SECTION 905 -- PROPOSAL (CONTINUED)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO.	**1**	DATED	**3/8/2012**	ADDENDUM NO.		DATED	
ADDENDUM NO	**2**	DATED	**03**/20/2012	ADDENDUM NO.		DATED	

Number	Description
1	Table of Contents, replace same; Revised NTB's 3797, 3798, 3799, 3805, & 3808, replace same; Add NTB 3827; Revised SP's 907-102-7, 907-103-10, & 907-619-7, replace same; Revised Bidsheets, replace same; Revised or Added Plan Sheets; Amendment EBS Download Required.
2	Table of Contents, replace same; Utility Status Updated; Revised NTB's , 3585, 3797, 3803, 3805, 3806, 3809, & 3827, replace same; Add NTB;s 3828, 3829, 3841, & 3842; Revised SP's 907-102-7, 907-103-10, 907-308-3 & 907-619-7, replace same; SP 907-282-10, replaces SP 907-282-9; SP 907-699-4, replaces SP 907-699-3; Add SP's 907-605-6, 907-639-6, & 907-680-1; Bidsheets, replace same; Revised or Added Plan Sheets; Amendment EBS Download Required.

TOTAL ADDENDA: **2**
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

_____
Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

President	Address
Secretary	Address
Treasurer	Address

The following is my (our) itemized proposal.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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SECTION 905 - PROPOSAL,
PROPOSAL BID SHEETS,
COMBINATION BID PROPOSAL,
CERTIFICATION OF PERFORMANCE - PRIOR FEDERAL-AID CONTRACTS,
CERTIFICATION REGARDING NON-COLLUSION, DEBARMENT AND SUSPENSION,
SECTION 902 - CONTRACT FORM, AND SECTION 903 - CONTRACT BOND FORMS,
PILE DRIVING FORM,
OCR-485.

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET OF SECTION 905 AS ADDENDA)

ENCROACHMENT CERTIFICATION

ACNH-9204-00(001) / 100486301

Madison County(ies)

December 9, 2012

This is to certify that the above captioned project has been inspected and no encroachments were found.

UTILITY STATUS REPORT

ACNH-9204-00(001) / 100486301

Madison County(ies)

City of Madison: Complete

Centerpoint: Complete

City of Ridgeland: Complete

Entergy: Secondary pole at Station 19+20,RT 15 – to be removed in a couple of days.
Poles at Station 34+20,RT 55 and Station 36+65,RT 50 waiting on cable company to remove attachments.
Concrete pole waiting for AT&T to remove phone drops, Station 28+00,RT 45.

Comcast: Attachments on poles at Station 34+20,RT 55 and Station 36+65,RT 50.

AT&T: Phone drops on concrete pole at station 28+00,RT 45.

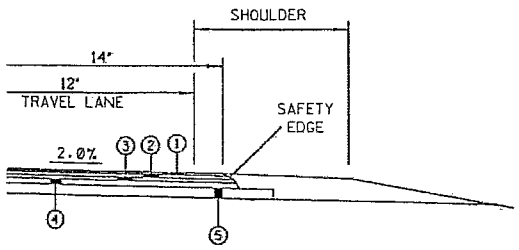
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

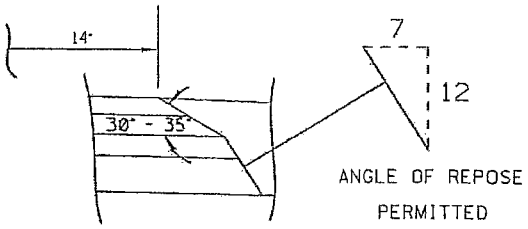
SECTION 904 - NOTICE TO BIDDERS NO. 3585 **CODE: (SP)**

DATE: 06/22/2011

SUBJECT: Safety Edge

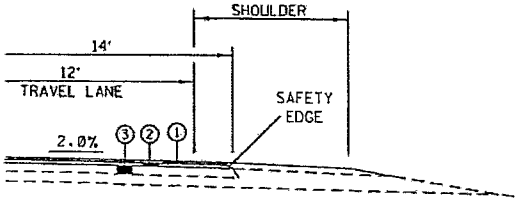
Bidders are hereby advised that the Shoulder Wedge (Safety Edge) specified in the Supplement to Special Provision 907-401-2 shall only apply to the top two (2) lifts of asphalt. Attached is a drawing showing the safety edge.

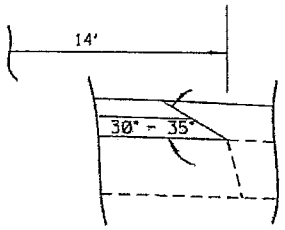




SAFETY EDGE REQ'D
TOP 2 LIFTS ONLY
(NOT A PAY ITEM)

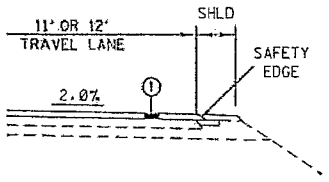
NEW CONSTRUCTION

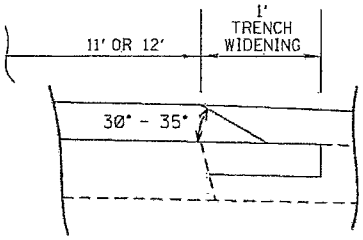




SAFETY EDGE REQ'D
TOP 2 LIFTS ONLY
(NOT A PAY ITEM)

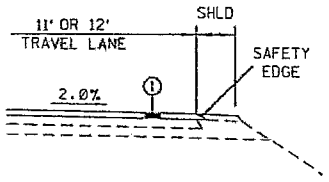
OVERLAY
14' PAVEMENT

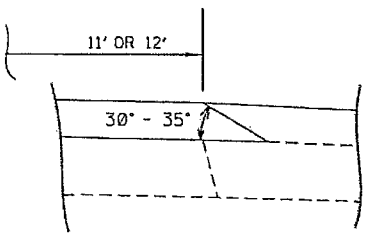




SAFETY EDGE REQ'D
(NOT A PAY ITEM)

OVERLAY
11' OR 12' PAVEMENT
WITH TRENCH WIDENING





SAFETY EDGE REQ'D
(NOT A PAY ITEM)

OVERLAY
11' OR 12' PAVEMENT
WITHOUT TRENCH WIDENING

SAFETY EDGE DETAILS **4/8/2011**

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 3797 **CODE: (SP)**

DATE: 03/20/2012

SUBJECT: Contract Time

PROJECT: ACNH-9204-00(007) / 100486301 – Madison County

The date for completion of the work to be performed under this contract will not be a predetermined date but will be the date calculated by adding the number of days specified by the Contractor on Bid Sheet 2 - 38 in the proposal (Contract Time) and the effective date of the Notice to Proceed / Beginning of Contract Time. This date will be known as the specified completion date, which date or extended date as provided in the contract shall be the end of contract time.

It is anticipated that the Notice of Award will be issued no later than **April 10, 2012** and the effective date of the Notice to Proceed / Beginning of Contract Time will be **May 10, 2012**.

Should the Contractor request a Notice to Proceed earlier than **May 10, 2012** and it is agreeable with the Department for an early Notice to Proceed, the requested date will become the new Notice to Proceed / Beginning of Contract Time date.

The Contractor will be allowed to work 24 hours a day/7 days a week on the project, but work shall adhere to the lane closure requirements set forth in the Notice To Bidders titled Lane Closure Restrictions.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 3803 **CODE: (SP)**

DATE: **03/19/2012**

SUBJECT: **Lane Closure Restrictions**

PROJECT: **ACNH-9204-00(007) / 100486301 – Madison County**

Bidders are hereby advised that lane closure restrictions and work restrictions on the above captioned project shall be as follows:

Monday through Saturday

For Interstate Routes: - Lane closures will **NOT** be allowed between the hours of 6:00 AM and 7:00 PM.

For Non-Interstate Routes: - Lane closures will **NOT** be allowed between the hours of 6:00 AM and 9:00 AM or between 3:00 PM and 6:00 PM.

Temporary Road Closures will be allowed between the hours of 10:00 PM and 6:00 AM for the demolition of the existing bridges over Steed Road and Madison Avenue. The Contractor shall notify the Project Engineer **two weeks** in advance of such closure.

In cases where a loop or ramp has to be completely closed to accomplish the work, that work will have to be done adhering to the Interstate restrictions above. Before this work is done, the Engineer shall be given a two-week notice so the public can be given sufficient notice.

No exceptions to the above requirements will be allowed unless specifically approved by the Engineer.

No lane closures will be permitted on the following holidays or the day preceding them: New Year's Day, Independence Day, Labor Day, Thanksgiving Day or Christmas Day. In the event that one the above mentioned holidays falls during the weekend or on a Monday, no lane closures will be allowed during that weekend or the Friday immediately preceding that holiday. Lane closures will not be permitted Friday through Sunday of the Thanksgiving Holiday. Lane closures will not be permitted during the day of the Canton Flea Market as directed by the engineer.

If the lane closure restriction listed above is violated, no excuses will be accepted by the Department and the Contractor will be charged a fee of **$ 2,500.00** for each full or partial five minute period until the roadway is back in compliance with the lane closure restriction requirement.

For the purposes of this contract, official time shall be the announced time available at the Jackson area telephone number (601) 355-9311.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3805 **CODE: (SP)**

DATE: 03/19/2012

SUBJECT: A + B Bidding

PROJECT: ACNH-9204-00(007) / 100486301 -- Madison County

Bidders are hereby advised this project contains requirements for A + B bidding. Bidders are advised to review Special Provision No's. 907-102-7 and 907-103-10 as they relate to A + B bidding. A + B bid amounts are to be entered on Bid Sheet 2-38 of the bid proposal sheets. Bids will not be considered unless the A + B sheet, bid proposal sheet 2-38, is completed.

Bidders are also advised that the MDOT Electronic Bid System DOES NOT generate Bid Sheet 2-38. Whether bid proposal sheets are prepared electronically or by hand, Bid Sheet 2-38 will have to be completed by hand. Failure to complete and include Bid Sheet 2-38 will make the bid package irregular.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3806 **CODE: (SP)**

DATE: 3/19/2012

SUBJECT: Double Drop Stripe

PROJECT: ACNH-9204-00(007) / 100486301 -- Madison County

Bidders are hereby advised that Double Drop Thermoplastic permanent pavement markings are to be used on this project. Any reference to standard thermoplastic traffic markings and High Performance Cold Plastic on Plan Sheets 100.176 through 100.204 should be disregarded. Quantities and Pay Items set forth in the Bid Sheets and Summary of Quantities represent the correct items for bidding.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3809 **CODE: (SP)**

DATE: 03/20/2012

SUBJECT: Additional Construction Requirements

PROJECT: ACNH-9204-00(007) / 100486301 -- Madison County

Bidders are hereby advised of the following construction requirements:

The Contractor will be allowed to work in multiple phases and throughout the project in accordance with the approved progress schedule directed in Subsection 907-108.03.1. Any changes with traffic patterns within each phase shall have prior approval by the Project Engineer.

The use of vibratory or hammer-driven methods for installation and/or removal of sheet pile shoring and/or temporary encasements for drilled shafts are restricted between Station 170+00 and 183+00.

The contractor may be limited to static vibration for compaction equipment in the area of West Frontage Road from Station 72+00 to 85+00. Density requirements shall remain the same for operations effected by this provision. Additional equipment may be warranted to achieve full compaction.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3827 **CODE: (SP)**

DATE: 03/20/2012

SUBJECT: Soil Cement Alternate

PROJECT: ACNH-9204-00(007) / 100486301 – Madison County

Bidders are hereby advised that the quantities for Pay Item Nos. 907-308-A001, Portland Cement, and 907-308-B001, Soil-Cement-Water Mixing, Optional Mixers, Base, and 907-308-S001, Bituminous Curing Seal, shown on the SOQ sheets in the Plans are in error. The correct quantities are shown on the bidsheet in the proposal documents and are to be used for bidding purposes. Bidders are further advised that Soil-Cement chemical treatment is an acceptable alternate to the Lime-Fly Ash treatment for the 25% of the subgrade represented in the plan notes as being solely set-up as Lime-Fly Ash treatment.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3828 **CODE: (SP)**

DATE: 3/19/2012

SUBJECT: Substitution for Jacked or Bored Concrete Pipe

PROJECT: ACNH-9204-00(007) / 100486301 – Madison County

Bidders are hereby advised that the Contractor may be allowed to substitute steel pipe in areas where the contract specifies concrete jacked or bored pipe. The Contractor will be required to submit, for approval, design calculations stamped by a registered professional engineer with the following criteria considered at a minimum: PH, Resistivity, Corrosion, Wall Thicknesses, Dead and Live Loads.

If the steel pipe is approved for use, payment will be made under the appropriate pay item for concrete jacked or bored pipe.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3829 **CODE: (SP)**

DATE: **03/19/2012**

SUBJECT: **Plan Corrections**

PROJECT: **ACNH-9204-00(007) / 100486301 – Madison County**

Bidders are hereby advised that the summary of quantities listed in the plans is different than the ones in the Bidsheets. The descriptions and quantities listed in the Bidsheets are **CORRECT**.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3841 **CODE: (SP)**

DATE: 3/20/2012

SUBJECT: Questions and Answers

PROJECT: ACNH-9204-00(001) 100486 -- Madison County

Bidders are advised that the following questions were asked regarding the construction of this project. If there is any discrepancy or conflicts between the below questions and answers and the Plans or Contract Documents, the following answers shall govern.

Question 1. Are as-built plans of the Madison Ave and Steed Road Bridges that are scheduled for demolition available through MDOT?

Answer 1. As-built plans for these bridges are located at the following FTP site:
http://ftp.mdot.state.ms.us
Download a File
Roadway_Design
Public
Asbuilts-for-100486-301

Note:
5448_I-091-2(16)OLD-Asbuilts – Original Asbuilt plans.
NH-SP-0055-02(190)N-FinalPlans – Final Construction Plans of the recent "Add 2 Lanes" project. We have not received Asbuilts yet of the project.

Question 2. Is the above referenced project currently on schedule to be bid in the March 27, 2012 letting, or will it be postponed to the April 2012 letting?

Answer 2. The project will be officially withdrawn from the February advertisement, but will be re-advertised in the March letting. Bids will be received on March 27, 2012. Proposal holders prior to the withdrawal of the project will be sent a new proposal (of like kind) at no cost when the proposals are ready for the March letting.

Question 3. Entergy will not give estimate for the monthly electricity bill to the contractor on the Madison County MDOT Project stating the prices could change due to the length of the project.

Answer 3. Contact Mr. Steve Lee, Manager, Customer Operations Support with Entergy Mississippi, Inc. at (601) 969-4810 or SLEE@entergy.com for questions related to power service information. It is the Contractor's responsibility to make these arrangements and MDOT is not responsible for information provided by Entergy.

Question 4. Can MDOT define the allowable haul routes? I request MDOT to take the lead with the city and county on this issue and assign those routes or give some guidance. It's a very important variable to costs and timeliness.

Answer 4. No, MDOT only provides access via the State maintained system. Local Officials will need to be contacted for access through their system.

Question 5. Due to timeliness, will MDOT allow the Erosion Control Plan be submitted in phases and outline the phases expected, so as to allow a timely NTP with work.

Answer 5. The erosion control plan can be submitted in phases in accordance with Notice to Bidders No. 3741.

Question 6. If there is no way to provide a network of street haul for the job access, then can temporary ramps of ingress and egress of I-55 be allowed by using shoulder closures, with acceleration type setup.

Answer 6. Notice to Bidders No. 3743 addresses lane closure restrictions. Ingress and egress of construction traffic with Interstate traffic would require a lane closure that would have to comply with NTB 3743. Permits for access directly to the Interstate Right-of-Way may be requested in writing and would require approval from MDOT and FHWA.

Question 7. Is there a possibility this project will be pulled from March letting due to lack of funding? Contractors are spending time and effort on preparing this bid and would like a heads up if the project is definitely going to bid.

Answer 7. See the answer to question no. 2

Question 8. Sheet 500, 501, 502, 503, 550, 551, 552, 553, 592, 593, 594, 595, 596, and 597 all state:
The Deck Pouring Schedule Shall Be As Shown On These Plans. Alternate Sequence Will Not Be Approved.
Sheets 500 and 501 (I-55 over Steed Road Right Lane) show Pour 1, Pour 2, Pour 3, Pour 4, and Pour 5 to be performed on each side of the CL of the Bridge with a Closure Pour to follow.
Sheets 502 and 503 (I-55 over Steed Road Left Lane) show two (2) Pour 1's, Pour 2, Pour 3, and Pour 4 to be performed on each side of the CL of the Bridge with a Closure Pour to follow.
Sheets 550, 551, 552, and 553 (I-55 over Colony Park Blvd Right and Left Lanes) show Pour 1, Pour 2, Pour 3, Pour 4, Pour 5, Pour 6, and Pour 7 to be performed full width of the bridge.
Sheets 592, 593, 594, 595, 596, and 597 (I-55 over Madison Avenue Right and Left Lanes) show two (2) Pour 1's, Pour 2, Pour 3, Pour 4, Pour 5, and Pour 6 to be performed on each side of the CL of the Bridge with a Closure Pour to follow.
Would not consistent pour sequences for all of the bridges help eliminate potential errors (such as, all with closure pours or all full width and/or all with multiple pour 1's or all single pours)?

Answer 8. The project should be bid based upon the pour schedule and phasing of the bridges as per the plans. After the execution of the contract, alternate pour schedules and phasing may be submitted for approval by MDOT. It shall be MDOT's sole discretion on the approval of alternate plans to construct the bridges.

Question 9. Concerning the Traffic Signal Plans it shows a Type 3 Pull Box (according to bid items) at each controller. On the ITS plans it shows a Type 5 Pull Box for fiber. If you are using a Type 5 Pull Box you should be able to do away with the Type 3 Pull Box. A Type I Pull Box is not needed at all on this project.

Answer 9. Pull box types, quantities, and locations should be bid as per plan sheets.

Question 10. Concerning the prints there is nothing stated about the power to the Traffic Signal Controllers. Entergy will not give a price for hook up due to these being new sites. The Contractor should not be responsible for meeting Power Company and inquiring to see how to get power to each site. Baker Engineering should be the responsible party for this task.

Answer 10. See answer to Question No. 3 previously posted.

Question 11. Concerning the Street Name Signs to be installed on the Signal Arms are they to be designed to meet Ridgeland/Madison Specifications or MDOT Standard Specifications?

Answer 11. The street name signs shall be in accordance with MDOT Specifications. Any reference in the contract documents referring to City of Madison or Ridgeland Specifications shall be disregarded.

Question 12. What are the over-all dimensions on the OTN Node Communication Huts?

Answer 12. A Notice to Bidders will be included in the reprint of the contract documents defining the dimensions and other specifics regarding the huts.

Question 13. Looking through the plans for this project the General Notes, page 2 Sheet 10.1 (17) there is mention of a soil profile available. Is this profile in an electronic version so that I may forward it on to our structure design folks?

Answer 13. The soil profiles are available at the following ftp site under soil profiles: \\ftp\ftp\Download\Roadway_Design\Public\Asbuilts-for-100486-301

Question 14. Where might one find the spec 907-630-4 referenced on sheet 100.291A note #6?

Answer 14. The reference to 907-630-4 is incorrect. The correct reference should be to 907-630-9 which is included in the contract. Also, a Supplement to 907-630-9 will be included in the new proposal.

Question 15. Is it safe to assume that there will be a revised note #1 from sheet 100.263 as it is referencing the signal interconnect cable as copper and the plans show a fiber interconnect cable?

Answer 15. A revised note will be forthcoming. The signal interconnect cable shall be fiber.

Question 16. Concerning drilled shaft excavations for overhead sign structures. Will geo investigation be required for each sign foundation location or will the foundation designers be permitted to use the project soil profile being supplied to design the foundations?

Answer 16. The contractor will be responsible for performing soil borings at each location to be used in the design of the foundations and supports in accordance with the Supplement to 907-630-9. The Supplement to 907-630-9 will be included in the new proposal which addresses this issue.

Question 17. Where is Assembly 30 Cross Section Drawing located in the contract drawings? Assembly 28 & 29 are DMS-1 & DMS-2. Is Assembly 30 actually required or should this item be deleted?

Answer 17. It is located on Sheet TC-11. Assembly No. 30 is the temporary sign assembly required on the temporary crossover.

Question 18. For the Smart Work Zone (item 907-619-M2002), what are the required quantities of both Portable Changeable Message Signs and Portable Traffic Sensors? These quantities are not listed on the proposal- only as a lump-sum.

Answer 18. These quantities are not listed in either the proposal or plan sheets as this lump sum item is contractor-designed base on the general, technical, and performance requirements provided in the special provision. The provision states, "The quantity for each device will vary to meet project objectives." This specification further states that, "the SWZS supplier will prepare a preliminary plan showing the location and number of various components of the SWZS to provide adequate queue detection and warning to the traveling public for approval prior to any installation of the system or any components."

Question 19. Page 195 of the proposal document states that the system will be in operation only during phases 2 and 3. Will the system need to be re-deployed between Phases 2 and 3?

Answer 19. No, the system will be removed either partially or wholly once traffic is reopened to the public on both northbound and southbound routes after phase 2 and reinstalled once phase 3 is implemented.

Question 20. Call Number 2, Line number 2520 Pay Item Number 907-619-M3001 Portable Smart work Zone Monitoring: is indicating 500. Is 500 the number of days or hours? Special Provision is indicating each for quantity on item number 97-619-M3. ? If number of days or hours should lump sum on line item no. 2510 utilize 500 as basis for bid? If 500 days or hours for 97-619-M3001 and project runs over 500 how will additional pay be calculated? Is four hours correct on control software portion of special provision 907-619-7 General Requirements 907-619.03.10.1 is indicating "control software issues shall be corrected within (4) hours of notification" - is 4 hours correct or is this to be 24 hours?

Answer 20. As stated in Special Provision 907-619-7 Section 907-619.04, the measurement for portable smart work zone, system monitoring, will be per each calendar day, determined by the number of calendar days the system is monitoring. There will be a revised Special Provision going out by addendum to correct the 4 hours. The spec will state in section 907-619.03.10.1 that, "Control software issues shall be corrected within 24 hours of notification by MDOT."

Question 21. Looking through the plan sheets (Sheet 100.289) we noticed that the communications pullbox depth is marked as 18", will this allow enough room for a splice can and slack fiber if necessary

Answer 21. Yes

Question 22. Plan Sheet WK 3 through WK 8 are referenced on the Cover Sheet of the Plans. Are these sheets available? If not, are there plan sheets available showing the project Geometry?

Answer 22. There are no plan sheets WK 3 through WK 8. The WK 5, for instance, is showing that the area between Station 180 and Station 210 can be found on the plan profile sheets that start with the number 5. In this case, there are 4 sheets: 5 LT, 5 RT, 5A and 5B. Sheet Numbers 100.088 through 100.093 provide a geometric layout of the project.

Question 23. Looking at the ITS Plan sheets other than a note about services being paid for by the contractor, we haven't seen many notes concerning electrical work. Was it the intention of the designer to leave power service location, cable sizing, number of services, etc. up to the contractor? We are not seeing any cable quantities on the ITS summary sheets, should this be absorbed into another pay item, and can we use one of the new conduits being installed or does the wire need a separate conduit, if so should also be absorbed?

Answer 23. For the power service location, see the Answer to No. 3. The cable quantities and conduit questions have been addressed in the addendum that was sent out March 8th.

Question 24. Cannot find specifications for item 907-605-CC001 prefabricated sheet drain utilized in project ACNH-9204-00(007)/100486391 Madison County, MS.

Answer 24. The specification was inadvertently left out of the contract. The specification will be added in Addendum No. 2

Question 25. There appears to be a unit discrepancy for Bid Item 3820, Precast Panels, 671 Square Feet. Is this supposed to be 671 Square Yards?

Answer 25. Yes, the correct unit is square yards. This will be corrected in Addendum No. 2

Question 26. Will full road closures of Steed Road and Madison Avenue be allowed for the demolition of the existing overpass bridges?

Answer 26. Temporary road closures will be allowed between the hours of 10:00 PM and 6:00 AM for bridge demolition work. The contractor shall notify the Project Engineer 10 days in advance of such closure.

Question 27. The specifications indicate that pile restrikes are required. However, there is no pay item for this activity. Please indicate which bid item Pile Restrikes (803-J) will be paid under.

Answer 27. A Pay Item for Pile Restrikes will be added in Addendum No. 2

Question 28. The Interconnect Plan (TRS-13 to TRS-20, 100.255 to 100.262) shows 2" Roll Pipe (Bored) in areas of new construction. Could this 2" Roll Pipe be installed during construction in these areas or is boring after construction required?

Answer 28. Bid as per plans. The Contractor may submit site-specific request after execution of the contract and prior to performance of the work.

Question 29. Sheet 24, Working Number TS-12 (Typical Sections) shows 42" Barrier required from Sta 20+50 to 25+00. Sheet 75, Worksheet 3A (SE Ramp at Old Agency) shows 42" Concrete Barrier required from Sta 20+50 to 25+00. Sheet 100.102, Working Number TC-1 (Traffic Control) Section A-A shows Permanent 32" Barrier for this ramp. Is the Barrier on the Southeast Ramp at Old Agency to be 42" or 32"?

Answer 29. 42" modified is required. Sheet No. 100.102 is in error. See Sheet No. 49.1

Question 30. Sheets 100.100 and 100.101, Working Number TC-TP1 and TC-TP2 (Typical Section, Temporary Pavement) require 6" Chemically Treated Subgrade and 6" Chemically Treated Granular Material under the asphalt pavement. As these are temporary crossovers to be removed, can the subgrade and granular material be replaced with crushed stone to reduce the cost to the State and reduce the duration of the construction of the crossovers?

Answer 30. Treatment of the subgrade will be required. Crushed stone may be used in lieu of the treated granular material.

Question 31. Sheets 12 and 13, Working Number TS-2 and TS-3 (Typical Sections) show different barrier details for the North Bound lanes and South Bound lanes of I-55. Could one detail be used to allow for more efficient construction?

Answer 31. No, build as per plans

Question 32. Sheet 701, Working Number WA2 (Retaining Wall) Typical Section shows a 4" Concrete Pavement at the base of the retaining wall. Sheet 17, Working Number TS-5 and Sheet 20, Working Sheet TS-8 (Typical Sections) do not show a concrete pavement for this retaining wall. What is the required width of this concrete pavement at the base of the retaining wall?

Answer 32. The required width is 3 feet. Sheet 17 & 20 will be revised by Addendum No. 2 to show that dimension.

Question 33 In areas where the plans called for jacked or bored concrete pipe, can steel pipe be used in place of concrete pipe?

Answer 33. Steel pipe may be used, but the Contractor will be required to submit, for approval, design calculations stamped by a registered Engineer with the following criteria considered as a minimum: PH, Resistivity, Corrosion, Wall Thickness, Dead Load & Live Loads. A Notice to Bidders will be added in Addendum No. 2 to address this issue.

Question 34. I am still not clear on the details for pay regarding the monitoring. If five hundred days is utilized for bidding purposes as line number 2520 indicates for item code 907-619-M3001 "Portable Smart Work Zone, System Monitoring":

1. If system is utilized and actual monitoring occurs for four hundred days is actual pay adjusted down?
2. If system is utilized and actual monitoring occurs for six hundred days is actual pay adjusted up?
3. A unit price is indicated on line 2520:
   a. Is unit price to be daily rate for system monitoring and bid amount to be daily rate times five hundred?
   b. Is unite price to be daily rate for each component of system being monitored and bid amount to be daily rate times each component times each component times five hundred?

Answer 34.
1. Yes, pay will be based on the actual number of days the system is monitored
2. Yes, pay will be based on the actual number of days the system is monitored

3a. Yes

3b. No, monitoring is not for individual components, but for the entire system

Question 35. There appears to be a Bid Item Quantity discrepancy for Bid Item 90, Removal of Concrete Median & Island Pavement. Quantity Sheet EQ-7 (Sheet 50) shows median and island pavement removals to be approximately 314 SY. The bid item quantity is 5,571 SY. Please confirm which is correct.

Answer 35. Neither is correct. The correct quantity is 739 square yards. This will be corrected in Addendum No. 2

Question 36. Special Provisions 907-307-3, 907-308-3, and 907-311-2 include a pay item for Bituminous Curing Seal; however, this item has not been included in the schedule of items. Please clarify.

Answer 36. The bituminous curing seal pay item will be added in Addendum No. 2

Question 37. If maintenance of the existing roadway is required during restricted lane closure periods, through no fault of the contractor, will the Contractor be charged the penalties associated with these lane closures?

Answer 37. If normal routine maintenance is required, it should be done under normal lane closure periods. The lane rental fee will not be assessed if the Engineer determines immediate maintenance is required and directs the Contractor to perform this work during a restricted lane closure period.

Question 38. There are twelve requirements for pay item 642-A008. However, on sheet number TRS-1, 100.242 it only requires for a modification of the existing cabinet. Since there is no pay item for a solid state traffic actuated controller modification, are we supposed to average this in with the eleven new complete traffic controller cabinet assemblies?

Answer 38. No, a new pay item will be added for a Solid State Actuated Controller Modification in Addendum No. 2

Question 39. In Special Provision 907-103-10, The "Value of the Contact Time" shall not exceed 928 Calendar Days. How is the number of Calendar days determined, is the Calendar to be 365 days per year without Weather days and State Holidays or is the Calendar modified to include Weather days and State Holidays? Please provide the number of Calendars days per Calendar Year.

Answer 39. The calendar year is 365 days per year without weather days and state holidays. See NTB No. 3781 and SP 907-108-26 for additional details.

Question 40. I have searched to spec for spare equipment requirements for signalization/ITS/lighting and see no mention of spare parts on the project specification other than a handful of fiber optic jumpers for the OTN Nodes. Is there some other mention of spare equipment in another document?

Answer 40. No

Question 41. Will Changeable Message Signs included in the Smart Work Zone System be paid under item 907-619-E3001 (Changeable Message Sign), or are they absorbed as part of the Smart Work Zone System.

Answer 41. No, they are absorbed under the pay item for Smart Work Zone System.

Question 42. Regarding the lighting plan details 100.307.1 the pull boxes are shown to be cast iron, can quazite pull boxes be used instead? Size of pull box is not shown on prints either, please clarify sizes.

Answer 42. Pull boxes shall be cast iron with an H-20 rated top. The boxes should be sized in accordance with the National Electrical Code with a minimum size of 12"x12"x6".

Question 43. Regarding Type I Pull Boxes-Sixty one Type I pull boxes are listed in bid quantities and bid item sheets but are not reflected on plan sheets, will this item be installed?

Answer 43. No, there are not any Type I Pull Boxes required. This pay item will be deleted in Addendum No. 2.

Question 44. Regarding Camera Poles and Radar Poles- Camera Poles 70' and Radar Poles 50' show to have no foundation details, please clarify width and depth for these items.

Answer 44. The foundations for the 70 foot Camera Poles and the 50 foot Radar Poles are Contractor designed in accordance with Special Provision No. 907-639-6 that will be included in Addendum No. 2. The poles and foundations shall be designed in accordance with the current addition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals with a design life of 50 years and a minimum wind speed of 90 mph. The Camera Pole detail shown on plan sheet no. 100.290 shows the foundation concrete to be Class A, this is in error and the correct class of concrete is Class B.

Question 45. How does MDOT require that the controllers be communicate to the traffic system (ACTRA) – via Ethernet or via serial fiber?

Answer 45. The controllers shall communicate to the ACTRA via Ethernet.

Question 46. Managed Gigabit Traffic Ethernet Switches – are normally employed to provide the Ethernet switch in traffic cabinets, are these to be provided under Item No 642-A for each intersection? If serial fiber, where shall the initiating fiber modem(s) be located?

Answer 46. Yes, ethernet switches are to be provided under pay item no. 642-A for each intersection.

Question 47. It appears that the 907-658-A Network Switch Type A quantity is short by one for the switch required to connect the Type A detector cabinet on the west side of I-55 to the Type B camera cabinet on the East side of I-55. Should this quantity be increased by 1 switch?

Answer 47. Yes

Question 48. Does MDOT want the RDS cable terminated at the Type A detector cabinet instead of pulled under the interstate as indicated on the revised plans?

Answer 48. The RDS cable should be pulled in accordance with the revised plan sheets.

Question 49. In the Proposal NTB# 3810 indicates 2 OTN nodes while the Summary of Quantities (ITS-SQ-1) indicates only a single node. How many nodes are to be provided?

Answer 49. One OTN node.

Question 50. Whom is the current MDOT wireless provider for compliance with SP's 907-619-7 & 907-619-5 on above referenced project?

Answer 50. MDOT's current wireless provider is CSpire.

Question 51. Regarding the ITS Systems can they be fed from the traffic signal meters or would they be fed to a different meter? If fed to a different meter when contractor bores or trenches conduit to ITS System for power will that be paid from the bid item or will it be absorbed?

Answer 51. The ITS system shall be on a separate meter from the lighting and traffic signal meters. See note on plan sheet no. 100.291 for payment of conduit.

Question 52. Regarding the ITS Drawings it shows 2" roll pipe and 3" roll pipe at same location, if contractor does not use sleeve on bores for 2" or 3" conduit at the same time will contractor get paid for each linear feet per pipe?

Answer 52. The Contractor shall be paid separately for each linear foot of 2" roll pipe installed and the 3" roll pipe installed.

Question 53. Regarding Traffic Plans it shows 2" roll pipe and 3" roll pipe at same location, if contractor does not use sleeve on bores for 2" or 3" conduit at the same time will contractor get paid for each linear feet per pipe?

Answer 53. The Contractor shall be paid separately for each linear foot of 2" roll pipe installed and the 3" roll pipe installed.

Question 54. The drawings call for what looks to be a cast Aluminum Post - I have been unable to locate this post in any of the foundries I called, does MDOT have any source information.

One concern I have is that the drawings call for the posts to be installed level, with the horizontal rails following the slope. This will cause the rails to bind in the posts, and I believe it will be impossible to install them in this fashion.

Answer 54. There is at least one supplier that can furnish the posts that are shown in the plans. Contractors may submit an alternate railing system, similar to the system that is shown in the plans, in accordance with the General Notes on plan sheet no. 817.

The rails should not bind in the posts if the posts are cast correctly as detailed.

Question 55. Is there any way that we might get an extension on the Q & A for this project?

Answer 55. The deadline to submit questions will be extended to 5:00 PM (Central Time) on Friday, March 16.

Question 56. Removal of Concrete overlayed w/ asphalt - What are the limits of removal (Stations, lengths, widths) ? Any idea as to the thickness(es) of the concrete and the asphalt overlaying? 2.) Removal of Soil Cement w/ asphalt overlay - What are the limits of removal (Stations, lengths, widths)? Any idea as to the thickness (es) of the asphalt overlaying?

Answer 56. The removal limits are shown on plan sheet 51 (EQ-8) and the existing pavement thicknesses are shown on plan sheet 11 (TS-1).

Question 57. Sheet 80 (Worksheet 4RT) shows Jack & Bore 24" RCP in three places, Sta. 160+00, Sta. 163+55, and Sta. 165+50. Sheet 100.105 (Working Number TC-2) shows Jack & Bore 18" RCP in these locations. Are the Jack & Bore RCP 24" or 18"?

Answer 57. The pipe shall be 24" as shown on Sheet 80 (WK #4RT); disregard the 18" designation on Sheet 100.105 (WK #TC-2).

Question 58. Sheet 22 (Working Number TS-10) shows Steed Road to be widened on both the north side and south side of the existing roadway from Sta. 110+44 to Sta. 121+00. Sheet 82 (Worksheet 4B) only shows work on the south side of the existing roadway from approximately Sta. 114+50 to Sta. 121+00. Sheet 82 (Worksheet 4B) also shows Phase 1 work to be performed from Sta. 116+00 to Sta. 125+00 and Phase 3 work to be performed from Sta. 110+00 to 116+00. Sheet 100.105 (Working Number TC-2) shows the Phase 1 work at Steed Road to be from approximately Sta. 116+65 to Sta. 121+00 (East of I-55). Sheet 100.117 (Working Number TC-14) shows the Phase 3 work at Steed Road to be on the north side of the existing roadway from approximately Sta. 110+44 to Sta. 114+30 (West of I-55). The Traffic Control sheets do not show the work at Steed Road from Sta. 114+30 to Sta. 116+65 (Under I-55) in any phase. Will Steed Road be widened on both sides from Sta. 110+44 to Sta. 121+00? And if so, during which phase?

Answer 58. Yes, Steed Road will be widened on both the north and south sides. The south side of Steed Road shall be widened from the East Frontage Road eastward within the milestone phase. The Contractor has the option to perform the remaining widening in any phase in accordance with NTB 3809, Additional Construction Requirements.

Question 59. Can you help me find any description/scope/work required/notes regarding for pay item 619-H1001?

Answer 59. The temporary traffic signal is located at the intersection of Jackson Avenue and Sunnybrook Road. The reconstruction of this intersection is within the milestone portion of the project and the temporary traffic signal may be required if the new traffic signal cannot be installed prior to the specified milestone completion date. The temporary traffic signal shall meet the requirements of Subsection 619.02.8--Traffic Signals and Flashers of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 edition which states, " Traffic signals and flashers shall meet the requirements of the plans and Section 6F.71 & 6F.74 of the MUTCD."

Question 60. I did not see the following pay items in the bid proposal:
Traffic Signal Conduit Bank, Underground, Rolled Pipe, 2 @ 2"
Traffic Signal Conduit Bank, Underground, Drilled or Jacked, Rolled Pipe, 2 @ 2"

Answer 60. These items are included in addendum #1 bid sheets as Line No. 1900 and 1910, respectively.

Question 61. The following Items appear to be an error. I have not found any of Item 1865 Electric Cable, Underground in Conduit, THHN, AWG #2, 4 Conductor or any of Item 1866 Electric Cable, Underground in Conduit, THHN, AWG #6, 4 Conductor. However there is AWG #2, 3 Conductor, AWG #2, 6 Conductor, & AWG #6, 3 Conductor shown on the drawings but not any pay items.

Answer 61. Line No items 1865 Electric Cable, Underground in Conduit, THHN, AWG #2, 4 Conductor and Line No. 1866 Electric Cable, Underground in Conduit, THHN, AWG #6, 4 Conductor are in error and will be deleted in Addendum # 2.
The pay items for AWG #2, 3 Conductor (5640 LF), AWG #2, 6 Conductor (4155 LF), & AWG #6, 3 Conductor (2750 LF) will be added in Addendum # 2.

Question 62. On sheet 100.242 it shows installing new loops for this intersection. There are no conduit or pullbox quantities listed for this, will these materials be incidental to the loops?

Answer 62. No, there are existing conduit and pull boxes that will be used for the new loops.

Question 63. Existing Bike Paths have bollards to block motor vehicles from entering. Are bollards required at the locations where the 12' wide bike paths intersect streets? If so, will you please provide the requirements.

Answer 63. Bollards are not required.

Question 64. Will electronic drawings (Microstation) be provided to the awarded contractor?

Answer 64. Yes, the Contractor that is awarded the project can request the electronic files from Keith Boteler in Roadway Design Division.

Question 65. Please provide a typical section for the temporary detours and indicate which bid item the detours should be paid under.

Answer 65. The typical section for the detour road is on plan sheet no. 27 (TS-15). Payment will be made under the pay items necessary to construct the detour road.

Question 66. Sheet 100.111 and 100.113 refers to Sheet # TRW-1 for details of the temporary retaining wall. Please provide the sheet TRW-1.

Answer 66. Sheet TRW-1 is on plan sheet no. 100.372, this sheet can be obtained from the MDOT Plans Print Shop.

Question 67. Is it safe to assume that the note on the ITS pages referencing transformers/concrete poles/disconnects will make these items incidental to the site work?

Answer 67. Yes, see Sheet No. 100.291

Question 68. Does the department provide any concrete cylinder testing or is this incidental to the work?

Answer 68. The Department breaks cylinders for acceptance. All other cylinder testing is incidental to the work.

Question 69. Is it safe to assume that since the CCTV and RDS pole foundations are contractor designed that each will have to have a geo investigation?

Answer 69. Yes

Question 70. Regarding the 907-637.02.1—Type A Network Switch #2 Long Reach optical ports (SFP), #1.a (p.295) requires " the minimum optical budget between transmit and receive ports be 19dB." Will MDOT consider an 18 dB optical budget acceptable for single mode SFP transceivers (Long Reach Optical Ports)?
The 19 dB optical budget (@ 1310nm wavelengths) requires a 25km SFP transceiver, a 40 km SFP transceiver, or other stronger SFP transceivers. 25km SFP transceivers are only available a very few manufacturers; hence, increased cost. Using stronger transceivers requires attenuators (#2.d) be used to protect the switches from burnout, and this would likely cause confusion during long term system operation and maintenance.
An 18 dB optical budget (@1310 nm wavelengths) requirement is readily met by industry standard 20km SFP transceivers. To the best of my knowledge all SFP transceiver manufactures and network switch providers have 20 km SFP transceivers available. A 20 km transceiver has approximate range of 12.4 miles which is roughly comparable to a 25 km transceiver's range of 15.5 miles. 20 km transceivers are substantially more cost effective than 25 km transceivers due to their ready availability from a wide variety of manufacturers.
Additionally, using 20 km transceivers removes the possibility that attenuators will be required to protect the transceivers in each switch. This reduces system cost, reduces system complexity, and increases ease of maintenance – particularly over the long term. To date, every MDOT project that I have seen would have been adequately served with a 20 km SFP transceiver with its approximate 12.4 mile range.

Answer 70. It must be 19 dB

Question 71. Concerning traffic signalization, does the department have any sort of per intersection summary sheet covering all of the items needed? The reason I am asking is that I see "lum" listed on several of the plan sheets indicating luminaire power, but I am not seeing any luminaire symbols on the drawings.

Answer 71. There is no recap. Intersections that show luminaire power shall have luminaires and the cost shall be absorbed.

Question 72. Addendum #1 addresses Special Provision 907-619-7 Portable Smart Work Zone Systems (SWZS). Under the basis of payment, it lists the following pay items:
907-619-M1 Portable Smart Work Zone, Single Device -per Each
907-619-M2 Portable Smart Work Zone, System -lump sum
907-619-M3 Portable Smart Work Zone, System Monitoring -per each
The bid items only show items 907-619-M2002 & 907-619-M3001. Will there not be a bid item regarding the Single Device? Or was there an omission?

Answer 72. A revised Special Provision for Portable Smart Work Zone Systems is included in Addendum No. 2. The revised specification provides a minimum number of components for the system and also includes individual pay items for traffic sensors and portable changeable message signs in the event it is necessary to expand the smart work zone system.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3842 **CODE: (SP)**

DATE: 3/19/2012

SUBJECT: Restricted Area

PROJECT: ACNH-9204-00(007) / 100486301 -- Madison County

Bidders are hereby advised that construction operations for the West Frontage Road from Station 72+00 to 85+00 are restricted until September 7, 2012. Work may only commence in this area before this date with written approval by the Engineer.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-7 **CODE: (SP)**

DATE: 03/19/2012

SUBJECT: **Preparation of Proposal**

PROJECT: ACNH-9204-00(007) / 100486301 -- Madison County

Section 102, Bidding Requirements and Conditions, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-102.06--Preparation of Proposal. After the tenth paragraph of Subsection 102.06 on page 18, add the following:

The bidder shall determine the total number of calendar days required to complete the work in the contract.

The product of the total number of calendar days required for construction of the project in accordance with the plans and specifications (contract time), as determined by the bidder, times the disincentive cost of **$15,000 per calendar day** shall be added to the total bid determined from the bid items. The sum of these two amounts will be the amount used for comparison of bids. This information is to be entered on bid sheet 2-38 of the bid proposal sheets.

907-102.08--Proposal Guaranty. At the end of Subsection 102.08 on page 20, add the following:

The proposal guaranty should not include the amount determined for contract time as specified in 907-102.06 above.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-103-10 **CODE: (SP)**

DATE: 03/19/2012

SUBJECT: Consideration of Proposal

PROJECT: ACNH-9204-00(007) / 100486301 -- Madison County

Section 103, Award and Execution of Contract, of the 2004 Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete the first paragraph of 103.01 on Page 22 and substitute:

907-103.01--Consideration of Proposals. After the proposals are opened and read, they will be compared on the basis of the following formula:

X = A + B

Where:

X = The total amount used only for determining the lowest bid for award of Contract.

A = Total Bid - Direct and Dependent Items - This being the summation of the products of the quantities shown in the bid schedule multiplied by their respective unit prices.

B = Value of the Contract Time – This being the total calendar days required to complete construction of the project in accordance with the plans and specifications (contract time), as determined by the bidder, multiplied by the disincentive cost of $15,000.00 per day. The value B is included for comparison of bids only and will NOT be included in any payment to the Contractor. **The total number of days entered for contract time CAN NOT EXCEED 928 CALENDAR DAYS.** If the Contractor enters a Contract Time of more that 928 calendar days on Bid Sheet 2 - 38, the proposal will be considered **irregular, rejected, and returned to the bidder.**

The results of bid comparisons will be immediately made available to the public. In the event of a discrepancy between unit bid prices and extensions, the unit bid price shall govern.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-282-10 **CODE: (SP)**

DATE: 03/14/2012

SUBJECT: Automatic Irrigation System

Section 907-282, Automatic Irrigation System, is hereby added to and made a part of the 2004 Edition of the Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-282 -- AUTOMATIC IRRIGATION SYSTEM

907-282.01--Description.

907-282.01.1--General. Unless otherwise specified or indicated on the drawings, the construction of the automatic irrigation system shall include the furnishing, installing, and testing of all mains, laterals, risers, and fittings, all municipal water main taps, the furnishing and installing of irrigation heads, drip irrigation equipment, gate valves, controllers, controller enclosures, all necessary specialties and accessories, the removal and/or restoration of existing improvements, excavation and backfill, and all other work in accordance with the plans and specifications as required for a complete system.

The work consists of installing a complete underground irrigation system as shown on the drawings and as hereinafter specified, including the furnishing of all labor, equipment, appliances, and materials and in performing all operations in connection with the construction of the irrigation system. It shall include furnishing and installing all plastic pipe and fittings, automatic control valves, pressure relief valves, check valves, gate valves, valve access boxes, valve markers, manual drain valves, irrigation heads, drip irrigation equipment, electric controllers, electric wire, hydraulic lines, etc., as required for complete system as shown on the drawings, called for in these specifications or as may be required for proper operation of the system.

Sidewalks, roads and other paving adjacent to planting operations shall be kept clean and free of obstructions, mud and debris at all times. Wheels of vehicles used in the work shall be cleaned if necessary. Sidewalks shall be protected from damage and markings from wheels of vehicles used in the work.

Flushing of streets and disposal of dirt or debris into sewers or drainage ditches will not be permitted.

907-282.01.2--Quality Assurance. All local, Municipal and State Laws and Rules and Regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these specifications and their provisions shall be carried out by the Contractor. Anything contained in these specifications shall not be construed to conflict with any of the above mentioned Rules, Regulations or requirements and where a conflict may occur, the Rules,

Regulations or requirements of the governing code shall be adhered to. However, when these specifications and/or drawings call for or describe materials, workmanship or construction of better quality, higher standard or larger size, these specifications and/or drawings shall take precedence over the requirements of said Rules, Regulations or Codes.

In addition to complying with all pertinent codes and regulations, the Contractor shall comply with the latest rules of the National Electric Code and local city and county Electrical Codes for all electrical work and materials.

At least one person, thoroughly familiar with the type of materials being installed and the materials manufacturers' recommended methods of installation, shall be present at all times during execution of this work and shall direct all work being performed.

All workers shall have sufficient skill and experience to properly perform the work assigned to them. Workers engaged in special work or skilled work shall have the sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

All materials to be incorporated in this system shall be new and without flaws or defects and of quality and performances as specified and meeting the requirements of the system.

907-282.01.3--Scope of Work. The irrigation system shall be constructed using the irrigation heads, valves, drip irrigation equipment, piping, fittings, controllers, wiring, etc. of sizes and types shown on the drawings and as called for in these specifications or approved equals. The system shall be constructed to grades and conform to areas and locations as shown on the drawings.

It is the intention of these specifications, together with the accompanying drawings, to accomplish the work of installing an irrigation system which will operate in an efficient and satisfactory manner according to the workmanlike standards established for the irrigation system operation. Notwithstanding is the fact that these specifications and drawings may be deficient in setting forth a complete detailed description of the work to be done.

It shall be the Contractor's responsibility to ensure and guarantee coverage of the areas shown on the drawings to be irrigated. The Contractor shall also guarantee the satisfactory operation of the entire system and the workmanship and restoration of the area.

The Contractor shall be responsible for coordination with the local water authority and shall be responsible for any and all permits, fees, tapping charges and other costs required to make the irrigation system completely operational.

907-282.01.4--Warranty. The entire system shall be warranted/guaranteed for a period of six months from the date of final acceptance, and the Contractor hereby agrees to repair or replace any manufacturing or workmanship defects occurring within that six month period, at no additional costs to the State.

During the warranty period, all work not functioning correctly shall be immediately replaced; adjusted as necessary to maintain complete coverage, or make good any other damage, loss, destruction, or failure; at no cost to the State.

Any damage to grade, plants, and other work due to improper irrigation operations or corrective actions shall be corrected or replaced.

Warranty excludes loss due to extraordinary natural phenomena, vandalism or as determined by the Engineer.

Upon completion of all work on the project, the Contractor may request a final inspection of the project. If all items of work, except the completion of a six month warranty period on the irrigation system, are considered satisfactory and acceptable, the Contractor will be given a partial maintenance release. This partial maintenance release is to relieve the Contractor of responsibility, except as stated herein, and to release the Contractor from maintenance on all other items of work on the project during the six month warranty period on the Irrigation System.

907-282.02--Materials.

907-282.02.1--General. Plastic pipe shall be rigid plasticized PVC, extruded from virgin parent material of the type specified on the drawings. The pipe shall be homogenous throughout and free from visible cracks, holes, foreign materials, blisters, deletions, wrinkles and dents.

All pipe shall be continuously and permanently marked with the manufacturer's name and trademark, size schedule and type of pipe, working pressure at 73 degrees Fahrenheit and National Sanitation Foundation (N.S.F.) approval.

All plastic pipe fittings to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for solvent weld, or screwed connections. No fittings made of other materials shall be used except as hereinafter specified.

Only solvents complying with ASTM Designation: D 2564 and recommended by the manufacturer of the plastic pipe shall be used for joining.

Only cleaners recommended by the plastic pipe manufacturer shall be used to clean pipe and fittings.

907-282.02.2--Irrigation Heads. Irrigation heads shall be of the required types and sizes and have the diameter or radius of throw, pressure, discharge and any other designations necessary to determine the type and size visibly marked. Irrigation heads shall be Rain Bird, Toro, or an approved equal. All heads of a particular type and for a particular function in the system shall be of the same manufacturer and shall be marked with the manufacturer's name and identification in such a position that they can be identified without being removed from the system.

907-282.02.3--Electric Remote Control Valves. All electric remote control valves shall be of the type and size called for by the drawings and shall be Rain Bird, Toro, or an approved equal.

Valves shall be twenty-four (24) volt with epoxy-sealed solenoid coils, manual flow control stem and 200 psi rated.

907-282.02.4--Drip Irrigation Equipment. All drip irrigation equipment shall be of the type and size called for by the drawings and shall be Rain Bird, Toro, or an approved equal.

907-282.02.5--Automatic Controllers. Automatic controllers shall be of the type called for on the drawings or approved equal. Controller shall be by the same manufacturer as selected for the electric remote control valves.

Each automatic controller shall be mounted in a lockable, stainless steel enclosure per the drawing details. Surge and lightning protection shall be incorporated into each controller.

907-282.02.6--Irrigation Head Risers. All irrigation head risers shall be a "swing joint" composed of three street joints and a one (1) inch schedule 80 PVC pipe riser.

907-282.02.7--Double Check Valve. Double check valves shall be designed to accommodate a three (3) inch service line. The valve shall be Watts 709, Wilkins 350, Febco 850, or an approved equal and shall meet the following standards: ASSEE No. 1015; AWWA C506-78; CSA B64. Valves shall meet all local regulations.

907-282.02.8--Other Materials. All other materials, not specifically described but required for a complete and proper irrigation system installation, shall be new, first quality of their respective kinds and subject to the approval of the Engineer.

907-282.03--Construction Requirements.

907-282.03.1--Excavation and Backfill. Trenches for plastic pipe sprinkler lines shall be excavated to a sufficient depth and width to permit proper handling and installation of the pipe and fittings, or the piping may be installed by other methods approved by the Engineer.

The backfill shall be properly compacted to eliminate settlement and evened off with the adjacent soil level. Selected fill dirt or sand shall be used if soil conditions are rocky. In rocky areas, the trenching depth shall be two (2) inches below normal trench depth to allow for bedding. The fill dirt or sand shall be used in backfilling to a point four (4) inches above the pipe. The remainder of the backfill shall contain no lumps or rocks larger than three (3) inches. The top six (6) inches of the backfill shall be free of rocks over one (1) inch, subsoil or trash.

Unless otherwise indicated on the drawings or required, all plastic pipe main lines shall be installed with a minimum cover of twenty four (24) inches based upon finished grades. All lateral lines shall be installed with a minimum of eighteen (18) inches of cover.

Layout of piping and heads shown on the plans is approximate and may require adjusting to avoid plants and other obstructions.

907-282.03.2--Pipe Installation. Irrigation lines shown on the drawings are essentially diagrammatic. Locations of all irrigation heads, drip irrigation equipment, valves, piping, wiring, etc., shall be established by the Contractor at the time of construction. Spacing of the irrigation heads are shown on the drawings and shall be exceeded only with the permission of the Engineer.

Layout of piping, irrigation heads, and drip irrigation equipment shown on the plans is approximate and may require adjusting to avoid plants and other constructions.

Pipe sizes shall conform to those shown on the drawings. No substitutes of smaller pipe sizes will be permitted, but substitutions of larger sizes may be approved. All pipe damaged or rejected because of defects shall be immediately removed from the site.

Where piping on the drawings is shown under paved areas but running parallel and adjacent to planted areas or turf areas, the intent of the drawings is to install the piping inside the planted or turf areas.

Generally, piping under concrete or asphalt shall be installed through new Schedule 80 irrigation sleeves to be installed prior to the roadway and bridge construction. Schedule 80 irrigation sleeves must be used when sleeving beneath all roadway travel lanes. Where any cutting or breaking of sidewalks, concrete work and/or asphalt is necessary, it shall be removed and replaced by the Contractor. Permission to cut or break sidewalks, concrete work and/or asphalt shall be obtained from those having proper jurisdiction.

Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.

Plastic pipe shall be cut with a standard pipe cutter or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.

All plastic to plastic joints shall be solvent-weld joints. Only the solvent recommended by the pipe manufacturer shall be used. All plastic pipe and fitting shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility for the correct installation.

All material overages at the completion of the installation are the property of the Contractor and are to be removed from the site.

Piping shall be installed in dry weather when the air temperature is forty (40) degrees Fahrenheit or greater.

907-282.03.3--Solvent-Weld Joints. Solvent-weld joints shall be made in the following manner:

Thoroughly clean the mating pipe and fitting with a clean cloth and liquid cleaning agent.

Apply a uniform coat of solvent to the outside of the pipe with an approved applicator.

Apply solvent to the fitting in a similar manner.

Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.

Give the pipe or fitting a quarter turn to ensure even distribution of the solvent and make sure the pipe is inserted to the full depth of the fitting socket.

Hold in position fifteen (15) seconds.

Wipe off excess solvent that appears at the outer shoulder of the fitting.

Care should be taken so as not to use an excess amount of solvent, thereby causing an obstruction to form on the inside of the pipe. The joints shall be allowed to set at least twenty-four (24) hours before pressure is applied to the system.

907-282.03.4--Concrete Thrust Blocks. Concrete thrust blocks shall be installed on 3-inch irrigation main lines using the dimensions and placement for thrust blocks as indicated on the drawing details.

907-282.03.5--Electric Wiring. All control lines (electric wiring or hydraulic tubing) shall be laid in same trench as plastic pipe.

907-282.03.6--Irrigation Heads. Unless otherwise specified or designated on the drawings, the installation of irrigation heads shall include the excavation and backfill, the furnishing, installing and testing of risers, fittings and pop-up or rotor heads and the removal and/or restoration of existing improvements and all other work in accordance with the plans and specifications.

All irrigation heads shall be set perpendicular to the finished grades unless otherwise designated on the drawings or otherwise specified by the Engineer. Irrigation heads shall be located flush with the surrounding finished grades whether that grade be a soil level or the top of installed sod.

Irrigation heads adjacent to existing walls, curbs and other paved areas, shall be set to grade unless the plans show the head to be placed on a riser. Riser height shall be adjusted as needed after planting operations.

Minor adjustments to head locations shall be made after planting operations to ensure optimum coverage.

907-282.03.7--Drip Irrigation Equipment. Unless otherwise specified or designated on the drawings, the installation of all drip irrigation equipment shall include the excavation and backfill, the furnishing, installing and testing of risers, emitters, fittings, diffusers, nozzles, distribution lines, drip zone valves, and the removal and/or restoration of existing improvements and all other work in accordance with the plans and specifications.

All drip irrigation distribution lines, stakes, emitters, and diffuser nozzles shall be established around the trees as designated on the drawings, with tubing stakes equally spaced around the perimeter of each tree, with six per tree. Distribution tubing to each tubing stake shall be completely covered with soil as indicated in the drawing details. Each multi-outlet emitter shall be installed in a subterranean emitter box as indicated in the drawing details.

Minor adjustments shall be made to the layout of distribution tubing or tubing stakes to ensure optimum coverage.

907-282.03.8--Electric Remote Control Valves. Electric remote control valves shall be installed in the manner and location called for by the plan and drawings. Installation shall comply with applicable codes and be done in a workmanlike manner.

907-282.03.9--Automatic Controllers. Install the automatic controller in the location called for by the drawings and in accordance with the manufacturer's recommendations. Installation to comply with applicable codes and to be done in a workmanlike manner.

Contractor shall provide adequate lightning and surge protection for the automatic controller and electric valve solenoids.

The controllers shall receive electrical power at a future date, by others. Therefore, the Contractor shall be responsible for providing a temporary power source for testing the irrigation system. A temporary power source shall also be provided by the Contractor for demonstrating operation of the irrigation system.

907-282.03.10--Testing, Inspection and Repairs. After all new sprinkler piping and risers are in place and connected, for a given section and all necessary work has been completed and prior to the installation of sprinkler heads, all control valves shall be opened and a full head of water used to flush out the system.

Testing of the system shall be performed after completion of each section or completion of the entire installation and any necessary repairs shall be made, at the Contractor's expense, to put the system in good working order.

Temporary power shall be supplied by the Contractor, since electricity will not be available at the time of installation.

Should repairs or adjustments to the irrigation system be required, the Contractor shall backfill any excavation with sandy-loam topsoil. Any landscaping disturbed by these repairs shall be repaired to meet original landscaping specifications. All surrounding landscaped areas shall be protected from excavated materials during the repair process. Sod, grass, or shrubs damaged by excavated material or equipment shall be replaced at the Contractor's expense.

907-282.03.11--Instructions. A typewritten legend shall be attached to the inside of each controller door stating the areas covered by each remote control valve and station on the controller.

After the system has been completed, inspected and approved, maintenance personnel shall be instructed in the operation and maintenance of the irrigation system and demonstrate the contents of the manual furnished.

907-282.04--Method of Measurement. The automatic irrigation system, complete and accepted, will be measured as a lump sum price, as indicated in the construction documents and in the bid schedule of the contract.

907-282.05--Basis of Payment. The automatic irrigation system, measured as prescribed in Subsection 907-282.04, will be paid for at the contract lump sum price bid, which lump sum price shall be full compensation for furnishing and installing the water main taps, double check valves, water meters, vaults for the double check valves and water meters, main water lines, lateral water lines, trenching for all water lines, trench backfill and compaction of trench backfill per specifications, concrete thrust blocks for all 3-inch main lines per construction documents, drip irrigation lines, drip irrigation emitters, emitter stakes, distribution lines for emitters, pop-up sprinklers, turf rotors, irrigation head risers, all necessary nozzles for emitters and irrigation heads, valve boxes, automatic irrigation valves, automatic drip zone valves, gate valves, irrigation controllers in lockable stainless steel pedestal enclosures per construction documents, testing of irrigation system, supply a temporary power source for testing the irrigation system and for demonstrating operation of the irrigation system at the final walk-through inspection, shipping/freight costs; taxes; labor and equipment used for installation, storage and protection of the materials both on-site and off; clean-up and incidentals necessary to complete the irrigation work.

Payment will be made under:

907-282-A: Automatic Irrigation System - per lump sum

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-308-3

DATE: 02/29/2012

SUBJECT: Portland Cement Treated Courses

Delete the sentence in Subsection 907-308.02.4 on page 1, and substitute the following:

After "EA-1," in the first sentence of 308.02.4 on page 204, add "AE-P, CSS-1,".

Delete the first sentence of Subsection 907-308.03.7.2 on page 1, and substitute the following.

No cement or cement treated material shall be applied or placed when the temperature is below 40°F nor when the Engineer determines, based on the latest information available from the National Weather Service, that the forecast temperature will fall below 40°F within the next three (3) days in the area in which the project is located. For anticipated mixing operations on a Monday, a Friday forecast that runs through the following Wednesday shall be used to determine if conditions will allow the application of cement on Monday.

Before Subsection 907-308.05 on page 3, add the following.

907-308.04--Method of Measurement. Delete the fourth paragraph of Subsection 308.04 on page 214 and substitute the following.

Bituminous curing seal will be measured by the gallon as prescribed in Subsections 109.01. Unless otherwise specified, distributor tank measurements will be used. The volume of material over five percent above the allowed range for each shot will be deducted from measured quantities, except that 15 percent will be allowed for irregular areas where hand spraying is necessary. The volume of all bituminous material lost, wasted, damaged, or rejected, or applied outside of designated areas, or in excess of the Engineer's directions and tolerances allowed, or contrary to the specifications, will be deducted from measured quantities.

Water will not be measured for separate payment.

After the first sentence of Subsection 907-308.05 on page 3, add the following.

Bituminous curing seal, measured as prescribed above, will be paid for at the contract unit price per gallon, which price shall be full compensation for furnishing, applying and reapplying if needed, protecting, maintaining; and all tools, equipment, labor and incidentals necessary to complete the work.

After the last pay item listed on page 215, add the following.

907-308-S: Bituminous Curing Seal - per gallon

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-308-3 **CODE: (IS)**

DATE: **08/14/2007**

SUBJECT: **Portland Cement Treated Courses**

Section 907-308, Portland Cement Treated Courses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-308.02.4--Curing Seals. After "EA-1," in the first sentence of 308.02.4 on page 204, add "AE-P,".

907-308.03.2--Equipment.

907-308.03.2.1--General. Delete the second paragraph of Subsection 308.03.2.1 on page 206.

Delete Subsection 308.03.7.2 on page 209 and substitute the following:

907-308.03.7.2--Weather Limitations. No cement or cement treated material shall be applied or placed when the temperature is below 45°F nor when the Engineer determines, based on the latest information available from the National Weather Service, that the forecast temperature will fall below 45°F within the next five (5) days in the area in which the project is located. No cement or cement treated material shall be placed on a frozen foundation or mixed with frozen material.

907-308.03.9.2--Density. Delete the second paragraph of Subsection 308.03.9.2 on page 213 and substitute the following:

Soil Cement Treatment of Subgrade. The lot will be divided into five approximately equal sublots with one density test taken at random in each sublot. The average of the five (5) density tests shall equal or exceed 96.0 percent with no single density test below 94.0 percent. Sublots with a density below 94.0 percent shall be corrected at no additional cost to the State and retested for acceptance.

Each lot of work found not to meet the density requirement of 96.0% of maximum density, may remain in place with a reduction in payment as set out in the following table:

PAYMENT SCHEDULE FOR COMPACTION

Pay Factor	Lot Density * % of Maximum Density
1.00	96.0 and above
0.90	95.0 - 95.9
0.50	94.0 - 94.9

* Any lot with a density less than 94.0% of maximum density shall be corrected at no additional cost to the State.

Soil Cement Treatment of Base. The lot will be divided into five approximately equal sublots with one density test taken at random in each sublot. The average of the five (5) density tests shall equal or exceed 97.0 percent with no single density test below 95.0 percent. Sublots with a density below 95.0 percent shall be corrected at no additional cost to the State and retested for acceptance.

Each lot of work found not to meet the density requirement of 97.0% of maximum density, may remain in place with a reduction in payment as set out in the following table:

PAYMENT SCHEDULE FOR COMPACTION

Pay Factor	Lot Density ** % of Maximum Density
1.02	98.0 and above
1.00	97.0 - 97.9
0.90	96.0 - 96.9
0.50	95.0 - 95.9

** Any lot with a density less than 95.0% of maximum density shall be corrected at no additional cost to the State.

Soil Cement Treatment of Irregular Areas. Density of irregular areas shall be rolled to highest stability. Irregular areas shall be defined as preleveling, wedging [less than fifty percent (50%) of width greater than minimum lift thickness], ramp pads, irregular shoulder areas, median crossovers, turnouts, and other areas where an established rolling pattern cannot be obtained.

907-308.03.10--Protection and Curing. Delete the second paragraph of Subsection 308.03.10 on page 213 and substitute the following:

When the treated course is the subgrade, a subsequent course shall not be placed on the sealed course for at least seven (7) calendar days. During this 7-day period, the treated course shall not be subjected to any type of traffic and equipment.

When the treated course is the base, the Contractor shall use the mix design (7-day or 14-day) as specified on the Mix Design from the Central Laboratory. Depending on the specified mix design, a subsequent course shall not be placed on the sealed course for at least seven (7) or fourteen (14) calendar days. During this period, the treated course shall not be subjected to any type of traffic and equipment.

907-308.05--Basis of Payment. Add the "907" prefix to all pay item numbers listed in Subsection 308.05 on page 215.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-605-6 **CODE: (SP)**

DATE: 03/14/2012

SUBJECT: Prefabricated Sheet Drain

Section 605, Underdrains, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-605.02--Materials. After Subsection 605.02.4 on page 372, add the following:

907-605.02.5--Prefabricated Sheet Drain. The Prefabricated Sheet Drain shall be one of the following, or an approved equal.

Miradrain G200N
TenCate, Inc.
800-685-9990
www.mirafi.com

NuDrain PD20
Nilex, Inc.
303-766-2000
www.nilex.com

Sitedrain DS-184
American Wick Drain, Inc.
800-242-WICK
www.americanwick.com

907-605.02.5.1--Marking, Shipment, and Storage. Each roll or container of Prefabricated Sheet Drain shall be visibly labeled with the name of the manufacturer, trade name of the product and quantity of the material. During shipment and storage the Prefabricated Sheet Drain shall be protected from direct sunlight, and temperatures above 120ºF or temperatures below 0ºF. The Prefabricated Sheet Drain shall be maintained in a heavy duty protective covering or stored in a safe enclosed area to protect it from damage during prolonged storage.

907-605.03--Construction Requirements. After Subsection 605.03.6 on page 377, add the following:

907-605.03.7--Prefabricated Sheet Drain. The Prefabricated Sheet Drain shall be placed in the areas shown in the plans, or as directed by the Engineer. Unless otherwise directed by the Engineer, the Prefabricated Sheet Drain may be installed longitudinally either horizontally or vertically. If placed horizontally, the sections of the Prefabricated Sheet Drain shall be placed in a shingled fashion with the upper section overlapping the lower a minimum of two (2) inches. If

placed vertically, the edges of the Prefabricated Sheet Drain shall be overlapped a minimum of two (2) inches. In either case the upper section should be taped to the lower section using duct tape.

907-605.04--Method of Measurement. After the last paragraph of Subsection 605.04 on page 378, add the following:

Prefabricated Sheet Drain shall be measured by the square yard of sheet drain installed. The measured area shall be the treated surface area not including overlaps.

907-605.05--Basis of Payment. After the seventh paragraph of Subsection 605.05 on page 379, add the following:

Prefabricated Sheet Drains will be paid for at the contract unit price per square yard, which price shall be full compensation for the materials, tools, labor and all incidentals necessary to complete the installation.

After the last pay item listed on page 605-7, add the following:

907-605-CC: Prefabricated Sheet Drain	- per square yard or square foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION 907-619-7 **CODE: (SP)**

DATE: 03/20/2012

SUBJECT: Portable Smart Work Zone Systems (SWZS)

PROJECT: ACNH-9204-00(001) / 100486301 -- Madison County

Section 619, Traffic Control For Construction Zones, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as modified for by this special provision is applicable to Portable Smart Work Zone Systems only.

907-619.01–Description. This work includes designing and installing smart work zone devices which detect real-time vehicle speed, volume and provide queue detection. A Smart Work Zone System (SWZS) is used to monitor traffic conditions in advance of and through the entire work zone, to manage traffic both in the northbound and south bound lanes of I-55 during Phases 2 & 3, to automatically update portable changeable message signs to advise motorists of changing conditions, to alert MDOT personnel to traffic issues in the work zone, and to gather data on work zone traffic control performance for later evaluation.

907-619.03–Construction Requirements.

907-619.03.10–Smart Work Zone Systems.

907-619.03.10.1–General Requirements. A SWZS is comprised of several devices linked together in a wireless network to perform as one unit. The components may include, but are not limited to, portable traffic sensors, portable changeable message signs (PCMS), and software with user settable parameters to collect and analyze data and trigger new messages on the PCMS and/or warnings to the appropriate personnel, including but not limited to the Project Engineer and the MDOT ITS Engineer or his representative. At a minimum, MDOT is anticipating that 10 Portable Changeable Message Signs (PCMS) and 20 Portable Traffic Sensors (PTS) will be needed. The anticipated locations for the PCMS are as follows:

1) I-55 SB north of MS 463
2) I-55 SB just south of MS 463
3) I-55 SB at EOP
4) I-55 NB between Lakeland and Meadowbrook
5) I-55 NB between Northside and Briarwood
6) I-55 NB between Briarwood and County Line Rd.
7) I-55 NB at BOP
8) I-220 NB south of the junction w/ I-55
9) Two (2) extra PCMS for use at the Project Engineer’s discretion

The following are example messages for the PCMS. The Final Messages on the signs will be at the approval of the Project Engineer:

If the average speed is at or above the posted speed limit, the upstream PCMS will display the 2-frame message:

"ROAD WORK AHEAD; REDUCED SPEED AHEAD"

If the average speed is between 35 MPH and 65 MPH, the upstream PCMS will display the 2-frame message:

"CONGESTION AHEAD; EXPECT DELAYS"

If the average speed is between 5 MPH and 35 MPH, the upstream PCMS will display the 2-frame message:

"SLOW TRAFFIC AHEAD; EXPECT LONG DELAYS"

If the average speed is below 5 MPH, the upstream PCMS will display the 2-frame message:

"STOPPED TRAFFIC AHEAD; PREPARE TO STOP"

The SWZS Supplier will prepare a preliminary plan showing the location and number of the various components of the SWZS and the proposed messages for the PCMS to provide queue detection and warning to the traveling public for approval by the Engineer prior to any installation of the system or any of the components. The addition of devices may be added at the discretion of the Project Engineer with consultation with MDOT Traffic Engineering and ITS staff.

The SWZS supplier shall provide MDOT with a 24/7 contact to respond to any issues with the system. Control software issues shall be corrected within 24 hours of notification by MDOT. Equipment damaged or otherwise not functioning properly shall be repaired or replaced within 48 hours of notification by MDOT. All equipment installation, service, repair, relocation and removal is the responsibility of the SWZS supplier.

907-619.03.10.2–Technical Requirements. Portable traffic sensors, control software and changeable message signs, shall meet the following technical requirements.

Portable Traffic Sensors - The devices must be independent of all local or regional power and communication networks to provide continuous, uninterrupted data collection even during power or communications interruptions. The device shall be able to gather real-time data 24 hours a day, seven (7) days a week and provide 95% accuracy on all detection requirements, have GPS functionality, transfer data to web base communications for monitoring, and communicate with PCMS for travel information. The web base interface shall allow access to data for vehicle speed, volume, and queue at each device location and maintain data history for a minimum of 12

months. All equipment, materials, components, and assemblies of the smart work zone devices shall conform to the manufacturer's requirements and recommendations.

Control Software - The control software shall be web-based. Authorized MDOT personnel shall be enabled to view all devices via the internet. The software will be configurable to meet project requirements for queue detection and speed monitoring. The software shall offer both a public information side and a password protected agency-only side.

The control software shall include a map feature showing real time traffic conditions. This shall be offered in a visual format via the internet, using different colors to represent different traffic conditions. It shall also display the devices on the project. By "clicking" on any device, the user shall be able to learn its current condition and operating properties. Software shall display current speed and volumes detected by the work zone sensors and the message currently displayed on the digital message sign. Should communication fail, the device sensors shall record a date and time stamp and make this available upon polling current speeds or volumes.

The software shall display current traffic data as well as the message(s) currently displayed on the changeable message signs. The software shall include parameters to trigger new messages to the roadside message signs and the message(s) to be displayed. The software shall allow for appropriate MDOT personnel, including but not limited to the MDOT Project Engineer and the MDOT ITS Engineer or his representative, to override the current message with a new one in emergencies or when conditions warrant it.

The software shall provide email and text alerts to specified MDOT personnel, including but not limited to the MDOT Project Engineer and the MDOT ITS Engineer or his representative, when speeds fall below 35 Miles per Hour or queue lengths exceed 1 mile within the limits of the project or prior to entering the construction project on I-55. This speed threshold and queue length may be adjusted at the discretion of or with the approval of the MDOT Project Engineer and the MDOT ITS Engineer or his representative as project conditions dictate during the execution of the project.

The software shall be capable of providing an XML data feed to MDOT on request and shall allow for raw data to be archived by MDOT for a period of not less than 5 years.

Portable Changeable Message Signs - The PCMS shall meet the requirements of MDOT Special Provision 907-619-5 in this contract. The sign(s) shall be equipped with an IP addressable digital CDMA modem compatible with the current MDOT Wireless Provider and be capable of remote communication and control by the Control Software.

907-619.03.10.3--Performance Requirements. The device shall gather and report real-time data during work zone hours as a single unit or as a system. The Website shall report data by overlaying work zones onto an interactive map. Work zones shall be represented by a single symbol and present data in a pop up window when selected. Data shall include the date, time, and average speed through the work zone. Symbols shall also be color coded as previously described to represent different speed conditions. Website shall have web access granted accounts for any and all public sector entities. For strategic speed enforcement, law enforcement

agencies shall be granted an account in their jurisdiction at their request at no additional cost. Web access shall allow stakeholders to download archive data such as counts, travel time, speed bin, and speed history.

907-619.04–Method of Measurement. Additional portable smart work zone devices, which include portable traffic sensors and portable changeable message signs, will be measured per each. If additional devices are added, the monitoring of such devices shall be included in the price bid for monitoring of the smart work zone system.

The measurement for portable smart work zone system will be measured per lump sum when all devices within the system are installed, functional, and accepted. Fifty percent of the lump sum bid amount will be paid for in Phase 2 and the remaining fifty percent in Phase 3. Devices will be considered accepted by the Engineer when real-time data is gathered and reported.

The measurement for portable smart work zone, system monitoring, will be per each calendar day, determined by the number of calendar days the system is monitored.

907-619.05--Basis of Payment. Additional portable smart work zone devices, measured as prescribed above, will be paid for per each, which price shall be full compensation for any design, installation, materials, labor, equipment, and all other incidental necessary to complete the work.

Portable smart work zone, system, measured as prescribed above, will be paid for at the lump sum contract price, which price shall be full compensation for any design, installation, materials, labor, equipment, and all other incidental necessary to complete the work.

Portable smart work zone, system monitoring, measured as prescribed above, will be paid for per each, which price shall be full compensation for any design, installation, removal, resetting, materials, labor, equipment, and all other incidental necessary to complete the work.

Payment will be made under:

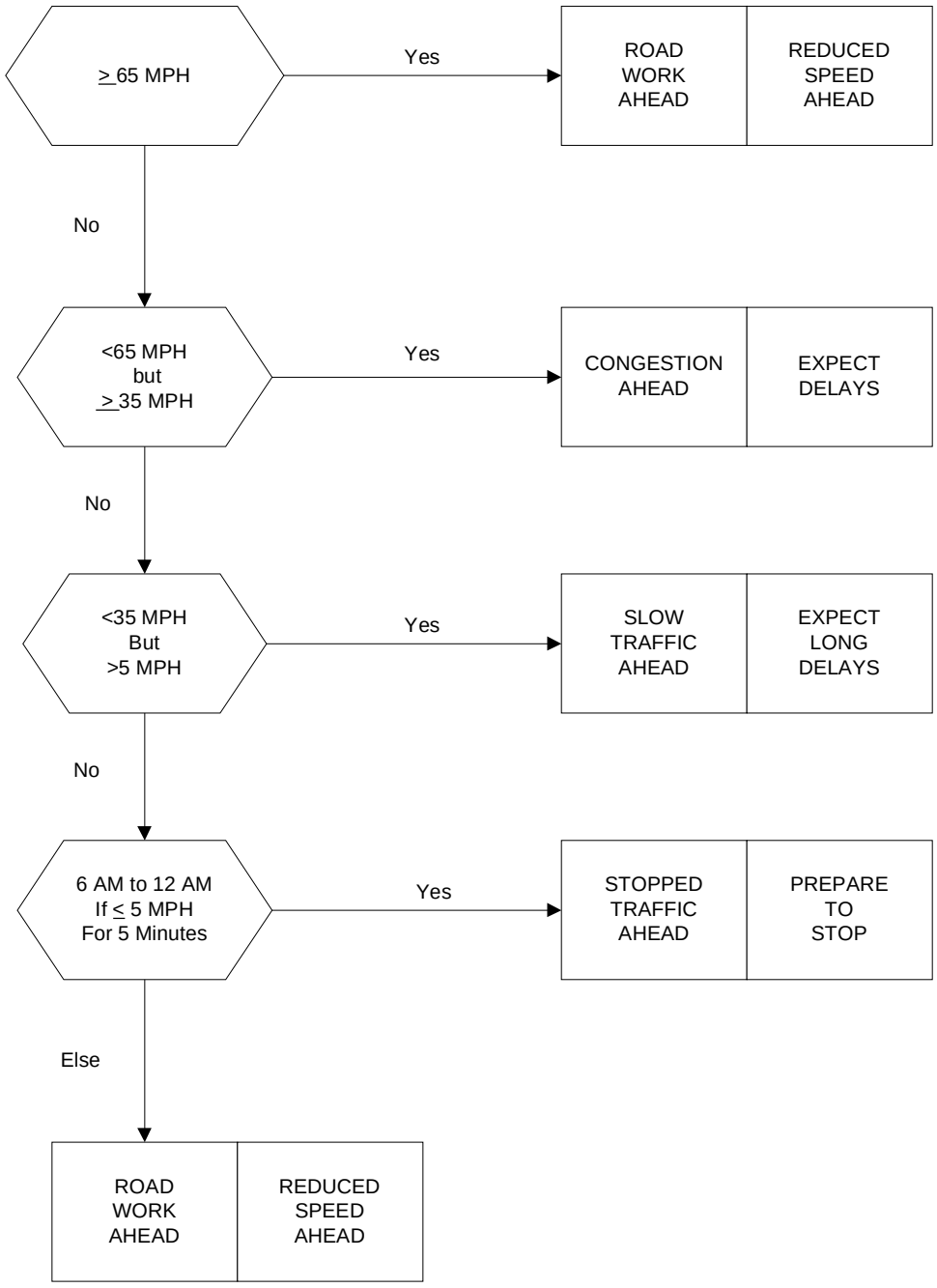
907-619-M1: Portable Smart Work Zone, Additional Device, * - per each

907-619-M2: Portable Smart Work Zone, System - lump sum

907-619-M3: Portable Smart Work Zone, System Monitoring - per each

* Specify Portable Changeable Message Sign or Portable Traffic Sensor

Smart Work Zone System Message Logic
Example Messages for Construction Route PCMS



MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-639-6 **CODE: (SP)**

DATE: 03/14/2012

SUBJECT: ITS Equipment Poles

Section 639, Traffic Signal Equipment Poles, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in total Section 639 beginning on page 481, and substitute the following:

SECTION 907-639--ITS EQUIPMENT POLES

907-639.01--Description. This Section specifies the minimum requirements for poles and foundations furnished and installed to support Intelligent Transportation Systems (ITS) equipment. This work shall consist of assembling, constructing, erecting and installing ground-mounted equipment poles with foundations, and equipment poles attached to existing or proposed structures, in conformity with these specifications and in accordance with the design(s) shown on the plans or as directed.

907-639.02--Materials. The materials used in this construction shall conform to the general requirements of these specifications and the specific requirements set out hereunder.

907-639.02.1--Galvanized Steel Poles for Cameras. Ground-mounted camera poles and foundations, conduits, connections, clamps, anchor bolts, shoe bases and all other members shall be designed and fabricated in accordance with the standards and requirements listed below. Design and materials documentation shall be furnished as part of the approval request submittal. Certifications will be furnished upon request by the Engineer.

1) Poles shall be designed in accordance with the AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals", current edition, including all interims and updates. Design life shall be 50 years for all poles. The design wind speed for all parts of the structure shall be as shown in the design specifications with a minimum of 90 mph. For projects that are in areas with higher wind standards, the higher standard is required. The pole shall meet design wind loading with camera(s) installed.
2) The Contractor shall submit manufacturer's shop drawings, layout drawings and specifications for equipment and appurtenances for approval by the Engineer no later than ninety (90) days after notice to proceed.
3) Pole fabricator shall be certified under Category I, "Conventional Steel Structures" as set forth by the American Institute of Steel Construction Quality Certification Program. Proof of this certification will be required.

4) All welding shall be in accordance with Sections 1 through 8 of the American Welding Society (AWS) DI. 1 Structural Welding Code. Tackers and welders shall be qualified in accordance with the American Welding Society Structural Welding code. Tube longitudinal seam welds shall be free of cracks and excessive undercut, performed with automatic processes, and be visually inspected. Longitudinal welds suspected to contain defects shall be magnetic particle inspected. All circumferential butt welded pole and arm splices shall be ultrasonically and radio graphically inspected. All inspection records will be furnished to the Engineer.
5) Camera pole system shall consist of a pole, anchor bolts, base plate, ground rod array, communication and power conduits to nearest pull box, grounding conduit, spare conduit and foundation.
6) Design computations for the camera poles shall be complete and shall include but not be limited to the following:
   a. Consideration shall be given for all parts of the structure.
   b. Consideration shall be given for all possible loading combinations including wind and ice loads.
   c. Computations shall include design stresses and allowable stresses for all components which comprise the proposed structure.
   d. Top of pole deflection shall not exceed 1-inch deflection from center due to 30 mph (non-gust) winds for the 50-foot poles.
   e. All complete shop drawings and design computations shall bear the stamp of a Professional Engineer registered in the State of Mississippi.
   f. Shop drawings shall be approved by the Engineer prior to fabrication. Approval of the shop drawings does not relieve the Contractor of responsibility for the design, fabrication and erection of the structure.
   g. The Engineer reserves the right to reject a pole design if the calculated deflection exceeds that specified herein.
   h. The foundation design shall be based on actual soil conditions from soil borings conducted by the Contractor. The cost of the soil borings shall be included in the cost of the pole.
   i. The calculations shall include a pole, base plate, and anchor bolt analysis. The pole calculations shall be analyzed at the pole base, 5-foot pole intervals, and at each slip joint splice.
7) For each pole shown in the Plans, the following information shall be given:
   a. Top/bottom diameter, taper rate, wall thickness, section modulus, moment of inertia, and cross sectional area for each pole section.
   b. The centroid, weight, projected area, drag coefficient, velocity pressure, and wind force of each trapezoidal pole section.
   c. The axial force, shear force, primary moment, total moment, axial stress, bending stress, allowable axial stress, allowable bending stress, allowable shear stress and combined stress ratio (CSR) at each pole section.
   d. The pole’s angular and linear deflection at each section.
8) Pole Mounted Cabinet Access Conduit Nipple:
   a. Each pole will be manufactured with a 2-inch diameter rigid threaded nipple for conduit connection to a pole-mounted cabinet.

b. The height of this nipple above the base of the pole shall be such that a cabinet mounting height of 3 feet above ground can be provided.

9) Hand Holes:
   a. Hand hole openings shall be reinforced with 2-inch wide hot rolled steel bar. The opening shall be rectangular and 5" x 8" nominal.
   b. The cover shall be 11-gauge steel and shall be secured to a clip-on lock with a tamper-proof screw.
   c. The reinforcing rim shall be provided with a ½" tapped hole and ½" hex head cap screw for grounding.
   d. Hand holes on poles with pole-mounted cabinets and transformers shall be placed toward oncoming traffic. For all other poles, hand holes shall face away from traffic.
   e. Section at hand hole to be reinforced to have equivalent section modulus as the section without the hand hole.
10) Cable Supports (J-Hooks & Eyelets): Top and bottom J-hooks and eyelets shall be located within the pole directly aligned with each other.
11) Base Plate:
   a. Base plates shall conform to ASTM A572 (50 ksi min. yield).
   b. Plates shall be integrally welded to the tubes with a telescopic welded joint or a full penetration butt weld with backup bar.
   c. Plates shall be hot dip galvanized.
12) Anchor Bolts:
   a. Anchor bolts shall conform to the requirements of AASHTO M314-90 (105 ksi min. yield.) The upper 12 inches of the bolts shall be hot dip galvanized per ASTM A153.
   b. Each anchor bolt shall be supplied with two (2) hex nuts and two (2) hardened washers.
   c. The strength of the nuts shall equal or exceed the proof load of the bolts.
   d. The top nut shall be torqued so as to produce 60% yield stress of anchor bolt.
   e. The Contractor shall not grout between bottom of base plate and top of concrete foundation.
13) Pole heights shall be as indicated on the plans.

907-639.02.2--Aluminum Poles for Detectors. Ground-mounted detector poles and foundations, conduits, connections, clamps, anchor bolts, breakaway bases and all other members shall be designed and fabricated in accordance with the standards and requirements listed below. Design and materials documentation shall be furnished as part of the approval request submittal. Certifications will be furnished upon request by the Engineer.

1) Poles shall be designed in accordance with the AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals", current edition, including all interims and updates. Design life shall be 50 years for all poles. The design wind speed for all parts of the structure shall be as shown in the design specifications with a minimum of 90 mph. The pole shall meet design wind loading with detector(s) installed.
2) The Contractor shall submit manufacturer's shop drawings, layout drawings and specifications for equipment and appurtenances for approval by the Engineer no later than ninety (90) days after notice to proceed.
3) Poles shall be spun or formed from aluminum seamless tubing meeting requirements of ASTM Designation: B 210, Alloy 6063-T4 and after fabrication shall have mechanical

properties not less than those specified for Alloy 6063-T6. The poles may also be formed from aluminum plates or sheets meeting the requirements of ASTM Designation: B 209, Alloys 5052-H34 or 5086-H34.

4) External surface of poles shall have a satin-type finish, clean and smooth, with all details defined and true to pattern.
5) Poles shall have a constant taper of 0.14 inch nominal per foot.
6) All poles shall be equipped with a breakaway device which conforms to the latest AASHTO and FHWA requirements, which have been approved by same. The Contractor shall submit a manufacturer's certification with the pole shop plans stating that the device meets, or exceeds, these standards.
7) Pole heights shall be as indicated on the plans.
8) Detector pole system shall consist of, but not be limited to a pole, anchor bolts, breakaway base, base plate, ground rod array, communication and power conduit to nearest pull box, grounding conduit, spare conduit and foundation as shown on the Plans.
9) Anchor bolts, washers and hex nuts shall be made of steel in accordance with ASTM Designation: F 1554, Grade 55, and shall be galvanized as per ASTM Designation: A 153. Anchor bolts shall be provided for each pole with two (2) hex nuts and washers per bolt. Anchor bolts shall be “L” shaped; minimum yield strength shall be 50,000 psi. A bolt layout template shall be provided by the manufacturer for proper bolt installation. The number of anchor bolts and design yield strength shall be as recommended by the manufacturer.

907-639.02.3--Foundations for Ground-Mounted Poles. Cast-in-place foundations for ground-mounted equipment poles shall be Contractor Designed in accordance with this specification and the plans. It shall be cast with reinforced Class “B” Concrete conforming to the requirements of Sections 601 and 602. Anchor bolts, washers and hex nuts for use in the foundation shall conform to requirements set forth in these specifications. Conduit for electric cable and fiber optic cable shall comply with the requirements for such materials as set out in Subsection 722.05.

907-639.02.4--Structure-Mounted ITS Equipment Poles. Structure-mounted equipment poles and conduits, connections, clamps, mounting hardware and all other members shall be designed and fabricated in accordance with the standards and requirements listed below. Design and materials documentation shall be furnished as part of the approval request submittal. Certifications will be furnished upon request by the Engineer.

1) Poles shall be designed in accordance with the AASHTO “Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals”, current edition, including all interims and updates. Design life shall be 50 years for all poles. The design wind speed for all parts of the structure shall be as shown in the design specifications with a minimum of 90 mph. For projects that are in areas with higher wind standards, the higher standard is required. The pole shall meet design wind loading with all equipment installed.
2) The Contractor shall submit manufacturer’s shop drawings, layout drawings and specifications for equipment and appurtenances for approval by the Engineer no later than ninety (90) days after notice to proceed.

3) Pole fabricator shall be certified under Category I, "Conventional Steel Structures" as set forth by the American Institute of Steel Construction Quality Certification Program. Proof of this certification will be required.
4) All welding shall be in accordance with Sections 1 through 8 of the American Welding Society (AWS) DI. 1 Structural Welding Code. Tackers and welders shall be qualified in accordance with the American Welding Society Structural Welding code. Tube longitudinal seam welds shall be free of cracks and excessive undercut, performed with automatic processes, and be visually inspected. Longitudinal welds suspected to contain defects shall be magnetic particle inspected. All circumferential butt welded pole and arm splices shall be ultrasonically and radio graphically inspected. All inspection records will be furnished to the Engineer.
5) ITS equipment pole system shall consist of a pole, connectors, clamps, mounting hardware, ground wires and rods, grounding conduit, and communication and power conduits to nearest pull box.
6) Design computations for structure-mounted poles shall be complete and shall include but not be limited to the following:
    a. Consideration shall be given for all parts of the structure.
    b. Consideration shall be given for all possible loading combinations including wind and ice loads.
    c. Computations shall include design stresses and allowable stresses for all components which comprise the proposed structure.
    d. Top of pole deflection shall not exceed 1-inch deflection from center (2-inch deflection diameter) due to 30 mph (non-gust) winds.
    e. All complete shop drawings and design computations shall bear the stamp of a Professional Engineer registered in the State of Mississippi.
    f. Shop drawings shall be approved by the Engineer prior to fabrication. Approval of the shop drawings does not relieve the Contractor of responsibility for the design, fabrication and erection of the structure.
    g. The Engineer reserves the right to reject a pole design if the calculated deflection exceeds that specified herein.
    h. The calculations shall include a pole, base plate, and anchor bolt analysis. The pole calculations shall be analyzed at the pole base, 5-foot pole intervals, and at each slip joint splice.
7) For each pole shown in the Plans, the following information shall be given:
    a. Top/bottom diameter, taper rate, wall thickness, section modulus, moment of inertia, and cross sectional area for each pole section.
    b. The centroid, weight, projected area, drag coefficient, velocity pressure, and wind force of each trapezoidal pole section.
    c. The axial force, shear force, primary moment, total moment, axial stress, bending stress, allowable axial stress, allowable bending stress, allowable shear stress and combined stress ratio (CSR) at each pole section.
    d. The pole's angular and linear deflection at each section.
8) Hand Holes:
    a. Hand hole openings shall be reinforced with 2-inch wide hot rolled steel bar. The opening shall be rectangular and 5" x 8" nominal.

b. The cover shall be 11-gauge steel and shall be secured to a clip-on lock with a tamper-proof screw.
c. The reinforcing rim shall be provided with a ½" tapped hole and ½" hex head cap screw for grounding.
d. Section at hand hole to be reinforced to have equivalent section modulus as the section without the hand hole.

9) Cable Supports (J-Hooks & Eyelets): Top and bottom J-hooks and eyelets shall be located within the pole directly aligned with each other.
10) Pole heights shall be as indicated on the plans.

907-639.03--Installation Requirements. All equipment shall be installed according to the manufacturer's recommendations. Materials and associated accessories/adapters shall not be applied contrary to the manufacturer's recommendations and standard practices. ITS equipment pole systems shall be installed as indicated on the Plans and shall conform to the following requirements:

1) All poles shall be installed in accordance with the National Electric Safety Code and the latest AASHTO standards.
2) Foundations for ground-mounted poles:
   a. The Contractor shall submit a design for each pole foundation that has been sealed by a Professional Engineer registered in the State of Mississippi.
   b. Excavation for concrete foundations shall be opened vertically in accordance with the methods of Section 206 with a tolerance of plus two inches from neat lines and grades as shown on the Plans or required by local conditions. Adjacent earth shall be compacted sufficiently to withstand the loadings set out in Subsections 907-639.02.1 and 907-639.02.2.
   c. If soil conditions require the use of any shoring, casings, or sonotube for proper installation of the foundations, the cost of the shoring, casings or sonotube shall be included in the cost of the pole and foundation.
   d. Before placing concrete, the Contractor shall place reinforcing bars, conduit and anchor bolts, all in accordance with plan details, and held rigidly in place by approved methods.
   e. Concrete foundations shall be formed, cast and cured in accordance with the provisions of Section 601. The top surface shall be finished smooth, and sloped to drain.
   f. Concrete shall cure a minimum of 7 days before any load is applied to the foundation.
   g. Conduit shall be installed in the pole foundation for access and includes conduit to the nearest pull box as shown in the Plans.
   h. A minimum of one 2-inch spare conduit shall be installed in all pole foundations as shown in the Plans. Spare conduits in pole foundations shall be sealed with blank duct plugs.
3) Grounding System:
   a. The Contractor shall supply and install a grounding system with ground rod array at the base of all poles as shown on the Plans.
   b. The ground rod array system shall be connected to the pole through an appropriate ground clamp.

c. A #6 AWG copper stranded bonding wire shall be installed between the pole and the field cabinet providing a common ground system for each site.
d. All ground bonding wires shall be un-spliced.

4) The installation method for the CCTV poles and cameras shall be such that the camera can be rotated as needed around the pole for optimum placement.

907-639.04--Method of Measurement.

907-639.04.1--Camera Pole with Foundation. Camera pole with foundation will be measured as a unit quantity per each. Such measurement shall include but is not limited to a steel pole, foundation, conduit inside foundation and to nearest pull box as indicated on the Plans, wiring between camera and field cabinet, connections to support structures, satisfactory completion of testing and training requirements, and all work, equipment and appurtenances as required to effect the full operation including remote and local control of the camera site complete in place and ready for use.

907-639.04.2--Detector Pole with Foundation. Detector pole with foundation will be measured as a unit quantity per each. Such measurement shall include but is not limited to an aluminum pole, breakaway base, foundation, conduit inside foundation and to nearest pull box as indicated on the Plans, wiring between detector and field cabinet, connections to support structures, satisfactory completion of testing and training requirements, and all work, equipment and appurtenances as required to effect the full operation including remote and local control of the detector site complete in place and ready for use.

907-639.04.3—Structure-Mounted ITS Equipment Pole. Structure-mounted equipment pole will be measured as a unit quantity per each. Such measurement shall include but is not limited to a steel pole; conduit between structure attachment location and nearest pull box as indicated on the Plans; wiring between pole-mounted devices and field cabinet; all structure-mounting hardware indicated on the Plans, and as otherwise needed for a complete and secure installation; satisfactory completion of testing and training requirements; and all work, equipment and appurtenances as required to effect the full operation including remote and local control of the ITS equipment site complete in place and ready for use.

907-639.05--Basis of Payment. Camera pole with foundation and detector pole with foundation, measured as prescribed above, will be paid for at the contract unit price per each, which price shall be full compensation for furnishing all materials, for excavating, backfilling, replacing sod, and for all constructing, placing, curing, erecting, installing, connecting and testing; for foundations, poles, pole bases, caps, covers, ground wire, ground rods, hardware and for all equipment, tools, labor and incidentals necessary to complete the work.

Progress payments for Camera pole with foundation and detector pole with foundation may be paid in accordance with the following:

1) 25% of the contract unit price upon complete installation of foundations;

2) Additional 45% of the contract unit price upon delivery of poles or structure to the site; and

3) Final 30% of the contract unit price upon complete installation of pole system

Structure-mounted equipment pole, measured as prescribed above, will be paid for at the contract unit price per each, which price shall be full compensation for furnishing all materials, for all constructing, placing, erecting, installing, connecting and testing, for poles, caps, covers, ground wire, ground rods, hardware and for all equipment, tools, labor and incidentals necessary to complete the work.

Progress payments for Structure-mounted equipment pole may be paid in accordance with the following:

1) 70% of the contract unit price upon delivery of poles or structure to the site; and

2) Final 30% of the contract unit price upon complete installation of pole system

Payment will be made under:

907-639-E: Camera Pole with Foundation, ___' Pole - per each

907-639-F: Detector Pole with Foundation, ___' Pole - per each

907-639-G: ITS Equipment Pole, Structure Mounted, ___' Pole - per each

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-680-1 **CODE: (SP)**

DATE: 08/17/2011

SUBJECT: Portable Construction Lighting

Division 680, Portable Construction Lighting, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-680.02--Materials.

907-680.02.1--Tower Lights. Delete the second and third paragraphs of Subsection 680.02.1 on page 561, and substitute the following:

Tower lights shall be of sufficient wattage and/or quantity to provide an average maintained horizontal luminance in accordance with Subsection 907-680.02.3. In no case shall the main beam of the light be aimed higher than 30° above straight down. The lights should be set as far from traffic as practical and aimed in the direction of, or normal to, the traffic flow.

Delete Subsection 680.02.2 on page 561, and substitute the following:

907-680.02.2--Balloon Lights. All moving equipment used during night time operations shall have a balloon lighting system and flashing amber light on the equipment. In lieu of a flashing amber light, the Contractor may install four square feet of approved reflective material on the equipment in a location that will be seen by the traveling public. This lighting system shall illuminate the work area in each direction of travel of the equipment. Machine balloon lights shall be mercury vapor, metal halide, high pressure sodium or low pressure sodium in conventional roadway enclosed fixtures mounted on supports attached to the construction machine at a height of approximately thirteen (13) feet. The power supply shall be of sufficient capacity to operate the light(s) and shall be securely mounted on the machine. Electrical grounding of generators to frames of machines on which they are mounted shall be done in conformance with the National Electrical Code (NEC).

The light fixtures shall be of sufficient wattage and/or quantity to provide an average maintained horizontal luminance in accordance with Subsection 907-680.02.3.

Balloon lights are in addition to conventional automotive type head lights which are necessary for maneuverability.

Delete Subsection 680.02.3 on pages 561 & 562, and substitute the following:

907-680.02.3--Lighting Levels. The submitted lighting plan shall indicate how the Contractor intends to accomplish the lighting of the work area(s). The lighting system shall provide a minimum of five (5) foot-candles throughout the work area. For stationary operations, the work

area shall be defined as the entire area where work is being performed. For mobile operations the work area shall be defined as 25 feet in front of and behind moving equipment.

907-680.03--Construction Requirements. Delete the first, second, third, and fourth paragraphs of Subsection 680.03 on page 562 and substitute the following:

Tower lights may be used when the night work is confined to a fairly small area and is essentially a stationary operation.

Balloon lights shall be used when the night work is not confined to a small area and is essentially a continuous moving construction operation.

Use of tower lights in lieu of balloon lights will be considered when the number of machines, type of work, or need for inspection justify their use as decided by the Engineer.

The work area where traffic control devices are being set up or repositioned at night shall be illuminated.

If night work requires the use of a flagger, then the flagger must be illuminated by balloon lighting.

907-680.05--Basis of Payment. Delete the pay item listed on page 563, and substitute the following:

907-680-A: Portable Construction Lighting - lump sum

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-699-4 **CODE: (IS)**

DATE: 02/15/2012

SUBJECT: Construction Stakes

Section 699, Construction Stakes, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-699.01--Description. After the first paragraph of Subsection 699.01 on page 585, add the following:

This work may be performed utilizing Automated Machine Guidance technologies and systems in accordance with the standard specifications and contract documents. Automated Machine Guidance (AMG) is defined as the utilization of positioning technologies such as Global Positioning Systems (GPS), Robotic Total Stations, lasers, and sonic systems to automatically guide and adjust construction equipment according to the intended design requirements. The Contractor may use any type of AMG system(s) that result in compliance with the contract documents and applicable Standard Specifications.

Automated Machine Guidance (AMG) is not a mandatory requirement. Automated Machine Guidance (AMG), conventional staking, or a combination of both may be used at the Contractor's option for staking on this project.

907-699.02--Materials. After the last sentence of the first paragraph of Subsection 699.02 on page 585, add the following.

All equipment required to accomplish automated machine guidance shall be provided by the Contractor. The Contractor may use any type of AMG equipment that achieves compliance with the contract documents and applicable Standard Specifications.

907-699.03--Construction Requirements. Delete the first sentence of Subsection 699.03 on page 585 and substitute the following:

The Department will establish, one time only, secondary control points with elevations at distances not to exceed 1500 feet or that minimum distance necessary to maintain inter-visibility.

Delete the third sentence of the fourth paragraph of Subsection 699.03 on page 587, and substitute the following.

The duties performed by said Registrant shall conform to the definitions under the "practice of engineering" and practice of "land surveying" in Mississippi Law and the latest edition of the MDOT Survey Manual. The MDOT Survey Manual can be obtained online at the following address.

http://www.gomdot.com/Divisions/Highways/Resources.aspx?Div=RoadwayDesign.

After the last paragraph of Subsection 699.03 on page 587, add the following.

907-699.03.1--Automated Machine Guidance.

907-699.03.1.1--Automated Machine Guidance Work Plan. The Contractor shall submit a comprehensive written Automated Machine Guidance Work Plan to the Engineer for review at least 30 days prior to use. The submittal of a AMG Work Plan shall be an indication of the Contractor's intention to utilize AMG instead of conventional methods on the project areas and elements stated in the Work Plan. The Engineer shall review the Automated Machine Guidance Work Plan to ensure that the requirements of this special provision are addressed. The Contractor shall assume total responsibility for the performance of the system utilized in the Work Plan. Any update or alteration of the Automated Machine Guidance Work Plan in the course of the work shall be approved and submitted to MDOT for determination of conformance with requirements of this special provision.

The Automated Machine Guidance Work Plan shall describe how the automated machine guidance technology will be integrated into other technologies employed on the project. This shall include, but not limited to, the following:

1. A description of the manufacturer, model, and software version of the AMG equipment.
2. Information on the Contractor's experience in the use of Automated Machine Guidance system (or Related Technologies) to be used on the project, including formal training and field experience of project staff.
3. A single onsite staff person as the primary contact, and up to one alternate contact person for Automated Machine Guidance technology issues.
4. A definition of the project boundaries and scope of work to be accomplished with the AMG system.
5. A description of how the project proposed secondary control(s) is to be established. It shall also include a list and map detailing control points enveloping the site.
6. A description of site calibration procedures including, but not limited to, equipment calibration and the frequency of calibration as well as how the equipment calibration and information will be documented to MDOT and the Project Engineer. The documentation shall contain a complete record of when and where the tests were performed and the status of each equipment item tested within or out of the ranges of required tolerances.
7. A description of the Contractor's quality control procedures for checking mechanical calibration and maintenance of equipment. It shall also include the frequency and type of checks to be performed.
8. A description of the method and frequency of field verification checks and the submission schedule of results to the Project Engineer.
9. A description of the Contractor's contingency plan in the event of failure/outage of the AMG system.
10. A schedule of Digital Terrain Models (DTM) intended for use on the project. This shall be submitted to the Engineer for review, feedback, and communication.

The Contractor and MDOT will agree on the quantity and schedule of Contractor-provided training on the utilized AMG system required under Subsection 907-699.03.1.3.

907-699.03.1.2--State's Responsibilities. The District Surveyor will set the primary horizontal

and vertical control points in the field for the project as per latest edition of the MDOT Survey Manual. The control points shall be in Mississippi State Plane coordinate system.

MDOT will provide an electronic alignment file and primary control file for the project. This file will be based on the appropriate Mississippi State Plane Coordinate Zone either West or East. These files will be created with the computer software applications MicroStation (CADD software) and GEOPAK (civil engineering software). The data files will be provided in the native formats. The Contractor shall perform necessary conversion of the files for their selected grade control equipment, field verify the data for accuracy, and immediately report any errors to MDOT.

MDOT will provide design data, if available, in an electronic format to the Contractor. These files will be created with the computer software applications MicroStation (CADD software) and GEOPAK (civil engineering software). The data files will be provided in the native formats as specified in the Data Format section of this specification. No guarantee is made to the data accuracy or completeness, or that the data systems used by MDOT will be directly compatible with the systems used by the Contractor. Information shown on the paper plans marked with the seal (official plans as advertised) shall govern.

The Engineer will perform spot checks as necessary of the Contractor's machine control grading results, surveying calculations, records, field procedures, and actual staking. If the Engineer determines that the work is not being performed in accordance with the Specifications, the Engineer shall order the Contractor to re-construct the work to the requirements of the contract documents at no additional cost to the Department.

907-699.03.1.3--Contractor's Responsibilities The Contractor shall provide formal training, if requested, on the use of the Automated Machine Guidance Equipment and the Contractor's systems to MDOT project personnel prior to the start of construction activities utilizing AMG. This training is for providing MDOT project personnel with an understanding of the equipment, software, and electronic data being used by the Contractor.

The Contractor shall use the alignment and control data provided by MDOT.

The Contractor shall bear all costs, including but not limited to the cost of actual reconstruction work that may be incurred due to errors in application of Automated Machine Guidance techniques or manipulation of MDOT design data in Digital Terrain Models (DTM).

The Contractor shall be responsible for converting the information on the plans and/or electronic data file provided by MDOT into a format compatible with the Contractor's AMG system.

The Contractor shall establish secondary control points at locations along the length of the project and outside the project limits and/or where work is performed beyond the project limits as required by the Automated Machine Guidance system utilized. The Contractor shall establish this secondary control using survey procedures as outlined in the latest edition of the MDOT Survey Manual. A copy of all new control point information shall be provided to the Engineer prior to construction activities. The Contractor shall be responsible for all errors resulting from their efforts and shall correct deficiencies to the satisfaction of the Engineer and at no additional cost to the State.

The Contractor shall preserve all reference points and monuments that are established by the District Surveyor outside the construction limits. If the Contractor fails to preserve these items, they shall be re-established by the Contractor to their original quality at no additional cost to the State.

The Contractor shall set grade stakes at the top of the finished sub-grade and base course at all hinge points on the typical sections at 2000-foot maximum intervals on mainline, critical points such as, but not limited to, PC's, PT's, beginning and ending super elevation transition sections, middle of the curve, and at least two locations on each of the side roads and ramps, and at the beginning and end of each cross slope transition where Automated Machine Guidance is used. These grade stakes shall be established using conventional survey methods for use by the Engineer to check the accuracy of the construction.

The Contractor shall meet the same accuracy requirements as detailed in the Mississippi Standard Specifications for Road and Bridge Construction. Grade stakes shall be established as per Section 699 of the Mississippi Standard Specifications for Road and Bridge Construction for use by the Engineer to check the accuracy of the construction.

The Contractor shall be responsible for implementing the AMG system using the Mississippi State Plane Coordinate System. No localization methods will be accepted.

907-699.03.1.4--Data Format. It is the Contractor's responsibility to produce the Digital Terrain Model(s) and/or 3D line work needed for Automated Machine Guidance. MDOT does not produce this data in its design process. MDOT does provide CADD files created in the design process to the Contractor. The CADD files provided by MDOT are provided in the native software application formats in which they are created with no conversions, and their use in developing 3D data for machine guidance is at the discretion of the Contractor. The CADD files that may be available are listed below. Cross-Sections are one of the items provided but are not necessarily created at critical design locations. Therefore their use in Digital Terrain Models (DTM) for AMG is limited.

1. Project Control - Microstation DGN file and ASCII file
2. Existing Topographic Data - Microstation DGN file(s)
3. Preliminary Surveyed Ground Surface - GeoPak TIN, if available
4. Horizontal and Vertical alignment information - GeoPak GPK file and/or Microstation DGN file(s)
5. 2D Design line work (edge of pavement, shoulder, etc.) - Microstation DGN file(s)
6. Cross sections - Microstation DGN file(s), GeoPak format
7. Superelevation - Microstation DGN file(s), GeoPak format
8. Form Grades - Microstation DGN file(s)
9. Design Drainage - Microstation DGN file(s)

It is expressly understood and agreed that MDOT assumes no responsibility in respect to the sufficiency or accuracy of these CADD files. These files are provided for convenience only and the contract plans are the legal document for constructing the project.

907-699.05--Basis of Payment. Add the "907" prefix to the pay items listed on page 588.

Reconstruction of I-55 from Old Agency Rd. to North of SR 463, known as Federal Aid Project No. ACNH-9204-00(007) / 100486301 in Madison County.

I (We) agree to complete the entire project within the specified contract time.

***** SPECIAL NOTICE TO BIDDERS *****
BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED.
BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATION LOCATED AT THE END OF THE BID SHEETS IS SIGNED

*****BID SCHEDULE*****

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Item Amount	
						Dollar	Ct	Dollar	Ct
Roadway Items									
0010	201-A001		1	Lump Sum	Clearing and Grubbing	XXXXXXXX	XXX		
0020	201-B001		1	Acre	Clearing and Grubbing				
0030	202-B005		40,854	Square Yard	Removal of Asphalt Pavement, All Depths				
0040	202-B009		1	Each	Removal of Bridge (On Madison Avenue)				
0050	202-B009		2	Each	Removal of Bridge (Over Madison Avenue)				
0060	202-B009		2	Each	Removal of Bridge (Over Steed Road)				
0070	202-B010		820	Square Yard	Removal of Bridge End Pavement				
0080	202-B022		440	Linear Feet	Removal of Concrete Median Barrier				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0090	202-B024 Changed 03/19/2012		739	Square Yard	Removal of Concrete Median & Island Pavement, All Depths				
0100	202-B025		1,486	Square Yard	Removal of Concrete Paved Ditch				
0110	202-B041		24,037	Linear Feet	Removal of Fence, All Types				
0120	202-B042		9	Each	Removal of Flared End Section, All Sizes				
0130	202-B055		4	Each	Removal of High Mast Lighting Assembly				
0140	202-B056		4	Each	Removal of High Mast Lighting Foundation				
0150	202-B057		38	Each	Removal of Inlets, All Sizes				
0160	202-B062		1,114	Square Feet	Removal of Overhead Sign Panels				
0170	202-B063		1	Each	Removal of Overhead Sign Including Panels, Truss, Supports & Footing				
0180	202-B064		5,476	Linear Feet	Removal of Pipe, 8" And Above				
0190	202-B070		24	Each	Removal of Sign Including Post & Footing				
0200	202-B072		59,915	Square Yard	Removal of Soil Cement Treated Base, All Depths				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0210	202-B076		62,481	Linear Feet	Removal of Traffic Stripe				
0220	202-B085		13	Each	Removal of Trees				
0230	202-B087		5,095	Linear Feet	Removal of Guard Rail, Including Rails, Posts and Terminal Ends				
0240	202-B088		6	Each	Removal of Box Culvert Headwall, All Sizes				
0250	202-B093		7,865	Linear Feet	Removal of Curb & Gutter, All Types				
0260	202-B095		2,754	Square Yard	Removal of Concrete Sidewalks & Driveways, All Depths				
0270	202-B097		45,382	Square Yard	Removal of Concrete Overlayed w/ Asphalt Pavement, All Depths				
0280	202-B125		4	Each	Removal of Signal Pole Including Hardware and Wiring				
0290	202-B138		625	Square Yard	Removal of Riprap (Grouted)				
0300	202-B166		62,328	Square Yard	Removal of Soil Cement with Asphalt Overlay				
0310	202-B189		2	Each	Removal of Impact Attenuator				
0320	202-B247		7	Each	Removal of Pull Box				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0330	202-B284		1	Each	Removal of Irrigation System				
0340	203-A003	(E)	142,844	Cubic Yard	Unclassified Excavation, FM, AH				
0350	203-EX022	(E)	1,223	Cubic Yard	Borrow Excavation, AH, LVM, Class B11				
0360	203-EX027	(E)	216,635	Cubic Yard	Borrow Excavation, AH, FME, Class B14				
0370	203-EX030	(E)	2,456	Cubic Yard	Borrow Excavation, AH, LVM, Class B15				
0380	203-EX035	(E)	265,591	Cubic Yard	Borrow Excavation, AH, FME, Class B9-6				
0390	203-F001	(E)	13,147	Cubic Yard	Channel Excavation, FM				
0400	203-G003	(E)	956,712	Cubic Yard	Excess Excavation, FM, AH				
0410	206-A001 Changed 03/08/2012	(S)	48,912	Cubic Yard	Structure Excavation				
0420	206-B001	(E)	310	Cubic Yard	Select Material for Undercuts, Contractor Furnished, FM				
0430	211-B001	(E)	1,000	Cubic Yard	Topsoil for Slope Treatment, Contractor Furnished				
0440	213-C001		115	Ton	Superphosphate				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0450	215-A001		469	Ton	Vegetative Materials for Mulch				
0460	216-A001		9,219	Square Yard	Solid Sodding				
0470	217-A001		5,000	Square Yard	Ditch Liner				
0480	219-A001		164	Thousand Gallon	Watering	20.	00	3,280.	00
0490	220-A001		115	Acre	Insect Pest Control	30.	00	3,450.	00
0500	221-A001	(S)	3,388	Cubic Yard	Portland Cement Concrete Paved Ditch				
0510	223-A001		1	Acre	Mowing	40.	00	40.	00
0520	234-A001		26,936	Linear Feet	Temporary Silt Fence				
0530	235-A001		2,173	Bale	Temporary Erosion Checks				
0540	236-A004		5	Each	Silt Basin, Type D				
0550	239-A001		1,500	Linear Feet	Temporary Slope Drains				
0560	406-A003		19,567	Ton	Cold Milling of Bituminous Pavement, All Depths				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0570	423-A001		15	Mile	Rumble Strips, Ground In				
0580	501-E001		970	Linear Feet	Expansion Joints, Without Dowels				
0590	501-F001		320	Linear Feet	Concrete Lug Anchors				
0600	501-K001		2,136	Square Yard	Transverse Grooving				
0610	502-A001	(C)	2,136	Square Yard	Reinforced Cement Concrete Bridge End Pavement				
0620	503-C007		8,460	Linear Feet	Saw Cut, Full Depth				
0630	602-A001	(S)	221,694	Pounds	Reinforcing Steel				
Changed 03/08/2012									
0640	603-CA002	(S)	12,822	Linear Feet	18" Reinforced Concrete Pipe, Class III				
Changed 03/08/2012									
0650	603-CA003	(S)	10,284	Linear Feet	24" Reinforced Concrete Pipe, Class III				
Changed 03/08/2012									
0660	603-CA004	(S)	1,968	Linear Feet	30" Reinforced Concrete Pipe, Class III				
0670	603-CA005	(S)	1,994	Linear Feet	36" Reinforced Concrete Pipe, Class III				
0680	603-CA006	(S)	504	Linear Feet	42" Reinforced Concrete Pipe, Class III				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0690	603-CA007	(S)	4,160	Linear Feet	48" Reinforced Concrete Pipe, Class III				
0700	603-CA102	(S)	156	Linear Feet	48" Reinforced Concrete Pipe, Class V, Jacked or Bored				
0710	603-CA107	(S)	440	Linear Feet	24" Reinforced Concrete Pipe, Class V, Jacked or Bored				
Changed 03/08/2012									
0720	603-CA133	(S)	56	Linear Feet	60" Reinforced Concrete Pipe, Class V, Jacked or Bored				
0725	603-CA137	(S)	152	Linear Feet	12" Reinforced Concrete Pipe, Class V, Jacked or Bored				
Added 03/08/2012									
0730	603-CB001	(S)	40	Each	18" Reinforced Concrete End Section				
0740	603-CB002	(S)	35	Each	24" Reinforced Concrete End Section				
Changed 03/08/2012									
0750	603-CB003	(S)	5	Each	30" Reinforced Concrete End Section				
0760	603-CB004	(S)	9	Each	36" Reinforced Concrete End Section				
0770	603-CB006	(S)	5	Each	48" Reinforced Concrete End Section				
0775	603-CB011	(S)	2	Each	12" Reinforced Concrete End Section				
Added 03/08/2012									
0780	603-CE002	(S)	164	Linear Feet	29" x 18" Concrete Arch Pipe, Class A III				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0790	603-CE003	(S)	204	Linear Feet	36" x 23" Concrete Arch Pipe, Class A III				
0800	603-CE004	(S)	48	Linear Feet	44" x 27" Concrete Arch Pipe, Class A III				
0810	603-CE005	(S)	212	Linear Feet	51" x 31" Concrete Arch Pipe, Class A III				
0820	603-CE006	(S)	76	Linear Feet	58" x 36" Concrete Arch Pipe, Class A III				
0830	603-CE007	(S)	412	Linear Feet	65" x 40" Concrete Arch Pipe, Class A III				
0840	603-CF002	(S)	3	Each	29" x 18" Concrete Arch Pipe End Section				
0850	603-CF003	(S)	6	Each	36" x 23" Concrete Arch Pipe End Section				
0860	603-CF004	(S)	1	Each	44" x 27" Concrete Arch Pipe End Section				
0870	603-CF007	(S)	1	Each	65" x 40" Concrete Arch Pipe End Section				
0880	603-SB004	(S)	1	Each	24" Branch Connections, Stub into Box Culvert				
0890	603-SB006	(S)	1	Each	42" Branch Connections, Stub into Box Culvert				
0900	603-SB007	(S)	1	Each	48" Branch Connections, Stub into Box Culvert				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0910	603-SB017	(S)	1	Each	65" x 40" Branch Connections, Stub into Box Culvert				
0920	603-SB040	(S)	4	Each	18" Branch Connections, Stub into Box Culvert				
0930	603-SB055	(S)	2	Each	30" Branch Connections, Stub into Box Bridge				
0940	604-A001		18,598	Pounds	Castings				
0950	604-B001 Changed 03/08/2012		8,277	Pounds	Gratings				
0960	605-AA004	(S)	9,216	Square Yard	Geotextile for Subsurface Drainage, Type V				
0970	605-W001	(GY)	1,443	Cubic Yard	Filter Material for Combination Storm Drain and/or Underdrains,Type A, FM				
0980	605-W002	(GY)	3,598	Cubic Yard	Filter Material for Combination Storm Drain and/or Underdrains,Type B, FM				
0990	606-B001 Changed 03/08/2012		2,025	Linear Feet	Guard Rail, Class A, Type 1				
1000	606-C003 Changed 03/08/2012		10	Each	Guard Rail, Cable Anchor, Type 1				
1010	606-D012		8	Each	Guard Rail, Bridge End Section, Type I				
1020	606-E002 Changed 03/08/2012		13	Each	Guard Rail, Terminal End Section, Flared				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1030	606-E003		3	Each	Guard Rail, Terminal End Section, Non-Flared				
1040	608-B001	(S)	12,761	Square Yard	Concrete Sidewalk, With Reinforcement				
1050	609-B001	(S)	919	Linear Feet	Concrete Curb, Header				
1060	609-D004	(S)	59,836	Linear Feet	Combination Concrete Curb and Gutter Type 3A Modified				
1070	609-D007	(S)	4,183	Linear Feet	Combination Concrete Curb and Gutter Type 2 Modified				
1080	613-D004		12	Each	Adjustment of Inlet				
1090	613-D008		10	Each	Adjustment of Existing Overhead Mounted Interstate Directional Sign				
1100	614-B001	(S)	123	Square Yard	Concrete Driveway, With Reinforcement				
1110	615-A004	(S)	81	Linear Feet	Concrete Special Design Median Barrier				
1120	615-A012	(S)	21,481	Linear Feet	Concrete Type IV Modified, 42" Height, Cast-in-Place Median Barrier				
1130	615-A015	(S)	50	Linear Feet	Concrete Bridge End Barrier, 32"				
1140	615-A016	(S)	239	Linear Feet	Concrete Bridge End Barrier, 42"				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1150	616-A001 Changed 03/19/2012	(S)	11,684	Square Yard	Concrete Median and/or Island Pavement, 4-inch				
1160	616-A003	(S)	599	Square Yard	Concrete Median and/or Island Pavement, 10-inch				
1170	618-A001		1	Lump Sum	Maintenance of Traffic	XXXXXXXX	XXX		
1180	619-A1004		31	Mile	Temporary Traffic Stripe, Continuous White, Paint				
1190	619-A1008		1	Mile	Temporary Traffic Stripe, Continuous White, Type 1 Tape				
1200	619-A2004		29	Mile	Temporary Traffic Stripe, Continuous Yellow, Paint				
1210	619-A2008		1	Mile	Temporary Traffic Stripe, Continuous Yellow, Type 1 Tape				
1220	619-A3007		49	Mile	Temporary Traffic Stripe, Skip White, Paint				
1230	619-A4007		2	Mile	Temporary Traffic Stripe, Skip Yellow, Paint				
1240	619-A5002		42,186	Linear Feet	Temporary Traffic Stripe, Detail, Paint				
1250	619-A6003		1,162	Linear Feet	Temporary Traffic Stripe, Legend, Paint				
1260	619-A6004		617	Square Feet	Temporary Traffic Stripe, Legend, Paint				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1270	619-C6001		7,036	Each	Red-Clear Reflective High Performance Raised Marker				
1280	619-C7001		1,071	Each	Two-Way Yellow Reflective High Performance Raised Marker				
1290	619-D1001		377	Square Feet	Standard Roadside Construction Signs, Less than 10 Square Feet				
1300	619-D2001		2,402	Square Feet	Standard Roadside Construction Signs, 10 Square Feet or More				
1310	619-D3001		6	Each	Remove and Reset Signs, All Sizes				
1320	619-D4001		363	Square Feet	Directional Signs				
1330	619-E1001		2	Each	Flashing Arrow Panel, Type C				
1340	619-F1001		25,873	Linear Feet	Concrete Median Barrier, Precast				
1350 Changed 03/19/2012	619-F2001		34,399	Linear Feet	Remove and Reset Concrete Median Barrier, Precast				
1360	619-G4001		720	Linear Feet	Barricades, Type III, Single Faced				
1370	619-G4002		126	Linear Feet	Barricades, Type III, Single Faced, Permanent				
1380	619-G5001		300	Each	Free Standing Plastic Drums				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1390	619-G7001		23	Each	Warning Lights, Type "B"				
1400	619-H1001		1	Lump Sum	Traffic Signals	XXXXXXXX	XXX		
1410	619-J1002		4	Unit	Impact Attenuator, 50 MPH				
1420	619-J2004		4	Unit	Impact Attenuator, 50 MPH, Replacement Package				
1430	620-A001		1	Lump Sum	Mobilization	XXXXXXXX	XXX		
1440	907-622-B002 Changed 03/08/2012		1	Each	Engineer's Field Office Building, Type 3 LO				
1450	627-K001		6,520	Each	Red-Clear Reflective High Performance Raised Markers				
1460	627-L001		1,025	Each	Two-Way Yellow Reflective High Performance Raised Markers				
1470	629-A002 Changed 03/08/2012		5	Each	Vehicular Impact Attenuator, 60 MPH				
1480	629-A003 Deleted 03/08/2012					XXXXXXXX	XXX	XXXXXXXX	XXX
1490	630-A001		516	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness				
1500	630-A002		1,979	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1510	630-B001		1,596	Square Feet	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Ground Mounted				
1520	630-B002		7,125	Square Feet	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Overhead Mounted				
1530	630-C001 Changed 03/08/2012		585	Linear Feet	Steel U-Section Posts, 2.0 lb/ft				
1540	630-C004		1,687	Linear Feet	Steel U-Section Posts, 3.0 to 3.5 lb/ft				
1550	630-D003		596	Linear Feet	Structural Steel Beams, W6 x 9				
1560	630-D004		57	Linear Feet	Structural Steel Beams, W6 x 12				
1570	630-D010		100	Linear Feet	Structural Steel Beams, W12 x 26				
1580	630-E001		657	Pounds	Structural Steel Angles & Bars, 3" x 3" x 1/4" Angles				
1590	630-E003		265	Pounds	Structural Steel Angles & Bars, 4" x 4" x 5/16" Angles				
1600	630-E004		1,886	Pounds	Structural Steel Angles & Bars, 7/16" x 2 1/2" Flat Bar				
1605	630-F001 Added 03/19/2012		32	Each	Delineators, Guard Rail, White				
1606	630-F002 Added 03/19/2012		52	Each	Delineators, Guard Rail, Yellow				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1610	630-F006		25	Each	Delineators, Post Mounted, Single White				
1620	630-F007		17	Each	Delineators, Post Mounted, Single Yellow				
1630	630-F008		67	Each	Delineators, Post Mounted, Double White				
1640	630-F009		15	Each	Delineators, Post Mounted, Double Yellow				
1650	630-K001		80	Linear Feet	Welded & Seamless Steel Pipe Posts, 3"				
1660	630-K002		402	Linear Feet	Welded & Seamless Steel Pipe Posts, 3 1/2"				
1670	630-K003		1,057	Linear Feet	Welded & Seamless Steel Pipe Posts, 4"				
1675 Added 03/08/2012	635-A001		420	Linear Feet	Vehicle Loop Assemblies				
1680	640-A016		64	Each	Traffic Signal Heads, Type 1 LED				
1690	640-A017		8	Each	Traffic Signal Heads, Type 2 LED				
1700	640-A018		2	Each	Traffic Signal Heads, Type 3 LED				
1710	640-A022		12	Each	Traffic Signal Heads, Type 7 LED				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1720	640-A024		11	Each	Traffic Signal Heads, Type 4 LED				
1730	640-A034		52	Each	Traffic Signal Heads, Type 6 LED Countdown , Fiber Ready				
1740	640-A052		4	Each	Traffic Signal Heads, Type 4R LED				
1750	642-A008 Changed 03/19/2012		11	Each	Solid State Traffic Actuated Controllers, Type 8A				
1760	644-A001		36	Each	Optical Detector				
1770	644-B001		6,750	Linear Feet	Optical Detector Cable				
1780	644-C002		11	Each	Phase Selector, 4 Channel				
1790	647-A001 Deleted 03/19/2012					XXXXXXXX	XXX	XXXXXXXX	XXX
1800	647-A002		11	Each	Pullbox, Type 3				
1810	647-A003		29	Each	Pullbox, Type 4				
1820	647-A004 Changed 03/08/2012		36	Each	Pullbox, Type 5				
1830	647-A005 Changed 03/08/2012		78	Each	Pullbox, Type 2				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1840	907-649-A001 Changed 03/08/2012		28	Each	Video Detection System, 1 Sensor				
1850	666-B015		8,830	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor				
1860	666-B016		5,190	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 7 Conductor				
1861	666-B027 Added 03/19/2012		5,670	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #2, 3 Conductor				
1862	666-B028 Added 03/19/2012		2,750	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #6, 3 Conductor				
1865	666-B043 Added 03/08/2012		42,000	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #2, 4 Conductor				
1866	666-B052 Added 03/08/2012		8,115	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #6, 4 Conductor				
1867	666-B053 Added 03/19/2012		4,155	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #2, 6 Conductor				
1870	666-D005		2,030	Linear Feet	Electric Cable, Aerial Supported in Conduit, IMSA 20-1, AWG 14, 7 Conductor				
1880	668-A018		6,230	Linear Feet	Traffic Signal Conduit, Underground, Type 4, 2"				
1890	668-A020		70	Linear Feet	Traffic Signal Conduit, Underground, Type 4, 3"				
1900	668-A029 Changed 03/08/2012		34,600	Linear Feet	Traffic Signal Conduit, Underground, Rolled Pipe, 2"				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
1910	668-B024 Changed 03/08/2012		6,405	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"				
1920	668-B025		5,050	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 3"				
1930	668-C005		480	Linear Feet	Traffic Signal Conduit, Aerial Supported, Type 1, 2"				
1940	682-A001		2,900	Linear Feet	Underground Branch Circuit, AWG 1, 3 Conductor				
1950	682-A004		3,810	Linear Feet	Underground Branch Circuit, AWG 1/0, 3 Conductor				
1960	682-A015		11,175	Linear Feet	Underground Branch Circuit, AWG 2, 3 Conductor				
1970	682-A025		3,915	Linear Feet	Underground Branch Circuit, AWG 4, 3 Conductor				
1980	682-A031		3,555	Linear Feet	Underground Branch Circuit, AWG 6, 3 Conductor				
1990	682-B002		500	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 1, 3 Conductor				
2000	682-B005		290	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 1/0, 3 Conductor				
2010	682-B016		1,665	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 2, 3 Conductor				
2020	682-B025		530	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 4, 3 Conductor				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2030	682-B031		680	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 6, 3 Conductor				
2040	682-D001		68	Each	Underground Pull Box				
2050	682-F001		2	Each	Secondary Power Controllers				
2060	683-A008		2	Each	Lighting Assembly, High Mast, Type 100-4-A				
2070	683-A009		2	Each	Lighting Assembly, High Mast, Type 100-4-S				
2080	683-A012		17	Each	Lighting Assembly, High Mast, Type 100-5-S				
2090	683-B027		2	Each	Lighting Assembly, Low Mast, Type 35-1-12-250				
2100	683-D001 Changed 03/19/2012		2	Each	Portable Electric Power Units				
2110	684-A004		192	Cubic Yard	Pole Foundation, 36" Diameter				
2120	684-A005		22	Cubic Yard	Pole Foundation, 42" Diameter				
2130	684-A007		4	Cubic Yard	Pole Foundation, 30" Diameter				
2140	684-B004		720	Linear Feet	Slip Casing, 36" Diameter				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2150	684-B005		60	Linear Feet	Slip Casing, 42" Diameter				
2160	684-B007		20	Linear Feet	Slip Casing, 30" Diameter				
2170	685-B005		13,200	Linear Feet	Aerially Supported Electrical Cable, XLP, AWG 4, 3 Conductor				
2180	685-B006		350	Linear Feet	Aerially Supported Electrical Cable, XLP, AWG 2, 3 Conductor				
2190	685-C005		57	Each	Temporary Lighting Assembly, 35-1-0-250				
2200	685-D001		6	Each	Service Pole				
2210	686-A001		25	Each	Relocation of Existing Lighting Assemblies				
2220	686-B001		3,580	Linear Feet	Relocation of Existing Wiring				
2230	815-A009	(S)	4,639	Ton	Loose Riprap, Size 300				
2240	815-E001	(S)	4,818	Square Yard	Geotextile under Riprap				
2250	815-F001	(S)	310	Cubic Yard	Sediment Control Stone				
2260	907-225-A001		235	Acre	Grassing				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2270	907-225-B001		688	Ton	Agricultural Limestone				
2280	907-226-A001		115	Acre	Temporary Grassing				
2290	907-234-D001		24	Each	Inlet Siltation Guard				
2300	907-237-A002		5,802	Linear Feet	Wattles, 12"				
2310	907-237-A003		2,000	Linear Feet	Wattles, 20"				
2320	907-246-B002		500	Each	Rockbags				
2330	907-249-A001		1,000	Ton	Riprap for Erosion Control				
2340	907-249-B001		500	Cubic Yard	Remove and Reset Riprap				
2350	907-282-A019		1	Lump Sum	Automatic Irrigation System	XXXXXXXX	XXX		
2360	907-304-B001	(GT)	27,668	Ton	Granular Material, Class 5, Group C				
2365 Added 03/08/2012	907-304-A001	(GY)	1,000	Cubic Yard	Granular Material, LVM, Class 5, Group C				
2370	907-304-B005	(GT)	197,005	Ton	Granular Material, Class 9, Group C				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2380	907-304-F003	(GT)	1,579	Ton	3/4" and Down Crushed Stone Base				
2390	907-307-A002	(M)	280,623	Square Yard	6" Soil-Lime-Water Mixing, Class A				
2400	907-307-D001		3,977	Ton	Lime				
2405 Added 03/19/2012	907-307-S001	(A3)	49,109	Gallon	Bituminous Curing Seal				
2410	907-407-A001	(A2)	73,934	Gallon	Asphalt for Tack Coat				
2420	907-601-A001	(S)	8,194	Cubic Yard	Class "B" Structural Concrete				
2430 Changed 03/08/2012	907-601-B003	(S)	860	Cubic Yard	Class "B" Structural Concrete, Minor Structures				
2440	907-605-CC001	(S)	1,225	Square Yard	Prefabricated Sheet Drain				
2450	907-605-O001	(S)	4,714	Linear Feet	6" Perforated Sewer Pipe for Underdrains, SDR 23.5				
2460 Changed 03/19/2012	907-605-P001	(S)	406	Linear Feet	6" Non-perforated Sewer Pipe for Underdrains, SDR 23.5				
2470	907-611-B001	(S)	637	Square Feet	Brick Pavers				
2480	907-617-A001		189	Each	Right-of-Way Marker				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2490	907-618-1M001		1	Lump Sum	Service Patrol	XXXXXXXX	XXX		
2500	907-619-E3001		4	Each	Changeable Message Sign				
2505	907-619-M1002 Added 03/19/2012		1	Each	Portable Smart Work Zone, Additional Device, Portable Changeable Message Sign				
2506	907-619-M1003 Added 03/19/2012		1	Each	Portable Smart Work Zone, Additional Device, Portable Traffic Sensor				
2510	907-619-M2002		1	Lump Sum	Portable Smart Work Zone, System	XXXXXXXX	XXX		
2520	907-619-M3001		500	Each	Portable Smart Work Zone, System Monitoring				
2530	907-619-P1001		10,700	Linear Feet	Glare Paddles				
2540	907-626-A005		28	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip White				
2550	907-626-B006		3	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous White				
2560	907-626-C006		14	Mile	6" Thermoplastic Double Drop Edge Stripe, Continuous White, 90 mi min				
2570	907-626-D005		1,880	Linear Feet	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow				
2580	907-626-E006		4	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2590	907-626-F006		12	Mile	6" Thermoplastic Double Drop Edge Stripe, Continuous Yellow, 90 mil min				
2600	907-626-G006		60,850	Linear Feet	Thermoplastic Double Drop Detail Stripe, White				
2610	907-626-G007		21,647	Linear Feet	Thermoplastic Double Drop Detail Stripe, Yellow				
2620	907-626-H009 Changed 03/08/2012		6,880	Linear Feet	Thermoplastic Double Drop Legend, White				
2630	907-626-H010 Changed 03/08/2012		4,019	Square Feet	Thermoplastic Double Drop Legend, White				
2640	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 1	XXXXXXXX	XXX		
2650	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 11	XXXXXXXX	XXX		
2660	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 12	XXXXXXXX	XXX		
2670	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 13	XXXXXXXX	XXX		
2680	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 14	XXXXXXXX	XXX		
2690	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 15	XXXXXXXX	XXX		
2700	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 16	XXXXXXXX	XXX		

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2710	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 17	XXXXXXXX	XXX		
2720	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 18	XXXXXXXX	XXX		
2730	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 19	XXXXXXXX	XXX		
2740	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 20	XXXXXXXX	XXX		
2750	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 21	XXXXXXXX	XXX		
2760	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 22	XXXXXXXX	XXX		
2770	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 23	XXXXXXXX	XXX		
2780	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 24	XXXXXXXX	XXX		
2790	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 25	XXXXXXXX	XXX		
2800	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 28	XXXXXXXX	XXX		
2810	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 29	XXXXXXXX	XXX		
2820	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 30	XXXXXXXX	XXX		

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2830	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 4	XXXXXXXX	XXX		
2840	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 6	XXXXXXXX	XXX		
2850	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 7	XXXXXXXX	XXX		
2860	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 8	XXXXXXXX	XXX		
2870	907-630-I011		1	Lump Sum	Metal Overhead Sign Supports, Contractor Designed , Assembly No. 9	XXXXXXXX	XXX		
2880	907-631-A001 Changed 03/08/2012		965	Cubic Yard	Flowable Fill, Excavatable				
2890	907-637-A001		7	Each	Equipment Cabinet, Type B				
2900	907-637-A003		2	Each	Equipment Cabinet, Type A				
2910	907-639-A002		7	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 50' Arm				
2920	907-639-A007		2	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 40' Arm				
2930	907-639-A008		4	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 55' Arm				
2940	907-639-A009		8	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 60' Arm				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
2950	907-639-A013		1	Each	Traffic Signal Equipment Pole, Type III, 17' Shaft, 50' & 50' Arms				
2960	907-639-A015		3	Each	Traffic Signal Equipment Pole, Type IV, 30' Shaft, 50' Arm				
2970	907-639-A018 Changed 03/08/2012		2	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 65' Arm				
2980	907-639-A020 Changed 03/08/2012		1	Each	Traffic Signal Equipment Pole, Type IV, 30' Shaft, 60' Arm				
2985	907-639-A030 Added 03/08/2012		1	Each	Traffic Signal Equipment Pole, Type IV, 30' Shaft, 65' Arm				
2990	907-639-A031 Changed 03/08/2012		3	Each	Traffic Signal Equipment Pole, Type IV, 30' Shaft, 70' Arm				
3000	907-639-A034		9	Each	Traffic Signal Equipment Pole, Type VI, 8' Shaft				
3010	907-639-A042		1	Each	Traffic Signal Equipment Pole, Type IV, 30' Shaft, 50' & 60' Arms				
3020	907-639-A092		1	Each	Traffic Signal Equipment Pole, Type III, 17' Shaft, 50' & 60' Arms				
3030	907-639-C002		65	Cubic Yard	Pole Foundations, 36" Diameter				
3040	907-639-E003		4	Each	Camera Pole with Foundation, 70' Pole				
3050	907-639-F002		4	Each	Detector Pole with Foundation, 50' Pole				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3060	907-641-A001		4	Each	Radar Detection System				
3065	907-642-A004 Added 03/19/2012		1	Each	Solid State Traffic Actuated Controller Modification, Type 8A Fiber Ready				
3070	907-650-A002		16	Each	On Street Video Equipment, Fixed Type				
3080	907-650-A003		10	Each	On Street Video Equipment, PTZ Type				
3090	907-651-A002		11	Each	Magnetometer Detection System				
3091	907-651-B008 Added 03/08/2012		21	Each	Magnetometer Detection System Component, 18-foot Pole				
3092	907-651-B009 Added 03/08/2012		21	Each	Magnetometer Detection System Component, Repeater				
3093	907-651-B010 Added 03/08/2012		11	Each	Magnetometer Detection System Component, Access Point				
3094	907-651-B011 Added 03/08/2012		11	Each	Magnetometer Detection System Component, Closure Card				
3100	907-651-B013 Changed 03/08/2012		40	Each	Magnetometer Detection System Component, Wireless Detection Sensor				
3110	907-656-A001		2	Each	Dynamic Message Sign, Type 1				
3120	907-656-B001		1	Lump Sum	Dynamic Message Sign Training	XXXXXXXX	XXX		

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3130	907-657-A001		26,920	Linear Feet	Fiber Optic Cable, 72 SM				
3140	907-657-B001 Changed 03/08/2012		1,160	Linear Feet	Fiber Optic Drop Cable, 12 SM				
3150	907-658-A001 Changed 03/19/2012		12	Each	Hardened Network Switch, Type A				
3155	907-658-A003 Added 03/08/2012		1	Each	Hardened Network Switch, Type C				
3160	907-658-B001		2	Each	Terminal Server				
3170	907-659-A001		1	Lump Sum	Traffic Management Center Modifications	XXXXXXXX	XXX		
3180	907-659-C001		1	Lump Sum	Traffic Management Center Modifications - Training	XXXXXXXX	XXX		
3190	907-660-A001		1	Each	OTN Node				
3200	907-660-B001		1	Each	OTN Node Communications Hut				
3210	907-662-A001 Changed 03/08/2012		13	Each	Video Encoder, Type A				
3220	907-662-B001		3	Each	Video Decoder, Type A				
3230	907-682-F1001		1	Each	Repair Secondary Power Controller				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3240	907-699-A002		1	Lump Sum	Roadway Construction Stakes	XXXXXXXX	XXX		
3250	907-804-B001	(S)	280	Cubic Yard	Box Bridge Concrete, Class B				
3260	907-809-A004	(S)	25,623	Square Feet	Temporary Shoring Wall System				
3270	907-906001		2,280	Hours	Trainees	5.	00	11,400.	00
					ALTERNATE GROUP AA NUMBER 1				
3280	907-308-A001		5,710	Ton	Portland Cement				
Changed 03/08/2012									
3290	907-308-B001	(M)	467,702	Square Yard	Soil-Cement-Water Mixing, Optional Mixers, Base				
Changed 03/08/2012									
3295	907-308-S001	(A3)	81,848	Gallon	Bituminous Curing Seal				
Added 03/19/2012									
					ALTERNATE GROUP AA NUMBER 2				
3300	907-311-A003	(M)	467,702	Square Yard	Processing Lime and Fly Ash Treated Course, 6" Thick				
3310	907-311-B001		3,707	Ton	Lime				
3320	907-311-C002		14,811	Ton	Fly Ash, Class C or F				
3325	907-311-S001	(A3)	81,848	Gallon	Bituminous Curing Seal				
Added 03/19/2012									
					ALTERNATE GROUP BB NUMBER 1				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3330	907-403-A001	(BA1)	13,311	Ton	Hot Mix Asphalt, HT, 12.5-mm mixture				
ALTERNATE GROUP BB NUMBER 2									
3340	907-403-M010	(BA1)	13,311	Ton	Warm Mix Asphalt, HT, 12.5-mm mixture				
ALTERNATE GROUP CC NUMBER 1									
3350	907-403-A002	(BA1)	58,820	Ton	Hot Mix Asphalt, HT, 19-mm mixture				
ALTERNATE GROUP CC NUMBER 2									
3360	907-403-M011	(BA1)	58,820	Ton	Warm Mix Asphalt, HT, 19-mm mixture				
ALTERNATE GROUP DD NUMBER 1									
3370	907-403-A005	(BA1)	4,566	Ton	Hot Mix Asphalt, HT, 9.5-mm mixture				
ALTERNATE GROUP DD NUMBER 2									
3380	907-403-M009	(BA1)	4,566	Ton	Warm Mix Asphalt, HT, 9.5-mm mixture				
ALTERNATE GROUP EE NUMBER 1									
3390	907-403-A006	(BA1)	6,270	Ton	Hot Mix Asphalt, MT, 12.5-mm mixture				
ALTERNATE GROUP EE NUMBER 2									
3400	907-403-M002	(BA1)	6,270	Ton	Warm Mix Asphalt, MT, 12.5-mm mixture				
ALTERNATE GROUP FF NUMBER 1									

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3410	907-403-A007	(BA1)	7,528	Ton	Hot Mix Asphalt, MT, 19-mm mixture				
ALTERNATE GROUP FF NUMBER 2									
3420	907-403-M007	(BA1)	7,528	Ton	Warm Mix Asphalt, MT, 19-mm mixture				
ALTERNATE GROUP GG NUMBER 1									
3430	907-403-A010	(BA1)	4,206	Ton	Hot Mix Asphalt, MT, 9.5-mm mixture				
ALTERNATE GROUP GG NUMBER 2									
3440	907-403-M006	(BA1)	4,206	Ton	Warm Mix Asphalt, MT, 9.5-mm mixture				
ALTERNATE GROUP HH NUMBER 1									
3450	907-403-A012	(BA1)	37,514	Ton	Hot Mix Asphalt, ST, 19-mm mixture				
ALTERNATE GROUP HH NUMBER 2									
3460	907-403-M004	(BA1)	37,514	Ton	Warm Mix Asphalt, ST, 19-mm mixture				
ALTERNATE GROUP II NUMBER 1									
3470	907-403-B001	(BA1)	250	Ton	Hot Mix Asphalt, HT, 12.5-mm mixture, Leveling				
ALTERNATE GROUP II NUMBER 2									
3480	907-403-N009	(BA1)	250	Ton	Warm Mix Asphalt, HT, 12.5-mm mixture, Leveling				
ALTERNATE GROUP JJ NUMBER 1									

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3490	907-403-D001	(BA1)	54,710	Ton	Hot Mix Asphalt, HT, 12.5-mm mixture, Polymer Modified				
					ALTERNATE GROUP JJ NUMBER 2				
3500	907-403-P002	(BA1)	54,710	Ton	Warm Mix Asphalt, HT, 12.5-mm mixture, Polymer Modified				
					ALTERNATE GROUP KK NUMBER 1				
3510	907-403-D004	(BA1)	29,936	Ton	Hot Mix Asphalt, HT, 9.5-mm mixture, Polymer Modified				
					ALTERNATE GROUP KK NUMBER 2				
3520	907-403-P001	(BA1)	29,936	Ton	Warm Mix Asphalt, HT, 9.5-mm mixture, Polymer Modified				
					Bridge Items				
3530	501-K001		17,292	Square Yard	Transverse Grooving				
3540	803-B002	(S)	4	Each	Conventional Static Pile Load Test	5,000.	00	20,000.	00
3550	803-C002	(S)	34,206	Linear Feet	14" x 14" Prestressed Concrete Piling				
3560	803-I001	(S)	7	Each	PDA Test Pile				
3565 Added 03/19/2012	803-J001	(S)	20	Each	Pile Restrike				
3570	803-O009	(S)	510	Linear Feet	Temporary Casing, 54" Diameter				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3580	805-A001	(S)	2,575,856	Pounds	Reinforcement				
3590	810-A006	(S)	954	Pounds	Structural Steel, A 307				
3600	813-A002	(S)	5,271	Linear Feet	Concrete Railing, 32"				
3610	813-A003	(S)	2,156	Linear Feet	Concrete Railing, 42"				
3620	813-E005	(S)	1,054	Linear Feet	Metal Railing				
3630	815-D001	(S)	1,292	Cubic Yard	Concrete Slope Paving				
3640	907-803-K003	(S)	3,645	Linear Feet	Drilled Shaft, 54" Diameter				
3645 Added 03/08/2012	907-803-K002	(S)	21,798	Linear Feet	Drilled Shaft, 30" Diameter				
3650	907-803-K007	(S)	1,019	Linear Feet	Drilled Shaft, 42" Diameter				
3660 Changed 03/08/2012	907-803-K008	(S)	90	Linear Feet	Drilled Shaft, 24" Diameter				
3670	907-803-K009	(S)	10,606	Linear Feet	Drilled Shaft, 36" Diameter				
3680	907-803-L005	(S)	2	Each	Test Shaft, 54" Diameter				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3690	907-803-M003	(S)	172	Linear Feet	Trial Shaft, 54" Diameter				
3700	907-803-M007	(S)	93	Linear Feet	Trial Shaft, 36" Diameter				
3710	907-804-A001	(S)	8,224	Cubic Yard	Bridge Concrete, Class AA				
3720	907-804-C007	(S)	2,740	Linear Feet	115' Prestressed Concrete Beam, Type BT-72				
3730	907-804-C012	(S)	3,220	Linear Feet	135' Prestressed Concrete Beam, Type BT-72				
3740	907-804-C026	(S)	2,323	Linear Feet	90' Prestressed Concrete Beam, Type IV				
3750	907-804-C148	(S)	1,934	Linear Feet	75' Prestressed Concrete Beam, Type IV				
3760	907-804-C193	(S)	2,653	Linear Feet	103' Prestressed Concrete Beam, Type IV				
3770	907-804-C194	(S)	1,500	Linear Feet	68' Prestressed Concrete Beam, Type BT-63				
3780	907-804-C195	(S)	5,332	Linear Feet	121' Prestressed Concrete Beam, Type BT-63				
3790	907-804-C196	(S)	1,280	Linear Feet	58' Prestressed Concrete Beam, Type BT-63				
3800	907-804-C197	(S)	2,314	Linear Feet	97' Prestressed Concrete Beam, Type BT-72				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
3810	907-804-C198	(S)	2,074	Linear Feet	87' Prestressed Concrete Beam, Type BT-72				
3820	907-831-PP005		671	Square Yard	Precast Panels				
Changed 03/19/2012									

*** BID CERTIFICATION ***

TOTAL BID.....$_____

*** DBE/WBE SECTION ***

Complete item nos. 1, 2, and/or 3 as appropriate. See Notice to Bidders addressing Disadvantaged Business Enterprises in Highway Construction.

1. I/We agree that no less than _____ percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).

2. Classification of Bidder: Small Business (DBE)_____ Small Business (WBE)_____

3. A joint venture with a Small Business (DBE/WBE): _____

*** SIGNATURE STATEMENT ***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFIED THAT THE FIGURES SHOWN THEREIN CONSTITUTE THEIR OFFICIAL BID.

_____

BIDDER'S SIGNATURE

_____

BIDDER'S COMPANY

_____

BIDDER'S FEDERAL TAX ID NUMBER

CONTRACT TIME AND COMPARISON OF BIDS

1. CONTRACT TIME ..... _____
   (Total number of calendar days. Reference Special Provision 907-108-26) (To Be Specified by Bidder)
   [NOT TO EXCEED 928 CALENDAR DAYS]
   If the Contractor enters a Contract Time of more than 928 calendar days, the proposal will be considered **irregular, rejected, and returned to the bidder.**

A. TOTAL BID – DIRECT AND DEPENDENT ITEMS ..... $ _____

B. VALUE OF CONTRACT TIME ..... $ _____
   (Contract Time from line 1 above multiplied by $15,000.00 per Calendar Day. Line B is for comparison of bids only and will NOT be included in any payment to the Contractor.)

X. TOTAL AMOUNT FOR COMPARISION OF BIDS ..... $ _____
   (Line A + Line B)

BIDDER ACKNOWLEDGES THAT THIS SHEET HAS BEEN CHECKED FOR ACCURACY AND CERTIFIES THAT THE FIGURES SHOWN CONSTITUTE THE OFFICIAL AMOUNT FOR COMPARISION OF BIDS.

_____
BIDDER'S SIGNATURE