

DIVISION 1 GENERAL REQUIREMENTS

SECTION 101 DEFINITIONS OF TERMS

101-1 GENERAL

Whenever the terms defined in this section are used in those specifications, in any of the contract documents, or on the plans, the intended meaning of such terms shall be as defined in this section.

101-2 ABBREVIATIONS

AAN	_____	American Association of Nurserymen
AAR	_____	Association of American Railroads
AASHTO	__	American Association of State Highway and Transportation Officials
ACI	_____	American Concrete Institute
ADT	_____	Annual Average Daily Traffic
AED	_____	Associated Equipment Distributors
AGC	_____	Associated General Contractors of America
AIA	_____	American Institute of Architects
AISC	_____	American Institute of Steel Construction
AISI	_____	American Iron and Steel Institute
ANSI	_____	American National Standards Institute, Inc.
ARA	_____	American Railway Association
AREA	_____	American Railway Engineering Association
ASLA	_____	American Society of Landscape Architects
ASTM	_____	American Society for Testing and Materials
AWWA	_____	American Water Works Association
AWS	_____	American Welding Society
AWPA	_____	American Wood Preserver's Association
CRSI	_____	Concrete Reinforcing Steel Institute
DHV	_____	Design Hourly Volume
EI	_____	Edison Electric Institute
FHWA	_____	Federal Highway Administration, U.S. Department of Transportation
FSS	_____	Federal Specifications and Standards, General Services Administration
GS	_____	General Statutes of North Carolina
IES	_____	Illuminating Engineering Society
NEC	_____	National Electrical Code
NEMA	_____	National Electrical Manufacturers Association
NESC	_____	National Electrical Safety Code
NTPEP	_____	National Transportation Product Evaluation Program
SPIB	_____	Southern Pine Inspection Bureau
SSPC	_____	Steel Structures Painting Council
UL	_____	Underwriters' Laboratories, Inc.

101-3 ACT OF GOD.

Events in nature so extraordinary that the history of climate variations and other conditions in the particular locality affords no reasonable warning of them.

101-4 ADDITIONAL WORK.

Additional work is that which results from a change or alteration in the contract and for which there are existing contract unit prices.

101-5 ADMINISTRATOR.

The State Highway Administrator.

101-6 ADVERTISEMENT.

The public advertisement inviting bids for the construction of specific projects.

101-7 AMOUNT BID.

The amount bid for a particular item of work in a proposal form.

101-8 ARTICLE.

A primary numbered subdivision of a section of the standard specifications.

101-9 AWARD.

The decision of the Board of Transportation to accept the bid of the lowest responsible Bidder for work which is subject to the furnishing of payment and performance bonds, and such other conditions as may be otherwise provided by law, the proposal form, and these specifications.

101-10 BASE COURSE.

That portion of the pavement structure of planned thickness placed immediately below the pavement or surface course.

101-11 BID (OR PROPOSAL).

The offer of a Bidder on the proposal form furnished by the Department of Transportation to perform the work and to furnish the labor and materials at the prices quoted.

101-12 BID BOND OR BID DEPOSIT.

The security furnished by the Bidder with his bid as guaranty that he will furnish the required bonds and execute such documents as may be required if his bid is accepted.

101-13 BIDDER.

An individual, partnership, firm, corporation, or joint venture formally submitting a bid for the work contemplated.

101-14 BOARD OR BOARD OF TRANSPORTATION.

The Board created by the provisions of G.S. 143B-350 for the purpose of formulating policies and priorities for the Department of Transportation, and awarding all state highway construction contracts.

101-15 BRIDGE.

A structure including supports, erected over a depression or an obstruction such as water, highway, or railway, and having a track or passage way for carrying traffic or other moving loads and having a length measured along the center of the roadway of more than 20 feet between undercopings of end supports, spring lines of arches, or between extreme ends of openings for multiple reinforced concrete box structures.

Bridge Length: The length of a bridge structure is the overall length measured along the line of survey stationing back to back of backwalls of abutments, if present, otherwise end to end of the bridge floor.

Bridge Width: The clear width measured at right angles to the longitudinal centerline of the bridge between the bottom of curbs, guard timbers or face of parapets, or in the case of multiple height of curbs, between the bottoms of the lower risers.

101-16 CALENDAR DAY.

A day shown on the calendar beginning and ending at midnight.

101-17 CHIEF ENGINEER.

The Chief Engineer, Operations, Division of Highways, North Carolina Department of Transportation.

101-18 COMPLETION DATE.

That date set forth in the special provisions or as revised by authorized extensions, by which date it is required that the work set forth in the contract be satisfactorily completed.

101-19 CONSTRUCTION EASEMENT.

A right owned by the Department of Transportation in a parcel of land owned by a third party outside the highway right of way for the purpose of containing construction which exceeds the right of way.

101-20 CONTRACT.

The executed agreement between the Department of Transportation and the successful Bidder, covering the performance of the work and the compensation therefor.

The term contract is all inclusive with reference to all written agreements affecting a contractual relationship and all documents referred to therein, and shall specifically include, but not be limited to, the proposal form, the printed contract form and all attachments thereto, the contract bonds, the plans, the standard specifications and all supplemental specifications thereto, the standard special provisions and the project special provisions contained in the proposal form, and all executed supplemental agreements, all of which shall constitute one instrument.

101-21 CONTRACT ITEM.

A specifically described unit of work for which a unit or lump sum price is provided in the contract. Synonymous with "Pay Item".

101-22 CONTRACT LUMP SUM PRICE.

The amount bid for a lump sum item which has been submitted by the Contractor in his proposal form.

101-23 CONTRACT PAYMENT BOND.

A bond furnished by the Contractor and his corporate surety securing the payment of those furnishing labor, materials, and supplies for the construction of the project.

101-24 CONTACT PERFORMANCE BOND.

A bond furnished by the Contractor and his corporate surety guaranteeing the performance of the contract.

101-25 CONTRACT TIME.

The number of calendar days inclusive between the date of availability and the completion date, said dates being set forth in the special provisions, including authorized extensions to the completion date.

101-26 CONTRACT UNIT PRICE.

The unit bid price for a unit item which has been submitted by the Contractor in his proposal form.

101-27 CONTRACTOR.

The successful Bidder to whom the contract has been awarded, and who has executed the contract documents and furnished acceptable contract bonds.

101-28 CULVERT.

Any structure not classified as a bridge which provides an opening under the roadway.

101-29 CURRENT CONTROLLING OPERATION OR OPERATIONS.

Any operation or operations, as determined by the Engineer, which if delayed would delay the completion of the project.

101-30 DATE OF AVAILABILITY.

That date, set forth in the special provisions, by which it is anticipated that sufficient work sites within the project limits will be available for the Contractor to begin his controlling operations.

101-31 DEPARTMENT OR DEPARTMENT OF TRANSPORTATION.

A principal department of the Executive Branch which performs the functions of planning, design, construction, and maintenance of an integrated statewide transportation system.

101-32 DIVISION OF HIGHWAYS.

The division of the Department of Transportation which, under the direction of the Secretary of Transportation, carries out state highway planning, design, construction, and maintenance functions assigned to the Department of Transportation.

101-33 DRAINAGE EASEMENT.

A right, owned by the Department of Transportation, in a parcel of land owned by a third party outside the highway right of way, to construct and maintain ditches, channels, or structures for directing the course and flow of water outside the highway right of way.

101-34 EASEMENT.

A property right to use or control real property of another.

101-35 ENGINEER.

The Chief Engineer Operations, Division of Highways, North Carolina Department of Transportation, acting directly or through his duly authorized representatives.

101-36 EQUIPMENT.

All machinery and equipment, together with the necessary supplies, tools, and apparatus for upkeep and maintenance, all of which are necessary for the proper construction and acceptable completion of the work.

101-37 EXTRA WORK.

Work found necessary or desirable to complete fully the work as contemplated in the contract for which payment is not provided for by the contract unit or lump sum prices in the original contract. Extra work shall not be work which in the terms of the specifications and special provisions is incidental to work for which there is a contract price or work for which payment is included in some other contract unit or lump sum price.

101-38 FINAL ACCEPTANCE DATE.

That date on which all work set forth in the contract and work modified by the Engineer is satisfactorily completed excluding any observation periods not specifically made a part of the work by the specifications or special provisions.

101-39 FINAL ESTIMATE.

The document which contains a final statement of all quantities and total dollar amount for each item of work performed during the life of the contract including any adjustments to those amounts made under the terms of the contract. The final statement will be titled The Final Estimate and will be the document utilized to document final payment to the Contractor. Receipt of this document by the Contractor will begin the time frame for filing of a verified claim with the Department as provided for in G.S. 136-29 of the General Statutes of North Carolina.

101-40 FINAL ESTIMATE ASSEMBLY.

As constructed plans and other project records which establish the final statement of quantities to be paid and document work performed on the project.

101-41 FORCE ACCOUNT NOTICE.

A written notice to the Contractor that extra work ordered by the Engineer will be paid for as force account work.

101-42 FORCE ACCOUNT WORK.

Work that is paid for in accordance with Article 109-3 or on the basis of the force account formula provided in the contract.

101-43 HIGHWAY.

A general term denoting a public way for purposes of vehicular travel, including the entire area within the right of way. Synonymous with "Road" and "Street".

101-44 HOUR.

One of the 24 equal parts of a day.

101-45 INSPECTOR.

The authorized representative of the Engineer assigned to make a detailed inspection of any or all portions of the work and materials.

101-46 INTERMEDIATE COMPLETION DATE.

That date set forth in the special provisions or as revised by authorized extensions, by which date it is required that the portion of work set forth in the contract be satisfactorily completed.

101-47 INTERMEDIATE COMPLETION TIME.

The time set forth in the special provisions or as revised by authorized extensions, by which it is required that the portion of work set forth in the contract be satisfactorily completed.

101-48 INTERMEDIATE CONTRACT TIME (DAYS).

The number of calendar days inclusive between the date of availability and the completion date, said dates being set forth in the special provisions, including authorized extensions to the intermediate completion date.

101-49 INTERMEDIATE CONTRACT TIME (HOURS).

The number of hours inclusive between the time of availability and the intermediate completion time, said times being set forth in the special provisions, including authorized extensions to the intermediate completion time.

101-50 INVERT.

The lowest point in the internal cross section of a pipe or other culvert.

101-51 INVITATION TO BID.

The notification that bids will be received for the construction of specific projects.

101-52 LABORATORY.

The testing laboratory of the Department of Transportation or any other testing laboratory which may be designated or approved by the Engineer.

101-53 LOCAL TRAFFIC.

Traffic which must use the facility under construction in order to reach its destination.

101-54 MAJOR AND MINOR CONTRACT ITEMS.

Major contract items are listed as such in the project special provisions. All other original contract items and extra work shall be considered as minor items.

101-55 MATERIALS.

Any substances which may be incorporated into the construction of the project.

101-56 MEDIAN.

The center section of a divided highway which separates the traffic lanes in one direction from the traffic lanes in the opposite direction.

101-57 MOBILIZATION.

The work described in Article 800-1.

101-58 PAVEMENT STRUCTURE.

The combination of base and surface courses placed on a subgrade to support the traffic load and distribute it to the roadbed.

101-59 PAY ITEM.

Synonymous with "Contract Item".

101-60 PLANS.

The approved plans, profiles, typical roadway sections, appropriate standard plans, supplemental plans, and working drawings, or exact reproductions thereof, which show the location, dimensions, and details of the work to be done, and which are a part of the contract.

101-61 PREBID CONFERENCE.

A conference held before bids are accepted on a project at which representatives of the Department will provide information and accept and answer questions from interested parties.

101-62 PROJECT.

The specific section of the highway together with all appurtenances and construction to be performed thereon under the contract.

101-63 PROJECT SPECIAL PROVISIONS.

Special provisions peculiar to the project and not otherwise thoroughly or appropriately set forth in the standard specifications or plans.

101-64 PROPOSAL FORM.

The form provided by the Department of Transportation on which the offer of the Bidder to perform the work at designated bid prices is submitted.

101-65 RIGHT OF WAY.

The land area shown on the plans as right of way to be furnished by the Department of Transportation within which the project is to be constructed.

101-66 ROAD.

Synonymous with "Highway" and "Street".

101-67 ROADBED.

The graded portion of a highway usually considered as the area between the intersections of top and side slopes, upon which the base course, surface course, shoulders, and median are constructed.

101-68 ROADSIDE.

A general term denoting the area within the limits of the right of way adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

101-69 ROADWAY.

The portion of a highway within limits of construction.

101-70 SECTION.

A numbered chapter of the standard specifications.

101-71 SHOULDER.

The portion of the roadway adjacent to the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

101-72 SIDEWALK.

That portion of the roadway primarily constructed for pedestrian traffic.

101-73 SKEW ANGLE.

The angle between the centerline of the project and the centerline of a pipe, culvert, bridge pier, bent, abutment, or other drainage feature, measured to the right of the project centerline facing in the direction of progressing stations.

101-74 SPECIAL PROVISIONS.

Project special provisions and standard special provisions taken together as one body of special provisions.

101-75 SPECIFICATIONS.

The general term comprising all the directions, provisions, and requirements contained or referred to in the standard specifications, including the supplemental specifications, together with such additional directions, provisions, and requirements which may be added or adopted as special provisions.

101-76 STANDARD SPECIAL PROVISIONS.

Special directions or requirements not otherwise thoroughly or appropriately set forth in the standard specifications and which are peculiar to a selected group of projects.

101-77 STANDARD SPECIFICATIONS.

The general term comprising all the directions, provisions, and requirements contained or referred to in this book entitled "Standard Specifications for Roads and Structures", and in any subsequent revisions or additions to such book that are issued under the title "Supplemental Specifications".

101-78 STATE.

The State of North Carolina.

101-79 STATION.

A station, when used as a term of measurement, will be 100 linear feet measured horizontally. When used as a location, it will be a designated point on the project.

101-80 STREET.

Synonymous with "Highway" and "Road".

101-81 SUBCONTRACTOR.

An individual, partnership, firm, joint venture, or corporation to whom the Contractor, with the written consent of the Engineer, sublets any part of the contract.

101-82 SUBGRADE.

That portion of the roadbed prepared as a foundation for the pavement structure including curb and gutter. On portions of projects which do not include the construction of a base course or pavement, the presence of the subgrade will not be recognized during the life of such contract.

101-83 SUBSTRUCTURE.

All of that part of the structure below the bearings of simple and continuous spans, spans, skew back of arches and tops of footings of rigid frames, together with the backwalls, and wingwalls.

101-84 SUCCESSFUL BIDDER.

The bidder awarded a contract.

101-85 SUPERINTENDENT.

The representative of the Contractor authorized to supervise and direct the construction for the Contractor and to receive and fulfill directions from the Engineer.

101-86 SUPERSTRUCTURE.

All of the part of the structure exclusive of the substructure.

101-87 SUPPLEMENTAL AGREEMENT.

A written agreement between the Contractor and the Department of Transportation covering amendments to the contract.

101-88 SUPPLEMENTAL SPECIFICATIONS.

General revisions or additions to this book of standard specifications which are issued under the title of "Supplemental Specifications", and which shall be considered as part of the standard specifications; or specifications, regulations, standards, or codes referenced in the contract documents.

101-89 SURETY.

A corporate bonding company furnishing the bid bond or furnishing the contract payment and performance bonds.

101-90 TEMPORARY CONSTRUCTION EASEMENT.

A temporary right, owned by the Department of Transportation, in a parcel of land owned by a third party outside the highway right of way, for the use of the Department of Transportation during the construction and which reverts to the third party on completion of construction.

101-91 THROUGH TRAFFIC.

Traffic which can reach its destination by a route or routes other than the facility under construction.

101-92 TIME OF AVAILABILITY.

That time, set forth in the special provisions, by which it is anticipated that sufficient work sites within the project limits will be available for the Contractor to begin his controlling operations.

101-93 TOTAL AMOUNT BID.

Same as total price bid. The total amount bid will be considered to be the correct sum total obtained by adding together the amounts bid for every item in the proposal form other than items which are authorized alternates to those items for which an amount bid has been established.

101-94 UNBALANCED BID.

A bid which includes any unbalanced bid price.

101-95 UNBALANCED BID PRICE.

A unit or lump sum bid price that does not reflect reasonable actual costs which the Bidder anticipates for the performance of the item in question along with a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs.

101-96 WORK.

Work shall mean the furnishing of all labor, materials, equipment, and incidentals necessary or convenient to the successful completion of the project, or any part, portion, or phase thereof, and the carrying out of all duties and obligations imposed by the contract.

101-97 WORKING DRAWINGS.

Stress sheets, shop drawings, erection drawings, falsework drawings, cofferdam drawings, catalog cuts, or any other supplementary drawings or similar data which the Contractor is required to submit to the Engineer for review and/or approval.

**SECTION 102
BIDDING REQUIREMENTS AND
CONDITIONS**

102-1 INVITATION TO BID.

After the advertisement has been made, an invitation to bid will be mailed to known prequalified Contractors and any other contracting firms, material suppliers, and other interested parties who have requested they be placed on the invitation to bid mailing list informing them that bids will be received for the construction of specific projects. Such invitation will indicate the contract identification number, project number, length, locations, and descriptions; a general summary of the items and approximate quantities of work to be performed; and the time and place for the public opening and reading of the bids received. Information concerning the cost and availability of plans and proposal forms will also be indicated in the invitation to bid.

All projects shall be advertised in three widely circulated daily newspapers throughout the state prior to the bid opening.

102-2 PREQUALIFYING TO BID.

In order to ensure that contracts are awarded to responsible bidders, prospective bidders shall prequalify with the Department. The requirements for prequalification are as follows:

- (1) Applicant must submit a completed NCDOT Experience Questionnaire along with any additional supporting information requested by the Department.
- (2) Applicant must demonstrate that he has sufficient ability and experience in related highway construction projects to perform the work specified in NCDOT contracts, including the type and dollar value of previous contracts.
- (3) Applicant must demonstrate a history of successful performance and completion of projects in a timely manner, subject to contractual time adjustments.

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- (4) Applicant must demonstrate the financial ability to furnish bonds as specified in G.S. 44A-26.
- (5) Applicant must demonstrate sufficient available equipment to perform highway construction contracts in a timely manner.
- (6) Applicant must demonstrate sufficient available experienced personnel to perform highway construction contracts. The identities and qualifications of both management and labor work force shall be provided.
- (7) Applicant must provide names and addresses of persons for whom the firm has performed related work. Responses from the references must be on Department of Transportation forms and must be received by the Department prior to evaluating the request for prequalifications.
- (8) Applicant must provide any information requested concerning the corporate and operational management structure of the company, the identity of persons or entities owning stock or other equity interest in the company, and the relationship between the applicant and any other company prequalified with the Department or applying for prequalification.
- (9) Applicant must demonstrate, at the time of application for prequalification, the financial capability to successfully complete projects.
- (10) Applicant must submit a completed Safety Index Rating form.

Prospective Bidders, not prequalified, may request a NCDOT Experience Questionnaire form and a Safety Index Rating form from the State Construction Engineer, Division of Highways, Department of Transportation, Raleigh, NC. The Experience Questionnaire must be completed in its entirety and signed by an officer of the firm; the officer's signature shall be notarized. In addition to submitting the Experience Questionnaire form as set forth above, the prospective bidder shall submit supporting information in a format of his choosing to address the requirements listed above.

All required statements and documents shall be filed with the State Construction Engineer by the prospective Bidder at least 2 weeks prior to the date of opening of bids. A bid shall not be opened unless all prequalification requirements have been met by the Bidder and have been found to be acceptable by the Engineer.

Upon a determination by the Department that all prequalification requirements have been met, the applicant will be assigned a Prequalification Number. This Prequalification Number will thereafter be assigned to all applicants for prequalification or requalification which the Department determines are under sufficient common ownership and management control to warrant prequalification as a single entity. This determination by the Department shall be based on the information submitted with the Experience Questionnaire and any other information obtained by the Department.

In addition to the Experience Questionnaire, prequalification requirements will include provisions for the evaluation of a firm's safety record. A completed 'Safety Index Rating' form must be on file with the Department. To be prequalified to bid, each firm must maintain a satisfactory safety index. An overall safety index equal to or greater than 60 is considered satisfactory. In addition, an index between 60 and 69 may be considered marginal and may result in an in-depth safety audit of a firm's safety practices. An overall safety index equal to or less than 59 is considered unsatisfactory and will prohibit prequalification of new firms or the requalification of existing firms at the time of their biennium renewal.

When an existing prequalified company's safety index becomes unsatisfactory as described above, the State Construction Engineer may require the Contractor to state in writing the reason(s) for the unsatisfactory rating and produce such supporting data as may be necessary to evaluate the circumstances surrounding the rating. When the Contractor cannot provide justification to raise the unsatisfactory safety index, the State Construction Engineer may invoke one or more of the following sanctions:

1. Removal of the firm from the list of prequalified bidders
2. Placement of the firm on probation for up to two years
3. Auditing of the firm's safety practices
4. Giving a written warning to correct any safety deficiencies

Firms not approved or disqualified to bid due to an unsatisfactory safety index will not be approved or reinstated to bid until they can provide adequate evidence that all safety deficiencies have been corrected.

Bidders shall comply with all applicable laws regulating the practice of general contracting as contained in Chapter 87 of the General Statutes of North Carolina.

Prospective bidders must renew their prequalification biennially. To renew their prequalification, the prospective bidder must submit a completed Experience Questionnaire form, acceptable to the State Construction Engineer, on or before the anniversary date of the original prequalification. Experience Questionnaire forms shall be furnished approximately 30 days prior to the anniversary date and must be completed and executed in the same manner as the original form. The Experience Questionnaire form shall be submitted to the State Construction Engineer.

102-3 PROPOSAL FORMS AND PLAN HOLDER LISTS.

A proposal form will be furnished by the Department upon request. Each proposal form will be marked on the front cover by the Department with the name of the firm or individual to whom it is being furnished. This form will state the location of the contemplated construction and will show a schedule of contract items with the approximate quantity of each of these items for which bid prices are invited. It will set forth the date and time for the opening bids. The form will also include any special provisions or requirements which vary from or are not contained in the plans or standard specifications.

The proposal form will also include the printed contract forms and signature sheets for execution by both parties to the contract. In the event the Bidder is awarded the contract, execution of the bid by the bidder is considered the same as execution of the contract.

All papers bound with the proposal form are necessary parts thereof and shall not be detached, taken apart, or altered.

The plans, standard specifications, and other documents designated in the proposal form shall be considered a part of the proposal form whether attached or not.

The prospective Bidder will be required to pay the "Department of Transportation" the sum stated in the invitation to bid for each copy of the proposal form and each set of plans requested.

The names and identity of corporations, firms, partnerships, individuals or joint ventures who have requested plans or proposal forms for the purposes of bidding shall be made public, except that a potential bidder who obtains a set of plans/proposals may, at the time of ordering, request that his name remain confidential.

This information shall be furnished to the Federal Highway Administration in accordance with written rules, regulations, policies and procedures of the Federal Highway Administration.

102-4 COMBINATION BIDS.

If the Department so elects, proposal forms may be issued for projects in combination or separately, so that bids may be submitted either on the combination or on separate units of the combination. The right is reserved to make awards on combination bids or separate bids to the best advantage of the Department. No combination bids, other than those specified by the Department in the proposal form, will be considered.

102-5 INTERPRETATION OF QUANTITIES IN PROPOSAL FORM.

The quantities appearing in the proposal form are approximate only and are to be used for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of the various items that are completed and accepted in accordance with the terms of the contract.

When revisions in the plans are made by the Engineer which affect the quantities shown for lump sum items, adjustment in compensation will be made under the provisions of Articles 104-3 or 104-7.

102-6 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK.

The Bidder shall examine carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered; as to the character, quality, and scope of work to be performed; the quantities of materials to be furnished; and as to the conditions and requirements of the proposal form, plans, specifications, and contract under which his bid is offered.

A Bidder or Contractor is cautioned to make such independent investigation and examination as he deems necessary to satisfy himself as to conditions to be encountered in the performance of the work and with respect to possible local material sources, the quality and quantity of material available from such property, and the type and extent of processing that may be required in order to produce material conforming to the requirements of the specifications.

102-7 SUBSURFACE INFORMATION.

If Subsurface Information is available on this project, a copy of the Subsurface Information may be obtained from the Department. A copy of the Subsurface Information will be mailed to the plan holders upon request.

The Subsurface Information and the Subsurface Investigation on which it is based was made for the purpose of study, planning, and design, and not for construction or pay purposes. The various field boring logs, rock cores, and soil test data available may be reviewed or inspected in Raleigh at the office of the Geotechnical Unit. Neither the Subsurface Information nor the field boring logs, rock cores, or soil test data is part of the contract.

General soil and rock strata descriptions and indicated boundaries are based on a geotechnical interpretation of all available subsurface data and may not necessarily reflect the actual subsurface conditions between borings or between sampled strata within the borehole. The laboratory sample data and the in situ (in-place) test data can be relied on only to the degree of reliability inherent in the standard test method. The observed water levels or soil moisture conditions indicated in the subsurface investigations are as recorded at the time of the investigation. These water levels or soil moisture conditions may vary considerably with time according to climatic conditions including temperature, precipitation, and wind, as well as other nonclimatic factors.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE INFORMATION ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE OR OPINIONS OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS

AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

102-8 PREPARATION AND SUBMISSION OF BIDS.

All bids shall be prepared and submitted in accordance with the following listed requirements, except where otherwise provided by Article 102-9:

1. The proposal form provided by the Department shall be used and shall not be taken apart or altered. The bid shall be submitted on the same proposal form which has been furnished to the Bidder by the Department as identified by the bidder's name marked on the front cover by the Department.
2. All entries including signatures shall be written in ink.
3. The Bidder shall submit a unit or lump sum price for every item in the proposal form other than items which are authorized alternates to those items for which a bid price has been submitted.

As an exception to the above, when the proposal form permits a Bidder to submit a bid on only a portion of the work covered by the entire proposal form, the Bidder shall then submit a unit or lump sum price for every item constituting that portion of the work on which the Bidder has elected to place a bid other than items which are authorized alternates to those items for which a bid price has been submitted.

The unit or lump sum prices bid for the various contract items shall be written in figures.

The unit prices shall be rounded off by the bidder to contain no more than four (4) decimal places.

4. An amount bid shall be entered in the proposal form for every item on which a unit price has been submitted. The amount bid for each item other than lump sum items shall be determined by multiplying each unit bid price by the quantity for that item, and shall be written in figures in the "Amount Bid" column in the proposal form.

In the case of lump sum items, the price shall be written in figures in the "Amount Bid" column in the proposal form.

5. The total amount bid shall be written in figures in the proper place in the proposal form. The total amount bid shall be determined by adding the amounts bid for each item.
6. Changes in any entry shall be made by marking through the entry in ink and making the correct entry adjacent thereto in ink. A representative of the Bidder shall initial the change in ink.
7. The bid shall be properly executed. In order to constitute proper execution, the bid shall be executed in strict compliance with the following:
 - a. If a bid is by an individual, it shall show the name of the individual and shall be signed by the individual with the word "Individually" appearing under the signature. If the individual operates under a firm name, the bid shall be signed in the name of the individual doing business under the firm name.
 - b. If the bid is by a corporation, it shall be executed in the name of the corporation by the President, Vice President, or Assistant Vice President. It shall be attested by the Secretary or Assistant Secretary. The seal of the corporation shall be affixed. If the bid is executed on behalf of a corporation in any other manner than as above, a certified copy of the minutes of the Board of Directors of said corporation authorizing the manner and style of execution and the authority of

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- the person executing shall be attached to the bid or shall be on file with the Department.
- c. If the bid is made by a partnership, it shall be executed in the name of the partnership by one of the general partners.
 - d. If the bid is a joint venture, it shall be executed by each of the joint venturers in the appropriate manner set out above. In addition, the execution by the joint venturers shall appear below their names.
 - e. The bid execution shall be notarized by a notary public whose commission is in effect on the date of execution. Such notarization shall be applicable both to the bid and to the non-collusion affidavit which is part of the signature sheets.
8. The bid shall not contain any unauthorized additions, deletions, or conditional bids.
 9. The Bidder shall not add any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
 10. The bid shall be accompanied by a bid bond on the form furnished by the Department or by a bid deposit. The bid bond shall be completely and properly executed in accordance with the requirements of Article 102-11. The bid deposit shall be a certified check or cashier check in accordance with Article 102-11.
 11. The bid shall be placed in a sealed envelope and shall have been delivered to and received by the Department prior to the time specified in the invitation to bid.
 12. The bid shall not be an unbalanced bid.

102-9 COMPUTER BID PREPARATION.

A diskette to assist the Bidder in preparing his bid by means of a personal computer will be furnished by the Department if so requested by the Bidder at the same time he orders a proposal form. Unit prices shall be rounded off by the Bidder to four (4) decimal places. The diskette will contain an electronic copy of the itemized proposal sheets included in the proposal. The electronic copy may be used to prepare a bid. The bid diskette will function properly with an IBM compatible personal computer.

The only entries into the program which will be permitted by the Bidder are the appropriate unit or lump sum prices for those items which must be bid in order to provide a complete bid for the project. When these entries have been made, the program will automatically prepare and print a complete set of itemized proposal sheets which will include the amount bid for the various items and the total amount bid for the project in addition to the unit or lump sum prices bid. This set of itemized proposal sheets, when submitted together with the appropriate proposal form, will constitute the bid and shall be delivered to the Department in accordance with Article 102-12. If the Bidder submits his bid on computer generated itemized proposal sheets, bid prices shall not be written on the itemized proposal sheets bound in the proposal form. The computer generated itemized proposal sheets shall be signed by a duly authorized representative in accordance with Article 102-8(7). The bid diskette furnished by the Department shall be returned with the bid.

In the case of a discrepancy between the unit or lump sum prices submitted on the itemized proposal sheets and those contained on the diskette furnished to the Department, the unit or lump sum prices submitted on the itemized proposal sheet shall prevail.

The provisions of Article 102-8 will apply to the preparation of bids except that the bid may be submitted on computer generated itemized proposal sheets in which case the entries on the itemized proposal sheets will not be required to be in ink. Changes to any entry on the computer generated itemized proposal sheets shall be made in accordance with requirement Number 6 of Article 102-8. When the Computer Generated Itemized Proposal Sheets are not signed and received with the proposal, the bid will be considered irregular.

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The Department will not be responsible for loss or damage to a bid diskette after it has been mailed to the Bidder. If loss or damage occurs, the Bidder may order another bid diskette.

102-10 NON-COLLUSION AFFIDAVIT.

In compliance with Section 112(c) of Title 23 USC, and current regulations of the Department, each and every Bidder will be required to furnish the Department with an affidavit certifying that the Bidder has not entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with his bid on the project. The affidavit shall also conclusively indicate that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

Affidavit forms will be included in the Proposal Form as part of the signature sheets. Execution of the signature sheets will also constitute execution of the non-collusion affidavit. The signature sheets shall be notarized.

A non-collusion certification shall be executed by prime contractors and lower tier participants in each transaction involving public funds. Transactions which require certifications from lower tier participants are:

- (1) Transactions between a prime contractor and a person, other than for a procurement contract, for goods or services, regardless of type.
- (2) Procurement contracts for goods and services, between a prime contractor and a person, regardless of type, expected to equal or exceed the Federal small purchase threshold fixed at 10 U.S.C. 2304(g) [currently twenty-five thousand dollars (\$25,000)] under a prime contract.
- (3) Procurement contracts for goods or services between a prime contractor and a person, regardless of the amount, under which that person will have a critical influence on or substantive control over the transaction. Such persons include, but are not limited to, bid estimators and contract managers.

The certifications for both the prime contractor and the lower tier participants shall be on a form furnished by the Department of Transportation to comply with Federal Highway Administration requirements, as published in 49 CFR Part 29. The prime contractor is responsible for obtaining the certifications from the lower tier participants and is responsible for keeping them as part of the contract records.

102-11 BID BOND OR BID DEPOSIT.

Each bid shall be accompanied by a corporate bid bond or a bid deposit of a certified or cashiers check in the amount of at least 5% of the total amount bid for the contract. No bid will be considered or accepted unless accompanied by one of the foregoing securities. The bid bond shall be executed by a Corporate Surety licensed to do business in North Carolina and the certified check or cashiers check shall be drawn on a bank or trust company insured by the Federal Deposit Insurance Corporation and made payable to the Department of Transportation in an amount of at least 5% of the total amount bid for the contract. The condition of the bid bond or bid deposit is: the Principal shall not withdraw its bid within 60 days after the opening of the same, and if the Board of Transportation shall award a contract to the Principal, the Principal shall within 14 calendar days after the notice of award is received by him give, payment and performance bonds with good and sufficient surety as required for the faithful performance of the contract and for the protection of all persons supplying labor and materials in the prosecution of the work; in the event of the failure of the Principal to give such payment and performance bonds as required, then the amount of the bid bond shall be immediately paid to the Department as liquidated damages, or, in the case of a bid deposit, the deposit shall be forfeited to the Department.

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Withdrawal of a bid due to a mistake made in the preparation of the bid, where permitted by Article 103-3, shall not constitute withdrawal of a bid as cause for payment of the bid bond or forfeiture of the bid deposit.

When a bid is secured by a bid bond, the bid bond shall be on the form furnished by the Department. The bid bond shall be executed by both the Bidder and a Corporate Surety licensed under the laws of North Carolina to write such bonds. The execution by the Bidder shall be in the same manner as required by Article 102-8 for the proper execution of the bid. The execution by the Corporate Surety shall be the same as is provided for by Article 102-8, Item 7b, for the execution of the bid by a corporation. The seal of the Corporate Surety shall be affixed to the bid bond. The bid bond form furnished is for execution of the Corporate Surety by a General Agent or Attorney in Fact. A certified copy of the Power of Attorney shall be attached if the bid bond is executed by a General Agent or Attorney in Fact. The Power of Attorney shall contain a certification that the Power of Attorney is still in full force and effect as of the date of the execution of the bid bond by the General Agent or Attorney in Fact. If the bid bond is executed by the Corporate Surety by the President, Vice President, or Assistant Vice President, and attested to by the Secretary or Assistant Secretary, then the bid bond form furnished shall be modified for such execution, instead of execution by the Attorney in Fact or the General Agent.

When a bid is secured by a bid deposit (certified check or cashiers check), the execution of a bid bond will not be required.

If the Bidder has failed to meet all conditions of the bid bond but the Department has not received the amount due under the bid bond, the Bidder may be disqualified from further bidding as provided in Article 102-16.

102-12 DELIVERY OF BIDS.

All bids shall be placed in a sealed envelope having the name and address of the Bidder, and the statement "Bid for the Construction of State Highway Project No. _____ in _____ county(s)" on the outside of the envelope. If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope addressed to the Contract Officer, Division of Highways, North Carolina Department of Transportation, Raleigh, N. C. 27611. The outer envelope shall also bear the statement "Bid for the Construction of State Highway Project No. _____". If delivered in person before the day of bid opening, the sealed envelope shall be delivered to the office of the Contract Officer as indicated in the Invitation to Bid. If it is delivered in person on the day of the bid opening, it shall be delivered to the place indicated, for bid opening, in the Invitation to Bid. All bids shall be delivered prior to the time specified in the invitation to bid. Bids received after such time will not be accepted and will be returned to the Bidder unopened.

102-13 WITHDRAWAL OR REVISION OF BIDS.

A Bidder may, without prejudice to himself, withdraw a bid after it has been delivered to the Department, provided the request for such withdrawal is made in writing, by telegram, or by facsimile to the Contract Officer before the date and time set for the opening of bids. The Bidder may then submit a revised bid provided it is received prior to the time set for opening of bids.

Only those persons authorized to sign bids under the provisions of Article 102-8, Item 7, shall be recognized as being qualified to withdraw a bid.

Withdrawal of a bid after the date and time set for the opening of bids will be permitted only in accordance with Article 103-3.

102-14 RECEIPT AND OPENING OF BIDS.

Bids will be opened and read publicly at the time and place indicated in the invitation to bid. Bidders, their authorized agents, and other interested parties are invited to be present.

A bid will be received and opened from any Bidder who:

1. Is prequalified in accordance with the provisions of Article 102-2, and
2. Has delivered the bid to the place indicated in the Specifications prior to the time indicated in the invitation to bid.

A bid received from a Bidder who has not complied with the above requirements will be returned to the Bidder unopened and under no circumstances will be considered for award.

102-15 REJECTION OF BIDS.

Any bid submitted which fails to comply with any of the requirements of Article 102-8, 102-9, or 102-11 shall be considered irregular and may be rejected.

Irregularities due to apparent clerical errors and omissions may be waived in accordance with Article 103-2.

Any bid including any unit or lump sum bid price which is significantly unbalanced to the potential detriment of the Department will be considered irregular and may be rejected. In the event the Board determines it is in the best public interest to accept such irregular bid, it may award the contract based on such bid subject to the provisions of Subarticle 109-4(B).

In addition to the above, any bids for contracts not funded with any Federal funds which are submitted by any Bidder who has failed to obtain the appropriate General Contractor's license, as required by Chapter 87 of the General Statutes of North Carolina, shall be considered irregular and will not be considered for award.

The right to reject any and all bids shall be reserved to the Board.

102-16 DISQUALIFICATION OF BIDDERS.

Any one of the following causes may be justification for disqualifying a Contractor from further bidding until he has applied for and has been requalified in accordance with Article 102-2:

1. Unsatisfactory progress in accordance with Article 108-8.
2. Being declared in default in accordance with Article 108-9.
3. Uncompleted contracts which, in the judgment of the Chief Engineer-Operations, might hinder or prevent the timely completion of additional work if awarded.
4. Failure to comply with prequalification requirements.
5. The submission of more than one bid for the same contract by an individual, partnership, joint venture, or corporation prequalified under the same prequalification number.
6. Evidence of collusion among Bidders. Each participant in such collusion will be disqualified.
7. Failure to furnish a non-collusion affidavit upon request.
8. Failure to comply with Article 108-6.
9. Failure to comply with a written order of the Engineer as provided in Article 105-1 if in the judgment of the Chief Engineer-Operations such failure is of sufficient magnitude to warrant disqualification.
10. Failure to satisfy the Disadvantaged Business Enterprise requirements of the project special provisions.

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11. The Department has not received the amount due under a forfeited bid bond or under the terms of a performance bond.
12. Failure to submit within 60 days after being requested by the Engineer, or the submission of false information in the documents required by Article 109-9.
13. Failure to return overpayments as directed by the Engineer.
14. Failure to maintain a satisfactory safety index as required by Article 102-2.
15. Recruitment of Department employees for employment as prohibited by Article 108-5.

Upon a determination that a Contractor should be disqualified for one or more of the reasons listed above, the Department may, at its discretion, remove all entities prequalified under the same Prequalification Number.

SECTION 103 AWARD AND EXECUTION OF CONTRACT

103-1 CONSIDERATION OF BIDS.

After the bids are opened and read, they will be compared on the basis of the summation of the products of the quantities shown in the bid schedule by the unit bid prices. The results of such comparisons will be immediately available to the public. In the event of errors, omissions, or discrepancies in the bid prices, corrections to the bid prices will be made in accordance with the provisions of Article 103-2. Such corrected bid prices will be used for the comparison and consideration of bids.

The right is reserved to reject any or all bids, to waive technicalities, to request the low Bidder to submit an up-to-date financial and operating statement, to advertise for new bids, or to proceed to do the work otherwise, if in the judgment of the Board, the best interests of the State will be promoted thereby.

103-2 CORRECTION OF BID ERRORS.

(A) General:

The provisions of this article shall apply in waiving irregularities and correcting apparent clerical errors and omissions in the "unit bid price" and the "amount bid" for bid items.

(B) Omitted Unit Bid Price--Amount Bid Completed--Quantity Bid on Is One Unit:

In the case of a bid item for which the "amount bid" is completed, but the "unit bid price" is omitted and the "quantity" shown in the proposal for the bid item is only one unit, the "unit bid price" shall be deemed to be the same as the amount bid for that bid item and shall constitute the "contract unit price" for that bid item.

(C) Omitted Unit Bid Price--Amount Bid Completed--Quantity Bid on Is More Than One Unit:

In the case of a bid item for which the "amount bid" is completed (extension of the "unit bid price" by the quantity) but the "unit bid price" is omitted and the quantity shown in the proposal for the bid item is more than one unit, the "unit bid price" shall be deemed to be the amount derived by dividing the "amount bid" for that item by the quantity shown in the proposal for that bid item and shall constitute the "contract unit price" for that bid item.

(D) Discrepancy in the "Unit Bid Price" and the "Amount Bid":

In the case of a bid item in which there is a discrepancy between the "unit bid price" and the extension for the bid item ("amount bid"), the "unit bid price" shall govern.

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As an exception to the above, on bids for contracts not funded with any Federal funds, the extension for the bid item ("amount bid") shall govern when the discrepancy consists of an obvious clerical mistake in the "unit bid price" consisting of the misplacement of a decimal point. The correction to the "unit bid price" will be made only when the following two conditions are met:

1. The corrected "unit bid price" multiplied by the quantity equals the "amount bid" for the bid item.
2. The corrected "unit bid price" is closer to the average of the engineer's estimate and the individual bids for the contract item than the uncorrected "unit bid price".

(E) Omitted "Unit Bid Price" and Omitted "Amount Bid"--Deemed "Zero" Bid:

The provisions of this subarticle shall apply only to bids for contracts not funded with any Federal funds.

In the case of omission of the "unit bid price" and the omission of the "amount bid" for any one item, and also in the case of the omission of the "amount bid" where a lump sum price is called for, the "amount bid" and the "unit bid price" shall be deemed to be zero where the value of the omitted "amount bid" is 1 percent or less of the "total amount bid" for the entire project (excluding the omitted item). The value of the omitted "amount bid" will be derived by determining the average of the engineer's estimate and the individual bids for that contract item.

Where the "unit bid price" is deemed to be zero as provided in this subarticle, such zero "unit bid price" shall constitute the "contract unit price" for the affected bid item.

Where the "amount bid" for a lump sum bid item is deemed to be zero as provided in this subarticle, such zero "amount bid" shall constitute the "contract lump sum price" for that bid item.

This subarticle shall not apply to the bid item for "Mobilization".

(F) Unit bid prices containing more than four (4) decimal places:

In the case of a Bid Item for which the "amount bid" contains more than four (4) decimal places for the "Unit Bid Price", only the whole number and the first four (4) decimal places shall constitute the "Contract Unit Price" for that Bid Item.

103-3 WITHDRAWAL OF BIDS--MISTAKE.

(A) Criteria for Withdrawal of Bid:

The Department of Transportation may allow a Bidder submitting a bid pursuant to G.S. 136-28.1 for construction or repair work to withdraw his bid after the scheduled time of bid opening upon a determination that:

1. A mistake was in fact made in the preparation of the bid.
2. The mistake in the bid is of a clerical or mathematical nature and not one of bad judgment, carelessness in inspecting the work site, or in reading the plans and specifications.
3. The mistake is found to be made in good faith and was not deliberate or by reason of gross negligence.
4. The amount of the error or mistake is equal to or greater than 3 percent of the total amount bid.
5. The notice of his mistake and request for withdrawal of the bid by reason of the mistake was promptly communicated to the Chief Engineer-Operations within 48 hours after the scheduled time of bid opening. Upon proper notification of a mistake and request for withdrawal of bid, the Bidder shall submit within 48 hours written notice of mistake accompanied by copies of bid preparation information to the Chief Engineer-Operations.

6. The Department of Transportation will not be prejudiced or damaged except for the loss of the bid.

(B) Hearing by Chief Engineer-Operations:

If a Bidder files a notice of mistake along with a request to withdraw his bid, the Chief Engineer-Operations (or his designee) will promptly hold a hearing thereon. The Chief Engineer-Operations will give to the requesting Bidder reasonable notice of the time and place of any such hearing. The Bidder may appear at the hearing and present the original working papers, documents, or materials used in the preparation of the bid sought to be withdrawn, together with other facts and arguments in support of his request to withdraw his bid. The Bidder shall be required to present a written affidavit that the documents presented are the original, unaltered documents used in the preparation of the bid.

(C) Action by State Highway Administrator:

A determination may be made by the Administrator that the Bidder meets the criteria for withdrawal of the bid as set forth in Subarticle 103-3(A) upon presentation of clear and convincing evidence by the Bidder. The Chief Engineer-Operations will present his findings to the State Highway Administrator for action on the Bidder's request. The Chief Engineer-Operations will advise the Bidder of the Administrator's decision prior to the Board of Transportation's consideration of award.

(D) Bid Bond:

If a bid mistake is made and a request to withdraw the bid is made, the bid bond shall continue in full force and effect until there is a determination by the Administrator that the conditions in Subarticle 103-3(A) have been met. The effect of the refusal of the Contractor to give payment and performance bonds within 14 calendar days after the notice of award is received by him, if award has been made by the Board of Transportation after consideration and denial of the Contractor's request to withdraw his bid, shall be governed by the terms and conditions of the bid bond.

103-4 AWARD OF CONTRACT.

(A) General:

The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Transportation (49 CFR, Part 21), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that contracts entered in pursuant to advertisements, if awarded, will be made by the Board of Transportation to the lowest responsible Bidder without discrimination on the grounds of race, color, or national origin. The lowest responsible Bidder will be notified by letter that his bid has been accepted and that he has been awarded the contract. This letter shall constitute the notice of award. The notice of award, if the award be made, will be issued within 60 days after the opening of bids, except that with the consent of the lowest responsible Bidder the decision to award the contract to such Bidder may be delayed for as long a time as may be agreed upon by the Department and such Bidder. In the absence of such agreement, the lowest responsible Bidder may withdraw his bid at the expiration of the 60 days without penalty if no notice of award has been issued.

Award of a contract involving any unbalanced bid price(s) may be made in accordance with the provisions of Article 102-15.

(B) Award Limits:

A Bidder who desires to bid on more than one project on which bids are to be opened on the same date, and who also desires to avoid receiving an award of more projects than he is equipped to handle, may bid on any number of projects but may limit the total amount of work awarded to him on selected projects by completing the form "Award Limits on Multiple Projects" for each project subject to the award limit. This form will be

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bound within each proposal form. This form will not be effective unless the amount is filled in and the form is properly signed. In the event that a Bidder is the lowest responsible Bidder on projects subject to the award limit and the value of such projects is more than the "award limit" established by such Bidder, the Board of Transportation will not award such Bidder projects from among those subject to the award limit which have a total value exceeding the award limit. The projects to be awarded to the Bidder will be those projects on which award will result in the lowest total cost to the Department of Transportation.

In determining the lowest total cost to the Department, the options of rejecting a bid or re-advertising for new bids may be considered.

All bids submitted without the properly executed form "Award Limits on Multiple Projects" will not be subject to the award limit. In the event that there is a discrepancy between the completed award limit forms submitted by the same Bidder for the different projects in a letting, the Department reserves the right to declare all such award limit forms invalid or to make such interpretation of the discrepancy as may be in the best interests of the Department. However, the presence of such discrepancy shall not be reason for declaring any bid irregular nor shall it invalidate the conditions of his bid bond or bid deposit.

Where a prequalified Contractor bids individually (as opposed to a Joint Venture) on one or more projects and also bids on one of more projects as part of a Joint Venture, such individual Bidder and such Joint Venture will be considered separate bidders in applying the provisions of this article.

103-5 CANCELLATION OF AWARD.

The Board of Transportation reserves the right to rescind the award of any contract at any time before the receipt of the properly executed contract bonds from the successful Bidder.

103-6 RETURN OF BID BOND OR BID DEPOSIT.

All bid bonds will be retained by the Department until the contract bonds are furnished by the successful Bidder, after which all such bid bonds will be destroyed unless the individual bid bond form contains a note requesting that it be returned to the Bidder or the Surety.

Checks which have been furnished as a bid deposit by all Bidders other than the 3 lowest responsible Bidders will be retained not more than 10 calendar days after the date of opening of bids. After the expiration of such period, Department of Transportation warrants in the equivalent amount of checks which were furnished as a bid deposit will be issued to all Bidders other than the 3 lowest responsible Bidders.

Checks which have been furnished as a bid deposit by the 3 lowest responsible Bidders will be retained until after the contract bonds have been furnished by the successful Bidder, at which time Department of Transportation warrants in the equivalent amount of checks which were furnished as a bid deposit will be issued to the 3 lowest responsible Bidders.

103-7 CONTRACT BONDS.

The successful Bidder, within 14 calendar days after the notice of award is received by him, shall provide the Department with a contract payment bond and a contract performance bond each in an amount equal to 100 percent of the amount of the contract. All bonds shall be in conformance with G.S. 44A-33. The corporate surety furnishing the bonds shall be authorized to do business in the State.

103-8 EXECUTION OF CONTRACT.

As soon as possible following receipt of the properly executed contract bonds, the Department will complete the execution of the contract, retain the original contract, and return one certified copy of the contract to the Contractor.

103-9 FAILURE TO FURNISH CONTRACT BONDS.

The successful Bidder's failure to file acceptable bonds within 14 calendar days after the notice of award is received by him shall be just cause for the forfeiture of the bid bond or bid deposit and rescinding the award of the contract. Award may then be made to the next lowest responsible Bidder or the work may be readvertised and constructed under contract or otherwise, as the Board of Transportation may decide.

**SECTION 104
SCOPE OF WORK****104-1 INTENT OF CONTRACT.**

The intent of the contract is to prescribe the work or improvements which the Contractor undertakes to perform, in full compliance with the plans, specifications, special provisions, proposal, and contract. In case the method of construction or character of any part of the work is not covered by the plans, these specifications shall apply. The Contractor shall perform all work in accordance with the lines, grades, typical sections, dimensions, and other data shown on the plans or as may be modified by written orders, and shall do such special, additional, extra, and incidental work as may be considered necessary to complete the work to the full intent of the plans and specifications. Unless otherwise provided in the special provisions or elsewhere in the contract, the Contractor shall furnish all implements, machinery, equipment, tools, materials, supplies, transportation, and labor necessary for the prosecution and completion of the work.

104-2 SUPPLEMENTAL AGREEMENTS.

Whenever it is necessary to make amendments to the contract in order to satisfactorily complete the proposed construction and/or to provide authorized time extensions, the Engineer shall have the authority to enter into a supplemental agreement covering such amendments.

Supplemental agreements shall become a part of the contract when executed by the Engineer and an authorized representative of the Contractor. The Contractor shall file with the Engineer a copy of the name or names of his representatives who are authorized to sign supplemental agreements.

104-3 ALTERATIONS OF PLANS OR DETAILS OF CONSTRUCTION.

The Engineer reserves the right to make, at any time during the progress of the work, such alterations in the plans or in the details of construction as may be found necessary or desirable. Under no circumstances will an alteration involve work beyond the termini of the proposed construction except as may be necessary to satisfactorily complete the project. Such alterations shall not invalidate the contract nor release the Surety, and the Contractor agrees to perform the work as altered at his contract unit or lump sum prices the same as if it had been a part of the original contract except as otherwise herein provided.

An adjustment in the affected contract unit or lump sum prices due to alterations in the plans or details of construction that materially change the character of the work and the cost of performing the work will be made by the Engineer only as provided in this article.

If the Engineer makes an alteration in the plans or details of construction which he determines will materially change the character of the work and the cost of performing the work, an adjustment will be made and the contract modified in writing accordingly. The

Contractor will be paid for performing the affected work in accordance with Subarticle 104-8(A).

When the Contractor is required to perform work which is, in his opinion, an alteration in the plans or details of construction which materially changes the character of the work and the cost of performing the work, he shall notify the Engineer in writing prior to performing such work. The Engineer will investigate and, based upon his determination, one of the following will occur:

1. If the Engineer determines that the affected work is an alteration of the plans or details of construction that materially changes the character of the work and the cost of performing the work, the Contractor will be notified in writing by the Engineer and compensation will be made in accordance with Subarticle 104-8(A).
2. If the Engineer determines that the work is not such an alteration in the plans or details of construction that materially changes the character of the work and the cost of performing the work, he will notify the Contractor in writing of his determination. If the Contractor, upon receipt of the Engineer's written determination, still intends to file a claim for additional compensation by reason of such alteration, he shall notify the Engineer in writing of such intent prior to beginning any of the alleged altered work and the provisions of Subarticle 104-8(B) shall be strictly adhered to.

No contract adjustment will be allowed under this article for any effects caused on unaltered work.

104-4 SUSPENSIONS OF WORK ORDERED BY THE ENGINEER.

(A) Suspensions of the Work Ordered by the Engineer:

When the Engineer suspends in writing the performance of all or any portion of the work for a period of time not originally anticipated, customary, or inherent to the construction industry and the Contractor believes that additional compensation for idle equipment and/or labor is justifiably due as a result of such suspension, the Contractor shall notify the Engineer in writing of his intent to file a claim for additional compensation within 7 days after the Engineer suspends the performances of the work and the provisions of Subarticle 104-8 (C) shall be strictly adhered to.

Within 14 calendar days of receipt by the Contractor of the notice to resume work, the Contractor shall submit his claim to the Engineer in writing. Such claim shall set forth the reasons and support for such adjustment in compensation, including cost records, and any other supporting justification in accordance with Subarticle 104-8(C).

(B) Alleged Suspension:

If the Contractor contends he has been prevented from performing all or any portion of the work for a period of time not originally anticipated, customary, or inherent to the construction industry because of conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any tier, and not caused by weather, but the Engineer has not suspended the work in writing, the Contractor shall submit in writing to the Engineer a notice of intent to file a claim for additional compensation by reason of such alleged suspension. No adjustment in compensation will be allowed for idle equipment and/or labor prior to the time of the submission of the written notice of intent to file a claim for additional compensation by reason of such alleged suspension. Upon receipt, the Engineer will evaluate the Contractor's notice of intent to file a claim for additional compensation. If the Engineer agrees with the Contractor's contention, the Engineer will suspend in writing the performance of all or any portion of the work and the provisions of Subarticle 104-8(C) shall be strictly adhered to.

If the Engineer does not agree with the Contractor's contention as described above and determines that no portion of the work should be suspended, he will notify the Contractor in writing of his determination. If the Contractor does not agree with the Engineer's

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determination, the provisions of Subarticle 104-8(C) shall be strictly adhered to. Within 14 calendar days after the last day of the alleged-suspension, the Contractor shall submit his claim to the Engineer in writing. Such claim shall set forth the reasons and support for such adjustment in compensation, including cost records, and any other supporting justification in accordance with Subarticle 104-8(C).

(C) Conditions:

No adjustment in compensation will be allowed under Subarticles 104-4(A) and 104-4(B) for any reason whatsoever for each occurrence of idle equipment and/or idle labor which has a duration of twenty-four hours or less.

No adjustment in compensation will be allowed under Subarticles 104-4(A) and 104-4(B) to the extent that performance would have been suspended by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.

No adjustment in compensation will be allowed under Subarticles 104-4(A) and 104-4(B) for any effects caused on unchanged work. No adjustment in compensation will be allowed under Subarticles 104-4(A) and 104-4(B) except for idle equipment and/or idle labor resulting solely from the suspension of work in writing by the Engineer.

No adjustment in compensation will be allowed under Subarticles 104-4(A) and 104-4(B) where temporary suspensions of the work have been ordered by the Engineer in accordance with Article 108-7 and the temporary suspensions are a result of the fault or negligence of the Contractor.

104-5 OVERRUNS AND UNDERRUNS OF CONTRACT QUANTITIES.

(A) General:

The Engineer reserves the right to make at any time during the work such changes in quantities as are necessary to satisfactorily complete the project. Such changes in quantities shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as changed. The Engineer will notify the Contractor in writing of the significant changes in the quantities.

The Contractor will be entitled to an adjustment in contract unit prices for increased costs incurred in performing contract items which overrun or underrun the estimated contract quantities only as provided for in this article, and where the increased costs are caused by the overrun or underrun.

(B) Overruns--Increase in Unit Price:

If the actual quantity of any major contract item overruns the original bid quantity by more than 15 percent of such original bid quantity, or the actual quantity of any minor contract item overruns the original bid quantity by more than 100 percent of such original bid quantity, an increase in the contract unit price, excluding loss of anticipated profits, may be authorized by the Engineer. Revised contract unit prices pertaining to overruns will be applicable only to that portion of the overrun which is in excess of the percentages stated above.

1. Whenever it is anticipated that an overrun in a major or minor contract item in excess of that described above will occur, the Contractor may make written request for a revision in contract unit prices. It shall be incumbent upon the Contractor to justify the request for a revision in contract unit prices. After reviewing the Contractor's request, the Engineer will notify the Contractor of his determination as follows:
 - a. If the Engineer determines a revision in the contract unit price is justified, and the Engineer and the Contractor are in agreement as to the revision to be made in the contract unit price, then a supplemental agreement covering the revised

unit price will be consummated prior to performing work on that quantity in excess of the percentage set forth above.

If the Engineer determines a revision in the contract unit price is justified, and the Engineer and the Contractor are not in agreement as to the revision to be made in the contract unit price, the Engineer will issue a force account notice prior to performing work on that quantity in excess of the percentage set forth above.

- b. If the Engineer determines a revision in the contract unit price is not justified he will notify the Contractor of his determination in writing and payments will be made for the work at the contract unit price. Upon completion of the work, the Contractor may request an adjustment in the contract unit price as provided in paragraph 2 below.
2. Whenever an overrun in a contract item in excess of the percentages previously set forth has occurred and a supplemental agreement establishing an increase in the contract unit price has not been executed or the Engineer has not issued a force account notice, the Contractor may make written request for a revision in the original contract unit price. Any adjustment in the contract unit prices due to overruns will be made by the Engineer based upon his evaluation and comparison of the Contractor's documented cost records for all work performed on those quantities within the percentages stated above and the Contractor's documented cost records for all work performed on those quantities beyond the percentages stated above, and upon the contract unit prices. The Contractor's documented cost records for the work performed on those quantities beyond the percentages stated above shall be kept in accordance with the provisions of Article 109-3 which will indicate the cost of performing the item of work which has overrun. The Contractor's cost records and supporting data shall be complete in every respect and in such form that they may be checked by the Engineer. It shall be incumbent upon the Contractor to satisfy the Engineer of the validity of any request presented by the Contractor for an adjustment in contract unit price. After reviewing the Contractor's request, the Engineer may make such adjustment as he deems warranted based upon his engineering judgment and the payment to the Contractor will be made accordingly. The adjustment will be made on the next partial pay estimate and reflected on the final estimate.

(C) Underruns--Increase in Unit Price:

If the actual quantity of any major contract item underruns the original bid quantity by more than 15 percent of such original bid quantity, an increase in the contract unit price, excluding loss of anticipated profit, may be authorized by the Engineer. Revised contract unit prices pertaining to underruns of major contract items will be applicable to the entire quantity of the contract item which underruns. No revision will be made to the contract unit price for any minor contract item which underruns the original bid quantities.

Whenever it is anticipated that an underrun in a major contract item in excess of that described above will occur, the Contractor may make written request for a revision in contract unit price. If the Engineer and the Contractor are in agreement as to the revision to be made in the contract unit price, then a supplemental agreement covering the revised unit price will be entered into. If the Engineer and the Contractor are not in agreement, then after performance of the work, a revised unit price may be determined as described below.

Whenever an underrun in a major contract item in excess of the percentage previously set forth has occurred, and a supplemental agreement establishing an increase in the contract unit price has not been executed, the Contractor may make written request for a revision in the original contract unit price. The Contractor shall submit sufficient documentation and analysis of his costs to satisfy the Engineer of any non-recovered costs included in the item that underran. Any adjustment in contract unit prices due to underruns will be made by the Engineer based upon his evaluation of the Contractor's documentation

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and analysis setting forth changes in contract item cost attributable to the underrun. An analysis of costs shall be supplemented with the Contractor's documented cost records for the work performed on the total quantity of the affected item where the Contractor's request for compensation includes compensation for costs other than non-recorded fixed costs. The Contractor's cost records shall be complete in every respect and in such form that they may be checked by the Engineer. It shall be incumbent upon the Contractor to satisfy the Engineer of the validity of any request presented by the Contractor for adjustment in contract unit price. After reviewing the Contractor's request, the Engineer may make such adjustment as he deems warranted based upon his engineering judgment and the payment will be made on the final estimate. The total payment including any additional compensation granted by the Engineer due to an underrun in a major contract item shall not exceed the payment which would have been made for the performance of 100 percent of the original contract quantity at the original contract unit price.

In the event of underruns of major items less than 15% and underruns of minor items, which involve fabricated materials and which are not considered to be stock items, if fabrication of such material is begun or completed before the Contractor is advised of the reduction in the quantity of the pay item, the Department will reimburse the Contractor for the verified fabrication cost, including the cost of material less salvage value, or it may instruct the Contractor to have the fabricated material delivered to a site designated by the Engineer and make payment for such material in accordance with Article 109-6.

(D) Overruns and Underruns--Reduction in Unit Price:

Whenever it is anticipated that an overrun or underrun in a major contract item in excess of 15% or an overrun in a minor contract item in excess of 100% will occur, the Engineer may make written request for a reduction in contract unit price. If the Engineer and the Contractor are in agreement as to the decrease to be made in the contract unit price, then a supplemental agreement covering the revised unit price will be consummated prior to beginning work on that quantity in excess of the allowable percentages. If the Engineer and the Contractor are not in agreement as to the decrease to be made, the Contractor will be directed to perform the affected work on a force account basis. Payment for the affected work will be made based upon force account records kept in accordance with Article 109-3 but shall not exceed that payment that would have been made at the contract unit price.

104-6 ELIMINATED CONTRACT ITEMS.

The Engineer may eliminate any item from the contract, and such action will in no way invalidate the contract. In the event the item of work involves pre-fabricated materials, which are not considered to be stock items, and fabrication of such material is begun or completed before the Contractor is advised of the elimination of the contract item, the Department may reimburse the Contractor for the verified fabrication cost including the cost of materials less salvage value or may instruct the Contractor to have the fabricated material delivered to a site designated by the Engineer and make payment for such material in accordance with Article 109-6.

If the Contractor has partially completed a contract item prior to notification of the elimination of such item, the Department will reimburse the Contractor for the verified actual cost of the partially completed work not to exceed the payment that would have been made at the contract unit or lump sum price for the completed work.

In any event no payment will be made for loss of anticipated profits and no other allowance will be made for eliminated items except as listed above.

104-7 EXTRA WORK.

The Contractor shall perform extra work whenever it is deemed necessary or desirable to complete fully the work as contemplated. Extra work shall be performed in accordance

with the specifications and as directed by the Engineer. No extra work shall be commenced prior to specific authorization for the performance of such extra work being given by the Engineer.

Extra work which is specifically authorized by the Engineer will be paid for in accordance with Subarticle 104-8(A).

When the Contractor is required to perform work which is in his opinion extra work, he shall notify the Engineer in writing prior to performing such work. The Engineer will investigate and, based upon his determination, one of the following will occur.

1. If the Engineer determines that the affected work is extra work, the Contractor will be notified in writing by the Engineer and compensation will be made in accordance with Subarticle 104-8(A).
2. If the Engineer determines that the work is not extra work, he will notify the Contractor in writing of his determination. If the Contractor upon receipt of the Engineer's written determination intends to file a claim for additional compensation by reason of such work, he shall notify the Engineer in writing of such intent prior to beginning any of the alleged extra work and the provisions of Subarticle 104-8(B) shall be strictly adhered to.

104-8 COMPENSATION AND RECORD KEEPING.

(A) Compensation--Article 104-3 and Article 104-7:

When the Engineer and Contractor agree that compensation is due under the provisions of Articles 104-3 or 104-7, payment will be made in accordance with one of the following:

1. When the Engineer and the Contractor agree to the prices to be paid, the agreement will be set forth in a supplemental agreement. If the estimated total cost of the affected work is equal to or less than \$15,000.00 and the prices for performing the work have been mutually agreed to, the Contractor may begin work before executing the supplemental agreement. If the estimated total cost of the affected work is more than \$15,000.00, the Contractor shall not begin the affected work until the supplemental agreement is executed.
2. When the Engineer and the Contractor cannot agree to the prices to be paid for the affected work, the Engineer will issue a force account notice prior to the Contractor beginning work. In this instance the affected work shall be performed as directed by the Engineer and paid for in accordance with the provisions of Article 109-3.

(B) Claim for Additional Compensation--Article 104-3 and Article 104-7:

The Contractor's notice of intent to file a claim for additional compensation under the provisions of Articles 104-3 and 104-7 shall be given to the Engineer in writing. The Contractor shall keep accurate and detailed cost records in accordance with the provisions of Article 109-3. The Contractor's cost records and supporting data shall be complete in every respect and in such form that they may be checked by the Engineer. The Contractor's cost records and supporting data shall clearly indicate the cost of performing the work in dispute and shall separate the cost of any work for which payment has been made. The Contractor's cost records shall be kept up to date and the Engineer shall be given the opportunity to review the methods by which the records are being maintained. The cost records shall be prepared on a weekly basis for each occurrence for which notice of intent to file a claim has been given and submitted to the Engineer within 7 days after the end of a given weekly period.

If the Contractor chooses to pursue the claim after the disputed work is complete, he shall submit a written claim to the Engineer for an adjustment in compensation based upon his cost records within 120 calendar days after completion of the disputed work. This claim shall summarize previously submitted cost records and clearly describe the

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Contractor's justification for an adjustment in compensation under the terms of the contract.

Upon receipt, the Engineer will review the Contractor's request and supporting documentation.

If the Engineer determines that the work covered by the claim is in fact compensable under the terms of the contract, an adjustment in compensation will be made based upon the documentation presented and his engineering judgment. The adjustment will be made on the next partial pay estimate and reflected on the final estimate. The compensation allowed shall be limited to the amount that would be paid if the work was performed in accordance with Article 109-3.

If the Engineer determines that the work covered by the claim is not compensable under the terms of the contract, the claim will be denied.

The Engineer will notify the Contractor of his determination whether or not an adjustment of the contract is warranted within 120 calendar days after receipt of the complete request, all necessary supporting justification, and cost records.

The failure on the part of the Contractor to perform any of the following shall be a bar to recovery under the provisions of Articles 104-3 or 104-7:

1. The failure to notify the Engineer in writing prior to performing the work in dispute that he intends to file a claim.
2. The failure of the Contractor to keep records in accordance with the provisions of Article 109-3.
3. The failure of the Contractor to give the Engineer the opportunity to monitor the methods by which records are being maintained.
4. The failure of the Contractor to submit additional documentation requested by the Engineer provided documentation requested is available within the Contractor's records.
5. The failure of the Contractor to submit cost records on a weekly basis.
6. The failure of the Contractor to submit the written request for an adjustment in compensation with cost records and supporting information within 120 calendar days of completion of the affected work.

(C) Compensation--Article 104-4:

The Contractor's notice of intent to file a claim for additional compensation under the provisions of Subarticle 104-4(A) shall be given to the Engineer in writing within 7 days after the Engineer suspends the performance of the work. For an alleged suspension, the Contractor's notice of intent to file a claim for additional compensation under the provisions of Subarticle 104-4(B) shall be given to the Engineer in writing. The Contractor shall keep accurate and detailed records of the alleged idle equipment and alleged idle labor. The Contractor's cost records, supporting data, and supporting information shall be complete in every respect and in such form that they may be checked by the Engineer. The Contractor's cost records, supporting data, and supporting information for equipment idled due to the suspension or alleged suspension shall specifically identify each individual piece of equipment, its involvement in the work, its location on the project, the requested rental rate and justification as to why the equipment cannot be absorbed into unaffected work on the project during the period of suspension or alleged suspension. The Contractor's cost records, supporting data, and supporting information for idle labor shall include the specific employees, classification, dates and hours idled, hourly rate of pay, their involvement in the project, and justification as to why they cannot be absorbed into the unaffected work on the project or other projects during the period of suspension or alleged suspension. The Contractor's cost records, supporting data, and supporting information shall be kept up-to-date and the Engineer shall be given the opportunity to review the methods by which the records, data, and information are being maintained. The cost records, supporting data, and supporting information shall be

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prepared on a weekly basis for each occurrence for which notice of intent to file a claim has been given and submitted to the Engineer within 7 days after the end of a given weekly period.

If the Contractor chooses to pursue the claim after the suspension or alleged suspension period has ended, he shall submit a written claim to the Engineer for an adjustment in compensation based upon his cost records due to idle equipment and/or idle labor within 14 calendar days or receipt of the notice to resume work or within 14 calendar days of expiration of the alleged suspension period. This request shall summarize previously submitted cost records and clearly describe the Contractor's justification for an adjustment in compensation under the terms of the contract.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost of the work directly associated with the suspension or alleged suspension has increased as a result of such suspension or alleged suspension and the suspension or alleged suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment, excluding profit, and modify the contract in writing accordingly. The Contractor will be paid for the verified actual cost of the idle equipment and idle labor. The compensation allowed shall be limited to the equipment, labor, bond, insurance, and tax costs, excluding profits, computed in accordance with Article 109-3.

If the Engineer determines that the suspensions of the work by the Engineer or alleged suspensions do not warrant an adjustment in compensation, he will notify the Contractor in writing of his determination.

The Engineer will notify the Contractor of his determination of whether or not an adjustment in compensation is warranted within 120 calendar days after receipt of the complete request, all necessary supporting justification, and cost records.

The failure on the part of the Contractor to perform any of the following shall be a bar to recovery under the provisions of Article 104-4:

1. The failure to notify the Engineer in writing within 7 days after the Engineer suspends in writing the performance of all or any portion of the work.
2. The failure to notify the Engineer in writing that he intends to file a claim by reason of alleged suspension.
3. The failure of the Contractor to keep records in accordance with the details of Article 109-3.
4. The failure of the Contractor to give the Engineer the opportunity to monitor the methods by which records are being maintained.
5. The failure of the Contractor to submit additional documentation requested by the Engineer provided documentation requested is available within the Contractor's records.
6. The failure of the Contractor to submit cost records on a weekly basis.
7. The failure of the Contractor to submit the written request for an adjustment in compensation with cost records, supporting data, and supporting information within 14 calendar days of receipt of the notice to resume work.
8. The failure of the Contractor to submit the written request for an adjustment in compensation with cost records, supporting data, and supporting information within 14 calendar days after the last day of the period during which the Contractor contends he has been prevented from performing all or any portion of the work for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) because of conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather.

(D) Notification of Determination:

The failure on the part of the Engineer to notify the Contractor of his determination on the requested adjustment in compensation within 120 calendar days after receipt of the complete request, all supporting justification, and cost records will result in payment of interest on any monies determined to be due from the requested adjustment in compensation. Interest, at the average rate earned by the State Treasurer on the investment within the State's Short Term Investment Fund during the month preceding the date interest becomes payable, will be paid the Contractor on the next partial pay estimate and reflected on the final estimate for the period beginning on the 121st day after receipt of the complete request, all supporting justification, and cost records, and extending to the date the Engineer makes his determination on the disputed work.

If the Contractor fails to receive such adjustment in compensation for the disputed work as he claims to be entitled to under the terms of the contract, the Contractor may resubmit the written request for an adjustment in compensation to the Engineer as a part of the final claim after the project is complete. The Contractor will only be allowed to submit the request for an adjustment in compensation one time during the construction of the project.

104-9 DISPOSITION OF SURPLUS PROPERTY.

All property which is surplus to the needs of the project will remain or become the property of the Contractor, unless otherwise stated in the plans or special provisions, with the following exceptions:

1. Materials which are the property of utility companies providing service to buildings which are to be demolished or removed in accordance with Sections 210 and 215.
2. Materials resulting from the removal of existing pavement in accordance with Section 250 which are to be stockpiled for the use of the Department.
3. Materials resulting from the removal of existing structures in accordance with Section 402 where the plans or special provisions indicate that the material will remain the property of the Department.
4. Aggregate base course where the Special Provisions require that this material become the property of the Department.
5. Left over materials for which the Department has reimbursed the Contractor as provided in Article 109-6.
6. Materials which have been furnished by the Department for use on the project.

Property shall include but not be limited to materials furnished by the Contractor or the Department for either temporary or permanent use on the project, salvaged materials which were part of the existing facility on the date of availability for the project, and all implements, machinery, equipment, tools, supplies, laboratories, field offices, and watercraft which are necessary for the satisfactory completion of the project.

All property which is the property of the Contractor shall be removed from the project by the Contractor prior to final acceptance.

104-10 MAINTENANCE OF THE PROJECT.

The Contractor shall maintain the project from the date of availability or the date of beginning work, whichever occurs first, until the project is finally accepted. On resurfacing projects the Contractor shall maintain each part of the project, as defined by map numbers, from the date of beginning work on that part until such part is finally accepted. This maintenance shall be continuous and effective and shall be prosecuted with adequate equipment and forces to the end that all work covered by the contract is kept in satisfactory and acceptable condition at all times.

The Contractor shall maintain all existing drainage facilities, except where the work consists of resurfacing only, such that they are in the same condition upon acceptance of the project as they were when the project was made available to the Contractor.

In the event that the Contractor's work is suspended for any reason, the Contractor shall maintain the work covered by the contract, as provided herein.

When a portion of the project is accepted as provided in Article 105-17, immediately after such acceptance the Contractor will not be required to maintain the accepted portions. Should latent defects be discovered or become evident in an accepted portion of the project, such defective work shall be repaired or replaced at no cost to the Department.

Where an observation period(s) is required that extends beyond the final acceptance date, the Contractor shall perform any work required by the observation period until satisfactory completion of the observation period. The Contractor will not be directly compensated for any maintenance operations necessary, as this work will be considered incidental to the work covered by the various contract items.

104-11 FINAL CLEANING UP.

Before acceptance of the project, the highway, borrow sources, waste areas, and all ground occupied by the Contractor within the project limits in connection with the work shall be cleaned of all rubbish, excess materials, temporary structures, and equipment; and all parts of the work shall be left in an acceptable condition.

The Contractor will not be directly compensated for the work of final cleaning up, as this work will be considered incidental to the work covered by the various contract items.

104-12 VALUE ENGINEERING PROPOSAL

This value engineering specification is to provide an incentive to the Contractor to initiate, develop, and present to the Department of Transportation for consideration, any cost reduction proposals conceived by him 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. Submittals which propose material substitutions of permanent features such as changes from rigid to flexible or flexible to rigid pavements, concrete to steel or steel to concrete bridges will not be considered acceptable Value Engineering Proposals. Depending on complexity of evaluation and implementations, Value Engineering Proposals which provide for a total savings prior to distribution of less than ten thousand dollars (\$10,000) will not be generally considered.

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 effects 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 |
| | 9) Environmental Impact |

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 which may result from implementation of the Proposal.

The Department reserves the right to reject at its discretion any Value Engineering Proposal submitted which 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 which are identified by the Contractor and which 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 Value Engineering Proposals proposed by his subcontractors. The Contractor may choose any arrangement for the subcontractor value engineering payments, provided that these payments shall not reduce the Department's share of the savings resulting from the Value Engineering Proposal.

Should the Contractor desire a preliminary review of a possible Value Engineering Proposal, prior to expending considerable time and expense in full development, a copy of the preliminary proposal shall be submitted to the Resident Engineer and the Value Engineering Office. The submittal shall state, 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 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) that is submitted.

A copy of the Final Value Engineering Proposal shall be submitted by the Contractor to the Resident Engineer and the Value Engineering Office. 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 drawings shall be accomplished and sealed by a Professional Engineer registered in the State of North Carolina. Further, the Department 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 design 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 the 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 estimate 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 his use through the Department's Value

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Engineering Office. The preparation of new design drawings by or for the Contractor shall be coordinated with appropriate Department Branch through the Value Engineering Office. The contractor shall provide, at no charge to the Department, one set of reproducible drawings of the approved design needed to implement the value engineering proposal.

The Engineer, as defined in Article 101-34 of the Standard Specifications, 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 Value Engineering Proposal not accepted by the Department within the period to be specified in the Proposal per Item (6) of the preceding paragraph.

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 percent 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 unit bid items and actual final cost occurring as a result of the modification. Only those unit bid items directly affected by the Supplemental Agreement will be considered in making the final determination of net savings. In determining the estimate 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 savings obtained by implementing the value engineering proposal. The Contractor's portion of the net savings shall constitute full compensation to him for effecting all changes pursuant to the agreement. The net savings will be prorated, 50 percent for the Contractor and 50 percent 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 the proposal on other projects shall not be valid.

Except as may be otherwise 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 under Section 104 of the Standard Specifications 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.

104-13 RECYCLED PRODUCTS OR SOLID WASTE MATERIALS

It is the policy of the Department of Transportation to aid in reduction of materials that become a part of our solid waste stream. To that extent the Department encourages contractors to initiate, develop, and utilize products and/or construction methods that incorporate the use of recycled or solid waste products in this project. For the purpose of this provision recycled products or waste materials will be those products or materials which would otherwise become solid waste and are collected, separated, or processed and reused or returned to reuse in the form of raw materials or products that are incorporated into a beneficial reuse on the project. Targeted materials include but are not limited to the following: plastic, glass, paper, cardboard, shingles, tires, fly ash, bottom ash, sludge and construction and demolition debris.

This provision will not be applicable to reclaimed asphalt materials used in accordance with the Section 611 of the Standard Specifications and shall not be applicable to any recycled or solid waste materials that are specified for use by the Department on this project.

To utilize recycled or solid waste materials, the Contractor shall submit to the Department of Transportation a Recycled Products or Solid Waste Materials Proposal for approval. This proposal shall be submitted to the Resident Engineer and the Design Services Unit. The proposal shall contain, as a minimum, the following.

1. A statement that the request for the modification is being made as a Recycled Products or Solid Waste Materials proposal.
2. A description of the difference between the existing contract requirements and the proposed modification and the comparative advantages and disadvantages of each.
3. If applicable, a complete drawing of the details covering the proposed modifications and supporting computations shall be included in the submittal. The preparation of new designs or revisions to the design shown in the contract drawings shall be accomplished by a professional engineer registered in North Carolina. The Department may waive this requirement based on the extent, detail, and complexity of the design needed to implement the 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 the work under the proposed modification.
6. A statement of the time by which approval of the proposal must be issued by the Department to maintain the completion date of the contract.

The Contractor shall be responsible for obtaining any and all permits which may be required for the hauling, storing, or handling of the targeted materials.

If a Recycled Products or Solid Waste Materials 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 as follows:

- A. If the proposal results in a net savings to the Department the savings and distribution of the savings shall be done in accordance with the provisions of Section 104-12 of the Standard Specifications. This includes recycled products

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which have been approved by the Department but were not originally included in this contract.

- B. If the proposal results in a net increase in the project cost but is judged to have a significant effect on the development of long term markets for the targeted materials; or results in significant beneficial usage of project generated debris which would have otherwise been disposed of in accordance with Section 802 of the Standard Specifications the Department will bear the approved increased costs, if any. This includes recycled products which have been approved by the Department but were not originally included in this contract.
- C. If the proposal is new and innovative, never utilized in the Department projects before as approved by the Engineer and results in a net savings to the Department, the savings shall be distributed in accordance with Section 104-12 of the Standard Specifications. However, when this innovative proposal results in a net increase in project cost, part B of this provision shall apply, and a minimum of \$500 (but not more than \$2,500) may be awarded to the Contractor.

The Contractor shall provide certification which verifies the source of the material, and the percentage of targeted materials to be utilized.

The Contractor shall remain obligated to perform the work in accordance with the terms of the existing contract pending execution of the Supplemental Agreement which implements an approved Recycled Products or Solid Waste Materials proposal and will not be entitled to any additional compensation or additional contract time if a Recycled Products or Solid Waste Materials proposal is not accepted.

The Department reserves the right to reject, at its discretion, any Recycled Products or Solid Waste Materials proposal. The Engineer will be the sole judge of the acceptability, the value, the estimated net savings, any additional compensation to be paid to the Contractor for all or any part of the proposal.

The provisions of Article 104-3 of the Standard Specifications do not apply to a Recycled Products or Solid Waste Materials proposal.

Upon execution of the Supplemental Agreement, the Department will hereafter 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 of conditions imposed by the Contractor for use of the proposal by the Department on other projects shall not be valid.

The Department will not be liable to the Contractor for failure to accept or act upon any Recycled Products or Waste Materials proposal submitted pursuant to this provision nor for any delays to the work attributable to any third party claims, or fines that may be levied as a result of the Contractor's decision to use targeted materials.

SECTION 105 CONTROL OF WORK

105-1 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 which may arise as to the interpretation of the contract; and all questions as to the acceptable fulfillment of the contract on the part of the Contractor. His decision shall be final and he shall have executive authority to enforce and make effective such decisions and orders as the Contractor fails to carry out promptly.

The Engineer shall have the authority to issue any written order to the Contractor which he considers necessary to the prosecution of the work, and shall have executive authority to enforce such written orders as the Contractor fails to carry out promptly. Failure on the part of the Contractor to comply with any written order issued by the Engineer may be

justification for disqualifying the Contractor from further bidding in accordance with Article 102-16.

105-2 PLANS AND WORKING DRAWINGS.

Plans will show details of all structures, lines, grades, typical cross sections of the roadway, location and design of all structures, and a summary of items appearing in the proposal form.

The plans shall be supplemented by such approved working drawings as are necessary to adequately control the work. Working drawings furnished by the Contractor and approved by the Engineer shall consist of such detailed drawings as may be required to adequately control the work and are not included in the plans furnished by the Department. They may include stress sheets, shop drawings, erection drawings, falsework drawings, cofferdam drawings, bending diagrams for reinforcing steel, catalog cuts, or any other supplementary drawings or similar data required of the Contractor. When working drawings are approved by the Engineer such approval shall not operate to relieve the Contractor of any of his responsibility under the contract for the successful completion of the work.

Unless otherwise specified, the Contractor shall allow forty (40) calendar days for review and approval, or acceptance, of working drawings from the date they are received until they are returned by the Engineer. If revised drawings are required, appropriate additional time shall be allowed for review and approval, or acceptance, of the revised drawings. The Contractor shall have no claim for extension of the completion date(s) or additional compensation due to this review period.

Changes on shop drawings after approval and/or distribution shall be subject to the approval of the Engineer and he shall be furnished a record of such changes.

Payment at the several contract prices will be full compensation for all costs of furnishing all working drawings.

105-3 CONFORMITY WITH PLANS AND SPECIFICATIONS.

All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans, or indicated in the specifications.

In the event the Engineer finds the materials or the finished product in which the materials are used not within reasonably close conformity with the plans and specifications but that reasonably acceptable work has been produced, he will then make a determination if the work is to be accepted and remain in place. If the Engineer determines that the work is to be accepted, he will have the authority to make such adjustment in contract price as he deems warranted based upon his engineering judgment and the final estimate will be paid accordingly.

In the event the Engineer finds the materials or the finished product in which the materials are used or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by the contractor at no cost to the Department.

105-4 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS.

The specifications, the supplemental specifications, the plans, the special provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. In case of discrepancy, figured dimensions shall govern over scaled dimensions; supplemental specifications shall govern over standard specifications; plans shall govern over supplemental specifications and standard specifications; standard special provisions shall govern over plans, supplemental specifications, and standard specifications; and project special provisions shall govern over

standard special provisions, plans, supplemental specifications, and standard specifications.

The Contractor shall not take advantage of any apparent error or omission in the plans or specifications. In the event such errors or omissions are discovered, the Engineer will make such corrections and interpretations as may be determined necessary for the fulfillment of the intent of the plans and specifications.

105-5 COOPERATION BY CONTRACTOR.

The Contractor shall cooperate with the Engineer, his inspectors, and other contractors in every way possible, and shall give the work the constant attention necessary to facilitate the progress and satisfactory performance thereof. The Contractor shall notify the Engineer in writing at least 7 days prior to beginning work on the project. He shall notify the Engineer at least 1 day in advance when work is to be suspended and at least 2 days in advance when work is to be resumed.

The Contractor shall keep available on the project site at all times the contract assembly including special provisions, standard specifications, and plans.

105-6 SUPERVISION BY CONTRACTOR.

(A) On Site Personnel:

At all times that work is actually being performed the Contractor shall have present on the project one competent individual who has been authorized to act in a supervisory capacity over all work on the project including work subcontracted. The individual who has been so authorized shall be experienced in the type of work being performed and is to be fully capable of managing, directing, and coordinating the work; of reading and thoroughly understanding the contract; and of receiving and carrying out directions from the Engineer or his authorized representatives. He shall be an employee of the Contractor, unless otherwise approved by the Engineer.

(B) On Call Personnel:

At all times during the life of the project the Contractor shall provide one permanent employee who shall have the authority and capability for the overall responsibility of the project and who shall be personally available at the site of work within 24 hours notice. Such employee shall be fully authorized to conduct all business with the Subcontractors, to negotiate and execute all supplemental agreements, and to execute the orders or directions of the Engineer.

(C) Exceptions:

If the Contractor elects to have the employee described under (B) above constantly available in person on the project, then the presence of this employee will be considered as also meeting the requirements of (A) above. However, whenever such employee is absent from the project then an authorized individual meeting the requirements of (A) above shall be present on the project.

105-7 COOPERATION BETWEEN CONTRACTORS.

The Department reserves the right at any time to contract for and perform other or additional work on or near the work covered by the contract.

When separate or additional contracts are let within the limits of any one project, each Contractor shall conduct his work so as not to interfere with or hinder the progress or completion of the work being performed by other Contractors. Contractors working within the limits of the same project shall cooperate with each other.

Each Contractor shall conduct his operations in such a manner as to avoid damaging any work being performed by others or which has been completed by others.

When a project is let under more than one contract and the plans and/or special provisions include a construction schedule, it shall be the responsibility of the Contractors

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to complete the various phases of the project in accordance with the time limits specified such that the total contracts will be completed by the completion date. This construction schedule will remain in effect until such time as the Contractors at their option submit to the Engineer a joint construction schedule meeting the approval of the Engineer. This joint construction schedule shall be signed by authorized representatives of each firm and upon the approval of the Engineer shall be binding on each Contractor and made a part of the contract documents. Subsequent modifications to the joint construction schedule may be made during the course of the work in the same manner.

Failure of the Contractor(s) to complete the various phases of work within the time limits set forth in the construction schedule or latest approved joint construction schedule shall be just cause for removing the Contractor(s) from the Department's list of qualified bidders. A Contractor disqualified from bidding by reason of this provision will not be reinstated until such time as his progress is in accordance with the latest approved construction schedule or until the project is completed and accepted, whichever occurs first.

The Department will under no circumstances be liable for any claim for additional compensation due to acts of one Contractor holding up the work of another.

The Department will under no circumstances be liable for any damages experienced by one Contractor as a result of the presence and operations of other Contractors working within the limits of the same project.

105-8 COOPERATION WITH UTILITY OWNERS

Prior to the beginning of construction, the Department will notify all utility owners known to have facilities affected by the construction of the project and will make arrangements for the necessary adjustments of all affected public or private utility facilities. The utility adjustments may be made either before or after the beginning of construction of the project. The adjustments will be made by the utility owner or his representative, or by the Contractor when such adjustments are part of the work covered by his contract.

The Contractor shall use special care in working around and near all existing utilities that are encountered during construction, protecting them where necessary so that they will give uninterrupted service.

The Contractor shall cooperate with the utility owner, and/or the owner's representative in the adjustment or placement of utility facilities when such adjustment or placement is made necessary by the construction of the project or has been authorized by the Department.

In the event that utility services are interrupted by the Contractor, the Contractor shall promptly notify the owners and shall cooperate with the owners and/or the owner's representative in the restoration of service in the shortest time possible.

Existing fire hydrants shall be kept accessible to fire departments at all times.

Prior to submitting his bid, the Contractor shall make his own determination as to the nature and extent of the utility facilities, including proposed adjustments, new facilities, or temporary work to be performed by the utility owner or his representative; and as to whether or not any utility work is planned by the owner in conjunction with the project construction. The Contractor shall consider in his bid all of the permanent and temporary utility facilities in their present or relocated positions, whether or not specifically shown on the plans or covered in the project special provisions. It will be the Contractor's responsibility to anticipate any additional costs to him resulting from such utility work and to reflect these costs in his bid for the various items in the contract.

No additional compensation except as provided for in Article 104-4 will be allowed for delays, inconvenience, or damage sustained by the Contractor due to any interference from said utility facilities or the operation of moving them and any such delay, inconvenience,

or damage except as provided for in Article 104-4 shall not constitute a basis for a claim for additional compensation.

Where changes to utility facilities are to be made solely for the convenience of the Contractor, it shall be the Contractor's responsibility to arrange for such changes and the Contractor shall bear all costs of such changes.

105-9 CONSTRUCTION STAKES, LINES, AND GRADES.

Unless otherwise required on the contract, the Engineer will set construction stakes establishing lines, slopes, and continuous profile-grade in road work, and centerline and bench marks for bridge work, culvert work, protective and accessory structures, and appurtenances which require the use of an engineer's level and transit and will furnish the Contractor with all necessary information relating to lines, slopes, and grades. These stakes and marks shall constitute the field control by and in accordance with which the Contractor shall establish other necessary controls and perform the work.

The Contractor shall be held responsible for the preservation of all stakes and marks, and if any of the construction stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost of replacing them will be charged against him and will be deducted from the payment for the work.

105-10 AUTHORITY AND DUTIES OF THE INSPECTOR.

Inspectors employed by the Department are authorized to inspect all work done and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The inspector is not authorized to alter or waive the provisions of the contract. The inspector is not authorized to issue instructions contrary to the plans and specifications, or to act as foreman for the Contractor; however, he has the authority to reject work or materials until any questions at issue can be referred to and decided by the Engineer. The inspector is not authorized to make any final acceptance of the work.

105-11 INSPECTION OF WORK.

All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Contractor shall allow and provide a reasonable access to all parts of the work to the Engineer or his authorized representative. The Contractor shall also furnish such information and assistance as is required to make a complete and detailed inspection. Such access shall meet the approval of the Engineer.

The presence of the Engineer or Inspector at the work site shall in no way lessen the Contractor's responsibility for conformity with the plans and specifications. Should the Engineer or Inspector, prior to or during construction, fail to point out or reject materials or work that does not conform with plans and specifications, whether from lack of discovery or for any other reason, it shall in no way prevent later rejection or corrections to the unsatisfactory materials or work when discovered. The Contractor shall have no claim for losses suffered due to any necessary removals or repairs resulting from the unsatisfactory work.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. The Contractor shall keep cost records of the work performed and if the uncovered work is found to be acceptable, the Department will pay the Contractor on a force account basis in accordance with Article 109-3 for the cost of uncovering, or removing, and the replacing of the covering or making good of the parts removed; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed, shall be at no cost to the Department.

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When any other unit of government or political subdivision is to pay a portion of the cost of the work covered by the contract, its respective representatives shall have the right to inspect the work. When work is to be performed on the right of way of any railroad corporation or in proximity to other public utilities, the representatives of the railroad corporation and/or the public utilities shall have the right to inspect the work. Such inspection shall in no sense make any unit of government or political subdivision or any railroad corporation or public utility a party to the contract, and shall in no way interfere with the rights of either party thereunder.

105-12 UNAUTHORIZED WORK.

No work shall be performed without established lines and grades except as otherwise permitted by the Engineer. Work performed contrary to the instructions of the Engineer or contrary to any approvals granted by the Engineer will be considered as unauthorized and will not be paid for under the provisions of the contract. Work performed beyond the lines shown on the plans or as given, except as herein specified, or any extra work performed without authority will be considered as unauthorized and will not be paid for under the provisions of the contract. Any of the above work so performed may be ordered removed, replaced, or repaired at no cost to the Department.

Upon failure on the part of the Contractor to comply forthwith with any order of the Engineer made under the provisions of this article, the Engineer will have the authority to cause such unauthorized work to be removed and/or adjusted to conform to the provisions of the contract and to deduct the cost of removal and/or adjustment from any monies due or to become due the Contractor.

105-13 LIMITATIONS OF OPERATIONS.

At any time when, in the opinion of the Engineer, the Contractor has obstructed, closed, or is conducting operations on, a greater portion of the work than is necessary for the prosecution of the work so as to constitute a hazard to the general public or impair the function of the facility being constructed where traffic must be maintained, the Engineer may require the Contractor to finish the portions on which work is in progress before starting work on additional portions of the work.

105-14 NIGHT WORK.

Whenever the Contractor's operations are being conducted at night, the Contractor shall provide such artificial lighting as may be necessary to provide for safe and proper construction and to provide for adequate inspection of the work as described in Section 1412.

105-15 RESTRICTION OF LOAD LIMITS.

The Contractor shall comply with all legal load restrictions in hauling equipment and materials on roads under the jurisdiction of the Department.

The Department has the right to place load limit restrictions on the load a Contractor may haul on any road or bridge in the vicinity of his contract. The Contractor, prior to bidding on a project, will be responsible for making his own investigations to determine beforehand the possibility of load limit restrictions being placed on any of the highways he plans to use for hauling purposes. The Contractor shall not be entitled to an extension of time or to compensation for any costs, inconvenience, delay, or any other adversity to the Contractor as the result of any reduction by the Department in load limit, or as the result of a refusal by the Department to raise load limits as hereinafter provided or under any other conditions, and any such reduction in load limit or refusal to raise load limits shall not constitute a basis for a claim for additional compensation.

Wherever load limit restrictions below the statutory legal load limit have been posted on any roads and/or bridges on the project or within the vicinity of the project, the Department may remove the load limit restrictions from such roads and/or bridges upon written request from the Contractor; and the Contractor thereafter will be allowed to haul

up to the statutory legal limits over such roads and/or bridges, provided the Contractor enters into an agreement with the Department providing for:

1. Maintenance by the Contractor of such roads in a condition satisfactory to the Engineer during the haul period.
2. Repair by the Contractor of all damages to such roads after haul is completed to place them in a condition as good as they were prior to removal of the load limits.
3. Furnishing bond by the Contractor in an amount determined by the Engineer for the roads. Furnishing a bond for the roads does not entitle the Contractor to exceed the posted load limits of any bridge.
4. Assumption by the Contractor of all costs of strengthening any bridges which may be necessary in order to safely haul loads up to statutory legal limits. The Department will, upon request by the Contractor, make a determination as to the method and extent of strengthening required for the bridges and will advise the Contractor as to the amount of work to be done or an estimate of the charges for the work if performed by Department forces. When Department forces perform the work, the Contractor shall reimburse the Department in the amount of the actual charges for said work. When Contractor's forces perform the work, it shall be done in accordance with plans approved by the engineer and under his inspection.
5. Indemnification of the Department against any and all claims from third persons arising out of or resulting from the hauling operation or the maintenance, or lack of maintenance, of haul roads. Haul roads shall be maintained not only for the Contractor's hauling operations, but for the use of the general public.

Equipment operated on proposed bridges shall comply with the following load restrictions.

Maximum axle load (lbs.) [kg.]	36,000 [16,330]
Maximum axle load on tandem axles (lbs.) [kg.]	30,000 [13,608]
Maximum gross load (lbs.) [kg.].....	90,000 [40,823]

The Contractor shall keep the bridge floor clean to reduce impact forces and place approved temporary guides on the bridge floor to position the wheel loads as nearly as possible over the bridge girders. Only one earth moving vehicle shall be on a bridge at any time. Upon completion of hauling over each bridge, the Contractor shall clean the bridge floor, curbs and rails.

Regulations pertaining to size and weight will not apply to equipment used on the project provided the vehicles involved are not operated on pavement, completed base course, or structures.

105-16 FAILURE TO MAINTAIN THE PROJECT OR PERFORM EROSION CONTROL WORK.

Failure on the part of the Contractor to comply with the provisions of Article 104-10 or to perform erosion control work as directed will result in the Engineer notifying the Contractor to comply with these provisions. In the event that the Contractor fails to begin such remedial action or fails to begin erosion control work within 24 hours after receipt of such notice with adequate forces and equipment, the Engineer may proceed to have the work performed with other forces. No payment will be made to the Contractor for work performed by others. Any costs incurred by the Department for work performed by others as provided above in excess of the costs that would have been incurred had the work been performed by the Contractor will be deducted from monies due the Contractor on his contract.

105-17 INSPECTION AND ACCEPTANCE.

Upon apparent completion of the entire project, the Engineer will make an inspection of the project for final acceptance. If all construction provided for and contemplated by

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the contract is found to be satisfactorily completed, the project will be accepted. The acceptance of projects in their entirety will not be altered except as listed below:

1. When any continuous project is equal to or in excess of 5 miles (8 km) in length, the Department will accept the project in 2 increments with the first increment equaling at least 50 percent of the total length of the project.
2. Under resurfacing contracts, the Department will accept the project in parts as defined by map numbers representing at least 25% of the total length of project.
3. When it is considered to be in the best interest of the Department, other increments or parts of projects may be considered for acceptance.
4. When the contract contains an intermediate completion date requiring the completion of a portion of the work in its entirety, such portion of the work may be accepted if requested in writing by the Contractor.
5. Bridge decks and rails that have been constructed or rehabilitated at such time as they are open to public traffic.
6. Permanent sign panels, including hardware and retroreflective sheeting, that are required prior to the final acceptance of the project by the Traffic Control Plans or by the Engineer when the roadway where the signs are located is open to public traffic.

Acceptance of any increment or part of a project shall not operate to waive the assessment of all or any portion of liquidated damages assessable under the terms of the contract.

When the inspection discloses any work, in whole or in part, as being unsatisfactory or incomplete, the Engineer will advise the Contractor of such unsatisfactory or incomplete work, and the Contractor shall immediately correct, repair, or complete such work. The project will not be accepted and the Contractor shall be responsible for the maintenance of the project and maintenance of traffic until all of the recommendations made at the time of the inspection have been satisfactorily completed.

The Engineer will notify the Contractor in writing that the project has been accepted as soon as practicable after the completion of the project. When an observation period(s) is required that extends beyond the final acceptance date, the satisfactory completion of the observation period(s) shall be covered by the contract bonds.

SECTION 106 CONTROL OF MATERIAL

106-1 GENERAL REQUIREMENTS.

The materials used on the work shall meet all requirements of the contract and shall be subject to inspection, test, or rejection by the Engineer at any time. Materials used in the work shall be new or recycled as permitted by the Specifications.

It is the Departments intent to expand the use of recovered materials in its construction programs. The Contractor is encouraged to find innovative and alternative ways for beneficial use of recyclable materials that are currently a part of the solid waste stream and that contribute to problems of declining space in landfills.

The Contractor shall make his own determination of the various kinds and quantities of materials that are necessary for the acceptable performance and timely completion of the work. It will be the Contractor's responsibility to obtain materials which will meet the requirements of the contract. The Contractor shall be responsible for the acceptability of all materials used in the work and for the timely delivery of materials to the project so that adequate time will be available for the safe and proper performance of the work.

In order to facilitate testing by the Department, the Contractor shall furnish a complete statement of the origin of all materials to be used in the construction of the work, together

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with samples when required. The statement of origin shall be furnished to the Materials and Tests Unit sufficiently in advance of any shipment and/or fabrication of materials so that arrangements can be made for proper inspection.

The Contractor shall furnish a material safety data sheet with all paints and hazardous chemicals proposed for use on the project. The material safety data sheet shall be in accordance with the North Carolina Hazard Communication Standard (13 NCAC 7C.0101(a)(99)).

The Contractor shall provide access, means, and assistance in the verification of all testing equipment, scales, measures, and other devices operated by him in connection with the testing of the materials.

If the Contractor desires or is required to furnish materials from local deposits, other than those, if any, described in the contract he shall assume full responsibility for the sampling of the sources and the acceptability of the material in accordance with these specifications. He shall furnish without charge such preliminary samples as may be required; except that, if requested in writing, the Engineer may allow Department forces to take samples as requested by the Contractor. In the latter case, the Contractor shall reimburse the Department for the total expense of the sampling as determined by the Engineer. Tests will be made and reports rendered, but it is understood that such tests shall in no way be construed as a guarantee of acceptance of any material which may be delivered later for incorporation in the work. The Contractor shall assume full responsibility for the production of uniform and satisfactory materials from such local deposits, and shall indemnify and save harmless the Department from any and all claims for loss or damages resulting from the opening and operation thereof, or from the failure of the deposit after development to produce materials acceptable to the Engineer, in either quality or quantity.

106-2 SAMPLES, TESTS, AND CITED SPECIFICATIONS.

All tests will be made in accordance with the most recent standard or interim methods of the AASHTO in force on the date of advertisement. Should no AASHTO method of test exist for a material, the most recent standard or tentative method of ASTM or other methods adopted by the Department will be used.

All reference made to a specification published by AASHTO, ASTM, or any other organization other than the Department, which does not indicate the date of publication, will be understood to mean the specification current on the date of advertisement for the project. When a more current specification is published during the life of the project, and when it is mutually agreed by the Contractor and the Engineer and such agreement is documented by a supplemental agreement, the Department may accept materials meeting the requirements of the latest publication.

106-3 CONTRACTOR FURNISHED CERTIFICATION.

The Contractor shall furnish the Department material certifications obtained from the producer, supplier, or an approved independent testing laboratory for the following types of materials, unless otherwise directed by the Engineer.

1. Materials required to meet criteria documented by tests which are normally performed during the production process.
2. Materials which are required to meet specifications other than those published by AASHTO, ASTM, or the Division of Highways.
3. Materials produced at locations which are not within routine travel distance for Department representatives.
4. Materials required to meet criteria documented by tests involving special equipment not readily available to Department representatives.
5. Any other special material when so directed by the Engineer.

Material certifications of one of the following types shall be furnished for pre-tested materials. The specific type of material certification for each material shall be in accordance with the schedule maintained by the Materials and Tests Unit. Copies of this schedule may be obtained from the Materials and Tests Unit.

Type 1 ---Certified Mill Test Report:

A certified mill test report shall be a certified report of tests conducted by the manufacturer on samples taken from the same heat or lot number as the material actually shipped to the project. The report shall identify the heat or lot number.

Type 2 ---Typical Certified Mill Test Report:

A typical certified mill test report shall be a certified report of tests conducted by the manufacturer on samples taken from a lot which is typical of the material actually shipped to the project, but which may or may not be from the lot shipped.

Type 3 ---Manufacturer's Certification:

A manufacturer's certification shall be a certified statement that the material actually shipped to the project was manufactured by production processes which are periodically and routinely inspected to assure conformance to specification requirements.

Type 4 ---Certified Test Reports:

A certified test report shall be a certified report of test conducted by an approved independent testing laboratory on samples taken from same heat or lot number as the material actually shipped to the project. The report shall identify the heat or lot number.

Type 5 ---Typical Certified Test Reports:

A certified test report shall be a certified report of tests conducted by an approved independent testing laboratory on samples taken from a lot which is typical of the material actually shipped to the project, but which may or may not be from the lot shipped.

Type 6 Supplier's Certification:

A supplier's certification is a signed statement by the supplier that the material described in the certification is of the specification grade required and that the supplier has on hand Type 1, Type 2, or Type 3 material certifications to cover the material which is included in the Type 6 supplier's certification.

Type 7 ---Contractor's Certification:

Contractor's certification is a signed statement by a contractor that the used material described in the certification meets the requirements of the current specifications to the best of the contractor's knowledge and that the contractor had in his possession at the time of purchase a Type 1, 2, or 3 materials certification to cover the material which is included in the Type 7 Contractor's Certification.

106-4 DELIVERY AND HANDLING OF MATERIALS.

All materials shall be handled carefully and in such manner as to preserve their quality and fitness for the work. Materials damaged during delivery or handling shall not be used without approval of the Engineer.

106-5 STORAGE OF MATERIALS.

Materials shall be stored so as to insure the preservation of their quality and fitness for the work. Stored materials, which may have been approved before storage, shall be subject to inspection at any time, and shall meet the requirements of the specifications at the time they are put into use. Stored materials shall be so located as to facilitate their inspection. Subject to the approval of the Engineer, that portion of the right of way not required for public travel may be used for storage purposes and for the Contractor's plant and equipment, but any additional space required therefor shall be provided by the Contractor at no expense to the Department. All storage sites located within the right of way shall be restored to their original condition by the Contractor at no expense to the Department, except where the materials stored are or are to become the property of the Department.

106-6 INSPECTION AT SOURCE.

The Engineer may undertake the inspection of materials at the source of supply. This inspection will be performed by Department personnel or private organizations retained by the Department. Where approved by the Engineer, the results of tests performed by private laboratories or producer's or manufacturer's laboratories may be used in determining compliance of a material or product with the specifications.

The Department assumes no obligation to inspect materials at the source of supply and such inspection will be undertaken only upon condition that:

1. The cooperation and assistance of the Contractor and the producer with whom he has contracted for materials is assured.
2. The representative of the Engineer will have full entry at all times to such parts of the plant as may concern the manufacture or production of the materials.
3. Laboratory facilities shall be provided when required by the Engineer.

Where the Department agrees to inspect or test materials during their production or at the source of supply, the Contractor shall bear the cost of testing performed on materials ordered by him but not incorporated into the project.

The Department reserves the right to retest all materials which have been tested and accepted at the source of supply after the same have been delivered, and to reject all materials which, when retested, do not meet the requirements of the specifications.

106-7 SCALES AND PUBLIC WEIGHMASTER.

When material is to be paid for on a ton basis, the Contractor shall furnish platform scales or other weighing devices which have been certified by the N. C. Department of Agriculture. If the platform scales or other weighing devices are located outside of North Carolina, they shall have been certified by the Department of Agriculture within the particular State. The scales may be constructed and operated to provide automatic weighing, recording, and printing of tickets for the load being weighed.

All scales shall be operated by a public weighmaster licensed in accordance with Chapter 81A of the General Statutes of North Carolina. A certified weight certificate shall be issued by a North Carolina public weighmaster for each load. The certificate shall be in the form of a ticket furnished by the Contractor and shall contain the following information:

1. Division of Highways project number.
2. Date.
3. Time issued, if for bituminous plant mix or portland cement stabilized base course mixed in a central plant.
4. Type of material.
5. Gross weight.
6. Tare weight.

7. Net weight of material.
8. Quarry or plant location.
9. Division of Highways' Job Mix Formula Number, if ticket is for asphalt plant mix.
10. Division of Highways' Asphalt Plant Certification Number, if ticket is for asphalt plant mix.
11. Truck number.
12. Contractor's name.
13. Public weighmaster's stamp or number.
14. Public weighmaster's signature in ink or initials in ink.

When certified weighing devices other than platform scales are to be used, the gross weight and tare weight will not be required.

The Engineer may direct the Contractor to re-weigh the contents of any truck load that is to be delivered to the work on approved platform scales at no cost to the Department.

When tractor and trailer units are to be utilized in hauling material to be weighed, the platform scales shall be of sufficient length so as to accommodate the entire unit or the tractor shall be disconnected and the trailer and its contents weighed as a separate unit.

106-8 DEPARTMENT FURNISHED MATERIAL.

The Contractor shall furnish all materials necessary to complete the work, except those materials specified in the special provisions to be furnished by the Department. Payment at the contract price for the item which includes the use of Department furnished material will be full compensation for all costs of handling and placing such materials after they are delivered or made available to the Contractor.

The Contractor will be held responsible for all material furnished him, and deductions will be made from any money due him to make good any shortage and deficiencies from any cause whatsoever and for any damage which may occur after Department furnished material has been made available.

106-9 DEFECTIVE MATERIAL

All materials which are not in reasonably close conformity to the requirements of the specifications shall be considered as defective and such materials, whether in place or not, shall be rejected and are to be removed from the site of the work unless otherwise permitted by the Engineer in accordance with Article 105-3. No rejected material, the defects of which may have been substantially corrected, may be used until approval has been given by the Engineer.

106-10 DENSITY DETERMINATION BY NUCLEAR METHODS.

Application:

The Engineer may, at his option, utilize nuclear methods as described in Article 520-10 and 610-11C to determine the density of selected pavement materials. The use of nuclear methods will include the establishment of the required density through the use of control strips constructed from materials actually being used on the project, and the determination of the density being obtained in test sections located throughout the project.

SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107-1 LAWS TO BE OBSERVED.

The Contractor shall keep himself fully informed of all Federal and State laws, all local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority which may in any manner affect those engaged or employed

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in the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall indemnify and hold harmless the Board of Transportation and the Department of Transportation and their agents and employees from any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, by the Contractor or by his agents and employees.

107-2 ASSIGNMENT OF CLAIMS VOID.

In accordance with G.S. 143-3.3, the Department will not recognize any assignment of claims by any Contractor against the Department.

107-3 PERMITS AND LICENSES.

The Contractor shall procure all permits and licenses except as otherwise specified; pay all charges, fees, and taxes; and give all notices necessary and incident to the due and lawful prosecution of the work.

107-4 PATENTED DEVICES, MATERIALS, AND PROCESSES.

If the Contractor employs any design, device, material, or process covered by letters of patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and his surety shall indemnify and save harmless the Department from any and all claims for infringement by reason of the use of such patented design, device, material, process, trademark, or copyright, and shall indemnify and save harmless the Department from any costs, expenses, and damages which it may be obligated to pay at any time during the prosecution or after the completion of the work by reason of any infringement.

107-5 ENCROACHMENT ON RIGHT OF WAY.

Any individual, firm, or corporation wishing to encroach on highway right of way shall secure a written permit from the Department. The Contractor is not authorized to allow any individual, firm, or corporation to perform any work within the limits of the project unless such work has been authorized in writing by the Engineer.

When so directed by the Engineer, the Contractor shall make any repairs necessary due to such encroachments and such work will be paid for as extra work.

107-6 FEDERAL PARTICIPATION.

When the United States Government pays all or any portion of the cost of the work, the Federal laws authorizing such participation and the rules and regulations made pursuant to such laws shall be observed by the Contractor. The work will be subject to the inspection of the representative of such Federal agencies as are created for the administration of these laws. The Contractor shall have no right to make the Federal Government a party to any court action solely by reason of its participation in the cost of the work or by reason of its inspection of the work.

107-7 SANITARY PROVISIONS.

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements of the State and local Board of Health, or of other bodies or tribunals having jurisdiction.

107-8 PUBLIC CONVENIENCE AND SAFETY.

The Contractor shall at all times so conduct his work as to insure the least possible obstruction to traffic. The safety and convenience of the general public and the residents along the highway, and the protection of persons and property, shall be provided for by the Contractor as specified in Section 150.

107-9 COORDINATION WITH RAILWAY.

All work to be performed by the Contractor on railway right of way shall be done in accordance with the special provisions and in a manner satisfactory to the railway company, and shall be performed at such times and in such manner as not to unnecessarily interfere with the movement of traffic upon the track of the railway company. The Contractor shall use all care and precautions in order to avoid accidents, damage, or unnecessary delays or interference with the railway company's traffic or other property. The Contractor shall carry such railroad protective insurance and public liability and property damage insurance as may be stipulated in the special provisions.

When the Contractor is required by the plans or special provisions to transport materials or equipment across the tracks of any railway or to perform work on railway right of way, the Department will obtain any necessary written authority from the railway company for the establishment of a railway crossing or for the performance of work on railway right of way. The Contractor will not be required to bear the cost of any watchman service or flagging protection necessary due to such operations, as the railway company will be reimbursed directly by the Department for the cost of such work.

In case the Contractor elects or finds it necessary to transport materials or equipment across the tracks of any railway at any point where a crossing is not required by the plans or special provisions, or at any point other than an existing public crossing, he shall obtain specific written authority from the railway company for the establishment of a private railway crossing and shall bear all costs in connection with such crossing, including installation, drainage, maintenance, any necessary insurance, watchman service, flagging protection, and removal of such private railway crossing.

107-10 WORK IN, OVER, OR ADJACENT TO NAVIGABLE WATERS.

All work in or over navigable waters shall be in accordance with conditions contained in the permit obtained by the Department from the authority granting the permit. These conditions will be included in the project special provisions. The work shall be performed in such manner so as not to interfere with navigation of the waterway unless approval therefor is obtained from the authority granting the permit.

The Contractor shall prepare drawings necessary to obtain any addendums which may be required for his operations which are not included in the Department's permit. He shall coordinate their submission with the Engineer.

107-11 USE OF EXPLOSIVES.

When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property. The Contractor shall be responsible for any and all damage or injury to persons or property resulting from the use of explosives. Such responsibility shall include, but shall in no way be limited to all damages arising from all forms of trespass to adjacent property as a result of blasting by the Contractor. Provided that in cases of damage or interruption to underground water supply or veins to adjacent landowners, the Contractor shall not be held responsible where the Contractor has used reasonable care and has taken reasonable precautions to prevent such damage.

All explosives shall be stored in a secure manner, in compliance with all laws, and all such storage places shall be marked clearly "DANGEROUS EXPLOSIVES."

The Contractor shall notify each public utility company having facilities in close proximity to the site of the work of his intention to use explosives. This notice shall be given sufficiently in advance to enable the utility companies to take whatever steps they may consider necessary to protect their property from injury. The Contractor shall also give the Engineer, all occupants of adjacent property, and all other Contractors working in or near the project notice of his intention to use explosives. Motorists shall be notified in accordance with Article 1101-10.

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The Contractor shall submit a blasting plan to the Engineer within 24 hours after each shot. The blasting plan shall contain the full details of the drilling and blasting patterns unless otherwise approved by the Engineer, and shall contain the following information: (1) station limits of shot, (2) plan of drill hole pattern, blast hole spacing, blast hole diameters and free face, (3) initiation sequence of blastholes including delay timer and delay system, (4) manufacturers data sheet for all explosives, primers, and initiators employed, (5) loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming. The blasting plan submitted is for quality control and record keeping purposes. Review by the Engineer shall not relieve the Contractor of his responsibilities as provided in Article 107-12.

107-12 PROTECTION AND RESTORATION OF PROPERTY.

The Contractor shall be responsible for the protection from his activities of all public and private property on and adjacent to the work and shall use every reasonable precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits, and other underground structures, and to poles, wires, cables, and other overhead structures.

The Contractor shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not remove them until directed.

The Contractor shall be responsible for the removal, preservation, and resetting of all mail boxes disturbed by the construction operations. The mail boxes and their supports, when reset, shall be left in as good a condition as they were before removal. The Contractor will not be required to furnish new material except as required to repair damage resulting from construction operations.

The Contractor will be held responsible for all damage or injury to property of any character resulting from any act, omission, negligence, or misconduct in the prosecution of the work. When any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, negligence, or misconduct in the execution of the work, he shall either restore at his own expense such property to a condition similar or equal to that existing before such damage or injury was done, or shall make good such damage or injury in a manner acceptable to the owner of the damaged property and to the Department. In case of failure on the part of the Contractor to restore such property or make good such damage or injury the Department may at the Contractor's expense repair, rebuild, or otherwise restore such property in such manner as the Engineer may consider necessary.

107-13 CONTROL OF EROSION, SILTATION, AND POLLUTION.

(A) General:

The Contractor shall take whatever measures are necessary to minimize soil erosion and siltation, water pollution, and air pollution caused by his operations. The Contractor shall also comply with the applicable regulations of all legally constituted authorities relating to pollution prevention and control. The Contractor shall keep himself fully informed of all such regulations which in any way affect the conduct of the work, and shall at all times observe and comply with all such regulations. In the event of conflict between such regulations and the requirements of the specifications, the more restrictive requirements shall apply.

The Engineer will limit the area over which clearing and grubbing, excavation, borrow, and embankment operations are performed whenever the Contractor's operations do not make effective use of construction practices and temporary measures which will minimize erosion, or whenever construction operations have not been coordinated to effectively minimize erosion, or whenever permanent erosion control features are not being completed as soon as permitted by construction operations.

Following completion of any construction phase or operation, on any area greater than one acre, the Contractor shall provide ground cover sufficient to restrain erosion within 30 calendar days. When the construction is within a high quality water zone, as indicated in the plans, ground cover sufficient to restrain erosion shall be provided within 15 calendar days. The ground cover shall be either temporary or permanent and the type specified in the special provisions.

(B) Erosion and Siltation Control:

The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent the eroding of soil and the silting of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces, or other property.

Prior to suspension of operations on the project or any portion thereof, the Contractor shall take all necessary measures to protect the construction area, including but not limited to borrow sources, soil type base course sources, and waste areas, from erosion during the period of suspension.

Unless otherwise approved in writing by the Engineer, construction operations in rivers, streams, and water impoundments shall be restricted to those areas where channel changes are shown on the plans and to those areas which must be entered for the construction or removal of temporary or permanent structures.

Excavated materials shall not be deposited, nor shall earth dikes or other temporary earth structures be constructed, in rivers, streams, or impoundments. As an exception to the above, confined earth materials will be permitted when approved in writing by the Engineer.

Frequent fording of live streams with construction equipment will not be permitted; therefore, temporary bridges or other structures shall be used wherever frequent stream crossings are necessary. Unless otherwise approved in writing by the Engineer, mechanized equipment shall not be operated in live streams except as may be necessary to construct channel changes and to construct or remove temporary or permanent structures.

(C) Coordination of Erosion Control Operations:

Temporary and permanent erosion control measures shall be provided as shown on the plans or as directed by the Engineer. All permanent erosion control work shall be incorporated into the project at the earliest practicable time. Temporary erosion control measures shall be coordinated with permanent erosion control measures and all other work on the project to assure economical, effective, and continuous erosion control throughout the construction and post construction period and to minimize siltation of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces, or other property.

Temporary erosion control measures shall include but not be limited to the use of temporary berms, dikes, dams, drainage ditches, silt basins, silt ditches, slope drains, structures, vegetation, mulches, mats, netting, gravel, or any other methods or devices that are necessary. Temporary erosion control measures may include work outside the right of way or construction limits where such work is necessary as a result of construction such as borrow operations, haul roads, plant sites, equipment storage sites, and disposal of waste or debris. The Contractor shall be liable for all damages to public or private property caused by silting or slides originating in waste areas furnished by the Contractor.

Materials for temporary erosion control measures shall have been approved by the Engineer before being used or shall be as directed by the Engineer.

Erosion control measures installed by the Contractor shall be acceptably maintained by the Contractor.

(D) Water and Air Pollution:

The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent pollution of rivers, streams, and water impoundments. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful waste shall not be

discharged into or alongside of rivers, streams, or impoundments, or into natural or manmade channels leading thereto.

The Contractor shall comply with all State or local air pollution regulations throughout the life of the project.

(E) Dust Control:

The Contractor shall control dust throughout the life of the project within the project area and at all other areas affected by the construction of the project, including, but not specifically limited to, unpaved secondary roads, haul roads, access roads, disposal sites, borrow and material sources, and production sites. Dust control shall not be considered effective where the amount of dust creates a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property.

The Contractor will not be directly compensated for any dust control measures necessary, as this work will be considered incidental to the work covered by the various contract items.

(F) Application of Specifications:

The provisions of this article shall apply to all construction operations. Further references and detailed requirements concerning erosion, siltation, and pollution prevention and control are given in other sections of the specifications as supplements to the general requirements of this article.

(G) Sanctions:

In the event that temporary erosion and pollution control measures become necessary due to the Contractor's negligence, carelessness, or failure to incorporate permanent erosion control measures into the project at the earliest practicable time, such measures shall be performed by the Contractor as directed by the Engineer at no cost to the Department. If the Contractor fails to perform such measures as directed, the Engineer may have the work performed in accordance with Article 105-16.

Failure of the Contractor to fulfill any of the requirements of this article may result in the Engineer ordering the stopping of construction operations in accordance with Article 108-7 until such failure has been corrected. Such suspension of operations will not justify an extension of contract time.

Failure on the part of the Contractor to perform the necessary measures to control erosion, siltation, and pollution will result in the Engineer notifying the Contractor to take such measures. In the event that the Contractor fails to perform such measures within 24 hours after receipt of such notice with adequate forces and equipment, the Engineer may suspend the work as provided above, or may proceed to have such measures performed with other forces and equipment, or both. No payment will be made to the Contractor for the performance of this work and the cost of such work so performed will be deducted from monies due the Contractor on his contract.

107-14 PROTECTION OF PUBLIC LANDS.

In the execution of any work within or adjacent to any State or National forest, park, or other public lands, the Contractor shall comply with all regulations of all authorities having jurisdiction over such forest, park, or lands, governing the protection of public lands and the carrying out of work within public lands, and shall observe all sanitary laws and regulations with respect to the performance of work in public lands. He shall keep the areas in an orderly condition, dispose of all refuse, and obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks, and other structures in accordance with the requirements of the appropriate authorities.

The Contractor shall take all reasonable precaution to prevent and suppress forest fires and shall require his employees and subcontractors, both independently and at the request

of forest officials, to do all reasonable within their power to prevent and suppress and to assist in preventing and suppressing forest fires and to make every possible effort to notify a forest official at the earliest possible moment of the location and extent of any fire seen by them.

The Contractor shall obtain any construction permits which may be required for his operations, which are not a part of the project, in accordance with the requirements of the regulations of the appropriate authorities.

107-15 RESPONSIBILITY FOR DAMAGE CLAIMS.

The Contractor shall indemnify and save harmless the Board of Transportation and its members and the Department of Transportation and its officers, agents, and employees from all suits, actions, or claims of any character brought for any injury or damages received or sustained by any person, persons, or property by reason of any act of the Contractor, Subcontractor, its agents or employees, in the performance of the contract. The Contractor's liability to save harmless and indemnify shall include, but not by way of limitation, the following: (1) damages or claims for the failure of the Contractor to safeguard the work; (2) damages or claims by reason of the failure of the Contractor to erect adequate barricades and post adequate warnings to the public of such barricades; (3) any damage or claims caused through the Contractor's use of defective materials or by the performance of defective work; (4) any claims by reason of the Contractor's infringement of patent, trademark, or copyright; (5) any amounts paid by the Department by reason of the Contractor's failure to comply with or for violations of laws, ordinances, orders, or decrees; (6) any damages or claims caused by blasting operations of the Contractor with or without proof of negligence on the part of the Contractor; (7) damages or claims caused by the failure of the Contractor to protect private or public property pursuant to Article 107-12, including damages to public and private property caused by silting and slides from waste areas furnished by the contractor, without proof of negligence; (8) damages caused by the failure of the Contractor to control erosion in accordance with the plans and specifications.

In addition to any remedy authorized by law, the Department shall have a right to retain from moneys due the Contractor as the Department considers necessary until final disposition has been made of the following suits or claims: (1) For all claims against the Department involving claims or damages which are the Contractor's responsibility under Section 107 of the specifications. The Contractor and the Surety shall remain responsible until such suits or claims against the Department have been settled and until the Department has been indemnified and saved harmless. (2) In case of claims by the third parties against the Contractor involving tort liability for which the Department might be held liable for as a taking of property, or as a tort before the Industrial Commission. However, moneys due the Contractor will not be retained provided the Contractor produces satisfactory evidence to the Department that he is adequately protected from such tort liability by public liability and property damage insurance. In all other cases involving claims or suits by third parties against the Contractor, amounts due the Contractor will not be withheld provided that the consent of the Surety is furnished and the Surety guarantees payment of any amounts for which the Contractor may be determined to be legally liable for. (3) In cases of damage to property of the Department, such amounts necessary to pay for such damage.

In cases where claims are made or suits filed against employees, agents, or officers of the Department of Transportation or members of the Board of Transportation, the Department of Transportation may retain from moneys due the Contractor sufficient to indemnify such employee, agent, or officer of the Department of Transportation or member of the Board of Transportation for any amounts which they may be held liable for but for which the Contractor is responsible under the provisions of Section 107 of these specifications. In the event that there is not sufficient retainage or the final estimate is paid, the Department of Transportation may collect from the Contractor or its Surety

amounts sufficient to indemnify such employee, agent, or officer of the Department of Transportation or member of the Board of Transportation for such damages incurred.

107-16 LIABILITY INSURANCE.

When required by the special provisions the Contractor shall carry insurance of the kinds and in the amounts specified therein in addition to any other forms of insurance or bonds required under the terms of the contract, or any other insurance carried by the Contractor.

107-17 OPENING SECTIONS OF PROJECT TO TRAFFIC.

If it is determined by the Engineer that the Contractor will not complete the work by the completion date, intermediate completion date, or intermediate completion time, the Engineer may notify the Contractor in writing that upon expiration of contract time or intermediate contract time the project or any portion thereof will be open to traffic. On such sections which are opened, the Contractor shall conduct the remainder of his operations so as to cause the least obstruction to traffic. The Contractor shall not be relieved of his liability or responsibility, shall not receive any additional compensation due to the added cost of the work, nor shall he receive any extension of the completion date, intermediate completion date, or intermediate completion time, by reason of such openings.

107-18 CONTRACTOR'S RESPONSIBILITY FOR WORK.

Until final acceptance of the work by the Engineer, as evidenced in writing, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part thereof by the action of the elements, or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof, except as provided in other sections of the specifications. The Department will reimburse the Contractor for the repair of the work due to actions of the elements of such exceptional nature as to be legally classified as Acts of God.

In case of suspension of work from any cause whatever, the Contractor shall be responsible for all materials, and shall properly store them, if necessary, and shall provide suitable drainage of the roadway and erect necessary temporary structures at no cost to the Department.

107-19 FURNISHING RIGHT OF WAY.

The Department will be responsible for the securing of all necessary rights of way in advance of construction.

107-20 PERSONAL LIABILITY OF PUBLIC OFFICIALS.

Employees, agents, officers, and members of the Board of Transportation or the Department of Transportation shall not be held personally liable for any damages connected with the work, it being specifically understood in all such matters that they act solely as agents and representatives of the Board of Transportation or the Department of Transportation.

107-21 WAIVER OF LEGAL RIGHTS BY THE DEPARTMENT.

Upon completion of the work, the Department will expeditiously make an inspection and notify the Contractor of acceptance. Such final acceptance and processing of the final estimate, however, shall not preclude or estop the Department from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Department be precluded or estopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain, or by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the

Department of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Department for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Department's rights under any warranty or guaranty.

107-22 SAFETY AND ACCIDENT PROTECTION.

The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide all safeguards, safety devices, and protective equipment, and shall take any other needed actions, on his own responsibility that are reasonably necessary to protect the life and health of employees on the job and the safety of the public, and to protect property in connection with the performance of the work covered by the contract.

107-23 WAGES AND CONDITIONS OF EMPLOYMENT.

The Contractor's attention is directed to the provisions and requirements of any and all public statutes which regulate hours or conditions of employment on public work. Such provisions and requirements that are appropriate, in accordance with the intent of the particular law, act, or statute, will be applicable to all work performed by the Contractor with his own organization and with the assistance of workmen under his immediate superintendence, and to all work performed by subcontract. It will be the responsibility of the Contractor to ascertain the appropriate application of such provisions and requirements to the work.

In addition to the general requirements of the various regulations referred to above, certain additional regulations and restrictions may be imposed that are peculiar to the particular work under the contract. In such cases, these regulations and restrictions will be included in the special provisions for the particular project involved.

For projects that are financed wholly or in part with Federal funds, the minimum wage rates to be paid to all mechanics and laborers employed on the project will be determined by the U.S. Secretary of Labor. A schedule of such wage rates will be inserted in the proposal form for such projects. The Contractor shall provide at the job site at no cost to the Department a weatherproof bulletin board covered with glass or rigid transparent plastic and shall display thereon at all times legible copies of such schedule of wage rates and of the wage rate information poster that will be furnished to him. The bulletin board shall be located in a conspicuous place easily accessible to all employees.

In the event that changes should occur in any of the regulations referred to in this article, or in any application thereof to the work under contract, no additional compensation will be allowed the Contractor as a result of such changes.

107-24 LIABILITY TO THIRD PARTIES.

It is not intended by any of the provisions of any part of these specifications to make the public or any member thereof a third party beneficiary hereunder, or to authorize anyone who is not a party to a contract entered into pursuant to these specifications to maintain a suit for personal injury or property damage otherwise than as authorized and provided by law.

107-25 RIGHT OF THE CONTRACTOR TO FILE VERIFIED CLAIM.

If the Contractor fails to receive such settlement as he claims to be entitled to under the terms and provisions of the contract, the Contractor may submit a written and verified claim for such amounts he deems himself or his subcontractor(s) entitled to under the terms and provisions of the contract provided he has complied with the applicable provisions of the contract including, but not limited to, giving written notice of intent to file a claim, keeping and submission of cost records, and the initial submission of a written claim within the specified time period. The claim shall be submitted to the State Highway

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Administrator within 60 days from the time the Contractor receives the final estimate as defined by Article 101-38 and shall be submitted in accordance with G.S. 136-29.

107-26 HAZARDOUS, CONTAMINATED, AND/OR TOXIC MATERIAL.

When the Contractor's operations encounter or expose any abnormal condition which may indicate the presence of a hazardous, contaminated, and/or toxic material, such operations shall be discontinued in the vicinity of the abnormal condition and the Engineer shall be notified immediately. Upon notification by the Contractor, the Engineer will investigate the work and, if necessary, suspend the work in accordance with Article 108-7. The presence of barrels; old or abandoned underground storage tanks; and discolored earth, metal, wood, etc.; visible fumes; abnormal odors; excessively hot earth; smoke; or anything else which appears abnormal may be indicators of hazardous, contaminated, and/or toxic materials and shall be treated with extraordinary caution as they are evidence of abnormal conditions.

The Contractor's operations shall not resume until so directed by the Engineer.

Disposition of the hazardous, contaminated, and/or toxic material will be made in accordance with the requirements and regulations of the Department of Human Resources and the Department of Environment, Health & Natural Resources. Where the Contractor performs work necessary to dispose of hazardous, contaminated, and/or toxic material, payment will be made at the unit prices for pay items included in the contract which are applicable to such work or, where the contract does not include such pay items, payment will be made as provided in Article 104-7 for extra work. Where the contract does not include pay items for the work necessary to dispose of hazardous, contaminated, and/or toxic material, the Engineer may have the work performed by others.

SECTION 108 PROSECUTION AND PROGRESS

108-1 GENERAL.

It is the intent of these specifications that the Contractor shall commence work on the date of availability shown in the special provisions or as soon thereafter as practicable. The Contractor shall not begin work prior to the date of availability without written approval of the Engineer. If such approval is given and the Contractor does begin work prior to the date of availability the Department will assume no responsibility for any delays caused prior to the date of availability by any reason whatsoever, and such delays, if any, will not constitute a valid reason for extending the completion date.

It is further the intent of these specifications that the Contractor shall pursue the work diligently with workmen in sufficient numbers, abilities, and supervision, and with equipment, materials, and methods of construction as may be required to complete the work described in the contract, or as may be amended, by the completion date.

108-2 PROGRESS SCHEDULE.

The Contractor shall prepare and submit for approval by the Engineer a schedule of his proposed working progress on the project in accordance with the instructions and on forms furnished by the Engineer.

The proposed progress schedule shall be submitted no later than 7 days prior to the date of the project preconstruction conference and shall have been approved before any work is begun on the project.

When conditions beyond the Contractor's control have adversely affected his progress, or the Engineer has extended the completion date, the Contractor may submit a revised progress schedule to the Engineer for approval. Such revised progress schedule will not be approved unless accompanied by a detailed written statement giving the Contractor's reasons for the proposed revision.

108-3 PRECONSTRUCTION CONFERENCE.

Immediately after receipt of notice of award, the Division Engineer and the Contractor will establish a mutually agreeable date on which the preconstruction conference will be held. The Contractor's project superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of the work shall attend the preconstruction conference.

108-4 CONSTRUCTION CONFERENCES.

After work on the project has begun, construction conferences are to be held periodically. The construction conferences are to be scheduled at times which are mutually agreeable to both the project superintendent and the Resident Engineer. It shall be the superintendent's responsibility to attend the conferences.

108-5 CHARACTER OF WORKMEN, METHODS, AND EQUIPMENT.

The Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by these specifications.

The Contractor cannot recruit Department employees for employment. Additionally, Department employees who elect to become employed by a Contractor may not perform any function on a project which they have been involved in during employment with the Department without written consent of the State. Any person employed by the Contractor and assigned to a project who has previously been involved in the project as a Department employee shall be, at the written direction of the Engineer, removed from the project. An exception to these terms may be granted when recommended by the Secretary and approved by the Board of Transportation.

Failure of the contractor to comply may be justification for disqualifying the Contractor from further bidding in accordance with the provisions of Article 102-16 and shall be grounds for termination of this contract.

No person shall be employed by the Contractor or by any Subcontractor who has been determined by the Engineer to have engaged in fraudulent activities in connection with any work for the Department of Transportation.

Any person employed by the Contractor or by any Subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is disrespectful, intemperate, or disorderly or who has been determined by the Engineer to have engaged in fraudulent activities in connection with any work for the Department of Transportation shall be, at the written request of the Engineer, removed forthwith by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer.

Should the Contractor fail to remove such person or persons as required above, the Engineer may suspend the work in accordance with the provisions of Article 108-7 until such orders are complied with.

All equipment which is proposed to be used on the work is to be of sufficient size and in such mechanical condition as to meet the requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other highways will result from its use. The Engineer may order in writing the removal and replacement of any unsatisfactory equipment.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor is free to use any methods or equipment that he demonstrates to the satisfaction of the Engineer will accomplish the contract work in conformity with the requirements of the contract.

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When the contract specifies that the construction be performed by the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than those specified in the contract, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given it will be on the condition that the Contractor will be fully responsible for producing construction work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove the unsatisfactory work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved nor in the completion date as a result of authorizing a change in methods or equipment under these provisions.

108-6 SUBLETTING OF CONTRACT.

The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the contract or any portion thereof; or of his right, title, or interest therein; without written consent of the Engineer. In case such consent is given, the sublet work shall be performed by the Subcontractor unless otherwise approved in writing by the Engineer. Failure of the Contractor to comply with these provisions will be just cause for the work to be considered unauthorized in accordance with Article 105-12. A firm which has been disqualified due to its failure to maintain satisfactory progress under the provisions of Article 108-8 will not be approved as a subcontractor until the firm demonstrates the ability to perform the work in a satisfactory manner. When directed by the Engineer, the Contractor shall submit a certified copy of the actual subcontract agreement executed between the Contractor and Subcontractor prior to written consent being issued by the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, work amounting to not less than 40 percent of the total original contract amount, except:

1. Any items designated in the contract as "specialty items" may be performed by subcontract and the cost of any such special items so performed by subcontract will be deducted from the total original contract amount before computing the amount of work required to be performed by the Contractor with his own organization, and
2. Any other items sublet to Disadvantaged Business Enterprise (DBE), Minority Business (MB) or Women's Business (WB), up to the value of the contract DBE, MB or WB goal, will be deducted from the total original contract amount before computing the amount of work required to be performed by the Contractor with his own organization.

In any event, the Contractor shall perform with his own organization work amounting to not less than 35% of the difference between the total original contract amount and the value of specialty items which have been sublet.

Extra work performed in accordance with Article 104-7 will not be considered in the computation of work required to be performed by the Contractor.

An assignment by operations of law or assignment for the benefit of creditors, or the bankruptcy of the Contractor, shall not vest any right in this contract in the Trustee in bankruptcy, the Contractor's creditors, or the agent of the creditors.

A Subcontractor shall not sublet, sell, transfer, assign, or otherwise dispose of his contract with a Contractor or any portion thereof; or of his right, title, or interest therein; without written consent of the Engineer. When directed by the Engineer, the Contractor shall submit a certified copy of the actual subcontract agreement executed between the

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Subcontractor and the Second Tier Subcontractor. In the event of an assignment by operations of law or the bankruptcy of the Subcontractor, the Contractor shall have the right, power, and authority, in its discretion, without violating the contract or releasing the Surety, to terminate the subcontract. An assignment by operations of law or assignment for the benefit of creditors or the bankruptcy of the Subcontractor shall not vest any right in this contract in the Trustee in bankruptcy, nor the Subcontractor's creditors or agents of the creditors.

Neither the Contractor, nor any Subcontractor, shall enter into any written or oral equipment lease or rental agreement, materials purchase agreement, and/or labor agreement which circumvents the provisions of this article.

If the Contractor or a Subcontractor enters into a lease or rental agreement for equipment based upon payment for a unit of work, such agreement will be considered subletting of the contract unless the lease or rental agreement is with a commercial equipment company, manufacturer, and/or commercial leasing agency and such firm has been approved by the Engineer. An equipment lease or rental agreement which is based upon unit prices per unit of time will not be considered subletting of the contract.

The approval of any subcontract will not release the Contractor of his liability under the contract and bonds, nor will the Subcontractor or the second tier Subcontractor have any claim against the Department of Transportation by reason of the approval of the subcontract. The State Highway Administrator will review and consider Subcontractor claims for additional time or compensation provided such claims are submitted by the contractor in accordance with Article 107-25 and General Statute 136-29.

Failure of the Contractor to comply with any of the provisions of this article may be justification for disqualifying the Contractor from further bidding in accordance with the provisions of Article 102-16.

108-7 TEMPORARY SUSPENSION OF THE WORK.

The Engineer will have the authority to suspend the work wholly or in part by written order for such periods as he may deem necessary for any of the following reasons:

1. Conditions considered unfavorable for the suitable prosecution of the work, or
2. The Contractor's failure to correct conditions unsafe for workmen or the general public, or
3. The Contractor has not carried out orders given to him by the Engineer, or
4. The Contractor's failure to perform any provisions of the contract.

No extension of the completion date will be allowed for the above suspensions except as may be provided for in Article 108-10.

108-8 FAILURE TO MAINTAIN SATISFACTORY PROGRESS.

The Engineer will check the Contractor's progress at the time each partial pay estimate is prepared. The Contractor's progress may be considered as unsatisfactory as follows:

1. The Contractor's progress is found to be less than that described in both counts below:
 - a. The dollar value of the work completed, excluding material payments allowed by Article 109-5, is less than the dollar value of the work which should have been completed, on the basis of the Contractor's approved progress schedule, by more than 15 percent of the current contract amount.

The dollar value of the work completed will be the total estimate to date shown in the latest partial pay estimate, excluding material payments allowed by Article 109-5. The current contract amount will be the contract estimate plus accumulated overruns less accumulated underruns shown in the latest partial pay estimate.

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- b. The percentage of the work completed is less than the percentage of contract time elapsed on the work by more than 15 percentage points. The percentage of work completed will be the dollar value of the work completed as defined above, divided by the current contract amount as defined above.

The percentage of contract time elapsed will be number of calendar days elapsed as shown in the latest partial pay estimate divided by the total contract time in calendar days.

2. The Contractor fails to begin and pursue the work in accordance with Article 108-1 prior to the expiration of 5% of the original contract time after the date work was scheduled to begin based upon the approved progress schedule.
3. The Engineer anticipates the Contractor will not complete the work described in the contract by the completion date.

When the Contractor's progress is found to be unsatisfactory as described above, the Engineer may make written demand of the Contractor to state in writing the reason for the unsatisfactory progress and produce such supporting data as the Engineer may require or the Contractor may desire to submit. The Engineer will consider the justifications submitted by the Contractor and extensions of the completion date have or may be allowed in accordance with Article 108-10(B).

When the Contractor cannot satisfactorily justify the unsatisfactory progress the Engineer may invoke one or more of the following sanctions:

1. Withhold anticipated liquidated damages from amounts currently due or which become due.
2. Remove the Contractor and all firms prequalified under the Contractor's Prequalification Number from the Department's list of qualified bidders.

When any of the above sanctions have been invoked, they shall remain in effect until rescinded by the Engineer.

108-9 DEFAULT OF CONTRACT.

(A) Declaration of Default:

The Department shall have the right to declare a default of the contract for breach by the Contractor of any material term or condition of the contract or specifications. Material breach by the Contractor shall include, but specifically shall not be limited to failure to begin work under the contract within the time specified; failure to provide workmen, equipment, or materials adequate to perform the work in conformity with the plans and specifications by the completion date; unsatisfactory performance of the work; refusal or failure to replace defective work; failure to maintain satisfactory work progress; failure to comply with equal employment opportunity contract requirements; insolvency or bankruptcy, or any act of insolvency or bankruptcy; failure to satisfy any final judgment within 10 days after entry thereof; and making an assignment for benefit of creditors.

(B) Sanctions:

In the event of a breach of the contract by the Contractor, the Department shall have the right, power, and authority, in its sole discretion, without violating the contract or releasing the surety: to assume full control of the prosecution of the contract in the place and stead of the Contractor in directing Contractor's agents, employees, and Subcontractors in the performance of the work and in utilizing all materials, tools, machinery, equipment, and structures located on the project; to perform the work or any part thereof with Department personnel and equipment or to utilize any or all materials and equipment located on the project that are suitable and acceptable; to relet the work upon such terms and conditions as the Department shall deem appropriate; to employ any other methods that it may determine are required for completion of the contract in an acceptable manner; and to

withhold any sums due the Contractor under the contract without penalty or interest until the work is completed and accepted by the Department.

(C) Notice:

Before invoking any of the sanctions provided for herein, the Department, acting through the Engineer, will give the Contractor at least 7 days written notice with a copy to the Surety, which will set forth the breach of contract involved and the sanctions to be imposed. The Department, in its discretion, may grant the Contractor time in excess of 7 days within which to comply with the contract terms and specifications, and the time allowed will be set forth in writing. If the Department determines during such period that the Contractor is not proceeding satisfactorily to compliance, it may impose the sanctions after 24 hours notice to the Contractor. If the Department determines that the Contractor is not in compliance at the end of the time allowed, it may immediately impose any of the sanctions set forth herein and will advise the Contractor, in writing, with a copy to the Surety of the sanctions imposed.

(D) Payment:

After declaration of default has been made final, the Contractor will be entitled to receive payment for work satisfactorily completed or portions of work satisfactorily completed, less any sums that may be due the Department from the Contractor but in no event shall payment exceed the contract unit or lump sum price for such work. The Department, at its election, may retain the sum due the Contractor, or any portion thereof, without interest or penalty, until the contract work is completed; or it may make payment to the Contractor upon declaration of default for work satisfactorily completed to the date that notice of default is received by the Contractor. The Contractor may be required by the Engineer, however, to carry to a stage of completion satisfactory to the Engineer any work in progress, the value of which otherwise would be lost by immediate cessation of work. Payment for such work will be made upon the basis hereinafter set out.

In the event that the Contractor's employees, equipment, or materials are used in prosecution of the work, or any part thereof, after default is declared, payment to the Contractor may be by contract unit or lump sum prices for the work performed, or, if the Engineer determines that such prices do not represent the value of the work performed, payment for the type of work or services performed will be made on a force account basis, as set forth in Article 109-3, less any sums that may be due the Department; but in no event shall payment exceed the contract unit or lump sum price for such work or services. Determination of the method of payment shall be in the sole discretion of the Engineer, and he will advise the Contractor, in writing, of his determination with reference to the specific type of work or service to be performed.

If all costs and expenses incurred by the Department arising out of the breach and imposition of sanctions, together with the total cost to the Department of securing the performance of the work set forth in the contract, exceed the sum that would have been payable under the contract, the Contractor and the Surety shall be liable to the Department for such excess and shall pay such amount to the Department.

(E) Authority of Engineer:

The Engineer will exercise the powers and discretion vested in him by the specifications and other contract conditions in carrying out the terms of this article. He will have full power and authority to carry out any orders, directives, or resolutions issued by the Department in connection with a declaration of default. In the event that the Department fails to specify the sanctions to be imposed, the notice to be given, or the method of completing the work, the Engineer, may, in his discretion, impose such sanctions, give such notice, and select such methods of completing the work, as are authorized by this article; and such actions shall have the same effect and validity as if taken pursuant to an express order, directive, or resolution of the Department.

(F) Obligation of Contractor and Surety:

No term or terms of this article and no action taken pursuant hereto by the Department of Transportation, its agents, or employees, will be construed to release or discharge the Contractor or the Surety upon the obligation set forth in the contract bonds, and the Contractor and the Surety shall remain bound thereon unto the Department until the work set forth in the contract has been completed and accepted by the Department and all obligations of the Contractor and the Surety arising under the contract and contract bond have been discharged.

(G) Provision Not Exclusive:

The provisions shall be in addition to, and not in place of, any other provisions relating to default, breach of contract, and sanctions to be imposed in connection therewith appearing in the contract.

108-10 CONTRACT TIME; INTERMEDIATE CONTRACT TIME.**(A) General:**

The contract time will be as defined in Article 101-24. No extensions to the completion date will be authorized except as allowed by this article. No modifications in the date of availability will be made for any reason whatsoever.

Intermediate contract time, as defined in Articles 101-47 and 101-48, will be that as allowed in the special provisions to complete a part, portion, or phase of the total work covered in the contract. Intermediate completion dates and intermediate completion times set forth in the special provisions may be extended on the same basis as completion dates and as described in this article.

When the liquidated damages stipulated in the project special provisions are to be on an hourly basis, extensions as described in this article will be considered on an hourly basis.

(B) Completion Date, Intermediate Completion Date, and Intermediate Completion Time Extensions:

No extension of the completion date, intermediate completion date, or intermediate completion time will be allowed for any reason except as provided for below:

1. If the total dollar value of the final quantities adjusted as provided below, less the dollar value of quantities represented by supplemental agreements which previously extended the completion date, intermediate completion date, or intermediate completion time, exceeds the dollar value of the total amount bid, the completion date, intermediate completion date, or intermediate completion time will be extended by the number of calendar days or hours obtained by multiplying the contract time (days), intermediate contract time (days), or intermediate contract time (hours) as set forth in the special provisions by that percentage that such reduced final dollar value exceeds the total amount bid. The total dollar value of the final quantities for pro-rata computations shall be adjusted by excluding the following:
 - a. Unit bid price changes caused by price adjustments to asphalt cement.
 - b. Fuel adjustments.
 - c. Unit price reductions under the provisions of Article 105-3.
 - d. Payment for trainees.
 - e. Unit price changes due to pay factors established by the Specifications.
2. If supplemental agreements covering the performance of extra work include provisions for an extension of the completion date, intermediate completion date, or intermediate completion time, and the final dollar value of the extra work exceeds the estimated dollar value, the number of days or the number of hours by which the completion date, intermediate completion date, or intermediate completion time was

extended will be increased by the percentage which the final dollar value exceeds the estimated value.

3. If the Contractor's current controlling operation(s) are delayed by circumstances originating from work required under the contract and beyond his control and without his fault or negligence, he may, at any time prior to payment of the final estimate, make a written request to the Engineer for an extension of the completion date, intermediate completion date, or intermediate completion time. This request shall include: (a) the circumstances resulting in the alleged delay and documentation of said circumstances as may be required by the Engineer, (b) the controlling operation(s) alleged to have been delayed, (c) the calendar dates or calendar dates and times on which the controlling operation(s) were delayed and (d) the number of calendar days or hours by which he is requesting the completion date, intermediate completion date, or intermediate completion time to be extended.

If the Engineer determines that the controlling operation(s) were delayed because of circumstances beyond the control of and without the fault or negligence of the Contractor, and that the Contractor has pursued the work in accordance with Article 108-1, he will extend the completion date, intermediate completion date, or intermediate completion time unless otherwise precluded by other provisions of the contract. No extension of the completion date, intermediate completion date, or intermediate completion time will be allowed for delays caused by restrictions, limitations or provisions contained in the contract.

Consideration will be given for an extension in the completion date, intermediate completion date, or intermediate completion time involving an intermediate contract time of more than 96 hours if the Contractor's current controlling operation(s) is delayed in excess of 40 percent of the total contract time (days), as defined in Article 101-24, excluding the time between December 15 and March 16; the total intermediate contract time (days), as defined in Article 101-47, excluding the time between December 15 and March 16; or the total intermediate contract time (hours), as defined in Article 101-48; due to weather or conditions resulting from weather. No other consideration will be given for extensions in the completion date, intermediate completion date, or intermediate completion time due to delays caused by weather.

Where the intermediate contract time is 96 hours or less, no consideration whatsoever will be given for an extension in the intermediate completion time due to weather or conditions resulting from weather.

4. If changes in the work from that originally contemplated in the contract are ordered by the Engineer and these changes result in reduction in quantities, elimination of items, additional work and/or extra work, the Engineer will allow an extension in the completion date, intermediate completion date, or intermediate completion time as he may deem warranted by such changes. Pursuit of the work with adequate forces and equipment and efficiency of the Contractor's operations will be considered by the Engineer in determining an extension in the completion date, intermediate completion date, or intermediate completion time. It is, however, the Contractor's responsibility to show just cause for an extension in the completion date, intermediate completion date, or intermediate completion time due to the aforesaid conditions.
5. In the event accumulated authorized extensions in the completion date or intermediate completion date extend the completion date or intermediate completion date beyond December 15 following expiration of the completion date or intermediate completion date as established in the special provisions, the completion date will be further extended by the number of calendar days between December 15 of one year and March 16 of the following year. If any portion of such accumulated authorized extensions are for delays which occurred after the original contract time or intermediate contract time (days) expired and during the

period between December 15 of one year and March 16 of the following year, this portion of the extension will be deducted from the number of additional calendar days awarded due to extension of the completion date or intermediate completion date beyond December 15.

The Contractor's plea that insufficient contract time (days), intermediate contract time (days), or intermediate contract time (hours) was specified in the contract will not be considered as a valid reason for an extension in the completion date, intermediate completion date, or intermediate completion time.

When all work on the project is totally complete, with the exception of an item or items on which work is precluded by seasonal limitations set forth in the contract, the Engineer may, provided that the Contractor has diligently pursued the work with adequate forces and equipment, waive the assessment of liquidated damages during the period of time from the date all work other than that precluded by seasonal limitations was completed until the date of expiration of the seasonal limitations. The Contractor shall make the request to waive the assessment of liquidated damages in writing prior to the beginning date of the requested waiver. The nonassessment of liquidated damages during the aforesaid period shall not operate to waive any other liquidated damages that may be assessable, or any other terms of the contract.

108-11 LIQUIDATED DAMAGES.

It is mutually recognized that time is an essential element of the contract, and that delay in completing the work will result in damages due to public inconvenience, obstruction to traffic, interference with business, and the increasing of engineering, inspection, and administrative costs to the Department. It is therefore agreed that in view of the difficulty of making a precise determination of such damages, a sum of money in the amount stipulated in the special provisions will be charged against the Contractor for each calendar day, each hour, or portion thereof that the work, or any portion of the work as described in the special provisions, remains uncompleted after the expiration of the completion date, intermediate completion date, or intermediate completion time shown in the special provisions, not as a penalty but as liquidated damages.

Should the Contractor or, in case of default, the Surety fail to complete the work or any portion of the work by any of the applicable completion dates, intermediate completion dates, or intermediate completion times shown in the special provisions, a deduction of the amount stipulated in the special provisions as liquidated damages will be made for each and every calendar day, for each and every hour, or portion thereof that the work or any portion of the work remains uncompleted after the expiration of any completion date, intermediate completion date, or intermediate completion time applicable to the uncompleted work. This amount will be deducted from any money due the Contractor or his Surety under the contract, and the Contractor and his Surety will be liable for any liquidated damages in excess of the amount due.

In the event that the special provisions establish one or more intermediate completion dates and/or one or more intermediate completion times in addition to the completion date, each of the liquidated damages stipulated will be considered to be cumulative to any other liquidated damages stipulated.

In case of default of the contract and the completion of the work by the Department, the Contractor and his Surety will be liable for the liquidated damages under the contract, but no liquidated damages will be chargeable for any delay in the final completion of the work by the Department due to any action, negligence, omission, or delay of the Department.

In any suit for the collection of or involving the assessment of liquidated damages, the reasonableness of the amount stipulated in the contract will be presumed. The liquidated damages referred to herein are intended to be and are cumulative, and will be in addition to

every other remedy now or hereafter enforceable at law, in equity, by statute, or under the contract.

Permitting the Contractor to continue and finish the work or any part thereof after the expiration of the completion date, intermediate completion date, or intermediate completion time shall in no way operate as a waiver on the part of the Department of any of its rights under this contract.

108-12 EXTENSION OF CONTRACT TIME AND APPORTIONMENT OF LIQUIDATED DAMAGES.

It is the intent of Articles 108-10 and 108-11 of these specifications that when a contract is not completed by the completion date, intermediate completion date, or intermediate completion time the Contractor shall be entitled to an extension of the completion date, intermediate completion date, or intermediate completion time and apportionment and remittance of liquidated damages to the extent that the failure to complete was due to the conditions set forth in Article 108-10. The Contractor, however, shall be entitled to an extension of the completion date, intermediate completion date, or intermediate completion time, or an apportionment and remittance of liquidated damages only to the extent and in the proportion that such delays were caused by the conditions set forth in Article 108-10, and it is understood that any extension granted shall not operate to waive any liquidated damages or any claim which the Department has or may have against the Contractor by reason of failure of the Contractor to complete the said contract by the completion date, intermediate completion date, or intermediate completion time specified therein or as revised by authorized extensions.

108-13 TERMINATION OF CONTRACT.

The Board may terminate the contract in accordance with the following provisions:

1. Consideration will be given to termination of the contract if any of the following circumstances exist:
 - a. If it is impossible for the Contractor to obtain critical materials for completion of the contract within a practical time limit, or
 - b. If it is impossible for the Contractor to complete the work in accordance with the contract by reason of unanticipated conditions at the site, including slides and unstable subsoil, without a major change in the design of the project and the Contractor will be unduly delayed in completing the project by reason of such unanticipated conditions and changes in design, or
 - c. If the Contractor is prevented from proceeding with the contract as a direct result of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense, or
 - d. If the Contractor is prevented from proceeding with the work required by the contract as a direct result of a restraining order, or other court order, or by reason of a permit requirement, and the Contractor will be unduly delayed in completing the project by reason of such order or requirement, or
 - e. If the Contractor is prevented from proceeding with the work due to the unavailability of the site.
2. The Contractor shall determine that the circumstances in item 1 exist and are beyond his control, and shall notify the Department in writing of his determination and include adequate documentation of these circumstances along with such notification.

3. The Contract will be terminated under this article if:
 - a. Request by Contractor:
 - i. The Board concurs in the determination by the Contractor of the circumstances or makes an independent determination that such circumstances hereinabove indicated exist, and
 - ii. The Board determines that such circumstances are beyond the control of the Contractor, and the Contractor was not at fault in creating the circumstances, and
 - iii. The Board determines that a termination of the contract is in the best public interest, or
 - b. Authority of the Board:

The Board determines that a termination of the contract is in the best public interest.
4. The Contractor will be notified in writing by the State Highway Administrator of the action of the Board.
5. After a contract is terminated in accordance with this termination provision, the following provisions shall be applicable:
 - a. When the contract is terminated before completion of all items of work in the contract, payment will be made for the actual number of acceptably completed items of work or acceptably completed portions thereof at the contract unit or lump sum prices. When the contract is terminated before completion of all items of work in the contract and items of work are partially completed or not begun, payment will be made in accordance with Article 104-6.
 - b. Payment for costs incurred in organization of the work will be based on verified actual costs and will be included in the adjusted contract lump sum price for "Mobilization" in accordance with provision 5a of Article 108-13. The Contractor shall demonstrate through submission of appropriate documentation that these costs were included in the bid item of "Mobilization". After reviewing the submitted cost records and the submitted documentation, the Engineer will make such adjustments as he deems warranted.
 - c. Upon request from the Contractor, materials meeting the requirements of the contract which were to have been incorporated into the work or were to remain the property of the Department but are not used in the work will be paid for in accordance with Article 109-6.
 - d. No claim for loss of anticipated profits will be considered and no payment will be made for loss of anticipated profits.
 - e. Termination of a contract shall not relieve the Contractor of his responsibilities for any completed portion of the work nor shall it relieve his Surety, of its obligation for and concerning any just claims arising out of the work performed.

108-14 TERMINATION OF CONTRACTOR'S RESPONSIBILITY.

After the project has been completed and accepted, as provided for in Article 105-17, the Contractor's responsibility will cease except as provided in Article 107-21 and as set forth in his contract bonds. The Contractor shall remain responsible for any amounts determined to be owed the Department in the processing of the final estimate and such amounts shall be paid by the Contractor upon notification by the Department prior to processing of the final estimate.

**SECTION 109
MEASUREMENT AND PAYMENT**

109-1 MEASUREMENT OF QUANTITIES.

All work completed under the contract will be measured by the Engineer according to United States standard measures unless otherwise stated in the contract.

The method of measurement and computations used in the determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to accepted engineering practice.

The terms "gage" and "thickness", when used in connection with the measurement of plates, sheets, and steel wire, shall be applied as follows:

Uncoated Steel Sheets and Light Plates	United States Standard Gage
Galvanized Sheets.....	AASHTO M218 or M167
Aluminum Sheets	AASHTO M196 or M197
Steel Wire	AASHTO M32

The term ton (metric ton) will mean short ton (mass) consisting of 2,000 pounds (1000 kgs) avoirdupois.

Cement will be measured by the barrel unless otherwise indicated elsewhere in the Specifications. The term barrel will mean 376 pounds (170 kgs) of cement.

Trucks used to haul material being paid for by weight will be either weighed empty prior to each loading or weighed empty on a daily basis. When trucks are weighed empty on a daily basis, each truck shall be weighed prior to hauling its first load of the day and shall bear a legible identification mark.

Where aggregates which are to be paid for by weight have been stockpiled after being produced, measurement for purposes of payment will be made after the aggregates have been loaded on trucks for direct delivery to the project.

When a complete structure or structural unit, as may be indicated by the unit "lump sum" or "each", is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When standard manufactured items are specified, and these items are identified by gage, unit weight, section dimensions, and/or other dimensions, such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

109-2 SCOPE OF PAYMENT.

The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of Article 107-21. Payment to the Contractor will be made only for the actual quantities of the various items that are completed and accepted in accordance with the terms of the contract.

If the "Basis of Payment" or "Compensation" clause in the specifications relating to any unit price or lump sum price in the bid schedule requires that the said unit price or lump sum price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the specifications.

109-3 FORCE ACCOUNT WORK.

All force account work shall be performed as directed by the Engineer including the numbers and types of equipment, the numbers and classifications of labor and foremen, and material requirements.

All work to be paid for on a force account basis will be paid for in the following manner:

1. Labor. For all authorized labor and foremen in direct charge of the specific operations, the Contractor will receive the rate of base wages (or scale) actually being paid by the Contractor for each hour that the labor and foremen are actually engaged in the work. Prior to beginning the work the Contractor shall submit in writing for the Engineer's approval a list of all wage rates applicable to the work. Approval will not be granted where these wage rates are not actually representative of wages being paid elsewhere on the project for comparable classes of labor performing similar work. Payment for overtime will be allowed when approved by the Engineer prior to performing the work. An amount equal to 35 percent of the total base wages paid for labor and foremen will be added to the total base wages paid to the Contractor.

The percentage additive will be full compensation for overhead, profit, benefits, and contingencies.

2. Bond, Insurance, and Tax. For property damage, liability, and worker's compensation insurance premiums, unemployment insurance contributions, bond premiums, and social security taxes on the force account work, the Contractor will receive the actual cost to which cost 6 percent will be added. The Contractor shall furnish satisfactory evidence to the Engineer of the rate or rates paid for such bond, insurance, and tax.

An annualized composite percentage of the direct cost for labor and foremen may be used to determine the cost for bond, insurance, and tax to which cost 6 percent will be added. The Contractor shall furnish satisfactory evidence to the Engineer of the annualized composite percentage for the bond, insurance, and tax.

The percentage additive will be full compensation for overhead, profit, and contingencies.

3. Materials. For materials authorized and accepted by the Engineer and used, the Contractor will receive the actual cost of such materials, including transportation charges paid by him (exclusive of equipment rentals as hereinafter set forth), to which cost 15 percent will be added. The Contractor shall furnish records to the Engineer to verify the quantities of materials used in the work, prices of the materials, and costs of transportation for the materials.

If materials used in the force account work are not specifically purchased for such work but are taken from the Contractor's stock, the Contractor shall furnish an affidavit certifying that such materials were taken from his stock, the quantity was actually used in the work, and the price and transportation cost claimed represent the actual cost to the Contractor.

The percentage additive will be full compensation for overhead, profit, and contingencies.

4. Equipment. For all equipment authorized by the Engineer to be used on the force account work the Contractor will receive rental payment.

Hourly rental rates paid for equipment in use which is Contractor owned or rented from another Contractor will not exceed 1/176th of the monthly rate listed in the "Rental Rate Blue Book for Construction Equipment", as published by Dataquest, Incorporated, which is current at the time the force account work is performed.

In determining the hourly rate, the regional adjustment factor and the rate adjustment factor for equipment age, as set forth in the current Blue Book, will both

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be applied to the basic rate. An additive payment equal to 70 percent of the Blue Book estimated operating cost per hour will also be paid for all hours equipment is in use. This additive payment will be full compensation for fuel, lubricants, repairs, servicing (greasing, fueling, and oiling), small tools, and other incidentals.

If rental rates for the equipment actually being used in the work are not listed in the Blue Book, the Contractor will receive the prevailing rental rates being paid for such equipment in the area where the project is located. An additive payment equal to 15 percent of the prevailing rental rate will also be paid for the time equipment is in use. This additive payment will be full compensation for fuel, lubricants, repairs, servicing (greasing, fueling, and oiling), small tools, and other incidentals.

Hourly rental rates for equipment held in ready as directed by the Engineer will be 50 percent of the rate paid for equipment in use. An additive payment will not be made for equipment held in ready. When equipment is in use less than 40 hours for any given week and is held in ready as directed by the Engineer, payment for held in ready time will be allowed for up to 40 hours, less hours in use. When payment is made for equipment held in ready as directed by the Engineer, the payment for held in ready time will be allowed for up to 8 hours in a day less hours in use.

Hourly rental rates for idle equipment held in ready in accordance with Article 104-4 will be 50 percent of the rate paid for equipment in use. Hourly rental rates for idle equipment held in ready in accordance with Article 104-4 which is rented from a commercial rental agency will be paid for in accordance with the invoice rate for the equipment. An additive payment will not be made for idle equipment. When equipment is in use less than 40 hours for any given week and is held in ready as idle equipment in accordance with Article 104-4, payment for idle equipment time will be allowed for up to 40 hours, less hours in use. When payment is made for idle equipment held in ready in accordance with Article 104-4, the payment for idle equipment time held in ready will be allowed for up to 8 hours in a day less hours in use.

In the event the Contractor does not possess or have readily available such equipment necessary for the performance of the work and such equipment is rented from a commercial rental agency, the Contractor will receive payment based on the approved invoice rate for the equipment. An additive payment equal to 15 percent of the calculated hourly invoice rate will also be paid for all hours equipment is in use. This additive payment will be full compensation for fuel, lubricants, repairs, servicing (greasing, fueling and oiling), small tools, and other incidentals. The commercial rental agency cannot be the Contractor or an affiliate of the Contractor.

No compensation will be made for the use of equipment not authorized by the Engineer.

The Contractor will be reimbursed for the actual transportation costs for equipment which the Contractor is directed to furnish. Such payment will be limited to transportation costs from the nearest source of available equipment. If equipment is not returned to the point of origin, but is transported to another location, transportation costs will not exceed the cost of return to the point of origin. Rental for such equipment will not be paid when the equipment is being transported. The Contractor shall furnish records to the Engineer to verify the actual transportation costs for equipment.

The Contractor shall provide to the Engineer for approval a listing of all equipment and attachments to be utilized in the prosecution of the work. The list shall include the manufacturer's name, type, model, serial number, and year of manufacture. The list shall also include the invoice rate for equipment rented from a commercial rental agency. It shall be the Contractor's responsibility to verify the age of the equipment in a manner acceptable to the Engineer. Where such verification is not

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available, the rate adjustment factor used will be for the oldest equipment listed in the Blue Book.

The above prices and payments will be full compensation for fuel, lubricants, cutting edges, all repairs, and all other operating and maintenance costs other than operator's wages.

- 5. Miscellaneous. No additional allowance will be made for general superintendence, the use of manually powered tools, or other costs for which no specific allowance is herein provided.
- 6. Subcontracting. For administrative costs of the Contractor in connection with approved subcontract work, the Contractor will receive an amount in accordance with the rate schedule shown below of the total cost of such subcontracted work. The total cost will include labor; bond, insurance, and tax; materials; and equipment costs incurred by the subcontractor and computed in accordance with Items 1, 2, 3, and 4 above.

<u>Total Cost of Subcontract Work</u>	<u>Rate Schedule</u>
\$0 - \$10,000	10%
Above \$10,000	\$1,000 + 5% Above \$10,000

- 7. General. The Engineer will maintain the payment records of work performed on a force account basis. The Contractor shall compare records of work with the Engineer at the end of each day on which such work is in progress.
Any contention the Contractor may have for an extension in the completion date, intermediate completion date, or intermediate completion time, due to performance of force account work will be considered as provided in Article 108-10.

109-4 PARTIAL PAYMENTS.

(A) General:

Partial payments will be based upon progress estimates prepared by the Engineer at least once each month on the date established by the Engineer. Partial payments may be made twice each month if in the judgment of the Engineer the amount of work performed is sufficient to warrant such payment. No partial payment will be made when the total value of work performed since the last partial payment, excluding mobilization, amounts to less than \$10,000.00. Partial payments will be approximate only and will be subject to correction in the final estimate and payment.

An amount equal to 5 percent of the total amount due on the progress estimates will be deducted and retained by the Department until 50 percent of the work has been completed. After 50 percent of the work has been completed, the Engineer may reduce the amount to be retained to 2 percent of the total amount due. Any reduction of the amount to be retained below 2 percent will be at the discretion of the Engineer, and with the consent of Surety.

On all projects with an original contract amount in excess of \$200,000.00 the Contractor may request that the retainage specified above be paid to an approved trustee selected by him. Such request shall be given in writing to the State Construction Engineer. Before approval will be given, the Contractor must submit for approval 5 copies of a Trust Agreement executed by the Contractor and the Trustee on forms furnished by the Office of the State Construction Engineer. After approval of the request, the Department will pay to the Trustee the retainage. Any funds retained to cover anticipated liquidated damages will not be released to the Trustee. The Trustee may, in accordance with the stipulations contained in the Trust Agreement, invest the funds for the benefit of the Contractor and periodically pay the earnings on such investments to the Contractor. Title to and all rights in the principal of the Trust shall remain in the Department. The Trust Fund shall be treated in the same manner as retainage withheld by the Department, and it shall be under the control of the Department, subject to return to the Department upon written request. In

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any event, the principal funds shall not be due and payable to the Contractor, unless released by the Department. The Contractor shall have no right, or interest in the funds unless released by the Department pursuant to the terms of the trust Agreement. Upon notice of the insolvency or bankruptcy of the Contractor or an act of insolvency or bankruptcy on the part of the Contractor, the Trust shall forthwith terminate. Upon such termination, the principal in the Trust shall be returned to the Department. An assignment by operation of law or the bankruptcy of the Contractor shall not vest any rights in the principal amount in the Trustee in bankruptcy or the Contractor's creditors or agents of the creditors.

Funds paid into a trust account pursuant to this section shall not be subject to the payment of interest by the Department as provided in Article 109-11.

When anticipated liquidated damages, as determined by the Engineer, equal or exceed one percent of the original contract estimate, the Engineer will withhold an amount sufficient to cover such anticipated liquidated damages and such amount will be in addition to the normal percentage retained as noted above.

Where lump sum items are included in the contract and the applicable section of the specifications require that fixed percentages of the total amount bid included in partial pay estimates, the Engineer will determine amounts due on partial pay estimates in accordance with the applicable section of the specifications.

(B) Unbalanced Bids:

Any excess moneys included in an unbalanced bid price which the Department determines to be in excess of a reasonable unit or lump sum bid price for the work, shall be retained by the Department until the last partial payment estimate, at which time these funds will be paid to the Contractor. These retained funds will not be eligible for deposit in any trust account established pursuant to this contract nor for interest for such delay in the payment for the retained portion of the bid price. Partial payment for work performed on an unbalanced bid item shall be at the reasonable unit or lump sum price determined in accordance with this subarticle.

For purposes of this subarticle, a reasonable unit or lump sum price will be deemed to be the average of the Engineer's Estimate and the individual balanced bid prices received from the other bidders for the item in question.

109-5 PAYMENT FOR MATERIAL TO BE USED IN THE WORK.

(A) Material Delivered on the Project:

When so authorized by the Engineer, partial payments will be made up to 90 percent of the delivered cost of materials on hand that are to be incorporated in the work, provided that such materials have been delivered on or in close proximity to the project and stored in an acceptable manner. Material payments will be allowed when 90 percent of the accumulated costs of unpaid invoices are equal to or greater than \$10,000.00, materials have been inspected and approved by the Engineer, and the documents listed in Subarticle 109-5(C) have been furnished to the Engineer.

(B) Material Stored at Fabricator's Facilities or Contractor's Facilities:

When so authorized by the Engineer, partial payments will be made up to 90 percent of the invoiced cost, exclusive of delivery cost, for bulky materials requiring fabrication at an off site location that are durable in nature and represent a significant portion of the project cost, if it has been determined by the Engineer, that the material cannot be reasonably stockpiled in the vicinity of the work. Material payments will be allowed when the materials have been inspected and approved by the Engineer and the documents listed in Subarticle 109-5(C) have been furnished to the Engineer.

(C) Required Documents:

1. Written consent of surety to make such partial payments,

2. Bill of Sale from the Contractor to the Department,
3. Copy of invoice from material supplier verifying the cost of the material.

(D) General Requirements:

The partial payments will be made on the conditional basis that the material meets the requirements of the contract and will be incorporated into the project. The Contractor shall reimburse the Department for all partial payments for material paid for, but not incorporated into the project.

Partial payments for materials on hand will not constitute acceptance, and any faulty material will be rejected even though previous payment may have been made for same in the estimates.

Partial payment will not be made for fuel, supplies, form lumber, falsework, or used materials.

Partial payments will not be made on seed or any living or perishable plant materials except that when such materials have been planted or otherwise incorporated in the work, payment may be made, not as materials, but as work done as part of a contract item for which a contract unit or lump sum price has been established.

Partial payments will not exceed 90 percent of the contract unit or lump sum prices for the work.

109-6 PAYMENT FOR LEFTOVER MATERIALS.

Payment will be made to the Contractor for materials meeting the requirements of the contract which were to have been permanently incorporated into the work or were to remain the property of the Department but due to revisions or elimination of items of work by the Engineer, due to discrepancies in the contract, or due to termination of the contract are not used in the work. The Contractor upon request will be reimbursed for the verified actual cost of such material delivered to a site designated by the Engineer, including any handling charges less any discount, but in no event shall payment exceed that which would have been made at the contract unit or lump sum price for the completed work.

The Contractor shall furnish invoices and cost records to the Engineer to verify the actual cost of materials, handling charges, discounts which were taken, and transportation charges. No percentage additive will be added to the verified cost of such material.

No payment will be made for loss of anticipated profits and no other payment will be made for leftover materials except as listed above.

109-7 COMPENSATION PAID AT CONTRACT PRICES.

Except as provided for by this article, payment for work performed will be made at the contract unit price or the contract lump sum price, as the case may be. Payment shall be made at the adjusted contract unit price, as applicable, when a price adjustment or pay factor is provided for by the Specifications or as determined by the Engineer in accordance with Article 105-3. In addition to the compensation made at the unit or lump sum price, adjustment in compensation will be made in accordance with Article 109-8. The Contractor shall not be paid for any work performed for which there is not a contract price, nor shall the Contractor receive additional compensation over and above the contract price for work performed or for extra work performed, except for work performed pursuant to an executed supplemental agreement or work performed in accordance with the applicable provisions of Section 104.

109-8 FUEL PRICE ADJUSTMENTS.

Fuel price adjustments will be made to the payments due the Contractor for contract items specified in the Project Special Provisions, or for extra work item specified in the supplemental agreement, when the average F.O.B. price for diesel fuel at the terminals in Charlotte, Wilmington and Selma, North Carolina has fluctuated by more than 10% from the Base Index Price contained in the Project Special Provisions. When the average F.O.B.

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price for diesel fuel at the above terminals fluctuates upward or downward from the Base Index Price by more than 10%, an amount will be added to or deducted from the monies due the Contractor as follows.

The current quantity for the specified contract items for which partial payment is made will be multiplied by the respective Diesel Fuel Usage Factor contained in the Project Special Provision to determine the theoretical diesel fuel usage for each specified contract item. The sum of the theoretical diesel fuel usage for all specified contract items will be multiplied by the algebraic difference between the average F.O.B. price for diesel fuel at the above specified terminals and the Base Index Price contained in the Project Special Provisions to determine the fuel price adjustment to be made on the partial payment estimate.

The Engineer's estimate of quantities for contract items measured by cross sections shall be utilized on the various partial payment estimates to determine fuel price adjustments. Where it is determined by the Engineer after payment for all or a portion of such contract item that is subject to a fuel price adjustment that the total quantity of work paid to date must be adjusted to reflect more accurate quantity determinations, the Engineer will make a prorata increase or decrease in the fuel price adjustment proportionate to the adjustment in the total quantity of work paid. The prorated fuel price adjustment for the contract item will be determined by multiplying the cumulative fuel price adjustment made for that contract item for the previous estimate period(s) by the adjusted quantity for that contract item and divided by the total quantity of work paid for the previous estimates for the contract item. Payment for the prorated fuel price adjustment will be made accordingly on the partial payment estimate that includes the adjustment in the quantity of work paid.

After notification of the Contractor of the final quantities as provided in Article 109-9, no change in the fuel price adjustment will be made due to changes in the quantities of work to be paid unless the change in the quantities would result in an increase or decrease in the fuel price adjustment of more than \$200.00.

109-9 FINAL PAYMENT.

Upon completion of the final estimate assembly, the Engineer will notify the Contractor giving the final quantities and the apparent liquidated damages, if any, assessed. After the Contractor reviews the final quantities and submits the documents listed in Article 109-10, the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract will be paid the Contractor.

109-10 DOCUMENTS REQUIRED FOR THE PROCESSING OF THE FINAL ESTIMATE.

Prior to the processing of the final estimate, the following documents shall have been submitted to and accepted by the Engineer.

1. Statement of Consent of Surety on the contract bonds for payment of money due the Contractor.
2. Affidavit of the Contractor that all obligations and debts arising out of the construction have been satisfied, or affidavit which shall include a list of obligations not satisfied.
3. Written notice that the Contractor has no request for any extension in the completion date or any adjustment in compensation from that shown in the final estimate or in lieu thereof written notice presenting all request for adjustment of the final estimate setting forth full justification for such requests.
4. Any other documents that are required by the contract such as completed Form FHWA-47 and all reports, statements, and other information necessary for compliance with applicable labor regulations of the Federal Highway Administration.

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Submission of false information in the documents required by this section shall be a basis for disqualifying the Contractor from further bidding in accordance with Article 102-16.

109-11 INTEREST ON FINAL PAYMENT.

Should final payment on a project not be made within 120 calendar days after the project final acceptance date, interest, at the average rate earned by the State Treasurer on the investment within the State's Short Term Investment Fund during the month preceding the date interest becomes payable, will be paid the Contractor on the final payment for the period beginning on the 121st day after final acceptance and extending to the date the final estimate is paid, provided that the documents required by Article 109-10 have been submitted within 30 days of the mailing of the notification outlined in Article 109-9. In the event the Contractor fails to submit the required documents within the stipulated 30 day period, and the final estimate is not paid until 120 calendar days following final acceptance of the project, the number of days on which interest accrues will be reduced by the number of days in excess of 30 that the Contractor requires to submit the document(s).

**SECTION 150
MAINTENANCE OF TRAFFIC**

150-1 GENERAL.

The Contractor will be required to maintain traffic within the limits of the project, including all existing roadways which cross or intersect the project, unless otherwise provided in the contract or approved by the Engineer. Traffic shall be maintained from the time the Contractor begins work on the project site until acceptance of the project, including any periods during which the Contractor's operations are suspended, unless otherwise provided for in the contract or approved by the Engineer. The Contractor shall conduct his work in a safe manner which will create a minimum amount of inconvenience to traffic.

The Contractor shall be responsible for maintaining in a safe, passable, and convenient condition, such part or parts of existing roads as are being used by him to maintain traffic within the limits of the project from the time the Contractor begins work on the project until acceptance of the project. As an exception to the above, the Department will be responsible for the removal of ice and snow from all portions of the project open to traffic.

Whenever it is necessary to utilize traffic control devices as shown in the contract, as determined by the Engineer, or in order to conform to the provisions of this section, the work of furnishing, erecting, operating, maintaining, covering, relocating, and removing traffic control devices shall be in accordance with the provisions of Division 11 & 12.

NOTES

