



U.S. Department
of Transportation
**Federal Highway
Administration**

Memorandum

Subject: **ACTION:** Final Value Engineering (VE) Program
Performance Measures

Date: April 20, 2010

Dwight A. Horne

Reply to
Attn. of: HIPA-20

From: Dwight A. Horne
Director, Office of Program Administration

To: Division Administrators
Federal Lands Highway Division Engineers

This memorandum is to inform you of the new goals and performance measures for the VE program. These goals reflect the strategies FHWA will pursue and successful practices to be promoted to continuously enhance the conduct of VE studies, the quality of the VE programs, and FHWA's stewardship and oversight of the VE program.

These proposed new VE program goals and measures:

- Maximize the influence VE studies have on a project's cost and performance;
- Enhance the quality of VE programs; and
- Improve FHWA's stewardship and oversight of the VE Program.

The attached summary provides the outcomes, performance measures, and metrics which support these goals. FHWA's FY 2009 VE Accomplishment Report summarizing the progress that has been achieved with advancing VE will be distributed in May.

The identification and promotion of successful practices will continue to play an important role with FHWA's efforts to promote VE practices nationally. The innovative and successful practices identified in the annual VE data collection will augment the reporting of the progress being made with advancing VE practices.

We appreciate your continued support with advancing the VE program and practices within your state and office. Please submit any questions or comments your staff may have on the VE program goals and performance measures to Mr. Jeffrey Zaharewicz at jeffrey.zaharewicz@dot.gov.

Attachment



FHWA Value Engineering (VE) Program Performance Measures

Goal 1: Maximize the influence VE studies have on a project's cost and performance.

Outcome: By increasing the number of VE study recommendations that are implemented, improvements in the project's cost-effectiveness and performance will be realized.

- Baseline: 2.0 (FY 2009)
- Target: 2.5 (FY 2016)

The baseline and target measures were developed using weighted averages of the data collected from the annual VE reporting cycles. These measures are based on a weighted average of 60% of the indicator for project construction costs saved and 40% of the indicator for VE study recommendations implemented. Both the national average and numeric average for each indicator will be compiled, tracked and reported.

Performance indicators:

A. Percentage of VE study recommendations implemented

- National average:
 - Baseline: 44 % (FY 2009)
 - Target: 55 % (FY 2016)

-Performance indicator & metric: The data collected (question 11b) in the annual VE reporting cycle for each state DOT is converted to a numeric value and averaged as depicted in the following matrix:

- Baseline: 2.3 (FY 2009)
- Target: 2.8 (FY 2016)

	0	1	2	3	4	5
% of Implemented Recommendations	0-15%	16-30%	31-45%	46-60%	61-80%	81-100%

B. Percentage of project construction costs saved

- National average:
 - Baseline: 8.0 % (FY 2009)
 - Target: 10.0 % (FY 2016)

-Performance metric: The data collected (question 10b & 12b) in the annual VE reporting cycle for each state DOT is converted to a numeric value and averaged as depicted in the following matrix:

- Baseline: 1.8 (FY 2009)
- Target: 2.4 (FY 2016)

	0	1	2	3	4	5
% of Construction Project Cost Savings	0-2.5%	2.5-5%	5-7.5%	7.5-10%	10-12.5%	More than 12.5%

Goal 2: Enhance the quality of VE programs.

Outcome: To enhance both the strategic and day-to-day capacity (e.g., policy, procedures, functions, services) and quality of VE programs.

- Baseline: 2.5 (FY 2009)
- Target: 3.5 (FY 2016)

The baseline and target measures were developed using weighted average of the data collected from the annual VE reporting cycles. These measures are based on a weighted average of 30% for the state DOTs with a VE policy, 30% for the State DOTs with an established VE program, and 40% for the state DOT's conducting VE studies prior to completing 30% of the design of a project.

Performance indicators:

A. Number of state DOTs with a VE policy.

- Baseline: 2.7 (FY 2009)
- Target: 4.1 (FY 2016)

Performance Metric: The data collected (question 1b) in the annual VE reporting cycle is converted to a numeric value and averaged as depicted in the following matrix:

	0	1	2	3	4	5
VE Policy	No policy documented or formal VE program commitment	Documented commitment to conduct required VE studies (23 CFR 627) & 1 VE program element in policy	2 VE program elements addressed in policy	3-4 VE program elements addressed in policy	5-6 VE program elements addressed in policy	All 7 VE program elements addressed in policy

B. Number of states with an established VE Program.

- Baseline: 3.1 (FY 2009)
- Target: 4.0 (FY 2016)

Performance Metric: The data collected (question 1a & 2a) in the annual VE reporting cycle is converted to a numeric value and averaged as depicted in the following matrix:

	0	1	2	3	4	5
VE Policy	No policy documented or formal VE program commitment	1 VE program element identified or under development	2 VE program elements identified or under development	3 VE program elements identified or under development	4 VE program elements identified or under development	5 VE program elements identified or under development

C. Percentage of VE studies conducted prior to completing 30% of a project's design.

-Baseline: 1.9 (FY 2009)
 -Target: 2.7 (FY 2016)

Performance Metric: This indicator reflects the percentage of the VE studies that state DOTs conduct prior to completing 30% of a project's design, using the data collected (question 4c) in the annual VE reporting cycle, is converted to a numeric value and averaged as depicted in the following matrix:

	0	1	2	3	4	5
% of VE studies conducted before completing 30% of a project's design	0 – 15 %	15 – 30 %	30 – 45 %	45 – 60 %	60 – 80 %	80 – 100 %

Goal 3: Improve FHWA's stewardship and oversight of the VE Program.

Outcome: To enhance FHWA's consistency with providing oversight of the VE programs and involvement with studies.

-Baseline: 2.4 (FY 2009)
 -Target: 4.3 (FY 2016)

The baseline and target measures were developed using weighted average of the data collected from the annual VE reporting cycles. These measures are based on a weighted average of 30% for the FHWA Divisions engaged in VE studies, 30% for the FHWA Divisions verifying all required VE studies are conducted, and 40% for the FHWA Divisions stewardship and oversight of VE programs and studies.

Performance indicators:

A. Divisions are engaged in VE studies.

-Baseline: 3.1 (FY 2009)
 -Target: 4.2 (FY 2016)

Performance Metric: The data collected (question 20a) in the annual VE reporting cycle is converted to a numeric value and averaged as depicted in the following matrix:

	0	1	2	3	4	5
Participating in VE studies	No involvement	Rarely (0-20 %)	Seldom (21-40 %)	Occasionally (41-60 %)	Frequently 61-80 %	Normally (80-100 %)

B. Number of Divisions verifying all required VE studies are conducted.

-Baseline: 3.0 (FY 2009)

-Target: 5.0 (FY 2016)

Performance Metric: The data collected (question 20d) in the annual VE reporting cycle is converted to a numeric value and averaged as depicted in the following matrix:

	0	1	2	3	4	5
Verification of VE studies conducted	0-5	6-20	21-35	26-39	40-51	52

C. Enhance the consistency of FHWA’s stewardship and oversight of VE.

-Baseline: 1.4 (FY 2009)

-Target: 3.7 (FY 2016)

Performance Metric: The data collected (question 19a) in the annual VE reporting cycle is converted to a numeric value and averaged as depicted in the following matrix.

	0	1	2	3	4	5
Integration of VE in Divisions stewardship & oversight agreements, risk assessment, & reviews conducted	<p>VE is not included in Divisions stewardship & oversight agreement</p> <p>VE is not included in annual risk assessment process</p>	<p>Identified in Divisions stewardship & oversight agreement, work plan or standards operating procedures:</p> <ul style="list-style-type: none"> - When VE studies need to be conducted -VE integrated in the planning & design sections of agreement &/or plans <p>VE is considered in Divisions annual risk assessment process</p>	<p>Identified in Division’s stewardship & oversight agreement, work plan or standard operating procedures:</p> <ul style="list-style-type: none"> -State DOTs VE policies & procedures referenced -Division’s VE coordinator & role described 	<p>Identified in Division’s stewardship & oversight agreement, work plan or standard operating procedures:</p> <ul style="list-style-type: none"> -Division’s VE roles & responsibilities -Division’s participation in VE studies 	<p>Identified in Division’s stewardship & oversight agreement, work plan or standard operating procedures:</p> <ul style="list-style-type: none"> -Divisions role in reviewing VE study recommendations -Divisions role in verifying VE recommendations are implemented 	<p>Identified in Division’s stewardship & oversight agreement, work plan or standard operating procedures:</p> <ul style="list-style-type: none"> -Division’s role in the monitoring, & reporting of VE programs -Division’s role with supporting improving a State DOTs VE program