Value Engineering

of

State Agency Capital Outlay Projects

for

Fiscal Year 2026

DEPARTMENT OF
GENERAL SERVICES

DIVISION OF ENGINEERING AND BUILDINGS

Serving Government. Serving Virginians.

September 15, 2026

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EXECUTIVE SUMMARY

I. Introduction

The Director of the Department of General Services is required by Section 2.2-1133 of the *Code of Virginia* to report to the Governor and the General Assembly on or before September 15 of each year, the following:

(i) the number and value of the state capital projects where value engineering (VE) was employed
(ii) the identity of the capital projects for which a waiver of the requirements of Section 2.2-1133.B was granted, including a statement of the compelling reasons for granting the waiver.

II. Projects

Eleven (11) projects with a combined estimated construction value of approximately $607.9 million were reported by Agencies as undergoing the Value Engineering process during Fiscal Year 2026. The requirements for Value Engineering are defined in Section 2.2-1133 of the *Code of Virginia.* The associated administrative procedures are provided in the Commonwealth of Virginia's *Construction and Professional Services Manual.*

III. Savings / Cost

Estimated savings for owner-accepted VE items were provided for these projects by the applicable agencies and institutions. The estimated savings recommended by the value engineering teams and accepted by state agencies for these projects totaled approximately $13.7 million. The average VE savings were 2.3% of the estimated construction value.

The average cost of a VE Study was $61,113. The average savings in construction value was $913,000. The aggregate costs of the VE studies as a percent of aggregate savings were 6.7%. This is equivalent to a payback ratio of 15:1 for employing the VE process.

IV. Waivers Granted / Projects Excluded

Eleven (11) reported projects were granted waivers, excluded from the VE process, or did not perform a VE study. Six (6) projects were CM or Design-Build procurements and are identified in Table 3. The remaining projects and the associated reasons for exclusion are identified in Table 4. Projects approved for procurement using the Design Build methodology are excluded from the standard VE process as the Design Build Contractor provides a lump sum fixed price prior to design and contract award. Projects procured using Construction Management at Risk (CM at Risk or CM/GC) are also exempted from the VE process. The average "value" savings reported by agencies as being incorporated in the design for these waived/excluded projects was 7.0% of the estimated construction value.

Projects procured under the provisions of the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) are exempted from the value engineering requirements defined in Code of Virginia Section 2.2-1133.

VALUE ENGINEERING OF STATE CAPITAL OUTLAY PROJECTS FOR THE PERIOD JULY 1, 2025 - JUNE 30, 2026

1. Introduction

The Director of the Department of General Services is required by Section 2.2-1133 of the Code of Virginia to report by September 15 each year to the Governor and the General Assembly on the (i) number and value of the capital projects where value engineering (VE) was employed and (ii) identity of the capital projects for which a waiver of the requirements of Section 2.2-1133.B was granted, including a statement of the compelling reasons for granting the waiver. This report provides the information for Fiscal Year 2026 which encompasses the period from July 1, 2025 - June 30, 2026.

2. Background

Section 2.2-1133.A of the *Code of Virginia* establishes the requirement for use of value engineering on any capital project costing more than five million ($5,000,000) dollars. This requirement became effective in 1994 and procedures for implementing a value engineering program were developed and issued to state agencies in July 1994. The procedures for implementing the VE process are contained Section 5.14 of the Commonwealth of Virginia's *Construction and Professional Services Manual (CPSM)*.

Value engineering is a systematic process of review and analysis of a project design performed by an independent team of persons not originally involved in the design of the project. The team members are themselves licensed design professionals and the team leader is specially trained in conducting the team study process.

The purpose of the Value Engineering review and analysis of the design is to offer suggestions to the project owner and project design firm that improve project quality and reduce total project cost by combining or eliminating inefficient or expensive parts or steps in the original design or recommending redesign of the project using different technologies, materials or methods. Value engineering is often used to deal with "cost growth" during the project design phase. In some cases, a VE study may result in an increase in initial cost for a portion of a project. This generally occurs when the team recommends a design change that may involve a higher initial investment during construction, but is more cost effective when measured on a life cycle basis.

Not all projects are candidates for VE. Where an initial analysis of a project indicates that the cost of conducting the VE study may not produce sufficient recommendations of cost savings to cover study costs, there is no potential net benefit in conducting the study. Also, projects which are site adaptations and previously value-engineered projects are not typically cost-effective for a second VE study.

Current state procedures require capital projects with an estimated construction cost exceeding **$5,000,000** to be value engineered, unless waived by the Director of the

Department of General Services. The VE study is conducted at the preliminary design stage of the project after the design concept has been selected and the various building systems evaluated and selected by the designer.

The Commonwealth's process involves a **40-hour study** of the project by the VE team. The team is composed of registered design professionals that practice architecture and the engineering disciplines (civil, structural, electrical, and mechanical) involved in the project design and a Certified Value Specialist who is the VE team leader. The A/E (architect/engineer) firm that designed the project is a part-time participant in the VE study. Building shape, floor plan layout and building systems components are sufficiently developed at the preliminary stage of design for all VE team disciplines to evaluate the essential elements of the design and suggest alternatives where appropriate.

The recommendations produced by the VE team are reviewed by the project owner and the A/E firm employed to design the project. Recommendations are selected or rejected by the project owner in consultation with the design firm based on program requirements, cost, technical feasibility, aesthetics, and other related considerations.

Recommendations dealing with technical design issues must ultimately be accepted or rejected by the owner's design consultant as the designer of record is the party with ultimate liability for the design and is required by law to professionally seal the design documents.

Accepted recommendations must be incorporated into the project design and most often this will require additional work on the part of the design consultant. Since the nature and scope of this additional work is not known when the A/E design contract and price are negotiated, the A/E is entitled to a fee for this additional design service.

3. Projects Studied and Savings Identified

Eleven (11) projects with a combined estimated construction value of approximately $607.9 million were reported by Agencies as undergoing the VE process during Fiscal Year 2026. The Value Engineering teams identified design changes which were accepted by the agencies and institutions. These accepted changes produced an aggregate estimated savings in construction cost of approximately $13.7 million. (See Table 1.)

The aggregate VE savings reported are equivalent to 2.3% of the combined preliminary construction budgets of these projects.

4. Study Costs

The aggregate cost for preparing studies for these eleven (11) projects was $672,241. Study costs ranged from a low of $18,120 to a high of $117,593. The average study cost was $61,113. The median cost was $63,425. Deducting the study costs, the Commonwealth realized a net savings in estimated construction value of approximately $13,695,982 by employing the Value Engineering process. The VE Cost as a percent of the VE Savings as an aggregate for these eleven (11) projects was 6.7%. Stated otherwise, this represents a payback ratio of 15 to 1. (See Table 2.)

5. Waivers Granted / Projects Excluded

Agencies are requested each year to report all projects under their purview which were at the preliminary design phase during the reporting period, and which exceed the $5,000,000 threshold, but did not undergo a formal VE process.

Eleven (11) reported projects were granted waivers, excluded from the VE process, or did not perform a VE study. Six (6) projects were Construction Management at Risk or Design-Build and are identified in Table 3. The remaining projects and the associated reasons for exclusion are identified in Table 4.

Projects approved for procurement using the Design Build (D/B) methodology are excluded from the standard VE process as the Design Build Contractor provides a lump sum fixed price prior to design and contract award. Projects procured using Construction Management at Risk (CM at Risk or CM/GC) are also exempted from the VE process. Projects procured under the provisions of the Public Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) are exempted from the VE provisions mandated in Section 2.2-1133 of the Code of Virginia.

Exemptions from the formal VE process are primarily due to the use of these alternative procurement methods for major projects. Agencies did, however, report “value” savings of approximately $55.6 million for exempted Construction Management at Risk projects. Based on an aggregate construction value of approximately $790.2 million, the savings reported represent 7.0% of the total construction value.

Table 1

VE Study Savings vs. Construction Budget (FY 2026)

Item No.	Project Code	Agency / Institution	Project Title	Estimated VE Savings (Accepted Items)	Preliminary Construction Budget	VE Savings as a % of Con. Budget
1)	194-18537-003	Department of General Services	Commonwealth Courts Building New Construction	$1,781,175	$288,155,696	0.6%
2)	207-B1324-000	University of Virginia - Academic	Fontaine Data Center	$3,801,860	$67,671,367	5.6%
3)	211-18702-000	Virginia Military Institute	Hinty Hall Improvements	$516,300	$15,698,385	3.3%
4)	215-18544-000	University of Mary Washington	Construct Fine and Performing Arts Center	$4,200,700	$135,095,594	3.1%
5)	218-18662-000	Virginia School for the Deaf and the Blind	Renovate Lewellyn Gym	$103,636	$13,096,000	0.8%
6)	221-18651-000	Old Dominion University	Improve Public Safety Building	$186,109	$10,469,144	1.8%
7)	229-18699-000	Virginia Tech - Cooperative Extension	Improve Center Woods Complex	$301,041	$14,130,000	2.1%
8)	268-B4268-007	Virginia Institute of Marine Science	Watermen's Hall Renvation and Campus Improvements	$255,976	$11,000,000	2.3%
9)	417-18546-000	Gunston Hall	Construct New Archaeology Center and Maintenance Facility	$175,000	$5,000,000	3.5%
10)	702-18517-000	Depeartment of Blind and Vison Impaired	Renovate The Library And Resource Center	$2,200,000	$14,000,000	15.7%
11)	942-18450-000	Virginia Museum of Natural History	VMNH Waynesboro Satellite Facility	$174,185	$33,565,500	0.5%
			TOTAL	**$13,695,982**	**$607,881,686**	
			AVERAGE	**$1,245,089**	**$55,261,971**	**2.3%**
			MEDIAN	**$301,041**	**$14,130,000**	

Table 2

VE Study Savings vs. VE Study Cost (FY 2026)

Item No.	Project Code	Agency / Institution	Project Title	VE Study Cost	Estimated VE Savings (Accepted Items)	Study Cost as % of VE Savings	Payback Ratio
1)	194-18537-003	Department of General Services	Commonwealth Courts Building New Construction	$72,225	$1,781,175	4.1%	25:1
2)	207-B1324-000	University of Virginia - Academic	Fontaine Data Center	$18,120	$3,801,860	0.5%	210:1
3)	211-18702-000	Virginia Military Institute	Hinty Hall Improvements	$117,593	$516,300	22.8%	4:1
4)	215-18544-000	University of Mary Washington	Construct Fine and Performing Arts Center	$26,715	$4,200,700	0.6%	157:1
5)	218-18662-000	Virginia School for the Deaf and the Blind	Renovate Lewellyn Gym	$75,556	$103,636	72.9%	1:1
6)	221-18651-000	Old Dominion University	Improve Public Safety Building	$61,133	$186,109	32.8%	3:1
7)	229-18699-000	Virginia Tech - Cooperative Extension	Improve Center Woods Complex	$63,425	$301,041	21.1%	5:1
8)	268-B4268-007	Virginia Institute of Marine Science	Watermen's Hall Renvation and Campus Improvements	$55,903	$255,976	21.8%	5:1
9)	417-18546-000	Gunston Hall	Construct New Archaeology Center and Maintenance Facility	$66,851	$175,000	38.2%	3:1
10)	702-18517-000	Depeartment of Blind and Vison Impaired	Renovate The Library And Resource Center	$50,000	$2,200,000	2.3%	44:1
11)	942-18450-000	Virginia Museum of Natural History	VMNH Waynesboro Satellite Facility	$64,720	$174,185	37.2%	3:1
			TOTAL	**$672,241**	**$13,695,982**		
			AVERAGE	**$61,113**	**$913,065**	**6.7%**	**15:1**
			MEDIAN	**$63,425**	**$186,109**		

Table 3

Other Projects Exceeding $5,000,000 Threshold with Informal VE Process (FY 2026)

The requirement to perform a formal VE study was waived for the following projects. However, an informal VE process was utilized which yielded the following results:

Item No.	Project Code	Agency / Institution	Project Title	Estimated "Value" Savings (Accepted Items)	Preliminary Construction Budget	Savings as a % of Con. Budget	Reason Reported for VE Study Exemption	See Note
1)	207-18602-000	University of Virginia - Academic	Center for the Arts	$11,642,000	$235,000,000	5.0%	Construction Mgmt. project	(a)
2)	211-18665-000	Virginia Military Institute	Construct New Moody Hall	$4,988,110	$48,256,190	10.3%	Construction Mgmt. project	(a)
3)	216-18758-000	James Madison University	Johnston Hall Renovation and Addition	$7,892,811	$28,162,256	28.0%	Construction Mgmt. project	(a)
4)	236-18676-000	Virginia Commonwealth University	Construct New School of Dentistry	$17,078,700	$322,087,000	5.3%	Construction Mgmt. project	(a)
5)	236-B5236-001	Virginia Commonwealth University	Grace & Laurel Residence Center New Construction 2024	$9,693,057	$135,000,000	7.2%	Construction Mgmt. project	(a)
6)	247-241927	George Mason University	Basketball and Academic Performance Center (RAC Addition)	$4,321,252	$21,750,000	19.9%	Construction Mgmt. project	(a)
			TOTAL	**$55,615,930**	**$790,255,446**	**7.0%**		

Notes:

(a) The Code of Virginia section 2.2-1133.C exempts projects procured utilizing Design-Build or Construction Management at Risk from the requirement for a formal VE process.

Table 4
Other Projects Exceeding $5,000,000 Threshold (FY 2026)

The requirement to perform a formal VE study was waived for the following projects for the reasons outlined below:

Item No.	Project Code	Agency / Institution	Project Title	Reason for Waiver	See Note
1)	207-B1325-000	University of Virginia - Academic	The Park Maintenance Facility	Project is composed of sitework, associated utilities, and prefab metal buildings with limited finishes. The prefab buildings designed and procured were the most efficient and straightforward approach to address the on-going needs. VE for this Project has been continuous throughout design, with estimated VE savings to date of $773,000. The limited scope and prefabricated construction approach leave little opportunity for a short-duration formal VE study with paid peer reviewers to add value or reduce costs. Waiver of the formal VM session requirement was requested and approved.	(a)
2)	208-18723-000	Virginia Tech	IMPROVE CAMPUS ACCESSIBILITY (ICA)	The ICA project was limited in scope to site improvements only. Virginia Tech (VT) contracted with an architectural/engineering (A/E) firm to provide Schematic Design (SD) and Working Drawings. Because of the project's limited scope and cost, the potential savings identified in a 40-hour VE study did not significantly exceed the anticipated consulting fees associated with the VE study. Additionally, the A/E team prepared VE options which were reviewed and approved in accordance with the standard VT Capital Construction VM procedure at the conclusion of the SD phase and bidding. Since the desired outcome had been achieved, and the value was inherently limited for this specific project, VT waived the 40-hour VE study. After the Schematic Design was delivered, VT accepted $831,782 of VE options. Once bids were received, VT negotiated with the lowest responsible bidder and accepted an additional $830,900 of VE options. Therefore, the total value savings equal $1,662,682.	(a)
3)	194-18537-002	Department of General Services	Commonwealth Courts Building - Demolition	1) The scope of the project is limited to demolition only and 2) a Value Engineering Study is unlikely to provide meaningful design alternatives and / or cost savings that would justify the expense of the study.	(b)
4)	194-18660-001	Department of General Services	Renovate Eastern State Hospital - Bathroom Hardening - Building 1	1) this project is part of the existing ESH Building 2 - Hardening/Anti-Ligature Renovation Project, 2) the selected materials meet the durability, safety, and operational requirements established by the Hospital Users and DBHDS, 3) the hardened "in-kind" finish systems were previously vetted and approved for the Building-2 project, and 4) a new VE study would not identify meaningful cost savings from alternative materials.	(b)
5)	199-18513-000	Dept. of Conservation and Recreation	State Park Critical Bathhouse/Restroom Replacements and Renovations	N/A	(c)

Notes:

(a) Waiver granted by Higher Education Institution based upon their stated Tier III Authority under the Restructured Higher Education Financial and Administrative Operations Act.
(b) Waiver granted by the Director of the Virginia Department of General Services.
(c) Waiver neither requested or granted by the Director of the Virginia Department of General Services.