

Partial payment for this item shall in no way act to preclude or limit any of the provisions of partial payments otherwise provided for by the contract or these specifications.

Payment for this item includes all direct and indirect costs and expenses required to complete the work.

Payment will be made under:

Item No.	Pay Item	Pay Unit
1031000	Mobilization	Lump Sum

SECTION 104

SCOPE OF WORK

104.01 Intent of Contract. The intent of the contract is to provide for the construction and completion in every detail of the work described and contemplated. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, specifications and terms of the contract.

104.02 Alteration of Plans or Character of Work. The Engineer shall have the right to make, at any time, such increases or decreases in quantities and such alterations in the plans or character of the work, including, but not limited to alterations in the grade or alignment of the road or structure or both, as may be found necessary or desirable. Such alterations shall not be considered as a waiver of any conditions of the contract nor release the surety. The Contractor shall accept the work as altered, the same as if it had been a part of the original contract.

The right is reserved to increase or decrease any or all of the items in the list of approximate quantities shown in the

proposal form. The total amount of such increase or decrease, whether it applies to one or several items, shall not exceed in value 20% of the total contract amount, except that variations in the items of solid rock excavation or bridge foundation work, including piling, shall not be considered in determining increases or decreases under this provision, it being understood that quantities of these items cannot be determined accurately before the work is performed.

In addition to the above limitation to increases or decreases in the contract value, quantity increases or decreases for individual **major items of work**, as defined in Subsection **101.33**, shall be limited to 25% of the original contract quantity.

Alterations of plans or of the nature of the work will not involve or require work beyond the termini of the original proposed construction except as may be necessary for drainage, transitions in alignment and grade or otherwise necessary to satisfactorily complete the work contemplated, unless the contract has been extended in accordance with the provisions of Subsection **104.04**.

Increases or decreases in the quantities of work within the limits specified shall in no way invalidate the unit bid or contract prices. No claim shall be made by the Contractor for any loss of anticipated profits because of any such alteration or by reason of any variation between the approximate quantities and the quantities of work as done.

Payment for work occasioned by changes or alterations will be made in accordance with the provisions set forth in Subsection **109.03**. If the altered or added work is of sufficient magnitude as to require additional time in which to complete the project, such time adjustment will be made in accordance with the provisions of Subsection **108.06**.

Increases or decreases in excess of the limits stated above for the contract value or for the quantity of a major item

shall constitute a significant change, which may warrant consideration by the Department of equitable adjustment in the unit price. Any price adjustment for the increase in quantity of a major item shall apply only to that portion in excess of 125% of original contract item quantity, or in the case of a decrease below 75%, to the actual amount of work performed. The adjustments in contract unit price shall be handled as outlined in Subsection **101.09**, Subsection **109.03**, or Subsection **109.04**.

Should the Contractor encounter or the Department discover during the progress of work, subsurface or latent physical conditions at the site differing substantially from those in the contract, or unknown physical conditions at the site of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract, the Engineer shall be promptly notified in writing of such conditions. If the Engineer finds that the conditions do substantially differ and would cause a substantial increase or decrease in the cost of, or the time required for performance of the work, an equitable adjustment will be negotiated and a Supplemental Agreement executed in accordance with Subsection **109.03**. If the Contractor and the Department are unable to reach an agreement concerning prices, the work shall be performed in accordance with the provisions of Subsection **109.04**.

The Contractor shall submit notice of differing site condition to the Department before performing additional work resulting from the alleged differing site condition. Notification shall be submitted to the Department on SCDOT *Form No. 616, Contractor Notice of Claim*. If the issue cannot be resolved by the methods specified in this Subsection, then the Contractor shall submit to the Department at the appropriate time a fully detailed request ("Claim") for additional time or compensation. The claim shall be submitted in accordance with Subsection **105.16**.

The Contractor shall not begin work until a Supplemental

Agreement has been executed or a Force Account order has been issued for the affected work. Revised contract unit prices will be applicable only to that portion of the work created as a result of the changed condition.

Whenever alterations are made in plans, or within the contract provisions, and such alterations result in leaving the Contractor, either on hand or in transit, with materials that were ordered prior to notice being given the Contractor of the alterations, the Department may take over the surplus materials and pay the Contractor the actual cost of these materials including transportation, but in no case will the Department pay the Contractor any allowance for anticipated profits. The Contractor will be responsible for these surplus materials until delivered by him to a point designated by the Engineer. The Department will not take over or be responsible for any materials purchased in advance of the apparent need for them, or assume any responsibility for losses to the Contractor due to his furnishing an excess of materials, except where the excess has been brought about by alterations of the plans that the Contractor could not reasonably foresee.

The above provisions shall not apply to materials left over due to changes in substructures caused by foundation conditions being at variances from those assumed or shown.

104.03 Value Engineering. This specification provides an incentive to the Contractor to initiate, develop, and present to the Department for consideration, any cost reduction proposals conceived by the Contractor involving changes in the drawings, designs, specifications, or other requirements of the contract. This specification does not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a Value Engineering Proposal.

Value Engineering Proposals contemplated are those that would result in a net savings to the Department by providing a decrease in the total cost of construction or reduce the construction time without increasing the cost to construct the project. The affects the proposal may have on the following items, but not limited to these items, will be considered by the Department when evaluating the proposal:

- | | |
|-------------------------|--------------------------|
| 1) Service Life | 5) Ease of Maintenance |
| 2) Safety | 6) Desired Aesthetics |
| 3) Reliability | 7) Design |
| 4) Economy of Operation | 8) Standardized Features |

The Department reserves the right to reject the proposal or deduct from the savings identified in the proposal to compensate for any adverse effects to these items that may result from implementation of the proposal.

The Department reserves the right to reject at its discretion any Value Engineering Proposal submitted that would require additional right-of-way. Substitution of another design alternate, which is detailed in the contract plans, for the one on which the Contractor bid, will not be allowed. Plan errors that are identified by the Contractor, and result in a cost reduction, will not qualify for submittal as a Value Engineering Proposal. Pending execution of a formal supplemental agreement, implementing an approved Value Engineering Proposal, the Contractor shall remain obligated to perform in accordance with the terms of the existing contract. No time extension will be granted due to the time required to review a Value Engineering Proposal.

The Contractor is encouraged to include this specification in contracts with Subcontractors. The Contractor shall encourage submissions of Value Engineering Proposals from Subcontractors, however, it is not mandatory that the Contractor accept or transmit to the Department proposals by its Subcontractors. The Contractor may choose any arrange-

ment for the Subcontractor's value engineering payments, provided that these payments shall not reduce the Department's share of the savings resulting from the proposal. Should the Contractor desire a preliminary review of a possible Value Engineering Proposal, before expending considerable time and expense in full development, a copy of the preliminary proposal shall be submitted to the Engineer. The submittal shall be entitled: *Preliminary Value Engineering Proposal Review Request* and must contain sufficient drawings, cost estimates and written information that can be clearly understood and interpreted. Also, include the identity of any private engineering firms proposed by the Contractor to prepare designs or revisions to designs. The Department will review the preliminary submittal only to the extent necessary to determine if it has a possible merit as a Value Engineering Proposal. This review does not obligate the Department to approve the final proposal should a preliminary review indicate the proposal has possible merit. The Department is under no obligation to consider any Value Engineering Proposal, preliminary or final, which is submitted.

A copy of the *Final Value Engineering Proposal* shall be submitted by the Contractor to the Engineer. The proposal shall contain, as a minimum, the following:

1. A statement that the request for the modification is being made as a Value Engineering Proposal.
2. A description of the difference between the existing contract requirements and the proposed modifications, with the comparative advantages and disadvantages of each.
3. If applicable, a complete drawing of the details covering the proposed modifications and supporting design computations shall be included in the final submittal. The preparation of new designs or revisions or modifications to the designs shown in the contract drawings shall be accomplished and sealed by a Professional Engineer registered in the State of South Carolina. Further, the Depart-

ment may require a review, and possibly the redesign, be accomplished by the project's original designer, or an approved equal. The Department may contract with private engineering firms, when needed, for reviews requested by the Department. The Contractor shall contract with the original project designer, or an approved equal, when required by the Department, for any design work needed to completely and accurately prepare contract drawings. The Department may waive the requirements to have the preparation of contract drawings accomplished by a Professional Engineer or the project's original designer based on the extent, detail, and complexity of the design needed to implement the Value Engineering Proposal.

4. An itemized list of the contract requirements that would be modified and a recommendation of how to make each modification.
5. A detailed estimate of the cost of performing work under the proposed modification.
6. A statement of the time by which approval of the Value Engineering Proposal must be issued by the Department to obtain the total estimated cost reduction during the remainder of the contract, noting any effect on the contract completion or delivery schedule.

To facilitate the preparation of revisions to contract drawings, the Contractor may purchase reproducible copies of drawings for their use through the Department. The preparation of new design drawings by or for the Contractor shall be coordinated with the appropriate Department Division. The Contractor shall provide, at no charge to the Department, one set of reproducible drawings of the approved design needed to implement the proposal.

The Engineer will be the sole judge of the acceptability of a Value Engineering Proposal requested in accordance with these provisions and of the estimated net savings resulting from the approval of all or any part of the proposal. The Contractor has the right to withdraw, in whole or in part, any

proposal not accepted by the Department within the period to be specified in the proposal as indicated in item (6) above.

If a Value Engineering Proposal is approved, the necessary changes will be effected by supplemental agreement. Included as a part of the supplemental agreement will be provisions for price adjustment giving the Contractor 50% of the net savings to the project resulting from the modifications.

The Department reserves the right to include in the supplemental agreement any conditions it deems appropriate for consideration, approval, and implementation of the proposal. Acceptance of the supplemental agreement by the Contractor shall constitute acceptance of such conditions.

The final net savings to be distributed will be the difference in cost between the existing contract cost for the involved bid items and the actual final cost occurring as a result of the modification. Only those unit price items directly affected by the supplemental agreement will be considered in making the final determination of net savings. In determining the estimated net savings, the Department reserves the right to disregard the contract prices if, in the judgement of the Department, such prices do not represent a fair measure of the value of the work to be performed or to be deleted.

Subsequent change documents affecting the modified unit bid items but not related to the Value Engineering Proposal will be excluded from such determination. The Department's review and administrative costs for Value Engineering Proposals will be borne by the Department. The Contractor's costs for designs and /or revisions to designs and the preparation of design drawings will be borne by the Contractor. The costs to either party will not be considered in determining the net saving obtained by implementing the Value Engineering Proposal. The Contractor's portion of the net savings shall constitute full compensation to them for effecting all changes pursuant to the agreement. The new savings will be prorated, 50% for the Contractor and 50% for the Department, for all accepted Value Engineering Proposals.

Upon execution of the supplemental agreement, the Department will thereafter have the right to use, duplicate or disclose in whole or in part any data necessary for utilization of the modification on other projects without obligation or compensation of any kind to the Contractor. Restrictions or conditions imposed by the Contractor for use of proposal on other projects shall not be valid.

Except as may otherwise be precluded by this specification, the Contractor may submit a previously approved Value Engineering Proposal on another project.

Unless and until a supplemental agreement is executed and issued by the Department, the Contractor shall remain obligated to perform the work in accordance with the terms of the existing contract.

Acceptance of the modification and its implementation will not modify the completion date of the contract unless specifically provided for in the supplemental agreement.

The Contractor shall not be entitled to additional compensation for alterations in the plans or in the details of construction pursuant to the Value Engineering Proposal.

The Department will not be liable to the Contractor for failure to accept or act upon any Value Engineering Proposal submitted pursuant to this provision nor for any delays to the work attributable to any such proposal.

The Department reserves the right to negotiate desired changes with the Contractor under the provisions of the contract even though the changes are the result of a Value Engineering Proposal submitted on another contract. In this instance, the savings will be prorated in accordance with the terms of the negotiated agreement.

Payment will be made under:

Item No.	Pay Item	Pay Unit
1040010	Value Engineering (Contractor's Portion)	Lump Sum

104.04 Extension of Contract. Upon written agreement with the Contractor, the Department may extend the work beyond the limits of the contract or add an additional road or roads as agreed. Such extension shall not exceed 50% of the total amount of the original contract being extended or shall not exceed \$100,000.00 whichever is the lesser amount, except as approved in advance by the Commission. Should these limitations conflict with State laws, contract extensions shall be governed by the limitations of the State laws existing at the time of the extension. Extended work shall be performed at the same unit price as in the original contract. If there is no unit price for an item in the original contract, the unit price of such item shall be agreed upon, and a supplemental agreement shall be executed before beginning work.

104.05 Extra Work. The Contractor shall perform unforeseen work, for which there is no price included in the contract, whenever the Department deems it necessary or desirable to complete the work as contemplated and such extra work shall be performed in accordance with the specifications and as directed; provided however, that before any extra work is started, a supplemental agreement shall be entered into, or a force account work order issued.

104.06 Detours and Haul Roads. When the plans indicate that traffic is to use detour roads or structures, the items of work involved will be provided for in the contract, or their construction and maintenance may be performed by the Department. At places on the project where detour roads or structures are not shown on the plans or provided for in the contract, it shall be the Contractor's responsibility to provide adequately for traffic without extra compensation. If the Con-

tractor uses such roads that have been provided by the Department to haul its materials or equipment over, it shall bear a proportionate part of the construction and maintenance costs as determined by the Engineer. The Contractor will be required to bear all costs of constructing and maintaining new roads that are necessary to enable it to haul materials over the shortest practicable route. If the Engineer so directs, the Contractor shall restore, without extra compensation, the premises over which a haul road has been constructed to a condition similar to or equal to that existing before the haul road was constructed.

104.07 Maintenance and Maintaining Traffic. Unless otherwise provided, an existing road while undergoing improvements shall be kept open to all traffic by the Contractor. The Contractor shall be required, without direct compensation, to maintain in a condition satisfactory to the Engineer, the entire section or sections of highway, within the limits of the work being performed by the Contractor under the contract from the time the Contractor first begins work until all work has been completed and accepted, except that the Department may, when requested by the Contractor, assist in removing ice and snow from portions of the project that are open to traffic. Such work by Department forces shall in no way be construed as a waiver of the Contractor's responsibility as set forth herein or in cited specifications. This provision shall not be construed to require the Contractor to maintain portions of the highway or roadway that are not in the limits of the contract. The Contractor shall, where determined necessary by the Engineer, provide and maintain temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages and farms. This work shall also include the satisfactory maintenance of the old roadway wholly or in part, even though a section or sections of the old roadway may be outside the new right of way, until such time as the new road is sufficiently completed to adequately accommodate traffic; keeping the roadway being constructed in shape so as to be well drained at all times, and when such sections are being used by the traveling public,

paying special attention to keeping the subgrade and the newly laid subbase or base course, or surfacing in a condition that is safe and comfortable for public travel; keeping all water courses free from obstruction; repairing all defects promptly and in a manner that will insure durability; and all work necessary to keep the subgrade, subbase or base course, surface course, shoulders, slopes and ditches to the required cross-section and grade.

The Contractor shall coordinate and perform the various phases or stages of the construction, paying attention to weather conditions, seasons of the year, etc., so as to afford the least inconveniences to the adjacent landowners and the traveling public.

The Contractor will be relieved of maintenance of a section or sections when all work on such section or sections covered by the contract has been satisfactorily completed, the final cleaning-up performed and the final inspection made.

104.08 Removal and Disposal of Structures and Obstructions. Unless otherwise provided, the Contractor shall remove, without extra compensation, any existing structure or portion thereof, fences, or buildings or other encumbrances or obstructions upon or within the limits of the right of way which are not necessary to the improvement or which interfere in any way with the new construction and they shall be removed with sufficient care to preserve the salvage value of the materials therein. Such materials when not designated for use in the new construction will, unless otherwise provided, become the property of the owner or the Department, as the case may be. All such materials belonging to owners of abutting property shall be piled neatly and in an acceptable manner upon their property or otherwise disposed of as required. All such materials reserved for use by the Department shall be removed without damage in sections that can be readily transported and shall be neatly piled at accessible points. Whenever materials are stored upon the highway, the Contractor will be held responsible for its care and preservation until its

authorized removal. The Contractor shall remove all material designated by the Engineer as having no salvage value, all discarded materials, and rubbish or debris from the highway without extra compensation, and shall dispose of it as directed by the Engineer.

Any structure, any part of which conflicts with the installation of a new structure, shall be removed by the Contractor, and all work and costs incidental to this removal shall be included in the contract prices for the new structure.

Whenever it is necessary to remove, reset or rearrange any building or structure outside the limits of the roadway which is not provided for in the contract, the Contractor may be required by the Engineer to perform this work as extra work; or the work may be performed by the Department or by the owners under separate agreement.

The Contractor will be required to use every precaution to prevent interference with utilities. The Department will not be responsible for any damage to or interference with the utilities by the Contractor, or for the cost of protecting the utilities from such interference or damage.

104.09 Rights In and Use of Materials Found on the Work. The Contractor, with the approval of the Engineer, may use on the project such stone, gravel, sand or other material determined suitable by the Engineer, as may be found in the excavation and will be paid both for the excavation of such materials at the corresponding contract unit price and for the pay item for which the excavated material is used. The Contractor shall replace, at its own expense and with other acceptable material, all of that portion of the excavation materials so removed and used which was needed for use in the embankments, backfills, approaches or otherwise. No charge for the materials so used will be made against the Contractor. The Contractor shall not excavate or remove any material from within the highway location that is not within the grading limits, without written authorization from the Engineer.

Unless otherwise provided, the material from any existing old structure may be used temporarily by the Contractor in the erection of the new structure. Such material shall not be cut or otherwise damaged except with the approval of the Engineer, and upon completion of the work shall be placed where it may be readily loaded on trucks. If the Contractor unnecessarily damages or impairs the salvage value of the material removed from an existing structure, it will be charged an amount estimated by the Engineer as sufficient to cover the loss, damage, or impairment in salvage value.

104.10 Final Cleaning Up. Before acceptance and final payment is made, the Contractor shall, without extra compensation, clear the highway structures and site of all obstructions placed by the Contractor, and shall remove from the right of way, borrow pits and adjacent property all surplus or discarded materials, rubbish, temporary buildings, structures and equipment; restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work; and shall leave the highway or bridge site, including stream banks, in a neat and presentable condition, with waterways unobstructed and free of debris for the entire length of the section or sections of road under contract.

SECTION 105

CONTROL OF WORK

105.01 Authority of the Engineer. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions regarding the interpretation of the plans and specifications; all questions as