

VT 15 Athens Drive to VT 289 Scoping Study Proposal



October 13, 2017



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1 Project Description

Over the years, the Village of Essex Junction and the Town of Essex have greatly expanded their pedestrian and bicycle network through a series of sidewalks, shared use paths, and on-street facilities. The VT 15 corridor, from Essex Junction Village to VT 289 Interchange is an important link missing to connect these facilities. As the interest in active transportation has grown, the need for this link has grown.

This is a scoping project to identify a preferred alternative for this important, missing link along VT 15. The project area begins on the east side of the Village at Athens Drive, where an existing shared use path ends. It extends eastward approximately 0.70 miles to the VT 289 interchange, where there is an existing shared sue path on the east side. In this area, VT Route 15 is approximately 28 feet wide with 2 foot shoulders. There are approximately 12,100 vehicles per day and people currently walk along the narrow road shoulder where the speed limit is 40 MPH.

It is expected to be a challenging project to construct, with areas of ledge and a crossing of Indian Brook required. The project has been discussed for many years but discounted as being too difficult and/or too costly to construct. However, no detailed scoping has been done on this segment to define what opportunities exist.

Since the needs include a broad range of users, from beginner to expert bicyclists, and there is a shared use facility at each end of the project corridor, assumed alternatives to be developed and evaluated include the following:

- Do Nothing
- A shared use path on the north side of VT 15 from Athens Drive to VT 289 and including crossings at each end to connect to existing facilities.
- A shared use path on the south side of VT 15 from Athens Drive to VT 289

The intent is to consider either the north and south side of VT 15 for a shared use path but constructing on both sides is considered not necessary due to being cost and impact prohibitive. Since much of the VT 15 existing roadway width is about 28 feet, it is assumed the shared use path layout will provide a separation from VT 15 for potential future widening of VT 15, but any VT 15 widening would not be part of this scoping.

It is also assumed the alternatives would end at the west side of the VT 289 interchange, and not included a facility through the interchange.

During the process a project steering committee (PSC) will be consulted for input, guidance and support and act as a liaison to other town groups and committees. Members will include Christine Forde, Dennis Lutz, Dan Gregoire, Darren Schibler, Robin Pierce, and Ricky Jones. The PSC will approve the Purpose and Need Statement and make a recommendation on alternatives after conferring and getting input from the Bike/Ped/Trails Committees. The recommendation will go forward in a memo to the Selectboard. The CCRPC will keep VTrans informed as the project proceeds.



2 Study Area Scope and Approach

The following utilizes the standard scope provided by the CCRPC for scoping projects. Stantec has included additional detail to clarify the scope for this project.

A. Kick-Off Meeting

Scope: Stantec will meet with CCRPC, Village of Essex Junction, Town of Essex, and a Project Committee as developed by the CCRPC to discuss the project goals, objectives, process, timeliness and deliverables.

Approach/Assumptions: This meeting has occurred on August 17, 2017 as part of the proposal development process.

Deliverables: Meeting agenda, and presentation of existing information.

B. Compile Existing/Future Conditions Data & Develop a Base Map

Scope/Approach/Assumptions: Using the available high resolution orthophotos, the CCRPC will develop an existing conditions base map. The map will include available GIS layers as obtained from the Town/CCRPC and VCGI. These may include existing transportation, pedestrian and bicycle facilities, tax parcels, environmental resources, stormwater, hazardous waste sites, and utilities. The Village and Town will provide any permitted developments that may affect the corridor. Stantec will also solicit CCTA's plans for the area and indicate existing and/or proposed bus routes, facilities and stops.

It is assumed no field survey or digital terrain model will be provided for the project area. The project base map will be based on available orthophotos and Lidar. Stantec will also research the existing highway ROW for VT Route 15. The existing ROW will be shown on the base mapping (Task G). It is assumed Stantec will contact CWD, Fairpoint and Vermont Gas Systems requesting information on any of their existing facilities in the project area. Using the information provided, the general location of the existing facilities will be shown on the base mapping. It is assumed additional field survey to provide utility elevations, such as pipe inverts, will not be required.

For the VT Route 15 intersections, including the VT 289 interchange, it is assumed traffic analysis of existing or projected conditions will not be required. Stantec will request crash data from VTrans, summarize the data, and highlight the predominating causes.

Stantec will collect and review existing studies. Using the Vermont State Standards, Stantec will develop the project's design criteria.

Deliverables: Existing conditions map and design criteria.

C. Local Concerns Meeting

Scope: Stantec, working with the PSC, will organize and facilitate a Local Concerns Meeting to hear the public's issues and concerns to develop a clear understanding of the purpose and need of the project. This meeting will be hosted by the CCRPC and the Town of Essex with local officials invited. This meeting may be an opportunity to discuss any future maintenance issues or concerns with the proposed project. As an outcome of the local concerns meeting and the project kickoff meeting, the consultant will develop the Project's Draft Purpose and Need

Statement. The consultant will generate this statement based on local input and an understanding of existing conditions.

Approach/Assumptions: Stantec will develop a meeting agenda and a slide presentation in close coordination with the CCRPC Project Manager to facilitate the Local Concerns Meeting. The names and addresses of all people, including adjacent property owners, to be notified will be provided by the town and CCRPC. A direct mailing will be sent out and announcements will be posted via Front Porch Forum and on the Town website by the Town and in the Essex Reporter by Stantec. The presentation will include an existing conditions plan illustrating collected information. This information will be reviewed by the CCRPC and Town and edited for the Local Concerns Meeting. The presentation and agenda will include pertinent discussion items such as: existing traffic operations, safety, crash prone conditions, bicycles, pedestrians, etc. The goal is to facilitate an organized solicitation of concerns. Potential alternatives will also be discussed.

The Stantec team shall prepare minutes of the meetings and distribute them to and the CCRPC Project Manager. Comments received from anyone not present at the meetings, such as ones received via the comment section on the project website, will be attached to the minutes of the meetings. The meeting minutes will focus on the comments received and required action items. Comments will be organized by topic for easy referencing.

Deliverables: Meeting agenda, slide presentation, and meeting minutes.

D. Purpose and Need

Scope: Following the Local Concerns meeting, Stantec will develop a draft Purpose and Need Statement for this project. Stantec understands the importance of the Purpose and Need Statement as it is used to identify and evaluate alternatives and assist with selecting a preferred alternative. Based on our experience with scoping projects, the needs portion typically points out existing issues revealed during the information collection and local concerns tasks. The Purpose and Need Statement will be distributed to the CCRPC Project Manager for review and approval. The Purpose and Need Statement will be discussed at subsequent meetings and throughout the scoping process. Any discussed edits will be included and an updated statement distributed.

Deliverables: Draft and revised Purpose and Need Statement.

E. Develop Conceptual Alternatives

Scope: In cooperation with the Town and CCRPC staff, the consultant will identify potential alternatives utilizing the information compiled for the base plan, and site visit. The consultant will develop typical sections for the different alternatives that show basic dimensions and, if applicable, where the facility is located within existing road rights of way and in relation to travel lanes, shoulders, existing building faces and other features.

Approach/Assumptions: To develop an accurate evaluation of impacts and costs, the alternatives will be developed using the base mapping. It is assumed the following two long term alternatives (in addition to the Do Nothing) will be developed and evaluated:

- Do Nothing (No-Build)
- A shared use path on the north side of VT 15 from Athens Drive to VT 289

- A shared use path on the south side of VT 15 from Athens Drive to VT 289

Since much of the VT 15 existing roadway width is about 28 feet, it is assumed the shared use path layout will provide a separation from VT 15 for potential future widening of VT 15, but any VT 15 widening would not be part of this scoping.

It is also assumed the alternatives would end at the west side of the VT 289 interchange, and not included a facility through the interchange.

The alternatives will cross Indian Brook and the concept and estimate of a bridge spanning Indian Brook will be provided. Stantec will contact Chris Brunelle, Stream Alteration Engineer for ANR, and discuss the need to provide Aquatic Organism Passage (AOP), the needed span length, and design considerations to obtain a stream alteration permit.

Short term improvements such as pavement markings will also be considered, discussed and included in the scoping report.

The need for storm water treatment will be included on the evaluation. The proposed improvements will be shown on the base mapping.

Once alternatives are analyzed and alternative sketches are developed, the Stantec team in coordination with the CCRPC and the Town will conduct an alternative presentation meeting to solicit ideas, issues, and concerns.

The alternative plans will include the following:

1. Plan sheets showing proposed improvements.
2. Existing Right-of-Way.
3. Conceptual cost estimate.

During development of the alternatives, it is assumed one meeting with the CCRPC and Town will be required.

Deliverables: Traffic analysis of alternatives, draft and revised alternative plans, and conceptual cost estimate, Alternatives presentation agenda, presentation and meeting notes.

F. Identify Natural and Cultural Resource Constraints and Permitting Requirements

Scope: Review natural and cultural resource issues including wetlands, surface waters, flora/fauna, endangered species, storm water, hazardous material sites, forest land, historic, archaeological and architectural resources, 4(f) and 6(f) public lands, and agricultural lands. Identify potential impacts on these resources and permitting requirements, including the potential for review under Act 250. When possible, documentation from appropriate state and federal agencies (e.g. Agency of Natural Resources, Department of Fish and Wildlife, Corps of Engineers) will be included to summarize the extent to which resources may or may not be impacted. The consultant will identify any permits that will likely be needed for the project.

Where a closed, subsurface drainage system is proposed (new or addition to existing), an estimate of new, redeveloped and existing contributing surface areas will be included as well as

an assessment of what will be required to obtain a stormwater discharge permit. An estimate of the area of disturbance that will result from the project will be included to assess the extent of mitigation that will be required under the National Pollutant Discharge and Elimination of Sediment (erosion prevention and sediment control) permit.

Historic and Archaeological resources will be reviewed by qualified experts in those fields to determine potential impacts to those resources. For the Historic resources, a reconnaissance-level survey will be performed. For Archaeology, an "Archaeological Resources Assessment" which involves no excavations, will be performed to determine where and how much of a proposed project area has "archaeologically sensitive" land.

Approach/Assumptions: The area of identification will be limited to the area shown on the project location plan. The identification method for each resource is as follows:

- Wetlands: Field review, functional assessment and report.
- Archaeological and historic sites/districts: See proposal, Appendix C.
- Air & Water Quality: this task would typically assess the 10-year increase in the AADT and the report would note any additional steps needed to address air quality in the instance the 10-year increase in the AADT exceeds 10,000 vehicles as allowed per MOA with VANR. Given the nature of this project and declining traffic volumes, it is assumed this assessment is not applicable. Regarding adjacent streams, their status of impairment will be noted for consideration for stormwater treatment.
- Noise Sensitive Land Uses: Existing residential and lodging facilities will be noted on the mapping. Given the nature of this project being a pedestrian improvement, it is assumed a noise analysis is not required.
- Fish and Wildlife Habitats: The results of research and field review will be shown on the mapping.
- Endangered / Threatened Species: The results of research and field review will be shown on the mapping.
- Community Character (local aesthetics): Any scenic views and valued aesthetics will be noted on the mapping.
- Socio-economic Characteristics: Local and regional plans will be reviewed and pertinent portions noted.
- Agricultural land: The results of research and field review will be shown on the mapping.
- LWCF lands (Section 6(f)): Stantec will review the latest listing posted on the relevant websites and any lands will be noted on the mapping.
- Public and Recreation Land (Section 4(f)): Based on field review and input from communities, these lands will be noted on the base mapping.

Deliverables: Results of field and research reviews to be incorporated into existing conditions plan.

G. Identify Right-of-Way

Scope: Compile right-of-way and property ownership information along the alignment of the proposed project. This information should identify public/private ownership and any existing easements or restrictions (e.g. Act 250 permits) on affected property. Right-of-way information will be mapped on the same base mapping as the existing conditions.

Approach/Assumptions: Stantec will provide the existing highway right-of-way. The Town will provide the names of the property owners in the project area. Stantec will include this information on the plans.

Deliverables: Documentation of research and right-of-way for base map.

H. Identify Utility Conflicts

Scope: Identify and discuss public and private underground and overhead utilities (water, sewer, fiber optics, electric, TV, cable, phone) in the project area. Include a preliminary assessment of whether any relocation will be required and indicate if the relocations may occur outside of the existing Rights of Way. For underground utilities, an assessment should be made of whether they will be impacted by construction of the proposed improvements. The assessment will include identification of owners of potentially impacted utilities.

Approach/Assumptions: Stantec will provide a project plan to area utility companies asking for what existing facilities or proposed expansion or relocation plans they have in the project area and request any location information and condition information they have. This information along with the aerial line information will be shown on the plans. Impacts to existing facilities and potential mitigation will be depicted.

Deliverables: List of utility impacts.

I. Alternatives Evaluation

Scope: The proposed alternatives, including the no build alternative, will be evaluated and the results summarized in an alternatives matrix. The matrix will include transportation impacts (traffic, bike and pedestrian), resource 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. The new bike and pedestrian link has the potential to improve the community character and this item will be part of the evaluation. The socio-economic impact or benefit of alternatives will be noted.

Approach/Assumptions: A draft will be developed and provided by Stantec to the CCRPC and Town for review prior meeting. Comments will be incorporated for the subsequent presentation to the Town Selectboard. The provided information will also include a draft scoping report describing the project, existing conditions, and alternatives.

Deliverables: Recommendation on preferred alternative, evaluation matrix, draft scoping report, PowerPoint of alternatives.

J. Develop Preliminary Cost Estimates

Scope: The consultant will develop preliminary cost estimates for further planning, design, construction and maintenance costs of the project. Cost estimates shall include preliminary bid

item quantities. Per foot or lump sum costs will not be an acceptable substitute. The long-term alternatives estimates will assume that the project will be constructed using a combination of Federal and local funding and will be managed by the local community. The long-term alternatives cost estimates will include amounts for construction, engineering, municipal project management and construction inspection. For the short term/interim improvements that are identified, estimates will be provided assuming local funding will be used for their implementation.

Approach/Assumptions: Stantec will utilize the VTrans Estimator database and recent bid results to develop a cost estimate for the preferred alternative. Cost estimates prepared to compare alternatives will be order of magnitude estimates and will not be carried out to the same level of detail as the preferred alternative cost estimate. Cost estimates will be conducted in tandem with the Alternatives Evaluation and be presented to the Project Advisory Committee as part of the alternatives matrix at their meeting under Task I.

Deliverables: Cost estimates for alternatives.

K. Alternatives Presentations

Scope: Stantec and CCRPC staff will present the alternatives considered and seek the Town Selectboard endorsement of a preferred alternative.

Approach/Assumptions: The alternatives presentation is planned to be in PowerPoint format.

Deliverables: Alternative presentation in PowerPoint format and meeting notes from alternatives presentation

L. Report Production

Scope: Using information gathered from the activities outlined above and from the meetings with the Town and CCRPC, submit draft and final scoping reports outlining the findings of the study. This report will be an update and reference the previous report.

Approach/Assumptions: It is proposed the report sections be developed as the work is completed. For instance, the Existing Conditions sections and Proposed Alternatives section will be completed prior to the alternatives presentation meeting. This will allow a draft document to be used to update parties interested on the project status. It will also facilitate input on alternatives.

M. Project Team

The proposed Stantec Project Team includes:

Gregory Edwards, PE – Principal / Project Manager

Erik Alling, PE – Senior Engineer

Todd Duguay, PE – Senior Engineer

Sean Neely – Project Engineer

Polly Harris, Environmental Specialist



55 Green Mountain Drive
South Burlington, VT 05403

TASK-LABOR HOUR SCHEDULE

CCRPC / Town of Essex
VT Route 15 Athens Drive to VT 289 Scoping Study

September 11, 2017

TASK		Principal / PM/ Sr Traffic Engr.	Sr. Engineer	Project Engr./ Env. Specialist	Technical / Clerical	TOTAL
A. Attend Kick-off meeting and review project scope/schedule						
1.	Develop agenda and presentation and meet with committee	Assume completed				0
B. Collect Existing Data/ Compile Base Mapping						
1.	Field review/inspection/documentation		2	4		6
2.	Traffic Analysis - intersections	Assume not required				
3.	Collect and review existing studies and Record Drawings		4	2		6
4.	Identify and document existing resources	See F.1 Below				
5.	Develop base mapping (Coordination, review, and set up)					0
	a. Collect othophoto and Lidar/generate 3D model		1	8	4	13
	b. Update base mapping w/collected data		2		8	10
	c. Collect existing utility information and show in base mapping		2	4	4	10
6.	Establish design criteria	1	4			5
C. Local Concerns Meeting / Purpose and Need						
1.	a. Develop list of property owners and stakeholders	Provided By City				
	b. Notice, prepare for, & attend Local Concerns Meeting	2	2	6	2	12
2.	Document LCM and distribute notes		2			2
D. Purpose and Need						
1.	Develop draft purpose & need statement		2			2
2.	Develop final purpose & need statement for Committee endorsement		1			1
E. Development of Conceptual Alternatives						
1.	Develop plans and sections of 2 alternatives.	16	32	64	64	176
2.	Develop bridge concept for Indian Brook crossing	4	24	16	8	52
2.	Develop conceptual estimates for alternatives	1	8	16	8	33
3.	Review with Committee (assume 1 mtg.)	3	3			6
F. Identify Natural Cultural Resources Constraints						
1.	Desktop and field review		2	16	2	20
2.	Include resources on base mapping		2		6	8
3.	Conduct team coordination		4			4
4.	Attend Corp of Engineers coordination meeting	Assume Not Required				
G. Identify Right of Way						0
1.	Review VTrans record plans and collect P.O. names		8		2	10
2.	Include on base plans		2		4	6
H. Identify Utility Conflicts						0
			1	4		5
I. Alternative Presentation Meetings						
1.	Prepare evaluation and matrix	1	8	4	1	14
2.	Prepare presentation material & present to committee	4	2	4	12	22
3.	Notice, present alternatives & document meeting	4	4		2	10
5.	Meet with committee to finalize preferred alternative	3	3			6
J. Preliminary Cost Estimate						0
1.	Prepare cost estimate for the preferred alternative		2	4		6

TASK			Principal / PM/ Sr Traffic Engr.	Sr. Engineer	Project Engr./ Env. Specialist	Technical / Clerical	TOTAL
L.	Report Production						
	1.	Compile information & prepare draft scoping report	4	40	8	16	68
	2.	Submit to CCRPC for review		1			1
	3.	Revise with CCRPC comments		16	4	8	28
TOTALS			43	184	164	151	542

4 Appendices

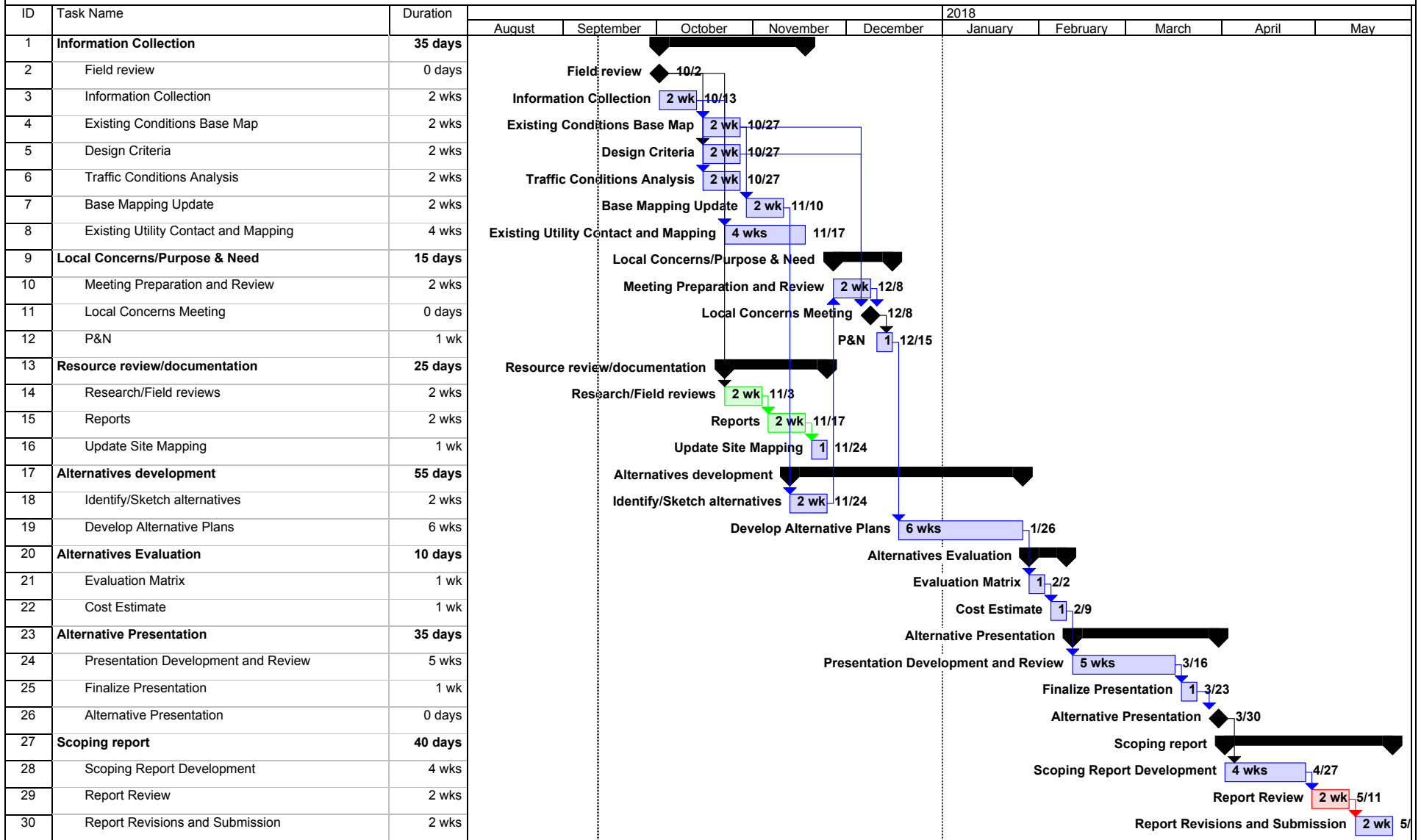
APPENDIX A – PROJECT SCHEDULE

APPENDIX A

Project Schedule

PROPOSED PROJECT SCHEDULE

VT 15 Athens Drive to VT 289 Scoping Study



Date: Tue 9/12/17	Task		Summary		Rolled Up Progress		Deadline	
	Split		Rolled Up Task		VAOT Task			
	Progress		Rolled Up Split		Project Summary			
	Milestone		Rolled Up Milestone		External Milestone			