

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Scoping Report

**FOR
Rutland City BF 3000(24)**

**TOWN HIGHWAY 8 (RIVER ST), BRIDGE 27
OVER VERMONT RAILWAY (VTR)
-General Merritt A. Edson Memorial Bridge-**

August 7, 2024



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I. Site Information

Bridge 27 is a State owned bridge located on Town Highway 8 / FAU-3052 (River St.) in Rutland City, over the Vermont Railway – Northern. The bridge is located approximately 400 feet west of the junction with Town Highway 3 (Strongs Ave.), and at VTR milepost 54.27. The existing conditions were gathered from a combination of a Site Visit, the Inspection Report, the Route Log and the existing Survey. See correspondence in the Appendix for more detailed information.

Roadway Classification	Urban Major Collector (Non-National Highway System)
Bridge Type	Three Span Rolled Beam Bridge
Bridge Length	195 feet
Year Built	1968
Ownership	State of Vermont

Need

Bridge 27 carries Town Highway 8 over the Vermont Railway Railroad (VTR). The following is a list of deficiencies of Bridge 27 and TH-8 in this location:

1. The reinforced concrete deck is in fair condition with large areas of moderate to heavy saturation, efflorescence staining, and delaminations in scattered locations along the interior bays, and extensively along the fascia beams over the piers and abutments.
2. The rolled beam superstructure is in good condition with areas of pitting and minor to moderate section loss in the beam ends at the piers.
3. The banking on the bridge is substandard.
4. The guardrail on the bridge is an outdated style, and no longer considered crashworthy.

Traffic

A traffic study of this site was performed by the Vermont Agency of Transportation. The traffic volumes are projected for the years 2029 and 2049.

TRAFFIC DATA	2029	2049
AADT	5009	5413
DHV	610	660
%T	7.6	10.1
%D	54	54
ADTT	317	456
Flexible ESALS:	2029~2049	2029~2069
	1,180,000	2,672,000

Design Criteria

The design standards for this bridge project are the Vermont State Standards, dated October 22, 1997. Minimum standards are based on an ADT of 5,413, a DHV of 660, and a design speed of 30 mph for an Urban Major Collector.

Design Criteria	Source	Existing Condition	Minimum Standard	Comment
Approach Lane and Shoulder Widths	VSS Table 5.3	4'/11'/11'/4' (30')	3'/11'/11'/3' (28')	
Bridge Lane and Shoulder Widths	VSS Table 5.3 / VSS Table 5.8	4'/11'/11'/4' (30')	3'/11'/11'/3' (28')	
Clear Zone Distance	VSS Table 5.5	No Issues Noted	14' fill / 12' cut	
Banking	VSS Section 5.13	Normal Crown	8% (max)	
Speed	VSS Section 5.3	30 mph (Posted)	30 mph (design)	
Horizontal Alignment	AASHTO Green book Table 3-10b	R = 1,442'	R _{min} = 3,240' @ NC R _{min} = 1,370' @ 3.2% bank	Substandard
Vertical Grade	VSS Table 5.6	5.0% to 12.13%	9% for rolling terrain	Excessive grade
K Values for Vertical Curves	VSS Table 5.1	K _{crest} = 12	30 crest / 40 sag	Substandard
Stopping Sight Distance	VSS Table 5.1	159'	200'	Substandard
Bicycle/Pedestrian Criteria	VSS Table 5.8 / A.D.A 403.5.2	4' shoulder on bridge 5' sidewalk on bridge	3' paved shoulders 5' sidewalk (if provided)	
Railroad Vertical Clearance	VSS Section 5.8	23' vertical clearance from the top of rail	23' vertical clearance above the railway	
Bridge Railing	Structures Design Manual Section 13	Aluminum Spindle Rail (Untested)	TL-3	Not Crash Tested
Structural Capacity	Structures Design Manual, Ch. 3.4.1 / VSS Table 5.4	Not Deficient	Replacement Design LL: HL-93 Rehab Design LL: HS-15	

Inspection Report Summary

Deck Rating	5 Fair
Superstructure Rating	6 Satisfactory
Substructure Rating	7 Good
Channel Rating	N Not Applicable

From the Bridge Inspection Reports:

07/21/2022 – Widespread saturation throughout the deck with developing deterioration, a deck replacement project should be considered; see maintenance report. ~ SH

07/29/2020 – This structure should be considered for a deck replacement project with general cleaning and painting of the beams. ~ JW

07/16/2018 – Asphalt is in poor condition with large depressions and heavy cracking and should be replaced with a new layer of asphalt to prevent further deterioration to the deck. Deck has spalling with exposed rebar, multiple delaminations and cracking with efflorescence and rust staining and is need of rehab or replacement within the next 10 years. ~ SMP & AAL

Railroad Vertical Clearance

Bridge 27 crosses over two tracks of the Vermont Railway Railroad (VTR), which is an active railroad line. The bridge should meet the minimum horizontal and vertical clearance per the American Railway Engineering and Maintenance-of-Way Association (A.R.E.M.A.).

Horizontal Clearance: A.R.E.M.A. specifies a horizontal clearance of 18 feet centered on the track, resulting in a 9 foot minimum clearance on either side measured from the centerline. The existing bridge has a minimum horizontal clearance of 12 feet measured from the centerline, which meets the minimum standard.

Vertical Clearance: A.R.E.M.A. specifies a vertical clearance of 23 feet measured from the top of the rail. For a standard 18 inch high ballast along with a 7 inch high rail, a low beam requirement of 25'-1" is required from finished grade. The existing vertical clearance meets this standard.

Utilities

The existing aerial utilities are shown on the Existing Conditions Layout Sheet, and are as follows:

Aerial:

- Green Mountain Power – Single and Three Phase power
- Consolidated Communications

Underground:

- Green Mountain Power – Buried three phase power going from pole on west side of bridge to shopping plaza under railroad.
- FirstLight Fiber – Buried fiber in railroad ROW running parallel to tracks.
- Consolidated Communications – Buried fiber line in conduit going across bridge to MH on East side.

Municipal:

- Rutland City has water and sewer infrastructure within the highway right of way.

Adjustments may need to be made to the existing utilities depending on the project scope of work.

Right Of Way

The existing Right-of-Way (ROW) is plotted on the Existing Conditions Layout Sheet. There is ample Town-Owned Right-of-Way on either side of River St. (TH-8). It is assumed that additional rights will not be needed for construction.

Environmental and Cultural Resources

The environmental resources present at this project are shown on the Existing Conditions Layout Sheet, and are as follows:

Biological:

The VTrans Environmental section performed a desk review for mapped resources followed up by a site visit on September 21, 2023. The findings are summarized below. For additional information

on all natural resources, see the Existing Conditions Layout Sheet and the Natural Resources Memo in Appendix F.

Wetlands/Watercourse

NRCS soils mapping lists the east side of the project area as Paxton fine sandy loam, 2 to 8 percent slopes. No watercourses intersect the project area. no wetlands were mapped in the vicinity.

A site visit was performed in September 2023 to evaluate the site for the potential presence of wetlands using the US Corps of Engineers Wetland Delineation Methodologies and the VT Wetlands Rules. Wetlands were not identified, as this is a dry railroad crossing.

Rare, Threatened, and Endangered Species

There were no state listed mapped Rare, Threatened, and Endangered Species present at Bridge 27.

The project was submitted to ANR Natural Resource database for RTE species and significant natural communities, and none were present. The USFWS IPac mapping database lists: Northern long-eared bat (*Myotis septentrionalis*). The monarch butterfly (*Danaus plexippus*), currently a candidate species for listing under the Endangered Species Act (ESA) was also included.

During NEPA further evaluation will be conducted to determine if any surveys for RTE species will be required.

Wildlife Habitat

A query to the VT Fish and Wildlife Biofinder found that the project site is not within any priority habitat blocks. Due to the surrounding dense human development, it is unlikely to facilitate terrestrial wildlife movement (other than urban-adapted species like raccoon or opossum). This structure is over a railway and therefore does not pass aquatic organisms.

Invasive species:

Phragmites (*Phragmites australis*) were noted within the project area.

Archeological:

The area surrounding Bridge 27 is highly disturbed and occupied by commercial and residential buildings. There are no areas of archaeological sensitivity within the project area.

Historic:

Bridge 27 is not historic as it is a common steel girder bridge constructed around 1968.

Hazardous Materials:

There are two Hazardous waste sites and multiple Hazardous waste generators identified within the proposed project area. The Hazardous waste sites consisting of gasoline / heating oil / other petroleum contamination from removed underground storage tanks; are HWS 20073696, at 57 Strongs Ave. and HWS 921324, which is across Strongs Ave. from HWS 20073696.

Stormwater:

Regulatory Considerations:

The Rutland Plaza, which is located just north and west of the bridge, is covered by an existing stormwater permit (8651-9050). There are no other regulatory considerations of note.

Existing Drainage:

The bridge deck and adjacent roadways within the project area have curbing with catch basin inlets on either side of the bridge. The bridge itself is a highpoint as River Street rises up and over the rail line.

Landscape Clearance:

A landscape resource ID was performed for this project and recommendations included the following:

1. Landscape/vegetation:
 - a. Minimize tree clearing in this area.
 - b. Tree protection shall be used for any trees with canopies within the area of construction.
2. Invasive species:
 - a. To manage the invasive species, follow the Environmental Commitments for Invasive Material.
3. Community Engagement/vision:
 - a. Reference the community's vision and goals for Pedestrian and Bicycle Transportation outlined in the Town Plan and incorporate into the project design.
 - b. Involve the Town/Village government and community members in the vision & goals for the project.
4. Active Transportation:
 - a. Protect, maintain, and improve the accessibility, function, and safety of active transportation infrastructure. Ensure that ADA, PROWAG, & MUTCD standards on the project are met.
 - b. This project would benefit from incorporating additional Complete Streets elements, such as:
 - i. Provide additional sidewalks on both sides of the road.
 - ii. Widen shoulders or add dedicated bike lanes.
 - iii. Add curb extensions to increase protection for pedestrians, and slow speeds in the area.
 - iv. Incorporate consistent pedestrian-scale lighting, avoiding dark spots.

II. Safety

There have been 9 crashes along TH-8 in Rutland City between TH-191 (Granger St) and TH-3 during the period of 2017 to 2022. A listing of the crashes is in Appendix P.

There are a number of additional projects in the area of the project or a potential detour that may have their schedules overlap. They are:

RUTLAND-PITTSFORD REVT2306: Reconstruction of Roadbed & Remove Debris. VTR Northern MP 52.0 - MP 65.0. Damage from 7/10/23 storm.

HOOSICK-BENNINGTON-RUTLAND Vermont Railway, B&R Sub. VTRY(59): Preliminary Engineering of rail track replacement on the VTR B&R and VTR Hoosick rail lines. Target Construction: Fall 2025 - Summer 2026.

RUTLAND CITY West St. STP 3000(22): Add two flashing light masts with LED lights, install gate assemblies at three existing flashing light masts and upgrade the crossing systems controller, replace the rail, ties and concrete panel surface. Target Construction: Spring 2025 - Fall 2025.

RUTLAND CITY Forest St. STP 3000(23): Add two flashing light masts with LED lights, install gate assemblies at three existing flashing light masts and upgrade the crossing systems controller, replace the rail, ties and concrete panel surface. Target Construction: Spring 2025 - Fall 2025.

RUTLAND CITY NH PC24(1): Class 1 paving in Rutland City on BR 4 (West Street, Merchants Row, State Street & Columbia Ave) from mm 0.00 to mm 1.942, on US 4 (Woodstock Ave) from mm 0.00 to mm 1.250 and on US 7 from mm 0.00 to mm 2.809. Target Construction: April 4, 2024 - Spring 2025.

III. Local Concerns

A local concerns questionnaire was sent to Rutland City. The city currently has not responded to the questionnaire. There is a copy of the questionnaire in Appendix N.

IV. Operations Concerns

An Operations questionnaire was sent to the VTrans maintenance District 3. The district currently has not responded to the questionnaire. There is a copy of the questionnaire in Appendix O.

V. Maintenance of Traffic

The Vermont Agency of Transportation has created an Accelerated Bridge Program, which focuses on faster delivery of construction plans, permitting, and Right of Way, as well as faster construction of projects in the field. One practice that helps in this endeavor is closing bridges for portions of the construction period, rather than providing temporary bridges. In addition to saving money, the intention is to minimize the closure period with faster construction techniques and incentives to contractors to complete projects early. The Agency will consider the closure option on most projects where rapid reconstruction or rehabilitation is feasible. The use of prefabricated elements in new bridges will also expedite construction schedules. This can apply to decks, superstructures, and substructures. Accelerated Construction should provide enhanced safety for the workers and the travelling public while maintaining project quality. The following options have been considered:

Option 1: Off-Site Detour

This option would close the bridge and reroute traffic onto an official, signed detour. There are many local bypass routes available in the area that will likely see an increase in traffic from local passenger cars if River Street is closed during construction. There are two potential routes for the City of Rutland to consider as an officially signed detour, which are as follows:

1. TH-13 (Forest St.) north to TH-4 (West St.), to TH-131 (Evelyn St.), to TH-2 (Merchants Row), back to TH-3 (Strongs Ave.) (1.4 miles end-to-end w/ sidewalk).
2. TH-13 (Forest St.) south to TH-12 (Park St.), to TH-1 (South Main St.), back to TH-3 (Strongs Ave.) (2.1 miles end-to-end). (Includes a narrow bridge)

Either detour route would place an additional 5,000 vehicles per day onto the detour routes during construction. Either route would go through signalized intersections and at-grade railroad

crossings, which can have the timing adjusted for the temporary flow. This option could be combined with accelerated bridge construction techniques to reduce the closure duration.

Maps of the detour routes can be found in Appendix Q.

Advantages: This option would have minimal impacts to natural and cultural resources located adjacent to the structure. This option reduces the time and cost of the project both at the development stage and construction. This is the safest traffic control option since the traveling public is removed from the construction site.

Disadvantages: Traffic flow would not be maintained through the project corridor during construction. Also, this would increase the traffic at the intersections along the detour route, that would increase traffic congestion at already busy intersections.

Option 2: Phased Construction

Phased construction is the maintenance of one lane of alternating traffic on the existing bridge while working on the other lane. The project begins with traffic being constricted to one lane, while work is done on the other. After completion of improvements to the first lane, traffic is switched to the completed lane and work proceeds on the second lane. Traffic flow is constant, although delayed due to slower speeds in the work zone. This allows keeping the road open during construction, while having minimal impacts to adjacent property owners and environmental resources.

While the time required to develop a phased construction project would remain the same, the time required to complete a phased construction project increases because some of the construction tasks have to be performed multiple times. In addition to the increased design and construction costs mentioned above, the costs also increase for phased construction because of the inconvenience of working around traffic and the effort involved in coordinating the joints between the phases. Another negative aspect of phased construction is the decreased safety of the workers and vehicular traffic, which is caused by increasing the proximity and extending the duration that workers and moving vehicles are operating in the same confined space. Phased construction is usually considered when the benefits include reduced impacts to resources and decreased costs and development time by not requiring the purchase of additional ROW.

With phased construction, one side of each bridge deck would be constructed while traffic on TH-8 is reduced from 2-lanes to 1-lane. Traffic would be one-lane of two-way alternating traffic with a signal. Based on the Design Hourly Volumes, some delay may be experienced during the peak hours of traffic, which will require the retiming of the signals in the intersection of River St. & Strongs Ave, as well as incorporating the temporary signals into the network. See the Phasing Layout Sheets in Appendix R.

Advantages: One-way alternating traffic flow would be maintained through the project corridor during construction. Also, this option would have minimal impacts to adjacent properties and environmental and cultural resources. Right-of-Way would not be required for this maintenance of traffic option. Phasing the work allows the work to proceed one lane at a time without the expense of a temporary bridge and without the inconvenience of a closure and detour.

Disadvantages: Compared to a closure and detour or a temporary bridge scenario, it takes longer and costs more to construct, rehabilitate, or repair a bridge project in phases because some of the construction tasks have to be performed multiple times and cannot be performed concurrently. Additional permit requirements may come into play. The safety risks for both workers and travelers

are also increased due to the close proximity to each other. Some structural qualities, such as joints, demand more coordination time and may suffer in quality as well.

Option 3: Temporary Bridge

Based on the length between stop bars for placement of a temporary bridge and the traffic volumes along TH-8 at this location, a temporary bridge would need to have two lanes to accommodate two-way traffic.

From a constructability standpoint, a temporary bridge is potentially viable to the north of the existing bridge. To the south of the existing bridge, a temporary bridge would require the demolition of a listed historic building and will not be considered.

The northern option would take the travelling public from TH-8, through the driveway of the “Rutland Community Cupboard”, across the railroad tracks, and into the rear parking lot of the Rutland shopping plaza. This option would require the construction of a temporary signalized rail crossing, and the removal of a very large propane tank owned by the shopping plaza.

See the Temporary Bridge Layout Sheet in Appendix R.

Advantages: Traffic flow can be maintained along the Town highway.

Disadvantages: This option would require multiple utility relocations and would have adverse impacts to the surrounding natural environment. This option would require the removal of a very large (est. 33,000 gal) propane tank and placing the traffic over a two track at-grade rail crossing. This traffic control option would be more costly, and time consuming, than an offsite detour.

VI. Alternatives Discussion

This project was identified by Asset Management as a good candidate for bridge deck replacement. The objective of this scoping process is to apply a cost-effective treatment at the proper time to preserve and extend the useful life of the bridge. Preventative maintenance provides the biggest benefit for the smallest level of investment. By either repairing or replacing the bridge deck or superstructure, the service life of the superstructure and substructure can be maximized by protecting them from exposure to the elements that have caused the deck to deteriorate to its current condition. Therefore, the alternatives analysis was limited to the bridge deck and superstructure exclusively.

No Action

This alternative is not recommended. The bridge is declining in condition and will continue to deteriorate if no action is taken. The bridge deck has large areas of moderate to heavy saturation, efflorescence staining, and small delaminations in scattered locations along the interior bays, and extensively along the fascia beams over the piers and abutments. The rolled beam superstructure has areas of pitting and minor to moderate section loss in the beam ends at the piers. In the interest of safety to the traveling public, the No Action alternative is not recommended. No cost estimate has been provided for this alternative since there are no immediate costs.

Deck Rehabilitation

The existing deck of Bridge 27 is rated as a 5, or “fair” condition. The superstructure, referring to the steel beams, is rated a 6 (satisfactory), and the existing substructure is rated a 7 (good). Deck

rehabilitation would include removal of loose and deteriorating concrete, cleaning and possibly supplementing reinforcing steel, application of concrete repair materials to cracks and areas of section loss and paving on the bridge and for a short distance on each approach to the bridge. Some characteristics of deck concrete repair are as follows:

- There are areas of water damage to the steel beams at the joints. The beams should be inspected and cleaned as needed, and the failing joints replaced.
- Concrete repair tends to accelerate the deterioration of the existing concrete that is in contact with the repair material, and thus offers a widely variable service life often 15 years or less.
- Much of the work under Bridge 27 would be taking place over the VT Railway which would require increased safety efforts to protect the railroad corridor and any traffic on the VT Railway.
- In approximately 15 years, the condition of the bridge would be similar to its current condition and major work would be required again.
- This alternative would not take care of the issues with the existing horizontal and vertical alignment.

The disadvantages seem to outweigh the benefits to this short-term fix. Deck rehabilitation alone will not be considered further.

Deck Replacement

This alternative would involve removing the existing deck in its entirety and placing a new deck on the existing steel beams. In addition to replacing the bridge deck, sidewalk and bridge railing, some repair work on the steel beams would be undertaken. Work to be included for a deck replacement project includes:

- There are areas of water damage to the steel beams at the joints. The beams should be inspected, cleaned, and a new protective coating applied as needed.
- Bearings should be inspected and cleaned as needed.
- The wingwalls, piers, and abutments are in good condition, with only minor cracking and efflorescence present. The pier caps were rehabbed previously and are in good condition. Currently no repairs are needed. Silane should be applied to all exposed substructure concrete as part of the project as a protective measure.
- A new deck with the typical section of 4'-11'-11'-4' with a 5' sidewalk would be constructed. With additional work to match the new deck and sidewalk into the existing off bridge travel surfaces.

The existing substructure is in good condition, and it is reasonable to assume that with these repairs it can safely carry anticipated traffic loads for an additional 50 years.

The existing deck geometry does not meet the minimum standard for roadway horizontal or vertical alignment criteria set forth in the Vermont State Standards and AASHTO Policy on Geometric

Design of Highways and Streets (Green Book). A new deck on the existing beams would not be able to correct these issues.

Advantages: This alternative will protect the superstructure for years to come from exposure to the elements which deteriorated the piers leading to their previous repairs. This option would also have minimal impacts to adjacent properties and resources.

Disadvantages: The new deck would not correct the alignment issues to design standards.

Maintenance of Traffic: Traffic could be maintained on an offsite detour, a temporary bridge, or with phased construction.

Superstructure Replacement

A superstructure replacement would include a new deck, beams, and bridge railing. The new superstructure would be a new steel beam bridge, similar to the existing superstructure, with modifications to the roadway geometry to bring it closer to standard. Substructure repairs and modifications to accommodate the new superstructure would be as follows:

- There are areas of scattered fine map cracks on the abutments and wingwalls with light staining and areas of efflorescence. These areas should be prepared for repair and repaired with the appropriate concrete class. In addition, silane should be applied to all exposed substructure concrete as part of the project.
- The existing bridge seats would be cut down and new bridge seats, pier seats and wingwall tops would be poured to accommodate the modifications to the roadway geometry.
- A new deck with a typical section of 4'-11'-11'-4' and a 5' sidewalk would be constructed. The design would maintain the clearance under the bridge superstructure required for the railway.
- Work under Bridge 27 would be taking place over the VT Railway which would require increased safety efforts to protect the railroad corridor and any traffic on the VT Railway.

The existing substructure is in good condition, and it is reasonable to assume that with the repairs listed above, the existing substructure can safely carry anticipated traffic loads for an additional 50 years.

The existing banking does not meet the minimum standard. A new superstructure should be constructed to the existing typical section but changing the banking to meet AASHTO standard.

Advantages: This alternative would address the structural concerns of the bridge and extend the life of the existing structure an additional 50 years. This alternative will protect the superstructure for years to come from exposure to the elements which have deteriorated the deck. This option would also have minimal impacts to adjacent properties and resources. This option would eliminate future maintenance concerns for the beams. The banking of the existing bridge could be increased from a normal crown to a 3.2% bank, to meet the minimum standard.

Disadvantages: The new superstructure would have a design life greater than that of the remaining substructures and the bridge vertical alignment would still not be up to design standards.

Maintenance of Traffic: Traffic could be maintained on an offsite detour, a temporary bridge, or with phased construction.

VII. Alternatives Summary

Based on the existing site conditions and bridge condition there are several viable alternatives:

- Alternative 1a: Deck Replacement with Traffic Maintained on an Offsite Detour
- Alternative 1b: Deck Replacement with Traffic Maintained via Phased Construction
- Alternative 1c: Deck Replacement with Traffic Maintained on a Temporary Bridge
- Alternative 2a: Superstructure Replacement with Traffic Maintained on an Offsite Detour
- Alternative 2b: Superstructure Replacement with Traffic Maintained via Phased Construction
- Alternative 2c: Superstructure Replacement with Traffic Maintained on a Temporary Bridge

A cost evaluation for each of the alternatives is shown below.

VIII. Cost Matrix¹

Rutland City BF 3000(24)		Do Nothing	Alternative 1			Alternative 2		
			Deck Replacement			Superstructure Replacement		
			a. Offsite Detour	b. Phased Construction	c. Temporary Roadway	a. Offsite Detour	b. Phased Construction	c. Temporary Roadway
COST	Bridge Cost	\$0	\$2,500,300	\$1,605,800	\$1,396,300	\$3,041,300	\$2,620,600	\$2,278,800
	Removal of Structure	\$0	\$730,787	\$840,406	\$730,787	\$730,787	\$840,406	\$730,787
	Roadway	\$0	\$490,000	\$670,000	\$466,000	\$465,000	\$689,000	\$480,000
	Maintenance of Traffic	\$0	\$203,200	\$515,350	\$816,540	\$203,200	\$515,350	\$816,540
	Construction Costs	\$0	\$3,924,287	\$3,631,556	\$3,409,627	\$4,440,287	\$4,665,356	\$4,306,127
	Construction Engineering & Contingencies	\$0	\$784,857	\$907,889	\$852,407	\$666,043	\$699,803	\$645,919
	Accelerated Premium	\$0	\$274,700	\$0	\$0	\$310,820	\$0	\$0
	Total Construction Costs w CEC	\$0	\$4,983,845	\$4,539,444	\$4,262,034	\$5,417,151	\$5,365,159	\$4,952,047
	Preliminary Engineering	\$0	\$313,943	\$290,524	\$272,770	\$666,043	\$699,803	\$645,919
	Right of Way	\$0	\$0	\$0	\$100,000	\$0	\$0	\$100,000
	Total Project Costs	\$0	\$5,297,788	\$4,829,969	\$4,634,804	\$6,083,194	\$6,064,962	\$5,697,966
	Annualized Costs	\$0	\$105,956	\$96,600	\$92,696	\$121,664	\$121,300	\$113,960
	TOWN %	0%	0%	0%	0%	0%	0%	0%
	TOWN SHARE	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SCHEDULEING	Project Development Duration	NA	2 years	2 years	2 years	2 years	2 years	2 years
	Construction Duration	NA	4 months	8 months	8 months	6 months	12 months	12 months
	Closure Duration (If Applicable)	NA	45 days	NA	NA	60 days	NA	NA
ENGINEERING	Typical Section - Roadway (feet)	35'	35'	35'	35'	35'	35'	35'
	Typical Section - Bridge (feet)	5'4"/11'/11'4' (35')	5'4"/11'/11'4' (35')	5'4"/11'/11'4' (35')	5'4"/11'/11'4' (35')	5'4"/11'/11'4' (35')	5'4"/11'/11'4' (35')	5'4"/11'/11'4' (35')
	Geometric Design Criteria	Substandard Banking & Vertical Align	Substandard Banking & Vertical Alignment			Substandard Vertical Alignment		
	Traffic Safety	No Change	Improved	Improved	Improved	Improved	Improved	Improved
	Alignment Change	No Change	No Change	No Change	No Change	Improved	Improved	Improved
	Bicycle Access	No Change	No Change	No Change	No Change	No Change	No Change	No Change
	Pedestrian Access	No Change	No Change	No Change	No Change	No Change	No Change	No Change
	Minimum Vertical Underclearance	No Change	No Change	No Change	No Change	No Reduction	No Reduction	No Reduction
Utilities	No Change	May require utility relocation	May require utility relocation	Will require utility relocation & Propane removal	May require utility relocation	May require utility relocation	Will require utility relocation & Propane removal	
OTHER	ROW Acquisition	No	No	No	Yes	No	No	Yes
	Road Closure	No	Yes	No	No	Yes	No	No
	Design Life	15	50	50	50	50	50	50

¹ Costs are estimates only, used for comparison purposes.

IX. Conclusion

Our recommendation is **Alternative 1a**; to replace the existing deck with accelerated construction methods, while maintaining traffic on an offsite detour.

Structure:

This alternative includes replacing the deck with a precast concrete deck, new bridge railing, membrane, pavement, and elastomeric joints. This may include repairs to curtain walls, abutments, pier caps, and minor repairs to the steel beams. Using accelerated bridge construction is preferred at this location since it is located over the railroad.

Traffic Control:

There is a network of bypass roads around the bridge. The shortest detour for this location is 1 mile end to end and adds approximately 3 minutes to the drive depending on traffic. There is a pedestrian detour available that has sidewalks and crosswalks for its entire length.

X. Appendices

- Appendix A: Photos
- Appendix B: Town Map
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- Appendix D: Preliminary Geotechnical Information
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Appendix A: Photos



Sidewalk and Guardrail.



Joint & Beam



Deck underside



Deck Underside

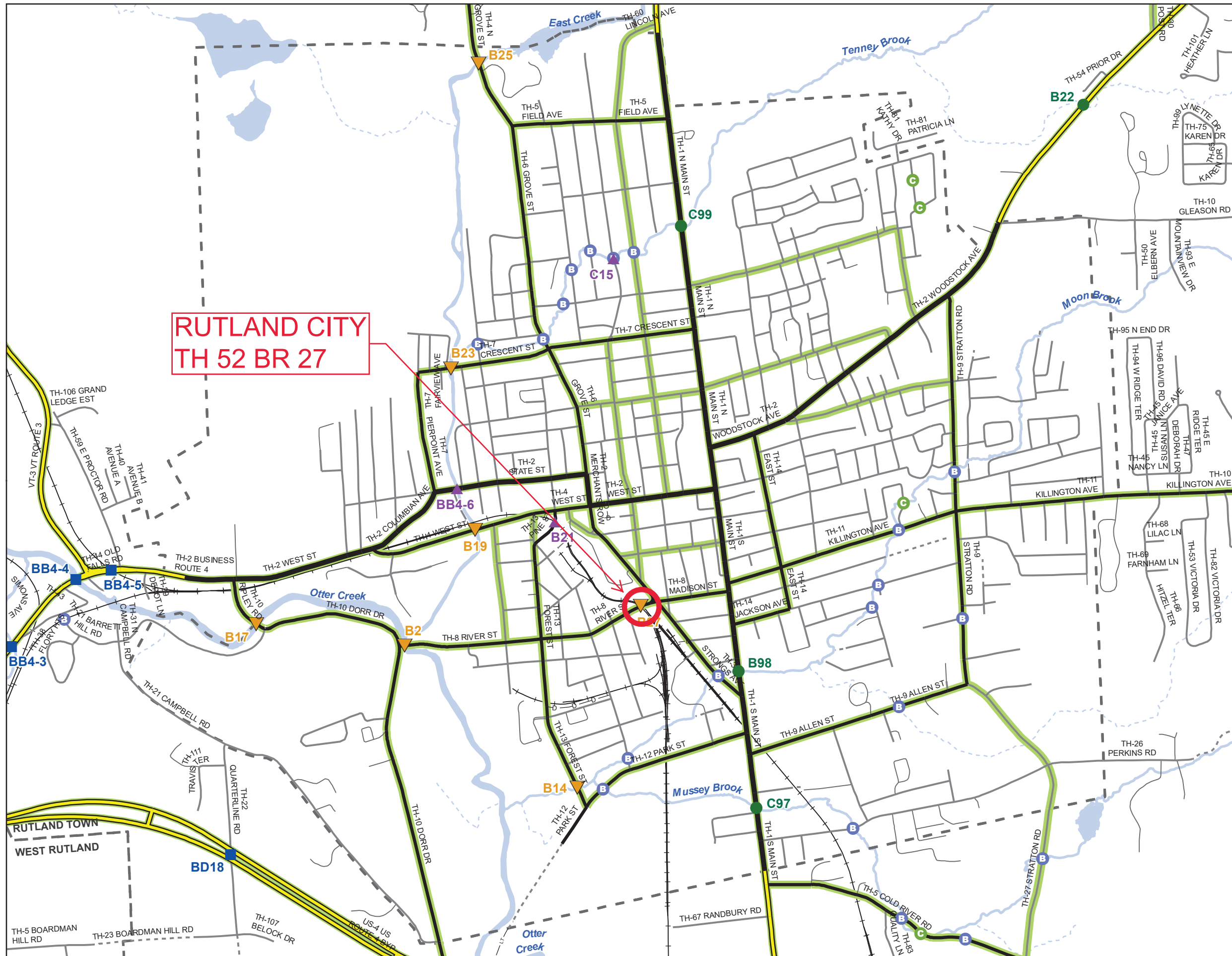


Abutment 1 & Pier 1



Abutment 2 & Pier 2

Appendix B: Town Map



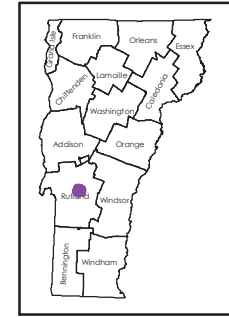
Scale: 1:20,040



- ★ INTERSTATE
- STATE LONG
- STATE SHORT
- ▲ TOWN LONG
- ▼ FEDERAL AID
- ◆ BIKE PATH
- INTERSTATE
- STATE HIGHWAY
- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- - - CLASS 4
- - - LEGAL TRAIL
- PRIVATE
- - - DISCONTINUED
- FEDERAL AID HIGHWAY
- [] MAINTENANCE DISTRICT
- [] POLITICAL BOUNDARY
- [] VTRANS REGION BOUNDARY
- NAMED RIVER-STREAM
- - - UNNAMED RIVER-STREAM
- B Point from Local Bridge Data *
- C Point from Local Culvert Data *

* Points are from local town bridge and culvert inventories. Some points may overlap where VTrans has also conducted an inventory on the Town highway.
Data source: VOBCT aka VTCulverts

Produced by:
Mapping Section
Division of Policy, Planning and
Intermodal Development
Vermont Agency of Transportation
April 2022



RUTLAND CITY
COUNTY-TOWN CODE: 1119-0
RUTLAND COUNTY
DISTRICT #3
District Long Name: Mendon District
VTrans Four Region: Southwest

This map was funded in part through grants from the Federal Highway Administration, U.S. Department of Transportation. The representation of the authors expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

Appendix C: Bridge Inspection Report

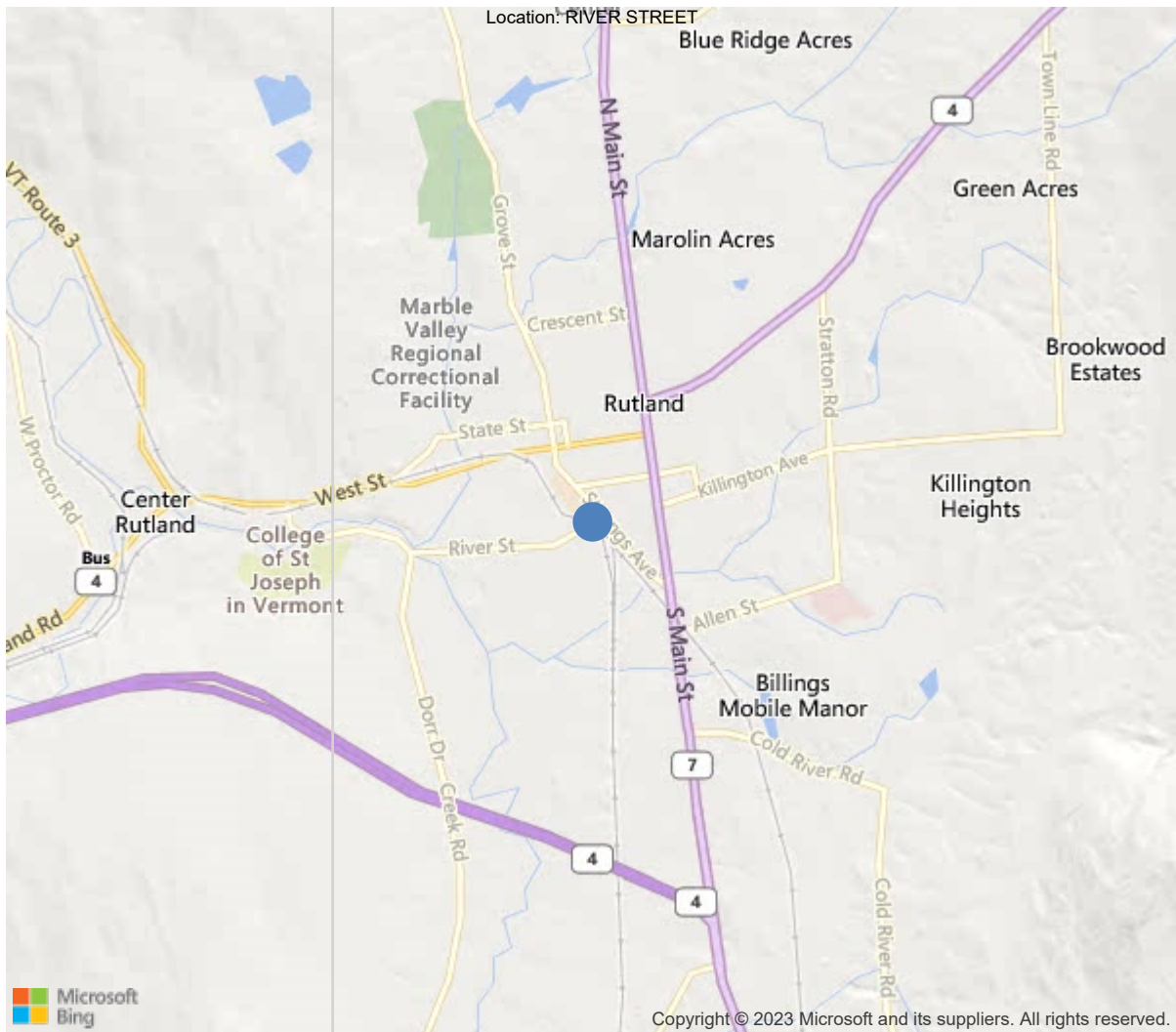


Town: 190 - RUTLAND CITY

District 3, 21 - RUTLAND County

Owner: 1 - State Highway Agency

Maintenance Responsibility: 1 - State Highway Agency



43.60301, -72.97717

IDENTIFICATION	
(1) State Names	50 - Vermont
(8) Structure Number	203052002711192
(5) Inventory Route	1
(2) Highway Agency District	3 - District 3
(3) County Code	21 - RUTLAND
(4) Place Code	61225
(6) Features Intersected	RIVER ST OVER VT RR
(7) Facility Carried	RIVER ST.
(9) Location	RIVER STREET
(11) Mile Point	0 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	
(16) Latitude	43.6030111111111
(17) Longitude	-72.9771694444444
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3 - Steel
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1968
(106) Year Reconstructed	0
(42) Type of Service	52
On	5 - Highway-pedestrian
Under	2 - Railroad
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	5200
(30) Year of ADT	2016
(109) Truck ADT	3 %
(19) Bypass, Detour Length	0 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	79 ft
(49) Structure Length	195 ft
(50) Curb or Sidewalk Width	
Left	5 ft
Right	1.4 ft
(51) Bridge Roadway Width Curb to Curb	30 ft
(52) Deck Width Out to Out	39 ft
(32) Approach Roadway Width (W/Shoulders)	30 ft
(33) Bridge Median	0 - No median
(34) Skew	20 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	30 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	23 ft
Ref:	
(55) Min Lat Underclear RT	16.7 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(111) Pier Protection	
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	17 - Urban Collector
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exis
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	5
(59) Superstructure	6
(60) Substructure	7
(61) Channel & Channel Protection	N
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	6 - MS 18+Mod / HS 20+Mod
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	88
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	52
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	6
(68) Deck Geometry	3
(69) Clearances, Vertical/Horizontal	6
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	N - Bridge not over waterway.
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	195 ft
(94) Bridge Improvement Cost	\$ 2662
(95) Roadway Improvement Cost	\$ 50
(96) Total Project Cost	\$ 2712
(97) Year of Improvement Cost Estimate	2020
(114) Future ADT	5460
(115) Year of Future ADT	2026

INSPECTIONS *			
(90) Inspection Date			07/21/2022
(91) Frequency			24
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

Maintenance Needs

Date Reported: 07/21/2022
Priority: 4 - Maintenance Finding - Next Inspection Cycle
Type of Work: 8 - Deck - Deck replacement
Status: Open
Component: Deck

Deficiency Description

Areas of scaling concrete with saturation, rust staining, scattered varying sizes delams, and small spalls with exposed rebar throughout.

Remarks

A deck replacement project should be considered.



Center Span East pier



Center span West pier

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7605	2705	3700	1200	0
1080	Delamination/Spall/Patched Area	SF	1900	0	700	1200	0
1120	Efflorescence/Rust Staining	SF	3000	0	3000	0	0
510	Wearing Surfaces	SF	5850	5850	0	0	0
301	Pourable Joint Seal	LF	120	120	0	0	0
330	Metal Bridge Railing	LF	390	340	50	0	0
7000	Damage	LF	50	0	50	0	0
804	Concrete Fascia	LF	390	210	180	0	0
1120	Efflorescence/Rust Staining	LF	180	0	180	0	0

58 - Deck (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

Areas of scaling concrete with saturation, rust staining, scattered varying sizes delams, and small spalls with exposed rebar throughout.

200 - Existing pavement depth on bridge (3")

A21 - Deck Wearing Surface Condition (2 - Good)

Minor wear along deck surface.

A24 - Deck Curb Condition (3 - Satisfactory)

Map cracking throughout with light staining and there are small spalled areas at the approach ends with exposed reinforcing. The granite facing at the approach ends have displacement and some detached end segments.

A25 - Deck Sidewalk Condition (4 - Satisfactory)

Minor lineal voided spalling along the granite curbing with debris build up.

A28 - Deck Rail Condition (3 - Satisfactory)

Minor scrapes and dings from plow damage

A31 - Deck Post Condition (2 - Good)

A34 - Deck Joint Condition (2 - Good)

Plug joints are in good condition with a few cracks in them

A39 - Deck Fascia Condition (3 - Satisfactory)

Minor cracking and rust stains along the fascia.

APPROACH

72 - Approach Roadway Alignment (8 - Equal to present desirable criteria)

A13 - Approach Rail Condition (3 - Satisfactory)

Areas of minor bending scattered throughout.

A16 - Approach Post Condition (3 - Satisfactory)

Minor displacement of posts

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	1170	1050	100	20	0
1000	Corrosion	LF	120	0	100	20	0
515	Steel Protective Coating	SF	9360	8210	300	300	550
3420	Peeling/Bubbling/Cracking	LF	1150	0	300	300	550
311	Movable Bearing	EA	18	6	9	3	0
1000	Corrosion	EA	12	0	9	3	0
313	Fixed Bearing	EA	18	9	6	3	0
1000	Corrosion	EA	9	0	6	3	0

59 - Superstructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Areas of minor pitting and section loss at the beam ends and paint peel along the flanges with exposed primer and visible corrosion.

A55 - Lateral Bracing Condition (2 - Good)

Scattered areas of paint peel with corrosion initiated.

A63 - Bearing Condition (3 - Satisfactory)

Exterior bearings on east abutment have heavy rust scale with section loss present. Bearings over piers have minor corrosion with minor pitting and section loss throughout. Bearings at west abutment have minor pitting and section loss.

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	6	0	6	0	0
1130	Cracking (RC and Other)	EA	6	0	6	0	0
215	Reinforced Concrete Abutment	LF	90	80	10	0	0
1130	Cracking (RC and Other)	LF	10	0	10	0	0
234	Reinforced Concrete Pier Cap	LF	90	60	30	0	0
1080	Delamination/Spall/Patched Area	LF	30	0	30	0	0
800	Reinforced Concrete Wing/Retaining Wall	EA	4	0	3	1	0
1080	Delamination/Spall/Patched Area	EA	1	0	0	1	0
1120	Efflorescence/Rust Staining	EA	3	0	3	0	0

60 - Substructure (7 - GOOD CONDITION - some minor problems.)

Abutments are in good condition with minor cracking in them

A71 - Abutment End Walls Condition (3 - Good)

Map cracking in the ends with light staining and some areas of efflorescence.

A77 - Retaining/Wingwall Condition (3 - Good)

Scattered fine map cracks throughout with light staining and areas of efflorescence and small area of rust staining at the abutment ends.

A81 - Pier Seat/Cap Condition (3 - Good)

Areas of past patching in pier caps are in sound condition.

A85 - Pier Columns Condition (3 - Good)

Columns at both piers have areas of past patching and are in sound condition.

CHANNEL

61 - Channel/Channel Protection (N - Not applicable.)

GENERAL OBSERVATION

Wide spread saturation throughout the deck with developing deterioration, a deck replacement project should be considered; see maintenance report.



Deck East span



Deck West span



Deck center span



North rail damage West approach



South curb East end



SW end approach curb/fascia



Sidewalk from West abutment



Sidewalk from East end



South rail damage, missing ballasters & displaced curbing at West approach



Joint East abutment



Joint East pier



Joint West pier



Joint West abutment



North fascia/elevation



South end East pier joint



East span



Center Span East pier



Center span West pier



Center span West pier



West span



East abutment



East pier



West pier



West abutment



NW retaining wall



SW retaining wall

Appendix D: Preliminary Geotechnical Information



Geotechnical Scoping Report Data Form

General Project Information

Project Name:	Rutland City BF 3000(24)				
Project Pin:	22J400				
Requestor Name:	Laura Stone, P.E., Scoping Engineer				
Prepared By:	J. Sophis, AOT Geologist				
Date:	1/16/2024				
Structure Information:	Town	Route		Mile Marker	
	Rutland City	River St. (URB-3052)		0.82	
Structure Type:	Bridge	Structure ID #:	00027	Conceptual Treatment Type:	Deck
Existing Structure Description:	Bridge 27 is a three span rolled steel girder Bridge is located over the Vermont Railway train tracks. Structures is considering a deck replacement.				

Geological Information

Surficial Map Description:	Glaciolacustrine deposit of Pebbly Sand				
Bedrock Map Formation Name:	Dunham Dolostone				
Bedrock Map Member Name:	N/A				
Bedrock Map General Rock Type:	Rock Type 1:	Dolostone	Rock Type 2:	Conglomerate	
Bedrock Map Detailed Rock Description:	Dolostone, buff- and pink-mottled and massive, or light-gray, pinkish-gray-weathering, and massive to poorly bedded. Contains distinctive small pebbles and grains of well-rounded quartz, minor beds of dolostone-breccia and conglomerate occur near Rutland.				

Record Plan Information

Are there Record Plans?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Record Plans ID #:	Plot Set: 68x711 Pin: 68x711 Project Number: SAB 6550
Record Plan Notes:	Record plans, dated 1968, detail boring information, and foundation details for the abutments and piers.

Subsurface Information

Are there Historical Borings?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is there Well Data available near the project limits?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Well Data Information:	Well & Report #	Bedrock Depth (ft)	Distance from Project
	Report #9 Well Tag #361	Not encountered to a depth of 230 ft	0.20 mi
	Report #4461	Not Encountered to a depth of 23 ft	0.30 mi
	Report #2	8 ft	0.45 mi
	Report #16	21 ft	0.45 mi
Are Bedrock Outcrops Present at the Site?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

General Site Conditions

Site Visit Conducted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Date of Site Visit:	N/A
Are there Overhead Utilities at the Site?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Are Environmental Hazards Present at the Site?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Information regarding found Environmental Hazards:	A hazardous waste site is located adjacent to the start of the bridge.

Site Condition Notes:
From bridge inspection report: The deck has areas of scaling concrete with widespread saturation, rust staining, scattered varying sizes delamination, and small spalls with exposed rebar throughout. Deck curb has map cracking throughout with light staining and there are small-spalled areas at the approach ends with exposed reinforcing. The granite facing at the approach ends has displacement and some detached end segments. The deck rail has minor scrapes and dings from plow damage. The deck fascia has minor cracking and rust stains along the fascia. The exterior bearings on the east abutment have heavy rust scale with section loss present. Bearings over piers have minor corrosion with minor pitting and section loss throughout. Bearings at west abutment have minor pitting and section loss. Abutments are in good condition with minor cracking in them.

Note that representative site photos are provided in Appendix A.

Recommendations

Are Borings Needed in the Scoping Phase?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Subsurface Investigation Recommendations:	
N/A	
Foundation & Structure Type Recommendations:	
N/A	

The information provided is utilized from the databases and references noted in the Reference Section below. This form has been completed to the best of staff and reviewer knowledge.

Please reach out to us if you have any questions or concerns.

Staff Name & Title:

Julie Sophis, AOT Geologist	Julie.Sophis@vermont.gov (802) 793-3402
-----------------------------	---

Reviewer Name & Title:

August Arles, Geotechnical Engineer	august.arles@vermont.gov (802) 498-5715
-------------------------------------	---

References:

Doll, C. G., 1970, Surficial Geologic Map of Vermont, Vermont Geological Survey, Montpelier, VT.

Ratcliffe, N. M., Stanley, R. S., Gale, M. H., Thompson, P. J., Walsh, G. J., 2011, Bedrock Geologic Map of Vermont, Vermont Geological Survey, Montpelier, VT.

Vermont Agency of Natural Resources Department of Environmental Conservation, Natural Resources Atlas, www.anr.vermont.gov/maps/nr-atlas%20

APPENDIX A



Figure A1: Overall View. Rutland City, Bridge #27, River Street. Photo from 07/21/2022 inspection.



Center Span East pier



Center span West pier



Center span West pier



West span



East span

Figure A2: Condition photos of deck. Rutland City, Bridge #27, River Street. Photo from 07/21/2022 inspection.

Appendix E: Resource ID Completion Memo



OFFICE MEMORANDUM
AOT - PDB - ENVIRONMENTAL SECTION

RESOURCE IDENTIFICATION COMPLETION MEMO

TO: Laura Stone, Project Manager
FROM: Julie Ann Held, Environmental Specialist
DATE: July 8, 2024
Project: Rutland City BF 3000(24) 22J400

ENVIRONMENTAL RESOURCES:

- Archaeological Resources: Yes X No See Archaeological Resource ID Memo
Historic Resources: X Yes No See Historic Resource ID Memo
Wetlands: Yes X No See Natural Resource ID Memo
Aquatic Organism Passage: Yes X No See Natural Resource ID Memo
Agricultural Soils: X Yes No See Natural Resource ID Memo
Wildlife Habitat: Yes X No See Natural Resource ID Memo
Endangered Species: X Yes No See Natural Resource ID Memo
Stormwater Considerations: X Yes No See Stormwater Resource ID Memo
Landscape Considerations: X Yes No See Landscape Resource ID Memo
6(f) Properties: Yes X No See Environmental Specialist Resource ID Memo
Hazardous Waste: X Yes No See Environmental Specialist Resource ID Memo
Contaminated Soils: X Yes No See Environmental Specialist Resource ID Memo
Wild Scenic Rivers: Yes X No See Environmental Specialist Resource ID Memo
Act 250 Permits: Yes X No See Environmental Specialist Resource ID Memo
FEMA Floodplains: Yes X No See Environmental Specialist Resource ID Memo
Flood Hazard Area: Yes X No See Environmental Specialist Resource ID Memo
River Corridor: Yes X No See Environmental Specialist Resource ID Memo
Protected Lands: Yes X No See Environmental Specialist Resource ID Memo
US Coast Guard: Yes X No See Environmental Specialist Resource ID Memo
Lakes and Ponds: Yes X No See Environmental Specialist Resource ID Memo
Scenic Highway/ Byway: Yes X No See Environmental Specialist Resource ID Memo
Environmental Justice: X Yes No See Environmental Specialist Resource ID Memo
Other: Yes X No See Environmental Specialist Resource ID Memo

cc:
Project File

Appendix F: Natural Resources Memo

Caitlin Drasher
VTrans Biologist
State of Vermont
Environmental Section

Barre City Place
 219 Main St.
 Barre City, VT 05641
<https://vtrans.vermont.gov/>

Agency of Transportation

To: File
 From: Caitlin Drasher, VTrans Biologist
 Date: 9/26/2023
 Subject: RUTLAND CITY BF3000(24) 22J400 – Natural Resource ID

I have completed my natural resource identification for the above referenced project (Fig. 1). This project is located on River Street (TH52) at Bridge 27. My evaluation has included wetlands, wildlife habitat, agricultural soils, and rare, threatened, and endangered species. I have reviewed existing mapped information and I performed a field visit on September 21, 2023.



Figure 1. Project location on River Street in Rutland, VT.

Wetlands/Watercourses

I reviewed existing VSWI, Advisory Wetland Mapping and USFWS Wetland Mapper prior to field work and no wetlands were mapped in the vicinity. NRCS soils mapping lists the east side of the project area as Paxton fine sandy loam, 2 to 8 percent slopes (Fig. 2). No watercourses intersect the project area.

I performed a site visit in September 2023 to evaluate the site for the potential presence of wetlands using the US Corps of Engineers Wetland Delineation Methodologies and the VT Wetlands Rules. Wetlands were not identified, as this is a dry railroad crossing.

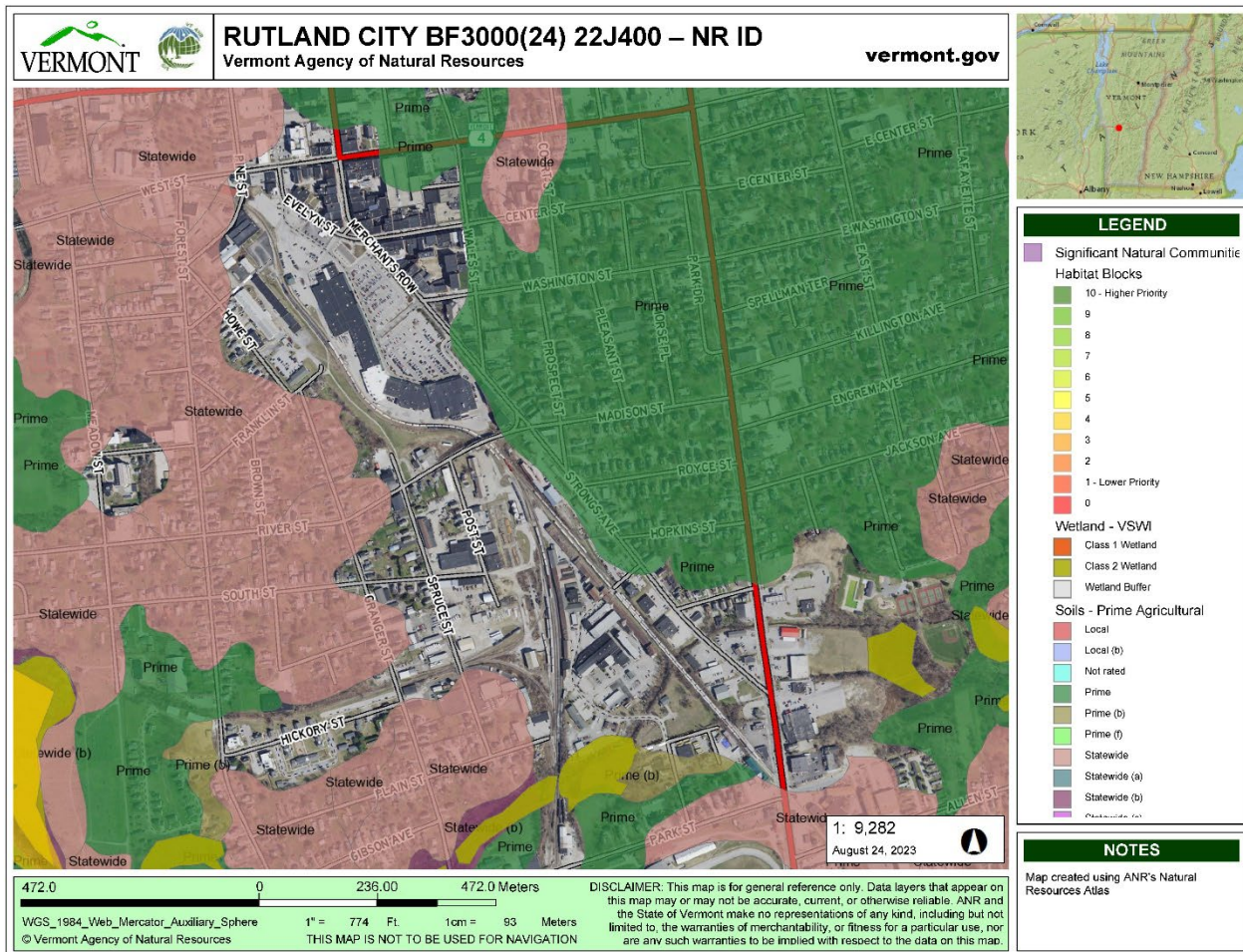


Figure 2. Mapped agricultural soils and wetlands surrounding project area. No wetlands mapped near project location.

Wildlife Habitat

I have queried the VT Fish and Wildlife Biofinder and the project site is not within any priority habitat blocks. Due to the surrounding dense human development, it is unlikely to facilitate terrestrial wildlife movement (other than urban-adapted species like raccoon or opossum). This structure is over a railway and therefore does not pass aquatic organisms.

Rare, Threatened and Endangered Species (RTE)

I have queried the ANR Natural Resource database for RTE species and significant natural communities and none were present.

The USFWS IPac mapping database lists:

Myotis septentrionalis, northern long-eared bat (E)

Danaus plexippus, Monarch Butterfly (candidate species for listing)

There are no critical habitats within this project listed area under this jurisdiction. Suitable habitat for northern long-eared bat roosting includes trees above or equal to 3" DBH with cavities or crevices in the bark, in either live or dead snag trees. Bridges also provide suitable roosting habitat.

Additionally the USFWS has indicated the following bird species have a higher likelihood of presence during the summer months:

Haliaeetus leucocephalus, Bald Eagle

Aquila chrysaetos, Golden Eagle

Cardellina canadensis, Canada warbler

Hylocichla mustelina, Wood thrush

Coccothraustes vespertinus, Evening Grosbeak

Coccyzus erythrophthalmus, Black-billed Cuckoo

Dolichonyx oryzivorus, Bobolink

Setophaga tigrina, Cape May Warbler

Chaetura pelagica, Chimney Swift

Tringa flavipes, Lesser Yellowlegs

Contopus cooperi, Olive-sided Flycatcher

Dendroica discolor, Prairie Warbler

Antrostomus vociferus, Eastern Whip-poor-will

During NEPA further evaluation will be conducted to determine if any surveys for RTE species will be required.

Agricultural Soils:

Prime soils, Paxton fine sandy loam, 2 to 8 percent slopes, were mapped in the east side of the project (Fig. 2).

Invasive Species

Phragmites (*Phragmites australis*) was noted within the project area.

Appendix G: Archeology Memo



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.®

15 Research Drive
Amherst, Massachusetts 01002
Tel 413.256.0202 Fax 413.256.1092
www.swca.com

To: Jeannine Russell, VTrans Archaeology Officer
From: SWCA Environmental Consultants
Date: June 17, 2024
Subject: Rutland City BF 3000(24) 22J400 Archaeological Resource ID
Br 27 River Street over Vermont Railway

Bridge 27 is located on River Street, which turns into Madison Street before connecting to South Main Street in Rutland VT. The scope of this project has not yet been defined so we have been asked to look at the general project area for resource potential to account for things like off-road access, temporary bridge, and staging. In order to encompass these potential impacts, a 50-meter (m) radius around the bridge was surveyed (project area).

The general project area sits in the city of Rutland, in the Western New England Marble Valleys. Coolidge Range is located to the east and Blue Ridge Mountain to the northeast (Figures 1 and 2). The closest water source is Moon Brook located approximately 550 m southeast of the project area. Otter Brook is located approximately 1 kilometer (km) west of the project area. Bridge 27 is located within a developed area, in Rutland City. Bridge 27 crosses over the Vermont Railway.

The closest Pre-Contact site, (VT-RU-0075), is located 1.5 km west along Otter Creek. Other Pre-Contact and historic period sites are located over two km to the west following Otter Creek. A large collection of sites is located approximately two km south of the project area. No Pre-Contact sites are recorded within or adjacent to the project area. The immediate project area is highly disturbed, with most of the area paved and currently used for commercial or residential properties. The closest National Register of Historic Places (NRHP) location is the Rutland Downtown Historic District, located approximately 544 m northwest of the project area. This area contains 90 properties which contribute to its listing on the NRHP (VDHP 2024). While there are no NRHP within the project area, the Vermont railway Depot, the Adirondack Tire and Service building, and nearby residential areas on Strongs Ave and Post Street could be of potential historic interest.

Situated within the Western New England marble Valley, much of Rutland's development surrounded marble quarries. Gravestones were cut and carved as early as 1820. However, commercial marble production began in the mid-1860s with the use of steam driven quarrying machines. Many marble works companies were opened, each operating multiple quarries, by the mid-1860s. Several sawmills were documented to be running in conjunction with the quarries (Smith 1886). There are no marble quarries or mills found within the project area. The Vermont Railway, originally chartered under the name Rutland Railroad, built in 1849, was a large contribution to the development of the city of Rutland. Rutland Railroad was used for both commercial and passenger use into the 1900s. Still standing to this day, the Vermont Railway saw a decline in use and revenue post World War II. Worker strikes led to Rutland Railroad being shut down in 1961, however the railroad was not abandoned at this time. Currently operated by Vermont Railway the tracks under Bridge 27 are used by a passenger train (Shaughnessy 1964). A map of Rutland City in 1876 by H.W. Burgett and Company, depicts a larger complex associated

with the Vermont Railway. Two engine houses, two woodsheds, and a paint shop were all situated near or within the project area (Burgett and Beer 1876).

Shannon Nelson-Maney, SWCA Assistant Staff Archaeologist, conducted a site visit on June 7th, 2024, to assess the area for archaeological potential. The entirety of the bridge is located within a developed area in Rutland, Vermont. The area surrounding the bridge is relatively level, however the naturally rolling hills were artificially levelled for the construction of the Vermont Railway and the development of the city of Rutland. The northeastern quadrant consists of a paved parking lot and loading dock for the associated shopping plaza to the north of the project area. Within this quadrant there is also a commercial property situated atop a hill sloping southwest to the railroad track (Figure 3). The southeastern quadrant consists primarily of construction associated with the Vermont Railway, the associated railway depot, and a storage area located to the east of the railway. The land within the southeast quadrant is an artificially terraced landform. The northwest quadrant is occupied by the Vermont Railway and the Rutland Community Cupboard. The land slopes to the south along the Vermont Railway where a propane tank occupies the artificially leveled area (Figure 4). At the base of the slope, and west of the propane tank, is wetland vegetation. Finally, the southwest quadrant is occupied by the Vermont Railway depot and by residences. This land has also been artificially leveled for construction of the railroad (Figure 5).

In conclusion, the area surrounding Bridge 27 is highly disturbed and occupied by commercial and residential buildings. There are no areas of archaeological sensitivity within the 50 m project area defined before the site visit.



Figure 1. Project area location in Vermont.

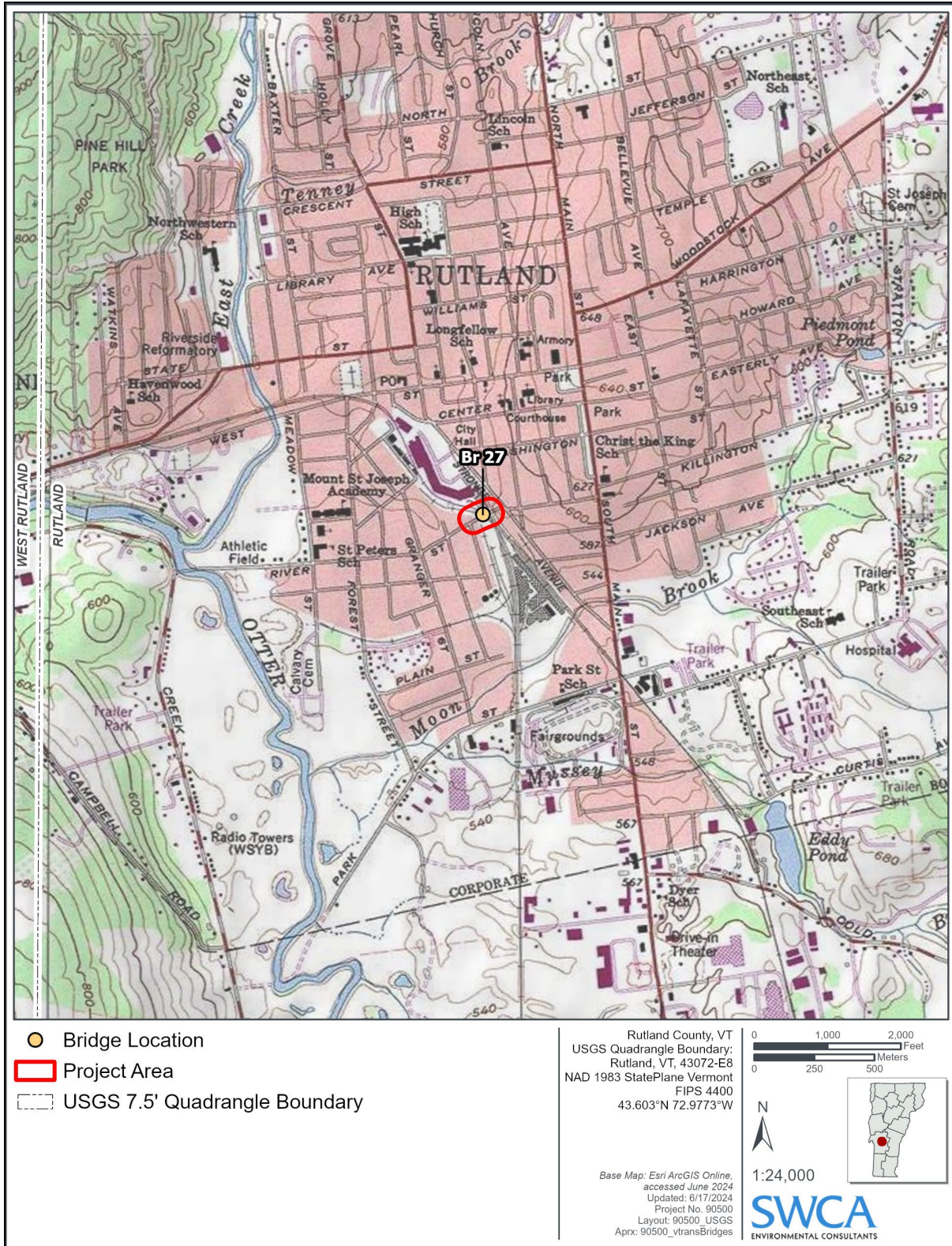


Figure 2. Project area location in Rutland, Vermont.



Figure 3. Overview facing northeast towards Strongs Ave with paved loading bay and commercial property.



Figure 4. Overview photo facing northwest showing artificial terraced land, Vermont Railway, shopping center, and propane tank.



Figure 5. Overview facing northeast towards River Street with depot and flattened land.

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Appendix H: Historic Memo

HISTORIC RESOURCES IDENTIFICATION SURVEY BRIDGE NO. 27 OVER VT RR, RIVER STREET RUTLAND CITY BF 3000(24)

Rutland, Rutland County, Vermont



Prepared for:



Vermont Agency of Transportation
219 North Main Street
Barre, Vermont 05641

Prepared by:



WSP USA Inc.
433 River Street, 7th Floor
Troy, New York 12180

May 29, 2024

HISTORIC RESOURCES IDENTIFICATION SURVEY
BRIDGE NO. 27 OVER VT RR, RIVER STREET
RUTLAND CITY BF 3000(24)

Rutland
Rutland County, Vermont

Prepared for:

Vermont Agency of Transportation
219 North Main Street
Barre, Vermont 05641

Prepared by:

Kate Umlauf, Austin White, and Camilla McDonald

WSP USA Inc.
433 River Street, 7th Floor
Troy, New York 12180

May 29, 2024

Abstract

On behalf of the Vermont Agency of Transportation (VTrans), Barre, VT, WSP USA Inc. (WSP) of Troy, New York, completed a historic resources identification survey (ID Report) involving the anticipated future repair and/or replacement of 27 bridges throughout the state. This particular report addresses Rutland Bridge No. 27 over Vermont Railroad (VT RR), River Street, City of Rutland, Rutland County. The scope of work for these resource identification projects includes surveys to identify historic buildings, structures, objects, districts, landscapes, and Section 4(f) properties in the preliminary aboveground survey area (survey area), including the bridge, that may be directly, indirectly (including views of the project from the survey area), and/or cumulatively impacted by the potential project. As the forthcoming bridge projects have no specific plans, each bridge and their proximal historic resources will be documented in ID Reports to inform the project designers regarding historic and Section 4(f) resources and for National Register of Historic Places eligibility determinations in the Section 106 review. WSP performed no archaeological investigations for these ID Reports.

The survey area extends 99 meters (325 feet) around either end of Rutland Bridge No. 27, including all four quadrants, which includes all areas that may be directly impacted by either rehabilitation or replacement of the current bridge and have substantial visibility of the current bridge.





This reconnaissance survey included background research and fieldwork, which was conducted on March 26, 2024. All surveys were undertaken in accordance with the guidelines and criteria established by the National Park Service and in 36 Code of Federal Regulations (CFR) 60.4, and the Advisory Council on Historic Preservation's Reasonable and Good Faith Identification Standard.

The goal of the survey was to identify (1) buildings, structures, objects, districts, and landscapes in the survey area previously listed in the Vermont State Register of Historic Places/National Register of Historic Places (SR/NRHP) (the criteria for both are identical), (2) previously unsurveyed historic aboveground resources in the survey area that may be eligible for listing in the SR/NRHP, and (3) historic, park, recreational, or refuge Section 4(f) properties. The survey also evaluated the potential effects of the project on viewsheds associated with any SR/NRHP-listed and -eligible properties. As the project is still in the planning stages and may take several years to be implemented, WSP identified properties that meet the 45-year mark for NRHP evaluation.

The survey area contains a total of 13 resources: six SRHP-listed properties along Strongs Avenue and at 118 Post Street and 65 River Street, and seven previously unsurveyed resources, including Rutland Bridge No. 27 (Table A-1). No park, recreational, or refuge Section 4(f) properties were identified in the survey area.

It is WSP's opinion that three of the six SRHP-listed properties should remain listed in the SRHP and are therefore eligible for listing in the NRHP. In WSP's opinion Adirondack Tire & Service, the United Methodist Church, and the Filling Station should be removed from the SRHP, thereby precluding their NRHP eligibility. Furthermore, in WSP's opinion further evaluation of the filling station should be conducted if it may be affected by future projects. It is also WSP's opinion that all the previously unsurveyed resources are not eligible for the SR/NRHP. In WSP's opinion Rutland Bridge No. 27 is not eligible for the SR/NRHP because it does not meet the Criterion C registration requirements outlined in the Multiple Property Documentation form, *Metal Truss, Masonry and Concrete Bridges of Vermont, 1820–1978*.

TABLE A-1; NRHP ELIGIBILITY RECOMMENDATIONS FOR PREVIOUSLY
 AND NEWLY IDENTIFIED HISTORIC RESOURCES IN SURVEY AREA

MAP ID (Rutland-)	RESOURCE NAME	LOCATION	PREVIOUS ELIGIBILITY	WSP ELIGIBILITY OPINION	PHOTOGRAPH
1	Adirondack Tire & Service	55 Strongs Avenue, Rutland	Listed, SRHP	Not Eligible	
2	Mill	118 Post Street, Rutland	Listed, SRHP	Remain Listed, SRHP; Eligible, NRHP	
3	Filling Station	61 Strongs Avenue, Rutland	Listed, SRHP	Not Eligible	
4	United Methodist Church	60 Strongs Avenue, Rutland	Listed, SRHP	Not Eligible	
5	Commercial Block	56 Strongs Avenue, Rutland	Listed, SRHP	Remain Listed, SRHP; Eligible, NRHP	
6	Nusantara Warehouse	37 Strongs Avenue, Rutland	Listed, SRHP	Remain Listed, SRHP; Eligible, NRHP	

MAP ID (Rutland-)	RESOURCE NAME	LOCATION	PREVIOUS ELIGIBILITY	WSP ELIGIBILITY OPINION	PHOTOGRAPH
7	Rutland Bridge No. 27 over Vermont Railroad	River Street, Rutland	Not evaluated	Not Eligible	
8	Multi-family Residence	54 Strongs Avenue, Rutland	Not evaluated	Not Eligible	
9	Angler Pub	52 Strongs Avenue, Rutland	Not evaluated	Not Eligible	
10	Cara Mia's	50 Strongs Avenue, Rutland	Not evaluated	Not Eligible	
11	Multi-family Residence	116 Post Street, Rutland	Not evaluated	Not Eligible	
12	Residence	64 River Street, Rutland	Not evaluated	Not Eligible	


MAP ID (Rutland-)	RESOURCE NAME	LOCATION	PREVIOUS ELIGIBILITY	WSP ELIGIBILITY OPINION	PHOTOGRAPH
13	Price Chopper	38 Rutland Shopping Plaza, Rutland	Not evaluated	Not Eligible	

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I. Introduction

A. Project Description

On behalf of the Vermont Agency of Transportation (VTrans), Barre, VT, WSP USA Inc. (WSP) of Troy, New York, completed a historic resources identification survey (ID Report) involving the anticipated future repair and/or replacement of 27 bridges throughout the state. This particular report addresses Rutland Bridge No. 27 over Vermont Railroad (VT RR), River Street, City of Rutland, Rutland County. The scope of work for these resource identification projects includes intensive surveys to identify and evaluate all historic and Section 4(f) properties in the survey area, including the bridge, that may be directly, indirectly (including views of the project from the survey area), and/or cumulatively impacted by the potential project.

The project is located along River Street in the City of Rutland, Rutland County (Figure 1). The survey area for the resource identification survey extends 99 meters (325 feet) around either end of Rutland Bridge No. 27, including all four quadrants, based on the visibility and proximity with regard to the structure's dimensions (Figure 2).

B. Objectives

The goal of the survey was to identify (1) historic architectural resources (properties) in the survey area previously listed in the Vermont State Register of Historic Places/National Register of Historic Places (SR/NRHP) (the criteria for both are identical), and (2) previously unsurveyed historic architectural resources in the survey area that may be eligible for listing in the SR/NRHP. The survey also evaluated the potential effects of the project on viewsheds associated with any SR/NRHP-listed and -eligible historic resources. The investigation included background research and fieldwork. Fieldwork was conducted on March 26, 2024.

Determinations of eligibility for the NRHP followed the guidelines and criteria established by the National Park Service (NPS) (NPS 2002) and in 36 Code of Federal Regulations (CFR) 60.4, and the Advisory Council on Historic Preservation's Reasonable and Good Faith Identification Standard). In 2001 the Vermont Division for Historic Preservation (VDHP) changed the Vermont SRHP criteria to make them identical to the NRHP criteria, and all resources then listed in the Vermont SRHP were deemed eligible for the NRHP, creating a single class of historic properties and thereby streamlining the historic preservation permitting process in Vermont. As the unspecified project is still in the planning stages and may take several years to be implemented, WSP identified properties that meet the 45-year mark for evaluation for the NRHP.

This report contains six chapters. Following the introduction in Chapter I, Chapter II describes the survey's methodology. Chapter III provides the historic context for the project vicinity. Chapter IV describes the survey results, and the conclusions and recommendations appear in Chapter V. Chapter VI contains the references cited.

This investigation was conducted under the direction and supervision of WSP Contract Manager Joseph Tomberlin. Senior Architectural Historian Camilla McDonald supervised the QA/QC process. Architectural Historian Austin White conducted fieldwork, and Architectural Historian Kate Umlauf conducted research and report writing with assistance from Mr. White. Principal Draftsperson Jacqueline L. Horsford prepared the graphics. Principal Editor Anne Moiseev edited the report.

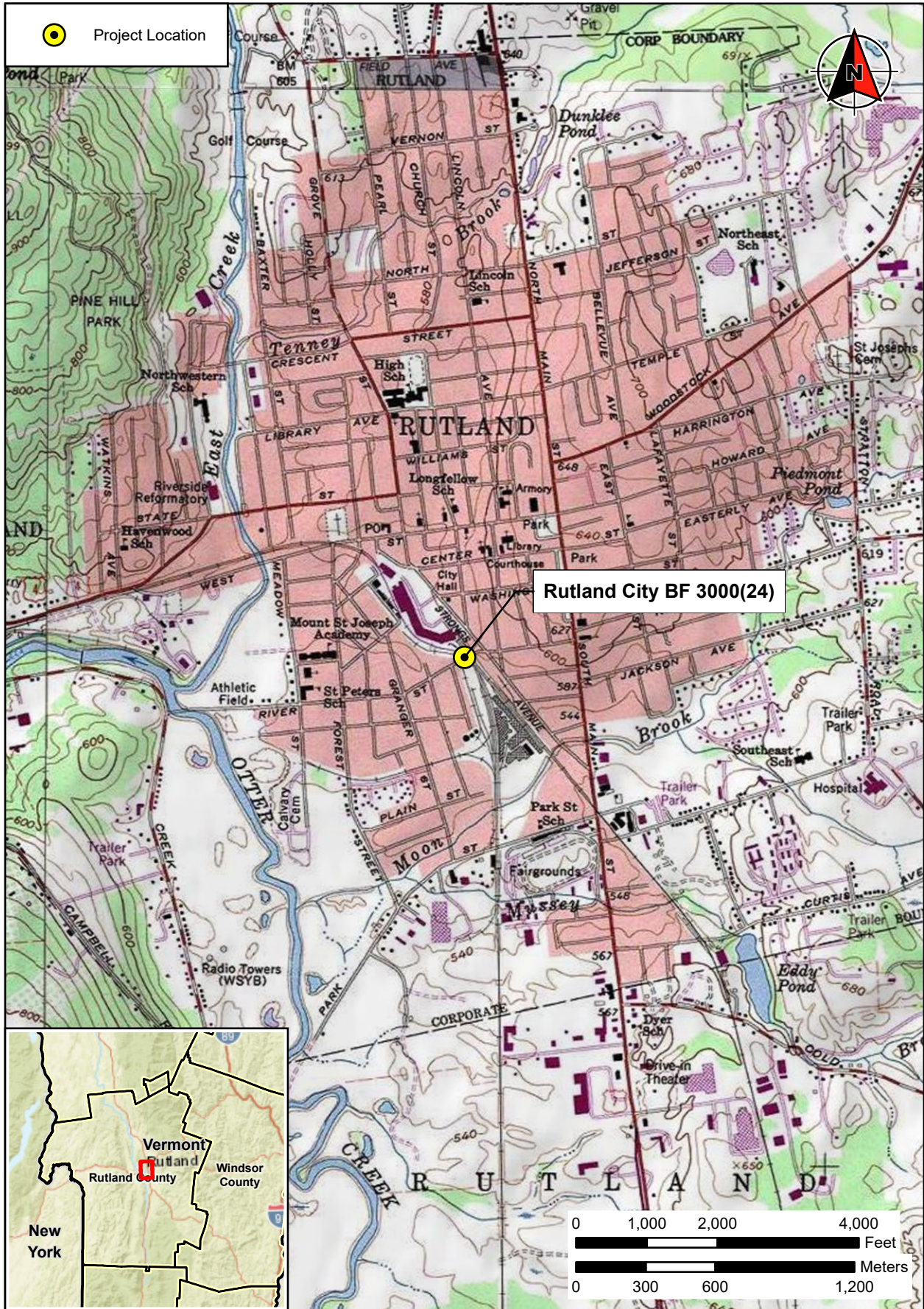


FIGURE 1: Location of Project (ESRI USA Topo Maps 2019 [USGS Rutland])

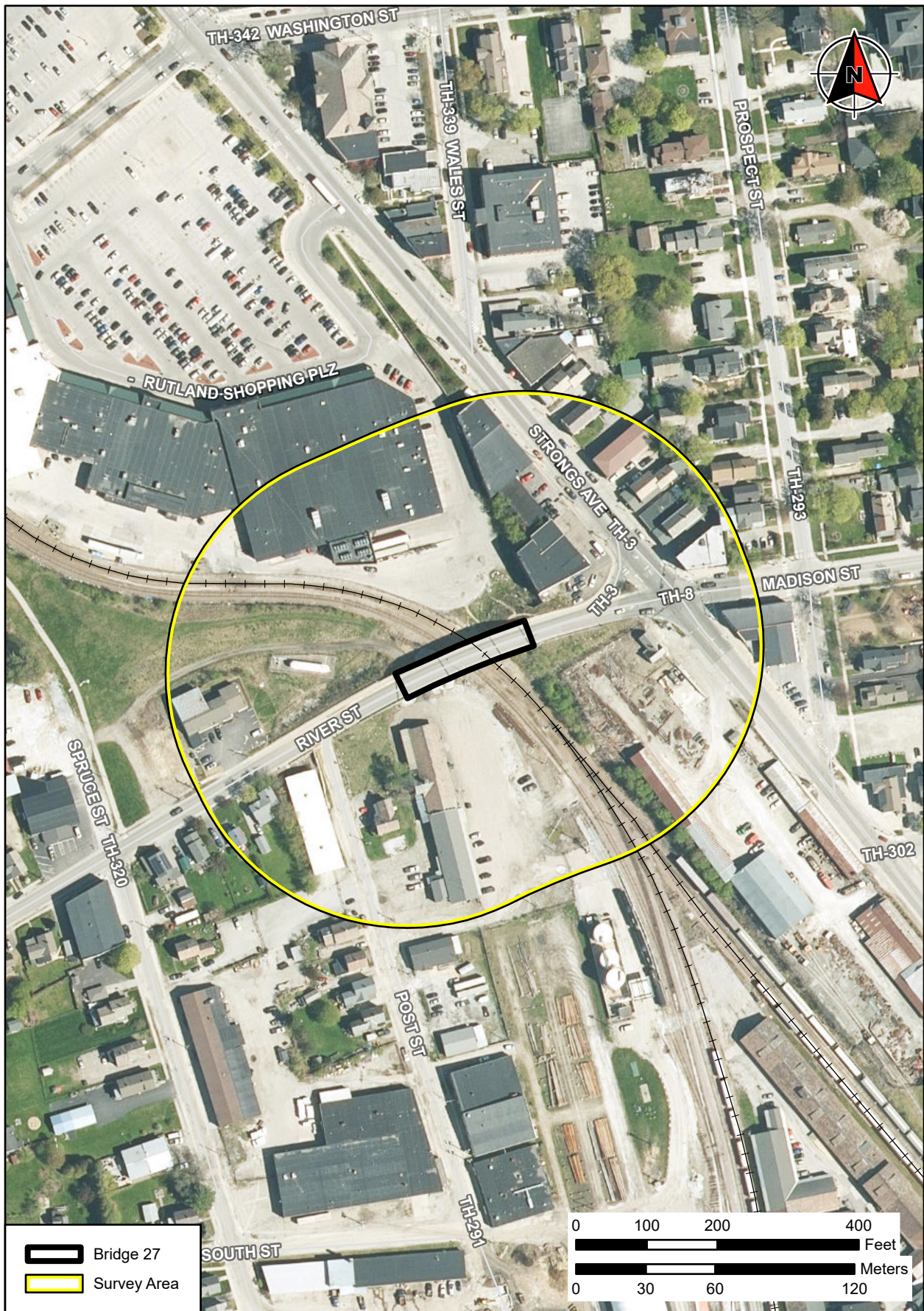


FIGURE 2: Project Survey Area (ESRI World Imagery 2022)

II. Methodology

WSP's primary task for this survey was to identify historic properties in the survey area listed in or eligible for listing in the NRHP. WSP reviewed site files at the VDHP, identifying documented resources in the survey area that are already either listed in or eligible for listing in the NRHP. Location information on the identified properties was mapped, and nomination forms and eligibility determination data were copied for comparison against current conditions during the field survey. Available historic context data on the development of the community in the survey area were gathered from VDHP files, including context information from VDHP (1989), to assist in the evaluation of additional historical resources identified during the field survey.

The field survey checked the continued existence of the historic properties identified during the site file check and collected information on each property's architectural and historical integrity and eligibility for listing in the NRHP. Each resource in the survey area was documented through digital photographs and narrative field notes. Some properties were not visible from the right-of-way, and those properties were examined through historical and current aerial photographs to determine their age.

WSP followed the NRHP criteria in evaluating each resource. According to the NRHP criteria for evaluation, properties may be eligible for the NRHP if:

- A. they are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. they are associated with the lives of significant persons in our past; or
- C. they embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. they have yielded or may be likely to yield, information important in history or prehistory [NPS 2002:7].

WSP's eligibility assessments were further guided by the Multiple Property Documentation (MPD) form, *Metal Truss, Masonry and Concrete Bridges of Vermont, 1820-1978* (Louis Berger 2018).

Results of the background research and field survey were analyzed under the established criteria to determine the NRHP eligibility of each architectural resource, whether previously recorded or newly identified.

III. Historic Context

A. Historical Overview of Rutland County

Rutland County is located in the southwestern portion of the state approximately 30 miles southwest of Montpelier. The land that comprises Rutland County was incorporated from Bennington County in 1781 and also included the area now known as Addison County until 1785 (Smith and Rann 1886).

Settlement of Rutland County began around 1760, with the arrival of settlers from western Massachusetts, Connecticut, and the Hudson Valley. The pattern of settlement in the county “generally flowed south to north through the Taconic hills and Otter Creek valley, and then into the foothills of the Green Mountains” (Johnson and Gilbertson 1988:3). Primary settlements occurred as clusters of buildings near mills or a meetinghouse.

Residents of Rutland County were primarily involved in agriculture. The early farms were small in scale and diversified. Established farms produced a cash crop, such as potash made from wood ashes and easily created by clearing land. The discovery of local iron deposits, such as Tinmouth “bog iron,” in the 1780s led to the iron manufacturing industry. By 1793 Rutland County contained 16 forges and three blast furnaces, more than in the rest of the state (Sheridan and Jones 2020). After 1790 the increased demand for potash and wheat in New England and Europe helped stimulate the agricultural economy. By 1791 Euro-American settlers numbered 15,590; by 1810 that number had nearly doubled to 29,486. Sawmills were established in the 1780s in Pittsfield, Middletown, Ira, Mount Holly, Wallingford, Benson, Danby, Fair Haven, Sudbury, and West Haven. With widespread availability of sawn lumber and nails during the 1780s, construction of wood-frame houses was made easier, and the Cape Cod style was the most common. Previously, the majority of dwellings were log or block houses constructed of hewn logs (Johnson and Gilbertson 1988).

The creation of toll roads in the early nineteenth century generated revenue to construct additional maintained roads that helped farmers and manufacturers transport products to market much faster and more efficiently. This was a boon to the local economy. High prices during the War of 1812 continued the economic prosperity, but with resumption of British imports after the war, the economy crashed. Vermont’s wool industry suffered with the resumption of wool imports, and European farming imports dropped wheat prices and further added to the economic decline. Hardships that came with fighting during the War of 1812, natural disasters, an epidemic, and two seasons of famine discouraged settlement in Rutland County between 1811 and 1817. Many emigrated in search of better opportunities (Johnson and Gilbertson 1988).

The years from 1820 to 1850 were a difficult time for industry in Rutland County. Although tariffs helped protect the wool and iron markets, in earlier years transportation costs were high. Companies that were able to turn a profit eventually supported better transportation, and industries with access to the railroads that came in the mid-nineteenth century were able to succeed. Local manufacturers whose goods could be mass-produced elsewhere or were not located on rail lines suffered (Johnson and Gilbertson 1988). It was not until the construction of railroads between 1849 and 1852 that the local economy began to rise and the population began to increase. Irish immigrants escaping the Irish potato famine in the 1840s were among the first immigrants to settle in Rutland County, to help build the Vermont railroads. Towns without railroad connections, however, continued a slow population decline. With the invention of insulated iced railroad cars, the dairy industry prospered. Farms shifted from sheep specialization to breeding stock and dairy. In 1850 Rutland County produced the most cheese in the state and was fifth in butter production. Factory-produced cheese eventually replaced farm cheese, and fluid milk became much more important. Between 1870 and 1880, a milk train between Rutland County and New York City was initiated. In addition to contributing to the population increase, the railroads fostered commercial and industrial wealth in the

county. By 1870 manufactures value (\$3,714,795) had exceeded the value of agricultural products (\$3,458,102) (Johnson and Gilbertson 1988).

Although sheep raising and later dairying were economically important, the majority of farmers between 1850 and 1900 relied primarily on small-scale diversified agriculture. During the early twentieth century the number of farms in the county declined by over 30 percent and the farm population declined by 25 percent or more. The decline in agriculture coincided with a shift to industrial manufacturing, where investment in building and equipment was double that of agriculture. During the Great Depression in the 1930s, agricultural overproduction and low prices made life on the farm more difficult. As a result the number of farms and the amount of county land containing farms decreased further. In 1940 only about 20 percent of the county population lived on farms. Although the diversity of the agricultural market declined, dairying remained important and was still economically sound (Johnson and Gilbertson 1988).

B. Historical Overview of the City of Rutland

The Town of Rutland was chartered in 1761 as part of the New Hampshire Grants issued by Gov. Benning Wentworth of New Hampshire. The first named grantee was John Murray, a prominent citizen from Rutland, Massachusetts, who is thought to have given the same name to Rutland, Vermont (Smith and Rann 1886).

Rutland, for the early fur traders, lay on the route between Fort Drummer, Massachusetts, and Lake Champlain. Rutland served as a frontier settlement during the Revolutionary War and was the site of two small forts erected by the Green Mountain Boys, one in the eastern village and the other at the head of the falls at Otter Creek. These forts served to help curb British invasions from Canada and to expedite communication between eastern Vermont and Lake Champlain (Coolidge and Mansfield 1859).

Marble was discovered early in the eighteenth century, and these quarries became the principal business of Rutland. In 1847 the Village of Rutland was incorporated, and in 1856 it was divided into seven wards (Smith and Rann 1886). Because of the marble quarries and the construction of railroads, settlement increased throughout Rutland during the nineteenth century. During the mid-nineteenth century the town was home to eight churches (including one Baptist, two Methodist, and two Roman Catholic), 21 school districts, six marble mills, two flour mills, and one iron foundry and machine shop (Coolidge and Mansfield 1859). By 1870 Rutland was world renowned for its marble business and was the railroad crossroads of Vermont. A historical map of Rutland (United States Geological Survey [USGS] 1893) depicts four different railroads converging in Rutland: Delaware and Hudson (D.&H. R.R.), Clarendon and Pittsford (C.&P. R.R.), Central Vermont (C.V. R.R.), and Bennington and Rutland Railroad.

The present-day towns of Proctor and West Rutland were formed from portions of the Town of Rutland in 1886, and in 1892 present-day City of Rutland was separated from the Town of Rutland and was incorporated (Rutland Historical Society [RHS] 2014). Currently, the Town of Rutland completely surrounds the separately incorporated City of Rutland. By the late nineteenth and early twentieth centuries, the City of Rutland was experiencing widespread urbanization. In the 1890s Rutland became a local center for music, literature, and theater. In 1894 the horse-drawn trolley was replaced by the electric trolley and was expanded to reach Lake Bomoseen, Castleton, and Fair Haven.

In 1947 the Chittenden Dam overflowed, which caused the earthen dam of the East Pittsford Pond to falter. The result was an influx of water sent down the East Creek, causing massive amounts of damage in Rutland, including the destruction of a highway bridge and railroad bridge at the intersection of West Street and East Creek (RHS 2014).

In contrast with the City of Rutland, the Town of Rutland remained primarily rural and agrarian in character throughout the twentieth century, with some quarrying, mining, and logging, although many of those industries were focused in Rutland Center (Johnson and Gilbertson 1988). By the late twentieth century small commercial shopping centers had been developed on the borders with the City of Rutland; those, along with some industries, including General Electric and Isovolta, Inc., currently provide significant employment to the town's 4,054 residents (Town of Rutland 2019).

IV. Survey Results

The architectural survey area extends 99 meters (325 feet) around either side of Rutland Bridge No. 27 over VT RR, on River Street. The survey area consists of a dense commercial and industrial setting.

WSP identified six previously surveyed architectural resources that are 45 years old or older in or adjacent to the survey area (Figure 3; Table 1). These are SRHP-listed properties mostly along Strongs Avenue with one each on Post Street and River Street.

WSP identified seven previously unsurveyed architectural resources in or adjacent to the survey area (see Figure 3 and Table 1). These are Rutland Bridge No. 27, commercial establishments, and single- and multi-family residences along Strongs Avenue, Post Street, and River Street.

WSP did not identify any park, recreational, or refuge Section 4(f) resources in or adjacent to the survey area.

TABLE 1: PREVIOUSLY AND NEWLY IDENTIFIED HISTORIC RESOURCES IN SURVEY AREA

MAP ID (Rutland-)	CURRENT SR/NRHP ELIGIBILITY	NAME	ADDRESS
<i>Previously Identified</i>			
1	Listed, SRHP*	Adirondack Tire & Service	55 Strongs Avenue, Rutland
2	Listed, SRHP	Mill	118 Post Street, Rutland
3	Listed, SRHP*	Filling Station	61 Strongs Avenue, Rutland
4	Listed, SRHP*	United Methodist Church	60 Strongs Avenue, Rutland
5	Listed, SRHP	Commercial Block	56 Strongs Avenue, Rutland
6	Listed, SRHP	Nusantara Warehouse	37 Strongs Avenue, Rutland
<i>Newly Identified</i>			
7	Not evaluated	Rutland Bridge No. 27 over VT RR	River Street, Rutland
8	Not evaluated	Multi-family Residence	54 Strongs Avenue, Rutland
9	Not evaluated	Angler Pub	52 Strongs Avenue, Rutland
10	Not evaluated	Cara Mia's	50 Strongs Avenue, Rutland
11	Not evaluated	Multi-family Residence	116 Post Street, Rutland
12	Not evaluated	Multi-family Residence	64 River Street, Rutland
13	Not evaluated	Price Chopper	38 Rutland Shopping Plaza, Rutland

*Change in eligibility recommended (see Sections IV.A.2, IV.A 3, IV.A 4).
 See Section IV.B for evaluation of newly identified resources.

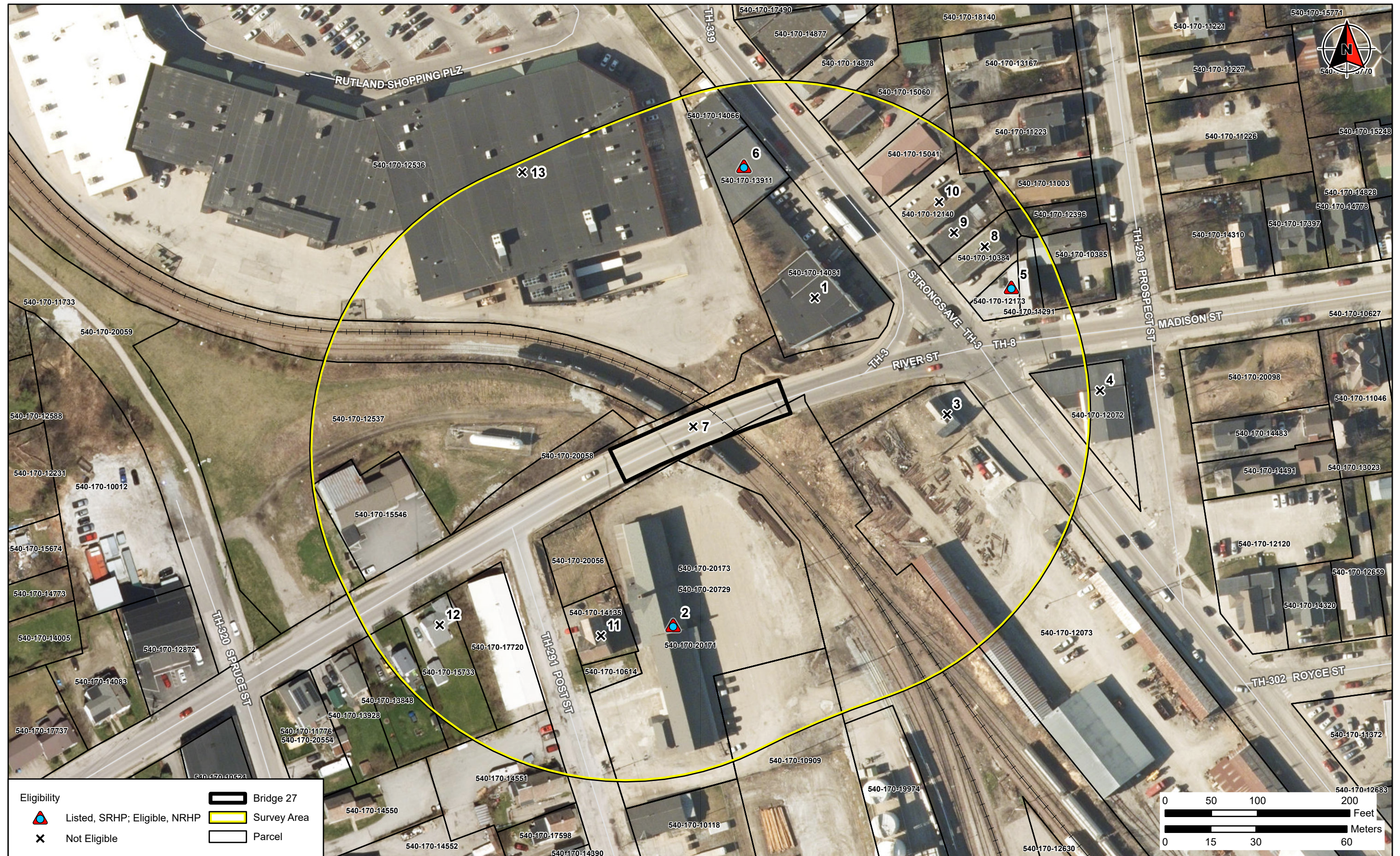


FIGURE 3: Location of Surveyed Architectural Resources in Survey Area (ESRI World Imagery 2022)

A. Vermont SR/NRHP-Listed Properties

1. Adirondack Tire & Service, 55 Strongs Avenue, Rutland (Rutland-1)

Resource Name	Adirondack Tire & Service
VTrans ID No.	N/A
Location	55 Strongs Avenue, Rutland
Parcel ID	14081
Date(s) of Construction	ca. 1930
NRHP	Not Eligible
Recommendation	



Adirondack Tire & Service is a two-story six-bay rectangular Streamline Moderne garage with Colonial Revival elements. The garage has a flat roof and a masonry exterior clad in stucco featuring an entrance at the south end of the east-facing façade. The entrance is contained in a Colonial Revival door treatment composed of a pediment surmounting three pilasters and a door flanked by large fixed windows. The façade has four service bays accessed by roll-up garage doors and a small human-sized entry door at the northeast corner. The remaining fenestration consists of segmental-arch and plain rectangular windows on the remaining elevations.

The property's fabric has been modified by replacement windows, doors, cladding, and doors, and is not known to be associated with significant events or people. In WSP's opinion Adirondack Tire & Service is not eligible for listing in the SRHP.

2. Mill, 118 Post Street, Rutland (Rutland-2)

Resource Name	Mill
VTrans ID No.	N/A
Location	118 Post Street, Rutland
Parcel ID	20729
Date(s) of Construction	ca. 1890
NRHP	Remain Listed,
Recommendation	SRHP; Eligible, NRHP



The mill is a one-and-one-half-story rectangular structure with an intersecting-gable asphalt-shingle roof pierced by an internal brick chimney with stepped parapet on the south elevation. The brick exterior features wood siding and boarded windows except for vinyl siding and replacement windows on the gable front projection. The west elevation has three additions with shed roofs of various dimensions and pitches. The main and auxiliary entrances located on the east elevation have been boarded. A gabled storage unit placed on the south elevation of the main block has vinyl siding, horizontal sliding windows, and multiple entrances covered by metal shed-roof porches and awnings. According to the Sanborn (1890) map (Figure 4), the building was constructed as a gristmill by Davis & Gay along the Bennington and Rutland Railroad.

The property has been modified by infilled and replacement windows, doors, and cladding, which have compromised the building's integrity of design, materials, and workmanship. The property retains its integrity of location, setting, feeling, and association, as the footprint and the surrounding area's industrial character remain largely unchanged, emphasizing the railroad lines and its ancillary structures. In WSP's opinion the mill should remain listed in the SRHP and is eligible for listing in the NRHP under Criterion A for its association with Rutland's late nineteenth-century economic prosperity and railroad enterprises; however, in WSP's opinion the mill should no longer be listed in the SRHP under Criterion C because of compromised integrity of design, materials, and workmanship.

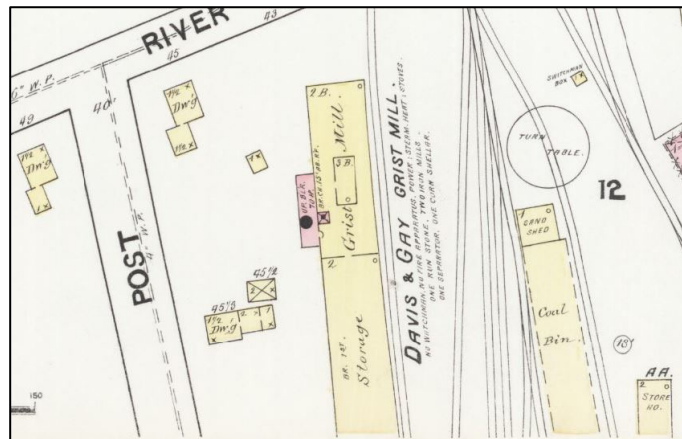


FIGURE 4: Davis & Gay Grist Mill (Sanborn 1890)

3. *Filling Station, 61 Strongs Avenue, Rutland, Rutland (Rutland-3)*

Resource Name	Community Cupboard
VTrans ID No.	N/A
Location	61 Strongs Avenue, Rutland
Parcel ID	12073
Date(s) of Construction	ca. 1930
NRHP Recommendation	Not Eligible



This resource is a one-and-one-half-story front-facing gable-with-wing Tudor Revival filling station. The filling station rests on a concrete foundation and has an intersecting-gable asphalt-shingle roof pierced by an internal brick chimney. The painted stucco exterior has boarded windows with rowlock sills, and primary and single-bay garage entrances within Tudor arch surrounds. Small vents are present on the gable peaks. The north elevation features an auxiliary entrance.

The filling station's integrity of design and materials has been greatly compromised by the infilled windows and the presumed removal of false half-timbering, a character-defining feature of the Tudor Revival style. Although the building is a rare survivor of early twentieth-century roadside commercial architecture in Vermont, this factor cannot overcome its loss of historic integrity. Therefore, in WSP's opinion the filling station is no longer eligible for listing in the SRHP, thereby precluding it from NRHP eligibility; however, WSP recommends further evaluation of the filling station if it may be affected by future projects.

4. *United Methodist Church, 60 Strongs Avenue, Rutland (Rutland-4)*

Resource Name 61 Strongs Avenue
VTrans ID No. N/A
Location 61 Strongs Avenue, Rutland
Parcel ID 12073
Date(s) of Construction ca. 1906
NRHP Recommendation Not Eligible



United Methodist Church now occupies this two-story five-bay commercial block, which has a flat roof with corbeling and an enriched frieze and rests on a concrete foundation. The exterior is faced in brick veneer on the façade and vinyl siding on the lateral elevations. Fenestration consists of two boarded entrances and 8/1 replacement vinyl windows with rowlock lintels and marble lug sills. The central ground-floor bay has a replacement vinyl grouped window surrounded by vinyl siding. The south elevation has a one-story false front and a one-and-one-half-story front-gable addition, both clad in vinyl siding and featuring replacement vinyl fixed single-pane and 1/1 windows.

The building's integrity of design and materials have been diminished by replacement and infilled windows and doors and unsympathetic additions. Despite the intact corbeling and enriched frieze, the building is an altered and unremarkable example of a commercial block. In WSP's opinion the United Methodist Church is no longer eligible for listing in the SRHP, thereby precluding it from NRHP eligibility.

5. Commercial Block, 56 Strongs Avenue Street, Rutland (Rutland-5)

Resource Name	Commercial Block
VTrans ID No.	N/A
Location	56 Strongs Avenue, Rutland
Parcel ID	12173
Date(s) of Construction	ca. 1885
NRHP Recommendation	Remain Listed, SRHP; Eligible, NRHP



This three-story three-bay trapezoidal-plan commercial block rests on a cut marble foundation and has a flat roof with a corbeled paneled frieze carried by corner pilasters. The exterior is faced in brick veneer and features 1/1 windows with segmental brick arches and stone lug sills. The second and third floors are marked by rectangular wall panels. The centered main entrance is contained in an Italianate storefront articulated by paneled pilasters and shallow brackets. An auxiliary entrance contained in a storefront clad in vertical wood siding with 1/1 replacement vinyl windows is located on the southeast corner.

The building maintains all seven aspects of integrity with minimal diminishment of materials, a result of the replacement fabric on the corner auxiliary storefront. It is WSP's opinion that the commercial block should remain listed on the SRHP, thereby qualifying it as eligible for listing in the NRHP. The property is eligible under Criterion A for its association with Rutland's late nineteenth-century economy prosperity, and under Criterion C as good example of an intact Italianate commercial block.

6. Nusantara Warehouse, 37 Strongs Avenue Street, Rutland (Rutland-6)

Resource Name	Nusantara Warehouse
VTrans ID No.	N/A
Location	37 Strongs Avenue, Rutland
Parcel ID	13911
Date(s) of Construction	ca. 1900
NRHP Recommendation	Remain Listed, SRHP; Eligible, NRHP



This one-story eight-bay rectangular warehouse rests on a raised concrete foundation and has a flat roof carried by a corbeled façade frieze punctured by an internal brick chimney. The exterior is faced in painted

brick veneer and features 1/1 windows with segmental brick arches and stone lug sills; some openings have been boarded, and the fourth window lacks an arch. A single-bay garage door opens the south elevation. The building is bookended by Adirondack Tire & Service (Rutland-1) and the brick store located at 34 Strongs Avenue.

The building maintains all seven aspects of integrity, with moderate diminishment of materials as a result of the boarded windows. It is WPS's opinion that the Nusantara Warehouse should remain listed in the SRHP, thereby qualifying it as eligible for listing in the NRHP. The property is eligible under Criterion A for its association with Rutland's early twentieth-century industrial development, and under Criterion C as good example of an early twentieth-century warehouse with modest stylistic attributes.

B. Newly Surveyed Resources

1. Rutland Bridge No. 27 over VT RR, River Street, Rutland (Rutland-7)

Resource Name	Rutland Bridge No. 27
VTrans ID No.	Rutland City BF 3000(24)
Location	River Street, Rutland
Parcel ID	N/A
Date(s) of Construction	1968
NRHP Recommendation	Not Eligible



Rutland Bridge No. 27 over VT RR is a three-span 195-foot-long steel-girder bridge (see Figure 3). The structure carries River Street over two lines operated by the VT RR. The concrete cast-in-place deck is 39 feet wide with sidewalks, granite curbs, and metal teardrop railings. The reinforced-concrete superstructure features two sets of five longitudinal girders and diaphragms. The spans are carried and delineated by three open concrete cap and column piers. The concrete fascia is adorned by a single central incised horizontal. The bridge is anchored by concrete abutments and wingwalls. Overall, the bridge's condition is considered fair. The deck, including sidewalks and curbs, exhibits minor wearing, cracking, rusting, and spalling, with some built-up debris and minor dings and scrapes from snowplows. The superstructure shows areas of minor paint peeling, section loss, and corrosion on the beams and diagrams. The substructure is affected by light areas of efflorescence, staining, and fine cracks in the abutments and retaining walls. The piers are in good condition with some areas of past patching.

Rutland Bridge No. 27 does not meet the registration requirements outlined in the MPD, *Metal Truss, Masonry and Concrete Bridges of Vermont, 1820-1978* (Louis Berger 2018:F59-F61). The bridge was not part of a major building initiative, does not possess special characteristics, associations, or integrity, and did not establish a significant crossing at this location or a new transportation corridor. The bridge is also not an early or rare example of its type, does not represent exceptional work by an important engineer or designer, is not of exceptional length, and does not exhibit innovating, specialized, patented, or aesthetic design importance. It is WSP's opinion that the Rutland Bridge No. 27 is not eligible for the SR/NRHP.

2. 54 Strongs Avenue, Rutland (Rutland-8)

Resource Name 54 Strongs Avenue
VTrans ID No. N/A
Location 54 Strongs Avenue, Rutland
Parcel ID 10384
Date(s) of Construction ca. 1900
NRHP Recommendation Not Eligible



This resource is a two-and-one-half-story multi-bay multi-family residence. The rectilinear-plan building rests on a cut marble foundation and water table and has a side-gable asphalt-shingle roof pierced by an internal brick chimney carried by return cornices. The brick exterior has recessed 1/1 replacement vinyl windows with lug lintels and sills. The building appears to have been perpendicularly oriented to the street, suggested by the fenestration arrangement on the southeast elevation. This elevation is accessed by a central entry contained in a paneled surround below a shed-roof awning on wood posts. The bays immediately above are sheltered by a similar roof but on metal poles and supporting an overhanging wood deck. A one-story three-bay front-gable addition is placed on the street-facing southwest gable. The addition is clad in brick and aluminum siding with an asphalt-shingle roof, two recessed paneled entry doors, and a vinyl picture window.

The resource maintains its integrity of location, setting, feeling, and association, as it has not been moved and the surrounding area's commercial/industrial nature has been unchanged. Its integrity of design and materials have been compromised by unsympathetic additions on the façade and replacement fenestration and siding. Furthermore, the resource does not exhibit outstanding architectural details. It is WSP's opinion that the resource is not eligible for listing in the SR/NRHP.

3. Angler Pub, 52 Strongs Avenue, Rutland (Rutland-9)

Resource Name Angler Pub
VTrans ID No. N/A
Location 52 Strongs Avenue, Rutland
Parcel ID 12140
Date(s) of Construction ca. 1900
NRHP Recommendation Not Eligible



This resource is a single-story three-bay vernacular commercial building. The building rests on a concrete foundation and has a flat roof with a false front parapet demarcated from the ground floor by a shallow pent awning covered in asphalt shingles. The exterior is clad in vertical composite siding and wood clapboards on the parapet. The central entrance is a paneled door recessed in an alcove flanked by two single fixed-pane windows.

The resource maintains its integrity of location, design, setting, feeling, and association, as it has not been moved and the surrounding area's intact commercial environment. Its integrity of materials has been compromised by replacement siding, windows, and doors. Furthermore, the resource is a typical example of an early twentieth-century commercial building. It is WSP's opinion that Angler Pub is not eligible for listing in the SR/NRHP.

4. Cara Mia's, 50 Strongs Avenue, Rutland (Rutland-10)

Resource Name Cara Mia's
VTrans ID No. N/A
Location 52 Strongs Avenue, Rutland
Parcel ID 12140
Date(s) of Construction ca. 1900
NRHP Recommendation Not Eligible



This resource is a two-and-one-half-story multi-bay commercial/multi-family residential building. The rectilinear-plan building rests on a concrete foundation and has a front-gable asphalt-shingle roof. The exterior is clad in thin wood siding and features 6/6 replacement vinyl windows with decorative shutters.

This commercial portion is accessed via a one-story front-gable addition on the main elevation. The four bays are divided by thin pilasters and occupied by a centered pair of large fixed single-pane windows flanked by recessed entrances. The two additions include a rear front-gable unit pierced by an internal brick chimney slightly offset from the main block, and a two-story lean-to with a connecting shed roof placed on the south elevation.

The resource maintains its integrity of location, setting, feeling, and association, as it has not been moved and the surrounding area's commercial/industrial nature remains intact. However, its integrity of design and materials has been compromised by unsympathetic additions and replacement fenestration and siding. It is WSP's opinion that the resource is not eligible for listing in the SR/NRHP.

5. *Multi-family Residence, 116 Post Street, Rutland (Rutland-11)*

Resource Name Multi-family Residence
VTrans ID No. N/A
Location 116 Post Street, Rutland
Parcel ID 14135
Date(s) of Construction ca. 1880
NRHP Recommendation Not Eligible



This resource is a two-and-one-half-story vernacular gable-front-and-wing multi-family residence. The building rests on a painted brick foundation and has an intersecting-gable roof covered in slate pierced by ridgeline chimneys on each roof gable. The exterior is clad predominantly in wood siding with vertical composite siding on the first floor of the façade. Fenestration consists of crowned 1/1 replacement vinyl windows with a small original 2/2 wood double-hung sash below the front-gable peak. The respective units are accessed via a wood porch and sidehall entrance on the front-gable portion and on the wing at the wall junction and the first bay on the second floor. This entrance is accessed by a wood porch and staircase.

The resource maintains its integrity of location, design, setting, feeling, and association, as it has not been moved and the surrounding area's residential/industrial character is largely unchanged. Its integrity of materials has been compromised by replacement fenestration and siding. It is WSP's opinion that the resource is not eligible for listing in the SR/NRHP.

6. *Residence, 64 River Street, Rutland (Rutland-12)*

Resource Name Residence
VTrans ID No. N/A
Location 64 River Street,
Rutland
Parcel ID 15733
Date(s) of Construction ca. 1890
NRHP Recommendation Not Eligible



This resource is a two-and-one-half-story vernacular gable-front-and-wing residence. The building rests on a painted brick foundation and has an intersecting-gable asphalt-shingle roof pierced by ridgeline chimneys on each roof gable. The exterior is clad in vinyl siding and features crowned 1/1 replacement vinyl windows. The primary sidehall entrance is a paneled door sheltered by a gabled hood on wood posts. The auxiliary entrance, located on the wing at the wall junction, is accessed via an open porch with a metal shed roof on a single wood post. A gabled dormer addition immediately above the porch roof interrupts the eaves.

The resource maintains its integrity of location, design, setting, feeling, and association, as it has not been moved and the surrounding area conveys its residential/industrial character with minimal intrusions. Its integrity of materials has been compromised by replacement fenestration, siding, and roofing. It is WSP's opinion that the resource is not eligible for listing in the SR/NRHP.

7. *Price Chopper, 38 Rutland Shopping Plaza, Rutland (Rutland-13)*

Resource Name Price Chopper
VTrans ID No. N/A
Location 38 Rutland
Shopping Plaza,
Rutland
Parcel ID 12536
Date(s) of Construction ca. 1960
NRHP Recommendation Not Eligible



This resource is a one-and-one-half-story vernacular commercial building. The irregularly planned building rests on a concrete foundation and has a flat roof. The exterior is clad in brick veneer ornamented by a simple concrete string course running the entire length of the facade. Fenestration consists of fixed single

panes and swinging and automatic sliding doors in aluminum frames. These are covered by a covered shed-roof walkway on square piers with a series of gables and interrupted by a large projecting anchor entry with a corbeled parapet.

The resource maintains its integrity of location, design, setting, feeling, and association, as it has not been moved and the surrounding area maintains its commercial environment. Its integrity of materials has been compromised by replacement fenestration and roofing. Furthermore, the resource is a common example of a shopping center type found throughout Rutland. It is WSP's opinion that Price Chopper is not eligible for listing in the SR/NRHP.




V. Conclusions and Recommendations







On behalf of VTrans, WSP completed an ID Report involving the anticipated future repair and/or replacement of 27 bridges throughout Vermont. This particular report addresses Rutland Bridge No. 27 over VT RR, River Street, City of Rutland, Rutland County. The survey’s purpose was to identify and evaluate all structures and buildings in the survey area, including the bridge, that may be directly, indirectly, and/or cumulatively impacted by the potential project.

WSP identified 13 resources in the survey area: six SRHP-listed properties along Strongs Avenue and at 118 Post Street and 65 River Street, and seven previously unsurveyed resources, including Rutland Bridge No. 27. No park, recreational, or refuge Section 4(f) properties were identified in the survey area. (Table 2).

It is WSP’s opinion that three of the six the SRHP-listed properties should remain listed in the SRHP and are therefore eligible for listing in the NRHP. In WSP’s opinion Adirondack Tire & Service, the United Methodist Church, and the Filling Station should be removed from the SRHP, thereby precluding their NRHP eligibility; however, in WSP’s opinion further evaluation of the Filling Station should be conducted if it may be affected by future projects. It is also WSP’s opinion that all the previously unsurveyed resources are eligible for the SR/NRHP. In WSP’s opinion Rutland Bridge No. 27 is not eligible for the SR/NRHP because it does not meet the Criterion C registration requirements outlined in the MPD *Metal Truss, Masonry and Concrete Bridges of Vermont, 1820–1978* (Louis Berger 2018:F59-F61).

TABLE 2: NRHP ELIGIBILITY RECOMMENDATIONS FOR
 NEWLY IDENTIFIED HISTORIC RESOURCES IN SURVEY AREA

MAP ID (Rutland-)	RESOURCE NAME	LOCATION	PREVIOUS ELIGIBILITY	WSP ELIGIBILITY OPINION	PHOTOGRAPH
1	Adirondack Tire & Service	55 Strongs Avenue, Rutland	Listed, SRHP	Not Eligible	
2	Mill	118 Post Street, Rutland	Listed, SRHP	Remain Listed, SRHP; Eligible. NRHP	
3	Filling Station	61 Strongs Avenue, Rutland	Listed, SRHP	Not Eligible	

MAP ID (Rutland-)	RESOURCE NAME	LOCATION	PREVIOUS ELIGIBILITY	WSP ELIGIBILITY OPINION	PHOTOGRAPH
4	United Methodist Church	60 Strongs Avenue, Rutland	Listed, SRHP	Not Eligible	
5	Commercial Block	61 Strongs Avenue, Rutland	Listed, SRHP	Remain Listed, SRHP; Eligible, NRHP	
6	Nusantara Warehouse	37 Strongs Avenue, Rutland	Listed, SRHP	Remain Listed, SRHP; Eligible, NRHP	
7	Rutland Bridge No. 27 over VT RR	River Street, Rutland	Not evaluated	Not Eligible	
8	Multi-family Residence	54 Strongs Avenue, Rutland	Not evaluated	Not Eligible	
9	Angler Pub	52 Strongs Avenue, Rutland	Not evaluated	Not Eligible	

MAP ID (Rutland-)	RESOURCE NAME	LOCATION	PREVIOUS ELIGIBILITY	WSP ELIGIBILITY OPINION	PHOTOGRAPH
10	Cara Mia's	50 Strongs Avenue, Rutland	Not evaluated	Not Eligible	
11	Multi-family Residence	116 Post Street, Rutland	Not evaluated	Not Eligible	
12	Residence	64 River Street, Rutland	Not evaluated	Not Eligible	
13	Price Chopper	38 Rutland Shopping Plaza, Rutland	Not evaluated	Not Eligible	

Given that the boundaries of the SRHP-listed, NRHP-eligible resources (Commercial Block and Nusantara Warehouse) are adjacent to Bridge No. 27, there is a potential for either the rehabilitation or replacement of the bridge to adversely affect these properties. Other historic resources, such as the mill, are near the bridge. Precautions should be taken to limit both direct effects to the resources from construction equipment and activities as well as potential vibration effects from construction activities (whether for bridge rehabilitation or replacement). Design of the replacement bridge could mimic the design of the current bridge or previous bridges at the site to be sympathetic to the surrounding area's commercial and industrial character.

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wsp

Appendix I: Environmental Specialist Resource ID

Date: July 8, 2024
Environmental Specialist: Julie Ann Held
Project: **Rutland City BF 3000(24) 22J400**

6(f) Properties:

There aren't any 6(f) Properties within the project area.

Hazardous Waste:

Multiple hazardous waste sites are identified within the proposed project area (hazardous waste site # 921324 for petroleum and # 20073696 for petroleum). Depending on the project scope there is potential to impact these hazardous waste sites. Coordination with the Hazard Waste Coordinator is recommended to determine potential impacts.

Contaminated Soils:

There are mapped urban background soils mapped within and out of the Rail right-of-way. The proposed project is located within a mapped *Urban Background Soils* area (See ANR Atlas Map in the folder). Additional coordination with the Hazard Waste coordinator is recommended. Disturbed soils within this project should be expected to be kept on site, or follow notice to bidders guidance.

Rail Projects: Contaminated Soils are assumed to exist along the railroad. Additional coordination with the Hazard Waste coordinator is recommended. Disturbed soils within this project should be expected to be kept on site, or follow notice to bidders guidance.

Wild Scenic Rivers:

There aren't any designated Wild Scenic Rivers within the project area.

Act 250 Permits:

There aren't any Act 250 Permits within the project area.

FEMA Floodplains:

There aren't any FEMA Floodplains mapped within the project area.

River Corridor:

There aren't any River Corridors within the project area.

Protected Lands:

There aren't any Protected Lands within the project area.

US Coast Guard:

There aren't any US Coast Guard navigable waterways within the project area.

Lakes and Ponds:

There aren't any lakes or ponds within the project area.

Scenic Highway/ Byway:

There aren't any Scenic Highway/ Byways within the project area.

Environmental Justice:

There are mapped socioeconomic indicators of low income populations within the project area. Depending on the scope of the project further environmental justice related coordination with the environmental specialists may be needed.

Other:

There aren't any other resources within the project area.

Save Session

Measure

Side by Side Comparisons

Add Shapefile

Search Geoplatform

Add Map Services

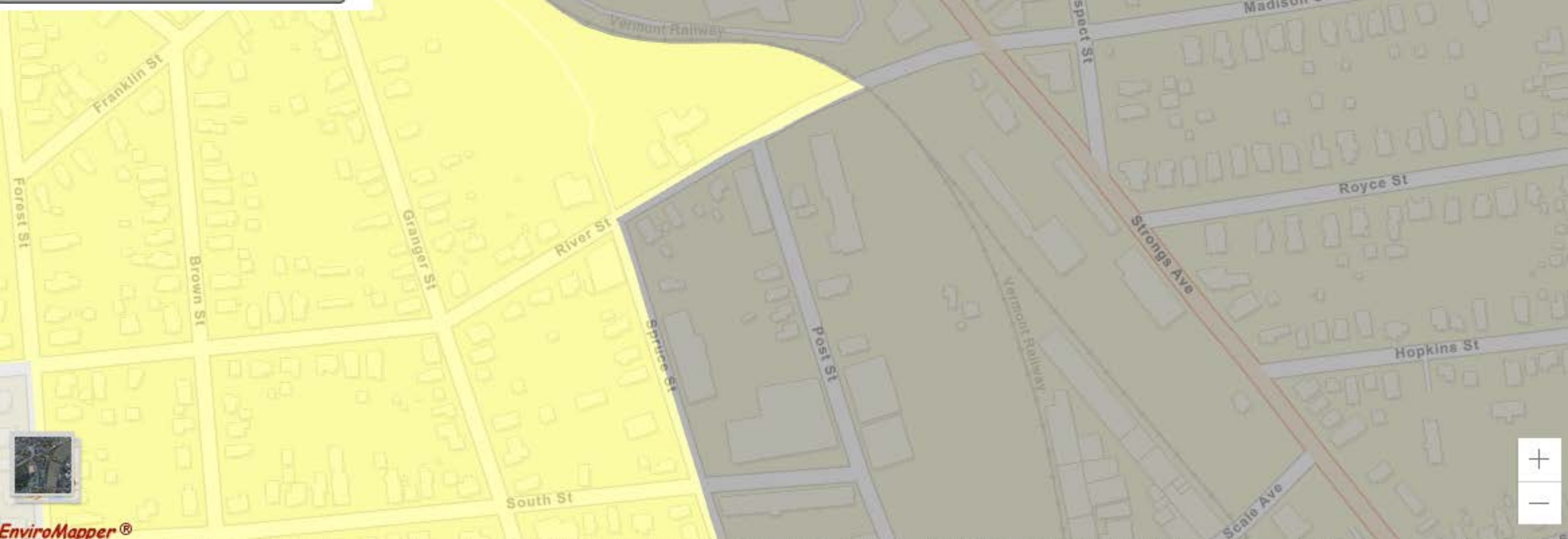
Print

Boundaries

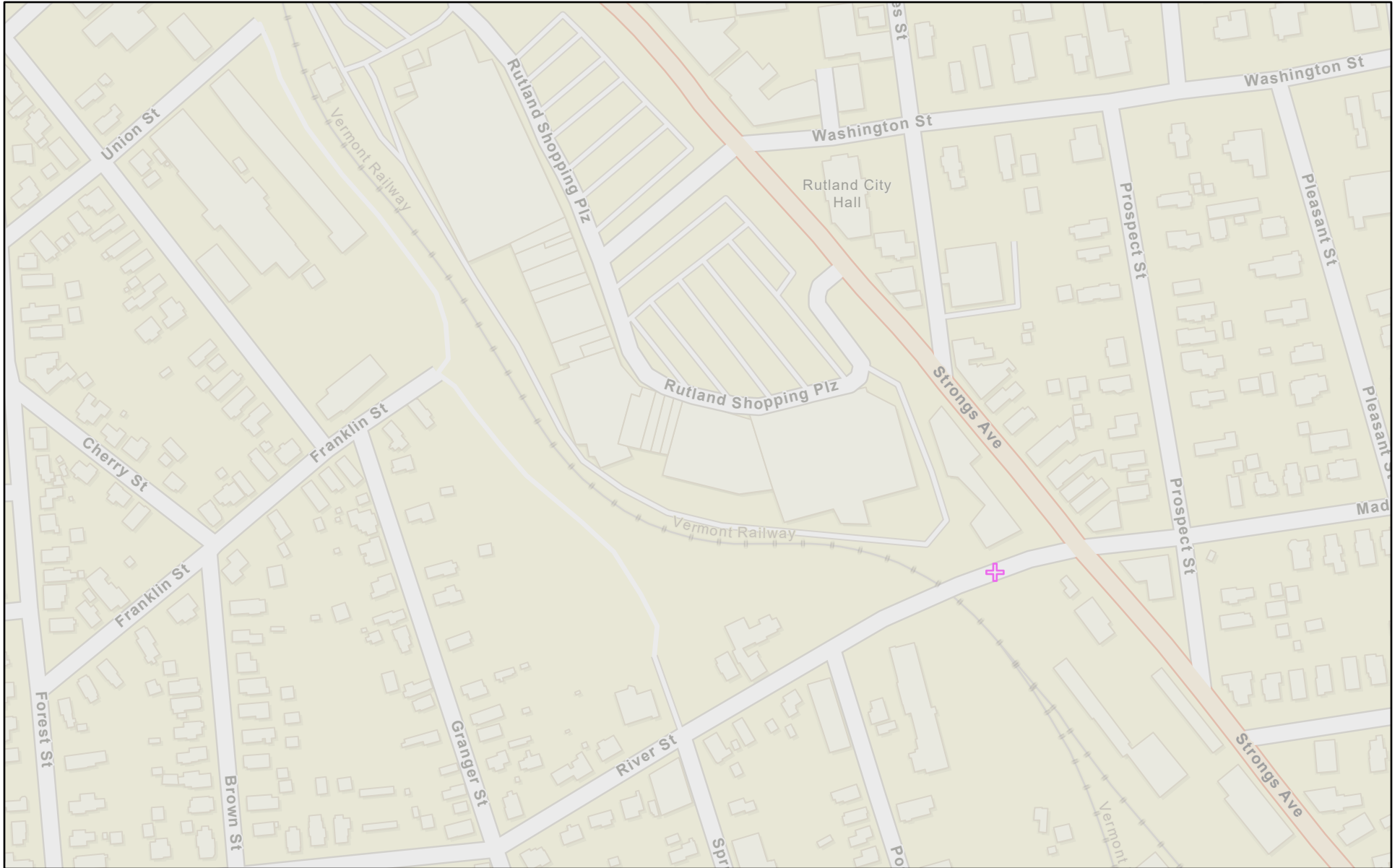
River St, Rutland, VT, 05701

Map Contents

- Socioeconomic Indicators
 - Low Income (National Percentiles)
 - 95 - 100 percentile
 - 90 - 95 percentile
 - 80 - 90 percentile
 - 70 - 80 percentile
 - 60 - 70 percentile
 - 50 - 60 percentile
 - Less than 50 percentile
 - Data not available



Socioeconomic Indicator Map



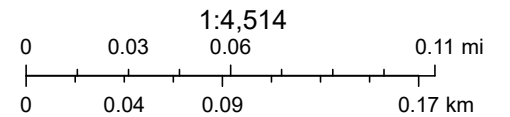
9/14/2023

People of Color
(National Percentiles)



Search Result (point)

Less than 50 percentile



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LEGEND

- DFIRM X-Sections
- DFIRM - Letter of Map Revisio
- DFIRM Panels
- DFIRM Floodways
- Flood Hazard Areas (Only FEM)
 - AE (1-percent annual chance flood)
 - A (1-percent annual chance floodpl.)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
 - River Corridors (Aug 27, 2019)
 - .5 - 2 sqmi.
 - .25-.5 sqmi.
- Protected Lands
 - Private Organizations
 - Vermont Municipalities
 - State
 - Federal
- Parcels (standardized)
- Waterbody
- Stream
 - Stream
 - Intermittent Stream
- ACT250 Permits
- Roads
 - Interstate
 - US Highway; 1
 - State Highway

1: 2,869
September 14, 2023

NOTES

Map created using ANR's Natural Resources Atlas

146.0 0 73.00 146.0 Meters
 WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 239 Ft. 1cm = 29 Meters
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DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



LEGEND

- DFIRM X-Sections
- DFIRM - Letter of Map Revisio
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 - .25-.5 sqmi.
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- Stream
 - Stream
 - Intermittent Stream
- Roads
 - Interstate
 - US Highway; 1
 - State Highway
 - Town Highway (Class 1)
 - Town Highway (Class 2,3)
 - Town Highway (Class 4)
 - State Forest Trail
 - National Forest Trail
 - Legal Trail
 - Private Road/Driveway

1: 2,869
September 14, 2023



NOTES

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Appendix J: Hazardous Sites Map



LEGEND

- Landfills**
 - OPERATING
 - CLOSED
- Land Use Restrictions**
 - Class IV GW Reclass
 - Class VI GW Reclass
 - Deed Restriction
 - Easement
 - Land Record Notice
 - Other
- Hazardous Site
- Hazardous Waste Generators
- Brownfields
- Salvage Yard
- Aboveground Storage Tank
- Underground Storage Tank (w/)
- Dry Cleaner
- Urban Soil Background Areas
- Parcels (standardized)
- Roads**
 - Interstate
 - US Highway; 1
 - State Highway
 - Town Highway (Class 1)
 - Town Highway (Class 2,3)
 - Town Highway (Class 4)
 - State Forest Trail
 - National Forest Trail

1: 2,869
September 14, 2023



NOTES

Map created using ANR's Natural Resources Atlas

146.0 0 73.00 146.0 Meters
 WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 239 Ft. 1cm = 29 Meters
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Site Details

Site Name	LaValley Building Supply
Address	57 Strongs Ave
Town	Rutland City
Site Use	Business
Site Number	20073696
DEC Manager	James Donaldson
Priority	LOW - Site with contamination to soils or groundwater, but no effect on sensitive receptors
Site Status	
Project Status	5 underground storage tanks removed. Contamination found. Investigation completed. Possible SMAC with notice of TPH in soil if GW remains below VGES in spring 2010. File being managed with #92-1324.
Source of Contamination	UST-Gasoline, UST-Heating Oil, UST-Waste Oil
Contaminant	Gasoline, Heating Oil, Other Petroleum
Institutional Control	
Site Closure Date	
DEC Contact Email Address	James.Donaldson@vermont.gov
Record Last Updated	12-22-2021

Appendix K: Stormwater Resource ID

State of Vermont
Environmental Section
219 North Main Street
Barre, Vermont 05641
Vtrans.vermont.gov

Agency of Transportation

[phone] 802-498-5787

To: Project file
From: Heather Voisin, VTrans Green Infrastructure Engineer
Date: June 27, 2024
Subject: Rutland City BF 3000(24) - Stormwater Resource ID Review

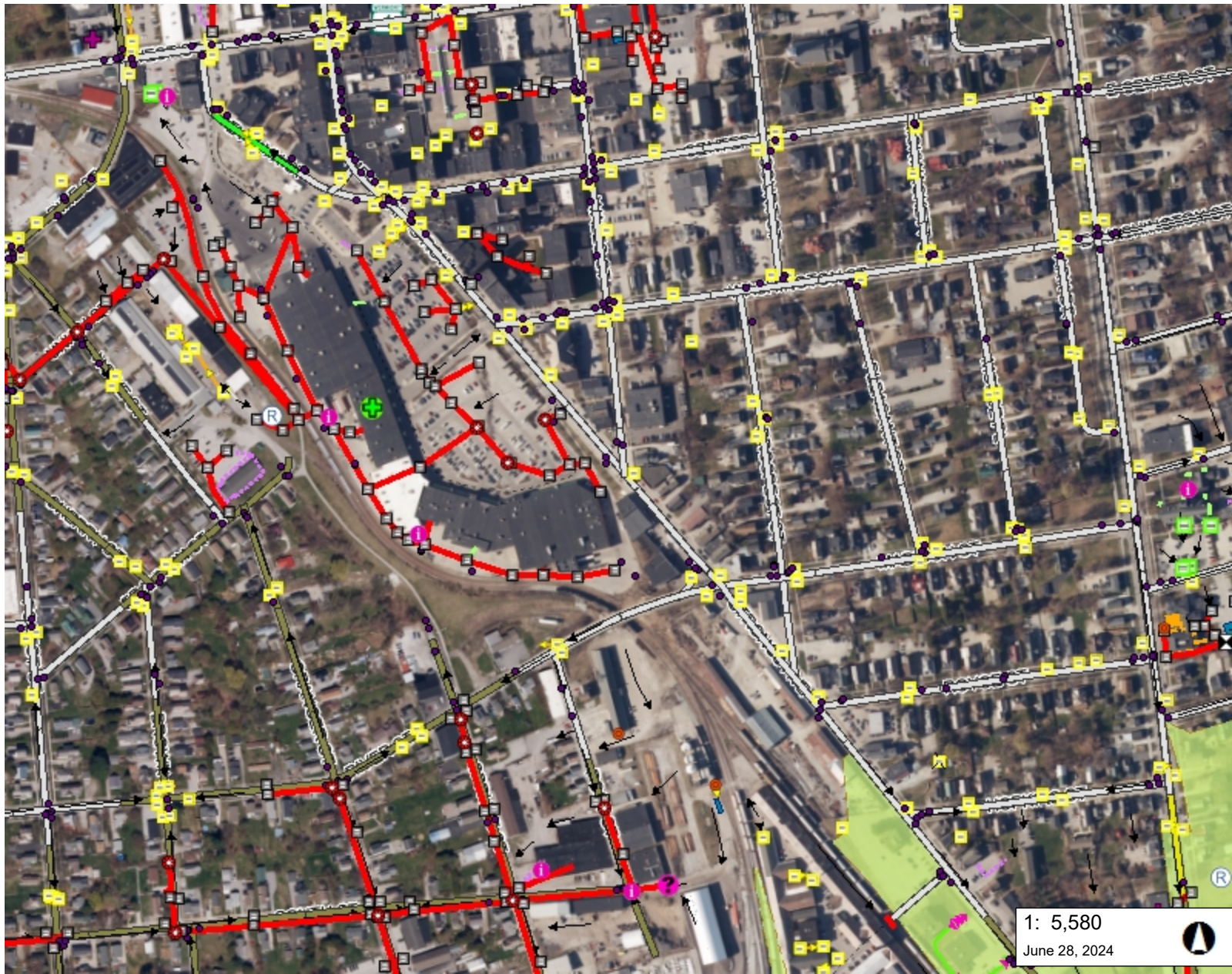
Project Description: I have reviewed the project area for Rutland City BF 3000(24) for stormwater related regulatory and water quality concerns. The project involves Bridge 27 on Town Highway 52 (River Street) that spans the rail lines beneath it. The scope has not yet been determined so this review is based on available mapping (ANR Natural Resource Atlas and Google Street View) to capture existing stormwater features in the project vicinity.

Regulatory Considerations

The Rutland Plaza, which is located just north and west of the bridge, is covered by an existing stormwater permit (8651-9050). There are no other regulatory considerations of note.

Existing Drainage

The bridge deck and adjacent roadways within the project area have curbing with catch basin inlets on either side of the bridge. The bridge itself is a highpoint as River Street rises up and over the rail line.



LEGEND

- 303(d) List of Impaired Stream
 - Priority Waters List (Streams a
 - Part B (impaired TMDL not require
 - Part D (impaired with approved T
 - Part E (altered exotic species)
 - Part F (altered flow regulation)
- Stormwater Permits (Issued)**
- + Operational
 - + Construction
 - + Industrial - NOI
 - + Industrial - NOX
 - + Other
- Stormwater Permits (Pending)**
- + Operational
 - + Construction
 - + Industrial - NOI
 - + Industrial - NOX
 - + Other
- Existing stormwater point**
- ⊗ Pipe Cross (not connected)
 - Catchbasin
 - Dry Well
 - Drop Inlet
 - ⊠ Grate/Curb Inlet
 - Yard drain
 - Junction Box
 - Stormwater Manhole

1: 5,580
June 28, 2024

NOTES

Map created using ANR's Natural Resources Atlas



WGS_1984_Web_Mercator_Auxiliary_Sphere
© Vermont Agency of Natural Resources

1" = 465 Ft. 1cm = 56 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

Appendix L: Landscape Clearance Resource ID



State of Vermont | Agency of Transportation
Environmental Section
219 North Main
Barre, VT 05641
Vtrans.vermont.gov

To: Project File
From: Bonnie Kirn Donahue, *VTrans Landscape Architect*
Date: July 1, 2024
Project: **Rutland City BF 3000(24) 22J400**
Subject: Landscape (LA) Clearance for Resource ID

I have reviewed the proposed area for **Rutland City BF 3000(24) 22J400** and found the following:

EXISTING CONDITIONS

The following items/conditions were found on site that could influence design decisions:

1. Context/setting:
 - a. The project is located in an urban area
 - b. This project is located in a downtown area
2. Presence of utilities:
 - a. This project includes utilities that should be considered.
3. Riparian buffer:
 - a. No riparian area was identified within the project area.
4. Trees to protect:
 - a. No trees to protect were identified in the project area.
5. Presence of hazard trees
 - a. Desktop review. No hazard trees were identified.
6. Special site features:
 - a. No special sites were identified in the project area.
7. Plants observed: (this is not a complete list of species on site)
 - a. Desktop review. No species were identified. See natural resources clearance.
8. Invasive species observed: (this is not a complete list of species on site)
 - a. Desktop review. No species were identified. See natural resources clearance.

9. Accessibility & Active Transportation:
 - a. This project includes accessible sidewalks and crosswalks that should be protected.
 - b. This project would benefit from the addition or improvement of accessible sidewalks, crosswalks, and/or bicycle facilities.
 - c. This project would benefit from lower speeds supported by pedestrian design accommodations.

RECOMMENDATIONS

1. Landscape/vegetation:
 - a. Minimize tree clearing in this area.
 - b. Tree protection shall be used for any trees with canopies within the area of construction.
2. Invasive species:
 - a. To manage the invasive species, follow the Environmental Commitments for Invasive Material.
3. Community Engagement/vision:
 - a. Reference the community's vision and goals for Pedestrian and Bicycle Transportation outlined in the Town Plan and incorporate into the project design.
 - b. Involve the town/village government and community members in the vision & goals for the project.
4. Active Transportation:
 - a. Protect, maintain, and improve the accessibility, function, and safety of active transportation infrastructure. Ensure that ADA, PROWAG, & MUTCD standards on the project are met.
 - b. This project would benefit from incorporating additional Complete Streets elements, such as:
 - i. Provide additional sidewalks on both sides of the road.
 - ii. Widen shoulders or add dedicated bike lanes.
 - iii. Add curb extensions to increase protection for pedestrians, and slow speeds in the area.
 - iv. Incorporate consistent pedestrian-scale lighting, avoiding dark spots.

NOTES

1. I am available to assist with landscape architectural design, including planting plans, plant lists, hardscape/pedestrian access plans, etc. (bonnie.donahue@vermont.gov).

Appendix M: Utilities Resource ID

Rutland City BF 3000(24)
Existing Utilities within Project Limits Report
Bridge 27, Urban Highway 52 (River Street) Rutland City

AERIAL

- Green Mountain Power -Single and three phase power
- Consolidated Communications

UNDERGROUND

- Consolidated Communications – Buried fiber line in conduit going across bridge to MH on East side.
- Green Mountain Power – Buried three phase power going from pole on west side of bridge to shopping plaza under railroad.
- FirstLight Fiber – Buried fiber in railroad ROW running parallel to tracks.

MUNICIPAL

- Rutland City water and sewer infrastructure within the highway right of way.

Adjustments may need to be made to the existing utilities depending on the project scope of work.

Appendix N: Local Input Questionnaire

Local & Regional Input Questionnaire

Project Summary

This project, BF 3000(24), focuses on bridge 27 on Town Highway 8 (River St.) in Rutland City, Vermont. The bridge is deteriorating and needs either a major maintenance action or replacement. Potential options being considered for this project include targeted repairs, replacement of the deck, replacement of the deck and superstructure, and replacement with a new bridge. It is possible that VTrans will recommend a road closure and detour traffic away from the project site for the duration of the work. Efforts will be made to limit the detour to Class 1 & 2 roads.

Community Considerations

1. Are there regularly scheduled public events in the community that will generate increased traffic (e.g. vehicular, bicycles and/or pedestrians), or may be difficult to stage if the bridge is closed during construction? Examples include annual bike races, festivals, parades, cultural events, weekly farmers market, concerts, etc. that could be impacted? If yes, please provide approximate date, location and event organizers' contact info.
2. Is there a "slow season" or period of time from May through October where traffic is less or no events are scheduled?
3. Please describe the location of the Town garage, emergency responders (fire, police, ambulance) and emergency response routes that might be affected by the closure of the bridge, one-way traffic, or lane closures and provide contact information (names, address, email addresses, and phone numbers).
4. Are there businesses (including agricultural operations and industrial parks) or delivery services (fuel or goods) that would be adversely impacted either by a detour or due to work zone proximity?
5. Are there important public buildings (town hall, community center, senior center, library) or community facilities (recreational fields, town green, etc.) close to the project?
6. What other municipal operations could be adversely affected by a road/bridge closure or detour?

Local & Regional Input Questionnaire

7. Are there any town highways that might be adversely impacted by traffic bypassing the construction on other local roads? Please indicate which roads may be affected and their condition (paved/unpaved, narrow, weight-limited bridges, etc), including those that may be or go into other towns.
8. Is there a local business association, chamber of commerce, regional development corporation, or another downtown group that we should be working with? If known, please provide name, organization, email, and phone number.
9. Are there any public transit services or stops that use the bridge or transit routes in the vicinity that may be affected if they become the detour route?

Schools

1. Where are the schools in your community and what are their yearly schedules (example: first week in September to third week in June)?
2. Is this project on specific routes that school buses or students use to walk to and from school?
3. Are there recreational facilities associated with the schools nearby (other than at the school)?

Pedestrians and Bicyclists

1. What is the current level of bicycle and pedestrian use on the bridge?
2. Are the current lane and shoulder widths adequate for pedestrian and bicycle use?

Local & Regional Input Questionnaire

3. Does the community feel there is a need for a sidewalk or bike lane on the bridge?
4. Is pedestrian and bicycle traffic heavy enough that it should be accommodated during construction?
5. Does the Town have plans to construct either pedestrian or bicycle facilities leading up to the bridge? Please provide any planning documents demonstrating this (scoping study, master plan, corridor study, town or regional plan).
6. In the vicinity of the bridge, is there a land use pattern, existing generators of pedestrian and/or bicycle traffic, or zoning that will support development that is likely to lead to significant levels of walking and bicycling?

Design Considerations

1. Are there any concerns with the alignment of the existing bridge? For example, if the bridge is located on a curve, has this created any problems that we should be aware of?
2. Are there any concerns with the width of the existing bridge?
3. Are there any special aesthetic considerations we should be aware of?
4. Are there any known Hazardous Material Sites near the project site?

Local & Regional Input Questionnaire

5. Are there any known historic, archeological and/or other environmental resource issues near the project site?

6. Are there any utilities (water, sewer, communications, power) attached to the existing bridge? Please provide any available documentation.

7. Are there any existing, pending, or planned municipal utility projects (communications, lighting, drainage, water, wastewater, etc.) near the project that should be considered?

8. Are there any other issues that are important for us to understand and consider?

Land Use & Zoning

1. Please provide a copy of your existing and future land use map or zoning map, if applicable.

2. Are there any existing, pending or planned development proposal that would impact future transportation patterns near the bridge? If so, please explain.

3. Is there any planned expansion of public transit or intercity transit service in the project area? Please provide the name and contact information for the relevant public transit provider.

Local & Regional Input Questionnaire

Communications

1. Please identify any local communication outlets that are available for us to use in communicating with the local population. Include weekly or daily newspapers, blogs, radio, public access TV, Facebook, Front Page Forum, etc. Also include any unconventional means such as local low-power FM.

2. Other than people/organizations already referenced in this questionnaire, are there any others who should be kept in the loop as the project moves forward?

Appendix O: Operations Input Questionnaire

Bridge Scoping Project BF 3000(24) Operations Input Questionnaire

The Structures Section has begun the scoping process for BF 3000(24), Rutland City Highway 8 (River St.) Bridge 27, over the Vermont Rail. This is a rolled beam / concrete deck bridge constructed in 1968. The Structure Inspection, Inventory, and Appraisal Sheet (attached) rates the deck as 5 (fair), the superstructure as 6 (satisfactory), and the substructures as 7 (good). We are interested in hearing your thoughts regarding the items listed below. Leave it blank if you don't wish to comment on a particular item.

1. What are your thoughts on the general condition of this bridge and the general maintenance effort required to keep it in service?

2. What are your comments on the current geometry and alignment of the bridge (curve, sag, banking, sight distance)?

3. Do you feel that the posted speed limit is appropriate?

4. Is the current bridge and approach roadway width adequate for winter maintenance including snow plowing?

5. Are the joints salvageable or would you recommend replacement?

6. Are the railings constantly in need of repair or replacement? What type of railing works best for your district?

7. Are you aware of any unpermitted driveways within close proximity to the bridge? We frequently encounter driveways that prevent us from meeting railing and safety standards.

**Bridge Scoping Project BF 3000(24)
Operations Input Questionnaire**

8. Are you aware of abutting property owners that are likely to need special attention during the planning and construction phases? These could be people with disabilities, elderly, or simply folks who feel they have been unfairly treated in the past.

9. Are you familiar with traffic volumes in the area of this project?

10. Are you familiar with rail traffic volumes in the area of this project?

11. Do you think a closure with off-site detour and accelerated construction would be appropriate? Do you have any opinion about a possible detour route, assuming that we use State route for State projects and any route for Town projects? Are there locations on a potential detour that are already congested that we should consider avoiding?

12. Please describe any larger projects that you have completed that may not be reflected on the attached Appraisal sheet, such as deck patches, paving patches, railing replacement with new type, steel coating, etc.

13. If there is a sidewalk on this bridge, how effective are the Town's efforts to keep it free of snow and ice?

14. Are there any drainage issues that we should address with this project?

15. Are you aware of any complaints that the public has about issues that we can address on this project?

**Bridge Scoping Project BF 3000(24)
Operations Input Questionnaire**

16. Would replacement with an at grade crossing be worth looking into?

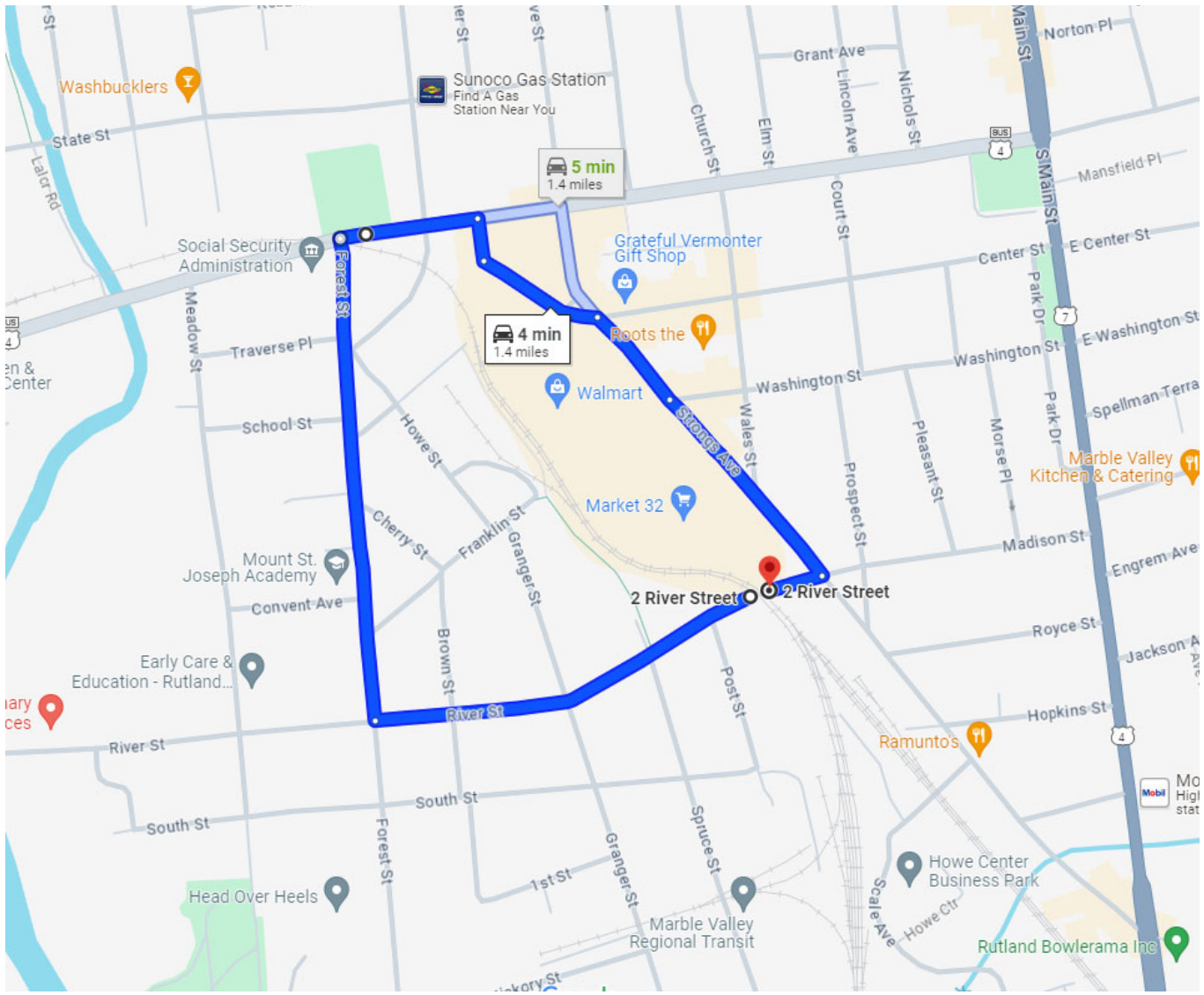
17. Is there anything else we should be aware of?

Appendix P: Crash Data

Rutland City River St. Bridge 27 is located at MM 0.8

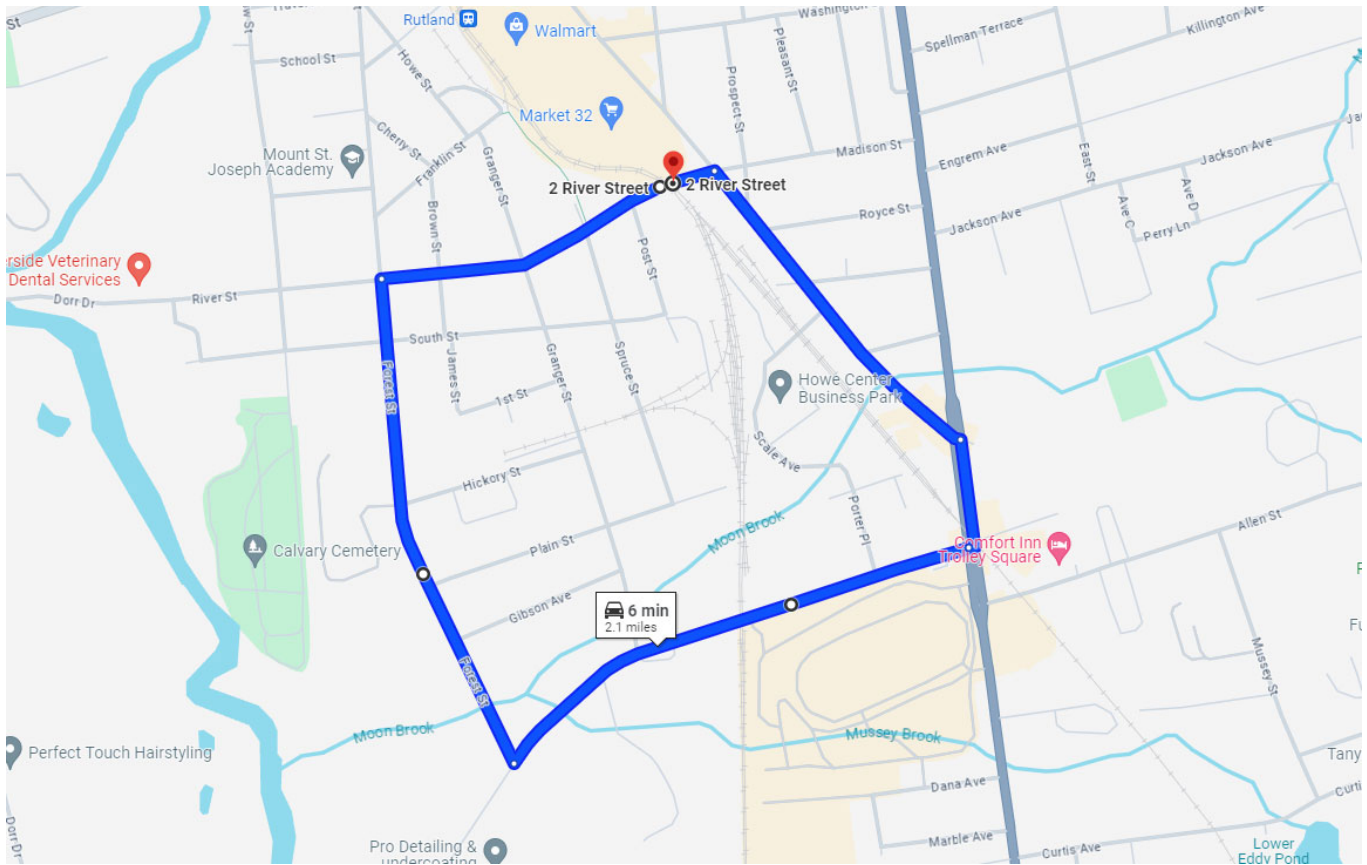
ObjectID	Crash Date	City/Town	AOT Route	Crash Type	Collision Direction	Weather	Report Number	Milepoint	Animal	Time of Day	Intersection With	Impairment	Involving	Road Characteristics	Road Condition	Surface Condition
3849151	November 20, 2018 at 10:09 PM	Rutland City	RIVER ST.	Property Damage Only	Single Vehicle Crash	Freezing Precipitation	18RL11078	0	None/Other	Night	Dorr Drive	Alcohol	None	T - Intersection	Road Surface Condition(wet, icy, snow, slush, etc)	Snow
4107298	June 30, 2019 at 11:55 AM	Rutland City	RIVER ST.				19RL05633	0		Day						
4924194	January 10, 2020 at 8:33 PM	Rutland City	RIVER ST.				20RL00262	0.001		Night						
3841645	December 5, 2018 at 4:52 AM	Rutland City	RIVER ST.	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	18RL11453	0.09	None/Other	Night	West St & Merchants Row	None	None	Four-way Intersection	None	Dry
3851267	September 5, 2018 at 4:28 PM	Rutland City	RIVER ST.	Property Damage Only	Single Vehicle Crash	Clear	18RL08626	0.18	None/Other	Day	St Joseph Ave	None	None	Not at a Junction	None	Dry
3848570	January 13, 2019 at 7:18 AM	Rutland City	RIVER ST.	Injury	Head On	Clear	19RL00328	0.35	None/Other	Day	Meadow Street	None	None	Four-way Intersection	None	Dry
5497926	May 22, 2020 at 4:39 PM	Rutland City	RIVER ST.				20RL03849	0.35		Day						
5875027	October 2, 2020 at 1:53 PM	Rutland City	RIVER ST.				20RL08313	0.35		Day						
5929066	January 26, 2022 at 2:29 PM	Rutland City	RIVER ST.	Injury	No Turns, Thru moves only, Broadside ^<	Clear	22RL000696	0.35	None/Other	Day	River St	None	None	Four-way Intersection	None	Dry
5936639	April 10, 2022 at 5:36 PM	Rutland City	RIVER ST.	Property Damage Only		Clear	22RL002762	0.35	None/Other	Day	Meadow Street	None	None		None	Dry
5936731	May 3, 2022 at 5:15 PM	Rutland City	RIVER ST.	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	22RL003527	0.37	None/Other	Day	Forest St	None	None	Four-way Intersection	None	Dry
4287371	August 30, 2019 at 1:47 PM	Rutland City	RIVER ST.				19RL08074	0.47		Day						
4385699	September 16, 2019 at 4:32 PM	Rutland City	RIVER ST.				19RL08722	0.47		Day	Forest St .					
5928083	January 22, 2021 at 5:28 PM	Rutland City	RIVER ST.				21RL00608	0.47		Night	FOREST ST					
5936040	June 13, 2022 at 4:09 PM	Rutland City	RIVER ST.	Property Damage Only			22RL004970	0.47	None/Other	Day	Forest St	None	None			
3851616	August 31, 2018 at 7:19 AM	Rutland City	RIVER ST.	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	18RL08425	0.48	None/Other	Day	Forest St	None	None	Four-way Intersection	None	Dry
5932962	September 29, 2021 at 12:58 PM	Rutland City	RIVER ST.	Property Damage Only	Other - Explain in Narrative	Cloudy	21RL08915	0.54	None/Other	Day	Brown Street	None	None	Four-way Intersection	None	Dry
5921914	February 8, 2022 at 10:02 AM	Rutland City	RIVER ST.	Property Damage Only			22RL001041	0.6	None/Other	Day	Granger St	None	None			
4107302	June 24, 2019 at 12:48 PM	Rutland City	RIVER ST.				19RL05396	0.61		Day	Granger St.					
5743079	July 31, 2020 at 3:58 PM	Rutland City	RIVER ST.				20RL06240	0.63		Day						
5919699	November 4, 2020 at 7:19 AM	Rutland City	RIVER ST.				20RL09284	0.64		Day						
5927713	December 15, 2020 at 2:21 PM	Rutland City	RIVER ST.				20RL10417	0.7		Day						
5964518	December 5, 2022 at 2:31 PM	Rutland City	RIVER ST	Injury	No Turns, Thru moves only, Broadside ^<	Cloudy	22RL011696	0.715	None/Other	Day	Spruce St	None	Heavy Tru	Four-way Intersection	None	Dry
5919154	November 8, 2020 at 3:58 PM	Rutland City	RIVER ST.				20RL09429	0.75		Day						
3840398	May 7, 2018 at 8:34 PM	Rutland City	RIVER ST.	Property Damage Only	Head On	Clear	18RL03988	0.85	None/Other	Night	River Street	None	None	Four-way Intersection	None	Dry
5930908	November 19, 2021 at 12:20 PM	Rutland City	RIVER ST.	Injury	Rear End	Clear	21RL10382	0.88	None/Other	Day	Strongs Ave	None	None	Four-way Intersection	None	Dry
5841936	September 21, 2020 at 2:33 PM	Rutland City	RIVER ST.				20RL07950	999.99		Day						
5997385	November 22, 2022 at 5:10 AM	Rutland City	RIVER ST	Property Damage Only	No Turns, Thru moves only, Broadside ^<	Clear	22RL011267	999.99	None/Other	Night	Granger St	None	None	Four-way Intersection	None	Dry

Appendix Q: Detour Maps



Detour Route 1: TH-13 (Forest Street) north to TH-4 (West Street/BUS-4), to TH-131 (Evelyn Street), to TH-2 (Merchants Row), back to TH-3 (Strongs Avenue) (1.4 miles end-to-end w/ sidewalk).

- Though Route: 0.4 miles
- Detour Route: 1.0 miles
- End to end Route: 1.4 miles
- Added distance: 0.6 miles



Detour Route 2: TH-13 (Forest St.) south to TH-12 (Park St.), to TH-1 (South Main St.), back to TH-3 (Strong's Ave.) (2.2 miles end-to-end). (Includes a narrow bridge)

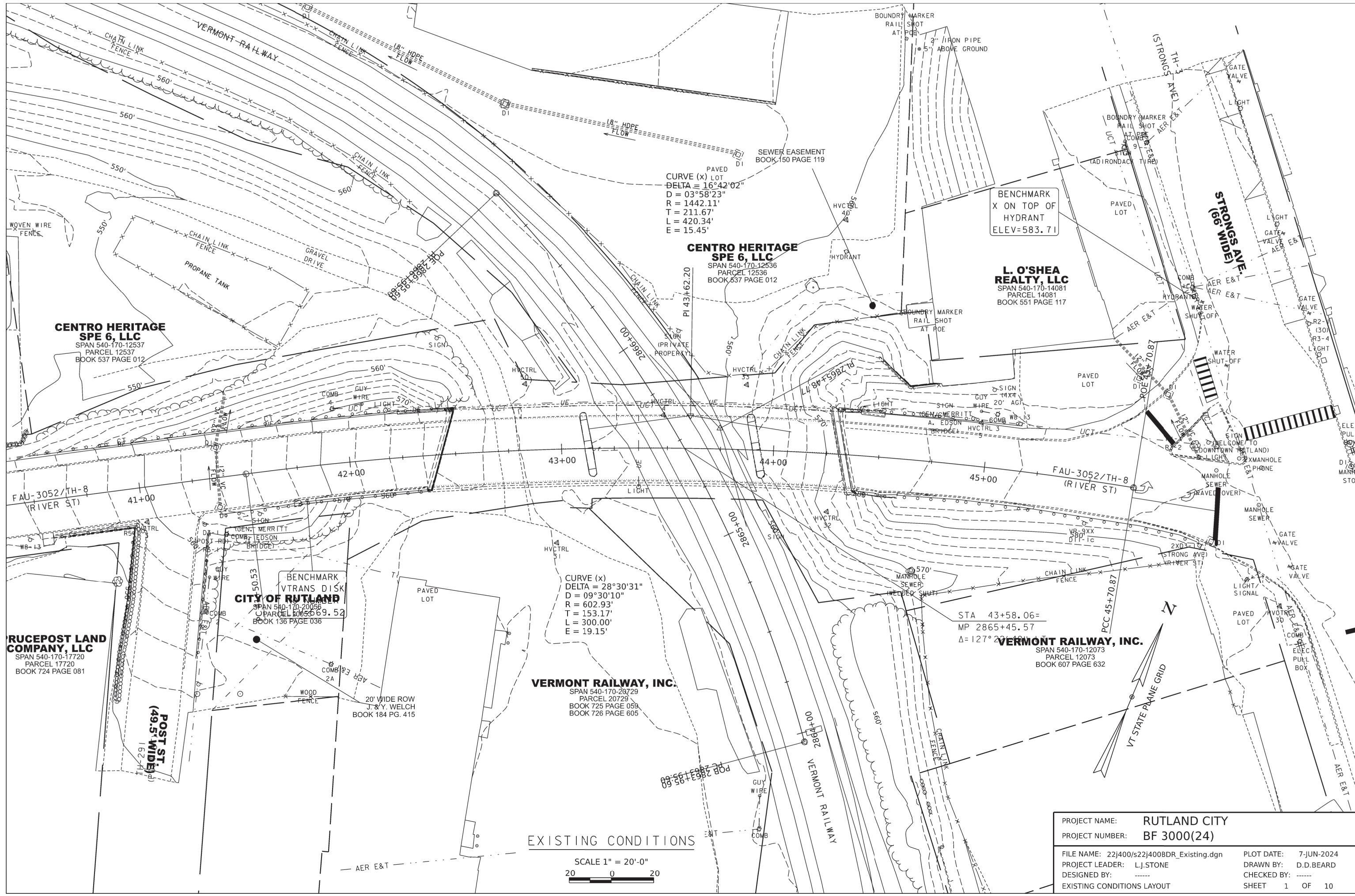
Though Route: 0.4 miles

Detour Route: 1.7 miles

End to end Route: 2.1 miles

Added distance: 1.3 miles

Appendix R: Plans



CENTRO HERITAGE SPE 6, LLC
 SPAN 540-170-12537
 PARCEL 12537
 BOOK 537 PAGE 012

CENTRO HERITAGE SPE 6, LLC
 SPAN 540-170-12536
 PARCEL 12536
 BOOK 537 PAGE 012

BENCHMARK
 X ON TOP OF
 HYDRANT
 ELEV=583.71

L. O'SHEA REALTY, LLC
 SPAN 540-170-14081
 PARCEL 14081
 BOOK 551 PAGE 117

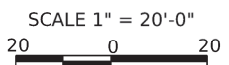
CITY OF RUTLAND
 SPAN 540-170-20056
 PARCEL 20056
 BOOK 136 PAGE 036

RUCEPOST LAND COMPANY, LLC
 SPAN 540-170-17720
 PARCEL 17720
 BOOK 724 PAGE 081

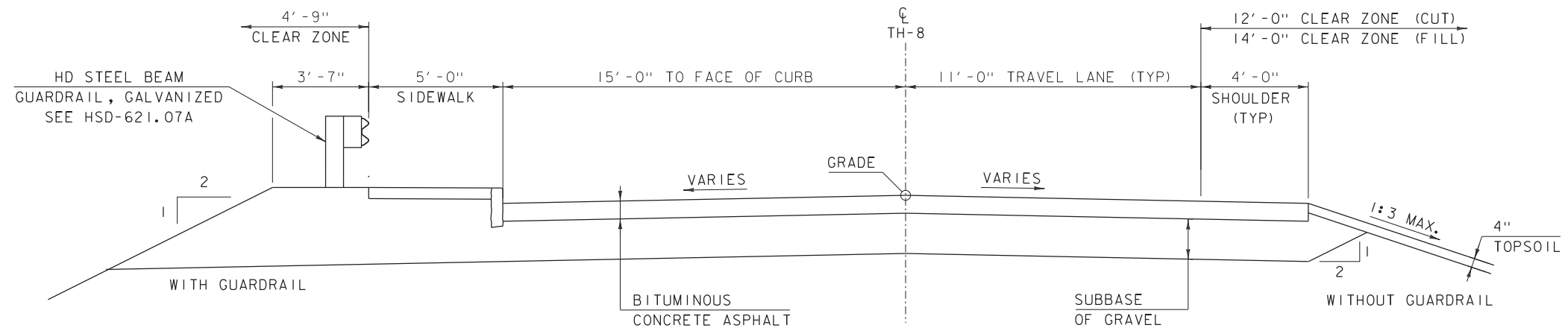
VERMONT RAILWAY, INC.
 SPAN 540-170-26729
 PARCEL 20729
 BOOK 725 PAGE 059
 BOOK 726 PAGE 605

STA 43+58.06=
 MP 2865+45.57
 $\Delta = 127^{\circ} 20' 10''$
VERMONT RAILWAY, INC.
 SPAN 540-170-12073
 PARCEL 12073
 BOOK 607 PAGE 632

EXISTING CONDITIONS

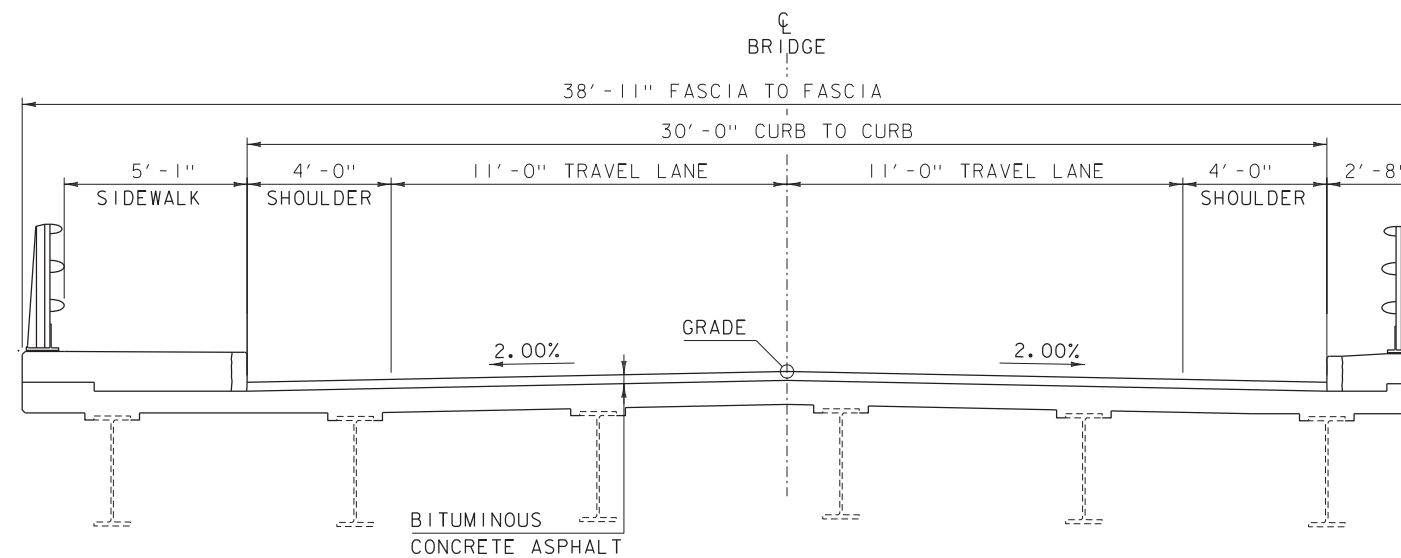


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PROJECT NUMBER:	BF 3000(24)		
FILE NAME:	22\400\22\400BDR_Existing.dgn	PLOT DATE:	7-JUN-2024
PROJECT LEADER:	L.J.STONE	DRAWN BY:	D.D.BEARD
DESIGNED BY:	-----	CHECKED BY:	-----
EXISTING CONDITIONS LAYOUT		SHEET	1 OF 10



EXISTING TH-8 TYPICAL SECTION

SCALE 3/8" = 1'-0"



EXISTING BRIDGE TYPICAL SECTION

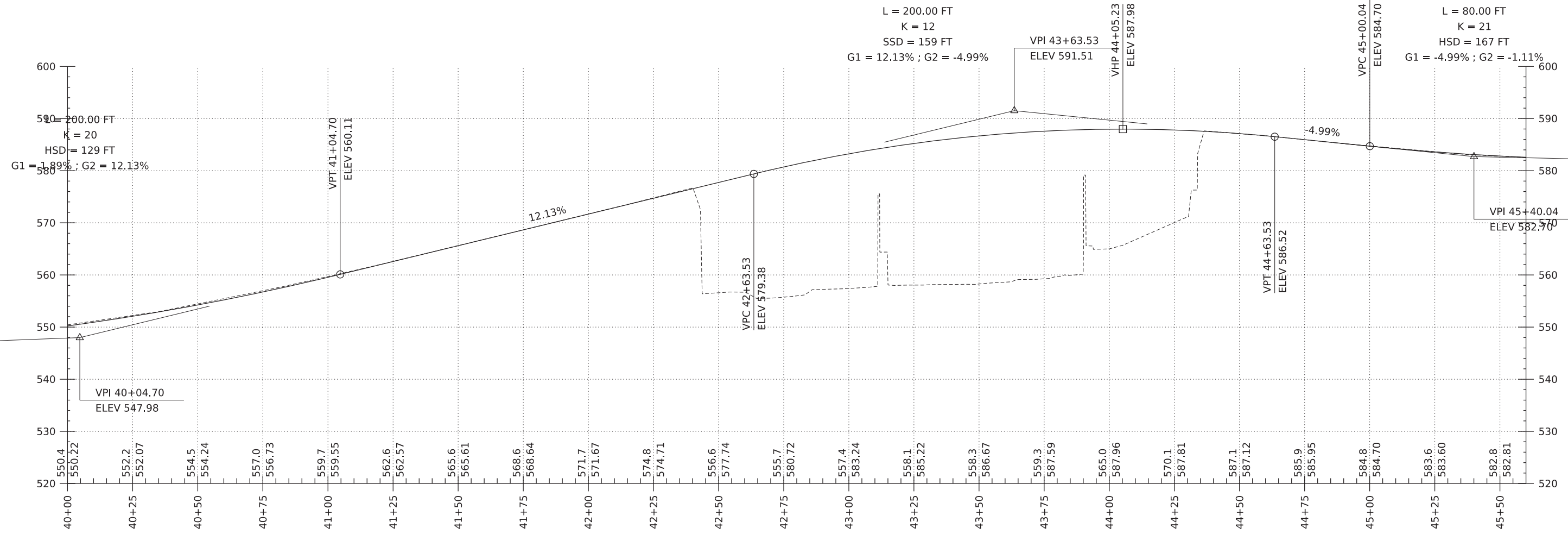
SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	
	+/- 1"
SAND BORROW	
	+/- 1"

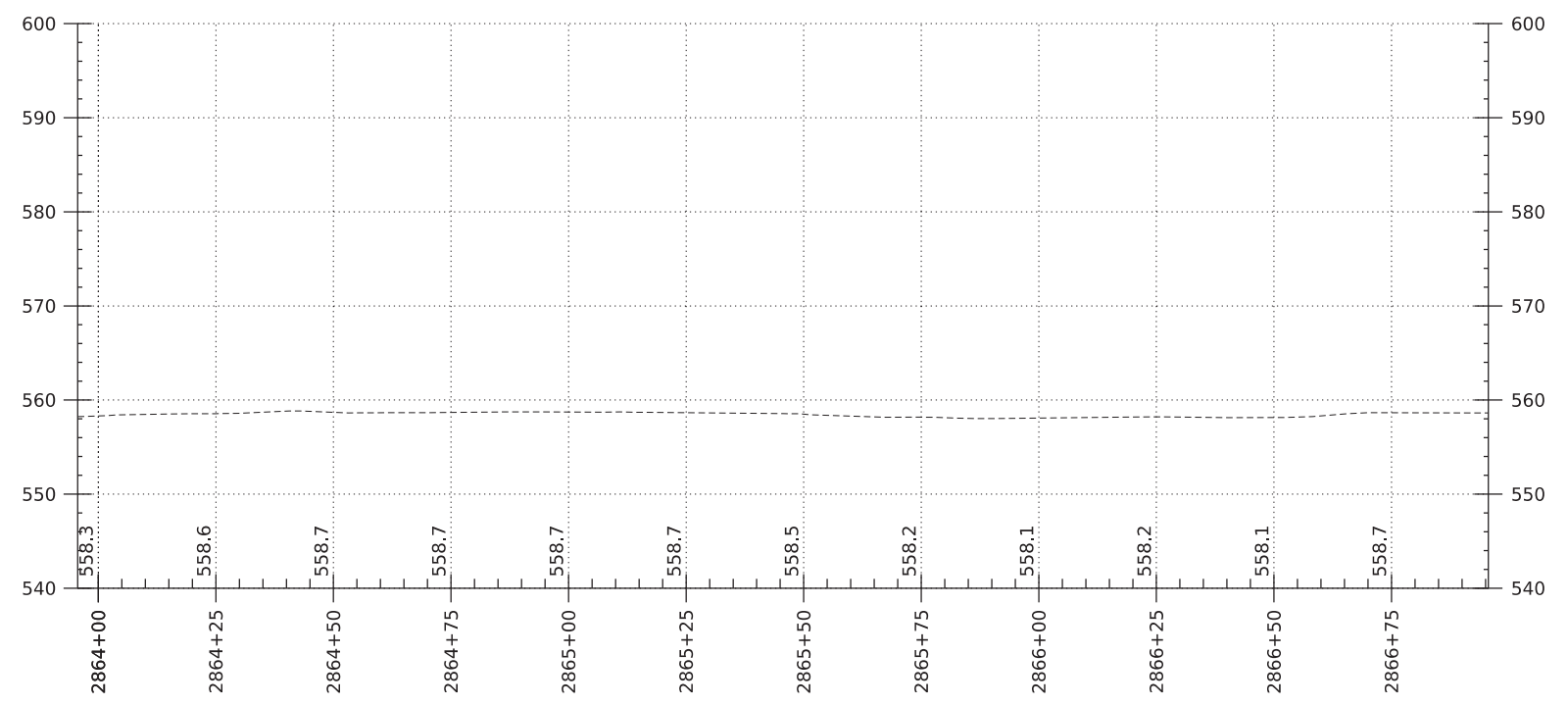
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PROJECT NUMBER: BF 3000(24)

FILE NAME: 22j400\22j400typical.dgn PLOT DATE: 7-JUN-2024
PROJECT LEADER: L.J.STONE DRAWN BY: D.D.BEARD
DESIGNED BY: ----- CHECKED BY: -----
EXISTING TYPICAL SECTIONS SHEET 2 OF 10



MJC ROUTE 3052 / TH-8 PROFILE

SCALE: HORIZONTAL 1" = 20' - 0"
VERTICAL 1" = 10' - 0"

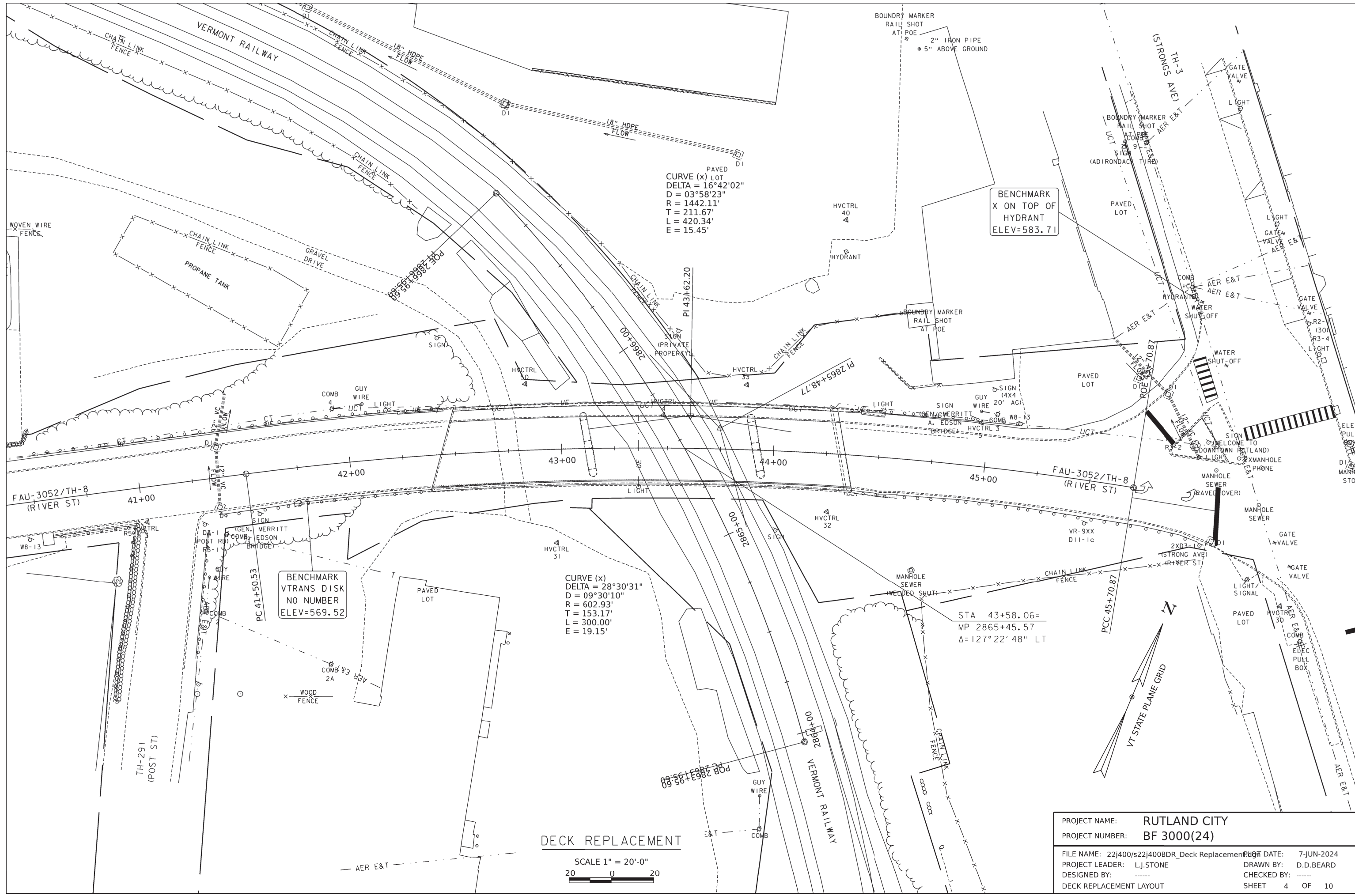


VERMONT RAILWAY PROFILE

SCALE: HORIZONTAL 1" = 20' - 0"
VERTICAL 1" = 10' - 0"

NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CL
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG CL

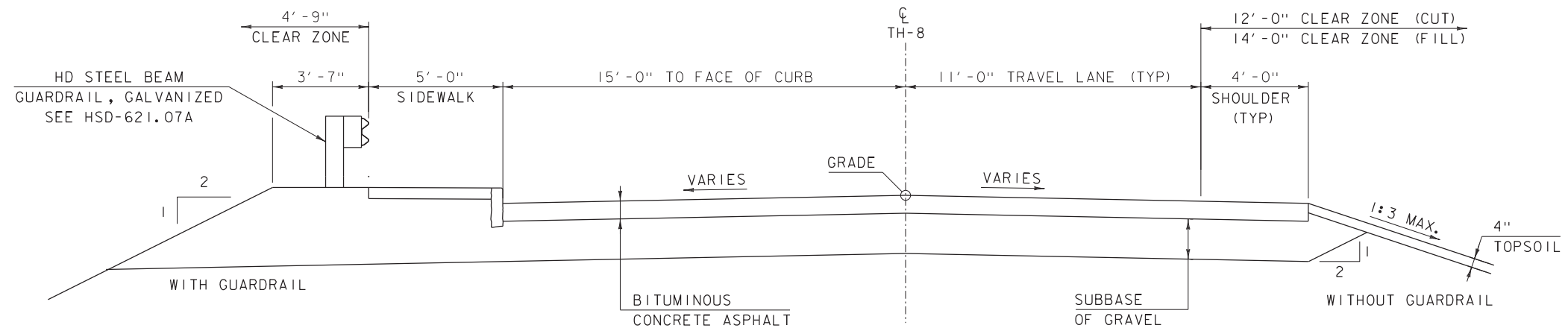
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PROJECT NUMBER:	BF 3000(24)	DRAWN BY:	D.D.BEARD
FILE NAME:	s22j400profile.dgn	CHECKED BY:	-----
PROJECT LEADER:	L.J.STONE	SHEET	3 OF 10
DESIGNED BY:	-----		



DECK REPLACEMENT

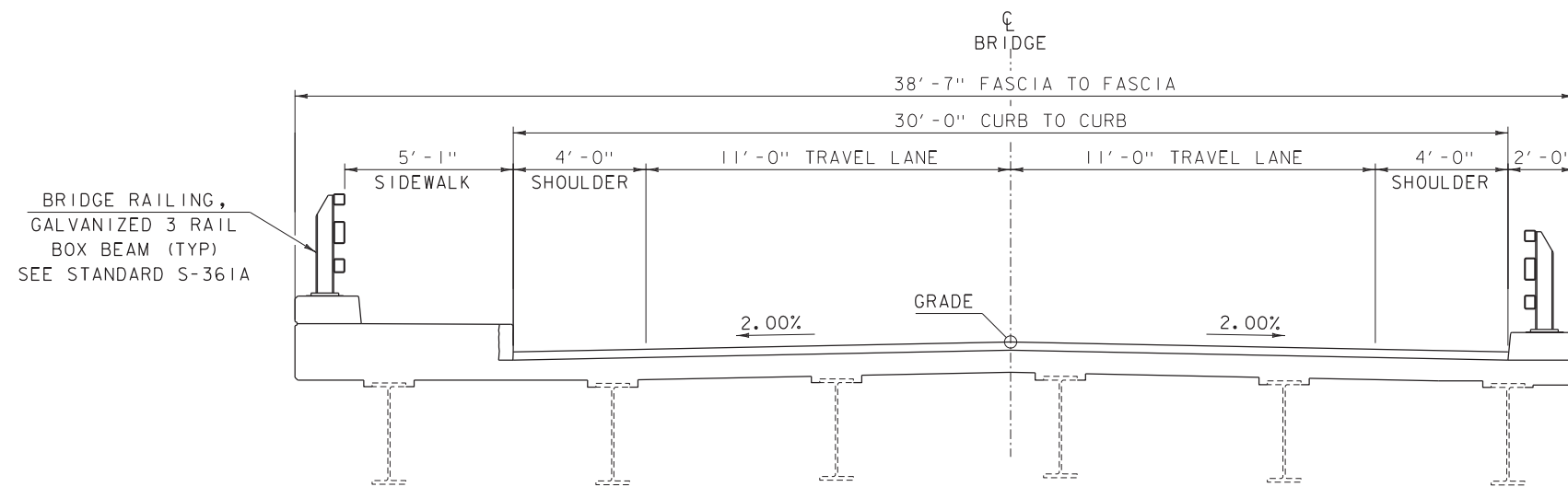
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PROJECT NUMBER:	BF 3000(24)
FILE NAME:	22\400\22\400BDR_Deck Replacement.dwg
PROJECT LEADER:	L.J.STONE
DESIGNED BY:	-----
DECK REPLACEMENT LAYOUT	
PLOT DATE:	7-JUN-2024
DRAWN BY:	D.D.BEARD
CHECKED BY:	-----
SHEET	4 OF 10



EXISTING TH-8 TYPICAL SECTION

SCALE 3/8" = 1'-0"



DECK REPLACEMENT TYPICAL SECTION

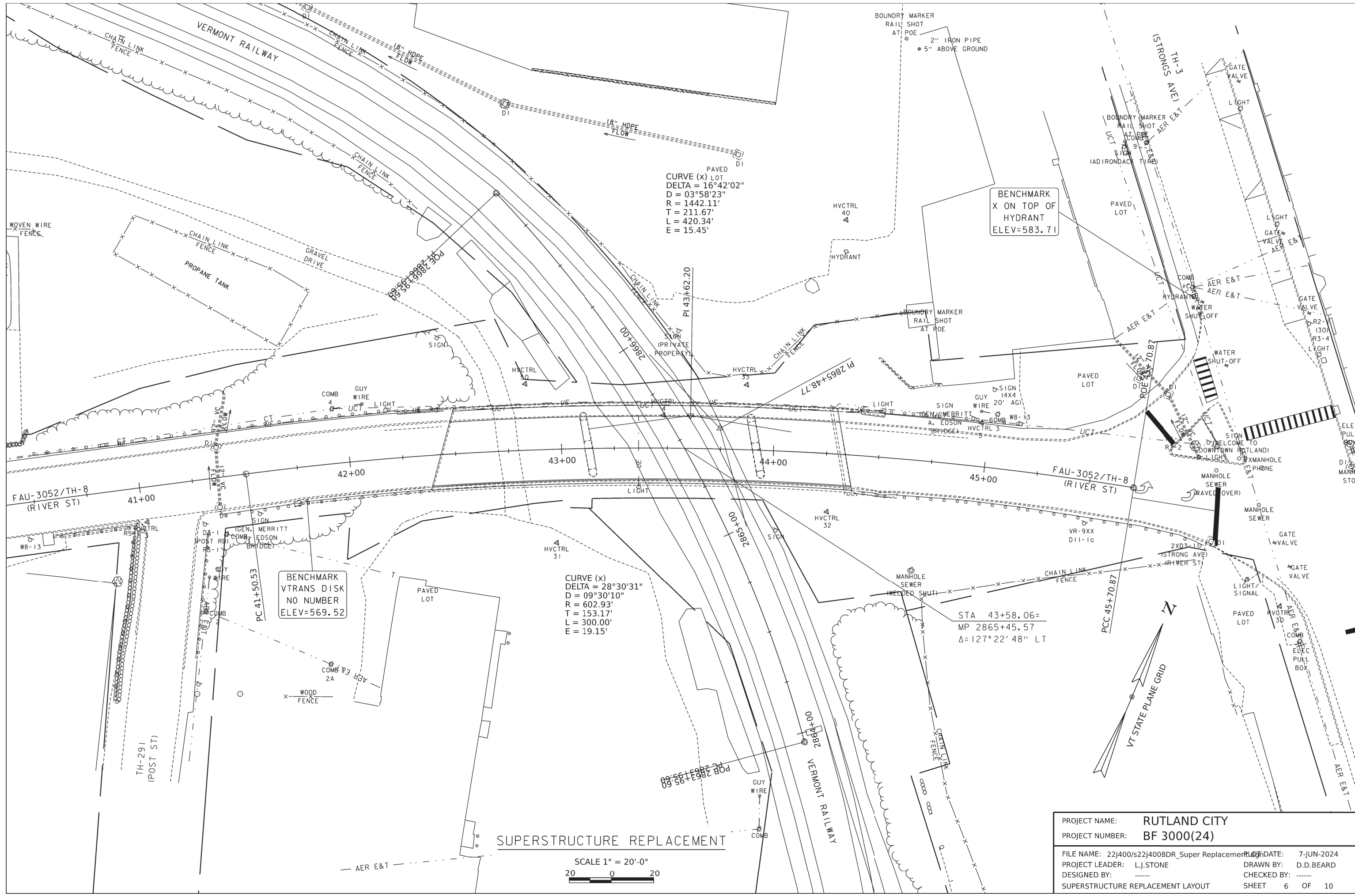
SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: RUTLAND CITY
PROJECT NUMBER: BF 3000(24)

FILE NAME: 22j400\22j400typical.dgn PLOT DATE: 11-SEP-2024
PROJECT LEADER: L.J.STONE DRAWN BY: D.D.BEARD
DESIGNED BY: ----- CHECKED BY: -----
DECK REPLACEMENT TYPICAL SECTIONS SHEET 5 OF 10



PAVED CURVE (X) LOT
 DELTA = 16°42'02"
 D = 03°58'23"
 R = 1442.11'
 T = 211.67'
 L = 420.34'
 E = 15.45'

CURVE (x)
 DELTA = 28°30'31"
 D = 09°30'10"
 R = 602.93'
 T = 153.17'
 L = 300.00'
 E = 19.15'

BENCHMARK
 X ON TOP OF
 HYDRANT
 ELEV=583.71

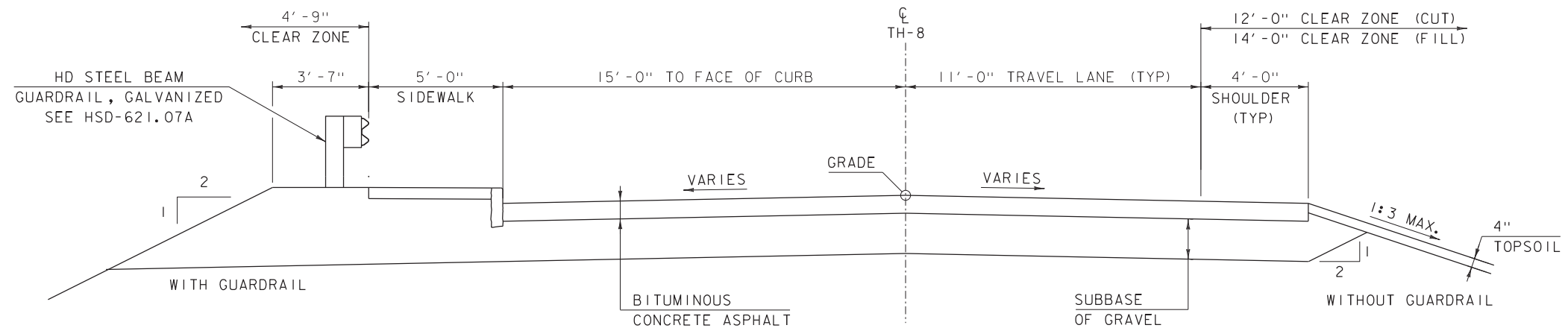
BENCHMARK
 VTRANS DISK
 NO NUMBER
 ELEV=569.52

STA 43+58.06=
 MP 2865+45.57
 Δ=127°22'48" LT

SUPERSTRUCTURE REPLACEMENT

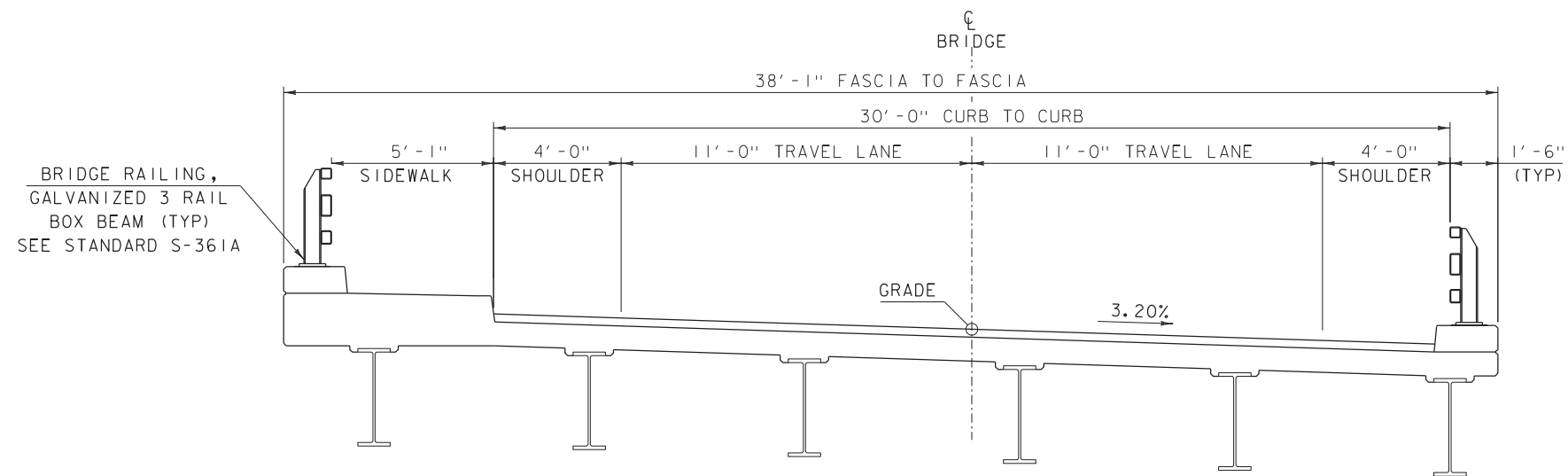
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PROJECT NAME:	RUTLAND CITY	DATE:	7-JUN-2024
PROJECT NUMBER:	BF 3000(24)	DRAWN BY:	D.D.BEARD
FILE NAME:	22\400\22\400BDR_Super Replacement.dwg	CHECKED BY:	
PROJECT LEADER:	L.J.STONE	SHEET	6 OF 10
DESIGNED BY:			
SUPERSTRUCTURE REPLACEMENT LAYOUT			



EXISTING TH-8 TYPICAL SECTION

SCALE 3/8" = 1'-0"



SUPERSTRUCTURE REPLACEMENT TYPICAL SECTION

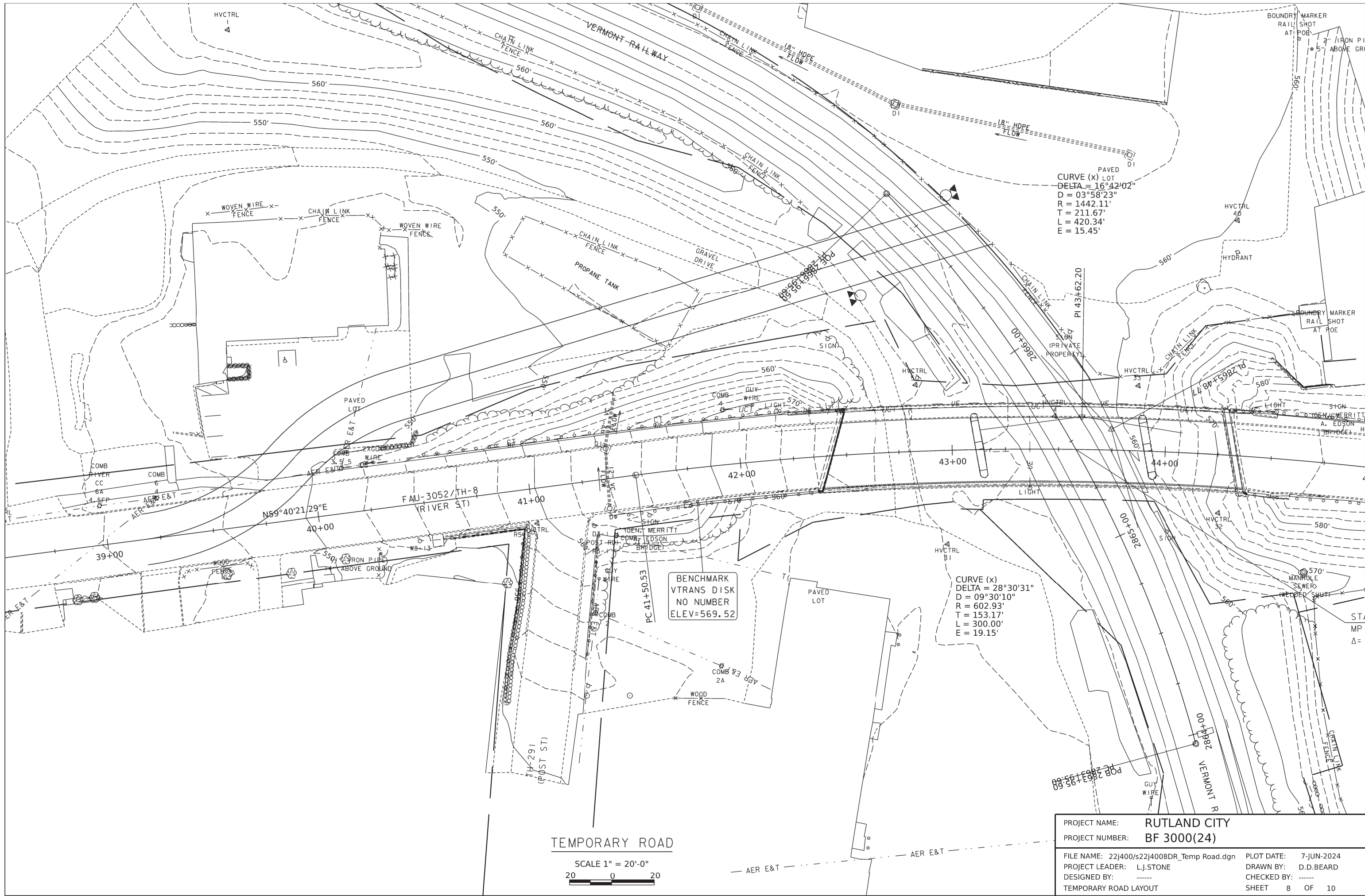
SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: RUTLAND CITY
PROJECT NUMBER: BF 3000(24)

FILE NAME: 22j400\ss22j400+typical.dgn PLOT DATE: 11-SEP-2024
PROJECT LEADER: L.J.STONE DRAWN BY: D.D.BEARD
DESIGNED BY: ----- CHECKED BY: -----
SUPERSTRUCTURE REPLACEMENT TYP SECTION SHEET 7 OF 10

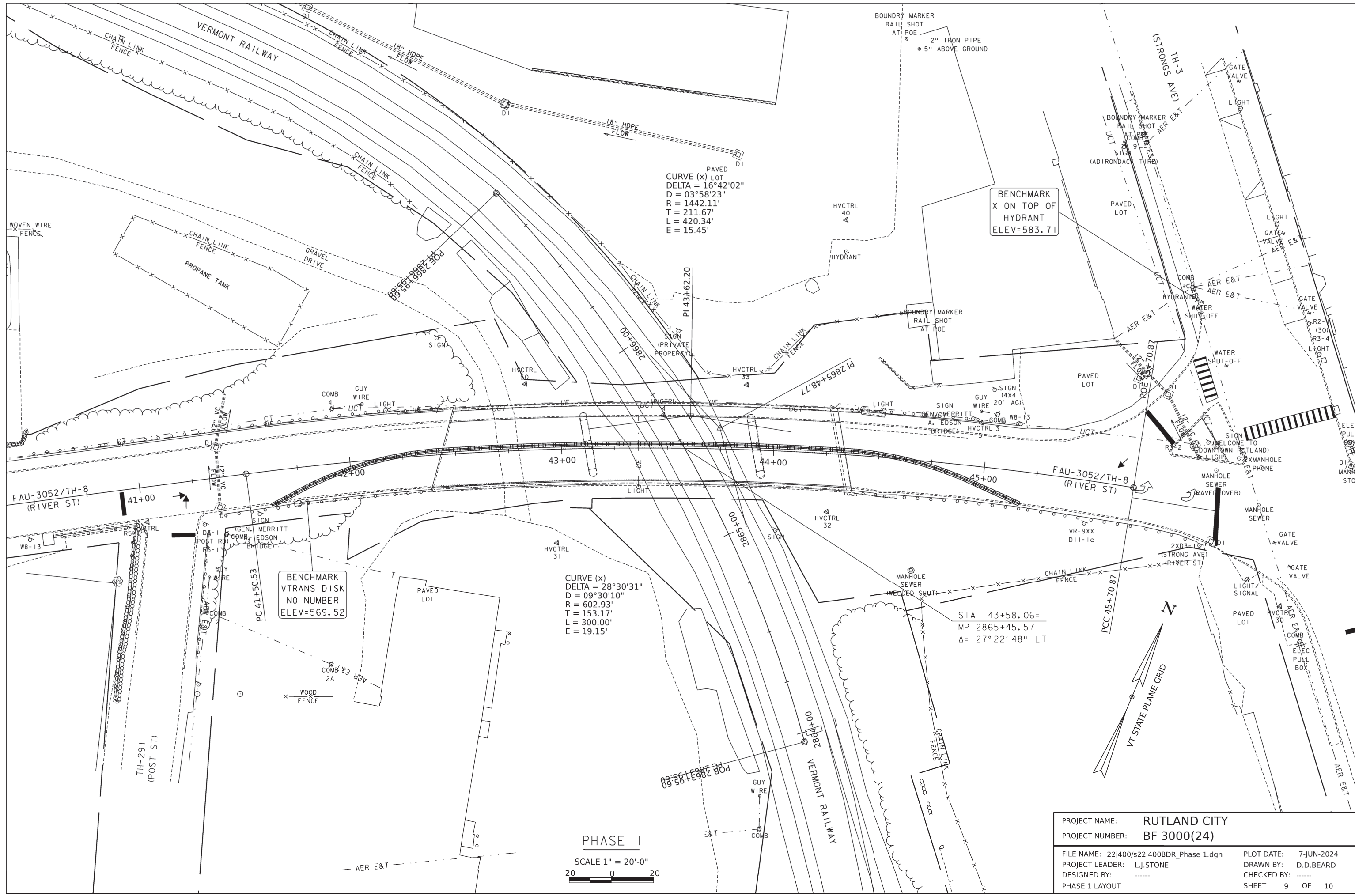


TEMPORARY ROAD

SCALE 1" = 20'-0"



PROJECT NAME:	RUTLAND CITY		
PROJECT NUMBER:	BF 3000(24)		
FILE NAME:	22\400\22\400BDR_Temp Road.dgn	PLOT DATE:	7-JUN-2024
PROJECT LEADER:	L.J.STONE	DRAWN BY:	D.D.BEARD
DESIGNED BY:	-----	CHECKED BY:	-----
TEMPORARY ROAD LAYOUT		SHEET	8 OF 10



PAVED CURVE (X) LOT
 DELTA = 16°42'02"
 D = 03°58'23"
 R = 1442.11'
 T = 211.67'
 L = 420.34'
 E = 15.45'

BENCHMARK
 VTRANS DISK
 NO NUMBER
 ELEV=569.52

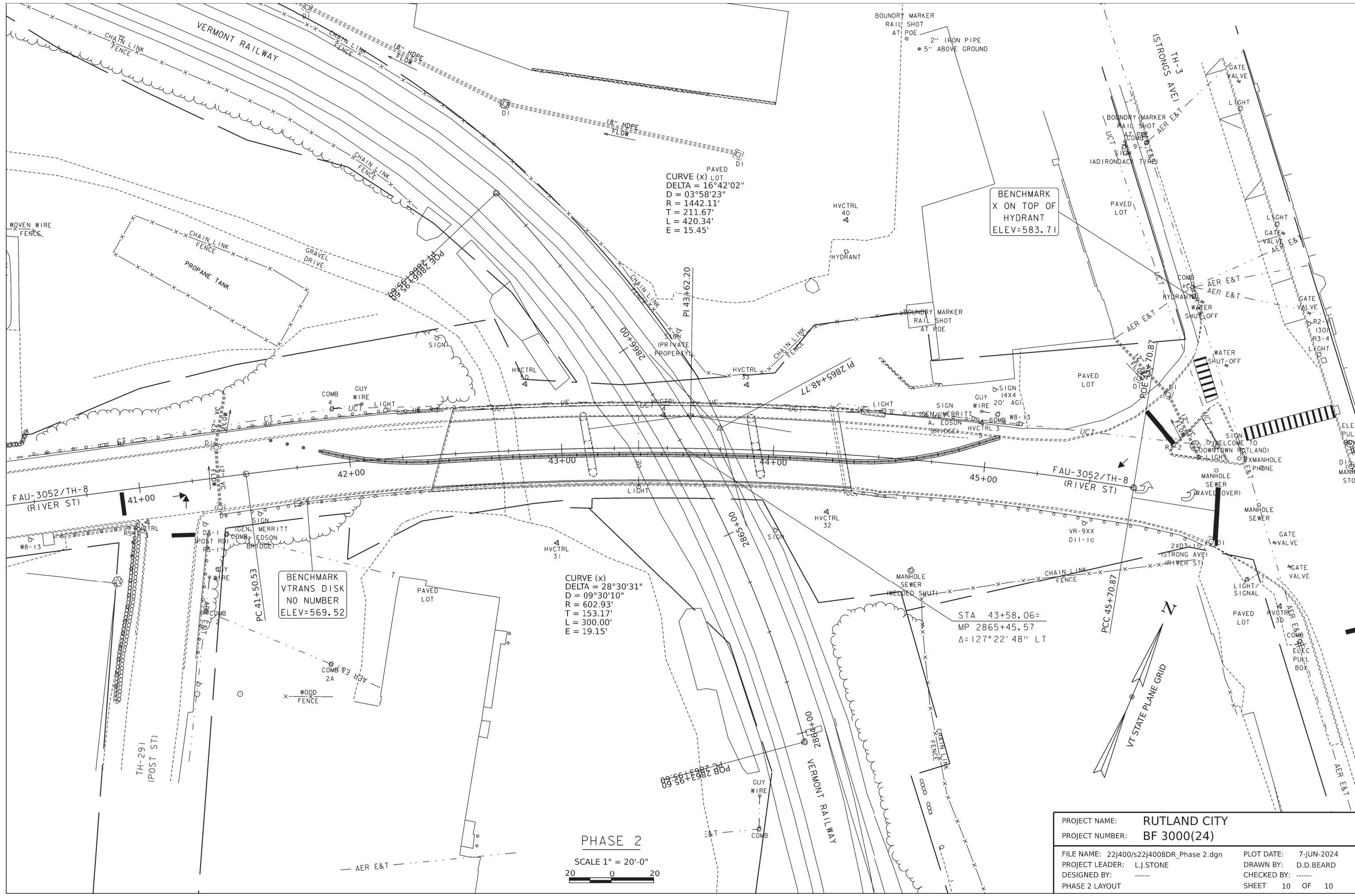
CURVE (x)
 DELTA = 28°30'31"
 D = 09°30'10"
 R = 602.93'
 T = 153.17'
 L = 300.00'
 E = 19.15'

BENCHMARK
 X ON TOP OF
 HYDRANT
 ELEV=583.71

STA 43+58.06 =
 MP 2865+45.57
 Δ = 127°22'48" LT

PHASE I
 SCALE 1" = 20'-0"
 20 0 20

PROJECT NAME:	RUTLAND CITY		
PROJECT NUMBER:	BF 3000(24)		
FILE NAME:	22\400\22\400BDR_Phase 1.dgn	PLOT DATE:	7-JUN-2024
PROJECT LEADER:	L.J.STONE	DRAWN BY:	D.D.BEARD
DESIGNED BY:	-----	CHECKED BY:	-----
PHASE 1 LAYOUT		SHEET	9 OF 10



PHASE 2
 SCALE 1" = 20'-0"

PROJECT NAME:	RUTLAND CITY	PLOT DATE:	7-JUN-2024
PROJECT NUMBER:	BF 3000(24)	DRAWN BY:	D.D.BEARD
FILE NAME:	22\400\22\400BDR_Phase 2.dgn	CHECKED BY:	-----
PROJECT LEADER:	L.J.STONE	SHEET	10 OF 10
DESIGNED BY:	-----		
PHASE 2 LAYOUT			