



# Florida Department of Transportation

JEB BUSH  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.  
SECRETARY

November 14, 2005

Mr. Donald Davis  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 004  
Proposed Specification: 0040309 - Scope of the Work - Value Engineering Incentive.

Dear Mr. Davis:

We are submitting, for your approval, two copies of a proposed Supplemental Specification for Scope of the Work - Value Engineering Incentive.

This change was proposed by Kurt Lieblong of the State Value Engineer Office to expand value engineering incentive data requirements. Establish conditions of acceptance for major design modification of Category 2 bridges.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or [duane.brautigam@dot.state.fl.us](mailto:duane.brautigam@dot.state.fl.us).

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Duane F. Brautigam, P.E.  
State Specifications Engineer

DFB/jo

Attachment

cc: General Counsel  
Florida Transportation Builders' Assoc.  
State Construction Engineer

**VALUE ENGINEERING INCENTIVE.****(REV ~~7-19-05~~~~9-29-05~~11-14-05)**

SUBARTICLE 4-3.9 (Pages 22-25) is deleted and the following substituted:

**4-3.9 Value Engineering Incentive:****4-3.9.1 Intent and Objective:**

(1) This Subarticle applies to any cost reduction proposal (hereinafter referred to as a Value Engineering Change Proposal or VECP) that the Contractor initiates and develops for the purpose of refining the Contract to increase cost effectiveness or significantly improve the quality of the end result. This Subarticle does not, however, apply to any such proposal unless the Contractor identifies it at the time of its submission to the Department as a proposal submitted pursuant to this Subarticle.

(2) The Department will consider VECPs that would result in net savings to the Department by providing either:

~~(a.)~~ a decrease in the cost of performance of the Contract;

or

~~(b.)~~ a reduction in cost of ownership (hereinafter referred to as collateral costs) of the work provided by this Contract, regardless of acquisition costs. VECPs must result in savings without impairing essential functions and characteristics such as safety, service, life, reliability, economy of operation, ease of maintenance, aesthetics and necessary standard design features. However, nothing herein prohibits the Contractor from submitting VECPs when the required functions and characteristics can be combined, reduced or eliminated because they are nonessential or excessive. The Department will not recognize the Contractor's correction of plan errors that result in a cost reduction, as a VECP.

(3) The Department reserves the right to reject at its discretion any VECP submitted that proposes a change in the design of the pavement system or that would require additional right-of-way. The Department will not allow the substitution of another design alternate, on which the Contractor could have bid, that is detailed in the plans for the one on which the Contractor has bid, under this Subarticle. Pending the Department's execution of a formal supplemental agreement implementing an approved VECP, the Contractor shall remain obligated to perform the work in accordance with the terms of the existing Contract. The Department will not grant any time extensions to allow for the time required to review a VECP.

**4-3.9.2 Subcontractors:** The Department encourages the Contractor to include the provisions of this Subarticle in Contracts with subcontractors and to encourage submission of VECPs from subcontractors. However, it is not mandatory to submit VECPs to the Department or to accept or transmit subcontractor proposed VECPs to the Department.

**4-3.9.3 Data Requirements:** As a minimum, submit the following information with each VECP:

(1) a description of the difference between the existing Contract requirement and the proposed change, and the comparative advantages and disadvantages.

(2) separate detailed cost estimates for both the existing Contract requirement and the proposed change. Break down the cost estimates by ~~Contract-pay~~ item numbers indicating quantity increases or decreases and deleted pay items. Identify additional proposed work not covered by ~~Contract-pay~~ items *within the Contract*, by using ~~current Department~~ pay item numbers *on the Master Pay Item list*. In preparing the estimates, include -overhead, profit, and bond *within pay items in the Contract*. ~~The Department will not allow any~~ Separate pay item(s) for the cost of overhead, profit, and bond *will not be allowed*.

(3) an itemization of the changes, deletions or additions to plan details, plan sheets, design standards and Specifications that are required to implement the VECP if the Department adopts it. Provide preliminary plan drawings sufficient to describe the proposed changes.

(4) an estimate of the effects the VECP would have on collateral costs to the Department.

~~(5)~~ Engineering or other analysis in sufficient detail to identify and describe specific features of the Contract that must be changed if the Department accepts the VECP with a proposal as to how these changes can be accomplished and an assessment of their effect on other project elements. The Department may require that engineering analyses be performed by a prequalified consultant in the applicable class of work. Support all design changes that result from the VECP with prints of drawings and computations signed and sealed by the ~~Specialty Engineer~~ *Contractor's Engineer of Record*. *Written documentation or drawings will be provided clearly delineating the responsibility of the Contractor's Engineer of Record.*

(6) ~~state the date time~~ by which the Department must approve the VECP to obtain the total estimated cost reduction during the remainder of the Contract, noting any effect on the Contract completion time or delivery schedule.

*(7) a revised project schedule that would be followed upon approval of the VECP. This schedule would include submittal dates and review time for the Department and Peer reviews.*

**4-3.9.4 Processing Procedures:** Submit two copies of each VECP to the Engineer or his duly authorized representative. The Department will process VECPs expeditiously; however, the Department is not liable for any delay in acting upon a VECP submitted pursuant to this Subarticle. The Contractor may withdraw, in whole or in part, a VECP not accepted by the Department within the period specified in the VECP. The Department is not liable for any VECP development cost in the case where the Department rejects or the Contractor withdraws a VECP.

The Engineer is the sole judge of the acceptability of a VECP and of the estimated net savings in construction and collateral costs from the adoption of all or any part of such proposal. In determining the estimated net savings, the Department reserves the right to disregard the Contract bid prices if, in the judgment of the Engineer, such prices do not represent a fair measure of the value of work to be performed or to be deleted.

Prior to approval, the Engineer may modify a VECP, with the concurrence of the Contractor, to make it acceptable. If any modification increases or decreases the net savings resulting from the VECP, the Department will determine the Contractor's fair share upon the basis of the VECP as modified and upon the final

quantities. The Department will compute the net savings by subtracting the revised total cost of all bid items affected by the VECP from the total cost of the same bid items as represented in the original Contract.

Prior to approval of the VECP that initiates the supplemental agreement, provide acceptable Contract-quality plan sheets revised to show all details consistent with the VECP design.

#### **4-3.9.5 Computations for Change in Contract Cost of Performance:**

The Department will not pay for the Contractor's VECP development and implementation costs. If the VECP is adopted, the Contractor's share of the net savings as defined hereinafter represents full compensation to the Contractor for the VECP.

The Department will not include its costs to process and implement a VECP in the estimate. However, the Department reserves the right, where it deems such action appropriate, to require the Contractor to pay the Department's cost of investigating and implementing a VECP as a condition of considering such proposal. When the Department imposes such a condition, the Contractor shall accept this condition in writing, authorizing the Department to deduct amounts payable to the Department from any monies due or that may become due to the Contractor under the Contract.

**4-3.9.6 Computations for Collateral Costs:** To determine any collateral cost savings, prepare separate estimates for collateral costs of both the existing Contract requirement and the proposed change. Provide estimates that consist of an itemized breakdown of all costs and the basis for the data used in the estimate. Cost benefits to the Department include, but are not limited to, reduced costs of operation, maintenance or repair, and extended useful service life. Increased collateral costs include the converse of such factors.

Compute collateral costs as follows:

(1) Calculate costs over a 20-year period on a uniform basis for each estimate.

(2) If the difference in the estimates as approved by the Department indicates a savings, divide the resultant amount by 20 to arrive at the average annual net collateral savings. The Department will share the average annual net collateral savings as stipulated in 4-3.9.78.

**4-3.9.7 Conditions of Acceptance for Major Design Modifications of Category 2 Bridges:** *A VECP that proposes major design modifications of a category 2 bridge, as determined by the Engineer, shall have the following conditions of acceptance:*

*All bridge plans shall be reviewed by a single independent engineering firm (the independent Engineer) not involved in the VECP design, pre-qualified in accordance with Chapter 14-75, to assure that the design is in compliance with all Department requirements. The independent Engineer's comments, along with the resolution of each comment, shall be submitted to the Department. The independent Engineer shall sign and seal a cover letter stating that all of the independent Engineer's comments have been adequately addressed and the design is in compliance with the Department requirements. If there are any unresolved comments the independent Engineer shall specifically list all unresolved issues in the signed and sealed cover letter. Peer review will be funded by the Contractor.*

*Contractor shall designate a primary engineer responsible for the VECP design and as such will be designated as the Contractors Engineer of Record for*

*the VECP design. The Department reserves the right to require the Contractor's Engineer of Record to assume responsibility for the entire structure.*

*The contractor shall have all permanent engineering work affected by the VECP, peer reviewed by an independent engineer other than the engineer initially performing the work. Engineering work includes but is not limited to: requests for acceptance for noncompliant work, repair procedures, shop drawing review, or design and review of activities affecting public safety. If the Specialty Engineer and Contractor's Engineer of Record are separate entities, either party may initiate the action; the other shall check and certify the work as being complete and correct prior to submittal to the Engineer. If the Specialty Engineer and Contractor's Engineer of Record are the same entity, the Specialty Engineer/Contractor's Engineer of Record will initiate the action of the independent firm contracted to prepare these requests and the Specialty Engineer/Contractor's Engineer of Record will check and certify the work of the independent firm as being complete and correct prior to submittal to the Engineer.*

*New designs shall be in compliance with all applicable Department, FHWA and AASHTO criteria requirements including bridge load ratings.*

**4-3.9.78 Sharing Arrangements:** If the Department approves a VECP, the Contractor may be entitled to share in both construction savings and collateral savings to the full extent provided for in this Subarticle. The Contractor shall receive *up to 50%* of the net reduction in the cost of performance of the Contract due to an approved VECP, except for innovative ideas. *Upon review and approval of the VECP, the savings shall be based on a final negotiated agreement between the Contractor and the Department. The final negotiated agreement shall include a minimum guaranteed savings, which shall be the Department's share of the savings.*

*For sharing purposes, the Department will not consider an idea as innovative if the idea is identical or similar to a previously submitted VECP or an idea previously used by the Department.* For innovative ideas, as determined by the Engineer, the Contractor and the Department shall share the reduction in the cost of performance as follows:

Accrued Net Savings	Contractor's Share %	Department's Share %
Less than \$25,000	100	0
\$25,000 to \$50,000	75	25
Over \$50,000	50	50

~~The Department will not consider an approved change that is identical or similar to a previously submitted VECP or an idea previously used by the Department as an innovative idea.~~

When collateral savings occur, the Department will provide the Contractor with 20% of the average annual net collateral savings.

SUBARTICLE 4-3.9.8 (of the Supplemental Specifications) is deleted and the following substituted:

**4-3.9.89 Notice of Intellectual Property Interests and Department's Future Rights to a VECP:**

**4-3.9.89.1 Notice of Intellectual Property Interests:** The Contractor's VECP submittal shall identify with specificity any and all forms of intellectual property rights that either the Contractor or any officer, shareholder, employee, consultant, or affiliate, of the Contractor, or any other entity who contributed in any measure to the substance of the Contractor's VECP development, have or may have that are in whole or in part implicated in the VECP. Such required intellectual property rights notice includes, but is not limited to, disclosure of any: issued patents, copyrights, or licenses; pending patent, copyright or license applications; and any intellectual property rights that though not yet issued, applied for or intended to be pursued, could nevertheless otherwise be subsequently the subject of patent, copyright or license protection by the Contractor or others in the future. This notice requirement does not extend to intellectual property rights as to stand-alone or integral components of the VECP that are already on the Department's QPL or design standard indexes, or are otherwise generally known in the industry as being subject to patent or copyright protection.

**4-3.9.89.2 Department's Future Rights to a VECP:**

Notwithstanding 7-3 nor any other provision of the Standard Specifications, upon acceptance of a VECP, the Contractor hereby grants to the Department and its contractors (such grant being expressly limited solely to any and all existing or future Department construction projects and any other Department projects that are partially or wholly funded by or for the Department) a royalty-free and perpetual license under all forms of intellectual property rights to manufacture, to use, to design, to construct, to disclose, to reproduce, to prepare and fully utilize derivative works, to distribute, display and publish, in whole or in part, and to permit others to do any of the above, and to otherwise in any manner and for any purpose whatsoever do anything reasonably necessary to fully utilize any and all aspects of such VECP on any and all existing and future construction projects and any other Department projects.

Contractor shall hold harmless, indemnify and defend the Department and its contractors and others in privity therewith from and against any and all claims, liabilities, other obligations or losses, and reasonable expenses related thereto (including reasonable attorneys' fees), which are incurred or are suffered by any breach of the foregoing grants, and regardless of whether such intellectual property rights were or were not disclosed by the Contractor pursuant to 4-3.9.89.1, unless the Department has by express written exception in the VECP acceptance process specifically released the Contractor from such obligation to hold harmless, indemnify and defend as to one or more disclosed intellectual property rights.

**VALUE ENGINEERING INCENTIVE.****(REV 11-14-05)**

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**4-3.9 Value Engineering Incentive:****4-3.9.1 Intent and Objective:**

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a. a decrease in the cost of performance of the Contract; or  
 b. a reduction in cost of ownership (hereinafter referred to as collateral costs) of the work provided by this Contract, regardless of acquisition costs. VECPs must result in savings without impairing essential functions and characteristics such as safety, service, life, reliability, economy of operation, ease of maintenance, aesthetics and necessary standard design features. However, nothing herein prohibits the Contractor from submitting VECPs when the required functions and characteristics can be combined, reduced or eliminated because they are nonessential or excessive. The Department will not recognize the Contractor's correction of plan errors that result in a cost reduction, as a VECP.

(3) The Department reserves the right to reject at its discretion any VECP submitted that proposes a change in the design of the pavement system or that would require additional right-of-way. The Department will not allow the substitution of another design alternate, on which the Contractor could have bid, that is detailed in the plans for the one on which the Contractor has bid, under this Subarticle. Pending the Department's execution of a formal supplemental agreement implementing an approved VECP, the Contractor shall remain obligated to perform the work in accordance with the terms of the existing Contract. The Department will not grant any time extensions to allow for the time required to review a VECP.

**4-3.9.2 Subcontractors:** The Department encourages the Contractor to include the provisions of this Subarticle in Contracts with subcontractors and to encourage submission of VECPs from subcontractors. However, it is not mandatory to submit VECPs to the Department or to accept or transmit subcontractor proposed VECPs to the Department.

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(3) an itemization of the changes, deletions or additions to plan details, plan sheets, design standards and Specifications that are required to implement the VECP if the Department adopts it. Provide preliminary plan drawings sufficient to describe the proposed changes.

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(6) the date by which the Department must approve the VECP to obtain the total estimated cost reduction during the remainder of the Contract, noting any effect on the Contract completion time or delivery schedule.

(7) a revised project schedule that would be followed upon approval of the VECP. This schedule would include submittal dates and review time for the Department and Peer reviews.

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**4-3.9.7 Conditions of Acceptance for Major Design Modifications of Category 2 Bridges:** A VECP that proposes major design modifications of a category 2 bridge, as determined by the Engineer, shall have the following conditions of acceptance:

All bridge plans shall be reviewed by a single independent engineering firm (the independent Engineer) not involved in the VECP design, pre-qualified in accordance with Chapter 14-75, to assure that the design is in compliance with all Department requirements. The independent Engineer's comments, along with the resolution of each comment, shall be submitted to the Department. The independent Engineer shall sign and seal a cover letter stating that all of the independent Engineer's comments have been adequately addressed and the design is in compliance with the Department requirements. If there are any unresolved comments the independent Engineer shall specifically list all unresolved issues in the signed and sealed cover letter. Peer review will be funded by the Contractor.

Contractor shall designate a primary engineer responsible for the VECP design and as such will be designated as the Contractors Engineer of Record for the VECP design. The Department reserves the right to require the Contractor's Engineer of Record to assume responsibility for the entire structure.

The contractor shall have all permanent engineering work affected by the VECP, peer reviewed by an independent engineer other than the engineer initially performing the work. Engineering work includes but is not limited to: requests for acceptance for noncompliant work, repair procedures, shop drawing review, or design and review of activities affecting public safety. If the Specialty Engineer and Contractor's Engineer of Record are separate entities, either party may initiate the action; the other shall check and certify the work as being complete and correct prior to submittal to the Engineer. If the Specialty Engineer and Contractor's Engineer of Record are the same entity, the Specialty Engineer/Contractor's Engineer of Record will initiate the action of the independent firm contracted to prepare these requests and the Specialty Engineer/Contractor's Engineer of Record will check and certify the work of the independent firm as being complete and correct prior to submittal to the Engineer.

New designs shall be in compliance with all applicable Department, FHWA and AASHTO criteria requirements including bridge load ratings.

**4-3.9.8 Sharing Arrangements:** If the Department approves a VECP, the Contractor may be entitled to share in both construction savings and collateral savings to the full extent provided for in this Subarticle. The Contractor shall receive up to 50% of the net reduction in the cost of performance of the Contract due to an approved VECP, except for innovative ideas. Upon review and approval of the VECP, the savings shall be based on a final negotiated agreement between the Contractor and the Department. The final negotiated agreement shall include a minimum guaranteed savings, which shall be the Department's share of the savings.

For sharing purposes, the Department will not consider an idea as innovative if the idea is identical or similar to a previously submitted VECP or an idea previously used by the Department. For innovative ideas, as determined by the Engineer, the Contractor and the Department shall share the reduction in the cost of performance as follows:

Accrued Net Savings	Contractor's Share %	Department's Share %
Less than \$25,000	100	0
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When collateral savings occur, the Department will provide the Contractor with 20% of the average annual net collateral savings.

SUBARTICLE 4-3.9.8 (of the Supplemental Specifications) is deleted and the following substituted:

**4-3.9.9 Notice of Intellectual Property Interests and Department's Future Rights to a VECP:**

**4-3.9.9.1 Notice of Intellectual Property Interests:** The Contractor's VECP submittal shall identify with specificity any and all forms of

intellectual property rights that either the Contractor or any officer, shareholder, employee, consultant, or affiliate, of the Contractor, or any other entity who contributed in any measure to the substance of the Contractor's VECP development, have or may have that are in whole or in part implicated in the VECP. Such required intellectual property rights notice includes, but is not limited to, disclosure of any: issued patents, copyrights, or licenses; pending patent, copyright or license applications; and any intellectual property rights that though not yet issued, applied for or intended to be pursued, could nevertheless otherwise be subsequently the subject of patent, copyright or license protection by the Contractor or others in the future. This notice requirement does not extend to intellectual property rights as to stand-alone or integral components of the VECP that are already on the Department's QPL or design standard indexes, or are otherwise generally known in the industry as being subject to patent or copyright protection.

#### **4-3.9.9.2 Department's Future Rights to a VECP:**

Notwithstanding 7-3 nor any other provision of the Standard Specifications, upon acceptance of a VECP, the Contractor hereby grants to the Department and its contractors (such grant being expressly limited solely to any and all existing or future Department construction projects and any other Department projects that are partially or wholly funded by or for the Department) a royalty-free and perpetual license under all forms of intellectual property rights to manufacture, to use, to design, to construct, to disclose, to reproduce, to prepare and fully utilize derivative works, to distribute, display and publish, in whole or in part, and to permit others to do any of the above, and to otherwise in any manner and for any purpose whatsoever do anything reasonably necessary to fully utilize any and all aspects of such VECP on any and all existing and future construction projects and any other Department projects.

Contractor shall hold harmless, indemnify and defend the Department and its contractors and others in privity therewith from and against any and all claims, liabilities, other obligations or losses, and reasonable expenses related thereto (including reasonable attorneys' fees), which are incurred or are suffered by any breach of the foregoing grants, and regardless of whether such intellectual property rights were or were not disclosed by the Contractor pursuant to 4-3.9.9.1, unless the Department has by express written exception in the VECP acceptance process specifically released the Contractor from such obligation to hold harmless, indemnify and defend as to one or more disclosed intellectual property rights.