Value Engineering Annual Report FY 2008/2009



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Executive Summary

VE During Project Development

The effort put forth in value engineering by the department management and employees over the past ten years has produced more than \$2.4 billion in implemented cost avoidance. This effort has led to the department being recognized as a national leader in value engineering .

The districts completed 28 studies or 68% of the original number of studies scheduled for fiscal year 2008/2009. The original work plan had 41 studies scheduled for the year and the target was to complete 75% or 31 of the planned studies. Due to the dynamics of the department's work program, 15 of the 41 scheduled studies (37%) were rescheduled for the 2009/2010 fiscal year, while two of the completed studies were added to the original work plan.

During this same period, the districts acted on 187 recommendations, approving 89 for a 48% adoption rate. Seventy-eight of the approved recommendations resulted in \$310.4 million in project cost avoidance/savings. The remaining 11 recommendations were value added recommendations that increased project performance, while adding \$53.4 million to the project cost. Therefore, the total value of the approved recommendations, including the value added recommendations, produced **\$257 million in project cost avoidance/savings**.

The approved recommendations resulted in a 7.53% project saved and a Return on Investment (ROI) of \$196 to \$1. The percent project saved is calculated by dividing the value of all approved recommendations by the total costs of the projects studied, while the ROI is calculated by dividing the value of all approved recommendations by the cost of administering the program.

There are currently 47 pending recommendations totaling \$118.2 million in potential cost avoidance/savings. This is a 47% decrease in the total number of pending recommendations and a 74% decrease in the amount of pending dollars from the 4th quarter of last year. This is the lowest number of pending recommendations in the last 4 years and is the result of an outstanding job the districts have done managing their pending recommendations.

VE During Construction

Nineteen Value Engineering Change Proposals (VECP's) were submitted during fiscal year 2008/2009, totaling more than \$3.2 million in potential project savings. During this same period, the districts acted on 18 proposals approving 14. The implemented savings from the 14 approved VECP's was nearly \$2.6 million. There are currently six pending VECP's totaling \$1.8 million in potential project savings.

Program Organization

Mission: Administer the Florida Department of Transportation Value Engineering Program, satisfying the needs of the stakeholders.

Vision: Value Engineering . . . providing an effective support function which maximizes project and process value for the transportation systems in the State of Florida.

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10.0

Value Engineering Overview

What is Value Engineering

Value Engineering (VE) is the formal application of a proven and effective tool used to improve the value of a project, product or service. VE strives to optimize the use of allocated funds without reducing the quality or performance. A multi-disciplined team is assembled and the six phases of the VE Job Plan (Information, Functional Analysis, Creative, Evaluation, Development and Presentation) are used to guide the team through the process.

Pre-Study	 Project Selection Team Selection 	
VE Study	 Information Phase Functional Analysis Creative Phase Evaluation Development Presentation 	
Post-Study	 Recommendation Resolution Report Results 	

VE Job Plan

The administration of the VE Program can be broken down into the following key processes.

Pre-Study	Study	Post Study
Project Selection	Conduct VE Study	Recommendation Resolution
Team Selection		Report Results

Value Engineering Overview

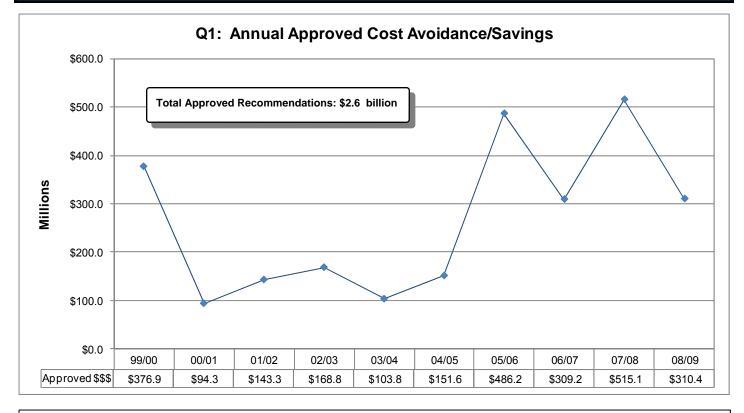
Performance Measures

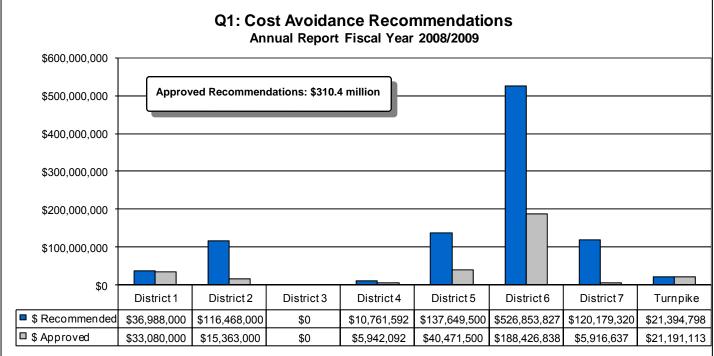
The VE Program is managed through the use of the Process Control Systems found in Appendix B. Each process has a set of Quality and In-Process measures that are used to evaluate the performance of the program. The Quality Measures for the overall VE program are defined below.

VE Program			
Quality Measure	Calculation		
Q1: Approved Cost Avoidance Recommendations	Sum of all approved cost avoidance/ savings recommendations		
Q2: Approved Value Added Recommendations	Sum of all approved value added recommendations		
Q3: Adoption Rate	# of Approved Recommendations # of Proposed Recommendations		
Q4: Percent Project Saved	Value of Approved Recommendations Total Project Costs		
Q5: Return on Investment (only reported annually)	Value of Approved Recommendations Total cost of VE Program		
VECP Program			
Q1: Number of VECP's	Sum of all VECP's		
Q2: Approved Cost Savings	Sum of all approved VECP savings		

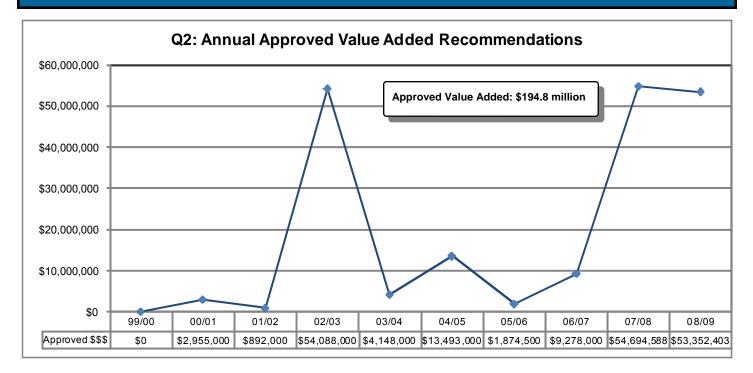
FY 2008/2009 Performance Measures

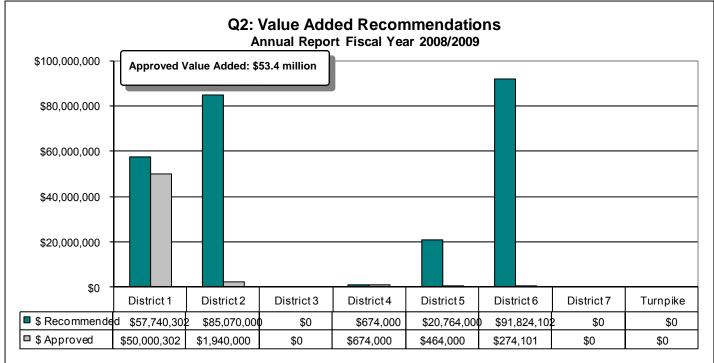
Adopted Recommendations





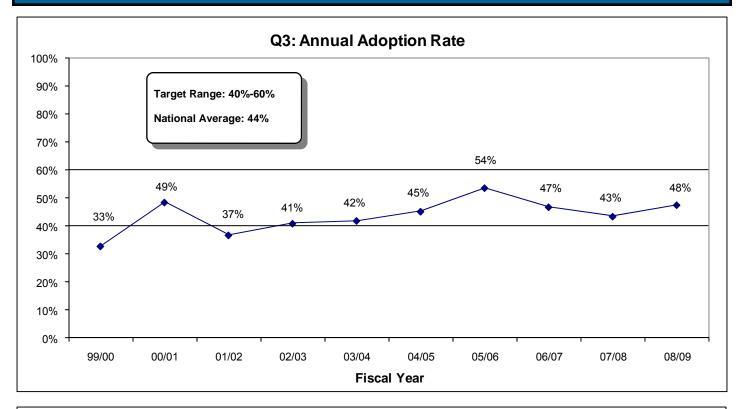
Adopted Recommendations

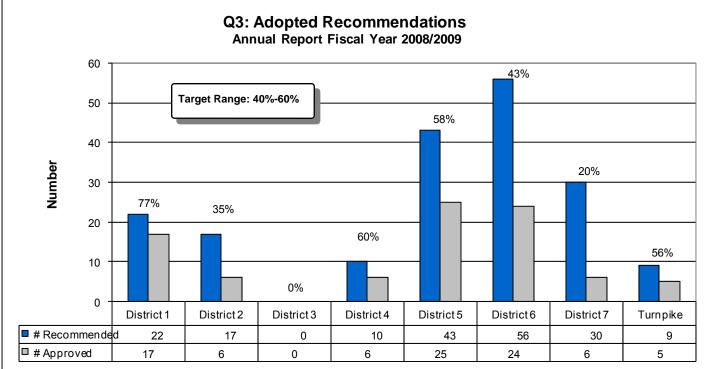




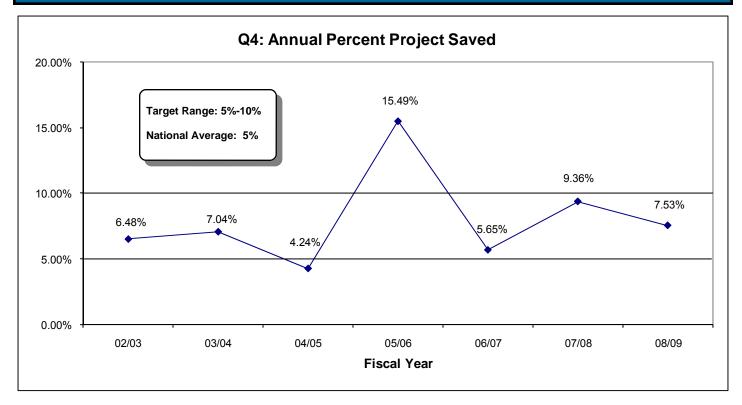
* A Value Added Recommendation significantly increases the performance of a function while also increasing the cost.

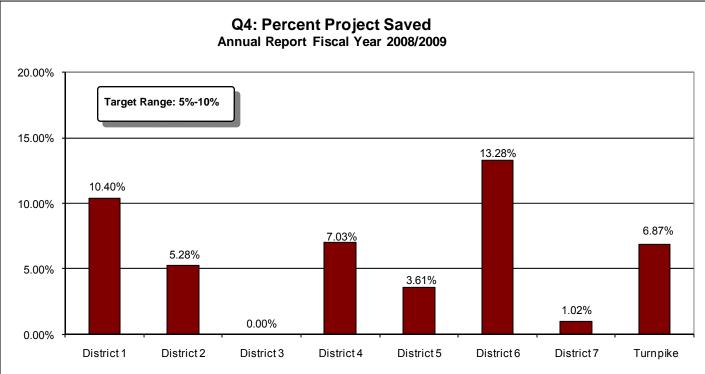
Adoption Rates



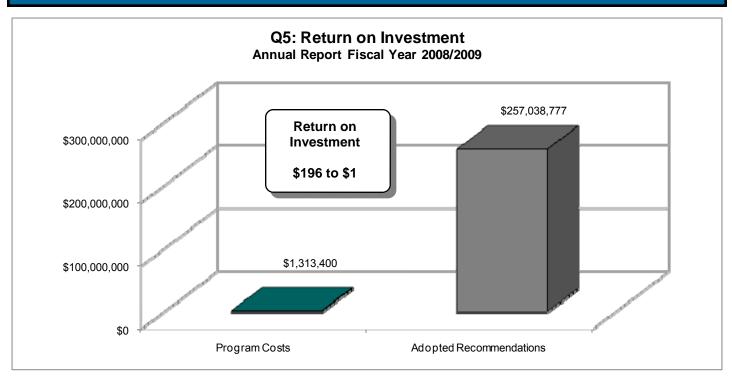


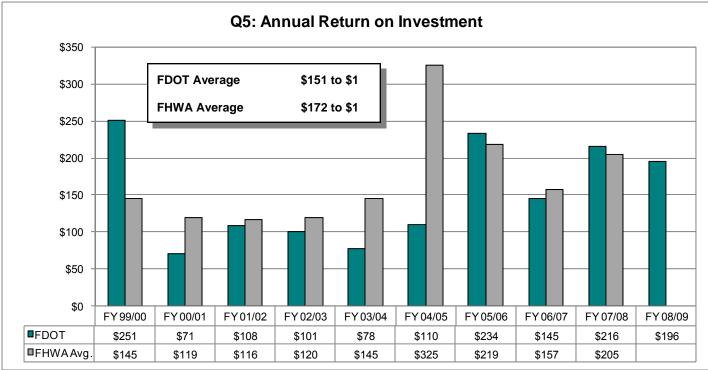
Percent Project Saved





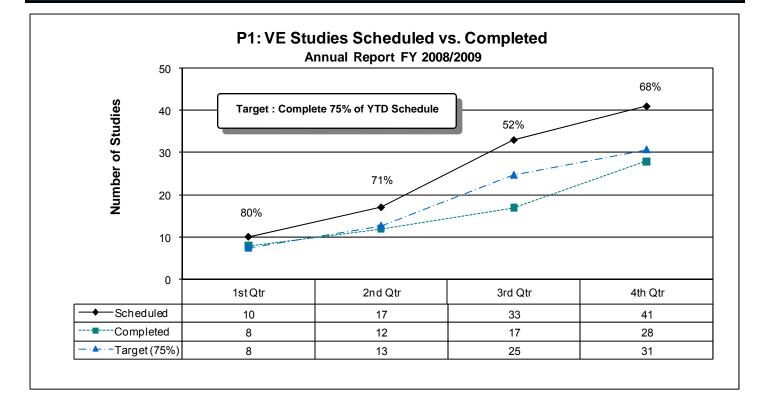
Return on Investment

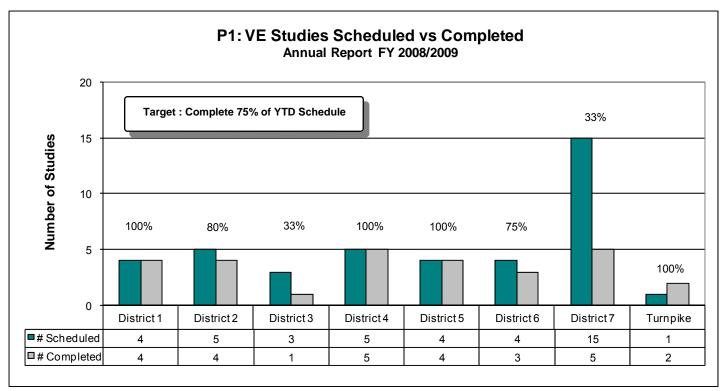




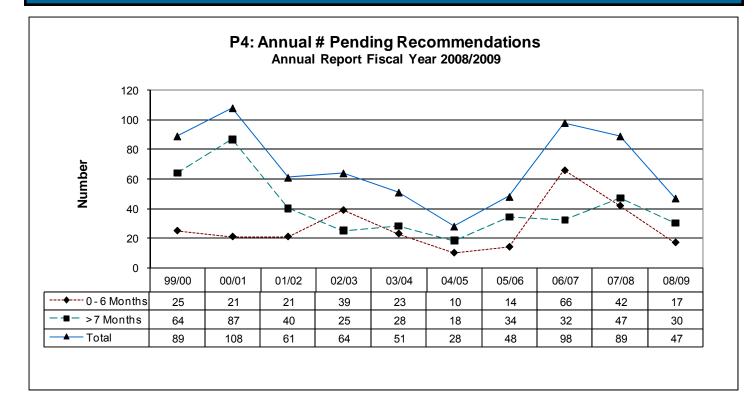
* FHWA data for fiscal year 2007/2008 was not available at time of publication.

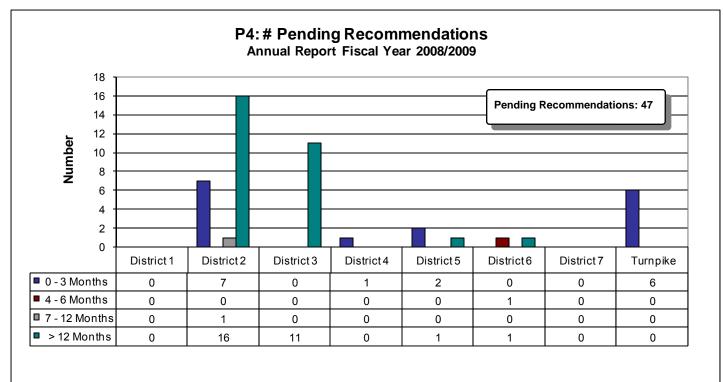
Work Plan Completion



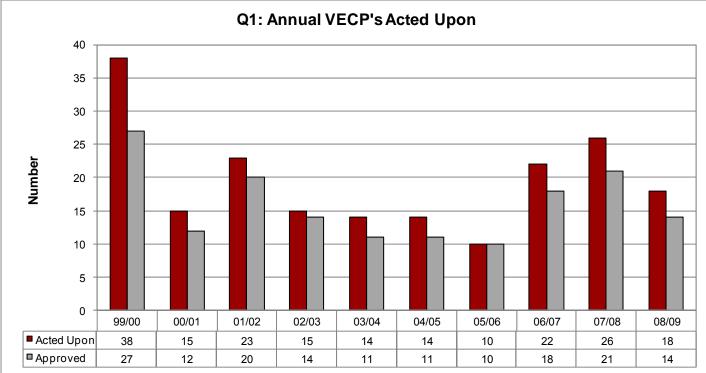


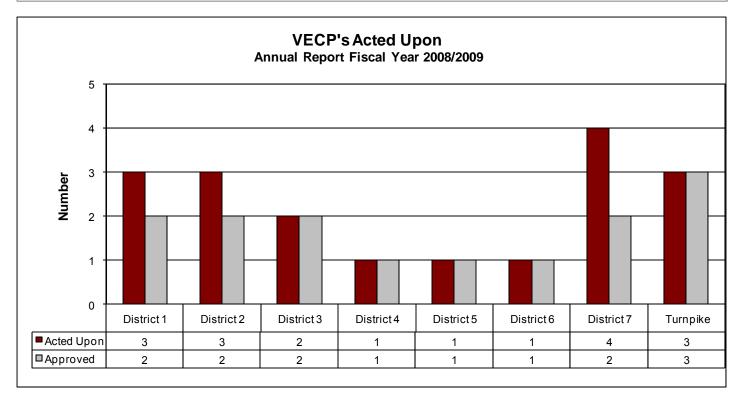
Pending Recommendations



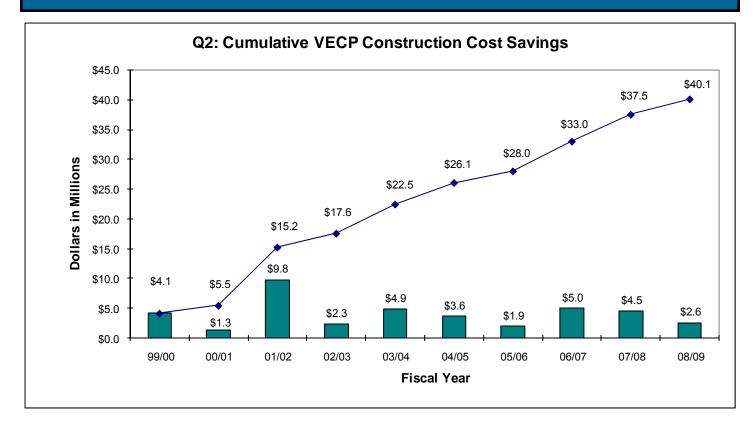


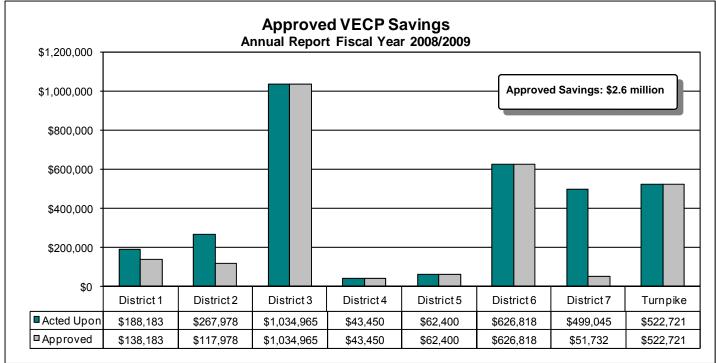
VECP Summary



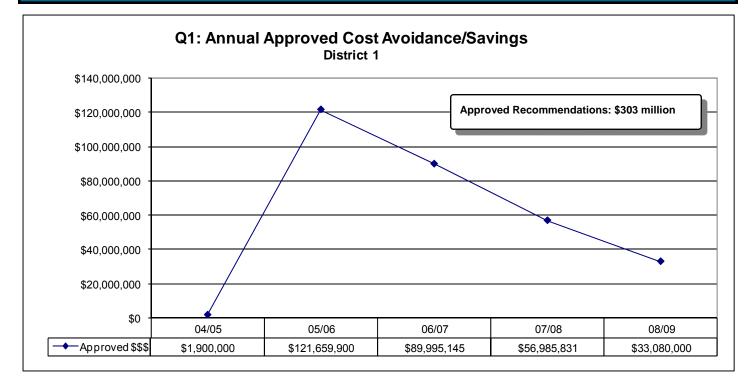


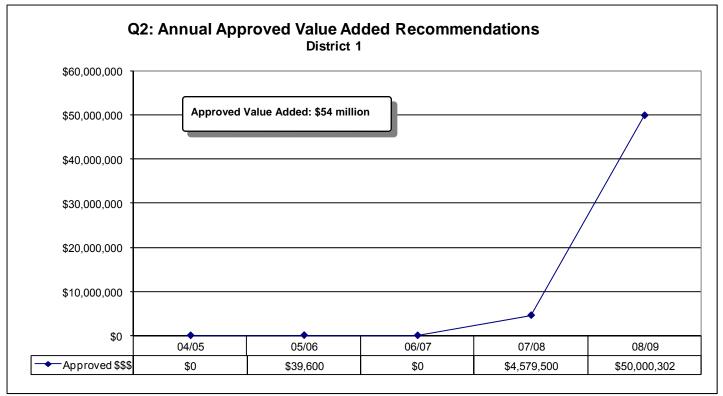
VECP Approved Savings

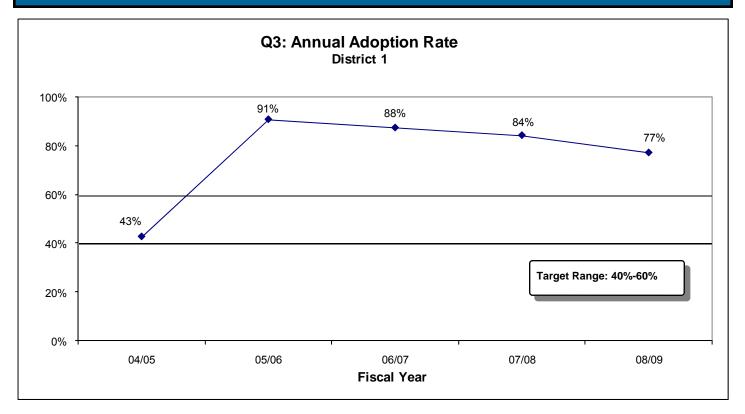


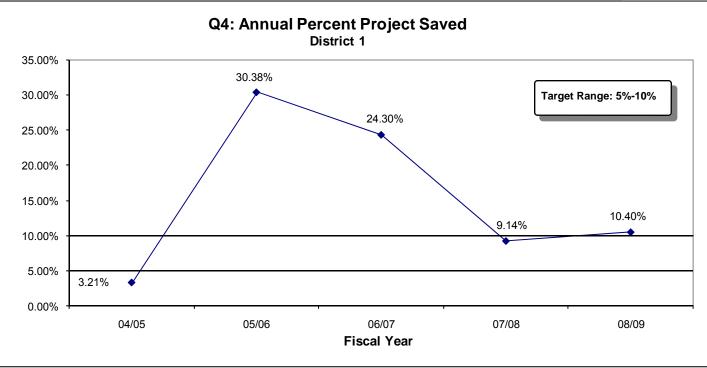


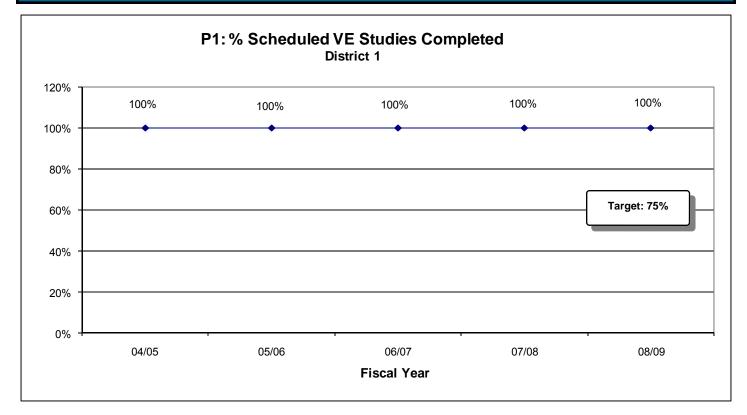
Appendix A 5 year History Annual Performance Measures by District

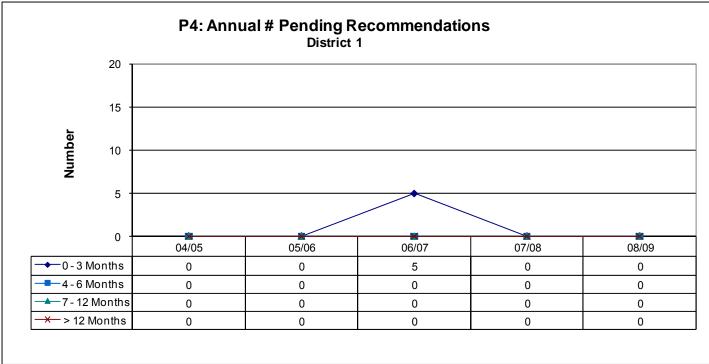


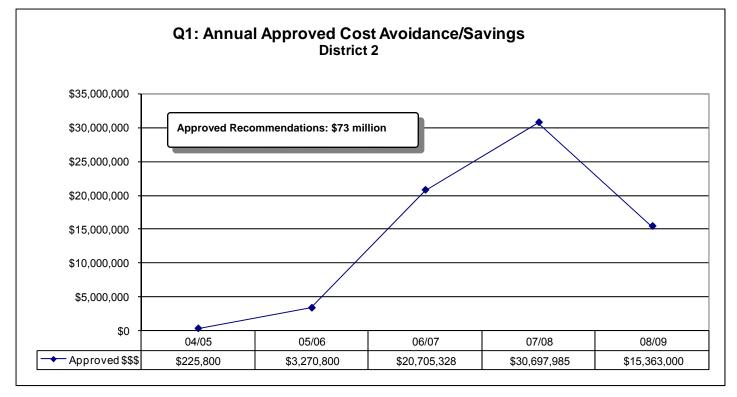


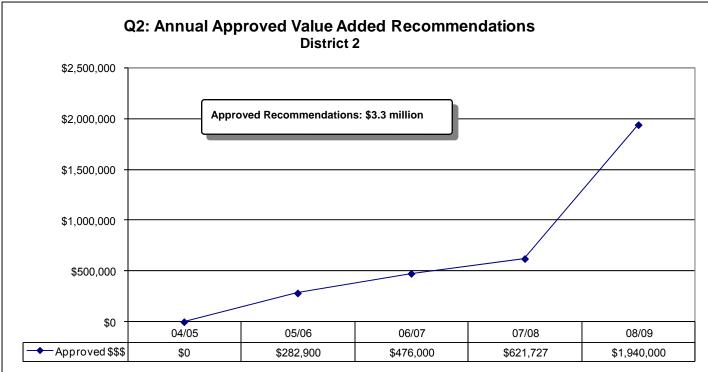


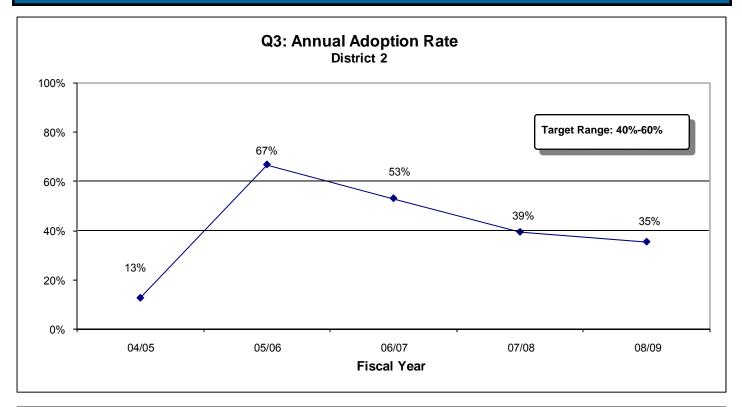


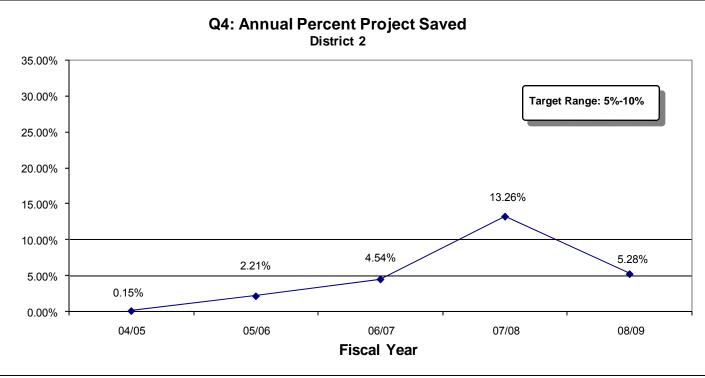


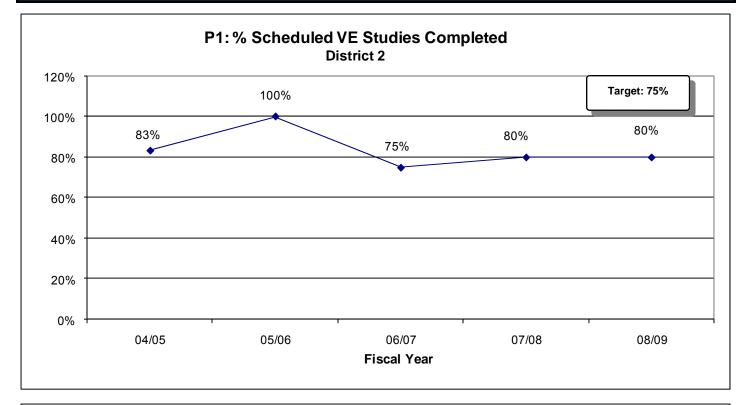


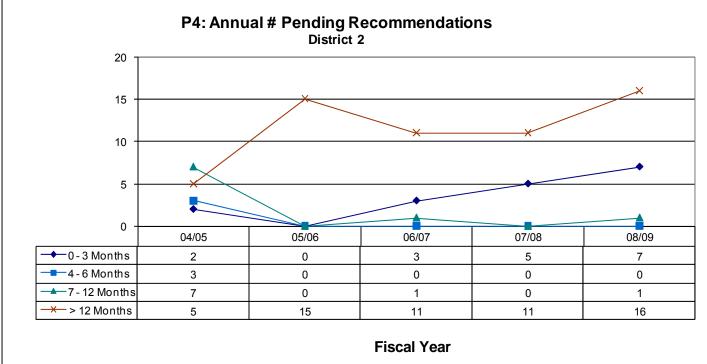


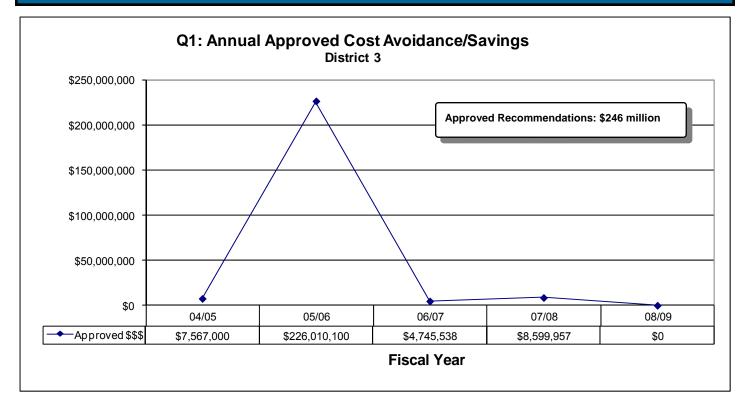


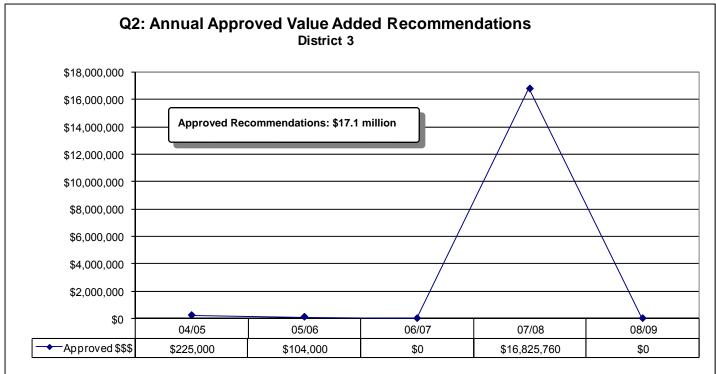


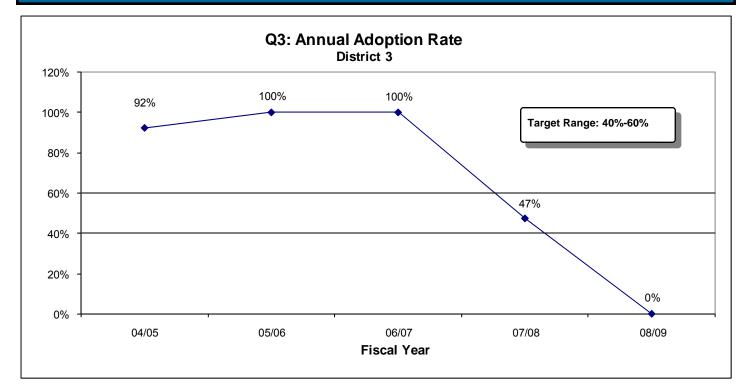


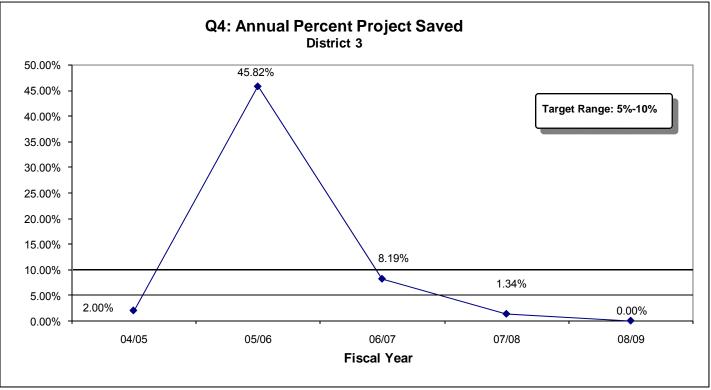


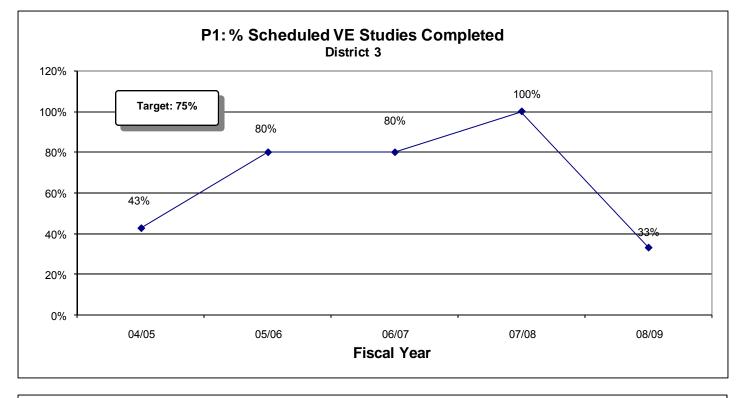


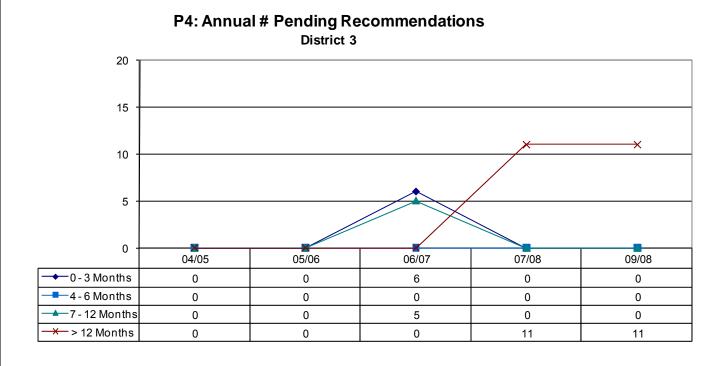


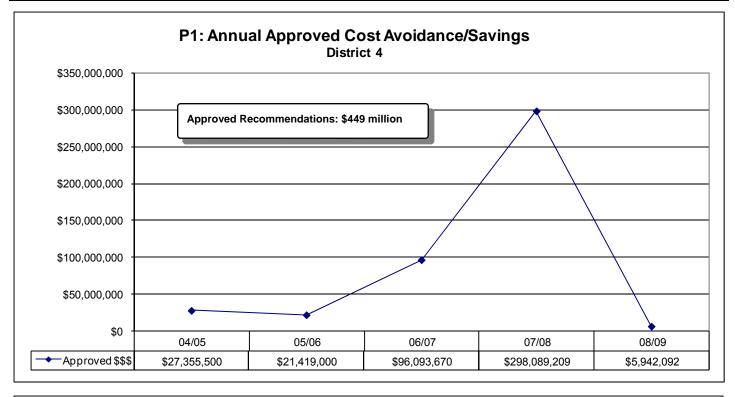


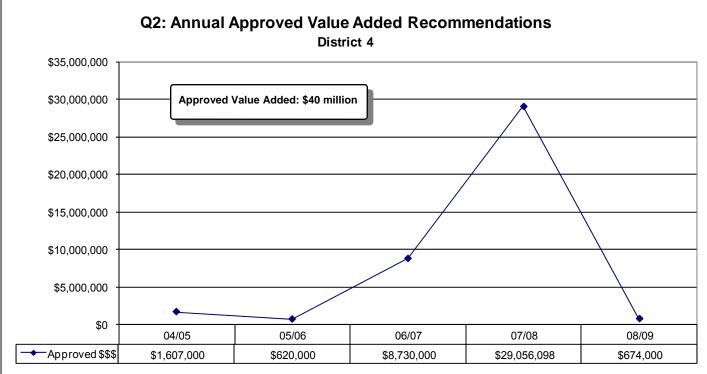


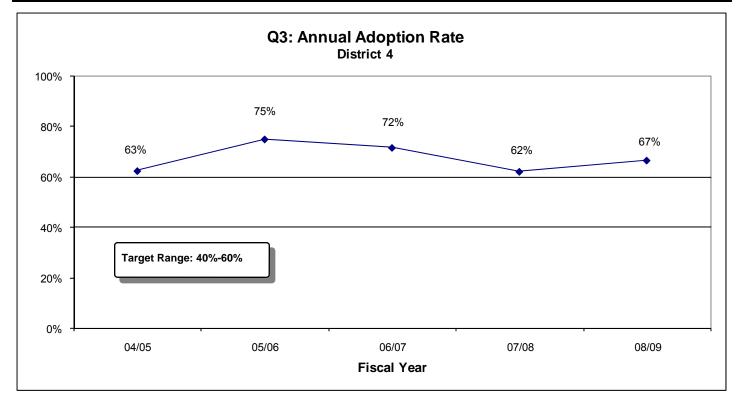


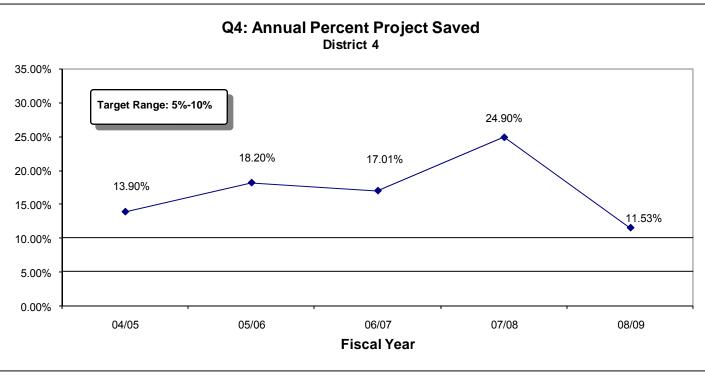


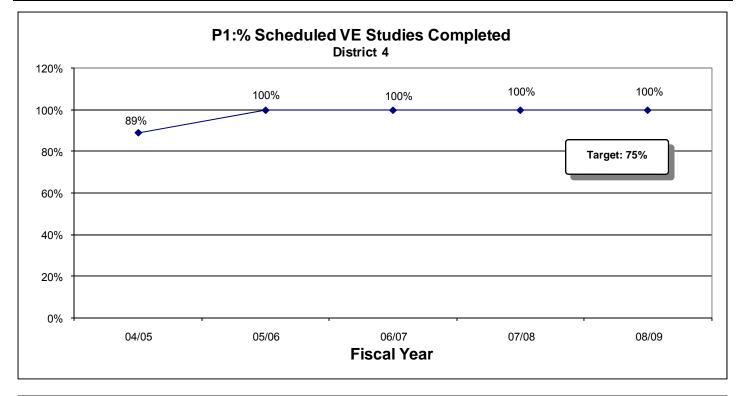


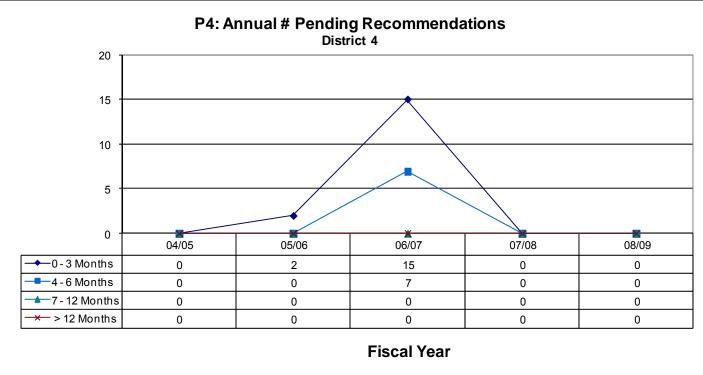


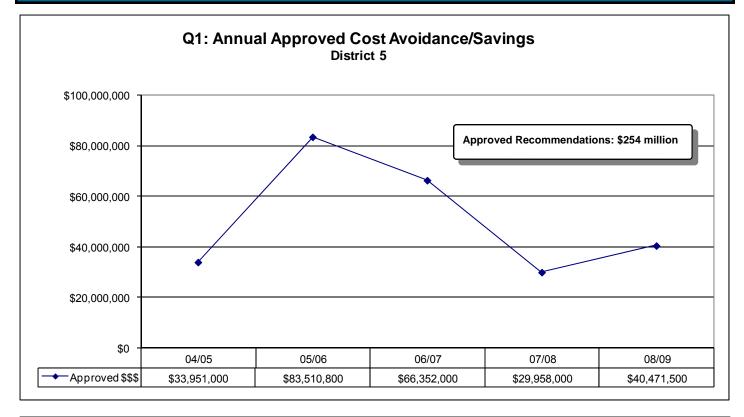


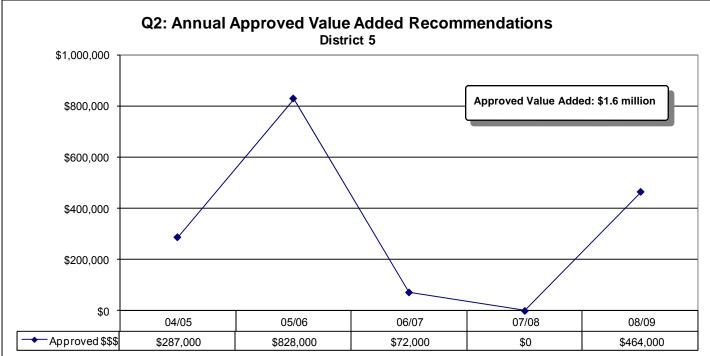


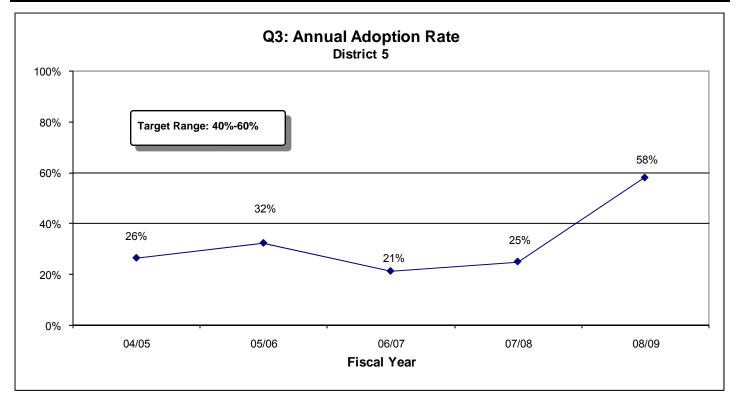


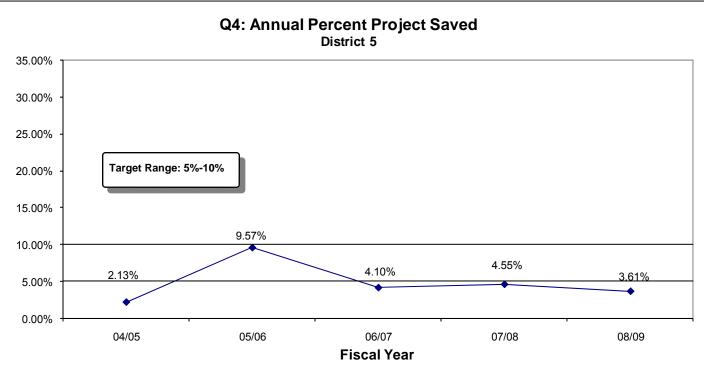


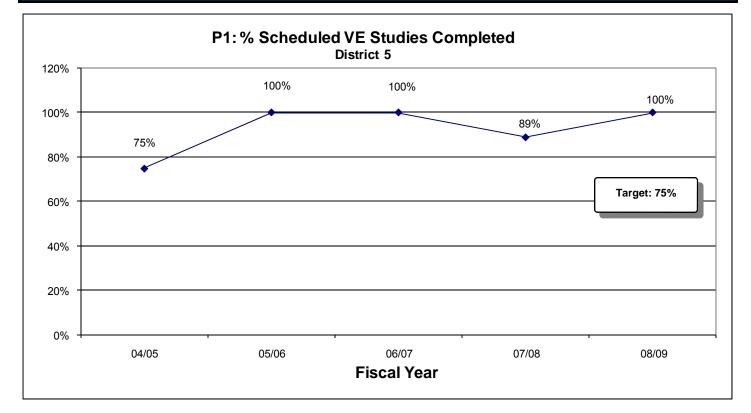


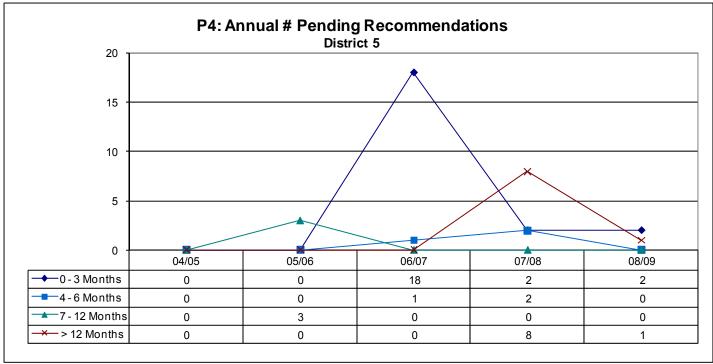


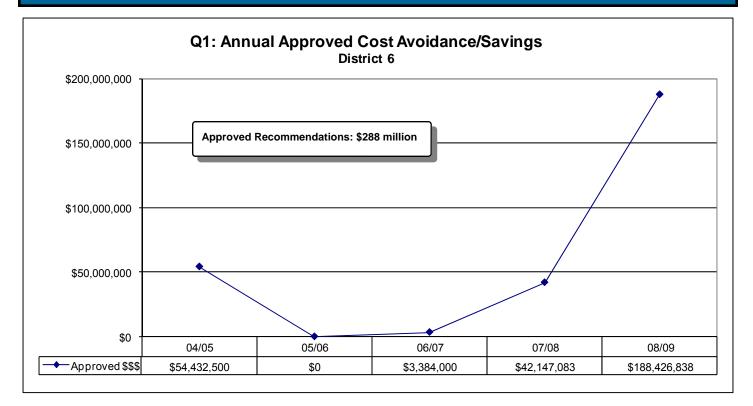


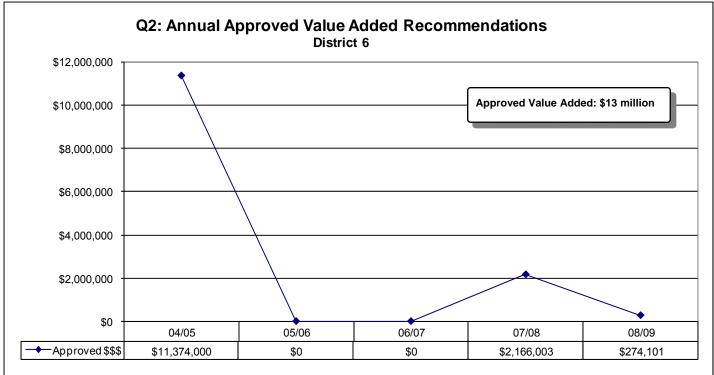


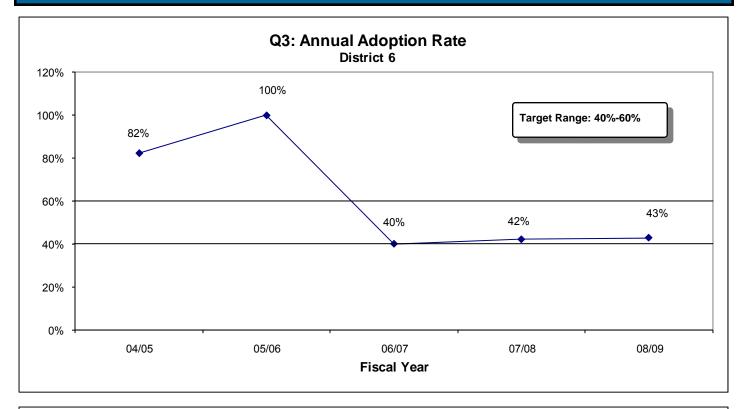


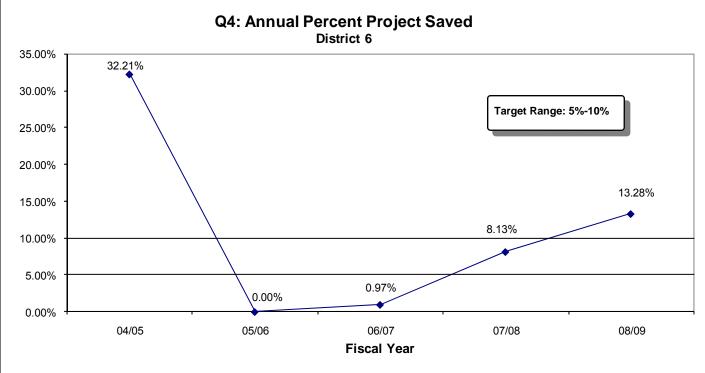


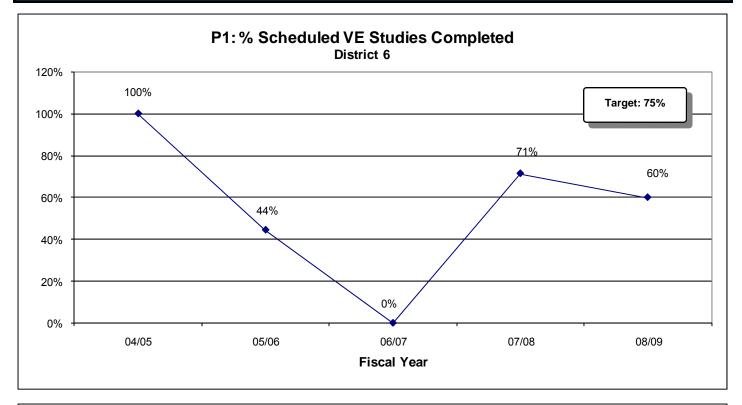


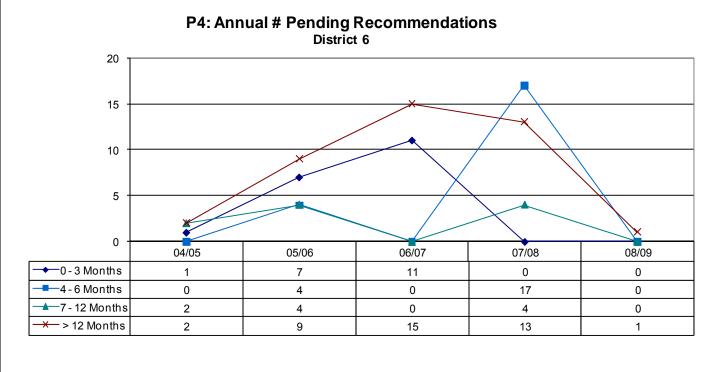


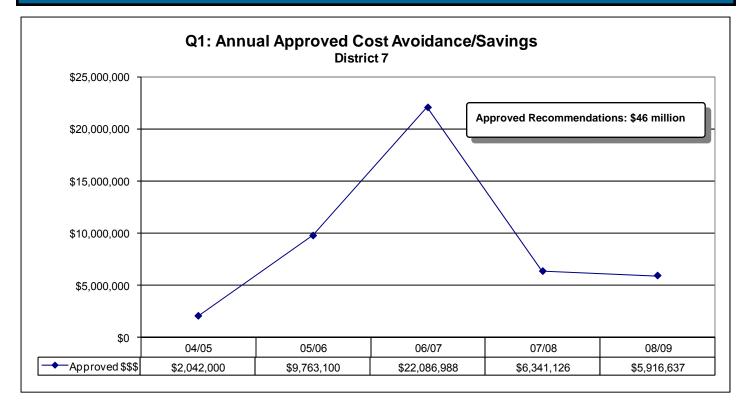


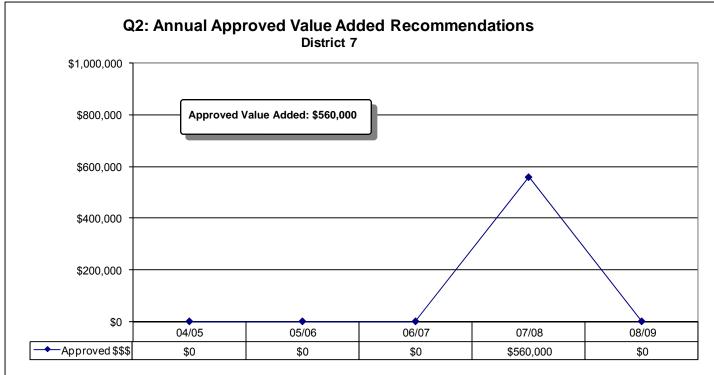




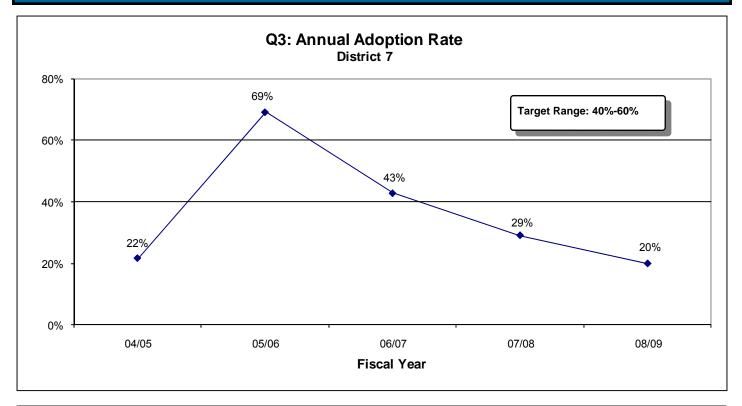


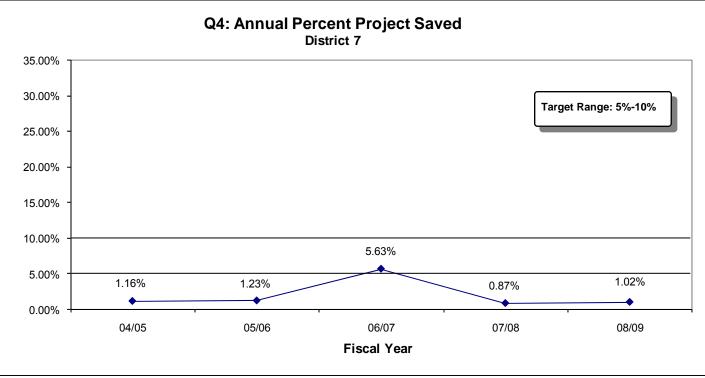




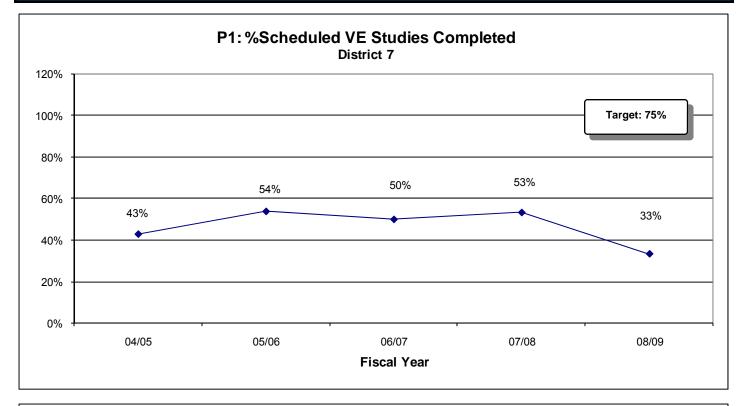


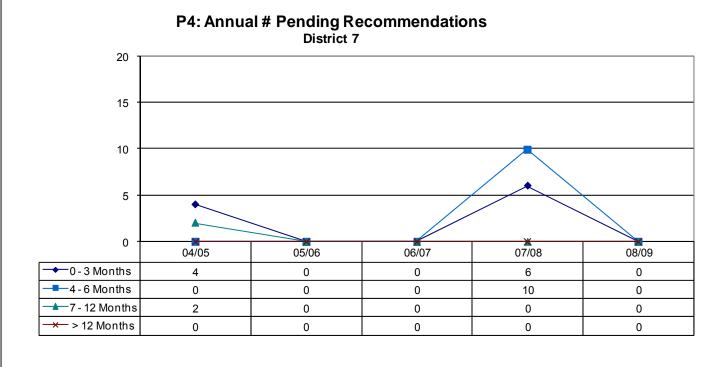
District 7



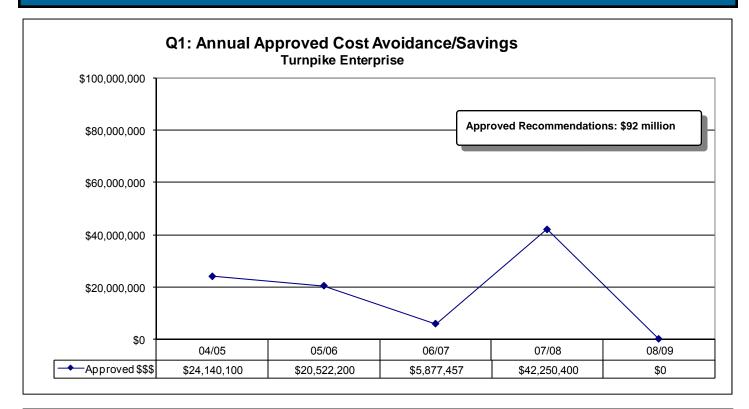


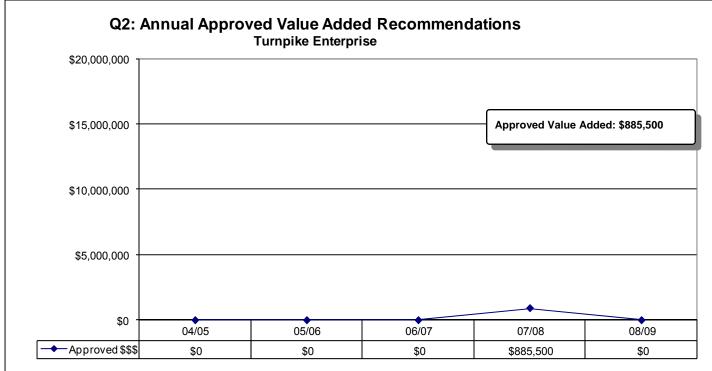
District 7



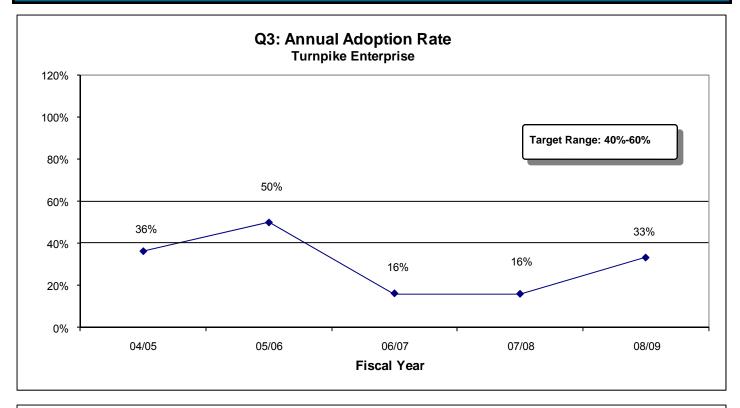


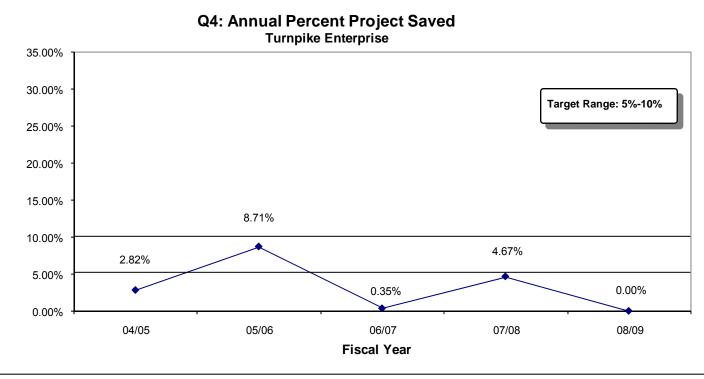
Turnpike Enterprise



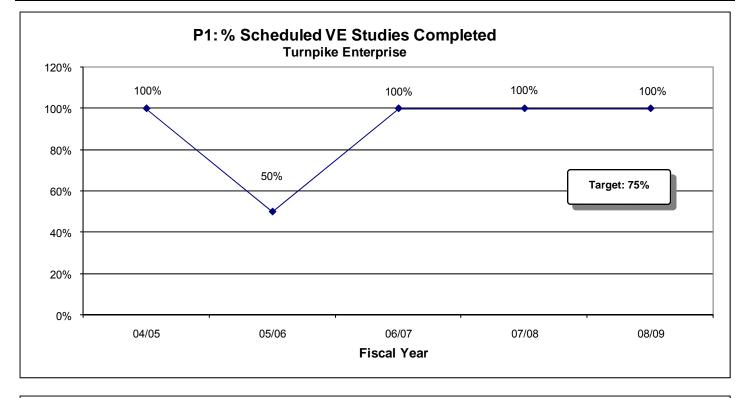


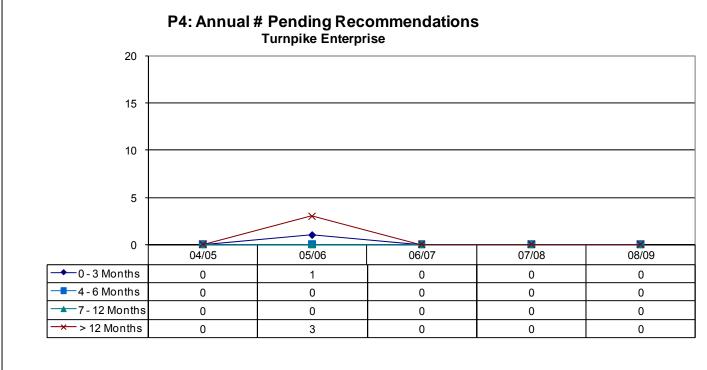
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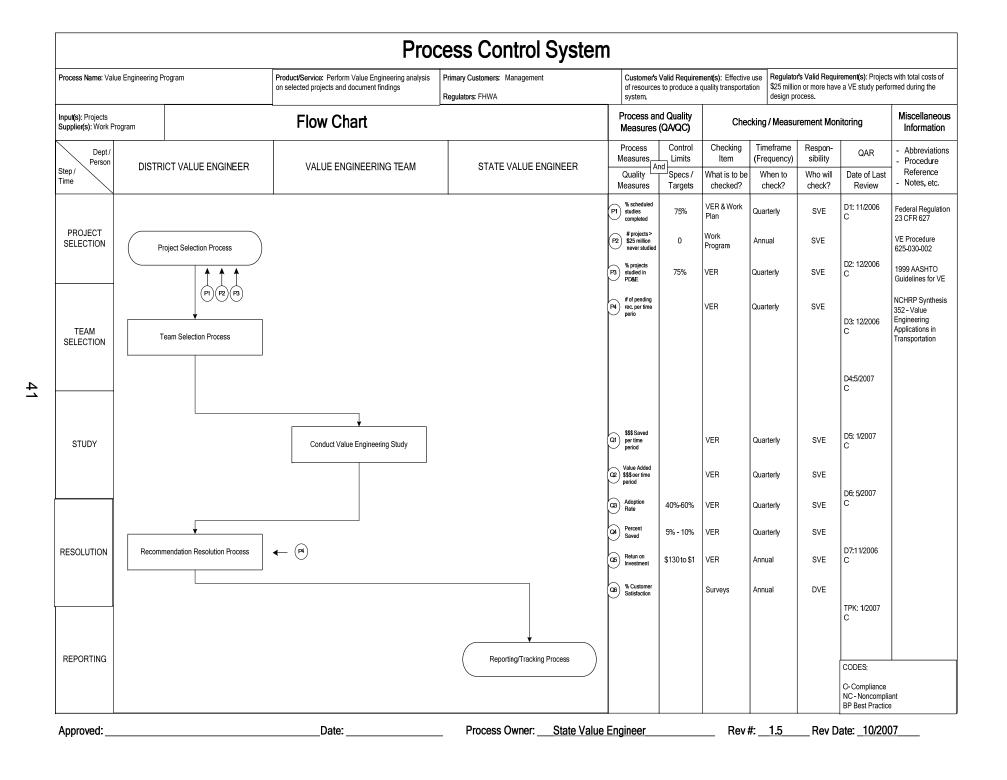


Turnpike





Appendix B Process Control Systems



		Pro	cess Con	trol Systen	n						
Process Name: Value Engineering Project Selection Product/Service: Develop a Value Engineering by July 1 of each fiscal year.		eering Work Plan	In Primary Customers: District Management, State Value Engineer. Partners: FHWA		Valid Requirement(s): All projects with the most potential for improvement have a VE Analysis.			E NHS s		All projects on the sts > \$25 million	
upplier(s): Projects Flow Chart					Process and Quality Indicators		Cł	Checking / Indicator Monitoring			Miscellaneous Information
Dept/ Person ae DISTRICT VALUE ENGINEER		DISTRICT MANAGEMENT		STATE VALUE ENGINEER	Process Control Indicators Limits Quality Specs /		Checking Item What is to be	Timeframe (Frequency) When to	Respon- sibility Who will	Date of Last	 Abbreviations Procedure Reference
Develop VE Work Plan	n Feedback from	n surveys			Indicators P1 % work plans approved by July 1	Targets 100%	checked? Work Plan Received	check? Annual	check? SVE	Review D1: 11/2006 C	- Notes, etc. Federal Regulation 23 CFR 627
eview projects in production pip	NO				Q1 % scheduled studies completed	75%	VER & Work Plan	Quarterly	SVE	D2: 12/2006 C	VE Procedure 625-030-002
project costs > \$25 million? YES	NO project a quality candidate?				(02) #projects > \$25 million never studied	0	Work Program	Annual	SVE	D3: 12/2006	AASHTO Guidelines for VE
VE window in this fiscal year	YES NO				% projects studied in Pre-Design phase	60%	VER	Quarterly	SVE	c	NCHRP Synthesis 352 - Value
YES Add project to Candidate Lis	List									D4:5/2007 C	Engineering Applications in Transportation
All projects been reviewed? YES Develop Work Plan	d? NO									D5: 1/2007 C	
Submit work plan approval	/al	¥								D6: 5/2007 C	
	<	Is work plan a YES Approve work plan	NO							D7:11/2006 C	
Send copy of plan to SVE	E (P)									TPK: 1/2007 C	
				Compile plans and publish on Web						CODES:	
Execute work plan										C- Compliance NC - Noncomplia	ant
			lan	lan)	Compile plans and publish on Web	Compile plans and publish on Web	Compile plans and publish on Web	Compile plans and publish on Web	Compile plans and publish on Web	Compile plans and publish on Web	Compile plans and publish on Web

