Smugglers Notch Scenic Highway Parking Feasibility Study

Prepared for the:
Lamoille County Planning Commission

Prepared by:
Greenman Pederson Inc.
Planning, Design, Engineering
and Construction Services

Formerly ORW
Landscape Architects and Planners
(as of 5/1/15)

STANTEC
Transportation Engineers

Arrowwood Environmental
Ecological consultants

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The project was guided by a Smugglers Notch Scenic Byway Corridor Steering Committee, and the following members participated through the course of the project.

<table>
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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Peter Roberts</td>
<td>Stowe SOAR</td>
</tr>
<tr>
<td>Mark Delany</td>
<td>Smugglers Notch Resort</td>
</tr>
<tr>
<td>Susan Bulmer</td>
<td>VTFPR</td>
</tr>
<tr>
<td>Aaron Jacobs</td>
<td>Smugglers Notch State Park</td>
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<tr>
<td>Rob Apple</td>
<td>Stowe Mountain Resort</td>
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<tr>
<td>Mike DeBonis</td>
<td>Green Mountain Club</td>
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<tr>
<td>Jim Cota</td>
<td>Vtrans District 8</td>
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<tr>
<td>Ralf Bullock</td>
<td>Vtrans District 8</td>
</tr>
<tr>
<td>William Kennison</td>
<td>Vtrans District 8</td>
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<tr>
<td>Diane Perley</td>
<td>Vtrans District 8</td>
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<tr>
<td>Tim Farr</td>
<td>CRAG Vermont</td>
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<td>Traivs Peckam</td>
<td>CRAG Vermont</td>
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<tr>
<td>Larry Wyckoff</td>
<td>Town of Cambridge</td>
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<tr>
<td>Tom Jackman</td>
<td>Town of Stowe</td>
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Smugglers Notch Scenic Highway Parking Feasibility Study

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Project overview:

The Lamoille County Planning Commission (LCPC), in partnership with the Smugglers Notch Partners has funded a feasibility study to evaluate the feasibility of constructing parking area improvements along the Smugglers Notch State Park and Scenic Highway in the towns of Stowe and Cambridge. The study is intended to update the 1995 Smugglers Notch Scenic Highway Corridor Management Plan and revisit the need for parking area improvements along the highway which traverses some of Vermont’s most significant environmental and scenic locales.

The study evaluated possible improvements to existing parking areas, development of new parking areas, and closing-off/revegetation of existing roadside parking include the following areas:

- Closing/revegetation of the existing Long Trail Parking Area
- Development of the “Elephants Head Vista” Parking Area.
- Improvements to the “Big Spring/Hell brook Trailhead” Parking Area
- Improvements to “Notch Proper South” Parking Area
- Closing/revegetation of bootleg parking areas.

The purpose of this feasibility is to consider the long standing issue of parking in notch and to develop conceptual plans and identify resource constraints prior to undertaking more formalized engineering and landscape plans for construction. In the event that a decision is rendered to proceed with implementation, additional funds for design and construction of the preferred alternative are available through a separate VTtrans Cooperative Grant Agreement numbered Stowe STP 0235(14).

Conversations within the steering committee decided not to formally study parking from a quantitative perspective for the corridor overall, but did seek to balance lost spaces with new ones in critical areas of intense visitation and tourist use. In the course of the study, public input through the steering committee and the public concerns meeting highlighted the rock climbing community specific interests and concerns about parking and access to bouldering areas.

The project has been overseen by LCPC and the Steering Committee consisting of the Smugglers Notch Partners, municipal representatives, and other groups with an interest in the Notch. One working session was held with the Steering committee in October 2014, and a public meeting was held in November 2014.

The project team held a site visit on October 10, 2014, and subsequent review with VT State Parks was held in November 2014 with direction for the MT. Mansfield State forest Stewardship Committee guiding the final recommendations of this report.
Purpose and Need:

Purpose: To identify improvements to formal and informal parking facilities along the Smugglers Notch Scenic Highway that accommodate the needs of diverse user groups, while respecting the areas unique natural, scenic, and historic resources.

Need: Nearly 700,000 visitors travel through the Notch annually within a six-month period of time (the road is closed during the winter season). Visitors come to the Notch for a wide variety of activities. Existing, formal parking areas are inadequate to meet the demand of the numerous, diverse groups who visit the Notch. As a result, visitor parking is often in unofficial “boot leg” areas along the roadway/shoulder of VT Route 108. This contributes to soil erosion, destruction of sensitive roadside flora, and sedimentation of mountain streams. In addition to these significant impacts on natural resources, the large numbers of visitors coupled with limited and inadequate transportation and recreation facilities creates an unsafe environment for both vehicles and pedestrians.

Overview of areas under consideration:
Project areas have been defined in project drawings. The following pages describe each area, current conditions, and proposed improvements based upon guidance from the state and advisory committee.

Summary of project areas:

<table>
<thead>
<tr>
<th>Plan reference:</th>
<th>Proposed Improvements:</th>
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<tbody>
<tr>
<td>L1.2 – L1.3</td>
<td>Long Trail parking closure: Relocation of parking to a new trailhead and revegetation for scenic roadside and storm water</td>
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<tr>
<td>L1.3</td>
<td>CCC picnic area: Revegetation and ped. walkways to define uses and preserve CCC heritage</td>
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<tr>
<td>L1.4</td>
<td>Roadside revegetation Re-establish native roadside vegetation for old pull outs along stream banks.</td>
</tr>
<tr>
<td>L1.5</td>
<td>Elephants Head Vista parking and roadside stream bank revegetation Re-establish native roadside vegetation for old pull outs along stream banks and create a new scenic vista parking area.</td>
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<tr>
<td>L1.6</td>
<td>Hell Brook trailhead and Big Spring parking Define pull over for passing traffic and trailhead parking and make improvements to parking for the Big Spring</td>
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<tr>
<td>L1.7A - B.</td>
<td>Southern Notch approach Roadside pull over and roadway shoulder improvements and creation of a new parking location to receive relocated parking from a pullover in sensitive ecological area.</td>
</tr>
<tr>
<td>L1.8</td>
<td>Notch Proper Improve large impacted parking area with new design, drainage, and Restoration and coordinate with notch pathway loop.</td>
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An Overview of parking and traffic in the Notch:

With over 700,000 people travelling and visiting the notch each year there are undoubtedly concerns about traffic, safety, local resident through traffic and ease of movement is in some tension with the tourist destination that the notch receives in peak foliage and other holiday weekends and vacation periods.

There are numerous pullouts and parking areas throughout the Scenic Highway Corridor. Unofficial, or "bootleg", parking areas scattered along the roadside as pullovers to allow faster traffic to pass, to stop for family passengers to vomit in the bushes, and for scenic views of the mountainsides of Mt. Mansfield and Spruce Peak, among trees and the boulders and along the sides of stream banks. These parking areas are unmarked, often poorly graded and have damaged the road shoulder and the adjacent environment on the forest floor. They present frequent conflicts for drivers entering and exiting with through-traffic as they are often in locations without proper sight distance. In many cases, cars are left partially obstructing the travel lane.

A revisit of the Corridor Master Plan survey of available parking along the corridor was conducted and few if any loss of spaces has been noted due to the guardrail work completed in the early 1990’s. There are still as many as 400 locations for "bootleg" parking, as well as more defined but largely unimproved "parking lots". In many cases, the areas of high visitor interest were where the greatest amount of spaces had been "created" by the sheer crush of cars on the landscape.

These include:  

<table>
<thead>
<tr>
<th>Location</th>
<th>Current location and #spaces:</th>
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<tr>
<td>Barnes Camp</td>
<td>25-30</td>
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<tr>
<td>Long Trail trailhead</td>
<td>30-50</td>
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<td>Vista area below Big Spring</td>
<td>15-25</td>
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<tr>
<td>Boulders and switchbacks</td>
<td>25-30</td>
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<tr>
<td>Notch Proper</td>
<td>30-50</td>
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Future management strategies should improve parking in appropriate locations and should be designed to minimize damage to natural areas while also reclaiming previously damaged areas.

This has been, in the past - however, contradicted somewhat by public discussion that suggested that the Notch have a "no net loss" of parking to have adequate space for people to park without blocking the road. This has been proven to be a less than desirable policy - tempered by the fact that too much parking would damage the Notch's character.

A practical assessment of the parking situation suggests the following issues that have evolved to be operating assumptions for which there is general consensus:

1. The linear nature of most of the scenic roadway and the various places where people stop for recreation define separate levels of use and visitation along the road, but there is no actual overall formula or meaningful methodology to estimating the amount of parking demand that is appropriate for the road.
2. It is - and will always be impossible to provide parking to all those who desire to stop and see the notch in peak visitation periods such as Columbus Day weekend, July 4 weekend, etc.
3. It is undesirable to seek to make major changes to the road and notch proper in particular to attempt additional parking.
4. Visitors will park in the areas of high interest wherever they can find available space.
5. Creating alternative parking should be keyed with trailheads and public info.
6. Changes in the layout of trails and access to areas of interest in the corridor has the potential to enhance parking demand.
7. Given the infrequent occasions that the Notch is "full", a common sense approach that the actual number of parking spaces was not as important as their location and how well they function.

**LCPC data:**

- Average Daily Traffic
- Pedestrian and bicycle counts
- Crash data
Project Location Map

Land Use Context
The corridor is entirely located within the Smugglers Notch State Park and VT 108 the Smugglers notch Scenic Highway. A rural/natural area land use context in public ownership is assumed.
Detailed descriptions of planning areas and proposed parking and corridor improvements

*Refer to the 11x17” formatted plans at the rear of the document.*

**L1.2 – L1.3  Long Trail parking closure:**

This Area involves the pull-off shoulders for the former Long Trail trailhead when the trail previously descended from Taft Lodge on Mount Mansfield to the roadside of VT 108. With the relocation of the Long Trail further south to Barnes Camp, this parking is no longer necessary as it is been replaced by the parking associated with the Mount Mansfield Company on the west side of Vermont 108. The relocated Long Trail now follows the east side of VT 108 along the valley. 30-50 parking spaces are relocated.

Closure of the roadside parking for the former Long Trail includes the regrading of the area for better drainage and some possible bio-retention treatment of roadside run off, definition of a 10 foot wide grass shoulder to match the other naturalistic meadow grass roadside shoulders in this part of the Notch Road. Beyond the 10 foot wide shoulder, remaining areas are to be revegetated with native vegetation appropriate to the notch environment. The end result will be a soft grassy shoulder to the roadside in a naturalistic woodland verge blending into the woodlands along the roadside.

**Specific improvements to be made:**

- Regrade for drainage
- Six-inch topsoil
- Seed 10 foot swath a long road side shoulder
- Rain gardens and bio retention
- Woodland revegetation – restoration

**Public issues:**

✔ Roadside clear zone of 10’ of mowable grass void of impediments such as stone placements or trees

**VTrans issues:**

✔ Roadside clear zone of 10’ of mowable grass void of impediments such as stone placements or vegetation

✔ Drainage patterns from regrading of the deep road roadside parking areas will slow down run off and allow for infiltration and treatment of some areas to be revegetated.

✔ Pavement removal of excess shoulder

✔ Is this a maintenance project, capital project, or grant funded project?

**VT State Parks Issues:**

❖ Recognition of the challenge of erasing the collective memory of past trailhead users.

**Resource sensitivities:**

The original corridor management plan defined no critical resources in this area of the project. A revisit of rare and endangered species updated in the fall of 2014 confirmed as such.

- There is no evidence of rare or endangered species in the project area, and the areas proposed for construction involve previously disturbed landscape and paved areas.
• The area is completely disturbed from long standing parking thus no historical artifacts remain at the surface.
• Proposed revegetation will cause only fill to occur- archaeological resources won’t be disturbed.
• There are no permanent waterways or drainages other than storm specific runoff from the roadside ditches and mountainside runoffs in larger storms, and there is no evidence of wetlands

Cost of area improvements: $152,494

L1 .3 CCC Picnic Area

The original corridor plan defined the CCC picnic area for an ambitious reconstruction of the area. Input from Vermont State Parks in 2014-15 suggested a lighter touch to alterations to preserve the driveway layout and the informal camp nature. Recently a new trail kiosk and interpretive sign has been placed on the site. Reduced scale of improvements could offer the redefinition of the parking area separation of parking with stones as a border to contain your movement and parking, and definition of walkway is for pedestrians out of the vehicular path, but to leave the historical wooded and lawn areas unchanged. Another potential was the re-establishment of more robust riverbank vegetation on the sloped below the parking areas where erosion and compaction impacts have damaged the natural woodland environment above the brook at the edge of the picnic area. No changes to parking capacity are anticipated.

Specific improvements to be made:
- Regrade for drainage
- Six-inch topsoil for revegetation where possible
- Seed 10 foot swath along compacted driveway shoulder
- Rain gardens and bio retention with native species
- Stream bank buffer revegetation
- Woodland revegetation – restoration
- Fresh gravel surfacing on the parking areas
- Walkway surfacing
- Natural stone placement as edging to separate the widened driveway and parking from an area designated as a walking path

Public issues:
- ✔ Retain historic character largely unchanged
- ✔ Retain functional parking
- ✔ Enjoy the historic interpretation
- ✔ Public bathrooms

VTrans issues:
- ✔ Site distances to the driveway entrances – make sure any stone walls don’t impede safety.

VT State Parks Issues:
- ❖ Retain historic character unchanged
- ❖ Retain functional parking
- ❖ Enjoy the historic interpretation.

Resource sensitivities:
The original corridor management plan defined no critical resources in this area of the project. A revisit of rare and endangered species updated in the fall of 2014 confirmed as such.

- There is no evidence of rare or endangered species in the project area that would be disturbed by any construction.
- There is no evidence of wetlands as disturbed area by any proposed construction – but the sloped area between the parking area/proposed walking path route would be in the jurisdictional river buffer. Revegetation and impact reduction would need to be considered as a positive impact to the resources but that would need to be demonstrated to state permitting and parks agencies. The presumption is that the further removal of parked cars from the wooded steep edge would be beneficial.
- The area is completely disturbed from long standing parking thus no actual historical artifacts remain at the surface, and assuming that general CC original configuration is preserved, any further construction of the project would not impact historical resources. Additionally funds could be used form the grant to restore the historic fireplaces in the picnic area.
- There are no permanent waterways or drainages that would be altered other than storm specific runoff from the roadside ditches and mountainside runoffs in larger storms – and modest regrading and revegetation could mitigate storm water flows directly into the stream.

**Cost of area improvements:** $55,846

L1.4. **Roadside revegetation and parking closures**

There are intermittent locations along the road where historical roadside pullovers have damaged vegetation and caused an eroded pavement edge extending to the small Brook that follows the VT 108. In an effort to reclaim some of those areas the pull - overs offer little in the way of views or other amenities, and in the context of the corridor plan, improved locations for pullovers with rewarding amenities have been substituted. The removal of two areas of 3 - 4 parking spaces at a time offers little change to parking and traffic through the notch.

Similar to the former Long Trail parking lot revegetation area, VTrans has recommended still preserving the grass shoulder for as much as 10 feet and beyond that the use of native vegetation for stream bank restoration and stabilization of eroded conditions. In the lower notch areas, this is a typical remedy that can be used in a number of locations. In higher areas of the notch – the environment changes to different native vegetation communities - the species of which should be used in the revegetation process.

**Specific improvements to be made for revegetation:**

- Regrade for drainage
- Six-inch topsoil
- Seed 10 foot swath a long road side shoulder
- Rain gardens and bio retention
- Woodland revegetation – restoration

**Public issues:**

- ✓ Roadside clear zone of 10’ of mowable grass void of impediments such as stone placements or

**VTrans issues:**

- ✓ Roadside clear zone of 10’ of mowable grass void of impediments such as stone placements or vegetation
Drainage patterns from regrading of the deep road roadside parking areas will slow down run off and allow for infiltration and treatment of some areas to be revegetated.

Is this a maintenance project, capital or grant funded project?

**VT State Parks Issues:**

- Recognition that the area has seen historical use of these pull overs - and that erasing the collective memory of past users may take some work.

**Resource sensitivities:**

- The original corridor management plan defined no critical resources in this area of the project. A revisit of rare and endangered species updated in the fall of 2014 confirmed as such.
- There is no evidence of rare or endangered species in the project area.
- There is no evidence of wetlands.
- The area is completely disturbed from long standing parking thus no historical artifacts remain at the surface.
- There are no permanent waterways or drainages other than storm specific runoff from the roadside ditches and mountainside runoffs in larger storms.

**Cost of area improvements:** $39,311

**L1.5. Elephants Head Vista parking, roadside stream bank revegetation and large pullover**

Historically a landslide in the early 1990’s opened up a views to Elephants Head and frequented for pullover and climbing to the ledges to look up the slide and into the southern cliffs of the notch. The impacts of the pullover uses were eroded roadside shoulders and loss of vegetation of the riverbank buffer at the base of the ledges of the landslide.

In an effort to offer access and parking for the view a new parking area is proposed slightly to the north of the ledges so that the roadside parking can be removed and both sides of the road can be revegetated to the benefit of the stream bank environs. The western side of VT 108 can be regraded to have a 10 foot grass shoulder and stream bank revegetation installed. The eastern side of the road can have a grass shoulder and native Woodland vegetation. 15 - 25 parking spaces are relocated in this plan.

The new parking area relocates viewer parking to the immediate north of the landslide nestled into a low-lying area between the roadside in the steep mountain side slopes. The parking will need to define roadside swales and ditch drainage in the area and with seasonal wet soils, the parking will need to have geotextile base support and underdrains.

An ADA pathway from the parking area to the overlook is included in the plans and a Kiosk for interpretation is also located to the parking. The 5-25 parking spaces relocated from below are placed into the new pullover parking area from eroded and damaging roadside shoulders.

Uphill from the new parking area is a large pull over used mostly for pull over passing just as the roadway gets steep and windy. While the small intermittent pull out areas have no real function to corridor visitors, this area promises approximately 250 feet of a more tangible pullover to allow slower traffic to use off the road and for parking to access natural areas. Proposed improvements to this pull over include a median to separate the roadway from the pull over/parking - similar to the flush faux stone treatment of the median at the gateway parking area at Barnes Camp.
Specific improvements to be made for shoulder restoration, a new parking area and large pullover:
Roadside:
- Six-inch topsoil and seed 10 foot swath a long road side shoulder
- Rain gardens and bio retention
- Stream bank buffer revegetation
- Woodland revegetation – restoration

New Parking:
- Clearing regrade for drainage swales
- Geotextile’s, underdrains and subsurface drainage
- Gravel parking base
- Gravel surfacing on the parking area
- Walkway surfacing for ADA hardness
- Pathway to overlook
- Develop overlook site with stone edging and gravel surfacing
- Information kiosk

Pullover:
- Stone flush median
- Gravel surfacing on the parking area

Public issues:
✓ Replace parking to serve the viewing functions of the pull over.
✓ River related restoration is desirable.
✓ Trail to view location desirable.
✓ Road is safer with traffic removed.
✓ Large pull over good for locals who would like to pass slower moving vehicles below the steep curves and boulders.

VTrans issues:
✓ Roadside clear zone of 10’ of mowable grass void of impediments such as stone placements or vegetation
✓ Drainage patterns from regrading of the deep road roadside parking areas will slow down run off and allow for infiltration and treatment of some areas to be revegetated.
✓ Pavement removal of excess shoulder
✓ Is this a maintenance project, capital or grant funded project?

VT State Parks Issues:
✓ Stream bank restoration is good
✓ New parking is good
✓ New parking area may have wetlands and needs to be screened.
✓ Drainage areas around new parking
✓ Is the new trail ADA?

Resource sensitivities:
The original corridor management plan identified several resources in this area of the project.
✓ A revisit of rare and endangered species updated in the fall of 2014 confirmed the presence of the rare plant *Stellaria alsine*, trailing stichwort past the spring and on the slopes above the spring. Actual construction has never been an issues for the site and the species, but the presence and proximity is noted.
✓ The outlet stream from the spring creates a small flowing brook channel and a wooded wetland.
✓ The long standing parking are in the spring site is on the foundation of a historic structure. This area will need to be screened for archaeological resources.
✓ The new parking area will need to screened for archaeology or historical.
✓ The large pull-over is all previously disturbed area.

**Cost of area improvements:** $188,231

**L1.6. Hell Brook trailhead, Big Spring parking and large pullover at first boulders.**

These two activities generate traffic and parking congestion and heavy use in a small topographically challenging area bounded by stream corridors.

On the west side of VT 108 is a shoulder that hikers use to park for Hell Brook Trail. Like other places, the roadside has become eroded and it is damaging the adjacent streams. It is proposed that the parking in this area could be shifted down to the large pull out previously mentioned to handle both the parking for the trailhead and overflow for Big Spring, while an approach similar to the other lower notch areas with grass shoulder and stream bank revegetation is taken for the roads west side.

On the east side of the road, the parking area for Big Spring needs safety and comfort improvements to be made with walkways. This is a popular area for travelers and has both natural and cultural beauty that people enjoy. People use the spring for water and the access trail should both provide safe access as well as to prevent visitors from straying into the wetlands at the spring outflow, the banks on the east side of which have rare and endangered plant species. The parking area is sited on top of a historic stone foundation of an old inn that predated the state park.

The plans show a better defined parking with regraded driveway and parking surfaces, which still preserve the stone foundation perimeter, ADA walkways and an information kiosk and revegetated woodland areas where parking isn’t feasible.

Immediately north of Big Spring, VT 108 turns into a winding narrow road weaving in between boulders. Several locations have historical pullouts at the roadside and these have caused damage areas around the boulders with muddy boot leg parking and drive-through’s. A combined effort of extending guard rail from the stream crossing stone placements and revegetation of this area will reclaim a natural setting. At the same time accommodating pedestrian access into the boulders is essential does the boulders are popular bouldering spots for the local climbing community. The immediate base of the boulders probably should be kept free of new vegetation as it is the climbing steps down onto the faces. Better defined pathways can also be created as a walkway system between the boulders will better define where people walk and climb. A small new parking area can better serve this location and also be access to the Hell Brook Trail from above.

**Specific improvements to be made for Hell Brook trailhead:**
- Roadside revegetation
- Regrade for drainage
- Six-inch topsoil
- Seed 10 foot swath a long road side shoulder
- Rain gardens and bio retention
- Stream bank buffer revegetation
- Woodland revegetation – restoration
Specific improvements to be made for renovated Big Spring parking area:
- Regrade parking area and driveway approach
- Define subsurface drainage with geotextile's and permeable crushed stone and gravel base
- Under drains and swales
- Gravel surfacing on the parking areas
- Walkway to spring surfacing including stone crib walls and elevated surfacing.
- Information kiosk

Specific improvements to be made for bootleg parking closure
- Roadside revegetation
- Extend box beam guard rail
- Regrade for drainage
- Define walkways to boulders for climbers and explorers
- Stream bank buffer revegetation

Public issues:
- Functional parking at Big Spring
- Shift of parking from roadside to defined pullovers is acceptable.
- Concern from the bouldering community about boulder access but agreement that safety and access are important to them.

VTrans issues:
- Shift of parking from roadside to defined pullovers is acceptable
- Big Spring needs improvement and is a present maintenance and safety challenge.
- Roadside clear zone of 10’ is preferred but VTrans realizes that once entering the boulders this is diminished.
- Drainage patterns from regrading the road roadside parking areas will slow down run off and allow for infiltration and treatment of some areas to be revegetated.
- There is a large culvert at this location that needs to be preserved.
- Pavement removal of excess shoulder
- Is this a maintenance project, capital or grant funded project?

VT State Parks Issues:
- Rare plants, wetlands and stone foundation at the spring need protection
- General support for the parking improvements to the area with note of resource caution.
- Kiosk Signage will be installed at this site.

Resource sensitivities:
The original corridor management plan defined no critical resources in this area of the project. A revisit of rare and endangered species updated in the fall of 2014 confirmed as such.
- There is no evidence of rare or endangered species in the project area.
- There is no evidence of wetlands on the west side of the road. There is a wetland below Big Spring as part of the spring drainage.
- The area is completely disturbed from long standing parking and that has occurred with existing the historical artifact of the old Inn foundation. Removal of the foundation is not planned and the improvements can be made with no further impacts to the site, however archaeological review and screening is appropriate.
- The permanent drainage from the spring flows permanently.
The large pull over has no resource issues.

Cost of area improvements: $142,511 plus $52,940

L1.7A. Southern Notch Approach

As the curving road steepens up to the headwall of the notch, the roadside has been graded and paved with asphalt gutters to convey the run walk run off water along the roadside without eroding the roadway shoulders. On the west side of the road the asphalt gutter collects a number of mountainside drainages. In order to reclaim a more natural aesthetic and natural flow of the roadside drainage and to better visually integrated with the mountainside environs natural swales made out of made of stone and built as a native river stream corridor. Should be considered as a pilot project in small increments. Of concern is the structural stability and integrity of the roadside and the ability of the swales to withstand the enormous velocity of runoff that surges through them.

Specific improvements to be made: Southern Notch Approach
- Natural roadside drainage swale's
- Remove asphalt gutters
- Regrade naturalistic flow lines for roadside swales to also capture mountainside drainages
- Stonework in roadside drainage
- Revegetation of roadside in natural woodland vegetation appropriate to the notch
- Stone placements to prevent shoulder pullovers

Specific improvements to be made: New south notch parking area:
There has long been a desire to increase parking for visitors to the notch but it was always perceived that additional parking would be ruinous to the environment around the boulders in the nosh proper. In scoping the area beside on the south side of the notch above the steep curving area but before the boulders has been identified as a possible place for additional parking and trailhead access to a pathway through the notch environs and boulders.

Three layout options have been developed in the study and are presented as Options 1, 2 and 3 and they provide between 14 and 24 additional parking spaces. The basics of this parking area is developing a graded terrace for the parking spaces, a walkway along the southern edge can also accommodate a viewing platform for peregrine falcons up on the Elephants Head cliffs and view other parts of the notch. The trailhead exiting the southern terminus of a notch path that would access the bouldering area is an interesting environ to bring visitors to the notch to walk around and broaden their perspective on the notch.

Option 1- presents a single loaded modest parking area set on to a gradual slope. 14 spaces.

Option 2- presents a double loaded increase in parking area on the same slope. 24 spaces.

Option 3- presents the tiered approach to two levels of parking that may better accommodate the slow transition but is a larger footprint of impact. 23 spaces.

Specific improvements to be made common to all alternatives:
- Clearing and subsurface drainage
- Geotextile under gravel and crushed stone base for permeable subsurface
- Underdrains and swales
- Gravel surface on the parking areas
- Walkway surfacing
- Stone edging possibly native stone and or in combination with split face sloped granite curbing
- Pathway to overlook and Peregrine Falcon observation platform
- Develop Overlook station with stone edging and gravel surfacing
- Information kiosk
- Peregrine Falcon observation platform and interpretive kiosk
- Pathway into the boulders area
- Hillside stabilization above walkways
- Stone retaining wall on the lower side.
- Regrade for drainage
- Six-inch topsoil
- Seed 10 foot swath a long road side shoulder
- Rain gardens and bio retention
- Woodland revegetation – restoration

Public issues:
✓ Additional parking in the notch well received by all public parties.

VTrans issues:
✓ Shift of parking from roadside to defined pullovers is acceptable and desirable here.
✓ Roadside clear zone of 10’ is preferred but VTrans realizes that once entering the boulders this is diminished.
✓ Drainage patterns from regrading the road roadside parking areas will slow down run off and allow for infiltration and treatment of some areas to be revegetated.
✓ There are several major mountainside receiving culverts at this section of the road that need to be preserved.
✓ Pavement removal of excess shoulder
✓ Is this a maintenance project, capital or grant funded project?

VT State Parks Issues:
✓ Because the site is un - impacted there is a greater sensitivity to changing it and being sure that resource protection is achieved.
✓ While the site appears to be free of rare plants and wetlands, the area should be screened in greater detail.
✓ While the area has no apparent historical structures its location at the top of the notch and a long historical use suggests historical sensitivity that will require greater screening and assessment prior to developing the site.
✓ General support for the parking improvements to the area with note of resource caution.
✓ Strong interest in the connector walkways to notch areas of interest.

Resource sensitivities:
The original corridor management plan defined no critical resources in this area of the project. A revisit of rare and endangered species updated in the fall of 2014 confirmed as such.
✓ There is no evidence of rare or endangered species in the project area.
✓ There is no evidence of wetlands but there are numerous significant seasonal and storm activated drainages.
✓ The area is new to construction and human use - therefor it is suggested that archaeological review and screening is appropriate.
The permanent drainage from the spring flows permanently.
The large pull-over has no resource issues.

Cost of area improvements: $281,820

L1.8 Notch proper parking area and roadside
The trade-off between parking in environmental preservation could this be struck in this area and hopefully will meet with the approval of both the environmental recreation and tourism communities.

There are two areas of major change that are contemplated in the notch proper:

Gravel Pit:
At the notch’s height of land ascending from the south, is an area of the highest concentration of rare and endangered plants that make their way down the landslides into the parking area and thrive on the dynamic changing landscape of the rockslides. Species unknown. There is a gravel pit at the base of one of the notches drainage ravines has caused erosion and gravel slides. The removal of debris from excavation and erosion has flattened a space that has been used to accommodate pullover vehicles for many years.

The development of a new south side parking area will allow the removal of parking just at the top of the notch. Placement of stones along the roadside extending out from the natural ledges on the north and south on the west side of the road will close off the area entirely. Revegetation of the gravel pit landslide and establishment of footpath connections will also keep people on the defined trail through the area as part of the notch walk. An additional small pull out immediately to the north can also be closed off.

Large unimproved parking area:
In the mid Notch area, a large muddy eroded swath of land has been used as a parking area for many years. For some time, the presence of several large trees had caused consideration of parking improvements in there to be undesirable but those have recently dies and fallen. VT state parks and the corridor management committee have been receptive to a parking redevelopment plan for this site as it is the major impacting parking area in the notch that could be improved to better environmental and scenic standards.

The lot area redeveloped into parking could potentially accommodate 26-30 cars.

Since both this site and the south side new parking lot are at the top of the Smugglers Notch watershed, it is essential that the lot be designed and constructed of materials that would minimize environmental damage to the area. Drainage patterns should be specifically considered as well as run-off of the paved areas to minimize erosion downstream and to minimize run off velocity. The development of these parking areas is an opportunity for a sustainable parking lot to be created in the notch using the best environmental sustainable practices available. These could include pervious pavement as well as bio-retention and subsurface drainage to preserve the natural flow and hydrology of the area.

Specific improvements to be made:
- Closure of gravel pit parking pullover is made possible by the new south notch parking as replacement spaces.
- Closure of unsafe pullover spaces amongst the boulders south and north of the sharks tooth.
- Formalization part of parking in the mid-notch area as organized constructed parking.
- Boulder revegetation.

The new south and notch proper parking areas will also bring structure to peoples movement through the Notch Path in both directions to the boulders and northwards to look up to the long trail and the other areas of dramatic cliffs.

Further enhancements to the Notch Proper parking area by the stone hut and the bathroom facility Public into it to the process has indicated that while the improvements to the long-standing paved parking lot of acceptable is that enhancement of the landscape around it is not adequately been completed. A Budget allowance has been defined to accommodate additional natural landscaping of the area to better accommodation for people's desires to sit, have picnics and enjoy the unique notch environment.

**Public issues:**
- Additional And improved parking in the notch was well received by all public parties.
- Access to the boulders was underscored by the climbing community.

**VTrans issues:**
- Shift of parking from roadside to defined pullovers is acceptable and desirable here.
- Roadside clear zone of 10’ is preferred but VTrans realizes that once entering the boulders this is diminished.
- Drainage patterns from regrading the road roadside parking areas will slow down run off and allow for infiltration and treatment of some areas to be revegetated.
- There are several major mountainside receiving culverts at this section of the road that need to be preserved.
- Pavement removal of excess shoulder
- Is this a maintenance project, capital or grant funded project?

**VT State Parks Issues:**
- Because the site is highly impacted already there is a greater receptivity to the parking as a way to both achieve parking as well as environmental restoration. However, given the widespread environmental sensitivity to the notch, changes are to be made with utmost caution and stewardship ethics.
- High sensitivity to changing the notch and being sure that resource protection is achieved. The actual proposed site was cleared to be free of rare plants and wetlands, however, adjacent uplands and slopes should be protected extensively during construction.
- While the area has no apparent historical structures, its location at the top of the notch and a long historical use suggests historical sensitivity that will require greater screening and assessment prior to developing the site. An advantage of the proposed parking plan is that the construction work is all fill - with no further excavation into potential resources, and the layers of construction can be separated with geotextiles.
- General support for the parking improvements to the area with note of resource caution.
- Strong interest in the connector walkways to notch areas of interest.

**Resource sensitivities:**
The original corridor management plan defined significant ecological resources in this area of the notch but they were largely confined to the rocky cliffs and steep slopes of the notch. A revisit of rare and endangered species updated in the fall of 2014 confirmed as such and verified that the impacted areas such that might be changed with a parking project would not affect the higher positioned species.
✓ Concern about the nature of imported soils and plant materials to not introduce foreign and potentially invasive weed species - soils will need to be either from local native sources or will be need to be sanitized of weed seed.
✓ There is no evidence of rare or endangered species in the project area to be altered in construction although there is a context of extensive resources.
✓ There is no evidence of wetlands in the top of the notch but there are numerous seasonal and storm flow drainages.
✓ The area is completely disturbed from long standing parking and that has occurred within the context of the however archaeological review and screening is appropriate.

Cost of area improvements: $357,572 plus $103,299
Appendix:

Alternatives Presentation
All of the proposed alternatives (including a mandatory “no build” alternative) will be evaluated in an alternatives matrix. The matrix will include resource impacts, storm water treatment needs/impacts, right of way impacts, utility impacts, ability to meet the project purpose and need, estimated cost and any other factors that will help the community evaluate the alternatives being considered.

LCPC and ORW conducted a public informational meeting to present all the different alternatives that have been considered and gather feedback from community. The meeting was held in November, 2014 and was attended by approximately 15 people.

Identify Right-of-way Issues
It is assumed that all improvements take place within the VT 108 right-of-way (ROW) and/or the Smugglers Notch State Park/Mount Mansfield State Forest.

Identify Utility Conflicts
All sites are located within the Smugglers Notch State Park and Scenic Highway. Most typical public and private underground and overhead utilities (water, sewer, fiberoptics, electric, TV, cable, phone) are absent in the project area.

Resource checklist:
The table following identifies potential impacts on these resources and permitting requirements and assesses each project area in light of potential resource issues for the following:

Implementation schedule:

Detailed cost analysis:

Plan sheets:

Note: Base mapping from the original implementation work for the project dating back to 1990 was secured at ORW and from Little River Survey co. and updated to current CAD. The base maps and cad plans for the 1992 efforts towards implementation were extracted from metric Microstation cadd and served as base mapping and design files for the schematic design work.

Resource field notes