

## Agenda

Washington Joint Transportation Committee Weigh Station Study – Kickoff Meeting

July 31, 2015

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### 1. Introductions and Project Roles (9:00 – 9:10)

### 2. Review Scope, Schedule, and Deliverables (9:10 – 10:20)

- a. Presentation of Project Workplan and Schedule

### Break (10:20 – 10:30)

### 3. Data Collection and Interviews (10:30 – 10:50)

- a. DOT, SP interviews
- b. Weigh station site visits
- c. Additional data / interviews
- d. Federal Way case study

### 4. Next Steps (10:50 – 11:00)

- a. Synthesize data received (Task 1)
- b. Develop white papers and electronic maps (Task 1)
- c. Continue public and private sector interviews and data collection (Tasks 1 and 3)





## 1.1 Task 0: Project Kickoff Meeting and Site Visits

**OBJECTIVE:** Jump-start the project through a focused multipurpose on-site visit from July 29-31.

**APPROACH:** In Task 0, selected members of the CS Team will be on site in the Olympia area for up to three days, from July 29-31, 2015. The visit will include a kickoff meeting with the JTC and its invitees, interviews at both participating agencies, and field visits to two weigh stations.

At the project kickoff meeting at JTC headquarters, CS staff will discuss the proposed work plan, schedule, and required data to support the project. The meeting will include the JTC project manager, CS Project Manager, and key staff from the JTC and the Project Team. The agenda for the half-day meeting will consist of the following items, to be augmented if desired by the JTC project manager:

- Review of and consensus on a finalized work plan and schedule;
- Review of data needs and the data collection process. The CS Team will provide their expected data needs for the project in advance of the kickoff meeting so that JTC will be able to gather and provide requested data to the project team at the kickoff meeting from existing documents used in internal management and Federal reporting;
- Agreement on roles, responsibilities, and communications protocols,<sup>2</sup> including which activities require initiation by the JTC project manager;
- Review of the processes for development and JTC review of formal project deliverables; and
- Confirmation of milestone dates, including future on-site meetings with the JTC.

The CS team will also conduct meetings with State Patrol and DOT, and visit two of the State's weigh station sites. These activities may occur on either side of the kickoff meeting. The CS team has extensive experience with weigh station site operations, and through the FMCSA Safety Benefits Study found that on-site visits to engage operational staff, and understand day-to-day practices is important for setting a base for understanding systemwide issues. We request that the JTC

**Figure 1.2**  
**Project Summary**



<sup>2</sup> More information on the CS team's proposed communications approach is provided in the management approach.

coordinate scheduling these meetings and site visits, and we welcome participants from the JTC to join us at their convenience.

Our expectation that the trip will occur from July 29-31 is based on the dates explicitly provided by the JTC in the RFP, most specifically that we will be enabled to proceed starting on July 23, 2015. Delays in the timing of Task 0 correspondingly impact later tasks, and our participating staff have identified these dates and are blocking any potential conflicts.

**Task 0**

- *Facilitate kickoff meeting with JTC during a three day visit*
- *Visit to two weigh stations*
- *Interview WSDOT and WSP*

**Deliverables:** Final work plan and schedule

## 1.2 Task 1: High Level Overview of Commercial Vehicle Enforcement Programs

**OBJECTIVE:** Prepare background material that summarizes the WA commercial vehicle enforcement program and system of weigh stations within the state.

**APPROACH:** We will execute two subtasks to obtain, review, and summarize information about existing practices in WA, and how those practices compare to other states.

Task 1A will focus on describing the overall Federal commercial vehicle enforcement program and how it impacts state programs across the country. Our project team is familiar with the core documents which define the Federal CVO enforcement environment, including the guidelines for programs such as MCSAP and CVISN. We will compile the most recent versions of these documents, which often contain statistics on a state-by-state basis, and conduct benchmarking

telephone interviews with CVO enforcement-related officials of up to five (5) states beyond Washington. As described in the RFP, our summary will include Federal and state commercial vehicle requirements, "typical activities" occurring at weigh stations, functions of state-level agencies related to commercial vehicle enforcement, identification of national and state level policy goals and performance measures, and Federal and state funding programs and decision-making processes. This information will be summarized in a white paper of 10 pages or less.

**Task 1**

- *Benchmark other state programs in the Federal context.*
- *Review and summarize current Washington programs.*
- *Produce two briefing white papers (WA, national context).*
- *Create an electronic map of CVO enforcement in Washington.*

Task 1B, will focus on collecting and reviewing relevant data and information for each of Washington's weigh stations and understanding how these weigh stations functions as part of a statewide network. We will review 5 years of MCSAP and state enforcement plans. At the Kickoff Meeting, we will discuss additional information to be requested from JTC, State Patrol, or WSDOT. Examples of information requests include:

- Information on administrative agency (statewide) responsibilities and ten year cost history of the system (and reason for changes);
- Number, type, and purpose of existing weigh stations;

- Enforcement revenue statistics;
- Current and planned use of technology including Commercial Vehicle Information Systems and Networks, (CVISN), Weigh-in-motion (WIM), and other screening, diagnostic, or categorization systems; and
- As available, information on traffic volumes, number of enforcement activities, and planned improvements.

Information on individual weigh stations will be presented in an electronic system map using Google Maps or a similar technology. Summary level information will be presented in a white paper. To increase the ease of understanding and efficiency of discussion, a “cluster” approach may be used. The CS Team will evaluate each of the weigh stations and group them into clusters based on shared characteristics, such as use of technology, location, or volumes. Based on our experience, we believe that will likely be three to five clusters for Washington’s sites.

As a simple example of such a map, Figure 1.3 presents the locations of WA’s CVISN integrated weigh stations (note that Everett is currently closed). Data for this map is derived from the Smart Roadside Initiative Gap Analysis study conducted for the U.S. Department of Transportation. For each site, the main database includes multiple attributes regarding location, characteristics, technologies, and data availability. The data will be accessible on the electronic map by clicking on each weigh station.

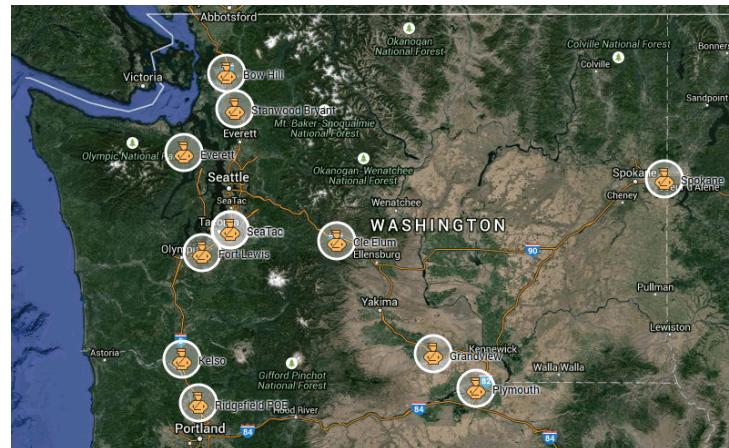
**Deliverables:** Task 1A: white paper of 10 pages or less. Task 1B: summary white paper and an electronic system map describing the Washington State system of weigh stations.

### 1.3 Task 2: Review Washington State Patrol and Department of Transportation Weigh Station Operations and Capital Assets

**OBJECTIVE:** Review the efficiency and effectiveness of the Washington State weigh station program, with a particular focus on agency responsibilities, inter-agency coordination, and system-level performance.

**APPROACH:** As discussed, there are multiple agencies with priorities and responsibilities regarding roadside enforcement, and these may complement, coordinate, overlap, or conflict, depending on the situation. As part of this task the CS team will review information pertaining to weigh station operations and capital assets in the state. We assume that information on state practices, management, and improvement efforts will be available from WSDOT, WSP, or the JTC. We also suggest as part of this task that we will review Washington’s statutes and regulations pertaining to roadside enforcement and weigh station activities, as well as any documentation of potential or active performance measures or management programs, funding sources, and uses. Some of this information may be collected during Task 1 and, as

**Figure 1.3 Sample Electronic Map**



appropriate, used to inform this task. At the kickoff meeting, we will discuss and agree upon potential sources for this information, including identifying and scheduling in-person or phone interviews with appropriate agency representatives.

In similar analyses for other states, the CS team identified key areas to include in an analysis of roadside inspection system effectiveness and efficiency, and evaluated the need for changes to the system. To understand how weigh stations are managed and operated, we will take a high-level look at the following components and develop criteria to evaluate the need for system changes:

- **Agency operational efficiency** – understanding what tasks, responsibilities, and enforcement authority agencies have in common at weigh stations, including applications and information exchange.
- **Statewide system efficacy** – how each facility supports other facilities through information exchange on a statewide level.
- **Infrastructure and technology efficiency and effectiveness** – evaluation of functionalities of weigh station activities including screening, sorting, and inspection, and how these pieces of the system facilitate or hinder inspection and enforcement staff activities.
- **Software applications and databases** – assessing the information available to support operational staff in evaluation of trucks and drivers, CVISN, PRISM, Washington State databases, and potentially data from neighboring states and Canadian provinces,



As part of this task we will also conduct a high-level case study to examine the causes that led to the closure of and the feasibility of reopening the Federal Way southbound weigh station. This may include an assessment of operational effectiveness and capacity, including reviewing current plans for reopening the location, evaluating truck volumes at and around the weigh station location, and reviewing available data on implications of the closure (and potential reopening) in terms of costs, mobility, safety and infrastructure preservation.

A final component of this task is to evaluate the potential for siting weigh stations on highway medians. Typically, median weigh stations are only on the secondary highway system and not on the interstate system. This is due to a number of factors including higher construction costs associated with extended acceleration and deceleration lanes to accommodate merging from the left lane. However, there are many operational advantages to median situated sites, including the ability for staff to operate, evaluate, inspect, and process citations for both directions of travel in one location. Additional efficiencies include the construction and use of a single building instead of two, eliminating the need for duplicate utilities such as power, voice/data communication, and shared employee areas. Finally, median sites typically produce a better capital and operational

## **Task 2**

- *Analyze WA's current weigh station system.*
- *Identify methods to evaluate system needs.*
- *Conduct a Case Study of Federal Way.*
- *Evaluate feasibility of median siting.*
- *Document analysis in a white paper.*

cost to per truck-processed ratio than separate weigh station sites on both sides of mainline, and have the added benefit of not requiring right-of-way acquisition.

**Deliverables:** White Paper documenting and evaluating weigh station related operations and capital assets, including a case study of Federal Way and evaluation of highway median weigh station siting.

## 1.4 Task 3: Identify Best Practices in the Funding, Placement, and Operation of Weigh Stations

**OBJECTIVE:** Identify best practices in weigh station management related to operations and capital assets.

**APPROACH:** We will build off of the national review from Task 1A to benchmark best practices for weigh stations, including both fixed site and virtual stations, as well as stations integrated with other infrastructure elements such as border crossings. In this context, the “weigh station” concept is expanded to include a broader array of weight and safety enforcement.

We understand that a healthy commercial vehicle enforcement program, which maintains safety and infrastructure without impeding freight mobility, is founded on efficiencies and effectiveness of information exchange between trucks, smart roadside screening system (CVISN, PRISM, SAFER, and other States databases), control room technology, drivers, and staff. Our best practices review will benchmark how information and technology is utilized to leverage enforcement effectiveness.

In Task 3, the CS Team will conduct research on current weigh station practices in the U.S. and Canada. As a foundation for this effort, Cambridge Systematics will leverage its recent work for U.S. DOT, which documented the State of the Practice regarding technology usage to improve roadside enforcement and regulatory operations. In addition, to this work, we will review other relevant U.S. DOT (e.g., Effective Use of Weigh-in-Motion Data: The Netherlands Case Study, Commercial Motor Vehicle Size and Weight Enforcement in Europe, NHI Principles of Effective Commercial Vehicle Size and Weight Enforcement ), and state (e.g., CVISN Program Plans/Top-Level Designs, State Enforcement Plans) documents/materials. The literature review will be supplemented by telephone interviews with Federal agencies responsible for oversight of these roadside programs and up to three states identified as employing best practices. States generally utilize a blended approach to roadside enforcement that includes both fixed facilities and mobile operations. Interviews conducted during this task will include at least one state with a strong focus on mobile operations and one state that focuses on fixed facility enforcement. We will also conduct up to three in-person or telephone interviews with private sector representatives, including the Washington Trucking Association (WTA), and/or local carriers or industry groups identified by the JTC. One of these interviews may be in the format of a one-hour virtual roundtable, to include a number of stakeholders in a single interview. We assume that the (WTA) or JTC will assist CS in identifying relevant private sector participants and in the scheduling of interviews or roundtables.

### **Task 3**

- *Produce a literature review of existing practices in U.S. and Canada.*
- *Conduct benchmarking interviews with five states, provinces, and Federal agencies.*
- *Analyze emerging trends and technologies.*
- *Evaluate Washington's current and future leadership in CVO.*
- *Document best practices in a white paper.*

In addition to current practices in North America, we will leverage recent work for both Federal and State agencies and years of experience to identify new and emerging commercial vehicle technologies that could be deployed now, or in the near future, to improve the efficiency of the weigh station program for both safety and infrastructure preservation objectives

We will utilize the above components to assess Washington's current position with respect to U.S. and Canadian programs, and examine how Washington can either maintain or regain a leadership position within CVO enforcement.

**Deliverables:** White Paper on weigh station best practices

## 1.5 Task 4: Findings and Recommendations

**Objective:** Make findings and recommendations to improve the efficiency and effectiveness of weigh station operations, capital assets, and strategic management.

**Approach:** We will synthesize information from Tasks 1-3 and use the CS Team's experience to develop findings and recommendations for operations, capital assets, and strategic management of the system. We will divide the recommendations into broad phases that can be used to develop and structure implementation plans. As appropriate, these recommendations will be made at the system, cluster, or individual weigh station level.

As noted in the RFP, potential recommendations may include:

- Changes to criteria and/or performance measures to guide budget and policy decisions;
- Changes to the number, placement, and operation of weigh stations;
- Changes in the use of technology to achieve performance outcomes;
- Changes to agency policies, practices, and how funding is allocated between agencies and by fund types (i.e., state and Federal);
- Considerations for evaluating future changes in state laws and/or rules;
- Potential costs or savings likely to occur by adopting the recommended changes.

The findings and recommendations will be presented to the JTC as part of the JTC review of the draft PowerPoint presentation on November 9<sup>th</sup>, described in Task 5. It is expected that any changes to the findings and recommendations will be made in conjunction with the review process leading to the November 17<sup>th</sup> presentation. The white paper with final recommendations will be delivered as an appendix to the draft final report on November 30<sup>th</sup>.

**Deliverables:** White paper documenting findings and recommendations

### *Task 4*

- *Synthesize information collected earlier in the project.*
- *State conclusions and findings.*
- *Present tangible recommendations to the JTC.*
- *Produce presentation materials suitable for a legislative audience.*
- *Walkthrough and fine tune analysis with a senior policy specialist with previous legislative interaction.*

## 1.6 Task 5: Draft and Final Reports

**Objective:** Document the study process and consolidate findings and recommendations into a draft and final report.

**Approach:** The CS Team will consolidate and summarize all previous work into a single, concise document containing an overview of work performed as part of this study, relevant data, and recommendations. As part of the final report, we will include the following items:

- **Executive Summary** (one or two pages, extensive use of visuals);
- **Summary Report** (15 – 20 pages, summarizing the purpose and goals of the study, findings and recommendations at a high level);
  - Federal and state overview of weigh station infrastructure, operations, and best practices (Tasks 1A and 3)
  - Washington’s statewide weigh station system (Tasks 1B and 2)
  - Findings and Recommendations (Task 4)
- Appendices incorporating content from the white papers developed as Tasks 1-4

### Tasks 5 and 6

- *Formally document project findings in multiple levels of detail and formats, as identified by the JTC in the RFP.*
- *Conduct a walkthrough process to ensure correct level of detail in each formulation of the report.*
- *JTC review period in line with timeframe stated in RFP.*

As described in Task 6, a draft PowerPoint presentation will be presented to the JTC in Stevenson, WA on Nov 17<sup>th</sup>. A draft of this PowerPoint presentation will be provided to JTC by November 9<sup>th</sup> for comments. The PowerPoint will include the main contents of and flow of the final report. At this time the CS team and JTC project manager will also discuss which elements are appropriate for inclusion into the presentation to the WA legislature.

The draft final report will be provided to JTC by November 30th. Given that the content will substantially be based on white papers and the draft PowerPoint presentation previously delivered to JTC, we assume that consolidated comments will be provided to the CS team by JTC project manager no later than December 4<sup>th</sup>. CS will prepare a final report and provide to JTC by December 14<sup>th</sup>. CS will be available to attend via telephone conference, if required, the meeting on December 17<sup>th</sup>. We expect that all comments from the JTC or others will be provided to CS to be addressed in advance of the meeting so that the report can be accepted on schedule.

**Deliverables:** Draft PowerPoint presentation, draft, and final report

## 1.7 Task 6: Presentations

**Objective:** Develop a draft and final presentations summarizing the study and recommendations and present to the JTC committee and the WA State Legislature.

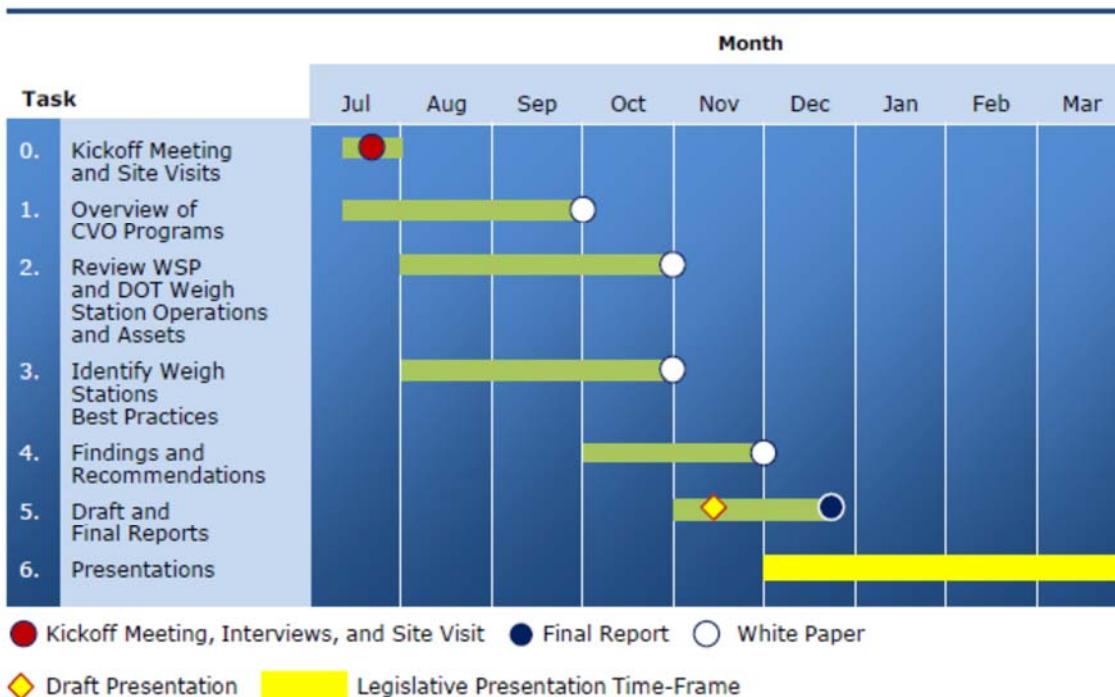
**Approach:** As described in Task 5, the substantial content used to develop legislative presentations will be included in the draft PowerPoint presentation on Nov 17<sup>th</sup>. The CS team and JTC will meet, either as part of the November 17<sup>th</sup> presentation or at a later date to be

mutually agreed upon via teleconference, to discuss any comments and changes regarding the legislative presentation.

After acceptance of the final report (Task 5), CS will prepare a draft legislative presentation and submit to JTC for review. Mr. Steven Pickrell, the project's senior policy specialist and an Executive Vice President of CS with experience delivering materials for the Washington Legislature, will be available to assist in a web meeting between CS and JTC to walk through the materials and fine tune the appropriate recommendations. CS will provide a final version of the legislative presentation within 2 weeks of receiving consolidated comments from JTC. The CS team designee will be available to deliver the presentation to the legislature (up to 2 presentations, in person, on a single day), and provide up to 2 brief study updates via conference call or webinar.

**Deliverables:** Draft and final legislative PowerPoint presentations.

### Figure 1.4 Schedule



#### Critical Project Milestones

**July 29 – 31\***. Task 0: Kickoff meeting, site visits, and interviews

**November 17th. Task 5:** Presentation to JTC in Stevenson, WA.

**December 14: Task 5:** Draft Final Report

**January – March, 2016. Task 6:** Legislative Presentation.

\*Schedule is contingent on CS receiving NTP by July 23rd.

# Memorandum

TO: Beth Redfield, JTC

FROM: Elaine McKenzie, CS

DATE: July 21, 2015

RE: CS Pre-kickoff data requests for JTC weigh station study

The purpose of this memo is to document the types of data and stakeholder interview requests during the July 29 – 31 kickoff visit to Washington State by the CS team. This is an initial draft list and describes high-level types of data, and potential sources (Dept. of Transportation or State Patrol). For the interview requests, the topics to be discussed are noted below. As described in the project scope, we are requesting JTC's assistance in identifying and scheduling with the specific agency representatives best able to speak to these topics, and to make an initial data request to the appropriate agencies.

## **Initial Data Requests -**

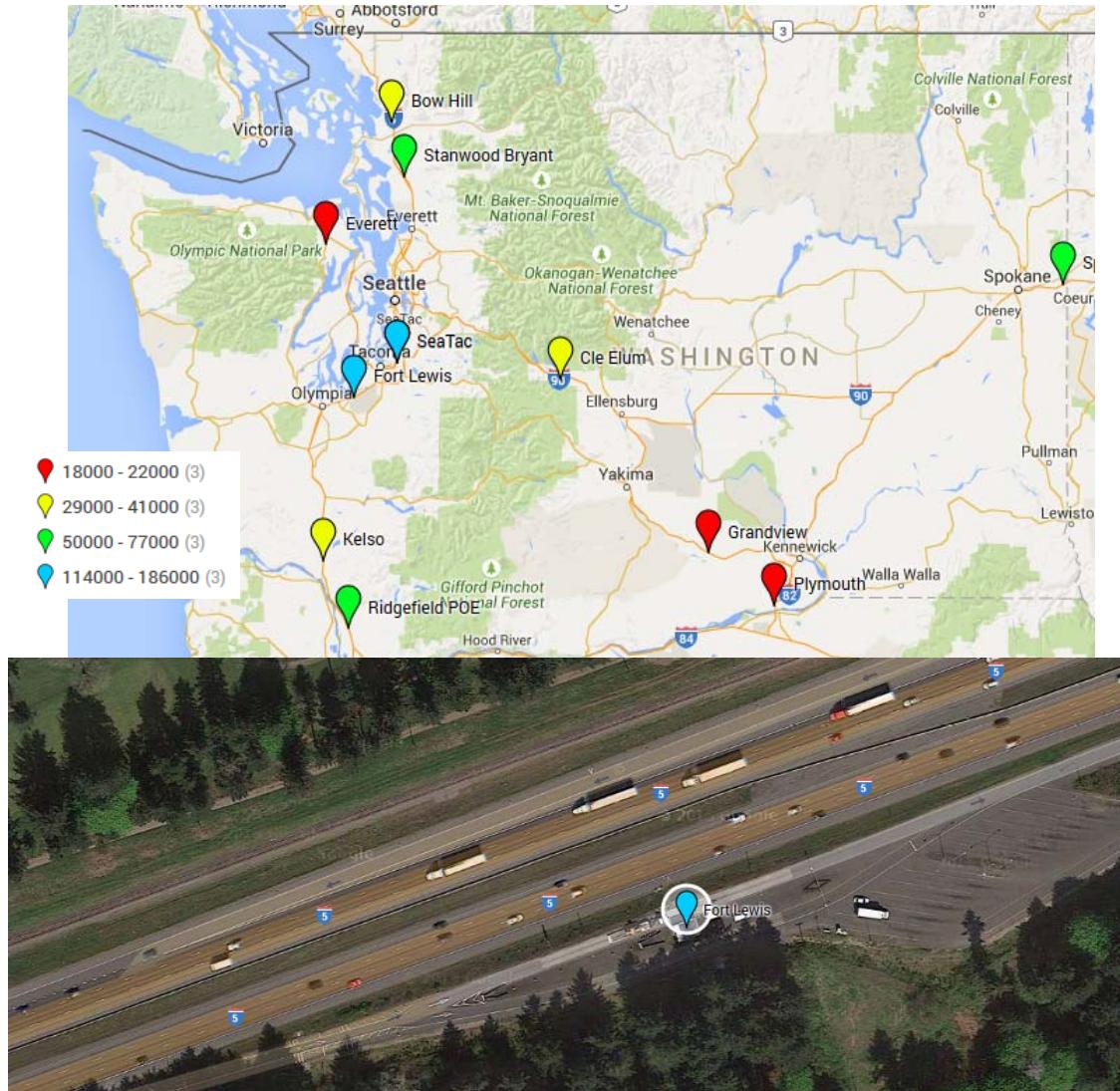
- Statistics / data
  - Current and future mainline and station traffic volumes (including truck volumes, or T factor) at each station location and on major highways. (DOT)
  - Number of enforcement activities, and safety statistics by station. (DOT/SP)
  - Statistics on number, type, and purpose of existing weigh stations. (DOT)
  - Ten year cost and revenue history of the weigh station system. (DOT/SP)
  - Enforcement safety and revenue statistics. (SP)
- Planning documents or information –
  - Previous 5 years of MCSAP and State Enforcement plans, other planning documents related to evaluation/inspection and citations/violations procedures or potential changes, Enforcement Standard Operating Procedures (SOP) Manual. (SP)
  - Planning documents for weigh station capital improvements. (DOT)
  - Current and planned use of technology including Commercial Vehicle Information Systems and Networks, (CVISN), Weigh in Motion (WIM), and other screening, diagnostic, or categorization systems. (DOT)
- Information on the following concepts (may be in various formats):

- Will new truck configurations will be allowed in WA (i.e. double trailers, increased weight) in the future? (DOT)
- Planned new or future corridors, changes to major truck routes, highways, or other routes used by trucks in the state? (DOT)
- Information regarding the closure and planned re-opening of Federal Way (e.g. planning documents or information on the highway improvements that led to the closure, statistics from the weigh station at the time of closure, any recent reports regarding potential opening, any planning documents for the station). (DOT, SP)
- Description of administrative agency (statewide) responsibilities regarding weigh stations (i.e. State Patrol, DOT). (DOT, SP)

**Target Interviews -**

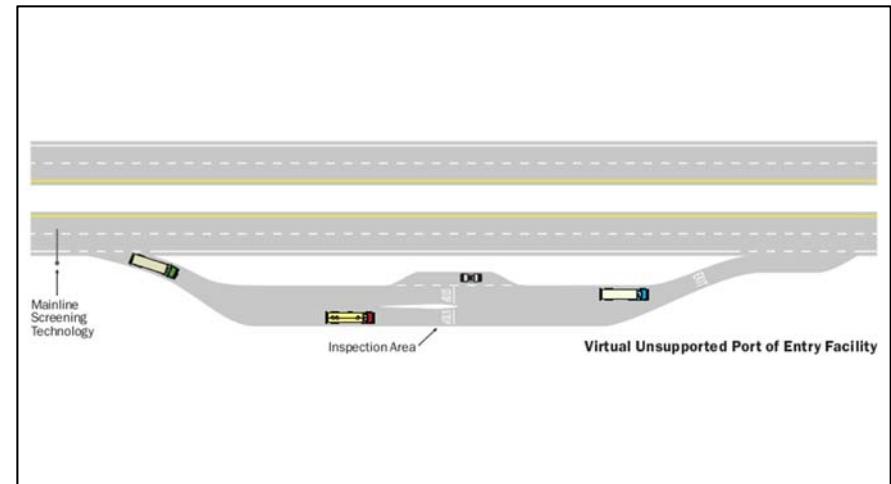
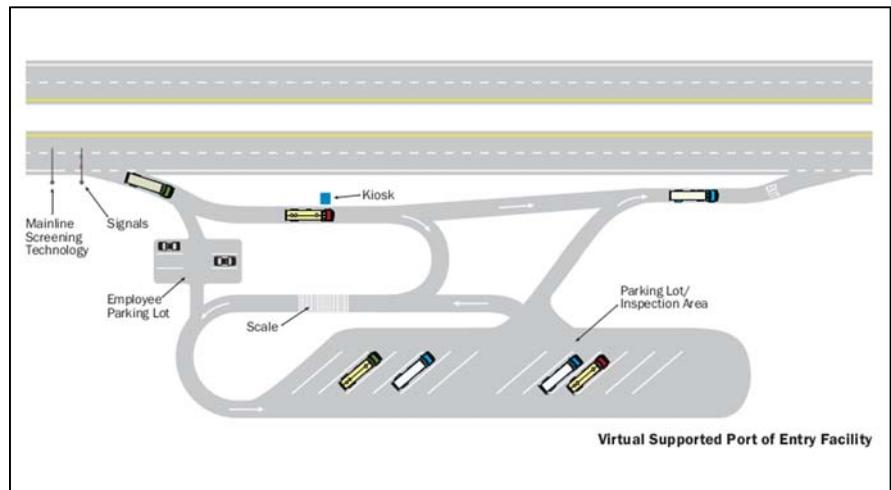
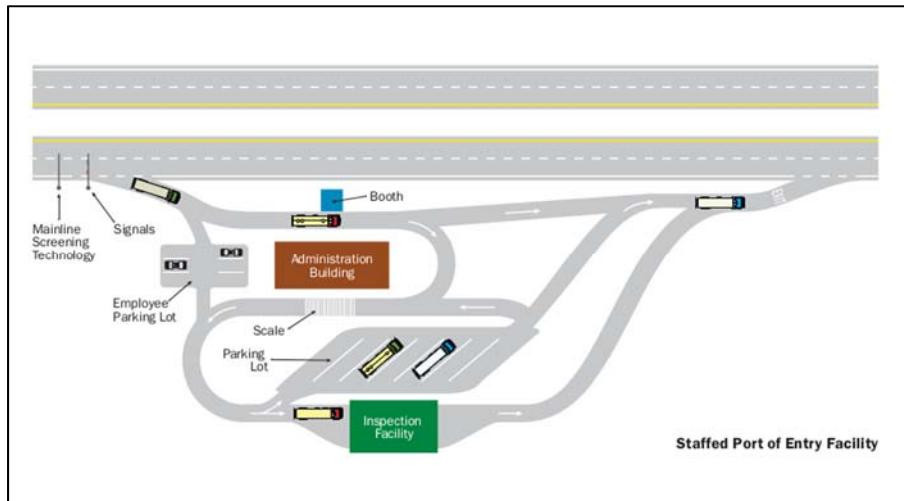
- **WA DOT** - long range capital plan, CVISN investments, highway system project procurement, Federal Way weigh station
- **WA State Patrol** - enforcement priorities (i.e. commercial vehicles vs. other enforcement, weight vs. safety enforcement), weigh station operations, weigh station technology and systems
- **Washington Trucking Association** (WTA will also identify other relevant private sector stakeholders for follow up interviews)
- Others - U.S. Customs and Border Patrol (regarding International POEs)

# Electronic Map Example: Fort Lewis Weigh Station



Fort Lewis	
<b>WRI</b>	NA
<b>Other Sensors</b>	No value
<b>Screening Criteria</b>	See Document
<b>Safety History Data</b>	IIS
<b>Safety History Source</b>	CVIEW
<b>IRP</b>	CVIEW
<b>IFTA</b>	CVIEW
<b>UCR</b>	N/A
<b>OSOW</b>	N/A
<b>Intrastate Vehicle Regi...</b>	CVIEW
<b>Intrastate Fuel Tax</b>	N/A
<b>Other Credentials and D...</b>	TBD
<b>Integration Note</b>	All mainline screening integrated into one screen, WIM, ALPR, OH
<b>Parking Availability</b>	No value
<b>Communication with/F...</b>	Transponder/CMS
<b>Traffic Control</b>	Direction Arrows/VMS
<b>Services Available for E...</b>	No value
<b>Method of Payment</b>	No value
<b>Data Analyzed</b>	E-Screening Event
<b>Purpose of Analysis</b>	Targeting enforcement details, Compliance Review, Log Book Validation, Carrier Vehicle E-Screening History, WSP Resource Deployment
<b>Example Mainline AADT</b>	114000

# Example Weigh Station Concepts of Operation



# Project Schedule

