

# STATE OF DELAWARE

This Copy is for information only.  
You must request a CD from  
DeIDOT in order to bid.



## DEPARTMENT OF TRANSPORTATION

### BID PROPOSAL

for

CONTRACT T201906107.01

PAVEMENT & REHABILITATION, NORTH VII, 2019

NEW CASTLE COUNTY

ADVERTISEMENT DATE: October 14, 2019

COMPLETION TIME: 100 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION  
DELAWARE DEPARTMENT OF TRANSPORTATION  
AUGUST 2016

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware prior to 2:00 P.M. local time **November 19, 2019**

PAVEMENT & REHABILITATION, NORTH VII, 2019  
NEW CASTLE COUNTY

GENERAL DESCRIPTION

LOCATION

These improvements are located in NEW CASTLE County more specifically shown on the Location Map(s) of the enclosed Plans.

DESCRIPTION

The improvements consist of furnishing all labor and materials for pavement milling bituminous concrete pavement, bituminous concrete patching, bituminous concrete superpave Type C overlays, signing and pavement markings , and other incidental construction in accordance with the location, notes and details shown on the plans and as directed by the Engineer.

COMPLETION TIME

All work on this contract must be complete within 100 Calendar Days. It is the Department's intent to issue a Notice to Proceed such that work starts on or about February 28, 2020.

PROSPECTIVE BIDDERS NOTES:

1. BIDDERS MUST BE REGISTERED with DelDOT and request a cd of the official plans and specifications in order to submit a bid. Contact DelDOT at [dot-ask@delaware.gov](mailto:dot-ask@delaware.gov), or (302) 760-2031. Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware prior to 2:00 P.M. local time November 19, 2019 unless changed via addendum.
2. QUESTIONS regarding this project are to be e-mailed to [dot-ask@delaware.gov](mailto:dot-ask@delaware.gov) no less than six business days prior to the bid opening date in order to receive a response. Please include T201906107.01 in the subject line. Responses to inquiries are posted on-line at <http://www.bids.delaware.gov>.
3. PREQUALIFICATION REQUIREMENT - 29 Del.C. §6962 (c)(12)(a) requires DelDOT to include a performance-based rating system for contractors. The Performance Rating for each Contractor shall be **NEW** used as a prequalification to bid at the time of bid. Refer to Contract '*General Notices*' for details.
4. **THE BID PROPOSAL software used by DelDOT has changed. We now use Bid Express.** This new software is an updated version of the previous software used and operates similarly. The cd you request from DelDOT contains the Bid Express file and its installation file. Bidders are to use the cd provided to enter their bid amounts into the Bid Express file. The Bid Express bid file must be printed and submitted in paper form along with the electronic bid file and other required documents prior to the Bid due date and time. (DelDOT is not utilizing web based electronic bidding for this project).
5. SURETY BOND - Each proposal must be accompanied by a deposit of either surety bond or security for a sum equal to at least 10% of the bid.
6. DRUG TESTING - Regulation 4104; The state Office of Management and Budget has developed regulations that require Contractors and Subcontractors to implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds pursuant to 29 Del.C. §6908(a)(6). **Refer to the full REVISED requirements at the following link:** <http://regulations.delaware.gov/register/december2017/final/21 DE Reg 503 12-01-17.htm>

Note a few of the Drug Testing requirements;

- \* At bid submission - Each bidder must submit with the bid a single signed affidavit certifying that the bidder and its subcontractors has in place or will implement during the entire term of the contract a Mandatory Drug Testing Program that complies with the regulation, *the form is attached*;

\* Subcontractors - Contractors that employ Subcontractors on the job site may do so only after submitting a copy of the Subcontractor's Employee Drug Testing Program along with the standard required subcontractor information. A Subcontractor shall not commence work until **DeIDOT** has approved the subcontractor in writing;

\* Penalties for non-compliance are specified in the regulation.

7. No RETAINAGE will be withheld on this contract unless through the Prequalification Requirements.
8. EXTERNAL COMPLAINT PROCEDURE can be viewed on DeIDOT's Website [here](#), or you may request a copy by calling (302) 760-2555.
9. REMINDER; A copy of your firm's Delaware Business License must be submitted with your bid.
10. SECTION 106.06 BUY AMERICA Contract Requirement in the Delaware Standard Specifications for Road and Bridge Construction, August, 2016 does not apply to this contract.
11. AUGUST 2016 STANDARD SPECIFICATIONS apply to this contract. The Contractor shall make himself aware of any revisions and corrections (Supplemental Specifications, if any) and apply them to the applicable item(s) of this contract. The 2016 Standard Specifications can be [viewed here](#).
- 11a. FLATWORK CONCRETE TECHNICIAN CERTIFICATION TRAINING:  
Section 501.03, 503.03, 505.03, 610.03, 701.03 and 702.03 of the 2016 Standard Specifications require contractor's to provide an American Concrete Institute (ACI) or National Ready Mix Concrete Association (NRMCA) certified concrete flatwork technician to supervise all finishing of flatwork concrete. Concrete flatwork certification will be effective starting on June 1, 2018.
12. **BREAKOUT SHEETS** MUST be submitted either with your bid documents; or within seven (7) calendar days following the bid due date by the lowest apparent bidder. Refer to instructions adjacent to the Breakout Sheets in this document.

**STATE OF DELAWARE  
CONSTRUCTION ITEMS UNITS OF MEASURE**

<b>English Code</b>	<b>English Description</b>	<b>Multiply By</b>	<b>Metric Code</b>	<b>Metric Description</b>	<b>Suggested CEC Metric Code</b>
ACRE	Acre	0.4047	ha	Hectare	HECTARE
BAG	Bag	N/A	Bag	Bag	BAG
C.F.	Cubic Foot	0.02832	m <sup>3</sup>	Cubic Meter	M3
C.Y.	Cubic Yard	0.7646	m <sup>3</sup>	Cubic Meter	M3
EA-DY	Each Day	N/A	EA-DY	Each Day	EA-DY
EA-MO	Each Month	N/A	EA-MO	Each Month	EA-MO
EA/NT	Each Night	N/A	EA-NT	Each Night	EA/NT
EACH	Each	N/A	EA	Each	EACH
GAL	Gallon	3.785	L	Liter	L
HOUR	Hour	N/A	h	Hour	HOUR
INCH	Inch	25.4	mm	Millimeter	MM
L.F.	Linear Foot	0.3048	m	Linear Meter	L.M.
L.S.	Lump Sum	N/A	L.S.	Lump Sum	L.S.
LA-MI	Lane Mile	1.609	LA-km	Lane-Kilometer	LA-KM
LB	Pound	0.4536	kg	Kilogram	KG
MFBM	Thousand Feet of Board Measure	2.3597	m <sup>3</sup>	Cubic Meter	M3
MGAL	Thousand Gallons	3.785	kL	Kiloliter	KL
MILE	Mile	1.609	km	Kilometer	KM
S.F.	Square Foot	0.0929	m <sup>2</sup>	Square Meter	M2
S.Y.	Square Yard	0.8361	m <sup>2</sup>	Square Meter	M2
SY-IN	Square Yard-Inch	0.8495	m <sup>2</sup> -25 mm	Square Meter-25 Millimeter	M2-25 MM
TON	Ton	.9072	t	Metric Ton (1000kg)	TON
N.A.*	Kip	4.448	kN	Kilonewton	N.A.*
N.A.*	Thousand Pounds per Square Inch	6.895	MPa	Megapascal	N.A.*

\*Not used for units of measurement for payment.

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## GENERAL NOTICES

### SPECIFICATIONS:

The specifications entitled "Standard Specifications for Road and Bridge Construction, August, 2016", hereinafter referred to as the Standard Specifications, and Supplemental Specifications, the Special Provisions, notes on the Plans, this Bid Proposal, and any addenda thereto shall govern the work to be performed under this contract. The Specifications and Supplemental Specifications can be [viewed here](#).

### CLARIFICATIONS:

Under any Section or Item included in the Contract, the Contractor shall be aware that when requirements, responsibilities, and furnishing of materials are outlined in the details and notes on the Plans and in the paragraphs preceding the "Basis of Payment" paragraph in the Standard Specifications or Special Provisions, no interpretation shall be made that such stipulations are excluded because reiteration is not made in the "Basis of Payment" paragraph.

### ATTESTING TO NON-COLLUSION:

The Department requires as a condition precedent to acceptance of bids a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract. The form for this sworn statement is included in the proposal and must be properly executed in order to have the bid considered.

### QUANTITIES:

The quantities shown are for comparison of bids only. The Department may increase or decrease any quantity or quantities without penalty or change in the bid price.

### PREQUALIFICATION REQUIREMENT

29 Del.C. §6962 (c)(12)(a) requires a Department of Transportation project, excluding a Community <sup>NEW</sup> Transportation Fund or municipal street aid contract, to include a performance-based rating system. At the time of bid, the Performance Rating for each Contractor shall be used as a prequalification to bid.

Bidders with Performance Rating scores equal to or greater than 85% shall be permitted to bid. Bidders with scores of less than 85% who comply with the retainage requirements of 29 Del.C. §6962 shall be permitted to bid provided the *Agreement to Accept Retainage* (located on the Certification Page) is executed and submitted with the bid. Lack of an executed *Agreement to Accept Retainage* will result in the rejection of the bid by the Department. Successful bidders awarded Department contracts who have no performance history within the last five (5) years will be assigned a provisional Performance Rating of 85% at the date of advertisement.

Notification of Performance Rating. The Department shall post publicly the Performance Rating for all Contractors on the Department's [website](#). DelDOT will complete performance-based evaluations on the construction company contracted by the Department to build the project (the "Contractor"). Provisions to appeal Performance Ratings are described in the regulations. The regulations are set forth in Section 2408 of Title 2, Delaware Administrative Code, found [here](#).

### PREFERENCE FOR DELAWARE LABOR:

Delaware Code, Title 29, Chapter 69, Section 6962, Paragraph (d), Subsection (4)b:

"In the construction of all public works for the State or any political subdivision thereof, or by firms contracting with the State or any political subdivision thereof, preference in employment of laborers, workmen or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State. Each public works contract for the construction of public works for the State or any political subdivision thereof shall contain a stipulation that any

person, company or corporation who violates this section shall pay a penalty to the Secretary of Finance equal to the amount of compensation paid to any person in violation of this section."

EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS:

Delaware Code, Title 29, Chapter 69, Section 6962, Paragraph (d), Subsection (7) states;

- a. As a condition of the awarding of any contract for public works financed in whole or in part by State appropriation, such contracts shall include the following provisions:

During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation, gender identity or national origin. The contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, sex, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, sexual orientation, gender identity or national origin.
3. The contractor will ensure employees receive equal pay for equal work, without regard to sex. Employee pay differential is acceptable if pursuant to a seniority system, a merit system, a system which measures earnings by quantity or quality of production, or if the differential is based on any other factor other than sex.

TAX CLEARANCE:

As payments to each vendor or contractor aggregate \$2,000, the Division of Accounting will report such vendor or contractor to the Division of Revenue, who will then check the vendor or contractor's compliance with tax requirements and take such further action as may be necessary to insure compliance.

LICENSE:

A person desiring to engage in business in this State as a contractor shall obtain a license upon making application to the Division of Revenue.

CONTRACTOR / SUBCONTRACTOR LICENSE: 29 DEL. C. §6967:

(b) No agency shall accept a proposal for a public works contract unless such contractor has provided a proper and current copy of its occupational and/or business license, as required by Title 30, to such agency.

(c) Any contractor that enters a public works contract must provide to the agency to which it is contracting, within 30 days of entering such public works contract, copies of all occupational and business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the contractor entered the public works contract the occupational or business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.

DIFFERING SITE CONDITIONS,

SUSPENSIONS OF WORK and SIGNIFICANT CHANGES IN THE CHARACTER OF WORK:

Differing site conditions: During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the engineer will investigate the conditions, and if he/she determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the

contract modified in writing accordingly. The engineer will notify the contractor of his/her determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

No contract adjustment will be allowed under their clause for any effects caused on unchanged work.

Suspensions of work ordered by the engineer: If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The engineer will notify the contractor of his/her determination whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.

Significant changes in the character of work: The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

The term "significant change" shall be construed to apply only to the following circumstances:

- (A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or
- (B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

#### RIGHT TO AUDIT

The Department shall have the right to audit the books and records of the contractor or any subcontractor under this contract or subcontract to the extent that the books and records relate to the performance of the contract or subcontract. The books and records shall be maintained by the contractor for a period of 3 years from the date of final payment under the prime contract and by the subcontractor for a period of 3 years from the date of final payment under the subcontract (29 Del.C. §6930)

#### PREVAILING WAGES

Included in this proposal are the minimum wages to be paid various classes of laborers and mechanics as determined by the Department of Labor of the State of Delaware in accordance with Title 29 Del.C. §6960, relating to wages and the regulations implementing that Section.

REQUIREMENT BY DEPARTMENT OF LABOR FOR SWORN PAYROLL INFORMATION

Title 29 Del.C. §6960 stipulates;

(b) Every contract based upon these specifications shall contain a stipulation that the employer shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics. The specifications shall further stipulate that the scale of wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work, and that there may be withheld from the employer so much of accrued payments as may be considered necessary by the Department of Labor to pay to laborers and mechanics employed by the employer the difference between the rates of wages required by the contract to be paid laborers and mechanics on the work and rates of wages received by such laborers and mechanics to be remitted to the Department of Labor for distribution upon resolution of any claims.

(c) Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.

Bidders are specifically directed to note the Department of Labor's prevailing wage regulations implementing §6960 relating to the effective date of the wage rates, at Section 6.3, which in relevant part states:

"Public agencies (covered by the provisions of 29 Del.C. §6960) are required to use the rates which are in effect on the date of the publication of specifications for a given project. In the event that a contract is not executed within one hundred twenty (120) days from the date the specifications were published, the rates in effect at the time of the execution of the contract shall be the applicable rates for the project."

Contractor may contact:

Department of Labor, Division of Industrial Affairs, 4425 N. Market Street, Wilmington, DE 19802  
Telephone (302) 761-8200

STATE OF DELAWARE  
DEPARTMENT OF LABOR  
DIVISION OF INDUSTRIAL AFFAIRS  
OFFICE OF LABOR LAW ENFORCEMENT  
PHONE: (302) 761-8200

Mailing Address:  
4425 North Market Street  
3rd Floor  
Wilmington, DE 19802

Located at:  
4425 North Market Street  
3rd Floor  
Wilmington, DE 19802

PREVAILING WAGES FOR HIGHWAY CONSTRUCTION EFFECTIVE MARCH 15, 2019

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
BRICKLAYERS	55.89	55.89	55.89
CARPENTERS	55.95	55.63	44.22
CEMENT FINISHERS	35.48	35.70	28.39
ELECTRICAL LINE WORKERS	29.40	47.49	23.24
ELECTRICIANS	70.49	70.49	70.49
IRON WORKERS	65.24	26.10	27.72
LABORERS	45.30	41.69	40.93
MILLWRIGHTS	17.62	17.10	14.76
PAINTERS	71.29	71.29	71.29
PILEDRIVERS	72.65	25.98	29.47
POWER EQUIPMENT OPERATORS	67.07	43.32	39.68
SHEET METAL WORKERS	24.89	22.21	20.12
TRUCK DRIVERS	37.52	30.88	37.62

CERTIFIED: 10/10/2019

BY: 

ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

**NOTE:** THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: T201906107.01 Pavement and Rehabilitation North VII 2019, New Castle County

# **SUPPLEMENTAL SPECIFICATIONS TO THE STANDARD SPECIFICATIONS**

**EFFECTIVE AS OF THE ADVERTISEMENT  
DATE OF THIS PROPOSAL  
AND INCLUDED BY REFERENCE**

**The Supplemental Specifications can be viewed and printed from  
the Department's Website.**

To access the Website;

- in your internet browser, enter; <https://www.deldot.gov>
- under 'BUSINESS', Click; 'Publications'
- scroll down under 'MANUALS' and Click; "Standard Specifications"
- be sure and choose the correct Standard Specification year; 2001 or 2016
- choose the latest revision prior to the date of this advertisement

The full Website Link is;

[https://www.deldot.gov/Publications/manuals/standard\\_specifications/index.shtml](https://www.deldot.gov/Publications/manuals/standard_specifications/index.shtml)

Copies of the Supplemental Specifications can be printed from the Website.

**The Contractor shall make himself aware of these revisions and corrections (Supplemental Specifications), and apply them to the applicable item(s) of this contract.**

## **SPECIAL PROVISIONS**

**CONSTRUCTION ITEM NUMBERS**

All construction pay items are assigned a six (6) digit number, shown as Item Number on the Plans and/or in the Special Provisions, and shall be interpreted in accordance with the following:

**Standard Item Number:**

The first three digits of the construction item numbers indicates the Section number as described in the Standard Specifications, and all applicable requirements of the Section shall remain effective unless otherwise modified by the Special Provisions. The last three digits of the construction item identifies the item by sequential number under that Section. A comprehensive list of construction item numbers are listed in the Standard Specifications. Additions to this list will be made as required.

**Special Provisions Item Number:**

The first three digits of the construction items, covered under Special Provisions, indicates the applicable Section number of the Standard Specifications, and shall be governed fully by the requirements of the Special Provisions. The last three digit of the items covered under Special Provisions identifies the item by sequential number.

Examples

**Standard Item Number - 202000 Excavation and Embankment**

202 Indicates Section Number

000 Indicates Sequential Number

**Special Provision Item Number - 202500 Grading and Reshaping Roadway**

202 Indicates Section Number

500 Indicates Sequential Number

**401502 - ASPHALT CEMENT COST ADJUSTMENT**

For Sections 304, 401, 402, 403, 404, and 405, payments to the Contractor shall be adjusted to reflect increases or decreases in the Delaware Posted Asphalt Cement Price when compared to the Project Asphalt Cement Base Price, as defined in these Special Provisions.

The Delaware Posted Asphalt Cement Price will be issued monthly by the Department and will be the industry posted price for Asphalt Cement, F.O.B. Philadelphia, Pennsylvania. The link for the [posting is here](#).

The Project Asphalt Cement Base Price will be the Delaware Posted Asphalt Cement Price in effect on the date of advertisement.

All deviations of the Delaware Posted Asphalt Cement Price from the Project Asphalt Cement Base Price are eligible for cost adjustment. No minimum increases or decreases or corresponding percentages are required to qualify for cost adjustment.

Actual quantity of asphalt cement qualifying for any Asphalt Cement Cost Adjustment will be computed using the weight of eligible asphalt that is shown on the QA/QC pay sheets as a percentage for the delivered material.

If the mix was not inspected and no QA/QC pay sheet was generated, then the asphalt percentage will be obtained from the job mix formula for that mix ID.

The asphalt percentage eligible for cost adjustment shall only be the virgin asphalt cement added to the mix.

There shall be no separate payment per ton cost of asphalt cement. That cost shall be included in the various unit prices bid per ton for those bid items that contain asphalt cement (mentioned above).

The Asphalt cement cost adjustment will be calculated on grade PG 64-22 asphalt regardless of the actual grade of asphalt used. The Project Asphalt Cement Base Price per ton for the project will be the Delaware Posted Asphalt Cement Price in effect on the date of project advertisement.

If the Contractor exceeds the authorized allotted completion time, the price of asphalt cement on the last authorized allotted work day, shall be the prices used for cost adjustment during the time liquidated damages are assessed. However, if the industry posted price for asphalt cement goes down, the asphalt-cement cost shall be adjusted downward accordingly.

**NOTE:**

Application of Asphalt Cement Cost Adjustment requirements as indicated above shall apply only to those contracts involving items related to bituminous base and pavements, and with bitumen, having a total of 1,000 tons or more of hot-mix bid quantity in case of Sections 401, 402 and 403; and 15,000 gallons or more in case of Sections 304, 404 and 405.

5/05/15

**401580 - RIDE QUALITY OF BITUMINOUS PAVEMENT**

**Description:**

This specification outlines requirements for an acceptable ride surface in addition to requirements established in DelDOT Standard Specifications. The Contractor is responsible for providing smoothness characteristics that meet these requirements. The Contractor is responsible for providing equipment, maintenance of traffic (MOT) as required by the Delaware MUTCD, and performing testing in accordance to this specification. All costs for testing and MOT are incidental to this item. Both the International Roughness Index (IRI) and deviations located within a 10' straightedge are used to characterize smoothness in this Special Provision.

**Definitions:**

*Class 1 Project* - a project that consists of full depth construction. Full depth construction is considered to be when contract documents or modifications provide opportunity for preparation of the subgrade prior to paving.

*Class 2 Project* - a project that consists of a minimum of two smoothness opportunities.

*Class 3 Project* - a project that consists of one smoothness opportunity.

*Deviation* - a hump or depression that exceeds defined tolerances.

*Smoothness Opportunity* - a smoothness opportunity is considered to be any of the following; roadway milling, placement of a leveling course, in-place recycling, or placement of a lift of bituminous concrete. The final wearing surface is considered one smoothness opportunity.

**Equipment:**

The Contractor must have a 10' straightedge available during all paving operations.

The Contractor must also have a high speed or lightweight inertial profiling system that meets requirements of AASHTO M328 capable of collecting data in both wheelpaths simultaneously.

Prior to the start of corrective actions, the Contractor must provide to the Engineer:

1. Manufacturer, Make, and Model of the test system
2. Equipment Owner,
3. Relevant Certifications,
4. Manufacturer Calibration Procedures, and
5. Relevant Operator Training information.

**Testing:**

The Contractor is responsible for testing the pavement surface using an approved inertial profiler in accordance to manufacturer and AASHTO R57 from the start of paving limits to the end of pavement limits. Testing must be performed 3 times in each lane paved in the direction of traffic flow. Testing must be performed within seven (7) days of completion of project paving operations in each location.

The Contractor is responsible for providing information relative to locations that are to be excluded from calculation of the International Roughness Index. These areas must still meet 10' straightedge requirements.

Areas that are to be tested but will be removed prior to IRI analysis are:

1. 50 feet prior to the first bridge deck expansion joint and 50 feet after the last expansion joint if a bridge deck is excluded from smoothness operations.
2. 50' longitudinally from the center of an existing obstruction within the test area such as a manhole, water main, or catch basin that impedes paving operations.

3. 50' longitudinally from transverse joints that separate it from existing pavement not included on this contract.

Areas that are not to be profiled but are still subject to 10' straightedge requirements are:

1. Shoulder areas
2. Parking lots
3. Ramps, Streets, or Acceleration / Deceleration lanes less than 1000' in length.

**Submission Requirements:**

Test results must be submitted to the Engineer within five working days of completion of testing. Results not received within the allotted time frame will be assessed a charge of \$1,000.00 per day at the discretion of the Engineer.

The Contractor is required to submit summary table IRI reports from their test equipment for 1 run for each lane and direction of paving. This report must also include:

1. Profiling Company Name
2. Date of Test
3. Contract Number
4. Location Description
5. Testing Personnel

The Contractor is required to submit ERD files for each of the 3 tests run in each lane and direction of paving to the Engineer for analysis.

The Contractor must provide to the Engineer written documentation indicating the start and end of bridges and the center of obstructions relative to the stationing used on the testing that are not subject to IRI analysis.

**Acceptance and Payment:**

Acceptance of the final pavement will be based on Engineer calculated IRI values using ProVAL software upon removal of allowable areas of exemption and the number of deviations found in the pavement surface.

The IRI measurements will be calculated in 0.1 mile (528 foot) sections for payment purposes. The average value of the three test runs will be used and the average value will be rounded to the nearest tenth.

Payments for each section will be based on estimated tonnage calculated from plan thickness and widths using the average maximum specific gravity ("Rice") for all surface mix used at that location.

Deviations equal to or in excess of 0.25" in 10' are to be corrected at the Contractor's expense or will have a discount charge of \$200.00 per deviation.

$$\text{Estimated Tonnage} = [L * W * T] * \text{Rice} * 62.4 \text{ (lb/ft}^3\text{)} * (0.0005 \text{ tons} / 12 \text{ in.})$$

Where: L = Length Segment (ft.)  
W = Lane Width (ft.)  
T = Plan Thickness (in.)

$$\text{IRI Incentive / Disincentive} = \text{Estimated Tonnage} * \text{UP} * (\text{PA}-100)/100$$

Where: UP = Contract Unit Price (Dollars)  
PA = Pay Adjustment (Table A)

The total pay adjustment for paving work performed on each location is:

$$(\sum \text{IRI adj for each section}) - \text{Total Deviations} * 200$$

It is possible to receive incentive for IRI measurements and a discount charge for excessive deviations on the same project. If a 528' section has an IRI value resulting in a deduction of at least 84% of the section pay, the deviation discount charge for that section is disregarded and the IRI discount charge is the only action taken for that section.

<b>Table A: Payment Adjustments for IRI</b>	
<b>Class 1</b>	
<b>IRI per 0.1 mile Segment (in./mi.)</b>	<b>Pay Adjustment</b>
50	103%
> 50 and < 145	$100 + 0.2(65 - \text{IRI})$
145	84%
<b>Class 2</b>	
<b>IRI per 0.1 mile Segment (in./mi.)</b>	<b>Pay Adjustment</b>
60	106%
> 60 and < 170	$100 + 0.2(90 - \text{IRI})$
170	84%

Correction to the paving surface, such as diamond grinding with approved equipment, patching, or other measures may be taken at the Contractor's expense and at the Engineers discretion to correct pavement surfaces assessed a discount charge. The Engineer may require corrective actions including remove & replace if the deviation discount charge exceeds 50% of the cost of materials or the IRI pay adjustment is 84%. Deviations must be corrected if it is determined that they are at a height or depth that may create a safety concern.

4/10/2019

**401696 – ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE**

**Description:**

To compensate for work associated with paving the tie-ins at entrances, driveways and intersecting streets when such work cannot be completed as part of the mainline (roadway, auxiliary lanes, shoulder) paving operation. The surcharge limits will extend from the outermost roadway element to the point of tie-in as directed by the Engineer with the following exceptions.

No Surcharge will be paid:

1. When the tie-in does not exceed three feet from the outermost roadway element.
2. For paving any portion of a tie-in which exceeds 100 feet from the outermost roadway element. The entire tie-in section will be performed under normal paving operations.
3. When the intersecting street is to be paved under the same Contract.
4. For paving of auxiliary lanes and crossovers in the median of divided highways.

**Method of Measurement:**

The quantity of entrance, driveway and intersecting street paving surcharge will be measured as the actual number of tons of bituminous concrete placed and accepted in entrances, driveways and intersecting streets as described in this item.

**Basis of Payment:**

The quantity of entrance, driveway and intersecting street paving surcharge will be paid for at the Contract unit price per ton. Price and payment will constitute full compensation for the additional labor and equipment costs involved with the reduced production associated with such work.

10/12/17

**401699 - QUALITY CONTROL/QUALITY ASSURANCE OF BITUMINOUS CONCRETE**

**.01 Description**

This item shall govern the Quality Assurance Testing for supplying bituminous asphalt plant materials and constructing bituminous asphalt pavements and the calculation for incentives and disincentives for materials and construction. The Engineer will evaluate all materials and construction for acceptance. The procedures for acceptance are described in this Section. Include the costs for all materials, labor, equipment, tools, and incidentals necessary to meet the requirements of this specification in the bid price per ton for the bituminous asphalt. Payment to the Contractor for the bituminous asphalt item(s) will be based on the Contract price per ton and the pay adjustments described in this specification.

**.02 Bituminous Concrete Production – Quality Acceptance**

**(a) Material Production - Tests and Evaluations.**

All acceptance tests shall be performed by qualified technicians at qualified laboratories following AASHTO or DelDOT procedures, and shall be evaluated using Quality Level Analysis. The Engineer will conduct acceptance tests. The Engineer will directly base acceptance on the acceptance test results, the asphalt cement quality, the Contractor's QC Plan work, and the comparisons of the acceptance test results to the QC test results. The Engineer may elect to utilize test results of the Contractor in some situations toward judging acceptance.

Supply and capture samples, as directed by the Engineer under the purview of the Engineer from delivery trucks before the trucks leave the production plant. Hand samples to the Engineer to be marked accordingly. The sample shall represent the material produced by the Contractor, and shall be of sufficient size to allow the Engineer to complete all required acceptance tests. The Engineer will direct the Contractor when to capture these samples, on a statistically random, unbiased basis, established before production begins each day based upon the anticipated production tonnage. The captured sample shall be from the Engineer specified delivery truck. The Contractor may visually inspect the specified delivery load during sampling and elect to reject the load. If the contractor elects to reject the specified delivery truck, each subsequent load will be inspected until a visually acceptable load is produced for acceptance testing. All visually rejected loads shall not be sent to a Department project.

The first sample of the production day will be randomly generated by the Engineer between loads 0 and 12 (0-250 tons). Subsequent samples will be randomly generated by the Engineer on 500-ton sub-lots for the production day. Samples not retrieved in accordance with the Contractor's QC plan will be deemed unacceptable and may be a basis for rejection of material produced. Parallel tests or dispute resolution tests will only be performed on material captured at the same time and location as the acceptance test sample. Parallel test samples or Dispute Resolution samples will be created by splitting a large sample or obtaining multiple samples that equally represent the material. The Engineer will perform all splitting and handling of material after it is obtained by the Contractor.

The Contractor may retain dispute resolution samples or perform parallel tests with the Engineer on any acceptance sample.

The Engineer will evaluate and accept the material on a lot basis. All the material within a lot shall have the same JMF (mixture ID). The lot size shall be targeted for 2000 tons or a maximum period of three days, whichever is reached first. If the 2000<sup>th</sup> ton target lot size is achieved during a production day, the lot size shall extend to the end of that production day. The Contractor may interrupt the production of one JMF in order to produce different material; this type of interruption will not alter the determination of the size or limits of material represented by a lot. The Engineer will evaluate each lot on a subplot basis. The size for each subplot shall be 100 to 500 tons and testing for the sub lots will be completed on a daily basis. For each subplot, the Engineer will evaluate one sample.

The target size of sub-lots within each lot, except for the first sample of the production day, is equal-sized 500 ton sub lots and will be based upon anticipated production, however, more or fewer sublots, with differing sizes, may result due to the production schedule and conditions. If the actual production is less than anticipated, and it's determined a sample will not be obtained (based upon the anticipated tonnage), a new sample location will be determined on a statistically random, unbiased basis based upon the new actual

production. If the actual production is going to be 50 tons or greater over the anticipated sub lot production, a new sample location will be determined on a statistically random, unbiased basis based upon the new actual production. The Engineer will combine the evaluation and test results for all of the applicable sublots in order to evaluate each individual lot.

If the Engineer is present, and the quantity exceeds 25 tons, a statistically random sample will be used for analysis. When the anticipated production is less than 100 tons and greater than 25 tons, and the Engineer is not present, the contractor shall randomly select a sample using the Engineer's random location program. The captured sample shall be placed in a suitable box, marked to the attention of the Engineer, and submitted to the Engineer for testing. A box sample shall also be obtained by the contractor at the same time and will be used as the Dispute Resolution sample if requested by the Engineer. The Contractor shall also obtain one liquid asphalt sample (1 pint) per grade of asphalt used per day and properly label it with all pertinent information.

The Engineer will conduct the following tests in order to characterize the material for the pavement compaction quality and to judge acceptance and the pay adjustment for the material:

- AASHTO T312 - Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
- AASHTO T166, Method C (Rapid Method) - Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface Dry Specimens
- AASHTO T308 - Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
- AASHTO T30 - Mechanical Analysis of Extracted Aggregate
- AASHTO T209 - Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt (HMA)
- ASTM D7227 - Standard Practice for Rapid Drying of Compacted Asphalt Specimens using Vacuum Drying Apparatus

**(b) Pavement Construction - Tests and Evaluations.**

The Engineer will directly base acceptance on the compaction acceptance test results, and on the inspection of the construction, the Contractor's QC Plan work, ride smoothness as referenced in the contract documents, lift thickness as referenced in the contract documents, joint quality as referenced in the contract documents, surface texture as referenced in the contract documents, and possibly the comparisons of the acceptance test results to the independent test results. For the compaction acceptance testing, the Engineer will sample the work on a statistically random basis, and will test and evaluate the work based on daily production.

Notify the Engineer of any locations within that road segment that may not be suitable to achieve minimum (93%) compaction due to existing conditions prior to paving the road segment. Schedule and hold a meeting in the field with the Engineer in order to discuss all areas that may potentially be applicable to Table 5a before paving starts. Areas that will be considered for Table 5a will be investigated in accordance to the method described in Appendix B. If this meeting is not held prior to paving, no areas will be considered for Table 5a. Areas of allowable exemptions that will not be cored include the following: partial-depth patch areas, driveway entrances, paving locations of less than 100 tons, areas around manholes and driveway entrances, and areas of paving that are under 400 feet in continuous total length and/or 5 feet in width.

The exempt areas around manholes will be a maximum of 4 feet transversely on either side from the center of the manhole, and 20 feet longitudinally on either side from the center of the manhole. The exempt areas around driveway entrances shall be the entire width of the driveway, and 3 feet from the edge of the longitudinal joint next to the driveway. Areas of exemption that will be cored for informational purposes only include: areas where the mat thickness is less than three times the nominal maximum aggregate size as directed by the Engineer, violations of Section 401.08 in the Standard Specifications as directed by the Engineer, and areas shown to contain questionable subgrade properties as proven by substantial yielding under a fully legally loaded truck. Failure to obtain core samples in these areas will result in zero payment for compaction regardless of the exempt status.

The Engineer will evaluate and accept the compaction work on a daily basis. Payment for the compaction will be calculated by using the material production lots as referenced in **.02 Acceptance Plan (a) Material**

**Production - B Tests and Evaluation** and analyzing the compaction results over the individual days covered in the material production lot. The compaction results will be combined with the material results to obtain a payment for this item.

The minimum size of a compaction lot shall be 100 tons. If the compaction lot is between 101 and 1000 tons, the Engineer shall randomly determine four compaction acceptance test locations. If the compaction lot is between 1001 and 1500 tons, the Engineer shall randomly determine six compaction acceptance test locations. If the compaction lot is between 1501 and 2000 tons, the Engineer shall randomly determine eight compaction acceptance test locations. If the compaction lot is greater than 2000 tons, the Engineer shall randomly determine two compaction acceptance test locations per 500 tons.

If a randomly selected area falls within an Engineer approved exemption area, the Engineer will select one more randomly generated location to be tested per the requirements of this Specification. If that cannot be accomplished, or if an entire location has been declared exempt, the compaction testing shall be performed as per these Specifications but a note will be added to the results that the location was an Engineer approved exempt location.

Testing locations will be a minimum of 1.0 feet from the newly placed longitudinal joint and 50 feet from a new transverse joint.

Cut one six (6) inch diameter core through the full lift depth at the exact location marked by the Engineer. Cores submitted that are not from the location designated by the Engineer will not be tested and will be paid at zero pay.

Notify the Engineer prior to starting paving operations with approximate tonnage to be placed. The Contractor is then responsible for notifying the appropriate Engineer test personnel within 12 hours of material placement. The Engineer will mark core locations within 24 hours of notification. After determination of locations, the Contractor shall complete testing within two operational days of the locations being marked. If the cores are not cut within two operational days, the area in question will be paid at zero pay for compaction testing.

Provide any traffic control required for the structural number investigation, sampling, and testing work at no additional cost to the Department.

Commence coring of the pavement after the pavement has cooled to a temperature of 140°F or less. Cut each core with care in order to prevent damaging the core. Damaged cores will not be tested. Label each core with contract number, date of construction, and number XX of XX upon removal from the roadway. Place cores in a 6-inch diameter plastic concrete cylinder mold or approved substitute for protection. Separate cores in the same cylinder mold with paper. Attach a completed QC test record for the represented area with the corresponding cores. The Engineer will also complete a test record for areas tested for the QA report and provide to Materials & Research. Deliver the cores to the Engineer for testing, processing, and report distribution at the end of each production day.

Repair core holes per Appendix A, Repairing Core Holes in Bituminous Asphalt Pavements. Core holes shall be filled immediately. Failure to repair core holes at the time of coring will result in zero pay for compaction testing for the area in question.

The Engineer will conduct the following tests on the applicable portion of the cores in order to evaluate their quality:

- AASHTO T166, Method C (Rapid Method) – Bulk Specific Gravity of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface Dry Specimens
- AASHTO T209 - Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt
- ASTM D7227 - Standard Practice for Rapid Drying of Compacted Asphalt Specimens using Vacuum Drying Apparatus

The Engineer will use the average of the last five test values of the same JMF (mixture ID) material at the production plant in order to calculate the average theoretical maximum specific gravity of the cores. The average will be based on the production days test results and as many test results needed from previous days production to have an average of five samples. If there are less than five values available, the Engineer will

use the JMF design value in addition to the available values to calculate the average theoretical maximum specific gravity.

### **.03 Payment and Pay Adjustment Factors.**

The Engineer will determine pay adjustments for the bituminous asphalt item(s) in accordance with this specification. The Engineer will determine a pay adjustment factor for the material produced and a pay adjustment factor for the pavement construction. Pay adjustments for material and construction will be calculated independently. When the pay adjustment calculation for either material or construction falls to zero payment per tables 4, 5, or 5a, the maximum pay adjustment for the other factor will not exceed 100.

Pay Adjustment factors will only be calculated on in place material. Removed material will not be used in payment adjustment calculations.

Material Production Pay Adjustments will be calculated based upon 70% of the contract unit price and calculated according to section .03(a) of this specification. Pavement construction Pay Adjustments will be calculated based upon 30% of the contract unit price and calculated according to section .03(b) of this specification.

#### **(a) Material Production - Pay Adjustment.**

Calculate the material pay adjustment by evaluating the production material based on the following parameters:

<b>Table 2 - Material Parameter Weight Factors</b>		
<b>Material Parameter</b>	<b>Single Test Tolerance (+/-)</b>	<b>Weight Factor</b>
Asphalt Content	0.4	0.30
#8 Sieve ( $\geq 19.0$ mm)	7.0	0.30
#8 Sieve ( $\leq 12.5$ mm)	5.0	0.30
#200 Sieve (0.075mm Sieve)	2.0	0.30
Air Voids (4.0% Target)	2.0	0.10

Using the JMF target value, the single test tolerance (from Table 2), and the test values, the Engineer will use the following steps to determine the material pay adjustment factor for each lot of material:

1. For each parameter, calculate the mean value and the standard deviation of the test values for the lot to the nearest 0.1 unit.
2. For each parameter, calculate the Upper Quality Index (QU):  

$$QU = ((\text{JMF target}) + (\text{single test tolerance}) - (\text{mean value})) / (\text{standard deviation}).$$
3. For each parameter, calculate the Lower Quality Index (QL):  

$$QL = ((\text{mean value}) - (\text{JMF target}) + (\text{single test tolerance})) / (\text{standard deviation}).$$
4. For each parameter, locate the values for the Upper Payment Limit (PU) and the Lower Payment Limit (PL) from Table 3 - Quality Level Analysis by the Standard Deviation Method. (Use the column for "n" representing the number of sublots in the lot. Use the closest value on the table when the exact value is not listed).
5. Calculate the PWL for each parameter from the values located in the previous step:  

$$PWL = PU + PL - 100.$$
6. Calculate each parameter's contribution to the payment adjustment by multiplying its PWL by the weight factor shown in Table 2 for that parameter.
7. Add the calculated adjustments of all the parameters together to determine the Composite PWL for the lot.
8. From Table 4, locate the value of the Pay Adjustment Factor corresponding to the calculated PWL. When all properties of a single test are within the single test tolerance of Table 2, Pay Adjustment factors shall be determined by Column B. When any property of a single test is

outside of the Single Test Tolerance parameters defined in Table 2, the Material Pay Adjustment factor shall be determined by Column C

9. For each lot, determine the final material price adjustment:

Final Material Pay Adjustment =

(Lot Quantity) x (Item Bid Price) x (Pay Adjustment Factor) x 70%. This final pay calculation will be paid to the cent.

In lieu of being assessed a pay adjustment penalty, the Contractor may choose to remove and replace the material at no additional cost to the Department. When the PWL of any material parameter in Table 2 is below 60, the Engineer may require the removal and replacement of the material at no additional cost to the Department. Test results on removed material shall not be used in calculation of future PWL calculations for Mixture ID.

The test results from the Engineer on production that is less than 100 tons will be combined with the two most recently completed Engineer tests with the same Mixture ID to calculate payment for the lot encompassing the single test. If that cannot be accomplished, the approved JMF will be used to calculate payment for the lot encompassing the single test. Payment for previously closed lots will not be affected by the analysis.

When a sample is outside of the allowable single test tolerance for any Materials criteria in Table 2, that sample will be isolated. For payment purposes, the test result of the out of acceptable tolerance sample will be combined with the two previous acceptable samples of the same JMF and analyzed per this specification. The material that is considered out of the acceptable tolerance will only include the material within the represented sub-lot (i.e., a maximum of 500 tons). If the previous acceptable test result is from the previous production day, only the material produced on the second production day will be considered out of tolerance. All future sub lots will not include the isolated test. The pay factors for the out of tolerance sample lot will be calculated using column C of table 4.

If, during production, a QA sample test result does not meet the acceptable tolerances and the Contractors QC sample duplicates the QA sample test result, the Contractor can make an appropriate change to the mixture (within the JMF boundaries), and request to have that sample further isolated. After the Contractor has made appropriate changes, the Contractor will visually inspect each produced load. The first visually acceptable load will be sampled and tested. If that sample test result shows compliance with the specifications, the material that is considered out of the acceptable tolerance will include the material from the previous acceptable test result to the third load after the initially sampled and tested sample. If the sample does not meet the specification requirements, the Engineer will no longer accept material. Production may resume when changes have been made and an acceptable sample and test result is obtained.

Table 3 – Quality Level Analysis by the Standard Deviation Method							
PU or PL	QU and QL for “n” Samples						
	n = 3	n = 4	n = 5	n = 6	n = 7	n = 8	n = 9
100	1.16	1.50	1.79	2.03	2.23	2.39	2.53
99	-	1.47	1.67	1.80	1.89	1.95	2.00
98	1.15	1.44	1.60	1.70	1.76	1.81	1.84
97	-	1.41	1.54	1.62	1.67	1.70	1.72
96	1.14	1.38	1.49	1.55	1.59	1.61	1.63
95	-	1.35	1.44	1.49	1.52	1.54	1.55
94	1.13	1.32	1.39	1.43	1.46	1.47	1.48
93	-	1.29	1.35	1.38	1.40	1.41	1.42
92	1.12	1.26	1.31	1.33	1.35	1.36	1.36
91	1.11	1.23	1.27	1.29	1.30	1.30	1.31
90	1.10	1.20	1.23	1.24	1.25	1.25	1.26
89	1.09	1.17	1.19	1.20	1.20	1.21	1.21
88	1.07	1.14	1.15	1.16	1.16	1.16	1.17

87	1.06	1.11	1.12	1.12	1.12	1.12	1.12
86	1.04	1.08	1.08	1.08	1.08	1.08	1.08
85	1.03	1.05	1.05	1.04	1.04	1.04	1.04
84	1.01	1.02	1.01	1.01	1.00	1.00	1.00
83	1.00	0.99	0.98	0.97	0.97	0.96	0.96
82	0.97	0.96	0.95	0.94	0.93	0.93	0.93
81	0.96	0.93	0.91	0.90	0.90	0.89	0.89
80	0.93	0.90	0.88	0.87	0.86	0.86	0.86
79	0.91	0.87	0.85	0.84	0.83	0.82	0.82
78	0.89	0.84	0.82	0.80	0.80	0.79	0.79
77	0.87	0.81	0.78	0.77	0.76	0.76	0.76
76	0.84	0.78	0.75	0.74	0.73	0.73	0.72
75	0.82	0.75	0.72	0.71	0.70	0.70	0.69
74	0.79	0.72	0.69	0.68	0.67	0.66	0.66
73	0.75	0.69	0.66	0.65	0.64	0.63	0.63
72	0.74	0.66	0.63	0.62	0.61	0.60	0.60
71	0.71	0.63	0.60	0.59	0.58	0.57	0.57
70	0.68	0.60	0.57	0.56	0.55	0.55	0.54
69	0.65	0.57	0.54	0.53	0.52	0.52	0.51
68	0.62	0.54	0.51	0.50	0.49	0.49	0.48
67	0.59	0.51	0.47	0.47	0.46	0.46	0.46
66	0.56	0.48	0.45	0.44	0.44	0.43	0.43
65	0.52	0.45	0.43	0.41	0.41	0.40	0.40
64	0.49	0.42	0.40	0.39	0.38	0.38	0.37
63	0.46	0.39	0.37	0.36	0.35	0.35	0.35
62	0.43	0.36	0.34	0.33	0.32	0.32	0.32

**Table 3 – Quality Level Analysis by the Standard Deviation Method**

PU or PL	QU and QL for “n” Samples						
	n = 3	n = 4	n = 5	n = 6	n = 7	n = 8	n = 9
61	0.39	0.33	0.31	0.30	0.30	0.29	0.29
60	0.36	0.30	0.28	0.27	0.27	0.27	0.26
59	0.32	0.27	0.25	0.25	0.24	0.24	0.24

**Table 4 - PWL Pay Adjustment Factors**

PWL	Pay Adjustment Factor (%) Column B	Pay Adjustment Factor (%) Column C
100	+5	0
99	+4	-1
98	+3	-2
97	+2	-3
96	+1	-4

95	0	-5
94	-1	-6
93	-2	-7
92	-3	-8
91	-4	-9
PWL<91	PWL - 100	PWL - 100

**(b) Pavement Construction - Pay Adjustments.**

The Engineer will determine the pavement construction pay adjustment by evaluating the construction of the pavement, based on the following parameter:

- Degree of compaction of the in-place material

Using the test values for the cores, the Engineer will use the following steps to determine the pavement construction pay adjustment for each lot of work. .

1. Calculate the core bulk specific gravity values from the subplot tests values, to the nearest 0.001 unit. Obtain the Theoretical maximum Specific Gravity values from the corresponding laboratory subplot tests.
2. Calculate the Degree of Compaction:  
Degree of Compaction =  
 $((\text{Core Bulk Specific Gravity}) / (\text{Theoretical Maximum Specific Gravity})) \times 100\%$  recorded to the nearest 0.1%.
3. The average compaction for the sublots shall be averaged together for the compaction level of the lot. The lots compaction test level shall be averaged and recorded to the nearest whole percent.
4. Locate the value of the Payment Adjustment Factor corresponding to the calculated degree of compaction from Table 5 or Table 5a.
5. Determine the pavement construction price adjustment by using the following formula:  
Construction Pay adjustment = (Lot Quantity) x (Bid Price) x (Pay Adjustment Factor) x 30%.

**Table 5: Compaction Price Adjustment Highway Locations**

Degree of Compaction (%)	Range	Pay Adjustment Factor (%)
$\geq 97.0$	$\geq 96.75$	-100*
96.5	96.26 – 96.74	-5
96.0	95.75 – 96.25	-3
95.5	95.26 – 95.74	-2
95.0	94.75 – 95.25	0
94.5	94.26 – 94.74	0
94.0	93.75 – 94.25	1

93.5	93.26 – 93.74	3
93.0	92.75 – 93.25	5
92.5	92.26 – 92.74	3
92.0	91.75 – 92.25	0
91.5	91.26 – 91.74	0
91.0	90.75 – 91.25	-5
90.5	90.26 – 90.74	-15
90.0	89.75 – 90.25	-20
89.5	89.26 – 89.74	-25
89.0	88.75 – 89.25	-30
88.5	88.26 – 88.74	-50
≤88.0	≤88.25	-100*

\* or remove and replace it at Engineer's discretion

**Table 5A: Compaction Price Adjustment Other<sup>1</sup> Locations**

Degree of Compaction	Range	Pay Adjustment Factor (%)
≥ 97.0	≥ 96.75	-100*
96.5	96.26 – 96.74	-5
96.0	95.75 – 96.25	-3
95.5	95.26 – 95.74	-2
95.0	94.75 – 95.25	0
94.5	94.26 – 94.74	0
94.0	93.75 – 94.25	0
93.5	93.26 – 93.74	1
93.0	92.75 – 93.25	3
92.5	92.26 – 92.74	1
92.0	91.75 – 92.25	0
91.5	91.26 – 91.74	0
91.0	90.75 – 91.25	0
90.5	90.26 – 90.74	0
90.0	89.75 – 90.25	0
89.5	89.26 – 89.74	0
89.0	88.75 – 89.25	-1
88.5	88.26 – 88.74	-3

88.0	87.75 – 88.25	-5
87.5	87.26 – 87.74	-10
87.0	86.75 – 87.25	-15
86.5	86.26 – 86.74	-20
86.0	85.75 – 86.25	-25
85.5	85.26 – 85.74	-30
85.0	84.75 – 85.25	-40
84.5	84.26 – 84.74	-50
$\leq 84.0$	$\leq 84.25$	-100*

\* or remove and replace at Engineer's discretion

<sup>1</sup> This chart is to be used for areas where the structural value of the area to be paved is less than 1.75 as determined by the Engineer. See Appendix B - Method for Obtaining Cores for Determination of Roadway Structure. This chart is applicable to rehabilitation work only; full depth construction will not be considered for Table 5a.

#### **.04 Dispute Resolution.**

Disputes or questions about any test result shall be brought to the attention of the Contractor and the Engineer within two operational days of reported test results. The following dispute resolution procedures will be used.

The Engineer and the Contractor will review the sample quality, the test method, the laboratory equipment, and the laboratory technician. If these factors are not the cause of the dispute, a third party dispute resolution will be used.

Third party resolution testing can be performed at either another Contractor's laboratory, the Engineer's laboratory, or an independent accredited laboratory. Unless otherwise mutually agreed upon by DAPA and the Engineer, the Engineer's qualified laboratory in Dover and qualified personnel shall conduct the necessary testing for third party Dispute Resolution after the Engineer has provided reasonable notice to allow the Contractor to witness this testing.

When disputes over production testing occur, the samples used for Dispute Resolution testing will be those samples properly captured, labeled, and stored, as described in the second paragraph of the section of these specifications titled **.02 Acceptance Plan, (a) Material Production - Tests and Evaluations**. If no samples are available, the original testing results will be used for payment calculations.

Dispute Resolution samples for air void content will be heated by a microwave oven.

If there is a discrepancy between the Engineer's acceptance test result and the Contractor's test result, the Contractor may ask for the Dispute Resolution sample to be tested. The Contractor may request up to two dispute resolution samples be tested per calendar year without charge. Any additional Dispute Resolution samples run at the Contractor's request where the results substantiate the acceptance test result will be assessed a fee of \$125. Any additional Dispute Resolution samples that substantiate the Contractor's test result will not be assessed the fee.

When disputes over compaction core test results occur, the Engineer's acceptance core will be used for the dispute resolution sample. The Contractor will be advised on when the testing will occur as referenced above to witness the testing.

The results of the dispute resolution testing shall replace all of the applicable disputed test results for payment purposes.

## **Appendix A - Repairing Core Holes in Bituminous Asphalt Pavement**

### **Description.**

This appendix describes the procedure required to repair core holes in a bituminous concrete pavement.

### **Materials and Equipment.**

The following material shall be available to complete this work:

- Patch Material - DelDOT approved High Performance Cold Patch material shall be used.

The following equipment shall be available to complete this work:

- Sponge or other absorbent material - Used to extract water from the hole.
- Compaction Hammer - mechanical (electrical, pneumatic, or gasoline driven) tamping device with a flat, circular tamping face smaller than 6 inches in diameter. .

### **Construction Method.**

After core removal from the hole, remove all excess water from within the hole, and prevent water from re-entering the hole.

Place the patch material in lifts no greater than 3 inches and compact with mechanical tamping device. If the hole is deeper than 3 inches, use two lifts of approximately equal depths so that optimum compaction is achieved. Make sure that the patch surface matches the grade of the existing roadway. Make every effort to achieve the greatest possible compaction

### **Performance Requirements.**

The Engineer will judge the patch on the following basis:

- The patch shall be well compacted
- The patch surface shall match the grade of the surrounding roadway surface.

### **Basis of Payment.**

No measurement or payment will be made for the patching work. The Contractor must gain the Engineer's acceptance of the patching work before the Engineer will accept the material represented by the core.

**Appendix B - Method for Obtaining Cores for Determination of Roadway Structure**

The Contractor is responsible for obtaining cores in areas that they propose are eligible for compaction price adjustments according to Table 5a in this specification. Table 5a is not applicable for new full-depth pavement box construction. Cores submitted for this process shall be obtained according to the following process.

1. Contact Materials & Research (M&R) personnel to determine if information about the area is already available. If M&R has already obtained cores in the location that is being investigated, the contractor may opt to use the laboratory information for the investigation and not core the area on their own.
2. If M&R does not have information concerning the section of the roadway, the contractor needs to contact M&R to arrange for verification of coring operations. Arrangements shall be made to allow for an individual from M&R to be on the site when the cores are obtained. Cores will be turned over to M&R for evaluation.
3. The Contractor is responsible for providing all traffic control and repairing core holes in accordance to 401699 Appendix A - Repairing Core Holes in Bituminous Asphalt Pavements.
4. Cores are to be taken throughout the entire project for the area in question. Cores will be spaced, from the start of the project in increments determined based on field and project specifics. Cores will be evenly distributed throughout the project location. The cores will be taken in the center of the lane in question.
5. Additional cores may be taken at other locations, if surface conditions indicate that there may be a substantial difference in the underlying section. The location of these cores should be documented and submitted to M&R.
6. Cores shall be full depth and include underlying materials. If there is a stone base included in the pavement section, at a minimum 1 core must have information concerning the thickness of the base. This is determined by augering to the subgrade surface.
7. The calculations used to determine the structural capacity of the roadway is as follows. If the contractor finds, upon starting the coring process, that the areas are of greater thickness than applicable to Table 5a, they may terminate the coring process on their own and retract the request.

## Structural Number Calculations

Each pavement box material is assigned a structural coefficient based upon AASHTO design guides. The structural coefficient is used to determine the total strength of the pavement section.

Materials used in older pavement sections are assigned lower structural coefficients to compensate for aging of the materials. The coefficients used to determine the structural number of an existing pavement are:

Existing Material	Structural Coefficient
HMA	0.32
Asphalt Treated Base	0.26
Soil Cement	0.16
Surface Treatment (Tar & Chip)	0.10
GABC	0.14
Concrete	0 - 0.7*

\* The Structural Coefficient of Concrete is dependent upon the condition of the concrete. Compressive strengths & ASR analysis are used to determine condition - contact the Engineer if this situation arises.

Newly placed materials use a different set of structural coefficients. They are as follows:

New Material	Structural Coefficient
HMA	0.40
Asphalt Treated Base (BCBC)	0.32
Soil Cement	0.20
GABC	0.14

### Example:

Location includes placement of a 1.25" Type C overlay on 2.25" Type B. Existing roadway is cored and is shown to consist of 2" HMA on 7" GABC.

Calculation:

For the Type B lift the calculation would be:

Existing HMA	2 * 0.32	=	0.64
GABC	7 * 0.14	=	0.98
			<hr/> 1.62

For the Type C lift the calculation would be:

Newly Placed B	$2.25 * 0.4$	=	0.90
Existing HMA	$2 * 0.32$	=	0.64
GABC	$7 * 0.14$	=	<u>0.98</u>
			2.52

11/3/14

**763621 - CONSTRUCTION ENGINEERING, REHABILITATION**

**Description:**

Collect survey information and provide layout as described in this provision and as noted on the Plans. Assume full responsibility for any errors and/or omissions in the work of all engineering staff employed.

Provide and have available for the project adequate engineering staff that is:

1. Competent and experienced to set lines and grades needed to construct the project;
2. Able to perform the work to the scope and magnitude outlined herein.

Construction Engineering functions and requirements:

1. Provide all necessary surveying equipment required for all engineering work on the project.
  - a. Check all equipment/instruments prior to use on the project.
  - b. Immediately replace or recalibrate equipment found to be out of adjustment or inadequate to perform its function to the satisfaction of the Engineer.
2. Perform all computations necessary to establish the exact position of the work from control points and preserve.
  - a. Maintain adequate workbooks of all computations survey notes and other records.
  - b. Make available to the Department, neat and legible, all computations, survey notes and other records necessary to accomplish the work.
3. Preliminary topographic survey for all proposed curb ramps locations identified in the Plans and the layout of grade information provided by the Engineer for curb ramp construction;
4. Obtain topographic information a minimum of 25' in each direction from the back of curb where the curb ramp is proposed;
  - a. Grades for the edge of pavement, gutter line (if applicable), top of curb, front and back edge of sidewalk, existing obstructions such as utility poles, junction wells, traffic poles and cabinets, manholes, valves, fire hydrants, drainage inlets, steps, retaining walls, building faces or other obstructions that are directly adjacent or within the proposed curb ramp limits.
  - b. Collect data in a format that is compatible with DelDOT Design Standards and submit to the Engineer for evaluation curb ramps that are located in areas with multiple obstructions, limited area, or other unique characteristics that require more detailed layout. The Engineer will provide the final grades for construction of these curb ramps.
5. Establish necessary grades to ensure all proposed curb ramps, roadways or ditches, installation of drainage structures, or other items of work as determined by the Engineer, have positive drainage;

Note:

Professional services performed under this item by individuals/firms other than the Contractor are not subject to the subcontracting requirements of Subsection 108.01 of the Standard Specifications.

**Method of Measurement:**

The quantity of Construction Engineering - Rehabilitation will be measured as the actual number of hours the Contractor's survey crew is in the field actively engaged in Construction Engineering - Rehabilitation Work.

**Basis of Payment:**

The quantity of Construction Engineering - Rehabilitation will be paid for at the Contract unit price per hour. Price and payment constitutes full compensation for furnishing all labor, equipment, instruments, stakes, and other material necessary to satisfactorily complete the work as herein described under this item.

7/10/2012

**801500 - MAINTENANCE OF TRAFFIC - ALL INCLUSIVE**

**Description:**

This item shall consist of furnishing, installing, maintaining and/or relocating the necessary temporary traffic control devices used to maintain vehicular, bicycle and pedestrian traffic, including persons with disabilities in accordance with the Americans with Disabilities Act, as amended. All work shall be performed in a manner that will provide reasonably safe passage with the least practicable obstruction to all users, including vehicular, bicycle and pedestrian traffic.

All requirements of the Delaware Manual on Uniform Traffic Control Devices (MUTCD), Part 6, herein referred to as the Delaware MUTCD. (latest edition with all revisions made up to the date of Advertisement of this project) shall apply for all temporary traffic control devices. Any, and all, control, direction, management and maintenance of traffic shall be performed in accordance with the requirements of the Delaware MUTCD, notes on the Plans, this specification, and as directed by the Engineer.

The Contractor shall be aware that the Case Diagrams and safety measures outlined in the Delaware MUTCD are for common construction situations and modifications may be warranted based on the complexity of the job. The Contractor shall submit justification for modifications to the Temporary Traffic Control Plan (TTCP) to the Engineer for approval prior to implementation.

The Department reserves the right to impose additional restrictions, as needed, for the operational movement and safety of the traveling public. The Department reserves the right to suspend the Contractor's operations until compliance with the Engineer's directive for remedial action, based on but not limited to the following reasons:

1. The Contractor's operations are not in compliance with the Delaware MUTCD, the specifications or the Plans.
2. The Contractor's operations have been deemed unsafe by the Traffic Safety Engineer or District Safety Officer.

**Materials and Construction Methods:**

The Contractor shall submit a Temporary Traffic Control Plan (TTCP) or a Letter of Intent to use the Plan recommended Delaware MUTCD Case Diagram(s) at or prior to the pre-construction meeting. The Contractor shall submit the TTCP for all Contractor and subcontractor work to be performed on the project for the Department's approval before the start of work.

When specified by a note in the Plans, the Contractor shall be required to have an American Traffic Safety Services Association (ATSSA) certified Traffic Control Supervisor on the project. The authorized designee must be assigned adequate authority, by the Contractor, to ensure compliance with the requirements of the Delaware MUTCD and provide remedial action when deemed necessary by the Traffic Safety Engineer or the District Safety Officer. The ATSSA certified Traffic Control Supervisor's sole responsibility shall be the maintenance of traffic throughout the project. This responsibility shall include, but is not limited to, the installation, operations, maintenance and service of temporary traffic control devices. Also required is the daily maintenance of a log to record maintenance of traffic activities, i.e., number and location of temporary traffic control devices; and times of installation, changes and repairs to temporary traffic control devices. The ATSSA Traffic Control Supervisor shall serve as the liaison with the Engineer concerning the Contractor's maintenance of traffic. The name, contact number and certification for the designated Traffic Control Supervisor shall be submitted at or prior to the pre-construction meeting. The cost of the ATSSA certified Traffic Control Supervisor shall be incidental to this item.

Temporary traffic control devices shall be maintained in good condition in accordance with the brochure entitled "Quality Guidelines for Temporary Traffic Control Devices", published by the American Traffic Safety Services Association (ATSSA). Any temporary traffic control devices that do not meet the quality guidelines shall be removed and replaced with acceptable devices. Failure to comply will result in work stoppage with time charges continuing to be assessed.

Any existing signs that conflict with any temporary or permanent construction signs shall be covered as needed or as directed by the Engineer. The cost for temporarily covering conflicting signs shall be incidental to this item.

Access to all transit stops located within the project limits shall be maintained unless otherwise directed by the Plans or the Engineer. Maintaining access shall include maintaining an area for the transit vehicle and also an accessible path for pedestrians to safely access the transit stop.

The Contractor shall notify the Engineer, in writing, no less than fourteen (14) calendar days prior to the start of any detour(s) and road closures. The Engineer will notify the following entities:

- Local 911 Center
- Local School Districts
- Local Post Offices
- DelDOT's Transportation Management Center (TMC)
- Town Managers
- Local Police
- DelDOT's Public Relations
- Delaware Transit Corporation (DTC)

Immediately prior to the implementation of any lane or road closures, the Engineer shall notify the DelDOT TMC at (302) 659-4600. Notifications shall also be provided when the closures are lifted. The Engineer shall notify TMC and the District Safety Officer if any lane closures cannot be removed prior to the end of the allowable work hours.

The Contractor shall notify the local 911 center if access to a fire hydrant is temporarily restricted. The Contractor shall provide written confirmation to the Engineer that the local 911 center has been notified.

If a detour is required during any part or the entire period of this Contract, an approved detour plan shall be obtained from the Department's Traffic Safety Section. All signs, barricades and other temporary traffic control devices required as part of the approved detour plan shall be installed and maintained by the Contractor on the route that is closed and on the detour route. Road closures without an approved detour plan shall not be allowed. If a road is closed without an approved detour plan, the Contractor's operations shall be stopped immediately.

The Contractor shall provide and maintain ingress and egress for each property abutting the construction area and each property located between the diversion points of any detour and the actual construction site. Construction activities which may temporarily or otherwise interfere with property access shall be coordinated in advance with the affected property owners.

The Contractor shall conduct construction operations in a manner which will minimize delays to traffic, and shall meet the following requirements:

1. If work is being performed within 200 feet in any direction of an intersection that is controlled by a traffic signal, the flagger(s) shall direct the flow of traffic in concert with the traffic signals in construction areas to avoid queuing, unless active work prohibits such action. The flagger shall direct traffic to prevent traffic from queuing through an intersection (i.e., blocking an intersection). Only a Traffic Officer may direct traffic against the operation of a traffic signal and only until the operation occurring within the intersection is completed.
2. When a lane adjacent to an open lane is closed to travel, the temporary traffic control devices shall be set 2 feet (0.61 m) into the closed lane from the edge of the open lane, unless an uncured patch exists or actual work is being performed closer to the open lane with minimum restriction to traffic.
3. Except for "buffer lanes" on high volume and/or high speed roadways, lanes shall not be closed unless construction activity requiring lane closure is taking place, or will take place within the next hour. Lanes shall be reopened immediately upon completion of the work. Moving operations will require the lane closures be shortened as the work progresses and as traffic conditions warrant to minimize the length of the closure. The Contractor shall conduct construction operations in a manner so as to minimize disruption to traffic during

peak hours and periods of heavy flow. The Department reserves the right to stop or change the Contractor's operations, if in the opinion of the Engineer, such operations are unnecessary at that time or the operations are unnecessarily impeding traffic.

4. Work in the vicinity of traffic signals, shall be scheduled to minimize the time during which the signal is operated without detectors, and prior approval from the Engineer shall be required. TMC shall be notified in advance of cutting a loop detector, and be immediately notified once the loop detector has been reinstalled. The Contractor shall provide sufficient advance notice of the loop detector work with the Engineer to ensure the aforementioned requirements are met.

It is required that all temporary traffic control work and related items shall either be performed entirely by the Contractor's own organization, or totally subcontracted. Maintenance of equipment shall not be subject to this requirement.

Any deficiencies related to temporary traffic control that are reported to the Contractor in writing shall be corrected within 24 hours or as directed by the Engineer. Failure to comply will result in non-payment for those devices that are found to be deficient for the duration of the deficiency. Serious deficiencies that are not corrected immediately shall result in suspension of work until items identified are brought back into compliance.

At the end of each day's work, the Contractor shall correct all pavement edge drop-offs in accordance with Table 6G-1 in the Delaware MUTCD. This corrective work shall be accomplished with Temporary Roadway Material (TRM) unless an alternate method is specified in the Plans. All ruts and potholes shall be filled with TRM as soon as possible but no later than the end of each work day. Placement and Payment of TRM shall be completed in accordance with Section 403 of the Standard Specifications. If temporary elimination of a drop-off hazard cannot be accomplished, then the area should be properly marked and protected with temporary traffic control devices such as temporary barricades, warning signs, flashing lights, etc. as required by Section 6G.21 of the Delaware MUTCD.

All open trench excavation accessible by vehicular traffic must be backfilled prior to the end of each working day. Steel plates shall not be used except in emergency situations and only with prior written approval from the Engineer unless otherwise directed by the Plans.

The Contractor shall submit, at or prior to the preconstruction meeting, detailed drawings including but not limited to existing striping lengths, lane and shoulder widths, turn lane lengths, locations of stop bars, turn arrows, crosswalks and railroad crossings. The drawings shall depict the existing pavement markings for each project location. These drawings will be reviewed by the Department's Traffic Section to determine the need for modification(s) for compliance with the Delaware MUTCD. Temporary pavement markings, on the final pavement surface, shall match the Plan dimensions and layout or the approved drawings of the permanent markings in compliance with Section 3 of the Delaware MUTCD. All conflicting or errant striping shall be removed as directed by the Engineer in compliance with the specifications for Item 817031 - Removal of Pavement Striping.

At the end of each day's operation and before traffic is returned to unrestricted roadway use, temporary striping shall be utilized when the existing pavement is milled and hot mix will not be placed the same day or more than a single course of hot mix is to be placed or permanent roadway striping cannot be placed on the same day as the placement of the final course of hot mix. Placement of temporary striping shall receive prior approval from the Engineer and the contractor shall apply temporary pavement markings in accordance with the requirements of Section 817 of Delaware Standard specifications and the Delaware MUTCD. Payment for temporary pavement striping shall be made at the unit price bid for item 817 - Temporary Striping. Payment for final striping will be included in the applicable striping item.

The Contractor shall have temporary striping/delineating materials (such as raised markers, tape, and other approved materials) available at the job site for verification by the Department prior to starting the hot-mix paving operation on roads to be immediately opened to traffic. These materials shall be used by the Contractor for temporary markings if he/she fails to apply temporary marking paint, etc., as required by the Delaware MUTCD. No paving operations on roads to be immediately opened to traffic will be allowed unless such verification has been made for the availability of the materials at the job site.

Travel lane and ramp closings on multilane highways and Interstates shall not be permitted during the following holiday periods:

- December 24 through December 27 (Christmas Day)
- December 31 through January 3 (New Years Day)
- Friday prior to Easter through Easter Sunday
- Thursday prior to Memorial Day through the Tuesday following Memorial Day
- Dover International Speedway Race Weekends (Thursday prior to the race event through the day after the race event)
- July 3 through July 5 (Independence Day)
- Thursday prior to Labor Day through the Tuesday following Labor Day
- Wednesday prior to Thanksgiving Day through the Monday following Thanksgiving Day

Additional time restrictions may apply as noted in the project plans or as directed by the Engineer. Any requests to waive any restrictions must be made in writing to the Engineer for review and approval. A copy of the request shall be provided to the District Safety Officer for review.

### **Certification:**

Temporary traffic control devices used on all highways open to the public in this State shall conform to the Delaware MUTCD. All devices shall be crashworthy in accordance with the National Cooperative Highway Research Program (NCHRP) Report 350, the memorandum issued August 28, 1998 by The USDOT Federal Highway Administration, and/or in accordance with the latest edition of the Manual for Assessing Safety Hardware (MASH), published by the American Association of State Highway and Transportation Officials (AASHTO).

The Contractor shall submit certification for temporary traffic control devices or vendors used specifically on this project at or prior to the pre-construction meeting.

Certification of compliance with NCHRP report 350 and/or MASH is required for the following categories of temporary traffic control devices:

**Category I** contains small and lightweight channelizing and delineating control devices which includes cones, tubular markers, flexible delineator post and drums, all without any accessories or attachments.

**Category II** includes temporary traffic control devices that are not expected to produce significant vehicular velocity changes to impacting vehicles. These devices which shall weigh 100 pounds or less, include Type I, II and III barricades, portable sign supports with signs, and intrusion alarms. Also included are drums, cones, and vertical panels with accessories or attachments.

**Category III** includes temporary traffic control devices that are expected to cause significant vehicular velocity changes to impacting vehicles. These devices which weigh more than 100 pounds include temporary barrier, temporary impact attenuators, and truck-mounted attenuators.

**Category IV** includes portable or trailer-mounted devices such as arrow panels, variable message signs, temporary traffic signals and temporary area lighting.

For Category I devices, the manufacturer or Contractor may self-certify that the devices meet the NCHRP-350 and/or MASH criteria. The Contractor shall supply the Federal Highway Administration's NCHRP-350 and/or MASH acceptance letter for each type of device that falls under Category II and III devices.

### **Basis of Payment:**

Payment will be made at the Lump Sum price for "Maintenance of Traffic", for which price and payment constitutes full compensation for all maintenance of traffic activities accepted by the Engineer, which shall include the cost of furnishing and relocating permanent and temporary traffic control signs, traffic cones or drums, submission of temporary traffic control plan(s), submission of existing pavement marking drawings, submission of all required certifications, labor, equipment and incidentals necessary to complete the item. Payment to furnish and maintain other temporary traffic control devices including but not limited to Portable

P.C.C. Safety Barrier, Truck Mounted Attenuators, Portable Changeable Message Signs, Arrow Panels and Portable Light Assemblies will be made at the contract unit price for each item.

**NOTE**

If the Contractor does not complete the Contract work within the Contract completion time (including approved extension time), the Contractor shall be responsible for providing the necessary temporary traffic control devices that are required to complete any remaining work. The costs of such temporary traffic control shall be borne by the Contractor. No additional payment will be made to the Contractor to maintain traffic in accordance with the Delaware MUTCD, contract plans and specifications. Temporary traffic control items include, but not be limited to, warning lights, warning signs, barricades, plastic drums, P.C.C. safety barrier, flaggers, traffic officers, arrow panels, message boards, and portable impact attenuators.

10/5/16

**801501 - MAINTENANCE OF RAILROAD TRAFFIC (WWRC)**  
Wilmington & Western Railroad

**Description:**

The item shall consist of complying with all the terms and conditions set and defined under these specifications and notes on the Plans while performing the construction activities of this contract. For this Contract, the term Railroad and/or Owner shall be understood to mean the Wilmington & Western Railroad (WWRC).

**No work shall commence on Railroad Right-of-Way until all insurance has been submitted and approved by the Railroad and the Engineer.**

Under this Contract, the General Contractor and all of the Subcontractors working within the track envelope shall be required to obtain and hold in force for the life of the Contract, all of the following insurances to the amounts listed. The track envelope shall be defined as any contractor working within twenty-five (25) feet vertically (as measured from the top of the rail) or horizontally (as measured from the centerline of the track out from each side) of the railroad tracks.

In the event of multiple tracks, the horizontal measurement shall be taken from twenty-five (25) feet outside of the centerline of the outside tracks. The track envelope shall include all areas between the twenty-five (25) foot measurements.

Proof of meeting these insurance values shall be by submission of Certificates of Insurance from their Insurance carriers. Only the cost of the Railroad Protective Liability Insurance shall be paid by this Item. The Railroad Protective Insurance may be issued as separate policies for each individual General Contractor and applicable Subcontractor(s), or may be a singular policy supplied by the General Contractor that specifically states the policy covers the General and all Subcontractors.

Should the General or any of his Subcontractors whose work does not actually involve track or signalization work, find themselves working within the track envelope (as by definition above) feel that an exemption should be issued for the Railroad Protective Liability Insurance coverage, then the Railroad may issue such an exemption. This exemption will only apply to the Railroad Protective Liability Insurance and all other insurance listed within this specification shall still be required from all contractors.

The General Contractor or any of his Subcontractors must make written application to be considered for this exemption directly to the Railroad. If any exemption(s) are issued, a credit will be deducted based on a negotiated amount for this insurance. The decision of the Railroad is final.

**Insurance:**

Before any work on the project is commenced, the Contractor shall be required to carry insurance of the following kinds and amounts in addition to any other forms of insurance or bonds required under the terms of the contract and specifications.

**Insurance Requirements:**

The General Contractor and all of the Subcontractors working within the track envelope, as defined above, shall be required to secure, at its sole cost and expense, various types of insurance coverage with various limits. These insurance coverages must be in a form and be underwritten by insurance companies that meet with the Owner's and Railroad's approval. The types of insurance required include:

1. Railroad Protective Liability Insurance (during construction or maintenance only)
2. Commercial General Liability Insurance
3. Automobile Liability Insurance
4. All Risk Property Insurance
5. Worker's Compensation Insurance

Specific insurance requirements for the above listed Policy types are as follows:

### **1. Railroad Protective Liability Insurance**

Railroad Protective Liability (RRP) Insurance covering the Operations performed by Contractor or any subcontractor within twenty-five (25) feet vertically or horizontally of railroad tracks. The Contractor and any Subcontractors working within that envelope shall have limits of liability of not less than two million dollars (**\$2,000,000**) each occurrence, combined single limit for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof. A six million dollar (**\$6,000,000**) annual aggregate shall apply.

The Contractor and any Subcontractors working within the track envelope (as defined above) of an active track carrying passenger traffic shall have limits of liability of not less than six million dollars (**\$6,000,000**) each occurrence, combined single limit for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof. A ten million dollar (**\$10,000,000**) annual aggregate shall apply.

The certificate shall name the Wilmington & Western Railroad, 1601 Railroad Avenue, P.O. Box 5787, Wilmington, DE 19808-5787, as the certificate holder.

The certificate shall also name the Wilmington & Western Railroad and their agents, as additional insureds. Insurance shall be returned to the certificate holder at the above address. Construction will not be authorized until all insurance requirements are satisfied.

### **2. Commercial General Liability Insurance**

Commercial General Liability Insurance covering liability of Contractor with respect to all operations to be performed and all obligations assumed by Contractor under the terms of the Agreement. Products completed operations, independent contractors and contractual liability coverages are to be included, with the contractual exclusion related to construction/demolition activity within twenty-five (25) feet of the railroad and any Explosion/Collapse/Underground (X-C-U) exclusions deleted.

Coverage under this policy shall have limits of liability of not less than two million dollars (\$2,000,000) each occurrence, combined single limit, for bodily injury (including disease or death), personal injury and property damage (including loss of use) liability. The insurance amount may be achieved via an excess or umbrella policy in order to meet this limit.

The certificate shall name the Wilmington & Western Railroad, 1601 Railroad Avenue, P.O. Box 5787, Wilmington, DE 19808-5787, as the certificate holder.

The certificate shall also name the Wilmington & Western Railroad and their agents, as additional insureds. Insurance shall be returned to the certificate holder at the above address. Construction will not be authorized until all insurance requirements are satisfied.

### **3. Automobile Liability Insurance**

Automobile Liability Insurance covering the liability of Contractor arising out of the use of any vehicles which bear, or are required to bear, license plates according to the laws of the jurisdiction in which they are to be operated, and which are not covered under Contractor's Commercial General Liability insurance. Coverage under this policy shall have limits of liability of not less than \$1 million each occurrence, combined single limit, for bodily injury and property damage (including loss of use) liability. In the event Contractor or any subcontractor will be transporting and/or disposing of any hazardous material or waste off of the jobsite, a MCS-90 Endorsement is to be added to this policy and the limits of liability are to be increased to \$5 million dollars (\$5,000,000) each occurrence.

The certificate shall name the Wilmington & Western Railroad, 1601 Railroad Avenue, P.O. Box 5787, Wilmington, DE 19808-5787, as the certificate holder.

The certificate shall also name the Wilmington & Western Railroad and their agents, as additional insureds. Insurance shall be returned to the certificate holder at the above address. Construction will not be authorized until all insurance requirements are satisfied.

#### **4. All Risk Property Insurance**

All Risk Property Insurance covering physical loss or damage to all property used in the performance of the Operations. The policy shall have limits of liability adequate to cover all property of Contractor (including personal property of others in Contractor's care, custody or control) and shall include a waiver of subrogation against the Wilmington & Western Railroad, 1601 Railroad Avenue, P.O. Box 5787, Wilmington, DE 19808-5787.

#### **5. Worker's Compensation Insurance**

Workers' Compensation Insurance complying with the requirements of the statutes of the jurisdiction(s) in which the Operations will be performed, covering all employees of Contractor Employer's Liability coverage with limits of not less than one million dollars (**\$1,000,000**) each accident or illness shall be included. In the event the Operations are to be performed on or over navigable waterways, a Longshoremen and Harbor Workers' Compensation Act Endorsement and a Maritime Coverage Endorsement are to be added, including coverage for wages, transportation, maintenance and cure.

The Contractor shall furnish to the Owner a Certificate of Insurance for all insurance listed above except for the Railroad's Protective Public Liability Insurance. Its submittal shall include the original of the AAR-AASHTO policy for Railroad's Protective Public Liability Insurance.

Each insurance policy shall be endorsed to provide that the insurance company shall notify the Railroad by registered or certified mail at least thirty days in advance of termination of any change in the policy. It is agreed that the providing of any conductors, flagmen or other employees shall not relieve Contractor from liability or payment for any damages caused by its operations.

#### **Protection of Railroad Traffic:**

The Contractor shall conduct the work in such a manner as to safeguard the train operations, tracks, facilities and property of the Railroad. All work affecting the Railroad property, right-of-way, or facilities shall be subject to the approval of the Railroad or his designated representative.

The Contractor's operations adjacent to, over or under the Railroad's tracks, right-of-way, and property shall be governed by the Owner's and/or the Railroad's standards, whichever is more stringent, or by such other requirements as specified by the Owner's or Railroad's representative so as to insure safe operation of trains avoiding delay to trains, and safety of all concerned including Contractor's forces.

An operating track shall be considered obstructed or fouled when any object is brought closer than fifteen (15) feet horizontally from the center of track and projects above the top of tie. A power line shall be considered fouled when any object is brought to a point less than eight (8) feet therefrom. A signal line shall be considered fouled when any object is brought nearer than six (6) feet to any wire or cable. Cranes, trucks and other equipment shall be considered as fouling the track, power line or signal line when failure of equipment whether working or idle with or without load will obstruct the track or other Railroad facilities.

Equipment used by Contractor shall be in first-class condition to preclude any failure that would cause delay interfering with operation of trains or damage to Railroad facilities. Contractor's equipment shall not be placed or put in operation adjacent to the Railroad's tracks or facilities without obtaining clearance from the Railroad's representative. All such equipment shall be operated by the Contractor in a manner satisfactory to the Railroad.

Minimum overhead and lateral clearances as specified by the Railroad are to be maintained during the performance of the work. Existing overhead and lateral clearance are to be maintained during construction unless a temporary reduction in clearance for construction purposes is approved by the Railroad. All wire and attachments shall be treated as live unless notified by the Railroad's representative that same have been grounded and de-energized. Particular attention shall be given to the use of hand lines containing metal strands which can not be permitted when working near or above exposed live wires. Metal ladders or ladders reinforced by metal in a longitudinal direction shall not be used near exposed wires. When working over wires, tools and materials not in use shall be stored in a manner to prevent them from falling. Tools or materials shall not be thrown to or from men working over the wires and men on the ground. Contractor shall be responsible for locating and protecting all underground facilities.

The Contractor shall give notice to the Railroad at least fourteen (14) calendar days in advance of the time work is to be commenced.

The Railroad has sole authority to determine the need for flagging required to protect its operations and property. In general, flagging protection will be required whenever the track is fouled or the Contractor or their equipment are, or are likely to be, working within twenty five (25) feet of live track or other track clearances specified by the Railroad, or over tracks. The Railroad will assign conductors and/or flagmen, or other similar qualified employees to protect its trains and facilities when in the opinion of its representative the construction work will cause or may cause a hazard to the Railroad's facilities and the safe operation of trains. The providing of such watchmen, inspectors, and other precautionary measures, shall not, however, relieve the Contractors from liability for payment of damages caused by his operations. This inspection service, if required, shall be supplied at no expense to the Contractor.

DelDOT shall reimburse Railroad directly for all costs of flagging that is required on account of construction within Railroad property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement or change order.

Should the Contractor request from the Railroad, the services of conductors and/or flagmen, employed by the Railroad, for the Contractor's piece of mind and safety, a separate and private agreement shall be entered into by both the Railroad and Contractor for those services. Payment of any and all costs under that agreement shall be between the Railroad and the Contractor only.

No operations of Contractor shall be carried out without all the necessary protection to properly safeguard the work and the personnel.

The Contractor shall be responsible for damage to Railroad facilities or property arising out of the prosecution of its work. The Railroad shall undertake any necessary repair work at the sole cost and expense of the Contractor. Billing for the work shall be in accordance with standard billing procedures.

**Basis of Payment:**

The payment for the item shall be made for at the contract unit price per Lump Sum bid for "Maintenance of Railroad Traffic", which price and payment shall constitute all costs for maintaining railroad traffic as required during the life of the project; all incidental costs imposed by the Railroad on the Contractor due to operations and activities, except Protective Services (which will be paid directly to the Railroad by the State). The requirements include also, but are not limited to, furnishing and hauling all materials; for Railroad Protective Liability Insurance or other required Insurance not normally held in force by the contractor, as required in these Special Provisions; for cleanup and restoration of railroad site, for any cost incidental to or arising from the need to meet any or all requirements outlined herein; and for all materials, labor, tools, equipment, appurtenances, and incidentals necessary to complete the item.

Payment for the Railroad Protective Liability Insurance requirements and all other required Insurance not normally held in force by the contractor shall be made under this Item. All other Insurances (such as, but not limited to, auto, etc.) required for this Contract shall be considered incidental to the Contract.

As stated above in this specification, DelDOT will pay the Railroad directly for protective services required for this project. Should deviation from the sequence of construction plan by the Contractor result in additional costs for protective services than the method and sequence of construction originally shown in the Plans, then that additional cost shall be deducted from monies due the Contractor unless prior permission was obtained from DelDOT to revise the original method.

10/4/19



**STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION**

**800 BAY ROAD  
P.O. Box 778  
DOVER, DELAWARE 19903**

**JENNIFER COHAN  
SECRETARY**

**UTILITY STATEMENT  
December 10, 2018**

**STATE CONTRACT # T201906107  
P6 # 19-06107  
F.A.P. # N/A  
PAVEMENT & REHABILITATION,  
NORTH VII, 2019**

**Utility adjustment, relocation or other involvement is not anticipated for the work associated with this project. All existing facilities will remain in place and active throughout the duration of the contract.**

It is important to note, all contractors must maintain a minimum distance of 10'-0" from all energized lines during construction and any permanent facilities must be installed a minimum distance of 10'-0" from all aerial electric lines. Additional clearance may be required from high voltage transmission lines.

Should any conflicts be encountered as a result of the contractor's means and methods during construction requiring adjustment, outages and/or relocation, the necessary relocation work shall be accomplished by the respective utility company and funded by the State's Contractor as directed by the District Engineer. The State Contractor shall coordinate any potential conflicts with utility companies and provide adequate notice as determined by the utility company prior to performing work. Any utility conflicts that are not readily discernable shall be coordinated by the State Contractor once the conflict is recognized. The time to complete any relocations/adjustments found to be necessary during construction of the project will depend on the nature of the work.

Any adjustments and/or relocations of municipally owned sewer or water facilities shall be performed by the State's Contractor in accordance with the respective agency's standard specifications as directed by the District Engineer. The State contractor shall coordinate any potential conflicts of municipally owned sewer or water facilities with

facility owners and provide adequate notice to the municipally and to the District Engineer prior to performing work.

### **General Notes**

- 1. The Contractor's attention is directed to Section 105.09 Utilities, Delaware Standard Specifications, August 2016. The Contractor shall contact Miss Utility (1-800-282-8555) two working days prior to any excavation. The Contractor is responsible for the support and protection of all utilities when excavating. The Contractor is responsible for ensuring proper clearances, including safety clearances, from overhead utilities for construction equipment. The Contractor is advised to check the site for access and operating purposes for his equipment and, if necessary, make arrangements directly with the utility companies for field adjustments for adequate clearances.**
- 2. The information shown in the Contract Documents, including the Utility Statement and the Utility Schedule contained herein, concerning the location, type and size of existing and proposed utilities, their locations, and construction timing has been compiled by the preparer based on information furnished by each of the involved Utility Companies. It shall be the responsibility of the State's Contractor to verify all information and coordinate with the Utility Companies prior to and during construction, as specified in Section 105.09 of the Standard Specifications.**
- 3. It is understood and agreed that the Contractor has considered in his bid all permanent and temporary utility appurtenances in their present and relocated positions as shown on the plans or described in the Utility Statement or are readily discernible and that no additional compensation will be allowed for any delays, inconvenience, or damage due to any interference from the utility facilities and appurtenances or the operation of moving them, except that the Contractor may be granted an equitable extension of time unless the delay is caused by the Contractor's delay in having the site conditions ready for the utility relocation work after the Contractor has provided the advance notice that the site conditions would be ready for the utility relocation work. The contractor's means and method of construction are not taken into account when known utility conflicts are identified. If the Contractor's means and method of construction create a utility conflict the Utility Statement will prevail in discussions with the utility and the Contractor. The State's Contractor shall be responsible for any costs associated with any temporary outages; holding, bracing and shielding of utility facilities; temporary relocations; or permanent relocations that are not specifically identified in this utility statement or shown in the contract plan set.**

4. **Coordination and cooperation among the Utility Companies and the State's Contractor are of prime importance. Therefore, the Contractor is directed to contact the following Utility Company representatives with any questions regarding this work prior to submitting bids and work schedules. Proposed work schedules should reflect the Utility Companies' proposed relocations. The Utility Companies do not work on weekends, nights or legal holidays.**
5. **As outlined in Chapter 3 of the DelDOT Utilities Manual, individual utility companies are responsible for obtaining all required permits from municipal, State and federal government agencies and railroads. This includes but is not limited to water quality permits/DNREC Water Quality Certification, DNREC Subaqueous Lands/Wetlands permits, DNREC Coastal Zone Consistency Certification, County Floodplain permits (New Castle County only), U.S. Coast Guard permits, US Army Corps 404 permits, sediment and erosion permits, and railroad crossing permits.**
6. **Individual utility companies are required to restore any areas disturbed in conjunction with their relocation work. If an area is disturbed by a utility company and is not properly restored, the Department may have the State's Contractor perform the necessary restoration. Any additional costs incurred as a result will be forwarded to the utility company.**
7. **16 Del. C. § 7405B requires notification to and mutually agreeable measures from the public utility operating the electric line for any person intending to carry on any function, activity, work or operation within dangerous proximity of any high voltage overhead electric lines. All contractors/other utilities must also maintain a minimum distance of 10'-0" from all energized lines. Additional clearance may be required from high voltage transmission lines.**
8. **Any existing facilities that are comprised of hazardous materials will be removed by the Utility Company unless otherwise outlined in the contract documents or language above. Any existing facilities containing hazardous materials will be purged by the Utility Company unless otherwise outlined in the contract documents or language above.**

**DIVISION OF TRANSPORTATION SOLUTIONS**



Utilities Section, DelDOT  
Eric C. Cimo, P.E.  
eric.cimo@state.de.us

12/10/18  
Date

**STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION  
PO BOX 778  
DOVER, DELAWARE 19903**

**CERTIFICATE OF RIGHT-OF-WAY STATUS**

**STATE PROJECT NO. T201906107**

**F.A.P. NO. N/A for R/W**

**PAVEMENT & REHABILITATION, NORTH VII, 2019**

**NEW CASTLE COUNTY**

**Certificate of Right-of-Way Status – 100%**

**Status - LEVEL 1**

**As required by 23 CFR, Part 635, and other pertinent Federal and State regulations or laws, the following certifications are hereby made in reference to this highway project:**

All project construction or work shall be performed within existing rights of way and permanent easements; and

**All necessary real property interests, including control of access rights when pertinent, were acquired as part of previous highway projects, and include legal and physical possession; and,**

This project does not cause any persons to be displaced as defined in 49 CFR, Part 24; and,

The State has the right to remove, salvage, or demolish any improvements or personal property that may be located within project limits.

**RIGHT OF WAY SECTION**

A handwritten signature in black ink, appearing to read 'J. Pappas'.

James Pappas  
Acting Chief of Right of Way

December 12, 2018



STATE OF DELAWARE  
**DEPARTMENT OF TRANSPORTATION**  
800 BAY ROAD  
P.O. BOX 778  
DOVER, DELAWARE 19903

JENNIFER COHAN  
SECRETARY

October 3, 2019

ENVIRONMENTAL REQUIREMENTS

FOR  
State Contract No. T201906107  
Federal Aid No.: N/A

Contract Title: Pavement and Rehabilitation, North VII, 2019

Due to the nature of the proposed construction activities, permits are not required for this project. However, the following construction requirements and special provisions have been developed to minimize and mitigate impact to the surrounding environs. These requirements by DelDOT not specified within the contract, but listed below, are the responsibility of the contractor and are subject to risk of shut down at the contractor's expense if not followed.

GENERAL REQUIREMENTS:

1. All construction debris, excavated material, brush, rocks, and refuse incidental to such work shall be placed either on shore above the influence of flood waters or on some suitable dumping ground.
2. That effort shall be made to keep construction debris from entering adjacent waterways or wetlands. Any debris that enters those areas shall be removed immediately.
3. The disposal of trees, brush, and other debris in any stream corridor, wetland, surface water, or drainage area is prohibited.
4. DelDOT Environmental Studies Section must be notified if there are any changes to the project methods, footprint, materials, or designs, to allow the Department to coordinate with the appropriate resource agencies (COE, DNREC, and SHPO), for approval at (302) 760-2264 or [DOT\\_EnvironmentalStudies@delaware.gov](mailto:DOT_EnvironmentalStudies@delaware.gov).



STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION  
800 BAY ROAD  
P.O. Box 778  
DOVER, DELAWARE 19903

JENNIFER COHAN  
SECRETARY

**RAILROAD STATEMENT**

**For**

**State Contract No.:** T201906107

**Federal Aid No.:** N/A

**Project Title:** Pavement & Rehabilitation, North VII, 2019

**The following railroad companies maintain facilities within the contract limits:**


- |  |   |
|--|---|
| <input type="checkbox"/> Amtrak              | <input type="checkbox"/> Maryland & Delaware  |
| <input type="checkbox"/> CSX                 | <input type="checkbox"/> Norfolk Southern     |
| <input type="checkbox"/> Delaware Coast Line | <input type="checkbox"/> Wilmington & Western |
| <input type="checkbox"/> East Penn           | <input checked="" type="checkbox"/> None      |
| <input type="checkbox"/> Delmarva Central    |   |

DOT Inventory No.: N/A No. Trains/Day: N/A Passenger Trains (Y / N): N/A

**In accordance with 23 CFR 635, herein is the railroad statement of coordination (check one):**

- ☒ No Railroad involvement.
- ☐ Railroad Agreement unnecessary but railroad flagging required. The contractor shall follow requirements stated in the DelDOT Maintenance of Railroad Traffic Item in the Special Provisions. Contractor shall coordinate railroad flagging with DelDOT's Railroad Program Manager at (302) 760-2183.
- ☐ Railroad Agreement required. The necessary Railroad Agreement is pending. The Contractor cannot begin work until the Agreement is complete and fully executed. Railroad related work to be undertaken and completed as required for proper coordination with physical construction schedules. The Contractor shall follow requirements stated in the DelDOT Maintenance of Railroad Traffic Item in the Special Provisions. Contractor shall coordinate railroad flagging with DelDOT's Railroad Program Manager at (302) 760-2183.

**Approved As To Form:**

  
Robert A. Perrine  
DelDOT Railroad Program Manager

3Dec18

DATE

# **BID PROPOSAL FORMS**

**CONTRACT T201906107.01**

UNLESS OTHERWISE DIRECTED, SUBMIT ALL FOLLOWING PAGES TO:

DEPARTMENT OF TRANSPORTATION  
BIDDERS ROOM  
800 BAY ROAD  
DOVER, DELAWARE 19901

Identify the following on the outside of the sealed envelope:  
- Contract Number T201906107.01  
- Name of Contractor

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 1  
DATE:

CONTRACT ID: T201906107.01 PROJECT(S): T201906107

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 Category 0001

0010	202000 EXCAVATION AND EMBANKMENT	1770.000 CY				
0020	202004 UNDERCUT EXCAVATION, PATCHING	50.000 CY				
0030	211001 REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT, CURB AND SIDEWALK	90.000 SY				
0040	301003 GRADED AGGREGATE BASE COURSE, TYPE B	200.000 TON				
0050	301008 RECYCLED ASPHALT PAVEMENT	2850.000 TON				
0060	302002 DELAWARE NO. 3 STONE	2340.000 TON				
0070	401005 SUPERPAVE TYPE C, PG 64-22 (CARBONATE STONE)	7500.000 TON				
0080	401031 SUPERPAVE TYPE BCBC, PG 64-22, PATCHING	3560.000 TON				
0090	401696 ENTRANCE, DRIVEWAY, AND INTERSECTING STREET PAVING SURCHARGE	440.000 TON				

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 2  
DATE:

CONTRACT ID: T201906107.01 PROJECT(S): T201906107

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	402000 BITUMINOUS CONCRETE PATCHING	61250.000 SYIN				
0110	403000 BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS (TRM) CONCRETE	170.000 TON				
0120	602100 REPLACE DRAINAGE INLET GRATE(S)	1.000 EACH				
0130	602101 REPLACE DRAINAGE INLET FRAME(S)	1.000 EACH				
0140	602130 ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	2.000 EACH				
0150	701019 INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 2	400.000 LF				
0160	708003 GEOTEXTILES, RIPRAP	5300.000 SY				
0170	760010 PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT	126150.000 SYIN				
0180	762000 SAW CUTTING, BITUMINOUS CONCRETE	3810.000 LF				
0190	762001 SAW CUTTING, CONCRETE, FULL DEPTH	160.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 3  
DATE:

CONTRACT ID: T201906107.01 PROJECT(S): T201906107

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0200	763000 INITIAL EXPENSE/DE-MOBILIZATION	LUMP	LUMP			
0210	763621 CONSTRUCTION ENGINEERING, REHABILITATION	20.000 HOUR				
0220	801500 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
0230	801501 MAINTENANCE OF RAILROAD TRAFFIC	LUMP	LUMP			
0240	803001 FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	130.000 EADY				
0250	811001 FLAGGER, NEW CASTLE COUNTY STATE	1890.000 HOUR				
0260	811013 FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	760.000 HOUR				
0270	817002 PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	674.000 SF				
0280	817003 TEMPORARY MARKINGS, PAINT, 4"	34660.000 LF				
0290	817004 TEMPORARY MARKINGS, PAINT, SYMBOL/LEGEND	1348.000 SF				

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 4  
DATE:

CONTRACT ID: T201906107.01 PROJECT(S): T201906107

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0300	817013 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	17330.000 LF				
0310	817027 RAISED/RECESSED PAVEMENT MARKER	170.000 EACH				
0320	819018 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	189.000 EACH				
0330	819019 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS	50.000 SF				
0340	905004 INLET SEDIMENT CONTROL, DRAINAGE INLET	7.000 EACH				
0350	908001 TOPSOIL	1005.000 TON				
0360	908014 PERMANENT GRASS SEEDING, DRY GROUND	4960.000 SY				
0370	908020 EROSION CONTROL BLANKET MULCH	740.000 SY				
	SECTION 0001 TOTAL					
	TOTAL BID					

# BREAKOUT SHEET INSTRUCTIONS

**BREAKOUT SHEET(S) MUST BE SUBMITTED EITHER WITH YOUR BID DOCUMENTS; OR WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE BID DUE DATE BY THE LOWEST APPARENT BIDDER.**

BREAKOUT SHEETS ARE TO BE SUBMITTED TO DELDOT'S CONTRACT ADMINISTRATION AS SHOWN BELOW. BREAKOUT SHEETS CANNOT BE CHANGED AFTER AWARD. THE DEPARTMENT WILL REVIEW THE FIGURES SUBMITTED ON THE BREAKOUT SHEET(S) TO ENSURE THEY MATCH THE RESPECTIVE LUMP SUM BID AMOUNT(S). MATHEMATICALLY INCORRECT BREAKOUT SHEETS WILL BE RETURNED FOR IMMEDIATE CORRECTION.

BREAKOUT SHEETS MAY BE SUBMITTED;

VIA E-MAIL TO: [DOT-ASK@STATE.DE.US](mailto:DOT-ASK@STATE.DE.US)  
SUBJECT: **T201906107.01** Breakout Sheet

OR MAILED TO: DELDOT  
CONTRACT ADMINISTRATION  
PO BOX 778, DOVER, DE 19903

'BREAKOUT SHEET' AND THE PROJECT NUMBER  
MUST APPEAR ON THE ENVELOPE.

### **801500 - Maintenance of Traffic - All Inclusive**

Location No.	Location - Description	Working Hours	Primary MOT Case Set-ups	Unit of Measurement	Unit Price	Calendar Days
1	Pyles Ford Road/New London Road from 75' West of Center Meeting Road to Mt. Cuba Road	7:00am - 7:00pm	Road Closure w/Detour	LS	\$	
2	Center Mill Road from Ashland Clinton School Road to Old Kennett Road	7:00am - 7:00pm	Road Closure w/Detour	LS	\$	
3	Hillside Mill Road from New London Road to Beginning of Bridge Deck at Mt. Cuba Road	8:00am - 7:00pm	Road Closure w/Detour	LS	\$	
4	Ashland Clinton School Road from Creek Road to Old Kennett Road	7:00am - 7:00pm	Road Closure w/Detour	LS	\$	
Total Lump Sum Bid for Item 801500 - Maintenance of Traffic - All Inclusive					\$	<u>Total Days*</u>
					(LS Bid Price for 801500)	
* Total days should equal original contract duration						

# "ATTENTION"

# TO BIDDERS

**BREAKOUT SHEET(S) MUST BE SUBMITTED EITHER WITH YOUR BID DOCUMENTS; OR WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE BID DUE DATE BY THE LOWEST APPARENT BIDDER.**

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OR MAILED TO: DELDOT  
CONTRACT ADMINISTRATION  
PO BOX 778, DOVER, DE 19903

'BREAKOUT SHEET' AND THE PROJECT NUMBER  
MUST APPEAR ON THE ENVELOPE.



**AFFIDAVIT  
OF  
EMPLOYEE DRUG TESTING PROGRAM**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors, that complies with this regulation:

**Contractor Name:** \_\_\_\_\_

**Contractor Address:** \_\_\_\_\_  
\_\_\_\_\_

**Authorized Representative (typed or printed):** \_\_\_\_\_

**Authorized Representative (signature):** \_\_\_\_\_

**Title:** \_\_\_\_\_

Sworn to and Subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

My Commission expires \_\_\_\_\_. NOTARY PUBLIC \_\_\_\_\_.

**THIS PAGE MUST BE SIGNED, NOTARIZED, AND RETURNED WITH YOUR BID.**

**(This form is required from the prime contractor only, not required from subcontractors)**

**CERTIFICATION**  
Contract No. T201906107.01

The undersigned bidder, \_\_\_\_\_  
whose address is \_\_\_\_\_  
and telephone number is \_\_\_\_\_ hereby certifies the following:

I/We have carefully examined the location of the proposed work, the proposed plans and specifications, and will be bound, upon award of this contract by the Department of Transportation, to execute in accordance with such award, a contract with necessary surety bond, of which contract this proposal and said plans and specifications shall be a part, to provide all necessary machinery, tools, labor and other means of construction, and to do all the work and to furnish all the materials necessary to perform and complete the said contract within the time and as required in accordance with the requirements of the Department of Transportation, and at the unit prices for the various items as listed on the preceding pages.

The foregoing quantities are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. Any such increase or decrease in the quantity for any item will not be regarded as a sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided in the contract.

Accompanying this proposal is a surety bond or a security of the bidder assigned to the Department of Transportation, for at least ten (10) percentum of total amount of the proposal, which deposit is to be forfeited as liquidated damages in case this proposal is accepted, and the undersigned shall fail to execute a contract with necessary bond, when required, for the performance of said contract with the Department of Transportation, under the conditions of this proposal, within twenty (20) days after date of official notice of the award of the contract as provided in the requirement and specifications hereto attached; otherwise said deposit is to be returned to the undersigned.

I/We are licensed, or have initiated the license application as required by Section 2502, Chapter 25, Title 30, of the Delaware Code.

By submission of this proposal, each bidder and each person signing on behalf of any bidder, certifies as to its own organization, under penalty of perjury, that to the best of each signer's knowledge and belief:

1. The prices in this proposal have been arrived at independently without collusion, consultation, communication, or Agreement with any other bidder or with any competitor for the purpose of restricting competition.
2. Unless required by law, the prices which have been quoted in this proposal have not been knowingly disclosed and will not knowingly be disclosed by the bidder, directly or indirectly, to any other bidder or competitor prior to the opening of proposals.
3. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

\_\_\_\_\_  
I/We acknowledge receipt and incorporation of addenda to this proposal as follows:

No.	Date	No.	Date	No.	Date	No.	Date	No.	Date
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

**BIDDERS MUST ACKNOWLEDGE RECEIPT OF ALL ADDENDA**

**MUST INSERT DATE OF FINAL QUESTIONS AND ANSWERS ON WEBSITE:** \_\_\_\_\_



**AFFIRMATION:**

Within the past five (5) years, has your firm, any affiliate, any predecessor company or entity, owner, Director, officer, partner or proprietor been the subject of a Federal, State, Local government suspension or debarment?

YES \_\_\_\_\_ NO \_\_\_\_\_ if yes, please explain \_\_\_\_\_

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**Agreement to Accept Retainage**

"Bidder acknowledges that if its Performance-Based Rating as defined in 29 Del.C. §6962 and section 2408 NEW of Title 2 of Delaware's Administrative Code is below the required minimum threshold, as a condition to bid, Bidder acknowledges, consents and agrees to the Department withholding retainage of up to 5% from the monies due at the time of each progress payment under the contract."

Sealed and dated this \_\_\_\_\_ day of \_\_\_\_\_ in the year of our Lord two thousand \_\_\_\_\_ ( 20\_\_\_\_ ).

Corporate  
Seal

By:

\_\_\_\_\_  
Name of Bidder (Organization)

\_\_\_\_\_  
Authorized Signature

Attest \_\_\_\_\_

\_\_\_\_\_  
Title

SWORN TO AND SUBSCRIBED BEFORE ME this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Notary  
Seal

\_\_\_\_\_  
Notary

**BID BOND**

TO ACCOMPANY PROPOSAL  
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: \_\_\_\_\_  
of \_\_\_\_\_ in the County of \_\_\_\_\_ and State of \_\_\_\_\_  
as **Principal**, and \_\_\_\_\_ of \_\_\_\_\_ in the County of \_\_\_\_\_  
and State of \_\_\_\_\_ as **Surety**, legally authorized to do business in the  
State of Delaware ("**State**"), are held and firmly bound unto the **State** in the sum of \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_), or \_\_\_\_\_ percent not to exceed \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_) of amount of bid on Contract  
No. T201906107.01 , to be paid to the **State** for the use and benefit of its Department of Transportation  
("**DelDOT**") for which payment well and truly to be made, we do bind ourselves, our and each of our heirs,  
executors, administrators, and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden **Principal** who  
has submitted to the **DelDOT** a certain proposal to enter into this contract for the furnishing of certain  
materiel and/or services within the **State**, shall be awarded this Contract, and if said **Principal** shall well and  
truly enter into and execute this Contract as may be required by the terms of this Contract and approved by  
the **DelDOT**, this Contract to be entered into within twenty days after the date of official notice of the award  
thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and  
remain in full force and virtue.

Sealed with \_\_\_\_\_ seal and dated this \_\_\_\_\_ day of \_\_\_\_\_ in the year of our Lord  
two thousand and \_\_\_\_\_ ( 20\_\_\_\_ ).

SEALED, AND DELIVERED IN THE  
presence of

\_\_\_\_\_  
Name of Bidder (Organization)

Corporate  
Seal

By: \_\_\_\_\_

\_\_\_\_\_  
Authorized Signature

Attest \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name of **Surety**

Witness: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
Title