2011 FHWA Annual Report Questions and Answers:

1a.	**Does your DOT have a formalized VE Program that includes:** **(** *Select all that apply):* •	

Answer:

- Agency VE Policy documented and adopted
- A VE Coordinator established
- A VE Training Plan or sustained initiative established
- VE Program performance goals & measures approved - % of mandated projects studied, % savings, % accepted
- VE Program evaluation and reporting conducted
- VE analysis procedures and guidelines developed

1b	**Does your DOT's VE Program have an official VE Policy, indicate which of the following items are included in the policy:** **(***Select all that apply):*	

Answer:

- Processes to identify projects for VE analyses
- Processes to assure that required VE analyses are completed
- Processes to conduct VE analyses
- Process for scheduling the VE analysis
- Processes to review/accept/reject VE recommendations
- VE coordinator roles and responsibilities established

2.	**Provide links to any of your DOT's currently available, VE-related web sites, such as:**	

Answer:

General VE Program Information http://www.dot.ca.gov/hq/oppd/value/index.htm
Official VE Policy – DD92 http://www.dot.ca.gov/hq/oppd/value/index.htm
General VE Processes and procedures http://www.dot.ca.gov/hq/oppd/value/guides.htm

3b	**Describe any practices your DOT uses to encourage more successful implementation of VE Change Proposals (VECPs) during construction.**	Briefly describe individual practices or policies that enable VECPs to be implemented in a successful manner. Examples include but are not limited to: • Encouraging submittals of VECPs • Reviewing/approving/rejecting VECPs • Monitoring and tracking the implementation of VECPs • Implementing VECPs on design-build projects

Answer:

This year, Caltrans implemented the 2010 Standard Specifications which includes VECPs as a cost reducing, time savings, traffic congestion relief incentive to provide a more valuable product to the traveling public. Once a VECP is accepted, the contractor will receive 50% of the Net savings. The net savings is minus any cost to develop the proposal, both by the contractor and the Department. Any reduction to the working days of the project will result in a 50% reduction in Contract time. Furthermore, the Department will provide a 60% net savings incentive for proposals which reduce traffic congestion or avoidance.

3a.	**Describe any practices your DOT uses to make the VE Program, and VE analyses conducted, more successful**	Briefly describe individual practices or policies that enable VE analyses to be conducted in a successful manner. Examples for discussion include but are not limited to: • Program Coordination and Communication • Planning, coordinating and conducting VE analyses • Integrating VE within Project Development • Coordinating VE with other project cost and quality review techniques • Reviewing/Accepting/Rejecting recommendations • Monitoring and tracking activities • Other practices and policies

Answer:

The Caltrans VA Program has instituted a number of innovations that have contributed to its success. In terms of coordinating VA with other cost and quality review techniques, Caltrans has implemented the following procedures:

- The utilization of performance measures to quantify the relative level of impact to performance as a result of the VA alternatives. Performance, cost and time are quantified to derive a value index, which is used to compare the relative level of total value improvement of the alternative concepts to the baseline concept
- The incorporation of cost estimate validation techniques. Caltrans is developing capabilities in validation of project cost estimates provided for VA studies in both a statistical and risk-based manner. Incorporation of estimate validation allows for the project capital costs to be further reviewed and adjusted to better reflect market conditions and factors influencing project construction costs. This also allows for decision makers and project managers to better align expectations and to more effectively manage project and program budgets.
- The integration of VA studies with Roadway Safety Audits (RSA). Caltrans has piloted the first joint RSA/VA Study effort in cooperation with the FHWA. The results of this new integrated approach will be evaluated and fine-tuned for future efforts.

4a	**Identify the typical project factors and associated measures that your DOT requires to be analyzed on VE Analyses.** **Examples:** **Factor — Measure** **Safety — Crashes** **Traffic flow — Delay** **Cost — $$$**	Identify and briefly describe how project functions (e.g., traffic flow, safety) are typically addressed during the Investigation, Speculation, and Evaluation phases of your VE analyses; explain the typical level of effort expended in analyzing these critical project functions.

Answer:

Performance Attributes

Caltrans has developed a "standard" set of performance attributes (referred to by some as Performance Measures). These represent those aspects of a project's scope that may possess a range of potential values. In addition, Performance Requirements, which are characteristics of the project that must be met, are identified and managed during the VA Study. The standard performance attribute are summarized below.

- Mainline Operations

An assessment of traffic operations and safety on the mainline facilities, including off-ramps and collector-distributor roads. Operational considerations include level of service relative to the 20-year traffic projections, as well as geometric considerations such as design speed, sight distance, lane widths, and shoulder widths.

- Local Operations

An assessment of traffic operations and safety on the local roadway infrastructure, including on-ramps and frontage roads. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, and lane widths; bicycle and pedestrian operations and access.

- Environmental Impacts

An assessment of the permanent impacts to the environment, including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., environmental justice); impacts to cultural, recreational, and historic resources. Also considered under this attribute are drainage and hydraulic issues.

- Construction Impacts

An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours, and delays; impacts to businesses and residents relative to access, visual, noise, vibration, dust, and construction traffic; environmental impacts related to water quality, air quality, soil erosion, and local flora and fauna.

- Maintainability

An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity, and maintainability of pavements, structures, and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.

- Phasing

An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of "throwaway work" involved, as well as future traffic and public impacts when the planned future improvements are made.

- Land-Use Compatibility

An assessment of the overall compatibility of transportation facilities with existing and planned land uses. This attribute considers how a transportation facility will directly affect the quality and viability of the land uses around it.

- Schedule

An assessment of both the impact to the remaining design and construction time of the project from the point in time of the VA Study.

The use of these performance attributes are integrated into each step of the Caltrans VA Process.

How Performance Attributes are used during the Study:

- Preparation

During the preparation for the VA Study, the CVS team leader works with the Project Manager, key PDT team members and other project stakeholders (including local agency representatives) to identify the key Performance Requirements and appropriate Performance Attributes for the project. Rating scales for each Performance Attribute is developed. Over time standard scales have been developed due to the vast number of studies where Performance Attributes have been used, but these can be subject to customizing for any project.

- Information

During the information phase, typically at the kick-off meeting the CVS team leader has the PM, PDT and other Project Stakeholders 1) verify that the current design or design options are meeting the Performance Requirements, then Rating the baseline design (and other design options as necessary) to determine how well the current design(s) are meeting the performance attributes. Note that the VA Team DOES NOT rate the baseline design, this is the role of the key project stakeholders. This information is then used by the VA Team to compare Value alternatives that are developed by the VA Team.

- Function Analysis

After the FAST Diagram has been completed on the project the team 1) assigning cost to the functions, 2) identifying which functions have the greatest impact on the project Performance Attributes, and 3) when Risk has been included in the VA Study, identify which functions have the greatest impact on Project Risk.

- Creativity

Based on an analysis of the FAST Diagram, that has been dimensioned with Cost, Performance Attributes and Risk; the Functions are Prioritized for Creativity Sessions. Basically Cost and Performance hold equal importance when seeking how to improve the project.

- Evaluation

During Evaluation, each idea is tested with respect to how it impacts the Performance Attributes – better, worse or no significant change. The rationale for the decision is also recorded. The potential impact on cost is also recorded, but the impact on Performance is evaluated first. This furthers in keeping the team on identifying Project Improvements and not just Cost Reduction. Based on this preliminary evaluation, the ideas are prioritized for development.

- Development

During the development and documentation of each alternative, a narrative is developed

discussing the impact that the VA Alternative has on each performance characteristic as well as the cost. Documentation developed by the VA Team during Evaluation, provides a starting point for this documentation. Frequently at the end of Development the team reviews the entire alternative and rates the performance for each Value alternative.

- Presentation

In preparation for the Presentation the VA Team reviews all alternatives and identifies their recommended strategy for the project. This permits the cumulative impact of the recommended VA Alternatives to be evaluated for Performance and Cost and compared to the baseline design. Ultimately this reveals which approach has the best Value to the public. Frequently the VA Team will develop several strategies for the Project Stakeholders and decision makers to consider. Organizing these strategies helps the decision makers better understand to potential cumulative impact of the various VA Alternatives.

- Implementation

At the implementation meeting, for those item s that are accepted, the project decision makers and PDT are asked to respond to the Performance and Cost ratings, to ensure the costs and performance that is reported represents the perspective of these critical project representatives and are not just the opinion of the VA Team.

In addition, Caltrans considers initial costs, life cycle costs, highway user cost, and risk for each alternative where appropriate. Most Caltrans studies are 6-day efforts, and an appropriate amount of time is applied in considering the performance requirement, performance attributes, and cost to ensure the best value project results and Value Based decisions are made.

4b.	**Describe how your DOT incorporates life-cycle cost analyses in VE analyses.**	Summarize your DOTs use of life cycle cost analyses while conducting VE analyses; indicate whether they are conducted as part of the study directly, if the study incorporates an independently conducted life cycle cost analysis, etc.

Answer:

Life cycle costs are calculated during VA studies where appropriate in terms of pavement life, long-term O&M considerations, etc. Caltrans regularly conducts VA studies that focus on pavement rehabilitation projects. In these cases, life cycle cost analysis plays a significant role. In addition, Caltrans considers highway-user benefits when evaluating construction schedule phasing and detours on all projects where VA Alternatives impact on these factors. Highway user benefits have also been used in VA Studies to help identify and resolve the best transportation solution for a project or where a VA Alternative has significant impact on operations.

4c.	**What percentage of VE analyses completed in FY 11 occurred in during the following stages of project development:**	

Answer:

0 studies - Planning and concept development phase
22 studies - Up to 30% Design Phase
7 studies - 30-60% Design Phase (i.e., final design)
30 studies - 60% or later Design Phase (i.e., final plans complete, PS & E)

Provide comments describing your experience regarding the timing of the VE analyses:

Our data clearly shows that when performing VE early, results are significantly better. During early design, we typically reach a 5% savings with excellent ROIs. As the project progresses savings are reduced. Late design projects actually could have a negative ROI due to no savings. This year was slightly better with a project savings of 1% and ROI of 5:1. However, the numbers don't always reflect the true benefits of VE. On all projects there are always some performance benefits that are achieved. If it's consensus building, validating, risk mitigation, etc… all studies bring value to the project.

This year, the high number (30) of late studies was attributed to one thing, the economy. Due to the economy, federal fund issues, and stimulus uncertainty, many pavement rehabilitation projects were quickly initiated. This creates a situation for VE where results are more difficult to achieve. An exception process for these types of situations should be considered.

4d.	**For design-build projects, identify the timetable that best describes when VE analyses are typically conducted by your DOT**. *Select one of the following:*	

Answer:

Prior to Issuance of RFP

4e.	**If your DOT conducts multiple VE analyses on Major Projects, describe the points in the project development process where the analyses occur.**	Identify the common points in the project development process when VE analyses typically occur for Major Projects ($500 Million or greater). If the DOT does not conduct multiple analyses for Major Projects, proceed to Question 5.

Answer:

On major projects, VA Studies are typically conducted early in the Environmental process to help to evaluate alternatives and in many cases identify new concepts to consider in the evaluation phase. The next potential study may occur on major elements of the project where either high cost, environmental issues, or local issues exist and the VA Study can assist in resolving these concerns and getting agreement with project stakeholders. While there is no formal requirement for further studies on large project. Studies have been performed in the Design Phase to further resolve issues or address construction phasing and staging issues. Further studies may be warranted if project costs have risen and exceed the budget. Studies have also been performed to assess contract documents on complex or unique major projects.

5.	Briefly describe any special analyses conducted by your DOT in FY 2011.	

Caltrans VA program employed a pilot study of a joint Roadside Safety Audit (RSA)/Value Analysis (VA) study completed over a six day workshop on the US 101 Smith River Corridor Improvements Project, Del Norte County, PM 35.90 - 46.49. The workshop was carried out as a shared effort between the Smith River Rancheria Tribe, Federal Highway Administration (FHWA) and Caltrans. This workshop acted as a feasibility study to identify and evaluate potential safety, operational, and mobility improvements for both motorized and non-motorized traffic throughout the Smith River Corridor. The effort consisted of a 3-day RSA workshop held on location near the Smith River Rancheria, and then was followed by a 3-day VA study held in the Caltrans District 1 offices in Eureka, California. The outcome of the RSA was used as the input to the VA study. Findings of the RSA/VA workshop were then presented in Crescent City to all the stakeholders.

Participation in these workshops included the following entities:

- Smith River Rancheria
- Caltrans
- FHWA
- Federal Lands Highway
- Del Norte County Transportation Commission
- Del Norte County Department of Public Works
- VMS, Inc. (VA facilitation)
- VHB (RSA expertise)

The baseline project concept – the existing conditions for the purposes of the RSA/VA study – consists of the following:

1. The existing facility as observed by the team, and

2. The following proposed programmed improvements:
    a. Add rumble strip (centerline and edgeline), minor shoulder widening and upgrade metal beam guardrail (MBGR) from Rowdy Creek Bridge to Panoramic Trailer Park
    b. Replace Dr. Fine Bridge and Upgrade SR 197 intersection
    c. Revise access to the Lucky 7 Casino and Shell Station with parking moved to rear of the lot
    d. Sidewalks along North Indian Road
    e. Upgrade pedestrian warning signs to be completed under a maintenance work order; the work order is a result of recommendations found in safety investigation
    f. Pavement Rehabilitation of Oceanview Drive
    g. Foothill Drive Improvements

US 101 serves many purposes in the Smith River area. In addition to being the "lifeline to the north coast"—a Principal Arterial Route that is essential to the movement of goods and people in northwest California—it also serves as a main street for communities. As population and traffic volumes increase, it will be necessary to plan and initiate projects to address the needs of both motorized and non-motorized traffic while considering potential impacts for both local and interregional travelers. This Feasibility Study identified and evaluated potential safety, operational, and mobility improvements for both motorized and non-motorized traffic throughout the Smith River Corridor.

Advantages:

- The RSA study encompassed most of the roadway issues (safety driven) and fed most of the creative ideas
- A very strong way to inject roadway safety topics into a VA Study
- Addressed the big picture of the corridor and engaged with local stakeholders
- Effective way to capture, investigate, and document possible solutions expressed by the community
- VA process vetted the RSA mitigation measures in more detail

Best Practices:

- Engaging external stakeholders throughout the process. Allowing external opposition to participate in RSA so they can 1-take ownership, 2-educate them on why we do what we do, and 3-good stewardship.
- Keeping the core team through the two processes. (i.e., traffic safety, design, environmental, etc…)
- Allow RSA study to essentially feeds the information, analysis, and part of the creativity phases.

6.	Briefly describe a successful VE analysis that was completed by your	Briefly describe a successful VE analysis or "lesson learned" from conducting a VE analysis that is an agency "best practice".

	DOT in FY 2011.	

Answer:

D-6 Kern County Taft Highway 8-Lane (Dealing with outside agencies in relation to environmental concerns)

The project is needed to accommodate the growth of the local community and surrounding economic region by increasing the capacity of the SR 99 mainline facility. The project purpose is to increase the capacity, reduce traffic congestion, and improve operations on SR 99 by widening the existing 6-lane freeway to an 8-lane freeway. This segment of SR 99 is a six-lane freeway located on the south end of Bakersfield. The freeway consists of 12-foot concrete travel lanes, eight-foot outside shoulders, one to ten-foot inside shoulders, and a 46-foot wide median. The five-mile section of SR 99 to the north of this project's limits is an eight-lane freeway travelling through central Bakersfield and the segment to the south is a six-lane freeway located in an unincorporated area of Kern County. The current Level of Service (LOS) for SR 99 in the southbound direction is E and F for the entire segment and most segments have a LOS of C and D in the northbound direction.

The baseline concept is to construct a new inside lane and inside shoulder utilizing a continuously reinforced concrete pavement (CRCP) strategy for the entire project limits of 5.1 miles in each of the northbound and southbound directions (10.2 – 12-foot lane-miles plus the accompanying 10-foot shoulders and 2-foot median). The entire project is expected to take 15 months or roughly 260 work days. The pavement strategy utilizes a high-value continuously reinforced concrete pavement (CRCP) type that will provide an excellent surface and reduce future roadway maintenance considerably. Construction impacts are expected to be minimal due to the location of the lanes being constructed and what should be expected for construction along a major operating roadway. Total project costs for all elements of the project are currently estimated at $31,500,171.

The presence of the endangered Kit Fox, which is known to be a nocturnal and curious animal, will limit the amount of allowable night work for the project. The baseline concept limits the amount of night work to the bare minimum necessary (2 to 3 nights for K-rail movement and for falsework operations). This level of night work was initially agreed by Caltrans and the U.S. Fish & Wildlife Service (FWS) to limit potential exposure to the endangered Kit Fox in the region. It is understood that the Kit Fox is a curious and nocturnal animal and that additional night work may increase the risk of Kit Fox incidents. The accepted alternative, which is to work with US Fish & Wildlife Service to allow night work to reduce project duration, will reduce the overall project duration. It is thought that additional successful measures can be taken to reduce the exposure of Kit Fox during the construction effort. This alternative was accepted based on the feasibility of the concept and the logic behind shortening the project’s duration, which will reduce the construction impacts and overall disruption to the local community and traffic on SR-99.

The accepted alternative represents a total value increase of 12% - including slightly over $600 thousand in initial construction cost savings, a reduction in construction related disturbances, and a project schedule shortened by a conservative 4 months.

D-4 Laguna de Santa Rosa Bridge Replacement (Using VA partnerships to bring value to the project).

The purpose of the project is to replace the existing Laguna de Santa Rosa Bridge on SR 12 between the towns of Santa Rosa and Sebastopol. The needs of the project are to replace the bridge due to scour and other deteriorating conditions, while limiting impacts to the local community and to the Laguna de Santa Rosa environment and maintaining traffic operations. The proposed bridge structure is a pre-cast/pre-stressed I-girder supported by an abutment at each end and two bents; each bent will have three or four columns. The length of the replacement bridge will be 231 feet, consisting of three equal spans of 77 feet. The bridge deck will be widened to 58 feet and conforms to current design standards. Design speed for this project is 45 mph. Retaining walls are required on three corners of the new structure to minimize earthwork, right-of-way impacts, and impacts to biologically sensitive resources within the project limits. The existing roadways at both ends of the current bridge approaches will be resurfaced and widened to conform to the new bridge. Total project costs for all elements of the project are currently estimated at $13,858,000.

This project was selected for our unique International VE Technical Exchange program. The California DOT (Caltrans) in cooperation with Korea Expressway Corporation (KEC) performed a pilot VE study to collaborate and learn from each other's VE best practices and experiences. The program was a joint effort which included performing a VE study on a "live" project. The process was for KEC to perform a VE study on the project and deliver alternatives, and then Caltrans would use those as input into their own VA study. The VA team was able to build on this initial concept and develop it for implementation and share the results of the VA study with KEC to complete the process.

The two VA teams developed 4 alternatives for improvement of the overall project. The Caltrans VA team was able to build on the ideas furnished by the previous VA Study conducted by KEC, and develop a total of 2 alternatives that were accepted for implementation. The first alternative, originally proposed by KEC, shifted the alignment of the bridge slightly south to reduce construction staging interference between the old and new bridges, and the second is to erect sheet pile walls around the abutment walls to provide future scour protection. These two alternatives, which center on the bridge alignment and the bridge foundations, enhance the project's value by producing a significant cost savings and improving the project's critical path duration by 2 months.

The most notable value enhancements revolve around reducing short term disruptions to the community and the environment, which are captured under the performance attributes of Construction Impacts and Environmental Impacts. The accepted alternatives represent a cost savings of $726,000 and a performance improvement of 34%. When the savings and performance improvements are factored in with the schedule and risk reductions, the accepted alternatives represent a 42% value improvement over the baseline design.

Interstate 5 HOV Lane Extension, Orange County, CA (using VA to analyze design paradigms)

Orange County Transportation Authority, in cooperation with the Caltrans, the City of Dana Point, the City of San Clemente, and the City of San Juan Capistrano, is proposing to widen Interstate 5 (I-5). The VA Study, conducted early in the PA&ED Phase, utilized Value Metrics to review previous analyses and to conduct an independent analysis of limited-access HOV facilities compared with continuous-access HOV facilities. Designed and operated much like general-purpose lanes, the continuous-access HOV Lanes make carpooling easier and more inviting to the traveling public. With continuous access, carpoolers can enter or exit at any point along the route.

Previous analyses indicated that HOV facilities with limited access offer no safety advantages over those with continuous access, whether measured by percentage of collisions, collisions per mile, collisions per VMT, or collision severity. The VA Study analysis confirmed that limited access HOV facilities had a higher percentage of total collisions in the HOV and left lanes and a higher number of collisions per mile in the HOV and left lanes. In addition, limited-access HOV facilities result in more collisions per million vehicle miles traveled in the HOV lanes and greater collision severity in the HOV lanes.

Given these conclusions, the VA Study proposed elimination of the buffer separation between the HOV lanes and mixed-flow lanes and to use continuous-access to and from the HOV lanes. The reduced footprint associated with the revised roadway cross-section reduced the impacts to constructability and reduced construction schedule associated with reductions in mainline bridge widening, retaining walls, ramp widening, culvert extensions, etc. The footprint reduction also translated into reduced environmental impacts. In addition to all the performance advantages, the project realized cost savings in excess of $30 million.

As a result of the VA Study, OCTA has adopted continuous-access as the preferred operational methodology for their HOV facilities throughout county. Finally, a recent survey by the OCTA found 71 percent believe that continuous-access HOV facilities make freeways safer. It is through the VA Process that OCTA was able to make significant improvements to the performance of their HOV and carpool facilities.

7.	**Describe a unique or innovative VE recommendation or VECP that provided significant benefit to the project on which it was implemented**	Describe an implemented recommendation or VECP that could potentially find application in other projects or by other DOTs.

Answer:

During the Value Analysis study of a Caltrans Local project – US 101 Capitol Expressway for the Valley Transit Authority (VTA) – an innovative analysis of the project's construction phasing and construction activities resulted in the elimination of one of six construction phases. The innovation was the team's use of drawings that showed the activities of each construction phase and noting which construction activities (using various

colored post its) could be combined with other phases. This resulted in the elimination of one construction phase. This method or showing phase activities using post its of different colors, clearly showed which activities could be combined and helped the project decisions makers clearly understand what was being proposed. This led to the acceptance of the VE alternative. Savings were projected to be approximately $0.26 million of a $19.4 million project and approximately one month of a 24 month construction schedule was saved.

Bella Diddy Roadway Rehabilitation: This project proposes to complete roadway rehabilitation on a segment of State Route (SR) 299 in Shasta County near Bella Vista from 0.4 miles east of Intermountain Road to 0.3 miles west of Backbone Ridge Road. Key scope items include widening the roadway to provide 8-foot shoulders and place shoulder backing; overlaying the existing surface with 0.30 feet of asphalt concrete; repairing localized areas of severe failure (dig outs); sealing all cracks greater than 1/8 inch; constructing a new bridge structure to replace the triple concrete box culvert; increasing hydraulic capacity at Lemm Creek; and widening Salt Creek Bridge. At the time of the VA study, the total project costs for all elements of the project were currently estimated at $28,299,000

One VA alternative related to the widening of Salt Creek Bridge was accepted. The revised structure type results in an increase in freeboard beneath the structure (as compared to the baseline concept) which will result in reduced maintenance and reduced potential for debris accumulation and overtopping during a high water event. Two VA alternatives related to the hydraulic capacity and efficiency of the Lemm Creek Bridge structure was also accepted. The skewed orientation to better orient the bridge with the direction of flow in the creek as well as the slight offset location will result in a shorter length of bridge (i.e., cost savings) and a reduction in debris accumulation and maintenance on the abutment slopes and structure approaches. Finally, another VA alternative that related to a pavement rehabilitation strategy to address the significant level of deterioration of the roadway and increase the life of the pavement was accepted. Pulverizing the existing pavement will create a totally new pavement section, thus improving the ride quality through this segment of roadway and significantly reduce future maintenance and delay the need for future rehabilitation projects.

In addition to the performance improvements indicated above, the VA study resulted in initial cost savings of over $360,000 and life cycle savings of over $6.2 million over the project's 25 year design life.

Though permitted in many states the island detour for lane closure had not been practiced within Caltrans. District 7 on an I-5 PCC Rehabilitation project accepted this approach for lane isolation. This permitted the use of conventional concrete and continuous construction. Savings on this project amounted to $3 million but if utilized statewide will save many times that amount while increasing the overall quality of the end product.

8a.	**Enter the number of State DOT, FHWA, and other individuals receiving VE training in FY 2011**	
Answer: 41 - DOT 0 - FHWA 8 - Other (Mexico officials)		

8b.	Identify the method(s) that best describe(s) your DOT's approach to conducting VE training and education (Select all that apply):	
Answer: • Short-duration orientation presentations for agency leadership • Short-duration orientation presentations for technical staff • Short-duration workshops/analyses		

9a.	Total # of Analyses Completed in FY 2011	
Answer: 0 - In-House 59 - Consultant		

9b.	# of Analyses Completed in FY 2011 that were required by Federal Law	
Answer: 0 - In-House 50 - Consultant		

9c.	# of Analyses Completed in FY 2011 that were specially designated by the Secretary.	
Answer: 0 - In-House 0 - Consultant		

9f.	Anticipated # of Analyses to be Completed during FY 2012 and 2013.	
Answer: FY 2012 # In-House - 1 FY 2012 # Consultant - 50 FY 2013 # In-House - 0 FY 2013 # Consultant - 50		

10a.	Estimated costs associated with conducting the VE analyses $	
Answer: $2,710,000		

10b.	Estimated costs of the projects studied $	
Answer: $4,783,589,937		

11a.	Enter the total number of recommendations proposed	
Answer: 329		

11b.	Enter the total number of recommendations approved	
Answer: 161		

12a.	Enter the value of recommendations proposed	
Answer: $424,502,020		

12b.	Enter the value of recommendations approved	
Answer:		

$192,311,470

13a.	Enter the total number of VECPs Submitted	
Answer: Not tracked		

13b.	Enter the total number of VECPs approved	
Answer: 40		

14a.	Enter the total value of VECPs submitted	
Answer: Not tracked		

14b.	Enter the total value of VECPs approved	
Answer: $4,477,540		

15.	**Tabulate the approved VE recommendations according to functional benefit**	
Answer: **#safety - 0** **#operations - 29** **#environment - 40** **#construction - 81** **#other - 67**		

16.	**Tabulate the approved VECPs according to functional benefit**	
Answer: Not Tracked **#safety**		

#operations
#environment
#construction
#other

17a.	**Is VE evaluated as part of your Division's Risk Assessment process?**	Enter yes if the Division considered & documented risks for the VE program during FY 2011. This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE' (Risk value)
Yes No		

17b.	If the answer to Question 17a is "Yes", how is VE currently evaluated? Select One of the Following:	Enter yes if the Division considered & documented risks for the VE program during FY 2011. This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE' (Risk value)
Directly (i.e., VE-specific risk assessment conducted) Indirectly (e.g., VE risk accessed via Design Program)		

17c.	What was the identified level of risk assigned to VE by your Division?	This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE' (Risk value)
High risk to program Moderate to program Low risk to program Not evaluated		

18a.	Did your State conduct a review of the DOT's VE Program between FY 2008 and FY 2011?	Enter yes if either the STA or Division evaluated any component (policies, procedures, analyses conducted, etc) of the VE program and documented the results during the specified period. This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE', (Risk value).
Yes No		

18b.	Will your State conduct a review of the DOT's VE Program in FY 2012?	Enter yes if either the STA or Division plans to conduct a review of any component (policies, procedures, analyses conducted, etc) of the VE program during FY 2012. This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE', (Risk value).

Yes No		

19a.	Is VE discussed in your Division's Stewardship and Oversight Agreement with your DOT?	This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE', (S&O value).
Yes No		
19b.	If the answer to Question 19a is "Yes", describe how the VE Program is currently addressed in your Division's Stewardship and Oversight Agreement with your DOT.	This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE', (S&O value).
VE is addressed by reference in Design Oversight Section Federal Regulations for VE are referenced State DOT's VE Policies and Procedures are referenced Division's VE Coordinator is identified Division's general roles and responsibilities are discussed Division's participation in VE Analyses is discussed Division's role in review of VE recommendations is discussed Division's role in VE Program monitoring is discussed		

20a.	Describe your Division's typical level of participation in VE Analyses	This data is used for Goal 3A 'Divisions are engaged in VE studies; and Goal 3C ' Enhance the consistency of FHWA's Stewardship and Oversight of VE', (S&O value).
Normally (80-100% projects) Frequently (60-80% of projects) Occasionally (40-60% of projects) Seldom (20-40% of projects) Rarely (0-20% of projects)		

20b.	Describe your Division's typical level of participation in the approval/rejection process for VE recommendations.	This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE', (S&O value).
Normally (80-100% projects) Frequently (60-80% of projects) Occasionally (40-60% of projects) Seldom (20-40% of projects) Rarely (0-20% of projects)		

20c.	Describe your Division's level of effort monitoring the implementation of recommendations.	This data is used for Goal 3C 'Enhance the consistency of FHWA's Stewardship and Oversight of VE', (S&O value).
Normally (80-100% projects) Frequently (60-80% of projects) Occasionally (40-60% of projects) Seldom (20-40% of projects) Rarely (0-20% of projects)		

21.	Describe your Division's efforts to ensure that the States complete the required VE Analyses prior to authorizing a project for construction:	Enter all methods of used by the Division to verify that the required VE studies are conducted. This data is used for Goal 3B 'Number of Divisions verifying all required VE studies are conducted'.
All project with full FHWA oversight are checked for compliance Projects with full FHWA oversight "spot checked" for compliance (e.g., sampling & assessment of projects, process reviews) State administered projects are "spot checked" for compliance VE policies, procedures & guidance verified for compliance VE program evaluation and reporting verified for compliance Completion of required VE analyses is not checked formally		