TOWN OF SOUTH HERO

Featherbed Lane / Apple Island Resort Safety Concerns Scoping Study DRAFT

January 2026

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INTRODUCTION

Project Overview

The Town of South Hero, in partnership with the Northwest Regional Planning Commission, and the Vermont Agency of Transportation (VTrans), conducted a scoping study to address safety concerns at the Featherbed Lane/Apple Island Resort intersection and surrounding area. The project was funded in part by the Federal Highway Administration and the Town of South Hero, through the Vermont Agency of Transportation (VTrans) Municipal Assistance Section (MAS).

The project proposes concept designs to improve pedestrian and bicycle safety at the Featherbed Lane/ Apple Island Resort intersection area, the use of which is influenced by Apple Island Resort, Featherbed Lane, the Vermont Fish and Wildlife parking area and boat launch, and the Sand Bar & Grill development (53 through 90 US RT 2).

Project Team

The project team met regularly throughout this process and provided guidance and direction to the consultant team. Members included:

- Sue Arguin, Town Administrator
- Dean Pierce, NRPC
- Ashley Andrews, VTrans
- Doug Patterson, Resident
- Anne Zolotas, Resident
- John Beaulac, Resident
- Joan Falcao, Resident

The project team met a total of 5 times over the course of the study. The kickoff meeting was held on May 14th, 2025. Subsequent project team meetings were held on July 31st, September 11th, October 15th, and November 6th.

Project Area

The project area, show in ***Figure 1***, is along Route 2 in South Hero, just west of the causeway, from the Sand Bar & Grill Restaurant to the Vermont Fish & Wildlife parking lot.

Figure 1 – Project Area

Source: Esri, USDA FSA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

Prepared for: Northwest Regional Planning Commission
Town of South Hero
South Hero STP BP23(23) / Featherbed Lane/Apple Island Resort Safety Concerns

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PURPOSE AND NEED

The following purpose and need statement was developed based on the existing conditions assessment, public input, and project team discussions.

Purpose

The purpose of this project is to improve the safety of US Route 2 in South Hero near the Featherbed Lane/Apple Island Resort intersection and surrounding area for all users (walkers, bikers, and vehicles).

Need

Recognizing the importance of enhancing safety at this location, the following needs have been identified:

Provide safe facilities for bicyclists and pedestrians. With the proximity of the Apple Island Resort, Apple Island Marina, a restaurant, and public marina in the study area, there is a large demand for bikers and pedestrians to travel along and cross the road at convenient locations to reach key destinations, particularly during the summer months. Currently, there are no crossings, designated pedestrian areas along the road, or bicycle lanes in an area where vehicles often exceed the 40MPH speed limit.

Improve vehicular safety while still maintaining the functionality of the corridor. US Route 2 is an important corridor and the gateway to South Hero and a key route to New York State. This area also has a history of crashes attributed to high speeds and a wide range of uses, including bikers and pedestrians, as well as trucks and RVs.

Enhance the area as an important recreational destination. The Apple Island Resort is a major summer destination and an important recreational destination for the community. Making it safe and comfortable for people to get to nearby amenities is essential for supporting this community resource and the local economy

EXISTING CONDITIONS

The following section inventories existing conditions within the project area. This inventory looks at existing land uses, roadway characteristics, speeds, pedestrian crossings, crash history, and natural resources. A cultural resources assessment was not included in this project, but is recommended for the preferred alternative during the next phase of the project.

Land Uses

The project area is largely characterized by commercial and recreational uses, including the following:

Apple Island Resort

The Apple Island Resort is a seasonal resort providing accommodations for RV camping from Mid-May to Mid-October. Amenities include a general store, golf course, marina, and a community center.

APPLE ISLAND GENERAL STORE

The on-site general store is open to the public and provides a one-stop-shop for food, drinks, souvenirs, and daily necessities. It includes a deli, coffee station, wine and beer, camping supplies, and daily necessities.

APPLE ISLAND MARINA

The marina is on the northern side of Route 2, across the street from the resort. The marina offers seasonal boat slips and boat rentals for the public and resort guests.

John Guilmette Access Area

This site, known as the John Guilmette access area, is owned by the State of Vermont Fish and Wildlife. It includes parking, and public access for fishing and boat launching.

Marina

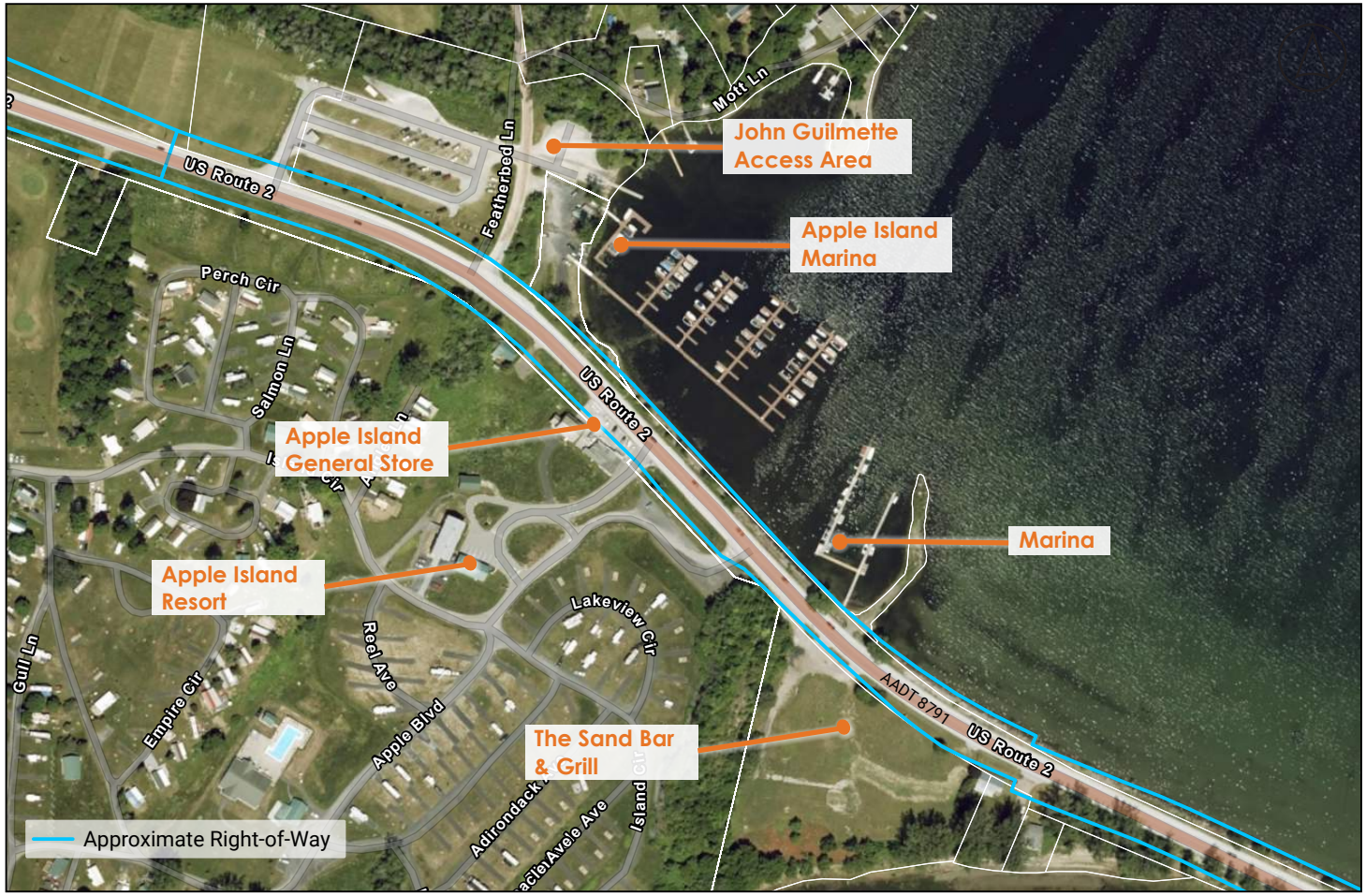
A second smaller marina is located across the street from the Sand Bar & Grill, also on the northern side of Route 2.

The Sand Bar & Grill

The Sand Bar & Grill opened in 2025. The popular restaurant serves food and cocktails year-round, and promotes its scenic location and panoramic views of Lane Champlain.

Figure 2 shows a map of key locations surrounding the project area.

Figure 2 – Surrounding Land Uses



Source: Esri, USDA FSA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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Roadway Characteristics

US route 2 is a State Highway approximately 43' wide, through the project area. The roadway includes a 12.5' travel lane in each direction, and paved shoulders. The northern shoulder is approximately 8' wide, and the southern shoulder is about 10' wide. There are no bicycle lanes, sidewalks, or crosswalks present.

The approximate right-of-way and utilities locations were acquired through the VTrans ROW Information Tool (https://vtrans.vermont.gov/highway/row). The right-of-way is approximately 99.5' with about 25-30' on the southern side, and a variable width on the northern side. The ROW limits are shown on ***Figure 4***. Aerial utilities are present on the southern side of Route 2.

According to VTrans 2024 AADT Report (vtrans.vermont.gov/operations/OSB/data/traffic), average daily traffic volumes through the project area are 8,791 vehicles. However, given the seasonal nature of this location and feedback from the community, it is clear that traffic volumes are considerably higher in the summer.

Figure 3 – Existing Cross-Section

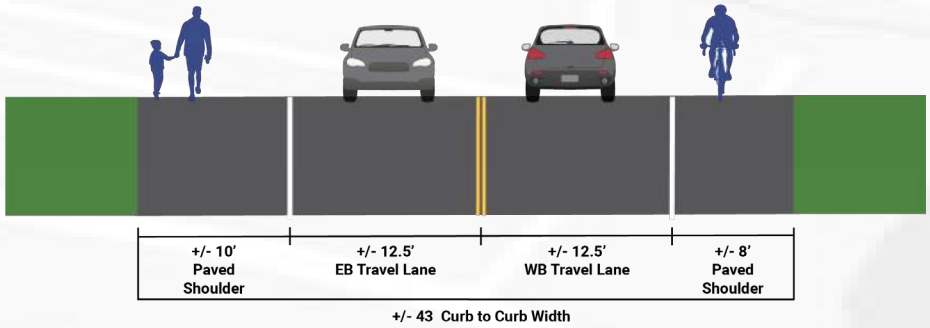

Figure 4 – Approximate Right-of-Way

Source: Esri, USDA FSA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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Roadway Speeds

The posted speed limit though the project area is 40 miles per hour. However, there were many local reports of faster speeds through this area.

In Vermont, speed limits are determined using a standardized process guided by the federal Manual on Uniform Traffic Control Devices (MUTCD). This process includes an engineering study known as a speed study, which helps identify how fast most drivers are naturally traveling on a given road.

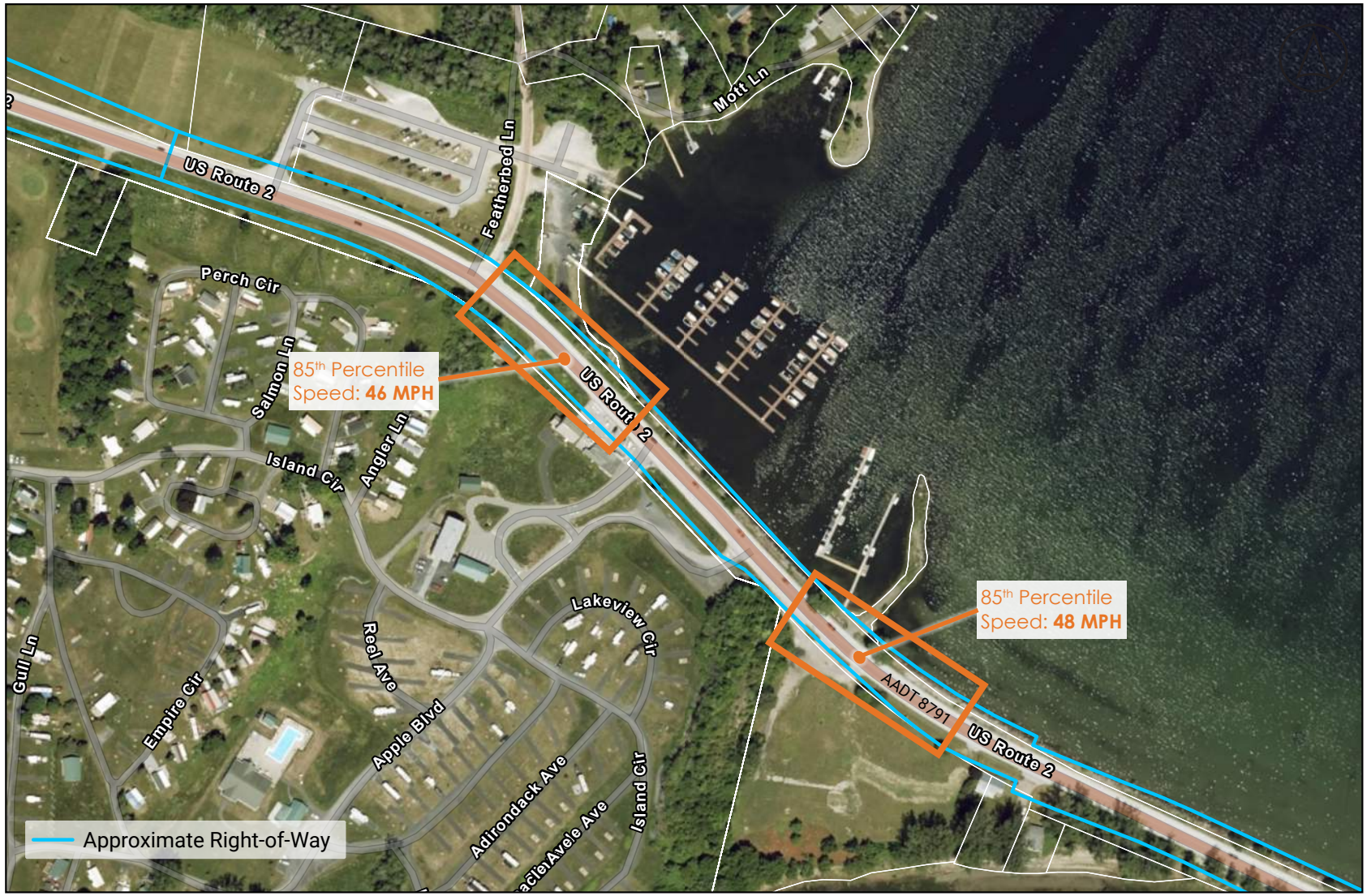
A key part of this study is calculating the 85th percentile speed—the speed at or below which 85% of vehicles are moving. This number reflects the behavior of the majority of drivers and is considered a safe and reasonable benchmark.

Typically, the speed limit is set at this 85th percentile speed, rounded to the nearest 5 miles per hour. However, other factors—such as road design, crash history, pedestrian activity, or nearby land uses—may lead engineers to recommend a different speed limit to better match local conditions.

To fully understand the impacts of speed through this area, Northeast Regional Planning Commission conducted a vehicle spot speed study on the morning of August 4th, 2025. This spot speed study was not in compliance with the MUTCD standards for an engineering speed study, but it gives a sense of current travel speeds through the area.

The spot speed study looked at two locations within the project area. The northern location measured speeds between the Featherbed Lane and Apple Island General Store. At this location, the 85th percentile speed was 46 mph. The southern location measured speeds in front of the Sand Bar & Grill. At this location the 85th percentile speed was 48 mph. The full speed study is available in ***Appendix A***.

Figure 5 – Spot Speed Study Findings



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Pedestrian Crossings

In order to help quantify the need for pedestrian crossings within the project area, the Northeast Regional Planning Commission completed a Pedestrian Crossing Count Study. This study counted the number of pedestrians crossing the road at two locations (between Featherbed Lane and the Apple Island General Store, and in front of the Sand Bar & Grill) on July 5th, 2025.

This spot study gave the project team a sense for how many people are crossing the road and where during the summer months. It was also an important data point to determine whether the crossing volumes would warrant a crosswalk based on VTrans policy.

According to the *VTrans Guidelines for Pedestrian Crossing Treatments - August 2019*, the following criteria should be met prior to installing a mid-block crosswalk (unless supported by other factors using engineering judgment):

1. The speed limit is 40 mph or less;
2. There are 20 or more pedestrians using the crossing per hour during the highest pedestrian volume hour (elementary school age and elderly pedestrians count as 2 each);
3. The AADT (annual average daily traffic) for the roadway exceeds 3000 vehicles per day;
4. There is a sidewalk or adequate shoulder for use by pedestrians.
5. There is not another crosswalk across the same roadway within 200 feet;
6. A determination has been made that the pedestrian shall have the right of way over the vehicular traffic;
7. There is adequate sight distance in both directions.

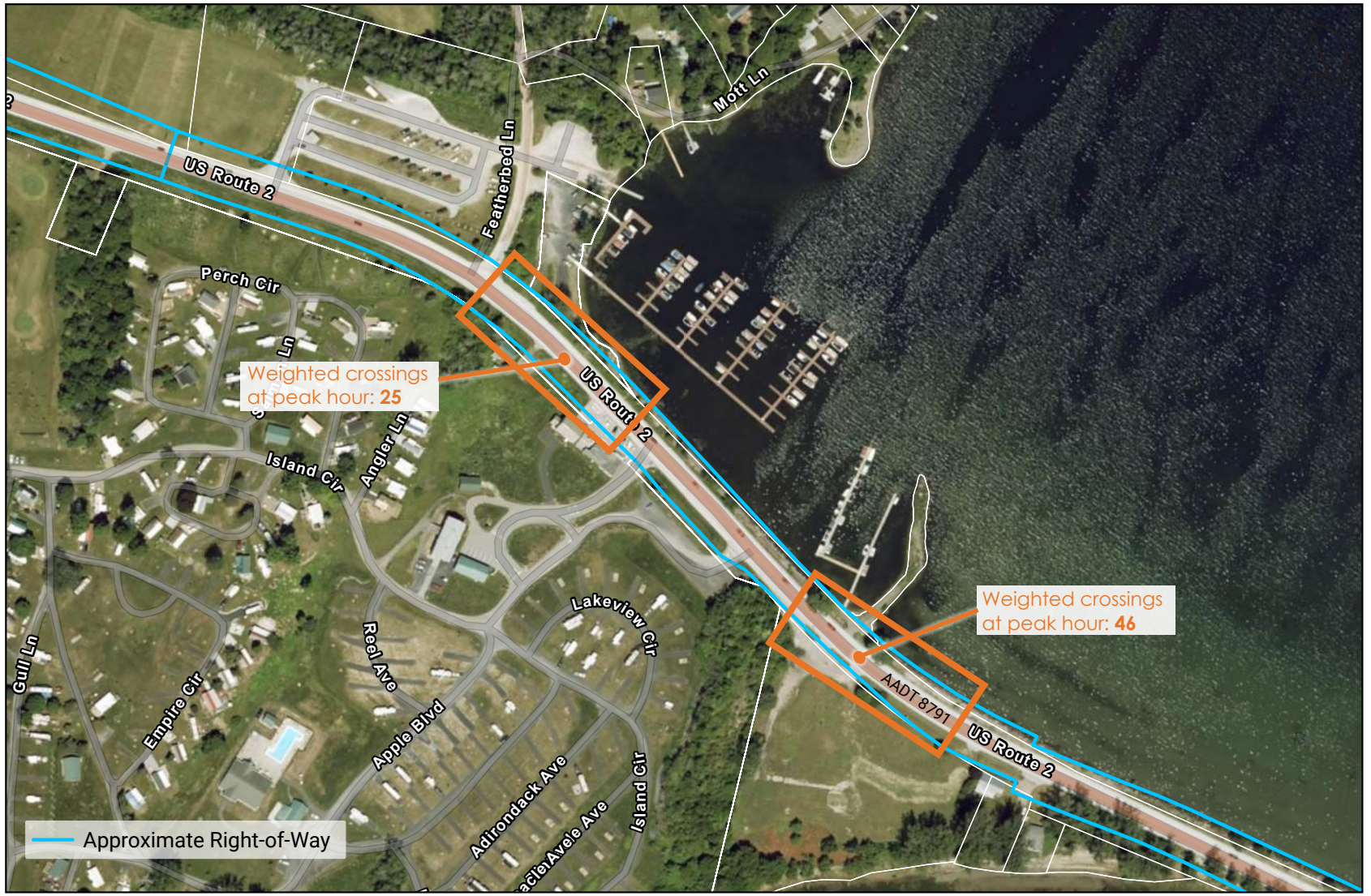
Based on the existing conditions, the only criteria in question was criteria #2, so the Pedestrian Crossing Feasibility Study focused on determining if there were locations in the project area that meet this criteria. Both locations met this threshold at peak hour on July 5th, 2025.

At the northern location (between Featherbed Lane and the Apple Island General Store), the weighted crossings (children and seniors counted x2) was 25 at peak hour (12:28pm - 1:28pm).

At the southern location (in front of the Sand Bar & Grill), the weighted crossings (children and seniors counted x2) was 46 at peak hour (5:45pm - 6:45pm).

The full Pedestrian Crossing Count Study can be found in ***Appendix B***.

Figure 6 – Pedestrian Crossing Count Study Findings



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Crash History

Crash history from the Vermont Public Crash Data Query Tool (2020-2025) was reviewed. In the past 5 years, there was a total of 5 crashes in the project area. Of the 5 crashes, 1 resulted in the damage of property only, 2 resulted in injuries, and there was no data available for 2 crashes. Both crashes that resulted in injuries were at the Apple Boulevard exit and Route 2 intersection. All of the crashes occurred in clear and dry conditions, and most of them occurred during the day. At least two crashes were rear-ends.

There were no fatalities during this time period, but there are reports of at lest one fatality in the past 25 years. Additionally, there were many comments from the study team and the public about near misses, particularly at the Featherbed Lane intersection.

The types and location of each crash is show in ***Figure 7***.

Table 1 – Crash History (2020-2025)

Crash Date	Crash Type	Collision Direction	Time of Day
July 2020	Property Damage Only	Rear End	Day
May 2020	No Data	No Data	Day
October 2020	No Data	No Data	Night
May 2022	Injury	No Data	Day
June 2022	Injury	Rear End	Day

Figure 7 – Crash History (2020-2025)

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Town of South Hero
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Source: Esri, USDA FSA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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Natural Resources

A desktop review of natural resources was completed using the Vermont Agency of Natural Resources (ANR) Natural Resources Atlas mapping program. This was done to gain a better understanding of the natural resource constraints within the project area. This included wetlands and streams; rare, threatened, or endangered (RTE) species; wildlife and wildlife habitat; agricultural land; public lands and designated conservation area; hazardous materials, and Act 250 permits. Given the scope of the project, it is unlikely that any alternative would have a significant impact on any natural resources evaluated. The following is a summary of the findings. The full review is in ***Appendix C***.

Wetlands and Streams

The Project Area is adjacent to Lake Champlain on both sides. The lake and nearby lakefront is identified as a Flood Hazard Area. Class 2 Wetlands are shown near the Project Area in the Wetland VSWI layer. The Wetlands Advisory Layer is shown on the western side of Route 2 along the lakefront. A stream is also identified north of the Vermont Fish and Wildlife parking area. There are no river corridor easements nearby.

Rare, Threatened, and Endangered (RTE) Species

According to the ANR Natural Resources Atlas, there are RTE plants and animal species present in and around the southern portion of the Project Area, primarily along the lakefront.

Wildlife and Wildlife Habitat

The project area includes uncommon plant and animal species as well as significant natural communities in the southern section, near Lake Champlain. No deer wintering areas, brook trout waters, or Indiana Bat are present in the ANR Natural Resources Atlas. However, all of Vermont is considered critical habitat for the state and federally threatened northern long-eared bat, and this area, along with much of the state, is also within the range of the endangered Tricolored Bat.

Agricultural Land

According to the ANR Natural Resources Atlas, there are statewide, statewide (b), and prime agricultural soils within and around the Project Area. However, no agricultural operations are planned nor expected for the project area.

Public Land and Designated Conservation Areas

The Vermont Fish and Wildlife parking area and fishing access area in the northern part of the Project Area are publicly owned. This area supports fishing and also abuts a private marina. The ANR Natural Resources Atlas does not otherwise identify any portions of the Project Area as designated Section 4(f) public recreation land or designated Section 6(f) public land developed with Land and Water Conservation Funds.

Hazardous Materials

According to the ANR Natural Resources Atlas, the Project Area is within an Architectural Waste Recycling Area. Additionally, the Atlas identifies the site of the Apple Island General Store as a Hazardous Site. Gasoline contamination was discovered at this location (Site Number 20083762) in 2008 during the removal of gasoline underground storage tanks.

Act 250 Permits

According to the ANR Natural Resources Atlas, Apple Island Resort has a current Act 250 permit in place, issued on March 24th, 2008. The permit (Project Number 6G0016-3B) project participant is the "Herbert Neiman AIR Development LLC" and the description includes, "Complete reclamation and final grading for rock quarry".

Figure 8 – Vermont Agency of Natural Resources (ANR) Natural Resources Atlas: Wetlands and Streams

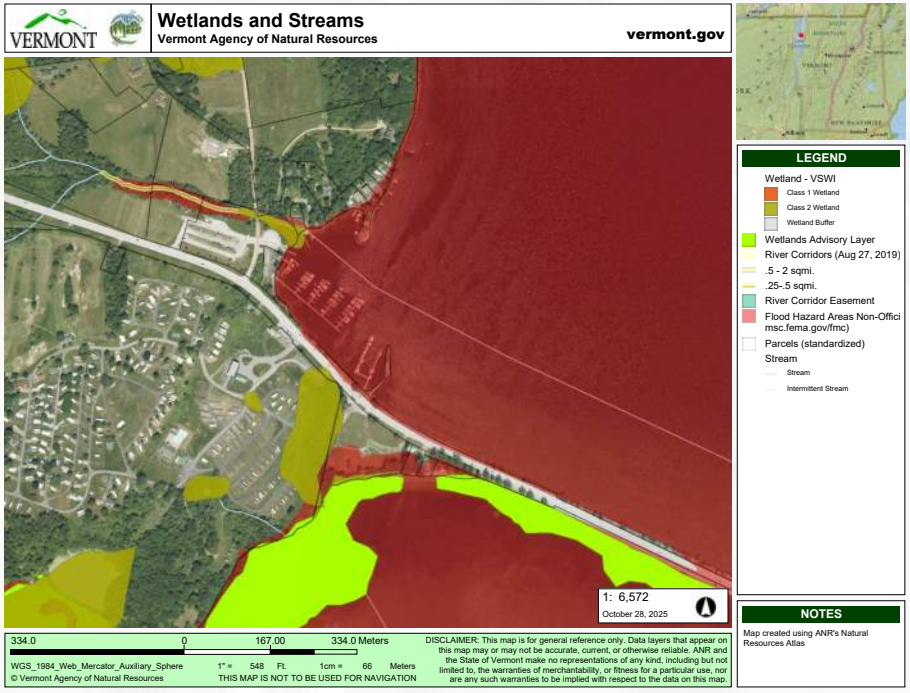
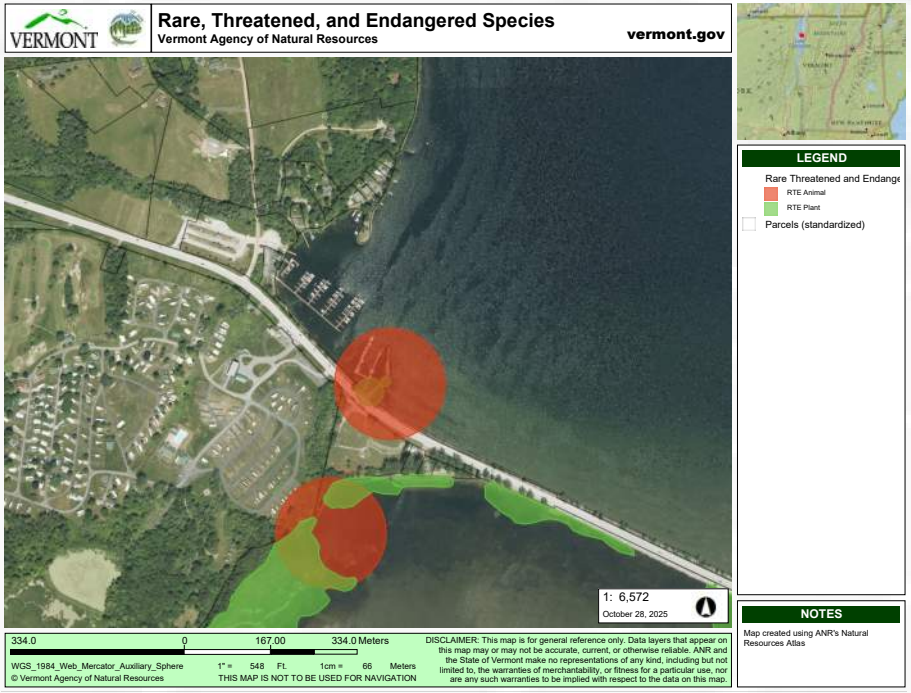


Figure 9 – Vermont Agency of Natural Resources (ANR) Natural Resources Atlas: Rare, Threatened, and Endangered Species



PUBLIC INVOLVEMENT

The project team conducted a robust public engagement process in accordance with the VTrans MAS Guidebook for Municipally Managed Project.

Local Concerns Meeting

On August 11, 2025, the project team held the Local Concerns Meeting during a Selectboard Meeting at the South Hero Town Hall. The meeting was a hybrid format and included the ability for participants to join the meeting online. Public input was received in person and over Zoom. Background information was presented, and the floor was opened to receive public input and answer questions. The comments received, fell into 4 broad categories: corridor speeds, pedestrian safety, parking and bicycle safety, and turning movements & sight distance.

Corridor Speeds

- Speeds along Route 2 are widely viewed as too high and inconsistent. Many participants support a corridor-wide 35 mph treatment, with a few suggesting time-of-day/seasonal adjustments.
- Concerns about limited enforcement and the need for stronger design cues (clearer speed zoning, gateway/transition signs, pavement legends, and speed-feedback displays) to pull operating speeds down.
- Crash history and frequent near-misses were cited as justification for lowering speeds and improving compliance.

Pedestrian Safety

- Two marked crossings drew strong support—near the Sand Bar & Grill and at Featherbed Lane—with interest in beacons (e.g., RRFBs), high-visibility markings, and lighting. Placement should prioritize adequate sight distance; Featherbed Lane was often favored on that basis.
- Multiple commenters asked for a sidewalk on the west side of Route 2 to create a safer, continuous walking connection among key destinations (Sand Bar & Grill, Apple Island Resort, Featherbed Lane, the marina).
- Past fatalities and numerous near-misses were emphasized as reasons to make crossings legible and protected, with advance driver warning—especially during high-season surges.

Parking and Bicycle Safety

- On busy days, boat-launch overflow parking (trucks with trailers) encroaches on Route 2 shoulders, forcing cyclists into traffic—a peak-season safety concern. Community feedback framed this as both a bike-safety and parking-management problem, suggesting clearer no-parking controls, overflow management, and seasonal delineation where feasible.
- Passing in the breakdown lane is also a concern for bikers.

Turning Movements & Sight Distance

- Visibility constraints at the Apple Island driveways; requests for vegetation/rock clearing and minor geometric refinements to improve sight lines and driveway egress.

» Pinch points arise when faster traffic encounters RVs/ boats slowing to turn, leading to sudden braking and risky behavior, including passing in the breakdown lane. Feedback focused on speed management, driver warnings, and driveway/sight-line fixes to reduce friction.

The full meeting presentation and notes are available in ***Appendix D***.

Alternatives Meeting

On October 27, 2025, the project team held the Alternatives Meeting during a Selectboard Meeting at the South Hero Town Hall. The meeting was a hybrid format and included the ability for participants to join the meeting online. Public input was received in person and over Zoom. Background information was reviewed, draft alternatives were presented, questions were addressed, and feedback was collected. The comments received focused on safety and speed, and there were also requests for the town to consider extending the recommendations beyond the project area.

Speed Management

» Community members expressed strong support for adding crosswalks and speed feedback signs to help calm traffic.

» Electronic "Your Speed" signs were noted as effective in encouraging drivers to slow down, especially near pedestrian areas.

» Seasonal driving habits were highlighted as a concern, with suggestions for treatments that help drivers adjust behavior as traffic increases in spring.

Featherbed Lane Intersection Safety

» Multiple residents described dangerous conditions at the Featherbed Lane intersection, including illegal passing on the right shoulder and near-miss incidents.

» The intersection was identified as particularly hazardous for motorcyclists and left-turning vehicles.

» Suggestions included narrowing shoulders and implementing seasonal closures to discourage unsafe maneuvers.

Extending Beyond The Project Area

» Suggestions were made to expand the study area westward to slow traffic further west and improve sight lines, especially during peak seasons when parked vehicles obstruct visibility.

» A proposed development just west of the project area was also noted as a factor that could impact future traffic conditions.

The full meeting presentations and notes are available in ***Appendix E***.

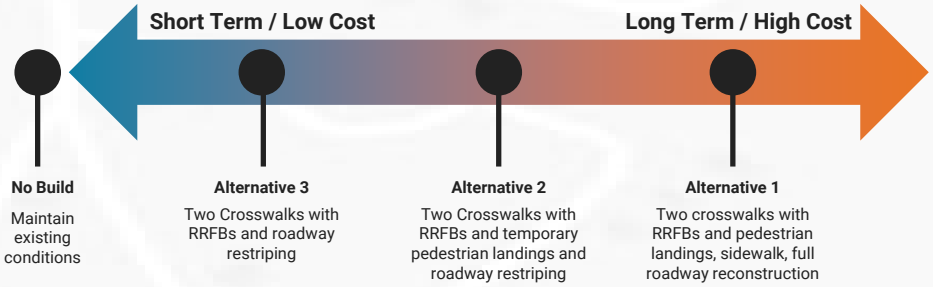
ALTERNATIVES

The project team developed three alternatives to address the project's Purpose and Need, in addition to a No Build alternative advanced as a baseline for comparison.

Each alternatives was designed to fall at different points along a spectrum, ranging from a more high cost and long term solution, to a lower cost and shorter term option. This provided the community with a wide-range of choices and demonstrated the trade-offs between cost, impacts and meeting the study's stated purpose and need.

Full scale concept plans for each alternative are in ***Appendix F***.

Figure 10 – Alternatives Overview



No Build

For the No Build Alternative, the existing transportation facilities in the project area remain as they exist today. This alternative has no construction costs and has no impacts on right-of-way, resources, or traffic. The No Build Alternative does not address the Purpose and Need.

Figure 11 – Existing and No Build Cross-Section

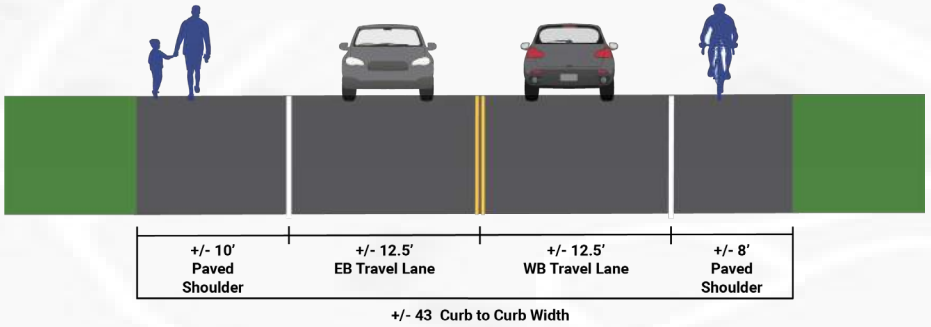


Figure 12 – No Build (Existing Conditions Map)

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Source: Esri, USDA FSA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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Alternative 1

Two crosswalks with RRFBs and pedestrian landings, sidewalk, full roadway reconstruction

Alternative 1 is the most extensive alternative evaluated. This option includes two crosswalks equipped with Rectangular Rapid Flashing Beacons (RRFBs) and pedestrian refuge islands to make crossings safer. The western crosswalk is located at the Featherbed Lane intersection, and the eastern crosswalk connects the Marina and the Sand Bar & Grill. The roadway would be narrowed to create 11-foot travel lanes and 6-foot bicycle lanes in each direction. A sidewalk is also included on the southern side of the road. Seasonal flex posts are included to separate travel lanes from bike lanes, reinforcing the visual cue for slower speeds. Additional measures include speed feedback signs at both ends of the project area and a reduced speed limit of 35 mph. Coordination with Apple Island Resort to improve driveway visibility is also recommended.

Figure 13 – Alternative 1 Cross-Section

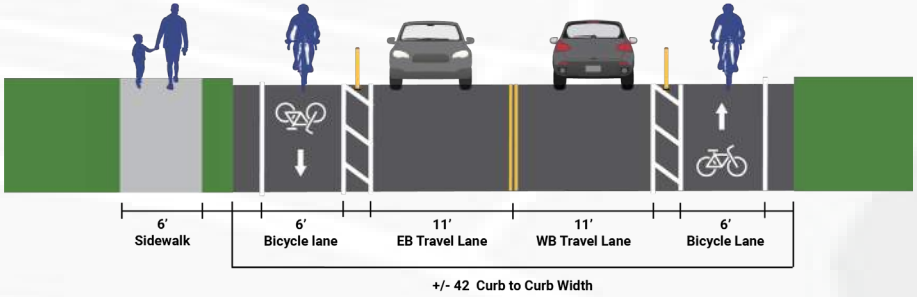
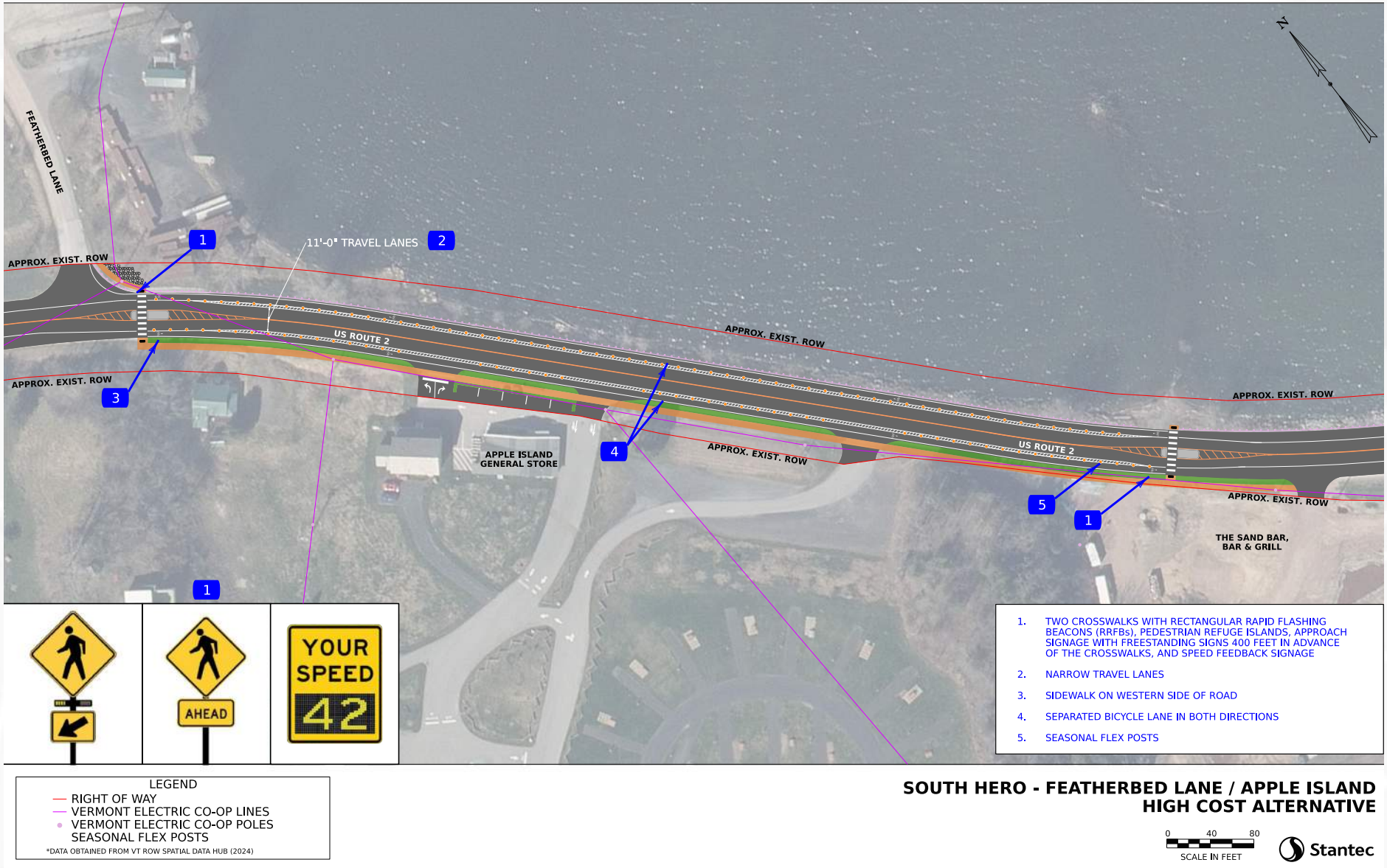


Figure 14 – Crosswalk with RRFBs and Pedestrian Refuge Island Example (Portland, ME)

Figure 15 – Alternative 1 Design



Alternative 2

Two Crosswalks with RRFBs and temporary pedestrian landings and roadway re-striping

Alternative 2 also includes two crosswalks, in the same locations as Alternative 1, equipped with Rectangular Rapid Flashing Beacons (RRFBs), however rather and permanent, year-round pedestrian refuge islands, a seasonal, modular option is proposed. This allows the community to install the median during the busy summer months and remove it during the winter to reduce interference with plowing operations. To reduce cost and impacts, the roadway would not be reconstructed, but rather re-striped to provide narrower travel lanes and bicycle and pedestrian accommodations. The cross section includes 11-foot travel lanes, a 5.5-foot bicycle lane on the northern side and a 9.5-foot bicycle/pedestrian lane on the southern side. Within this shoulder there will be a designated area for bikers and pedestrians to minimize potential conflicts. Seasonal flex posts are included to separate travel lanes from bike/pedestrians lanes. This alternative does not include a sidewalk. Additional measures include speed feedback signs at both ends of the project area and a reduced speed limit of 35 mph. Coordination with Apple Island Resort to improve driveway visibility is also recommended.

Figure 16 – Alternative 2 Cross-Section

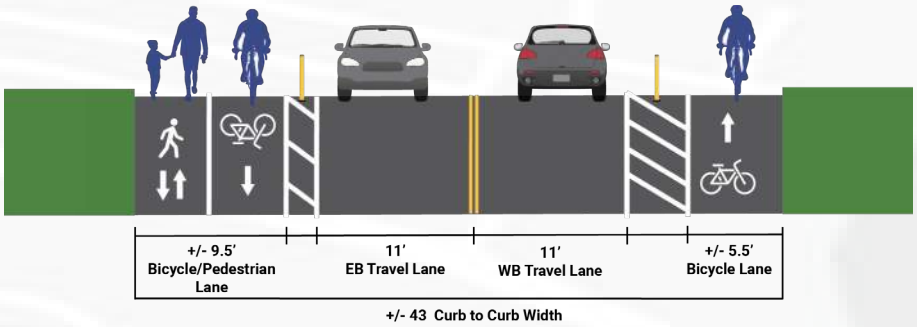
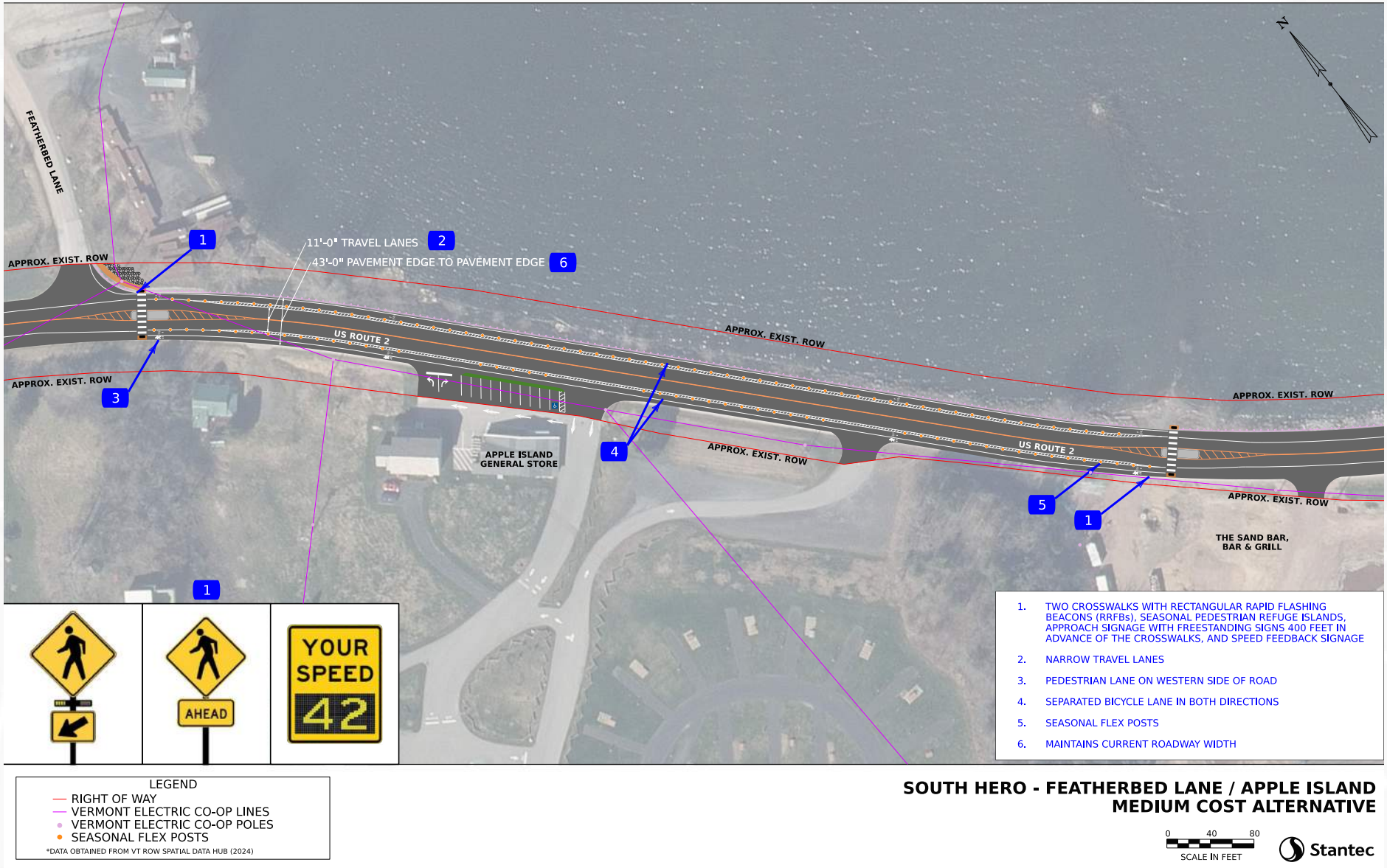


Figure 17 – Redipave Modular Median Example

Figure 18 – Alternative 2 Design



Alternative 3

Two Crosswalks with RRFBs and roadway re-striping

Alternative 3 also includes two crosswalks, in the same locations as Alternative 1 and 2, equipped with Rectangular Rapid Flashing Beacons (RRFBs). This alternative does not include pedestrian refuge islands. To reduce cost and impacts, the roadway would not be reconstructed, but rather re-striped to provide narrower travel lanes and bicycle and pedestrian accommodations. The cross section includes 11-foot travel lanes, a 5.5-foot bicycle lane on the northern side and a 9.5-foot bicycle/pedestrian lane on the southern side. Within this shoulder there will be a designated area for bikers and pedestrians to minimize potential conflicts. Seasonal flex posts are not included in this alternative, nor is a sidewalk or speed feedback signs at both ends of the project area. A reduced speed limit of 35 mph and coordination with Apple Island Resort to improve driveway visibility are also recommended.

Figure 19 – Alternative 3 Cross-Section

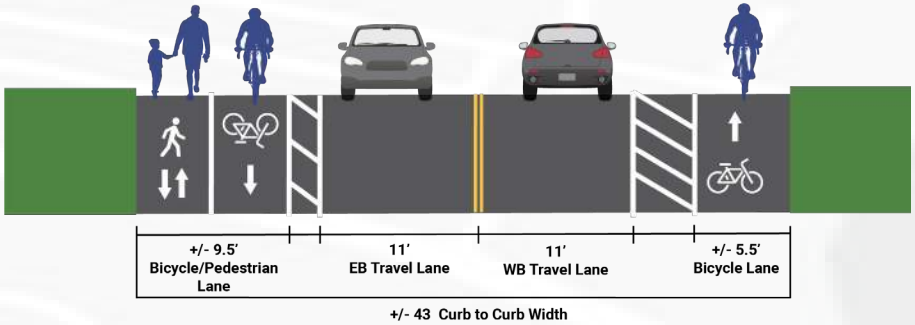
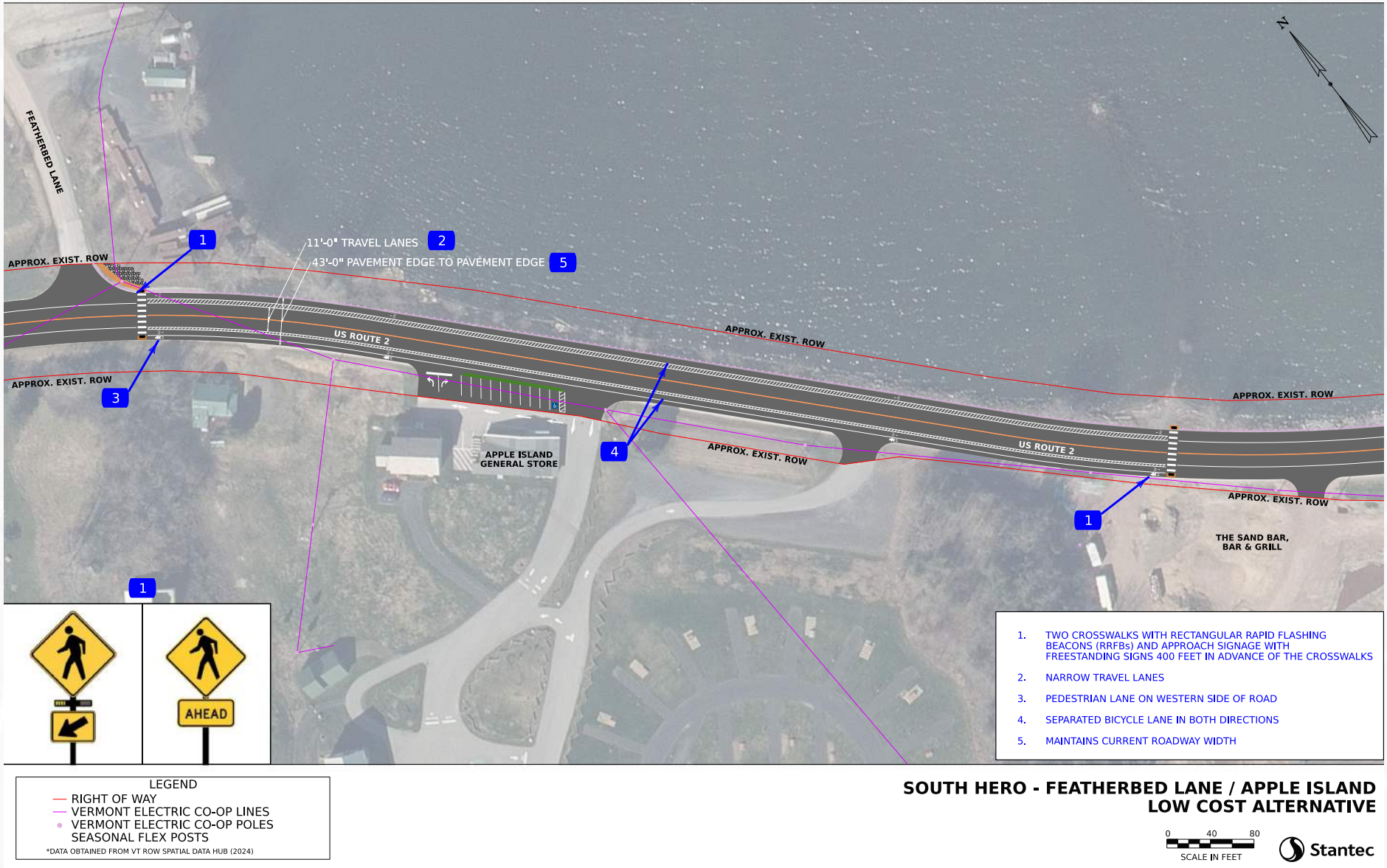


Figure 20 – Crosswalk with RRFBs Example (Hanover, NH)

Figure 21 – Alternative 3 Design



ALTERNATIVES EVALUATION

Each alternative and the No Build alternative were evaluated based on the fulfillment of the Purpose and Need, impacts, and cost.

Purpose and Need Evaluation

The purpose of this project is to improve the safety of US Route 2 in South Hero near the Featherbed Lane/ Apple Island Resort intersection and surrounding area for all users (walkers, bikers, and vehicles). Overall, the no build does not accomplish this purpose. Alternatives 1, 2, and 3 do accomplish this purpose, to various degrees. To evaluate the effectiveness of each alternatives in addressing the Purpose and Need of the project, each need was evaluated separately:

Provide safe facilities for bicyclists and pedestrians

All of the proposed alternatives provide increased safety for bicycles and pedestrians compared to the no build, which does not provide any facilities. Alternative 1 achieves the highest level of safety for bicycles and pedestrians. Adding a sidewalk greatly increases pedestrian safety, and features such as the bicycle lanes with seasonal bollards increase bicycle safety. This alternative provides the most safety at crossing the road, with the inclusion of RRFBs and a permanent pedestrian refuge island at both crosswalks. Additionally, the speed feedback signage will help slow traffic and create as safer multi-modal environment. Alternative 2 also provides a high level of safety for bicycles and pedestrians, but since it doesn't include the sidewalk and the pedestrian refuge island is seasonal, it meets this need less than alternative 1. Alternative 3 still improves bicycle and pedestrian safety, but not as much as the other two. Not including the seasonal bollards, speed feedback signage, and pedestrian refuge islands included in Alternative 2 does reduce the overall safety improvements provided by this alternative compared to the other two.

Improve vehicular safety while still maintaining the functionality of the corridor

All of the proposed alternatives and the no build alternative successfully maintain the functionality of the corridor. In each scenario, two travel lanes are maintained and given the traffic volumes and speed, no impact on the overall capacity of the corridor is anticipated. All of the proposed alternatives provide improved vehicular safety compared to the no build, which does not improve vehicular safety. Alternative 1 achieves the highest level of vehicular safety by including speed feedback signage, narrowing the roadway and including seasonal bollards, which, in addition to separating bicycles from vehicles, also improves vehicular safety by preventing vehicles from passing turning vehicles in the shoulder. Alternative 2 also greatly improves vehicular safety, but

less than alternative 1 since the curb-to-curb roadway is wider, vehicles may travel faster based on visual cues. The effectiveness of Alternative 3 in improving vehicular safety is similar to that of Alternative 2, but is slightly reduced without the speed feedback signage or seasonal bollards to visually narrow the travel lane. Without this cue, travel speeds may be higher, decreasing safety.

Enhance the area as an important recreational destination

All of the proposed alternatives enhance the area as an important recreational destination compared to the no build. The Apple Island Resort is a major summer destination and an important recreational destination for the community. The addition of the Sand Bar & Grill has increased the desirability of this area for seasonal visitor. Anything that can be done to make this area feel safer and more comfortable to people visiting and recreating in the area will help support this community resource and the local economy. Alternative 1 goes the farthest to enhance this location as a recreational destination by including the most traffic calming features and pedestrian improvements (sidewalk,seasonal bollards, speed feedback signage, and crosswalks with RRFBs and pedestrian refuge islands). Alternative 2 also greatly enhances the area as a recreational destination, but the lack of a sidewalk does detract from the sense of place.

Alternative 3 is similar to Alternative 2, but again, the lack of seasonal bollards, speed feedback signage, and pedestrian refuge island may increase vehicular speeds through the area, making the area a less appealing recreational destination.

Impacts Evaluation

Every project inevitably has impacts to the surrounding environment. As a part of this study, impacts to the right-of-way, utilities, and natural resources were evaluated. A cultural resources assessment was not included in this project as it is unlikely to impact the outcome, but it is recommended for the preferred alternative during the next phase of development.

Right-of-Way

Alternatives 2 and 3 and the no build are expected to have no impacts outside of the existing state-owned right of way for Route 2. However, a full survey will need to be completed to confirm. Based on the approximate right-of-way location provided from VTrans, Alternative 1 is expected encroach on Apple Island Resort and the Sand Bar & Grill properties slightly to accommodate a sidewalk on the southern side of the road. Based on the planning-level cost estimate, impacts are expected to be limited to just over 450 square feet and cost about $1,500.

Utilities

Alternatives 2 and 3 and the no build are expected to have no impacts on surrounding utility poles because all of the work is confined to the existing pavement area. Utility impacts are possible in Alternative 1 with the addition of a sidewalk on the same side of the road as the utility poles.

Natural Resources

Alternatives 2 and 3 and the no build are expected to have minimal impacts on surrounding natural resources because all of the work is confined to the existing paved area. For all alternatives, tree trimming may be necessary, and potential impacts to the northern long-eared bat, a state and federally threatened species, will be addressed through compliance with state guidelines. Additional natural resource impacts are possible in Alternative 1 with the addition of a sidewalk. The sidewalk may impact a Class 2 wetland and a rare and threatened and endangered animal habitat. However, impacts are expected to be minimal given this is already a disturbed area from an environmental perspective.

Cost

An order of magnitude cost was estimated for each alternative. The estimates use 2025 dollars and include a 20% contingency:

- No Build - Construction: $0, Total Project Cost: $0
- Alternative 1 - Construction: $750,000, Total Project Cost: $977,000
- Alternative 2 - Construction: $450,000, Total Project Cost: $585,000
- Alternative 3 - Construction: $300,000, Total Project Cost: $390,000

Detailed cost estimates for each alternative are in ***Appendix G***.

Alternatives Matrix

Table 2 provides an evaluation matrix summarizing the above information pertaining to project costs, how well each alternative meets the Purpose and Need, and impacts to right-of-way, utilities, and natural resources.

Table 2 – Alternatives Matrix

	No Build Maintain Existing Conditions	**Alternative 1** Two crosswalks with RRFBs and pedestrian landings, sidewalk, full roadway reconstruction	**Alternative 2** Two Crosswalks with RRFBs and temporary pedestrian landings and roadway re-striping	**Alternative 3** Two Crosswalks with RRFBs and roadway re-striping
Preliminary Cost Estimate				
Construction Costs	$0	$750,000	$450,000	$750,000
Design Engineering	$0	$150,000	$90,000	$60,000
Construction Engineering	$0	$75,000	$45,000	$30,000
Right-of-Way Costs	$0	$2,000	$0	$0
Total Project Cost	$0	$977,000	$585,000	$390,000
Purpose and Need				
Safe bicycle and pedestrian facilities	No Improvement	Very High	High	Medium
Vehicular safety	No Improvement	Very High	High	Medium
Economic vitality	No Improvement	Very High	High	Medium
Impacts				
Right-of-Way	None	Medium	None	None
Utilities	None	Low	None	None
Natural resources	None	Low	None	None

PREFERRED ALTERNATIVE

Based on evaluation by the project team and input from the public, the project team recommends Alternative 2 with a few modifications, as the best alternative to meet the project Purpose and Need while minimizing impacts. This alternatives includes two crosswalks with RRFBs and temporary pedestrian landings and roadway re-striping.

Alternative 2 includes two crosswalks, one at the Featherbed Lane intersection and one at the Sand Bar & Grill, both equipped with Rectangular Rapid Flashing Beacons (RRFBs) and seasonal, modular pedestrian refuge islands. This allows the community to install the median during the busy summer months and remove it during the winter to reduce interference with plowing operations. The roadway is re-striped to provide narrower travel lanes and bicycle and pedestrian accommodations on road. The cross section includes 11-foot travel lanes, a 5.5-foot bicycle lane on the northern side and a 9.5-foot bicycle/pedestrian lane on the southern side. Within this shoulder there will be a designated area for bikers and pedestrians to minimize potential conflicts. Seasonal flex posts are included to separate travel lanes from bike/pedestrians lanes. Additional measures include speed feedback signs at both ends of the project area and a reduced speed limit of 35 mph. Coordination with Apple Island Resort to improve driveway visibility is also recommended.

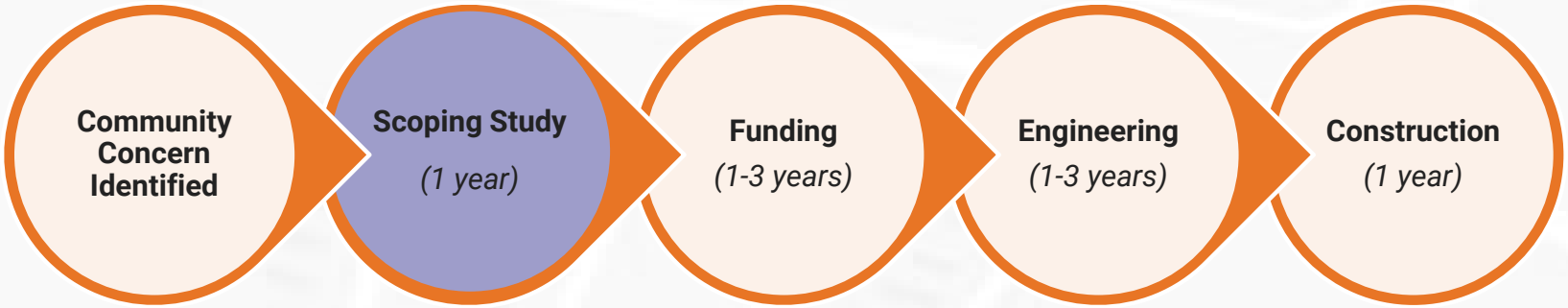
Based on feedback at the public meeting, the following modifications to Alternative 2 were made for the Preferred Alternatives, including:

- Extending the roadway re-striping and bollards to the northern end of the to end of the John Guilmette Access Area parking lot
- Relocating the speed feedback signs to the outer limits of the Project Area

Timeline

Projects of this nature tend to follow a typical process, starting with the community identifying a concern, and then progressing to a scoping study (this study), funding, engineering, and finally construction. This timeline can move from one step to the next fairly quickly, or depending on community resources and funding availability, there can be a delay between each steps. A scoping study typically takes about a year. Procuring funding can range from 1 to 3 years. Once funding is procured, engineering typically takes 1-3 years, followed by construction the following year. The shorter timelines can be realized if the community has a champion to apply for grants and procure the funding and if right-of-way, utility, and environmental impacts are avoided during the engineering phase.

Figure 22 – Typical project process and timeline



Cost Estimate

Adding additional striping and bollards to the northern end of the study area added some cost to the preferred alternative. The total project cost is estimated to be about $650,000. This includes $500,000 for construction, $100,000 for design engineering, and $50,000 for construction engineering. The detailed cost estimates is provided in ***Appendix G***.

Additionally, labor to install and remove the bollards each year is estimated to cost around $800-$1,000. This is a rough scoping study estimate, dependent on time, the need for flaggers and the type of bollards. Additionally, there would be an annual cost associated with replacing damaged bollards each year. Assuming the posts cost $300 and 10 are damaged each year, this could add about $3,000 in expense each year.

Funding Opportunities and Next Steps

In order for this project to progress, it requires local advocacy and championship. The Town of South Hero will have to take the next steps of pursuing funding. Project partners in the form of volunteers, nearby businesses directly impacted such as Apple Island Resort and the Sand Bar & Grill , or Town Board and Committee Members will be key to procuring funding, completing engineering, and progressing to final construction.

Depending on the desire of the community and available funding, there are two clear tracks for this project moving forward. The first path is to pursue funding through VTrans for the Preferred Alternative as presented. The second option is to consider a demonstration project to pilot the improvements before pursuing funding, particularly to test the impacts of the pedestrian refuge islands. Including a demonstration project in the timeline would give the community more information about the effectiveness of the pedestrian refuge islands in increasing safety. This information could then be used to further refine the preferred alternative, opting to either keep the removable pedestrian refuge island, deciding to install permanent refuge islands or remove the refuge island entirely.

Direct Funding Opportunities through VTrans

The VTrans Municipal Assistance Section has several funding opportunities available to advance a scoping study like this one through engineering and construction. Grant opportunities change, so it is important to learn about the latest opportunities by contacting VTrans directly or online: vtrans.vermont.gov/highway/local-projects.

Many communities in Vermont use the VTrans grant funding opportunities successfully. It is a good option if the Town doesn't have enough funding in its Capital Improvement Program to fund the project on its own.

Relevant funding sources currently available as of January 2025 through VTrans, include the following:

Bicycle & Pedestrian Program – Design/ Construction Projects

A grant program to provide safe and convenient facilities for those Vermonters who desire alternative transportation opportunities. Projects applied for under this category will be taking all of the necessary steps to move a concept through the design, permitting and right of way process to advance to construction. T he Bike/ Ped Program does not fund design only projects. All project (including scoping studies) must be completed or there is a pay-back provision. Eligible costs for design-construction projects include project management/ administration, engineering/permitting, right of way acquisition, construction, and construction inspection. This program is federally funded and a 20% local match is required.

Transportation Alternatives Program

A grant program that encompasses a variety of smaller scale transportation projects such as pedestrian and bicycle facilities, Safe Routes to School projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity. The maximum grant award is $300,000, and a 20% local match is required. Applications are typically due in September.

Demonstration Project Opportunities

VTrans Demonstration Projects on State Highway Right of Way

VTrans' Guidance Document: Demonstration Projects in State Highway Right-of-Way explains how to plan, permit, install, evaluate, and remove temporary ("pop-up/pilot") roadway changes within the State Highway right-of-way (ROW). It covers roles, application steps, design/material limits, operations, and evaluation—so communities can test safety and mobility treatments before investing permanently. The applicant, either a municipality or a local group, must submit a proposal, demonstrates municipal support, designs and installs per the guide, maintain the installation, collects data, evaluate, and remove the project on schedule. No funding is available through this program. It does not specify funding programs, costs, or who pays, beyond assigning the applicant responsibility to install, maintain, and remove the project per the §1111 permit. Move information is available though VTrans here: vtrans.vermont.gov/planning/permitting/demonstration-projects.

Local Motion

Local Motion is Vermont's statewide nonprofit advocate for active transportation whose mission is to make it safe, accessible, and fun for everyone to bike, walk, and roll. As South Hero considers a seasonal demonstration on US Route 2, the Town or a local group can use Local Motion as a practical partner: they offer technical assistance for Complete Streets pilots, help communities organize and staff pop-up installations, support public outreach and education, and provide toolkits and funding resources. While they don't typically fund transportation demonstrations directly, Local Motion can help South Hero refine pilot goals and, coordinate volunteers, and amplify communications—strengthening the case for permanent improvements and future funding. Learn more at localmotion.org.

Figure 23 – Preferred Alternative Design

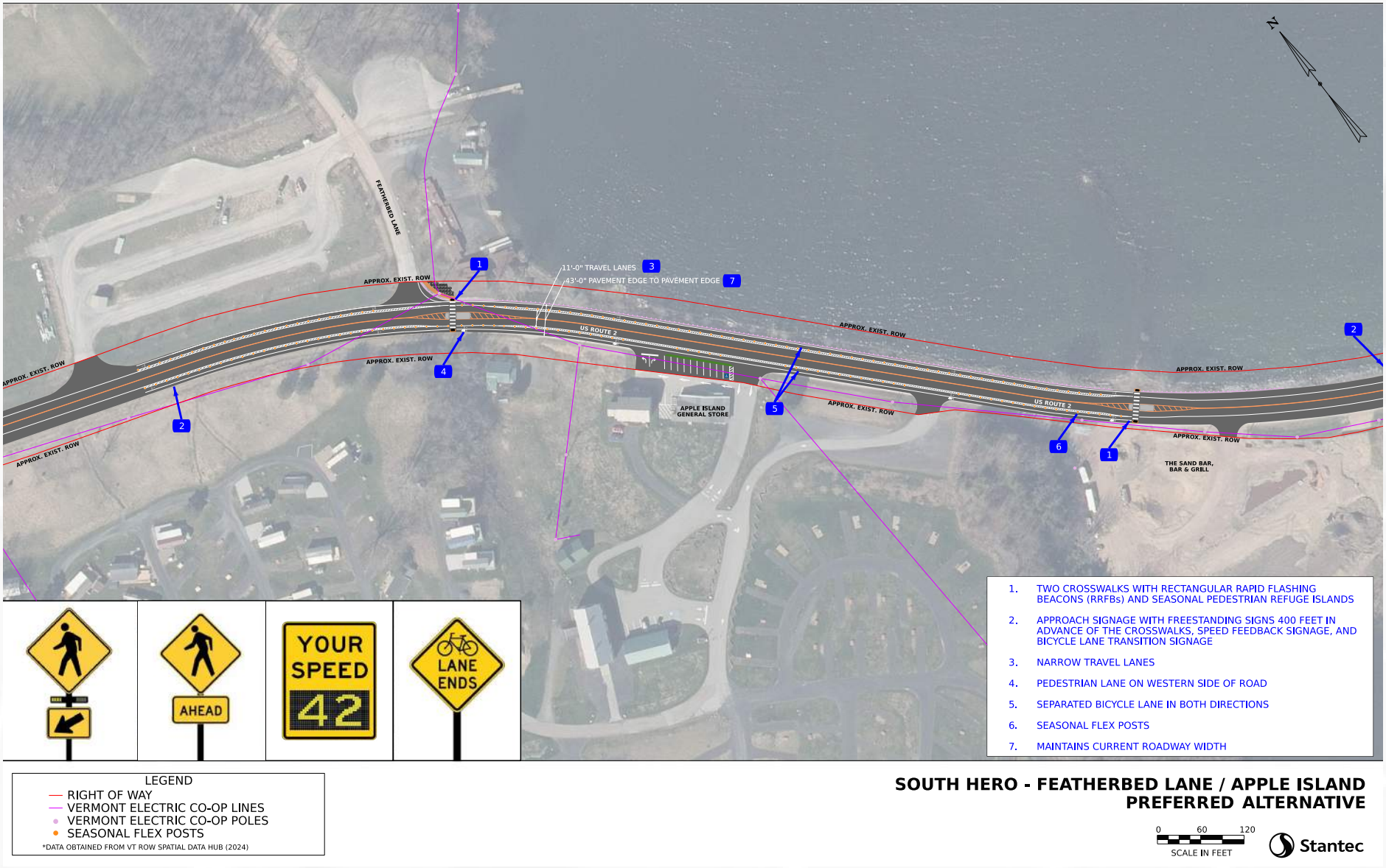


Figure 24 – Preferred Alternative Featherbed Lane Intersection