

## **Historic Preservation Commission Meeting REGULAR**

Tuesday, August 11, 2026 at 7:00 PM

REMOTE ACCESS ONLY

**To Join Via Zoom Meeting Go To:**

<https://us06web.zoom.us/j/89238445474?pwd=nA1Ehjl8Qjh8v4LTGxrra3h0DGd8CR.1>

**Alternatively you can Call In by Dialing:** 1-929-205-6099

**For both remote options, the Meeting ID is:** 892 3844 5474

**Passcode:** 528804

**Members:** Eric Gilbertson (Chair), Robert McCullough (Vice Chair), Paul Carnahan, Bryan Jones, Linden Chozinska, and Yana Walder

1. Call to Order
2. Public Comments [~5 minutes]
3. Approval of the Agenda [~5 minutes]
4. Comments from the Chair [~5 minutes]
5. **Montpelier Dam Removals: Sec. 106 Review**
6. **Review of Vermont State House Entryway Addition**
7. **Tentative - National Register Nomination Review: 9 Heaton Street** *(pending official notice from Vt. Div for Historic Preservation)*
8. Review and Approve Minutes: 06/09/2026 & 07/08/2026 [~5 minutes]
9. Other Business: Next Meeting??? -- Late August or Special Sept. meeting? 9/8 has a conflict
10. Adjournment



802-233-9506 phone

39 Main Street, Montpelier, VT 05602

802-262-6080 fax

[www.montpelier-vt.org](http://www.montpelier-vt.org)

---

Meetings are open to the public. For questions about accessibility or to request accommodations please call (802) 223-9506.



# Four Winooski River Dams

Montpelier and East Montpelier, Vermont

---

PREPARED FOR

Vermont River Conservancy  
29 Main St, Unit #11  
Montpelier, VT 05602

---

PREPARED BY



40 IDX Drive  
Building 100, Suite 200  
South Burlington, VT 05403

July 27, 2026

# Abstract

This archaeological resource assessment (ARA) has been prepared on behalf of the Vermont River Conservancy (VRC) for the proposed removal of four dams along the Winooski River in the City of Montpelier and the Town of East Montpelier. Feasibility, design, and initial permitting for all four dams is being funded through the Lake Champlain Basin Program. Funding for the archaeological resource assessment has been funded by Watershed United Vermont through an Enhancement Project Development Grant. The City of Montpelier also submitted an application to FEMA for Hazard Mitigation Assistance Grant Program (HMGP) funding through Vermont Emergency Management (VEM) for the 5 Home Farm Way Floodplain Restoration Project with the VRC's Pioneer Street Dam Removal and therefore, both projects are subject to review under Section 106 of the National Historic Preservation Act of 1966 (NHPA). Finally, implementation funding for all four dam removals and associated restoration work is still being pursued and is expected to come from a combination of local, state, and federal sources. Following consultation between VDHP and VRC, an ARA was requested across each of the four proposed dam removals (Yvonne Benney Basque, pers. comm. 2024). Consequently, VHB staff examined the potential for previously recorded and undiscovered archaeological resources within four discrete Study Area locations encompassing a total of 39.1 acres (ac) to accommodate project impacts and alternatives (Appendix I: Figure 1).

VHB has determined that the Bailey Dam (VT-WA-0223) and Trestle Dam (VT-WA-0224) proposed for removal are ineligible for listing on the National Register of Historic Places (NRHP) as archaeological resources and cannot foreseeably meet any criteria outlined in 36 CFR Part 60.4. However, VHB recommends the Hidden Dam (E. Montpelier No. 5 Dam, CDFC Upper Dam) (VT-WA-0226) and the Montpelier No. 3 Dam (Pioneer Street Dam) (VT-WA-0225) as eligible for listing on the NRHP as archaeological sites. FEMA has requested the preparation of an archaeological monitoring and documentation plan for impacts related to archaeologically sensitive sections of the Pioneer Street Dam (VT-WA-0225) (Archaeological Sensitivity Area [ASA] 11). In addition, FEMA has requested the preparation of an HRDP to document the dam prior to removal. The information contained within this report provides interpretive context for the future assessment.

VHB identified eleven discrete areas which retain potential for undiscovered archaeological resources. Except for ASA 11 where archaeological monitoring is proposed, VHB recommends that a Phase I survey be completed prior to any activities involving ground disturbance in these archaeologically sensitive areas. Project plans presently include the avoidance of all archaeologically sensitive areas delineated in this report except for those at the Pioneer Dam location where FEMA has requested archaeological monitoring and documentation. If these additional archaeologically sensitive areas can be avoided by project impacts, no further archaeological investigations are recommended. Any future HRDP efforts, archaeological monitoring and documentation plans, or other mitigation measures for the VT-WA-0225 and VT-WA-0226 should be developed in consultation with VDHP.

# Table of Contents

|          |                                                                            |           |
|----------|----------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Introduction .....</b>                                                  | <b>6</b>  |
| <b>2</b> | <b>Environmental Context .....</b>                                         | <b>7</b>  |
| <b>3</b> | <b>Historic Context .....</b>                                              | <b>8</b>  |
|          | General Overview .....                                                     | 8         |
|          | Dams Proposed for Removal .....                                            | 9         |
|          | Bailey Dam .....                                                           | 9         |
|          | Trestle Dam .....                                                          | 12        |
|          | Montpelier No. 3 Dam (Pioneer Street Dam) .....                            | 13        |
|          | Hidden Dam (E. Montpelier No. 5 Dam, CDFC Upper Dam) .....                 | 14        |
| <b>4</b> | <b>Previous Archaeological Research .....</b>                              | <b>20</b> |
| <b>5</b> | <b>Archaeological Sensitivity Assessment .....</b>                         | <b>21</b> |
|          | Study Area .....                                                           | 21        |
|          | Hidden Dam (E. Montpelier No.5 Dam, CDFC Upper Dam) .....                  | 22        |
|          | Montpelier No. 3 Dam (Pioneer Street Dam) .....                            | 22        |
|          | Trestle Dam .....                                                          | 23        |
|          | Bailey Dam .....                                                           | 23        |
| <b>6</b> | <b>Archaeological Sensitivity Determinations and NRHP Evaluation .....</b> | <b>24</b> |
|          | Hidden Dam (E. Montpelier No.5 Dam, CDFC Upper Dam) .....                  | 25        |
|          | Montpelier No. 3 Dam (Pioneer Street Dam) .....                            | 29        |
|          | Trestle Dam .....                                                          | 32        |
|          | Bailey Dam .....                                                           | 33        |
| <b>7</b> | <b>Analysis of Proposed Impacts .....</b>                                  | <b>34</b> |
|          | Hidden Dam (E. Montpelier No.5 Dam) .....                                  | 34        |
|          | Montpelier No. 3 Dam (Pioneer Street Dam) .....                            | 34        |
|          | Trestle Dam .....                                                          | 35        |
|          | Bailey Dam .....                                                           | 35        |
| <b>8</b> | <b>Conclusions and Recommendations .....</b>                               | <b>36</b> |
| <b>9</b> | <b>References .....</b>                                                    | <b>38</b> |

## List of Tables

|          |                                    |    |
|----------|------------------------------------|----|
| Table 1. | Adjacent Archaeological Sites..... | 15 |
|----------|------------------------------------|----|

## List of Figures

|            |                                                                                                                                                                                                                 |    |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1.  | c. 1871 Photograph of the confluence of the North Branch and the Winooski River. Note Berlin Mills and the Bailey Dam location circled in red (Photo Courtesy of the Vermont Historical Society).<br>2025)..... | 9  |
| Figure 2.  | Sarah Watrous's 1821 engraving depicting the Bailey Dam location (Photo Courtesy of the Vermont Historical Society).....                                                                                        | 10 |
| Figure 3.  | 1891 Photo of Montpelier Manufacturing Company at the "Berlin Mills" (Photo Courtesy of the Vermont Historical Society)<br>.....                                                                                | 11 |
| Figure 4.  | Photo of former Bailey Timber Crib Dam, unknown date. Note the Berlin Mills and facilities associated with the E.W. Bailey Grist Mill are visible (Photo Courtesy of the VRC).....                              | 11 |
| Figure 5.  | Photo of the Bailey Dam reconstructed in 1934, unknown date. Note the Berlin Mills and facilities associated with the E.W. Bailey Grist Mill are visible (Photo Courtesy of the VRC).....                       | 12 |
| Figure 6.  | c.1925 Photo Depicting Trestle Dam (Photo Courtesy of the Vermont Historical Society).....                                                                                                                      | 13 |
| Figure 7.  | c. 1890 and 2024 Photos Depicting Pioneer Dam from Old Country Club Road (Photo Courtesy of the Vermont Historical Society, VHB 2024).....                                                                      | 14 |
| Figure 8.  | View of Pioneer Dam and former crib dam elements from Old Country Club Road (VHB 2024).....                                                                                                                     | 14 |
| Figure 9.  | USGS (1917) map depicting the location of the Hidden Dam (CDFC Upper Dam) denoted in red.....                                                                                                                   | 16 |
| Figure 10. | CDFC Structures and Penstock Locations on 1942 Aerial Imagery.....                                                                                                                                              | 16 |
| Figure 11. | View of CDFC Upper Dam Facing North.....                                                                                                                                                                        | 17 |
| Figure 12. | Photo/Schematic Drawing Depicting Hidden Dam (E. Montpelier No.5 Dam) in East Montpelier and dam intake (VHB 2024).....                                                                                         | 18 |
| Figure 13. | Photo/Schematic Drawing Depicting Hidden Dam (E. Montpelier No.5 Dam) in East Montpelier and outflow which connected to the former penstock (VHB 2024).....                                                     | 19 |
| Figure 14. | CDFC Hydroelectric Dam Complex and LiDAR Imagery .....                                                                                                                                                          | 26 |
| Figure 15. | CDFC Hydroelectric Dam Complex and Aerial Imagery .....                                                                                                                                                         | 27 |

|                     |                                                                                                                                                    |    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 16.          | CDFC Upper Dam Powerhouse Foundation Remains Located Outside the Study Area.....                                                                   | 23 |
| Figure 17.          | CDFC Upper Penstock Trench.....                                                                                                                    | 29 |
| Figure 18.          | Newspaper Advertisement for the Lane Manufacturing<br>.....                                                                                        | 30 |
| Figure 19.          | Newspaper advertisement illustrating the Standard Light & Power Company's Pioneer Mills significance in the early electric grid of Montpelier..... | 31 |
| <b>Appendix I</b>   | <b>Project Maps</b>                                                                                                                                |    |
| <b>Appendix II</b>  | <b>Field Investigation Photographs</b>                                                                                                             |    |
| <b>Appendix III</b> | <b>Vermont Division for Historic Preservation<br/>Environmental Predictive Model for Locating Pre-contact Archaeological Sites</b>                 |    |
| <b>Appendix IV</b>  | <b>Removal of Four Dams Along the Winooski River Plans Dated September 4, 2025.</b>                                                                |    |
| <b>Appendix V</b>   | <b>FEMA Consultation Letter Dated December 10, 2025</b>                                                                                            |    |



# 1

## Introduction

This archaeological resource assessment (ARA) has been prepared on behalf of the Vermont River Conservancy (VRC) for the proposed removal of four dams along the Winooski River in the City of Montpelier and the Town of East Montpelier. Feasibility, design, and initial permitting for all four dams is being funded through the Lake Champlain Basin Program. Funding for the archaeological resource assessment and other associated archaeological work has been funded by Watershed United Vermont through an Enhancement Project Development Grant. The City of Montpelier also submitted an application to FEMA for Hazard Mitigation Assistance Grant Program (HMGP) funding through Vermont Emergency Management (VEM) for the 5 Home Farm Way Floodplain Restoration Project with the VRC's Pioneer Street Dam Removal and therefore, both projects are subject to review under Section 106 of the National Historic Preservation Act of 1966 (NHPA). Finally, implementation funding for all four dam removals and associated restoration work is still being pursued and is expected to come from a combination of local, state, and federal sources. Following extensive community education and outreach in Montpelier and surrounding communities, the VRC identified dam removal as a priority of local stakeholders. The VRC is working with environmental engineers and recreation professionals to design the removal of the four dams and improve recreational access to the Winooski River. Collectively, removal of all four dams would open-up 14.1 miles of free-flowing river through the towns of Middlesex, Montpelier, and Barre. This will offer additional riparian habitat due to the narrower river channel, improve aquatic habitat via connected waterways, and allow for sustainable recreational opportunities.

Following consultation with VDHP and VRC, an ARA was requested across each four of the proposed dam removals (Yvonne Benney Basque, pers. comm. 2024). Consequently, VHB staff examined the potential for previously recorded and undiscovered archaeological resources within four discrete Study Area locations encompassing a total of 39.1 acres (ac) to accommodate project impacts and alternatives (Appendix I: Figure 1). The study was conducted in accordance with the VDHP's (2017) *Guidelines for Conducting Archaeology in Vermont*. Background research for this ARA included a review of the contemporary physical environment, Vermont Archaeological Inventory (VAI) site records, pre-Contact Native American culture-historical chronology in Vermont, pertinent local historic documentation, and a subsequent field inspection of the Study Area. The VDHP's Online Resource Center (ORC) was consulted to identify any previously completed archaeological studies within or near the Study Area.

# 2

## Environmental Context

This section outlines a review of the physical environment within the proposed Study Area including water resources, topography, floral and faunal resources, bedrock and surficial geology, and soils. This review constitutes the background for interpretations of landscape history and potential past uses of the environment. Consequently, this information serves as a foundation for the archaeological sensitivity modeling discussed below.

The Study Area is situated in the Town of Montpelier within the Northern Vermont Piedmont biophysical region along the Winooski River. Calcareous bedrock in the Northern Vermont Piedmont has shaped northern hardwoods forests, northern cedar swamps, and fens found throughout the region. Abundant rivers crosscut the Northern Vermont Piedmont and many lakes and ponds within the formerly glaciated landscape provide essential waterfowl nesting habitat (Vermont Fish and Wildlife 2014:10). The mineral-rich ponds and large forest tracts of the Northern Vermont Piedmont also contain habitat for fur-bearing species such as Beaver (*Castor canadensis*), Moose (*Alces alces*), and Black Bear (*Ursa americanus*) that were important resources to past peoples (VT Fish and Wildlife 2014: 89–94, 101–103). Species such as Gray Wolf, Canadian Lynx, Eastern Mountain Lion, American Marten, and Long-tailed Weasel are now rare, endangered, or historically extirpated (VT Fish and Wildlife 2022).

Glaciolacustrine deposits from the former footprint of Glacial Lake Winooski and postglacial alluvium overlie the carbonaceous phyllite and limestone member of the Lower Devonian and Upper Silurian Waits River Formation in the Study Area (Doll 1970; Ratcliffe et al. 2011). According to available United States Department of Agriculture (USDA) (2024), surficial deposits in the Study Area are further classified as alluvial Sunday fine sand (2.1%), glaciolacustrine Buxton silt loam (0.4%), Vershire-Dummerston complex derived from loamy till (1.3%), Glover-Vershire complex derived from loamy till (1.8%), Tunbridge-Lyman complex derived from loamy till (0.8%), Dummerston fine sandy loam derived from loamy till (1%), Buckland loam derived from loamy till (7.4%), urban land (4%), and water (81.2%).

# 3

## Historic Context

### General Overview

Montpelier was among the towns included in New Hampshire Governor Wentworth's 1780 charter. Records indicate that Euroamerican settlement began along the North Branch of the Winooski River when Colonel Jacob Davis set out in 1787 with a surveying crew and occupied a hunting camp formerly used by transient trappers and hunters (Thompson 1860:38). Initial clearing efforts in town were carried out by Davis, his sons, and early settler and trapper Joel Frizzle (Hemenway 1882:260). The first sawmill in Montpelier was constructed by Davis along the North Branch Falls in the Summer of 1788.

The high velocity of the Winooski River and North Branch were harnessed by an incipient industrialist class in Montpelier and the layout of town was organized as corollary development expanded with the growth of manufacturing operations. Frequent flooding of the Winooski River and the North Branch in Montpelier has also resulted in a palimpsest of bridge and dam construction spanning the city's rich industrial past. Industry in town proliferated from its cottage origins in the nineteenth century; in 1805, a short-lived still predicated on abundant grain yields in the vicinity of town was constructed. Surplus grain facilitated the construction of a second still in town built in 1824 which lasted two years. Early nineteenth century manufacturing operations in town along the Winooski River also included James R. Langdon's grist mill and Sylvanus Baldwin's cotton mill (Garcia 2020:61; Hemenway 1882:275).

The North Branch of the Winooski River hosted a suite of early manufacturing operations including, a tannery, Alfred Wainwright's foundry and forge built in 1832 along the North Falls, and Nathaniel Davis's woolen mill built in 1839. Dennis Lane, an owner and patent holder of a lever-set sawmill from Plainfield, purchased Wainwright's facilities in 1863 for the manufacture of sawmill blades and granite industry tools (Garcia 2020:62).

Papermills were developed in the early nineteenth century in Montpelier but following significant streambank alterations from the 1830 flood and the resultant unreliability waterpower, these undertakings were ultimately abandoned. The mid-nineteenth century saw significant developments which paralleled broader trends throughout New England and New York, such as



greater connections to regional and international commerce via rail line, the introduction of the telegraph, gas-powered lighting, and later, electricity to town residents. The south side of Winooski River Falls at the site of the Bailey Dam emerged as an industrial hub by the mid-nineteenth century and hosted a suite of manufacturing operations, which, prior to the present bounds of Montpelier established in 1899, were known as the “Berlin Mills” (Figure 1). Granite manufacturing rose to greater prominence in Montpelier during the late nineteenth and early twentieth centuries with the establishment of numerous operations upstream along the course of the Winooski, such as, but not limited to, the Montpelier Granite Works, the Excelsior Granite Company, and Harry Bertoli’s statuary shop (Garcia 2020:59–70; Hemenway 1882:276–77).



Figure 1. c. 1871 Photograph of the confluence of the North Branch and the Winooski River. Note Berlin Mills and the Bailey Dam location circled in red (Photo Courtesy of the Vermont Historical Society).

## Dams Proposed for Removal

The four dams proposed for removal include Bailey, Trestle, Pioneer Street (Montpelier No. 3), and Hidden Dam (Montpelier No. 5) (Appendix I: Figure 1).

### Bailey Dam

The site of the Bailey Dam along the bridge connecting US-2/River Street to Main Street served as the de facto hub of industrial development throughout the nineteenth and early twentieth centuries in Downtown Montpelier (Figure 2). Historic map resources provide snapshots of the rich history of hydromechanical manufacturing in Montpelier; the Bailey Dam received its name

from the former E.W. Bailey Grist Mill, built in 1873, which was located along the north side of the Winooski River (Appendix I: Figure 3; Sanborn Map Company 1884, 1889, 1894, 1909; Garcia 2020:64). Additionally, the Berlin Mills along the southern side of the Winooski River hosted several businesses such as, but not limited to, the Colton Manufacturers of Saddlery Hardware, Montpelier Carriage Company which produced sleighs and velocipedes, the Clogston Planning Mill, and the Sabin manufacturer of door springs and piano hardware (Figure 3; Appendix I: Figure 3; Sanborn Map Company 1884, 1889, 1894, 1909). The United States Clothespin Company was the last occupant of the former Berlin Mills in the early twentieth century and its closure marked the end of the era of manufacturing at the Bailey Dam (Garcia 2020:64).

In 1934, the Civilian Conservation Corps replaced the former wooden crib dam along the Bailey Dam site location with a concrete structure which contained 6 Tainter gates and a fixed spillway as part of flood control project in the Winooski River Valley (Figures 4 and 5, Montpelier Evening Argus Nov. 27, 1934). In 1975, the Bailey Dam was almost entirely reconstructed by the United States Army Corps of Engineers (2022) with the lowering of the dam, the removal of the gates, and a concrete cap to form a fixed spillway.



Figure 2. Sarah Watrous's 1821 engraving depicting the Bailey Dam location (Photo Courtesy of the Vermont Historical Society).



Figure 3. 1891 Photo of Montpelier Manufacturing Company at the “Berlin Mills” (Photo Courtesy of the Vermont Historical Society).



Figure 4. Photo of former Bailey Timber Crib Dam, unknown date. Note the Berlin Mills and facilities associated with the E.W. Bailey Grist Mill are visible (Photo Courtesy of the VRC).



Figure 5. Photo of the Bailey Dam reconstructed in 1934, unknown date. Note the Berlin Mills and facilities associated with the E.W. Bailey Grist Mill are visible (Photo Courtesy of the VRC).

## Trestle Dam

Contrary to the storied history of hydromechanical manufacturing along the Bailey Dam, the concrete Trestle Dam was not associated with industry in Montpelier and is absent from available nineteenth and early twentieth century maps (Appendix I: Figures 2 and 3; Beers 1873; Sanborn Map Company 1884, 1889, 1894, 1909; Walling 1858). The Trestle Dam is located along the North Branch near its confluence with the Winooski River. A dam at the present Trestle site was demolished in 1899 to lower the water level of the North Branch for the replacement of the Rialto Bridge upstream (Montpelier Evening Argus, Apr. 6, 1899:1). The dam was originally constructed to combat rising vermin populations along the North Branch associated with the practice of disposing sewage in the watershed prior to the construction of a city sewer system (Montpelier Evening Argus, Jun 5, 1899:3). The "sewerage dam" was reconstructed in 1899 by Ward and Douglas upon the completion of the Rialto Bridge (Montpelier Evening Argus, Oct. 7, 1899:3). Records indicate that the dam was again repaired in 1903 by James Ewing and is visible in later historic photographs (Figure 6; Montpelier Evening Argus, May 22, 1903:3). The present concrete dam remains range 3 to 5 feet (ft) in height and today is known colloquially as the "rat dam" (VRC, pers comm 2024).





Figure 6. c.1925 Photo Depicting Trestle Dam at lower left (Photo Courtesy of the Vermont Historical Society).

### Montpelier No. 3 Dam (Pioneer Street Dam)

The Montpelier No. 3 dam represents the oldest of the three dams proposed for demolition. Presently, the dam contains fragmented timber crib and stone elements but has been modified with an 8-foot blockade, encompassing 168 ft in length and a width of 16 ft, and a concrete cap (VRC, pers comm 2024). The Pioneer Street Dam is absent from earlier historic map resources (Appendix I: Figure 2; Beers 1873; Walling 1858) but appears on later Sanborn Fire Insurance Maps (Sanborn Map Company 1899, 1909), placing the construction date of the original timber crib dam elements sometime between 1873–1881. While records indicate Edwin and Dennis Lane of the Lane Manufacturing Co. processed lumber at the Pioneer Mills from 1881–1884, it is unclear whether they built the structure (Montpelier Evening Argus, Jan. 14, 1918:8). Following the cessation of the Lane Manufacturing Co. sawmill operations at Pioneer Street Dam, the Standard Light and Power Manufacturing Company acquired the mill site in 1888 to provide electricity to Montpelier and Barre. The concrete dam apron was constructed in 1905 by W.S. Teachout on behalf of the Consolidated Lighting Company and was built in front of the original timber structure (Figure 7; Montpelier Evening Argus, Oct. 19, 1905:3). By 1898, Standard Light was absorbed by the new Consolidated Electric Light Company of Montpelier which built a larger hydroelectric facility downriver at Bolton Falls in 1900 and a nearby reserve steam plant in the Pioneer section of Montpelier southeast of the Pioneer Street Dam (Appendix I: Figure 4; Garcia 2020:68–69; VHB 2024). Operations at Pioneer Street Dam were ultimately halted by the early twentieth century with the expansion of more productive hydroelectric infrastructure, such as the Middlesex No. 2 dam, built in 1928, and the facility at Bolton Falls (GMP 1988: 2-1; Montpelier Evening Argus, Mar. 1, 1947:3; Sanborn Map Company 1909; The Times Argus, Apr. 7, 1978:9).



Figure 7. c. 1905 and 2024 Photos Depicting Pioneer Dam from Old Country Club Road (Photo Courtesy of the Vermont Historical Society, VHB 2024).



Figure 8. View of Pioneer Dam and former crib dam elements from Old Country Club Road (VHB 2024).

### Hidden Dam (E. Montpelier No. 5 Dam, CDFC Upper Dam)

The Hidden Dam in East Montpelier (No. 5) comprises the former Corry, Deavitt, and Frost Company (CDFC) Upper Dam built between 1909–1910. The CDFC was first organized in 1908 by Frank M. Corry, Edward H. Deavitt, I.N. Frost, and D.T. Dewey to provide electricity to the nearby railroad owned by the Barre and Montpelier Power and Traction Company, of which they were also the primary stockholders. The CDFC charter was broad and gave it the “authority to

manufacture and sell electric light, heat, and power, to build and operate water and steam power, plants, to acquire and hold real estate, to acquire hold and convey water rights and rights of way, to acquire concessions and franchises as may be necessary for these purposes, to deal generally in real estate, and to construct buildings and to harvest ice from their pond and dispose of the ice" (Montpelier Evening Argus, Aug. 13, 1908:1).

The CDFC Upper Dam was part of a greater early twentieth century hydroelectric complex owned by the CDFC along the Winooski River which provided electricity for local industry and transportation infrastructure (Figure 8). The charter of the nearby CDFC Lower Dam and associated powerhouse was first obtained in 1908 on the former site of the Kinney sawmill to power the adjacent electric railway (Figures 8; Montpelier Evening Argus, Aug. 13, 1908:1). Construction of the CDFC Lower Dam and the associated powerplant began in September that same year (Montpelier Evening Argus, Sep. 21, 1908:2).

The subsequent CDFC Upper Dam was contracted in September 1909 and built to provide electricity to the Westmore and Morse quarry facilities in Barre via pole line. Records indicate the proposed structure was to reach 12.5-ft in height with a penstock connecting to the new powerplant approximately 1,500-ft downstream at a cost between \$30,000–\$35,000 (Figure 8; The Barre Daily Times, Sep. 3, 1909:1; Montpelier Evening Argus, Sep. 3, 1909:4). The contract to install the steel penstock was granted to George Dalrymple and was modeled off the structure he installed at the CDFC Lower Dam (Montpelier Evening Argus, Dec. 31, 1909:1). The CDFC Upper Dam was deemed operational following a successful testing of facilities on September 16, 1910 (The Barre Daily Times, Sep. 17, 1910:8). While excavations at the CDFC Lower Dam in 1908 were reported to have uncovered at least three separate dam structures from past hydromechanical operations at the site, no references to prior dam remnants at the CDFC Upper Dam location were identified during archival or historic map research (Montpelier Evening Argus, Sep. 21, 1908:2). The 1927 flood inundated the tail race with debris and destroyed portions of the penstock of the Upper CDFC structure, leading to the ultimate cessation of operations at the dam (Figures 9–13; Montpelier Evening Argus, Nov. 2, 1928:2).



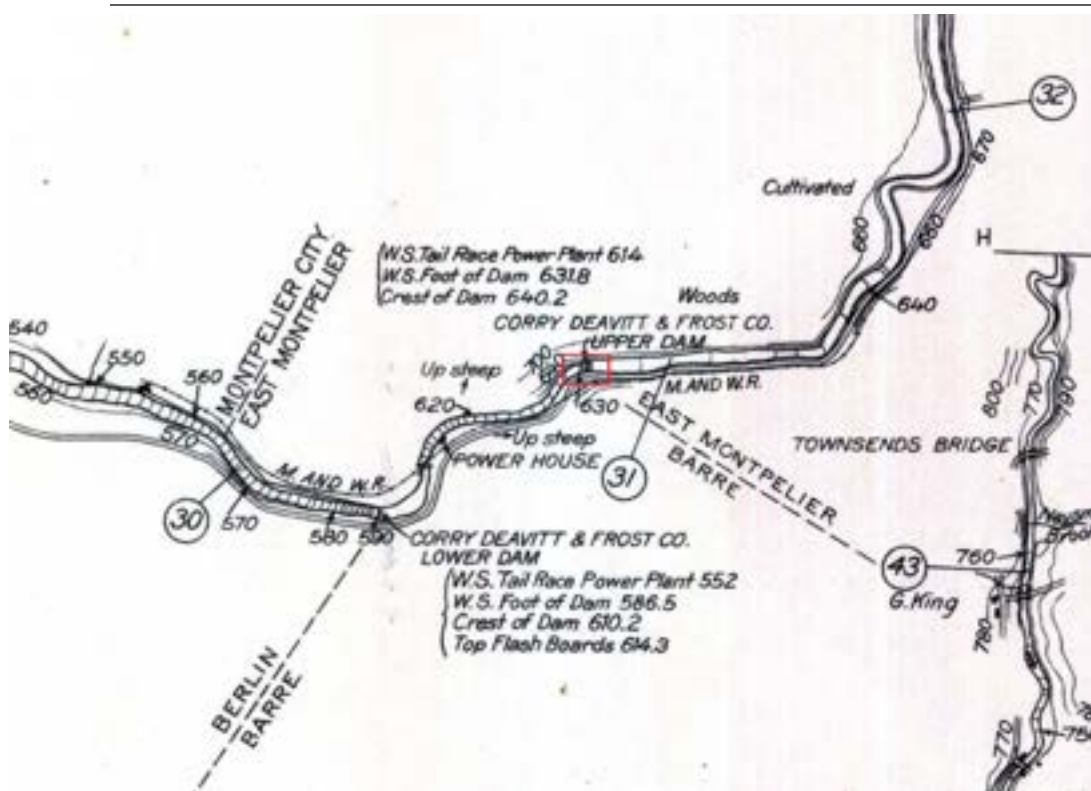


Figure 9. USGS (1917) map depicting the location of the Hidden Dam (E. Montpelier No. 5 Dam, CDfC Upper Dam) denoted in red.

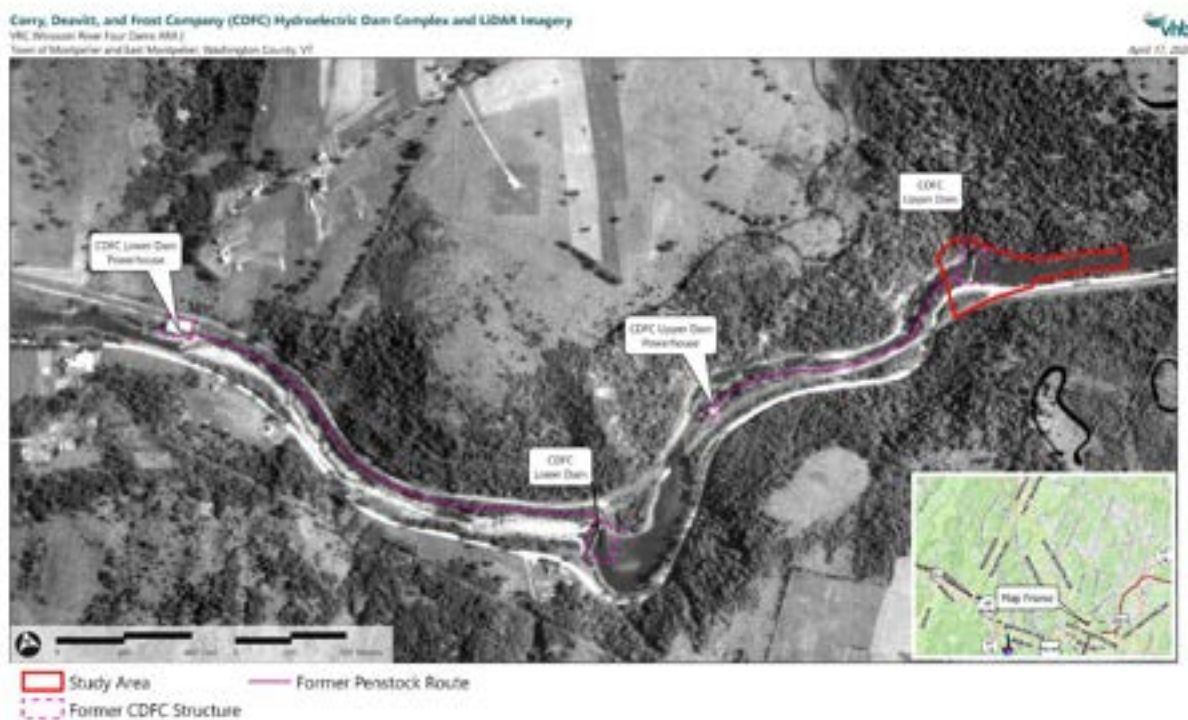


Figure 10. CDfC Structures and Penstock Locations on 1942 Aerial Map (VCGI).





Figure 11. View of the Hidden Dam (E. Montpelier No. 5 Dam, CDFC Upper Dam) Facing North (VHB 2024).

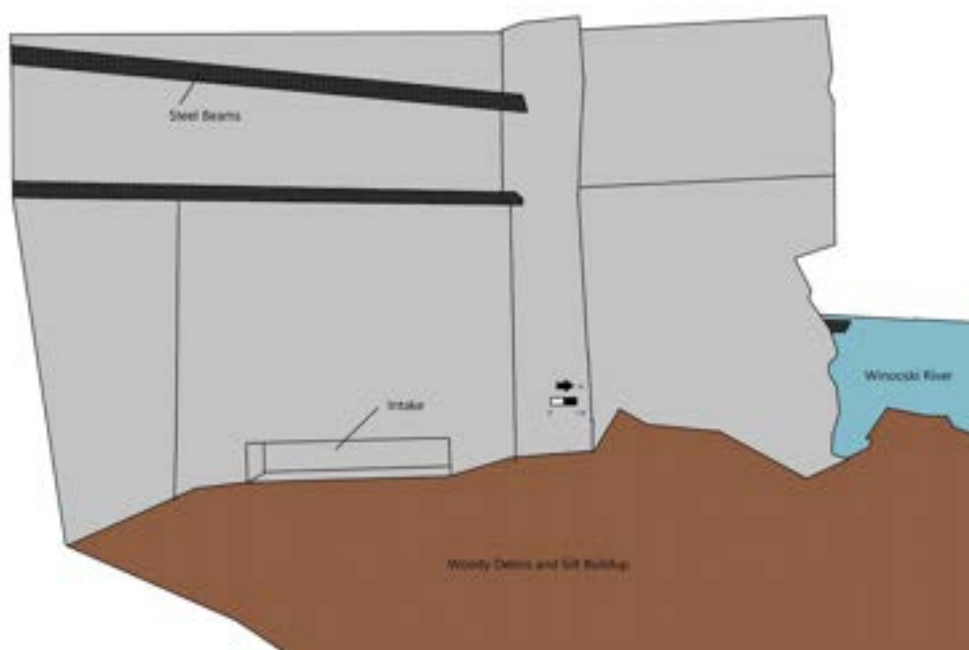


Figure 12. Photo/Schematic Drawing Depicting the Hidden Dam (E. Montpelier No. 5 Dam, CDFC Upper Dam) in East Montpelier and dam intake (VHB 2024).

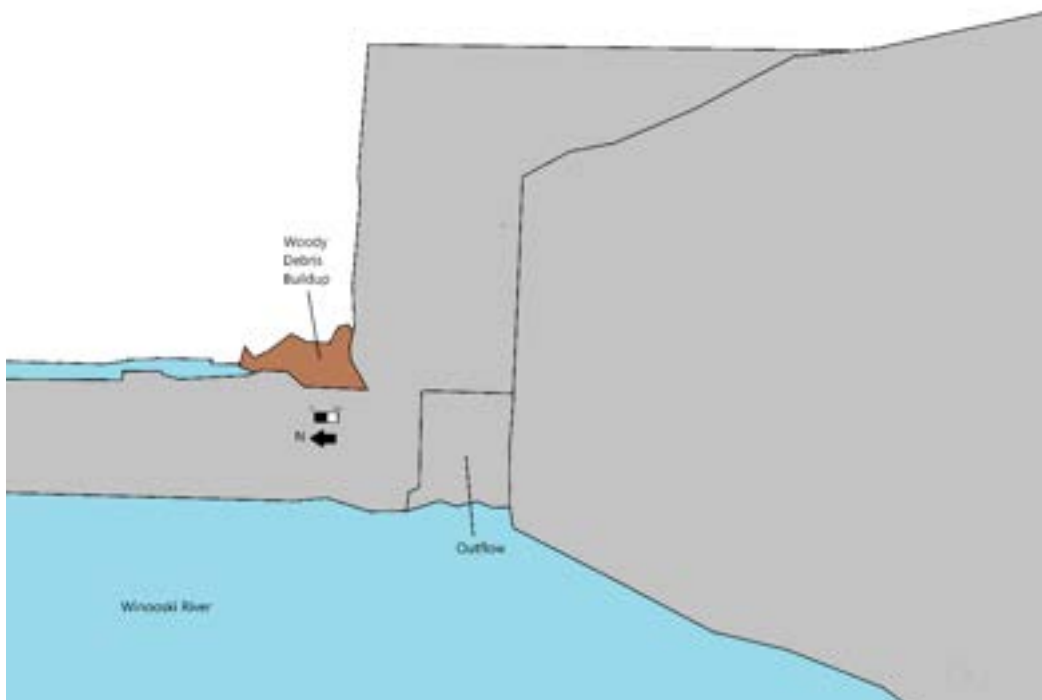


Figure 13. Photo/Schematic Drawing Depicting the Hidden Dam (E. Montpelier No. 5 Dam, CDFC Upper Dam) in East Montpelier and outflow which connected to the former penstock (VHB 2024).

## 4

## Previous Archaeological Research

VHB consulted both the VDHP's Online Resource Center (ORC) to identify potential archaeological research or previously identified sites in the Study Area, as this information may inform the archaeological sensitivity determinations for areas affected by Project impacts.

No previous subsurface archaeological investigations within the Study Area were identified during a review of available information on the ORC. A total of five archaeological sites were identified within a one-kilometer (km) radius of the Study Area, including two pre-Contact resources and three historic archaeological sites.

**Table 1. Adjacent Archaeological Sites**

| Site Number/Name                 | Temporal Affiliation  | Distance from Study Area |
|----------------------------------|-----------------------|--------------------------|
| Nicholas Homestead/VT-WA-0095    | Euroamerican Historic | 330 m                    |
| Bailey Ave. spot find/VT-WA-0212 | Unknown pre-Contact   | 516 m                    |
| Mather Terrace Site /VT-WA-0006  | Unknown pre-Contact   | 520 m                    |
| State Capitol Site /VT-WA-0024   | Euroamerican Historic | 570 m                    |
| Sabin Slate Quarry/VT-WA-0023    | Euroamerican Historic | 620 m                    |

# 5

## Archaeological Sensitivity Assessment

### Study Area

Proposed work is still in the design phase; therefore, VHB staff examined the potential for previously recorded and undiscovered archaeological resources within four discrete Study Area locations encompassing a total of 39.1 acres (ac) to accommodate project impacts and alternatives (Appendix I: Figure 1).

### Pre-Contact Archaeological Sensitivity

Using the VDHP (2015) *Environmental Predictive Model for Locating Pre-contact Archaeological Sites*, undisturbed areas throughout the Study Area received a score of 56 points, exceeding the 32-point threshold to be considered archaeologically sensitive. A variety of contributing environmental factors intersect various portions of the roughly 39.1-ac Study Area. While sensitivity scores range significantly, undisturbed areas throughout receive a score of at least 56 points due to the proximity of the Winooski River (0–90m), the presence of a major alluvial terrace/floodplain, and the Project location along a natural travel corridor.

### Historic Period Archaeological Sensitivity

Based upon a review of historic maps and background research, the locations of the Bailey Dam, Pioneer Dam, and Hidden Dam were denoted for potential significant historic archaeological sensitivity during the desktop assessment due to past industrial activities outlined above. Conversely, the Trestle Dam location was revealed to represent municipal infrastructure and did not comprise a center of previous industrial activities nor does it contain potential archaeological sensitivity (Figure 6).

### Field Investigation

VHB archaeologist Alexander Honsinger conducted a field visit for the VRC Four Winooski River Dams Project on November 1, 2024, following the desktop review. This entailed a thorough inspection of the 39.1-ac Study Area to explore areas demarcated as archaeologically sensitive during desktop review and to identify any landscape features which may have been omitted



during the preliminary sensitivity analysis (*e.g.*, microtopographic features, unmapped historic structures). Additionally, any landscape elements which would subtract from the original desktop sensitivity analysis were recorded (*e.g.*, hydric soils, excessive slope, disturbance).

### Hidden Dam (E. Montpelier No.5 Dam, CDFC Upper Dam)

The November 1, 2024, field investigation began at the Hidden Dam location in East Montpelier from the north side of the dam. Level, ostensibly undisturbed floodplain terraces were identified in the northwestern portion of the Study Area and demarcated for pre-Contact archaeological sensitivity (Appendix I: Figure 6; Appendix II: Photos 1–3). Heavily impacted remains from the CDFC Upper Dam completed in 1910 were observed during the field investigation (Appendix I: Figure 6; Appendix II: Photos 4–9). Portions of cement wall along the northside of the Winooski River have become overgrown following the dam falling into disuse (Appendix I: Figure 6; Appendix II: Photos 5, 7). Heavily fragmented timber dam elements were also identified along the north banks of the Winooski River (Appendix I: Figure 6; Appendix II: Photos 6,9).

East of the dam location, additional level, floodplain terrace landforms were observed interspersed along the north bank of the Winooski River (Appendix I: Figure 6; Appendix II: Photos 10–13). Soil core samples recovered from this section of the Study Area revealed the landform was comprised of silt alluvium (Appendix I: Figure 6; Appendix II: Photos 10–13). The field investigation then proceeded to the south banks along the Winooski River in the southeastern section of the Study Area. Like the northern banks along the Winooski River, level floodplain terrace landforms in this section of the Study Area are intermixed among slopes greater than 15% (Appendix I: Figure 6; Appendix II: Photos 14–18). Additional fragmented floodplain terraces located outside the asphalt access road were denoted in the southwestern portion of the Study Area (Appendix I: Figure 6; Appendix II: Photos 19–21). Above-ground concrete dam elements were also noted along the south banks the Winooski River comprising the former intake structure (Appendix I: Figure 6; Appendix II: Photos 22).

### Montpelier No. 3 Dam (Pioneer Street Dam)

The Montpelier No. 3 Dam field investigation began in the southeastern section of the Study Area along the eastern banks of the Winooski River. The Study Area in this portion solely comprises the course of the Winooski River and its banks west of the railway track (Appendix I: Figure 7; Appendix II: Photos 23). Moving north-northwest along the multiuse path towards Old Country Club Road, the Study Area remains constrained to areas west of the pathway constituting the Winooski River and its banks (Appendix I: Figure 7; Appendix II: Photos 24–26). Moving northwest along Old Country Club Road in the northwestern section of the Study Area, impacts expand outside the banks and course of the Winooski and into Old Country Club Road. Recent flood deposits were observed to blanket this portion of the Study Area, revealing the frequency of flooding and scouring in the low gradient section of the riverbank (Appendix I: Figure 7; Appendix II: Photos 27). Moving westward from the gravel parking area along Old Country Club Road, timber crib elements and the concrete apron at the Montpelier No. 3 Dam were noted from the riverbank (Appendix I: Figure 7; Appendix II: Photos 28 and 29). Proceeding westward, the western terminus of the Study Area is located along Old Country Club Road (Appendix I: Figure 7; Appendix II: Photo 30).



The grounds of the former Pioneer Mills were denoted along the south banks of the Winooski River for historic archaeological sensitivity (Appendix I: Figure 7; Appendix II: Photo 31–32). Moving east of the Pioneer Mills, commercial development characterizes the remaining southern terrace in the Pioneer Street Dam Study Area (Appendix I: Figure 7; Appendix II: Photo 33–35)

## Trestle Dam

Field investigations of the Trestle Dam location began atop the southern terrace along the North Branch at its confluence with the Winooski River (Appendix I: Figure 8; Appendix II: Photo 36). The Trestle Dam was accessed via the south banks of the North Branch and observed to remain in a state of disrepair, with only a portion of the southern dam section remaining intact (Appendix I: Figure 8; Appendix II: Photo 37). The surrounding banks are interspersed with stone riprap for slope stabilization and encompass the abutments of the adjacent truss bridge.

## Bailey Dam

Field investigations of the Bailey Dam commenced from the Trestle Dam location and began along the eastern banks of the Winooski River. The eastern bank of the Winooski River contains large stone riprap deposits installed to preserve bank stability during episodic flooding (Appendix I: Figure 8; Appendix II: Photo 38). The 1975 reconstruction of the Bailey Dam was observed to have entirely obliterated previous structural elements (Appendix I: Figure 8; Appendix II: Photo 39). Stacked stone embankment walls from the era of hydromechanical manufacturing of the Bailey Dam remain intact on the western side of the Winooski and demarcate the former location of the Berlin Mills (Appendix I: Figure 8; Appendix II: Photo 40 and 41). South of the Bailey Dam and the former location of the Berlin Mills, steep slopes and dense development characterize the remainder of the Study Area (Appendix I: Figure 8; Appendix II: Photos 42–45).

# 6

## Archaeological Sensitivity Determinations and NRHP Evaluation

### NRHP Archaeological Site Significance

The National Register of Historic Places (NRHP) constitutes the US government's official list of cultural resources, both historical and archaeological (e.g. individual structures, districts, or archaeological sites etc.), deemed worthy of historical significance. The NRHP is derived, in part, from passage of the National Historic Preservation Act (NHPA) of 1966 (as amended). This federal law was enacted to promote the preservation of significant cultural resources, and under Section 106 of the Act (*36 Code of Federal Regulations [CFR] 800.1-800.16; Protection of Historic Properties*), it requires all federal agency undertakings, which are either fully or partially funded, to consider the potential impacts of that undertaking to cultural resources.

If a cultural resource (*i.e.*, a historic structure, building, district, object, or archaeological site) is identified, the data obtained from survey is evaluated based on the application of a set of eligibility criteria specified by the Department of the Interior in 36 CFR Part 60.4, Criteria for Evaluation. According to 36 CFR Part 60.4, cultural resources can be determined eligible if they:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Are associated with the lives of persons significant in our past; or
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possesses high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important to the pre-contact or historic periods.

The NRHP dictates that a property, or archaeological site, must possess integrity to be listed. Integrity is defined by its location, design, setting, materials, workmanship, feeling, and association. An archaeological site will possess integrity of at least one of these aspects to be

considered eligible for listing on the NRHP. According to the *National Register Bulletin How to Apply the National Register Criteria for Evaluation*, integrity is defined as the resource's ability to convey its significance (Andrus and Shrimpton 1997). For an archaeological resource to retain sufficient, or good integrity, it will typically retain most of the seven aspects. While historic resources (i.e., above-ground structures) can retain all seven aspects of integrity, not every one can be applied directly to an archaeological resource. It is important to note that under Criterion D, integrity is alone not sufficient to issue an eligibility determination. Archaeological sites are considered eligible based on their potential to yield important information, and evaluations should be made within a developed cultural context.

## Archaeological Sensitivity Determinations and NRHP Evaluation of Dam Remains

Numerous significant flood events have extensively scoured slopes along the banks of the Winooski River and the North Branch during the past century. Despite this, archaeologically sensitive areas containing potential for NRHP-eligible resources were identified in several areas throughout the four Study Area locations. Following consultation with VDHP archaeologists Yvonne Benney Basque and Scott Dillon on April 10, 2025, VHB has assigned VAI site numbers (VT-WA-0223–0226) for each of the dam remains evaluated below. Additionally, VHB has assigned a site number for the CDFC Lower Dam (VT-WA-0232) that is located outside the Study Area.

### Hidden Dam (E. Montpelier No.5 Dam, CDFC Upper Dam)

#### *Pre-Contact Archaeological Sensitivity*

A total of eight terrace locations were identified which retain sensitivity for undiscovered pre-Contact archaeological resources, dubbed archaeological sensitivity areas (ASAs) 1–8 (Appendix I: Figure 9). Soil samples retrieved throughout this section revealed alluvial soils, suggesting the likelihood of deeply stratified pre-Contact archaeological deposits. Slopes exceeding 15% and heavily scoured stream bank locations characterize much of the remainder of the Hidden Dam Study Area.

#### *Historic Archaeological Sensitivity and NRHP Evaluation*

The CDFC Upper Dam at the Hidden Dam site (VT-WA-0226) operated from 1910–1927 to divert water to the powerhouse downstream and was part of a greater early twentieth century hydroelectric dam complex owned by the CDFC. The charter of the nearby CDFC Lower Dam (VT-WA-0232) and associated powerhouse was obtained first in 1908 to power the adjacent electric railway (Figure 9; Montpelier Evening Argus, Aug. 13, 1908:1).

The CDFC Upper Dam was subsequently established by the firm to furnish electricity to the adjacent railway line and later, quarry operations in nearby Graniteville. The site of the demolished powerhouse is located approximately 1,500 ft downstream from the associated CDFC Upper Dam outside the Study Area and was connected by the former steel penstock. The Hidden Dam location contains remnants of the CDFC Upper Dam including the fragmented concrete dam and gatehouse, timber and concrete dam elements along the northern shore of the Winooski River, and the penstock gate (Figures 14–17).

While the CDFC Upper Dam was principally used to divert water to the penstock and did not contain additional structural elements or other adjoining areas of industrial activity besides the downstream powerhouse, its former components (*i.e.*, dam, powerhouse, penstock), together constitute an early center of hydroelectric power generation along the Winooski River established prior to the rise of larger, more consolidated enterprises, like the Green Mountain Power Company.

The Lower CDFC Dam was purchased by the Montpelier & Barre Light and Power Company in 1913, and then by the Green Mountain Power Company (formerly the People's Hydroelectric Vermont Corporation) in 1927 (FERC 1982). The Winooski Hydroelectric Company purchased the Lower CDFC Dam from the Green Mountain Power Company in 1985. Soon after, the Winooski Hydroelectric Company entirely reconstructed the dam components for the "Winooski 8 Dam" Project, which utilized the existing dam location to build a new intake/powerhouse structure and excavated a new 300 ft tailrace. The new dam was anchored to bedrock using steel anchors drilled and grouted through the center of the dam. The downstream face of the dam and its crest were capped with reinforced concrete. The new powerhouse design consists of an open-flume type constructed with reinforced concrete containing post-tensioned rock anchors. The powerhouse contains a masonry block with brick facing turbine room/control room building built on top of the concrete superstructure. A 300-ft long tailrace directs the turbine discharge from the two main turbines back to the river. The turbine room houses an overhead travelling crane, hydraulic systems, and an emergency power generator (FERC 1986). Today, the remains of the original CDFC Lower Dam are restricted to the route of its former penstock and buried foundations of the former powerhouse (Figures 14 and 15).

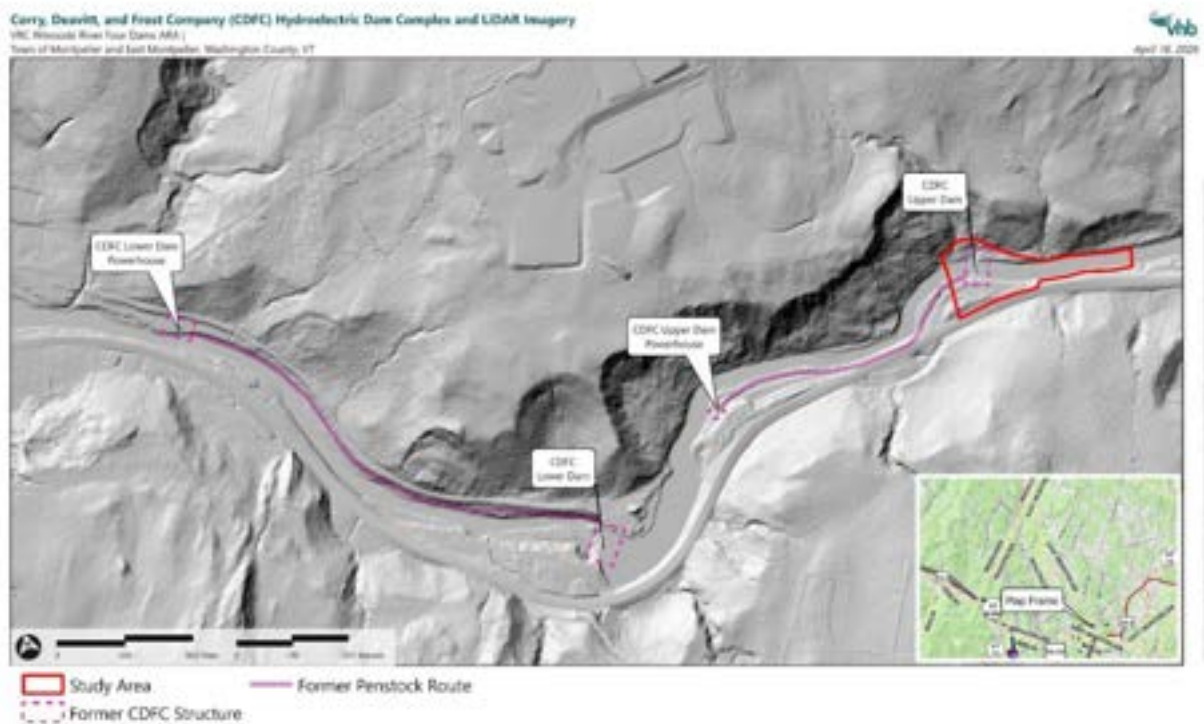


Figure 14. CDFC Hydroelectric Dam Complex and LiDAR Imagery.

Conversely, the archaeological remains of the network of structures associated with the former Upper CDFC Dam are preserved along the banks of the Winooski and are also visible in LiDAR imagery (Figure 14). While the remains of the former steel penstock are gone, a trench still connects concrete elements of the CDFC Upper Dam to the foundation remains of the powerhouse approximately 1,500 ft downstream (Figures 14–17).

VHB recommends VT-WA-0226 as eligible for listing on the NRHP under Criterion A due to its association with the development of early hydroelectric energy infrastructure (ca. 1890–1930) along the Winooski River and throughout broader New England. This period encompasses the initial construction of small-scale hydroelectric infrastructure along the river prior to the development of larger hydroelectric facilities in greater New England, such as Bellows Falls Station in 1928, Comerford Dam in 1930, and the Moore Reservoir and Dam in 1956 (Brattleboro Daily Reformer, Jan. 7, 1929:7; The Newport Daily Express, Dec. 7, 1936; The St. Johnsbury Daily Republican, May 4, 1956:3). The CDFC Upper Dam was ultimately superseded by nearby hydroelectric infrastructure, such as the Middlesex No. 2 dam and the facility at Bolton Falls (GMP 1988: 2-1; Montpelier Evening Argus, Mar. 1, 1947:3; The Times Argus, Apr. 7, 1978:9). Today, Green Mountain Power operates several facilities along the course of the Winooski River, including Gorge No. 18, Essex No. 19, Bolton Falls No. 1, and at Middlesex No. 2. VHB also recommends VT-WA-0226 as eligible for listing on the NRHP under Criterion D due to its likelihood to yield information important to the historic period.

VT-WA-0226 maintains integrity of *location* along the Winooski River with archaeological remains of each of its constituent parts (*i.e.*, dam, powerhouse, penstock) crucial for power generation across the broader landscape. Likewise, VT-WA-0226 preserves integrity of *design* with the preservation of archaeological remains from each structural element of the greater layout of the Upper CDFC dam.

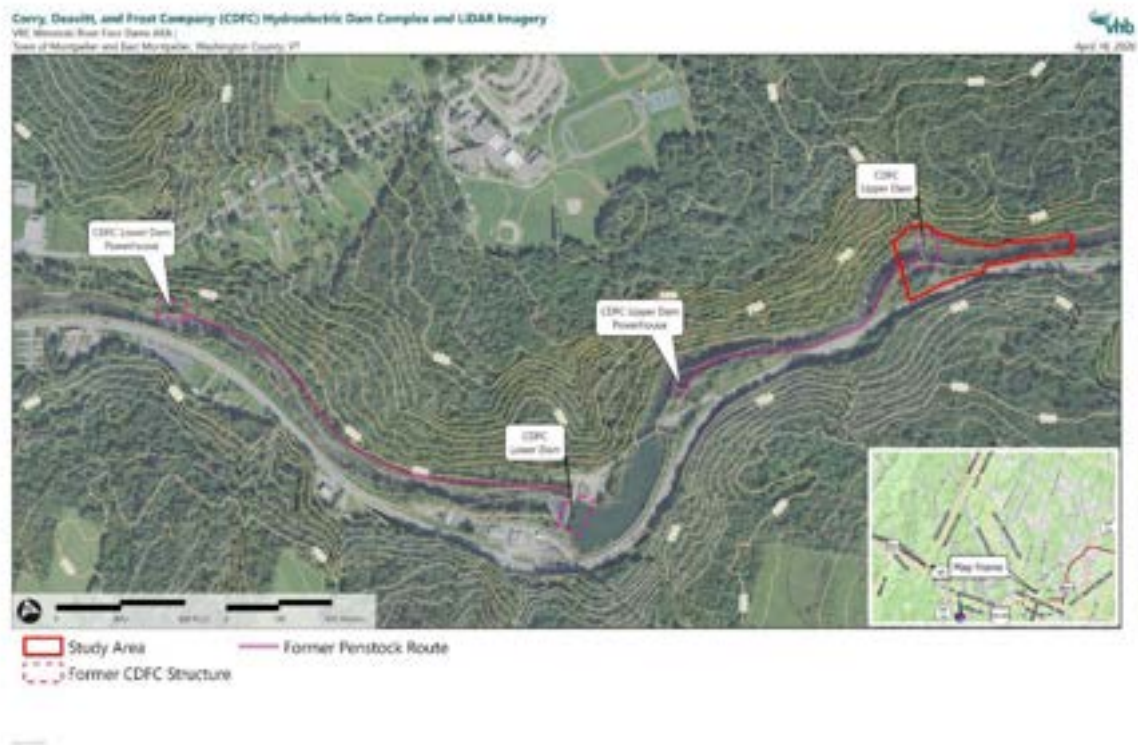


Figure 15. CDFC Hydroelectric Dam Complex and Aerial Imagery.



VT-WA-0226 maintains integrity along an undeveloped riverine *setting* much like its early twentieth century context during active operations. VT-WA-0226 preserves poor integrity of *materials*, lacking key structural remains of the approximately 1,500 ft penstock that connected the dam structure to the downstream powerhouse. Despite that VT-WA-0226 preserves an incomplete record of materials used to build the structure, the site still maintains integrity of *workmanship*, as archaeological remains of the human-altered industrial landscape are preserved (*i.e.*, the penstock trench, the dam structure, and the powerhouse foundation). The grouping of its structural elements in its original riverine setting preserves the integrity of *feeling* and *association* of the early twentieth century hydroelectric facility.



Figure 16. CDFC Upper Dam Powerhouse Foundations Remains located outside the Study Area.





Figure 17. View of CDFC Upper Dam Penstock Trench outside of the Study Area.

## Montpelier No. 3 Dam (Pioneer Street Dam)

### *Pre-Contact Archaeological Sensitivity*

Dense development, steep slopes, and heavily scoured low gradient sections of the Winooski riverbank lacking sensitivity for pre-Contact archaeological resources characterize much of the Pioneer Street Dam Study Area.

### *Historic Archaeological Sensitivity and NRHP Evaluation*

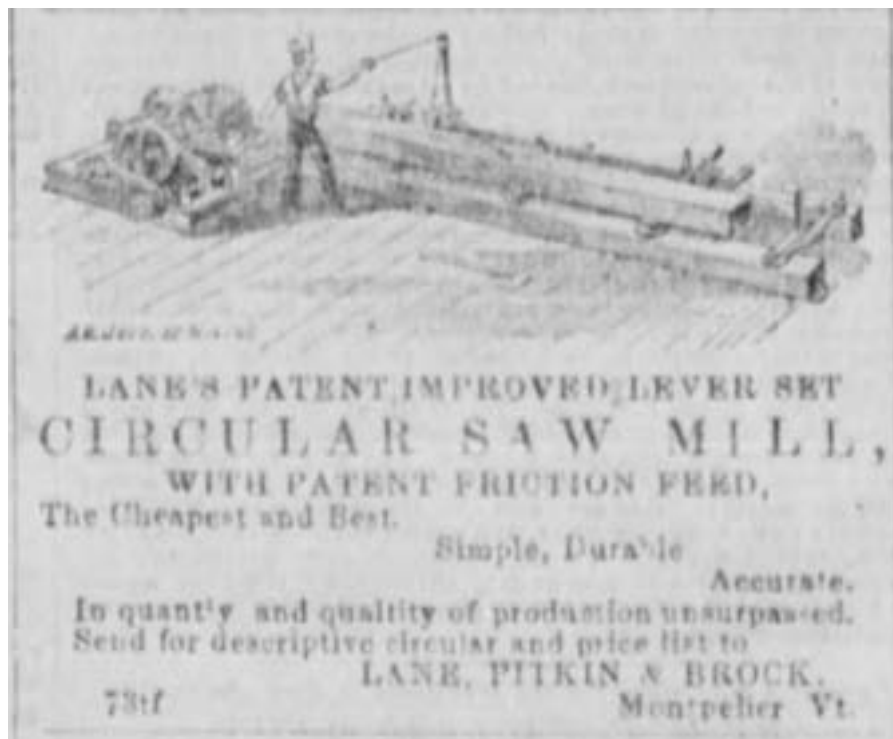
One terrace location retains archaeological sensitivity for significant historic archaeological deposits, dubbed ASA 11, due to its association with the former hydromechanical manufacturing and hydroelectric facility located at the Pioneer Dam (VT-WA-0225) (Appendix I: Figure 11).

The above-ground Pioneer Street Dam elements (VT-WA-0225) reflect two distinct developments in infrastructure including the nineteenth century timber crib dam operated by Lane Manufacturing Co., and the later concrete dam owned by the Standard Light and Power Manufacturing Company/Consolidated Lighting Company (Figure 7; Argus and Patriot, Oct. 19, 1881:3; Montpelier Evening Argus, Oct. 19, 1905:3, Jan. 14, 1918:8).

Records indicate that the original timber structure was used as a sawmill from at least 1881–1884 (Montpelier Evening Argus, Jan. 14, 1918:8). Timber crib dams were a common method of impoundment in forested New England from the onset of colonization until the late nineteenth century and were originally built to power sawmills for processing lumber and harvested grain. Logs like the remnants visible at the Pioneer Street Dam were stacked at right angles to establish a sturdy foundation with structural gaps typically filled with soil, stone, or gravel. Timber crib dams were common in New England due to their simplicity in design, relative efficacy, and the ubiquity of cheap, quality lumber (Smith 1971:146, 186–187). The timber elements of the Pioneer

Dam represent the later period crib dam construction in New England before the proliferation of concrete structures.

The Lane Manufacturing Co., incorporated in 1873, was among the leading companies in the outgrowth of Montpelier's late nineteenth industrial sector. Dennis Lane patented several lever-set sawmills which the company produced in operational facilities along the North Branch of the Winooski River (Child 1889:327). Patented Lane lever set sawmills facilitated a sawyer's ability to set logs for successive cuttings, greatly reducing the need for manpower and enhancing saw precision (Vermont Watchmen, Jan. 23, 1884:4) (Figure 18).



**Figure 18. Newspaper advertisement for the Lane Manufacturing Co. Patented Lever Set Circular Sawmill (Vermont Watchmen Feb. 5, 1868:4).**

The sawmill at the Pioneer Mill was located outside the main Lane Manufacturing Co. facility, but the preservation of the timber crib elements associated with the company is a notable feature of VT-WA-0225, as it has effectively preserved nineteenth century structural elements related to hydromechanical manufacturing at the site prior to its use as a hydroelectric facility (Figure 7; Montpelier Evening Argus, Oct. 19, 1905:3, Jan. 14, 1918:8; Vermont Watchmen, Sep. 12, 1888:1).

The Standard Light and Power Manufacturing Company first acquired the Pioneer Mills in 1888 to lease waterpower to adjacent businesses and town infrastructure but by 1898, the company's holdings had been absorbed by the new Consolidated Lighting Company. The new Consolidated Electric Light Company of Montpelier built a larger hydroelectric facility downriver at Bolton Falls in 1900 and a nearby reserve steam plant in the Pioneer section of Montpelier southeast of the Pioneer Street Dam (Garcia 2020:68–69; VHB 2024). Operations at the Pioneer Street Dam were ultimately superseded in the early twentieth century with the expansion of more productive

hydroelectric infrastructure, such as the Middlesex No. 2 dam, built in 1928, and the facility at Bolton Falls (GMP 1988: 2-1; Montpelier Evening Argus, Mar. 1, 1947:3; The Times Argus, Apr. 7, 1978:9).



Figure 19. Newspaper advertisement illustrating the Standard Light & Power Company's Pioneer Mills significance in the early electric grid of Montpelier (News and Advertiser Feb. 7, 1922:5).

VHB recommends that the VT-WA-0225 be considered eligible for listing on the NRHP under Criterion A due to its association with two distinct periods of industrial development in Montpelier. The timber crib dam elements are associated with the late nineteenth century outgrowth of Montpelier's industrial sector during the era of Lane Manufacturing Co. (ca. 1881–1884) production at the Pioneer Dam. The concrete dam elements were constructed in 1905 during the development of Montpelier's electric grid and early hydroelectric energy infrastructure (ca. 1890–1930) along the Winooski River (Figure 19). This period encompasses the initial construction of small-scale hydroelectric infrastructure along the Winooski River prior to the development of larger hydroelectric facilities in greater New England, such as Bellows Falls Station in 1928, Comerford Dam in 1930, and the Moore Reservoir and Dam in 1956 (Brattleboro Daily Reformer, Jan. 7, 1929:7; The Newport Daily Express, Dec. 7, 1936; The St. Johnsbury Daily

Republican, May 4, 1956:3). The Pioneer Dam was ultimately superseded by nearby hydroelectric infrastructure, such as the Middlesex No. 2 dam and the facility at Bolton Falls (GMP 1988: 2-1; Montpelier Evening Argus, Mar. 1, 1947:3; The Times Argus, Apr. 7, 1978:9). VHB also recommends VT-WA-0226 as eligible for listing on the NRHP under Criterion C due to the preservation of timber crib elements via the concrete capping of the Pioneer Dam in 1905. The timber crib dam elements at VT-WA-0226 constitute a rarely preserved example from the height of Montpelier's era of hydromechanical manufacturing sector and embody distinctive structural characteristics of late nineteenth century industrial infrastructure prior to the proliferation of concrete dams throughout New England in the early twentieth century. VHB also recommends VT-WA-0225 as eligible for listing on the NRHP under Criterion D due to its likelihood to yield information important to the historic period.

VT-WA-0225 maintains integrity of *location* along the Winooski River with archaeological remains dating to the era of hydromechanical manufacturing and hydroelectric power generation (i.e., timber crib dam, concrete apron, concrete foundation of the former wheelhouse) at the Pioneer Mills. Likewise, VT-WA-0225 preserves integrity of *design* with the preservation of archaeological remains from the former sawmill and hydroelectric powerplant at the Pioneer Dam. The riverine *setting* of VT-WA-0225 is much like its early twentieth century context during active industrial operations at the Pioneer Mills. While VT-WA-0225 preserves poor integrity of *materials* because of the demolition of former affiliated above-ground structural elements, the embankment and adjacent area south of the dam possess historic archaeological sensitivity for below ground, archaeological remains (Figure 7). Despite that VT-WA-0225 preserves an incomplete record of materials from the structure, the site still maintains integrity of *workmanship*, as archaeological remains span its industrial history are preserved that reflect local innovations in sawmill technology by the Lane Manufacturing Co., and early developments in hydroelectric infrastructure along the Winooski River. The grouping of the structural elements at VT-WA-0225 in its original riverine setting preserves a degree of integrity of *feeling* and *association* of the former facilities at the site.

## Trestle Dam

No areas of pre-Contact archaeological sensitivity were observed in the Trestle Dam Study Area, as project impacts are restricted to heavily scoured riverbanks with slopes exceeding 15% interspersed with riprap. VHB has determined that the Trestle Dam location (VT-WA-0224) is devoid of sensitivity for significant historic archaeological resources or deposits, as background research has revealed that the "sewerage dam" did not contain additional structural elements or associated areas of industrial activity (Montpelier Evening Argus, Oct. 7, 1899:3). Documentary research has revealed that a dam existed in the approximate location prior to 1899 but was demolished for the reconstruction of the Rialto Bridge (Montpelier Evening Argus, Apr. 6, 1899:1). Historic records confirmed that the pre-1899 "rat dam" was originally built to combat rising vermin populations prior to the development of a city sewer system and was again reconstructed in 1899 (Montpelier Evening Argus, Oct. 7, 1899:3). The Trestle Dam was subsequently repaired in 1903 by James Ewing and is visible in later historic photographs (Figure 6; Montpelier Evening Argus, May 22, 1903:3). Today, the fragmentary concrete dam stands 3 to 5 feet in height and is functionally obsolete.

Considering the lack of additional associated structures or likelihood for significant historic archaeological deposits related to the "sewerage dam", the site has not yielded nor possesses

the likelihood to yield additional information important to the historic period; therefore, VHB has concluded that the Trestle Dam does not constitute an NRHP-eligible archaeological resource and cannot foreseeably meet any criteria outlined in 36 CFR Part 60.4 listed above.

## Bailey Dam

Dense development, steep slopes, and heavily scoured sections of the Winooski riverbank lacking archaeological sensitivity characterize much of the Study Area. Two terrace locations marked by stone embankment walls were identified which retain sensitivity for significant historic archaeological deposits, dubbed ASA 9 and 10, due to their association with the former nineteenth century Berlin Mills hydromechanical manufacturing complex located at the Bailey Dam (VT-WA-0223) (Figure 4; Appendix I: Figure 10).

The former Bailey Dam timber crib structure was replaced in 1934 by the Civilian Conservation Corps with a concrete structure and again in 1975 by the United States Army Corps of Engineers (2022) with the lowering of the dam, the removal of the former gates, and a concrete cap to form a fixed spillway.

VHB has determined that Bailey Dam has not yielded nor possesses the likelihood to yield information important to the historic period as an archaeological resource due to multiple iterations of reconstruction and the obliteration of previous dam remnants; therefore, VHB has concluded that the Bailey Dam does not constitute an NRHP-eligible archaeological resource and does not foreseeably meet any criteria outlined in 36 CFR Part 60.4 listed above.



# 7

## Analysis of Proposed Impacts

This chapter provides recommendations concerning proposed impacts to archaeologically sensitive areas and dam structure remains considered eligible for listing on the NRHP. The plans used in this analysis, dated September 4, 2025, are included in the appendices of this report (Appendix IV).

### Hidden Dam (E. Montpelier No.5 Dam)

Proposed impacts at the Hidden Dam site include the removal of impounded sediment, riparian plantings, the removal of the concrete spillway, the removal of the concrete gatehouse structure, and the removal of the downstream concrete training wall. Presently, proposed project impacts avoid pre-Contact archaeological sensitivity at the Hidden Dam site described above. However, the removal of the CDFC upper dam remains constitutes an adverse effect to site VT-WA-0226 because the dam is recommended eligible for the NRHP. Mitigation for this proposed adverse effect should be prepared in consultation with VDHP but may include tasks such as the preparation of an HRDP and/or interpretive signage.

### Montpelier No. 3 Dam (Pioneer Street Dam)

Proposed impacts at the Pioneer Street Dam include the removal of the concrete spillway, removal of the timber crib structure and stone ballast, removal of the concrete gatehouse structure, removal of impounded sediment, riparian plantings, the installation of stone armoring for slope stabilization, and the installation of live stake joint plantings along the proposed armoring. Presently, proposed armoring of the banks and sediment removal impact the historic archaeological sensitivity areas described above. The removal of the Pioneer Dam constitutes an adverse effect to site VT-WA-0225 because the dam is recommended eligible for the NRHP. FEMA has requested that the project sponsor (see Appendix V):

- Complete a Historic Resource Documentation Package (HRDP) for the Pioneer Street Dam which researches and documents both the timber crib dam as well as the concrete dam apron as part of their associated industrial complexes. This analysis should also focus on the potential impacts of the other project

components associated with the dam removal, including but not limited to, bank grading and armoring around the mill, staging locations and the proposed access on the north side of the dam to any potential mill or industrial remains.

- Develop an archaeological monitoring and documentation plan for the proposed sediment removal on the southeast side of Pioneer Street Dam where earlier mill and the Standard Light building once stood.

The preparation of a future archaeological monitoring and documentation plan on the southeast side of Pioneer Street Dam in ASA 11 will be employed to document any contributing structural remains uncovered during sediment removal and mitigate impacts to subsurface archaeological components of VT-WA-0225. These mitigation measures should be developed in consultation with FEMA and VDHP. Additional impacts described north of the river are not included as part of this project.

## Trestle Dam

Proposed impacts at the Trestle Dam include the removal of the concrete dam, the installation of stone armored protection of sanitary sewer crossings, installation of riprap protection, installation of natural gravel and cobble material, removal of impounded sediment, and riparian plantings. VT-WA-0224 is recommended as ineligible for listing on the NRHP and therefore, its removal will not constitute an adverse effect. Furthermore, no archaeologically sensitive areas will be impacted by its removal.

## Bailey Dam

Proposed impacts at Bailey Dam include the removal of the concrete spillway, the installation of stabilized construction access, a temporary staging and stockpile area, stone armoring of the riverbank, removal of impounded sediment, and riparian planting. Presently, proposed project impacts avoid impacts to the historic archaeological sensitivity at the Bailey Dam described above. VT-WA-0223 is not ineligible for listing on the NRHP and therefore, its removal will not constitute an adverse effect.

# 8

## Conclusions and Recommendations

This ARA has been prepared on behalf of the VRC for the proposed removal of four dams along the Winooski River in the City of Montpelier and the Town of East Montpelier. Funding for the archaeological resource assessment and other associated archaeological work has been funded by Watershed United Vermont through an Enhancement Project Development Grant. The City of Montpelier also submitted an application to FEMA for HMGP funding through VEM for the 5 Home Farm Way Floodplain Restoration Project with the VRC's Pioneer Street Dam Removal and therefore, both projects are subject to review under Section 106 of the NHPA. Finally, implementation funding for all four dam removals and associated restoration work is still being pursued and is expected to come from a combination of local, state, and federal sources. This ARA was conducted to understand the archaeological resource considerations of removing each of the four dams. Consequently, VHB staff examined the potential for previously recorded and undiscovered archaeological resources within four discrete Study Area locations encompassing a total of 39.1 acres (ac) to accommodate project impacts and alternatives (Appendix I: Figure 1).

Upon completion of background review and a field investigation of the Study Area, VHB has determined that the Bailey and Trestle dams are ineligible for listing on the NRHP as archaeological resources and cannot foreseeably meet any criteria outlined in 36 CFR Part 60.4. VHB recommends that both VT-WA-0225 and VT-WA-0226 are eligible for listing on the NRHP as described in this report, and that dam removal at these locations will constitute adverse effects. FEMA has requested the preparation of an archaeological monitoring and documentation plan for impacts related to archaeologically sensitive sections of the Pioneer Dam (VT-WA-0225) and the preparation of a HRDP.

VHB identified an additional eleven areas which retain potential for undiscovered archaeological resources (Appendix I: Figures 9–11). Except for ASA 11 where archaeological monitoring has been proposed at the Pioneer Dam (VT-WA-0225), VHB recommends that a Phase I survey be completed prior to any activities involving ground disturbance in these archaeologically sensitive areas. Project plans presently include the avoidance of all archaeologically sensitive areas delineated in this report except for those at the Pioneer Dam location where FEMA has requested archaeological monitoring and documentation. If these archaeologically sensitive areas can be avoided by project impacts, no further archaeological investigation is recommended. Any future

HRDP efforts, archaeological monitoring and documentation plans, or other mitigation measures should be developed in consultation with VDHP.

# References

Argus and Patriot [Montpelier, Vermont]

1881 "Papers sent out of the State". 19 Oct: 3.

Beers, F. W.

1871 *County Atlas of Washington County, Vermont*. F. W. Beers and Co., New York.

The Brattleboro Reformer [Brattleboro, Vermont]

1929 "Happenings of Windham County During Year 1928". 37 January: 7.

Child, Hamilton

1889 *Gazetteer of Washington County, VT. 1783–1889*. The Syracuse Journal Company. Syracuse, NY.

Doll, Charles G.

1970 Surface Geologic Map of Vermont. Vermont Geological Survey, Department of Water Resources, scale 1:250,000.

Federal Energy Regulatory Commission (FERC)

1982 Before the Federal Energy Commission Application for License for a Minor Water Power Project. Electronic Resource,  
[https://elibrary.ferc.gov/eLibrary/docketsheet?docket\\_number=P-6470&sub\\_docket=All&dt\\_from=1960-01-01&dt\\_to=2026-03-26&chklegadata=false&pageNm=dsearch&date\\_range=custom&search\\_type=docket&date\\_type=datedate&sub\\_docket\\_q=Allsub&sid=34a775d8-f85e-49e8-9767-78ac54d7c13d](https://elibrary.ferc.gov/eLibrary/docketsheet?docket_number=P-6470&sub_docket=All&dt_from=1960-01-01&dt_to=2026-03-26&chklegadata=false&pageNm=dsearch&date_range=custom&search_type=docket&date_type=datedate&sub_docket_q=Allsub&sid=34a775d8-f85e-49e8-9767-78ac54d7c13d), accessed on March 26, 2026.

1986 "AS BUILT" drawings and Revised Project Description for the Winooski 8 Hydroelectric Project Electronic Resource,  
[https://elibrary.ferc.gov/eLibrary/docketsheet?docket\\_number=P-6470&sub\\_docket=All&dt\\_from=1960-01-01&dt\\_to=2026-03-26&chklegadata=false&pageNm=dsearch&date\\_range=custom&search\\_type=docket&date\\_type=datedate&sub\\_docket\\_q=Allsub&sid=34a775d8-f85e-49e8-9767-78ac54d7c13d](https://elibrary.ferc.gov/eLibrary/docketsheet?docket_number=P-6470&sub_docket=All&dt_from=1960-01-01&dt_to=2026-03-26&chklegadata=false&pageNm=dsearch&date_range=custom&search_type=docket&date_type=datedate&sub_docket_q=Allsub&sid=34a775d8-f85e-49e8-9767-78ac54d7c13d), accessed on March 26, 2026.

Garcia, Manuel Jr.

2022 The Other Montpelier: Historical Glimpses and Memories of the City's Development along the River Valleys. Electronic Resource,  
<https://vermonthistory.org/journal/88/VH8801TheOtherMontpelier.pdf>, accessed February 1, 2025.

Green Mountain Power Company (GMP)

1988 Green Mountain Power Corporation Bolton Falls Hydroelectric Redevelopment Final Technical & Construction Cost. Prepared for the U.S. Department of Energy. Electronic



Resource, <https://babel.hathitrust.org/cgi/pt?id=uc1.31210022266694&seq=3>, accessed on April 17, 2026.

Hemenway, Abby Maria

1882 *The History of the Town of Montpelier, Including that of the Town of East Montpelier, for the First One Hundred and Two Years.* Montpelier, Vermont

Montpelier Evening Argus [Montpelier, Vermont]

1899 "Officially Determined by the Board of Alderman This Morning." 6 April: 1.

1899 "Plans for New Sewer." 5 June: 3

1899 "Montpelier and Vicinity." 7 October: 3.

1903 "Montpelier and Vicinity." 22 May: 3.

1905 "Improving the Plant." 19 October: 3.

1908 "Electric Co. Organized." 13 August: 1.

1908 "Power Plant Underway." 21 September: 2.

1909 "Contract for New Dam." 3 September: 4.

1909 "Dalrymple on the Job." 31 December: 1.

1918 "Well Known Resident." 14 January: 8.

1928 "Activities Beneath the Golden Dome." 2 November: 2.

1934 ""Dedication of New Dam on the Winooski Took Place Monday." 27 November.

1947 "E.P. Coleman Retires Today from Nat'l Life." 1 March: 3.

The Newport Daily Express [Newport, Vermont]

1936 "Monroe, N.H. Making Great Strides." 7 Dec: 5.

News and Advertiser [Montpelier, Vermont]

1922 "The Pioneer Plant." 7 Feb: 5.

Ratcliffe, Nicholas M., Rolfe S. Stanley, Marjorie H. Gale, Peter J. Thompson, and Gregory J. Walsh

2011 *Bedrock Geologic Map of Vermont.* USGS Scientific Investigations Series Map 3184, 3 sheets, scale 1:100,000.

Sanborn Map Company

1884 *Sanborn Fire Insurance Map from Montpelier, Washington County, Vermont.*

1889 *Sanborn Fire Insurance Map from Montpelier, Washington County, Vermont.*

1894 *Sanborn Fire Insurance Map from Montpelier, Washington County, Vermont.*

1899 *Sanborn Fire Insurance Map from Montpelier, Washington County, Vermont.*

1909 *Sanborn Fire Insurance Map from Montpelier, Washington County, Vermont.*

Smith, Henry Perry

1886 *History of Addison County, Vermont with Illustrations and Biographical Sketches of Some of its Prominent Men and Pioneers*. D. Mason & Co. Syracuse, New York.

Smith, Norman

1971 *A History of Dams*. The Citadel Press. Secaucus, New Jersey.

St. Johnsbury Republic [St. Johnsbury, Vermont].

1956 "Open Control Gates of Dam to Widen Spillway Channel". 4 May: 3.

Thompson, D.P.

1860 *History of the Town of Montpelier, from the Time it was First Chartered in 1781 to the Year 1860. Together with Biological Sketches of its Most Notable Deceased Citizens*. E.P. Walton. Montpelier, Vermont.

The Times Argus [Barre, Vermont]

1978 "Green Mountain to Fight Dam Takeover." 7 April: 9.

United States Army Corps of Engineers (US Army Corps)

2022 2022 Annual Dam Inspection Bailey Dam – Washington County Montpelier, Vermont. On file at the New York District, US Army Corps of Engineers. New York, NY.

United States Department of Agriculture (USDA)

2024 Web Soil Survey. Electronic Resource, <https://websoilsurvey.nrcs.usda.gov/app/>, accessed November 1, 2024.

United States Geological Survey (USGS)

1917 River Surveys. 1:24,000. Winooski, Vermont. Electronic Resource, <https://pubs.usgs.gov/wsp/0424/plate-4.pdf>, accessed June 6, 2025.

1922 Barre, 1:48,000. Barre, VT.

1924 Barre, 1:62,500. Barre, VT.

Vanasse Hangen Brustlin (VHB)

2018 Cultural Resources Assessment Report Initial Study Report – Bolton Falls Hydroelectric Project (FERC No. 2879). Prepared for Green Mountain Power, December 2018. On file at VHB, South Burlington VT.

Vermont Division for Historic Preservation (VDHP)

2015 Environmental Predictive Model for Locating Pre-contact Archaeological Sites. Electronic Resource, <https://accd.vermont.gov/historic-preservation/review-compliance/precontact-archaeological-sites>, retrieved November 1, 2024.

2017 Guidelines for Conducting Archaeology in Vermont. Electronic Resource, [https://outside.vermont.gov/agency/ACCD/ACCD\\_Web\\_Docs/HP/Archaeology/ARCHEO\\_GUIDELINES.pdf](https://outside.vermont.gov/agency/ACCD/ACCD_Web_Docs/HP/Archaeology/ARCHEO_GUIDELINES.pdf), retrieved November 1, 2024.

#### Vermont Fish and Wildlife

- 2014 Biophysical Regions and a Landscape Perspective for Conservation and Management. In, *Wildlife Habitat Management – A Landowner’s Guide*, pp 8–11. Montpelier, Vermont.
- 2022 Rare and Uncommon Animals of Vermont. Vermont Natural Heritage Inventory. Electronic Resource,  
<https://vtfishandwildlife.com/sites/fishandwildlife/files/documents/Learn%20More/Library/REPORTS%20AND%20DOCUMENTS/NONGAME%20AND%20NATURAL%20HERITAGE/ENDANGERED%2C%20THREATENED%20AND%20RARE%20SPECIES%20LISTS/Rare%20and%20Uncommon%20Animals%20of%20Vermont.pdf>, retrieved December 3, 2024.

#### Vermont Watchmen [Montpelier, VT]

- 1868 “Lane’s Patent Improvement Lever Set Circular Saw Mill”. 5 Feb: 4.
- 1884 “Rise and Growth of a Thriving Business”. 23 Jan. 23: 4.

#### Walling, Henry Francis

- 1858 *Map of Washington County, Vermont*. Baker and Tilden Publishers, New York.

# Appendix I

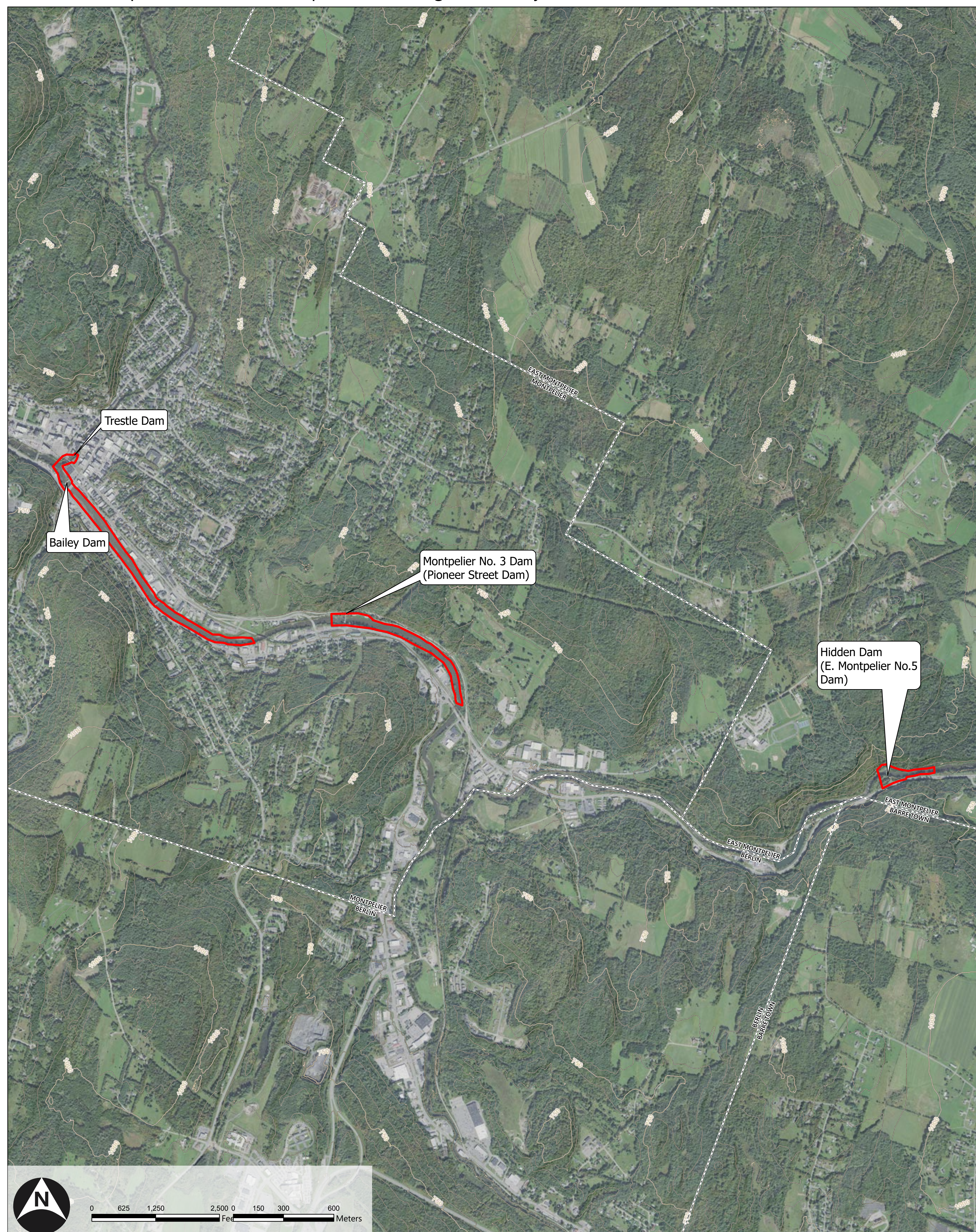
## Project Maps



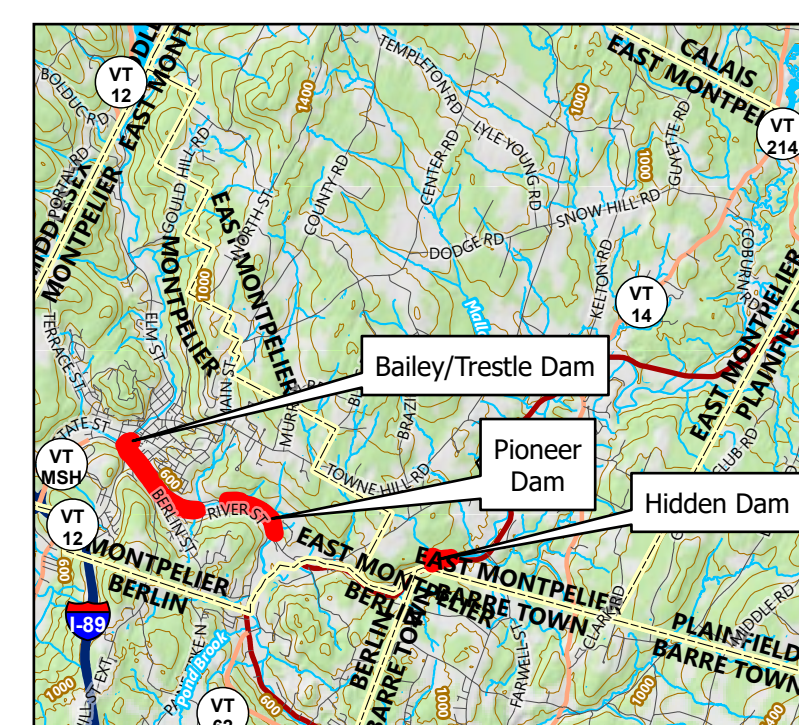
## Figure 1. Study Area in the Town of Montpelier and East Montpelier

VRC Winooski River Four Dams ARA |

Town of Montpelier and East Montpelier, Washington County, VT



- ▭ Study Area
- ▭ Town Boundary (VCGI)



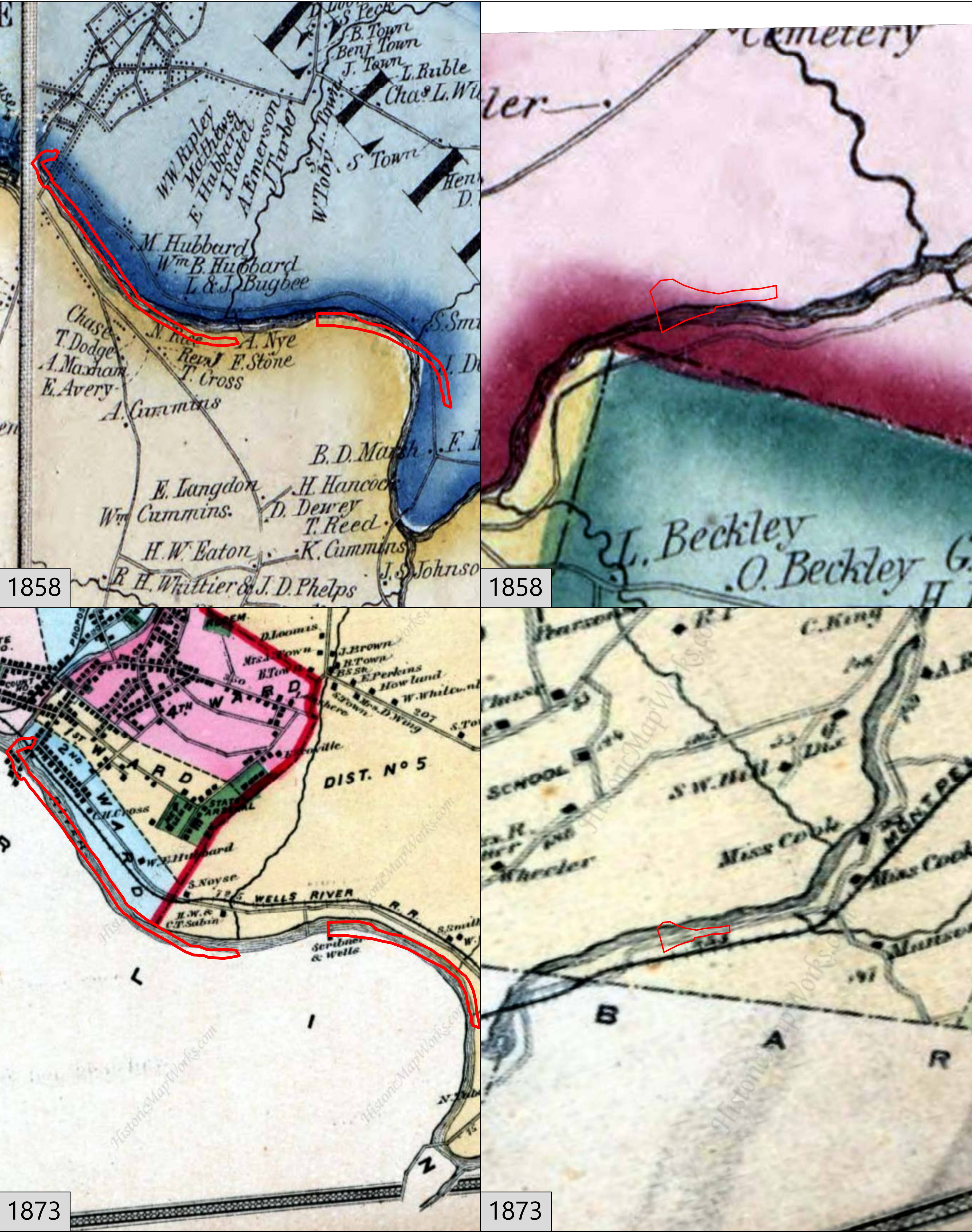
Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)

Path: \\vhb\gis\proj\SBurlington\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 4/20/2026)



Figure 2. Walling (1858) Map of Washington County and Beers (1873) Atlas of Washington County

VRC Four Winooski River Dams ARA |  
Town of Montpelier and East Montpelier, Washington County, VT



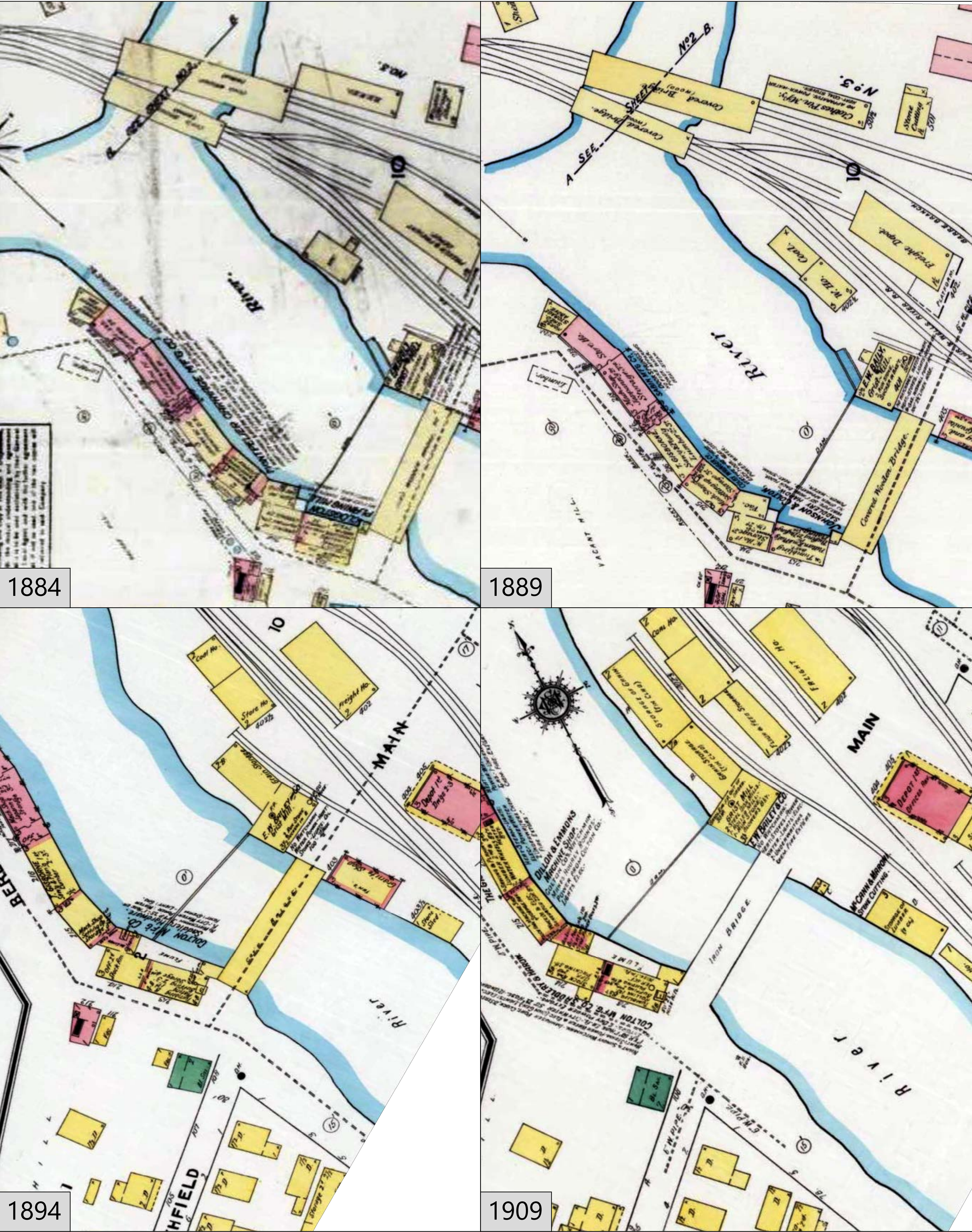
Study Area

Source: Walling (1858) Map of Washington County; Beers (1873) Atlas of Washington County



Figure 3. Sanborn Fire Insurance Maps 1884, 1889, 1894, & 1909  
Depicting the Bailey Dam

VRC Four Winooski River Dams ARA |  
Town of Montpelier and East Montpelier, Washington County, VT

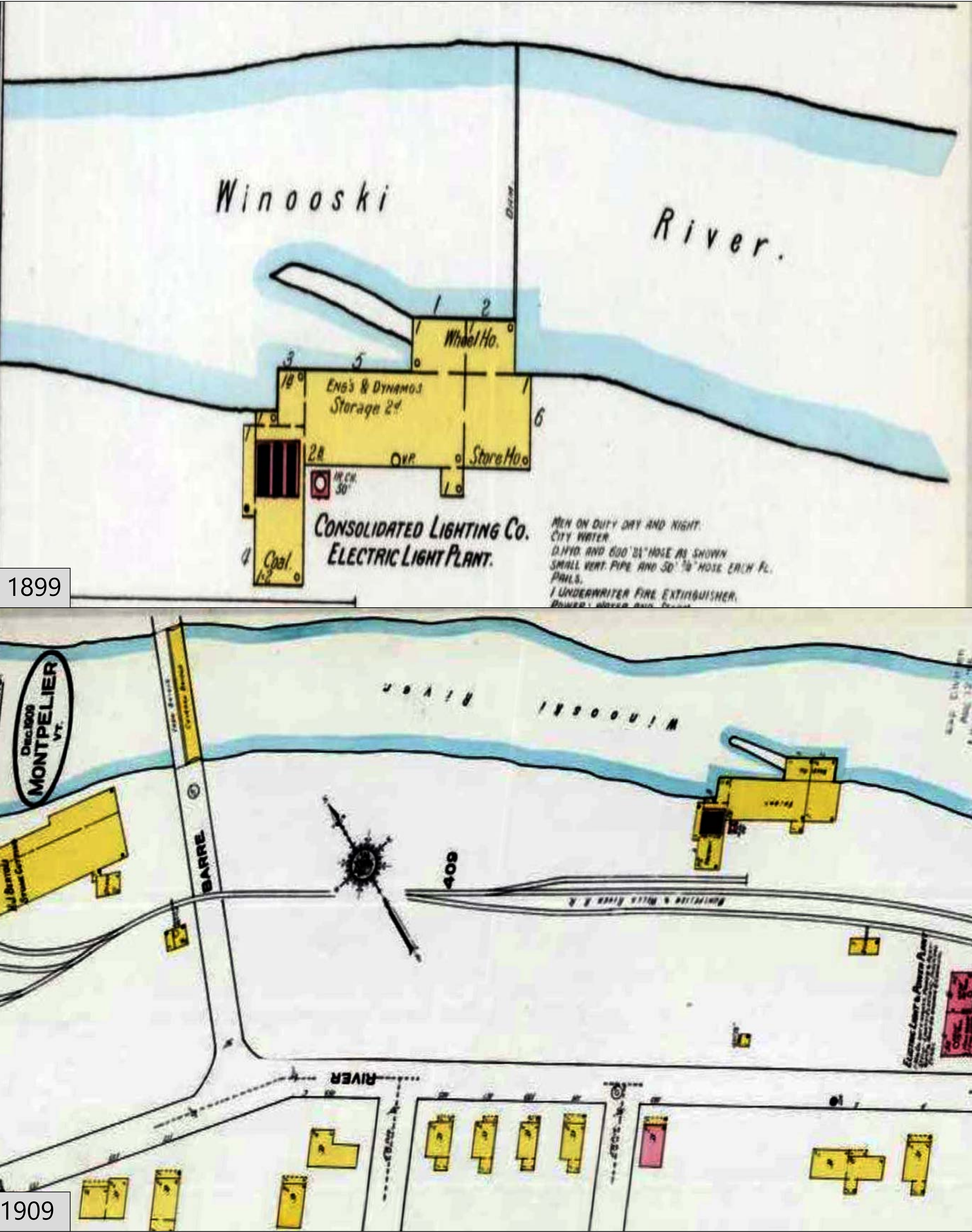


Sanborn Fire Insurance Maps from Montpelier, Washington County, Vermont.



Figure 4. Sanborn Fire Insurance Maps 1899 & 1909 Depicting the Pioneer Street Dam, Montpelier No. 3 Dam

VRC Four Winooski River Dams ARA |  
Town of Montpelier and East Montpelier, Washington County, VT



Path: \\vnb.com\gis\proj\SBurlington\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 6/19/2025)

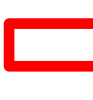


Figure 5. 1922 and 1924 USGS Maps  
Depicting the Hidden Dam Location in East Montpelier

VRC Four Winooski River Dams ARA |  
Town of Montpelier and East Montpelier, Washington County, VT



0 300 600 1,200 0 105 210 420  
Feet Meters

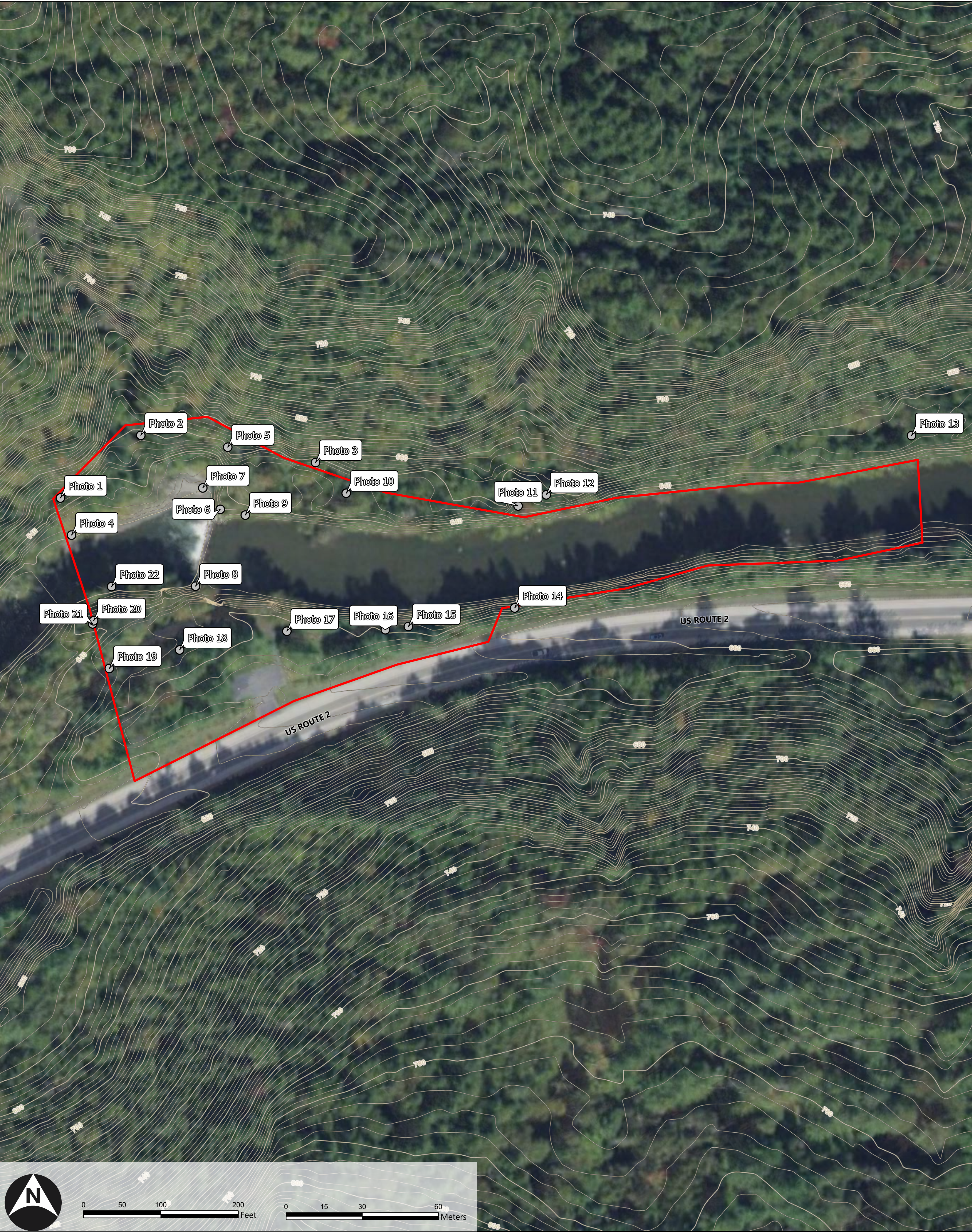
 Study Area

Sanborn Fire Insurance Maps from Montpelier, Washington County, Vermont.

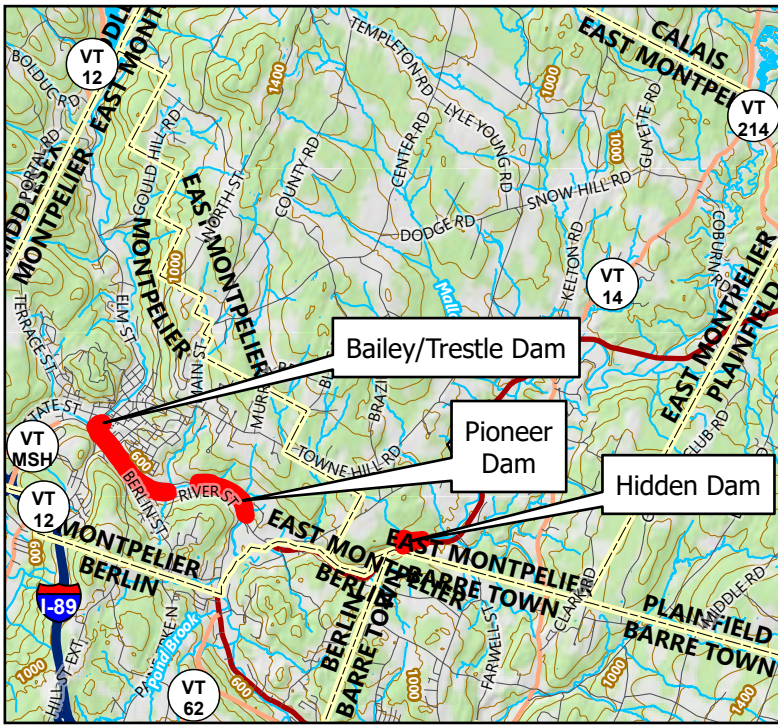


**Figure 6. Photo Locations at the Hidden Dam (E. Montpelier No.5 Dam)**

VRC Winooski River Four Dams ARA |  
 Town of Montpelier and East Montpelier, Washington County, VT



- Study Area
- Railroad (VTrans)
- Photos



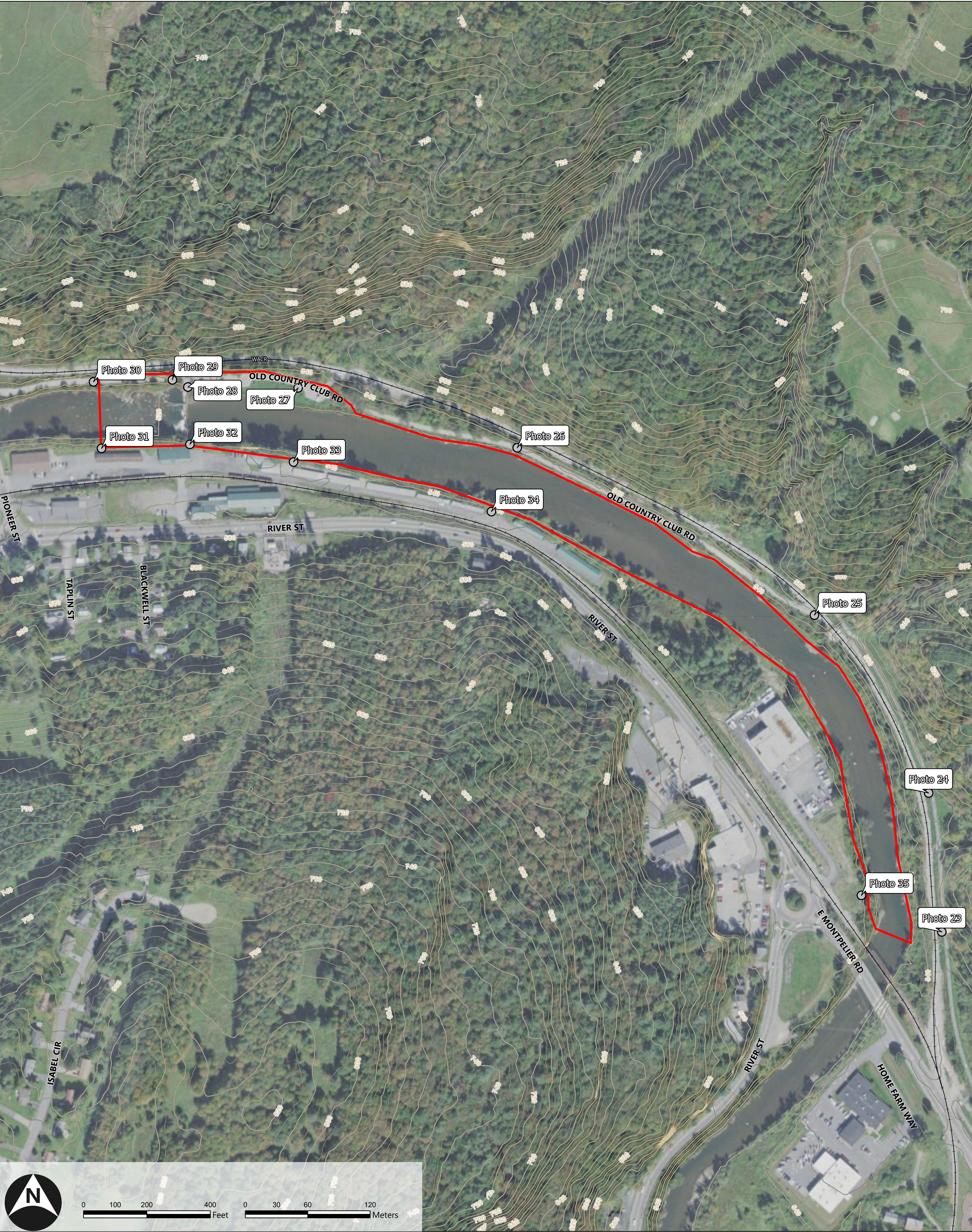
Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)

Path: \\vhb\gis\proj\SBurlington\59218.00 VRC Four Winooski River\Project\Archaeology\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 4/20/2026)

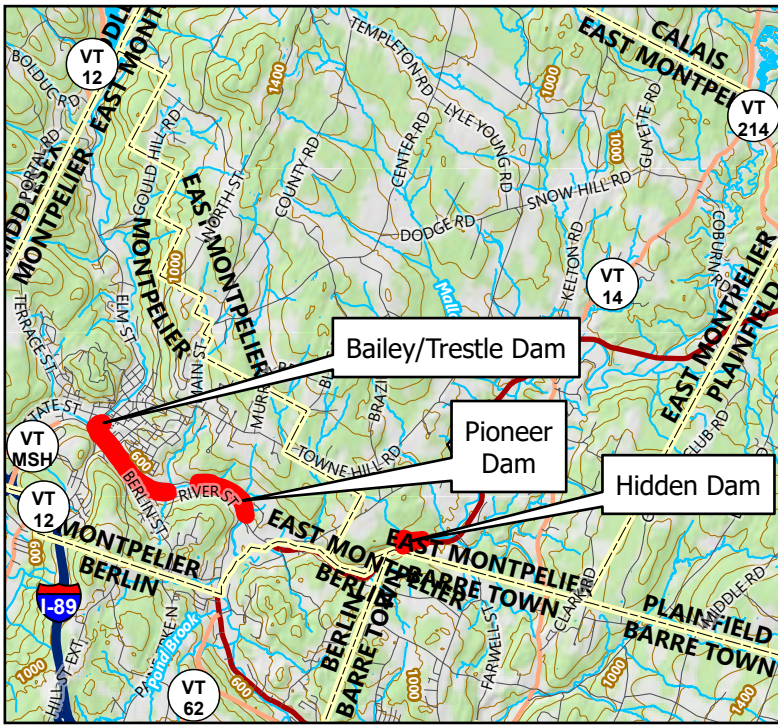


Figure 7. Photo Locations at the Montpelier No. 3 Dam (Pioneer Street Dam)

VRC Winooski River Four Dams ARA |  
 Town of Montpelier and East Montpelier, Washington County, VT



- ▭ Study Area
- Railroad (VTrans)
- Photos



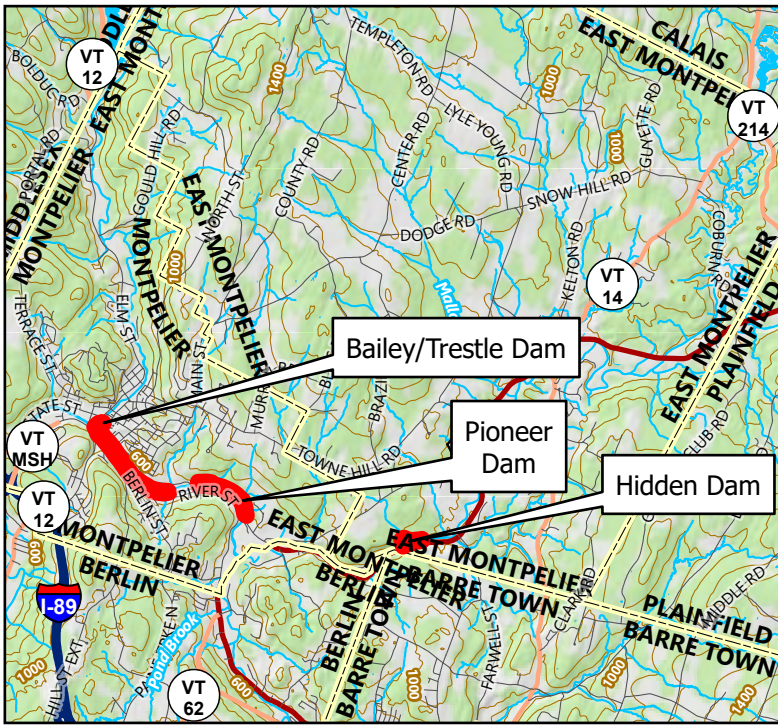
Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)



**Figure 8. Photo Locations at the Bailey and Trestle Dam**  
 VRC Winooski River Four Dams ARA |  
 Town of Montpelier and East Montpelier, Washington County, VT



- ▭ Study Area
- Photos
- Railroad (VTrans)

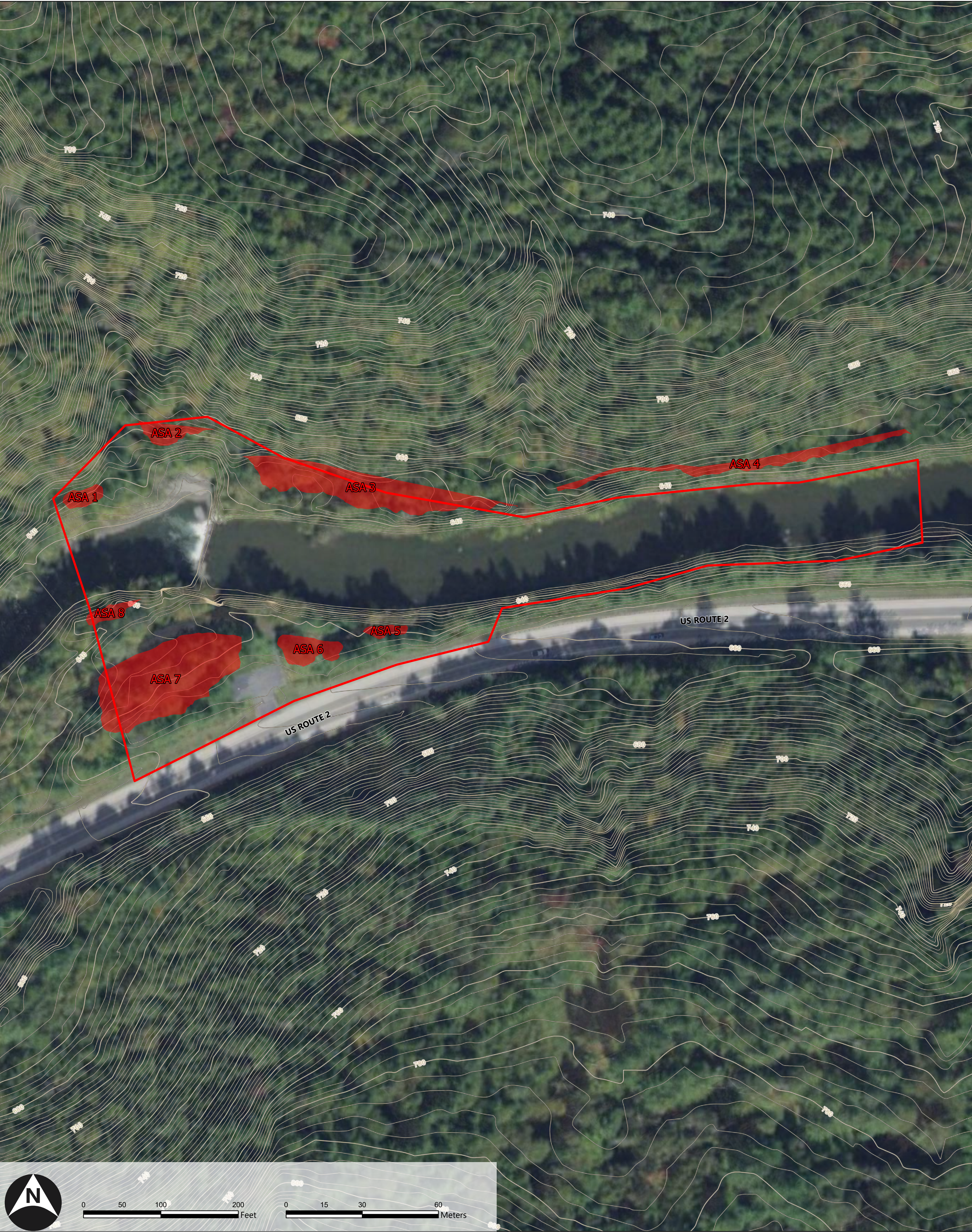


Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)

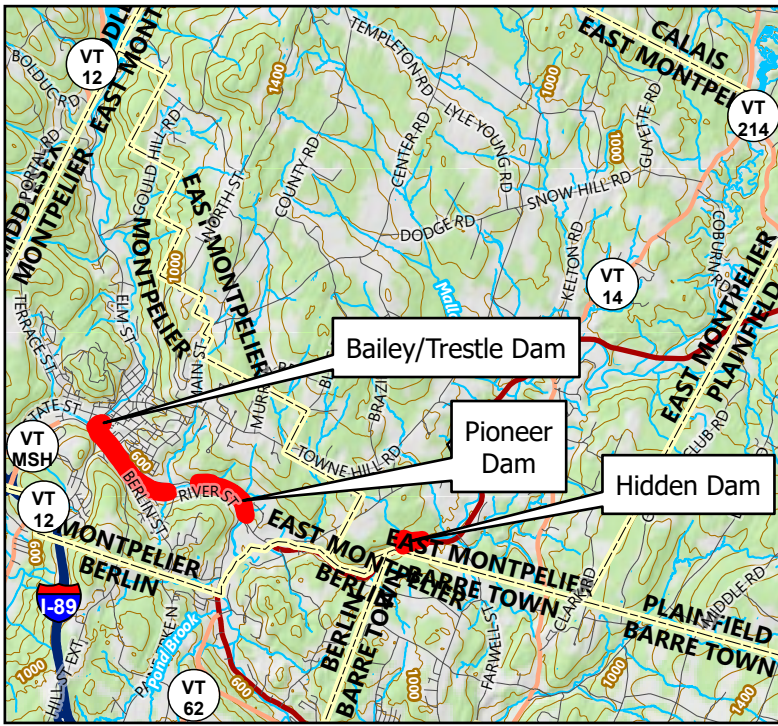
Path: \\vhb\gis\proj\SBurlington\59218.00 VRC Four Winooski River\Project\Archaeology\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 4/20/2026)



Figure 9. Archaeological Sensitivity at the Hidden Dam (E. Montpelier No.5 Dam) Location  
VRC Winooski River Four Dams ARA |  
Town of Montpelier and East Montpelier, Washington County, VT



- Study Area
- Archaeological Sensitivity



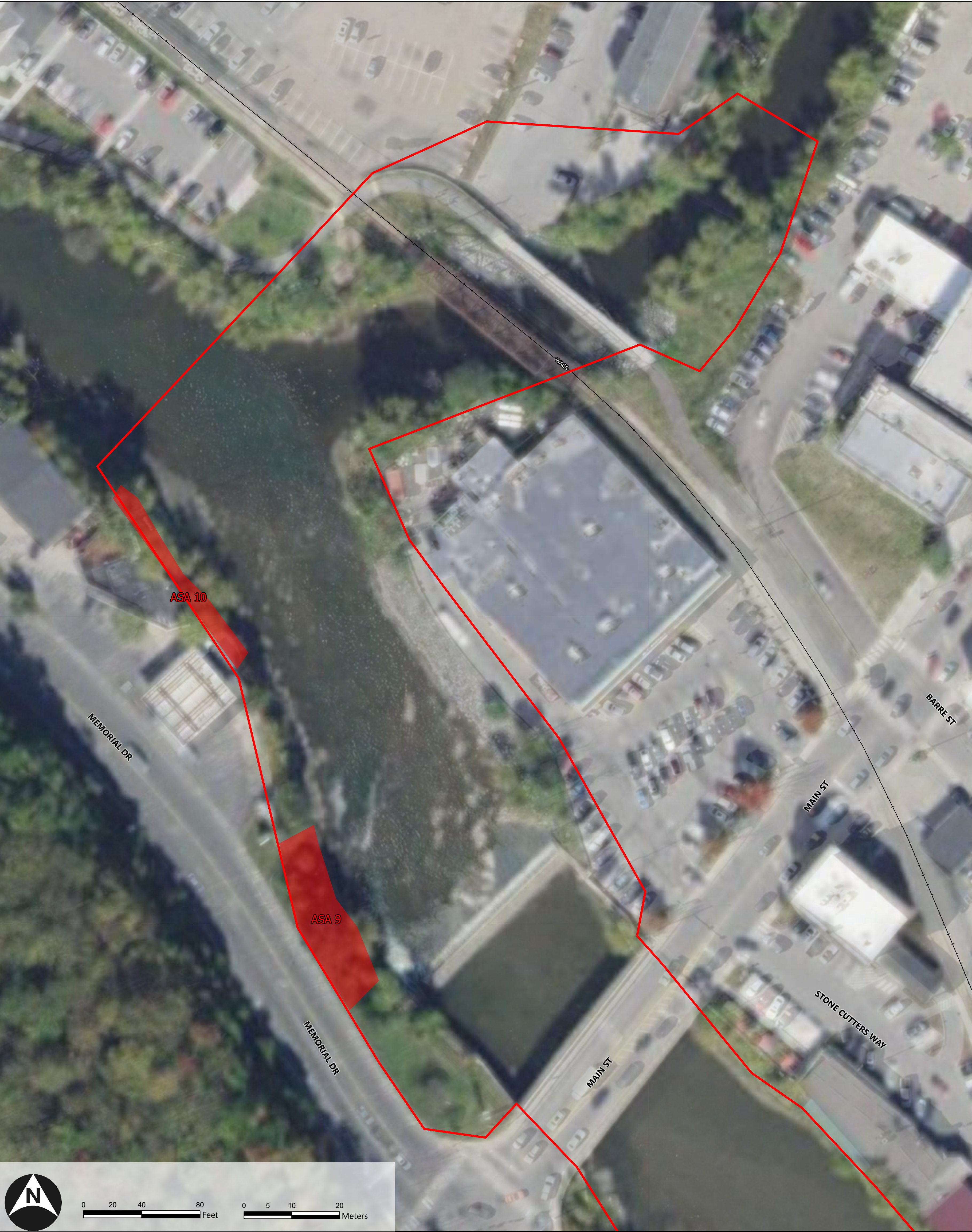
Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)

Path: \\vhb\gis\proj\SBurlington\59218.00 VRC Four Winooski River\Project\Archaeology\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 4/20/2026)

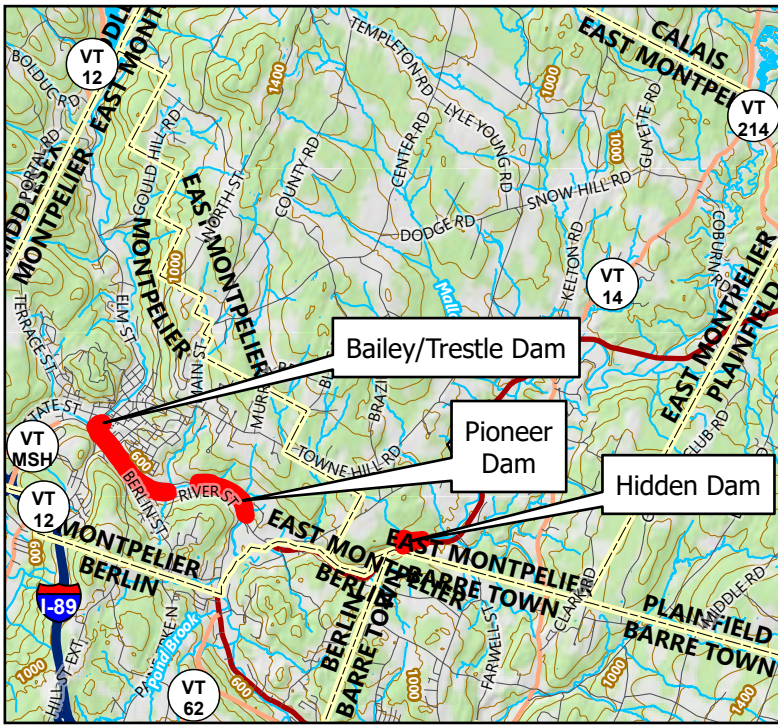


Figure 10. Archaeological Sensitivity at the Bailey and Trestle Dam

VRC Winooski River Four Dams ARA |  
 Town of Montpelier and East Montpelier, Washington County, VT



- Study Area
- Archaeological Sensitivity
- Railroad (VTrans)



Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)

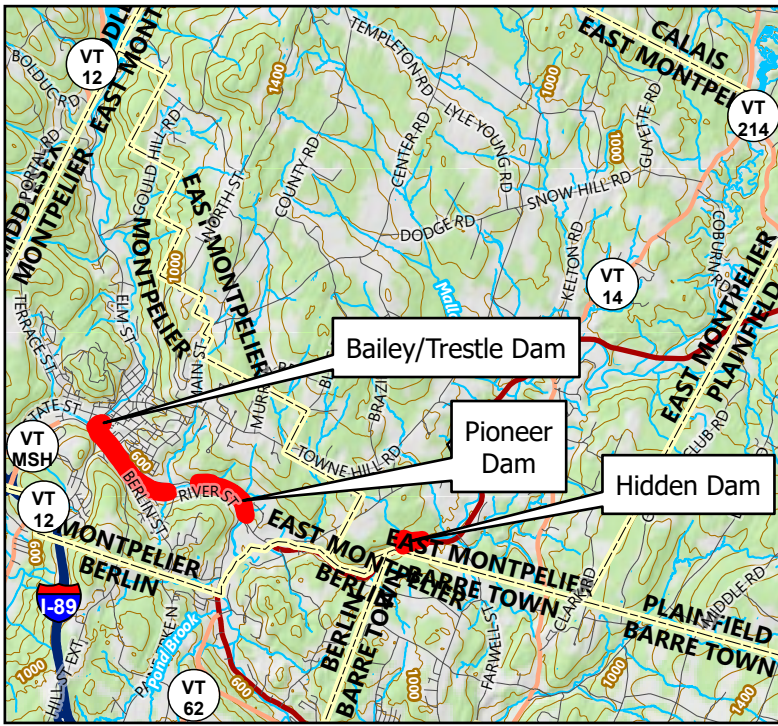
Path: \\vhb\gis\proj\SBurlington\59218.00 VRC Four Winooski River\Project\Archaeology\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 4/20/2026)



**Figure 11. Archaeological Sensitivity at the Pioneer Dam**  
VRC Winooski River Four Dams ARA |  
Town of Montpelier and East Montpelier, Washington County, VT



- Study Area
- Archaeological Sensitivity
- Railroad (VTrans)



Sources: Background Imagery by VCGI (Collected in 2022); ANR(Vermont Agency of Natural Resources - Hosted Feature Services); VCGI Vermont Center for Geographic Information - Hosted Feature Services); VTrans (Vermont Agency of Transportation - Hosted Feature Services)

Path: \\vhb\gis\proj\SBurlington\59218.00 VRC Four Winooski River\Project\Archaeology\59218.00 VRC Four Winooski River Dams ARA.aprx (ahonsinger, 4/20/2026)



## Appendix II

# Photographs from Field Investigations

### Hidden Dam (E. Montpelier Dam No. 5)



Photo 1. View of ASA 1, facing east.





Photo 2. View of ASA 2, facing east.



Photo 3. View of ASA 3, facing east.





Photo 4. View of Hidden Dam, facing northeast.



Photo 5. View of Hidden Dam retaining wall, facing south.





Photo 6. View of fragmentary timber dam elements at the Hidden Dam along the north bank of the Winooski River.



Photo 7. View of structural Hidden Dam elements from the north bank of the Winooski, facing north.





Photo 8. View of Hidden Dam from south bank of the Winooski, facing north.



Photo 9. View of Hidden Dam from upstream, facing west.





Photo 10. View of soil core sample depicting alluvial deposits.



Photo 11. View of ASA 4, facing west.





Photo 12. View of ASA 4, facing east.



Photo 13. View of ASA 4, facing west.





Photo 14. View of excessively steep slopes, facing west.

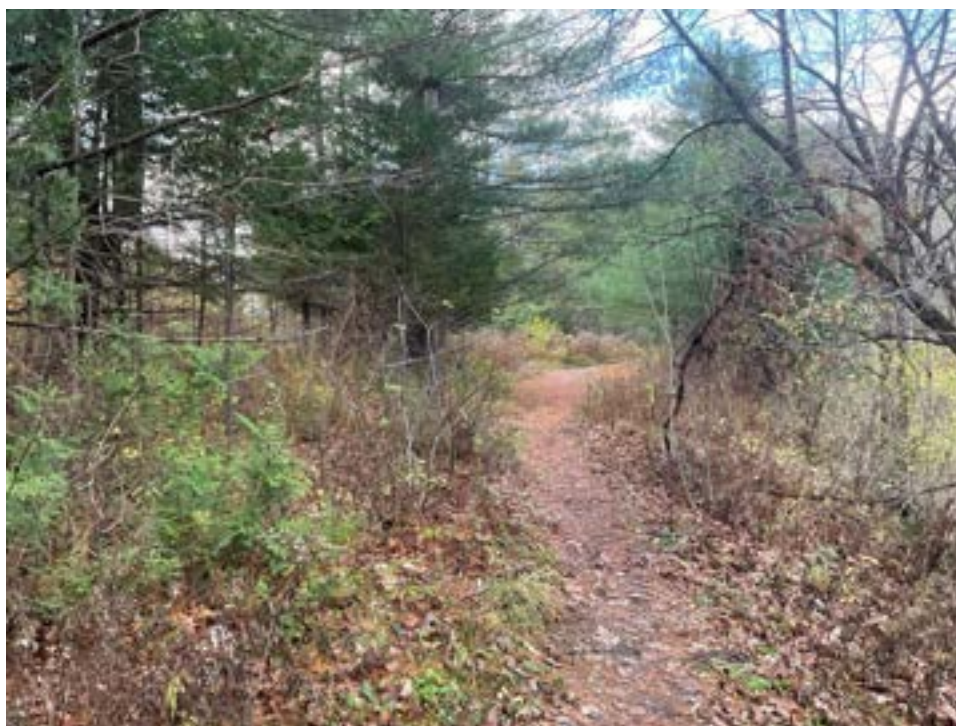


Photo 15. View of ASA 5, facing west.





Photo 16. View of soil core sample depicting alluvial deposit.



Photo 17. View of ASA 6, facing northeast.





Photo 18. View of soil core sample depicting topsoil and developing B horizon.



Photo 19. View of ASA 7, facing northeast.





Photo 20. View of ASA 8, facing east.



Photo 21. View of soil core sample depicting topsoil and developing B horizon.





Photo 22. View of Hidden Dam downstream from the south banks of the Winooski River, facing east.

## Montpelier No. 3 Dam (Pioneer Street Dam)



Photo 23. View of railway and Winooski Riverbank, facing northwest.





Photo 24. View of railway and Winooski Riverbank, facing northwest.



Photo 25. View of Old Country Club Road and the Winooski Riverbank, facing northwest.





Photo 26. View of Old Country Club Road and the Winooski Riverbank, facing southeast.



Photo 27. View of recent flood deposits along low gradient section of the Winooski River, facing west.





Photo 28. View of Pioneer Dam timber crib and concrete dam elements from north bank of the Winooski



Photo 29. View of Pioneer Dam concrete dam elements from north bank of the Winooski River, facing southwest. ASA 11 where monitoring has been proposed is demarcated in red.





Photo 30. View of Old Country Club Road and the Winooski Riverbank, facing east.



Photo 31. View of southern terrace and Winooski Riverbank, facing east.





Photo 32. View of Pioneer Dam from the south bank of the Winooski River, facing north.



Photo 33. View of southern terrace and Winooski Riverbank, facing east.





Photo 34. View of southern terrace and Winooski Riverbank, facing east.



Photo 35. View of southern terrace and Winooski Riverbank, facing east.



## Trestle Dam



Photo 36. View of the confluence of the North Branch and the Winooski River, facing southeast.



Photo 37. View of the Trestle Dam, facing northwest.



## Bailey Dam



Photo 38. View of the Bailey Dam, facing southwest.



Photo 39. View of the Bailey Dam, facing southwest.





Photo 40. View of the Bailey Dam and stone embankment walls from the former Pioneer Mills, facing southwest.



Photo 41. View of the Bailey Dam and stone embankment walls from the former Pioneer Mills, facing northwest.





Photo 42. View of eastern terrace and Winooski Riverbank, facing northwest.



Photo 43. View of eastern terrace and Winooski Riverbank, facing northwest.





Photo 44. View of eastern terrace and Winooski Riverbank, facing northwest.

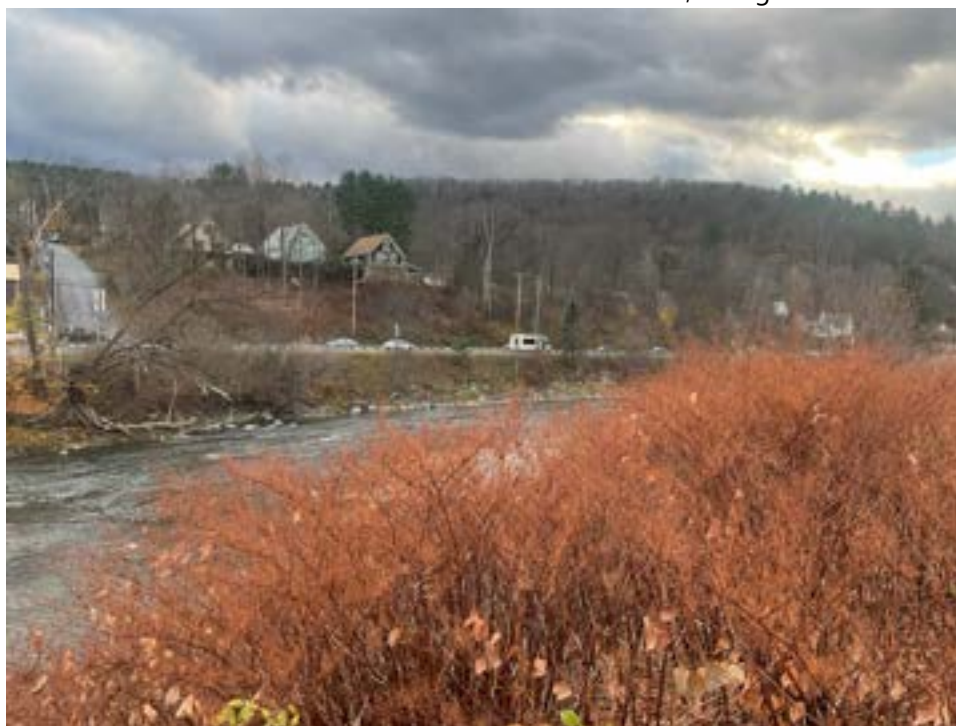


Photo 45. View of northern terrace and Winooski Riverbank, facing northwest.



## Appendix III

### Vermont Division for Historic Preservation Environmental Predictive Model for Locating Pre-contact Archaeological Sites



**VERMONT DIVISION FOR HISTORIC PRESERVATION**

**Environmental Predictive Model for Locating Pre-contact Archaeological Sites**

**Project Name** Winooski Four Dams ARA  
**DHP No.** **Map No.**

**County** Washington  
**Staff Init.**

**Town** Montpelier/E.Mont  
**Date** 2/26/2025

**Additional Information**

| <b>Environmental Variable</b>                                        | <b>Proximity</b>       | <b>Value</b> | <b>Assigned Score</b> |
|----------------------------------------------------------------------|------------------------|--------------|-----------------------|
| <b>A. RIVERS and STREAMS (EXISTING or RELICT):</b>                   |                        |              |                       |
| 1) Distance to River or Permanent Stream (measured from top of bank) | 0- 90 m<br>90- 180 m   | 12<br>6      | 12                    |
| 2) Distance to Intermittent Stream                                   | 0- 90 m<br>90-180 m    | 8<br>4       |                       |
| 3) Confluence of River/River or River/Stream                         | 0-90 m<br>90 –180 m    | 12<br>6      |                       |
| 4) Confluence of Intermittent Streams                                | 0 – 90 m<br>90 – 180 m | 8<br>4       |                       |
| 5) Falls or Rapids                                                   | 0 – 90 m<br>90 – 180 m | 8<br>4       |                       |
| 6) Head of Draw                                                      | 0 – 90 m<br>90 – 180 m | 8<br>4       |                       |
| 7) Major Floodplain/Alluvial Terrace                                 |                        | 32           | 32                    |
| 8) Knoll or swamp island                                             |                        | 32           |                       |
| 9) Stable Riverine Island                                            |                        | 32           |                       |
| <b>B. LAKES and PONDS (EXISTING or RELICT):</b>                      |                        |              |                       |
| 10) Distance to Pond or Lake                                         | 0- 90 m<br>90 -180 m   | 12<br>6      |                       |
| 11) Confluence of River or Stream                                    | 0-90 m<br>90 –180 m    | 12<br>6      |                       |
| 12) Lake Cove/Peninsula/Head of Bay                                  |                        | 12           |                       |
| <b>C. WETLANDS:</b>                                                  |                        |              |                       |
| 13) Distance to Wetland (wetland > one acre in size)                 | 0- 90 m<br>90 -180 m   | 12<br>6      |                       |
| 14) Knoll or swamp island                                            |                        | 32           |                       |
| <b>D. VALLEY EDGE and GLACIAL LAND FORMS:</b>                        |                        |              |                       |
| 15) High elevated landform such as Knoll Top/Ridge Crest/ Promontory |                        | 12           |                       |
| 16) Valley edge features such as Kame/Outwash Terrace**              |                        | 12           |                       |



|                                                                                                                                                                                                        |                        |        |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------|
| 17) Marine/Lake Delta Complex**                                                                                                                                                                        |                        | 12     |                        |
| 18) Champlain Sea or Glacial Lake Shore Line**                                                                                                                                                         |                        | 32     |                        |
| <b>E. OTHER ENVIRONMENTAL FACTORS:</b>                                                                                                                                                                 |                        |        |                        |
| 19) Caves /Rockshelters                                                                                                                                                                                |                        | 32     |                        |
| 20) <input type="checkbox"/> Natural Travel Corridor<br><input type="checkbox"/> Sole or important access to another drainage<br><input type="checkbox"/> Drainage divide                              |                        | 12     | 12                     |
| 21) Existing or Relict Spring                                                                                                                                                                          | 0 – 90 m<br>90 – 180 m | 8<br>4 |                        |
| 22) Potential or Apparent Prehistoric Quarry for stone procurement                                                                                                                                     | 0 – 180 m              | 32     |                        |
| 23) ) Special Environmental or Natural Area, such as Milton aquifer, mountain top, etc. (these may be historic or prehistoric sacred or traditional site locations and prehistoric site types as well) |                        | 32     |                        |
| <b>F. OTHER HIGH SENSITIVITY FACTORS:</b>                                                                                                                                                              |                        |        |                        |
| 24) High Likelihood of Burials                                                                                                                                                                         |                        | 32     |                        |
| 25) High Recorded Site Density                                                                                                                                                                         |                        | 32     |                        |
| 26) High likelihood of containing significant site based on recorded or archival data or oral tradition                                                                                                |                        | 32     |                        |
| <b>G. NEGATIVE FACTORS:</b>                                                                                                                                                                            |                        |        |                        |
| 27) Excessive Slope (>15%) or Steep Erosional Slope (>20)                                                                                                                                              |                        | - 32   |                        |
| 28) Previously disturbed land as evaluated by a qualified archeological professional or engineer based on coring, earlier as-built plans, or obvious surface evidence (such as a gravel pit)           |                        | - 32   |                        |
| <b>** refer to 1970 Surficial Geological Map of Vermont</b>                                                                                                                                            |                        |        |                        |
|                                                                                                                                                                                                        |                        |        | <b>Total Score: 56</b> |
| <b>Other Comments :</b>                                                                                                                                                                                |                        |        |                        |
| <b>0- 31 = Archeologically Non- Sensitive</b><br><b>32+ = Archeologically Sensitive</b>                                                                                                                |                        |        |                        |



## Appendix IV

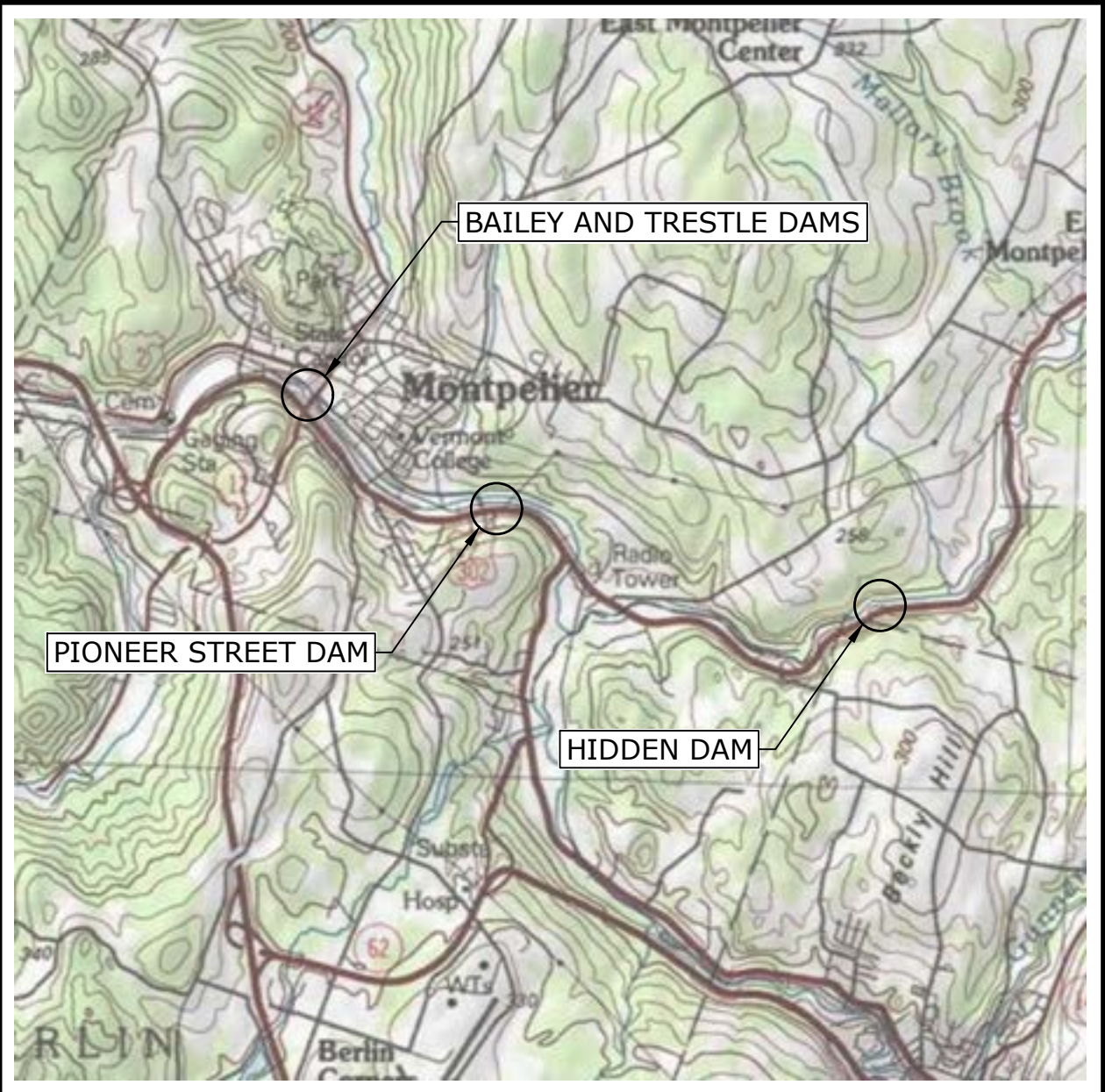
### Removal of Four Dams Along the Winooski River Plans Dated September 4, 2025.



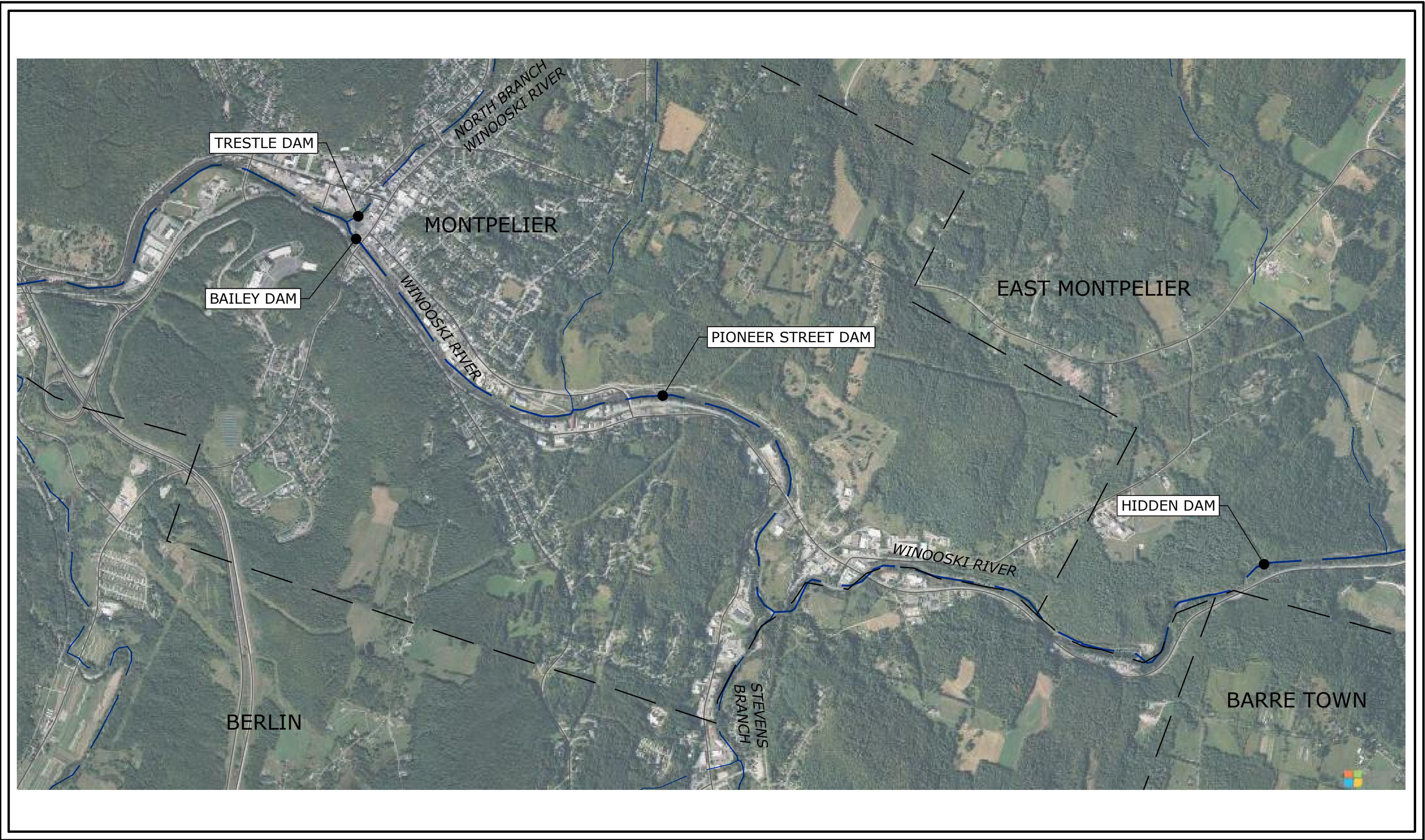
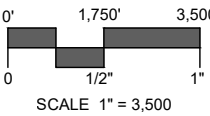
# REMOVAL OF FOUR DAMS ALONG THE WINOOSKI RIVER

MONTPELIER AND EAST MONTPELIER,  
VERMONT

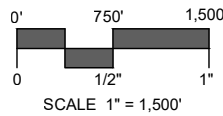
CONCEPT (30%) DESIGN  
SEPTEMBER 4, 2025



LOCATION MAP:



AERIAL PROJECT MAP:



**PREPARED FOR:**  
VERMONT RIVER CONSERVANCY  
29 MAIN STREET  
MONTPELIER, VT 05602

**PREPARED BY:**



1 SOUTH MAIN STREET  
WATERBURY, VT 05676  
802.882.8335  
SLRCONSULTING.COM

## LIST OF DRAWINGS

| NO.                        | NAME        | TITLE                                             |
|----------------------------|-------------|---------------------------------------------------|
| 01                         | --          | TITLE SHEET                                       |
| 02                         | IN-1        | INDEX PLAN                                        |
| 03                         | IN-2        | INDEX PROFILE                                     |
| BAILEY DAM REMOVAL         |             |                                                   |
| 04                         | EX-1        | EXISTING CONDITIONS - BAILEY DAM                  |
| 05                         | SP-1        | SITE PLAN - PROPOSED LAYOUT - BAILEY DAM          |
| 06                         | PR-1        | WINOOSKI RIVER PROFILE - BAILEY DAM               |
| 07 - 08                    | CP-1 - CP-2 | CONSTRUCTION PLAN - BAILEY DAM (1-2)              |
| TRESTLE DAM REMOVAL        |             |                                                   |
| 09                         | EX-2        | EXISTING CONDITIONS - TRESTLE DAM                 |
| 10                         | SP-2        | SITE PLAN - PROPOSED LAYOUT - TRESTLE DAM         |
| 11                         | PR-2        | NORTH BRANCH WINOOSKI RIVER PROFILE - TRESTLE DAM |
| 12                         | CP-3        | CONSTRUCTION PLAN - TRESTLE DAM                   |
| PIONEER STREET DAM REMOVAL |             |                                                   |
| 13                         | EX-3        | EXISTING CONDITIONS - PIONEER STREET DAM          |
| 14                         | SP-3        | SITE PLAN - PROPOSED LAYOUT - PIONEER STREET DAM  |
| 15                         | PR-3        | WINOOSKI RIVER PROFILE - PIONEER STREET DAM       |
| 16 - 17                    | CP-4 - CP-5 | CONSTRUCTION PLAN - PIONEER STREET DAM (1-2)      |
| HIDDEN DAM REMOVAL         |             |                                                   |
| 18                         | EX-4        | EXISTING CONDITIONS - HIDDEN DAM                  |
| 19                         | SP-4        | SITE PLAN - PROPOSED LAYOUT - HIDDEN DAM          |
| 20                         | PR-4        | WINOOSKI RIVER PROFILE - HIDDEN DAM               |
| 21                         | CP-4        | CONSTRUCTION PLAN - HIDDEN DAM                    |

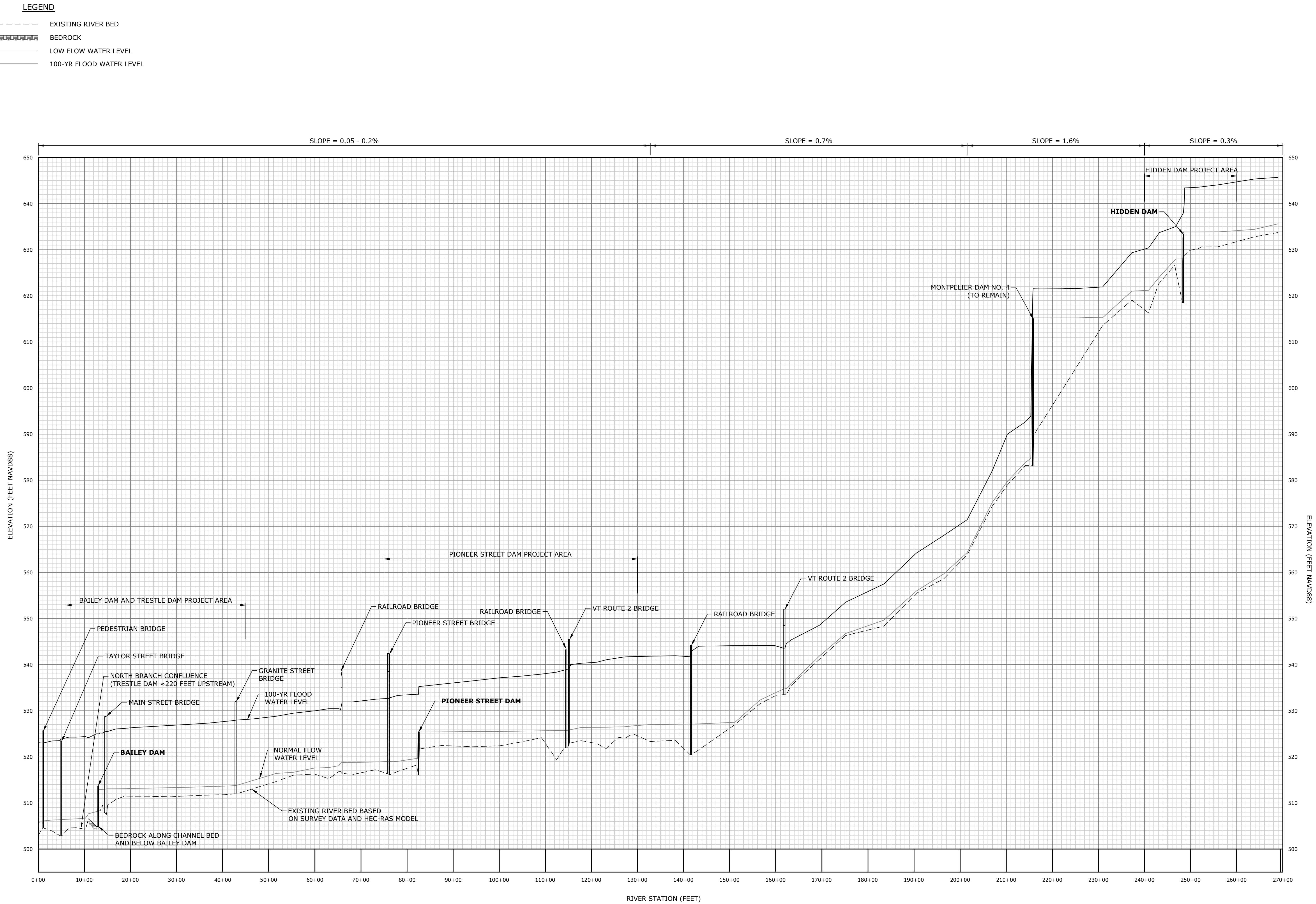


Know what's below.  
Call before you dig.  
www.cbyd.com









## WINOOSKI RIVER - PROFILE VIEW

[illegible]

INDEX - WINOOSKI RIVER LONG PROFILE

REMOVAL OF FOUR DAMS ALONG  
THE WINOOSKI RIVER

ADDRESS, STREET NAME  
MONTPELIER AND EAST MONTPELIER, VERMONT

|                          |           |           |
|--------------------------|-----------|-----------|
| <b>EE</b>                | <b>EE</b> | <b>RS</b> |
| DESIGNED                 | DRAWN     | CHECKED   |
| <b>AS SPECIFIED</b>      |           |           |
| SCALE                    |           |           |
| <b>SEPTEMBER 4, 2025</b> |           |           |
| DATE                     |           |           |
| <b>146.15919.00006</b>   |           |           |
| PROJECT NO.              |           |           |
| <b>3 OF 21</b>           |           |           |
| SHEET NO.                |           |           |
| <b>IN-2</b>              |           |           |
| SHEET NAME               |           |           |





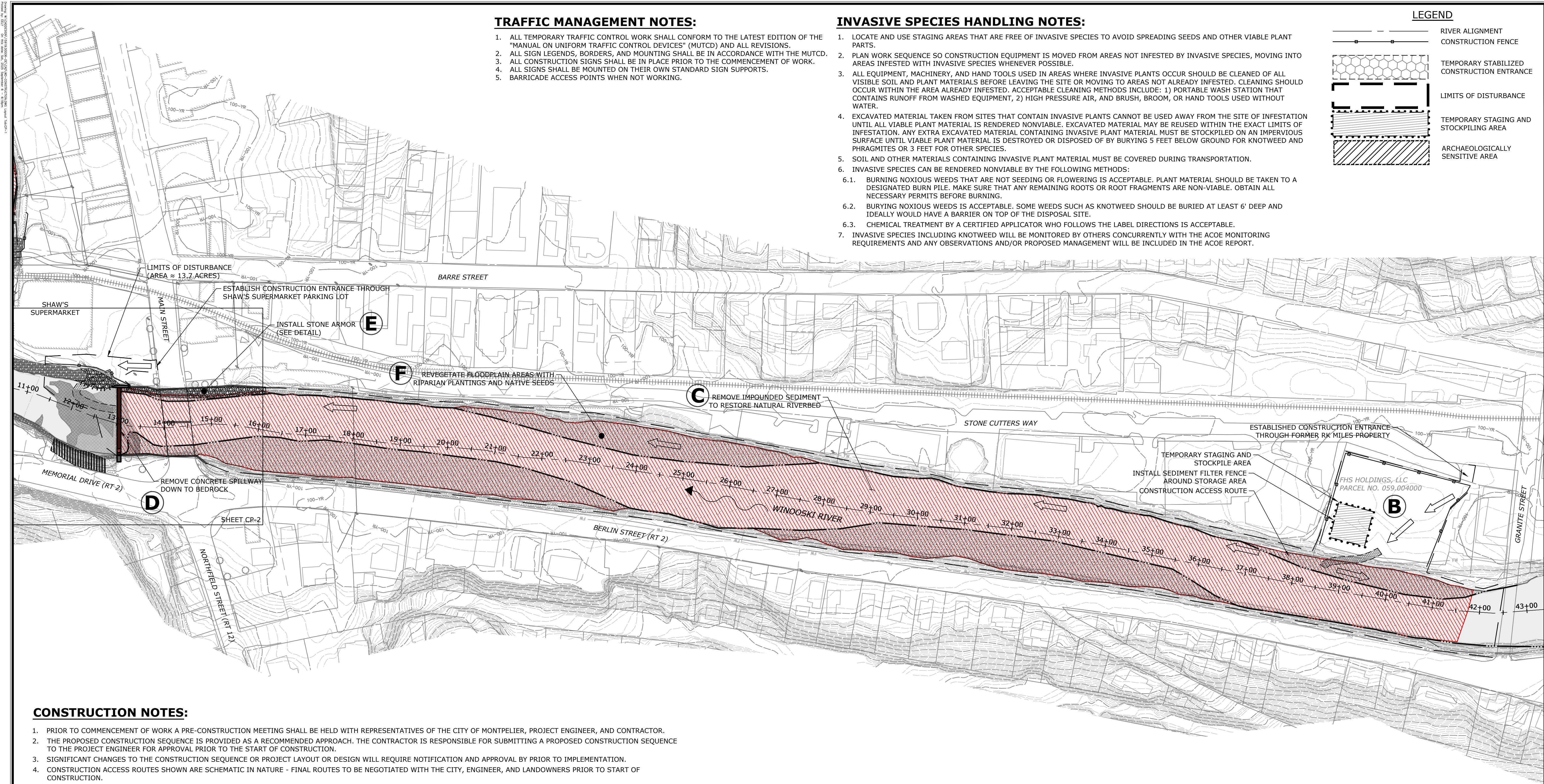












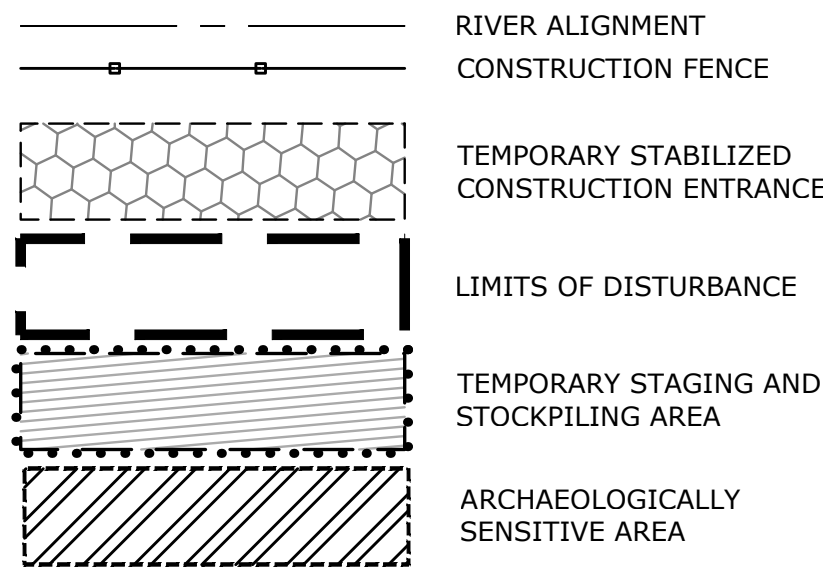
### TRAFFIC MANAGEMENT NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. ALL CONSTRUCTION SIGNS SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
5. BARRICADE ACCESS POINTS WHEN NOT WORKING.

### INVASIVE SPECIES HANDLING NOTES:

1. LOCATE AND USE STAGING AREAS THAT ARE FREE OF INVASIVE SPECIES TO AVOID SPREADING SEEDS AND OTHER VIABLE PLANT PARTS.
2. PLAN WORK SEQUENCE SO CONSTRUCTION EQUIPMENT IS MOVED FROM AREAS NOT INFESTED BY INVASIVE SPECIES, MOVING INTO AREAS INFESTED WITH INVASIVE SPECIES WHENEVER POSSIBLE.
3. ALL EQUIPMENT, MACHINERY, AND HAND TOOLS USED IN AREAS WHERE INVASIVE PLANTS OCCUR SHOULD BE CLEANED OF ALL VISIBLE SOIL AND PLANT MATERIALS BEFORE LEAVING THE SITE OR MOVING TO AREAS NOT ALREADY INFESTED. CLEANING SHOULD OCCUR WITHIN THE AREA ALREADY INFESTED. ACCEPTABLE CLEANING METHODS INCLUDE: 1) PORTABLE WASH STATION THAT CONTAINS RUNOFF FROM WASHED EQUIPMENT, 2) HIGH PRESSURE AIR, AND BRUSH, BROOM, OR HAND TOOLS USED WITHOUT WATER.
4. EXCAVATED MATERIAL TAKEN FROM SITES THAT CONTAIN INVASIVE PLANTS CANNOT BE USED AWAY FROM THE SITE OF INFESTATION UNTIL ALL VIABLE PLANT MATERIAL IS RENDERED NONVIALE. EXCAVATED MATERIAL MAY BE REUSED WITHIN THE EXACT LIMITS OF INFESTATION. ANY EXTRA EXCAVATED MATERIAL CONTAINING INVASIVE PLANT MATERIAL MUST BE STOCKPILED ON AN IMPERVIOUS SURFACE UNTIL VIABLE PLANT MATERIAL IS DESTROYED OR DISPOSED OF BY BURYING 5 FEET BELOW GROUND FOR KNOTWEED AND PHRAGMITES OR 3 FEET FOR OTHER SPECIES.
5. SOIL AND OTHER MATERIALS CONTAINING INVASIVE PLANT MATERIAL MUST BE COVERED DURING TRANSPORTATION.
6. INVASIVE SPECIES CAN BE RENDERED NONVIALE BY THE FOLLOWING METHODS:
  - 6.1. BURNING NOXIOUS WEEDS THAT ARE NOT SEEDING OR FLOWERING IS ACCEPTABLE. PLANT MATERIAL SHOULD BE TAKEN TO A DESIGNATED BURN PILE. MAKE SURE THAT ANY REMAINING ROOTS OR ROOT FRAGMENTS ARE NON-VIALE. OBTAIN ALL NECESSARY PERMITS BEFORE BURNING.
  - 6.2. BURYING NOXIOUS WEEDS IS ACCEPTABLE. SOME WEEDS SUCH AS KNOTWEED SHOULD BE BURIED AT LEAST 6' DEEP AND IDEALLY WOULD HAVE A BARRIER ON TOP OF THE DISPOSAL SITE.
  - 6.3. CHEMICAL TREATMENT BY A CERTIFIED APPLICATOR WHO FOLLOWS THE LABEL DIRECTIONS IS ACCEPTABLE.
7. INVASIVE SPECIES INCLUDING KNOTWEED WILL BE MONITORED BY OTHERS CONCURRENTLY WITH THE ACOE MONITORING REQUIREMENTS AND ANY OBSERVATIONS AND/OR PROPOSED MANAGEMENT WILL BE INCLUDED IN THE ACOE REPORT.

### LEGEND



### CONSTRUCTION NOTES:

1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE CITY OF MONTPELIER, PROJECT ENGINEER, AND CONTRACTOR.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY PRIOR TO IMPLEMENTATION.
4. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH THE CITY, ENGINEER, AND LANDOWNERS PRIOR TO START OF CONSTRUCTION.
5. ESTABLISH TEMPORARY STABILIZED CONSTRUCTION ENTRANCE (SEE DETAILS) PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. TEMPORARY CONSTRUCTION ACCESS ROADS TO BE RESTORED UPON PROJECT COMPLETION.
7. STOCKPILE AREA TO BE FLAGGED PRIOR TO CONSTRUCTION AND APPROVED BY ENGINEER. ALL STORAGE AND ACCESS ROUTES, PEDESTRIAN FENCES/BARRIERS, WORKING HOURS, AND LIMITS OF CLEARING SHALL BE APPROVED BY CITY OF MONTPELIER, LANDOWNERS, AND THE PROJECT ENGINEER.
8. STOCKPILE AREAS TO BE ENCLOSED BY SILT FENCE AND/OR STRAW BALES. SEE DETAILS.
9. PROTECT PAVEMENT ALONG ACCESS ROUTE. ANY PAVEMENT DAMAGE SHALL BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES.
10. INSTALL CONSTRUCTION FENCE AROUND CONSTRUCTION ENTRANCE.
11. ALL FEATURES, SUCH AS PAVEMENT, SIGNAGE, WALKWAYS, PRIVATELY OWNED LAWNS, GARDENS, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES, SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE DIRECTION OF THE OWNER/ENGINEER.
12. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

### SOIL EROSION & SEDIMENT CONTROL NOTES:

1. THE SEDIMENT AND EROSION CONTROL PRACTICES IMPLEMENTED AS PART OF THE PROJECT SHALL BE IMPLEMENTED AND MAINTAINED AS A MODERATE RISK CONSTRUCTION ACTIVITY ACCORDING TO THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PROTECTION AND SEDIMENT CONTROL GUIDANCE DOCUMENT FROM THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHERE APPLICABLE IN CONSULTATION WITH PROJECT ENGINEER.
2. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
3. CLEARING OF VEGETATION FOR CONSTRUCTION ACCESS SHOULD BE MINIMIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR WILL VERIFY THE MAINTENANCE WEEKLY AND AFTER RAIN EVENTS AND REPORT TO THE PROJECT ENGINEER.
5. THE PROJECT ENGINEER IS TO BE NOTIFIED IMMEDIATELY IF EXCESSIVE SEDIMENT EROSION TAKES PLACE, IF SIGNIFICANT FINE GRAIN SEDIMENT IS ENCOUNTERED OR IF POTENTIALLY CONTAMINATED SEDIMENTS ARE ENCOUNTERED (OILY, DARK COLOR, CHEMICAL ODOR).
6. WORK SHALL PROGRESS IN STAGES TO MINIMIZE EXPOSED AREAS AND DISTURBED EARTH. NO MORE THAN TWO (2) ACRES OF DISTURBED EARTH WILL BE ALLOWED AT ANY ONE TIME.
7. NO DISTURBED EARTH SHALL REMAIN EXPOSED FOR MORE THAN SEVEN (7) CONSECUTIVE DAYS WITHOUT APPLYING TEMPORARY OR PERMANENT STABILIZATION MEASURES.
8. EXPOSED AREAS SHALL BE SEEDED AND MULCHED OR PROTECTED WITH EROSION CONTROL MATTING WITHIN 48 HOURS OF ACHIEVING FINAL GRADE.
9. STOCKPILE AREAS TO BE ENCLOSED BY SILT FENCING.
10. THE SITE SHOULD BE KEPT CLEAN OF LOOSE DEBRIS, LITTER, AND OTHER MATERIAL SUCH THAT NONE OF THESE MATERIAL ENTER WATERS OR WETLANDS.
11. PUMPING IS NOT EXPECTED TO BE NECESSARY FOR THIS PROJECT. SHOULD THE CONTRACTOR FEEL PUMPING IS BENEFICIAL, PRIOR APPROVAL WILL BE REQUIRED, AND PUMPING WILL BE PERFORMED AT THE CONTRACTORS EXPENSE. DIRTY WATER SHOULD BE DISCHARGED TO A DEWATERING DISCHARGE BASIN OR OTHER APPROVED DEVICE APPROVED BY THE PROJECT ENGINEER.

### CONSTRUCTION SEQUENCE NOTES:

THIS CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

**A**

#### STEP A - PRE-CONSTRUCTION ACTIVITIES:

1. SUBMIT A SEDIMENT AND EROSION CONTROL PLAN, CONSTRUCTION SEQUENCE, AND WATER CONTROL PLAN TO THE PROJECT ENGINEER FOR REVIEW NO LESS THAN SEVEN (7) DAYS BEFORE START OF CONSTRUCTION.
2. OBTAIN ANY NECESSARY WORK PERMITS AND SUBMIT SCHEDULES, PLANS, AND PRODUCT INFORMATION, INCLUDING THE EMERGENCY OPERATION PLAN TO THE PROJECT ENGINEER FOR REVIEW NO LESS THAN SEVEN (7) DAYS BEFORE START OF CONSTRUCTION.
3. CONTRACTOR SHALL PARTICIPATE IN A PRE-CONSTRUCTION SITE WALK WITH THE PROJECT ENGINEER AND OTHERS TO REVIEW ENVIRONMENTAL PERMIT REQUIREMENTS, CONTRACT PROVISIONS, PROJECT LIMITS, AND CONSTRUCTION DETAILS.

**B**

#### STEP B - CONSTRUCTION SETUP ACTIVITIES:

1. INSTALL CONSTRUCTION WARNING SIGNS AND SAFETY FENCING. INITIATE TRAFFIC CONTROL, AS NEEDED.
2. INSTALL TRAFFIC BARRIERS AND TEMPORARY CONSTRUCTION FENCE AS NEEDED TO LIMIT UNAUTHORIZED ENTRY TO THE SITE.
3. STAKE OUT LIMITS OF WORK AND INSTALL SEDIMENT AND EROSION CONTROLS, TEMPORARY CONSTRUCTION ACCESS, STAGING AND STOCKPILE AREAS, ALL TO BE REVIEWED BY PROJECT ENGINEER.
4. WAIT FOR LOW FLOW TO BEGIN IN-CHANNEL WORK.

**C**

#### STEP C - SEDIMENT REMOVAL:

1. INCREMENTALLY NOTCH DAM SPILLWAY TO LOWER UPSTREAM WATER LEVEL.
2. ALLOW SEDIMENT TO DEWATER PRIOR TO REMOVAL.
3. REMOVE SEDIMENT FROM IMPOUNDMENT. SEE PROFILE AND RIVER CROSS SECTION SHEETS FOR EXTENT OF SEDIMENT REMOVAL.
4. STOCKPILE BOULDERS EQUAL TO OR LARGER THAN 12-INCHES IN DIAMETER FOR REUSE IN RESTORED CHANNEL.

**D**

#### STEP D - DAM REMOVAL:

1. INCREMENTALLY LOWER DAM ALTERNATING BETWEEN UPSTREAM SEDIMENT REMOVAL/CHANNEL RESTORATION.
2. REMOVE CONCRETE SPILLWAY DOWN TO BEDROCK. RETAIN CONCRETE ABUTMENTS AND TRAINING WALLS AT EACH END OF SPILLWAY. SAW CUT CONCRETE SPILLWAY AT ABUTMENTS.

**E**

#### STEP E - INSTALLATION OF STONE ARMOR:

1. INSTALL STONE ARMOR ALONG NORTHERN RIVERBANK AS SHOWN IN PROPOSED LAYOUT AND RIVER CROSS SECTIONS.
2. TEMPORARILY DIVERT FLOWS AS NEEDED TO INSTALL STONE.
3. REUSE SAND AND GRAVEL STREAMBED/BANK MATERIAL TO FILL VOIDS BETWEEN STONES AND COVER ARMOR WITH 6-INCH LAYER OF MATERIAL.
4. INSTALL LIVE STAKE JOINT PLANTINGS ALONG BASE OF STONE ARMOR.

**F**

#### STEP F - SITE RESTORATION:

1. RESTORE RECLAIMED FLOODPLAIN AREAS WITH RIPARIAN PLANTINGS AND NATIVE SEEDS.
2. SEED AND MULCH ALL DISTURBED SOILS.

**G**

#### STEP G - POST-CONSTRUCTION ACTIVITIES:

1. PERFORM SITE RECOVERY. REMOVE ALL ACCESS ROADS AND CONSTRUCTION ENTRANCES, AND STABILIZE AND RESTORE ALL DISTURBED AREAS INCLUDING TEMPORARY CONSTRUCTION ACCESS, STOCKPILE AREA, STAGING AREAS, AND ANY ADDITIONAL AREAS DISTURBED DURING CONSTRUCTION. COMPLETE SITE RESTORATION. RESTORE TO ORIGINAL CONDITION, OR AS INDICATED ON THE PLANS.
2. COMPLETE POST-CONSTRUCTION SITE WALK WITH PROJECT ENGINEER.

SOUTH MAIN STREET  
VERMONT 05607  
802.882.8335  
SLRCONSULTING.COM

| DESCRIPTION | DATE | BY |
|-------------|------|----|
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |

CONSTRUCTION PLAN - BAILEY DAM (1)

REMOVAL OF FOUR DAMS ALONG THE WINOOSKI RIVER

MONTPELIER AND EAST MONTPELIER, VERMONT

| EE       | EE    | RS      |
|----------|-------|---------|
| DESIGNED | DRAWN | CHECKED |
|          |       |         |

SCALE

1"=100'

SEPTEMBER 4, 2025

DATE

146.15919.00006

PROJECT NO.

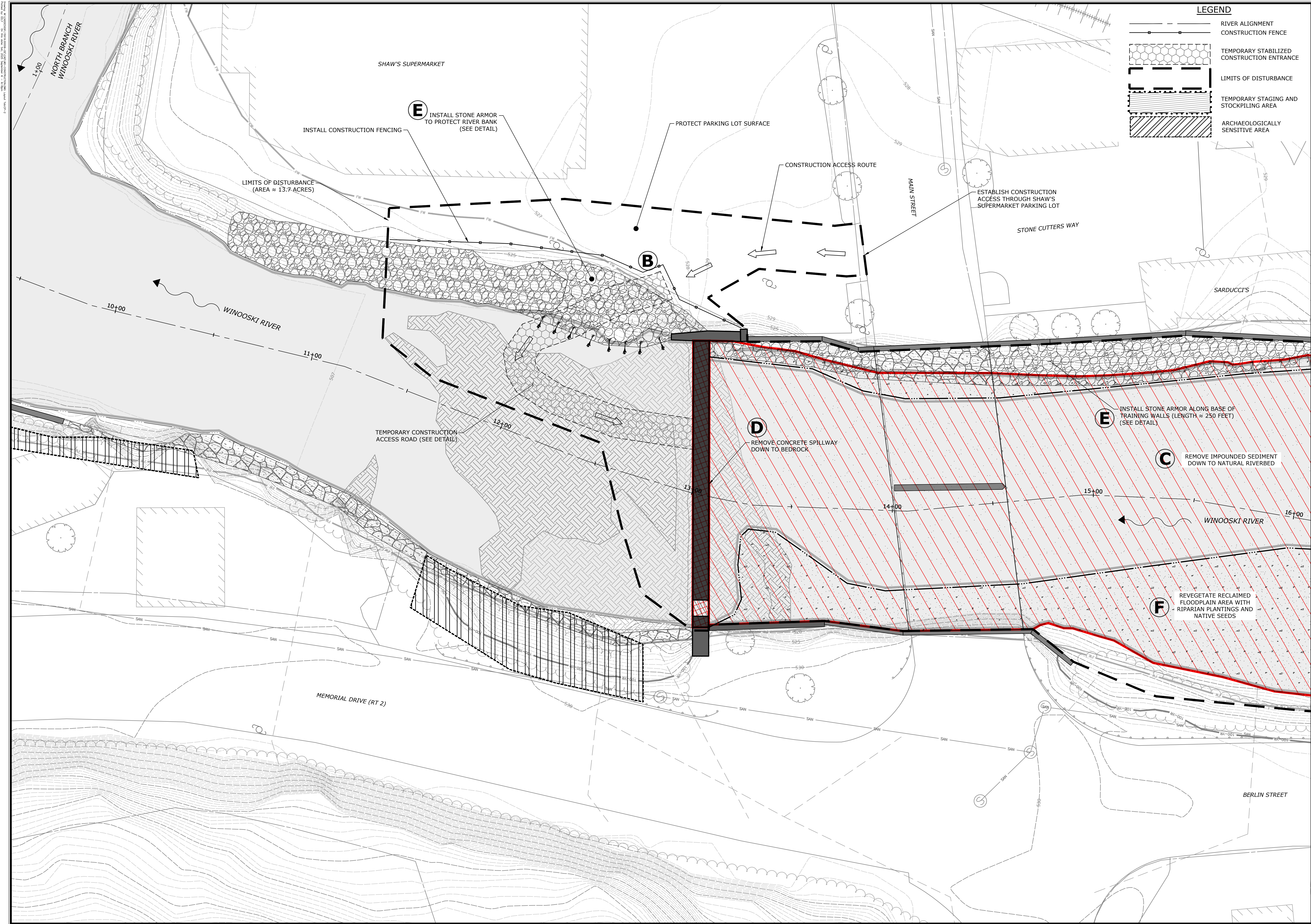
7 OF 21

SHEET NO.

CP-1

SHEET NAME

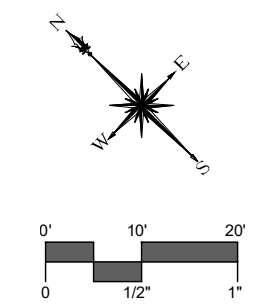




146.15919.00006 CP-2  
SOUTH MAIN STREET  
VERMONT 05601  
802.882.8335  
SLRCONSULTING.COM

LEGEND

- RIVER ALIGNMENT
- CONSTRUCTION FENCE
- TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
- LIMITS OF DISTURBANCE
- TEMPORARY STAGING AND STOCKPILING AREA
- ARCHAEOLOGICALLY SENSITIVE AREA



SOUTH MAIN STREET  
VERMONT 05601  
802.882.8335  
SLRCONSULTING.COM

| DESCRIPTION | DATE | BY |
|-------------|------|----|
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |

CONSTRUCTION PLAN - BAILEY DAM (2)

REMOVAL OF FOUR DAMS ALONG THE WINOOSKI RIVER

MONTPELIER AND EAST MONTPELIER, VERMONT

CONCEPT (30%) DESIGN

|                   |       |         |
|-------------------|-------|---------|
| EE                | EE    | RS      |
| DESIGNED          | DRAWN | CHECKED |
| 1"=20'            |       |         |
| SEPTEMBER 4, 2025 |       |         |
| DATE              |       |         |
| 146.15919.00006   |       |         |
| PROJECT NO.       |       |         |
| 8 OF 21           |       |         |
| SHEET NO.         |       |         |
| CP-2              |       |         |
| SHEET NAME        |       |         |









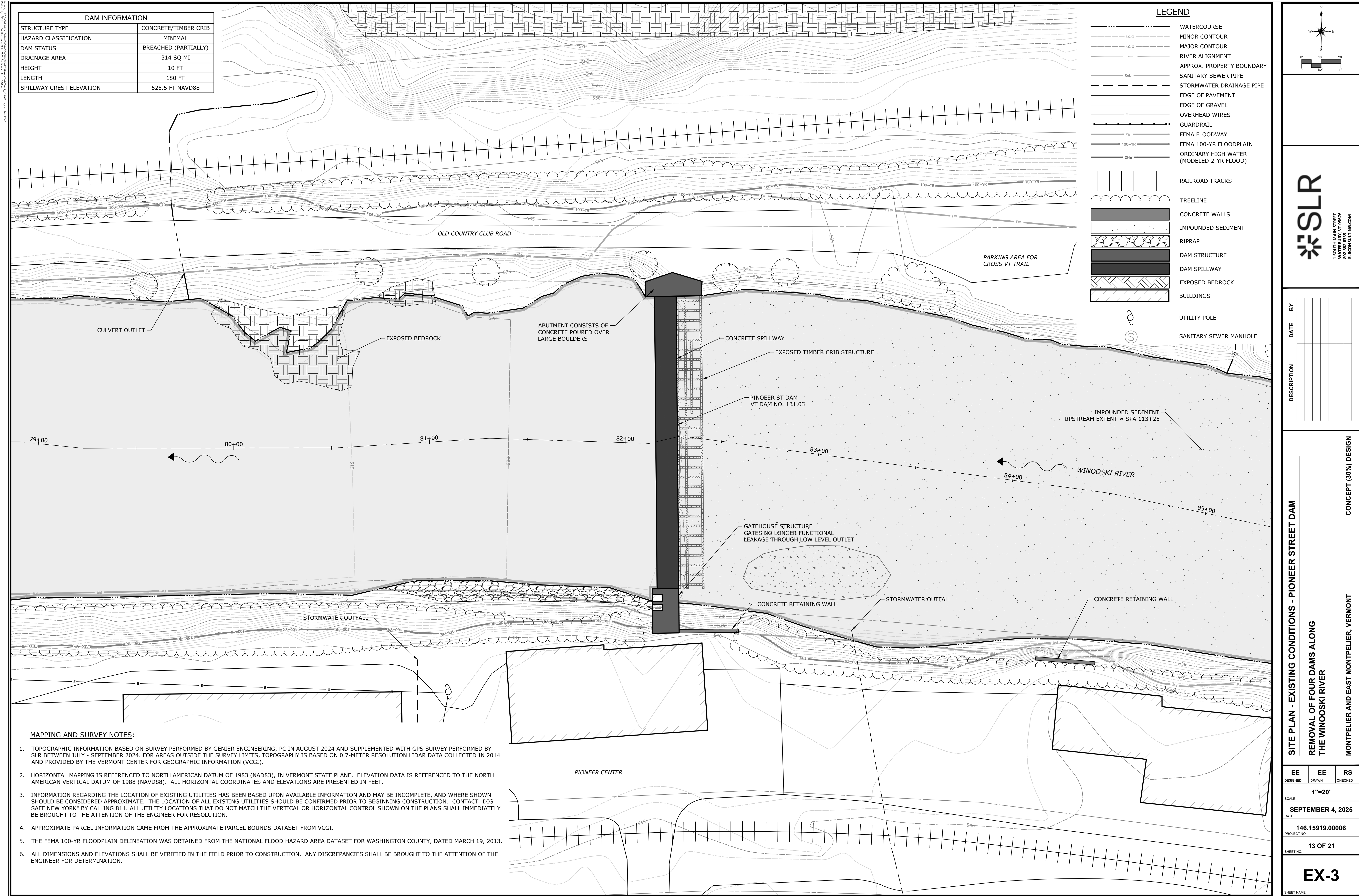




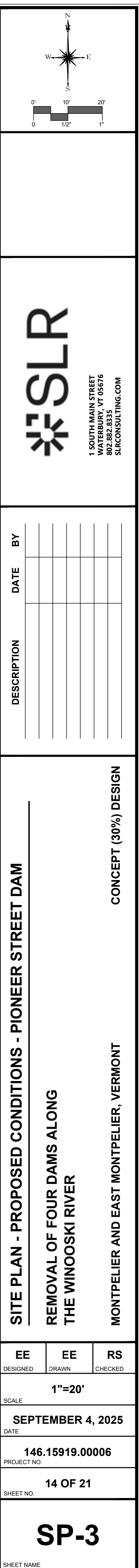








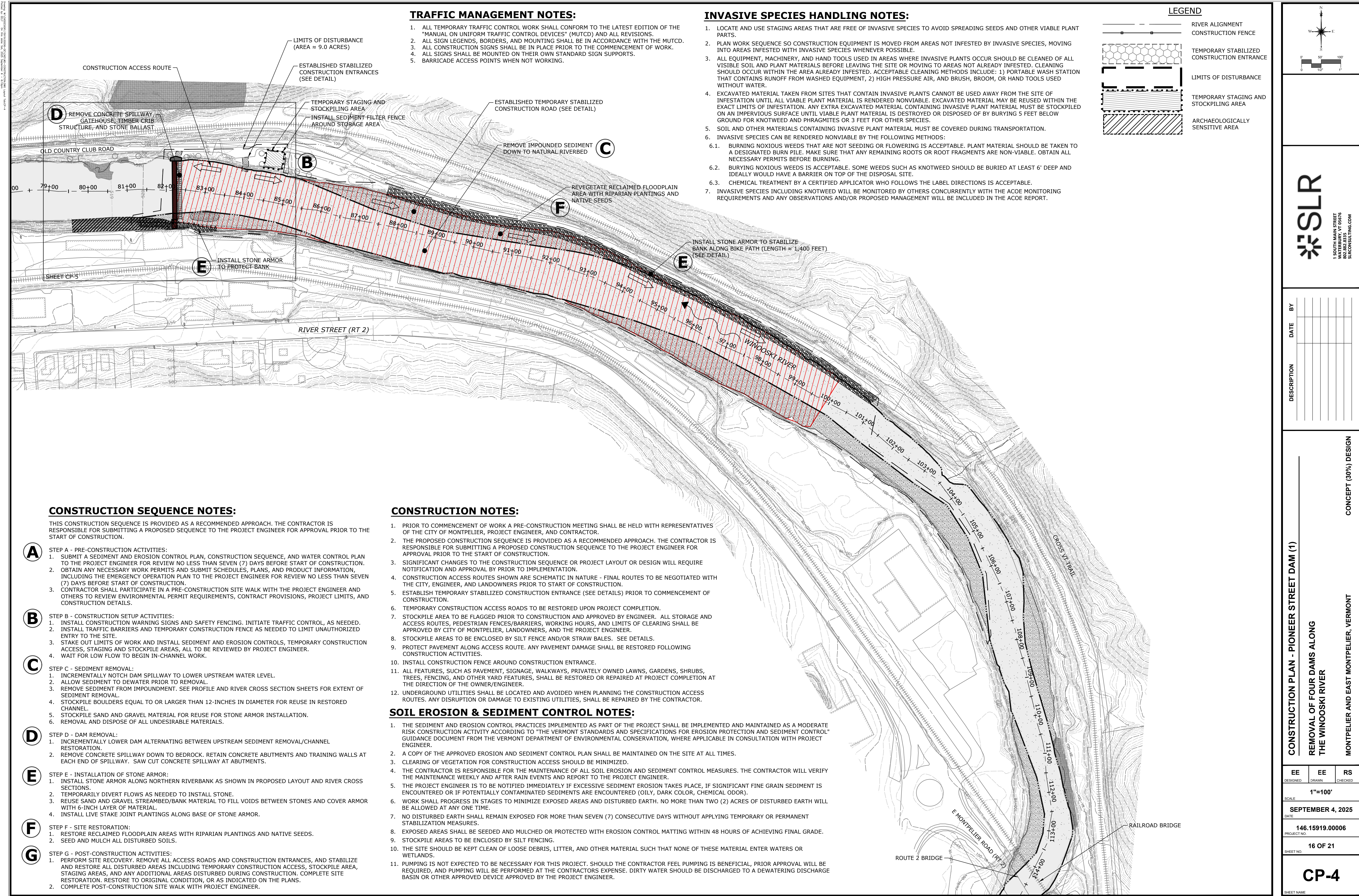




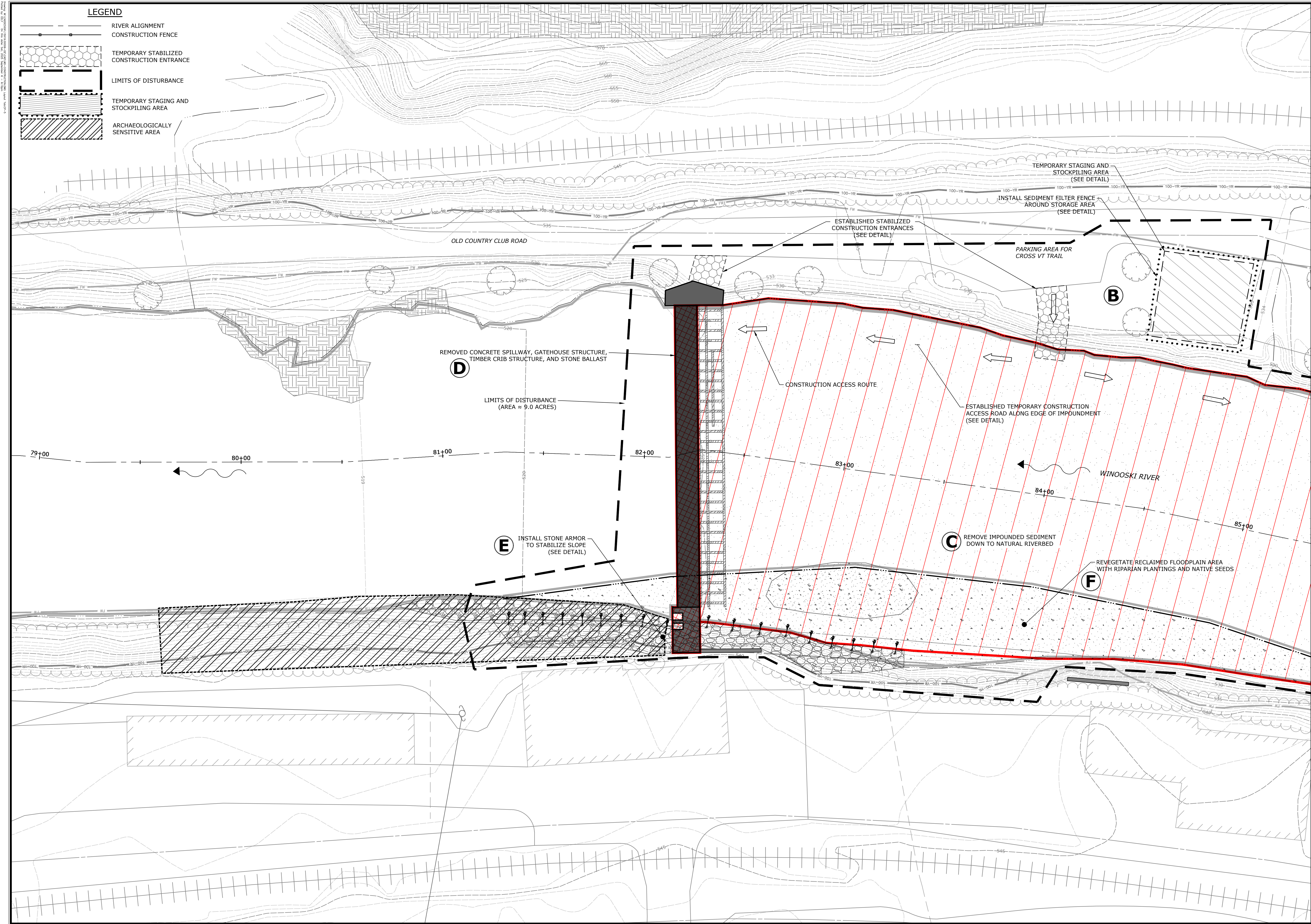












0'12'24'

W

E

N

S

0'

12'

24'

SLR

SOUTH MAIN STREET  
VERMONT 05607  
802.882.8335  
SLRCONSULTING.COM

| DESCRIPTION | DATE | BY |
|-------------|------|----|
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |
|             |      |    |

CONSTRUCTION PLAN - PIONEER STREET DAM (2)

REMOVAL OF FOUR DAMS ALONG THE WINOOSKI RIVER

MONTPELIER AND EAST MONTPELIER, VERMONT

| EE       | EE    | RS      |
|----------|-------|---------|
| DESIGNED | DRAWN | CHECKED |
|          |       |         |

1"=20'

SEPTEMBER 4, 2025

DATE

146.15919.00006

PROJECT NO.

17 OF 21

SHEET NO.

CP-5

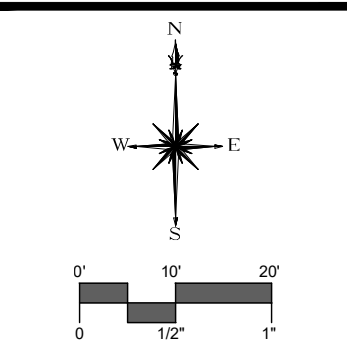
SHEET NAME

CONCEPT (30%) DESIGN

Page 99 of 126



|  |                                             |
|--|---------------------------------------------|
|  | WATERCOURSE                                 |
|  | MINOR CONTOUR                               |
|  | MAJOR CONTOUR                               |
|  | RIVER ALIGNMENT                             |
|  | APPROX. PROPERTY BOUNDARY                   |
|  | SANITARY SEWER PIPE                         |
|  | EDGE OF PAVEMENT                            |
|  | EDGE OF GRAVEL                              |
|  | OVERHEAD WIRES                              |
|  | GUARDRAIL                                   |
|  | FEMA FLOODWAY                               |
|  | FEMA 100-YR FLOODPLAIN                      |
|  | ORDINARY HIGH WATER<br>(MODELED 2-YR FLOOD) |
|  | TREELINE                                    |
|  | SEDIMENT BAR                                |
|  | IMPOUNDED SEDIMENT                          |
|  | CONCRETE WALLS                              |
|  | DAM STRUCTURE                               |
|  | DAM SPILLWAY                                |
|  | EXPOSED BEDROCK                             |
|  | BUILDINGS                                   |
|  | UTILITY POLE                                |
|  | SANITARY SEWER MANHOLE                      |



**\*SLR**

**1 SOUTH MAIN STREET  
WATERBURY, VT 05676  
802.882.8335  
SLRCONSULTING.COM**

[illegible]

**SITE PLAN - EXISTING CONDITIONS - HIDDEN DAM**

**REMOVAL OF FOUR DAMS ALONG  
THE WINOOSKI RIVER**

**MONTPELIER AND EAST MONTPELIER, VERMONT**

|           |           |           |
|-----------|-----------|-----------|
| <b>EE</b> | <b>EE</b> | <b>RS</b> |
| DESIGNED  | DRAWN     | CHECKED   |

**1"=20'**

**SCALE**

**SEPTEMBER 4, 2025**

**DATE**

**146.15919.00006**

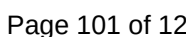
**PROJECT NO.**

**13 OF 21**

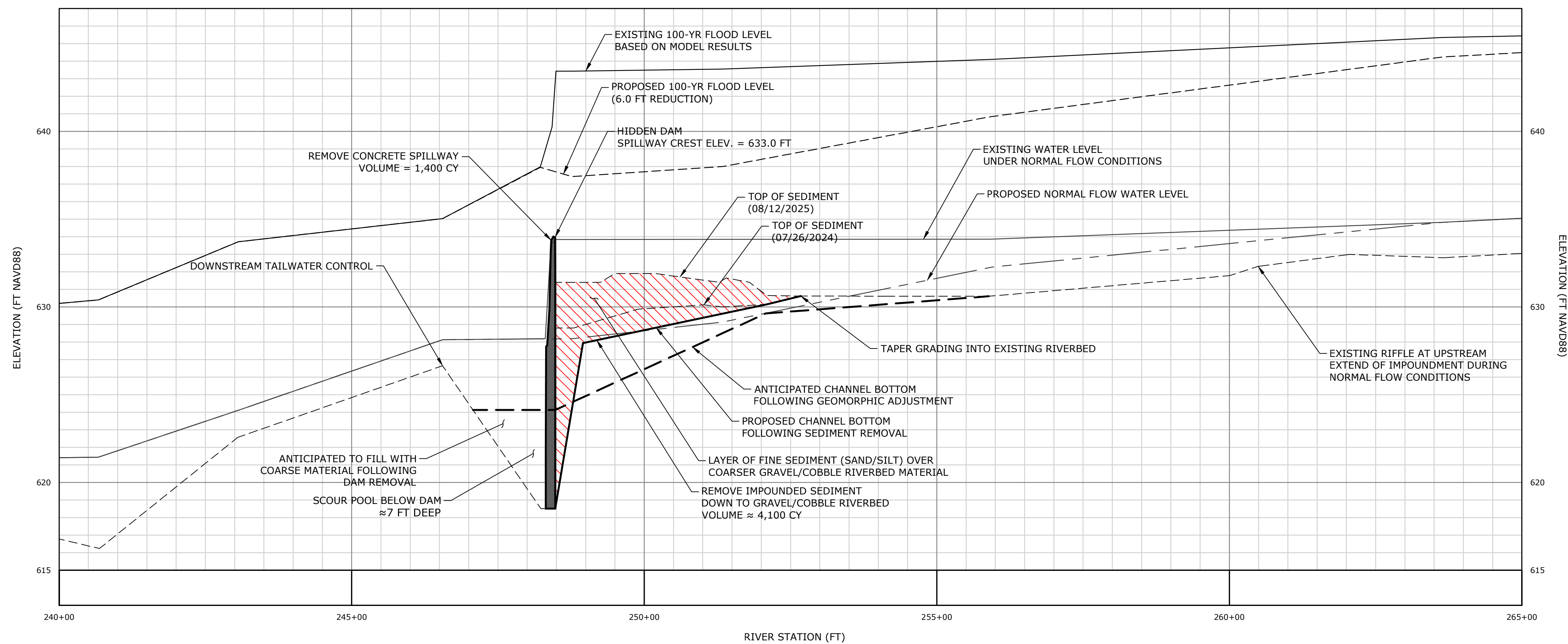
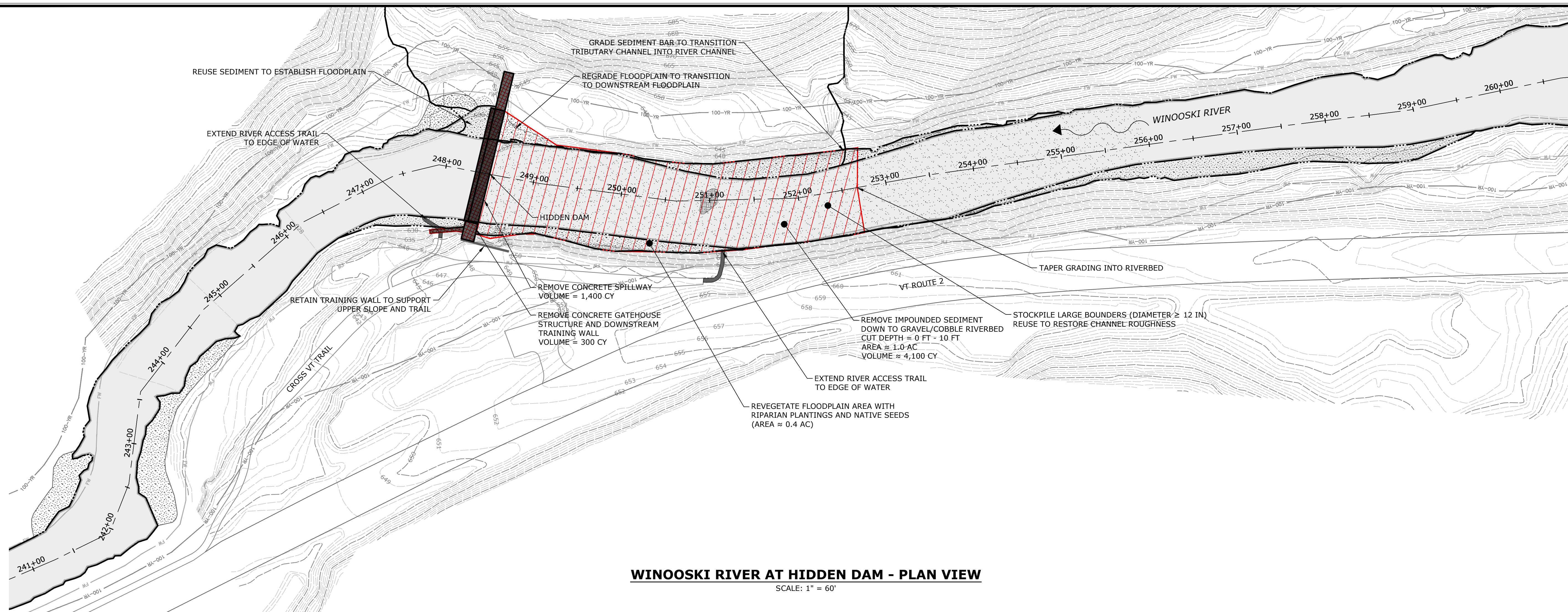
**SHEET NO.**

**EX-4**









**LEGEND**

- 
- 240+00
-  DAM STRUCTURE
  -  SEDIMENT REMOVAL
  -  EXISTING GRADE
  -  PROPOSED GRADE
  -  ANTICIPATED GRADE FOLLOWING GEOMORPHIC ADJUSTMENT
  -  ESTIMATED BEDROCK SURFACE



1 SOUTH MAIN STREET  
WATERBURY, VT 05676  
802.882.8335

[illegible]

## WINOOKSI RIVER PROFILE - HIDDEN DAM

# REMOVAL OF FOUR DAMS ALONG THE WINOOSKI RIVER

MONTPELIER AND EAST MONTPELIER, VERMONT

|                   |       |         |
|-------------------|-------|---------|
| EE                | EE    | R       |
| DESIGNED          | DRAWN | CHECKED |
| AS SPECIFIED      |       |         |
| SCALE             |       |         |
| SEPTEMBER 4, 2021 |       |         |
| DATE              |       |         |
| 146.15919.00006   |       |         |
| PROJECT NO.       |       |         |
| 20 OF 21          |       |         |
| SHEET NO.         |       |         |
| PR-4              |       |         |
| SHEET NAME        |       |         |

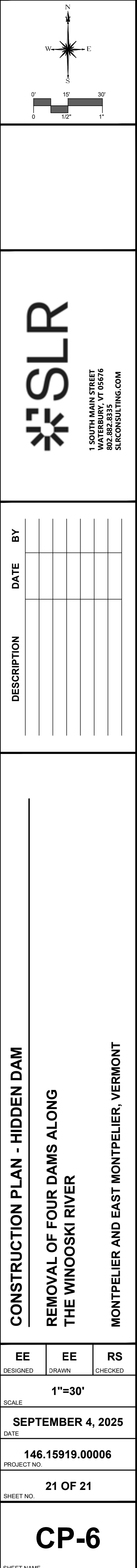


1. PRIOR TO COMMENCEMENT OF WORK A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES OF THE CITY OF MONTPELIER, PROJECT ENGINEER, AND CONTRACTOR.
2. THE PROPOSED CONSTRUCTION SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
3. SIGNIFICANT CHANGES TO THE CONSTRUCTION SEQUENCE OR PROJECT LAYOUT OR DESIGN WILL REQUIRE NOTIFICATION AND APPROVAL BY PRIOR TO IMPLEMENTATION.
4. CONSTRUCTION ACCESS ROUTES SHOWN ARE SCHEMATIC IN NATURE - FINAL ROUTES TO BE NEGOTIATED WITH THE CITY, ENGINEER, AND LANDOWNERS PRIOR TO START OF CONSTRUCTION.
5. ESTABLISH TEMPORARY STABILIZED CONSTRUCTION ENTRANCE (SEE DETAILS) PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. TEMPORARY CONSTRUCTION ACCESS ROADS TO BE RESTORED UPON PROJECT COMPLETION.
7. STOCKPILE AREA TO BE FLAGGED PRIOR TO CONSTRUCTION AND APPROVED BY ENGINEER. ALL STORAGE AND ACCESS ROUTES, PEDESTRIAN FENCES/BARRIERS, WORKING HOURS, AND LIMITS OF CLEARING SHALL BE APPROVED BY CITY OF MONTPELIER, LANDOWNERS, AND THE PROJECT ENGINEER.
8. STOCKPILE AREAS TO BE ENCLOSED BY SILT FENCE AND/OR STRAW BALES. SEE DETAILS.
9. PROTECT PAVEMENT ALONG ACCESS ROUTE. ANY PAVEMENT DAMAGE SHALL BE RESTORED FOLLOWING CONSTRUCTION ACTIVITIES.
10. INSTALL CONSTRUCTION FENCE AROUND CONSTRUCTION ENTRANCE.
11. ALL FEATURES, SUCH AS PAVEMENT, SIGNAGE, WALKWAYS, PRIVATELY OWNED LAWNS, GARDENS, SHRUBS, TREES, FENCING, AND OTHER YARD FEATURES, SHALL BE RESTORED OR REPAIRED AT PROJECT COMPLETION AT THE DIRECTION OF THE OWNER/ENGINEER.
12. UNDERGROUND UTILITIES SHALL BE LOCATED AND AVOIDED WHEN PLANNING THE CONSTRUCTION ACCESS ROUTES. ANY DISRUPTION OR DAMAGE TO EXISTING UTILITIES, SHALL BE REPAIRED BY THE CONTRACTOR.

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. ALL CONSTRUCTION SIGNS SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
5. BARRICADE ACCESS POINTS WHEN NOT WORKING.

1. THE SEDIMENT AND EROSION CONTROL PRACTICES IMPLEMENTED AS PART OF THE PROJECT SHALL BE IMPLEMENTED AND MAINTAINED AS A MODERATE RISK CONSTRUCTION ACTIVITY ACCORDING TO "THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PROTECTION AND SEDIMENT CONTROL" GUIDANCE DOCUMENT FROM THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHERE APPLICABLE IN CONSULTATION WITH PROJECT ENGINEER.
2. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
3. CLEARING OF VEGETATION FOR CONSTRUCTION ACCESS SHOULD BE MINIMIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR WILL VERIFY THE MAINTENANCE WEEKLY AND AFTER RAIN EVENTS AND REPORT TO THE PROJECT ENGINEER.
5. THE PROJECT ENGINEER IS TO BE NOTIFIED IMMEDIATELY IF EXCESSIVE SEDIMENT EROSION TAKES PLACE, IF SIGNIFICANT FINE GRAIN SEDIMENT IS ENCOUNTERED OR IF POTENTIALLY CONTAMINATED SEDIMENTS ARE ENCOUNTERED (OILY, DARK COLOR, CHEMICAL ODOR).
6. WORK SHALL PROGRESS IN STAGES TO MINIMIZE EXPOSED AREAS AND DISTURBED EARTH. NO MORE THAN TWO (2) ACRES OF DISTURBED EARTH WILL BE ALLOWED AT ANY ONE TIME.
7. NO DISTURBED EARTH SHALL REMAIN EXPOSED FOR MORE THAN SEVEN (7) CONSECUTIVE DAYS WITHOUT APPLYING TEMPORARY OR PERMANENT STABILIZATION MEASURES.
8. EXPOSED AREAS SHALL BE SEEDED AND MULCHED OR PROTECTED WITH EROSION CONTROL MATTING WITHIN 48 HOURS OF ACHIEVING FINAL GRADE.
9. STOCKPILE AREAS TO BE ENCLOSED BY SILT FENCING.
10. THE SITE SHOULD BE KEPT CLEAN OF LOOSE DEBRIS, LITTER, AND OTHER MATERIAL SUCH THAT NONE OF THESE MATERIAL ENTER WATERS OR WETLANDS.
11. PUMPING IS NOT EXPECTED TO BE NECESSARY FOR THIS PROJECT. SHOULD THE CONTRACTOR FEEL PUMPING IS BENEFICIAL, PRIOR APPROVAL WILL BE REQUIRED, AND PUMPING WILL BE PERFORMED AT THE CONTRACTORS EXPENSE. DIRTY WATER SHOULD BE DISCHARGED TO A DEWATERING DISCHARGE BASIN OR OTHER APPROVED DEVICE APPROVED BY THE PROJECT ENGINEER.

1. LOCATE AND USE STAGING AREAS THAT ARE FREE OF INVASIVE SPECIES TO AVOID SPREADING SEEDS AND OTHER VIABLE PLANT PARTS.
2. PLAN WORK SEQUENCE SO CONSTRUCTION EQUIPMENT IS MOVED FROM AREAS NOT INFESTED BY INVASIVE SPECIES, MOVING INTO AREAS INFESTED WITH INVASIVE SPECIES WHENEVER POSSIBLE.
3. ALL EQUIPMENT, MACHINERY, AND HAND TOOLS USED IN AREAS WHERE INVASIVE PLANTS OCCUR SHOULD BE CLEANED OF ALL VIABLE SOIL AND PLANT MATERIALS BEFORE LEAVING THE SITE OR MOVING TO AREAS NOT ALREADY INFESTED. CLEANING SHOULD OCCUR WITHIN THE AREA ALREADY INFESTED. ACCEPTABLE CLEANING METHODS INCLUDE: 1) PORTABLE WASH STATION THAT CONTAINS RUNOFF FROM WASHED EQUIPMENT, 2) HIGH PRESSURE AIR, AND BRUSH, BROOM, OR HAND TOOLS USED WITHOUT WATER.
4. EXCAVATED MATERIAL TAKEN FROM SITES THAT CONTAIN INVASIVE PLANTS CANNOT BE USED AWAY FROM THE SITE OF INFESTATION UNTIL ALL VIABLE PLANT MATERIAL IS RENDERED NONViable. EXCAVATED MATERIAL MAY BE REUSED WITHIN THE EXACT LIMITS OF INFESTATION. ANY EXTRA EXCAVATED MATERIAL CONTAINING INVASIVE PLANT MATERIAL MUST BE STOCKPILED ON AN IMPERVIOUS SURFACE UNTIL VIABLE PLANT MATERIAL IS DESTROYED OR DISPOSED OF BY BURYING 5 FEET BELOW GROUND FOR KNOTWEED AND PHRAGMITES OR 3 FEET FOR OTHER SPECIES.
5. SOIL AND OTHER MATERIALS CONTAINING INVASIVE PLANT MATERIAL MUST BE COVERED DURING TRANSPORTATION.
6. INVASIVE SPECIES CAN BE RENDERED NONViable BY THE FOLLOWING METHODS:
  - 6.1. BURNING NOXIOUS WEEDS THAT ARE NOT SEEDING OR FLOWERING IS ACCEPTABLE. PLANT MATERIAL SHOULD BE TAKEN TO A DESIGNATED BURN PILE. MAKE SURE THAT ANY REMAINING ROOTS OR ROOT FRAGMENTS ARE NON-Viable. OBTAIN ALL NECESSARY PERMITS BEFORE BURNING.
  - 6.2. BURYING NOXIOUS WEEDS IS ACCEPTABLE. SOME WEEDS SUCH AS KNOTWEED SHOULD BE BURIED AT LEAST 6' DEEP AND IDEALLY WOULD HAVE A BARRIER ON TOP OF THE DISPOSAL SITE.
  - 6.3. CHEMICAL TREATMENT BY A CERTIFIED APPLICATOR WHO FOLLOWS THE LABEL DIRECTIONS IS ACCEPTABLE.
7. INVASIVE SPECIES INCLUDING KNOTWEED WILL BE MONITORED BY OTHERS CONCURRENTLY WITH THE ACOE MONITORING REQUIREMENTS AND ANY OBSERVATIONS AND/OR PROPOSED MANAGEMENT WILL BE INCLUDED IN THE ACOE REPORT.





## Appendix IV

### FEMA Consultation Letter Dated December 10, 2025.





December 10, 2025

Laura V. Trieschmann  
State Historic Preservation Officer  
Vermont Division for Historic Preservation  
National Life Building, 6<sup>th</sup> Floor  
Montpelier, VT 05620-1201

**RE:**    **Section 106 Consultation:** *Recommendation for Phase 1 Intensive Locational Archaeological Survey, Research and Archaeological Monitoring*  
         **Undertaking:** *Pioneer Street Dam Removal and 5 Home Farm Way Floodplain Restoration*  
         **FEMA Grant Program:** *Hazard Mitigation Grant Program (HMGP) DR-4720-VT*  
         **Location:** *Pioneer Street Dam and Parcel at 5 Home Farm Way, Montpelier, VT*  
         **Recipient:** *Vermont Emergency Management (VEM)*  
         **Subrecipient:** *City of Montpelier*

Dear SHPO Trieschmann,

This letter is to initiate consultation in accordance with Section 106 of the National Historic Preservation Act (NHPA). The Federal Emergency Management Agency (FEMA) has determined that the above referenced proposed project constitutes a federally assisted undertaking for FEMA's Hazard Mitigation Grant Program (HMGP). The City of Montpelier (Subrecipient), through the Vermont Emergency Management (VEM/Recipient), has submitted an application to FEMA for Hazard Mitigation Assistance Grant Program (HMGP) funding to complete the Pioneer Street Dam Removal and 5 Home Farm Way Floodplain Restoration project.

The purpose of this letter is to provide project details and obtain concurrence from your office on the recommendations made by FEMA contained herein.

**DESCRIPTION OF THE UNDERTAKING [36 CFR § 800.11(e) 1]**

**Project Location**

The undertaking is located along the Winooski River, at two (2) different locations. The Pioneer Street Dam removal and associated river work is located just south of Old Country Club Road, and east of Pioneer Street. The work will take place from approximately N 44.250886, W -72.556989 (UTM 18T 695040.630 Easting, 4902641.255 Northing) to N 44.249411, W -72.550853 (UTM 18T 695535.403 Easting, 4902492.022 Northing).



The floodplain restoration will occur near the 5 Home Farm Way (tax parcel id 040-001000), approximately 0.35 miles southeast of the Pioneer Street Dam. The floodplain restoration work will have a footprint of approximately 15.37 acres, within the 18.4-acre parcel. The property is bounded by the Winooski River to the east and south, East Montpelier Road (VT Rte. 2) to the northeast, and the Cross Vermont Trail to the west (*see Attachment 1*).

#### Project Description

The dam removal and floodplain restoration projects will address the recurring flooding sediment and debris buildup at the confluence of the Winooski and Stevens Branch Rivers, specifically affecting the Route 302 and Route 2 intersection and adjacent infrastructure. The goal is to improve flood resilience by removing the Pioneer Street Dam and reconnecting the floodplain at 5 Home Farm Way, allowing floodwaters to move more freely, sediment to be deposited in controlled areas, and reducing peak flood depths in critical infrastructure corridors.

The Pioneer Street Dam removal portion of the scope of work includes nine (9) acres and consists of the removal of concrete spillway down to the bedrock, the timber crib structure along with stone ballast, and concrete gatehouse structure. Additionally, as part of this scope of work, approximately 22,500 cubic yards (CY), or approximately 6.4 acres of impounded sediment will be removed from the Winooski River. The floodplain area exposed following dam removal will be revegetated with riparian plantings and native seeds. Approximately 1,400 feet (FT) of riprap will be installed on the north bank and 1,400 cubic yards (CY) of stone armoring will be installed at the base of the retaining wall on the south bank to stabilize the slopes. Temporary staging will be located on Old Country Club Road, and a temporary access road will be constructed between the dam and Old Country Club Road.

The floodplain restoration portion of the scope of work will cover a total of 15.37 acres within the property at 5 Home Farm Way, and includes excavation and haul of approximately 24,000 CY or 12.90 acres of fill, lowering the floodplain from the river bank to the back edge of the property by six (6) FT. Work will also include installation of approximately 1,500 CY of bank armoring, installation of bio-engineered trees for energy deflection, and site restoration, which includes removal of invasive species, grading of floodplain at a one (1) percent slope toward the river, planting riparian areas, and transplanting trees. The Jacob Davis Homestead at 5 Home Farm Way was demolished as part of separate, non-FEMA funded, project. All equipment and materials stockpiles will be staged on the site of the former home once demolition is complete. A temporary, stabilized construction entrance pad will be installed at the start of the existing gravel road from the armory to the river (*see Attachment 2*).

#### Area of Potential Effect

As defined in the Advisory Council on Historic Preservation's (ACHP) regulations, the Area of Potential Effect (APE) for a project is defined as the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR 800.16[d]). The APE is based upon the "potential" for effect, which may differ for aboveground resources (historic structures and landscapes) and subsurface resources (archaeological sites). Factors with potential to cause effects (including indirect and cumulative effects) include, but are not limited to, noise, vibration, visual (setting), traffic, atmosphere, and construction.

For this undertaking, two (2) discontinuous APEs have been identified: one encompassing all work to be completed at the Pioneer Street Dam (*Pioneer Street Dam APE*), and one encompassing all work to be done for the floodplain restoration work at 5 Home Farm Way (*5 Home Farm Way APE*). Both APEs take into consideration direct construction impacts associated with access road construction, staging of materials and equipment, embankment restoration activities, earth moving, and installation of plants, as well as indirect viewshed impacts (*see Attachment 3*).



### **STEPS TAKEN TO IDENTIFY HISTORIC PROPERTIES [36 CFR § 800.4(a) & (b)]**

A FEMA SOI-qualified Historic Preservation Specialist has conducted a search of the Vermont Online Resource Center (ORC), Vermont Archaeology Inventory (VAI) mapper), National Register of Historic Places (NRHP) database, reviewed historic aerial images and historic maps, and the United States Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS) Web Soil Survey to assess the potential for eligible resources within the project APE.

#### **Standing Structures**

According to the NRHP, there are no NRHP-listed resources in either APE. According to the ORC, there is one (1) State Register-listed property within the *5 Home Farm Way APE* (1211-154), the Jacob Davis Homestead farmhouse at 5 Home Farm Way, listed on the SRHP on March 5, 1990. As noted above, the property was demolished in 2025 as part of another non-FEMA funded project.

All resources within the APEs are noted below in Table 1 and will be evaluated for NRHP eligibility in the future Section 106 consultation letter for this project if they are over 45 years of age. As the Jacob Davis has been demolished, FEMA will not further evaluate this resource.

**Table 1: Resources within the APEs**

| <b>Resource Type</b>                         | <b>Designation</b>                                                          | <b>Resource Address</b>                                                       | <b>Approximate Year Built</b> | <b>APE</b>             |
|----------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------|------------------------|
| Building (Connor Brothers Montpelier Armory) | Not listed                                                                  | 1 Home Farm Way, Montpelier, VT                                               | ca. 1960                      | 5 Home Farm Way APE    |
| Jacob Davis Homestead - Farmhouse            | Listed in Vermont State Register March 5, 1990<br><b>DEMOLISHED in 2025</b> | 5 Home Farm Way, Montpelier, VT                                               | ca. 1787                      | 5 Home Farm Way APE    |
| Structure/Dam*                               | Not listed                                                                  | Pioneer Street Dam- South of Old Country Club Road and east of Pioneer Street | ca. 1873-1881                 | Pioneer Street Dam APE |
| Commercial Property (Bear Naked Growler)     | Not Listed                                                                  | 186 River Street Montpelier, VT 05602                                         | 1980                          | Pioneer Street Dam APE |
| Commercial Property (Juana's Garden)         | Not Listed                                                                  | 188 River Street, Montpelier VT 05602                                         | 1980                          | Pioneer Street Dam APE |
| Garage                                       | Not Listed                                                                  | N/A                                                                           | 2000                          | Pioneer Street Dam APE |
| Storage Facility                             | Not Listed                                                                  | 192 River Road, Montpelier                                                    | 1999-2004                     | Pioneer Street Dam APE |



A review of historic aerials and topographic maps of the area did not reveal any additional properties that may be affected by the proposed undertaking. All resources over 45 years of age within both APEs will be assessed for their NRHP eligibility in FEMA's subsequent finding of effect letter for this undertaking.

#### Archaeological Resources

The Pioneer Street Dam (VT-WA-0225) is listed as a historic archaeological site in the ORC. Per the site record, the construction of the timber crib portion of the dam dates from circa 1873 to 1881 and was possibly constructed to power the adjacent Lane sawmill. The closest recorded precontact archaeological site is the Main Street Site, VT-WA-0007, located approximately 1.03 miles northwest of the Pioneer Street Dam APE.

According to the USDA NRCS Web Soil Survey, the APEs are comprised of the following soil types (see Attachment 4):

- *Pioneer Street Dam APE:*
  - Glover-Vershire complex, 35 to 60 percent slopes, very rocky: Typically found on hills and comprised of coarse-loamy till. The soil is considered somewhat excessively drained.
  - Vershire-Dummerston complex, 25 to 60 percent slopes, rocky: Typically found on hills and comprised of coarse-loamy till. The soil is considered well drained.
  - Urban land-Udipsamments complex, occasionally flooded: Typically found on flood plains and terraces and comprised of sand.
  - Buckland loam, 15 to 35 percent slopes, very stony: Typically found on hills and comprised of loamy lodgement till derived from mica schist and/or loamy lodgement till derived from limestone and/or loamy lodgement till derived from phyllite. The soil is considered moderately well drained.
  - Sunday fine sand, 0 to 3 percent slopes: Typically found on flood plains and comprised of sandy alluvium. The soil is considered excessively drained.
  - Dummerston fine sandy loam, 15 to 35 percent slopes, very stony: Typically found on hills and comprised of coarse-loamy till. The soil is considered well drained.
- *5 Home Farm Way APE*
  - Nicholville very fine sandy loam, 3 to 8 percent slopes: Typically found in river valleys and marine terraces and comprised of coarse-silty glaciolacustrine deposits. The soil is considered moderately well drained.

An Archaeological Resource Assessment Report was conducted by Vanasse Hangen Brustlin, Inc. (VHB) in June 2025 for the Vermont River Conservancy for the assessment of four (4) dams, including the Pioneer Street Dam, along the Winooski River which your office provided to FEMA. VHB determined that the area surrounding Pioneer Street Dam lacked sensitivity for pre-contact and historic archaeological deposits due to dense development and steep slopes surrounding the dam and heavily scoured low gradient sections of the Winooski riverbank (see Attachment 5).

Furthermore, VHB determined that the above-ground elements of Pioneer Street Dam were not eligible for listing on the NRHP as it is "devoid of sensitivity for associated significant historic archaeological resources or depositions" and the site was unlikely to "yield information to the historic period [of late nineteenth century and early twentieth century manufacturing] and exhibits poor integrity of materials and workmanship". However, after speaking with your office, it is felt that the ARA did not fully analyze the dam, inclusive of the earlier timber crib dam and the later concrete dam apron, in its larger context for its association with mill operations (timber crib dam) and hydroelectricity generation (concrete dam apron). Given that the ARA only analyzed the Pioneer Street Dam as a stand-alone feature and not as a feature formerly integrated into other structures and functions, and that the ARA did not include an analysis of the



impacts of other project components to the dam removal, including bank grading and armoring, staging of equipment and access on the north side of the dam on potential industrial remains, FEMA agrees that further research is necessary to determine its eligibility for listing on the NRHP.

Northeast Archaeology Research Center, Inc. (NE ARC) completed a Phase 1 field investigation of the Jacob Davis homestead demolition and a small portion of the Winooski Floodplain restoration project at 5 Home Farm Way in December 2024 which your office provided to FEMA. For this investigation, NE ARC completed a total of 20 test pits immediately surrounding the Jacob Davis homestead. No precontact archaeological resources were recovered and most of the artifacts dated from the late nineteenth and early twentieth centuries and were recovered in the uppermost fill and overburden deposits. NE ARC, therefore, concluded that no further testing was required, and that the demolition of the homestead was unlikely to adversely affect any archaeological deposits. Your office concurred with this report on January 27, 2025.

Monadnock Archaeological Consulting completed an ARA for the floodplain restoration project at 5 Home Farm Way in August 2024 (see *Attachment 6*). The ARA included a walkover of the project area in August of 2024, observation of prevailing terrain and conditions and sampling of underlying soils with a 1-inch diameter hand-held auger. The ARA recommended “further Phase I archaeological study [of the area] to determine the presence of archaeological sites in areas of proposed impact”.

Completion of the VDHP Environmental Predictive Model for Locating Precontact Archeological Sites yielded a score of 36 for 5 Home Farm Way APE, indicating the APE is archaeologically sensitive for precontact materials (see *Attachment 7*). Given these findings, as well as correspondence from your office, FEMA believes that the 5 Home Farm Way APE has the potential to yield precontact materials and historic materials with the APE. FEMA believes that given the known, historic occupation of this parcel and the limits of the previously completed survey, further investigation of the APE is warranted.

Therefore, FEMA recommends that the Subrecipient (City of Montpelier) hire a qualified professional consultant(s) for the following tasks:

For the proposed Pioneer Street Dam removal:

- Complete a Historic Resource Documentation Package (HDP) for the Pioneer Street Dam which researches and documents both the timber crib dam as well as the concrete dam apron as part of their associated industrial complexes. This analysis should also focus on the potential impacts of the other project components associated with the dam removal, including but not limited to, bank grading and armoring around the mill, staging locations and the proposed access on the north side of the dam to any potential mill or industrial remains.
- Develop an archaeological monitoring and documentation plan for the proposed sediment removal on the southeast side of Pioneer Street Dam where earlier mill and the Standard Light building once stood.

For the floodplain restoration at 5 Farm Way:

- Complete a Phase 1 archaeological investigation for the 5 Farm Way APE, excepting the portions of the APE that were previously surveyed for the demolition of Jacob Davis homestead. This survey should include a stratigraphic assessment component to establish the appropriate Phase I methodology and determine if deep testing strategies would be warranted.



**FINDING OF EFFECT 36 CFR § 800.4(d)**

**Recommendation and Request for Concurrence**

FEMA is recommending that the Subrecipient (City of Montpelier) hire a qualified professional consultant(s) to complete a HRDP for Pioneer Street Dam, develop a monitoring and documentation plan for the sediment removal on the southeast side of the dam and complete a Phase 1 archaeological investigation that includes a stratigraphic assessment for the floodplain restoration work in the 5 Farm Way APE (excepting portions of the APE that were previously surveyed).

**Therefore, FEMA requests your concurrence on the above recommendations.**

In accordance with 36 C.F.R. Part 800 and pursuant to Stipulation I.E.2.c. of the *Vermont Prototype Programmatic Agreement* (2024), this undertaking is associated with a non-disaster grant program funds, therefore FEMA requests SHPO concurrence within **thirty (30) calendar days from receipt of this transmittal**. Please let us know in advance if additional time is needed.

Should you have any questions, please do not hesitate to contact me at [Mary.Shanks@fema.dhs.gov](mailto:Mary.Shanks@fema.dhs.gov) or 617-901-2204, or our Historic Preservation Specialist, Anastasia Azenaro-Moore at [Anastasia.azenaromoore@fema.dhs.gov](mailto:Anastasia.azenaromoore@fema.dhs.gov) or 202-258-5487

Thank you,

for Mary K. Shanks  
Regional Environmental Officer  
FEMA Region 1, New England

**Attachments:**

1. Project Location Map
2. Project Plans and Staging
3. Area of Potential Effects (APE) Map
4. NRCS Soil Map
5. VHB determination for Pioneer Dam
6. Monadnock ARA of 5 Home Farm Way August 2024
7. VDHP Environmental Predictive Model
8. Photographs

cc: City of Montpelier, VT  
Vermont Emergency Management (VEM)



---

**Re: Montpelier Dam Archeological Resource Assessment**

---

From Remy Crettol <remy@vermontriverconservancy.org>  
Date Tue 8/4/2026 1:21 PM  
To Meredith Crandall <mcrandall@montpelier-vt.org>  
Cc Kassia Randzio <kassia@vermontriverconservancy.org>

Hi Merideth,

Thank you for the update. I wanted to provide an updated (and final draft) ARA for you and the committee that I received recently. VHDP has indicated their concurrence with this report pending final engineering designs. The two versions are nearly identical. The only changes between the two documents I have summarized below.

Also please note that Hidden Dam is not in Montpelier but is in East Montpelier just FYI for the committee's review of these projects. Thank you for the update on 5 home farm way. VRC is not directly engaged in that project despite it being tied to the Pioneer St Dam for the implementation phase. Because of that, this ARA was conducted separately.

Hidden Dam (VT-WA-0226):

The July version adds a recommendation that the site is eligible for the NRHP under Criterion D, citing its potential to yield important information about the historic period through its preserved archaeological remains.

The May version discussed eligibility under other criteria but did not include this Criterion D recommendation.

Pioneer Street Dam (VT-WA-0225):

The July version likewise adds a recommendation that the site is eligible under Criterion D because of its archaeological research potential.

This criterion was not included in the May version.

Remy

Winooski\_20Dam\_20ARA\_202026-7-26.pdf.pdf

On Tue, Aug 4, 2026 at 11:59 AM Meredith Crandall <[mcrandall@montpelier-vt.org](mailto:mcrandall@montpelier-vt.org)> wrote:

Hi, Remy and Kassia,

Confirming that the Montpelier Historic Preservation Commission is still planning to meet next Tuesday, August 11th, and that the dam removal project (all 4 dams) is on the agenda for a Section 106 Review. In finalizing that agenda now - and you'll get another email with links later this week.





# State House Entryway Design Overview

---

AUGUST 11, 2026

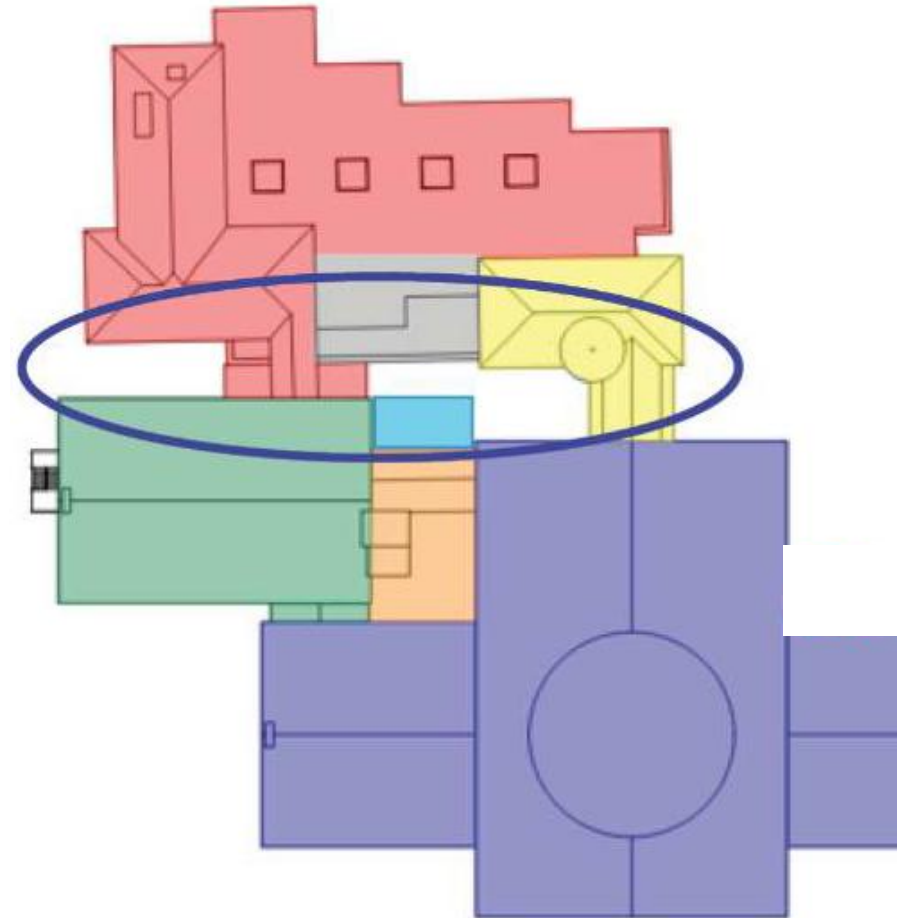
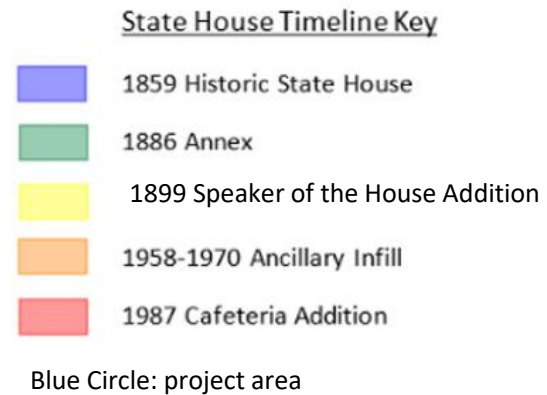
MONTPELIER HISTORIC  
PRESERVATION COMMISSION



# Project Overview

---

1. Design Process
2. Design Goals
3. Project Constraints
4. Project Status







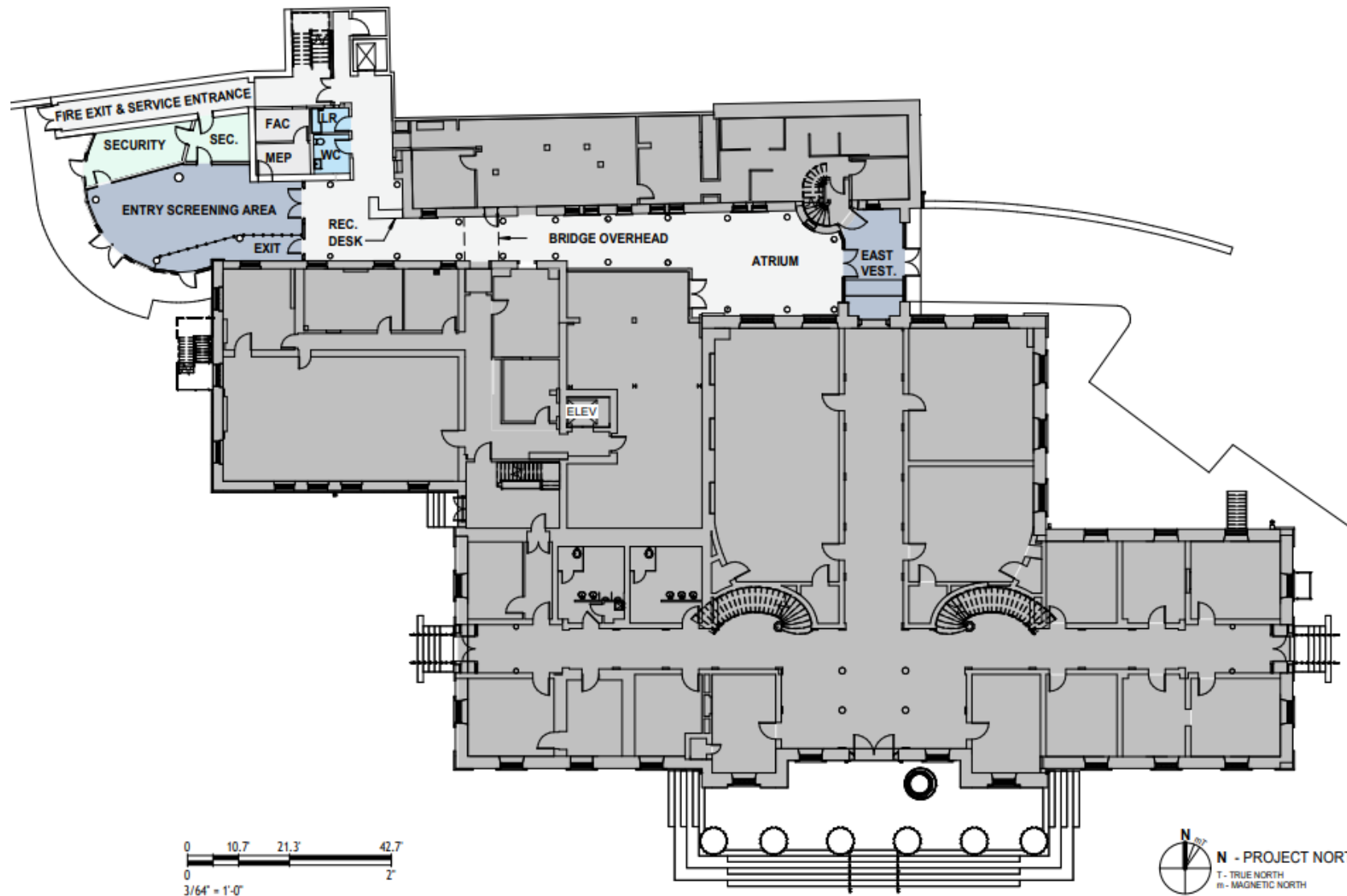












A001

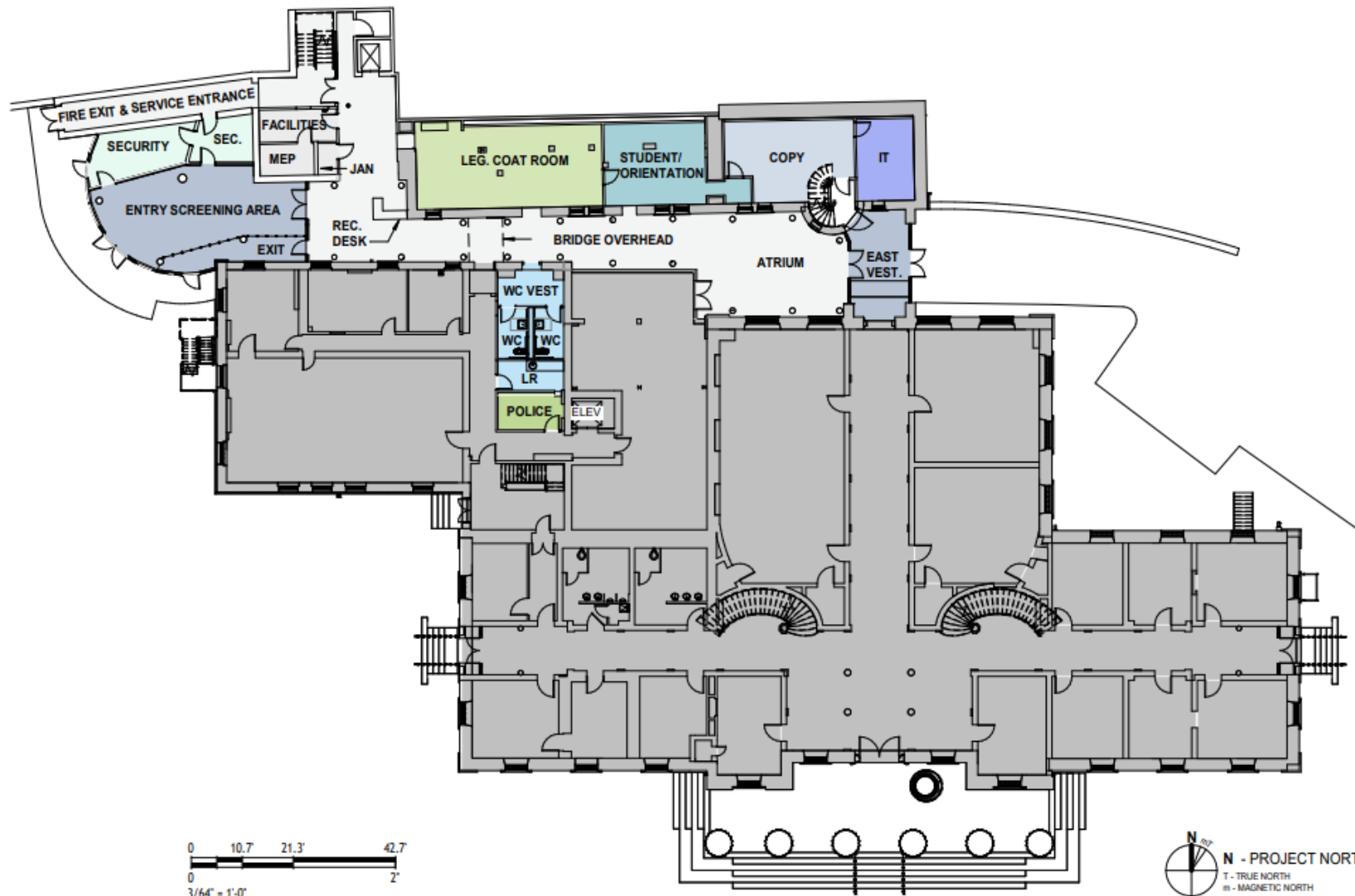
FIRST FLOOR PLAN

© 2025 Freeman French Freeman, Inc.



freeman | french | freeman





A002

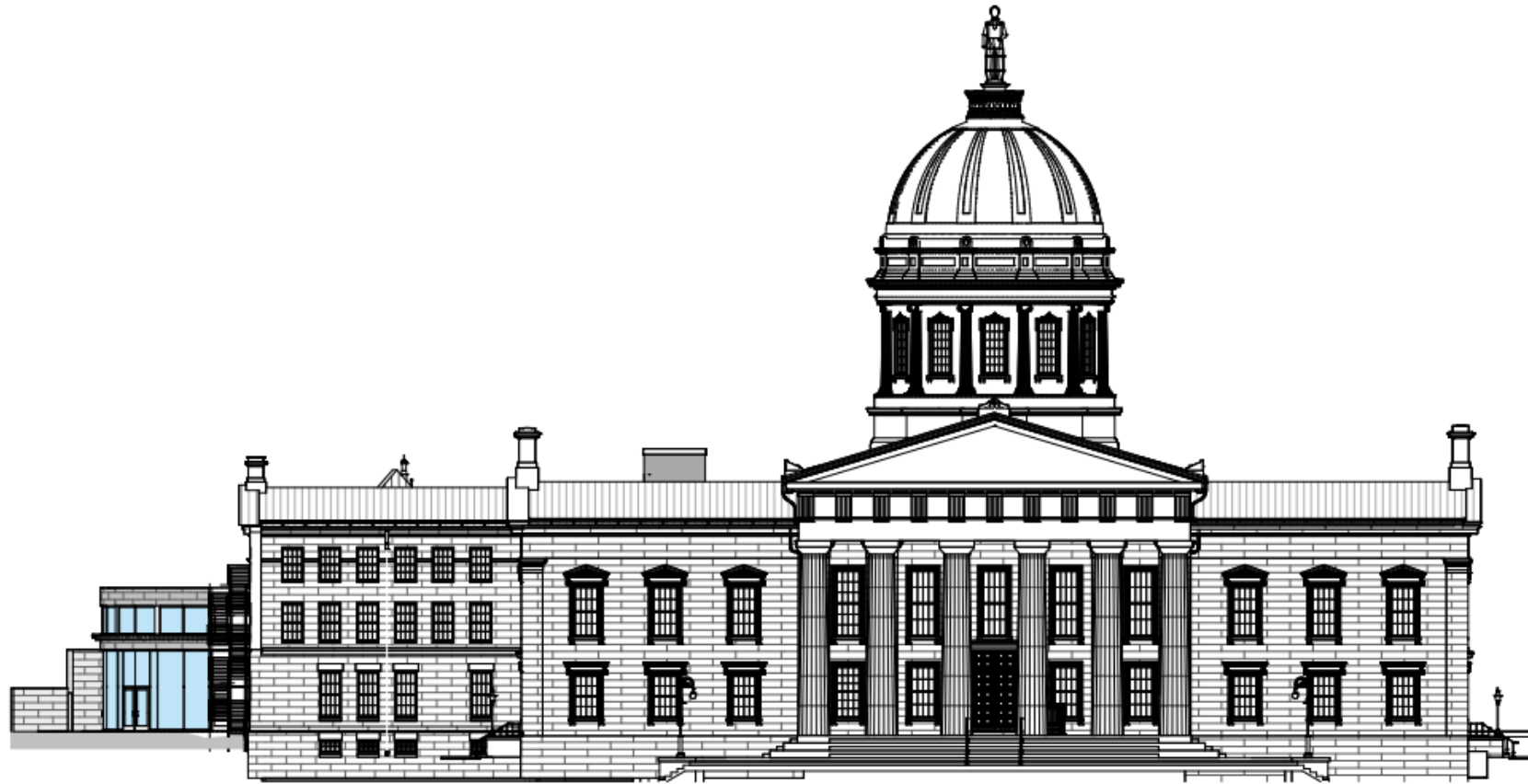


FIRST FLOOR PLAN - OPTION B

© 2025 Freeman French Freeman, Inc.







A004.



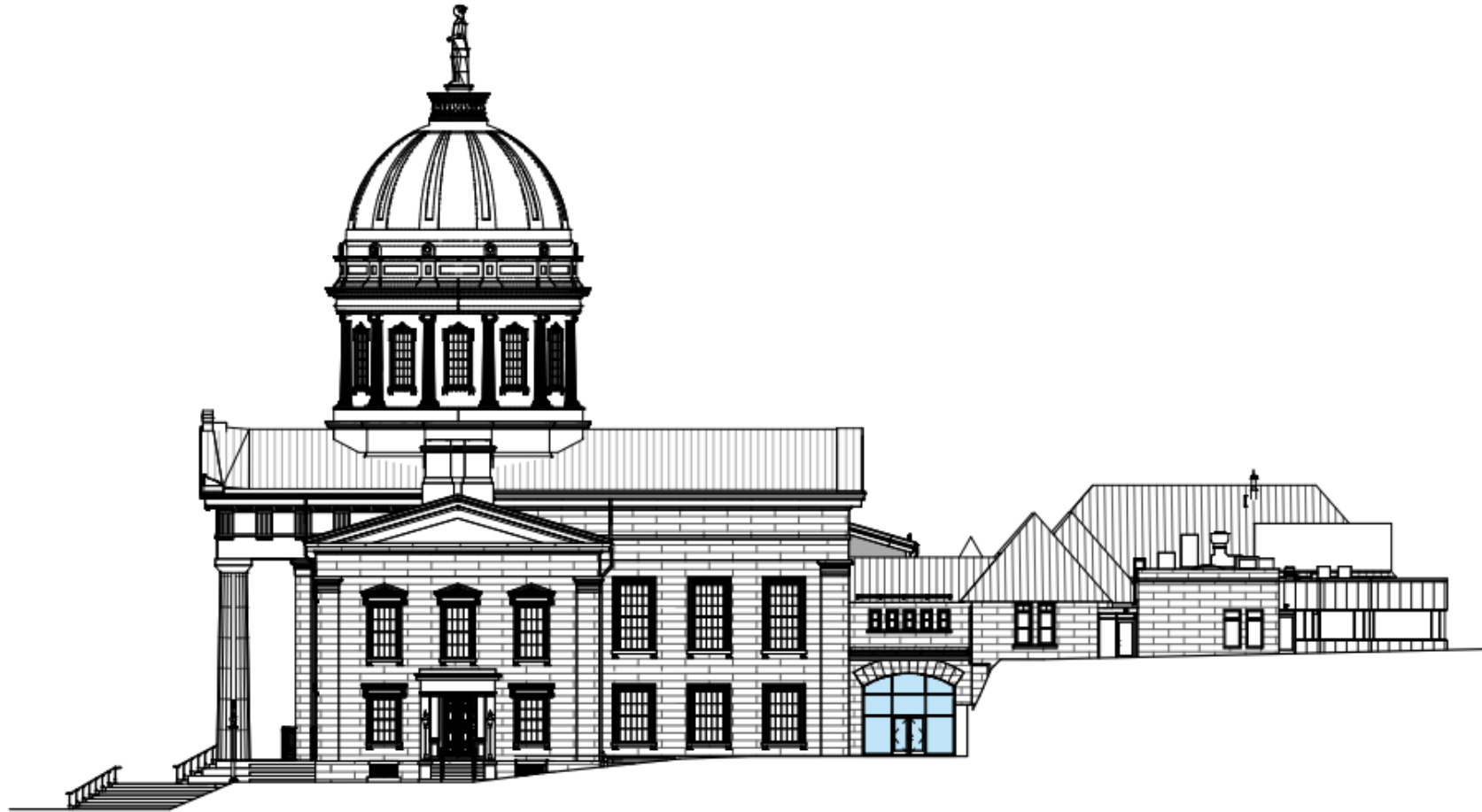
SOUTH ELEVATION

© 2025 Freeman French Freeman, Inc.



freeman | french | freeman





A006.



EAST ENTRANCE ELEVATION

© 2025 Freeman French Freeman, Inc.



freeman | french | freeman





EAST ENTRANCE RENDERING

© 2025 Freeman French Freeman, Inc.



freeman | french | freeman







**Minutes**  
**Historic Preservation Commission Meeting**  
**Tuesday, June 9, 2026 at 7:00 PM**  
Held via Zoom Only

Members attending: Eric Gilbertson (Chair), Robert McCullough (Vice Chair), Paul Carnahan, Linden Chozinska, and Yana Walder. Guest Jon Copans. Staff in attendance, Meredith Crandall.\

1. Call to Order: 7:03 PM
2. Public Comments. No comments from the public.
3. Approval of the Agenda. Minutes approved unanimously
4. Comments from the Chair. No comments.
5. Review and Approve HPC Chair to Sign & Staff to Send Revised Draft Letter re: 87 State St (Federal Building)

Jon Copans is the former Executive Director of the Montpelier Commission for Recovery and Resilience, which has been converted to the Foundation for Resilient Montpelier. He provided a summary of the building status, the auction for which will open on June 15<sup>th</sup> and will last for fifty days, concluding August 5, 2026; the bidding period can be extended if necessary. The process will be anonymous, and bidders will be required to deposit \$50,000, with the starting bid at \$500,000. Jon explained that for various reasons the city was not able to consider acquiring the property and that the Foundation and State's previous discussions with GSA about potential acquisition had served to extend the time needed for consideration of the project's many complexities.

Last week, "87 State Street Local Development Corporation" was formed, with representatives of prominent local corporations and other entities, including the Montpelier City Manager, serving as members of the board of directors. The group is working with the state's Rural Industrial Development program on legislation that will address federally impacted property, including 87 State Street and also a building in Newport, in order to make those properties eligible for \$2,000,000 grants. Jon is optimistic that the legislation will be signed by the governor.

Jon also reported that GSA has not been willing to provide tests of building materials prior to the auction to determine environmental contamination, which makes it very difficult for any potential buyer to calculate project costs. The Foundation learned about PCB contamination inadvertently from a report by Stone Engineering, and GSA agreed to include that report as part of the auction documents. However, GSA has made it clear that the building is being offered "AS IS," or "de-risked" according to the auction documents. PCB contaminants are extensive and estimates to clean the building range from \$1M to \$3M. In addition, those estimates do not



include the costs of moving utilities from the basement, which will be required by city code. Introducing flood resilience for the building will be a key part of the redevelopment question.

The Foundation plans to observe the auction process closely, ideally finding a partner from the private sector who can rehabilitate the building in the best manner possible, and the goals of that partner understandably may influence the building's ultimate reuse.

Discussion with Jon followed, with general agreement about the letter's objectives, and also referencing the potential adverse effects under Section 106 caused by GSA's unwillingness to allow testing of the materials, restrictive rules governing the auction process that might result in a buyer incapable of developing the project, and leading in turn to the building's continued vacancy – all accentuated by the building's size and critical location in Montpelier's Downtown Historic District. A finding of adverse effect under Section 106 would normally lead to mitigation, which can take various forms, including financial compensation.

Following Jon's departure from the meeting, commission members voted unanimously to have Eric sign and Staff then circulate the letter.

6. Meredith provided a report on 9 Heaton Street renovations, which include conversion of the offices to residential apartments, which will require removal of a number of interior walls to achieve 2,000 square feet of additional space and satisfy access requirements. The project will qualify for the RITC, notwithstanding removal of interior walls and loss of an historic chimney. Yana noted that the lower level of the building had been designated as a fallout shelter at one time, and Eric suggested that a photographic exhibit showing old images of the building would be a useful marketing device. Meredith will keep the commission apprised of progress.

7. Minutes for meetings of 04/14/2026 and 05/12/2026 were approved unanimously.

8. Other Business: On Wednesday, Meredith will meet with officials regarding the Pioneer St. Dam removal and also the Five Home Farm Way project, both of which are moving forward. Both projects have Section 106 components, and when the permit process has been completed the city will be ready to move toward an RFP.

The Commission also decided that a July meeting will be unnecessary.

Meredith also reported that Bryan's term expires June 14, 2026, and she hasn't heard from Bryan Jones, so it may be necessary to find new candidates. Eric's and Bob's terms expire in October.

9. Adjournment. 8:06 P.M.



**Minutes**  
**Historic Preservation Commission Meeting**  
**Tuesday, July 8, 2026 at 7:00 PM**  
Via Zoom Only

Members Present: Eric Gilbertson (Chair), Robert McCullough (Vice Chair), Linden Chozinska, and Yana Walder.

Guests attending: Judith Ehrlich, VTrans; Doug Pfohl, VTrans; Corey Line, DPW; and Lucky Boardman, building owner.

Members Absent: Bryan Jones, Paul Carnahan

1. Call to Order: 7:01 P.M.

2. Public Comments. None

3. Agenda approved unanimously.

4. Comments from the Chair: None

5. VTrans Sec. 106 Review Request: Improvements to the Washington County Railroad crossing on Main Street adjacent to the Barre Street intersection, including new signal equipment and warning system improvements, pedestrian safety fencing, and other site improvements.

Doug Phol and Judith Ehrlich presented the project and explained that the primary concern is to improve the safety at the intersection of Barre and Main Streets, as well as the entrances/exits to Shaw's Supermarket and Stone Cutters Way. The project is in preliminary design stage and has been in planning stages for several years, supported by two diagnostic studies. Federal Rail Agency requirements establish safety ratings, with a desirable rating of 60; currently, the crossing is rated at 38.

Design features of the project include signal cross arms above Main Street on both sides of the track; an aluminum signal box with public information panel and located adjacent to Main Street near the Citizens Bank building; lights at the northeast corner of Barre and Main Streets; separation of the track area from adjacent asphalt pavement at several locations, possibly with the use of ballast; separation of the track from the adjoining bicycle/pedestrian path on the westerly side of Main Street, using a low, plank rail; and possible landscaping.

Discussion followed, focusing on ways to apply exterior treatments to the bright aluminum signal box (Sculpt Nouveau suggested) to reduce brightness and inhibit graffiti; whether the aluminum cross arms could be adonized in black to make them less visible and reflect the styling of downtown light posts; and mounts or a prefabricated concrete platform for the signal box to elevate it against flooding. It was reported that the owner of the Shaw's parcel suggested that it would be helpful to create a pedestrian crossing at the Shaws exit, where the project is also considering a small island.



Commission members believed the improvements were necessary to improve safety, and Bob encouraged the project because the railroad adds to the vitality of Montpelier's Downtown Historic District, and the railroad infrastructure is interesting. Eric reflected that there is a significant history of railroad infrastructure within Montpelier downtown.

The commission unanimously approved a motion to prepare a Section 106 letter with a finding of no adverse effect that also includes recommendations to consider ways to treat the aluminum elements to reduce visibility.

6. 144 Elm Street: Review proposal to demolish historic structure - consider sending comments to Development Review Board for 8/3 Permit Hearing.

Lucky Boardman presented the proposal and explained that he had approached several engineers, contractors, and construction firms about a previous suggestion from Bob and Eric during an informal site visit to consider preserving the front ten or fifteen feet of the historic building to maintain the historic building's contribution to the streetscape, incorporating that part of the building into the design of an affordable housing complex. However, exact estimates of the cost and feasibility of that proposal were not provided. Commission members acknowledged that rehabilitation of the full building would not be practical, especially given the extensive alterations to the building, and also acknowledged the importance of providing affordable housing.

The Commission determined that it would forward comments and recommendations to the DRB. Without more detailed estimate it is not possible to determine if the demolition is a reasonable plan for a property listed as a contributing structure in the Montpelier National Register Historic District which has the same legal responsibilities as an individual listing. Bob will try to connect Lucky Boardman with Eliot Lothrop, a historic preservation contractor whose work is primarily on timber framed buildings, to obtain a more thorough analysis of a possible preservation and incorporation of the façade that could be provided to the Board. The building at 144 Elm Street is a timber framed building. The commission recognized that the flood damage and other deterioration make reuse of the building for housing not practical. In the meantime, Bob will prepare a draft memorandum for the DRB outlining the Commission's concerns about the project.

The original part of 144 Elm St. is a significant part of the historic streetscape views on Elm street. In addition to making a contribution to the streetscape, the project is an opportunity to experiment with approaches to salvaging historic buildings in Montpelier that have been damaged by the flood and to demonstrate creative solutions to that difficult challenge.

7. Other Business: Next Meeting, Aust 11th (anticipating Review of NR Listing & Sec. 106 for Dam Removals)

8. Adjournment: 8:35.