-- STATE OF NORTH CAROLINA--
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

DESIGN-BUILD PACKAGE

FINAL RFP **OCTOBER 20, 2004**

VOID FOR BIDDING

DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION **November 22, 2004** AT **4:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **December 23, 2004** AT **10:00 AM**

CONTRACT ID: C 201236 MILES: 9.5

WBS ELEMENT NO. 34424.3.7

STATE FUNDED

COUNTY: BERTIE

ROUTE NO. U.S. 17

T.I.P. NO. R-2404A

LOCATION: US 17 (WINDSOR BYPASS) FROM US 13/17 TO EAST OF SR 1503 (DAVIS ROAD)

TYPE OF WORK: DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK CONTAINED IN THE DESIGN-BUILD PACKAGE

NOTICE:

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS $30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA.

_____

5% BID BOND OR BID DEPOSIT REQUIRED

_____

PROPOSAL FORM FOR THE CONSTRUCTION OF CONTRACT NO. C201236

IN BERTIE COUNTY, NORTH CAROLINA

Date_____ 20_____

DEPARTMENT OF TRANSPORTATION,

RALEIGH, NORTH CAROLINA

The Design Build Team has carefully examined the location of the proposed work to be known as Contract No. C201236; has carefully examined the plans (if available) and specifications, which are acknowledged to be part of the proposal, the special provisions, the Design-Build Package, the form of contract, and the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements and provisions. The undersigned Design Build Team agrees to bound upon his execution of the proposal and subsequent award to him by the Board of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen calendar days after the written notice of award is received by him. The undersigned Design Build Team further agrees to provide all design services and all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with the 2002 Standard Specifications for Roads and Structures by no later than the dates(s) specified in the Design Build Package and in accordance with the requirements of the Engineer, and at the lump sum price(s) for the various items given on the sheets contained herein.

The Design-Build Team shall provide a Technical Proposal, a Price Proposal and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to design construct and complete State Highway Contract No. C201236 in Bertie County, for the lump sum price(s) bid by the Design Build Team in his Price Proposal and according to the proposal, plans, and specifications prepared by said Department and/or Design Build Team, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures*, *JANUARY 2002* with all amendments and supplements thereto, is by reference, incorporated into and made a part of this contract; that, except as herein modified, all the Construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

All design manuals, policy and procedures manuals, and AASHTO publications and guidelines referenced in the Request For Proposal, are by reference, incorporated and made part of this contract.

If the proposal is accepted and the award is made, the technical proposal submitted by the proposer is by reference, incorporated and made part of this contract. The contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except by written approval as allowed by the Request For Proposal.

Accompanying this Proposal is a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Design-Build Team shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by him, as provided in the Standard Specifications; otherwise said deposit will be returned to the Design Build Team.

State Alternative Delivery Systems Engineer	***State Contract Officer***

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STANDARD SPECIAL PROVISIONS (YELLOW SHEETS)

PROPOSAL FORM ITEM SHEET, ETC.

Item Sheet
Award Limits
Signature

PROJECT SPECIAL PROVISIONS

CONTRACT TIME AND LIQUIDATED DAMAGES (Projects with Permits)

The date of availability for this contract is January 31, 2005, except that work in jurisdictional waters and wetlands shall not begin until a meeting between the DOT, Regulatory Agencies, and the Design Build Team is held as stipulated in the Environmental Permits Scope of Work contained elsewhere in this proposal. The Design Build Team shall consider this factor in determining the proposed completion date for this project.

The completion date for this contract is defined as the date proposed in the Design Build Package by the proposer who is awarded the project. The completion date thus proposed shall not be later than November 15, 2008.

When observation periods are required by the special provisions, they are not a part of the work to be completed by the completion date and/or intermediate contract times. Should an observation period extend beyond the final completion date, the acceptable completion of the observation period shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are Ten Thousand Dollars ($10,000.00) per calendar day. As an exception to this amount, where the contract has been determined to be substantially complete as defined in Section 105-18 contained elsewhere in this package, the liquidated damages will be reduced to Two Thousand Dollars ($2,000.00) per calendar day.

Where the Design Build Team who is awarded the contract has proposed a completion date for the contract as required above, but also has proposed an earlier date for substantial completion, then both of these proposed dates will become contract requirements.

Liquidated damages of Ten Thousand Dollars ($10,000.00) per calendar day will be applicable to the early date for substantial completion proposed by the bidder. Liquidated damages of Two Thousand Dollars ($2,000.00) per calendar day will be applicable to the final completion date proposed by the bidder.

DB1G04

OTHER LIQUIDATED DAMAGES AND INCENTIVES 7-13-04

Refer to the Traffic Control Scope of Work for more information on the following Intermediate Contract time restrictions and liquidated damages:

Liquidated Damages for lane closures, narrowing of lanes, holidays and special events for US 13&17, US 13 Bypass and US 13/ King St. is $500.00 per hour for this Intermediate Contract Time.

Liquidated Damages for road closure time restriction on US 13&17, US 13 Bypass and US 13/ King St. is $200.00 per 15 minute period or any portion thereof for this Intermediate Contract Time.

Incentives and Disincentive for Erosion and Sedimentation Control shall apply to this project as follows:

For each month that the Contractor receives no NOVs, ICAs or C&D order as verified by the Engineer, the Contractor will receive an incentive payment of $5,000 subject to the conditions outlined in the Erosion and Sedimentation Control Scope of Work.

Incentives for minimizing environmental impacts

Incentives are offered for minimizing impacts to wetlands and jurisdictional streams at a rate of $2400 per 0.1 acres and $400 per linear foot, respectively. Reference Environmental Scope of Work.

DB1 G11

PROGRESS SCHEDULE

The Design Build Team shall be responsible for planning, scheduling and reporting the progress of the work to ensure timely completion of the contract.

The Design Build Team shall submit a schedule in accordance with the following:

CRITICAL PATH METHOD PROJECT SCHEDULE (CPM)

DESCRIPTION

The work of this provision consists of the Design Build Team planning, scheduling, designing, and constructing this project using a Critical Path Method Project Schedule (CPM). Use the CPM for coordinating and monitoring all the work specified in this contract including all activities of subcontractors, vendors, suppliers, utilities, railroads, NCDOT, and all other parties associated with the design or construction of this project. The work covered by this section includes but is not limited to submittals, major procurement, delivery, construction activities, submitting an initial CPM, and providing monthly updates to the CPM. The schedule shall have considered the time requirement for ordering articles of special manufacture to meet specific requirements of the work and for any inspection requirements of the various sections of the specifications, such as Section 1072 when structural steel fabrication inspection is required. Make sure that all activities quantified in the contract are included in the CPM.

MATERIALS

Use software for the CPM that generates files that are compatible with Primavera Project Planner.

REQUIREMENTS

(A) Float

Float is defined as the amount of time between when an activity "can start or finish" (early start or early finish) and when an activity "must start or finish" (late start or late finish). Float is a shared commodity for the use of NCDOT and/or the Design Build Team and is not for the exclusive use or benefit of either party. Both parties have the full use of the float until it is depleted.

(B) Design Build Team's Scheduling Representative

Designate an individual from the Design Build Team's organization, prior to submission of the Initial Critical Path Method Schedule, who will be the Design Build Team's authorized representative responsible for the development, updating, and revising of the Design Build Team's CPM schedule. Have the scheduling representative represent the Design Build Team in all matters regarding the schedule and attend all schedule related meetings. The scheduling representative must be skilled in the application of computer network schedules on construction projects of the magnitude and complexity of this project.

(C) Initial Critical Path Method Schedule (ICPM)

Within thirty (30) calendar days of receiving the Notice of Award, submit an ICPM for approval. Within twenty-one (21) calendar days of receipt of the Design Build Team's ICPM, the Engineer will complete the review of the ICPM. If required, a Joint Review Conference will be convened at which the Engineer and the Design Build Team will make any necessary corrections or adjustments to the ICPM. If a revision to the ICPM is necessary due to the Engineer's review or a Joint Review Conference, submit a revised ICPM within seven (7) calendar days after the date of the Joint Review Conference. The Engineer will respond to the submitted revised ICPM with seven (7) calendar days of receipt.

Once the ICPM has been accepted, it becomes the CPM of record. Acceptance of the ICPM in no way attests to the validity of the assumptions, logic constraints, dependency relationships, resource allocations, manpower and equipment, or any other aspect of the ICPM. The Design Build Team is and will remain solely responsible for the planning and execution of work in order to meet project milestones or contract completion dates.

Include the following in the ICPM submittal:

(1) A time scale diagram containing the following:
   (a) an acceptable scale and format
   (b) all activities clearly labeled
   (c) all activity identification clearly shown for each activity
   (d) all relationships between activities shown

(2) Tabular reports containing the following:
   (a) Precedence diagrams with activities listed and lead and lag times shown
   (b) Activity duration shown. All activities must have a duration of not more than 20 days unless otherwise approved. Divide activities with longer durations into subgroups of activities not exceeding 20 working days in duration. Indicate logical start and end points (e.g. stationing, staging, etc.) for each subgroup.
   (c) Activity descriptions shown

(d) Early start and finish dates shown
(e) Late start and finish dates shown
(f) Status (critical or not) shown
(g) Total float shown
(h) Responsibility (i.e. Design Build Team, specific subDesign Build Team, specific supplier, NCDOT, etc.) shown

(3) Written narrative complying with the requirements listed below.

(4) Data disk containing all of the information in the ICPM. The disk must be compatible with Primavera Project Planner software.

(D) Written Narrative

Provide a written narrative that explains the sequence of work, the critical path, interim completion dates, project phasing, non-work days or periods, maintenance of traffic, and labor and equipment resources. In addition, explain in the written narrative how the Design Build Team has provided for permit requirements, environmental requirements, coordination with other public contractors, milestone dates, other entities, coordination with utility companies, special non-work days or periods, and weather in the ICPM.

Provide the following information for each activity listed in the ICPM:

(1) Estimated start and completion date
(2) Description of work to be done including the type and quantity of equipment, labor, and material to be used
(3) Description of the location on the project where activity occurs
(4) Description of planned production rates (e.g. cubic yards (cubic meters) of excavation per day/week)
(5) Description of work days per week, holidays, number of shifts per day, and number of hours per shift
(6) Description of expected and critical delivery dates for equipment or material that can affect timely completion of the project
(7) Identify the vendor, supplier, or subDesign Build Team to perform the activity. State all assumptions made in the scheduling of the subDesign Build Team's or supplier's work.
(8) Utilize the written narrative to explain the following:
(a) relationship between activities not obviously identified
(b) equipment usage and limitation
(c) manpower usage and limitations
(d) use of additional shifts and/or overtime
(e) activity codes, abbreviations, and activity identification system
(f) all calendars used in the CPM
(g) constraints (date or time constraints)
(h) all abbreviations used in the ICPM
(i) scheduling of weather and/or temperature sensitive activities

(j) describe critical completion dates for maintaining the design and construction schedule

(E) Schedule Updates

Submit an update of the CPM of record monthly and at the preconstruction conference. The data date for the CPM update will be seven days prior to the cut-off date for the monthly partial payment. Submit the update within seven calendar days of the data date. Failure to submit the CPM update may result in the Engineer withholding partial payments. Upon acceptance, the monthly update will become the CPM of record for the time period between its data date and the next approved update or revision.

Include in the monthly updates activity data as specified in (1) through (4) under (C) Initial Critical Path Method Schedule using actual activity start dates. Use the monthly update to describe the project progress to date. Include in the written narration a description of the work performed during the update period, the current critical path, any delays or disruptions experienced during the update period, any change in manpower or equipment, and any potential delays or disruptions.

(F) Revisions to the Schedule of Record

A revision to the schedule of record is defined as one or more of the following:

(1) a change in the original duration of an activity
(2) a change in the logic of the schedule
(3) a change to resources
(4) a change to any Actual date, previously established
(5) the deletion or addition of an activity
(6) a change to, addition of, or deletion of a constraint (date or time constraint)
(7) a change to, addition of, or deletion of an activity code
(8) a change to an activity description
(9) any change other than updating an activity

Whenever a revision is proposed for any of the above reasons, contact the Engineer and verbally discuss the revision. If the revision is considered minor, the Engineer may allow the revision to be included in the next update of the CPM. If the revision is not considered minor, submit for approval the proposed revision with the same requirements as the ICPM including the following:

- an updated CPM including the proposed revision
- a written narrative that describes the reason for the revision, the resulting critical path, and all particulars of the revision including but not limited to:

(1) changes in the method or manner of the work
(2) changes in the specifications
(3) changes in resources
(4) extra work
(5) addition or deletion of work

(6) increased or decreased quantities
(7) defective work
(8) acceleration of work

Submitted revisions will be responded to within fourteen (14) calendar day after receipt. If the Design Build Team is required to resubmit the proposed revision, do so within seven (7) calendar days after receipt of the Engineer's comments. The Engineer reserves the right to reject any proposed revision, which adversely affects the NCDOT, utilities, or other interested parties.

No measurement or direct payment will be made for Design Build Team costs relating to preparation and submission of schedules and reports and revisions thereto, the cost being considered as included in the lump sum Price Proposal.

Acceptance of the Design Build Team's schedules by the Engineer is not to be construed as relieving the Design Build Team of its obligation to complete the work within the contract time; or as granting, rejecting, or in any other way acting on the Design Build Team's requests for adjustments to the date for completing contract work, or claims for additional compensation. Such requests shall be processed in strict compliance with other relevant provisions of the contract.

DB1G12

WORKSPACE FOR DEPARTMENT STAFF

The Design Build Team shall provide and maintain space for one Department staff member at the project site. This space can be a separate facility or part of the area provided to the Design Build Team. The workspace provided shall be adequately lighted and will include as a minimum, 1 desk, 1 chair, 1 telephone (a separate line from the DBT), and Internet access. The Engineer shall make the final determination for location and adequacy of the facilities.

SPI

PARTNERING

As a part of its quality management program, the North Carolina Department of Transportation intends to encourage the formation of a cohesive relationship with the Design Build Team and its principal subcontractors and suppliers. This relationship will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are safe, effective, and efficient contract performance; and completion within budget, on schedule, and in accordance with the plans and specifications.

This relationship will be bilateral in makeup and participation will be totally voluntary. The cost associated with effectuating this relationship will be agreed to by both parties and shall be shared equally.

To implement this initiative prior to starting work in accordance with the requirements of Section 108 of the Standard Specifications and prior to the preconstruction conference, the Design Build Team's management personnel and NCDOT's Construction Engineer will initiate a partnering development seminar/team building workshop. Project personnel working with the assistance of

the Construction Unit will make arrangements to determine attendees at the workshop, agenda of the workshop, duration, and location. Persons required to be in attendance will be the NCDOT Resident Engineer, the NCDOT Division Construction Engineer, and key project personnel; the Design Build Team's senior management personnel, the Design Build Team's on-site project manager, and key project supervisory personnel for both the Design Build Team and principal subcontractors and suppliers. The project design engineers, FHWA, and key local government personnel will also be invited to attend as necessary.

Follow-up workshops may be held periodically throughout the duration of the contract as agreed by the Design Build Team and the North Carolina Department of Transportation.

The establishment of the partnering charter on a project will not change the legal relationship to the contract nor relieve either party from any of the terms of the contract.

DB1G49

EXECUTION OF SIGNATURE SHEETS AND DEBARMENT CERTIFICATION

The Proposer's attention is directed to the various sheets in the Design Build Package which are to be signed by the Proposer. A list of these sheets is shown below. The signature sheets are located behind the item sheets in the Design Build Package. The bid bond is inserted in the Design Build Package.

1. Applicable Signature Sheets: 1, 2, 3, 4, 5, or 6 (Bid)

2. Bid Bond (Proposal Insert)

The Proposer shall certify to the best of his knowledge all subcontractors, material suppliers and vendors utilized herein current status concerning suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency, in accordance with the "Debarment Certification" located behind the signature sheets in the proposal forms. Execution of the bid signature sheets in conjunction with any applicable statements concerning exceptions, when such statements have been made on the "Debarment Certification", constitutes the Proposer’s certification of "status" under penalty of perjury under the laws of the United States.

DB1G52

SUBMISSION OF DESIGN BUILD PROPOSAL

The Proposer's attention is directed that each Proposer's Design Build Proposal shall comply with the following requirements in order for that Design Build Proposal to be responsible and considered for award.

1. The Proposer shall be prequalified with the Department prior to submitting a Design Build Proposal.

2. The Proposer shall deliver the Design Build Proposal to the place indicated, and prior to the time indicated in the Design Build Package.

3. The Design Build Proposal documents shall be signed by an authorized employee of the Proposer.

4. The Design Build Proposal shall be accompanied by Bid surety in the form of a Bid bond or Bid deposit.

5. If Minority and Women's Business Enterprise (MB/WB) goals are established for this contract, the Proposer shall complete the form Listing of MB/WB Subcontractors contained elsewhere in this proposal in accordance with the Project Special Provision entitled Minority and Women.

6. The Design Build Proposal shall address all the requirements as specified in the Request For Proposal document.

In addition to the above requirements, failure to comply with any of the requirements of Articles 102-8, 102-9, 102-10 or 102-11 of the specifications may result in a Design Build Proposal being rejected.

DB1G55

CONFIDENTIAL QUESTIONS **4/05/04**

The Design-Build Team will be permitted to ask confidential questions of the Department, which neither the question nor answer will be shared with other proposing teams. For the purpose of this provision, *confidential question is defined as a private inquiry containing information whose disclosure could alert others to certain details of doing business in a particular manner*.

I. Confidential questions arising prior to issuance of the final Request for Proposal will be allowed at the draft RFP review with the individual teams.

The Department will answer the confidential question verbally at the meeting if possible. If not answered verbally during the meeting, the Department will answer the confidential question by subtle changes in the Final Request for Proposal, which will clarify the scope by either allowing or disallowing the request. The revision will be made in such a manner as to not disclose the confidential question.

II. After the issuance of the Final Request for Proposal, confidential questions may be asked by requesting a meeting with the Contract Officer. The request shall be in writing and provide sufficient detail to evaluate the magnitude of the request. Questions shall be of such magnitude as to warrant a special meeting. Minor questions will not be acknowledged or answered.

After evaluation, the Contract Officer will respond to the question in writing to the Design Build Team only. Other teams will not be notified of the question or answer.

If the Design Build Team includes work based on the confidential questions and answers, the work shall be included and discussed in the technical proposal. The Technical Proposal will be evaluated in accordance with existing policies.

DB1G56

VALUE ANALYSIS

Value Engineering Construction Proposals (VECP), as identified in the *NCDOT Standard Specifications for Roads and Structures* Article 104-12, will be accepted. Only proposals, which alter the requirements of the RFP issued by the Department, will be considered as Value Engineering Construction Proposals.

DB1G57

SCHEDULE OF ESTIMATED COMPLETION PROGRESS

The Design Build Team's attention is directed to the Standard Special Provision entitled "Availability Of Funds - Termination Of Contracts" included elsewhere in this proposal form. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

Fiscal Year	Progress (Dollar Value)
2005 (07/01/04 – 06/30/05)	16 % of Total Amount Bid
2006 (07/01/05 – 06/30/06)	34 % of Total Amount Bid
2007 (07/01/06 – 06/30/07)	27 % of Total Amount Bid
2008 (07/01/07 – 06/30/08)	18 % of Total Amount Bid
2009 (07/01/08 – 06/30/09)	5 % of Total Amount Bid

The Design Build Team shall also furnish his own progress schedule in accordance with Article 108-2 of the Standard Specifications. Any acceleration of the progress as shown by the Design Build Team's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

DB1G58

MINORITY AND WOMEN BUSINESS 7/17/01$_R$

POLICY

It is the policy of the North Carolina Department of Transportation that minority and women businesses shall have the maximum opportunity to participate in the performance of contracts financed by Non-Federal Funds.

The Design Build Team is also encouraged to give every opportunity to allow MB/WB participation in Supplemental Agreements.

OBLIGATION

The Design Build Team and any subsequent Subcontractor shall ensure that minority and women businesses have the maximum opportunity to participate in the performance of the work included in this contract. The Design Build Team and any subsequent Subcontractor shall take all necessary and reasonable steps to ensure that minority and women businesses have the maximum opportunity to compete for and perform a portion of the work included in this contract and shall

not discriminate on the basis of race, color, national origin or sex. Failure on the part of the Design Build Team to carry out the requirements set forth herein shall constitute a breach of contract and after proper notification, may result in award disqualification, termination of the contract, disqualification from bidding, or other appropriate remedy.

GOALS

Pursuant to the requirements of North Carolina General Statute 136-28.4, the following goals for participation are established for this contract:

Minority Business Enterprises	**10 %**
Women Business Enterprises	**5 %**

This goal is to be met through utilization of highway construction contractors. Utilization of MB/WB firms performing design-related functions or Construction Engineering and Inspection are not included in this goal. MB/WB utilization for engineering related services is expected and is credited through the technical scoring process.

The Design Build Team shall exercise all necessary and reasonable steps to ensure that Minority Businesses (MB) and Women Businesses (WB) participate in at least the percentage of the contract as set forth above as goals for this contract.

LISTING OF MB AND WB SUBCONTRACTORS

All bidders, at the time the bid proposal is submitted, must also submit a listing of MB and WB participation on the appropriate form (or facsimile thereof) contained elsewhere in this proposal in order for the bid to be considered responsible. Bidders must indicate the total dollar value of MB and WB participation of the contract. In the event the bidder has no MB and WB participation, he is still required to indicate this on the forms by entering the word or number zero. Blank forms will not be deemed to represent zero participation. BIDS SUBMITTED WHICH DO NOT HAVE MB AND WB PARTICIPATION INDICATED ON THE APPROPRIATE FORM WILL NOT BE READ PUBLICLY DURING THE OPENING OF BIDS. These bids will not be considered for award by the Department and they will be returned to the bidder. Bidders have the option of submitting their MB and WB participation in an abbreviated format as required in Paragraph A below, or the bidders may submit their MB and WB participation in the additional detail required by Paragraph B below. In the event the bidder elects to submit MB and WB participation in accordance with Paragraph A and is determined to be the apparent lowest responsible bidder, that bidder must deliver to the Department no later than 12:00 noon of the sixth day following the opening of bids, a detailed MB and WB submittal as required by Paragraph B below.

Only those MB and WB firms with current certification by the Department will be considered acceptable for listing in the bidders submittal of MB and WB participation.

A. The Design Build Team shall indicate on the form for listing of MB and WB Subcontractors the following required information:

REQUIRED INFORMATION

(1) The names of MB and WB firms committed to participate in the contract;

(2) The Contract Item Numbers of work to be performed by each MB and WB firm; and

(3) The total dollar amount to be paid to each MB and WB based on agreed upon unit prices.

B. In lieu of submitting the information required by (A) above, the bidder may submit the detailed information required below along with the bid proposal form.

REQUIRED INFORMATION

(1) The names of MB and WB firms committed to participate in the contract;

(2) The Contract Item Numbers and Contract Item Descriptions and agreed upon unit prices of work to be performed by each MB and WB firm; and

(3) The total dollar amount to be paid to each MB and WB based on agreed upon unit prices.

Failure to indicate the required information of either Part A or B on the specified form will cause the bid to be considered nonresponsible and it may be rejected.

The Department will not allow any substitutions, deletions, or other alterations to the listing of firms committed for MB and WB participation and/or the respective listed contract item numbers after opening of bids. The Department will not allow adjustments to total dollar amount of MB and/or WB participation after the opening of bids which would result in the MB and/or WB participation being less than the contract goal. The only exceptions to the requirements of this paragraph will be: (1) to allow for replacement of a MB or WB firm that had been decertified after opening of bids, and (2) to allow alteration of the listed contract item numbers subject to the Bidder submitting sufficient documentation to verify an obvious error in the initial submittal.

C. If the bid of the lowest responsible bidder exceeds $500,000 and if the MB and/or WB participation submitted in response to Paragraph B exceeds the algebraic sum of the MB and WB goals by $1000 or more, the excess will be placed on deposit by the Department for future use by the bidder. Separate accounts will be maintained for MB and WB participation and these may accumulate for a period not to exceed 24 months.

If the MB and WB participation submitted in response to Paragraph A/B does not meet or exceed the MB and WB contract goals, the apparent lowest responsible bidder must submit information to satisfy the North Carolina Department of Transportation that sufficient reasonable efforts have been made to meet the contract goals. One complete set and nine (9) copies of this information must be received in the office of the State Contractual

Services Engineer no later than 12:00 noon of the sixth day following opening of bids. Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms being solicited. Documentation of MB and WB quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Department considers in judging good faith efforts. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

Where the bidder fails to provide this information by the deadline, the Department may impose the following sanctions: (1) disqualify the Design Build Team and any affiliated companies from further bidding for a period of time of no more than 90 days from the date of disqualification as established in notification by certified mail; and (2) disqualify the Design Build Team and any affiliated companies for award of all contracts for which bids have been received and opened. Additionally, the Proposal may be considered non-responsive and no stipend may be paid.

The Department will consider the following factors in judging whether or not the bidder has made adequate good faith effort:

(1) Whether the bidder attended any pre-bid meetings that were scheduled by the Department to inform MBs and WBs of subcontracting opportunities;

(2) Whether the bidder provided written notice to a reasonable number of specific MBs and WBs that their interest in the contract is being solicited and whether the firms solicited could have reasonably been expected to quote the work in the contract;

(3) Whether the bidder followed up on initial solicitations of interests by contacting MBs and WBs to determine with certainty whether they were interested;

(4) Whether the bidder selected portions of the work to be performed by MBs and WBs in order to increase the likelihood of meeting the contract goals;

(5) Whether the bidder provided interested MBs and WBs with adequate information about the plans, specifications and requirements of the contract;

(6) Whether the bidder negotiated in good faith with interested MBs and WBs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities;

(7) Whether quotations were received from interested MB and WB firms but rejected as unacceptable without sound reasons why the quotations were considered unacceptable;

(8) Whether the bidder made efforts to assist interested MBs and WBs in obtaining any required insurance or bonding that may be required by the bid proposal or by the bidder;

(9) Whether the bidder specifically negotiated with Subcontractors to assume part of the responsibility to meet the contract MB and WB goal when the work to be sublet includes potential for MB and WB participation.

In the event one bidder is the apparent low bidder on two non-federally funded projects within the same letting located in the same geographic area of the state, as a part of the good faith effort the Department will consider allowing the bidder to combine the MB participation on the two projects so long as the overall MB goal value of both projects is achieved.

In the event one bidder is the apparent low bidder on two non-federally funded projects within the same letting located in the same geographic area of the state, as a part of the good faith effort the Department will consider allowing the bidder to combine the WB participation on the two projects so long as the overall WB goal value of both projects is achieved.

Where the apparent lowest responsible bidder fails to submit sufficient participation by MB firms to meet the contract goal, as part of the good faith effort the Department will consider allowing the bidder to withdraw funds to meet the MB goal so long as there are adequate funds available from the bidders MB bank account.

Where the apparent lowest responsible bidder fails to submit sufficient participation by WB firms to meet the contract goal, as part of the good faith effort the Department will consider allowing the bidder to withdraw funds to meet the WB goal so long as there are adequate funds available from the bidders WB bank account.

Where the apparent lowest responsible bidder fails to submit sufficient participation by MB and WB firms to meet the contract goal and upon a determination by the Goal Compliance Committee based upon the information submitted that the apparent lowest responsible bidder failed to make sufficient reasonable efforts to meet the contract goal, the Department may reject the bid.

In the event that the Department does not award the contract to the apparent lowest responsible bidder, the Department reserves the right to award the contract to the next lowest responsible bidder that can satisfy the Department that the contract goal can be met or that adequate good faith efforts have been made to meet the goal.

DIRECTORY OF CERTIFIED BUSINESSES

Included with this Proposal Form is a list of Businesses which have been certified by the North Carolina Department of Transportation. Only those MB firms with current certification may be used to meet the contract MB goal and only those WB firms with current certification may be used to meet the contract WB goal.

The listing of an individual firm certified by the Department shall not be construed as an endorsement of the firms capability to perform certain work.

REPLACEMENT OF MBs AND WBs

(A) Performance Related

If any MB or WB Subcontractor indicated on the form for listing of MB and WB Subcontractors, contained elsewhere in this proposal form, does not perform satisfactorily to the extent indicated or anticipated, the Design Build Team shall take all necessary, reasonable steps to replace the MB Subcontractor with another MB Subcontractor and/or the Design Build Team shall take all necessary, reasonable steps to replace the WB Subcontractor with another WB Subcontractor.

Any substitution of MB or WB firms after award of the contract shall be approved by the Department. The Design Build Team shall submit any requests for substitutions through the Resident Engineer and the request must provide a valid basis or reason for the proposed substitution.

To demonstrate necessary, reasonable efforts, the Design Build Team shall document the steps he has taken to replace any MB or WB Subcontractor that is unable to perform successfully with another MB or WB Subcontractor. Such documentation shall include but not be limited to the following:

(a) Copies of written notification to MBs/WBs that their interest is solicited in subcontracting the work defaulted by the previous MB or WB Subcontractor or in subcontracting other items of work in the contract.

(b) Efforts to negotiate with MBs and WBs for specific subbids including at a minimum:

(1) The names, addresses, and telephone numbers of MBs and WBs that were contacted;

(2) A description of the information provided to MBs and WBs regarding the plans and specifications for portions of the work to be performed; and

(3) A statement of why additional agreements with MBs and WBs were not reached.

(c) For each MB or WB contacted but rejected as unqualified, the reasons for the Design Build Team's conclusion.

(d) Efforts made to assist the MBs and WBs contacted, if needed, in obtaining bonding or insurance required by the Design Build Team.

Failure of the Design Build Team to demonstrate reasonable efforts to replace a MB or WB firm that does not perform as intended or anticipated, shall be just cause to disqualify the Design Build Team from further bidding for a period of up to 6 months after notification by certified mail.

(B) Decertification

1. If the Department has approved a Request for Subcontract for a particular MB or WB Subcontractor and that MB or WB Subcontractor is subsequently decertified by the Department; then the Department will not require the Design Build Team to solicit replacement MB or WB participation equal to the remaining work to be performed by the decertified firm.

2. If a Design Build Team has listed a MB or WB firm in his low bid submittal and the MB or WB firm is decertified prior to the Department approving a Request for Subcontract for the named MB or WB firm, the Design Build Team may be required to make a good faith effort to:

   (a) Replace the decertified firm with a certified firm, or

   (b) To obtain replacement MB or WB participation in other areas of work.

DEFINITIONS

For purposes of this provision, the following definition will apply:

Minority Business or MB means a small business concern, which is owned and controlled by one or more minorities. Except that such term shall not include any concern or group of concerns controlled by the same minority or minorities which has average annual gross receipts over the preceding 3 fiscal years in excess of $14,000,000, as adjusted by the Department for inflation. For the purposes of this part, owned and controlled means a business:

(a) Which is at least 51 percent owned by one or more minorities or in the case of a publicly owned business, at least 51 percent of the stock of which is owned by one or more minorities; and

(b) Whose management and daily business operations are controlled by one or more such individuals.

Minority is defined as a citizen or lawful permanent resident of the United States and who is:

(1) Black (a person having origins in any of the black racial groups of Africa);

(2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);

(3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands);

(4) American Indian

Women Business or WB means a small business concern, which is owned and controlled by one or more women. Except that such term shall not include any concern or group of concerns controlled by the same woman or women which has average annual gross receipts over the preceding 3 fiscal years in excess of $14,000,000, as adjusted by the Department for inflation. For the purposes of this part, owned and controlled means a business:

(a) Which is at least 51 percent owned by one or more women or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(b) Whose management and daily business operations are controlled by one or more of the women who own it.

COUNTING MB/WB PARTICIPATION TOWARD MEETING THE MB/WB GOAL

(1) If a firm is determined to be an eligible MB or WB firm and certified by the Department, the total dollar value of the participation by the MB or WB will be counted toward the appropriate MB or WB goal. The total dollar value of participation by a certified MB or WB will be based upon unit prices agreed upon by the Design Build Team and MB or WB Subcontractor.

(2) The Design Build Team may count toward its MB or WB goal a portion of the total dollar value of participation with a joint venture, eligible under the standards of this provision, equal to the percentage of the ownership and controls of the MB or WB partner in the joint venture.

(3) (a) The Design Build Team may count toward its MB or WB goal only expenditures to MBs or WBs that perform a commercially useful function in the work of a contract. A MB or WB is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a MB or WB is performing a commercially useful

function, the Department will evaluate the amount of work subcontracted, industry practices, and other relevant factors.

(b) Consistent with normal industry practices, a MB or WB may enter into subcontracts. If a MB or WB Contractor or Subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the MB or WB shall be presumed not to be performing a commercially useful function. The MB or WB may present evidence to rebut this presumption to the Department. The Department's decision on the rebuttal of this presumption shall be final.

(4) A Design Build Team may count toward its MB or WB goal 60 percent of its expenditures for materials and supplies required to complete the contract and obtained from MB or WB regular dealer and 100 percent of such expenditures to a MB or WB manufacturer.

(a) For purposes of this provision, a manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Design Build Team.

(b) For purposes of this provision, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the firm must engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Brokers and packagers shall not be regarded as manufacturers or regular dealers within the meaning or this section.

(5) A contractor may count toward its MB or WB goal the following expenditures to MB or WB firms that are not manufacturers or regular dealers:

(a) The fees or commissions charged for providing a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for performance of the contract, provided that the fee or commission is determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services.

(b) The fees charged for delivery of materials and supplies required on a job site (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer of or a regular dealer in the materials and supplies, provided that the fee is determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services.

(c) The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract provided that the fee or commission is determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services.

REPORTS

Within 30 days after receipt of materials, supplies, or services from MBs or WBs, not otherwise documented by Request for Subcontracts (RS-1A/RS-1B), the Design Build Team shall furnish to the Engineer appropriate documentation (canceled checks, paid invoices, etc.) to verify expenditures with MB and WB concerns. The documentation should also indicate the percentage (60% or 100%) of expenditures claimed for MB or WB credit.

All requests for subcontracts involving MB or WB Subcontractors shall be accompanied by a certification executed by both the Design Build Team and the MB or WB Subcontractor attesting to the agreed upon unit prices and extensions for the affected contract items. This document shall be on the Departments Form RS-1-D, or in lieu of using the Departments Form, copies of the actual executed agreement between the Design Build Team and the MB or WB Subcontractor may be submitted. In any event, the Department reserves the right to require copies of actual subcontract agreements involving MB and WB Subcontractors.

The RS-1-D certification forms may be obtained from the Department's Resident Engineer.

These certifications shall be considered a part of the project records, and consequently will be subject to any penalties under State Law associated with falsifications of records related to projects.

REPORTING MINORITY BUSINESS ENTERPRISE OR WOMEN BUSINESS ENTERPRISE PARTICIPATION

When payments are made to Minority Business Enterprise firms or Women Business Enterprise firms, including material suppliers, contractors at all levels (prime, subcontractor, or second tier subcontractor) shall provide the Engineer with an accounting of said payments. This accounting shall be furnished to the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in (1) withholding of money due in the next partial pay estimate; or (2) removal of an approved Design Build Team from the prequalified bidders list or the removal of other entities from the approved subcontractors list. The accounting shall list for each payment made to a MB/WB Enterprise firm the following:

DOT Project Number
Payee Design Build Team Name
Receiving Design Build Team or Material Supplier
MB/WB Certification Basis, e.g., Woman Owned, Native American, African American, etc.
Amount of Payment
Date of Payment

A responsible fiscal officer of the payee Design Build Team, subcontractor, or second tier subcontractor who can attest to the date and amounts of the payments shall certify that the accounting is correct. A copy of an acceptable report may be obtained from the Engineer.

DB1G67

CONTRACTOR'S LICENSE REQUIREMENTS

If the Design Build Team does not hold the proper license to perform any plumbing, heating, air conditioning, or electrical work in this contract, he will be required to sublet such work to a contractor properly licensed in accordance with Article 2 of Chapter 87 of the General Statutes (licensing of heating, plumbing, and air conditioning contractors) and Article 4 of Chapter 87 of the General Statutes (licensing of electrical contractors).

DB1G88

DOMESTIC STEEL AND IRON PRODUCTS

All steel and iron products which are permanently incorporated into this project shall be produced in the United States except minimal amounts of foreign steel and iron products may be used provided the combined project cost of the bid items involved does not exceed one-tenth of one percent (0.1 percent) of the total amount bid for the entire project or $2,500.00, whichever is greater. This minimal amount of foreign produced steel and iron products permitted for use by this Special Provision is not applicable to fasteners. Domestically produced fasteners are required for this project.

All steel and iron products furnished as "domestic products" shall be melted, cast, formed, shaped, drawn, extruded, forged, fabricated, produced, or otherwise processed and manufactured in the United States. Raw materials including pig iron and processed pelletized and reduced iron ore used in manufacturing "domestic" steel products may be imported; however, all manufacturing processes to produce the products, including coatings, must occur in the United States.

Before each steel or iron product is incorporated into this project or included for partial payment on a monthly estimate, the Design Build Team shall furnish the Resident Engineer a notarized certification certifying that the product conforms to the above requirements of this Special Provision. The Resident Engineer will forward a copy of each certification to the Materials and Tests Unit.

Each purchase order issued by the Design Build Team or a subcontractor for steel and iron products to be permanently incorporated into this project shall contain in bold print a statement advising the supplier that all manufacturing processes to produce the steel or iron shall have occurred in the United States. The Design Build Team and all affected subcontractors shall maintain a separate file for steel products permanently incorporated into this project so that verification of the Design Build Team's efforts to purchase "domestic" steel and iron products can readily be verified by an authorized representative of the Department or the Federal Highway Administration.

DB1G97

DESIGN BUILD TEAM BORROW SOURCE **7/20/04**

Revise the *2002 Standard Specifications* as follows:

Page 2-17, Article 230-4(C) Contractor Furnished Sources, add the following;

If the Design Build Team proposes a borrow source, the environmental assessment shall include wetland and stream delineation extending 400 feet beyond the proposed borrow source limits.

1. If wetlands or streams are present within 400 feet of the borrow source and the Design Build Team proposes to dewater:

    a. Submit a hydrologic analysis (Skaggs Method) to determine if lateral effects will permanently impact or cause degradation to wetlands or streams. The analysis shall be performed by an environmental or hydraulics engineer with expertise in this discipline and shall consist of, but not be limited to:

        Hydric soil type
        Average profile depth to restrictive soil layer
        Average hydraulic conductivity or permeability
        Average drainable porosity or available water capacity
        Required buffer width, including safety factor

    b. Attach a conservation easement specifying that the completed pit impoundment, shall not be drained, ditched, used for irrigation, or any other manner that would degrade wetlands and streams.

    c. Provide copy of recorded conservation easement to Engineer prior to commencement of any work on proposed pit.

2. If wetlands or streams are not present within 400 feet, no additional documentation will be required.

During Department review of the proposed borrow area, the hydrologic analysis will be submitted to the U. S. Army Corps of Engineers for evaluation.

Obtain copy of Skaggs Method for Determining Lateral Effects of a Borrow Pit on Adjacent Wetlands from Roadside Environmental Unit web site:

http://www.doh.dot.state.nc.us/operations/dp_chief_eng/roadside/fieldops/

Copies may also be obtained from Room 558, Transportation Building, 1 S. Wilmington Street, Raleigh, NC 27601.

DB1G111

SUBSURFACE INFORMATION

Available subsurface information will be provided on this project. The Design Build Team will be responsible for additional investigations.

DB1G119

SAFETY VESTS

All the Design Build Team's personnel, all subcontractors and their personnel, and any material suppliers and their personnel, must wear an OSHA approved reflective vest or outer garment at all times while on the project.

DB1G139

BID DOCUMENTATION 5/6/04

General:

The successful Proposer (Design Build Team) shall submit the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation used to prepare the Price Proposal for this contract to the Department. Such documentation shall be placed in escrow with a banking institution or other bonded document storage facility selected by the Department and preserved by that institution or facility as specified in the following sections of this provision.

Bid Documentation:

The terms "bid documentation" as used in this provision means all written information, working papers, computer printouts and diskettes, charts, and all other data compilations which contain or reflect information, data, and calculations used by the Proposer in the preparation of their Price Proposal. The term "bid documentation" includes, but is not limited to, Design Build Team equipment rates, Design Build Team overhead rates, labor rates, efficiency or productivity factors, arithmetical calculations, and quotations from subcontractors and material suppliers to the extent that such rates and quotations were used by the Proposer in formulating and determining the bid. The term "bid documentation" also includes any manuals, which are standard to the industry used by the Proposer in determining the bid. Such manuals may be included in the bid documentation by reference. Such reference shall include the name and date of the publication and the publisher. The term does not include bid documents provided by the Department for use by the Proposer in bidding on this project.

Submittal of Bid Documentation:

A representative of the Proposer shall deliver the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation to the Department, in a container suitable for sealing, within ten (10) days after the notice of award is received by him. Bid documentation will be considered a certified copy if the Proposer includes a letter to the Department from a chief officer of the company stating that the enclosed documentation is an EXACT copy of the original documentation. The letter must be signed by a chief officer of the

company, have the person's name and title typed below the signature, and the signature MUST be notarized at the bottom of the letter. The Department will not execute the contract until the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation has been received by the Department. The container shall be clearly marked "Bid Documentation" and shall also show on the face of the container the Proposer's name, Proposer's address, the date of submittal, the Project Number, and the County.

Affidavit:

In addition to the bid documentation, an affidavit signed under oath by an individual authorized by the Proposer to execute the bid shall be included. The affidavit shall list each bid document with sufficient specificity so a comparison may be made between the list and the bid documentation to ensure that all of the bid documentation listed in the affidavit has been enclosed. The affidavit shall attest that the affiant has personally examined the bid documentation, that the affidavit lists all of the documents used by the Proposer to determine the bid for this project, and that all such bid documentation has been included.

Verification:

Upon delivery of the bid documentation, the Department's Contract Officer and the Proposer's representative will verify the accuracy and completeness of the bid documentation compared to the affidavit. Should a discrepancy exist, the Proposer's representative shall immediately furnish the Department's Contract Officer with any other needed bid documentation. The Department's Contract Officer upon determining that the bid documentation is complete will, in the presence of the Proposer's representative, immediately place the complete bid documentation and affidavit in the container and seal it. Both parties will deliver the sealed container to a banking institution or other bonded document storage facility selected by the Department for placement in a safety deposit box, vault, or other secure accommodation.

Duration and Use:

The bid documentation and affidavit shall remain in escrow until sixty (60) calendar days from the time the Design Build Team receives the final estimate; or until such time as the Design Build Team gives written notice of intent to file a claim, files a written claim, files a written and verified claim, or initiates litigation against the Department related to the contract; or until authorized in writing by the Design Build Team. Upon the giving of written notice of intent to file a claim, filing a written claim, filing a written and verified claim, or the initiation of litigation by the Design Build Team against the Department, or receipt of a letter from the Design Build Team authorizing release, the Department may obtain the release and custody of the bid documentation. If the bid documentation remains in escrow sixty (60) calendar days after the time the Design Build Team receives the final estimate and the Design Build Team has not filed a written claim, filed a written and verified claim, or has not initiated litigation against the Department related to the contract, the Department shall instruct the banking institution or other bonded document storage facility to release the sealed container to the Design Build Team.

The Proposer certifies and agrees that the sealed container placed in escrow contains all of the bid documentation used to determine the bid and that no other bid documentation shall be relevant or material in litigation over claims brought by the Design Build Team arising out of this contract.

Failure to Provide Bid Documentation:

The Proposer's failure to provide the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation within ten (10) days after the notice of award is received by him may be just cause for rescinding the award of the contract and may result in the removal of the Proposer from the Department's list of qualified Proposers for a period up to 180 days. Award may then be made to the next lowest responsible Proposer or the work may be readvertised and constructed under the contract or otherwise, as the Board of Transportation may decide.

Escrow Agreement:

The Proposer will be required to sign an Escrow Agreement within ten (10) days after the notice of award is received by him. A copy of this Escrow Agreement document will be mailed to the Proposer with the notice of award for informational purposes. The Proposer and Department will sign the Escrow Agreement at the time that the bid documentation is delivered to a Banking Institution or other facility as outlined above. The Proposer's failure to sign the Escrow Agreement at the time the bid documentation is delivered may be just cause for rescinding the award of the contract and may result in the removal of the Proposer from the Department's list of qualified Proposers for a period up to 180 days. Award may then be made to the next lowest responsible Proposer or the work may be readvertised and constructed under the contract or otherwise, as the Board of Transportation may decide.

Confidentiality of Bid Documentation:

The bid documentation and affidavit in escrow are, and will remain, the property of the Proposer. The Department has no interest in, or right to, the bid documentation and affidavit other than to verify the contents and legibility of the bid documentation unless the Design Build Team gives written notice of intent to file a claim, files a written claim, files a written and verified claim, or initiates litigation against the Department. In the event of such written notice of intent to file a claim, filing of a written claim, filing a written and verified claim, or initiation of litigation against the Department, or receipt of a letter from the Design Build Team authorizing release, the bid documentation and affidavit may become the property of the Department for use in considering any claim or in litigation as the Department may deem appropriate.

Any portion or portions of the bid documentation designated by the Proposer as a "trade secret" at the time the bid documentation is delivered to the Department's Contract Officer shall be protected from disclosure as provided by G.S. 132-1.2.

Cost and Escrow Instructions:

The cost of the escrow will be borne by the Department. The Department will provide escrow instructions to the banking institution or other bonded document storage facility consistent with this provision.

Payment:

There will be no separate payment for all costs of compilation of the data, container, or verification of the bid documentation. Payment at the lump sum price for the Design Build project will be full compensation for all such costs.

DB1G142

TWELVE-MONTH GUARANTEE

A. The Design Build Team shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department.

B. Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. The Department's first remedy shall be through the manufacturer although the Design Build Team is responsible for invoking the warranted repair work with the manufacturer. The Design Build Team's responsibility shall be limited to the term of the manufacturer's guarantee.

This guarantee provision shall be invoked only for major components of work for which the Design Build Team would be wholly responsible under the terms of the contract. Examples would include pavement structures, bridge components, and sign structures. This provision shall not be used as a mechanism to force the Design Build Team to return to the project to make repairs or perform additional work for which the Department would normally compensate the Design Build Team. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project. In addition, failure on the part of the Design Build Team to perform guarantee work within the terms of this provision shall be just cause to remove the Design Build Team from the Department's prequalified bidder's list. The Design Build Team will be removed for a minimum of 6 months and will be reinstated only after all work has been corrected and the Design Build Team requests reinstatement in writing.

To ensure uniform application statewide the Division Engineer will forward details regarding the circumstances surrounding any proposed guarantee repairs to the Chief Engineer for review and approval prior to the work being performed.

DB1G145

CLEARING AND GRUBBING

Perform clearing on this project to the limits established by Method " III " shown on Standard No. 200.03 of the Roadway Standards.

The 2002 Standard Specifications shall be revised as follows:

Page 2-3, Article 200-5

Delete the first sentence of this article and insert the following:

The property owner will have no right to use or reserve for his use any timber on the project. All timber cut during the clearing operations is to become the property of the Design Build Team, and shall be either removed from the project by him, or else shall be satisfactorily disposed of as hereinafter provided.

DB2R01

PRICE ADJUSTMENTS FOR ASPHALT BINDER

Adjustments will be made to the payments due the Design Build Team for each grade of asphalt binder when it has been determined that the monthly average terminal F.O.B. Selling Price of asphalt binder, Grade PG 64-22, has fluctuated from the Base Price Index for Asphalt Binder included in this Project Special Provision. The methods for calculating a Base Price Index, for calculating the monthly average terminal F.O.B. Selling Price and for determining the terminals used are in accordance with procedures on file with the Department's Construction Unit.

When it is determined that the monthly average terminal F.O.B. Selling Price of asphalt binder on the first business day of the calendar month during which the last day of the partial payment period occurs, varies either upward or downward from the Base Price Index, the partial payment for that period will be adjusted. The partial payment will be adjusted by adding the difference (+ or -) of the base price index subtracted from the monthly selling price multiplied by the total theoretical quantity of asphalt binder authorized for use in the plant mix placed during the partial payment period involved.

The Base Price Index for this project is $219.17 per ton

DB6R25

PRICE ADJUSTMENTS - ASPHALT CONCRETE PLANT MIX

Revise the 2002 Standard Specifications as follows:

Page 6-36, Article 610-13

Add the following paragraph before the first paragraph:

The “Asphalt Price” used to calculate any price adjustments set forth in this section shall be $35 per theoretical ton. This price shall apply for all mix types.

DB6R26

GENERAL 3/1/04

USE OF TERMS

Throughout this Design Build Package and all manuals, documents and standards referred to in the Design Build Package the terms Contractor, Bidder, Design Builder, Design Build Team and Proposer are synonymous. Throughout this Design Build Package and all manuals, documents and standards referred to in the Design Build Package, the terms NCDOT, Department, and State are synonymous.

DESIGN REFERENCES

Design references developed and published by NCDOT and those developed and published by other agencies and adopted for use by NCDOT which are to be used in the design of this project may be obtained by contacting the Contract Office of the Project Services Unit. Standard prices for materials, which the Department normally sells for a fee, will be in effect. The Design Build Team is responsible for designing in accordance with the applicable documents and current revisions and supplements thereto.

REVIEW AND APPROVAL OF DESIGN SUBMITTALS

Major design milestones and required design submittals shall be identified as activities on the approved CPM for the project. Submittals will be reviewed within 10 working days (15 days for temporary structures) from the date of receipt by NCDOT unless otherwise stipulated in the scope of work. The Department will not accept subsequent submittals until prior submittal reviews have been completed for that item. The Design Build Team shall prioritize submittals in the event that multiple submittals are made based on the approved CPM. All submittals (four full size copies) shall be made simultaneously to the Resident Engineer (two hard copies) and to the designated person in the Project Services Unit (two hard copies and an electronic copy following NCDOT CADD standards) unless otherwise stated in the scope of work. All submittals shall include pertinent Special Provisions. No work shall be performed prior to Department approval of the design submittals.

OVERVIEW

The project will be a 4-lane freeway on new location. There will be interchanges, overpasses, service roads and -Y- line realignments. A portion of the project will be widening existing US 13 with at-grade intersections and partial control of access.

Project services shall include but are not limited to:

- Design Services – right of way and construction plans
- Construction Services – necessary to build and ensure workmanship of the designed facility.
- Permit Preparation/Application
- Right of Way Acquisition.

The State FEIS was approved August 29, 2003.
The State ROD was approved August 26, 2004.

The ICE Analysis will be completed by the Department to be included in the Design Build Team's permit application.

GENERAL SCOPE

The scope of work for this project will include design, construction and construction engineering and management of the project. The design work will include all aspects to construct a 4-lane freeway on new location. The designs shall meet all appropriate latest versions of *AASHTO Policy on Geometric Design of Highways and Streets*, *AASHTO Standard Specifications for the Design of Highway Bridges, Manual of Uniform Traffic Control Devices*, and all NCDOT design criteria.

Construction will include but not limited to all necessary roadway, drainage, utility coordination, foundation design, substructure and superstructure work, and erosion and sediment control work items. Construction engineering and management, will be the responsibility of the Design Build Team. Construction will comply with *NCDOT Standard Specifications for Roads and Structures Edition of 2002* and any special provisions.

Areas of work required for this project will include, but are not limited to the following items:

Permit Preparation / Application
Roadway Plan Preparation
Preliminary and Final Bridge Preparation
GeoEnvironmental
Construction
Project Management
Construction Management
Construction Surveying
Hydraulics and Drainage Design
Foundation Design for Structures and Roadway
R/W Acquisition
Erosion and Sediment Control
Traffic Control and Pavement Markings
R/W Utilities, Conflicts
Sign Design
Traffic Management and Signal System Design
Supplemental Surveys
Public Involvement

All designs shall be in Microstation format using Geopak software.

DESIGN, AND CONSTRUCTION WORK PERFORMED BY DESIGN BUILD TEAM

The design work consists of the preparation of all construction documents for constructing US 17 (Windsor Bypass) as outlined in the Scope of Work section of this package. The Design Build Team shall prepare final designs, construction drawings and special provisions.

The Design Build Team shall be fully and totally responsible for the accuracy and completeness of all work performed under this contract and shall save the State harmless and shall be fully liable for any additional costs and all claims against the State which may arise due to errors, omissions and negligence of the Design Build Team in performing the work.

There shall be no assignment, subletting or transfer of the interest of the Design Build Team in any of the work covered by the Contract without the written consent of the State, except that the Design-Build Team may, with prior notification of such action to the State, sublet property searches and related services without further approval of the State.

The Design Build Team shall certify all plans, specifications, estimates and engineering data furnished by the team.

All work by the Design Build Team shall be performed in a manner satisfactory to the State and in accordance with the established customs, practices, and procedures of the North Carolina Department of Transportation, and in conformity with the standards adopted by the American Association of State Highway Transportation Officials, and approved by the Secretary of Transportation as provided in Title 23, US Code, Section 109 (b). The decision of the Engineer/State/Department shall control in all questions regarding location, type of design, dimension of design, and similar questions.

Alternate designs, details, or construction practices (such as those employed by other states, but not standard practice in NC) are subject to Department review and will be evaluated on a case by case basis.

The Design Build Team shall not change team members, subconsultants or subcontractors identified in the RFQ or RFP without written consent of the Engineer. In addition, subconsultants and subcontractors not identified in the RFQ or RFP shall not perform any work without written consent by the Engineer. Individual offices of the Design Build Team not identified in the Statement of Qualifications or the Technical Proposal submittal shall not perform any work without written consent by the Engineer. Failure to comply with this requirement may be justification for removing the Team from further consideration for this project and disqualification from submitting on future Design Build Projects.

The Department shall prequalify all firms for the work they are identified to perform. Design firms and Natural Systems firms are prequalified by the particular office performing the work. If the work shall be performed by an office other than the one that is prequalified that office shall be prequalified prior to any design submittals.

ETHICS POLICY

Employees employed by the Design Build Team or employees employed by any subconsultant for the Design Build Team to provide services for this project shall comply with the Department's ethics policy. Failure to comply with the ethics policy will result in the employee's removal from the project and may result in removal of the Company from the Department's listing of Registered Qualified Engineering Firms.

APPROVAL OF PERSONNEL

The Department will have the right to approve or reject any personnel, assigned to a project by the Design Build Team.

The Design Build Team or any subcontractor for the Design Build Team which are employed to provide services for this project shall not discuss employment opportunities or engage the services of any person or persons, now in the employment of the State during the time of this contract, without written consent of the State.

In the event of engagement, the Design Build Team or their subcontractors shall restrict such person or persons from working on any of the Design Build Team's contracted projects in which the person or persons were "formerly involved" while employed by the State. The restriction period shall be for the duration of the contracted project with which the person was involved. *Former Involvement* shall be defined as active participation in any of the following activities:

Drafting the contract
Defining the scope of the contract
Selection of the Design Build Team
Negotiation of the cost of the contract (including calculating manhours or fees); and
Administration of the contract.

An exception to these terms may be granted when recommended by the Secretary and approved by the Board of Transportation.

Failure to comply with the terms stated above in this section shall be grounds for termination of this contract and/or not being considered for selection of work on future contracts for a period of one year.

SUBMITTAL OF PROPOSALS

GENERAL

Technical and Price Proposals will be accepted until **4:00 P.M. Local Time on Monday November 22, 2004**, at the office of the Contract Officer, 1020 Birch Ridge Drive, Century Center Complex Bldg. B, Raleigh, NC. No Proposals will be accepted after the time specified.

Proposals shall be submitted in 2 separate, sealed parcels containing the Technical Proposal in one and the Price Proposal in the other parcel.

TECHNICAL PROPOSAL

Technical Proposals shall be submitted in a sealed package. The outer wrapping shall clearly indicate the following information:

Technical Proposal
Submitted By: (Design Build Team's name)
Contract Number C201236
TIP Number R-2404A
Bertie County
US 17 (Windsor Bypass) from US 13-17 to East of SR 1503 (Davis Road)

Technical Proposal Requirements
8 Copies
8 ½ inch by 11 inch pages
No fold-out sheets allowed
Printed on one side only
Double-spaced
Font size 12
No more than 50 pages, excluding the
11 inch by 17 inch appropriate plan sheets

Key Project Team members, identified in the Request For Qualifications, shall not be modified in the Technical Proposal without written approval of the Department. Any such request should be sent to the attention of Mr. Randy Garris, P.E., at the address below:

NCDOT-Project Services Unit
Century Center-Building B
1020 Birch Ridge Drive
Raleigh, NC 27610

PRICE PROPOSAL

Price Proposals shall be submitted in a sealed package. The outer wrapping will clearly indicate the following information:

Price Proposal
Submitted by (Design Build Team's Name)
Contract Number C201236
TIP Number R-2404A
Bertie County
US 17 (Windsor Bypass) from US 13-17 to East of SR 1503 (Davis Road)

The Price Proposal shall be submitted by returning the Design Build Package with the item sheets completed, and all required signatures and bonds. Failure to execute the required documents may render the proposal non-responsive.

EVALUATIONS

Technical proposals shall address the technical elements of the design and construction of the project. The Technical Review Committee will consider the understanding of the project, the anticipated problems and the solutions to those problems.

The Design Build Team's Technical Proposal shall be developed using narratives, tables, charts, plots, drawings and sketches as appropriate. The purpose of the Technical Proposal is to document the firm's understanding of the project, their selection of appropriate design criteria, and their approach for completing all design and construction activities.

The award of the design build contract does not in any way imply that the Department accepts or approves the details of the technical proposal submitted by the Design Build Team. Decisions based on cost alone will not establish the design standards for the project. The proposal will be evaluated in each of the following areas:

	EVALUATION FACTOR	POINTS
1.	Responsiveness to Request for Proposal	55
2.	Schedule and Milestones	20
3.	Innovation	10
4.	Maintenance of Traffic and Safety Plan	10
5.	Oral Interview	5

TECHNICAL PROPOSAL EVALUATION CRITERIA

1. **Responsiveness to RFP – 55 points**

Design Build Team Management – **10 points**

- Describe the Design Build Team's concept of design management. The proposal shall identify key positions and subordinate organizational units.
- Describe the plan for the coordination of civil/structural, utilities, traffic maintenance, constructability and environmental responsibility.
- Provide a narrative description of the proposed location of the design office(s).
- Describe how the designs developed by different firms and offices will be integrated.
- Describe how design personnel will interface with the construction personnel.
- Describe the overall strengths of the Design team and their ability to fulfill the design requirements of this project.

Quality Management - **7 points**

- Describe how the Design Build Team will comply with the quality control requirements for both design and construction. Specifically, include a narrative describing the Design Build Team's understanding of the Department's construction quality control philosophy for this project and how the Design Build Team will implement it.
- The narrative shall include both design and construction activities.
- Detail all additional warranties and/or guarantees provided beyond that required under the Twelve Month Guarantee provision.
- If NCDOT inspection, describe the Design Build Team's expectations on number of inspectors.

Construction Management – **10 points**

- Describe the Design Build Team's concept of the project construction management organization and how it interrelates with the other elements of the Design Build Team's organization for the project.
- Provide a brief narrative description of the Design Build Team's proposed plan for performing construction on the project. This description shall include at least the following:
    - A construction organization chart for the project, showing the relationships between functions shown on the chart and the functional relationships with subcontractors.
    - The chart shall indicate how the Design Build Team intends to divide the project into work segments to enable optimum construction performance.
    - Descriptions of those categories of work that the Design Build Team anticipates will be performed by the Design Build Team's own direct labor force and those categories that will be performed by subcontractors.
    - The Design Build Team's plans and procedures to insure timely deliveries of materials to achieve the project schedule.
    - Describe the overall strengths of the construction team and their ability to fulfill the construction management requirements of this project.

Disadvantaged or Minority and Women's Business Enterprises (DB/MB/WB) – **4 points**

- Describe the Design Build Team's approach to ensuring that DB/MB/WB will have opportunity to participate in the design and in the Construction Engineering and Inspection (CEI), if applicable, aspect of the project.
- DB/MB/WB firms to be utilized in the design and the CEI work, if applicable, shall be noted in the submittal for this RFP.
- It is expected that DB/MB/WB design and CEI firm participation will be at least 5% of the overall design and CEI cost.
- The overall approach to ensuring DB/MB/WB participation in all areas of work also needs to be addressed.

Natural Environmental Responsibility – **9 Points**

- Describe the Design Build Team's approach to addressing environmental concerns within the project boundaries.
- Identify efforts to minimize impacts on wetlands, streams, riparian buffers, and other environmentally sensitive areas.
- Identify innovative approaches to minimize any impacts in environmentally sensitive areas. Describe any temporary impacts and associated minimization approaches.
- Describe the Design Build Team's understanding of the overall approach to permitting and the team's comfort level with obtaining the required permit within the allowed timeframe.
- Identify methods of construction in wetlands and buffers.

Design Features – **8 points**

- Show plan view of design concepts with key elements noted.
- Identify preliminary horizontal and vertical alignment of all roadway elements.
- Show typical sections for the mainline of the project.
- Identify drainage modifications and designs to be implemented.
- Identify the appropriate design criteria for each feature if not provided.
- Identify any deviations, including proposed design exceptions, from the established design criteria that will be utilized. Explain why the deviation is necessary. Describe any Geotechnical investigations to be performed by the Design Build Team.
- Identify any special aesthetics considerations that will be part of the design.
- Describe how any utility conflicts will be addressed and any special utility design considerations.
- Address maintenance issues of all design features.

Structure Features – **7 points**

- Identify any special bridge design features to be constructed.
- Identify types of any retaining walls and /or noise walls if applicable.
- Address the approach to coordinating any necessary efforts with railroad owners.
- Address maintenance issues and durability of the provided structures.

2. Schedule and Milestones – 20 points

Provide a schedule for the project including both design and construction. The schedule shall show the sequence and continuity of operations, as well as the month of delivery of usable segments of the project.

The schedule shall also include the Design Build Team's final completion date and, if proposed, their substantial completion date. **These dates shall be clearly indicated on the Project Schedule and labeled "Final Completion Date" and "Substantial Completion Date"**.

3. Innovation – 10 points

Identify any aspects of the design or construction elements that the firm considers innovative. Include a description of alternatives that were considered whether implemented or not.

4. Maintenance of Traffic and Safety Plan – 10 points

- Describe any traffic control requirements that will be used for each construction phase.
- Describe how traffic will be maintained as appropriate and describe the Design Build Team's understanding of any time restrictions noted in the RFP.
- Specifically describe how business and residential access will be maintained, if applicable.

Safety Plan

- Describe the safety considerations specific to the project.
- Discuss the Design Build Team's overall approach to safety.

5. Oral Interview – 5 points

Content

- The Design Build Team's Project Management Team shall present a brief introduction of the project team and design / construction approach.
- Introductory comments shall be held to no more than 15 minutes.
- The Department will use this interview to ask specific questions about the team's background, philosophies, and approach to the project.
- Presentation, questions, and answers shall not exceed 90 minutes. No more than 8 people from the Design Build Team may attend.

The Department will use the information presented in the oral interview to assist in the evaluation of the technical proposal.

Additional Warranty And/Or Guarantee

- **The Extra Credit for this project shall be a Maximum of 7 Points.**

A twelve-month guarantee as outlined in the *Twelve-Month Guarantee* provision is required for this project. However, the Design-Build team may provide additional warranties and/or guarantees at their discretion. The Design-Build team may be awarded additional points as "extra credit" to be added to the technical score.

The Design-Build team may provide warranties and/or guarantees for major components of the project. Examples of major components are pavements, bridge components and sign structures. If additional warranties and/or guarantees are offered the Design-Build team shall indicate the term of the warranties and/or guarantees, a list of the items covered, performance parameters, notification and response parameters for corrective action, and evaluation periods. The warranties and/or guarantees shall also define how disputes will be handled.

No direct payment will be made for warranties and/or guarantees. Payment will be considered incidental to the lump sum price for the contract.

SELECTION PROCEDURE

There will be a Technical Review Committee (TRC) composed of Project Managers, and three or more senior personnel from involved engineering groups that will evaluate the Technical Proposal on the basis of the criteria provided in the Design Build Package.

The selection of a Design Build Team will involve both technical quality and price. The technical proposals will be presented to the TRC for evaluation. The TRC shall first determine whether the proposals are responsive to the requirements of the Design Build Package. Each responsive technical proposal shall be evaluated based on the rating criteria provided in the Design Build Package. The TRC will submit an overall technical proposal score for each firm to the Manager of the Contract Office. A maximum quality credit percentage will be assigned for each project, as determined by the TRC.

Quality Credit Evaluation Factors for Technical Proposals

Responsiveness to Request for Proposal	55
Schedule and Milestones	20
Innovation	10
Maintenance of Traffic and Safety Plan	10
Oral Interview	5
Maximum Score	100

The Manager of the Contract Office will use a table based on the maximum quality credit percentage to assign a Quality Credit Percentage to each proposal based on the proposal's overall technical score. The maximum percentage for this project will be **30%.**

Quality Credit Percentage for Technical Proposals

Technical Score	Quality Credit (%)	Technical Score	Quality Credit (%)
100	30.00	84	14.00
99	29.00	83	13.00
98	28.00	82	12.00
97	27.00	81	11.00
96	26.00	80	10.00
95	25.00	79	9.00
94	24.00	78	8.00
93	23.00	77	7.00
92	22.00	76	6.00
91	21.00	75	5.00
90	20.00	74	4.00
89	19.00	73	3.00
88	18.00	72	2.00
87	17.00	71	1.00
86	16.00	70	0.00
85	15.00		

If any of the technical proposals were considered non-responsive, the manager of the Contract Office will notify those Design Build Teams of that fact. The Manager of the Contract Office shall publicly open the sealed price proposals and multiply each Design Build Team's price proposal by the Quality Credit Percentage earned by the Design Build Team's technical proposal to obtain the Quality Value of each Design Build Team's technical proposal. The Quality Value will then be subtracted from each Design Build Team's price proposal to obtain an Adjusted Price based upon Price and Quality combined. Unless all proposals are rejected, the Department will recommend to the State Transportation Board that the Design Build Team having the lowest adjusted price be awarded the contract. The cost of the design build contract will be the amount received as the price proposal.

The following table shows an example of the calculations involved in this process.

As Example of Calculating Quality Adjusted Price Ranking

Proposal	Technical Score	Quality Credit (%)	Price Proposal ($)	Quality Value ($)	Adjusted Price ($)
A	95	25.00	3,000,000	750,000	2,250,000
B	90	20.00	2,900,000	580,000	2,320,000
C *	90	20.00	2,800,000	560,000	2,240,000
D	80	10.00	2,700,000	270,000	2,430,000
E	70	0.00	2,600,000	0	2,600,000
* Successful Design Build Team – Contract Cost $2,800,000					

Best and Final Offer

In the event initial cost proposals exceed the Department's budget for the project or if the Department feels it is necessary for any reason the Department may choose to make amendments to the details of the RFP and request a Best and Final Offer from all of the previously shortlisted teams. Alternately, the Department may choose to redistribute to the shortlisted firms another RFP for the project with no amendments to the RFP scope.

After receipt of the redistributed RFP, the Design Build Team has the option of changing their Technical Proposal details. If the Design Build Team changes any component of the Technical Proposal, the TRC will review those amended components of the Technical Proposal and reevaluate the scores accordingly. The Design Build Team shall highlight the changes to bring them to the Department's attention. A revised total score will be calculated, if appropriate, based on these amendments to the Technical Proposal.

Additional oral interviews will not be held. The Design Build Teams will submit both a revised Price Proposal and a revised Technical Proposal (if applicable) at the time, place, and date specified in the redistributed RFP. A revised Quality Value (if required) and Adjusted Price will be determined as elsewhere in the RFP. This will constitute the Design Build Team's Best and Final Offer. Award of the project may be made to the team with the lowest adjusted price on this Best and Final Offer for the project.

Stipend

A stipulated fee of **$100,000** will be awarded to each Design Build Team on the short-list who provides a responsive, but unsuccessful, proposal. If a contract award is not made, all responsive Design Build Teams shall receive the stipulated fee. The stipulated fee shall be paid to eligible Design Build Teams within ninety days after the award of the contract or the decision not to award. Once award is made, unsuccessful Design Build Teams will be notified of the opportunity to apply for the stipulated fee. If the Design Build Team accepts the stipulated fee, the Department reserves the right to use any ideas or information contained in the proposals in connection with any contract awarded for the project, or in connection with any subsequent procurement, with no obligation to pay additional compensation to the unsuccessful Design Build Teams. Unsuccessful Design Build Teams may elect to refuse payment of the stipulated fee and retain any rights to its proposal and the ideas and information contained therein.

ROADWAY DESIGN SCOPE OF WORK:

- Prepare the final design plans and construct the project using the provided survey data. The following information shall be used when completing the final design: the design-hearing map, supplemental information addressing the service road at the beginning of the project, and the recommended alignment shift through the "Harden" property near the east end of the project. Any proposed design features that vary from that contained in the above materials shall be clearly noted in the Technical Proposal and will be subject to review and approval by the Department.

- The proposed project includes a 4-lane roadway with a 36 ft. grass median beginning on existing US 13/US 17 just north of SR 1153, New Hope Lane, at station -L- 12+25 and extending to the vicinity of existing US 13, King Street. The existing 4-lane roadway through the commercial area of Windsor (roughly 1,800 ft. from South of Charles Street to North of Sterlingworth St.) is to be resurfaced, the shoulders are to be regraded to the proper width, and existing median crossovers are to be removed. The new location 4-lane freeway and 46 ft. median begins near existing US 13, King Street and extends eastward to just west of SR 1503, Davis Road where it transitions to the existing 5-lane shoulder section. The project ends at station -L- 518+95.

- The Design shall include interchanges at SR1001 and US13, intersections at US17/US13 Bus./ NC308, SR1100, NC308, and US17 at the eastern end of the project, as well as realignment of SR1300. These features shall be designed as shown on the preliminary design and hearing maps. Every effort should be made to duplicate all preliminary horizontal and vertical alignments since Concurrence Point 4A has been reached.

- As a result of the public hearing, the design shall include a service road connecting to the proposed signalized intersection of US13-17/US 13 Bypass at US 17 with three 12 ft. lanes transitioning to two 12 ft. lanes. The service road will turn west and follow the US 13 Bypass and end at the Center Tobacco Warehouse Inc./Robert Sessoms, Jr. property line.

- Commitments to the "Harden Family" regarding the mainline alignment must be satisfied.

- The 300 ft. right-of-way shown on the hearing map may be reduced; however, adequate right-of-way must be provided to access and maintain the facility. Any reduction in right-of-way from that shown on public hearing map shall be clearly noted in the Technical Proposal and will be subject to review and approval by the Department.

- The widening portion of mainline where partial control of access is proposed should meet Rural Arterial standards, using a 60-mph design speed in level terrain. Include

all other design criteria in the Technical Proposal. All design criteria must be approved by the Department prior to the submittal of the preliminary plans.

- The new location portion of the mainline where full control of access is proposed shall meet Freeway standards using a 70-mph design speed in level terrain. Include all other design criteria in the Technical Proposal. All design criteria must be approved by the Department prior to the submittal of the preliminary plans.

- All ramps shall have a lane width of 14 feet with 10 feet wide shoulders on the left side of traffic and 12 feet wide shoulders on the right side of traffic. In areas along the ramp where guardrail is required along the right side of traffic, provide a shoulder width of 15 feet. Design efforts should be made to eliminate guardrail need along the left side of traffic by using 4:1 (H:V) fill slopes. Spiral curves are required for ramp alignments that tie to the mainline near the gore area. The use of spiral curves at other locations along the ramp alignment is optional. NCDOT prefers angular exit ramp design and parallel entrance ramp design.

- Loops shall have a lane width of 16 feet. Loops shall use curb and gutter along the inside of the loop in conjunction with a berm width of 10 feet. Design efforts should be made to eliminate guardrail along the loop, however, if guardrail should be required along the inside of a loop, provide a berm width of 14 feet and set the guardrail 12 feet from the face of curb and gutter. Provide a shoulder width of 10 feet on the outside or left side of traffic and use 4:1 (H:V) fill slopes to eliminate the need for guardrail, should guardrail be necessary along the left side of traffic, provide a shoulder width of 13 feet.

- Existing -L, New Location -L-, -Y1- and -Y7- shall have 12 feet lanes. The outside shoulders along Existing -L- and shoulders along -Y1- and -Y7- in cut sections shall be 8 feet in width, 10 feet wide for fill sections and 13 feet wide where guardrail is required. The outside shoulders along the New Location -L- in cut sections shall be 10 feet in width, 12 feet wide for fill sections and 15 feet wide where guardrail is required. All median divided sections shall have a minimum 6 feet median shoulder.

- Minimum 6:1 (H:V) median slopes shall be used with the 46' median typical section along the mainline to accept cable guiderail installation. Median guardrail/guiderail along the proposed bypass west of the proposed US 13, King Street interchange is not required, however, guardrail in the median to protect the end of the structure is required .

- All outside shoulders for -Y2-, -Y3-, -Y4-, and -Y6- shall be 8 ft. wide without guardrail (11 ft. wide with guardrail). Outside shoulders for -Y5- line shall be 5 ft. wide without guardrail (8 ft. wide with guardrail).

- All outside and median paved shoulders shall be 4 ft. wide and consist of full depth asphalt pavement, unless otherwise noted below. All shoulders along -Y6- and -Y7-

lines shall be 2 ft. wide full depth paved shoulders. All paved shoulders shall be as detailed in the Pavement Management Scope of Work. Paved shoulders are not required along –Y2- and -Y5- lines.

- Currently, a new signal is warranted at the Westbound ramps for US17 Bypass and US13 Bypass at US13 (-Y4-). The Design Build team may explore re-configuration at this location to negate the need for this signal. Any such proposal shall be included in the Technical Proposal and shall be approved before inclusion in the preliminary roadway plans. Reference Traffic Management and Signal Systems Scope of Work.

- The Design Build Team shall prepare and submit Structure Recommendations for approval.

- Ditching in wetlands is not allowed. All roadway grades shall be established so that ditching in the wetlands is not necessary. The maximum fill slope to be used throughout the project is 3:1.

- The Design Build Team is responsible for all work necessary to obtain permits for this project including, but not limited to, the preparation of all permit drawing submittals for Concurrence Point Meetings 4B and 4C. Reference the Environmental Permits Scope of Work.

- Milled Rumble Strips will be required on the outside and median-side asphalt paved shoulders (STD. DWG. 665.01) for the new location, 70-mph design, full control access portion of the project.

- The Design Build Team shall acquire all right-of-way for this project. Reference the Right of Way Scope of Work.

- No Design Exceptions are anticipated. All design exceptions proposed shall be clearly noted in the Technical Proposal and approved by the Department prior to inclusion in the preliminary roadway plans.

- There are no noise walls anticipated on this project.

- The Design Build Team shall place rebar and caps with carsonite posts for right of way monument locations. The Department will furnish the caps and carsonite posts in accordance with Department policy.

- This is a control of access facility. Placement of the woven wire fence is required; location shall be shown on the plans and approved prior to placement.

General

- The design shall be in accordance with the *2001 AASHTO A Policy on Geometric Design of Highways and Streets, January 2002 NCDOT Roadway Standard Drawings, NCDOT 2002 Roadway Design Manual, Roadway Design Policy and Procedure Manual, Project Services Unit's Guidelines for Roadway Design Activities, January 2002 North Carolina Standard Specifications for Roads and Structures, and the AASHTO Roadside Design Guide 2002.*

- Unless otherwise noted in the scope of work, if the *NCDOT Roadway Design Manual, the 2001 AASHTO, A Policy on Geometric Design of Highways and Streets, the January 2002 Roadway Design Standard Drawings* and/or any other guidelines, standards or policies that have desirable and /or minimum design values; the Design-Build team should use the desirable values. Similarly, in case of conflicting design parameters in the various resources, the proposed design shall adhere to the most conservative values unless otherwise noted in the scope of work.

- Guardrail and cable guiderail placement and installation shall be in accordance with NCDOT standard drawings and/or approved details in lieu of standards.

- The Design Build Team shall identify the need for any special roadway design details (i.e. any special drainage structures, rock embankment, rock plating, special guardrail, retaining walls, concrete barrier designs, etc.) and shall provide special design drawings. The Project Services Unit may have special details available that can be provided to the Design Build Team upon request. The Design Build Team shall refer to the list of details to be used in lieu of standards located at www.ncdot.org/business/

- The Design Build Team shall develop construction plans using the current version of Microstation and Geopak software required by NCDOT and shall be in English units. The plans shall follow NCDOT CADD standards including but not limited to NCDOT's file naming convention, leveling chart, and file folder structure. These standards can be found on the Engineering Guidelines web page: www.doh.dot.state.nc.us/guidelines/

- The Design Build Team shall provide 8 hard copies of all submittals directly to the Project Services Unit. Half size plans are not acceptable; half size cross sections are acceptable. Submit electronic plans when requested. The submittals shall be as follows:

    - Preliminary Plans
    - Right of Way Plans
    - Final Plans - summary sheets and quantity sheets are not required
    - Release for Construction Plans (signed and sealed – not for review)

- Submit right-of-way plans for review and approval prior to staking rights-of-way or easements.

- All submittals must adhere to the NCDOT Review requirements for Preliminary, Right of Way, and Final Plans located at www.doh.dot.state.nc.us/guidelines/. The Design Build Team shall use the Department's *Guidelines for Roadway Design Activities* for specific requirements for each of these submittals.

- The Design Build Team shall provide a copy of the final plans in both electronic and hard copy form. The Design Build Team shall provide a copy of the plans for right of way recordation in both electronic and hard copy form. All final designs shall be signed and sealed by a Professional Engineer registered in the State of North Carolina.

- The Design Build Team shall assume full responsibility for the project design, including any portions of the design provided by the Department.

NCDOT Information Supplied

- Final pavement designs are provided. Reference the Pavement Management Scope of Work. The Design Build Team will be responsible for all temporary pavement designs.

- The Department will provide CD's of the SFEIS (State Final Environmental Impact Statement), copies of the SROD (State Record of Decision), and the latest list of environmental commitments, municipal agreements and all pertinent approvals and correspondence.

- Electronic surveys and available design files will be furnished to the Design Build Team. These surveys include known wetland delineations. Any supplemental surveys, including but not limited to additional topography, existing and proposed roadway, structure sites, underground and overhead utilities, existing and proposed drainage, supplemental wetland delineation, right of way, parcel names, and deed research and descriptions shall be the responsibility of the Design Build Team to acquire and process.

- A Geotechnical Subsurface investigation will be provided for the project. Additional specific geotechnical information surrounding the proposed bridges over the Cashie River will be made available upon issuance of the Final request for Proposals. Any additional geotechnical information will be the responsibility of the Design Build Team. Reference the Environmental Permits Scope of Work.

PAVEMENT MANAGEMENT SCOPE OF WORK

The pavement designs for the project are given below:

LINE	Surface	Intermediate	Base	ABC
L-line, new construction	3.0" S9.5C	3.0" I19.0C	5.5" B25.0C	-----
L-line, widening of existing road	3.0" S9.5C	3.0" I19.0C	5.5" B25.0C	-----
Y1 (US 17 & NC 308)	3.0" S9.5B	2.5" I19.0B	4.0" B25.0B	-----
Y1A (US 13 Bus.)	3.0" S9.5B	-----	4.0" B25.0B	-----
SR1	3.0" S9.5B	-----	4.0" B25.0B	-----
Y2	3.0" S9.5B	-----	4.0" B25.0B	-----
Y3	3.0" S9.5B	-----	5.5" B25.0B	-----
Y4 (US 13)	3.0" S9.5C	3.0" I19.0C	4.0" B25.0C	-----
Ramp A and Ramp D @ Y4	3.0" S9.5C	3.0" I19.0C	4.0" B25.0C	-----
Ramp B @ Y4	3.0" S9.5C	3.0" I19.0C	4.0" B25.0C	-----
Loop D @ Y4	3.0" S9.5C	4.0" I19.0C	4.0" B25.0C	-----
Y5 and Y7	3.0" S9.5B	-----	4.0" B25.0B	-----
Y6	3.0" S9.5B	-----	5.5" B25.0B	-----
Ramp A and Ramp D @ Y6	3.0" S9.5B	-----	4.5" B25.0B	-----
Loop A and Ramp C @ Y6	3.0" S9.5B	-----	4.5" B25.0B	-----
Overlay the existing pavement with the full thickness of surface course as given above. Shoulder drains are not required.				

For L-line, new construction, the Design-Build Team may use an ABC Alternate. The ABC Alternate consists of 3.0" S9.5C, 4.0" I19.0C, and 10.0" ABC.

The Design/Build team will be responsible for the design of all temporary pavements and for evaluation of existing shoulders regarding their suitability for carrying traffic during construction, if necessary. Temporary pavements will be designed in accordance with the most recent version of the North Carolina DOT Pavement Design Procedure. Temporary pavement designs are to be submitted for review and comment using the contract submittal process. The expected duration for traffic on temporary pavement must be included as part of the submittal.

STRUCTURE DESIGN SCOPE OF WORK

The team's primary design firm shall be on the Highway Design Branch list of firms qualified for Structure Design and maintain an office in North Carolina.

Design shall be in accordance with the Seventeenth Edition AASHTO Standard Specifications for Highway Bridges (and current interims), NCDOT Structure Design Manual (including policy memos), and NCDOT Bridge Policy Manual. Construction and Materials shall be in accordance with the 2002 NCDOT Standard Specifications For Roads and Structures, NCDOT Structure Design Unit Project Special Provisions, and NCDOT Structure Design Unit Standard Drawings.

Alternate designs, details, or construction practices (such as those employed by other states, but not standard practice in NC) are subject to NCDOT review and will be evaluated on a case by case basis.

Anticipated Structures:

-Dual Bridges on US17 Bypass over US13
-Dual Bridges on US17 Bypass over Cashie River and surrounding wetlands
-Bridge on SR1300 (Greens Cross Road) over US17 Bypass
-Bridge on SR1001 (Wakelon Road) over US17 Bypass
-Extension or replacement of existing culvert at approximate station -L- 45+00.
-Possible extension or replacement of box culverts under -Y1-/-Y1A- (US17/NC308 and US17/US13Bus.). Extensions of these culverts will be as needed based on the Design Build Team's roadway design.

The Design Build Team shall determine the structural adequacy of all culverts. The Technical Proposal should reflect the Design Build Team's intentions to retain as is, replace, or extend each of these culverts.

Bridge geometry (width, length, skew, span arrangement, typical section, grade, alignment, etc.) shall match the Bridge Survey Report, Roadway plans, and the approved Structure Recommendations prepared by the Design Build Team. Bridges shall meet all hydraulic design requirements for drainage. There are currently no environmental commitments disallowing permanent or temporary bents in the Cashie River and oxbow. The location of bents and associated impacts in and around the Cashie River and oxbow shall be determined through the 4B and 4C concurrence meetings and permit application process.

All bridge barrier rails shall be jersey shaped barriers per Standard Drawing CBR1.

Bridge design and construction shall be subject to applicable permit restrictions and conditions. A construction moratorium (which also applies to geotechnical borings) exists for the Cashie River bridges. Reference Environmental Permits Scope of Work. The Department has reached an agreement with the regulatory agencies that amends this moratorium. For work within the waters of the Cashie River and inundated portions of the surrounding wetlands, the moratorium

remains intact. For non-inundated portions of these wetlands, permitted construction activities may occur within the moratorium timeframe provided that the following conditions are met:

(1) The area of construction is fully contained and isolated by silt fence.
(2) A turbidity curtain is used to separate the construction area from the Cashie River.
(3) The above containment measures are in place and fully functional prior to the beginning of the moratorium.

Monotube or cantilever DMS (if required on project) support structures will not be allowed.

Attachment of sign structures to bridges will not be allowed.

If used, cored slab bridges and adjacent box beams will require a cast in place concrete wearing surface. This wearing surface shall be 3" minimum and consist of Class AA fiber reinforced concrete in accordance with the special provision. The wearing surface shall be placed after the casting of the barrier rail.

A closed drainage system is required on the Cashie River Bridge. Reference Hydraulics Scope of Work. The Technical Proposal shall clearly denote how this drainage system will be attached to the proposed structure.

This bridge is not considered to be in a corrosive area. The NCDOT Structure Design Manual (including policy memos), shall be followed to determine any protection measures to be used. Weathering steel girders will be allowed along this project. Steel pipe piles will be allowed on the Cashie River Bridge provided they meet the requirements of the special provisions and standard drawings.

Required Submittals:

Sufficient data, including items previously approved by other NCDOT units (Roadway, Geotechnical, Hydraulics, Traffic, etc.) shall be submitted with (or prior to) all plan submittals to facilitate review.

A. Submittals for Review:

For bridges, the required plan submittals for review are six half size (11”X17”) sets of Preliminary General Drawings and six half size sets of final plans. For culverts or other permanent structures, the required plan submittals for review are six half size sets of final plans. Two complete sets of project special provisions shall also be submitted for review.

Preliminary General Drawings shall contain sufficient details (drawings or narrative) to explain the scope of design and construction intended for the bridge, and shall list all anticipated special provisions and notes describing design data and material properties (for guidance, refer to NCDOT Structure Design Manual Section 5, General Drawings). Final Plans are expected to have all plan details and notes completed for final review. The RFC’s (optional) and Final Plans

submittals may be separated into substructure and superstructure or other submittals as necessary to accommodate construction schedules.
All comments by NCDOT or FHWA on all submittals shall be addressed in writing and by making appropriate changes to designs or drawings before construction of those elements begins. Re-submittal of plans may be required.

B. Submittals for Record Keeping:

One complete full size original set of Release For Construction (RFC) plans shall be submitted to the structure design unit for record keeping along with the complete set of original design files and one complete set of project special provisions. The record set RFCs, design files, and project special provisions shall bear the seal of a North Carolina registered Professional Engineer.

C. Working Drawing Submittals:

Working drawing submittals shall be in accordance with the ”Submittal of Working Drawings" project special provision. Sufficient data shall be submitted prior to or with the working drawings to facilitate review. This data shall include one half size copy of the appropriate RFC drawing or drawings related to the submittal.

D. Other:

The Contractor shall be responsible for all additional copies of structure plans for other units as requested (including but not limited to As Built Plans).

GEOTECHNICAL ENGINEERING SCOPE OF WORK

I. GENERAL:

Obtain the services of a firm prequalified for geotechnical work from the Highway Design Branch List. The prequalified geotechnical firm should prepare foundation design recommendation reports for use in designing structure foundations, roadway foundations, retaining walls, sound barrier foundations and temporary structures. The prequalified geotechnical firm should also determine if additional subsurface information is required based upon the subsurface information provided by NCDOT and the final roadway and structure designs. Perform any additional subsurface investigation and laboratory testing in accordance with the current NCDOT *Geotechnical Unit Guidelines and Procedure Manual*. A minimum of 1 standard penetration test (SPT)/rock core borings is required per bent for all bridges except dual bridges. For dual bridges, a minimum of 1 SPT/rock core borings is required per bent for each of the right and left lane dual bridges. All borings must be located within 20 ft. of the proposed bent location. The Design Build Team is responsible for all supplemental borings required to meet these criteria. The maximum spacing between borings for retaining walls is 200 feet (61 meters) with a minimum of two borings; one at each end of the wall. Drill borings for retaining walls to twice the maximum height of the wall.

II. DESCRIPTION OF WORK:

Design foundations, embankments, slopes, retaining walls, sound barrier foundations and temporary structures in accordance with the current allowable strength design AASHTO *Standard Specifications for Highway Bridges*, NCDOT *Structure Design Manual*, NCDOT *Roadway Design Manual* and the Geotechnical Engineering Unit *Roadway and Structure Foundation Guidelines*.

A. Structure Foundations

Design foundations with concrete footings, prestressed concrete piles, steel piles or drilled piers. Steel reinforcement is required for concrete foundations. Design spread footings with the bottom of footing elevation at or below the weathered rock or hard rock elevation. Key in spread footings of structures crossing streams a minimum of full depth below the 100 year design scour elevation and provide scour protection in accordance with scour protection detail in *the NCDOT Structure Design Manual*.

Piles must have at least 10 feet (3 meters) of embedment below the lowest of the following: 100 year design scour elevation, bottom of footing elevation, finished or existing grade elevation. Obtain approval from the NCDOT Hydraulics Unit for any longitudinally battered piles for pile bents of structures crossing streams. Permanent steel casings are required for drilled piers that are constructed in 6 inches (150 mm) or more of water. Permanent casings may be required where drilled piers are constructed on stream banks.

When the weathered rock or rock elevation is below the 100 year hydraulic scour elevation, the 100 year and 500 year design scour elevations are equal to the 100

year and 500 year hydraulic scour elevations from the structure survey report approved by the NCDOT Hydraulics Unit. When the weathered rock or rock elevation is above the 100 year hydraulic scour elevation, the 100 year design scour elevation may be considered equal to the top of the weathered rock or rock elevation, whichever is higher, and the 500 year design scour elevation may be set 2 feet (600 mm) below the 100 year design scour elevation.

End bent fill slopes up to 35 feet (10.7 meters) in height (defined as the difference between grade point elevation and finished grade at toe of slope) must be 1.5:1 (H:V) or flatter. End bent slopes with heights greater than 35 feet (10.7 meters) or end bent cut slopes must be 2:1 or flatter. Extend end bent slope protection from the toe of slope to berm and to 1.75:1 (H:V) slope for 1.5:1 fill slopes or to the limits of the superstructure for cut slopes and for 2:1 or flatter fill slopes.

Design foundations for service loads using allowable stress design. The ultimate bearing capacity of all piles will be determined by Section IV, Construction Requirements.

Permits are required for pre-augering, predrilling or jetting of pile foundations. The Design Build Team is responsible for including these construction techniques in the permit application, if applicable.

Analyze drilled pier and pile bent foundations using either Lpile or FB-Pier. Drilled piers and vertical piles must be "fixed" in the soil/rock such that a decrease in pier or pile length will not significantly increase the top deflection. The D/B team structural engineer must approve deflections greater than 1 inch (25 mm) in the free head condition for either top of pile for a pile bent or top of column for post and beam construction on drilled piers.

B. Roadway Foundations

Design all non-reinforced fill slopes for a maximum slope of 3:1 (H:V) except bridge end bent slopes (see Section A) and a minimum stability factor of safety of 1.3. Design all cut slopes for a slope of 2:1 (H:V) or flatter and a minimum stability factor of safety of 1.5. Use limiting equilibrium methods, such as Modified Bishop, Simplified Janbu, Spencer or any other generally accepted method for slope stability analysis.

Design sound barrier foundations in accordance with current allowable stress design AASHTO *Guide Specifications for Structural Design of Sound Barriers*. A minimum factor of safety of 1.5 is required for shaft embedment depths.

Design and construct embankments such that excessive settlement will not occur after the waiting periods end. Soil improvement techniques to mitigate long term settlement problems or to transfer the embankment load to a deeper bearing strata are allowed. Soil improvement techniques should follow the current industry standard practices and the guidelines of *Ground Improvement Technical*

Summaries FHWA-SA-98-086 or *Geosynthetic Design and Construction Guidelines FHWA-HI-95-038*. Embankment monitoring in accordance with the Embankment Monitoring Special Provision and the Standard Settlement Plate Detail is required when a waiting period of more than one month is recommended in the foundation design recommendation reports. A minimum of two settlement plates are required at each location. Space settlement plate locations no more than 200 feet (61 meters) apart or at each bridge end bent location, whichever is closer. Reinforced bridge approach fills in accordance with the NCDOT standard are required for end bents on all bridges.

C. Permanent Retaining Wall Structures

Extensible reinforcement is not allowed for any permanent retaining walls. Modular block walls are not allowed for critical wall structures. Critical wall structures include walls supporting or adjacent to interstate highways, bridge abutments, wing walls and walls over 18 feet (5.5 meters) in height.

The following list of retaining wall types are acceptable for consideration for permanent applications:
Gravity wall
Cast-in-place cantilever wall
Modular block wall
Mechanically stabilized earth (MSE) wall
Soldier pile cantilever wall with either a cast-in-place face or precast panels
Anchored tieback wall
Soil nail wall

Design and construct permanent retaining walls, with the exception of gravity walls and cast-in-place cantilever walls, in accordance with the applicable NCDOT *Project Special Provisions*. For each retaining wall, with the exception of gravity walls, submit a wall layout and design. The wall layout submittal should include the following:

Wall envelope with top of wall, bottom of wall, existing ground and finished grade elevations at incremental stations.
Wall alignment with stations and offsets.
Typical sections showing top and bottom of wall, drainage, embedment, slopes, barriers, fences, etc.
Calculations for bearing capacity, global stability and settlement.
Details of conflicts with utilities and drainage structures.
Roadway plan sheets showing the wall (half size).
Roadway cross sections showing the wall (half size).
Traffic control plans showing the wall (half size).

Gravity walls must be designed and constructed in accordance with the NCDOT *Roadway Standard Drawings* and the NCDOT 2002 *Standard Specifications*. Gravity walls do not require any submittals and should be identified in the

roadway foundation design recommendation report. Cast-in-place cantilever walls must be designed and constructed in accordance with the NCDOT 2002 *Standard Specifications.*

Locate retaining walls at toe of slopes unless restricted by right of way limits. Any slopes behind walls are required to be 2:1 (H:V) or flatter. Embed retaining walls in accordance with FHWA Manual Demonstration Project 82 Reinforced Soil Structures MSEW and RSS or a minimum of 2 feet (600 mm), whichever is greater. The wall embedment depth is from the grade that intersects the front of the wall (either finished grade or natural ground elevation) or 100 year scour elevation, whichever is lower, to the top of the leveling pad.

Drainage over the top of retaining walls is not allowed. Sags in the top of walls should be avoided. Direct runoff above and below walls away from walls, if possible, or collect runoff at the walls and transmit it away. Curb and gutter or cast-in-place single faced barrier with paving up to the wall is required when runoff can not be directed away from the back or front of the wall. A paved concrete ditch with a minimum depth of 6 inches (150 mm) is required at the top of walls when slopes steeper than 6:1 (H:V) intersect the back of walls.

Precast or cast-in-place coping is required for walls without a cast-in-place face with the exception of when a barrier is integrated into the top of the wall. Extend coping or cast-in-place face a minimum of 6 inches (150 mm) above where the finished or existing grade intersects the back of the wall. A fence or metal rail is required on top of the facing, coping, barrier or immediately behind the wall (if there is no slope behind the wall) and the drop off in front of the wall is greater than 3 ft. Design concrete barriers integrated into retaining walls for traffic impact in accordance with AASHTO.

Design end bents with abutment retaining walls for deep foundations only. Wing walls independent of abutment retaining walls are required unless approved otherwise by the NCDOT. When using abutment retaining walls, design the end bent and the wall independent of each other. When using piles and abutment retaining walls, brace piles are required. Do not consider lateral support from any fill placed around drilled piers behind abutment retaining walls when analyzing end bent stability. All deep foundations for end bents with abutment retaining walls must penetrate 10 feet (3 meters) into natural ground. If fill is required around piles or drilled piers, install foundations before placing any fill.

D. Temporary Structures

Design temporary retaining structures, which include earth retaining structures and cofferdams, in accordance with Section 4 of the 1995 or current allowable stress design AASHTO *Guide Design Specifications for Bridge Temporary Works* and the NCDOT Temporary Shoring for Maintenance of Traffic Special Provision. The only submittal required to use the standard sheeting design is the "Standard Shoring Selection Form".

Design and construct temporary retaining walls in accordance with the applicable NCDOT *Project Special Provision*. For temporary retaining walls, do not place a barrier within 5 feet (1.5 meters) of the face of the wall. If the barrier is between 5 and 9 feet (1.5 to 2.7 meters) from the face of the wall, anchor the barrier in accordance with Roadway Standard Detail No. 11.70.01.

III. SUBMITTALS:

Submit all structure and roadway foundation design recommendation reports, retaining wall layouts, retaining wall designs, reinforced slope designs, soil improvement designs and temporary structure designs for review. A separate structure foundation design recommendation report is required for each structure, except permanent retaining walls, and one roadway foundation design recommendation report is required for the entire project. All sound barrier foundations should be addressed in a foundation design report and will be considered one submittal. Seal all foundation design recommendation reports, plans, special provisions and calculations by a registered professional engineer licensed in the state of North Carolina.

Submit each soil improvement design separately as two submittals; the conceptual design and the final design. The conceptual design shall be approved prior to submission of the final design.

Submit each retaining wall separately as two submittals, the wall layout and wall design. Do not submit wall layouts until 25% roadway plan submittal (line and grade) have been approved by the State Alternative Delivery Systems Engineer. Do not submit wall designs until the wall layouts have been approved by the Geotechnical Engineering Unit. If temporary shoring is required to construct a retaining wall, submit the temporary shoring design as part of the wall design submittal. A review time of 20 business days is required for each retaining wall layout. A review time of 20 business days is also required for each retaining wall design.

IV. CONSTRUCTION REQUIREMENTS:

All construction and materials must be in accordance with the NCDOT 2002 *Standard Specifications* and current NCDOT *Project Special Provisions*. The D/B team is responsible for investigating and proposing remedial measures for any construction problems related to foundations, retaining walls, subgrades, settlement, slopes, and construction vibrations. The Geotechnical Engineering Unit will review and approve these proposals.

Do not allow vibratory compaction of fill within 100 feet (30 meters) of any existing structure. Do not allow pile driving or subsurface drilling of foundations within 500 feet (150 meters) of any existing structure. If these requirements can not be met or damage occurs to any existing structure, employ the services of a qualified private engineering firm experienced in the effects of construction on existing structures to do a study of the structure's response to vibration. The purpose of this study is to set vibration limits to avoid damage to the existing structure and provide modifications to construction methods

as necessary. Any existing structure is not intended to include existing bridges or culverts unless they are historic or will remain in service upon completion of construction. Existing bridges used for detours that will be taken out of service upon completion of construction should be protected from vibration damage to the extent necessary for the safety of the traveling public.

The prequalified geotechnical firm that did the foundation designs must review the embankment monitoring data a minimum of once a month. Waiting periods may not be ended until less than 0.1 inches (2.5 mm) of settlement is measured over a period of four weeks.

The pre-qualified geotechnical firm that did the foundation designs must review and approve drilled pier construction sequences and all pile driving hammers before submitting for acceptance by the Geotechnical Engineering Unit.

Perform Pile Driving Analyzer (PDA) testing to determine pile driving criteria and production order lengths for each pile type and hammer to be used for pile installation. Provide PDA testing, production pile lengths, and pile driving criteria by a NCDOT pre-approved company. Meet the guidelines for NCDOT PDA reports from the Geotechnical Engineering Testing Contract for PDA test reports. To obtain a list of pre-approved Geotechnical Engineering Testing Contract companies to perform PDA testing and guidelines for PDA test report contact Geotechnical Engineering Unit Contract Administrator at 919-250-4088. PDA Testing Engineer must be a professional engineer registered in the State of North Carolina. Summarize recommendations for production pile lengths and pile driving criteria on a separate cover sealed by both the PDA Testing Engineer and the Geotechnical Design Engineer. Provide additional PDA testing for any revisions to pile driving criteria previously accepted.

Perform a minimum of one (1) PDA test per 600 foot of bridge length (dual bridges are counted as one structure) for each pile size or pile type or hammer driving system. The Geotechnical Engineering Unit will determine if additional PDA testing is necessary. Acceptance by the Geotechnical Engineering Unit of the pile foundation design and approval of pile driving systems before beginning PDA testing is required. Test piles in accordance with ASTM D 4945-89, Standard Test Method for High Strain Dynamic Testing of Piles and this scope of work. A minimum of 30 blows per foot (300 mm) based on GRLWEAP Version 2002 or later is required to verify the design bearing capacity with a minimum factor of safety of two. Stresses during driving may not exceed the limits outlined in the FHWA manual “Design and Construction of Driven Pile Foundations”. Obtain acceptance by the Geotechnical Engineering Unit of all PDA test reports, pile driving criteria and recommendations before driving of piles.

Use current NCDOT inspection forms for drilled piers available on the DOH website under Geotechnical Engineering Unit Forms in “Doing Business with NCDOT”. The Department will use the Shaft Inspection Device (SID) in accordance with the Drilled Piers Special Provision to inspect the first drilled pier excavation that is not hand cleaned for each bridge location. Install Crosshole Sonic Logging (CSL) tubes in all drilled piers.

CSL testing may be required for up to a third of the drilled piers for each bridge. The NCDOT and/or the construction engineering inspection (CEI) firm will determine which piers will be CSL tested. The Geotechnical Engineering Unit will determine if the CSL results are acceptable.

Verify bearing on rock for spread footings in the field during construction.

Provide field quality control for all bridge foundations including pile driving records and drilled pier inspection forms. Provide field quality control for all retaining wall and sound barrier foundations including verifying subsurface conditions for drilled piers and bearing for shallow foundations.

The pre-qualified geotechnical firm that did the original design must perform any changes to the foundation designs. All changes must be based upon additional information, subsurface investigation and/or testing. Drilled pier tip elevations may not be changed during construction unless the prequalified geotechnical firm that did the bridge foundation design redesigns the drilled pier from an SPT/rock core boring in accordance with ASTM standards at the subject pier location or observations of the drilled pier excavation. If a drilled pier is designed based on a boring, do not drill a boring inside an open drilled pier excavation. Locate the boring within three pier diameters of the center of the subject pier and drill to a depth of two pier diameters below the revised tip elevation. If a drilled pier is redesigned based upon observations of the drilled pier excavation, the geotechnical engineer of record must be present during the excavation to determine the actual subsurface conditions. Send copies of revised designs including additional subsurface information, calculations and any other supporting documentation sealed by a professional engineer registered in the State of North Carolina to the Geotechnical Engineering Unit. Also, send copies of any inspection forms related to foundations, settlement or retaining walls to the Geotechnical Engineering Unit.

Geotechnical Roadway and Structure Foundation Guidelines:

The geotechnical firm is responsible for (but not limited to) addressing the following items for the roadway and structure foundation design of the project.

1. Analyze the stability of embankments and utilize recognized geotechnical engineering designs and construction methods to ensure embankment stability.
2. Analyze embankment settlement and if necessary, recommend mitigation through the use of undercut or soil improvement methods such as surcharges, waiting periods, wick drains, etc.
3. Address the following regarding embankment problems:
    a. The feasibility of using geo-textiles to achieve stability, reduce excavation of soft soils and reduce the effect of settlement on the roadway.
    b. The need for settlement gages, slope inclinometers and other embankment monitoring devices and their placement and location.
4. Determine the feasibility and recommend types of retaining walls or shoring for permanent or temporary situations. Design all retaining walls in accordance with the current allowable

stress design AASHTO *Standard Specifications for Highway Bridges* and applicable FHWA manuals.

5. Determine amount of and recommend methods to mitigate any differential settlement problems at locations of culverts and utilities.
6. Analyze the stability of cut sections. Utilize recognized geotechnical engineering designs and construction methods to ensure cut slope stability.
7. Analyze the stability of roadway approaches (to the distance from the bridge that affects the stability and design of the bridge foundations) and particularly the end slopes under the bridge, utilizing recognized geotechnical engineering designs and construction methods to ensure stability.
8. Recommend pile, drilled pier or spread footing foundations for structures with regard to bearing capacity, lateral stability, buckling analysis for piles, scour, settlement and constructability. Use the 100 year design scour elevation for foundation design.
9. Recommend allowable bearing pressure for spread footings considering settlement, adjacent foundations, water table, scour, etc. The scour critical elevation for a spread footing is at the bottom of footing elevation.
10. Address the following regarding pile and/or drilled pier foundations:
    a. Method of support – skin friction, tip bearing or combination of both.
    b. Tip elevations no higher than and estimated pile lengths.
    c. Allowable axial load.
    d. Settlement.
    e. Number and location of test piles or piers and dynamic and/or static load testing.
    f. Wave equation analysis using an appropriately chosen pile hammer and cushion material for each bent.
    g. Necessity of using steel pile tips for concrete piles or pile points for steel piles.
    h. Effects of vibration on adjacent construction or existing structures.
    i. Corrosion effects of various soils and water (See Structure Design Unit's Policy Manual).
    j. Downdrag on piles or piers.
    k. Lateral stability and allowable horizontal deflections.
    l. Design scour and scour critical elevations. The scour critical elevation for a drilled pier foundation is the 500 year design scour elevation. The scour critical elevation for a pile foundation is when the scour reaches an elevation that results in a factor of safety equal to 1.
    m. Point of fixity or point of rotation.
    n. Lateral squeeze for piles.
11. Include in the geotechnical recommendations report a summary table of the bridge foundation recommendations including the following:
    a. State project number, TIP number, county, description and bridge station.
    b. Bent (work point) stations, types of foundations, allowable loads, bottom of cap or footing elevations, estimated pile lengths and tip elevations.

12. Address the following items, when applicable, as notes on plans or comments and attach to the summary table:
    a. All appropriate notes on plans (See Structure Design Unit's Standard Foundation Notes on Plans).
    b. End slope and extent of slope protection.
    c. Waiting periods for approach slab construction or end bent construction.
    d. Battered piles.
    e. Point of fixity or point of rotation elevations.
    f. Design and scour critical elevations.
    g. Tip elevations no higher than.
    h. Steel pile points for steel piles or steel pile tips for concrete piles.
    i. Number and location of test piles or piers, load tests, dynamic and/or static testing.
    j. Required rock socket for drilled piers.
    k. Need for permanent steel casing including casing tip elevations, SPT, SID Inspection, CSL and slurry use in accordance with the Drilled Piers Special Provision.
    l. Range of allowable hammer energies for concrete and pipe piles.

Address any other items affecting the foundation design on the summary sheets and include all final recommendations on the summary sheets.

The geotechnical firm's attention is directed to the latest design guide entitled *Soils and Foundations Workshop Manual*, NHI Course No. 13212, Publication No. FHWA HI-88-009, published by the FHWA.

GEOENVIRONMENTAL SCOPE OF WORK

The Department prepared a GeoEnvironmental Impacts Evaluation which identified sixteen (16) known or suspected contaminated properties within the project corridor. Subsequent Preliminary Environmental Site Assessment reports were prepared for each property identified in the GeoEnvironmental Impacts Evaluation. These reports document the collection and laboratory analyses of soil and groundwater samples, and indicate the nature, contaminant concentrations, and approximate horizontal extent of all known soil and groundwater contamination within the project limits. Copies of these reports will be made available.

For the purpose of this section, contamination/contaminants shall be defined as any substance, which when discharged in any quantity may present an imminent and substantial danger to the public health or welfare. Petroleum shall be defined as any oil of any kind and in any form, including, but specifically not limited to, crude oil, diesel fuel, fuel oil, gasoline, lubrication oil, oil refuse, oil mixed with other waste, oil sludge, petroleum related products or by-products, and all other liquid hydrocarbons, regardless of specific gravity, whether singly or in combination with other substances.

Department Responsibilities:

- The Department shall remove all known underground petroleum storage tanks found within the project limits after the affected parcels are acquired but prior to construction. The Design Build Team should notify the Department immediately after acquisition of each contaminated parcel identified in the Preliminary Environmental Site Assessment reports so the Department may remove all known underground storage tanks. The Department shall make every reasonable effort to avoid conflicts with the Design / Build Team's schedule and operations.

Design / Build Team Responsibilities:

Right of Way Acquisition

- Follow all Department recommendations pertaining to the acquisition of contaminated right of way. These recommendations will be made available to the Design Build Team. The Department provides these recommendations for right of way acquisition based upon information obtained through the above-noted Preliminary Environmental Site Assessment Reports. These recommendations include acquisition through Permanent Easement and/or withholding all or part of payments to property owners. The Design / Build Team shall deposit all withheld money in accordance with current Right of Way Branch procedures. Right of way within properties which are known to contain underground storage tanks or which are known to be contaminated shall be acquired through Permanent Easement only.

Known Contaminated Sites

The Design/Build Team shall be responsible for removal and disposal of all known contaminated materials encountered during project construction. Approximate horizontal limits of contaminated media that may impact project design and construction are provided within the Preliminary Environmental Site Assessment reports noted above. The Design/Build Team should note that contaminated soil excavation limits provided in the Preliminary Site Assessment reports are based on a geoenvironmental interpretation of all available subsurface data and may not necessarily reflect the actual subsurface conditions between borings and samples. Observed groundwater levels and contaminant levels are as recorded at the time of the investigation. These conditions may vary with time according to climatic and other conditions. The Department does not warrant or guarantee the sufficiency or accuracy of the contaminant concentrations or extent provided in the Preliminary Site Assessment reports.

The Design/Build Team shall either excavate an additional 10 feet of soil beyond the depicted horizontal limits or provide on-site screening to ensure the removal of all contaminated soil. In addition, the Design-Build Team shall be responsible for post-excavation soil samples, collected per accepted protocol and submitted under chain-of-custody to a certified laboratory for all applicable site-specific chemical analyses, to document any remaining contaminant concentrations.

Unknown Contaminated Sites

- Immediately notify the Department when the Design-Build Team's operations encounter or expose any abnormal condition which may indicate the presence of a hazardous, contaminated, and/or toxic material not previously identified in the Preliminary Environmental Site Assessments. The Design / Build Team's operations shall be discontinued in the vicinity of the abnormal condition until the Department and the Design / Build Team develop a consensus remedy. The presence of barrels, old or abandoned underground storage tanks, discolored earth, buried debris such as metal and wood, 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.

- If the Design Build Team removes unanticipated contaminated material, this work shall be done in accordance with the provisions under General Information. The Design/Build Team shall be reimbursed for such work through Supplemental Agreement negotiated and executed prior to commencement of the work.

- As an alternative to the Design / Build Team's waste disposal responsibilities for unanticipated contaminated materials, and to achieve timely removal of such materials, the Design / Build Team may select the following option:

  The Department will perform the work through a geoenvironmental contractor. All such work shall commence within 72 hours after determination that the Department will do the

work. The Design / Build Team and the Department's Contractor shall cooperate with each other to the fullest extent possible. The Design / Build Team and the Department's Contractor shall conduct their respective operations in such a manner as to avoid damaging any work being performed by others or which others have completed.

General Information

- The Design / Build Team shall employ a fully experienced and qualified geoenvironmental firm to dispose of contaminated soil and groundwater and any other contaminants removed from within the project right of way during construction activities. The Design / Build Team must furnish and deliver to the Department reports accompanied by all documents necessary to meet the laws, rules and regulations of the environmental regulatory agency(ies) having jurisdiction over each respective site from which waste materials are removed. Reports documenting the Design / Build Team's work and laboratory analyses of collected samples shall be submitted to the Department within 30 calendar days after its completion. If the Design/Build Team removes any unanticipated underground storage tanks, a UST Closure Report must be presented to the Department within twenty-five (25) calendar days after receipt of laboratory data. The Design / Build Team shall not submit any reports directly to the regulatory agencies.

- Transport all contaminated materials removed during construction to a waste treatment/disposal facility that is fully approved and permitted by all applicable environmental regulatory agencies to receive, treat and/or dispose of the material. The Contractor may haul contaminated materials provided they meet all hazardous material regulations, Federal Motor Safety Carrier regulations and state laws, and all other applicable rules and regulations regarding such activities. It shall be the Design / Build Team's responsibility to locate such a facility. Departmental approval of the specific facility identified for use by the Design / Build Team must occur prior to removal of any materials from the project limits. The Design / Build Team shall provide to the Department all transportation manifests and certificates of acceptance from the receiving disposal facility on a weekly basis. The Contractor must provide to the Department a Certificate of Remediation from the disposing / treating facility within thirty (30) days after removal of the materials from the project site unless alternate arrangements are approved in writing by the Department. The Department will be the regulatory generator of all waste. The Design / Build Team will act as agents of the Department for signing all waste transportation and disposal manifests as necessary.

- The Design / Build Team is entirely responsible for compliance with all rules and regulations pertaining to excavation, transportation and disposal of contaminated materials including, but not limited to, those of OSHA, EPA, DOT, DENR and local governments. Examples of such rules and regulations include, but are not limited to, 29 CFR 1910 and 1926, 40 CFR 260 - 265, 49 CFR 173 and 178, 15A NCAC 13A *North Carolina Hazardous Waste Management Rules*, NCGS 130A - 310 *Inactive Hazardous Sites*, the *Federal Comprehensive Environmental Response*, *Compensation and Liability Act* (CERCLA) and the *Federal Resource Conservation and Recovery Act (RCRA)*. The Contractor must note that inclusion

of this paragraph is meant to highlight the Design / Build Team's responsibility for regulatory compliance in all phases of work on this project.

- The Design-Build Team shall be responsible for any costs (direct or indirect) associated with damage and or cleanup of a hazardous substance and/or oil spill caused by it or its agent. This responsibility shall extend to freight carriers hired by the Design-Build Team to deliver a commodity or service to the Department. The Design-Build Team shall comply with all Local, State, and Federal requirements for the proper handling of hazardous substances and/or oil. In addition, the Design-Build Team agrees to indemnify and hold the Department harmless against all claims, liabilities, and costs, including attorneys' fees, incurred in the defense of any claim brought against the Department resulting from such a spill.

HYDRAULICS DESIGN SCOPE OF WORK

The Design-Build Team will be required to do the following:

- The Design-Build team shall employ a private engineering firm to perform hydraulic design for all work required under this contract. The private engineering firm must be prequalified for Hydraulic Design work under the Department's normal prequalification procedures prior to bid submission.

- Storm Drainage Design

- All design in accordance with criteria provided in the North Carolina Division of Highways "Guidelines for Drainage Studies and Hydraulics Design-1999" and the addendum "Handbook of Design for Highway Drainage Studies-1973"

- Bridge Survey Report for Cashie River and adjacent wetlands. No sag will be allowed on bridge. A closed drainage system with an appropriately sized basin (located outside of the wetlands) shall be required for the entire Cashie River Bridge unless otherwise approved at the 4B and 4C meetings. Temporary work bridge or top down construction will be used.

- Prepare and obtain a "No-Rise / No-Impact" Certification per the FEMA *Guidance "No-Rise / No-Impact" Certification for Proposed Developments in Regulatory Floodways*.

- Culvert Survey Reports will be required for all culverts that are extended, replaced, or rehabilitated.

- Conduct hydraulic analyses for the -Y1- and -Y1A- culverts and existing cross pipes in the widening portion of the project and replace any deficient pipes and/or culverts.

- Stormwater Management Plan

- Minimum ditch grade .3%

- Design-Build Team will conduct the 4B & 4C meeting. All associated work dealing with hydraulics review and permit review will be the responsibility of the Design-Build Team. The Design-Build Team will provide hydraulics plans and permit impact sheets (1/2 size plans) to the State Alternative Delivery Systems Engineer 5 weeks before respective meetings.

- Design-Build Team will take minutes of the above meetings and provide them to the department within 3 business days.

- Obtain state stormwater permit

- Pre and Post Analysis for increases in discharge and take appropriate action in accordance with the above guidelines to make sure additional drainage is adequately handled. Design-Build Teams are not responsible for addressing the adequacy of pipe systems outside of the right-of-way.

- Equalizer pipes shall be required through the wetlands. Sizing and spacing shall be based on the site conditions.

SIGNING SCOPE OF WORK

General: The Signing plans will be prepared by the Design Build (DB) team in accordance with the latest edition of the 2003 *Manual on Uniform Traffic Control Devices (MUTCD)*, the 1988 NC *Supplement to the MUTCD*, NCDOT *Standard Specifications for Roads and Structures* (January 2002), the NCDOT *Roadway Standard Drawings* (January 2002) for the design and development of signing plans, the latest Standard Specifications for *Structural Supports for Highway signs, Luminaires, and Traffic Signals* published by AASHTO, and the contract requirements for Signing plan design and preparation including specific submittal requirements for department review (attached). All electrical installations are the responsibility of the Design Build Team and must meet NEC, State, and local codes. All electrical/electronics equipment and devices must be UL approved and listed.

Specific Signing Items:

Signs Furnished by Design Build Team: The signs will be furnished by DB team according to the specifications provided by the department. These provisions apply to all signs, inside the project limits and all signing outside the projects limits that are related to the interchanges inside the project limits. List of approved vendors will be provided.

Sign Design: The DB team will be responsible for all type A, B, and D sign designs for ground mounted signs. The DB team will be responsible for determining, sizing, and locating all type E (warning and regulatory signs) and type F signs (route marker assemblies). Route marker designation will be provided to the awarded DB team. The DB team is not responsible for designing and locating any new proposed LOGO sign, however; the DB team will be responsible for relocating existing LOGO signs due to widening or realignment.

Sign Locations: The DB team will be responsible for determining the station locations for all signs. The DB team also must coordinate with known existing and future projects to avoid sign placement in locations where their usefulness will be short-lived.

Overhead Sign Assemblies: If needed, all overhead sign assemblies will be designed and fabricated by the DB team and must meet all department design requirements. The coordination with future projects should be considered when designing and fabricating overhead sign assemblies. The DB team is responsible for performing any structure analysis on any of the existing overhead sign assembly structure that has been modified for reuse. The windspeed for use in the design is 120mph and the windload is the rectangular area figured from 25% larger than the highest sign on the assembly and extended 4’ from the left and the right furthest edges of the signs on the assembly. Standard specifications for the requirements including shop drawings designs, submittals and examples of structure line drawings completed for other projects will be provided via CD. See Contract Requirements for the plan requirements.

Ground Mounted Support Designs: NCDOT will provide the software for support design. DB team is responsible for all design, fabrication, and installation. Instructions for loading support design software will be available via CD.

Guardrail or Other Protection for Signs and Overhead Assemblies: The DB team will be responsible for determining and designing any protection for sign installations and coordinating this design work with the department for approval.

Signing Typical Sheets: Sheets for use in summarizing pay items, standard specifications, and quantities and sheets for compiling type E signs and type F signs will be provided by the department on a compact disk. Typical sheets showing NCDOT signing standards for interchanges will also be provided for design reference.

Removal and Disposal of Existing Signs: The DB team will be responsible for determination of existing signs that will no longer be needed upon completion of the project, such as on –Y– lines and project tie-ins. The DB team will be responsible for removal and disposal of these signs and supports. These signs will need to be shown and noted on the plan view sheets of the signing plans designed by DB team.

Final Signing Design Plans: Final Signing Plans must be approved by the department.

Signing Construction Revisions: Any construction revision must be submitted to the department for approval.

Sign Lighting Catalog Cut Submittals: If overhead sign assemblies are needed, use section 2E-9 of the NC supplemental to the 1988 MUTCD and the chart below to determine the possible lighting needs for this project. The Technical proposal will need to address the need for or against lighting with justification for reason. Sign lighting catalog cut transmittals shall be generated using the NCDOT Signing Section's online qualified products list (QPL). The online QPL is located at:

http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/SIGN/qpl/qpl.html

If a product complies with the requirements of the NCDOT Standard Specifications for Roads and Structures and isn't contained in the online QPL, the submittal process guidelines are online at:

http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/SIGN/qpl/equipment_submittal.html

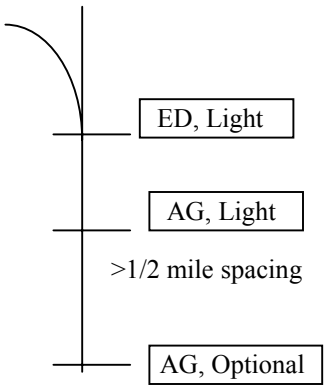
Luminaire retrieval system (LRS) will not be deemed necessary for any overhead sign on this project.

Interpretation of 1988 MUTCD NC Supplement
Section 2E-9: Overhead Sign Lighting

1. If an overhead does not have 1200' of continuous, unobstructed sight distance, then light the sign(s).

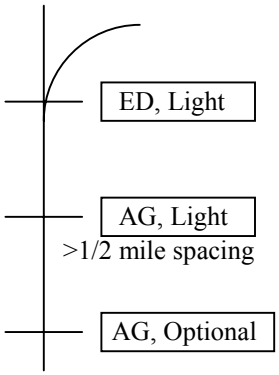
2. If the sight distance is 1200' or more, then the following Apply:

1.A.



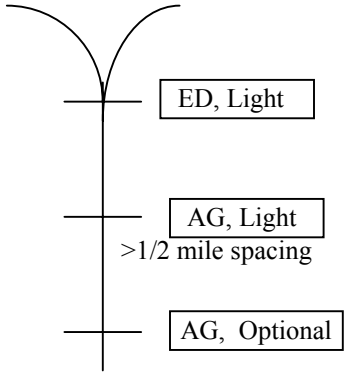
Left Hand Exit(s)

1.B.



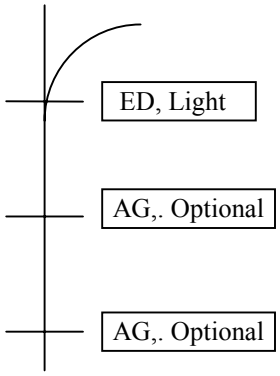
Lane Drops

1. & 2.



Route / Ramp Split

2.



Right Hand Exit(s)

Legends:

ED	=	Exit Direction
AG	=	Advance Guide
Light	=	Shall Light
Optional	=	Should Light - refer to 4.
☐	=	Represents Overhead Sign Structure

>1/2 mile spacing = The distance between 2nd AG sign and ED sign must be at least 1/2 mile to consider optional lighting for the 1st AG sign

3. Light all overheads on roadways with four or more lanes in one direction and a speed limit greater than 45 mph. (This rule doesn't apply to this project)

4. Light all overheads on roadways with two or three lanes in each direction having traffic volumes at or near capacity, truck traffic 10% or more, and a speed limit of 45 mph or greater. (This rule doesn't apply to this project)

Requirements For The Preparation Of Signing Plans

I. Signing Information Available Electronically Per Request.
Electronic information prepared by Signing Section is available per request:

Non-proprietary computer software for support and sign design is included in this information.

ll. Description of Work Required of Design Build (DB) Team
An understanding of the signing sections of the *MUTCD*, 1998 NC *Supplement to the MUTCD*, 2002 NCDOT *Standard Specifications for Roads and Structures*, and 2002 NCDOT *Roadway Standard Drawings* are required for design and development of signing plans.

A. Signing Plan Preparation: Prepare signing plans (SP) on Microstation J and include the following information and supporting documentation:

1. General Requirements: Accurate 1" = 100', (for metric projects 1:1000), CADD drawings of roadway plans, hereafter referred to as signing plan view sheets, which show pavement, paved shoulders, bridges, culverts, guardrail, drainage pipe, survey lines, right-of-way lines, stationing as labeled on roadway plans, equalities, north orientation for each sheet, signalized intersections labeled, beginning Signing project station, and ending Signing project station. Proposed traffic flow arrows shall be shown on these sheets at the beginning and end of each sheet, at overhead sign locations, and following any lane transitions.

2. Sign Locations: Locations of re-erected existing signs, existing signs remaining in place, proposed signs, and future signs by station on L-lines. No stations are required for signs erected on intersections and Y-lines. When stationing is not available, such as outside of the project limits, signs are required to be dimensioned from a fixed point or sign spacing shall otherwise be indicated on plans. Graphic representation of all existing, proposed, and future signs on the L-lines, Y-lines, and ramps are to be positioned on the plans as traffic would see them.

3. Sign Design: Signs will be designed to accommodate future messages when necessary. Determination of type E and F signs will be made by the DB team and included in signing plans.

4. Ground Mounted Support Design for Type A and B Signs: Determination of S dimensions from X-sections (or from field survey when X-sections are not available) is required for type A and B ground mounted signs. Design of supports is required using these S dimensions. Support chart including support sizes, lengths, and weights, for all type A and B ground-mounted signs is required. (Spreadsheets are available electronically through FTP.)

5. Type D, E and F signs: Charts including sign number, sign size, and number of U channel posts for all Type D, E and F signs is required.

6. Special Provisions: Project Special Provisions for special signing items are required to be written by the DB team and sealed by a professional engineer of the DB team.

7. Overhead Sign Assembly: An overhead sign assembly cross-section sheet is required for each overhead sign assembly, hereafter referred to as a structure line drawing. These sheets include lane widths, slopes, location of supports, S-dimensions at support locations, positioning of signs relative to travel lanes, sign messages and / or future messages, future signs, minimum and maximum vertical clearance, existing and proposed guardrail, walkway detail (if required), labeling of facility and direction of travel, windload and deadload requirements to be used for the design of structure and footings, and all applicable notes.

8. Coordinate With Other Traffic Engineering Plan Requirements: The DB team is required to coordinate with the Traffic Control and Pavement Marking & Delineation plans when locating and designing overhead signs and sign assemblies, lane drop signing, and "All Traffic Exit" signing and to ensure that they match the requirements of the signing plans. The DB team is required to label signalized locations on the signing plans.

9. Requirements for Sign Lighting Design: Refer to section 2E-9 of the 1998 NC Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways. The lighting design shall be engineered to meet the requirements of section 905 and 1097 of the 2002 NC *Standard Specifications for Roads and Structures* in an energy efficient and cost effective manner. The DB team shall design the lighting through computer aided lighting analysis, and the following provisions will be expected of the DB team:

I. The DB team shall provide the Signing Section with a licensed electronic copy of the lighting design software, if design software other than Visual Professional Edition – Release 2.2 is used.
II. With each signing plan submittal, the DB team shall provide the Signing Section with an electronic copy of the sign lighting design. The Signing Section shall be capable of reviewing the lighting design using the software provided in provision 9-I above.

B. Signing Plan Submittals: The DB team shall make submittals for review by the Traffic Engineering and Safety Systems Branch Signing Section at the following milestones:

Note: 1) The Signing Section may combine or eliminate milestone submittals depending on project specifics.

1. Initial SP review: 2 (1/2 size) sets of Signing Plans and 2 copies of roll out ½ size plan view consisting of the signing plan view sheets with all existing, proposed, future signs (including messages) located in the format of the final product. All necessary sign relocations are also required to be included in this submittal. The approval of this review shall complete 50% of the SP work.

Submittal of 1 (1/2 size) corrected set of initial SP is required for review by field personnel and FHWA.

2. Interim SP review: 2 (1/2 size) sets of plans and 2 copies of roll out ½ size plan view with plans consisting of the corrected signing plan view sheets with all signs located, completed type E and F sign sheets, ground-mounted sign support chart with support designs and design calculation information (S-Dimension Worksheets), structure line drawings, and lighting design sheets completed in the format of the final product. The approval of this submittal shall complete 90% of the SP work.

Submittal of 1 (1/2 size) corrected set of interim SP is required for approval by Signing Engineer.

3. Final SP review: 2 (1/2 size) sets of plans and 2 copies of roll out ½ size plan view sheets with plans consisting of the summary of quantities sheet with list of applicable Roadway Standard Drawings, quantities estimate and computations, draft of Project Special Provisions (other than those prepared and sealed by NCDOT), and all corrected signing sheets and supporting documentation required in the 50% submittal. The approval of this submittal shall complete 100% of the SP work.

4. Final Plan submittal: Original sealed set of approved signing plans and 5 (1/2 size) copies, original quantities estimate and computations, sign designs in binder including cover sheet listing signs (form for cover sheet available electronically through FTP), original of Project Special Provisions sealed by Professional Engineer of DB team (see II.A.6. for when required), design files on CD that have name of sealer, registration number, and date of sealing inserted where seal, signature, and date are located on original plans, and all other supporting documentation shall be submitted for final acceptance by the Signing Section of the Traffic Engineering and Safety Systems Branch. The approval of this submittal shall complete 100% of the SP work.

C. Final plans shall meet the approval of the Department. Said approval shall not relieve the DB team of liability or the responsibility to correct any error in their plans or computations after the 100% Final Plan Submittal. The DB team will be required to make any such corrections without additional compensation.

III. Work Standards

A. The plans, sign designs, sign support designs, design and quantity calculations, project special provisions, any other supporting documentation, and design files are required on CDs and shall be submitted to the Department upon completion of the work and become the property of the Department. Cadd work units that are compatible with NCDOT are required such that when plans are printed by NCDOT, plans will be identical to the hard copy of what was submitted by DB team.

B. All plan sheets shall be 34” x 22” in finished dimensions. The Department may furnish the DB team with sheets to incorporate into their plans prior to final plan reproductions.

C. All plan sheets shall conform to the requirements of the signing section. A 4 ½ ” x 4 ½ ” area for full size sheets, directly below the project information block in the upper right corner of all sheets, shall be left blank and unobstructed.

D. Reproduction

1. The DB team shall be responsible for providing the following:

At 100%: 1 full size original set of plans sealed by Professional Engineer

The DB team shall be responsible for reproduction of the signing plans as necessary to provide the following bond prints:

At 50%: 2 (1/2 size) sets interim SP review prints; 2 copies of roll out ½ size plan view;
1 (1/2 size) set of corrected interim SP review prints;
At 90%: 2 (1/2 size) sets final SP review prints; 2 copies of roll out ½ size plan view;
At 100%: 5 (1/2 size) copies of approved final SP sealed by Professional Engineer;
1 roll out ½ size plan view.

E. Project Special Provisions - the North Carolina Department of Transportation *Standard Specifications for Roads and Structures*, *2002**, and the Standard Special Provisions issued by the Division of Highways shall apply for materials and construction on all work described above. The DB team shall prepare thorough and complete Project Special Provisions covering those items of material, work, and other conditions for the signing items of the project which are not covered at all, or not covered as desired in the Standard Specifications or Standard Special Provisions. These Project Special Provisions shall be submitted for review at the time prints of final plans are submitted for review. The 100% submittal of these Project Special Provisions shall be sealed by a Professional Engineer of the DB team.

TRAFFIC CONTROL SCOPE OF WORK

I. Traffic Control Plans

Design and prepare the Traffic Control Plan for this project. Development of the Traffic Control Plan should proceed as follows:

Submit a Staging Concept, a description of the sequenced phases and steps to be followed in implementing the construction plans, of the Traffic Control Plan to the Resident Engineer and State Alternate Delivery Systems Engineer for review and acceptance. The Staging Concept for the entire project must be accepted before proceeding further with the development of the Traffic Control Plan. A complete Traffic Control Plan will not be required to begin phased construction activities on this project. If a barrier system will be used, the Staging Concept will need to identify what barrier system will be proposed for approval.

Construction may begin on a Phase once the Traffic Control Plan for that Phase has been sealed by the Design Build designer and accepted by the State Alternate Delivery Systems Engineer.

The Traffic Control Plan will identify all maintenance of traffic needs, including lane closures, road closures, traffic control devices, temporary lane markings, construction signing, phasing, project notes and other possible needs. The plan will identify lane widths, transition taper widths and any geometry necessary to define placement of devices and temporary roadway alignments. The Traffic Control Plan will show the pavement design to be used for pavement markings/markers for temporary patterns on existing/proposed/temporary roadways. NCDOT's *Roadway Standard Drawings* – Sections 1100 and 1200 are for traffic control and will need to be incorporated into the plans for most work activities. Detailed phasing plans will be required where traffic control activities and device placement cannot be entirely covered by these standard drawings. Sealed and accepted plans showing all pavement markings which are not covered in the NCDOT's *Roadway Standard Drawings* are required prior to placement of any temporary markings and temporary markers. Ensure the development of the Traffic Control Plan is in compliance with the NCDOT 2002 *Roadway Standard Drawings*, NCDOT 2002 *Standard Specifications for Roads and Structures*, and the 2003 *Manual on Uniform Traffic Control Devices (M.U.T.C.D.).*

Develop Traffic Control Plan details at a scale of 1"=50' (metric 1:500) and overviews at a scale of 1"=500' (metric 1:5000) unless otherwise agreed upon. Use the *Requirements for the preparation of Traffic Control & Pavement Markings plans* as a guideline to developing plans. The Traffic Control Website provides key information necessary in preparing the Traffic Control Plans and is continuously updated. Traffic Control Website is located at the address shown below.

http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/tc/

Use traffic control devices that conform to all NCDOT requirements and are listed on the Department's Approved Products List as shown on NCDOT's Traffic Control Website. Use of devices not shown on the Approved Product List will need approval from the Traffic Control Unit.

The Traffic Control Unit does not have traffic counts to provide for use during development of the Traffic Control.

Coordinate with the Engineer to promote public awareness for this project. Hold a coordination meeting with the Department one month prior to the beginning of construction. The Department will be responsible for the initial public information effort through its IMPACT Team. Once the project is announced formally to the public, it shall be the Design-Build Team's responsibility to hold public meetings and press conferences, make media announcements, distribute flyers, and post advertisements.

Inform the following groups at least 3 weeks in advance of any construction activities that will have significant impact on the public:

Governmental agencies, municipalities directly affected by the construction, transportation services, emergency services, neighborhood groups, private homes, industry and businesses, and any other organization as deemed necessary by the Engineer.

Submittal requirements:

- Staging Concept

  Please refer to the *Requirements for the preparation of Traffic Control & Pavement Markings plans* for Staging Concept requirements.
  - Submit 5 sealed half-size sets of plans, deliver 2 sets directly to the Resident Engineer and deliver 3 sets directly to the State Alternate Delivery Systems Engineer.

- Phase submittals

  Phase submittals should include more detailed information than what was required for the staging concept. Plans can be used for construction if approved and no changes are required. Section B for preparing 50% submittals in the *Requirements for the preparation of Traffic Control & Pavement Markings plans* has a lot of good information that should be researched when preparing phase submittals.
  - Submit 5 sealed half-size sets of plans, deliver 2 sets directly to the Resident Engineer and deliver 3 sets directly to the State Alternate Delivery Systems Engineer.

After the reviewed phase submittal is returned, if any comments require changes to the plans, a sealed set of revised plans will be required before construction begins on that phase.

- Submit 5 sealed half-size sets of plans, deliver 2 sets directly to the Resident Engineer and deliver 3 sets directly to the State Alternate Delivery Systems Engineer.

II. Final Pavement Marking Plans

Construction may proceed only with an accepted and sealed Final Pavement Marking Plan. Submit the Pavement Marking Plan to the Resident Engineer and State Alternate Delivery Systems Engineer for review and acceptance prior to the final pavement marking and marker installation. Prepare Final Pavement Marking Plans at a scale of 1"=50' unless otherwise agreed upon. NCDOT's 2002 *Roadway Standard Drawings* – Sections 1100 and 1200 pertaining to pavement markings, markers and devices left on the project will be utilized where applicable. Prepare detailed plans for all locations where NCDOT's *Roadway Standard Drawings* do not completely describe the required markings and markers. The plans will show lane widths, transition tapers, lane lines, edge lines, gore markings, symbols, word messages, and other appropriate markings and markers.

Use pavement marking and marker products that conform to all NCDOT's requirements and specifications and are listed on the Department's Approved Products List as shown on the NCDOT's Traffic Control Website. Install pavement markings and markers in accordance with NCDOT's *Standard Specifications for Roads and Structures*, and in accordance with the manufacturer's procedures and specifications.

Coordinate with the Resident Engineer and State Alternate Delivery Systems Engineer for designing and installation of final/temporary pavement markings and/or Traffic Control Devices needed for the traffic pattern left in place at the completion of this project.

Submittal requirements:

- Submit Preliminary Pavement Marking Plan with Staging Concept for approval. (See Section I. above) Please refer to the *Requirements for the preparation of Traffic Control & Pavement Markings plans* for Staging Concept and preliminary pavement marking plan requirement.
  - Submit 5 unsealed half-size sets of plans, deliver 2 sets directly to the Resident Engineer and deliver 3 sets directly to the State Alternate Delivery Systems Engineer.

- Submit Final Pavement Marking Plan with final phase submittal package. Refer to the *Requirements for the preparation of Traffic Control & Pavement Markings plans* for Final Pavement Marking Plan requirements. If no changes are required, plans can be used to install final traffic control devices, final pavement markings and final pavement markers when required by final phase submittal.

- Submit 5 sealed half-size sets of plans, deliver 2 sets directly to the Resident Engineer and deliver 3 sets directly to the State Alternate Delivery Systems Engineer.

After the reviewed Final Pavement Marking Plan is returned, if any comments require changes to the plans, a sealed set of revised plans will be required before final traffic control devices, final pavement markings and final pavement markers can be installed.

- Submit 5 sealed half-size sets of plans, deliver 2 sets directly to the Resident Engineer and deliver 3 sets directly to the State Alternate Delivery Systems Engineer.

III. Project Requirements

The following general notes apply at all times for the duration of the construction project.

A. Time Restrictions

1. Intermediate Contract Time for Lane Narrowing, Closure, Holiday and Special Event Restrictions.

The Contractor shall maintain the existing traffic pattern as a minimum and not close or narrow a lane of traffic on US 13&17, US 13 Bypass and US 13/ King St. during the following times:

6:00 AM to 8:00 AM and 4:00 PM to 6:00PM	Monday thru Friday

The Contractor shall not install, maintain or remove any traffic control device required for narrowing or closing a lane during the times listed above.

In addition, the Contractor shall not close or narrow a lane of traffic on US 13&17, US 13 Bypass and US 13/ King St., detain and/or alter the traffic flow during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

(a) For New Year's, between the hours of 6:00 a.m. December 31st to 6:00 p.m. January 2nd. If New Year's day is on a Saturday or a Sunday, then until 6:00 p.m. the following Tuesday.

(b) For Easter, between the hours of 6:00 a.m. Thursday and 6:00 p.m. Monday.

(c) For Memorial Day, between the hours of 6:00 a.m. Friday to 6:00 p.m. Tuesday.

(d) For Independence Day, between the hours of 6:00 a.m. the day before Independence Day and 6:00 p.m. the day after Independence Day.

If Independence Day is on a Saturday or Sunday, then between the hours of 6:00 a.m. the Thursday before Independence Day and 6:00 p.m. the Tuesday after Independence Day.

(e) For Labor Day, between the hours of 6:00 a.m. Friday to 6:00 p.m. Tuesday.

(f) For Thanksgiving, between the hours of 6:00 a.m. Tuesday to 6:00 p.m. Monday.

(g) For Christmas, between the hours of 6:00 a.m. the Friday before the week of Christmas day and 6:00 p.m. the following Monday after the week of Christmas.

Liquidated Damages for the above lane closures, narrowing of lanes, holidays and special events time restriction for US 13&17, US 13 Bypass and US 13/ King St. is $500.00 per hour for this Intermediate Contract Time.

2. Intermediate Contract Time for Road Closure Restrictions for Construction Operations.

The Contractor shall maintain the existing traffic pattern as a minimum for all roadways and follow the road closure restrictions listed below. When a road closure is used, the Contractor shall reopen the travel lanes by the end of the road closure duration to allow the traffic queue to deplete before re-closing the roadway.

The Design Build team will need to address in the technical proposal road closure durations for all the roads and respective operations listed in the below time restrictions and provide a traffic control concept on how traffic will be maintained. A percentage of the Technical proposal evaluation will be dependent on this information. The Contractor will need to address in the Traffic Control Staging plans and be subject for approval by the State Alternate Delivery Systems Engineer. If accepted, the appropriate Traffic Control Phase submittal will need to provide more detailed information.

a) The Contractor may close US 13/ King St. for a maximum of **30 minutes**, but not during the following times and only for the operations listed below the time restrictions:

6:00 AM to 12:00AM (midnight) Monday – Sunday

Operations:
- Hanging Girders
- Traffic shifts, including tie-in work and placement of pavement markings

b) The Contractor may close US 13&17, US 13 Bypass for a maximum of **15 minutes**, but not during the following times and only for Traffic shifts, including tie-in work and placement of pavement markings.

6:00 AM to 12:00AM (midnight) Monday – Sunday

Liquidated Damages for the above road closure time restriction US 13&17, US 13 Bypass and US 13/ King St., is $200.00 per 15 minute period or any portion thereof for this Intermediate Contract Time.

3. Hauling restrictions

See *2002 NCDOT Standard Specifications for Roads and Structures* for other specific hauling restrictions requirements.

Do not conduct any hauling operations against the flow of traffic of an open travelway unless the work area is protected by barrier or guardrail or otherwise directed by the Engineer.

B. Lane and Shoulder Closure Requirements

Remove lane closure devices from the lane when work is not being performed behind the lane closure or when a lane closure is no longer needed, or as directed by the Engineer.

When personnel and/or equipment are working within 40 ft of an open travel lane, close the nearest open shoulder using *Roadway Standard Drawing* no. 1101.04 unless the work area is protected by barrier or guardrail.

When personnel and/or equipment are working on the shoulder adjacent to an undivided facility and within 5 ft of an open travel lane, close the nearest open travel lane using *Roadway Standard Drawing* no. 1101.02 unless the work area is protected by barrier or guardrail.

When personnel and/or equipment are working on the shoulder adjacent to a divided facility and within 10 ft of an open travel lane, close the nearest open travel lane using *Roadway Standard Drawing* no. 1101.02 unless the work area is protected by barrier or guardrail.

When personnel and/or equipment are working within a lane of travel of an undivided or divided facility, close the lane according to the*, Roadway Standard Drawing*s, as directed by the Resident Engineer or by the State Alternate Delivery Systems Engineer. Conduct the work so that all personnel and/or equipment remain within the closed travel lane.

Do not work simultaneously, on both sides of an open travelway, within the same location, on a two-lane, two-way road.

Do not perform work involving heavy equipment within 15 ft of the edge of travelway when work is being performed behind a lane closure on the opposite side of the travelway.

Do not install more than 1.0 miles of lane closure on US 13 & 17, measured from the beginning of the merge taper to the end of the lane closure.

Do not install more than one lane closure, in any one direction, on US 13 & 17.

Maintain minimum 11' wide lanes, which are open to traffic on US 13 & 17 and on all –Y- lines. In addition, a minimum 2' offset from the edge of travel to any Traffic Control Device is required at all times.

Maintain minimum 4' wide inside and outside shoulders on US 13 & 17 and existing shoulder width on all –Y- lines which are open to traffic.

Utilizing lane and shoulder widths less than the minimal requirements for for all roads in the project limits will need prior approval from the State Alternate Delivery Systems Engineer.

C. Pavement Edge Drop Off Requirements

Backfill at a 6:1 slope up to the edge and elevation of existing pavement in areas adjacent to an opened travel lane that has a drop-off as follows:

Backfill drop-offs that exceed 2 inches on roadways with posted speed limits of 45 mph or greater.

Backfill drop-offs that exceed 3 inches on roadways with posted speed limits less than 45 mph.

Backfill with suitable compacted material, as approved by the Engineer, at no expense to the Department.

Do not exceed a difference of 1.5 inches in elevation between open lanes of traffic. Install advance warning 'UNEVEN LANES' signs (W8-11) 500 ft in advance and a minimum of once every mile throughout the uneven area.

D. Traffic Pattern Alterations

Notify the Engineer twenty-one calendar days prior to any traffic pattern alteration.

E. Signing

Install advance work zone warning signs when work is within 100 feet from the edge of travel lane and no more than three days prior to the beginning of construction.

When no work is being conducted for a period longer than one week, remove or cover all advance work zone warning signs, as directed by the Engineer, at no cost to the Department.

If a roadway will be closed more than 1hr, a signed detour route will be required. Submit the detour route and any necessary sign designs with the phase submittal it will be used, for review and approval.

Provide detour signing within and off the project limits.

Cover or remove all detour signs within and off the project limits when a detour is not in operation.

Ensure all necessary signing is in place prior to altering any traffic pattern.

F. Traffic Barrier

Install approved barrier system a maximum of two (2) weeks prior to beginning work in any location. Once the approved barrier system is installed at any location, proceed in a continuous manner to complete the proposed work in that location unless otherwise directed by the Engineer.

Once the approved barrier system is installed and if no work has been performed behind the approved barrier system for a period longer than two (2) months, remove/reset the approved barrier system at no cost to the Department unless barrier is protecting a hazard, or as directed by the Engineer

Protect the approach end of the approved barrier system at all times during the installation and removal of the barrier. If system requires installation of a temporary crash cushion, a truck mounted impact attenuator can be used for a maximum of 72 hours.

Offset the approach's end of the approved barrier system a minimum of 40 ft from oncoming traffic or protect at all times by a temporary crash cushion if the approved barrier system requires a temporary crash cushion.

Install approved barrier system with the traffic flow, beginning with the upstream side of traffic. Remove the approved barrier system against the traffic flow, beginning with the downstream side of traffic.

Install and space drums no greater than twice the posted speed limit (mph) to close or keep closed the section of the roadway until the barrier can be placed or after barrier is removed.

Offset the approved barrier system a minimum of 2' from the edge of travel on all open travelways.

G. Traffic Control Devices

When using Roadway Standard No. 1101.02, Drums may be used in lieu of cones on all roads. All Drums must meet the requirements of the Drum Standard Detail found on the Traffic Control Web Site.

Space channelizing devices in work areas no greater than twice the posted speed limit (mph), except 10 ft on-center in radii, and 3 ft off the edge of an open travelway, when lane closures are not in effect.

Place Type III barricades, with 'ROAD CLOSED' sign R11-2 attached, of sufficient length to close entire roadway. Stagger or overlap barricades to allow for ingress or egress.

Place sets of three drums perpendicular to the edge of the travelway on 500 feet centers when unopened lanes are closed to traffic. These drums shall be in addition to channelizing devices.

H. Pavement Markings and Markers

Install pavement markings and pavement markers on the final surface as follows:

Road name	Marking	Marker
All roadways in the project limits.	Thermoplastic	Permanent Raised

Install temporary pavement markings and temporary pavement markers on interim layers of pavement as follows:

Road name	Marking	Marker
All roads	Paint	Temporary Raised

Tie proposed pavement marking lines to existing pavement marking lines.

Replace any pavement markings that have been damaged by the end of each day's operation.

Trace the edge of proposed monolithic islands with the proper color pavement marking prior to installation of a proposed monolithic island.

Place at least two applications of paint on new asphalt with temporary traffic patterns, which will remain in place over three months. Place additional applications of paint upon sufficient drying time, as determined by the Engineer.

I. Temporary/Final Signals

Notify the Engineer two months before a traffic signal installation by others is required.

Shift and revise all signal heads as required by approved signal plans.

J. Miscellaneous

Police may be used to maintain traffic through intersections per the Design Build teams plans or per Engineer. Utilize Police Officers who are outfitted with police uniforms and marked Police Vehicles, which are equipped with police lights mounted on top of the vehicle, and police vehicle emblems.

Provide portable temporary lighting to conduct night work in accordance with the *NCDOT Standard Specifications for Roads and Structures.*

Removal of the temporary pavement markings shall be accomplished by using water blasting, sand blasting or shot blasting to minimize damage to the road surface.

Coordinate with the Engineer in charge of any project in the vicinity of this project for any work that may effect the construction and the Traffic Control of this project.

Guidelines for speed reduction and $250 speeding penalty ordinances are located on the Traffic Control Website. If the guidelines justify the need for either ordinance, an engineering study will need to be preformed by the Regional Traffic Engineer and the Ordinance signed by the State Traffic Engineer. Submit request for the engineer study to be performed for the speed reduction and/or the $250 speeding penalty ordinance to the State Alternate Delivery Systems Engineer and allow 6 weeks to complete study and provide ordinance(s) if approved.

UTILITIES COORDINATION SCOPE OF WORK

Overview: The Design Build Firm shall obtain the services of a firm knowledgeable in the NCDOT Utility Coordination Process involved with utility relocation/installation and highway construction. The Design Build Firm shall be responsible for coordinating all utility relocations. Coordination shall include any necessary utility agreements when applicable. The NCDOT will be responsible for non-betterment utility relocation cost when the utility company has prior rights of way/compensable interest. The utility company will be responsible for the relocation cost if they can not furnish evidence of prior rights of way or a compensable interest in their facilities. The Design Build Firm will be responsible for determining the cost responsibility for the utility relocations. NCDOT will be the approving authority for all utility agreements and approval of plans.

Preparation for relocating utilities within the existing or proposed highway Rights of Way.

I. The Design Build Firm will be required to use the guidelines as set forth in the following:

(A) NCDOT Utility Manual - Policies & Procedures for Accommodating Utilities on Highway Rights of Way.

(B) Federal Aid Policy Guide- Subchapter G, Part 645, Subparts A & B

(C) Federal Highway Administration's Program Guide, Utility Adjustments & Accommodations on Federal Aid Highway Projects.

(D) NCDOT Construction Manual Section 105-8

(E) NCDOT Right of Way Manual - Chapter 16 Utility Relocations

(F) NCDENR Public Water Supply - Rules governing public water supply.

(G) NCDENR Division of Water Quality - Title 15A - Environment and Natural Resources.

II. The Design Build Firm will be responsible for confirming the location of the utilities, type of facility, identify the utility owner and determine the cost responsibility in order to coordinate the relocation of any utilities in conflict with the project.

Arrangements for Protection or Adjustments to existing utilities

I. The Design Build Firm will make the necessary arrangements with the utility owners for adjustments, relocating or removals where the Firm and Utility Company determine that such work is essential for safety measures and performance of the required construction.

-The Design Build Firm shall not commence work at points where the highway construction operations are adjacent to utility facilities, until making arrangements with the utility company to protect against damage that might result in expense, loss, disruption of service or other undue inconvenience to the public or utility owner. The Design Build Firm shall be responsible for damage to the existing or relocated utilities resulting from his operations. In the event of interruption of any utilities by the project construction, the Design Build Firm will promptly notify the proper authority (Utility Company) and cooperate with the authority in the prompt restoration of service.

-The Design Build Firm should plan to accommodate for certain utility adjustments, reconstruction, new installation and routine maintenance work that may be underway or take place during the progress of the contract.

II. In the event of a utility conflict, the Design Build Firm will request that the utility company submit relocation plans (Highway Construction Plans to be provided by the Design Firm to Utility owners) showing existing utilities and proposed utility relocation for approval by the NCDOT.

-The Firm will be required to submit (3) three copies of the Utility Relocation Plans to the NCDOT State Utility Agent for review and approval prior to relocation work beginning. If the Firm determines the cost to be borne by NCDOT, then the Firm will be required to submit three (3) copies of a detailed utility relocation estimate and copies of verification of compensable interest. The Firm will also be responsible for submitting the appropriate agreements to be used with the relocation plans (See Agreements under line items V & VI). After the review process is complete, the NCDOT Utility Unit will submit one (1) copy of the Utility Relocation Plans, executed agreements and any necessary comments back to the Firm. The Utility Unit will also submit a copy of the approved Utility Relocation plans to the Department's Resident Engineer. If the Utility Relocation Plans are approved subject to changes, it will be the Firms responsibility to coordinate these changes with the appropriate utility company.

III. The cost in relocating utilities due to the highway construction will be the responsibility of NCDOT. As stated in the overview, the Firm will be responsible to determine cost responsibility/compensable interest. A compensable interest is identified as follows:

(A) Existing or prior easement rights within the limits of the project, either by recorded right of way or adverse possession (Utility occupying the same location for twenty (20) plus years outside the existing highway rights of way).

(B) Entities covered under General Statute 136-27.1 and 136-27.2. Statute requires the NCDOT to pay the non-betterment cost for certain water, sewer and gas relocations.

-The cost in relocating CATV due to the highway construction will be the responsibility of the CATV Company; however, under the following conditions the NCDOT will bear the relocation expense:

(A) If the Company can validate a recorded easement for facilities outside the maintained NCDOT Rights of Way.

(B) The adjustment is needed on existing utility poles to accommodate for a proposed NCDOT Traffic Management System Fiber Optic Communication Cable Project.

-The NCDOT will not permit CATV to place poles within the Highway Rights of Way but will allow down guys for their facilities within the Rights of Way. Under most circumstances the CATV Company will continue a joint-use attachment with the local Power and Telephone Company. If the CATV proposed relocation places buried facilities within the highway rights of way then plans and encroachment agreements will be required by the NCDOT.

IV. If the Design Build Firm elects to make arrangements with a utility company to incorporate a new utility installation or relocation as part of the highway construction, the utility work done by the firm and the associated cost for the work will be negotiated and agreed upon between the firm and the utility company.

-It is recommended that the Design Build Firm make arrangements to relocate water or sewer line facilities in which the entities are covered under General Statute 136-27.1 or occupying a compensable interest. The non-betterment cost associated with this work will be borne by NCDOT and pursuant to a Supplement Agreement between the Firm and NCDOT.

-If the Design Build Firm is requested, in writing, by an entity to relocate, upgrade or incorporate new water and sewer facilities as part of the highway construction, designs shall be coordinated with the Utility Owner and NCDOT Utility Unit. Coordination shall include preparation of all plans for needed agreements and permits. The Firm would be responsible for all permit fees.

-If the Design Build Firm elects to make arrangements with a Governmental Agency or any other utility owner for proposed utility construction, in which the Agency/Utility Owner will participate in the cost for work to be performed by the Firm, the Firm will be responsible for negotiating all cost associated with the proposed construction. Once the Firm and the Agency/Utility Owner agree on a plan and a lump sum estimated cost for the utility construction, the Firm will be responsible for

submitting five (5) sets of 11 x 17 utility construction drawings to the State Utility Agent for further handling. Each set should include a title sheet, plan sheets, profiles and special provisions if available. Also, a letter from the Agency/Utility Owner agreeing to the plans and lump sum cost must accompany this package. The NCDOT will reimburse the Firm the estimated lump sum cost under a supplement agreement. The necessary Utility Agreement to the Agency/Utility Owner for reimbursement will be a two party agreement between the NCDOT and the Agency/Utility Owner.

V. The Design Build Firm will be required to utilize the NCDOT Standard Utility Encroachment Agreements as necessary in relocating utilities. The Encroachment Agreements will be used under the following conditions:

(A) If a utility company is not occupying a valid right of way/compensable interest and the proposed relocation will place the relocated utilities within the existing or proposed highway rights of way.

(B) For all new utility installations within the existing or proposed highway rights of way. This includes all water, sewer and gas lines owned by entities covered under General Statute 136-27.1 and 136-27.2.

VI. If a utility company can show evidence of prior rights of way or a compensable interest in their facilities, the non-betterment utility relocation cost and the agreement will be handled between the NCDOT and the utility company. The Design Build Firm will be required to utilize the NCDOT Utility Relocation Agreement as necessary in relocating utilities.

The NCDOT State Utility Agent must execute approved agreements on Design Build highway projects. The Utility Relocation Agreements (Cost Agreement) and encroachment agreements are available from the NCDOT Utility Unit. See Pages 59 and 60 of the NCDOT Utility Manual on *"Policies & Procedures for Accommodating Utilities on Highway Rights of Way"* for the different types of encroachment agreements available for use.

Requirements for attachments to existing and/or proposed structures

I. Attachments to structures should be avoided where feasible. Attachments should only be considered when other alternatives are cost prohibitive or not feasible due to environmental or geographical features. Attachments are prohibited under the following conditions:

(A) No attachments will be allowed to a bridge located parallel within the C/A carrying the freeway over streams, other roadways or railroads. (No parallel utility installations within the C/A)

(B) No attachments will be allowed to cored-slab bridges.

(C) No attachments will be allowed to curved bridges.

II. Attachments to structures, if allowed, shall meet the following criteria.

(A) No attachments will be allowed below the bottom of the beams and/or girders.

(B) Drilling of or attachments to beams and/or girders will not be allowed. Attachments will only be allowed to the bottom of the bridge deck.

(C) For water and sewer force mains, only restrained joint ductile iron pipe will be allowed.

(D) A minimum of 18" of clearance to beams and/or girders shall be maintained if possible.

III. Documentation of adverse conditions or cost estimates of all feasible alternatives should be submitted to the NCDOT State Utility Agent when seeking approval of a structure attachment. Cost estimates should consider all costs involved with each alternative and impacts to the utility and the highway project as a whole.

Preparation for Communication Cables/Electrical Services for Signing Devices if needed

I. Prior to establishing the location for new meter poles, the Design Build Firm will coordinate with the local Power Distribution Company concerning accessibility of E/C Service and safety in maintenance of the meter.

II. All service taps that require a parallel installation within the C/A will require plans for review and approval by the NCDOT prior to the installation.

-Preferably, parallel service installations within a C/A should be buried and located as close to the R/W line as practical. However, due to unusual circumstances the NCDOT may approve aerial installations.

III. The NCDOT will be responsible for any cost concerning service taps provided by the utility company.

REMOVED SECTION ON "Preparation for Adjusting Existing Utilities due to Proposed Traffic Management Systems Fiber Optic Communication Cables"

TRAFFIC MANAGEMENT & SIGNAL SYSTEMS SCOPE OF WORK

I. TRAFFIC SIGNALS

A. Traffic Signal Plans:

The Design-Build firm shall Design and Construct plans as needed for traffic signal installations. This work shall include, but not be limited to, the preparation of Traffic Signal Plans, Electrical and Programming Details, and Project Special Provisions. This work consists of two traffic signals to be upgraded at the following locations:

01-0185: US 13 Bypass at NC 308 (Sterlingsworth Street) - **EXISTING SIGNAL**
01-0193: US 13-17/US 13 Bypass at US 17- **EXISTING FLASHER**
01-0743: US 13 (N. King Street) at US 17 Bypass WB Ramps - **NEW SIGNAL**

Signal 01-0743, meets the minimum warrants due to only one movement of traffic, the southbound US 13 (N. King St.) traffic that are accessing the bypass. If the intersection can be reconfigured within the proposed right of way to provide a free-flow right turn movement to the ramp, it would eliminate the need for a signal at this intersection.

The Design Build Team will be required to implement the signal designs at the appropriate time as directed by the Engineer. The Design Build Team shall maintain, monitor, and adjust the traffic signals as needed throughout the project. The Design Build Team shall be responsible for any timing changes required on any traffic signal, as required, due to the implementation of traffic detours or lane shifts associated with this project. The Contractor/Design Build Team will also be responsible for the design and implementation of any temporary signal designs needed to maintain traffic during construction of the geometric improvements.

01-0193 is an existing flasher. Maintain the location as a flasher until traffic is shifted to the proposed configuration. Once traffic is in the proposed configuration, upgrade the intersection to a fully actuated traffic signal.

Traffic signal designs shall incorporate the use of 2070L equipment including base adapters, custom metal poles with mastarms as the signal supports, and any Division requests or recommendations.

Emergency vehicle preemption is not required at this time, although the Division may request it in the future if necessary.

Inductive Loops are required for all Final Signal plans, and inductive loops are preferred during the temporary signal plans. If the D-B Team chooses to use video detection during any temporary signals, they must maintain & adjust the detection zones during construction.

B. Project Special Provisions:

Project Special Provisions will include the following information with all supporting documentation and information:

The project special provisions will cover all items of work, material, equipment, and methods of construction for the installation of a complete traffic signal installation that are not otherwise covered in the *Standard Specifications for Roads and Structures, Dated January 2002* and all addendum.

Each section of the project special provisions will contain subsections titled: Description, Materials, and Construction Method. The Design Build Firm is encouraged to utilize the Traffic Management and Signal Systems Unit's generic *Project Special Provisions* in developing the project special provisions.
Submit 1 copy of the project special provisions for the 90% and 100% reviews.
The Engineer will seal final project special provisions. The Engineer must be duly registered to practice engineering in North Carolina.

C. Work Standards:

The Engineer shall be responsible for providing the safest and most economic design for the public. The Engineer shall be responsible for insuring that all plans and designs conform to the current design standards of the Traffic Management and Signals Systems Unit. All plans and associated design material and specifications must be reviewed and approved by NCDOT before installation. These standards include, but are not limited to, compliance with the current edition of the following publications:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*
- *North Carolina Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways*
- *NCDOT Traffic Signal Specifications and all addenda*
- *NCDOT Signals and Geometrics Section Design Manual*
- *National Electrical Safety Code*
- *National Electric Code*

All final plans and special provisions shall be sealed by the responsible designing Engineer. The Engineer must be duly registered to practice engineering in North Carolina.

II. SUBMITTAL REQUIREMENTS

The Design Build Team shall provide the Department a copy of all supporting documentation, computer files, and any other pertinent information, as needed, and as required for a complete and accurate review and approval by the Department. Supporting documentation may include, but not be limited to:

- Signed clearance chart with distances (show dimensions)
- Controller timings for all existing signalized locations
- Most recent traffic counts with breakdown (vehicular and pedestrian)
- Roadway plan sheet for intersection
- Profile at intersection
- Capacity analysis
- Division requests for specialized items (preemption, pedestrian signals, metal poles, system work, etc.)
- Existing signal plans if applicable
- Notes on all correspondence with Department personnel

Information required for each plan submittal may include, but not be limited to:

90% Submittal

(A) Traffic Signal plans:
2 Full size bond copies
2 Half size bond copies

(B) Electrical and programming detail plans:
2 Half size bond copies

(C) Project Special Provisions:
2 Copies

(D) Traffic Control Plans:
1 Half size bond copy

100% Submittal

(A) Traffic Signal plans:
2 Full size bond copies
2 Half size bond copies
All computer files on CD

(B) Electrical and programming detail plans:
2 Full size bond copies
2 Half size bond copies
All computer files on CD

(C) Project Special Provisions:
2 Copies
All computer files on CD

(D) Traffic Control Plans:
1 Half size bond copy

RIGHT OF WAY SCOPE OF WORK

The Department will be responsible for the cost associated to relocate the cell tower along Wakelon Rd. and should be included as part of the right-of-way settlement agreement for that parcel.

Scope Of Services And Responsibilities:

The CONTRACTOR, will employ qualified, competent personnel who are currently **approved by the NCDOT Right of Way Branch,** herein after referred to as The DEPARTMENT, to provide all services necessary to perform all appraisal, appraisal review, negotiation and relocation services required for completion of the project in accordance with G.S. 136-28.1 of the General Statutes of North Carolina, as amended, and in accordance with the requirements set forth in the *Uniform Appraisal Standards and General Legal Principles for Highway Right of Way*, the *North Carolina Department of Transportation's Right of Way Manual*, the *North Carolina Department of Transportation's Rules and Regulations for the Use of Right of Way Consultants*, the *Code of Federal Regulations*, and Chapter 133 of the *General Statutes of North Carolina* from Section 133-5 through 133-18, hereby incorporated by reference, including the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended. The CONTRACTOR agrees to perform the services as set forth herein and furnish and deliver to The DEPARTMENT reports accompanied by all documents necessary for the settlement of claims and the recordation of deeds, or necessary for condemnation proceedings covering said properties. The CONTRACTOR, acting as an agent on behalf of the State of North Carolina shall provide right of way acquisition services for I.D. R-2404 A in Bertie County.

The CONTRACTOR shall carry out the responsibilities as follows:

- With respect to the payments, costs and fees associated with the acquisition of right of way in this contract, The DEPARTMENT shall be responsible for only direct payments to property owners for negotiated settlements, recording fees, any relocation benefits, and deposits and fees involved in the filing of condemnation an any claims. The DEPARTMENT will assume responsibility for all costs associated with the litigation of condemned claims, including testimony by the appraiser(s). The CONTRACTOR shall be responsible for all other acquisition related payments, costs and fees.

- A DEPARTMENT representative will be available to provide technical guidance on right of way acquisition procedures and to make timely decisions on approving relocation benefits and approving administrative adjustment settlements on behalf of The DEPARTMENT over and above the authority granted to The DEPARTMENT Right of Way Consultant Project Managers.

- Submit a right of way project tracking report and right of way quality control plan to The DEPARTMENT. The DEPARTMENT standard forms and documents will be used to the extent possible.

- THE CONTRACTOR shall provide a current title certificate for each parcel as of the date of closing or the date of filing of condemnation.

- Prepare, obtain execution of and record documents conveying title to acquired properties to The DEPARTMENT with Register of Deeds and deliver all executed and recorded deeds and easements to The DEPARTMENT. For all property purchased in conjunction with the project, title will be acquired in fee simple or easement and shall be conveyed to "The North Carolina Department of Transportation", free and clear of all liens and encumbrances except permitted encumbrances.

- It is understood and agreed by and between the parties hereto that all reports, surveys, studies, specifications, memoranda, estimates, etc., secured by and for The CONTRACTOR shall become and remain the sole property of The DEPARTMENT upon termination or completion of the work, and The DEPARTMENT shall have the right to use same for any public purpose without compensation to The CONTRACTOR.

- Prepare Appraisals in accordance with The DEPARTMENT'S *Uniform Appraisal Standards and General Legal Principles for Highway Right of Way Acquisitions*. The CONTRACTOR'S appraiser must be on The DEPARTMENT'S approved state certified appraiser list. The CONTRACTOR may request its state certified appraiser be added to the approved state certified appraiser list, subject to approval by The DEPARTMENT'S State Appraiser.

- The CONTRACTOR is to provide appraisal reviews complying with The DEPARTMENT'S *Uniform Appraisal Standards and General Legal Principles for Highway Right of Way Acquisitions*. The reviewer must determine that the appraisal meets The DEPARTMENT'S guideline and requirements, conforms to acceptable appraisal standards and techniques, does not include any non-compensible items or exclude any compensible items and that the value conclusions are reasonable and based on facts presented in the appraisal. The reviewer has the authority to approve, adjust, request additional data or corrections, or not to recommend and request another appraisal. The reviewer has the authority to approve appraisals not in excess of $750,000.00. All appraisals showing compensation in excess of $750,000.00 are referred to The DEPARTMENT'S State Appraiser for approval, with the written recommendation of the reviewer. The CONTRACTOR'S reviewer must be on The DEPARTMENT'S approved state certified reviewer appraiser list. The CONTRACTOR may request its state certified review appraiser to be added to the approved state certified reviewer appraiser list, subject to approval by The DEPARTMENT'S State Appraiser.

- The CONTRACTOR shall provide a right of way certification prior to entering the property.

EROSION AND SEDIMENTATION CONTROL SCOPE OF WORK

Erosion and Sedimentation Control Plans should at minimum address the following:

I. Complete Set of Plans

A. Clearing and grubbing phase

1. Use correct NCDOT symbology
2. Utilize adequate perimeter controls (temporary diversions, silt fence, etc.)
3. Utilize rock measures w/ sediment control stone @ drainage outlets
4. Take into account existing topography and show contour lines
5. Protect existing streams
6. Need adequate silt storage for 1800(2400 for High Quality Water/Environmentally Sensitive Areas) cubic feet per disturbed acre(127(170 for High Quality Water/Environmentally Sensitive Areas) cubic meters per disturbed hectare) and sediment basins should be sized with surface area equal to .01 times the peak inflow rate using 10-year(25-year for High Quality Water/Environmentally Sensitive Areas) peak runoff data*(NCDENR-Land Quality's Erosion and Sediment Control Planning and Design Manual)*
7. Design Riser Basins to the following standards:
   a. Surface Area should be determined by Equation A(sq. ft.) = Q10(cfs) * 435.6
   b. Riser Pipe should have a cross-sectional area 1.5 times that of the barrel pipe
   c. Perforations in the riser pipe should be reduced to increase dewatering time to twenty-four(24) hours

B. Intermediate and final grade phases

1. Use correct NCDOT symbology
2. Protect proposed inlets with RIST-A, RIST-C, PIST-A, etc.
3. Utilize temp. slope drains and earth berms at top of fill slopes 10 ft or higher or where there are super elevations above .04 and fills are greater than 5 ft
4. Utilize rock energy dissipater at outlet of slope drain
5. Devices at all drainage turnouts should utilize sediment control stone (TRSD-B, TRSC-A, etc.)
6. Need adequate silt storage for 1800(2400 for High Quality Water/Environmentally Sensitive Areas) cubic feet per disturbed acre(127(170 for High Quality Water/Environmentally Sensitive Areas) cubic meters per disturbed hectare) and sediment basins should be sized with surface area equal to .01 times the peak inflow rate using 10-year(25-year for High Quality Water/Environmentally Sensitive Areas) peak runoff data *(NCDENR-Land Quality's Erosion and Sediment Control Planning and Design Manual)*
7. Show matting on all ditch lines (non-jurisdictional streams) with 1.25% grade or larger and all cut/fill slopes 2:1 or greater where it is difficult to establish vegetation and/or slope failure is occurring
8. Show the overall plan for the erosion control for period between Clearing & Grubbing and Final Grade
9. Design Riser Basins to the following standards:
   a. Surface Area should be determined by Equation A(sq. ft.) = Q10(cfs) * 435.6

b. Riser Pipe should have a cross-sectional area 1.5 times that of the barrel pipe
c. Perforations in the riser pipe should be reduced to increase dewatering time to twenty-four (24) hours

II. Detail Sheets and Notes

A. Reforestation sheet(s) will be required in the areas outlined in the Special Provisions, permits, interchanges, and the pavement removal area in the vicinity of the intersection at –Y1-/-Y1A-/-L-

B. Construction entrance detail

C. Special details and notes

III. Title Sheet

A. Show correct notes: HQW, ESA, critical habitat, clearing and grubbing, etc.

B. Show correct standards for project

C. List of standard NCDOT symbology

IV. Special Provisions

A. Erosion Control Special Provisions are available at the following web site:

http://stage.dot.state.nc.us/dohweb/operations/dp_chief_eng/roadside/soil&water/provisions/e&scprov.html

B. References in Erosion Control Special Provisions from web site to Method of Measurement, Basis of Payment, or any other statement regarding direct payment for Erosion & Sediment Control measures shall be disregarded

V. Miscellaneous

A. Plan submittal must include all pertinent design information required for review, such as design calculations, drainage areas, etc.

B. The NCDOT Roadside Environment Unit (REU) will provide a sample set of Erosion and Sedimentation Control plans (including any special details or special provisions used by the NCDOT REU) and MicroStation Erosion Control tool palette to the Designer/Planner for reference if requested.

C. Plans must address any environmental issues raised during the permitting process.

D. Sufficient time must be allowed for the Designer/Planner to make any changes to the Erosion and Sedimentation Control Plans deemed necessary by the NCDOT REU.

E. All Erosion and Sedimentation Control plans must be approved by the NCDOT REU before **any** land disturbing activities can commence.

F. Temporary access and haul roads, other than public roads, constructed or used in connection with the project shall be considered a part of the project.

G. Borrow or waste areas that are part of the project will require a separate Erosion and Sedimentation Control plan, unless the borrow or waste activity is regulated under the *Mining Act of 1971*, or is a landfill regulated by the Division of Solid Waste Management (NCDENR).

H. Whenever the Engineer determines that significant erosion and sedimentation continues despite the installation of approved protective practices, the Design-Builder will be required to and shall take additional protective action.

I. Final Grade Erosion Control Plans are final only if Roadway Drainage Design has been completed and finalized.

J. An approved Erosion and Sedimentation Control Plan Does Not Exempt the Builder from Making Every Effort to Contain Sediment Onsite.

K. Any Erosion Control Design revisions made during the construction of the project should be submitted to REU by the 15th of the month. At anytime the Engineer or the Roadside Environmental Unit can request the contractor to provide an updated version of the erosion control plan from the Erosion Control Designer for distribution to all parties involved in the construction process

L. The contractor shall comply with the North Carolina Administrative Code Title 15 A Department of Environment and Natural Resources Chapter 4, Sediment Control.

M. A pre-design meeting must take place between the REU Soil & Water Engineering Section, the Design-Builder, and any other pertinent DOT personnel before Erosion Control Design begins.

VI. Submittal Requirements shall include, but not be limited to:

A. 90% Submittal
   1. 1 Full size bond copy
   2. 1 Half size set of final cross sections
   3. 1 set of design calculations and all other pertinent design information

B. 100 % Submittal
   1. 1 Full size bond copy
   2. 1 set of design calculations and all other pertinent design information

C. RFC
   1. 3 Half size bond copies
   2. 2 sets of Erosion Control Project Special Provisions

ENVIRONMENTAL INCENTIVES AND DISINCENTIVES

DESCRIPTION

The Contractor shall observe and comply with federal and state laws, local laws, ordinances, and regulations, orders, and decrees of bodies having any jurisdiction or authority in accordance with Section 107 of the *Standard Specifications for Roads and Structures*.

The Contractor will be eligible for an incentive in the amount of $5,000 per month if construction operations have been performed in accordance with all environmental regulations and the Specifications, and no violations have been issued. Violations are defined as:

Violation	Issuing Entity
Immediate Corrective Action (ICA)	Department
Continuance of an ICA (CICA)	Department
Notice of Violation (NOV)	Regulatory Agencies
Cease and Desist (C&D)	Corp of Engineers

CONSTRUCTION METHODS

The Contractor shall notify the Engineer in writing upon commencement of the construction activities on the project. The monthly time period shall begin upon verification by the Engineer that construction has started. The monthly time period is defined as that period if time encompassed by each monthly pay estimate.

INCENTIVE/DISINCENTIVE

For each month that the Contractor receives no NOVs, ICAs or C&D order as verified by the Engineer, the Contractor will receive an incentive payment of $5,000 subject to the following conditions:

The Contractor will not receive any incentive for the month, if one or more of the violations have been issued.

In addition, the Contractor will not receive the incentive for subsequent months after the month one or more of the citations has been issued, for a specified period of time depending on the specific violation as shown herein. For example, if the Contractor receives a NOV the third month of construction, an incentive will not be forthcoming for at least 5 months (the month in which the violation was issued and 4 additional months).

Type	**Duration + current month**
ICA	1 Month
CICA	2 Months
NOV	4 Months
C&D	4 Months

Incentives will not be paid during time periods when the Engineer has suspended the work.

Erosion Control Liquidated Damages:

The Design-Builder shall take all reasonable precaution to comply with all regulations of all authorities having jurisdiction over public and private land governing the protection of erosion and sedimentation. Any fines, remediation required, or charges levied against the Department for failing to comply with all rules and regulations concerning erosion and sediment control, due to the Design-Builder's negligence, carelessness, or failure to implement the erosion and sediment control plan and specifications, will be deducted from monies due the Design-Builder on his contract. In addition to said fines, remediation required, or charges levied, any associated engineering costs or actions taken by the Department in order for the Department to comply with rules and regulations, as a result of the Design-Builder's negligence, carelessness, or failure to implement the erosion and sediment control plan and specifications, will be deducted from the monies due to the Design-Builder.

ENVIRONMENTAL PERMITS SCOPE OF WORK

General

The Design-Build Team is responsible for preparing all documents necessary for the Department to obtain the environmental permits for this project. These consist of the US Army Corps of Engineers Section 404 Permit, the NC Department of Natural Resources, Division of Water Quality (DWQ) Section 401 Water Quality Certification, and Division of Coastal Management (DCM) Major Development Permit. The Design-Build Team may not begin ground-disturbing activities, including utility relocation, until the environmental permits have been issued (this does not include permitted investigative borings covered under a current Nationwide Permit #6).

The Department has reached concurrence point 4A in the Merger 01 Process used by the environmental agencies and the Department to obtain environmental permits for projects. The Design-Build team is required to participate and present information in steps 4B and 4C that are necessary to complete the Merger 01 process. The Design-Build Team is directed to follow the appropriate details in the document titled "Merger 01 Implementation Team – Merger 01 Process Information" available from the Alternative Delivery Systems Engineer.

The Department will schedule the 4B meeting for mid-May of 2005. The Department will schedule the 4C meeting for mid-August 2005. Failure on the part of the Design-Build Team to meet these dates places all responsibility for delays resulting from missing these dates solely in the hands of the Design-Build Team.

The Design-Build Team is bound by the terms of all signed planning documents and approved minutes and commitments of the concurrence meetings (including 4A) and is held accountable for meeting all permit conditions. The Design-Build Team is required to staff any personnel necessary to ensure permit compliance.

Major Permit Application Process

It is the Design-Build Team's responsibility to acquire information and prepare permit drawings that reflect the impacts and minimization efforts resulting from the project as designed by the Design-Build Team. Further it is the Design-Build Team's responsibility to provide these permit impact sheets (drawings) depicting the design and construction details to the Department as part of the permit application. The Design-Build Team will be responsible for developing the permit application for all jurisdictional impacts. The permit application shall include all utility relocations. The permit application is to consist, at a minimum, of the following:

- Cover Letter
- Minutes from the 4B and 4C meetings
- Permit drawings
- Half-size plans
- Completed forms (CAMA, Section 404, etc.) appropriate for impacts

The Design-Build Team shall re-verify and update, as needed, the required environmental data that expires prior to the completion of the activity causing the impact in the jurisdictional areas. These

include, but are not limited to, federally protected species, re-verification of wetland jurisdictional areas, historic and archaeological sites, and 303d (impaired) streams. The Design-Build Team shall draft a letter, for the Project Development & Environmental Analysis Branch's (PDEA) signature, requesting concurrence from the United States Fish and Wildlife Service to document compliance with Section 7 of the Endangered Species Act for those species requiring such concurrence. The original dates of verification/concurrence are listed below:

- Dates of verification for streams (October 30, 2001 & November 9, 2001)
- Dates of verification for wetlands (September 6, 2001 & October 30, 2001)
- USFWS concurrence on species (Red-cockaded Woodpecker on May 19, 2004)

Direct coordination between the Design-Build Team, the Department's Alternative Delivery Systems Engineer, Resident Engineer, and the Office of Natural Environment (PDEA-ONE) will be necessary to ensure proper permit application development. Upon completion of the permit application package, the Design-Build Team will forward the package to the Alternative Delivery Systems Engineer, Resident Engineer, DEO and PDEA-ONE for review and approval. The Department will subsequently forward the package to the appropriate agencies to have the permit application placed on public notice to reflect the details.

The Department will allow no direct contact between the Design-Build Team and representatives of the environmental agencies. No contact between the Design-Build Team and the environmental agencies will be allowed either by phone, e-mail or in person, without representatives of the Department's PDEA Branch and/or the Division's Environmental Officer present.

The Design-Build Team shall submit one permit application for the entire project. The Design-Build Team shall not submit multiple applications to develop a "staged permitting" process to expedite construction activities in a phased fashion.

Any temporary construction measures, including de-watering, construction access, etc. must be addressed in the permit application. Impacts that result from so-called temporary measures may not be judged to be temporary impacts by the agencies. These issues must be addressed and reviewed by PDEA-ONE prior to the 4B and 4C meetings and resolved with the agencies during the 4B and 4C meetings.

The Design-Build Team must also clearly indicate the location of and impacts of haul roads and utility relocations on jurisdictional areas. The Design-Build Team shall also identify all proposed borrow and waste sites. These details must be included in the permit application data. Further, the Design-Build Team must describe the methods of construction of all structures. The description of the temporary impacts (haul roads, utility relocations, work bridges, etc.) must include restoration plans, schedules, and disposal plans. This information must be included in the permit application. This information must also be part of the data presented at the 4B and 4C meetings. There must be particular emphasis on minimizing impacts during the construction of the bridge over Cashie River and adjacent wetlands and floodplain.

The NCDOT hereby commits to ensuring, to the greatest extent possible, that the footprint of the impacts in areas under the jurisdiction of the federal Clean Water Act will not be increased during the Design-Build effort. All fill material will be immediately stabilized and maintained to prevent

sediment from entering adjacent waters or wetlands. The Design-Build Team is responsible for ensuring that the design and construction of the project will not impair the movement of aquatic life.

The Design-Build Team should be aware that DCM permits for the entire project, not just the area around the Cashie River. The Design-Build Team will be responsible for providing receipts of notification to landowners under DCM jurisdiction as part of the Major Development Permit application process.

Requests made for modifications to the permits will only be allowed if the Engineer determines it to be in the best interest of the Department and will be strongly discouraged. The Design-Build Team shall not take an iterative approach to hydraulic design issues. The design shall be complete prior to permit application.

Major Permit Timeframe

The Design-Build Team should expect it to take up to 11 months to accurately and adequately complete all designs necessary for permit application, submit the permit application request to the Department, and obtain approval for the permit from the environmental agencies. The Department's PDEA Branch requires up to 30 days for internal review. Agency review time will be approximately 100 days from receipt of a "complete" package. No requests for additional contract time or compensation will be allowed if the permits are obtained within this 11-month period. With the exception of location and survey work, no mobilization of men, materials, or equipment for site investigation or construction of the project shall occur prior to obtaining the permits (either within the 11-month period or beyond the 11-month period). The Department will not honor any requests for additional contract time or compensation, including idle equipment or mobilization or demobilization costs, for the Design-Build Team mobilizing men, materials (or ordering materials), or equipment prior to obtaining all permits. The Department will consider requests for contract time extensions for obtaining the permits only if the Design-Build Team has pursued the work with due diligence, the delay is beyond his control, and the 11-month period has been exceeded. If time were granted it would be only for that time exceeding the 11-month period. This 11-month period is considered to begin on the Date of Availability as noted in the contract.

The Design-Build Team needs to be aware that the timeframes listed above for review by PDEA, DWQ, DCM, and the Army Corps of Engineers to review any permit applications and/or modifications begin only after a fully complete and 100% accurate submittal.

The Design-Build Team shall meet with DOT personnel, field representatives from the DCM, and other interested agencies, shortly after the 4C meeting in order to review the project and project commitments. The Design-Build Team should contact PDEA-ONE in order to schedule this field review. Every effort shall be made to have this meeting prior to submitting the permit application.

Other Permits

NCDOT has completed the application for a Nationwide Permit #6. Any additional geotechnical investigations the Design-Build Team desires to complete prior to, or during, construction must be permitted under a new or modified Nationwide Permit #6. It is the Design-Build Team's

responsibility to prepare the application and obtain approval from PDEA. NCDOT will then submit the application to the agencies as needed.

As noted in the "Hydraulics Design Scope of Work", the Design-Build Team will be required to obtain a State Stormwater Permit.

Incentive for Reduction of Impacts in Environmentally Sensitive Areas

It is expected that the Design-Build Team will determine areas where the impacts on environmentally sensitive areas can be further reduced from that indicated below. The Design-Build Team is expected to employ innovative efforts to reduce impacts to environmentally sensitive areas within the project boundaries. While extensive minimization efforts have taken place during the development of this project, the Design-Build Team is expected to further minimize these impacts as the final designs are completed.

The Department has identified and anticipates mitigating for up to 130 acres of wetland impacts and up to 1410 feet of stream impacts as a result of this project. If during the reverification process, the above impacts are reduced, these new impacts for both the wetland and stream impacts shall be used in the calculation of incentive payments.

As an incentive to encourage further minimization efforts, incentive payments will be made to the Design-Build Team for reducing, through design efforts, the total wetland impacts by more than 25%. The incentive payments will apply to that portion in excess of the 25% reduction in the following amount:

- $2,400 per 0.1 acres of wetland, or portion thereof

In addition, incentive payments will be made to the Design-Build Team for reducing, through design efforts, the total stream impacts. The incentive payments will apply to any reduction in the following amount:

- $400 per linear foot for streams requiring mitigation

Development of acceptable mitigation that will result in the restoration of jurisdictional resources also may be considered for these incentive payments. This mitigation would need to be within the same hydrological unit as those impacted by the project and shall be approved by the applicable regulatory agencies.

Further, the development of any innovative approach to minimizing impacts on environmentally sensitive areas that can be utilized on future Department of Transportation projects will be rewarded with a one-time monetary bonus of up to $50,000. The applicability of these innovative approaches and the final determination of the value of the bonus will be made by the Engineer.

Mitigation Responsibilities of the Design-Build Team

The Ecosystem Enhancement Program has agreed to provide compensatory mitigation for unavoidable impacts to wetlands and surface waters resulting from project construction. The

mitigation was based on the impacts identified in the planning process and will be available August 1, 2005. The Design-Build Team may not begin ground-disturbing activities, including utility relocation, until the mitigation is available. The Design-Build Team will not be responsible for any portion of the work performed at these mitigation sites.

Any changes proposed by the Design-Build team to any design or construction details provided to the team by the Department shall be approved by the Department prior to being submitted to the resource agencies for their approval.

Should additional jurisdictional impacts result from revised design/construction details, suitable compensatory mitigation for wetlands and/or streams will be the sole responsibility of the Design-Build Team. Therefore, it is important to note that additional mitigation will have to be approved by the agencies and such approval will require, at a minimum, the preparation and approval of a mitigation plan before permit modification(s) is/are approved and before construction may commence. Compensatory mitigation provided to accommodate revised design/construction details will not be considered eligible for the incentive payments.

Any new areas to be impacted that have not been analyzed during the NEPA process and preparation of permit applications will need to be analyzed. This analysis must include performing all environmental assessments. These assessments will require the Design-Build Team to engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, compensatory mitigation, FEMA compliance, CAMA consideration and historical, archaeological, and cultural resources surveys in these areas. The environmental consultant shall obtain concurrence through PDEA-ONE from the United States Fish and Wildlife Service to document compliance with Section 7 of the *Endangered Species Act* for those species requiring such concurrence. In addition the Design-Build Team shall identify additional mitigation required, identify the amount of time the modification will take beyond the 11 month period, and the fulfillment of any other requirements that may be imposed by the permitting agencies to obtain the permit modification.

If any staging areas are located outside the project right-of-way, the Design-Build Team shall engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, compensatory mitigation, FEMA compliance, CAMA consideration and historical, archaeological, and cultural resources surveys in these areas.

Commitments

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts and to provide full compensatory mitigation of all remaining wetland impacts. Avoidance measures were taken during the planning and NEPA phases and minimization measures were incorporated as part of the preliminary project design. The Design-Build Team will incorporate these avoidance and minimization features plus any minimization identified during the 4B and 4C process into the design.

All work by the Design-Build Team must be accomplished in strict compliance with the plans submitted with the Section 404, 401 and DCM permit applications and in compliance with all conditions of the permits and certifications issued by the agencies. The Design-Build Team shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of the permits.

The commitments made by the Department as part of the 4A meeting are provided below. The Design-Build Team shall strictly adhere to these commitments, as well as others, including but not limited to, those made as part of the SFEIS, ROD, all permits, and 4B and 4C meetings.

- Delineated, field verified and surveyed per GPS methodology all jurisdictional features (wetlands, streams, riparian buffers) within the study corridor for Alternative C2. The study corridor was approximately 1,000 feet in width along new location and 500 feet in width along upgrading existing location. Using these surveyed features, preliminary designs were adjusted to avoid and/or minimize impacts to jurisdictional areas.
- The 60-foot median proposed in the DEIS for all four-lane divided sections on new location was reduced to 46 feet to minimize environmental impacts.
- Proposed full control of access on the new location portion of the project with a grade separation at SR 1300 (Greens Cross Road) and an interchange at SR 1001 (Wakelon Road). Full control of access will minimize cumulative secondary impacts.
- Removed median cuts both north and south of NC 308 along existing US 13 Bypass to improve safety and improve access control.
- Extended the Cashie River Bridge over all open water, adjacent riparian buffers and natural wetland systems. The proposed structure will be approximately 1800 feet long.
- Investigated interchange designs at SR 1001 (Wakelon Road) to determine potential wetland avoidance/traffic demand compatibility.
- Investigated narrow median widths to determine potential wetland savings.
- Investigated design options at the east end connector from existing US 17 to US 17 Bypass to avoid a compact archaeological site. A final determination from OSA states that a satisfactory data recovery program would be implemented.
- In-stream construction moratorium will be observed from February 15 through September 30.
- Ditch construction in wetlands will be avoided.
- Fill slopes will be 3:1 in wetlands.

- Stream Crossing Guidelines for anadromous fish will be observed.
- Temporary work bridges or top down construction will be utilized over the Cashie River and adjacent wetlands.

Archeological Sites

Two parcels involve archeological data recovery. The Department will be responsible for this data recovery and any entry required to conduct these efforts. It is anticipated that the data recovery will be complete in advance of construction in this area. Site maps for these two parcels will be provided.

If the Design-Build Team discovers any previously unknown historic or archeological remains while accomplishing the authorized work, he will immediately notify NCDOT Staff Archaeologist and/or NCDOT Project Development Engineer, as listed below, who will initiate the required State/Federal coordination. All questions regarding these sites should be addressed to Mr. Matthew Wilkerson, NCDOT Staff Archaeologist (919) 715-1561 or Ms. Stacy Baldwin, PE, NCDOT.

STANDARD SPECIAL PROVISIONS

PROMPT PAYMENT

Prompt Payment of Monies Due Subcontractors, Second Tier Subcontractors and Material Suppliers and Release of Retainage

Design Build Teams at all levels; prime, subcontractor, or second tier subcontractor, shall within seven calendar days of receipt of monies, resulting from work performed on the project or services rendered, pay subcontractors, second tier subcontractors, or material suppliers as appropriate. This seven-day period begins upon knowledgeable receipt by the contracting firm obligated to make subsequent periodic or final payment. These prompt payment requirements will be met if each firm mails the payment to the next level firm by evidence of postmark within the seven-day period.

This provision for prompt payment shall be incorporated into each subcontract or second tier subcontract issued for work performed on the project or for services provided. If any retainage is held on subcontractors, all retainage shall be released within seven calendar days of release by the Department.

Failure of any entity to make prompt payment as defined herein may result in (1) withholding of money due to that entity in the next partial payment until such assurances are made satisfactory to this provision; or (2) removal of an approved Design Build Team from the prequalified bidders list or the removal of other entities from the approved subcontractors list.

DB1G76

PLANT AND PEST QUARANTINES
(IMPORTED FIRE ANT, GYPSY MOTH, WITCHWEED, AND OTHER NOXIOUS WEEDS)

Within quarantined area:
This project may be within a county regulated for plant and/or pests. If the project or any part of the Design Build Team's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a quarantined county:
Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact:
Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-733-6932, or http://www.ncagr.com/plantind/ to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include:
1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed or other noxious weeds.

DB1G130

BORROW EXCAVATION - (EVALUATION OF WETLANDS)

Revise the 2002 Standard Specifications as follows:

Page 2-20, Article 230-6

After the first paragraph, insert the following paragraph:

"No separate payment will be made for the work of Evaluation of Potential Wetlands and Endangered Species as outlined above. Payment at the contract lump sum price for Construction of the Design Build project will be considered full compensation for this work.

DB2R37

ASPHALT PAVEMENTS – SUPERPAVE

Revise the 2002 Standard Specifications as follows:

ASPHALT TACK COAT

Page 6-4, Article 605-8

Insert the following after paragraph one in this Article:

Take necessary precautions to limit the tracking and/or accumulation of tack coat material on either existing or newly constructed pavements. Excessive accumulation of tack may require corrective measures.

FIELD VERIFICATION AND JOB MIX FORMULA ADJUSTMENTS

Page 6-7, Article 609-4

Delete the first paragraph under this Article and substitute the following:

Conduct field verification of the mix at each plant within 30 calendar days prior to initial production of each mix design, when required by the Allowable Mix Adjustment Policy and when directed as deemed necessary.

Page 6-8, Article 609-4

Delete the first paragraph on this page and substitute the following:

Retain records of these calibrations and mix verification tests, including Superpave Gyratory Compactor (SGC) printouts, at the QC laboratory. In addition, furnish copies, including SGC printouts, to the Engineer for review and approval within one working day after beginning production of the mix.

Page 6-8, Article 609-4

Add the following sentence to the end of the last paragraph in this Article:

Any mix produced that is not verified may be assessed a price reduction at the Engineer's discretion in addition to any reduction in pay due to mix and/or density deficiencies.

Quality control minimum sampling and testing schedule:

Page 6-9, Subarticle 609-5(C)1

Delete the second sentence in the second paragraph of this Article and substitute the following:

Retain the QC compacted volumetric test specimens for 5 calendar days, commencing the day the specimens are prepared.

Page 6-9, Subarticle 609-5(C)2

At the bottom of this page, delete the sentence directly above the Accumulative Production Increment and substitute the following:

Sample and test the completed mixture from each mix design at the following minimum frequency during mix production:

Page 6-10, Subarticle 609-5(C)2

Revise Items B, C, D and E on this page as follows:

B. Gradation on Recovered Blended Aggregate from Mix Sample (AASHTO T 30 Modified) Grade on all sieves specified on JMF
C. Maximum Specific Gravity (AASHTO T 209 or ASTM D 2041), optional (ASTM D 6857)
D. Bulk Specific Gravity of Compacted Specimens (AASHTO T166), optional (ASTM D 6752), Average of 3 specimens at N_{des} gyrations (AASHTO T 312)
E. Air Voids (VTM) (AASHTO T 269), Average of 3 specimens at N_{des} gyrations

Page 6-11, Subarticle 609-5(C)2

At the top of this page, delete Item B.," Reclaimed Asphalt Pavement…" and substitute the following:

B. Reclaimed Asphalt Pavement (RAP) Binder Content and Gradation (AASHTO T 308 Modified or T 164 and AASHTO T 30 Modified) (sampled from stockpiles or cold feed system at beginning of production and weekly thereafter). Have RAP approved for use in accordance with Article 1012-1(G). (Split Sample Required)

Page 6-11, Subarticle 609-5(C)2

Insert the following sampling and testing at the end of this Subarticle

F. Uncompacted Void Content of Fine Aggregate, AASHTO T 304, Method A (natural sand only). Performed at Mix Design and when directed as deemed necessary. (Split Sample Required)
G. Reclaimed Asphalt Shingle Material (RAS) Binder Content and Gradation (AASHTO T 308 Modified or T 164 and AASHTO T 30 Modified) (sampled from stockpiles or cold feed system at beginning of production and weekly thereafter). Have RAS approved for use in accordance with Article 1012-1(F). (Split Sample Required)

CONTROL CHARTS

Page 6-11, Subarticle 609-5(C)3

Delete the second sentence of the first paragraph in this Subarticle and substitute the following:

Record all regularly scheduled random sample or directed sample full test series results for mix incorporated into the project on control charts the same day the test results are obtained.

Page 6-12, Subarticle 609-5(C)3

Delete item 3 in the list below the second full paragraph on this page.

CONTROL LIMITS

Page 6-12, Subarticle 609-5(C) 4

At the bottom of this page, delete the table and substitute the following:

CONTROL LIMITS

Mix Control Criteria	Target Source	Warning Limit	Moving Average Limit	Individual Limit
2.36mm Sieve	JMF	±4.0 %	±5.0 %	±8.0 %
0.075mm Sieve	JMF	±1.5 %	±2.0 %	±2.5 %
Binder Content	JMF	±0.3 %	±0.5 %	±0.7 %
VTM @ N_{des}	JMF	±1.0 %	±1.5 %	±2.0 %
VMA @ N_{des}	Min. Spec. Limit	-0.5%	-0.8%	-1.0%
$P_{0.075}$/ P_{be} Ratio	Max. Spec. Limit	0.0	N/A	+0.4%
$\%G_{mm}$ @ N_{ini}	Max. Spec. Limit	N/A	N/A	+2.0%
TSR	Min. Spec. Limit	N/A	N/A	-15.0%

FIELD COMPACTION QUALITY CONTROL

Page 6-15, Subarticle 609-5(D)1

Delete the first and second sentences in the fourth paragraph on this page and substitute the following:

Base and intermediate mix types (surface mixes not included) utilized for pavement widening of less than 4.0 feet and all mix types used in tapers, irregular areas and intersections (excluding full width travel lanes of uniform thickness), will not be subject to the sampling and testing frequency specified above provided the pavement is compacted using approved equipment and procedures. However, the Engineer may require occasional density sampling and testing to evaluate the compaction process.

Page 6-16, Subarticle 609-5(D)1

Delete item number 2 at the top of this page. Item number 3 should be re-numbered as 2 after the specified deletion.

LIMITED PRODUCTION PROCEDURE

Page 6-17, Subarticle 609-5(D) 5

Delete the first paragraph in this Subarticle and substitute the following:

Proceed on limited production when, for the same mix type, one of the following items occur:

(1) Two consecutive failing lots, excluding lots representing an individual resurfacing map or portion thereof.
(2) Three consecutive failing lots, with each lot representing an individual resurfacing map or portion thereof.
(3) Two consecutive failing nuclear control strips.

Pavement within each construction category (New and Other), as defined in Article 610-13, and pavement placed simultaneously by multiple paving crews will be evaluated independently for limited production purposes.

Delete the first sentence in the last paragraph in this Subarticle and substitute the following:

If the Design Build Team does not operate by the limited production procedures as specified above, the two consecutive failing density lots, three consecutive failing lots with each lot representing an individual resurfacing map or portion thereof, or two consecutive failing nuclear control strips, whichever is applicable, and all mix produced thereafter will be considered unacceptable.

DOCUMENTATION (RECORDS)

Page 6-18, Subarticle 609-5(E)

Delete the third and fourth sentence in the first full paragraph on this page and substitute the following:

Maintain all QC records, forms and equipment calibrations for a minimum of 3 years from their completion date.

Delete the second full paragraph on this page and substitute the following:

Falsification of test results, documentation of observations, records of inspection, adjustments to the process, discarding of samples and/or test results, or any other deliberate misrepresentation of the facts will result in the revocation of the applicable person's QMS certification. The Engineer will determine acceptability of the mix and/or pavement represented by the falsified results or documentation. If the mix and/or pavement in question is determined to be acceptable, the Engineer may allow the mix to remain in place at no pay for the mix, asphalt binder and other mix components. If the mix and/or pavement represented by the falsified results is determined not to be acceptable, remove and replace with mix, which complies with the Specifications. Payment will be made for the actual quantities of materials required to replace the falsified quantities, not to exceed the original amounts.

QUALITY ASSURANCE

Page 6-18, Article 609-6

In Item 5 under Plant Mix Quality Assurance, add "at a frequency equal to or greater than 5% of the QC sample frequency".

In the first sentence within the paragraph below Plant Mix Quality Assurance, delete the words "of mix".

In Item 1 under Density Quality Assurance, delete the wording at the end of the sentence "at a frequency equal to or greater than 10% of the frequency required of the Design Build Team".

Page 6-19, Article 609-6

In Item 4 under Density Quality Assurance, add "at a frequency equal to or greater than 5% of the QC sample frequency."

Insert the following after Item 4 under Density Quality Assurance:

6. By periodically directing the recalculation of random numbers for the Quality Control core or nuclear density test locations. The original QC test locations may be tested by QA and evaluated as verification tests.

LIMITS OF PRECISION

Page 6-19, Article 609-6

In the limits of precision table, delete the last three rows and substitute the following:

QA retest of prepared QC Gyratory Compacted Volumetric Specimens	± 0.015
Retest of QC Core Sample	± 1.2% (% Compaction)
Comparison of QA Core Sample	± 2.0% (% Compaction)
QA Verification Core Sample	± 2.0% (% Compaction)
Nuclear Comparison of QC Test	± 2.0% (% Compaction)
QA Nuclear Verification Test	± 2.0% (% Compaction)

ASPHALT CONCRETE PLANT MIX PAVEMENTS – DESCRIPTION

Page 6-20, Article 610-1

Insert the following after the last paragraph in this Article:

A high frequency of asphalt plant mix, density, or mix and density deficiencies occurring over an extended duration of time may result in future asphalt, which is represented by mix and/or

density test results not in compliance with minimum specification requirements, being excluded from acceptance at an adjusted contract unit price in accordance with Article 105-3. This acceptance process may apply to all asphalt produced and /or placed and may continue until the Engineer determines a history of quality asphalt production and placement is reestablished.

MATERIALS

Page 6-21, Article 610-2

Delete reference of Anti-strip additive (chemical) to Article 1020-2 and substitute Article 1020-8.

COMPOSITION OF MIXTURES (MIX DESIGN AND JOB MIX FORMULA)

Page 6-21, Subarticle 610-3(A)

At the end of the second paragraph under this Subarticle, add the following sentence:

In addition, submit Superpave gyratory compactor printouts for all specimens compacted at N_{des} and N_{max} during the mix design process.

Insert the following paragraph after the second paragraph under this Subarticle:

For the final surface layer of the specified mix type, use a mix design with an aggregate blend gradation above the maximum density line on the 2.36 mm and larger sieves.

Insert the following at the end of the third paragraph under this Article:

When the percent of binder contributed from RAS or a combination of RAS and RAP exceeds 20 percent of the total binder in the completed mix, the virgin binder PG grade must be one grade below (both high and low temperature grade) the binder grade specified in Table 610-2 for the mix type.

Delete the fourth paragraph in this Subarticle and substitute the following:

For Type S 12.5D mixes, the maximum percentage of reclaimed asphalt material is limited to 15% and must be produced using virgin asphalt binder grade PG 76-22. For all other recycled mix types, when the percentage of RAP is 15 percent or less of the total mixture, the virgin binder PG grade must be as specified in Table 610-2 for the specified mix type. When the percentage of RAP is greater than 15 but not more than 25 percent of the total mixture, the virgin binder PG grade must be one grade below (both high and low temperature grade) the specified grade for the mix type. When the percentage of RAP is greater than 25 percent of the total mixture, the Engineer will establish and approve the asphalt binder grade.

Page 6-22, Subarticle 610-3(A)

Insert the following sentence at the end of the Item 4:

If natural sand is utilized in the proposed mix design, determine and report the Uncompacted Void Content of the natural sand in accordance with AASHTO T-304, Method A.

Page 6-23, Subarticle 610-3(A)

Under the quantities of mix components insert the following sentence:

When requested by the Engineer, submit to the Department's Materials and Tests Unit, in Raleigh, six (6) Superpave Gyratory Compactor specimens compacted to a height of 75 mm and to a void content (VTM) of 4.0% +/- 0.5% for performance rut testing with the Asphalt Pavement Analyzer.

JOB MIX FORMULA

Page 6-24, Subarticle 610-3(C)

Delete Table 610-1 and associated notes. Substitute the following:

TABLE 610-1
SUPERPAVE AGGREGATE GRADATION DESIGN CRITERIA

Standard	**Percent Passing Criteria (Control Points)**											
Sieves	**Mix Type (Nominal Maximum Aggregate Size)**											
	4.75 mm (a)		**9.5 mm (c)**		**12.5 mm (c)**		**19.0 mm**		**25.0 mm**		**37.5 mm**	
(mm)	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
50.0												100.0
37.5										100.0	90.0	100.0
25.0								100.0	90.0	100.0		90.0
19.0						100.0	90.0	100.0		90.0		
12.5				100.0	90.0	100.0		90.0				
9.5		100.0	90.0	100.0		90.0						
4.75	90.0	100.0		90.0								
2.36	65.0	90.0	32.0**(b)**	67.0**(b)**	28.0	58.0	23.0	49.0	19.0	45.0	15.0	41.0
1.18												
0.600												
0.300												
0.150												
0.075	4.0	8.0	4.0	8.0	4.0	8.0	3.0	8.0	3.0	7.0	3.0	6.0

(a) For Type S 4.75A, a minimum of 50% of the aggregate components shall be manufactured material from the crushing of stone.

(b) For Type SF 9.5A, the percent passing the 2.36mm sieve shall be a minimum of 60% and a maximum of 70%.

(c) For the final surface layer of the specified mix type, use a mix design with an aggregate blend gradation above the maximum density line on the 2.36 mm and larger sieves.

Page 6-25, Subarticle 610-3(C),

Delete Table 610-2 and associated notes. Substitute the following:

TABLE 610-2
SUPERPAVE MIX DESIGN CRITERIA

	Design	Binder	Compaction Levels			Volumetric Properties (c)			
Mix	ESALs	PG							
Type	millions	Grade	No. Gyrations @			VMA	VTM	VFA	%Gmm
(f)	(a)	(b)	N_{ini}	N_{des}	N_{max}	% Min.	%	Min. - Max.	@ N_{ini}
S-4.75A	<0.3	64 -22	6	50	75	20.0	7.0-15.0		
SF-9.5A	<0.3	64 -22	6	50	75	16.0	3.0 - 5.0	70 - 80	≤ 91.5
S-9.5B	0.3 - 3	64 -22	7	75	115	15.0	3.0 - 5.0	65 - 80	≤ 90.5
S-9.5C	3 - 30	70 -22	8	100	160	15.0	3.0 - 5.0	65 - 76	≤ 90.0
S-12.5C	3 - 30	70 -22	8	100	160	14.0	3.0 - 5.0	65 - 75	≤ 90.0
S-12.5D	> 30	76 -22	9	125	205	14.0	3.0 - 5.0	65 - 75	≤ 90.0
I-19.0B	< 3	64 -22	7	75	115	13.0	3.0 - 5.0	65 - 78	≤90.5
I-19.0C	3 - 30	64 -22	8	100	160	13.0	3.0 - 5.0	65 - 75	≤ 90.0
I-19.0D	> 30	70 -22	9	125	205	13.0	3.0 - 5.0	65 - 75	≤ 90.0
B-25.0B	< 3	64 -22	7	75	115	12.0	3.0 - 5.0	65 - 78	≤ 90.5
B-25.0C	> 3	64 -22	8	100	160	12.0	3.0 - 5.0	65 - 75	≤ 90.0
B-37.5C	> 3	64 -22	8	100	160	11.0	3.0 - 5.0	63 - 75	≤ 90.0
	Design Parameter					Design Criteria			
All	1. $\%G_{mm}$ @ N_{max}					≤ 98.0% **(d)**			
Mix	2. Dust to Binder Ratio ($P_{0.075}$ / P_{be})					0.6 - 1.4			
Types	3. Retained Tensile Strength (TSR) (AASHTO T 283 Modified)					85 % Min. **(e)**			

Notes: (a) Based on 20 year design traffic.
(b) When Recycled Mixes are used, select the binder grade to be added in accordance with Subarticle 610-3(A).
(c) Volumetric Properties based on specimens compacted to N_{des} as modified by the Department.
(d) Based on specimens compacted to N_{max} at selected optimum asphalt content.
(e) AASHTO T 283 Modified (No Freeze-Thaw cycle required). TSR for Type S 4.75A, Type B 25.0 and Type B 37.5 mixes is 80% minimum.
(f) Mix Design Criteria for Type S 4.75A may be modified subject to the approval of the Engineer

WEATHER, TEMPERATURE, AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES

Page 6-26, Article 610-4, Table 610-3

Delete the title of Table 610-3 and substitute the following title:

ASPHALT PLACEMENT- MINIMUM TEMPERATURE REQUIREMENTS

In the first column, third row; delete reference to the ACSC Types S 9.5A and S 12.5B mix.

Add the following minimum placing temperatures for mix types S 4.75A and SF 9.5A.

Asphalt Concrete Mix Type	Minimum Air Temperature	Minimum Road Surface Temperature
ACSC, Type S 4.75A, SF 9.5A	40°F (5°C)	50°F (10°C)

SPREADING AND FINISHING

Page 6-32, Article 610-8

Insert the following after the second sentence within the sixth paragraph in this Article,

Take necessary precautions during production, loading of trucks, transportation, truck exchanges with paver, folding of the paver hopper wings, and conveying material in front of the screed to prevent segregation of the asphalt mixtures.

Page 6-33, Article 610-8

At the end of the third full paragraph on this page, add the following sentence:

Waiver of the use of automatic screed controls does not relieve the Design Build Team of achieving plan grades and cross-slopes.

DENSITY REQUIREMENTS

Page 6-34, Article 610-10,

Delete Table 610-4 and substitute the following table and associated notes:

Table 610-4
MINIMUM DENSITY REQUIREMENTS

MIX TYPE	MINIMUM % of G_{mm}
SUPERPAVE MIXES	**(Maximum Specific Gravity)**
S 4.75A	85.0[(a,b)]
SF 9.5A	90.0
S 9.5X, S 12.5X, I 19.0X, B 25.0X, B 37.5X	92.0

(a) All S 4.75A pavement will be accepted for density in accordance with Article 105-3

(b) Compaction to the above specified density will be required when the S 4.75 A mix is applied at a rate of 100 lbs/sy (55 kg/m^2)

Page 6-34, Article 610-10

Delete the second paragraph in this Article and substitute the following:

Compact base and intermediate mix types (surface mixes not included) utilized for pavement widening of less than 4.0 feet (1.2 meters) and all mix types used in tapers, irregular areas and intersections (excluding full width travel lanes of uniform thickness), using equipment and procedures appropriate for the pavement area width and/or shape. Compaction with equipment other than conventional steel drum rollers may be necessary to achieve adequate compaction. Occasional density sampling and testing to evaluate the compaction process may be required. Densities lower than that specified in Table 610-4 will be accepted, in accordance with Article 105-3, for the specific mix types and areas listed directly above.

SURFACE REQUIREMENTS AND ACCEPTANCE

Page 6-35, Article 610-12

Delete the first paragraph in this Article and substitute the following:

Construct pavements using quality paving practices as detailed herein. Construct the pavement surface smooth and true to the plan grade and cross slope. Immediately correct any defective areas with satisfactory material compacted to conform with the surrounding area. Pavement imperfections resulting from unsatisfactory workmanship such as segregation, improper longitudinal joint placement or alignment, non-uniform edge alignment and excessive pavement repairs will be considered unsatisfactory and if allowed to remain in place will be accepted in accordance with Article 105-3.

When directed due to unsatisfactory laydown or workmanship, operate under the limited production procedures. Limited production for unsatisfactory laydown is defined as being restricted to the production, placement, compaction, and final surface testing (if applicable) of a sufficient quantity of mix necessary to construct only 2500 feet (750 meter) of pavement at the laydown width.

Remain on limited production until such time as satisfactory laydown results are obtained or until three consecutive 2500 foot (750 meter) sections have been attempted without achieving satisfactory laydown results. If the Design Build Team fails to achieve satisfactory laydown results after three consecutive 2500 foot (750 meter) sections have been attempted, cease production of that mix type until such time as the cause of the unsatisfactory laydown results can be determined. As an exception, the Engineer may grant approval to produce a different mix design of the same mix type if the cause is related to mix problem(s) rather than laydown procedures.

Mix placed under the limited production procedures for unsatisfactory laydown or workmanship will be evaluated for acceptance in accordance with Article l05-3.

DENSITY ACCEPTANCE

Page 6-36, Article 610-13

Delete the second paragraph on this page and substitute the following:

The pavement will be accepted for density on a lot by lot basis. A lot will consist of one day's production of a given job mix formula on a contract. As an exception, separate lots will be established when the one of the following occurs:

(6) Portions of pavement are placed in both "New" and "Other" construction categories as defined below. A lot will be established for the portion of the pavement in the "New" construction category and a separate lot for the portion of pavement in the "Other" construction category.

(7) Pavement is placed on multiple resurfacing maps, unless otherwise approved prior to paving. A lot will be established for each individual resurfacing map or portion thereof.

(8) Pavement is placed simultaneously by multiple paving crews. A lot will be established for the pavement placed by each paving crew.

(9) Pavement is placed in different layers. A lot will be established for each layer.

(10) Control strips are placed during limited production.

The Engineer will determine the final category and quantity of each lot for acceptance purposes.

Page 6-36, Article 610-13

Delete the first sentence in the third paragraph on this page and insert the following:

The "New" construction category will be defined as pavements of uniform thickness, exclusive of irregular areas, meeting all three of the following criteria:

Delete the sixth paragraph in this Article and substitute the following:

A failing lot for density acceptance purposes is defined as a lot for which the average of all test sections, and portions thereof, fails to meet the minimum specification requirement. If additional density sampling and testing, beyond the minimum requirement, is performed and additional test sections are thereby created, then all test results shall be included in the lot average. In addition, any lot or portion of a lot that is obviously unacceptable will be rejected for use in the work.

Page 6-36, Article 610-13

Delete the last paragraph on this page and substitute the following:

Any density lot not meeting minimum density requirements detailed in Table 610-4 will be evaluated for acceptance by the Engineer. If the lot is determined to be reasonably acceptable, the mix will be paid at an adjusted contract price in accordance with Article 105-3. If the lot is determined not to be acceptable, the mix will be removed and replaced with mix meeting and compacted to the requirement of these specifications.

ASPHALT BINDER FOR PLANT MIX - METHOD OF MEASUREMENT

Page 6-39, Article 620-4

Delete the first sentence of the second paragraph on this page and substitute the following:

Where recycled plant mix is being produced, the grade of asphalt binder to be paid for will be the grade for the specified mix type as required in Table 610-2 unless otherwise approved.

CONSTRUCTION REQUIREMENTS

Page 6-43, Article 650-5

Add the following paragraph after the first paragraph under this Article:

Do not place open-graded asphalt friction course between October 31 and April 1 of the next year, unless otherwise approved. Place friction course, Type FC-1 mixes, only when the road surface temperature is 50°F (10°C) or higher and the air temperature is 50°F (10°C) or higher. The minimum air temperature for Type FC-1 Modified and FC-2 Modified mixes will be 60°F (15°C).

AGGREGATES FOR ASPHALT PLANT MIXES

Page 10-34, Subarticle 1012-1(B)4

Delete this Subarticle and substitute the following:

(4) Flat and Elongated Pieces:

Use coarse aggregate meeting the requirements of Table 1012-1 for flat and elongated pieces when tested in accordance with ASTM D 4791 (Section 8.4) on the No. 4 (4.75 mm) sieve and larger with a 5:1 aspect ratio (maximum to minimum) for all pavement types, except there is no requirement for Types S 4.75A, SF 9.5A, and S 9.5B.

Page 10-35, Table 1012-1

Delete Table 1012-1 and substitute the following:

Table 1012-1
AGGREGATE CONSENSUS PROPERTIES[a]

Mix Type	Course Aggregate Angularity[b]	Fine Aggregate Angularity	Sand Equivalent	Flat & Elongated 5 : 1 Ratio
		% Minimum	% Minimum	% Maximum
	ASTM D 5821	AASHTO T 304 Method A	AASHTO T 176	ASTM D 4791 Section 8.4
S 4.75 A		40	40	
SF 9.5 A S 9.5 B I 19.0 B B 25.0 B	75 / -	40	40	10[c]
S 9.5 C S 12.5 C I 19.0 C B 25.0 C B 37.5 C	95 / 90	45	45	10
S 12.5 D I 19.0 D	100 / 100	45	50	10
OGAFC	100 / 100	N/A	N/A	10

(a) Requirements apply to the course aggregate blend and/or fine aggregate blend
(b) 95/90 denotes that 95% of the course aggregate (+No.4 or + 4.75mm sieve)has one fractured face and 90% has two or more fractured faces.
(c) Does not apply to Mix Types SF 9.5 A or S 9.5 B

Page 10-36, Subarticle 1012-1(C)1

Insert the following after the fourth paragraph on this page:

When natural sand is utilized in "C" or "D" level asphalt mixes, do not exceed the maximum natural sand percentage in the mix design and/or production aggregate blend detailed in Table 1012-1A.

Table 1012-1A

Uncompacted Void Content of Fine Aggregate AASHTO T 304 Method A	Maximum Percent Natural Sand Included in Mix Design and/or Production*
Less than 42.0	10
Equal to 42.0 to 44.9	15
Equal to 45.0 and greater	20

*Maximum percent natural sand may be exceeded with approval from Pavement Construction Engineer upon satisfactory evaluation of pavement performance testing

FINE AGGREGATE ANGULARITY

Page 10-36, Subarticle 1012-1(C)6

Delete reference to AASHTO TP 33 Method A and substitute AASHTO T 304, Method A.

Page 10-37, Subarticle 1012-1(H)

Delete this Subarticle. It is a duplicate of Subarticle 1012-1(F) located on Page 10-36.

ASPHALT BINDER

Page 10-46, Article 1020-2

Delete the first paragraph under this Article and substitute the following:

Use Performance Graded Asphalt Binder meeting the requirements of AASHTO M 320. See Article 610-3 for the specified grades. Submit a Quality Control Plan for asphalt binder production in conformance with the requirements of AASHTO R 26 to the Materials and Tests Unit.

DB6R01

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course,	Type B 25.0X	4.3%
Asphalt Concrete Intermediate Course,	Type I 19.0X	4.7%
Asphalt Concrete Surface Course,	Type S 4.75A	7.0%
Asphalt Concrete Surface Course,	Type SF 9.5A	6.0%
Asphalt Concrete Surface Course,	Type S 9.5X	6.5%
Asphalt Concrete Surface Course,	Type S 12.5X	5.5%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the Standard Specifications or Project Special Provisions.

DB6R15

FINAL SURFACE TESTING - ASPHALT PAVEMENTS 4/1/04

Perform acceptance testing of the longitudinal profile of the finished pavement surface in accordance with these provisions using a North Carolina Hearne Straightedge (Model No. 1). Furnish and operate the straightedge to determine and record the longitudinal profile of the pavement on a continuous graph. Final surface testing is an integral part of the paving operation and is subject to observation and inspection by the Engineer as deemed necessary.

Push the straightedge manually over the pavement at a speed not exceeding 2 miles per hour (3 kilometers per hour). For all lanes, take profiles in the right wheel path approximately 3 ft (1 m) from the right edge of pavement in the same direction as the paving operation, unless otherwise approved due to traffic control or safety considerations. Make one pass of the straightedge in each full width travel lane. The full lane width should be comparable in ride quality to the area evaluated with the Hearne Straightedge. If deviations exist at other locations across the lane width, utilize a 10 foot non-mobile straightedge or the Hearne Straightedge to evaluate which areas may require corrective action. Take profiles as soon as practical after the pavement has been rolled and compacted but in no event later than 24 hours following placement of the pavement, unless otherwise authorized by the Engineer. Take profiles over the entire length of final surface travel lane pavement exclusive of -Y- line travel lanes less than or equal to 300 feet (90 meters) in length, turn lanes less than or equal to 300 feet (90 meters) in length, structures, approach slabs, paved shoulders, loops, and tapers or other irregular shaped areas of pavement, unless otherwise approved by the Engineer. Test in accordance with this provision all mainline travel lanes, full width acceleration or deceleration lanes, -Y- line travel lanes greater than 300 feet (90 meters) in length, ramps, full width turn lanes greater than 300 feet (90 meters) in length, and collector lanes.

At the beginning and end of each day's testing operations, and at such other times as determined necessary by the Engineer, operate the straightedge over a calibration strip so that the Engineer can verify correct operation of the straightedge. The calibration strip must be a 100 ft (30 m)

section of pavement that is reasonably level and smooth. Submit each day's calibration graphs with that day's test section graphs to the Engineer. Calibrate the straightedge in accordance with the current NCDOT procedure titled "North Carolina Hearne Straightedge - Calibration and Determination of Cumulative Straightedge Index". Copies of this procedure may be obtained from the Department's Pavement Construction Section.

Plot the straightedge graph at a horizontal scale of approximately 25 ft per inch (3 m per cm) with the vertical scale plotted at a true scale. Record station numbers and references (bridges, approach slabs, culverts, etc.) on the graphs, and distances between references/stations must not exceed 100 ft (30 m). Have the operator record the Date, Project No., Lane Location, Wheel Path Location, Type Mix, and Operator's Name on the graph.

Upon completion of each day's testing, evaluate the graph, calculate the Cumulative Straightedge Index (CSI), and determine which lots, if any, require corrective action. Document the evaluation of each lot on a QA/QC-7 form. Submit the graphs along with the completed QA/QC-7 forms to the Engineer, within 24 hours after profiles are completed, for verification of the results. The Engineer will furnish results of their acceptance evaluation to the Design Build Team within 48 hours of receiving the graphs. In the event of discrepancies, the Engineer's evaluation of the graphs will prevail for acceptance purposes. The Engineer will retain all graphs and forms.

Use blanking bands of 0.2 inches, 0.3 inches, and 0.4 inches (5 mm, 7.5 mm, and 10 mm) to evaluate the graph for acceptance. The 0.2 inch and 0.3 inch (5 mm and 7.5 mm) blanking bands are used to determine the Straightedge Index (SEI), which is a number that indicates the deviations that exceed each of the 0.2 inch and 0.3 inch (5 mm and 7.5 mm) bands within a 100 ft (30 m) test section. The Cumulative Straightedge Index (CSI) is a number representing the total of the SEIs for one lot, which consist of not more than 25 consecutive test sections. In addition, the 0.4 inch (10 mm) blanking band is used to further evaluate deviations on an individual basis. The Cumulative Straightedge Index (CSI) will be determined by the Engineer in accordance with the current procedure titled "North Carolina Hearne Straightedge - Calibration and Determination of Cumulative Straightedge Index".

The pavement will be accepted for surface smoothness on a lot by lot basis. A test section represents pavement one travel lane wide not more than 100 ft (30 m) in length. A lot will consist of 25 consecutive test sections, except that separate lots will be established for each travel lane, unless otherwise approved by the Engineer. In addition, full width acceleration or deceleration lanes, ramps, turn lanes, and collector lanes, will be evaluated as separate lots.

If during the evaluation of the graphs, more than 5 lots within the contract limits (mainline travel lanes and full width -Y- line travel lanes greater than 300 feet in length only) require corrective action, then proceed on limited production for unsatisfactory laydown in accordance with Article 610-12. Proceeding on limited production is based upon the Design Build Team's initial evaluation of the straightedge test results and must begin immediately upon obtaining those results. Additionally, the Engineer may direct the Design Build Team to proceed on limited production in accordance with Article 610-12 due to unsatisfactory laydown or workmanship.

Limited production for unsatisfactory laydown is defined as being restricted to the production, placement, compaction, and final surface testing of a sufficient quantity of mix necessary to construct only 2500 feet (750 meter) of pavement at the laydown width. Once this lot is complete, the final surface testing graphs will be evaluated jointly by the Design Build Team and the Engineer. Remain on limited production until such time as satisfactory laydown results are obtained or until three consecutive 2500 foot (750 meter) sections have been attempted without achieving satisfactory laydown results. The Engineer will determine if normal production may resume based upon the CSI for the limited production lot and any adjustments to the equipment, placement methods, and/or personnel performing the work. Once on limited production, the Engineer may require the Design Build Team to evaluate the smoothness of the previous asphalt layer and take appropriate action to reduce and/or eliminate corrective measures on the final surface course. Additionally, the Design Build Team may be required to demonstrate acceptable laydown techniques off the project limits prior to proceeding on the project.

If the Design Build Team fails to achieve satisfactory laydown results after three consecutive 2500 foot (750 meter) sections have been attempted, cease production of that mix type until such time as the cause of the unsatisfactory laydown results can be determined.

As an exception, the Engineer may grant approval to produce a different mix design of the same mix type if the cause is related to mix problem(s) rather than laydown procedures. If production of a new mix design is allowed, proceed under the limited production procedures detailed above.

If the Design Build Team does not operate by the limited production procedures as specified above, the 5 lots, which require corrective action, will be considered unacceptable and may be subject to removal and replacement.

After initially proceeding under limited production, the Design Build Team shall immediately notify the Engineer if any additional lot on the project requires corrective action. The Engineer will determine if limited production procedures are warranted for continued production.

The adjustment schedule for the Cumulative Straightedge Index (CSI) test results per lot is as follows:

Adjustment Schedule for Cumulative Straightedge Index (CSI) (Obtained by adding SE Index of up to 25 consecutive 100 ft. (30m) sections)		
***CSI**	**ACCEPTANCE CATEGORY**	**CORRECTIVE ACTION**
0-0	Acceptable	None
1-0 or 2-0	Acceptable	None
3-0 or 4-0	Acceptable	None
1-1, 2-1, 5-0 or 6-0	Acceptable	None
3-1, 4-1, 5-1 or 6-1	Acceptable	Required
Any other Number	Unacceptable	Required

***Either Before or After Corrective Actions**

Correct any deviation that exceeds a 0.4 inch (10 mm) blanking band such that the deviation is reduced to 0.3 inches (7.5 mm) or less.

Corrective actions shall be performed at the Design Build Team's expense and shall be presented for evaluation and approval by the Engineer prior to proceeding. Any corrective action performed shall not reduce the integrity or durability of the pavement which is to remain in place. Corrective action for deviation repair may consist of overlaying, removing and replacing, indirect heating and rerolling. Scraping of the pavement with any blade type device will not be allowed as a corrective action. Provide overlays of the same type mix, full roadway width, and to the length and depth established by the Engineer. Tapering of the longitudinal edges of the overlay will not be allowed.

Corrective actions will not be allowed for lots having a CSI of 40 or better. Take corrective actions as specified if the CSI indicates "Required" corrective action. The CSI after corrective action shall meet or exceed "Acceptable" requirements.

Where corrective action is required, the test section(s) requiring corrective action will be retested, unless the Engineer directs the retesting of the of the entire lot.

Areas excluded from testing by the N.C. Hearne Straightedge will be tested by using a non-mobile 10-foot (3 m) straightedge. Assure that the variation of the surface from the testing edge of the straightedge between any two contact points with the surface is not more than 1/8 inch (3 mm). Correct deviations exceeding the allowable tolerance in accordance with the corrective actions specified above, unless the Engineer permits other corrective actions.

Furnish the North Carolina Hearne Straightedge(s) necessary to perform this work. Maintain responsibility for all costs relating to the procurement, handling, and maintenance of these devices. The Department has entered into a license agreement with a manufacturer to fabricate, sell, and distribute the N.C. Hearne Straightedge. The Department's Pavement Construction Section may be contacted for the name of the current manufacturer and the approximate price of the straightedge.

DB6R45

DISPOSAL OF WASTE AND DEBRIS

Revise the 2002 Standard Specifications as follows:

Page 8-9, Subarticle 802-2(7. Buffer Zones:)

At the end of the last sentence in this subarticle, add the words "unless superseded by an environmental permit."

DB8R03

GUARDRAIL POSTS AND OFFSET BLOCKS 10/21/03

Revise the *2002 Standard Specifications* as follows:

Page 10-69, Subarticle 1046-3

Delete this sub-article in its entirety and replace with the following:

1046-3 POSTS AND OFFSET BLOCKS.

(A) General:

The Design Build Team may, at his option, furnish either of the following types of steel guardrail posts. Only one type of post will be permitted at any one continuous installation. Use structural steel posts throughout the project, unless otherwise directed or detailed in the plans.

1. Steel W6 x 8.5 or W6 x 9.0 posts.
2. Steel 4.5" x 6.0" "C" shape posts. (C150 x 12.2 kg/m)

The Design Build Team may, at his option, furnish either of the following types of treated timber posts if specifically directed or detailed in the plans. Only one type of post will be permitted at any one continuous installation.

1. Timber 6" x 8" (152 mm x 203 mm) posts.
2. Timber 8" x 8" (203 mm x 203 mm) posts.

(B) Structural Steel Posts:

Fabricate steel posts for guardrail of the size and weight shown on the plans from structural steel complying with the requirements of Section 1072. Metal from which C shape posts are fabricated shall meet the requirements of ASTM A570 for any grade of steel, except that mechanical requirements shall meet the requirements of ASTM A36. Punch or drill the holes for connecting bolts. Burning will not be permitted. After fabrication, the posts shall be galvanized in accordance with Section 1076.

(C) Treated Timber Posts:

All timber guardrail posts shall be of treated southern pine meeting the requirements of Article 1082-2 and 1082-3.

Bore bolt holes to a driving fit for the bolts. A minus tolerance of 1 percent will be allowed in the length of the post. Perform all framing and boring before the posts receive preservative treatment.

(D) Offset Blocks:

Provide 8-inch deep recycled plastic or composite offset blocks that have been approved for use with the guardrail shown in the standard drawings and/or plans. Only one type of offset block will be permitted at any one continuous installation. Prior to beginning the installation of recycled offset block, submit the FHWA acceptance letter, for each type of block, to the Engineer for approval

Treated timber offset blocks with steel beam guardrail will not be allowed unless required by the specifications, directed by the Engineer, or detailed on the plans. Steel offset blocks with steel beam guardrail will not be allowed.

Recycled plastic or composite offset blocks shall be made from no less than 50% recycled plastic or composite and meet the following minimum requirements:

- Specific Gravity: 0.950
- Compressive Strength in Lateral Direction: .....1600 psi (11 MPa)
- Maximum Water Absorption: .....10% by weight
- Maximum Termite and Ant Infestation: 10%

Testing: Shall pass NCHRP Report 350, Test Level 3 by CRASH TESTING

Revise the *2002 Standard Roadway Drawings* as follows:

Sheet 4 of 6, Standard 862.03, delete the note and substitute the following:

Note: The midpost and offset block of the WTR section will require special bolt hole drilling in the thrie beam offset block and line post.

DB8R57

STREET SIGNS AND MARKERS AND ROUTE MARKERS

Move any existing street signs, markers, and route markers out of the construction limits of the project and install the street signs and markers and route markers so that they will be visible to the traveling public if there is sufficient right of way for these signs and markers outside of the construction limits.

Near the completion of the project and when so directed by the Engineer, move the signs and markers and install them in their proper location in regard to the finished pavement of the project.

Stockpile any signs or markers that cannot be relocated due to lack of right of way, or any signs and markers that will no longer be applicable after the construction of the project, at locations directed by the Engineer for removal by others.

The Design Builder will be responsible to the owners for any damage to any street signs and markers or route markers during the above described operations.

DB9R01

AGGREGATE PRODUCTION

Provide aggregate from a producer who utilizes the new Aggregate Quality Control/Quality Assurance Program that is in effect at the time of shipment.

No price adjustment is allowed to Design Build Team or producers who utilize the new program. Participation in the new program does not relieve the producer of the responsibility of complying with all requirements of the Standard Specifications. Copies of this procedure are available upon request from the Materials and Test Unit.

DB10R05

CONCRETE BRICK AND BLOCK PRODUCTION

Provide concrete brick and block from a producer who utilizes the new Solid Concrete Masonry Brick/Unit Quality Control/Quality Assurance Program that is in effect on the date that material is received on the project.

No price adjustment is allowed to Design Build Team or producers who utilize the new program. Participation in the new program does not relieve the producer of the responsibility of complying with all requirements of the Standard Specifications. Copies of this procedure are available upon request from the Materials and Test Unit.

DB10R10

FINE AGGREGATE

Revise the 2002 Standard Specifications as follows:

Page 10-17, Table 1005-2

Make the following change to the table:

For Standard Size 2MS the following gradation change applies.

The minimum percent shown for material passing the No. 8 (2.36mm) sieve has been changed from 84 to **80.**

DB10R15

BORROW MATERIAL

Revise the 2002 Standard Specifications as follows:

Page 10-44

Section 1018-2 II (b) Delete the last sentence in its entirety.

DB10R17

DRUMS

Revise the 2002 Standard Specifications as follows:

Page 10-195, Subarticle 1089-5(C)

Delete the first (1^{st}) sentence of the first (1^{st}) paragraph and insert the following:

"Provide a minimum of three orange and two white alternating horizontal circumferential stripes covering the entire outside with each drum."

DB11R05

PORTABLE CONCRETE BARRIER

Portable Concrete Barrier used on this project must meet one of the following:

- NC Approved NCHRP 350 Portable Concrete Barrier (design can be found at http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/TC/ or can be obtained by calling the Traffic Control Section at (919) 250-4159)
- Other NCHRP 350 Portable Concrete Barrier as approved by the Engineer and the Traffic Control Section
- NC Approved NCHRP 230 Portable Concrete Barrier in Roadway Standard Drawing 1170.01 manufactured before October 1, 2002

DB11R10

PAVEMENT MARKING GENERAL REQUIREMENTS

Revise the 2002 Standard Specifications as follows:

Page 12-10, Subarticle 1205-3(J)

Delete the first (1st) sentence of the first (1st) paragraph and insert the following:

"Have at least one member of every pavement marking crew working on a project certified through the NCDOT Pavement Marking Technician Certification Process. For more information contact the Traffic Control, Marking and Delineation Section of the North Carolina Department of Transportation at 919-250-4151 or

http://www.doh.dot.state.nc.us/preconstruct/traffic/congestion/TC/"

DB12R01

AVAILABILITY OF FUNDS - TERMINATION OF CONTRACTS

In accordance with G.S. 143-28.1 (6), Subsection (5) of G.S. 143-28.1 is hereby incorporated verbatim in this contract. G.S. 143-28.1(5) is as follows:

"(5). Amounts Obligated - Payments subject to the Availability of Funds - Termination of Contracts. Highway maintenance and construction appropriations may be obligated in the amount of allotments made to the Department of Transportation by the Office of State Budget and Management for the estimated payments for maintenance and construction contract work to be performed in the appropriation fiscal year. The allotments shall be multi-year allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in subdivision (2) above. Payment for highway maintenance and construction work performed pursuant to contract in any fiscal year other than the current fiscal year will be subject to appropriations by the General Assembly. Highway maintenance and construction contracts shall contain a schedule of estimated completion progress and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any highway maintenance or construction contract and any highway maintenance or construction contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the Design-Builder shall be given a written notice of termination at least 60 days before completion of schedule work for which funds are available. In the event of termination, the Design-Builder shall be paid for the work already performed in accordance with the contract specifications".

Payment will be made on any contract terminated pursuant to the special provision in accordance with Article 108-13, Item 5, of the North Carolina Department of Transportation *Standard Specifications for Roads and Structures*, dated January 1, 2002.

NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

Restricted Noxious **Weed**	Limitations per Lb. Of Seed	Restricted Noxious **Weed**	Limitations per Lb. of Seed
Blessed Thistle	4 seeds	Bermudagrass	27 seeds
Cocklebur	4 seeds	Cornflower (Ragged Robin)	27 seeds
Spurred Anoda	4 seeds	Texas Panicum	27 seeds
Velvetleaf	4 seeds	Bracted Plantain	54 seeds
Morning-glory	8 seeds	Buckhorn Plantain	54 seeds
Corn Cockle	10 seeds	Broadleaf Dock	54 seeds
Wild Radish	12 seeds	Curly Dock	54 seeds
Purple Nutsedge	27 seeds	Dodder	54 seeds
Yellow Nutsedge	27 seeds	Giant Foxtail	54 seeds
Canada Thistle	27 seeds	Horsenettle	54 seeds
Field Bindweed	27 seeds	Quackgrass	54 seeds
Hedge Bindweed	27 seeds	Wild Mustard	54 seeds

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

Further specifications for each seed group are give below:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza
Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)	Bermudagrass
Kobe Lespedeza	Browntop Millet
Korean Lespedeza	German Millet - Strain R
Weeping Lovegrass	Centipedegrass
Carpetgrass	Clover - Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties)
Kentucky Bluegrass (all approved varieties)
Hard Fescue (all approved varieties)
Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Crownvetch
Pensacola Bahiagrass
Japanese Millet
Switchgrass
Reed Canary Grass

03-16-04

STANDARD SPECIAL PROVISIONS
ERRATA

Correct the *2002 Standard Specifications for Roads and Structures* as follows:

Page 1-61, Subarticle 108-10(A)

In the first sentence, change the Article reference from 101-24 to 101-25.

Page 2-21, Subarticle 235-4(B)

In the third sub-bullet under the eighth bullet in this subarticle, delete the word "subgrade" and insert the words "finished grade".

Page 3-4, Article 300-10

Change all references to 300-8 to 300-9.

Page 5-9, Subarticle 520-3(A)

Delete the words "at your option".

Page 5-10, Subarticle 520-6(A)

In the first sentence, add a period after "(B)" and delete the words "and (C)."

Delete the last sentence of the subarticle.

Page 8-47, Subarticle 862-6

Change the subarticle number from 862-6 to **862-7**.

Page 8-49, Subarticle 864-4

In the first paragraph, change the Article reference from 862-3 to **864-3**.

Page 8-55, Subarticle 866-5(G)

In the third pay item, insert the words "with Posts" after the word "Fence".

Page 10-1, Subarticle 1000-3(A)

In the second paragraph, change 550 psi to 600 psi (4.1 MPa).

Page 10-2, Subarticle 1000-3(A)

In the last sentence of the second paragraph on this page, change 550 psi to 600 psi (4.1 MPa).

Page 10-5, Table 1000-1

Under the column "Consistency Max. Slump" change the sub-heading 'Non-Vibrated' to 'Vibrated' and change the sub-heading 'Vibrated' to 'Non-Vibrated'. Under the column "Min. Cement Content" change the sub-heading 'Non-Vibrated' to 'Vibrated" and change the sub-heading 'Vibrated' to 'Non-Vibrated'.

Page 10-7, Table 1005-2

For Std. Size # 2S make the following changes:
#50 (0.300) Sieve change the limits from 8 - 30 to **5 - 30**.
#100 (0.150) Sieve change the limits from 0.5 - 10 to **0 - 10**.

For Std. Size # 2MS make the following changes:
#50 (0.300) Sieve change the limits from 8 - 35 to **5 - 35**.
#100 (0.150) Sieve change the limits from 0.5 - 20 to **0 - 20**.

Page 15-3, Article 1505-3

In the last paragraph of this article, change Article 300-6 to Article 300-7.

Page 15-10, Article 1510-5

In the fourth paragraph, insert a comma after the word "water".

Page 15-18, Article 1530-2

In the third paragraph on the page, change "Section 812" to "Section 340".

Page 16-15, Article 1635-3(A)

Substitute the second paragraph with the following:

Construct the rock pipe inlet sediment trap type-A with a minimum height of 18 inches (457.2 mm) and a minimum of 12 inches (304.8 mm) below the roadway shoulder or diversion point.

AWARD OF CONTRACT

"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 C.F.R., Part 21), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin".

MINIMUM WAGES

Federal: The Fair Labor Standards Act provides that with certain exceptions every employer must pay wages at the rate of not less than FIVE DOLLARS AND FIFTEEN CENTS ($5.15) per hour.

State: The North Carolina Minimum Wage Act provides that every employer shall pay to each of his employees wages at a rate of not less than FIVE DOLLARS AND FIFTEEN CENTS ($5.15) per hour.

The minimum wage paid to all skilled labor employed on this contract shall be FIVE DOLLARS AND FIFTEEN CENTS ($5.15) per hour.

The minimum wage paid to all intermediate labor employed on this contract shall be FIVE DOLLARS AND FIFTEEN CENTS ($5.15) per hour.

The minimum wage paid to all unskilled labor on this contract shall be FIVE DOLLARS AND FIFTEEN CENTS ($5.15) per hour.

This determination of the intent of the application of this act to the contract on this project is the responsibility of the Contractor.

The Contractor shall have no claim against the Department of Transportation for any changes in the minimum wage laws, State or Federal. It is the responsibility of the Contractor to keep himself fully informed of all Federal and State Laws affecting his contract.

STANDARD SPECIAL PROVISIONS

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
EEI _____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
SPIB_____Southern Pine Inspection Bureau
SSPC _____Steel Structures Painting Council
UL _____Underwriters' Laboratories, Inc.
AMRL _____AASHTO Materials Reference Laboratory
CCRL _____Cement and Concrete Reference Laboratory

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, provided in the original contract or an executed supplemental agreement.

101-5 ADMINISTRATOR.

The State Highway Administrator.

101-6 ADVERTISEMENT.

The public advertisement inviting Request for Qualifications for the design and construction of specific projects.

101-7 ARTICLE.

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

101-8 AWARD.

The decision of the Board of Transportation to accept the proposal of the selected Design-Builder 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 Request for Proposals, and the Standard specifications.

101-9 BASE COURSE.

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

101-10 BID (OR PROPOSAL).

The offer of a Design-Builder in the form of a Design-Build price proposal and a Design-Build technical proposal to perform the work and to furnish the labor and materials at the prices quoted.

101-11 BID BOND OR BID DEPOSIT.

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

101-12 BIDDER.

An individual, partnership, firm, corporation, or joint venture formally submitting a proposal for the work contemplated. On Design-Build projects the word refers to respondents to the Design-Build Proposal invitation.

101-13 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.

101-14 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.

101-15 CALENDAR DAY.

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

101-16 CHIEF ENGINEER.

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

101-17 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.

101-18 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.

101-19 CONTRACT.

The executed agreement between the Department of Transportation and the successful Proposer, 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. The contract shall specifically include, but not be limited to, the Design-Build Package, the Design-Build Technical Proposal, the Design-Build Price Proposal, 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 Design-Build Package, and all executed supplemental agreements, all of which shall constitute one instrument.

101-20 CONTRACT ITEM.

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

101-21 CONTRACT LUMP SUM PRICE.

The amount proposed for a lump sum item that has been submitted by the Design-Builder in his price proposal.

101-22 CONTRACT PAYMENT BOND.

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

101-23 CONTACT PERFORMANCE BOND.

A bond furnished by the Design-Builder and his corporate surety guaranteeing the performance of the contract.

101-24 CONTRACT TIME.

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

101-25 CONTRACT UNIT PRICE.

The unit price for a unit item established in an executed supplemental agreement.

101-26 CONTRACTOR.

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

101-27 CULVERT.

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

101-28 CURRENT CONTROLLING OPERATION OR OPERATIONS.

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

101-29 DATE OF AVAILABILITY.

That date set forth in the Request for Proposals, by which it is anticipated that the Contract will be executed and sufficient work sites within the project limits, will be available for the Design-Builder to begin his controlling operations.

101-30 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.

101-31 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.

101-32 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.

101-33 EASEMENT.

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

101-34a. DIRECTOR OF CONSTRUCTION IN LIEU OF CHIEF ENGINEER.

Wherever the term *Chief Engineer or Chief Engineer of Operations* occurs in the Specifications, the actions and responsibilities referred to will be performed by the Director of Construction, Division of Highways, North Carolina Department of Transportation, acting directly or through his duly authorized representative.

101-34b. ENGINEER.

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

101-35 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.

101-36 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.

101-37 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.

101-38 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 Design-Builder. Receipt of this document by the Design-Builder 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.

101-39 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.

101-40 FORCE ACCOUNT NOTICE.

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

101-41 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.

101-42 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".

101-43 HOUR.

One of the 24 equal parts of a day.

101-44 INSPECTOR.

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

101-45 INTERMEDIATE COMPLETION DATE.

That date set forth in the contract 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.

101-46 INTERMEDIATE COMPLETION TIME.

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

101-47 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.

101-48 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.

101-49 INVERT.

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

101-50 INVITATION TO BID.

The notification that proposals will be received for the design and construction of specific projects.

101-51 LABORATORY.

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

101-52 LOCAL TRAFFIC.

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

101-53 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.

101-54 MATERIALS.

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

101-55 MEDIAN.

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

101-56 PAVEMENT STRUCTURE.

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

101-57 PAY ITEM.

Synonymous with "Contract Item".

101-58 PLANS.

The project plans, Standard Drawings, working drawings and supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions and details of the work to be performed.

(A) Standard Drawings:

Drawings approved for repetitive use, showing details to be used where appropriate. All Standard Drawings approved by the Department plus subsequent revisions and additions. Standard Drawings are available for purchase from:

Randy A. Garris, PE
State Contract Officer
1591 Mail Service Center
Raleigh, NC 27699-1591

(B) Initial Plans:

Department-furnished drawings included as part of the Design-Build Package.

(C) Project Plans:

Construction drawings prepared, sealed and completed by the Design-Builder. Specific details and dimensions peculiar to the work, which are completed by the Design-Builder.

(D) Working Drawings and Supplemental Drawings:

Supplemental design sheets, shop drawings, or similar data which the Design-Builder is required to submit to the Engineer as described in the Scope of Work.

(E) As-Constructed Drawings:

Final drawings prepared by the Design-Builder, documenting the details and dimensions, of the completed work.

101-59 PROJECT.

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

101-60 PROJECT SPECIAL PROVISIONS.

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

101-61 PROPOSAL FORM.

This definition is deleted for this project.

101-62 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.

101-63 ROAD.

Synonymous with "Highway" and "Street".

101-64 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.

101-65 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.

101-66 ROADWAY.

The portion of a highway within limits of construction.

101-67 SECTION.

A numbered chapter of the standard specifications.

101-68 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.

101-69 SIDEWALK.

That portion of the roadway primarily constructed for pedestrian traffic.

101-70 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.

101-71 SPECIAL PROVISIONS.

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

101-72 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.

101-73 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.

101-74 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".

101-75 STATE.

The State of North Carolina.

101-76 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 designated point on the project.

101-77 STREET.

Synonymous with "Highway" and "Road".

101-78 SUBCONTRACTOR.

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

101-79 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.

101-80 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.

101-81 SUPERINTENDENT.

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

101-82 SUPERSTRUCTURE.

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

101-83 SUPPLEMENTAL AGREEMENT.

A written agreement between the Design-Builder and the Department of Transportation covering amendments to the contract.

101-84 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.

101-85 SURETY.

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

101-86 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.

101-87 THROUGH TRAFFIC.

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

101-88 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 Design-Builder to begin his controlling operations.

101-89 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 Design-Build Price proposal.

101-90 UNBALANCED BID.

A bid which includes any unbalanced bid price.

101-91 UNBALANCED BID PRICE.

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

101-92 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.

101-93 WORKING DRAWINGS.

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

101-94.1 DESIGN-BUILD.

A form of contracting in which the successful proposer undertakes responsibility for both the design and construction of a project.

101-94.2 DESIGN-BUILDER.

An individual, partnership, joint venture, corporation or other legal entity that furnishes the necessary design and construction services, whether by itself or through subcontracts.

101-94.3 DESIGN-BUILD PACKAGE.

The documents prepared by the Department for a Design-Build project, containing all forms, information, drawings or other documentation furnished to proposers to guide the preparation and submittal of a proposal for a Design-Build project.

101-94.4 DESIGN-BUILD PROPOSAL.

A proposal to contract consisting of a separately sealed technical proposal and a separately sealed price proposal submitted in response to a request for proposal on a Design-Build project. The technical proposal and price proposal, in some cases, may be scheduled to be submitted on different dates.

101-94.5 DESIGN-BUILD PRICE PROPOSAL.

The part of a Design-Build proposal containing the offer of a Proposer, submitted on the prescribed forms, to perform the work and furnish the labor and materials at the price quoted.

101-94.6 DESIGN-BUILD TECHNICAL PROPOSAL.

A submittal from a proposer, in accordance with requirements of the Design-Build Package, for the purpose of final selection.

101-94.7 PROJECT MANAGER.

The Department’s authorized designee responsible for the administration of the Design-Build project.

101-94.8 TECHNICAL SPECIFICATIONS.

Additions and revisions to the Standard Specifications covering conditions and requirements peculiar to a Design-Build project.

101-94.9 TABLE OF VALUES.

A table prepared prior to beginning of construction listing estimated quantity of items for which a testing frequency is defined in the Minimum Sampling Guide. This estimate will be used to determine required frequency of testing for materials and products incorporated into construction, and shall be updated monthly and provided to the Engineer.

SECTION 102
PROPOSAL REQUIREMENTS AND CONDITIONS

102-1 INVITATION TO BID.

This section is deleted from this project and replaced with the special provision titled "Submittal of Proposals", which discusses the process used to evaluate the Technical and Price proposals.

102-2 PREQUALIFICATION FOR PROPOSERS.

Proposers shall prequalify with the Department. The requirements for prequalification will be furnished each prospective Proposer by the Engineer upon receipt of a written request. A Price Proposal or Technical Proposal will not be opened unless all prequalification requirements have been met by the Proposer and have been found to be acceptable by the Engineer.

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.

All subcontractors performing work for the Department shall have received a passing grade on the Safety Index Rating form, in accordance with Article 102-2, prior to beginning work. Subcontractors can request the Safety Index Rating form from the State Contractual Services 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.

No Proposer will be prequalified who, at the time of the application for prequalification is determined by the Engineer to lack the financial capability to complete projects.

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

102-3 CONTENTS OF DESIGN-BUILD PACKAGES.

A Design-Build Package will be furnished by the Department to the selected Proposers from among the respondents to the Request for Qualifications. Each Design-Build Package will be marked on the front cover by the Department with an identifier of the Proposer to whom it is being furnished. This package will state the location of the project and will show a schedule of contract items for which Technical and Price proposals are invited. It will set forth the date and

time Technical and Price Proposals are to be submitted and will be opened. The package will also include any special provisions or requirements which vary from or are not contained in any preliminary plans or standard specifications.

The package will also include the printed contract forms and signature sheets for execution by both parties to the contract. In the event the Proposer is awarded the contract, execution of the Design-Build Proposal will be considered the same as execution of the contract by the Proposer.

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

The plans, standard specifications, and other documents designated in the Design-Build package shall be considered a part of the Design-Build package whether attached or not.

Up to 3 copies of the Design-Build Package will be furnished to each prospective Proposer upon request. Additional copies may be purchased for the sum of $25 each. *The copy marked with the Proposer's name and prequalification number shall be returned to the Department.*

102-4 COMBINATION BIDS.

This section is deleted for this project.

102-5 INTERPRETATION OF QUANTITIES IN PROPOSAL FORM.

This section is deleted for this project.

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

The Proposer shall examine carefully the site of the work contemplated, the preliminary plans and specifications, and the Design-Build Package.. The submission of a Technical Proposal and a Price Proposal shall be conclusive evidence that the Proposer 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 proposed contract.

A Proposer 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 prospective proposers upon request.

The Subsurface Information and the Subsurface Investigation on which it is based was made for the purpose of information only. 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 non-climatic factors.

THE PROPOSER IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE INFORMATION ARE PRELIMINARY ONLY. 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 PROPOSER IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS THEY DEEM NECESSARY TO SATISFY THEIRSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE PROPOSER 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 PRICE PROPOSALS .

All Price Proposals shall be prepared and submitted in accordance with the following listed requirements:

1. The Design-Build Package provided by the Department shall be used and shall not be taken apart or altered. The Price Proposal shall be submitted on the same form, which has been furnished to the Proposer by the Department as identified by the Proposer's name marked on the front cover by the Department.
2. All entries including signatures shall be written in ink.
3. The Proposer shall submit a lump sum price for every item in the Design-Build Price Proposal. The lump sum prices bid for the various contract items shall be written in figures.
4. An amount bid shall be entered in the Design-Build Package for every lump sum item and the price shall be written in figures in the "Amount Bid" column in the Design-Build Package.
5. The total amount bid shall be written in figures in the proper place in the Design-Build Package. The total amount bid shall be determined by adding the amounts bid for each lump sum 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 Proposer shall initial the change in ink.

7. The Price Proposal shall be properly executed. In order to constitute proper execution, the Price Proposal shall be executed in strict compliance with the following:

   a. If a Price Proposal 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 Price Proposal 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 Price Proposal 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 the person executing shall be attached to the Price Proposal or shall be on file with the Department.

   c. If the Price Proposal is made by a partnership, it shall be executed in the name of the partnership by one of the general partners.

   d. If the Price Proposal 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 Price Proposal 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 Price Proposal and to the non-collusion affidavit which is part of the signature sheets.

8. The Price Proposal shall not contain any unauthorized additions, deletions, or conditional bids.

9. The Proposer 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 Price Proposal 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 Price Proposal 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 Design-Build Package.

102-9 COMPUTER BID PREPARATION.

This section is deleted from this project.

102-10 NON-COLLUSION AFFIDAVIT.

In compliance with Section 112(c) of title 23 USC, and current regulations of the Department, each and every Proposer will be required to furnish the Department with an affidavit certifying that the Proposer 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 Price Proposal on the project. The affidavit shall also conclusively indicate that the

Proposer intends to do the work with its own bonafide employees or subDesign-Builders and is not bidding for the benefit of another Design-Builder.

Affidavit forms will be included in the Design-Build Package 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.

102-11 BID BOND OR BID DEPOSIT.

Each Price proposal 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 Price proposal 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 Price proposal 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.

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

When a Price proposal 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 Proposer and a Corporate Surety licensed under the laws of North Carolina to write such bonds. The execution by the Proposer shall be in the same manner as required by Article 102-8 for the proper execution of the Price proposal. 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 Price proposal 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 Price proposal is secured by a bid deposit (certified check or cashiers check), the execution of a bid bond will not be required.

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

102-12 DELIVERY OF PROPOSALS.

All Price Proposals shall be placed in a sealed envelope having the name and address of the Proposer, and the statement " Price Proposal for the Design/Build of State Highway Project No. _____ in _____County(ies)" 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 as stated in the Design-Build Package. The outer envelope shall also bear the statement " Price Proposal for the Design/Build of State Highway Project No. _____". All Technical Proposals shall be placed in a sealed envelope having the name and address of the Proposer, and the statement " Technical Proposal for the Design/Build of State Highway Project No. _____ in _____County(ies)" 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 as stated in the Design-Build Package. The outer envelope shall also bear the statement " Technical Proposal for the Design/Build of State Highway Project No. _____". If delivered in person on or before the due date, the sealed envelope shall be delivered to the office of the Contract Officer as indicated in the Design-Build Package. Price Proposals and Technical Proposals shall be submitted in accordance with the project special provision “Submittal of Proposals” contained elsewhere in this Design Build package.

All Price Proposals and Technical Proposals shall be delivered prior to the time specified in the Design-Build Package. Price proposals and Technical Proposals received after such time will not be accepted and will be returned to the Proposer unopened.

102-13 WITHDRAWAL OR REVISION OF PROPOSALS.

A Design-Build proposer will not be permitted to withdraw its Technical and Price proposals after they have been submitted to the Department.

102-14 RECEIPT AND OPENING OF PROPOSALS.

Price Proposals will be opened and read publicly at the time and place indicated in the Design-Build Package. The scores of the previously conducted evaluation of the Technical Proposals will also be read publicly at this time. Proposers, their authorized agents, and other interested parties are invited to be present.

102-15 REJECTION OF PRICE PROPOSALS.

Any Price proposal submitted which fails to comply with any of the requirements of Article 102-8, 102-11, or with the requirements of the project scope and functional specifications 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 Price proposal 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 Price proposal, it may award the contract based on such Price proposal subject to the provisions of Subarticle 109-4(B).

A Price proposal, which does not contain costs for all proposal items, shall be considered irregular and may be rejected.

In addition to the above, any Price proposals for contracts not funded with any Federal funds which are submitted by any Proposer 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 Proposals shall be reserved to the Board.

102-16 DISQUALIFICATION OF PROPOSERS.

Any one of the following causes may be justification for disqualifying a Proposer 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, 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 Price proposal for the same contract by an individual, partnership, joint venture, or corporation prequalified under the same prequalification number.
6. Evidence of collusion among Proposers. 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 such failure is of sufficient magnitude to warrant disqualification.
10. Failure to satisfy the Disadvantaged Business Enterprise requirements of the project special provisions.
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. Recruitment of Department employees as prohibited by Article 108-5.
15. Failure to maintain a satisfactory safety index as required by Article 102-2.

Upon a determination that a Proposer 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 PRICE PROPOSALS.

After the Price proposals are opened and read, they will be tabulated. The Price proposal and score of the technical proposal will be made available to the public. In the event of errors, omissions, or discrepancies in the costs, corrections to the Price proposal will be made in accordance with the provisions of Article 103-2. Such corrected costs will be used to determine the lowest adjusted price.

After the reading of the Price proposals and technical scores, the Department will calculate the lowest adjusted price as described in the "Special Provision for Instructions to Proposers".

The right is reserved to reject any or all Price proposals, to waive technicalities, to request the Proposer with the lowest adjusted price to submit an up-to-date financial and operating statement, to advertise for new proposals, 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 PRICE PROPOSAL ERRORS.

(A) General:

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

(B) Discrepancy in the "Total Amount Bid" and the addition of the "Amount Bid" for each line Item.

In the case of the Total Amount Bid does not equal the summation of each Amount Bid for the line items, the Total Amount Bid shall be deemed to be the correct total for the entire project.

(C) Omitted Total Amount Bid –Amount Bid Completed

If the Total Amount Bid is not completed and the Amount Bid for all line items is completed the Total Amount Bid shall be the summation of the Amount Bid for all line items.

103-3 WITHDRAWAL OF PRICE PROPOSAL -MISTAKE.

(A) Criteria for Withdrawal of Price Proposal:

The Department of Transportation may allow a Proposer submitting a Price proposal to withdraw his Price proposal after the scheduled time of Price proposal opening upon a determination that:

1. A mistake was in fact made in the preparation of the Price proposal.
2. The mistake in the Price proposal is of a clerical or mathematical nature and not one of bad judgment, carelessness in inspecting the work site, or in interpreting the functional requirements.
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 of Price proposal.
5. The Proposers notice of his mistake and request for withdrawal of the Price proposal by reason of the mistake was promptly communicated to the Chief Engineer and in no instance longer than 48 hours after the scheduled time of Price proposal opening. If the Proposer notifies the Chief Engineer verbally, written notice of mistake must be submitted within 48 hours to the Chief Engineer accompanied by copies of Price proposal preparation information.
6. The Department of Transportation will not be prejudiced or damaged except for the loss of the Price proposal.

(B) Hearing by Chief Engineer:

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

(C) Action by State Highway Administrator:

A determination may be made by the Administrator that the Proposer meets the criteria for withdrawal of the Price proposal as set forth in Subarticle 103-3(A) upon presentation of clear and convincing evidence by the Proposer. The Chief Engineer will present his findings to the State Highway Administrator for action on the Proposer’s request. The Chief Engineer will advise the Proposer 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 Price proposal 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 Proposer 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 Proposer's request to withdraw his Price proposal, 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 proposers that it will affirmatively insure that contracts entered in pursuant to this Request for Proposals, if awarded, will be made by the Board of Transportation to the Proposer with the lowest adjusted price as outlined in the Design-Build package without discrimination on the grounds of race,

color, or national origin. The Proposer with the lowest adjusted price will be notified by letter that his proposal 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 Price proposals, except that with the consent of the Proposer with the lowest adjusted price the decision to award the contract to such Proposer may be delayed for as long a time as may be agreed upon by the Department and such Proposer. In the absence of such agreement, the Proposer with the lowest adjusted price may withdraw his proposal 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.

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 Proposer.

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 Proposer, 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 Proposer or the Surety.

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

103-7 CONTRACT BONDS.

The successful Proposer, 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 Proposer.

103-9 FAILURE TO FURNISH CONTRACT BONDS.

The successful Proposer'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 Proposer with the next lowest adjusted price Proposer 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 Design-Builder undertakes to perform, in full compliance with the contract. In case the method or character of any part of the work is not covered by the contract, this section shall apply. The Design-Builder shall perform all work in accordance with the contract 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 contract. Unless otherwise provided elsewhere in the contract, the Design-Builder shall furnish all implements, machinery, equipment, tools, materials, supplies, transportation, and labor necessary for the design, prosecution and completion of the work.

104-2 SUPPLEMENTAL AGREEMENTS.

Whenever it is necessary to make amendments to the contract to satisfactorily complete the proposed design and 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 Design-Builder. The Design-Builder 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 CONTRACT

The Engineer reserves the right to make, at any time during the progress of the work, such alterations in the contract 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 Design-Builder 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 contract 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 contract that 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 Design-Builder will be paid for performing the affected work in accordance with Subarticle 104-8(A).

When the Design-Builder is required to perform work, which is, in his opinion, an alteration in the contract that 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 contract, the Design-Builder 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 contract that materially changes the character of the work and the cost of performing the work, he will notify the Design-Builder in writing of his determination. If the Design-Builder, 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 Design-Builder believes that additional compensation for idle equipment and/or labor is justifiably due as a result of such suspension, the Design-Builder 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 Design-Builder of the notice to resume work, the Design-Builder 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 Design-Builder 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 Design-Builder, its suppliers, or subcontractors at any tier, and not caused by weather, but the Engineer has not suspended the work in writing, the Design-Builder 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 Design-Builder’s notice of intent to file a claim for additional compensation. If the Engineer agrees with the Design-Builder’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 Design-Builder’s contention as described above and determines that no portion of the work should be suspended, he will notify the Design-Builder in writing of his determination. If the Design-Builder does not agree with the Engineer's 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 Design-Builder 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 Design-Builder.

104-7 EXTRA WORK.

The Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder in writing of his determination. If the Design-Builder 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 Design-Builder 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 Design-Builder 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 $25,000.00 and the prices for performing the work have been mutually agreed to, the Design-Builder may begin work before executing the supplemental agreement. If the estimated total cost of the affected work is more than $25,000.00; the Design-Builder shall not begin the affected work until the supplemental agreement is executed.
2. When the Engineer and the Design-Builder cannot agree to the prices to be paid for the affected work, the Engineer will issue a force account notice prior to the Design-Builder 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 Design-Builder'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 Design-Builder shall keep accurate and detailed cost records in accordance with the provisions of Article 109-3. The Design-Builder's cost records and supporting data shall be complete in every respect and in such form that the Engineer may check them. The Design-Builder'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 Design-Builder'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 Design-Builder 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 Design-Builder's justification for an adjustment in compensation under the terms of the contract.

Upon receipt, the Engineer will review the Design-Builder'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 were 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 Design-Builder 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 Design-Builder 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 of the Design-Builder 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 Design-Builder to keep records in accordance with the provisions of Article 109-3.
3. The failure of the Design-Builder to give the Engineer the opportunity to monitor the methods by which records are being maintained.

The failure of the Design-Builder to submit additional documentation requested by the Engineer provided documentation requested is available within the Design-Builder's records.

The failure of the Design-Builder to submit cost records on a weekly basis.

The failure of the Design-Builder 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 Design-Builder'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 Design-Builder'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 Design-Builder shall keep accurate and detailed records of the equipment and labor alleged to be idle. The Design-Builder's cost records, supporting data, and supporting information shall be complete in every respect and in such form that the Engineer may check them. The Design-Builder'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 Design-Builder's cost records, supporting data, and supporting information for idle labor shall include the specific employees, classification, dates and time 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 Design-Builder'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 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 Design-Builder choose 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 Design-Builder's justification for an adjustment in compensation under the terms of the contract.

Upon receipt, the Engineer will evaluate the Design-Builder'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 Design-Builder, 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 Design-Builder 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 Design-Builder in writing of his determination.

The Engineer will notify the Design-Builder 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 Design-Builder 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 Design-Builder to keep records in accordance with the details of Article 109-3.
4. The failure of the Design-Builder to give the Engineer the opportunity to monitor the methods by which records are being maintained.
5. The failure of the Design-Builder to submit additional documentation requested by the Engineer provided documentation requested is available within the Design-Builder's records.
6. The failure of the Design-Builder to submit cost records on a weekly basis.
7. The failure of the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder, 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 Design-Builder 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 Fixed Income Investment Fund during the month preceding the date interest becomes payable, will be paid the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 that is surplus to the needs of the project will remain or become the property of the Design-Builder, 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 Design-Builder as provided in Article 109-6.
6. Materials that have been furnished by the Department for use on the project.

Property shall include but not be limited to materials furnished by the Design-Builder 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 of the Design-Builder shall be removed from the project by the Design-Builder prior to final acceptance.

104-10 MAINTENANCE OF THE PROJECT.

The Design-Builder shall maintain the project from the date of beginning construction until the project 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 Design-Builder 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.

In the event that the Design-Builder's work is suspended for any reason, he 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 Design-Builder 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 Design-Builder shall perform any work required by the observation period until satisfactory completion of the observation period. The Design-Builder 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 work for maintenance, the highway, borrow sources, waste areas, and all ground occupied by the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder as being presented for consideration as a Value Engineering Proposal. Submittals that 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 implementation, Value Engineering Proposals that provide for total savings prior to distribution of less than the thousand dollars ($10,000.00) will not generally be 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
2) Safety
3) Reliability
4) Economy of Operation
5) Ease of Maintenance
6) Desired Aesthetics
7) Design
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 design-build package, for the one on which the Design-Builder proposed, will not be allowed. Plan errors which are identified by the Design-Builder 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 Design-Builder 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 Design-Builder is encouraged to include this specification in contracts with subcontractors. The Design-Builder shall encourage submissions of Value Engineering Proposals from subcontractors, however, it is not mandatory that the Design-Builder accept or transmit to the Department Value Engineering Proposals proposed by his subcontractors. The Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Engineering Office. The preparation of new design drawings by or for the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder's costs for designs and/or revisions to designs and the preparation of design drawings will be borne by the Design-Builder. The costs to either party will not be considered in determining the net savings obtained by implementing the value engineering proposal. The Design-Builder'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 Design-Builder 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 Design-Builder. Restrictions or conditions imposed by the Design-Builder for use of the proposal on other projects shall not be valid.

Except as may be otherwise precluded by this specification, the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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.

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 Design-Builder. His decision shall be final and he shall have executive authority to enforce and make effective such decisions and orders as the Design-Builder fails to carry out promptly.

The Engineer shall have the authority to issue any written order to the Design-Builder which he considers necessary to the prosecution of the work, and shall have executive authority to enforce such written orders as the Design-Builder fails to carry out promptly. Failure on the part of the Design-Builder to comply with any written order issued by the Engineer may be justification for disqualifying the Design-Builder from further bidding in accordance with Article 102-16.

105-2 PLANS AND WORKING DRAWINGS.

See Scope of Work:

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.

The Design-Builder shall bear all the costs of providing the burden of proof that the nonconforming work is reasonable and adequately addresses the design purpose. The Design-Builder shall bear all risk for continuing with nonconforming work in question until it is accepted.

The Engineer may impose conditions for acceptance of the nonconforming work. The Design-Builder shall bear all costs for fulfilling the conditions.

The decisions whether the product satisfies the design purpose, whether the nonconforming work is reasonably acceptable and the conditions for acceptance are within the sole discretion of the Engineer.

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

The Design-Build Package, the Plans, the Standard Specifications, and all supplementary documents are essential parts of the contract and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In case of discrepancy or conflict, the order in which they govern shall be as follows:

(A) Design-Build Package

(B) Technical Proposal

(C) Accepted Construction Plans

(D) Standard Drawings

(E) Standard Specifications

Where dimensions on the plans are given or can be computed from other given dimensions they shall govern over scaled dimensions.

The Design-Builder shall take no advantage of any error or omission in the plans, estimated quantities, or specifications. In the event the Design-Builder discovers an error or omission, he shall immediately notify the Engineer.

105-5 COOPERATION BY DESIGN-BUILDER.

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

105-6 SUPERVISION BY DESIGN-BUILDER.

(A) On Site Personnel:

At all times that work is actually being performed the Design-Builder 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 Design-Builder, unless otherwise approved by the Engineer.

(B) On Call Personnel:

At all times during the life of the project the Design-Builder 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 Design-Builder 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 OR DESIGN-BUILDERS.

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 or Design-Builder shall conduct his work so as not to interfere with or hinder the progress or completion of the work being performed by other Contractors or Design-Builders. Contractors or Design-Builders working within the limits of the same project shall cooperate with each other.

Each Contractor or Design-Builder 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.

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

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

105-8 COOPERATION WITH UTILITY OWNERS

Prior to the beginning of construction, the Department or Design-Builder 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 Design-Builder when such adjustments are part of the work covered by his contract.

The Design-Builder 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 Design-Builder 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 Design-Builder, the Design-Builder 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.

The Design-Builder 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 Design-Builder shall consider all of the permanent and temporary utility facilities in their present or relocated positions. It will be the Design-Builder'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.

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

105-9 CONSTRUCTION STAKES, LINES, AND GRADES.

The Design-Builder shall be responsible for any surveying, construction staking and layout required in the performance of the work. He will be responsible for the accuracy of lines, slopes, grades and other engineering work which he provides under this contract. Unless otherwise specified in the Request for Proposal, no measurement or direct payment will be made for this work. The cost shall be considered as included in other contract items.

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 Design-Builder shall allow and provide a reasonable access to all parts of the work to the Engineer or his authorized representative. The Design-Builder 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 at the work site shall in no way lessen the Design-Builder's responsibility for conformity with the plans and specifications. Should the Engineer, 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 Design-Builder 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 Design-Builder, 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 Design-Builder shall restore said portions of the work to the standard required by the specifications. The Design-Builder shall keep cost records of the work performed and if the uncovered work is found to be acceptable, the Department will pay the Design-Builder 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.

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 Design-Builder 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 Design-Builder.

105-13 LIMITATIONS OF OPERATIONS.

At any time when, in the opinion of the Engineer, the Design-Builder 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 Design-Builder 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 Design-Builder's operations are being conducted at night, the Design-Builder 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 Design-Builder 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 Design-Builder may haul on any road or bridge in the vicinity of his contract. The Design-Builder, 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 Design-Builder shall not be entitled to an extension of time or to compensation for any costs, inconvenience, delay, or any other adversity to the Design-Builder 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 Design-Builder; and the Design-Builder thereafter will be allowed to haul up to the statutory legal limits over such roads and/or bridges, provided the Design-Builder enters into an agreement with the Department providing for:

1. Maintenance by the Design-Builder of such roads in a condition satisfactory to the Engineer during the haul period.
2. Repair by the Design-Builder 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 Design-Builder in an amount determined by the Engineer for the roads. Furnishing a bond for the roads does not entitle the Design-Builder to exceed the posted load limits of any bridge.
4. Assumption by the Design-Builder 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 Design-Builder, make a determination as to the method and extent of strengthening required for the bridges and will advise the Design-Builder 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 Design-Builder shall reimburse the Department in the amount of the actual charges for said work. When Design-Builder'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 Design-Builder's hauling operations, but also for the use of the public.

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

Maximum axle load (lbs.) 36,000

Maximum axle load on tandem axles (lbs.) 30,000

Maximum gross load (lbs.) 90,000

The Design-Builder 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 Design-Builder 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 Design-Builder to comply with the provisions of Article 104-10 or to perform erosion control work as directed will result in the Engineer notifying the Design-Builder to comply with these provisions. In the event that the Design-Builder 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 Design-Builder 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 Design-Builder will be deducted from monies due the Design-Builder 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 the contract is found to be satisfactorily completed, the project will be accepted. The acceptance of projects in there entirely will not be altered except as listed below:

1. When any continuous project is equal to or in excess of 5 miles 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. When it is considered to be in the best interest of the Department, other increments or parts of projects may be considered for acceptance.
3. 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 Design-Builder.
4. Bridge decks and rails that have been constructed or rehabilitated at such time as they are open to public traffic.

5. 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 Design-Builder of such unsatisfactory or incomplete work, and the Design-Builder shall immediately correct, repair, or complete such work. The project will not be accepted and the Design-Builder 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 Design-Builder in writing that the project has been accepted as soon as practicable after the completion of the project.

105-18 Substantial Completion

When the special provisions provide for a reduction in the rate of liquidated damages for the contract time or an intermediate contract time after the work is substantially complete, the work will be considered substantially complete when the following requirements are satisfied:

1. Through traffic has been placed along the project or along the work required by an intermediate contract time and the work is complete to the extent specified below, and all lanes and shoulders are open such that traffic can move unimpeded at the posted speed. Intersecting roads and service roads are complete to the extent that they provide the safe and convenient use of the facility by the public.
2. The final layers of pavement for all lanes and shoulders along the project or along the work required by an intermediate contract time are complete.
3. All signs are complete and accepted except for the signs on intersecting roadways.
4. All guardrails, drainage devices, ditches, excavation and embankment are complete.
5. Remaining work along the project consists of permanent pavement markings, permanent pavement markers or incidental construction that is away from the paved portion of the roadway.

Upon apparent substantial completion of the entire project or the work required by an intermediate contract time, the Engineer will make an inspection of the work. If the inspection discloses the entire project or the work required by an intermediate contract time is substantially complete; the Engineer will notify the Design-Builder in writing that the work is substantially complete. If the inspection discloses the entire project or the work required by an intermediate contract time is not substantially complete, the Engineer will notify the Design-Builder in writing of the work that is not substantially complete. The entire project or the work required by an intermediate contract time will not be considered substantially complete until all of the recommendations made at the time of the inspection have been satisfactorily completed.

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 Design-Builder 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 Design-Builder 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 Design-Builder's responsibility to obtain materials which will meet the requirements of the contract. The Design-Builder 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.

The Design-Builder 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 Design-Builder 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 Design-Builder. In the latter case, the Design-Builder 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 Design-Builder 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.

The Design-Builder shall perform Quality Control (QC), that may be used in the acceptance decision, at the frequencies described in the Minimum Sampling Guide. Quality Assurance (QA), verification and Independent Assurance (IA) will be performed by the Department. Laboratory testing performed by the Design-Builder shall be performed by an AASHTO Accredited facility and participate in the AMRL/CCRL proficiency testing program for the tests being performed. Technicians performing sampling and testing shall be qualified in accordance with the Department’s training and certification requirements for the specific materials, or in accordance with AMRL/CCRL accreditation requirements.

Prior to beginning construction, the Design-Builder shall provide a "Table of Values" as described in Section 101-102 Definitions of Terms.

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 Request for Proposals for the project. When a more current specification is published during the life of the project, and when it is mutually agreed by the Design-Builder 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 DESIGN-BUILDER FURNISHED CERTIFICATION.

The Design-Builder shall maintain 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 Department's Minimum Sampling Guide.

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 Design-Builder's Certification:

Design-Builder'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 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.

Final Material Certificate:

The Design-Builder shall, upon completion of the project, certify that all certifications were received and the materials were found in compliance with the specification requirements and list all exceptions to the plans and specifications. This certification shall be in the following format:

"This is to certify that the results of the tests on Acceptance and QC/QA samples indicate that the materials incorporated in the construction work and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications. Such results compare favorably with the results of the independent assurance sampling and testing. Exceptions to the plans and specifications are noted below:"

Upon final acceptance of the Project, the Design-Builder shall submit all certifications to the Engineer.

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 Design-Builder's plant and equipment, but any additional space required therefor shall be provided by the Design-Builder at no expense to the Department. All storage sites located within the right of way shall be restored to their original condition by the Design-Builder 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 contract.

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 Design-Builder 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 Design-Builder shall bear the cost of testing performed on materials ordered by him but not incorporated into the project. For items normally pretested by the Department, the Design-Builder shall provide a minimum of 30 days notice prior to the beginning of production of the items for this project along with final approved shop drawings.

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.

In the event 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 Design-Builder shall furnish all materials necessary to complete the work, except those materials specified in the Design-Build Package 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 Design-Builder.

The Design-Builder 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.

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 Design-Builder 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 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 Design-Builder 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 Design-Builder.

107-3 PERMITS AND LICENSES.

The Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder. 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder as specified in Section 150.

107-9 COORDINATION WITH RAILWAY.

All work to be performed by the Design-Builder on railway right of way shall be done 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 Design-Builder 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 Design-Builder shall carry such railroad protective insurance and public liability and property damage insurance as may be stipulated in the special provisions.

When the Design-Builder 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 Design-Builder 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 Design-Builder will 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 Design-Builder for the cost of such work.

In case the Design-Builder 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 Design-Builder 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 Design-Builder shall exercise the utmost care not to endanger life or property. The Design-Builder 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 Design-Builder. Provided that in cases of damage or interruption to underground water supply or veins to adjacent landowners, the Design-Builder shall not be held responsible where the Design-Builder 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 Design-Builder 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 Design-Builder 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.

The Design-Builder 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 Design-Builder of his responsibilities as provided in Article 107-12.

107-12 PROTECTION AND RESTORATION OF PROPERTY.

The Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder will

not be required to furnish new material except as required to repair damage resulting from construction operations.

The Design-Builder 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 Design-Builder to restore such property or make good such damage or injury the Department may at the Design-Builder'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 Design-Builder shall take whatever measures are necessary to minimize soil erosion and siltation, water pollution, and air pollution caused by his operations. The Design-Builder shall also comply with the applicable regulations of all legally constituted authorities relating to pollution prevention and control. The Design-Builder 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 Design-Builder'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 Design-Builder 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 Design-Builder 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 Design-Builder 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.

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.

(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 Design-Builder shall be liable for all damages to public or private property caused by silting or slides originating in waste areas furnished by the Design-Builder.

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 Design-Builder shall be acceptably maintained by the Design-Builder.

(D) Water and Air Pollution:

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

(E) Dust Control:

The Design-Builder 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 Design-Builder 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 Design-Builder'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 Design-Builder as directed by the Engineer at no cost to the Department. If the Design-Builder fails to perform such measures as directed, the Engineer may have the work performed in accordance with Article 105-16.

Failure of the Design-Builder 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 Design-Builder to perform the necessary measures to control erosion, siltation, and pollution will result in the Engineer notifying the Design-Builder to take such measures. In the event that the Design-Builder 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 Design-Builder for the performance of this work and the cost of such work so performed will be deducted from monies due the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder, Subcontractor, its agents or employees, in the performance of the contract. The Design-Builder'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 Design-Builder to safeguard the work; (2) damages or claims by reason of the failure of the Design-Builder to erect adequate barricades and post adequate warnings to the public of such barricades; (3) any damage or claims caused through the Design-Builder's use of defective materials or by the performance of defective work; (4) any claims by reason of the Design-Builder's infringement of patent, trademark, or copyright; (5) any amounts paid by the Department by reason of the Design-Builder'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 Design-Builder with or without proof of negligence on the part of the Design-Builder; (7) damages or claims caused by the failure of the Design-Builder 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 Design-Builder, without proof of negligence; (8) damages caused by the failure of the Design-Builder 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 Design-Builder 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 Design-Builder's responsibility under Section 107 of the specifications. The Design-Builder 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 Design-Builder 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 Design-Builder will not be retained provided the Design-Builder 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 Design-Builder, amounts due the Design-Builder will not be withheld provided that the consent of the Surety is furnished and the Surety guarantees payment of any amounts for which the Design-Builder 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 Design-Builder 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 Design-Builder is responsible under the provisions of Section 107 of these specifications. In the event that there is not sufficient money retained or the final estimate is paid, the Department of Transportation may collect from the Design-Builder 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 Design-Builder 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 Design-Builder.

107-17 OPENING SECTIONS OF PROJECT TO TRAFFIC.

If it is determined by the Engineer that the Design-Builder will not complete the work by the completion date, intermediate completion date, or intermediate completion time, the Engineer may notify the Design-Builder 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 Design-Builder shall conduct the remainder of his operations to cause the least obstruction to traffic. The Design-Builder 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 DESIGN-BUILDER'S RESPONSIBILITY FOR WORK.

Until final acceptance of the work by the Engineer, as evidenced in writing, the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder of acceptance. Such final acceptance and processing of the final estimate, however, shall not preclude or stop the Department from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Department be precluded or stopped from recovering from the Design-Builder or his Surety, or both, such overpayment as it may sustain, or by failure on the part of the Design-Builder 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 Design-Builder, 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 Design-Builder 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 Design-Builder'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 Design-Builder 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 Design-Builder 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 Request for Proposals for such projects. The Design-Builder 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 Design-Builder 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 DESIGN-BUILDER TO FILE VERIFIED CLAIM.

If the Design-Builder fails to receive such settlement as he claims to be entitled to under the terms and provisions of the contract, the Design-Builder 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 Administrator within 60 days from the time the Design-Builder 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 Design-Builder'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 Design-Builder, 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 Design-Builder'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 Design-Builder 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 Design-Builder shall commence work on the date of availability shown in the Request for Proposals or as soon thereafter as practicable, but not before the contract has been executed by both the Design-Builder and the Department. The Design-Builder shall not begin work prior to the date of availability without written approval of the Engineer. If such approval is given and the Design-Builder 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 Design-Builder 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.

This section is replaced by the Project Special Provision entitled " Progress Schedule" contained elsewhere in this Design-Build Package.

108-3 PREDESIGN CONFERENCE / PRECONSTRUCTION CONFERENCE.

The selected Design-Builder shall meet with the Engineer for a predesign conference concerning the design phase of the work. This conference shall be held prior to the commencement of work, as it is determined according to Article 108-1, and will be scheduled by the Engineer. At the predesign conference, the Design-Builder shall furnish authorized signature forms and a list of any proposed subcontractors and major material suppliers associated with the design of the project.

A preconstruction conference shall be held at least 10 working days before construction activity begins. This second conference, concerning the construction phase, shall also be scheduled by the Engineer. The Design Builder shall give the Engineer a minimum of 45 days notice before he plans to begin construction activities. This will allow the Engineer time for any environmental agency representatives involved in the permitting process, as well as any other pertinent entities, to be scheduled to attend the preconstruction conference. If the Design-Builder is responsible for utilities in accordance with Article 105-8, he shall be responsible for coordinating with the Engineer in scheduling their attendance and for notifying them. The Design-Builder shall also be responsible for coordinating with the Engineer in scheduling the attendance of subcontractors and others deemed appropriate, and for notifying them.

At the preconstruction conference, a list of any proposed subcontractors and major material suppliers associated with the construction of the project will be submitted.

If the contract has a DBE requirement, the Design-Builder shall submit copies of completed and signed DBE subcontracts, purchase orders, or invoices to the Department.

The Design-Builder shall submit a traffic control plan in accordance with Article 1101-5. The Design-Builder shall designate an employee who is competent and experienced in traffic control

to implement and monitor the traffic control plan. The qualifications of the designated employee must be satisfactory to the Engineer.

The Design-Builder shall submit a safety plan and designate an employee as Safety Supervisor.

Both plans shall be submitted at the preconstruction conference and must be satisfactory to the Engineer. Should the design plan include activities that would place personnel on the work site, traffic control and safety plans for those activities would be submitted at the predesign conference.

During the preconstruction conference, the Engineer will designate a Department employee or employees who will be responsible to see that the traffic control plans and any alterations thereto are implemented and monitored to the end that traffic is carried through the work in an effective manner. If approved by the Engineer, the Design-Builder may designate one employee to be responsible for both the traffic control and safety plans. The Design-Builder shall not designate its superintendent as the responsible person for either the traffic control plan or the safety plan, unless approved by the Engineer.

If the project requires that Design-Builder or State personnel work from falsework, within shoring, or in any other hazardous area the Design-Builder shall submit, as part of the Design-Builder's safety plan, specific measures it will use to ensure worker safety.

The Design-Builder shall also submit a program for erosion control and pollution prevention on all projects involving clearing and grubbing, earthwork, structural work, or other construction, when such work is likely to create erosion or pollution problems.

If the Design-Builder fails to provide the required submissions, the Engineer may order the preconstruction conference suspended until such time as they are furnished. Work shall not begin until the preconstruction conference has been concluded and the safety plan has been approved, unless authorized by the Engineer. The Design-Builder shall not be entitled to additional compensation or an extension of contract time resulting from any delays due to such a suspension.

The Design-Builder shall designate a qualified employee as Quality Control Manager. The Quality Control Manager shall be responsible for the implementing and monitoring of the quality control requirements of the project.

108-4 CONSTRUCTION CONFERENCES.

After work on the project has begun, construction conferences are to be held no less than once per month. The construction conferences are to be scheduled at times, which are mutually agreeable to both the Design-Builder and the Department. It shall be the Design-Builder's responsibility to attend and record the proceedings of these conferences.

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

The Design-Builder 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 Design-Builder cannot recruit Department employees for employment. Additionally, Department employees who elect to become employed by a Design-Builder 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 Design-Builder 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 Design-Builder to comply may be justification for disqualifying the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder in accomplishing the construction are not prescribed in the contract, the Design-Builder 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.

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 Design-Builder 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 Design-Builder 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 Design-Builder shall discontinue the use of the substitute method or equipment and shall complete the remaining construction with the specified methods and equipment. The Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder shall submit a certified copy of the actual subcontract agreement executed between the Design-Builder and Subcontractor prior to written consent being issued by the Engineer. In case such consent is given, the Design-Builder will be permitted to sublet a portion thereof, but shall perform with his own organization, work amounting to not less than 30 percent of the total original contract amount, except:

1. Any 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 Design-Builder with his own organization.

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

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

A Subcontractor shall not sublet, sell, transfer, assign, or otherwise dispose of his contract with a Design-Builder or any portion thereof; or of his right, title, or interest therein; without written consent of the Engineer. When directed by the Engineer, the Design-Builder shall submit a certified copy of the actual subcontract agreement executed between the Subcontractor and the Second Tier Subcontractor. In the event of an assignment by operations of law or the bankruptcy of the Subcontractor, the Design-Builder 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 Design-Builder, 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 Design-Builder 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 Design-Builder 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 Design-Builder to comply with any of the provisions of this article may be justification for disqualifying the Design-Builder 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 Design-Builder's failure to correct conditions unsafe for workmen or the general public, or
3. The Design-Builder has not carried out orders given to him by the Engineer, or
4. The Design-Builder'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 Design-Builder’s progress at the time each partial pay request is received. The Design-Builder’s progress may be considered as unsatisfactory if, according to the CPM of Record, the projected finish date for all work exceeds the scheduled finish date by greater than 10%.

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

When the Design-Builder 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 Design-Builder and all firms prequalified under the Design-Builder'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 Design-Builder of any material term or condition of the contract or specifications. Material breach by the Design-Builder 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 Design-Builder, 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 Design-Builder in directing Design-Builder'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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder is not proceeding satisfactorily to compliance, it may impose the sanctions after 24 hours notice to the Design-Builder. If the Department determines that the Design-Builder 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 Design-Builder, in writing, with a copy to the Surety of the sanctions imposed.

(D) Payment:

After declaration of default has been made final, the Design-Builder 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 Design-Builder 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 Design-Builder, or any portion thereof, without interest or penalty, until the contract work is completed; or it may make payment to the Design-Builder

upon declaration of default for work satisfactorily completed to the date that notice of default is received by the Design-Builder. The Design-Builder 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 Design-Builder's employees, equipment, or materials are used in prosecution of the work, or any part thereof, after default is declared, payment to the Design-Builder 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 Design-Builder, 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 Design-Builder 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 Design-Builder 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 Design-Builder or the Surety upon the obligation set forth in the contract bonds, and the Design-Builder 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 Design-Builder 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 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.
2. If the Design-Builder'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 the final payment 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 Design-Builder, and that the Design-Builder 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.

3. If changes in the work from that originally contemplated in the Design-Build Package are ordered by the Engineer and these changes result in 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. It is, however, the Design-Builder'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.

Submit all requests for extensions of Contract time in writing. Only delays to activities which affect the Contract completion date will be considered for an extension of contract time. No time extensions will be granted until a delay occurs which impacts the project's critical path, consumes all available float, and extends the work beyond the contract completion date. Include in the request a written narrative describing the events, which would require an extension of contract time.

Any extension to the Contract completion date will be based on the number of calendar days the Contract completion date is impacted as determined by the Engineer's analysis.

The Design-Builder'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.

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 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 Design-Builder 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 Design-Builder 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 Design-Builder or his Surety under the contract, and the Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder, 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 Design-Builder by reason of failure of the Design-Builder 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 Design-Builder to obtain critical materials for completion of the contract within a practical time limit, or
    b. If it is impossible for the Design-Builder 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 Design-Builder will be unduly delayed in completing the project by reason of such unanticipated conditions and changes in design, or

c. If the Design-Builder 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 Design-Builder 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 Design-Builder will be unduly delayed in completing the project by reason of such order or requirement, or

e. If the Design-Builder is prevented from proceeding with the work due to the unavailability of the site.

2. The Design-Builder 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 Design-Builder:

      i. The Board concurs in the determination by the Design-Builder 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 Design-Builder, and the Design-Builder 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 Design-Builder 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. Upon request from the Design-Builder, 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.

   c. No claim for loss of anticipated profits will be considered and no payment will be made for loss of anticipated profits.

d. Termination of a contract shall not relieve the Design-Builder 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 Design-Builder's responsibility will cease except as provided in Article 107-21 and as set forth in his contract bonds.

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 will mean short ton consisting of 2,000 pounds avoirdupois.

Cement will be measured by the barrel unless otherwise indicated elsewhere in the Specifications. The term barrel will mean 376 pounds 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 that 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 Design-Builder 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 Design-Builder will be made only for the work 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.

(A) Design:

The actual costs for labor will be paid.

(B) Construction:

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 Design-Builder will receive the rate of base wages (or scale) actually being paid by the Design-Builder for each hour that the labor and foremen are actually engaged in the work. Prior to beginning the work the Design-Builder 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 Design-Builder.

   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 Design-Builder will receive the actual cost to which cost 6 percent will be added. The Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder 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 Design-Builder's stock, the Design-Builder 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 Design-Builder.

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 Design-Builder will receive rental payment.

   Hourly rental rates paid for equipment in use which is Design-Builder 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 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 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.

   If rental rates for the equipment actually being used in the work are not listed in the Blue Book, the Design-Builder 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 time 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 time 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 time 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 time in use.

   In the event the Design-Builder 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 Design-Builder 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 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. The commercial rental agency cannot be the Design-Builder or an affiliate of the Design-Builder.

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

The Design-Builder will be reimbursed for the actual transportation costs for equipment which the Design-Builder 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 Design-Builder shall furnish records to the Engineer to verify the actual transportation costs for equipment.

The Design-Builder 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 Design-Builder's responsibility to verify the age of the equipment in a manner acceptable to the Engineer. Where such verification is not 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 Design-Builder in connection with approved subcontract work, the Design-Builder 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.

Total Cost of Subcontract Work	Rate Schedule
$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 Design-Builder shall compare records of work with the Engineer at the end of each day on which such work is in progress.

Any contention the Design-Builder 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 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.

Partial payments for the lump sum design-build price shall be based on a Schedule of Payments submitted by the successful Design-Build proposer and approved by the Engineer. The Schedule of Payments shall be submitted not less than 30 calendar days after the date of award. Each item on the Schedule of Payments shall be assigned a cost and quantity and shall be identified as an activity on the project schedule. A revised Schedule of Payments shall be submitted with each update of the CPM of Record as described in Article 108-2 or when requested by the Engineer.

The Engineer will withhold an amount sufficient to cover anticipated liquidated damages as determined by the Engineer.

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

No partial payments will be made for materials to be incorporated in the work unless elsewhere provided.

109-6 PAYMENT FOR LEFTOVER MATERIALS.

Payment will be made to the Design-Builder 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 changes in the scope, or due to termination of the contract are not used in the work. The Design-Builder 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 Design-Builder 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 or lump sum 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. The Design-Builder shall not be paid for any work performed for which there is not a contract price, nor shall the Design-Builder 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.

No fuel price adjustments will be made.

109-9 FINAL PAYMENT.

The Engineer will notify the Design-Builder giving the apparent liquidated damages, if any assessed. After the Design-Builder 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 Design-Builder.

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 Design-Builder.
2. Affidavit of the Design-Builder 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 Design-Builder 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 PR-47 and all reports, statements, and other information necessary for compliance with applicable labor regulations of the Federal Highway Administration.
5. As-constructed plans.
6. Final Material Certificate

Submission of false information in the documents required by this section shall be a basis for disqualifying the Design-Builder 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 Fixed Income Investment Fund during the month preceding the date interest becomes payable, will be paid the Design-Builder 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 Design-Builder 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 Design-Builder requires to submit the document(s).

SECTION 150

MAINTENANCE OF TRAFFIC

150-1 GENERAL.

The Design-Builder 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 Design-Builder begins work on the project site until acceptance of the project, including any periods during which the Design-Builder's operations are suspended, unless otherwise provided for in the contract or approved by the Engineer. The Design-Builder shall conduct his work in a safe manner, which will create a minimum amount of inconvenience to traffic.

The Design-Builder 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 Design-Builder 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.

ITEMIZED PROPOSAL FOR CONTRACT No. C 201236

May 27, 2004 8:02 am

County: Bertie

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
			ROADWAY ITEMS			
0001	0000900000-N	SP	GENERIC MISCELLANEOUS ITEM DESIGN & CONSTRUCTION	Lump Sum	L.S.	

0802/May27/Q1.0/D 900000 /E 1 **Total Amount Of Bid For Entire Project:**

12/19/89

*AWARD LIMITS ON MULTIPLE PROJECTS

It is the desire of the Proposer to be awarded contracts, the value of which will not exceed a total of $_____, for those projects indicated below on which bids are being opened on the same date as shown in the Proposal Form. Individual projects shall be indicated by placing the project number and county in the appropriate place below. Projects not selected will not be subject to an award limit.

_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)

*If a Proposer desires to limit the total amount of work awarded to him in this letting, he shall state such limit in the space provided above in the second line of this form.

It is agreed that in the event that I am (we are) the successful Design Build Team on indicated projects, the total value of which is more that the above stipulated award limits, the Board of Transportation will award me (us) projects from among those indicated which have a total value not exceeding the award limit and which will result in the best advantage to the Department of Transportation.

_____
**Signature of Authorized Person

**Only those persons authorized to sign bids under the provisions of Article 102-8, Item 7, shall be authorized to sign this form.

LISTING OF MB & WB SUBCONTRACTORS

Sheet _____ of _____

FIRM NAME AND ADDRESS	MB OR WB	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF ITEM

CONTRACT NO._____ **COUNTY**_____ **FIRM**_____

LISTING OF MB & WB SUBCONTRACTORS

Sheet _____ of _____

FIRM NAME AND ADDRESS	MB OR WB	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF ITEM

CONTRACT NO._____ **COUNTY**_____ **FIRM**_____

LISTING OF MB & WB SUBCONTRACTORS

Sheet _____ of _____

FIRM NAME AND ADDRESS	MB OR WB	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF ITEM

CONTRACT NO._____ **COUNTY**_____ **FIRM**_____

LISTING OF MB & WB SUBCONTRACTORS

Sheet _____ of _____

FIRM NAME AND ADDRESS	MB OR WB	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF ITEM

COST OF CONSTRUCTION WORK ONLY $ _____

(*) The Dollar Volume Shown in this Column Shall be Actual Price Agreed Upon by the Prime Contractor and the MB and/or WB Subcontractor, and These Prices will be Used to Determine the Percentage of the MB and/or WB Participation in the Contract

Dollar Volume of MB Subcontractor.....$ _____

MB Percentage of Total Contract Bid Price.....____%

Dollar Volume of WB Subcontractor .....$_____

WB Percentage of Total Contract Bid Price..... _____%

12/21/99

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and 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.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If a corporation uses this sheet)

_____
(Print full name of corporation)

_____
(Address as Prequalified)

Attest_____ By_____
(Secretary) (Assistant Secretary) (President) (Vice President)
Delete inappropriate title (Asst. Vice President)
Delete inappropriate title

_____ _____
Print Signer's Name Print Signer's Name

CORPORATE SEAL

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

_____ day of _____, 20___.

_____
(Signature of Notary Public) NOTARY SEAL:

of _____County.

State of _____.

My Commission Expires: _____

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and 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.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If a joint venture, use this sheet)

Instructions to Bidders: On Line (1), print the name of each contractor. On Line (2), print the name of one of the joint venturers and execute below in the appropriate manner and furnish in the following lines all information required by Article 102-8 of the Specifications. On Line (3), print the name of the other joint venturer and execute below in the appropriate manner and furnish all information required by said article of the Specifications. For correct form of execution and information required for execution of this sheet by an individual, see Signature Sheets 3 and 4; for a corporation, see Signature Sheet 1; and for a partnership, see Signature Sheet 5.

(1)_____ and _____
A Joint Venture

(2)_____(Seal)
(Name of Contractor)

_____

_____ By_____
Witness or Attest

_____ _____
Print Signer's Name Print Signer's Name
If a corporation, affix corporate seal:

and

(3)_____(Seal)
(Name of Contractor)

_____
(Address as Prequalified)

_____ By_____
Witness or Attest

_____ _____
Print Signer's Name Print Signer's Name
If a corporation, affix corporate seal:

NOTE - AFFIDAVIT MUST BE NOTARIZED For Line (2)

Subscribed and sworn to before me

this the _____day of _____, 20____.

_____
(Signature of Notary Public & Seal)

of _____County.

State of _____.

My Commission Expires:_____.

NOTE - AFFIDAVIT MUST BE NOTARIZED For Line (3)

Subscribed and sworn to before me

this the ____ day of _____, 20___.

_____
(Signature of Notary Public & Seal)

of _____County.

State of _____.

My Commission Expires_____.

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and 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.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If an individual doing business under a
firm name, use this sheet)

Name of Contractor_____trading
(Print individual name)

_____
Witness

and doing business as _____
(Print firm name)

_____
Print Signer's Name

_____
(Address as Prequalified)

Signature of Contractor_____
(Individually)

_____
Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

_____ day of _____, 20___.

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

12/21/99

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and 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.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If an individual doing business in his own name, use this sheet)

Name of Contractor_____
(Print)

_____
(Address as Prequalified)

_____ Signature of Contractor_____
Witness (Individually)

_____ _____
Print Signer's Name Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the NOTARY SEAL

_____ day of _____, 20___.

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

12/21/99

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and 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.

In addition, execution of this bid in the proper manner also constitutes the bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If a partnership, use this sheet)

_____
(Print Name of Partnership)

_____
(Address as Prequalified)

_____ By_____
Witness Partner

_____ _____
Print Signer's Name Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the NOTARY SEAL

_____ day of _____, 20___.

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and 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.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(Limited Liability Company, use this sheet)

Name of Contractor_____
(Print firm name)

_____
(Address as Prequalified)

Signature of Manager_____
(Individually)

_____
Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

_____ day of _____, 20___. NOTARY SEAL

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

2/16/99

Contract No: **C201236**

County: **Bertie**

ACCEPTED BY THE
DEPARTMENT OF TRANSPORTATION

_____
Contract Officer

_____
Date

Execution of Contract and Bonds
Approved as to Form:

_____
Attorney General

DEBARMENT CERTIFICATION OF BIDDERS

Instructions & conditions for certification

1. By signing and submitting this proposal, the bidder is providing the certification set out below.

2. The inability of a bidder to provide the certification required below will not necessarily result in denial of participation in this contract. If the certification is not provided, the bidder must submit an explanation (exception) of why it cannot provide the certification set out below. The certification or explanation (exception) will be considered in connection with the Department's determination whether to award the contract. However, failure of the prospective bidder to furnish a certification or an explanation (exception) may be grounds for rejection of the bid.

3. The certification in this provision is a material representation of fact upon which reliance is placed when the Department determines whether or not to award the contract. If it is later determined that the bidder knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the Department may terminate this contract for cause of default.

4. The prospective bidder shall provide immediate written notice to the Department if at any time the bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

6. The bidder agrees by submitting this bid that, should the contract be awarded, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this contract, unless authorized by the Department.

7. The prospective bidder further agrees by submitting this proposal that it will include the Federal-Aid Provision titled "Required Contract Provisions Federal-Aid Construction Contract" (Form FHWA PR 1273) provided by the Department, without subsequent modification, in all lower tier covered transactions.

8. The prospective bidder may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if the successful bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the Department may terminate this transaction for cause of default.

DEBARMENT CERTIFICATION

The bidder certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective bidder is unable to certify to any of the statements in this certification, it shall attach an explanation to this proposal.

****

IF AN EXPLANATION, AS PROVIDED IN THE ABOVE DEBARMENT CERTIFICATION, HAS BEEN ATTACHED TO THE PROPOSAL, PLEASE CHECK THE BOX SHOWN BELOW:

☐ An explanation has been attached to the proposal.