Independent Review

eTicket Project

For the

State of Vermont
Department of Public Safety and Department of Information and Innovation

Submitted to the
State of Vermont, Office of the CIO
By

Strategic Technology Services

6/2/2014

Attachments:

1. FINAL-REVIEW-SOW-DII-DPS-eTicket-IR-STS-Risk_Register.pdf
2. FINAL-REVIEW-SOW-DII-DPS-eTicket-IR-STS-Project-Cost-Detail.xlsx
3. FINAL-REVIEW-SOW-DII-DPS-eTicket-IR-STS-Project-Plan.mpp

E-SIGNED by Richard Boes
on 2014-06-18 19:00:41 GMT June 18, 2014

E-SIGNED by Barbara Cormier
on 2014-06-18 18:00:26 GMT June 18, 2014

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1. Executive Summary

Provide an introduction that includes a brief overview of the technology project and selected vendor(s).

1.1 Cost Summary

IT Activity Lifecycle:	10 Years
Total Lifecycle Costs:	$ 5.5M
Total Implementation Costs:	$ 3.1M
New Annual Operating Costs:	$ 2.4M
Difference Between Current and New Operating Costs:	$ 2.4M (new project, no significant savings or change in current operating costs)
Funding Source(s) and Percentage Breakdown if Multiple Sources:	NHTSA FY2006 408 Grant: $890K (20%) NHTSA FY2006 405c Grant: $599K (13%) Ticket Revenue Recovery: $3.05M (67%)

1.2 Disposition of Independent Review Deliverables

Deliverable	Highlights from the Review *Include explanations of any significant concerns*
Acquisition Cost Assessment	Costs seem reasonable and in line with comparable bids. As Vermont is the smallest implementation by TEG, no other eTicket projects performed by TEG were referenced as a comparable data point.
Technology Architecture Review	Sound technology architecture based on Windows Desktop and Windows Server, Microsoft .NET Framework, SQL Server database with no stored procedures. Off line mode/syncing to master database process is proven.
Implementation Plan Assessment	Consistent project management approach and methodology has yielded positive results on all previous projects.
Cost Analysis and Model for Benefit Analysis	Cost analysis provides accurate 10 year costs. No quantified monetary benefits beyond a percentage of increased ticket revenue recovery. Per URL Integration report, no other eTicket projects have yielded cost savings or other benefits that have been monetarily quantified. Benefits include data error reduction, increased data quality, redundant data entry eliminated, but none have yielded any measurable monetary benefits.
Impact Analysis on Net Operating Costs	Per URL Integration report, no other eTicket projects have yielded cost savings, so this project will only yield increased net operating costs. The only way to reduce costs is to reduce staff, and that has not been stated as an option being contemplated by stakeholders interviewed for this report.

1.3 Identified High Impact &/or High Likelihood of Occurrence Risks

Risk Description	State's Planned Risk Response	Reviewer's Assessment of Planned Response
This to be completed after working with DPS on the Risk Register		

1.4 Other Key Issues

Recap any key issues or concerns identified in the body of the report.

1. No other issues identified.

1.5 Recommendation

Provide your independent review recommendation on whether or not to proceed with this technology project and vendor(s).

1. Complete the project/analysis now underway to determine whether VSP will continue using Spillman. If VSP shifts to Valcour, poll remaining LEAs on their intent of continued Valcour usage as an indicator of Spillman market share in Vermont, in order to determine:
    a. Priority of connectivity/data interface between eTicket solution and Spillman/Valcour.
    b. Whether Valcour Ticketing is sufficiently robust to preclude the need for a separate eTicket solution, should Spillman not be considered a viable long-term solution in Vermont.

2. Allocate funding source **first** towards electronic exchange of VCVC and bias-free policing data between Valcour (and Spillman if it remains in play per #1 above) and Judicial Bureau.
    a. All LEAs already enter data into their Record Management Systems (RMS), and having data collected at that point of entry vs. in the car, provides no disruption to current processes, yet delivers the greatest benefits identified through the URL Integration report: reduced errors and reduced duplicate data entry. If this can be done successfully, only then consider moving data collection "upstream" into the cars, by implementing eTicketing software solution, along with printers and scanners. In the meantime, seek to pass legislation to allow eSignatures to meet the notarized signature requirement on the VCVC form, and put bar codes onto vehicle registration and insurance cards.
    b. If Valcour/Spillman and Judicial Bureau integration cannot be done, implementing eTicketing software as well as printers and scanners will not yield the benefits contemplated in the URL integration report, and as such, suggest no further action be undertaken on this project.

3. Develop a strong project oversight team, with representation from the entire stakeholder group, including LEAs, Vermont State Police, DPS, DII, Judicial Bureau, Judicial Operations, and DMV.

4. Develop a formal project management structure, including a formal Project Management role as well as a Project Operations role. The Project Manager should function as both a true Project Manager as well as assume the Project Controller role. The Project Operations role is necessary as there is a statewide user audience, and success will only be achieved by constant contact and check in with this group: A "boots on the ground" role to ensure adoption of computer, scanner, and printer technology, and ensuring data is captured in an automated fashion. Without the automated data collection objective being met, the project will again fail to meet a fundamental justification for undertaking the effort.

1.6 Certification

I hereby certify that this Independent Review Report represents a true, independent, unbiased and thorough assessment of this technology project/activity and proposed vendor(s).

_____ _____

Signature **Date**

2. Scope of this Independent Review

Add or change this section as applicable.

2.1 In-Scope

The scope of this document is fulfilling the requirements of Vermont Statute, Title 3, Chapter 45, §2222(g):

The Secretary of Administration shall obtain independent expert review of any recommendation for any information technology initiated after July 1, 1996, as information technology activity is defined by subdivision (a)(10), when its total cost is $1,000,000 or greater or when required by the State Chief Information Officer.

The independent review report includes:

- An acquisition cost assessment
- A technology architecture review
- An implementation plan assessment (which includes a Risk Analysis)
- A cost analysis and model for benefit analysis; and
- An impact analysis on net operating costs for the Agency carrying out the activity

2.2 Out-of-Scope

If applicable, describe any limits of this review and any area of the project or proposal that you did not review.

A separate deliverable contracted as part of this Independent Review may be procurement negotiation advisory services, but documentation related to those services are not part of this report *at this time*.

3. Sources of Information

3.1 Independent Review Participants

List the individuals that participated in this Independent Review.

Name	Employer and Title	Participation Topic(s)
Anne Liske	DPS	Contract Manager: Discussed terms of NHTSA Grant which is funding majority of this project
Barb Cormier	DII	Project Management Oversight
Bob Thigpen	AOT	eTicket project initiator as part of the TRCC membership
Chief Michael Schirling	Burlington Police	Discuss how BPD is using Valcour to process traffic tickets
Dean Hamel	DPS	Expectations of IR as Project Sponsor
Deputy Chief Andy Marceau	Barre City Police Department	Member of vendor evaluation and selection team
Gabrielle Lapointe	Judicial Bureau	Understand process once paper tickets arrive at JB
Gary Nowak	DPS	eTicket Project Leader; Primary point of contact on this IR project; Discuss project history, vendor evaluation, project budget, business case, cost/benefit, technology design.
Jeff Loewer	Judiciary	CIO of Judiciary: Discussed desired outcomes and risk concerns
Lt. Bret Meyer	Washington County Sheriff	Member of vendor evaluation and selection team
Lt. Brian Miller	VT State Police	Member of vendor evaluation and selection team
Lt. Garry Scott	VT State Police Traffic Operations Unit (TOPS)	Member of vendor evaluation and selection team; Expected to participate in pilot of scanners, printers, and software
Lt. Tim Charland	DMV	Discuss whether DMV is using printers in the vehicles (they are not)
Mary Spicer	AOT	WebCrash Project Leader: Discussed lessons learned from WebCrash project; How eTicket needs to work with WebCrash team to accomplish desired data exchanges
Paco Aumand	DPS	Expectations of IR as Project Sponsor
Peter Kipp	DII	Project Contracting
Richard Boes	DII	DII Commissioner and key project sponsor: Discussed desired outcomes and risk concerns
Rob Ide	AOT	AOT Commissioner and key project sponsor: Discussed desired outcomes and risk concerns
Sgt. Mark Anderson	Windham County Sheriff	Member of vendor evaluation and selection team

3.2 Independent Review Documentation

Complete the chart below to list the documentation utilized to compile this independent review.

Document Name	Description	Source
eTicket RFP Final VI.docx and related attachments	eTicket RFP soliciting bids on the projects	Project SharePoint site
TEG Technical Response for Vermont RFP.pdf, TEG Pricing Response for Vermont RFP.pdf, TEG Pricing Response for Vermont RFP BAFO.pdf, TEG Project Plan for Vermont RFP.mpp, TEG Attachment I VT eTicket Functional and Technical Requirements.xls	TEG proposal	Project SharePoint site
Brazos Response BAFO.pdf, gTechna Response Vermont BAFO V8.pdf	Other finalist BAFOs, used as pricing comparison	Project SharePoint site
Vermont eTicket Master Business Plan - Final Version 1 0 I.docx	eTicket Master Business Plan prepared by URL Integration in 2011	Thigpen
eTicket Monthly Status Report November 2013_mbpinput.docx (also for Dec 2013, Jan 2014, Feb 2014, Mar 2014) and Vermont eCitations Progress Reports 1st Quarter 2014.docx and Vermont eCitations Progress Reports 2nd Quarter 2014.docx	Project status reports as prepared by Thigpen and Nowak	Cormier, Nowak
eTicket Minutes_02042014.doc	Team discussion minutes whereby finalist vendors were ranked	Project SharePoint site
Thigpen20140110tegwith5dollarand 2yrpositionepmofee.xlsx	10 Year Project Cost Model	Cormier
Executive Level TRCC 9.13.docx	List of TECC members	Thigpen
TRCC Agenda 05-01-2014.docx	Agenda from most recent TRCC meeting whereby the following projects were reviewed: • AOT Crash Data Reporting System • End User Crash Data Query Tool • Web Crash Auto Population • Traffic Records IT Project Manager • SIREN • DPS Support of Traffic Records Improvements • DPS E-Citation Implementation • Local Road LRS	Mandy White
Final National Model Business Plan February 2012.pdf	National Model Business Plan, Governance Description	Nowak
Final Vermont 2012 TRA.pdf	Traffic Records Assessment study conducted by NHTSA Technical Assistance Team in May, 2012	Nowak
NHTSA TR funding source criteria.pdf	Subsection of the language defining the	Nowak

Document Name	Description	Source
	terms and conditions of the funding source (MAP-21: 405c and 408 Grant funds)	
Spillman_Wisconsin_TraCSXML.pdf	Spillman XML interface guide for data exchange with TraCS	Nowak
Wisconsin Tracs RSD.pdf	Spillman XML design document for data exchange with TraCS	Nowak
TraCS User.docx	TraCS User Agreement (software license agreement)	Nowak
Vermont DPS Nowak 130715-paper.pdf	Quote for thermal printer paper	Nowak
Vermont DPS Nowak Price 130411.pdf	Quote for L-Tron 4910LR Scanner	Nowak
4910LR-151-Data-Sheet.pdf	L-Tron 4910LR Scanner spec sheet	Nowak
VSP TOPS 1 Quote 130815.pdf and VSP TOPS 2 Quote 130906.pdf	Quote for Brother thermal printer options and car mounts	Nowak
Namdar_TicketMethodByAgency.xlsx	Spreadsheet developed by Gadway to collect information by LEA: number of cars, scanners, printers, RMS, etc.	Gadway, Nowak, Namdar

4. Project Information

4.1 Historical Background

Provide any relevant background that has resulted in this project.

SUMMARY

Vermont followed the recommendation of the National Highway Traffic Safety Administration (NHTSA) to contract with a nationally recognized consultant to review the current paper based citation system. NHTSA provided funding for this recommended study. See **Attachment 4** for a graphical representation of the current process flow.

In **December, 2011** the State of Vermont contracted with **URL Integration** to examine the issues and barriers related to implementing a statewide electronic citation (eTicket) system within the state of Vermont. The decision to hire a consultant for this work is grounded in one of several recommendations of the Vermont Traffic Records Coordinating Committee (TRCC) in their efforts to improve traffic records and the sharing of traffic information between relevant parties at the local, state, and federal levels.

In **May, 2012**, **NHTSA** deployed a Technical Assessment Team to Vermont to conduct a **Traffic Records Assessment**, out of which, recommendations related to the eTicket project came.

A deliverable of the effort by URL Integration was an **RFP for an eTicketing solution**, which DPS issued **April, 2013**, received proposals in June, 2013.

In **April, 2014**, a team comprised of a broad cross-section of stakeholders selected the **TraCS** solution (Traffic and Criminal Software) from TEG, Inc. to provide eTicketing functionality.

ADDITIONAL DETAIL

URL Integration was contracted to provide the following analyses, reports, and deliverables to provide the TRCC and other decision-makers in the State of Vermont with information about eTicketing:

- A national survey on eTicket use in other states;
- An analysis of Bias-Free Policing and how that is impacted by the use of eTicketing systems;
- A Law Enforcement Agency (LEA) Workflow and IT Needs Report which addressed local business processes around traffic tickets, ordinance violations, warnings, DUIs/citations, crash reports, and parking tickets, as well as the infrastructure in place at the local level to support automating those processes;
- An Expansion of Systems and Feasibility Report that looked at the eTicket project in the context of other software programs in use by public safety and transportation agencies;
- A **master business plan** that makes the business case for an eTicket project and addresses costs and an implementation strategy that fits the needs and technology environment within the State of Vermont;
- A Request for Proposal (RFP) for an off-the-shelf eTicket system that the State of Vermont can use when it is ready to procure.

In May, 2012, NHTSA deployed a Technical Assessment Team to Vermont to conduct a Traffic Records Assessment, out of which the following recommendations related to the eTicket project came:

- Create a consistent location schema for correlating crash event with traffic enforcement locations.
- Coordinate the upgrade of the court case management system through the TRCC to ensure it meets the needs of the agencies contributing or receiving information from the system.
- Coordinate development of the e-citation application through the TRCC to ensure it meets the needs of the agencies contributing or receiving information from the system. Explore methods to populate data on e-citations from driver and vehicle query returns or from machine readable technology to populate driver and vehicle data.
- Identify any potential for integration of the e-citation with the court case management system during the development phases of each project.
- Encourage the development of a citation tracking system within the new court management system.
- Coordinate through the TRCC methods to provide law enforcement officers and agencies disposition data to aid in evaluating the effectiveness of their traffic enforcement efforts.
- Prioritize efforts to modernize and update the Vehicle Records System to enhance electronic data interface with other traffic records systems.
- Examine the possibility of using bar coding on issued registration documents to aide law enforcement and others with the ability to auto- populate information on electronic documents such as citations, crash reports, and registration renewals.

The Vermont law enforcement community is made up of the Vermont State Police (VSP), which is comprised of 320 sworn officers; 55 municipal departments; and 14 County Sheriff's departments; and other agencies. The combined efforts of the Vermont law enforcement community is comprised of approximately 550 sworn officers for road patrol, which is well below the national average.

In Vermont, law enforcement agencies are defined as small (0-7 officers), medium (8-29 officers) and large (30+ officers). In Vermont, 49.9% of the LEAs fall within the medium-sized category.

The vast majority of law enforcement agencies across Vermont provide laptop computers in the squad cars. The basic laptop setup includes an air card to connect the laptop to a network. Most Law Enforcement

agencies that use Spillman RMS (V6.1) also use an application called NetMotion to address air card connectivity issues for users in more remote areas of the State.

All states surveyed for the URL study reported that air card connectivity is an issue. This was identified as a major issue for the state of Vermont as well. The connectivity issue was addressed in all states surveyed through the eTicket application – either via caching data, storing data locally, or by utilizing removable media such as a flash drive which can then be downloaded at the office. None of the states surveyed employed a "Cloud" based solution for eTicketing – all systems were client/server based, partly due to the connectivity issue. Only one state surveyed still used Radio Frequency (RF) communication, although they were in the process of eliminating that option and migrating toward the use of air cards.

At the time the URL Integration report was written (2012), Spillman software served 93% of all law enforcement agencies in Vermont. At that time, Burlington, South Burlington, UVM, Winooski, Colchester, and Montpelier used Valcour, and these agencies serve approximately 20% of Vermont's *user* population.

The split is now approximately 70% Spillman/30% Valcour in terms of *numbers of agencies. User count per RMS data was not available at the time of this report.*

Some agencies use Spillman Mobile (V4.6) to query multiple databases for driver and criminal history information. Currently, that information is ascertained from the Dispatch Center and is communicated verbally over the radio to the law enforcement officer in the field. In other words, there are no information transfers between the DPS Wants and Warrants system and NLETS (National Law Enforcement Telecommunications System (NLETS) which polls Interstate DMV Information) to the Spillman mobile software.

The number of electronic tickets processed in the six surveyed states ranged from 5,000/week in Iowa (approximately 260,000/year) to as many as two million/year in New York, with 500,000/year in Utah, 3,500/day in North Carolina (well over one million/year), Alabama reporting one million/year, and Wisconsin processing 58,000 to 60,000/month (around 700,000/year). Vermont processed 83,681 in 2013.

State	Annual Ticket Count
Vermont	83,681
Iowa	260,000
Utah	500,000
Wisconsin	700,000
Alabama	1,000,000
North Carolina	1,277,500
New York	2,000,000

Both New York's and Utah's percentage of total tickets processed electronically is 55%, Iowa is at 60%, with North Carolina at 82%, Wisconsin at 89% and Alabama at 90%.

Of note: TraCS has been integrated with Spillman in Wisconsin using XML.

ADDITIONAL DETAIL ON NATIONAL MODEL

National Model for the Statewide Application of Data Collection and Management Technology to Improve Highway Safety is a nationally recognized program for sharing information, resources, and technologies to improve safety. The focus of the National Model is improving data collection for roadway incidents, leveraging proven technology for law enforcement, streamlining the communication of safety information to key stakeholders, and extending the use of this information for short and long range safety and law enforcement programs.

National Model Objectives:

1. Objective 1: Continue to enhance and maintain the National Model in a manner that serves the greater good and that positions local agencies, states/provinces and federal entities to share timely and accurate data.
2. Objective 2: Collaborate among TraCS entities to collectively resolve common issues.
3. Objective 3: Monitor and evolve existing technologies to stay current and adopt new technologies at the appropriate times.
4. Objective 4: Continue to expand the number of entities deploying the National Model.
5. Objective 5: Resolve the majority of operational and performance issues at the state/provincial level, with states/provinces being responsible for monitoring and measuring performance.
6. Objective 6: Develop and maintain TraCS and other software offerings in a way that provides the highest level of flexibility possible, while maintaining a common source code, so each state/province can deploy as needed. The software should not be an obstacle to change.
7. Objective 7: Provide a decision-making framework for the National Model that allows for centralized coordination and planning with decentralized execution.
8. Objective 8: Raise awareness of the availability of the National Model and the benefits of multiple entities working together. Use outreach efforts to promote TraCS and communicate its robustness, versatility and flexibility as a data collection and management tool.
9. Objective 9: Establish self-sustaining funding that can accommodate growth, and that is primarily user-jurisdiction funded from state/provincial funds or federal discretionary funds and formula allocations. An adequate level of funding is needed to obtain and retain the skill sets needed to maintain and enhance TraCS and provide technical support.

The management of the National Model is best described as a Lead-State Consortium, with a National Program Manager from Iowa, a Steering Committee made up of participants from the member community, and working groups that are formed for specific tasks. Management can be characterized as a “lean operation” that provides quick response, efficiency and flexibility. National Model software offerings including TraCS are licensed at the provincial or statewide agency level which promotes statewide traffic records systems integration.

The foundation of the National Model continues to be the **TraCS software package**. The benefits of the TraCS package include the following:

1. Facilitates sharing software among states/provinces through the use of a common source code;
2. Provides an open architecture allowing TraCS to be customized by user entities without modifying the source code;

3. Provides the ability for customization to mimic the look and feel of existing paper-based reports;
4. Allows for agency-specific and state-specific functionality;
5. Maintains data integrity for statewide reporting through field edits/validations and allows retrieval of data from other sources to populate TraCS forms (e.g., databases of driver license and vehicle information);
6. Provides the capability to import data to the TraCS database (e.g., citation dispositions);
7. Allows customization of the content and format of data for export from the TraCS database, including creation of Global Justice Data Model for Extensible Markup Language (GJDMXML) compliant export file by utilizing an Extensible Stylesheet Language Transformation (XSLT) style sheet;
8. Allows TraCS to use Microsoft Access, Microsoft SQL Server or Oracle as a database and maintains the potential to use additional databases if needed;
9. Allows a variety of file formats to be attached to and stored with TraCS reports;
10. Includes a Software Development Kit (SDK); The SDK is a set of tools, including a form and report builder, a rules builder, and a database builder, which allows other states/provinces/agencies to build upon the TraCS common source code by modifying the existing forms or adding new forms to the package and being able to output data from TraCS in varying formats for movement to other data repositories

The customizable TraCS database output is compatible with GJDMXML, TransXML and NIEM. Allowing the TraCS data export to be customized enables the TraCS database to meet the data collection requirements of local agencies, and output the selected data elements in the format required by the state/province and federal enterprise level databases to meet their business needs.

Putting the power into the hands of a state/province to modify TraCS through the SDK significantly minimizes its dependence on the TraCS developers. The effort by states/provinces may be accomplished with internal resources or through an agreement with a private consultant of choice. Additionally, states/provinces may take advantage of close working relationships with a university to add TraCS support to other services the university provides. All three approaches are currently used.

In addition to TraCS, other value added software is also offered through the National Model including:

1. TraCS Web - complete web based TraCS solution;
2. Mobile Architecture for Communications Handling (MACH) - used for cross-agency communications, mobile data, CAD (computer-aided dispatch) and AVL (automatic vehicle location);
3. Incident Location Tool (ILT) - used for map based GIS incident locating for TraCS forms;
4. Incident Mapping Analysis Tool (IMAT) - used for map based analysis of incident data collected through TraCS.

National Model History:

1. 14 States (NY, PA, NC, FL, ND, SD, NE, IA, WI, AR, OK, NM, AZ, AK)and 1 Province (Manitoba) currently members
2. In 1994 the Iowa Department of Transportation, working in partnership with the Iowa Department of Public Safety (DPS) and several local law enforcement agencies, initiated a program to create a PC-based crash reporting system to expedite data capture for police crash reports. In 1995 traffic citations and commercial motor vehicle inspections were added. Over time the program evolved into TraCS, an integrated system used by state and local law enforcement agencies with continuing leadership and support from the state. Participation by all levels of law enforcement (city, county and state) in the development of TraCS was essential to the success of the program.
3. In 1996 Iowa was selected by the Federal Highway Administration (FHWA) as a partner for the National Model for the Statewide Application of Data Collection and Management Technology to Improve Highway Safety Project. FHWA provided funds to share National Model/TraCS project successes with other states, and subsequently the Federal Motor Carrier Safety Administration (FMCSA) and the National Highway Traffic Safety Administration (NHTSA) also contributed funds to enhance the program's success.
4. In 2000 the ILT was added to the National Model as a user-friendly tool to collect geographical information system (GIS) coordinates. Although a separate application, the ILT is launched from TraCS and the location output is stored with the report in the TraCS database and exported with the report. To take advantage of the data, including the location, and make the data immediately usable to local agencies, an Incident Mapping Tool (IMAT) was created. IMAT uses the same look and feel of the ILT for ease of use and provides law enforcement agencies with a set of queries for creating reports and the capability to create and print maps that graphically display the spatial concentration of incidents.
5. To simplify the transition of the TraCS solution from one state to another, the SDK was added to the TraCS suite of applications in November of 2000. The SDK allows other states to manage the evolution of their current paper forms into TraCS electronic forms and customize the TraCS environment to meet their individualized needs.
6. In order to continue to stay current with new technology, TraCS version 10 was released in August of 2009. TraCS 10 was rewritten from the ground up using Microsoft's .NET framework. Rewriting TraCS presented an opportunity to incorporate all of the lessons learned from more than a decade of experience as well as incorporate a significant number of new features. TraCS 10 is the new National Model baseline from which future projects and software will be based.
7. Also in August 2009, ILT 5.0 was released. ILT 5.0 is a .NET version of ILT that was rewritten to work with TraCS 10.
8. In 2010, Mobile Architecture for Communications Handling (MACH) was added to the National Model. MACH is a software application that utilizes innovative internet communications architecture to allow public safety agencies including law enforcement, EMS, fire and highway division to share information for facilitating cooperation and organization during everyday activities and emergency events. MACH offers in-car mapping, session based messaging for cross agency communications between first responders to an incident, dispatch capabilities, an NCIC/NLETS interface, and a TraCS 10 interface that allows TraCS to operate in wireless mode in the vehicle.
9. TraCS Web, a complete web browser based version of TraCS, was made available in March, 2011. Because TraCS Web has multiple setup configurations, it can be used as an effective way for rural

agencies to go paperless with little or no on-site support or it can be used in conjunction with TraCS 10 at larger agencies as an alternative to workstation installations. TraCS Web provides yet another alternative for flexible TraCS implementations.

10. Today TraCS is a sophisticated data collection and reporting tool for the public safety community to streamline and automate the capture of incident data in the field and transfer the data from the local agency to a statewide enterprise system. Iowa's TraCS package includes a component for crash reporting, citation writing, warning ticket, driving while intoxicated reporting, commercial motor vehicle inspections, field investigative reports, National Incident Based Reporting System (NIBRS) compliant incident reporting, criminal affidavit and complaint forms, evidence tracking, time and activity reports and more. Electronic data collection also sets the stage for electronic filing with the courts in addition to populating the courts' database with electronic data.
11. Inherent in the National Model/TraCS program are several key benefits. Capturing the data where it originates improves the accuracy, completeness, and timeliness of incident data and eliminates the need for duplicate entry into local and state databases; providing quantifiable benefits in reduced need for data entry resources and administrative duties, and the less quantifiable benefit of having better data more timely for problem identification and improved decision making. At the local level, TraCS provides law enforcement administrators almost immediate information. Expediting the receipt of data in a central enterprise system facilitates and supports timely business processes, including applying driver sanctions and other important public safety related management functions. Combining these advantages with the benefit of linking to federal systems, provides the opportunity for higher quality data to be delivered more timely to federal data managers whose decisions impact a broader audience than just the jurisdiction submitting the data.

4.2 Project Goal

Explain why the project is being undertaken.

The State of Vermont has a five (5)-year vision for the statewide eTicket project, with the first two (2) years of the project focused primarily on the deployment and rollout of the eTicket application and getting the initial exchange of VCVC (Vermont Civil Violation Complaint) information and racial profiling data to a server at the State.

The State envisions that the electronic citation system will support the following high-level goals:

- Create a single, statewide, ticketing solution that will be used by all law enforcement agencies in the State of Vermont, including the Vermont State Police (VSP) in every local jurisdiction in which it operates.
- Leverage a standards-based approach to send information in an event-triggered, real-time information exchange with law enforcement agency RMS, as well as multiple State agencies, including Judicial Bureau, Motor Vehicles, Attorney General (AG), DPS, and VSP.
- Gain processing and administrative efficiencies and to reduce the number of ticket dismissals.
- Simplify and standardize response to changes in state and municipal offense codes and guidelines.
- Provide for automated data entry and workflow to eliminate manual processing, redundant data entry, and paper requirements.
- Focus on establishing data entry rules and automatically populating fields to make data entry from police vehicles as easy as possible (sources to include the DPS message switch and web service interfaces).
- Provide NAD 1983 format GPS reading for each traffic stop.
- Provide query capability and report writing for traffic ticket data (including warnings and bias-free policing) from data gathered by the application.

The Vermont DPS seeks to bolster the effectiveness of patrol officers by using technology to boost officer productivity and improve efficiencies at roadside stops, and it believes that an eTicketing solution is a key component of achieving those efficiencies.

From a user's perspective, an eTicketing system should make a law enforcement officer or court clerk's job easier by reducing the amount of time necessary to fully complete reports and eliminating redundant data entry.

From a management point of view, the user and business process should be more effective and efficient, saving money, time, and resources.

From a technology perspective, the basic premise of the system is to collect relevant business process data at the initial point of entry giving technology systems the ability to share information.

Typically, the biggest efficiency that is realized by an eTicket customer is the elimination of duplicate data entry across disparate systems. To achieve the efficiencies outlined above, eTicketing systems must share information with other agencies and criminal justice agencies in a real-time, event-triggered manner. As a result, there are several other agencies besides the DPS and VSP that are involved in this initiative. Summaries of the other involved agencies include:

Municipal Law Enforcement Agencies/County Sheriff's Offices – As noted above, there are 55 municipal law enforcement agencies and 14 County Sheriff agencies in Vermont. Many local law enforcement agencies in the State of Vermont use the Spillman RMS product, though some larger local agencies (City of Burlington and

other Chittenden County agencies) use Valcour. Some agencies use Spillman Mobile to query multiple databases for driver and criminal history information. Most agencies provide laptop computers in the squad cars for RMS and CAD access.

Local law enforcement agencies use a custom developed system called Web Crash for accident reporting, which is provided by the State's Agency of Transportation (AOT). Police agencies enter data into the web application and other agencies can query records from Web Crash. **Typically, accident reports are entered into Web Crash after the incident and before the end of the shift. They are often times handwritten and entered into the system by records clerks.** There are currently no data exchanges between WebCrash and the Spillman RMS, although there is between WebCrash and Valcour.

For network connectivity most agencies leverage the State network provided by the Department of Public Safety using air cards. DPS also deploys NetMotion to help ensure secure access to the network in remote areas.

Judicial Branch –The Vermont Court system is administered by the Supreme Court. The court administrator, the administrative judge for trial courts and court appointed boards and committees assist the Supreme Court by seeing that administrative policies adopted by the court are carried out.

Agency of Transportation – the Vermont AOT addresses all transportation-related matters for the State. The AOT has responsibility regarding crash related reporting as well as is the lead agency over the Department of Motor Vehicles (DMV). The AOT's vision is a safe, efficient and multimodal transportation system that promotes Vermont's quality of life and economic wellbeing. The AOT's mission is to provide for the safe movement of people and goods in a reliable, cost-effective and environmentally responsible manner.

Department of Motor Vehicles – the State DMV maintains motor vehicle information records and registration, licensing, and permits for the State's driving population. The State DMV has an interest in the eTicket application in that it would like to receive disposition information regarding tickets once the case has been adjudicated. The DMV currently receives a batch XML file electronically from the Judicial Bureau with disposition data. The files are transferred via File Transfer Protocol (FTP) on a daily basis.

Department of Information and Innovation - The Department of Information and Innovation (DII) serves as the Enterprise IT shop for the State of Vermont hosting various enterprise applications like email and a Microsoft Office SharePoint Server. DII includes the Enterprise Project Management Office (EPMO) and the Office of the Enterprise Architect/CTO. The Commissioner of DII is the State CIO. DII also manages the State's WAN and all Telecommunications resources, which local, county, and State law enforcement agencies rely on for communications in the field.

4.3 Project Scope

Describe the project scope and list the major deliverables. Add or delete lines as needed.

The project scope, major deliverables, and schedule are summarized in Section 4.4: Project Phases, Milestones, and Schedule.

4.3.1 Major Deliverables

See Section 4.4.

4.4 Project Phases, Milestones and Schedule

Provide a list of the major project phases, milestones and high level schedule. You may elect to include it as an attachment to the report instead of within the body.

PHASE	SCHEDULED COMPLETION DATE	DELIVERABLES/MILESTONES
I (also known as Year 1)	1 Year from Start Date (6/30/15)	VCVC form, rules, and reports Warning form, rules, and reports VCVC and Bias Free Policing Exchange to DPS Server Warning Exchange Web Crash Exchange
II (Year 2)	2 Years from Start Date, or 6/30/16	Spillman Integration Valcour Integration
III (Year 3)	3 Years from Start Date, or 6/30/17	Judicial Branch Integration VCVC Disposition group and rules DMV Disposition Integration Criminal Operation of Motor Vehicle (non-DUI) form, rules, and report
IV (Year 4)	4 Years from Start Date, or 6/30/18	Support and Maintenance
V (Year 5)	5 Years from Start Date, or 6/30/19	Support and Maintenance

5. Acquisition Cost Assessment

List all acquisition costs in the table below (i.e. the comprehensive list of the one-time costs to acquire the proposed system/service). Do not include any costs that reoccur during the system/service lifecycle. Add or delete lines as appropriate. Based on your assessment of Acquisition Costs, please answer the questions listed below in this section.

The following chart represents the TEG Acquisition Costs over a 5 year period.

Acquisition Costs	Cost	Comments
Hardware Costs	$0	
Software Costs	$292,500	National Model membership fees
Implementation Services	$0	Included in System Integration costs
System Integration Costs	$309,430	
Professional Services (e.g. Project Management, Technical, Training, etc.)	$0	Included in System Integration costs
Travel (18 trips @ $2K per)	$36,000	
Total TEG Acquisition Costs	**$637,930**	

A detailed 10 year Total Project Cost is provided in Attachment 3, and is summarized in the chart below.

Acquisition Costs	Cost	Comments
Hardware Costs	$296,064	DII hosting fees
Software Costs	$672,500	Primarily National Model membership fees
Implementation Services	$0	Included in System Integration costs
System Integration Costs	$563,850	
Professional Services (e.g. Project Management, Technical, Training, etc.)	$0	Included in System Integration costs
Travel (18 trips @ $2K per)	$36,000	
DPS Costs: Staffing	$1,529,790	
DPS Contractors: Proj Mgt	$750,000	
DPS Contractors: IR	$11,895	
DPS Costs: Hardware (computer, printer, scanner, paper)	$1,314,920	
Contingency	$175,000	
DII EPMO/EA Services	$160,500	
Total Project Acquisition Costs	**$5,515,519**	

5.1 Cost Validation

Describe how you validated the Acquisition Costs.

The TEG Acquisition Costs were validated through two methods:

1. The Acquisition Costs were validated first by comparison of the TEG proposal with the two other finalist BAFO bids. The chart below shows the actual bid. Further analysis conducted showed that the TEG bid provided more value in terms of total number of hours allocated to the project and lower hourly rate for service. The software licensing and pricing model with TEG is more favorable in terms of cost and usage than the others, as TEG solution has a flat licensing fee, while others have a per user fee, which will increase project cost as users are added.

	TEG	**Brazos**	**gTechna**
Software License Fees	$292,500	$170,520	$339,000
Maintenance and Support Fees		$72,898	$113,800
3rd Party Software			
3rd Party Software Maintenance			
Hardware			$278,027
Hardware Maintenance			$28,647
Professional Services		$17,500	$132,500
Supplemental Services	$309,430	$179,580	
Direct Expenses	$36,000	$71,274	$103,450
TOTAL	**$637,930**	**$511,772**	**$995,424**
TOTAL Less Hardware	**$637,930**	**$511,772**	**$688,750**
Delta between TEG and other Finalists (measured as a percentage)		*20%*	*8%*

2. The Acquisition Costs were validated secondly through discussion with TEG regarding how the Vermont project scope compared with other projects TEG has undertaken. There is no direct comparison with other projects, given the fact that the Vermont project scope is smaller than any other project TEG has completed.

   However, the valid data point is this: For every project, TEG has provided a detailed quote of hours and rate by staffing level (ie. Project Manager, Programmer Analyst I, Programmer Analyst II, etc.) and has offered the client the choice of Time and Materials or Fixed Price. In all cases, the quoted price/budget has been met. Given this point, combined with the data above that shows TEG's pricing in line with the other two finalists, Vermont can be confident that the proposed price will be achieved, and that the proposed price is comparable for the deliverables Vermont seeks in this project.

Other costs were validated through readily available market data, including analysis of:

1. Hardware
2. Paper
3. Professional Services
4. DII Hosting

5.2 Cost Comparison

How do the above Acquisition Costs compare with others who have purchased similar solutions (i.e., is the State paying more, less or about the same)?

1. Vermont costs are higher in the area of ongoing operations. Other states polled in the URL integration report do not report increases in operational staffing, as opposed to Vermont, which contemplates 2 operations staff supporting the application.

2. Vermont costs are comparable in terms of software costs (membership in the National Model) as well as Implementation and Training fees.

Further, in order to provide context regarding relative sizes of state law enforcement agencies in the respective sites surveyed, the following table sets out the number of full-time sworn officers within each of the primary state law enforcement agencies within the surveyed states:

State/Agency	Number of Full-Time Sworn Personnel
Alabama Department of Public Safety	763
Illinois State Police	2,105
Iowa Department of Public Safety	669
New York State Police	4,000
North Carolina State Highway Patrol	1,827
Utah Department of Public Safety	475
Wisconsin State Patrol	492
Vermont State Police	307

- Of the state systems surveyed by URL Integration, all included traditional traffic cases within the scope of their efforts, with five also transmitting Criminal Traffic cases, three transmitting Ordinance Violations, two transmitting Written Warning data, and two electronically sending Minor Misdemeanor/Non-traffic data. As for reporting capabilities, all of the state systems are able to transmit several reports out of their system with crash reports transmitted electronically in each of the surveyed sites.
- For **Vermont State Police**, there were 49,672 stops conducted from July 1, 2010 to June 30, 2011. 56% of those stops resulted in written warnings and 42% resulted in the issuance of a VCVC (20,862). Verbal warnings are generally not done, but they may have accounted for the remaining 2%.
  - If Vermont loses 10.8% of the 20,862 tickets, that equals 2,253. If we recover 22.5% of the 2,253, that = 507 tickets @ $150/avg/ticket = $76,050.
- For all of Vermont in 2013, there were 83,681 tickets issued. At 10.8% loss, 9,052 were dismissed. If we recover 22.5% of 9,052, that = 2,037 tickets @ 150/avg/ticket) = $305,500. **This $305,500 is the number used as Revenue Recovery in the SOURCE OF FUNDS section of the Source/Use spreadsheet.**

5.3 Cost Assessment

Are the Acquisition Costs valid and appropriate in your professional opinion? List any concerns or issues with the costs.

It is the opinion of the report writer that the Acquisition Costs as outlined in the associated costing spreadsheet are appropriate.

Additional Comments on Acquisition Costs:

- The URL report indicates that in NONE of the cases they examined, were there ANY cost savings generated through eTicket systems implementation. While there are no cost savings expected from this project, revenue recovery is expected at 22.5% of the 10.8% anticipated/current ticket loss, which is anticipated to be part of the ongoing operational funding.

6. Technology Architecture Review

After performing an independent technology architecture review of the proposed solution, please respond to the following.

1. **State's IT Strategic Plan:** Describe how the proposed solution aligns with the State's IT Strategic Plan (http://dii.vermont.gov/sites/dii/files/pdfs/DII-Strategic-Plan-FY2014-2019.pdf).
    a. The State's 2014-2019 IT Strategic Plan contains 5 major goals and uses 6 key principles in designing and prioritizing work.
        i. 5 Major Goals:
            1. to modernize critical technologies
            2. to ensure sustainability of the state's information services
            3. to operate IT effectively and efficiently
            4. to use IT to improve the productivity of all state services
            5. Create new solutions partnering with State Agencies
        ii. 6 Key Principles:
            1. Leverage successes of others, learning best practices from outside Vermont.
            2. Leverage shared services and cloud-based IT, taking advantage of IT economies of scale.
            3. Adapt the Vermont workforce to the evolving needs of state government.
            4. Leverage modern IT delivery frameworks and enterprise architectures.
            5. Couple IT with business process optimization, to improve overall productivity and customer service, not just IT itself.
            6. Optimize IT investments via Enterprise Architecture and Project Management methodologies.
    b. The following describes how this project exploits these principles:
        i. Leverage successes of others, learning best practices from outside Vermont.
            1. *The proposed solution has been implemented in many States and Provinces, and Vermont can draw on lessons learned through similar implementations.*
        ii. Leverage shared services and cloud-based IT, taking advantage of IT economies of scale.
            1. *Utilizing the DII Data Center and virtualized servers for this implementation provides economies of scale. The biggest economy of scale will be realized when the proposed solution eliminates duplicate data entry processes.*
        iii. Adapt the Vermont workforce to the evolving needs of state government.
            1. *The proposed solution creates a large change in behavior, going from paper-based VCVCs to electronically produced VCVCs, requiring officers to use computers and printers vs. pen and paper.*
        iv. Leverage modern IT delivery frameworks and enterprise architectures.
            1. *The platform upon which the proposed solution is based (.NET, SQL Server, Windows, Browser technology) is modern IT framework and enterprise-class architecture.*
        v. Couple IT with business process optimization, to improve overall productivity and customer service, not just IT itself.

1. *This project will deliver on the promise of technology being leveraged to improve data collection methods, data quality/integrity, and data integration with external partners, and as such, is expected to improve overall productivity and customer service.*

vi. Optimize IT investments via Enterprise Architecture and Project Management methodologies.

1. *The project meets the Enterprise Architecture standard through being deployed on virtual servers in the DII Data Center. TEG is proposing a strong Project Management component. DPS is contemplating outsourcing the PM responsibility for this project.*

2. Service Level(s): What is the desired service level for the proposed solution and is the technical architecture appropriate to meet it?

a. At a fundamental level and to be clear, TEG is not proposing any hardware, operating system software, or database software in their proposal. Having said that, TEG is very clear on the proposed technical architecture, which is described below.

b. DPS developed a comprehensive list of required technical standards in a spreadsheet titled "Attachment I: Functional and Technical Requirements" as part of the RFP, and all of those technical standards suggested in the proposed solution meet the standards defined in that Attachment I spreadsheet. TEG recommends the following infrastructure, with the warranty that the server side can be deployed in a VMWare 5.x or above environment.

<u>Desktop PC / Workstation</u>

- Operating System: Windows XP SP3, Windows Server 2008, Windows Server 2012, Windows 7, Windows 8 (Note: Both 32 and 64 bit Operating Systems are supported.)
- .NET Framework: 2.0, 3.0, 3.5, and 4.0 (full installs)
- Processor: Dual Core, 2.0GHz or higher
- Memory: 4 GB RAM or more
- Hard Disk Drive Size: 50 GB or more with 10 GB free
- Monitor/Video: 23" that supports 1920 x 1080 resolution / 1GB Video Card Backup Device: External Hard Drive or Online Backup Service
- Network Connectivity (optional)
- Barcode Imager (optional- AAMVA PDF417 barcode reading from driver licenses and vehicle registrations)
- Printer (optional)

<u>Mobile Data / Laptop /Field Unit Computers</u>

- Operating System: Windows XP SP3, Windows 7, Windows 8 (Note: Both 32 and 64 bit Operating Systems are supported.)
- .NET Framework: 2.0, 3.0, 3.5, and 4.0 (full installs)
- Processor: Dual Core, 2.0GHz or higher
- Memory: 4 GB RAM or more
- Hard Disk Drive Size: 50 GB or more with 10 GB free
- Screen: 1024 x 768 minimum supported resolution (touch screen optional)
- Hardwired/Wireless Internet Connectivity: WiFi or Air Cards (optional)
- Barcode Imager (optional)

- Printer (optional but suggested)

TraCS Web Client

- Operating System: Windows XP SP3, Windows 7, Windows 8 (Note: Both 32 and 64 bit Operating Systems are supported.)
- Browser: IE 9 or above (does not work with Windows XP), Firefox 15.01 or above, Chrome
- .NET Framework: 2.0, 3.0, 3.5, and 4.0 (full installs)
- Processor: Dual Core, 2.0GHz or higher
- Memory: 4 GB RAM or more
- Hardwired/Wireless Internet Connectivity: WiFi or Air Cards (required)
- Barcode Imager (optional)
- Printer (optional)

Servers (TraCS/TraCS Web/TraCS Update)

- Operating System: Windows Server 2008 R2 x64 with IIS 7, Windows Server 2012 R2 x64 with IIS 8
- .NET Framework: 2.0, 3.0, 3.5, and 4.0 (full installs) Processor: Quad Core, 2.0GHz or higher Memory: 8 GB RAM or more
- Hard Disk Drive Size: 100 GB or more with 50 GB free
- Monitor/Video: 23" that supports 1920 x 1080 resolution / 1GB Video Card
- Backup Device: External Hard Drive or Online Backup Service
- Databases: SQL Server 2008 R2 x64 or Oracle 11g or higher (TraCS can use Microsoft Access as its database but it is not recommended. Please consider using SQL Server Express instead.)
- Network Connectivity (required)

3. **Sustainability:** Comment on the sustainability of the solution's technical architecture (i.e., is it sustainable?).
    a. It appears that the technical architecture is sustainable, given the following considerations:
        i. It utilizes industry standard technology (.NET Framework, IIS, SQL Server, Windows Server Operating System, Window Desktop Operating System, IE/Firefox/Chrome).
        ii. It utilizes technology that is supported by State of Vermont EA staff.
        iii. It utilizes technology that many users are already trained in/familiar with.

4. **License Model:** What is the license model (e.g., perpetual license, etc.)?
    a. Licensing of TraCS is through the National Model and involves an annual fee of $60K. The TraCS license allows a state agency to distribute the software to as many public safety agencies and users in the state as it desires. The TraCS Web, TraCS Update, and TraCS SDK applications are included with the TraCS license.

5. **Security:** Does the proposed solution have the appropriate level of security for the proposed activity it will perform (including any applicable State or Federal standards)? Please describe.
    a. Solution meets CJIS 5.0 Security Guidelines.

i. Additionally, there is an option that allows sysadmin role to turn that on or off (ie. Password change every 90 days, password complexity, same password after 10 times, data encryption)

b. Data is encrypted at rest and transit - FIPS 140-2 256 bit encryption standards (This can be turned off by sysadmin role)

c. Global Justice Data Model for Extensible Markup Language (GJDMXML) compliant export file by utilizing an Extensible Stylesheet Language Transformation (XSLT) style sheet compatible with GJDMXML, TransXML and NIEM

6. **Disaster Recovery:** What is your assessment of the proposed solution's disaster recovery plan; do you think it is adequate? How might it be improved? Are there specific actions that you would recommend to improve the plan?
    a. The solution is expected to be housed in the DII Data Center and will thus utilize and meet the State of Vermont Disaster Recovery model.
    b. Further, DPS can configure SQL Server Maintenance plans to backup database and log files to meet Recover Point Objectives and Recovery Time Objectives. These objectives are yet to be defined.

7. **Data Retention:** Describe the relevant data retention needs and how they will be satisfied for or by the proposed solution.
    a. DPS indicates that there is a minimum of two years of data retention required to meet Title 23 VSA, Section 2503, 2506 (Motor Vehicle Laws), and it is expected that at least that time period will be met.

8. **Service Level Agreement:** What is your assessment of the service level agreement provisions that the proposed vendor will provide? Are they appropriate and adequate in your judgment?
    a. **The SLA required by DPS is described below, and are not met by the proposed solution.**

DPS Requirement	TEG Response
The vendor(s) must have an initial response to support inquiries within 15 minutes.	TEG provides support Monday through Friday 9am-5pm through phone, email, and the issue tracker.
The vendor(s) must provide a central help desk available 7am to 10pm EST seven days a week.	TEG provides support Monday through Friday 9am-5pm through phone, email, and the issue tracker.

9. **System Integration:** Is the data export reporting capability of the proposed solution consumable by the State? What data is exchanged and what systems will the solution integrate/interface with*?* ***Please create a visual depiction*** and include as **Attachment 1** of this report. Will the solution be able to integrate with the State's Vision and financial systems (if applicable)?
    a. See **Attachment 1** for details regarding WHAT is being exchanged.
    b. In terms of HOW data is being exchanged, the following summary describes the approach and methodology:

i. TraCS transmission can be setup to export any form to any number of external systems. TraCS exports form data as XML. The exported XML can be transformed to meet any standards including NIEM or formatted to meet other external system needs including XML, CSV, and fixed record. The same exported form can be converted to multiple formats at the same time for use by different external systems.
ii. Once exported and transformed, TraCS communications can be set up to deliver the form data to external systems through FTP, HTTP, file copy, e-mail, and web services. Transmission data can be combined, compressed, and/or encrypted if desired.
iii. The TraCS batch transmission functionality allows Windows services to run on the TraCS server so that scheduled transmissions can be done automatically without user intervention.
iv. TraCS rules created using the SDK Rules Builder allow business logic to be applied to the transmission process so that only forms in certain statuses can be exported, or only certain forms containing certain violations are exported to a specific external system.
v. TraCS transmission also has an import feature for importing data from external systems such as ticket disposition data from the courts.
vi. Once a TraCS form is exported and transformed, TraCS communications can use web services to transfer the data to the external system. Although TraCS has built in http upload functionality, TEG prefers WCF based web services.
vii. TraCS can accommodate and conform to existing infrastructures and technical environments. Many National Model states utilize TraCS with a central service bus or data broker to move data between enterprise systems. However, a system to system method is also valid in many scenarios.

Additional Comments on Architecture:

7. Assessment of Implementation Plan

7.1 Implementation Readiness

After assessing the Implementation Plan, please comment on each of the following.

1. The reality of the implementation timetable
    a. The overall proposal contemplates a 5 year period, with a 3 year implementation schedule followed by 2 years of maintenance and support.
    b. Given other project experiences by TEG, the 3 year implementation period seems very achievable.

2. Training of users in preparation for the implementation
    a. The project plan calls for a Train the Trainer component 1-2 weeks prior to rollout for any given deliverable. Given TEG's experience with these projects, the approach seems adequate.
    b. Additionally, the proposed system contains on-line help.

3. Readiness of impacted divisions/ departments to participate in this solution/project
    a. This is difficult to measure, given the disparate statewide user community. **There appears to be pockets of readiness, preparedness, and willingness to adopt the solution, and other areas less interested, due to their use of Valcour.**

4. Adequacy of design, conversion, and implementation plans
    a. The Design and Implementation plans are proven and adequate.
    b. Conversion is not part of the Scope of this project.

5. Adequacy of support for conversion/implementation activities
    a. Conversion is not part of the Scope of this project.

6. Adequacy of agency and partner staff resources to provide management of the project and related contracts (i.e. vendor management capabilities)
    a. DPS is anticipating outsourcing Project Management for this project.
    b. TEG is assigning Roy Bussard as Project Manager to this project. Mr. Bussard is a 6 year employee of TEG, has a Bachelor's in MIS from Penn State University, and has experience managing efforts in Iowa, Illinois, New Mexico, Nebraska, and New York.

7. Adequacy of testing plan/approach
    a. The testing approach is described below, and based on TEG's experience, appears adequate:
        i. Set up user groups, bring officers in and show them how the software works, and have them "pound on the keys".
        ii. Baseline version testing:
            1. New versions are delivered once/week;
            2. Standardized system test case scenario for each release;
            3. Unit testing;
            4. QA test;
            5. All code is reviewed by supervisor of the developer.
        iii. TraCS Pack testing (files specific to Vermont):
            1. Vermont will need to compile their own team, and this user group should work out their own test plan. *This is a good item to assign to the Project Operations role.*

8. General acceptance/readiness of staff

a. As noted above, this is difficult to measure, given the disparate statewide user community. **There appears to be pockets of readiness, preparedness, and willingness to adopt the solution, and other areas less interested, due to their use of Valcour.**

Additional Comments on Implementation Plan:
TEG has successfully completed other eTicket implementations for the following organizations:

- Province of Alberta Transportation
- Arizona Department of Transportation
- Georgia Department of Transportation
- Illinois Department of Transportation
- Iowa Department of Transportation
- Nebraska Crime Commission
- New Mexico Department of Transportation
- New York State Police
- North Dakota Highway Patrol
- Pennsylvania State Police
- South Dakota Department of Transportation
- Tennessee Department of Safety
- Wisconsin Department of Transportation

TEG places particular emphasis on the following projects due to these being statewide implementations:

- New York State Police with over 485 local TraCS agencies and the entire state police use TraCS to issue over 2 million tickets each year.
- Wisconsin Department of Transportation with TraCS installed in over 400 local agencies and the state patrol, electronically transmit tickets to their courts and crashes to the DOT.
- Iowa Department of Transportation, with over 185 local TraCS agencies and the state patrol, electronically transmit their crashes, tickets, DUI, NIBRS incidents, complaints and affidavits, and commercial motor vehicle inspections to the appropriate federal, state and county agency systems.

TEG references include:

Arizona Department of Transportation
Rick Turner, Program Manager
E-mail: rturner3@azdot.gov
Phone: 602-712-6227

FAMU/FSU College of Engineering funded by FDOT
Amy Cochran, Technical Lead
E-mail: amyc@tracsflorida.org
Phone: 850-410-6237

Iowa Department of Transportation
David Meyers
National Model Program Manager, Iowa Program Manager
E-mail: david.meyers@dot.iowa.gov
Phone: 515-237-3042

Manitoba Infrastructure and Transportation
Lindsay Campbell, Program Manager
E-mail: lindsay.campbell@gov.mb.ca
Phone: 204-771-0794

Nebraska State Patrol
Michael Overton, Program Manager
E-mail: Michael.Overton@nebraska.gov
Phone: 402-471-3992

New Mexico DOT
Yolanda M. Duran, Traffic Records Program Manager
E-mail: yolanda.duran@state.nm.us
Phone: 505-827-0961

New York State Police (NYSP)
Sgt. James Daily, Program Manager
E-mail: jdaily@troopers.state.ny.us
Phone: 518-485-9968

North Carolina Division of Motor Vehicles
Julian Council, Assistant Director
E-mail: jhcouncil@ncdot.gov
Phone: 919-861-3062

North Dakota Department of Transportation
Lynn Heinert, Program Manager
E-mail: lheinert@nd.gov
Phone: 701-328-4352

Pennsylvania State Police
Sgt. Troy Sherwin, Program Manager, Operations
Email: tsherwin@pa.gov
Phone: 717-346-5354

South Dakota Department Of Public Safety
Chuck Fergen, Program Manager
E-mail: chuck.fergen@state.sd.us
Phone: 605-773-4156

Wisconsin Department of Transportation/Division of Motor Vehicles/Traffic Accident Section
Darlene Schwartz, Program Manager
E-mail: darlene.schwartz@dot.wi.gov
Phone: 608-266-8677

7.2 Risk Assessment & Risk Register

*After performing a Risk assessment in conjunction with the Business, please create a **Risk Register** as an **Attachment 2** to this report that includes the following:*

1) ***Source of Risk**: Project, Proposed Solution, Vendor or Other*
2) ***Risk Description**: Provide a description of what the risk entails*
3) ***Risk ratings to indicate**: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)*
4) ***State's Planned Risk Strategy**: Avoid, Mitigate, Transfer or Accept*
5) ***State's Planned Risk Response**: Describe what the State plans to do (if anything) to address the risk*
6) ***Timing of Risk Response**: Describe the planned timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)*
7) ***Reviewer's Assessment of State's Planned Response**: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.*

See **Attachment 2.**

Additional Comments on Risks:

The following are not specific risks, rather, things to keep in mind as an e-Ticket solution is considered.

1. Misconceptions:
    a. "We can do eTicketing now in Valcour". *This is simply not a true statement for many reasons, the most relevant of which are*:
        i. While Valcour does have some functionality to capture eTicket data and print citations, there is no ability to function in an off-line mode. Valcour requires on-line connectivity to back end server(s) and constant on-line mode is not possible in Vermont given cellular network limitations.
        ii. There are no scanning capabilities/hardware in the most vehicles, and many officers indicate they would not likely perform computer data entry of citation information while in the vehicle. *This project calls for placing scanners in the car, but they do not currently exist in most vehicles which use Valcour (DMV is the exception, but they do not scan into Valcour).*
        iii. There are no ticket printing capabilities in most/all vehicles where Valcour is deployed. *This project calls for placing thermal printers in the car, but they do not currently exist in most vehicles which use Valcour (DMV is the exception, but they do not print citations using Valcour).*
        iv. Judicial Bureau currently only issues citation numbers via the current paper-based ticketing method.
        v. Judicial Bureau only "accepts" paper (hand written) tickets at present. No electronic data transfer between Valcour and JB exists. Nor does the ability for JB to receive/process PDFs or images of citations.
    b. "If you build it, they will come". *This is not a given:* In order for statewide adoption of eTicketing to occur, strong leadership and buy-in is required. Public safety officers are a fragmented group in that, they do not all report through the same chain of command, and as

such, are free to make their own decisions regarding policies, procedures, which technology to use, and how to use that technology.

c. "It is quicker to hand-write a ticket than complete an eTicket." *The data suggests otherwise:* The URL Integration report shows studies where there is a 50% reduction in time required when using bar code/scanner technology vs. hand writing tickets, and a certain improvement in data quality/reduction in errors.

d. "We need constant on-line connectivity for an eTicketing solution to work." *Here is another way to look at this:* What is needed is the ability to record data and print a ticket when off line. The difficulty is that the auto-population of data from an on-line source is not possible when off line, which would them miss two key benefits: auto population of data from on-line sources and reduction of data entry time. This could be mitigated by scanning licenses, registration, and insurance information, but legislation is required to make this a reality. Further, we need to keep in mind that a precedent has been set, as the Web Crash application is not typically used in the car, as accident-related data are often times handwritten and entered into the system by records clerks.

2. Considerations:

a. Given the demographic mix of Public Safety Records Management Systems in use in the State of Vermont, namely Spillman and Valcour, there are two highly concentrated users (Vermont State Police (Spillman) and Burlington Police (Valcour)). All other public safety departments comprise the rest of the population, some using Spillman while others user Valcour.

As VSP is a large Spillman user, and as VSP is undergoing a study to determine whether to stay with Spillman or move to Valcour, their decision may sway other public safety departments to follow their direction. Should VSP move to Valcour, a certain portion of the Scope of Work of the eTicket project goes away, namely, Spillman Integration. (VSP's decision regarding staying with Spillman is expected in August, 2014)

Further, if that were to happen, it would beg the question as to whether it is best to spend money on a system to "front end" Valcour to perform the eTicket function, or to put that money into Valcour to support off-line functionality, scanner support, and printer support.

b. The chart below shows the breakdown at present between Spillman and Valcour MDC users.

Agency	Method	Description	Records Management System Used	Number of Cars	Number of Cars with MDCs	Number of cars with Internet access	Number of cars with Scanners	Number of cars with Printers	Type of MDC
County Sheriffs Agencies									
Addison	By Hand		Spillman	4	4	4	0	0	Toughbook
Bennington	By Hand	Plan to Move to Valcour	Valcour	7	7	7	0	0	Toughbook
Calendonia	By Hand	Plan to Move to Valcour -No MDCs	Spillman	12	0	0	0	0	
Chittenden	By Hand		Valcour	3	3	3	0	0	iPad Tablet
Essex	By Hand		Spillman	1	1	1	0	0	Toughbook
Franklin	By Hand	Plan to Move to Valcour	Valcour	10	10	10	0	0	Toughbook
Grand Isle	By Hand		Spillman	7	7	7	0	0	Toughbook
Lamoille	By Hand		Valcour	8	8	8	0	0	Toughbook
Orange	By Hand		Spillman	9	9	9	0	0	Toughbook
Orleans	By Hand		Spillman	4	4	4	0	0	Toughbook
Rutland	By Hand		Valcour	8	8	8	0	0	Toughbook
Washington	By Hand	eTicket Hardware Test Trial	Spillman	4	4	4	3	4	Toughbook
Windsor	By Hand	Plan to Move to Valcour	Valcour	8	8	8	0	0	Toughbook
Windham	By Hand		Valcour	4	4	4	0	0	Toughbook
CSD TOTALS				**89**	**77**	**77**	**3**	**4**	
			Spillman Total	**41**	**29**	**29**	**3**	**4**	
			Valcour Total	**48**	**48**	**48**	**0**	**0**	
Municipal Agencies									
Barre City	By Hand		Spillman	5	5	5	0	0	Toughbook
Barre Town	By Hand		Valcour	5	5	5	0	0	Toughbook
Bellows Falls	By Hand		Valcour	4	4	4	0	0	Toughbook
Bennington	By Hand		Spillman	8	8	8	0	0	Toughbook
Berlin	By Hand		Spillman	4	4	4	0	0	Toughbook
Bradford	By Hand		Spillman						
Brandon	By Hand		Valcour	4	4	4	0	0	Toughbook
Brattleboro	By Hand		Spillman	3	3	3	0	0	Toughbook
Brighton	By Hand		Spillman	1	1	1	0	0	Toughbook
Bristol	By Hand		Spillman	3	3	3	0	0	Toughbook

Agency	Method	Description	Records Management System Used	Number of Cars	Number of Cars with MDCs	Number of cars with Internet access	Number of cars with Scanners	Number of cars with Printers	Type of MDC
Burlington	By Hand		Valcour	22	4	4	0	0	Toughbook
Burlington	By Hand		Valcour	0	18	18	0	0	iPad Tablet
Canaan	By Hand		Spillman	1	1	1	0	0	Toughbook
Castleton	By Hand		Spillman	3	3	3	0	0	Toughbook
Chester	By Hand		Spillman	3	3	3	0	0	Toughbook
Colchester	By Hand		Valcour	7	7	7	0	0	Toughbook
Dover	By Hand		Spillman	4	4	4	0	0	Toughbook
Essex	By Hand		Spillman						
Fair Haven	By Hand	Plan to Move to Valcour	Valcour	3	3	3	0	0	Toughbook
Fairlee	By Hand	No MDCs	Spillman	1	0	0	0	0	
Hardwick	By Hand	Plan to Move to Valcour	Valcour	3	3	3	0	0	Toughbook
Hartford	By Hand		Spillman	9	9	9	0	0	Toughbook
Hinesburg	By Hand		Spillman	4	4	4	0	0	Toughbook
Killington	By Hand	Plan to Move to Valcour	Valcour	2	2	2	0	0	iPad Tablet
Ludlow	By Hand		Spillman	3	3	3	0	0	Toughbook
Lyndonville	By Hand		Spillman	3	3	3	0	0	Toughbook
Manchester	By Hand	Plan to Move to Valcour	Valcour	3	3	3	0	0	Toughbook
Middlebury	By Hand		Valcour	7	4	4	0	0	iPad Tablet
Milton	By Hand		Valcour	5	5	5	0	0	Toughbook
Montpelier	By Hand		Valcour						
Morristown	By Hand	Plan to Move to Valcour	Valcour	4	4	4	0	0	Toughbook
Mount Tabor	By Hand		Spillman						
Newport	By Hand		Spillman	5	5	5	0	0	Toughbook
Northfield	By Hand		Spillman	4	4	4	0	0	Toughbook
Norwich	By Hand		Spillman	2	2	2	0	0	Toughbook
Pittsford	By Hand	Plan to Move to Valcour	Valcour	2	2	2	0	0	iPad Tablet
Randolph	By Hand		Spillman	3	3	3	0	0	Toughbook
Richmond	By Hand		Spillman	5	5	5	0	0	Toughbook
Royalton	By Hand		Spillman	1	1	1	0	0	Toughbook
Rutland City	By Hand		Spillman	15	15	15	0	0	Toughbook
Rutland Town	By Hand		Spillman	3	3	3	0	0	Toughbook
St.Albans	By Hand		Valcour						
St. Johnsbury	By Hand	No MDCs	Spillman	5	0	0	0	0	

Agency	Method	Description	Records Management System Used	Number of Cars	Number of Cars with MDCs	Number of cars with Internet access	Number of cars with Scanners	Number of cars with Printers	Type of MDC
Shelburne	By Hand		Spillman	4	4	4	0	0	Toughbook
Springfield	By Hand		Spillman	11	11	11	0	0	Toughbook
South Burlington	By Hand		Valcour	11	11	11	0	0	Toughbook
Stowe	By Hand	Plan to Move to Valcour	Valcour	7	7	7	0	0	Toughbook
Swanton	By Hand		Spillman	2	2	2	0	0	Toughbook
Thetford	By Hand		Spillman	3	3	3	0	0	Toughbook
UVM Police Services	By Hand		Valcour						iPad Tablet
Vergennes	By Hand		Spillman	5	5	5	0	0	Toughbook
Vernon	By Hand	Closes Down 30 June 2014							
Waterbury	By Hand		Spillman	3	3	3	0	0	Toughbook
Weatherfield	By Hand		Spillman	2	2	2	0	0	Toughbook
Williston	By Hand		Spillman	7	7	7	0	0	Toughbook
Wilmington	By Hand		Spillman	3	3	3	0	0	Toughbook
Windsor	By Hand		Spillman	3	3	3	0	0	Toughbook
Winhall	By Hand		Spillman	3	3	3	0	0	Toughbook
Winooski	By Hand		Valcour	5	4	4	0	0	Toughbook
Woodstock	By Hand		Spillman	2	2	2	0	0	Toughbook
Municipal Agencies Totals				**240**	**230**	**230**	**0**	**0**	
			Spillman Total	**146**	**140**	**140**	**0**	**0**	
			Valcour Total	**94**	**90**	**90**	**0**	**0**	
Vermont State Police									
Troop A									
St. Albans	By Hand		Spillman	20	20	20	0	0	Toughbook
Williston	By Hand		Spillman	22	22	22	0	0	Toughbook
Middlesex	By Hand		Spillman	18	18	18	0	0	Toughbook
Troop B									
Derby	By Hand		Spillman	16	16	16	0	0	Toughbook
Bradford	By Hand		Spillman	12	12	12	0	0	Toughbook
St. Johnsbury	By Hand		Spillman	14	14	14	0	0	Toughbook

Agency	Method	Description	Records Management System Used	Number of Cars	Number of Cars with MDCs	Number of cars with Internet access	Number of cars with Scanners	Number of cars with Printers	Type of MDC
Troop C									
New Haven	By Hand		Spillman	13	13	13	0	0	Toughbook
Shaftsbury	By Hand		Spillman	13	13	13	0	0	Toughbook
Rutland	By Hand		Spillman	27	27	27	0	0	Toughbook
Troop D									
Brattleboro	By Hand		Spillman	14	14	14	0	0	Toughbook
Rockingham	By Hand		Spillman	15	15	15	0	0	Toughbook
Royalton	By Hand		Spillman	15	15	15	0	0	Toughbook
Traffic Ops Section (TOPS)	By Hand	eTicket Hardware Test Trial	Spillman	9	9	9	1	9	Toughbook
Vermont State Police Totals				**208**	**208**	**208**	**1**	**9**	
			Spillman Total	**208**	**208**	**208**	**1**	**9**	
			Valcour Total	**0**	**0**	**0**	**0**	**0**	
Ancillary Law Enforcement									
Fish & Wildlife	By Hand		Spillman						
Dept of Liquor Control	By Hand	Plan to Move to Valcour	Valcour	15	15	15	0	0	Toughbook
Dept of Motor Vehicles	By Hand		Valcour						iPad Tablet
Ancillary Law Enforcement Totals				**15**	**15**	**15**	**0**	**0**	
			Spillman Total	**0**	**0**	**0**	**0**	**0**	
			Valcour Total	**15**	**15**	**15**	**0**	**0**	
GRAND TOTALS				**552**	**530**	**530**	**4**	**13**	
			Spillman Total	**395**	**377**	**377**	**4**	**13**	
			Valcour Total	**157**	**153**	**153**	**0**	**0**	
			Spillman %	**72%**	**71%**	**71%**	**0%**	**0%**	
			Valcour %	**28%**	**29%**	**29%**	**0%**	**0%**	
NOTES: Color Row Meanings									

Agency	Method	Description	Records Management System Used	Number of Cars	Number of Cars with MDCs	Number of cars with Internet access	Number of cars with Scanners	Number of cars with Printers	Type of MDC
Vernon PD Will Close Down 30 June 2014									
Use Valcour but Still Use Toughbooks Too									
Not Supported by DPS, Other Arrangements									
No MDCs									

8. Cost Benefit Analysis

This section involves four tasks:

1) *Perform an independent Cost Benefit Analysis.*

2) ***Create a Lifecycle Cost Benefit Analysis spreadsheet*** *as an* ***Attachment 3*** *to this report. A sample format is provided.*

a) The cost component of the cost/benefit analysis will include all one-time acquisition costs, on-going operational costs (licensing, maintenance, refresh, etc.) plus internal costs of staffing and "other costs". "Other costs" include the cost of personnel or contractors required for this solution, enhancements/upgrades planned for the lifecycle, consumables, costs associated with system interfaces, and any costs of upgrading the current environment to accept the proposed solution (new facilities, etc.).

b) The benefit side of the cost/benefit will include: 1. Intangible items for which an actual cost cannot be attributed. 2. Tangible savings/benefit such as actual savings in personnel, contractors or operating expense associated with existing methods of accomplishing the work which will be performed by the proposed solution. Tangible benefits also include additional revenue which may result from the proposed solution.

c) The cost benefit analysis will be for the IT activity's lifecycle.

d) The format will be a column spreadsheet with one column for each year in the lifecycle. The rows will contain the itemized costs with totals followed by the itemized benefits with totals.

e) Identify the source of funds (federal, state, one-time vs. ongoing). For example, implementation may be covered by federal dollars but operations will be paid by State funds.

3) *Perform an analysis of the IT ABC form (Business Case/Cost Analysis) completed by the Business.*

4) *Respond to the questions/items listed below.*

1. **Analysis Description:** Provide a narrative summary of the cost benefit analysis conducted: The approach used was to gather all costs associated with project for a 10 year period, identify revenue sources for the project, and identify tangible benefits that might also be used as revenue sources or expense reductions. Several people were interviewed, and primary contributors to this section include Bob Thigpen (AOT), Gary Nowak (DPS), and Tadd Geis (TEG President).

    a. COST COMPONENT: See the detailed spreadsheet referenced in **Attachment 3** to gain an understanding of:
        i. Use of Funds
        ii. Source of Funds
        iii. Change in Operating Costs

    b. BENEFIT COMPONENT: See the detailed spreadsheet referenced in **Attachment 3**. There is one benefit, namely Revenue Recovery, which appears in the Source of Funds section.

2. **Assumptions:** List any assumptions made in your analysis.
    a. Staff reductions are not expected or contemplated through the implementation of this solution.

3. **Funding:** Provide the funding source(s). If multiple sources, indicate the percentage of each source for both Acquisition Costs and on-going Operational costs over the duration of the system/service lifecycle.

    a. See the detailed spreadsheet referenced in **Attachment 3.**

4. **Tangible Benefits:** Provide a list and description of the tangible benefits of this project. Tangible benefits include specific dollar value that can be measured (examples include a reduction in expenses or reducing inventory, with supporting details).

    a. The monetary tangible benefits identified are:
        i. Reduction in ticket error rates, as edits on the computer screen require data to be correct before printing/issuing the citation.

ii. Reduction in ticket error rates due to data being collected in one system vs. keyed into several systems.
    1. The Reduction in ticket error rates is expected to yield $305,500 of Annual Revenue Recovery.
    2. Using 2013 data, the following is the expected annual cost recovery:
        a. 83,681 tickets issued, 9,052 were dismissed. Expected recovery rate of 22.5% based on conservative estimate from URL report of 9,052 = 2,037 tickets; 2,037 tickets recovered X $150/avg/ticket) = $305,500

b. There were NO OTHER tangible benefits identified due to the following factors:
    i. The URL Integration report noted no reduction in expenses from ANY eTicket implementations from the LEAs they surveyed for the Vermont report.
    ii. There are no reductions in staffing expected from this initiative.

5. **Intangible Benefits:** Provide a list and description of the intangible benefits of this project. Intangible benefits include cost avoidance, the value of benefits provided to other programs, the value of improved decision making, public benefit, and other factors that become known during the process of analysis. Intangible benefits must include a statement of the methodology or justification used to determine the value of the intangible benefit.
    a. Reduction in time it takes to collect data due to scanning bar codes vs. keying data into a system.
    b. Reduction in time it takes to collect data due to data being collected in one place/system vs. multiple systems.
    c. Improved officer safety due to reduced time to issue Citation, therefore, less time at the roadside.
    d. Improved data accuracy/completeness, as edits on the computer screen require data to be correct before printing/issuing the citation. Bias-Free Policing information is one very good example.
    e. Reduction in staff time as supervisory approval can be reduced/eliminated due to improved data accuracy.
    f. Increase in data timeliness, as Citation data will be in the computer system(s) at the point of issuance, vs. later in the day, week, or month, depending on which system we are considering.

    METHODOLOGY: It is expected that the above listed Intangible Benefits yield a value of $120,000 annually, based on the approximation of 2 data entry clerk FTEs across the state no longer entering Citation data again after initial collection by LEAs. It is expected these roles are primarily in Judicial Bureau and DMV.

    These are considered Intangible Benefits as there is not expected to be any staff reductions, and as such, those savings are not expected to be realized.

6. **Costs vs. Benefits:** Do the benefits of this project (consider both tangible and intangible) outweigh the costs in your opinion? Please elaborate on your response.
    a. The TOTAL Benefits do outweigh the Costs. Over a 10 year window, the combination of Funding Source, Tangible Benefits and Intangible benefits cover the project costs.
    b. The Intangible Benefits represents a **$1.2M savings**. If applied to the project cost calculation, would then offset the **$965K funding shortage** anticipated on this project.

7. **IT ABC Form Review:** Review the IT ABC form (Business Case/Cost Analysis) created by the Business for this project. Is the information consistent with your independent review and analysis? If not, please describe.

    a. There was no IT ABC FORM conducted for this project, therefore, no analysis of the IT ABC FORM is provided here.

Additional Comments on the Cost Benefit Analysis:

a. Cost benefit analyses were not readily available in any of the LEAs which URL surveyed, aside from Alabama, but all report anecdotal evidence of increased efficiencies in the field, reduction in redundant data entry, more accurate and timely data transfer, and improved officer safety.

b. Also noted in the URL report, the benefits of these systems are so apparent, that many jurisdictions have failed to significantly document those savings—even though benchmarking existing performance metrics to compare with future readings after deployment is desirable. The most striking theme behind each of these visits is that no one would retreat from their eTicket system back to a predominantly paper-based approach to processing traffic tickets —they may have done things differently at certain points in the process—but no one would retreat.

c. The most critical success criteria for this eTicket project are two-fold: <u>improved data accuracy</u> and <u>elimination of entering the same data into multiple systems</u>.
    a. We get <u>improved data accuracy</u> two ways:
        i. Scanning bar codes to collect data we already have, and as such, do not introduce another variable of somebody hand writing data and potentially missing or mistakenly writing errant data;
        ii. Reduce number of times data is collected/entered into multiple system;
    b. We get <u>elimination of entering the same data into multiple systems one way:</u>
        i. Reduce number of times data is collected/entered into multiple system (which is already mentioned in c.a.ii above).
    c. In other words we kill two birds with one stone: We get BOTH <u>improved data accuracy</u> and <u>elimination of entering the same data into multiple systems</u> by collecting the data just once.

d. <u>Given the above, consider the following</u>: Currently, citation data is ALREADY being data entered in the RMS systems at each LEA. We have **two options** for collecting data just once:
    a. **OPTION A**: Low cost/low risk integration between RMS systems and VTADS. This would require the following:
        1. Integration between Spillman and Judicial Bureau/VTADS
        2. Integration between Valcour and Judicial Bureau/VTADS.
    b. **OPTION B**: Implement eTicketing software and related hardware. This would require the following:
        1. VT to join the National Model
        2. Procure and configure servers
        3. Implement eTicket software
        4. Integration between TraCS and Spillman
        5. Integration between TraCS and Valcour
        6. Put a PC in each car
        7. Put a printer in each car

8. Put a scanner in each car
9. Pass legislation to allow for Notarized e-signatures
10. Place bar codes on registrations
11. Place bar codes on insurance cards
12. Adoption by officers for completing the ticket in the car
13. Train users to use TraCS
14. And, oh yeah, we still need to implement **Option A** above anyway

It seems like the smart course of action is to start with the end, that is Implement **Option A** first, and only when that is successful, implement the front end data collection/eTicket solution.

9. Impact Analysis on Net Operating Costs

1.) Perform a lifecycle cost impact analysis on net operating costs for the agency carrying out the activity, minimally including the following:
a) Estimated future-state ongoing annual operating costs, and estimated lifecycle operating costs. Consider also if the project will yield additional revenue generation that may offset any increase in operating costs.
b) Current-state annual operating costs; assess total current costs over span of new IT activity lifecycle
c) Provide a breakdown of funding sources (federal, state, one-time vs. ongoing)
2.) Create a table to illustrate the net operating cost impact.
3.) Respond to the items below.

1. Insert a table to illustrate the Net Operating Cost Impact.
    a. See the detailed spreadsheet referenced in **Attachment 3**.

2. Provide a narrative summary of the analysis conducted and include a list of any assumptions.
    a. See the Cost/Benefit Analysis section, which covers this topic.

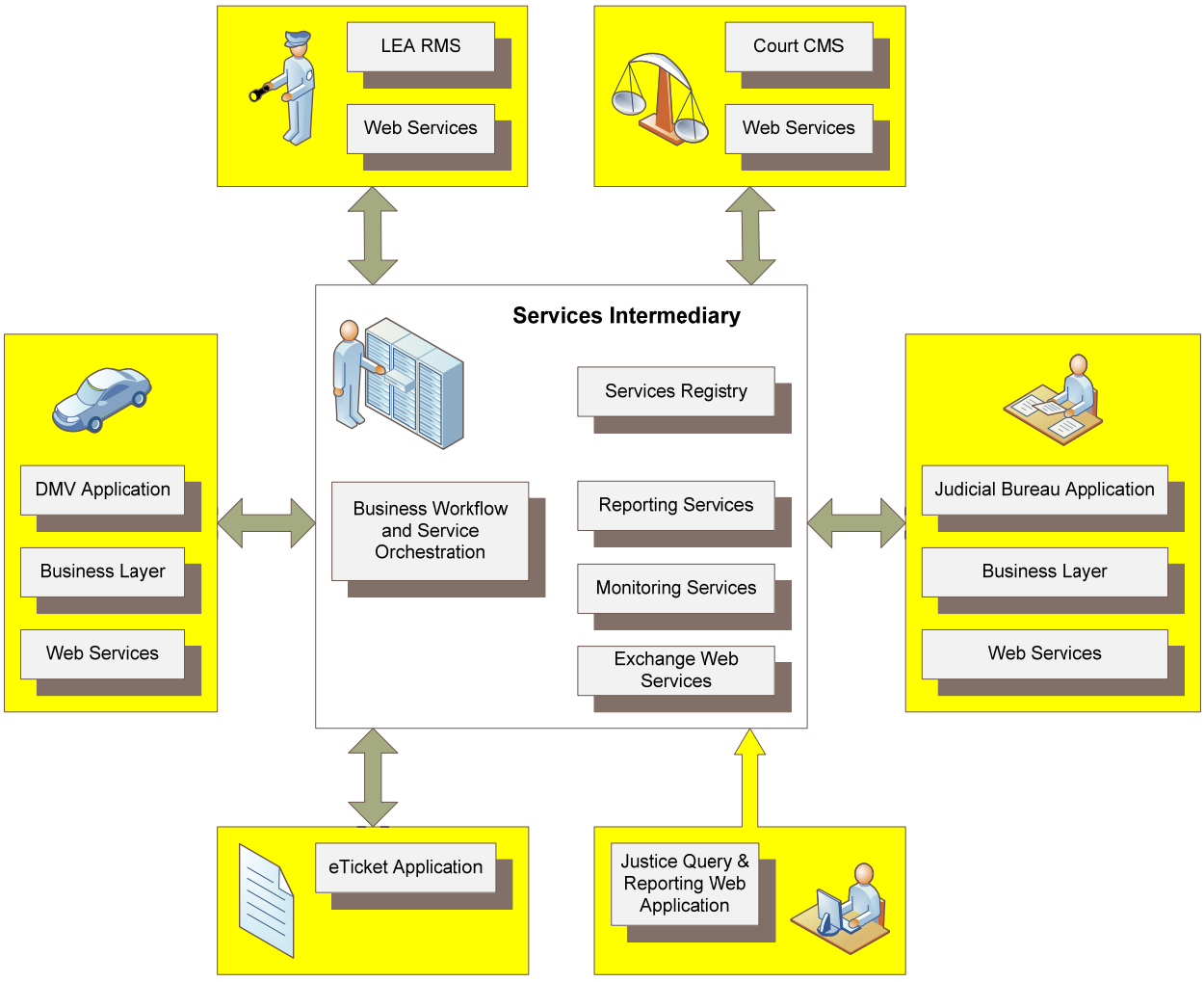
3. Explain any net operating increases that will be covered by federal funding. Will this funding cover the entire lifecycle? If not, please provide the breakouts by year.
    a. See the detailed spreadsheet referenced in **Attachment 3**.

4. What is the break-even point for this IT Activity (considering implementation and on-going operating costs)?
    a. When comparing Funding Uses to Funding Sources, there is no apparent break-even point, as the project, as described, has a **$965K funding shortage**.
    b. Should Vermont elect to use Non-Tangible benefits, the break-even point occurs in Year 1.

Attachment 1 - Illustration of System Integration

The project calls for system integration as follows:

a. eTickets (VCVC) / DPS eTicket server exchange
b. Warnings exchange
c. Spillman RMS exchange
d. Valcour RMS exchange
e. Web Crash exchange
f. Judicial Bureau exchange
g. DMV Disposition exchange



Attachment 2 - Risk Register

See attached document: Risk_Register-DII-DPS-eTicket-IR-STS_Final.pdf

Attachment 3 – Lifecycle Cost Benefit Analysis

See attached document: FINAL-REVIEW-SOW-DII-DPS-eTicket-IR-STS-Project-Cost-Detail.xlsx

Attachment 4 – As-Is Ticket Flow

Summary of steps describing current process for issuing a paper VCVC (ticket):

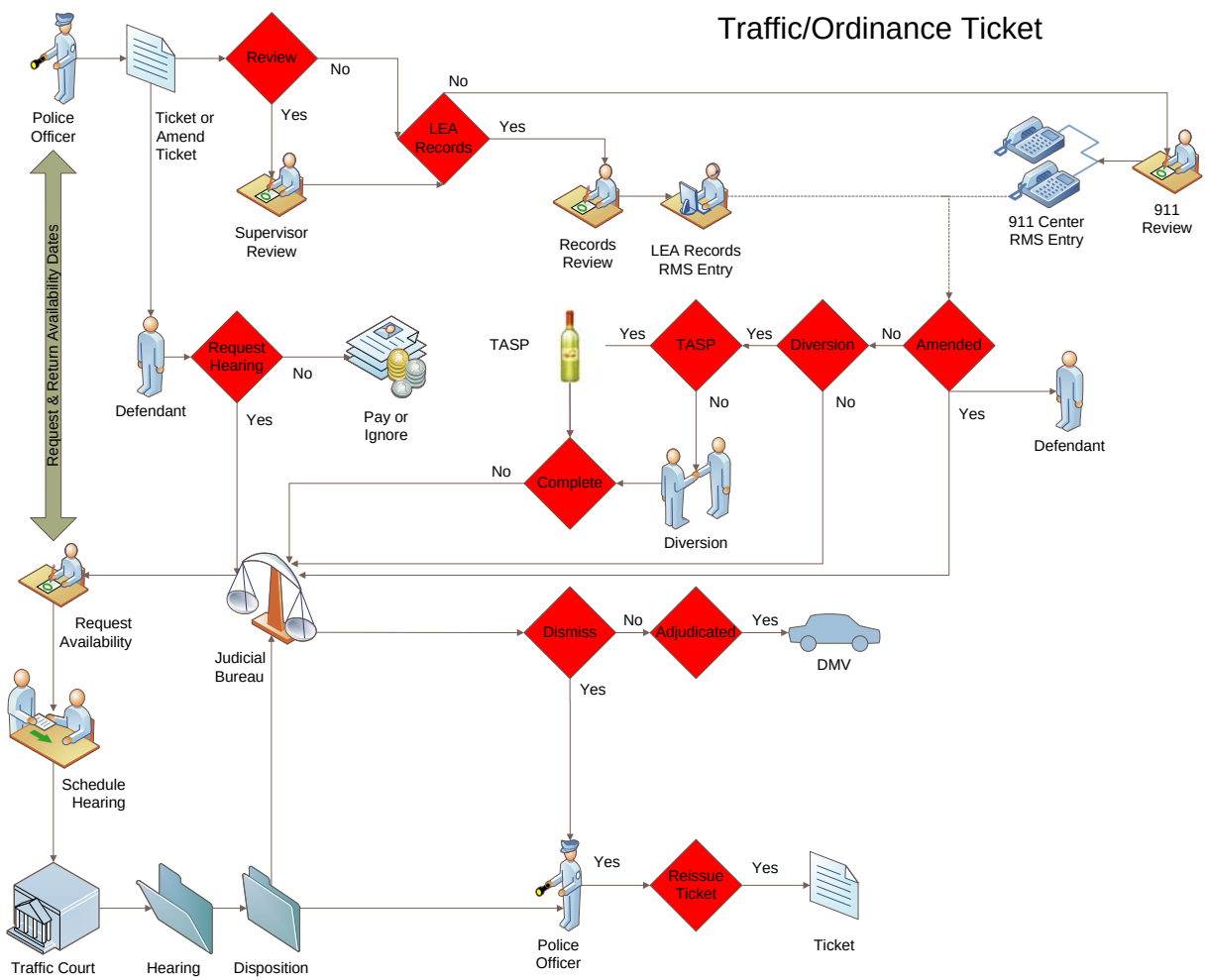
1. Officer issues a copy of ticket to the driver (Ticket is a 4 part form, an original and 3 copies –copies 1 and 2 go to driver (1 to keep and 1 to mail to Judicial bureau within 20 days), the original goes to officer for additional narrative and filing in office, and the 3rd copy goes to Records staff for RMS data entry then mailing to Judicial Bureau)

2. LEA Data entry Clerk enters ticket into Records Management System (Spillman or Valcour), retains one copy, and mails a copy to Judicial Bureau

3. Judicial Bureau clerk enters ticket in VTADS Case Management System and sends disposition to DMV via batch of text file(s) delivered via FTP

4. DMV clerk enters amended data into DMV system to correct errors

5. DMV/CRASH – Hand entered into DMV



DPS eTICKET Project

STATEMENT OF: Use of Funds (Expenses), Source of Funds (Revenue), Cash Flow, and Change in Net Operating Cost

KEY:

Cells with red background require attention

SUMMARY:

Total Project Cost Over 10 Years: $5,510,514
Total NHTSA Grant Funding: $1,489,999
Potential Revenue Recovery: $3,055,500
Funding Excess/(Shortage): ($965,015)

NET DECREASE/(INCREASE) IN OP. COSTS: ($5,510,514)
CASH FLOW ANALYSIS: Click Here

USE OF FUNDS - START

Description	Billing Milestone	Unit Price	# of Units	Total		NHTSA Funded	Implementation Year 1 (FY15)	Implementation Year 2 (FY16)	Implementation Year 3 (FY17)	Implementation Year 4 (FY18)	Implementation Year 5 (FY19)	Refresh/Maint. Year 6 (FY20)	Refresh/Maint. Year 7 (FY21)	Refresh/Maint. Year 8 (FY22)	Refresh/Maint. Year 9 (FY23)	Refresh/Maint. Year 10 (FY24)	TOTAL
SOFTWARE AND SERVICES																	
TraCS SOFTWARE ❶				**$672,500**													
National Model Annual Fee	National Model Annual Fee Paid		1	$672,500	0%	100%	$52,500	$60,000	$60,000	$65,000	$65,000	$70,000	$70,000	$75,000	$75,000	$80,000	$672,500
SOFTWARE TOTAL				**$672,500**			**$52,500**	**$60,000**	**$60,000**	**$65,000**	**$65,000**	**$70,000**	**$70,000**	**$75,000**	**$75,000**	**$80,000**	**$672,500**
SERVICES																	
TEG IMPLEMENTATION SERVICES																	
TEG IMPLEMENTATION SERVICES				**$55,100**													
Project Management		$135	150	$20,250	0%	100%	$20,250	$20,250	$20,250	$3,240	$3,240	$0	$0	$0	$0	$0	$67,230
Technical Lead		$125	180	$22,500	0%	100%	$22,500	$22,500	$22,500	$0	$0	$22,500	$22,500	$22,500	$22,500	$22,500	$180,000
Business Analyst I		$95	130	$12,350	0%	100%	$12,350	$0	$19,000	$0	$0	$0	$0	$0	$0	$0	$31,350
Programmer Analyst I		$95	130	$12,350	0%	100%	$12,350	$0	$19,000	$0	$0	$0	$0	$0	$0	$0	$31,350
Programmer Analyst II		$110	110	$12,100	0%	100%	$12,100	$11,400	$0	$0	$0	$0	$0	$0	$0	$0	$23,500
Deployment Team		$75	60	$4,500	0%	100%	$4,500	$4,500	$4,500	$0	$0	$0	$0	$0	$0	$0	$13,500
Support Team ❷		$75	240	$18,000	0%	100%	$18,000	$7,500	$13,500	$18,000	$18,000	$0	$0	$0	$0	$0	$75,000
Travel		$2,000	6	$12,000	0%	100%	$12,000	$8,000	$8,000	$4,000	$4,000	$0	$0	$0	$0	$0	$36,000
TOTAL: TEG IMPLEMENTATION SERVICES							**$114,050**	**$74,150**	**$106,750**	**$25,240**	**$25,240**	**$22,500**	**$22,500**	**$22,500**	**$22,500**	**$22,500**	**$457,930**
3rd PARTY VENDOR INTEGRATION (Estimated Fees)																	
Spillman		$61,920	1	$61,920	0%	100%	$61,920	$0	$0	$0	$0	$0	$0	$0	$0	$0	$61,920
CrossWind (Valcour)		$10,000	1	$10,000	0%	100%	$0	$10,000	$0	$0	$0	$0	$0	$0	$0	$0	$10,000
Appris (WebCrash)		$10,000	1	$10,000	0%	100%	$0	$10,000	$0	$0	$0	$0	$0	$0	$0	$0	$10,000
DMV		$30,000	1	$30,000	0%	100%	$0	$0	$30,000	$0	$0	$0	$0	$0	$0	$0	$30,000
Judiciary		$30,000	1	$30,000	0%	100%	$0	$0	$30,000	$0	$0	$0	$0	$0	$0	$0	$30,000
TOTAL: 3rd PARTY VENDOR INTEGRATION (Estimated Fees)							**$61,920**	**$20,000**	**$60,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$141,920**
																	$599,850
SERVICES TOTAL							**$175,970**	**$94,150**	**$166,750**	**$25,240**	**$25,240**	**$22,500**	**$22,500**	**$22,500**	**$22,500**	**$22,500**	**$599,850**
SOFTWARE AND SERVICES TOTAL							**$228,470**	**$154,150**	**$226,750**	**$90,240**	**$90,240**	**$92,500**	**$92,500**	**$97,500**	**$97,500**	**$102,500**	**$1,272,350**
SOLUTION MAINTENANCE AND SUPPORT																	
Application Hosting ❸	DII Data Center (iTOP)				0%	100%	$10,108	$10,108	$10,108	$10,108	$10,108	$10,108	$10,108	$10,108	$10,108	$10,108	$101,080
TraCS Maintenance	Included in licensing fee above as a component of National Model Membership				0%	100%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Spillman Maintenance					0%	0%	$0	$8,776	$8,776	$8,776	$8,776	$8,776	$8,776	$8,776	$8,776	$8,776	$78,984
Valcour Maintenance					0%	100%	$0	$0	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$16,000
WebCrash Maintenance					0%	100%	$0	$0	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$16,000
DMV Maintenance					0%	100%	$0	$0	$0	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$42,000
DPS Maintenance					0%	100%	$0	$0	$0	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$42,000
MAINTENANCE and SUPPORT TOTAL							**$10,108**	**$18,884**	**$22,884**	**$34,884**	**$34,884**	**$34,884**	**$34,884**	**$34,884**	**$34,884**	**$34,884**	**$296,064**
DPS COSTS																	
Incremental Staffing Costs ❹	Costs borne by taking on the project, goes to 2.5 people in year 5	$70,000	1	$70,000	0%	100%	$70,000	$72,100	$74,263	$76,491	$191,227	$196,964	$202,873	$208,959	$215,228	$221,685	$1,529,790
DII Project Management Oversight	Included in DII Fee Below	$0	1	$0	0%	100%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

External Project Management Services	Anticipated	$150,000	5	$750,000	0%	100%	$150,000	$150,000	$150,000	$150,000	$150,000	$0	$0	$0	$0	$0	$750,000
Security Assessment	Needed?	$0	1	$0	0%	100%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Independent Review		$11,890	1	$11,890	0%	100%	$11,890	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,890
MDT(Mobile Data Terminals (Laptop, Tablet)	None	$1,500	200	$300,000	0%	100%	$15,000	$60,000	$75,000	$75,000	$75,000	$15,000	$60,000	$75,000	$75,000	$75,000	$600,000
Printer	None	$500	300	$150,000	0%	100%	$5,000	$20,000	$41,500	$41,500	$42,000	$5,000	$20,000	$41,500	$41,500	$42,000	$300,000
Scanner	None	$500	300	$150,000	0%	100%	$5,000	$20,000	$41,500	$41,500	$42,000	$5,000	$20,000	$41,500	$41,500	$42,000	$300,000
Thermal Paper	Assume 1 roll/week/vehicle	$1	0	$0	0%	100%	$520	$2,600	$6,916	$11,284	$15,600	$15,600	$15,600	$15,600	$15,600	$15,600	$114,920
SQL Server Licensing	In place already; Cost assigned elsewhere	$0	0	$0	0%	100%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Travel	Included above	$0	1	$0	0%	100%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other ()		$0	1	$0	0%	100%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contingency	~5%	$102,315	1	$102,315	0%	100%	$35,000	$35,000	$35,000	$35,000	$35,000	$0	$0	$0	$0	$0	$175,000
DPS COSTS TOTAL							**$292,410**	**$359,700**	**$424,179**	**$430,775**	**$550,827**	**$237,564**	**$318,473**	**$382,559**	**$388,828**	**$396,285**	**$3,781,600**
PROJECT SUB TOTAL COSTS							**$530,988**	**$532,734**	**$673,813**	**$555,899**	**$675,951**	**$364,948**	**$445,857**	**$514,943**	**$521,212**	**$533,669**	**$5,350,014**
3% Charge for DII PMO/EA Services ❺					0%	100%	**$15,930**	**$15,982**	**$20,214**	**$16,677**	**$20,279**	**$10,948**	**$13,376**	**$15,448**	**$15,636**	**$16,010**	**$160,500**
PROJECT TOTAL COSTS							**$546,918**	**$548,716**	**$694,027**	**$572,576**	**$696,230**	**$375,896**	**$459,233**	**$530,391**	**$536,848**	**$549,679**	**$5,510,514**
											$3,058,467					$2,452,048	$5,510,514

USE OF FUNDS - END

SOURCE OF FUNDS (PAYMENT SCHEDULE BASED ON DELIVERABLES) - START

Revenue Source:							**Year 1 (FY15)**	**Year 2 (FY16)**	**Year 3 (FY17)**	**Year 4 (FY18)**	**Year 5 (FY19)**	**Year 6 (FY20)**	**Year 7 (FY21)**	**Year 8 (FY22)**	**Year 9 (FY23)**	**Year 10 (FY24)**	**TOTAL**
NHTSA FY2006 408 Grant (Old Money)	Only through launch. States are to assume operational costs						$448,150	$218,828	$223,857	$0	$0	$0	$0	$0	$0	$0	$890,835
NHTSA FY2013 405c (New Money)	Operational support									$222,312	$171,805	$19,005	$41,042	$0	$0	$0	$454,164
NHTSA FY2013 405c (New Money)	Federal Position Support						$70,000	$75,000	$0	$0	$0	$0	$0	$0	$0	$0	$145,000
TOTAL:							**$518,150**	**$293,828**	**$223,857**	**$222,312**	**$171,805**	**$19,005**	**$41,042**	**$0**	**$0**	**$0**	**$1,489,999**

SOURCE OF FUNDS - END

CASH FLOW - START

							Year 1 (FY15)	**Year 2 (FY16)**	**Year 3 (FY17)**	**Year 4 (FY18)**	**Year 5 (FY19)**	**Year 6 (FY20)**	**Year 7 (FY21)**	**Year 8 (FY22)**	**Year 9 (FY23)**	**Year 10 (FY24)**	**TOTAL**
Use							$546,918	$548,716	$694,027	$572,576	$696,230	$375,896	$459,233	$530,391	$536,848	$549,679	$5,510,514
Source							$518,150	$293,828	$223,857	$222,312	$171,805	$19,005	$41,042	$0	$0	$0	$1,489,999
Net Cash by Fiscal Year:							($28,768)	($254,888)	($470,170)	($350,264)	($524,425)	($356,891)	($418,191)	($530,391)	($536,848)	($549,679)	-$4,020,515
Cash Flow:							**($28,768)**	**($283,656)**	**($753,826)**	**($1,104,090)**	**($1,628,515)**	**($1,985,406)**	**($2,403,597)**	**($2,933,988)**	**($3,470,837)**	**($4,020,515)**	**($4,020,515)**
Potential Revenue Recovery:																	
Citation Error Reductions ❻	Year 2013: 83,681 tickets issued, 9,052 were dismissed. 22.5% of 9,052 = 2,037 tickets; 2,037 tickets recovered X $150/avg/ticket) = $305,500						$305,550	$305,550	$305,550	$305,550	$305,550	$305,550	$305,550	$305,550	$305,550	$305,550	$3,055,500
Net Cash by Fiscal Year:							$276,782	$50,662	($164,620)	($44,714)	($218,875)	($51,341)	($112,641)	($224,841)	($231,298)	($244,129)	-$965,015
Cash Flow:							**$276,782**	**$327,444**	**$162,824**	**$118,110**	**($100,765)**	**($152,106)**	**($264,747)**	**($489,588)**	**($720,887)**	**($965,015)**	**($965,015)**
	Considering $120K Annual Intangible Benefit						$396,782	$567,444	$522,824	$598,110	$499,235	$567,894	$575,253	$470,412	$359,113	$234,985	**($965,015)**

CASH FLOW - END

Up to $700K looks like what?
Up to $80-160 for VSP looks like what?

NET CHANGE IN OPERATING COSTS - START

Version 1: TOTAL PROJECT COST/Payment Schedule tied to Deliverables	**Year 1 (FY15)**	**Year 2 (FY16)**	**Year 3 (FY17)**	**Year 4 (FY18)**	**Year 5 (FY19)**	**Year 6 (FY20)**	**Year 7 (FY21)**	**Year 8 (FY22)**	**Year 9 (FY23)**	**Year 10 (FY24)**	**TOTAL**
Proposed Operating Costs	$546,918	$548,716	$694,027	$572,576	$696,230	$375,896	$459,233	$530,391	$536,848	$549,679	**$5,510,514**
Current Operating Costs:	??	??	??	??	??	??	??	??	??	??	$0
Postage											
Staff time (Data Entry)											
Printing Costs											
Envelopes											
Net Operating Cost Decrease/(Increase)	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**($5,510,514)**

Version 2: DPS PROJECT COST/Payment Schedule tied to Deliverables	**Year 1 (FY15)**	**Year 2 (FY16)**	**Year 3 (FY17)**	**Year 4 (FY18)**	**Year 5 (FY19)**	**Year 6 (FY20)**	**Year 7 (FY21)**	**Year 8 (FY22)**	**Year 9 (FY23)**	**Year 10 (FY24)**	**TOTAL**
Proposed Operating Costs	$546,918	$548,716	$694,027	$572,576	$696,230	$375,896	$459,233	$530,391	$536,848	$549,679	**$5,510,514**
Current Operating Costs	??	??	??	??	??	??	??	??	??	??	$0
Net Operating Cost Decrease/(Increase)	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($402,052)**	**($5,510,514)**

NET CHANGE IN OPERATING COSTS - END

NOTES / ASSUMPTIONS:

1. Includes base system maintenance and upgrades
2. "Train the Trainer" Provided By Vendor, Deployment & Support team
3. Three servers needed (1 application, 1 application test, and 1 database (database server already in place and paid for outside of this project))
   App and App test: Windows 2008 R2, Quad Core (4) CPU, 16 GB RAM, 300gb hard drive - $4,529 for 160gb plus $3.75*140gb = $525 = $5,054/server
   SQL Server Specs: SQL 2008R2 64bit, Server is a 2 CPU, 8GB Ram virtual machine with an 80GB OS drive, 120GB database drive, 100GB log file drive and a 225 GB backup drive at an annual cost of $2537
4. Provides help line support and interfaces with vendor for problem resolution, upgrades and provides post implementation business support
5. It is not clear whether EPMOFee is 1% of Cost up to $5,000 Cap, or not capped
6. Income based upon recovery of 22.5% of court dismissals for Errors, based upon low year for tickets (2013); Errors include illegibility,incomplete/missing data,untimely filing; figures are a conservative number which is 43% of the higher number $707,400 projected by URL in the eTicket Master Business Plan p175

$563,850

$1,314,920

5580514

$890,835 19.60%

$599,164 13.18%

$3,055,500 67.22%

$4,545,499

$1,200,000

$5,745,499 $234,985

eTICKET RISK REGISTER DESCRIPTION:

1. Risk Description: Provide a description of what the risk entails
2. Source of Risk: Project, Proposed Solution, Vendor or Other
3. Risk Rating: Risk ratings to indicate: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)
4. Risk Strategy: State's Planned Risk Strategy: Avoid, Mitigate, Transfer or Accept
5. Timing of Risk Response: Describe the planned timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)
6. State's Planned Risk Response: Describe what the State plans to do (if anything) to address the risk
7. Reviewer's Assessment of State's Planned Response: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.

NOTE: Hyperlinks are used on the Risk ID. From the Risk Register, click on a link to see the Risk Response, or from the Risk Response, click on a link to go back to the Risk Register.

RISK REGISTER:

Risk #:	Risk Description	Source of Risk	Risk Rating: Impact	Risk Rating: Probability	Risk Rating: Overall Risk	State Risk Strategy Summary	Timing of Response	Reviewer Assessment of Response
1	Legal: Legislative changes required for notarized electronic signatures and bar coding of vehicle registrations and insurance cards.	Proposed Solution	High	Medium	High	Mitigate	Prior to project initiation	Risk Not Adequately Mitigated
2a	Lack of Solution Adoption: TOPS prefers to not use scanners to collect data, rather, get data from message switch. The proposed solution does not provide this interface, rather, relies on another of its products (MACH) to interface with external systems to get data from the external sources such as DMV, NLETS, NCIC.	Proposed Solution	High	High	High	Mitigate	Prior to project initiation	Risk Not Adequately Mitigated
2b	Lack of Solution Adoption: It is unlikely that Valcour users who currently use a tablet will instead use a laptop, which is required for access to TraCS when in offline mode.	Proposed Solution	High	High	High	Accept	N/A	Risk Not Adequately Mitigated

2c	Lack of Solution Adoption: Fear of job loss in Judicial Bureau as clerks currently spend most of their day conducting data entry, which will be eliminated through this solution.	Proposed Solution	Low	Low	Low	Accept	N/A	Risk Mitigated
2d	Lack of Solution Adoption: Law Enforcement Agencies do not have a statewide governance model. As such, they have autonomy regarding *whether* to use a technology solution as well as defining policies/procedures for *how* technology solutions are used. It will be difficult to gain statewide *adoption* of the proposed solution, as well as *consistent method of usage* across LEAs.	Project	High	Medium	High	Accept	N/A	Risk Not Adequately Mitigated
3a	Funding: The source of funding does not cover the cost of the project.	Project	High	High	High	Accept	N/A	Risk Not Adequately Mitigated
3b	Funding: Many states place the burden of outfitting the vehicles on the LEAs (computer, printers, scanner). LEAs may not want to assume that burden if they feel that they can hand write the tickets at a lower cost. The decision on who bears this cost has not been finalized and may impact LEA participation.	Proposed Solution	High	Medium	High	Mitigate	Prior to project initiation	Risk not fully Mitigated
3c	Funding: Lack of overall Traffic-related data collection and reporting strategy. Per the May 2012 by NHTSA regarding the Traffic Records Assessment report, "The Vermont Strategic Plan for Traffic Records meets the requirements for Section 408 grant eligibility. It does not, however, describe a strategic set of actions working toward an identified goal for the future. The traffic records strategic plan is not well integrated with other planning efforts." This may impact future NHTSA grant funding.	Other	High	Low	Medium	Accept	N/A	Risk Mitigated

3d	Funding: The grant funding comes through MAP-21, which is part of the Transportation Bill. Secretary Searles indicated that the US Highway Trust Fund will run out of money in the September 2014 timeframe if Congress does not reauthorize the Transportation Bill, which will affect MAP-21. Some states have begun to put highway projects on hold. Vermont is proceeding ahead both because of our short construction season and also because AOT leadership expects the outcome to be level funding. Vermont has been in this situation in the past with resolution coming from general fund transfers (a de facto continuing resolution). While leadership expects funding to continue, we must acknowledge the possibility that funding could be delayed indefinitely or reduced.					Avoid	N/A	Risk is largely Mitigated
4	Scope: A key success criteria of this project is the ability for Judicial Bureau to accept Citation data electronically vs. continuing data entry from paper tickets, yet, this key deliverable has not been designed, prioritized, scheduled, or vetted with neither decision-makers nor those who would actually do this work.	Project	High	High	High	Mitigate	Year 3	Risk not fully Mitigated

5	Project Governance and Management: While Vermont did a good job of following URL Integration's recommendations regarding Project Governance and Management during solution *selection*, there is not similar effort on the pending *implementation*. Specifically, URL recommended that VT have a team structure for procurement: advisory team for each participating agency who will serve in an advisory capacity during key milestones of the project such as finalizing the RFP, review of proposals, and scope development). VT has not created a similar team for implementation, as defined by URL: 1. Advisory team for each participating agency who will serve in an advisory capacity during implementation of the selected system. 2. Governance structures vary from site to site, but an oversight committee of some sort is generally in place at the outset of these projects. (*TRCC could be viewed as playing this role, but there needs to be more detailed oversight focusing on this project*) 3. Participation on these committees is often widespread so that the courts, law enforcement, motor vehicle, and public safety communities have input into the process. (*This is not the case in VT*)	Project	High	High	High	Mitigate	Prior to project initiation	Risk not fully Mitigated
6	Service Level Agreement specified in RFP Not Met: DPS calls for support 7 days/week, 7am-10pm, with a 15 minute call back standard, while TEG provides M-F, 9am-5pm, with no set call back window	Project	Low	Medium	Low	Accept	N/A	Risk Mitigated

eTICKET RISK RESPONSE:

Risk #:	State's Planned Risk Response and Reviewer's Assessment of State's Risk Response
1	**STATE'S RISK RESPONSE:** UPDATE: Notarized Electronic Signatures are provided for : 4 VSA Chapter 29 Sec 1105 (a) (f)—this process was identified and completed in the 2013 legislative session Bar Coding of Vehicle Registrations and Insurance Cards: DMV has a project in progress to have bar codes added to Vehicle Registrations. The first bar codes on VT Vehicle Registrations "will go live" or begins in August 2014. VT vehicle registrations are for either one (1) or two (2) years. Two years after the start time in August 2014; most VT vehicle registrations should have bar codes on them. Miranda Davison (DMV Project Specialist) is Project Lead. Interface to the CPI message switch is included in the project cost. We have already discussed the need for this interface because of the current status of (lack of) all of the information on the driver's license, because some users (TOPS) have expressed preference for using the message switch; and because this would best serve the Valcour model where users rely upon a web-connected model to perform information retrieval. **REVIEWER'S ASSESSMENT:** While 4 VSA Chapter 29 Sec 1105 (a) (f) may indicate electronic signatures are valid, what is not clear is when an officer, who is also a notary, signs something electronically, whether that counts as a notarized signature. It is suggested that AG's office comment on this. Per Mr. Nowak, Bar Coding and Vehicle Registration and Insurance cards does not require legislative approval, rather DMV administrative rules. This project is underway for Vehicle Registrations, but not Insurance Cards. **Of note:** Without bar coding of vehicle registration and/or insurance card, and assuming that collecting data from the message switch is not always available due to off-line operational mode, a significant benefit is lost in that, the officer would then be faced with typing the data into the system or hand writing the ticket. This should be addressed before the project is initiated, otherwise, a compelling reason for undertaking the project is lost. Further, where in the SCOPE OF WORK or PROJECT COST is the following included: "Interface to the CPI message switch is included in the project cost"? The following Question is on page 115 of the TEG proposal: "How does your system communicate a query request with the Vermont message switch?" The following Answer is on page 115 of the TEG proposal: "TraCS does not currently have a NCIC/NLETS interface built in. However, the MACH software, which is also available from the National Model program, has the ability to securely interface with a state switch to run these types of queries. TraCS and MACH work together so that a query can be initiated from within a TraCS form, MACH will execute the query, and the results will then be returned to TraCS and can be used to fill in fields on the TraCS form. MACH can display the query response as formatted html if the return is in a tagged XML format, or MACH can display the response as plain text. In order for TraCS to be able to auto populate fields on the form with returned query data, the query response data needs to be in a tagged XML format. If DL photos are available from the message switch, those photos can be displayed in MACH and on a TraCS form. As an option to using the MACH software, the TraCS external information interface can be used to develop the ability to query the Vermont message switch if needed or desired. This customization is not included in this proposal." Mr. Nowak indicates this interface between TraCS and CPI (message switch) will be $20-50K based on conversations with TEG after the BAFO and will have funding implications. Additionally, using the MACH software is not part of the Scope of Work.

2a	**STATE'S RISK RESPONSE:** VT DMV is working on getting the Message Switch to provide data for Web Crash. TEG has interfaced with the Message Switch in other states. The Message Switch data exchange is part of the eTicket project. The eTicket project offers both ways (Message Switch and Bar Code Reader) to get data. We feel that we have a very flexible project to meet the needs of LEAs. Since VSP TOPS is one of the identified pilot sites and they have expressed a preference for using the message switch, we will modify the project plan to include message switch connectivity from the start. This need for modification of the plan has been previously discussed due to needs discussed in 1B (above). Note that project costs will drop for users with a message switch connection as no scanners will be needed for those agencies. **REVIEWER'S ASSESSMENT:** See Review Assessment response to Risk Register #1. Message switch interface is not part of the scope of work. Mr. Nowak indicates this interface between TraCS and CPI (message switch) will be $20-50K based on conversations with TEG after the BAFO and will have funding implications.
2b	**STATE'S RISK RESPONSE:** We believe once the eTicket system gets working; that our application would offer a lot of features that may cause some of the Valcour users to use our application. Some Valcour users still have and use their laptops for other applications; these laptops could be used for eTicket. **REVIEWER'S ASSESSMENT:** The Valcour/PC users are not the point of this risk. The risk is that the Valcour/Tablet users are the risky population, in that, in order to use TraCS in off-line mode, a PC is required. Valcour/Tablet users are unlikely to ALSO put a PC in the car. Offline mode is a key feature of using TraCS.
2c	**STATE'S RISK RESPONSE:** Clerks / Data Entry Personal can be reassigned to other tasks / duties and not be eliminated. **REVIEWER'S ASSESSMENT:** Accepted.

2d	**STATE'S RISK RESPONSE:** Although local law enforcement and county sheriffs do have autonomy in their choice of technology solutions; there are some things that the eTicket project can do to help with the adoption of the proposed solution. The VT State Police is often viewed as a role model for some local law enforcement agencies. These agencies will often watch and wait until the state police make their move to eTicket and then follow suit. eTicket system plans to be self-funded and doesn't plan to charge the end-user a fee to use the application. eTicket plans to self- fund the hardware and software so those cost will not be a burden on the local law enforcement. The access to free hardware and software to do eTicket is a good incentive for LEAs to use the application. Use of the eTicket application is based on the VCVC ticket which is the standard traffic ticket used across the state for civil moving traffic violations. This electronic version of VCVC will help make a consistent method of usage among end users across the state. **REVIEWER'S ASSESSMENT:** The points made here are compelling but do not fully mitigate the risk. To the point of VSP being a role model, this point supports the recommendation that DPS wait until VSP decides on Spillman or Valcour, as it is expected other LEAs will follow suit. Regarding LEAs assuming the hardware (printer, scanner, PC) costs, these costs are in the budget, but a decision regarding whether DPS is paying for this or the LEAs are paying for this was not confirmed one way or the other, per Mr. Aumand. A suggestion to fully mitigate the risk is to obtain a signed agreement from LEAs indicating their commitment to this project, and their agreement to follow policies and procedures defined by the to-be-defined project team/governance model. Per Mr. Nowak on 6/5/2014, the TRCC has indicated a desire to fund/equip the cars with the necessary hardware (MDT, scanner, printer), pending adequate funding.
3a	**STATE'S RISK RESPONSE:** We have reviewed potential grant sources and have not found other available funding at this time. There is the possibility that we could receive additional grant funding from other sources during the course of implementation. We are continuously reviewing new programs and changes to stipulations in existing programs that might provide additional funding. A. Edward Byrne Memorial Justice Assistance Grant (JAG) B. Safety Data Improvement Program (SaDIP) (Sec 4128) The recovery of 22.5% of courts dismissals for errors should be allowed as income for eTicket. If said income is allowed to build up for a few years without being used; this built up income could later self-fund eTicket. The cost of running the project during the buildup could possibly be covered by additional federal funds. **REVIEWER'S ASSESSMENT:** The 22.5% is considered as a SOURCE OF FUNDS in the project budget. However, State agrees there is a funding shortage.

3b	**STATE'S RISK RESPONSE:** Printers and Bar Code Scanner for LEAs vehicles are being paid for by the eTicket project. This is a line item in the 10 year life cycle. The software application is also being paid for by eTicket project. Some MDC laptops could be paid for by Federal Grants. eTicket project is working to cover all costs so that burden won't prevent a police agency from using our applications. There are two possible sources of federal grant money for MDC equipment for local police agencies: 1. Highway Safety Equipment Grant- NHTSA. Equipment must be used for highway safety / traffic enforcement 2. Homeland Security Equipment Grant **REVIEWER'S ASSESSMENT:** Regarding LEAs assuming the hardware (printer, scanner, PC) costs, these costs are in the budget, but a decision regarding whether DPS is paying for this or the LEAs are paying for this was not confirmed one way or the other, per Mr. Aumand during the Independent Review project kick-off meeting. Per Mr. Nowak on 6/5/2014, the TRCC has indicated a desire to fund/equip the cars with the necessary hardware (MDT, scanner, printer), pending adequate funding.
3c	**STATE'S RISK RESPONSE:** See memorandum dated 11 Feb 2013 in **Attachment A**. NHTSA has accepted this memorandum. **REVIEWER'S ASSESSMENT:** In reading the memo, it is not clear that the memo addresses the actual point made in the NHTSA TRA report, specifically: "…It does not, however, describe a strategic set of actions working toward an identified goal for the future. The traffic records strategic plan is not well integrated with other planning efforts". A memo from NHTSA stating that TRCC has addressed that concern would address this risk. Per an email received from Anne Liske on 6/9/2014, in response to the question as to whether such a memo existed, Ms. Liske indicates: "NHTSA has not issued any specific memo to Vermont re the quote that you cite from the TRA; however they continue to approve of the TR components included in the HSP". Given this fact, this risk is mitigated.
3d	**STATE'S RISK RESPONSE:** $1.2 Million of Sec 408 money has been set aside for the eTicket project at DPS. This money has been allocated only for eTicket. This funding would fund the 1st two years of the project (Pilot 1a and Pilot 1b). These pilots could be viewed as proof of concept field tests. If the project is allowed to keep some of the funds recovered from dismissed tickets due to errors, the project would self-fund itself. That is why it's important to have the project be self-funded and not be dependent on federal grants alone. **REVIEWER'S ASSESSMENT:** The point being made is this: if Congress does not reauthorize the Transportation Bill, it will run out of money in the September 2014 timeframe, affecting MAP-21, which is the source of the grant funding. Unless VT has grant funding in hand, there is a chance that the money goes away. Additionally, $890K of Section 408 and $600K of Section 405c money is allocated to this project. These numbers are slightly different than the $1.2M of Section 408 money indicated above. Per Mr. Nowak on 6/5/2014, $1.2M of $1.5M is in hand.

4	**STATE'S RISK RESPONSE:** Judicial Bureau accepting eTicket data: Discussions with the Judicial Bureau indicated for the early stages of the eTicket project (the 2 pilot phases); the Judicial Bureau will accept a printed copy of the electronic ticket. Given the Judicial Bureau a printed copy of an electronic ticket would greatly improve timeliness. Later when the Judicial Bureau reaches a decision on their new CMS / RMS system, we can work with them to build the exchanges. The 3rd year of the TEG BAFO response includes professional services for the Judicial Bureau CMS Integration. **REVIEWER'S ASSESSMENT:** There are two measures of success for this project: 1. Collecting data in an automated fashion at the point of the traffic stop 2. Not having that data entered into multiple systems, rather, having that data exchanged among multiple systems. Measure #1 is addressed in Risk ID #1. Measure #2 is addressed here and is a recommendation in the report. If we are still data entering data into multiple systems, we've not met a key success factor. It is recommended that this be done first, and not in Year 3. Why spend all the money on software FIRST, and then find out there is some reason Judicial Bureau integration is not possible. Why not lay that groundwork first, and then implement the data collection piece second, as the LEAs already key data into their RMS system. In summary, while this Risk is mitigated by the State's response, it is not mitigated until Year 3, and there is no reason why this risk cannot be mitigated in Year 1, before major costs are expended.
5	**STATE'S RISK RESPONSE:** The eTicket project does have a team structure for procurement, key milestone checks, and scope development. This team is the eTicket committee. The eTicket committee is made up of members from various state agencies. All three sections of the VT Law Enforcement Community (local police, county sheriffs, and VT State Police) are represented in the committee. Other state agencies such as the Judicial Bureau, AOT, and DMV were given invitations to join this working committee. Some of the invited agencies decided not to participate in the working committee. All major decisions must be approved by the eTicket Committee. 1. The eTicket Committee is the advisory team throughout the life of the project. The member law enforcement agencies are the hands on testers and serve as the field advisory team. 2. The TRCC is responsible for the high level overview of the project use of its funding, its direction, and checks monthly progress. The TRCC encourages and coordinates data exchanges between projects which will help improve traffic records data quality. 3. The eTicket Committee is made up of members of various agencies. Participating agencies members have a say and vote into the project. The eTicket Committee members input is the cornerstone on which the project success was built on. **REVIEWER'S ASSESSMENT:** The reviewer understands that the eTicket project falls under the purview of TRCC. However, the reviewer has not seen an eTicket Project Org Chart or any semblance of support or visibility for this project. In other words, there is no Project Sponsor or Champion for this project. The eTicket Committee appeared to be formed for solution *selection.* However, there is no team formed for solution *implementation.* Per Mr. Nowak on 6/5/2014, State of Wisconsin employed project leadership from both Administration and Law Enforcement. In Vermont, this equates to DPS and representation from the 3 law enforcement bodies in the State of Vermont: Vermont Police Chiefs Association, Vermont County Sheriffs Association, and Vermont State Police.

6	**STATE'S RISK RESPONSE:** eTicket Committee looked to Web Crash project as an example of acceptable support levels, which are 7:30-4:30 M-F. eTicket Committee decided to accept this SLA for eTicket project. **REVIEWER'S ASSESSMENT:** So long as all LEAs find this acceptable, it seems that this risk mitigation strategy is acceptable.

ATTACHMENT A: Memo referenced in response to Risk 3c

State of Vermont
Governor's Highway Safety Program
103 South Main Street
Waterbury, VT 05671
www.vthighwaysafety.com

[phone] 802-241-5509
[fax] 802-241-5551

Department of Public Safety

February 11, 2013

MEMORANDUM

To: Vermont Traffic Records Executive Committee
From: Anne Liske and Bob Thigpen, Traffic Records Coordinating Committee Co-chairs
Re: Annual Traffic Records funding application

The Co-Chairs of the Vermont Traffic Record Coordinating Committee (TRCC) reviewed strategic plan processes in Maine, NH and RI and found that those states use; and National Highway Transportation and Safety Administration (NHTSA) accepts, the annual project plan submission as the state traffic records strategic plan. Vermont also has higher level planning initiatives underway including the Strategic Highway Safety Plan (SHSP) which will use the TRCC annual project plan as input.

The current TRCC strategic plan development in Vermont employs a contracted consultant in a separate planning process with all of the stakeholders. In addition, we produce an annual project plan update as part of the sub-grant application process.

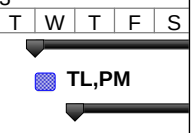
The TRCC voted unanimously to discontinue the separate strategic planning process to avoid added consulting costs and duplication of effort.

We will follow the same planning process that NHTSA accepts in other states while saving money on consulting expenses and avoiding duplicative effort. The TRCC annual project plan application process will continue to be available as input to the higher level planning initiatives in Vermont.

If you have questions or concerns on this process change, please contact Anne Liske at 802-241-5505, or by email at anne.liske@state.vt.us.

VERMONT

ID	Task Name	Duration	Start	Finish
1	**Project Phase I - Year 1**	**252 days**	**Wed 9/4/13**	**Wed 9/3/14**
2	Conduct kickoff meeting	4 hrs	Wed 9/4/13	Wed 9/4/13
3	**Requirements Gathering for eTicketing solution**	**5 days**	**Thu 9/5/13**	**Wed 9/11/13**
9	**Design/Develop VCVC and Warning exchanges**	**26.5 days**	**Thu 9/12/13**	**Mon 10/21/13**
10	**VCVC and Warning**	**26.5 days**	**Thu 9/12/13**	**Mon 10/21/13**
11	Design VCVC and Warning forms	8 hrs	Thu 9/12/13	Thu 9/12/13
12	Develop VCVC and Warning forms	60 hrs	Fri 9/13/13	Tue 9/24/13
13	Design business rules for VCVC and Warning	8 hrs	Fri 9/13/13	Fri 9/13/13
14	Develop VCVC and Warning validation/process flow rules	60 hrs	Mon 9/16/13	Wed 9/25/13
15	Review VCVC and Warning forms with State	4 hrs	Wed 9/25/13	Wed 9/25/13
16	Incorporate feedback into functional specifications	24 hrs	Thu 9/26/13	Mon 9/30/13
17	Design VCVC and Warning reports	8 hrs	Mon 9/16/13	Mon 9/16/13
18	Develop VCVC and Warning reports	80 hrs	Tue 10/1/13	Tue 10/15/13
19	Review VCV and Warning reports with State	4 hrs	Wed 10/16/13	Wed 10/16/13
20	Incorporate feedback into functional specifications	24 hrs	Wed 10/16/13	Mon 10/21/13
21	Design VCVC to eTicket server (DPS) exchange	8 hrs	Tue 9/17/13	Tue 9/17/13
22	Develop VCVC to eTicket server (DPS) exchange	24 hrs	Wed 9/18/13	Fri 9/20/13
23	Design Warning exchange	8 hrs	Wed 9/18/13	Wed 9/18/13
24	Develop Warning exchange	24 hrs	Mon 9/23/13	Wed 9/25/13
25	Review VCVC and Warning exchanges with State	4 hrs	Thu 9/26/13	Thu 9/26/13
26	**Spillman RMS Interface**	**8.5 days**	**Thu 9/26/13**	**Tue 10/8/13**
27	Design integration into Spillman RMS	8 hrs	Thu 9/26/13	Fri 9/27/13
28	Develop integration into Spillman RMS	32 hrs	Fri 9/27/13	Thu 10/3/13
29	Develop stylesheet for exchanges	24 hrs	Thu 10/3/13	Tue 10/8/13
30	Review exchanges with State	4 hrs	Tue 10/8/13	Tue 10/8/13
31	Design/Develop complete	0 days	Mon 10/21/13	Mon 10/21/13
32	**Testing of VCVC and Warning exchanges**	**6.5 days**	**Mon 10/21/13**	**Tue 10/29/13**
38	Ensure all hardware is installed in pilot eTicket agency(ies)	8 hrs	Wed 10/30/13	Wed 10/30/13
39	**Deployment of VCVC and Warning for Pilot agencies**	**12 days**	**Thu 10/31/13**	**Mon 11/18/13**
40	Deploy software to Centralized Server	16 hrs	Thu 10/31/13	Fri 11/1/13
41	**Training for Pilot (1a)**	**3 days**	**Mon 11/4/13**	**Wed 11/6/13**
45	**VT State Police Pilot (1a)**	**6 days**	**Thu 11/7/13**	**Thu 11/14/13**
48	**Training for Pilot (1b)**	**3 days**	**Tue 11/5/13**	**Thu 11/7/13**
52	**County Sheriffs & Local Law Enforcement Pilot (1b)**	**6 days**	**Fri 11/8/13**	**Fri 11/15/13**
55	Deployment complete	0 days	Mon 11/18/13	Mon 11/18/13
56	Monitor software and maintain 60 day uptime	60 days	Mon 11/18/13	Thu 2/13/14
57	**Post Implementation Review**	**3 days**	**Fri 2/14/14**	**Wed 2/19/14**
60	**Support and Maintenance**	**207 days**	**Thu 11/7/13**	**Wed 9/3/14**
63	Phase I Complete	0 days	Wed 9/3/14	Wed 9/3/14



Project: Vermont eTicket Solution
Date: Wed 6/18/14

Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	

ID	Task Name	Duration	Start	Finish	3 T W T F S
64	**Project Phase II - Year 2**	**253 days**	**Thu 9/4/14**	**Thu 9/3/15**	
65	Conduct Phase I review/Phase II Planning Meeting	8 hrs	Thu 9/4/14	Thu 9/4/14	
66	**Design/Develop Web Crash/Valcour Interfaces**	**17 days**	**Thu 9/4/14**	**Fri 9/26/14**	
67	**Web Crash Exchange**	**8.5 days**	**Thu 9/4/14**	**Tue 9/16/14**	
68	Design Web Crash exchange	8 hrs	Thu 9/4/14	Thu 9/4/14	
69	Develop Web Crash exchange	32 hrs	Fri 9/5/14	Wed 9/10/14	
70	Develop stylesheet for exchange	24 hrs	Thu 9/11/14	Mon 9/15/14	
71	Review Web Crash exchange with State	4 hrs	Tue 9/16/14	Tue 9/16/14	
72	**Valcour RMS Interface**	**8.5 days**	**Tue 9/16/14**	**Fri 9/26/14**	
73	Design integration into Valcour RMS	8 hrs	Tue 9/16/14	Wed 9/17/14	
74	Develop integration into Valcour RMS	32 hrs	Wed 9/17/14	Tue 9/23/14	
75	Develop stylesheet for exchange	24 hrs	Tue 9/23/14	Fri 9/26/14	
76	Review Valcour Integration with State	4 hrs	Fri 9/26/14	Fri 9/26/14	
77	Design/Develop complete	0 days	Fri 9/26/14	Fri 9/26/14	
78	**Test Web Crash/Valcour Interfaces**	**5 days**	**Mon 9/29/14**	**Fri 10/3/14**	
83	**Deployment**	**102 days**	**Mon 10/6/14**	**Thu 3/5/15**	
84	Ensure agencies meet requirements for TraCS software	5 days	Mon 10/6/14	Fri 10/10/14	
85	Rollout VCVC and other exchanges in TraCS Pack	8 hrs	Tue 10/14/14	Tue 10/14/14	
86	**Training for eTicket software**	**2 days**	**Mon 10/6/14**	**Tue 10/7/14**	
89	**ALL Local Law Enforcement Agencies**	**100 days**	**Wed 10/8/14**	**Wed 3/4/15**	
94	Deployment complete	0 days	Thu 3/5/15	Thu 3/5/15	
95	**Post Implementation Review**	**3 days**	**Tue 9/1/15**	**Thu 9/3/15**	
98	**Ongoing Support/Maintenance and Training**	**253 days**	**Thu 9/4/14**	**Thu 9/3/15**	
102	Phase II Complete	0 days	Thu 9/3/15	Thu 9/3/15	

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Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	

ID	Task Name	Duration	Start	Finish	3 T W T F S
103	**Project Phase III - Year 3**	**250 days**	**Fri 9/4/15**	**Fri 9/2/16**	
104	Conduct Phase II review/Phase III Planning Meeting	8 hrs	Fri 9/4/15	Fri 9/4/15	
105	Automate the VCVC exchange with Judicial Bureau	60 hrs	Fri 9/4/15	Wed 9/16/15	
106	**Requirements for VCVC Disp, Criminal Citation, & DUI**	**5 days**	**Fri 9/4/15**	**Fri 9/11/15**	
111	**Design/Develop VCVC Disposition and Criminal Citation**	**33 days**	**Fri 9/4/15**	**Fri 10/23/15**	
112	**VCVC Disposition**	**9.5 days**	**Fri 9/4/15**	**Fri 9/18/15**	
121	**Criminal Citation**	**18 days**	**Fri 9/18/15**	**Thu 10/15/15**	
134	Design/Develop complete	0 days	Fri 10/23/15	Fri 10/23/15	
135	**Testing for Criminal Citation**	**3.5 days**	**Thu 10/15/15**	**Tue 10/20/15**	
139	**Deployment of Crash and Criminal Citation exchanges**	**5 days**	**Wed 10/21/15**	**Tue 10/27/15**	
140	Rollout Crash exchange	8 hrs	Wed 10/21/15	Wed 10/21/15	
141	**Training for Pilot of Criminal Citation**	**3 days**	**Thu 10/22/15**	**Mon 10/26/15**	
145	**Pilot eCitation for Criminal Operation of Motor Vehicle**	**1 day**	**Tue 10/27/15**	**Tue 10/27/15**	
147	Deployment complete	0 days	Tue 10/27/15	Tue 10/27/15	
148	Monitor for 60 days	60 days	Wed 10/28/15	Mon 1/25/16	
149	**Post Implementation Review**	**3 days**	**Tue 1/26/16**	**Thu 1/28/16**	
152	**Ongoing Support/Maintenance and Training**	**250 days**	**Fri 9/4/15**	**Fri 9/2/16**	
155	Phase III Complete	0 days	Fri 9/2/16	Fri 9/2/16	

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Date: Wed 6/18/14

Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	

ID	Task Name	Duration	Start	Finish	3 T W T F S
156	**Project Phase IV - Year 4**	**252 days**	**Tue 9/6/16**	**Tue 9/5/17**	
157	Conduct Phase III review/Phase IV Planning Meeting	8 hrs	Tue 9/6/16	Tue 9/6/16	
158	**Requirement Gathering for Ordinance Violation**	**1 day**	**Tue 9/6/16**	**Tue 9/6/16**	
161	**Design/Develop DUI**	**18 days**	**Wed 9/7/16**	**Fri 9/30/16**	
162	**DUI**	**18 days**	**Wed 9/7/16**	**Fri 9/30/16**	
175	Design/Develop complete	0 days	Fri 9/30/16	Fri 9/30/16	
176	**Testing DUI and Ordinance Violation**	**6.5 days**	**Mon 10/3/16**	**Wed 10/12/16**	
182	**Deployment**	**7 days**	**Tue 9/6/16**	**Thu 9/15/16**	
183	Rollout Crash exchange	16 hrs	Tue 9/6/16	Wed 9/7/16	
184	**Training for VCVC Disposition exchange Pilot**	**3 days**	**Tue 9/6/16**	**Thu 9/8/16**	
188	**Pilot VCVC Disposition exchange**	**2 days**	**Fri 9/9/16**	**Mon 9/12/16**	
190	**Training for DUI Pilot**	**3 days**	**Fri 9/9/16**	**Tue 9/13/16**	
194	**Pilot electronic DUI and exchange**	**1 day**	**Wed 9/14/16**	**Wed 9/14/16**	
196	Deployment complete	0 days	Thu 9/15/16	Thu 9/15/16	
197	Monitor for 60 days	60 days	Thu 9/15/16	Mon 12/12/16	
198	**Post Implementation Review**	**3 days**	**Tue 12/13/16**	**Thu 12/15/16**	
201	**Ongoing Support/Maintenance and Training**	**252 days**	**Tue 9/6/16**	**Tue 9/5/17**	
204	Phase IV Complete	0 days	Tue 9/5/17	Tue 9/5/17	

Project: Vermont eTicket Solution
Date: Wed 6/18/14

Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	

ID	Task Name	Duration	Start	Finish	3 T W T F S
205	**Project Phase V - Year 5**	**252 days**	**Wed 9/6/17**	**Wed 9/5/18**	
206	Conduct Phase IV review/Phase V Planning Meeting	8 hrs	Wed 9/6/17	Wed 9/6/17	
207	**Design/Develop**	**14 days**	**Wed 9/6/17**	**Mon 9/25/17**	
208	**Ordinance Violation**	**14 days**	**Wed 9/6/17**	**Mon 9/25/17**	
223	Design/Develop complete	0 days	Mon 9/25/17	Mon 9/25/17	
224	**Testing Ordinance Violation**	**4.5 days**	**Tue 9/26/17**	**Mon 10/2/17**	
229	**Deployment**	**5 days**	**Wed 9/6/17**	**Tue 9/12/17**	
230	Rollout Ordinance Violation exchange	16 hrs	Wed 9/6/17	Thu 9/7/17	
231	Rollout DUI exchange	16 hrs	Fri 9/8/17	Mon 9/11/17	
232	Obtain feedback	8 hrs	Tue 9/12/17	Tue 9/12/17	
233	Deployment complete	0 days	Mon 9/11/17	Mon 9/11/17	
234	Monitor for 60 days	60 days	Tue 9/12/17	Thu 12/7/17	
235	**Post Implementation Review**	**3 days**	**Tue 9/12/17**	**Thu 9/14/17**	
238	**Ongoing Support/Maintenance and Training**	**252 days**	**Wed 9/6/17**	**Wed 9/5/18**	
241	Phase V Complete	0 days	Wed 9/5/18	Wed 9/5/18	

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Date: Wed 6/18/14

Task		Inactive Summary	
Split		Manual Task	
Milestone		Duration-only	
Summary		Manual Summary Rollup	
Project Summary		Manual Summary	
External Tasks		Start-only	
External Milestone		Finish-only	
Inactive Task		Progress	
Inactive Milestone		Deadline	