

Baldwinville School Apartments Comprehensive Permit Application

June 10, 2022
Templeton, MA

*Presented by:
CC MPZ School Street LLC*



40B COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

Submitted to: The Zoning Board of Appeals, Town of Templeton
By: CC MPZ School Street LLC
Date: June 10, 2022

TABLE OF CONTENTS

1. Cover Letter and Narrative
2. Comprehensive Permit Application Form
3. Requested Waivers from Local Requirements and Regulations
4. Parking and Traffic Assessment (by Vanasse & Associates, Inc.)
5. Civil Engineer's Narrative & Storm Water Management Plan
6. Plans and Perspectives
7. Site and Neighborhood Photographs
8. Locus Map and Assessor Plat
9. Evidence of Site Control and Abutters List
10. Property Management Plan
11. Wetlands Report & Order of Conditions

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 1

COVER LETTER AND NARRATIVE

CC MPZ SCHOOL STREET LLC
c/o Capstone Communities LLC
831 Beacon Street, #164
Newton, MA 02459

June 10, 2022

Zoning Board of Appeals
Town of Templeton
P.O. Box 620, 160 Patriots Road
East Templeton, MA 01438

Re: Comprehensive Permit Application for the Baldwinville School Apartments
12 and 16 School Street, Templeton, MA

Dear Zoning Board of Appeals Members:

We are pleased to submit the enclosed Project Eligibility Application in accordance with M.G.L. c.40B for Baldwinville School Apartments, a proposed mixed-income apartment community in Templeton, Massachusetts. CC MPZ School Street LLC (“Applicant”), an affiliate of Capstone Communities LLC (www.capstonecommunities.com) (“Capstone”) and MPZ Development LLC (www.mpzdevelopment.com) (“MPZ”), intend to construct The Baldwinville School Apartments on two contiguous lots at 12 School Street and 16 School Street in Templeton’s Baldwinville Village (the “Site”).¹ The resulting residential community will consist of 54 rental apartment homes with a variety of unit sizes – 4 studios, 15 one-bedroom, 29 two-bedroom, and 6 three-bedroom apartments – 49 of the 54 apartments will be affordable to individuals and families earning a range of incomes – from 30% to 60% of the area median income (the “Project”).

Over the past several years, the development team has engaged the community through various avenues. The development team will maintain a website, that will provide updated and detailed information on the proposal. The website will include copies of plans, FAQs, news and events, information on the development team, and contact information for the community to provide feedback and ask questions. In addition, we have presented at one community meeting open to the entire community and seven town committee meetings which included the Templeton Select Board, Community Preservation Committee, Annual Town Meeting.

Capstone and MPZ have created a separate entity that owns/will own the Site/Project and that will develop the Baldwinville School Apartments. The entity, CC MPZ School Street LLC, whose managing members are Mathieu Zahler (50%) and Jason Korb (50%), share equal decision-making rights. In September 2020, Capstone and MPZ entered into a Developer Designation agreement with the Town of Templeton for 16 School Street (the Baldwinville School site) and then assigned the agreement to CC MPZ School Street LLC. In March of 2021, CC MPZ School Street LLC entered into a two to three-year purchase and sale agreement for 12 School Street in February 2021. CC MPZ School Street LLC is also undertaking due-diligence and pre-development activities.

¹ The address for the combined Site will be requested to be 16 School Street, Templeton, Massachusetts, 01436

CC MPZ School Street LLC will pursue the financing, construction, and operation of the Project as well as the Comprehensive Permit Applicant. CC MPZ School Street LLC is a Limited Dividend Organization under M.G.L. c.40B, §§ 20 through 23. Pursuant to 760 CMR 56, CC MPZ School Street LLC is applying to the Department of Housing and Community Development, as the Subsidizing Agency, for Project Eligibility under the following subsidy programs: Affordable Housing Trust Fund, DHCD Housing Stabilization Fund (HSF), HUD HOME Program (Rental Production), Commercial Area Transit Node Housing Program (CATNHP), Section 8 Voucher Program, Massachusetts State Low Income Housing Tax Credit Program (SLIHTC) and the Federal Low Income Housing Tax Credit Program (LIHTC). An affordable housing restriction will be recorded against the land and buildings with a term of perpetuity and Baldwinville School Apartments will comply with the Affirmative Fair Housing Marketing and Resident Selection Plan as required by 760 CMR 56.

Development Proposal

The site has a unique history and as part of a larger historic district, the follow is excerpted from Wikipedia to offer some context:

“The Baldwinville Village Historic District encompasses the historic elements of the village of Baldwinville, a 19th-century mill village in northern Templeton, Massachusetts. Although its industrial elements have largely been lost, the district retains period housing and civic buildings. It was listed on the National Register of Historic Places in 1986.

The town of Templeton was settled beginning in the 1750s and was incorporated in 1761. The northern part of the town remained sparsely settled, although a bridge was built across the Otter River in what is now Baldwinville in 1763, adjacent to an early saw and grist mill. The district's oldest surviving building is the 1797 residence of Eden Baldwin, owner of local lumber and brick yards, at the junction of Maple Street and Baldwinville Road on the south side of the river. In 1805 a turnpike was opened to the bridge from Royalston, which helped the area develop into a small village by 1830, when it was formally named Baldwinville. Although none of the mill buildings survive, Greek Revival houses in the district date to this phase of development. Development was further spurred by the arrival of railroads in 1847 and 1872, and it became the principal economic center of the town, focused primarily on the manufacture of chairs. During the height of the village's prosperity in the late 19th century, fine Queen Anne and Stick style houses were built. The area's industries were regularly impacted by floods and fire, and the Great New England Hurricane of 1938 destroyed or damaged most of its remaining industrial buildings.

The historic district is roughly linear in shape, extending along Elm Street north of the river and Baldwinville Road south of the river. Its northern boundary is roughly Mason Street, while its southern boundary is roughly Mountain View Street. The district bulges on the north side of the river, where the village's commercial center is located, extending west along Pleasant and Memorial Streets, and east along Circle and Central Streets.”

The site presents an opportunity for the parcel to continue to fulfill its original obligation to be an asset to the community and preserve the history of the existing building. The site, being within walking distance to other community-serving businesses, this location is primed for residential development. Given the high ongoing demand for housing that is affordable to local employees and residents, this project will provide 54 households with access to housing that is desirable and of high-quality.

The Neighborhood

The proposed development is located adjacent to route 202 and approximately three miles from Route 2, in the historic district of Baldwinville in Templeton, MA. The site is proximate to retailers and commercial properties that are located in Baldwinville Center including, restaurants and neighborhood retail stores. There are a number of single-family homes surrounding the site in addition to the larger apartment type buildings abutting the site, including another historic building that was converted into housing some time ago. Much of the housing stock in the neighborhood is older with median year built being 1961. Vacancy rates in the submarket are extremely low partly due to the lack of new housing production. A large portion of the population – approximately 71.6% - are homeowners, which represents an underserved need for additional rental housing where only 28.4% of families rent.

Development Detail

Current Status:

In March of 2020 MPZ submitted a 30B proposal to redevelop the Baldwinville site. After several months of conversations with the Town Administrator, Selection Committee, Select Board, Community Preservation Committee, and larger community, the Town of Templeton entered into a Developer Designation Agreement (DDA) on September 21, 2020, with MPZ. The DDA was then amended to include Capstone and the Applicant on March 23, 2021. The agreement allows for the acquisition of the Baldwinville property and notes the need for the contribution of CPC funds in the amount of \$1.174 million. The CPC agreed to allocate the resources to the project and this was voted on at the Templeton Annual Town Meeting on May 12, 2021. MPZ/Capstone has committed to close on the acquisition of the Baldwinville site after completion of due diligence, permitting and the raising of capital to build the project. In February 2021, the Applicant entered into a purchase and sale agreement for 12 School Street and has two years to close on the acquisition with the larger goal of rehabilitating the existing single-family home and then combining it with the Baldwinville property. Site control documents are included in Section 9 of this application.

Overview:

The recently unoccupied site is no longer contributing to the vibrancy of the surrounding neighborhood (the school was closed in late 2019). This proposal looks to take an historic asset, rehabilitate it into 15 units and then enhance it by adding a newly constructed addition with 39 units that will also include resident fitness center, open space, scenic overlook of the Otter River, playground and parking across the balance of the site. The benefits of an historic rehabilitation and new construction addition are multi-layered:

1. An historic building with great meaning to the town will be preserved;
2. There will once again be activity on the now vacant and blighted site;
3. The proposal will provide housing opportunities to those making \$18,630 per year up to \$66,000 (depending on unit type and household size), which, according to the 2010 US Census, would include approximately 8,013 households currently living in Templeton;
4. The proposal will be a source of significant new revenues for the Town and;
5. This investment will create the opportunity to spur additional investments along the Route 2/Baldwinville corridor as the introduction of new households will generate additional economic activity.

The new housing will be of high-quality and will offer an enticing option to those already living in and around the neighborhood, to those who can no longer afford to live in the neighborhood, and to those individuals and families from outside the area.

Existing Conditions:

The lot is 1.97+/- acres and is currently home to the vacant and blighted Baldwinville School, the balance of the site is paved with asphalt in poor condition. 12 School Street is approximately one acre and includes a single-family residence and shed. Large trees line the perimeter of the parcel. The parcel is located in the Village District (V) zoning district. The abutting parcels are improved with single and multi-family residences.

Parcel numbers 380, 381, 382, 383, 384, 385 and a portion of 407 are included with the application. To maximize the efficiency of the site the developer may look to acquire additional adjacent parcels but those are not included in the proposal at this time. The redevelopment would also look to utilize the 16 municipal parking spaces along school street which has been included in the DDA.



Assessor's Map (parcel outlined in red) Historic Street view of 16 School Street.



12 School Street

Historic Rehabilitation:

The Baldwinville School Apartments will be an adaptive reuse development designed in accordance with the Secretary of the Interior's Standards for Rehabilitation. The development team anticipates utilizing federal and state historic tax credits that will enable it to preserve the building's historical integrity. Construction will include an exterior restoration consisting of the installation of historically accurate large windows, the repointing and cleaning of the exterior masonry, and the interior rehabilitation and restoration of the architecturally significant stairwells and other common area elements.

Proposed Unit Mix:

The full scope of the redevelopment of the Baldwinville School Site will consist of 54 apartment homes, including four (4) or 7% studio units and fifteen (15) or 28% one-bedroom units and twenty-nine (29) or 54% two-bedroom units and six (6) or 11% three-bedroom units. Units will range in size from approximately 505 sf to 1044sf. There will be 15 units within the rehabilitated Baldwinville School. The addition to the school building will contain 39 units of new construction and will be built in a 3-story elevator type building connected to the existing school by a connector to offer a separation between old and new. The new development will offer a diverse unit mix which meets State funding requirements.

The rehabilitated school and the new addition will look to bring a range of income mixes to the Templeton market. The buildings will be targeted to families making between 30-60% of the AMI (household incomes up to \$18,630-\$66,000 depending on household size) as well as market units. To the extent permitted by funding resources, 70% of the units will be given preference to current Templeton residents, municipal/school department employees, and employees of local businesses. This income mix provides housing that is affordable to families and individuals earning a range of incomes. The immediate market area shows very strong demand for this unit mix as occupancy rates are between 96-100% and little to no new or substantially rehabilitated housing stock.

Market Demand:

Affordable and mixed-income rental housing is in short supply and is projected to continue to increase in demand over the next few years. According to the Town of Templeton's 2017 Master Plan the following goals are stated as it relates to housing and historic preservation:

Ensure that Housing Opportunities are Available for a Broad Range of Income Levels and Household Types including Affordability, Homeownership, and Condition of the Housing Stock while Maintaining the Town's Community Character.

Preserve the town's historic fabric and protect the quality of our natural resources, to ensure a vibrant, diverse, sustainable community.

The proposal to preserve the historic school and create 54 new apartments in Baldwinville Village that will help to provide new housing to many who live in Templeton but can barely afford Templeton's housing costs or to those who work in Templeton but currently cannot afford Templeton's increasingly high rents. All of this will be accomplished while maintaining the natural fabric of the community and will meet market demand.

Parking & Traffic:

The proposed development will provide 76 parking spaces at grade with driveway access off School and Cottage Streets with 16 additional spaces that will be accessible to the development via an access agreement but not be a part of the development's entitlements. Given that the previous use of the Baldwinville lot was a school building with student, bus traffic and faculty/staff parking the proposed residential use will have much lower traffic volumes and parking needs. A parking analysis has been conducted by Vanasse & Associates and the high-level conclusions are as follows:

- The development will add 40 new vehicle trips (9 entering and 31 exiting) during the weekday morning peak hour, and 44 new vehicle trips (28 entering and 16 exiting) during the weekday evening peak hour. This represents a decrease during the morning time period when compared with the previous school facility, with the proposed Project resulting in 66 fewer trips than the school would generate.
- The analysis has indicated that the Project will result in minimal impact on motorist delays at the study intersections, as compared to future No-Build conditions; and
- The Project is expected to result in decreases of as low as 6.1 percent and increases of up to 2.4 percent when compared with peak-hour traffic volumes of the former school facility.
- No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study intersections.
- The analysis has indicated that the development will result in minimal impact on motorist delays at the study intersections, as compared to future No-Build conditions.
- The proposed 76 parking spaces will adequately serve the site demand.

Vanasse & Associates has recommended that School Street become two ways. The Applicant will use commercially reasonable efforts to work in partnership with the Town to implement this, including identifying funding outside of the Project's budget. If, despite the Applicant's commercially reasonable efforts to obtain funding and approvals, School Street is not turned into a two-way street, the Applicant shall not be in violation of its permit hereunder. A full copy of the report is included in Section 4 of this application.

Community Process:

The Applicant has held one community information sessions to date to receive input to ensure the neighborhood is informed about the redevelopment plan for the Site. The Applicant will hold additional meetings through the permitting process (if necessary) to ensure the community is provided an opportunity to continue to provide constructive feedback. In working through the Baldwinville site disposition process the applicant has met with the following Town Committees/Boards:

- Select Board – Two meetings
- Community Preservation Committee – Three meetings
- Town Meeting – CPC request was voted on and approved by the community
- Interdepartmental Meeting with all Town departments

In addition, the applicant has met with the Templeton Fire Department, the Templeton_Historical Commission, the Conservation Agent and the Town Engineer to discuss the development. The proposed development also has strong support from Senator Gobi, Representative Whipps, Representative Zlotnik, The Templeton Select Board and the Templeton Town Administrator all of whom have offered support letters for this application.

Design

The design of the Baldwinville Site is intended to be well integrated into the existing School Street neighborhood. The street-facing facade will be that of the renovated and rehabilitated Baldwinville School. The new addition at the rear will include a combination of materials that allow the building to stand on its own but also incorporate materials from the surround neighborhood, with large windows to allow for ample natural light into the apartments. The massing of the buildings will be similar to each other. The site improvements will include landscaping and enhanced parking and circulation. The site entry will also be adjusted to better meet the needs of the redevelopment and will include an enhanced streetscape to meet the town standards along School Street. Detailed plans, a site plan and rendering have been included in Section 6 of this response.



Rendering of the Rehabilitated Baldwinville School and the addition.

Permitting and Environmental

After review of the Town's zoning code and specifically that of the Baldwinville site, which is understood to be located in the Village Zoning District, Capstone/MPZ recognizes the larger multifamily use would not be permitted as-of right. The permitting of the Baldwinville site will be accomplished using a friendly Comprehensive Permit application (LIP is not applicable due to the use of subsidized agency funding), and a requested waiver list has been included in Section 3 of this application. The Site has been surveyed and the project sits within the 200 foot riverfront buffer as noted in Section 11 of this application. The project has filed an NOI with the conservation commission and received an approved order of conditions which is also included in Section 11 of this application.

A full hazardous material assessment of the Baldwinville school has been conducted and there will need to be removal of asbestos and other hazardous containing material, the report had the following findings:

- Asbestos floor tiles are prevalent in the hallways and classrooms. The floor tiles will be removed, and the floor underneath will be refinished.
- Asbestos floor tiles and mastic were found in a few of the classrooms and the gymnasium. The floor tile and wood floor with the mastic adhered to it will be removed and replaced with new flooring.
- The historic window glazing in the interior contains hazardous materials. The glazing will be removed and replaced with new glazing in areas that are being retained.
- The lauan wood paneling's adhesive contains asbestos. The panels will be and replaced with historically accurate panels.
- Asbestos containing pipe insulation was found it will be removed.
- The old boilers may also contain asbestos but could not be fully accessed due to their location. This will be removed under containment.

The removal of items noted in the report will be in strict accordance with the Department of Environmental Protection's regulations by a licensed contractor.

A Phase 1/2 site investigation was recently completed, which determined there are no Recognized Environmental Conditions nor did any soil testing reveal contaminants above reportable limits.

Lastly a geotechnical memo was completed identifying soil conditions and noting how the building foundations should be constructed.

The full reports for Hazmat, Environmental and Geotechnical can supplied upon request.

Municipal Services

The project will require water and sewer services and will connect to the Town's existing infrastructure. Based on Title V requirements, the usage per bedroom is 110 GPD of water usage and 110 GPD of sewer flows, on an annual basis the calculation would be approximately 515,258 cubic feet for water and 515,258 cubic feet for sewer. The required connection fees have been estimated and included in the development budget. The project will also require bottled gas and electric service connections and the required utility back charges have been carried in the project's budget. A full analysis of the project's municipal service needs including usage flows, storm water runoff and drainage calculations have been performed and are included in Section 5 of the application. All public utilities are currently available at the Site.

Financing

The project's financing structure contemplates one phase and will utilize resources from the Department of Housing and Community Development (DHCD) as well as a subordinate loan from the Town's Community Preservation Committee (CPC) funds. The Applicant has been in discussions with DHCD about the project and would hope to be permitted to apply for the winter 2022 funding round. The project will also utilize Federal and State Historic tax credits, which would be made available through applications to the Massachusetts Historical Commission. The development team would also source a private permanent mortgage as part of the project's capital stack. It should be noted that the

Town's local CPC investment will leverage approximately 10X as many additional resources and could be contributed all at one time.

The project has currently been structured as a 9% Low Income Housing Tax Credit development. The proposed project meets the requirements of DHCD's Qualified Allocation Plan's family production category and is also located in a municipality that has not yet reached its 40B threshold requirements. Further, the Baldwinville building is currently owned by the Town and the disposition of publicly owned land within a redevelopment project is a criterion that DHCD is considering making a priority. The following is a list of the subsidy resources being considered:

- Affordable Housing Trust Fund;
- DHCD Housing Stabilization Fund (HSF);
- HUD HOME Program (Rental Production);
- CBH/AAHG Programs
- NFIT Program
- Transit Oriented Development Housing Program (TOD);
- Section 8 Voucher Program;
- Massachusetts State Low Income Housing Tax Credit Program (SLIHTC);
- and the Federal Low-Income Housing Tax Credit Program (LIHTC).

Development Team

The following development team has been formed to include industry experts ensuring a seamless and successful completion:

➤ **Developers:**

- *Capstone Communities Development LLC, an affiliate of Capstone Communities LLC (www.capstonecommunities.com)*, is a Newton, Massachusetts based real estate development firm experienced in structuring complex financing involving multiple federal and state subsidies. Jason Korb is the principal of Capstone Communities LLC, where he has developed market rate, mixed income, and 100% affordable housing. Since founding Capstone in October 2010, Jason has successfully completed a total of \$36,000,000 of development transactions in Cambridge, Somerville, Arlington, Newton and Brockton Massachusetts. These include converting Brockton's first brick shoe factory into 25 mixed-income apartments, co-developing 20 100% affordable family apartments on a vacant lot in Cambridge's Port neighborhood, and currently working on plans to redevelop three parcels in Porter Square, Cambridge into 40 100% affordable family apartments. Prior to forming Capstone, Jason was the Vice President of Acquisitions at Beacon Communities LLC, a developer, owner, and manager of over 9,000 apartment homes in the Northeast. At Beacon, Jason was responsible for sourcing new acquisitions and overseeing mixed income, affordable and market rate development and financing opportunities. Jason specializes in complex affordable housing transactions that involve multiple government subsidies. In his seven years at Beacon, Jason was responsible for developing over 600 apartment homes totaling over \$100M. Prior to joining Beacon in 2004, Jason was a Housing Project Manager at the Fenway Community Development Corporation in Boston. Jason is a former Director of Caritas Communities and a former Vice-Chair of Preservation Massachusetts. Jason received an MS from the Massachusetts Institute of Technology's Center for Real Estate and a BA from the University of Michigan, Ann Arbor. Jason's MIT thesis, *The Low Income Housing Tax Credit: HERA, ARRA, and Beyond* has been cited by Harvard University's Joint Center for Housing Studies and the US Senate Budget Committee.

- *MPZ Development LLC (www.mpzdevelopment.com)* Mathieu P. Zahler is the owner and manager of the Milton, MA based MPZ Development LLC. The firm was recently started by Matt coming with over 20 years of Marketing, Design/Construction and Housing Development experience. This is a new venture where the Matt's experience developing over 859 units for Trinity Financial Inc., can be leveraged into his own projects. Prior to starting MPZ Development LLC Matt was a senior project manager at Trinity Financial and over saw approximately \$423 million in development. Prior to joining Trinity Financial, Mr. Zahler was the Director of Policy and Development for A Better City (ABC) and oversaw the organization's policy activity and ABC's legislative agenda. He also managed the abutters groups and private partnering process for the City of Boston's Crossroads Initiative, the Silver Line Phase III Business and Institutional Committee, South Boston Stakeholders and ABC's foundation and government relations. Additionally, Matt worked in the design and construction industry at Kallmann, McKinnell and Wood Architects, HNTB Inc. (Boston) and as Director of Marketing at Copley Wolff Design Group. He has had significant experience in the real estate industry having worked for JJ Gumberg Inc. (Pittsburgh) and The Boston Garden Development

Corp. (Boston). In these positions, Matt was involved in the development and operation of over 20 Million square feet looking at both operational and financial needs for various projects.

- **General Contractor:** *Keith Construction:* (www.keithconstruction.net) specializes in multifamily residential construction and completed work on The Cordovan at Haverhill Station in Haverhill, Whaler's Place in New Bedford, and Wilber School Apartments in Sharon.
- **Legal (Financing and Development):** *Nixon Peabody LLP:* (www.nixonpeabody.com) Nixon Peabody's Affordable Housing practice is highly skilled in federally assisted housing or accessing capital markets for housing development. Its attorneys—many of whom formerly worked at HUD in several legal and policy positions—have been involved with every major federal affordable housing initiative in the last 40 years.
- **Legal (Permitting)** *Sullivan & Worcester LLP:* (www.sullivanlaw.com) Sullivan & Worcester's land use and zoning practice has extensive experience in providing zoning and permitting advice for a wide variety of projects, including residential, affordable housing and complicated mixed-use developments throughout Massachusetts.
- **Architect:** *ICON Architecture (ICON)* (www.iconarch.com) ICON is a 50-person, Boston based, women-owned architectural practice. Our work focuses on sustainable transformative projects that create new paradigms for transformative living and range from transit-oriented development to innovative adaptive reuse, and from low-rise to high-rise construction. Our team has contributed to the design and construction of over 20,000 housing units throughout New England, with 2,000 currently under design or in construction this year. Their adaptive reuse historic school housing projects include: The Coady School, Borne; Simkins School, South Yarmouth; Fulton School, Weymouth; School Street Residences, Athol.
- **Historic Consultant:** *Epsilon Associates, Inc.* (www.epsilonassociates.com) Epsilon's team of Historic Preservation Specialists provides clients with the insight and guidance needed to secure project approvals and clearances from local, state, and federal agencies, State Historic Preservation Offices, the National Park Service, and local historic district commissions. Having previously worked at the Massachusetts Historical Commission, Boston Landmarks Commission, National Park Service, City of Newton Planning Department and other preservation planning organizations and -rms, Epsilon's senior level historic preservation staff has a unique understanding of regulatory requirements and agency expectations.

Minority and Women Owned Business Enterprises

The Applicant will make an effort to include WMBE business certified through the Commonwealth's SOMWBA program part of the development team. The current development team includes two SOMWBA certified businesses.

Conclusion

The Baldwinville School redevelopment will restore an important historic building and bring high-quality housing to the Town of Templeton that is affordable to a diverse array of household types earning a wide range of incomes. Located in a walkable neighborhood near neighborhood business and amenities, the Site is both attractive and sustainable for housing development. The redevelopment will bring additional tax revenue to the town and improve what is currently a blighted site with an approximately \$28 million new investment. After years of unfulfilled potential on the Site, Baldwinville and 12 School Street sites represent an opportunity to create a community-serving development coupled with historic preservation – affordable and workforce housing – that will help to relieve some of the pressure on the tight rental housing market within the Town of Templeton.

We look forward to presenting this exciting Project to the Board at your earliest convenience.

Sincerely,

A handwritten signature in blue ink, appearing to be 'JK', written in a cursive style.

Jason Korb
managing member

A handwritten signature in blue ink, appearing to be 'Mathieu P. Zahler', written in a cursive style.

Mathieu P. Zahler
managing member

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 2

COMPREHENSIVE PERMIT APPLICATION FORM

COMPREHENSIVE PERMIT APPLICATION

PETITIONER: CC MPZ SCHOOL STREET LLC

PETITIONER'S ADDRESS: C/O CAPSTONE COMMUNITIES LLC
831 BEACON STREET #164
NEWTON, MA 02459

NAME, ADDRESS, AND PHONE NUMBER OF CONTACT PERSON: MPZ DEVELOPMENT LLC
499 ADAMS STREET, BOX 527
MILTON, MA 02186
ATTN: MATHIEU P. ZAhLER
617.645.3534

CAPSTONE COMMUNITIES DEVELOPMENT LLC
831 BEACON STREET #164
NEWTON, MA 02459
ATTN: JASON KORB
617.513.6320

LOCATION OF SITE: 12 AND 16 SCHOOL STREET, TEMPLETON, MA 01436

DESCRIPTION OF PROJECT: SEE **SECTION 2** (COVER LETTER AND NARRATIVE)

SPECIFY LOCAL REGULATIONS OR REQUIREMENTS FROM WHICH RELIEF IS REQUESTED: SEE **SECTION 3** REQUESTED WAIVERS FROM LOCAL REQUIREMENTS AND REGULATIONS

THE PETITIONER IS: A LIMITED DIVIDEND ORGANIZATION

IS THE PROPOSED PROJECT NEW CONSTRUCTION: THE PROPOSED PROJECT INCLUDES THE HISTORIC REHABILITATION OF THE EXISTING BALDWINVILLE SCHOOL WITH NEW CONSTRUCTION ADDITION AT THE BACK OF THE SITE AND THE RENOVATION OF A SINGLE FAMILY HOME AT 12 SCHOOL STREET

SITE CONTROL: CC MPZ SCHOOL STREET LLC CURRENTLY HAS DEVELOPER DESIGNATION AGREEMENT WITH THE TOWN OF TEMPLETON FOR THE BALDWINVILLE SCHOOL PROPERTY AND HAS A PURCHASE AND SALE AGREEMENT FOR 12 SCHOOL STREET.

SITE ELIGIBILITY: THE PETITIONER RECEIVED SITE APPROVAL ON MAY 5, 2022 UNDER THE FOLLOWING SUBSIDIES: AFFORDABLE HOUSING TRUST FUND; DHCD HOUSING STABILIZATION FUND (HSF); HUD HOME PROGRAM (RENTAL PRODUCTION); COMMERCIAL AREA TRANSIT NODE HOUSING PROGRAM (CATNHP); SECTION 8 VOUCHER PROGRAM;

MASSACHUSETTS STATE LOW INCOME HOUSING TAX CREDIT PROGRAM (SLIHTC); AND THE FEDERAL LOW-INCOME HOUSING TAX CREDIT PROGRAM (LIHTC).

TOTAL NUMBER DWELLING UNITS PROPOSED: 54
TOTAL NUMBER OF AFFORDABLE RENTAL UNITS: 49
TOTAL NUMBER OF AFFORDABLE HOME OWNERSHIP UNITS: 0

RESIDENT ELIGIBILITY STANDARDS: 49 UNITS AT OR BELOW 60% AMI, INCLUDING 7 UNITS AT OR BELOW 30% AMI, PURSUANT TO THE LOW INCOME HOUSING TAX CREDIT PROGRAM

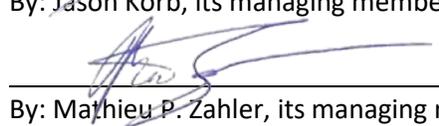
PLEASE SEE **SECTIONS 5 – 11** FOR A COMPLETE DESCRIPTION OF THE PROPOSED PROJECT, AND EACH OF THE FOLLOWING ITEMS:

- a. Site Development Plans - Site development plans showing locations and outlines of proposed buildings, the proposed location and nature of the existing buildings, existing street elevations, traffic patterns and character of open areas, if any, in the neighborhood;
- b. Report on Existing Site Conditions - a summary of conditions in the surrounding areas, showing the location and nature of existing buildings, existing street elevations, traffic patterns and character of open areas, if any, in the neighborhood.
- c. Drawings – scaled, architectural drawings, including typical floor plans, typical elevations and sections, and identifying construction type and exterior finish. All projects of five or more units must have Site development plans signed by a registered architect;
- d. Building Tabulations - a tabulation of proposed buildings by type, size (number of bedrooms, floor area) and ground coverage, and a summary showing the percentage of the tract to be occupied by the buildings by parking and other paved vehicular areas and by open areas;
- e. Subdivision Plan - where a subdivision of land is involved, a preliminary subdivision plan;
- f. Utilities Plan - a preliminary utilities plan showing the proposed location and types of sewage, drainage, and water facilities, including hydrants.
- g. Dimensional Form- provided with application;
- h. Photographs – photographs of Site and existing buildings; photographs of the surrounding neighborhood.
- i. Assessor’s Plat – available at Town of Templeton’s Town Hall Building, Assessor’s Office, 160 Patriots Road, East Templeton, MA 01438;
- j. Evidence of Ownership – Developer Designation Agreement for Baldwinville School and the Purchase and Sale Agreement for 12 School Street are attached.

I certify that the information contained herein is true and accurate to the best of my knowledge and belief.

CC MPZ SCHOOL STREET LLC


By: Jason Korb, its managing member


By: Mathieu P. Zahler, its managing member

Date: June 10, 2022



Town of Templeton
Zoning Board of Appeals
P.O. Box 620
E. Templeton MA 01438
978-894-2771
Email: lwita@templetonma.gov

ZONING BOARD OF APPEALS
APPLICATION

VARIANCE APPEAL SPECIAL PERMIT COMPREHENSIVE

1. **This application is being filed under Templeton Zoning Bylaw(s), Article XXI, Section**

_____.
(please review the Templeton Bylaws, Section 3.0, Use Districts, for applicability)

Date of application June 10, 2022
(if appealing the Zoning Officer's decision, appeal must be filed within thirty (30) days of the decision letter per MGL c. 40A, s. 15).

Date of Zoning Officer's decision letter See attached Site Eligibility Letter

2. Applicant's information

Name CC MPZ SCHOOL STREET LLC

Address C/O Capstone Communities LLC, 831 Beacon Street #164

City, State, Zip Newton, MA 02459

Phone 617-645-3534 Cell 617-645-3534

Email mzahler@mpzdevelopment.com

Owner Applicant Contract Purchaser Attorney Other
(please check all that apply)

3. Owner's information (if different from applicant information)

Name _____

Address _____

City, State, Zip _____

Phone _____ Cell _____

Email _____

Owner Applicant Contract Purchaser Attorney Other
(please check all that apply)



4. Parcel information

Address See attached application Section 8 for multiple parcels

Map _____, Parcel _____ /Map _____, Parcel _____

Zoning District: RA1 _____ RA2 _____ RA5 _____ Village _____

Highway Business _____ CIA _____ CIB _____

Lot size _____

Recorded in Worcester Registry of Deeds or Land Court: Book _____ Page _____

What are the current setbacks (measure from the foundation to the property line)

Front yard setback _____ Side yard setbacks _____ Rear yard setback _____

5. Describe the proposed project

See Section 1 of the attached application

6. Please complete the following information if seeking a variance

a. What circumstance(s) relating to soil condition, shape, or topography affects your property, but does not generally affect the zoning district in which the land or structure is located, prohibit the proposed use from meeting the zoning requirements?

The application is for a comprehensive permit under Chapter 40B a detailed waiver list is attached in Section 3 of the attached application

b. What substantial hardship (financial or otherwise) will result from enforcement of the applicable zoning bylaw, to the land or buildings, which make the issuance of a variance necessary?

The application is for a comprehensive permit under Chapter 40B a detailed waiver list is attached in Section 3 of the attached application

c. If approved, explain why the variance will not be a detriment to the abutters and the general public.

The application is for a comprehensive permit under Chapter 40B a detailed waiver list is attached in Section 3 of the attached application



7. If you are appealing the Zoning Enforcement Officer's decision, what is the basis for your appeal under the Templeton Bylaws Article XXI or MGL c. 40A, s. 8? (check all that apply).

This Section is NOT APPLICABLE

a. ___ Are you aggrieved by an inability to obtain a permit from the Building Commissioner?

b. ___ Are you aggrieved by enforcement action, or lack thereof by the Building Commissioner?

c. ___ Is a regional planning agency, officer or board of the town, or an abutting town aggrieved by an order or decision of the Zoning Enforcement Officer or town official perceived to be in violation of the zoning bylaw.

8. Please complete the following information if seeking a Special Permit

State the section of the Templeton Bylaws under which you are requesting a Special Permit.

This Section is NOT APPLICABLE

9. Check the boxes below indicating the following documentation has been included with this application.

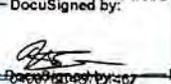
Abutter's list (must be approved and signed by the Assessor's Office)

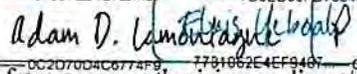
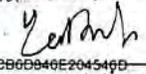
A scaled plot plan at least 8 1/2 x 11 in size that distinguishes existing structures from the proposed construction. The plan must show all setbacks (front, rear, sides) and frontage measurements. All lot and structural dimensions, both existing and proposed, must be clearly delineated. Show adjoining streets and any identifying landmarks.

___ Zoning Enforcement Officer/Building Commissioner's denial letter **NOT APPLICABLE**

___ Copy of deed **Site control agreements have been included in Section 9 of the application**

Filing fee according to the fee schedule (check payable to Town of Templeton)

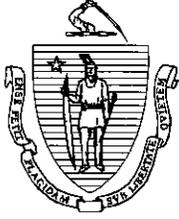
Applicant's signature  Jason Korb Date 6/10/2022

*Owner's signature  Adam D. Lamontagne  Yedon Date 6/10/2022

(*Owner's signature or letter from owner authorizing applicant/representative to sign on behalf of owner)

I certify that the information contained herein is true and accurate to the best of my knowledge; the above signed owner(s) grant the board and its agents permission to enter the property to review this application; I understand all documents will be entered into public record; I understand that if neighboring issues have not been addressed/





Commonwealth of Massachusetts
**DEPARTMENT OF HOUSING &
COMMUNITY DEVELOPMENT**

Charles D. Baker, Governor ♦ Karyn E. Polito, Lt. Governor ♦ Jennifer D. Maddox, Undersecretary

May 5, 2022

Mr. Mathieu P. Zahler
MPZ Development LLC
499 Adams Street #527
Milton, MA 02186

Re: Baldwinville School Apartments, Templeton, MA – Project Eligibility Letter

Dear Mr. Zahler:

We are pleased to inform you that your application for project eligibility determination for the proposed Baldwinville School Apartments project located in Templeton, Massachusetts, has been approved under the Low Income Housing Tax Credit (LIHTC) program. The property is located at 12 and 16 School Street, Templeton, Massachusetts. This approval indicates that the proposed plan is for 54 units of rental housing for families, 49 (90.7%) of which will be affordable at no more than 60% of area median income. The proposed development will consist of 4 studios, 15 one-bedroom units, 29 two-bedroom units and 6 three-bedroom units and the rental structure as described in the application is generally consistent with the standards for affordable housing to be included in the community's Chapter 40B affordable housing stock. This approval does not constitute a guarantee that LIHTC funds will be allocated to the Baldwinville School Apartments project. It does create a presumption of fundability under 760 CMR 56.04 and allows CC MPZ School Street LLC to apply to the Templeton Zoning Board of Appeals for a comprehensive permit. The sponsor should note that a One Stop submission for funding for this project must conform to all Department of Housing and Community Development (DHCD) program limits and requirements in effect at the time of submission.

As part of the review process, DHCD has made the following findings:

1. The proposed project appears generally eligible under the requirements of the Low Income Housing Tax Credit program.
2. DHCD has performed an on-site inspection of the proposed Baldwinville School Apartments project and has determined that the proposed site is an appropriate location for the project. The project will develop housing on the site of a former school and a neighboring home.
3. The proposed housing design is appropriate for the site. The design includes 15 units within the historic school building and an addition with 39 new units. This project will include a resident fitness center and a playground.

4. The proposed project appears financially feasible in the context of the Templeton housing market. The proposal includes seven rental units for households earning up to 30% of area median income (AMI) and 42 units for households earning up to 60% AMI.
5. The initial proforma for the project appears financially feasible and consistent with the requirements for cost examination and limitations on profits on the basis of estimated development and operating costs. Please note again that a One Stop+ submission for funding for this project must conform to all DHCD program limits and requirements in effect at the time of submission.
6. A third-party appraisal has been engaged. The Low-Income Housing Tax Credit Program Guidelines state that the allowable acquisition value of a site with a comprehensive permit must be equal to or less than the value under pre-existing zoning, plus reasonable carrying costs. If this project applies for funding under the Low-Income Housing Tax Credit Program, the acquisition price in the proposed budget should reflect these program guidelines.
7. The ownership entity will be a single-purpose entity controlled by the applicant subject to limited dividend requirements and meets the general eligibility standards of the Low Income Housing Tax Credit program. The applicant will need to demonstrate sufficient capacity to successfully develop the project under the Low-Income Housing Tax Credit program.
8. The applicant is the designated developer of the site.
9. The Town of Templeton has submitted a letter of support for the project.

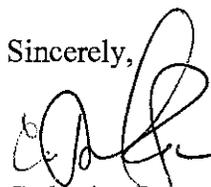
The proposed Baldwinville School Apartments project will have to comply with all state and local codes not specifically exempted by a comprehensive permit. In applying for a comprehensive permit, the project sponsor should identify all aspects of the proposal that will not comply with local requirements.

If a comprehensive permit is granted, construction of this project may not commence without DHCD's issuance of final approval pursuant to 760 CMR 56.04 (7) and an award of LIHTC funds. This project eligibility determination letter is not transferable to any other project sponsor or housing program without the express written consent of DHCD. When construction is complete, a Chapter 40B cost certification and an executed and recorded 40B regulatory agreement in compliance with DHCD's requirements pertaining to Chapter 40B must be submitted and approved by DHCD prior to the release of a Low-Income Housing Tax Credit form 8609.

This letter shall expire two years from this date, or on May 5, 2024, unless a comprehensive permit has been issued.

We congratulate you on your efforts to work with the town of Templeton to increase its supply of affordable housing. If you have any questions as you proceed with the project, please feel free to call or email Rebecca Frawley Wachtel at (617) 573-1318 or at Rebecca.Frawley@mass.gov.

Sincerely,



Catherine Racer
Director

cc: Chairman Michael Currie, Templeton Select Board

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 3

REQUESTED WAIVER FROM LOCAL REQUIREMENTS AND REGULATIONS

**LIST OF REQUESTED WAIVERS FOR THE PROPOSED G.L. C. 40B PROJECT AT 12
AND 16 SCHOOL STREET**
(revised June 9, 2022)

Pursuant to 760 C.M.R. 56.05(7), no special permit requirements (including without limitation those set forth in Chapter 300, Sections 300-18.A, 300-13.C.2, 300-16, and 300-25) apply to this application; accordingly, there is no need to request a waiver of such requirements. The following waivers are requested to be included as part of a comprehensive permit that authorizes the project as proposed in the plans submitted:

I. TOWN OF TEMPLETON MASSACHUSETTS ZONING BY-LAWS CHAPTER 300

A. Section 300-20: Table of Dimensional Regulations (Village District)

Dimensional Aspect	Requirement	Requested Waiver
Maximum Stories	2.5 Stories	Waive this limitation and permit the proposed 3 story existing building.
Maximum Height	35'	Waive this limitation and permit the proposed existing building and addition to exceed 35'.
Minimum Lot Area	Lot size: 1 acre for a single-family home	Waive this requirement and permit the proposed project on approximately 2.97 acres of land.

B. Chapter 300-21: Multi Family Housing

Section	Requirement	Requested Waiver
Section 21.B.1	Limit of six (6) units per building.	Waive this limitation and permit the proposed project, which consists of 54 residential units.
Section 21.B.2	Size of Lot Required: 3 acres	Waive this requirement and permit the proposed project on approximately 2.97 acres of land.
Section 21.B.2	Frontage Requirements: Each 5 or 6 units – 250 feet	Waive this requirement and permit the proposed project on land with approximately 229 feet of frontage.
Section 21.B.4 Multi Family Housing	No multi-family building shall be higher than two (2) stories or thirty (30) feet in height.	Waive this limitation and permit the proposed existing building and addition to be 3 stories and to exceed 35'.

Section	Requirement	Requested Waiver
Section 21.B.5	Imposing an unbroken yard space requirement of not	Waive this requirement and permit the proposed parking areas to be 0 feet from the property line.

Section	Requirement	Requested Waiver
	less than ten (10) feet in depth along the entire perimeter of the lot on which a multi-family building is located.	
Section 21.B.6	Imposing dimensional (18 feet long by 9 feet wide) and numerical requirements (requiring 112 spaces here) for off-street automobile parking spaces on the lot containing a multifamily housing building .	Waive these requirements and permit the proposed parking area, which includes 76 parking spaces on site, 21 of which are planned to be compact spaces (having dimensions of 8 feet wide by 16 feet long). The current plans also contemplate up to 16 off-site parking spaces, to the extent such off-site spaces are reasonably available; however, such off-site spaces shall not be required and some or all of them may be eliminated at any time if it is not practical, for financial or other reasons, to include them as part of the project.
Section 21.D.	Imposing a 50 foot buffer zone requirement between proposed multi-family buildings constructed adjacent to an industrial, residential or commercial use must be created.	Waive this requirement and permit buffer zones of 0 feet from adjacent residential uses.

C. Other Zoning Requirements

Section	Requirement	Requested Waiver
Section 32 – Site Plan Review	Requiring site plan review for the construction, exterior alteration or exterior expansion of, or change of use within any nonresidential or nonagricultural building or structure or lot and the	Waive this requirement.

Section	Requirement	Requested Waiver
	construction or expansion of a parking lot for any nonresidential or nonagricultural building or structure or lot.	

II. TOWN OF TEMPLETON MASSACHUSETTS –GENERAL LEGISLATION

Chapter and Section	Requirement	Requested Waiver
Chapter 124, Section 124-7 Emergency communications ability.	Requiring public emergency radio communication for the construction of a new building or structure containing a floor area equal to or greater than 12,000 square feet or substantial renovation or alteration of an existing building containing 12,000 square feet or more.	Waive this requirement.
Chapter 124, Section 124-16 Buildings and Construction	Requiring the Building Inspector to make the Stretch Energy Code a requirement in building permits.	Waive this requirement.
Chapter 139-1 Regulation of Driveways	Requiring permission from the Highway Superintendent for the rebuilding of a driveway that enters a Town Way.	Request that the Board of Appeals issue any necessary permission to rebuild driveways, or waive this requirement.
Chapter 145 Removal of Sand and Gravel	Requiring a permit from the Select Board for the removal of soil, loam, sand or gravel under certain circumstances.	Request that the Board of Appeals issue any necessary permit for the removal of soils, or waive these requirements.

Chapter and Section	Requirement	Requested Waiver
Chapter 215-1 Sewers	Requiring authorization from the Select Board or Sewer Commissioners for connections to the public sewer.	Request that the Board of Appeals issue any necessary authorization to lay drain and sewer in a public way, or waive this requirement.
Chapter 230 Storm Drains	Requiring a permit from the Select Board for certain storm water discharge to municipal storm drainage system.	Request that the Board of Appeals provide any permit or license required under this section (including to authorize a connection to the storm drain system).
Chapter 235-3 NPDES Phase II Permit Stormwater Management Bylaw Discharges generated by Construction Activities.	Requiring a permit from the Planning Board for construction activity that will disturb at least one acre of land.	Waive this requirement.
Chapter 240-5 Snow and Ice and Water Drainage	Requiring authorization from the Highway Superintendent for the drainage of water from private property to a public way, sidewalk, catch basin or Town owned land.	Request that the Board of Appeals provide any necessary permit or authorization relating to this section (the existing driveway drains into the street), or waive this requirement.

III. ADDITIONAL

The applicant requests waivers of any other requirements that would impede the ability to construct the project as shown on the plans as approved.

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 4

PARKING AND TRAFFIC ASSESSMENT

Transportation Impact Assessment

Proposed Residential Development 12 and 16 School Street Templeton, Massachusetts

Prepared for:

CC MPZ School Street LLC
c/o Capstone Communities LLC
Newton, Massachusetts

February 2022

Prepared by:



35 New England Business Center Drive
Suite 140
Andover, MA 01810

CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION.....	6
Project Description	6
Study Methodology	6
EXISTING CONDITIONS	8
Geometry	8
Existing Traffic Volumes	9
Pedestrian and Bicycle Facilities.....	10
Public Transportation	10
FUTURE CONDITIONS	13
Future Traffic Growth	13
General Background Traffic Growth.....	13
Specific Development by Others.....	14
Roadway Improvement Projects.....	14
No-Build Traffic Volumes	14
Project-Generated Traffic.....	14
Trip Distribution and Assignment.....	17
Future Traffic Volumes - Build Condition.....	17
SIGHT DISTANCE EVALUATION.....	20
TRAFFIC OPERATIONS ANALYSIS	23
Analysis Results	25
CONCLUSIONS AND RECOMMENDATIONS	28
Recommendations	28
Conclusions	30

FIGURES

No.	Title
1	Site Location and Study Map
2	Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities
3	2021 Existing Weekday Morning Peak-Hour Traffic Volumes
4	2021 Existing Weekday Evening Peak-Hour Traffic Volumes
5	2028 No-Build Weekday Morning Peak-Hour Traffic Volumes
6	2028 No-Build Weekday Evening Peak-Hour Traffic Volumes
7	Trip Distribution Map
8	Project-Generated Weekday Morning Peak-Hour Traffic Volumes
9	Project-Generated Weekday Evening Peak-Hour Traffic Volumes
10	2028 Build Weekday Morning Peak-Hour Traffic Volumes
11	2028 Build Weekday Evening Peak-Hour Traffic Volumes
12	School Street Conceptual Improvement Plan

TABLES

No.	Title
1	Motor Vehicle Crash Data Summary
2	Trip-Generation Summary
3	School Trip-Generation Summary
4	Trip-Generation Comparison
5	Trip-Distribution Summary
6	Peak-Hour Traffic-Volume Increases
7	Weekday Peak-Parking Demand
8	Sight Distance Measurements
9	Design Speed and Sight Distance Measurements
10	Level-of-Service Criteria for Unsignalized Intersections
11	Unsignalized Intersection Level-of-Service and Vehicle Queue Summary

EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate potential traffic impacts associated with the proposed residential development to be located on the site of the former Baldwinville Elementary School at 12 and 16 School Street in Templeton, Massachusetts (the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing and future traffic conditions, both with and without the Project.

PROJECT DESCRIPTION

The proposed Project entails redevelopment of the former Baldwinville Elementary School property to provide a 54-unit multifamily housing development. This redevelopment includes renovation of the historical school building to accommodate 15 residential units and construction of a new three-story building with 39 apartment units. The site is situated on the east side of School Street and is bounded by residential properties to the north and south and open and wooded areas to the east. On-site parking will be provided for approximately 76 vehicles, including 4 handicap accessible spaces (parking ratio of 1.41 parking spaces per unit). As part of an agreement with the town, the existing 16 parking spaces along School Street will be available for use by this development. Access to the Project site will be provided via two existing driveways off School Street, approximately 162 and 305 feet north of Cottage Street, and one driveway onto Cottage Street approximately 135 feet east of School Street.

As part of the Project, the School Street, which is currently oriented one-way toward north, will be reconstructed and reconfigured to function as a two-way roadway along with the water main replacements that are planned to be done by the Town.

EXISTING CONDITIONS

A comprehensive field inventory of traffic conditions on the study area roadways was conducted in September 2021.

Existing Traffic Volumes

In order to establish base traffic-volume conditions within the study area, manual turning movement counts (TMCs) were completed on Tuesday, September 28, 2021. The TMCs were conducted during the weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak periods, which represent the peak periods for residential traffic. The raw traffic volumes were adjusted upward by 10.0 percent in order to account for traffic reductions as a result of the COVID-19 pandemic. A review of the peak-period traffic counts indicates that the weekday morning peak hour generally occurs between 7:15 and 8:15 AM with the weekday evening peak hour generally occurring between 4:45 and 5:45 PM.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the Massachusetts Department of Transportation (MassDOT) Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2014 through 2018). All study intersections were found to have a motor vehicle crash rate below the MassDOT average for the District in which the Project is located (District 2).

FUTURE CONDITIONS

Traffic volumes within the study area were projected to 2028, which reflects a seven-year planning horizon consistent with State traffic study guidelines.

Background Traffic Growth

Traffic-volume data compiled by MassDOT from Permanent Count Stations in the area were reviewed in order to determine general background traffic growth trends. Based on this data, it was determined that traffic volumes within the study area have fluctuated over the past several years, with the average growth rate found to be approximately 1.43 percent per year. A slightly higher 1.5 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Specific Development by Others

The Town of Templeton was contacted in order to determine if there are any planned or approved specific development projects within the area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, no future projects are identified in the immediate area of the Project site.

Planned Roadway Improvements

The Town of Templeton was contacted to determine if there are any planned roadway improvements in the area that would have an impact on future traffic operations. Based on these discussions, the School Street Water Main Replacement project is identified in the immediate area of the Project site.

No-Build Traffic Volumes

The 2028 No-Build peak-hour traffic-volume networks were developed by applying the 1.5 percent per year compounded annual background traffic growth rate to the 2021 Existing peak-hour traffic volumes then adding the trips associated with the Project's previous use as a 287-student elementary school.

Site-Generated Traffic Volumes

The proposal entails construction of a 54-unit residential development. In order to develop the anticipated traffic characteristics of the Project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)¹ were reviewed. ITE Land Use Code (LUC) 220, *Multifamily Housing (Low-Rise)* was used to develop the traffic characteristics of the proposal. Trip-generation calculations were performed for a typical weekday, as well as the weekday morning and weekday evening peak hours, the critical time periods for Project-related traffic activity. The proposed development is expected to generate approximately 421 new vehicle trips on an average weekday (two-way, 24-hour volume), with 40 new vehicle trips (9 entering and 31 exiting) expected during the weekday morning peak hour and 44 new vehicle trips (28 entering and 16 exiting) expected during the weekday evening peak hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of Journey-to-Work United States Census Bureau² for persons residing in the Town of Templeton, and then refined based on existing traffic patterns within the study area. In summary, 40 percent of the trips are expected to arrive and depart the site to/from the north on Elm Street, 45 percent of the trips are expected to arrive and depart the site to/from the south on Baldwinville Road, and 15 percent of the trips are expected to arrive and depart the site to/from the west on Maple Street.

Build Traffic Volumes

The 2028 Build condition networks consist of 1) removing the previous elementary school traffic from the 2028 No-Build condition traffic volumes; and 2) adding the proposed site-generated traffic. Adjustments were made to the school traffic to account for approximately 50 percent of the students walking to school.

TRAFFIC OPERATIONS ANALYSIS

In order to assess the impact of the proposed Project on the roadway network, traffic operations analyses were performed at the study intersections under 2021 Existing, 2028 No-Build, and 2028 Build conditions. In comparison with a scenario where the previous elementary school is open, the proposed Project will improve the operating conditions at the study area intersections during the weekday morning peak hour with minor increases in delay and vehicle queuing during the weekday evening peak hour. The addition of site-related traffic will not result in a significant impact on overall operations at the study area intersections.

¹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

²Table 3. *Residence MCD/County to Workplace MCD/County Commuting Flows for the United States and Puerto Rico Sorted by Residence Geography: 5-Year ACS, 2011-2015.*

RECOMMENDATIONS

The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

Project Access

Access and egress to the Project site will continue to be provided by two full-access driveways onto School Street and one full-access driveway onto Cottage Street. The following recommendations are offered with respect to Project access, internal circulation, and parking, many of which are already reflected on the Site Plans for the Project:

- The Project site driveways should be designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Templeton Fire Department.
- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices (MUTCD)*.³
- Americans with Disabilities Act (ADA)-compliant wheelchair ramps should be provided at all pedestrian crossings internal to the Project site and for crossing the Project site driveways.
- Crosswalks across the Project driveways should be positioned to be consistent with the existing sidewalk on School Street and Cottage Street.
- Signs and landscaping to be installed as a part of the Project within intersection sight triangle areas of the Project site driveways should be designed and maintained so as not to restrict lines of sight.
- Snow windrows within the sight triangle areas of the Project site driveways and at intersections within the Project site should be promptly removed where such accumulations would impede sightlines.

³*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

Off-Site Improvements

School Street

As part of this project, School Street will be redesigned to function as a two-way roadway. VAI prepared a Conceptual Plan with proposed improvements along School Street. These improvements include installation of ADA-compliant sidewalk and wheelchair ramps, signage, and intersection geometric radius enhancement.

A review of sight distance and vehicle turning movements indicates the reconfiguration can accommodate left-turning movements from Elm Street with a minimum of delay.

CONCLUSIONS

The proposed Project will not result in a significant impact on overall operations and in fact, represents a decrease in vehicle trips during the weekday morning time period from the previous school use. With implementation of the above recommendations, safe and efficient access will be provided to the planned development and the proposed development can be constructed with minimal impact to the area.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate potential traffic impacts associated with the proposed residential development to be located at 12 and 16 School Street in Templeton, Massachusetts (the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing and future traffic conditions, both with and without the Project.

PROJECT DESCRIPTION

The proposed Project entails redevelopment of the former Baldwinville Elementary School property to provide a 54-unit multifamily housing development. This redevelopment includes renovation of the historical school building to accommodate 15 residential units, renovation of an existing single-family house to accommodate 2 apartment units and construction of a new three-story building with 39 apartment units. The site is situated on the east side of School Street and is bounded by residential properties to the north and south and open and wooded areas to the east. On-site parking will be provided for approximately 76 vehicles, including 4 handicap accessible spaces (parking ratio of 1.41 parking spaces per unit). As part of an agreement with the town, the existing 16 parking spaces along School Street will be available for use by this development. Access to the Project site will be provided via two existing driveways off School Street, approximately 162 and 305 feet north of Cottage Street, and one driveway onto Cottage Street approximately 135 feet east of School Street.

As part of the Project, the School Street, which is currently oriented one-way toward north, will be reconstructed and reconfigured to function as a two-way roadway along with the water main replacements that are planned to be done by the Town. The Project location in relation to the surrounding roadway network is depicted on Figure 1.

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Templeton and in accordance with the Massachusetts Department of Transportation (MassDOT) Guidelines for *Transportation Impact Assessment (TIA) Guideline*; and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages.



Figure 1
Site Location Map

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian facilities; observations of traffic flow; review of safety characteristics along area roadways; and collection of daily and peak-period traffic counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project.

A seven-year time horizon was selected for analyses consistent with State guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues. The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of traffic conditions on the study area roadways was conducted in September 2021. The field investigation consisted of an inventory of existing roadway geometrics, pedestrian facilities, traffic volumes, and operating characteristics, as well as posted speed limits and land use information for the roadways that provide access to the Project including Maple Street/Elm Street (Route 68/Route 202) and Baldwinville Road as well as the intersections which are expected to accommodate the majority of Project-related traffic. The study area for the Project is listed below and graphically depicted in Figure 1.

1. Cottage Street with Baldwinville Road
2. Cottage Street with School Street (one-way)
3. Baldwinville Road with Maple Street/Elm Street (Route 68/Route 202)
4. School Street (one-way) with Maple Street/Elm Street (Route 68/Route 202)

The following describes the study area roadway and intersections:

GEOMETRY

Roadways

Maple Street/Elm Street (Route 68/Route 202)

Route 68 connects to Maple Street in an east-west orientation from the southwest and continues north where the roadway name changes to Elm Street (Route 202). In the vicinity of the Project site, Maple Street/Elm Street is a two-lane urban minor arterial under MassDOT and Town jurisdiction and is separated by a painted double-yellow centerline. Maple Street/Elm Street provides an approximate 12- to 18-foot wide travel lane in each direction with an approximate 1- to 3-foot wide shoulder provided along both sides and a 5-foot wide sidewalk along the north side of the roadway. North of School Street, sidewalks are provided on both sides of the roadway. Painted crosswalks are provided across the north leg of the Maple Street/Elm Street intersection at School Street. The posted speed limit along Route 202 is 20 miles per hour (mph) eastbound and 35 mph westbound within the site. Land uses along Maple Street/Elm Street are generally areas of open and wooded space, residential, and commercial properties.

Baldwinville Road

Baldwinville Road is an urban minor arterial street under Town jurisdiction that traverses the study area in a general north-south orientation providing access to the Route 68/Route 202 corridor to the north and Route 2 to the south. In the vicinity of the Project site, Baldwinville Road provides an approximate 12-foot wide travel lane in each direction, separated by a painted double-yellow centerline. An approximate 3- to 5-foot wide paved shoulder is provided along both sides of the roadway. Sidewalks are provided along both sides of Baldwinville Road, with painted crosswalks provided across the main intersections. The posted speed limit along Baldwinville Road in the vicinity of the site is 30 mph. Land use within the study area consists mostly of residential properties.

Intersections

Figure 2 summarizes existing lane use and travel lane widths at the study area intersections as observed in September 2021.

EXISTING TRAFFIC VOLUMES

In order to establish base traffic-volume conditions within the study area, manual turning movement counts (TMCs) were completed on Tuesday, September 28, 2021. The TMCs were conducted during the weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak periods, which represent the peak periods for residential traffic.

Seasonal Adjustment

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, traffic-volume data from MassDOT Continuous Count Station No. 44 located on Mohawk Trail in Worcester was reviewed.⁴ Based on a review of this data, it was determined that traffic volumes for the month of September are approximately 11.0 percent above average-month conditions. Therefore, traffic volumes for September were not adjusted downward in order to provide a conservative analysis condition.

COVID-19 Adjustment

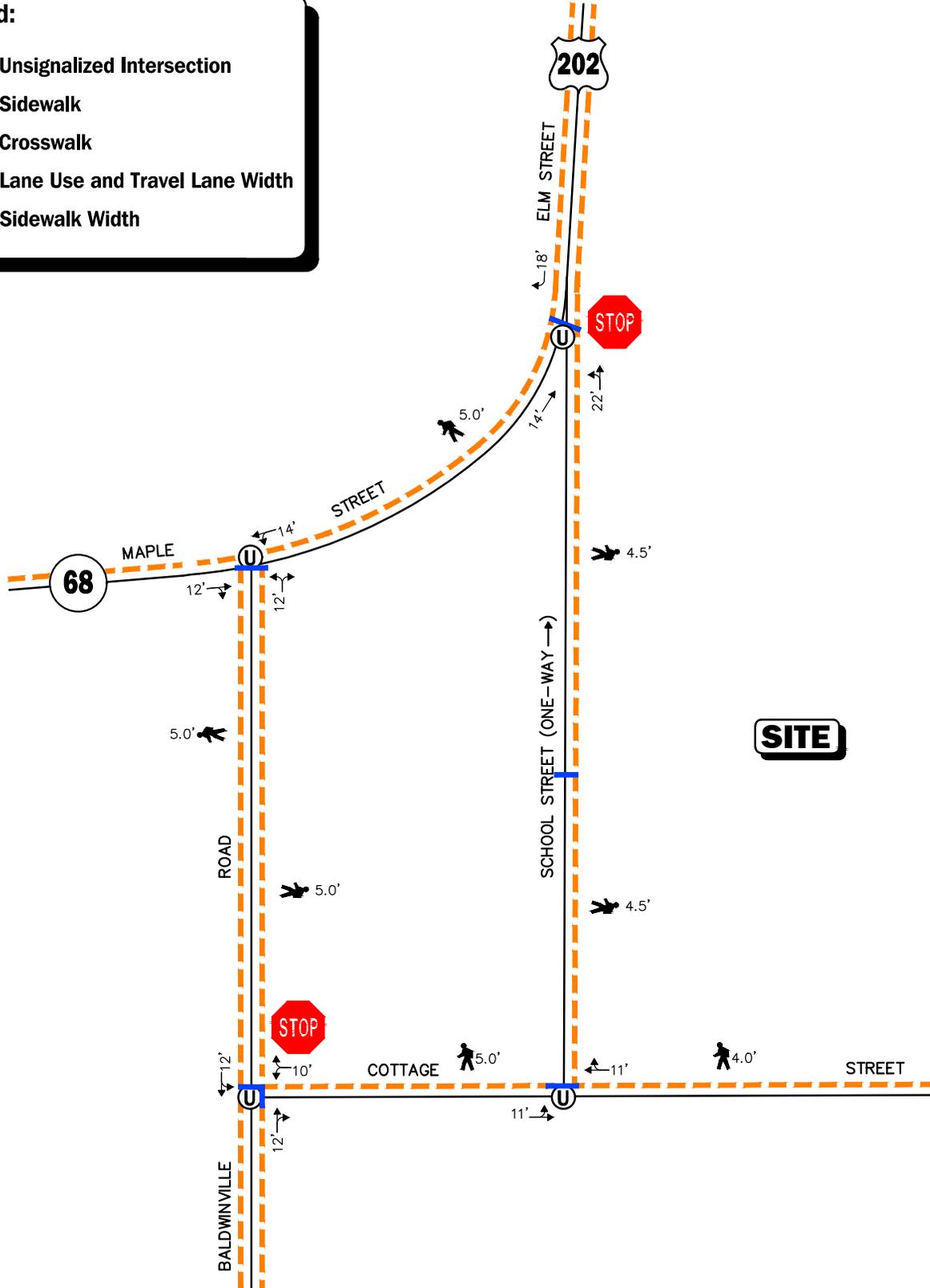
In order to account for the impact on traffic volumes and trip patterns resulting from the COVID-19 pandemic, traffic-volume data from the MassDOT Continuous Count Station Nos. 2012 and 34 located on Route 2 were reviewed.⁵ These count stations provide data available for September 2019 and 2021 which allows for a comparison of the data for pre- and post-COVID-19 pandemic conditions. Therefore, traffic-volume data collected at these count stations in September 2021 was compared to September 2019 traffic volumes that were collected at the same location. The 2019 traffic volumes were expanded to 2021 (same year condition) by applying a background traffic growth rate of 1.5 percent per year (discussion follows) in order to allow for a comparison of the data. Based on this pre- and post-COVID-19 traffic data comparison, the 2021 traffic-volume data that was collected as a part of this assessment were adjusted upward by an average adjustment factor of 10.0 percent, in order to account for the reduced traffic volumes resulting from the phased “Reopening Massachusetts” plan.

⁴MassDOT Traffic Volumes for the Commonwealth of Massachusetts; 2021.

⁵Ibid 4.

Legend:

-  Unsignalized Intersection
-  Sidewalk
-  Crosswalk
-  Lane Use and Travel Lane Width
-  Sidewalk Width



 Not To Scale

Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities



A review of the peak-period traffic counts indicates that the weekday morning peak hour generally occurs between 7:15 and 8:15 AM with the weekday evening peak hour generally occurring between 4:45 and 5:45 PM. The 2021 Existing weekday morning and evening peak-hour traffic volumes are graphically depicted on Figure 3 and Figure 4.

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in September 2021. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study intersections, as well as the location of existing and planned future bicycle facilities. As detailed on Figure 2, sidewalks are generally provided within the study area roadways with painted crosswalks provided on the north leg of the School Street and Elm Street intersection, the south leg of the Baldwinville Road at Maple Street/Elm Street intersection, the north and east legs of the Cottage Road at Baldwinville Road intersection, and the north leg of the Cottage Street at School Street intersection. A crosswalk is provided between the site driveways on School Street. Formal bicycle facilities are not provided within the immediate study area; however, Maple Street/Elm Street and Baldwinville Road generally provide sufficient width (combined travel lane and shoulder) to support bicycle travel in a shared traveled-way configuration (i.e., motor vehicles and bicyclists sharing the roadway).⁶

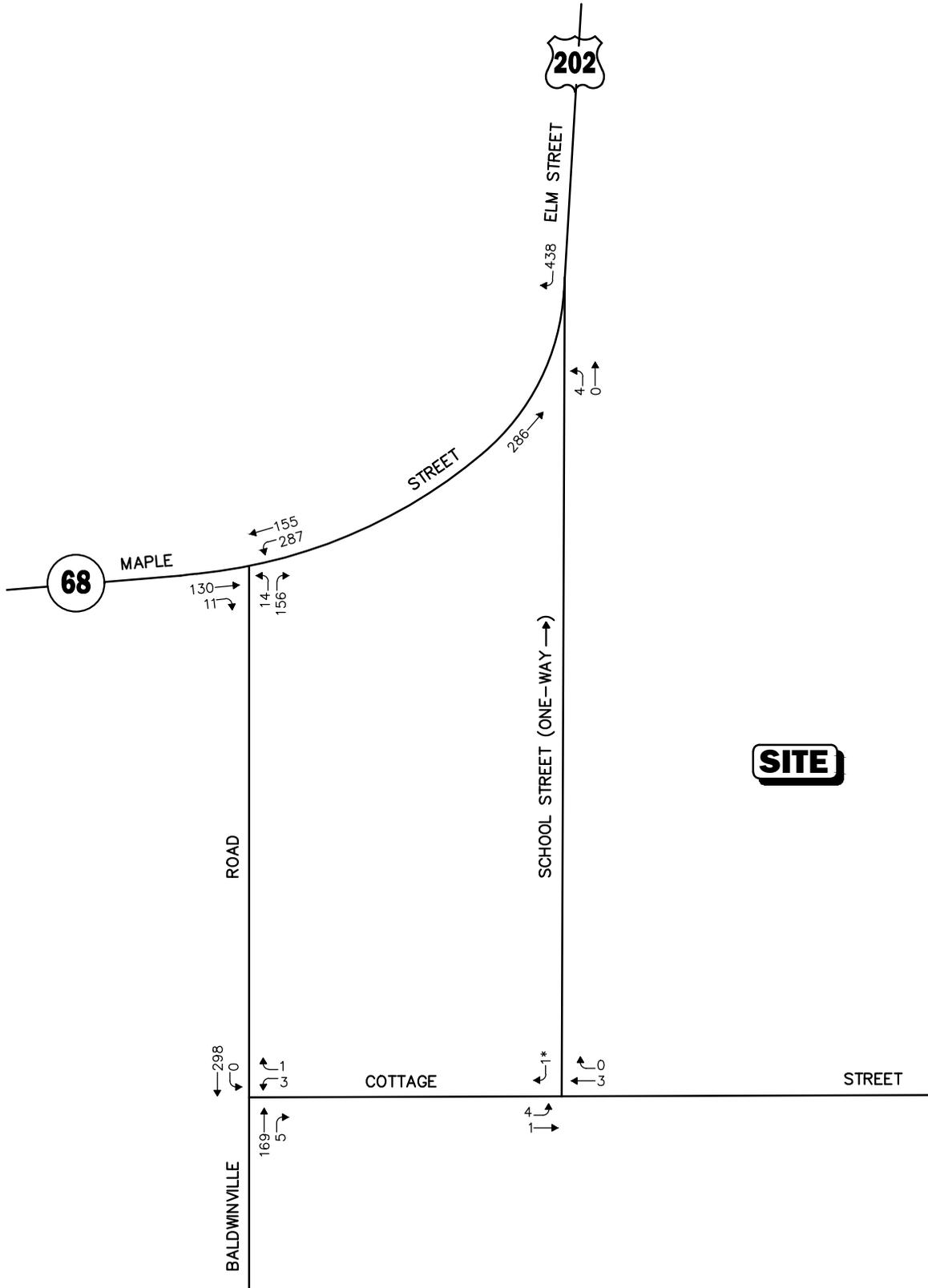
PUBLIC TRANSPORTATION

Public transportation services are not provided within the study area. The closest access to public transportation is provided by the Massachusetts Bay Transportation Authority (MBTA) for commuter rail service located in Wachusett via *Fitchburg Line* and the Montachusett Regional Transit Authority (MART) bus services in Templeton center via *Glink: Gardner/Athol Line*.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2014 through 2018) in order to examine motor vehicle accident trends occurring within the study area. The data is summarized by intersection, type, severity, roadway and weather conditions, and day of occurrence, and presented in Table 1.

⁶A minimum combined travel lane and paved shoulder width of 14 feet is required to support bicycle travel in a shared traveled-way condition.

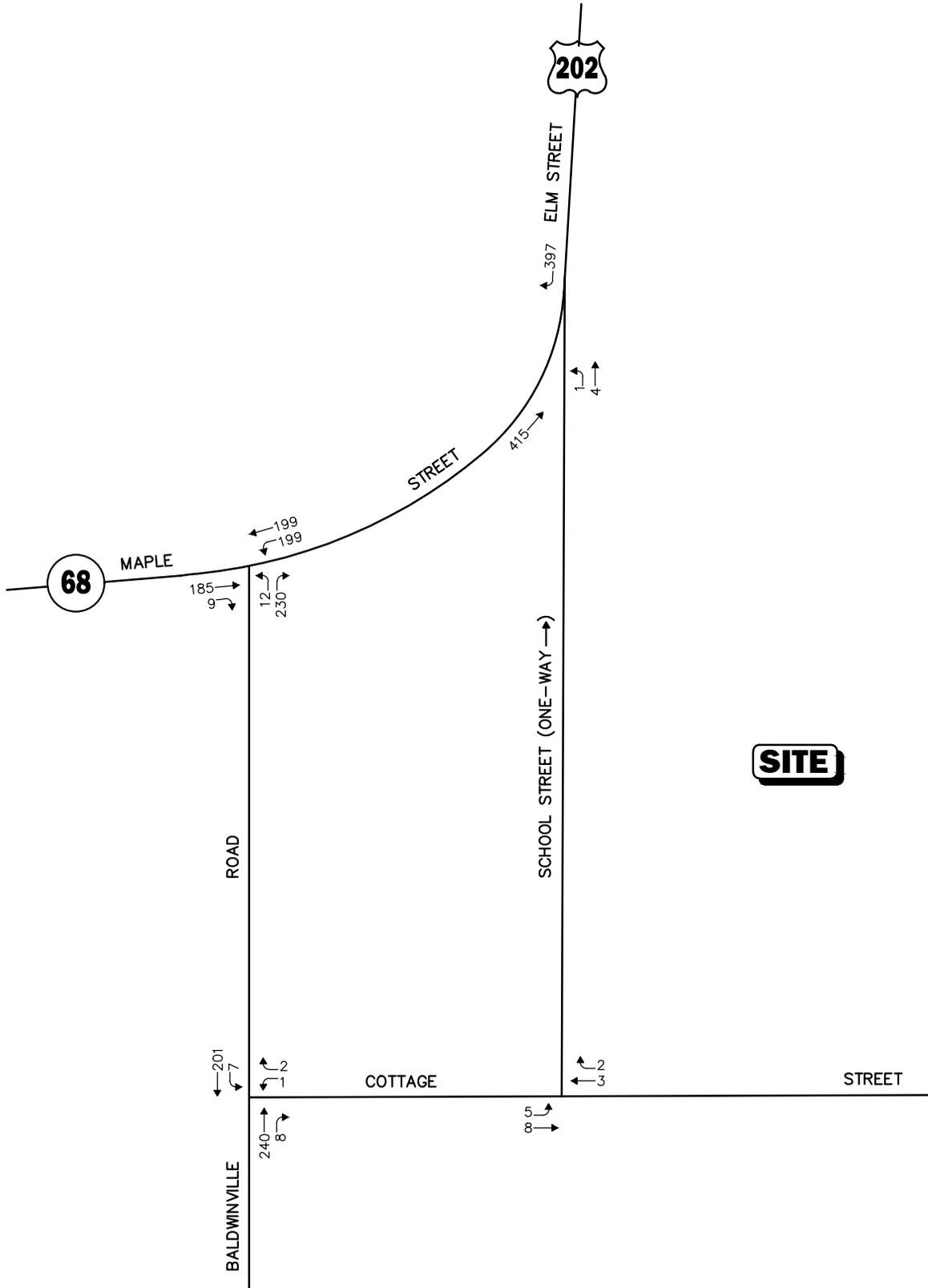


 **Note: *illegal movement**
Not To Scale

Figure 3

**2021 Existing
Weekday Morning
7:15 to 8:15 AM
Peak-Hour Traffic Volumes**





Not To Scale Figure 4



2021 Existing
 Weekday Evening
 4:45 TO 5:45 PM
 Peak-Hour Traffic Volumes

R:\8914\8914NT2.dwg, 12/6/2021 9:29:33 AM

Table 1
MOTOR VEHICLE ACCIDENT DATA SUMMARY^a

Scenario	Cottage Street at Baldwinville Road (Unsignalized)	Maple Street/ Elm Street at Baldwinville Road (Unsignalized)	School Street at Elm Street (Unsignalized)	Cottage Street at Elm Street (Unsignalized)
<i>Year:</i>				
2014	0	0	1	0
2015	0	1	0	0
2016	0	0	0	0
2017	0	1	2	0
<u>2018</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	1	2	3	0
Average ^a	0.20	0.40	0.60	0.00
Crash Rate ^b	0.11	0.12	0.19	0.00
Significant ^c	No	No	No	No
<i>Type:</i>				
Angle	1	0	0	0
Rear-End	0	1	0	0
Head-On	0	0	0	0
Sideswipe	0	0	0	0
Singe Vehicle	0	1	3	0
Pedestrian	0	0	0	0
Bicyclist	0	0	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	1	2	3	0
<i>Weather Conditions:</i>				
Clear	1	1	1	0
Cloudy/Rain	0	1	1	0
Snow/Ice	0	0	1	0
Fog	0	0	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	0	2	3	0
<i>Lighting Conditions:</i>				
Daylight	1	2	2	0
Dawn/Dusk	0	0	0	0
Dark (lit)	0	0	1	0
Dark (unlit)	0	0	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	1	2	3	0
<i>Pavement Conditions :</i>				
Dry	1	0	2	0
Wet	0	1	0	0
Snow/Ice	0	0	1	0
<u>Unknown/Other</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	0	2	3	0
<i>Severity:</i>				
Property Damage Only	1	2	2	0
Personal Injury	0	0	0	0
Fatality	0	0	1	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	1	2	3	0

^aSource: MassDOT, 2014 through 2018.

^bAverage crashes over five-year period.

^cCrash rate per million entering vehicles.

Unsignalized intersections are significant if rate >0.62 crashes per million vehicles (District 2) or if rate >0.57 crashes per million vehicles (Statewide).

As summarized in Table 1, the intersection of Cottage Street at Baldwinville Road experienced 1 accident over the five-year review period, averaging 0.2 accidents per year. The accident was an angle collision and caused property damage only. The intersection of Maple Street/Elm Street at Baldwinville Road experienced a total of 2 crashes, averaging 0.4 accidents per year. These accidents were rear-end and single-vehicle collisions that caused property damage only. No crashes were identified at the intersection of Cottage Street at School Street.

The intersection of School Street at Elm Street experienced a total of 3 crashes, averaging 0.6 accidents per year. These accidents were all single-vehicle crashes that caused 2 property damage only and 1 fatality crash. The fatality crash happened in 2017 under cloudy weather conditions and on dry pavement. The first harmful event of the collision is unknown. The Templeton Police Department was contacted in order to get more details about cause of the incident and updates will be provided once more information is received.

All of the study intersections were found to have a motor vehicle crash rate *below* the MassDOT average for the District in which the Project is located (District 2) and no safety deficiencies were noted with respect to the geometric and operational aspects of the study area intersections.

A review of the MassDOT statewide High Crash Location List indicated that none of the study intersections are included on MassDOT's Highway Safety Improvement Program (HSIP) listing as a high crash location. The detailed MassDOT Crash Rate Worksheets and High Crash Location mapping are provided in the Appendix.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2028, which reflects a seven-year planning horizon consistent with State Traffic Study Guidelines. Independent of the Project, traffic volumes on the roadway network in the year 2028 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon this 2028 No-Build traffic network reflect the 2028 Build conditions with the Project.

FUTURE TRAFFIC GROWTH

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

GENERAL BACKGROUND TRAFFIC GROWTH

Traffic-volume data compiled by MassDOT from Permanent Count Stations in the area were reviewed in order to determine general background traffic growth trends. Based on this data, it was determined that traffic volumes within the study area have fluctuated over the past several years, with the average growth rate found to be approximately 1.43 percent per year. A slightly higher, 1.5 percent per year, compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

SPECIFIC DEVELOPMENT BY OTHERS

The Town of Templeton was contacted in order to determine if there are any planned or approved development projects that are expected to influence future traffic volumes within the study area. Based on these discussions, no other developments are identified at this time that is expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

ROADWAY IMPROVEMENT PROJECTS

The Town of Templeton was contacted to determine if there are any planned roadway improvements in the area that would have an impact on future traffic operations. Based on these discussions, the following project was identified:

School Street Water Main Replacement

This project includes the replacement of a water main along School Street and Baldwinville Road with pedestrian improvements at the intersection of Maple Street/Elm Street at Baldwinville Road. The project is in the design phase and has not yet been scheduled for construction.

No other roadway improvement projects were identified that would affect the study area.

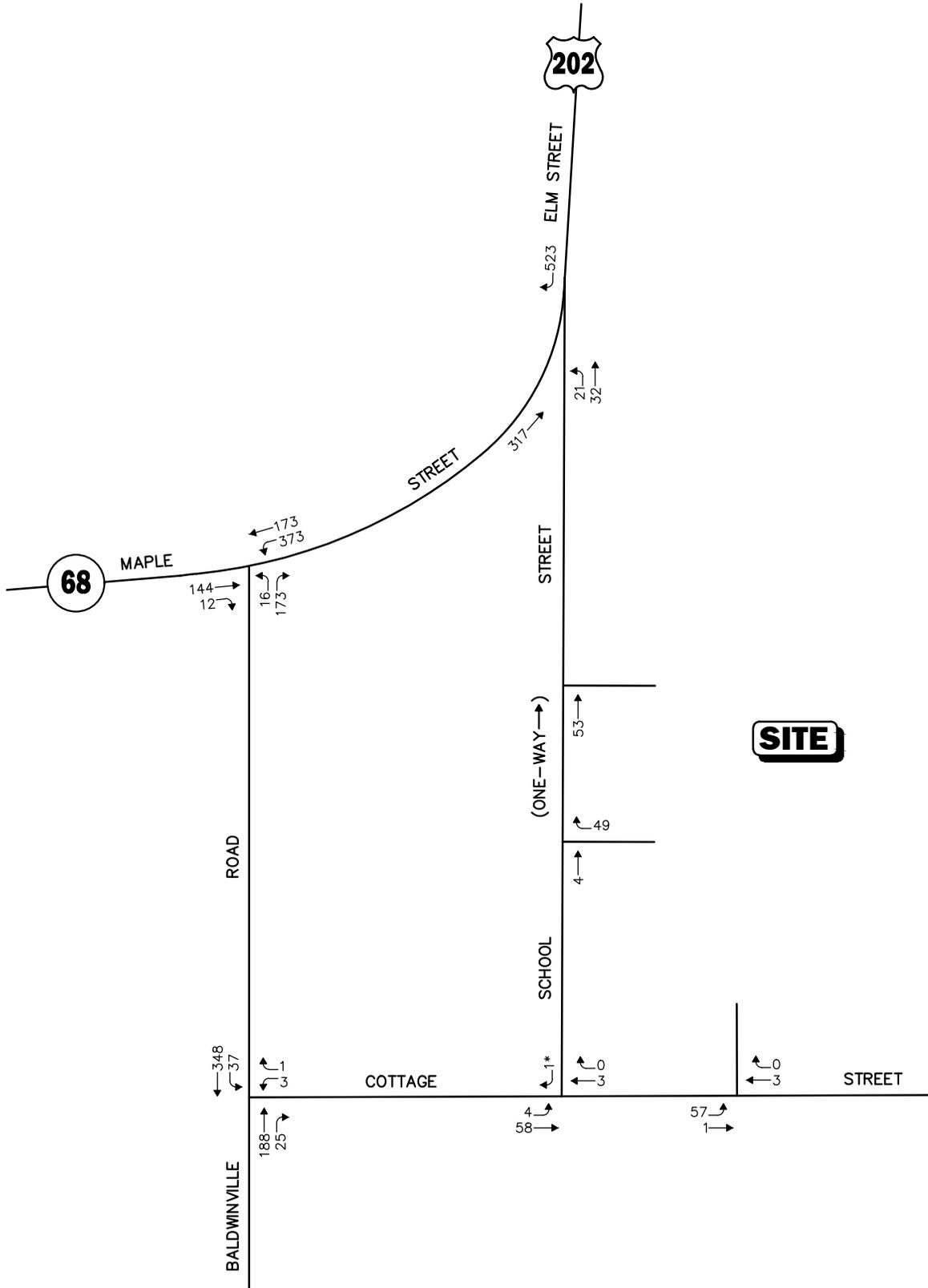
NO-BUILD TRAFFIC VOLUMES

The 2028 No-Build peak-hour traffic-volume networks were developed by applying the 1.5 percent per year compounded annual background traffic growth rate to the 2021 Existing peak-hour traffic volumes then adding the trips associated with the Project previous use as an elementary school in order to show the traffic impact between the previous and proposed Project use (discussion follows). The resulting 2028 No-Build weekday morning and weekday evening peak-hour traffic-volume networks are shown on Figure 5 and Figure 6.

PROJECT-GENERATED TRAFFIC

The proposal entails construction of 54 housing units. In order to develop the anticipated traffic characteristics of the Project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)⁷ were reviewed. ITE Land Use Code (LUC) 220, *Multifamily Housing (Low-Rise)* was used to develop the traffic characteristics of the proposal. A summary of the expected vehicle-trip generation is summarized in Table 2.

⁷Ibid 1.



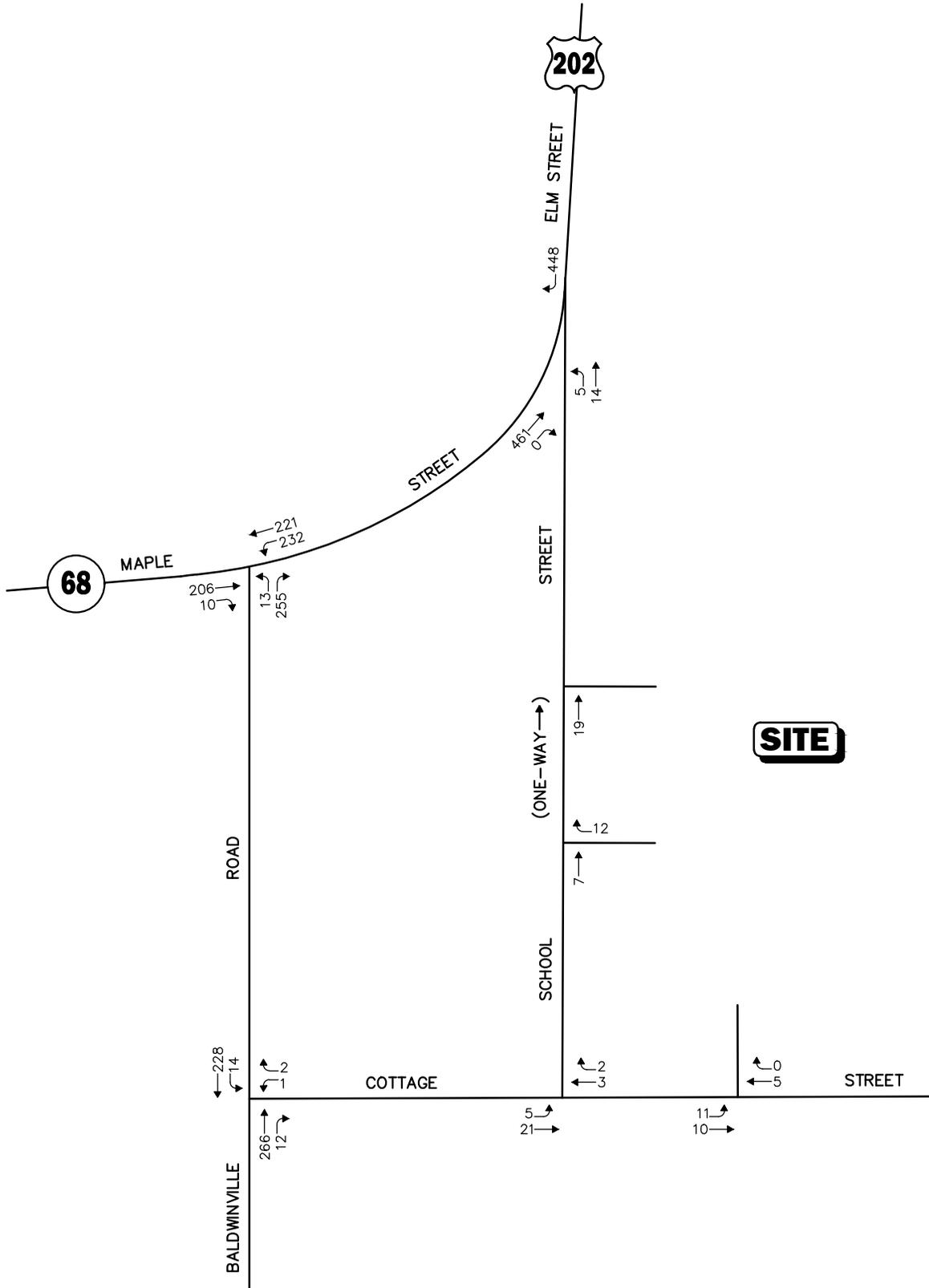
 **Note: *illegal movement**
Not To Scale

Figure 5



**2028 No Build
Weekday Morning
7:15 to 8:15 AM
Peak-Hour Traffic Volumes**

R:\8914\8914NT2.dwg, 12/9/2021 4:36:29 PM



Not To Scale Figure 6



**2028 No Build
Weekday Evening
4:45 to 5:45 PM
Peak-Hour Traffic Volumes**

R:\8914\8914NT2.dwg, 12/9/2021 4:36:08 PM

Table 2
TRIP-GENERATION SUMMARY

Time Period/Direction	Proposed Residential Trips (54 Units) ^a
Weekday Daily	421
<i>Weekday Morning Peak Hour:</i>	
Entering	9
<u>Exiting</u>	<u>31</u>
Total	40
<i>Weekday Evening Peak Hour:</i>	
Entering	28
<u>Exiting</u>	<u>16</u>
Total	44

^aBased on ITE LUC 220, *Multifamily Housing (Low-Rise)*.

As shown in Table 2, the proposed development is expected to generate approximately 421 new vehicle trips on an average weekday (two-way, 24-hour volume), with 40 new vehicle trips (9 entering and 31 exiting) expected during the weekday morning peak hour and 44 new vehicle trips (28 entering and 16 exiting) expected during the weekday evening peak hour.

Previous Elementary School Trip-Generation Estimation

In order to estimate the trips generated by the previous elementary school, ITE LUC 520, *Elementary School* was used. It was assumed that 50 percent of the students walk to school where no other information was available. Table 3 summarizes the elementary school trip generation.

Table 3
SCHOOL TRIP-GENERATION SUMMARY

Time Period/Direction	Previous Elementary School (287 Students) ^a	Walk to School (50%)	Previous Elementary School (287 Students)
Weekday Daily	652	326	326
<i>Weekday Morning Peak Hour:</i>			
Entering	114	57	57
<u>Exiting</u>	<u>98</u>	<u>49</u>	<u>49</u>
Total	212	106	106
<i>Weekday Evening Peak Hour:</i>			
Entering	21	10	11
<u>Exiting</u>	<u>25</u>	<u>13</u>	<u>12</u>
Total	46	23	23

^aBased on ITE LUC 520, *Elementary School*.

As can be seen in Table 3, the previous elementary school generated approximately 326 vehicle trips on a daily basis with 106 vehicle trips (57 entering and 49 exiting) during the weekday morning peak hour and 23 vehicle trips (11 entering and 12 exiting) during weekday evening peak hour. A trip-generation comparison of the proposed Project and the previous elementary school is shown in Table 4 below.

Table 4
TRIP-GENERATION COMPARISON

Time Period/Direction	(A) Previous Elementary School (287 Students) ^a	Proposed Residential Trips (54 Units) ^b	Difference
Weekday Daily	326	421	+95
<i>Weekday Morning Peak Hour:</i>			
Entering	57	9	-48
<u>Exiting</u>	<u>49</u>	<u>31</u>	<u>-18</u>
Total	106	40	-66
<i>Weekday Evening Peak Hour:</i>			
Entering	11	28	+17
<u>Exiting</u>	<u>12</u>	<u>16</u>	<u>+4</u>
Total	23	44	+21

^aFrom Table 2.

^bFrom Table 3.

The Project is expected to generate an increase of approximately 108 vehicles on a daily basis with 66 *fewer* vehicle trips during the weekday morning peak hour and 22 additional vehicle trips during the weekday evening peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of the site-generated trips to and from the proposed development was determined based on a review of the Journey-to-Work data obtained from the United States Census Bureau.⁸ The directional distribution of generated trips to and from the Project site was determined based on a review of Journey-to-Work for persons residing in the Town of Templeton and then refined based on existing traffic patterns within the study area. The general trip distribution for the proposal is summarized in Table 5 and graphically depicted on Figure 7.

**Table 5
TRIP-DISTRIBUTION SUMMARY**

Roadway	Direction (To/From)	Percentage (To/From)
Maple Street (Route 202)	North	40
Elm Street (Route 68)	West	15
<u>Baldwinville Road</u>	South	<u>45</u>
TOTAL		100

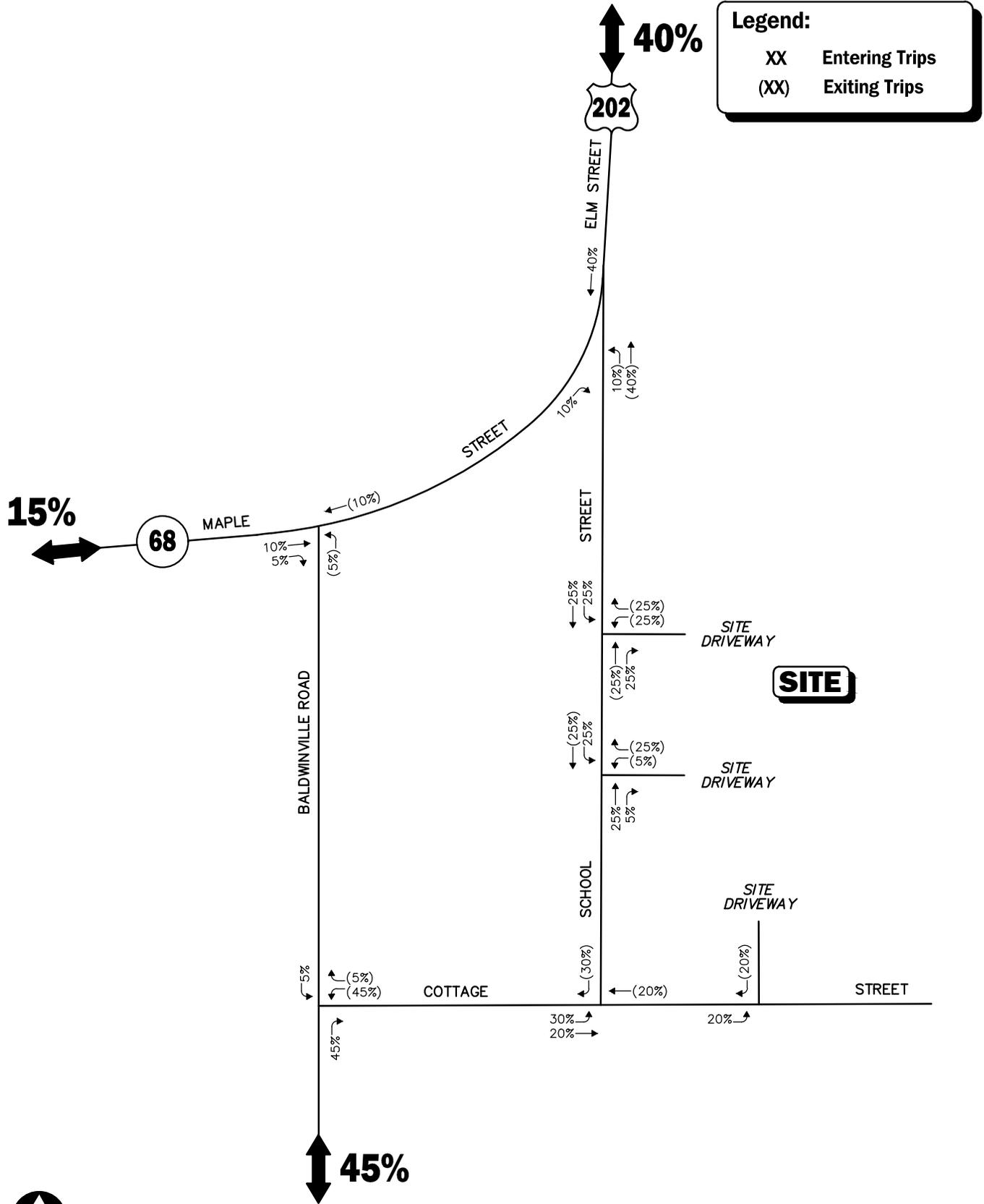
The weekday morning and weekday evening peak-hour traffic volumes expected to be generated by the residential development were assigned on the study area roadway network as shown on Figure 8 and Figure 9.

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

The 2028 Build condition networks consist of 1) removing the previous elementary school traffic from the 2028 No-Build condition traffic volumes; and 2) adding the proposed site-generated traffic. The 2028 Build weekday morning and weekday evening peak-hour traffic-volume networks are graphically depicted on Figure 10 and Figure 11.

A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 6. These volumes are based on the expected increases from the Project.

⁸Ibid 2.



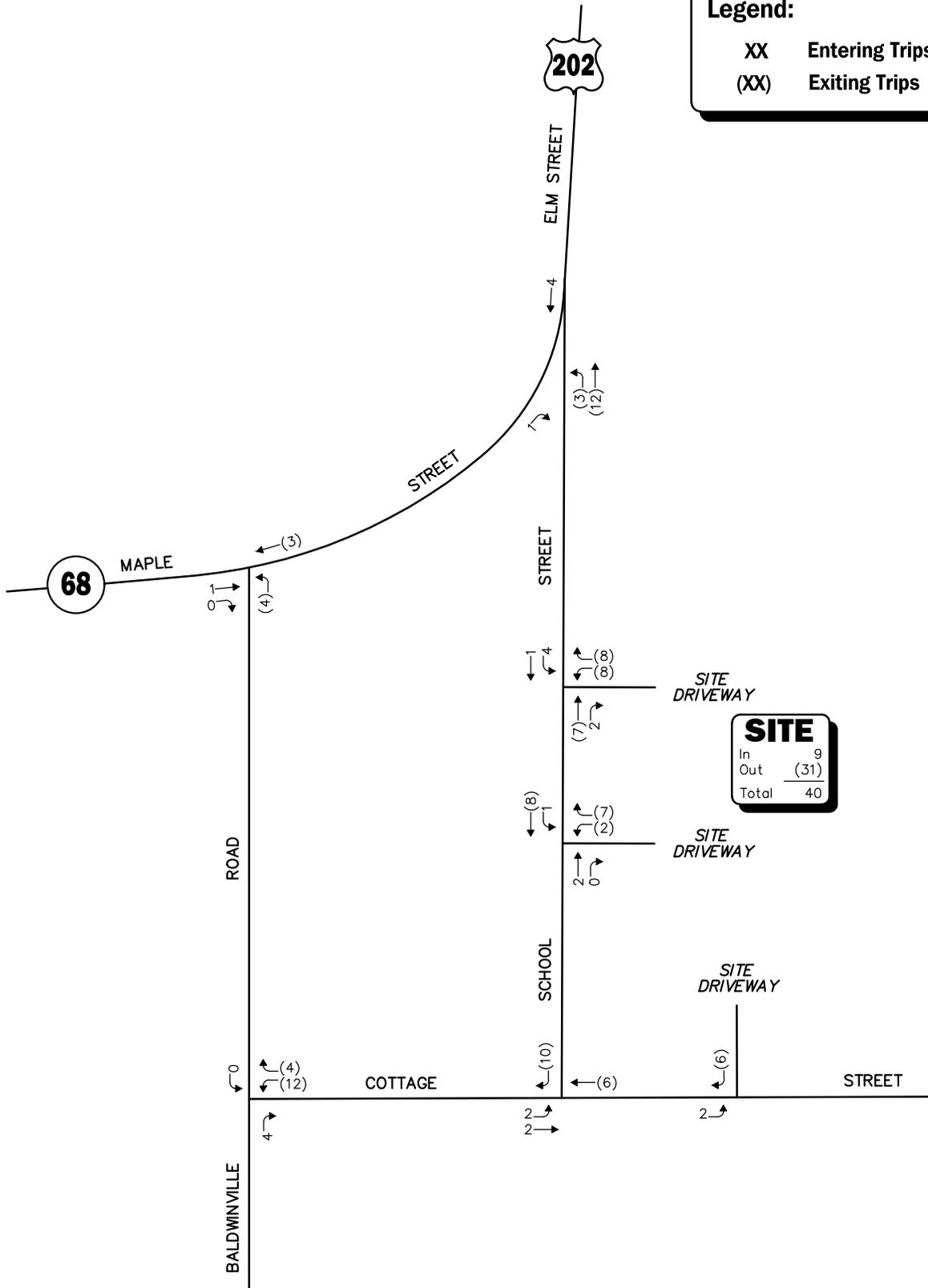
Not To Scale Figure 7

Trip Distribution



R:\8914\8914NT2.dwg, 12/9/2021 4:34:28 PM

Legend:
 XX Entering Trips
 (XX) Exiting Trips



Not To Scale **Figure 8**

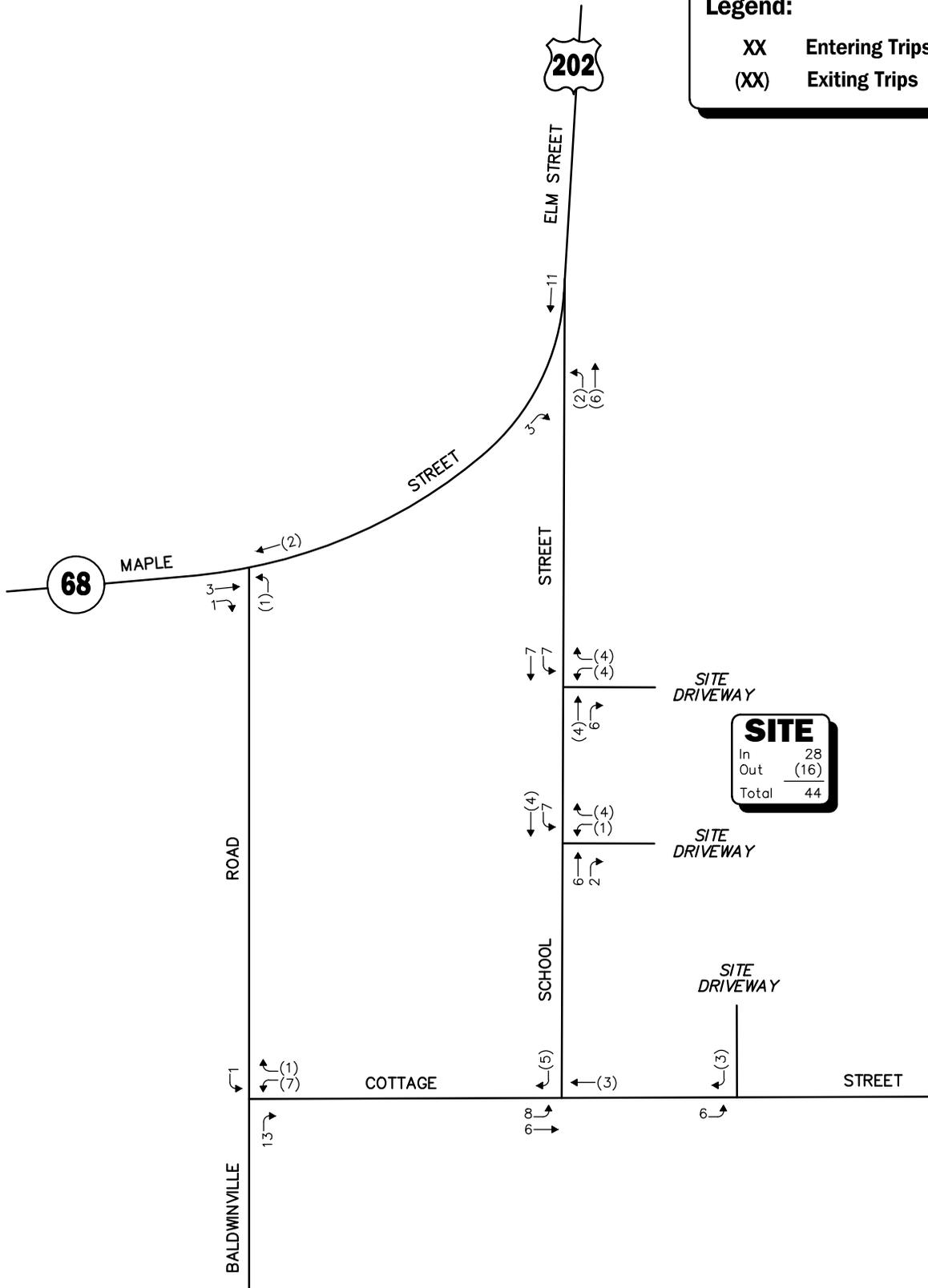


**Project Generated
 Weekday Morning
 Peak-Hour Traffic Volumes**

R:\8914\8914NT2.dwg, 12/9/2021 4:34:17 PM

Legend:

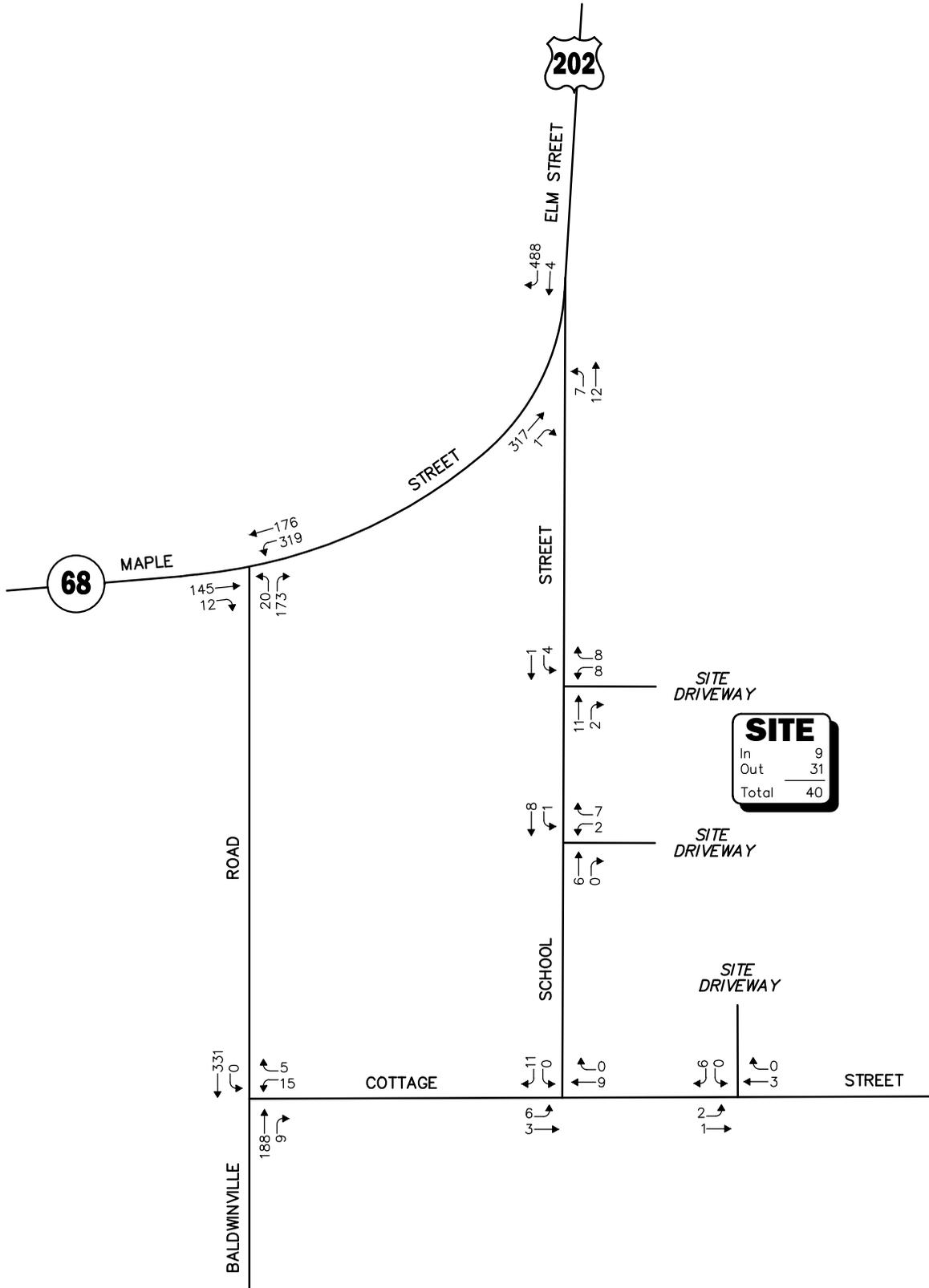
- XX Entering Trips
- (XX) Exiting Trips



Not To Scale **Figure 9**



**Project Generated
Weekday Evening
Peak-Hour Traffic Volumes**

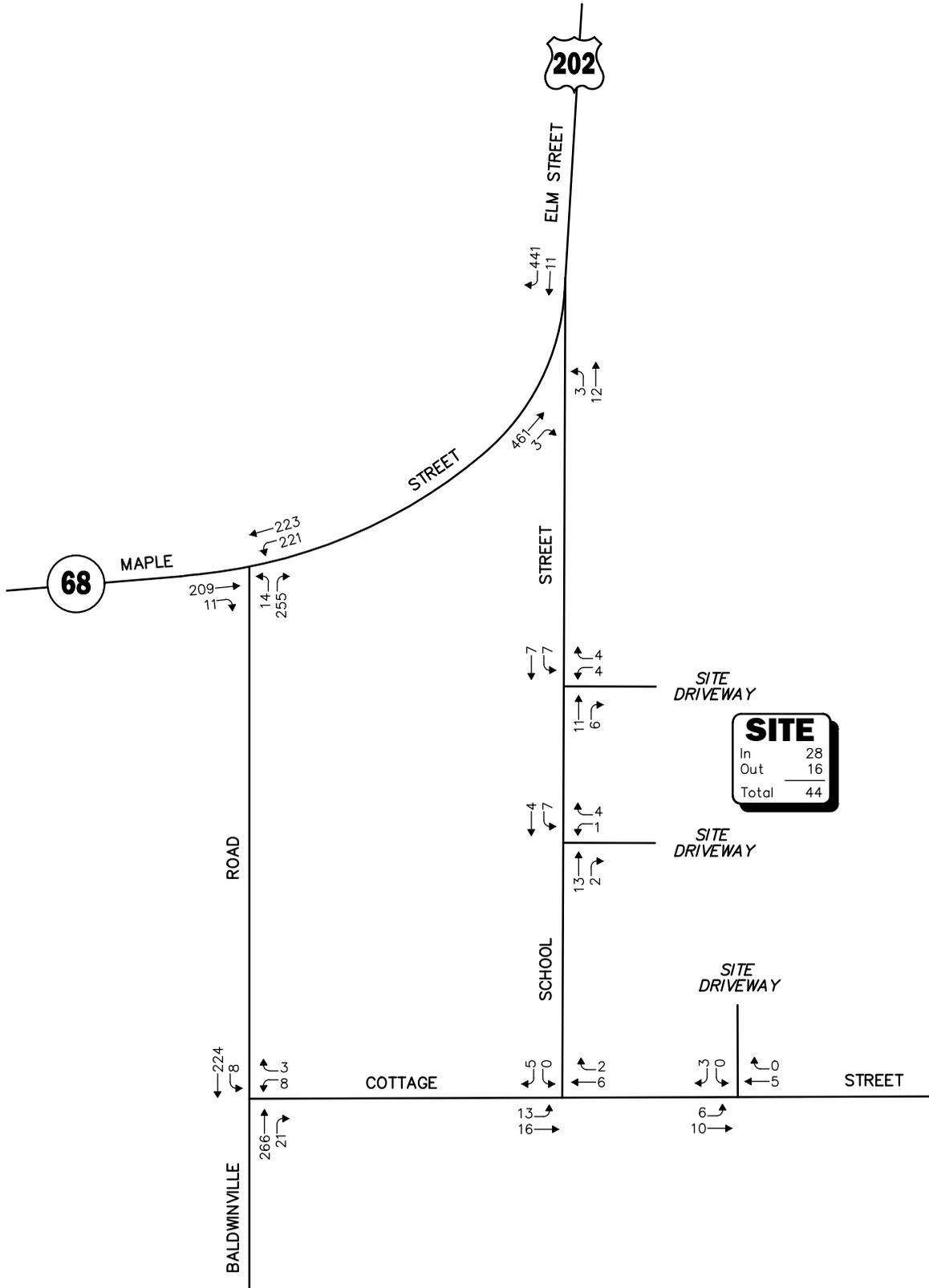


Not To Scale



Figure 10
2028 Build
Weekday Morning
7:15 to 8:15 AM
Peak-Hour Traffic Volumes

R:\8914\8914NT2.dwg, 12/9/2021 4:33:53 PM



Not To Scale **Figure 11**



**2028 Build
 Weekday Evening
 4:45 to 5:45 PM
 Peak-Hour Traffic Volumes**

Table 6
PEAK-HOUR TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2028 No Build	2028 Build	Traffic-Volume Increase Over No-Build	Percent Increase/Decrease Over No-Build
<i>Elm Street, north of School Street:</i>				
Weekday Morning	872	819	-53	-6.1
Weekday Evening	923	925	2	0.2
<i>Maple Street, west of Baldwinville Road:</i>				
Weekday Morning	345	353	8	2.3
Weekday Evening	450	457	7	1.6
<i>Baldwinville Road, south of Cottage Street:</i>				
Weekday Morning	564	543	-21	-3.7
Weekday Evening	507	519	12	2.4

As shown in Table 6, Project-related traffic-volume increases within the study area relative to 2028 No-Build conditions are anticipated to range from -6.1 to 2.4 percent during the peak periods, with vehicle increases shown to range from -53 to 12 vehicles. *When distributed over the peak hour, the predicted traffic-volume increases would not result in a significant impact (increase) on motorist delays or vehicle queuing within of the immediate study area that is the subject of this assessment.*

PARKING

A parking demand analysis was performed for the Project using data provided by ITE for multifamily housing. The ITE parking data is based on observations that have been conducted at specific land uses as a guide to determine the adequacy of parking to support a specific land use or uses under study. Table 7 summarizes the ITE parking demand data for multifamily housing.

Table 7
WEEKDAY PEAK-PARKING DEMAND

Peak Period Parking Demand Per Units ^a	Spaces	
Weekday/Saturday (Average Rate)	Average Required Parking	Proposed Parking Supply
1.21/1.31	68/73	76

^aITE Parking Generation Manual LUC 220, multifamily housing (low-rise).

As can be seen in Table 7, the average peak-parking demand rate on a weekday and Saturday was shown to be 1.21 and 1.31 parking spaces per unit. Applying the ITE parking demands to Project total units (54 units) results in a parking demand of 65 and 71 parking spaces, therefore, the proposed parking supply of 76 spaces is higher than the range of values documented by ITE for similar uses. It is important to note that as part of an agreement with the town, the existing 16 parking spaces along School Street will be available for use by this development.

SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the Project site driveway intersections with School Street and Cottage Street in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)⁹ requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. Please note that the vehicle travel speed measurements were not performed due to the low traffic volumes and; therefore, the statutory or “prima facie” speed limit of 30 mph was used in sight distance evaluations. ***In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner.*** Table 8 presents the measured SSD and ISD at the site driveway intersections.

⁹*A Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

Table 8
SIGHT DISTANCE MEASUREMENTS^a

Intersection/Sight Distance Measurement	Distances (Feet)	
	Required Minimum	Measured
<i>School Street at North Site Driveway</i>		
<i>Stopping Sight Distance:</i>		
School Street approaching from the north	200	278
School Street approaching from the south	200	248
<i>Intersection Sight Distance:</i>		
Looking to the north from the North Site Driveway	335	278
Looking to the south from the North Site Driveway	335	300
<i>School Street at South Site Driveway</i>		
<i>Stopping Sight Distance:</i>		
School Street approaching from the north	200	258
School Street approaching from the south	200	145 ^c
<i>Intersection Sight Distance:</i>		
Looking to the north from the South Site Driveway	335	332
Looking to the south from the South Site Driveway	335	78/145 ^d
<i>Cottage Street at Site Driveway</i>		
<i>Stopping Sight Distance:</i>		
Cottage Street approaching from the east	200	258
Cottage Street approaching from the west	200	333
<i>Intersection Sight Distance:</i>		
Looking to the east from the Site Driveway	335	258
Looking to the west from the Site Driveway	335	405

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018 and based on Prima facie speed of 30 mph

^bValues shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

^cMeasured Cottage Street at School Street intersection terminus to south site driveway.

^dMeasured from south site driveway to Cottage Street at School Street intersection terminus and with trimming the vegetation situated within the sight triangle.

As can be seen in Table 8, the sight distance at the north site driveway intersection with School Street and site driveway intersection with Cottage Street was found to exceed the recommended minimum sight distances to operate in a safe manner based on the vehicle travel speed of 30 mph.

Due to the short segment of Cottage Street between School Street and the south site driveway, the sight distance is limited to 145 feet, which is lower than the minimum requirement. However, this short segment would limit the actual travel speed along School Street in this area. Clear lines of sight are provided to/from Cottage Street for vehicles exiting the site driveway, and motorists traveling north and south on School Street would be able to react to vehicles exiting the driveway.

In addition, a sight distance measurement was performed at the intersection of School Street at Elm Street and Maple Street. The design speed was estimated based on the measurements that was performed for SSD and ISD which are summarized in Table 9 below.

**Table 9
DESIGN SPEED AND SIGHT DISTANCE MEASUREMENTS^a**

Intersection/Sight Distance Measurement	Measured Distance (Feet)	Equivalent Design Speed (mph)
<i>School Street at Elm Street and Maple Street</i>		
<i>Stopping Sight Distance:</i>		
Elm Street approaching from the east	500+	55
Maple Street approaching from the west	271	37
<i>Intersection Sight Distance:</i>		
Looking to the east from School Street	500+	55
Looking to the west from School Street	283	38

^aBased on AASHTO; and posted speed limit of 20 and 35 mph on Maple Street eastbound and westbound directions, respectively.

As can be seen in Table 9, the sight distances at the School Street intersection with Elm Street and Maple Street were found to be sufficient for design speeds of 55 and 37 mph for approaching School Street from the east and west (SSD), and for design speed of 55 and 38 mph looking east and west from School Street (ISD). Both SSD and ISD were shown to be provided for speeds that are higher than the posted speed limit on Elm Street and Maple Street (20 and 35 mph); therefore, the proposed reconfiguration of School Street to accommodate left turns from Elm Street can operate with adequate visibility and should operate in a safe manner.

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level-of-service to traffic facilities under various traffic-flow conditions.¹⁰ The concept of level-of-service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing congested or constrained operating conditions.

Since the level-of-service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

¹⁰The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the *2016 Highway Capacity Manual (HCM) 6th Edition*.¹¹ Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the HCM 6th Edition. Table 10 summarizes the relationship between level of service and average control delay for two-way STOP-controlled and all-way STOP-controlled intersections.

Table 10
LEVEL-OF-SERVICE CRITERIA FOR
UNSIGNALIZED INTERSECTIONS^a

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
$v/c \leq 1.0$	$v/c > 1.0$	
A	F	≤ 10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	> 50.0

^aSource: *Highway Capacity Manual 6th Edition*; Transportation Research Board; Washington, DC; 2016; page 20-6.

¹¹*Highway Capacity Manual 6th Edition*; Transportation Research Board; Washington, DC; 2016.

ANALYSIS RESULTS

Level-of-service and vehicle queue analyses were conducted for 2021 Existing, 2028 No-Build, and 2028 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized for unsignalized intersections in Table 11 with the detailed analysis results presented in the Appendix. The following is a summary of the level-of-service and delay analyses for the intersections within the study area:

It should be noted that some movements were shown to experience level of service and queuing improvements under Build conditions which occurred as a result of the reduction in site traffic associated with changing the Project use from an elementary school to a residential development.

Unsignalized Intersections

Maple Street/Elm Street at School Street

Under existing and No-Build conditions and prior to being reconstructed as a two-way roadway, the movements exiting School Street at this unsignalized intersection were shown to operate at LOS B during the weekday morning and weekday evening peak hours. With reconstruction of School Street to function as a two-way street under Build conditions, no reduction in LOS were shown to occur for critical movements exiting School Street with left-turn movements from Elm Street onto School Street projected to operate at LOS A.

Cottage Street at School Street

Under all conditions, the movements at this unsignalized intersection will operate at an overall LOS A during the weekday morning and weekday evening peak hours. It is noteworthy that the level of service remains the same under the future No-Build and Build conditions. The Project impact on queues and delays will be minimal.

Cottage Street at Baldwinville Road

Under all conditions, the movements at this unsignalized intersection will operate at an overall LOS C or better during the weekday morning and weekday evening peak hours. It is noteworthy that the level of service improves or remains the same going from the future No-Build to the future Build conditions as a result of the redevelopment of the school facility.

Baldwinville Road at Maple Street/Elm Street

Under Existing and 2028 No-Build conditions, the critical movements at this unsignalized intersection will operate at an overall LOS C or better during the weekday morning peak hour and weekday evening peak hours. Under 2028 Build conditions, the critical movements at this intersection will operate at an overall LOS C or better during the weekday morning peak hour and at an overall LOS B during weekday evening peak hour. The Project impact on queues and delays will be minimal.

School Street at Site Driveways

Under future conditions, site driveway intersections with School Street and Cottage Street are predicted to operate at an overall LOS A during the peak periods with negligible vehicle queuing expected.

Table 11
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/ Peak Hour/Movement	2021 Existing				2028 No-Build				2028 Build			
	Demand ^a	Delay ^b	LOS ^c	Queue 95 th Percentile ^d	Demand	Delay	LOS	Queue 95 th Percentile	Demand	Delay	LOS	Queue 95 th Percentile
<i>Elm Street at School Street and Maple Street</i>												
<i>Weekday Morning:</i>												
School Street NB LT	4	10.8	B	0.0	21	12.5	B	0.7	7	13.7	B	0.1
Elm Street SB LT ^e	--	--	--	--	--	--	--	--	4	8.0	A	0.0
<i>Weekday Evening:</i>												
School Street NB LT	1	10.0	B	0.0	5	10.4	B	0.1	3	13.0	B	0.1
Elm Street SB LT	--	--	--	--	--	--	--	--	11	8.4	A	0.0
<i>Cottage Street at School Street</i>												
<i>Weekday Morning:</i>												
Cottage Street EB LT	4	7.9	A	0.0	4	7.9	A	0.0	6	8.0	A	0.0
<i>Weekday Evening:</i>												
Cottage Street EB LT	15	7.2	A	0.0	5	7.2	A	0.0	13	7.3	A	0.0
<i>Cottage Street at Baldwinville Road</i>												
<i>Weekday Morning:</i>												
Cottage Street WB LT	3	12.1	B	0.1	3	14.6	B	0.6	15	13.8	B	0.5
Baldwinville Road SB LT	0	0.0	A	0.0	37	7.9	A	0.1	0	0.0	A	0.0
<i>Weekday Evening:</i>												
Cottage Street WB LT	1	10.7	B	0.1	1	11.1	B	0.1	8	13.1	B	0.3
Baldwinville Road SB LT	7	7.7	A	0.0	14	7.8	A	0.0	8	7.8	A	0.0
<i>Baldwinville Road at Maple Street</i>												
<i>Weekday Morning:</i>												
Maple Street/Elm Street WB LT	287	8.4	A	1.0	373	8.8	A	1.5	319	8.6	A	1.2
Baldwinville Road NB LT	14	13.0	B	1.4	16	16.7	C	2.2	20	16.2	C	2.2
<i>Weekday Evening:</i>												
Maple Street/Elm Street WB LT	199	8.3	A	0.7	232	8.5	A	0.9	221	8.5	A	0.8
Baldwinville Road NB LT	12	12.6	B	1.6	13	14.1	B	2.1	14	14.2	B	2.2

See notes at end of table.

Table 11 (Continued)
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/ Peak Hour/Movement	2021 Existing				2028 No-Build				2028 Build			
	Demand ^a	Delay ^b	LOS ^c	Queue 95 th Percentile ^d	Demand	Delay	LOS	Queue 95 th Percentile	Demand	Delay	LOS	Queue 95 th Percentile
School Street at North Site Driveway												
<i>Weekday Morning:</i>												
North Site Driveway WB LT	--	--	--	--	--	--	--	--	8	8.6	A	0.1
School Street SB LT	--	--	--	--	--	--	--	--	4	7.2	A	0.0
<i>Weekday Evening:</i>												
North Site Driveway WB LT	--	--	--	--	--	--	--	--	4	8.6	A	0.0
School Street SB LT	--	--	--	--	--	--	--	--	7	7.3	A	0.0
School Street at South Site Driveway												
<i>Weekday Morning:</i>												
South Site Driveway WB LT	--	--	--	--	--	--	--	--	2	8.4	A	0.0
South Site Driveway WB RT	--	--	--	--	49	8.5	A	0.2	7	8.4	A	0.0
School Street SB LT	--	--	--	--	--	--	--	--	1	7.2	A	0.0
<i>Weekday Evening:</i>												
South Site Driveway WB LT	--	--	--	--	--	--	--	--	1	8.5	A	0.0
South Site Driveway WB RT	--	--	--	--	12	8.4	A	0.0	4	8.5	A	0.0
School Street SB LT	--	--	--	--	--	--	--	--	7	7.3	A	0.0
Cottage Street at Site Driveway												
<i>Weekday Morning:</i>												
Cottage Street EB LT	--	--	--	--	57	7.3	A	0.1	2	7.2	A	0.0
Site Driveway SB RT	--	--	--	--	0	0.0	A	0.0	6	8.4	A	0.0
<i>Weekday Evening:</i>												
Cottage Street EB LT	--	--	--	--	11	7.2	A	0.0	6	7.2	A	0.0
Site Driveway SB RT	--	--	--	--	0	0.0	A	0.0	3	8.4	A	0.0

^aDemand in vehicles per hour.

^bControl delay per vehicle in seconds.

^cLevel of service.

^dQueue length in vehicles.

^eSchool Street is one-way, towards north direction, under existing conditions.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

CONCLUSIONS AND RECOMMENDATIONS

VAI has prepared this TIA in order to evaluate potential traffic impacts associated with the proposed residential development to be located on the site of the former Baldwin Elementary School at 12 and 16 School Street in Templeton, Massachusetts. This study was prepared in accordance with the MassDOT Guidelines for *Transportation Impact Assessment (TIA) Guidelines*; and was conducted pursuant to the standards of the Traffic Engineering and Transportation Planning Professions for the preparation of such reports. Based on the results of this study, the following can be concluded:

- Based on trip-generation statistics published by ITE, the proposed Project is expected to generate approximately 421 new vehicle trips on an average weekday (two-way, 24-hour volume), with 40 new vehicle trips (9 entering and 31 exiting) expected during the weekday morning peak hour and 44 new vehicle trips (28 entering and 16 exiting) expected during the weekday evening peak hour. This represents a decrease during the morning time period when compared with the previous school facility, with the proposed Project resulting in 66 fewer trips than the school would generate.
- The analysis has indicated that the Project will result in minimal impact on motorist delays at the study intersections, as compared to future No-Build conditions; and
- The Project is expected to result in decreases of as low as -6.1 percent and increases of up to 2.4 percent when compared with peak-hour traffic volumes of the former school facility.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the following recommendations.

RECOMMENDATIONS

The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

Project Access

Access and egress to the Project site will continue to be provided by two full-access driveways onto School Street and one full-access driveway onto Cottage Street. The following recommendations are offered with respect to Project access, internal circulation, and parking, many of which are already reflected on the Site Plans for the Project:

- The Project site driveways should be designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Templeton Fire Department.
- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices (MUTCD)*.¹²
- Americans with Disabilities Act (ADA)-compliant wheelchair ramps should be provided at all pedestrian crossings internal to the Project site and for crossing the Project site driveways.
- Crosswalks across the Project driveways should be positioned to be consistent with the existing sidewalk on School Street and Cottage Street.
- Signs and landscaping to be installed as a part of the Project within intersection sight triangle areas of the Project site driveways should be designed and maintained so as not to restrict lines of sight.
- Snow windrows within the sight triangle areas of the Project site driveways and at intersections within the Project site should be promptly removed where such accumulations would impede sightlines.

Off-Site Improvements

School Street

As part of this Project, School Street will be redesigned to function as a two-way roadway. VAI prepared a Conceptual Plan with proposed improvements along School Street. These improvements include installation of ADA-compliant sidewalk and wheelchair ramps, signage, and intersection geometric radius enhancement.

A review of sight distance and vehicle turning movements indicated the reconfiguration can accommodate left-turning movements from Elm Street with a minimum of delay. Figure 12 graphically depicts the recommended modifications to accommodate two-way flow on School Street.

With implementation of the above recommendations, safe and efficient vehicular, pedestrian, and bicycle access will be provided to the Project site and the Project can be accommodated within the confines of the existing and improved transportation system.

¹²Ibid 2.

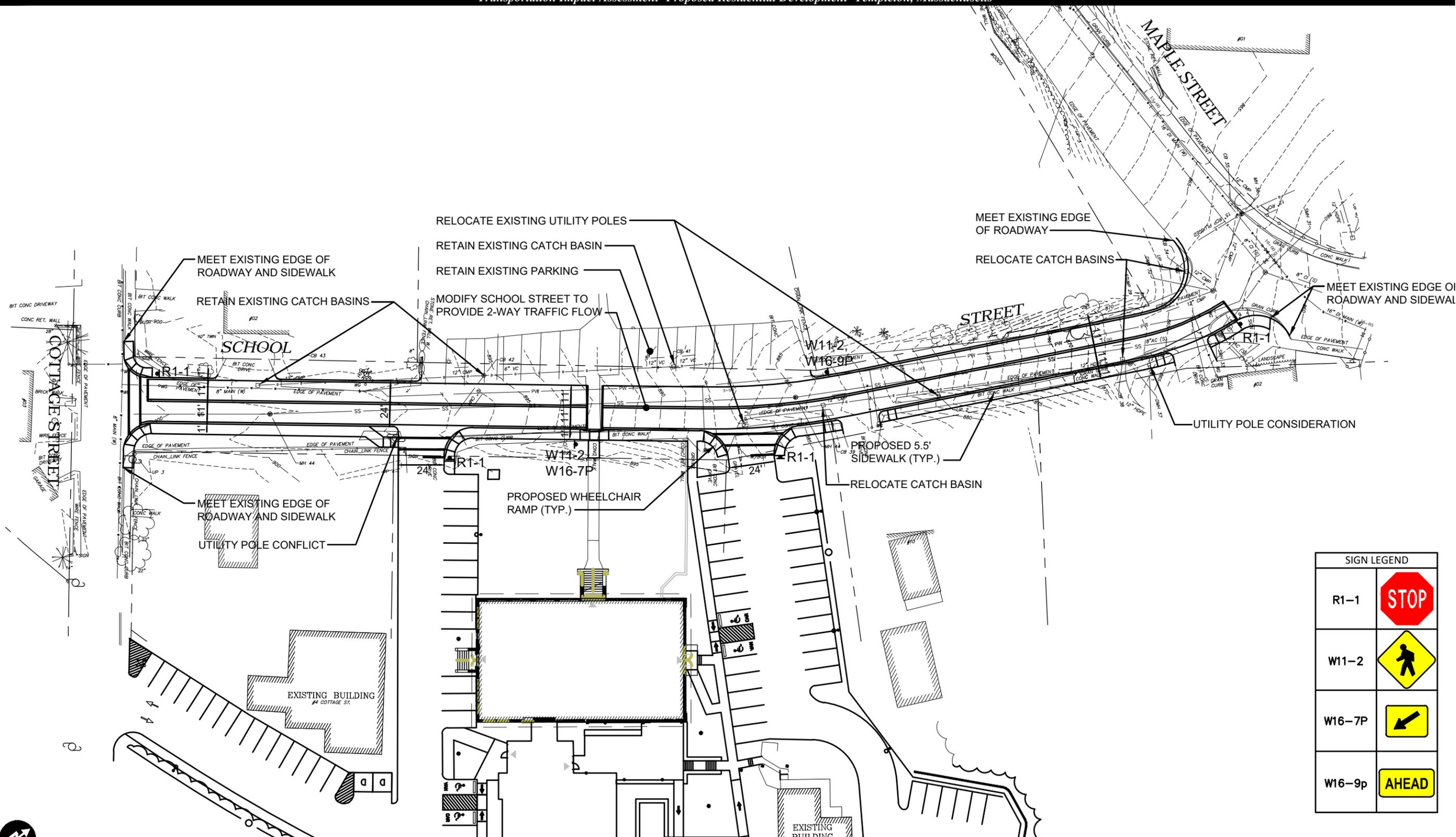


Figure 12
Conceptual Improvement Plan
Two-Way Reconfiguration of
School Street

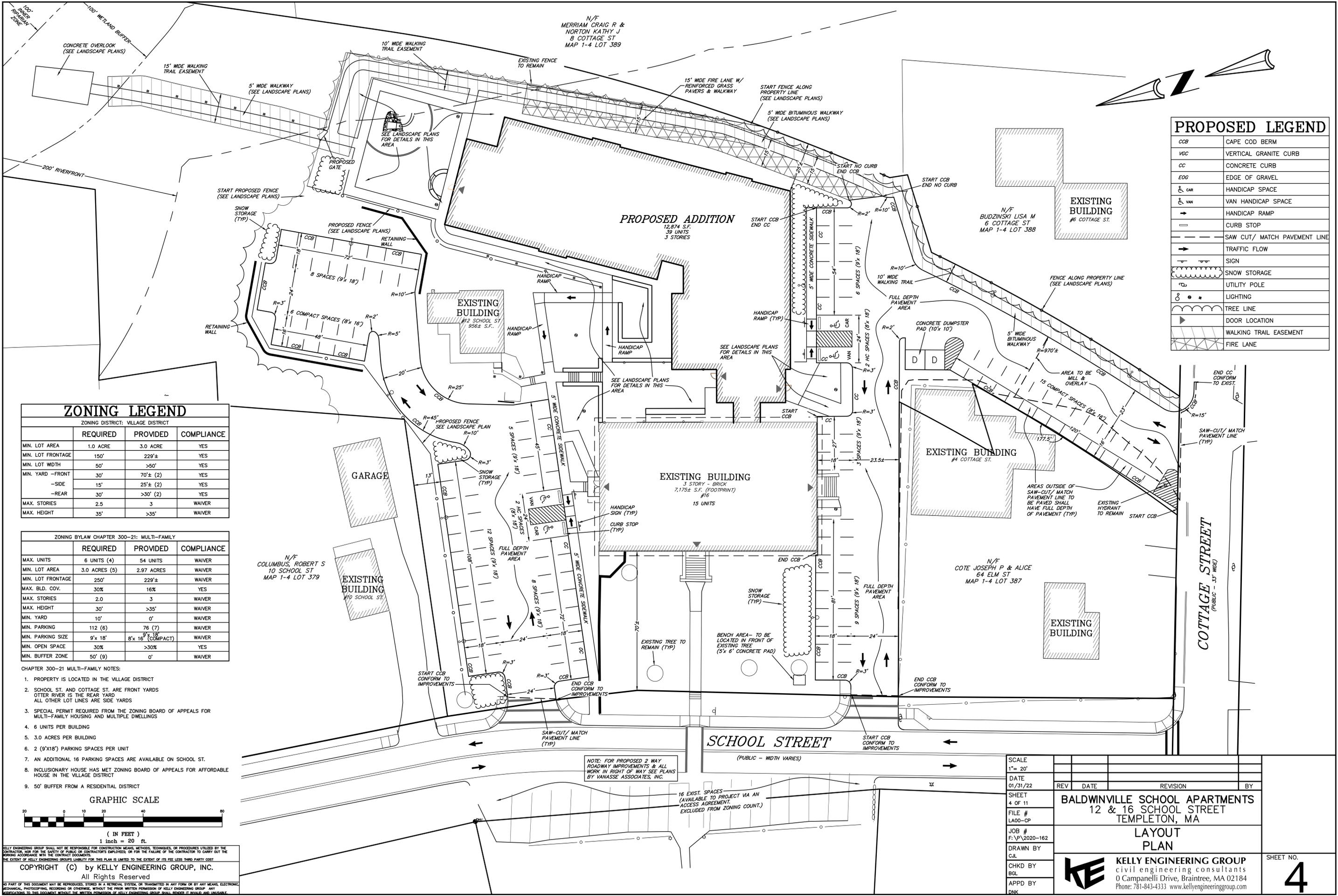
CONCLUSIONS

The proposed Project will not result in a significant impact on overall operations and in fact represents a decrease in vehicle trips during the weekday morning time period from the previous school use. With implementation of the above recommendations, safe and efficient access will be provided to the planned development and the proposed development can be constructed with minimal impact to the area.

APPENDIX

PROJECT SITE PLAN
MANUAL TURNING MOVEMENT COUNT DATA
SEASONAL AND COVID ADJUSTMENT DATA
CRASH DATA
MASSDOT CRASH RATE WORKSHEETS
GENERAL BACKGROUND TRAFFIC GROWTH
ELEMENTARY SCHOOL NETWORKS
TRIP-GENERATION CALCULATIONS
TRIP-DISTRIBUTION CALCULATIONS
CAPACITY ANALYSIS WORKSHEETS

PROJECT SITE PLAN



PROPOSED LEGEND

CCB	CAPE COD BERM
VGC	VERTICAL GRANITE CURB
CC	CONCRETE CURB
EOG	EDGE OF GRAVEL
♿ CAR	HANDICAP SPACE
♿ VAN	VAN HANDICAP SPACE
↔	HANDICAP RAMP
—	CURB STOP
---	SAW CUT/ MATCH PAVEMENT LINE
→	TRAFFIC FLOW
+	SIGN
☁	SNOW STORAGE
⊙	UTILITY POLE
⊙	LIGHTING
—	TREE LINE
▶	DOOR LOCATION
---	WALKING TRAIL EASEMENT
---	FIRE LANE

ZONING LEGEND

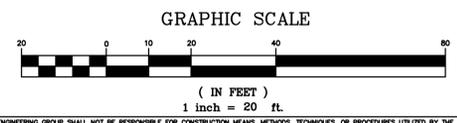
ZONING DISTRICT: VILLAGE DISTRICT

	REQUIRED	PROVIDED	COMPLIANCE
MIN. LOT AREA	1.0 ACRE	3.0 ACRE	YES
MIN. LOT FRONTAGE	150'	229'±	YES
MIN. LOT WIDTH	50'	>50'	YES
MIN. YARD -FRONT	30'	70'± (2)	YES
-SIDE	15'	25'± (2)	YES
-REAR	30'	>30' (2)	YES
MAX. STORIES	2.5	3	WAIVER
MAX. HEIGHT	35'	>35'	WAIVER

ZONING BYLAW CHAPTER 300-21: MULTI-FAMILY

	REQUIRED	PROVIDED	COMPLIANCE
MAX. UNITS	6 UNITS (4)	54 UNITS	WAIVER
MIN. LOT AREA	3.0 ACRES (5)	2.97 ACRES	WAIVER
MIN. LOT FRONTAGE	250'	229'±	WAIVER
MAX. BLD. COV.	30%	16%	YES
MAX. STORIES	2.0	3	WAIVER
MAX. HEIGHT	30'	>35'	WAIVER
MIN. YARD	10'	0'	WAIVER
MIN. PARKING	112 (6)	76 (7)	WAIVER
MIN. PARKING SIZE	9'x 18'	8'x 16' (COMPACT)	WAIVER
MIN. OPEN SPACE	30%	>30%	YES
MIN. BUFFER ZONE	50' (9)	0'	WAIVER

- CHAPTER 300-21 MULTI-FAMILY NOTES:
- PROPERTY IS LOCATED IN THE VILLAGE DISTRICT
 - SCHOOL ST. AND COTTAGE ST. ARE FRONT YARDS OTTER RIVER IS THE REAR YARD ALL OTHER LOT LINES ARE SIDE YARDS
 - SPECIAL PERMIT REQUIRED FROM THE ZONING BOARD OF APPEALS FOR MULTI-FAMILY HOUSING AND MULTIPLE DWELLINGS
 - 6 UNITS PER BUILDING
 - 3.0 ACRES PER BUILDING
 - 2 (9'x18') PARKING SPACES PER UNIT
 - AN ADDITIONAL 16 PARKING SPACES ARE AVAILABLE ON SCHOOL ST.
 - INCLUSIONARY HOUSE HAS MET ZONING BOARD OF APPEALS FOR AFFORDABLE HOUSE IN THE VILLAGE DISTRICT
 - 50' BUFFER FROM A RESIDENTIAL DISTRICT



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
All Rights Reserved

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY REPRODUCTION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF KELLY ENGINEERING GROUP SHALL BE UNLAWFUL AND PENALIZABLE.

SCALE 1" = 20'	DATE 01/31/22	REV	DATE	REVISION	BY
SHEET 4 OF 11	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA				
FILE # LA00-CP	LAYOUT PLAN				
JOB # F:\P\2020-162	DRAWN BY C.L.				
CHKD BY BGL	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				
APPD BY DNK	SHEET NO. 4				

MANUAL TURNING MOVEMENT COUNT DATA

Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

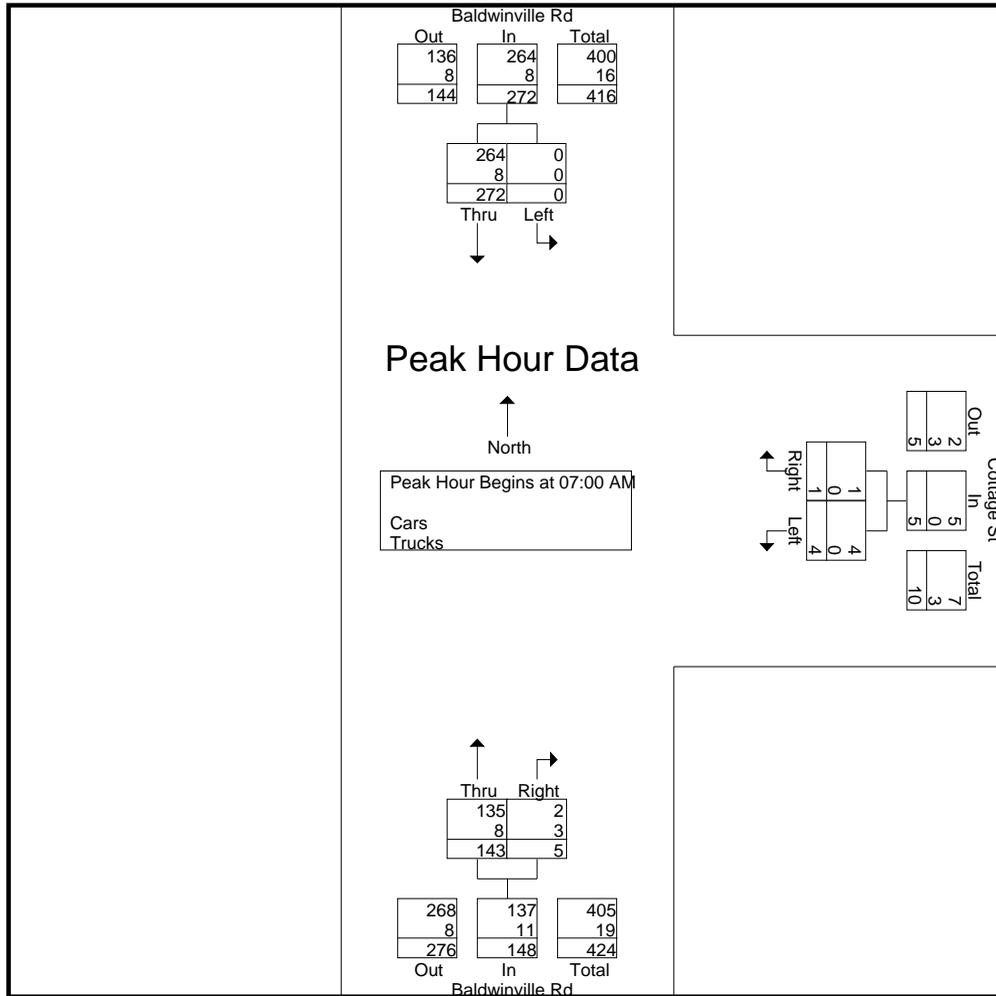
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Baldwinville Rd From North		Cottage St From East		Baldwinville Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	48	1	0	27	1	77
07:15 AM	0	89	3	1	24	3	120
07:30 AM	0	91	0	0	47	0	138
07:45 AM	0	44	0	0	45	1	90
Total	0	272	4	1	143	5	425
08:00 AM	0	39	0	0	34	1	74
08:15 AM	0	33	0	0	43	0	76
08:30 AM	0	25	1	0	36	0	62
08:45 AM	0	33	0	0	35	0	68
Total	0	130	1	0	148	1	280
Grand Total	0	402	5	1	291	6	705
Apprch %	0	100	83.3	16.7	98	2	
Total %	0	57	0.7	0.1	41.3	0.9	
Cars	0	389	5	1	278	3	676
% Cars	0	96.8	100	100	95.5	50	95.9
Trucks	0	13	0	0	13	3	29
% Trucks	0	3.2	0	0	4.5	50	4.1

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	48	48	1	0	1	27	1	28	77
07:15 AM	0	89	89	3	1	4	24	3	27	120
07:30 AM	0	91	91	0	0	0	47	0	47	138
07:45 AM	0	44	44	0	0	0	45	1	46	90
Total Volume	0	272	272	4	1	5	143	5	148	425
% App. Total	0	100	100	80	20	100	96.6	3.4	92.6	95.5
PHF	.000	.747	.747	.333	.250	.313	.761	.417	.787	.770
Cars	0	264	264	4	1	5	135	2	137	406
% Cars	0	97.1	97.1	100	100	100	94.4	40.0	92.6	95.5
Trucks	0	8	8	0	0	0	8	3	11	19
% Trucks	0	2.9	2.9	0	0	0	5.6	60.0	7.4	4.5

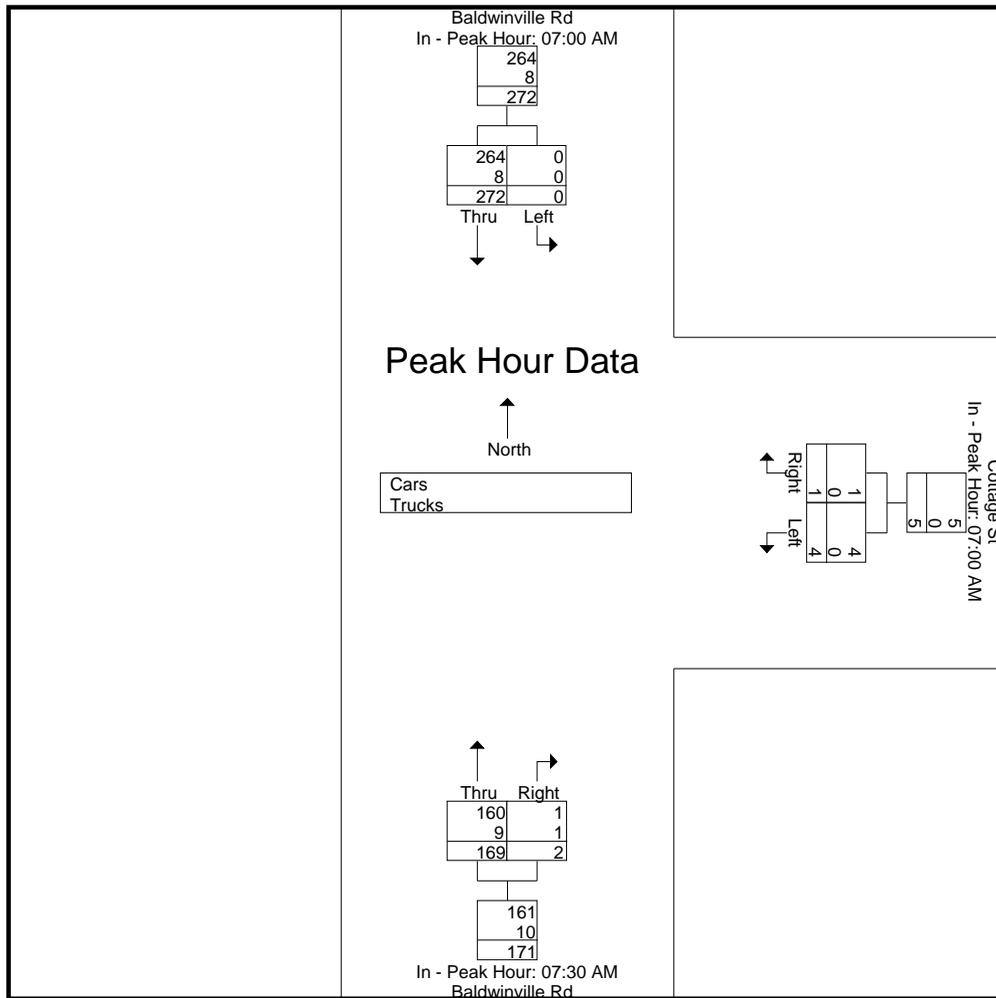
N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:30 AM					
+0 mins.	0	48	48	1	0	1	47	0	47
+15 mins.	0	89	89	3	1	4	45	1	46
+30 mins.	0	91	91	0	0	0	34	1	35
+45 mins.	0	44	44	0	0	0	43	0	43
Total Volume	0	272	272	4	1	5	169	2	171
% App. Total	0	100		80	20		98.8	1.2	
PHF	.000	.747	.747	.333	.250	.313	.899	.500	.910
Cars	0	264	264	4	1	5	160	1	161
% Cars	0	97.1	97.1	100	100	100	94.7	50	94.2
Trucks	0	8	8	0	0	0	9	1	10
% Trucks	0	2.9	2.9	0	0	0	5.3	50	5.8

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

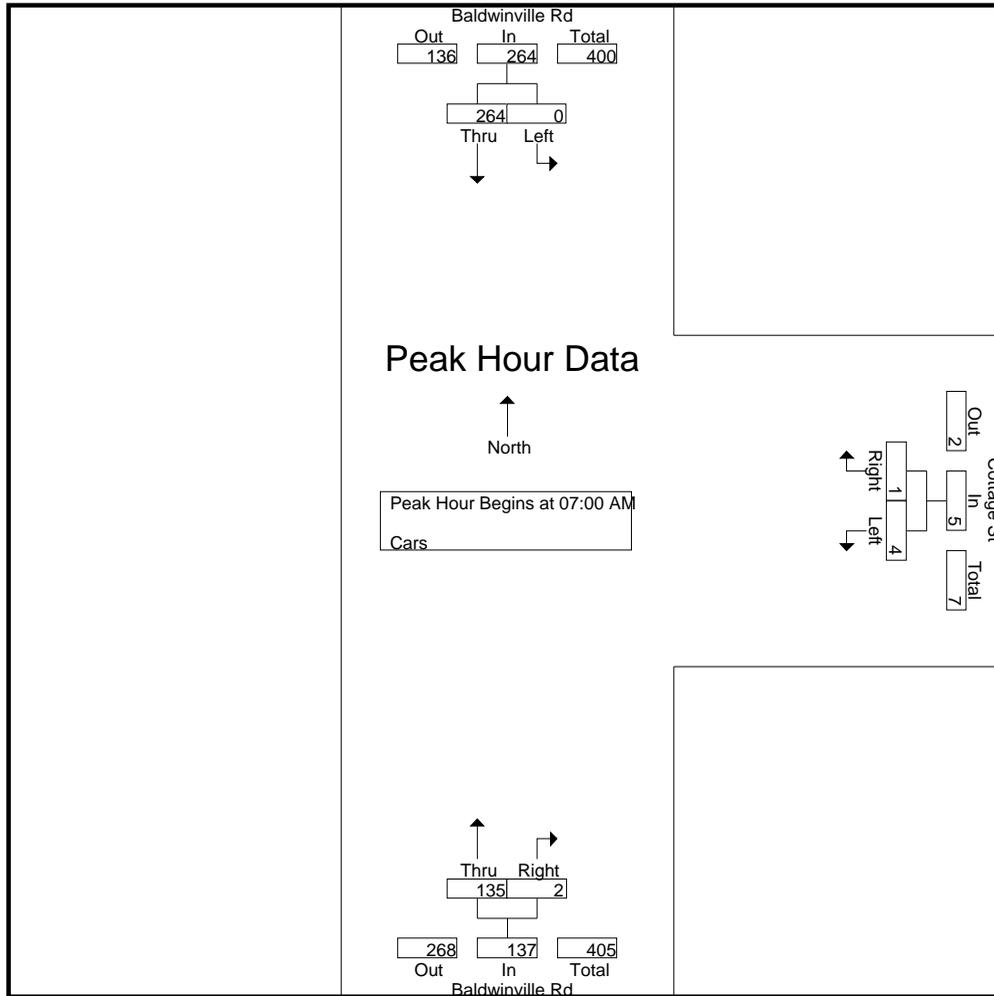
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 4

Groups Printed- Cars

Start Time	Baldwinville Rd From North		Cottage St From East		Baldwinville Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	48	1	0	24	0	73
07:15 AM	0	86	3	1	23	2	115
07:30 AM	0	88	0	0	44	0	132
07:45 AM	0	42	0	0	44	0	86
Total	0	264	4	1	135	2	406
08:00 AM	0	38	0	0	34	1	73
08:15 AM	0	32	0	0	38	0	70
08:30 AM	0	23	1	0	36	0	60
08:45 AM	0	32	0	0	35	0	67
Total	0	125	1	0	143	1	270
Grand Total	0	389	5	1	278	3	676
Apprch %	0	100	83.3	16.7	98.9	1.1	
Total %	0	57.5	0.7	0.1	41.1	0.4	

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	48	48	1	0	1	24	0	24	73
07:15 AM	0	86	86	3	1	4	23	2	25	115
07:30 AM	0	88	88	0	0	0	44	0	44	132
07:45 AM	0	42	42	0	0	0	44	0	44	86
Total Volume	0	264	264	4	1	5	135	2	137	406
% App. Total	0	100		80	20		98.5	1.5		
PHF	.000	.750	.750	.333	.250	.313	.767	.250	.778	.769

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



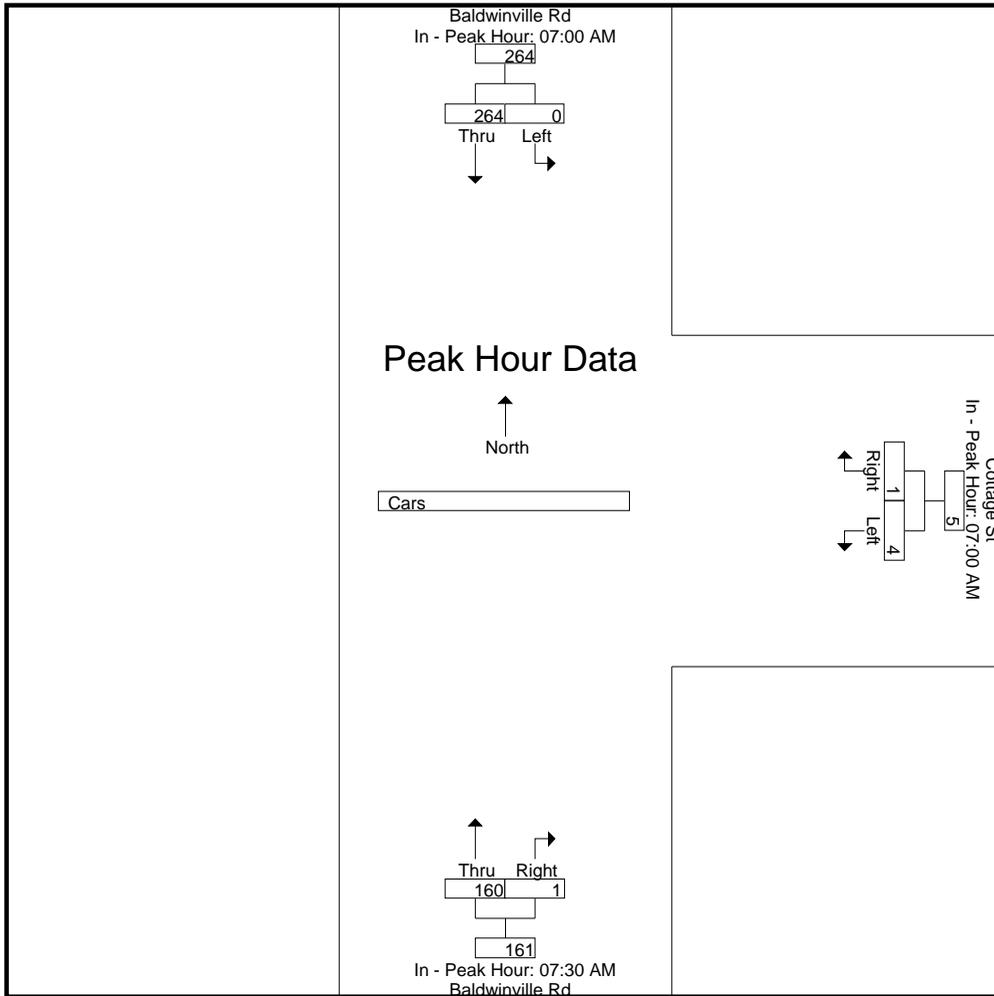
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:30 AM		
+0 mins.	0	48	48	1	0	1	44	0	44
+15 mins.	0	86	86	3	1	4	44	0	44
+30 mins.	0	88	88	0	0	0	34	1	35
+45 mins.	0	42	42	0	0	0	38	0	38
Total Volume	0	264	264	4	1	5	160	1	161
% App. Total	0	100		80	20		99.4	0.6	
PHF	.000	.750	.750	.333	.250	.313	.909	.250	.915

Accurate Counts
978-664-2565

File Name : 89140001
Site Code : 89140001
Start Date : 9/28/2021
Page No : 6

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

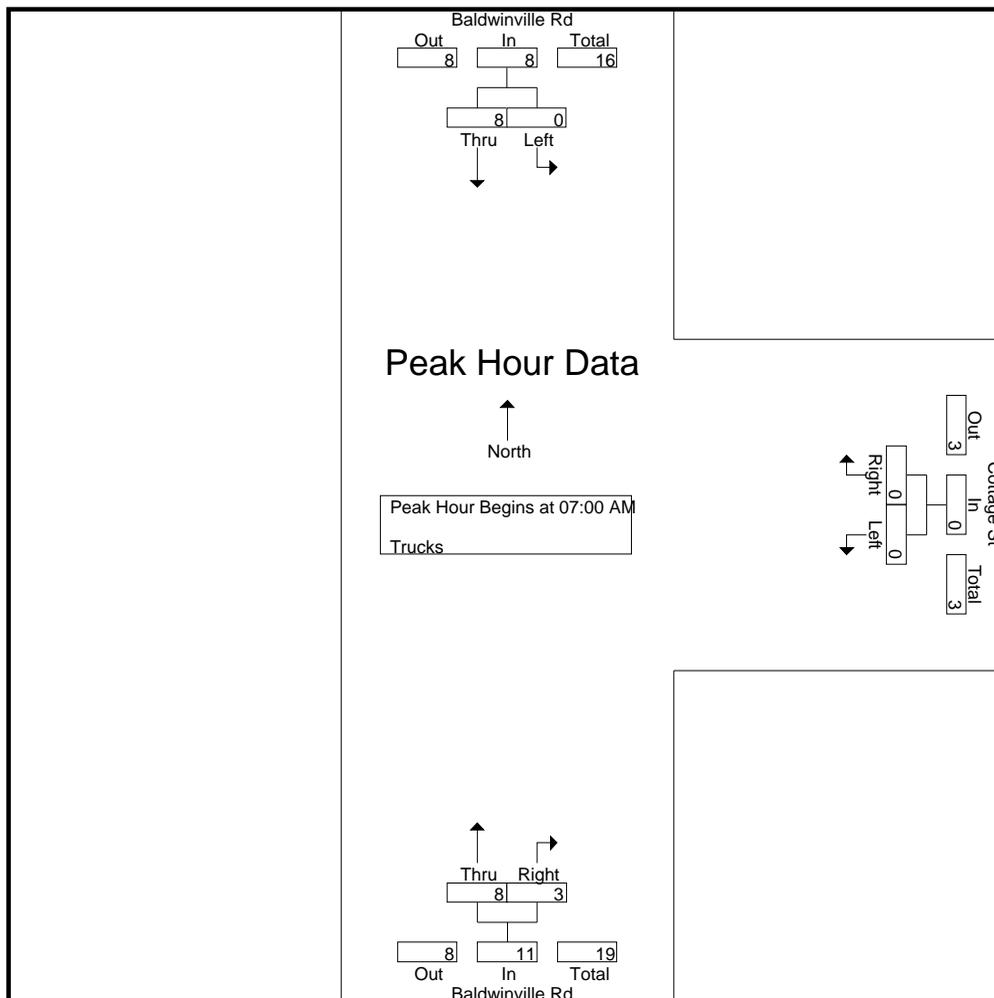
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 7

Groups Printed- Trucks

Start Time	Baldwinville Rd From North		Cottage St From East		Baldwinville Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	0	0	0	3	1	4
07:15 AM	0	3	0	0	1	1	5
07:30 AM	0	3	0	0	3	0	6
07:45 AM	0	2	0	0	1	1	4
Total	0	8	0	0	8	3	19
08:00 AM	0	1	0	0	0	0	1
08:15 AM	0	1	0	0	5	0	6
08:30 AM	0	2	0	0	0	0	2
08:45 AM	0	1	0	0	0	0	1
Total	0	5	0	0	5	0	10
Grand Total	0	13	0	0	13	3	29
Apprch %	0	100	0	0	81.2	18.8	
Total %	0	44.8	0	0	44.8	10.3	

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	3	1	4	4
07:15 AM	0	3	3	0	0	0	1	1	2	5
07:30 AM	0	3	3	0	0	0	3	0	3	6
07:45 AM	0	2	2	0	0	0	1	1	2	4
Total Volume	0	8	8	0	0	0	8	3	11	19
% App. Total	0	100		0	0		72.7	27.3		
PHF	.000	.667	.667	.000	.000	.000	.667	.750	.688	.792

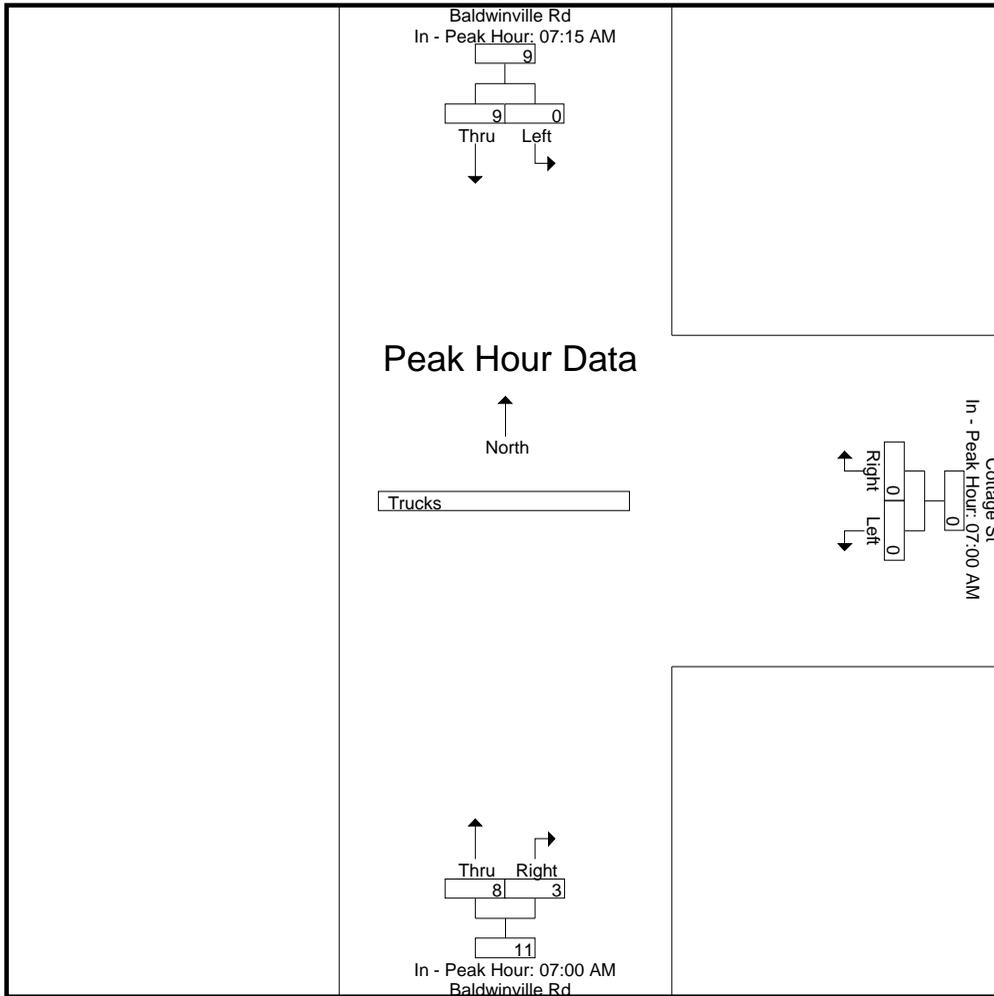
N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	3	1	4
+15 mins.	0	3	3	0	0	0	1	1	2
+30 mins.	0	2	2	0	0	0	3	0	3
+45 mins.	0	1	1	0	0	0	1	1	2
Total Volume	0	9	9	0	0	0	8	3	11
% App. Total	0	100		0	0		72.7	27.3	
PHF	.000	.750	.750	.000	.000	.000	.667	.750	.688

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

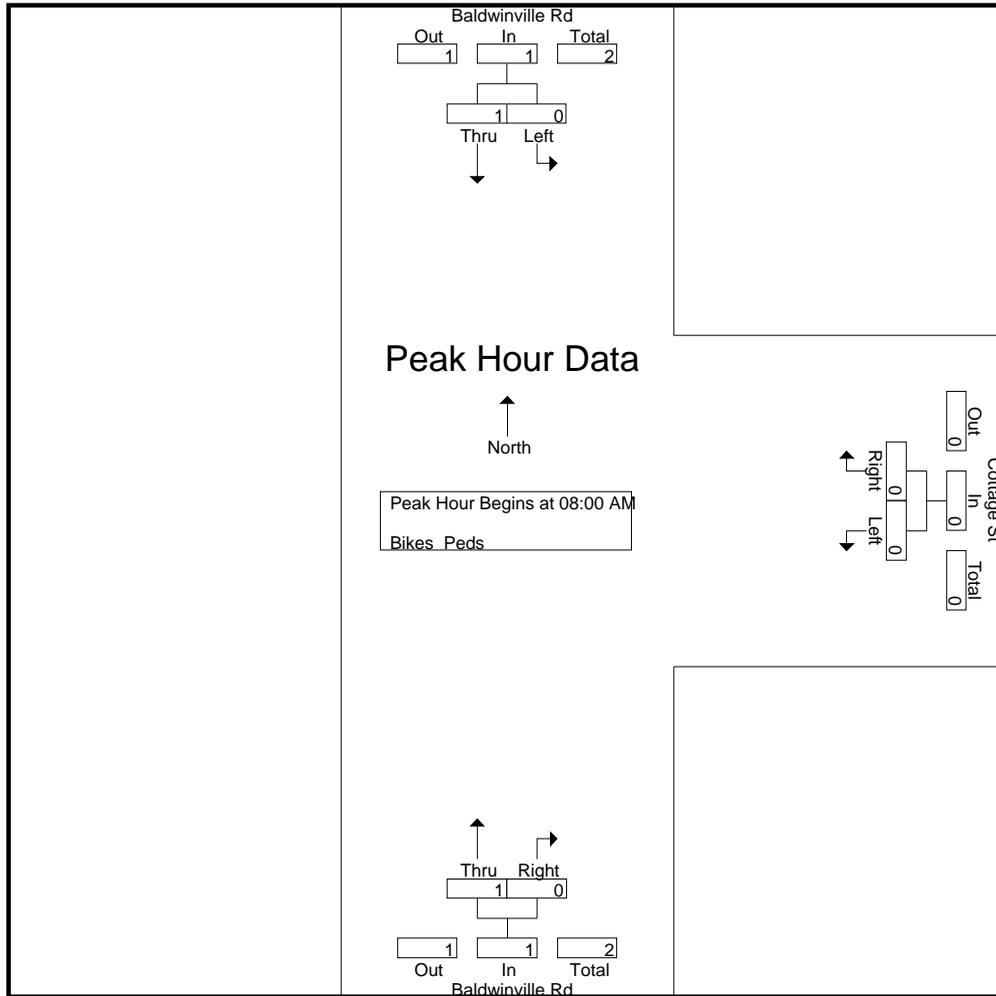
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	0	3	0	0	0	0	0	0	3	0	3
07:15 AM	0	0	2	0	0	0	0	0	0	2	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	3	0	0	0	0	0	0	3	0	3
Total	0	0	8	0	0	0	0	0	0	8	0	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	1	0	0	0	1	1
08:45 AM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	0	1	0	0	0	2	2
Grand Total	0	1	8	0	0	0	1	0	0	8	2	10
Apprch %	0	100		0	0		100	0				
Total %	0	50		0	0		50	0		80	20	

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



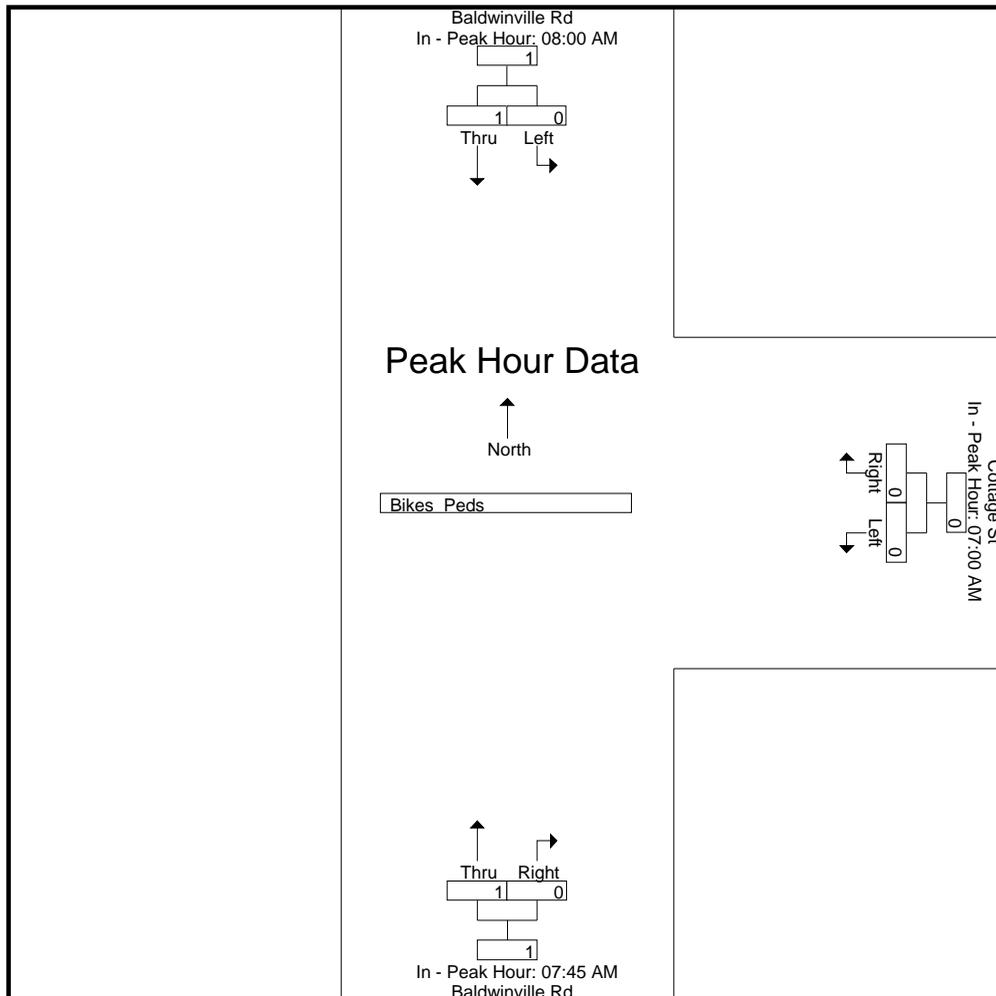
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	1	0	1
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

Accurate Counts
978-664-2565

File Name : 89140001
Site Code : 89140001
Start Date : 9/28/2021
Page No : 12

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

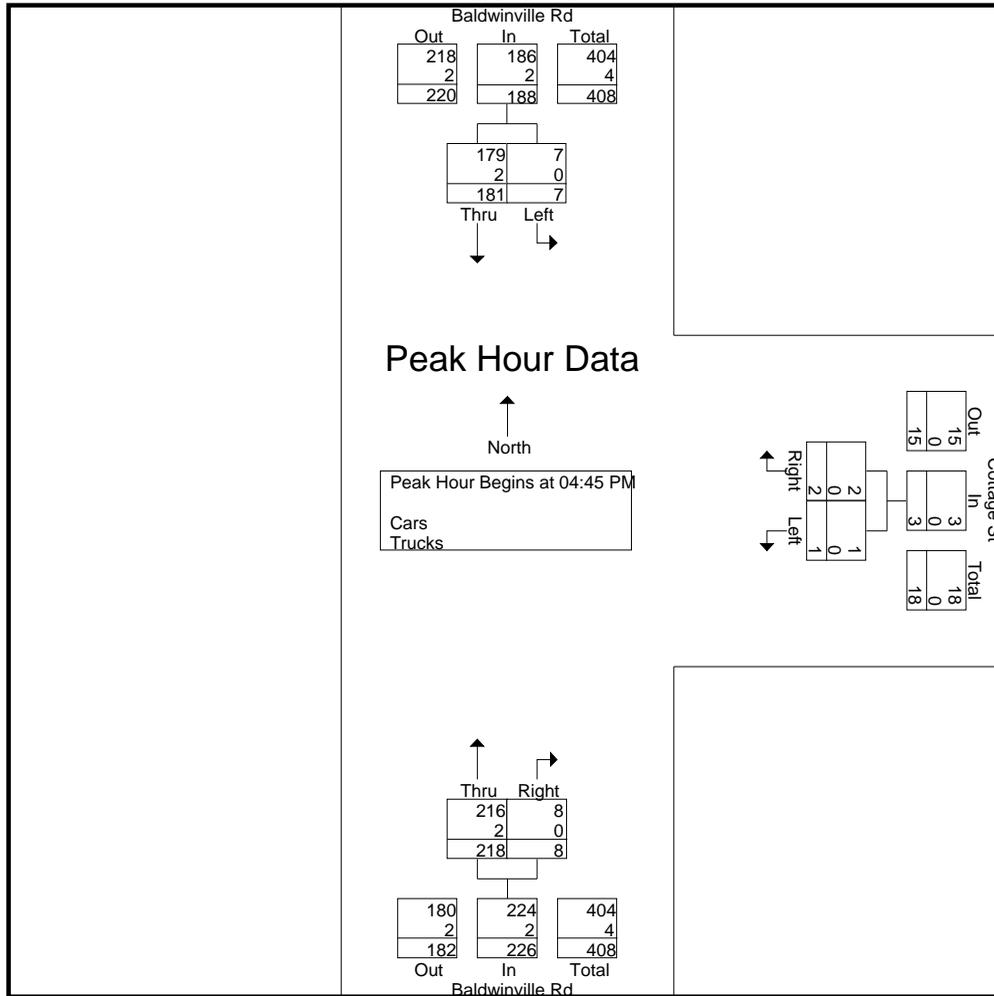
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Baldwinville Rd From North		Cottage St From East		Baldwinville Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	33	0	0	58	0	91
04:15 PM	1	35	1	0	55	1	93
04:30 PM	0	36	0	0	55	1	92
04:45 PM	1	31	0	0	58	0	90
Total	2	135	1	0	226	2	366
05:00 PM	1	39	1	2	54	3	100
05:15 PM	2	69	0	0	50	3	124
05:30 PM	3	42	0	0	56	2	103
05:45 PM	0	22	2	0	48	1	73
Total	6	172	3	2	208	9	400
Grand Total	8	307	4	2	434	11	766
Apprch %	2.5	97.5	66.7	33.3	97.5	2.5	
Total %	1	40.1	0.5	0.3	56.7	1.4	
Cars	8	305	4	2	430	11	760
% Cars	100	99.3	100	100	99.1	100	99.2
Trucks	0	2	0	0	4	0	6
% Trucks	0	0.7	0	0	0.9	0	0.8

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	1	31	32	0	0	0	58	0	58	90
05:00 PM	1	39	40	1	2	3	54	3	57	100
05:15 PM	2	69	71	0	0	0	50	3	53	124
05:30 PM	3	42	45	0	0	0	56	2	58	103
Total Volume	7	181	188	1	2	3	218	8	226	417
% App. Total	3.7	96.3		33.3	66.7		96.5	3.5		
PHF	.583	.656	.662	.250	.250	.250	.940	.667	.974	.841
Cars	7	179	186	1	2	3	216	8	224	413
% Cars	100	98.9	98.9	100	100	100	99.1	100	99.1	99.0
Trucks	0	2	2	0	0	0	2	0	2	4
% Trucks	0	1.1	1.1	0	0	0	0.9	0	0.9	1.0

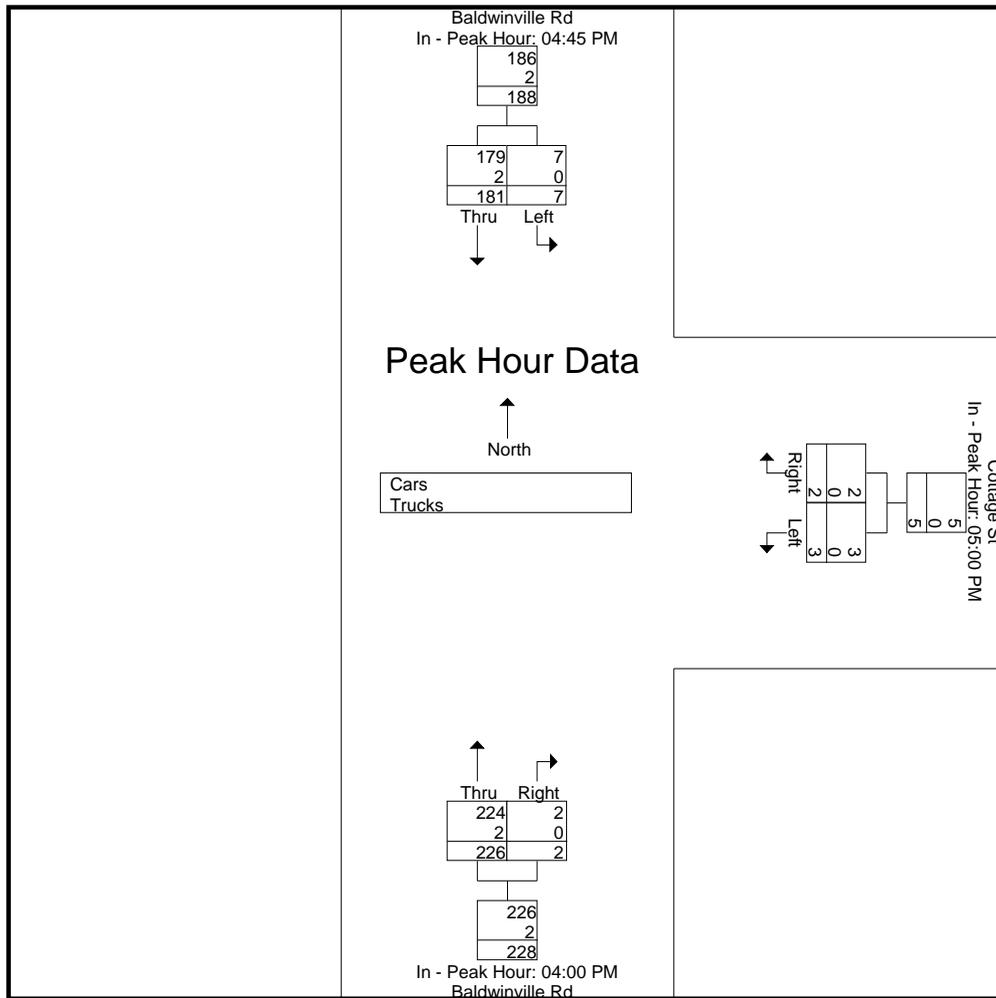
N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:00 PM		
+0 mins.	1	31	32	1	2	3	58	0	58
+15 mins.	1	39	40	0	0	0	55	1	56
+30 mins.	2	69	71	0	0	0	55	1	56
+45 mins.	3	42	45	2	0	2	58	0	58
Total Volume	7	181	188	3	2	5	226	2	228
% App. Total	3.7	96.3		60	40		99.1	0.9	
PHF	.583	.656	.662	.375	.250	.417	.974	.500	.983
Cars	7	179	186	3	2	5	224	2	226
% Cars	100	98.9	98.9	100	100	100	99.1	100	99.1
Trucks	0	2	2	0	0	0	2	0	2
% Trucks	0	1.1	1.1	0	0	0	0.9	0	0.9

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

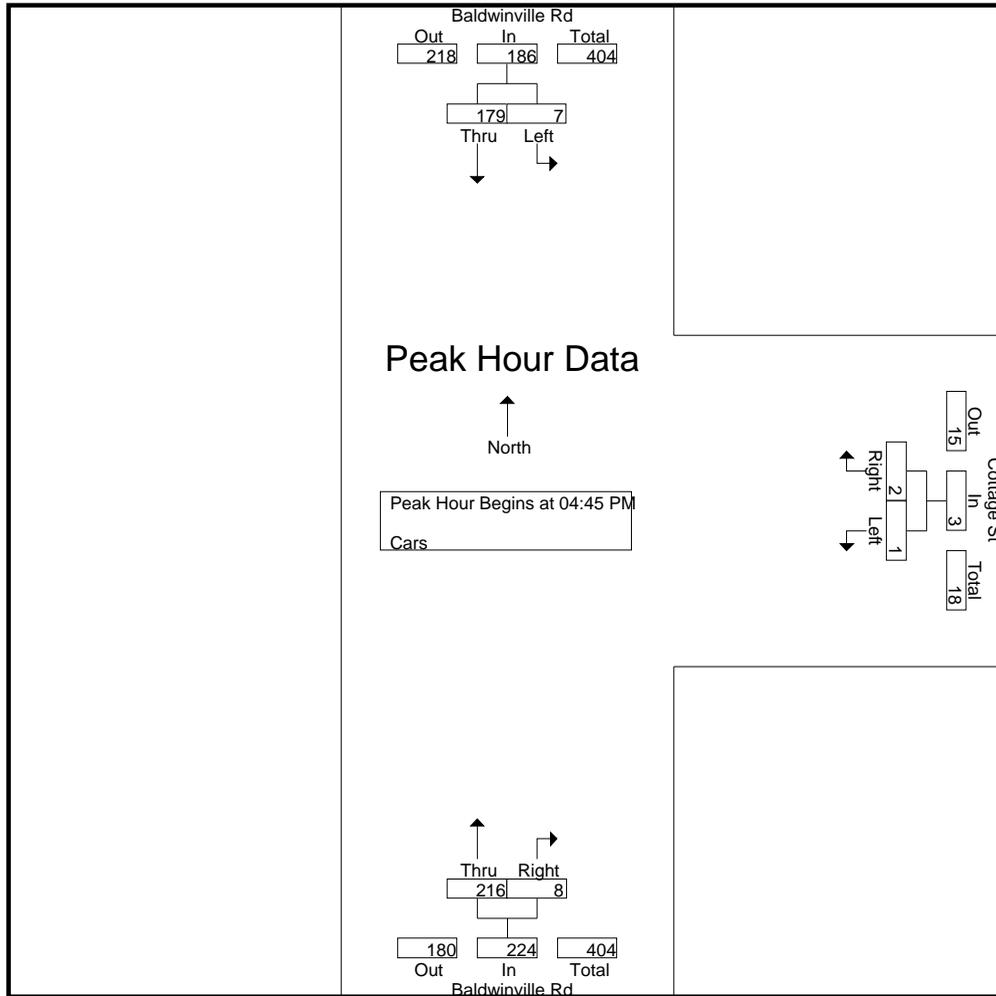
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 4

Groups Printed- Cars

Start Time	Baldwinville Rd From North		Cottage St From East		Baldwinville Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	33	0	0	56	0	89
04:15 PM	1	35	1	0	55	1	93
04:30 PM	0	36	0	0	55	1	92
04:45 PM	1	31	0	0	58	0	90
Total	2	135	1	0	224	2	364
05:00 PM	1	39	1	2	53	3	99
05:15 PM	2	69	0	0	49	3	123
05:30 PM	3	40	0	0	56	2	101
05:45 PM	0	22	2	0	48	1	73
Total	6	170	3	2	206	9	396
Grand Total	8	305	4	2	430	11	760
Apprch %	2.6	97.4	66.7	33.3	97.5	2.5	
Total %	1.1	40.1	0.5	0.3	56.6	1.4	

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	1	31	32	0	0	0	58	0	58	90
05:00 PM	1	39	40	1	2	3	53	3	56	99
05:15 PM	2	69	71	0	0	0	49	3	52	123
05:30 PM	3	40	43	0	0	0	56	2	58	101
Total Volume	7	179	186	1	2	3	216	8	224	413
% App. Total	3.8	96.2		33.3	66.7		96.4	3.6		
PHF	.583	.649	.655	.250	.250	.250	.931	.667	.966	.839

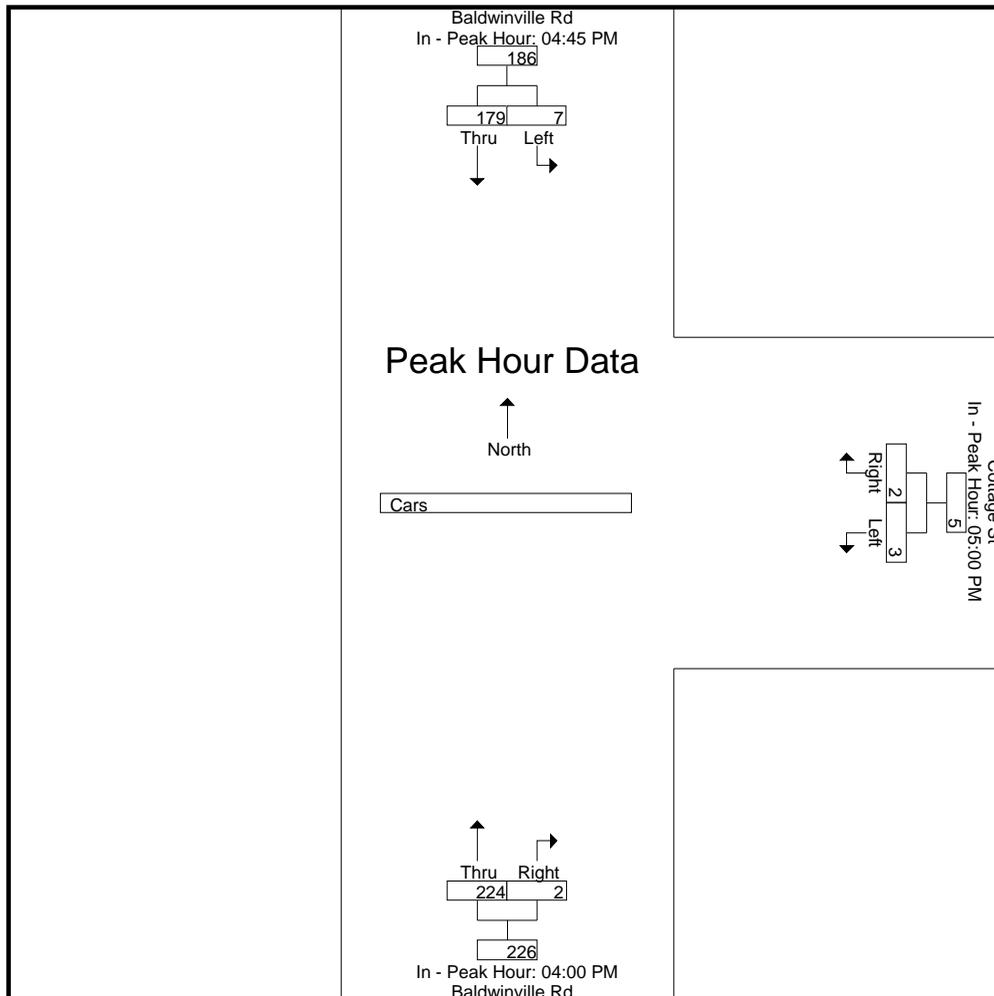
N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:00 PM		
+0 mins.	1	31	32	1	2	3	56	0	56
+15 mins.	1	39	40	0	0	0	55	1	56
+30 mins.	2	69	71	0	0	0	55	1	56
+45 mins.	3	40	43	2	0	2	58	0	58
Total Volume	7	179	186	3	2	5	224	2	226
% App. Total	3.8	96.2		60	40		99.1	0.9	
PHF	.583	.649	.655	.375	.250	.417	.966	.500	.974

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy

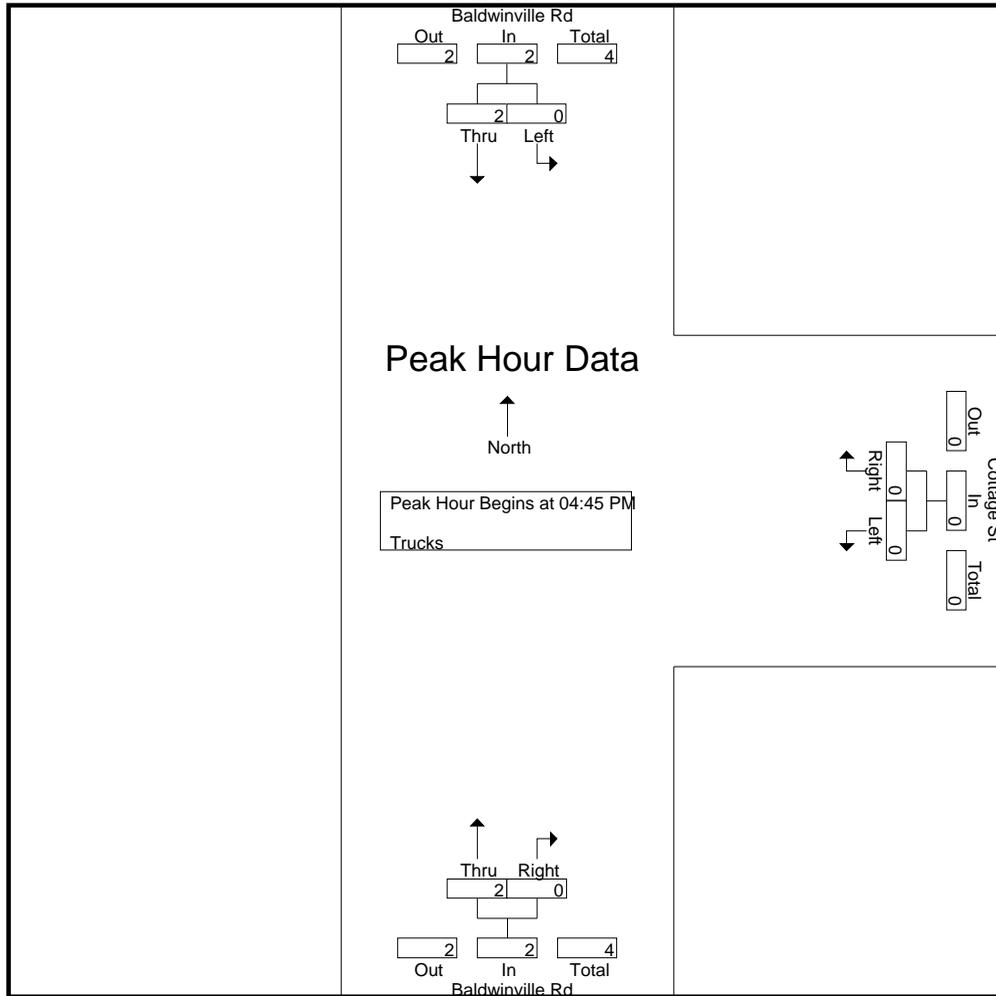
File Name : 89140001
Site Code : 89140001
Start Date : 9/28/2021
Page No : 7

Groups Printed- Trucks

Start Time	Baldwinville Rd From North		Cottage St From East		Baldwinville Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	0	0	0	2	0	2
04:15 PM	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	2
05:00 PM	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	1	0	1
05:30 PM	0	2	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	4
Grand Total	0	2	0	0	4	0	6
Apprch %	0	100	0	0	100	0	
Total %	0	33.3	0	0	66.7	0	

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	2	2	0	0	0	0	0	0	2
Total Volume	0	2	2	0	0	0	2	0	2	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.500

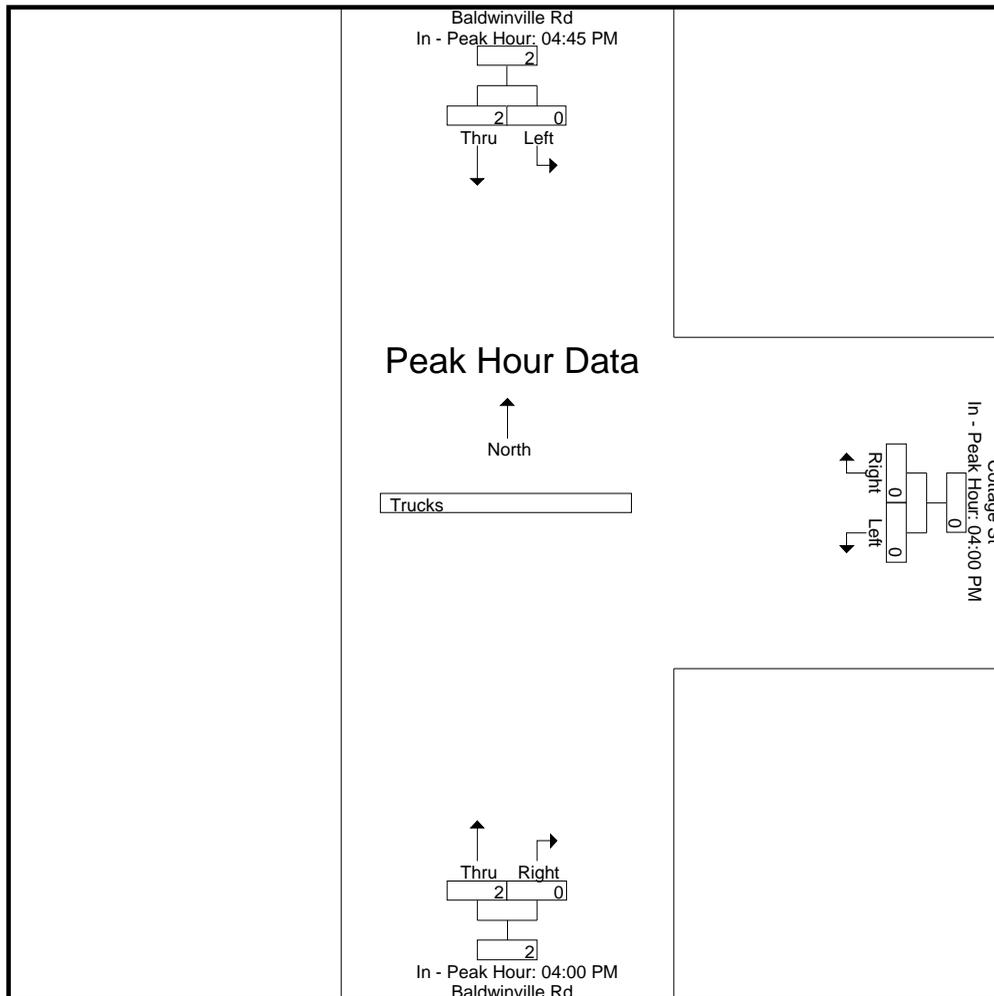
N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

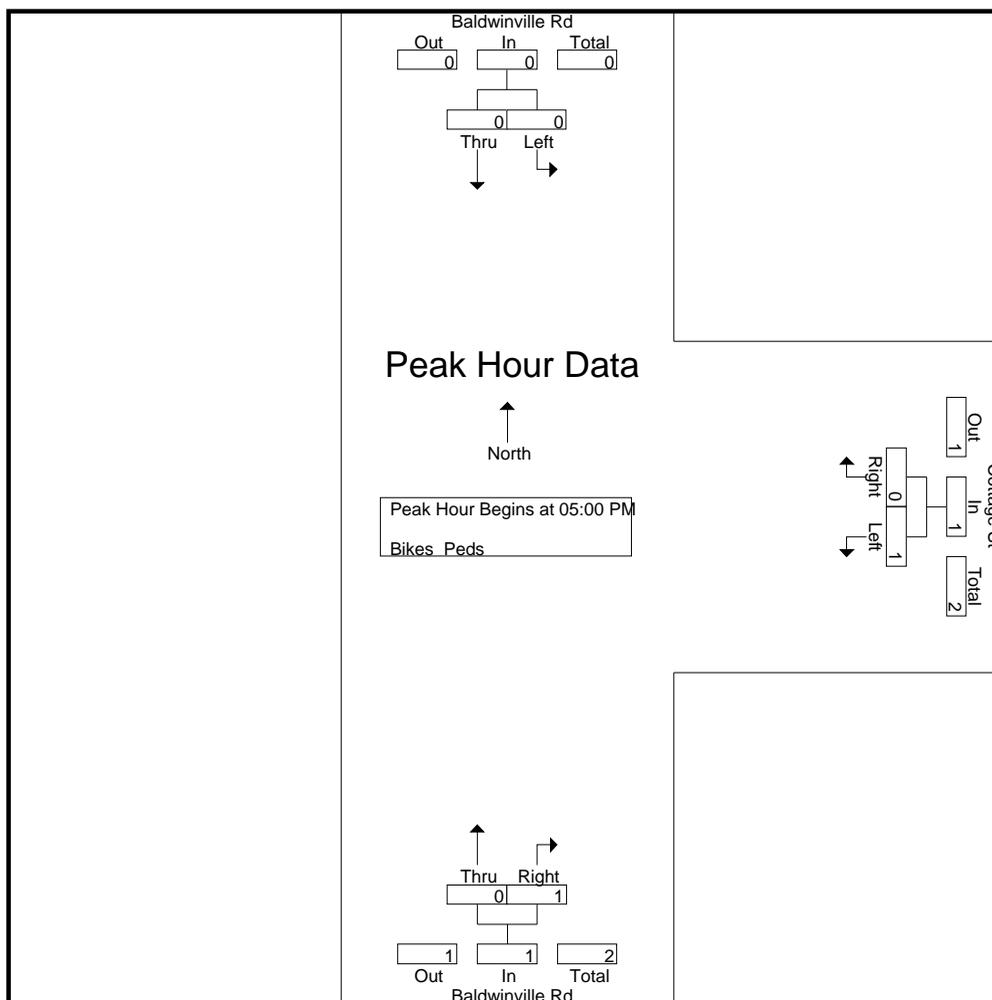
File Name : 89140001
 Site Code : 89140001
 Start Date : 9/28/2021
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	1	0	0	0	0	0	0	1	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	0	1	0	1
05:00 PM	0	0	0	0	0	0	0	1	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	1	0	0	0	1	0	0	2	2
Grand Total	0	0	1	1	0	0	0	1	0	1	2	3
Apprch %	0	0		100	0		0	100				
Total %	0	0		50	0		0	50		33.3	66.7	

Start Time	Baldwinville Rd From North			Cottage St From East			Baldwinville Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	1	0	1	0	0	0	1
Total Volume	0	0	0	1	0	1	0	1	1	2
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250	.500

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



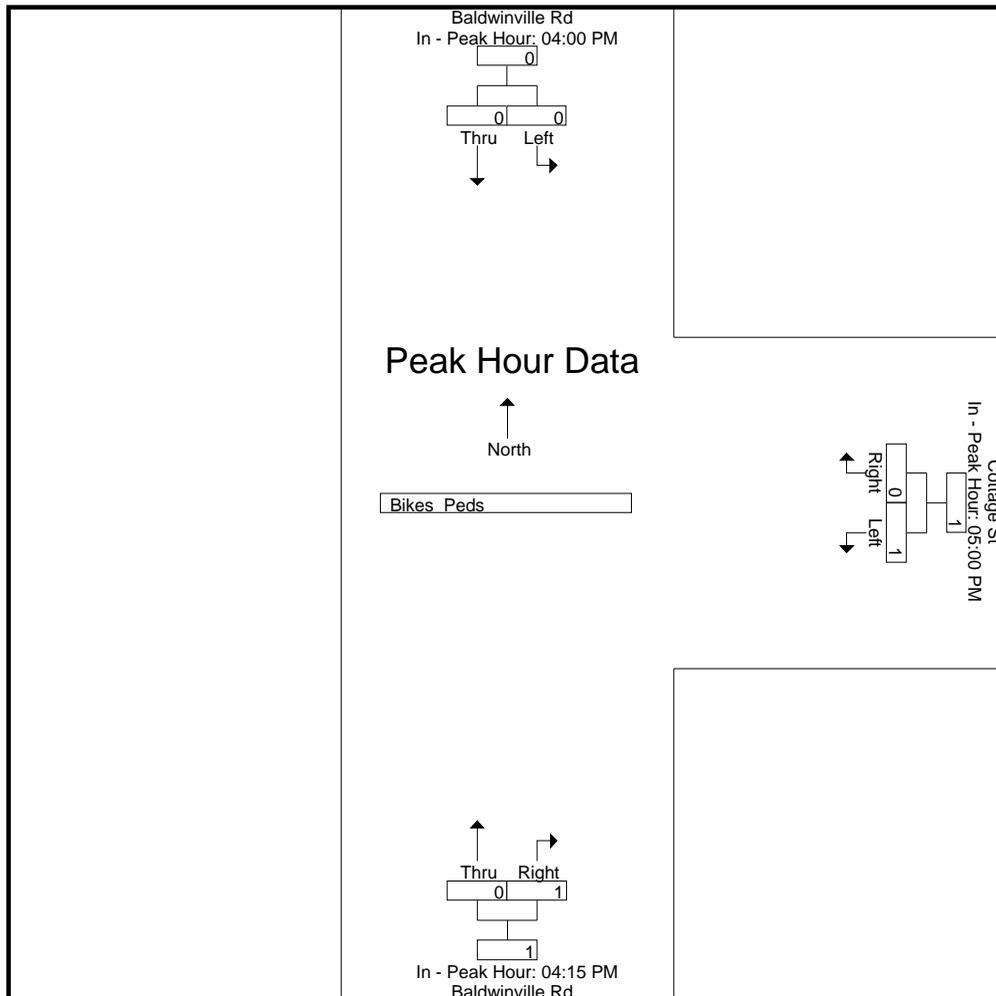
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	1	0	1	0	1	1
Total Volume	0	0	0	1	0	1	0	1	1
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250

Accurate Counts
978-664-2565

File Name : 89140001
Site Code : 89140001
Start Date : 9/28/2021
Page No : 12

N/S Street : Baldwinville Road
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : School Street
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

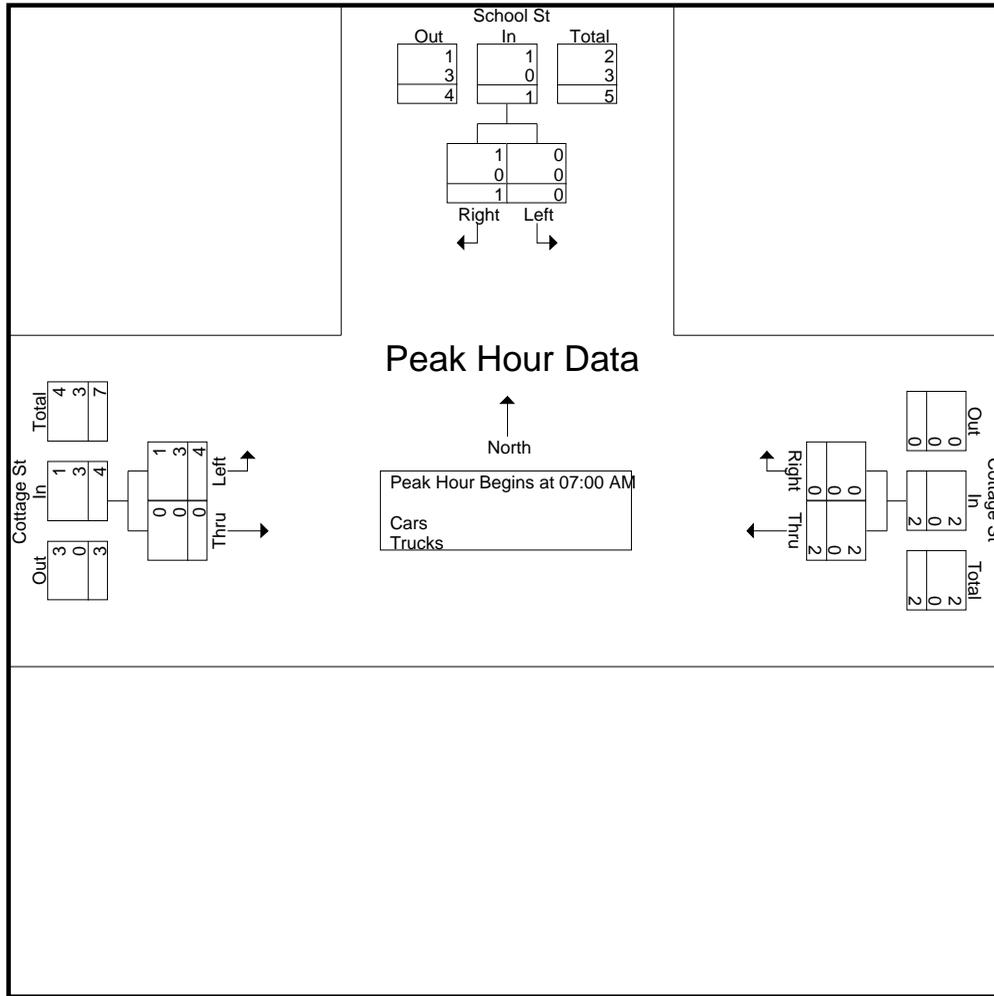
File Name : 89140002
 Site Code : 89140002
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	School St From North		Cottage St From East		Cottage St From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	0	0	1	0	1
07:15 AM	0	1	2	0	2	0	5
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	1
Total	0	1	2	0	4	0	7
08:00 AM	0	0	0	0	1	0	1
08:15 AM	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	0	1
Total	0	0	0	1	1	0	2
Grand Total	0	1	2	1	5	0	9
Apprch %	0	100	66.7	33.3	100	0	
Total %	0	11.1	22.2	11.1	55.6	0	
Cars	0	1	2	1	2	0	6
% Cars	0	100	100	100	40	0	66.7
Trucks	0	0	0	0	3	0	3
% Trucks	0	0	0	0	60	0	33.3

Start Time	School St From North			Cottage St From East			Cottage St From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	1	1	2	0	2	2	0	2	5
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	1	2	0	2	4	0	4	7
% App. Total	0	100	100	100	0	100	100	0	25.0	57.1
PHF	.000	.250	.250	.250	.000	.250	.500	.000	.500	.350
Cars	0	1	1	2	0	2	1	0	1	4
% Cars	0	100	100	100	0	100	25.0	0	25.0	57.1
Trucks	0	0	0	0	0	0	3	0	3	3
% Trucks	0	0	0	0	0	0	75.0	0	75.0	42.9

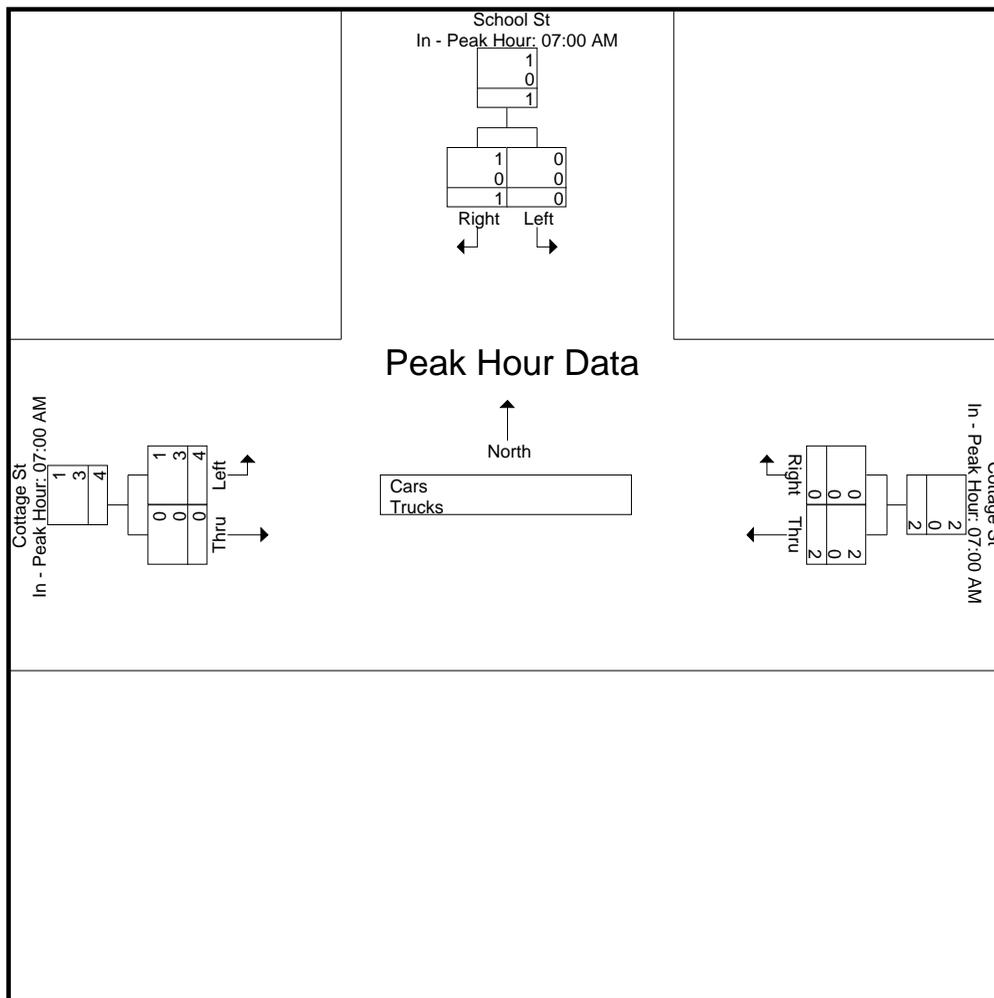
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	1	1	2	0	2	2	0	2
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	1	1	2	0	2	4	0	4
% App. Total	0	100		100	0		100	0	
PHF	.000	.250	.250	.250	.000	.250	.500	.000	.500
Cars	0	1	1	2	0	2	1	0	1
% Cars	0	100	100	100	0	100	25	0	25
Trucks	0	0	0	0	0	0	3	0	3
% Trucks	0	0	0	0	0	0	75	0	75

N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : School Street
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

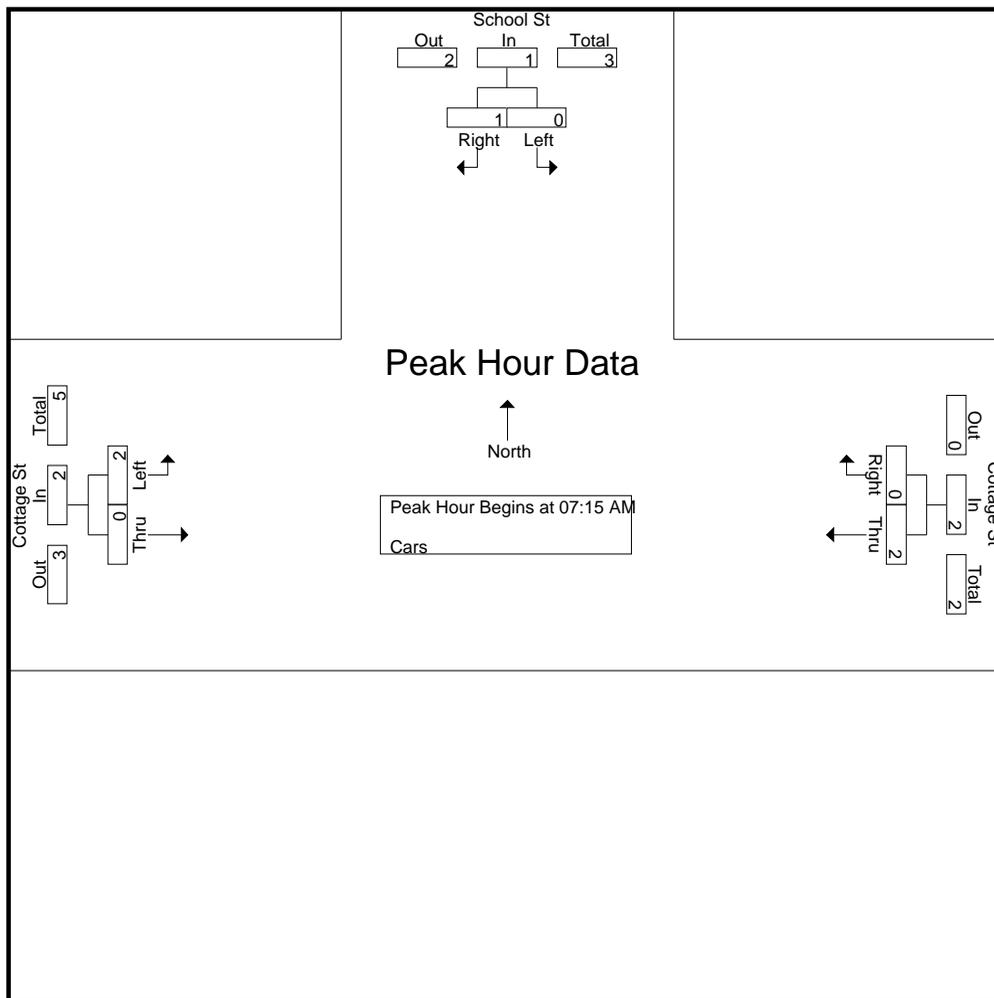
File Name : 89140002
 Site Code : 89140002
 Start Date : 9/28/2021
 Page No : 4

Groups Printed- Cars

Start Time	School St From North		Cottage St From East		Cottage St From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	0	0	0	0	0
07:15 AM	0	1	2	0	1	0	4
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0
Total	0	1	2	0	1	0	4
08:00 AM	0	0	0	0	1	0	1
08:15 AM	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	0	1
Total	0	0	0	1	1	0	2
Grand Total	0	1	2	1	2	0	6
Apprch %	0	100	66.7	33.3	100	0	
Total %	0	16.7	33.3	16.7	33.3	0	

Start Time	School St From North			Cottage St From East			Cottage St From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	1	1	2	0	2	1	0	1	4
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	1	2	0	2	2	0	2	5
% App. Total	0	100		100	0		100	0		
PHF	.000	.250	.250	.250	.000	.250	.500	.000	.500	.313

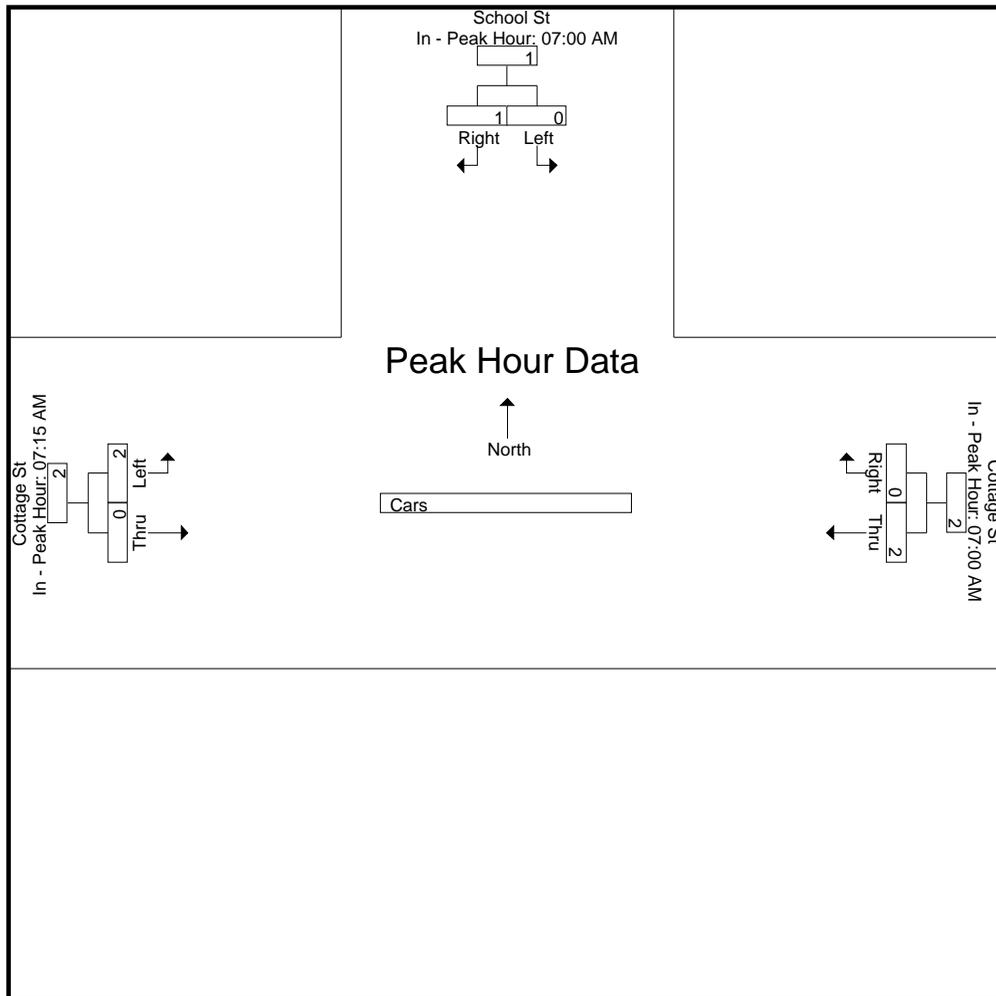
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	1	1	2	0	2	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	1	1	2	0	2	2	0	2
% App. Total	0	100		100	0		100	0	
PHF	.000	.250	.250	.250	.000	.250	.500	.000	.500

N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

File Name : 89140002
Site Code : 89140002
Start Date : 9/28/2021
Page No : 7

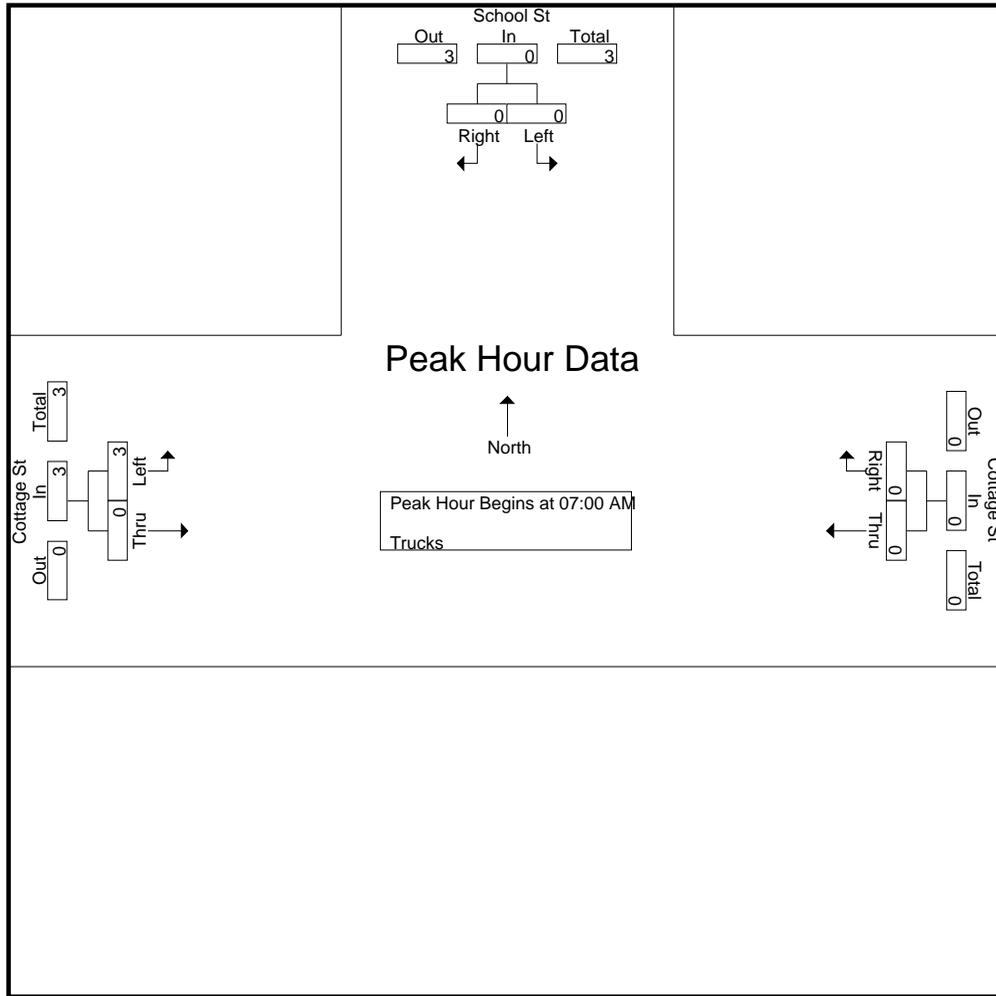
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy

Groups Printed- Trucks

Start Time	School St From North		Cottage St From East		Cottage St From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	0	0	1	0	1
07:15 AM	0	0	0	0	1	0	1
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	1
Total	0	0	0	0	3	0	3
08:00 AM	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Grand Total	0	0	0	0	3	0	3
Apprch %	0	0	0	0	100	0	
Total %	0	0	0	0	100	0	

Start Time	School St From North			Cottage St From East			Cottage St From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	3	0	3	3
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.750	.000	.750	.750

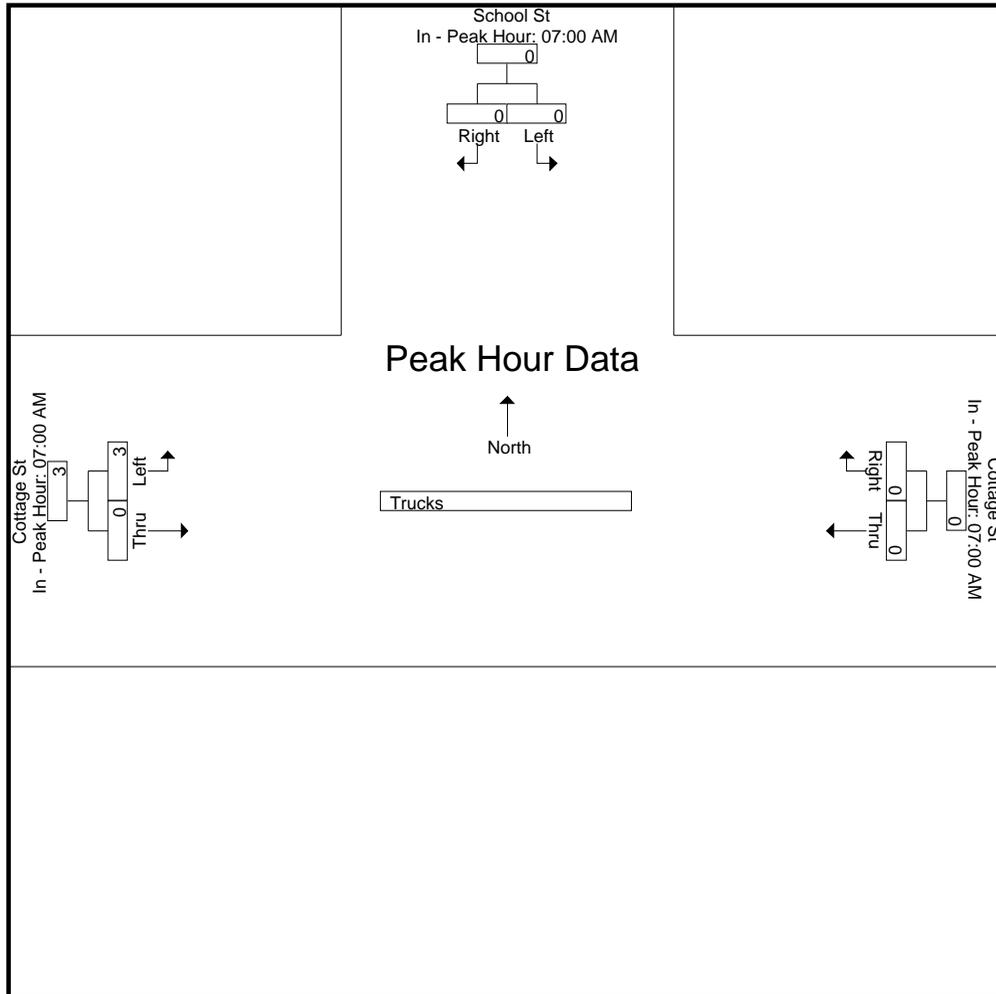
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



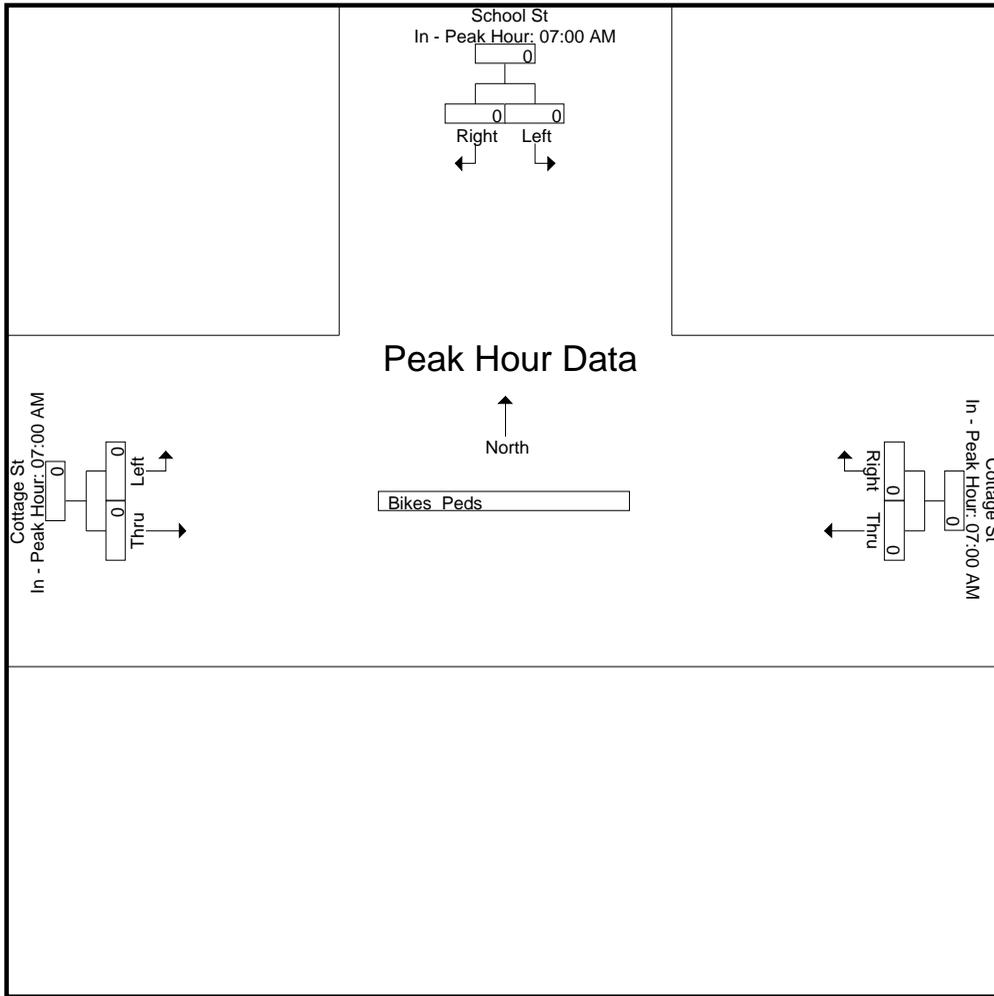
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	3	0	3
% App. Total	0	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.000	.750	.000	.750

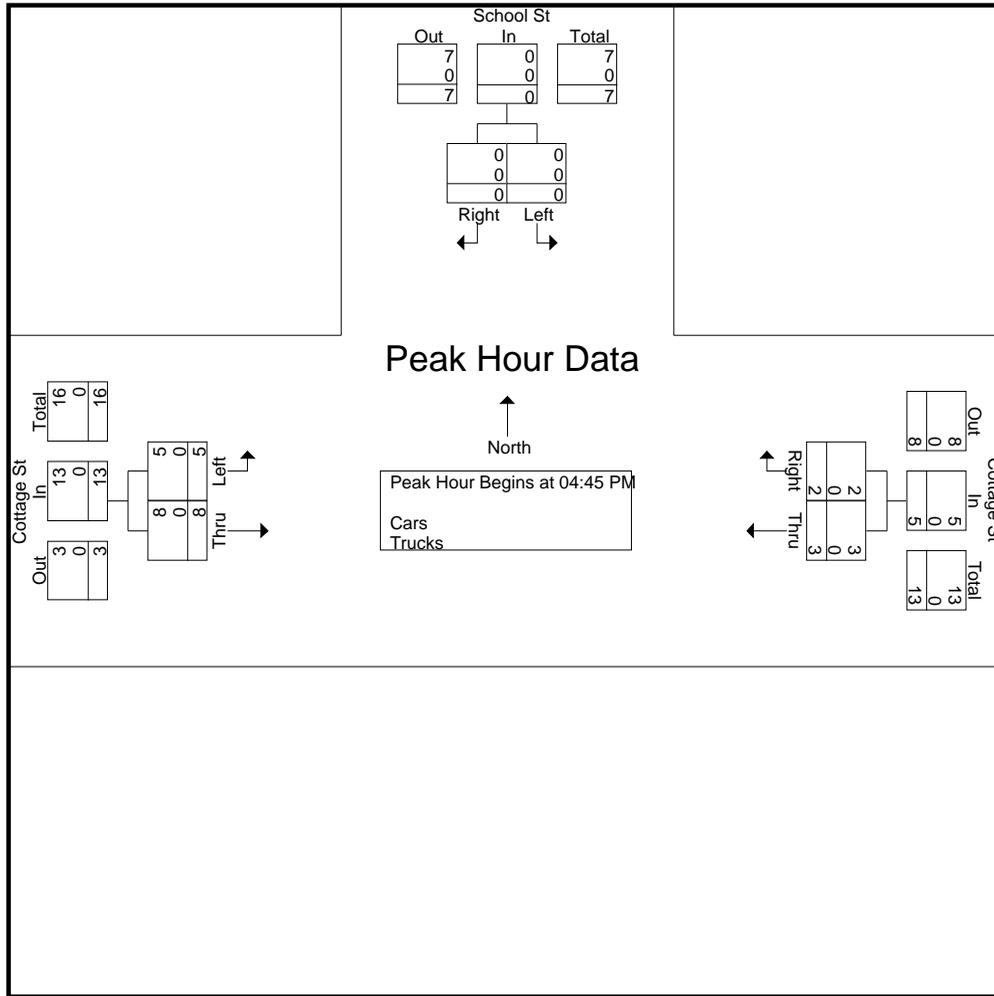
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



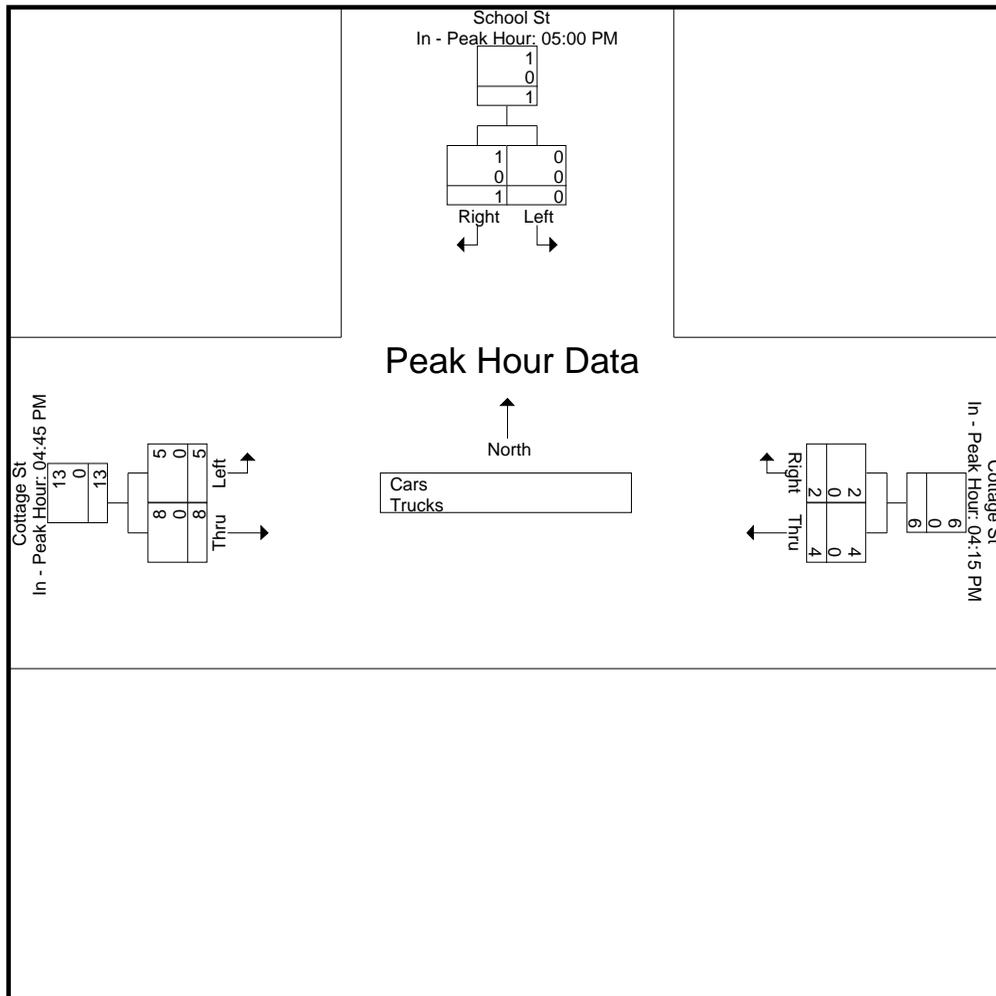
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:15 PM			04:45 PM		
+0 mins.	0	0	0	1	0	1	0	1	1
+15 mins.	0	0	0	0	0	0	0	4	4
+30 mins.	0	0	0	0	2	2	2	1	3
+45 mins.	0	1	1	3	0	3	3	2	5
Total Volume	0	1	1	4	2	6	5	8	13
% App. Total	0	100		66.7	33.3		38.5	61.5	
PHF	.000	.250	.250	.333	.250	.500	.417	.500	.650
Cars	0	1	1	4	2	6	5	8	13
% Cars	0	100	100	100	100	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0

N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

File Name : 89140002
Site Code : 89140002
Start Date : 9/28/2021
Page No : 4

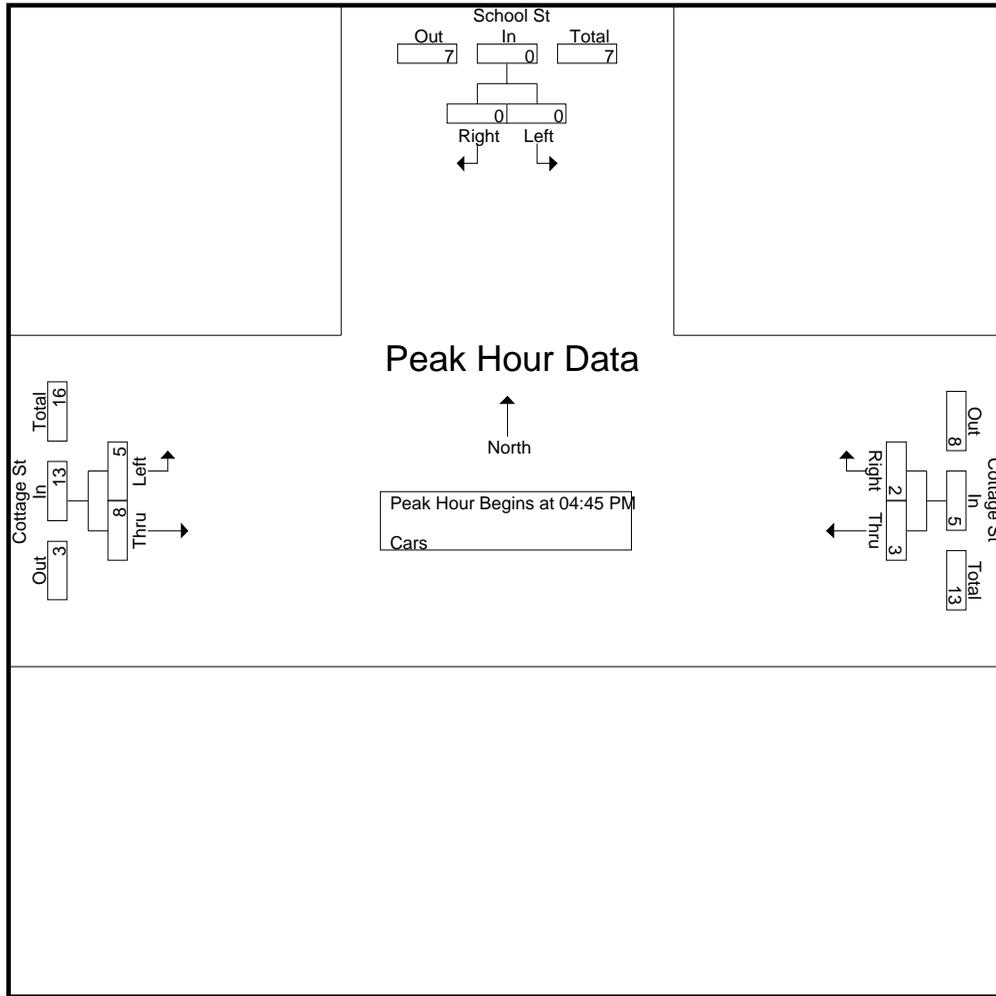
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy

Groups Printed- Cars

Start Time	School St From North		Cottage St From East		Cottage St From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	0	0	0	0	0	0
04:15 PM	0	0	1	0	0	2	3
04:30 PM	0	0	0	0	1	0	1
04:45 PM	0	0	0	2	0	1	3
Total	0	0	1	2	1	3	7
05:00 PM	0	0	3	0	0	4	7
05:15 PM	0	0	0	0	2	1	3
05:30 PM	0	0	0	0	3	2	5
05:45 PM	0	1	0	1	0	0	2
Total	0	1	3	1	5	7	17
Grand Total	0	1	4	3	6	10	24
Apprch %	0	100	57.1	42.9	37.5	62.5	
Total %	0	4.2	16.7	12.5	25	41.7	

Start Time	School St From North			Cottage St From East			Cottage St From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	2	2	0	1	1	3
05:00 PM	0	0	0	3	0	3	0	4	4	7
05:15 PM	0	0	0	0	0	0	2	1	3	3
05:30 PM	0	0	0	0	0	0	3	2	5	5
Total Volume	0	0	0	3	2	5	5	8	13	18
% App. Total	0	0	0	60	40	60	38.5	61.5	60	60
PHF	.000	.000	.000	.250	.250	.417	.417	.500	.650	.643

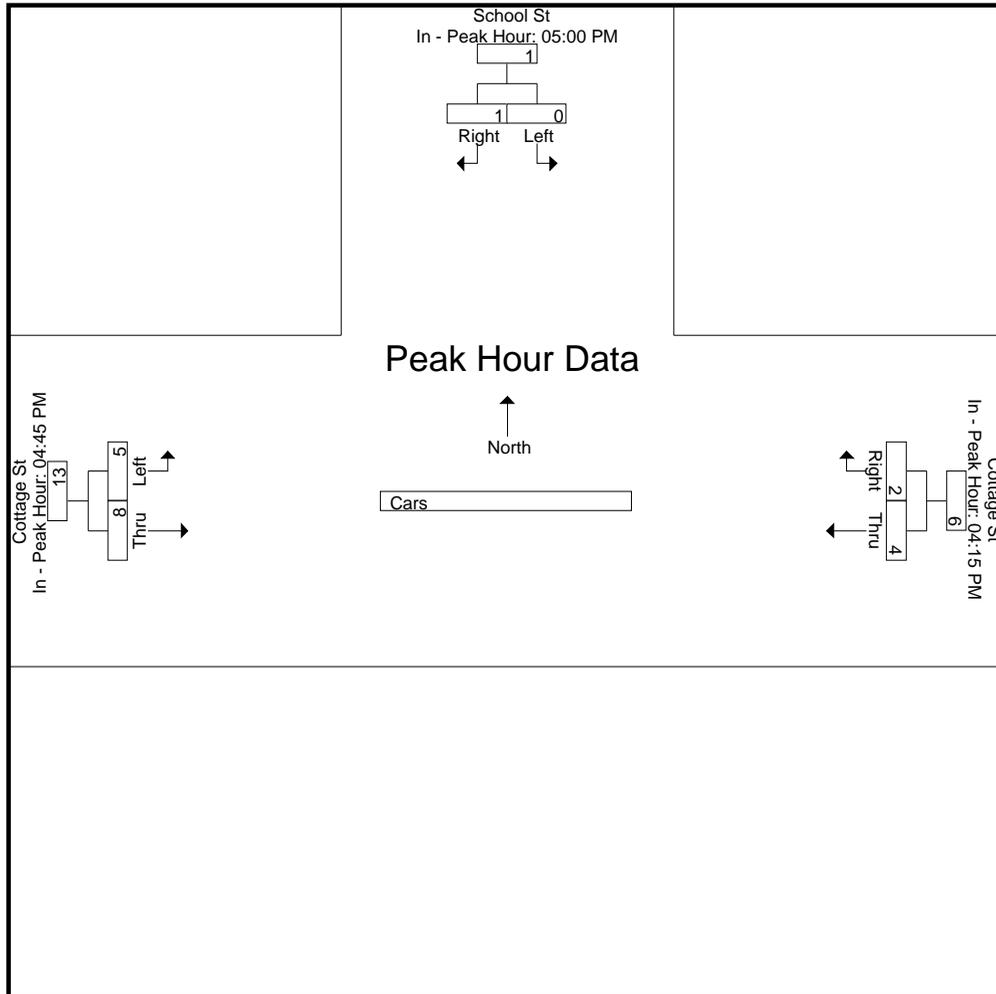
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



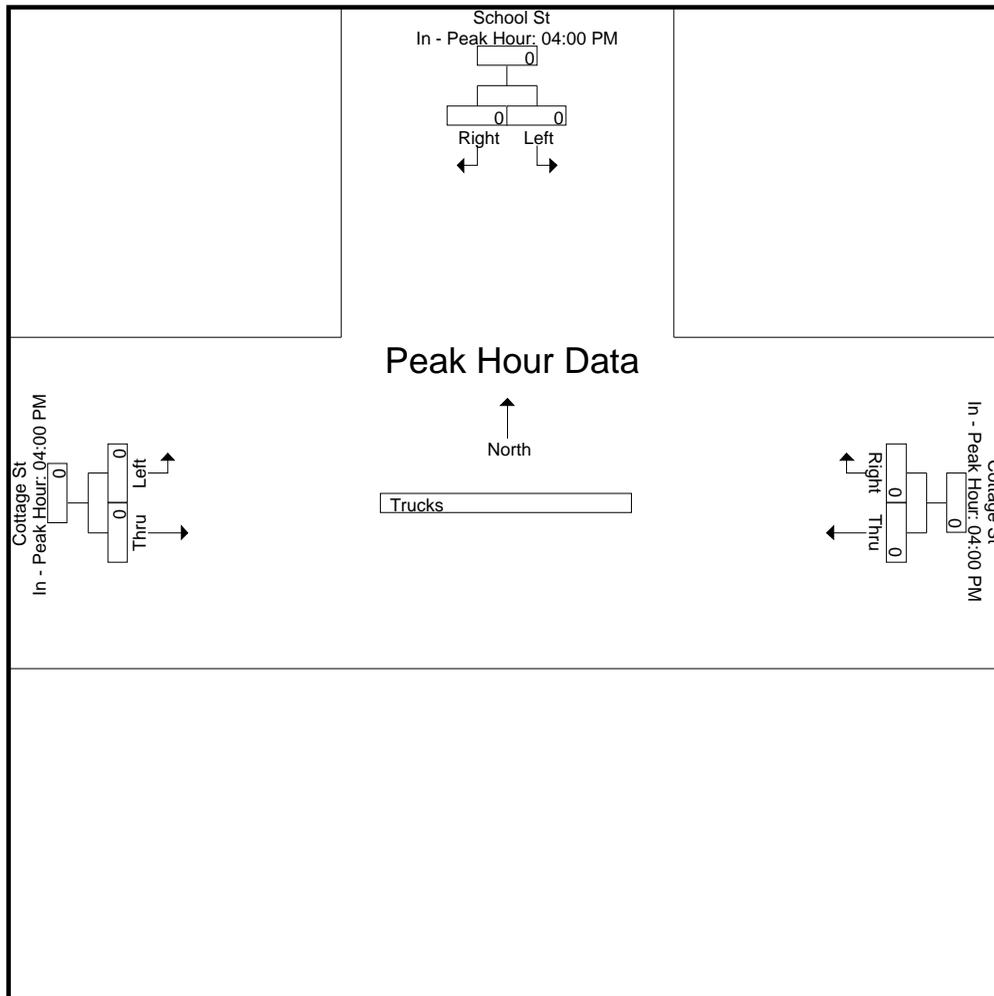
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:15 PM			04:45 PM		
+0 mins.	0	0	0	1	0	1	0	1	1
+15 mins.	0	0	0	0	0	0	0	4	4
+30 mins.	0	0	0	0	2	2	2	1	3
+45 mins.	0	1	1	3	0	3	3	2	5
Total Volume	0	1	1	4	2	6	5	8	13
% App. Total	0	100		66.7	33.3		38.5	61.5	
PHF	.000	.250	.250	.333	.250	.500	.417	.500	.650

N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : School Street
 E/W Street : Cottage Street
 City/State : Templeton, MA
 Weather : Cloudy

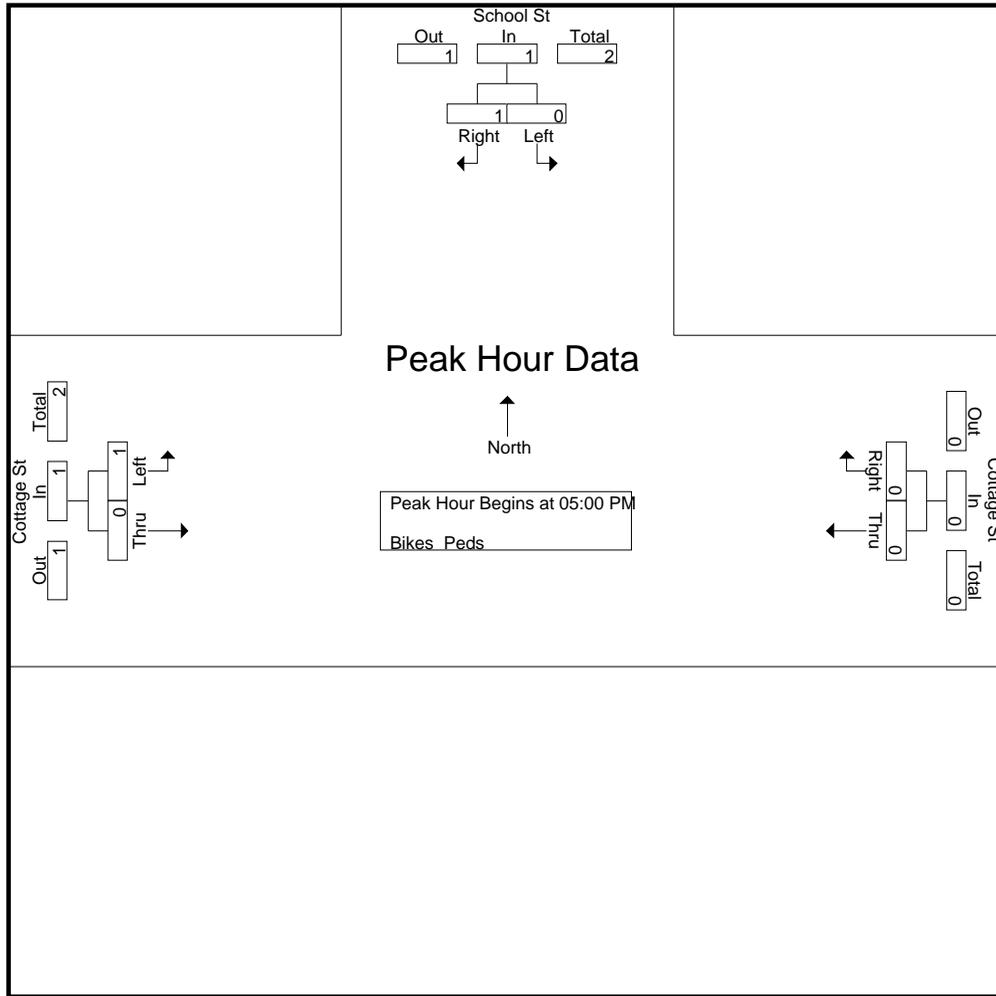
File Name : 89140002
 Site Code : 89140002
 Start Date : 9/28/2021
 Page No : 10

Groups Printed- Bikes Peds

Start Time	School St From North			Cottage St From East			Cottage St From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	0	1	0	0	0	2	2
Grand Total	0	1	0	0	0	0	1	0	0	0	2	2
Apprch %	0	100		0	0		100	0				
Total %	0	50		0	0		50	0			100	

Start Time	School St From North			Cottage St From East			Cottage St From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

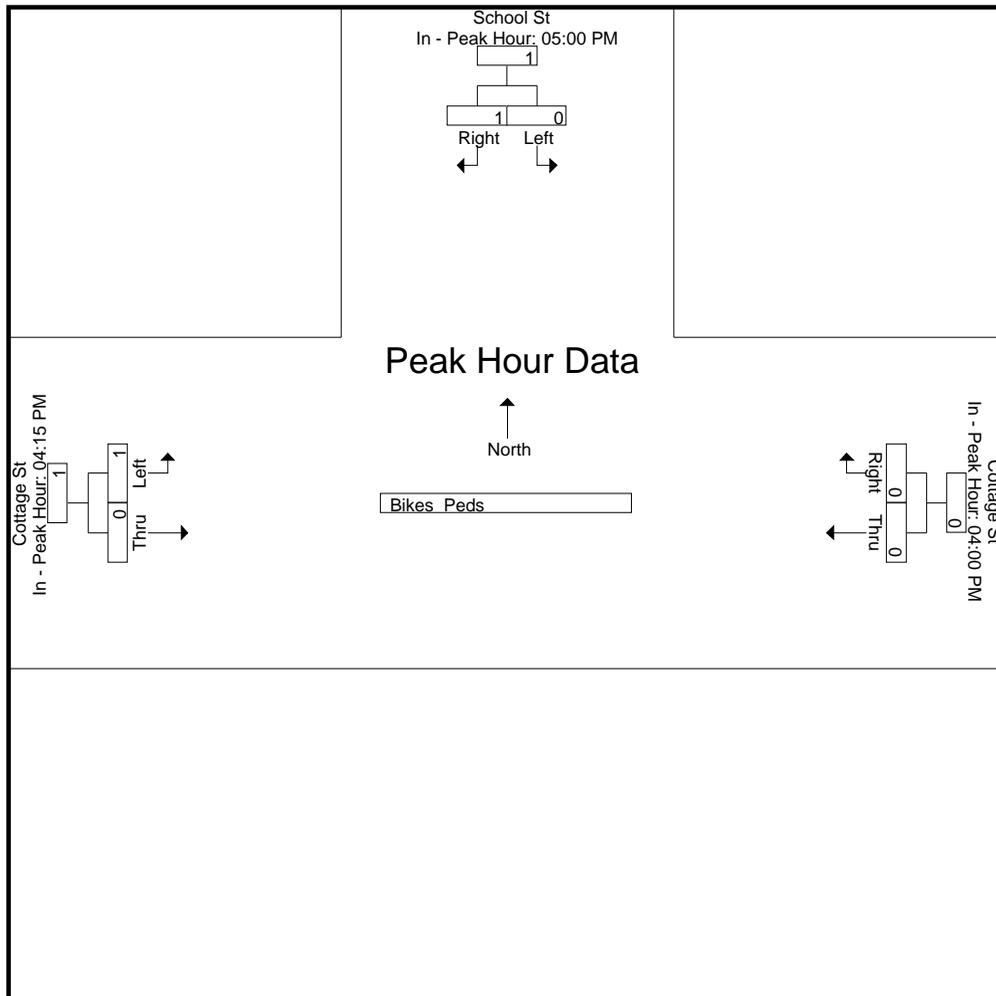
N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	1	0	1
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

N/S Street : School Street
E/W Street : Cottage Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Maple Street
 City/State : Templeton, MA
 Weather : Cloudy

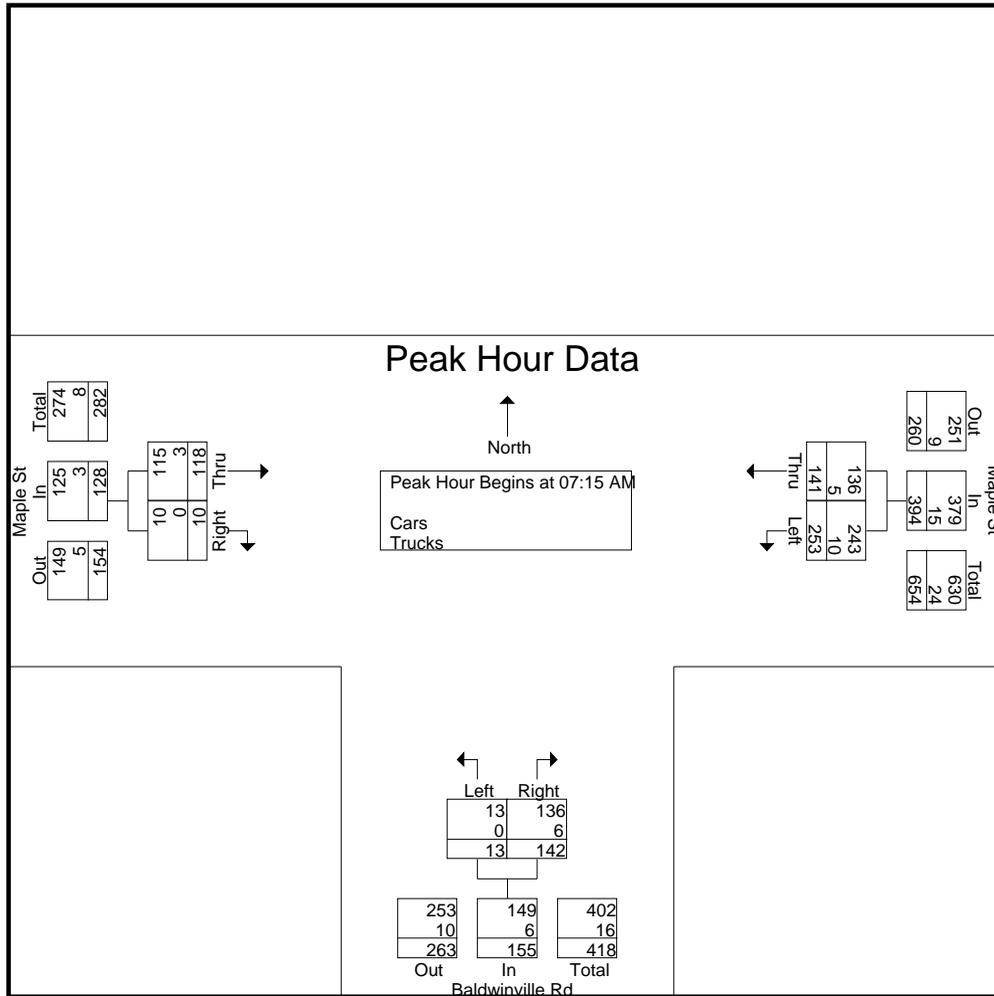
File Name : 89140003
 Site Code : 89140003
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Maple St From East		Baldwinville Rd From South		Maple St From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	45	19	1	25	28	1	119
07:15 AM	85	38	3	23	28	6	183
07:30 AM	86	30	3	46	34	3	202
07:45 AM	42	41	3	41	26	1	154
Total	258	128	10	135	116	11	658
08:00 AM	40	32	4	32	30	0	138
08:15 AM	32	23	1	43	32	2	133
08:30 AM	24	37	2	32	27	1	123
08:45 AM	31	35	3	36	32	1	138
Total	127	127	10	143	121	4	532
Grand Total	385	255	20	278	237	15	1190
Apprch %	60.2	39.8	6.7	93.3	94	6	
Total %	32.4	21.4	1.7	23.4	19.9	1.3	
Cars	371	241	20	264	224	15	1135
% Cars	96.4	94.5	100	95	94.5	100	95.4
Trucks	14	14	0	14	13	0	55
% Trucks	3.6	5.5	0	5	5.5	0	4.6

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	85	38	123	3	23	26	28	6	34	183
07:30 AM	86	30	116	3	46	49	34	3	37	202
07:45 AM	42	41	83	3	41	44	26	1	27	154
08:00 AM	40	32	72	4	32	36	30	0	30	138
Total Volume	253	141	394	13	142	155	118	10	128	677
% App. Total	64.2	35.8		8.4	91.6		92.2	7.8		
PHF	.735	.860	.801	.813	.772	.791	.868	.417	.865	.838
Cars	243	136	379	13	136	149	115	10	125	653
% Cars	96.0	96.5	96.2	100	95.8	96.1	97.5	100	97.7	96.5
Trucks	10	5	15	0	6	6	3	0	3	24
% Trucks	4.0	3.5	3.8	0	4.2	3.9	2.5	0	2.3	3.5

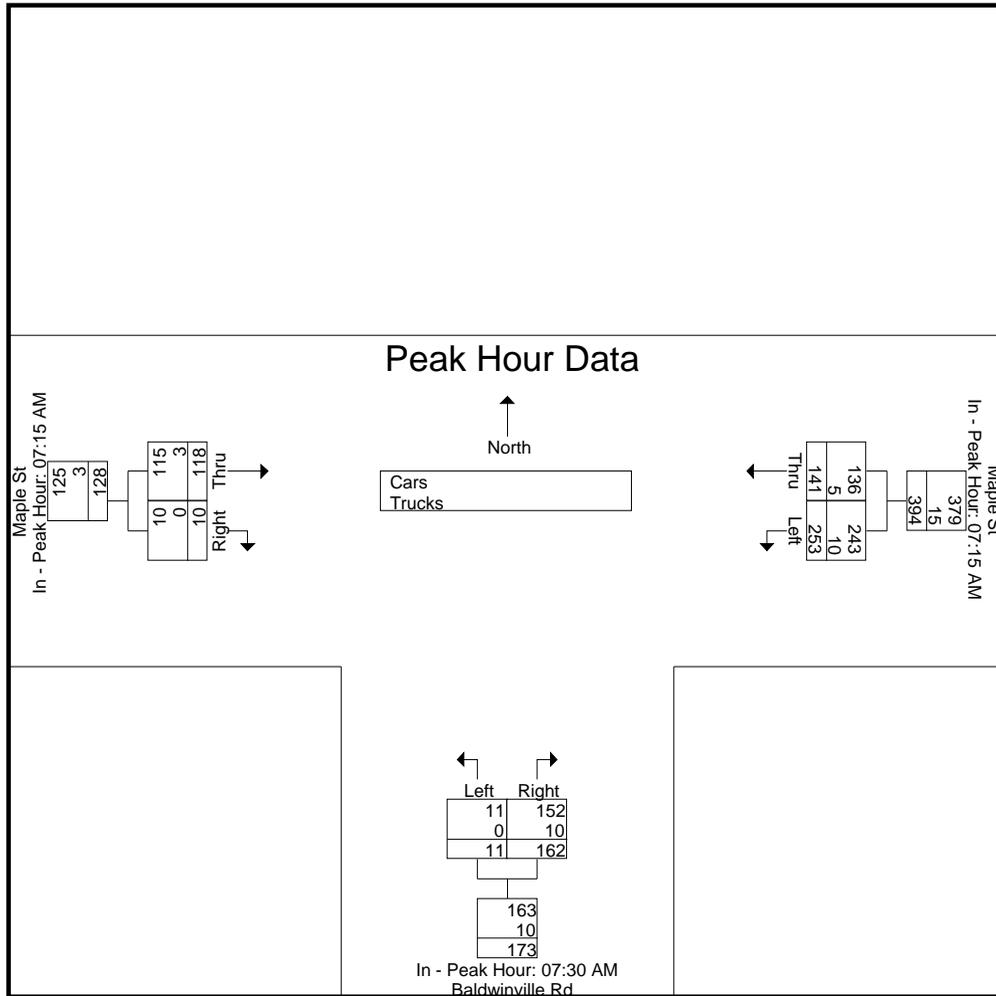
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			07:15 AM		
+0 mins.	85	38	123	3	46	49	28	6	34
+15 mins.	86	30	116	3	41	44	34	3	37
+30 mins.	42	41	83	4	32	36	26	1	27
+45 mins.	40	32	72	1	43	44	30	0	30
Total Volume	253	141	394	11	162	173	118	10	128
% App. Total	64.2	35.8		6.4	93.6		92.2	7.8	
PHF	.735	.860	.801	.688	.880	.883	.868	.417	.865
Cars	243	136	379	11	152	163	115	10	125
% Cars	96	96.5	96.2	100	93.8	94.2	97.5	100	97.7
Trucks	10	5	15	0	10	10	3	0	3
% Trucks	4	3.5	3.8	0	6.2	5.8	2.5	0	2.3

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy

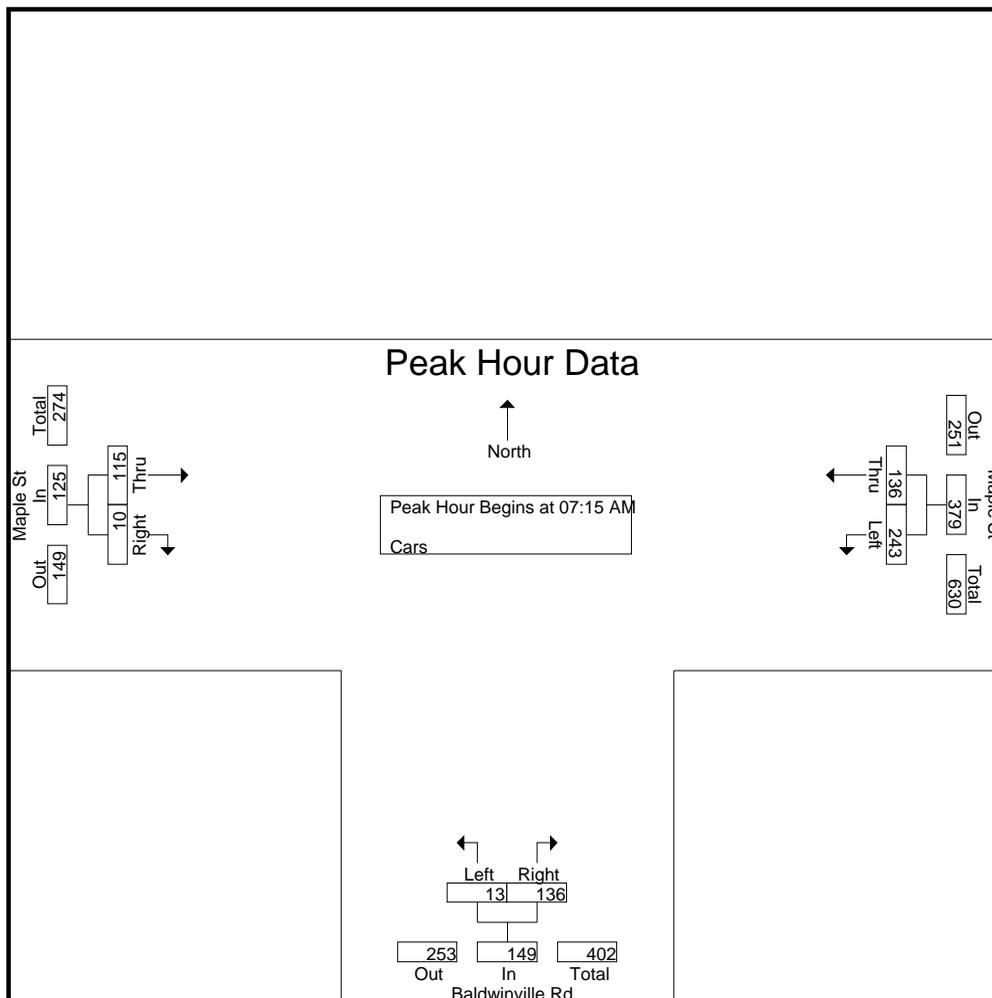
File Name : 89140003
Site Code : 89140003
Start Date : 9/28/2021
Page No : 4

Groups Printed- Cars

Start Time	Maple St From East		Baldwinville Rd From South		Maple St From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	45	18	1	22	28	1	115
07:15 AM	82	38	3	22	28	6	179
07:30 AM	82	27	3	42	32	3	189
07:45 AM	40	40	3	41	25	1	150
Total	249	123	10	127	113	11	633
08:00 AM	39	31	4	31	30	0	135
08:15 AM	31	22	1	38	28	2	122
08:30 AM	22	33	2	32	23	1	113
08:45 AM	30	32	3	36	30	1	132
Total	122	118	10	137	111	4	502
Grand Total	371	241	20	264	224	15	1135
Apprch %	60.6	39.4	7	93	93.7	6.3	
Total %	32.7	21.2	1.8	23.3	19.7	1.3	

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	82	38	120	3	22	25	28	6	34	179
07:30 AM	82	27	109	3	42	45	32	3	35	189
07:45 AM	40	40	80	3	41	44	25	1	26	150
08:00 AM	39	31	70	4	31	35	30	0	30	135
Total Volume	243	136	379	13	136	149	115	10	125	653
% App. Total	64.1	35.9		8.7	91.3		92	8		
PHF	.741	.850	.790	.813	.810	.828	.898	.417	.893	.864

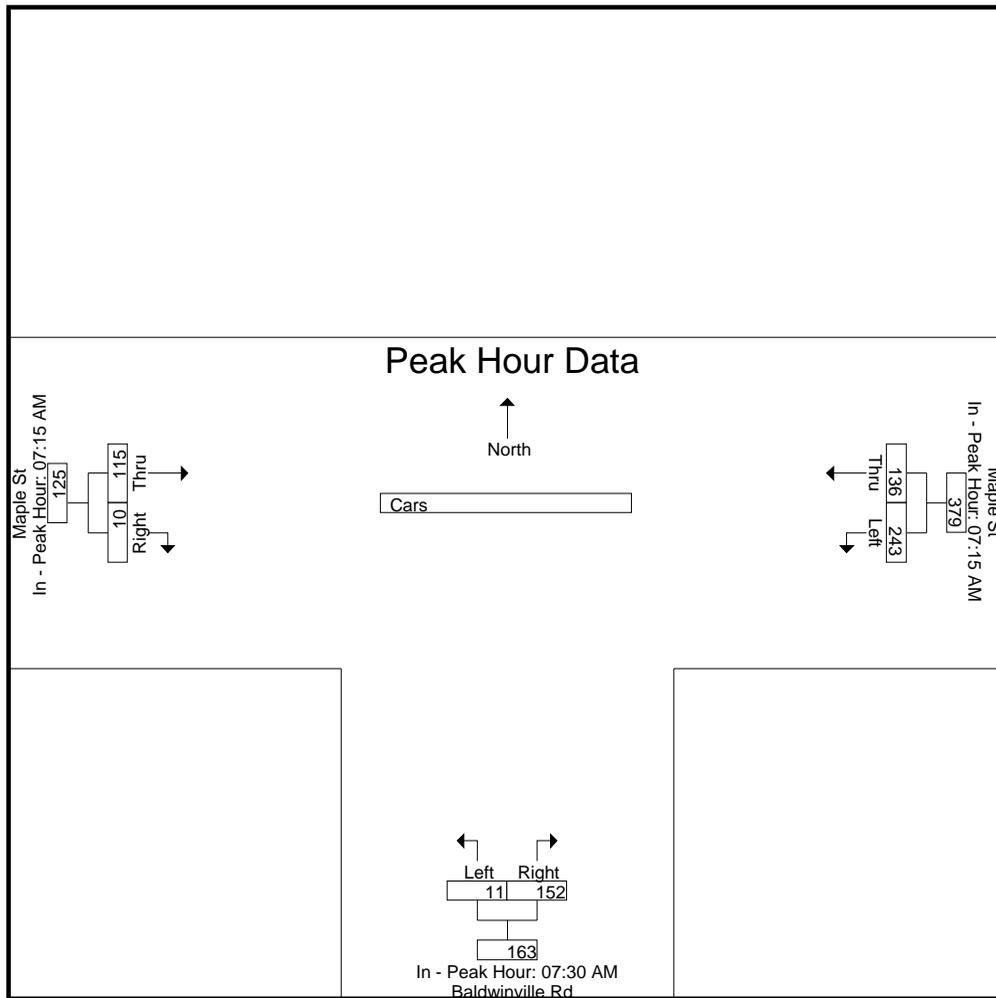
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			07:15 AM		
+0 mins.	82	38	120	3	42	45	28	6	34
+15 mins.	82	27	109	3	41	44	32	3	35
+30 mins.	40	40	80	4	31	35	25	1	26
+45 mins.	39	31	70	1	38	39	30	0	30
Total Volume	243	136	379	11	152	163	115	10	125
% App. Total	64.1	35.9		6.7	93.3		92	8	
PHF	.741	.850	.790	.688	.905	.906	.898	.417	.893

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Maple Street
 City/State : Templeton, MA
 Weather : Cloudy

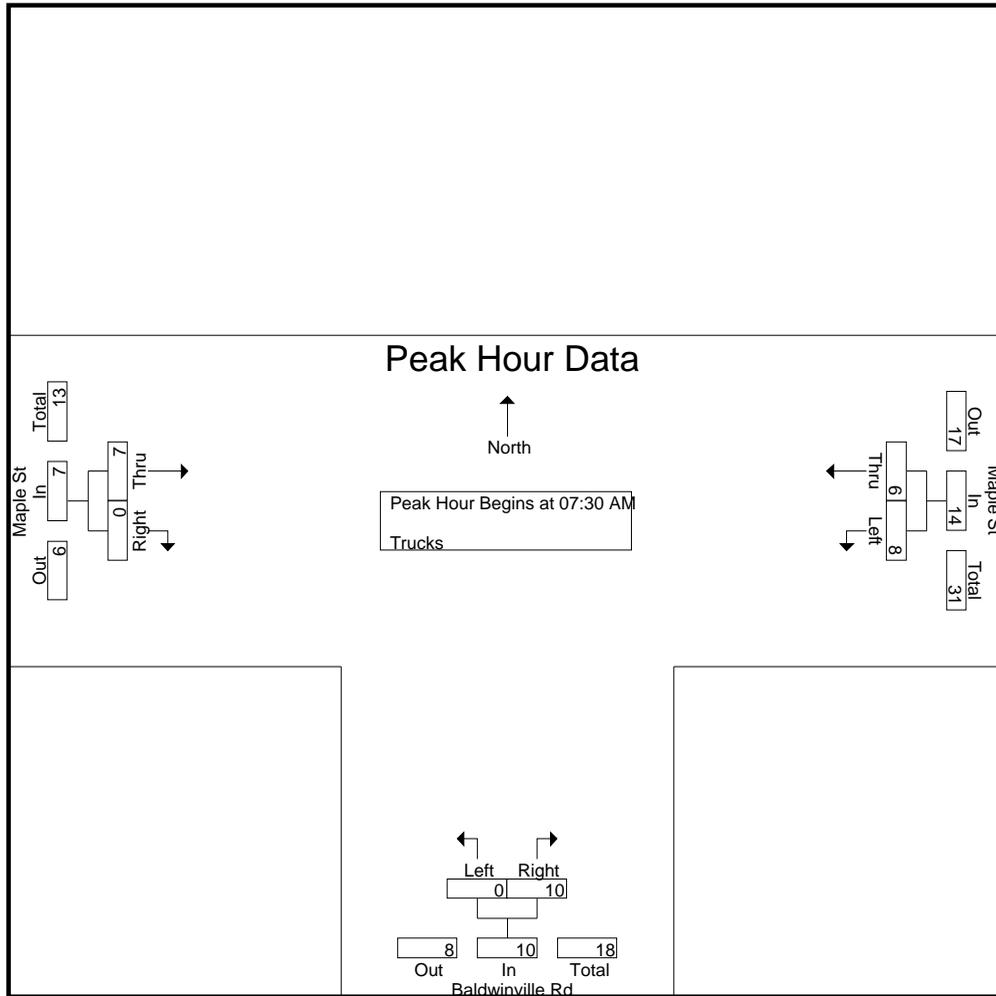
File Name : 89140003
 Site Code : 89140003
 Start Date : 9/28/2021
 Page No : 7

Groups Printed- Trucks

Start Time	Maple St From East		Baldwinville Rd From South		Maple St From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	1	0	3	0	0	4
07:15 AM	3	0	0	1	0	0	4
07:30 AM	4	3	0	4	2	0	13
07:45 AM	2	1	0	0	1	0	4
Total	9	5	0	8	3	0	25
08:00 AM	1	1	0	1	0	0	3
08:15 AM	1	1	0	5	4	0	11
08:30 AM	2	4	0	0	4	0	10
08:45 AM	1	3	0	0	2	0	6
Total	5	9	0	6	10	0	30
Grand Total	14	14	0	14	13	0	55
Apprch %	50	50	0	100	100	0	
Total %	25.5	25.5	0	25.5	23.6	0	

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	4	3	7	0	4	4	2	0	2	13
07:45 AM	2	1	3	0	0	0	1	0	1	4
08:00 AM	1	1	2	0	1	1	0	0	0	3
08:15 AM	1	1	2	0	5	5	4	0	4	11
Total Volume	8	6	14	0	10	10	7	0	7	31
% App. Total	57.1	42.9		0	100		100	0		
PHF	.500	.500	.500	.000	.500	.500	.438	.000	.438	.596

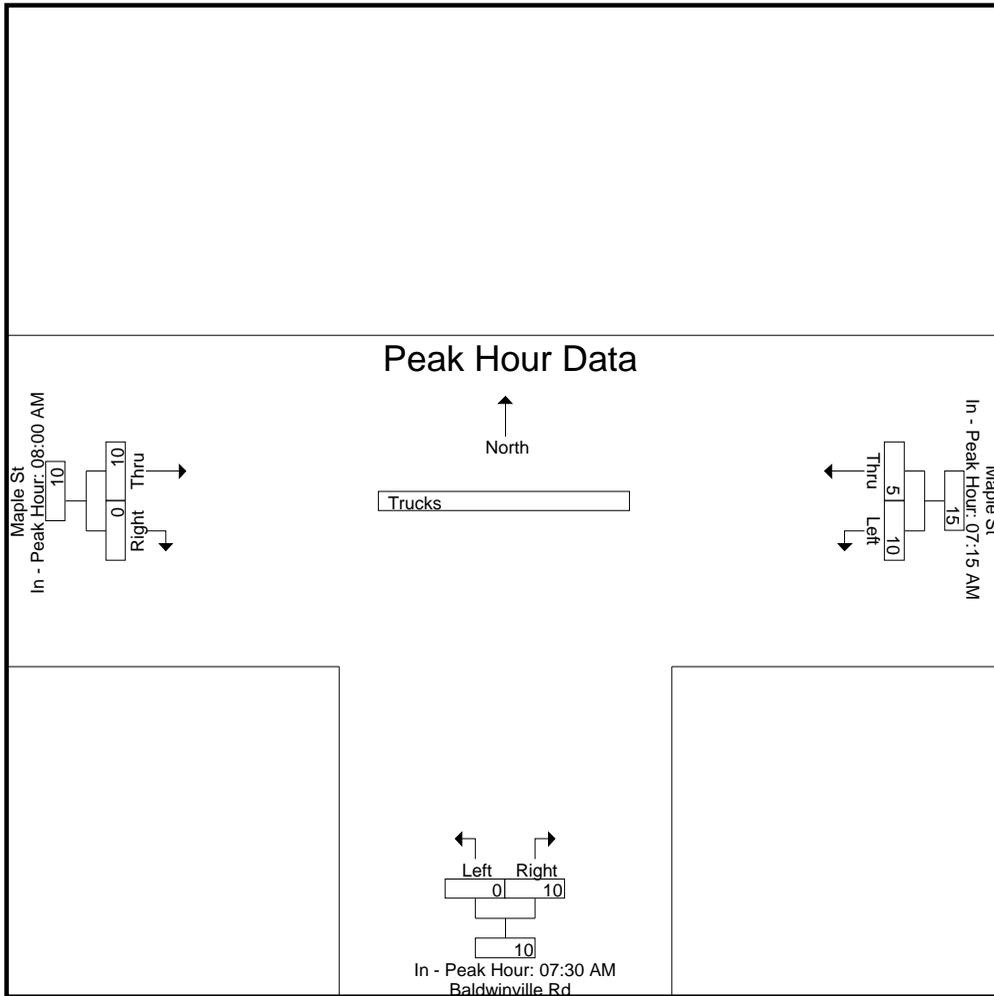
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			08:00 AM		
+0 mins.	3	0	3	0	4	4	0	0	0
+15 mins.	4	3	7	0	0	0	4	0	4
+30 mins.	2	1	3	0	1	1	4	0	4
+45 mins.	1	1	2	0	5	5	2	0	2
Total Volume	10	5	15	0	10	10	10	0	10
% App. Total	66.7	33.3		0	100		100	0	
PHF	.625	.417	.536	.000	.500	.500	.625	.000	.625

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Maple Street
 City/State : Templeton, MA
 Weather : Cloudy

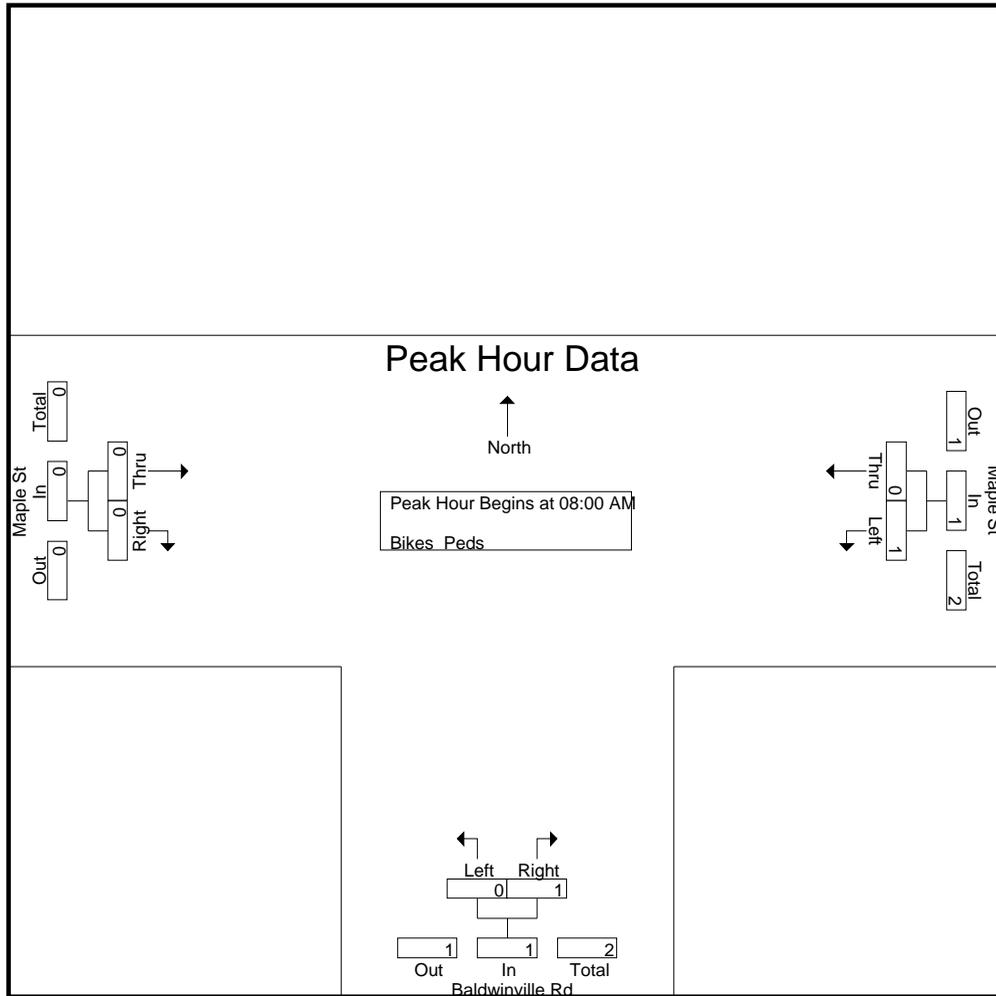
File Name : 89140003
 Site Code : 89140003
 Start Date : 9/28/2021
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	1
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	1	0	0	0	0	0	1	1
08:45 AM	1	0	0	0	0	0	0	0	0	0	1	1
Total	1	0	0	0	1	0	0	0	0	0	2	2
Grand Total	1	0	0	0	1	0	0	0	2	2	2	4
Apprch %	100	0		0	100		0	0				
Total %	50	0		0	50		0	0		50	50	

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	1	1	0	0	0	1
08:45 AM	1	0	1	0	0	0	0	0	0	1
Total Volume	1	0	1	0	1	1	0	0	0	2
% App. Total	100	0		0	100		0	0		
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.000	.500

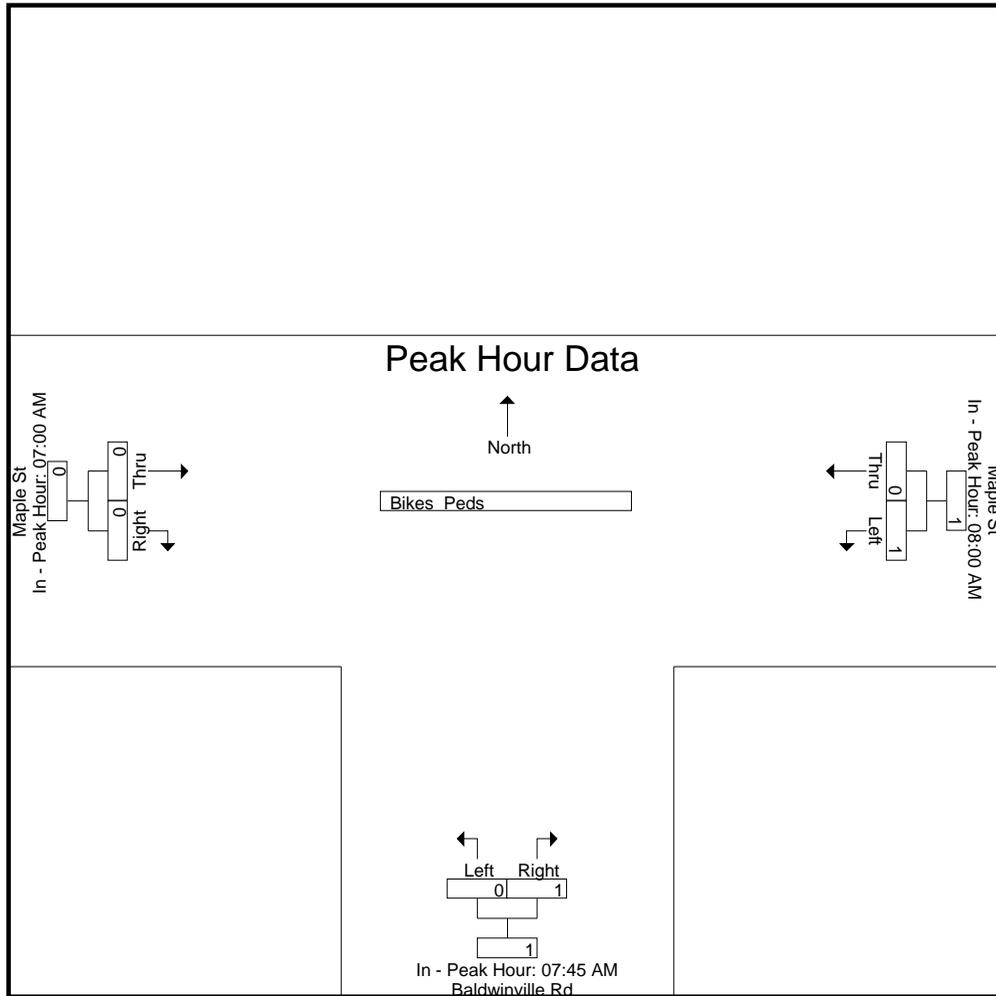
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:45 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	1	0	1	1	0	0	0
Total Volume	1	0	1	0	1	1	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.000

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Maple Street
 City/State : Templeton, MA
 Weather : Cloudy

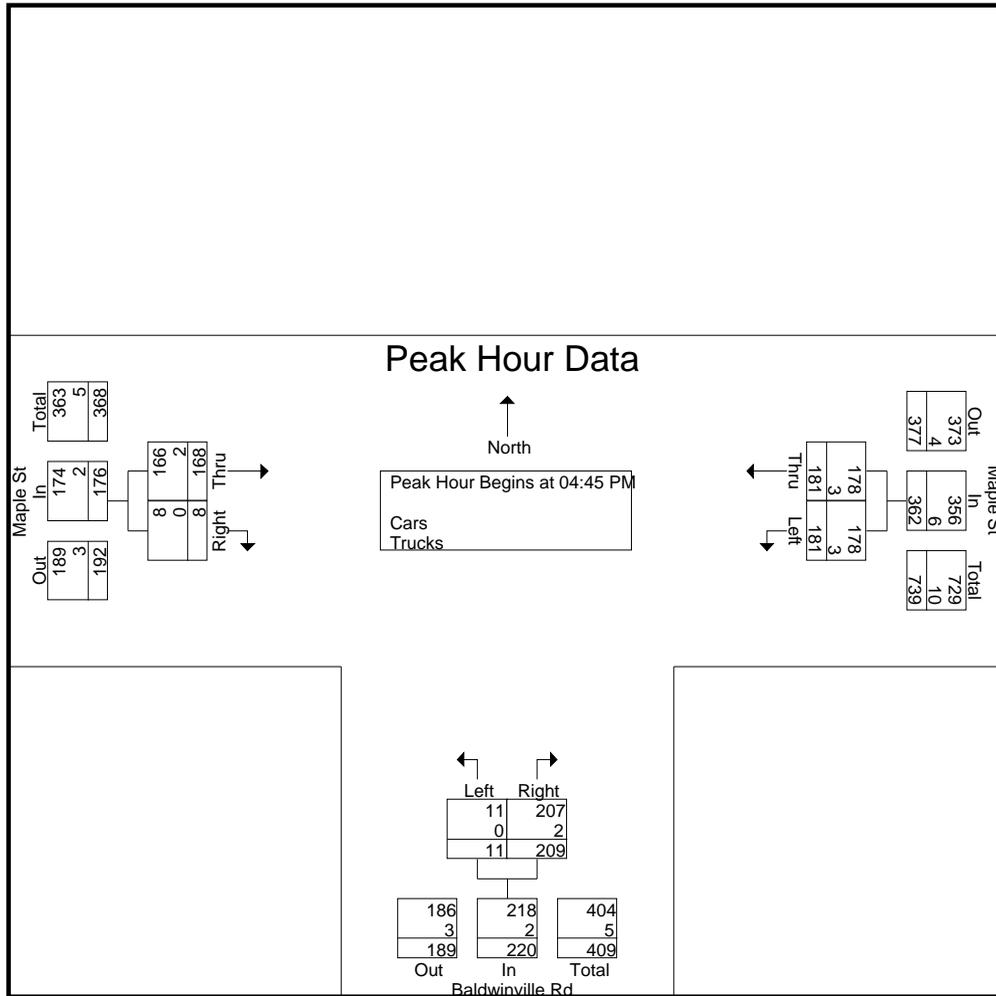
File Name : 89140003
 Site Code : 89140003
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Maple St From East		Baldwinville Rd From South		Maple St From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	31	45	3	55	33	1	168
04:15 PM	34	31	5	50	38	2	160
04:30 PM	33	28	2	48	39	2	152
04:45 PM	30	38	2	58	42	3	173
Total	128	142	12	211	152	8	653
05:00 PM	39	54	5	52	44	3	197
05:15 PM	70	50	3	45	44	2	214
05:30 PM	42	39	1	54	38	0	174
05:45 PM	22	35	0	48	30	0	135
Total	173	178	9	199	156	5	720
Grand Total	301	320	21	410	308	13	1373
Apprch %	48.5	51.5	4.9	95.1	96	4	
Total %	21.9	23.3	1.5	29.9	22.4	0.9	
Cars	298	315	21	406	302	13	1355
% Cars	99	98.4	100	99	98.1	100	98.7
Trucks	3	5	0	4	6	0	18
% Trucks	1	1.6	0	1	1.9	0	1.3

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	30	38	68	2	58	60	42	3	45	173
05:00 PM	39	54	93	5	52	57	44	3	47	197
05:15 PM	70	50	120	3	45	48	44	2	46	214
05:30 PM	42	39	81	1	54	55	38	0	38	174
Total Volume	181	181	362	11	209	220	168	8	176	758
% App. Total	50	50	362	5	95	220	95.5	4.5	176	758
PHF	.646	.838	.754	.550	.901	.917	.955	.667	.936	.886
Cars	178	178	356	11	207	218	166	8	174	748
% Cars	98.3	98.3	98.3	100	99.0	99.1	98.8	100	98.9	98.7
Trucks	3	3	6	0	2	2	2	0	2	10
% Trucks	1.7	1.7	1.7	0	1.0	0.9	1.2	0	1.1	1.3

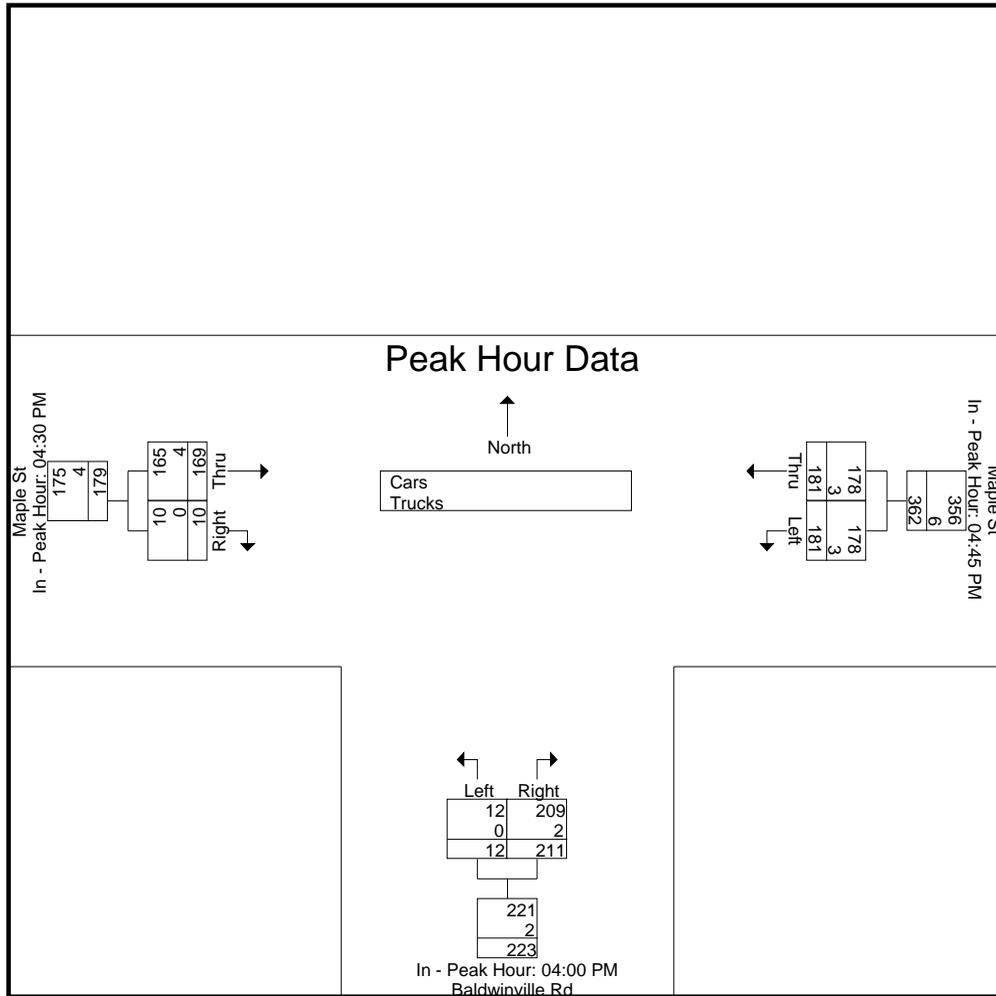
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:30 PM		
+0 mins.	30	38	68	3	55	58	39	2	41
+15 mins.	39	54	93	5	50	55	42	3	45
+30 mins.	70	50	120	2	48	50	44	3	47
+45 mins.	42	39	81	2	58	60	44	2	46
Total Volume	181	181	362	12	211	223	169	10	179
% App. Total	50	50		5.4	94.6		94.4	5.6	
PHF	.646	.838	.754	.600	.909	.929	.960	.833	.952
Cars	178	178	356	12	209	221	165	10	175
% Cars	98.3	98.3	98.3	100	99.1	99.1	97.6	100	97.8
Trucks	3	3	6	0	2	2	4	0	4
% Trucks	1.7	1.7	1.7	0	0.9	0.9	2.4	0	2.2

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Maple Street
 City/State : Templeton, MA
 Weather : Cloudy

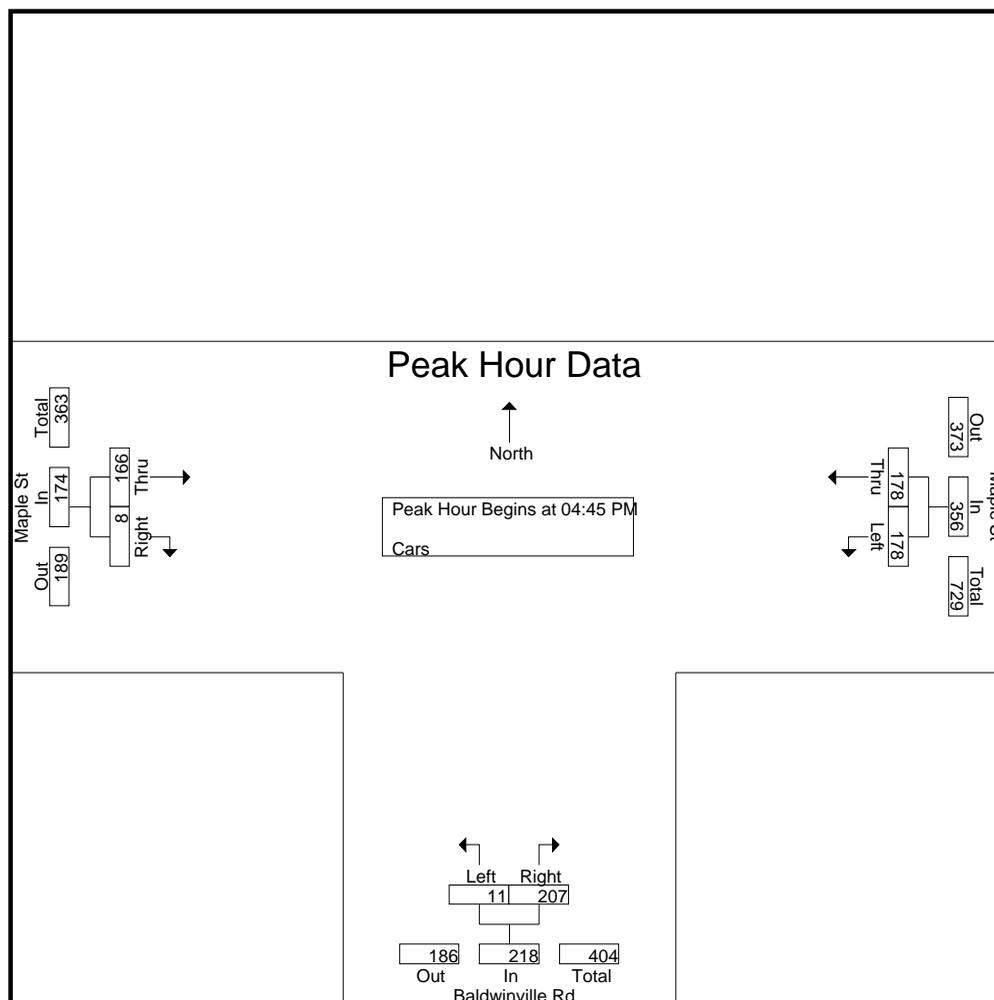
File Name : 89140003
 Site Code : 89140003
 Start Date : 9/28/2021
 Page No : 4

Groups Printed- Cars

Start Time	Maple St From East		Baldwinville Rd From South		Maple St From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	31	44	3	54	32	1	165
04:15 PM	34	30	5	49	37	2	157
04:30 PM	33	28	2	48	37	2	150
04:45 PM	29	37	2	58	41	3	170
Total	127	139	12	209	147	8	642
05:00 PM	39	53	5	51	44	3	195
05:15 PM	70	50	3	44	43	2	212
05:30 PM	40	38	1	54	38	0	171
05:45 PM	22	35	0	48	30	0	135
Total	171	176	9	197	155	5	713
Grand Total	298	315	21	406	302	13	1355
Apprch %	48.6	51.4	4.9	95.1	95.9	4.1	
Total %	22	23.2	1.5	30	22.3	1	

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	29	37	66	2	58	60	41	3	44	170
05:00 PM	39	53	92	5	51	56	44	3	47	195
05:15 PM	70	50	120	3	44	47	43	2	45	212
05:30 PM	40	38	78	1	54	55	38	0	38	171
Total Volume	178	178	356	11	207	218	166	8	174	748
% App. Total	50	50		5	95		95.4	4.6		
PHF	.636	.840	.742	.550	.892	.908	.943	.667	.926	.882

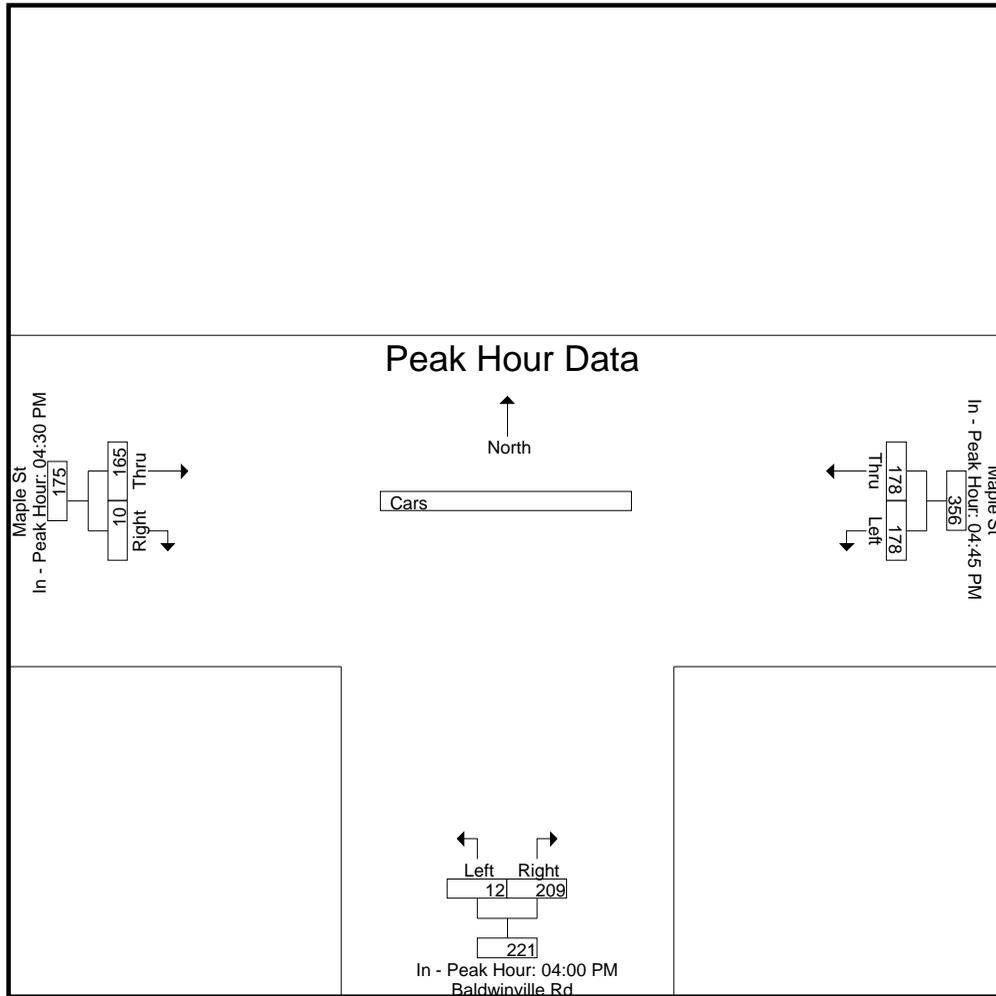
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:30 PM		
+0 mins.	29	37	66	3	54	57	37	2	39
+15 mins.	39	53	92	5	49	54	41	3	44
+30 mins.	70	50	120	2	48	50	44	3	47
+45 mins.	40	38	78	2	58	60	43	2	45
Total Volume	178	178	356	12	209	221	165	10	175
% App. Total	50	50		5.4	94.6		94.3	5.7	
PHF	.636	.840	.742	.600	.901	.921	.938	.833	.931

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Baldwinville Road
 E/W Street : Maple Street
 City/State : Templeton, MA
 Weather : Cloudy

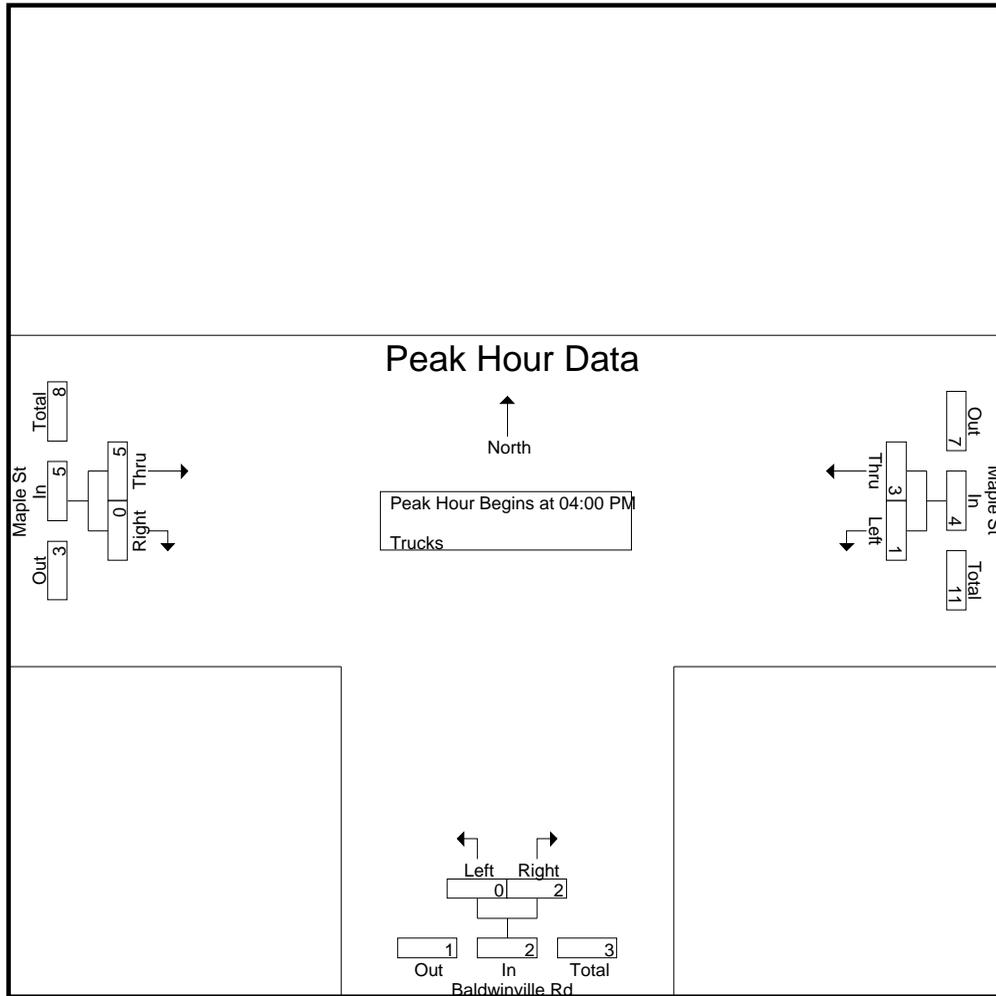
File Name : 89140003
 Site Code : 89140003
 Start Date : 9/28/2021
 Page No : 7

Groups Printed- Trucks

Start Time	Maple St From East		Baldwinville Rd From South		Maple St From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	1	0	1	1	0	3
04:15 PM	0	1	0	1	1	0	3
04:30 PM	0	0	0	0	2	0	2
04:45 PM	1	1	0	0	1	0	3
Total	1	3	0	2	5	0	11
05:00 PM	0	1	0	1	0	0	2
05:15 PM	0	0	0	1	1	0	2
05:30 PM	2	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0
Total	2	2	0	2	1	0	7
Grand Total	3	5	0	4	6	0	18
Apprch %	37.5	62.5	0	100	100	0	
Total %	16.7	27.8	0	22.2	33.3	0	

Start Time	Maple St From East			Baldwinville Rd From South			Maple St From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	1	1	0	1	1	1	0	1	3
04:15 PM	0	1	1	0	1	1	1	0	1	3
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	1	1	2	0	0	0	1	0	1	3
Total Volume	1	3	4	0	2	2	5	0	5	11
% App. Total	25	75		0	100		100	0		
PHF	.250	.750	.500	.000	.500	.500	.625	.000	.625	.917

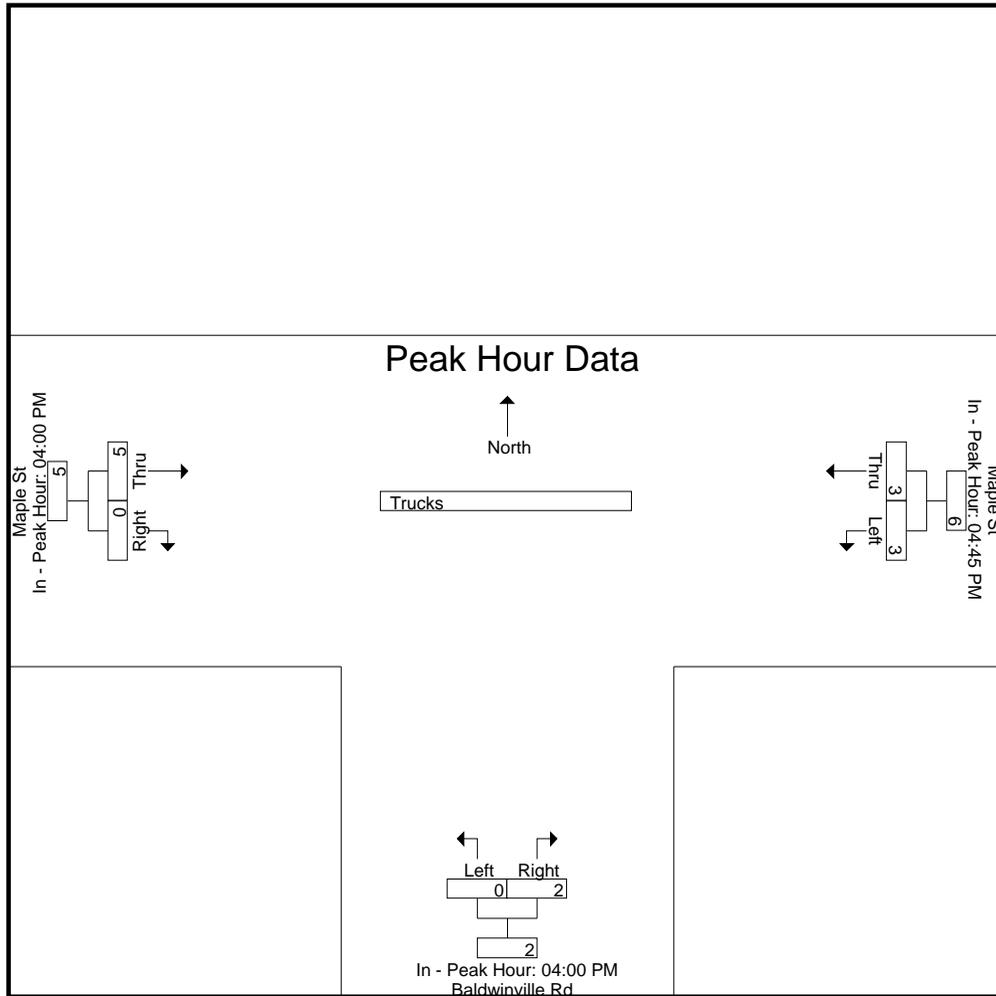
N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



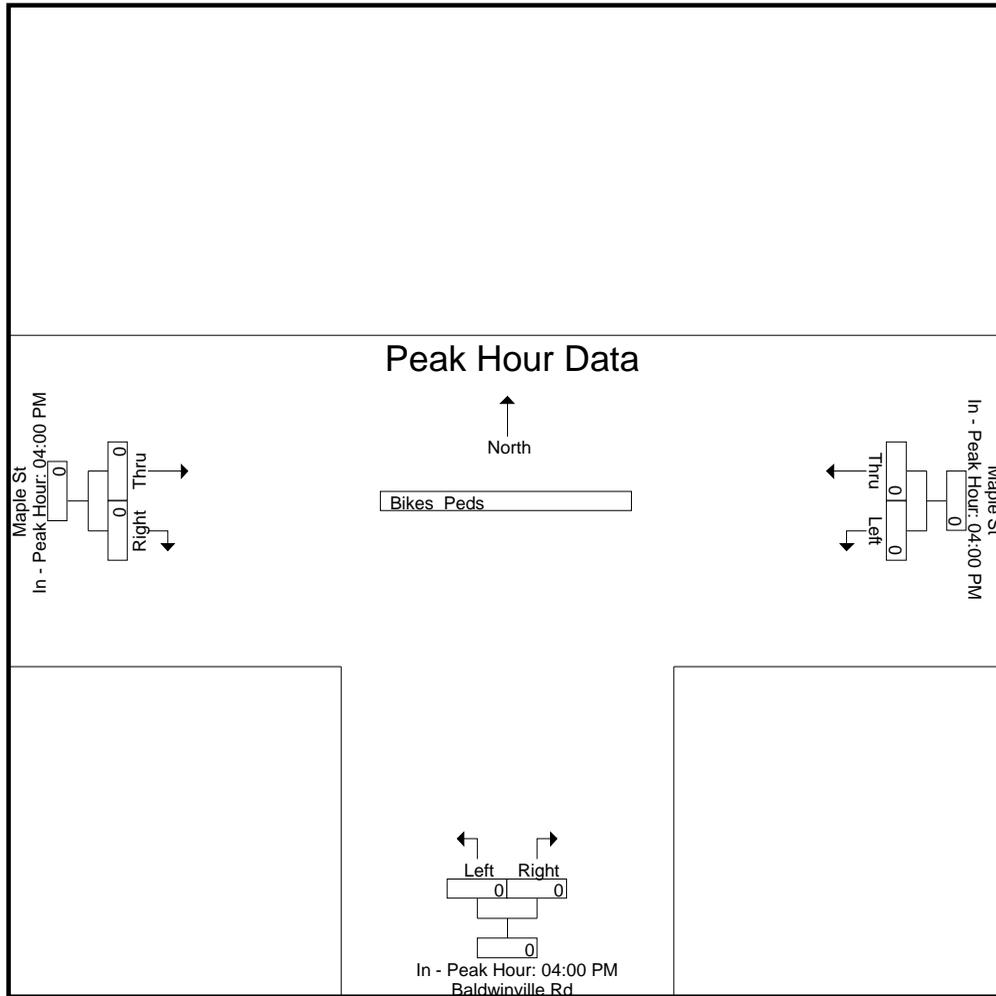
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:00 PM		
+0 mins.	1	1	2	0	1	1	1	0	1
+15 mins.	0	1	1	0	1	1	1	0	1
+30 mins.	0	0	0	0	0	0	2	0	2
+45 mins.	2	1	3	0	0	0	1	0	1
Total Volume	3	3	6	0	2	2	5	0	5
% App. Total	50	50		0	100		100	0	
PHF	.375	.750	.500	.000	.500	.500	.625	.000	.625

N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



N/S Street : Baldwinville Road
E/W Street : Maple Street
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Maple Street
 E/W Street : School Street / Driveway
 City/State : Templeton, MA
 Weather : Cloudy

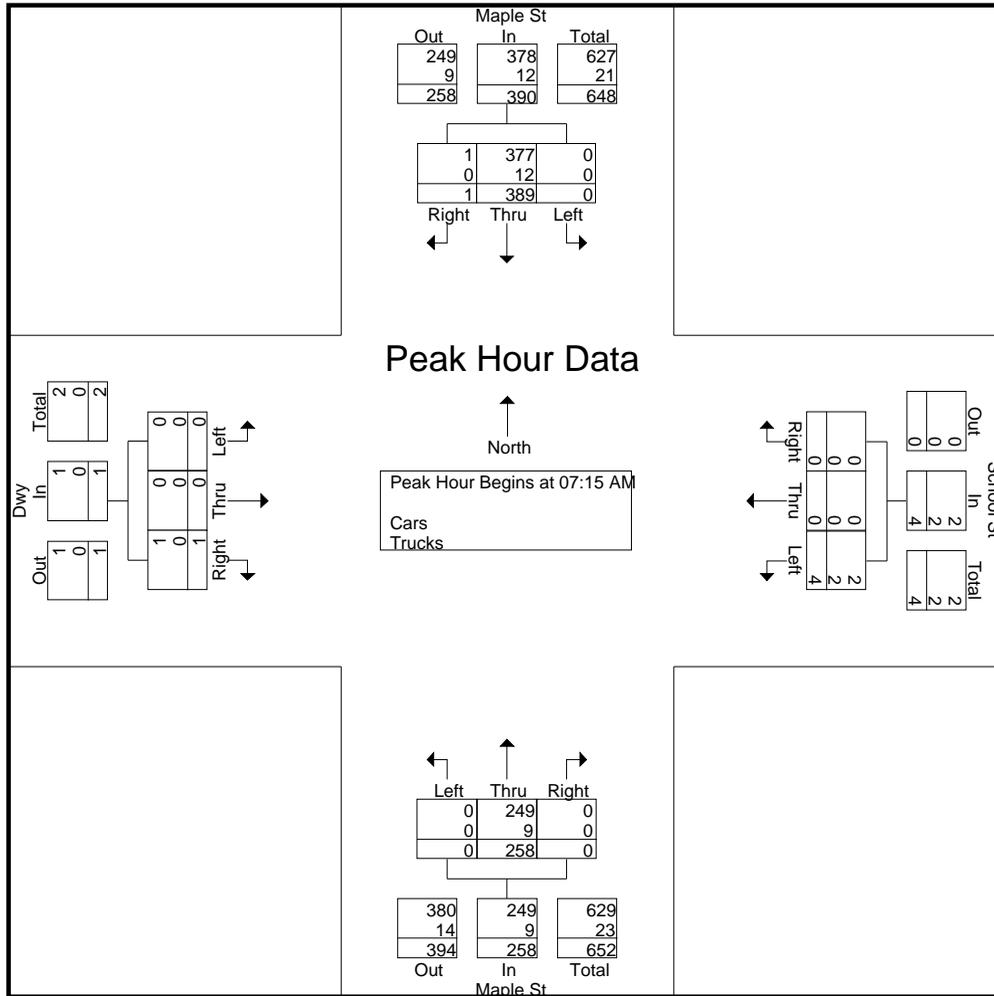
File Name : 89140004
 Site Code : 89140004
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Maple St From North			School St From East			Maple St From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	63	0	0	0	1	0	53	0	0	0	0	117
07:15 AM	0	121	0	2	0	0	0	50	0	0	0	0	173
07:30 AM	0	115	1	0	0	0	0	79	0	0	0	1	196
07:45 AM	0	82	0	1	0	0	0	69	0	0	0	0	152
Total	0	381	1	3	0	1	0	251	0	0	0	1	638
08:00 AM	0	71	0	1	0	0	0	60	0	0	0	0	132
08:15 AM	0	56	0	0	0	0	0	77	0	0	0	0	133
08:30 AM	0	60	0	0	0	0	1	57	0	0	0	0	118
08:45 AM	0	66	0	0	0	1	0	69	0	0	0	0	136
Total	0	253	0	1	0	1	1	263	0	0	0	0	519
Grand Total	0	634	1	4	0	2	1	514	0	0	0	1	1157
Apprch %	0	99.8	0.2	66.7	0	33.3	0.2	99.8	0	0	0	100	
Total %	0	54.8	0.1	0.3	0	0.2	0.1	44.4	0	0	0	0.1	
Cars	0	609	1	2	0	1	1	487	0	0	0	1	1102
% Cars	0	96.1	100	50	0	50	100	94.7	0	0	0	100	95.2
Trucks	0	25	0	2	0	1	0	27	0	0	0	0	55
% Trucks	0	3.9	0	50	0	50	0	5.3	0	0	0	0	4.8

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	121	0	121	2	0	0	2	0	50	0	50	0	0	0	0	173
07:30 AM	0	115	1	116	0	0	0	0	0	79	0	79	0	0	1	1	196
07:45 AM	0	82	0	82	1	0	0	1	0	69	0	69	0	0	0	0	152
08:00 AM	0	71	0	71	1	0	0	1	0	60	0	60	0	0	0	0	132
Total Volume	0	389	1	390	4	0	0	4	0	258	0	258	0	0	1	1	653
% App. Total	0	99.7	0.3	100	100	0	0	100	0	100	0	100	0	0	100	100	
PHF	.000	.804	.250	.806	.500	.000	.000	.500	.000	.816	.000	.816	.000	.000	.250	.250	.833
Cars	0	377	1	378	2	0	0	2	0	249	0	249	0	0	1	1	630
% Cars	0	96.9	100	96.9	50.0	0	0	50.0	0	96.5	0	96.5	0	0	100	100	96.5
Trucks	0	12	0	12	2	0	0	2	0	9	0	9	0	0	0	0	23
% Trucks	0	3.1	0	3.1	50.0	0	0	50.0	0	3.5	0	3.5	0	0	0	0	3.5

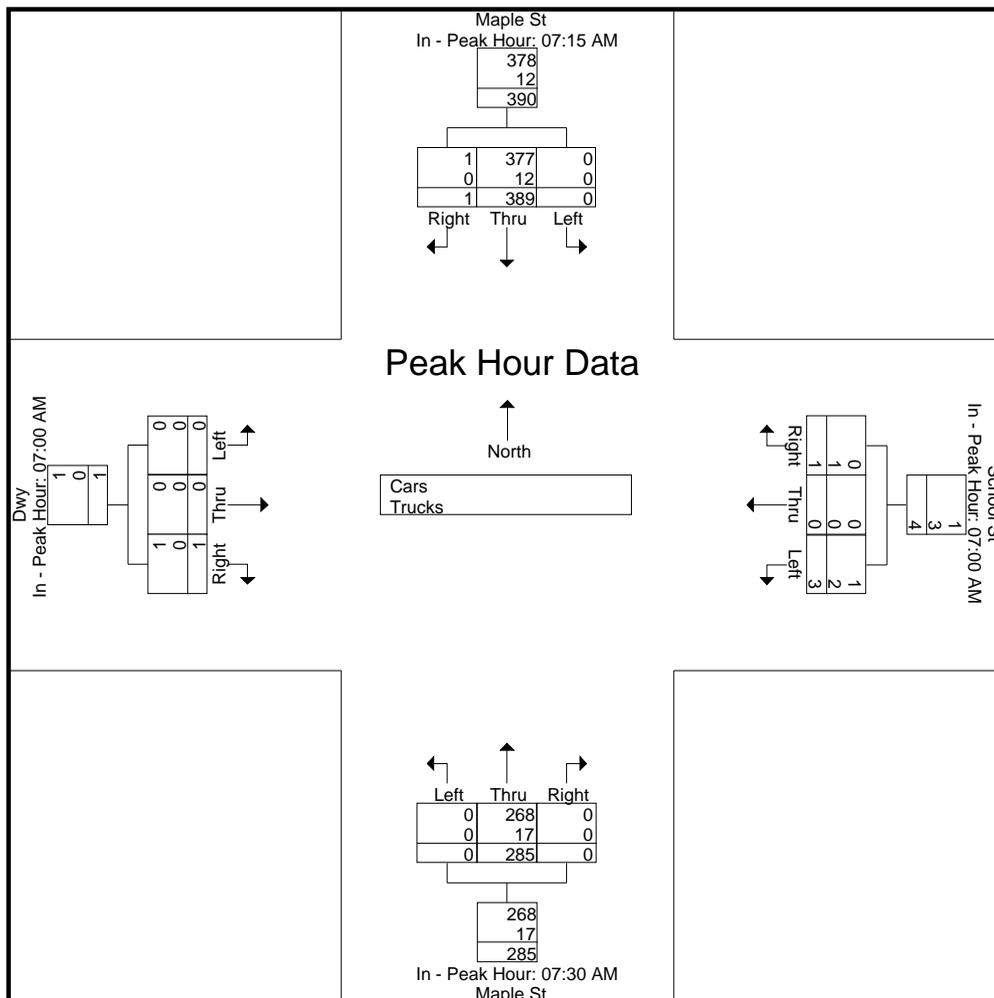
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:00 AM			
+0 mins.	0	121	0	121	0	0	1	1	0	79	0	79	0	0	0	0
+15 mins.	0	115	1	116	2	0	0	2	0	69	0	69	0	0	0	0
+30 mins.	0	82	0	82	0	0	0	0	0	60	0	60	0	0	1	1
+45 mins.	0	71	0	71	1	0	0	1	0	77	0	77	0	0	0	0
Total Volume	0	389	1	390	3	0	1	4	0	285	0	285	0	0	1	1
% App. Total	0	99.7	0.3		75	0	25		0	100	0		0	0	100	
PHF	.000	.804	.250	.806	.375	.000	.250	.500	.000	.902	.000	.902	.000	.000	.250	.250
Cars	0	377	1	378	1	0	0	1	0	268	0	268	0	0	1	1
% Cars	0	96.9	100	96.9	33.3	0	0	25	0	94	0	94	0	0	100	100
Trucks	0	12	0	12	2	0	1	3	0	17	0	17	0	0	0	0
% Trucks	0	3.1	0	3.1	66.7	0	100	75	0	6	0	6	0	0	0	0

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Maple Street
 E/W Street : School Street / Driveway
 City/State : Templeton, MA
 Weather : Cloudy

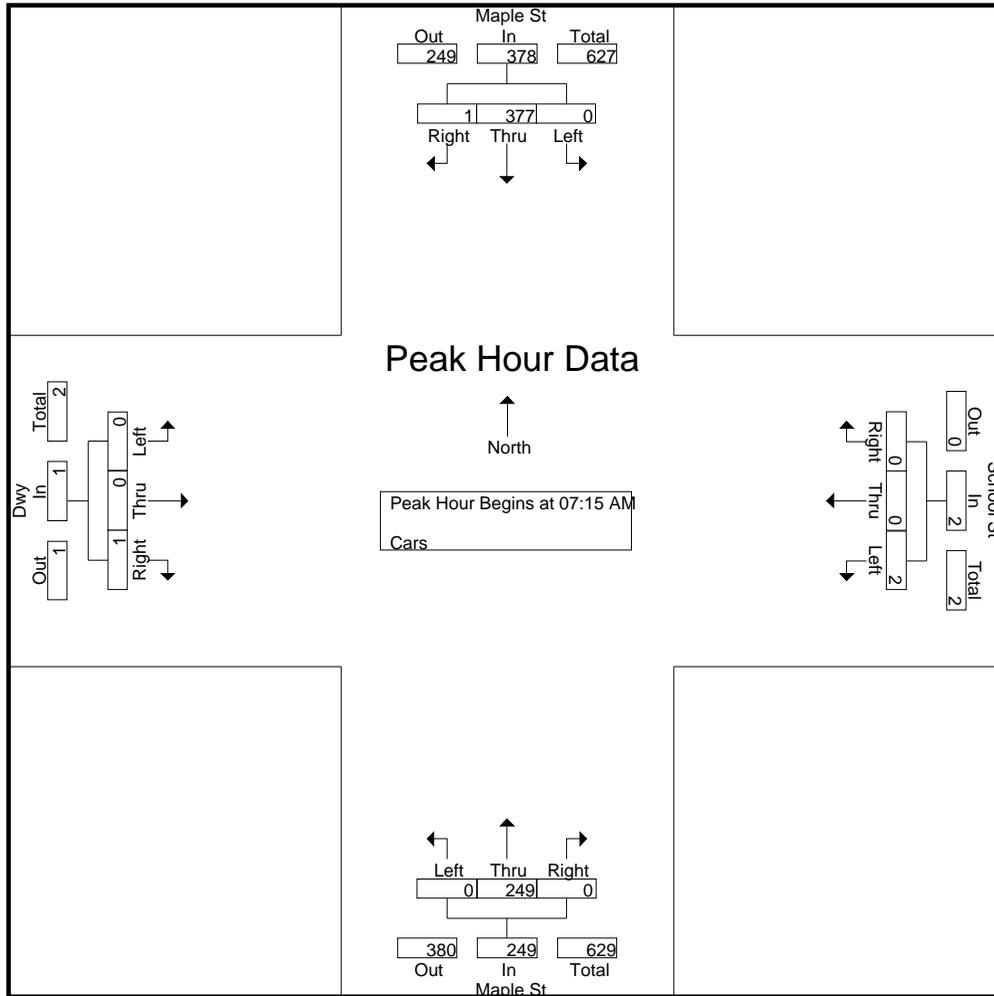
File Name : 89140004
 Site Code : 89140004
 Start Date : 9/28/2021
 Page No : 4

Groups Printed- Cars

Start Time	Maple St From North			School St From East			Maple St From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	62	0	0	0	0	0	50	0	0	0	0	112
07:15 AM	0	119	0	1	0	0	0	49	0	0	0	0	169
07:30 AM	0	109	1	0	0	0	0	73	0	0	0	1	184
07:45 AM	0	80	0	0	0	0	0	68	0	0	0	0	148
Total	0	370	1	1	0	0	0	240	0	0	0	1	613
08:00 AM	0	69	0	1	0	0	0	59	0	0	0	0	129
08:15 AM	0	54	0	0	0	0	0	68	0	0	0	0	122
08:30 AM	0	54	0	0	0	0	1	53	0	0	0	0	108
08:45 AM	0	62	0	0	0	1	0	67	0	0	0	0	130
Total	0	239	0	1	0	1	1	247	0	0	0	0	489
Grand Total	0	609	1	2	0	1	1	487	0	0	0	1	1102
Apprch %	0	99.8	0.2	66.7	0	33.3	0.2	99.8	0	0	0	100	
Total %	0	55.3	0.1	0.2	0	0.1	0.1	44.2	0	0	0	0.1	

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	119	0	119	1	0	0	1	0	49	0	49	0	0	0	0	169
07:30 AM	0	109	1	110	0	0	0	0	0	73	0	73	0	0	1	1	184
07:45 AM	0	80	0	80	0	0	0	0	0	68	0	68	0	0	0	0	148
08:00 AM	0	69	0	69	1	0	0	1	0	59	0	59	0	0	0	0	129
Total Volume	0	377	1	378	2	0	0	2	0	249	0	249	0	0	1	1	630
% App. Total	0	99.7	0.3		100	0	0		0	100	0		0	0	100		
PHF	.000	.792	.250	.794	.500	.000	.000	.500	.000	.853	.000	.853	.000	.000	.250	.250	.856

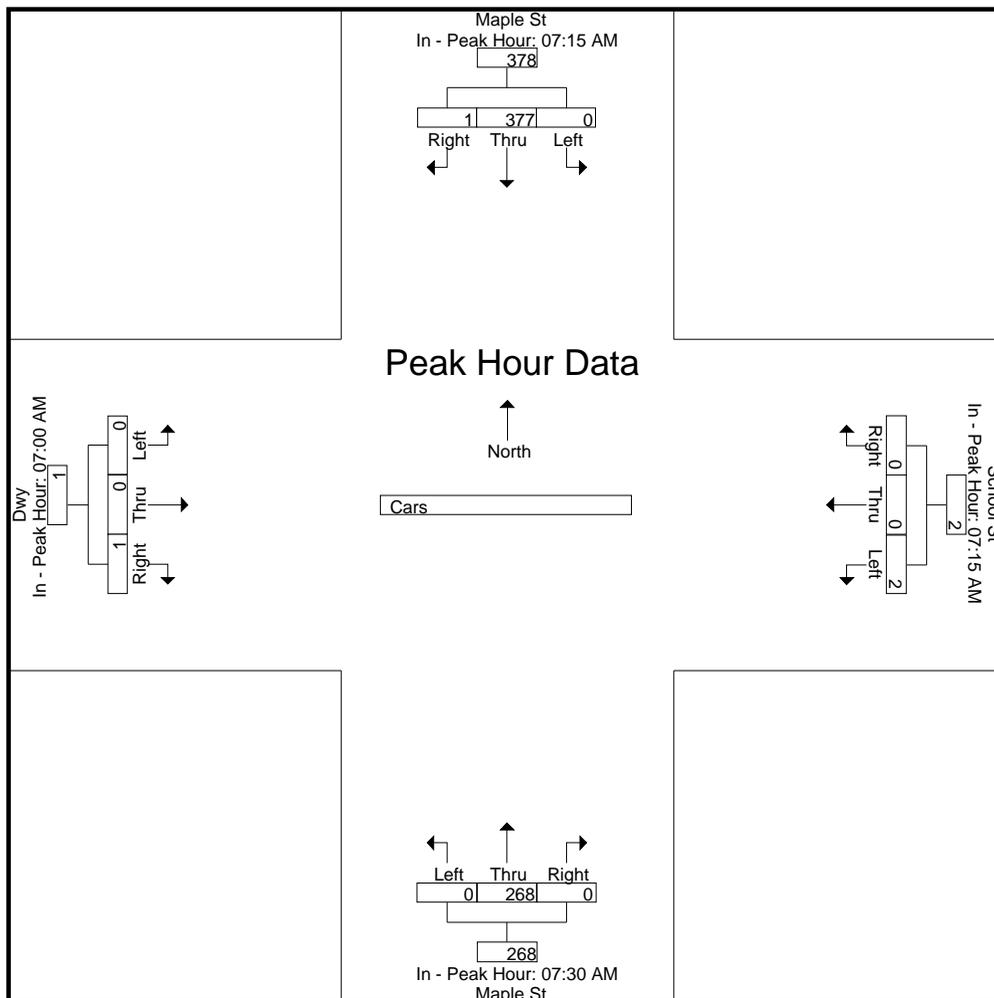
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:00 AM							
+0 mins.	0	119	0	119	1	0	0	1	0	73	0	73	0	0	0	0
+15 mins.	0	109	1	110	0	0	0	0	0	68	0	68	0	0	0	0
+30 mins.	0	80	0	80	0	0	0	0	0	59	0	59	0	0	1	1
+45 mins.	0	69	0	69	1	0	0	1	0	68	0	68	0	0	0	0
Total Volume	0	377	1	378	2	0	0	2	0	268	0	268	0	0	1	1
% App. Total	0	99.7	0.3		100	0	0		0	100	0		0	0	100	
PHF	.000	.792	.250	.794	.500	.000	.000	.500	.000	.918	.000	.918	.000	.000	.250	.250

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Maple Street
 E/W Street : School Street / Driveway
 City/State : Templeton, MA
 Weather : Cloudy

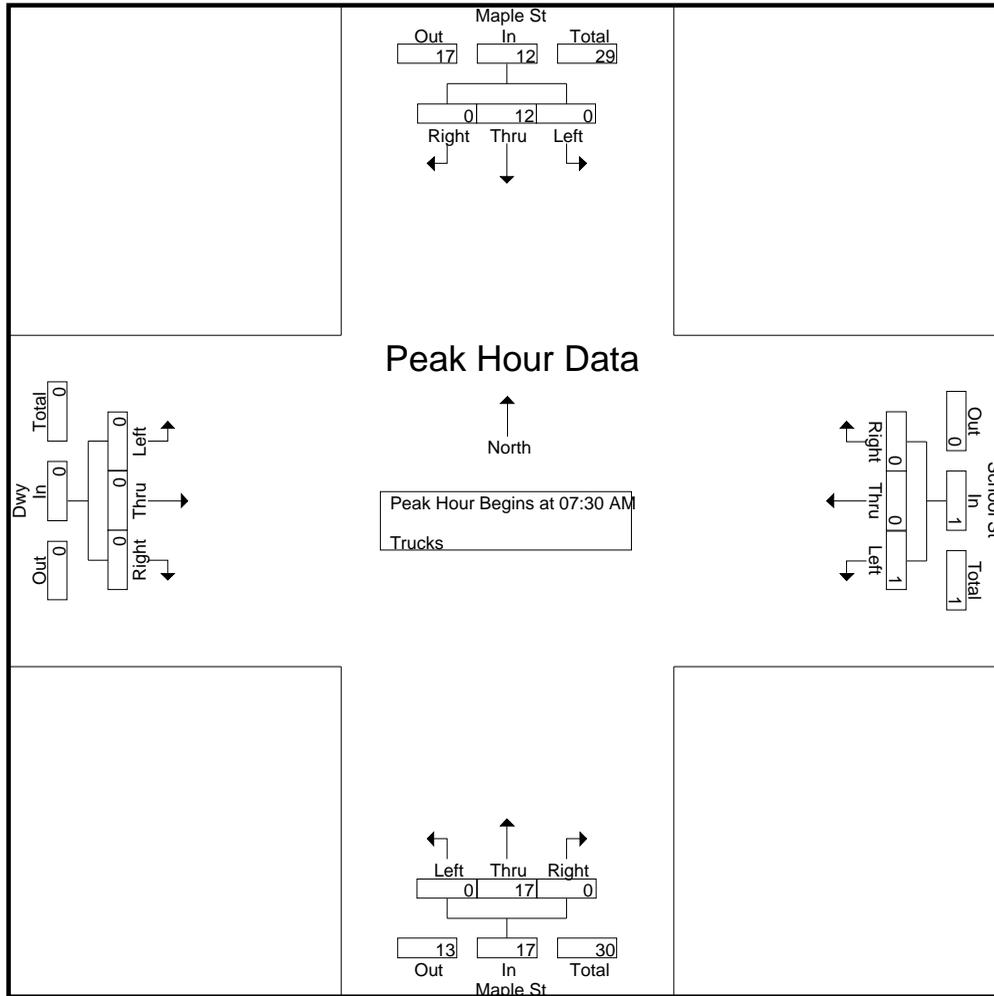
File Name : 89140004
 Site Code : 89140004
 Start Date : 9/28/2021
 Page No : 7

Groups Printed- Trucks

Start Time	Maple St From North			School St From East			Maple St From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	1	0	0	0	1	0	3	0	0	0	0	5
07:15 AM	0	2	0	1	0	0	0	1	0	0	0	0	4
07:30 AM	0	6	0	0	0	0	0	6	0	0	0	0	12
07:45 AM	0	2	0	1	0	0	0	1	0	0	0	0	4
Total	0	11	0	2	0	1	0	11	0	0	0	0	25
08:00 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
08:15 AM	0	2	0	0	0	0	0	9	0	0	0	0	11
08:30 AM	0	6	0	0	0	0	0	4	0	0	0	0	10
08:45 AM	0	4	0	0	0	0	0	2	0	0	0	0	6
Total	0	14	0	0	0	0	0	16	0	0	0	0	30
Grand Total	0	25	0	2	0	1	0	27	0	0	0	0	55
Apprch %	0	100	0	66.7	0	33.3	0	100	0	0	0	0	
Total %	0	45.5	0	3.6	0	1.8	0	49.1	0	0	0	0	

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	6	0	6	0	0	0	0	0	6	0	6	0	0	0	0	12
07:45 AM	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
08:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:15 AM	0	2	0	2	0	0	0	0	0	9	0	9	0	0	0	0	11
Total Volume	0	12	0	12	1	0	0	1	0	17	0	17	0	0	0	0	30
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.250	.000	.000	.250	.000	.472	.000	.472	.000	.000	.000	.000	.625

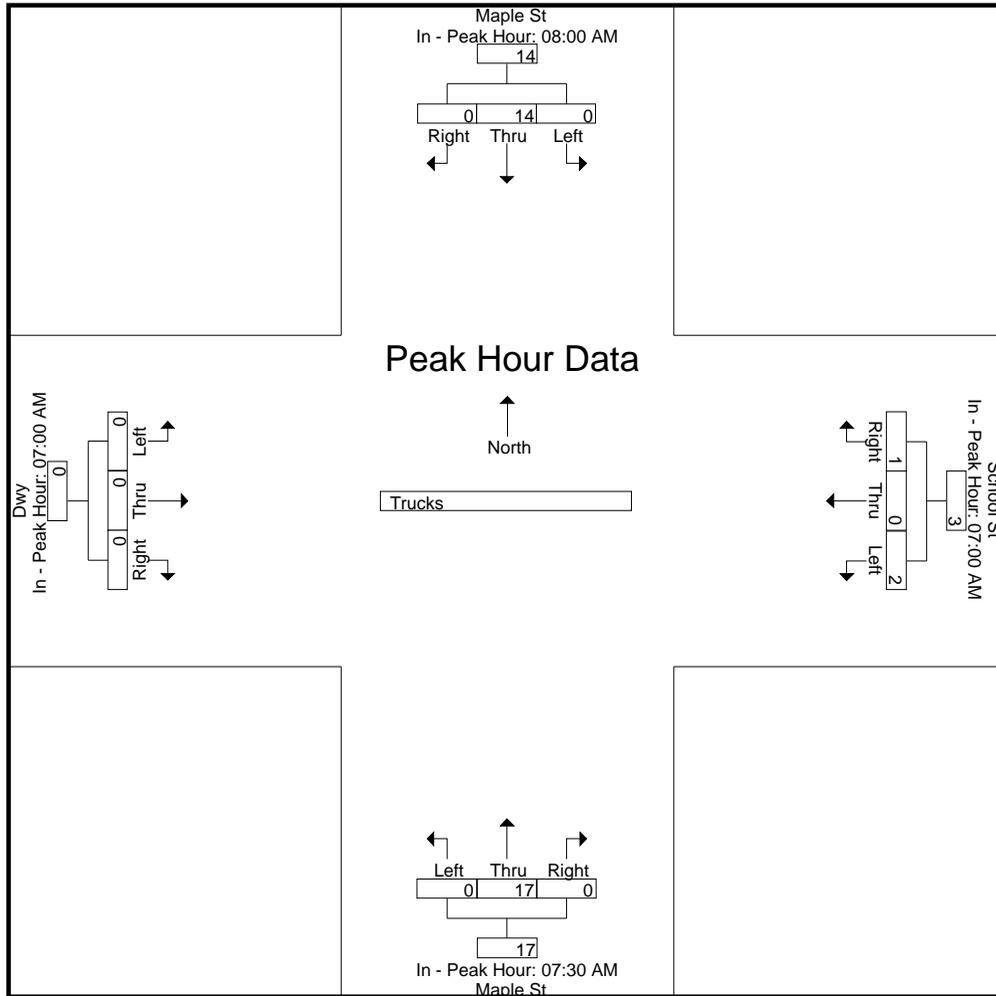
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:30 AM				07:00 AM			
+0 mins.	0	2	0	2	0	0	1	1	0	6	0	6	0	0	0	0
+15 mins.	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0
+30 mins.	0	6	0	6	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	4	0	4	1	0	0	1	0	9	0	9	0	0	0	0
Total Volume	0	14	0	14	2	0	1	3	0	17	0	17	0	0	0	0
% App. Total	0	100	0		66.7	0	33.3		0	100	0		0	0	0	
PHF	.000	.583	.000	.583	.500	.000	.250	.750	.000	.472	.000	.472	.000	.000	.000	.000

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

File Name : 89140004
Site Code : 89140004
Start Date : 9/28/2021
Page No : 10

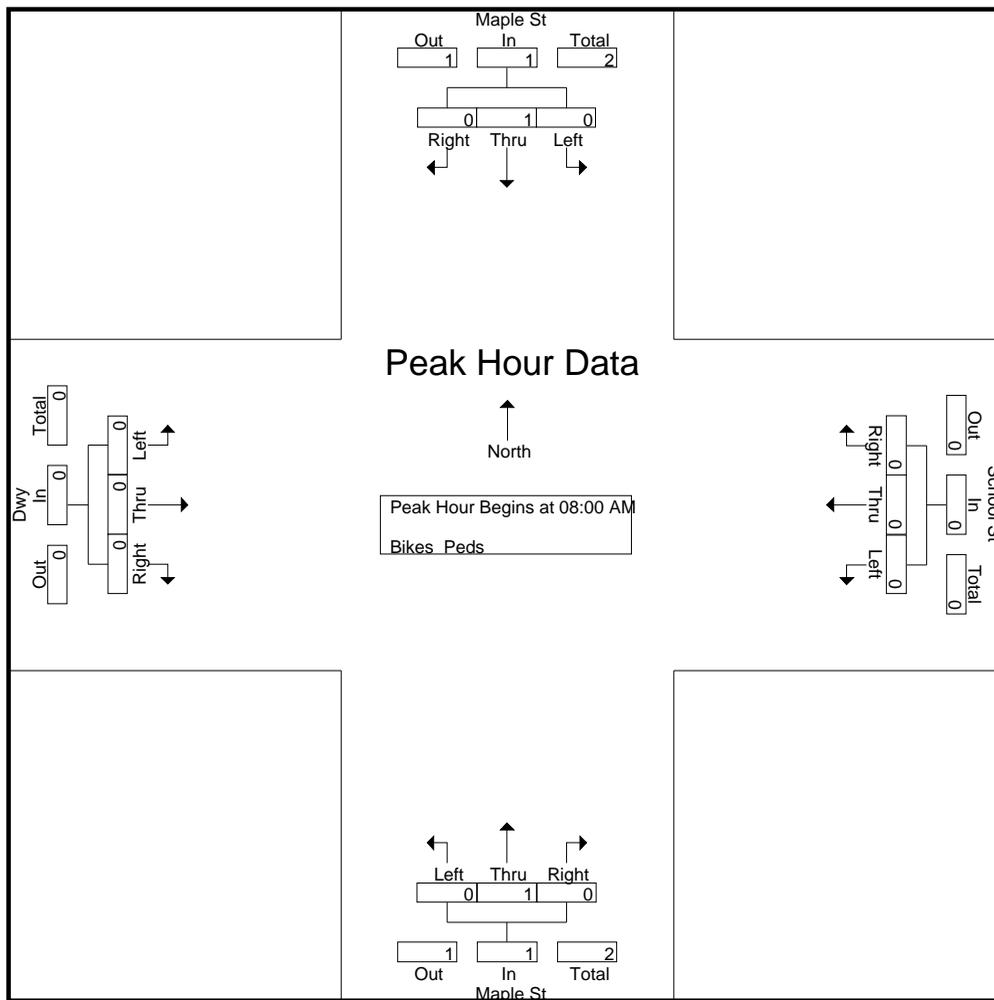
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy

Groups Printed- Bikes Peds

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
08:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2
Grand Total	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	2	2	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0				
Total %	0	50	0		0	0	0		0	50	0		0	0	0		50	50	

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 08:00 AM																		
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0			
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500

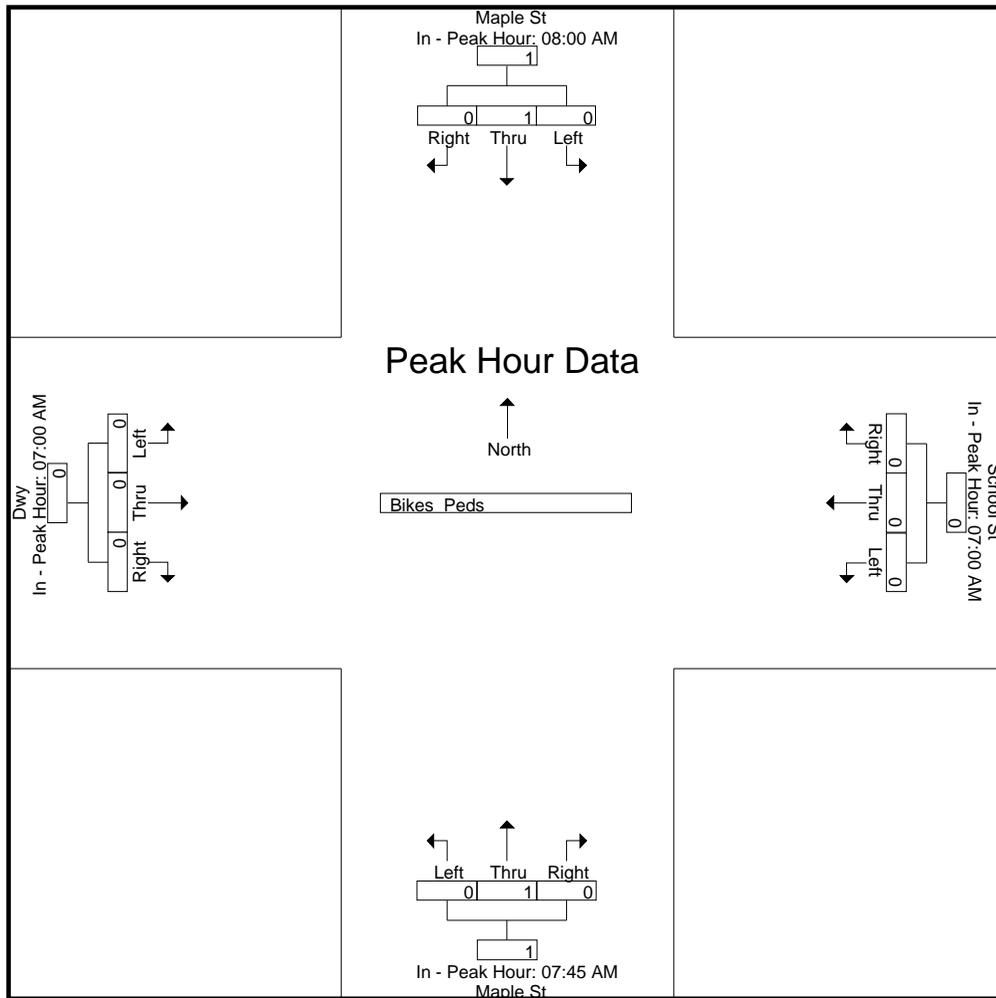
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:45 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts

978-664-2565

N/S Street : Maple Street
 E/W Street : School Street / Driveway
 City/State : Templeton, MA
 Weather : Cloudy

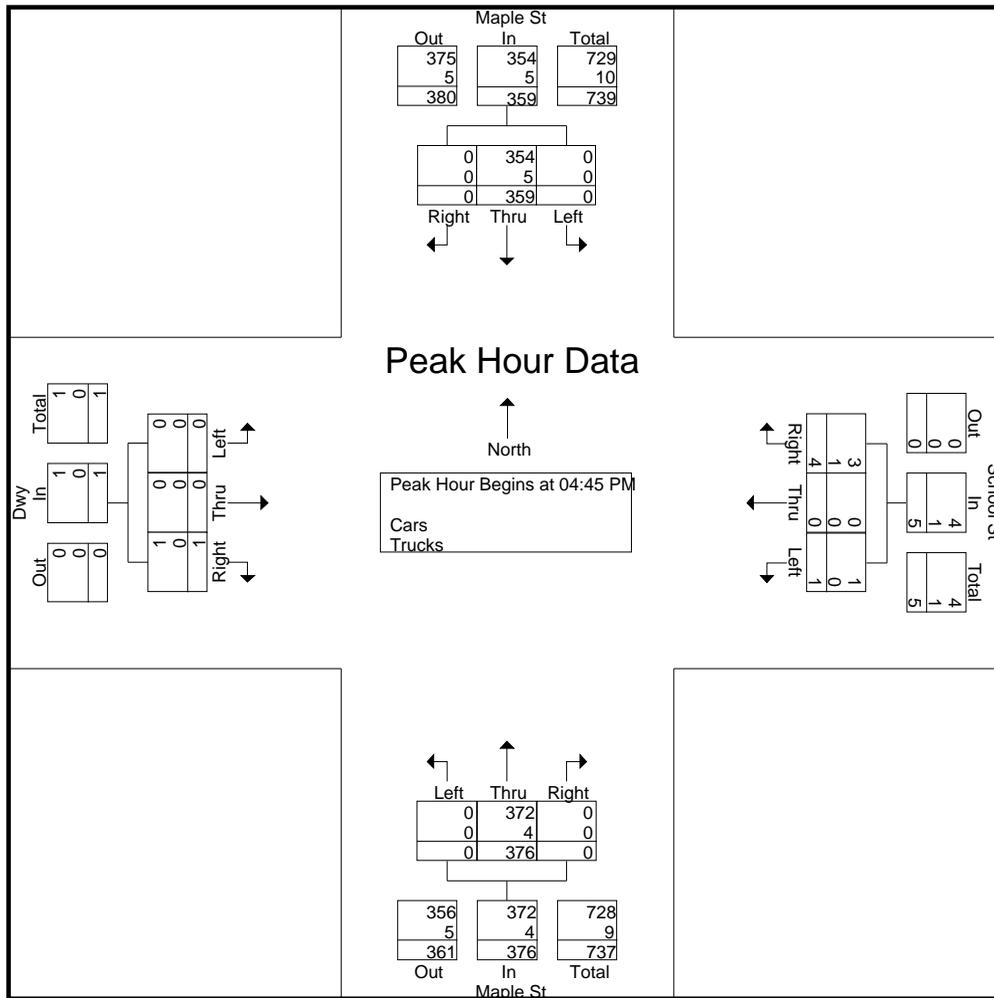
File Name : 89140004
 Site Code : 89140004
 Start Date : 9/28/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Maple St From North			School St From East			Maple St From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	78	0	0	0	0	0	89	0	0	0	0	167
04:15 PM	0	64	0	0	0	0	0	86	0	0	0	0	150
04:30 PM	0	63	0	0	0	0	0	89	0	0	0	0	152
04:45 PM	0	66	0	0	0	2	0	100	0	0	0	0	168
Total	0	271	0	0	0	2	0	364	0	0	0	0	637
05:00 PM	0	92	0	0	0	1	0	95	0	0	0	1	189
05:15 PM	0	122	0	0	0	1	0	90	0	0	0	0	213
05:30 PM	0	79	0	1	0	0	0	91	0	0	0	0	171
05:45 PM	0	56	0	0	0	2	0	79	0	0	0	0	137
Total	0	349	0	1	0	4	0	355	0	0	0	1	710
Grand Total	0	620	0	1	0	6	0	719	0	0	0	1	1347
Apprch %	0	100	0	14.3	0	85.7	0	100	0	0	0	100	
Total %	0	46	0	0.1	0	0.4	0	53.4	0	0	0	0.1	
Cars	0	613	0	1	0	5	0	710	0	0	0	1	1330
% Cars	0	98.9	0	100	0	83.3	0	98.7	0	0	0	100	98.7
Trucks	0	7	0	0	0	1	0	9	0	0	0	0	17
% Trucks	0	1.1	0	0	0	16.7	0	1.3	0	0	0	0	1.3

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	66	0	66	0	0	2	2	0	100	0	100	0	0	0	0	168
05:00 PM	0	92	0	92	0	0	1	1	0	95	0	95	0	0	1	1	189
05:15 PM	0	122	0	122	0	0	1	1	0	90	0	90	0	0	0	0	213
05:30 PM	0	79	0	79	1	0	0	1	0	91	0	91	0	0	0	0	171
Total Volume	0	359	0	359	1	0	4	5	0	376	0	376	0	0	1	1	741
% App. Total	0	100	0	100	20	0	80	80	0	100	0	100	0	0	100	100	
PHF	.000	.736	.000	.736	.250	.000	.500	.625	.000	.940	.000	.940	.000	.000	.250	.250	.870
Cars	0	354	0	354	1	0	3	4	0	372	0	372	0	0	1	1	731
% Cars	0	98.6	0	98.6	100	0	75.0	80.0	0	98.9	0	98.9	0	0	100	100	98.7
Trucks	0	5	0	5	0	0	1	1	0	4	0	4	0	0	0	0	10
% Trucks	0	1.4	0	1.4	0	0	25.0	20.0	0	1.1	0	1.1	0	0	0	0	1.3

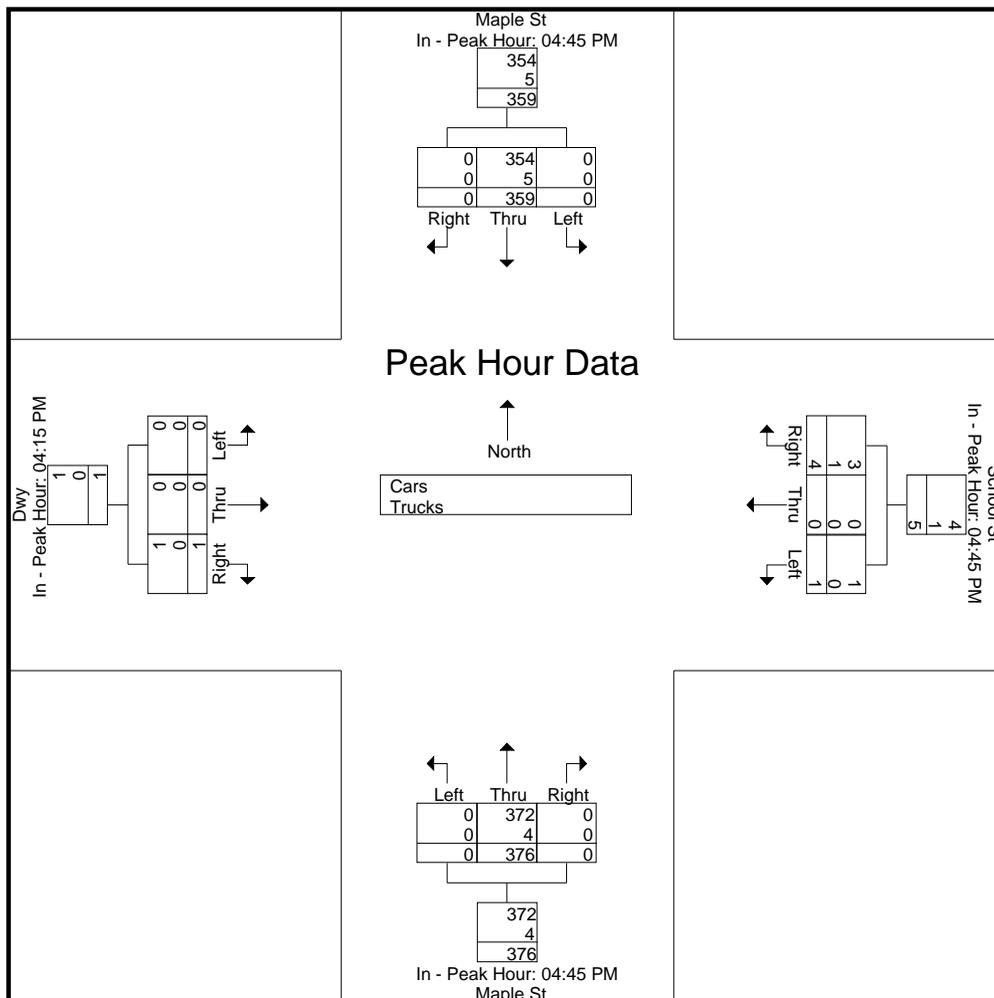
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:15 PM			
+0 mins.	0	66	0	66	0	0	2	2	0	100	0	100	0	0	0	0
+15 mins.	0	92	0	92	0	0	1	1	0	95	0	95	0	0	0	0
+30 mins.	0	122	0	122	0	0	1	1	0	90	0	90	0	0	0	0
+45 mins.	0	79	0	79	1	0	0	1	0	91	0	91	0	0	0	1
Total Volume	0	359	0	359	1	0	4	5	0	376	0	376	0	0	1	1
% App. Total	0	100	0		20	0	80		0	100	0		0	0	100	
PHF	.000	.736	.000	.736	.250	.000	.500	.625	.000	.940	.000	.940	.000	.000	.250	.250
Cars	0	354	0	354	1	0	3	4	0	372	0	372	0	0	1	1
% Cars	0	98.6	0	98.6	100	0	75	80	0	98.9	0	98.9	0	0	100	100
Trucks	0	5	0	5	0	0	1	1	0	4	0	4	0	0	0	0
% Trucks	0	1.4	0	1.4	0	0	25	20	0	1.1	0	1.1	0	0	0	0

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy

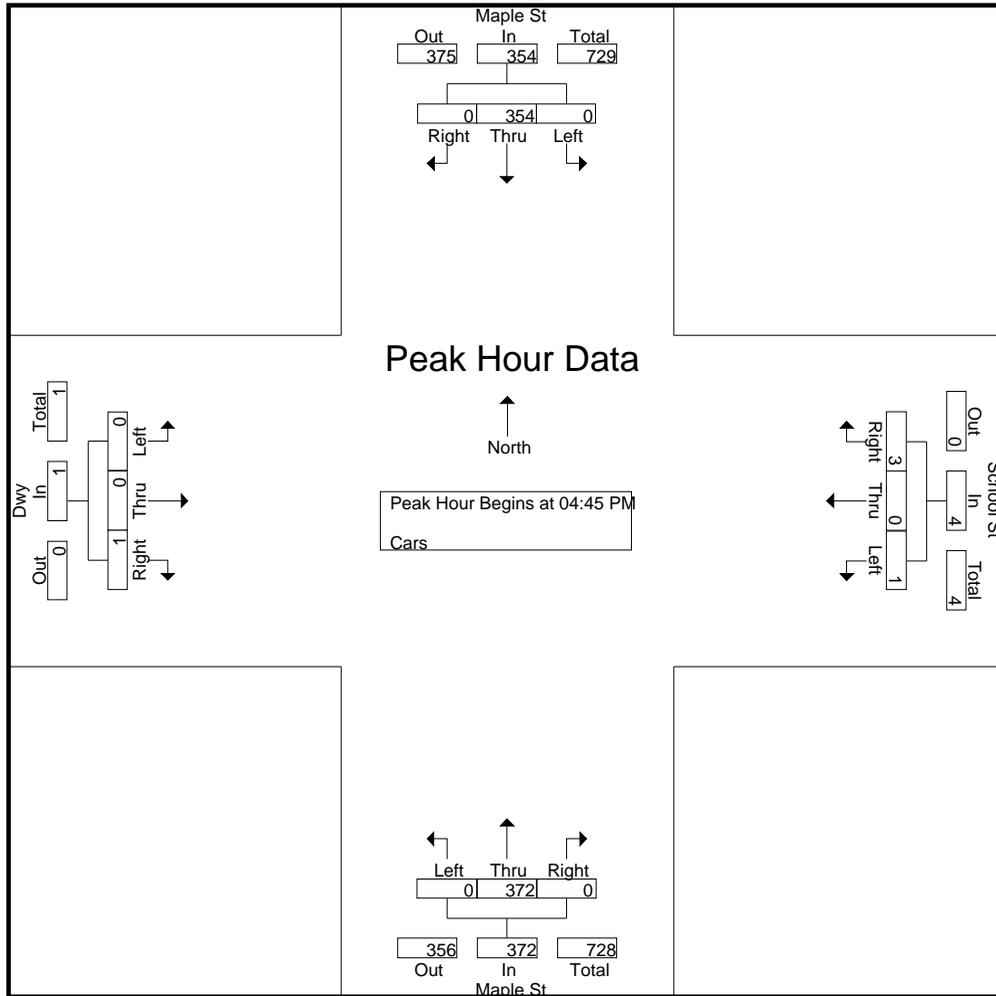
File Name : 89140004
Site Code : 89140004
Start Date : 9/28/2021
Page No : 4

Groups Printed- Cars

Start Time	Maple St From North			School St From East			Maple St From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	77	0	0	0	0	0	88	0	0	0	0	165
04:15 PM	0	63	0	0	0	0	0	84	0	0	0	0	147
04:30 PM	0	63	0	0	0	0	0	87	0	0	0	0	150
04:45 PM	0	65	0	0	0	2	0	99	0	0	0	0	166
Total	0	268	0	0	0	2	0	358	0	0	0	0	628
05:00 PM	0	91	0	0	0	0	0	94	0	0	0	1	186
05:15 PM	0	122	0	0	0	1	0	88	0	0	0	0	211
05:30 PM	0	76	0	1	0	0	0	91	0	0	0	0	168
05:45 PM	0	56	0	0	0	2	0	79	0	0	0	0	137
Total	0	345	0	1	0	3	0	352	0	0	0	1	702
Grand Total	0	613	0	1	0	5	0	710	0	0	0	1	1330
Apprch %	0	100	0	16.7	0	83.3	0	100	0	0	0	100	
Total %	0	46.1	0	0.1	0	0.4	0	53.4	0	0	0	0.1	

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	65	0	65	0	0	2	2	0	99	0	99	0	0	0	0	166
05:00 PM	0	91	0	91	0	0	0	0	0	94	0	94	0	0	1	1	186
05:15 PM	0	122	0	122	0	0	1	1	0	88	0	88	0	0	0	0	211
05:30 PM	0	76	0	76	1	0	0	1	0	91	0	91	0	0	0	0	168
Total Volume	0	354	0	354	1	0	3	4	0	372	0	372	0	0	1	1	731
% App. Total	0	100	0		25	0	75		0	100	0		0	0	100		
PHF	.000	.725	.000	.725	.250	.000	.375	.500	.000	.939	.000	.939	.000	.000	.250	.250	.866

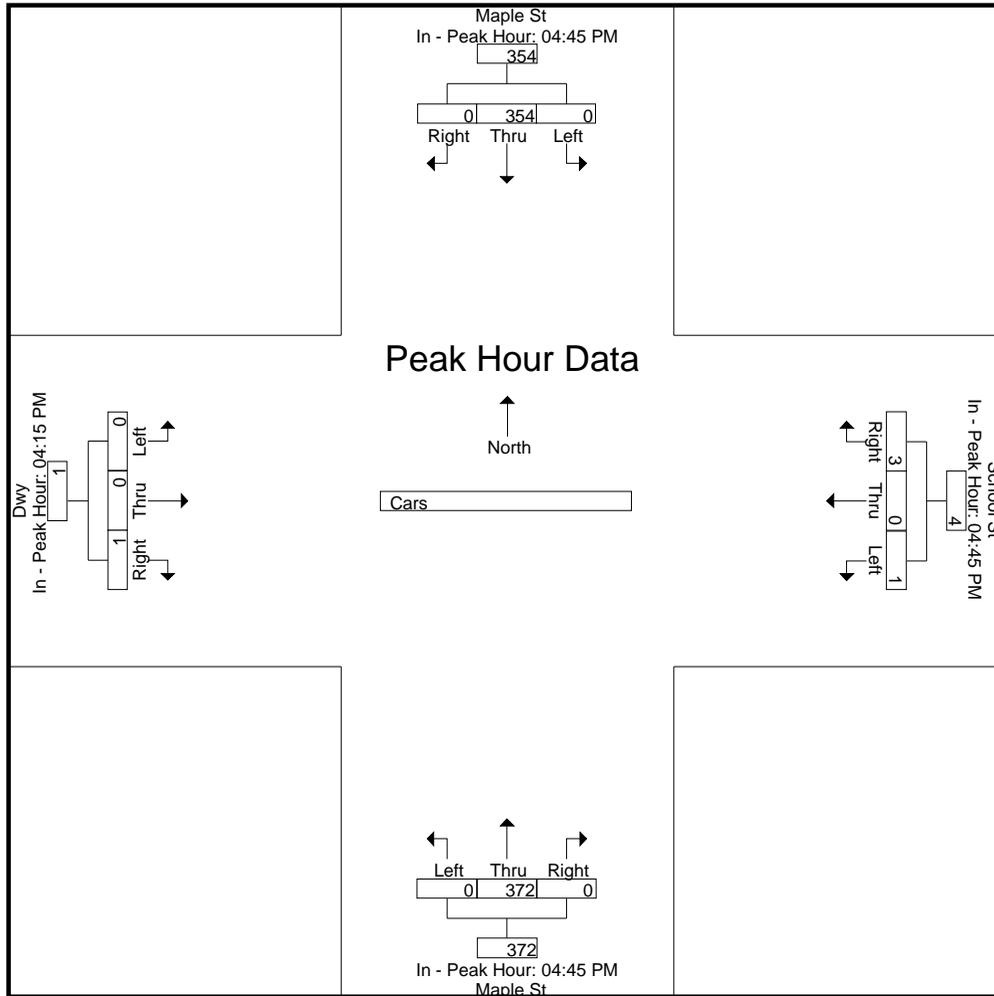
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:15 PM			
+0 mins.	0	65	0	65	0	0	2	2	0	99	0	99	0	0	0	0
+15 mins.	0	91	0	91	0	0	0	0	0	94	0	94	0	0	0	0
+30 mins.	0	122	0	122	0	0	1	1	0	88	0	88	0	0	0	0
+45 mins.	0	76	0	76	1	0	0	1	0	91	0	91	0	0	0	1
Total Volume	0	354	0	354	1	0	3	4	0	372	0	372	0	0	1	1
% App. Total	0	100	0		25	0	75		0	100	0		0	0	100	
PHF	.000	.725	.000	.725	.250	.000	.375	.500	.000	.939	.000	.939	.000	.000	.250	.250

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy

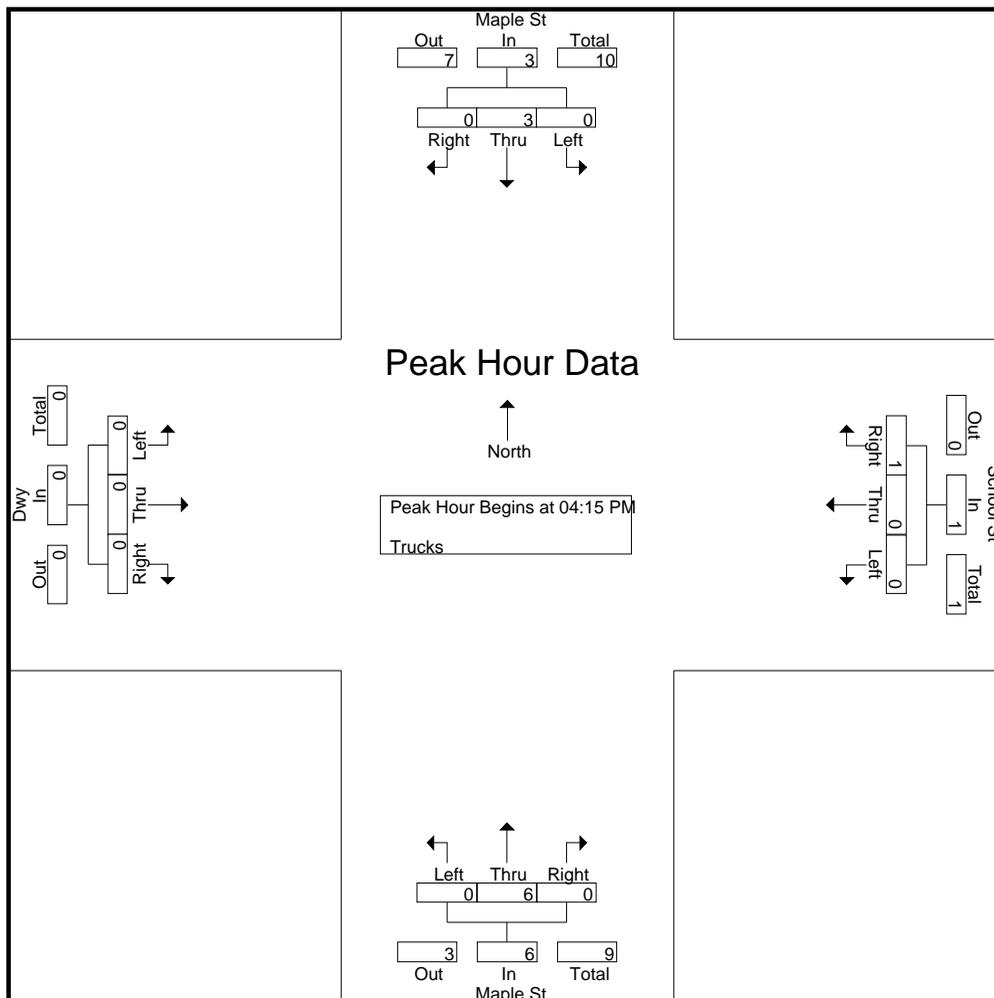
File Name : 89140004
Site Code : 89140004
Start Date : 9/28/2021
Page No : 7

Groups Printed- Trucks

Start Time	Maple St From North			School St From East			Maple St From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
04:15 PM	0	1	0	0	0	0	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
04:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
Total	0	3	0	0	0	0	0	6	0	0	0	0	9
05:00 PM	0	1	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
05:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	0	0	1	0	3	0	0	0	0	8
Grand Total	0	7	0	0	0	1	0	9	0	0	0	0	17
Apprch %	0	100	0	0	0	100	0	100	0	0	0	0	
Total %	0	41.2	0	0	0	5.9	0	52.9	0	0	0	0	

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:00 PM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
Total Volume	0	3	0	3	0	0	1	1	0	6	0	6	0	0	0	0	10
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.750	.000	.750	.000	.000	.250	.250	.000	.750	.000	.750	.000	.000	.000	.000	.833

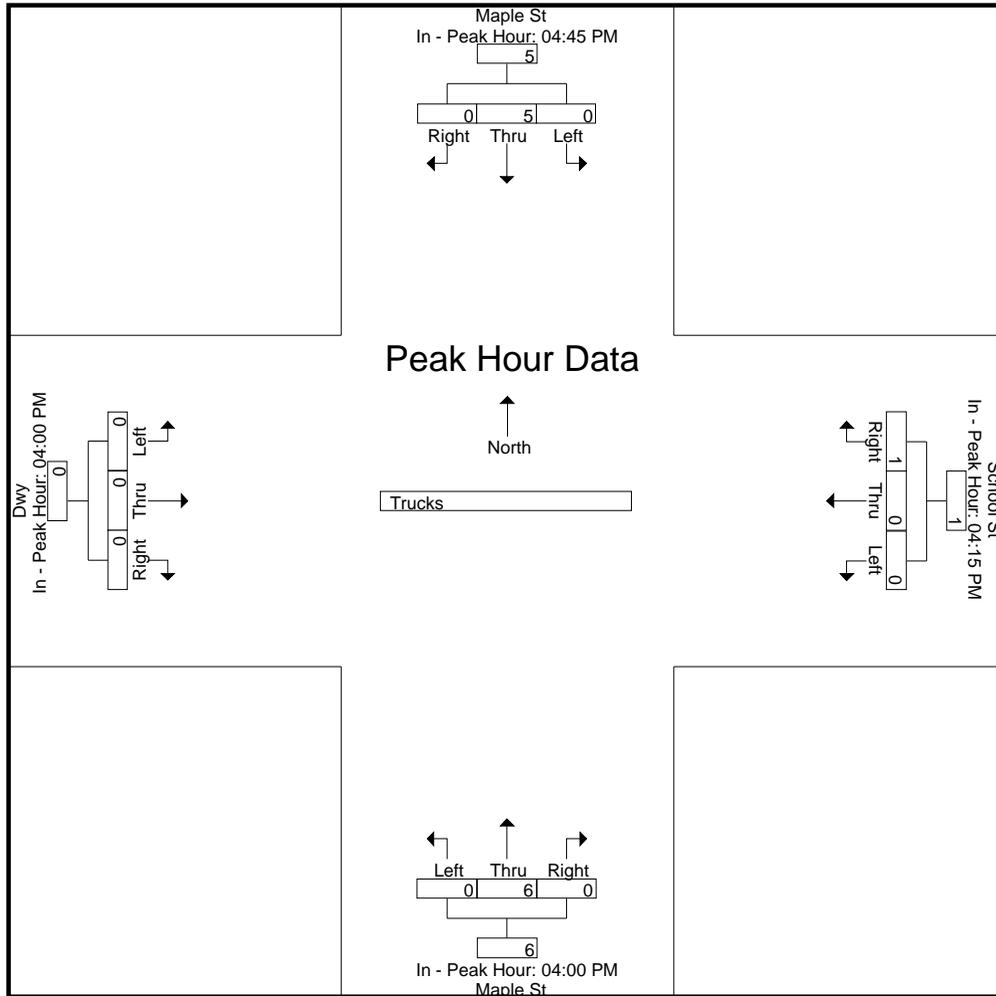
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	3	0	3	0	0	1	1	0	1	0	1	0	0	0	0
Total Volume	0	5	0	5	0	0	1	1	0	6	0	6	0	0	0	0
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0	
PHF	.000	.417	.000	.417	.000	.000	.250	.250	.000	.750	.000	.750	.000	.000	.000	.000

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Accurate Counts
978-664-2565

N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy

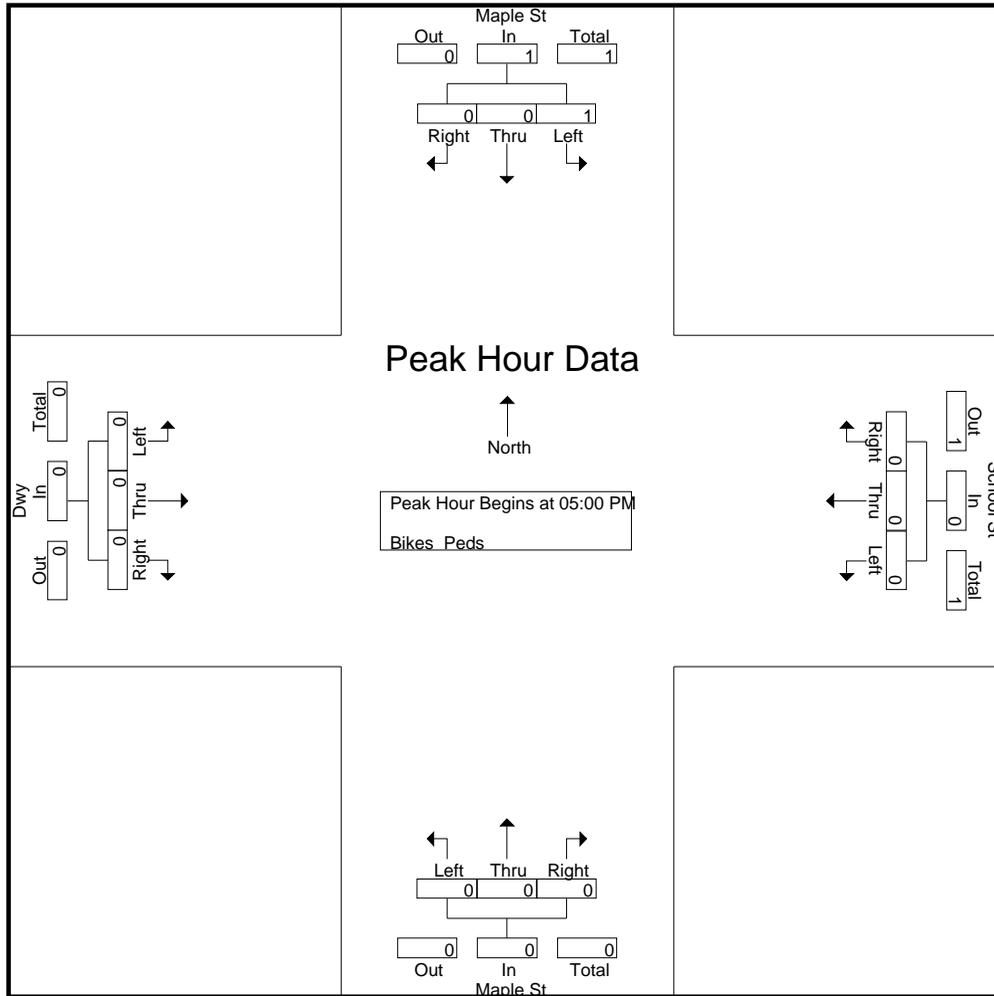
File Name : 89140004
Site Code : 89140004
Start Date : 9/28/2021
Page No : 10

Groups Printed- Bikes Peds

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	3
Grand Total	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	3
Apprch %	100	0	0		0	0	0		0	0	0		0	0	0				
Total %	100	0	0		0	0	0		0	0	0		0	0	0		66.7	33.3	

Start Time	Maple St From North				School St From East				Maple St From South				Dwy From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 05:00 PM																		
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	100	0	0		0	0	0		0	0	0		0	0	0			
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

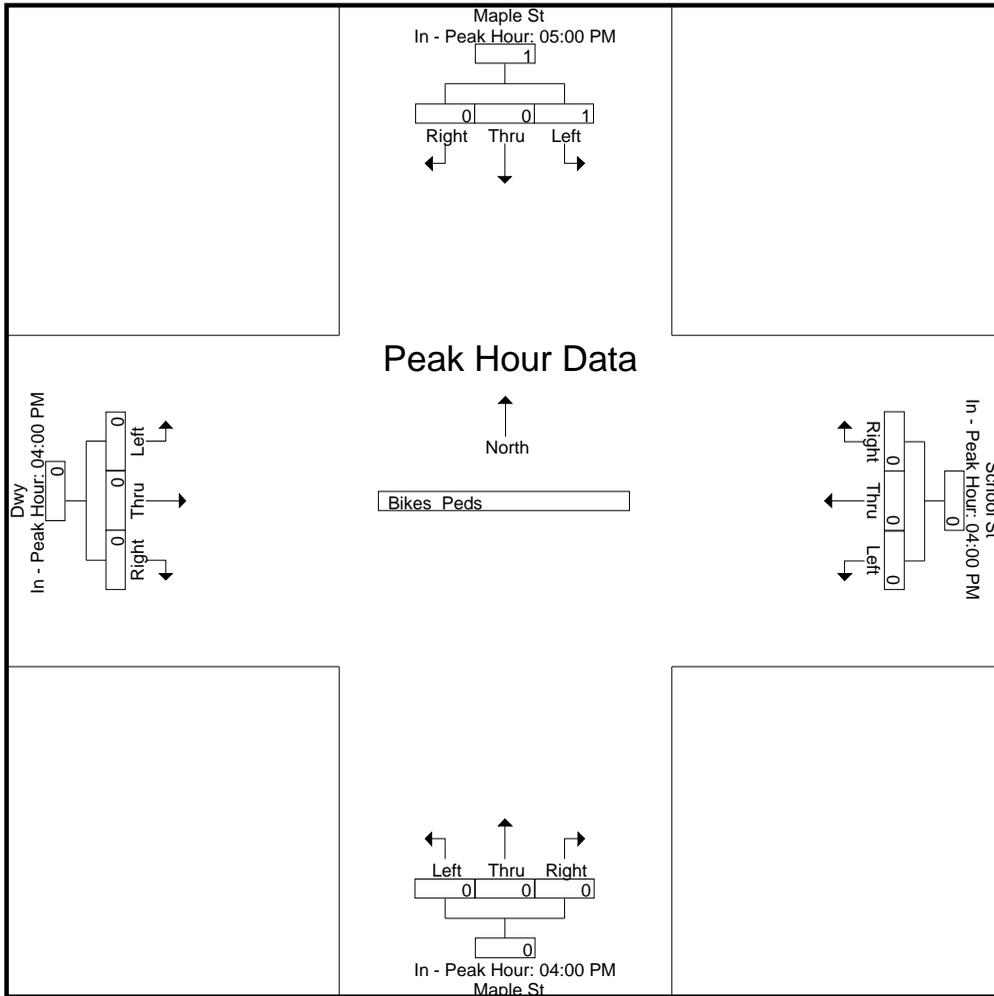
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	100	0	0		0	0	0		0	0	0		0	0	0	
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

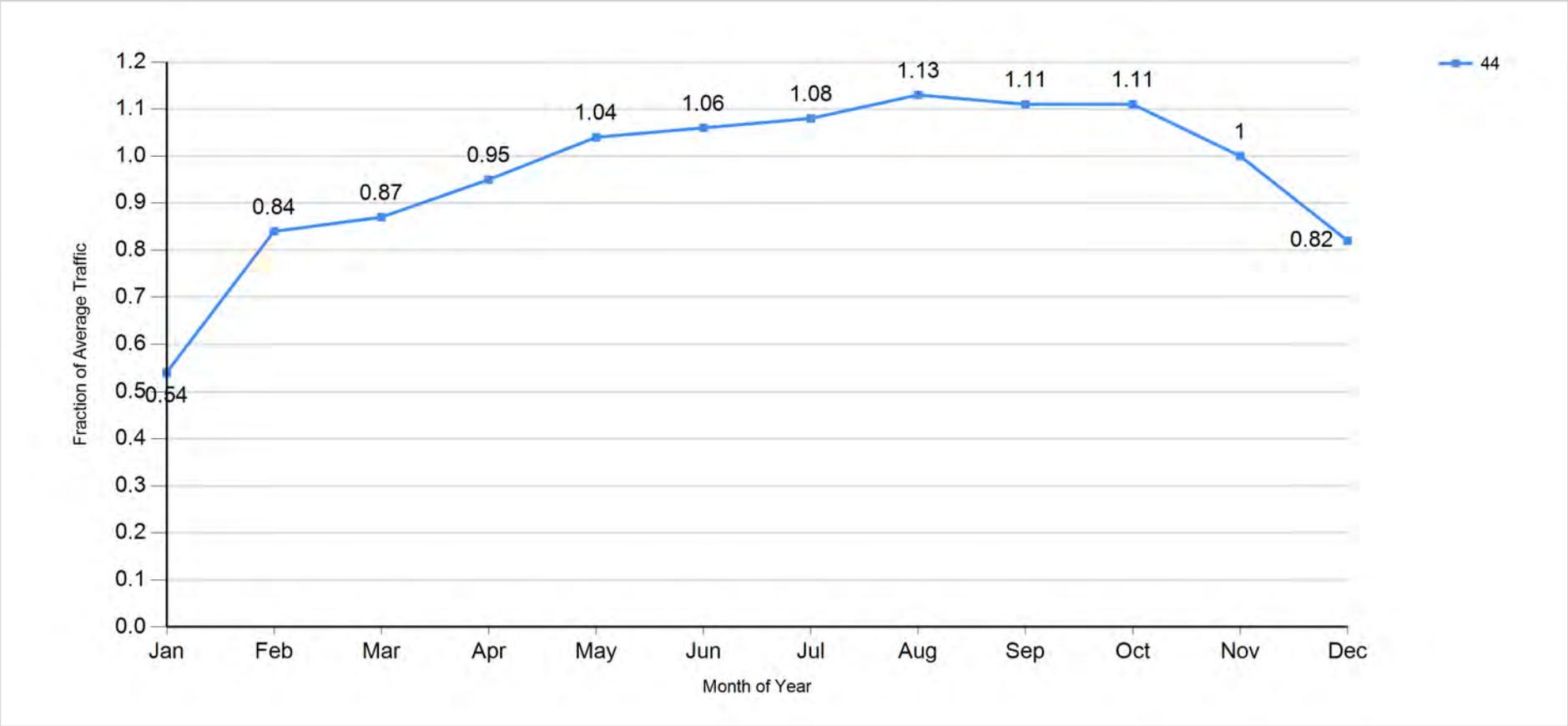
N/S Street : Maple Street
E/W Street : School Street / Driveway
City/State : Templeton, MA
Weather : Cloudy



SEASONAL AND COVID ADJUSTMENT DATA



Traffic Pattern by Month for 1/1/2017 - 12/31/2017
Criteria: Location ID = 44, From 1/1/1900 To 12/31/2049 12:00:00 AM





Massachusetts Highway Department

Traffic Pattern by Month for 1/1/2017 - 12/31/2017
Criteria: Location ID = 44, From 1/1/1900 To 12/31/2049 12:00:00 AM

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
U2	44	0	0.538	0.836	0.868	0.946	1.038	1.059	1.084	1.129	1.106	1.110	0.997	0.824
Average of Weighted Factors			0.000											

**Proposed Residential Development
Templeton, Massachusetts**

Continues Count Station No.2012			
2021 COVID Adjustment			
Year	Month	Average Daily Data	Adjustement to 2021
2019	Sep	10,009	10,311
2021	Sep	9,406	9,406
Covid			1.10

Continues Count Station No.34			
2021 COVID Adjustment			
Year	Month	Average Daily Data	Adjustement to 2021
2019	Sep	63,058	64,964
2021	Sep	60,529	60,529
Covid			1.07

Adjust 2021 Volume up to 10%

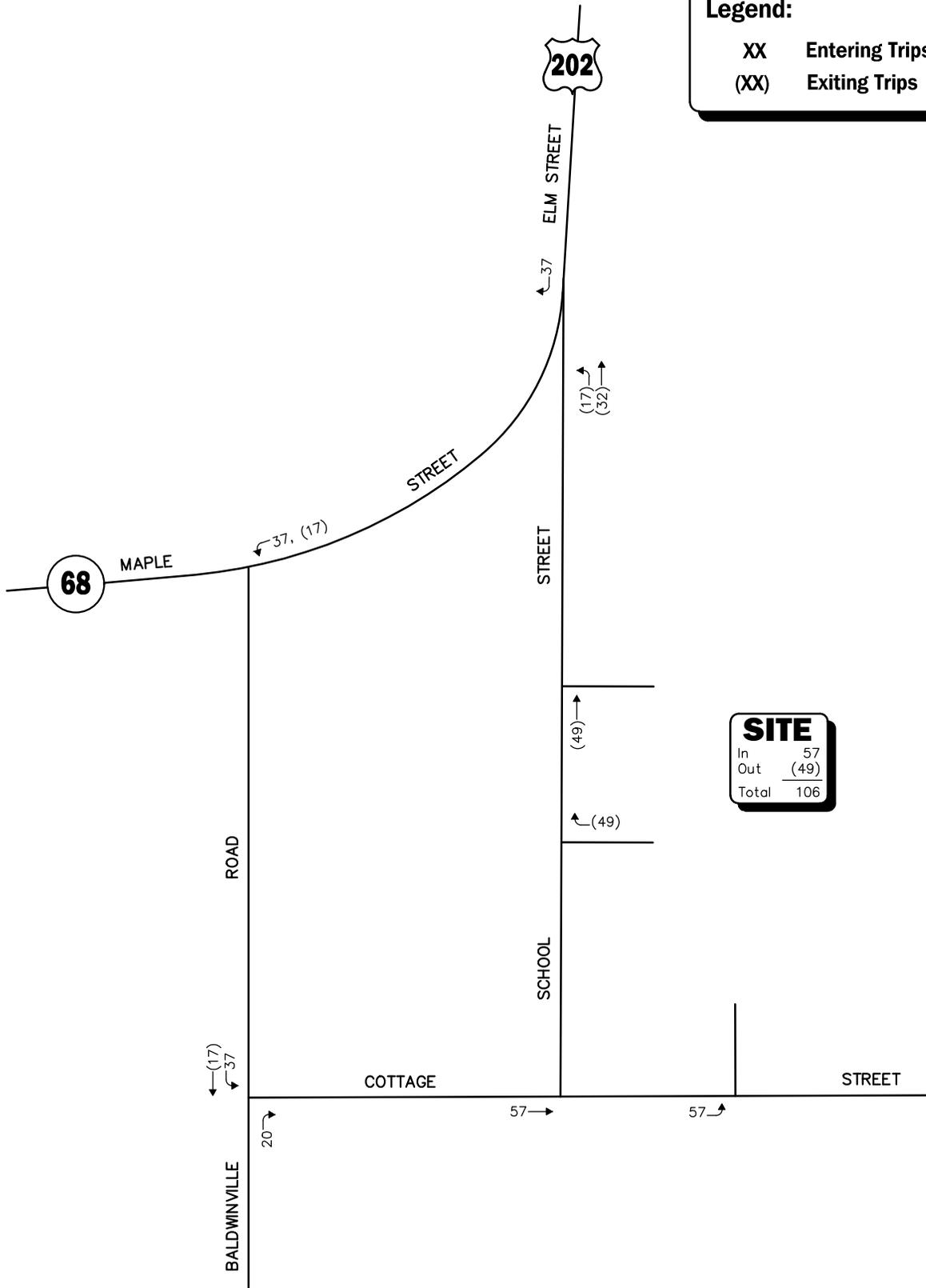
Note: 1.5% Background Growth Rate per Year

CRASH DATA

Crash Number	City/Town Name	Crash Date	Crash Severity	Crash Status	Crash Time	Injury Severity Reported	Number of Vehicles	Driver - Youngest Known (All Drivers)	Driver Contributing Circumstances	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	MassDOT District	RMV Document Numbers	Road Surface Condition	Roadway Junction Type	Total Fatalities	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Latitude	Longitude	Roadway	
Baldwinville Road at Cottage Street																										
4541666	TEMPLET ON	05/14/2018	Property damage only (none injured)	Closed	2:19 PM	No injury	2	21-24	D1: (No improper driving) / D2: (Failed to yield right of way)(Visibility obstructed)	Collision with motor vehicle in traffic	Yes	Daylight	Angle		2	PW201814300739	Dry	T-intersection	0	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Clear	42.60467	-72.0768	BALDWINVILLE RD
Maple Street/Elm Street at Baldwinville Road																										
4139121	TEMPLET ON	10/25/2015	Property damage only (none injured)	Closed	10:47 AM	No injury	1	16-17	D1: (Driving too fast for conditions),(Operating vehicle in erratic, reckless, careless, negligent or aggressive manner)	Collision with tree	Yes	Daylight	Single vehicle crash		2	PW201602203106	Wet	Not at junction	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: W	Cloudy	42.6059	-72.0763	BALDWINVILLE RD / MAPLE ST
4447174	TEMPLET ON	02/10/2017	Property damage only (none injured)	Closed	12:32 PM	No injury	2	25-34	D1: (No improper driving) / D2: (Distracted)	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end		2	PW201730602403	Sand, mud, dirt, oil, gravel	T-intersection	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: N / V2: N	Clear	42.6059	-72.0763	BALDWINVILLE RD / MAPLE ST
School Street at Elm Street																										
4025105	TEMPLET ON	01/02/2014	Property damage only (none injured)	Closed	8:39 PM	No injury	1	35-44	D1: (No improper driving)	Collision with curb	Yes	Dark - lighted roadway	Single vehicle crash		2	PW201508501534	Snow	Not at junction	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: N	Snow/Severe crosswinds	42.60622	-72.0754	ELM STREET Rte 202 N
4447178	TEMPLET ON	03/11/2017	Property damage only (none injured)	Closed	11:38 AM	No injury	1	55-64	D1: (No improper driving)	Collision with curb	Yes	Daylight	Single vehicle crash		2	PW201730602119	Dry	Not at junction	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: N	Clear	42.60611	-72.0755	MAPLE STREET Rte 202 S
4500572	TEMPLET ON	12/17/2017	Fatal injury	Closed	4:05 PM	Fatal injury (K)	1	25-34	D1: (Unknown)	Collision with unknown fixed object	Yes	Daylight	Single vehicle crash		2	PW201804600803	Dry	Not at junction	1	V1: Travelling straight ahead	V1:(Passenger car)	V1: N	Cloudy	42.60603	-72.0758	MAPLE STREET Rte 202 N

ELEMENTARY SCHOOL NETWORKS

Legend:
 XX Entering Trips
 (XX) Exiting Trips



Not To Scale

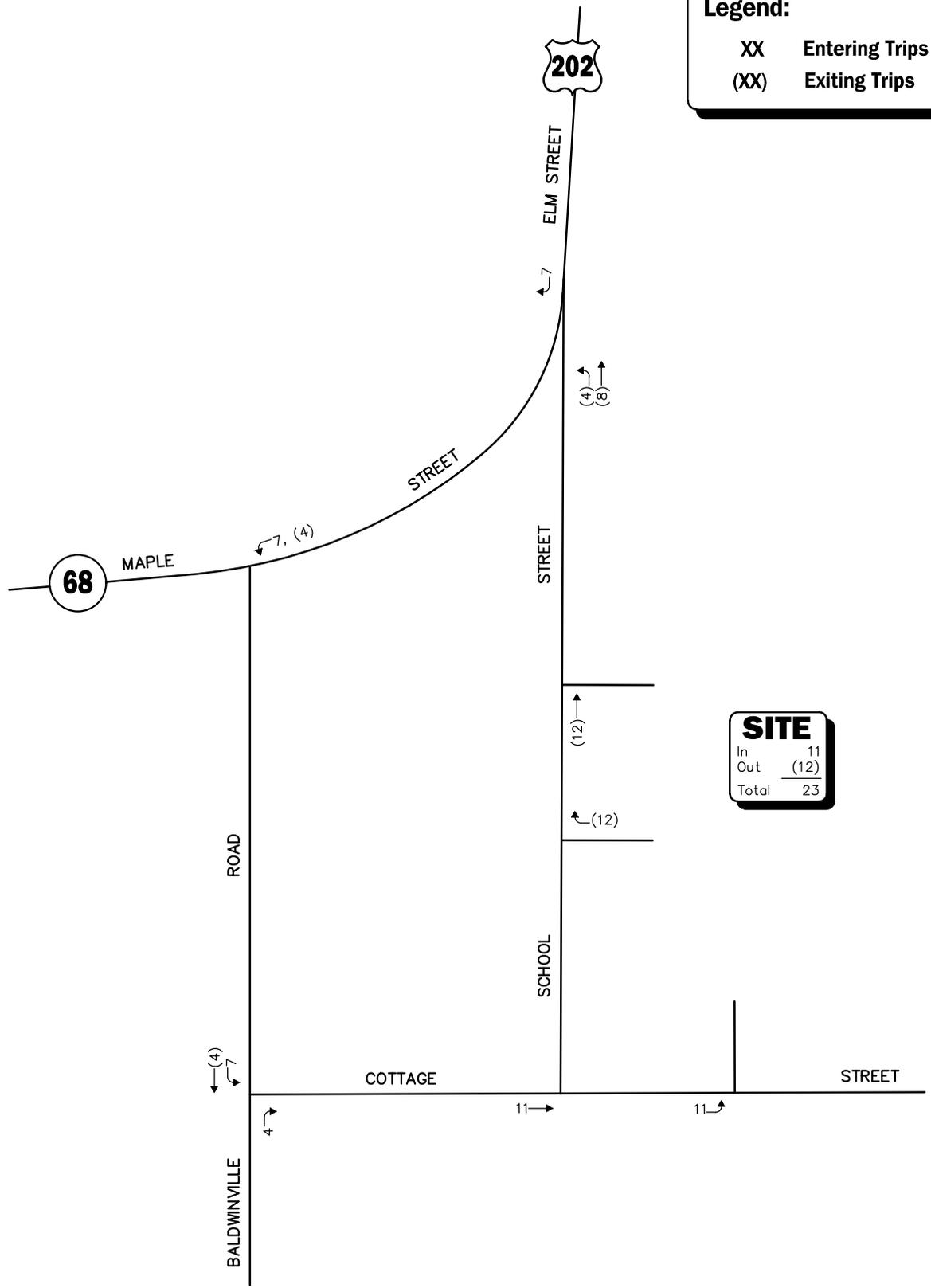
Figure A-1



Elementary School Generated Weekday Morning Peak-Hour Traffic Volumes

Legend:

- XX Entering Trips
- (XX) Exiting Trips



Not To Scale



Figure A-2
Elementary School Generated
Weekday Evening
Peak-Hour Traffic Volumes

R:\8914\8914NT2.dwg, 12/9/2021 4:33:30 PM

MASSDOT CRASH RATE WORKSHEETS

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : Templeton COUNT DATE : 2021

DISTRICT : 2 UNSIGNALIZED : SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Baldwinville Road

ST #

MINOR STREET(S) : Cottage Street

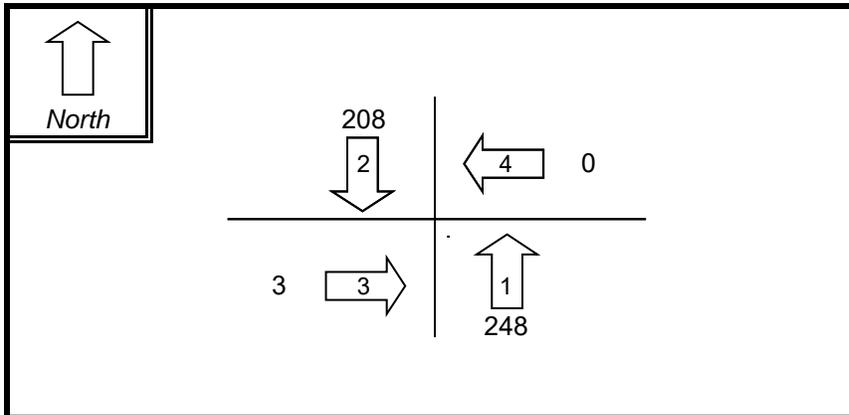
ST #

ST #

ST #

ST #

**INTERSECTION
DIAGRAM
(Label Approaches)**



INTERSECTION

REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	WB			
VOLUMES (PM) :	248	208	3			459

" K " FACTOR : APPROACH ADT : ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : # OF YEARS : AVERAGE # OF ACCIDENTS (A) :

CRASH RATE CALCULATION : RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$

Comments : Accident Rate for District 2 signalized intersections = 0.89

Accident Rate for District 2 unsignalized intersections = 0.62

Statewide Accident Rate for Signalized Inteserction = 0.78 and Unsignalized/Inteserction = 0.57

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : Templeton COUNT DATE : 2021

DISTRICT : 2 UNSIGNALIZED : SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Maple Street and Elm Street

ST #

MINOR STREET(S) : Bladwinville Road

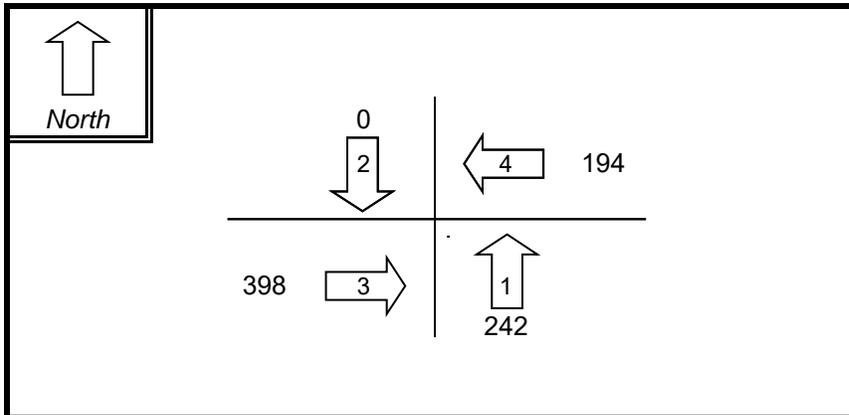
ST #

ST #

ST #

ST #

**INTERSECTION
DIAGRAM**
(Label Approaches)



INTERSECTION

REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	WB	EB		
VOLUMES (PM) :	242		398	194		834

" K " FACTOR : APPROACH ADT : ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : # OF YEARS : AVERAGE # OF ACCIDENTS (A) :

CRASH RATE CALCULATION : RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$

Comments : Accident Rate for District 2 signalized intersections = 0.89

Accident Rate for District 2 unsignalized intersections = 0.62

Statewide Accident Rate for Signalized Inteserction = 0.78 and Unsignalized/Inteserction = 0.57

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : Templeton COUNT DATE : 2021

DISTRICT : 2 UNSIGNALIZED : SIGNALIZED :

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : Maple Street and Elm Street

ST #

MINOR STREET(S) : School Street

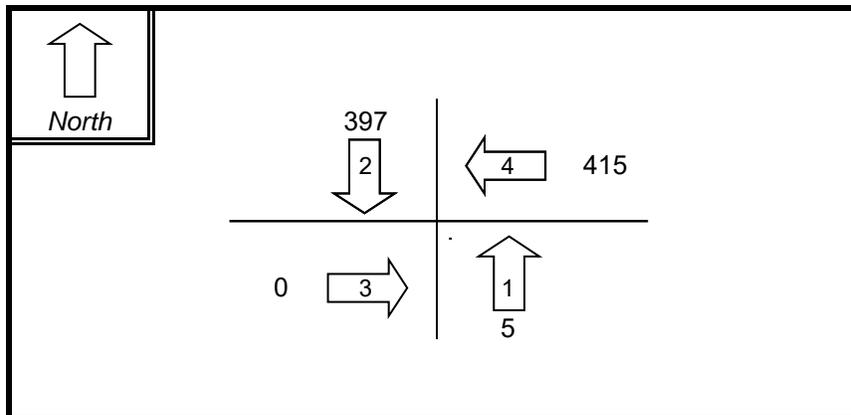
ST #

ST #

ST #

ST #

**INTERSECTION
DIAGRAM**
(Label Approaches)



INTERSECTION
REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	WB	EB		
VOLUMES (PM) :	5	397		415		817

" K " FACTOR : APPROACH ADT : ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : # OF YEARS : AVERAGE # OF ACCIDENTS (A) :

CRASH RATE CALCULATION : RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$

Comments : Accident Rate for District 2 signalized intersections = 0.89

Accident Rate for District 2 unsignalized intersections = 0.62

Statewide Accident Rate for Signalized Inteserction = 0.78 and Unsignalized/Inteserction = 0.57

GENERAL BACKGROUND TRAFFIC GROWTH

General Background Traffic Growth - Daily Traffic Volumes

Station Number	ROUTE/STREET	LOCATION	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average Annual Growth Rate
321	Baldwinville Street	North of Templeton							4,720	5,013	5,073	5,130	5,109	1.88%
3008	Route 2	East of 2A/Rte 140 S		43,000	42,087	39,879	40,614	41,401	48,912	50,872	51,279	52,062	48,922	2.74%
3372388	South Road	Patriot Road							1,809			1,928	1,920	1.08%
237093	Patriots Road						1,625	1,697	1,680	1,685	1,624	1,642	1,662	-0.02%
44	Mowhak Trail	East of Orange	14,710	11,274	11,384	10,825	10,615	10,965	11,514	12,699	12,749	14,910	14,264	1.49%
														1.43%

TRIP-GENERATION CALCULATIONS

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

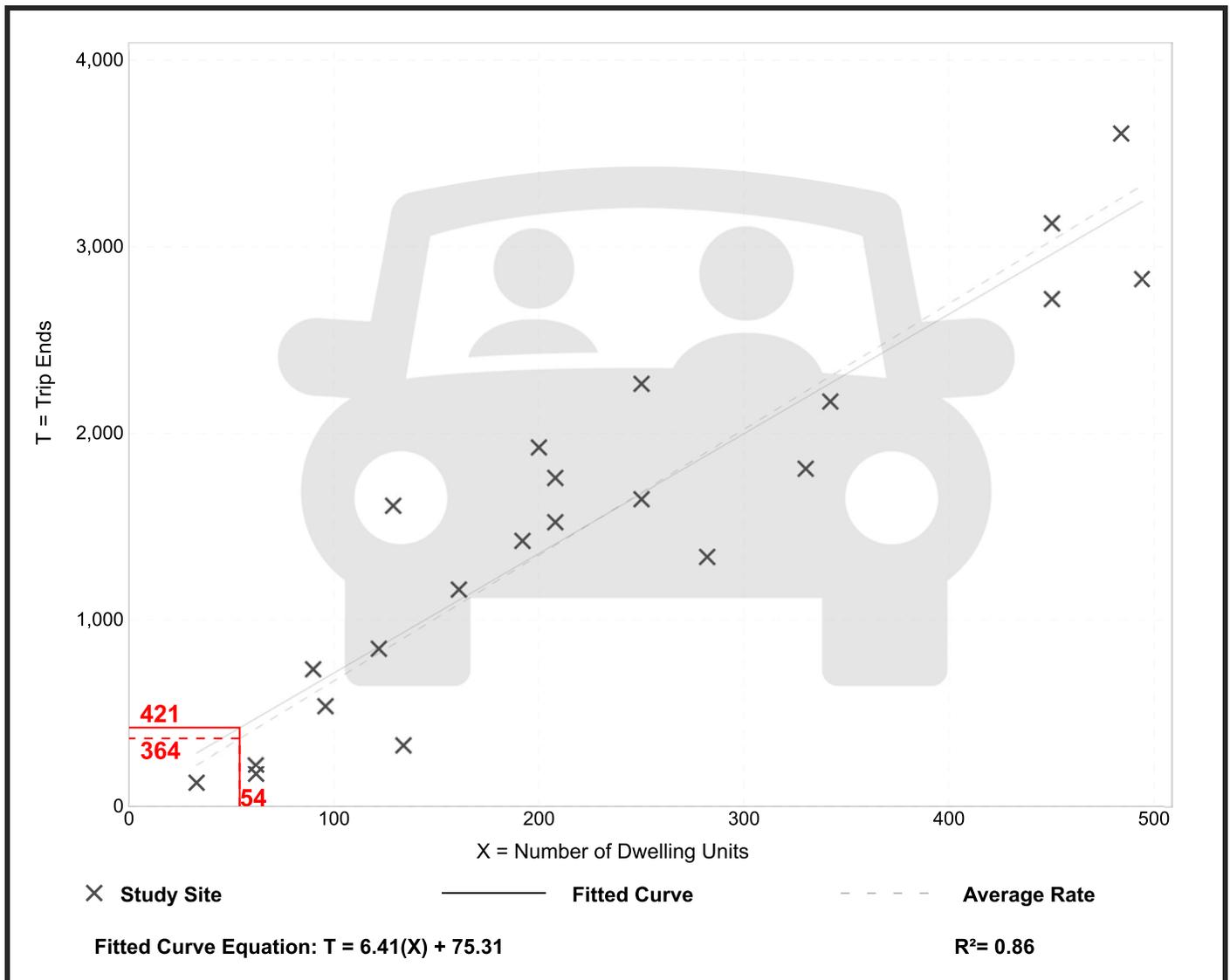
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

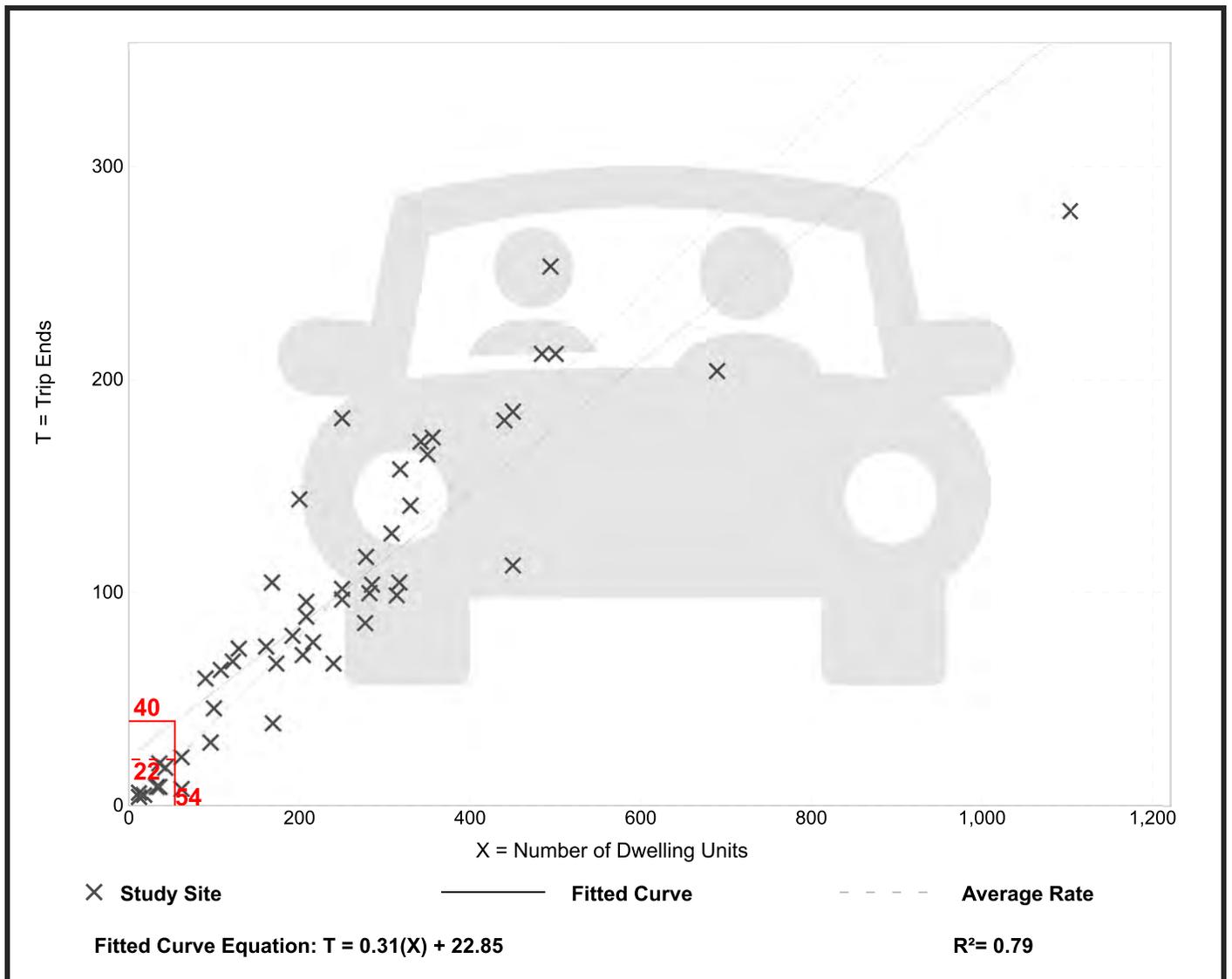
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

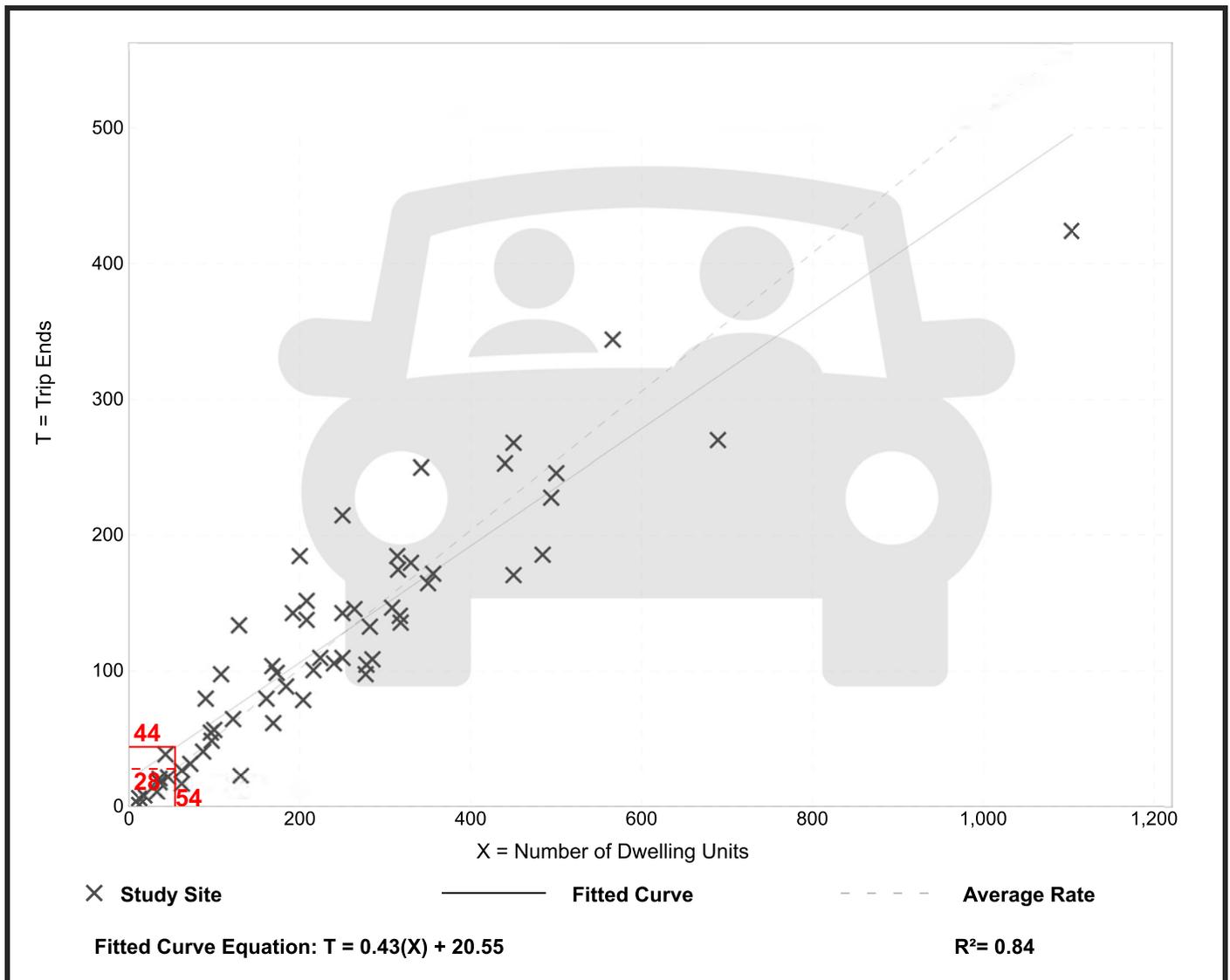
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



TRIP-DISTRIBUTION CALCULATIONS

Table 3. Residence MCD/County to Workplace MCD/County Commuting Flows for the United

For more information on sampling and estimation methods, confidentiality protection, and sampling and Universe: Workers 16 years and over.

Commuting flows are sorted by residence state, residence county, and residence minor civil division.

Residence				Place of Work					Commuting Flow
State FIPS Code	State Name	County Name	Minor Civil Division Name	State FIPS Code	Minor Civil Division FIPS Code	State Name	County Name	Minor Civil Division Name	Workers in Commuting Flow
25	Massachu	Worcester	Templeto	025	25485	Massa	Worcester	Gardner city	841
25	Massachu	Worcester	Templeto	025	69275	Massa	Worcester	Templeton	598
25	Massachu	Worcester	Templeto	025	23875	Massa	Worcester	Fitchburg city	331
25	Massachu	Worcester	Templeto	025	35075	Massa	Worcester	Leominster	271
25	Massachu	Worcester	Templeto	025	82000	Massa	Worcester	Worcester	220
25	Massachu	Worcester	Templeto	025	75015	Massa	Worcester	Westborough	131
25	Massachu	Worcester	Templeto	025	05070	Massa	Middlesex	Belmont	100
25	Massachu	Worcester	Templeto	025	77010	Massa	Worcester	Westminster	100
25	Massachu	Worcester	Templeto	025	03005	Massa	Middlesex	Ayer town	83
25	Massachu	Worcester	Templeto	025	07000	Massa	Suffolk	Boston city	82
25	Massachu	Worcester	Templeto	025	31435	Massa	Worcester	Hubbardston	71
25	Massachu	Worcester	Templeto	025	00380	Massa	Middlesex	Acton town	63
25	Massachu	Worcester	Templeto	033	38500	New	Cheshire	Jaffrey town	63
25	Massachu	Worcester	Templeto	025	61590	Massa	Middlesex	Shirley town	60
25	Massachu	Worcester	Templeto	025	67000	Massa	Hampden	Springfield	55
25	Massachu	Worcester	Templeto	025	02480	Massa	Worcester	Athol town	54
25	Massachu	Worcester	Templeto	025	14395	Massa	Worcester	Clinton town	54
25	Massachu	Worcester	Templeto	025	37000	Massa	Middlesex	Lowell city	50
25	Massachu	Worcester	Templeto	025	35215	Massa	Middlesex	Lexington	48
25	Massachu	Worcester	Templeto	025	24925	Massa	Middlesex	Framingham	47
25	Massachu	Worcester	Templeto	025	01885	Massa	Worcester	Ashburnham	46
25	Massachu	Worcester	Templeto	025	51265	Massa	Franklin	Orange town	43
25	Massachu	Worcester	Templeto	025	46820	Massa	Worcester	Northboroug	41
25	Massachu	Worcester	Templeto	025	67385	Massa	Worcester	Sterling town	40
25	Massachu	Worcester	Templeto	025	80405	Massa	Worcester	Winchendon	39

3,531

Exiting			%	Entering			%	Exiting			%	Entering			%	
Matrix %				Matrix %				Trip Distribution				Trip Distribution				
Route 202 (East)	Route 202 (West)	Baldwinville Road (South)		Route 202 (East)	Route 202 (West)	Baldwinville Road (South)		Route 202 (East)	Route 202 (West)	Baldwinville Road (South)		Route 202 (East)	Route 202 (West)	Baldwinville Road (South)		
1			1	1			1	841	0	0	841	841	0	0	841	
0.2	0.4	0.4	1	0.2	0.4	0.4	1	119.6	239.2	239.2	598	119.6	239.2	239.2	598	
0.3		0.7	1	0.3		0.7	1	99.3	0	231.7	331	99.3	0	231.7	331	
0.3		0.7	1	0.3		0.7	1	81.3	0	189.7	271	81.3	0	189.7	271	
		1	1			1	1	0	0	220	220	0	0	220	220	
		1	1			1	1	0	0	131	131	0	0	131	131	
		1	1			1	1	0	0	100	100	0	0	100	100	
0.3		0.7	1	0.3		0.7	1	30	0	70	100	30	0	70	100	
0.3		0.7	1	0.3		0.7	1	24.9	0	58.1	83	24.9	0	58.1	83	
		1	1			1	1	0	0	82	82	0	0	82	82	
		1	1			1	1	0	0	71	71	0	0	71	71	
		1	1			1	1	0	0	63	63	0	0	63	63	
1			1	1			1	63	0	0	63	63	0	0	63	
0.3		0.7	1	0.3		0.7	1	18	0	42	60	18	0	42	60	
	1		1		1		1	0	55	0	55	0	55	0	55	
	1		1		1		1	0	54	0	54	0	54	0	54	
		1	1			1	1	0	0	54	54	0	0	54	54	
0.5		0.5	1	0.5		0.5	1	25	0	25	50	25	0	25	50	
		1	1			1	1	0	0	48	48	0	0	48	48	
		1	1			1	1	0	0	47	47	0	0	47	47	
1			1	1			1	46	0	0	46	46	0	0	46	
	1		1		1		1	0	43	0	43	0	43	0	43	
		1	1			1	1	0	0	41	41	0	0	41	41	
		1	1			1	1	0	0	40	40	0	0	40	40	
1			1	1			1	39	0	0	39	39	0	0	39	
3531																
								1387.1	391.2	1752.7		1387.1	391.2	1752.7		
								39%	11%	50%		39%	11%	50%		
Adjustment								40%	15%	45%	100%	40%	15%	45%		

CAPACITY ANALYSIS WORKSHEETS

CAPACITY ANALYSIS WORKSHEETS

School Street at Elm Street

Maple Street at Baldwinville Road

Cottage Street at Baldwinville Road

Cottage Street at School Street

School Street at North Site

Driveway School Street at South

Site Driveway Cottage Street at Site

Driveway

School Street at Elm Street

Intersection						
Int Delay, s/veh	0.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	4	0	0	438	286	0
Future Vol, veh/h	4	0	0	438	286	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	50	50	81	81	82	82
Heavy Vehicles, %	50	0	0	3	4	0
Mvmt Flow	8	0	0	541	349	0

Major/Minor	Minor2	Major2		
Conflicting Flow All	271	271	-	0
Stage 1	271	271	-	-
Stage 2	0	0	-	-
Critical Hdwy	6.9	6.5	-	-
Critical Hdwy Stg 1	5.9	5.5	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.95	4	-	-
Pot Cap-1 Maneuver	627	639	-	-
Stage 1	676	689	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	627	0	-	-
Mov Cap-2 Maneuver	627	0	-	-
Stage 1	676	0	-	-
Stage 2	-	0	-	-

Approach	NB	SB
HCM Control Delay, s	10.8	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBLn1	SBT	SBR
Capacity (veh/h)	627	-	-
HCM Lane V/C Ratio	0.013	-	-
HCM Control Delay (s)	10.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	1	6	0	397	415	0
Future Vol, veh/h	1	6	0	397	415	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	62	62	74	74	94	94
Heavy Vehicles, %	0	25	0	1	1	0
Mvmt Flow	2	10	0	536	441	0

Major/Minor	Minor2	Major2		
Conflicting Flow All	268	268	-	0
Stage 1	268	268	-	-
Stage 2	0	0	-	-
Critical Hdwy	6.4	6.75	-	-
Critical Hdwy Stg 1	5.4	5.75	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.5	4.225	-	-
Pot Cap-1 Maneuver	726	601	-	-
Stage 1	782	647	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	726	0	-	-
Mov Cap-2 Maneuver	726	0	-	-
Stage 1	782	0	-	-
Stage 2	-	0	-	-

Approach	NB	SB
HCM Control Delay, s	10	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBLn1	SBT	SBR
Capacity (veh/h)	726	-	-
HCM Lane V/C Ratio	0.016	-	-
HCM Control Delay (s)	10	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection						
Int Delay, s/veh	1.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	21	32	0	523	317	0
Future Vol, veh/h	21	32	0	523	317	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	50	50	81	81	82	82
Heavy Vehicles, %	50	0	3	3	4	0
Mvmt Flow	42	64	0	646	387	0

Major/Minor	Minor2	Major2		
Conflicting Flow All	323	323	-	0
Stage 1	323	323	-	-
Stage 2	0	0	-	-
Critical Hdwy	6.9	6.5	-	-
Critical Hdwy Stg 1	5.9	5.5	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.95	4	-	-
Pot Cap-1 Maneuver	583	598	-	-
Stage 1	638	654	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	583	0	-	-
Mov Cap-2 Maneuver	583	0	-	-
Stage 1	638	0	-	-
Stage 2	-	0	-	-

Approach	NB	SB
HCM Control Delay, s	12.5	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBLn1	SBT	SBR
Capacity (veh/h)	583	-	-
HCM Lane V/C Ratio	0.182	-	-
HCM Control Delay (s)	12.5	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.7	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	14	0	448	461	0
Future Vol, veh/h	5	14	0	448	461	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	62	62	74	74	94	94
Heavy Vehicles, %	0	25	0	1	1	0
Mvmt Flow	8	23	0	605	490	0

Major/Minor	Minor2	Major2		
Conflicting Flow All	303	303	-	0
Stage 1	303	303	-	-
Stage 2	0	0	-	-
Critical Hdwy	6.4	6.75	-	-
Critical Hdwy Stg 1	5.4	5.75	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.5	4.225	-	-
Pot Cap-1 Maneuver	693	574	-	-
Stage 1	754	624	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	693	0	-	-
Mov Cap-2 Maneuver	693	0	-	-
Stage 1	754	0	-	-
Stage 2	-	0	-	-

Approach	NB	SB
HCM Control Delay, s	10.4	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBLn1	SBT	SBR
Capacity (veh/h)	693	-	-
HCM Lane V/C Ratio	0.044	-	-
HCM Control Delay (s)	10.4	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	317	1	4	488	7	12
Future Vol, veh/h	317	1	4	488	7	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	0	0	3	50	0
Mvmt Flow	345	1	4	530	8	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	346	0	884
Stage 1	-	-	-	-	346
Stage 2	-	-	-	-	538
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	5.9
Critical Hdwy Stg 2	-	-	-	-	5.9
Follow-up Hdwy	-	-	2.2	-	3.95
Pot Cap-1 Maneuver	-	-	1224	-	262
Stage 1	-	-	-	-	621
Stage 2	-	-	-	-	500
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1224	-	261
Mov Cap-2 Maneuver	-	-	-	-	261
Stage 1	-	-	-	-	621
Stage 2	-	-	-	-	498

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	433	-	-	1224	-
HCM Lane V/C Ratio	0.048	-	-	0.004	-
HCM Control Delay (s)	13.7	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th TWSC
 17: School Street (Two-Way) & Maple Street

2028 Build Weekday Evening Peak Hour

02/01/2022

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	461	3	11	441	3	12
Future Vol, veh/h	461	3	11	441	3	12
Conflicting Peds, #/hr	0	0	0	0	12	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	501	3	12	479	3	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	504	0	1018 503
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	515 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1071	-	265 573
Stage 1	-	-	-	-	612 -
Stage 2	-	-	-	-	604 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1071	-	258 573
Mov Cap-2 Maneuver	-	-	-	-	258 -
Stage 1	-	-	-	-	612 -
Stage 2	-	-	-	-	589 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	461	-	-	1071	-
HCM Lane V/C Ratio	0.035	-	-	0.011	-
HCM Control Delay (s)	13.1	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Maple Street at Baldwinville Road

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	130	11	287	155	14	156
Future Vol, veh/h	130	11	287	155	14	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	80	80	79	79
Heavy Vehicles, %	3	0	0	4	0	4
Mvmt Flow	151	13	359	194	18	197

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	164	0	1070
Stage 1	-	-	-	-	158
Stage 2	-	-	-	-	912
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1427	-	247
Stage 1	-	-	-	-	875
Stage 2	-	-	-	-	395
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1427	-	177
Mov Cap-2 Maneuver	-	-	-	-	177
Stage 1	-	-	-	-	875
Stage 2	-	-	-	-	284

Approach	EB	WB	NB
HCM Control Delay, s	0	5.4	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	664	-	-	1427	-
HCM Lane V/C Ratio	0.324	-	-	0.251	-
HCM Control Delay (s)	13	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	1	-

Intersection						
Int Delay, s/veh	5.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	185	9	199	199	12	230
Future Vol, veh/h	185	9	199	199	12	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	75	75	92	92
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	197	10	265	265	13	250

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	207	0	997
Stage 1	-	-	-	-	202
Stage 2	-	-	-	-	795
Critical Hdwy	-	-	4.12	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.218	-	3.5
Pot Cap-1 Maneuver	-	-	1364	-	273
Stage 1	-	-	-	-	837
Stage 2	-	-	-	-	448
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1364	-	211
Mov Cap-2 Maneuver	-	-	-	-	211
Stage 1	-	-	-	-	837
Stage 2	-	-	-	-	346

Approach	EB	WB	NB
HCM Control Delay, s	0	4.1	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	733	-	-	1364	-
HCM Lane V/C Ratio	0.359	-	-	0.195	-
HCM Control Delay (s)	12.6	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.6	-	-	0.7	-

Intersection						
Int Delay, s/veh	7.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	12	373	173	16	173
Future Vol, veh/h	144	12	373	173	16	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	80	80	79	79
Heavy Vehicles, %	3	0	0	4	0	4
Mvmt Flow	167	14	466	216	20	219

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	181	0	1322
Stage 1	-	-	-	-	174
Stage 2	-	-	-	-	1148
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1407	-	174
Stage 1	-	-	-	-	861
Stage 2	-	-	-	-	305
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1407	-	109
Mov Cap-2 Maneuver	-	-	-	-	109
Stage 1	-	-	-	-	861
Stage 2	-	-	-	-	190

Approach	EB	WB	NB
HCM Control Delay, s	0	6	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	545	-	-	1407	-
HCM Lane V/C Ratio	0.439	-	-	0.331	-
HCM Control Delay (s)	16.7	-	-	8.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.2	-	-	1.5	-

Intersection						
Int Delay, s/veh	6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	206	10	232	221	13	255
Future Vol, veh/h	206	10	232	221	13	255
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	75	75	92	92
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	219	11	309	295	14	277

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	230	0	1138
Stage 1	-	-	-	-	225
Stage 2	-	-	-	-	913
Critical Hdwy	-	-	4.12	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.218	-	3.5
Pot Cap-1 Maneuver	-	-	1338	-	225
Stage 1	-	-	-	-	817
Stage 2	-	-	-	-	395
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1338	-	163
Mov Cap-2 Maneuver	-	-	-	-	163
Stage 1	-	-	-	-	817
Stage 2	-	-	-	-	286

Approach	EB	WB	NB
HCM Control Delay, s	0	4.4	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	684	-	-	1338	-
HCM Lane V/C Ratio	0.426	-	-	0.231	-
HCM Control Delay (s)	14.1	-	-	8.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2.1	-	-	0.9	-

Intersection						
Int Delay, s/veh	7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	145	12	319	176	20	173
Future Vol, veh/h	145	12	319	176	20	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	80	80	79	79
Heavy Vehicles, %	3	0	0	4	0	4
Mvmt Flow	169	14	399	220	25	219

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	183	0	1194
Stage 1	-	-	-	-	176
Stage 2	-	-	-	-	1018
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1404	-	208
Stage 1	-	-	-	-	859
Stage 2	-	-	-	-	352
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1404	-	141
Mov Cap-2 Maneuver	-	-	-	-	141
Stage 1	-	-	-	-	859
Stage 2	-	-	-	-	238

Approach	EB	WB	NB
HCM Control Delay, s	0	5.5	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	563	-	-	1404	-
HCM Lane V/C Ratio	0.434	-	-	0.284	-
HCM Control Delay (s)	16.2	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.2	-	-	1.2	-

Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	209	11	221	223	14	255
Future Vol, veh/h	209	11	221	223	14	255
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	75	75	92	92
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	222	12	295	297	15	277

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	234	0	1115
Stage 1	-	-	-	-	228
Stage 2	-	-	-	-	887
Critical Hdwy	-	-	4.12	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.218	-	3.5
Pot Cap-1 Maneuver	-	-	1333	-	232
Stage 1	-	-	-	-	815
Stage 2	-	-	-	-	406
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1333	-	171
Mov Cap-2 Maneuver	-	-	-	-	171
Stage 1	-	-	-	-	815
Stage 2	-	-	-	-	298

Approach	EB	WB	NB
HCM Control Delay, s	0	4.2	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	681	-	-	1333	-
HCM Lane V/C Ratio	0.429	-	-	0.221	-
HCM Control Delay (s)	14.2	-	-	8.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2.2	-	-	0.8	-

Cottage Street at Baldwinville Road

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	169	5	0	298
Future Vol, veh/h	3	1	169	5	0	298
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	31	31	79	79	75	75
Heavy Vehicles, %	0	0	6	60	0	3
Mvmt Flow	10	3	214	6	0	397

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	614	217	0	0	220	0
Stage 1	217	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	459	828	-	-	1361	-
Stage 1	824	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	459	828	-	-	1361	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	517	1361
HCM Lane V/C Ratio	-	-	0.025	-
HCM Control Delay (s)	-	-	12.1	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	240	8	7	201
Future Vol, veh/h	1	2	240	8	7	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	97	97	66	66
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	4	8	247	8	11	305

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	578	251	0	0	255
Stage 1	251	-	-	-	-
Stage 2	327	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	481	793	-	-	1322
Stage 1	795	-	-	-	-
Stage 2	735	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	476	793	-	-	1322
Mov Cap-2 Maneuver	476	-	-	-	-
Stage 1	795	-	-	-	-
Stage 2	728	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	649	1322
HCM Lane V/C Ratio	-	-	0.018	0.008
HCM Control Delay (s)	-	-	10.7	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	188	25	37	348
Future Vol, veh/h	3	1	188	25	37	348
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	31	31	79	79	75	75
Heavy Vehicles, %	0	0	6	60	0	3
Mvmt Flow	10	3	238	32	49	464

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	816	254	0	0	270
Stage 1	254	-	-	-	-
Stage 2	562	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	349	790	-	-	1305
Stage 1	793	-	-	-	-
Stage 2	575	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	331	790	-	-	1305
Mov Cap-2 Maneuver	331	-	-	-	-
Stage 1	793	-	-	-	-
Stage 2	546	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	387	1305
HCM Lane V/C Ratio	-	-	0.033	0.038
HCM Control Delay (s)	-	-	14.6	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	266	12	14	228
Future Vol, veh/h	1	2	266	12	14	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	97	97	66	66
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	4	8	274	12	21	345

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	667	280	0	0	286
Stage 1	280	-	-	-	-
Stage 2	387	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	427	764	-	-	1288
Stage 1	772	-	-	-	-
Stage 2	691	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	418	764	-	-	1288
Mov Cap-2 Maneuver	418	-	-	-	-
Stage 1	772	-	-	-	-
Stage 2	677	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	599	1288
HCM Lane V/C Ratio	-	-	0.02	0.016
HCM Control Delay (s)	-	-	11.1	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	15	5	188	9	0	331
Future Vol, veh/h	15	5	188	9	0	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	31	31	79	79	75	75
Heavy Vehicles, %	0	0	6	60	0	3
Mvmt Flow	48	16	238	11	0	441

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	685	244	0	0	249	0
Stage 1	244	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	417	800	-	-	1328	-
Stage 1	801	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	417	800	-	-	1328	-
Mov Cap-2 Maneuver	417	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	474	1328
HCM Lane V/C Ratio	-	-	0.136	-
HCM Control Delay (s)	-	-	13.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	8	3	266	21	8	224
Future Vol, veh/h	8	3	266	21	8	224
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	97	97	66	66
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	32	12	274	22	12	339

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	648	285	0	0	296
Stage 1	285	-	-	-	-
Stage 2	363	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	438	759	-	-	1277
Stage 1	768	-	-	-	-
Stage 2	708	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	433	759	-	-	1277
Mov Cap-2 Maneuver	433	-	-	-	-
Stage 1	768	-	-	-	-
Stage 2	700	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	490	1277
HCM Lane V/C Ratio	-	-	0.09	0.009
HCM Control Delay (s)	-	-	13.1	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Cottage Street at School Street

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	4	1	3	0	0	1
Future Vol, veh/h	4	1	3	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	50	50	25	25	25	25
Heavy Vehicles, %	75	0	0	0	0	0
Mvmt Flow	8	2	12	0	0	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	12	0	-	0	30
Stage 1	-	-	-	-	12
Stage 2	-	-	-	-	18
Critical Hdwy	4.85	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.875	-	-	-	3.5
Pot Cap-1 Maneuver	1238	-	-	-	989
Stage 1	-	-	-	-	1016
Stage 2	-	-	-	-	1010
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1238	-	-	-	983
Mov Cap-2 Maneuver	-	-	-	-	983
Stage 1	-	-	-	-	1010
Stage 2	-	-	-	-	1010

Approach	EB	WB	SB
HCM Control Delay, s	6.3	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1238	-	-	-	1074
HCM Lane V/C Ratio	0.006	-	-	-	0.004
HCM Control Delay (s)	7.9	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	5	10	3	2	0	0
Future Vol, veh/h	5	10	3	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	42	42	92	92
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	8	15	7	5	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	12	0	-	0	41 10
Stage 1	-	-	-	-	10 -
Stage 2	-	-	-	-	31 -
Critical Hdwy	4.1	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.2	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1620	-	-	-	970 1071
Stage 1	-	-	-	-	1013 -
Stage 2	-	-	-	-	992 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1620	-	-	-	965 1071
Mov Cap-2 Maneuver	-	-	-	-	965 -
Stage 1	-	-	-	-	1008 -
Stage 2	-	-	-	-	992 -

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1620	-	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	7.2	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	4	58	3	0	0	1
Future Vol, veh/h	4	58	3	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	50	50	25	25	25	25
Heavy Vehicles, %	75	0	0	0	0	0
Mvmt Flow	8	116	12	0	0	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	12	0	-	0	144
Stage 1	-	-	-	-	12
Stage 2	-	-	-	-	132
Critical Hdwy	4.85	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.875	-	-	-	3.5
Pot Cap-1 Maneuver	1238	-	-	-	853
Stage 1	-	-	-	-	1016
Stage 2	-	-	-	-	899
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1238	-	-	-	847
Mov Cap-2 Maneuver	-	-	-	-	847
Stage 1	-	-	-	-	1009
Stage 2	-	-	-	-	899

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1238	-	-	-	1074
HCM Lane V/C Ratio	0.006	-	-	-	0.004
HCM Control Delay (s)	7.9	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	5	21	3	2	0	0
Future Vol, veh/h	5	21	3	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	42	42	92	92
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	8	32	7	5	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	12	0	-	0	58 10
Stage 1	-	-	-	-	10 -
Stage 2	-	-	-	-	48 -
Critical Hdwy	4.1	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.2	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1620	-	-	-	949 1071
Stage 1	-	-	-	-	1013 -
Stage 2	-	-	-	-	974 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1620	-	-	-	944 1071
Mov Cap-2 Maneuver	-	-	-	-	944 -
Stage 1	-	-	-	-	1008 -
Stage 2	-	-	-	-	974 -

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1620	-	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	7.2	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	4.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	6	3	9	0	0	11
Future Vol, veh/h	6	3	9	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	50	50	25	25	25	25
Heavy Vehicles, %	75	0	0	0	0	0
Mvmt Flow	12	6	36	0	0	44

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	36	0	-	0	66 36
Stage 1	-	-	-	-	36 -
Stage 2	-	-	-	-	30 -
Critical Hdwy	4.85	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.875	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1210	-	-	-	944 1042
Stage 1	-	-	-	-	992 -
Stage 2	-	-	-	-	998 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1210	-	-	-	935 1042
Mov Cap-2 Maneuver	-	-	-	-	935 -
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	998 -

Approach	EB	WB	SB
HCM Control Delay, s	5.3	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1210	-	-	-	1042
HCM Lane V/C Ratio	0.01	-	-	-	0.042
HCM Control Delay (s)	8	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	13	16	6	2	0	5
Future Vol, veh/h	13	16	6	2	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	42	42	92	92
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	20	25	14	5	0	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	19	0	-	0	82
Stage 1	-	-	-	-	17
Stage 2	-	-	-	-	65
Critical Hdwy	4.1	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.2	-	-	-	3.518
Pot Cap-1 Maneuver	1611	-	-	-	920
Stage 1	-	-	-	-	1006
Stage 2	-	-	-	-	958
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1611	-	-	-	908
Mov Cap-2 Maneuver	-	-	-	-	908
Stage 1	-	-	-	-	993
Stage 2	-	-	-	-	958

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1062
HCM Lane V/C Ratio	0.012	-	-	-	0.005
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

School Street at North Site Driveway

Intersection						
Int Delay, s/veh	4.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T			T
Traffic Vol, veh/h	8	8	11	2	4	1
Future Vol, veh/h	8	8	11	2	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	9	12	2	4	1

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	22	13	0	0	14	0
Stage 1	13	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	995	1067	-	-	1604	-
Stage 1	1010	-	-	-	-	-
Stage 2	1014	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	993	1067	-	-	1604	-
Mov Cap-2 Maneuver	993	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1012	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	5.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1029	1604
HCM Lane V/C Ratio	-	-	0.017	0.003
HCM Control Delay (s)	-	-	8.6	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection

Int Delay, s/veh 3.1

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	4	4	11	6	7	7
Future Vol, veh/h	4	4	11	6	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	12	7	8	8

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	40	16	0	0	19	0
Stage 1	16	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	972	1063	-	-	1597	-
Stage 1	1007	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	967	1063	-	-	1597	-
Mov Cap-2 Maneuver	967	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s 8.6 0 3.6
 HCM LOS A

Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT

Capacity (veh/h)	-	-	1013	1597	-
HCM Lane V/C Ratio	-	-	0.009	0.005	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

School Street at South Site Driveway

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	7	6	0	1	8
Future Vol, veh/h	2	7	6	0	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	8	7	0	1	9

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	18	7	0	0	7
Stage 1	7	-	-	-	-
Stage 2	11	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	1000	1075	-	-	1614
Stage 1	1016	-	-	-	-
Stage 2	1012	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	999	1075	-	-	1614
Mov Cap-2 Maneuver	999	-	-	-	-
Stage 1	1016	-	-	-	-
Stage 2	1011	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1057	1614
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	1	4	13	2	7	4
Future Vol, veh/h	1	4	13	2	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	14	2	8	4

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	35	15	0	0	16	0
Stage 1	15	-	-	-	-	-
Stage 2	20	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	978	1065	-	-	1602	-
Stage 1	1008	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	973	1065	-	-	1602	-
Mov Cap-2 Maneuver	973	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	4.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1045	1602
HCM Lane V/C Ratio	-	-	0.005	0.005
HCM Control Delay (s)	-	-	8.5	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Cottage Street at Site Driveway

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	2	1	3	0	0	6
Future Vol, veh/h	2	1	3	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	3	0	0	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	3	0	-	0	8 3
Stage 1	-	-	-	-	3 -
Stage 2	-	-	-	-	5 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1619	-	-	-	1013 1081
Stage 1	-	-	-	-	1020 -
Stage 2	-	-	-	-	1018 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1619	-	-	-	1012 1081
Mov Cap-2 Maneuver	-	-	-	-	1012 -
Stage 1	-	-	-	-	1019 -
Stage 2	-	-	-	-	1018 -

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1081
HCM Lane V/C Ratio	0.001	-	-	-	0.006
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	6	10	5	0	0	3
Future Vol, veh/h	6	10	5	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	11	5	0	0	3

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	5	0	-	0	30
Stage 1	-	-	-	-	5
Stage 2	-	-	-	-	25
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1616	-	-	-	984
Stage 1	-	-	-	-	1018
Stage 2	-	-	-	-	998
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1616	-	-	-	980
Mov Cap-2 Maneuver	-	-	-	-	980
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	998

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1616	-	-	-	1078
HCM Lane V/C Ratio	0.004	-	-	-	0.003
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 5

CIVIL ENGINEER'S NARRATIVE & STORM WATER MANAGEMENT PLAN

Baldwinville School Apartments

COMPREHENSIVE PERMIT APPLICATION - June 10, 2022

Section 5

Civil Infrastructure Narrative

Infrastructure Narrative

Sanitary Sewer

The existing site is currently comprised one vacant school building located at #16 School Street, one single family building located at #12 School Street, and one shed (to be demolished) located at #12 School Street.

A breakdown of the site’s existing sanitary sewer flow rates are as follows:

Existing Sanitary Sewer Flows ¹:

Use	GPD/Unit	Unit	GPD
#12 Single family	110 per bedroom	4 bedrooms	440 gpd
#16 School	10 per occupant	440 Occupants	4,400 gpd
Total Existing Sanitary Flows			4,840 gpd

1. Proposed Sanitary flow calculations per 310 CMR 15.203. School flows based on maximum historical occupancy.

This project proposes to develop the site into 54 mixed income housing units in three structures. The sanitary sewage from the redeveloped site will be piped to the existing 10 inch sewer main located in School Street. The connection at #12 School Street will remain in place. The connection at # 16 School Street will be reconstructed.

A breakdown of the project’s sewer design flow rates are as follows:

Proposed Sanitary Sewer Flows ¹:

Use	GPD/Unit	Unit	GPD
#12 School Street (storage)	110 per bedroom	0 bedrooms	0 gpd
#16 School Street.	110 per bedroom	95 bedrooms	10,450 gpd
Total Proposed Sanitary Flows			10,450 gpd

1. Proposed Sanitary flow calculations per 310 CMR 15.203

Stormwater/Drainage

The proposed drainage system is designed in compliance with MassDEP's Stormwater Management Standards for redevelopment. The site currently has no drainage system. Runoff from the site flows overland to School Street where it enters the Town of Bridgewater drainage system. A portion of the property flows to Otter River at the rear of the property.

The majority of the stormwater runoff from the site will be collected and discharged to on-site stormwater treatment, infiltration, and detention systems. These systems will include 3 subsurface recharge/detention systems, 5 proprietary water quality devices, and long-term operation and maintenance program. The stormwater detention/infiltration system over-flow to the Town's drainage system located in School Street and to Otter River.

Stormwater Runoff Rates

The proposed redevelopment project provides attenuation required to reduce offsite peak runoff rates that are less than the pre-development conditions. Attenuation is achieved through the use of onsite infiltration/detention systems that will be located under the parking lot.

The stormwater management design will result in the reduction of on-site peak flows from the site during the 2, 10, 25 and 100- year storms per the Stormwater Management Handbook.

Stormwater Quality

The proposed drainage system has been designed to exceed the recommended 80% TSS removal goal with the implementation of the following:

- Proprietary Water Quality Devices
- Subsurface retention/infiltration chambers
- Operation and Maintenance Program

Groundwater Recharge

Groundwater recharge is provided with the subsurface infiltration systems. Recharge will be provided for the increase in impervious area.

Conclusions

The project has been designed to meet, and in some cases, exceed, the applicable provisions of the Stormwater Management Standards for redevelopment.

Water Service Infrastructure Narrative

The existing water service to the single family building at #12 School Street will remain.

The Project will require new water services to the existing school building and the proposed addition on #16 School Street. This service will include fire protection for the two buildings and a demand of approximately 10,450 gallons per day of domestic water use.

All water service connections will be fully coordinated with the Water Department and its requirements.

The capacity and condition of the existing water supply infrastructure is currently under investigation. Hydrant flow tests will be performed to determine the capacity in the area. Should it be determined that there is inadequate pressure to provide the required flows for the potable water, a booster pump will be provided. All water connections will be fully coordinated with the Templeton Water Department and the fire protection system design will be fully coordinated with the Templeton Fire Department.

**STORMWATER MANAGEMENT
REPORT
06/10/2022**

**BALDWINVILLE SCHOOL APARTMENTS
12 & 16 SCHOOL STREET
TEMPLETON, MA 01438**

PREPARED FOR:

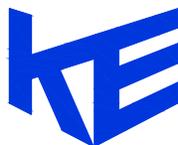
**CC MPZ SCHOOL STREET LLC
831 BEACON ST, #164
NEWTON CENTER, MA 02459**



A handwritten signature in blue ink that reads "David Noel Kelly".

Digitally signed by David
Noel Kelly P.E.
DN: cn=David Noel Kelly
P.E., o=Kelly Engineering
GGroup, Inc., ou,
email=dkelly@kellyengin
eeringgroup.com, c=US
Date: 2022.06.08
14:42:40 -04'00'

PREPARED BY:



KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

TABLE OF CONTENTS

Stormwater Management Summary
Checklist for Stormwater Report
Illicit Discharge Statement
Runoff Summary

Existing Conditions AnalysisAttachment A
 Existing Drainage Exhibit
 Runoff Curve Numbers
 Hydraflow Hydrographs Model.....
 Existing Conditions Hydrograph Summary Chart.....
 Individual Hydrographs for 100 year storm

Proposed Conditions AnalysisAttachment B
 Proposed Drainage Exhibit
 Runoff Curve Numbers
 Hydraflow Hydrographs Model
 Proposed Conditions Hydrograph Summary Chart.....
 Individual Hydrographs for 100 year storm

Best Management PracticesAttachment C
 Required Dedicated Recharge Volume and Drain Down Time
 Cultec Chambers
 Stage Storage Volume Charts.....
 TSS Removal Calculation Worksheets.....
 Water Quality Volumes
 Contech TSS Calculations
 Contech Water Quality Flow Rate Calculations
 Stormwater Maintenance System Operation and Maintenance Plan & Long Term
 Pollution Prevention Plan
 Operation and Maintenance Log
 BMP Location Map.....

Miscellaneous.....Attachment E
 NOAA Atlas 14 Point Precipitation Frequency Estimates
 Required Recharge Volume
 Infiltration Rates
 NRCS Soil Survey Maps.....
 Test Pits and Boring Logs by Haley Aldrich
 USGS Location Map... ..

INTRODUCTION

The purpose of this report is to analyze the pre-development and post-development drainage conditions for the proposed project and to demonstrate that the project will have no negative impacts on the surrounding properties and resource areas. The design incorporates many best management practices recommended by the Massachusetts Stormwater Management Handbook and also maximizes ground recharge consistent with the Town of Templeton General By-Law Article LIII, NPDES Phase II Permit Stormwater Management

EXISTING SITE

The 3.0 Ac lot site is located on 12 & 16 School Street in Templeton, MA. The site is currently occupied by the vacant Baldwinville Elementary School Building (16 School Street), a residential home (12 School Street), and a portion of an abandoned railroad bed. The site is currently improved parking, utilities and other site development features. Collectively the parcels contain approximately 3.0 acres and is bordered by School Street to the east, Residential Properties and the Otter River on the North, vacant land to the east and residential property on the south.

Currently runoff from the site splits into two drainage areas that have been used as design points for this analysis. Runoff from the front part of the property flows to School Street where the town has drainage system that ultimately discharges to the Otter River. The rear part of the site flows to the Otter River. See Existing Drainage Exhibit in **Attachment A**.

PROPOSED SITE

The proposed project will entail constructing a new 2 story apartment building, rehabilitating the Baldwinville Elementary School and renovations to the existing home. The construction and renovations will improve parking, utilities, and include a new stormwater management system for the entire site. In total the project will have 52 units. The proposed project will result in approximately 25,700 s.f. of new impervious area.

A stormwater management system has been designed to comply with Massachusetts Department of Environmental Protection Standards for stormwater management and the town of Templeton Stormwater By-Law.

The Stormwater management system will incorporate many Best Management Practices (BMPs), which will include deep sump catch basins, proprietary water quality structures, subsurface recharge chambers, and an operations and maintenance program designed to treat, recharge, and reduce peak runoff rates generated from the proposed development of the site.

See Proposed Conditions Drainage Exhibit in **Attachment B**.

STORMWATER MANAGEMENT STANDARDS

The following is a discussion of the Massachusetts Stormwater Management Standards

STANDARD 1: NO NEW UNTREATED DISCHARGES

The proposed project has been designed such that there are no new untreated discharges from the site. The existing and proposed impervious areas will be treated by proprietary water quality devices, directed to subsurface recharge systems with overflows to the existing drainage systems.

STANDARD 2: PEAK RATE ATTENUATION

Existing and developed sites were modeled using Hydraflow Hydrographs Extension version 10.5 computer program by AutoCAD Civil 3D 2016. This computer software uses the TR55/TR20 tabular method of computing peak flows, hydrograph addition, and pond routing. The curve numbers for the existing conditions analysis were determined using soil survey maps which show hydrologic group A soils. See soil survey map, test hole and boring information in **Attachment D**. For the purposes of the proposed conditions analysis, a conservative estimate of time of concentration of 6 minutes was assumed for the proposed conditions analysis.

As can be seen from the summary chart below, the peak flows from the design storm on the site will be reduced as a result of this project. Peak flow mitigation will be provided within the subsurface recharge systems.

The entire TR55 analysis is included in **Attachment A** (existing conditions) **and B** (proposed conditions) of this report.

STANDARD 3: RECHARGE

The project site contains hydrologic group A soils according to the NRCS soil maps. Based on DEP guidelines for recharge, the required recharge volume for hydrologic group A soils is 0.6". The total increase in impervious area on the proposed site is approximately 25,700 s.f.

Required = 25,700 s.f. X 0.6 in. X 1 ft/ 12 in. = 1,285 cubic feet

The dedicated recharge volume has been provided in the 3 subsurface recharge systems. The provided recharge volumes for the subsurface recharge systems were calculated using Hydraflow Hydrographs Extension for AutoCAD Civil 3D 2013 Version 10. The recharge chambers have been designed to hold approximately 5,157 cu.ft. (equivalent to approximately 2.4” of runoff from the increase in impervious area). This is 4 times the amount of recharge required by DEP. See **Attachment C** for pond volume and recharge calculations.

The infiltration rate used to calculate drain down time was calculated assuming hydrologic group A Sands with an infiltration rate of 50% of the recommended Rawls rate for the soils of this type. See Infiltration Rates in **Attachment D**.

STANDARD 4: STORMWATER QUALITY

Stormwater runoff from the site will be enhanced by means of a number of Best Management Practices (BMP’s), which have been designed to comply with the DEP Stormwater Management Guidelines. In order to achieve a Total Suspended Solids (TSS) removal rate of 80%, the following BMP’s will be incorporated:

- o Pavement sweeping and maintenance program
- o Water quality proprietary devices
- o Subsurface Recharge Chambers

The total TSS removal is expected to be greater than 80%. See TSS Removal in **Attachment C**.

STANDARD 5: Land Uses with Higher Potential Pollutant Loads (LUHPPL’s)

The proposed project is not considered a land use with higher potential pollutant loads. The proposed use is not

an industrial use and is not subject to a NPDES Multi-Sector General Permit.

STANDARD 6: CRITICAL AREAS

The site is not in an active public water supply, surface water protection area, nor groundwater protection area, and is not in an area of critical environmental concern.

STANDARD 7: REDEVELOPMENT

The proposed project constitutes both redevelopment and new development.

STANDARD 8: CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION CONTROL

A construction phasing plan will be established when a site contractor is consulted. At that time a construction phasing plan and the associated Stormwater Pollution Prevention Plan will be prepared and submitted to the Town of Templeton and the EPA.

STANDARD 9: OPERATIONS AND MAINTENANCE PLAN

The Stormwater Management System Operation and Maintenance Plan and Long Term Pollution Prevention Plan, Operations and Maintenance Log, and BMP Location Map are provided in **Attachment C**.

STANDARD 10: ILLICIT DISCHARGES

An Illicit Discharge Statement is attached and can be found in the Table of Contents. The Long Term Pollution Prevention Plan can be found in **Attachment C**.

CONCLUSION

An extensive stormwater management system has been designed for the project. The stormwater management system has been designed to comply with current (DEP) standards and will incorporate a number of Best Management Practices (“BMP’s”) that will ensure that the runoff will be treated prior to leaving the site.

The construction of the stormwater management system will ensure that stormwater runoff from this site will be of high quality and that there will be no adverse impacts on surrounding properties or resource areas.



Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

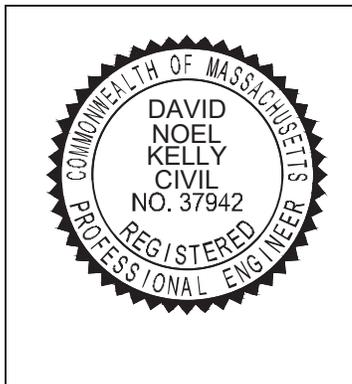
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Digitally signed by David Noel Kelly P.E.
DN: cn=David Noel Kelly P.E.,
o=Kelly Engineering Group, Inc.,
ou,
email=dkelly@kellyengineeringgroup.com, c=US
Date: 2021.10.01 06:45:06 -04'00'

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- New development
- Redevelopment
- Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- No disturbance to any Wetland Resource Areas
- Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- Reduced Impervious Area (Redevelopment Only)
- Minimizing disturbance to existing trees and shrubs
- LID Site Design Credit Requested:
 - Credit 1
 - Credit 2
 - Credit 3
- Use of "country drainage" versus curb and gutter conveyance and pipe
- Bioretention Cells (includes Rain Gardens)
- Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- Treebox Filter
- Water Quality Swale
- Grass Channel
- Green Roof
- Other (describe): _____

Standard 1: No New Untreated Discharges

- No new untreated discharges
- Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- Soil Analysis provided.
- Required Recharge Volume calculation provided.
- Required Recharge volume reduced through use of the LID site Design Credits.
- Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - Static
 - Simple Dynamic
 - Dynamic Field¹
- Runoff from all impervious areas at the site discharging to the infiltration BMP.
- Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - Site is comprised solely of C and D soils and/or bedrock at the land surface
 - M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - Solid Waste Landfill pursuant to 310 CMR 19.000
 - Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - is within the Zone II or Interim Wellhead Protection Area
 - is near or to other critical areas
 - is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - involves runoff from land uses with higher potential pollutant loads.
 - The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- The BMP is sized (and calculations provided) based on:
 - The ½" or 1" Water Quality Volume or
 - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- The NPDES Multi-Sector General Permit does **not** cover the land use.
- LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- All exposure has been eliminated.
- All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - Limited Project
 - Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - Bike Path and/or Foot Path
 - Redevelopment Project
 - Redevelopment portion of mix of new and redevelopment.
- Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- The project is **not** covered by a NPDES Construction General Permit.
- The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - Name of the stormwater management system owners;
 - Party responsible for operation and maintenance;
 - Schedule for implementation of routine and non-routine maintenance tasks;
 - Plan showing the location of all stormwater BMPs maintenance access areas;
 - Description and delineation of public safety features;
 - Estimated operation and maintenance budget; and
 - Operation and Maintenance Log Form.
- The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- An Illicit Discharge Compliance Statement is attached;
- NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

ILLICIT DISCHARGE STATEMENT

This statement has been prepared to comply with Stormwater Management Standard #10 as referenced in the Massachusetts Stormwater Handbook, Volume One, Chapter One, Page 25. This handbook has been issued by the Massachusetts Department of Environmental Protection for compliance with revised Regulations for Wetlands 310 CMR 10.00.

As detailed in the Site Development Plans accompanying this application this project will not involve any illicit discharge to the stormwater management system. Furthermore, to the best of my knowledge there are no illicit discharges to the stormwater management system of the existing site.

Owner and Responsible Party for Operating and Managing the site:

CC MPZ School Street LLC
831 Beacon St. #164
Newton Center, MA 02459



09/29/21

Brandon Li
For: CC MPZ MAIN STREET LLC

Date

RUNOFF SUMMARY

Peak Runoff Chart-

Design Point A-Otter River

<u>Storm</u>	<u>Existing</u>	<u>Proposed</u>	<u>Difference</u>
(yr, inches)	(cfs)	(cfs)	(cfs)
1,2.39	0.19	0	
2,2.90	0.3	0	-0.3
10,4.41	0.64	0	-0.64
25,5.35	0.87	0.48	-0.39
50,6.05	1.05	0.88	-0.17
100,6.81	1.34	1.32	-0.02

Design Point B-School Street

<u>Storm</u>	<u>Existing</u>	<u>Proposed</u>	<u>Difference</u>
(yr, inches)	(cfs)	(cfs)	(cfs)
1,2.39	0.52	0	
2,2.90	0.86	0	-0.86
10,4.41	2.16	1.09	-1.07
25,5.35	3.11	2.26	-0.85
50,6.05	4.9	3.04	-1.86
100,6.81	4.7	3.86	-0.84

Volume Runoff Chart-

Design Point A-Otter River

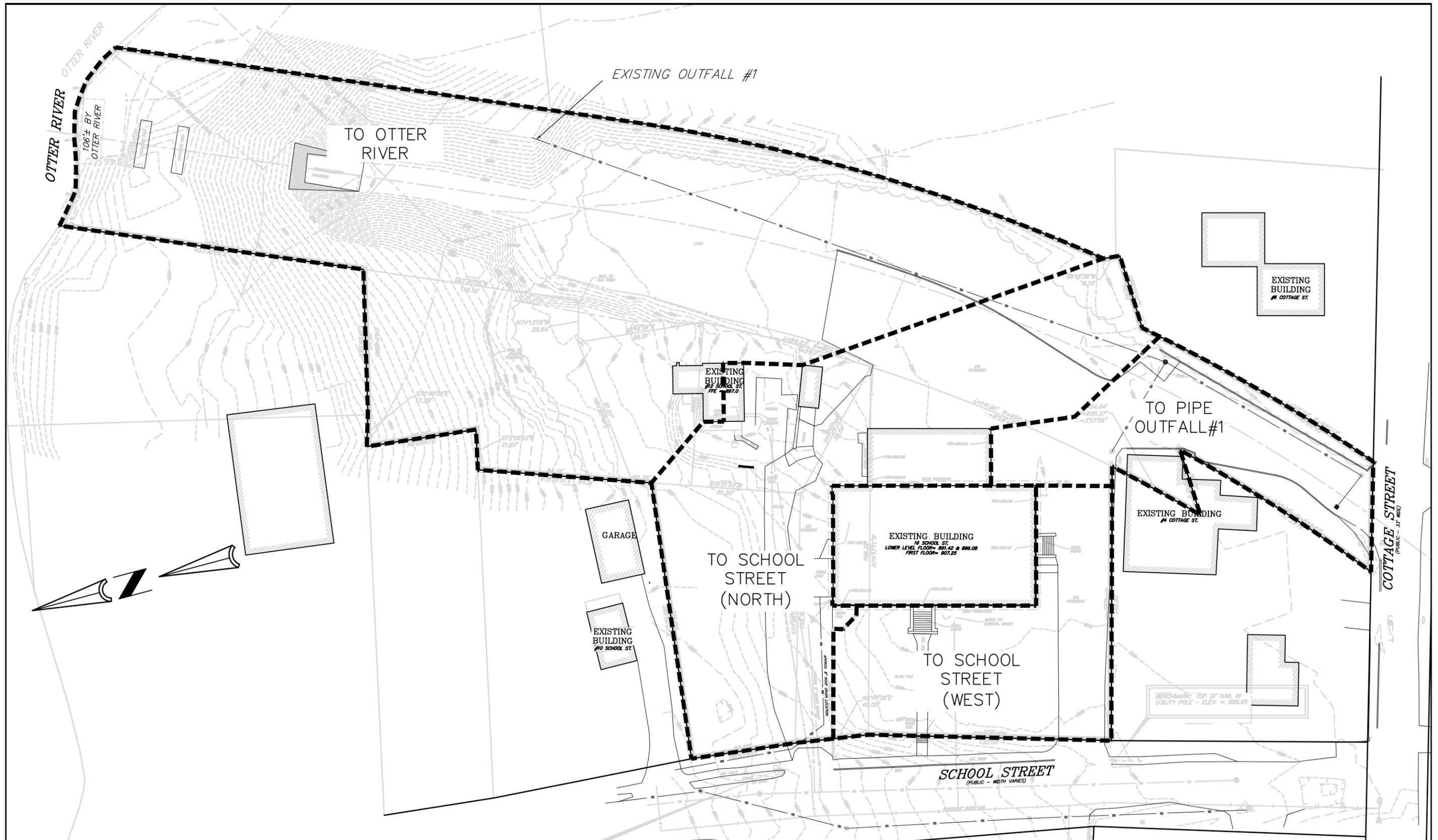
<u>Storm</u>	<u>Existing</u>	<u>Proposed</u>	<u>Difference</u>
(yr, inches)	(cf)	(cf)	(cf)
1,2.39	637	0	
2,2.90	941	0	-941
10,4.41	2,243	0	-2,243
25,5.35	3,719	864	-2,855
50,6.05	5,121	2,077	-3,044
100,6.81	6,900	3,613	-3,287

Design Point B-School Street

<u>Storm</u>	<u>Existing</u>	<u>Proposed</u>	<u>Difference</u>
(yr, inches)	(cf)	(cf)	(cf)
1,2.39	2,302	0	
2,2.90	3,378	1,324	-2,054
10,4.41	7,357	1,889	-5,468
25,5.35	10,252	3,770	-6,482
50,6.05	12,553	5,334	-7,219
100,6.81	15,161	7,190	-7,971

KELLY ENGINEERING GROUP, INC.
Zero Campanelli Drive-Braintree-MA 02184 Phone 781 843 4333

Attachment A
Existing Conditions



BALDWINVILLE SCHOOL APARTMENTS
 12 & 16 SCHOOL STREET
 TEMPLETON, MA

SCALE: 1" = 50'
 DATE: 09/29/21
 2020-162-PRDR

EXISTING DRAINAGE EXHIBIT



KELLY ENGINEERING GROUP
 civil engineering consultants
 0 Campanelli Drive, Braintree, MA 02184
 Phone: 781-843-4333 www.kellyengineeringgroup.com

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: EXISTING - TO OTTER RIVER

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	38982	1169460
WET	flagged wetlands	95	0	0
Open Space	Hydrologic Group A; Good Condition	39	25146	980694
Paved		98	2413	236474
Roof		98	603	59094
Totals =			67144.00	2445722
Acres =			1.54141414	

CN or C (weighted) = total product/total area =

36.4

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: EXISTING - TO OUTALL #1

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	1070	32100
WET	flagged wetlands	95	0	0
Open Space	Hydrologic Group A; Good Condition	39	2344	91416
Paved		98	7050	690900
Roof		98	0	0
Totals =			``	814416
Acres =			#VALUE!	

CN or C (weighted) = total product/total area =

#VALUE!

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: EXISTING - TO SCHOOL ST NORTH

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	1181	35430
Gravel	Hydrologic Group A; Good Condition	76	4221	320796
Open Space	Hydrologic Group A; Good Condition	39	13412	523068
Paved		98	9197	901306
Roof		98	2681	262738
Totals =			30692.00	2043338
Acres =			0.70459137	

CN or C (weighted) = total product/total area =

66.6

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: EXISTING - TO SCHOOL ST WEST

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	8500	331500
Paved		98	4860	476280
Roof		98	0	0
Totals =			13360.00	807780
Acres =			0.3067034	

CN or C (weighted) = total product/total area =

60.5

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: EXISTING - ROOF OF SCHOOL

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	0	0
Paved		98	0	0
Roof		98	7175	703150
Totals =			7175.00	703150
Acres =			0.16471534	

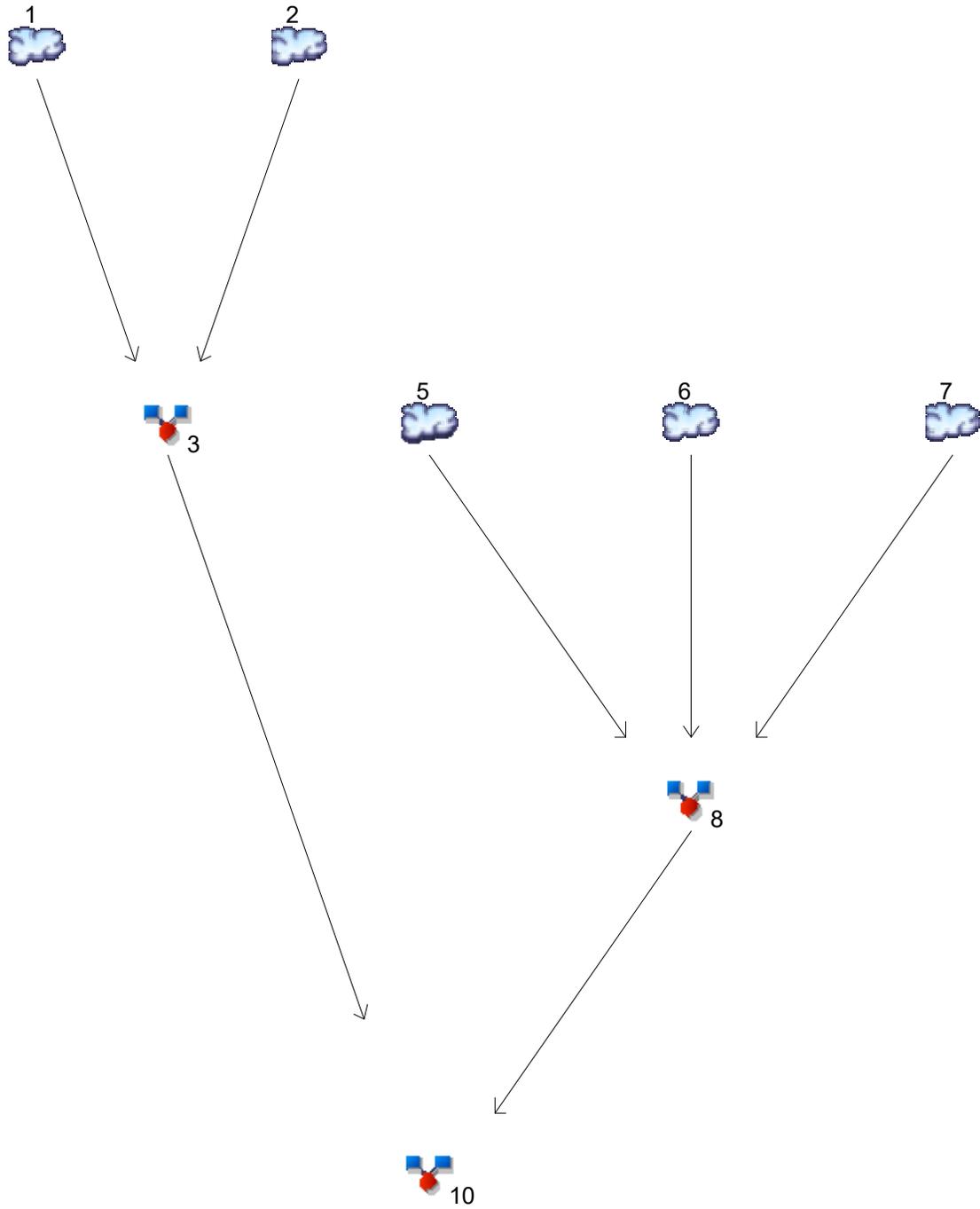
CN or C (weighted) = total product/total area =

98.0

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Legend

Hyd.	Origin	Description
1	SCS Runoff	To Otter River
2	SCS Runoff	To Outfall #1
3	Combine	Total to River Directly
5	SCS Runoff	School St-North
6	SCS Runoff	school St-West
7	SCS Runoff	Existing Roof Drain
8	Combine	Total to School St
10	Combine	Total Site Runoff

Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	0.000	0.000	-----	0.002	0.012	0.039	0.155	0.348	To Otter River
2	SCS Runoff	-----	0.193	0.296	-----	0.479	0.642	0.873	1.049	1.242	To Outfall #1
3	Combine	1, 2	0.193	0.296	-----	0.479	0.642	0.873	1.049	1.340	Total to River Directly
5	SCS Runoff	-----	0.148	0.343	-----	0.732	1.114	1.687	2.141	2.655	School St-North
6	SCS Runoff	-----	0.017	0.056	-----	0.184	0.319	0.535	0.711	0.913	school St-West
7	SCS Runoff	-----	0.391	0.478	-----	0.617	0.734	0.892	1.010	1.138	Existing Roof Drain
8	Combine	5, 6, 7	0.522	0.855	-----	1.525	2.161	3.107	3.854	4.697	Total to School St
10	Combine	3, 8,	0.715	1.151	-----	2.004	2.804	3.980	4.903	6.033	Total Site Runoff

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.000	1	n/a	0	----	----	----	To Otter River	
2	SCS Runoff	0.193	1	725	637	----	----	----	To Outfall #1	
3	Combine	0.193	1	725	637	1, 2	----	----	Total to River Directly	
5	SCS Runoff	0.148	1	727	793	----	----	----	School St-North	
6	SCS Runoff	0.017	1	741	177	----	----	----	school St-West	
7	SCS Runoff	0.391	1	724	1,333	----	----	----	Existing Roof Drain	
8	Combine	0.522	1	725	2,302	5, 6, 7	----	----	Total to School St	
10	Combine	0.715	1	725	2,939	3, 8,	----	----	Total Site Runoff	
EXISTING.gpw					Return Period: 1 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.000	1	n/a	0	----	----	----	To Otter River
2	SCS Runoff	0.296	1	725	941	----	----	----	To Outfall #1
3	Combine	0.296	1	725	941	1, 2	----	----	Total to River Directly
5	SCS Runoff	0.343	1	726	1,373	----	----	----	School St-North
6	SCS Runoff	0.056	1	728	359	----	----	----	school St-West
7	SCS Runoff	0.478	1	724	1,645	----	----	----	Existing Roof Drain
8	Combine	0.855	1	725	3,378	5, 6, 7	----	----	Total to School St
10	Combine	1.151	1	725	4,319	3, 8,	----	----	Total Site Runoff
EXISTING.gpw					Return Period: 2 Year			Thursday, 09 / 30 / 2021	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.002	1	1324	17	----	----	----	To Otter River
2	SCS Runoff	0.479	1	725	1,486	----	----	----	To Outfall #1
3	Combine	0.479	1	725	1,502	1, 2	----	----	Total to River Directly
5	SCS Runoff	0.732	1	725	2,518	----	----	----	School St-North
6	SCS Runoff	0.184	1	726	748	----	----	----	school St-West
7	SCS Runoff	0.617	1	724	2,149	----	----	----	Existing Roof Drain
8	Combine	1.525	1	725	5,416	5, 6, 7	----	----	Total to School St
10	Combine	2.004	1	725	6,918	3, 8,	----	----	Total Site Runoff
EXISTING.gpw					Return Period: 5 Year			Thursday, 09 / 30 / 2021	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.012	1	1324	263	----	----	----	To Otter River	
2	SCS Runoff	0.642	1	725	1,980	----	----	----	To Outfall #1	
3	Combine	0.642	1	725	2,243	1, 2	----	----	Total to River Directly	
5	SCS Runoff	1.114	1	725	3,635	----	----	----	School St-North	
6	SCS Runoff	0.319	1	726	1,148	----	----	----	school St-West	
7	SCS Runoff	0.734	1	724	2,574	----	----	----	Existing Roof Drain	
8	Combine	2.161	1	725	7,357	5, 6, 7	----	----	Total to School St	
10	Combine	2.804	1	725	9,601	3, 8,	----	----	Total Site Runoff	
EXISTING.gpw					Return Period: 10 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.039	1	820	1,028	----	----	----	To Otter River	
2	SCS Runoff	0.873	1	725	2,691	----	----	----	To Outfall #1	
3	Combine	0.873	1	725	3,719	1, 2	----	----	Total to River Directly	
5	SCS Runoff	1.687	1	725	5,324	----	----	----	School St-North	
6	SCS Runoff	0.535	1	725	1,776	----	----	----	school St-West	
7	SCS Runoff	0.892	1	724	3,152	----	----	----	Existing Roof Drain	
8	Combine	3.107	1	725	10,252	5, 6, 7	----	----	Total to School St	
10	Combine	3.980	1	725	13,971	3, 8,	----	----	Total Site Runoff	
EXISTING.gpw					Return Period: 25 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.155	1	743	1,881	----	----	----	To Otter River	
2	SCS Runoff	1.049	1	725	3,240	----	----	----	To Outfall #1	
3	Combine	1.049	1	725	5,121	1, 2	----	----	Total to River Directly	
5	SCS Runoff	2.141	1	725	6,677	----	----	----	School St-North	
6	SCS Runoff	0.711	1	725	2,292	----	----	----	school St-West	
7	SCS Runoff	1.010	1	724	3,583	----	----	----	Existing Roof Drain	
8	Combine	3.854	1	725	12,553	5, 6, 7	----	----	Total to School St	
10	Combine	4.903	1	725	17,674	3, 8,	----	----	Total Site Runoff	
EXISTING.gpw					Return Period: 50 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

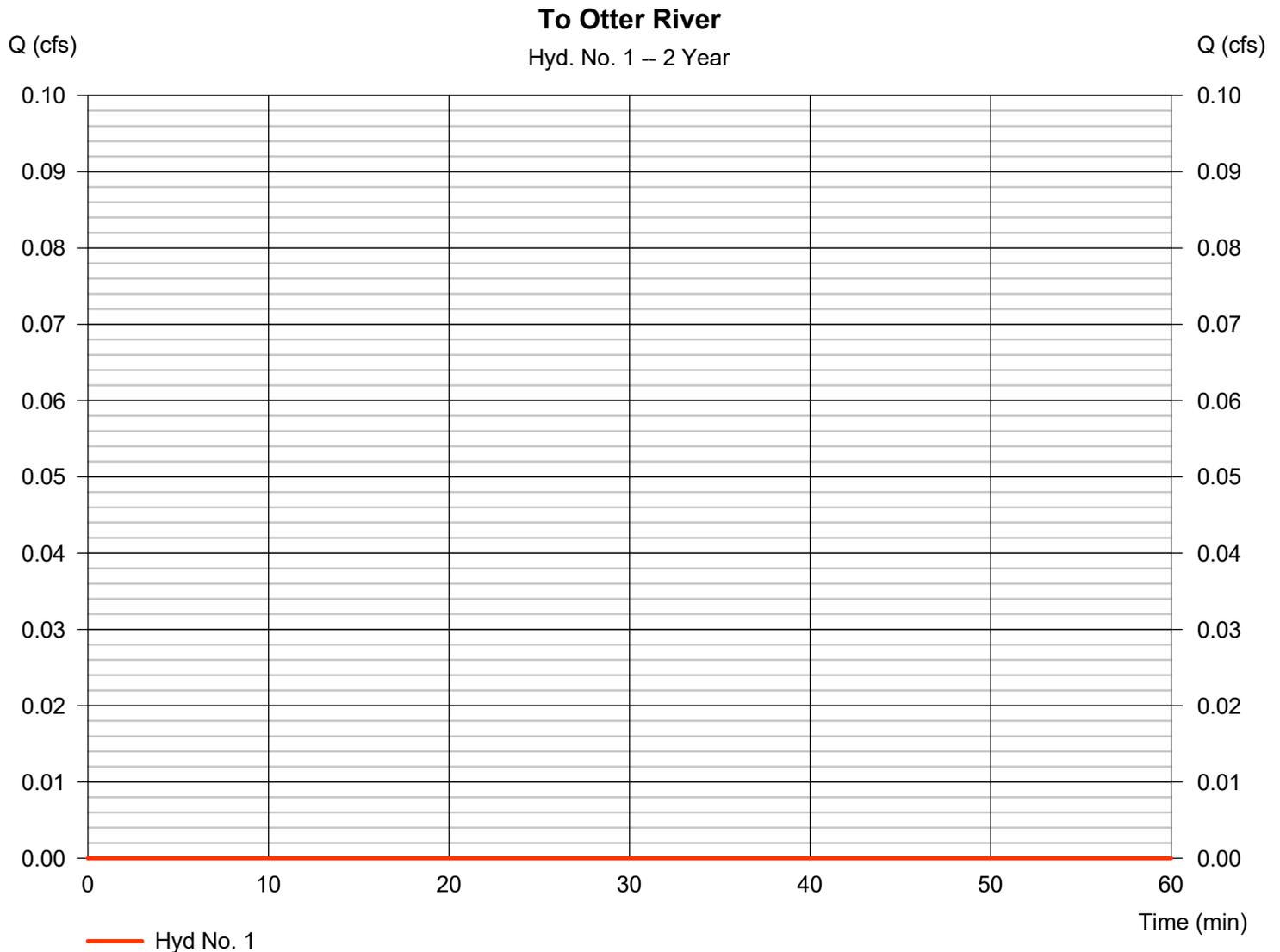
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.348	1	739	3,051	-----	-----	-----	To Otter River	
2	SCS Runoff	1.242	1	725	3,850	-----	-----	-----	To Outfall #1	
3	Combine	1.340	1	726	6,900	1, 2	-----	-----	Total to River Directly	
5	SCS Runoff	2.655	1	725	8,219	-----	-----	-----	School St-North	
6	SCS Runoff	0.913	1	725	2,891	-----	-----	-----	school St-West	
7	SCS Runoff	1.138	1	724	4,051	-----	-----	-----	Existing Roof Drain	
8	Combine	4.697	1	725	15,161	5, 6, 7	-----	-----	Total to School St	
10	Combine	6.033	1	725	22,061	3, 8,	-----	-----	Total Site Runoff	
EXISTING.gpw					Return Period: 100 Year			Thursday, 09 / 30 / 2021		

Hydrograph Report

Hyd. No. 1

To Otter River

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0 cuft
Drainage area	= 1.541 ac	Curve number	= 36.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

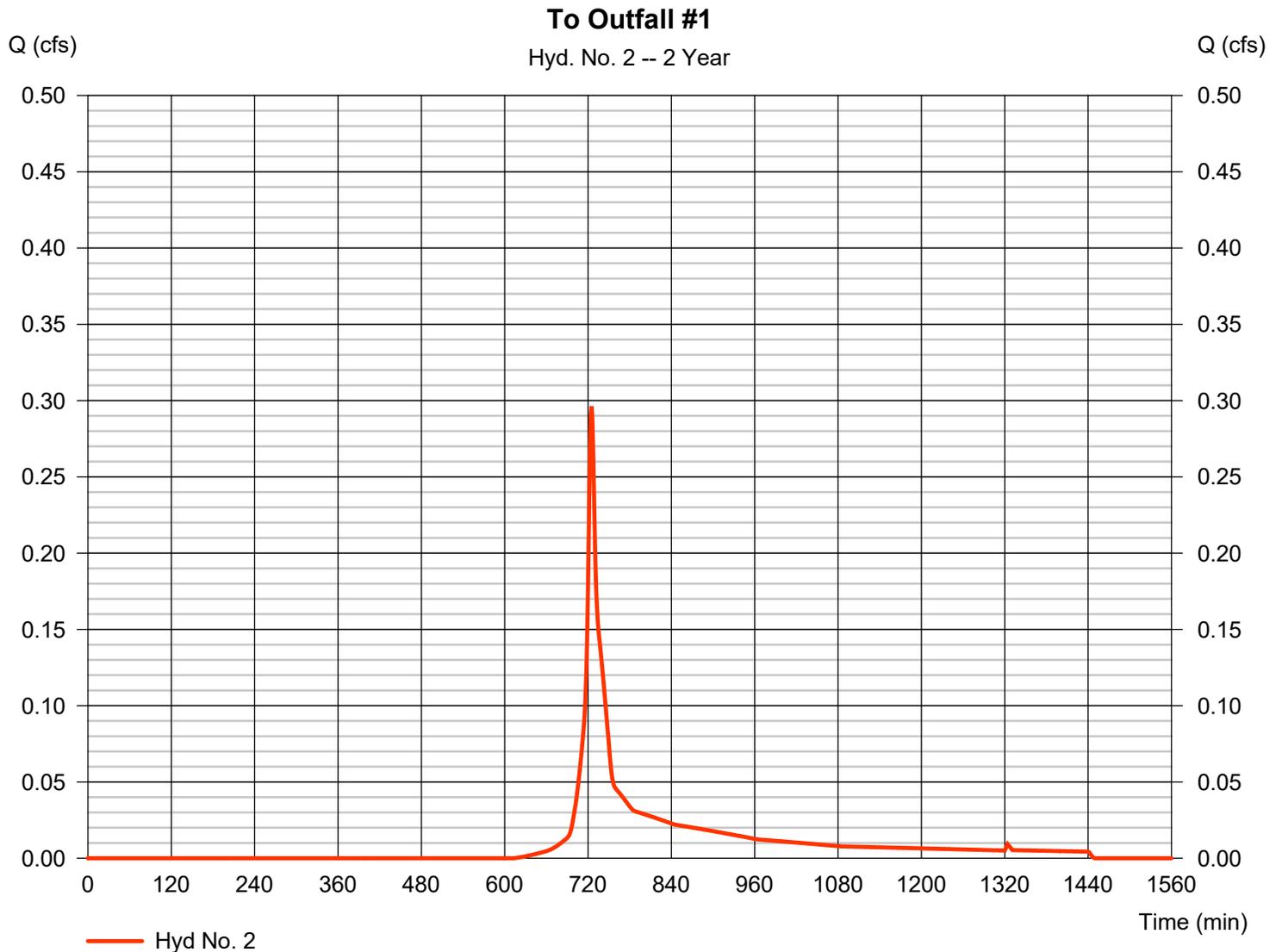


Hydrograph Report

Hyd. No. 2

To Outfall #1

Hydrograph type	= SCS Runoff	Peak discharge	= 0.296 cfs
Storm frequency	= 2 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 941 cuft
Drainage area	= 0.240 ac	Curve number	= 77.8
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



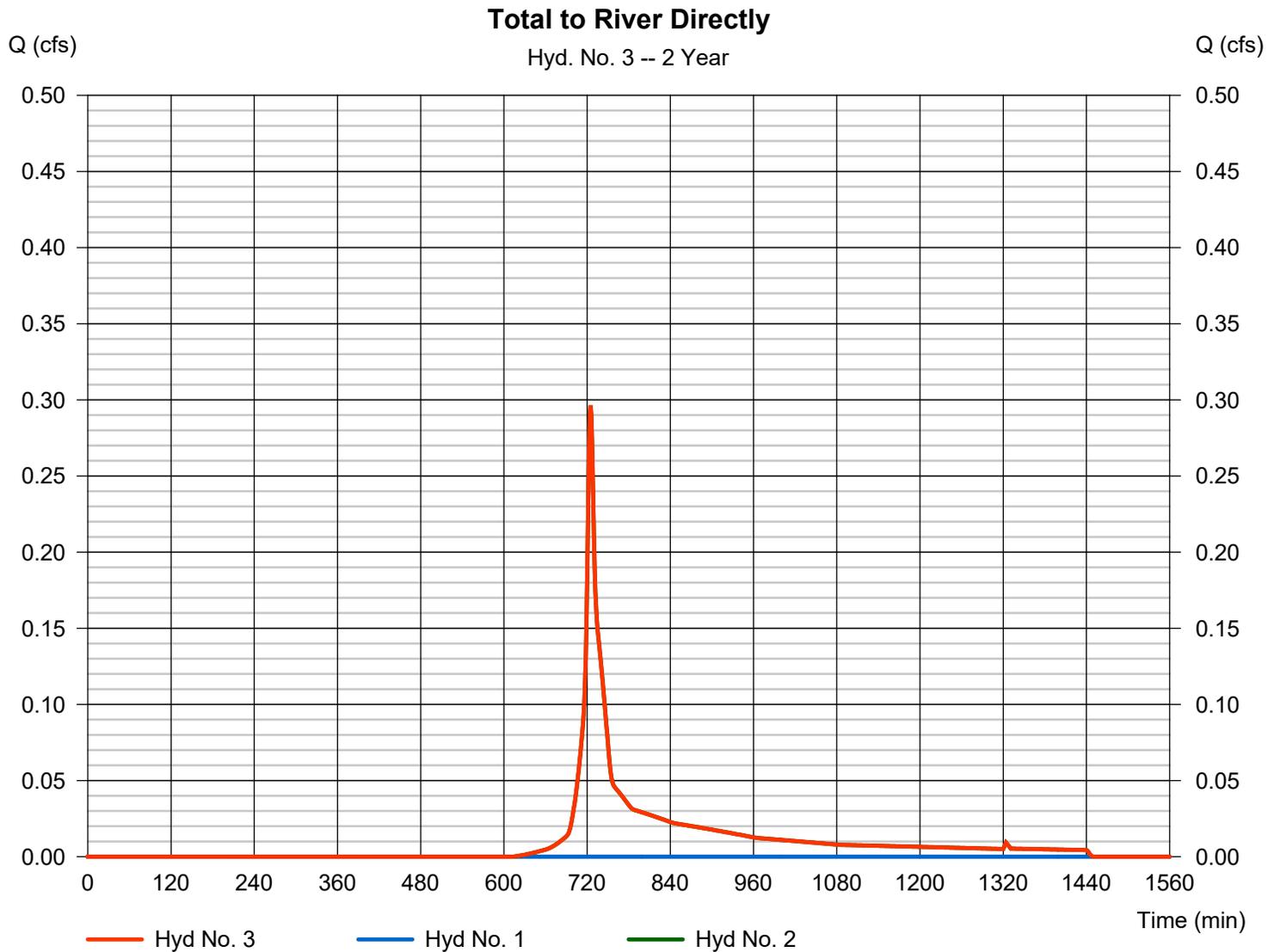
Hydrograph Report

Hyd. No. 3

Total to River Directly

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 1 min
Inflow hyds. = 1, 2

Peak discharge = 0.296 cfs
Time to peak = 725 min
Hyd. volume = 941 cuft
Contrib. drain. area = 1.782 ac

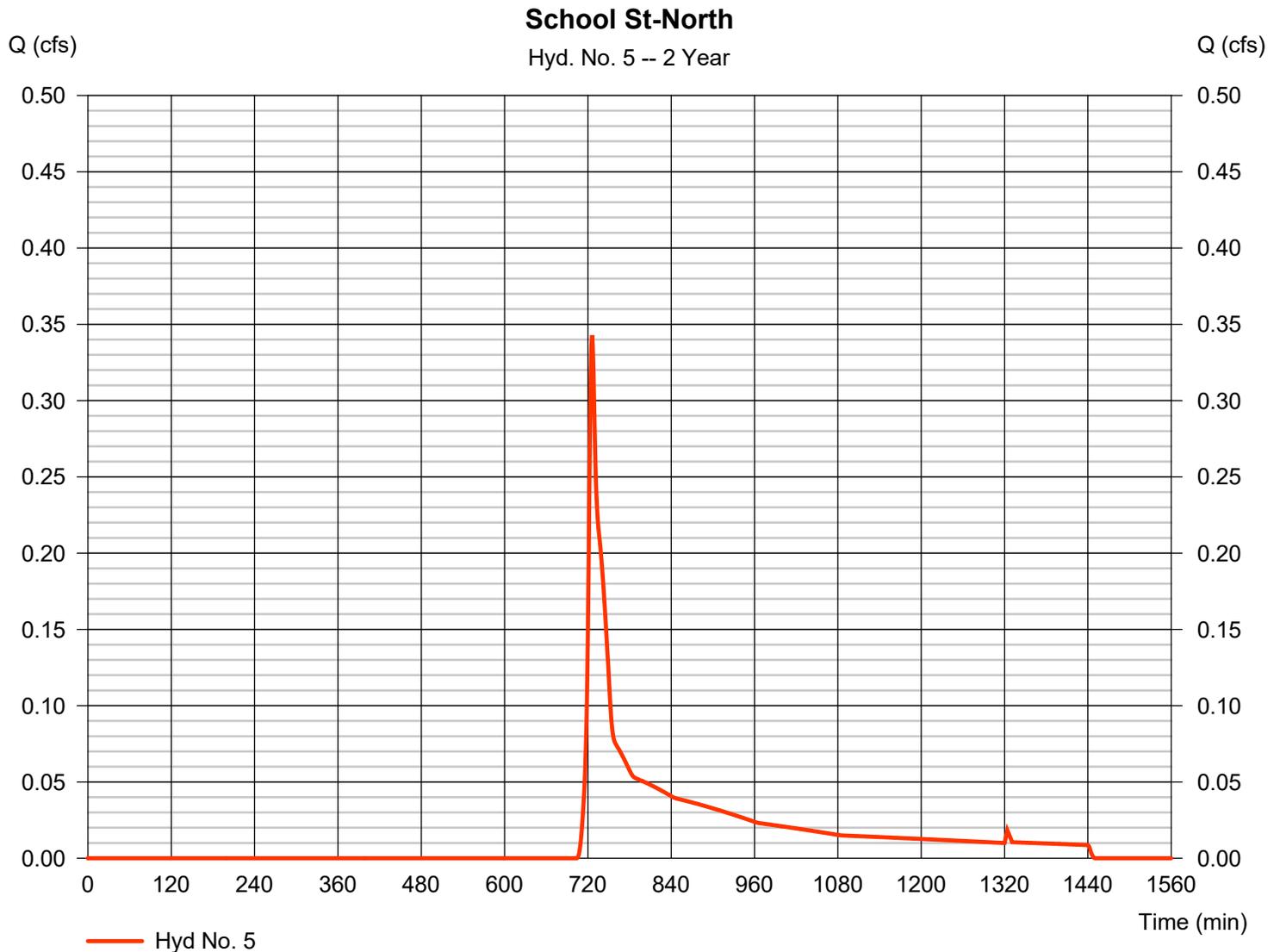


Hydrograph Report

Hyd. No. 5

School St-North

Hydrograph type	= SCS Runoff	Peak discharge	= 0.343 cfs
Storm frequency	= 2 yrs	Time to peak	= 726 min
Time interval	= 1 min	Hyd. volume	= 1,373 cuft
Drainage area	= 0.705 ac	Curve number	= 66.6
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

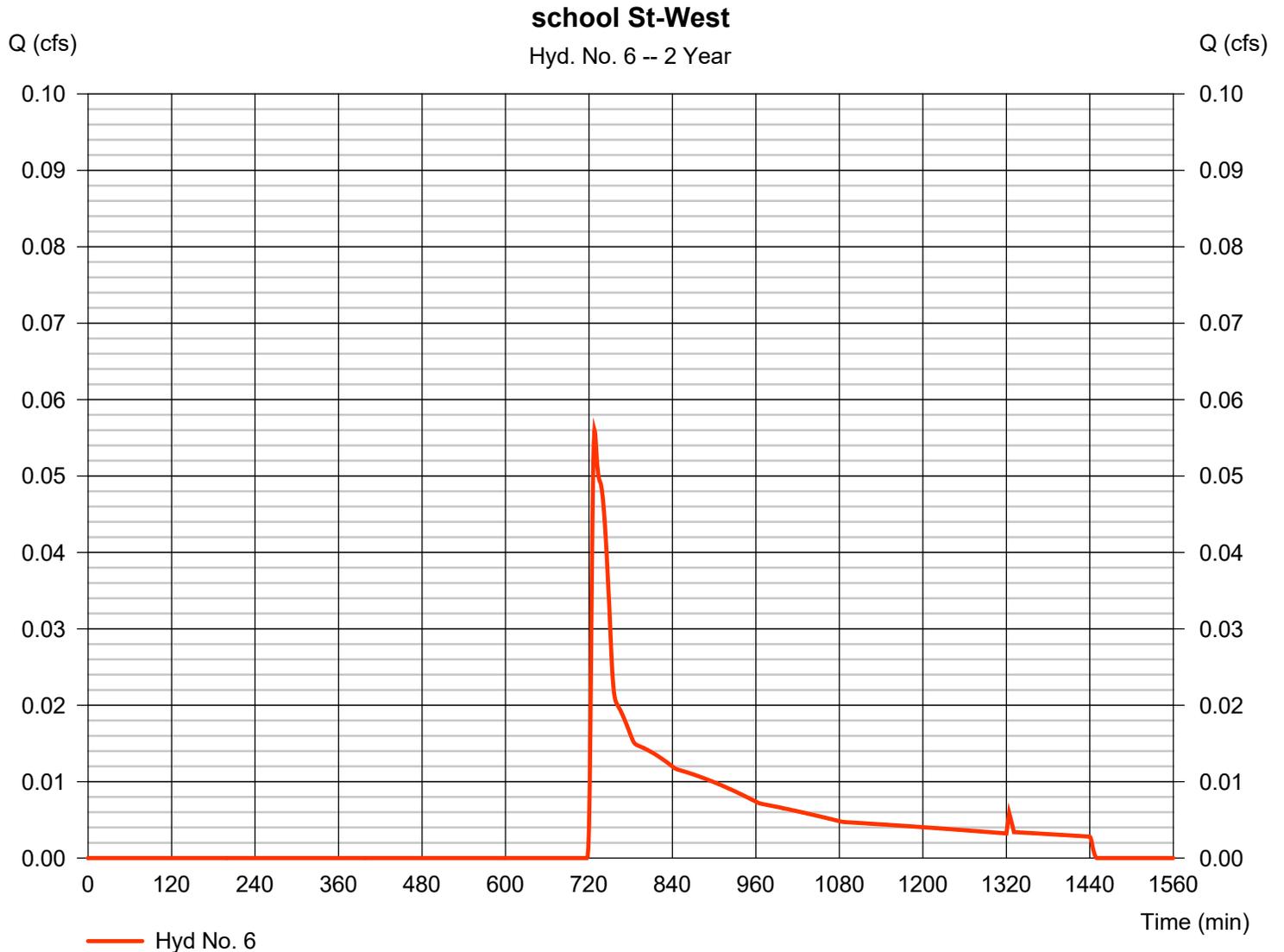


Hydrograph Report

Hyd. No. 6

school St-West

Hydrograph type	= SCS Runoff	Peak discharge	= 0.056 cfs
Storm frequency	= 2 yrs	Time to peak	= 728 min
Time interval	= 1 min	Hyd. volume	= 359 cuft
Drainage area	= 0.307 ac	Curve number	= 60.5
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

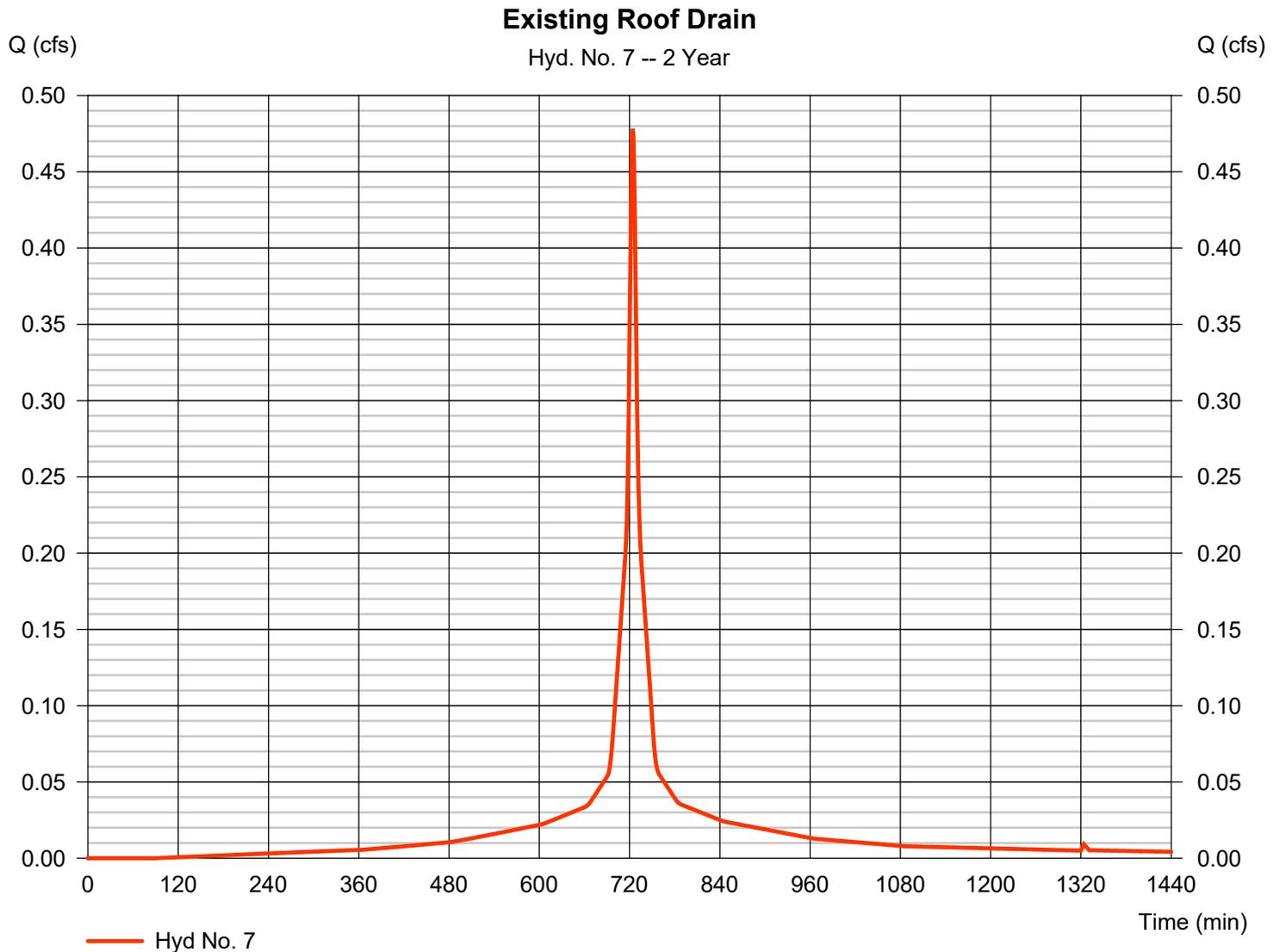


Hydrograph Report

Hyd. No. 7

Existing Roof Drain

Hydrograph type	= SCS Runoff	Peak discharge	= 0.478 cfs
Storm frequency	= 2 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 1,645 cuft
Drainage area	= 0.165 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



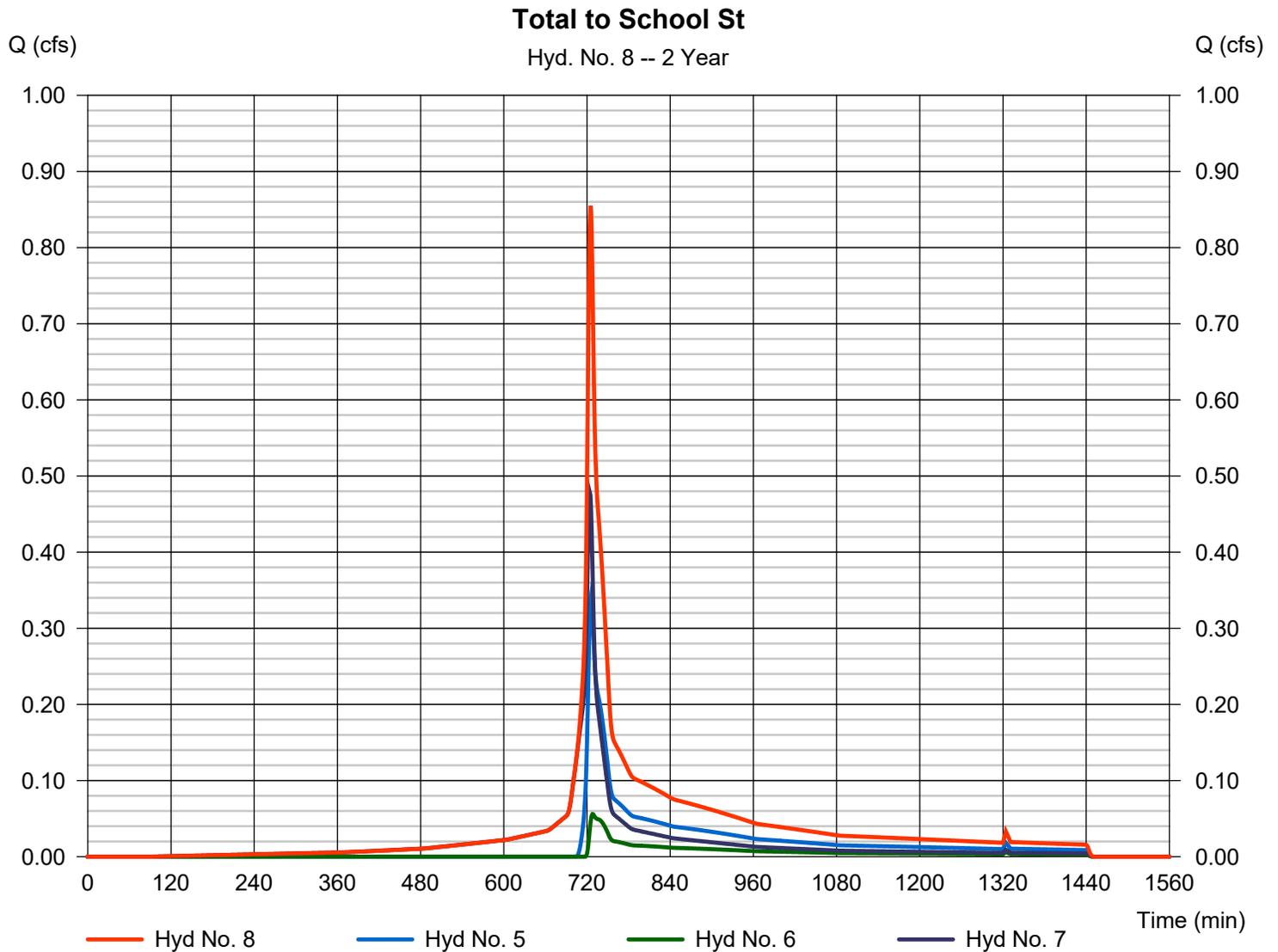
Hydrograph Report

Hyd. No. 8

Total to School St

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 1 min
Inflow hyds. = 5, 6, 7

Peak discharge = 0.855 cfs
Time to peak = 725 min
Hyd. volume = 3,378 cuft
Contrib. drain. area = 1.176 ac



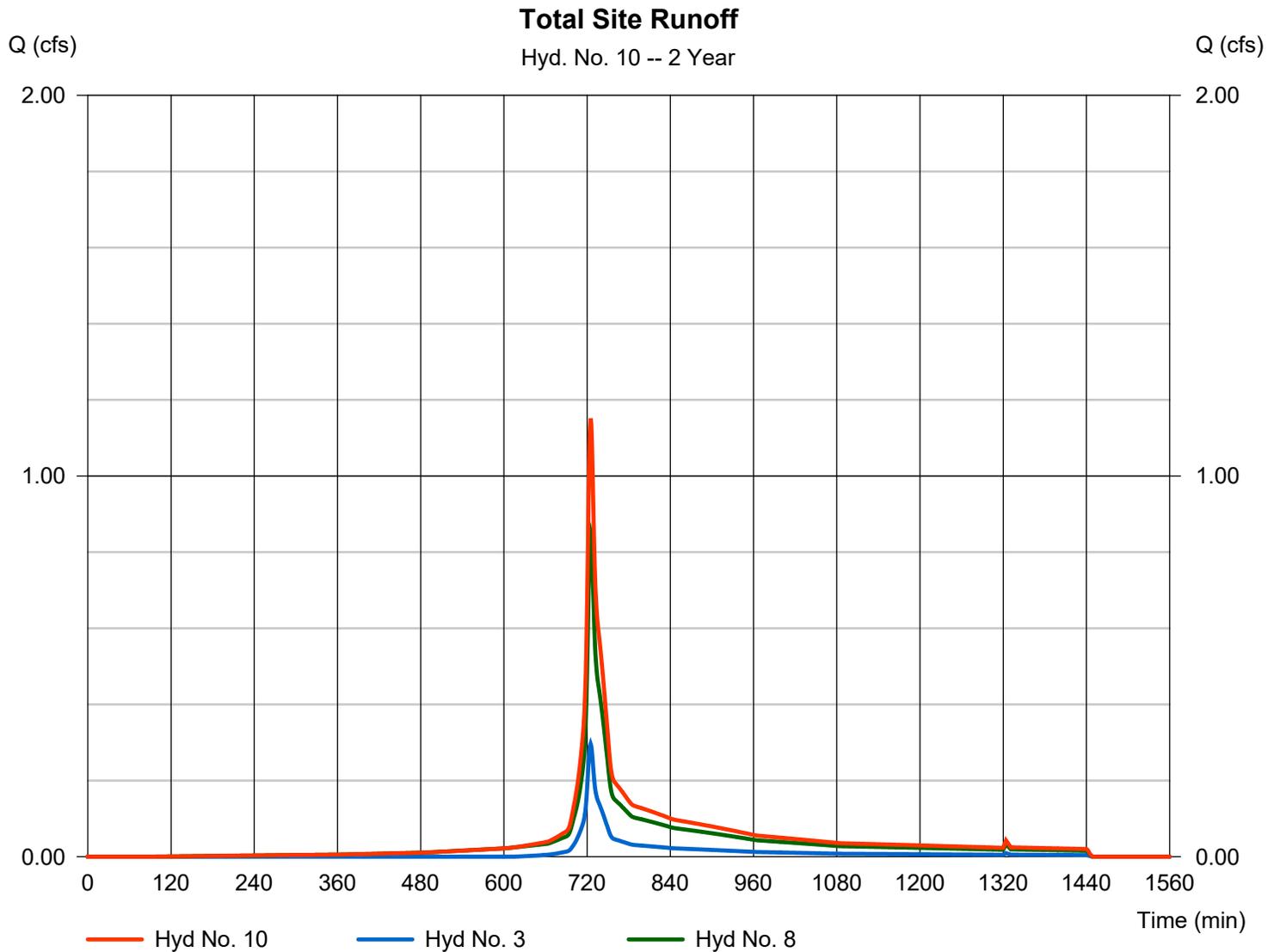
Hydrograph Report

Hyd. No. 10

Total Site Runoff

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 1 min
Inflow hyds. = 3, 8

Peak discharge = 1.151 cfs
Time to peak = 725 min
Hyd. volume = 4,319 cuft
Contrib. drain. area = 0.000 ac

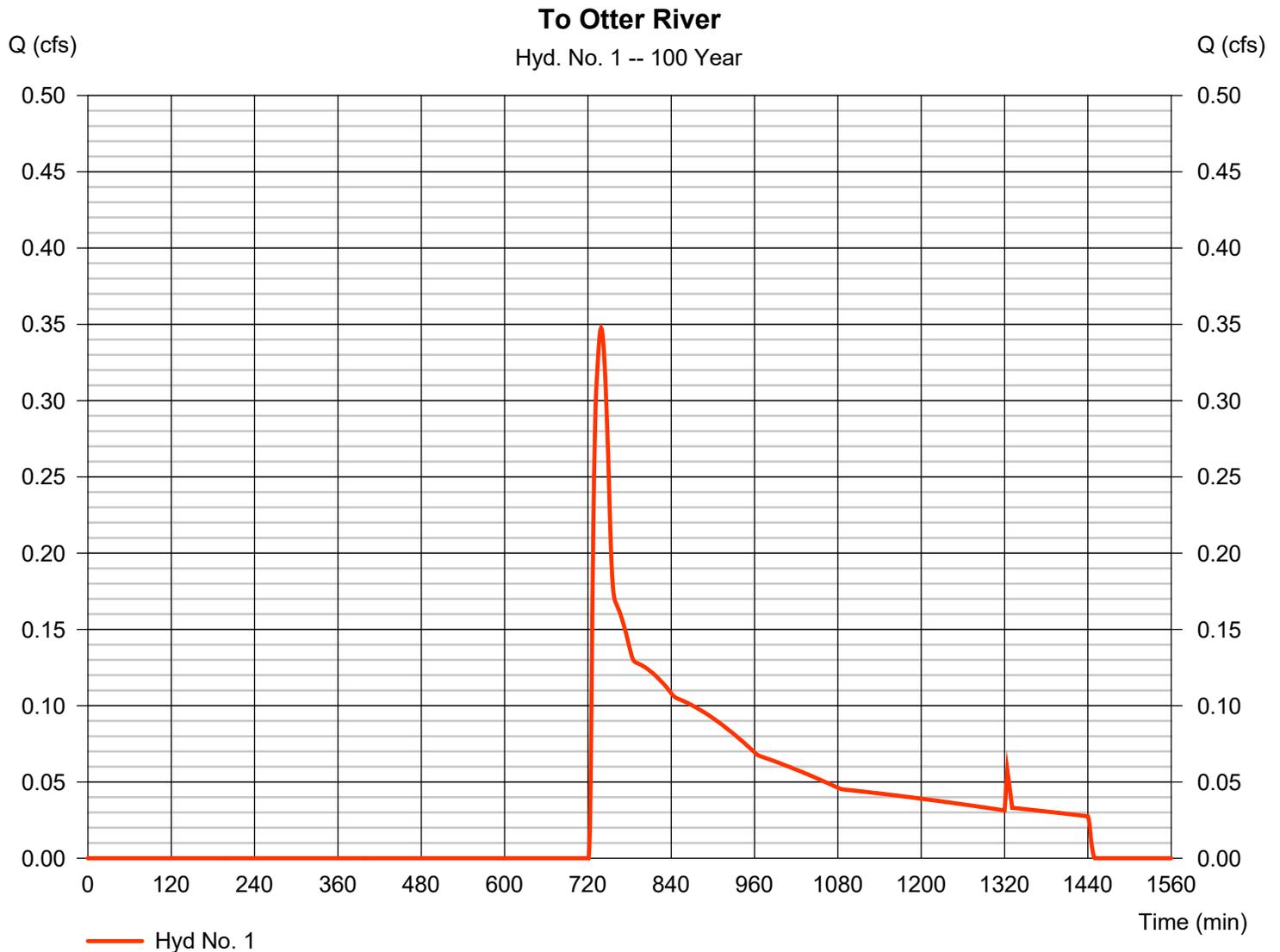


Hydrograph Report

Hyd. No. 1

To Otter River

Hydrograph type	= SCS Runoff	Peak discharge	= 0.348 cfs
Storm frequency	= 100 yrs	Time to peak	= 739 min
Time interval	= 1 min	Hyd. volume	= 3,051 cuft
Drainage area	= 1.541 ac	Curve number	= 36.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

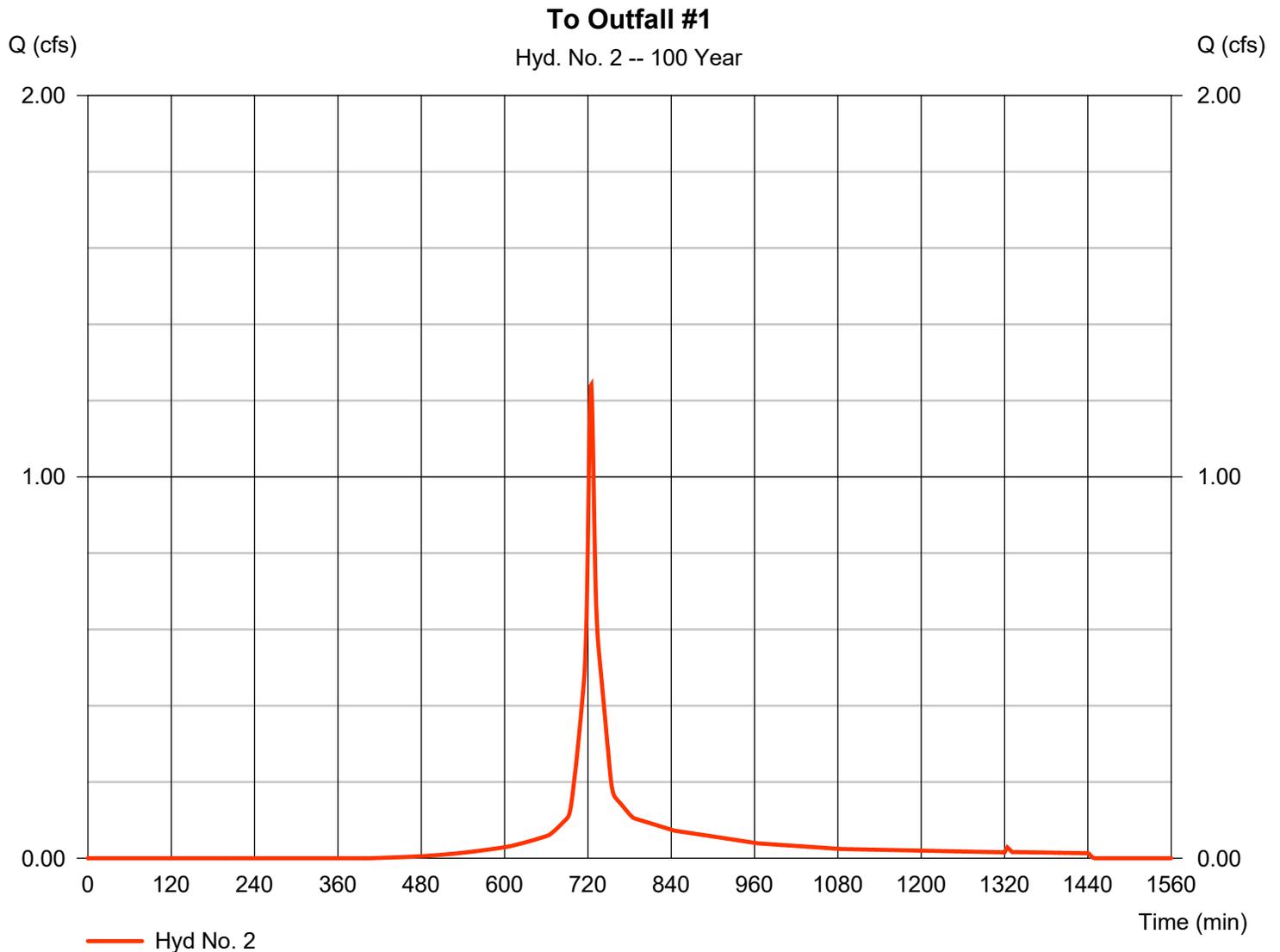


Hydrograph Report

Hyd. No. 2

To Outfall #1

Hydrograph type	= SCS Runoff	Peak discharge	= 1.242 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 3,850 cuft
Drainage area	= 0.240 ac	Curve number	= 77.8
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



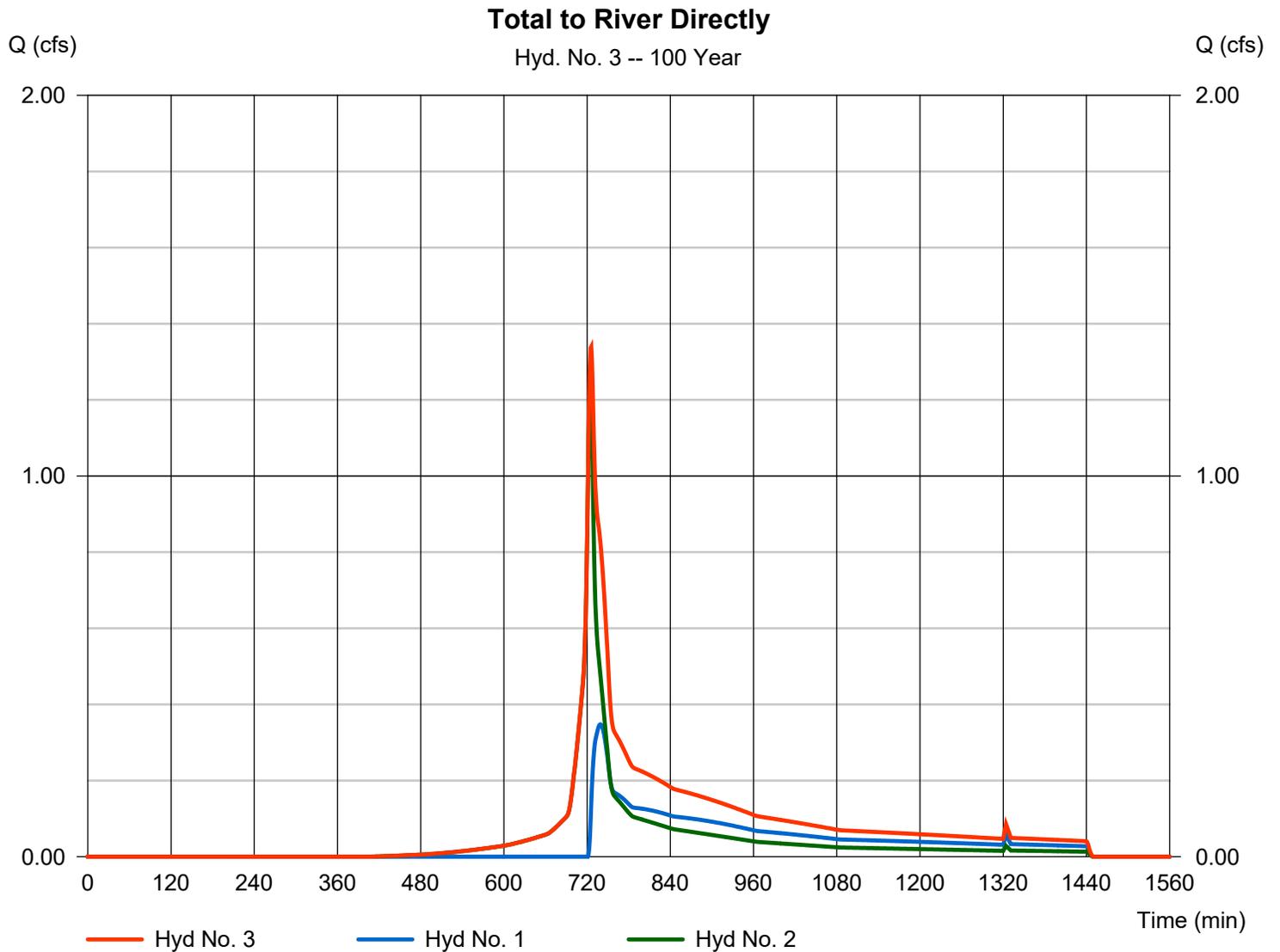
Hydrograph Report

Hyd. No. 3

Total to River Directly

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 1, 2

Peak discharge = 1.340 cfs
Time to peak = 726 min
Hyd. volume = 6,900 cuft
Contrib. drain. area = 1.782 ac

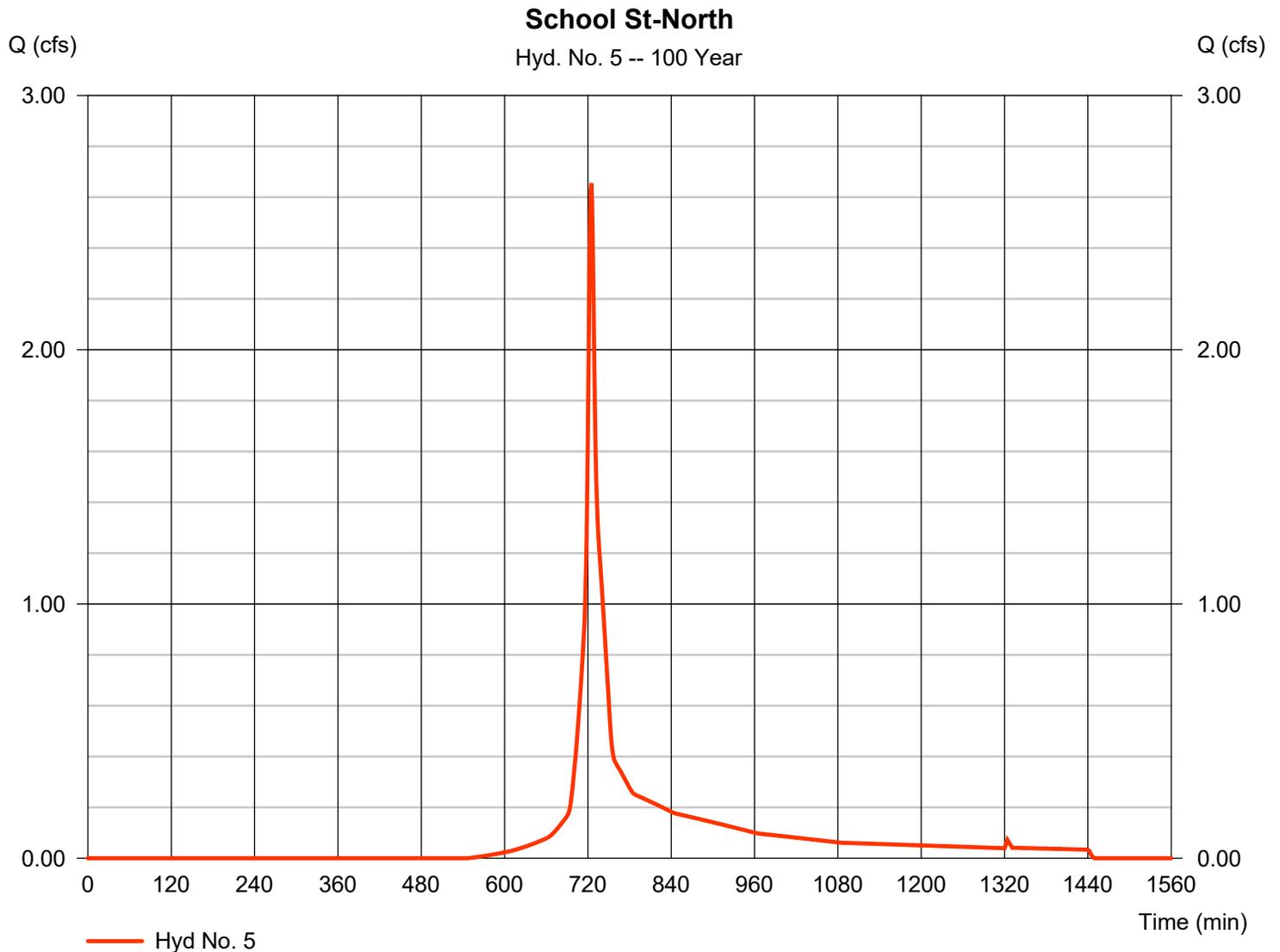


Hydrograph Report

Hyd. No. 5

School St-North

Hydrograph type	= SCS Runoff	Peak discharge	= 2.655 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 8,219 cuft
Drainage area	= 0.705 ac	Curve number	= 66.6
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

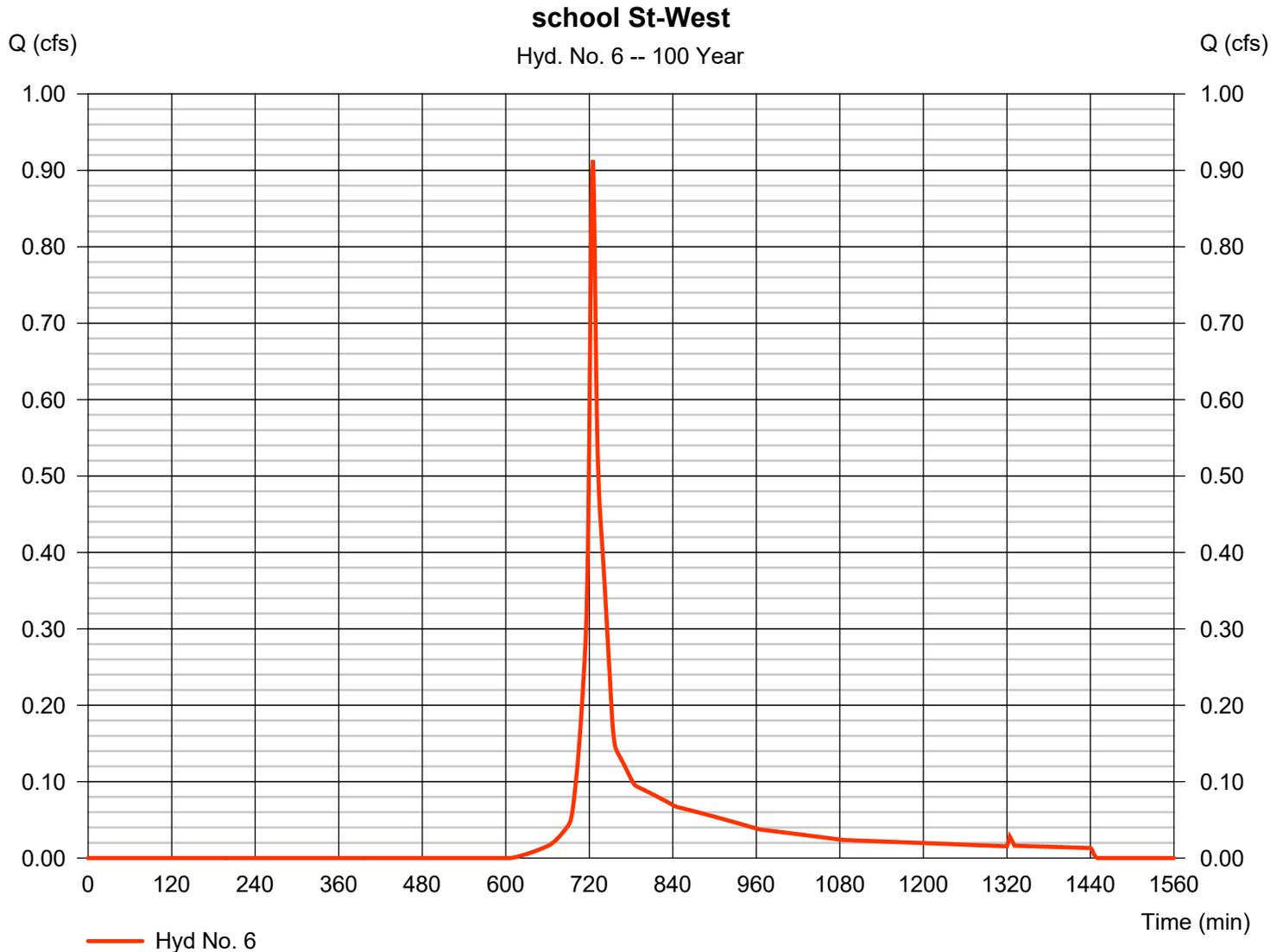


Hydrograph Report

Hyd. No. 6

school St-West

Hydrograph type	= SCS Runoff	Peak discharge	= 0.913 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 2,891 cuft
Drainage area	= 0.307 ac	Curve number	= 60.5
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

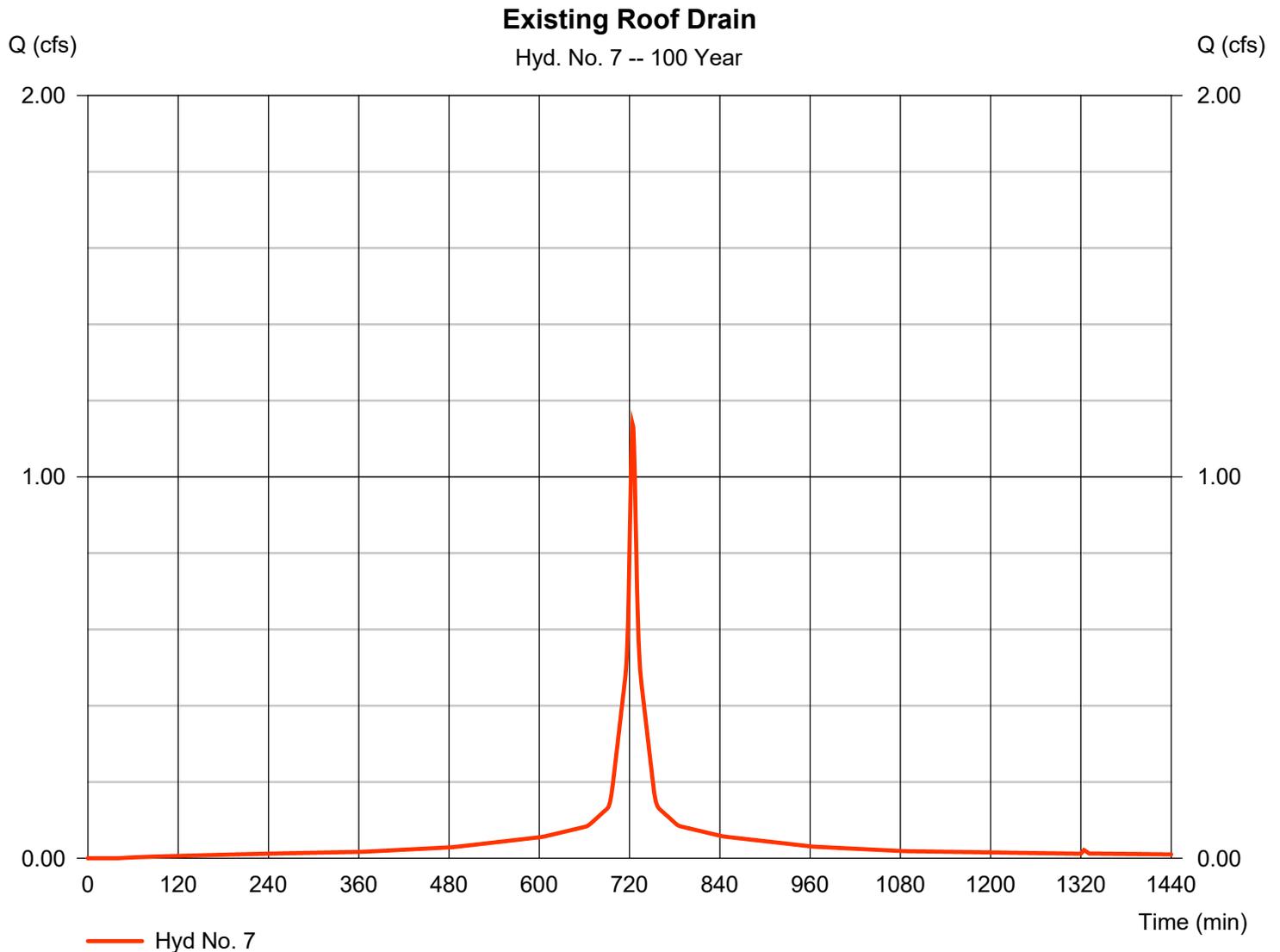


Hydrograph Report

Hyd. No. 7

Existing Roof Drain

Hydrograph type	= SCS Runoff	Peak discharge	= 1.138 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 4,051 cuft
Drainage area	= 0.165 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



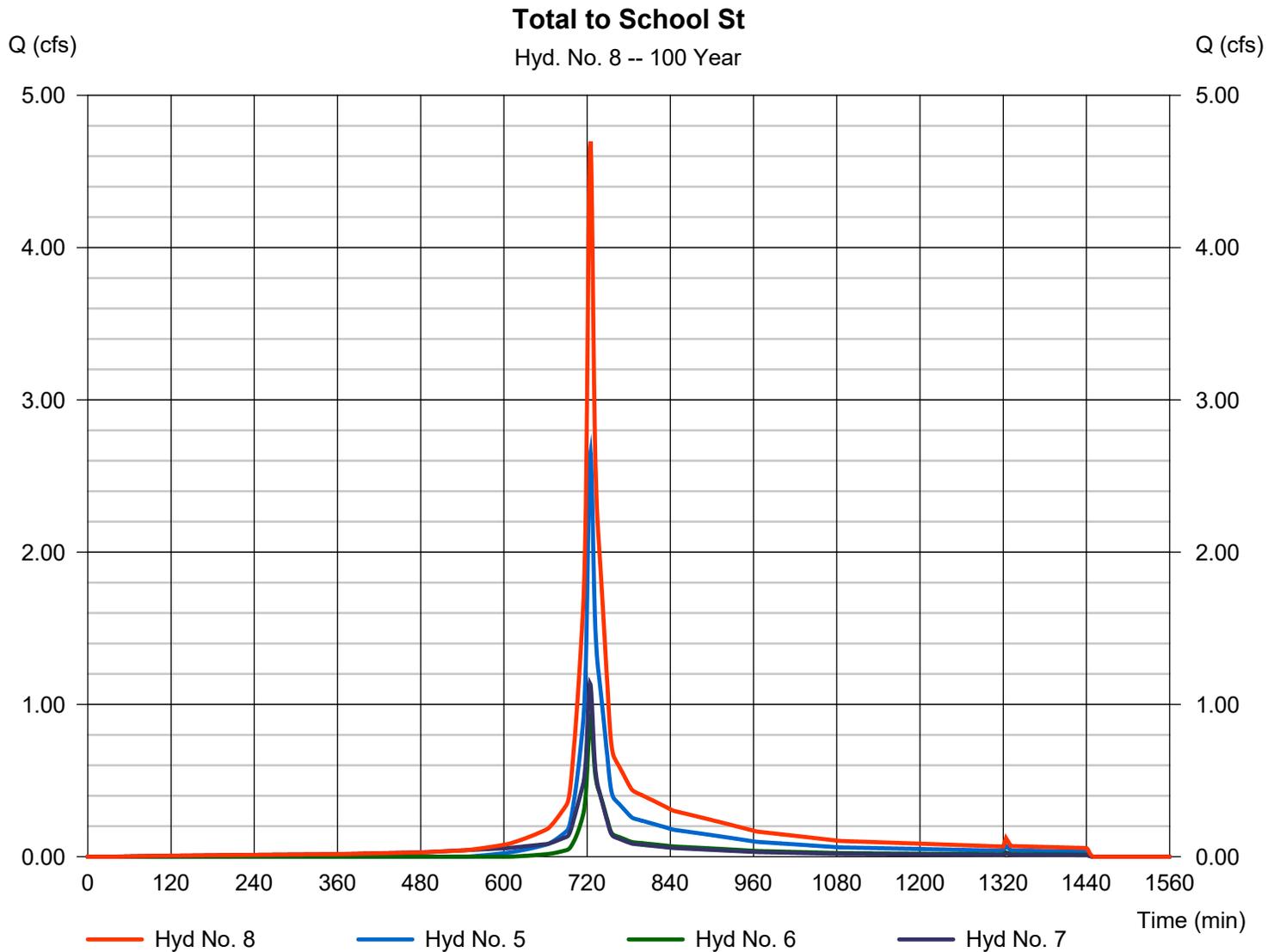
Hydrograph Report

Hyd. No. 8

Total to School St

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 5, 6, 7

Peak discharge = 4.697 cfs
Time to peak = 725 min
Hyd. volume = 15,161 cuft
Contrib. drain. area = 1.176 ac



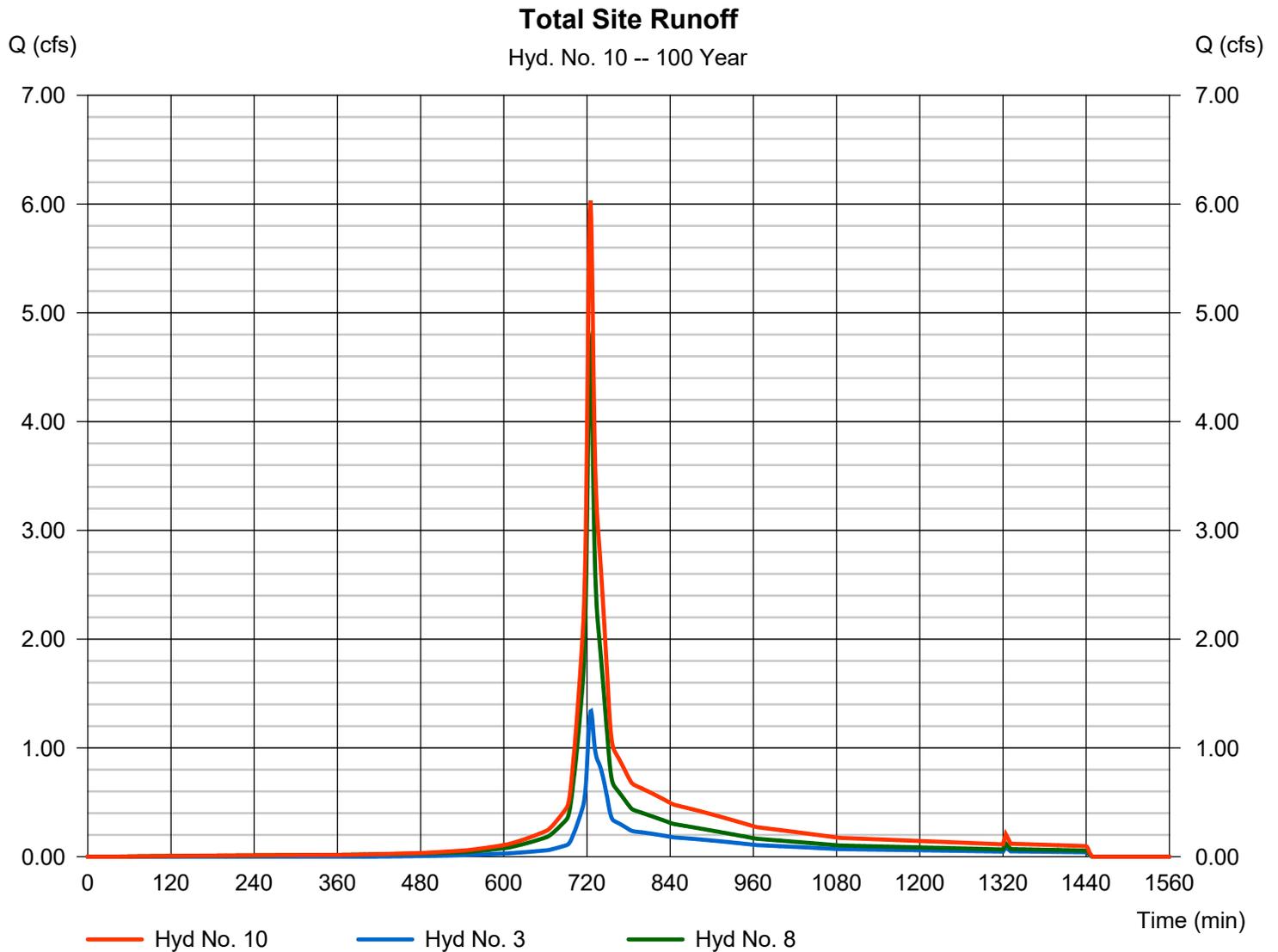
Hydrograph Report

Hyd. No. 10

Total Site Runoff

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 3, 8

Peak discharge = 6.033 cfs
Time to peak = 725 min
Hyd. volume = 22,061 cuft
Contrib. drain. area = 0.000 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	17.9350	3.8000	0.7184	-----
2	20.9621	3.6000	0.7033	-----
3	0.0000	0.0000	0.0000	-----
5	27.3416	3.6000	0.7007	-----
10	33.6678	3.8000	0.7074	-----
25	41.5263	3.9000	0.7078	-----
50	45.1624	3.6000	0.6969	-----
100	50.7632	3.6000	0.6952	-----

File name: norwood idf.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	3.76	2.72	2.18	1.84	1.60	1.43	1.30	1.19	1.10	1.02	0.96	0.91
2	4.62	3.34	2.68	2.27	1.98	1.77	1.61	1.47	1.37	1.27	1.20	1.13
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.05	4.39	3.53	2.98	2.61	2.33	2.11	1.94	1.80	1.68	1.58	1.49
10	7.23	5.26	4.23	3.58	3.12	2.79	2.53	2.32	2.15	2.01	1.89	1.78
25	8.84	6.45	5.19	4.39	3.84	3.43	3.11	2.86	2.65	2.47	2.32	2.19
50	10.08	7.33	5.89	4.99	4.36	3.90	3.54	3.25	3.02	2.82	2.65	2.50
100	11.37	8.27	6.65	5.64	4.93	4.41	4.00	3.68	3.41	3.19	3.00	2.83

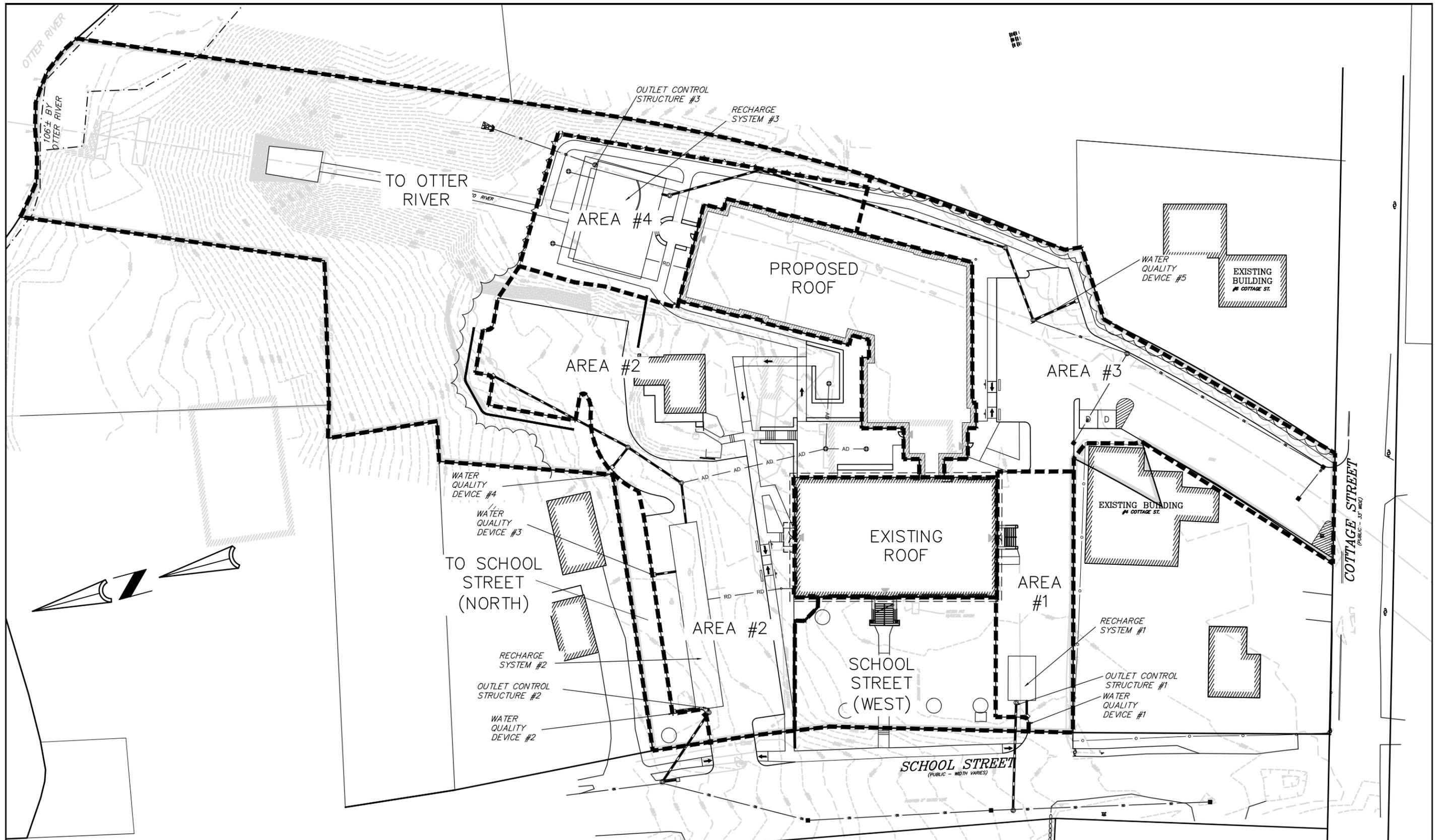
Tc = time in minutes. Values may exceed 60.

Precip. file name: Sample.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.39	2.90	0.00	3.72	4.41	5.35	6.05	6.81
SCS 6-Hr	0.00	1.80	0.00	0.00	2.60	0.00	0.00	4.00
Huff-1st	0.00	1.55	0.00	2.75	4.00	5.38	6.50	8.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	1.75	0.00	2.80	3.90	5.25	6.00	7.10

KELLY ENGINEERING GROUP, INC.
Zero Campanelli Drive-Braintree-MA 02184 Phone 781 843 4333

Attachment B
Proposed Conditions



**BALDWINVILLE SCHOOL
APARTMENTS**
12 & 16 SCHOOL STREET
TEMPLETON, MA

SCALE: 1" = 40'
DATE: 09/29/21
2020-162-PRDR

**PROPOSED
DRAINAGE
EXHIBIT**



KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
Location : 12-16 SCHOOL ST-TEMPLETON, MA
Description: PROPOSED-TO SCHOOL ST-North

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	<u>CN</u>	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	2855	111345
Paved		98	0	0
Roof		98	0	0
Totals =			2855.00	111345
Acres =			0.06554178	

CN or C (weighted) = total product/total area =

39.0

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPOSED-TO SCHOOL ST-West

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	7208	281112
Paved		98	545	53410
Roof		98	0	0
Totals =			7753.00	334522
Acres =			0.17798439	

CN or C (weighted) = total product/total area =

43.1

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPOSED AREA 1

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	0	0
Paved		98	5780	566440
Roof		98	0	0
Totals =			5780.00	566440
Acres =			0.13269054	

CN or C (weighted) = total product/total area =

98.0

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPOSED - ROOF OF SCHOOL

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	0	0
Paved		98	0	0
Roof		98	7175	703150
Totals =			7175.00	703150
Acres =			0.16471534	

CN or C (weighted) = total product/total area =

98.0

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE **By:** DAM **Date:** .09-24-21
Location : 12-16 SCHOOL ST-TEMPLETON, MA
Description: PROPOSED AREA 2

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	9166	357474
Paved		98	17216	1687168
Roof		98	952	93296
Totals =			27334.00	2137938
Acres =			0.6275023	

CN or C (weighted) = total product/total area =

78.2

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPOSED- TO OTTER RIVER

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	36900	1107000
WET	flagged wetlands	95	0	0
Open Space	Hydrologic Group A; Good Condition	39	2322	90558
Paved		98	0	0
Roof		98	0	0
Totals =			39222.00	1197558
Acres =			0.90041322	

CN or C (weighted) = total product/total area =

30.5

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPOSED-NEW BUILDING

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
WET	flagged wetlands	95	0	0
Open Space	Hydrologic Group A; Good Condition	39	0	0
Paved		98	0	0
Roof		98	12177	1193346
Totals =			12177.00	1193346
Acres =			0.27954545	

CN or C (weighted) = total product/total area =

98.0

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPOSED-AREA 3

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	783	23490
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	3692	143988
Paved		98	13309	1304282
Roof		98	0	0
Totals =			17784.00	1471760
Acres =			0.40826446	

CN or C (weighted) = total product/total area =

82.8

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Runoff Curve Number and Runoff

Name: CCMPZ-BALDWINVILLE By: DAM Date: .09-24-21
 Location : 12-16 SCHOOL ST-TEMPLETON, MA
 Description: PROPSOED AREA 4

Circle One: Pre or Post

Runoff Curve Number (CN):

Surface Description	Soil Name; hydrologic group; hydrologic condition	CN	s.f.	Product of CN x Area
Woods	Hydrologic Group A; Good Condition	30	0	0
Gravel	Hydrologic Group A; Good Condition	76	0	0
Open Space	Hydrologic Group A; Good Condition	39	6228	242892
Paved		98	2527	247646
Roof		98	0	0
Totals =			8755.00	490538
Acres =			0.20098714	

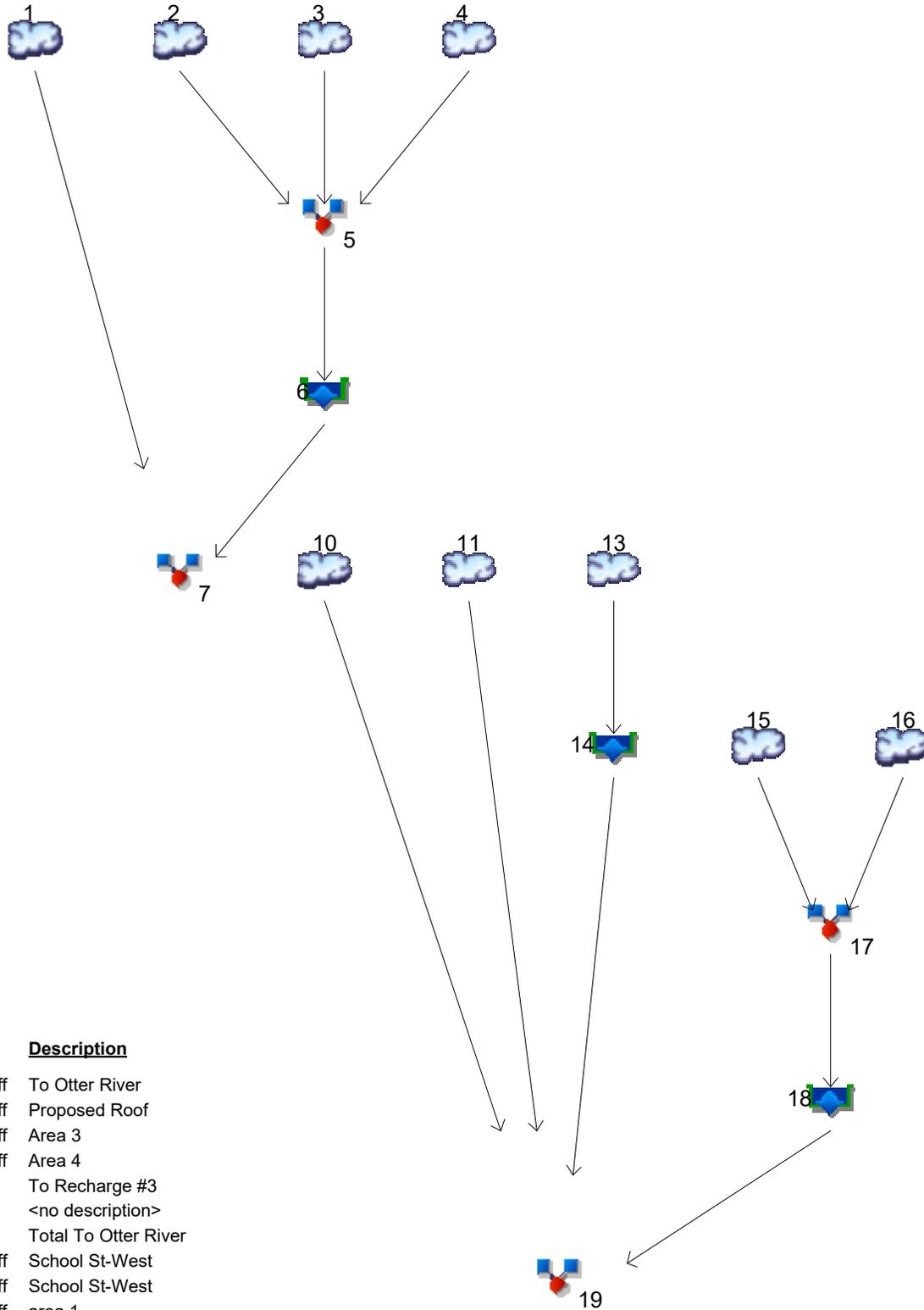
CN or C (weighted) = total product/total area =

56.0

Reference: *Urban Hydrology for Small Watersheds*
Technical Release 55, Soil Conservation Service
U.S. Department of Agriculture, June 1986

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Legend

Hyd.	Origin	Description
1	SCS Runoff	To Otter River
2	SCS Runoff	Proposed Roof
3	SCS Runoff	Area 3
4	SCS Runoff	Area 4
5	Combine	To Recharge #3
6	Reservoir	<no description>
7	Combine	Total To Otter River
10	SCS Runoff	School St-West
11	SCS Runoff	School St-West
13	SCS Runoff	area 1
14	Reservoir	<no description>
15	SCS Runoff	Area 2
16	SCS Runoff	Existing Roof
17	Combine	To Recharge #2
18	Reservoir	<no description>
19	Combine	Total To School Street

Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	0.000	0.000	-----	0.000	0.000	0.005	0.012	0.026	To Otter River
2	SCS Runoff	-----	0.664	0.812	-----	1.048	1.245	1.514	1.714	1.931	Proposed Roof
3	SCS Runoff	-----	0.470	0.669	-----	1.007	1.300	1.707	2.011	2.345	Area 3
4	SCS Runoff	-----	0.002	0.015	-----	0.064	0.137	0.258	0.361	0.482	Area 4
5	Combine	2, 3, 4	1.129	1.475	-----	2.103	2.670	3.467	4.075	4.746	To Recharge #3
6	Reservoir	5	0.000	0.000	-----	0.000	0.000	0.481	0.884	1.322	<no description>
7	Combine	1, 6	0.000	0.000	-----	0.000	0.000	0.481	0.884	1.322	Total To Otter River
10	SCS Runoff	-----	0.000	0.000	-----	0.000	0.001	0.005	0.013	0.025	School St-West
11	SCS Runoff	-----	0.000	0.000	-----	0.002	0.010	0.037	0.079	0.144	School St-West
13	SCS Runoff	-----	0.315	0.385	-----	0.497	0.591	0.719	0.814	0.917	area 1
14	Reservoir	13	0.000	0.000	-----	0.055	0.209	0.533	0.717	0.835	<no description>
15	SCS Runoff	-----	0.520	0.794	-----	1.274	1.703	2.309	2.769	3.273	Area 2
16	SCS Runoff	-----	0.391	0.478	-----	0.617	0.734	0.892	1.010	1.138	Existing Roof
17	Combine	15, 16	0.909	1.268	-----	1.887	2.431	3.194	3.771	4.405	To Recharge #2
18	Reservoir	17	0.000	0.000	-----	0.374	0.884	1.768	2.366	2.975	<no description>
19	Combine	10, 11, 14, 18	0.000	0.000	-----	0.422	1.091	2.263	3.037	3.863	Total To School Street

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	To Otter River	
2	SCS Runoff	0.664	1	724	2,261	-----	-----	-----	Proposed Roof	
3	SCS Runoff	0.470	1	725	1,471	-----	-----	-----	Area 3	
4	SCS Runoff	0.002	1	822	58	-----	-----	-----	Area 4	
5	Combine	1.129	1	725	3,790	2, 3, 4	-----	-----	To Recharge #3	
6	Reservoir	0.000	1	n/a	0	5	100.25	870	<no description>	
7	Combine	0.000	1	n/a	0	1, 6	-----	-----	Total To Otter River	
10	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	School St-West	
11	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	School St-West	
13	SCS Runoff	0.315	1	724	1,074	-----	-----	-----	area 1	
14	Reservoir	0.000	1	679	0	13	894.51	332	<no description>	
15	SCS Runoff	0.520	1	725	1,707	-----	-----	-----	Area 2	
16	SCS Runoff	0.391	1	724	1,333	-----	-----	-----	Existing Roof	
17	Combine	0.909	1	725	3,040	15, 16	-----	-----	To Recharge #2	
18	Reservoir	0.000	1	698	0	17	882.46	795	<no description>	
19	Combine	0.000	1	698	0	10, 11, 14, 18	-----	-----	Total To School Street	
proposed.gpw					Return Period: 1 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	To Otter River	
2	SCS Runoff	0.812	1	724	2,792	-----	-----	-----	Proposed Roof	
3	SCS Runoff	0.669	1	725	2,068	-----	-----	-----	Area 3	
4	SCS Runoff	0.015	1	741	145	-----	-----	-----	Area 4	
5	Combine	1.475	1	725	5,005	2, 3, 4	-----	-----	To Recharge #3	
6	Reservoir	0.000	1	n/a	0	5	100.49	1,328	<no description>	
7	Combine	0.000	1	n/a	0	1, 6	-----	-----	Total To Otter River	
10	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	School St-West	
11	SCS Runoff	0.000	1	1324	3	-----	-----	-----	School St-West	
13	SCS Runoff	0.385	1	724	1,326	-----	-----	-----	area 1	
14	Reservoir	0.000	1	666	0	13	894.91	434	<no description>	
15	SCS Runoff	0.794	1	725	2,512	-----	-----	-----	Area 2	
16	SCS Runoff	0.478	1	724	1,645	-----	-----	-----	Existing Roof	
17	Combine	1.268	1	725	4,158	15, 16	-----	-----	To Recharge #2	
18	Reservoir	0.000	1	678	0	17	882.86	1,266	<no description>	
19	Combine	0.000	1	1324	3	10, 11, 14, 18	-----	-----	Total To School Street	
proposed.gpw					Return Period: 2 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	To Otter River	
2	SCS Runoff	1.048	1	724	3,647	-----	-----	-----	Proposed Roof	
3	SCS Runoff	1.007	1	725	3,101	-----	-----	-----	Area 3	
4	SCS Runoff	0.064	1	727	347	-----	-----	-----	Area 4	
5	Combine	2.103	1	725	7,096	2, 3, 4	-----	-----	To Recharge #3	
6	Reservoir	0.000	1	n/a	0	5	100.93	2,162	<no description>	
7	Combine	0.000	1	n/a	0	1, 6	-----	-----	Total To Otter River	
10	SCS Runoff	0.000	1	1324	5	-----	-----	-----	School St-West	
11	SCS Runoff	0.002	1	889	54	-----	-----	-----	School St-West	
13	SCS Runoff	0.497	1	724	1,732	-----	-----	-----	area 1	
14	Reservoir	0.055	1	747	38	13	895.62	581	<no description>	
15	SCS Runoff	1.274	1	725	3,948	-----	-----	-----	Area 2	
16	SCS Runoff	0.617	1	724	2,149	-----	-----	-----	Existing Roof	
17	Combine	1.887	1	725	6,097	15, 16	-----	-----	To Recharge #2	
18	Reservoir	0.374	1	744	611	17	883.32	1,788	<no description>	
19	Combine	0.422	1	746	709	10, 11, 14, 18	-----	-----	Total To School Street	
proposed.gpw					Return Period: 5 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.000	1	n/a	0	-----	-----	-----	To Otter River
2	SCS Runoff	1.245	1	724	4,367	-----	-----	-----	Proposed Roof
3	SCS Runoff	1.300	1	725	4,017	-----	-----	-----	Area 3
4	SCS Runoff	0.137	1	726	567	-----	-----	-----	Area 4
5	Combine	2.670	1	725	8,951	2, 3, 4	-----	-----	To Recharge #3
6	Reservoir	0.000	1	n/a	0	5	101.36	2,940	<no description>
7	Combine	0.000	1	n/a	0	1, 6	-----	-----	Total To Otter River
10	SCS Runoff	0.001	1	889	24	-----	-----	-----	School St-West
11	SCS Runoff	0.010	1	745	139	-----	-----	-----	School St-West
13	SCS Runoff	0.591	1	724	2,074	-----	-----	-----	area 1
14	Reservoir	0.209	1	733	200	13	895.75	597	<no description>
15	SCS Runoff	1.703	1	725	5,250	-----	-----	-----	Area 2
16	SCS Runoff	0.734	1	724	2,574	-----	-----	-----	Existing Roof
17	Combine	2.431	1	725	7,824	15, 16	-----	-----	To Recharge #2
18	Reservoir	0.884	1	735	1,525	17	883.52	1,998	<no description>
19	Combine	1.091	1	734	1,889	10, 11, 14, 18	-----	-----	Total To School Street
proposed.gpw					Return Period: 10 Year			Thursday, 09 / 30 / 2021	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.005	1	1324	90	-----	-----	-----	To Otter River	
2	SCS Runoff	1.514	1	724	5,349	-----	-----	-----	Proposed Roof	
3	SCS Runoff	1.707	1	725	5,308	-----	-----	-----	Area 3	
4	SCS Runoff	0.258	1	726	923	-----	-----	-----	Area 4	
5	Combine	3.467	1	725	11,580	2, 3, 4	-----	-----	To Recharge #3	
6	Reservoir	0.481	1	747	774	5	101.85	3,706	<no description>	
7	Combine	0.481	1	747	864	1, 6	-----	-----	Total To Otter River	
10	SCS Runoff	0.005	1	744	68	-----	-----	-----	School St-West	
11	SCS Runoff	0.037	1	738	307	-----	-----	-----	School St-West	
13	SCS Runoff	0.719	1	724	2,540	-----	-----	-----	area 1	
14	Reservoir	0.533	1	728	443	13	895.94	618	<no description>	
15	SCS Runoff	2.309	1	725	7,117	-----	-----	-----	Area 2	
16	SCS Runoff	0.892	1	724	3,152	-----	-----	-----	Existing Roof	
17	Combine	3.194	1	725	10,270	15, 16	-----	-----	To Recharge #2	
18	Reservoir	1.768	1	730	2,953	17	883.87	2,326	<no description>	
19	Combine	2.263	1	729	3,770	10, 11, 14, 18	-----	-----	Total To School Street	
proposed.gpw					Return Period: 25 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.012	1	1324	309	----	----	----	To Otter River	
2	SCS Runoff	1.714	1	724	6,081	----	----	----	Proposed Roof	
3	SCS Runoff	2.011	1	724	6,292	----	----	----	Area 3	
4	SCS Runoff	0.361	1	725	1,223	----	----	----	Area 4	
5	Combine	4.075	1	724	13,597	2, 3, 4	----	----	To Recharge #3	
6	Reservoir	0.884	1	743	1,768	5	102.15	4,065	<no description>	
7	Combine	0.884	1	743	2,077	1, 6	----	----	Total To Otter River	
10	SCS Runoff	0.013	1	739	113	----	----	----	School St-West	
11	SCS Runoff	0.079	1	728	466	----	----	----	School St-West	
13	SCS Runoff	0.814	1	724	2,887	----	----	----	area 1	
14	Reservoir	0.717	1	726	634	13	896.02	628	<no description>	
15	SCS Runoff	2.769	1	725	8,558	----	----	----	Area 2	
16	SCS Runoff	1.010	1	724	3,583	----	----	----	Existing Roof	
17	Combine	3.771	1	725	12,141	15, 16	----	----	To Recharge #2	
18	Reservoir	2.366	1	729	4,131	17	884.23	2,581	<no description>	
19	Combine	3.037	1	728	5,344	10, 11, 14, 18	----	----	Total To School Street	
proposed.gpw					Return Period: 50 Year			Thursday, 09 / 30 / 2021		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

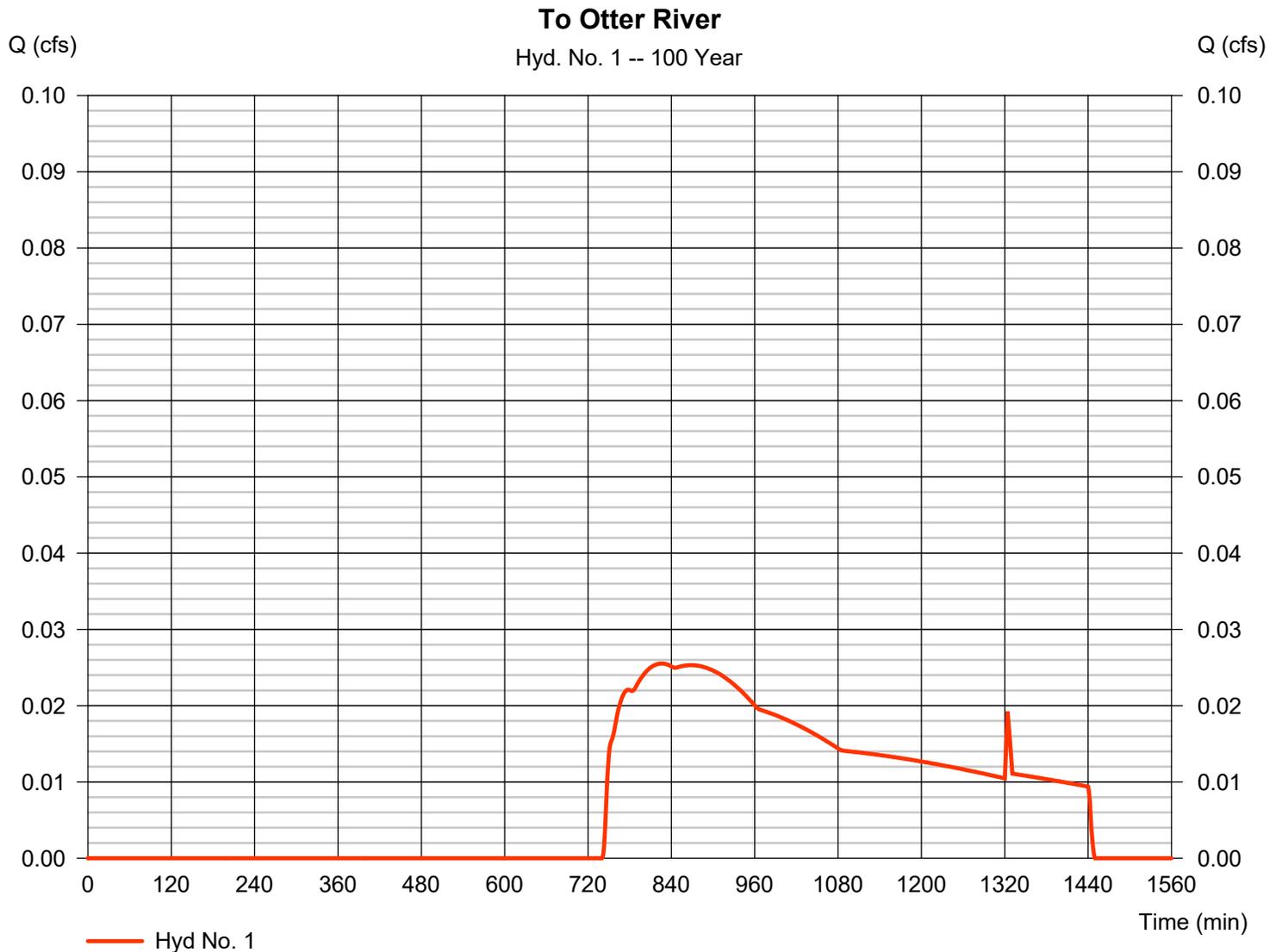
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.026	1	826	683	-----	-----	-----	To Otter River	
2	SCS Runoff	1.931	1	724	6,875	-----	-----	-----	Proposed Roof	
3	SCS Runoff	2.345	1	724	7,377	-----	-----	-----	Area 3	
4	SCS Runoff	0.482	1	725	1,577	-----	-----	-----	Area 4	
5	Combine	4.746	1	724	15,829	2, 3, 4	-----	-----	To Recharge #3	
6	Reservoir	1.322	1	739	2,930	5	102.66	4,481	<no description>	
7	Combine	1.322	1	739	3,613	1, 6	-----	-----	Total To Otter River	
10	SCS Runoff	0.025	1	729	172	-----	-----	-----	School St-West	
11	SCS Runoff	0.144	1	727	667	-----	-----	-----	School St-West	
13	SCS Runoff	0.917	1	724	3,264	-----	-----	-----	area 1	
14	Reservoir	0.835	1	725	853	13	896.08	634	<no description>	
15	SCS Runoff	3.273	1	725	10,158	-----	-----	-----	Area 2	
16	SCS Runoff	1.138	1	724	4,051	-----	-----	-----	Existing Roof	
17	Combine	4.405	1	724	14,209	15, 16	-----	-----	To Recharge #2	
18	Reservoir	2.975	1	728	5,499	17	884.88	2,819	<no description>	
19	Combine	3.863	1	728	7,190	10, 11, 14, 18	-----	-----	Total To School Street	
proposed.gpw					Return Period: 100 Year			Thursday, 09 / 30 / 2021		

Hydrograph Report

Hyd. No. 1

To Otter River

Hydrograph type	= SCS Runoff	Peak discharge	= 0.026 cfs
Storm frequency	= 100 yrs	Time to peak	= 826 min
Time interval	= 1 min	Hyd. volume	= 683 cuft
Drainage area	= 0.900 ac	Curve number	= 30.5
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

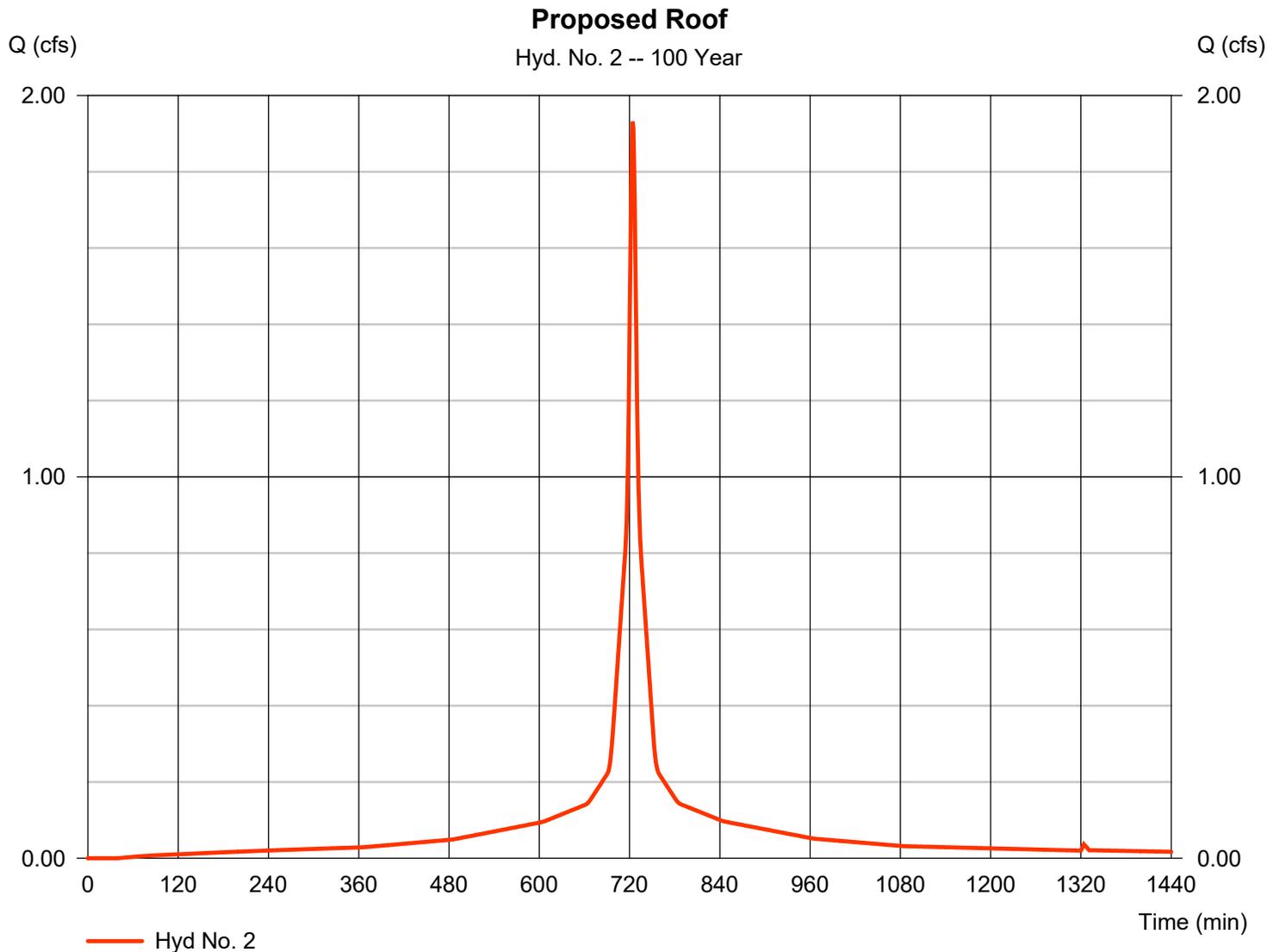


Hydrograph Report

Hyd. No. 2

Proposed Roof

Hydrograph type	= SCS Runoff	Peak discharge	= 1.931 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 6,875 cuft
Drainage area	= 0.280 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

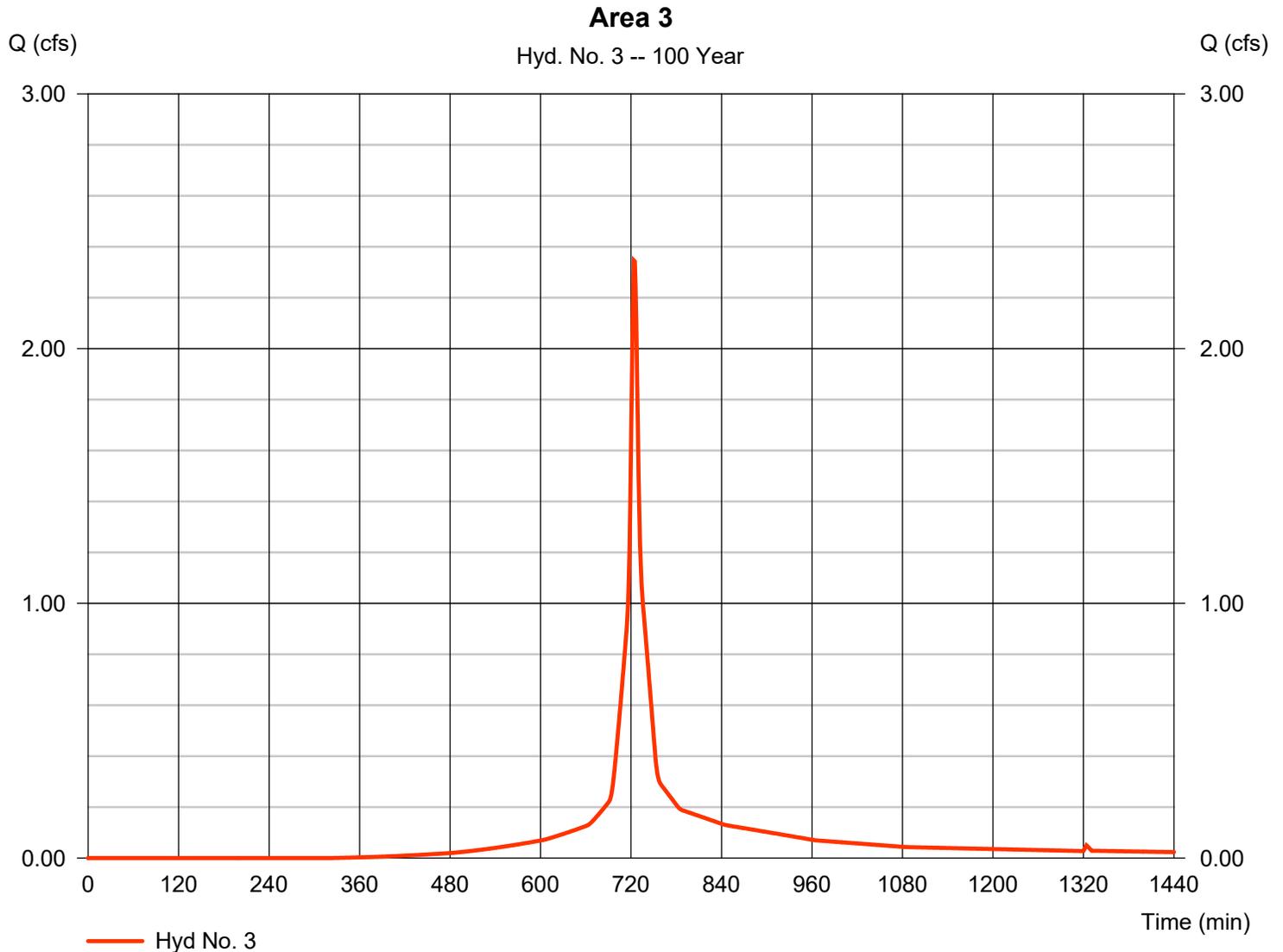


Hydrograph Report

Hyd. No. 3

Area 3

Hydrograph type	= SCS Runoff	Peak discharge	= 2.345 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 7,377 cuft
Drainage area	= 0.408 ac	Curve number	= 82.8
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

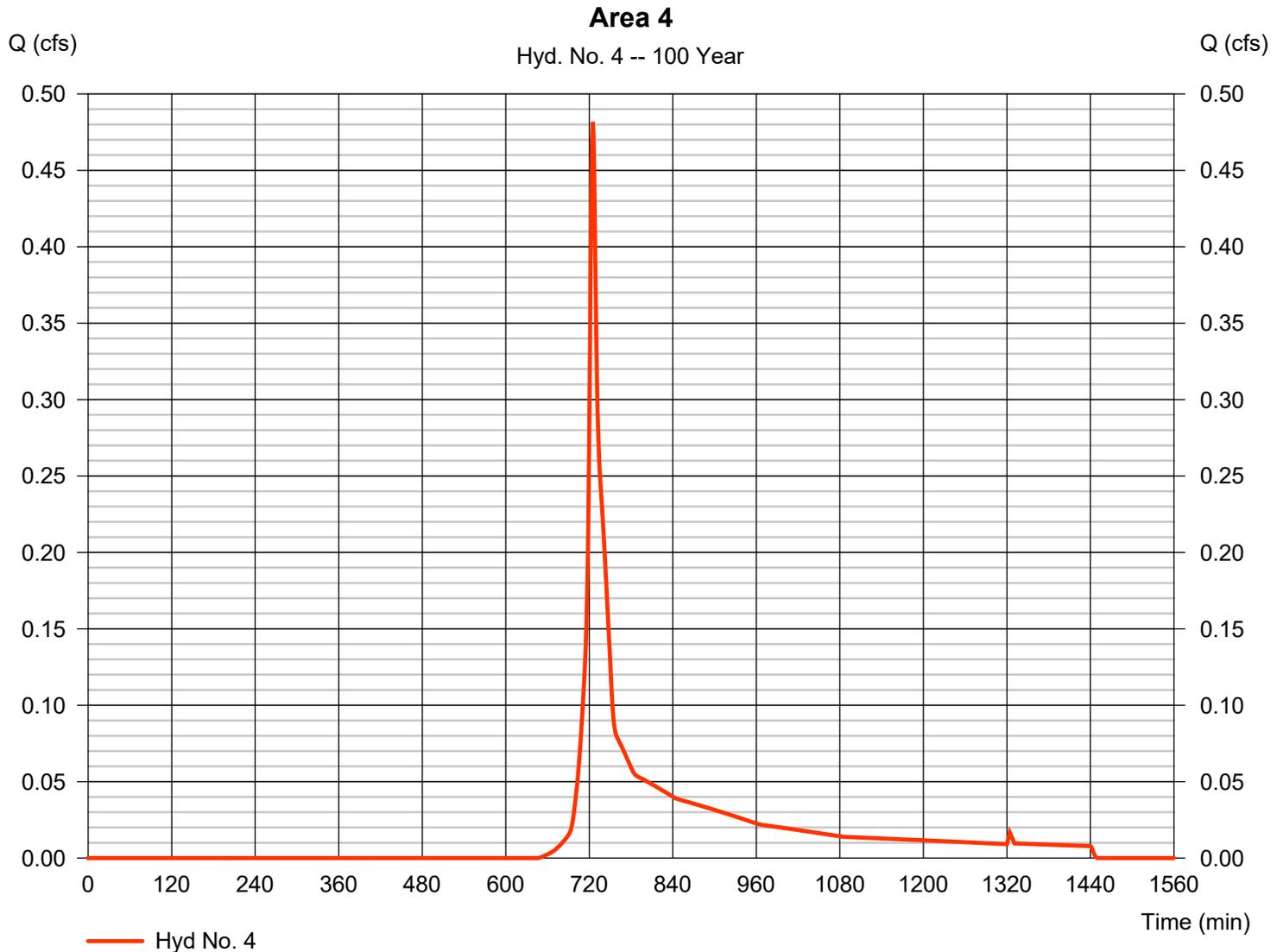


Hydrograph Report

Hyd. No. 4

Area 4

Hydrograph type	= SCS Runoff	Peak discharge	= 0.482 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 1,577 cuft
Drainage area	= 0.201 ac	Curve number	= 56
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



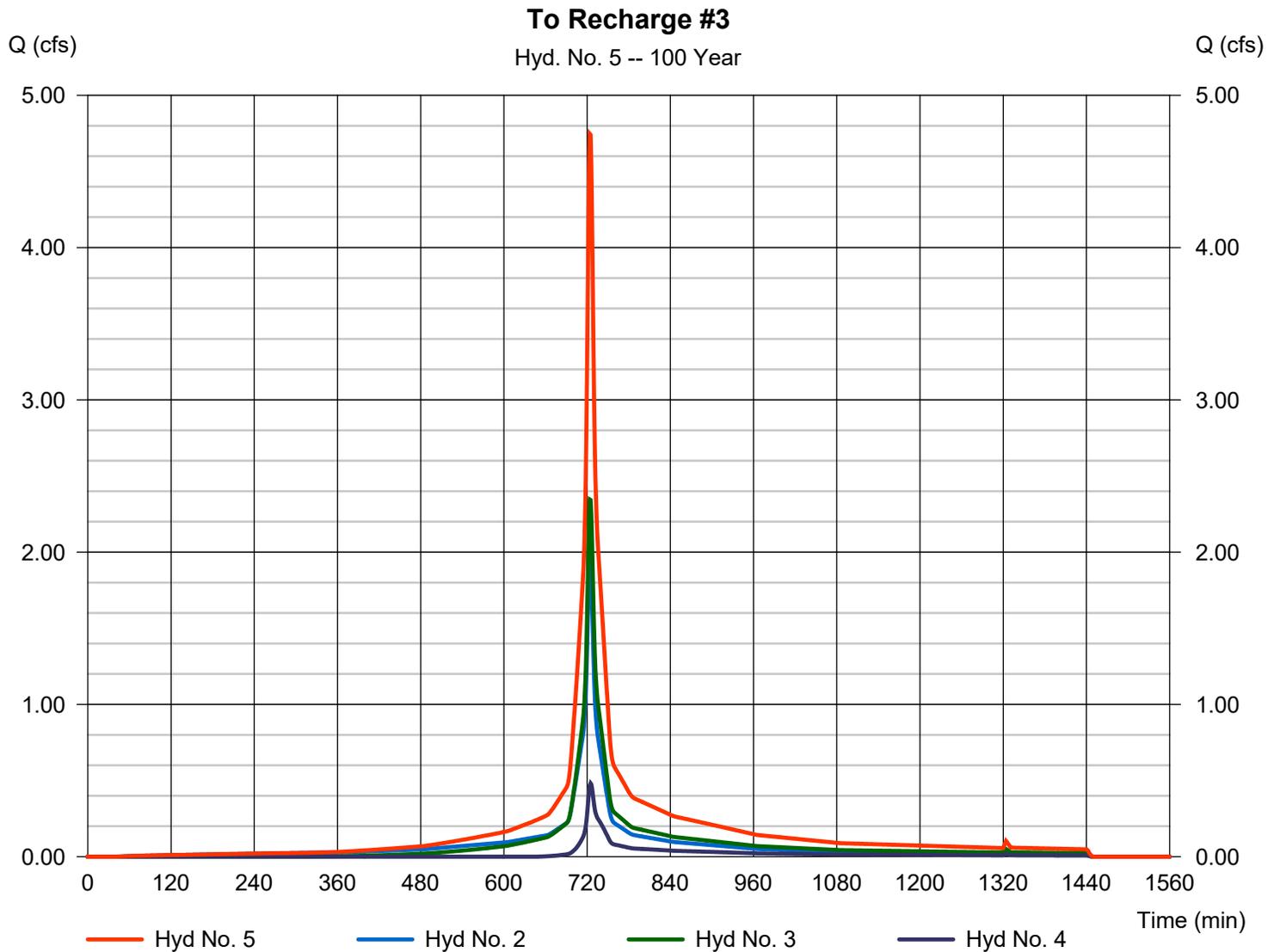
Hydrograph Report

Hyd. No. 5

To Recharge #3

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 2, 3, 4

Peak discharge = 4.746 cfs
Time to peak = 724 min
Hyd. volume = 15,829 cuft
Contrib. drain. area = 0.889 ac



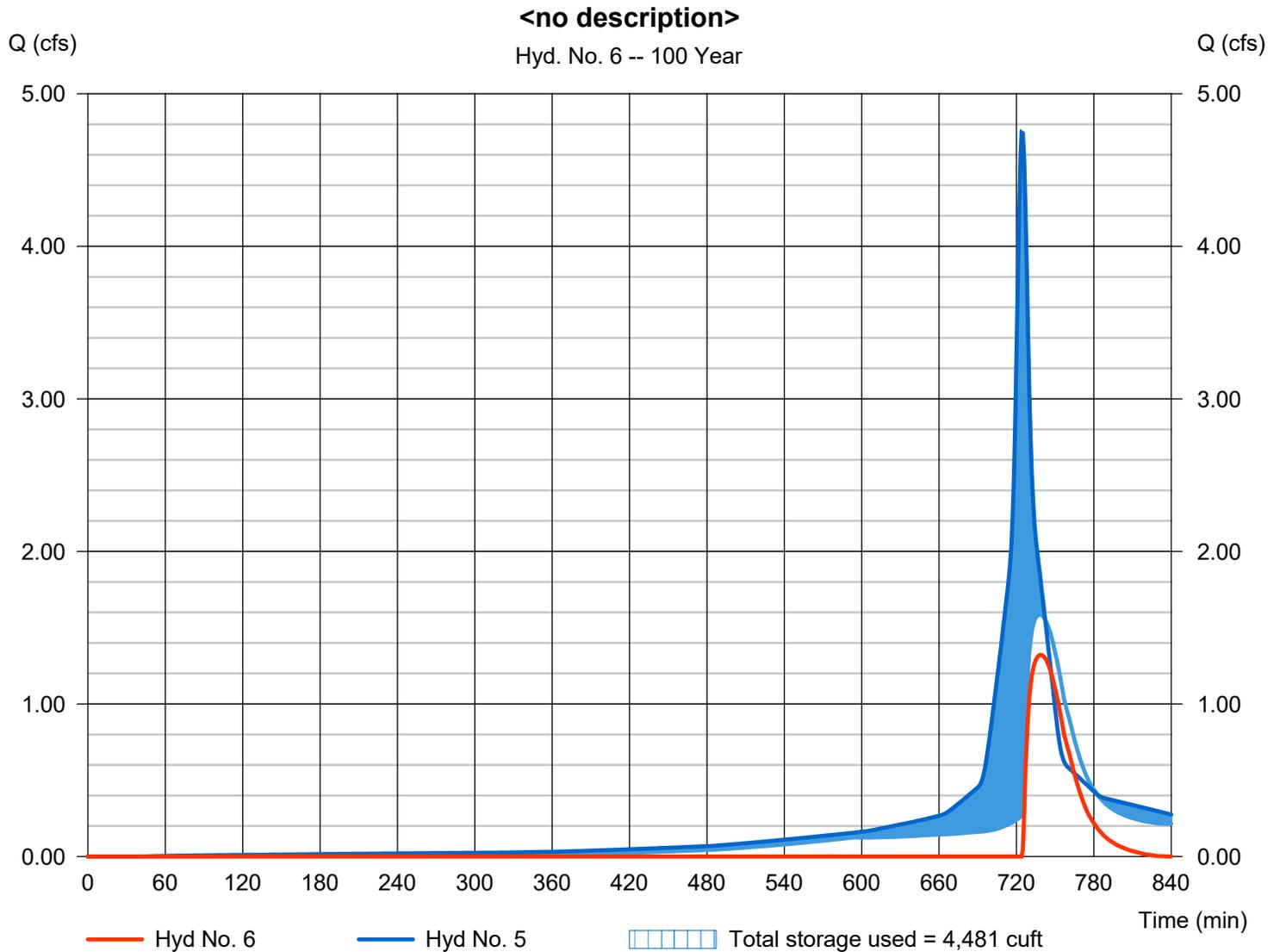
Hydrograph Report

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 1.322 cfs
Storm frequency	= 100 yrs	Time to peak	= 739 min
Time interval	= 1 min	Hyd. volume	= 2,930 cuft
Inflow hyd. No.	= 5 - To Recharge #3	Max. Elevation	= 102.66 ft
Reservoir name	= Subsurface #3	Max. Storage	= 4,481 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

Pond No. 1 - Subsurface #3

Pond Data

UG Chambers -Invert elev. = 100.00 ft, Rise x Span = 2.21 x 3.92 ft, Barrel Len = 37.00 ft, No. Barrels = 13, Slope = 0.00%, Headers = No
Encasement -Invert elev. = 99.50 ft, Width = 4.42 ft, Height = 3.21 ft, Voids = 35.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	99.50	n/a	0	0
0.32	99.82	n/a	239	239
0.64	100.14	n/a	413	652
0.96	100.46	n/a	628	1,280
1.28	100.78	n/a	616	1,896
1.60	101.10	n/a	594	2,490
1.93	101.43	n/a	561	3,051
2.25	101.75	n/a	512	3,563
2.57	102.07	n/a	435	3,998
2.89	102.39	n/a	280	4,278
3.21	102.71	n/a	239	4,517

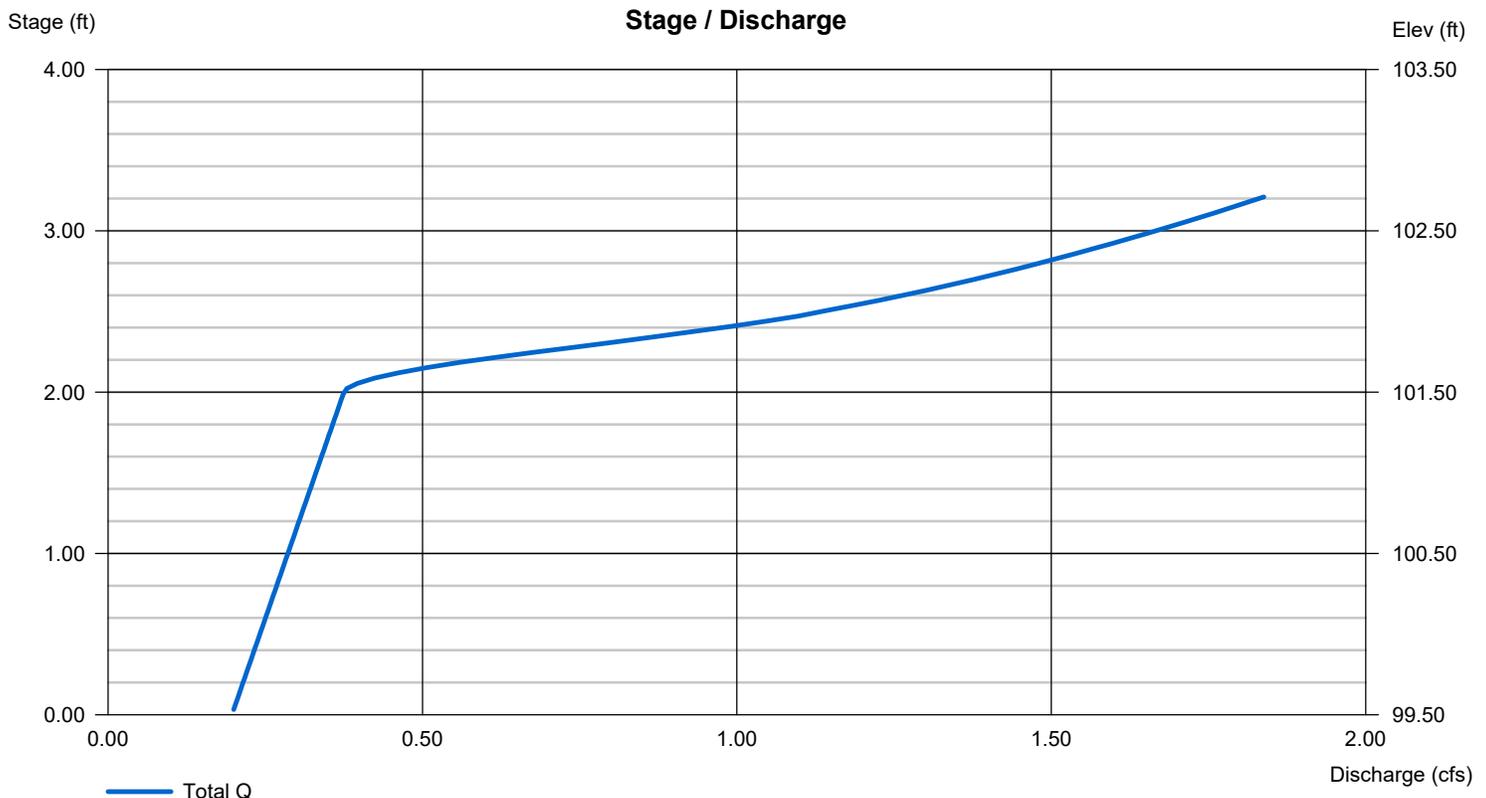
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	6.00	0.00	0.00
Span (in)	= 4.00	6.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 101.50	101.50	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 4.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



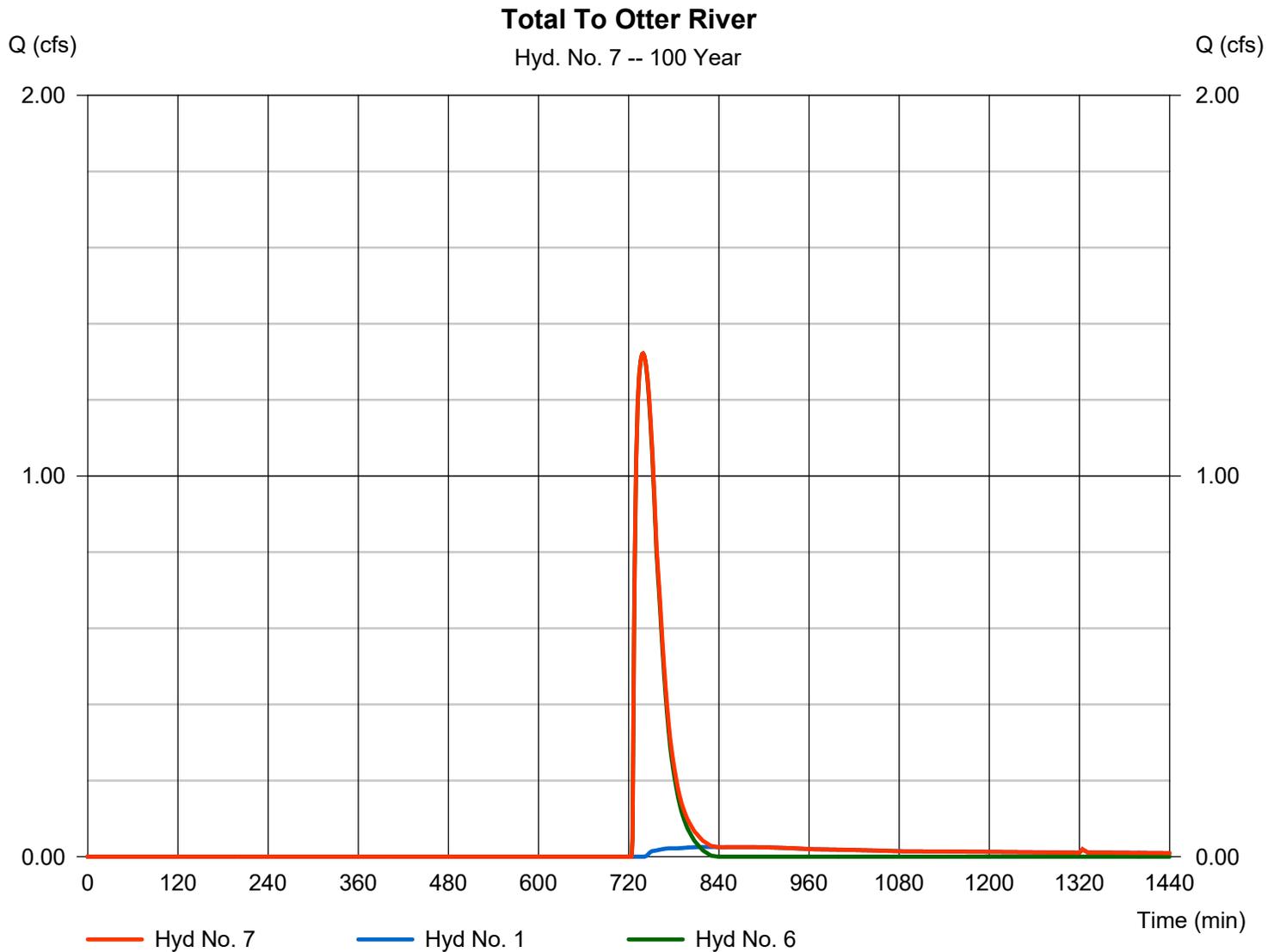
Hydrograph Report

Hyd. No. 7

Total To Otter River

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 1, 6

Peak discharge = 1.322 cfs
Time to peak = 739 min
Hyd. volume = 3,613 cuft
Contrib. drain. area = 0.900 ac

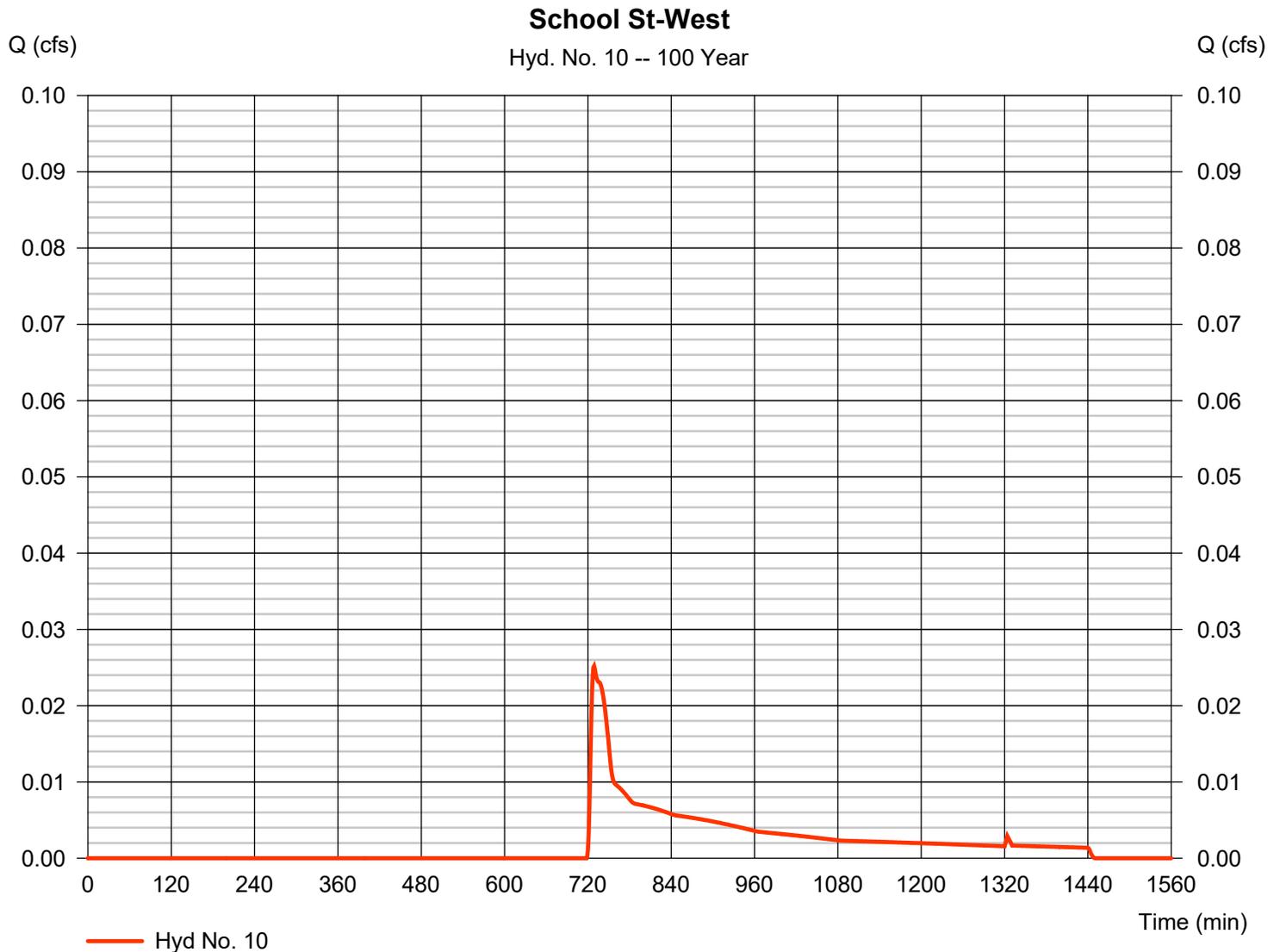


Hydrograph Report

Hyd. No. 10

School St-West

Hydrograph type	= SCS Runoff	Peak discharge	= 0.025 cfs
Storm frequency	= 100 yrs	Time to peak	= 729 min
Time interval	= 1 min	Hyd. volume	= 172 cuft
Drainage area	= 0.066 ac	Curve number	= 39
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

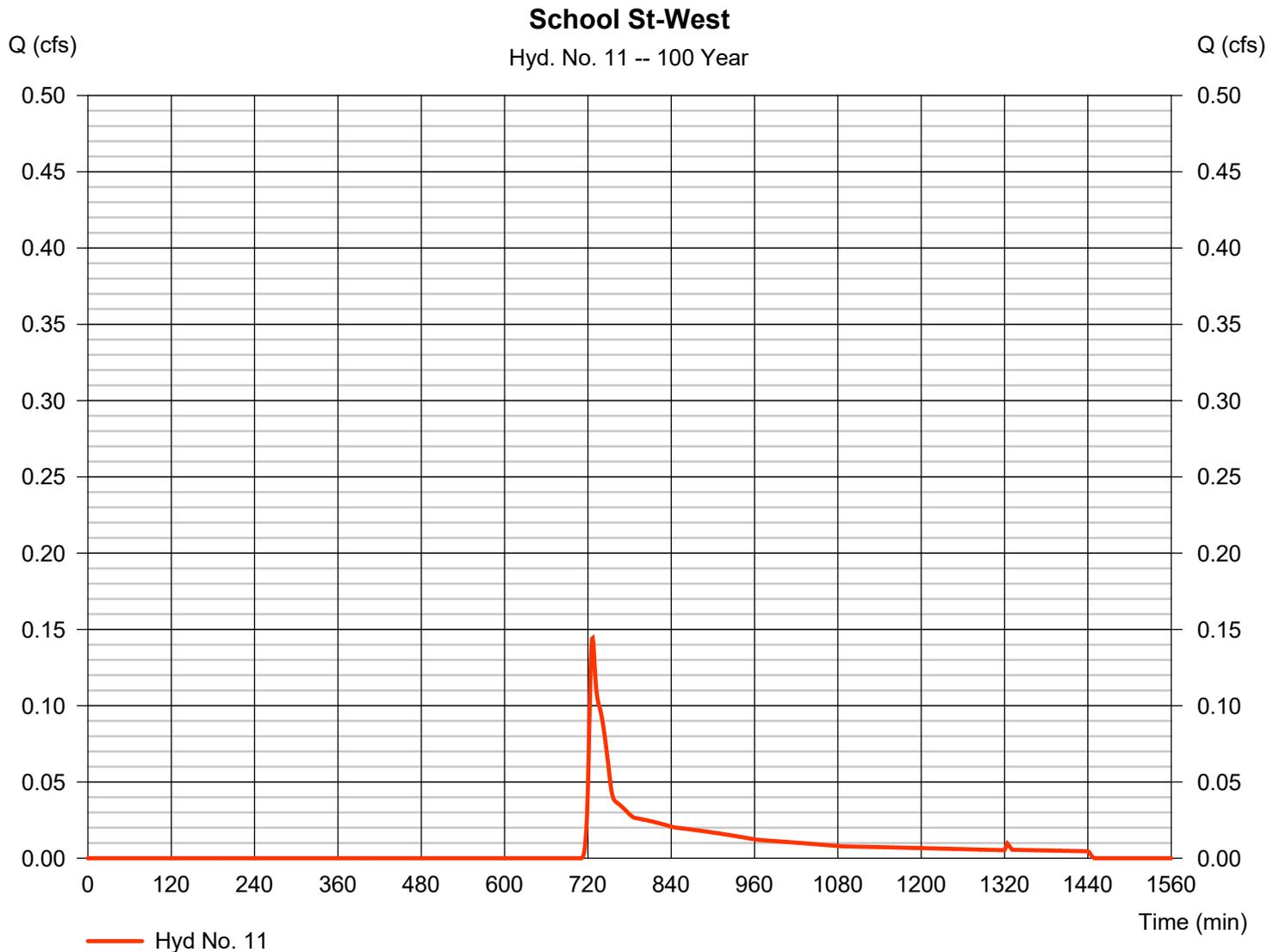


Hydrograph Report

Hyd. No. 11

School St-West

Hydrograph type	= SCS Runoff	Peak discharge	= 0.144 cfs
Storm frequency	= 100 yrs	Time to peak	= 727 min
Time interval	= 1 min	Hyd. volume	= 667 cuft
Drainage area	= 0.178 ac	Curve number	= 43.1
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

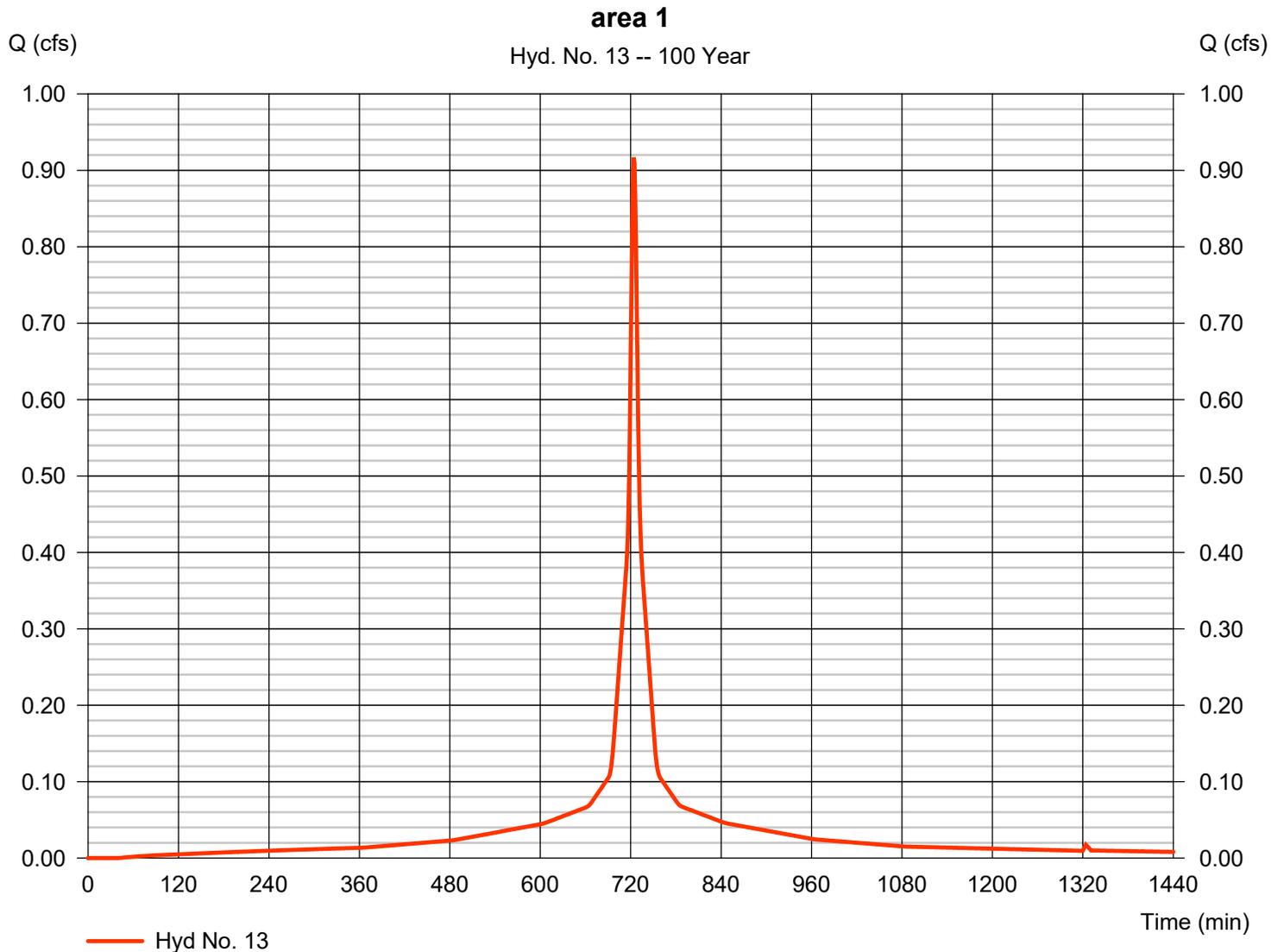


Hydrograph Report

Hyd. No. 13

area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 0.917 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 3,264 cuft
Drainage area	= 0.133 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



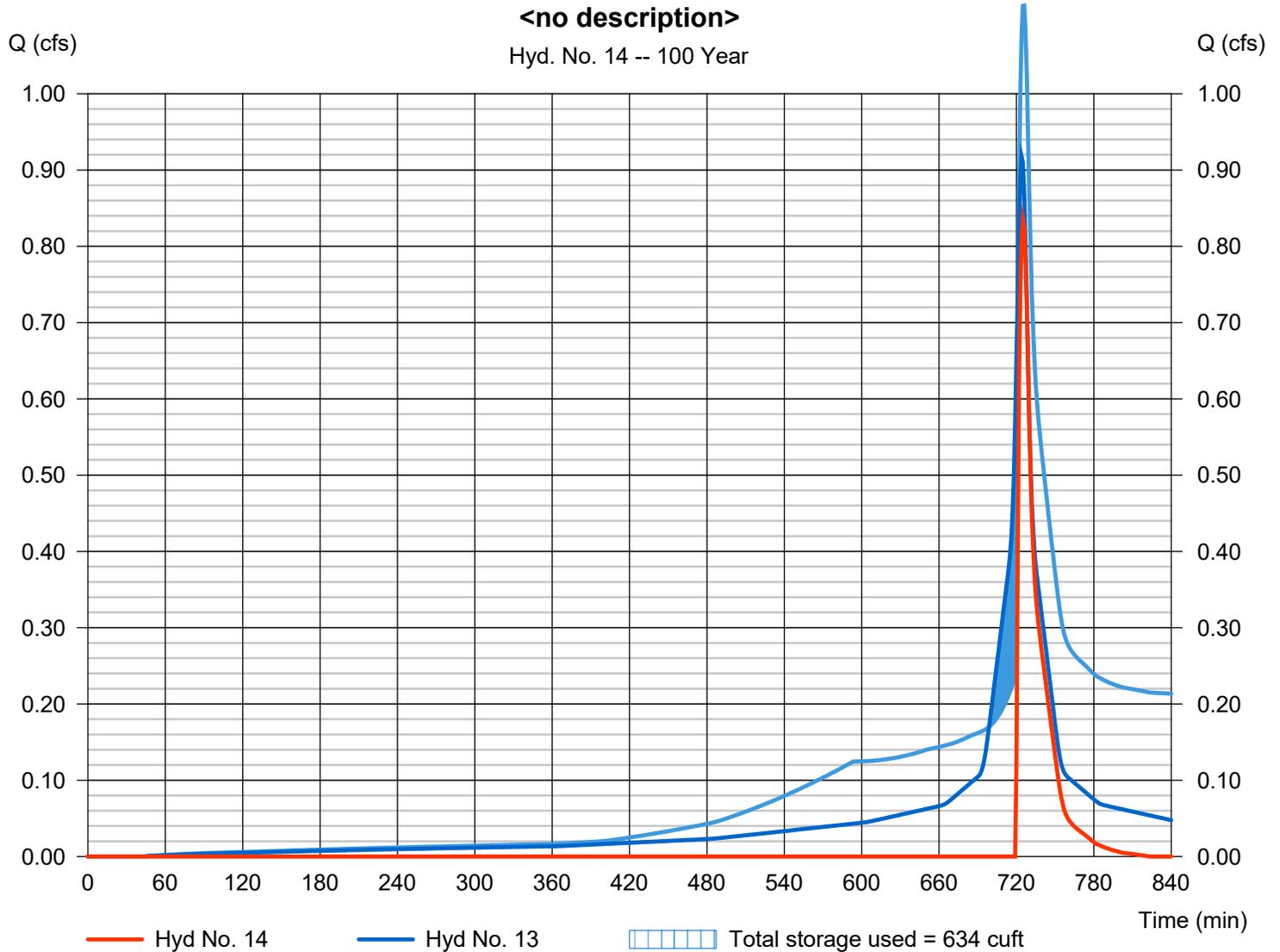
Hydrograph Report

Hyd. No. 14

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.835 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 853 cuft
Inflow hyd. No.	= 13 - area 1	Max. Elevation	= 896.08 ft
Reservoir name	= Subsurface #1	Max. Storage	= 634 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

Pond No. 2 - Subsurface #1

Pond Data

Basin storage is based on unconfined risers. Span = 2.21 x 3.92 ft, Barrel Len = 23.00 ft, No. Barrels = 3, Slope = 0.00%, Headers = No
Encasement - Invert elev. = 893.00 ft, Width = 4.42 ft, Height = 3.21 ft, Voids = 35.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	893.00	n/a	0	0
0.32	893.32	n/a	34	34
0.64	893.64	n/a	59	94
0.96	893.96	n/a	90	184
1.28	894.28	n/a	88	272
1.61	894.60	n/a	85	357
1.93	894.93	n/a	80	438
2.25	895.25	n/a	73	511
2.57	895.57	n/a	62	573
2.89	895.89	n/a	40	614
3.21	896.21	n/a	34	648
3.30	896.30	n/a	1	649
3.50	896.50	n/a	3	652
4.00	897.00	n/a	6	658
5.00	898.00	n/a	13	671
6.00	899.00	n/a	100	771

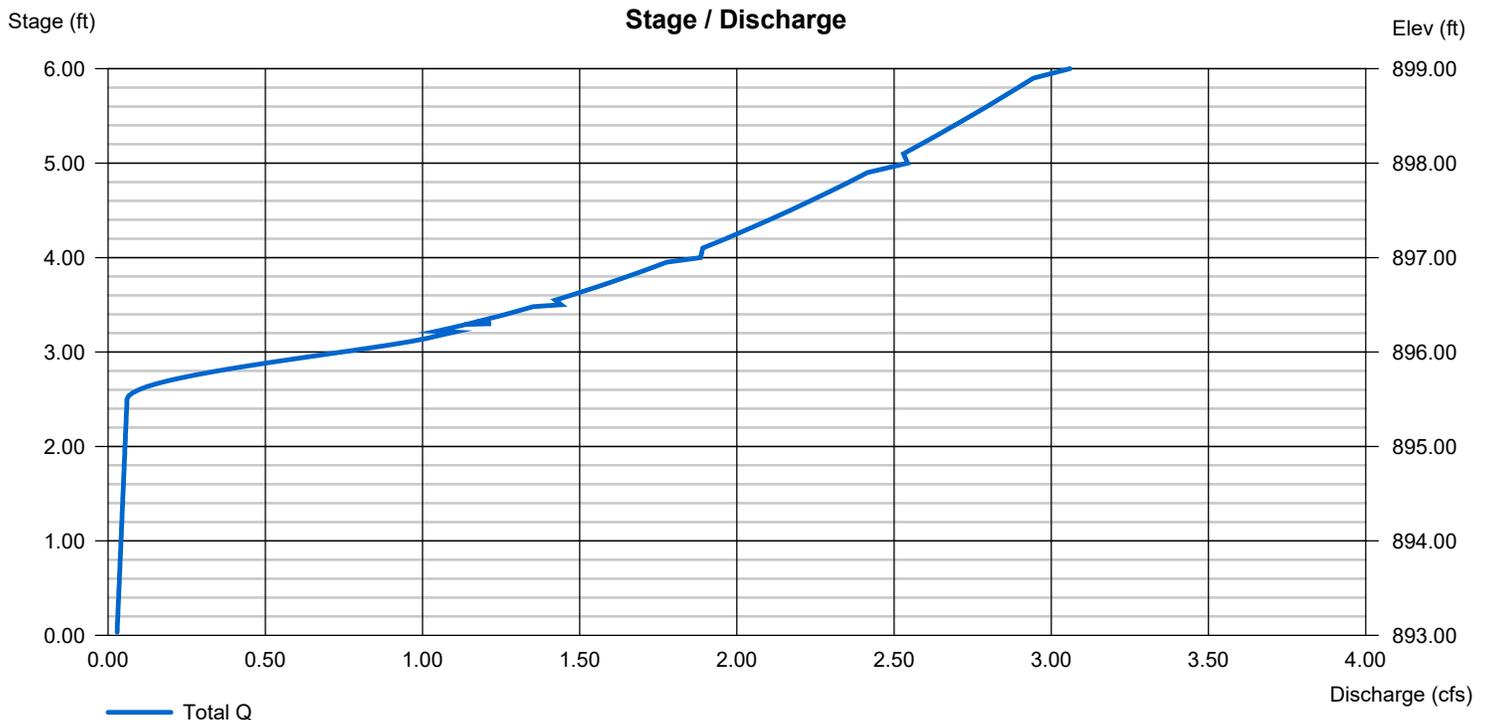
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 895.50	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 4.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

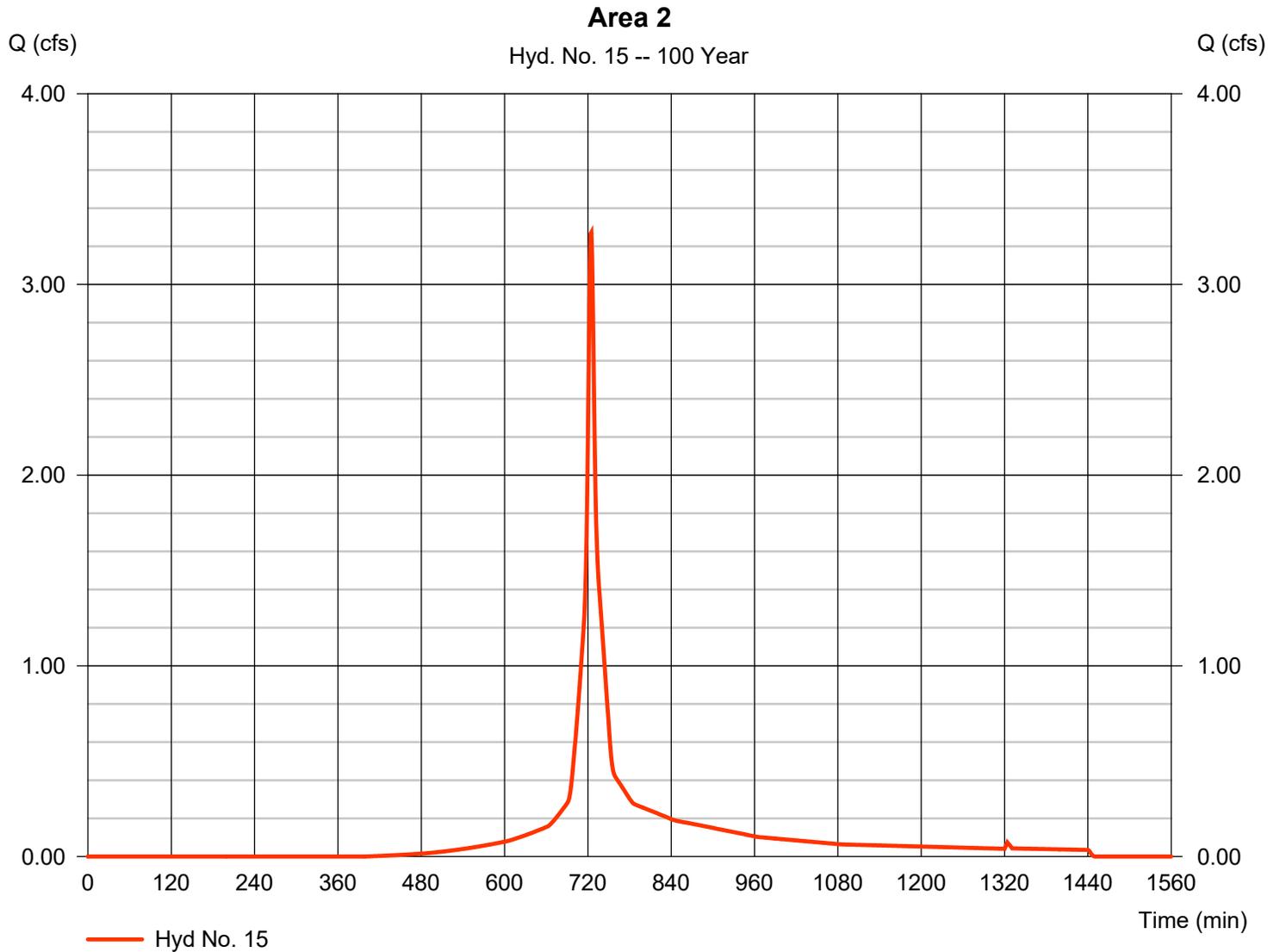


Hydrograph Report

Hyd. No. 15

Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 3.273 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 10,158 cuft
Drainage area	= 0.627 ac	Curve number	= 78.2
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

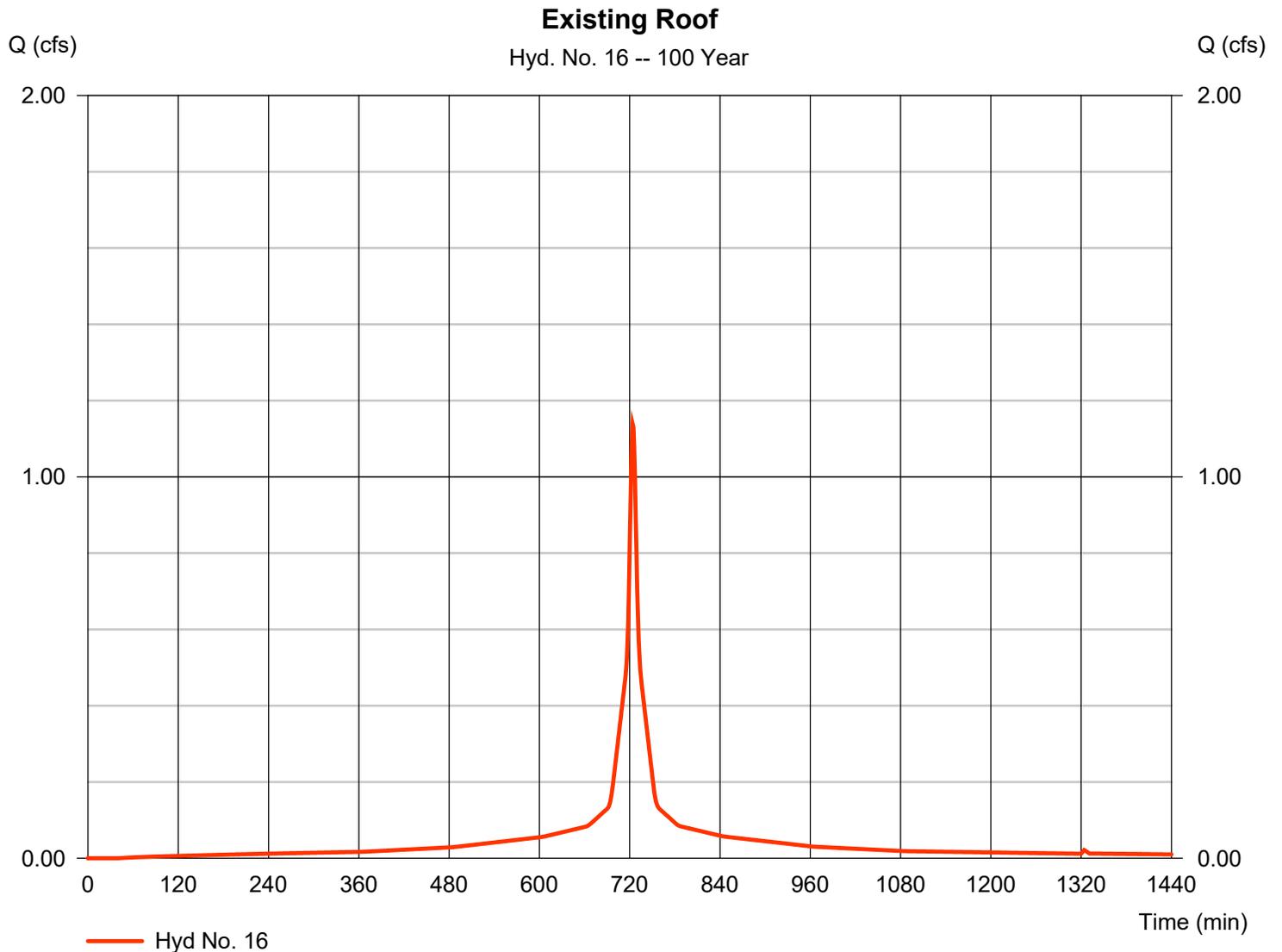


Hydrograph Report

Hyd. No. 16

Existing Roof

Hydrograph type	= SCS Runoff	Peak discharge	= 1.138 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 4,051 cuft
Drainage area	= 0.165 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.81 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



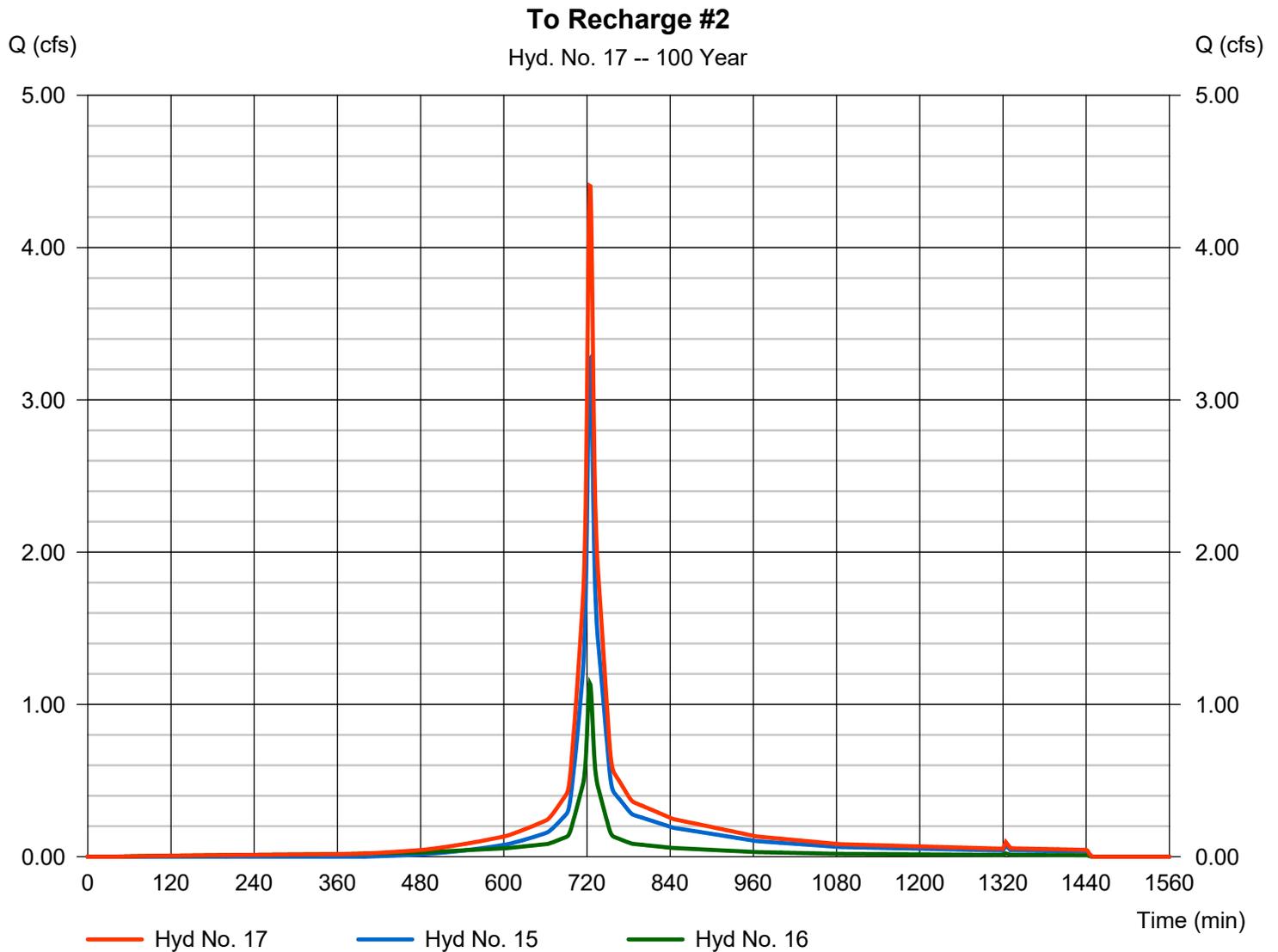
Hydrograph Report

Hyd. No. 17

To Recharge #2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 15, 16

Peak discharge = 4.405 cfs
Time to peak = 724 min
Hyd. volume = 14,209 cuft
Contrib. drain. area = 0.792 ac



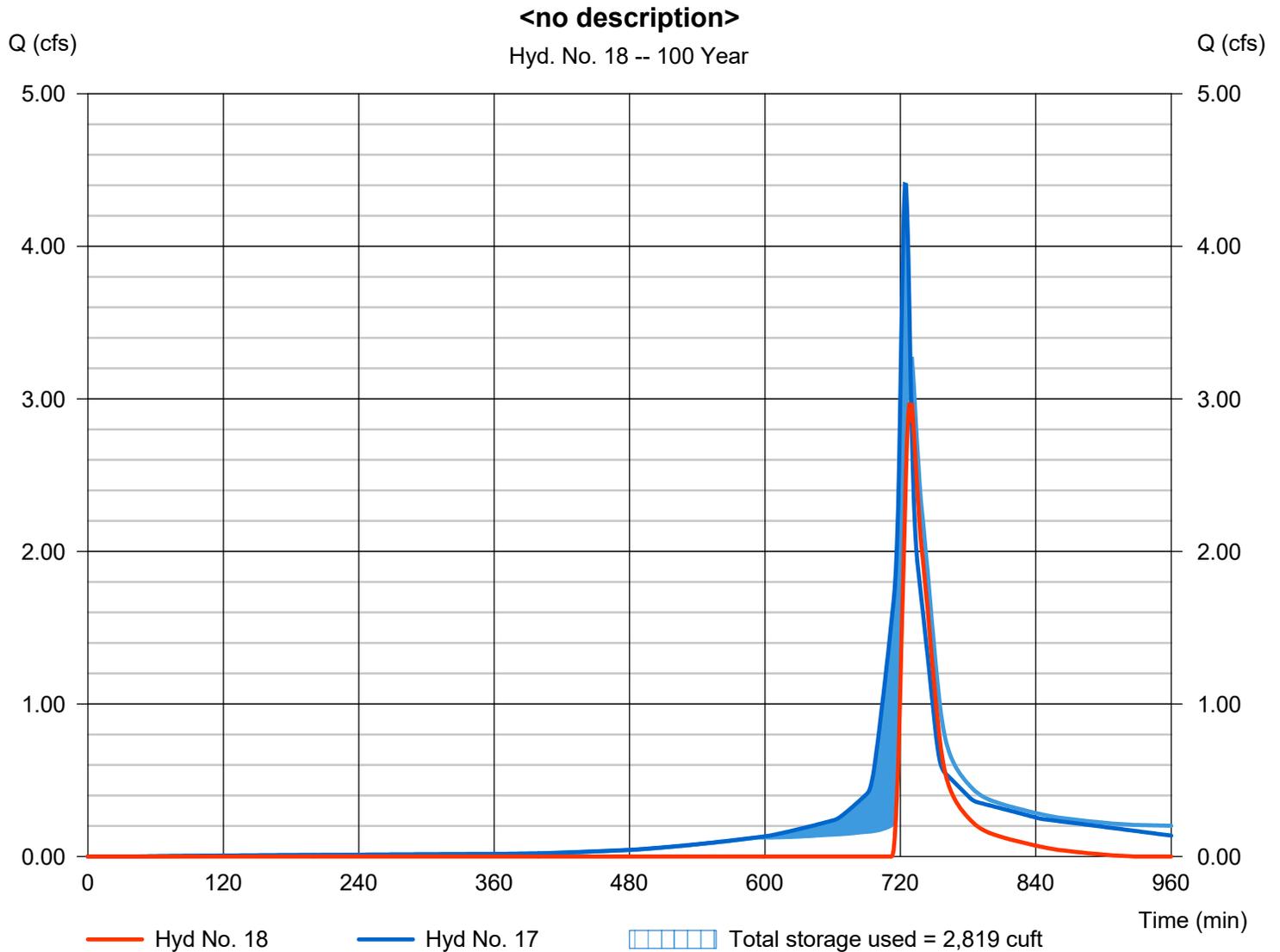
Hydrograph Report

Hyd. No. 18

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 2.975 cfs
Storm frequency	= 100 yrs	Time to peak	= 728 min
Time interval	= 1 min	Hyd. volume	= 5,499 cuft
Inflow hyd. No.	= 17 - To Recharge #2	Max. Elevation	= 884.88 ft
Reservoir name	= Subsurface #2	Max. Storage	= 2,819 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

Pond No. 3 - Subsurface #2

Pond Data

Encasement - Invert elev. = 881.50 ft, Width = 4.42 ft, Height = 3.21 ft, Voids = 35.00%
 Pond storage is based on unconfined risers. Span = 2.21 x 3.92 ft, Barrel Len = 100.00 ft, No. Barrels = 3, Slope = 0.00%, Headers = No

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	881.50	n/a	0	0
0.32	881.82	n/a	149	149
0.64	882.14	n/a	258	407
0.96	882.46	n/a	392	798
1.28	882.78	n/a	384	1,183
1.61	883.10	n/a	371	1,553
1.93	883.43	n/a	350	1,903
2.25	883.75	n/a	319	2,222
2.57	884.07	n/a	271	2,493
2.89	884.39	n/a	175	2,668
3.21	884.71	n/a	149	2,817
3.22	884.72	n/a	1	2,818
3.50	885.00	n/a	12	2,830
4.00	885.50	n/a	25	2,855
4.50	886.00	n/a	25	2,880

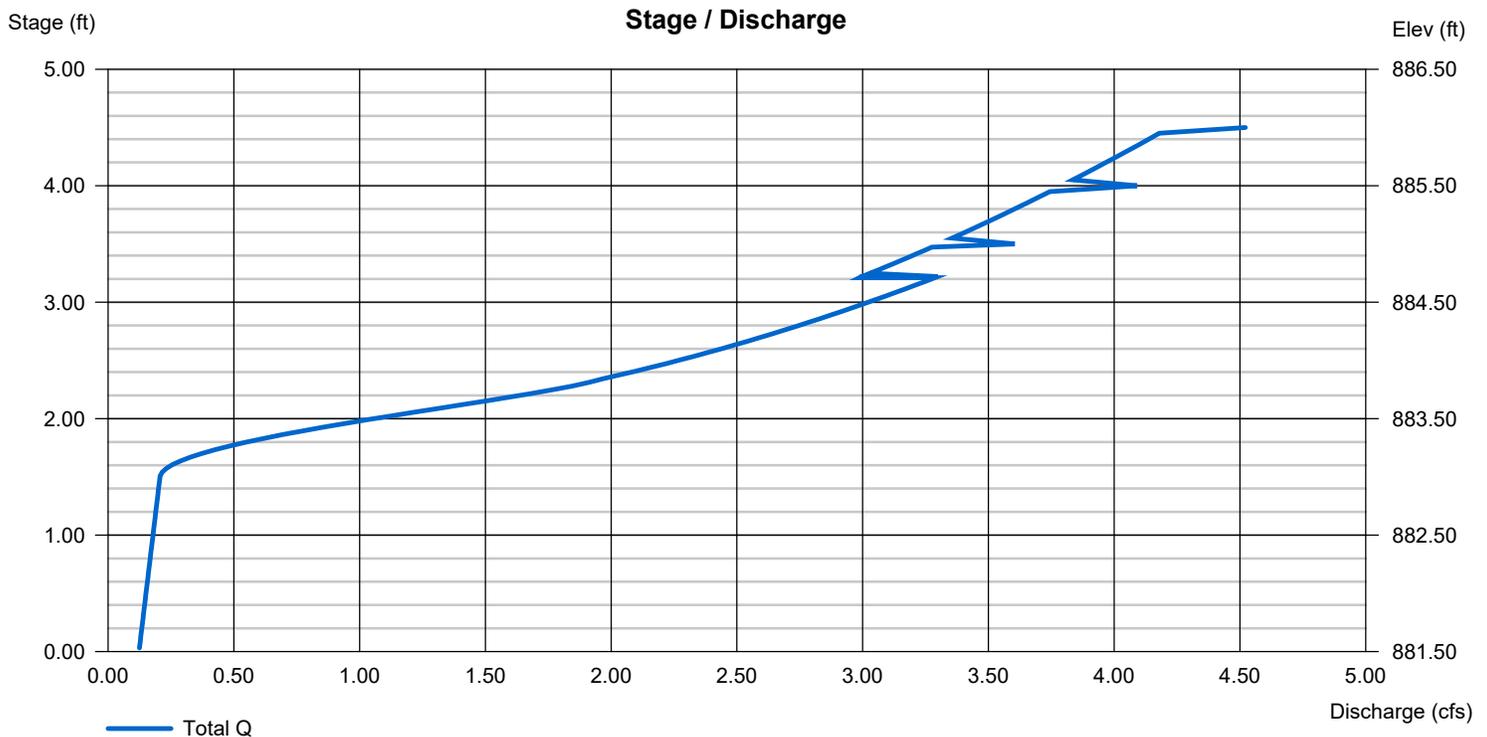
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 10.00	0.00	0.00	0.00
Span (in)	= 10.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 883.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 4.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



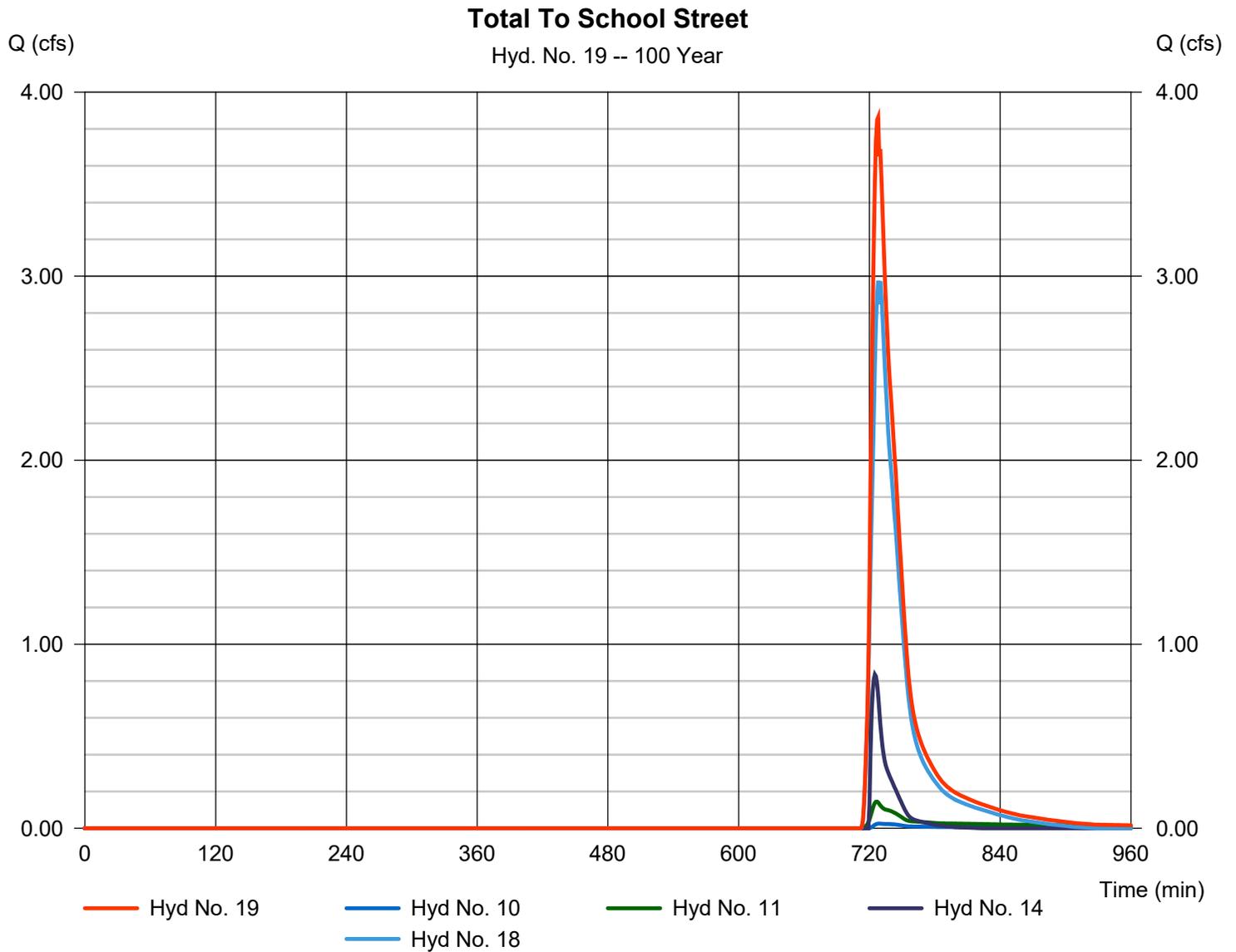
Hydrograph Report

Hyd. No. 19

Total To School Street

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 10, 11, 14, 18

Peak discharge = 3.863 cfs
Time to peak = 728 min
Hyd. volume = 7,190 cuft
Contrib. drain. area = 0.244 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	17.9350	3.8000	0.7184	-----
2	20.9621	3.6000	0.7033	-----
3	0.0000	0.0000	0.0000	-----
5	27.3416	3.6000	0.7007	-----
10	33.6678	3.8000	0.7074	-----
25	41.5263	3.9000	0.7078	-----
50	45.1624	3.6000	0.6969	-----
100	50.7632	3.6000	0.6952	-----

File name: norwood idf.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	3.76	2.72	2.18	1.84	1.60	1.43	1.30	1.19	1.10	1.02	0.96	0.91
2	4.62	3.34	2.68	2.27	1.98	1.77	1.61	1.47	1.37	1.27	1.20	1.13
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.05	4.39	3.53	2.98	2.61	2.33	2.11	1.94	1.80	1.68	1.58	1.49
10	7.23	5.26	4.23	3.58	3.12	2.79	2.53	2.32	2.15	2.01	1.89	1.78
25	8.84	6.45	5.19	4.39	3.84	3.43	3.11	2.86	2.65	2.47	2.32	2.19
50	10.08	7.33	5.89	4.99	4.36	3.90	3.54	3.25	3.02	2.82	2.65	2.50
100	11.37	8.27	6.65	5.64	4.93	4.41	4.00	3.68	3.41	3.19	3.00	2.83

Tc = time in minutes. Values may exceed 60.

Precip. file name: Sample.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.39	2.90	0.00	3.72	4.41	5.35	6.05	6.81
SCS 6-Hr	0.00	1.80	0.00	0.00	2.60	0.00	0.00	4.00
Huff-1st	0.00	1.55	0.00	2.75	4.00	5.38	6.50	8.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	1.75	0.00	2.80	3.90	5.25	6.00	7.10

KELLY ENGINEERING GROUP, INC.
Zero Campanelli Drive-Braintree-MA 02184 Phone 781 843 4333

Attachment C
Best Management Practices

Recharge System Calculations-Static Method

Required Dedicated Recharge Volume = $25,702 \text{ s.f} * 0.6''/12$ (Hydrologic Group A soils)
= **1,285 cu.ft**

Provided Recharge Volume Subsurface 1 = **561 cu.ft.** (see Pond Volumes)

Provided Recharge Volume Subsurface 2 = **1,442 cu.ft.** (see Pond Volumes)

Provided Recharge Volume Subsurface 3 = **3,154 cu.ft.** (see Pond Volumes)

Total provided recharge volume = **5,157 cu. ft.**

Drain Down Time

Draw down analysis is based on soil texture from NRCS soil survey.

The soils are Group A-Sands (8.37 in/hr)/ = 4.0+/- in/hr

Subsurface 1

Bottom Contact Area = 350 s.f.

Recharge Rate = $350 \text{ s.f.} * 4.0 \text{ in/hr} * 1/12 = 117 \text{ cu.ft/ hr}$

Drain Time for recharge volume = $561 \text{ cu.ft} / 117 \text{ cu.ft/hr} = 4.7 \text{ hours}$

Subsurface 2

Bottom Contact Area = 1,473 s.f.

Recharge Rate = $1,473 \text{ s.f.} * 4.0 \text{ in/hr} * 1/12 = 491 \text{ cu.ft/ hr}$

Drain Time for recharge volume = $1,442 \text{ cu.ft} / 491 \text{ cu.ft/hr} = 2.9 \text{ hours}$

Subsurface 3

Bottom Contact Area = 2,200 s.f.

Recharge Rate = $2,200 \text{ s.f.} * 4.0 \text{ in/hr} * 1/12 = 733 \text{ cu.ft/ hr}$

Drain Time for recharge volume = $3,154 \text{ cu.ft} / 733 \text{ cu.ft/hr} = 4.3 \text{ hours}$

Prepared For:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Project Information:

Name	
Street Address	
City	
State	Zip
Date:	(mm/dd)

Engineer:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Calculations Performed By:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Input Given Parameters

Unit of Measure	English
Select Model	Recharger 280HD
Stone Porosity	35.0%
Number of Header Systems	1 Header
Stone Depth Above Chamber	6 inches
Stone Depth Below Chamber	6 inches
Workable Bed Depth	10.00 feet
Max. Bed Width	15.00 feet
Storage Volume Required	600.00 cu. feet



Chamber Specifications

Height	26.5	inches
Width	47.00	inches
Length	8.00	feet
Installed Length	7.00	feet
Bare Chamber Volume	42.55	cu. feet
Installed Chamber Volume	61.72	cu. feet
<i>Image for visual reference only. May not reflect selected model.</i>		
Bed Depth	4.13	feet
Bed Width	14.58	feet
Storage Volume Provided	654.30	cu. feet

Materials List

Recharger 280HD Stormwater System by CULTEC, Inc.			
Approx. Unit Count - not for construction	9	pieces	
Actual Number of Chambers Required	9	pieces	
Starter Chambers	3	pieces	
Intermediate Chambers	3	pieces	
End Chambers	3	pieces	
HVLV FC-24	2	pieces	
CULTEC No. 410™ Filter Fabric	115.81	sq. yards	
CULTEC No. 20L Polyethylene Liner	14.58	feet	
Stone	26.70	cu. yards	
Volume of Excavation	53.47	cu. yards	

Bed Detail



Number of Rows Wide	3	pieces
Number of Chambers Long	3	pieces
Chamber Row Width	12.58	feet
Chamber Row Length	22.00	feet
Bed Width	14.58	feet
Bed Length	24.00	feet
Bed Area Required	350.00	sq. feet

Bed detail for reference only. Not project specific. Not to scale. Use CULTEC StormGenie to output project specific detail.

Project Name: Name

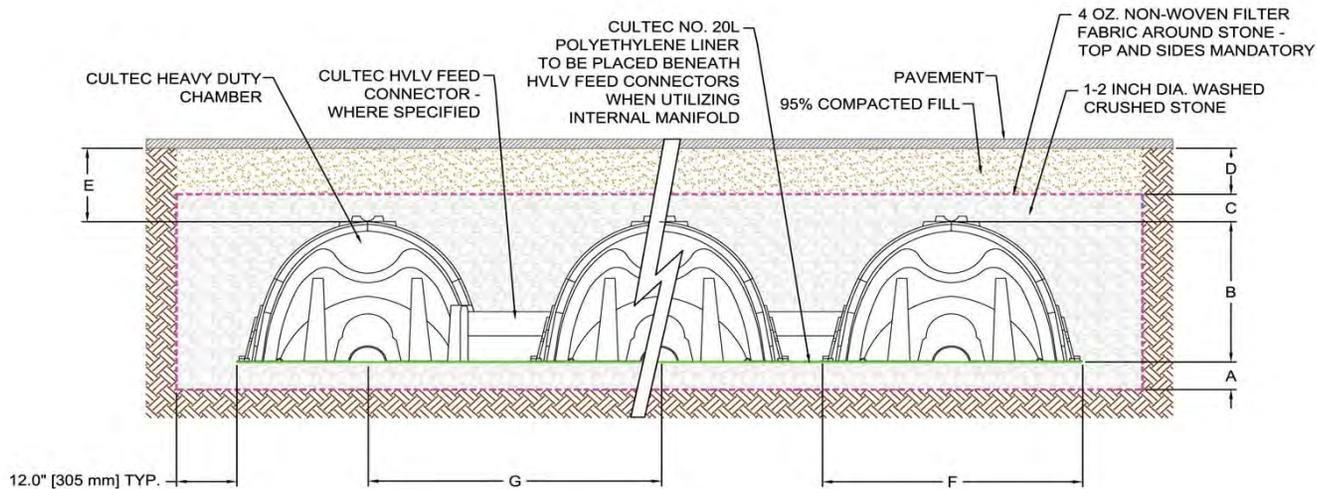
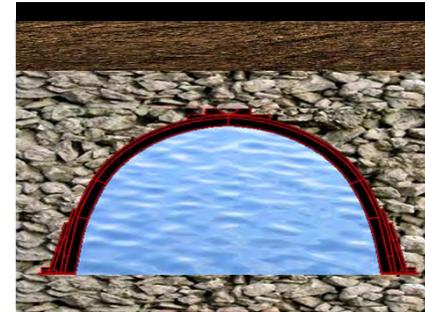
Date: (mm/dd)

Cross Section Detail



Conceptual graphic only. Not job specific.

Recharger 280HD		
Pavement	3	inches
95% Compacted Fill	8	inches
Stone Above	6	inches
Chamber Height	26.5	inches
Stone Below	6	inches
Effective Depth	38.5	inches
Bed Depth	49.5	inches



A	Depth of Stone Base	6.0	inches
B	Chamber Height	26.5	inches
C	Depth of Stone Above Units	6.0	inches
D	Depth of 95% Compacted Fill	8.0	inches
E	Max. Depth of Cover Allowed Above Crown of Chamber	12.0	feet
F	Chamber Width	47.0	inches
G	Center to Center Spacing	4.33	feet

Breakdown of Storage Provided by Recharger 280HD Stormwater System		
Chambers	401.21	cu. feet
Feed Connectors	0.76	cu. feet
Stone	252.33	cu. feet
Total Storage Provided	654.30	cu. feet

Prepared For:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Project Information:

Name	
Street Address	
City	
State	Zip
Date:	(mm/dd)

Engineer:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Calculations Performed By:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Input Given Parameters

Unit of Measure	English
Select Model	Recharger 280HD
Stone Porosity	35.0%
Number of Header Systems	1 Header
Stone Depth Above Chamber	6 inches
Stone Depth Below Chamber	6 inches
Workable Bed Depth	10.00 feet
Max. Bed Width	15.00 feet
Storage Volume Required	2800.00 cu. feet



Chamber Specifications

Height	26.5	inches
Width	47.00	inches
Length	8.00	feet
Installed Length	7.00	feet
Bare Chamber Volume	42.55	cu. feet
Installed Chamber Volume	61.72	cu. feet
<i>Image for visual reference only. May not reflect selected model.</i>		
Bed Depth	4.13	feet
Bed Width	14.58	feet
Storage Volume Provided	2828.01	cu. feet

Materials List

Recharger 280HD Stormwater System by CULTEC, Inc.			
Approx. Unit Count - not for construction	45	pieces	
Actual Number of Chambers Required	42	pieces	
Starter Chambers	3	pieces	
Intermediate Chambers	36	pieces	
End Chambers	3	pieces	
			HVLV FC-24
			2 pieces
			CULTEC No. 410™ Filter Fabric
			450.69 sq. yards
			CULTEC No. 20L Polyethylene Liner
			14.58 feet
			Stone
			108.13 cu. yards
			Volume of Excavation
			225.03 cu. yards

Bed Detail



Number of Rows Wide	3	pieces
Number of Chambers Long	14	pieces
Chamber Row Width	12.58	feet
Chamber Row Length	99.00	feet
Bed Width	14.58	feet
Bed Length	101.00	feet
Bed Area Required	1472.92	sq. feet

Bed detail for reference only. Not project specific. Not to scale. Use CULTEC StormGenie to output project specific detail.

Project Name: Name

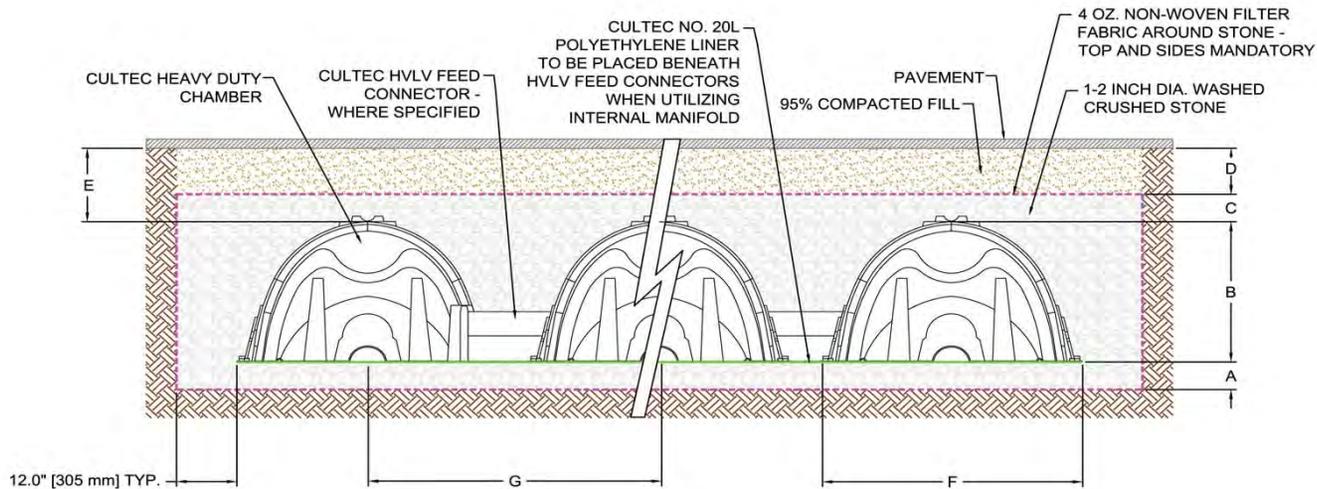
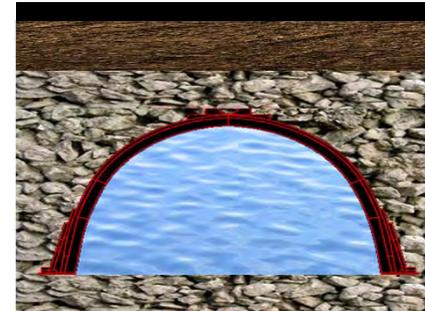
Date: (mm/dd)

Cross Section Detail



Conceptual graphic only. Not job specific.

Recharger 280HD		
Pavement	3	inches
95% Compacted Fill	8	inches
Stone Above	6	inches
Chamber Height	26.5	inches
Stone Below	6	inches
Effective Depth	38.5	inches
Bed Depth	49.5	inches



A	Depth of Stone Base	6.0	inches
B	Chamber Height	26.5	inches
C	Depth of Stone Above Units	6.0	inches
D	Depth of 95% Compacted Fill	8.0	inches
E	Max. Depth of Cover Allowed Above Crown of Chamber	12.0	feet
F	Chamber Width	47.0	inches
G	Center to Center Spacing	4.33	feet

Breakdown of Storage Provided by Recharger 280HD Stormwater System		
Chambers	1805.46	cu. feet
Feed Connectors	0.76	cu. feet
Stone	1021.79	cu. feet
Total Storage Provided	2828.01	cu. feet

Prepared For:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Project Information:

Name	
Street Address	
City	
State	Zip
Date:	(mm/dd)

Engineer:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Calculations Performed By:

Name	
Company Name	
Street Address	
City	
State	Zip
Phone	
Fax	
Email	

Input Given Parameters

Unit of Measure	English
Select Model	Recharger 280HD
Stone Porosity	40.0%
Number of Header Systems	1 Header
Stone Depth Above Chamber	6 inches
Stone Depth Below Chamber	6 inches
Workable Bed Depth	10.00 feet
Max. Bed Width	60.00 feet
Storage Volume Required	4500.00 cu. feet



Chamber Specifications

Height	26.5	inches
Width	47.00	inches
Length	8.00	feet
Installed Length	7.00	feet
Bare Chamber Volume	42.55	cu. feet
Installed Chamber Volume	64.46	cu. feet
<i>Image for visual reference only. May not reflect selected model.</i>		
Bed Depth	4.13	feet
Bed Width	57.92	feet
Storage Volume Provided	4534.12	cu. feet

Materials List

Recharger 280HD Stormwater System by CULTEC, Inc.			
Approx. Unit Count - not for construction	69	pieces	
Actual Number of Chambers Required	65	pieces	
Starter Chambers	13	pieces	
Intermediate Chambers	39	pieces	
End Chambers	13	pieces	
			HVLV FC-24
			12 pieces
			CULTEC No. 410™ Filter Fabric
			613.21 sq. yards
			CULTEC No. 20L Polyethylene Liner
			57.92 feet
			Stone
			155.98 cu. yards
			Volume of Excavation
			336.24 cu. yards

Bed Detail



Number of Rows Wide	13	pieces
Number of Chambers Long	5	pieces
Chamber Row Width	55.92	feet
Chamber Row Length	36.00	feet
Bed Width	57.92	feet
Bed Length	38.00	feet
Bed Area Required	2200.83	sq. feet

Bed detail for reference only. Not project specific. Not to scale. Use CULTEC StormGenie to output project specific detail.

Project Name: Name

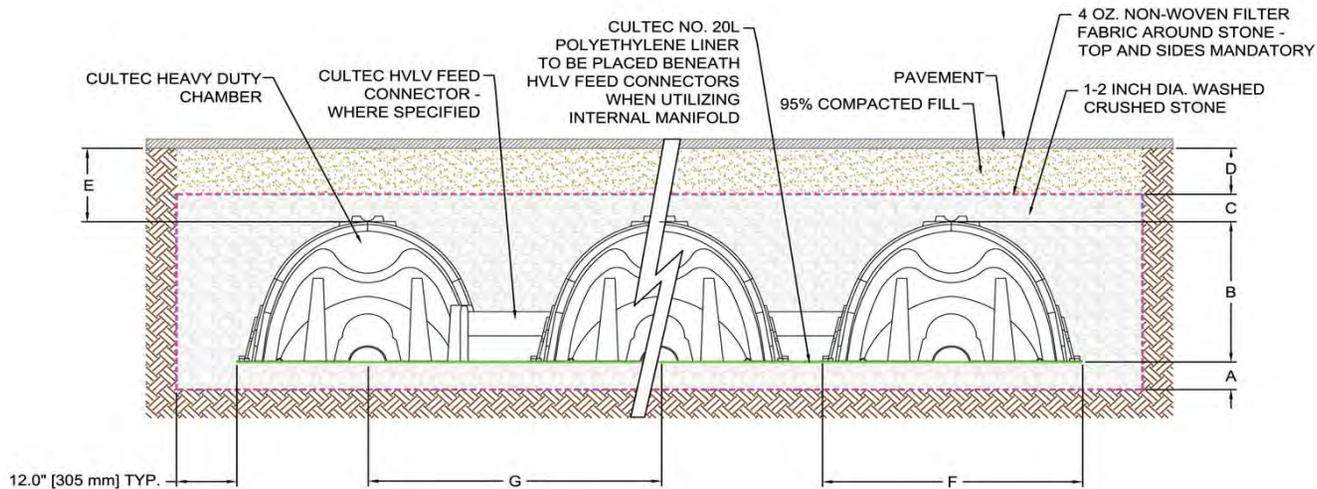
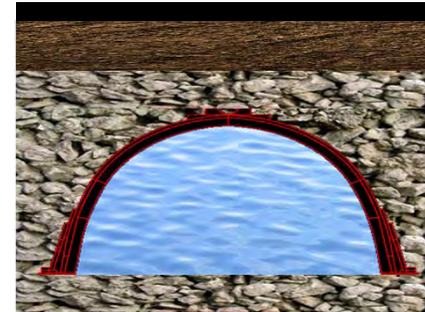
Date: (mm/dd)

Cross Section Detail



Conceptual graphic only. Not job specific.

Recharger 280HD		
Pavement	3	inches
95% Compacted Fill	8	inches
Stone Above	6	inches
Chamber Height	26.5	inches
Stone Below	6	inches
Effective Depth	38.5	inches
Bed Depth	49.5	inches



A	Depth of Stone Base	6.0	inches
B	Chamber Height	26.5	inches
C	Depth of Stone Above Units	6.0	inches
D	Depth of 95% Compacted Fill	8.0	inches
E	Max. Depth of Cover Allowed Above Crown of Chamber	12.0	feet
F	Chamber Width	47.0	inches
G	Center to Center Spacing	4.33	feet

Breakdown of Storage Provided by Recharger 280HD Stormwater System		
Chambers	2844.97	cu. feet
Feed Connectors	4.55	cu. feet
Stone	1684.59	cu. feet
Total Storage Provided	4534.12	cu. feet

Pond Report

Pond No. 2 - Subsurface #1

Pond Data

Pond storage is based on unconfined riser values Span = 2.21 x 3.92 ft, Barrel Len = 23.00 ft, No. Barrels = 3, Slope = 0.00%, Headers = No
Encasement -Invert elev. = 893.00 ft, Width = 4.42 ft, Height = 3.21 ft, Voids = 35.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	893.00	n/a	0	0
0.32	893.32	n/a	34	34
0.64	893.64	n/a	59	94
0.96	893.96	n/a	90	184
1.28	894.28	n/a	88	272
1.61	894.60	n/a	85	357
1.93	894.93	n/a	80	438
2.25	895.25	n/a	73	511
2.57	895.57	n/a	62	573
2.89	895.89	n/a	40	614
3.21	896.21	n/a	34	648
3.30	896.30	n/a	1	649
3.50	896.50	n/a	3	652
4.00	897.00	n/a	6	658
5.00	898.00	n/a	13	671
6.00	899.00	n/a	100	771

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 895.50	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 4.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	893.00	0.00	---	---	---	---	---	---	---	0.000	---	0.000
0.03	3	893.03	0.00	---	---	---	---	---	---	---	0.029	---	0.029
0.06	7	893.06	0.00	---	---	---	---	---	---	---	0.029	---	0.029
0.10	10	893.10	0.00	---	---	---	---	---	---	---	0.029	---	0.029
0.13	14	893.13	0.00	---	---	---	---	---	---	---	0.030	---	0.030
0.16	17	893.16	0.00	---	---	---	---	---	---	---	0.030	---	0.030
0.19	21	893.19	0.00	---	---	---	---	---	---	---	0.031	---	0.031
0.22	24	893.22	0.00	---	---	---	---	---	---	---	0.031	---	0.031
0.26	27	893.26	0.00	---	---	---	---	---	---	---	0.032	---	0.032
0.29	31	893.29	0.00	---	---	---	---	---	---	---	0.032	---	0.032
0.32	34	893.32	0.00	---	---	---	---	---	---	---	0.032	---	0.032
0.35	40	893.35	0.00	---	---	---	---	---	---	---	0.033	---	0.033
0.39	46	893.39	0.00	---	---	---	---	---	---	---	0.033	---	0.033
0.42	52	893.42	0.00	---	---	---	---	---	---	---	0.034	---	0.034
0.45	58	893.45	0.00	---	---	---	---	---	---	---	0.034	---	0.034
0.48	64	893.48	0.00	---	---	---	---	---	---	---	0.034	---	0.034
0.51	70	893.51	0.00	---	---	---	---	---	---	---	0.035	---	0.035
0.55	76	893.55	0.00	---	---	---	---	---	---	---	0.035	---	0.035
0.58	82	893.58	0.00	---	---	---	---	---	---	---	0.036	---	0.036
0.61	88	893.61	0.00	---	---	---	---	---	---	---	0.036	---	0.036
0.64	94	893.64	0.00	---	---	---	---	---	---	---	0.036	---	0.036
0.67	103	893.67	0.00	---	---	---	---	---	---	---	0.037	---	0.037
0.71	112	893.71	0.00	---	---	---	---	---	---	---	0.037	---	0.037
0.74	121	893.74	0.00	---	---	---	---	---	---	---	0.038	---	0.038
0.77	130	893.77	0.00	---	---	---	---	---	---	---	0.038	---	0.038
0.80	139	893.80	0.00	---	---	---	---	---	---	---	0.038	---	0.038
0.83	148	893.83	0.00	---	---	---	---	---	---	---	0.039	---	0.039

Continues on next page...

Subsurface #1

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.87	157	893.87	0.00	---	---	---	---	---	---	---	0.039	---	0.039
0.90	166	893.90	0.00	---	---	---	---	---	---	---	0.040	---	0.040
0.93	175	893.93	0.00	---	---	---	---	---	---	---	0.040	---	0.040
0.96	184	893.96	0.00	---	---	---	---	---	---	---	0.041	---	0.041
1.00	192	894.00	0.00	---	---	---	---	---	---	---	0.041	---	0.041
1.03	201	894.03	0.00	---	---	---	---	---	---	---	0.041	---	0.041
1.06	210	894.06	0.00	---	---	---	---	---	---	---	0.042	---	0.042
1.09	219	894.09	0.00	---	---	---	---	---	---	---	0.042	---	0.042
1.12	228	894.12	0.00	---	---	---	---	---	---	---	0.043	---	0.043
1.16	237	894.16	0.00	---	---	---	---	---	---	---	0.043	---	0.043
1.19	245	894.19	0.00	---	---	---	---	---	---	---	0.043	---	0.043
1.22	254	894.22	0.00	---	---	---	---	---	---	---	0.044	---	0.044
1.25	263	894.25	0.00	---	---	---	---	---	---	---	0.044	---	0.044
1.28	272	894.28	0.00	---	---	---	---	---	---	---	0.045	---	0.045
1.32	281	894.32	0.00	---	---	---	---	---	---	---	0.045	---	0.045
1.35	289	894.35	0.00	---	---	---	---	---	---	---	0.045	---	0.045
1.38	298	894.38	0.00	---	---	---	---	---	---	---	0.046	---	0.046
1.41	306	894.41	0.00	---	---	---	---	---	---	---	0.046	---	0.046
1.44	315	894.44	0.00	---	---	---	---	---	---	---	0.047	---	0.047
1.48	323	894.48	0.00	---	---	---	---	---	---	---	0.047	---	0.047
1.51	332	894.51	0.00	---	---	---	---	---	---	---	0.048	---	0.048
1.54	340	894.54	0.00	---	---	---	---	---	---	---	0.048	---	0.048
1.57	349	894.57	0.00	---	---	---	---	---	---	---	0.048	---	0.048
1.61	357	894.60	0.00	---	---	---	---	---	---	---	0.049	---	0.049
1.64	365	894.64	0.00	---	---	---	---	---	---	---	0.049	---	0.049
1.67	373	894.67	0.00	---	---	---	---	---	---	---	0.050	---	0.050
1.70	381	894.70	0.00	---	---	---	---	---	---	---	0.050	---	0.050
1.73	389	894.73	0.00	---	---	---	---	---	---	---	0.050	---	0.050
1.77	397	894.77	0.00	---	---	---	---	---	---	---	0.051	---	0.051
1.80	406	894.80	0.00	---	---	---	---	---	---	---	0.051	---	0.051
1.83	414	894.83	0.00	---	---	---	---	---	---	---	0.052	---	0.052
1.86	422	894.86	0.00	---	---	---	---	---	---	---	0.052	---	0.052
1.89	430	894.89	0.00	---	---	---	---	---	---	---	0.052	---	0.052
1.93	438	894.93	0.00	---	---	---	---	---	---	---	0.053	---	0.053
1.96	445	894.96	0.00	---	---	---	---	---	---	---	0.053	---	0.053
1.99	452	894.99	0.00	---	---	---	---	---	---	---	0.054	---	0.054
2.02	460	895.02	0.00	---	---	---	---	---	---	---	0.054	---	0.054
2.05	467	895.05	0.00	---	---	---	---	---	---	---	0.054	---	0.054
2.09	474	895.09	0.00	---	---	---	---	---	---	---	0.055	---	0.055
2.12	482	895.12	0.00	---	---	---	---	---	---	---	0.055	---	0.055
2.15	489	895.15	0.00	---	---	---	---	---	---	---	0.056	---	0.056
2.18	496	895.18	0.00	---	---	---	---	---	---	---	0.056	---	0.056
2.21	504	895.21	0.00	---	---	---	---	---	---	---	0.057	---	0.057
2.25	511	895.25	0.00	---	---	---	---	---	---	---	0.057	---	0.057
2.28	517	895.28	0.00	---	---	---	---	---	---	---	0.057	---	0.057
2.31	524	895.31	0.00	---	---	---	---	---	---	---	0.058	---	0.058
2.34	530	895.34	0.00	---	---	---	---	---	---	---	0.058	---	0.058
2.38	536	895.38	0.00	---	---	---	---	---	---	---	0.059	---	0.059
2.41	542	895.41	0.00	---	---	---	---	---	---	---	0.059	---	0.059
2.44	549	895.44	0.00	---	---	---	---	---	---	---	0.059	---	0.059
2.47	555	895.47	0.00	---	---	---	---	---	---	---	0.060	---	0.060
2.50	561	895.50	0.00 ic	---	0.060	---	0.060						
2.54	567	895.54	0.00 ic	---	---	---	---	---	---	---	0.061	---	0.065
2.57	573	895.57	0.02 ic	---	---	---	---	---	---	---	0.061	---	0.078
2.60	578	895.60	0.04 ic	---	---	---	---	---	---	---	0.061	---	0.097
2.63	582	895.63	0.06 ic	---	---	---	---	---	---	---	0.062	---	0.123
2.66	586	895.66	0.09 ic	---	---	---	---	---	---	---	0.062	---	0.155
2.70	590	895.70	0.13 ic	---	---	---	---	---	---	---	0.063	---	0.192
2.73	594	895.73	0.17 ic	---	---	---	---	---	---	---	0.063	---	0.236
2.76	598	895.76	0.22 ic	---	---	---	---	---	---	---	0.064	---	0.284
2.79	602	895.79	0.27 ic	---	---	---	---	---	---	---	0.064	---	0.336
2.82	606	895.82	0.33 ic	---	---	---	---	---	---	---	0.064	---	0.392
2.86	610	895.86	0.39 ic	---	---	---	---	---	---	---	0.065	---	0.452
2.89	614	895.89	0.45 ic	---	---	---	---	---	---	---	0.065	---	0.514
2.92	617	895.92	0.51 ic	---	---	---	---	---	---	---	0.066	---	0.579
2.95	621	895.95	0.58 ic	---	---	---	---	---	---	---	0.066	---	0.646
2.99	624	895.99	0.65 ic	---	---	---	---	---	---	---	0.066	---	0.712
3.02	627	896.02	0.71 ic	---	---	---	---	---	---	---	0.067	---	0.779
3.05	631	896.05	0.78 ic	---	---	---	---	---	---	---	0.067	---	0.844
3.08	634	896.08	0.84 ic	---	---	---	---	---	---	---	0.068	---	0.907
3.11	638	896.11	0.90 ic	---	---	---	---	---	---	---	0.068	---	0.965
3.15	641	896.15	0.95 ic	---	---	---	---	---	---	---	0.068	---	1.015

Continues on next page...

Subsurface #1

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.18	645	896.18	0.99 ic	---	---	---	---	---	---	---	0.069	---	1.055
3.21	648	896.21	1.03 ic	---	---	---	---	---	---	---	0.069	---	1.101
3.22	648	896.22	1.04 ic	---	---	---	---	---	---	---	0.000	---	1.044
3.23	648	896.23	1.06 ic	---	---	---	---	---	---	---	0.000	---	1.056
3.24	648	896.24	1.07 ic	---	---	---	---	---	---	---	0.000	---	1.068
3.25	648	896.25	1.08 ic	---	---	---	---	---	---	---	0.000	---	1.079
3.26	648	896.25	1.09 ic	---	---	---	---	---	---	---	0.000	---	1.091
3.26	649	896.26	1.10 ic	---	---	---	---	---	---	---	0.000	---	1.103
3.27	649	896.27	1.11 ic	---	---	---	---	---	---	---	0.000	---	1.114
3.28	649	896.28	1.13 ic	---	---	---	---	---	---	---	0.000	---	1.125
3.29	649	896.29	1.14 ic	---	---	---	---	---	---	---	0.000	---	1.137
3.30	649	896.30	1.15 ic	---	---	---	---	---	---	---	0.069	---	1.217
3.32	649	896.32	1.17 ic	---	---	---	---	---	---	---	0.000	---	1.172
3.34	650	896.34	1.20 ic	---	---	---	---	---	---	---	0.000	---	1.196
3.36	650	896.36	1.22 ic	---	---	---	---	---	---	---	0.000	---	1.220
3.38	650	896.38	1.24 ic	---	---	---	---	---	---	---	0.000	---	1.243
3.40	650	896.40	1.27 ic	---	---	---	---	---	---	---	0.000	---	1.265
3.42	651	896.42	1.29 ic	---	---	---	---	---	---	---	0.000	---	1.287
3.44	651	896.44	1.31 ic	---	---	---	---	---	---	---	0.000	---	1.309
3.46	651	896.46	1.33 ic	---	---	---	---	---	---	---	0.000	---	1.331
3.48	652	896.48	1.35 ic	---	---	---	---	---	---	---	0.000	---	1.352
3.50	652	896.50	1.37 ic	---	---	---	---	---	---	---	0.069	---	1.441
3.55	653	896.55	1.42 ic	---	---	---	---	---	---	---	0.000	---	1.423
3.60	653	896.60	1.47 ic	---	---	---	---	---	---	---	0.000	---	1.471
3.65	654	896.65	1.52 ic	---	---	---	---	---	---	---	0.000	---	1.519
3.70	654	896.70	1.56 ic	---	---	---	---	---	---	---	0.000	---	1.564
3.75	655	896.75	1.61 ic	---	---	---	---	---	---	---	0.000	---	1.609
3.80	656	896.80	1.65 ic	---	---	---	---	---	---	---	0.000	---	1.652
3.85	656	896.85	1.69 ic	---	---	---	---	---	---	---	0.000	---	1.694
3.90	657	896.90	1.74 ic	---	---	---	---	---	---	---	0.000	---	1.736
3.95	657	896.95	1.78 ic	---	---	---	---	---	---	---	0.000	---	1.776
4.00	658	897.00	1.82 ic	---	---	---	---	---	---	---	0.069	---	1.884
4.10	659	897.10	1.89 ic	---	---	---	---	---	---	---	0.000	---	1.891
4.20	661	897.20	1.96 ic	---	---	---	---	---	---	---	0.000	---	1.965
4.30	662	897.30	2.04 ic	---	---	---	---	---	---	---	0.000	---	2.035
4.40	663	897.40	2.10 ic	---	---	---	---	---	---	---	0.000	---	2.103
4.50	664	897.50	2.17 ic	---	---	---	---	---	---	---	0.000	---	2.169
4.60	666	897.60	2.23 ic	---	---	---	---	---	---	---	0.000	---	2.234
4.70	667	897.70	2.30 ic	---	---	---	---	---	---	---	0.000	---	2.296
4.80	668	897.80	2.36 ic	---	---	---	---	---	---	---	0.000	---	2.357
4.90	670	897.90	2.42 ic	---	---	---	---	---	---	---	0.000	---	2.416
5.00	671	898.00	2.47 ic	---	---	---	---	---	---	---	0.069	---	2.543
5.10	681	898.10	2.53 ic	---	---	---	---	---	---	---	0.000	---	2.530
5.20	691	898.20	2.59 ic	---	---	---	---	---	---	---	0.000	---	2.585
5.30	701	898.30	2.64 ic	---	---	---	---	---	---	---	0.000	---	2.639
5.40	711	898.40	2.69 ic	---	---	---	---	---	---	---	0.000	---	2.692
5.50	721	898.50	2.74 ic	---	---	---	---	---	---	---	0.000	---	2.744
5.60	731	898.60	2.80 ic	---	---	---	---	---	---	---	0.000	---	2.795
5.70	741	898.70	2.85 ic	---	---	---	---	---	---	---	0.000	---	2.845
5.80	751	898.80	2.89 ic	---	---	---	---	---	---	---	0.000	---	2.894
5.90	761	898.90	2.94 ic	---	---	---	---	---	---	---	0.000	---	2.943
6.00	771	899.00	2.99 ic	---	---	---	---	---	---	---	0.069	---	3.060

...End

Pond Report

Pond No. 3 - Subsurface #2

Pond Data

Pond storage is based on unconfined risers. Span = 2.21 x 3.92 ft, Barrel Len = 100.00 ft, No. Barrels = 3, Slope = 0.00%, Headers = No
Encasement -invert elev. = 881.50 ft, Width = 4.42 ft, Height = 3.21 ft, Voids = 35.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	881.50	n/a	0	0
0.32	881.82	n/a	149	149
0.64	882.14	n/a	258	407
0.96	882.46	n/a	392	798
1.28	882.78	n/a	384	1,183
1.61	883.10	n/a	371	1,553
1.93	883.43	n/a	350	1,903
2.25	883.75	n/a	319	2,222
2.57	884.07	n/a	271	2,493
2.89	884.39	n/a	175	2,668
3.21	884.71	n/a	149	2,817
3.22	884.72	n/a	1	2,818
3.50	885.00	n/a	12	2,830
4.00	885.50	n/a	25	2,855
4.50	886.00	n/a	25	2,880

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 10.00	0.00	0.00	0.00
Span (in)	= 10.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 883.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 4.000	(by Wet area)		
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	881.50	0.00	---	---	---	---	---	---	---	0.000	---	0.000
0.03	15	881.53	0.00	---	---	---	---	---	---	---	0.125	---	0.125
0.06	30	881.56	0.00	---	---	---	---	---	---	---	0.126	---	0.126
0.10	45	881.60	0.00	---	---	---	---	---	---	---	0.128	---	0.128
0.13	60	881.63	0.00	---	---	---	---	---	---	---	0.130	---	0.130
0.16	75	881.66	0.00	---	---	---	---	---	---	---	0.132	---	0.132
0.19	89	881.69	0.00	---	---	---	---	---	---	---	0.133	---	0.133
0.22	104	881.72	0.00	---	---	---	---	---	---	---	0.135	---	0.135
0.26	119	881.76	0.00	---	---	---	---	---	---	---	0.137	---	0.137
0.29	134	881.79	0.00	---	---	---	---	---	---	---	0.139	---	0.139
0.32	149	881.82	0.00	---	---	---	---	---	---	---	0.141	---	0.141
0.35	175	881.85	0.00	---	---	---	---	---	---	---	0.142	---	0.142
0.39	201	881.89	0.00	---	---	---	---	---	---	---	0.144	---	0.144
0.42	226	881.92	0.00	---	---	---	---	---	---	---	0.146	---	0.146
0.45	252	881.95	0.00	---	---	---	---	---	---	---	0.148	---	0.148
0.48	278	881.98	0.00	---	---	---	---	---	---	---	0.150	---	0.150
0.51	304	882.01	0.00	---	---	---	---	---	---	---	0.151	---	0.151
0.55	329	882.05	0.00	---	---	---	---	---	---	---	0.153	---	0.153
0.58	355	882.08	0.00	---	---	---	---	---	---	---	0.155	---	0.155
0.61	381	882.11	0.00	---	---	---	---	---	---	---	0.157	---	0.157
0.64	407	882.14	0.00	---	---	---	---	---	---	---	0.158	---	0.158
0.67	446	882.17	0.00	---	---	---	---	---	---	---	0.160	---	0.160
0.71	485	882.21	0.00	---	---	---	---	---	---	---	0.162	---	0.162
0.74	524	882.24	0.00	---	---	---	---	---	---	---	0.164	---	0.164
0.77	563	882.27	0.00	---	---	---	---	---	---	---	0.166	---	0.166
0.80	602	882.30	0.00	---	---	---	---	---	---	---	0.167	---	0.167
0.83	642	882.33	0.00	---	---	---	---	---	---	---	0.169	---	0.169
0.87	681	882.37	0.00	---	---	---	---	---	---	---	0.171	---	0.171

Continues on next page...

Subsurface #2

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.90	720	882.40	0.00	---	---	---	---	---	---	---	0.173	---	0.173
0.93	759	882.43	0.00	---	---	---	---	---	---	---	0.174	---	0.174
0.96	798	882.46	0.00	---	---	---	---	---	---	---	0.176	---	0.176
1.00	837	882.50	0.00	---	---	---	---	---	---	---	0.178	---	0.178
1.03	875	882.53	0.00	---	---	---	---	---	---	---	0.180	---	0.180
1.06	914	882.56	0.00	---	---	---	---	---	---	---	0.182	---	0.182
1.09	952	882.59	0.00	---	---	---	---	---	---	---	0.183	---	0.183
1.12	991	882.62	0.00	---	---	---	---	---	---	---	0.185	---	0.185
1.16	1,029	882.66	0.00	---	---	---	---	---	---	---	0.187	---	0.187
1.19	1,067	882.69	0.00	---	---	---	---	---	---	---	0.189	---	0.189
1.22	1,106	882.72	0.00	---	---	---	---	---	---	---	0.191	---	0.191
1.25	1,144	882.75	0.00	---	---	---	---	---	---	---	0.192	---	0.192
1.28	1,183	882.78	0.00	---	---	---	---	---	---	---	0.194	---	0.194
1.32	1,220	882.82	0.00	---	---	---	---	---	---	---	0.196	---	0.196
1.35	1,257	882.85	0.00	---	---	---	---	---	---	---	0.198	---	0.198
1.38	1,294	882.88	0.00	---	---	---	---	---	---	---	0.199	---	0.199
1.41	1,331	882.91	0.00	---	---	---	---	---	---	---	0.201	---	0.201
1.44	1,368	882.94	0.00	---	---	---	---	---	---	---	0.203	---	0.203
1.48	1,405	882.98	0.00	---	---	---	---	---	---	---	0.205	---	0.205
1.51	1,442	883.01	0.00 ic	---	---	---	---	---	---	---	0.207	---	0.207
1.54	1,479	883.04	0.01 ic	---	---	---	---	---	---	---	0.208	---	0.215
1.57	1,516	883.07	0.02 ic	---	---	---	---	---	---	---	0.210	---	0.232
1.61	1,553	883.10	0.04 ic	---	---	---	---	---	---	---	0.212	---	0.256
1.64	1,588	883.14	0.07 ic	---	---	---	---	---	---	---	0.214	---	0.288
1.67	1,623	883.17	0.11 ic	---	---	---	---	---	---	---	0.216	---	0.327
1.70	1,658	883.20	0.16 ic	---	---	---	---	---	---	---	0.217	---	0.373
1.73	1,693	883.23	0.21 ic	---	---	---	---	---	---	---	0.219	---	0.425
1.77	1,728	883.27	0.26 ic	---	---	---	---	---	---	---	0.221	---	0.484
1.80	1,763	883.30	0.33 ic	---	---	---	---	---	---	---	0.223	---	0.548
1.83	1,798	883.33	0.39 ic	---	---	---	---	---	---	---	0.224	---	0.618
1.86	1,833	883.36	0.47 ic	---	---	---	---	---	---	---	0.226	---	0.691
1.89	1,868	883.39	0.54 ic	---	---	---	---	---	---	---	0.228	---	0.771
1.93	1,903	883.43	0.62 ic	---	---	---	---	---	---	---	0.230	---	0.854
1.96	1,935	883.46	0.71 ic	---	---	---	---	---	---	---	0.232	---	0.940
1.99	1,967	883.49	0.80 ic	---	---	---	---	---	---	---	0.233	---	1.029
2.02	1,999	883.52	0.89 ic	---	---	---	---	---	---	---	0.235	---	1.121
2.05	2,031	883.55	0.98 ic	---	---	---	---	---	---	---	0.237	---	1.215
2.09	2,063	883.59	1.07 ic	---	---	---	---	---	---	---	0.239	---	1.309
2.12	2,095	883.62	1.16 ic	---	---	---	---	---	---	---	0.240	---	1.404
2.15	2,126	883.65	1.26 ic	---	---	---	---	---	---	---	0.242	---	1.498
2.18	2,158	883.68	1.35 ic	---	---	---	---	---	---	---	0.244	---	1.591
2.21	2,190	883.71	1.43 ic	---	---	---	---	---	---	---	0.246	---	1.680
2.25	2,222	883.75	1.52 ic	---	---	---	---	---	---	---	0.248	---	1.765
2.28	2,249	883.78	1.59 ic	---	---	---	---	---	---	---	0.249	---	1.843
2.31	2,276	883.81	1.66 ic	---	---	---	---	---	---	---	0.251	---	1.912
2.34	2,304	883.84	1.72 ic	---	---	---	---	---	---	---	0.253	---	1.968
2.38	2,331	883.88	1.78 ic	---	---	---	---	---	---	---	0.255	---	2.033
2.41	2,358	883.91	1.84 ic	---	---	---	---	---	---	---	0.257	---	2.096
2.44	2,385	883.94	1.90 ic	---	---	---	---	---	---	---	0.258	---	2.157
2.47	2,412	883.97	1.96 ic	---	---	---	---	---	---	---	0.260	---	2.216
2.50	2,439	884.00	2.01 ic	---	---	---	---	---	---	---	0.262	---	2.274
2.54	2,466	884.04	2.07 ic	---	---	---	---	---	---	---	0.264	---	2.330
2.57	2,493	884.07	2.12 ic	---	---	---	---	---	---	---	0.265	---	2.385
2.60	2,511	884.10	2.17 ic	---	---	---	---	---	---	---	0.267	---	2.438
2.63	2,528	884.13	2.22 ic	---	---	---	---	---	---	---	0.269	---	2.490
2.66	2,546	884.16	2.27 ic	---	---	---	---	---	---	---	0.271	---	2.541
2.70	2,563	884.20	2.32 ic	---	---	---	---	---	---	---	0.273	---	2.591
2.73	2,581	884.23	2.37 ic	---	---	---	---	---	---	---	0.274	---	2.640
2.76	2,598	884.26	2.41 ic	---	---	---	---	---	---	---	0.276	---	2.688
2.79	2,616	884.29	2.46 ic	---	---	---	---	---	---	---	0.278	---	2.736
2.82	2,633	884.32	2.50 ic	---	---	---	---	---	---	---	0.280	---	2.782
2.86	2,651	884.36	2.55 ic	---	---	---	---	---	---	---	0.281	---	2.828
2.89	2,668	884.39	2.59 ic	---	---	---	---	---	---	---	0.283	---	2.873
2.92	2,683	884.42	2.63 ic	---	---	---	---	---	---	---	0.285	---	2.917
2.95	2,698	884.45	2.67 ic	---	---	---	---	---	---	---	0.287	---	2.960
2.99	2,713	884.49	2.71 ic	---	---	---	---	---	---	---	0.289	---	3.003
3.02	2,728	884.52	2.75 ic	---	---	---	---	---	---	---	0.290	---	3.045
3.05	2,743	884.55	2.79 ic	---	---	---	---	---	---	---	0.292	---	3.087
3.08	2,758	884.58	2.83 ic	---	---	---	---	---	---	---	0.294	---	3.128
3.11	2,772	884.61	2.87 ic	---	---	---	---	---	---	---	0.296	---	3.169
3.15	2,787	884.65	2.91 ic	---	---	---	---	---	---	---	0.298	---	3.209
3.18	2,802	884.68	2.95 ic	---	---	---	---	---	---	---	0.299	---	3.248

Continues on next page...

Subsurface #2

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.21	2,817	884.71	2.99 ic	---	---	---	---	---	---	---	0.301	---	3.287
3.21	2,817	884.71	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.987
3.21	2,817	884.71	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.989
3.21	2,817	884.71	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.990
3.21	2,817	884.71	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.991
3.21	2,818	884.71	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.992
3.22	2,818	884.72	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.993
3.22	2,818	884.72	2.99 ic	---	---	---	---	---	---	---	0.000	---	2.994
3.22	2,818	884.72	3.00 ic	---	---	---	---	---	---	---	0.000	---	2.995
3.22	2,818	884.72	3.00 ic	---	---	---	---	---	---	---	0.000	---	2.996
3.22	2,818	884.72	3.00 ic	---	---	---	---	---	---	---	0.301	---	3.299
3.25	2,819	884.75	3.03 ic	---	---	---	---	---	---	---	0.000	---	3.030
3.28	2,820	884.78	3.06 ic	---	---	---	---	---	---	---	0.000	---	3.061
3.30	2,822	884.80	3.09 ic	---	---	---	---	---	---	---	0.000	---	3.093
3.33	2,823	884.83	3.12 ic	---	---	---	---	---	---	---	0.000	---	3.124
3.36	2,824	884.86	3.15 ic	---	---	---	---	---	---	---	0.000	---	3.155
3.39	2,825	884.89	3.19 ic	---	---	---	---	---	---	---	0.000	---	3.185
3.42	2,826	884.92	3.22 ic	---	---	---	---	---	---	---	0.000	---	3.215
3.44	2,828	884.94	3.25 ic	---	---	---	---	---	---	---	0.000	---	3.245
3.47	2,829	884.97	3.27 ic	---	---	---	---	---	---	---	0.000	---	3.275
3.50	2,830	885.00	3.30 ic	---	---	---	---	---	---	---	0.301	---	3.605
3.55	2,833	885.05	3.36 ic	---	---	---	---	---	---	---	0.000	---	3.356
3.60	2,835	885.10	3.41 ic	---	---	---	---	---	---	---	0.000	---	3.407
3.65	2,838	885.15	3.46 ic	---	---	---	---	---	---	---	0.000	---	3.457
3.70	2,840	885.20	3.51 ic	---	---	---	---	---	---	---	0.000	---	3.507
3.75	2,843	885.25	3.56 ic	---	---	---	---	---	---	---	0.000	---	3.555
3.80	2,845	885.30	3.60 ic	---	---	---	---	---	---	---	0.000	---	3.603
3.85	2,848	885.35	3.65 ic	---	---	---	---	---	---	---	0.000	---	3.651
3.90	2,850	885.40	3.70 ic	---	---	---	---	---	---	---	0.000	---	3.698
3.95	2,853	885.45	3.74 ic	---	---	---	---	---	---	---	0.000	---	3.744
4.00	2,855	885.50	3.79 ic	---	---	---	---	---	---	---	0.301	---	4.091
4.05	2,858	885.55	3.84 ic	---	---	---	---	---	---	---	0.000	---	3.835
4.10	2,860	885.60	3.88 ic	---	---	---	---	---	---	---	0.000	---	3.880
4.15	2,863	885.65	3.92 ic	---	---	---	---	---	---	---	0.000	---	3.924
4.20	2,865	885.70	3.97 ic	---	---	---	---	---	---	---	0.000	---	3.968
4.25	2,868	885.75	4.01 ic	---	---	---	---	---	---	---	0.000	---	4.011
4.30	2,870	885.80	4.05 ic	---	---	---	---	---	---	---	0.000	---	4.054
4.35	2,873	885.85	4.10 ic	---	---	---	---	---	---	---	0.000	---	4.096
4.40	2,875	885.90	4.14 ic	---	---	---	---	---	---	---	0.000	---	4.138
4.45	2,878	885.95	4.18 ic	---	---	---	---	---	---	---	0.000	---	4.179
4.50	2,880	886.00	4.22 ic	---	---	---	---	---	---	---	0.301	---	4.522

...End

Pond Report

Pond No. 1 - Subsurface #3

Pond Data

UG Chambers -Invert elev. = 100.00 ft, Rise x Span = 2.21 x 3.92 ft, Barrel Len = 37.00 ft, No. Barrels = 13, Slope = 0.00%, Headers = No
Encasement -Invert elev. = 99.50 ft, Width = 4.42 ft, Height = 3.21 ft, Voids = 35.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	99.50	n/a	0	0
0.32	99.82	n/a	239	239
0.64	100.14	n/a	413	652
0.96	100.46	n/a	628	1,280
1.28	100.78	n/a	616	1,896
1.60	101.10	n/a	594	2,490
1.93	101.43	n/a	561	3,051
2.25	101.75	n/a	512	3,563
2.57	102.07	n/a	435	3,998
2.89	102.39	n/a	280	4,278
3.21	102.71	n/a	239	4,517

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	6.00	0.00	0.00
Span (in)	= 4.00	6.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 101.50	101.50	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 4.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	99.50	0.00	0.00	---	---	---	---	---	---	0.000	---	0.000
0.03	24	99.53	0.00	0.00	---	---	---	---	---	---	0.200	---	0.200
0.06	48	99.56	0.00	0.00	---	---	---	---	---	---	0.203	---	0.203
0.10	72	99.60	0.00	0.00	---	---	---	---	---	---	0.205	---	0.205
0.13	96	99.63	0.00	0.00	---	---	---	---	---	---	0.208	---	0.208
0.16	119	99.66	0.00	0.00	---	---	---	---	---	---	0.211	---	0.211
0.19	143	99.69	0.00	0.00	---	---	---	---	---	---	0.214	---	0.214
0.22	167	99.72	0.00	0.00	---	---	---	---	---	---	0.217	---	0.217
0.26	191	99.76	0.00	0.00	---	---	---	---	---	---	0.220	---	0.220
0.29	215	99.79	0.00	0.00	---	---	---	---	---	---	0.223	---	0.223
0.32	239	99.82	0.00	0.00	---	---	---	---	---	---	0.225	---	0.225
0.35	280	99.85	0.00	0.00	---	---	---	---	---	---	0.228	---	0.228
0.39	321	99.89	0.00	0.00	---	---	---	---	---	---	0.231	---	0.231
0.42	363	99.92	0.00	0.00	---	---	---	---	---	---	0.234	---	0.234
0.45	404	99.95	0.00	0.00	---	---	---	---	---	---	0.237	---	0.237
0.48	445	99.98	0.00	0.00	---	---	---	---	---	---	0.240	---	0.240
0.51	487	100.01	0.00	0.00	---	---	---	---	---	---	0.243	---	0.243
0.55	528	100.05	0.00	0.00	---	---	---	---	---	---	0.245	---	0.245
0.58	569	100.08	0.00	0.00	---	---	---	---	---	---	0.248	---	0.248
0.61	610	100.11	0.00	0.00	---	---	---	---	---	---	0.251	---	0.251
0.64	652	100.14	0.00	0.00	---	---	---	---	---	---	0.254	---	0.254
0.67	715	100.17	0.00	0.00	---	---	---	---	---	---	0.257	---	0.257
0.71	777	100.21	0.00	0.00	---	---	---	---	---	---	0.260	---	0.260
0.74	840	100.24	0.00	0.00	---	---	---	---	---	---	0.263	---	0.263
0.77	903	100.27	0.00	0.00	---	---	---	---	---	---	0.265	---	0.265
0.80	966	100.30	0.00	0.00	---	---	---	---	---	---	0.268	---	0.268
0.83	1,029	100.33	0.00	0.00	---	---	---	---	---	---	0.271	---	0.271
0.87	1,092	100.37	0.00	0.00	---	---	---	---	---	---	0.274	---	0.274
0.90	1,154	100.40	0.00	0.00	---	---	---	---	---	---	0.277	---	0.277
0.93	1,217	100.43	0.00	0.00	---	---	---	---	---	---	0.280	---	0.280
0.96	1,280	100.46	0.00	0.00	---	---	---	---	---	---	0.283	---	0.283
1.00	1,342	100.50	0.00	0.00	---	---	---	---	---	---	0.285	---	0.285

Continues on next page...

Subsurface #3

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
1.03	1,403	100.53	0.00	0.00	---	---	---	---	---	---	0.288	---	0.288
1.06	1,465	100.56	0.00	0.00	---	---	---	---	---	---	0.291	---	0.291
1.09	1,527	100.59	0.00	0.00	---	---	---	---	---	---	0.294	---	0.294
1.12	1,588	100.62	0.00	0.00	---	---	---	---	---	---	0.297	---	0.297
1.16	1,650	100.66	0.00	0.00	---	---	---	---	---	---	0.300	---	0.300
1.19	1,711	100.69	0.00	0.00	---	---	---	---	---	---	0.303	---	0.303
1.22	1,773	100.72	0.00	0.00	---	---	---	---	---	---	0.306	---	0.306
1.25	1,835	100.75	0.00	0.00	---	---	---	---	---	---	0.308	---	0.308
1.28	1,896	100.78	0.00	0.00	---	---	---	---	---	---	0.311	---	0.311
1.32	1,956	100.82	0.00	0.00	---	---	---	---	---	---	0.314	---	0.314
1.35	2,015	100.85	0.00	0.00	---	---	---	---	---	---	0.317	---	0.317
1.38	2,074	100.88	0.00	0.00	---	---	---	---	---	---	0.320	---	0.320
1.41	2,134	100.91	0.00	0.00	---	---	---	---	---	---	0.323	---	0.323
1.44	2,193	100.94	0.00	0.00	---	---	---	---	---	---	0.326	---	0.326
1.48	2,253	100.98	0.00	0.00	---	---	---	---	---	---	0.328	---	0.328
1.51	2,312	101.01	0.00	0.00	---	---	---	---	---	---	0.331	---	0.331
1.54	2,371	101.04	0.00	0.00	---	---	---	---	---	---	0.334	---	0.334
1.57	2,431	101.07	0.00	0.00	---	---	---	---	---	---	0.337	---	0.337
1.60	2,490	101.10	0.00	0.00	---	---	---	---	---	---	0.340	---	0.340
1.64	2,546	101.14	0.00	0.00	---	---	---	---	---	---	0.343	---	0.343
1.67	2,602	101.17	0.00	0.00	---	---	---	---	---	---	0.346	---	0.346
1.70	2,659	101.20	0.00	0.00	---	---	---	---	---	---	0.348	---	0.348
1.73	2,715	101.23	0.00	0.00	---	---	---	---	---	---	0.351	---	0.351
1.77	2,771	101.27	0.00	0.00	---	---	---	---	---	---	0.354	---	0.354
1.80	2,827	101.30	0.00	0.00	---	---	---	---	---	---	0.357	---	0.357
1.83	2,883	101.33	0.00	0.00	---	---	---	---	---	---	0.360	---	0.360
1.86	2,939	101.36	0.00	0.00	---	---	---	---	---	---	0.363	---	0.363
1.89	2,995	101.39	0.00	0.00	---	---	---	---	---	---	0.366	---	0.366
1.93	3,051	101.43	0.00	0.00	---	---	---	---	---	---	0.368	---	0.368
1.96	3,102	101.46	0.00	0.00	---	---	---	---	---	---	0.371	---	0.371
1.99	3,154	101.49	0.00	0.00	---	---	---	---	---	---	0.374	---	0.374
2.02	3,205	101.52	0.00 ic	0.00 ic	---	---	---	---	---	---	0.377	---	0.380
2.05	3,256	101.55	0.01 ic	0.01 ic	---	---	---	---	---	---	0.380	---	0.396
2.09	3,307	101.59	0.02 ic	0.02 ic	---	---	---	---	---	---	0.383	---	0.424
2.12	3,358	101.62	0.03 ic	0.04 ic	---	---	---	---	---	---	0.386	---	0.460
2.15	3,409	101.65	0.05 ic	0.07 ic	---	---	---	---	---	---	0.388	---	0.505
2.18	3,461	101.68	0.07 ic	0.09 ic	---	---	---	---	---	---	0.391	---	0.557
2.21	3,512	101.71	0.09 ic	0.13 ic	---	---	---	---	---	---	0.394	---	0.616
2.25	3,563	101.75	0.12 ic	0.16 ic	---	---	---	---	---	---	0.397	---	0.678
2.28	3,606	101.78	0.14 ic	0.20 ic	---	---	---	---	---	---	0.400	---	0.743
2.31	3,650	101.81	0.16 ic	0.24 ic	---	---	---	---	---	---	0.403	---	0.808
2.34	3,693	101.84	0.18 ic	0.29 ic	---	---	---	---	---	---	0.406	---	0.869
2.38	3,737	101.88	0.19 ic	0.33 ic	---	---	---	---	---	---	0.408	---	0.930
2.41	3,780	101.91	0.21 ic	0.37 ic	---	---	---	---	---	---	0.411	---	0.990
2.44	3,824	101.94	0.22 ic	0.41 ic	---	---	---	---	---	---	0.414	---	1.046
2.47	3,867	101.97	0.23 ic	0.45 ic	---	---	---	---	---	---	0.417	---	1.098
2.50	3,911	102.00	0.24 ic	0.48 ic	---	---	---	---	---	---	0.420	---	1.140
2.54	3,954	102.04	0.26 ic	0.51 ic	---	---	---	---	---	---	0.423	---	1.183
2.57	3,998	102.07	0.27 ic	0.53 ic	---	---	---	---	---	---	0.426	---	1.225
2.60	4,026	102.10	0.28 ic	0.56 ic	---	---	---	---	---	---	0.428	---	1.264
2.63	4,054	102.13	0.29 ic	0.58 ic	---	---	---	---	---	---	0.431	---	1.302
2.66	4,082	102.16	0.30 ic	0.61 ic	---	---	---	---	---	---	0.434	---	1.339
2.70	4,110	102.20	0.31 ic	0.63 ic	---	---	---	---	---	---	0.437	---	1.374
2.73	4,138	102.23	0.31 ic	0.65 ic	---	---	---	---	---	---	0.440	---	1.409
2.76	4,166	102.26	0.32 ic	0.68 ic	---	---	---	---	---	---	0.443	---	1.442
2.79	4,194	102.29	0.33 ic	0.70 ic	---	---	---	---	---	---	0.446	---	1.474
2.82	4,222	102.32	0.34 ic	0.72 ic	---	---	---	---	---	---	0.448	---	1.506
2.86	4,250	102.36	0.35 ic	0.74 ic	---	---	---	---	---	---	0.451	---	1.537
2.89	4,278	102.39	0.36 ic	0.76 ic	---	---	---	---	---	---	0.454	---	1.567
2.92	4,302	102.42	0.36 ic	0.77 ic	---	---	---	---	---	---	0.457	---	1.596
2.95	4,326	102.45	0.37 ic	0.79 ic	---	---	---	---	---	---	0.460	---	1.625
2.99	4,350	102.49	0.38 ic	0.81 ic	---	---	---	---	---	---	0.463	---	1.653
3.02	4,373	102.52	0.39 ic	0.83 ic	---	---	---	---	---	---	0.466	---	1.681
3.05	4,397	102.55	0.39 ic	0.85 ic	---	---	---	---	---	---	0.468	---	1.708
3.08	4,421	102.58	0.40 ic	0.86 ic	---	---	---	---	---	---	0.471	---	1.735
3.11	4,445	102.61	0.41 ic	0.88 ic	---	---	---	---	---	---	0.474	---	1.762
3.15	4,469	102.65	0.42 ic	0.89 ic	---	---	---	---	---	---	0.477	---	1.787
3.18	4,493	102.68	0.42 ic	0.91 ic	---	---	---	---	---	---	0.480	---	1.813
3.21	4,517	102.71	0.43 ic	0.93 ic	---	---	---	---	---	---	0.483	---	1.838

...End

INSTRUCTIONS:

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location:

	A	B	C	D	E
	BMP ¹	TSS Removal Rate ¹	Starting TSS Load*	Amount Removed (B*C)	Remaining Load (C-D)
TSS Removal Calculation	Pavement Sweeping	0.05	1.00	0.05	95.0%
	Proprietary Device	0.95	0.95	0.90	4.8%
	Infiltration Basin	0.8	0.05	0.04	0.9%

Total TSS Removal = **to be Completed for**

Project:
 Prepared By:
 Date:

*Equals remaining load from previous BMP (E) which enters the BMP

INSTRUCTIONS:

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location:

	A	B	C	D	E
	BMP ¹	TSS Removal Rate ¹	Starting TSS Load*	Amount Removed (B*C)	Remaining Load (C-D)
TSS Removal	Pavement Sweeping	0.05	1.00	0.05	95.0%
	Proprietary Device	0.95	0.95	0.90	4.8%
	Infiltration Basin	0.8	0.05	0.04	0.9%

Total TSS Removal =

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project:
 Prepared By:
 Date:

*Equals remaining load from previous BMP (E) which enters the BMP

INSTRUCTIONS:

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location:

	A	B	C	D	E
	BMP ¹	TSS Removal Rate ¹	Starting TSS Load*	Amount Removed (B*C)	Remaining Load (C-D)
TSS Removal	Pavement Sweeping	0.05	1.00	0.05	95.0%
	Proprietary Device	0.97	0.95	0.92	2.9%
	Infiltration Basin	0.8	0.03	0.02	0.6%

Total TSS Removal =

Separate form needs to be Completed for Each Outlet or BMP Train

Project:
 Prepared By:
 Date:

*Equals remaining load from previous BMP (E) which enters the BMP

Brief Stormceptor Sizing Report - WQU #1

Project Information & Location			
Project Name	12 & 16 School St	Project Number	690647
City	Templeton	State/ Province	Massachusetts
Country	United States of America	Date	9/29/2021
Designer Information		EOR Information (optional)	
Name	Jim Lyons	Name	Brandon Li
Company	Contech ES	Company	Kelly Engineering
Phone #	413-246-5151	Phone #	617-843-4333
Email	jlyons@conteches.com	Email	bli@kellyengineeringgroup.com

Stormwater Treatment Recommendation

The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Site Name	WQU #1
Target TSS Removal (%)	80
TSS Removal (%) Provided	95
Recommended Stormceptor Model	STC 450i

The recommended Stormceptor Model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

Stormceptor Sizing Summary	
Stormceptor Model	% TSS Removal Provided
STC 450i	95
STC 900	98
STC 1200	98
STC 1800	98
STC 2400	99
STC 3600	99
STC 4800	99
STC 6000	99
STC 7200	99
STC 11000	100
STC 13000	100
STC 16000	100

Sizing Details			
Drainage Area		Water Quality Objective	
Total Area (acres)	0.13	TSS Removal (%)	80.0
Imperviousness %	100.0	Runoff Volume Capture (%)	
Rainfall		Oil Spill Capture Volume (Gal)	
Station Name	BIRCH HILL DAM	Peak Conveyed Flow Rate (CFS)	
State/Province	Massachusetts	Water Quality Flow Rate (CFS)	0.16
Station ID #	0666	Up Stream Storage	
Years of Records	58	Storage (ac-ft)	Discharge (cfs)
Latitude	42°38'0"N	0.000	0.000
Longitude	72°7'0"W	Up Stream Flow Diversion	
		Max. Flow to Stormceptor (cfs)	

Particle Size Distribution (PSD) The selected PSD defines TSS removal		
OK-110		
Particle Diameter (microns)	Distribution %	Specific Gravity
1.0	0.0	2.65
53.0	3.0	2.65
75.0	15.0	2.65
88.0	25.0	2.65
106.0	41.0	2.65
125.0	15.0	2.65
150.0	1.0	2.65
212.0	0.0	2.65

Notes
<ul style="list-style-type: none"> Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules. Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed. For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

For Stormceptor Specifications and Drawings Please Visit:
<https://www.conteches.com/technical-guides/search?filter=1WBC005EYX>

Brief Stormceptor Sizing Report - WQU #2

Project Information & Location			
Project Name	12 & 16 School St	Project Number	690647
City	Templeton	State/ Province	Massachusetts
Country	United States of America	Date	9/29/2021
Designer Information		EOR Information (optional)	
Name	Jim Lyons	Name	Brandon Li
Company	Contech ES	Company	Kelly Engineering
Phone #	413-246-5151	Phone #	617-843-4333
Email	jlyons@conteches.com	Email	bli@kellyengineeringgroup.com

Stormwater Treatment Recommendation

The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Site Name	WQU #2
Target TSS Removal (%)	80
TSS Removal (%) Provided	96
Recommended Stormceptor Model	STC 450i

The recommended Stormceptor Model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

Stormceptor Sizing Summary	
Stormceptor Model	% TSS Removal Provided
STC 450i	96
STC 900	98
STC 1200	98
STC 1800	98
STC 2400	99
STC 3600	99
STC 4800	99
STC 6000	99
STC 7200	100
STC 11000	100
STC 13000	100
STC 16000	100

Sizing Details			
Drainage Area		Water Quality Objective	
Total Area (acres)	0.09	TSS Removal (%)	80.0
Imperviousness %	100.0	Runoff Volume Capture (%)	
Rainfall		Oil Spill Capture Volume (Gal)	
Station Name	BIRCH HILL DAM	Peak Conveyed Flow Rate (CFS)	
State/Province	Massachusetts	Water Quality Flow Rate (CFS)	0.11
Station ID #	0666	Up Stream Storage	
Years of Records	58	Storage (ac-ft)	Discharge (cfs)
Latitude	42°38'0"N	0.000	0.000
Longitude	72°7'0"W	Up Stream Flow Diversion	
		Max. Flow to Stormceptor (cfs)	

Particle Size Distribution (PSD) The selected PSD defines TSS removal		
OK-110		
Particle Diameter (microns)	Distribution %	Specific Gravity
1.0	0.0	2.65
53.0	3.0	2.65
75.0	15.0	2.65
88.0	25.0	2.65
106.0	41.0	2.65
125.0	15.0	2.65
150.0	1.0	2.65
212.0	0.0	2.65

Notes
<ul style="list-style-type: none"> Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules. Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed. For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

For Stormceptor Specifications and Drawings Please Visit:
<https://www.conteches.com/technical-guides/search?filter=1WBC005EYX>

**CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD**

**12 & 16 SCHOOL ST
TEMPLETON, MA**

Area **0.12 ac**
Weighted C **0.9**
 t_c **5 min**
CDS Model **1515-3**

Unit Site Designation **WQU #3**
Rainfall Station # **71**

CDS Treatment Capacity **1.0 cfs**

<u>Rainfall Intensity¹</u> (in/hr)	<u>Percent Rainfall Volume¹</u>	<u>Cumulative Rainfall Volume</u>	<u>Total Flowrate (cfs)</u>	<u>Treated Flowrate (cfs)</u>	<u>Incremental Removal (%)</u>
0.08	37.6%	37.6%	0.01	0.01	37.6
0.16	22.6%	60.2%	0.02	0.02	22.6
0.24	11.9%	72.1%	0.03	0.03	11.9
0.32	7.6%	79.7%	0.03	0.03	7.6
0.40	4.3%	84.1%	0.04	0.04	4.3
0.48	2.3%	86.4%	0.05	0.05	2.3
0.56	1.8%	88.2%	0.06	0.06	1.8
0.64	1.4%	89.6%	0.07	0.07	1.3
0.72	0.9%	90.4%	0.08	0.08	0.8
0.80	1.2%	91.6%	0.09	0.09	1.1
0.88	1.5%	93.1%	0.10	0.10	1.4
0.96	0.9%	94.0%	0.10	0.10	0.9
1.04	0.4%	94.4%	0.11	0.11	0.4
1.12	0.4%	94.8%	0.12	0.12	0.4
1.20	0.6%	95.4%	0.13	0.13	0.6
1.28	0.3%	95.7%	0.14	0.14	0.3
1.36	0.2%	95.9%	0.15	0.15	0.2
1.44	0.9%	96.7%	0.16	0.16	0.8
1.52	0.6%	97.3%	0.16	0.16	0.5
1.60	0.4%	97.7%	0.17	0.17	0.4
1.80	0.2%	97.9%	0.19	0.19	0.2
					98.3
Removal Efficiency Adjustment ² =					0.0%
Predicted % Annual Rainfall Treated =					98.8%
Predicted Net Annual Load Removal Efficiency =					98.3%

1 - Based on 13 years of 15 minute precipitation data for Station 0666, Birch Hill Dam, Worcester County, MA

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

Brief Stormceptor Sizing Report - WQU #4

Project Information & Location			
Project Name	12 & 16 School St	Project Number	690647
City	Templeton	State/ Province	Massachusetts
Country	United States of America	Date	9/29/2021
Designer Information		EOR Information (optional)	
Name	Jim Lyons	Name	Brandon Li
Company	Contech ES	Company	Kelly Engineering
Phone #	413-246-5151	Phone #	617-843-4333
Email	jlyons@conteches.com	Email	bli@kellyengineeringgroup.com

Stormwater Treatment Recommendation

The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Site Name	WQU #4
Target TSS Removal (%)	80
TSS Removal (%) Provided	95
Recommended Stormceptor Model	STC 450i

The recommended Stormceptor Model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

Stormceptor Sizing Summary	
Stormceptor Model	% TSS Removal Provided
STC 450i	95
STC 900	98
STC 1200	98
STC 1800	98
STC 2400	99
STC 3600	99
STC 4800	99
STC 6000	99
STC 7200	99
STC 11000	100
STC 13000	100
STC 16000	100

Sizing Details			
Drainage Area		Water Quality Objective	
Total Area (acres)	0.13	TSS Removal (%)	80.0
Imperviousness %	100.0	Runoff Volume Capture (%)	
Rainfall		Oil Spill Capture Volume (Gal)	
Station Name	BIRCH HILL DAM	Peak Conveyed Flow Rate (CFS)	
State/Province	Massachusetts	Water Quality Flow Rate (CFS)	0.16
Station ID #	0666	Up Stream Storage	
Years of Records	58	Storage (ac-ft)	Discharge (cfs)
Latitude	42°38'0"N	0.000	0.000
Longitude	72°7'0"W	Up Stream Flow Diversion	
		Max. Flow to Stormceptor (cfs)	

Particle Size Distribution (PSD) The selected PSD defines TSS removal		
OK-110		
Particle Diameter (microns)	Distribution %	Specific Gravity
1.0	0.0	2.65
53.0	3.0	2.65
75.0	15.0	2.65
88.0	25.0	2.65
106.0	41.0	2.65
125.0	15.0	2.65
150.0	1.0	2.65
212.0	0.0	2.65

Notes
<ul style="list-style-type: none"> Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules. Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed. For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

For Stormceptor Specifications and Drawings Please Visit:
<https://www.conteches.com/technical-guides/search?filter=1WBC005EYX>

**CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD**

**12 & 16 SCHOOL ST
TEMPLETON, MA**

Area **0.29 ac**
Weighted C **0.9**
 t_c **5 min**
CDS Model **1515-3**

Unit Site Designation **WQU #5**
Rainfall Station # **71**

CDS Treatment Capacity **1.0 cfs**

<u>Rainfall Intensity¹</u> (in/hr)	<u>Percent Rainfall Volume¹</u>	<u>Cumulative Rainfall Volume</u>	<u>Total Flowrate (cfs)</u>	<u>Treated Flowrate (cfs)</u>	<u>Incremental Removal (%)</u>
0.08	37.6%	37.6%	0.02	0.02	37.6
0.16	22.6%	60.2%	0.04	0.04	22.5
0.24	11.9%	72.1%	0.06	0.06	11.7
0.32	7.6%	79.7%	0.08	0.08	7.4
0.40	4.3%	84.1%	0.10	0.10	4.2
0.48	2.3%	86.4%	0.13	0.13	2.2
0.56	1.8%	88.2%	0.15	0.15	1.7
0.64	1.4%	89.6%	0.17	0.17	1.3
0.72	0.9%	90.4%	0.19	0.19	0.8
0.80	1.2%	91.6%	0.21	0.21	1.1
0.88	1.5%	93.1%	0.23	0.23	1.3
0.96	0.9%	94.0%	0.25	0.25	0.8
1.04	0.4%	94.4%	0.27	0.27	0.3
1.12	0.4%	94.8%	0.29	0.29	0.4
1.20	0.6%	95.4%	0.31	0.31	0.5
1.28	0.3%	95.7%	0.33	0.33	0.3
1.36	0.2%	95.9%	0.35	0.35	0.1
1.44	0.9%	96.7%	0.38	0.38	0.7
1.52	0.6%	97.3%	0.40	0.40	0.5
1.60	0.4%	97.7%	0.42	0.42	0.3
1.80	0.2%	97.9%	0.47	0.47	0.2
					96.6
					Removal Efficiency Adjustment ² = 0.0%
					Predicted % Annual Rainfall Treated = 98.8%
					Predicted Net Annual Load Removal Efficiency = 96.6%

1 - Based on 13 years of 15 minute precipitation data for Station 0666, Birch Hill Dam, Worcester County, MA

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

**Baldwinville School Apartments
12 & 16 School Street
Templeton, MA**

**STORMWATER MANAGEMENT SYSTEM
OPERATION AND MAINTENANCE PLAN
&
LONG-TERM POLLUTION PREVENTION PLAN
09/29/2021**

Prepared by:

KELLY ENGINEERING GROUP, INC.
Zero Campanelli Drive
Braintree, Massachusetts 02184

OWNER AND RESPONSIBLE PARTY:
CC MPZ School Street LLC
831 Beacon Street, # 164
Newton Center, MA 02459

Note: If ownership of this property changes then the new owner becomes the responsible party.
The Owner may assign responsibility to a tenant on the property.

Introduction

Considerable time, effort and cost has been spent in the design and construction of the stormwater management system for this development. The stormwater management system consists of a number of Best Management Practices (BMP's). These BMP's combine to ensure that storm runoff from the site will not damage the sensitive environmental resources surrounding the site. In order to ensure that these BMP's operate as designed it is very important that the procedures in this operation and maintenance plan be followed. Most of these operation procedures require observation and measurement; however, at certain times more extensive maintenance measures may be needed. The following is an itemization of each of these BMP's and their maintenance needs.

The party responsible for maintenance should contract with a maintenance organization capable of performing the more extensive measures such as pumping of catch basin sumps, etc.

BMP No. 1 – Paved Road Surface/Parking Lot Area:

- Regularly pick up and remove litter from the parking lot area, landscaped islands and perimeter landscaped areas and water quality areas.
- The paved area is to be swept a minimum of two times per year, at least once during April and again during September with a high efficiency vacuum sweeper or a regenerative air sweeper. If a mechanical sweeper is used, the paved area is to be swept a minimum of once a month.

BMP No. 2 - Deep Sump Catch Basins & Outlet Control Structures, Outfalls and Drainage Channells

- Basins are to be inspected 4 times per year.
 1. Verify that tees are secure and free-flowing.
 2. Measure depth of sediment below water line.
- Basins are to be cleaned whenever sediment and hydrocarbons are observed. Basins are to be cleaned a minimum of twice per year. One of these cleanings shall occur before April 15th of each year and one shall occur before September 15th of each year. Basins may be cleaned either using a clamshell or a vacuum pump.
- All liquid shall be pumped from the sump of each basin at least once per year.
- All sediments and hydrocarbons should be properly handled and disposed of, in accordance with local, state and federal guidelines and regulations.

Inlet and outlet structures.
- On a regular basis, the inlet pipe and outlet structure shall be checked for debris and removed as necessary to ensure unobstructed flow of water.
- Rip Rap outfalls and drainage channels shall be inspected at least once annually for any conditions which could adversely affect their function. Remove debris, trash, and any accumulated sediment that impedes water flow.

Note: See catch basin detail for explanation of terms.

BMP No. 3 –Water Quality Inlets:

- Basins are to be inspected 4 times per year by owner or designee.
 1. Verify that tees are secure and free-flowing.
 2. Measure depth of sediment below water line.
- Basins are to be cleaned whenever 18” of sediment and hydrocarbons are observed. Basins are to be cleaned a minimum of twice per year. One of these cleanings shall occur before April 15th of each year and one shall occur before September 15th of each year. Basins may be cleaned either using a clamshell or a vacuum pump.
- All liquid shall be pumped from the sump of each basin at least once per year.
- All sediments and hydrocarbons shall be properly handled and disposed of, in accordance with local, state and federal guidelines and regulations.

If any problems are encountered with the Contech Units, contact the manufacturer.

BMP No. 4 - Subsurface Recharge:

- The inlet pipe and observation basin shall be inspected 4 times a year. Any accumulated debris shall be removed.
- Inspect recharge facilities following a rainfall event greater than 2.5 inches in a 24 hour period.
- If standing water is observed for more than 48 hours following a storm event, immediately retain a qualified professional to assess whether infiltration function has been lost and develop recommended corrective actions.
- Inspect Separator Row Twice Per Year. If sediment is observed greater than 2” The Separator Row shall be cleaned out with a Jet Vac through the drain manhole entering each system.

Snow Removal:

- There shall be no plowing or stock piling of snow within all resource areas and any area subject to the jurisdiction of local and state regulations without the prior written permission from state or local approving authority.
- Road salts and de-icing materials shall be stored on impervious pads and covered to protect from wind and precipitation.
- No de-icing materials shall be stored nor used within all resource areas and any area subject to the jurisdiction of local and state regulations without the prior written permission from state or local approving authority.
- No de-icing materials shall be stored within Zone I, Zone II, Zone A, and 200 feet from a river or estuary.

Storage and Use of Chemicals:

- No pesticides, herbicides, nor insecticides shall be stored nor used within all resource areas and any area subject to the jurisdiction of local and state regulations without the prior written permission from state or local approving authority.
- Chemical storage on site shall be limited. Any chemicals that must be stored shall be stored in a secure area in accordance with Local and State regulations.

Hazardous Waste:

- Containment – In the event of a discharge or spill of oil or another hazardous material, outlets to stormwater management systems shall be plugged so that hazardous material do not enter resource areas.
- Reporting - In the event of a discharge or spill of oil or another hazardous material, responsible facility personnel, oil spill and/or hazardous material removal organizations, federal, state, and local regulatory agencies, the Town of Abington Board of Health, fire and police departments, and the EPA National Response Center 1-800-424-8802 shall be rapidly notified.
- Hazardous Waste – All hazardous waste materials will be disposed of in the manner specified by local, state and/or federal regulations and by the manufacturer of such products.
- There shall be no illicit discharges to the stormwater management system.

Material and Waste Storage, Handling and Management:

- All waste materials will be collected and stored in a securely lidded metal dumpster from a solid waste management company licensed to do business by the state and the town. The dumpster will comply with all local and state solid waste management regulations.

Training for Long Term Pollution Prevention Plan:

- All staff or personnel involved and responsible for implementing the Stormwater Management System Operations and Maintenance Plan and the Long-Term Pollution Prevention Plan shall be properly trained as required under the DEP Stormwater Management Regulations. Training shall be documented with records kept with other stormwater maintenance records.

Mosquito Control:

- During all inspections observe any standing water within each BMP. Eliminate standing water by making repairs to the ground surface.
- If mosquitos become a problem a management plan shall be implemented . See attached “Mosquito Control In Best Management Practices document for guidance.

Pet Waste Management:

- Pooper-scooper laws for pets shall be followed.
- Never dump pet waste into storm drains, catch basins, or the drainage system.
- Pet waste shall be scooped up and disposed of properly in the garbage.

Lawn and Garden activities:

- There shall be no exterior storage of fertilizers, pesticides, herbicides, or insecticides. No pesticides, herbicides, nor insecticides shall be stored nor used within any resource areas its buffers, and any area subject to the jurisdiction of local and state regulations without the prior written permission from state or local approving authority.
- Fertilizers and pesticides shall be applied properly, sparingly, and outside any resource areas and its

buffers.

To reduce the impact of fertilizers, consider the following tips;

- Don't fertilize before a rain storm.
- Consider using organic fertilizers. They release nutrients more slowly.
- Test soils before applying fertilizers. Some soils may not need fertilizers. A standard soil test costs \$9.00. (Call the UMass Extension Soil Testing Lab at 413-545-2311 or download a soil test order form at <http://www.umass.edu/plsoils/soiltest/>.)

Stormceptor[®] STC
Operation and Maintenance Guide



Adjustment of the Stormceptor can be performed by lifting the upper sections free of the excavated area, re-leveling the base and re-installing the sections. Damaged sections and gaskets should be repaired or replaced as necessary. Once the Stormceptor has been constructed, any lift holes must be plugged with mortar.

12. Maintenance

12.1. Health and Safety

The Stormceptor System has been designed considering safety first. It is recommended that confined space entry protocols be followed if entry to the unit is required. In addition, the fiberglass insert has the following health and safety features:

- Designed to withstand the weight of personnel
- A safety grate is located over the 24 inch (600 mm) riser pipe opening
- Ladder rungs can be provided for entry into the unit, if required

12.2. Maintenance Procedures

Maintenance of the Stormceptor system is performed using vacuum trucks. No entry into the unit is required for maintenance (in most cases). The vacuum service industry is a well-established sector of the service industry that cleans underground tanks, sewers and catch basins. Costs to clean a Stormceptor will vary based on the size of unit and transportation distances.

The need for maintenance can be determined easily by inspecting the unit from the surface. The depth of oil in the unit can be determined by inserting a dipstick in the oil inspection/cleanout port.

Similarly, the depth of sediment can be measured from the surface without entry into the Stormceptor via a dipstick tube equipped with a ball valve. This tube would be inserted through the riser pipe. Maintenance should be performed once the sediment depth exceeds the guideline values provided in the Table 4.

Table 4. Sediment Depths Indicating Required Servicing*

Particle Size	Specific Gravity
Model	Sediment Depth inches (mm)
450i	8 (200)
900	8 (200)
1200	10 (250)
1800	15 (381)
2400	12 (300)
3600	17 (430)
4800	15 (380)
6000	18 (460)
7200	15 (381)
11000	17 (380)
13000	20 (500)
16000	17 (380)
* based on 15% of the Stormceptor unit's total storage	

Although annual servicing is recommended, the frequency of maintenance may need to be increased or reduced based on local conditions (i.e. if the unit is filling up with sediment more quickly than projected, maintenance may be required semi-annually; conversely once the site has stabilized maintenance may only be required every two or three years).

Oil is removed through the oil inspection/cleanout port and sediment is removed through the riser pipe. Alternatively oil could be removed from the 24 inches (600 mm) opening if water is removed from the lower chamber to lower the oil level below the drop pipes.

The following procedures should be taken when cleaning out Stormceptor:

1. Check for oil through the oil cleanout port
2. Remove any oil separately using a small portable pump
3. Decant the water from the unit to the sanitary sewer, if permitted by the local regulating authority, or into a separate containment tank
4. Remove the sludge from the bottom of the unit using the vacuum truck
5. Re-fill Stormceptor with water where required by the local jurisdiction

12.3. Submerged Stormceptor

Careful attention should be paid to maintenance of the Submerged Stormceptor System. In cases where the storm drain system is submerged, there is a requirement to plug both the inlet and outlet pipes to economically clean out the unit.

12.4. Hydrocarbon Spills

The Stormceptor is often installed in areas where the potential for spills is great. The Stormceptor System should be cleaned immediately after a spill occurs by a licensed liquid waste hauler.

12.5. Disposal

Requirements for the disposal of material from the Stormceptor System are similar to that of any other stormwater Best Management Practice (BMP) where permitted. Disposal options for the sediment may range from disposal in a sanitary trunk sewer upstream of a sewage treatment plant, to disposal in a sanitary landfill site. Petroleum waste products collected in the Stormceptor (free oil/chemical/fuel spills) should be removed by a licensed waste management company.

12.6. Oil Sheens

With a steady influx of water with high concentrations of oil, a sheen may be noticeable at the Stormceptor outlet. This may occur because a rainbow or sheen can be seen at very small oil concentrations (<10 mg/L). Stormceptor will remove over 98% of all free oil spills from storm sewer systems for dry weather or frequently occurring runoff events.

The appearance of a sheen at the outlet with high influent oil concentrations does not mean the unit is not working to this level of removal. In addition, if the influent oil is emulsified the Stormceptor will not be able to remove it. The Stormceptor is designed for free oil removal and not emulsified conditions.



SUPPORT

Drawings and specifications are available at www.ContechES.com.

Site-specific design support is available from our engineers.

©2020 Contech Engineered Solutions LLC, a QUIKRETE Company

Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater, and earth stabilization products. For information, visit www.ContechES.com or call 800.338.1122

NOTHING IN THIS CATALOG SHOULD BE CONSTRUED AS A WARRANTY. APPLICATIONS SUGGESTED HEREIN ARE DESCRIBED ONLY TO HELP READERS MAKE THEIR OWN EVALUATIONS AND DECISIONS, AND ARE NEITHER GUARANTEES NOR WARRANTIES OF SUITABILITY FOR ANY APPLICATION. CONTECH MAKES NO WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, RELATED TO THE APPLICATIONS, MATERIALS, COATINGS, OR PRODUCTS DISCUSSED HEREIN. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR ANY PARTICULAR PURPOSE ARE DISCLAIMED BY CONTECH. SEE CONTECH'S CONDITIONS OF SALE (AVAILABLE AT WWW.CONTECHES.COM/COS) FOR MORE INFORMATION.

CDS[®] Inspection and Maintenance Guide



Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allow both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine whether the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

Cleaning of a CDS system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes.



CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y ³	m ³
CDS1515	3	0.9	3.0	0.9	0.5	0.4
CDS2015	4	1.2	3.0	0.9	0.9	0.7
CDS2015	5	1.3	3.0	0.9	1.3	1.0
CDS2020	5	1.3	3.5	1.1	1.3	1.0
CDS2025	5	1.3	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3025	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3
CDS5640	10	3.0	6.3	1.9	8.7	6.7
CDS5653	10	3.0	7.7	2.3	8.7	6.7
CDS5668	10	3.0	9.3	2.8	8.7	6.7
CDS5678	10	3.0	10.3	3.1	8.7	6.7

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities



Support

- Drawings and specifications are available at www.contechstormwater.com.
- Site-specific design support is available from our engineers.

©2017 Contech Engineered Solutions LLC, a QUIKRETE Company

Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater, earth stabilization and wastewater treatment products. For information, visit www.ContechES.com or call 800.338.1122

NOTHING IN THIS CATALOG SHOULD BE CONSTRUED AS AN EXPRESSED WARRANTY OR AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. SEE THE CONTECH STANDARD CONDITION OF SALES (VIEWABLE AT WWW.CONTECHES.COM/COS) FOR MORE INFORMATION.

The product(s) described may be protected by one or more of the following US patents: 5,322,629; 5,624,576; 5,707,527; 5,759,415; 5,788,848; 5,985,157; 6,027,639; 6,350,374; 6,406,218; 6,641,720; 6,511,595; 6,649,048; 6,991,114; 6,998,038; 7,186,058; 7,296,692; 7,297,266; 7,517,450 related foreign patents or other patents pending.

CC MPZ SCHOOL STREET LLC

PROJECT LOCATION: 12 & 16 School Street, Templeton, MA

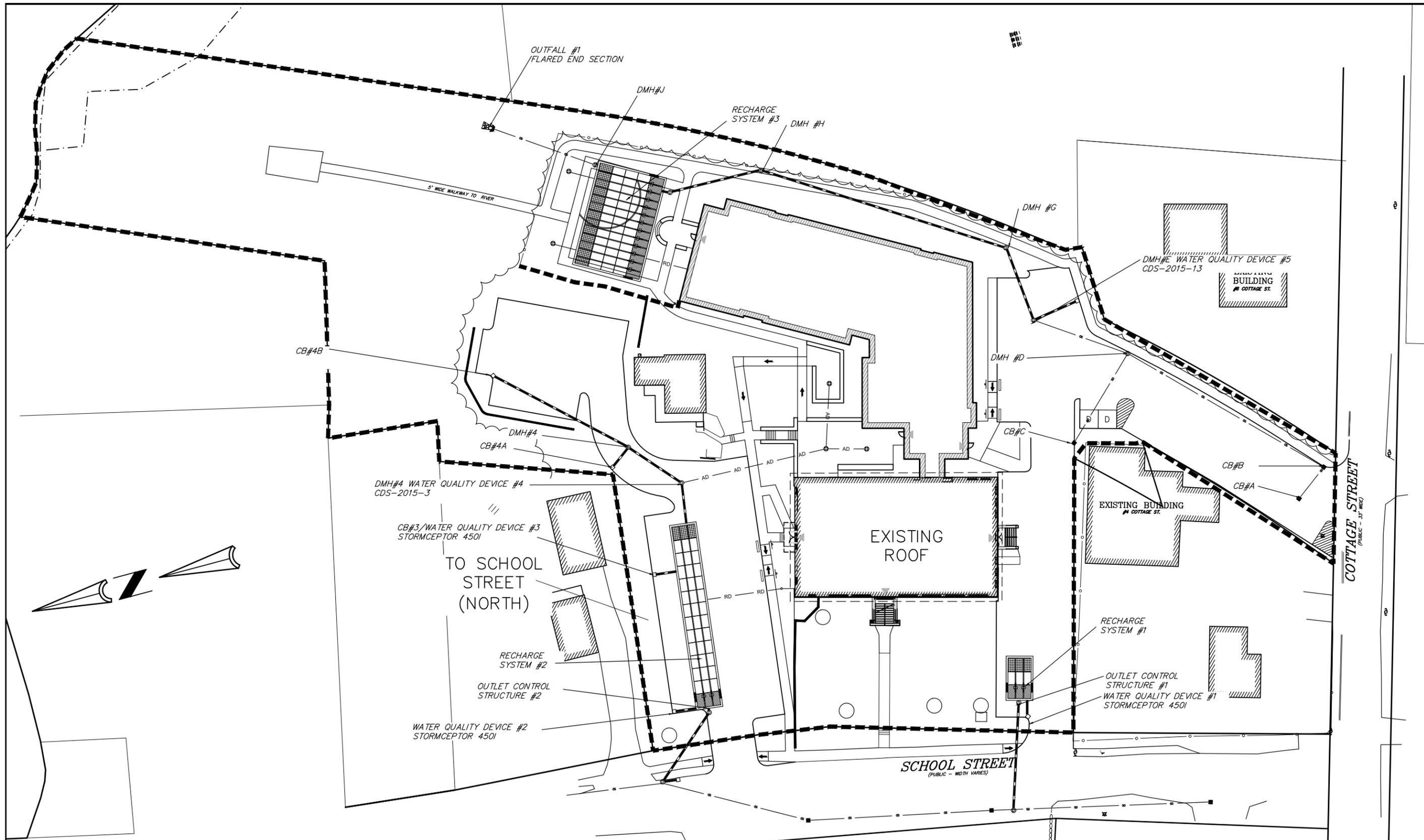
STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES - INSPECTION SCHEDULE AND EVALUATION CHECKLIST

Best Management Practice	Inspection Frequency (1)	Date I	Inspector	Minimum Maintenance and Key Items to Check (1)	Cleaning/Repair Needed yes__ no__ (list items)	Date of Cleaning /Repair	Perform ed By
Street Sweeping	4x per year			Vacuum sweeper			
Deep Sump and Hooded Catch Basins	4x per year			Remove sediment 1x per year or if >6"			
Recharge Chambers	4x per year			Inspect after 2.5" rain in 24 hours, drain time less than 3 days			
CDS Stormceptor Water Quality Device	4x per year			Per manufacturer Requirements (see Attached)			
Rip Rap Outfalls And Drainage Channel	2x per year first year, annually thereafter			Inspect outfalls for signs of erosion Remove all debris from outfalls and drainage channels			
Outlet Control Structure	2x per year first year, annually thereafter			Inspect inlets and outlets			

(1) Refer to the Operation and Maintenance Plan for recommendations regarding frequency of inspections and maintenance of specific BMP's.

recommendations regarding frequency for inspection and maintenance of specific BMPs.

Stormwater Control Manager/Environmental Monitor: _____ **Stamp/Signature**



BALDWINVILLE SCHOOL APARTMENTS
 12 & 16 SCHOOL STREET
 TEMPLETON, MA

SCALE: 1" = 60'
 DATE: 09/29/21
 2020-162-BMP

BMP LOCATION MAP



KELLY ENGINEERING GROUP
 civil engineering consultants
 0 Campanelli Drive, Braintree, MA 02184
 Phone: 781-843-4333 www.kellyengineeringgroup.com

KELLY ENGINEERING GROUP, INC.
Zero Campanelli Drive-Braintree-MA 02184 Phone 781 843 4333

Attachment D
Miscellaneous



Home Site Map Organization Search NWS All NOAA Go

- General Information
- Homepage
- Progress Reports
- FAQ
- Glossary

NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: MA

Data description

Data type: Units: Time series type:

Select location

1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude: Longitude:

b) By station (list of MA stations):

c) By address

2) Use map (if ESRI interactive map is not loading, try adding the host: <https://js.arcgis.com/> to the firewall, or contact us at hdsc.questions@noaa.gov):

a) Select location
Move crosshair or double click

b) Click on station icon
 Show stations on map

Location information:
Name: Baldwinville, Massachusetts, USA*
Latitude: 42.6059°
Longitude: -72.0754°
Elevation: 867.6 ft **

* Source: ESRI Maps
** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION NOAA Atlas 14, Volume 10, Version 3

PF tabular PF graphical Supplementary information

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.318 (0.253-0.399)	0.376 (0.299-0.472)	0.471 (0.374-0.594)	0.549 (0.432-0.696)	0.657 (0.499-0.870)	0.738 (0.591-1.00)	0.823 (0.591-1.16)	0.918 (0.622-1.32)	1.05 (0.684-1.57)	1.16 (0.736-1.77)
10-min	0.450 (0.359-0.565)	0.532 (0.424-0.669)	0.666 (0.528-0.840)	0.777 (0.612-0.986)	0.930 (0.707-1.23)	1.05 (0.776-1.42)	1.17 (0.837-1.64)	1.30 (0.882-1.87)	1.49 (0.969-2.23)	1.65 (1.04-2.51)
15-min	0.530 (0.422-0.665)	0.626 (0.498-0.787)	0.783 (0.620-0.987)	0.914 (0.720-1.16)	1.09 (0.832-1.45)	1.23 (0.914-1.67)	1.37 (0.985-1.93)	1.53 (1.04-2.20)	1.76 (1.14-2.62)	1.94 (1.23-2.95)
30-min	0.727 (0.579-0.913)	0.858 (0.683-1.08)	1.07 (0.851-1.35)	1.25 (0.986-1.59)	1.50 (1.14-1.98)	1.68 (1.25-2.28)	1.88 (1.35-2.64)	2.09 (1.42-3.01)	2.40 (1.56-3.58)	2.65 (1.68-4.04)
60-min	0.924 (0.736-1.16)	1.09 (0.868-1.37)	1.36 (1.08-1.72)	1.59 (1.25-2.01)	1.90 (1.44-2.52)	2.13 (1.58-2.89)	2.38 (1.71-3.34)	2.65 (1.80-3.82)	3.05 (1.98-4.55)	3.37 (2.13-5.13)
2-hr	1.15 (0.923-1.44)	1.37 (1.10-1.71)	1.74 (1.38-2.17)	2.04 (1.62-2.57)	2.45 (1.88-3.24)	2.76 (2.07-3.73)	3.09 (2.24-4.35)	3.48 (2.36-4.98)	4.06 (2.65-6.03)	4.56 (2.89-6.90)
3-hr	1.31 (1.05-1.62)	1.57 (1.26-1.95)	1.99 (1.59-2.48)	2.34 (1.86-2.94)	2.83 (2.17-3.73)	3.18 (2.40-4.30)	3.57 (2.61-5.03)	4.04 (2.75-5.77)	4.76 (3.10-7.03)	5.37 (3.41-8.10)
6-hr	1.63 (1.32-2.01)	1.96 (1.58-2.42)	2.50 (2.02-3.10)	2.95 (2.37-3.68)	3.58 (2.77-4.69)	4.03 (3.06-5.42)	4.53 (3.34-6.36)	5.15 (3.52-7.30)	6.09 (3.99-8.95)	6.91 (4.41-10.4)
12-hr	2.01 (1.64-2.47)	2.43 (1.98-2.98)	3.11 (2.52-3.83)	3.67 (2.96-4.55)	4.45 (3.46-5.80)	5.02 (3.83-6.70)	5.65 (4.17-7.87)	6.41 (4.40-9.03)	7.59 (4.99-11.1)	8.60 (5.51-12.8)
24-hr	2.39 (1.96-2.91)	2.90 (2.38-3.53)	3.72 (3.04-4.55)	4.41 (3.58-5.42)	5.35 (4.19-6.92)	6.05 (4.63-8.02)	6.81 (5.05-9.42)	7.73 (5.33-10.8)	9.15 (6.03-13.3)	10.4 (6.65-15.3)
2-day	2.72 (2.25-3.29)	3.32 (2.74-4.02)	4.30 (3.53-5.22)	5.11 (4.17-6.25)	6.23 (4.91-8.01)	7.06 (5.43-9.29)	7.95 (5.93-10.9)	9.05 (6.26-12.6)	10.7 (7.10-15.5)	12.2 (7.84-17.9)
3-day	2.97 (2.46-3.58)	3.63 (3.00-4.37)	4.70 (3.88-5.69)	5.59 (4.58-6.80)	6.81 (5.38-8.72)	7.72 (5.96-10.1)	8.70 (6.51-11.9)	9.90 (6.87-13.7)	11.7 (7.79-16.9)	13.3 (8.60-19.5)
4-day	3.20 (2.66-3.84)	3.89 (3.23-4.68)	5.03 (4.16-6.07)	5.98 (4.91-7.25)	7.28 (5.76-9.29)	8.24 (6.37-10.8)	9.28 (6.96-12.7)	10.6 (7.33-14.6)	12.5 (8.30-17.9)	14.2 (9.16-20.7)
7-day	3.85 (3.22-4.60)	4.62 (3.86-5.52)	5.87 (4.88-7.04)	6.91 (5.70-8.34)	8.33 (6.63-10.6)	9.39 (7.29-12.2)	10.5 (7.91-14.3)	11.9 (8.31-16.3)	14.0 (9.32-19.9)	15.8 (10.2-22.9)
10-day	4.50 (3.78-5.36)	5.30 (4.44-6.31)	6.60 (5.51-7.89)	7.68 (6.36-9.23)	9.16 (7.30-11.5)	10.3 (7.98-13.2)	11.5 (8.59-15.4)	12.8 (8.99-17.6)	14.9 (9.95-21.1)	16.7 (10.8-24.1)
20-day	6.48 (5.47-7.66)	7.30 (6.16-8.64)	8.65 (7.27-10.3)	9.77 (8.15-11.7)	11.3 (9.05-14.1)	12.5 (9.72-15.8)	13.7 (10.2-18.0)	15.0 (10.6-20.3)	16.8 (11.3-23.6)	18.2 (11.8-26.1)
30-day	8.12 (6.89-9.56)	8.97 (7.60-10.6)	10.4 (8.74-12.2)	11.5 (9.64-13.7)	13.1 (10.5-16.1)	14.3 (11.2-18.0)	15.5 (11.6-20.2)	16.7 (11.8-22.5)	18.3 (12.3-25.6)	19.5 (12.7-27.8)
45-day	10.2 (8.66-11.9)	11.1 (9.41-13.0)	12.5 (10.6-14.7)	13.7 (11.5-16.3)	15.4 (12.4-18.8)	16.7 (13.0-20.8)	18.0 (13.4-23.1)	19.1 (13.6-25.6)	20.5 (13.8-28.5)	21.4 (14.0-30.5)

Attention must be given to ensure consistency in units. In particular, the Target Depth Factors must be converted to feet.

NRCS HYDROLOGIC SOIL TYPE	APPROX. SOIL TEXTURE	TARGET DEPTH FACTOR (F)
A	sand	0.6-inch
B	loam	0.35-inch
C	silty loam	0.25-inch
D	clay	0.1-inch

Table 2.3.2: Recharge Target Depth by Hydrologic Soil Group

When a site contains multiple Hydrologic Soil Groups, determine the *Required Recharge Volume* for each impervious area by Hydrologic Soil Group and then add the volumes together.

Example: Assume a ten (10) acre site. 5.0 acres are proposed to be developed for a retail use. A section of the entrance roadway is to be bridged over a stream that is classified as land under water. As such, the bridging is subject to the Wetlands Protection Act Regulations, and the Stormwater Management Standards apply to stormwater runoff from all proposed roads, parking areas, and rooftops. Of the 5.0 acres proposed to be developed, 2 acres of impervious surfaces are proposed atop Hydrologic Soil Group (HSG) “A” soils, 1 acre of impervious surfaces atop HSG “B” soil, 1.5 acres of impervious surfaces atop HSG “C” soil, and 0.5 acres are proposed to be landscaped area. The remaining 5.0 acres, located on HSG “A” soil, are proposed to remain forested. Determine the *Required Recharge Volume*.

Solution: The *Required Recharge Volume* is determined only for the impervious surfaces. The 5.0-acre forested area and the 0.5-acre landscaped area are not impervious areas. Although converted from forest, landscaped area is pervious area for purposes of Standard 3. Use *Equation (1)* to determine the *Required Recharge Volume* for each Hydrologic Soil Group covered by impervious area. Add together the *Required Recharge Volumes* determined for each HSG.

$$Rv = F \times \text{impervious area}$$

$$Rv = [(F_{\text{HSG "A"}}) (\text{Area}_1)] + [(F_{\text{HSG "B"}}) (\text{Area}_2)] + [(F_{\text{HSG "C"}}) (\text{Area}_3)] + [(F_{\text{HSG "D"}}) (\text{Area}_4)] \text{ Equation (2)}$$

$$Rv = [(0.6\text{-in}/12)(2 \text{ acres})] + [(0.35\text{-in}/12)(1 \text{ acre})] + [(0.25\text{-in}/12)(1.5 \text{ acres})] + [(0.1\text{-in}/12)(0 \text{ acres})]$$

$$Rv = 0.1605 \text{ acre-feet}$$

$$Rv = 0.1605 \text{ acre-feet} \times 43560 \text{ square feet/acre-feet} = 6,991 \text{ cubic feet or } 258.9 \text{ cubic yards}$$

Type III 24-hr Rainfall=1.29"

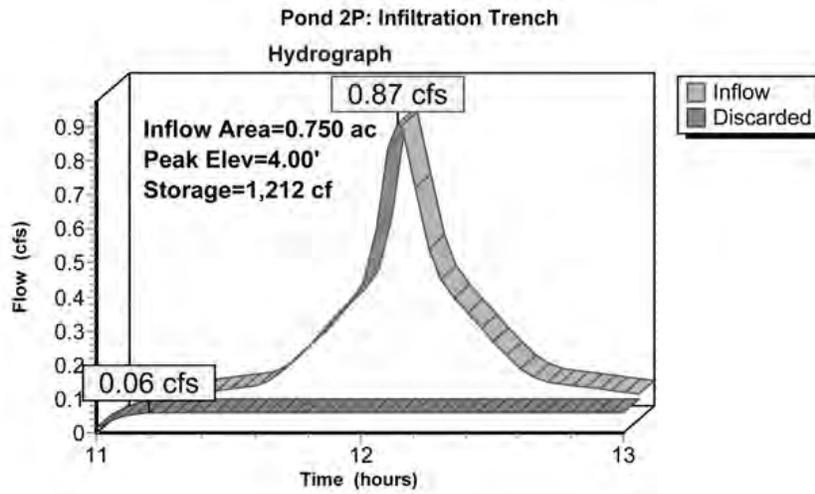


Table 2.3.3. 1982 Rawls Rates¹⁸

Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate Inches/Hour
Sand	A	8.27
Loamy Sand	A	2.41
Sandy Loam	B	1.02
Loam	B	0.52
Silt Loam	C	0.27
Sandy Clay Loam	C	0.17
Clay Loam	D	0.09
Silty Clay Loam	D	0.06
Sandy Clay	D	0.05
Silty Clay	D	0.04
Clay	D	0.02

¹⁸ Rawls, Brakensiek and Saxton, 1982

72° 4' 36" W

72° 4' 18" W

42° 36' 22" N

42° 36' 22" N

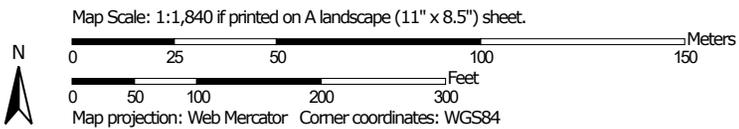


42° 36' 13" N

42° 36' 13" N

72° 4' 36" W

72° 4' 18" W



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Massachusetts,
 Northwestern Part
 Survey Area Data: Version 14, Jun 10, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2019—Jul 9, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
59A	Bucksport and Wonsqueak mucks, 0 to 2 percent slopes	B/D	0.2	1.4%
280B	Adams loamy sand, 3 to 8 percent slopes, wooded	A	8.8	67.2%
281B	Allagash fine sandy loam, 3 to 8 percent slopes	B	1.5	11.6%
282D	Colton gravelly loamy sand, 15 to 25 percent slopes	A	1.2	8.8%
282E	Colton gravelly loamy sand, 25 to 35 percent slopes	A	1.4	11.0%
Totals for Area of Interest			13.1	100.0%

Worcester County, Massachusetts, Northwestern Part

280B—Adams loamy sand, 3 to 8 percent slopes, wooded

Map Unit Setting

National map unit symbol: 2w40c

Elevation: 250 to 2,940 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Colton

Percent of map unit: 6 percent

Landform: Outwash deltas

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Croghan

Percent of map unit: 5 percent

Landform: Outwash deltas

Landform position (two-dimensional): Footslope, backslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Allagash

Percent of map unit: 3 percent

Landform: Outwash deltas

Landform position (two-dimensional): Footslope, backslope

Landform position (three-dimensional): Base slope, side slope

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Nicholville

Percent of map unit: 1 percent

Landform: Outwash deltas

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Data Source Information

Soil Survey Area: Worcester County, Massachusetts, Northwestern Part

Survey Area Data: Version 14, Jun 10, 2020

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

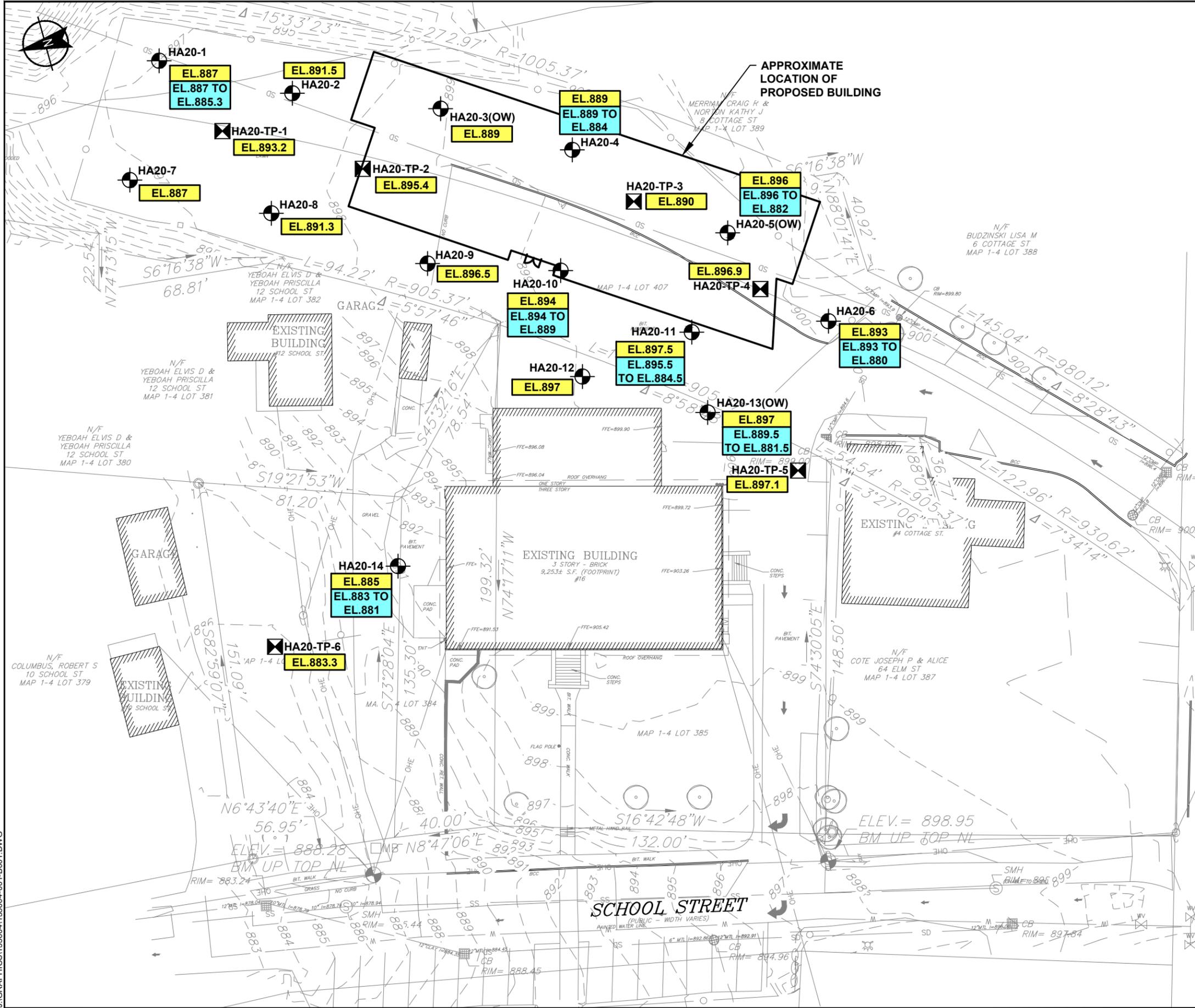
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



- LEGEND**
- HA20-TP-1 DESIGNATION AND APPROXIMATE LOCATION OF TEST PIT EXCAVATED BY SEABOARD DRILLING, INC. ON 30 NOVEMBER 2020 AND MONITORED BY HALEY & ALDRICH, INC.
 - HA20-3(OW) DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY SEABOARD DRILLING, INC. ON 17 TO 23 NOVEMBER 2020 AND MONITORED BY HALEY & ALDRICH, INC.
 - (OW) INDICATES OBSERVATION WELL INSTALLED IN COMPLETED BOREHOLE
 - EL.896 APPROXIMATE ELEVATION OF TOP OF FOUNDATION BEARING SOIL
 - EL.893 TO EL.885 APPROXIMATE TOP TO BOTTOM ELEVATIONS OF CLAY/SILT LAYER (GLACIOLACUSTRINE DEPOSITS)

- NOTES**
1. BASE PLAN TAKEN FROM ELECTRONIC FILE TITLED "ACAD-2020-162-SU00.dwg", PROVIDED BY KELLY ENGINEERING, INC. ON 16 NOVEMBER 2020.
 2. PROPOSED BUILDING FOOTPRINT TAKEN FROM ELECTRONIC FILE TITLED "XREF-LA00.dwg", PROVIDED BY KELLY ENGINEERING, INC. ON 3 DECEMBER 2020.
 3. ELEVATIONS ARE IN FEET AND ARE REFERENCED IN NORTH AMERICAN DATUM OF 1988 (NAVD 88).



HALEY ALDRICH BALDWINVILLE SCHOOL REDEVELOPMENT
TEMPLETON, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

TABLE 1 - SUMMARY OF SUBSURFACE INFORMATION

BALDWINVILLE SCHOOL REDEVELOPMENT
 TEMPLETON, MASSACHUSETTS
 FILE NO. 0135604-001

TEST BORING/TEST PIT DESIGNATION	GROUND ELEVATION (FT, NAVD 88)	DEPTH OF EXPLORATION (FT)	FILL		GLACIOLACUSTRINE DEPOSITS		GLACIOFLUVIAL DEPOSITS		GLACIAL TILL		GROUNDWATER	
			THICKNESS (FT)	EL. OF TOP (FT, NAVD 88)	THICKNESS (FT)	EL. OF TOP (FT, NAVD 88)	THICKNESS (FT)	EL. OF TOP (FT, NAVD 88)	THICKNESS (FT)	EL. OF TOP (FT, NAVD 88)	DEPTH (FT)	ELEVATION (FT, NAVD 88)
TEST BORINGS												
HA20-1	897.0	27.0	10.0	897.0	1.8	887.0	NE	NE	>15.2	885.3	NE	NE
HA20-2	897.5	18.3	6.0	897.5	5.0	891.5	NE	NE	>7.3	886.5	NE	NE
HA20-3(OW)	899.0	22.0	10.0	899.0	3.0	889.0	NE	NE	>9.0	886.0	13.2	885.8
HA20-4	899.0	22.0	10.0	899.0	5.0	889.0	5.0	884.0	>2.0	879.0	10.0	889.0
HA20-5(OW)	900.0	22.0	4.0	900.0	10.0	896.0	NE	NE	>4.0	882.0	10.3	889.7
HA20-6	900.0	22.0	7.0	900.0	13.0	893.0	NE	NE	>2.0	880.0	10.0	890.0
HA20-7	897.0	22.0	10.0	897.0	NE	NE	8.0	887.0	>4.0	879.0	NE	NE
HA20-8	897.5	19.0	6.2	897.5	10.3	891.3	NE	NE	>2.5	881.0	15.0	882.5
HA20-9	898.5	17.0	2.0	898.5	10.5	896.5	NE	NE	>4.5	886.0	NE	NE
HA20-10	899.0	32.0	4.7	898.7	14.0	894.0	NE	NE	>13.0	880.0	10.0	889.0
HA20-11	899.5	22.0	1.8	899.3	16.5	897.5	NE	NE	>3.5	881.0	15.0	884.5
HA20-12	899.0	22.0	1.8	898.8	NE	NE	16.0	897.0	>4.0	881.0	10.0	889.0
HA20-13(OW)	899.5	24.0	1.9	899.1	15.5	897.0	NE	NE	>6.0	881.5	6.7	892.8
HA20-14	891.0	17.0	5.8	890.8	7.0	885.0	NE	NE	>4.0	878.0	NE	NE
TEST PITS												
HA20-TP-1	897.5	8.5	4.3	897.5	>4.2	893.2	NE	NE	NE	NE	NE	NE
HA20-TP-2	898.0	7.6	2.6	898.0	>5.0	895.4	NE	NE	NE	NE	NE	NE
HA20-TP-3	899.5	10.5	9.5	899.5	>2.0	890.0	NE	NE	NE	NE	NE	NE
HA20-TP-4	900.0	7.0	3.1	900.0	>3.9	896.9	NE	NE	NE	NE	NE	NE
HA20-TP-5	900.0	7.0	2.9	900.0	>4.1	897.1	NE	NE	NE	NE	NE	NE
HA20-TP-6	886.0	10.5	2.7	886.0	6.0	883.3	NE	NE	>1.8	877.3	NE	NE

NOTES:

1. DATA IN THIS TABLE IS APPROXIMATE.
2. ASSUMED ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN DATUM OF 1988 (NAVD 88).
3. GROUNDWATER ELEVATIONS ARE BASED ON RECENT MEASUREMENTS IN OBSERVATION WELLS, OTHERWISE GROUNDWATER DEPTHS BASED ON VISUAL OBSERVATIONS DURING DRILLING.

ABBREVIATIONS:

NE: NOT ENCOUNTERED.

(OW): OBSERVATION WELL INSTALLED IN COMPLETED TEST BORING.

Project BALDWINVILLE SCHOOL REDEVELOPMENT
Location 16 SCHOOL ST, TEMPLETON, MA
Client CC MPZ SCHOOL STREET LLC
Contractor SEABOARD DRILLING, INC.
Equipment Used Komatsu PC40

File No. 0135604-001
H&A Rep A. Fleming
Date 30 Nov 2020
Weather

Ground El.: 897.5

Location: See plan

Groundwater depths/entry rates (in./min.): Not encountered

El. Datum: NAVD 88

Depth (ft)	Sample ID	Stratum Change Elev./Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Tests								
					% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength				
0		897.1 0.4	OL/OH SP	Dark brown to brown sandy ORGANIC SOIL (OL/OH), mps 0.3 in., no structure, no odor, moist, trace small roots, 0% oversized			5	60	30	5								
				- FILL - Light brown to brown poorly graded SAND (SP), mps 1.7 in., no structure, no odor, moist, 10-15% pockets of black silty sand containing trace slag and cinders from 3.8 ft to 4.2 ft, 0% oversized														
2				- FILL -														
4		893.2 4.3	SP	Light brown to tan poorly graded SAND (SP), mps 0.3 in., no structure, no odor, moist, 0% oversized				20	75	5								
				- GLACIOLACUSTRINE DEPOSITS -														
6																		
8		889.0 8.5		BOTTOM OF EXPLORATION 8.5 FT														

Obstructions:	Remarks:	Field Tests	
		Dilatancy	R - Rapid S - Slow N - None
		Toughness	L - Low M - Medium H - High
		Plasticity	N - Nonplastic L - Low M - Medium H - High
		Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit		Boulders			Test Pit Dimensions (ft)	
at depth	ft	Diameter (in.)	Number	Approx. Vol. (cu.ft)	Pit Length x Width (ft)	20.0x12.7
measured after	hours elapsed	12 to 24	=	=	Pit Depth (ft)	8.5
		over 24	=	=		

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Project BALDWINVILLE SCHOOL REDEVELOPMENT
Location 16 SCHOOL ST, TEMPLETON, MA
Client CC MPZ SCHOOL STREET LLC
Contractor SEABOARD DRILLING, INC.
Equipment Used Komatsu PC40

File No. 0135604-001
H&A Rep A. Fleming
Date 30 Nov 2020
Weather

Ground El.: 898.0

Location: See plan

Groundwater depths/entry rates (in./min.): Not encountered

El. Datum: NAVD 88

Depth (ft)	Sample ID	Stratum Change Elev./Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel						Sand				Field Tests				
					% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength					
0		897.7 0.3	OL/OH SM	Dark brown sandy ORGANIC SOIL (OL/OH), mps 0.2 in., no structure, no odor, moist, 0% oversized - FILL - Brown silty SAND (SM), mps 0.8 in., no structure, no odor, moist, trace gravel, 0% oversized - FILL -								30	70						
2		896.1 1.9	SM	Black silty SAND (SM), mps 2.5 in., no structure, no odor, moist, trace slag and cinders, 0% oversized - FILL -			5	15	45	20	15								
		895.4 2.6	SP	Light brown to tan poorly graded SAND (SP), mps 3.2 in., no structure, no odor, moist, 0% oversized, trace cobbles - GLACIOLACUSTRINE DEPOSITS -						25	70	5							
6		890.4 7.6		BOTTOM OF EXPLORATION 7.6 FT															

Obstructions:	Remarks:	Field Tests	
		Dilatancy	R - Rapid S - Slow N - None
		Toughness	L - Low M - Medium H - High
		Plasticity	N - Nonplastic L - Low M - Medium H - High
		Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit		Boulders			Test Pit Dimensions (ft)	
at depth	ft	Diameter (in.)	Number	Approx. Vol. (cu.ft)	Pit Length x Width (ft)	20.0x12.4
measured after	hours elapsed	12 to 24	=	=	Pit Depth (ft)	7.6
		over 24	=	=		

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

Project BALDWINVILLE SCHOOL REDEVELOPMENT
Location 16 SCHOOL ST, TEMPLETON, MA
Client CC MPZ SCHOOL STREET LLC
Contractor SEABOARD DRILLING, INC.
Equipment Used Komatsu PC40

File No. 0135604-001
H&A Rep A. Fleming
Date 30 Nov 2020
Weather

Ground El.: 886.0

Location: See plan

Groundwater depths/entry rates (in./min.): Not encountered

El. Datum: NAVD 88

Depth (ft)	Sample ID	Stratum Change Elev./Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color GROUP NAME & SYMBOL, % oversized, maximum particle size, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Tests				
					% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Dark brown to black sandy ORGANIC SOIL (OL/OH), mps 1.3 in., no structure, no odor, moist, 0% oversized - FILL -					30	70				
2		884.1 1.9	SM	Black to red brown silty SAND (SM), mps 2.0 in., no structure, no odor, moist, trace cinders, 0% oversized	5	5	15	30	25	20				
		883.3 2.7	SM	- FILL - Light brown silty SAND (SM), mps 1.2 in., no structure, no odor, moist, 0% oversized, 5-10% silt - GLACIOLACUSTRINE DEPOSITS -				10	60	30				
8		877.3 8.7	SM	Gray brown to light brown silty SAND (SM), mps 10.0 in., no structure, no odor, moist, 5 % oversized, trace to 5% cobbles - GLACIAL TILL -	5	5	5	10	40	35				
10		875.5 10.5		BOTTOM OF EXPLORATION 10.5 FT										

Obstructions:	Remarks:	Field Tests	
		Dilatancy	R - Rapid S - Slow N - None
		Toughness	L - Low M - Medium H - High
		Plasticity	N - Nonplastic L - Low M - Medium H - High
		Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit		Boulders			Test Pit Dimensions (ft)	
at depth	ft	Diameter (in.)	Number	Approx. Vol. (cu.ft)	Pit Length x Width (ft)	2.0x11.7
measured after	hours elapsed	12 to 24	=	=	Pit Depth (ft)	10.5
		over 24	=	=		

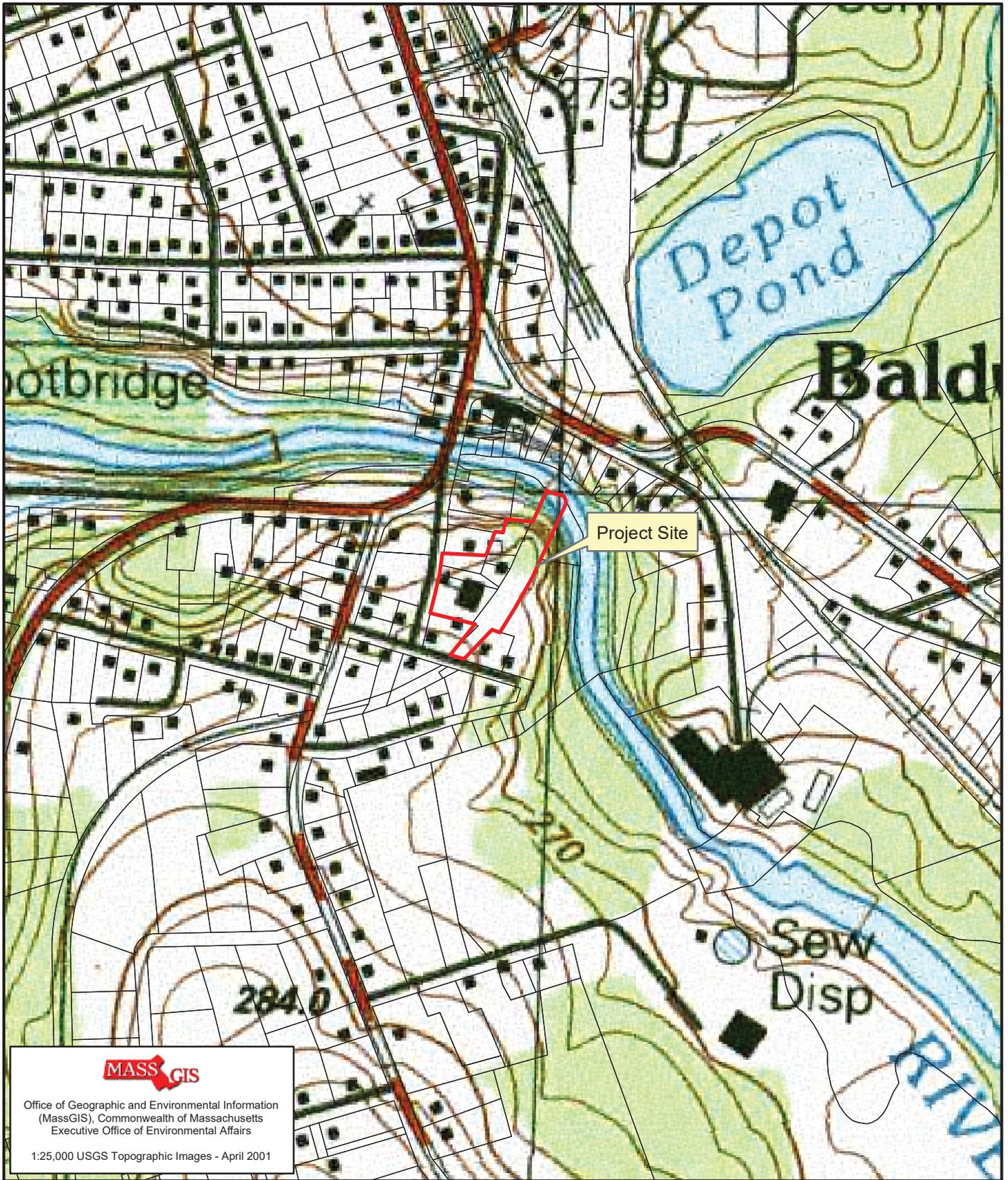
NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

DRAFT

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION <small>(Density/consistency, color, GROUP NAME, max. particle size[†], structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)</small>	Gravel		Sand				Field Test			
							% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
20	10 26 26 30	S8 19	20.0 22.0	SM		Very dense brown to gray brown silty SAND (SM), mps 0.9 in., no structure, no odor, moist	5	5	5	10	45	30				
						- GLACIAL TILL -										
25	28 48 47 47	S9 20	25.0 27.0	SM		Very dense gray silty SAND (SM), mps 0.7 in., no structure, no odor, moist	5	5	5	5	45	35				
					870.0 27.0	BOTTOM OF EXPLORATION 27.0 FT 4.25" HSA spun to 25.0'.										

H&A-TEST BORING-09 REV PLOG-HA-LIB09-BOS STANDARD ONLY GLB GREAT PYRAMID H&A GPJ \\HALEY\ALDRICH.COM\SHARECF\PROJECTS\135604\GINT\135604-002-TB.GPJ Dec 9, 20

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



Office of Geographic and Environmental Information
(MassGIS), Commonwealth of Massachusetts
Executive Office of Environmental Affairs

1:25,000 USGS Topographic Images - April 2001

COMPREHENSIVE PERMIT APPLICATION

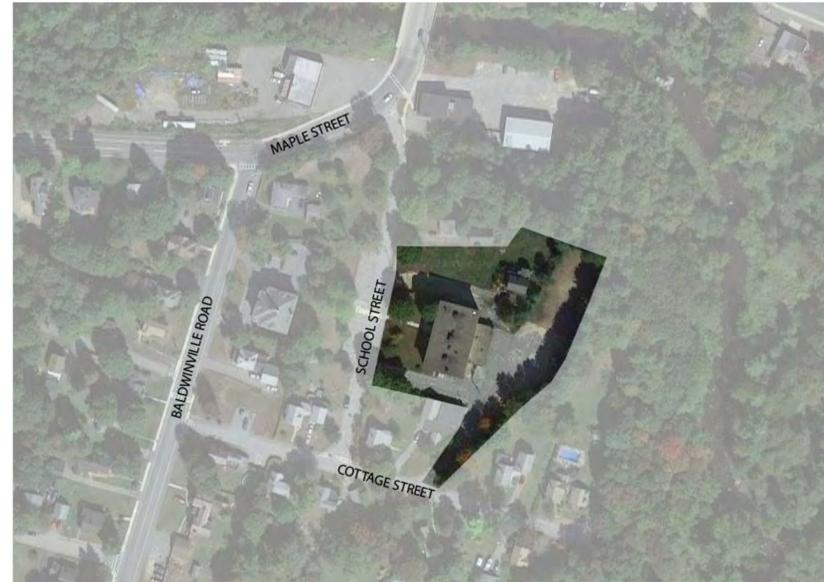
BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 6

PLANS AND PERSPECTIVES

LOCUS MAP:



PROJECT TEAM:

OWNER/DEVELOPER:

CC MPZ SCHOOL STREET LLC
831 BEACON STREET #164, NEWTON, MA, 02459

ARCHITECT:

ICON ARCHITECTURE
101 SUMMER STREET, BOSTON, MA 02110

CIVIL ENGINEER:

KELLY ENGINEERING GROUP, INC
0 CAMPANELLI DRIVE, BRAINTREE, MA 02184

LANDSCAPE ARCHITECT:

DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 BROMFIELD STREET, BOSTON, MA 02108

GEOTECHNICAL ENGINEER:

HALEY & ALDRICH, INC.
465 MEDFORD STREET, BOSTON, MA 02129

MECHANICAL, ELECTRICAL, PLUMBING, & FIRE PROTECTION:

PETERSEN ENGINEERING, INC.
127 PARROTT AVENUE, PORTSMOUTH, NH 03801

HISTORIC CONSULTANT:

EPSILON ASSOCIATES, INC.
3 MILL & MAIN PLACE, MAYNARD, MA 01754

ENVIRONMENTAL CONSULTANT:

LEC ENVIRONMENTAL CONSULTANTS, INC.
100 GROVE STREET, WORCESTER, MA 01605

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ISSUE DATE: 06/10/2022
COMPREHENSIVE PERMIT SUBMISSION



DRAWING LIST	
SHEET NUMBER	SHEET NAME
GENERAL	
G-000	COVER SHEET
G-001	DRAWING LIST & DEVELOPMENT SUMMARY
CIVIL	
C-1	CIVIL COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	DEMOLITION AND EROSION CONTROL PLAN
C-4	LAYOUT PLAN
C-5	GRADING PLAN
C-6	SEWER AND DRAIN PLAN
C-7	UTILITY PLAN
C-8	DETAIL SHEET
C-9	DETAIL SHEET
C-10	DETAIL SHEET
C-11	DETAIL SHEET
LANDSCAPE	
L-0	SITE RENDERING PLAN
L-1	LANDSCAPE MATERIALS PLAN
L-2	PLANTING PLAN
L-3	PHOTOMETRIC PLAN
L-4	SITE DETAILS
L-5	SITE DETAILS
ARCH - EXISTING	
EC-101	EXISTING PLANS
EC-102	EXISTING PLANS
EC-201	BUILDING ELEVATIONS - EXISTING
ARCHITECTURAL	
A-001	GENERAL NOTES
A-101	HISTORIC LOWER LEVEL & ADDITION FIRST FLOOR
A-102	HISTORIC FIRST FLOOR & ADDITION SECOND FLOOR
A-103	HISTORIC SECOND FLOOR & ADDITION THIRD FLOOR
A-110	HISTORIC LOWER LEVEL & ADDITION FIRST FLOOR RCP
A-111	HISTORIC FIRST FLOOR & ADDITION SECOND FLOOR RCP
A-112	HISTORIC SECOND FLOOR & ADDITION THIRD FLOOR RCP
A-120	ROOF PLAN
A-201	BUILDING ELEVATIONS - PROPOSED
A-202	BUILDING ELEVATIONS - PROPOSED
A-203	CONTEXT PHOTOS - KEY PLAN
A-204	CONTEXT PHOTOS
A-205	ENTRANCE AT CONNECTOR
A-206	COURTYARD
A-207	SCHOOL STREET
A-208	HISTORIC IMAGES
A-301	SITE LINES DIAGRAM
A-501	FINISH SCHEDULES
A-601	STAIR DETAILS
A-801	HISTORIC WINDOW SCHEDULE
A-802	HISTORIC WINDOW DETAILS
A-803	EXISTING WINDOW PHOTOS
Total Number of Sheets: 44	

Baldwinville School Residences									
Unit Type and Count by Building									
	Existing			ST	New				
	1-BR	2-BR	3-BR		1-BR	1-BR (BF)	2-BR	2-BR (BF)	3-BR
Ground Floor	2	1	1						
First Floor	1	2	2	2	2			9	0
Second Floor	2	2	2	1	4			8	0
Third Floor				1	4			7	1
Project Totals	5	5	5	4	10	0	24	0	1
Subtotal	15				39				
Total Units New and Existing	54			1-BR	15	2-BR	29	3-BR	6
	7%				28%		54%		11%

	Unit # Historic	Existing			ST	New					Unit # NEW	
		1-BR	2-BR	3-BR		1-BR	1-BR (BF)	2-BR	2-BR (BF)	3-BR		
Ground Level	H01		730			611					001	
	H02	668				614					002	
	H03	562			527						003	
	H04			1174					827		004	
									815		005	
									854		006	
									801		007	
									814		008	
									800		009	
									801		010	
									800		011	
									803		012	
					498						013	
	4 UNITS		3134				9565					13 UNITS
	First Floor Level	H11		816			611					101
H12				1090		614					102	
H13				1006		652					103	
H14			750			611					104	
H15		606							814		105	
									854		106	
									801		107	
								814		108		
								800		109		
								801		110		
								800		111		
								803		112		
				498						113		
5 UNITS		4268				9473					13 UNITS	
Second Floor Level	H21		771			614					201	
	H22			978		614					202	
	H23	572				652					203	
	H24			961		611					204	
	H25	624							814		205	
	H26		702							1056	206	
									801		207	
								814		208		
								800		209		
								801		210		
								800		211		
								803		212		
				498						213		
6 UNITS		4608				9678					13 UNITS	
NET SF		12010				28716						

	existing	existing	ADDITION
Ground Floor	902	7,352	
First Floor	944	7,352	13,105
Second Floor	704	7,352	13,105
Third Floor			13,105
GSF	2550	22,056	39,315

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JM

SHEET TITLE

DRAWING LIST & DEVELOPMENT SUMMARY

G-001

PLANS TO ACCOMPANY PROJECT ELIGIBILITY SUBMISSION

FOR

BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA

FEBRUARY 11, 2022

OWNERS:

TOWN OF TEMPLETON
P.O. BOX 620
EAST TEMPLETON, MA 01438

ELVIS D. & PRISCILLA YEBOAH
12 SCHOOL STREET
BALDWINVILLE, MA 01438

APPLICANT:

CC MPZ SCHOOL STREET LLC
831 BEACON STREET #164
NEWTON CENTER, MA 02459

CIVIL ENGINEERS:

KELLY ENGINEERING GROUP, INC.
0 CAMPANELLI DRIVE
BRAINTREE, MA 02184

ARCHITECT:

ICON ARCHITECTURE
101 SUMMER ST.
BOSTON, MA 02110

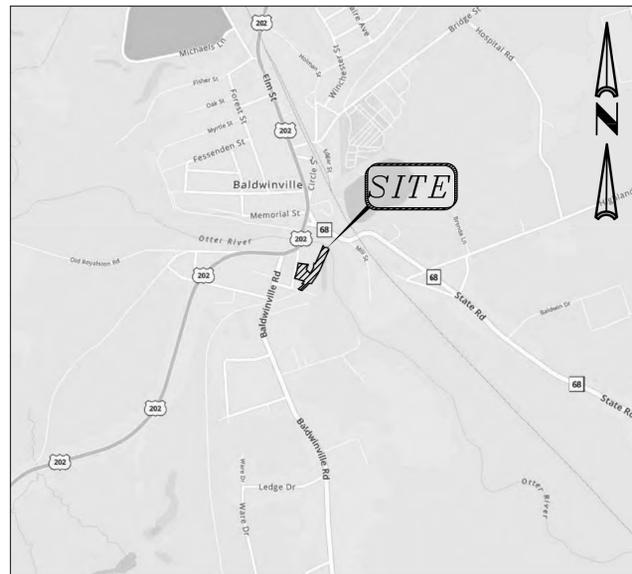
LANDSCAPE ARCHITECT:

DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 BROMFIELD STREET, SUITE 503
BOSTON, MA 02108

TRAFFIC ENGINEER:

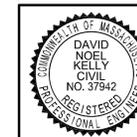
VANASSE ASSOCIATES
35 NEW ENGLAND BUSINESS CENTER DRIVE
SUITE 140
ANDOVER MA. 01810

SHEET INDEX					
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION	REVISIONS	
1	COVER SHEET				
2	EXISTING CONDITIONS PLAN				
3	DEMOLITION & EROSION CONTROL PLAN				
4	LAYOUT PLAN				
5	GRADING PLAN				
6	SEWER & DRAIN PLAN				
7	UTILITY PLAN				
8	DETAIL SHEET				
9	DETAIL SHEET				
10	DETAIL SHEET				
11	DETAIL SHEET				



LOCATION MAP

Digitally signed by David Noel Kelly P.E.
DN: cn=David Noel Kelly P.E., o=Kelly Engineering Group, Inc., ou,
email=dnkelly@kellyengineeringgroup.com, c=US
Date: 2022.02.09 15:50:00 -0500



SCALE	JOB #
DATE	F:\P\2020-162
02/11/22	DRAWN BY
	C.J.L.
SHEET	CHKD BY
1 OF 11	DAM
FILE #	APPD BY
TS00-CP	DNK

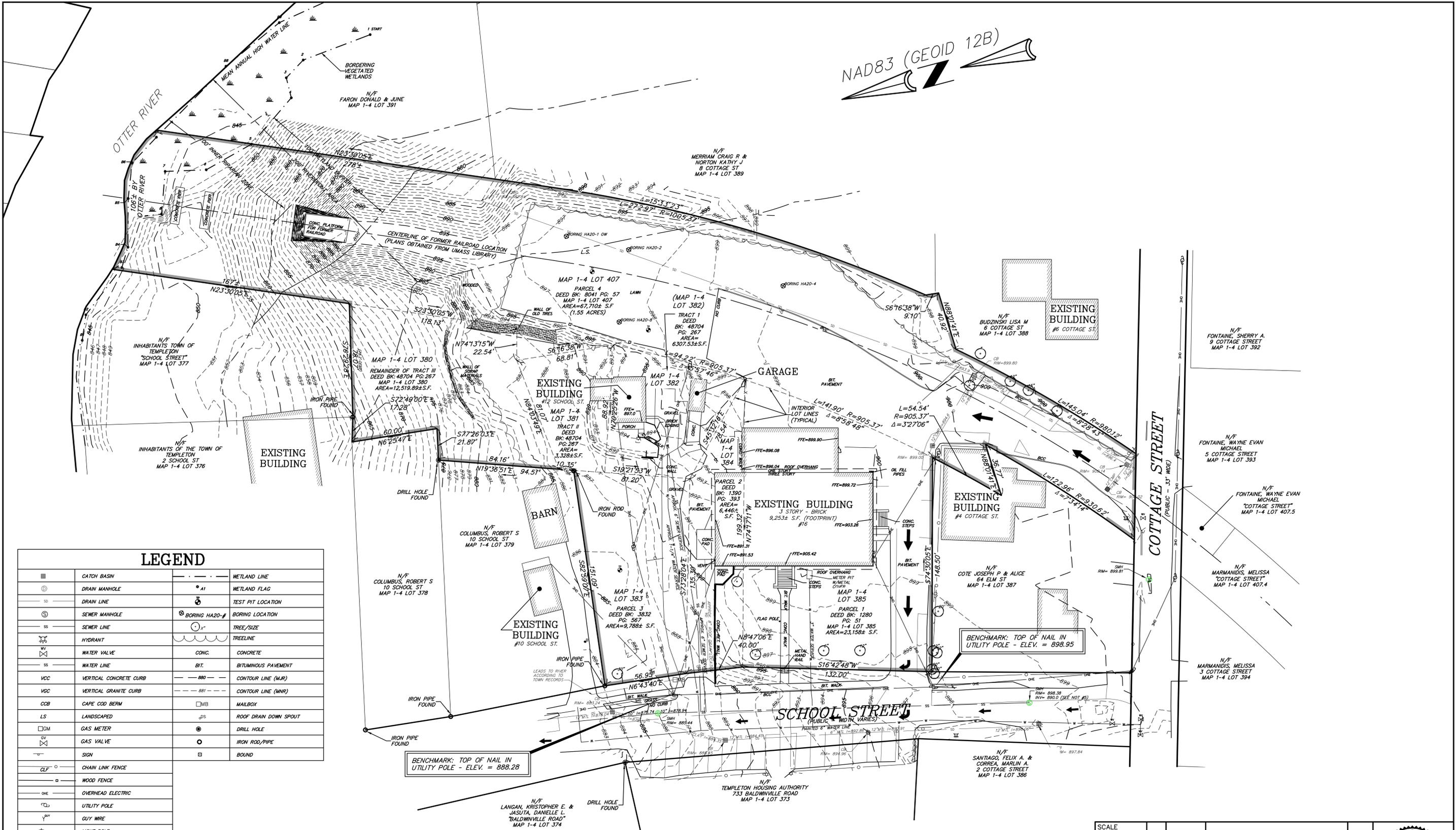


12 & 16 SCHOOL STREET
TEMPLETON, MA
KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

SHEET NO.
1

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST
COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
All Rights Reserved
NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPIING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY VIOLATIONS TO THIS DOCUMENT, REGARDLESS OF THE METHOD, SHALL BE CONSIDERED A VIOLATION OF THE PROFESSIONAL ENGINEER'S ETHICS.

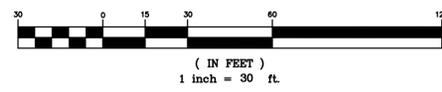
NAD83 (GEOID 12B)



LEGEND

	CATCH BASIN		WETLAND LINE
	DRAIN MANHOLE		WETLAND FLAG
	DRAIN LINE		TEST PIT LOCATION
	SEWER MANHOLE		BORING LOCATION
	SEWER LINE		TREE/SIZE
	HYDRANT		TREELINE
	WATER VALVE		CONCRETE
	WATER LINE		BITUMINOUS PAVEMENT
	VERTICAL CONCRETE CURB		CONTOUR LINE (M/R)
	VERTICAL GRANITE CURB		CONTOUR LINE (MWR)
	CAPE COD BERM		MAILBOX
	LANDSCAPED		ROOF DRAIN DOWN SPOUT
	GAS METER		DRILL HOLE
	GAS VALVE		IRON ROD/PIPE
	SIGN		BOUND
	CHAIN LINK FENCE		
	WOOD FENCE		
	OVERHEAD ELECTRIC		
	UTILITY POLE		
	GUY WIRE		
	LIGHT POLE		

GRAPHIC SCALE



NOTES:

- UNDERGROUND FEATURES HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND KELLY ENGINEERING GROUP, INC. DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO KELLY ENGINEERING GROUP, INC. THE SIZE, LOCATION, AND EXISTENCE OF ALL SUCH FEATURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION.
- THE LOCATION OF ALL UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED USING ASCE 38-02 (STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA) QUALITY LEVEL C.
- THE SITE DETAIL AND SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM AN ON THE GROUND SURVEY PERFORMED BY KELLY ENGINEERING GROUP IN SEPTEMBER OF 2020.
- ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN DATUM OF 1988 (NAV88). VERTICAL CONTROL WAS PROVIDED BY GPS RTK SURVEY PERFORMED BY KELLY ENGINEERING GROUP, INC.
- 890.0 CALCULATED FROM PROFILE PROVIDED BY TOWN OF TEMPLETON SEWER DEPARTMENT

CURRENT OWNER(S):

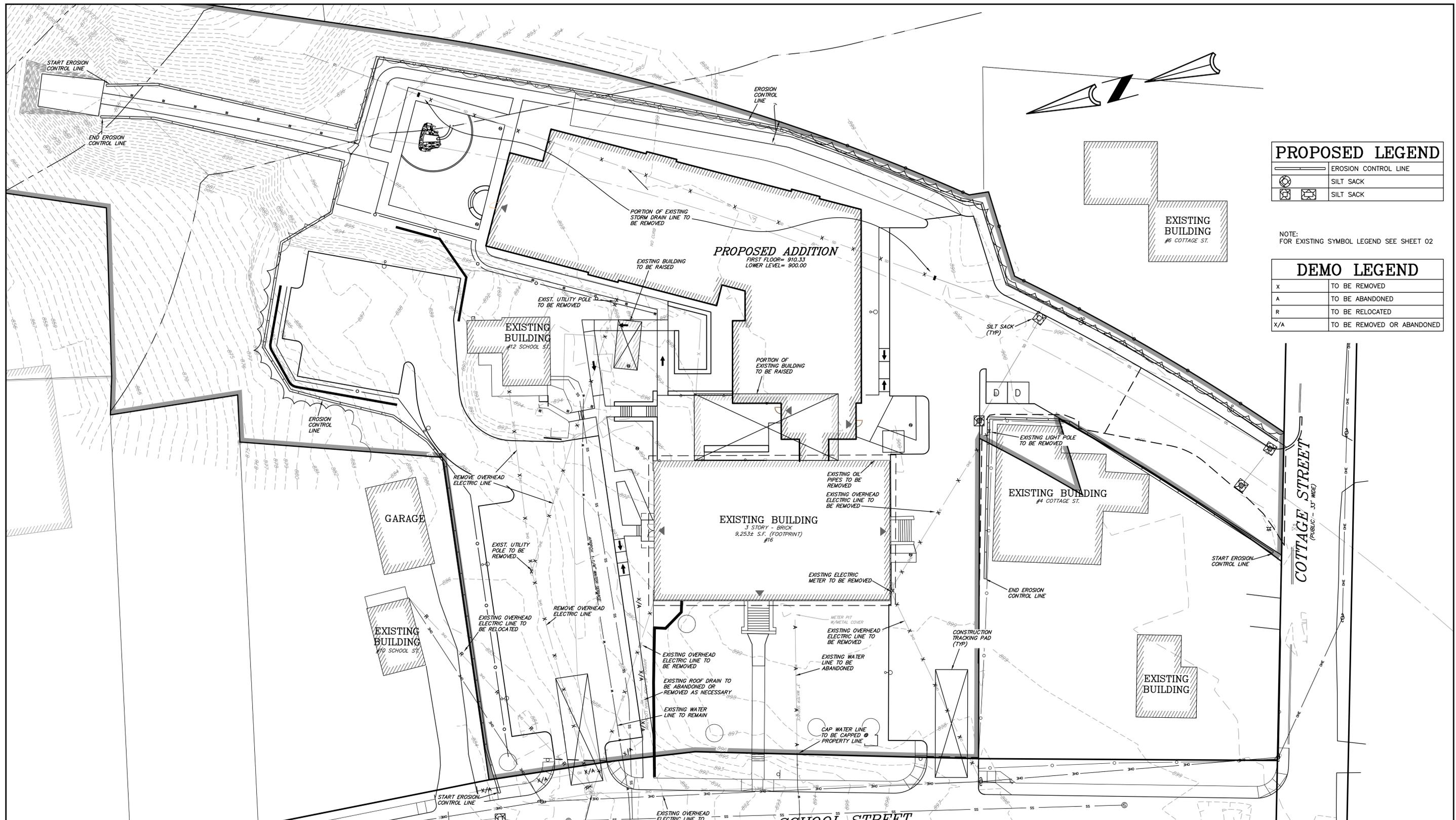
Assessors Map:	Deed Book/Page Reference:	Owner of Record:
Map: 1-4 Lot 385 -	Deed Bk: 1280 Pg: 51	Inhabitants of the Town of Templeton
Map: 1-4 Lot 384 -	Deed Bk: 1390 Pg: 393	Town of Templeton
Map: 1-4 Lot 383 -	Deed Bk: 3832 Pg: 567	Inhabitants of the Town of Templeton
Map: 1-4 Lot 407 -	Deed Bk: 8041 Pg: 57	Town of Templeton
Map: 1-4 Lot 380 &		
Map: 1-4 Lot 381 &		
Map: 1-4 Lot 382 -	Deed Bk: 48704 Pg: 267	Yeboah, Elvis D. & Yeboah, Priscilla

SCALE 1" = 30'			
DATE 02/11/22	REV	DATE	REVISION
SHEET 2 of 11			
FILE # EX00	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA		
JOB # F:\P\2020-162	EXISTING CONDITIONS PLAN		
DRAWN BY C.J.L.	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com		
CHKD BY SMH			
APPD BY SMH	SHEET NO. <h1 style="font-size: 2em;">2</h1>		

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST.

COPYRIGHT (C) BY KELLY ENGINEERING GROUP, INC.
All Rights Reserved

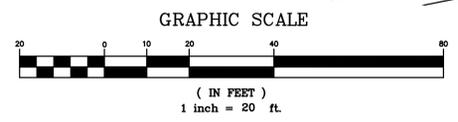
NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY REPRODUCTION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF KELLY ENGINEERING GROUP SHALL BE SUBJECT TO LITIGATION.



PROPOSED LEGEND	
	EROSION CONTROL LINE
	SILT SACK
	SILT SACK

NOTE:
FOR EXISTING SYMBOL LEGEND SEE SHEET 02

DEMO LEGEND	
X	TO BE REMOVED
A	TO BE ABANDONED
R	TO BE RELOCATED
X/A	TO BE REMOVED OR ABANDONED



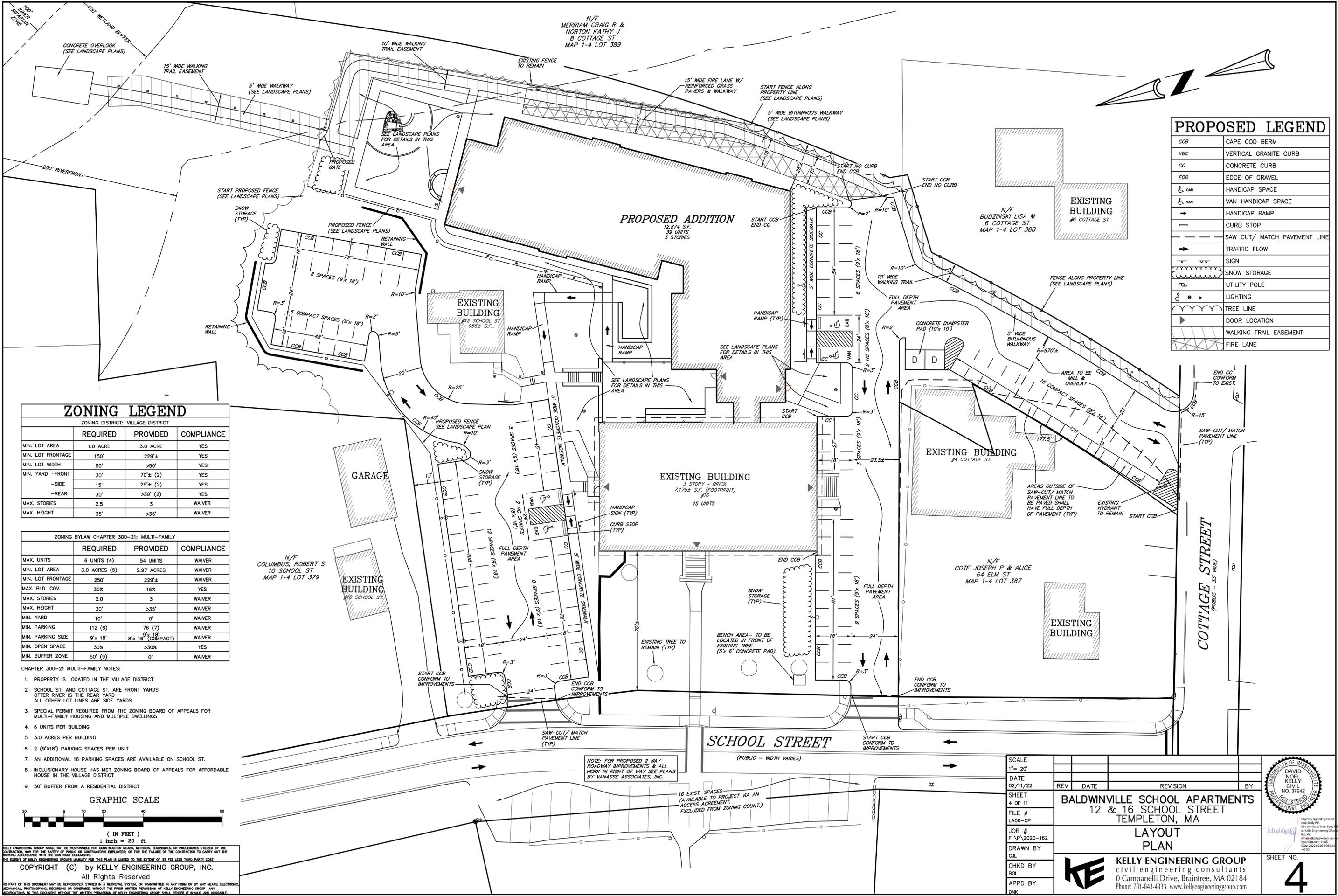
SCALE 1" = 20'	DATE 02/11/22	REV	DATE	REVISION	BY
SHEET 3 OF 11	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA				
FILE # DM00-CP	DEMOLITION & EROSION CONTROL PLAN				
JOB # F:\P\2020-162	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				
DRAWN BY C/L	SHEET NO. 3				
CHKD BY BGL					
APPD BY DNK					

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
All Rights Reserved

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY VIOLATIONS TO THIS DOCUMENT, REGARDLESS OF THE MEANS, SHALL BE SUBJECT TO LITIGATION.

Digitally signed by David Noel Kelly P.E., DN: cn=David Noel Kelly, o=Kelly Engineering Group, Inc., email=dkelly@kellyeng.com, c=US, Date: 2022.02.19 15:00:23 -0500



PROPOSED LEGEND

CCB	CAPE COD BERM
VGC	VERTICAL GRANITE CURB
CC	CONCRETE CURB
EOG	EDGE OF GRAVEL
♿ CAR	HANDICAP SPACE
♿ VAN	VAN HANDICAP SPACE
→	HANDICAP RAMP
—	CURB STOP
---	SAW CUT/ MATCH PAVEMENT LINE
→	TRAFFIC FLOW
+	SIGN
☁	SNOW STORAGE
⊙	UTILITY POLE
⊙	LIGHTING
—	TREE LINE
▶	DOOR LOCATION
---	WALKING TRAIL EASEMENT
---	FIRE LANE

ZONING LEGEND

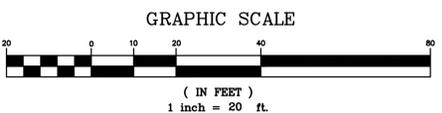
ZONING DISTRICT: VILLAGE DISTRICT

	REQUIRED	PROVIDED	COMPLIANCE
MIN. LOT AREA	1.0 ACRE	3.0 ACRE	YES
MIN. LOT FRONTAGE	150'	229'±	YES
MIN. LOT WIDTH	50'	>50'	YES
MIN. YARD -FRONT	30'	70'± (2)	YES
-SIDE	15'	25'± (2)	YES
-REAR	30'	>30' (2)	YES
MAX. STORIES	2.5	3	WAIVER
MAX. HEIGHT	35'	>35'	WAIVER

ZONING BYLAW CHAPTER 300-21: MULTI-FAMILY

	REQUIRED	PROVIDED	COMPLIANCE
MAX. UNITS	6 UNITS (4)	54 UNITS	WAIVER
MIN. LOT AREA	3.0 ACRES (5)	2.97 ACRES	WAIVER
MIN. LOT FRONTAGE	250'	229'±	WAIVER
MAX. BLD. COV.	30%	16%	YES
MAX. STORIES	2.0	3	WAIVER
MAX. HEIGHT	30'	>35'	WAIVER
MIN. YARD	10'	0'	WAIVER
MIN. PARKING	112 (6)	76 (7)	WAIVER
MIN. PARKING SIZE	9'x 18'	8'x 16' (COMPACT)	WAIVER
MIN. OPEN SPACE	30%	>30%	YES
MIN. BUFFER ZONE	50' (9)	0'	WAIVER

- CHAPTER 300-21 MULTI-FAMILY NOTES:
- PROPERTY IS LOCATED IN THE VILLAGE DISTRICT
 - SCHOOL ST. AND COTTAGE ST. ARE FRONT YARDS OTTER RIVER IS THE REAR YARD ALL OTHER LOT LINES ARE SIDE YARDS
 - SPECIAL PERMIT REQUIRED FROM THE ZONING BOARD OF APPEALS FOR MULTI-FAMILY HOUSING AND MULTIPLE DWELLINGS
 - 6 UNITS PER BUILDING
 - 3.0 ACRES PER BUILDING
 - 2 (9'x18') PARKING SPACES PER UNIT
 - AN ADDITIONAL 16 PARKING SPACES ARE AVAILABLE ON SCHOOL ST.
 - INCLUSIONARY HOUSE HAS MET ZONING BOARD OF APPEALS FOR AFFORDABLE HOUSE IN THE VILLAGE DISTRICT
 - 50' BUFFER FROM A RESIDENTIAL DISTRICT



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.

THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
All Rights Reserved

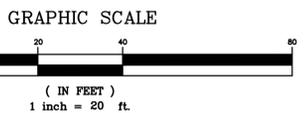
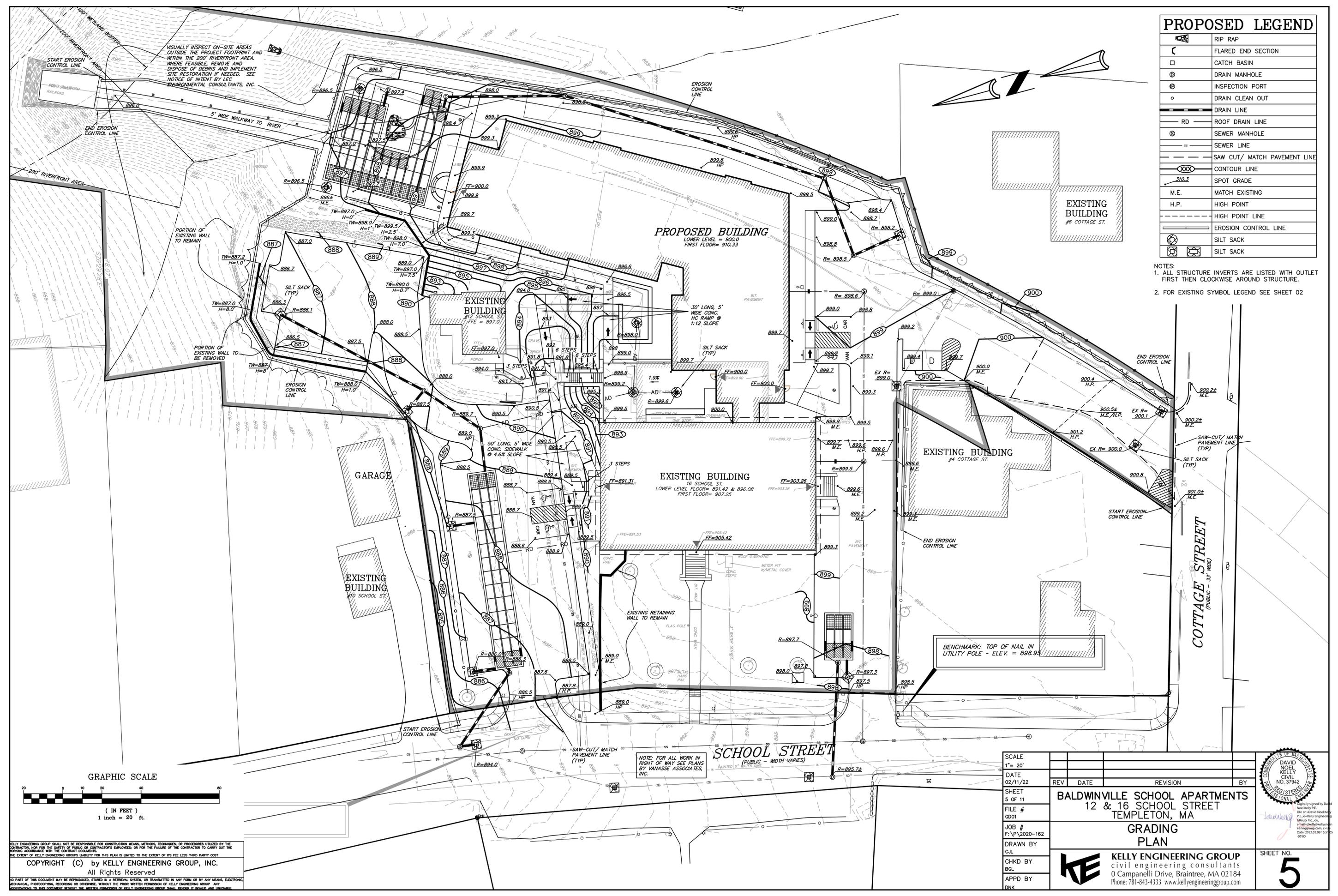
NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY REPRODUCTION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF KELLY ENGINEERING GROUP SHALL BE UNLAWFUL AND PENALIZABLE.

SCALE 1" = 20'	DATE 02/11/22	REV	DATE	REVISION	BY
SHEET 4 OF 11	FILE # LA00-CP	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA			
JOB # F:\P\2020-162	DRAWN BY C/L	LAYOUT PLAN			
CHKD BY BGL	APPD BY DNK	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
					SHEET NO. 4

PROPOSED LEGEND

	RIP RAP
	FLARED END SECTION
	CATCH BASIN
	DRAIN MANHOLE
	INSPECTION PORT
	DRAIN CLEAN OUT
	DRAIN LINE
	ROOF DRAIN LINE
	SEWER MANHOLE
	SEWER LINE
	SAW CUT/ MATCH PAVEMENT LINE
	CONTOUR LINE
	SPOT GRADE
	MATCH EXISTING
	HIGH POINT
	HIGH POINT LINE
	EROSION CONTROL LINE
	SILT SACK
	SILT SACK

- NOTES:
 1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
 2. FOR EXISTING SYMBOL LEGEND SEE SHEET 02



NOTE: FOR ALL WORK IN RIGHT OF WAY SEE PLANS BY VANASSE ASSOCIATES, INC.

SCALE 1" = 20'	DATE 02/11/22	REV	DATE	REVISION	BY
SHEET 5 OF 11	FILE # GD01	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA			
JOB # F:\P\2020-162	DRAWN BY C/L	GRADING PLAN			
CHKD BY BGL	APPD BY DNK	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com			
SHEET NO. 5					

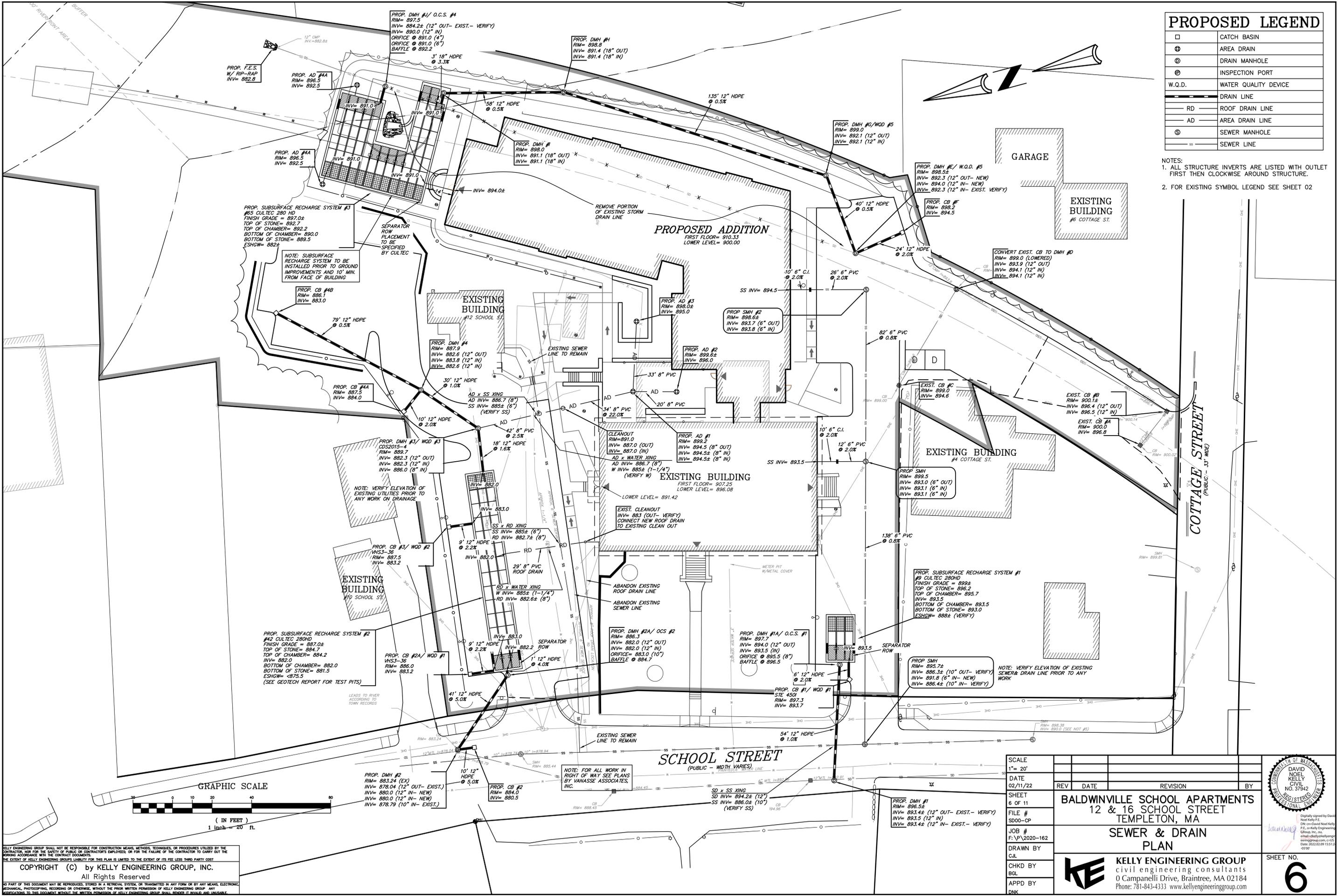
KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST.
 COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
 All Rights Reserved



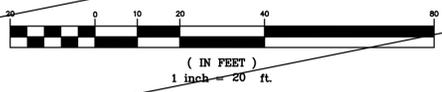
PROPOSED LEGEND

□	CATCH BASIN
⊕	AREA DRAIN
⊙	DRAIN MANHOLE
⊗	INSPECTION PORT
W.Q.D.	WATER QUALITY DEVICE
—	DRAIN LINE
—	ROOF DRAIN LINE
—	AREA DRAIN LINE
⊙	SEWER MANHOLE
—	SEWER LINE

NOTES:
 1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
 2. FOR EXISTING SYMBOL LEGEND SEE SHEET 02

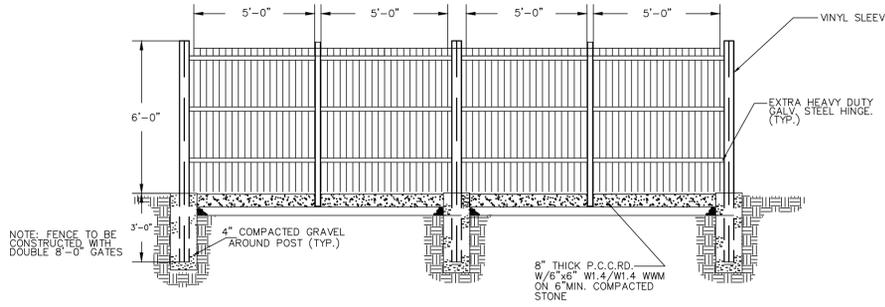


GRAPHIC SCALE

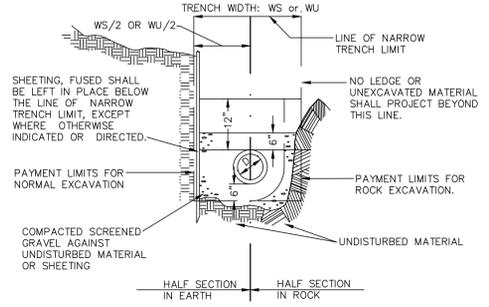


SCALE 1" = 20'	DATE 02/11/22	REV	DATE	REVISION	BY
SHEET 6 OF 11	FILE # SD00-CP	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA SEWER & DRAIN PLAN			
JOB # F:\P\2020-162	DRAWN BY C/L				
CHKD BY BGL	APPD BY DNK				
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com					
SHEET NO. 6		DAVID NOEL CIVIL NO. 37942 REGISTERED PROFESSIONAL ENGINEER			

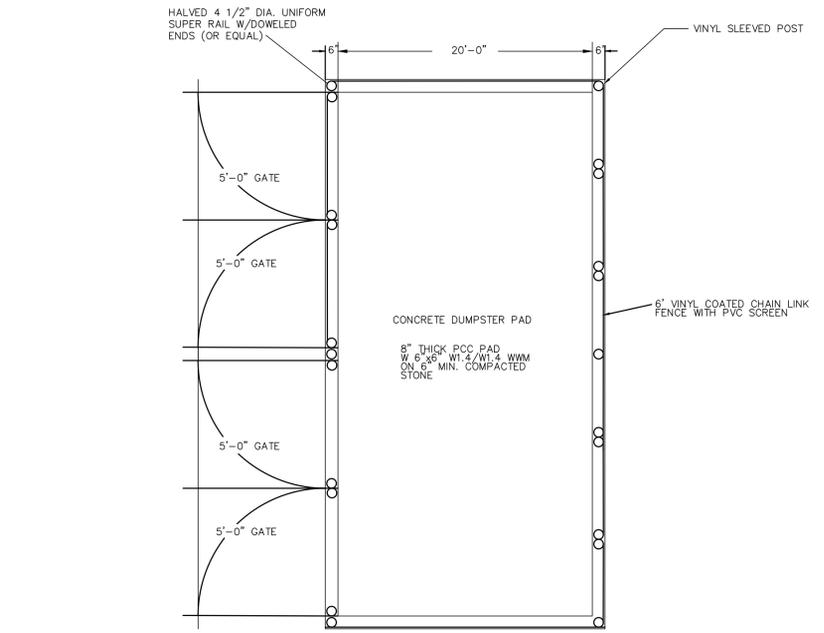
KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST
 COPYRIGHT (C) BY KELLY ENGINEERING GROUP, INC.
 All Rights Reserved
 NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY VIOLATIONS TO THIS DOCUMENT, REGARDLESS OF THE METHOD, EXPRESSOR, OR MEANS, SHALL BE SUBJECT TO LEGAL ACTION.



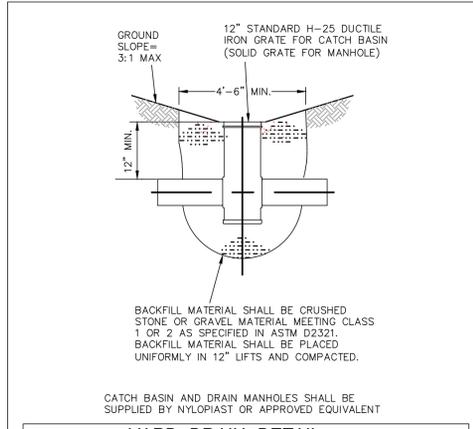
TRENCH WIDTH WS OR WU		
DIAM. OF PIPE	WU UNSHEATED	WS SHEATED
12" AND SMALLER	3'-0"	4'-2"
15" AND LARGER	O.D.+20"	O.D.+36"



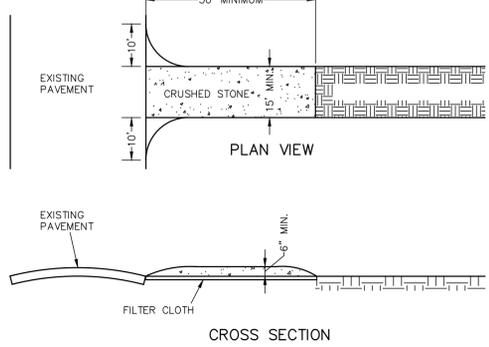
WATER AND SEWER TRENCH SECTION
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



DUMPSTER SCREEN GATE /DUMPSTER PAD DETAIL
NOT TO SCALE (DUMPSTER-DETAIL)
KELLY ENGINEERING GROUP, INC.

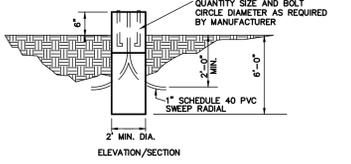


YARD DRAIN DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.

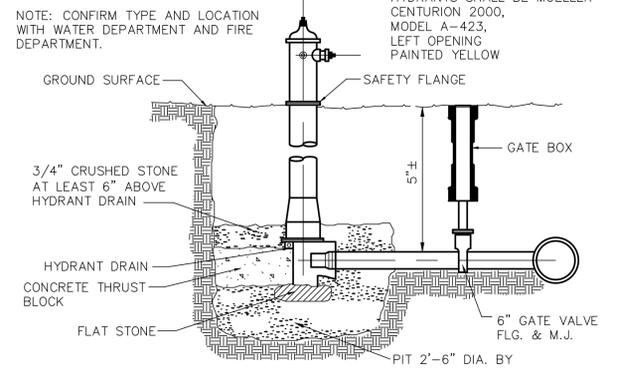


CONSTRUCTION TRACKING PAD
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.

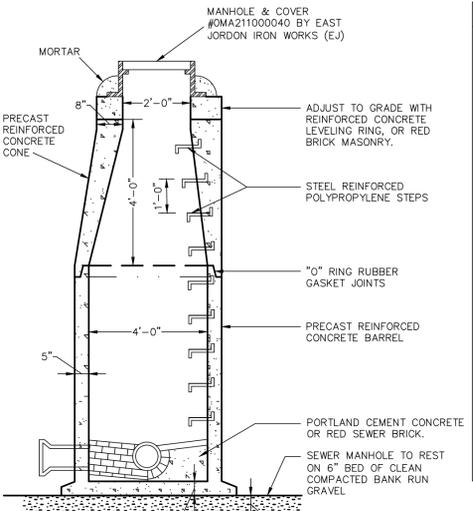
- TRACKING PAD NOTES:
- STONE SIZE - USE 2" CRUSHED STONE
 - FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHOULD BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHOULD BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.



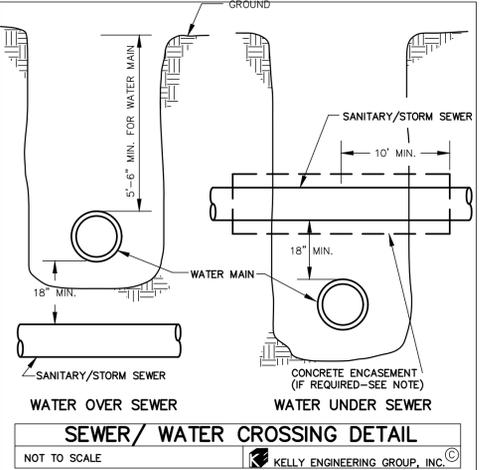
LIGHT POLE DETAIL (LANDSCAPED AREAS)
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



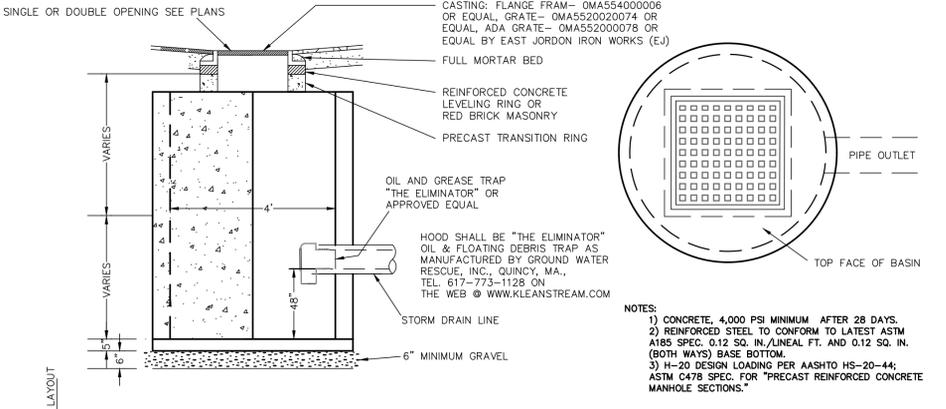
HYDRANT SETTING DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



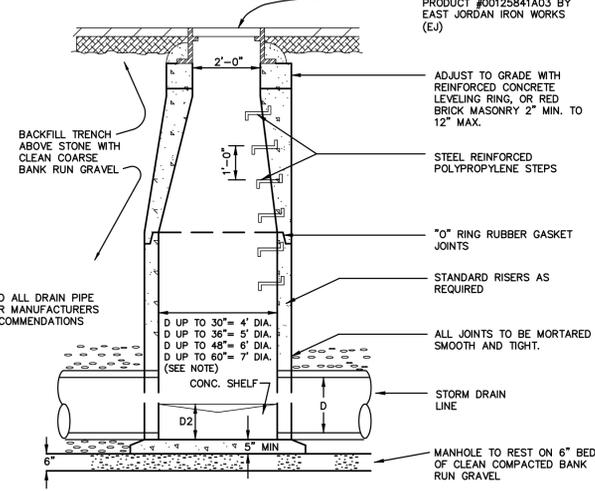
SEWER MANHOLE DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



SEWER/ WATER CROSSING DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



PRECAST CATCH BASIN DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



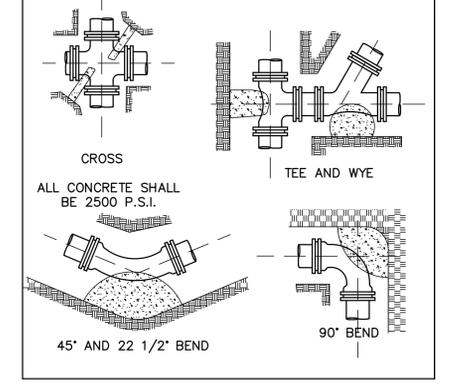
PRECAST DRAIN MANHOLE DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.

- NOTES:
- CONCRETE, 4,000 PSI MINIMUM AFTER 28 DAYS.
 - REINFORCED STEEL TO CONFORM TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
 - H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
 - STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC STEP TO CONFORM TO LATEST ASTM C478 SPEC.

RETAINING WALL DETAIL TYPE-1
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.

THRUST BLOCK SCHEDULE			
TABLE OF MINIMUM BEARING AREA IN SQ. IN. AGAINST UNDISTURBED SOIL FOR 8 IN. DIA. PIPE			
SOIL BEARING CAPACITY (PSF)	90 DEGREE BEND	TEE	45 DEGREE BEND
1000	945	674	516
1500	630	450	344
2000	473	337	258
3000	315	225	172

NOTE: FOR FITTINGS W/LESS THAN 45° DEFLECTION USE BEARING AREA FOR 45° BEND BASED ON INTERNAL PRESSURE OF 80 PSI



THRUST BLOCK
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR...
COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
All Rights Reserved

SANITARY SEWER CLEANOUT DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.

SCALE	NA	DATE	02/11/22	REV		DATE		REVISION		BY	
SHEET	9 of 11	FILE #	2020-162-DT00-CP	JOB #	F:\P\2020-162	DRAWN BY	CJL	CHKD BY	GSB	APPD BY	DNK

BALDWINVILLE SCHOOL APARTMENTS
12 & 16 SCHOOL STREET
TEMPLETON, MA

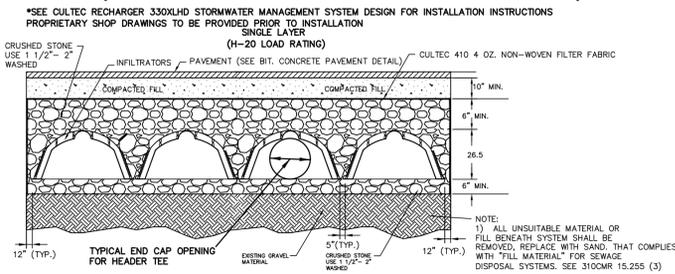
DETAIL SHEET

KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

REGISTERED PROFESSIONAL ENGINEER
DAVID NOEL KELLY
CIVIL
NO. 37942

SHEET NO. **9**

TYPICAL SUBSURFACE RECHARGE AREA (CULTEC 280XLHD) PLAN VIEW (INFILTRATION TO BE CULTEC OR APPROVED EQUAL)



SECTION 1-1 (PARTIAL) NOT TO SCALE
INFILTRATOR SUBSURFACE DETENTION AREA PLAN VIEW
NOT TO SCALE (INFIL-SUB-DET) KELLY ENGINEERING GROUP, INC.

STORMWATER MANAGEMENT SYSTEM CONSTRUCTION OPERATION NOTES:

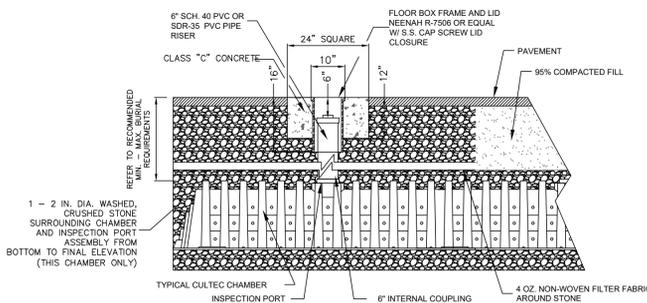
- EXTREME CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID SILTATION DURING THE CONSTRUCTION PROCESS. SILT SACKS AND SILT SOCKS SHALL BE INSPECTED DAILY AND REPLACED IF NECESSARY.
- EXTREME CARE SHALL BE TAKEN TO PREVENT COMPACTION OF UNDISTURBED SOILS BENEATH RECHARGE SYSTEM.
- THERE SHALL BE NO DISCHARGE OF WATER FOR CONSTRUCTION DEWATERING ACTIVITIES INTO THE STORMWATER MANAGEMENT SYSTEM.
- THERE SHALL BE NO DISCHARGE OF STORMWATER INTO THE RECHARGE SYSTEM UNTIL THE SITE HAS BEEN STABILIZED.

CONSTRUCTION INSPECTION SCHEDULE

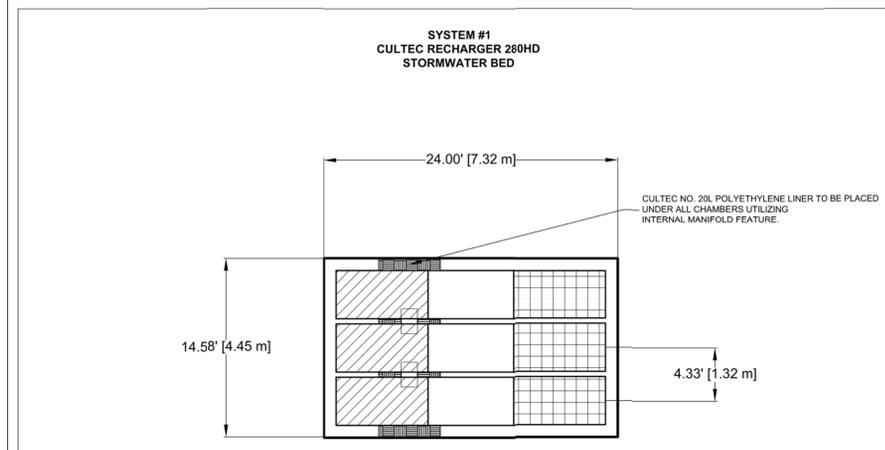
- AN INSPECTION OF THE EXCAVATION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND A REPRESENTATIVE FROM THE TOWN'S ENGINEERING DEPARTMENT PRIOR TO PLACEMENT OF ANY MATERIAL OR CHAMBERS.

CONSTRUCTION MAINTENANCE SCHEDULE

- WHEN THE BINDER COURSE HAS BEEN INSTALLED THE PAVEMENT SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENTS. IF ACCUMULATED SEDIMENTS ARE DEPOSITED ON THE PAVEMENT THE SEDIMENT SHALL BE CLEANED IMMEDIATELY. THE PAVEMENT SHALL BE SWEEP AS NECESSARY BASED ON THE WEEKLY INSPECTIONS. THE CONTRACTOR SHALL INSPECT THE PAVEMENT ON A DAILY BASIS AND REMOVE ACCUMULATED SEDIMENTS AS NECESSARY.
- "SILT SACKS" SHALL BE INSTALLED AT ALL CATCH BASIN AND DROP INLET LOCATIONS. THE CONTRACTOR SHALL INSPECT THE "SILT SACKS" ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND EMPTIED BASED ON MANUFACTURERS RECOMMENDATIONS.
- THE RECHARGE SYSTEM SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND SHALL BE CLEANED WHEN 2" OF SEDIMENT HAS ACCUMULATED IN THE INLET CHAMBER.

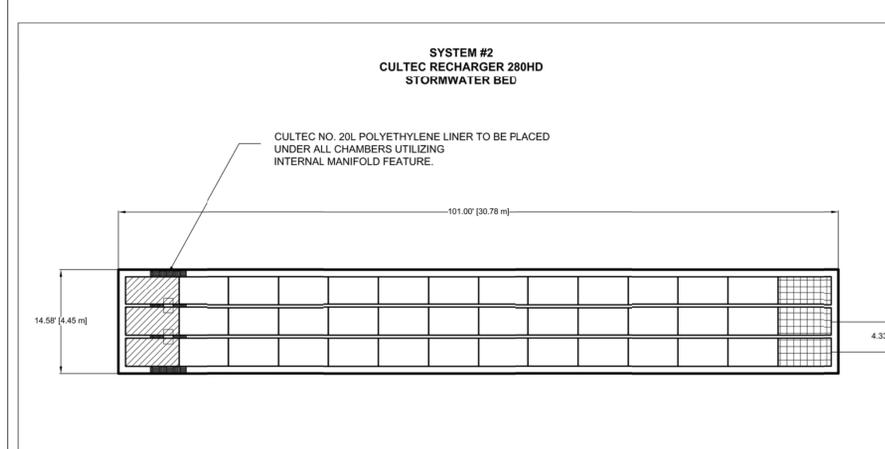


TYPICAL H2O INSPECTION PORT DETAIL



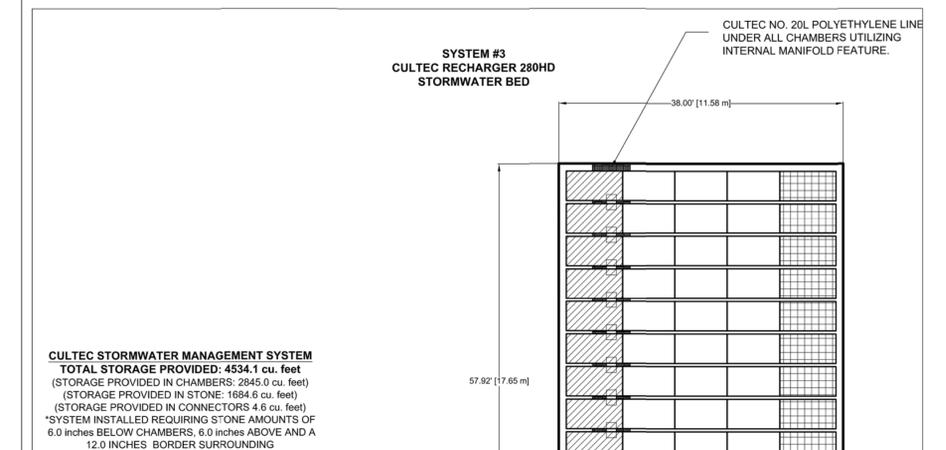
Recharger 280HD Stormwater System by CULTEC, Inc.		CULTEC RECHARGER 280HD LEGEND		CULTEC STORMWATER SYSTEM	
STARTER CHAMBERS	3	PIECES	[Symbol]	STARTER CHAMBERS	
INTERMEDIATE CHAMBERS	3	PIECES	[Symbol]	INTERMEDIATE CHAMBERS	
END CHAMBERS	3	PIECES	[Symbol]	END CHAMBERS	
HVLV FC-24 FEED CONNECTOR	2	PIECES	[Symbol]	HVLV FC-24 FEED CONNECTOR	
CULTEC NO. 410" FILTER FABRIC	115.81	SQ. YARDS	[Symbol]	CULTEC NO. 20L POLYETHYLENE LINER	
CULTEC NO. 20L POLYETHYLENE LINER	14.58	FEET	[Symbol]		
STONE	26.70	CU. YARDS	[Symbol]		
VOLUME OF EXCAVATION	53.47	CU. YARDS	[Symbol]		

CULTEC STORMWATER MANAGEMENT SYSTEM
TOTAL STORAGE PROVIDED: 654.3 cu. feet
(STORAGE PROVIDED IN CHAMBERS: 401.2 cu. feet)
(STORAGE PROVIDED IN STONE: 252.3 cu. feet)
(STORAGE PROVIDED IN CONNECTORS 0.8 cu. feet)
*SYSTEM INSTALLED REQUIRING STONE AMOUNTS OF 6.0 INCHES BELOW CHAMBERS, 6.0 INCHES ABOVE AND A 12.0 INCHES BORDER SURROUNDING



Recharger 280HD Stormwater System by CULTEC, Inc.		CULTEC RECHARGER 280HD LEGEND		CULTEC STORMWATER SYSTEM	
STARTER CHAMBERS	3	PIECES	[Symbol]	STARTER CHAMBERS	
INTERMEDIATE CHAMBERS	36	PIECES	[Symbol]	INTERMEDIATE CHAMBERS	
END CHAMBERS	3	PIECES	[Symbol]	END CHAMBERS	
HVLV FC-24 FEED CONNECTOR	2	PIECES	[Symbol]	HVLV FC-24 FEED CONNECTOR	
CULTEC NO. 410" FILTER FABRIC	450.69	SQ. YARDS	[Symbol]	CULTEC NO. 20L POLYETHYLENE LINER	
CULTEC NO. 20L POLYETHYLENE LINER	14.58	FEET	[Symbol]		
STONE	108.13	CU. YARDS	[Symbol]		
VOLUME OF EXCAVATION	225.03	CU. YARDS	[Symbol]		

CULTEC STORMWATER MANAGEMENT SYSTEM
TOTAL STORAGE PROVIDED: 2828.0 cu. feet
(STORAGE PROVIDED IN CHAMBERS: 1805.5 cu. feet)
(STORAGE PROVIDED IN STONE: 1021.8 cu. feet)
(STORAGE PROVIDED IN CONNECTORS 0.8 cu. feet)
*SYSTEM INSTALLED REQUIRING STONE AMOUNTS OF 6.0 INCHES BELOW CHAMBERS, 6.0 INCHES ABOVE AND A 12.0 INCHES BORDER SURROUNDING



Recharger 280HD Stormwater System by CULTEC, Inc.		CULTEC RECHARGER 280HD LEGEND		CULTEC STORMWATER SYSTEM	
STARTER CHAMBERS	13	PIECES	[Symbol]	STARTER CHAMBERS	
INTERMEDIATE CHAMBERS	39	PIECES	[Symbol]	INTERMEDIATE CHAMBERS	
END CHAMBERS	13	PIECES	[Symbol]	END CHAMBERS	
HVLV FC-24 FEED CONNECTOR	12	PIECES	[Symbol]	HVLV FC-24 FEED CONNECTOR	
CULTEC NO. 410" FILTER FABRIC	613.21	SQ. YARDS	[Symbol]	CULTEC NO. 20L POLYETHYLENE LINER	
CULTEC NO. 20L POLYETHYLENE LINER	57.92	FEET	[Symbol]		
STONE	155.98	CU. YARDS	[Symbol]		
VOLUME OF EXCAVATION	336.24	CU. YARDS	[Symbol]		

CULTEC STORMWATER MANAGEMENT SYSTEM
TOTAL STORAGE PROVIDED: 4534.1 cu. feet
(STORAGE PROVIDED IN CHAMBERS: 2845.0 cu. feet)
(STORAGE PROVIDED IN STONE: 1684.6 cu. feet)
(STORAGE PROVIDED IN CONNECTORS 4.5 cu. feet)
*SYSTEM INSTALLED REQUIRING STONE AMOUNTS OF 6.0 INCHES BELOW CHAMBERS, 6.0 INCHES ABOVE AND A 12.0 INCHES BORDER SURROUNDING

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
All Rights Reserved

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF KELLY ENGINEERING GROUP. ANY REPRODUCTION OF THIS DOCUMENT, WITHOUT THE WRITTEN PERMISSION OF KELLY ENGINEERING GROUP, SHALL BE UNLAWFUL AND PENALTY.

SCALE	NA	REV	DATE	REVISION	BY
DATE	02/11/22				
SHEET	10 of 11				
FILE #	2020-162-DT00-CP				
JOB #	F:\P\2020-162				
DRAWN BY	C/L				
CHKD BY	GSH				
APPD BY	DNK				

BALDWINVILLE SCHOOL APARTMENTS
12 & 16 SCHOOL STREET
TEMPLETON, MA

DETAIL SHEET

KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

DAVID NOEL KELLY CIVIL NO. 37842 REGISTERED PROFESSIONAL ENGINEER

Digitally signed by David Noel Kelly P.E.
DN: cn=David Noel Kelly P.E., o=Kelly Engineering Group, Inc., email=dnoel@kellyeng.com, c=US
Date: 2022.02.09 15:52:50 -0500

SHEET NO. **10**

SEPARATOR ROW™ SPECIFICATIONS

GENERAL

CULTEC'S SEPARATOR ROW IS USED AS AN INEXPENSIVE MEANS OF REMOVING TOTAL SUSPENDED SOLIDS FROM THE CHAMBER SYSTEM, AS WELL AS PROVIDING EASIER ACCESS FOR INSPECTION AND MAINTENANCE.

INSTALLATION INSTRUCTIONS

A SEPARATOR ROW IS INSTALLED ON A 1-2 INCH [25-51 mm] WASHED, CRUSHED STONE BASE. TYPICALLY, THE CULTEC CHAMBER MODEL USED FOR THE SEPARATOR ROW IS THE SAME CHAMBER USED THROUGHOUT THE ENTIRE CHAMBER BED.

STORMWATER IS DISTRIBUTED TO THE SEPARATOR ROW BY A PRIMARY FEED SYSTEM THAT DIVERTS FLOW TO THE SEPARATOR ROW AND A SECONDARY BYPASS FEED SYSTEM THAT DIVERTS THE FLOW OF CLEAN WATER TO THE OTHER PARTS OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. THE DISTRIBUTION SYSTEM MAY BE BY PIPES SET AT A LOWER ELEVATION THAT PERMIT THE FIRST FLUSH TO THE SEPARATOR ROW VERSUS OTHER PARTS OF THE UNDERGROUND STORMWATER SYSTEM. THIS INITIAL FLOW MAY BE MANAGED BY A BAFFLE OR WEIR. THE SIZING OF THE PIPE(S) THAT PROVIDE STORM WATER TO THE SEPARATOR ROW IS TO BE DETERMINED BY THE DESIGN ENGINEER AND IS BASED UPON THE REQUIREMENT TO ACCOMMODATE THE DESIGN FLOW AND SERVICE CONVENIENCE.

THE CHAMBERS UTILIZED IN THE SEPARATOR ROW ARE TO BE COMPLETELY WRAPPED WITH CULTEC NO. 410 NON-WOVEN GEOTEXTILE. THIS CREATES A PASSES-THROUGH FILTER ARRANGEMENT TO SEPARATE TOTAL SUSPENDED SOLIDS IN THE TRANSFER OF STORM WATER TO OTHER CHAMBERS THROUGHOUT THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM.

ONCE WRAPPED, THE SEPARATOR ROW IS TO THEN BE PLACED ENTIRELY OVER 1 LAYER OF CULTEC No. 4800 WOVEN GEOTEXTILE. THIS WOVEN GEOTEXTILE PROVIDES A DURABLE SURFACE WITHIN THE ROW FOR MAINTENANCE PROCEDURES AS WELL AS TO PREVENT ANY SCOURING OF THE STONE BASE DURING HIGH PRESSURE JETTING.

THE RECOMMENDED INSTALLATION OF SEPARATOR ROW CHAMBERS, IN REGARD TO STONE SEPARATION AND STONE ABOVE THE UNIT, ALONG WITH OTHER MINIMUM BURIAL MATERIALS AND METHOD SPECIFICATIONS DETAILED FOR THE PROPER INSTALLATION, IS THE SAME AS CULTEC'S REQUIREMENT DETAILED IN THE COMPANY'S INSTALLATION GUIDELINES WITH THE EXCEPTION OF THE PLACEMENT OF THE REQUIRED FILTERING FABRICS. PLEASE REFER TO CULTEC'S CURRENT INSTALLATION INSTRUCTIONS FOR STORMWATER CHAMBERS AS A GUIDE.

MAINTENANCE PROCEDURES

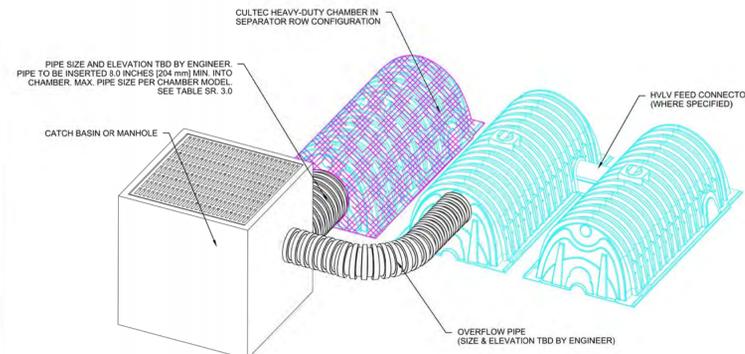
CULTEC RECOMMENDS INSPECTIONS OF THE SEPARATOR ROW TO BE PERFORMED EVERY SIX MONTHS FOR THE FIRST YEAR. THE FREQUENCY OF INSPECTION CAN THEN BE ADJUSTED BASED UPON PREVIOUS OBSERVATION OF SEDIMENT DEPOSITION.

WHILE CLEANING IS POSSIBLE FROM A SINGLE MANHOLE IN SHORTER LINES, A CLEAN-OUT OPTION FROM EITHER END OF A LINE IS PREFERABLE, PARTICULARLY FOR LONGER RUNS. CLEANING INVOLVES FLUSHING SEDIMENT FROM THE BASE FABRIC OF THE SEPARATOR ROW.

ACCESS WILL BE PROVIDED VIA A MANHOLE(S) LOCATED AT THE END(S) OF THE ROW FOR CLEAN OUT.

MAINTENANCE OF THE SEPARATOR ROW IS TO BE ACCOMPLISHED WITH A JETVAC PROCESS.

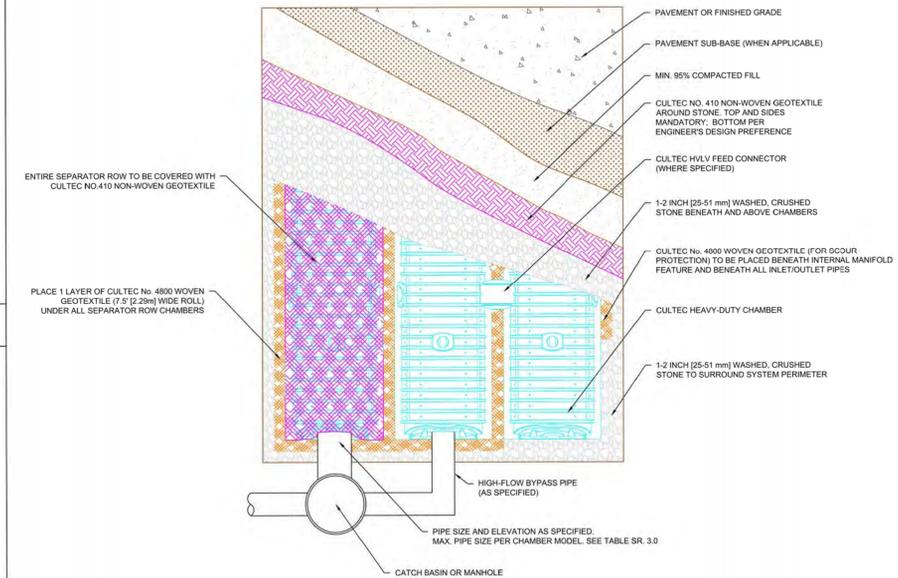
THE JETVAC IS TO BE SENT DOWN THE ENTIRE LENGTH OF THE SEPARATOR ROW. AS THE HIGH PRESSURE WATER NOZZLE IS RETRIEVED, THE CAPTURED SEDIMENTS ARE PUSHED BACK INTO THE MANHOLE FOR VACUUMING.



TYPICAL SEPARATOR ROW CONFIGURATION INLET CONNECTION

		CULTEC CHAMBER MODEL				
DESCRIPTION		CONTACTOR 100HD	RECHARGER 150XLHD	RECHARGER 280HD	RECHARGER 330XLHD	RECHARGER 902HD
A'	MIN. DEPTH OF STONE BASE	6" / 152 mm	6" / 152 mm	6" / 152 mm	6" / 152 mm	9" / 229 mm
B	CHAMBER HEIGHT	12.5" / 318 mm	18.5" / 470 mm	26.5" / 673 mm	30.5" / 775 mm	48" / 1219 mm
C'	MIN. DEPTH OF STONE REQUIRED ABOVE UNITS FOR TRAFFIC APPLICATIONS	6" / 152 mm	6" / 152 mm	6" / 152 mm	6" / 152 mm	12" / 305 mm
D	MIN. DEPTH REQUIRED OF 95% COMPACTED FILL FOR PAVED TRAFFIC	6" / 203 mm	6" / 203 mm	6" / 203 mm	10" / 254 mm	12" / 305 mm
E	MAX. DEPTH OF COVER ALLOWED ABOVE CROWN OF CHAMBER	12" / 3.65 m	12" / 3.65 m	12" / 3.65 m	12" / 3.65 m	8.3' / 2.53 m
	MAX. PIPE SIZE TO CHAMBER ENDWALL/ENDCAP	10" / 250 mm	12" / 300 mm	18" / 450 mm	24" / 600 mm	24" / 600 mm

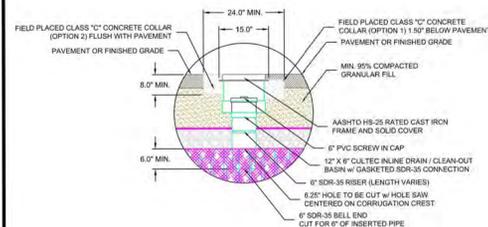
NOTE¹: STONE ABOVE AND BELOW UNITS MAY VARY PER SYSTEM. SEE SYSTEM LAYOUT FOR STONE REQUIREMENTS



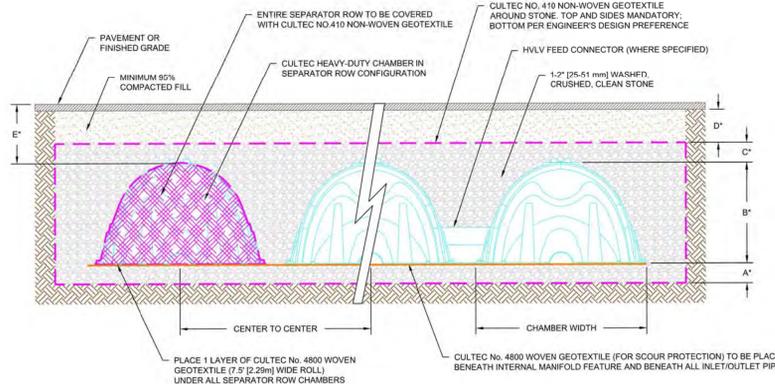
TYPICAL SEPARATOR ROW CONFIGURATION PLAN VIEW

GENERAL NOTES

CROSS SECTION TABLE REFERENCE

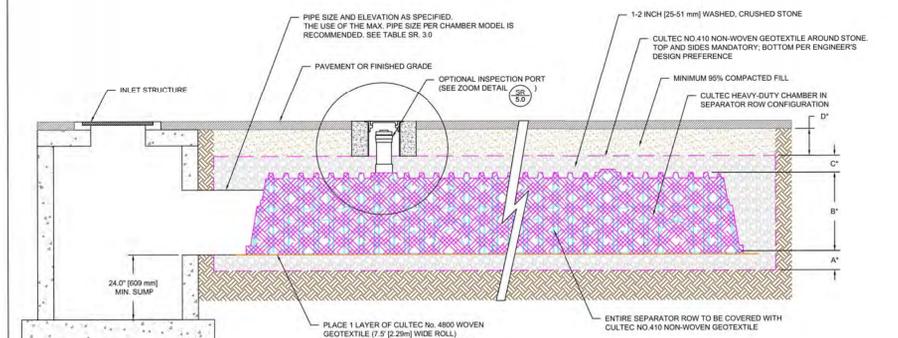


TYPICAL INSPECTION PORT - ZOOM DETAIL



* SEE SR 3.0 - CROSS SECTION TABLE REFERENCE

TYPICAL SEPARATOR ROW CONFIGURATION CROSS SECTION



* SEE SR 3.0 - CROSS SECTION TABLE REFERENCE

TYPICAL SEPARATOR ROW CONFIGURATION CROSS SECTION WITH INSPECTION PORT DETAIL

CULTEC, Inc.
Subsurface Stormwater Management Systems
 P.O. Box 280
 878 Federal Road
 Brookfield, CT 06804
 www.cultec.com
 PH: (203) 775-4416
 PH: (800) 4-CULTEC
 FX: (203) 775-1462
 tech@cultec.com

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

**SEPARATOR ROW
 DETAIL SHEET
 TRAFFIC APPLICATION**

SEPARATOR ROW DETAIL SHEET	
PROJECT NO: -	DATE: 08/2018
DESIGNED BY: CULTEC, INC	CHECKED BY: TECH
SCALE: N.T.S.	SHEET NO: -

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST
 COPYRIGHT (C) by KELLY ENGINEERING GROUP, INC.
 All Rights Reserved

SCALE	NA		
DATE	02/11/22	REV	DATE
SHEET	11 of 11	REVISION	BY
FILE #	2020-162-DT00-CP	BALDWINVILLE SCHOOL APARTMENTS 12 & 16 SCHOOL STREET TEMPLETON, MA	
JOB #	F:\P\2020-162	DETAIL SHEET	
DRAWN BY	C/L	KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com	
CHKD BY	GSH	SHEET NO. 11	
APPD BY	DNK		

DAVID NOEL KELLY CIVIL ENGINEER
 REGISTERED PROFESSIONAL ENGINEER
 No. 0205
 Date: 2022-02-09 15:53:16 -0500

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA

CC MPZ SCHOOL STREET LLC

ARCHITECT

CONSULTANT

DMLA
DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 Bromfield Street, Suite 303 Boston, MA 02108

STAMP

KEY PLAN

COMPREHENSIVE PERMIT SUBMISSION
06/10/2022

MARK	DATE	DESCRIPTION
PROJECT NUMBER: 220017		
DRAWN BY: CM		
CHECKED BY: JAT		

PROJECT NUMBER: 220017

DRAWN BY: CM

CHECKED BY: JAT

SHEET TITLE

SITE PLAN RENDERING

L-0



PLANTING LEGEND

-  EXISTING TREE
-  PROPOSED TREE
-  PROPOSED FLOWERING TREE
-  SHRUB
-  SHRUB MASSING



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

CONSULTANT

DMLA

DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 Bromfield Street, Suite 503 Boston, MA 02108

STAMP

KEY PLAN

COMPREHENSIVE PERMIT SUBMISSION
06/10/2022

MARK	DATE	DESCRIPTION
PROJECT NUMBER: 220017		
DRAWN BY: CM		
CHECKED BY: JAT		

PROJECT NUMBER: 220017

DRAWN BY: CM

CHECKED BY: JAT

SHEET TITLE

LANDSCAPE MATERIALS PLAN

L-1

LAYOUT AND MATERIALS LEGEND

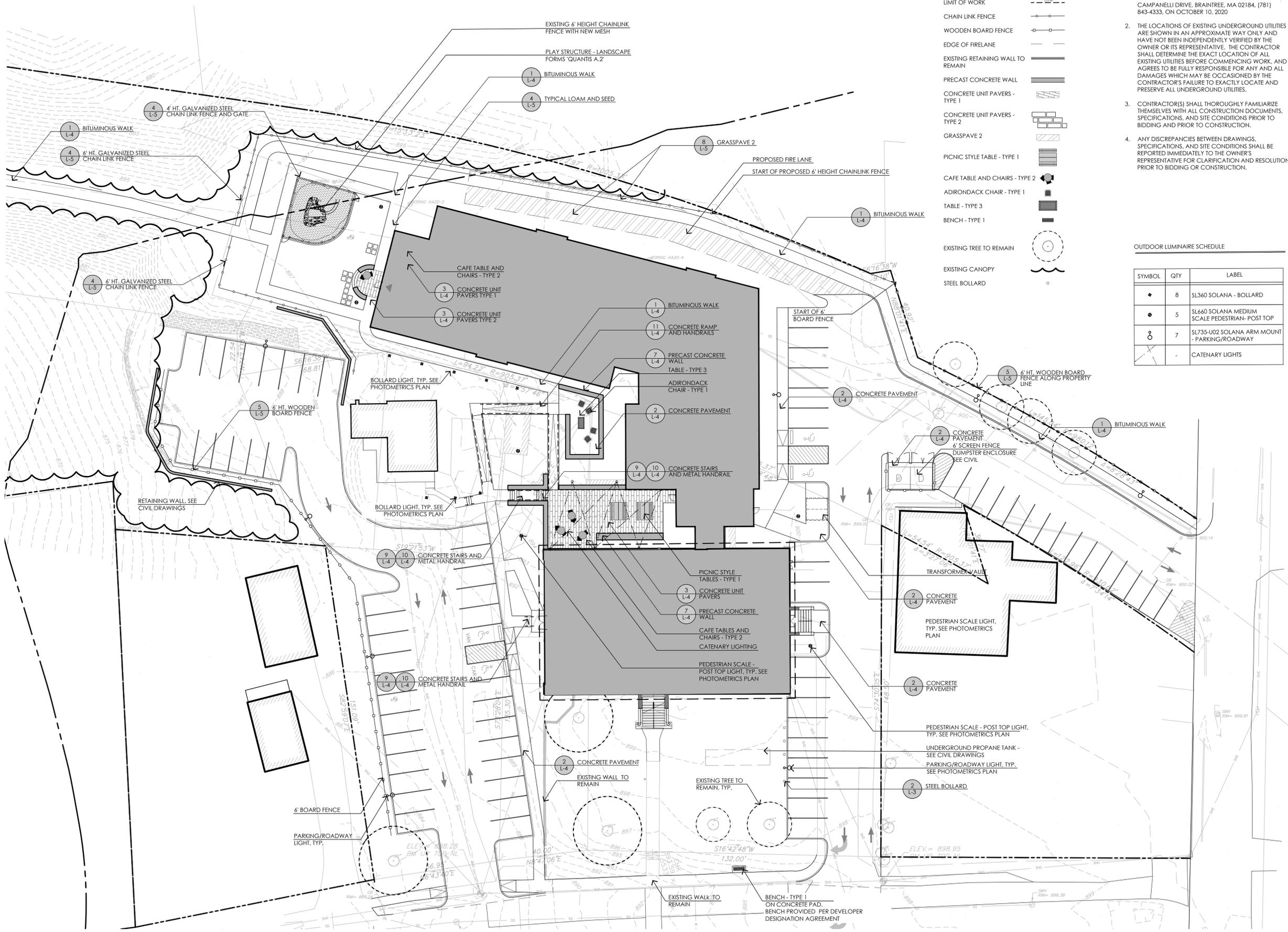
PROPERTY LINE	
LIMIT OF WORK	
CHAIN LINK FENCE	
WOODEN BOARD FENCE	
EDGE OF FIRELANE	
EXISTING RETAINING WALL TO REMAIN	
PRECAST CONCRETE WALL	
CONCRETE UNIT PAVERS - TYPE 1	
CONCRETE UNIT PAVERS - TYPE 2	
GRASSPAVE 2	
PICNIC STYLE TABLE - TYPE 1	
CAFE TABLE AND CHAIRS - TYPE 2	
ADIRONDACK CHAIR - TYPE 1	
TABLE - TYPE 3	
BENCH - TYPE 1	
EXISTING TREE TO REMAIN	
EXISTING CANOPY	
STEEL BOLLARD	

LAYOUT AND MATERIAL NOTES

- EXISTING CONDITIONS INFORMATION IS A COMPILED SURVEY PREPARED BY KELLEY ENGINEERING GROUP, 0 CAMPANELLI DRIVE, BRAINTREE, MA 02184, (781) 843-4333, ON OCTOBER 10, 2020
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES.
- CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.

OUTDOOR LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL
	8	SL360 SOLANA - BOLLARD
	5	SL640 SOLANA MEDIUM SCALE PEDESTRIAN- POST TOP
	7	SL735-U02 SOLANA ARM MOUNT - PARKING/ROADWAY
	-	CATENARY LIGHTS



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

CONSULTANT

DMLA
DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 Bromfield Street, Suite 503 Boston, MA 02108

STAMP

KEY PLAN

COMPREHENSIVE PERMIT SUBMISSION
06/10/2022

MARK	DATE	DESCRIPTION
PROJECT NUMBER:	220017	
DRAWN BY:	CM	
CHECKED BY:	JAT	

PROJECT NUMBER: 220017

DRAWN BY: CM

CHECKED BY: JAT

SHEET TITLE

PLANTING PLAN

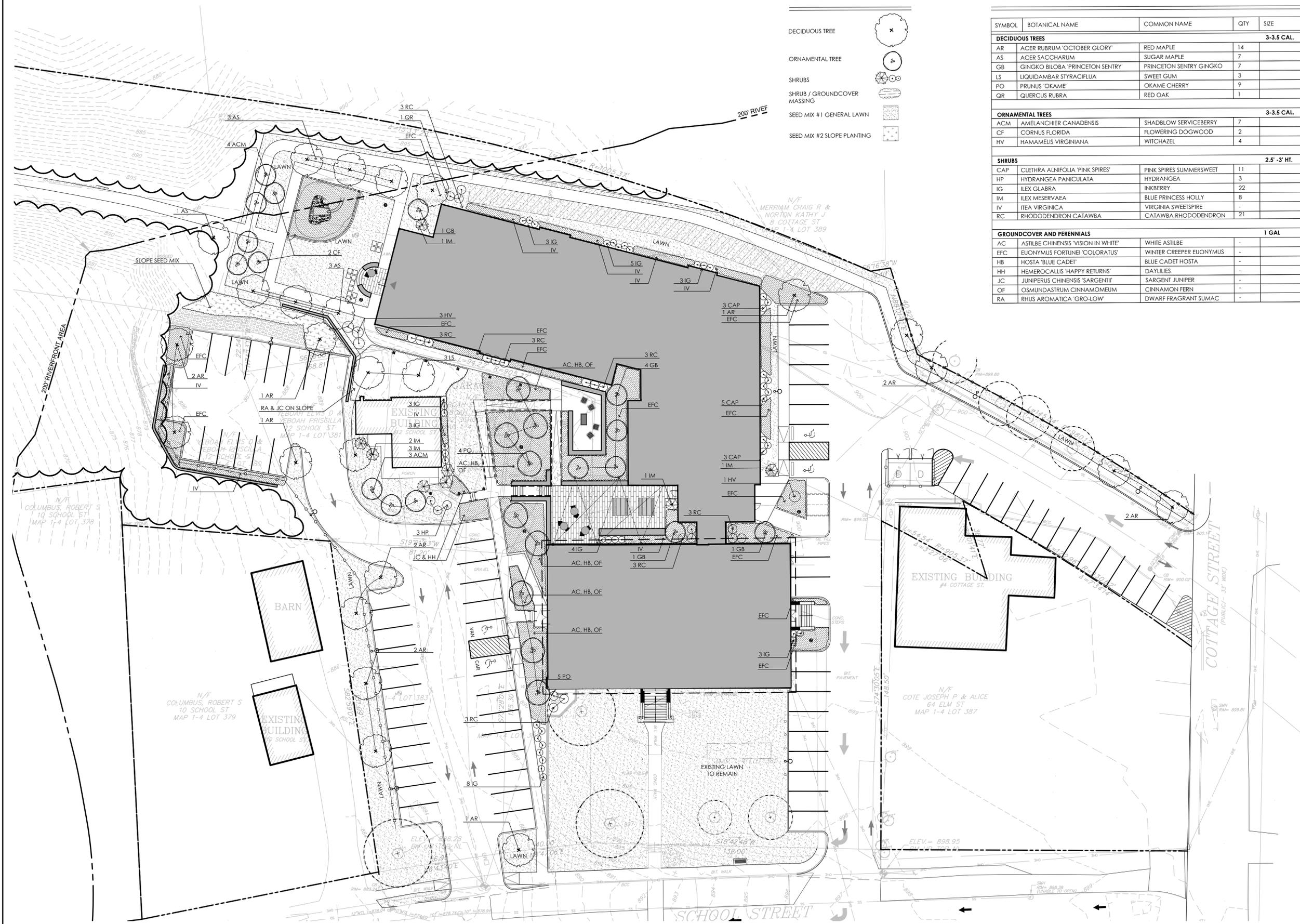
L-2

PLANTING LEGEND

- DECIDUOUS TREE 
- ORNAMENTAL TREE 
- SHRUBS 
- SHRUB / GROUNDCOVER MASSING 
- SEED MIX #1 GENERAL LAWN 
- SEED MIX #2 SLOPE PLANTING 

SUGGESTED PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY	SIZE
DECIDUOUS TREES				
3-3.5 CAL.				
AR	ACER RUBRUM 'OCTOBER GLORY'	RED MAPLE	14	
AS	ACER SACCHARUM	SUGAR MAPLE	7	
GB	GINGKO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY GINGKO	7	
LS	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	3	
PO	PRUNUS 'OKAME'	OKAME CHERRY	9	
QR	QUERCUS RUBRA	RED OAK	1	
ORNAMENTAL TREES				
3-3.5 CAL.				
ACM	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	7	
CF	CORNUS FLORIDA	FLOWERING DOGWOOD	2	
HV	HAMAMELIS VIRGINIANA	WITCHAZEL	4	
SHRUBS				
2.5' - 3' HT.				
CAP	CLETHRA ALNIFOLIA 'PINK SPIRES'	PINK SPIRES SUMMERSWEET	11	
HP	HYDRANGEA PANICULATA	HYDRANGEA	3	
IG	ILEX GLABRA	INKBERRY	22	
IM	ILEX MESERVAEA	BLUE PRINCESS HOLLY	8	
IV	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	-	
RC	RHOODODENDRON CATAWBA	CATAWBA RHODODENDRON	21	
GROUNDCOVER AND PERENNIALS				
1 GAL				
AC	ASTILBE CHINENSIS 'VISION IN WHITE'	WHITE ASTILBE	-	
EFC	EUONYMUS FORTUNEI 'COLORATUS'	WINTER CREEPER EUONYMUS	-	
HB	HOSTA 'BLUE CADET'	BLUE CADET HOSTA	-	
HH	HEMEROCALLIS 'HAPPY RETURNS'	DAYLILIES	-	
JC	JUNIPERUS CHINENSIS 'SARGENTII'	SARGENT JUNIPER	-	
OF	OSMUNDASTRUM CINNAMOMEUM	CINNAMON FERN	-	
RA	RHUS AROMATICA 'GRO-LOW'	DWARF FRAGRANT SUMAC	-	



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

CONSULTANT

DMLA
DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 Bromfield Street, Suite 503 Boston, MA 02108

STAMP

KEY PLAN

COMPREHENSIVE PERMIT SUBMISSION
06/10/2022

MARK	DATE	DESCRIPTION
------	------	-------------

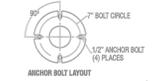
PROJECT NUMBER:	220017
DRAWN BY:	CM
CHECKED BY:	JAT

SHEET TITLE

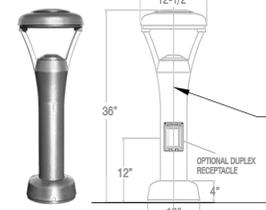
PHOTOMETRIC PLAN

L-3

Qty	Label	Dim	Measurement	W/P	Description
1	B1	12" DIA.	3600"	0.900	12" DIA. X 36' ALUMINUM BOLLARD
1	P1	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P2	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P3	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P4	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P5	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P6	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P7	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P8	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P9	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P10	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P11	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P12	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P13	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P14	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P15	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P16	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P17	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P18	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P19	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P20	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P21	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P22	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P23	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P24	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P25	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P26	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P27	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P28	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P29	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P30	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P31	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P32	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P33	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P34	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P35	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P36	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P37	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P38	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P39	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P40	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P41	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P42	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P43	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P44	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P45	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P46	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P47	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P48	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P49	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P50	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P51	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P52	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P53	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P54	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P55	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P56	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P57	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P58	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P59	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P60	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P61	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P62	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P63	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P64	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P65	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P66	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P67	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P68	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P69	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P70	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P71	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P72	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P73	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P74	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P75	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P76	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P77	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P78	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P79	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P80	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P81	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P82	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P83	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P84	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P85	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P86	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P87	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P88	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P89	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P90	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P91	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P92	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P93	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P94	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P95	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P96	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P97	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P98	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P99	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT
1	P100	20"	3600"	0.900	20" DIA. X 36' ALUMINUM POST TOP LIGHT



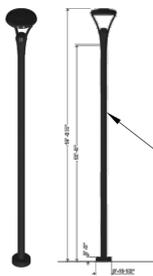
- NOTES:
1. INSTALL ON 12" O.D. X 36" CONCRETE FOOTING USING MFR'S BOLT CIRCLE TO SPACE ANCHOR BOLTS.
 2. CAST ALUMINUM
 3. FULL CUTOFF DARK SKY COMPLIANT
 4. IP65 RATING
 5. HIGH OUTPUT LED'S WITH A LIFE SPAN L70 RATING OF 100,00 HOURS OR MORE
 6. POWDER COATED FINISH



SOLANA SL360 BOLLARD AS MANUFACTURED BY STERNBERG LIGHTING
WWW.STERBERGLIGHTING.COM

1 BOLLARD LIGHT (B1 THIS SHEET)

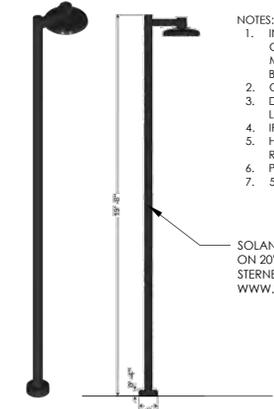
- NOTES:
1. INSTALL ON 12" O.D. X 48" CONCRETE FOOTING USING MFR'S BOLT CIRCLE TO SPACE ANCHOR BOLTS.
 2. CAST ALUMINUM FIXTURE HOUSING
 3. DARK SKY COMPLIANT U0 BUG RATED LUMINAIRE
 4. IP66 RATING
 5. HIGH OUTPUT LED'S WITH A LIFE SPAN L70 RATING OF 100,00 HOURS OR MORE
 6. POWDER COATED FINISH
 7. 4" O.D. STRAIGHT ALUMINUM POLE



SOLANA SL660 POST TOP LUMINAIRE ON 12" POLE. MANUFACTURED BY STERNBERG LIGHTING
WWW.STERBERGLIGHTING.COM

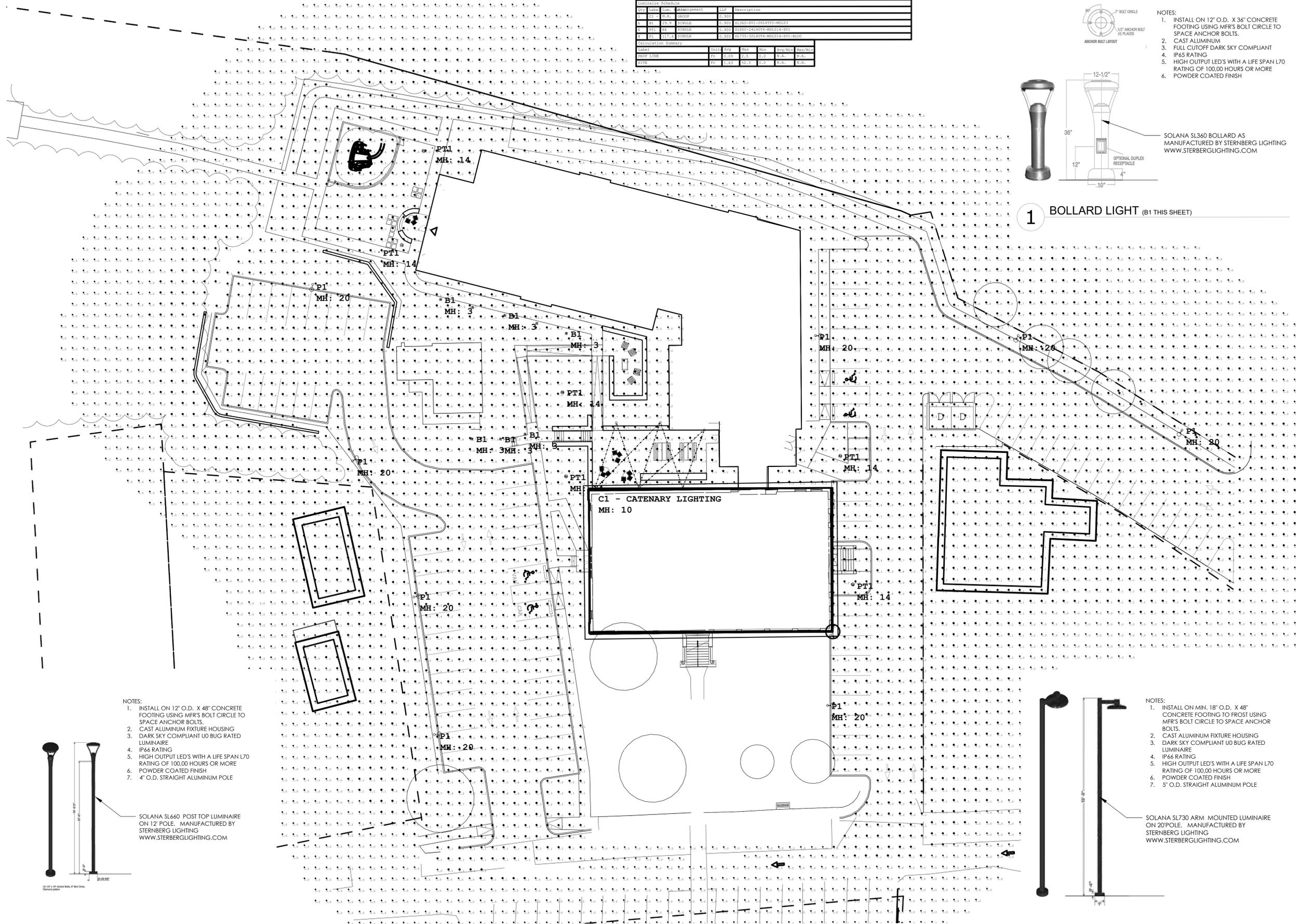
3 PEDESTRIAN / POST TOP LIGHT (PT THIS SHEET)

- NOTES:
1. INSTALL ON MIN. 18" O.D. X 48" CONCRETE FOOTING TO FROST USING MFR'S BOLT CIRCLE TO SPACE ANCHOR BOLTS.
 2. CAST ALUMINUM FIXTURE HOUSING
 3. DARK SKY COMPLIANT U0 BUG RATED LUMINAIRE
 4. IP65 RATING
 5. HIGH OUTPUT LED'S WITH A LIFE SPAN L70 RATING OF 100,00 HOURS OR MORE
 6. POWDER COATED FINISH
 7. 5" O.D. STRAIGHT ALUMINUM POLE



SOLANA SL730 ARM MOUNTED LUMINAIRE ON 20" POLE. MANUFACTURED BY STERNBERG LIGHTING
WWW.STERBERGLIGHTING.COM

2 PARKING / ROADWAY LIGHT (P1 THIS SHEET)



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

CONSULTANT

DMLA

DEBORAH MYERS LANDSCAPE ARCHITECTURE
36 Bromfield Street, Suite 503 Boston, MA 02108

STAMP

KEY PLAN

COMPREHENSIVE PERMIT SUBMISSION
06/10/2022

MARK	DATE	DESCRIPTION
PROJECT NUMBER: 220017		
DRAWN BY: CM		
CHECKED BY: JAT		

PROJECT NUMBER: 220017

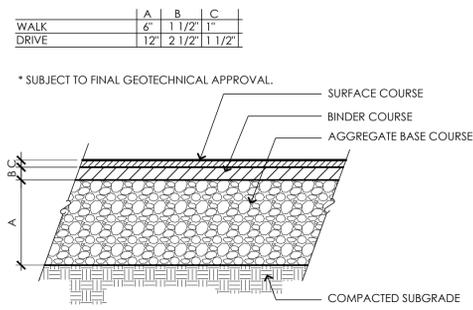
DRAWN BY: CM

CHECKED BY: JAT

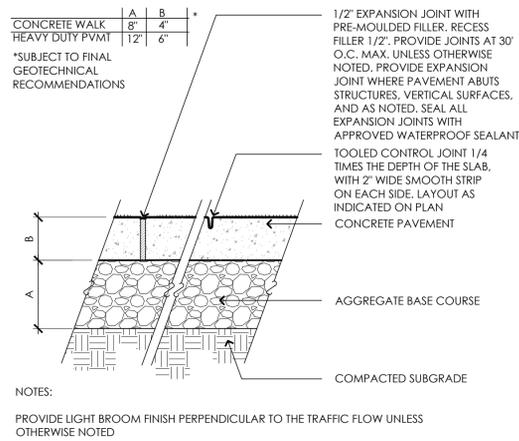
SHEET TITLE

SITE DETAILS

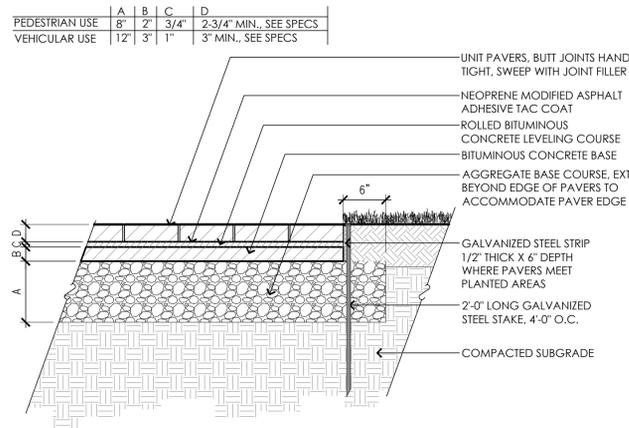
L-4



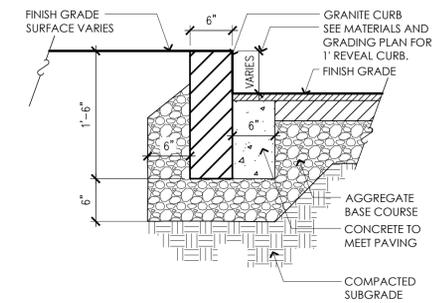
1 BITUMINOUS PAVEMENT
1" = 1'-0"



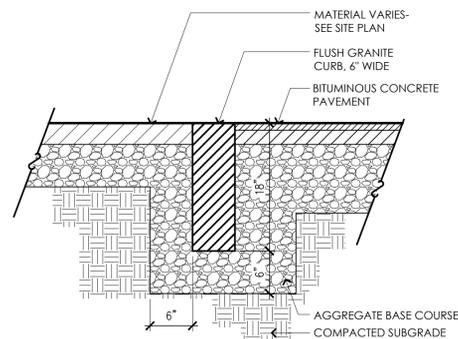
2 CONCRETE PAVEMENT
1 1/2" = 1'-0"



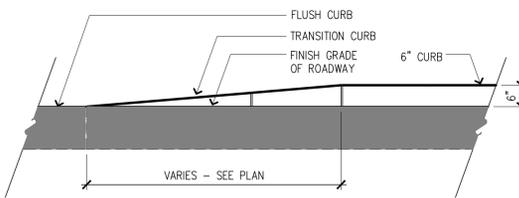
3 CONCRETE UNIT PAVERS
1" = 1'-0"



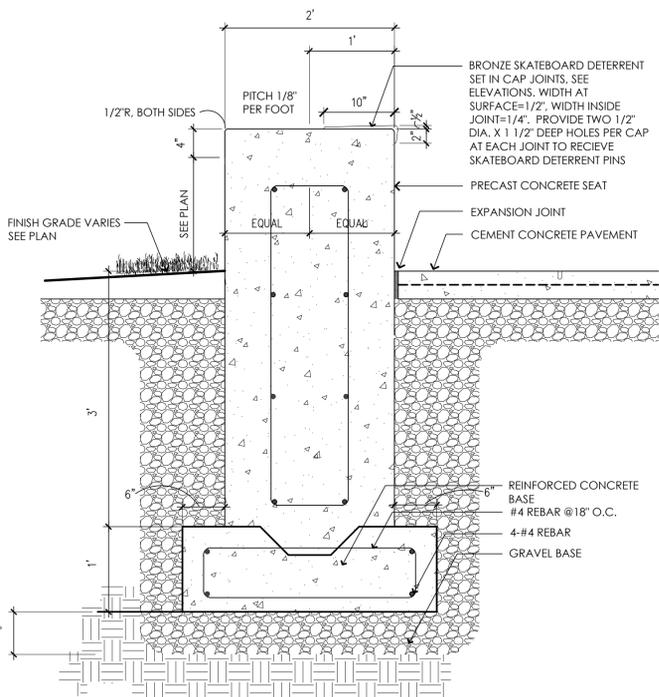
4 VERTICAL GRANITE CURB
1" = 1'-0"



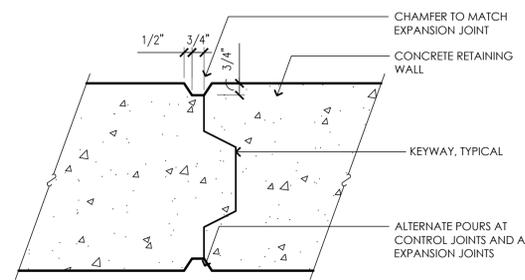
5 FLUSH GRANITE CURB
1" = 1'-0"



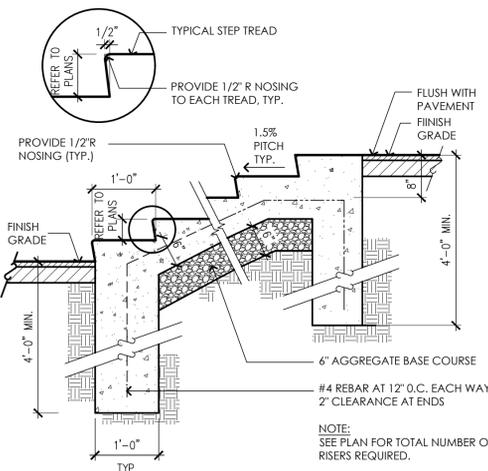
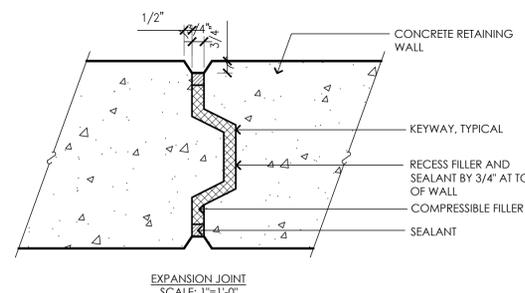
6 TRANSITION CURB
1/2" = 1'-0"



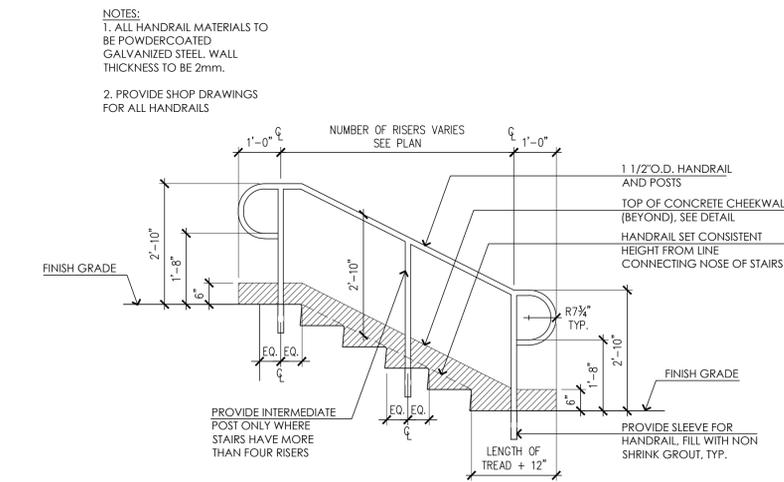
7 PRECAST CONCRETE SEATWALL
1" = 1'-0"



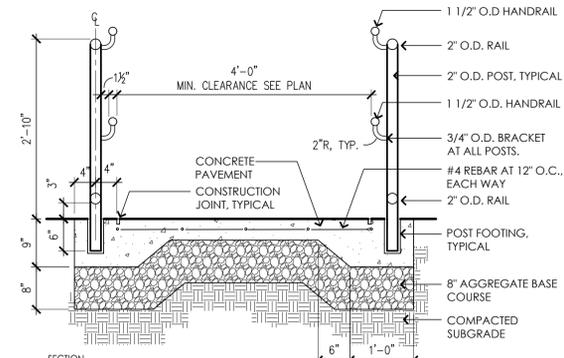
8 CONTROL AND EXPANSION JOINTS
1" = 1'-0"



9 CONCRETE STAIRS
1" = 1'-0"



10 METAL HANDRAIL
1/2" = 1'-0"



11 CONCRETE RAMP
3/4" = 1'-0"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

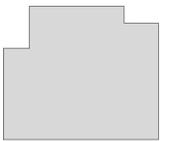


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC,PR
CHECKED BY: JM

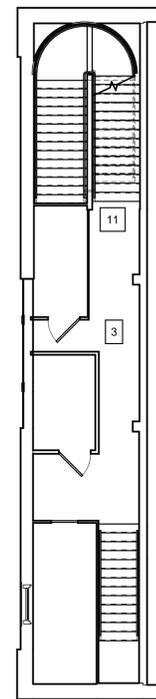
SHEET TITLE

EXISTING PLANS

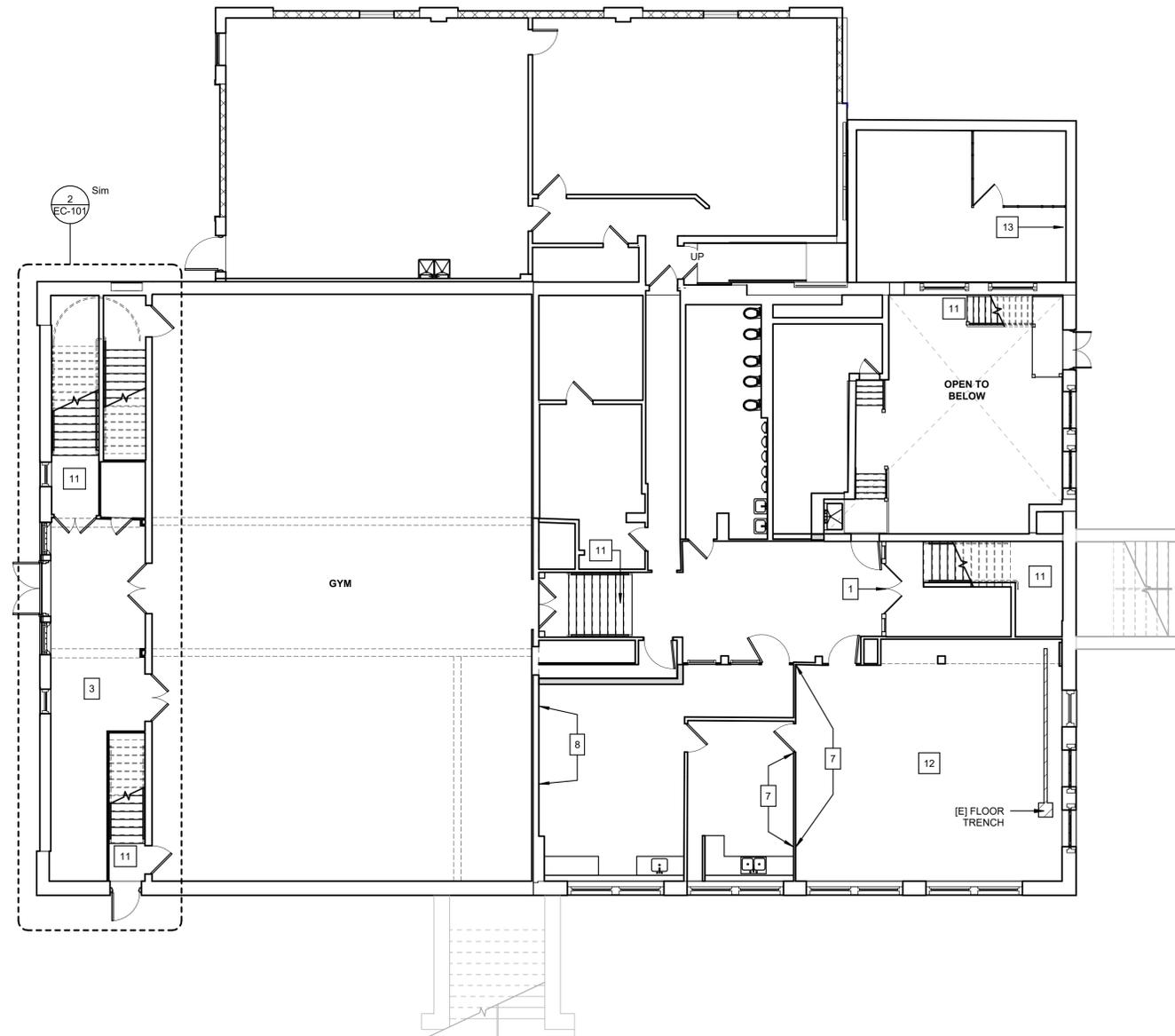
EC-101

HISTORICAL SALVAGE NOTES

- DOORS & TRIM AND/OR GLAZED PANEL SYSTEM TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL.
- CORNICE/BEAM CEILING DETAIL TO BE RETAINED. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- ALL EXISTING HISTORIC BUILT-IN CABINERY TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.
- REINSTALL EXISTING WINDOW TRIM WHERE POSSIBLE; REPLACE-IN-KIND WHERE NECESSARY - IN ALL LOCATION.
- (NOT USED)
- ALL EXISTING CHALKBOARDS AND TRIM TO BE REMOVED AND CUT DOWN, AND REINSTALLED IN UNITS. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL. REMOVE BROKEN OR DAMAGED SECTIONS WHERE NECESSARY.
- ALL EXISTING CHALKBOARD RAILS TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.
- EXISTING SKYLIGHT ABOVE
- ALL EXISTING HISTORIC MILLWORK & TRIM, INCLUDING BUT NOT LIMITED TO WAINSCOT, CHAIR RAILS, AND FLOOR BASE TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.
- EXISTING WOOD HANDRAILS AT STAIR TO BE REPLACED IN KIND TO PROVIDE HANDRAIL EXTENSIONS AS REQUIRED PER CODE. EXISTING MILLWORK AT STAIR TO BE PROTECTED & RESTORED. WHERE REQUIRED BY CODE, NEW CONTINUOUS HANDRAILS & GUARDRAILS TO BE MOUNTED TO EXISTING STAIR TREADS W/ MIN ATTACHMENTS INDEPENDENT OF HISTORIC RAIL, TYP.
- EXISTING HISTORIC WALL PANELING TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- REMOVE EXISTING OIL TANKS IN SUB BASEMENT.
- EXISTING VENT AND CEILING HATCH TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE INSTALLED.



2 MEZZ LEVEL - EXISTING PLAN
1/8" = 1'-0"



1 LEVEL 0 - EXISTING PLAN
1/8" = 1'-0"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

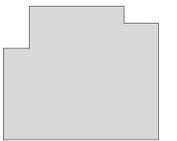


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC,PR
CHECKED BY: JM

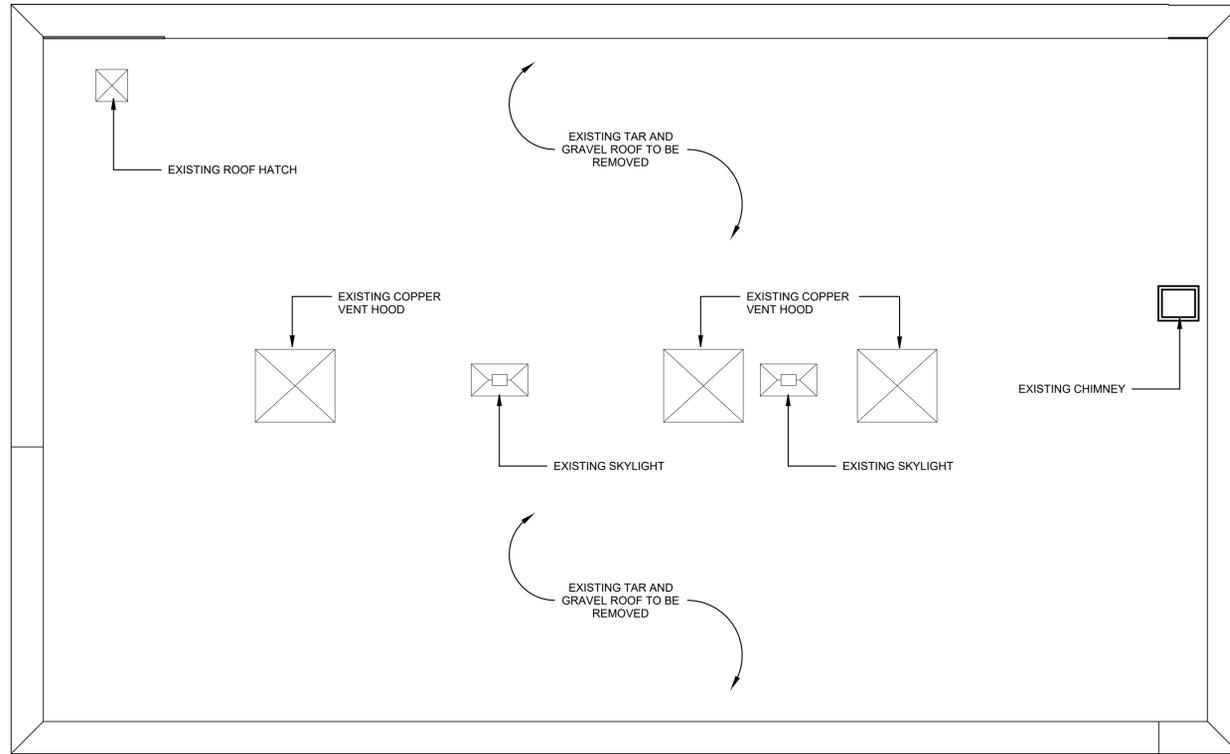
SHEET TITLE

EXISTING PLANS

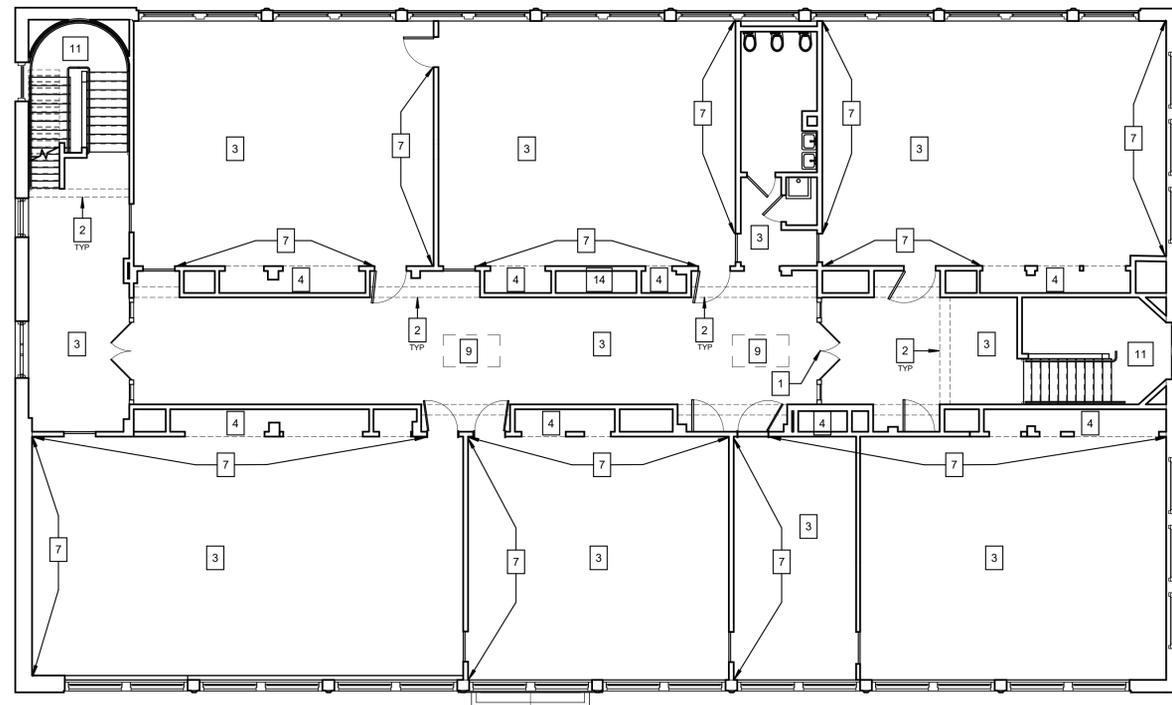
EC-102

HISTORICAL SALVAGE NOTES

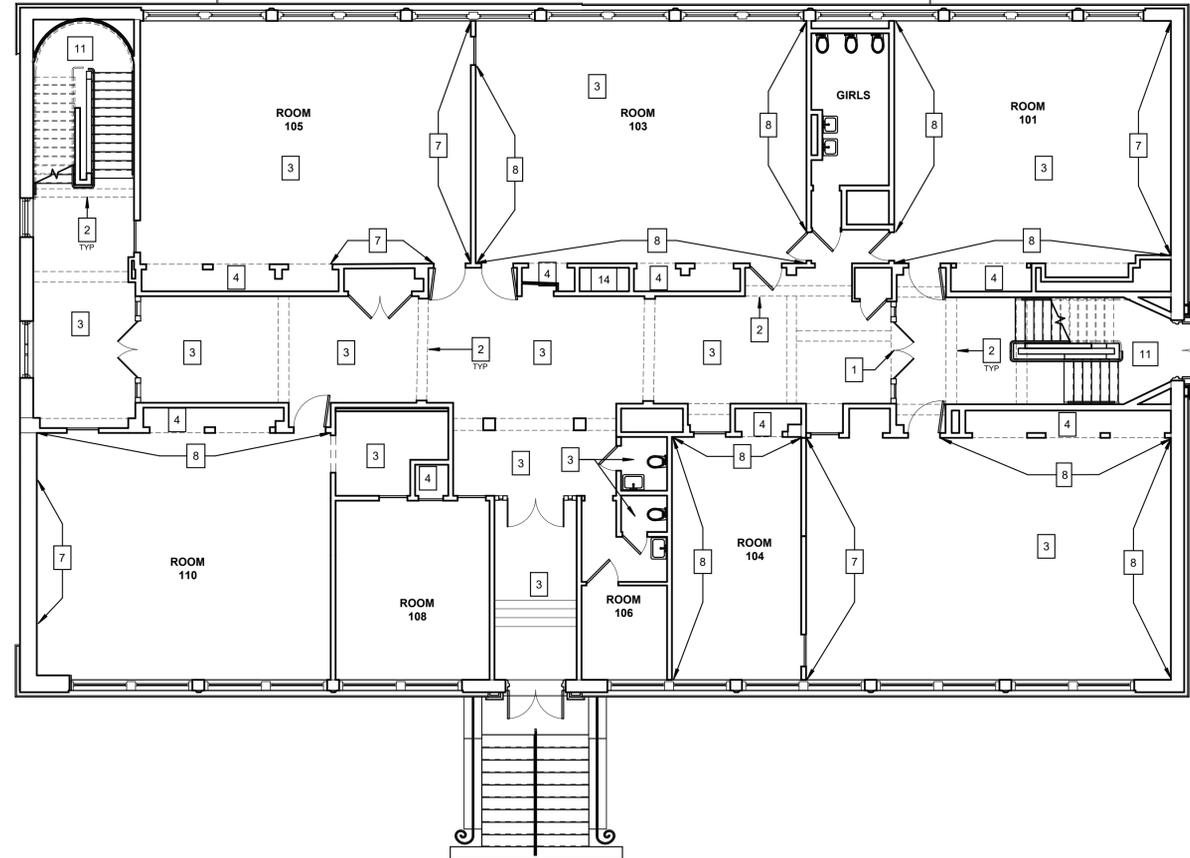
- DOORS & TRIM AND/OR GLAZED PANEL SYSTEM TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL.
- CORNICE/BEAM CEILING DETAIL TO BE RETAINED. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- ALL EXISTING HISTORIC BUILT-IN CABINETS TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.
- REINSTALL EXISTING WINDOW TRIM WHERE POSSIBLE; REPLACE-IN-KIND WHERE NECESSARY - IN ALL LOCATION.
- (NOT USED)
- ALL EXISTING CHALKBOARDS AND TRIM TO BE REMOVED AND CUT DOWN, AND REINSTALLED IN UNITS. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL. REMOVE BROKEN OR DAMAGED SECTIONS WHERE NECESSARY.
- ALL EXISTING CHALKBOARD RAILS TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.
- EXISTING SKYLIGHT ABOVE
- ALL EXISTING HISTORIC MILLWORK & TRIM, INCLUDING BUT NOT LIMITED TO WAINSCOT, CHAIR RAILS, AND FLOOR BASE TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.
- EXISTING WOOD HANDRAILS AT STAIR TO BE REPLACED IN KIND TO PROVIDE HANDRAIL EXTENSIONS AS REQUIRED PER CODE. EXISTING MILLWORK AT STAIR TO BE PROTECTED & RESTORED. WHERE REQUIRED BY CODE, NEW CONTINUOUS HANDRAILS & GUARDRAILS TO BE MOUNTED TO EXISTING STAIR TREADS W/ MIN ATTACHMENTS INDEPENDENT OF HISTORIC RAIL, TYP.
- EXISTING HISTORIC WALL PANELING TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- REMOVE EXISTING OIL TANKS IN SUB BASEMENT.
- EXISTING VENT AND CEILING HATCH TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE INSTALLED.



3 ROOF - EXISTING PLAN
1/8" = 1'-0"



2 LEVEL 2 - EXISTING PLAN
1/8" = 1'-0"



1 LEVEL 1 - EXISTING PLAN
1/8" = 1'-0"

NOTE:
STAIR TREAD = 11"
STAIR RISER = 7"
STAIR HANDRAIL = 34"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

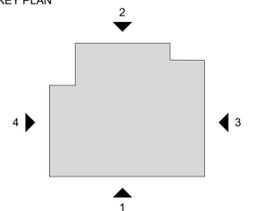


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



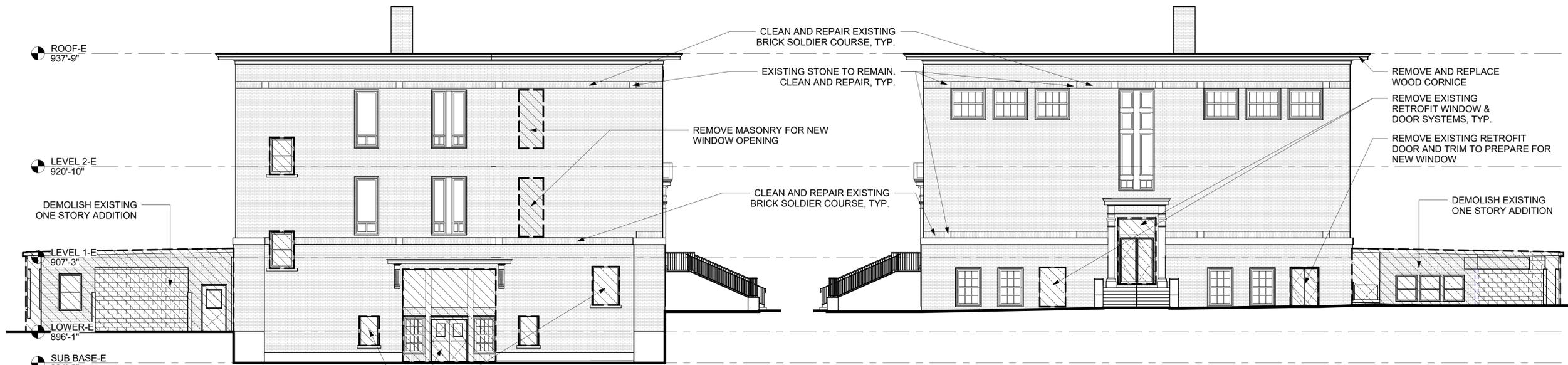
MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2021-06-15	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

SHEET TITLE

BUILDING ELEVATIONS - EXISTING

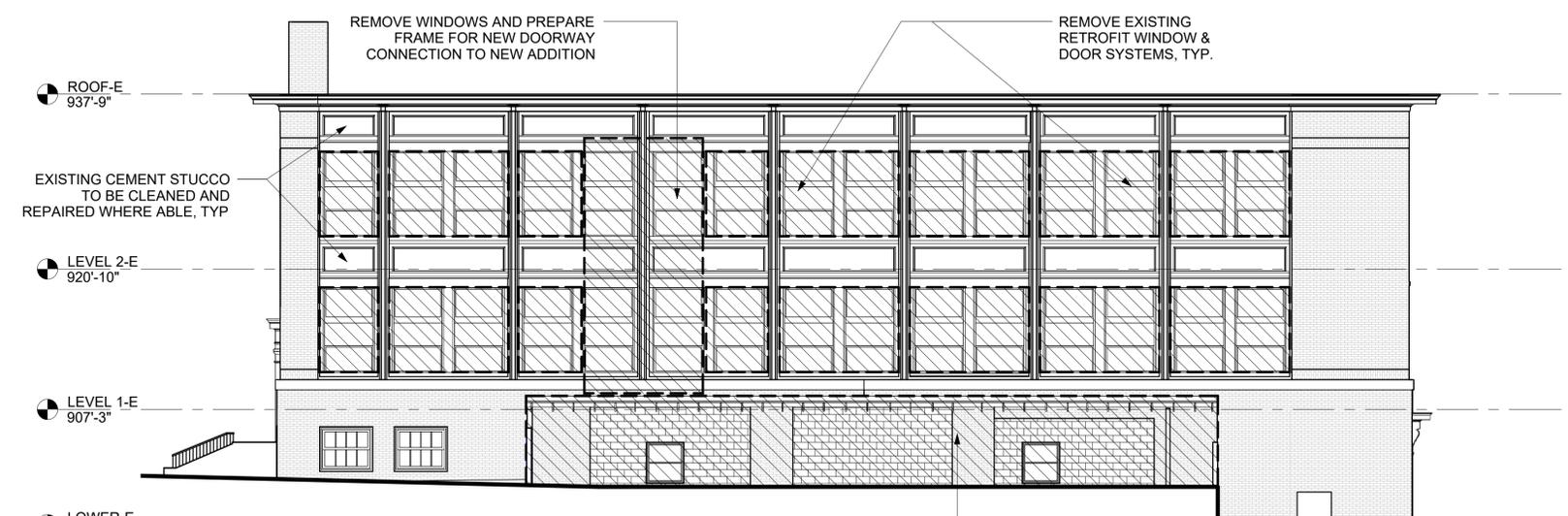
EC-201



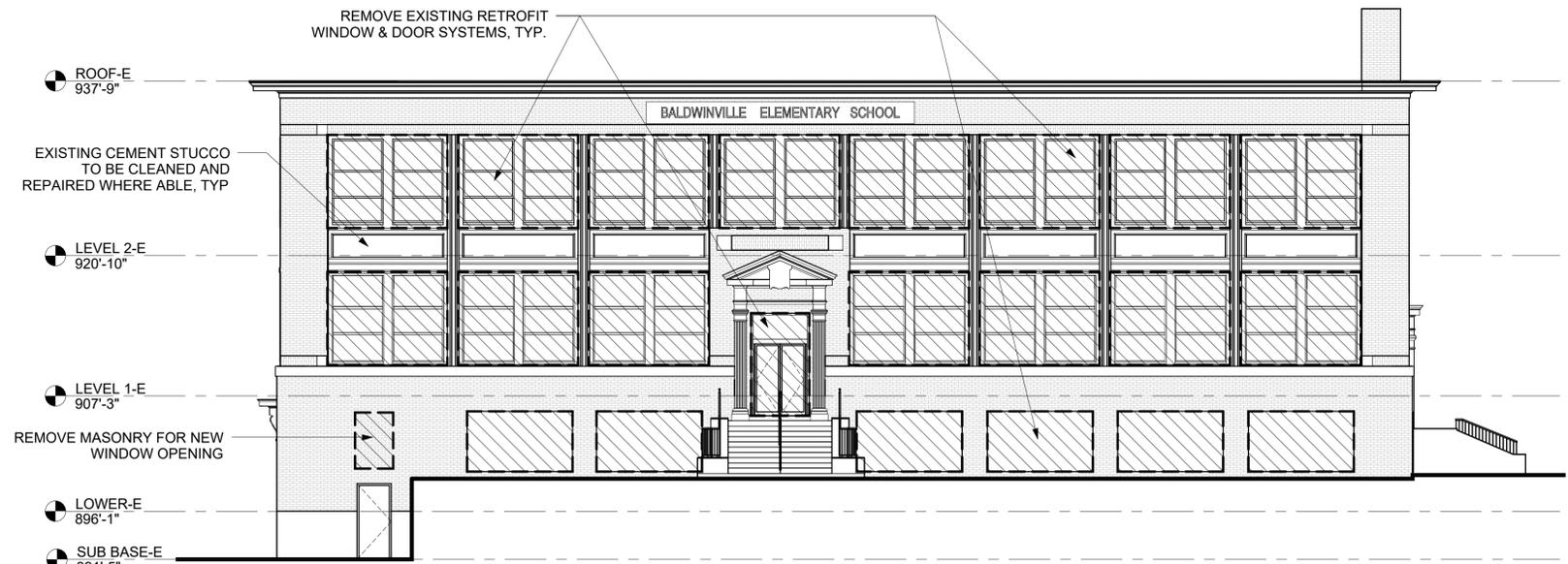
4 NORTH ELEVATION - EXISTING
1/8" = 1'-0"

3 SOUTH ELEVATION - EXISTING
1/8" = 1'-0"

REMOVE EXISTING RETROFIT WINDOW & DOOR SYSTEMS, TYP.



2 EAST ELEVATION - EXISTING
1/8" = 1'-0"



1 WEST ELEVATION - EXISTING
1/8" = 1'-0"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA

CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017

DRAWN BY: PR

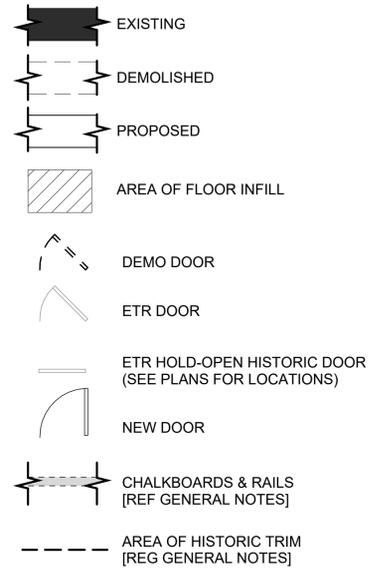
CHECKED BY: JM

SHEET TITLE

GENERAL NOTES

A-001

LEGEND



GENERAL NOTES

1. WITHIN CLASSROOMS:

A. AT ALL EXTERIOR WALLS OR DEMISING WALLS TO BE FURRED OUT: ALL EXISTING HISTORIC MILLWORK & TRIM, INCLUDING BUT NOT LIMITED TO WAINSCOT, FLOOR BASE, CHALKBOARD RAILS, MOULDING, DOORS & TRIM, AND BUILT-IN CABINETRY TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL - EXCLUDING AT NEW BATHS AND KITCHENS. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL. FURRED WALLS TO BE NO MORE THAN 4" BEYOND EXISTING PLASTER.

B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP

C. ITEMS REMOVED AND NOT REINSTALLED ARE TO BE RETURNED TO OWNER.

D. MAINTAIN EXISTING CLASSROOM DEMISING WALLS AND FURROUT AS NEEDED TO PROVIDE REQUIRED RATED ASSEMBLY. CLASSROOM COMMUNICATING DOORS & TRIM TO BE FIXED IN PLACE IN SAME LOCATION ON ONE SIDE OF DEMISING WALL W/ RATED GWB INFILL WALL BEHIND.

E. EXISTING HARDWOOD FLOORS TO BE PROTECTED & REFINISHED, TYP. REPAIR/REPLACE IN KIND AS NEEDED. PROVIDE NON-WOOD LOOK RESILIENT FLOORING AT UNIT BATHS, TYP.

F. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.

G. ALL EXISTING CHALKBOARDS AND TRIM TO BE REMOVED AND CUT DOWN, AND REINSTALLED IN UNITS. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL. REMOVE BROKEN OR DAMAGED SECTIONS WHERE NECESSARY.

H. ALL EXISTING CHALKBOARD RAILS TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.

2. WITHIN CORRIDORS:

A. AT ALL EXTERIOR WALLS OR DEMISING WALLS TO BE FURRED OUT: ALL EXISTING HISTORIC MILLWORK & TRIM, INCLUDING BUT NOT LIMITED TO WAINSCOT, FLOOR BASE, CHALKBOARD RAILS, MOULDING, DOORS & TRIM, AND BUILT-IN CABINETRY TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL.

B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP

C. ITEMS REMOVED AND NOT REINSTALLED ARE TO BE RETURNED TO OWNER.

D. MAINTAIN EXISTING DEMISING WALLS AND FURROUT AS NEEDED TO PROVIDE REQUIRED RATED ASSEMBLY. HISTORIC DOORS & TRIM TO BE FIXED IN PLACE IN SAME LOCATION (OR LOCATION NOTED) ON ONE SIDE OF DEMISING WALL W/ RATED GWB INFILL WALL BEHIND.

E. EXISTING HARDWOOD FLOORS TO BE PROTECTED & REFINISHED, TYP. REPAIR/REPLACE IN KIND AS NEEDED. PROVIDE NON-WOOD LOOK RESILIENT FLOORING AT COMMON LAUNDRY & MEP AREAS.

F. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.

G. HISTORIC CLASSROOM ENTRY DOORS TO BE RETAINED AND FIXED IN PLACE, TYP.

3. WITHIN EXISTING STAIRS:

A. EXISTING WOOD HANDRAILS & MILLWORK AT STAIR TO BE PROTECTED & RESTORED. WHERE REQUIRED BY CODE, NEW CONTINUOUS HANDRAILS & GUARDRAILS TO BE MOUNTED TO EXISTING STAIR TREADS W/ MIN ATTACHMENTS INDEPENDENT OF HISTORIC RAIL, TYP

B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP

C. REMOVE & REPLACE ALL EXISTING RESILIENT STAIR TREAD AND RISER COVERINGS

D. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.

GENERAL NOTES

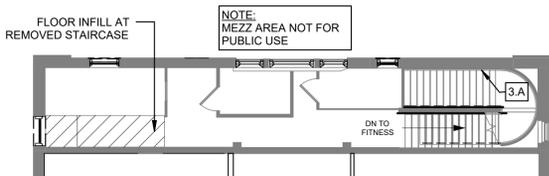
1. **WITHIN CLASSROOMS:** REF A-001 FOR ALL GENERAL NOTES; REF A-500S FOR CLASSROOM SCOPE

2. WITHIN CORRIDORS:

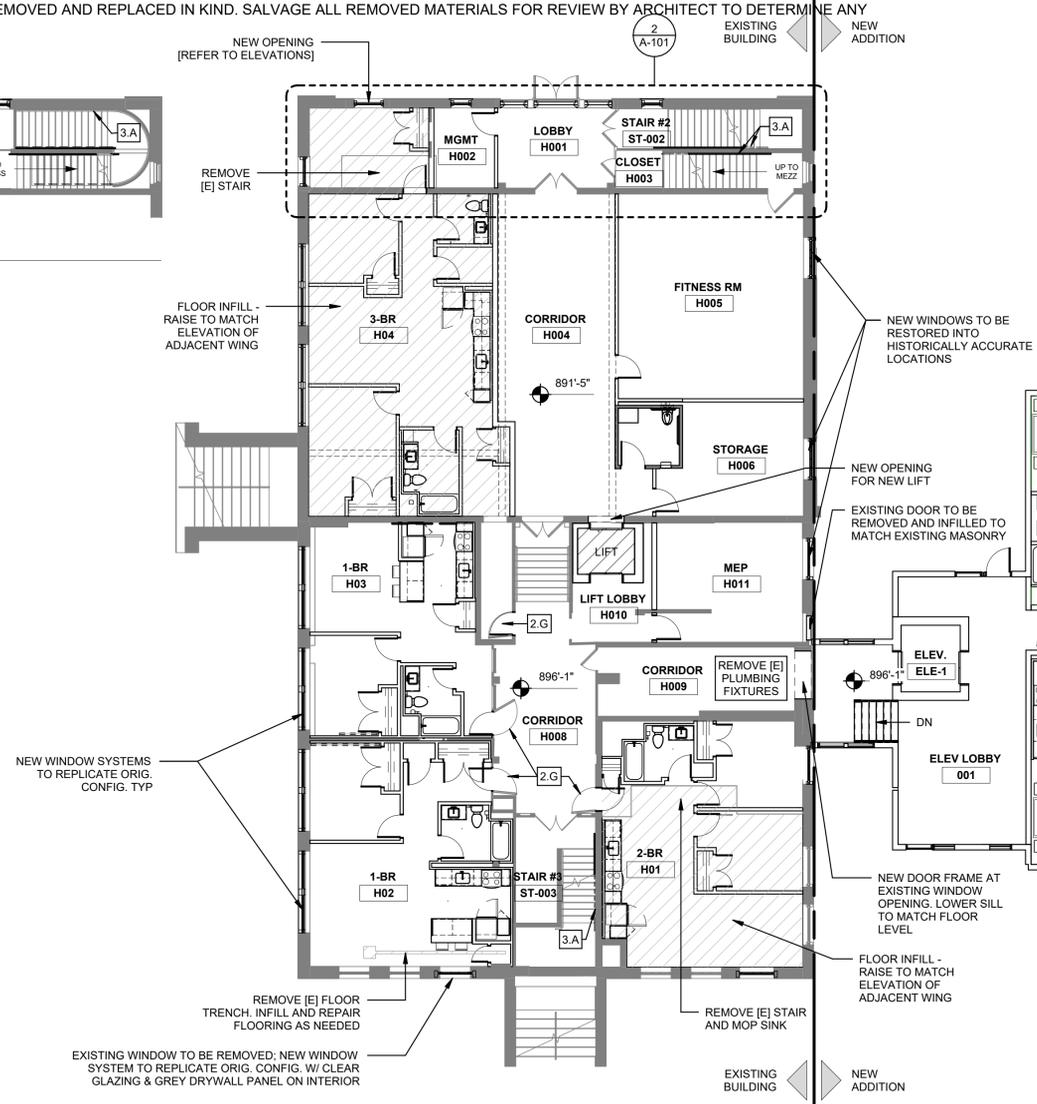
- A. AT ALL EXTERIOR WALLS OR DEMISING WALLS TO BE FURRED OUT: ALL EXISTING HISTORIC MILLWORK & TRIM, INCLUDING BUT NOT LIMITED TO WAINSCOT, FLOOR BASE, CHALKBOARD RAILS, MOULDING, DOORS & TRIM, AND BUILT-IN CABINETS TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL. FURRED WALLS TO BE NO MORE THAN 4" BEYOND EXISTING PLASTER.
- B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP
- C. ITEMS REMOVED AND NOT REINSTALLED ARE TO BE RETURNED TO OWNER.
- D. MAINTAIN EXISTING DEMISING WALLS AND FURROUT AS NEEDED TO PROVIDE REQUIRED RATED ASSEMBLY. HISTORIC DOORS & TRIM TO BE FIXED IN PLACE IN SAME LOCATION (OR LOCATION NOTED) ON ONE SIDE OF DEMISING WALL W/ RATED GWB INFILL WALL BEHIND.
- E. EXISTING HARDWOOD FLOORS TO BE PROTECTED & REFINISHED, TYP. REPAIR/REPLACE IN KIND AS NEEDED. PROVIDE NON-WOOD LOOK RESILIENT FLOORING AT COMMON LAUNDRY & MEP AREAS.
- F. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- G. HISTORIC CLASSROOM ENTRY DOORS TO BE RETAINED AND FIXED IN PLACE WHERE POSSIBLE, TYP.
- H. HISTORIC CLASSROOM DOORS THAT LINE UP WITH PROPOSED ELEMENTS THAT DO NOT REQUIRE DOORS, WILL BE RETAINED AND FIXED IN THE CLOSED POSITION, TYP.

3. WITHIN EXISTING STAIRS:

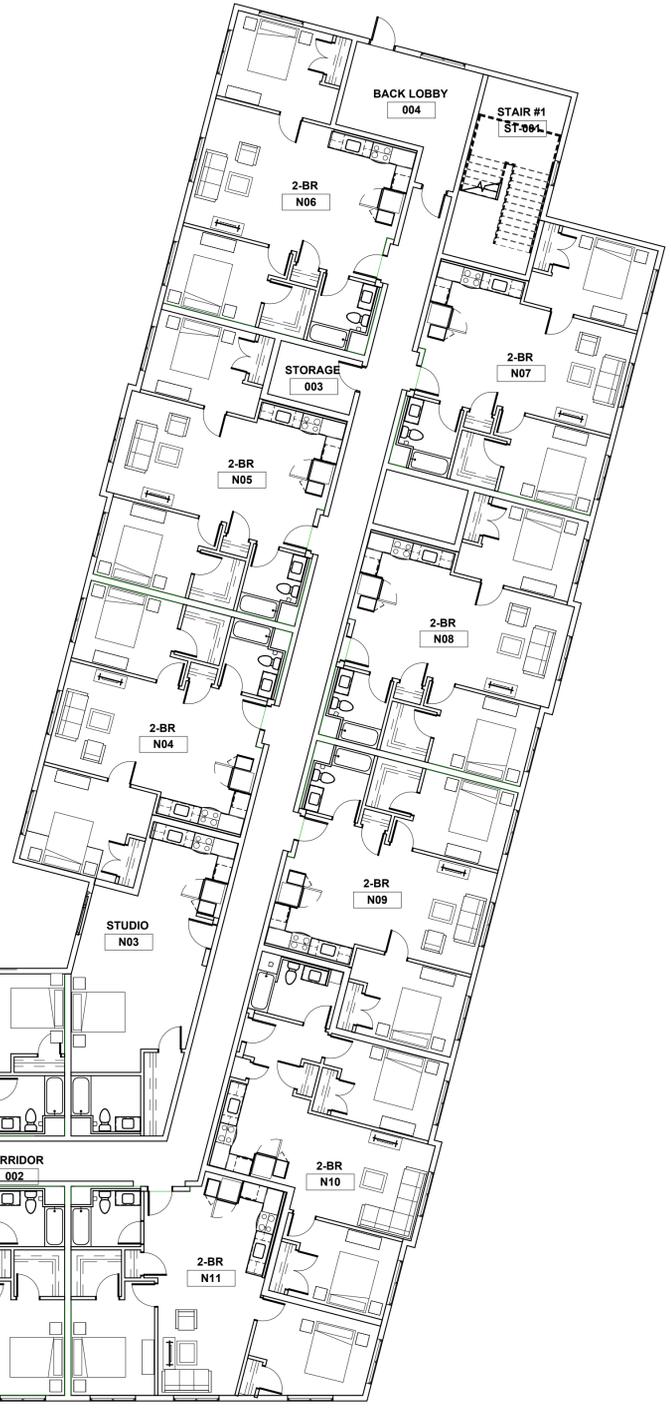
- A. EXISTING WOOD HANDRAILS TO BE REPLACED IN KIND TO PROVIDE EXTENSIONS AS REQUIRED BY CODE. EXISTING MILLWORK AT STAIR TO BE PROTECTED & RESTORED. WHERE REQUIRED BY CODE, NEW CONTINUOUS HANDRAILS AND/OR GUARDRAILS TO BE MOUNTED TO EXISTING STAIR TREADS W/ MIN ATTACHMENTS INDEPENDENT OF HISTORIC RAIL, TYP
- B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP
- C. REMOVE & REPLACE ALL EXISTING RESILIENT STAIR TREAD AND RISER COVERINGS
- D. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.



2 MEZZ LEVEL FLOOR PLAN
3/32" = 1'-0"



1 LOWER LEVEL FLOOR PLAN
3/32" = 1'-0"



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI

PROJECT NUMBER: 220017
DRAWN BY: DC,PR
CHECKED BY: JBM

SHEET TITLE

HISTORIC LOWER LEVEL & ADDITION FIRST FLOOR

A-101



GENERAL NOTES

1. **WITHIN CLASSROOMS:** REF A-001 FOR ALL GENERAL NOTES; REF A-500S FOR CLASSROOM SCOPE

2. WITHIN CORRIDORS:

- A. AT ALL EXTERIOR WALLS OR DEMISING WALLS TO BE FURRED OUT: ALL EXISTING HISTORIC MILLWORK & TRIM, INCLUDING BUT NOT LIMITED TO WAINSCOT, FLOOR BASE, CHALKBOARD RAILS, MOULDING, DOORS & TRIM, AND BUILT-IN CABINETS TO BE REMOVED, PROTECTED & CATALOGUED, RESTORED AND REINSTALLED IN LOCATION OF REMOVAL. PROTECT, MAINTAIN & RESTORE ALL HISTORIC MILLWORK & TRIM THAT DOES NOT REQUIRE REMOVAL. FURRED WALLS TO BE NO MORE THAN 4" BEYOND EXISTING PLASTER.
- B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP.
- C. ITEMS REMOVED AND NOT REINSTALLED ARE TO BE RETURNED TO OWNER.
- D. MAINTAIN EXISTING DEMISING WALLS AND FURROUT AS NEEDED TO PROVIDE REQUIRED RATED ASSEMBLY. HISTORIC DOORS & TRIM TO BE FIXED IN PLACE IN SAME LOCATION (OR LOCATION NOTED) ON ONE SIDE OF DEMISING WALL W/ RATED GWB INFILL WALL BEHIND.
- E. EXISTING HARDWOOD FLOORS TO BE PROTECTED & REFINISHED, TYP. REPAIR/REPLACE IN KIND AS NEEDED. PROVIDE NON-WOOD LOOK RESILIENT FLOORING AT COMMON LAUNDRY & MEP AREAS.
- F. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.
- G. HISTORIC CLASSROOM ENTRY DOORS TO BE RETAINED AND FIXED IN PLACE WHERE POSSIBLE, TYP.
- H. HISTORIC CLASSROOM DOORS THAT LINE UP WITH PROPOSED ELEMENTS THAT DO NOT REQUIRE DOORS, WILL BE RETAINED AND FIXED IN THE CLOSED POSITION, TYP.

3. WITHIN EXISTING STAIRS:

- A. EXISTING WOOD HANDRAILS TO BE REPLACED IN KIND TO PROVIDE EXTENSIONS AS REQUIRED BY CODE. EXISTING MILLWORK AT STAIR TO BE PROTECTED & RESTORED. WHERE REQUIRED BY CODE, NEW CONTINUOUS HANDRAILS AND/OR GUARDRAILS TO BE MOUNTED TO EXISTING STAIR TREADS W/ MIN ATTACHMENTS INDEPENDENT OF HISTORIC RAIL, TYP.
- B. ALL HISTORIC NATURAL WOOD FINISH MILLWORK & TRIM TO BE REFINISHED WITH CLEAR COAT. ALL HISTORIC PAINTED MILLWORK & TRIM TO BE REPAINTED, TYP.
- C. REMOVE & REPLACE ALL EXISTING RESILIENT STAIR TREAD AND RISER COVERINGS
- D. EXISTING HISTORIC TIN CEILINGS TO BE REMOVED AND REPLACED IN KIND. SALVAGE ALL REMOVED MATERIALS FOR REVIEW BY ARCHITECT TO DETERMINE ANY MATERIALS ABLE TO BE REINSTALLED.



1 SECOND FLOOR PLAN
3/32" = 1'-0"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

SHEET TITLE

HISTORIC SECOND FLOOR & ADDITION THIRD FLOOR

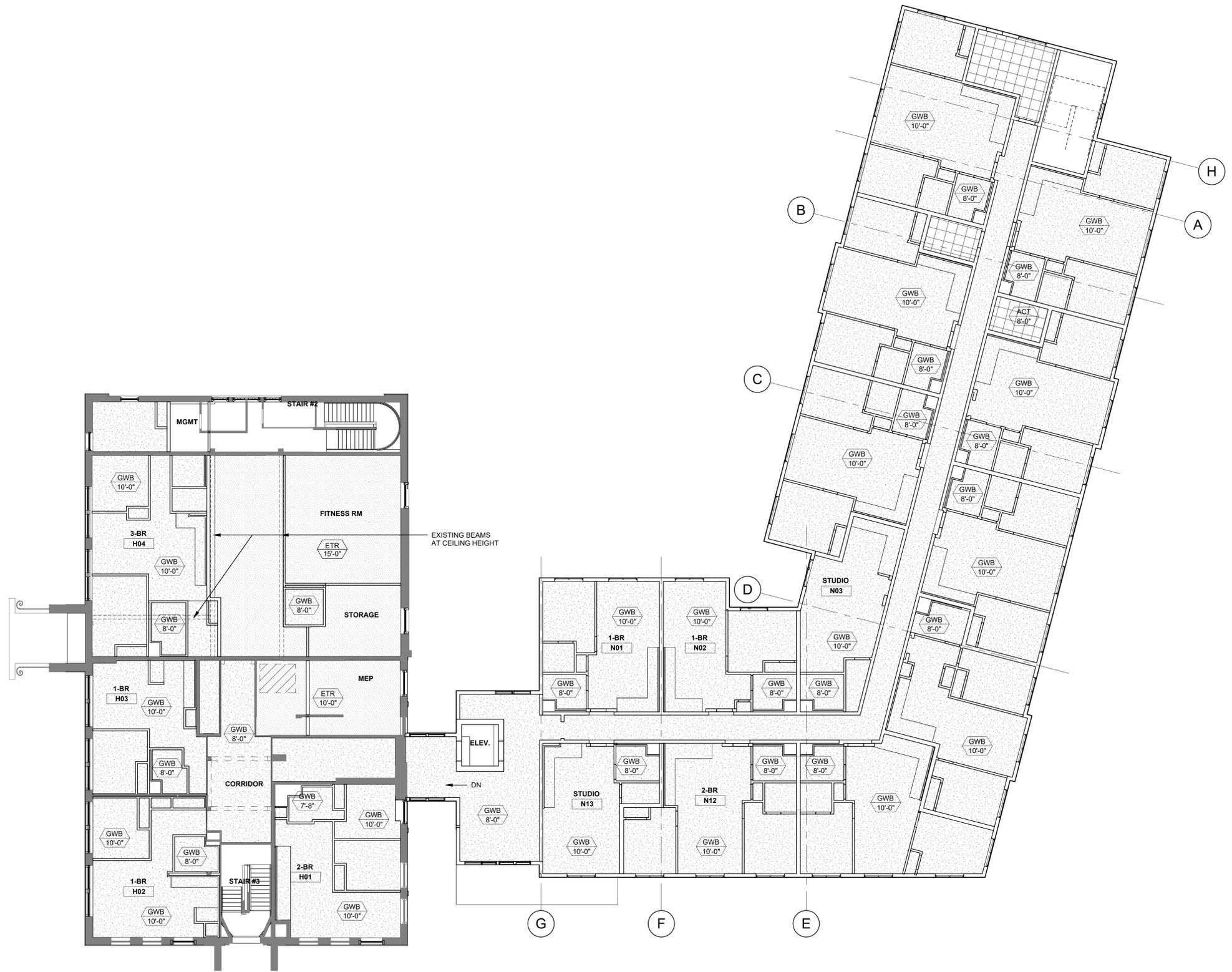
A-103

GENERAL RCP NOTES

1. PROVIDE NEW GWB CEILINGS THROUGHOUT EXCEPT AT LOCATIONS OF EXISTING HISTORIC TIN CEILINGS. NEW CEILING TO BE INSTALLED TIGHT TO UNDERSIDE OF STRUCTURE.
2. (SEE NOTE F) HISTORIC TIN CEILINGS AND WALL PANELS TO BE REMOVED AND SALVAGED AND REUSED WHERE POSSIBLE. WHERE UNABLE TO BE REINSTALLED, REPLACE W/ NEW METAL CEILINGS CLOSELY MATCHING THE ORIGINAL.
3. PROVIDE GWB DROPPED CEILINGS [AT BATHS, ENTRIES, HALLS] AND SOFFITS AS SHOWN IN RCPs.

REFLECTED CEILING PLAN LEGEND

-  GYPSUM BOARD SOFFIT OR CEILING (SEE RCP FOR HEIGHT)
-  2' x 2' ACT CEILING
-  NEW / EXISTING TIN CEILING (SEE RCP FOR HEIGHT)
-  EXISTING CEILING TO REMAIN



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

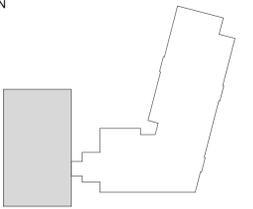


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: RG,PR
CHECKED BY: JM

SHEET TITLE

HISTORIC LOWER LEVEL & ADDITION FIRST FLOOR RCP

A-110

1 LOWER LEVEL FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"



GENERAL RCP NOTES

1. PROVIDE NEW GWB CEILINGS THROUGHOUT EXCEPT AT LOCATIONS OF EXISTING HISTORIC TIN CEILINGS. NEW CEILING TO BE INSTALLED TIGHT TO UNDERSIDE OF STRUCTURE.
2. (SEE NOTE F) HISTORIC TIN CEILINGS AND WALL PANELS TO BE REMOVED AND SALVAGED AND REUSED WHERE POSSIBLE. WHERE UNABLE TO BE REINSTALLED, REPLACE W/ NEW METAL CEILINGS CLOSELY MATCHING THE ORIGINAL.
3. PROVIDE GWB DROPPED CEILINGS [AT BATHS, ENTRIES, HALLS] AND SOFFITS AS SHOWN IN RCPs.

REFLECTED CEILING PLAN LEGEND

-  GYPSUM BOARD SOFFIT OR CEILING (SEE RCP FOR HEIGHT)
-  2' x 2' ACT CEILING
-  NEW / EXISTING TIN CEILING (SEE RCP FOR HEIGHT)
-  EXISTING CEILING TO REMAIN



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

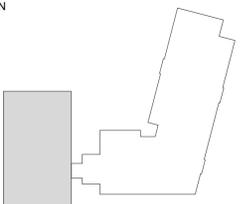


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: RG,PR
CHECKED BY: Checker

SHEET TITLE

HISTORIC FIRST FLOOR & ADDITION SECOND FLOOR RCP

A-111

1 FIRST FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

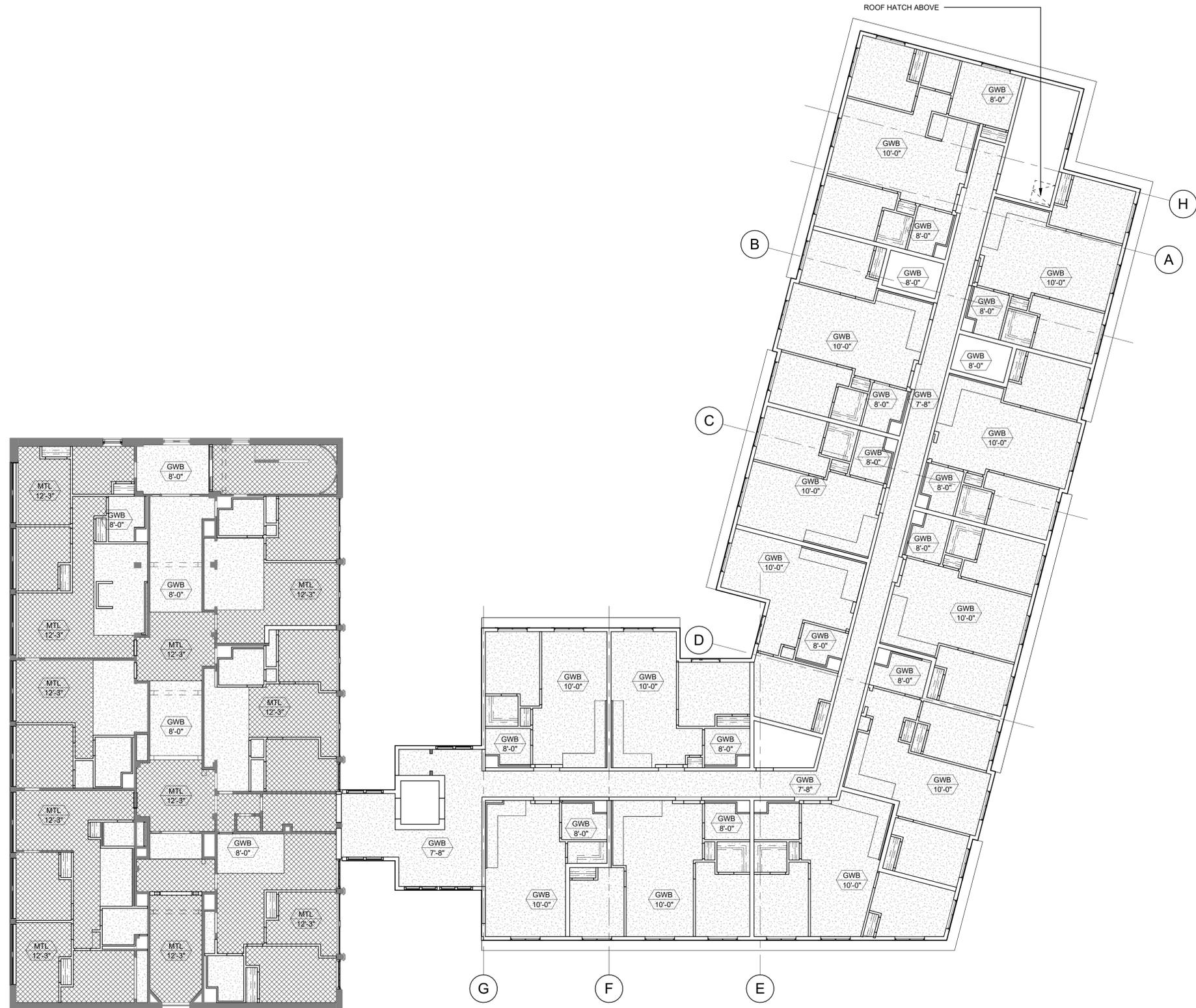


GENERAL RCP NOTES

1. PROVIDE NEW GWB CEILINGS THROUGHOUT EXCEPT AT LOCATIONS OF EXISTING HISTORIC TIN CEILINGS. NEW CEILING TO BE INSTALLED TIGHT TO UNDERSIDE OF STRUCTURE.
2. (SEE NOTE F) HISTORIC TIN CEILINGS AND WALL PANELS TO BE REMOVED AND SALVAGED AND REUSED WHERE POSSIBLE. WHERE UNABLE TO BE REINSTALLED, REPLACE W/ NEW METAL CEILINGS CLOSELY MATCHING THE ORIGINAL.
3. PROVIDE GWB DROPPED CEILINGS [AT BATHS, ENTRIES, HALLS] AND SOFFITS AS SHOWN IN RCPs.

REFLECTED CEILING PLAN LEGEND

-  GYPSUM BOARD SOFFIT OR CEILING (SEE RCP FOR HEIGHT)
-  2' x 2' ACT CEILING
-  NEW / EXISTING TIN CEILING (SEE RCP FOR HEIGHT)
-  EXISTING CEILING TO REMAIN



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

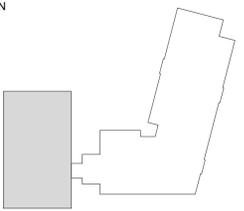


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: RG,PR
CHECKED BY: JM

SHEET TITLE

HISTORIC SECOND FLOOR & ADDITION THIRD FLOOR RCP

A-112

1 SECOND FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

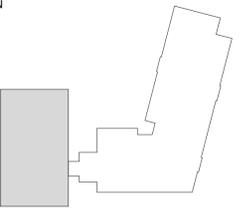


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC, RG, MM
CHECKED BY: JM

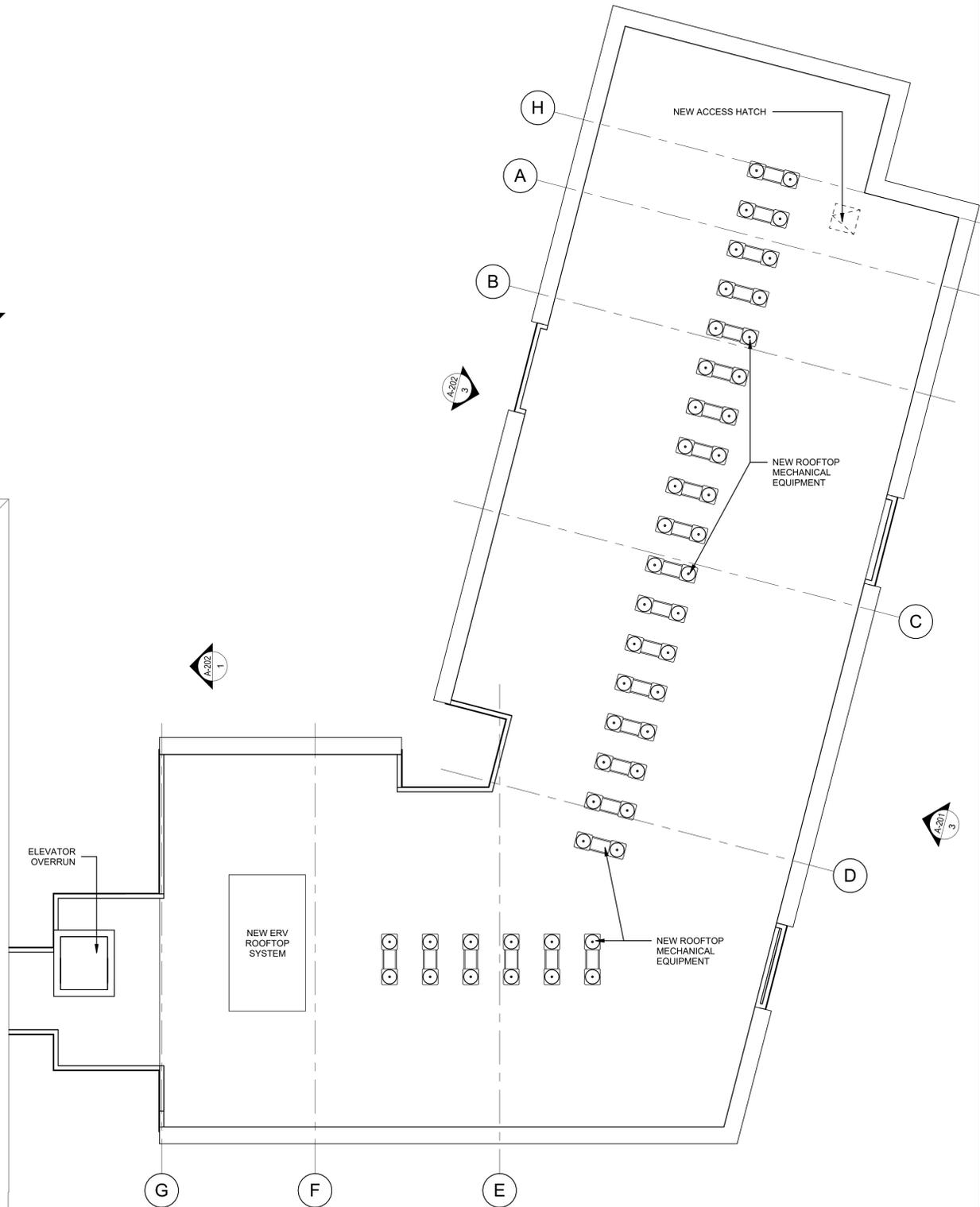
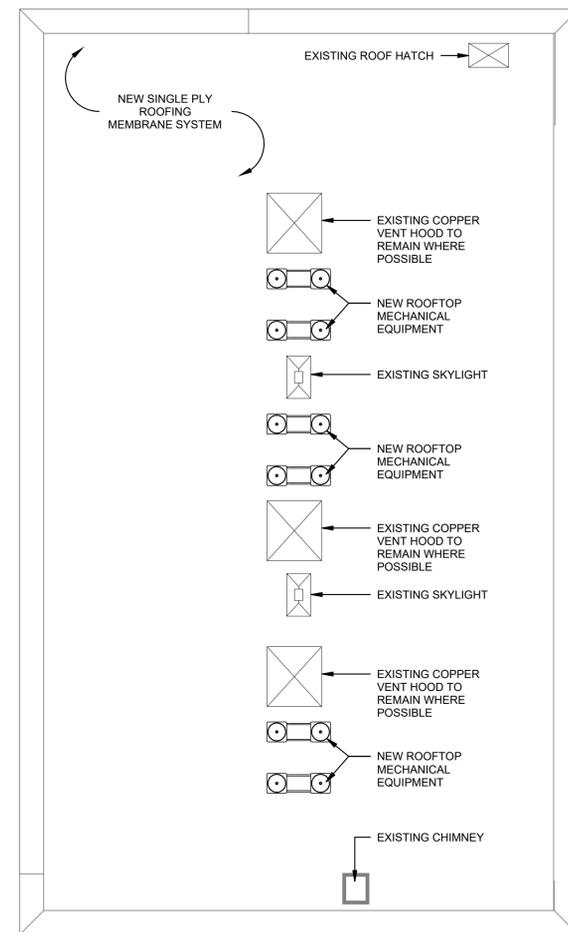
SHEET TITLE

ROOF PLAN

A-120



EXISTING ROOF ELEMENTS



1 ROOF PLAN
3/32" = 1'-0"



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

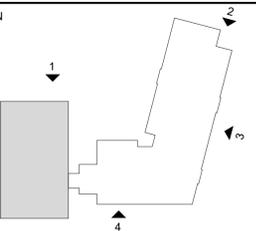


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PERMIT SUBMISSION
	2021-10-01	NOI
	2021-06-15	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

SHEET TITLE

BUILDING ELEVATIONS - PROPOSED

A-201



4 SOUTH ELEVATION
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"



2 NORTH ELEVATION @ ADDITION END
1/8" = 1'-0"

1 NORTH ELEVATION
1/8" = 1'-0"

6/8/2022 10:06:58 AM

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT

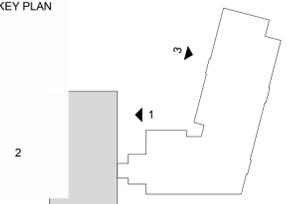


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI
	2021-06-15	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

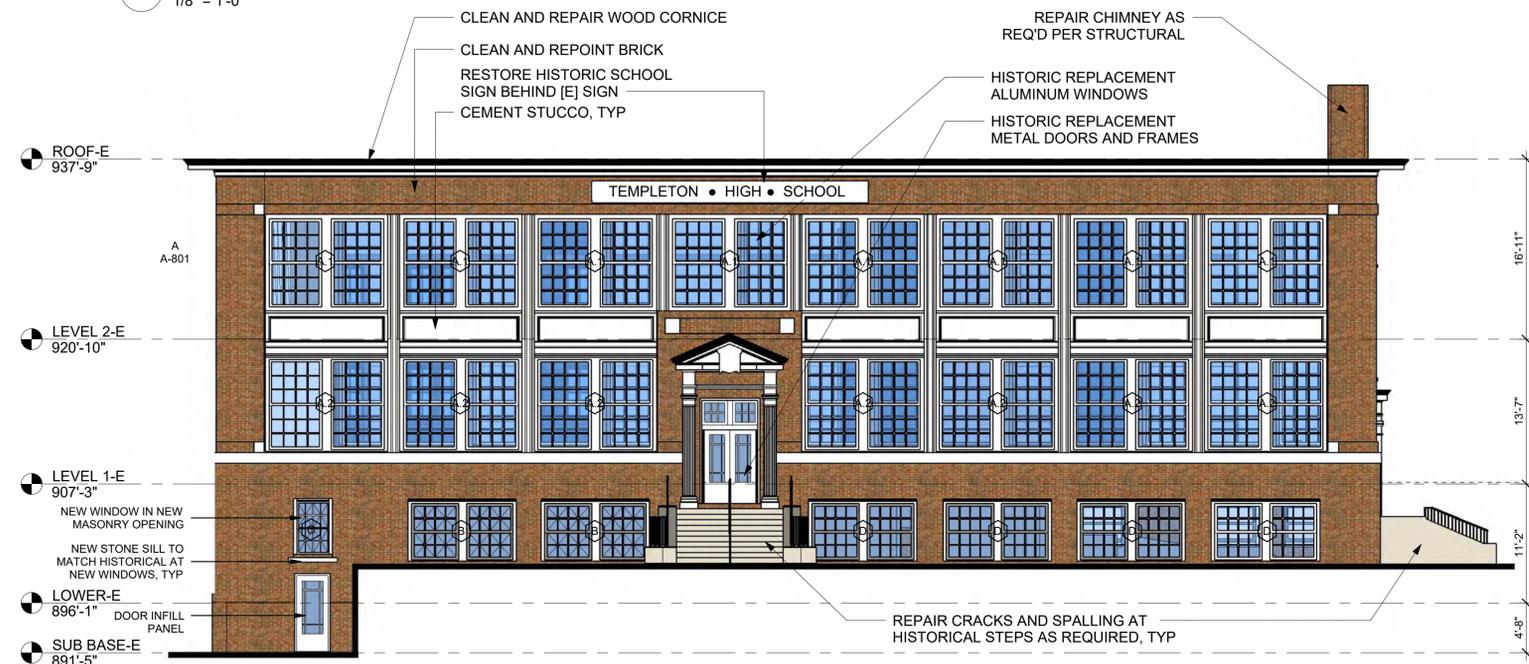
SHEET TITLE

BUILDING ELEVATIONS - PROPOSED

A-202



3 WEST ELEVATION @ ADDITION WING1
1/8" = 1'-0"



2 WEST ELEVATION @ HISTORIC
1/8" = 1'-0"



1 EAST ELEVATION @ HISTORIC
1/8" = 1'-0"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

SHEET TITLE

CONTEXT PHOTOS - KEY PLAN

A-203

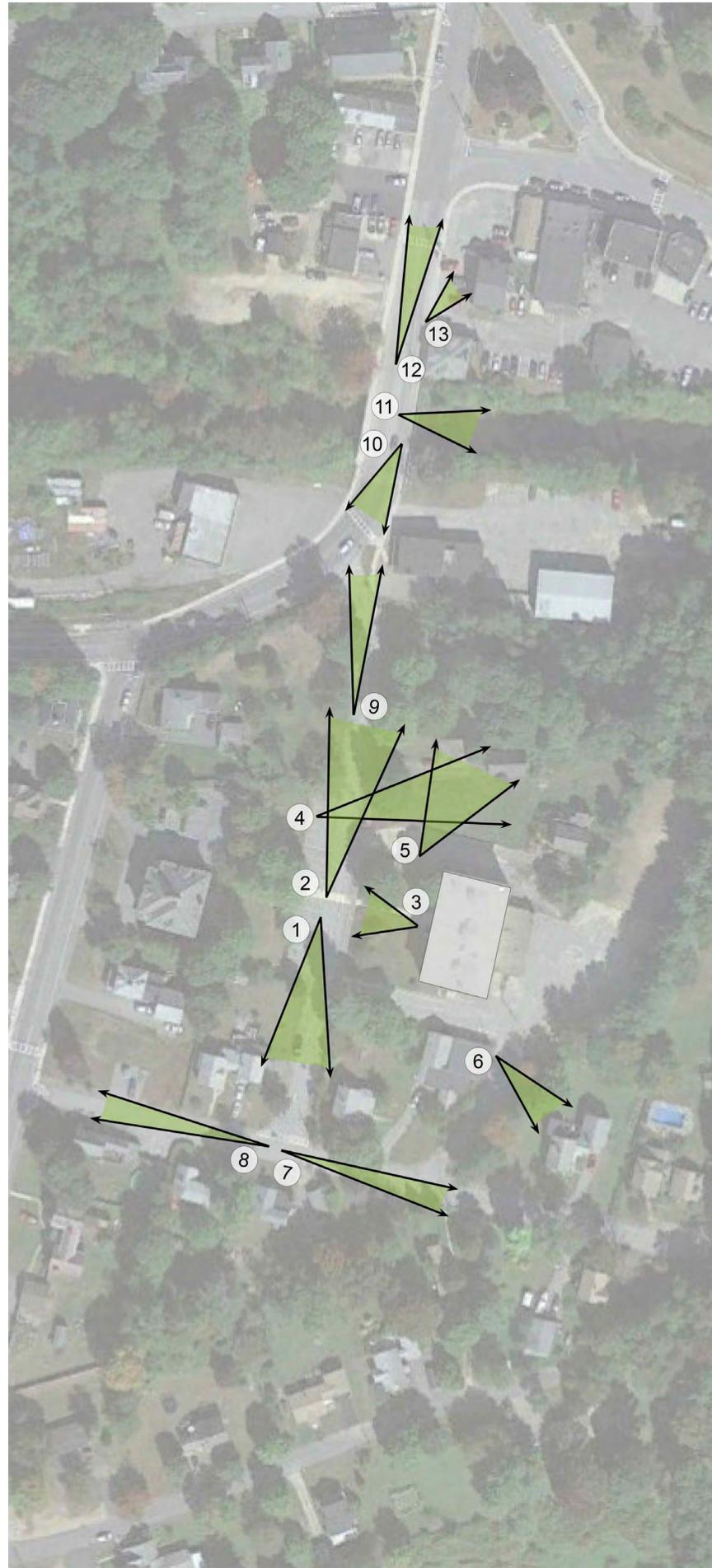


PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4



PHOTO 5



PHOTO 6



PHOTO 7



PHOTO 8



PHOTO 9



PHOTO 10



PHOTO 11



PHOTO 12



PHOTO 13

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL
STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 220017

DRAWN BY: DC

CHECKED BY: JBM

SHEET TITLE

CONTEXT PHOTOS

A-204

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL
STREET LLC

ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI

MARK	DATE	DESCRIPTION
------	------	-------------

PROJECT NUMBER: 220017

DRAWN BY: DC

CHECKED BY: JBM

SHEET TITLE

ENTRANCE AT
CONNECTOR

A-205



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL
STREET LLC

ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI

MARK	DATE	DESCRIPTION
------	------	-------------

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

SHEET TITLE

COURTYARD

A-206

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL
STREET LLC

ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 220017
DRAWN BY: DC
CHECKED BY: JBM

SHEET TITLE

SCHOOL STREET

A-207



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL
STREET LLC

ARCHITECT

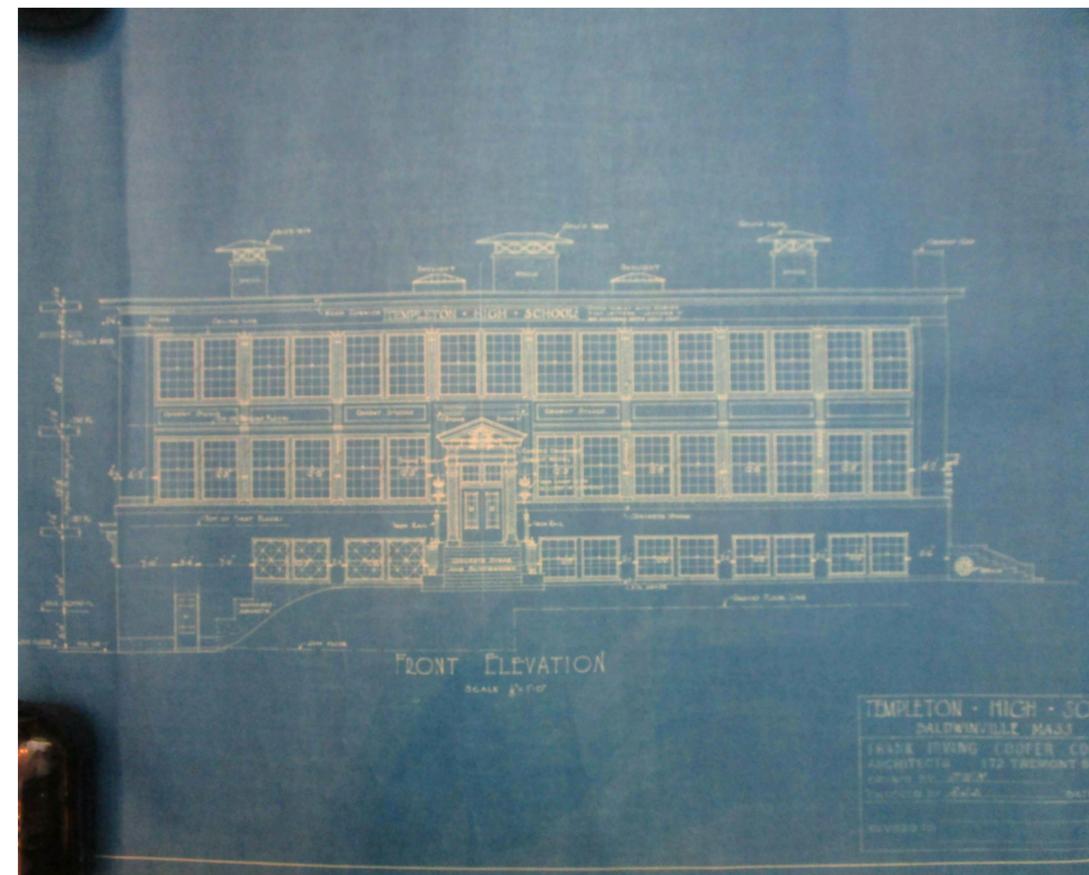


101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN



	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
	2022-02-11	PEL SUBMISSION
	2021-10-01	NOI

MARK	DATE	DESCRIPTION
------	------	-------------

PROJECT NUMBER: 220017

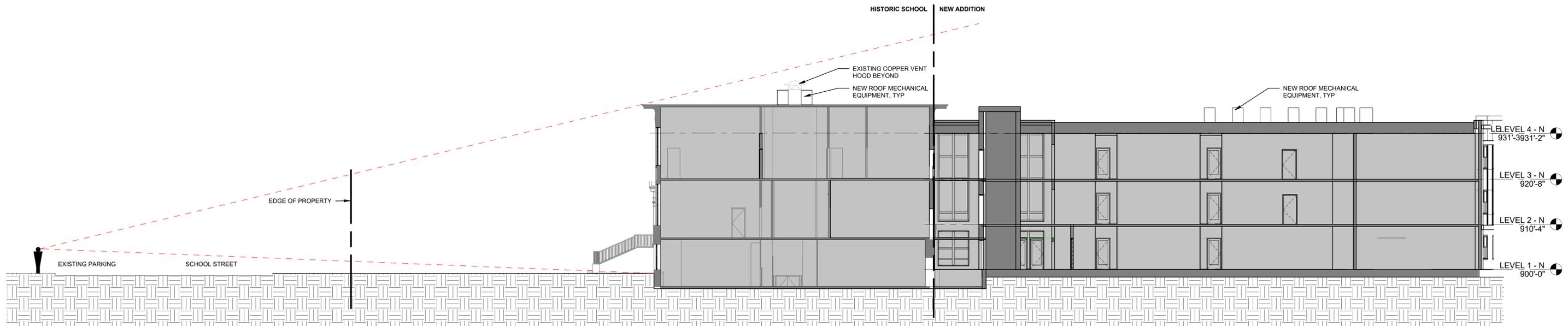
DRAWN BY: DC

CHECKED BY: JBM

SHEET TITLE

HISTORIC IMAGES

A-208



1 SITE LINES DIAGRAM
3/32" = 1'-0"

6/8/2022 10:07:19 AM

BALDWINVILLE SCHOOL APARTMENTS
 TEMPLETON, MA
 CC MPZ SCHOOL STREET LLC

ARCHITECT
E-ICON
 ARCHITECTURE
 101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
PROJECT NUMBER: 220017		
DRAWN BY: Author		
CHECKED BY: Checker		

SHEET TITLE
SITE LINES DIAGRAM
A-301

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 220017
DRAWN BY: PR
CHECKED BY: JM

SHEET TITLE

FINISH SCHEDULES

A-501

FINISH SCHEDULE - UNIT											
KEY NAME	FLOORING				BASE			WALL FINISH		CEILING	
	VINYL PLANK TILE (LVT)	ETR WOOD PLANK FLOORING	VINYL COMPOSITION TILE (VCT)	CERAMIC TILE (CT)	WOOD BASE - 6" PAINTED	CERAMIC TILE BASE	RUBBER BASE	PAINTED GWB	CERAMIC TILE	PAINTED GWB	EXISTING TO REMAIN TIN
Unit - Bath				*		*		*		*	
Unit - Bedroom		*			*			*			*
Unit - Kitchen		*			*			*		*	*
Unit - Living / Dining Room		*			*			*			*

NOTE:
1 - RESTORE [E] WOOD FLOORING

FINISH SCHEDULE - COMMON																	
Name	Number	FLOOR FINISH						WALL BASE			WALL FINISH			CEILING			Comments
		LVT	VCT	SAF-T	RB	RUBBER TREAD	ENTRY MAT	ETR	WOOD, PTD	RB	GWB	TIN	ETR	GWB	ACT		
LOWER-E																	
LOBBY	H001	*								*	*			*			
MGMT	H002	*								*	*			*	*		
CLOSET	H003		*							*	*			*			
CORRIDOR	H004		*							*	*			*			
FITNESS RM	H005				*					*	*		*				
STORAGE	H006			*						*	*		*				
WOMENS ROOM	H007			*						*	*		*				
CORRIDOR	H008	*								*	*		*				
CORRIDOR	H009	*								*	*		*				
LIFT LOBBY	H010	*								*	*		*				
MEP	H011		*							*	*		*				
STAIR #2	ST-002							*		*	*		*				
STAIR #3	ST-003							*		*	*		*				
LEVEL 1 - N																	
ELEV LOBBY	001	*								*	*		*	*			
CORRIDOR	002	*								*	*		*	*			
STORAGE	003			*						*	*		*	*			
BACK LOBBY	004							*		*	*		*	*			
ELEV.	ELE-1									*	*		*	*			
STAIR #1	ST-001					*				*	*		*	*			
LEVEL 1-E																	
STAIR LOBBY	H101							*	*	*	*		*	*			
CORRIDOR	H102							*	*	*	*		*	*			
CORRIDOR	H103							*	*	*	*		*	*			
LAUNDRY	H104			*				*	*	*	*		*	*	*		
ENTRY LOBBY	H105							*	*	*	*		*	*			
STAIR #2	ST-102							*	*	*	*		*	*			
STAIR #3	ST-103							*	*	*	*		*	*			
LEVEL 2 - N																	
ELEV LOBBY	101	*								*	*		*	*			
MECH RM	102		*							*	*		*	*			
CORRIDOR	103	*								*	*		*	*			
STORAGE	104			*						*	*		*	*			
LAUNDRY	105			*						*	*		*	*	*		
ELEV.	ELE-1									*	*		*	*			
STAIR #1	ST-101					*				*	*		*	*			
LEVEL 3 - N																	
ELEV LOBBY	201	*								*	*		*	*			
MECH RM	202		*							*	*		*	*			
CORRIDOR	203	*								*	*		*	*			
STORAGE	204			*						*	*		*	*			
ELEV.	ELE-1									*	*		*	*			
STAIR #1	ST-201					*				*	*		*	*			
LEVEL 2-E																	
STAIR LOBBY	H201							*	*	*	*		*	*			
CORRIDOR	H202							*	*	*	*		*	*			
CORRIDOR	H203							*	*	*	*		*	*			
CORRIDOR	H204							*	*	*	*		*	*			
STAIR #2	ST-202							*	*	*	*		*	*			
STAIR #3	ST-203							*	*	*	*		*	*			

NOTE:
1 - RESTORE [E] WOOD FLOORING

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

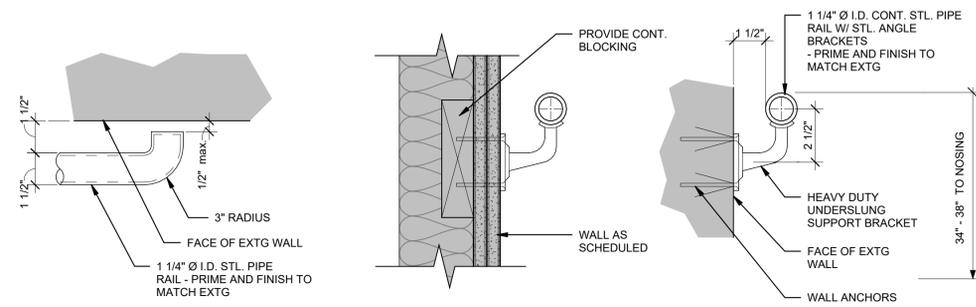
KEY PLAN

MARK	DATE	DESCRIPTION
PROJECT NUMBER: 220017		
DRAWN BY: Author		
CHECKED BY: Checker		

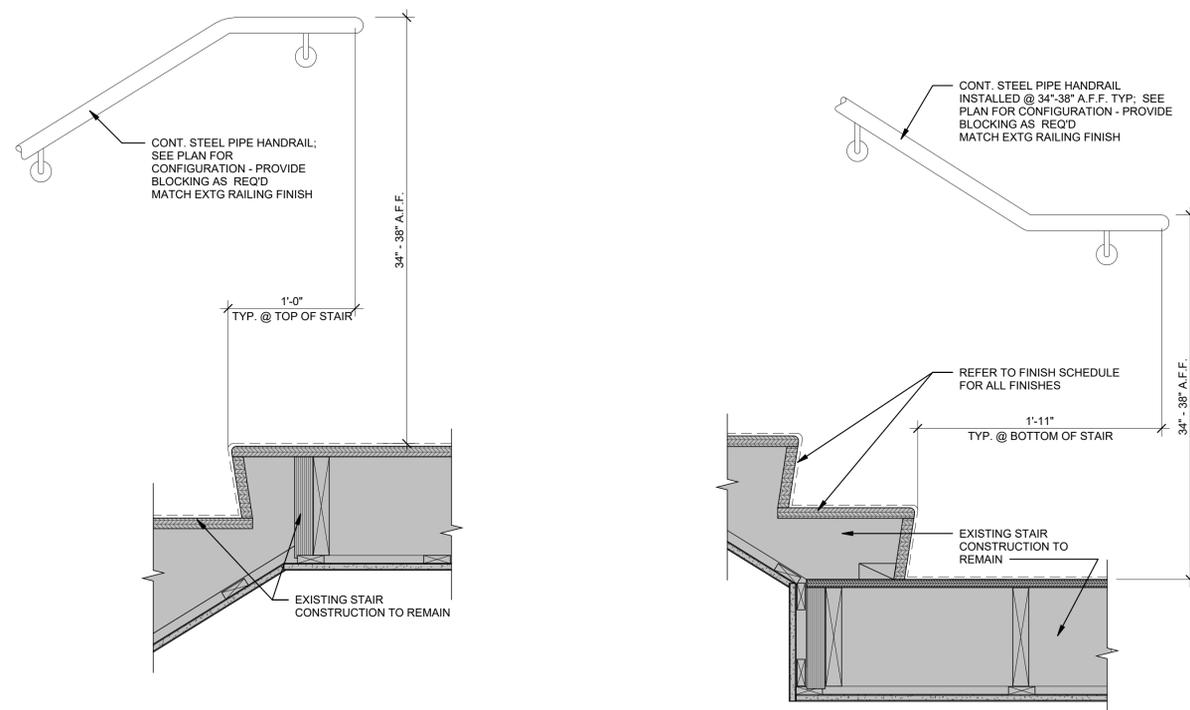
SHEET TITLE

STAIR DETAILS

A-601



3 HANDRAIL WALL ATTACHMENT DETAILS
3" = 1'-0"



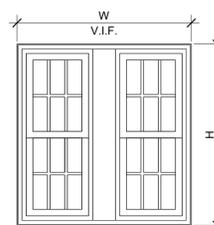
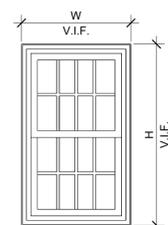
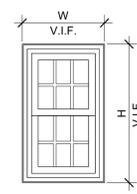
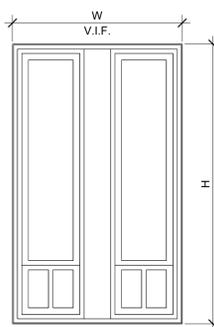
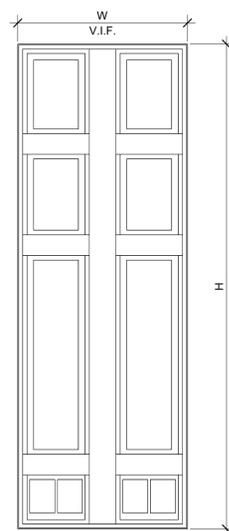
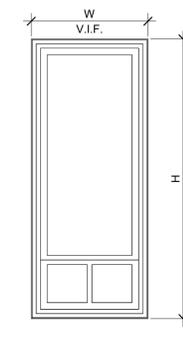
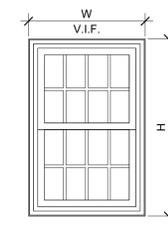
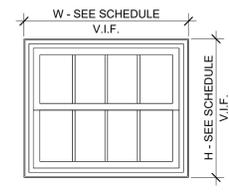
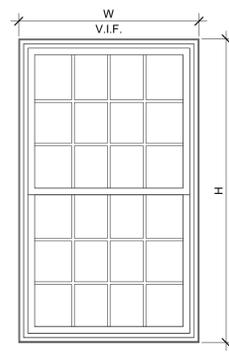
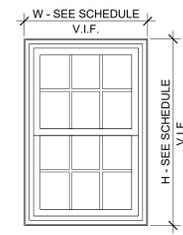
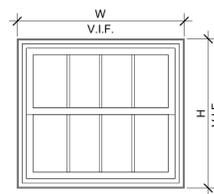
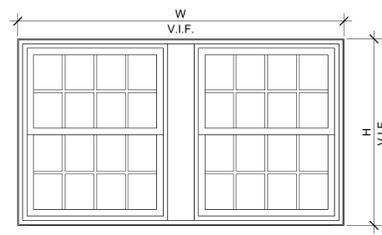
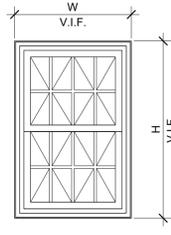
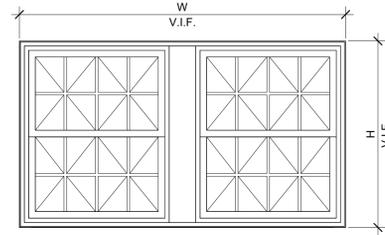
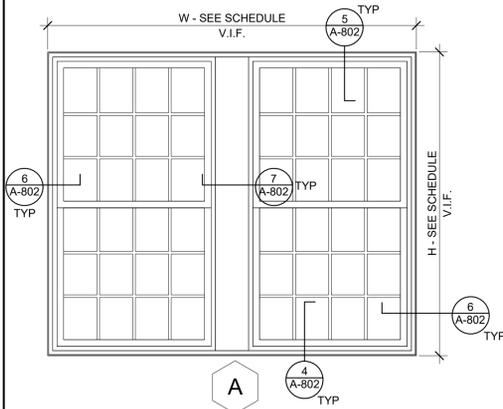
2 WOOD STAIR AT TOP OF LANDING
1 1/2" = 1'-0"

1 WOOD STAIR @ WOOD FLOOR
1 1/2" = 1'-0"

GENERAL NOTES FOR SAFETY GLAZING

SAFETY GLAZING MUST BE PROVIDED WHERE REQUIRED BY CODE, AND WHERE AN INDIVIDUAL PANEL MEETS ALL FOUR OF THE FOLLOWING REQUIREMENTS:
 1.) GREATER THAN 9 SF.
 2.) BOTTOM EDGE LESS THAN 18" AFF.
 3.) TOP EDGE MORE THAN 36" AFF, AND
 4.) WALKING SURFACE WITHIN 36"

TYPE	SIZE		MATERIAL		DETAILS			COMMENTS
	WIDTH	HEIGHT	FRAME	TRIM	HEAD	JAMB	SILL	
A.1	11'-7"	8'-8"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
A.2	11'-7"	8'-9"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
A.3	11'-7"	9'-6"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
B	10'-3"	5'-5"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
C	3'-8"	5'-6 1/2"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	SEE ELEVATIONS FOR NEW WINDOW OPENING LOCATIONS
D	10'-3"	5'-5"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
E	5'-3"	4'-8"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
F	5'-4"	15'-2"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
G.1	3'-10 1/2"	5'-10"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
G.2	4'-4"	5'-10"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
H	5'-8"	9'-6"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
J.1	5'-2"	4'-4"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
J.2	4'-9 1/2"	4'-4"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
K	3'-8"	5'-6 1/2"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
L	3'-8"	8'-9"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	SEE ELEVATIONS FOR NEW WINDOW OPENING LOCATIONS
M	5'-4"	8'-9"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
N	2'-7"	4'-4"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
O	3'-5 1/4"	5'-8"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	
P	3'-6 1/2"	5'-8"	ALUM	ALUM	5/A-802	6/A-802	4/A-802	



BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
 CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
 DRAWN BY: PR
 CHECKED BY: JM

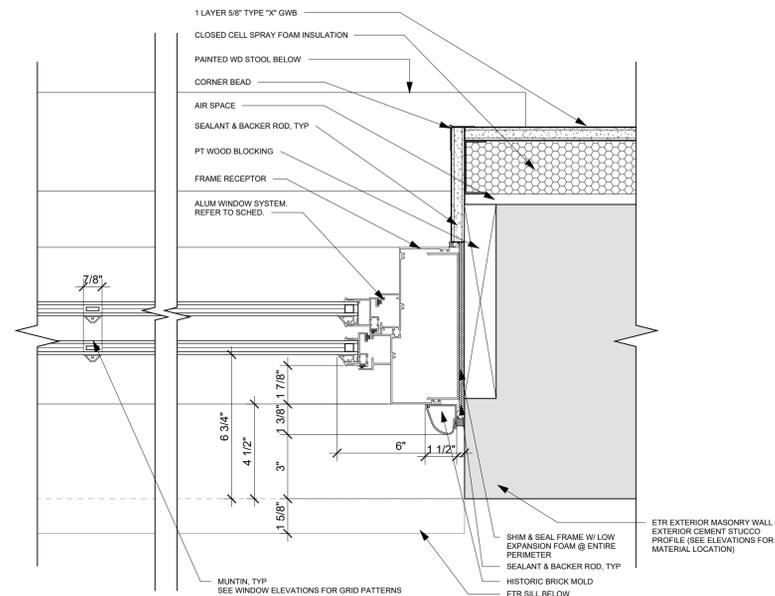
SHEET TITLE

HISTORIC WINDOW SCHEDULE

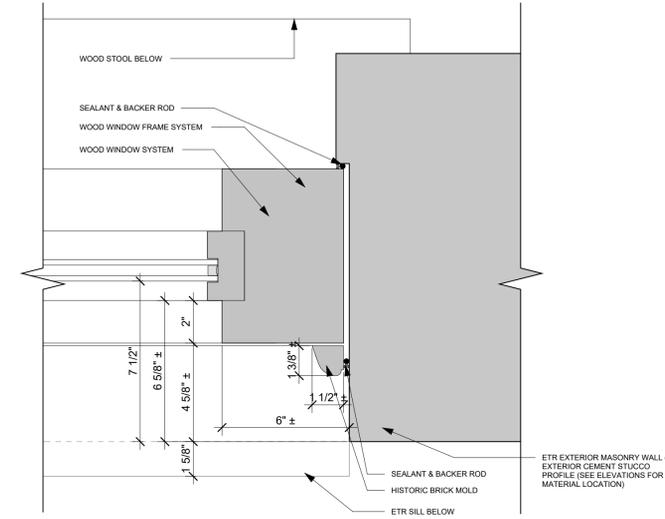
A-801



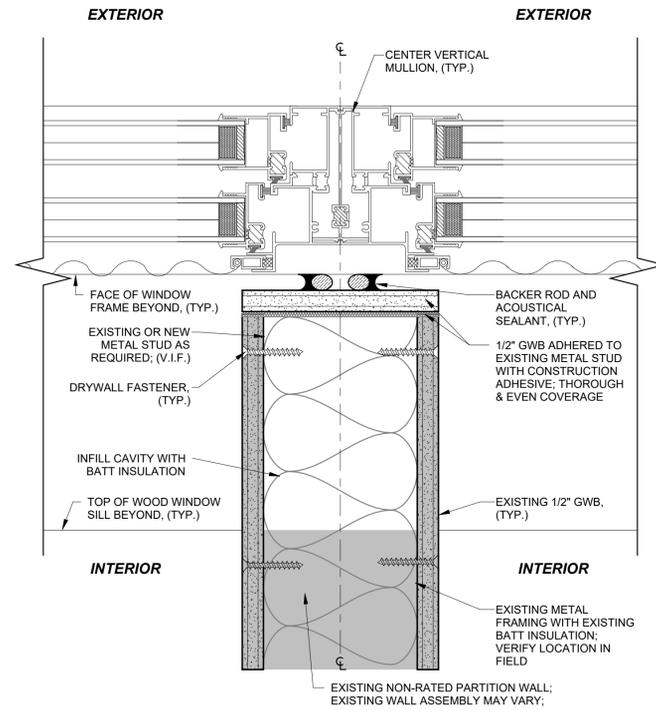
NOTE:
REMOVE EXISTING RETROFIT WINDOW SYSTEMS. PROVIDE NEW WINDOWS TO REPLICATE ORIGINAL WINDOW CONFIGURATIONS PER ORIGINAL DRAWINGS



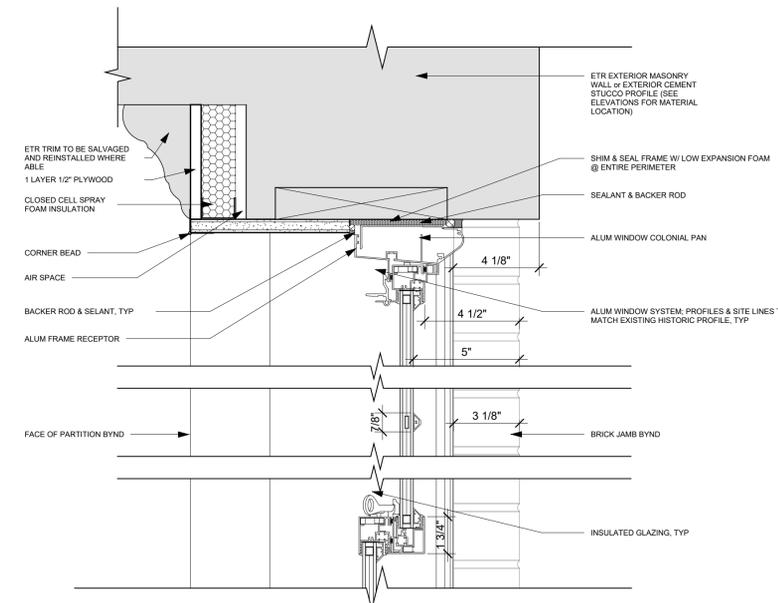
6 HISTORIC WINDOW - PROPOSED JAMB DETAIL
3" = 1'-0"



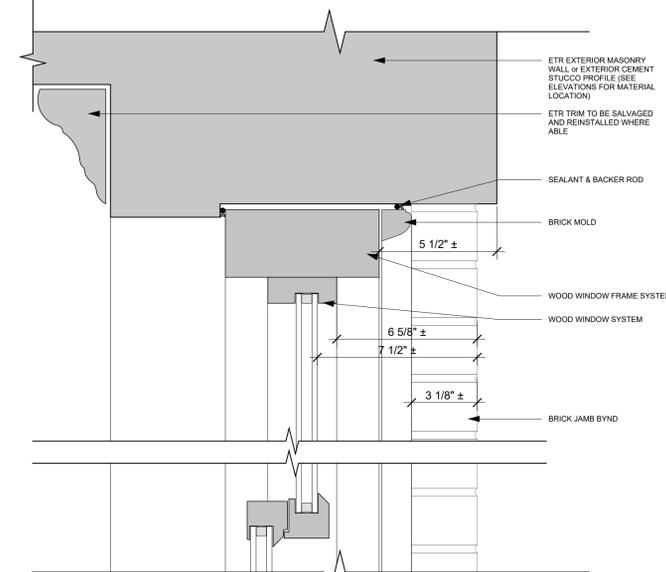
3 HISTORIC WINDOW - EXISTING JAMB DETAIL
3" = 1'-0"



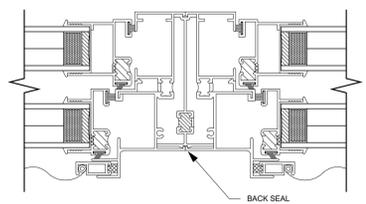
8 TYPICAL PARTITION WALL CLOSURE
6" = 1'-0"



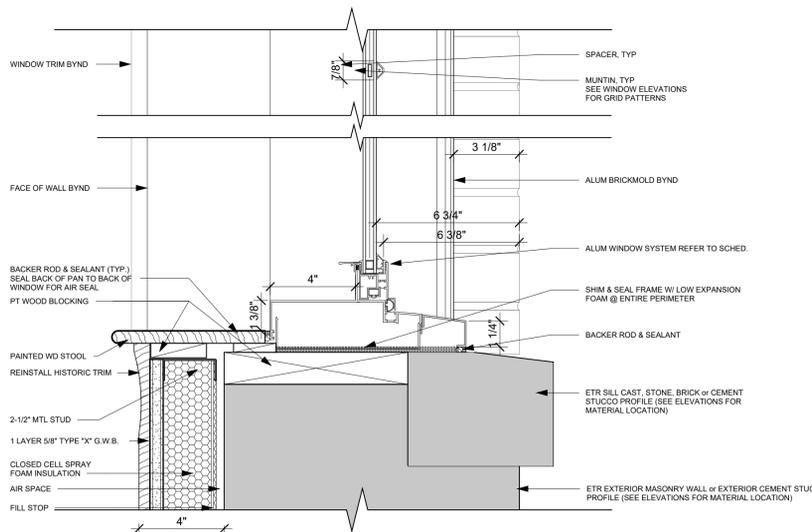
5 HISTORIC WINDOW - PROPOSED HEAD DETAIL
3" = 1'-0"



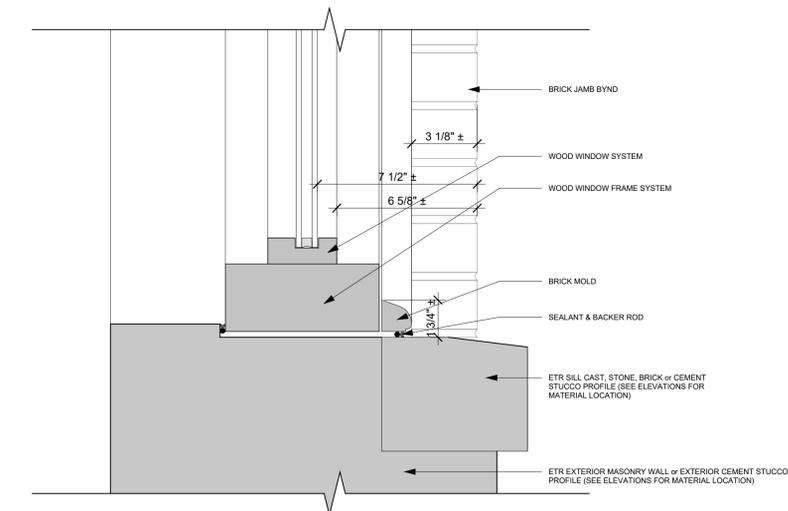
2 HISTORIC WINDOW - EXISTING HEAD DETAIL
3" = 1'-0"



7 HISTORIC WINDOW - PROPOSED INTERNAL MULLION DETAIL
6" = 1'-0"



4 HISTORIC WINDOW - PROPOSED SILL DETAIL
3" = 1'-0"



1 HISTORIC WINDOW - EXISTING SILL DETAIL
3" = 1'-0"

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION
	2022-03-30	HISTORIC SUBMISSION

PROJECT NUMBER: 220017
DRAWN BY: PR
CHECKED BY: JM

SHEET TITLE

HISTORIC WINDOW DETAILS

A-802

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA
CC MPZ SCHOOL STREET LLC

ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP

KEY PLAN

MARK	DATE	DESCRIPTION
	2022-06-10	COMPREHENSIVE PERMIT SUBMISSION

PROJECT NUMBER: 220017

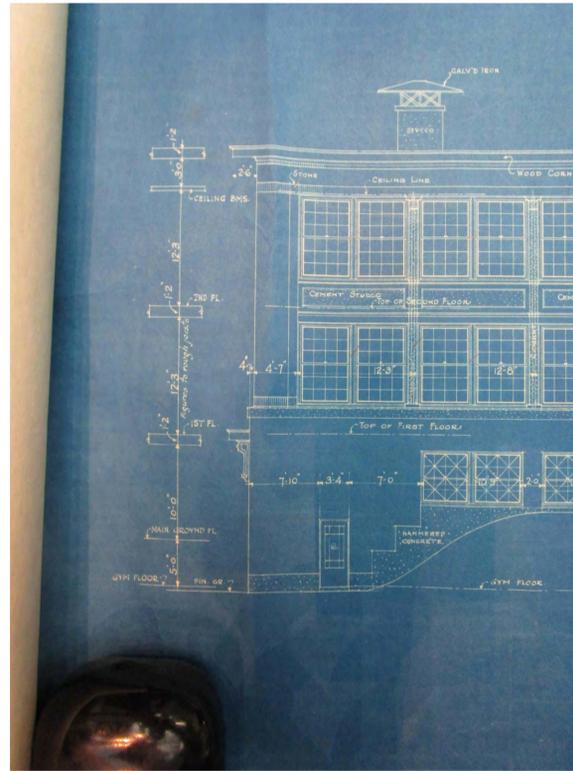
DRAWN BY: Author

CHECKED BY: Checker

SHEET TITLE

EXISTING WINDOW PHOTOS

A-803



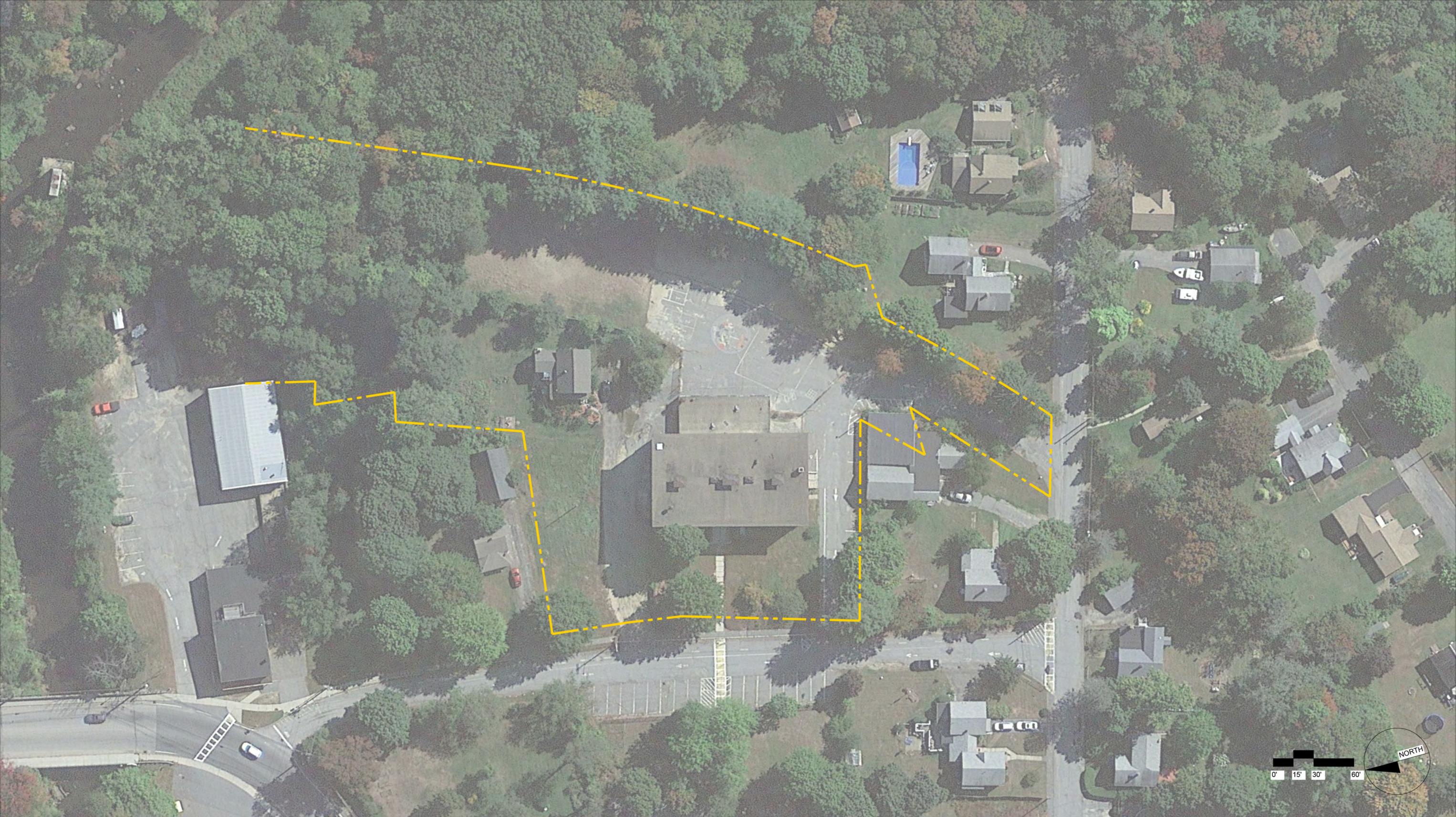
COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 7

SITE AND NEIGHBORHOOD PHOTOGRAPHS



BALDWINVILLE SCHOOL APARTMENTS

EXISTING CONDITIONS

TEMPLETON, MA



A-101
02/11/2021

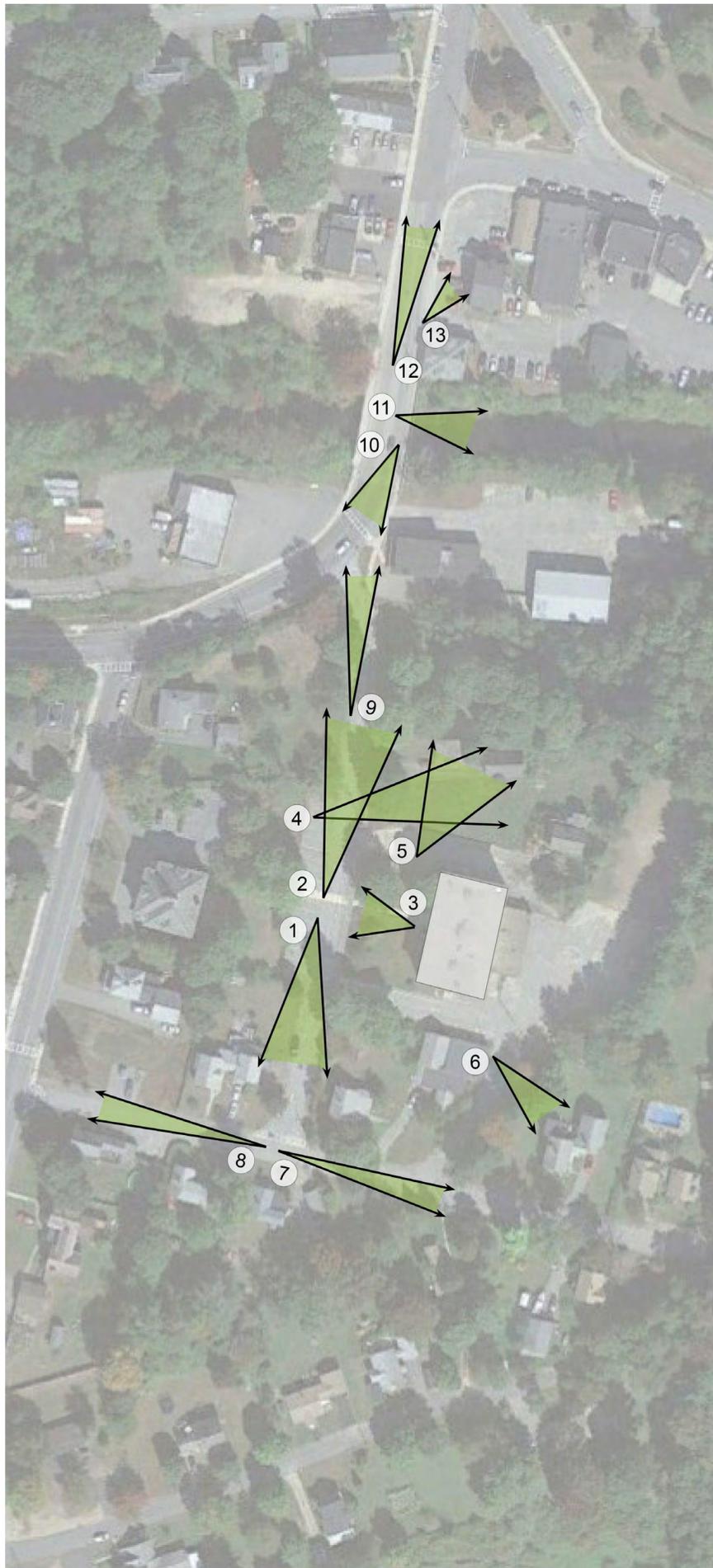


PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4



PHOTO 5



PHOTO 6

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA

CC MPZ SCHOOL ST LLC

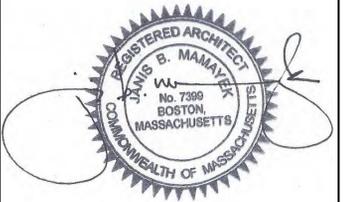
ARCHITECT



101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP



KEY PLAN

MARK	DATE	DESCRIPTION
	2022-01-24	PEL SUBMISSION
	2021-10-01	NOI
PROJECT NUMBER: 220017		
DRAWN BY: DC		
CHECKED BY: JBM		

SHEET TITLE

CONTEXT PHOTOS - KEY PLAN

A-203



PHOTO 7



PHOTO 8



PHOTO 9



PHOTO 10



PHOTO 11



PHOTO 12



PHOTO 13

BALDWINVILLE SCHOOL APARTMENTS

TEMPLETON, MA

CC MPZ SCHOOL ST LLC

ARCHITECT

E-ICON ARCHITECTURE

101 SUMMER ST BOSTON MA 02110

CONSULTANT

STAMP



KEY PLAN

MARK	DATE	DESCRIPTION
	2022-01-24	PEL SUBMISSION
	2021-10-01	NOI

PROJECT NUMBER: 220017

DRAWN BY: DC

CHECKED BY: JBM

SHEET TITLE

CONTEXT PHOTOS

A-204

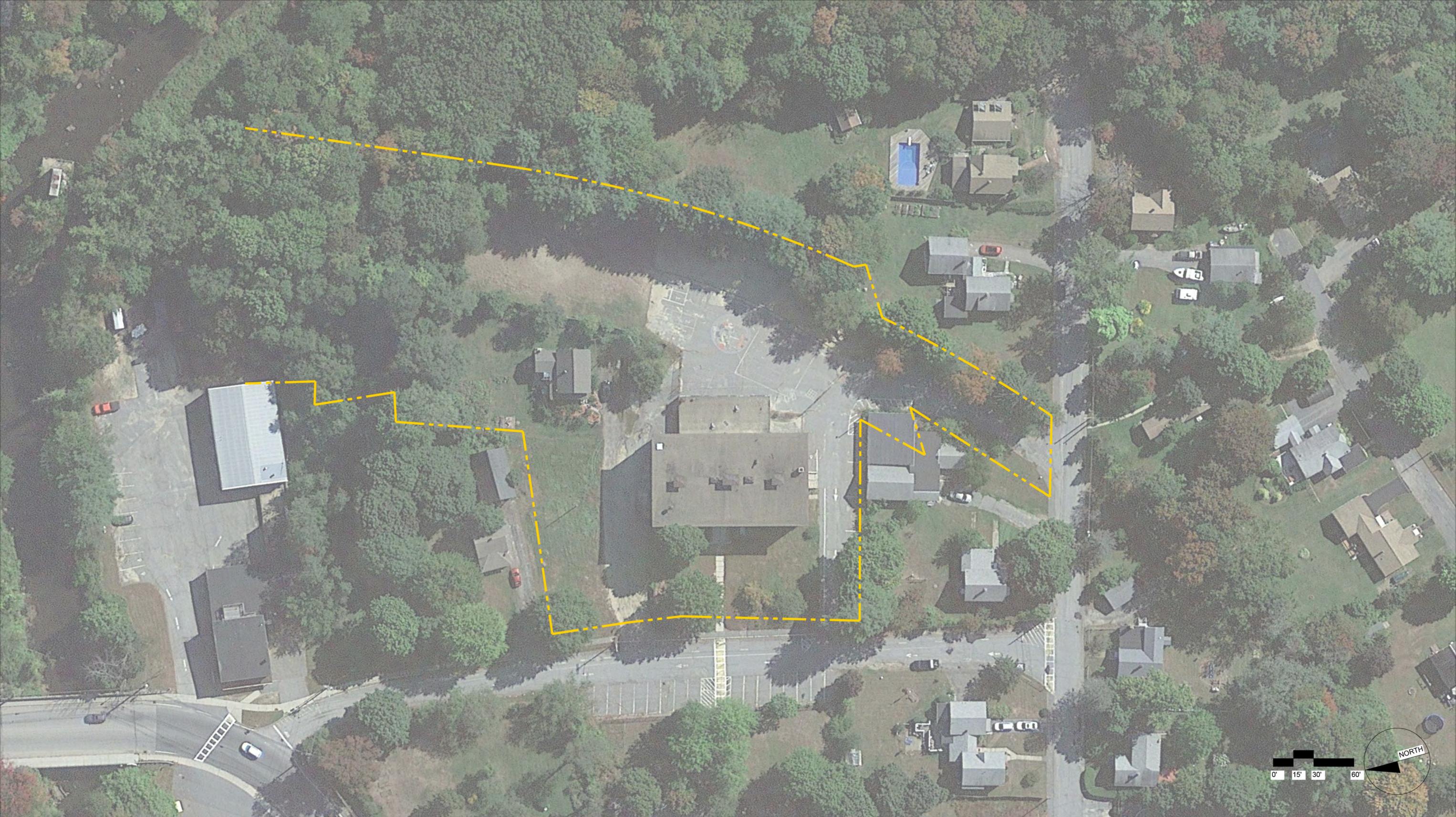
COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 8

LOCUS MAP AND ASSESSOR PLAT



BALDWINVILLE SCHOOL APARTMENTS

EXISTING CONDITIONS

TEMPLETON, MA



A-101
02/11/2021

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 9

EVIDENCE OF SITE CONTROL AND ABUTTERS LIST

Developer Designation Agreement
Between
The Town of Templeton and
MPZ Development LLC

THIS AGREEMENT is entered into as of the “Effective Date” of this Agreement (as herein defined) by and between **MPZ Development LLC**, a Massachusetts limited liability corporation (“**MPZ**”) and the Town of Templeton, Massachusetts, a Massachusetts municipal corporation acting by and through its Board of Selectmen (the “**Town**”) (collectively, the “**Parties**”).

WHEREAS, the Town is the legal owner of the parcels of land generally known as and numbered 16 School Street, Templeton, Worcester County, Massachusetts, as more particularly shown on Exhibit A-1 (the “**Property**”), on which is currently located the Baldwinville Elementary School (the “**School Building**”);

WHEREAS, the Property has recently been decommissioned as a public school and declared surplus property of the Town;

WHEREAS, a Revised Request for Proposals (“**RFP**”) for Reuse of Baldwinville Elementary School was issued on February 12, 2020, inclusive of four (4) addendums added during March 2020;

WHEREAS, on March 31, 2020 MPZ submitted a response to the RFP (the “**RFP Response**”) and proposed to develop, rehabilitate, design, and construct at the Property a housing development consisting of approximately 50 apartment units, no more than ninety (90) percent of which shall be affordable units eligible for low income housing tax credits and the remainder of the units shall be “market rate” units, all substantially in accordance with the RFP Response as presented to the Town and attached hereto as Exhibit B, as may be amended by this Agreement and by further mutual written Agreement of the Parties, and in accordance with all applicable state and federal laws, regulations and guidance (the “**Proposed Project**”);

WHEREAS, the Town has accepted MPZ’s RFP Response in order to facilitate the sale of the Property for MPZ to develop the Property into the Proposed Project; and

WHEREAS, the Town and MPZ intend to cooperate and collaborate to secure the necessary local, state and federal approvals and resources required to develop the Proposed Project and create an apartment community that is attractive and a community asset that once again contributes to the Town’s growth and development.

NOW, THEREFORE, in consideration of the covenants and mutual promises contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

I. SALE OF THE PROPERTY

The Town and MPZ have agreed, pursuant to the terms of this Agreement, together with all Exhibits attached hereto, the terms of which are specifically incorporated herein by reference, that (a) the Town shall sell and convey to MPZ and (b) MPZ shall purchase from the Town, the Property, further described in Exhibits A and B attached hereto, for Five Hundred Thousand Dollars (\$500,000.00), in accordance with the terms and provisions set forth in Exhibit A.

II. PROPERTY DEVELOPMENT

A. Designation of Developer: The Town hereby designates MPZ as the developer of the Proposed Project for the Property.

B. Development and Future Use of the Property: MPZ agrees to develop the Proposed Project at the Property. All of the affordable apartment units shall meet the Commonwealth's definition of an affordable unit as defined by the Department of Housing and Community Development.

C. Obligations of MPZ: MPZ shall have the following obligations with respect to the development of the Property:

1. MPZ agrees to develop the Proposed Project at the Property as described in Section II B above. In addition:

a. The construction/rehabilitation will be performed in a manner which will preserve, insofar as practical, the historical qualities of the exterior portion of the Property as it now exists. MPZ intends to have the Proposed Project qualify for federal and state historic tax credits, which means the historic integrity of the School Building must be maintained, and the design and construction of the Proposed Project must be consistent with the Department of the Interior National Park Service ("NPS") and the Massachusetts Historical Commission ("MHC") rehabilitation, design and other requirements (collectively, the "Historic Requirements").

b. MPZ shall, at its own expense, remove the fire horn on the roof of the Property and deliver same to the Town upon request and at a date and time that the Town will determine, so long as such removal is not inconsistent with the Historic Requirements.

c. MPZ shall reserve to the Town, at a location to be determined by the Town but directly adjacent to the School Street public way, 30 square feet of land for the purpose of the Town to install and maintain a bench and/or historic marker to recognize that the Property previously served as a school, so long as this is not inconsistent with the Historic Requirements.

d. MPZ shall maintain the 30 square feet of land and the bench and/or historic marker described above. Additionally, MPZ shall maintain the approximately 16 Town-owned parking spaces on School Street directly across from the Property which will be licensed to MPZ for the Proposed Project and the right of way access for the owners of 12 School Street. The Town shall reserve for itself a 15 foot right of way located southwest from Cottage Street along the eastern boundary of Parcel 407, and shown in red on Exhibit A-1, to be used as a walking, bicycling, or recreation trail open to the public, or as an underground public utility easement (the

“Recreation Trail”). The fee in the Recreation Trail shall be conveyed to MPZ. MPZ shall be responsible for the maintenance of the Recreation Trail. The location of the Recreation Trail is subject to clarification and modification during the development process. The Town believes that the location it has selected for the Recreation Trail is superior to any other location on the Property. The Town acknowledges that the location of the Recreation Trail also creates challenges to the development of the Property as described above. Therefore, the parties agree to work in good faith to relocate or to narrow the Recreation Trail should it prove to be a significant obstacle to the development of the Property as described above. Given the importance of determining the final location of the new building which is part of the Proposed Project, the parties agree to make any changes to the location of the Walking Trail during the Due Diligence Period.

2. MPZ shall organize and maintain a team of development professionals (“the Team”) skilled in all aspects reasonably necessary to implement the development of the Project. MPZ may make such substitutions and additions to the Team as it may determine, from time to time, are in the best interests of meeting its obligations under this Agreement and financing requirements, provided, however, that a change in the architect is subject to the approval of the Town, such approval shall not be unreasonably withheld, conditioned, or delayed.

3. Time is of the essence with respect to this Agreement and the development of this Proposed Project, and the timely and orderly completion of certain tasks and submission of certain documents are critical to such development. Therefore, the parties agree that MPZ shall use commercially reasonable efforts to complete the set of tasks set forth in Exhibit C, “Development Schedule,” attached hereto and incorporated herein, substantially in accord with to the timetables set forth therein.

4. Development Plan Submission:

a. MPZ shall submit development plans and working drawings and specifications (collectively “the Plans and Specifications”) to the Town for review, comment and approval in accordance with the schedule established in Exhibit C prior to submitting them to other state and federal entities, for approval.

MPZ acknowledges that all Plans and Specifications as well as any additional third-party studies, reports, data, and other records prepared and submitted to the Town in connection with the Proposed Project for MPZ, become public records. However, the Town acknowledges that as public records all materials provided to the Town are held without any representation or warranty as to the accuracy of the public records and that MPZ and its consultants and sub-consultants shall have no liability to the Town or any other parties with respect to the accuracy of the public records.

b. MPZ shall submit to the Town written reports on the status of the preparation of Plans and Specifications, Project design and implementation, and the permitting and approvals from the Town and other required local and state entities. Such reports shall be in such form and detail as the Town may reasonably require and shall be submitted on a quarterly basis and at other such times that the Town may reasonably request.

c. MPZ shall attend and participate in such public meetings as the Town shall designate as reasonable, including but not limited to neighborhood meetings regarding the Property's exterior design.

d. MPZ shall submit to the Town a detailed estimated progress schedule at the time of the commencement of construction of the Proposed Project, in a format generally used in the construction of buildings. This schedule shall be resubmitted each quarter until construction has been completed, with the actual progress described in each submission. The quarterly submission shall be accompanied by a written report citing any adjustments to the progress forecast, analyzing the causes of the adjustment, and, when applicable, noting MPZ's corrective efforts.

e. MPZ shall ensure that the employment of tradespersons is done in accordance with all applicable laws and regulations relative to wages and benefits to be paid to such persons. MPZ will take all reasonable steps to involve local suppliers, contractors, and tradespersons in the bidding process, including notifying such local suppliers, contractors, and tradespersons of their opportunity to bid and for employment. MPZ and its employees, agents, and subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical disability, medical condition, marital status, veteran status, age, sex, or sexual orientation, and shall take affirmative action to ensure that qualified applicants are treated without regard to their race, religion, color, national origin, ancestry, physical disability, medical condition, marital status, veteran status, age, sex, or sexual orientation.

f. MPZ and its employees, agents, and subcontractors shall not unlawfully discriminate against any applicant for a rental agreement because of race, religion, color, national origin, ancestry, physical disability, medical condition, marital status, veteran status, age, sex, or sexual orientation, and shall take affirmative action to ensure that qualified applicants are treated without regard to their race, religion, color, national origin, ancestry, physical disability, medical condition, marital status, veteran status, age, sex, or sexual orientation. In connection with the initial lease-up of the Property, MPZ will take all reasonable steps to involve local community organizations, coalitions, and other relevant entities to publicize the availability of the housing development units and their rental pricing.

g. Upon reaching initial occupancy of 75%, MPZ shall provide the Town with a final report on the efforts it undertook to outreach to potential leasees and advertise the availability of the units.

D. Obligations of the Town: The Town shall have the following obligations with respect to the development of the Property:

1. The Town shall deliver good, clear, and marketable title to the Property to MPZ in accordance with the terms and conditions contained in Exhibit A.

2. The Town shall provide MPZ with substantial assistance in obtaining all permits and approvals needed for the development of the Proposed Project, including but not limited to a 'friendly' 40B Comprehensive Permit.

3. The Town understands that MPZ's proposal includes obtaining financing under the Community Preservation Act in an amount equal to not less than \$1,174,000 (One Million One Hundred and Seventy Four Thousand Dollars). MPZ has advised the Town that such CPA funding is critical to the financial viability of the Proposed Project.

4. During the period from the Effective Date until the delivery of the deed, the Town shall maintain the Property in its current state pursuant to the terms of Exhibit D. Given that the Proposed Project will utilize historic tax credits, the Town shall have the right to perform emergency repairs to preserve the structure, but shall consult with MPZ before performing any maintenance, repairs or renovations, as such work could negatively impact the Proposed Project's ability to qualify for historic tax credits.

5. Upon receipt of the Plans and Specifications described above in Section C.4.a., the Town shall promptly provide MPZ with its written comments, setting forth in detail any grounds for modification. If no grounds for modification are delivered in writing to MPZ within fifteen (15) business days, excluding legal holidays, after the documents are submitted, the submitted documents shall be deemed approved by the Town. The Town agrees that its approval hereunder shall not be unreasonably withheld or delayed.

E. Maintenance and Inspection of Records: MPZ shall keep and maintain separate and distinct books, records, and other documents (the "Records") relating directly to the receipt and disbursement of funds to implement the Proposed Project, and shall allow the Town Administrator or his designee at all reasonable times during regular business hours to have access to and the right to inspect, copy, audit, and examine all such Records. Records shall be retained for three years after the completion of construction, at which time MPZ shall notify the Town of the Town's right to request delivery of the same. If the Town does not request the delivery of the Records within thirty (30) days of such notification, MPZ shall have no further obligation to maintain the Records under this Section.

F. Completion of the Proposed Project: Each Party covenants to perform its obligations as provided for in this Agreement subject only to the occurrence of events beyond its control, including but not limited to strikes, acts of God, environmental hazards, title issues, inability to secure permits, licenses or required governmental approvals, COVID-19 or other pandemics, and the like, provided, however, that delays shall not exceed the time necessitated by such factor(s), and the Party affected thereby shall promptly notify the other of a) the reason for the delay, b) the estimated duration thereof, and c) the action being taken or able to be taken to cure the delay.

G. Access: Upon execution of this Agreement, MPZ, its agents, and employees, are hereby granted a license to enter the Property and begin exploratory work as may be necessary in the course of MPZ's preparations for the development of the Project. Such exploratory work may include demolition or invasive investigation. Such license is granted upon the condition that a) MPZ shall hold the Town harmless from any liability of any nature whatsoever arising out of the exploratory work contemplated by this paragraph by MPZ, and b) that MPZ shall leave the Property in a condition at least equal to the condition of the Property at the commencement of this license, unless otherwise agreed to in writing by the parties. The license may be revoked at any time for any uncured violation the aforementioned terms and conditions by seventy-two (72) hours

written notice from the Town to MPZ. MPZ shall permit the Town and its representatives access to all portions of the Property at all reasonable times.

III. TERM AND EXTENSIONS

A. Duration of Agreement: The term of this Agreement shall commence on the Effective Date (as defined below) and shall continue for a period of ten (10) full calendar years unless extended or sooner terminated as provided in this Agreement ("Term"). Following the expiration of the Term, this Agreement shall be deemed terminated and of no further force and effect unless extended.

B. Extension of Time: The Parties will work cooperatively in the event that either Party requires an extension of time for any condition under this Agreement, but no such extension is guaranteed.

IV. DEFAULT; RIGHT TO CURE

Each Party agrees to provide the other with written notice of any default by the other party and shall provide the defaulting Party with thirty (30) days in which to cure such default, or, if such default is not capable of being cured within thirty (30) days, such longer period as is mutually agreed upon and as may be reasonably necessary to cure such default, so long as such Party is diligently pursuing such cure to completion.

V. TERMINATION

A. Termination by Mutual Consent: This Agreement shall terminate upon the expiration of the Term or in a signed writing by both Parties.

B. Termination by Default: If a defaulting Party has not cured the default or is not diligently curing the default in a manner and time frame agreed upon by the Parties and as described above, the complaining Party may at its option, terminate this Agreement by giving written notice of its intent to terminate this Agreement to the defaulting Party. Once the complaining Party has given such written notice, legal proceedings may be instituted to obtain a declaratory judgment determining the respective termination rights and obligations under this Agreement or other relief sought by the complaining Party. Notwithstanding the foregoing, neither party shall have the right to terminate the Agreement after the Closing, but instead shall have whatever rights are available in law or in equity for breach of this Agreement.

VI. MISCELLANEOUS PROVISIONS

A. Authorized Representative and Notice:

1. For purposes of this Agreement, the person listed below, on behalf of such Party, shall be able to render binding decisions and take binding action under this Agreement.

2. Any notice, approval, consent, or other communication required or permitted under this Agreement will be in writing and sent to the authorized representative specified below or to any other person that may be designated by prior written notice. If such

communication is sent by mail, it shall be delivered to a nationally recognized overnight courier or mailed by registered or certified mail, return receipt requested. Notice shall be considered received and effective when by personal delivery upon delivery, by overnight courier the day following delivery to the courier, and, if by mail, three (3) days following the date of mailing, as evidenced by a receipt from the U.S. Postal Service indicating the day of mailing. All notices shall also be sent by email.

If to the Town:

Carter Terenzini
Town Administrator
Town Hall
160 Patriots Road, PO Box 620
East Templeton, MA 01438
cterenzini@templetonma.gov

With a copy to:

Miyares and Harrington LLP
40 Grove Street
Wellesley, MA 02482
Attn: Thomas J. Harrington, Esq.
tom@miyares-harrington.com

If to MPZ Development LLC:

Mathieu Zahler
MPZ Development LLC
313 Eliot Street
Milton, MA 02186
mzahler@mpzdevelopment.com

With a copy to

Nixon Peabody LLP
Exchange Place
53 State Street
Boston, MA 02109
Attn: Paul E. Bouton, Esq.
pbouton@nixonpeabody.com

B. Governing Law and Venue: This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts. The Parties consent to the exclusive jurisdiction of the Massachusetts courts in any and all actions arising pursuant to this Agreement and waives the right to object to this venue as improper or inconvenient.

C. Town Consents and Approvals. The Town designates as its agent for actions required hereunder, excepting those that must be issued by a Town Board, Commission or its legislative body, its Town Administrator.

D. Invalidity and Severability: If any provision of this Agreement shall be determined by a court to be invalid and unenforceable, such provision shall be stricken from the Agreement, and the remaining provisions shall continue in full force and effect.

E. Cooperation in the Event of a Legal Challenge: In the event of any legal or equitable action or other proceeding instituted by a third party challenging the validity of this Agreement or any provision herein, the Parties shall cooperate in defending said action or proceeding, however such cooperation may not include the participation of Town Counsel or Special Counsel without the consent of the Select Board.

F. Disclaimer of Relationship: The Parties hereby acknowledge that nothing in this Agreement, nor any act of the Town or MPZ, is intended, or to be deemed or construed by either Party, to create any relationship of principal and agent, limited or general partnership, joint venture, or of any other association or entity.

G. Third Party Beneficiaries and Assignees: This Agreement is made and entered into for the sole protection and benefit of MPZ and the Town. No other person shall have any right of action based upon any provision in this Agreement. MPZ shall not assign to any entity without the Town's consent; provided, however, that MPZ may assign this Agreement to, and take title to the Property in the name of, a newly formed single purpose entity, so long as Mathieu Zahler, the owner of MPZ, is a member (directly or indirectly) of the limited liability company which will be the managing member of that ownership entity. MPZ shall obtain the prior written consent of the Town to assign this Agreement to any other entity, such consent shall not be unreasonably withheld, conditioned, or delayed. Upon any such assignment, this Agreement shall be fully binding upon the assignee as if the assignee had been an original signatory to this and all other provisions of and amendments to this Agreement. An assignee shall acknowledge its acceptance of this Agreement in a writing satisfactory to the Town.

H. Successors: This Agreement shall be binding upon and inure to the benefit of the Parties hereto, their heirs, successors, legal representatives, and assigns.

I. Conflict of Interest: No officer or employee of the Town or its designees, no agents, no consultant, no member of the governing body of the Town, and no other public official of the Town, who exercises or has exercised any functions or responsibilities with respect to the Proposed Project during his or her tenure, or who is in a position to participate in a discussion-making process or gain inside information with regard to the Proposed Project, shall have any interest, direct or otherwise, in any contract or subcontract, or the proceeds thereof, for works to be performed in connection with the Project or in any activity or benefit therefrom which is part of the Proposed Project at any time during or after such person's tenure.

J. Execution and Delivery of Other Documents: Each Party shall execute and deliver any and all additional documents and instruments and perform such further acts as may reasonably be necessary or proper to achieve the purposes of this Agreement. Appropriate language and provisions of this Agreement shall be included in all other agreements between MPZ and its contractors, subcontractors, and assignees to the extent necessary to ensure that the intent and provisions of this Agreement are honored.

K. Waiver and Effect: No waiver by either Party of any provision of this Agreement shall be considered a waiver of any other provision of this Agreement.

L. Construction: The provisions of this Agreement and its attachments shall be construed as a whole according to their common meaning and not strictly for or against any Party, and in a manner that shall achieve the purposes of this Agreement. The caption headings provided are for convenience only and shall not affect the construction of this Agreement.

M. Counterparts: This Agreement and any and all amendments may be executed in counterpart, and all counterparts together shall be construed as one document.

N. Amendments: This Agreement may be modified from time to time by a writing signed by all Parties.

O. Effective Date: The Effective Date of this Agreement shall be the last date that this Agreement is executed by either Party.

P. Entire Agreement: This Agreement, inclusive of its attachments incorporated herein, set forth the entire understanding between the Parties and supersedes all prior arrangements or agreements.

In witness whereof, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of September 21, 2020.

For the Town of Templeton:
By its Select Board



Michael Currie, Chair

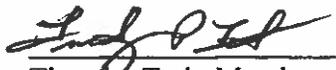
Jeffrey Bennett, Vice Chair



Julie Richard, Clerk



Theresa Griffis, Member



Timothy Toth, Member

Date: September 21, 2020

For MPZ Development LLC:



Mathieu Pierce Zahler
Managing Member

Date: September 10, 2020

Exhibit A

Terms and Conditions of Transfer of the Property

A. Property Description: The land known and numbered as 16 School Street, Templeton, Worcester County, Massachusetts, of approximately 3.08 acres, together with the buildings, structures, and improvements which are now on said land; all fixtures located on the property (excluding the fire horn, so long as it can be removed in a manner consistent with the Historic Requirements), which may include window shades, screens, screen doors, storm windows and doors, carpeting, awnings, shutters, furnaces, heaters, heating equipment, air conditioning equipment, appliances, oil and gas burners and fixtures appurtenant thereto, hot water heaters, plumbing and bathroom fixtures, garbage disposers, electric and other lighting fixtures, mantels, outside television antennas, fences, gates, trees, shrubs, and plants; all right title and interest in and to the alleys, strips, gores, abutting or adjoining the land; and any easements, rights of way, or other interests in or under or to any land, highway, street, road, right of way or avenue, open or proposed as they presently exist, as shown on the Town of Templeton's Assessor Map 1-4, Parcel ID 383, 384, 385, and a portion of 407, as further described by the RFP in Exhibit B and as shown on Exhibit A-1. The appurtenances together with the land and buildings are hereinafter collectively referred to as the "Property." The Property shall not include the municipal parking lot and public parking spaces which shall remain under ownership of the Town.

B. Purchase Price: MPZ shall pay the sum of Five Hundred Thousand Dollars (\$500,000.00) by electronic wire transfer on the date set forth for the delivery of the title to the Property (the "Closing Date"). MPZ shall provide the Town with evidence of financing at least 30 days prior to the Closing Date.

C. Earnest Money: The Town recognizes that MPZ has deposited Five Thousand Dollars (\$5,000) that shall be re-deposited by the Town in an escrow account held by the Town Counsel as escrow agent and applied against the Purchase Price at Closing (the "Deposit"). The Deposit shall become non-refundable if MPZ withdraws its offer after the Due Diligence Period.

D. Due Diligence Period: MPZ shall have a period of ninety (90) calendar days from the Effective Date (the "Due Diligence Period") to conduct any and all appraisals, environmental studies, property condition assessments, physical inspections, title inspections, surveys, and zoning studies. The Town shall deliver to MPZ all pertinent and material Due Diligence items in the Town's possession relating to the Property within ten (10) days of the Effective Date, including without limitation any structural or other plans relating to the Property.

E. Condition of Property at Closing: At the time of the Closing, the Property: (i) shall be delivered free of all tenants and occupants (ii) shall be in the same condition as they now are, reasonable use and wear thereof excepted; and (iii) not in violation of any restrictive covenant, agreement or other instrument of record affecting the Property.

If prior to the Closing Date, the Property shall be (i) damaged by fire or other casualty, or (ii) there shall be discovered a defect in title which occurred after the Due Diligence Period and which cannot reasonably be expected to be cured by the Closing Date or (iii) be subject to an eminent domain taking, then, subject to the Town's extension of time set forth in Paragraph F

below, at the MPZ's option, the Deposit shall be forthwith refunded to the MPZ, and all the obligations of the parties hereto shall cease, and this Agreement shall be void and without recourse to the parties hereto.

MPZ shall be entitled to an inspection of the Property within the ten-day period prior to the Closing Date to determine whether the condition thereof reasonably complies with the terms of this Agreement.

F. Closing Date: The deed of the Property is to be delivered and the consideration paid at the offices of the Town, or such other location as may be required by MPZ's mortgage lender, at 10:00 A.M. on a date which is two (2) years after the Due Diligence Period, or upon mutual agreement of the Parties, subject to any extension rights pursuant to this Agreement. The date and time of delivery of the deed is sometimes referred to herein as the "Closing" or the "Closing Date." If the Town shall be unable on the Closing Date to deliver title or make conveyance of the Property, or if the on the Closing Date, the Property do not conform with the provisions of this Agreement, or if any representation or warranty set forth herein is not true and correct as of the Closing Date, then the Town shall use reasonable efforts to deliver possession as provided herein, or to make the Property conform, or to correct any untrue representation or warranty, as the case may be, in which event the time for performance shall be extended for a period to be designated by MPZ in writing, but not to exceed sixty (60) days. The Town will either correct the nonconformities identified by MPZ but shall not be required to spend more than \$25,000.00 to do so or shall offer a credit on the purchase price of up to \$25,000.00, the exact amount to be agreed upon by the parties.

If at the expiration of the extended time provided in the prior paragraph, the Town shall have failed to remove any defects in title, deliver possession, or make the Property conform, as the case may be, all as herein agreed, then at MPZ's election, exercisable by written notice to the Town, this Agreement shall be canceled and void and the Deposit returned to MPZ, and neither party shall have any further liability hereunder. Notwithstanding the foregoing or anything to the contrary contained in this Agreement, if the School Building suffers a casualty which makes it ineligible for historic tax credits, then MPZ may terminate this Agreement and the Deposit returned to MPZ.

If the Property shall have been damaged by fire or casualty insured against or be the subject of a partial eminent domain taking, then the Town shall, unless the Town has previously restored the Property to their former condition (which restoration is subject to MPZ's approval, given the Historic Requirements), pay over or assign to MPZ, on delivery of the deed, all amounts recovered or recoverable on account of such insurance or eminent domain taking (together with any claims on account thereof or relating thereto), less any amounts reasonably expended by The Town for any partial restoration.

G. Title Deed and Documents: On the Closing Date, upon payment by MPZ in accordance with Section B of this Exhibit A above, the Town shall deliver full possession of the Property, in accordance with the terms of this Agreement, along with the following documents of title and other instruments to MPZ.

1. Title Deed:

a. A good and sufficient quitclaim deed that assigns and conveys good and clear record and marketable title to the Property, free from all encumbrances, except for: a) provisions of existing building and zoning laws that shall otherwise benefit the Property to become the Proposed Project and b) easements and restrictions of record, to the extent that the same are in force and applicable, provided the same do not interfere with or adversely affect the use, enjoyment, or the marketability of the Property as a housing development; and c) any liens for municipal betterments assessed after the date of this Agreement.

b. It is understood and agreed by the parties that the Town's title to the Property shall not be considered marketable unless:

All buildings, structures and improvements including, but not limited to, any driveways and garages, and all means of access to the Property, shall be located completely within the boundary lines of the Property and shall not encroach upon or under the property of any other person or entity, except pursuant to a validly recorded, indefeasible easement;

No building, structure or improvement of any kind belonging to any other person or entity shall encroach upon or under the Property;

The Property shall have sufficient legal access to and abut a public way, duly laid out or accepted as such by the city or town in which the Property are located, or have indefeasible legal access to same;

There are no easements across land of others that are required to permit surface water runoff to discharge from the existing surface water drainage system or to permit the installation, maintenance and use of the utility lines presently serving the Property including, without limitation, sewer lines, electrical, gas, water or telephone lines which are not validly recorded indefeasible easements; and

MPZ shall be able to obtain an ALTA owner's title insurance policy insuring MPZ's fee interest in the Real Estate, at standard rates, subject only to those encumbrances specifically permitted by this Agreement and those standard exceptions customarily included in an owner's title insurance policy, from a company reasonably acceptable to MPZ.

The parties agree that title to the Property as of the Effective Date satisfies the above conditions unless MPZ identifies a defect or defects in the title to the Property prior to the end of the Due Diligence Period identified in paragraph D on page A-1. Upon the identification of such defect, the Town shall have until its next Annual Town Meeting to vote to take action to cure the defect. If the Town fails to vote to cure the defect, then MPZ may elect by notice to the Town to terminate this Agreement, in which event this Agreement shall become null and void without recourse to the parties hereto and the Deposit shall be returned to MPZ.

c. The acceptance and recording of the Title Deed by MPZ shall be deemed to be a full performance and discharge of every agreement and obligation herein contained or expressed, except such as are, by the terms hereof, to be performed after or are as stated in this Agreement to survive the delivery of said deed.

2. A certificate by the Town to the effect that all of the representations and warranties hereinafter set forth in this Exhibit A remain true and correct as of the Closing Date.

3. All other documents and information reasonably required by the attorney representing MPZ.

H. Adjustments: Water, sewer use charges (if applicable), and fuel value (if applicable) shall be apportioned as of the day of performance of this Agreement and the net amount thereof shall be added to or deducted from, as the case may be, the costs payable by MPZ to the Town at the delivery of the deed.

I. Warranties and Covenants:

1. Except as is otherwise set forth in paragraph L. below regarding Hazardous Materials, the Town makes no representations that the Property shall be delivered free and clear of any hazardous materials, underground storage tanks and oil exceeding BPA or DEP standards for reporting but shall be delivered "As Is" subject to the conditions in Section I.1. of this Exhibit A.

2. The Town has full power to execute deliver and carry out the terms and provisions of this agreement and has taken all necessary action to authorize the execution, delivery and performance of this agreement, and this agreement constitutes the legal valid and binding obligation of Town enforceable in accordance with its terms. No approval, license, authorization, or validation of, or filing with, or exemption by, any governmental agency, commission, board, charitable organization, public authority or any other third party regarding the ownership, use or possession of, the Property is required in connection with the execution, delivery and performance of this Agreement by Town.

3. MPZ acknowledges that it has not been influenced to enter into this transaction nor has MPZ relied upon any warranties or representations made by the Town or the Town's agent not set forth or incorporated in this Agreement. If any warranties or representations were relied upon by MPZ, they are set forth here or incorporated elsewhere in this Agreement.

4. The Warranties and Representations set forth herein shall survive the delivery of the deed.

J. Conditions to Performance: The obligations of the Parties to perform each of its obligations herein are conditioned upon the occurrence of the following events:

1. Inspection. MPZ and its agents, contractors, and representative shall, from and after the Effective Date of this Agreement through the end of the Due Diligence Period, have the right to enter the Property for the purpose of conducting mechanical, engineering, environmental

surveying, inspections, studies, and other similar measurements and testing, including such testing for hazardous materials, including without limitation asbestos and asbestos containing material, as deemed by MPZ to be necessary and desirable. Such exploratory work shall not include demolition or invasive investigation. Any such inspections, studies, or tests shall be carried out by MPZ at its sole cost and expense. In the event that the results of any such surveying, testing, inspections and studies are unsatisfactory to MPZ, MPZ shall inform the Town of such results and give the Town the opportunity to cure or renegotiate terms of this Agreement. In the event that the Parties cannot agree on such terms, the MPZ may terminate this Agreement effective upon notice to the Town, the Deposit shall be returned to MPZ, and neither party shall have any further obligations under this Agreement, except for those that explicitly survive termination of this Agreement.

2. Financing. MPZ shall use commercially reasonable efforts to obtain financing and/or subsidies which MPZ determines is needed for the Proposed Project, including some or all of the following: (i) the Massachusetts Housing Finance Agency/Massachusetts Development Finance Agency and/or a commercial bank for construction and permanent financing, (ii) the Department of Housing and Community Development for federal and state tax credits and subordinate financing, (iii) the Town through Community Preservation Act funds, as described above; (iv) the Massachusetts Historical Commission for Massachusetts Rehabilitation Tax Credits; (v) federal agencies including, but not limited to (i) the United States Department of Housing & Urban Development and (ii) the United States Department of Agriculture, the National Park Service, and other such public and charitable organizations that MPZ determines may prove reasonable or advisable to pursue (the "Financing"). If MPZ shall not have obtained such Financing on or before the Closing Date, or any agreed upon extension of the Closing Date, then MPZ shall have the right to terminate this Agreement effective upon notice to the Town, the Deposit shall be paid to the Town, and neither party shall have any further obligations under this Agreement, except for those that explicitly survive termination of this Agreement.

3. Permits and Approvals. MPZ's obligations are contingent upon MPZ receiving all licenses, permits, consents, authorizations, and approvals (including, without limitation, environmental permits and approvals and a 'friendly' 40B Comprehensive Permit), which MPZ reasonably deems necessary or desirable to develop the Proposed Project (the "Approvals"). If MPZ shall not have obtained the Approvals on or before the Closing Date, or any agreed upon extension of the Closing Date, then MPZ shall have the right to terminate this Agreement effective upon notice to the Town, the Deposit shall be paid to the Town, and neither party shall have any further obligations under this Agreement, except for those that explicitly survive termination of this Agreement.

K. MPZ's Default Damages: If, after the Due Diligence Period, MPZ fails to purchase the Property by the Closing Date, the Deposit shall be retained by the Town as liquidated damages and this shall be the Town's sole and exclusive remedy at law and in equity. The Parties agree that the Deposit is a reasonable estimate of the loss that the Town would incur if MPZ were to breach this Agreement, including, without limitation, any losses which could result from the Town's inability to resell the Property for the same or different agreed price due to any number of presently undeterminable factors, whether or not any such losses are actually incurred by the Town.

L. Hazardous Materials:

1. The Town represents and warrants, to the best of its knowledge, that: (i) the Property and any improvements thereon or any part thereof have never been used as a sanitary landfill, waste dump site or for the treatment or disposal of Hazardous Materials; (ii) no Release of Hazardous Materials has occurred from or upon the Property; and (iii) The Town has delivered to MPZ all reports, assessments and studies in The Town's possession which relate to the environmental condition of the Property. The term "Release" or "Released" shall mean any actual or threatened spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, presence, dumping, migration on or from the Property or adjacent property, or disposing of Hazardous Materials into the environment, as "environment" is defined in CERCLA. "CERCLA" and "Hazardous Materials" are defined in paragraph 3 below.

2. In addition to the access rights granted to MPZ under this Agreement, the Town hereby authorizes MPZ, and MPZ's agents, servants and employees to go upon the Property at any time and from time to time after the date hereof for the purposes of testing the Property for the presence of Hazardous Materials and making soil boring tests, compacting tests, water table tests and soil porosity tests, and other various chemical and engineering tests to determine whether the Property are suitable (without the incurring of unusual expense) for the construction of the Proposed Project and such other topographical and engineering surveys, and other tests, surveys and studies as MPZ may deem necessary or desirable in connection with any of the matters contemplated by this Agreement. All tests performed pursuant to the provisions of this paragraph shall be at MPZ's sole cost and expense. MPZ shall enter onto the Property only after reasonable advance notice to The Town. After completing such tests, MPZ shall restore the Property to such condition as it was in prior to the commencement of such tests, reasonable and ordinary wear and tear and damage by unavoidable casualty excepted. Further, MPZ agrees to keep the Property free of mechanics' liens in connection with such tests. If MPZ is not satisfied with the results of any of such tests, in MPZ's sole, subjective discretion, then MPZ may elect by notice to the Town to terminate this Agreement, in which event this Agreement shall become null and void without recourse to the parties hereto and the Deposit shall be returned to MPZ.

3. "Hazardous Material" means hazardous substance, pollutant, or contaminant regulated under the Comprehensive Environmental Response, Compensation and Liability Act, as amended, 42 U.S.C. § 9601 et seq. ("CERCLA"); oil and petroleum products and by-products and natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel, urea formaldehyde foam insulation, and chlorofluorocarbons; pesticides regulated under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, 7 U.S.C. § 136 et seq.; asbestos, polychlorinated biphenyl, and other substances regulated under the Toxic Substances Control Act, as amended, 15 U.S.C. § 2601 et seq.; chemicals subject to the Occupational Safety and Health Standards, Hazard Communication, 29 C.F.R. § 1910.1200, as amended; source material, special nuclear, by-product materials, and any other radioactive materials or radioactive wastes, however produced, regulated under the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2011 et seq.; or the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. § 10101 et seq.; industrial process and pollution control wastes whether or not hazardous within the meaning of the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. § 6901 et seq.; and any other federal, state, regional, county, municipal, and other local laws, regulations, and ordinances, including without limitation Massachusetts General Laws Chapters 21C and 21E.

4. Notwithstanding anything in this Agreement to the contrary, MPZ shall in no event be deemed to have assumed any responsibility or liability for any environmental condition for which The Town is legally responsible under any local, state or federal law, rule or regulation.

I. Insurance:

The Town agrees to maintain or cause to be maintained its (i) commercial property insurance and (ii) commercial general liability insurance, with respect to the Property through the Closing Date, including any extensions thereof, and to bear the risk of loss or damage to the Property through the Closing Date.

J. Brokers:

MPZ represents and warrants to the Town that MPZ has not contacted any real estate broker in connection with this transaction and was not directed to the Town as a result of any services or facilities of any real estate broker. MPZ agrees to defend, hold harmless and indemnify the Town against and to hold the Town harmless from any cost (including, without limitation, attorneys' fees) or liability which the Town may incur as a consequence of any breach of the foregoing representation and warranty. The provisions of this paragraph shall survive delivery of the deed.

The Town represents and warrants to MPZ that the Town has not listed the Property, entered into a brokerage agreement or otherwise dealt with any real estate broker. Further, the Town agrees to defend, hold harmless and indemnify MPZ against and to hold MPZ harmless from any cost (including, without limitation, attorneys' fees) or liability which MPZ may incur as a consequence of the Town's having listed the property, entered into a brokerage agreement or otherwise dealt with any broker. The provisions of this paragraph shall survive delivery of the deed.

K. Miscellaneous Agreements

1. The parties shall cooperate with each other and furnish each other with all necessary information needed to apply for and obtain the Financing and Approvals, and the Town shall execute whatever instruments are necessary and take whatever action is necessary to enable MPZ to obtain the Financing and Approvals.

2. MPZ will be incurring significant fees and expenses, in connection with the transaction contemplated by this Agreement. In consideration of the foregoing, and as an inducement to MPZ to do so, the Town hereby agrees to use its best efforts to obtain or provide (or otherwise assist in obtaining or providing) any Financing and Approvals referred to herein, to satisfy and cause other parties to satisfy the terms and conditions of this Agreement on the others part to be performed, and to understand any short term and longer term environmental issues, if any. Regarding other parties, upon the request of MPZ, the Town shall support MPZ to raise the balance of the public resources included in the Financing, including without limiting request support from local elected officials and community leaders. MPZ shall work with the Town in good faith to further develop and amend the Proposed Project based on reasonable feedback from

the Town, its boards and committees, community organizations, and its citizens, so long as such feedback does not render the Proposed Project to be financially infeasible. The Parties anticipate a robust and cooperative community process. The Parties agree to cooperate fully with each other in connection with fulfilling the terms and conditions of this Agreement. In the event that any of the terms and conditions of this Agreement are not satisfied by the Closing Date or any such earlier date as is set forth in this Agreement, then, MPZ shall have the right, so long as MPZ is diligently seeking financing and approvals, to extend the Closing Date for three additional one year (1) periods.

EXHIBIT A-1

Site Plan

See attached site plan.

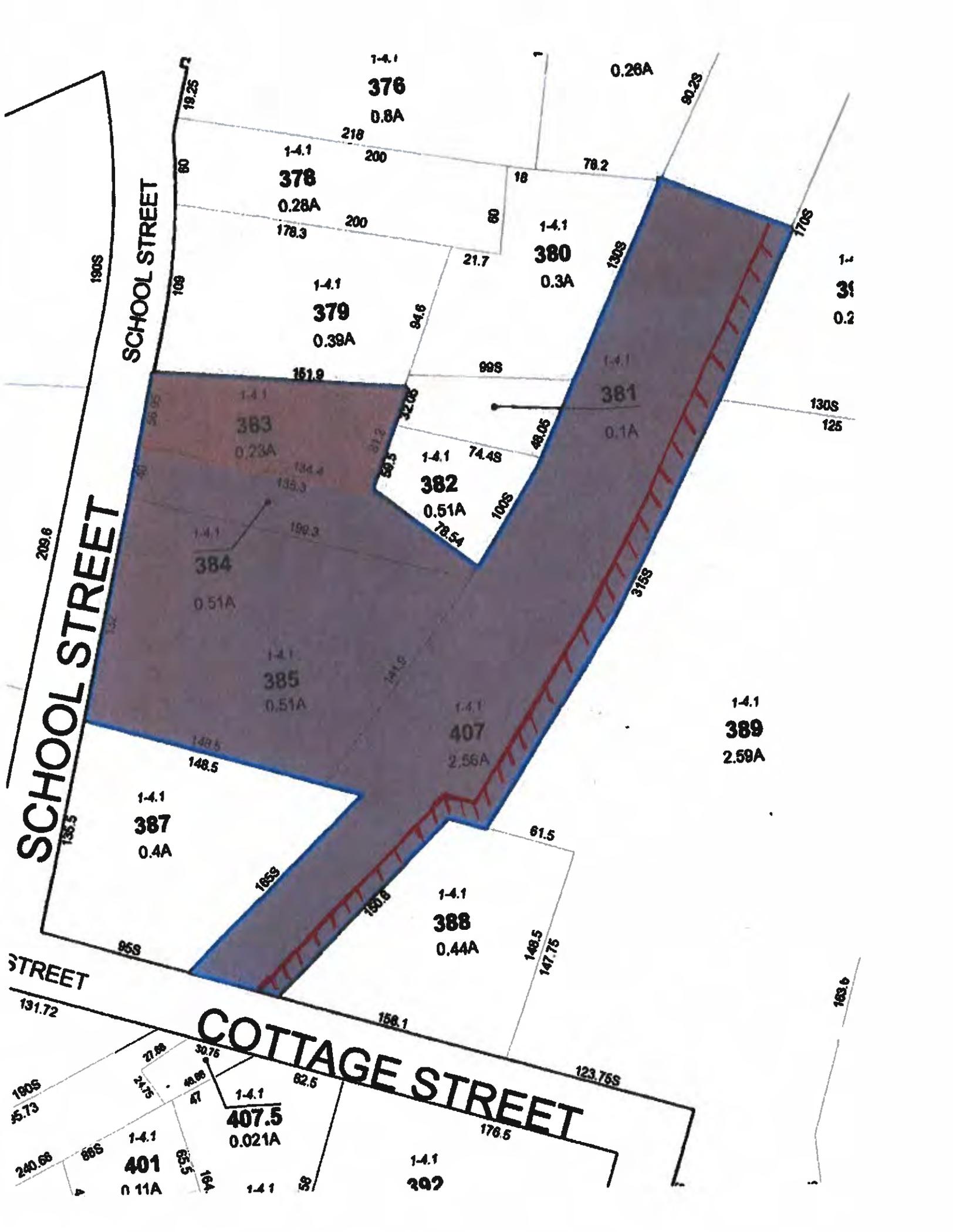


Exhibit B
The Town's RFP and MPZ's RFP Response

[both to be attached]

Request for Proposals
for
Reuse of Baldwinville
Elementary School
16 School Street
Templeton, MA 01436



2/12/2020

Revised from Final RFP issues 02/04/19 to reflect added lands and minor change in base information.

Table of Contents

I.	INTRODUCTION: SALE OF BALDWINVILLE ELEMENTARY SCHOOL	3
II.	HISTORY	4
III.	DEMOGRAPHICS	4
IV.	PROPERTY DESCRIPTION/SITE CHARACTERICS	4
V.	TOWN ASSISTANCE	6
VI.	ZONING	6
VII.	BUILDING & SITE PHOTOS	8
VIII.	SUBMISSION REQUIREMENTS.....	10
IX.	MANDATORY TERMS	11
X.	SELECTION PROCESS & EVALUATION CRITERIA.....	12
XI.	TERMS AND CONDITIONS	14

APPENDICES

- A. Deed/Title Information
- B. Required Proposal Attachments (Forms)

I. INTRODUCTION: SALE OF BALDWINVILLE ELEMENTARY SCHOOL

The Board of Selectmen, acting on behalf of the Town of Templeton (hereinafter the "Town") is seeking proposals from qualified development entities for sale and redevelopment of the Baldwinville Elementary School Building at 16 School Street, sitting on and adjacent to four sub parcels of land of 1.47+/- acres. The building has an area of approximately 23,527 square feet on three levels. The Town intends to work closely with the chosen developer in an attempt to preserve the architectural qualities of the building as well as satisfy the economic and social needs of Templeton's residents.

Built in 1923, Baldwinville Elementary School was constructed for the purpose of educating the inhabitants of Templeton. The building has been used exclusively as a school since that time.

Goals and Public Purpose

The goal of the Town in issuing this RFP is to determine the proposed use or redevelopment that will be in the best interest of the Town. This will not necessarily mean the proposal that offers the highest proposed purchase price. The Town desires to see the property used in a way that meets the following goals:

- | | |
|----------------------------------|---|
| Economic Climate: | The redevelopment should enhance the overall economic climate in Templeton. |
| Avoidance of Blight: | The redevelopment should create a well maintained attractive and fully-tenanted building. |
| Historic Characteristics: | The rehabilitation of the property should be done in a way that respects and enhances the character of the building and the surrounding area. |

Process

This disposition of property is subject to the Uniform Procurement Act, MGL Chapter 30B. This Request for Proposals (RFP) offers for sale of the identified property, as-is, for the purposes outlined in this RFP and desired by the buyer, in conformance with all applicable zoning, use, and development regulations.

This RFP provides general information about the property, including history, zoning, and utility information, as well as submission requirements to respond to this Request for Proposals. It is the Respondent's responsibility to review and analyze physical conditions, required permits and approvals, legal considerations, and any and all Town bylaws and regulations that may impact the proposed project.

II. HISTORY

The Baldwinville Elementary School is commercial property owned and operated by the Town. The original building was destroyed in a fire December 18, 1921. The building that now stands was built in 1923 at a cost of \$97,000 and opened on November 24, 1923 and has operated as a school ever since.

III. DEMOGRAPHICS

Templeton is located on 32 (+/-) square miles in northern Worcester County with a current single tax rate of \$16.83 per \$1,000.00. The 2020 Town census shows that the total current population is 7,850 with 3,067 total households. The current median household income is \$71,296 with a median home value of \$245,217.

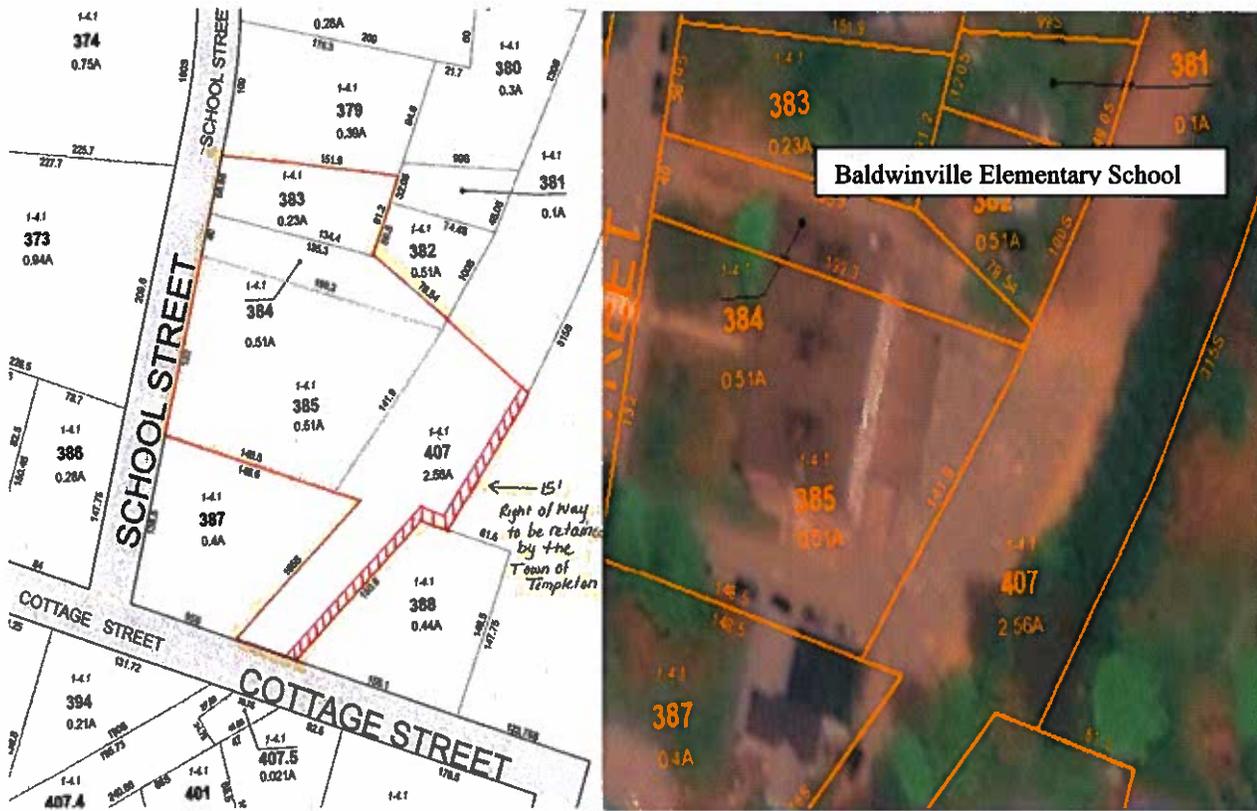
IV. PROPERTY DESCRIPTION/SITE CHARACTERICS

Location and General Site Information

The Baldwinville Elementary School is located at 16 School Street, Templeton, MA located in a residential area of the Town, and along a low traffic roadway. It sits on and is adjacent to four sub-parcels of land comprising 1.47+/- acres as shown on following page (page 5).

Additionally, there is a right of way access for the owners of 12 School Street, this right of way can be relocated in keeping with site redevelopment but cannot be extinguished (see **Appendix A**).

We do not have floor plans of the building; anyone desiring to have a walk-through of the building may do so by calling Ms. Laurie Wiita, Director of the Office of Development Services, on 1.978.894.2771 or emailing her on lwiita@templetonma.gov.



Related Planning Documents

The Town completed a Community Master Plan in 2017. The document is available on the Town’s website at www.templetonma.gov, click on Boards and Commissions, then Planning Commission, click on Master Plan-Town of Templeton 3.28.2017. Proposals should be consistent with these plans.

Parking

The Baldwinville Elementary School building has a parking lot at the back of the building; there is also municipal parking across the street for visitor parking; some on street parking is available in front of the building on School Street.

Building Information

The building has three floors of approximately 23,527 square feet in size with which two floors consisting of the first floor of 9,227 square feet of living area and the upper level of 7,150 square feet of living area for a total of 16,377.

Exterior: The exterior of the property consists primarily of brick/masonry.

Interior: There is a mix of large spaces and small offices, many with original woodwork and period details.

Utilities

Municipal electricity, water and sewer are available. Rates for these are available on <https://www.templetonlight.com> (click on light or water, then click on rates) and www.templetonma.gov (click on Department, then Sewer Department and then on sewer rates).

Deed/Title Information

Included as **Appendix A**

V. TOWN ASSISTANCE

The town will provide reasonable staff assistance to the developer to obtain essential information (e.g. loans, tax credits or grants) in aid to assemble the needed finances. In addition, the town has adopted the Community Preservation Act and may entertain proposals which may require assistance for the development of affordable housing.

VI. ZONING

This section is provided only as a general guide to potential property developers. It is not intended to supersede or reflect the complete Zoning Bylaws. It is the Respondent's responsibility to review the Zoning Bylaws in their entirety to ensure that the intended use is allowed. For any questions on zoning, please contact Zoning Enforcement Officer Richard Hanks at RHanks@templetonma.gov or 978-939-3411.

Allowed Uses

The property is zoned Village District (V). The V district allows the uses outlined in the table found on page 7. The community will accept proposals for redevelopment which will be used for any use allowed by right or under a special permit; on November 20, 2019 at the fall town meeting, residents voted to approve Article 8: Amending By-Laws re: overlay district for cannabis, on February 4, 2020 the Attorney General's office approved Article 8; to learn more, go to www.templetonma.gov and go to the Town Clerk's page under Annual and Special Town Meetings (November 20, 2019 Fall Town Meeting). Host Community Agreement (HCA's) information can be found by going to www.templetonma.gov, click on Planning & Construction projects at the bottom of the page and then on Marijuana Establishments.

Special Permits

Special permits may be granted by the Planning Commission if they find that the proposed use is in harmony with the intent of the general purpose and intent of the Zoning Bylaws; will not create undue traffic congestion; and will not impair the integrity of the district or be detrimental to health, safety or welfare. The Planning Commission may impose conditions on approval.

Dimensional & Density Requirements

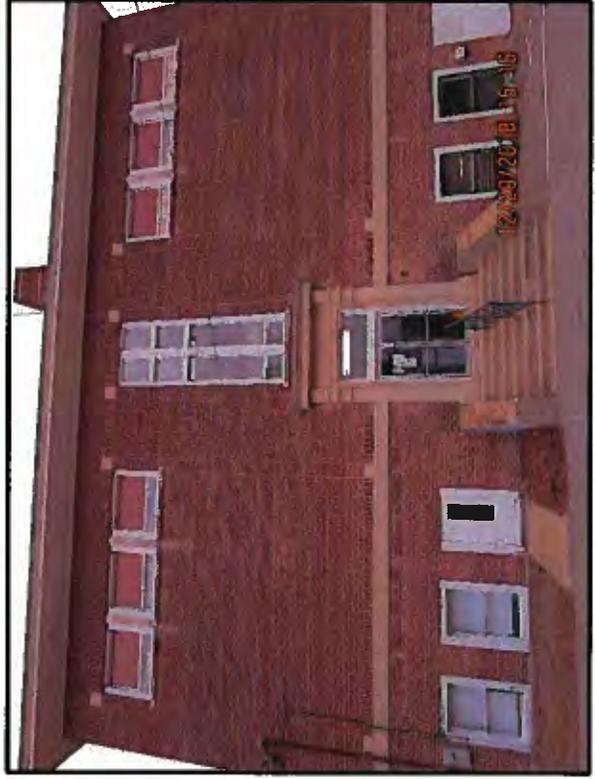
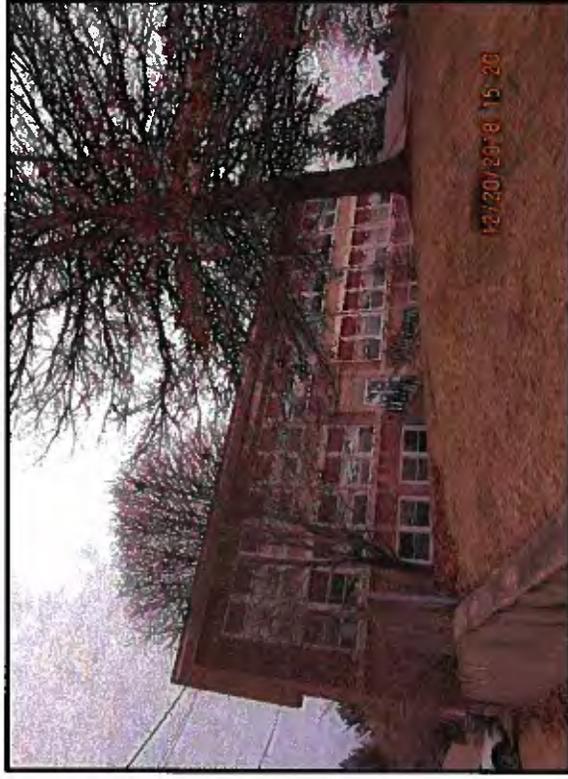
Note: V – Village Districts – 1 Acre Zone (where a minimum of 1 acre of land is required for the construction of a single-family home).

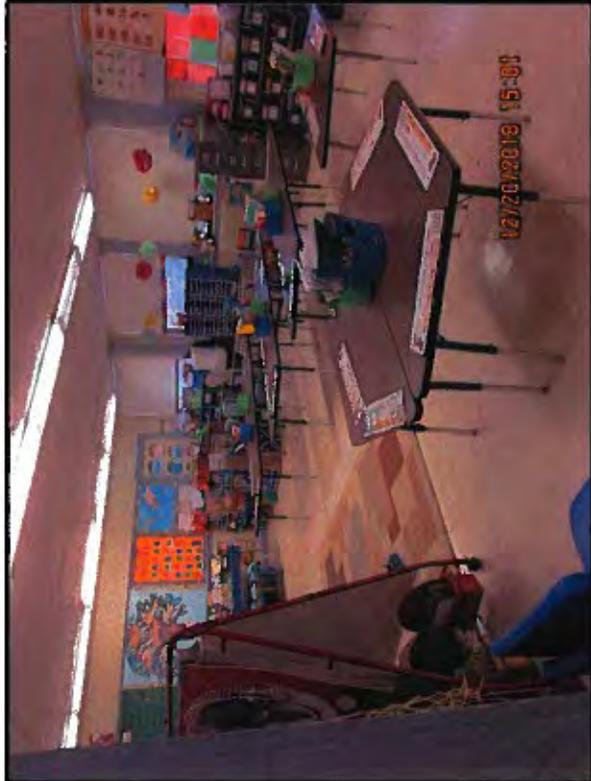
Minimum Side Setbacks	Minimum Rear & Front Setbacks	Maximum Number of Stories	Maximum Building Coverage (%)	Maximum Impervious Surface Coverage (%)
15 LF	30 LF	2.5 or 35 LF	60	75

VILLAGE (V) ZONING DISTRICT: ALLOWED USES*	
Residential (except Single-Family)	Y
Mixed Uses in a Single Building	Y
Home Occupation - Minor	Y
Home Occupation - Major	SP
Government facilities	Y
Gasoline or Service Station	SP
Hotel/Motel, Inn	SP
Small appliance or equipment repair	SP
Dry cleaning, shoe repair, tailoring, or other similar uses; self service coin operated laundry	SP
Wireless Communication Facility in accordance with Article XXX	SP
Small scale retail sales and services	Y
Business, financial or professional offices; medical office or clinic	Y
Trade, professional or other school conducted as a private business for gain	Y
Sales of flowers, garden supplies, or agricultural products partly or wholly outdoors	SP
Eating Establishment, drive through service not allowed	Y
Eating Establishment, specializing in serving alcoholic beverages	SP
Personal service business such as, but not limited to barber shop, beauty shop, tanning salon, nail salon	Y
Veterinary establishment or pet grooming establishment	SP
Indoor entertainment/recreational facility, including but not limited to bowling alley, theatre, or sports arena	SP
Cannabis Facilities	SP

* *Y=By-Right, SP = special permit required*
Uses not listed are not allowed in the Village District.

VII. BUILDING & SITE PHOTOS





VIII. SUBMISSION REQUIREMENTS

Instructions for Submitting Proposals

Respondents shall submit one original and seven copies of their proposal such that they are received by 2:00 PM on Wednesday, March 18, 2020 to:

Office of the Selectmen Office
160 Patriots Road, Room 6
East Templeton, MA 01438

The proposals must be submitted in a sealed package or envelope labeled "BES Proposal." The Respondent assumes the risk of timely delivery as the Town will return late submittals unopened. A Respondent can correct, modify, or withdraw a proposal by making such request in writing by March 18, 2020 @ 2:00 PM. All corrections and modifications must be sealed when submitted. The Town will not accept corrections or modifications after the date and time mentioned above

Proposals will be publicly opened on the date and time listed above, with the name of each Respondent and the purchase price recorded. Proposals become public information when they are opened.

INTERVIEWS Tuesday, March 31, 2020 @ 6:30 p.m.

All communications regarding this RFP must be made in writing to Adam Lamontagne, Assistant Town Administrator, 160 Patriots Road, Room 6, P O Box 620, East Templeton, MA 01438. Emailed questions may be addressed to alamontagne@templetonma.gov. All questions must be submitted by the close of business on March 9, 2020. Answers to all relevant questions will be posted on the Town's website no later than Wednesday, March 11, 2020.

Proposal Submission Requirements

The Proposal must include the following information and attachments, clearly identified and indexed.

1. A cover letter outlining the Respondent's proposal for the property and stating an offer to purchase the property including the proposed purchase price;
2. Contact information, including name, address, and telephone number of the lead member of the Respondent's team;
3. A description of the Team's Qualifications and Experience: The Respondent shall include information about the team's experience in redevelopment of similar properties. The Respondent shall include information regarding the technical, financial, and administrative capability of the team. The proposal shall include resumes of the key personnel indicating the role and experience of each person and a minimum of three (3) references who are familiar with the developer's work.
4. Evidence of the Respondent's ability to obtain financing;
5. Descriptions and locations of any similar projects developed by the Respondent;
6. A signed "Proposal Response Form";

7. A detailed narrative description of the Respondent's intended use of the Property, including the following:
 - a. Description of the proposed development, noting its use, scope, marketing objective, design concepts, amenities, benefits for the immediate area and Town and similar factors;
 - b. Description of any proposed modifications and/or renovations to the interior and exterior of the building and/or to the boundaries of the property.
 - c. Identification of the proposed uses. If residential units are proposed, the number of units should be identified.
 - d. Financial summary of the proposal, including, at a minimum, total project cost, proposed purchase price, financial arrangements (including amount and source of equity commitment), a five-year cash flow projection, and the estimated tax yield and/or jobs generated by the proposal;
 - e. Identification of any Town, State, Federal, or private assistance necessary for implementation;
 - f. Description of how the proposal meets each of the Comparative Evaluation Criteria.
8. A development schedule indicating timelines for preparing the space, permitting, assembly of financing commitments, and expected occupancy of the property;
9. Schematic site plans or conceptual floor plans and/or renderings;
10. A certified check or a bank cashier's check for \$5,000.00 (Five Thousand and 00/100 Dollars), payable to the Town of Templeton as its bid surety; the Town will deposit the check in a non-interest-bearing account. This surety will be forfeited if, having been notified the Town wishes to proceed with the proposal, the proposer does not enter into – and faithfully and diligently prosecute–negotiations with the Town by which the Town shall transfer the property to the proposer subject only to Town Meeting approval and authorization.
11. The following attachments must be included with the proposal (included in **Appendix B**):
 - a. Proposal Response Form
 - b. Certificate of Non-Collusion
 - c. Certificate of Tax Compliance – MGL, Chapter 62C, Section 49A
 - d. Disclosure of Beneficial Interest – M.G.L., Chapter 7, Section 40J

IX. MANDATORY TERMS

The successful Respondent shall be required to enter into a Developer Designation Agreement (Purchase & Sales Agreement) with the Town within one hundred eighty (180) days after Town's selection of the Respondent's proposal, containing in addition to the usual provisions, the following mandatory terms:

- a. The Town shall not pay a broker's commission, and the successful Respondent shall indemnify and hold the Town harmless from any claims for such commission.
- b. The Respondent or their agent shall have the right, at a time and date approved by the Town, to

enter the Property at the Respondent's own risk to conduct surveys, inspections, or tests. The Respondent shall restore the Property, if disturbed by such surveys, inspections, or tests, as close as reasonably possible to the condition prior to such entry. No testing without prior Town of Templeton approval.

- c. The Respondent shall acknowledge that the Town is selling the Property "as is".
- d. After the Town accepts the Respondent's proposal, the conceptual plan may not be substantially altered when submitted to other boards for approval. However, minor changes are acceptable to accommodate site conditions discovered during onsite investigations.

X. SELECTION PROCESS & EVALUATION CRITERIA

Proposal Selection

Proposals will be reviewed by a Committee consisting of a member the Community at Large, Advisory Committee, Board of Selectmen, Planning Board, Historical Commission which shall recommend the most advantageous proposal to the Board of Selectmen. The Board of Selectmen shall determine the proposal to be selected, if any. The Town will negotiate the final Developer Designation Agreement (Purchase & Sales Agreement) with the awarded Respondent.

We cannot guarantee you will receive an invitation to make a formal proposal but, if you do, such proposals will be made on the evening of Tuesday, March 31, 2020.

The Town may request any Respondent to furnish supplementary information to assure the Town that they have the technical competence, the business and technical organization, and the financial resources necessary to for the proposed project.

The Town reserves the right to reject any and all proposals, to waive any minor informality in responses, to negotiate any and all sales terms with the successful Respondent, or to cancel this RFP at any time if it is in the Town's best interest to do so.

The Town will accept or reject the proposals within ninety (90) days after opening. The Town will return the deposit that accompanies a proposal to any Respondent whose proposal the Town does not accept. The selected proposal shall be binding upon the Respondent for one hundred twenty (120) days from the date of the Letter of Acceptance issued by the Town. If the selected Respondent withdraws its proposal within this 120-day period, the Respondent's deposit shall be forfeited, and the Town may retain the funds as liquidated damages. Upon execution of a Developer Designation Agreement (Purchase & Sales Agreement), the Town will credit the proceeds of the check to the purchase price. In the event of default of the Respondent prior to transfer of title, the Town shall retain the deposit as liquidated damages.

Rule for Award

The most advantageous proposal from a responsive and responsible Respondent, taking into consideration price and all other evaluation criteria set forth in this solicitation.

Minimum Selection Criteria

1. The proposal must contain all required information, forms, certifications, and deposit.
2. The Respondent must submit satisfactory evidence of their ability to obtain sufficient financing to complete the project as proposed. This may include a pre-approval letter or similar commitment from a financing source indicating sufficient funding to complete the proposed project

Comparative Evaluation Criteria

All proposals meeting the Minimum Evaluation Criteria will be further reviewed in accordance with the following Comparative Evaluation Criteria.

Proposals will be evaluated on how they address the goals and public purposes outlined above using the technical criteria specified below. The Town may consider price in its evaluation of proposals, but the Board reserves the right to select a proposal that does not propose the highest sales price. Each duly submitted proposal will be reviewed by the Baldwinville Elementary School Disposition Advisory Committee according to the following technical criteria and scored according to the following characteristics (This scoring is in no particular order):

1. Overall Responsiveness to the submission requirements

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

2. Impact on economic conditions in Templeton

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

3. Project feasibility and financial strength of the developer

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

4. Developer's Project Plan & Schedule

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

5. Compatibility with the needs and characteristics of the neighborhood

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

6. Plans to address the parking needs of the property

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

7. Dedication to the preservation and maintenance of the historical aspects of the building

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

8. Consistency with the Town's 2017 Community Master Plan

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

9. Documented skill and experience in adaptive re-use of buildings

Not Advantageous	Advantageous	Highly Advantageous
1	2	3

Highest Score Available: 27

Lowest Score Possible: 9

XI. TERMS AND CONDITIONS

All proposals are subject to the terms, conditions, and specifications herein set forth.

1. The Town makes no express or implied representations or warranties as to the accuracy and/or

completeness of any of the information provided as part of the Request for Proposals, including information that is available upon request.

2. The Town reserves the right to seek additional information or revised proposals from respondents at any time prior to selection through written notice to all respondents.
3. The Town reserves the right to suspend, withdraw, or amend this RFP at any time, without notice.
4. All materials submitted by the Respondent become the property of the Town. The Town is under no obligation to return any of the material submitted by a Respondent in response to this RFP.
5. The Town reserves the right to reject, in its sole discretion, any proposal not submitted in conformance with this RFP and any amendments hereto, or to reject any and all proposals, in its sole discretion, for any reason. The Town further reserves the right to waive or decline to waive irregularities in any proposal when it determines that it is in the Town's best interest to do so.
6. The Respondent agrees to be solely responsible for obtaining, in a timely manner, all permits, approvals, waivers, releases or any other requirements for the development the property as proposed in this RFP.
7. The Town will draft a Developer Designation Agreement (Purchase & Sales Agreement) in compliance with the terms of the RFP and may incorporate the terms of the RFP and the proposal selected.
9. The Respondent must be current in taxes and all water and sewer liabilities on all real estate owned in the Town, if applicable.



J. Raymond Myres Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merritt
Rebekah Lacey Bryan Bertram Ivria Glass Fried Eric Roustie Katherine E. Stock

November 15, 2018

Carter Terenzini
Town Administrator
Town of Templeton
160 Patriots Road
East Templeton, MA 01438

Re: Town title

Dear Carter:

You asked me to examine the title of the following parcels of land. For ease, all parcels are shown on the Assessors map, attached hereto as "Exhibit A" as Parcels A, B, C and D. The results of my examination are as follows:

Parcel A: Assessors parcel 1-4.1-385

This parcel, also known as 16 School Street, was deeded to the Town on April 25, 1883 by Philenia Baldwin, Caroline Bryant, Martha Davenport, Lucia Proctor and Jonathan Baldwin, which deed is recorded in Book 1280, Page 51 and attached as "Exhibit B." There is no plan accompanying the conveyance, however, metes and bounds are described within the deed. There are no restrictions on this parcel.

Parcel B: Assessors parcel 1-4.1-384

This parcel was deeded to the Town on August 3, 1892 by James Meegan, which deed is recorded in Book 1390, Page 393 and attached as "Exhibit C." There is no plan accompanying the conveyance, however, metes and bounds are described within the deed. This deed contains a ROW to Assessors parcels 1-4.1-381 and 1-4.1-382: "Reserving the right of way along the northerly side of said lot, to cross and recross the same to the land of the grantor lying on the North and East of said lot." In my opinion, the Town may relocate the right of way on this parcel as long as said relocation does not materially change the owner's ability to use parcels 1-4.1-381 and 1-4.1-382.

Carter Terenzi
November 15, 2018
Page 2 of 2

Parcel C: Assessor's parcel 1-4-1-383

This parcel was deeded to the Town on November 15, 1956 by Frank J. O'Neil and Elizabeth Smith, which deed is recorded in Book 3832, Page 567 and attached as "Exhibit D." There is also a plan accompanying this conveyance, which is attached as "Exhibit E" and recorded in Plan Book 221, Plan 97. There are no restrictions on this parcel.

Parcel D: Assessor's parcel 1-4-1-407

This parcel (the rail line parcel) was deeded to the Town on December 30, 1983 by the New England Power Company, which deed is recorded in Book 8041, Page 57 and attached as "Exhibit F." There is also a plan accompanying this conveyance, which is attached as "Exhibit G" and recorded in Plan Book 331, Plan 52. There are no restrictions on this parcel.

Please contact me with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Thomas J. Harrington". The signature is stylized and somewhat cursive.

Thomas J. Harrington

Exhibit
A

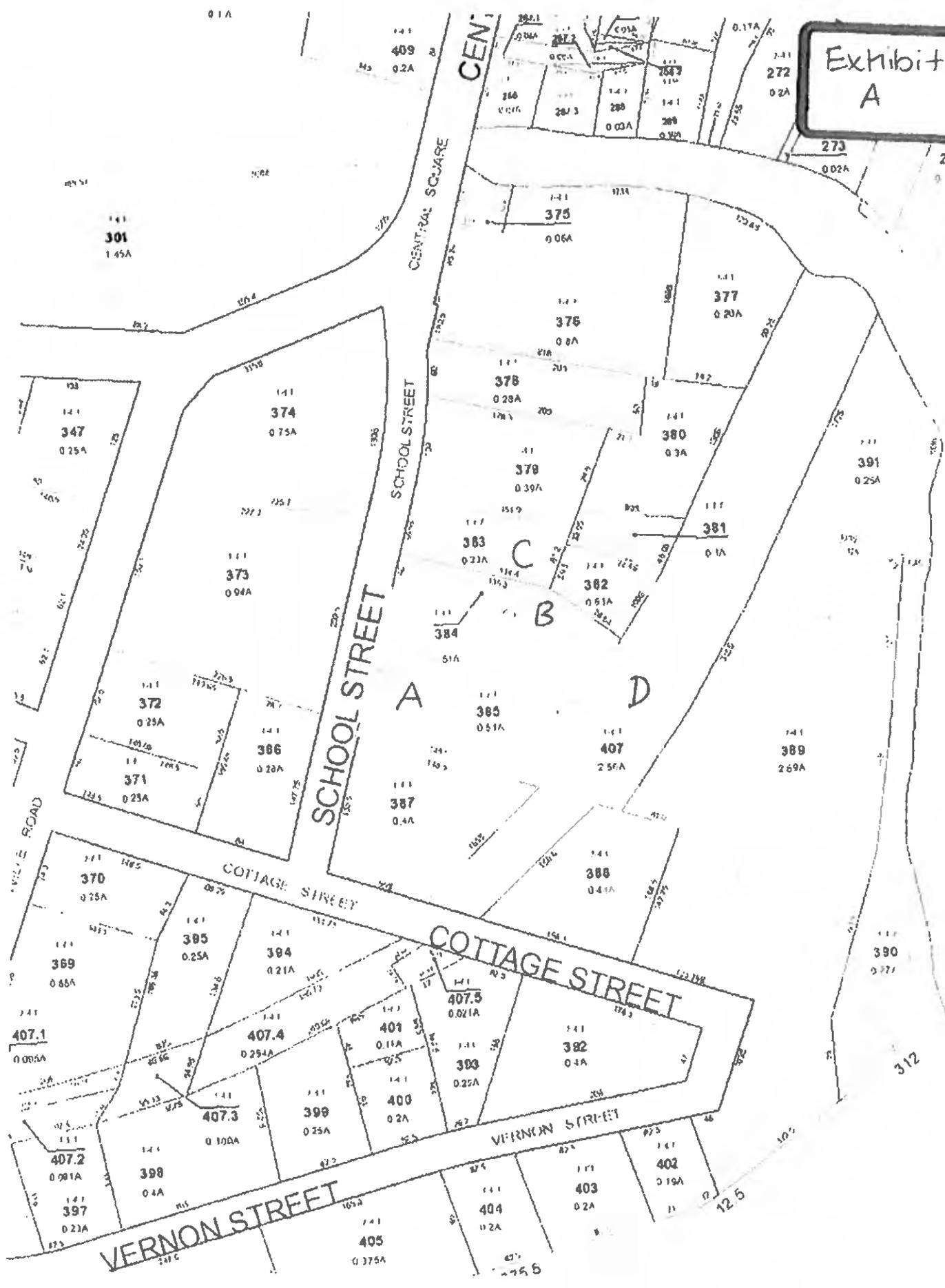


Exhibit
B

ourselves and our heirs, executors and administrators, with the said grantee and his heirs and assigns that the granted premises are free from all incumbrances made or suffered by us, and that our self and our heirs, executors and administrators shall warrant and defend the same to the said grantee and his heirs and assigns forever against the lawful claims and demands of all persons claiming by, through or under us, his heirs and assigns none other.

In witness whereof we the said Herbert W. Small and Milton R. Wilson Justice as aforesaid, have set our hands and seals this twenty eighth day of June in the year one thousand eight hundred and eighty eight

Signed, sealed and delivered } Herbert W. Small (seal)
in presence of } Milton R. Wilson (seal)

What is Demanded } Various parts of Massachusetts
Worcester on June 28, 1888. Then personally appeared the above named H. W. Small and acknowledged the foregoing instrument to be his free act and deed

Witness my hand and seal of the Court this 28th day of June 1888 at Worcester, Mass. By the Court B. M. Miller, J.

Waldemar P. Chelmsworth } Known all around by their parents that we
to Waldemar P. Chelmsworth } Waldemar P. Chelmsworth, wife of Albert
mpleton Waldemar } Waldemar P. Chelmsworth, wife of Albert
David W. Chelmsworth, Bruce O. Proctor, wife of Joseph W.
Proctor of Athol, all of the County of Worcester and Common
wealth of Massachusetts, and Waldemar Chelmsworth of Bolton
County of the State of New York, in consideration
of Five Hundred Dollars, paid by the inhabitants of the
Town of Templeton, the receipt whereof is hereby acknowl-
edged, do hereby give, grant, bargain, sell and convey with
the said inhabitants of said Templeton, a certain tract of
land bounded and described as follows situated in Old
Counsell in the north part of said Town, commencing
at a stake and stone in rods south of the south west
corner of James Mcgams. Land thence E. 27° W. eight
rods to a stake thence S 63° E. nine rods to the line of
the Ware River Road thence Northwesterly by the
line of said Ware Road eight rods and fifteen rods
thence N. 63° W. twelve rods and two links to the place

of beginning, containing eighty four square rods, more or less. Also a right of way commencing at the south west corner of the said James Morgan's land at the end of the Morgan road, as called, and running S. 27.° W. to and by the land herein conveyed to the north line of W. M. Adams land, said right of way to be ten and one half rods wide and to be on the west side of said line.

To have and to hold the granted premises with all the privileges and appurtenances thereto belonging, to the said inhabitants of said Town and their successors and assigns, to their own use and behoof forever. And we hereby for ourselves and our heirs, executors and administrators covenant with the grantees and their successors and assigns that we are lawfully seized in fee simple of the granted premises: that they are free from all incumbrances, that we have good right to sell and convey the same as aforesaid, and that we will and our heirs, executors and administrators shall warrant and defend the same to the grantees and their successors and assigns forever against the lawful claims and demands of all persons. And for the consideration aforesaid we Albert Bryant, husband of the said Caroline P. Bryant and David O. Davenport husbands of the said Martha A. Davenport and Joseph W. Proctor, husband of the said Susan A. Proctor do hereby release unto the grantees and their successors and assigns all rights to any estate by the writing in the granted premises.

In witness whereof, we the said Philomena Baldwin, Caroline P. Bryant, Albert Bryant, Martha A. Davenport, David O. Davenport, Susan A. Proctor, Joseph W. Proctor, Jonathan Baldwin, have hereunto set our hands and seals this Twenty fifth day of April in the year one thousand eight hundred and eighty three

signed and sealed

in presence of
A. C. & R. O.

Attest Foster as
to Jonathan Baldwin
Commonwealth of

Philomena Baldwin	(seal)
Caroline P. Bryant	(seal)
Albert Bryant	(seal)
Susan A. Proctor	(seal)
Joseph W. Proctor	(seal)
David O. Davenport	(seal)
Martha A. Davenport	(seal)
Jonathan Baldwin	(seal)

Massachusetts Worcester ss April 28th 1883 Then personally appeared the above named Philenia Ouldarin, Gustave O. Courant, Albert Bryant and acknowledged the foregoing instrument to be their free will and deed.

Before me, Rea Homer Justice of the Peace State of New York County of St. Lawrence ss Rea Homer that on this 15th day of May 1883 before me personally came Jonathan Ouldarin to me well known to be the same person mentioned in and who executed the foregoing instrument and who duly acknowledged the execution thereof.

Attest: Rea Homer Justice of the Peace
W. May 31st 1883 at 8th St. N. York Co. By Murray B. Miller Notary

Stearns, Maria J.
to
J. Stearns of Walton in the County of Holt and State of New Hampshire wife of George H. Stearns, as co-defendant
See Discharge of Ten Hundred Dollars paid by Providence Colman on Cash, 1896.
Page 514.

Know all men by these presents that I, Martha J. Stearns of Walton in the County of Holt and State of New Hampshire, wife of George H. Stearns, as co-defendant in the discharge of Ten Hundred Dollars paid by Providence Colman on Cash, 1896. wife of O. G. Colman of Templeton in the County of Worcester State of Massachusetts, the receipt whereof is hereby acknowledged, do hereby give, grant, bargain, sell and convey unto the said Providence Colman, her heirs and assigns a certain tract of land with the buildings thereon situated in said Templeton and bounded as follows, viz Beginning at a corner by the road called the Wardsenden Corner road and in the line between Northardston and Templeton thence Southwesterly on said line twelve rods to a heap of stones thence to Sth E. corner rods thence N. 45th E. on road thence to 12th E. side to said road thence Southwesterly on line of said road about said corner rods to the point of beginning containing 1 1/2 acres more or less.

I have and to all the granted premises with all the privileges and appurtenances thereto belonging to the said Providence Colman and her heirs and assigns, to them, one sex and behoof forever and I hereby, for myself and my heirs, executors and administrators consent with the grantee and her heirs and assigns that I am lawfully seized in fee simple of the granted premises, that they are free from all encumbrances that I have good right to sell and convey the same as afterwards and that I sell and my heirs, executors and administrators shall warrant and

Exhibit
C

of August in the year one thousand eight hundred
 ninety two.
 Signed, sealed and delivered Oliver Wellington
 in presence of Louisa Wellington (real)
 H. R. Vaille } Commonwealth of Massachusetts
 Worcester 26 August 26 1892
 personally appeared the above named Oliver Wellington
 and acknowledged the foregoing instrument to be his free
 act and deed
 Before me Henry B. Vailly Justice of the Peace
 Recd Aug 27 1892 at 2 15 PM. Seal of Dist. Court
 Henry B. Vailly

Megan James
 to
 Templeton Inhabitants

Know all men by these presents that I, James
 Megan, of Templeton in the County of Worcester and Com-
 monwealth of Massachusetts, in consideration of One hun-
 dred dollars to me paid by the Town of Templeton the re-
 ceipt whereof is hereby acknowledged, do hereby give, grant,
 bargain, sell and convey unto the said Town of Templeton
 a certain tract of land situated in Baldwinville in said
 Templeton, bounded and described as follows: Beginning at
 the southwest corner of the lot to be conveyed and at the
 Northwest corner of the present school house lot on the
 Baldwin land so called, thence N 27° E forty (40) feet to
 monument, thence S 63° S. eight rods and five links to
 monument, thence S 31° W to four rods and seventeen links
 to the Northeast corner of the present school house lot,
 thence N 63° W along the Northernly line of said school house
 lot twelve rods and two links to the place of beginning.
 Being part of the premises conveyed to me by Jonathan
 Baldwin et al and Lewis P. Proctor Guardian, by deeds
 dated June 30 A D 1892. Said deeds to be recorded with
 Worcester District Deeds. Reserving the right of way along
 the Southernly side of said lot, to cross and recross the
 same to the land of the grantor lying on the North and
 East of said lot
 To have and to hold the
 granted premises, with all the privileges and appurtenan-
 ces thereto belonging, to the said Town of Templeton and
 its successors and assigns to their own use and behoof
 forever. And I hereby for my and my heirs, executors
 and administrators covenant with the grantee and its

successors and assigns that I am lawfully seized in fee simple of the granted premises that they are free from all incumbrances that I have good right to sell and convey the same as aforesaid and that I well and lawfully execute and administrators shall warrant and defend the same to the grantee and its successors and assigns forever against the lawful claims and demands of all persons And for the consideration of said \$ Julia Morgan wife of the said James Morgan hereby release unto the grantee and its successors and assigns all rights of or to both towns and homestead in the granted premises.

In witness whereof we the said James Morgan and Julia Morgan herewith set our hands and seals this 3^d day of August in the year one thousand eight hundred and ninety two.

Signed sealed and delivered James Morgan (seal)
in presence of Julia Morgan (seal)
As Witness to of Me }
of Morgan }
Notary Public for the County of Worcester August 5 1892 Then

personally appeared the above named James Morgan and acknowledged the foregoing instrument to be his free act and deed before me Notary Public of the County of Worcester August 5 1892 at 5 15 PM at 18. C. J. HILLARY Notary Public

Dear Albert to
to
Wm J Walker

Know all men by these presents that we, Albert C Dean, of the County of Worcester and Commonwealth of Massachusetts in consideration of One dollar and other so: considerations paid by William J Walker of West Boylston in said Commonwealth the receipt whereof is hereby acknowledged do hereby release and forever quitclaim unto the said William J Walker his heirs and assigns a certain tract or parcel of land with the buildings thereon situated in the Northwesterly part of said West Boylston containing ninety square rods more or less bounded as follows to wit Beginning at a stone on the line of land state at the Southwesterly corner of Town school lot number (5) five eleven North 10° E by land of said school lot number (5) five fifteen

Exhibit
D

being unmarried
WE, FRANK J. O'NEIL and ELIZABETH M. SMITH/as joint tenants, both
of Templeton, Worcester County, Massachusetts,
for consideration paid, grant to the INHABITANTS OF THE TOWN OF TEMPLETON,
a municipal corporation in said County and Commonwealth

See Plan
Book 221,
Plan 97

with warranty covenants
the land in

(Description and encumbrances, if any)

A certain parcel of land situated on the southeasterly side of School Street in the village of Baldwinville in said Templeton, bounded and described as follows, to wit:

Beginning at the most westerly corner thereof at a stone monument in the southeasterly line of School Street at land of the Town of Templeton;

THENCE: northeasterly at an included angle of 101°-37' by the said line of School Street, 56.95 feet to an iron pipe;

THENCE: southeasterly at an included angle of 87°-59' by land of Frank J. O'Neil, 151.90 feet to an iron pipe;

THENCE: southwesterly at an included angle of 77°-39' by land of Harry D. Collier, 81.2 feet to a stone monument;

THENCE: northwesterly at an included angle of 92°-45' by land of the Town of Templeton, 134.40 feet to the place of beginning.

Meaning and intending to convey a portion of the deed from James E. Meegan to Frank J. O'Neil and Elizabeth M. Smith dated October 16, 1945 and recorded with Worcester District Registry of Deeds, Book 297, Page 62.



Worcester
COMMERCIAL
DEEDS & EXCISE
RECORDS
- 155

Inland of said grantor
etc.

to wit grant of right of tenancy by the entirety and other interests therein
-dower and homestead-

Witness our hands and seals this 15th day of November 1956
James J. O'Neil
Elizabeth M. Smith

The Commonwealth of Massachusetts

Worcester, ss. November 15 19 56

This person appeared to me and was named FRANK J. O'NEIL,

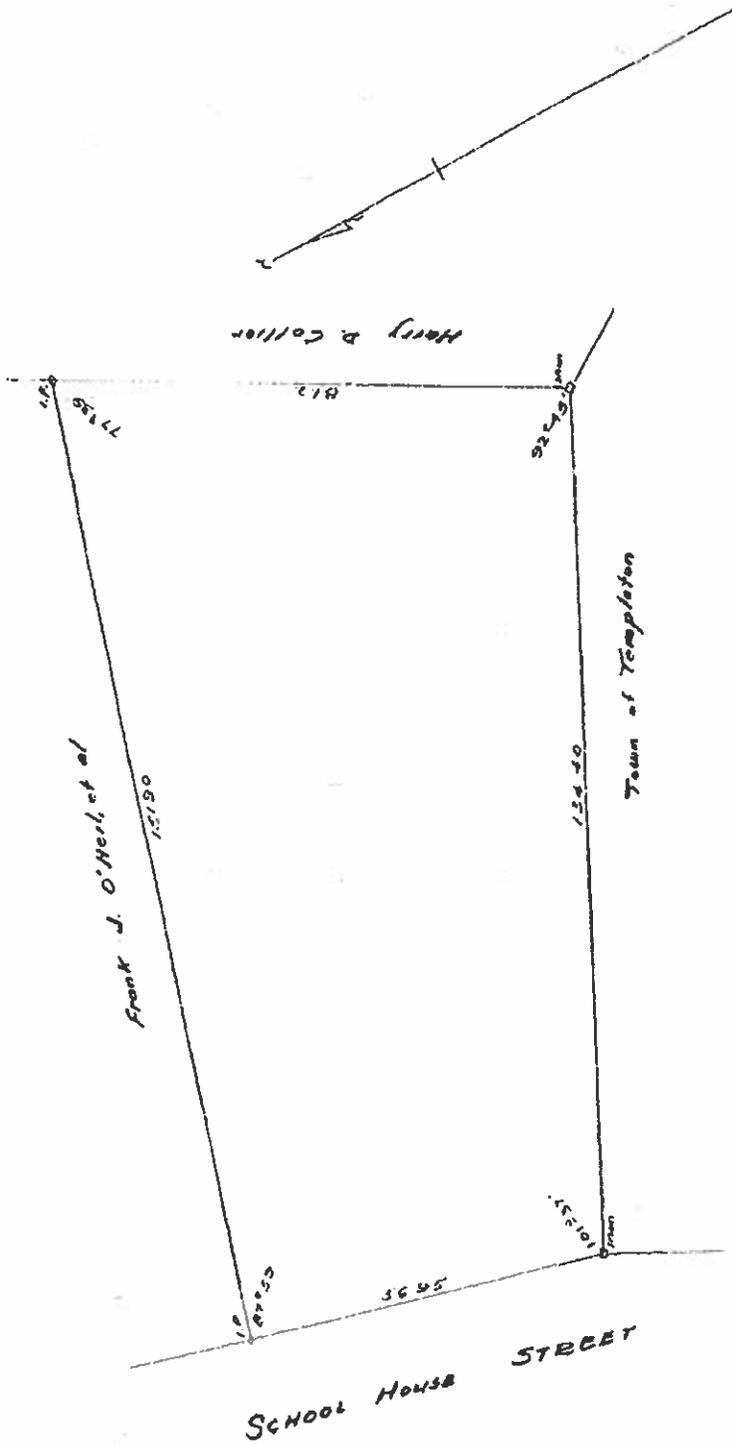
and acknowledged the foregoing instrument to be his free and voluntary deed, before me

Philip Howard
Notary Public
Worcester, Massachusetts

My commission expires February 6, 1960

Recorded Dec. 26, 1956 at 11. 22m. P. M.

Exhibit
E



PLAN OF LAND
OF
FRANK J. O'NEIL, ET AL

BARREMINNUEE VALLEGE
TEMPLETON, MASS.
Scale: 1 inch = 20 feet Aug 7, 1856
Shirley G. Kendall, C.E.

Approval of Plan 19 22 201
Approved by the

of Templeton Planning Board

MONESTER DISTRICT PLAN
OF TEMPLETON, MASS.
1 Dec. 16, 1956
TEST

KNOW ALL MEN BY THESE PRESENTS

that NEW ENGLAND POWER COMPANY, a Massachusetts corporation with its principal place of business in Westborough, Worcester County, Massachusetts (hereinafter referred to as the Grantor) for consideration of \$1,001.00, paid by the TOWN OF TEMPLETON located on School Street, Baldwinville, Massachusetts (hereinafter referred to as the Grantee), the receipt whereof is hereby acknowledged, does hereby remise, release, quitclaim, assign, transfer and set over unto the TOWN OF TEMPLETON its successors and assigns, forever, the following described land in Templeton, Worcester County, Massachusetts:

All that certain place or parcel beginning at the point where the easterly sideline of South Main Street crosses center line station 2244 plus 807.07 on said branch at Baldwinville and extending easterly and northerly to a line passing at right angles through center line station 2264 plus 55 on said branch, in the Town of Templeton aforesaid, containing 2.56 acres of land, more or less, all as shown on a plan recorded with Worcester District Registry of Deeds in Plan Book 331, Plan 52.

Being Parcel 1 conveyed by Penn Central Company to New England Power Company by deed dated August 23, 1968, recorded with Worcester District Registry of Deeds in Book 4879, Page 12.

IN WITNESS WHEREOF, the said NEW ENGLAND POWER COMPANY has

caused its corporate seal to be hereto affixed and these presents to be signed in its name and behalf by J. F. KASLOW, its President and by ALFRED D. HOUSTON, its Treasurer being thereunto duly authorized this 29th day of December 1983.

NEW ENGLAND POWER COMPANY

By J. F. Kaslow
President

By Alfred D. Houston
Treasurer

RECORDED
N&P
12/30/83 3:02

THE COMMONWEALTH OF MASSACHUSETTS

Worcester, ss.

December 29, 1983

Then personally appeared the above named J. F. KASLOW and ALFRED D. HOUSTON and acknowledged the foregoing instrument to be the free act and deed of NEW ENGLAND POWER COMPANY.

Before me,

David C. Fisher
Notary Public

My Commission Expires: April 16, 1987

Recorded DEC 30 1983 3:02 h/c m/AM

PROPOSAL INTENT RESPONSE FORM

RFP Title:

Please review the Request for Proposal (RFP). Furnish the information requested below and return this page to the Baldwinville Elementary School Disposition Advisory Committee:

Your expression of intent is not binding but will greatly assist us in planning for proposal evaluation.

Choose one of the following options:

- Do intend to submit a proposal
- Do not intend to submit a proposal

If you are not responding to this RFP, please provide your reason(s):

Please provide the following contact information:

Name (first, middle, last):

Title:

Organization:

Email address:

CERTIFICATION OF NON COLLUSION & GOOD FAITH

The undersigned certifies under pains and penalties of perjury that this Contract has been obtained in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

The Contractor by:

Print Name

Title/Authority

CERTIFICATE OF TAX COMPLIANCE

(Corporate)

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I,
_____, authorized signatory for _____

printed name

name of consultant/business

do hereby certify under the pains and penalties of perjury that said contractor has
complied with all laws of the Commonwealth of Massachusetts relating to taxes,
reporting of employees and contractors, and withholding and remitting child support.
Federal ID # _____

Signature

_____ Name _____

Title _____

_____ Date _____

OR

CERTIFICATE OF TAX COMPLIANCE

(Individual)

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I,
_____ do hereby certify under the pains and
penalties of perjury that said contractor has complied with all laws of the
Commonwealth of Massachusetts relating to taxes.

(Signature of person signing bid or bid)

(Date)

**Disclosure of Parties with Beneficial Interest
MGL Ch. 7 §40J**

I do hereby certify that the following parties have – or area anticipated to have – a beneficial interest in our submissions seeking to acquire and redevelop the Baldwinville Elementary School form the Town of Templeton, MA

Party 1 _____

Party 2 _____

I do make this declaration under the pains of penalties of law and understand that any material omission or misrepresentation may not only lead to the disqualification of my proposal but prosecution under the pains and penalties of law.

Section 40J. No agreement to rent or to sell real property to or to rent or purchase real property from a public agency, and no renewal or extension of such agreement, shall be valid and no payment shall be made to the lessor or seller of such property unless a statement, signed, under the penalties of perjury, has been filed by the lessor, lessee, seller or purchaser, and in the case of a corporation by a duly authorized officer thereof giving the true names and addresses of all persons who have or will have a direct or indirect beneficial interest in said property with the commissioner of capital asset management and maintenance. The provisions of this section shall not apply to any stockholder of a corporation the stock of which is listed for sale to the general public with the securities and exchange commission, if such stockholder holds less than ten per cent of the outstanding stock entitled to vote at the annual meeting of such corporation. In the case of an agreement to rent property from a public agency where the lessee's interest is held by the organization of unit owners of a leasehold condominium created under chapter one hundred and eighty-three A, and time-shares are created in the leasehold condominium under chapter one hundred and eighty-three B, the provisions of this section shall not apply to an owner of a time-share in the leasehold condominium who (i) acquires the time-share on or after a bona fide arms length transfer of such time-share made after the rental agreement with the public agency is executed and (ii) who holds less than three percent of the votes entitled to vote at the annual meeting of such organization of unit owners.

A disclosure statement shall also be made in writing, under penalty of perjury, during the term of a rental agreement in case of any change of interest in such property, as provided for above, within thirty days of such change.

Any official elected to public office in the commonwealth, or any employee of the division of capital asset management and maintenance disclosing beneficial interest in real property pursuant to this section, shall identify his position as part of the disclosure statement. The commissioner shall notify the state ethics commission of such names, and shall make copies of any and all disclosure statements received available to the state ethics commission upon request. The commissioner shall keep a copy of each disclosure statement received available for public inspection during regular business hours.

Acknowledgment for Individual

State of Massachusetts

County _____

On this _____ **day of** _____, **20** __, **before me personally appeared**

_____ **(or** _____

and _____), **to me known to be the person (or persons)**

described in and who executed the foregoing instrument, and acknowledged that he/she/they executed the same as his/her/their free act and deed.

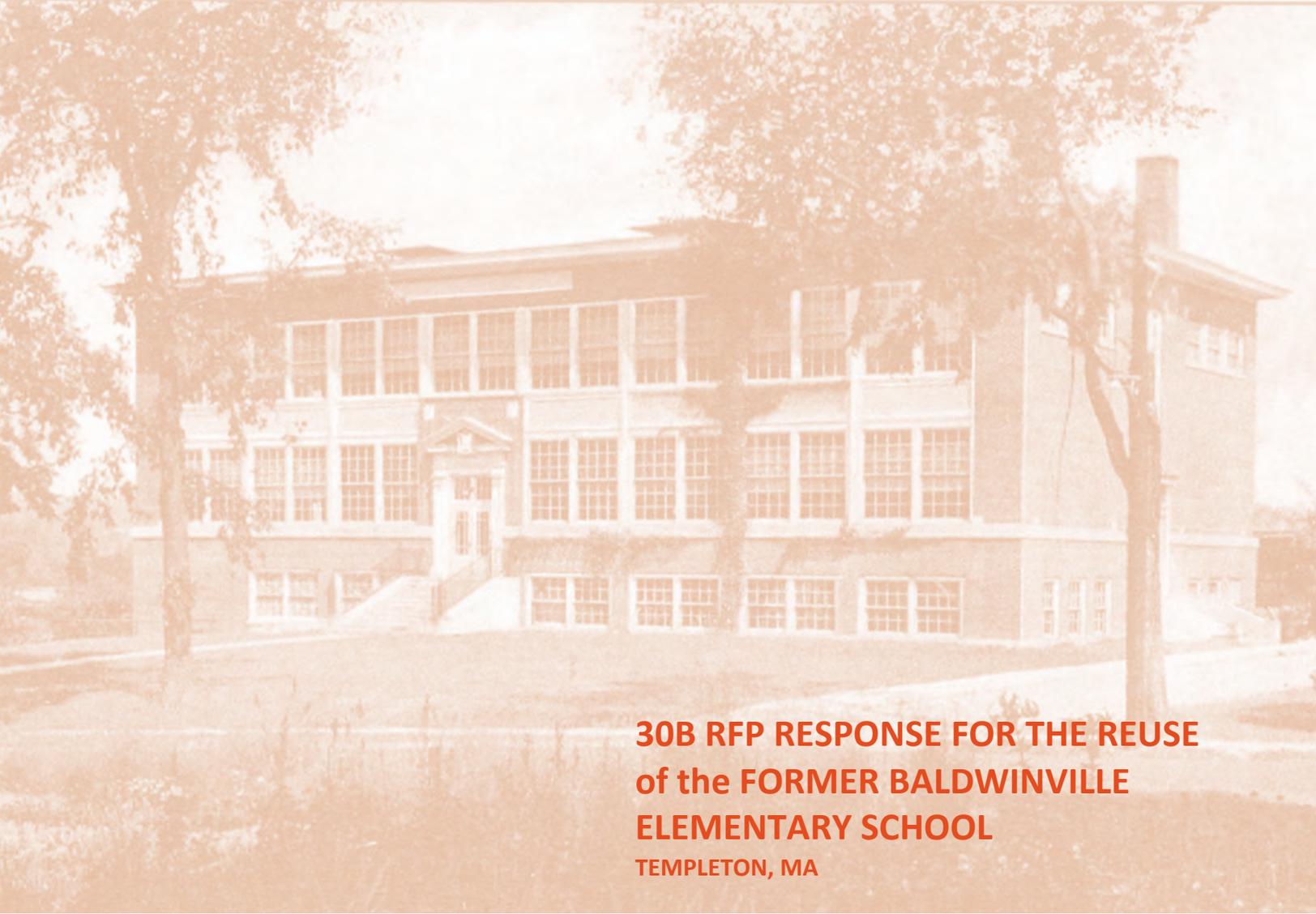
Notary Public

Print Name: _____

My commission expires:

A PROPOSAL SUBMITTED TO:

THE TOWN OF TEMPLETON



30B RFP RESPONSE FOR THE REUSE of the FORMER BALDWINVILLE ELEMENTARY SCHOOL

TEMPLETON, MA



MARCH 31, 2020

SUBMITTED BY:
MPZ DEVELOPMENT LLC
MILTON, MA 02186

WITH
ICON ARCHITECTURE, INC
BOSTON, MA 02110

TABLE OF CONTENTS

A. Proposal

1. Cover Letter & Scoring Criteria
2. Contact Information
3. Team's Qualification and Experience
4. Evidence of the Respondent's ability to obtain financing
5. Descriptions and Locations of Similar Projects Developed by the Respondent
6. Signed Proposal Response Form
7. Intended Use of the Property
8. Development Schedule
9. Schematic Site Plans, Conceptual Floor Plans and Renderings

B. Appendix

1. Team Qualifications/Collateral
2. Required Forms
 - Proposal Response Form
 - Certificate of Non-Collusion
 - Certificate of Tax Compliance
 - Disclosure of Beneficial Interest
 - Acknowledgement of Addendums

A. Proposal



499 Adams Street, #527
Milton, MA 02186
617-645-3534
www.mpzdevelopment.com

March 31, 2020

Baldwinville Elementary School
Disposition Advisory Committee
c/o Selectmen Office
160 Patriots Road, Room 6
East Templeton, MA 01438

Re: Response to Request for Proposals for Reuse of Baldwinville Elementary School

Dear members of the reviewing committee,

MPZ Development LLC (MPZ) is pleased to submit the enclosed proposal to be considered for the redevelopment of the Baldwinville Elementary School and its associated site located in the Baldwinville Village of Templeton. MPZ's proposal package responds to "Section VIII, IX & X," outlined on pages 10-14 of the Baldwinville Elementary School RFP dated February 12, 2020. Pursuant to Section VIII and Addendum four (4) of the RFP, enclosed is one thumb drive with an electronic copy of the proposal response, and bank check with the application fee of \$5,000. A PDF was also mailed to Adam Lamontagne, Assistant Town Administrator.

The Baldwinville School presents challenges that are exciting and similar to MPZ's past projects. MPZ has many years of expertise and experience in the development of mixed-income and affordable housing, as well as mixed-use projects. MPZ's primary goal is to work collaboratively with the Committee on a vision to redevelop 16 School Street Street into privately owned mixed-income housing that will well serve Baldwinville and the greater Templeton community. To accomplish this goal, MPZ has assembled a highly regarded team of expert consultants.

Some of the highlighted team members include **ICON Architecture** as the architect. ICON has significant experience creating high quality historic renovation and mixed-income developments. **Keith Construction** as the general contractor, with an expertise in undertaking complex historic renovation projects and new construction. **Epsilon Associates** who will oversee the historic preservation compliance and application process as they have for so many other similar type projects. The balance of the proposed team will be professionals that are experts in providing the services needed to effectuate high quality development projects.

MPZ understands that it is the town's goal to transform the vacant and blighted site into a vibrant and productive housing use. MPZ envisions a true Public Private Partnership (PPP) with the Town so that – jointly – we can effectuate the redevelopment of the site into privately owned and managed mixed-income rental housing. Our proposed redevelopment will allow for the

redeveloped site to contribute financially through added taxes and help to meet larger housing goals within the Town of Templeton. MPZ looks forward to discussing the development plan with the Committee should the proposal meet and exceed the Evaluation Criteria.

In order to construct a high-quality development that properly preserves the school building and creates additional units of housing, MPZ anticipates requesting various local, state and federal housing and historic rehabilitation subsidies. The proposal assumes \$6,200,000 in a combination of tax credits and subsidies from DHCD, and \$1,173,297 from the Town of Templeton in CPA. The requested subsidies from the Town will leverage 17 times or \$18.9 million its amount of resources into the project and will be offset by various payments identified in the project's development budget and through new tax revenues. The requested town resources could be contributed over the course of a few years and MPZ believes there may be an opportunity for the Town's funding to be partially or fully repaid over time. If the development's cash flow after expenses and first mortgage debt service exceed a to-be-determined threshold, a portion of cash flow exceeding that threshold could be used to repay the Town's financial commitments. Finally, the building will utilize federal and state historic tax credits and will be rehabilitated in accordance with the Secretary of the Interior's Standards for Rehabilitation.

The team's foremost goal is to bring value to communities by rehabilitating structures of historical significance to create housing and amenities for area residents. We not only desire to create properties that will maximize value for area taxpayers, but that will also impact the community by improving living conditions and raising the bar for expectations of future area developments. The proposal will provide reasonably priced, high-quality housing opportunities to Templeton's households and will provide new housing in a community where over 50% of its units were constructed prior to 1961. The development team is devoted to helping the Town of Templeton prosper and hope to invest our time and financial resources to ensure the Baldwinville School rehabilitation is successful.

Please contact me directly if you have any questions regarding this proposal response.

Mathieu Zahler (617) 645-3534 or mzahler@mpzdevelopment.com

I look forward to working with you and your team on this exciting redevelopment opportunity.

Sincerely,



Mathieu P. Zahler
managing member

Enclosures

Cc: Carter Terenzini and Adam Lamontagne

1. COVER LETTER & SCORING CRITERIA

Taken from Section 10 of the RFP with conformance notations

Comparative Evaluation Criteria

1. Overall responsiveness to the submission requirements

Highly Responsive – 3 Points: This response comports with the core elements and requirements of the RFP offering a clear and comprehensive plan as described in Sections 2-9 of the enclosed MPZ proposal response as well as the attached appendix.

2. Impact on economic conditions in Templeton

Highly Responsive – 3 points: As described in Section 7 of the RFP the redevelopment would provide new tax revenues (approximately \$100,000.00 per year, once completed), an acquisition fee and other fees to the Town during construction. The redevelopment would also provide much needed housing for the residents of Templeton.

3. Project feasibility and financial strength of the developer

Highly Responsive – 3 points: As requested in Section 4 is a letter from the developer's financial institution showing availability of resources. Additionally, MPZ has provided references for three comparable projects listed in Section 5. Lastly, in Section 7 the developer has offered a concept that is financeable and feasible.

4. Developer's Project Plan and Schedule

Highly Responsive – 3 points: As described in Sections 7 and 8 of the proposal response MPZ has provided a project plan that will create 50 additional units of housing for the town and has also included a draft schedule for the redevelopment which incorporates all permitting and financing milestones.

5. Compatibility with the needs and characteristics of the neighborhood

Highly Responsive – 3 points: As described in Section 7 of the proposal, the plan is responsive to the town's 2017 Master Plan and the new building design would fit within the existing neighborhood context.

6. Plans to address the parking needs of the property

Highly Responsive – 3 points: As described in Section 7 of the response the development plan will look to provide approximately 70 spaces onsite and enter into a shared parking agreement with the Town for the 16 existing municipal parking spaces on School Street for a total of 86 spaces.

7. Dedication to the preservation and maintenance of the historical aspects of the building

Highly Responsive – 3 points: As described in Section 7 of the proposal MPZ is looking to rehabilitate the Baldwinville School which will save a beloved historic asset and will address multiple segments of this category including special treatment of a historic location, utilization of an underutilized and blighted site and providing much needed landscape improvements.

8. Consistency with the Town’s 2017 Community Master Plan

Highly Responsive– 3 points: As described in Section 7 of the proposal this project meets the goals housing goals stated in the 2017 Community Master Plan as well as providing open space and saving a historic building.

9. Documented skill and expertise in adaptive re-use of buildings

Highly Responsive – 3 points: As described in Sections 3, 5, 7 and the appendix of this proposal the larger development team’s past experience will allow for the preservation and restoration of the exterior, and much of the interior, of the Baldwinville School as required by the Massachusetts Historical Commission and National Park Service so the project would be eligible for federal and state historic tax credits.

Estimated Total Projected Points 27

2. CONTACT INFORMATION

MPZ Development LLC is the lead respondent for the Baldwinville Elementary School disposition. The Principal of the company, Mathieu P. Zahler will be the main point of contact for all project related inquiries. The company's contact information is as follows:

MPZ Development LLC
499 Adams Street # 527
Milton, MA 02186
Tel: 617-645-3534
Email: mzahler@mpzdevelopment.com
Website: www.mpzdevelopment.com

3. TEAM'S QUALIFICATIONS AND EXPERIENCE

Development Team

The following development team has been formed to include industry experts ensuring a seamless and successful completion:

- **Developer:** *MPZ Development LLC* (www.mpzdevelopment.com) Mathieu P. Zahler is the owner and manager of the Milton, MA based MPZ Development LLC. Matt has more than 17 years of experience in both the design and construction industry and the field of real estate development.

Prior to establishing MPZ Development in 2017, Matt was a Senior Project Manager at Trinity Financial, Inc., in Boston, where he oversaw some \$423 million in development and the creation of nearly 860 housing units over nine years. He also gained experience through positions at The Boston Garden Development Corporation (Boston) and at JJ Gumberg, Inc. (Pittsburgh), where he was involved in the development and operation of over 17 million square feet of retail and commercial space, conducting portfolio analysis of operational and capital needs. Matt is a licensed real estate broker in the Commonwealth of Massachusetts and the owner of MPZ Brokerage LLC.

Before he specialized in real estate development, Matt was the Director of Policy and Development for A Better City (ABC), where he oversaw the organization's policy activity and legislative agenda. In that role he managed the abutters groups and private partnering process for the City of Boston's Crossroads Initiative, the Silver Line Phase III Business and Institutional Committee, South Boston Stakeholders, and ABC's foundation and government relations. Matt's earlier work in the design and construction field was at Kallmann, McKinnell and Wood Architects, as a draftsman and then as a marketing coordinator; at HNTB Inc., in a marketing coordination capacity; and as Marketing Director for Copley Wolff Design Group.

- **General Contractor:** *Keith Construction:* (www.keithconstruction.net) specializes in multifamily residential construction and completed work on The Cordovan at Haverhill Station in Haverhill, Whaler's Place in New Bedford, and Wilber School Apartments in Sharon.
- **Legal (Financing and Development):** *Nixon Peabody LLP:* (www.nixonpeabody.com) Nixon Peabody's Affordable Housing practice is highly skilled in federally assisted housing or accessing capital markets for housing development. Its attorneys—many of whom formerly worked at HUD in several legal and policy positions—have been involved with every major federal affordable housing initiative in the last 40 years.

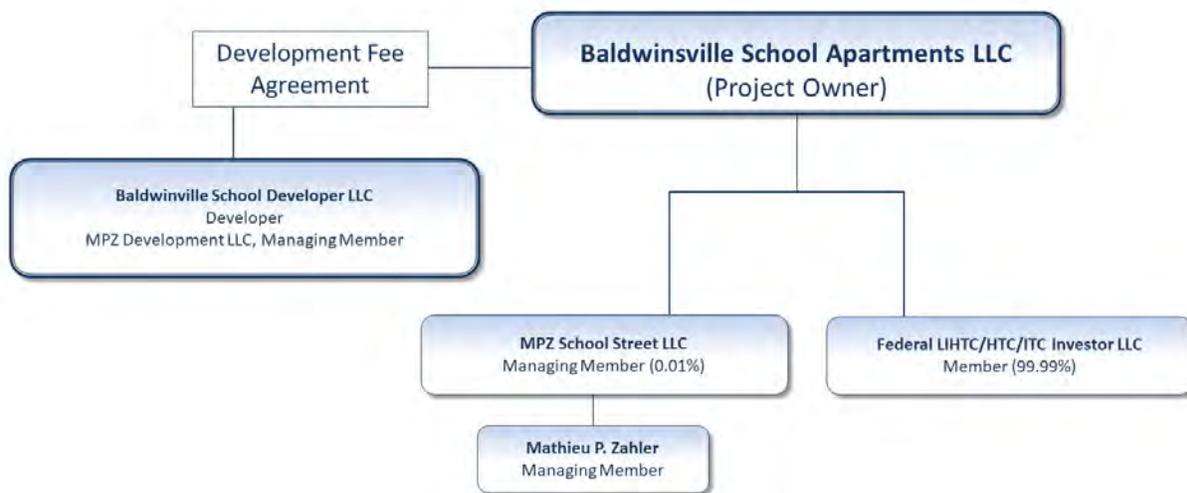
- **Architect:** *ICON Architecture (ICON)* (www.iconarch.com) ICON is a 50-person, Boston based, women-owned architectural practice. Our work focuses on sustainable transformative projects that create new paradigms for transformative living and range from transit-oriented development to innovative adaptive reuse, and from low-rise to high-rise construction. Our team has contributed to the design and construction of over 20,000 housing units throughout New England, with 2,000 currently under design or in construction this year. Their adaptive reuse historic school housing projects include: The Coady School, Borne; Simkins School, South Yarmouth; Fulton School, Weymouth; School Street Residences, Athol.
- **Property Manager:** *Trinity Management LLC (TMLLC)*(www.trinitymanagementllc.net) TMLLC's mission is to meet the programmatic and financial goals of our owners by providing exceptional, customer-focused property management services. Our goal is to aid in the revitalization of communities, enhancing the lives of our residents and neighbors, strengthening local commerce, and fostering opportunities for positive growth.
- **Historic Consultant:** *Epsilon Associates, Inc.* (www.epsilonassociates.com) Epsilon's team of Historic Preservation Specialists provides clients with the insight and guidance needed to secure project approvals and clearances from local, state, and federal agencies, State Historic Preservation Offices, the National Park Service, and local historic district commissions. Having previously worked at the Massachusetts Historical Commission, Boston Landmarks Commission, National Park Service, City of Newton Planning Department and other preservation planning organizations and -rms, Epsilon's senior level historic preservation staff has a unique understanding of regulatory requirements and agency expectations.

Team resumes are attached at the back of this section and additional company information can be found in Section B, Appendix 1

Ownership Entity

If this proposal is selected, a Massachusetts single purpose ownership entity will be created and owned Mathieu P. Zahler. Other entities will also be created for the respective project Phases to create an ownership structure that meets the needs of the project and its complex financing structure. Below is a draft organizational chart* to which gives a sense of how these entities will be linked to one another:

Baldwinville School Apartments Organizational Chart



* The RFP respondent reserves the right to admit a JV partner to developer upon approval of the Town.



MATHIEU P. ZAHLER

MANAGING MEMBER

499 Adams Street, #527

Milton, MA 02186

T 617.645.3534

E mzahler@mpzdevelopment.com

www.mpzdevelopment.com

Based in Milton, MA, MPZ Development is a developer of affordable, mixed-income, market rate and historic apartment communities.

SKILLS & ABILITIES

Affordable Housing

Mixed-Income Housing

Historic Rehabilitation

Public Private Partnerships

Urban Redevelopment

Low-Income Housing Tax Credits

Historic Rehabilitation Tax Credits



DEVELOPMENT

EXPERIENCE

MPZ DEVELOPMENT LLC, MILTON, MA

MANAGING MEMBER, 2017 – PRESENT

TRINITY FINANCIAL INC., BOSTON, MA

SENIOR PROJECT MANGER, 2010 – 2018

A BETTER CITY INC., BOSTON, MA

DIRECTOR OF POLICY AND DEVELOPMENT, 2009 – 2010

BOSTON GARDEN DEVELOPMENT COPR., BOSTON, MA

DIRECTOR OF POLICY AND DEVELOPMENT, 2008 – 2009

EDUCATION

CARNAGIE MELLON UNIVERSITY, HEINZ COLLEGE, PITTSBURGH

MASTER OF SCIENCE IN PUBLIC POLICY AND REAL ESTATE, 2008

CONNECTICUT COLLEGE, NEW LONDON

BACHELOR OF ARTS IN ARCHITECTURAL HISTORY, 2001

RELEVANT EXPERIENCE (PARTIAL LIST)

In Development

McElwain School Apartments, 57 Units, Bridgewater, MA

10 Stonley Road, 45 Units, Jamaica Plain, MA

Completed

Treadmark Building*, 83 Units and ground floor retail, Dorchester, MA

Enterprise Center*, 224 Units and 55K of Office/Retail, Brockton, MA

Randolph Houses*, 318 Units, Harlem, NY

Bristol Commons and Lenox Green*, 160 Units, Taunton, MA

Regency Tower*, 129 Units, New Bedford, MA

Washington Beech*, 206 Units, Roslindale, MA

*completed while an employee of Trinity Financial Inc.

PROFESSIONAL ASSOCIATIONS

Citizens Housing and Planning Association, Production & Preservation Committee

The Urban Land Institute, Policy Committee



Education

Bachelor of Architecture,
University of Minnesota, 1985

Bachelor of Environmental Design,
University of Minnesota, 1985

Design Studio Abroad,
Rome, Italy, 1984

Registration

Massachusetts (7399)

International Work

Istanbul, Turkey 1988-89

Affiliations

CHAPA
Preservation and
Production Committee

AIA MA Government Affairs
Committee, Member

Boston Society of Architects

BSA Renovate for Recovery
Registered Design Professional

U.S. Green Building Council

Speaking Engagements

ABX 2012: Survival Strategies for
Existing Buildings

ABX 2012: Living on Track

ABX 2019: Rethinking Reality -
Preservation Path to
Affordable Housing

Relevant Experience

Principal-in-Charge, **Rindge Commons**, Cambridge, MA: Optimizing full potential of this iconic site, ICON's design of infill structures transform the character of this property and include mixed uses while adding 100 units of affordable housing.

Principal-in-Charge of CA, **Avenir**, Boston, MA: A 241-unit, mixed-use residential development on a former MBTA parcel in Boston's Bulfinch Triangle above the MBTA's North Station. Avenir elegantly combines upscale apartments with vibrant retail and transportation links in Boston's Bulfinch Triangle sports and entertainment district. The 10-story building's varied massing and texture respond to the historic Bulfinch Triangle context of individual buildings aggregated over time. Tall, multi-level lofts wrap the internal parking structure to conceal it from street view, while upper level apartments enjoy the expansive terraces between building volumes.

Project Manager, **One Canal**, Boston, MA: Transit-oriented development in Boston's Bulfinch Triangle, including retail and parking below 310 rental apartments built over the MBTA Orange and Green Lines and the Central Artery Tunnel.

Project Manager, **Washington Beech (Phase II)**, Roslindale, MA: Transformation of a severely distressed development into a HOPE VI community of over 200 housing units in a range of types, incorporating leading edge energy and air quality strategies; all units take advantage of passive solar energy; LEED-H gold certified

Principal-in-Charge, **Chelmsford Woods Residences**, Chelmsford, MA: New construction of 116 units of affordable, low-rise townhouses with garden and clubhouse.

Principal-in-Charge, **North Point Lofts**, Cambridge, MA: Adaptive Reuse of 1926 concrete meat packing plant into 103 units of transit-oriented microloft housing as part of the Northpoint District. and is conveniently located near the Lechmere MBTA station. These studio apartments range in size from 330 to 700 square feet, each with floor-to-ceiling windows and contemporary interiors designed to meet LEED-NC Silver criteria.

Principal-in-Charge, **Simon C. Fireman Community Renovation and Expansion**, Randolph, MA: ICON is currently working on a phased modernization for this 3 story, 160 unit Senior Living Facility owned by Hebrew Senior Life. Expansion of site for another 50-units.

Principal-in-Charge, **Cambridge Housing Authority: Washington Elms Modernization**, Cambridge, MA: Extensive Existing Conditions and Schematic design programming through construction for modernization of an occupied 15 residential + 2 support building site; \$24M construction budget for broad and varied scope addressing most critical need across the housing development for the next 20 years; funded through HUD's Rental Assistance Demonstration program.

Principal-in-Charge, **Smith House**, Boston, MA: Renovation and modernization of 132 one-bedroom affordable occupied apartments in a 12-story, 1970's era concrete high-rise for seniors. Reprogramming of all amenity areas for seniors was completed.

Principal-in-Charge, **Maverick Landing**, East Boston, MA: Award-winning \$150M project on a nineacre waterfront site near the Maverick MBTA station. A multi-phase, multi-ownership, multi-family residential development built as a prototype for affordable green development totaling 426 sustainable units. LEED-certified.

Principal-in-Charge, **MSBA's Green and Accelerated Repair Program**: 26 different projects across 11 districts, 19 schools. Sustainable energy saving measures that include mechanical system upgrades, window and door replacement, roof and insulation repairs. All projects incorporate principles and standards of sustainable design ranging from \$400k to \$2M in construction cost.

Principal-in-Charge, **The Coady School Residences**, Bourne, MA: Fifty-eight residential units for active seniors are situated amongst a variety of communal spaces rich in historic character retained in the renovations: original open stairs, full proscenium at the entry lobby, and science greenhouse restored as a sun room - all washed in natural daylight through the large restored windows.



Education

Bachelor of Architecture, Boston
Architectural Center, 1998
Received High Honors for Thesis

Associate of Science in
Architectural Technology, Hartford
State Technical College, 1982

Registration

Massachusetts (20683)

Relevant Experience

Project Manager, **Appleton Mills**, Lowell (MA): Award winning adaptive reuse of a historic mill building on the Hamilton Canal into a 130-unit, mixed-income, artists' live/work development.

Project Manager, **Van Brodie Mill**, Lawrence, MA: Renovation of an existing historic mill building into 100+/- family-oriented lofts and a ground-level amenity center for residents. The renovation totals 145,488 GSF.

Project Manager, **Marriner Mill**, Lawrence, MA: Marriner Mill is located in the Arlington Mills Historic District in Lawrence. ICON will carry out a substantial rehabilitation of the structure to national Park Service standards. 84 apartments of low to moderate income housing will be created with a focus on 2 and 3 bedroom units. The renovation will be a companion to the neighboring Van Brodie Mill currently under construction in this historic district.

Project Manager, **Boston East**, East Boston (MA): The revitalization of a vacant piece of land into 200 apartments. The project provides public access to the waterfront and bridges two important centers of East Boston.

Project Team Manager, **The Plant & Cuban Revolution**, Providence (RI): An adaptive reuse project that includes the conversion of a 19th century Fabric Dying and Bleaching calendaring facility into artist live/work housing and a mixed use office park.

Project Manager, **Enterprise Office Building**, Brockton (MA): Adaptive reuse of a 55,000 SF former newspaper plant for commercial office space.

Project Manager, **Centre 50 & Enzo Flats**, Brockton (MA): Enzo Flats and Centre 50 are the first residential phase of a new multi-acre, mixed-used downtown redevelopment in the Gateway City of Brockton. This new, mixed use district includes the restored Enterprise Block, 200,000 SF of new office space, and restaurant and retail area. The residential component includes 250 apartments located within a one-block walk of the Brockton Commuter Rail Station.

Project Team Manager, **Fulton School Residences**, Weymouth (MA): Adaptive reuse of 1928 historic school with new construction, 63 units of affordable senior housing.

Project Manager, **110 Canal**, Lowell (MA): Renovation of the historic Freudenberg Nonwovens mill building renovation into modernized commercial space, a key piece in the city's \$800M Hamilton Canal District revitalization project.

Architectural Designer, **Olmsted Green**, Boston (MA): Design development / construction documentation for the design of 520 units of new mixed-income housing on the former Boston State Hospital Site. Focused on bathroom, kitchen, and unit interior compliance with MAAB and FHA.

Project Manager, **MSBA's Green and Accelerated Repair Program**: 26 different projects across 11 districts, 19 schools. Sustainable energy saving measures that include mechanical system upgrades, window and door replacement, roof and insulation repairs. All projects incorporate principles and standards of sustainable design ranging from \$400k to \$2M in construction cost.

Project Team Manager, **Emerson College Atrium**, Boston (MA): Design of an infill project for the existing light well in Emerson College's Walker Building.

Project Team Manager, **Vine Street Community Center**, Boston (MA): Rehabilitation and adaptive reuse of a 26,000 SF historic masonry structure resulted in a modern community center.

THE KEITH TEAM

Executive Team

From the top down, we recognize what it takes to build out a project successfully. With over 100 years of construction leadership experience, this executive team helps drive a building program integrated with the client's goals and strategy.

John W. Keith President and Partner

John W. Keith has over 45 years' experience in the development and general contracting fields of construction. He has vast knowledge in dealing with state funding organizations and programs, Tax Credits, HUD, and other related organizations. This knowledge and his experience in not only being a successful developer but in dealing with some of the most successful developers in the region makes Mr. Keith a valuable and competent professional in any development or construction team. John W. Keith is also the founder of Keith Properties Inc., a property management company with over 1500 units under management.

Timothy E. Forde Vice President and Partner

Tim Forde is Vice President of all construction operations and Partner. Tim has over 35 years' experience in the construction industry. Tim was one of the key team members in Mr. Keith's Central Street Construction prior to partnering to create Keith Construction. Tim is the executive leader in charge of both project management and field operations for Keith Construction. He has the uncanny ability to quickly understand and help deal with any situation, whether simple or complex.

Vanessa Aguiar Controller

Vanessa started full-time with Keith Construction in 2013 as a Contract Administrator after working part-time at KCI during her final year of college. She graduated with a BS in Accounting and a minor in Legal Studies from Bryant University. Between her internship in construction accounting at a local accounting firm and her accounting experience as the Office Manager for a landscaping/demo company, Vanessa brings extensive experience in administration and project accounting to her current role.



Douglas J. Kelleher

Principal / Historic Preservation Specialist

EDUCATION

Certificate, "Development Permitting in Boston," Massachusetts Continuing Legal Education

Certificate, "Green Strategies for Historic Buildings," National Preservation Institute (NPI)

Certificate "Sec. of the Interior's Standards for the Rehabilitation of Historic Properties," NPI

Certificate "Issues in Federal Cultural Resource Compliance," NPI, Alexandria, VA

B.S., Historic Preservation Planning, Roger Williams College

London Preservation Studies Program, Roger Williams College

PROFESSIONAL MEMBERSHIPS

Board of Directors, Preservation

Massachusetts

Salem Historical Commission, past member

National Trust for Historic Preservation

Essex National Heritage Commission

Boston Preservation Alliance

Historic New England

Historic Salem, Inc.

Boston Athenaeum

Historic Boston, Inc.

Society of Architectural Historians

Mr. Kelleher has more than 27 years of professional experience in historic preservation planning, cultural resource management, historic tax credits and architectural design review. At Epsilon, Mr. Kelleher is a Principal of the firm and Manages Epsilon's team of highly respected Historic Preservation professionals. He assists clients with strategic consulting for compliance with local, state, and federal historic preservation regulations. Mr. Kelleher provides assistance to clients in meeting regulatory requirements through consultation with state and federal agencies and the preparation of environmental impact assessments and documentation, and Chapter 254, Section 106, and Section 4(f) evaluations.

Mr. Kelleher has an expertise in state and federal historic rehabilitation tax credits. He provides guidance to developers and architects on the appropriate adaptive reuse and redevelopment of historic buildings in order to comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties. His background meets the Secretary of the Interior's Qualifications as a Historic Preservation Consultant.

Prior to joining Epsilon in 2005, Mr. Kelleher was a Senior Preservation Planner with a large engineering consulting firm where he was responsible for establishing a cultural resources compliance practice. Mr. Kelleher's background also includes nearly six years as a Preservation Planner with the Massachusetts Historical Commission.

PROFESSIONAL EXPERIENCE***Select list of State and Federal Historic Tax Credit Projects***

- ◆ *Central Grammar Apartments, Gloucester, MA.* Project Manager for the preparation of State and Federal Historic Tax Credit Applications for the substantial rehabilitation of an 1889 / 1922 former grammar school building for 80 units of the affordable elderly housing. The project included masonry repairs, mechanical system upgrades and the installation of historically appropriate replacement windows.
- ◆ *Chapin School, Chicopee, MA.* Project Manager for the preparation of State and Federal Historic Tax Credit Applications and a National Register of Historic Places nomination for the late 19th / early 20th century Chapin School as part of its conversion to housing for formerly homeless veterans.
- ◆ *Bowdoin Manor, Beacon Hill, Boston, MA.* Project Manager for the preparation of State and Federal Historic Tax Credit Applications for the rehabilitation of two early 20th century masonry buildings located on Boston's Beacon Hill for use as 120 single room occupancy residences. Responsibilities also included preparing an MHC Project Notification Form and securing design review approvals from the Beacon Hill Architectural Commission.
- ◆ *Jewett Piano Case Factory, Leominster, MA.* Project Manager responsible for overseeing the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for the conversion of a vacant, late 19th century, wood frame, piano case factory building to 41 units of affordable elderly housing.
- ◆ *J.P. Friend & Company Box Factory, Beverly, MA.* Project Manager for the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for an 1896 brick, former box factory converted to single room occupancy residential units for formerly homeless veterans.
- ◆ *Parkhill Mill, Fitchburg, MA.* Prepared necessary research and historic documentation to obtain a determination of National Register eligibility from the Massachusetts Historical Commission and the National Park Service in order for the late 19th century textile mill undergoing conversion to affordable elderly housing to qualify for state and federal historic rehabilitation tax credits.
- ◆ *New Home Sewing Machine Company, Orange, MA.* Project Manager for the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for the conversion of late 19th century industrial buildings to 60 units of new affordable elderly housing.
- ◆ *Livingston School, Albany, NY.* Project Manager responsible for overseeing the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for the conversion of a former 1932 school to 103 units of affordable housing.



CONTACT

Paul E. Bouton
Partner

Boston
Exchange Place
53 State Street
Boston, MA 02109-2835
Phone: 617-345-1240

Fax: 866-947-1841
pbouton@nixonpeabody.com

SERVICES

Real Estate

Real Estate & Community
Development

Affordable Housing

Community Development
Finance

EDUCATION

Boston College Law School,
J.D.

University of Connecticut,
M.B.A.

University of
Massachusetts, B.B.A.

ADMISSIONS

Massachusetts

PAUL E. BOUTON

Paul Bouton is a partner in Nixon Peabody's Affordable Housing group. He represents affordable housing developers in the development and preservation of affordable housing, primarily in Massachusetts.

What do you focus on?

I focus my practice on all aspects of affordable housing finance and development. I have represented owners and developers in the production and preservation of tens of thousands of affordable housing apartment units.

As part of my work in affordable housing finance, I have gained significant experience in structuring and documenting partnership arrangements between developers, owners, investors and others involved in affordable housing development.

I have developed legislative experience as well, as I helped write and implement two Massachusetts state laws relating to affordable housing preservation and development, specifically the Massachusetts state low-income housing tax credit program and the Massachusetts affordable housing preservation law (40T).

What do you see on the horizon?

The scarcity of resources to develop and preserve affordable housing will continue to be an issue. In order to compete for these resources, clients must put together an excellent project team and demonstrate that the proposed projects are well conceived and ready to proceed.

Representative Experience

- Several owners/developers in the acquisition, financing and rehabilitation of a number of existing multifamily affordable housing developments.
- The owner in the acquisition and financing of a historic building and conversion into affordable housing. The financing included federal and state low-income housing and historic tax credits.
- An owner in the acquisition and financing of a scattered site affordable housing development in Boston, acquired in a Bankruptcy Court Section 363 sale.
- The owner in the refinancing of a 508-unit luxury apartment complex in Boston.
- An owner in the recapitalization of a 967-unit affordable apartment complex in Hyde Park, Massachusetts.
- A developer in the financing of a 100-unit 40R development in Lakeville, Massachusetts.
- A purchaser in the acquisition and development of property in Danvers and Peabody, Massachusetts, which was the subject of significant environmental contamination.
- A joint venture between Edward Fish and Arthur Winn in connection with the redevelopment of Mission Main, a public housing development in Boston, Massachusetts.



CONTACT

Ruth H. Silman
Partner
Office Managing Partner,
Boston

Boston

Exchange Place
53 State Street
Boston, MA 02109-2835
Phone: 617-345-6062
Fax: 866-947-1897
rsilman@nixonpeabody.com

SERVICES

Environmental
Energy
Real Estate
Real Estate & Community
Development
Climate Change
Environmental Permitting
& Compliance
Siting & Permitting
Energy Project Permitting
Renewable Energy
Brownfields
Redevelopment
Energy Regulation
Food, Beverage &
Agriculture

EDUCATION

Boston University School of
Law, J.D.
Cornell University, B.A.

RUTH H. SILMAN

Ruth Silman concentrates her practice on complex land use, environmental and energy matters. She leads Nixon Peabody's Climate Change team, an interdisciplinary group of lawyers and environmental specialists focused on meeting the challenges and seizing the opportunities emerging from legislative, regulatory and judicial actions related to climate change. Ruth is also the Managing Partner of the Boston Office.

What do you focus on?

I love the depth and breadth of my practice because there is always a new issue or development.

Siting and Permitting

I work with clients to obtain zoning, land use and environmental permits and approvals for their projects. My clients include real estate developers, renewable energy developers, manufacturers, business owners, investors, private landowners and municipalities.

Regulatory Compliance

I help clients navigate through environmental and energy regulations to comply with existing rules, prepare for future provisions and understand evolving issues. One of my specialties is the Clean Air Act; currently, I am working with a number of manufacturing clients facing permitting and enforcement matters.

Climate Change and Sustainability

I represent companies who are impacted by climate change and climate change policy. We collaborate on how to face the new realities posed by climate change, as well as how to implement sustainable practices to prevent further impacts to the environment. I am working with a large



ADMISSIONS

Massachusetts

Rhode Island

U.S. District Court, District
of Massachusetts

beverage client on reducing water impacts and water conservation measures.

What do you see on the horizon?

I see the need to address environmental, energy and sustainability issues in a holistic fashion to help my clients implement processes that work for their growing businesses.

Recognition

Ruth has been selected by her peers for inclusion in *The Best Lawyers in America*© 2019 in the field of Environmental Law. She has been listed in *Best Lawyers in America* since 2011.

Ruth has also been recognized for exceptional standing in the legal community in *Chambers USA: America's Leading Lawyers for Business 2018* for Environment (Massachusetts). She has also been recognized in *Chambers USA* in previous years.

Ruth was nominated by her peers as a leading practitioner in *The International Who's Who of Environmental Lawyers 2013*.

Affiliations

Ruth is a member of the Boston Bar Association (former co-chair of the Environmental Law Section), the Environmental Business Council of New England (board member and chairman of the Climate Change and Air Quality Committee), the Air and Waste Management Association (former board member of New England Section), the Real Estate Bar Association, and the American Bar Association (Environment and Natural Resources Section). In her community of Harvard, Massachusetts, Ruth serves on the Board of the Virginia Thurston Healing Garden which provides integrative therapies to cancer patients and their families.

KATE FRANCO

CHIEF EXECUTIVE OFFICER | kfranco@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Chief Executive Officer | November 2011 – Present

- Responsible for all aspects of the Company, which includes more than 7,600+ units of housing in four states and more than \$1 billion in assets.
- Develops and implements vision and guidance of the Company.
- Manages day-to-day operations and resources.
- Oversees all financial matters, including the development of long- and short-term financial objectives.
- Pursue avenues for new business and expansion in market-rate and affordable housing sectors.
- Ensures compliance with all federal, state and local laws.
- Fosters and promotes a culture of exceptional client resources, service delivery and employee engagement for 270+ Team members.

MB MANAGEMENT COMPANY | Braintree, MA

Chief Operating Officer/Partner | 1990 – November 2011

Began as a Senior Property Manager in 1990, promoted to the Director of Marketing and Business Development in 2002, Promoted in 2006 to the Director of Property Management/Partner, and became Chief Operating Officer and Partner in January 2010 with responsibility for all operations.

- Provided oversight and guidance to Directors, Asset Managers, executive staff and departments.
- Established field offices to grow the Company through new business.
- Created and implemented a business plan to make MBMC a leading third-party property management and housing consulting company.

CLAREMONT MANAGEMENT COMPANY/BEACON MANAGEMENT COMPANY | Boston, MA

Various Positions | 1980 – 1990

PROFESSIONAL AFFILIATIONS

- Massachusetts Apartment Association, Past President
- Institute of Real Estate Management, Boston Chapter #4, Past President
- Granite State Managers Association, Past President
- NE Affordable Housing Management Association, Director Emeritus and Past President
- Greater Boston Real Estate Board, Legislative Chairwomen
- National Affordable Housing Management Association, Member
- National Association of Realtors, Member
- National Association of Housing Cooperatives, Member
- Citizens Housing And Planning Association, Member
- New Lease, Board Member
- Real Estate Broker – Connecticut, Massachusetts, and New York
- Notary, State of Massachusetts
- Certified Property Manager (CPM), Accredited Resident Manager (ARM), Certified Assisted Housing Manager (AHM), Housing Credit Certified Professional (HCCP), National Affordable Housing Professional-Executive (NAHP-Executive), Specialist in Housing Credit Management (SHCM), Site Compliance Specialist (SCS)



ADAM AMEDEN

CHIEF FINANCIAL OFFICER | aameden@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Chief Financial Officer | February 2013 – Present

- Directs and oversees all aspects of the finance and accounting functions.
- Provides leadership in development of short- and long-term financial objectives.
- Evaluates impact of long-rang plans, introduction of new programs/strategies and regulatory actions; in general, evaluates financial implications of business activities and makes recommendations regarding ways to enhance financial performance and business opportunities.
- Manages processes for financial forecasting, budgets and consolidation and reporting to the Chief Executive Officer and owners.
- Ensures effective internal controls are in place for compliance with GAAP, applicable federal, state and local laws and rules for financial tax reporting.
- Oversees and coordinates accounting software, upgrades and training.

BARKAN MANAGEMENT COMPANY | Boston, MA

Chief Financial Officer | 2004 – February 2013

Began as Controller in 1999 before becoming Vice President of Accounting in 2000 and Chief Financial Officer in 2004.

- Responsible for oversight of finance, accounting and information technology departments.
- Portfolio included 20,000 apartments with 3,000 regulated by LIHTC and/or HUD. The department produced more than 150 financial reports monthly, processed more than 9,000 vendor invoices, and recorded more than 14,000 charges and receipts for 14,000 condominiums.
- Communicated with regulatory agencies in four states regarding financial transactions.
- Oversaw annual audits of over 150 client financial statements.

SAUNDERS REAL ESTATE CORPORATION | Boston, MA

Controller | 1993 – 1999

EDUCATION

- Bentley College | Bachelor of Science, Accounting

PROFESSIONAL ACCREDITATIONS

Licensed CPA; AICPA; MSCPA; Chartered Global Management Accountant



Maribel Concepcion, Chief Operating Officer

**Education: Management Major, Roger Williams University
Associate's degree, Criminal Justice Major, New England Institute of Rhode Island, 2013**

Trinity Management, LLC

February 2020 - Present

Chief Operating Officer

Boston, MA

TRINITY MANAGEMENT, LLC

March 2015— January 2020

Regional Director

Boston, MA

- Responsible for a portfolio of 18 mixed-income and financial properties.
- Conduct management reviews of Property Managers to ensure compliance with company policies and procedures, including federal and state laws affecting property management, personnel and safety.
- Review monthly financial statements and supervise preparation of annual operation budgets.
- Communicate directly with investors, owners, regulatory agents with regard to financial reporting and property inspections. Coordinate and assist with public relations, resident groups and special events.
- Conduct physical site inspections to monitor upkeep and required repairs. Ensure compliance with Minimum Housing Quality and REAC standards. Ensure compliance with required record-keeping of physical inspections, work orders, warranty information, inventory, etc.
- Ensure property preparation and submittal of all required reports. Assist Property Managers with marketing. Leasing and overall daily operations and provide on-going training for all site personnel.
- Foster positive customer and resident experiences.

NATIONAL INVESTMENTS, LTD

Feb. 2014-Feb. 2015

Director of Property Management

Johnston, RI

- Report directly to President/Owner of 10 affordable properties in RI; Ability to work and make decisions under pressure and with the unexpected required.
- Prepared annual budgets and capital expenditures
- Foster and maintain strong working relationships with staff and with vendors/contractors
- Work with Property Managers and Facilities Manager to maximize portfolio value and reduce costs.

Oct. 2011-Jan. 2014

Assistant to Director of Property Management

DONALD W. WYATT DETENTION FACILITY

Jan. 2011-Oct. 2011

Correctional Officer

Central Falls, RI

PROPERTY ADVISORY GROUP

July 2009-Jan. 2011

Property Manager

Providence, RI

PROFESSIONAL DESIGNATIONS and CERTIFICATIONS

Institute of Real Estate Management (IREM), Certified Property Manager (CPM);

Accredited Residential Manager (ARM)

National Affordable Housing Management Association (NAHMA), Certified Professional of Occupancy (CPO);

National Affordable Housing Professional Executive (NAHP-e); Fair Housing Compliance

Spectrum Enterprises, Inc., Specialist in Housing Credit Management (SCHM); Certified Credit Compliance Professional (C3P)



4. EVIDENCE OF RESPONDENTS ABLITY TO OBTAIN FINANCING

The developer and the team have a strong track record of completing projects like the redevelopment of the Baldwinville School property as evidenced in Section 5 and Section B Appendix 1 of this RFP response. The team has relationships with the state and federal funding agencies that will provide financial resources for this project as well as private debt and equity providers. As requested, a letter from the Developer’s primary lending institution has been attached to this section showing availability of resources and “good standing.”

Developer Financial References:

MassHousing
Attn: Max Glickman
One Beacon Street
Boston, MA 02108-3110
Phone: 617.854.1394
Email: mglikman@masshousing.com

The Life Initiative
Attn: Michael Gondek
420 Boylston Street
Boston, MA 02116
Phone: 617-536-2850
Email: mgondek@masscapital.com



March 24, 2020

Regarding:

MATHIEU ZAHLER
313 ELIOT ST
MILTON, MA 02186-2216

This letter is being provided upon the customer's request, and serves as confirmation on the Personal and Business accounts for our client. As of 3/24/2020 our client Mathieu Zahler currently has combined balances of over \$100,000 with Santander and is in good standing with the bank.

If you have any further questions regarding this relationship please feel free to reach out to me.

Respectfully yours,

A handwritten signature in black ink, appearing to read "Fritz Etienne", written over a horizontal line.

Fritz Etienne
One Beacon Branch Manager
Santander Bank, N.A.
617-227-2473
Fritz.etienne@santander.us

5. DESCRIPTIONS/LOCATIONS OF SIMILAR PROJECTS DEVELOPED BY THE RESPONDENT

The following three projects represent what MPZ believes to have similar elements to the Baldwinville site. These projects are a mix of historic rehabilitation and new construction and all had/have complicated permitting, affordability and financing requirements.

Developer's Project References:

Project – McElwain School

Reference: Michael Dutton, Town Manager
Town of Bridgewater
66 Central Square
Bridgewater, MA 02324
Phone: 508-659-1235
Email: mdutton@bridgewaterma.org
<https://www.bridgewaterma.org/194/Town-Manager>

Project – 10 Stonley Road

Reference: Jonathan Greeley, Director of Development Review
Boston Planning and Development Agency
One City Hall, Ninth Floor
Boston, MA 02201
Phone: 617-918-4486
Email: jonathan.greeley@boston.gov
<http://www.bostonplans.org/about-us/leadership>

Project – Randolph Houses

Reference: Lamar Fenton, Deputy Director of Underwriting and Asset Management
New York City Housing Authority
250 Broadway
New York, NY, 10007
Phone: 212-306-4024
Email: lamar.fenton@nycha.nyc.gov
<http://www.nycha.nyc.gov>

McElwain School Apartments, Bridgewater, MA

Type: Mixed-Income Rental, Historic Preservation/New Construction

Total Development Cost: Approximately \$26.8 Million

Total Units: 57

Projected Completion: 2023



Proposed



Existing

MPZ Development LLC and Capstone Communities Development LLC plan to create a mixed-income housing development through the renovation of the historic but long-vacant McElwain School, to provide 16 units, and the construction of 38 new units on the balance of the property. The project also includes renovation of the three-family house and barn on the adjacent property, which have been separately acquired, for an additional three units and maintenance workspace.

To be collectively known as McElwain School Apartments, the development will provide a mix of one-, two- and three-bedroom apartments affordable to individuals and families whose incomes range from 30 percent to 60 percent of area median income as well as six market rate units.

Designs for the adaptation of the schoolhouse for residential use will follow the Secretary of the Interior's Standards for Rehabilitation. Federal and state historic tax credits are expected to make possible the preservation of the building's architectural integrity, including installation of historically accurate windows and cleaning and repointing of the exterior masonry. The dramatic staircases and other interior common area elements typical of such school buildings will also be refurbished.

A three-story elevator building at the back of the three-acre site will be designed to complement its historic neighbor and to fit with the surrounding single-family homes and nearby apartment communities. The adjacent three-family house will be renovated, and a maintenance building will be created in the barn, maintaining the architectural character of the existing 1880 structures. The developers were the successful bidders for the c. 1910 school property in an extensive Chapter 30B disposition process for surplus property with the Town of Bridgewater. Project financing will be through tax credits, state and federal housing funds, and private sources.

Currently in the pre-development stage, the project has completed the permitting process and is actively seeking financing. Projected completion is projected for 2023.

10 Stonley Road, Jamaica Plain, MA

Type: Mixed-Income Rental

Total Development Cost: Approximately \$17 Million

Total Units: 45

Projected Completion: 2022



The 10 Stonley Road Site includes the parcels of land located at 35 Brookley Road, 95 Stedman Road, and 51 Stedman Road, which collectively comprise approximately 16,290 square feet (0.37 acre) of land. The site is improved with a single-story light industrial cinder block building built in approximately 1950 and currently is owned and operated by a petroleum company.

The site is located within approximately one-half mile of both the MBTA Green Street and MBTA Forest Hills stations. The Project Site is located a quarter mile from Franklin Park and three-quarters of a mile from Arnold Arboretum, and also has access to several nearby neighborhood parks.

The project will construct a new four (4)-story residential building totaling approximately 39,858 gross square feet which includes forty-five (45) residential units and nineteen (19) ground-floor parking spaces accessed and egressed at Stanley Road. The parking program includes two accessible spaces, one of which is van accessible. The proposed unit mix includes five (5) ground-floor one-bedroom Artist Live/Work Units (all of which will be offered as inclusionary Development Policy ("IDP") Units), nine (9) studio units, twenty-three (23) one-bedroom units, seven (7) two-bedroom units, and one (1) three-bedroom unit. Resident amenity spaces, such as a ground floor gym, internal bike storage for thirty-eight (38) bikes, partially covered bike storage for eighteen (18) bikes, postal/package storage room, and fourth floor common area with an accessible bathroom including balcony and deck. In addition, ground floor landscape improvements, new sidewalk, and streetscape improvements (new curb and sidewalks) on all three street facing sides are also included as part of the redevelopment.

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

A. Philip Randolph Houses, Harlem, NY

Type: Mixed Income

Total Development Cost: \$146 Million

Units: 283

Completed: Phase I - 2016, Phase II - Expected 2018



Building image provided by Trinity Financial Inc.

While this project was not located in the Commonwealth, there are many aspects of the development which are relevant to the project example requirements of the RFQ and is notable as the first public-private partnership entered into by the New York City Housing Authority.

The Randolph Houses project contains 36 five-story Old Law tenement buildings, 14 of which are on the north side of the street (collectively, the “North Side”) and 22 on the south side of the street (collectively, the “South Side”), and together comprise the Public Housing development known as “Randolph Houses.” This project involves the historic rehabilitation of the existing structures into two sets of interconnected and fully handicapped accessible buildings. The building facades have been restored and the interior of the building has been completely demolished and rehabilitated. This 2-phased project was financed through the Department of Housing and Urban Development (HUD) mixed finance and Low Income Housing Tax Credit (LIHTC) programs.

The redevelopment of the South Side included a \$95 million gut-rehabilitation of 307 vacant units in the 22 old law tenement buildings on the south side of the street. The new project contains 168 units in what are now two interconnected buildings with central circulation and elevator access. The newly reconfigured units are a mix of Studio, 1, 2, 3 and 4-bedroom apartments designed to accommodate family living. The rehabilitated buildings contain community space, a teaching kitchen, computer lab, fitness room and storage for residents. There are also site improvements which include two children’s play areas for different age groups and active and passive outdoor spaces for residents to enjoy.

The \$51 million North Side (Phase 2) includes the gut-rehabilitation of 14 historic Old Law tenement buildings on the north side of the street. The renovation will result in 115 rehabilitated units in what will become one building with central circulation and elevator access. This project contains a mix of studio, 1, 2, 3 and 4-bedroom units and has a similar amenity package to the South Side project, with some amenities shared between the two phases.

Additional project information can be found in Section B Appendix 1

6. A SIGNED “PROPOSAL RESPONSE FORM”

Included in Section B, Appendix 2

7. RESPONDENT’S INTENDED USE OF THE PROPERTY

Introduction

MPZ Development LLC (MPZ) intends to acquire 16 School Street in Templeton, MA and construct a housing development in the existing historic building and a new construction building on the balance of the currently vacant 1.47+/- acre lot (“the site”). The resulting residential community, Baldwinville School Apartments, will consist of a total of 50 rental apartment homes with a variety of unit sizes – 1-br, 2-br and 3-br units – and affordable to individuals and families earning a range of incomes – 30%- 60% area median income for the tax credit units and market incomes. MPZ Development LLC (www.mpzdevelopment.com) (“MPZ”) is a Milton based development firm with significant expertise developing, market, mixed-income, affordable and historic type projects. MPZ has undertaken many site acquisitions, permitting exercises, construction of buildings and overseen leasing and marketing for many similar properties.

The site has a unique history and as part of a larger historic district, the follow is excerpted from Wikipedia to offer some context:

“The Baldwinville Village Historic District encompasses the historic elements of the village of Baldwinville, a 19th-century mill village in northern Templeton, Massachusetts. Although its industrial elements have largely been lost, the district retains period housing and civic buildings. It was listed on the National Register of Historic Places in 1986.

The town of Templeton was settled beginning in the 1750s and was incorporated in 1761. The northern part of the town remained sparsely settled, although a bridge was built across the Otter River in what is now Baldwinville in 1763, adjacent to an early saw and grist mill. The district's oldest surviving building is the 1797 residence of Eden Baldwin, owner of local lumber and brick yards, at the junction of Maple Street and Baldwinville Road on the south side of the river. In 1805 a turnpike was opened to the bridge from Royalston, which helped the area develop into a small village by 1830, when it was formally named Baldwinville. Although none of the mill buildings survive, Greek Revival houses in the district date to this phase of development. Development was further spurred by the arrival of railroads in 1847 and 1872, and it became the principal economic center of the town, focused primarily on the manufacture of chairs. During the height of the village's prosperity in the late 19th century, fine Queen Anne and Stick style houses were built. The area's industries were regularly impacted by floods and fire, and the Great New England Hurricane of 1938 destroyed or damaged most of its remaining industrial buildings.

The historic district is roughly linear in shape, extending along Elm Street north of the river and Baldwinville Road south of the river. Its northern boundary is roughly Mason Street, while its southern boundary is roughly Mountain View Street. The district bulges on the north side of the

river, where the village's commercial center is located, extending west along Pleasant and Memorial Streets, and east along Circle and Central Streets.”

The site presents an opportunity for the parcel to continue to fulfill its original obligation to be an asset to the community and preserve the history of the existing building. The site, being within walking distance to other community-serving businesses, this location is primed for residential development. Given the high ongoing demand for housing that is affordable to local employees and residents, this project will provide 50 households with access to housing that is desirable and of high-quality.

The Neighborhood

The proposed development is located adjacent to route 202 and approximately three miles from Route 2, in the historic district of Baldwinville in Templeton, MA. The site is proximate to retailers and commercial properties that are located in Baldwinville Center including, restaurants and neighborhood retail stores. There are a number of single-family homes surrounding the site in addition to the larger apartment type buildings abutting the site, including another historic building that was converted into housing some time ago. Much of the housing stock in the neighborhood is older with median year built being 1961. Vacancy rates in the submarket are extremely low partly due to the lack of new housing production. A large portion of the population – approximately 71.6% - are homeowners, which represents an underserved need for additional rental housing where only 28.4% of families rent.

Proposal Detail

Overview

The recently unoccupied site is no longer contributing to the vibrancy of the surrounding neighborhood (the school was closed in late 2019). This proposal looks to take an historic asset, rehabilitate and then enhance it by adding a newly constructed three-story residential building with open space and parking across the balance of the site. The benefits of an historic rehabilitation and new construction are multi-layered:

- 1) An historic building with great meaning to the town will be preserved;
- 2) There will once again be activity on the now vacant and blighted site;
- 3) The proposal will provide housing opportunities to those making \$18,630 per year up to \$66,000 (depending on unit type and household size), which, according to the 2010 US Census, would include approximately 8,013 households currently living in Templeton;
- 4) The proposal will be a source of significant new revenues for the Town and;
- 5) This investment will create the opportunity to spur additional investments along the Route 2/Baldwinville corridor as the introduction of new households will generate additional economic activity.

The new housing will be of high-quality and will offer an enticing option to those already living in and around the neighborhood, to those who can no longer afford to live in the neighborhood, and to those individuals and families from outside the area.

Existing Conditions

The lot is 1.47+/- acres and is currently home to the vacant and blighted Baldwinville School, the balance of the site is paved with asphalt in poor condition. Large trees line the perimeter of the parcel. The parcel is located in the Village District (V) zoning district. The abutting parcels are improved with single and multi-family residences.

It is understood that parcel numbers 383, 384, 385 and a portion of 407 are included with the RFP. To maximize the efficiency of the site the developer may look to acquire additional adjacent parcels but those are not included in the proposal at this time. The redevelopment would also look to utilize the municipal parking spaces along school street as part of its proposal. This could be accomplished by way of a shared-use agreement.



Aerial View (parcel outlined in red)



Historic Street view of 16 School Street.

Historic Rehabilitation:

The Baldwinville School Apartments will be an adaptive reuse development designed in accordance with the Secretary of the Interior's Standards for Rehabilitation. The development team anticipates utilizing federal and state historic tax credits that will enable it to preserve the building's historical integrity. Construction will include an exterior restoration consisting of the installation of historically accurate large windows, the repointing and cleaning of the exterior masonry, and the interior rehabilitation and restoration of the architecturally significant stairwells and other common area elements.

Proposed Unit Mix

The full scope of the redevelopment of the Baldwinville School Site will consist of 50 apartment homes, including sixteen (16) or 35% one-bedroom units and twenty-nine (29) or 65% two-bedroom units and five (5) or 10% three-bedroom units. Units will range in size from approximately 600 sf to 950sf. There will be 16 units within the rehabilitated Baldwinville School, and it will be predominantly be 2-bedroom units. The second building will contain 34 units of new construction and will be built in a 3-story elevator type building at the back of the site. Collectively the two buildings offer a diverse unit mix which meets State funding requirements.

The two buildings will look to bring a range of income mixes to the Templeton market. The buildings will be targeted to families making between 30-60% of the AMI (household incomes up to \$18,630-\$66,000 depending on household size) as well as market units. To the extent permitted by funding resources, 70% of the units will be given preference to current Templeton residents, municipal/school department employees, and employees of local businesses. This income mix provides housing that is affordable to families and individuals earning a range of incomes. The immediate market area shows very strong demand for this unit mix as occupancy rates are between 96-100% and little to no new or substantially rehabilitated housing stock.

Market Demand

Affordable and mixed-income rental housing is in short supply and is projected to continue to increase in demand over the next few years. According to the Town of Templeton's 2017 Master Plan the following goals are stated as it relates to housing and historic preservation:

Ensure that Housing Opportunities are Available for a Broad Range of Income Levels and Household Types including Affordability, Homeownership, and Condition of the Housing Stock while Maintaining the Town's Community Character.

Preserve the town's historic fabric and protect the quality of our natural resources, to ensure a vibrant, diverse, sustainable community.

The proposal to preserve the historic school and create 50 new apartments in Baldwinville Village that will help to provide new housing to many who live in Templeton but can barely afford Templeton's housing costs or to those who work in Templeton but currently cannot

afford Templeton's increasingly high rents. All of this will be accomplished while maintaining the natural fabric of the community and will meet market demand.

Parking & Traffic

The proposed development will provide approximately 86 parking spaces at grade with driveway access off School Street on the west side of the lot. The development team would look to partner with the town and arrange for a shared use parking in the existing 16 parking spaces along School Street. Given that the previous use was a school building with student, bus traffic and faculty/staff parking the proposed residential use will have much lower traffic volumes and parking needs. During the due diligence process, we will further evaluate the parking and traffic needs of the site.

Community Process

It is essential that the community and surrounding abutters stay informed as it relates to the rehabilitation plan for the Baldwinville School site. As noted in the development schedule in Section 8 of this response, it is MPZ's intention to hold at least three community meetings to receive input and to ensure the neighborhood is informed about the redevelopment plan for the site.

Design

Overview

The design of the Baldwinville Site is intended to be well integrated into the existing School Street neighborhood. The street-facing facade will be that of the renovated and rehabilitated Baldwinville School will be well lit and restored to its former grandeur. The new construction at the rear will include a combination of materials that allow the building to stand on its own but also incorporate materials from the surround neighborhood, with large windows to allow for ample natural light into the apartments. The massing of the buildings will be similar to each other. The site improvements will include landscaping and enhanced parking and circulation. The site entry will also be adjusted to better meet the needs of the redevelopment and will include an enhanced streetscape to meet the town standards along School Street. Detailed plans, a site plan and rendering have been included in Section 9 of this response.

New Proposed Site Plan



Rendering of New Building



Property Management

It is envisioned that a 3rd party property management company will oversee the daily operation of the Baldwinville School Apartments. Included on the team is, Trinity Management Company, based out of Boston and New York. MPZ and Trinity Management have a long-standing relationship as Mathieu Zahler had worked with the development arm of the company prior to starting MPZ and knows the management staff well. Trinity Management is currently bringing a building online in Worcester, MA so it will work well for them to oversee the Baldwinville School Apartments. More information on Trinity Management can be found in Section B of the proposal Appendix 1.

Permitting and Environmental

After review of the Town's zoning code and specifically that of the Baldwinville site, which is understood to be located in the Village Zoning District, MPZ recognizes the multifamily use would be permitted but not without a large number of variances. It is envisioned that the permitting of the Baldwinville site will be accomplished using a friendly comprehensive permit application (LIP is not applicable due to the use of subsidized agency funding). While not currently contemplated in the proposal, the development team is open to further investigating the potential for utilizing a special permit in collaboration with the town's Zoning Board of Appeal's. We do believe that the proposed unit count of approximately 29 units per acre is the most feasible size for this development. We have fully outlined our development schedule and proposed list of permits in Section 8 of this response and we are committed to filing for our permits within 120 days of execution of a Purchase and Sale Agreement.

Our area of greatest concern, as observed in our walkthrough of the building and site on March 12, 2020, is to what degree the Baldwinville School contains asbestos. Additionally, we noticed some site related issues on lot 407 that need to be further evaluated through a Phase I/II Environmental Site Assessment and a geotechnical analysis. If selected, we will undertake an extensive environmental investigation to determine the cost and quantity of these types of materials. Should this cost be material we would look to the Town to work with us to help to mitigate or defer the abatement/remediation costs. If it is determined that there is no economically viable remediation solution, we would reserve the right to exit the transaction and seek the return of all deposits and/or reimbursement of due diligence costs incurred.

Municipal Services

The project will require water and sewer services and would look to connect to the town's existing infrastructure. It is estimated that the usage per bedroom would be approximately 70GPD of water usage and 60GPD of sewer flows, on an annual basis the calculation would be approximately 34,000 cubic feet for water and 29,000 cubic feet for sewer. The required connection fees have been estimated and included in the development budget referenced in at the back of this section of the RFP response. The project will also require gas and electric service connections and the required utility back charges have been carried in the project's budget. A full analysis of the project's municipal service needs including usage flows, storm

water runoff and drainage calculations will be performed through the project's larger permitting process.

Project Financing

The sources and uses of funds are attached to this section of the proposal as well as 5-year cashflows for both buildings. The project will leverage historic tax credit and, low-income housing tax credit equity, and affordable housing resources and private sector debt. In addition, the project is requesting that the Town contribute Community Preservation Act resources in the amount of \$1,173,297 to complete the budget.

As a result of this project, the Town of Templeton will see new tax revenue (detailed in the latter part of this section), a land/building acquisition payment of \$500,000 and permit/connection fees of approximately \$159,000.

A letter of interest is also attached to this section from MassHousing, who would be providing permanent financing and other project resources.



Massachusetts Housing Finance Agency
One Beacon Street, Boston, MA 02108

TEL: 617.854.1000 |
FAX: 617.854.1091 | www.masshousing.com

Videophone: 857.366.4157 or Relay: 711

March 24, 2020

Matt Zahler
MPZ Development LLC
499 Adams Street, #527
Milton, MA 02186

Dear Mr. Zahler:

I am writing to confirm MassHousing's strong interest in working with your team to finance the redevelopment of the Baldwinville Elementary School, a 50-unit development located in Templeton, Massachusetts. You have informed us that you are responding to the Town of Templeton's RFP for the Baldwinville School redevelopment opportunity. We understand that the project will be developed using Federal 9% and State Low-Income Housing Tax Credits, which you will be requesting from DHCD, along with a request for Federal and State Historic Tax Credits, Project-Based Section 8, AHTF, HSF, and HOME.

To the extent this deal is deemed a high priority project by DHCD, we would welcome the opportunity to provide taxable permanent debt financing for this project. MassHousing's current lending terms and assumptions are below:

- Taxable permanent financing: 10-Year Treasury plus 300 basis points, which would translate to a rate of approximately 3.73% this week.
- Mortgage Insurance Premium: 0.25% of the permanent loan amount.
- Application and Financing Fees: 2.3% of the loan amount(s).

We look forward to working with you to structure a financing package that best meets the needs of the development, subject, of course, to the availability of funds, and MassHousing underwriting and approval by MassHousing's Board. We wish you success in obtaining the designation from the Town of Templeton and the funding you are seeking to support this important project, and hope that we will have an opportunity to work with you on the financing for this development.

Sincerely,



On Behalf of Cynthia Lacasse

Cynthia Lacasse
Director of Rental Business Development

Baldwinville School Apartments

Sources Uses

March 31, 2020

		Baldwinville Rehab	Baldwinville New Construction	Total
Unit Rental Count		16	34	50
Building Gross Square Footage		20,862	32,950	53,812
Surface Parking Spaces		22	48	70
Sources		Baldwinville Rehab	Baldwinville New Construction	Total
Taxable Construction Loan		\$ 4,700,000	\$ 6,200,000	\$ 10,900,000
Taxable Repayment		\$ (4,700,000)	\$ (6,200,000)	\$ (10,900,000)
Taxable Permanent Mortgage		\$ 1,083,591	\$ 564,316	\$ 1,647,907
Town of Templeton - CPA		\$ 330,682	\$ 842,615	\$ 1,173,297
Federal LIHTC	9%	\$ 1,474,174	\$ 6,434,666	\$ 7,908,840
AHT		\$ 640,000	\$ 1,360,000	\$ 2,000,000
HSF		\$ 480,000	\$ 1,020,000	\$ 1,500,000
State HOME		\$ 320,000	\$ 680,000	\$ 1,000,000
State Tax Credit Equity	\$700K	\$ 1,520,038	\$ 999,962	\$ 2,520,000
HTC Equity		\$ 1,338,644	\$ -	\$ 1,338,644
SHTC Equity		\$ 1,003,983	\$ -	\$ 1,003,983
Total Sources		\$ 8,191,112	\$ 11,901,559	\$ 20,092,671
Uses				
Land/Building Acquisition	100%	\$ 250,000	\$ 250,000	\$ 500,000
Total Acquisition Costs		\$ 250,000	\$ 250,000	\$ 500,000
Rehab Construction - Includes Environmental	\$250	\$ 5,215,500		\$ 5,215,500
New Housing Construction	\$245	\$ -	\$ 8,072,750	\$ 8,072,750
Bonds	1.0%	\$ 52,155	\$ 80,728	\$ 132,883
Contingency	10%/5%	\$ 526,766	\$ 407,674	\$ 934,439
Total Hard Costs		\$ 5,794,421	\$ 8,561,151	\$ 14,355,572
Architecture	7%	\$ 365,085	\$ 565,093	\$ 930,178
Geo Tech		\$ 25,000	\$ 30,000	\$ 55,000
Environmental		\$ 30,000	\$ 20,000	\$ 50,000
Clerk of the Works		\$ 40,000	\$ 40,000	\$ 80,000
Appraisal / Market Study		\$ 14,000	\$ 14,000	\$ 28,000
Building Permit	1.2%	\$ 62,586	\$ 96,873	\$ 159,459
Water & Sewer Connection		\$ 18,876	\$ 27,381	\$ 46,257
Electric & Gas Backcharges		\$ 30,000	\$ 50,000	\$ 80,000
Survey		\$ 15,000	\$ 15,000	\$ 30,000
Consultants		\$ 15,000	\$ 15,000	\$ 30,000
Historic Consultant		\$ 25,000	\$ -	\$ 25,000
Legal / Title & Recording		\$ 125,000	\$ 180,000	\$ 305,000
Accounting and Cost Certification		\$ 15,000	\$ 50,000	\$ 65,000
Tax Credit/Application Fees	8.5%/3.5%	\$ 5,000	\$ 88,250	\$ 93,250
Financing Fees	2.30%	\$ 108,100	\$ 142,600	\$ 250,700
Insurance & Real Estate Taxes		\$ 50,000	\$ 50,000	\$ 100,000
Marketing		\$ 20,000	\$ 30,000	\$ 50,000
Construction Loan Interest @50% ALOS	4%	\$ 188,000	\$ 248,000	\$ 436,000
Soft Cost Contingency	5.0%	\$ 57,582	\$ 83,110	\$ 140,692
Total Soft Costs		\$ 1,209,230	\$ 1,745,306	\$ 2,954,536
Concessions / Lease Up Reserve		\$ 50,000	\$ 70,000	\$ 120,000
Operating Reserve / Debt Service	9,500	\$ 57,000	\$ 57,000	\$ 114,000
Total Reserves		\$ 107,000	\$ 127,000	\$ 234,000
Developer Fee		\$ 830,462	\$ 1,218,102	\$ 2,048,564
Total Fees		\$ 830,462	\$ 1,218,102	\$ 2,048,564
Total Development Costs		\$ 8,191,112	\$ 11,901,559	\$ 20,092,671
Over/Under		\$ -	\$ 0	\$ 0
TDC Per Unit (less reserves)		\$ 505,257	\$ 350,046	\$ 401,853
Per Square Foot		\$ 393	\$ 361	\$ 373

Baldwinville School Apartments
Rehab - 16 Units
March 20, 2020

INCOME									
	Gross Rent	Utility Allowance	Contract Rent	# Units	Year 1	Year 2	Year 3	Year 4	Year 5
1BR - LIHTC - 60%	\$1,138	\$120	\$828	1	\$ 9,940	\$ 10,238	\$ 10,545	\$ 10,862	\$ 11,188
1BR - LIHTC - 30%	\$569	\$120	\$354	0	\$ -	\$ -	\$ -	\$ -	\$ -
1BR - PBV - 110% FMR	\$1,206	\$120	\$1,242	1	\$ 14,904	\$ 15,351	\$ 15,812	\$ 16,286	\$ 16,775
1BR - Market	\$0	\$0	\$1,664	1	\$ 19,965	\$ 20,863	\$ 21,802	\$ 22,783	\$ 23,809
2BR - LIHTC - 60%	\$1,138	\$170	\$968	7	\$ 81,320	\$ 83,760	\$ 86,273	\$ 88,861	\$ 91,527
2BR - LIHTC - 30%	\$569	\$170	\$399	0	\$ -	\$ -	\$ -	\$ -	\$ -
2BR - PBV - 110% FMR	\$1,206	\$170	\$1,419	1	\$ 17,028	\$ 17,539	\$ 18,065	\$ 18,607	\$ 19,165
2BR - Market	\$0	\$0	\$1,997	1	\$ 23,960	\$ 25,038	\$ 26,165	\$ 27,342	\$ 28,573
3BR - LIHTC - 60%	\$1,315	\$200	\$1,115	3	\$ 40,124	\$ 41,328	\$ 42,568	\$ 43,845	\$ 45,160
3BR - LIHTC - 30%	\$657	\$200	\$457	0	\$ -	\$ -	\$ -	\$ -	\$ -
3BR - PBV - 110% FMR	\$1,518	\$200	\$1,318	0	\$ -	\$ -	\$ -	\$ -	\$ -
3BR - Market	\$0	\$0	\$2,306	1	\$ 27,675	\$ 28,505	\$ 29,360	\$ 30,241	\$ 31,148
					\$ -	\$ -	\$ -	\$ -	\$ -
Total Units				16					
(Less Vacancy Market @ 5%)					\$ (3,580)	\$ (3,720)	\$ (3,866)	\$ (4,018)	\$ (4,176)
(Less Vacancy LIHTC/PBV @ 5%)					\$ (8,166)	\$ (8,411)	\$ (8,663)	\$ (8,923)	\$ (9,191)
Gross Effective Rental Income					\$ 223,171	\$ 230,492	\$ 238,061	\$ 245,886	\$ 253,977
EXPENSES									
Management Fee 5% of EGI				697	\$ 11,159	\$ 11,525	\$ 11,903	\$ 12,294	\$ 12,699
Administrative				2,680	\$ 42,880	\$ 43,738	\$ 44,612	\$ 45,505	\$ 46,415
Maintenance				1,864	\$ 29,824	\$ 30,420	\$ 31,029	\$ 31,649	\$ 32,282
Security				108	\$ 1,728	\$ 1,763	\$ 1,798	\$ 1,834	\$ 1,870
Utilities				1,458	\$ 23,328	\$ 23,795	\$ 24,270	\$ 24,756	\$ 25,251
Replacement Reserve				350	\$ 5,600	\$ 5,712	\$ 5,826	\$ 5,943	\$ 6,062
Taxes & Insurance				2,343	\$ 37,488	\$ 38,238	\$ 39,003	\$ 39,783	\$ 40,578
					\$ 9,500				
Annual Operating Expenses					\$ 152,007	\$ 155,190	\$ 158,441	\$ 161,763	\$ 165,157
Net Operating Income					\$ 71,164	\$ 75,302	\$ 79,619	\$ 84,123	\$ 88,820
1st Mortgage Debt Service					\$ (54,747)	\$ (54,747)	\$ (54,747)	\$ (54,747)	\$ (54,747)
Cash Flow					\$ 16,418	\$ 20,556	\$ 24,873	\$ 29,376	\$ 34,073
I/E Ratio					1.30	1.38	1.45	1.54	1.62

ASSUMPTIONS		
Vacancy rate LIHTC/PBV		5.0%
Vacancy rate Market		5.0%
Replacement Reserve		5.0%
Income trending		3.0%
CAP Rate @ exit		4.5%
Expenses trending		2.0%

Baldwinville School Apartments
New Construction - 34 Units
March 20, 2020

INCOME									
	Gross Rent	Utility Allowance	Contract Rent	# Units	Year 1	Year 2	Year 3	Year 4	Year 5
1BR - LIHTC - 60% AMI	\$948	\$120	\$828	11	\$ 109,341	\$ 112,621	\$ 115,999	\$ 119,479	\$ 123,064
1BR - LIHTC - 30% AMI	\$474	\$120	\$354	0	\$ -	\$ -	\$ -	\$ -	\$ -
1BR - PBV - 110% FMR	\$915	\$120	\$795	2	\$ 19,085	\$ 19,657	\$ 20,247	\$ 20,854	\$ 21,480
2BR - LIHTC - 60% AMI	\$1,138	\$170	\$968	17	\$ 197,492	\$ 203,417	\$ 209,520	\$ 215,805	\$ 222,279
2BR - LIHTC - 30% AMI	\$569	\$170	\$399	0	\$ -	\$ -	\$ -	\$ -	\$ -
2BR - PBV - 100% of FMR	\$1,206	\$170	\$1,036	3	\$ 37,282	\$ 38,400	\$ 39,552	\$ 40,739	\$ 41,961
3BR - LIHTC - 60% AMI	\$1,315	\$200	\$1,115	0	\$ -	\$ -	\$ -	\$ -	\$ -
3BR - LIHTC - 30% AMI	\$657	\$200	\$457	0	\$ -	\$ -	\$ -	\$ -	\$ -
3BR - PBV - 110% FMR	\$1,518	\$200	\$1,318	1	\$ 15,816	\$ 16,290	\$ 16,779	\$ 17,283	\$ 17,801
					\$ -	\$ -	\$ -	\$ -	\$ -
Total Units				34					
(Less Vacancy LIHTC/PBV @ 5%)					\$ (18,951)	\$ (19,519)	\$ (20,105)	\$ (20,708)	\$ (21,329)
Gross Effective Rental Income					\$ 360,065	\$ 370,867	\$ 381,993	\$ 393,452	\$ 405,256

EXPENSES									
Management Fee 5% of EGI				530	\$ 18,003	\$ 18,543	\$ 19,100	\$ 19,673	\$ 20,263
Administrative				2,699	\$ 91,766	\$ 93,601	\$ 95,473	\$ 97,383	\$ 99,330
Maintenance				2,012	\$ 68,408	\$ 69,776	\$ 71,172	\$ 72,595	\$ 74,047
Security				108	\$ 3,672	\$ 3,745	\$ 3,820	\$ 3,897	\$ 3,975
Utilities				1,458	\$ 49,572	\$ 50,563	\$ 51,575	\$ 52,606	\$ 53,658
Replacement Reserve				350	\$ 11,900	\$ 12,138	\$ 12,381	\$ 12,628	\$ 12,881
Taxes & Insurance				2,343	\$ 79,662	\$ 81,255	\$ 82,880	\$ 84,538	\$ 86,229
				\$ 9,500					
Annual Operating Expenses					\$ 322,983	\$ 329,623	\$ 336,401	\$ 343,320	\$ 350,383
Net Operating Income					\$ 37,081	\$ 41,244	\$ 45,592	\$ 50,132	\$ 54,873
1st Mortgage Debt Service					\$ (28,511)	\$ (28,511)	\$ (28,511)	\$ (28,511)	\$ (28,511)
Cash Flow					\$ 8,570	\$ 12,732	\$ 17,080	\$ 21,621	\$ 26,362
I/E Ratio					1.30	1.45	1.60	1.76	1.92

ASSUMPTIONS			
Vacancy rate LIHTC/PBV			5.0%
Vacancy rate Market			5.0%
Replacement Reserve			5.0%
Income trending			3.0%
CAP Rate @ exit			4.5%
Expenses trending			2.0%

Municipal Revenue

The redevelopment of the Baldwinville site will create economic development activity in a multitude of ways for the Town of Templeton. The project has the potential to take what is now a vacant and blighted site and introduce it to the Town’s tax roles for the first time in history. Additionally, the Town will realize other revenue streams from the project that will be further detailed in this section of the MPZ Development LLC proposal.

The development proposal contemplates a total project cost of approximately \$20.092 million of which 71% will be privately leveraged. The balance of the resources will be provided through state and local programs designed to foster economic development in towns such as Templeton. There is a request for Town resources to make the project financeable in the amount of \$1.173 million, this investment will leverage 17X as much in project resources and will be repaid via new tax revenue, an acquisition payments and various project fees to the Town of Templeton. The requested town resources could be contributed over the course of a few years and we believe there is an opportunity for the Town’s funding to be partially or fully repaid over time. If the development’s cash flow after expenses and first mortgage debt service exceed a to-be-determined threshold, a portion of cash flow exceeding that threshold could be used to repay the Town’s financial commitments. MPZ Development LLC is adept at raising the private and public resources needed to build this development proposal.

In looking at comparable properties and market tax rates we have estimated that our proposal will generate approximately \$1,226 in annual property tax revenue per unit. In addition, we estimate excise taxes will be approximately \$191 per unit per year and additional municipal revenue (such as water and sewer fees) are approximately \$500 per unit per year. The following schedule demonstrates that, when combined, the two buildings will generate approximately \$100,000 per year to the Town:

School Bldg Tax Schedule					New Construction Tax Schedule				
Year	RE Tax	Excise Tax	Other Revenue	Total	Year	RE Tax	Excise Tax	Other revenue	Total
Year 1	\$ 19,613	\$ 3,060	\$ 8,420	\$ 31,093	Year 1	\$ 41,677	\$ 6,503	\$ 17,893	\$ 66,073
Year 2	\$ 20,201	\$ 3,152	\$ 8,547	\$ 31,900	Year 2	\$ 42,927	\$ 6,698	\$ 18,162	\$ 67,787
Year 3	\$ 20,807	\$ 3,246	\$ 8,675	\$ 32,728	Year 3	\$ 44,215	\$ 6,899	\$ 18,434	\$ 69,548
Year 4	\$ 21,431	\$ 3,344	\$ 8,805	\$ 33,580	Year 4	\$ 45,542	\$ 7,105	\$ 18,711	\$ 71,358
Year 5	\$ 22,074	\$ 3,444	\$ 8,937	\$ 34,455	Year 5	\$ 46,908	\$ 7,319	\$ 18,991	\$ 73,218
Year 6	\$ 22,737	\$ 3,547	\$ 9,071	\$ 35,355	Year 6	\$ 48,315	\$ 7,538	\$ 19,276	\$ 75,129
Year 7	\$ 23,419	\$ 3,654	\$ 9,207	\$ 36,280	Year 7	\$ 49,765	\$ 7,764	\$ 19,565	\$ 77,094
Year 8	\$ 24,121	\$ 3,763	\$ 9,345	\$ 37,230	Year 8	\$ 51,257	\$ 7,997	\$ 19,859	\$ 79,114
Year 9	\$ 24,845	\$ 3,876	\$ 9,485	\$ 38,207	Year 9	\$ 52,795	\$ 8,237	\$ 20,157	\$ 81,189
Year 10	\$ 25,590	\$ 3,993	\$ 9,628	\$ 39,211	Year 10	\$ 54,379	\$ 8,484	\$ 20,459	\$ 83,322

Note inflation factors of 3% have been placed on RE and Excise tax and 1.5% on other revenue.

Minority and Women Owned Business Enterprises

If selected, MPZ will make an effort to include WMBE business certified through the Commonwealth's SOMWBA program part of the development team. The current development team includes ICON Architecture which is a SOMWBA certified businesses.

Conclusion

The Baldwinville Redevelopment Project will restore an important historic building and bring high-quality housing to the Town of Templeton that is affordable to a diverse array of household types earning a wide range of incomes. Located in a walkable section of Templeton near neighborhood business and amenities, the site is both attractive and sustainable for housing development. The redevelopment will bring additional tax revenue to the town and improve what is currently a vacant and blighted site with \$20 million in new investment. The Baldwinville Elementary School site represents an opportunity to create a community-serving development coupled with historic preservation and affordable housing that will help relieve some of the pressure on the tight rental housing market within the Town of Templeton.

8. DEVELOPMENT TIMELINE AND PROCESS

MPZ Development has, extensive experience, permitting large complicated residential housing developments. The firm has gone through local and state processes where it has secured local comprehensive permits, 40R and 40B approvals. In addition, the firm has worked well with municipalities in securing federal permits and approvals from the U.S. Department of Housing and Urban Development, the MA Department of Environmental Protection and The National Park Service.

In planning for the development of the Baldwinville site, MPZ's previous permitting experience will be very beneficial. In an effort to meet the Town's requirement below is a draft development schedule for consideration:

Task		Historic	Financing	Design & Construction	Community & Permitting
RFP Submission	03/31/2020				
RFP Developer Selection	06/29/2020				
Execution of Purchase and Sale Agreement	07/29/2020		07/29/2020		07/29/2020
Neighborhood Introductions and Charette - Meeting #1	08/15/2020			08/15/2020	08/15/2020
Site Eligibility Letter Filed with MassHousing	08/28/2020			08/28/2020	08/28/2020
Title, Survey, Phase I/Haz Mat Environmental Completed	09/12/2020		09/12/2020	09/12/2020	
Schematic Architectural & Civil Drawings Completed	09/12/2020	09/12/2020		09/12/2020	
Neighborhood Charrette - Meeting #2	09/14/2020				09/14/2020
MHC and NPS Part 1 & Part 2 Filed	09/12/2020	09/12/2020	09/12/2020	09/12/2020	
MHC PNF Filed	09/19/2020	09/19/2020	09/19/2020		
Apply for Templeton CPA Funding	09/19/2020		09/19/2020		
Neighborhood Charrette - Meeting #3	10/04/2020				10/04/2020
NOI Filed - Conservation Commission	10/12/2020				10/12/2020
ConCom Hearing and Approval - Meeting 3rd Monday of the month	10/19/2020				10/19/2020
MHC - Finding of "No Adverse Effect"	10/19/2020	10/19/2020	10/19/2020		10/19/2020
Site Eligibility Letter Received and Comprehensive Permit Application Filed	10/27/2020		10/27/2020	10/27/2020	10/27/2020
DHCD Pre-application	11/29/2020		11/29/2020		
MHC and NPS Part 1 & Part 2 Approved	12/11/2020	12/11/2020	12/11/2020	12/11/2020	
LIHTC and Affordable Housing Resources Funding Application to DHCD	02/20/2021		02/20/2021		
Comprehensive Permit Approved / Issued	01/25/2021		01/25/2021		01/25/2021
DHCD Funding Awarded	06/20/2021		06/20/2021		
Construction Drawings Completed	09/18/2021		09/18/2021	09/18/2021	
Financial and Land Closing - Building Permit Released	11/17/2021		11/17/2021		11/17/2021
Construction Start	12/17/2021			12/17/2021	12/17/2021
Construction Complete	06/17/2023			06/17/2023	
Leasing Complete	09/15/2023		09/15/2023		09/15/2023

9. DESIGN DRAWINGS AND NARRATIVE

Baldwinville Site – Design Narrative

The Baldwinville School Apartments is envisioned as a new family living community celebrating Templeton's past in the preservation of local cultural assets the historic Baldwinville Elementary School - while addressing Templeton's future potential for growth in the villages. The site offers the potential for housing options in the existing school as well as new construction; proposed to address a need to provide affordability across varying demographics.

OVERVIEW

Having served the community for nearly 100 years, the site is poised to continue its mission of service renewed as a safe and respectable home for many local families. Proposed as a family community, the Baldwinville School Apartments offers families a residence rooted in cultural heritage, with a convenient lifestyle and affordable living.

All things evolve as time passes. As part of our redevelopment proposal, the historic Baldwinville Elementary School building and site will be beautifully transformed into approximately 50 units of affordable and mixed-income family housing providing sustainable solutions that build communities. The historic school will house sixteen (16) family units of 1,2 & 3 bedrooms bringing new life to old classrooms. Another thirty-four (34) family units will be created in the new 3-story building nestled into the rear of the site with open views to the river below.

SITE

The site design will incorporate the restoration of the original school's historic front landscape facing School Street; this vast expanse to the west of the site will be a welcoming common green area accessible to the local Baldwinville neighborhood. Convenient parking and drop off loop are proposed to the north of the school with direct access to the historic school and convenient approach to the new construction via a landscaped court. A new entry to the existing building will provide universal access to the core of the new residential community where management office and amenity areas are provided. A new three stop elevator will be cut into the structure in the north stair well making most units in the school visitable.

Currently listed as a contributing resource in the Templeton Historical District and the National Register of Historic Places, the historic building occupies an aggregate 3-lot site [0.9 acres] set amongst several single-family houses, and nearby businesses and other small local businesses.

Parking for all residents will be provided across the site at a 1.76:1 ratio with a total of 86 parking spaces. The existing parking off School St that has serviced the school is proposed to continue to service the site for use by residents. The north lot off School street will service the existing building while a new lot will be provided to the rear within the long landlocked lot. An

easement for the Town will be maintained for access to municipal equipment at the property's edge.

BUILDING DESIGN

The proposed development is in-keeping with the vernacular of the existing school with simple understated massing and design. The straightforward footprint of the proposed building is sensitive to the style and mass of the historic school and acts as a backdrop set against the river bluff and the residential small-town architecture and scale. The new building is a wood frame structure with fiber cement board siding materials proposed. Simple window configurations, similar to the school, will be sized to maximize daylight while creating a tight thermally efficient building envelope. New mechanical, electrical, plumbing, and fire protection service entrances, and central laundry facilities are planned. Amenities include --On-Site community room with community kitchen; -- convenient shared laundry facilities; --On-site management; --Convenient Tot lot for young children.

The development will preserve the original 1923 Baldwinville School and proposes to remove the rear one-story addition. The prominent school will be re-used and "sensitively renovated," per the National Park Service Guidelines for Historic Renovation. The interior of the existing structures to remain will essentially be "gut" rehabilitated for the conversion. The rehabilitation will consist of (i) the selective demolition & removal of existing floor, wall and ceiling systems and finishes, (ii) the total removal of existing electrical, plumbing & mechanical systems, (iii) the addition and/or reinforcement of structural elements to meet current codes, (iv) the replacement of the majority of existing windows, exterior doors and roofing systems, to the extent this is compatible with historic review and guidelines, (v) the installation of new mechanical, plumbing, electrical and fire protection systems, (vi) the reconfiguration of the existing spaces, and (vii) the restoration of interior wood trim and paneling in existing historic areas. The exterior scope of work consists of (i) the complete restoration of the existing brick facade, (ii) the installation of new fenestration treatments consistent with historic preservation standards.

CONSTRUCTION/OPERATIONAL MANAGEMENT

The Development team recognizes that the site is located adjacent to a residential neighborhood and therefore the adaptive re-use, and new construction must be sensitive to this environment. We have completed numerous projects with the very same circumstance. Close attention will be paid to construction timing; site security; lighting; and noise. Once completed, the property will be professionally managed by a top-rated management company. There will be an on-site property manager and maintenance manager. Security cameras will monitor the property and all entrances.

As the community determines how it will affect the rural character of Templeton's villages and cherished heritage settings, opportunities such as the redevelopment of the Baldwinville School, offers the ability to make old-new; preserve character and protect a sense of place while promoting a vibrant new community.



THE BALDWINVILLE SCHOOL APARTMENTS

16 SCHOOL STREET
TEMPLETON, MA

VIEW FROM SCHOOL STREET

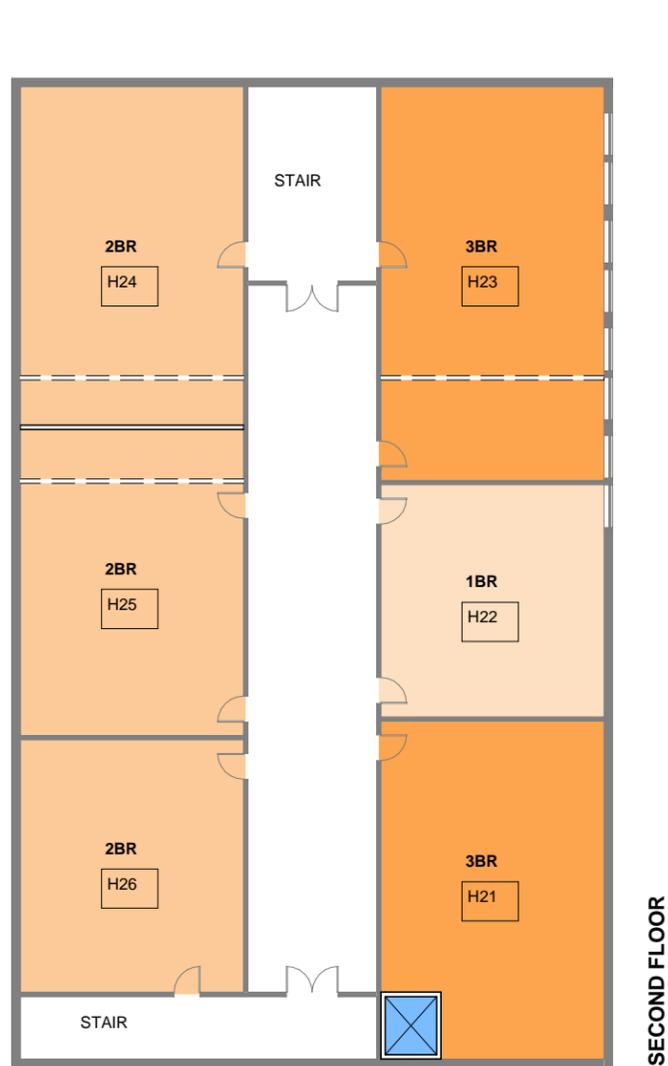


THE BALDWINVILLE SCHOOL APARTMENTS

16 SCHOOL STREET
TEMPLETON, MA

SITE PLAN

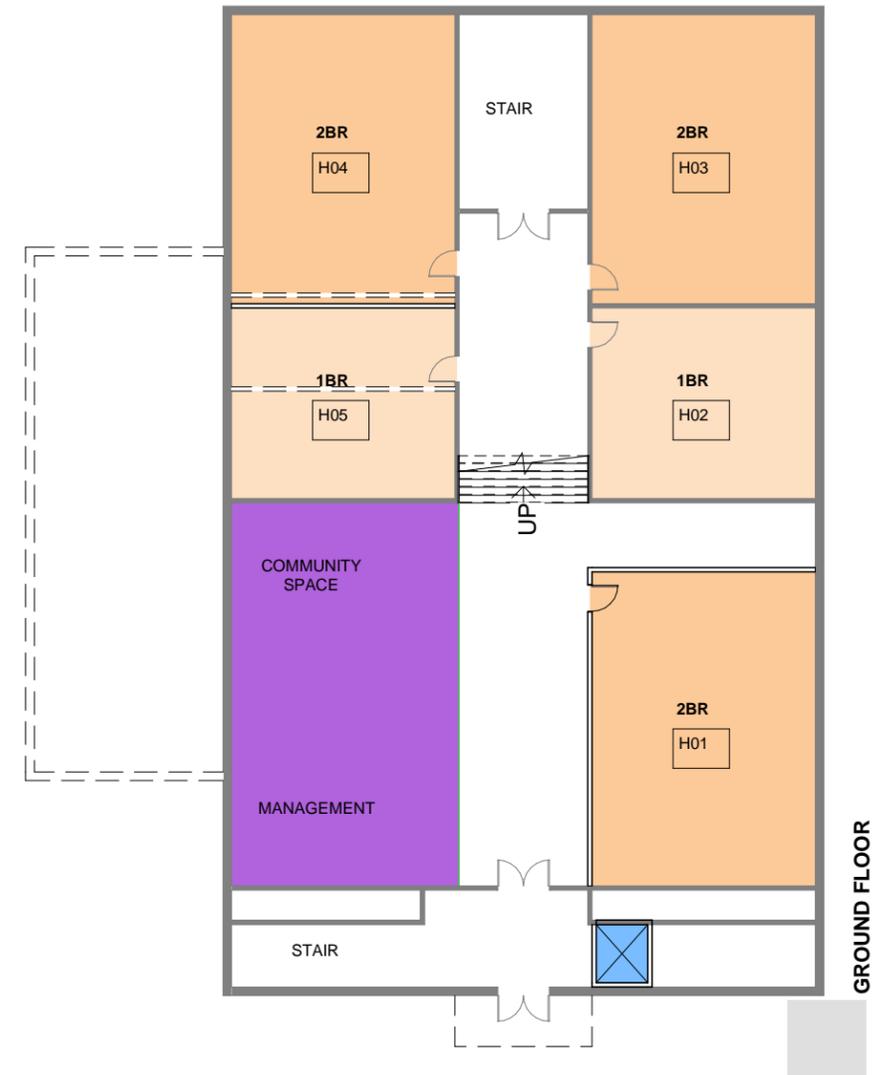
A-101
SCALE = 1:50



SECOND FLOOR



FIRST FLOOR



GROUND FLOOR

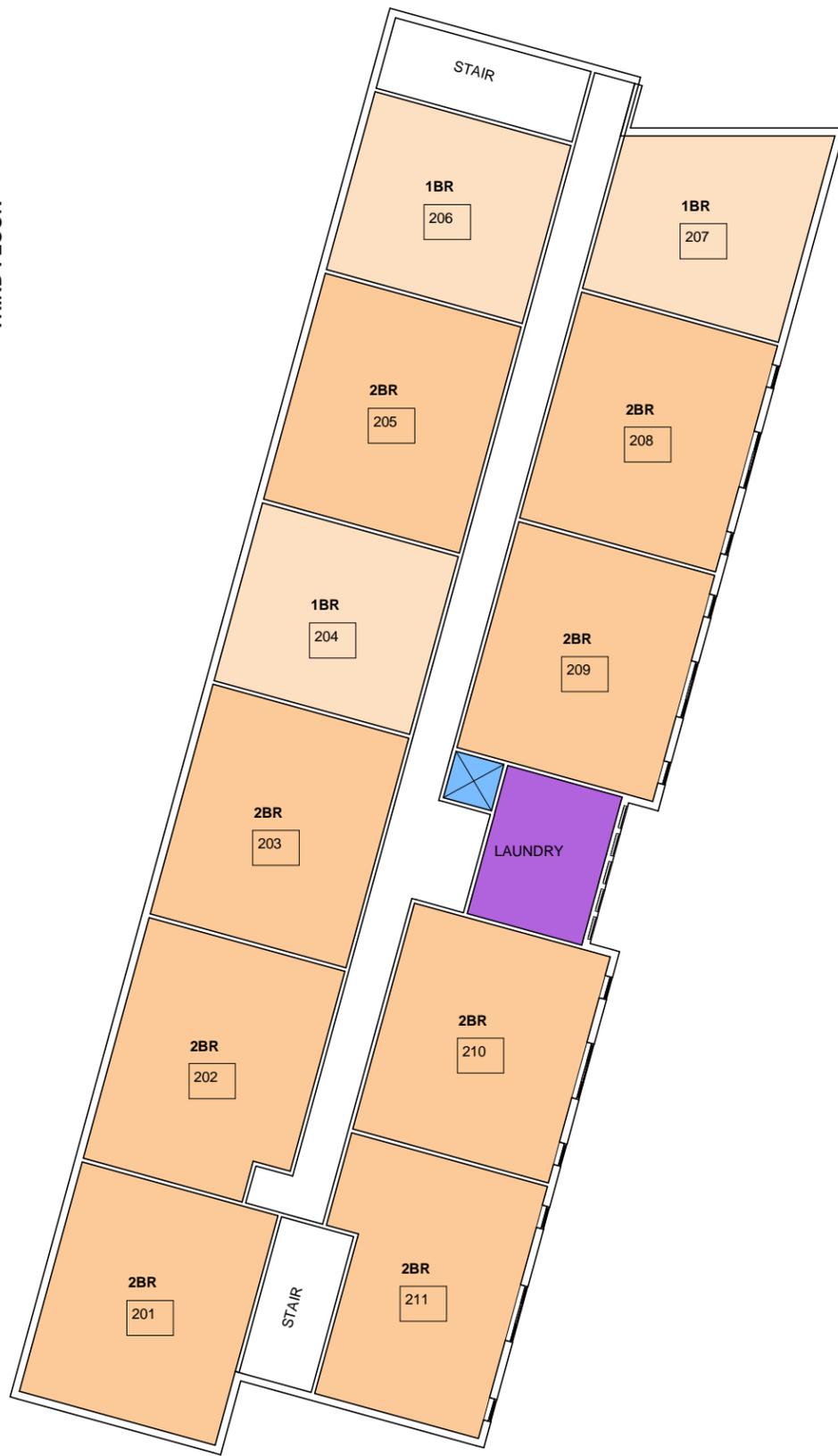


THE BALDWINVILLE SCHOOL APARTMENTS

16 SCHOOL STREET
TEMPLETON, MA

HISTORIC BUILDING FLOOR PLANS

A-102
3/64" = 1'



THE BALDWINVILLE SCHOOL APARTMENTS

16 SCHOOL STREET
TEMPLETON, MA

NEW BUILDING FLOOR PLANS

A-103
3/64" = 1'

B. Appendix

1. Team Qualifications/Collateral



MATHIEU P. ZAHLER

MANAGING MEMBER

499 Adams Street, #527

Milton, MA 02186

T 617.645.3534

E mzahler@mpzdevelopment.com

www.mpzdevelopment.com

Based in Milton, MA, MPZ Development is a developer of affordable, mixed-income, market rate and historic apartment communities.

SKILLS & ABILITIES

Affordable Housing

Mixed-Income Housing

Historic Rehabilitation

Public Private Partnerships

Urban Redevelopment

Low-Income Housing Tax Credits

Historic Rehabilitation Tax Credits



EXPERIENCE

MPZ DEVELOPMENT LLC, MILTON, MA

MANAGING MEMBER, 2017 – PRESENT

TRINITY FINANCIAL INC., BOSTON, MA

SENIOR PROJECT MANGER, 2010 – 2018

A BETTER CITY INC., BOSTON, MA

DIRECTOR OF POLICY AND DEVELOPMENT, 2009 – 2010

BOSTON GARDEN DEVELOPMENT COPR., BOSTON, MA

DIRECTOR OF POLICY AND DEVELOPMENT, 2008 – 2009

EDUCATION

CARNAGIE MELLON UNIVERSITY, HEINZ COLLEGE, PITTSBURGH

MASTER OF SCIENCE IN PUBLIC POLICY AND REAL ESTATE, 2008

CONNECTICUT COLLEGE, NEW LONDON

BACHELOR OF ARTS IN ARCHITECTURAL HISTORY, 2001

RELEVANT EXPERIENCE (PARTIAL LIST)

In Development

McElwain School Apartments, 57 Units, Bridgewater, MA

10 Stonley Road, 45 Units, Jamaica Plain, MA

Completed

Treadmark Building*, 83 Units and ground floor retail, Dorchester, MA

Enterprise Center*, 224 Units and 55K of Office/Retail, Brockton, MA

Randolph Houses*, 318 Units, Harlem, NY

Bristol Commons and Lenox Green*, 160 Units, Taunton, MA

Regency Tower*, 129 Units, New Bedford, MA

Washington Beech*, 206 Units, Roslindale, MA

*completed while an employee of Trinity Financial Inc.

PROFESSIONAL ASSOCIATIONS

Citizens Housing and Planning Association, Production & Preservation Committee

The Urban Land Institute, Policy Committee

MPZ Development Project Experience

McElwain School Apartments, Bridgewater, MA

Type: Mixed-Income Rental, Historic Preservation/New Construction

Total Development Cost: Approximately \$21 Million

Total Units: 57

Projected Completion: 2023



Proposed



Existing

MPZ Development LLC and Capstone Communities Development LLC plan to create a mixed-income housing development through the renovation of the historic but long-vacant McElwain School, to provide 16 units, and the construction of 38 new units on the balance of the property. The project also includes renovation of the three-family house and barn on the adjacent property, which have been separately acquired, for an additional three units and maintenance workspace.

To be collectively known as McElwain School Apartments, the development will provide a mix of one-, two- and three-bedroom apartments affordable to individuals and families whose incomes range from 30 percent to 60 percent of area median income as well as six market rate units.

Designs for the adaptation of the schoolhouse for residential use will follow the Secretary of the Interior's Standards for Rehabilitation. Federal and state historic tax credits are expected to make possible the preservation of the building's architectural integrity, including installation of historically accurate windows and cleaning and repointing of the exterior masonry. The dramatic staircases and other interior common area elements typical of such school buildings will also be refurbished.

A three-story elevator building at the back of the three-acre site will be designed to complement its historic neighbor and to fit with the surrounding single-family homes and nearby apartment communities. The adjacent three-family house will be renovated, and a maintenance building will be created in the barn, maintaining the architectural character of the existing 1880 structures.

The developers were the successful bidders for the c. 1910 school property in an extensive Chapter 30B disposition process for surplus property with the Town of Bridgewater. Project financing will be through tax credits, state and federal housing funds, and private sources.

Currently in the pre-development stage, the project has completed the permitting process and is actively seeking financing. Projected completion is projected for 2023.

MPZ Development Project Experience

10 Stonley Road, Jamaica Plain MA

Type: Mixed-Income Rental

Total Development Cost: Approximately \$17 Million

Total Units: 45

Projected Completion: 2022



The 10 Stonley Road Site includes the parcels of land located at 35 Brookley Road, 95 Stedman Road, and 51 Stedman Road, which collectively comprise approximately 16,290 square feet (0.37 acre) of land. The site is improved with a single-story light industrial cinder block building built in approximately 1950 and currently is owned and operated by a petroleum company.

The site is located within approximately one-half mile of both the MBTA Green Street and MBTA Forest Hills stations. The Project Site is located a quarter mile from Franklin Park and three-quarters of a mile from Arnold Arboretum, and also has access to several nearby neighborhood parks.

The project will construct a new four (4)-story residential building totaling approximately 39,858 gross square feet which includes forty-five (45) residential units and nineteen (19) ground-floor parking spaces accessed and egressed at Stanley Road. The parking program includes two accessible spaces, one of which is van accessible. The proposed unit mix includes five (5) ground-floor one-bedroom Artist Live/Work Units (all of which will be offered as inclusionary Development Policy ("IDP") Units), nine (9) studio units, twenty-three (23) one-bedroom units, seven (7) two-bedroom units, and one (1) three-bedroom unit. Resident amenity spaces, such as a ground floor gym, internal bike storage for thirty-eight (38) bikes, partially covered bike storage for eighteen (18) bikes, postal/package storage room, and fourth floor common area with an accessible bathroom including balcony and deck. In addition, ground floor landscape improvements, new sidewalk, and streetscape improvements (new curb and sidewalks) on all three street facing sides are also included as part of the redevelopment.

MPZ Development Project Experience

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

Treadmark, Dorchester, MA

Type: Mixed Income, Mixed-Use

Total Development Cost: \$45 Million

Units: 83 plus retail (5,000 sf)

Project Completion: December 2018



Building image provided by Trinity Financial Inc.

Treadmark is an 83-unit, six-story building located at the end of the southern end of the MBTA's Red Line, at Ashmont Station. The site was formerly the home to Ashmont Tire shop for the past 40 years and was an underutilized site. The unit mix includes 51 Low Income Housing Tax Credit (LIHTC) rental units, affordable up to 60% of the Area Median Income (AMI) and 32 for sale condominiums. Four of the condominiums meet the requirements of the City of Boston's Inclusionary Development Policy (80-100% of AMI), 16 units are affordable to individuals making up to 110% of AMI (workforce units) and the balance are market rate. The project was permitted through the City of Boston's Article 80 review process.

The building also includes 5,000 square feet of ground floor neighborhood retail and 32 spaces for parking (30 garage spaces and 2 surface spaces). The project has an executed lease with American Provision out of South Boston to take 50% of the retail space. The project will enhance the streetscape with the addition of street trees and street furniture down the block as well as the creation of 8 on-street parking spaces in front of the building. Following its sister property, The Carruth, Treadmark is the second new construction building to be built in and around the Ashmont/Peabody Square area over the past 10 years and will be ready for occupancy in November 2018. The project was originally slated to be completed in July 2017 but suffered a catastrophic fire and needed to be completely reconstructed. Once completed, the building will add to the vibrancy and growth that is already well underway in and around the Ashmont/Peabody Square neighborhood. The building is designed by The Architectural Team with interiors by celebrity designer, Taniya Nayak.

MPZ Development Project Experience

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

Enterprise Center, Brockton, MA

Type: Mixed-Use, Transit-Oriented

Total Development Cost: \$100 Million

Phase 1 Completed: 2015



Building image provided by Trinity Financial Inc.

The Enterprise Center project is a vibrant, mixed-use development recreating a significant city block and its street edges in downtown Brockton. The transit-oriented development sits within walking distance of the commuter rail station in downtown Brockton, and within walking distance of the City's center. The new development will occur in two phases and will restore a historic building and several newly constructed buildings which include retail (restaurant and neighborhood retail), commercial (traditional office and collaborative workspace) and housing uses. The block is bounded by Centre Street, Main Street, Montello Street and Petronelli Way and had suffered from considerable blight and physical deterioration.

Trinity's development has been the catalyst to bring significant reinvestment back to downtown Brockton and has begun to reinvigorate what was once a bustling downtown location. The project has been designed to comply with the goals of the Downtown Brockton Smart Growth Overlay District (DBSGOD) and was permitted using the Commonwealth's 40R Permitting Process. The project consists of two phases of housing in newly constructed buildings, the historic rehabilitation of an existing commercial building and the construction of a new municipal parking garage. The project was funded using Low Income Housing Tax Credits, New Market Tax Credits, private tax credit equity and other public and private resources.

Trinity has worked with the community to develop a multi-phase development program reflective of the goals of the City and its residents. The first phase of development consists of 113 units of housing in a newly constructed building along Centre Street. The building includes 42 artist live work units which will be affordable to artists earning up to 60% of the Area Median Income (AMI) and 71 mixed-income units. In addition to the housing there is ground floor neighborhood retail, artist gallery space, building amenities (club room, yoga room, coffee bar and fitness room), onsite management offices, green space, garage and surface parking.

The existing Enterprise Building was historically rehabilitated to create 55,000 square feet of new commercial and office space. The building is occupied by the Department of Transitional Assistance and has provisions for a restaurant and collaborative workspace.

MPZ Development Project Experience

The second phase of development consists of 111 units of housing, again a mix of affordable and market rate units, as well as a 414-space parking garage and additional green space. District Improvement Financing (DIF) will be utilized to help finance the public improvements, the creation of the district was championed by the developer.

Upon completion this project will consist of 224 units of housing, 10,000 square feet of retail and artist exhibition space, 52,000 square feet of commercial space and 588 parking spaces.

MPZ Development Project Experience

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

Bristol Commons and Lenox Green, Taunton, MA

Type: Rental

Total Development Cost: \$73 Million

Units: 160

Completed: 2014



Building image provided by Trinity Financial Inc.

In May 2011, the Taunton Housing Authority (THA) and Trinity were successfully awarded a \$22 Million HOPE VI Revitalization grant from the U.S. Department of Housing & Urban Development (HUD). In addition to the HOPE VI Grant, private equity resources and other public funds were used to rehabilitate the distressed 150-unit Fairfax Gardens public housing development.

Fairfax Gardens was built in 1951 as an isolated, 150-unit barracks-style development in the middle of a low density, single-family neighborhood. The units were clustered on a third of the 43-acre site, leaving the remaining acreage open as meadows and wetlands. The development's infrastructure, utilities, and many building components were original to the site and are outdated and needed complete replacement. The buildings were neither energy-efficient nor accessible; the units were cramped and much smaller than current space standards dictate; and mold, pests, and deteriorated finishes were problematic throughout. The distressed conditions at Fairfax Gardens not only negatively impacted residents' health and quality of life, it brought down the property values of nearby homes. The award of the HOPE VI grant allowed for the complete demolition and reconstruction of the existing Fairfax Gardens.

The original Fairfax Gardens site now renamed Bristol Commons, de-densified the existing site replacing the 150 units across two distinct sites for a newly redeveloped total of 160 units. The two sites offer the project the ability to create family housing options at Bristol Commons and apartment style living at Lenox Green for seniors and those who wanted to be closer to amenities and transportation options. The project was permitted using the City's standard special permit approval

MPZ Development Project Experience

process and requested the necessary variances form the planning board and the zoning board of appeals.

The Bristol Commons site contains 80 townhomes and eight duplex units, as well as new site infrastructure, a new community center, community gardens, green space, a basketball court and other community amenities. The 88 units in the Bristol Commons phase will include one-, two-, three-, and four-bedroom units and 78 of the units will be affordable to households earning between 0-60% of the Taunton area median income. The majority of the families are considered to be extremely low income and will require operating subsidies from the THA. These operating subsidies will allow all residents to pay only 30% of their income as rent. The remaining ten units will be market rate units and will have no income restriction assigned to them.

Lenox Green is in downtown Taunton in a transit-oriented development (TOD) overlay district, the development is adjacent to public transit and other services. Lenox Green has new site infrastructure, 18 townhomes, a three story 54-unit mid-rise building with community space/management offices, raised community planting beds, walking paths connecting to local services, a playground and other community amenities. The 72 units in the Lenox Green include one-, two- and three-bedroom units and all 72 of the units will be affordable to households earning between 0-60% of the Taunton area median income. The same operating subsidies offered to residents of the Bristol Commons site will also be available to the residents of the Lenox Green site.

MPZ Development Project Experience

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

A. Philip Randolph Houses, Harlem, NY

Type: Mixed Income

Total Development Cost: \$146 Million

Units: 283

Completed: Phase I - 2016, Phase II - Expected 2018



Building image provided by Trinity Financial Inc.

While this project was not located in the Commonwealth, there are many aspects of the development which are relevant to the project example requirements of the RFQ and is notable as the first public-private partnership entered into by the New York City Housing Authority.

The Randolph Houses project contains 36 five-story Old Law tenement buildings, 14 of which are on the north side of the street (collectively, the “North Side”) and 22 on the south side of the street (collectively, the “South Side”), and together comprise the Public Housing development known as “Randolph Houses.” This project involves the historic rehabilitation of the existing structures into two sets of interconnected and fully handicapped accessible buildings. The building facades have been restored and the interior of the building has been completely demolished and rehabilitated. This 2-phased project was financed through the Department of Housing and Urban Development (HUD) mixed finance and Low Income Housing Tax Credit (LIHTC) programs.

The redevelopment of the South Side included a \$95 million gut-rehabilitation of 307 vacant units in the 22 old law tenement buildings on the south side of the street. The new project contains 168 units in what are now two interconnected buildings with central circulation and elevator access. The newly reconfigured units are a mix of Studio, 1, 2, 3 and 4-bedroom apartments designed to accommodate family living. The rehabilitated buildings contain community space, a teaching kitchen, computer lab, fitness room and storage for residents. There are also site improvements which include two children’s play areas for different age groups and active and passive outdoor spaces for residents to enjoy.

The \$51 million North Side (Phase 2) includes the gut-rehabilitation of 14 historic Old Law tenement buildings on the north side of the street. The renovation will result in 115 rehabilitated units in what will become one building with central circulation and elevator access. This project contains a mix of studio, 1, 2, 3 and 4-bedroom units and has a similar amenity package to the South Side project, with some amenities shared between the two phases.

MPZ Development Project Experience

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

Regency Tower, New Bedford, MA

Type: Mixed-Income Rental, Mixed-Use

Total Development Cost: \$32 million

Completed: 2011



Completed in 1988 as a luxury apartment complex, the 16-story Regency Tower offers dramatic harbor views and is located steps from the city's historic downtown district. Unfortunately, the building had suffered from serious facade deterioration and water damage, due to lack of capital investment, by the time MassHousing foreclosed on the property in 2005.

In 2009 MassHousing selected Trinity Financial to acquire and redevelop the property, which was carried out at a total cost of \$32 million. The building facade was replaced on floors 5 to 16, new windows and patio doors were installed throughout, and common areas were renovated as well. Apartment interiors were refurbished and fitted with new kitchens, bathrooms, and HVAC systems, and underutilized commercial space was converted to residential use, increasing the total number of units from 123 to 129, with a mix of 33 affordable units, 10 "workforce" units, and 86 market-rate units.

Fully leased at rents above pro forma levels, the Regency Tower is arguably the most desirable high-rise apartment property in the area.

MPZ Development Project Experience

Project experience performed by Mathieu Zahler through Trinity Financial Inc.:

Washington Beech, Roslindale, MA

Type: Mixed-Income Rental, Public Housing

Total Development Cost: \$100 Million

Completed: Phase 1: 2010 / Phase 2: 2011



The original 266-unit Washington Beech housing project was built by the Boston Housing Authority in the early 1950s. Developer Trinity Financial demolished and replaced the aging complex with an attractive community of 206 rental units, with lower density and a site design that is more in keeping with the surrounding neighborhood in the Roslindale section of Boston.

A variety of unit types replaced the existing institutional walk-ups, including garden apartments, duplexes over flats, and townhouses. Homes have individual entrances and decks, with private backyards for families with children, while new roads were laid out so that all unit entries front on a street and residents can park nearby. All of the development's one-bedroom apartments, for seniors and singles, are located in a mid-rise elevator building located at a prominent street corner for easy access to local shops and services; the building also houses a community meeting room, computer center, kitchen and food pantry, and offices for management and tenant services. A central green space provides play facilities and park benches for residents of all ages.

Construction of Washington Beech occurred in two stages to accommodate the relocation and re-housing of existing residents. Total project cost was approximately \$100 million, with \$20 million provided through federal HOPE VI funds and \$10 million through federal American Recovery and Reinvestment Act funding. Other funders included the Commonwealth of Massachusetts through the HOME, HSF and AHT programs, the City of Boston's Neighborhood Housing Trust Program and Department of Neighborhood Development, and private equity generated from the syndication of Low Income Housing Tax Credits through RBC Capital Markets.



WOMEN-OWNED BUSINESS ENTERPRISE (WBE)

ICON is a 50-person, Boston-based, women-owned architectural practice. Our work focuses on sustainable transformative projects that create new paradigms for transformative living, and range from transit-oriented development to innovative adaptive reuse, and from low-rise to high-rise construction. Our team has contributed to the design and construction of over 20,000 housing units throughout New England, with 2,000 currently under design or in construction this year.

Widely recognized for their vision, creativity, and responsiveness to clients, ICON's principals and senior staff offer the skills necessary to conceive and implement complex projects that require coordination of clients, citizens, and agencies. We bring to our clients an ability to listen carefully, to assimilate and synthesize large bodies of information, and to help build consensus among often-conflicting interests.

SUSTAINABLE DESIGN

At the core of our philosophy and mission is a commitment to sustainable design. We call our approach to sustainability sensible green. Central to our commitment to sustainability is renewal - the reuse, repositioning or renovation of existing structures.

Our process is distinguished by the level of integrated planning we bring to the process. It starts with discussing budget and funding, maintenance, construction issues, sustainable design, building systems and performance, and life-cycle costs. Our design is informed by the host of complex issues involved in realizing a successful project. We work to find the most cost effective, "sensible" green approach to the project.

RECOGNITION

ICON's multi-family projects have been case studies for nationally distributed books on urban housing, published by the Urban Land Institute, Harvard University Press, and Global Green. Our work has won numerous awards, multiple Builders Choice Design Awards, a Governor's Smart Growth Leadership Award, and multiple Preservation Achievement Awards from the Boston Preservation Alliance and the Massachusetts Historical Commission. Maverick Landing was awarded the Terner Prize as the nation's most innovative and sustainable affordable housing complex.

LEGAL NAME OF CORPORATION

ICON Architecture, Inc.

ADDRESS

101 Summer Street
Boston, MA 02110



Janis B Mamayek AIA, LEED AP, Vice President, has been focused professionally on housing for over 30 years. As ICON's Director of Architecture, she manages staff across a multitude of project scales and types. Recently her work has focused on leading our RENEW practice targeted on bringing new realities to existing buildings through

Re-positioning, Re-thinking, and Re-pair for relevancy and resiliency; optimizing value in existing building assets through environmentally-conscious design and culturally conscious preservation with a commitment to high performance. Janis has considerable experience applying this old/new comprehensive approach to adaptive re-use of schools, preserving housing through modernizations and well as repairs of existing facilities.

Janis is currently leading the design and permitting teams for several adaptive reuse of historic school residential developments throughout the Commonwealth including:

- St James & Immaculate Conception Schools in Salem;
 - Henry T Wing School in Sandwich;
 - BF Brown School in Fitchburg;
 - Coyle School in Taunton;
 - Oxford School in Fairhaven;
- and the Bigelow and Riverbend Schools in Athol.



Bethany Drab AIA, Project Architect, Since joining ICON, Bethany has been passionate about bringing new life to existing buildings across Boston and the Commonwealth including occupied rehab and adaptive reuse through historic tax credits. She was immediately engaged in the culture of ICON's RENEW practice working to

preserve historic, cultural and affordable assets in existing buildings. She has contributed to numerous projects across ICON's practice teams: LIVE-LEARN-RENEW including **The Coady School Residences** in Bourne, **Van Brodie Mill** in Lawrence and **Blakely Hall** at Tufts University.

Outside of the office, Bethany is actively involved in the Boston Preservation Alliance's Young Advisors with a mission to protect, preserve, and promote Boston's unique character. Bethany earned her Bachelor of Architecture from Penn State University.



Kevin O'Neil AIA, Associate Principal, Practice + Adaptive Reuse Leader, brings extensive mill conversion experience to the team. At ICON, he has completed a variety of adaptive reuse projects for both residential and commercial uses, including serving as Project Manager for the rehabilitation of **Appleton Mills** in Lowell, MA into a new market loft-

style and live/work housing community with 130 units. He currently has two buildings under development in the Historic Arlington Mills District in Lawrence. One is under construction, the adaptive reuse of the **Van Brodie Mill** into 102 rental units overlooking Steven's Pond. The other is the adjacent **Marriner Mill** which is in design to be converted into 84 units of family housing. Kevin was the Project Manager for several mill conversions in Providence, including **The Plant**, a mixed used commercial and artist live/work complex, and the neighboring **60 Valley Street Mill**.



Education

Bachelor of Architecture,
University of Minnesota, 1985

Bachelor of Environmental Design,
University of Minnesota, 1985

Design Studio Abroad,
Rome, Italy, 1984

Registration

Massachusetts (7399)

International Work

Istanbul, Turkey 1988-89

Affiliations

CHAPA
Preservation and
Production Committee

AIA MA Government Affairs
Committee, Member

Boston Society of Architects

BSA Renovate for Recovery
Registered Design Professional

U.S. Green Building Council

Speaking Engagements

ABX 2012: Survival Strategies for
Existing Buildings

ABX 2012: Living on Track

ABX 2019: Rethinking Reality -
Preservation Path to
Affordable Housing

Relevant Experience

Principal-in-Charge, **Rindge Commons**, Cambridge, MA: Optimizing full potential of this iconic site, ICON's design of infill structures transform the character of this property and include mixed uses while adding 100 units of affordable housing.

Principal-in-Charge of CA, **Avenir**, Boston, MA: A 241-unit, mixed-use residential development on a former MBTA parcel in Boston's Bulfinch Triangle above the MBTA's North Station. Avenir elegantly combines upscale apartments with vibrant retail and transportation links in Boston's Bulfinch Triangle sports and entertainment district. The 10-story building's varied massing and texture respond to the historic Bulfinch Triangle context of individual buildings aggregated over time. Tall, multi-level lofts wrap the internal parking structure to conceal it from street view, while upper level apartments enjoy the expansive terraces between building volumes.

Project Manager, **One Canal**, Boston, MA: Transit-oriented development in Boston's Bulfinch Triangle, including retail and parking below 310 rental apartments built over the MBTA Orange and Green Lines and the Central Artery Tunnel.

Project Manager, **Washington Beech (Phase II)**, Roslindale, MA: Transformation of a severely distressed development into a HOPE VI community of over 200 housing units in a range of types, incorporating leading edge energy and air quality strategies; all units take advantage of passive solar energy; LEED-H gold certified

Principal-in-Charge, **Chelmsford Woods Residences**, Chelmsford, MA: New construction of 116 units of affordable, low-rise townhouses with garden and clubhouse.

Principal-in-Charge, **North Point Lofts**, Cambridge, MA: Adaptive Reuse of 1926 concrete meat packing plant into 103 units of transit-oriented microloft housing as part of the Northpoint District. and is conveniently located near the Lechmere MBTA station. These studio apartments range in size from 330 to 700 square feet, each with floor-to-ceiling windows and contemporary interiors designed to meet LEED-NC Silver criteria.

Principal-in-Charge, **Simon C. Fireman Community Renovation and Expansion**, Randolph, MA: ICON is currently working on a phased modernization for this 3 story, 160 unit Senior Living Facility owned by Hebrew Senior Life. Expansion of site for another 50-units.

Principal-in-Charge, **Cambridge Housing Authority: Washington Elms Modernization**, Cambridge, MA: Extensive Existing Conditions and Schematic design programming through construction for modernization of an occupied 15 residential + 2 support building site; \$24M construction budget for broad and varied scope addressing most critical need across the housing development for the next 20 years; funded through HUD's Rental Assistance Demonstration program.

Principal-in-Charge, **Smith House**, Boston, MA: Renovation and modernization of 132 one-bedroom affordable occupied apartments in a 12-story, 1970's era concrete high-rise for seniors. Reprogramming of all amenity areas for seniors was completed.

Principal-in-Charge, **Maverick Landing**, East Boston, MA: Award-winning \$150M project on a nineacre waterfront site near the Maverick MBTA station. A multi-phase, multi-ownership, multi-family residential development built as a prototype for affordable green development totaling 426 sustainable units. LEED-certified.

Principal-in-Charge, **MSBA's Green and Accelerated Repair Program**: 26 different projects across 11 districts, 19 schools. Sustainable energy saving measures that include mechanical system upgrades, window and door replacement, roof and insulation repairs. All projects incorporate principles and standards of sustainable design ranging from \$400k to \$2M in construction cost.

Principal-in-Charge, **The Coady School Residences**, Bourne, MA: Fifty-eight residential units for active seniors are situated amongst a variety of communal spaces rich in historic character retained in the renovations: original open stairs, full proscenium at the entry lobby, and science greenhouse restored as a sun room - all washed in natural daylight through the large restored windows.



Education

Bachelor of Architecture, Boston
Architectural Center, 1998
Received High Honors for Thesis

Associate of Science in
Architectural Technology, Hartford
State Technical College, 1982

Registration

Massachusetts (20683)

Relevant Experience

Project Manager, **Appleton Mills**, Lowell (MA): Award winning adaptive reuse of a historic mill building on the Hamilton Canal into a 130-unit, mixed-income, artists' live/work development.

Project Manager, **Van Brodie Mill**, Lawrence, MA: Renovation of an existing historic mill building into 100+/- family-oriented lofts and a ground-level amenity center for residents. The renovation totals 145,488 GSF.

Project Manager, **Marriner Mill**, Lawrence, MA: Marriner Mill is located in the Arlington Mills Historic District in Lawrence. ICON will carry out a substantial rehabilitation of the structure to national Park Service standards. 84 apartments of low to moderate income housing will be created with a focus on 2 and 3 bedroom units. The renovation will be a companion to the neighboring Van Brodie Mill currently under construction in this historic district.

Project Manager, **Boston East**, East Boston (MA): The revitalization of a vacant piece of land into 200 apartments. The project provides public access to the waterfront and bridges two important centers of East Boston.

Project Team Manager, **The Plant & Cuban Revolution**, Providence (RI): An adaptive reuse project that includes the conversion of a 19th century Fabric Dying and Bleaching calendaring facility into artist live/work housing and a mixed use office park.

Project Manager, **Enterprise Office Building**, Brockton (MA): Adaptive reuse of a 55,000 SF former newspaper plant for commercial office space.

Project Manager, **Centre 50 & Enzo Flats**, Brockton (MA): Enzo Flats and Centre 50 are the first residential phase of a new multi-acre, mixed-used downtown redevelopment in the Gateway City of Brockton. This new, mixed use district includes the restored Enterprise Block, 200,000 SF of new office space, and restaurant and retail area. The residential component includes 250 apartments located within a one-block walk of the Brockton Commuter Rail Station.

Project Team Manager, **Fulton School Residences**, Weymouth (MA): Adaptive reuse of 1928 historic school with new construction, 63 units of affordable senior housing.

Project Manager, **110 Canal**, Lowell (MA): Renovation of the historic Freudenberg Nonwovens mill building renovation into modernized commercial space, a key piece in the city's \$800M Hamilton Canal District revitalization project.

Architectural Designer, **Olmsted Green**, Boston (MA): Design development / construction documentation for the design of 520 units of new mixed-income housing on the former Boston State Hospital Site. Focused on bathroom, kitchen, and unit interior compliance with MAAB and FHA.

Project Manager, **MSBA's Green and Accelerated Repair Program**: 26 different projects across 11 districts, 19 schools. Sustainable energy saving measures that include mechanical system upgrades, window and door replacement, roof and insulation repairs. All projects incorporate principles and standards of sustainable design ranging from \$400k to \$2M in construction cost.

Project Team Manager, **Emerson College Atrium**, Boston (MA): Design of an infill project for the existing light well in Emerson College's Walker Building.

Project Team Manager, **Vine Street Community Center**, Boston (MA): Rehabilitation and adaptive reuse of a 26,000 SF historic masonry structure resulted in a modern community center.



Education

Bachelor of Architecture, Penn State University, 2014

Design Studio Abroad, The Pantheon Institute, Rome, Italy, 2012

Registration
Massachusetts

Affiliations
American Institute of Architects (AIA)

Boston Society of Architects (BSA)

Greenbuild 2017

Boston Preservation Alliance

HomeStart Fundraising Captain (iCycle, Boston Marathon)

Speaking Engagements
ABX 2019: Rethinking Reality - Preservation Path to Affordable Housing

Relevant Experience

Project Designer, **Van Brodie Mill**, Lawrence, MA: Renovation of an existing historic mill building into 100+/- family-oriented lofts and a ground-level amenity center for residents. The renovation totals 145,488 GSF.

Project Designer, **Marriner Mill**, Lawrence, MA: Marriner Mill is located in the Arlington Mills Historic District in Lawrence. ICON will carry out a substantial rehabilitation of the structure to national Park Service standards. 84 apartments of low to moderate income housing will be created with a focus on 2 and 3 bedroom units. The renovation will be a companion to the neighboring Van Brodie Mill currently under construction in this historic district.

Assistant Project Manager, **The Coyle School**, Taunton, MA: Adaptive reuse of 1933 historic Gothic Revival-style School and redeveloped site will be transformed into 50 units of affordable family housing. The historic school will house 32 families within the classroom wings and historic gymnasium; with another 18 families residing in a lower addition stepping down behind the auditorium.

Assistant Project Manager (through CA Phase), **The Coady School Residences**, Bourne, MA: The Coady School main building will be sensitively renovated per National Park Service Guidelines for Historic Renovation, and expanded to provide a total of 58 units of new housing and support services for active senior residents. The new construction portion will be a 3 story, wood framed plus basement with masonry fiber cement siding which will add an additional 38,000SF.

Project Manager, **Immaculate Conception and St James Schools** in Salem [MA] - Adaptive Re-Use of two historic schools- for affordable housing focused on two distinct populations- one for artists and one for active seniors. The use of Historic tax credits will steer the design of these historic structures providing a total of 61 units of new housing in downtown Salem.

Assistant Project Manager, **Smith House**, Boston, MA: Renovation and modernization of 132 one-bedroom affordable apartments in a 12-story, 1970's era concrete high-rise for seniors. New Entry addition, Reprogrammed Amenity spaces and tiered unit renovations developed to meet growing needs of elderly population and current accessibility code while the building is occupied.

Project Designer, **MSBA's Green and Accelerated Repair Program**: 37 different projects across 13 districts, 19 schools. Sustainable energy saving measures that include mechanical system upgrades, window and door replacement, roof and insulation repairs, and other improvements aimed at providing a better learning environment. All projects incorporate principles and standards of sustainable design. Roof, window and boiler replacements of all types ranging from \$400k to \$2M in construction cost.

Construction Administration, **The Residences at Canal Bluffs**, Bourne (MA): High efficiency Energy Star Rated wood-frame, four-story buildings housing 117 mixed-income units and community spaces.

Project Designer, **Chelmsford Woods Residences**, Chelmsford MA: New construction of 116 units of affordable, low-rise townhouses with garden-style apartments and clubhouse.

Project Designer, **Beach House Apartments**, Revere, MA: New construction of 230 units, with both outdoor and indoor amenity spaces for residents including a courtyard and pool. A below-grade parking garage provides a podium for the five-story building. The site totals 279,000 GSF.

Project Designer, **Babson Library Renovation**, Springfield College, Springfield, MA: Transformation of a 1971 library into a contemporary Learning Commons. The renovation totals 57,000 GSF.

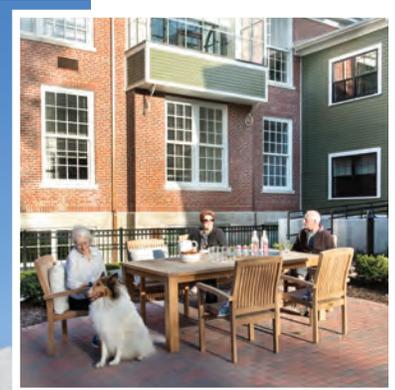
Project Designer, **Peabody-Leavitt**, Salem, MA: New Construction on two distinct parcels of Salem's Point neighborhood integrating mixed use programs of affordable housing, artists' studios, resilient design strategies and passive house detailing in proposed 40R district.

HISTORIC PRESERVATION / ADAPTIVE REUSE

COADY SCHOOL RESIDENCES

Bourne, MA

Coady School Residences in Bourne connects the community to the town's rich cultural history with affordable housing options set within the former elementary school. Fifty-eight residential units for active seniors are situated amongst a variety of communal spaces rich in historic character retained in the renovations: original open stairs, full proscenium at the entry lobby, and science greenhouse restored as a sun room - all washed in natural daylight through the large restored windows. Connecting corridors between the school and new addition frame intimate outdoor resident gathering spaces.



SIMPKINS SCHOOL RESIDENCES

SOUTH YARMOUTH, MA

Nestled in the historic district of South Yarmouth, the 1930's built John Simpkins School has been redesigned to offer 65 senior housing units. The adaptive reuse, which totals up to 78,000 SF, includes a historically-sensitive addition per the Cape Cod Commission's Regional Policy Plan. Amenities include a community room and an expansive green space which enlivens the landscape.

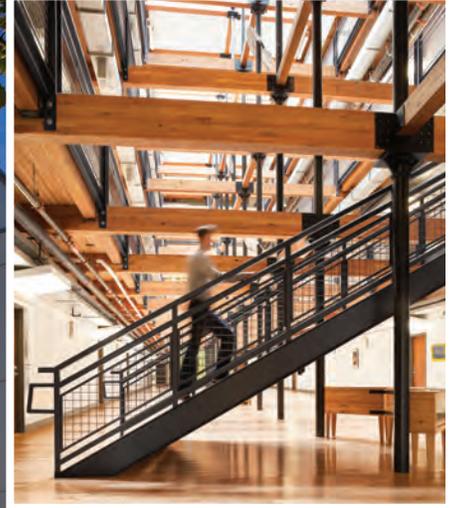


HISTORIC PRESERVATION / ADAPTIVE REUSE

APPLETON MILLS

LOWELL, MA

The 130 artist live/work lofts at Appleton Mills establish the 15-acre, mixed-use Hamilton Canal District as one of Massachusetts preeminent creative communities. This adaptive reuse restores the extant masonry mill remains, reuses the cast iron columns, and reengages bridges linking across canals. Site walkways trace the historic mill worker paths. At the heart of the complex lies a light-filled, four-story atrium serving as a communal gallery. Units offer a range of open loft layouts, including those that array along the “loading dock” terrace, allowing residents to roll up “garage doors” to open their studios to view.



BEFORE



HOTEL DARTMOUTH

ROXBURY, MA

Melding the restoration of this neglected 1871 National Register hotel with the new addition of artist live/work housing, Dartmouth Hotel has regained its elegance at the heart of Roxbury's Dudley Square. After sitting vacant for 30 years, restoration required painstaking renewal of the rare marble façade and meticulous rebuilding of ornate wood-trimmed dormers and slate roofing. Combined with its contemporary addition, this mixed-use project has acted as a catalyst for new development in the Dudley Square area, including substantial new retail and restaurant space in its ground floor.

BEFORE



HISTORIC PRESERVATION / ADAPTIVE REUSE

NORTH POINT LOFTS CAMBRIDGE, MA

This former industrial building creates 103 new “micro” lofts, an emerging new housing prototype for urban dwellers, conveniently located near the new Lechmere station on the Green Line extension. These studio apartments range in size from 330 to nearly 700 square feet, each with floor-to-ceiling windows and contemporary loft interiors and are designed to meet LEED-NC silver criteria.



60 KING PROVIDENCE, RI

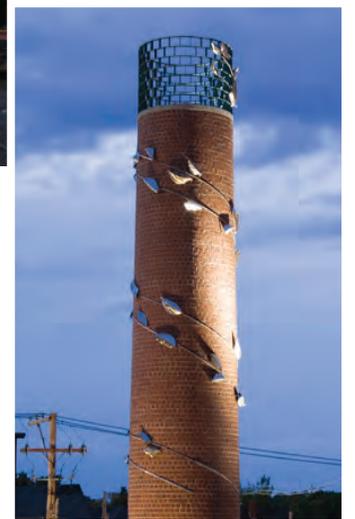
Historically known as the Rochambeau Worsted Mill, and more currently as The Imperial Knife Factory, this project was designed as a mixed income housing development and the First Phase of a larger community redevelopment plan for this area of the Olneyville neighborhood. The development is partially funded with Historic Tax Credits and Low Income Housing Tax Credits. The main building was built in 1923 and is three stories with a flat roof. The exterior is broken up into regular spaced bays with large window openings. There were additions, now removed, that were added over the years. The first in 1937 and the last being in 1980.



HISTORIC PRESERVATION / ADAPTIVE REUSE

THE PLANT + CUBAN REVOLUTION PROVIDENCE, RI

The Plant and Calender Mills mix a new blend of commercial and restaurant space with residential and live/work lofts into two 19th century industrial buildings. Live/work units range from affordable 500 SF studios with a wall of windows, to multi-story lofts with “wow,” and full floor-thru communal “nests.” Adaptive reuse is redefined through a blend of artistic integrity with aplomb. Via selective demolition, the underutilized and overbuilt site was opened up to create parking areas and an award-winning dance courtyard. Although in some areas the internal structure was deteriorated beyond repair, exterior walls were selectively preserved, maintaining the traditional street wall at the back of the sidewalk. New construction is clearly identified in contemporary materials and details.



HIBERNIAN HALL ROXBURY, MA

Restored to its former glory, the Roxbury Center for the Arts combines retail and arts-allied offices with a meeting and performance arts venue. Constructed in 1913 as the home of The Ancient Order of Hibernians, the building was on track to be demolished until recognized as a Boston Landmark. Extensive renovation transformed the 32,000 SF building, now the permanent home of the Arts Culture Trade Roxbury Consortium (ACT Roxbury), and returned it to its rightful place in the rebirth of Dudley Square.



ICON ARCHITECTURE: AFFORDABLE HOUSING PROJECTS

Designing affordable housing is the soul of our practice. We are committed to the highest quality of design, sustainability, livability and long-range economy. Our designs demonstrate sensitivity to their context and display our ability to work thoughtfully with residents, neighbors, and administrators to achieve quality planning and design with superior lasting value.

THE COADY SCHOOL RESIDENCES, BOURNE MA:

Adaptive reuse of 1905 and 1935 historic Georgian Revival School, and new addition, for 63 units of active senior housing and supportive resident community areas. This project is permitted as a 40B 100% affordable development.

SIMPKINS SCHOOL RESIDENCES, SOUTH YARMOUTH MA:

Nestled in the historic district of South Yarmouth, the 1930 John Simpkins School has been redesigned to offer 65 senior housing units. The adaptive reuse includes a historically-sensitive addition, and extensive review by the Cape Cod Commission's Regional Policy Plan. Features include a community room and expansive green space.

FULTON SCHOOL RESIDENCES, WEYMOUTH MA:

The 1928 Nationally Registered Alice E. Fulton School has been reborn as an affordable, active senior community. The adaptive reuse and historically-sensitive addition to the Colonial Revival structure provides 63 apartments, many preserving original detail. This development is one of many ICON renovations putting historic tax credits to work to create senior housing within surplus schools in Massachusetts.

SCHOOL STREET RESIDENCES, ATHOL MA:

Originally constructed in 1915, and later expanded in 1937, the historic Athol Middle School is a 66,600 SF Art Deco style structure that has been completely renovated to provide 50 units for active adults. Utilizing Historic Tax Credit financing, the School Street Residences provides a much needed affordable, locally-available retirement community that preserves an important historic structure.

WALDEN FIRE HOUSE RESIDENCES, REVERE MA:

Built in 1907 in a restrained Classical Revival style, this former fire station provides home to seven units of senior housing. Former fire truck bays now serve as a first floor community space for the broader neighborhood. Original staircases were retained, and still wrap around the fire house pole that was once used for quick passage. Wood wainscoting and trim have been retained and replicated, while historic images have been reproduced as artwork in the hallways. Funded by both historic and low-income housing tax credits, this new use rejuvenates a historic TOD neighborhood, within a walk of both the MBTA Blue Line and the Revere Beach waterfront.

BROWN SCHOOL RESIDENCES, PEABODY MA:

Originally constructed in 1911 with additions in 1920 and 1950, this distinctive structure incorporates elements of the Colonial Revival and Craftsman styles with Renaissance Revival entrance arches. The transformed site consists of a total of 61 active adult units. The reuse of the 30,000 SF historic school structure includes 20 units with community facilities and management space provided on the ground level. Immediately to the east of the school building sits a 41-unit, four-story, 50,000 SF new construction addition.



The Coady School Residences



Simpkins School Residences



Fulton School Residences



School Street Residences



Walden Fire House Residences



Brown School Residences

KEITH CONSTRUCTION TODAY



Firm Organization

Keith Construction is a general contractor and construction manager specializing in multifamily residential construction for clients throughout the Northeast and Mid-Atlantic United States. Based in Canton, Massachusetts Keith Construction incorporated in 1993. Keith Construction is registered to do business in Massachusetts, New Hampshire, Connecticut, Rhode Island, New York, Pennsylvania, Delaware, Virginia, and Florida.

Our History

Mr. Keith has been actively involved in the residential housing business for more than 40 years. He started in the 1960's as a single-family homebuilder and moved on to conventionally financed apartments and condominiums in the 1970's. In 1979 with his partner, William Duggan, he formed Central Street Construction Company, which specialized in developing and building government financed apartment complexes. The company reached a peak volume of \$42 million in 1989, and reorganized in 1992.



In 1993, Mr. Keith teamed up with Mr. Forde, one of the key members of Central Street Construction, and founded Keith Construction, Inc. maintaining the same values, standards of excellence, and goals. Working together and with other apartment owners, the company developed a niche in renovating occupied apartment complexes that needed modernization after nearly twenty years of use.



Keith Construction enjoys an affiliation with Keith Properties, Inc. Keith Construction's close association with the property management company affords our team of specialists the opportunity to look at construction and development from both the owner's and general contractor's vantage point. The learned knowledge from this relationship assists in the planning, design, and construction stages of projects. This is most noticeable in Keith Construction's depth of knowledge in market and housing trends. Clients are often pleasantly surprised at our ability to foresee opportunities often overlooked that help create value.

Business Strategy – Understanding Your Goals and Needs

Keith Construction understands that construction is a service business, and focuses our expertise in housing reconstruction and new development, through a collaborative building effort. These projects fall inside four market segments we define as historic preservation, sustainable building, rental housing, and new development. It is within this collaborative and niche focused framework that we create value for our clients. Our strategic steps include first setting out to understand the clients' goals, and then implementing our building knowledge to help develop the construction program with the owner and design teams.



While not all our projects require the same advanced level of construction expertise, each is treated the same. This commitment and caring have established Keith the industry-wide reputation for quality and professionalism.

Under Mr. Keith's and Mr. Forde's vision and leadership, the company continues to meet new challenges and take advantage of new opportunities.



Keith Construction has completed over 35,000 housing units in the last twenty-five years

KEITH CONSTRUCTION TODAY



Keith Statistics

Its officers are listed below:

John W. Keith
Timothy E. Forde
Kelley Carroll

President and Partner
Vice President and Partner
Treasurer and CFO

Keith currently employs over 50 full-time employees, including carpenters and laborers



Construction Volume

The Last Ten Years

- More than 11,000,000 square feet of residential construction
- Over 20,000 housing units reconstructed and built
- 80% of our work has been on active and occupied sites
- Over 100,000 square feet of community space
- Most of our work is negotiated bid, a testament to our quality and integrity

Minority and Women's Business Execution

Keith Construction takes great pride in our successful minority and women's business outreach policy. Keith maintains an updated database of MBE/WBE subcontractors and actively seeks competitive bids from these firms. We have great success in achieving outreach project goals as noted in the below statistics.

- In the last three years we have awarded over **20** MWBE contracts
- MWBE Contracts awarded in the last three years exceeds **\$18,000,000**
- In the last \$250,000,000 in volume our Minority Staffing exceeds 20%



Safety

Our dedication to the highest levels of safety is demonstrated in our **0.85** Safety Modification Rating. Our aggressive and proactive program means a better working environment, safer sites, and peace of mind for our clients. Our safety program is monitored by safety industry specialist Contractors Risk Management, Inc.



Insurance Reference

Eastern States Insurance
50 Prospect Street
Waltham, MA 02453

Christopher Clark
Account Executive
781-642-9000

Bonding Reference

Alliant Insurance Services, Inc.
131 Oliver Street, 4th Floor
Boston, MA 02110

Michael Cusack
Managing Director
617-217-2324

We are bondable to a \$50,000,000 single project limit and \$150,000,000 aggregate



Bank Reference

Citizens Bank
20 North Park Ave
Plymouth, MA 02360

Christopher Hallee
Sr. Vice President
508-732-5443

KEITH CONSTRUCTION TODAY



Continuity of Construction – Benefits of a Negotiated Bid General Contractor

As a general contractor engaged early in the process we understand that the information we provide during the design phase becomes the foundation for a successful project. Keith Construction takes great pride in ensuring that the budgets we help create are accurate and buildable.

We achieve continuity of construction through the product of understanding your needs, and the use of project control tools and ideas generated throughout the construction process. We focus on schedule, budget, procurement, field and project management to ensure projects finish on time and on budget.

Keith Construction provides numerous pre-construction services that include conceptual estimating, value design, green and energy efficient consultation, site plan review, scheduling, and final budget estimating.



Value Design

A primary focus is on Value Design, a collaborative effort between owner, architect, and contractor focuses on maximizing value of design within budget constraints. The process is a pure cost-benefit analysis based on a series of qualitative and quantitative options rather than an “options pricing exercise” typical of value engineering. In options pricing you will always get less than you want at more than you want to spend.



Scheduling

During construction, you can expect thorough review and updates to the master building schedule. This helps keep the entire team on the same page with regard to work progress and material availability.

Sustainability – Built to Last

At Keith, we endeavor to understand the interrelationships different building components and systems have on the whole building. This is more than building green or using the most environmentally friendly products but helping to create the most value from construction through design collaboration, product availability and cost, and understanding owner needs. We can provide LEED documentation and support.



Project Management

Experienced full-time superintendents and assistants manage all field activities, as work progress requires. This staffing ensures that daily operations, safety, and communication are maintained for a smooth construction process. Ultimately, the project manager is responsible for ensuring the timely delivery of the completed project on budget. The project manager understands that managing the client’s money responsibly is key to the success of the project.

Keith has the expertise and experience to help guide product selection through a whole building approach that includes value design and budgeting. This results in a more efficient, cost-effective building, with lower operating costs and significantly less impact on our surrounding environment. This understanding combined with responsibility for the workflow and schedule round out our project continuity process.



THE KEITH TEAM

Executive Team

From the top down, we recognize what it takes to build out a project successfully. With over 100 years of construction leadership experience, this executive team helps drive a building program integrated with the client's goals and strategy.

John W. Keith President and Partner

John W. Keith has over 45 years' experience in the development and general contracting fields of construction. He has vast knowledge in dealing with state funding organizations and programs, Tax Credits, HUD, and other related organizations. This knowledge and his experience in not only being a successful developer but in dealing with some of the most successful developers in the region makes Mr. Keith a valuable and competent professional in any development or construction team. John W. Keith is also the founder of Keith Properties Inc., a property management company with over 1500 units under management.

Timothy E. Forde Vice President and Partner

Tim Forde is Vice President of all construction operations and Partner. Tim has over 35 years' experience in the construction industry. Tim was one of the key team members in Mr. Keith's Central Street Construction prior to partnering to create Keith Construction. Tim is the executive leader in charge of both project management and field operations for Keith Construction. He has the uncanny ability to quickly understand and help deal with any situation, whether simple or complex.

Vanessa Aguiar Controller

Vanessa started full-time with Keith Construction in 2013 as a Contract Administrator after working part-time at KCI during her final year of college. She graduated with a BS in Accounting and a minor in Legal Studies from Bryant University. Between her internship in construction accounting at a local accounting firm and her accounting experience as the Office Manager for a landscaping/demo company, Vanessa brings extensive experience in administration and project accounting to her current role.

THE KEITH TEAM

Preconstruction and Estimating Team

In conjunction with the executive team our preconstruction and estimating division paves the way for a successful project. From site visits and conceptual estimates through final pricing and purchasing; our P&E team work directly with the clients, architects, and project managers to help define the scope and price the project at hand.

Carolyn M Sicard

Carolyn brings to Keith Construction over 24 years of experience in estimating alongside 8 years of construction purchasing. She has worked on Public and Private work; including: New Construction, additions, renovations, gut rehabs and owner-occupied rehabs. Carolyn's role incorporates many facets including: creating long lasting subcontractor relationships, maintaining subcontractor coverage, properly scoping out subcontractor's proposals while managing a project's MBE/WBE participation and budget. Carolyn's parents instilled in her at a young age that having passion, resilience, commitment, motivation and communication will help her grow to become successful in her career and in life. Carolyn has been happily married for 16 years to a supportive husband and two beautiful daughters. Keith Construction is excited to welcome Carolyn to our team.

Samuel M Wat- Junior Estimator

Samuel is a loyal, singularly focused, and driven team player with quantitative skills in building construction. He is learning estimating and how to price out projects from the ground up, including historical, new construction, and owner occupied rehabilitation. He loves speaking with the subcontractors and is aware the subcontractors are a crucial part to the business. Sam has a bachelor's degree in Construction Management at Wentworth Institute of Technology.

THE KEITH TEAM

Assistant Project Management Team

The Assistant Project Managers work side by side with our Project Managers to ensure the project day to day operations are running smoothly. The tasks include project set up, project execution, project closeout, financial management and relationship management.

Will Calder

After graduating with a BA from St. Lawrence University, Will entered the energy efficiency field, working alongside the Massachusetts energy utilities. It was through conducting over 1,800 field surveys, that Will found his passion for building. Will recently joined the Keith Team and is spending time in both the field and office honing his skills as a Super and APM. He currently holds an unrestricted construction supervisors license in the state of Massachusetts.

David Patel

David has a BS in civil engineering and got his MBA from University of Illinois at Urbana-Champaign in 2016. He joined Keith Construction in 2019 and brings in 3 years of experience in project management and client interaction. Between his time in managing the projects and interacting with the different stakeholders, David has developed the ability to better understand the client's vision and the finished infrastructure that would surpass the client's expectations. This client-oriented mindset has allowed him to streamline the process of managing various aspects of the projects.

THE KEITH TEAM

Project Management Team

The project manager is engaged from the beginning with estimating and value design to ensure the project is successful every step of the way. Once assigned to a project, that project manager becomes your main point of contact from conceptual estimating to delivery of maintenance manuals. This helps ensure continuity of construction.

Ruben Amaral

Ruben holds a BS in Project Management from Wentworth Institute of Technology and went on to receive his MS in Construction Management from Northeastern University in 2015. Ruben has been with Keith Construction since 2015 and brings 10 years of experience in the construction industry, from both a building material supplier, subcontractor and general contractor's perspective. This experience has enabled him to better understand the entire project life cycle and become an integral part of the Project Management team.

Robert Bradley, AIA

Bob is a graduate from Wentworth Institute of Technology and has been with Keith Construction since 1997, after having worked for 10 years as a registered architect. As an architect, he brings a unique perspective and insight to the role of project manager.

Daniel Carleton

Dan has over 20 years experience and has worked on new construction, renovation, and re-use projects. Beyond construction knowledge, Dan's experience includes acting as owner's representative and working within the property management community. He also has extensive experience in interacting with numerous governmental agencies including HUD, MHFA, and MHIC. He has been with Keith Construction since 2006.

Christopher Chiurri, AIA

Chris graduated from Wentworth Institute of Technology with a Bachelor's degree in architecture. With 10 years of experience as an Architect and previous experience as a Construction Project Manager and Site Supervisor, Chris has the diverse experience and skills needed for successful project management.

David Denaro

Dave has been with Keith Construction since 1998, and in that time has worked on a variety of different projects. Dave has over 25 years of knowledge in the construction industry having built numerous new communities and completed countless occupied housing unit rehabilitations. This practical experience and knowledge makes him an invaluable addition to any construction team.

Timothy Forde, Jr.

Earning a Business Management from Quinnipiac University and taking additional course work at Wentworth Institute of Technology in their Construction Management program, Tim spent years gaining academic knowledge to pair with his years of on-site construction field experience prior to joining our project management team. To date, Tim has overseen more than 60 million dollars of construction and takes pride in his work. He has been with Keith since 2011 and joined the Project Management team in 2014.

Wendell F. Orton II

Having been with Keith Construction since the Company's founding in 1993, Wendell has played many critical roles for the construction team over the years. Wendell started as a superintendent and is currently a project manager. He handles many of the out of New England projects Keith manages and constructs. He has a degree in Construction Management from Wentworth Institute of Technology.

THE KEITH TEAM

Superintendents

Like the project managers, Keith Construction superintendents are assigned for the duration of the project. Our superintendents are appointed based on their construction expertise to our projects. Each superintendent is supplemented with assistants who help complement the ongoing work, whether that is required expertise in site construction, general construction, or project closeout.

Superintendents are charged with the day-to-day operations of the site, construction activities, and are on-site 100% of the time. They become the main point of contact to your facilities team and clerk during the construction period. Keith superintendents have an average construction experience of over twenty years, with nearly half having tenure at Keith Construction of ten years. This career longevity and experience with the same company ensures that knowledge gained in doing our work is institutionalized while opportunities to advance the project are capitalized upon.

Hubert Caron

Hubert joined Keith in 2006 and is a licensed construction supervisor in Massachusetts. With the capabilities to manage large quantities of workers on a daily basis, paired with his knowledge of the industry and communication skills, Hubert is a valued part of our team.

Robert Dufour

Robbie has been with Keith since 2002. He has 22 years of construction experience, with specialties in site work, wood framing, and technical finishes. Robbie holds a construction supervisors license, and as an added safety competence, he is also certified in CPR.

Timothy Dumont

Tim has been with Keith since 2001 and is licensed in Massachusetts. He has over forty years construction experience in all phases. He has been a licensed construction supervisor for 30+ years.

George Fourtzialas

George has twenty-three years commercial superintendent experience, with sixteen years in the construction trades specializing in finish and structural carpentry, new home building, occupied rehabs, commercial tenant fit ups and nursing home rehabs. George is licensed in Massachusetts and has been with Keith since 2001 as a Superintendent.

Charles Kourafas

Chuck has been with Keith Construction since the Central Street Construction days beginning in 1984. He is a licensed superintendent whose specialty is site work.

David Lazaro

Dave has been with Keith since 1998 and holds a Massachusetts Unrestricted Construction Supervisor license. David graduated sixth in his class at New Bedford Vocational and started his construction career as a carpenter in 1992.

Don Mayer

Don has been with Keith Construction since 2010. Don brings extensive construction knowledge and experience to Keith Construction, and holds an Unrestricted Construction Supervisor license in the state of Massachusetts.

Bill Plante

Bill has over 20 years of experience in the construction industry and has held an Unrestricted Construction Supervisor's License for 9 of those years. He has experience in multiple areas including drafting, site work, and framing and occupied rehab in both commercial and residential spaces. Bill has been with Keith since June 2014.

KEITH CONSTRUCTION PROJECTS COMPLETED UNDER 5 YEARS

Project Name	City/Town	State	Ownership	Owner (C/O)	Owner Address	Architect	Architect Address	Project Type	Contract Amount	Completion Date	% Complete
Hilltop Apartments Phase One	Washington	DC	Eastern Avenue Receptment Limited Partnership	Winn Development Company Limited Partnership	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 1,704,038.83	12/15/2017	100%
Atlantic Terrace - Solar	Washington	DC	Winn Solar DC	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 86,857.00	9/17/2017	100%
Atlantic Terrace - Roof	Washington	DC	Atlantic Terrace Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 249,000.00	9/29/2017	100%
Umass,Turi 2nd Floor	Lowell	MA	Boott II Commercial Tenant LLC	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Office Rehav	\$ 1,599,497.00	8/18/2017	100%
Winn 2nd Floor Office	Lowell	MA	Boott II Commercial Tenant LLC	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Office Rehav	\$ 669,473.00	8/18/2017	100%
Highland Glen Offices	Westwood	MA	BC Highland Glen LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Tenant Fit Out	\$ 98,456.00	8/15/2017	100%
Quincy Tower	Boston	MA	BC Quincy Tower, LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Rehabilitation	\$ 10,830,549.00	2/15/2018	100%
Mystic Valley Towers	Medford	MA	Mystic Place LP	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 8,342,344.00	7/5/2017	100%
Binnall House	Gardner	MA	Binnall House RHF Partners, LP & Gardner RHF Housing, LLC	Schochet	911 N. Studebaker Road, Long Beach, CA 90815	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 3,110,287.00	11/30/2017	100%
Berkshire Peak	Pittsfield	MA	BC Berkshire Peak LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	Dietz & Company Architects	17 Hampden Street, Springfield, MA 01103	Occupied Renovation	\$ 7,468,136.00	9/8/2017	100%
Palmer Green Estates	Palmer	MA	BC Palmer Green LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	Davis Square Architects	240 A Elm Street, Somerville, MA 02144	New Construction	\$ 8,039,882.00	5/24/2017	100%
NSAIL Schoolhouse Apartments	Waterbury	CT	School Housing Redevelopment Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Rehabilitation	\$ 15,886,588.00	1/1/2018	100%
EPN Housing	Providence	RI	EPN Housing Partners, LP	Vitus Group	1700 7th Avenue, Suite 200, Seattle, WA 98101	DMS Design, LLC	100 Cummings Center, Suite 215C, Beverly, MA 01915	Occupied Rehabilitation	\$ 7,551,333.00	5/3/2017	100%
Springbrook Village	Kingston	NY	Kingston Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 4,153,245.00	10/25/2016	100%
Waterview Apartments	South Boston	MA	Waterview Associates	Federal Management Co. Inc	536 Granite Street, Suite 300, Braintree, MA 02184	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 869,000.00	9/2/2016	100%
EB McNitt Apartments	New Brighton	PA	Winn Development	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 8,319,630.00	12/31/2016	100%
Four Freedoms	Philadelphia	PA	FFPM Housing Partners, LP	Vitus Group	1700 Seventh Avenue, Suite 2000, Seattle, WA 98101	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 9,226,289.00	12/21/2016	100%
Billings Forge Apartments	Hartford	CT	Billings Forge Preservation Associates LP	Preservation of Affordable Housing	40 Court Street, Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 10,014,065.00	6/2/2017	100%
Frost Homestead Apartments	Waterbury	CT	Caleb Waterbury Limited Partnership	The Caleb Foundation, Inc. as a sponsor of the Project & sole member of the general Partner	491 Humphrey Street, Swampscott, MA 01907	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 4,523,205.00	7/1/2016	100%
Island Creek Village North Phase II	Duxbury	MA	ICVN Age Restricted LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	New Construction	\$ 26,408,045.00	10/12/2017	100%
Mill Valley Estates	Amherst	MA	Mill Valley Estates Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 11,894,311.00	1/1/2017	100%
Atlantic Gardens	Washington	DC	Atlantic Gardens Redevelopment LP	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 9,923,777.00	7/14/2017	100%
Atlantic Terrace	Washington	DC	Atlantic Terrace LP	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 15,838,068.00	8/18/2017	100%
Port Landing	Cambridge	MA	Port Landing Tenant LLC	Capstone Communities LLC	165 Armory Street, Cambridge, MA 02139	Prelwitz Chilinski Associates, Inc.	221 Hampshire Street, Cambridge, MA 02139	New Construction	\$ 6,211,190.00	10/31/2016	100%
Dalton Apartments	Pittsfield	MA	Pittsfield April Lane LLC	Rees-Larkin Development LLC		The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 6,010,000.00	12/1/2015	100%
Island Creek WWTF	Duxbury	MA	ICVN Age Restricted LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	New Construction	\$ 3,481,066.00	10/1/2016	100%
Island Creek Village North Phase I	Duxbury	MA	ICVN Age Unrestricted LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	New Construction	\$ 17,793,772.00	9/22/2016	100%

KEITH CONSTRUCTION PROJECTS COMPLETED UNDER 5 YEARS

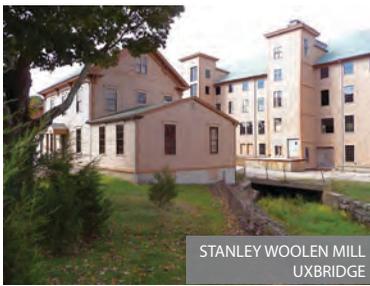
Project Name	City/Town	State	Ownership	Owner (C/O)	Owner Address	Architect	Architect Address	Project Type	Contract Amount	Completion Date	% Complete
River Mill Apartments	Grosvenordale	CT	North Grosvenordale Restoration LLC	Winn Development	6 Faneuil Hall Market Place, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 2,977,217.00	5/1/2016	100%
Douglas House Hamilton Wade	Brockton	MA	Brockton RHF Partners Limited Partnership	Schochet	911 N. Studebaker Road, Long Beach, CA 90815	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 6,496,363.00	12/1/2015	100%
Laurelwood Place Elderly Housing	Bridgeport	CT	Laurelwood Housing Associates LP	Wishrock Housing Partners & Investment Group	Three Canal Plaza, Portland, ME 04101	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 3,699,799.00	12/9/2015	100%
Whitinesville Cotton Mills	Whitinesville	MA	Schochet Whitinesville Associates	Schochet	17 Douglas Road, Whitinesville, MA 01588	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 402,337.00	5/1/2015	100%
Dorado Apartments	Yonkers	NY	Dorado Preservation Associates	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 12,969,878.00	6/1/2016	100%
St. Stephen's	Lynn	MA	St. Stephen's Preservation Limited Partnership	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	Bechtel Frank Erickson	1840 Massachusetts Avenue, Lexington, MA 02420	Occupied Renovation	\$ 10,116,538.00	11/9/2015	100%
Mandela Homes	Boston	MA	Mandela Preservation LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	Bechtel Frank Erickson	1840 Massachusetts Avenue, Lexington, MA 02420	Occupied Renovation	\$ 18,330,188.00	2/5/2016	100%
Park Tower	Philadelphia	PA	Park Preservation Limited Partnership	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	Wallace, Roberts & Todd, LLC	1700 Market Street, Suite 2800, Philadelphia, PA 19103	Occupied Renovation	\$ 5,943,236.00	12/1/2015	100%
Pequot Highlands	Salem	MA	Pequot II Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Boiler Room Renovation	\$ 33,810.00	11/1/2014	100%
Malden Mills II	Lawrence	MA	MM Lawrence II Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 14,606,800.00	8/1/2015	100%
North Village	Webster	MA	North Village Apartments Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 5,259,500.00	7/1/2015	100%
School House Apartments	New Britain	CT	School Housing Partners, LP	Vitus Group	299 Broadway, Suite 1820, New York, NY 10007	Core Group Architects, LLP	123 South Street Oyster Bay, NY 11771	Occupied Renovation	\$ 8,664,144.00	12/9/2015	100%
Watertown Crossing Village	Waterbury	CT	Watertown Crossing Village Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 6,366,535.00	5/1/2015	100%
Boott Cotton Mill West Phase 3	Lowell	MA	Bott Mill Developer LLC	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Rehab Office Space	\$ 1,213,025.00	7/1/2014	100%
Central Annex Apartments	Pittsfield	MA	Central Annex Preservation Associates Limited Partnership	POAH, Inc.	40 Court Street, Suite 700, Boston, MA 02108	Guzman Prufer, Inc.	Five Powderhouse Lane, Sherborn, MA 01770	Occupied Renovation	\$ 5,570,505.00	6/1/2015	100%
Livingston School Apts	Albany	NY	LV Apartments Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 19,087,140.00	7/1/2015	100%
Torrington West Apartments	Torrington	CT	Torrington West Preservation Assoc LP	POAH, Inc.	40 Court Street, Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 2,822,486.00	8/1/2014	100%
Colonial Estates	Springfield	MA	BC Colonial Estates LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 28,740,197.00	9/1/2015	100%
Olympia Oaks	Amherst	MA	Olympia Amherst LP	HAP	322 Main Street, Springfield, MA 01105	Kuhn Riddle Assoc	28 Amity Street, Amherst, MA 01002	New Construction	\$ 8,755,971.00	9/1/2014	100%
Edmands House	Framingham	MA	BC Edmands House LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 10,656,830.00	8/1/2014	100%
Coolidge at Sudbury	Sudbury	MA	CCC Post Road Limited Partnership	Covenant Commonwealth Corporation	34 Washington Street, Brighton, MA 02135	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	New Construction	\$ 9,565,245.00	10/1/2014	100%
Essex Village	Kingston	RI	Essex Village RHF Partners, Limited Partnership	RHF	12 Fischer Drive, North Kingston, RI 02852	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 2,159,896.00	11/1/2013	100%
Kings Grant	Kingston	RI	Essex Village RHF Partners, Limited Partnership	RHF	12 Fischer Drive, North Kingston, RI 02852	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 2,532,621.00	11/1/2013	100%
Washington Park	Roxbury	MA	Washington Park Limited Partnership	Nuestra Comunidad Development Corp	56 Warren Street #200, Roxbury, MA 02119	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 11,772,780.00	7/1/2014	100%
Station Lofts	Brockton	MA	CC Station Lofts LLC	Capstone Communities LLC	165 Amory Street, Cambridge, MA 02139	Prelwitz, Chlinski Associates, Inc.	211 Hampshire Street, Cambridge, MA 02139	Mill Renovation	\$ 5,012,282.00	12/1/2013	100%
Venango House	Philadelphia	PA	2102 Venango Limited Partnership	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 5,733,788.00	9/1/2013	100%
Boott Mill	Lowell	MA	Boott Mill Developer LLC	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Mill Renovation	\$ 21,974,621.00	11/1/2013	100%

KEITH CONSTRUCTION PROJECTS COMPLETED UNDER 5 YEARS

Project Name	City/Town	State	Ownership	Owner (C/O)	Owner Address	Architect	Architect Address	Project Type	Contract Amount	Completion Date	% Complete
Conway Court	Roslindale	MA	Beacon Communities LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 1,191,070.00	1/1/2013	100%
Bayview Towers	Stamford	CT	Bayview Preservation Partners LP	POAH, Inc.	122 East 42nd Street, Ste 3605, New York, NY 10168	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 12,356,125.00	4/1/2014	100%
Jaclen Towers	Beverly	MA	Beacon Communities LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 5,834,541.00	1/1/2013	100%
Summerhill Glen	Maynard	MA	Beacon Communities LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 5,146,054.00	1/1/2013	100%
Wilkins Glen	Medfield	MA	Beacon Communities LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Occupied Renovation	\$ 4,028,777.00	1/1/2013	100%
Ames Shovel Works	North Easton	MA	BC Shovel Works LLC/Shovel Works Two LLC	Beacon Communities LLC	Two Center Plaza - Suite 700, Boston, MA 02108	Prellwitz/Chilinski Associates Inc.	221 Hampshire Street, Cambridge, MA 02139	Mill Renovation	\$ 27,929,675.00	3/1/2014	100%
Wiggins Village	Providence	RI	Providence BSE	Winn Development	207 Cranston St., East Providence, RI 02904	Finegold, Alexander and Assoc.	77 N Washington St #7 Boston, MA 02114	Occupied Renovation	\$ 8,014,271.00	1/1/2013	100%
Cliftex Lofts	New Bedford	MA	Cliftex Lofts LLC	Winn Development	Six Faneuil Hall Marketplace, Boston, MA 02109	The Architectural Team, Inc	50 Commandants Way at Admiral's Hill, Chelsea, MA 02150	Mill Renovation	\$ 19,356,830.00	4/1/2013	100%

\$ 515,623,178.83

STATE AND FEDERAL HISTORIC REHABILITATION TAX CREDITS



STANLEY WOOLEN MILL
UXBRIDGE



WALTHAM WATCH CO
WALTHAM



311 SUMMER STREET
SOUTH BOSTON



WALDEN ST. FIRE STATION
REVERE



PONEMAH MILL
NORWICH, CT



COURT SQUARE BUILDING
SPRINGFIELD



BAKER SQUARE II
BOSTON



MOHAWK THEATER
NORTH ADAMS



WALKER AUTO BODY
AMESBURY



STATE NORMAL TRAINING SCHOOL
WESTFIELD



MONUMENT SQUARE APARTMENTS
TROY, NY



L.H. HAMEL LEATHER MILLS
HAVERHILL

Epsilon's team of Historic Preservation Specialists provides clients with the insight and guidance needed to secure project approvals from State Historic Preservation Offices and the National Park Service. We work closely with project proponents and team members including architects, engineers and designers to ensure compliance with the Secretary of the Interior Standards for Rehabilitation. We maintain excellent working relationships with the staff of the National Park Service and New England State Historic Preservation Offices. Epsilon's historic preservation staff has a unique understanding of program requirements, proponent needs, and agency expectations due to their prior employment with both state agencies and consulting firms.

For further information about Epsilon's historic tax credit consulting services please call:

- Douglas Kelleher**, Principal - 978.461.6259
- Brian Lever**, Associate - 978.461.6261
- Geoff Melhuish**, Senior Consultant - 978.461.6224
- Brielly Allen**, Preservation Planner - 978.461.6209
- Erin Doherty**, Preservation Planner - 978.461.6279

Epsilon
ASSOCIATES INC.

3 Mill & Main Place, Suite 250
Maynard, Massachusetts 01754
p) 978.897.7100 f) 978.897.0099
www.epsilonassociates.com



Douglas J. Kelleher

Principal / Historic Preservation Specialist

EDUCATION

Certificate, "Development Permitting in Boston," Massachusetts Continuing Legal Education

Certificate, "Green Strategies for Historic Buildings," National Preservation Institute (NPI)

Certificate "Sec. of the Interior's Standards for the Rehabilitation of Historic Properties," NPI

Certificate "Issues in Federal Cultural Resource Compliance," NPI, Alexandria, VA

B.S., Historic Preservation Planning, Roger Williams College

London Preservation Studies Program, Roger Williams College

PROFESSIONAL MEMBERSHIPS

Board of Directors, Preservation

Massachusetts

Salem Historical Commission, past member

National Trust for Historic Preservation

Essex National Heritage Commission

Boston Preservation Alliance

Historic New England

Historic Salem, Inc.

Boston Athenaeum

Historic Boston, Inc.

Society of Architectural Historians

Mr. Kelleher has more than 27 years of professional experience in historic preservation planning, cultural resource management, historic tax credits and architectural design review. At Epsilon, Mr. Kelleher is a Principal of the firm and Manages Epsilon's team of highly respected Historic Preservation professionals. He assists clients with strategic consulting for compliance with local, state, and federal historic preservation regulations. Mr. Kelleher provides assistance to clients in meeting regulatory requirements through consultation with state and federal agencies and the preparation of environmental impact assessments and documentation, and Chapter 254, Section 106, and Section 4(f) evaluations.

Mr. Kelleher has an expertise in state and federal historic rehabilitation tax credits. He provides guidance to developers and architects on the appropriate adaptive reuse and redevelopment of historic buildings in order to comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties. His background meets the Secretary of the Interior's Qualifications as a Historic Preservation Consultant.

Prior to joining Epsilon in 2005, Mr. Kelleher was a Senior Preservation Planner with a large engineering consulting firm where he was responsible for establishing a cultural resources compliance practice. Mr. Kelleher's background also includes nearly six years as a Preservation Planner with the Massachusetts Historical Commission.

PROFESSIONAL EXPERIENCE***Select list of State and Federal Historic Tax Credit Projects***

- ◆ *Central Grammar Apartments, Gloucester, MA.* Project Manager for the preparation of State and Federal Historic Tax Credit Applications for the substantial rehabilitation of an 1889 / 1922 former grammar school building for 80 units of the affordable elderly housing. The project included masonry repairs, mechanical system upgrades and the installation of historically appropriate replacement windows.
- ◆ *Chapin School, Chicopee, MA.* Project Manager for the preparation of State and Federal Historic Tax Credit Applications and a National Register of Historic Places nomination for the late 19th / early 20th century Chapin School as part of its conversion to housing for formerly homeless veterans.
- ◆ *Bowdoin Manor, Beacon Hill, Boston, MA.* Project Manager for the preparation of State and Federal Historic Tax Credit Applications for the rehabilitation of two early 20th century masonry buildings located on Boston's Beacon Hill for use as 120 single room occupancy residences. Responsibilities also included preparing an MHC Project Notification Form and securing design review approvals from the Beacon Hill Architectural Commission.
- ◆ *Jewett Piano Case Factory, Leominster, MA.* Project Manager responsible for overseeing the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for the conversion of a vacant, late 19th century, wood frame, piano case factory building to 41 units of affordable elderly housing.
- ◆ *J.P. Friend & Company Box Factory, Beverly, MA.* Project Manager for the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for an 1896 brick, former box factory converted to single room occupancy residential units for formerly homeless veterans.
- ◆ *Parkhill Mill, Fitchburg, MA.* Prepared necessary research and historic documentation to obtain a determination of National Register eligibility from the Massachusetts Historical Commission and the National Park Service in order for the late 19th century textile mill undergoing conversion to affordable elderly housing to qualify for state and federal historic rehabilitation tax credits.
- ◆ *New Home Sewing Machine Company, Orange, MA.* Project Manager for the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for the conversion of late 19th century industrial buildings to 60 units of new affordable elderly housing.
- ◆ *Livingston School, Albany, NY.* Project Manager responsible for overseeing the preparation of State and Federal Historic Rehabilitation Tax Credit Applications for the conversion of a former 1932 school to 103 units of affordable housing.



Brian Lever

Associate

EDUCATION

M.L.A., Anthropology/Archaeology,
Harvard University

M.A., American History, University of
Connecticut

B.A., History, University of
Massachusetts, Amherst

B.A., Archaeology, University of
Massachusetts, Amherst

PROFESSIONAL MEMBERSHIPS

Association for Preservation
Technology

Society of Architectural Historians

Boston Preservation Alliance

Mr. Lever has over 19 years of experience in architectural history and preservation planning. Mr. Lever provides assistance to clients in meeting regulatory requirements through consultation with state and federal agencies and the preparation of historic preservation compliance documentation. Mr. Lever has experience in implementing Section 106 of the National Historic Preservation Act, and related local, state, and federal environmental laws, regulations, and guidelines affecting historic resources. Additionally, Mr. Lever has expertise in state and federal historic rehabilitation tax credits.

Prior to joining Epsilon, he worked as the Senior Preservation Planner for the City of Newton where he managed the City's preservation efforts and served as a resource to elected officials, appointed officials, and the public regarding historic preservation issues and projects. He provided technical assistance in reviewing projects, prepared preservation restrictions, analytical research reports and guidelines; and made recommendations regarding future policy and ordinance changes. He also documented historic properties for inclusion in the Inventory of Historic and Archaeological Assets of the Commonwealth and the National Register of Historic Places.

Mr. Lever's prior experience also includes working as a historic preservation consultant for private and non-profit preservation firms as an architectural historian. He conducted Section 106 reviews for telecommunications projects throughout New England. Additionally, he completed historic resources surveys, assessed National Register eligibility of historic structures and sites, and authored compliance reports under the National Environmental Policy Act (NEPA). He also consulted with federal agencies, State Historic Preservation Offices, local historical commissions, and the general public on preservation procedures. Mr. Lever has also executed special history studies.

In addition, Mr. Lever background includes working as an archaeologist and park ranger for the National Park Service. He gave public presentations and led educational programs for school children and tours of historic sites. He engaged in archaeological reconnaissance surveys and data recovery projects of prehistoric and historic archaeological sites under state and federal regulations including Section 106, Section 4F of the Dept. of Transportation Act, and NEPA.

PROFESSIONAL EXPERIENCE***Select State and Federal Historic Rehabilitation Tax Credit Projects***

- ◆ *Abby's House, Worcester, MA.* This project involved the rehabilitation of an existing single room occupancy housing complex to provide necessary upgrades. Mr. Lever prepared state and federal rehabilitation certification applications, demolition review application for the City of Worcester and the National Register of Historic Places eligibility opinion for the building.
- ◆ *Central Annex, Pittsfield, MA.* This project involved the rehabilitation of existing affordable housing units within a historic 1896 school. Mr. Lever assisted in drafting the state and federal historic tax credit applications for the project..
- ◆ *Schoolhouse Apartments: Webster, Bishop and Wilby, Bridgeport, CT.* This project involved the rehabilitation of existing affordable housing units within three different historic schools providing necessary upgrades. Mr. Lever prepared the state and federal rehabilitation certification applications for the three projects.
- ◆ *Tribune Apartments, Framingham, MA.* This project involved the rehabilitation of existing affordable housing units within a 1904 commercial building in downtown Framingham. Mr. Lever prepared the state rehabilitation certification application.
- ◆ *Library Commons, Holyoke, MA.* This project involved the rehabilitation of two late 19th century apartment buildings and an early 20th century dormitory creating new affordable housing units as well as the rehabilitation of an existing early 20th century apartment building. Mr. Lever drafted the state and federal rehabilitation certification applications as well as two National Register nominations and four MHC Project Notification Forms.
- ◆ *Wellington Apartments, Worcester, MA.* This project involved the completion of state and federal rehabilitation certification applications for 10 separate buildings used for affordable housing as well as an MHC Area Form seeking a National Register eligibility determination. Mr. Lever prepared the state and federal rehabilitation certification applications for the 10 buildings.
- ◆ *Central Building, Worcester, MA.* This project involved the rehabilitation and conversion of an early 20th century commercial office building in downtown Worcester into a mix-use building including affordable housing. Mr. Lever prepared the state and federal rehabilitation certification applications for the project.

Geoffrey Melhuish

Senior Consultant

EDUCATION

Certificate, "Preservation Leadership Training,"
National Trust for Historic Preservation

Certificate, "Traditional Historic Mortar
Restoration," Campbell Center for Historic
Preservation Studies

Certificate, "Microscopy for Paint Pigment
Identification for the Art and Architectural
Conservator," Campbell Center for Historic
Preservation Studies

B.S., Historic Preservation Planning, Roger
Williams University

Wroxton College Preservation Studies Program,
Roger Williams University

PROFESSIONAL MEMBERSHIPS

Association for Preservation Technology

National Trust for Historic Preservation

Preservation Mass

Bayside Community Development Corporation,
past board member

Greater Portland Landmarks, past President

Preservation Worcester

Mr. Melhuish has more than 22 years of professional experience in architectural conservation, historic preservation planning, cultural resource management and project management. He assists private and public clients with strategic consulting for compliance with local, state, and federal historic preservation regulations. Mr. Melhuish assists clients in meeting regulatory requirements through consultation with state and federal agencies and the preparation of environmental impact assessments and documentation, and Chapter 254, Section 106, and Section 4(f) evaluations.

Mr. Melhuish has extensive experience in implementing Section 106 of the National Historic Preservation Act, Chapter 254 of Massachusetts General Laws, and related local, state, and federal environmental laws, regulations, and guidelines affecting historic resources, including Massachusetts Environmental Policy Act (MEPA) and Maine Land Use Regulation Commission (LURC). He has established working relationships with municipal, state and federal agencies, the development community, architectural and planning firms, and private organizations involved in cultural resource management.

Mr. Melhuish has an expertise in adaptive reuse and the rehabilitation of National Register listed properties and other culturally significant buildings in a broad range of market sectors, including residential, commercial, civic, religious, and education. He provides guidance to developers and architects on the appropriate adaptive reuse and redevelopment of historic buildings in order to comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties. His professional experience meets the Secretary of the Interior's Qualifications as a Historic Preservation Consultant.

Prior to joining Epsilon, Mr. Melhuish worked at an architecture and historic preservation firm in Portland, Maine where he led numerous historic restoration and historic rehabilitation projects as well as many historic resource surveys and preservation planning projects. His previous experience also includes numerous years as an Historic Preservation Specialist with a cultural resource management firm working on projects for the Dept. of Defense throughout the Eastern United States, Puerto Rico and Iceland.

PROFESSIONAL EXPERIENCE***Select list of State and Federal Historic Rehabilitation Tax Credit Projects***

◆ *Anglim Building, 93 Centre Street, Brockton MA.* This project involves the rehabilitation of a 1906 Renaissance Revival commercial block in downtown Brockton into 53 residential units. Mr. Melhuish assisted in the preparation of the Part 1 and Part 2 state and federal historic rehabilitation tax credit applications for the project.

◆ *47 Pleasant Street, Brockton MA.* This project includes the rehabilitation of a 1923 industrial building in downtown Brockton constructed for the New England Telephone and Telegraph Company. Mr. Melhuish completed the MHC Building Form (Form B), the Part 1 and Part 2 state and federal historic rehabilitation tax credit applications and National Register nomination for the building.

◆ *Bancroft and Dixwell Apartment Blocks, Boston MA.* This project includes the rehabilitation of two clusters of late 19th and early 20th century multi-unit apartment blocks for commercial and residential use. Mr. Melhuish assisted in the completion of MHC Area Forms (Form A) and Building Forms (Form B) as well as the Part 1 state historic rehabilitation application to obtain a determination of National Register eligibility from the MHC in order to qualify for State Historic Rehabilitation Tax Credits.

◆ *St. James Commons, Springfield, MA.* This project involved the rehabilitation of two early 20th century apartment blocks creating new affordable housing units. Mr. Melhuish prepared National Register of Historic Places nominations for the properties.

◆ *Dudley Terrace, Boston (Dorchester), MA.* This project involves the rehabilitation of four late 19th and early 20th century multi-unit apartment buildings with 100% of the units affordable. Mr. Melhuish completed the MHC Area Forms (Form A) and Building Forms (Form B) as well as Part 1 State and Federal Historic Tax Credit applications to obtain determinations of National Register eligibility from the MHC and NPS.

◆ *George S. Clough House, Worcester, MA.* This project involved the rehabilitation of a late 19th century apartment building as 18 single room occupancy units. Mr. Melhuish prepared final certifications and secured project approvals from the MHC and the NPS.



Brielly Allen

Project Preservation Planner

EDUCATION

B.S. Historic Preservation, Roger Williams University

PROFESSIONAL REGISTRATION

Certificate, "Section 106 Essentials,"
Advisory Council on Historic Preservation
2016

PROFESSIONAL MEMBERSHIPS

National Trust for Historic Preservation

Preservation Massachusetts

Historic New England

Ms. Allen has more than 10 years of professional experience in cultural resource management and historic preservation planning. She has served as a planner for projects involving environmental review and historic preservation. Ms. Allen has experience in state and federal historic rehabilitation tax credit applications. She has worked with environmental law, regulations, and guidelines affecting resources at the local, state, and federal levels.

Ms. Allen has prepared state and federal historic tax credit applications for projects throughout the Northeast. She also has extensive experience in documenting historic properties for inclusion in the Massachusetts Historical Commission's *Inventory of Historic and Archaeological Assets of the Commonwealth* and has prepared National Register of Historic Places nominations for both individual properties and historic districts.

PROFESSIONAL EXPERIENCE***Select State and Federal Historic Rehabilitation Tax Credit Projects***

- ◆ *South End Apartment Buildings, Boston MA.* This project included the rehabilitation of 28 apartment buildings throughout the South End. Prior to joining Epsilon, Ms. Allen prepared the state and federal historic rehabilitation tax credit applications for each of the buildings.
- ◆ *Wilshire Apartments, Roxbury MA.* This project included the rehabilitation of the 1929 apartment block for continued affordable housing units. Ms. Allen assisted in the completion of the state and federal historic rehabilitation applications for the project.
- ◆ *Wellington Apartments, Worcester MA.* This project included the rehabilitation of 10 apartment buildings for continued affordable housing. Ms. Allen assisted in the preparation of the state and federal historic rehabilitation applications for the projects.
- ◆ *Central Annex, Pittsfield, MA.* This project included the rehabilitation of existing affordable housing units within a historic 1896 school. Ms. Allen completed photograph documentation and Part 3 state and federal historic rehabilitation applications.
- ◆ *Old Middletown High School, Middletown, CT.* This project included the rehabilitation of existing affordable housing units within a historic 1894 school. Ms. Allen completed photograph documentation and Connecticut Historic Rehabilitation Tax Credit Part 4 Application.
- ◆ *Union Court, Pittsfield, MA.* This project included the rehabilitation of existing affordable housing units in a 1905 commercial building. Ms. Allen completed photograph documentation and Part 3 state and federal historic rehabilitation applications.
- ◆ *Julia Bancroft School, Auburn, MA.* This project included the rehabilitation of a 1927 school for affordable senior housing. Ms. Allen completed photograph documentation, the MHC Building Form (Form B) and the Part 1 state and federal historic rehabilitation applications.
- ◆ *Mary D. Stone School, Auburn, MA.* This project included the rehabilitation of a 1928 school for affordable senior housing. Ms. Allen completed photograph documentation, the MHC Building Form (Form B) and the Part 1 state and federal historic rehabilitation applications.

Erin Doherty

Preservation Planner

EDUCATION

M.A., Historic Preservation, Boston University

B.A., Russian and French, Wellesley College

PROFESSIONAL MEMBERSHIPS

Boston Preservation Alliance

Boston Preservation Alliance Young Advisors

Preservation Massachusetts

Roslindale Village Main Street

Vernacular Architecture Forum

Ms. Doherty has more than 7 years of professional experience in cultural resource management and historic preservation planning. Having spent much of her career in the public sector, she has an intimate familiarity with environmental laws, regulations, and guidelines affecting historic resources at the local, state, and federal levels. Ms. Doherty has extensive experience in state and federal historic rehabilitation tax credit applications.

Prior to joining Epsilon, Erin worked at the Massachusetts Historical Commission (MHC) for 3 ½ years, where her primary responsibility was the review and approval of state and federal historic tax credit applications. In that role, Erin was responsible for assessing the historic significance of properties under National Register criteria and reviewing project compliance with Secretary of the Interior's Standards for Rehabilitation. Erin guided hundreds of projects from across Massachusetts through the MHC and National Park Service review processes. She was responsible for reviewing a wide range of historic resources, from vacant municipal and school buildings, to large industrial properties, to multi-family affordable housing complexes. During her time at MHC, Erin completed specialized training in the federal historic tax credit program with the National Park Service. Erin previously worked at the Massachusetts Historical Commission in the Preservation Planning Division, where she assisted in the administration of the Survey and Planning Grant program and in the digitization of the Commonwealth's inventory of historic and archaeological resources.

During her time at the City of Boston as a Preservation Planner for the Boston Landmarks Commission, Ms. Doherty oversaw the administration of the City's Beacon Hill, Fort Point Channel, and Aberdeen local historic districts. In this role, she reviewed the design and construction phases of projects across three architecturally diverse districts in the City of Boston. Erin regularly provided technical assistance to homeowners, other City departments, and developers, and managed public hearings. Erin also reviewed and provided letters of support for all state historic rehabilitation tax credit applications for buildings within these three historic districts.

PROFESSIONAL EXPERIENCE

State and Federal Historic Rehabilitation Tax Credits

◆ *Isaac Moody Grocery Store, 289 Central Street, Lowell, MA.* Erin prepared the state and federal Part 1 and Part 2 applications for historic rehabilitation tax credits for the residential conversion of this ca. 1830 commercial building. The building is located within the Lowell National Historical Park.

◆ *St. Joseph Roman Catholic Church Rectory, 131 Lafayette Street, Salem, MA.* Erin prepared the state and federal Part 1 and 2 applications for historic rehabilitation tax credits for the residential conversion of this former Rectory. Formerly a part of the St. Joseph's Church complex, the building had sustained years of vacancy after the suppression of the parish. The rehabilitation of the building will provide 13 units of housing.

◆ *St. Joseph Roman Catholic Church School, 20 Harbor Street, Salem, MA.* Erin prepared the state and federal Part 1 and 2 applications for historic rehabilitation tax credits for the residential conversion of this former Catholic school following years of vacancy. The rehabilitation of the building will provide 21 units of housing.

◆ *Prescott Building, 41 Summer Street, Leominster, MA.* Erin prepared the state and federal Part 1 and 2 applications for historic rehabilitation tax credits for the rehabilitation of the ca.1840 property. The rehabilitation will provide 21 micro-units of rental housing.

Prior to joining Epsilon, Erin worked at the Massachusetts Historical Commission and reviewed hundreds of historic tax credit projects across the Commonwealth. These projects include:

◆ *Camden Development and Lenox Street Apartments, Boston, MA.* Rehabilitation of mid-20th century public housing complexes for continued affordable housing use.

◆ *American Optical Company Complex, Southbridge, MA.* Residential conversion of 19th century brick mill buildings and rehabilitation of early 20th century power plant into market rate and affordable housing units.

◆ *Worcester County Courthouse, Worcester, MA.* Residential conversion of the former 19th century courthouse and mid-20th century addition into market rate and affordable housing units.



Low-income housing tax credits (“LIHTCs”)

Nixon Peabody is among the nation’s foremost legal authorities in transactions involving the federal low-income housing tax credit (LIHTC). The firm’s attorneys helped shape the legislation that created the LIHTC program, and the team has contributed to the creation and implementation of every major federal housing program in the last 40 years. The group’s knowledge of the transactional, regulatory, and legislative history of the LIHTC program helps to solve common and uncommon problems associated with it. The firm has more attorneys with experience in LIHTC issues than any other law firm in the nation.

Historic rehabilitation tax credits (HTC)

Mixed-use-friendly, “smart growth”-oriented, inherently green, and in sync with the preferences of today’s tenants, HTCs are a key driver of downtown real estate investment and community revitalization. Nixon Peabody’s attorneys regularly represent investors and developers to structure, negotiate, document, and close transactions involving HTCs. In some instances, we have combined HTCs with low-income housing tax credits (LIHTCs), federal new markets tax credits (NMTCs), and a variety of state tax credits. Nixon Peabody has closed hundreds of HTC tax equity investments nationwide, including over 120 transactions since the IRS issued Revenue Procedure 2014-12.

HUD and mixed finance experts

We provide statutory, regulatory, and, perhaps most importantly, practical advice in preparation of materials needed to obtain HUD approval of demolition, disposition, RAD conversion, and other HUD approvals necessary to the success of a project. We have broad experience in working with HUD’s Special Application Center (SAC) and local HUD office staff, as well as with HUD Headquarters staff who are in charge of these programs. Our team has some of the most extensive experience in mixed-finance in the country. Our team’s experience representing housing authorities, developers, lenders, and syndicators with the HOPE VI and Choice Neighborhoods programs allows us to bring significant legal resources and business acumen to bear on whatever issues arise in structuring a public housing revitalization project.

General real estate

The Affordable Housing team also has the ability to draw on the firm’s strong real estate attorneys to handle a variety of work. In conjunction with development projects, our real estate attorneys routinely handle a variety of general real estate tasks, including:

- Negotiating real estate documents to ensure the best financial position with respect to other transaction participants
- Negotiating and reviewing various agreements, such as regulatory and operating agreements, restrictive covenants, management agreements, joint venture agreements, and partnership agreements
- Reviewing and negotiating the terms of ground leases
- Advising on real estate tax issues
- Advising on regulatory, statutory, and other legal issues and handling other related real estate work as needed

Real estate finance

We represent both borrowers and lenders in loans secured by all types of commercial real estate. Our national practice encompasses all forms of secured debt including bridge, acquisition, construction, and permanent financing secured by fixed and floating rate mortgages, mezzanine debt, and fee and leasehold mortgages.



Nixon Peabody Team Biographies



CONTACT

Paul E. Bouton
Partner

Boston
Exchange Place
53 State Street
Boston, MA 02109-2835
Phone: 617-345-1240

Fax: 866-947-1841
pbouton@nixonpeabody.com

SERVICES

Real Estate

Real Estate & Community
Development

Affordable Housing

Community Development
Finance

EDUCATION

Boston College Law School,
J.D.

University of Connecticut,
M.B.A.

University of
Massachusetts, B.B.A.

ADMISSIONS

Massachusetts

PAUL E. BOUTON

Paul Bouton is a partner in Nixon Peabody's Affordable Housing group. He represents affordable housing developers in the development and preservation of affordable housing, primarily in Massachusetts.

What do you focus on?

I focus my practice on all aspects of affordable housing finance and development. I have represented owners and developers in the production and preservation of tens of thousands of affordable housing apartment units.

As part of my work in affordable housing finance, I have gained significant experience in structuring and documenting partnership arrangements between developers, owners, investors and others involved in affordable housing development.

I have developed legislative experience as well, as I helped write and implement two Massachusetts state laws relating to affordable housing preservation and development, specifically the Massachusetts state low-income housing tax credit program and the Massachusetts affordable housing preservation law (40T).

What do you see on the horizon?

The scarcity of resources to develop and preserve affordable housing will continue to be an issue. In order to compete for these resources, clients must put together an excellent project team and demonstrate that the proposed projects are well conceived and ready to proceed.

Representative Experience

- Several owners/developers in the acquisition, financing and rehabilitation of a number of existing multifamily affordable housing developments.
- The owner in the acquisition and financing of a historic building and conversion into affordable housing. The financing included federal and state low-income housing and historic tax credits.
- An owner in the acquisition and financing of a scattered site affordable housing development in Boston, acquired in a Bankruptcy Court Section 363 sale.
- The owner in the refinancing of a 508-unit luxury apartment complex in Boston.
- An owner in the recapitalization of a 967-unit affordable apartment complex in Hyde Park, Massachusetts.
- A developer in the financing of a 100-unit 40R development in Lakeville, Massachusetts.
- A purchaser in the acquisition and development of property in Danvers and Peabody, Massachusetts, which was the subject of significant environmental contamination.
- A joint venture between Edward Fish and Arthur Winn in connection with the redevelopment of Mission Main, a public housing development in Boston, Massachusetts.



CONTACT

Ruth H. Silman
Partner
Office Managing Partner,
Boston

Boston

Exchange Place
53 State Street
Boston, MA 02109-2835
Phone: 617-345-6062
Fax: 866-947-1897
rsilman@nixonpeabody.com

SERVICES

Environmental
Energy
Real Estate
Real Estate & Community
Development
Climate Change
Environmental Permitting
& Compliance
Siting & Permitting
Energy Project Permitting
Renewable Energy
Brownfields
Redevelopment
Energy Regulation
Food, Beverage &
Agriculture

EDUCATION

Boston University School of
Law, J.D.
Cornell University, B.A.

RUTH H. SILMAN

Ruth Silman concentrates her practice on complex land use, environmental and energy matters. She leads Nixon Peabody's Climate Change team, an interdisciplinary group of lawyers and environmental specialists focused on meeting the challenges and seizing the opportunities emerging from legislative, regulatory and judicial actions related to climate change. Ruth is also the Managing Partner of the Boston Office.

What do you focus on?

I love the depth and breadth of my practice because there is always a new issue or development.

Siting and Permitting

I work with clients to obtain zoning, land use and environmental permits and approvals for their projects. My clients include real estate developers, renewable energy developers, manufacturers, business owners, investors, private landowners and municipalities.

Regulatory Compliance

I help clients navigate through environmental and energy regulations to comply with existing rules, prepare for future provisions and understand evolving issues. One of my specialties is the Clean Air Act; currently, I am working with a number of manufacturing clients facing permitting and enforcement matters.

Climate Change and Sustainability

I represent companies who are impacted by climate change and climate change policy. We collaborate on how to face the new realities posed by climate change, as well as how to implement sustainable practices to prevent further impacts to the environment. I am working with a large



ADMISSIONS

Massachusetts

Rhode Island

U.S. District Court, District
of Massachusetts

beverage client on reducing water impacts and water conservation measures.

What do you see on the horizon?

I see the need to address environmental, energy and sustainability issues in a holistic fashion to help my clients implement processes that work for their growing businesses.

Recognition

Ruth has been selected by her peers for inclusion in *The Best Lawyers in America*© 2019 in the field of Environmental Law. She has been listed in *Best Lawyers in America* since 2011.

Ruth has also been recognized for exceptional standing in the legal community in *Chambers USA: America's Leading Lawyers for Business 2018* for Environment (Massachusetts). She has also been recognized in *Chambers USA* in previous years.

Ruth was nominated by her peers as a leading practitioner in *The International Who's Who of Environmental Lawyers 2013*.

Affiliations

Ruth is a member of the Boston Bar Association (former co-chair of the Environmental Law Section), the Environmental Business Council of New England (board member and chairman of the Climate Change and Air Quality Committee), the Air and Waste Management Association (former board member of New England Section), the Real Estate Bar Association, and the American Bar Association (Environment and Natural Resources Section). In her community of Harvard, Massachusetts, Ruth serves on the Board of the Virginia Thurston Healing Garden which provides integrative therapies to cancer patients and their families.



CONTACT

John H. Cornell, III
Partner

Boston
Exchange Place
53 State Street
Boston, MA 02109-2835
Phone: 617-345-1127

Fax: 866-947-1691
jcornell@nixonpeabody.com

SERVICES

Real Estate & Community
Development
Community Development
Finance
Cannabis

EDUCATION

Boston College Law School,
J.D., *magna cum laude*
Boston College, A.B., *magna
cum laude*

ADMISSIONS

Massachusetts

JOHN H. CORNELL, III

John Cornell represents investors, syndicators, developers and lenders in transactions involving federal and state tax credits and other incentives.

What do you focus on?

Currently, my practice focuses on the three main areas below. I'm passionate about tax credit investing and am a frequent speaker at industry conferences.

Fund formation, finance and administration

I focus in fund formation and securities law for clients in the tax credit area. Most recently my team successfully completed a \$150,000,000 institutional tax equity fund for a national sponsor of low-income housing tax credit investments. I represent many fund sponsors in negotiating warehouse and bridge credit facilities, in secondary market transactions and in general corporate matters. I took a leading role in developing the industry's position on the Dodd-Frank financial reforms.

Historic rehabilitation

I have extensive experience in transactions involving the historic rehabilitation tax credit. My team recently represented a bank investor in the rehabilitation of a historic mill building in Buffalo, New York, which is being converted to 87 loft-style apartments. We are also representing a national hotel chain in the historic rehabilitation of a 21-story office building in Philadelphia, Pennsylvania, which is being converted to a 150-room full-service hotel. Many of my HTC deals are combined with new markets tax credits and state tax credits.

Renewable energy

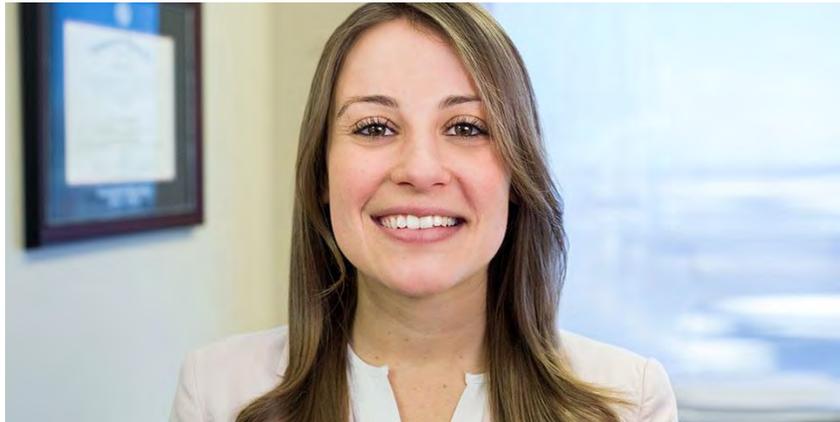
I also focus on representing developers and investors in renewable energy transactions. Our team successfully represented a developer in a series of utility scale solar PV installations sited on capped landfills just



recently. I am also working on an innovative clean energy fund family for solar and fuel cell investments.

What do you see on the horizon?

We have been following tax reform initiatives as well as the new IRS guidance on historic rehabilitation tax credit transactions. We are developing strategies to help clients deal with the new guidance and I will be co-chairing an industry conference to explore these issues.



CONTACT

Julie Hancock Stande
Associate

Boston
Exchange Place
53 State Street
Boston, MA 02109-2835
Phone: 617-345-6045
Fax: 855-464-5390
jstande@nixonpeabody.com

SERVICES

Real Estate Transactions &
Development
Health Care
Real Estate
Seniors Housing & Care
Real Estate & Community
Development
Affordable Housing

EDUCATION

Northeastern University
School of Law, J.D.
University of Connecticut,
B.A., *cum laude*

ADMISSIONS

Massachusetts

JULIE HANCOCK STANDE

Julie Hancock Stande represents developers, landowners and investors in all aspects of commercial real estate transactions.

What do you focus on?

Multifamily Housing

I assist owners and developers on several aspects of the acquisition and disposition of multifamily properties, including developments financed with low-income housing tax credits and historic tax credits. I recently assisted a client in refinancing a 570-unit multi-phase affordable housing development in Brockton, Massachusetts. Additionally, in the multifamily sector, I work on dispositions for a top asset manager for institutional investors, selling its investments in affordable housing communities financed with low-income housing tax credits, and negotiate purchase and sale agreements for the sale of the limited partner interests.

Seniors Housing and Care

I have assisted institutional investors with their investments in assisted living and skilled nursing properties and portfolios and have also represented developers and owners in acquiring, selling, and master leasing assisted living and skilled nursing developments. I recently worked on a transaction representing an institutional owner in a large multi-state workout of a master-leased portfolio of skilled nursing facilities.

General Real Estate

I work with clients on various other general real estate matters, including purchase and sale agreements, real estate joint ventures, title and survey review and zoning matters.



What do you see on the horizon?

The Commonwealth of Massachusetts has a continuing need for more affordable housing. The Massachusetts governor has committed to producing more multifamily housing units by 2020. I look forward to working with the developers on these important projects.

TRINITY MANAGEMENT

**TMLLC designated
a Specialist in Housing
Credit Management
Company, 2013.**

**MassHousing, ,
Multi-Million Dollar
MBE and Million Dollar
WBE 2013, 2014, 2015,
2016, 2017.**

**Vanguard Award,
2015, Glenark Mills/Oaks**

**Vanguard Award,
2016, Bristol Commons,
Lenox Green.**

**Community of
Quality designations,
2013-2014, Lucerne
Gardens, Maverick Landing,
New Orchard Hills, Trinity
Terrace, Quinpiac Terrace.**

**Community of
Quality designations,
2015, Washington Beech
Appleton Mills, The
Blakeley, Newport Heights.**

**Community of
Quality designations,
2016, Forest Hills ,
Countryside Village, The
Rowe, Franklin Hill.**

**Exemplary Family
Development award,
2016, Washington Beech.**

**Top 100 Affordable
Property Management
Company, 2015, 2016,
2017, 2018**

**Partner, U.S. Dept.
of Energy, Better
Buildings Challenge,
2014**

Trinity Management, LLC's (TMLLC) mission is to meet the programmatic and financial goals of our owners by providing exceptional, customer-focused property management services. Our goal is to aid in the revitalization of communities, enhancing the lives of our residents and neighbors, strengthening local commerce, and fostering opportunities for positive growth.

TMLLC was launched on February 24, 2012 to provide exceptional property management services for condominiums, resident associations, cooperatives, community development corporations, non-profit and for-profit developers. TMLLC manages properties throughout Massachusetts, Rhode Island, Connecticut and New York and continues to expand its reach with more than 7,600 residential units and more than 500,000 square feet of commercial and retail space.

The residential portfolio consists of a mix of affordable, mixed-income, market rate, cooperative and condominium properties. TMLLC's managed affordable and mixed-income communities use a variety of subsidy programs, including state and federal low-income housing tax credits, public housing operating and capital funds, Section 8 subsidies, HOME and CDBG resources, among others.

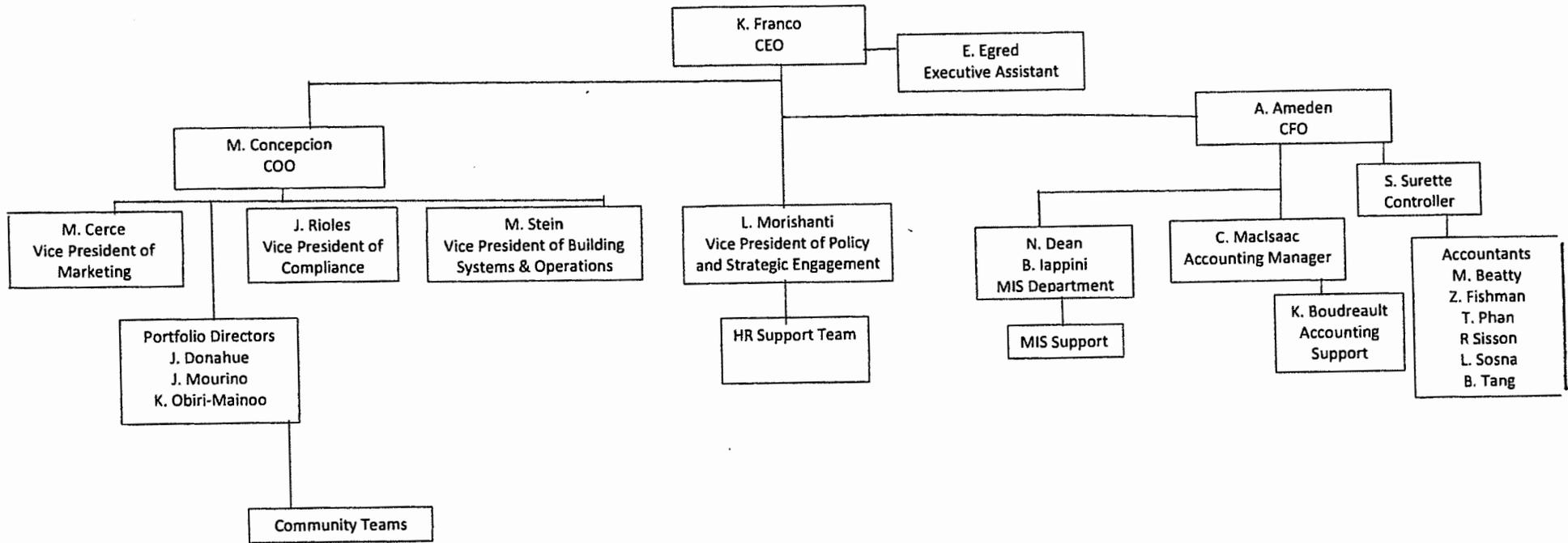
Our maintenance program is proactive and stresses preventative maintenance. The procedures and systems of accounting and compliance for our entire portfolio, regardless of individual property size, are identical: we apply the highest level of scrutiny and integrity to all. TMLLC has demonstrated expertise in managing properties during all stages of the development process, from providing valuable input in the conceptual stage, to marketing properties during the initial lease-up period, through successful management of stabilized properties years after construction is complete. We are dedicated to a very personal, hands-on approach to all the details of management.

At TMLLC, every member of our staff of over 275 is thoroughly engaged and committed to realize their full potential by effectively using their talents, creativity and professionalism on each client's project. Our success is based firmly on the success of each property we manage using our greatest asset – our employees.

The expertise of our staff is unsurpassed, and the diversity of our personnel matches the diversity of our portfolio. TMLLC is proud of its record as an employer committed to a diverse workforce with over 69% of our Team members being minorities and over 40% working in communities in which they live. As residential real estate managers, we manage new construction, established properties, conventional housing, condominiums, historic properties, low-income housing tax credit developments, public housing units, and government assisted housing for multi-family and elderly residents. What differentiates us from other real estate management companies is our unique ability to effectively combine our skill in providing detailed management and financial services with our demonstrated commitment in fulfilling the needs of owners and residents, contributing to the success of the communities in which we operate.

Offices located in Massachusetts and New York.

TRINITY MANAGEMENT



75 Federal Street/4th Floor, Boston, Massachusetts 02110 (617) 542-3019
 1350 Broadway, Suite 1700, New York, New York 10018 (212) 267-8400

KATE FRANCO

CHIEF EXECUTIVE OFFICER | kfranco@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Chief Executive Officer | November 2011 – Present

- Responsible for all aspects of the Company, which includes more than 7,600+ units of housing in four states and more than \$1 billion in assets.
- Develops and implements vision and guidance of the Company.
- Manages day-to-day operations and resources.
- Oversees all financial matters, including the development of long- and short-term financial objectives.
- Pursue avenues for new business and expansion in market-rate and affordable housing sectors.
- Ensures compliance with all federal, state and local laws.
- Fosters and promotes a culture of exceptional client resources, service delivery and employee engagement for 270+ Team members.

MB MANAGEMENT COMPANY | Braintree, MA

Chief Operating Officer/Partner | 1990 – November 2011

Began as a Senior Property Manager in 1990, promoted to the Director of Marketing and Business Development in 2002, Promoted in 2006 to the Director of Property Management/Partner, and became Chief Operating Officer and Partner in January 2010 with responsibility for all operations.

- Provided oversight and guidance to Directors, Asset Managers, executive staff and departments.
- Established field offices to grow the Company through new business.
- Created and implemented a business plan to make MBMC a leading third-party property management and housing consulting company.

CLAREMONT MANAGEMENT COMPANY/BEACON MANAGEMENT COMPANY | Boston, MA

Various Positions | 1980 – 1990

PROFESSIONAL AFFILIATIONS

- Massachusetts Apartment Association, Past President
- Institute of Real Estate Management, Boston Chapter #4, Past President
- Granite State Managers Association, Past President
- NE Affordable Housing Management Association, Director Emeritus and Past President
- Greater Boston Real Estate Board, Legislative Chairwomen
- National Affordable Housing Management Association, Member
- National Association of Realtors, Member
- National Association of Housing Cooperatives, Member
- Citizens Housing And Planning Association, Member
- New Lease, Board Member
- Real Estate Broker – Connecticut, Massachusetts, and New York
- Notary, State of Massachusetts
- Certified Property Manager (CPM), Accredited Resident Manager (ARM), Certified Assisted Housing Manager (AHM), Housing Credit Certified Professional (HCCP), National Affordable Housing Professional-Executive (NAHP-Executive), Specialist in Housing Credit Management (SHCM), Site Compliance Specialist (SCS)



ADAM AMEDEN

CHIEF FINANCIAL OFFICER | aameden@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Chief Financial Officer | February 2013 – Present

- Directs and oversees all aspects of the finance and accounting functions.
- Provides leadership in development of short- and long-term financial objectives.
- Evaluates impact of long-rang plans, introduction of new programs/strategies and regulatory actions; in general, evaluates financial implications of business activities and makes recommendations regarding ways to enhance financial performance and business opportunities.
- Manages processes for financial forecasting, budgets and consolidation and reporting to the Chief Executive Officer and owners.
- Ensures effective internal controls are in place for compliance with GAAP, applicable federal, state and local laws and rules for financial tax reporting.
- Oversees and coordinates accounting software, upgrades and training.

BARKAN MANAGEMENT COMPANY | Boston, MA

Chief Financial Officer | 2004 – February 2013

Began as Controller in 1999 before becoming Vice President of Accounting in 2000 and Chief Financial Officer in 2004.

- Responsible for oversight of finance, accounting and information technology departments.
- Portfolio included 20,000 apartments with 3,000 regulated by LIHTC and/or HUD. The department produced more than 150 financial reports monthly, processed more than 9,000 vendor invoices, and recorded more than 14,000 charges and receipts for 14,000 condominiums.
- Communicated with regulatory agencies in four states regarding financial transactions.
- Oversaw annual audits of over 150 client financial statements.

SAUNDERS REAL ESTATE CORPORATION | Boston, MA

Controller | 1993 – 1999

EDUCATION

- Bentley College | Bachelor of Science, Accounting

PROFESSIONAL ACCREDITATIONS

Licensed CPA; AICPA; MSCPA; Chartered Global Management Accountant



Maribel Concepcion, Chief Operating Officer

**Education: Management Major, Roger Williams University
Associate's degree, Criminal Justice Major, New England Institute of Rhode Island, 2013**

Trinity Management, LLC		Boston, MA
February 2020 - Present	<u>Chief Operating Officer</u>	
TRINITY MANAGEMENT, LLC		Boston, MA
March 2015— January 2020	<u>Regional Director</u>	
<ul style="list-style-type: none">• Responsible for a portfolio of 18 mixed-income and financial properties.• Conduct management reviews of Property Managers to ensure compliance with company policies and procedures, including federal and state laws affecting property management, personnel and safety.• Review monthly financial statements and supervise preparation of annual operation budgets.• Communicate directly with investors, owners, regulatory agents with regard to financial reporting and property inspections. Coordinate and assist with public relations, resident groups and special events.• Conduct physical site inspections to monitor upkeep and required repairs. Ensure compliance with Minimum Housing Quality and REAC standards. Ensure compliance with required record-keeping of physical inspections, work orders, warranty information, inventory, etc.• Ensure property preparation and submittal of all required reports. Assist Property Managers with marketing. Leasing and overall daily operations and provide on-going training for all site personnel.• Foster positive customer and resident experiences.		
NATIONAL INVESTMENTS, LTD		Johnston, RI
Feb. 2014-Feb. 2015	<u>Director of Property Management</u>	
<ul style="list-style-type: none">• Report directly to President/Owner of 10 affordable properties in RI; Ability to work and make decisions under pressure and with the unexpected required.• Prepared annual budgets and capital expenditures• Foster and maintain strong working relationships with staff and with vendors/contractors• Work with Property Managers and Facilities Manager to maximize portfolio value and reduce costs.		
Oct. 2011-Jan. 2014	<u>Assistant to Director of Property Management</u>	
DONALD W. WYATT DETENTION FACILITY		Central Falls, RI
Jan. 2011-Oct. 2011	<u>Correctional Officer</u>	
PROPERTY ADVISORY GROUP		Providence, RI
July 2009-Jan. 2011	<u>Property Manager</u>	

PROFESSIONAL DESIGNATIONS and CERTIFICATIONS

Institute of Real Estate Management (IREM), Certified Property Manager (CPM);
Accredited Residential Manager (ARM)
National Affordable Housing Management Association (NAHMA), Certified Professional of Occupancy (CPO);
National Affordable Housing Professional Executive (NAHP-e); Fair Housing Compliance
Spectrum Enterprises, Inc., Specialist in Housing Credit Management (SCHM); Certified Credit Compliance Professional (C3P)



MARGARET CERCE

VICE PRESIDENT OF MARKETING | mcerce@trinitymanagementcompany.com

TRINITY MANAGEMENT LLC

Boston, MA

Nov. 2018 - Present

Vice President of Marketing

- Researches and understands all market environments.
- Responsible for keeping up on trends in housing pertinent to designs, amenity packages, etc.
- Contributes to the design process of all communities.
- Assists with unit and rent assignments.
- Responsible for the coordination, implementation, and oversight of lease ups.
- Responsible for training of all leasing staff.
- Responsible for branding and curb appeal of all communities.
- Responsible for marketing plans and social media applications.

CLAREMONT COMPANIES

Bridgewater, MA

Jul. 2016 - Nov. 2018

Vice President of Residential Management

- Directly oversee operations and financial performance for the market rate portfolio in New England and Florida.
- Key member of the development team responsible for pro formas, unit counts, etc.
- Conducted extensive market and competitor research.
- Prepared and managed the financial reporting for each asset.

BARKAN MANAGEMENT

Boston, MA

2011 - 2016

Director of Marketing and Leasing

RIVERSTONE RESIDENTIAL GROUP

N. Smithfield, RI

2004 - 2011

Senior Property Manager

EDUCATION

Residential Property Management Major, Virginia Polytechnic Institute

PROFESSIONAL ACCREDITATIONS

Home Builders, Certified Apartment Manager (CAM)
National Center for Housing Management, Certified Occupancy Specialist (COS)
Rhode Island Real Estate License



JILL RIOLES

VICE PRESIDENT OF COMPLIANCE | jrioles@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Vice President of Compliance | April 2018 – Present

- Supervises the Compliance Team.
- Sets, distributes and implements ongoing compliance policies and procedures.
- Internal training, testing and continuing education (individual and group).
- Responsible for implementation of LIHTC and affordable housing compliance procedures at new communities.
- Responsible for annual compliance reports as required by state agencies.
- Provides audit coordination, attendance, oversight and response for LIHTC and other programs.

RHODE ISLAND HOUSING | Providence, RI

Multifamily Compliance Supervisor | September 2017 – April 2018

- Provided daily supervision, training and technical support to the Multifamily and HOME program staff to ensure compliance with IRS and HUD rules and regulations as well as internal policies and procedures.
- Maintained the master LIHTC, HOME and REAC inspection schedules and determining portfolio assignments for compliance staff.
- Prepared correspondence, technical reports, status reports and work schedules and required to implement and complete job assignments within designated deadlines.
- Performed welcome meetings with sponsors/agents and maintaining program compliance monitoring from the rent-up process through the preparation for the initial LIHTC certification review.
- Worked closely with the Rental Housing Training Coordinator to ensure the property owners and management partners are equipped with accurate and timely information regarding compliance with federal and state housing related regulations.

Multifamily Compliance Specialist | October 2015 – September 2017

- Performed LIHTC file audits and physical inspections on a portfolio of 43 apartment communities
- Reviewed certification data in HDS/WTC for completeness in preparation for tenant data collection

POAH COMMUNITIES | Providence, RI

Property Manager | 2014 – 2015

PROPERTY ADVISORY GROUP, INC. | Providence, RI

Tax Credit Compliance Supervisor | 2004 – 2013

EDUCATION

- Rhode Island College | Bachelor of Science, Business Marketing and Economics

PROPERTY MANAGEMENT SOFTWARE

Real Page Onesite, Boston Post, Yardi, WTC/HDS RI State software for compliance testing and HUD data collection

PROFESSIONAL ACCREDITATIONS

TCS/NCHM; COS/NCHM; HCCP/NAHB and C⁵P/Spectrum; ARM/IREM; STAR/Spectrum



MADELINE STEIN

VICE PRESIDENT OF BUILDING OPERATIONS AND SYSTEMS | mstein@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Vice President of Building Operations and Systems | February 2016 – Present

Began as a Senior Property Manager with Cornu Property Management in 1994. When Cornu became Trinity Management, LLC in 2012, Madeline became the Facilities Director at Mission Park, a 775-unit complex. She was then promoted to Vice President of Building Operations and Systems in February 2016.

- Responsible for all maintenance and utility operations of the company, working with the Portfolio Directors to establish efficient operations, coordination and control of all capital projects and utility management.
- Creates and implements a Maintenance Operations Manual.
- Periodically conducts physical inspections of sites, reporting to the Chief Executive Officer, Portfolio Directors and Community Managers.
- Troubleshoots problems at the properties and assists with mechanical system repairs and improvements.
- Reviews capital needs projects, establishes bid specifications and prepares bid analysis forms for projects.
- Reviews and approves contractors for capital projects and major equipment purchases.
- Assists in contractor negotiations and coordinates national vendor contracts.
- Assists in federal, state and local inspection preparation.
- Assists with budgeting, as requested.
- Offers support in hiring maintenance personnel and conducts trainings.
- Monitors and reviews utility consumption for the properties, analyzes bulk utility purchase contracts and creates and implements green technology.
- Represents the company to government agencies and other agencies with regard to maintenance and utility matters.
- Attends board and community meetings, as warranted.

EDUCATION

- Rhode Island Junior College | Business Administration
- Stonehill College | Real Estate Studies
- Boston Architectural College | Form, Function & Design Studies

PROFESSIONAL ACCREDITATIONS, CERTIFICATIONS & EDUCATION

- Certified Property Manager (CPM)
- Certified Occupancy Specialist (COS)
- OSHA 30-hour Occupational Safety and Health Training Courses in Construction Safety & Health
- Housing Credit College: LIHTC
- National Center for Housing Management: Assisted & Public Housing Studies

MEMBERSHIPS

- Boston Chapter of IREM
- Greater Boston Board of Real Estate
- National Association of Realtors
- National Center for Housing Management



LISA MORISHANTI

VICE PRESIDENT OF POLICY & STRATEGIC ENGAGEMENT | lmorishanti@trinitymanagementcompany.com

TRINITY MANAGEMENT, LLC | Boston, MA

Vice President of Policy & Strategic Engagement / 504 Coordinator | March 2017 – Present

Began as the Resident Social Service Coordinator for Bradley Properties in February 2012 before being promoted to the Director of Resident Services for the Company in October 2013 and again to Vice President of Policy and Strategic Engagement in March 2017.

- Consults on cases of domestic violence and/or 504 Reasonable Accommodation requests across the Company's portfolio to provide guidance, support and training.
- Oversees Resident Services and ensures the team is performing consistent to best practices and industry standards.
- Oversees Human Resources and compliance with state and federal laws and statutes as they pertain to labor laws.
- Develops and manages new company-wide and community programs and initiatives.
- Provides leadership and professional development training.

Boston Medical Center | Boston, MA

Psychiatric Clinician | November 2011 – Present

- Performs comprehensive psychosocial evaluations to determine level of care necessary.
- Presents to various medical insurance companies seeking pre-authorization for treatment.
- Develops comprehensive discharge plans in partnership with current services providers.

EDUCATION

- Boston College Graduate School of Social Work | MSW
- Boston University | Bachelor of Art

AWARDS, SKILLS & DESIGNATIONS

- MassHousing TAP Program Appreciation Award, March 2015
- MassHousing Community Recognition Award, March 2013
- NERSC Annual Excellence in Service Award for Respecting Resident Diversity, May 2007
- Leo P. Haley & Reverend John Essien Memorial Award, May 2005
- Sarah Joanne Davis Women Studies' Essay Prize – Humanities Essay, May 2003
- United Way Training in Public Speaking, *The Speaker's Bureau*
- Proficient in SAS and SPSS statistical computation software
- Fluent in Spanish and English
- MSW, LICSW

VOLUNTEER POSITIONS

- Vice President, Board of Directors | Madison Park Development Corporation, December 2013 – Present
- President, Board of Directors | The Network/LA Red, November 2006 – Present
- Coordinator | Dudley Pride Coalition, November 2006 – May 2010
- Steering Committee Member | Roxvote Coalition, September 2006 – Present
- Peer Hotline Supervisor | Boston Area Rape Crisis Center, January 2001 – December 2014
- Direct Service Advocate | Transition House, May 2002 – December 2003
- Community Organization Intern | Cambridge Women's Center, 2003



TRINITY MANAGEMENT

Managed Property Listing					
	Project Name	Location	Affordable/Conventional	Total Number of Units	Unit Mix
	Residential Portfolio				
1	1392 Dorchester House	Dorchester, MA	Affordable	12	All SRO
2	1460 Condominiums	Dorchester, MA	Conventional	6	0-1 br
3	1460 House	Dorchester, MA	Affordable	43	0-1 br
4	19-21 Faulkner Street	Dorchester, MA	Affordable	6	2-3 br
5	Blakeley Apartments	Lawrence, MA	Affordable	46	1-2 br
6	Bloomfield Apartments	Dorchester, MA	Affordable	27	0-3 br
7	Bradley Properties	Boston, MA	Affordable	71	1-3 br
8	The Brownstones	Boston, MA	Affordable	35	1 br
9	Forest Hills Cooperative	Jamaica Plain, MA	Conventional	87	1-3 br
10	Franklin Hill Apartments	Dorchester, MA	Affordable	266	1-5 br
11	Lucerne	Dorchester, MA	Affordable	45	2-3 br
12	The Carruth Condominiums	Dorchester, MA	Market	42	2-Jan
13	The Carruth	Dorchester, MA	Affordable	74	1-3 br
14	35 Northampton Square	Boston, MA	Affordable	245	0-1 br
15	Roxbury Highlands	Roxbury, MA	Affordable	52	0-4 br
16	Mission Park	Roxbury, MA	Affordable	775	1-4 br
17	Rockdale Commons	Northbridge, MA	Affordable	40	0-3 br
18	St. Joseph's Cooperative	Roxbury, MA	Market	137	1-3 br
19	TILL Building	Chelsea, MA	Affordable	23	1-3 br/1 comm'l
20	Trinity Terrace	Dorchester, MA	Affordable	62	1-3 br
21	Washington Beech	Roslindale, MA	Affordable	206	2-4 br
22	Water Street	Medford, MA	Affordable	35	1 br
23	Quinnipiac Terrace	New Haven, CT	Affordable	193	2-4 br
24	Rowe Apartments	New Haven, CT	Affordable/Conventional	104	1-2 br
25	Countryside Estates	Marlborough, MA	Affordable	118	1-3 br
26	New Mass Pike Towers	Boston, MA	Affordable	200	1-3 br
27	Maverick Landing	East Boston, MA	Affordable/Conventional	396	1-4 br
28	Appleton Mills	Lowell, MA	Affordable	130	0-2 br
29	Orchard Gardens	Roxbury, MA	Affordable	331	1-5 br
30	Carlton Wharf	East Boston, MA	Market	30	1-3 br condos
31	The Foley	Mattapan, MA	Affordable	116	0-1 br
32	Mattapan Heights	Mattapan, MA	Affordable	216	1-3 br
33	Newport Heights	Newport, RI	Affordable	299	1-5 br

34	New Orchard Hill Estates	Oxford, MA	Affordable	215	1-4 br
35	The Regency	New Bedford, MA	Affordable/Conventional	129	1-3 br
36	Marian Gardens	Lynn, MA	Affordable	94	2-4 br
37	Mei Wah	Boston, MA	Affordable	41	0-1 br
38	Glenark Mills	Woonsocket, RI	Affordable	89	1-3 br
39	Bristol Commons	Taunton, MA	Affordable	88	1-4 br
40	Lenox Green	Taunton, MA	Affordable	72	1-4 br
41	Centre 50	Brockton, MA	Affordable/Conventional	71	1-3 br
42	Enso Flats	Brockton, MA	Affordable	42	1-3 br
43	Holyoke High	Holyoke, MA	Market	46	1-2 br
44	Weld Park	Rosindale, MA	Affordable	14	0-1 br
45	Washington House	Taunton, MA	Affordable	14	0-1 br
46	Chestnut Park	Holyoke, MA	Affordable	54	0-2 br
47	860 Harrison Ave.	Boston, MA	Affordable/Conventional	102	0-2 br
48	Northridge	Beverly, MA	Conventional	98	1-4 br
49	Fourth @ Broadway Rentals	Chelsea, MA	Market	19	0-3 br
50	90 Wrentham	Dorchester, MA	Market	12	1-2 br
51	200 Hancock Street	Dorchester, MA	Market	37	0-2 br
52	341 Gallivan Boulevard	Dorchester, MA	Market	10	1-2 br
53	Bridgeview Center	Charlestown, MA	Affordable	61	1 - 3 br
54	Spring Meadow	Hanover, MA	Market	39	2 br condos
55	777-779 Huntington	Boston, MA	Market	22	1 br
56	Mosaic Condominiums	Boston, MA	Market	85	1-3 br
57	Mosaic Rentals	Boston, MA	Affordable	60	1-3 br
58	Restoration Housing	Boston, MA	Affordable	81	1-3 br
59	RTH Community Apartments	Boston, MA	Market	20	1-3 br
60	RTH Community Housing	Boston, MA	Market	67	1-3 br
61	Port Landing	Cambridge, MA	Affordable	20	1-2 br
62	Station Lofts	Brockton, MA	Market	25	0-2 br
63	Oxford Place	Boston, MA	Affordable	39	1-3 br
64	Oxford Ping On	Boston, MA	Affordable	67	0-3 br
65	3160 Park Avenue Affordable	Bronx, NY	Affordable	95	1-3 br
66	3160 Park Avenue Mixed Use	Bronx, NY	Affordable	57	1-3 br
67	Maple Gardens	Wenmouth, MA	Conventional	81	1-3 br
68	Upper Washington	Dorchester, MA	Affordable	35	1-3 br
69	Randolph Houses	Bronx, NY	Affordable	168	1-4 br
70	Orient Heights Phase I	East Boston, MA	Affordable	120	1-5 br
71	Lafayette Street	Chelsea, MA	Conventional	32	0-2 br
72	Soundview Landing I	Norwalk, CT	Affordable	80	1-4 br
73	Treadmark Condos	Dorchester, MA	Conventional	32	0-2 br
74	Parkside Gables	Stamford, CT	Affordable	69	1-3 br

75	422 River Street	Mattapan, MA	Affordable	27	1-2 br
76	Smith Avenue	Providence, RI	Conventional	55	1-2 br
77	Belgrade Avenue	Roslindale, MA	Conventional	16	1-2 br
78	Pearl Street	Dorchester, MA	Conventional	24	1-2 br
79	Arlington Point 4%	Lawrence, MA	Affordable	56	0-3 br
80	Arlington Point 9%	Lawrence, MA	Affordable	46	0-3 br
81	Harwell Homes	Cambridge, MA	Affordable/Conventional	56	1-4 br
82	60 King 4%	Providence, RI	Affordable	22	0-3 br
83	60 King 9%	Providence, RI	Affordable	38	0-3 br
84	Treadmark Rentals	Dorchester, MA	Affordable	51	0-2 br
85	Boston East	East Boston, MA	Market	200	0-3 br
	TOTAL			7661	
	Commerical Portfolio			SF	
1	Blakeley	Lawrence, MA		4,267	Commerical
2	Bradley	Boston, MA		2,635	Commerical
3	Carruth	Dorchester, MA		12,309	Commercial
4	Masspike Towers	Boston, MA		18,720	Commercial
5	Mission Park	Boston, MA		38,221	Commercial
6	Roxbury Highlands	Roxbury, MA		2,900	Commercial
7	1392 Dorchester Avenue	Dorchester, MA		1,760	Commercial
8	Centre 50	Brockton, MA		2,000	Commercial
9	Enso Flats	Brockton, MA		1,456	Commercial
10	Rowe	New Haven, CT		2,000	Commercial
11	Fourth @ Broadway	Chelsea, MA		11,404	Commercial
12	RTH Gymnasium	Boston, MA		28,000	Commercial
13	Trinity Terrace	Dorchester, MA		3,600	Commercial
14	TILL	Chelsea, MA		11,310	Commercial
15	Holyoke High	Holyoke, MA		30,000	Commercial
16	Upper Washington	Dorchester, MA		2,838	Commercial
17	Riverway	Mattapan, MA		63,231	Commercial
18	Enterprise Main	Brockton		55,000	Commercial
19	110 Canal Street	Lowell, MA		55,000	Commercial
20	777-779 Huntington	Boston, MA		2,385	Commercial
21	RTH Community	Boston, MA		6,707	Commercial
22	Faunce Corner	Dartmouth, MA		35,363	Commercial
23	Stetson West	Weymouth, MA		18,243	Commercial
24	Treadmark Commercial	Dorchester, MA		5,000	Commercial
25	3160 Park	Bronx, NY		21,400	Commercial
26	100 Weymouth	Rockland, MA		11,950	Commercial
27	Weymouth Condominiums	Rockland, MA		57,192	Commercial

2. Required Forms

Proposal Response Form
Certificate of Non-Collusion
Certificate of Tax Compliance
Disclosure of Beneficial Interest
Acknowledgement of Addendums

PROPOSAL INTENT RESPONSE FORM

RFP Title:

Please review the Request for Proposal (RFP). Furnish the information requested below and return this page to the Baldwinville Elementary School Disposition Advisory Committee:

Your expression of intent is not binding but will greatly assist us in planning for proposal evaluation.

Choose one of the following options:

- Do intend to submit a proposal
- Do not intend to submit a proposal

If you are not responding to this RFP, please provide your reason(s):

Please provide the following contact information:

Name (first, middle, last): Mathieu P. Zahler

Title: Managing Member

Organization: MPZ Development LLC

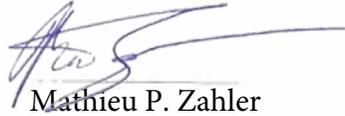
Email address: mzahler@mpzdevelopment.com

CERTIFICATION OF NON COLLUSION & GOOD FAITH

The undersigned certifies under pains and penalties of perjury that this Contract has been obtained in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

The Contractor by: MPZ Development LLC

Print Name


Mathieu P. Zahler

Title/Authority

Managing Member

CERTIFICATE OF TAX COMPLIANCE

(Corporate)

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I,
Mathieu P. Zahler, authorized signatory for MPZ Development LLC
printed name name of consultant/business

do hereby certify under the pains and penalties of perjury that said contractor has
complied with all laws of the Commonwealth of Massachusetts relating to taxes,
reporting of employees and contractors, and withholding and remitting child support.
Federal ID # 82-1087164

Signature  Name Mathieu P. Zahler

Title Managing Member Date March 31, 2020

OR

CERTIFICATE OF TAX COMPLIANCE

(Individual)

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I,
do hereby certify under the pains and
penalties of perjury that said contractor has complied with all laws of the
Commonwealth of Massachusetts relating to taxes.

(Signature of person signing bid or bid)

(Date)

**Disclosure of Parties with Beneficial Interest
MGL Ch. 7 §40J**

I do hereby certify that the following parties have – or area anticipated to have a beneficial interest in our submissions seeking to acquire and redevelop the Baldwinville Elementary School form the Town of Templeton, MA

Party 1 MPZ Development LLC

Party 2 _____

I do make this declaration under the pains of penalties of law and understand that any material omission or misrepresentation may not only lead to the disqualification of my proposal but prosecution under the pains and penalties of law.

Section 40J. No agreement to rent or to sell real property to or to rent or purchase real property from a public agency, and no renewal or extension of such agreement, shall be valid and no payment shall be made to the lessor or seller of such property unless a statement, signed, under the penalties of perjury, has been filed by the lessor, lessee, seller or purchaser, and in the case of a corporation by a duly authorized officer thereof giving the true names and addresses of all persons who have or will have a direct or indirect beneficial interest in said property with the commissioner of capital asset management and maintenance. The provisions of this section shall not apply to any stockholder of a corporation the stock of which is listed for sale to the general public with the securities and exchange commission, if such stockholder holds less than ten per cent of the outstanding stock entitled to vote at the annual meeting of such corporation. In the case of an agreement to rent property from a public agency where the lessee's interest is held by the organization of unit owners of a leasehold condominium created under chapter one hundred and eighty-three A, and time-shares are created in the leasehold condominium under chapter one hundred and eighty-three B, the provisions of this section shall not apply to an owner of a time-share in the leasehold condominium who (i) acquires the time-share on or after a bona fide arms length transfer of such time-share made after the rental agreement with the public agency is executed and (ii) who holds less than three percent of the votes entitled to vote at the annual meeting of such organization of unit owners.

A disclosure statement shall also be made in writing, under penalty of perjury, during the term of a rental agreement in case of any change of interest in such property, as provided for above, within thirty days of such change.

Any official elected to public office in the commonwealth, or any employee of the division of capital asset management and maintenance disclosing beneficial interest in real property pursuant to this section, shall identify his position as part of the disclosure statement. The commissioner shall notify the state ethics commission of such names, and shall make copies of any and all disclosure statements received available to the state ethics commission upon request. The commissioner shall keep a copy of each disclosure statement received available for public inspection during regular business hours.



Acknowledgment for Individual

Mathieu P. Zahler, Managing Member

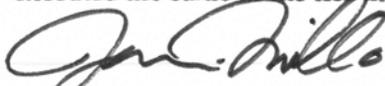
State of Massachusetts

County _____

On this 26th day of March, 2020, before me personally appeared

Mathieu P. Zahler (or _____
and _____), to me known to be the person (or persons)

described in and who executed the foregoing instrument, and acknowledged that he she they executed the same as his her their free act and deed.



Notary Public

Print Name: Janice Marinello

My commission expires:

2/28/2025



Acknowledgement of Addendums

MPZ Development LLC has received the following addendums from the Town of Templeton:

1. Addendum 1 dated March 2, 2020
2. Addendum 2 dated March 11, 2020
3. Addendum 3 dated March 16, 2020
4. Addendum 4 dated March 23, 2020

Exhibit C
Development Schedule

(include development schedule)

Exhibit C

Baldwinville School Apartments - Draft Development Schedule

9/2/2020

Task	Historic	Financing	Design & Construction	Community & Permitting
RFP Submission	03/31/2020			
RFP Developer Selection	05/27/2020			
Execution of Developer Designation Agreement (DDA)	09/09/2020	09/09/2020		09/09/2020
Neighborhood Introductions and Charette - Meeting #1	11/13/2020		11/13/2020	11/13/2020
Apply for Templeton CPA Funding	11/20/2020	11/20/2020		
Title, Survey, Phase I/Haz Mat Environmental Completed	12/08/2020	12/08/2020	12/08/2020	
Schematic Architectural & Civil Drawings Completed	12/08/2020	12/08/2020	12/08/2020	
MHC and NPS Part 1 & Part 2 Filed	12/08/2020	12/08/2020	12/08/2020	
NOI Filed - Conservation Commission	12/11/2020			12/11/2020
MHC PNF Filed	12/15/2020	12/15/2020	12/15/2020	
Site Eligibility Letter Filed with DHCD	01/07/2021		01/07/2021	01/07/2021
MHC - Finding of "No Adverse Effect"	01/14/2021	01/14/2021	01/14/2021	01/14/2021
ConCom Hearing and Approval - Meeting 3rd Monday of the month	01/18/2021			01/18/2021
Templeton CPC approval of resources	02/01/2021	02/01/2021	02/01/2021	
Neighborhood Charrette - Meeting #2	02/11/2021			02/11/2021
Site Eligibility Letter Received and Comprehensive Permit Application Filed	03/08/2021		03/08/2021	03/08/2021
MHC and NPS Part 1 & Part 2 Approved	03/08/2021	03/08/2021	03/08/2021	
Neighborhood Charrette - Meeting #3 (if necessary)	03/13/2021			03/13/2021
Templeton ZBA Hearing on Friendly 40B - Hearing 1	04/07/2021		04/07/2021	04/07/2021
Templeton ZBA Hearing on Friendly 40B & Approval - Hearing 2	04/22/2021		04/22/2021	04/22/2021
Vote of CPA Resources at Templeton Annual Town Meeting	05/15/2021	05/15/2021	05/15/2021	
DHCD Pre-application	11/29/2021		11/29/2021	
LIHTC and Affordable Housing Resources Funding Application to DHCD	02/20/2022		02/20/2022	
DHCD Funding Awarded	08/19/2022		08/19/2022	
Construction Drawings Completed	12/17/2022		12/17/2022	
Financial and Land Closing - Building Permit Released	05/01/2023		05/01/2023	05/01/2023
Construction Start	05/31/2023		05/31/2023	05/31/2023
Construction Complete	11/28/2024		11/28/2024	
Leasing Complete	05/27/2025		05/27/2025	05/27/2025

Exhibit D
Maintenance of the Property

The Town agrees to take the following steps to maintain the Property from the Effective Date of this Agreement until the transfer of the deed, and to provide the following, subject to the terms of this Agreement, including without limitation Section II.D.4:

1. Operational exterior security lighting if and as currently installed.
2. Operational fire alarm system with automatic notification to fire department if and as currently installed.
3. Access for emergency vehicles.
4. Weekly inspections of the interior and exterior of the Property.
5. Snow removal for emergency access and basic grass cutting.

The Town will install and monitor a burglar alarm in the School Building, at MPZ's expense.

ASSIGNMENT AND ASSUMPTION OF DEVELOPER DESIGNATION AGREEMENT

This Assignment and Assumption of Developer Designation Agreement (this “Assignment”) is made as of the 11th day of March, 2021, by and between MPZ Development LLC, a Massachusetts limited liability company (the “Assignor”), and CC MPZ School Street LLC, a Massachusetts limited liability company (“Assignee”).

WHEREAS, Assignor and the Town of Templeton, Massachusetts, a Massachusetts municipal corporation acting by and through its Select Board (“Town”), entered into that certain Developer Designation Agreement dated as of September 21, 2020 (the “DDA Agreement”), with respect to the purchase and sale of buildings, structures and improvements thereon located at 16 School Street, Templeton, Massachusetts, known as the Baldwinville Elementary School (the “Property”).

WHEREAS, Assignor desires to assign to Assignee all of its right, title and interest under the DDA Agreement and Assignee has agreed to accept such assignment and to assume all of the obligations of Assignor under the DDA Agreement effective on and after the date hereof.

NOW, THEREFORE, for good and valuable consideration, receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee hereby agree as follows:

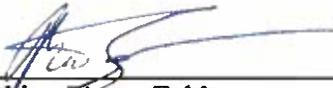
1. Pursuant to Section VI.G. of the DDA Agreement, Assignor hereby assigns and conveys to Assignee all right, title and interest of Assignor in and to the DDA Agreement.
2. Pursuant to Section VI.G. of the DDA Agreement, Assignee hereby accepts such assignment and agrees to assume and perform, in accordance with the terms thereof, all the obligations related to the DDA Agreement from and after the date hereof.

< signature pages to follow >

IN WITNESS WHEREOF, the parties hereto have executed this Assignment as of the date first set forth above.

ASSIGNOR:

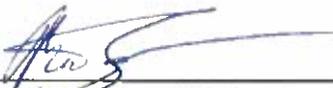
MPZ Development LLC, a Massachusetts limited liability company

By: 

Mathieu Pierce Zahler
Managing Member

ASSIGNEE:

CC MPZ School Street LLC, a Massachusetts limited liability company

By: 

Mathieu Pierce Zahler
Managing Member

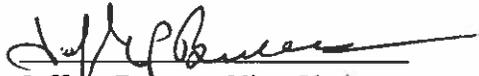
By: 

Jason Korb
Managing Member

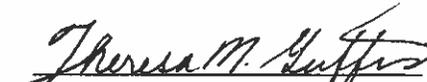
TOWN (Consenting to this Assignment):

Town of Templeton, by its Select Board:


Michael Currie, Chair


Jeffrey Bennett, Vice Chair


Julie Richard, Clerk


Theresa Griffis, Member


Timothy Toth, Member

PURCHASE AND SALE AGREEMENT

This 3rd day of February, 2021.

1. PARTIES.

Elvis D. Yeboah and Priscilla Yeboah, of 12 School Street, Templeton, MA 01436 hereinafter called the Seller, agrees to sell, and CC MPZ School Street LLC, a Massachusetts limited liability company with an address c/o Capstone Communities LLC, 1087 Beacon Street, Suite 302, Newton, MA 02459, or nominee, hereinafter called the Buyer or Purchaser, agrees to buy, upon the terms hereinafter set forth, the Premises as described in Section 2 below.

2. DESCRIPTION OF PREMISES.

The land with the buildings thereon located at 12 School Street, Templeton, Worcester County, Massachusetts, more particularly described in a deed recorded with the Worcester County Registry of Deeds at Book 48704, Page 267 (the "Premises").

3. BUILDINGS, STRUCTURES, IMPROVEMENTS, FIXTURES.

Included in the sale as a part of said Premises are the buildings, structures, improvements now thereon, and the fixtures belonging to the Seller and used in connection therewith including furnaces, heaters, heating equipment, oil and gas burners and fixtures appurtenant thereto, hot water heaters, kitchen, plumbing and bathroom fixtures, electric and other lighting fixtures, appliances, and all other equipment or fixtures on the Premises.

4. TITLE DEED.

Said Premises are to be conveyed by a good and sufficient quitclaim deed running to the Buyer, or to the nominee designated by the Buyer by written notice to the Seller at least seven (7) days before the deed is to be delivered as herein provided, and said deed shall convey a good and clear record and marketable title thereto, free from encumbrances, except:

- (a) Provisions of existing building and zoning laws;
- (b) Existing rights and obligations in party walls;
- (c) Such taxes for the then current year as are not due and payable on the date of the delivery of such deed;
- (d) Any liens for municipal betterments assessed after the date of the agreement; and
- (e) Easements, rights of way, restrictions and reservations of record, if any, so long as the same do not prohibit or materially interfere with the use of said Premises as a single family residence.

5. PURCHASE PRICE.

The agreed purchase price of said Premises is \$(REDACTED)(the “Purchase Price”) of which:

\$ (REDACTED) have been paid as a deposit this day;

\$(REDACTED) are to be paid at the time of delivery of the deed by wire transfer, bank or certified check, or by Attorney’s Client Fund IOLTA check.

\$(REDACTED) TOTAL

6. TIME FOR PERFORMANCE; DELIVERY OF DEED.

Such deed is to be delivered at noon on the 31st day of January, 2023 (the “Closing Date”), at the office of Buyer’s counsel or Buyer’s lender’s counsel, unless otherwise agreed upon in writing. It is agreed that time is of the essence of this agreement. At Buyer’s sole and absolute discretion, Buyer may elect to extend the Closing Date to January 31, 2024 and, in such event, the Purchase Price shall be increased to \$(REDACTED). At Buyer’s sole and absolute discretion, Buyer may also elect to move forward the Closing Date to January 31, 2022 and, in such event, the Purchase Price shall remain at \$(REDACTED). Buyer shall give to Seller at least four (4) months written notice of its intent to close on any such Closing Date, and of any such Closing Date change.

7. POSSESSION AND CONDITIONS OF PREMISES.

Possession of said Premises, free of all tenants and occupants, is to be delivered at the time of the delivery of the deed, said Premises to be then (a) in the same condition as they now are, reasonable use and wear thereof excepted, and (b) not in violation of said building and zoning laws, and (c) in compliance with the provisions of any instrument referred to in Section 4 hereof. The Buyer shall be entitled to an inspection of said Premises prior to the delivery of the deed in order to determine whether the condition thereof complies with the terms of this clause.

8. EXTENSION TO PERFECT TITLE OR MAKE PREMISES CONFORM.

If the Seller shall be unable to give title or to make conveyance, or to deliver possession of the Premises, all as herein stipulated, or if at the time of delivery of the deed the Premises do not conform with the provisions hereof, then the Seller shall use reasonable efforts to remove any defects in title, or to deliver possession as provided herein, or to make the said Premises conform to the provisions hereof, as the case may be, in which event the Seller shall give written notice thereof to the Buyer at or before the time for performance hereunder, and thereupon the time for performance hereof shall be extended for a period of thirty (30) days.

9. FAILURE TO PERFECT TITLE OR MAKE PREMISES CONFORM.

If at the expiration of the extended time the Seller shall have failed so to remove any defects in title, deliver possession, or make the Premises conform, as the case may be, all as herein agreed, or if at any time during the period of this agreement or any extension thereof, the holder of a mortgage on said Premises shall refuse to permit the insurance proceeds, if any, to be used for such purposes, then any payments made under this agreement shall be forthwith refunded and all other obligations of the parties hereto shall cease and this agreement shall be void without recourse to the parties hereto.

10. BUYER'S ELECTION TO ACCEPT TITLE.

The Buyer shall have the election, at either the original or any extended time for performance, to accept such title as the Seller can deliver to the said Premises in their then condition and to pay therefor the purchase price without deduction, in which case the Seller shall convey such title, except that in the event of such conveyance in accord with the provisions of this clause, if the said Premises shall have been damaged by fire or casualty insured against, then the Seller shall, unless the Seller has previously restored the Premises to their former condition, either

- (a) pay over or assign to the Buyer, on delivery of the deed, all amounts recovered or recoverable on account of such insurance, less any amounts reasonably expended by the Seller for any partial restoration, or
- (b) if a holder of a mortgage on said Premises shall not permit the insurance proceeds or a part thereof to be used to restore the said Premises to their former condition or to be so paid over or assigned, give to the Buyer a credit against the purchase price, on delivery of the deed, equal to said amounts so recovered or recoverable and retained by the holder of the said mortgage less any amounts reasonably expended by the Seller for any partial restoration.

11. ACCEPTANCE OF DEED.

The acceptance of a deed by the Buyer or its nominee as the case may be, shall be deemed to be a full performance and discharge of every agreement and obligation herein contained or expressed, except such as are, by the terms hereof, to be performed after or which survive the delivery of said deed.

12. USE OF MONEY TO CLEAR TITLE.

To enable the Seller to make conveyance as herein provided, the Seller may, at the time of delivery of the deed, use the purchase money or any portion thereof to clear the title of any or all encumbrances or interests, provided that all instruments so procured are recorded simultaneously with the delivery of said deed or customary arrangements are made for the subsequent delivery of institutional mortgage discharges.

13. INSURANCE.

Until the delivery of the deed, the Seller shall maintain insurance on said Premises as presently insured. All risk of loss shall remain with Seller until the deed is recorded.

14. ADJUSTMENTS.

Taxes for the then current year shall be apportioned and fuel value shall be adjusted, as of the day of performance of this agreement and the net amount thereof shall be added to or deducted from, as the case may be, the purchase price payable by the Buyer at the time of delivery of the deed.

15. ADJUSTMENT OF UNASSESSED AND ABATED TAXES.

If the amount of said taxes is not known at the time of the delivery of the deed, they shall be apportioned on the basis of the taxes assessed for the preceding year, with a reapportionment as soon as the new tax rate and valuation can be ascertained; and, if the taxes which are to be apportioned shall thereafter be reduced by abatement, the amount of such abatement, less the reasonable cost of obtaining the same, shall be apportioned between the parties, provided that neither party shall be obligated to institute or prosecute proceedings for an abatement unless herein otherwise agreed.

16. BROKER'S FEE.

None.

17. BROKER'S WARRANTY.

Not Applicable.

18. DEPOSIT.

All deposits made hereunder shall be held in escrow by Buyer's counsel, Smith Duggan Buell & Rufo LLP ("Escrow Agent"), in a non-interest bearing IOLTA account, subject to the terms of this Agreement, and shall be duly accounted for at the time for performance of this Agreement. In the event of any disagreement between the parties, the Escrow Agent shall retain all deposits made under this Agreement pending instructions mutually given by the Seller and the Buyer or a court of competent jurisdiction.

19. DEFAULT; DAMAGES.

a. Buyer's Default.

If the sale contemplated hereby is not consummated because of a default by Buyer in its obligation to purchase the Premises in accordance with the terms of this Agreement, then: (a) this Agreement shall terminate; (b) the Deposit shall be paid to and retained by Seller as liquidated damages; and (c) Seller and Buyer shall have no further obligations to each other. Buyer and Seller acknowledge that the damages to Seller in the event of a breach of this agreement by

Buyer would be difficult or impossible to determine, that the amount of the Deposit represents the parties' best and most accurate estimate of the damages that would be suffered by Seller if the transaction should fail to close and that such estimate is reasonable under the circumstances existing as of the date of this Agreement and under the circumstances that Seller and Buyer reasonably anticipate would exist at the time of such breach. Buyer and Seller agree that Seller's right to retain the deposit shall be Seller's sole remedy, at law and in equity, for Buyer's failure to purchase the Premises in accordance with the terms of this Agreement.

b. Seller's Default.

If Seller defaults in its obligation to sell the Premises in accordance with the terms of this Agreement, then Buyer may: (a) terminate this Agreement by giving written notice thereof to Seller, in which event the Deposit will promptly be returned to Buyer and the parties shall have no further obligation to each other; (b) waive such default and consummate the transactions contemplated hereby in accordance with the terms of this Agreement; or (c) specifically enforce this Agreement.

20. LIABILITY OF TRUSTEE, SHAREHOLDER, BENEFICIARY.

If the Seller or Buyer executes this agreement in a representative or fiduciary capacity, only the principal or the estate represented shall be bound, and neither the Seller or Buyer so executing, nor any shareholder or beneficiary of any trust, shall be personally liable for any obligation, express or implied, hereunder.

21. CONSTRUCTION OF AGREEMENT.

This instrument, executed in multiple counterparts, is to be construed as a Massachusetts contract, is to take effect as a sealed instrument, sets forth the entire contract between the parties, is binding upon and enures to the benefit of the parties hereto and their respective heirs, devisees, executors, administrators, successors and assigns, and may be canceled, modified or amended only by a written instrument executed by both the Seller and the Buyer. If two or more persons are named herein as Buyer their obligations hereunder shall be joint and several. The captions and marginal notes are used only as a matter of convenience and are not to be considered a part of this agreement or to be used in determining the intent of the parties to it.

22. NOTICES.

Any notice to be given hereunder shall be deemed duly given if mailed by certified mail, return receipt requested, or delivered by any form of private delivery requiring a signed receipt, postage and charges prepaid, or by facsimile or electronic mail, if a copy is also sent as otherwise provided herein, to:

if to Seller:

Robert J. Meyers, Esq.

Gelinas & Ward, LLP
106 Merriam Avenue
Leominster, MA 01453
978-537-2200 (telephone)
978-537-9028
Email: rmeyers@gelinasandward.com

if to Buyer:

Andrew P. Stempler, Esq.
Smith Duggan Buell & Rufo LLP
101 Arch Street, Suite 1950
Boston, MA 02110
617-228-4405 (telephone)
617-342-8250 (fax)
astempler@smithduggan.com

23. CONVEYANCING STANDARD.

Any matter or practice arising under or relating to this Agreement which is the subject of a title or practice standard of The Real Estate Bar Association (formerly known as the Massachusetts Conveyancers' Association) shall be governed by such standard to the extent applicable.

24. BROKER REPRESENTATION.

Seller represents to Buyer, and Buyer represents to Seller, that there has been no intermediary or broker in negotiations or discussions incident to the execution of this Agreement or any of the transactions contemplated hereby, and no intermediary or broker is or shall be entitled to any commission or other compensation with respect to any of such transactions. Each party agrees to indemnify the other against and to hold the other harmless from any claim, loss, damage, cost or liability, including reasonable attorney's fees, incurred as a result of claims for brokerage commissions asserted against the other in connection with this transaction. Such warranty and representation shall survive the delivery of the deed hereunder, or earlier termination hereof.

25. REPRESENTATIONS.

The following representations by the Seller shall be true and correct as of the date hereof and on the date of closing:

- a. Seller has not received any written notice which, by its terms, advises of pending complaints from any governmental authority or department against the Premises or of a violation of building, zoning, health, environmental or other applicable laws, and no written notice has been received from any insurer advising of the cancellation of or any increase in premiums of, any insurance policy on the Premises;

- b. Seller has not received from any governmental authority or other party any written notice which, by its terms, advises that the Premises or any appurtenance thereto, including, without limitation, utility lines servicing the Premises, violate any applicable easement or improperly encroach on the property of another;
- c. There are no contracts or commitments binding upon or affecting the Premises, and there will be no such contracts or commitments binding upon or affecting the Premises at the time of the closing.
- d. There are no actions, suits or proceedings pending or threatened against, by or affecting Seller, or the Premises which affect title to the Premises or which question the validity or enforceability of this Agreement, or of any action taken by Seller under this Agreement, in any court or before any governmental authority, domestic or foreign; and there are no pending or threatened or contemplated condemnation actions involving all or any portion of the Premises;
- e. Seller will not, between the date hereof and the date of closing, lease any part of the Premises;
- f. The Premises are serviced by and connected to town water and sewer services, and do not contain septic or well systems; and
- g. To the best of Seller's knowledge, information and belief, there are no underground oil storage tanks or related apparatus (including piping) for fuel oil, waste oil or other petroleum products located on or under the Premises and the Seller has no knowledge of any releases into the soil from any such tanks or apparatus or of the removal of such oil storage tanks; and there has been no release of any toxic or hazardous substances (as same is contemplated by MGL Ch 21E) and no such toxic or hazardous substances have been used, released, generated, stored, treated, disposed of, or otherwise deposited, in, on, about or from the Premises, other than reasonable quantities of normal household products.

26. CONDITIONS CONTINGENCY.

It is understood and agreed by the parties that the Buyer's obligations hereunder shall be contingent upon the following conditions:

- a. All buildings, structures and improvements, including but not limited to, any driveways, garages, and all means of access to the Premises, shall be located completely within the boundary lines of said Premises and shall not encroach upon or under the property of any other person or entities;
- b. No building, structure or improvement of any kind belonging to Seller or any other person or entity shall encroach in, upon, over or under the Premises;

c. The Premises shall abut and have unlimited access to a public way duly laid out or accepted as such by the Town of Templeton;

d. Title to the Premises is insurable for the benefit of the Buyer by a title insurance company at normal premium rates in the American Land Title Association form currently in use, subject only to those printed exceptions to title normally included in the "jacket" to such form and to the exceptions set forth in Paragraph 4 of this Agreement. It is agreed that in the event of a title matter for which a title insurance company is willing to issue a so-called "clean" policy or provide "affirmative coverage" over a known defect or problem, Buyer may elect to accept same but shall be under no obligation to do so; and

e. The Premises shall be delivered vacant at the closing.

27. DOCUMENTS TO BE DELIVERED BY SELLER.

On the closing date, Seller shall deliver:

a. A Quitclaim Deed conveying to Buyer title in fee simple to the Premises.

b. Such other affidavits, documents and certificates including, without limitation, parties-in-possession and mechanics' liens affidavits, affidavit stating Seller is not a foreign person or entity within the meaning of Section 1445, and any other documents as may be required by any lender or title insurance company which is providing title insurance coverage to the Buyer for this transaction;

c. Keys to the entire Premises;

d. Smoke detector and carbon monoxide detector Certificates of Compliance under Massachusetts General Laws, Chapter 148;

e. A statement that there are no contracts affecting the Premises; and

f. Final water and sewer and electric light Certificate or paid receipt.

28. CONTINUATION OF PARAGRAPH 3.

The "Premises" shall be deemed to include (i) all rights, title and interest, if any, of Seller in, to and with respect to any land lying in the bed of any street, road, avenue or way, open or proposed in front of or adjoining the Premises, to the center thereof and (ii) all easements appurtenant to the Premises, if any, including but not limited to, privileges or rights of way over property adjoining the Premises which enure to the benefit of the Premises or the fee owner thereof and over such streets, lots, avenues and ways, and any and all other appurtenances, privileges and hereditaments belonging to or in any way appurtenant to the Premises.

29. FIRPTA.

The Seller hereby warrants and represents that (i) the Seller is not a "foreign person" as defined by the IRC Section 1445, and (ii) the Seller shall execute and deliver to the Buyer at closing an affidavit or certificate in compliance with IRC Section 1445 (b) (2) and the regulations promulgated thereunder (the "Regulations").

30. CASUALTY.

Notwithstanding anything to the contrary contained in this Agreement, in the event of a fire or other casualty (occurring anytime after the date of this Agreement) causing damage to any portion of the building in excess of Ten Thousand (\$10,000.00) Dollars, then, at Buyer's option, any payments made under this Agreement shall be forthwith refunded and all other obligations of the parties hereto shall cease, and this Agreement shall be null and void without recourse to the parties hereto.

31. OFFER TERMINATION.

The Offer to Purchase Real Estate executed by the parties hereto dated December 17, 2020, and all prior agreements and understandings, are hereby superseded and shall have no further force and effect.

32. LIMITED POWER OF ATTORNEY.

By executing this Agreement, the Seller and Buyer hereby grant to their attorneys the actual authority to bind them for the sole limited purpose of allowing them to grant extensions, and the Seller and Buyer shall be able to rely upon signatures of said attorneys as binding unless they have actual knowledge that the principals have disclaimed the authority granted herein to bind them.

33. ACCESS.

From and after the date of this Agreement, Seller agrees to permit Buyer (and Buyer's designees if accompanied by Buyer) reasonable access, at reasonable times, to the Premises for the purpose of making measurements and inspections, inspections by lenders, and for construction tours, provided that Buyer shall notify Seller at least twenty-four (24) hours in advance.

34. PREMISES CONDITION.

Notwithstanding any other provisions of this Agreement the Premises, including the basement, garage and attic, shall be in broom clean condition at the Closing, free of all debris and personal effects except for those items being conveyed to the Buyer as provided in this Agreement; and all areas of the Premises, including, without limitation, basement, attic, crawl spaces, under-porch/deck areas, shed(s), yards and garage shall be delivered free of all excess/unusable building materials such as lumber, insulation, and the like, paints, solvents, chemicals, debris,

waste and personal property (except for those items being conveyed to the Buyer as provided in this Agreement; and all systems, including but not limited to electrical, plumbing, heating, air conditioning and ventilation systems and all appliances shall be in the same working order and physical condition at Closing as they were on the date of Buyer's initial inspection, reasonable wear and tear excepted. Between the date of the signing of this Agreement and the Closing, Seller shall continue to maintain and/or service the Premises in substantially the same manner and at the same level of effort and expense as the Premises have been maintained through the date hereof, including maintaining and landscaping the grounds and lawn and snow removal, and without any deferral of maintenance or repairs.

35. ENVIRONMENTAL INSPECTION.

The Buyer, at its sole cost and expense, shall have the right to have an inspection of the Premises by a qualified commercial inspection firm or firms which shall commence on the date hereof to ascertain that no "hazardous materials" or "oils" (as said terms are defined in the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, Chapter 21E of the Massachusetts General Laws) have been released on the Premises. Should the Buyer obtain an inspection report or reports that is not satisfactory to the Buyer with respect to any or all of the matters referred to in this paragraph herein, then, at the Buyer's option, all payments made hereunder by the BUYER shall be forthwith refunded and all other obligations of the parties hereto shall cease, and this Agreement shall be void and without recourse to the parties hereto. In order for the Buyer to elect to terminate this agreement hereunder, Buyer must notify Seller in writing, on or before March 1, 2021, of the Buyer's intentions to so terminate.

36. PERMITTING.

Buyer is authorized on behalf of the Seller to contact building and zoning officials from the Town of Templeton and other State and Federal agencies with jurisdiction over the development of the Premises to discuss permitting for future renovation and development of the Premises, and to submit to such agencies applications and other documentation for building, zoning and other related permits and approvals. Such applications shall include but not be limited to applications for building and zoning permits, comprehensive permits, Zoning Board of Appeal and Planning Board filings, and other related applications, documentation, and filings. Seller shall reasonably cooperate with Buyer in connection therewith and will, including but not limited to, execute such applications and/or provide written authority to such agencies to enable Buyer to sign such applications and documentation on Seller's behalf. Any costs of fees resulting from the foregoing shall be at Buyer's sole cost and expense. Notwithstanding the foregoing, such permitting shall not prohibit the use of the Premises by the Seller as a single family residence. Buyer further agrees that in the event the Buyer terminates this Agreement, then Buyer shall withdraw all applications with the Town of Templeton.

Seller acknowledges the Buyer intends to purchase the school building parcel contiguous to the Premises (the "School Building") to develop into multifamily apartments (the "Project"). In the event prior to the closing hereunder the Buyer is unable to purchase the School Building, does not receive all permits, licenses, consents, variances and/or approvals under all federal, state,

municipal, and regional codes, statutes, ordinances, by-laws, rules and regulations now in effect or hereafter enacted to construct the Project, or if Buyer determines, in its sole discretion, as a result of the analysis, inspection, testing, assessments, or permitting process that the Premises is unsuitable for the Project or the Project cannot be completed, Buyer shall have the right to terminate this Agreement by giving written notice of its election to terminate to Seller on or before the closing, and, if Buyer gives such notice of termination, this Agreement shall terminate in which event the Deposit will be paid to the Seller and the parties shall have no further obligation to each other.

37. LEGAL REPRESENTATION.

Seller represents that it: (i) has thoroughly read and reviewed the terms and provisions of this Agreement and are familiar with and have unconditionally consented to the terms hereof; (ii) has had full benefit and advice of their own counsel or the opportunity to obtain the benefit and advice of counsel of their own selection, in regard to understanding the terms, meaning and effect of this Agreement; (iii) has executed this Agreement and will execute any documents in connection herewith freely, voluntarily, with full knowledge, and without duress in executing this Agreement; and (iv) is relying on no other representations either written or oral, expressed or implied, made to Seller by any other party hereto.

38. LEAD PAINT.

The parties acknowledge that, under Massachusetts Law, whenever a child or children under six years of age resides in any residential premises in which any paint, plaster or other accessible material contains dangerous levels of lead, the owner of said premises must remove or cover said paint, plaster or other material so as to make it inaccessible to children under six years of age.

Buyer:

CC MPZ School Street LLC

DocuSigned by:

By: 040076C4B7E1467...
Mathieu P. Zahler, Managing Member

DocuSigned by:

By: 7D3ED59FD7584AA
Jason Korb, Managing Member

Seller:

DocuSigned by:

By: 7781062E4EF9487
Elvis D. Yeboah

DocuSigned by:

By: EA29C96D29C7406...
Priscilla Yeboah



300 foot Abutters List Report

Templeton, MA
June 08, 2022

Parcel Number: 1-4.1-385
CAMA Number: 1-4.1-385
Property Address: 16 SCHOOL ST

Mailing Address: BALDWINVILLE ELEM SCHOOL
PO BOX 620
EAST TEMPLETON, MA 01438

Parcel Number: 1-4.1-386
CAMA Number: 1-4.1-386
Property Address: 2 COTTAGE ST

Mailing Address: SANTIAGO , FELIX A CORREA, MARLIN
A
2 COTTAGE ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-387
CAMA Number: 1-4.1-387
Property Address: 4 COTTAGE ST

Mailing Address: COTE JOSEPH P & ALICE
64 ELM ST
BALDWINVILLE, MA 01436-1031

Parcel Number: 1-4.1-388
CAMA Number: 1-4.1-388
Property Address: 6 COTTAGE ST

Mailing Address: BUDZINSKI LISA M
6 COTTAGE ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-389
CAMA Number: 1-4.1-389
Property Address: 8 COTTAGE ST

Mailing Address: MERRIAM CRAIG R & NORTON KATHY J
8 COTTAGE ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-390
CAMA Number: 1-4.1-390
Property Address: COTTAGE ST

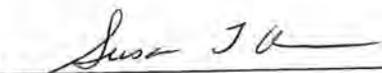
Mailing Address: TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438

Parcel Number: 1-4.1-391
CAMA Number: 1-4.1-391
Property Address: COTTAGE ST

Mailing Address: FARON DONALD & JUNE
1205 PERIDOT LANE
SUN CITY CENTER, FL 33573

Parcel Number: 1-4.1-407
CAMA Number: 1-4.1-407
Property Address: BALDWINVILLE RD

Mailing Address: TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438

CERTIFIED LIST 
Susan J. O'Coin
Administrative Assistant

CHAPTER 40A SECTION 11

THESE OWNERS ARE LISTED FROM OUR RECORDS AS OF June 8, 2022. THE LAST
DATE OF RECORDED DEEDS RECEIVED IN THIS OFFICE.

CAI Technologies

www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

6/8/2022

Page 2 of 2

Abutters List Report - Templeton, MA



300 foot Abutters List Report

Templeton, MA
June 08, 2022

Subject Property:

Parcel Number: 1-4.1-382
CAMA Number: 1-4.1-382
Property Address: 12 SCHOOL ST

Mailing Address: YEBOAH ELVIS D & YEBOAH PRISCILLA
12 SCHOOL ST
BALDWINVILLE, MA 01436-1326

Abutters:

Parcel Number: 1-4.1-373
CAMA Number: 1-4.1-373
Property Address: 733 BALDWINVILLE RD

Mailing Address: TEMPLETON HOUSING AUTHORITY
31 BRIDGE ST
BALDWINVILLE,, MA 01436

Parcel Number: 1-4.1-374
CAMA Number: 1-4.1-374
Property Address: 741 BALDWINVILLE RD

Mailing Address: PERRY, KENNETH PERRY, KENDRE
741 BALDWINVILLE RD
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-376
CAMA Number: 1-4.1-376
Property Address: 2 SCHOOL ST

Mailing Address: INHABITANTS TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438

Parcel Number: 1-4.1-377
CAMA Number: 1-4.1-377
Property Address: SCHOOL ST

Mailing Address: INHABITANTS TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438

Parcel Number: 1-4.1-378
CAMA Number: 1-4.1-378
Property Address: SCHOOL ST

Mailing Address: MARION, KYLE D
10 SCHOOL ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-379
CAMA Number: 1-4.1-379
Property Address: 10 SCHOOL ST

Mailing Address: MARION, KYLE D
10 SCHOOL ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-380
CAMA Number: 1-4.1-380
Property Address: SCHOOL ST

Mailing Address: YEBOAH ELVIS D & YEBOAH PRISCILLA
12 SCHOOL ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-381
CAMA Number: 1-4.1-381
Property Address: SCHOOL ST

Mailing Address: YEBOAH ELVIS D & YEBOAH PRISCILLA
12 SCHOOL ST
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-383
CAMA Number: 1-4.1-383
Property Address: SCHOOL ST

Mailing Address: INHABITANTS TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438

Parcel Number: 1-4.1-384
CAMA Number: 1-4.1-384
Property Address: SCHOOL ST

Mailing Address: TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.



TOWN OF TEMPLETON

BOARD OF ASSESSORS

160 PATRIOTS ROAD • P.O. BOX 620
EAST TEMPLETON, MASSACHUSETTS 01438-0620
TEL: 978.894.2760 • FAX: 978.894.2766

CERTIFIED LIST

Susan J. O'Coin
Administrative Assistant

CHAPTER 40A SECTION 11

THESE OWNERS ARE LISTED FROM OUR RECORDS AS OF June 8, 2022. THE LAST
DATE OF RECORDED DEEDS RECEIVED IN THIS OFFICE.



300 foot Abutters List Report

Templeton, MA

June 08, 2022

Parcel Number: 1-4.1-391 CAMA Number: 1-4.1-391 Property Address: COTTAGE ST	Mailing Address: FARON DONALD & JUNE 1205 PERIDOT LANE SUN CITY CENTER, FL 33573
Parcel Number: 1-4.1-392 CAMA Number: 1-4.1-392 Property Address: 9 COTTAGE ST	Mailing Address: FONTAINE SHERRY A 17 DAVIS ST BALDWINVILLE,, MA 01436
Parcel Number: 1-4.1-393 CAMA Number: 1-4.1-393 Property Address: 5 COTTAGE ST	Mailing Address: FONTAINE, WAYNE EVAN MICHAEL 5 COTTAGE ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-394 CAMA Number: 1-4.1-394 Property Address: 3 COTTAGE ST	Mailing Address: MARMANIDIS, MELISSA 292 ASH ST WINCHENDON, MA 01475
Parcel Number: 1-4.1-395 CAMA Number: 1-4.1-395 Property Address: 1 COTTAGE ST	Mailing Address: DINES SALLY S 1 COTTAGE ST BALDWINVILLE,, MA 01436
Parcel Number: 1-4.1-399 CAMA Number: 1-4.1-399 Property Address: 18 VERNON ST	Mailing Address: MESSER, LAWRENCE H MESSER, LEIANN W 18 VERNON ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-400 CAMA Number: 1-4.1-400 Property Address: 22 VERNON ST	Mailing Address: BREault MARIA J 22 VERNON ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-401 CAMA Number: 1-4.1-401 Property Address: VERNON ST	Mailing Address: BREault MARIA J 22 VERNON ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-407 CAMA Number: 1-4.1-407 Property Address: BALDWINVILLE RD	Mailing Address: TOWN OF TEMPLETON PO BOX 620 EAST TEMPLETON, MA 01438
Parcel Number: 1-4.1-407.4 CAMA Number: 1-4.1-407.4 Property Address: COTTAGE ST	Mailing Address: MARMANIDIS, MELISSA 292 ASH ST WINCHENDON, MA 01475
Parcel Number: 1-4.1-407.5 CAMA Number: 1-4.1-407.5 Property Address: COTTAGE ST	Mailing Address: FONTAINE WAYNE EVAN MICHAEL 5 COTTAGE ST BALDWINVILLE, MA 01436



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

6/8/2022

Page 3 of 3



300 foot Abutters List Report

Templeton, MA
June 08, 2022

Parcel Number: 1-4.1-378 CAMA Number: 1-4.1-378 Property Address: SCHOOL ST	Mailing Address: MARION, KYLE D 10 SCHOOL ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-379 CAMA Number: 1-4.1-379 Property Address: 10 SCHOOL ST	Mailing Address: MARION, KYLE D 10 SCHOOL ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-380 CAMA Number: 1-4.1-380 Property Address: SCHOOL ST	Mailing Address: YEBOAH ELVIS D & YEBOAH PRISCILLA 12 SCHOOL ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-381 CAMA Number: 1-4.1-381 Property Address: SCHOOL ST	Mailing Address: YEBOAH ELVIS D & YEBOAH PRISCILLA 12 SCHOOL ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-382 CAMA Number: 1-4.1-382 Property Address: 12 SCHOOL ST	Mailing Address: YEBOAH ELVIS D & YEBOAH PRISCILLA 12 SCHOOL ST BALDWINVILLE, MA 01436-1326
Parcel Number: 1-4.1-383 CAMA Number: 1-4.1-383 Property Address: SCHOOL ST	Mailing Address: INHABITANTS TOWN OF TEMPLETON PO BOX 620 EAST TEMPLETON, MA 01438
Parcel Number: 1-4.1-384 CAMA Number: 1-4.1-384 Property Address: SCHOOL ST	Mailing Address: TOWN OF TEMPLETON PO BOX 620 EAST TEMPLETON, MA 01438
Parcel Number: 1-4.1-386 CAMA Number: 1-4.1-386 Property Address: 2 COTTAGE ST	Mailing Address: SANTIAGO , FELIX A CORREA, MARLIN A 2 COTTAGE ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-387 CAMA Number: 1-4.1-387 Property Address: 4 COTTAGE ST	Mailing Address: COTE JOSEPH P & ALICE 64 ELM ST BALDWINVILLE, MA 01436-1031
Parcel Number: 1-4.1-388 CAMA Number: 1-4.1-388 Property Address: 6 COTTAGE ST	Mailing Address: BUDZINSKI LISA M 6 COTTAGE ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-389 CAMA Number: 1-4.1-389 Property Address: 8 COTTAGE ST	Mailing Address: MERRIAM CRAIG R & NORTON KATHY J 8 COTTAGE ST BALDWINVILLE, MA 01436
Parcel Number: 1-4.1-390 CAMA Number: 1-4.1-390 Property Address: COTTAGE ST	Mailing Address: TOWN OF TEMPLETON PO BOX 620 EAST TEMPLETON, MA 01438



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

6/8/2022

Page 2 of 3



300 foot Abutters List Report

Templeton, MA

June 08, 2022

Subject Property:

Parcel Number: 1-4.1-385
CAMA Number: 1-4.1-385
Property Address: 16 SCHOOL ST

Mailing Address: BALDWINVILLE ELEM SCHOOL
PO BOX 620
EAST TEMPLETON, MA 01438

Abutters:

Parcel Number: 1-4.1-347
CAMA Number: 1-4.1-347
Property Address: 742 BALDWINVILLE RD

Mailing Address: TABRON, KRISTEN
742 BALDWINVILLE RD
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-348
CAMA Number: 1-4.1-348
Property Address: 738 BALDWINVILLE RD

Mailing Address: OIKEMUS DAVID A & JUDY
738 BALDWINVILLE RD
BALDWINVILLE,, MA 01436

Parcel Number: 1-4.1-369
CAMA Number: 1-4.1-369
Property Address: 721 BALDWINVILLE RD

Mailing Address: SCRIBNER MANAGEMENT LLC
31 MONTAGUE ST
SUDBURY, MA 01176

Parcel Number: 1-4.1-370
CAMA Number: 1-4.1-370
Property Address: 725 BALDWINVILLE RD

Mailing Address: OXFORD JULIE ANN & OXFORD JAMES
A
725 BALDWINVILLE RD
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-371
CAMA Number: 1-4.1-371
Property Address: 729 BALDWINVILLE RD

Mailing Address: SANS, DONNA
731 BALDWINVILLE RD
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-372
CAMA Number: 1-4.1-372
Property Address: 731 BALDWINVILLE RD

Mailing Address: SANS ROBERT M & DONNA L
731 BALDWINVILLE RD
BALDWINVILLE,, MA 01436

Parcel Number: 1-4.1-373
CAMA Number: 1-4.1-373
Property Address: 733 BALDWINVILLE RD

Mailing Address: TEMPLETON HOUSING AUTHORITY
31 BRIDGE ST
BALDWINVILLE,, MA 01436

Parcel Number: 1-4.1-374
CAMA Number: 1-4.1-374
Property Address: 741 BALDWINVILLE RD

Mailing Address: PERRY, KENNETH PERRY, KENDRE
741 BALDWINVILLE RD
BALDWINVILLE, MA 01436

Parcel Number: 1-4.1-376
CAMA Number: 1-4.1-376
Property Address: 2 SCHOOL ST

Mailing Address: INHABITANTS TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438

Parcel Number: 1-4.1-377
CAMA Number: 1-4.1-377
Property Address: SCHOOL ST

Mailing Address: INHABITANTS TOWN OF TEMPLETON
PO BOX 620
EAST TEMPLETON, MA 01438



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

6/8/2022

Page 1 of 3

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 10

PROPERTY MANAGEMENT PLAN

MANAGEMENT PLAN

Baldwinville School Apartments

16 School Street
Templeton, MA 01436

Owner:

CC MPZ SCHOOL STREET LLC
C/O Capstone Communities LLC
831 Beacon Street, #164
Newton, MA 02459

Management Agent:

First Realty Management Corp.
151 Tremont Street
Boston, MA 02111

TABLE OF CONTENTS

- i. Overview**
 - a. Program funds
- ii. Role and responsibility of Owner and Management Agent**
 - a. Owner Oversight
- iii. Personnel Policy & Staffing Arrangement**
 - a. EEO Policy
 - b. Supervisory Relationships
 - c. Staffing Plan
 - d. Management Office
 - e. Training
 - f. Employee Diversity & Proximity
- iv. Occupancy**
 - a. Program Eligibility and File Review
 - b. Wait List Management
 - c. Rent Collection Policies and Termination Procedures
 - d. Lease Terminations
 - e. Grievances, Disputes & Procedures
 - f. Resident Orientation
 - g. Limited English Proficiency
 - h. Security
 - i. Apartment Inspections
 - j. Vacancy & Turnaround Procedures
 - k. Resident Charges
 - l. Record Keeping, Accounting & Reporting
 - m. Forms and Letters
- v. Financial Reporting**
 - a. Financial Statements
 - b. Investment Management
 - c. Risk Management
- vi. Operations, Maintenance & Repairs**
 - a. Capital Plan, Maintenance & Repairs
 - b. Daily Maintenance
 - c. Emergency Maintenance
 - d. Snow Removal
 - e. Trash Removal
 - f. Preventative Maintenance & Inventory
 - g. Use of Professional Services
 - h. Pest Control Procedures

- i. Work Order System and Emergency Repairs
- j. Capital Improvements

I. Overview

The Management Plan that is described herein has been formulated for Baldwinville School Apartments in Templeton, MA. Baldwinville School Apartments (PROPERTY) consists of 54 apartments with five (5) market rate apartments and forty-nine (49) affordable rental apartments. CC MPZ SCHOOL STREET LLC (OWNER) has been formed to complete the construction and leasing, utilizing the Low Income Housing Tax Credit Program (LIHTC), the Massachusetts Department of Housing and Community Development (DHCD), State HOME Programs, Affordable Housing Trust Fund (AHT), Affordable Housing Partnership (AHP), Community Preservation Fund (CPA), Housing Stabilization Fund (HSF), Commercial Area Transit Node Housing Program (CATNHP) and Non-Federal Investment Trust Fund (NFIT) as well as Sponsor Equity and a permanent loan.

a. Program Funds

The Development, Baldwinville School Apartments, will be funded through the following programs: Low Income Housing Tax Credit Program (LIHTC), the Massachusetts Department of Housing and Community Development (DHCD), State HOME Programs, Affordable Housing Trust Fund (AHT), Affordable Housing Partnership (AHP), Community Preservation Fund (CPA), Housing Stabilization Fund (HSF), Commercial Area Transit Node Housing Program (CATNHP) and Non-Federal Investment Trust Fund (NFIT).

II. Role and responsibility of Owner and Management Agent

Baldwinville School Apartments will be managed by First Realty Management of Boston (the Agent). The Owner will enter into a management agreement with First Realty Management of Boston (THE MANAGEMENT COMPANY). THE MANAGEMENT COMPANY was created in 1971 and from the outset has recognized that a strong focus on the creation of partnerships—especially with the OWNER, residents, tenant associations, and the community—is central to excellence in property management. Through our partnership approach we will work together with the OWNERS to formulate policy and procedures which will then be implemented by THE MANAGEMENT COMPANY.

In conjunction with the Management Agreement, THE MANAGEMENT COMPANY will assume the day-to-day management responsibilities for the PROPERTY, as outlined below. Management will assume the responsibilities of maintaining occupancy in accordance with the Tenant Selection Plan and Affirmative Fair Housing Marketing Plan which is subject to approval by lenders.

The project will have dedicated management resources (a Property Manager, Maintenance Superintendent, vendors and subcontractors). The Property Manager and Superintendent will have satisfactory workspace on-site, including an office and a maintenance shop. The Initial Operating Budget and start up budget has been structured to reflect such a relationship.

THE MANAGEMENT COMPANY will perform its duties and comply with all pertinent requirements under the Management and Regulatory Agreements for the PROPERTY. As Managing Agent, THE

MANAGEMENT COMPANY will advise and assist the OWNERS during regular monthly meetings or more often, as necessary. Such meetings will be scheduled at times which are deemed mutually convenient for the OWNERS and THE MANAGEMENT COMPANY. In accordance with requirements in the Management Agreement, THE MANAGEMENT COMPANY will consult with the OWNERS and solicit review and approval of operating budgets, inform of the need for rental or fee increases, and inform the OWNERS if the balance in the bank account is insufficient to pay disbursements. However, it is the policy of THE MANAGEMENT COMPANY to review and solicit OWNER input in all material matters relating to the PROPERTY, in the formulation of policy and procedures, with resident issues, compliance issues, redecoration projects, etc.

The areas of responsibility in which THE MANAGEMENT COMPANY may make decisions without consulting with the OWNERS are fully outlined in the Management Plan and include: Staff supervision, marketing, leasing and tenant selection, rent collection, 504 and Reasonable Accommodation compliance, resident services program, Resident/Management relations, lease enforcement, and routine and preventive maintenance.

A member of Capstone Communities LLC and/or MPZ Development LLC will be identified as the OWNER's representative and will be considered the key contact person in the OWNER's organization with full authority, including budget authority and signing of management agreements.

a. Owner Oversight

THE MANAGEMENT COMPANY will attend meetings as necessary to present information material to property operations and seek Owner input on matters relating to ongoing management issues. Topics to be covered would include financial reports, vacancy reports, site inspection reports, proposed improvements, contract, and other owner/property management items. Such meetings also include discussions and review of rules and regulations for the PROPERTY, such as policies on guests, parking, and security to name a few examples.

THE MANAGEMENT COMPANY will also coordinate Owner member participation in regular inspections of the PROPERTY that are conducted by the Property Manager and Maintenance Superintendent.

III. Personnel Policy & Staffing Arrangement

THE MANAGEMENT COMPANY and the OWNER recognize that its greatest asset is the people that work for the company. Accordingly, THE MANAGEMENT COMPANY focuses heavily on training and professional education at all levels of the company. Moreover, THE MANAGEMENT COMPANY is dedicated to equal opportunity for current and prospective employees, irrespective of race, color, religion, sex, handicap, familial or national origin. THE MANAGEMENT COMPANY complies with an EEO policy as described below. The key administrative positions, Property Manager in the First Realty Management team and the OWNERS representative for the PROPERTY, have had training and experience with the low-income tax credit program. Personnel

involved in the low-income tax credit program will continue to attend necessary training programs.

a. EEO Policy

THE MANAGEMENT COMPANY is committed to providing equal opportunity for all employees and applicants without regard to race, color, religion, sex, sexual orientation, age, national origin, handicap or disability and/or familial status, or any of the other following factors: age, ancestry, marital status, sexual orientation, gender identity, being a victim of domestic violence or dating violence or stalking, being a veteran or member of the Armed Forces, or receiving welfare, housing subsidies or other governmental benefits, as well as any other factor prohibited by federal, state, or local law. THE MANAGEMENT COMPANY's policy regarding equal employment opportunity applies to all aspects of employment, including recruitment, hiring, job assignments, promotions, working conditions, scheduling, benefits, wage and salary administration, disciplinary action, termination, and social, educational, and recreational programs.

THE MANAGEMENT COMPANY will not tolerate any form of discrimination and all employees are expected to cooperate fully in supporting this policy. Any employee, who believes that this policy has been violated, should report the matter immediately to his/her manager or the Director of Human Resources.

The Company affirms that the above policy reflects its attitude and its intention to do the following:

1. Recruit, hire and promote for all job classifications without regard to race, color, religion, marital status, sex, age, ancestry or national origin;
2. Base decisions on employment so as to further the principles of equal employment opportunity;
3. Ensure that promotion decisions are in accord with principles of equal employment opportunity;
4. Ensure that all other personnel actions such as compensation, benefits, transfers, determination, company-sponsored training, social and recreation programs will be administered as set forth above;
5. Ensure that there are equal employment opportunities available to qualified disabled or handicapped persons;
6. Ensure equal employment opportunities to those who are qualified Disabled Veterans.

THE MANAGEMENT COMPANY endeavors to be in full compliance with the provisions of the law. Our policy is expected to provide positive benefits to the company, as well as to the future employees, through maximum utilization and development of available human resources.

b. Supervisory Relationships

In regard to the PROPERTY, the following personnel from THE MANAGEMENT COMPANY will be part of the Managing Agents personnel.

THE MANAGEMENT COMPANY as Managing Agent will be solely responsible for the supervision and day-to-day management of the PROPERTY. The Maintenance Staff members will report directly to the Property Manager. The Property Manager reports to the Regional Manager. THE MANAGEMENT COMPANY has the following Senior Staff positions, and each is responsible for providing guidance and expertise:

Executive Vice President/COO: Ensures efficient, effective, and productive operations by preserving, enhancing and maximizing the profitability and business growth of each asset under THE MANAGEMENT COMPANY's management. Oversees financial operations and contracted financial services as necessary.

Vice President/Property Management: Ensures effective efficient and profitable operation of the portfolio by managing and directing all physical and administrative operations within established budget and profitability guidelines. Develops customer service and marketing programs.

Vice President/504, Training: Works with senior staff to further enhance client services and to identify and implement other internal improvements to benefit clients. Oversees a portfolio of residential and commercial properties in addition to overseeing training, communications, and business development initiatives. Serves as the company's 504 coordinator and supports internal training initiatives developed by our Human Resources Department. Overall supervision of Resident Services program company wide.

Compliance Manager: Develops and enhances working relationships with agency, state and local officials to position the company for further growth opportunities. Ensures company-wide compliance with the latest regulatory requirements. Develops and implements companywide training programs which will position THE MANAGEMENT COMPANY staff to be competitive in a changing affordable housing industry climate.

Director of Human Resources: Develops, implements, coordinates, and evaluates policies, programs, practices, and strategies to maintain and enhance THE MANAGEMENT COMPANY's employee relations and to support corporate and property goals.

Regional Property Manager: Works with individual Property Managers and site staffs when routine operational training and staff development are needed. Assists sites with problems and obstacles that might require a higher level of property management experience and expertise. The Regional Manager is fully trained and experienced with a broad range of knowledge in affordable housing, has a complete working knowledge of the company's operating policies and procedures, and is familiar with industry standards for professionally managed housing and has a demonstrated track record in the field. This individual works with site-based Site Managers in carrying out site responsibilities particularly as these relate to the physical and financial operation of the site.

c. Staffing Plan

Staffing will be a key component for the proper management of the PROPERTY. The anticipated Staff for the PROPERTY will include the Property Manager and Maintenance Superintendent.

Given the variety of assistance programs in operation at Baldwinville School Apartments, it is important to have management staff who can effectively communicate the assistance program requirements to residents and applicants, and who know how to administer these programs.

THE MANAGEMENT COMPANY staffing philosophy emphasizes strength in both managerial and interpersonal skills. In addition to compliance with regulatory requirements, we are interested in the ability of staff to problem solve, and work with residents in a respectful, collaborative atmosphere. Owners/Residents need to feel that there is open communication and cooperation between all levels of management of the PROPERTY.

Generally, all staff positions will be filled through internal postings, Internet, newspaper advertising, and in certain situations, employment recruitment firms. Any such costs will be a property expense.

A description of the full-time positions and duties are as follows:

Property Manager – A fully trained and experienced senior level manager with a broad range of knowledge in affordable housing. This person is familiar with industry standards for professionally managed housing and has a demonstrated track record in the field. They are in charge of coordinating all rental activities to make sure the PROPERTY maximizes occupancy and revenue while minimizing vacancy. Working to create a “Community of Quality”, the Property Manager is responsible for the efficient physical and financial operation of the assigned PROPERTY in keeping with the OWNER’S goals and in compliance with federal, state & local regulations and with THE MANAGEMENT COMPANY policies and procedures.

- Prepares annual site budget and regularly monitors budget throughout the year. Ensures that PROPERTY operates within set financial guidelines.
- Ensures that the physical condition of the PROPERTY, both interior and exterior is, safe, attractive, and running efficiently at all times. Ensures that PROPERTY meets inspection guidelines for various agencies.
- Supervises and ensures implementation of all maintenance functions relating to the PROPERTY including apartment turnover, move-out/move-in process, preventive maintenance programs, timely and efficient work order program, conducts regular physical inspections, and annual apartment inspections.
- Oversees the leasing process by:
 - processing, verifying, and approving/rejecting applications using established procedures to ensure tax credit and other program compliance
 - completing appropriate background checks,
 - processing leases,
 - ensuring apartment readiness for move-in,

- scheduling apartment inspection with local housing authority, if applicable,
- processing move-in certification and other rental subsidy-related paperwork, if applicable, and
- adhering to fair housing regulations in all aspects of leasing process
- Conducting new resident orientation at initial occupancy and reviewing the handbook, the lease, the apartment and contents, the rules and regulations, the amenities, etc.
- Increases flow of customer traffic and maximizes PROPERTY's visibility by:
 - developing effective communication materials, i.e. advertising and promotional materials,
 - developing on-site activities and promotions, and
 - ensuring the PROPERTY's curb appeal is attractive and appealing.
- Monitors effectiveness of marketing program and collects data on customer preferences by:
 - completing and monitoring guest cards,
 - analyzing information on guest cards,
 - placing follow up phone calls to potential residents, and
 - completing vacancy and traffic reports.
- Monitors and oversees all contractual services, ensuring satisfactory quality of service and cost effectiveness.
- Reduces vacancy by fostering and maintaining positive resident relations, resulting in a satisfactory resident retention rate.
- Monitors rent/fee collection process to ensure that notices are sent, and legal action is initiated in a timely manner, as necessary.
- Maintains vacancy status and rent collection reports and submits to Regional Property Manager.
- Documents and reports unusual or extraordinary incidents regarding residents or staff in the appropriate Company format.
- Hires appropriate site staff members. Manages, directs, disciplines and develops staff members, ensuring that they work toward meeting PROPERTY goals and operate within established policies and procedures.
- Directs staff to expedite all resident/owner requests or complaints with courtesy.
- Assumes active role in community in which PROPERTY is located. Develops and maintains positive and productive relationships with local agencies.
- Provides superior customer service by answering telephones, greeting and assisting all visitors to the management office, taking messages and assisting callers whenever possible.
- Fosters and maintains positive resident relations by responding to resident needs promptly and efficiently.
- Supports the site management office in an administrative capacity.
- Ensures the efficient operation of the management office by ordering office supplies, maintaining postage machine and arranging office equipment repairs.
- Assumes additional responsibilities and assisting co-workers when necessary.
- Prepares reports, correspondence, memos, logs, etc.
- Responds to residents' service requests by completing work order forms.
- Conducts market research on local competition by:
 - "shopping" competitor properties,

- gathering data on competitors' prices and marketing techniques,
- identifying economic trends,
- collecting data on customer/resident preferences, and
- uses data to forecast future market trends and works with Property Manager to plan site strategy to address these trends.
- Markets vacant units to potential residents by:
 - establishing and maintaining contact with prospective residents, showing units,
 - demonstrating and highlighting PROPERTY's advantages,
 - ensuring model and vacant apartments are ready for showing, and
 - following up on all inquiries and undecided prospects.
- Fosters and maintains positive resident relations to achieve satisfactory resident retention rate by:
 - conducting new resident orientation,
 - responding to resident service requests and other resident needs in a prompt, efficient, courteous manner,
 - communicating site/resident issues and concerns to Property Manager, and
 - assisting resident activities director with resident activities and programs.

The Property Manager reports to the Regional Manager.

THE MANAGEMENT COMPANY's benefit package for the Staff includes health insurance, dental insurance, life insurance, long term disability, and 401K Plan.

Maintenance Superintendent: Works with Property Manager and site staff to ensure the efficient physical operation of the PROPERTY in keeping with the OWNER'S goals as outlined by the senior MANAGEMENT COMPANY staff and in compliance with federal, state & local regulations and codes, and with THE MANAGEMENT COMPANY policies and procedures. Ensures the effective upkeep, repair, and inventory of grounds, buildings, equipment, and apartments. Oversees and directs the day-to-day activities, emergencies, and assignments of maintenance staff.

- Establishes daily work schedules for Maintenance Staff, prioritizes work orders and follows-up on work assignments for effective, thorough completion.
- Prepares and maintains maintenance records and paperwork.
- Maintains inventory of parts, equipment, assets and services.
- Works with Central Purchasing Department to purchase approved parts, supplies, equipment and services.
- Conducts daily inspection of PROPERTY, reports all maintenance problems observed, recommending solutions.
- Coordinates the turnover of vacant apartments in a timely manner.
- Makes recommendations for contract services, prepares bids, and supervises work.
- Works with Property Manager on the execution of Manager's Plan items and capital improvements.
- Interviews, recommends, and trains new maintenance staff.
- Establishes and maintains preventive maintenance schedule.

- Maintains thorough knowledge of electric power, water and gas shutoff, clean-out traps, fire alarm and fire protection systems, boiler, HVAC and mechanical systems, and security systems.
- Provides courteous, efficient response to requests for service.
- Services, cleans, repairs lighting, appliances, plumbing, electrical, HVAC systems, storm drains, and equipment.
- Paints, and maintains common areas, walls, floor covering, doors, and offices.
- Ensures curb appeal meets or exceeds the established standards.
- Completes resident work orders daily.
- Responds to emergency maintenance requests.
- Completes preventive maintenance assignments.
- Conducts snow removal.
- Prepares vacant apartments for rental in a timely manner.
- Shares on-call responsibility with other Maintenance Staff.
- Delivers notices to Residents.
- Provides courteous, efficient response to requests for service.

The Maintenance Superintendent reports directly to the Property Manager.

In addition to the on-Site Staff, THE MANAGEMENT COMPANY has the ability to provide direct services in technical areas from Staff who will be expensed to the PROPERTY on an hourly basis, for tasks completed:

Resident Activities Director: Works with site management team to develop and administer resident programs and services that contribute to and enhance site management objectives in creating and maintaining a Community of Quality. If funding permits or if grants can be obtained, we strongly suggest that a RAD be hired so that residents can fully enjoy and benefit from THE MANAGEMENT COMPANY's Residents Services social, educational and recreational activities/programs/special events.

Communications Manager and Staff: Responsible for developing and producing all communication and related materials for THE MANAGEMENT COMPANY and its related entities. Provides marketing tools and strategies which support corporate and PROPERTY goals. Supervises production of on-site PROPERTY newsletters.

Construction Specialist: The Specialist ensures effective and efficient processes for obtaining specifications and bids, engineer and architect coordination, project management for larger capital projects, and the quality and performance of sub-contractors to meet THE MANAGEMENT COMPANY standards.

Central Purchasing Staff: Purchasing staff develops, implements, and evaluates purchasing functions, to ensure standardized inventory, to maximize value and minimize cost.

Director of Marketing: Works with the Property Manager to closely monitor all on-site marketing functions, from vacancies and unit turnaround time, to the need for advertising and marketing materials, training and incentive programs, signage, and curb appeal issues. Conducts periodic resident satisfaction surveys, analyzes vacancy and traffic logs, recommending new strategies to minimize vacancy losses.

Information Technology Manager: Provides Management Information System Support to PROPERTY and Headquarters to insure optimum operating efficiency and service to internal PC users. Ensures software applications and functions are understood by users by providing training, equipment, software and related services and support.

Occupancy Specialist: Provides technical support to THE MANAGEMENT COMPANY managers and staff on regulatory issues that impact the day-to-day operations of the site. This includes establishing direct contact with regulatory staff for further clarification and assistance on Regulations and Notices and resolving specific issues that are site related. The Occupancy Specialist also recommends and assists in providing in-house regulatory training for THE MANAGEMENT COMPANY staff as needed.

d. Management Office

An on-site office for leasing, rent/fee collection, work orders, and other PROPERTY business will be provided by the OWNERS, including but not limited to, office equipment, supplies, copier/scanner, furniture, computers, and tax credit software.

e. Training

Training is emphasized throughout an employee's tenure with THE MANAGEMENT COMPANY, from the point of hire or transition in acquiring a new contract with current staff in place, through the employee's career with the Company.

The point person for training and development needs at PROPERTY would be the Regional Manager who handles oversight of front-line operations issues. The Regional Manager would identify areas to the Vice President/Property Management where the employee needs to develop skills. These areas would then be highlighted in regular and periodic reviews. The Vice President/Property Management would do the initial coordination by bringing in the Vice President of Training and/or the Director of Human Resources, or others as necessary. The development program would then be designed in consultation with the Regional Manager and the Vice President of Training or Director of Human Resources.

All Managers and Assistant Managers are required to become certified by the National Affordable Housing Management Association (NAHMA) as National Affordable Housing Professionals (NAHPs). This requires that staff obtain the Certified Professional of Occupancy (CPO) designation, as well as obtain the Fair Housing and Section 504 Compliance designation (FHC). The Company also has a program to encourage Staff to pursue professional accreditation courses including the ACCREDITED RESIDENTIAL MANAGER designation earned through the Institute of Real Estate

Management. THE MANAGEMENT COMPANY has several ARMs and CPMs on Staff, as well as several candidates for these designations. In addition to the required courses, THE MANAGEMENT COMPANY encourages participation in industry-related and personal growth seminars, approved courses and classes that are related to the employee's current position or their future career path with the Company, including "self-study" courses. These training costs (as outlined in THE MANAGEMENT COMPANY policy) will be a PROPERTY expense.

The appropriate individuals on the PROPERTY staff will attend in-house monthly Manager's meetings and quarterly Superintendent's meetings. Each of these meetings features one or more training sessions in a critical area.

Management staff who oversee the management of the project will attend at least annually a tax credit training seminar, the first to be attended prior to the marketing or leasing by the Partnership of any unit in the Project.

f. Employee Diversity & Proximity

THE MANAGEMENT COMPANY is committed to hiring and retaining employees who live in or near the property where they work. We prefer to hire locally, as employees sometimes need to be available twenty-four hours a day, seven days a week when they rotate "on call" duty with other employees to address emergency site issues that can arise after office hours. In addition to being able to respond quickly and provide the necessary services to the Site, community-based employees are also better able to relate to the specific needs and concerns of our residents.

IV. Occupancy

THE MANAGEMENT COMPANY will use the form of occupancy agreement attached to the Affirmative Fair Housing Marketing Plan.

a. Program Eligibility and File Review

The Property Manager will be responsible for obtaining the necessary information for Low Income Housing Tax Credit Certification/Recertification of resident eligibility. The Property Manager will be experienced in this area and will adhere to relevant procedures associated with the LIHTC program. As a second confirmation of program eligibility, management will submit all applications to US Housing Consultants, or similar consultant, who will verify management's determination of eligibility

Management staff will submit tax credit eligibility documentation to the lender for every prospective tax credit applicant during the initial tax credit unit qualification phase. No tenant who will initially qualify a unit for tax credits shall be allowed to take occupancy without first obtaining the lender's approval. The lender shall review such documentation in a timely manner.

Individuals who have a financial interest in the development and their families shall not be eligible for housing.

Tax Credit Tenant Files shall be stored in a fireproof and flood safe file cabinet and files shall be maintained for a period of not less than 21 years from the project's first tax credit year.

b. Wait List Maintenance

1) Placement of Applicants on the Wait List

Eligible applicants will be placed on the wait list, initially by lottery process, following the specific rules as outlined in the Baldwinville School Apartments Tenant Selection and Affirmative Fair Housing Marketing Plan. Again, special consideration will be given to applicants who meet the qualifications for programmatic preferences and those who need accessible units under Section 504.

The order of placement on these lists shall be:

1. Current residents who qualify for an internal transfer, by date requested. This includes requests under S. 504/ Reasonable Accommodation and over/under-housed residents.
2. Applicants eligible for FCF and CBH programs.

In situations in which persons decline the offer of an apartment without good cause, the date used as the basis for their wait list placement shall be changed to the date on which they declined the offer of an apartment. An applicant may decline an apartment two times before the applicant will be removed from the wait list.

2) Placement of Applicants on The Wait List for Accessible Units

It is recommended that applicants who require accessible units be noted as such. They should be given preference for accessible units when they become available, based on the needs of the applicant and the features of the unit. Management will market accessible units to applicants who need the features of the unit according to the Affirmative Fair Housing Marketing and Tenant Selection Plan for Baldwinville School Apartments.

3) Updating the Wait List

Wait lists will be updated semi-annually. Wait lists will be annotated to reflect offers of units and other such contacts with applicants. Written notice (Form CF-36(c)) will be sent to all persons on the lists advising that if they wish to remain on the wait lists, they must respond in writing within 30 days of receipt of the notice. Those not responding will be removed from the list; their application will be stored for three years.

4) Refusal of Unit on the Wait List

Persons who refuse an offer of an appropriately sized unit will be moved to the bottom of the wait list and the date of their refusal will become their new official date of application. Exception to this position displacement will be considered where the refusal is for serious immediate reasons (for example, a serious illness or death in the family) or the applicant did not respond to information or updates because of a disability (see Reinstatement to the Wait List).

5) Removal from the Wait List

Management must document removal of any names from the waiting list with the time and date of the removal.

Examples of when an applicant will be removed from the waiting list:

- The applicant no longer meets the eligibility requirements for the PROPERTY or program;
- The applicant fails to respond to a written notice for an eligibility interview;
- The applicant is offered and rejects two units in the PROPERTY (or any number of unit offers as specified in management's written policies);
- Mail sent to the applicant's address is returned as undeliverable; or
- The unit that is needed – using family size as the basis – changes, and no appropriate size unit exists in the PROPERTY.
- The applicant fails to respond to a written notice to update the wait list (Are You Still Interested? Form CF-36(c))
- An applicant on the HUD preference wait list is offered and rejects two units in the PROPERTY (or any number of unit offers as specified in the owner's written policies).

Management must periodically print out electronic waiting lists or preserve backup copies showing how the waiting list appeared before and after the removal of each name.

6) Reinstatement to the Wait List

If an applicant is removed from the wait list, and subsequently the owner determines that an error was made in removing the applicant (e.g., the incorrect address was used in sending mail to the applicant, the applicant did not respond to information or updates because of a disability or because of serious immediate reasons such as a serious illness or death in the family), the applicant must be reinstated at the original place on the waiting list.

7) Selection of Residents from the Wait List

Final selection of residents is made from the wait list. Every attempt will be made to meet the Affirmative Fair Marketing Plan for an optimum racial, and ethnic mix that mirrors that of the larger city or town.

Residents shall be selected to fill vacancies in order for the appropriate unit size wait list as follows:

Current residents who qualify for an internal transfer, by date requested. This includes Reasonable Accommodation requests and accommodating over/under-housed residents, as the site budget permits.

c. Rent Collection Policies and Termination Procedures

It is THE MANAGEMENT COMPANY's policy to use aggressive means to maximize effective gross income. The goal is to eliminate the delay of rental payments and potential collection expenses.

Delinquency control begins with the proper screening of prospective applicants. Applicants with negative references shall be rejected in accordance with the Tenant Selection Policy.

Resident education is an important measure in controlling delinquency. At the time of move-in, the Resident is educated on payment procedures and requirements and will be required to sign the Rent Collection Policy Form. Subsequent to move-in, Residents must be reminded via newsletters, Resident Meetings, and individual meetings of the importance of timely rent payments, as well as the importance of open communication for any problem that may arise.

Delinquent rental payments may stem from a variety of human service issues. In such cases, the Property Manager will meet the Resident. This intervention may disclose the need for services related to health, familial or other related reasons. Additionally, there may be instances where the implementation of a reasonable accommodation plan may address a nonpayment situation.

The following procedural steps will be adhered to by the Property Manager:

1. The rent is due on the first day of each month. A grace period of five (5) days is provided for reasons such as unforeseen delays, health-related issues, etc.
2. If the rent is not paid, a rent reminder notice is sent by the 3rd business day.
3. If the rent remains unpaid, the Resident is contacted by telephone and written reminder by the 5th business day.
4. A Fourteen Day Notice (or Thirty Day Notice for a unit with a HOME/DHCD program) is issued to any outstanding account by the 8th business day.
5. Any Notices that remain outstanding are forwarded to the attorney for continuation of the legal process by the 22nd of the month.

d. Lease Terminations

Residents are expected to fulfill their obligation to pay their rent on time, not disturb the peace and quiet enjoyment of other Residents, not damage the PROPERTY and comply with the other regulations and rules found in the Lease, Community Rules & Regulations, and specific Program regulations. If these obligations are not followed, the Resident will first be contacted to discuss the nature of the problem. The Resident is then fully aware of the issue and given an opportunity to address the problems. If the Resident does not comply, then specific written warnings are sent, followed by a Lease Termination Notice. The process is fully documented with dates, times and specifics of what transpired, in such a manner that if court is required, a prudent judge would

agree that lease termination is the only course of action to protect the rights of other Residents and/or the Owner.

At a point between the issuance of the written warnings and the Lease Termination Notice, the Site attorney is brought in to ensure proper compliance with State law. Agreeing on rules and regulations is a twofold process. Making Residents aware of the rules is the first step, but even more important is the second step of creating a climate that encourages compliance.

e. Grievances, Disputes, and Procedures

Grievances and disputes are addressed and resolved on the Site level. Our Property Manger works with Residents to resolve individual problems or conflicts. If not resolved there, the Resident is asked to put the grievance into writing and to forward to the MANAGEMENT COMPANY's Boston Office.

In those situations, rare instances where a Resident may request an alternative option, a procedure is in place whereby the Regional Manager from THE MANAGEMENT COMPANY will meet at the PROPERTY to arbitrate until the matter is settled. All Property Managers have "Open Door" policies with the Residents, which normally precludes problems getting to a grievance stage. In addition, we encourage Tenant Associations, Tenant Steering Committees for special projects.

f. Resident Orientation

Approximately one week prior to occupancy an appointment is made with the prospective Resident to conduct the Resident Orientation. All members of the household are encouraged to attend to discuss the move-in, review and sign the lease, review Management's policies and the Resident responsibilities as they relate to annual recertification requirements, the PROPERTY, and the community. The Resident Handbook and important topics such as fire safety and evacuation, energy conservation, emergency telephone numbers, and rent collection, are covered.

After the paperwork is signed a tour of the PROPERTY is conducted highlighting areas such as mailboxes, trash disposal, and parking. Finally, the apartment is visited to check how locks and keys work, how to operate the appliances, alarm system, disposal, lighting, windows/locks, heat and air conditioning, if applicable. A move-in package is provided which includes the lease, handbook, copies of Newsletters, and notices and flyers.

g. Limited English Proficiency

First Realty managed federally assisted properties must comply with Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (LEP). This requires that reasonable steps be taken to communicate with persons who need services or information in a language other than English. In performing the Four Factor Analysis* required by HUD, sites will track the language census of applicants and current beneficiaries (residents) by using the "I Speak"

form (**Form CF-13**). This will determine languages other than English that are commonly spoken to determine LEP needs.

The “I Speak” form should be used at application and at move-in (one per household) to determine the primary language, including English, spoken by beneficiaries of the program (adult household members). The data should be entered into the property management software under household information/demographics. This information will be used as part of the Language Assistance Plan for the PROPERTY. If the percentage of households who speak a language other than English “exceeds 1,000 persons or if it exceeds 5%...(of the beneficiaries) or along with 50 persons”**, then vital documents identified by the Multifamily Department of HUD. Legal documents, such as the lease agreement, will be executed only in English.

Additionally, outreach using the Affirmative Fair Housing Marketing Plan (AFHMP) will be consistent with the LEP safe harbor requirements of when the eligible LEP population in the market area exceeds 1,000 persons or if it exceeds 5% of the eligible population or along with 50 persons.

A site Language Assistance Plan for LEP individuals at a site could include some of the following strategies/steps; bilingual staff, written and oral translation services, available to the site when needed, newsletters and flyers in alternate languages, translated versions of important letters from management and approved versions of the lease in alternate languages for informational purposes only.

*Four factor analysis includes; number or proportion of LEP persons in the market area eligible-population or current beneficiaries & applicants, frequency of contact, importance of service/benefit, resources available.

** Full sentence quotation: “According to the table, HUD would expect translations of vital documents to be provided when the eligible LEP population in the market area or the current beneficiaries exceeds 1,000 persons or if it exceeds 5 percent of the eligible population or beneficiaries along with more than 50 persons.” Federal Register/Vol. 72, No.13/Monday, January 22, 2007/page 2736.

h. Security

The best, most effective security program begins with each resident. In conjunction with Capstone Communities and MPZ Development LLC, THE MANAGEMENT COMPANY would seek to organize community meetings, form a security committee, and recruit volunteers for a Neighborhood Watch or similar monitoring program. Educational initiatives, including newsletter reminders on safety and security, can provide positive reinforcement and encouragement to residents who may hesitate to report problems. Although hardware such as the alarm systems is an important factor, a resident population committed to maintaining security by reporting all suspicious activity and disturbances, and by following established guidelines for keeping buildings secured is extremely effective.

As incidents, disturbances, and liability-related issues occur, files will be kept of incident reports including details such as the time, date, names of residents/guests, police or fire department involvement, witnesses, etc. From the incident reports, follow-up letters will be sent, and meetings with residents regarding any violations will be routinely scheduled. THE MANAGEMENT COMPANY will make every effort to ensure that Residents comply with all terms and conditions of the rules and regulations and their use and occupancy agreement.

i. Apartment Inspections

Move-in Inspections are conducted by Management with the Resident present to document any items needing repair/adjustment prior to move-in.

Annual Apartment Inspections are performed annually by the Management and Maintenance Staff to determine if the apartment is being properly maintained and in good repair. As needed, work orders will be issued, and charges will be assessed for damages above and beyond normal wear and tear.

Preliminary Move-out Inspections are scheduled with the Resident who has provided a 30-day notice of a move. A letter is sent to the resident outlining their responsibility for repairing, cleaning, or replacing the listed items *before* the final inspection of the apartment. The Resident is further informed that they will be charged for the labor/replacement/repair cost of any damage beyond normal wear and tear which is not corrected before move-out.

Final Inspection at Move-out is again conducted with the Resident, if possible. A list of detailed damages and cleaning above normal wear and tear are noted. The Resident will then receive an itemized list of the damages and costs along with a request to remit funds to cover the total charges. All of the above inspections are completed on the MANAGEMENT COMPANY Apartment Inspection Report.

Management will comply with DHCD's requirement for annual inspections which include desk review, common area and apartment physical inspections.

j. Vacancy Turnaround Procedures

Recognizing that unoccupied apartments negatively affect the cash to the PROPERTY, unit turnaround will be started as a result of the Preliminary Move-out Inspection. Items that are noted in need of replacement will be pre-ordered and parts necessary for repair will be checked for inventory availability. Once vacated, apartments will be painted, cleaned and maintenance performed in accordance with housing quality standards. It is anticipated that painting of apartments will be a contracted service. Turnaround time should be no more than three (3) to five (5) days and under unusual circumstances no longer than thirty (30) days after approval and coordination with the Property Manager.

k. Resident Charges

THE MANAGEMENT COMPANY will review and recommend to the OWNER a policy of charges for items such as: lockouts, key and locks, late rental payments/fees, and resident damages. We will recommend charges for lockouts, as follows: a) no charge during regular business hours; b) during the evening and weekends \$60.00. Key/lock charges and resident damages will be assessed according to the actual cost of parts and labor associated with making the repair. Late charges will be charged that conform to state law and programmatic guidelines.

I. Record Keeping, Accounting & Reporting

The Resident files will be maintained at the PROPERTY Management Office. Also maintained in the Resident file are the completed work orders, original application, lease, correspondence, certifications and recertifications, legal notices, annual apartment inspection forms, copies of notifications, notices etc.

Residents are encouraged to pay their rent through the online resident portal. Otherwise, rents are mailed or brought in person to the Site Management Office. Payments must be made by personal check, certified check, or money order—cash is not accepted.

The Management Staff is responsible for collecting security deposits and the monthly rental payments and depositing them on a daily basis. A secure mail slot/lock box will be installed at the office or elsewhere on the PROPERTY so that rent checks can be dropped off at times convenient to the residents. The Property Manager utilizes fully computerized property management software for both the rent receivables and subsidy programs. All administrative staff and the Facilities Manager will have individual networked PCs with high-speed Internet connections. Software and hardware will be a PROPERTY expense.

The following is a current listing of the certification forms and letters required, as needed, in the resident file for certification. This list is subject to change with program regulations.

m. Summary of Forms & Sample Letters

Form #	Name
FF-MA	TAX CREDIT FORMS - MASSACHUSETTS
FF-MA-01	Application For Housing
FF-MA-02	Interview Checklist
FF-MA-03	Assisted Housing Lease
FF-MA-04	Lease Agreement
FF-MA-05	Lease-Up Checklist
FF-MA-06	Annual Apartment Inspection Report & Preliminary Move-Out Report
FF-MA-07	Applicant Disclosure
FF-MA-08	CORI Request Form
FF-MA-09	Evictions – MA 14-day notice
FF-MA-10	First & Last Month’s Rent Deposit and Receipt
FF-MA-11	Landlord Reference

FF-MA-12(b)	Move-In/Move-Out Inspection Report (Apartment Condition Statement) – Properties with Security Deposit
FF-MA-13	Rent Collection Policy – Receipt Form
FF-MA-14	Renter’s Insurance
FF-MA-15	Resident Emergency Contact Card
FF-MA-16	Resident Handbook Receipt
FF-MA-17	PI/MOR Sample Notice to Residents
FF-MA-18	Security Deposit Receipt
FF-MA-19(a)	Tenant Lead Law Notification - English
FF-MA-19(b)	Tenant Lead Law Notification - Spanish
FF-MA-20	LIHTC Qualified Basis Tracking Sheet
FF-MA-21	Development Agency Criteria Sheet
FF-MA-22	Income & Asset Worksheet for LIHTC
FF-MA-23	Property Development Map
FF-MA-24	Affidavit of Estrangement
FF-MA-25	Alimony/Child Support Documentation
FF-MA-26	Asset Verification Form
FF-MA-27	Recertification Paperwork Divider
FF-MA-28(a)	Certification for Resident Who Claims Zero Income
FF-MA-28(b)	Certification for Applicant Who Claims Zero Income
FF-MA-29	Certification Worksheet
FF-MA-30	Certification/Recertification Checklist
FF-MA-31	<i>Intentionally omitted</i>
FF-MA-32	Employment Verification
FF-MA-33	Financial Aid for Students
FF-MA-34	Life Insurance Verification
FF-MA-35	Live-In Care Attendant Affidavit
FF-MA-36	Memo to File (Blank)
FF-MA-37	No Change in Income Statement
FF-MA-38	Unemployed Status Affidavit
FF-MA-39	Occupancy Compliance Review Form
FF-MA-40	Pension Verification
FF-MA-41	Phone Conversation and Clarification Record
FF-MA-42	Real Estate Asset Worksheet
FF-MA-43	Real Estate Verification
FF-MA-44	Recertification Update
FF-MA-45	Verification of Monetary and Non-Monetary Contributions
FF-MA-46	Self-Affidavit – Alimony/Child Support
FF-MA-47	Self-Affidavit Form
FF-MA-48	Self-Employment Income Certification
FF-MA-49	Social Security Verification
FF-MA-50	Source Listing
FF-MA-51	Student Status Household Verification
FF-MA-52	Student Status Verification
FF-MA-53	Supplemental Applicant Questionnaire

FF-MA-54	Verification of Transitional Assistance
FF-MA-55	Tenant Income Certification (TIC)
FF-MA-56	Resident/Applicant Release and Consent
FF-MA-57	Termination of Employment Verification
FF-MA-58	Unable to Obtain Third Party Verification
FF-MA-59	Under \$5000 Asset Certification
FF-MA-61	Verification of Assets and Asset Disposition
FF-MA-62	Verification of Unemployment
FF-MA-63	Veteran's Administration Benefits Verification
FF-MA-64	Year-to-date (YTD) Clarification Form
FF-MA-65	IRS Form 8586 Low-Income Housing Credit
FF-MA-66	IRS Form 8609 Low-Income Housing Credit Allocation & Certification
FF-MA-67	IRS Form 8609A Annual Statement for Low-Income Housing Credit
FF-MA-68	IRS Form 8611 Recapture of Low-Income Housing Credit
FF-MA-69	IRS Form 8823 Low-Income Housing Credit Agencies Report of Non-Compliance or Building Disposition
FF-MA-70	IRS Form 8874 New Market Credits
FF-MA-71	Lease Addendum - Violence Against Women and Justice Department Reauthorization Act of 2005
FF-MA-72	Certification of Domestic Violence, Dating Violence or Stalking
FF-MA-73	Certification of Employment for Minor Children by Head of Household
FF-MA-74	Recurring Contribution to Household Statement
FF-MA-75	Seasonal Worker Affidavit
FF-MA-76	Child Support Affidavit and Verification
FF-MA-77	Alimony Affidavit
FF-MA-79	HUD LIHTC Tenant Data Collection Form
FF-MA-80	Request for Transcript of Tax Return
FF-MA-81	Affordable Community Apartment Deposit Receipt
FF-MA-82	Annual Recertification – Initial Notice - 120 day
FF-MA-83(a)	Annual Recertification – 2nd Notice - 90 day
FF-MA-83(b)	Annual Recertification – 3rd Notice - 60 day
FF-MA-83(c)	Annual Recertification – Final Notice – 30 day Termination
FF-MA-83(d)	Recertification – Notice of Rent Change
FF-MA-84	Occupancy Compliance Review Notification
FF-MA-85	Monthly Task List – Tax Credit
FF-MA-86(a)	Monthly Task List – Section 8 & Tax Credit
FF-MA-90(a)	Work Number Calculation Worksheet
FF-MA-91(a)	Pay Stub Calculation Worksheet
FF-MA-92	Application Assist Statement
FF-MA-93	Tip Earnings Self Affidavit
FF-MA-94	Acknowledgement of Document Receipt (MA LIHTC)

Note: for additional forms refer to the First Realty Management Operations Manual

V Financial Reporting

a. Financial Statements

THE MANAGEMENT COMPANY handles accounting and bookkeeping functions utilizing Real Page software. Monthly financial statements utilizing accrual basis accounting are provided to the OWNER. The general ledger package, accounts receivable, accounts payable and check disbursement are all computerized. Timely payments of expenses are generated through AvidPay.

The MANAGEMENT COMPANY financial package supplied to the Owner each month would include the following reports for each entity:

- Balance Sheet
- Schedule of Financial Statement Detail with Budget Comparisons (Accrual Basis)
- Bank Reconciliations for all bank accounts with statements
- Accounts Receivable Schedule
- Prepaid Insurance
- Paid Invoices Register by PROPERTY
- General Ledger

b. Investment Management

Prudent investment strategies are implemented in keeping with Capstone Communities LLC and MPZ Development LLC's objectives and recommendations and are coordinated with the PROPERTY's long and short-term cash flow requirements.

Funds for all THE MANAGEMENT COMPANY managed property and for its principals are invested according to directions from the OWNERS of the funds. Property owners tend to invest in extremely conservative investments such as treasury bills and bank certificates of deposit, which are purchased through mortgagees and banks. These investments are placed for periods relating to their proposed uses. (Capital reserve accounts can be carefully planned.) Certain owners prefer to place their own investments, and THE MANAGEMENT COMPANY processes the authorized transfers and performs the monthly accounting.

THE MANAGEMENT COMPANY also administers substantial sums at several banks to provide temporary fund investment of excess operating funds, similar in form to a lawyer's escrow account with separate sub-account ownership. Funds are available daily and are transferred weekly. In any case, THE MANAGEMENT COMPANY continuously monitors rates to obtain the highest interest possible.

c. Risk Management

The Risk Manager will tour the PROPERTY annually and will be pro-active in minimizing liability. Will work with insurance company loss control personnel to evaluate inspection reports and loss control recommendations as set forth by insurance company inspections.

The Regional Manager will work with THE MANAGEMENT COMPANY's full time, professional Risk Manager to assist the OWNER in procuring insurance coverage. The Risk Manager will do a complete review of the client's existing insurance portfolio. During this review the Risk Manager will identify coverage gaps, insurance to value issues, limit adequacy, deductible options and ensure that all appropriate coverages are in place. The Risk Manager will ensure that all coverage is in compliance with the requirements of client's mortgage company. If any coverage is lacking, the OWNER would be informed of any deficiencies and potential remedies. The Risk Manager will assist in every way possible to improve the PROPERTY insurance program. THE MANAGEMENT COMPANY will maintain records of insurance coverage, coordinate claims related to the common elements, review coverage and recommend changes, and will try to obtain competitive bids at policy renewal time.

In general, each PROPERTY's premiums are based on applying underwriting standards to their own particular construction materials, location and loss experience. Many of the coverages are broader and have higher limits than policies that are the industry norm. Each PROPERTY has guaranteed replacement cost coverage and can customize its property deductible and liability limits. THE MANAGEMENT COMPANY's Risk Manager closely monitors expirations and renewals of insurance policies and follows market trends to determine the best time to bid the various types of coverage. In addition, the Risk Manager reports all incidents of bodily injury, property damage and workers compensation injuries. Claims summaries are provided by the insurance carriers and are reviewed for accuracy and reasonable reserves.

Our risk management team sets insurance limit requirements for outside contractors working in units and the common areas. Our contracts department then monitors insurance certificates verifying each contractor's coverage and renewal dates. We would review the current loss prevention program at the PROPERTY to determine whether loss/risk can be improved. If so, a report of our findings and recommendations would be provided to the OWNER for review and approval. The services of a professional Risk Manager become especially valuable in the current climate of rapidly escalating premiums, higher deductibles and deteriorating coverage choices. The Risk Manager is always available to answer questions for site staff and clients.

Additionally, THE MANAGEMENT COMPANY leverages the resources of Real Page Vendor Credentialing to help ensure compliance with the set insurance standards. Their team and software do this by requiring every vendor utilized by the PROPERTY to be registered with them and go through the rigorous, multi-step process to verify that they meet the strict standards set by THE MANAGEMENT COMPANY including the secure logging and storage of critical documents like Certificates of Insurance evidencing the required amounts and W-9s.

VI Operations, Maintenance & Repairs

a. Maintenance & Repairs - Capital Improvements/Manager's Plan

As part of the budgeting process, THE MANAGEMENT COMPANY will develop and propose to the OWNER an annual Manager's Plan based on a third-party Capital Needs Assessment. The Plan

includes major capital improvements such as roofing, paving, landscaping upgrades, interior common area painting and exterior painting, occupied apartment repainting, flooring and carpet replacements, appliance replacements, window replacements, 504 compliance, etc. These and other capital items will be identified by THE MANAGEMENT COMPANY by assessing the needs of the PROPERTY. The Plan will focus on incorporating improvements for the PROPERTY each year that are not part of the routine operating budget and completing as funds allow. THE MANAGEMENT COMPANY would recommend updating the Capital Needs Assessment (CNA) after each five years of operation.

The CNA forms the basis for long and short-term management of the PROPERTY from the facility point of view. It is important to have a plan in place as a reference point for maintenance work and general building improvements. There are many instances when time and money can be saved by understanding what work needs to be done now and what work is anticipated in the future. We recommend hiring a third-party contractor, capable of incorporating a code review, to develop the CNA with input from THE MANAGEMENT COMPANY and the OWNER.

b. Daily Maintenance

The Agent will respond to maintenance requests called-in by residents within 48 hours. Residents will be instructed to call the site management office to report needed maintenance. When called-in, a written work order will be prepared and given to the building maintenance person or appropriate sub-contractor by the Property Manager. When the repair request is complete, the Building maintenance person will leave one (1) copy of the written work order with the Resident and return all other copies to the Management Office for logging-in and filing in the unit file. Residents will be encouraged to log work orders at any time through the on-line resident portal.

c. Emergency Maintenance

The Agent will immediately respond to the emergency needs of the PROPERTY. Residents will be given the afterhours telephone number for use in emergencies, generally the same number that residents use during the day. First Realty Management utilizes Hello Spoke Notify to handle emergencies after regular hours and when staff are not in the office call is recorded and immediately dispatched to the on-call maintenance person. There are back-up staff members in the hierarchy in the event the first person does not respond.

d. Snow Removal

THE MANAGEMENT COMPANY will remove snow and ice from walkways and parking areas so as to keep these areas passable and as free from danger as possible during the winter months. Snow removal will begin within a reasonable period of time after the end of a snowfall and will be completed by the Agent's staff or by a sub-contractor hired by the Agent and paid for by the PROPERTY.

e. Trash Removal

The Agent will instruct Residents of the need to properly dispose of trash and recycling in the dumpsters located in the dumpsters located adjacent to the parking area. On behalf of the OWNER, the Agent will sub-contract for the removal of trash and recycling by an outside trash collector.

f. Preventive Maintenance & Inventory

The Agent will conduct annual preventative maintenance inspections of each unit ascertaining that all features of the apartment remain in place and remain functioning properly. Residents will be given at least seven (7) days' notice of the up-coming preventative maintenance inspections. When inspections indicate that repairs are needed, repair requests will be prepared for completion within two (2) weeks.

Preventative maintenance inspections of major building systems will be completed as required by the particular system or equipment in accordance with the manufacturer's suggested maintenance schedule.

The maintenance needs of the PROPERTY require a continual review and response to ensure successful daily operations. THE MANAGEMENT COMPANY will develop a Preventive Maintenance (PM) program to meet the specific needs of the PROPERTY. The three critical aspects of the Preventive Maintenance program are inspections, planning and scheduling. A plan will be fully developed and tailored specifically for the PROPERTY as the phases of construction are completed.

THE MANAGEMENT COMPANY has a central purchasing program, at an additional cost, which enables each property in our management portfolio to benefit from the best possible price. Buying goods, supplies, products, appliances, carpeting, etc. in bulk quantity assures cost savings.

An inventory of all of the items required for the maintenance, upkeep, and cleaning of the PROPERTY will be created in our computerized system. Proper inventory control is vital to effective operations. Inventory purchasing requests will be forwarded to the Regional Manager for review and approval. The Contracts/Central Purchasing Department will enter all of the inventory data into the system to generate purchase orders for each vendor. Furthermore, the systems assist the Site Staff with tracking purchasing trends and costs, and at the same time staying within the budgetary guidelines.

g. Use of Professional Services

THE MANAGEMENT COMPANY utilizes outside professionals in areas where their expertise can provide the most cost-effective means of providing quality, specialized services. Legal and tax matters fall into this category. THE MANAGEMENT COMPANY would consult with the OWNER prior to hiring such services. Preparation and filing of tax forms are delegated to a qualified CPA firm. The services of an attorney would be utilized as necessary, including but not limited to the following instances:

- Collections – after 14-day notices have been issued (or 30-days for a unit with a HOME/DHCD program)
- Lease violations – other than minor infractions
- Review of new rules and regulations
- Review of service contracts
- Employment related issues

Contracted Services

Depending of the volume of work orders, preventive maintenance scheduling, number of apartment turnovers, and maintenance emergencies, THE MANAGEMENT COMPANY will review and consider contracting major heating system repairs, paving and road surfacing, major plumbing and electrical work, major roof repair work, landscaping, snow removal, rubbish removal, exterminating, cleaning, painting, and those repairs requiring licensing or technical expertise. In most cases, a contractor is used to oversee repairs resulting from insurance losses.

THE MANAGEMENT COMPANY has extensive experience in HVAC system maintenance and design--looking at this as a cost saving opportunity. We will pursue energy saving initiatives such as bulk purchase of gas, if applicable, insulation, and modifications to existing heating and lighting systems, the installation of semiautomatic, non-electrical control valves, and domestic hot water equipment modifications. THE MANAGEMENT COMPANY monitors conservation measures already in place and continually updates and implements cost saving techniques.

Specifications and at least three (3) competitive bids will be solicited for any proposed contracted services. Specifications will include but not be limited to: frequency of service, equipment to be serviced or repaired, specific schedule of dates and times, detail of services provided, and proof of insurance coverage.

Proposed Contracted Services (Outsourcing)

The proposed list for outside contractor services would include:

- Painting
- Flooring
- Exterminating
- Protection/Concierge
- Landscaping
- Snow Removal (contingent upon Site-owned equipment)
- Rubbish Removal
- Major Plumbing and Electrical
- Cleaning
- Fire Protection Equipment
- Laundry Equipment

- Transportation Gas
- Fire Protection
- Elevator
- Emergency Generator
- Garage Doors

h. Pest Control Procedures

THE MANAGEMENT COMPANY utilizes a number of professionally licensed exterminating companies for pest control services. Competitive bids are solicited for each PROPERTY based on the needs to best address the particular vermin. The specifications utilized for bidding will clearly identify the number of treatments which will directly correlate to the level of infestation. Management will maintain a pest control log which will contain the apartments to be treated, the date the resident is notified for treatment preparation, and any follow-up treatment that may be required. Residents/Owners are required to contact to the Management Office to report a pest problem, and Management will also discover apartments in need of treatment as a result of annual inspections and routine maintenance visits.

i. Work Order System and Emergency Requests

Residents will be instructed as part of the move in orientation to contact the Management Office to request a repair or problem. After regular business hours, the Office telephone line is connected with an automated emergency answering service. The answering service contacts the Maintenance person on-call to respond to emergencies.

Work orders are generated for all service requests such as: specific jobs requested by the Residents; in-unit items noted from an annual inspection or observed by a Staff member; and common area needs requested by a Resident or observed by Staff. Repairs are performed either by the Maintenance Staff or, if necessary, by contracting with outside services when the scope of the repair is beyond the capabilities of the Staff. The Property Manager along with assistance from the Regional Manager, Contracts and Construction Specialist will determine when to use outside contractors to make repairs based on workmanship needs and cost effectiveness. Whenever possible the Maintenance Staff will perform work order repairs. Maintenance work is tracked through a numbered work order system to ensure that all tasks and services are documented and completed.

The Maintenance staff will respond to emergency maintenance requests immediately and to routine calls or inquiries with-in a 24-hour period. During after-hours and on weekends at least one staff member is required to carry an emergency cell phone and will respond to emergencies and lock outs within an hour or less.

Typically, the Property Manager and Maintenance Superintendent will each have a cell phone for instant communication and response to whatever might arise in order to provide residents with prompt service.

j. Capital Improvements

This physical plant management plan is limited to day-to-day maintenance and repairs of the PROPERTY. Major improvements or repairs such as construction supervision related to tenant fit out, major building component replacements including roof, HVAC system or other such capital items conducted as approved by the OWNER on an item-by-item basis.

COMPREHENSIVE PERMIT APPLICATION

BALDWINVILLE SCHOOL APARTMENTS

12 and 16 SCHOOL STREET, TEMPLETON 01436

SECTION 11

WETLANDS REPORT & ORDER OF CONDITIONS

M E M O R A N D U M

DATE: August 20, 2021
TO: Mathieu Zahler, MPZ Development, Inc.
FROM: Andrea Kendall, PWS 
RE: Wetland Resource Area and Desktop Review Summary of Findings
16 School Street, Templeton, MA

The purpose of this memo is to summarize the findings from LEC's December 16, 2020 site evaluation and desk-top review. The Project Site is comprised of a former school building, paved asphalt surfaces, landscape areas, lawn (former play yard), the former railroad embankment and concrete platform, and forested areas. The main hydrologic features associated with the project site include the perennial Otter River (Attachment A, Figure 1) and fringing Bordering Vegetated Wetland (BVW) located within the northern portion of the site.

LEC delineated the boundaries to BVW and Bank-Mean Annual High Water (MAHW) line of the Otter River within and in proximity to the project site. The extent of BVW was determined through observations of the existing plant communities, using the "fifty percent criteria" to determine dominance of wetland/upland vegetation, the interpretation of soil characteristics, and other indicators of wetland hydrology in accordance with the Massachusetts Department of Environmental Protection (MassDEP) handbook, *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act* (March 1995), the *Field Indicators for Identifying Hydric Soils in New England* (May, 2017), and the criteria set forth in 310 CMR 10.55. The Town of Templeton does not administer a Wetlands Protection Bylaw.

The boundaries of BVW were demarcated in the field with blaze orange surveyor's flagging tape, embossed with the words "LEC Resource Area Boundary" in bold, black print. The BVW flags are numbered 1 through 9. The Bank-MAHW line boundaries associated with the perennial Otter River were demarcated in the field with blaze blue surveyor's flagging tape. The Bank flags are numbered B1 through B20 (Attachment A, Wetland Delineation Field Sketch).

The 100-foot Buffer Zone extends from the outermost wetland resource area of BVW and/or Bank. The on-site Buffer Zone includes the forested upland and a portion of the former railroad embankment, including the concrete platform. The 200-foot Riverfront Area extends from the Bank-MAHW line and includes the adjacent BVW, forested uplands, former railroad embankment and concrete platform, and portions of the lawn.

According to the 15th Edition of the *Massachusetts Natural Heritage Atlas* (August 1, 2021) published by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), no areas of Estimated Habitat of Rare Wildlife or Priority Habitats of Rare Species are located on or within proximity to the project site. Furthermore, there are no mapped Potential or Certified Vernal Pools within the Project Site (Attachment A, Figure 2).



According to the Coldwater Fish Resources (CFR) Mapping program (<https://www.mass.gov/info-details/coldwater-fish-resources>), the Otter River proximate to the Project Site is not mapped as a Cold Water Fishery.

According to the May 17, 1982 Federal Emergency Management Agency Flood Insurance Rate Map (FEMA FIRM) for Worcester County, Massachusetts (Community Panels 250339 0008B, the low-lying portion of the Project Site adjacent to the Otter River is mapped within a Zone A (shaded)- *Areas of 100-year flood; base flood elevations and flood hazard factors not determined*. The remainder of the Project Site is mapped within a Zone X (unshaded) – *Areas outside the 0.2% annual chance flood hazard* (Attachment A, Figure 3). As a result, it appears that the Project Site is not located within the 100-year floodplain (i.e. there is no Bordering Land Subject to Flooding).

alk: MPZD\20-345.04 Summary Memorandum of Findings 8-20-2021

A t t a c h m e n t A

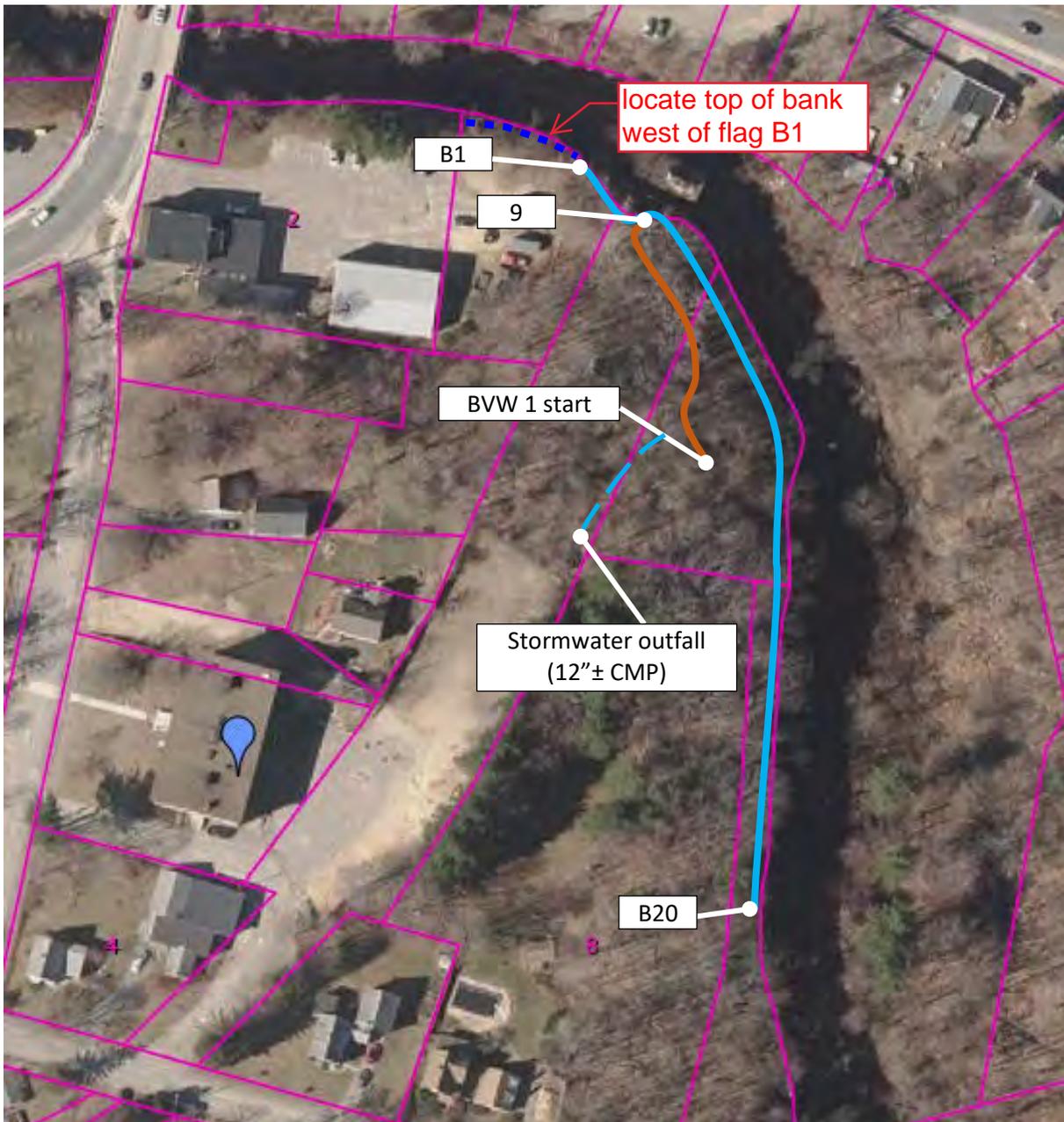
Wetland Delineation Field Sketch,
prepared by LEC, December 16, 2020

Locus Maps

Figure 1: USGS Topographic Map

Figure 2: Aerial Orthophoto of Project Locus & NHESP

Mapping Figure 3: FEMA Flood Insurance Rate Map



Wetland Delineation Sketch: 16 School Street, Templeton, MA

Prepared by LEC Environmental Consultants, Inc.

Field Work: December 16, 2020

Andrea Kendall, Senior Environmental Scientist (akendall@lecenvironmental.com; cell: 508-365-8321)

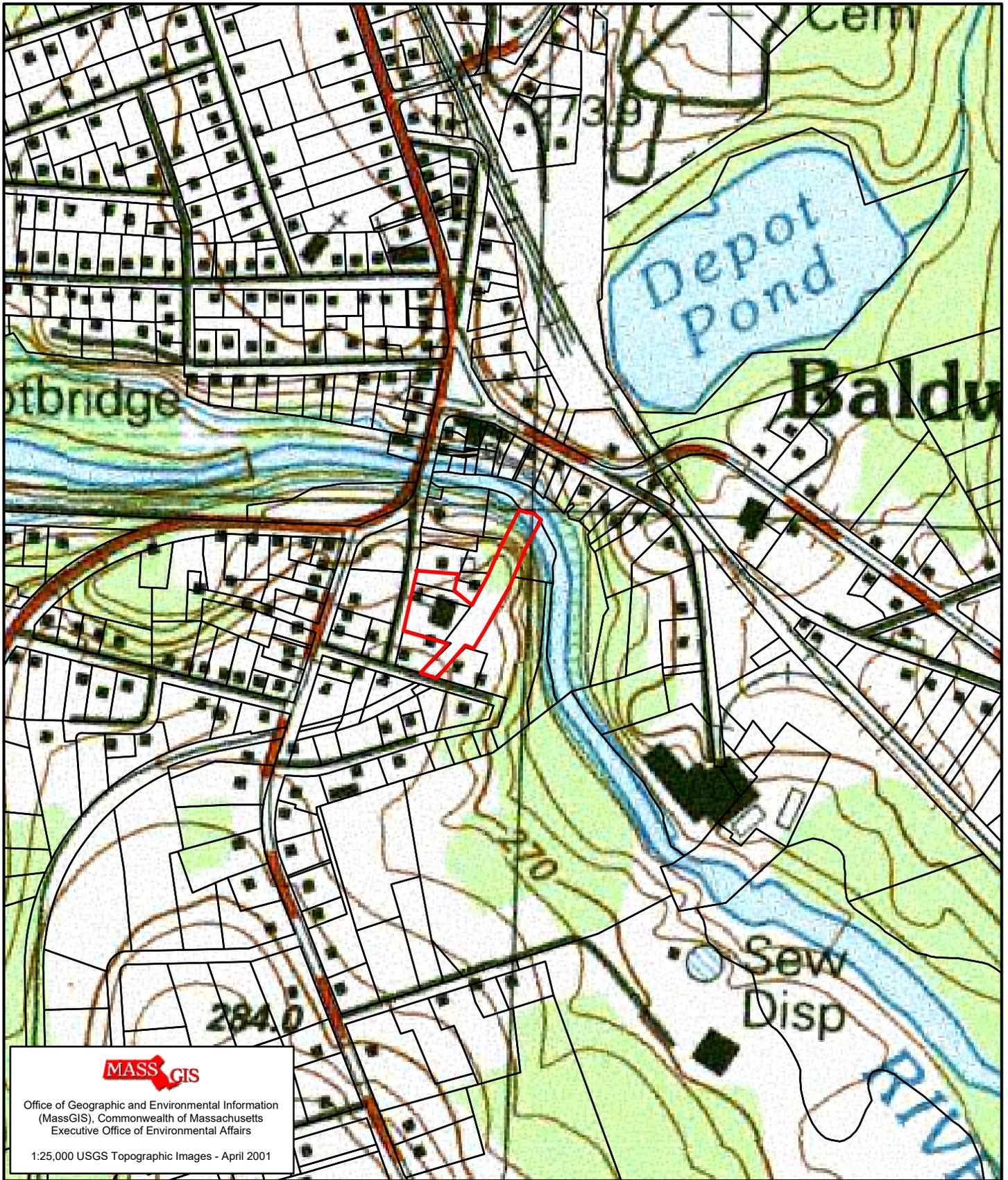
LEC File #: MPDZ\20-405.04

Orange line represents the approximate location of Bordering Vegetated Wetland (BVW) boundary, demarcated in the field by orange LEC flagging stations 1 through 9.

Blue line represents the approximate location of Bank-Mean Annual High Water (MAHW) line to Otter River, demarcated in the field by blue flagging stations B1 through B20

Add 100-foot Buffer Zone from outermost boundary of BVW or Bank-MAHW line

Add 200-foot Riverfront Area from boundary of Bank-MAHW line.



Office of Geographic and Environmental Information
(MassGIS), Commonwealth of Massachusetts
Executive Office of Environmental Affairs

1:25,000 USGS Topographic Images - April 2001

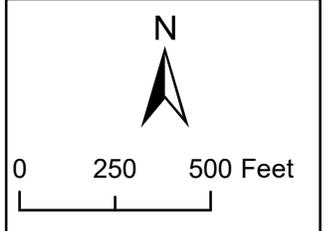


Environmental Consultants, Inc.
Wakefield, MA
781.245.2500

www.lecenvironmental.com

Baldwinville School
16 School Street
Templeton, MA

November 10, 2020





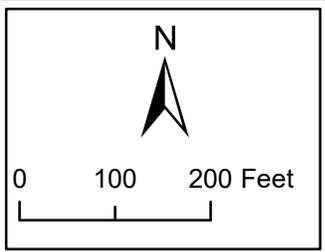
Legend

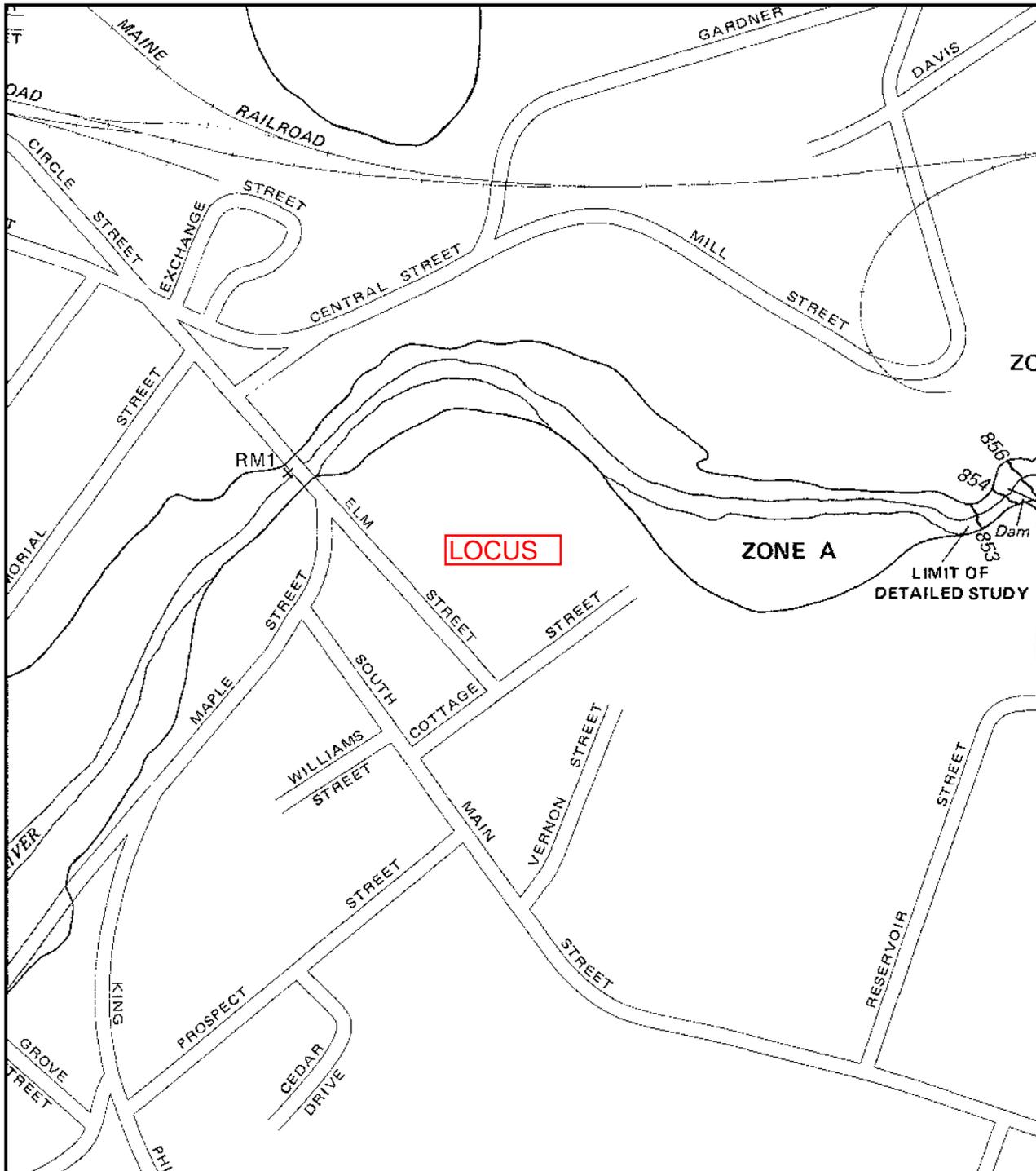
- * NHESP Certified Vernal Pool
- * NHESP Potential Vernal Pool
- NHESP Estimated Habitats of Rare Wildlife (2017)
- NHESP Priority Habitats of Rare Species (2017)
- DEP Wetlands
- DEP Wetlands Hydrologic Connection
- DEP Wetlands Linear Features
- DEP Wetlands Change (12/2013)
- ACEC

MASS GIS
 Office of Geographic and Environmental Information
 (MassGIS), Commonwealth of Massachusetts,
 Executive Office of Environmental Affairs
 MassGIS USGS Ortho Imagery (2019)

LEC
 Environmental Consultants, Inc.
 Wakefield, MA
 781.245.2500
 www.lecenvironmental.com

Baldwinville School
 16 School Street
 Templeton, MA
 November 10, 2020





APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
TEMPLETON,
MASSACHUSETTS
WORCESTER COUNTY

PANEL 8 OF 25
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
250339 0008 B

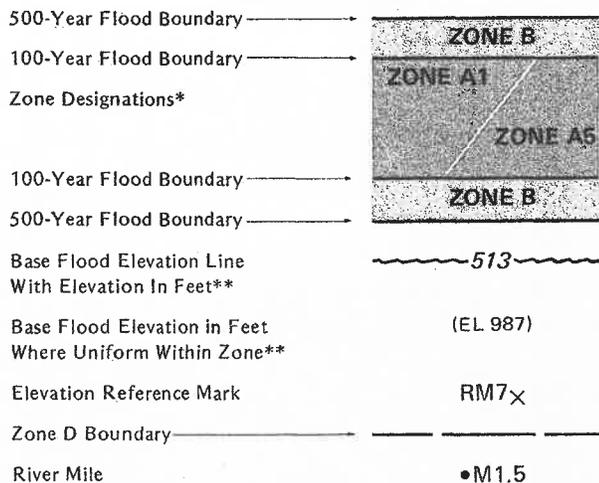
EFFECTIVE DATE:
MAY 17, 1982



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

KEY TO MAP



**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:

AUGUST 2, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:

SEPTEMBER 10, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:

MAY 17, 1982

FLOOD INSURANCE RATE MAP REVISIONS:

Worcester South District Registry of Deeds Electronically Recorded Document

This is the first page of the document – Do not remove

Recording Information

Document Number	: 163557
Document Type	: ORD
Recorded Date	: November 22, 2021
Recorded Time	: 01:35:30 PM
Recorded Book and Page	: 66584 / 68
Number of Pages(including cover sheet)	: 17
Receipt Number	: 1399213
Recording Fee	: \$105.00

Worcester South District Registry of Deeds
Kathryn A. Toomey, Register
90 Front St
Worcester, MA 01608
(508) 798-7717



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
304-0369

MassDEP File #

eDEP Transaction #

Templeton
City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Worcester
- | | |
|--|--|
| a. County | b. Certificate Number (if registered land) |
| 1280/51, 8041/57, 1390/393, 48704/267 & 3832/567 | |
| d. Page | |
7. Dates: 10/4/2021 10/28/2021 11/2/2021
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
 Baldwinville School Apartments
- | | |
|---|--------------------------|
| a. Plan Title | |
| Kelly Engineering Group | David N. Kelly, PE |
| b. Prepared By | c. Signed and Stamped by |
| 9/29/2021 | |
| d. Final Revision Date | e. Scale |
| Stormwater Management Report, Kelly Engineering Group | 9/29/2021 |
| f. Additional Plan or Document Title | g. Date |

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- | | | |
|--|---|--|
| a. <input type="checkbox"/> Public Water Supply | b. <input type="checkbox"/> Land Containing Shellfish | c. <input type="checkbox"/> Prevention of Pollution |
| d. <input type="checkbox"/> Private Water Supply | e. <input type="checkbox"/> Fisheries | f. <input type="checkbox"/> Protection of Wildlife Habitat |
| g. <input type="checkbox"/> Groundwater Supply | h. <input type="checkbox"/> Storm Damage Prevention | i. <input type="checkbox"/> Flood Control |

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

304-0369

MassDEP File #

eDEP Transaction #

Templeton

City/Town

B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) _____ a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet _____	b. linear feet _____	c. linear feet _____	d. linear feet _____
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet _____	b. square feet _____	c. square feet _____	d. square feet _____
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet _____ e. c/y dredged _____	b. square feet _____ f. c/y dredged _____	c. square feet _____	d. square feet _____
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet _____	b. square feet _____	c. square feet _____	d. square feet _____
Cubic Feet Flood Storage	e. cubic feet _____	f. cubic feet _____	g. cubic feet _____	h. cubic feet _____
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet _____	b. square feet _____		
Cubic Feet Flood Storage	c. cubic feet _____	d. cubic feet _____	e. cubic feet _____	f. cubic feet _____
9. <input checked="" type="checkbox"/> Riverfront Area	2, 640 a. total sq. feet _____	2, 640 b. total sq. feet _____		
Sq ft within 100 ft	0 c. square feet _____	0 d. square feet _____	0 e. square feet _____	0 f. square feet _____
Sq ft between 100-200 ft	2, 640 g. square feet _____	2, 640 h. square feet _____	2, 640 i. square feet _____	2, 640 j. square feet _____



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
304-0369
MassDEP File # _____

eDEP Transaction # _____
Templeton
City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____ a. square feet	_____ b. square feet		
	_____ c. c/y dredged	_____ d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____ a. square feet	_____ b. square feet	_____ c. nourishment cu yd	_____ d. nourishment cu yd
14. <input type="checkbox"/> Coastal Dunes	_____ a. square feet	_____ b. square feet	_____ c. nourishment cu yd	_____ d. nourishment cu yd
15. <input type="checkbox"/> Coastal Banks	_____ a. linear feet	_____ b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____ a. square feet	_____ b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____ a. square feet	_____ b. square feet		
	_____ c. c/y dredged	_____ d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	_____ a. c/y dredged	_____ b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____ a. square feet	_____ b. square feet		
22. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 304-0369
 MassDEP File # _____

eDEP Transaction # _____
 Templeton
 City/Town _____

B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. Restoration/Enhancement *:

a. square feet of BVW _____

b. square feet of salt marsh _____

24. Stream Crossing(s):

a. number of new stream crossings _____

b. number of replacement stream crossings _____

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

304-0369

MassDEP File #

eDEP Transaction #

Templeton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) is subject to the Massachusetts Stormwater Standards
- (2) is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

304-0369

MassDEP File #

eDEP Transaction #

Templeton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 304-0369
 MassDEP File #

eDEP Transaction #
 Templeton
 City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
304-0369
MassDEP File #

eDEP Transaction #
Templeton
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Conservation Commission hereby finds (check one that applies):
 - a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw	2. Citation
---------------------------------	-------------

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.
 - b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw	2. Citation
---------------------------------	-------------
3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
304-0369
MassDEP File #

eDEP Transaction #
Templeton
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

1. Date of Issuance

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Town of Templeton Conservation Commission

George Andrews 10/18/21
Signature

George Andrews, Chair

Printed Name

Dave Symonds 10/18/21
Signature

Dave Symonds

Printed Name

Amanda Suzzi
Signature

Amanda Suzzi

Printed Name

Signature

Printed Name

by hand delivery on

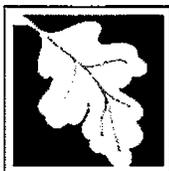
by certified mail, return receipt requested, on

11/2/2021

Date

Date

Scanned + Emailed



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 304-0369
 MassDEP File #

eDEP Transaction #
 Templeton
 City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 304-0369
 MassDEP File #

eDEP Transaction #
 Templeton
 City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Town of Templeton
 Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Town of Templeton
 Conservation Commission

Please be advised that the Order of Conditions for the Project at:

12 & 16 School Street
 Project Location

304-0369
 MassDEP File Number

Has been recorded at the Registry of Deeds of:

Worcester
 County

Book

Page

for:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Templeton

List of Property Owners
Baldwinville School Apartments
Notice of Intent Application

Assessors Map/Lot	Property Owner	Street Address	Mailing Address	Registry of Deeds Information	
				County	Book/Page
1-4.1/380	Elvis Dadzie & Priscilla Yeboah (elvisdadzie@verizon.net; p.yeboah@verizon.net)	School Street	12 School Street Baldwinville, MA 01436	Worcester	48704/0267
1-4.1/381	Elvis Dadzie & Priscilla Yeboah (elvisdadzie@verizon.net; p.yeboah@verizon.net)	School Street	12 School Street Baldwinville, MA 01436	Worcester	48704/0267
1-4.1/382	Elvis Dadzie & Priscilla Yeboah (elvisdadzie@verizon.net; p.yeboah@verizon.net)	12 School Street	12 School Street Baldwinville, MA 01436	Worcester	48704/0267
1-4.1/383	Inhabitants Town of Templeton	School Street	P. O. Box 620 East Templeton, MA 01438	Worcester	--
1-4.1/384	Town of Templeton	School Street	P. O. Box 620 East Templeton, MA 01438	Worcester	1390/0393
1-4.1/385	Baldwinville Elementary School	16 School Street	2 Elm Street Baldwinville, MA 01436	Worcester	1280/51
1-4.1/407	Town of Templeton	Baldwinville Road	PO Box 620 East Templeton, MA 01438	Worcester	8041/0057



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

DEP File Number:

**Request for Departmental Action Fee
Transmittal Form**

304-0369

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

1. Location of Project

a. Street Address	b. City/Town, Zip
c. Check number	d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name _____

Mailing Address _____

City/Town	State	Zip Code
Phone Number	Fax Number (if applicable)	

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

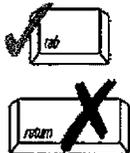
Name _____

Mailing Address _____

City/Town	State	Zip Code
Phone Number	Fax Number (if applicable)	

4. DEP File Number:

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Instructions

1. When the Departmental action request is for (check one):

- Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- Superseding Determination of Applicability – Fee: \$120
- Superseding Order of Resource Area Delineation – Fee: \$120



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee
Transmittal Form

DEP File Number:

304-0369

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.