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	**4/11/2008**	ADDENDUM NO.		DATED	
ADDENDUM NO		DATED		ADDENDUM NO.		DATED	

Number	Description
1	Revised Notice to Bidders No. 1917; Revised Special Provision 907-504-2; Amendment EBS Download Required.

TOTAL ADDENDA: **1**
(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

SECTION 904- NOTICE TO BIDDERS NO. 1917 **CODE: (SP)**

DATE: **April 10, 2008**

SUBJECT: **Vehicle Loop Assemblies**

PROJECT: **MP-5080-62(016)/303391301 - Scott County**

The quantity shown for the Vehicle Loop Assembly Pay Item is an estimated quantity. It is to be understood that if the wiring in place is at a depth such that it is not disturbed during the milling operations then no replacement will be necessary.

No sooner than 24 hours prior to beginning milling operations on intersections with Vehicle Loop Assemblies, the Contractor shall set the traffic signals on a timer frequency as specified the MDOT Traffic Engineering Division. If the Vehicle Loop Assembly is damaged, the Contractor shall be required to replace the Vehicle Loop Assembly and return the traffic signals to normal operation within 72 hours after the top lift of HMA is constructed at each intersection. If the Vehicle Loop Assembly is undamaged by the milling operation, the traffic signals shall be restored to normal operation within 24 hours of the milling operation.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-504-2 **CODE: (SP)**

DATE: **04/08/2008**

SUBJECT: Ultra-Thin and Thin Portland Cement Concrete Pavement

Section 907-504, Thin Portland Cement Concrete Pavement, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-504 - THIN PORTLAND CEMENT CONCRETE PAVEMENT

907-504.01--Description. This work consists of ultra-thin and thin pavement composed of Portland cement concrete, without steel reinforcement, constructed in accordance with these specifications and in reasonably close conformity with the lines, grades, thicknesses, and cross sections shown on the plans or established by the Engineer.

Ultra-thin pavements are defined as pavements less than 4 inches in thickness.

Thin pavements are defined as pavements greater than or equal to 4 inches in thickness.

907-504.02--Materials. Materials shall meet the applicable requirements of Division 700 and the following Subsections:

Portland Cement	701.01 and 701.02
Blended Cement	701.01 and 701.04
Fine Aggregate	703.01 and 703.02
Coarse Aggregate	703.01 and 703.03
Curing Materials	713.01
Admixtures	713.02
Water	714.01
Calcium Chloride	714.02
Fly Ash	714.05
Ground Granulated Blast Furnace Slag (GGBFS)	714.06

907-504.02.1--Composition of Concrete. Chemical admixtures of either Types D or G, or Types A and B, MR and B, or F and B in accordance with Subsection 713.02 shall be used in the concrete mix.

If fly ash or GGBFS are used as a replacement for Portland cement in accordance with the maximum values allowed in Subsection 701.02, then chemical admixtures of Types C or E in accordance with Subsection 713.02 or calcium chloride in accordance with Subsection 714.02 may be used. The maximum amount of calcium chloride which may be used is 1.0% by weight of the total cementitious materials.

Fibrillated Polypropylene fibers meeting the requirements of ASTM C1116, paragraph 4.1.3, shall be used in the concrete mix added at a rate of 3.0 lbs/yd^3.

907-504.02.1.1--Portland Cement Concrete Mix Design. The concrete mix design shall be submitted by the Contractor to the Engineer for approval prior to production in accordance with the requirements in Subsection 804.02.10, with the exception that the mix shall meet the requirements of the "Master Proportion Table for Portland Cement Concrete Design" listed in Table 1 of this Subsection. Additionally, prior to production the Contractor shall field verify production of the mixture in accordance with Subsection 907-504.02.1.3 and submit this documentation with the proportioning information required in Subsection 907-504.02.1.2. If the maturity method is used to estimate the compressive strength for early opening to traffic, the Contractor shall also submit strength/maturity documentation developed in accordance with Subsection 907-504.02.2.5.2 for the mix prior to production of concrete.

Table 1
MASTER PROPORTION TABLE FOR PORTLAND CEMENT CONCRETE DESIGN

Design Property	Requirements
Coarse Aggregate Size No.	
For Ultra-thin Pavements	67
For Thin Pavements	57
Maximum Water / Cementitious Ratio*	0.40
Maximum Slump, inches	4**
Total Air Content, %	3 - 6
Minimum Compressive Strength, psi	
For Opening to Traffic	2500 in 18 hours
For Acceptance	3500

* The replacement limits of Portland cement by weight by other cementitious materials (such as fly ash, GGBFS, metakaolin, silica fume, or others) shall be in accordance with the values in Subsection 701.02. Other hydraulic cements may be used in accordance with the specifications listed in Section 701.

** The slump may be increased up to 6 inches with an approved mid-range water reducer or up to 8 inches with an approved type G high range water reducer, in accordance with Subsection 713.02. Minus slump requirements shall meet those set forth in Table 3 of AASHTO M157 specifications.

907-504.02.1.2--Proportioning of Concrete Mix Design. Proportioning of Portland cement concrete shall meet the requirements of Subsection 804.02.10.1.

907-504.02.1.3--Field Verification of Concrete Mix Design. The Contractor shall furnish the Engineer documentation indicating that the mix meets requirements in Table 1 within the tolerances specified in the field verification requirements of Subsection 804.02.10.3. This

documentation must indicate that the mix achieves the requirements in Table 1 for:

- the compressive strengths required for acceptance within 28 days; and
- the compressive strengths required for early opening to traffic within the time specified.

Because the mix is being field verified by the Contractor prior to submittal of the mix for review, the requirement in Subsection 804.02.10.3 that the mix be proven to meet the field verification requirements within three attempts does not apply.

907-504.02.2--Basis of Acceptance. The Contractor shall furnish the concrete necessary for test specimens. Department personnel meeting the certification requirements of Subsection 804.02.9 shall be responsible for all concrete testing in accordance with the tests required in Subsection 804, Table 5: DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE, Section B: Plastic Concrete. These tests shall be performed on the first load delivered and placed each day and then a minimum of once for each subsequent 50 cubic yards delivered and placed per day.

907-504.02.2.1--Slump. Slump of plastic concrete shall meet the requirements of Table 1: MASTER PROPORTION TABLE FOR PORTLAND CEMENT CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-504.02.2.2--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 1: MASTER PROPORTION TABLE FOR PORTLAND CEMENT CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-504.02.2.3--Yield. Perform a yield check in accordance each 400 cubic yards in accordance with AASTHO Designation: T121. If the yield of the concrete mix design is more than plus or minus 3% of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus 3%.

907-504.02.2.4--Temperature. The maximum plastic concrete acceptance temperature shall not exceed 95°F. Plastic concrete with a temperature more than 95°F shall be rejected and not used in Department work.

Plastic concrete with an acceptance temperature less than the minimum temperature in Subsection 804.03.16.1 shall be rejected and not used in Department work.

907-504.02.2.5--Compressive Strength.

907-504.02.2.5.1--Strength Testing for Acceptance. Compressive strength cylinders cast for acceptance of the pavement shall meet the minimum acceptance strength requirement listed in Table 1. These cylinders shall be standard cured in accordance with the requirements in AASHTO Designation: T23, Section 10.1 and its subsequent paragraphs.

907-504.02.2.5.2--Strength Testing for Opening to Traffic.

Use of Cylinders. In addition to compressive strength testing for acceptance of the pavement, compressive strength testing shall be performed to accommodate traffic movements. Compressive strength cylinders cast for early opening of the pavement to traffic shall meet the minimum opening to traffic strength requirement listed in Table 1. These cylinders shall be field cured next to the pavement until time of test in accordance with the requirements in AASHTO Designation: T23, Section 10.2 and its subsequent paragraphs. One pair of test cylinders shall be broken approximately 18 to 24 hours after casting.

Use of Maturity Method. In lieu of using concrete strength cylinders to determine when concrete pavement can be opened to traffic, if the Contractor has previously developed the strength/maturity relationship for the mix, an approved maturity meter may be used to determine concrete strengths. A maturity meter probe shall be inserted into the last concrete placed that represents the pavement area to be tested. The maximum amount of concrete which may be represented by a maturity meter probe is 50 cubic yards. The pavement may be opened to traffic when maturity meter reading indicates that the required in place strength is obtained.

Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO Designation: T325. Validation of the maturity curves shall be made at least once for every 500 cubic yards produced of each concrete mix used. Validation of the maturity curve shall be considered acceptable when the results of compressive strength tests are within 10% of the predicted value determined by the maturity curve. If the 10% requirement is not met, a new maturity curve shall be developed.

Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment. Training and maintaining a list of approved maturity technicians shall be the responsibility of the Mississippi Concrete Industries Association.

907-504.03--Construction Requirements. Prior to the removal of any existing pavement, the Contractor shall submit a Work Plan to the Engineer for approval. The Contractor shall submit this plan to the Engineer a minimum of 14 days prior to the removal of the existing pavement. This plan shall include, but not be limited to, the following:

- the proposed procedures for concrete placement, screeding, consolidation, finishing and surface texturing, curing method, and jointing;
- a list or description of the equipment proposed for use to accomplish the proposed procedures including the quantities of each piece of equipment;
- a list or description of the materials, such as curing materials or corrugated strips used during joint installation, proposed for use to accomplish the proposed procedures including the quantities of each material; and
- a scale drawing of the areas of work with the locations of all joints.

907-504.03.1--Removal of Existing Pavement. Existing HMA pavement to be removed and replaced with thin or ultra-thin concrete pavement shall be removed by milling per Section 406. Prior to the milling operation, saw cuts shall be made to the neat lines, grades and depths, and in the locations shown on the drawings.

Additionally, areas where traffic is expected to cross the transition from the HMA pavement to the thin or ultra-thin concrete pavement and vice versa shall meet the grades and depths shown in Figure 1. For areas where the flow of traffic is longitudinal with respect to the pavement, the transition areas shall meet the requirements for a Longitudinal Transition shown in Figure 1. For areas where the flow of traffic is transverse with respect to the pavement, the transition areas shall meet the requirements for a Transverse Transition shown in Figure 1. Saw cuts and milling shall meet the requirements of this Subsection to the required neat lines, grades, and depths required in Figure 1.

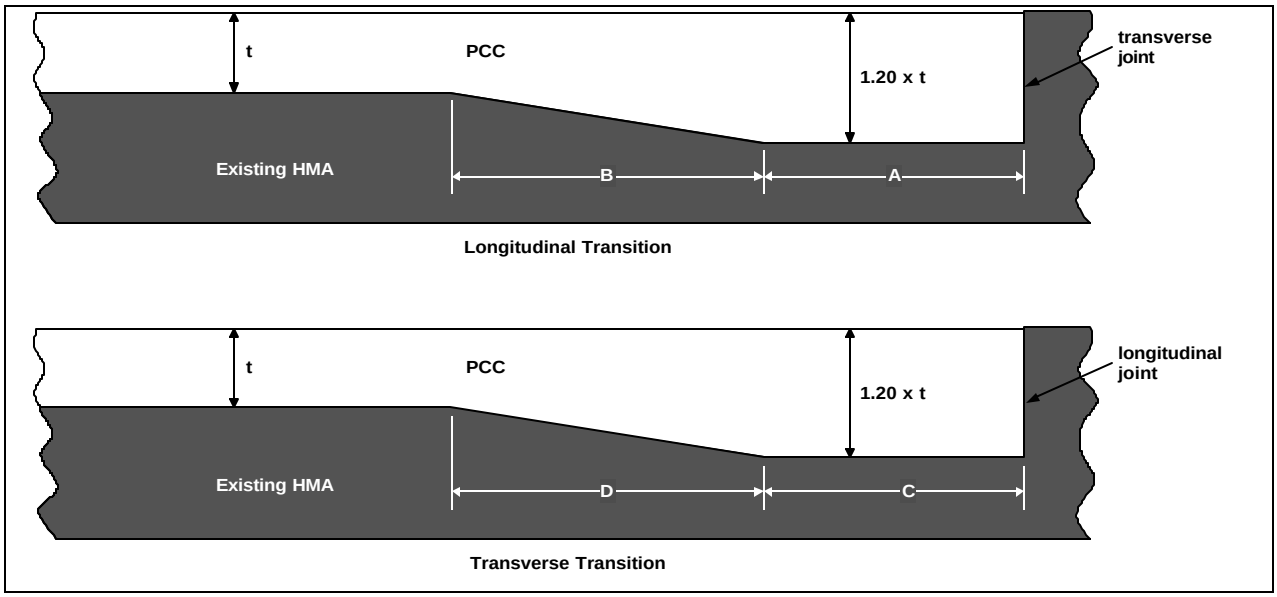

Figure 1

Dimension *A* in Figure 1 shall be no less than the transverse joint spacing required for the thickness, *t*, of the thin or ultra-thin concrete pavement per Table 2. Dimension *B* shall be either 0, 1, or 2 times the transverse joint spacing required for the thickness, *t*, of the thin or ultra-thin concrete pavement per Table 2.

Dimension *C* in Figure 1 shall be no less than the longitudinal joint spacing required for the thickness, *t*, of the thin or ultra-thin concrete pavement per Table 2. Dimension *D* shall be either 0, 1, or 2 times the longitudinal joint spacing required for the thickness, *t*, of the thin or ultra-thin concrete pavement per Table 2.

If there is sufficient thickness of the existing HMA as determined by the Engineer, with approval by the Engineer and at no additional expense to the Department the Contractor may remove more than *t* from the entire area to be replaced with thin or ultra-thin concrete pavement. Additionally, if the Contractor elects to remove 1.20 x *t* or more over the entire area to be replaced with thin or ultra-thin concrete pavement, this shall be in lieu of Dimension *B* and Dimension *D*.

907-504.03.2--Preparation of Grade. The foundation upon which the concrete pavement is to be placed shall be prepared within the tolerances set out in Subsection 321.03.

907-504.03.3--Setting Forms. The requirements for setting forms shall meet the requirements of Subsection 501.03.8 and its subsequent paragraphs.

907-504.03.4--Base Preparation. Prior to placement of concrete, the milled HMA surface shall be thoroughly swept to remove all loose HMA material or dirt particles so as to ensure development of proper bond between the concrete inlay and the existing HMA surface. Additionally, the base shall meet the requirements of Subsection 501.03.9 and it subsequent paragraphs.

907-504.03.5--Placing, Spreading, and Finishing. Concrete pavement shall be formed and constructed to the neat lines, grades, cross section, and thicknesses shown on the drawings. Concrete shall be placed and spread in an approved manner so as to distribute the concrete uniformly without segregation. Additional placement requirements are provided in Subsection 501.03.13 and its subsequent paragraphs.

Final finishing of the concrete pavement surface shall be in accordance with Subsection 501.03.17 and its subsequent paragraphs.

Under no circumstances shall water be used as a finishing aid or worked into the concrete surface. This includes water added by fogging, spraying, and/or pouring.

The surface of the concrete pavement shall be transverse tined in accordance with Subsection 501.03.18.4.

907-504.03.6--Joints. All joints shall be created by sawing using equipment meeting the requirements of Subsection 907-504.03.7.2. Sawing of the joints shall commence as soon as the concrete has hardened sufficiently to support the weight of the saw. The spacing and depth of all of joints shall meet the requirements of "Joint Spacing Requirements for Various Pavement Thicknesses" shown in Table 2. The maximum width of the joint shall be 0.125 inch.

Table 2
JOINT SPACING REQUIREMENTS FOR VARIOUS PAVEMENT THICKNESSES

Minimum Pavement Thickness	Maximum Joint Spacing Requirement	Minimum Joint Depth (installation timing)	
(in)	(Transverse x Longitudinal)	(within 2 hours of finishing)	(more than 2 hours after finishing)
3	3 ft x 3 ft	1 in	1 in
4	4 ft x 4 ft	1 in	1 in
5	5 ft x 6 ft	1 in	1-1/4 in
6	5 ft x 6 ft	1 in	1-1/2 in

Because the use of "early entry" dry cut saws is required, corrugated plastic filler strips shall be used at the intersection of all saw cuts, and at locations where the wheels of the early entry saw

cross a previously cut joint, to prevent future spalling at the corners of the intersection. The joints shall not be sealed but shall be cleaned of all deleterious material after sawing by using compressed air. Air compressors used to clean the joints shall meet the requirements of Subsection 413.03.1. Pavement thickness and other details shall be as specified in the plans or contract documents.

907-504.03.6.1--Timing of Sawing. The Contractor shall inspect the concrete within 90 minutes after the completion of curing at each location to determine if the concrete is sufficiently hardened to support the weight of the saw. If the concrete has not sufficiently hardened to support the weight of the saw, the Contractor shall inspect the concrete at least every 30 minutes after each subsequent inspection to determine if the concrete is sufficiently hardened to support the weight of the saw. Sawing shall not begin or shall be discontinued if there is any raveling of the joints or marring of the surface of the concrete during installation of the joints. If sawing is discontinued due to the concrete not being able to support the weight of the saw or due to raveling of joints, the Contractor shall inspect the concrete at least every 30 minutes to determine if the concrete has sufficiently hardened. FHWA Publication No. HIF-07-004 (Integrated Materials and Construction Practices for Concrete Pavement: A State-of-the-Practice Manual) shall be used as a guide for determining the timing of joint installation. Information about this Publication may be found at the following web site:

http://www.fhwa.dot.gov/pavement/pub_listing.cfm.

For successful installation of joints, the Contractor may need to inspect the concrete at more frequent time intervals than those listed above and with the understanding that concrete placed later in the day may be sufficiently hard for joint installation prior to concrete placed earlier in the day. If joints are not installed in a sufficient amount of time such that concrete cracks at locations other than the installed joints, the Contractor shall repair the pavement to the satisfaction of the Engineer.

907-504.03.7--Equipment.

907-504.03.7.1--Concrete Production and Transportation. Equipment and processes used for concrete production shall meet the requirements of Subsection 804.02.11 with automatic systems for recording batch weights and compensating for the moisture in the fine aggregate. Additionally, the requirements of AASHTO Designation: M157, Sections 8, 9, 10, and 11 shall be followed. Following AASHTO Designation: M157, Section 11.7, on arrival to the job site of a mixer truck, a maximum of 1½ gallons of water per cubic yard shall be allowed to be added to bring the slump within the required limits; water shall not be added at a later time. Batch ticket information shall meet the requirements of Subsection 804.02.12.3.

907-504.03.7.1.1--Limitations of Mixing. Except in emergencies, no concrete shall be mixed or placed when the natural light will be insufficient for finishing. In case of an emergency, the Engineer may permit finishing during periods of insufficient light provided adequate and approved lighting is furnished by the Contractor.

Concrete shall not be placed on a frozen foundation, nor shall frozen aggregate be used in the

concrete.

907-504.03.7.1.2--Cold or Hot Weather Concreting. During periods of cold or expected cold weather, the limitations for beginning a concrete pour and the limitations for temperature control of the mix and its components shall be in accordance with the provisions of Subsection 804.03.16.1.

During periods of hot weather or arid atmospheric conditions the provisions of Subsection 804.03.16.2 shall be applicable.

907-504.03.7.2--Concrete Saw. The concrete pavement joints shall be cut utilizing only an "early entry" dry cut saw, approved by the Engineer. Other type saws may be used for other sawing applications, provided the saw meets the requirements of Subsection 501.03.6.1. Proper, approved sawing equipment and sufficient labor shall be present on the site prior to each day's placement of concrete. Placement shall not commence until said equipment and labor are on site.

907-504.03.7.3--Other Equipment. Other equipment and tools necessary for handling materials and performing all parts of the work shall be approved by the Engineer as to design, capacity, and mechanical condition, and meeting the requirements of Subsections 501.03.5, 501.03.6, and 501.03.20.1, and their subsequent paragraphs.

907-504.03.7.4--Prohibited Equipment. The following equipment shall not be used or allowed on the project: bull floats or equipment used to dispense water, including fogging, spraying, and/or pouring. Water dispensing equipment attached to mixer trucks is not included in this list of prohibited equipment provided this equipment is only used to dispense water into a mixer truck in accordance with Subsection 907-504.03.7.1.

907-504.03.8--Surface Test. It is the intent of these specifications that the finished surface will have good riding qualities.

Any membrane curing damaged during the surface testing operation shall be repaired by the Contractor at no additional expense to the Department.

Any corrective work to the pavement surface necessitated to ensure that the applicable surface test limits are not exceeded shall be in accordance of Subsection 907-504.03.8.3.

907-504.03.8.1--Projects Containing More Than 10,000 SY. Profiles of the pavement surface will be established, evaluated and the pavement surface corrected, as necessary, so that the final surface variances shall not exceed a profile index of 65 inches per mile per segment. Shoulders, tapers, and areas in horizontal curves having a radius of less than 1000 feet at the centerline and within the superelevation transition of such curves are excluded from a test with the profilograph.

Determination of the profile index will be in accordance with test methods established by the Department.

A California profilograph meeting the requirements as set out in Section 401 shall be furnished and operated by the Contractor under supervision of the Engineer to provide recorded data to establish the profile index and identify locations requiring correction. Surface profile shall be obtained in the wheel path of each travel lane.

For the purpose of determining pavement smoothness and contract price adjustment for rideability, the pavement will be subdivided into sections of 528 feet. Where a segment less than 528 feet occurs at the end of a section, it will be combined with the preceding 528-foot segment for calculation of the profile index.

A profile index will be determined for each segment as inches per mile in excess of the "Zero" blanking band which is simply referred to as the "Profile Index". From the profilogram of each segment, the scallops above and below the "Zero" blanking band are totaled in tenths of an inch. The totaled count of tenths is converted to inches per mile to establish a smoothness profile index for that segment.

In addition to the above requirements for the profile index, all areas represented by high points having deviations in excess of 0.4 inch in 25 feet shall be removed by the Contractor utilizing grinding methods and equipment specified. Deviations in excess of 0.4 inch will be determined from the profilogram in accordance with Department test methods.

After correcting individual deviations in excess of 0.4 inch in 25 feet, corrective action shall be made to reduce the profile index to 65 inches per mile per segment or less.

On those segments where corrections are made, the pavement will be surface tested again to verify that corrections have produced a profile index of 65 inches per mile per segment or less.

907-504.03.8.2--Projects Containing Less Than Or Equal To 10,000 SY. Each continuous full or partial lane width of concrete pavement shall have a uniform surface and be in reasonably close conformity with the line, grade, and cross section shown on the drawings.

After a continuous full or partial lane width of concrete pavement is completed, the surface of the plastic concrete shall be tested for uniformity using a Contractor furnished and operated 10-foot straightedge. There shall be no deviations from the straightedge greater than 0.25 inch in 10 feet in either the longitudinal or the transverse directions. Pavement not in compliance with the requirement shall be corrected.

Additionally, individual bumps or depressions in the pavement surface exceeding 0.40 inch, when measured from a chord length of 25 feet shall be corrected.

907-504.03.8.3--Corrective Work for Smoothness. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of diamond grinding in accordance with Subsection 501.03.19.1 and its subsequent paragraphs. Concrete removal by grinding shall be limited such that the thickness of the pavement after grinding shall not be less than plan thickness minus 0.25 inch. Final pavement thicknesses, after any surface corrections,

which are thinner than plan thickness minus 0.25 inch shall subject the area represented by such deviation to the provisions of Subsection 907-504.05.2.

All areas which are corrected shall be retested to ensure conformance to the applicable surface test requirements.

No reestablishment of transverse tining shall be required after surface corrections are made by diamond grinding.

All corrective work to ensure compliance with the applicable surface test requirements shall be completed prior to determining pavement thickness.

The Contractor shall be responsible for all traffic control associated with the testing and/or correction of the concrete pavement.

907-504.03.9--Curing and Protection. Curing and protection of the pavement shall be in accordance with Subsection 501.03.20 and its subsequent paragraphs with the exception listed in Subsection 907-504.03.9.1.

Additionally, the amount of time between discharge of concrete at any location and the completion of the method of curing of that same location shall not exceed 45 minutes.

907-504.03.9.1--White Pigmented Membrane. Curing compound shall be applied per Subsections 501.03.20.1 and at a rate of one gallon to not more than 125 square feet. If the time period between floating and texturing of the concrete exceeds 30 minutes, the concrete shall be kept damp by fogging with a monomolecular film type evaporative retarder to prevent rapid evaporation of the surface. As a rule of thumb, the color of a pavement covered with the required amount of curing compound should be indistinguishable from a sheet of commercially available standard "letter" size white copier paper placed on top of it when viewed from a distance of about five (5) feet away horizontally if standing on the same grade as the pavement.

907-504.03.10--Removing Forms. Removal of forms shall be in accordance with Subsection 501.03.21.

907-504.03.11--Opening to Traffic. The Engineer will decide when the pavement may be opened to traffic. No traffic will be allowed on the completed pavement until the concrete has attained a compressive strength of 2500 psi. Prior to opening to traffic, the pavement shall be cleaned.

907-504.03.12--Pavement Thickness Determination. For the purpose of determining pavement thickness, the pavement will be subdivided into separate sections of 1000 linear feet in each traffic lane excluding turn-outs and ramps, extending from one end of the pavement to the other end. The last section in each traffic lane will be the length remaining unless the length of that section is less than 500 feet. If the length of the last section is less than 500 feet, include it with the previous section for determination of thickness.

One core will be taken at random by the Department from each section. The thickness of the sections will be determined as provided for in Subsection 907-504.05.1. Based on the thickness of each section, an adjusted unit price as provided in Subsection 907-504.05 and its subsequent paragraphs will be paid for each section represented.

Holes remaining in the pavement after coring shall be completely filled by the Contractor, at not additional cost to the Department, with concrete of the same quality as used to construct the pavement.

907-504.04--Method of Measurement. Concrete pavement will be measured by the square yard complete in place and accepted. The width for measurement will be the plan width, including widening where called for, or as otherwise authorized in writing by the Engineer. The length will be measured horizontally in accordance with Section 109.

Payment for removal of existing HMA pavement, required to be removed and replaced with concrete pavement, is addressed under Pay Items 406-A, Cold Milling of Bituminous Pavement, All Depths and 503-C, Saw Cut (Equal to depth of concrete pavement), and shall include saw cutting, milling, and all handwork necessary to ensure removal of HMA to the neat saw cut lines.

907-504.05--Basis of Payment.

907-504.05.1--General. Concrete pavement will be paid for at the contract unit price per square yard, adjusted when applicable for sections of pavement found deficient in thickness by more than 0.25 inch and not more than 0.50 inch, which shall be full compensation for concrete pavement placement, fiber reinforcement, finishing and curing, concrete volume, saw cutting of joints, and for all labor, equipment, tools, materials, all traffic control, and incidentals necessary for the construction of the concrete pavement.

In calculating the thickness of the pavement, measurements which are in excess of the plan thickness by more than 0.25 inch will be considered as the plan thickness plus 0.25 inch. Additionally, measurements which are less than the plan thickness by more than 0.50 inch, excluding exploratory cores, will be considered as the plan thickness minus 0.50 inch. When the measured thickness of a core is less than the plan thickness by more than 0.50 inch, the actual thickness of the pavement in this area will be determined by taking exploratory cores at not less than 10 foot intervals parallel to the centerline in each direction from the affected location until in each direction a core is found which is not deficient by more than 0.50 inch.

Areas found deficient in thickness by more than 0.50 inch will be evaluated by the Engineer; and if in the judgment of the Engineer, the deficient areas warrant removal, they shall be removed and replaced with pavement of the thickness shown on the plans without cost to the Department. If the Engineer determines that the deficient areas do not warrant removal, the pavement may be left in place with no payment to the Contractor, or may be removed and replaced at the Contractor's option. Exploratory cores for deficient thickness will not be used in averages for areas for adjusted unit price.

Each area or section of pavement removed shall be at least 10 feet in length and at least the full width of the lane involved. When it is necessary to remove and replace a section of pavement, any remaining portion of the slab adjacent to the joints that is less than 6 feet in length shall also be removed and replaced. The new surface shall be textured as specified in the contract.

Concrete that fails to develop a 28-day compressive strength of 3500 psi shall be removed and replaced, or accepted at a reduced price, if an Engineering study indicates that the concrete is satisfactory to remain in place.

Payment will be made under:

907-504-A: ___" Fiber Reinforced Concrete Pavement - per square yard

907-504.05.2--Price Adjustments for Thickness. When the average pavement thickness, determined in accordance with Subsection 907-504.03.12, is deficient by more than 0.25 inch but not more than 0.50 inch, payment will be made at an adjusted price as specified in the following table:

CONCRETE PAVEMENT DEFICIENCY

Thickness Deficiency Inches	Proportional Part of Contract Price Allowed
0.00 to 0.25	100 percent
0.26 to 0.50	75 percent
>0.50	Remove and Replace At No Additional Cost to the Department or Receive No Payment

Any applicable price adjustment due to thickness deficiency applies to the full width of the deficient lane or shoulder.