

Attachment 9

Special Notes – NYSDOT Specific Projects

(Revised 02/18/20)

Liquid Bituminous Materials - VPP

(2020 NYSDOT Specific Projects)

(State & Federal Funded)

IFB# 23195

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SECTION 1: CHIP SEAL - SPECIFIC PROJECTS

1.1 Introduction

Chip seal is a pavement preventive maintenance treatment which consists of single-sized stone embedded in a liquid bituminous material. The liquid bituminous material seals cracks in the existing pavement and the stone provides a high-friction wearing surface.

1.2 Pricing Information

1.2.1 General

Price quoted for chip seal shall be net per square yard furnished, hauled, delivered, and applied with contractor’s equipment totally by the contractor at the locations indicated herein including the cost of labor, surface preparation, and materials, except liquid bituminous materials and cover sand. Liquid bituminous materials used for chip seal and fog seal, and the cover sand will be paid for under separates items. Price quoted per square yard of chip seal shall also include mobilization to the project site, the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids, and Maintenance Materials Bond as listed in the *Maintenance Material Bonds* section in this Invitation for Bids. The price quoted per gallon of liquid bituminous materials for chip seal and fog seal shall include heating, hauling, and applying the liquid bituminous materials at the project locations indicated herein. The price quoted per square yard of cover sand shall include hauling and applying the necessary cover sand at the project locations indicated herein.

1.3 Asphalt Price Adjustments

1.3.1 General

- a. Asphalt price adjustments allowed will be based on the January 2020 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The January 2020 average is \$504.00.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the “Adjustment Date”, during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment (per gallon)	=	$\frac{\text{New Monthly Average FOB Terminal Price} - \text{Base Average Terminal Price}}{235}$	X	Total Allowable Petroleum %
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Positive Price Adjustment number shall be added to original per gallon Bid Price.
 Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of January 2020

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Material Designation	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
702-3101P	RS-2	63	2.7	65.7
702-3102P	HFRS-2	63	2.7	65.7
702-3301P	HFMS-2	65	8.2	73.2
702-4101P	CRS-2	65	2.7	67.7
702-XXXXT	Diluted Tack Coat	40	0.2	40.2

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.3.2 Asphalt Price Adjustment: Example

Material Designation 702-3301P, HFMS-2

Base Avg. Price per Ton = \$504.000

New Avg. Price per Ton = \$514.000

Total % Asphalt Plus Petroleum Allowance = 73.2%

$$\begin{array}{|c|} \hline \text{Price Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{(514.000 - 504.000)}{235} \times \begin{array}{|c|} \hline 0.732 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline \text{Price Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = +\$0.031 \text{ per gallon}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.
 Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

1.4 Payment

Payment for Chip seal shall be made at contract price bid for the actual number of completed square yards of chip seal, actual numbers of gallons of bituminous materials for chip seal, actual numbers of gallons of bituminous materials for fog seal, actual number of square yards of cover sand used in the accepted portions of the work. The determination as to quantities involved in any contract shall be accepted as final and binding upon the contractor.

Payment of work zone traffic control and abrading the existing pavement markings shall be included in the payment for number of square yards of completed chip seal.

A delivery slip stating quantities of liquid bituminous materials (modified or unmodified emulsions) shall accompany each shipment. An invoice listing the quantities of surface treatment shall be sent promptly by the contractor to the resident engineer.

1.5 Pre-Chip Seal Conference

The contractor shall schedule a Pre-Chip Seal Conference with the affected Resident Engineer at least two weeks prior to the start of the work under this contract. Project level supervisors from contractor and from the state shall be present at this conference. At this conference contractor shall present their chip seal schedule, mix design, number and types of equipment, chip seal procedure, and Work Zone Traffic Control Plan to the state for approval. The mix design for the chip seal must show the quantity in gallons per square yard of fog seal, the quantity in pounds per square yard of cover sand, the quantity in gallons and the type of liquid bituminous material per square yard, the quantity in pounds per square yard of aggregate, percent of polymer used to modify the asphalt emulsion, quantity in pounds per square yards of fiber (if applicable), and the design curing time. All the component materials used in the mix design shall be representative of the material proposed by the contractors to be used on the project. Adjustment may be required during the construction based on field conditions and with the approval of the state.

The contractor shall also furnish the state the copies of the calibrations of the liquid bituminous materials distributor and the aggregate spreader at the same time. The contractor shall indicate the aggregate sources at this conference. At least one week prior to the start of work under this contract, the contractor shall coordinate the details of the chip seal with the state's representative.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.6 Bonding Requirements – Chip Seal

A Maintenance Material Bond is required for chip seal projects in this IFB. Please see sample in Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

Maintenance bond is to be provided to the attention of the Regional Director of Operations, or their Regional designee as determined at the Pre-Chip Seal conference, for the corresponding Region. Each bond shall be specific to each Project Number, not contract, so that they may be released upon the completion of the terms in the contract for each corresponding Project/site.

1.7 Supervision

The Department of Transportation shall provide supervision for the chip seal operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

1.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

1.9 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (09/18). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

1.10 Special Note for Chip Seal

The Contractor will not be responsible for the initial conditioning of the existing pavement and shoulder surfaces as described in Section 402-3.05 of the NYSDOT Standard Specifications. Patching, joint repair, crack filling will be done by NYSDOT forces prior to the chip seal project. However, once work on the project begins, the Contractor is responsible for keeping the pavement and shoulders clean until the paving operations are completed, as per Section 633-3.01 of the NYSDOT Standard Specifications.

1.11 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

1.12 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.13 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

1.13.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs: **(see next page)**

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

1.13.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.13.2 Temporary Pavement Markings (Cont'd)

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT ____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2' x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2' x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
LOOSE GRAVEL	<u>W8-7</u> 36" x 36"	Place on mainline at start of the project and spaced every ½ miles along project in each direction.
30 MPH	<u>W13-1P</u> 18" x 18"	Mounted on W8-7 LOOSE GRAVEL sign

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.13.3 Abrading Existing Pavement Markings

The Contractor shall remove any epoxy or thermoplastic pavement markings. Other markings shall be removed as ordered by the Resident Engineer. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the Contractor's operations shall be the Contractor's responsibility. Waste material generated by the abrading operation shall be cleaned up and disposed of by the Vendor.

When the Contractor abrades the existing pavement markings, the Contractor shall place temporary pavement markings as specified elsewhere in this Invitation for Bids under Work Zone Traffic Control, unless the paving material will be placed the same day as pavement markings are abraded. The Contractor shall make every effort to expeditiously place the paving material in areas where pavement markings have been abraded and temporary pavement markings are in place. Under no circumstances will temporary pavement markings be allowed for more than five calendar days in areas where pavement markings have been abraded. In this event, the Contractor shall be required to place full pavement markings at no cost to the state. During the pavement markings abrading operation, traffic will be controlled by the Contractor in accordance with the Work Zone Traffic Control requirements included herein. The Contractor shall submit a proposed Traffic Control Plan to the Resident Engineer for approval. The plan may be based on the Work Zone Traffic Control drawings included in this Invitation for Bids.

Payment for pavement marking abrading shall be included in the price bid per square yard of chip seal. No separate payment shall be made.

1.13.4 **Special Note: Work Zone Intrusion Initiative**

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.13.4 Special Note: Work Zone Intrusion Initiative (Cont'd)

Temporary Rumble Strips (Cont'd)

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectORIZED removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape.

Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

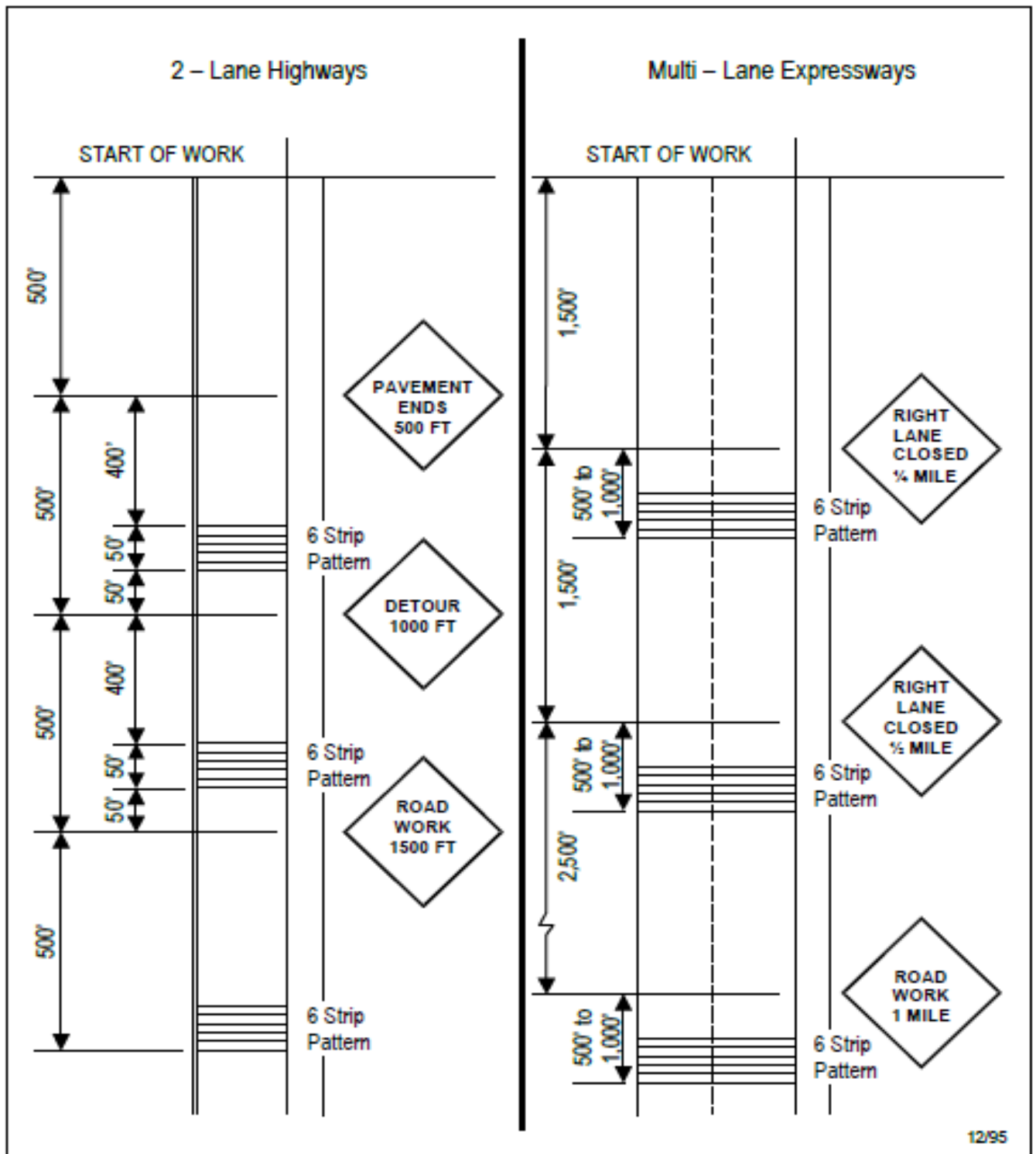
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing on the **next page**.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details – Temporary Rumble Strips



SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.14 Special Notes – Chip Seal

1.14.1 Funding Source (Chip Seal)

Project 5V2022, 5V2023, 5V2024, 5V2051, 5V2052, 6V2041, 6V2053, 9V2021, 9V2022, and 9V2081 will be funded by Federal Aid.

Project 9V2061 and 9V12062 are 100% State funded.

1.14.2 Special Note for Coordination with Other Projects (Chip Seal)

Prior to chip seal, Projects 5V2023 and 5V2052 involve heater scarification through separate contractor(s). These chip seal projects require that the chip seal contractor coordinates their work with the corresponding heater scarification contractor to allow required curing period before placing the chip seal as well as to minimize disruption to the traveling public and the time traffic is running over a recycled surface.

1.14.3 NYSDOT Region 5 Special Notes (Chip Seal)

Time Restrictions:

All Region 5 Projects shall follow the time restrictions outlined in the “Work Zone Traffic Control - for Design/Construction on State Highways in Region 5” available on the NYSDOT website or through the Regional Transportation Systems Operations group.

1.14.4 NYSDOT Region 6 Special Notes (Chip Seal)

Region 6 Specific Special Notes:

All Region 6 Chip, Fog, and Sand Overlay projects shall be completed no later than August 31, 2020. After award, a schedule reflecting this shall be submitted before start of work to the Region’s ARDO, Karen Patterson, for approval.

The Region requests all Preconstruction paperwork be submitted electronically as PDF files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as .pdf files on a CD or USB “thumb” drive that will not be returned to the contractor.

To minimize travel delays associated with major holidays, no work shall be permitted during the following periods:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Tuesday, July 7, 2020 - (July 4th Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per Section 619-3.02 J.2 (every 800’) and at strategic locations, such as intersections and driveways.

Paint with beads is the only option permitted in Region 6 for temporary and interim pavement markings, unless approved on a case by case basis by the Resident Engineer. Offset the centerline temporary/interim pavement markings so that the permanent markings will cover up the temporary/interim markings, as follows: 8” centerline offset for 2 lane roads, 6” centerline offset for multi-lane roadways.

All stockpile, spoils, and clean-out sites need to be preapproved by the Regional Maintenance Environmental Coordinator, Ruth Hart, prior to use.

1.14.5 NYSDOT Region 9 Special Notes (Chip Seal)

The roadway shall be swept clean immediately prior to placing the chip seal. The cost of this work shall be incorporated in the cost of the various chip seal items in the contracts, no separate payment shall be made for this work.

(Continues next page)

1.14.5 NYSDOT Region 9 Special Notes (Chip Seal) (Cont'd)

Project 9V2081 – Tioga County:

The contractor shall note that the project takes place on a marked bike route and that in order to protect bicyclists each day's chip seal must be swept within 24 hours of placement. The cost of this work shall be incorporated in the cost of the various chip seal items in the contracts, no separate payment shall be made for this work.

1.15 Detailed Specifications – Chip Seal

Please, see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

1.15.1 Project Dimensions - Chip Seal

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed in Attachment 12 – Project Dimensions are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. NYS OGS/NYS DOT assumes no responsibility for erroneous information listed herein.

Please refer to Attachment 12 – Project Dimensions for the Project Dimensions Data.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS

2.1 Introduction

Cold Recycling of bituminous concrete pavements is a corrective maintenance technique. The existing pavement is milled off for a depth of 3 to 4 inches, a liquid bituminous material is added to the millings, and the resulting mixture is placed and compacted on the milled surface. A new bituminous concrete sealing layer is added later. Existing cracks are eliminated and the resulting pavement should last for many years.

2.2 Pricing Information

2.2.1 General

Price quoted for cold recycling shall be net per square yard completed with contractor's equipment totally by the contractor at the locations indicated herein. The price quoted for cold recycling per square yard shall also include mobilization to the project site and the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids.

Some projects in this Invitation for Bids include an optional bid item to supply the liquid bituminous material necessary for the cold recycling. **Bidders shall either submit a bid for an emulsion or a PG binder per project, but not both.** The price quoted per gallon for **either** the asphalt emulsion or PG 64S-22 binder (liquid bituminous material) shall include heating, hauling, and applying the liquid bituminous material at the project locations indicated herein. The price quoted per ton for aggregate shall include hauling and applying the necessary aggregate as per the mix design at the project locations indicated herein.

If fog seal is applied, it will be paid under separate item as the total volume of material used for fog seal operations. The price quoted per gallon of fog seal shall include heating, hauling, and applying the liquid bituminous material used for fog sealing operation at the project locations indicated herein.

If Portland cement is used, it will be paid under separate item as the total tons of material used at the location. The price quoted per ton of Portland cement shall include hauling, delivery, and mixing.

2.3 Asphalt Price Adjustments

2.3.1 General

- a. Asphalt price adjustments allowed will be based on the January 2020 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The January 2020 average is \$504,000.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the "Adjustment Date", during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline \text{New Monthly Average} \\ \text{FOB Terminal Price} \\ \hline \end{array} - \begin{array}{|c|} \hline \text{Base Average} \\ \text{Terminal Price} \\ \hline \end{array}}{235} \times \begin{array}{|c|} \hline \text{Total} \\ \text{Allowable} \\ \text{Petroleum \%} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.
 Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of January 2020.

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Material Designation	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
702-3201	MS-2	65	8.2	73.2
702-3301	HFMS-2	65	8.2	73.2
702-3401	HFMS-2h	65	2.7	67.7
702-3402	HFMS-2s	65	8.2	73.2
702-3501	SS-1	65	0.2	65.2
702-3601	SS-1h	65	0.2	65.2
702-4201	CMS-2	65	10.2	75.2
702-4301	CMS-2h	65	10.2	75.2
702-4401	CSS-1	65	0.2	65.2
702-4501	CSS-1h	65	0.2	65.2
	PG 64S-22	100	0.2	100.2

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

2.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Material Designation 702-3301, HFMS-2

Base Avg. Price per Ton = \$504.000

New Avg. Price per Ton = \$514.000

Total % Asphalt Plus Petroleum Allowance = 73.2%

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{(514.000 - 504.000)}{235} \times \begin{array}{|c|} \hline 0.732 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \begin{array}{|c|} \hline +\$0.031 \text{ per gallon} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

2.4 Payment

Payment for cold recycling shall be made at the contract price bid for the actual number of completed square yards of cold recycling; the actual number of tons of aggregate; the actual number of gallons of either asphalt emulsion (unmodified or modified) or PG 64S-22 binder at 60 degrees F verified by the receiving agency used in the accepted portions of the work; if used, the actual number of gallons of asphalt emulsion used for fog sealing at 60 degrees F verified by the receiving agency used in the accepted portions of the work; and if used, actual number of tons of Portland cement. The determination as to quantities involved in any contract shall be accepted as final and binding upon the contractor.

A delivery slip stating quantities of liquid bituminous material (unmodified or modified emulsion or PG 64S-22 binder) shall accompany each shipment. An invoice listing the quantities of cold recycling shall be sent promptly by the contractor to the engineer.

No separate payment will be made for the use of water in the mixing process. Any work required for the maintenance and repair of the cold recycling including sweeping by the contractor during the ten-day curing period and for an additional twenty days thereafter shall be done at the contractor's expense.

Payment for work zone traffic control shall be included in the payment for the number of square yards of completed recycling.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.5 Pre-Recycling Conference

The contractor shall schedule a Pre-Recycling Conference with the affected resident engineer after the acceptance of the mix design by the State and at least one week prior to the start of the recycling. Project-level supervisors for both the owner agency and the contractor shall be present at this conference. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional insurance requirements set forth in the INSURANCE clause, their proposed recycling schedule, procedure, equipment, mix design, calibration and Work Zone Traffic Control Plan to the State for approval. Prior to the start of recycling, the contractor shall coordinate the details of the recycling with the resident engineer.

2.6 Supervision

The Department of Transportation shall provide supervision for the recycling operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

2.7 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (09/18). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

2.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

2.9 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

2.10 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

2.11 Possible Mix Design – Cold Recycling

All NYSDOT Regions except Regions 3 and 6

The Department may core the pavement and supply those cores to the contractor. The quantities shown on price pages are estimated and indicate the amount and type of added aggregate and the type and amount of asphalt emulsion and the amount of PG 64S-22 binder (if the option is provided) to properly recycle the pavement. The contractor shall develop their bids for square yards of cold recycling, aggregate and **either emulsion (unmodified or modified) or PG binder (if the option is provided) for each project** using the estimated quantities. After award, the contractor shall develop their own mix design as per the detailed specifications and submit it to the agency's representative for approval. The bidder shall submit a bid for cold recycling, aggregate, and either asphalt emulsion or PG 64S-22 binder (if the option is provided). **If the bidder's bid does not conform to these requirements, their bid offer will be rejected.** Core results may be obtained from respective Resident Engineer or Regional Materials Engineer.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.11 Possible Mix Design – Cold Recycling (Cont'd)

Regions 3 and 6

The possible mix design is shown on bid pages and indicates the amount and type of added aggregate and the type and amount of asphalt emulsion, and the amount of PG 64S-22 binder (if the option is provided) to properly recycle the pavement. The contractor shall develop their bids for square yards of cold recycling, aggregate and **either emulsion (unmodified or modified) or PG binder (if the option is provided) for each project** using the indicated possible mix design.

After award, the contractor shall take pavement cores and develop their own mix design and submit it to the agency's representative for approval. This mix design must be submitted a minimum of ten working days prior to the start of work. The bidder shall submit a bid for cold recycling, aggregate, and either asphalt emulsion or PG 64S-22 binder (if the option is provided). **If the bidder's bid does not conform to these requirements, their bid offer will be rejected.**

2.12 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

2.12.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs: (see next page).

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.12.1 Permanent Construction Signs (Cont'd)

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36" x 36" Freeways 48" x 48"	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.12.1 **Permanent Construction Signs (Cont'd)**

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

2.12.2 **Temporary Pavement Markings**

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

2.12.3 **Special Note: Work Zone Intrusion Initiative**

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.12.3 **Special Note: Work Zone Intrusion Initiative (Cont'd)**

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectORIZED removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

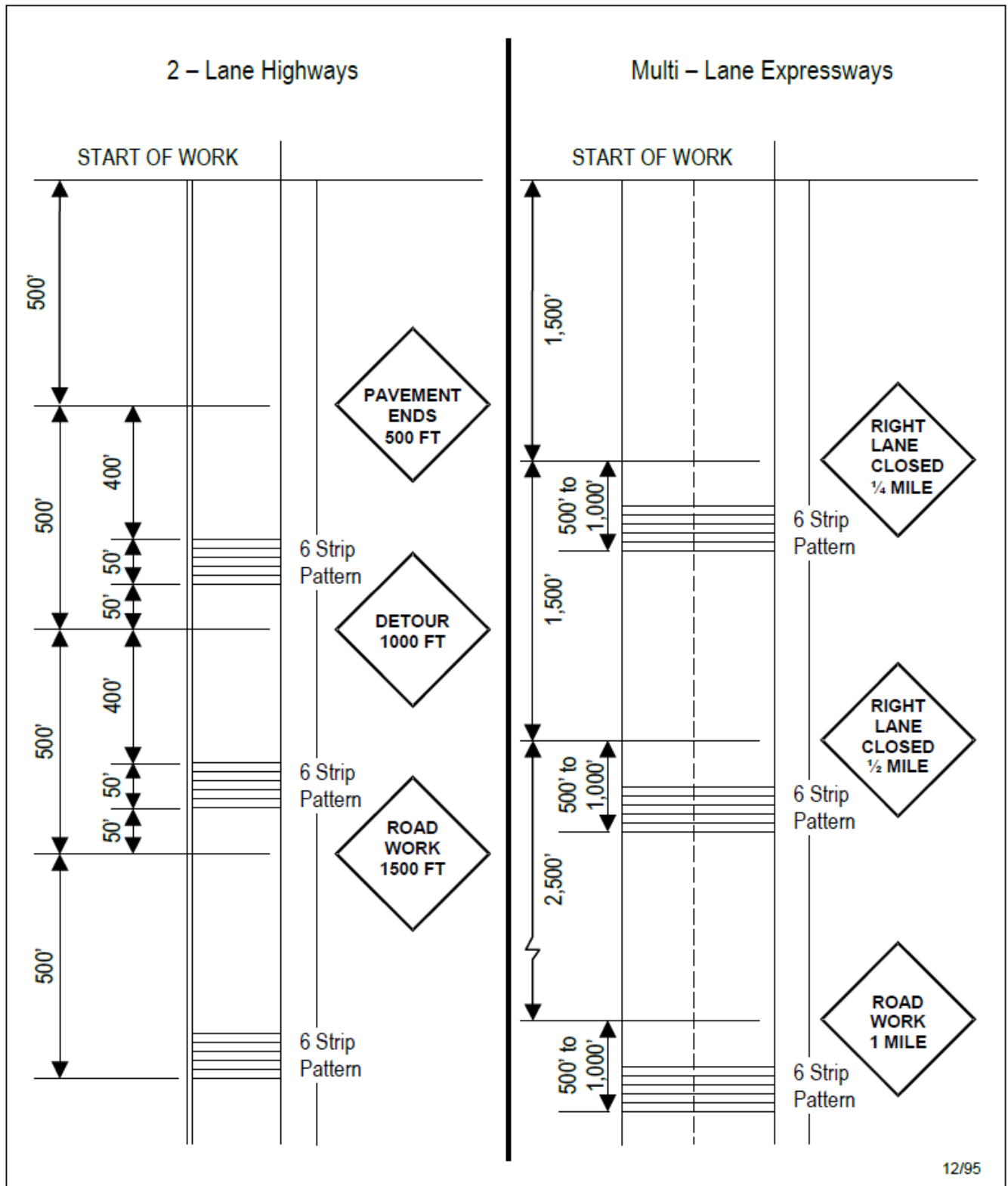
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing on the **next page**.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13 Special Notes – Cold Recycling

2.13.1 Funding Source (Cold Recycling)

Projects 360301, 6V2045, 6V2215, and 9V2041 will be funded by Federal Aid.

Projects 1V2041 and 360355 are 100% State funded.

2.13.2 Special Note for Coordination with Other Projects (Cold Recycling)

All the projects in this Contract Award Notification involve HMA overlay to the cold recycling through separate contract(s). All projects shall require that the cold recycling contractor coordinates their work with the overlay contractor(s) to provide required curing period before placing the overlay as well as to minimize disruption to the traveling public and the time traffic is running over a recycled surface.

2.13.3 NYSDOT REGION 1 Special Notes (Cold Recycling)

All Region 1 Projects shall follow the following holiday restrictions:

There shall be no temporary lane closures permitted on the following dates:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Monday, July 6, 2020 - (July 4th Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

6:00 am Friday, October 9, 2020 thru 6:00 am Tuesday, October 13, 2020 (Columbus Day Holiday)

Region 1 Projects – Pavement Markings:

It shall be the contractor's responsibility to inventory and document the existing pavement marking patterns prior to recycling and submit to the Engineer a copy of the inventory prior to beginning work. If the original markings are obliterated, the contractor shall contact the resident engineer for guidance on their location.

Region 1 Projects – Non-Vibratory Rolling:

Contractor shall use non-vibratory rolling over any bridge structure, large culvert or known utility within the project limits or as ordered by the engineer in charge.

Region 1 Recycling Operations

Recycling operations shall progress in the opposite direction of traffic. This provision may only be waived by the Region 1 Materials Engineer.

Project 1V2041 – Rte. 67 Rensselaer County RM 1063 to 1112

Lane Closure Restrictions Site Specific:

- There shall be no temporary lane closures permitted during the Schaghticoke Fair (2020 dates TBD, 2019 was August 28, 2019 thru September 2, 2019).

The recycling operations for this project shall be complete by **August 31, 2020**. The Contractor shall submit a schedule to the Engineer, to this effect, prior to beginning operations.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.4 NYSDOT REGION 3 Special Notes (Cold Recycling)

All Region 3 Projects shall follow the following holiday restrictions:

There shall be no temporary lane closures permitted on the following dates:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Monday, July 6, 2020 - (July 4th Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

6:00 am Wednesday, November 25, 2020 thru 6:00 am Monday, November 30, 2020 - (Thanksgiving Holiday)

2020 ADDITIONAL TEMPORARY LANE/SHOULDER CLOSURE RESTRICTIONS FOR OTHER HOLIDAYS AND/OR SPECIAL EVENTS

There shall be no temporary lane or shoulder closures permitted during the following special events on the roadways designated below:

Project PIN 360301, Route 221 (Central New York Maple Festival). Beginning 6:00 am Saturday, April 18, 2020 ending 6:00 am Monday, April 20, 2020.

Onondaga County Project 360355: Route 80 (Syracuse Nationals). No pavement marking paint work only. Beginning 6:00 am Friday, July 17, 2020 ending 6:00 am Monday, July 20, 2020.

Projects 360355: Route 80 (Lafayette Apple Festival). Beginning 6:00 AM Saturday October TBA ends 6:00 AM Monday October TBA (Typically Mid October Saturday and Sunday), 2020.

Project 360301 (Rte. 221, Cortland Co.) & Project 360355 (Rte. 80 Onondaga Co.)

Shoulders shall be disposed of (production cold milling) by the cold recycling Contractor.

The Cold Recycling Contractor shall determine addition or removal of material such that the pavement profile is not changed after recycling.

2.13.5 NYSDOT REGION 6 Special Notes (Cold Recycling)

Region 6 Specific Special Notes:

To minimize travel delays associated with major holidays, no work shall be permitted during the following periods:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Monday, July 6, 2020 - (July 4th Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

All CIPR projects are at a 4" depth unless otherwise noted in the plans.

The Region requests all Preconstruction paperwork be submitted electronically as .pdf files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as .pdf files on a CD or USB "thumb" drive that will not be returned to the contractor.

The expectation of Region 6 is that fog seal shall only be used when environmental conditions (pending rain, cooler temperatures, etc) could result in a negative impact to the mat (raveling, etc); Contractors should not plan to fog seal a mat at the close of business daily as part of their normal operations. Region 6 does not anticipate paying for fog seal, so Contractors should plan accordingly.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.5 NYSDOT REGION 6 Special Notes (Cold Recycling) (Cont'd)

In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per section 619-3.02 J.2 (every 800') and at strategic locations, such as intersections and driveways.

All Region 6 Cold Recycling projects shall be completed no later than August 31, 2020. A schedule reflecting this shall be submitted before start of work to the Region's ARDO, Karen Patterson, for approval.

Paint with beads is the only option permitted in Region 6 for temporary and interim pavement markings, unless approved on a case by case basis by the Resident Engineer. Offset the centerline temporary/interim pavement markings so that the permanent markings will cover up the temporary/interim markings, as follows: 8" centerline offset for 2 lane roads, 6" centerline offset for multi-lane roadways.

3 Rollers will be required to be used on all Region 6 cold recycling projects. The same roller cannot be substituted as the "knock-down" and "finish" roller.

All coring shall be coordinated with the Regional Materials Engineer, Dennis Cotton. The mix design submittal for approval shall include all data associated with each core, this shall include but not limited to locations and all laboratory results used to develop the mix design. Additionally, the Regional Materials Engineer may designate companion cores to be taken for QA testing in the regional lab, this shall be done in the presence of the RME or his designee.

Region 6 will waive the requirement to have the nuclear gage inspector on site at the start of the operation for the cold recycling operation. This inspector shall be on site within 4 hours of the start of the operation or as required by the Resident Engineer.

A reminder that per Code Rule 753, a "Dig Safe" ticket shall be submitted for each project notifying of "...the movement or removal...of pavement...". Some of these utilities may request "no vibratory rolling" for a distance up to 100' over interstate/intercontinental gas/petroleum transverse crossings. Contractors can visit the following website to view whether there is a likelihood for these utilities in the project limits:

<https://www.npms.phmsa.dot.gov/> and then click the npms public map viewer link and follow the instructions.

All stockpile, spoils, and clean-out sites need to be preapproved by the Regional Maintenance Environmental Coordinator, Ruth Hart, prior to use.

The following bridges are within the project limits and are not to receive the cold recycle treatment:

Project Number	BIN/CIN	Reference Marker
6V2045	1096440	36-6401-1170 *membrane
	1023510	36-6401-1190
	1023520	36-6401-1209
	1023530	36-6401-1219
6V2215	1029430	70-6101-1025 * in no CIPR area
	1029420	70-6101-1020

Project 6V2045

The contractor is to be aware that there is a Craze Daze Festival in the Village of Canisteo the second weekend of June and a Farm/City Days event in September that is often held just south of the Village. Plan schedules accordingly.

Project 6V2215

The area from RM 70-6101-1029 to 1021 is not to be recycled; it will receive a mill and fill after the CIPR is completed.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.6 NYSDOT REGION 9 Special Notes (Cold Recycling)

Project 9V1941 - Delaware County

The contractor shall mill the shoulders 4 feet wide and 4" deep and remove this material, contractor is responsible for disposing of material. It is intended to include a shoulder break for the 3' wide shoulder. The contractor shall include the method to be used for this in their MMP. Payment for the shoulder milling/removal will be made under item 416.10.

A three-roller train is required for the CIPR on this project. All MMPs that are submitted using a two-roller train with one roller acting as a finish and either a break down or intermediate roller will not be accepted.

2.14 Detailed Specifications – Cold Recycling

Please see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

2.14.1 Project Dimensions - Cold Recycling

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed in Attachment 12 – Project Dimensions are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. NYS OGS/NYS DOT assumes no responsibility for erroneous information listed herein.

Please refer to Attachment 12 – Project Dimensions for the Project Dimensions Data.

SECTION 3: JOINT AND CRACK FILLER/SEALER - SPECIFIC PROJECTS

3.1 Introduction

Joint and crack sealers are hot poured liquid bituminous materials (rubberized asphalt) used to seal cracks and joints in the surface of highway pavements.

3.2 Pricing Information

3.2.1 General

Price quoted for joint & crack filler/sealer shall be net lane mile, furnished, delivered, heated, and applied by the contractor at the locations indicated herein. Price calculations, if any, will be calculated on the basis of lane miles of crack/joint sealing/filling actually furnished. Work Zone Traffic Control, cleaning of cracks/joints, and disposal of debris shall be included in the price quoted per lane mile of crack sealer. Cracks within shoulder area are to be sealed and included in the price bid per lane mile.

The contractor is to furnish all necessary labor and equipment to complete the indicated projects except that the State will supervise and control the operation. The equipment supplied to complete the crack sealing projects shall conform with the specifications included in this Invitation for Bids.

3.3 Asphalt Price Adjustment

3.3.1 General

- a. Asphalt price adjustments allowed will be based on the January 2020 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The January 2020 average is \$504.000 per ton

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the “Adjustment Date”, during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment (per lane mile)	=	$\frac{\text{New Monthly Average FOB Terminal Price} - \text{Base Average Terminal Price}}{2.35}$	X	Total Allowable Petroleum %
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Positive Price Adjustment number shall be added to original per lane mile Bid Price.
 Negative Price Adjustment number shall be subtracted from original per lane mile Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of January 2020

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Material Designation	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
ASTM D6690 Type II		56	0.2	56.2%

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.
- e. Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.
- f. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$1.000 per lane mile from the original price. In these instances, prices will revert back to the original prices.
- g. All Asphalt Price Adjustments will be computed to three decimal places.
- h. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- i. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

3.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Item ASTM D6690 Type II
 Base Avg. Price per Ton = \$504.000
 New Avg. Price per Ton = \$514.000
 Total Allowable Petroleum = 56.2%

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per lane mile)} \\ \hline \end{array} = \frac{(514.000 - 504.000)}{2.35} \times \begin{array}{|c|} \hline 0.562 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per lane mile)} \\ \hline \end{array} = \begin{array}{|c|} \hline +\$ 2.391 \text{ per} \\ \text{lane mile} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per lane mile Bid Price.
 Negative Price Adjustment number shall be subtracted from original per lane mile Bid Price.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.4 Payment

Payment for crack filler/sealer shall be made at contract price per **lane mile** for the actual quantities furnished to and verified by the receiving agency. This determination as to quantities involved in any contract shall be accepted as final and binding upon the Contractor. An invoice shall be sent promptly by the Contractor to the Engineer of the Region placing the order. Measurement shall be based on actual **lane mile of crack filler/sealer. Cracks sealed within shoulder area is included in the price per lane mile.**

3.5 Pre-Crack Sealing Conference

The contractor shall coordinate a schedule for a Pre-Crack Sealing Conference with the Resident Engineer (RE), Resident Operation Engineer (ROE) and his or her project quality Assurance Representative within one month after the award of the contract and at least two weeks prior to the start of the crack sealing. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional Insurance Requirements set forth in the INSURANCE clause, their proposed crack sealing schedule, equipment, and crack sealing procedure and Work Zone Traffic Control Plan to the State for approval. At least one week prior to the start of crack sealing, the contractor shall coordinate the details of the crack sealing with the Resident Engineer.

3.6 Supervision

The Department of Transportation shall provide supervision for the crack sealing operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

3.7 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (09/18). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

3.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

3.9 Restoration Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

3.10 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.11 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

3.11.1 Temporary Construction Signs

The vendor shall provide temporary construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. All costs for Work Zone Traffic Control including flagging, construction signs and shadow vehicles are to be included in the price per gallon. No separate payment shall be made.

3.11.2 Shadow Vehicle Requirements

The shadow vehicles shall have a gross vehicle weight of 18,000 lb. to 20,000 lb. each. The shadow vehicles shall be equipped with a combination of four (4) rotary lights and strobes, two front and two rear and four (4) flashing amber lights, two (2) front and two (2) rear. All equipment on the shadow vehicle furnished under this contract shall be in full compliance with the latest edition of the New York State Vehicle and Traffic Law, Article 9, Sections 375 and 376. The shadow vehicles shall each be equipped with a Mobile Construction Zone Impact Attenuator, as per Section 712-06 of the NYSDOT Standard Specifications, and one Type B Arrow Panel, as described in Section 294.5 of the MUTCD. Contractor shall supply all necessary operators for the shadow vehicles.

3.11.3 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use. Frequent checks shall be made to reset channelizing devices dislodged by traffic.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.11.3 **Special Note: Work Zone Intrusion Initiative (Cont'd)**

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectORIZED removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

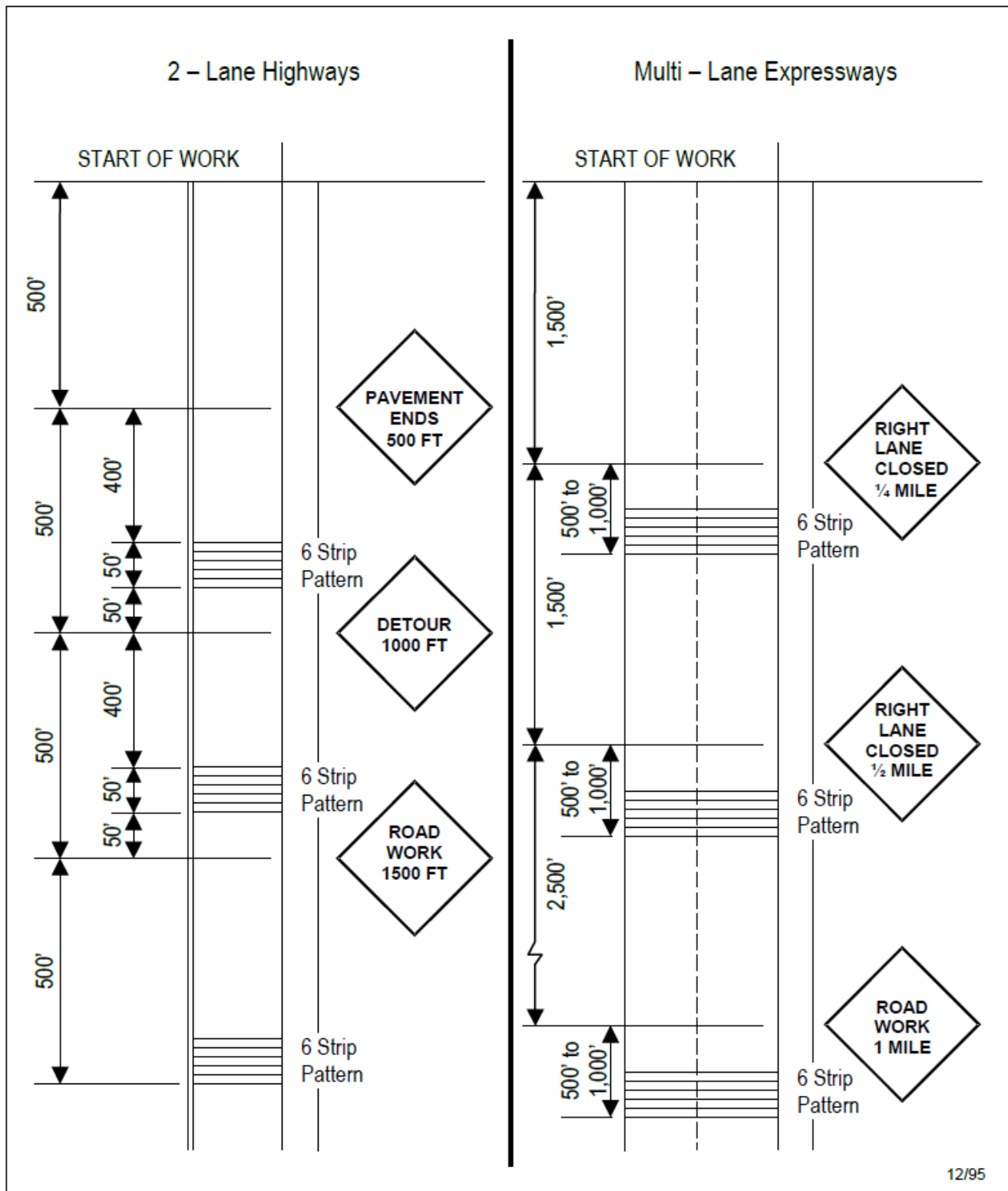
Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



12/95

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.11.3 Special Note: Work Zone Intrusion Initiative (Cont'd)

Temporary Rumble Strips (Cont'd)

c. Basis of Payment

All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard or lane mile as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing in the previous page.

3.12 Special Notes – Crack Sealing

3.12.1 Funding Source (Crack Sealer)

Projects 5V20CS, 9CRS01, 9CRS02, 9CRS03, and 9CRS04 will be funded by Federal Aid.

Project 4T5320 and 6M2001 are State funded projects.

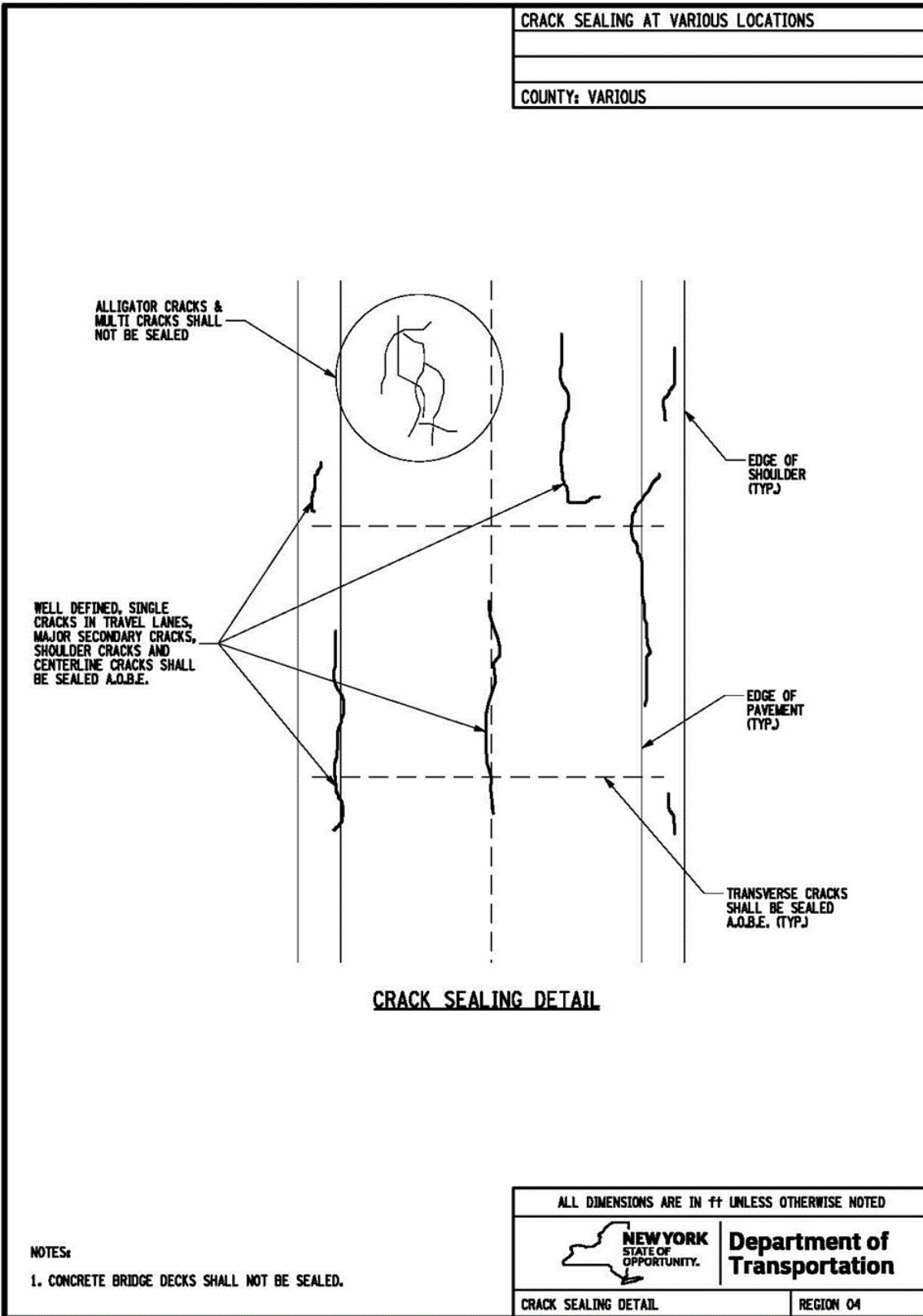
3.12.2 NYSDOT REGION 4 Special Notes (Crack Sealing)

Project 4T5320 – Crack sealing

1. The purpose of this project is to seal the cracks and joints in the paved roadway areas at various locations in Region 4. This work shall consist of cleaning and sealing the cracks and joints in the HMA pavement and shoulders.
2. The Contractor shall furnish for the Engineer's use, two ambient air thermometers and two "gun type" pavement thermometers per work crew. After completion of the project construction, the Engineer will return the thermometers back to the Contractor.
3. Pavement Markings: The Contractor shall use care when filling cracks and/or joints near existing pavement markings, to keep from obscuring its intended function or reflectivity. Centerline, lane line, and gore markings shall not be covered or obscured. If the Engineer determines, the pavement markings are covered or obscured, the Contractor shall restore the markings to their original condition at no additional cost to the State.
4. The application of sealant shall be allowed if the ambient temperature is between 40 degrees and 85 degrees Fahrenheit.
5. Preconstruction crack sealing meeting is required at least one week prior to start of any work. The meeting will discuss the intent of the work to ensure all parties understand the procedures to be followed. The Contractor should be prepared to discuss work staging, schedule, work zone traffic control, and overall procedures for completing work. The following people shall attend the meeting:
 - a. Contractor Superintendent
 - b. Crack Sealing Personnel
 - c. Resident Engineer
 - d. EIC/Inspection Staff
 - e. Regional Materials Engineer
 - f. Contractor Work Zone Traffic Control Supervisor
 - g. Regional Construction Safety Coordinator and/or Representative from Operations division (Traffic and Safety Group)
6. Coordination with other projects- The Contractor shall coordinate their work so as not to conflict with other projects occurring within or abutting the contract limits

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.12.2 NYSDOT REGION 4 Special Notes (Crack Sealing) (Cont'd)



SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.12.2 NYSDOT REGION 4 Special Notes (Crack Sealing) (Cont'd)

PIN 4T5320 – Work Zone Traffic Control (WZTC) Requirements

Time restrictions shall apply to apply to this project. Refer to the following pages for location specific time restrictions.

The time restrictions listed are to be implemented throughout the duration of the project. No deviations are allowed without prior approval from the Regional Traffic Engineer or designee. If, in the opinion of the EIC or the Traffic Management Center (TMC), short term lane closures are creating excessive delays to traffic or are creating a safety concern due to slow or stopped traffic, the closures shall be removed, and the roadway opened to traffic.

The time restrictions listed are based on anticipated traffic volumes. If, at the time of construction, the traffic volumes appear to allow extended work hours, an adjustment to the time restrictions may be proposed. Any requests for revisions to the time restrictions shall be submitted in writing to the EIC for approval by the Regional Traffic Engineer or designee. Bidders should not assume that revisions to the stated time restrictions will be permitted.

(Cont'd next page)

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.12.2 NYSDOT REGION 4 Special Notes (Crack Sealing) (Cont'd)

PIN 4T5320 – Work Zone Traffic Control (WZTC) Requirements (Cont'd)

2020 VPP CRACK SEALING - TIME RESTRICTIONS

Crack Seal Location	Reference Markers	Flagging/Intersection Flagging	Single Lane Closures
GENESEE COUNTY			
Rte. 63: Rte. 20 to Batavia SCL	1041 - 1114	Batavia City Line to Bethany Center Rd: 3-5pm Bethan Center Rd to Route 20: No restrictions	N/A
Rte. 63: Village of Oakfeild	3047 - 3062	No restrictions	N/A
Rte. 262: Village of Oakfeild	1000 - 1004	No restrictions	N/A
Rte. 19: Randall Rd to Rte. 33	1104 - 1156	Randall Rd to I-490: 4-6pm I-490 to Route 33: No restrictions	N/A
Rte. 19: Wyoming CL to Rte. 63	1000 - 1008	No restrictions	N/A
Rte. 20: Erie CL to Rte. 77	1000 - 1037	No restrictions except no work when there is a concert at Darien Lake	N/A
Rte. 238: Rte. 98 (Attica) to Rte. 20	1110 - 1112	No restrictions	N/A
	1000 - 1040	No restrictions	N/A
LIVINGSTON COUNTY			
Rte. 15: Depot Rd to Stagecoach Rd	1037 - 1116	No restrictions	N/A
Rte. 15: Livonia EVL to Rte. 20A	1199 - 1214.5	3-6pm	N/A
Rte. 20A: Rte. 256 to Rte. 15	1146 - 1151	4-6pm	N/A
Rte. 20: Rte. 36 to Rte. 5	1027 - 1087	No restrictions	N/A
I-390: Exit 5 to Exit 6	1030 - 1114	N/A	No restrictions
MONROE EAST			
Rte. 65: Canal to Rte. 31	1114 - 1127.5	7am-7pm	7-9am,3-7pm (single lane closures possible near Route 31)
Rte. 252: Commons way to Winton Rd	1089 - 1098	N/A	EB: 12pm - 7pm WB: 7-9am, 12pm - 7pm
Rte. 252: Winton Rd to Rte. 96	1098 - 1130	7am-8pm	N/A
Rte. 96: Rte. 252 to Mitchell Rd	1049 - 1055	7am-8pm	N/A
MONROE WEST			
Rte. 36: Rte. 33 to Rte. 531	1137 - 1151	No restrictions	N/A
Rte. 36: Rte. 33 to Rte. 531	1096 - 1137	No restrictions	N/A
Rte. 947A: Rte.19 to Payne Beach Rd	1051 - 1131	N/A	EB: 7-8am WB: 4-6pm
Rte. 947A: Orleans CL to Rte. 19	1000 - 1051	N/A	No restrictions
Rte. 383/386: Village of Scottsville	1054 - 1070	No restrictions	N/A
Rte. 251: Village of Scottsville	1096 - 1104	No restrictions	N/A

(Cont'd next page)

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.12.2 NYSDOT REGION 4 Special Notes (Crack Sealing) (Cont'd)

PIN 4T5320 – Work Zone Traffic Control (WZTC) Requirements (Cont'd)

2020 VPP CRACK SEALING - TIME RESTRICTIONS

Crack Seal Location	Reference Markers	Flagging/Intersection Flagging	Single Lane Closures
ONTARIO COUNTY			
Rte. 245: Rushville to Rte. 14A	1003 - 1116	No restrictions	N/A
Rte. 247: Lake to Lake Rd to Rte. 5/20	1037 - 1073	No restrictions	N/A
Rte. 5/20: Canadaigua CL to Geneva CL	3022 - 3120	No restrictions	N/A
Rte. 5/20: Canadaigua CL to Geneva CL	3007 - 3022	10am-6pm	No restrictions
Rte. 21: Wells Curtice Rd to Rte. 5/20	1112-1155	No restrictions	N/A
ORLEANS COUNTY			
Rte. 237: Holley NVL to Rte. 104	1082 - 1103	No restrictions	N/A
Rte. 31: Walmart Ent. To Albion EVL	1132 - 1164	No restrictions	N/A
Rte.: 947A: Kendall Rd to Monroe CL	1100 - 1125	N/A	No restrictions
Rte.: 31: Butts Rd to Hindsburg Rd.	1164-1194	No restrictions	N/A
Rte. 104: Rte 387 to County line (Rt 272)	1195-1247	No restrictions	N/A
WAYNE COUNTY			
Rte. 89: Savannah NVL to Rte. 104	1049 - 1153	No restrictions	N/A
WYOMING COUNTY			
Rte. 77: Rte. 19 to Rte. 362	1000 - 1066	No restrictions	N/A

(Continues next page)

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.12.3 NYSDOT REGION 5 Special Notes (Crack Sealing)

Time Restrictions

All Region 5 Projects shall follow the time restrictions outlined in the “Work Zone Traffic Control - for Design/Construction on State Highways in Region 5” available on the NYSDOT website or through the Regional Transportation Systems Operations group excepting those projects listed on the Region 5 project specific special notes.

Project 5V20CS

The Inspector reserves the right to modify the limits of sealing based on needs and field conditions. The Crack sealing locations include ramps.

3.12.4 NYSDOT REGION 6 Special Notes (Crack Sealing)

Region 6 Specific Special Notes:

To minimize travel delays associated with major holidays, no work shall be permitted during the following periods:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Monday, July 6, 2020 - (July 4th Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

The Region requests all Preconstruction paperwork be submitted electronically (after award) as PDF files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as pdf files on a CD or USB “thumb” drive that will not be returned to the contractor.

All Region 6 Crack Seal projects shall be completed no later than October 31, 2020. A schedule reflecting this shall be submitted before start of work to the Region’s ARDO, Karen Patterson, for approval.

All Region 6 Crack Seal projects on I86, I390, Rt 17, and Rt 15 shall follow R6-TAST-1L and R6-TAST-1R WZTC plans attached.

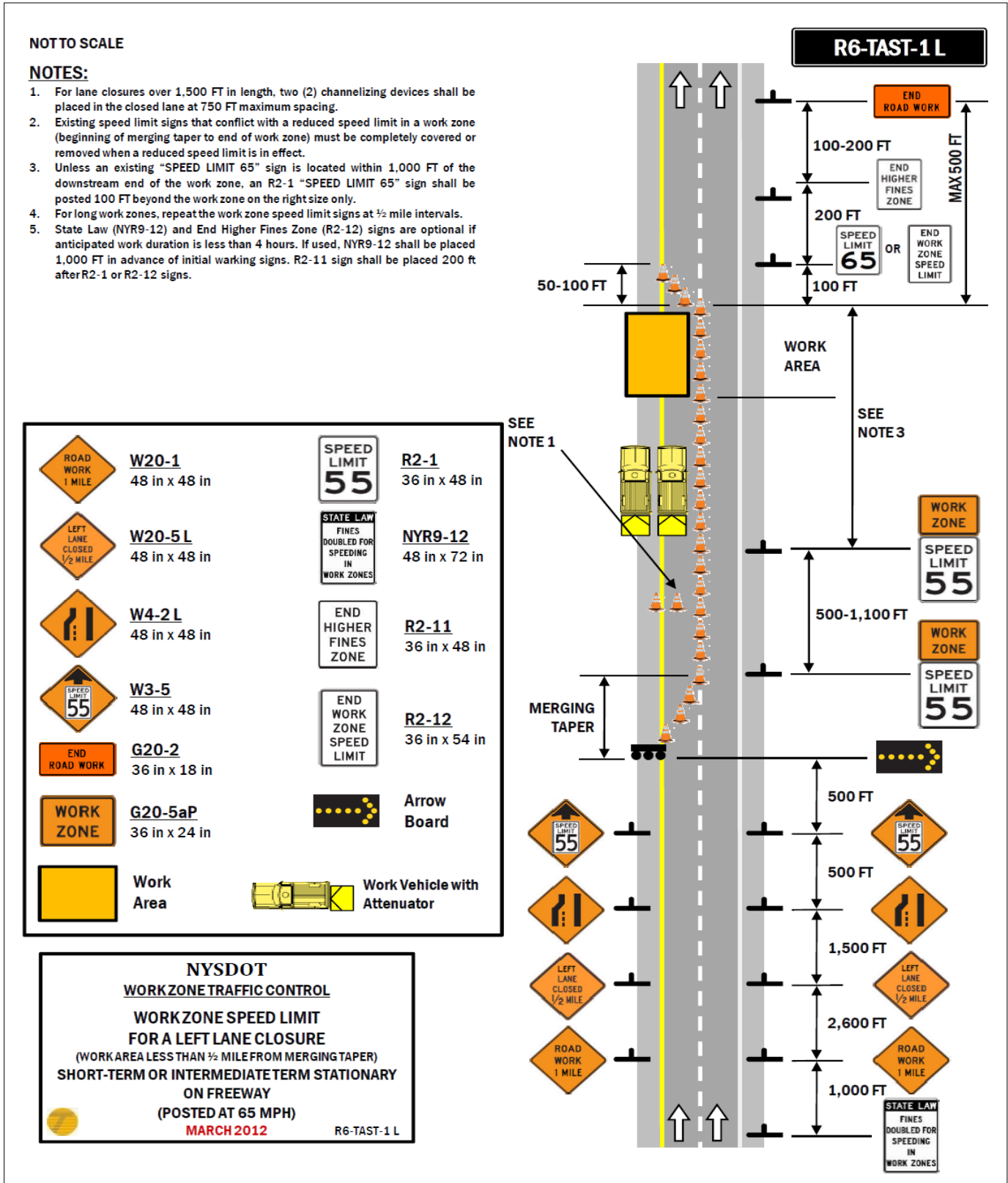
All crack seal sites denoted as “(concrete)” are only intended to receive crack seal at the longitudinal joint between the concrete pavement and the asphalt guiderail strip.

A map depicting the Region 6 Regional Priority Network Restricted Area is attached. No lanes closures are permitted in the restricted area Monday thru Friday, between the hours of 3:00PM and 6:00PM without the expressed written approval of the Regional Traffic Engineer, or his designee.

3.13 Detailed Specifications – Crack Sealing

Please, see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)



SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS

4.1 Introduction

Micro-surfacing is a pavement preventive maintenance treatment which offers minor improvements to rideability and has excellent friction characteristics.

4.2 Pricing Information

4.2.1 General

Price quoted for micro-surfacing shall be net per ton, furnished, hauled, delivered, and applied with Contractor’s equipment totally by the Contractor at locations indicated herein. The price quoted for micro-surfacing per ton shall also include abrading the existing pavement markings, the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids and Maintenance Materials Bond as listed in the *Maintenance Materials Bonds* section in this Invitation for Bids. Price calculations, if any, will be calculated on the basis of the material actually furnished.

4.3 Asphalt Price Adjustments

4.3.1 General

- a. Asphalt price adjustments allowed will be based on the January 2020 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The January 2020 average is \$504.000.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the “Adjustment Date”, during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment (Per Ton)	=	$\left(\begin{array}{c} \text{New Monthly Average} \\ \text{F.O.B. Terminal Price} \end{array} - \begin{array}{c} \text{Base Average F.O.B.} \\ \text{Terminal Price} \end{array} \right)$	X	Total Allowable Petroleum %
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Positive Price Adjustment number shall be added to original per ton Bid Price.
 Negative Price Adjustment number shall be subtracted from original per ton Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of January 2020

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Item #	Material Designation	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
413.02010118	Microsurfacing, Type II, F1	9.0	0.2	9.2
413.02020118	Microsurfacing, Type II, F2	9.0	0.2	9.2
413.02030118	Microsurfacing, Type II, F3	9.0	0.2	9.2
413.03010118	Microsurfacing, Type III, F1	7.5	0.2	7.7
413.03020118	Microsurfacing, Type III, F2	7.5	0.2	7.7
413.03030118	Microsurfacing, Type III, F3	7.5	0.2	7.7
413.04030118	Microsurfacing, Type III Rut Filling	7.5	0.2	7.7

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

4.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Item 18410.1021

Base Average Price = \$504.000

New Average Price = \$514.000

% Total Allowable Petroleum = 9.2%

$$\begin{array}{l}
 \boxed{\begin{array}{c} \text{Price} \\ \text{Adjustment} \\ \text{(per ton)} \end{array}} = \boxed{(514.000 - 504.000)} \times \boxed{0.092} \\
 \\
 \boxed{\begin{array}{c} \text{Price} \\ \text{Adjustment} \\ \text{(per ton)} \end{array}} = \boxed{+\$0.920 \text{ per ton}}
 \end{array}$$

Positive Price Adjustment number shall be added to original per ton Bid Price.

Negative Price Adjustment number shall be subtracted from original per ton Bid Price.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.4 Payment

Payment for micro-surfacing shall be made at contract prices per net ton for the actual quantity of material placed by the Contractor and actual numbers of gallons of bituminous materials for fog seal (if used).

Payment for work zone traffic control and abrading the existing pavement markings shall be included in the payment for the number of tons of completed micro-surfacing

A delivery slip stating quantities of micro-surfacing shall accompany each shipment. An invoice listing the quantities of micro-surfacing in place shall be sent promptly by the contractor to the address indicated on the purchase order.

4.5 Pre- Micro-Surfacing Conference

The contractor shall schedule a Pre-Micro-Surfacing Conference with the affected Resident Engineer within one month after award of the Contract and at least two weeks prior to the start of the micro-surfacing. Project level supervisors for both the owner agency and the Vendor should be present at this conference. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional insurance requirements set forth in the INSURANCE clause, their proposed micro-surfacing schedule, equipment, pavement marking abrading plan, mix design, calibration, micro-surfacing procedure, and Work Zone Traffic Control plan to the State for approval. At least one week prior to the start of micro-surfacing, the Vendor shall coordinate the details of the project with the Resident Engineer.

4.6 Bonding Requirements – Micro-Surfacing

A Maintenance Bond is required for micro-surfacing projects in this IFB. Please see sample in Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*.

4.7 Supervision

The Department of Transportation shall provide supervision for the micro-surfacing operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

4.8 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (09/18). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

4.9 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

4.10 Special Note for Micro-surfacing

The Contractor will not be responsible for the initial conditioning of the existing pavement and shoulder surfaces as described in Section 402-3.05 of the NYSDOT Standard Specifications. Patching, joint repair, crack filling will be done by NYSDOT forces prior to the micro-surfacing, chip seal or paver placed surface treatment project. However, once work on the project begins, the Contractor is responsible for keeping the pavement and shoulders clean until the paving operations are completed, as per Section 633-3.01 of the NYSDOT Standard Specifications.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.11 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

4.12 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

4.13 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway.

One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.13.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs:

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36" x 36" Freeways 48" x 48"	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.13.1 Permanent Construction Signs (Cont'd)

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

4.13.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

4.13.3 Abrading Existing Pavement Markings

The Contractor shall remove any epoxy or thermoplastic pavement markings. Other markings shall be removed as ordered by the Resident Engineer. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the Contractor's operations shall be the Contractor's responsibility. Waste material generated by the abrading operation shall be cleaned up and disposed of by the Vendor.

When the Contractor abrades the existing pavement markings, the Contractor shall place temporary pavement markings as specified elsewhere in this Invitation for Bids under Work Zone Traffic Control, unless the paving material will be placed the same day as pavement markings are abraded. The Contractor shall make every effort to expeditiously place the paving material in areas where pavement markings have been abraded and temporary pavement markings are in place. Under no circumstances will temporary pavement markings be allowed for more than five calendar days in areas where pavement markings have been abraded. In this event, the Contractor shall be required to place full pavement markings at no cost to the state. During the pavement markings abrading operation, traffic will be controlled by the Contractor in accordance with the Work Zone Traffic Control requirements included herein. The Contractor shall submit a proposed Traffic Control Plan to the Resident Engineer for approval. The plan may be based on the Work Zone Traffic Control drawings included in this Invitation for Bids.

Payment for pavement marking abrading shall be included in the price bid per ton of micro-surfacing. No separate payment shall be made.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.13.4 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectORIZED removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.13.4 Special Note: Work Zone Intrusion Initiative (Cont'd)

Temporary Rumble Strips (cont'd)

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

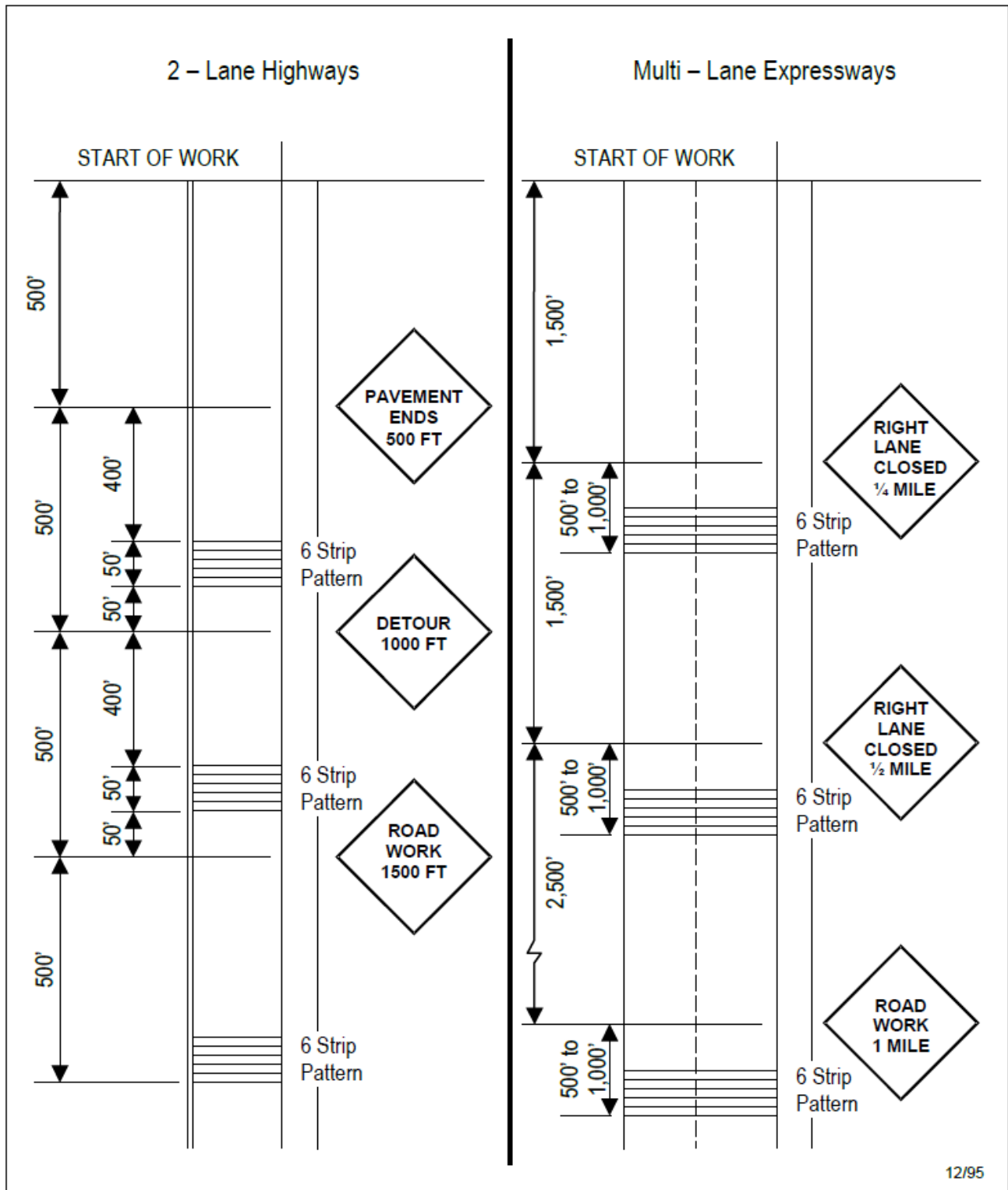
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing in the **next page**.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14 Special Notes – Micro-surfacing

4.14.1 Funding Source (Micro-surfacing)

Projects 7M20 11 will be funded by Federal Aid.
 Projects 402132 and 400576, are 100% State funded.

4.14.2 NYSDOT REGION 4 General Special Notes (Micro-surfacing)

REGION 4 General Special Notes

1. Local fire, police, ambulance, and school authorities shall be notified by the Contractor prior to commencing work in order to maintain sufficient emergency services and to allow school officials sufficient time to plan alternative bus routes, if necessary
2. Prior to the start of work, the contractor shall inventory all pavement markings and provide the engineer with a copy of the inventory. As part of a pavement marking program update, the Regional Traffic and Safety group is reviewing all pavement markings within the limits of paving projects. Upon their review, there may need to be adjustments to the pavement marking layout. The contractor shall be responsible for completing striping layout, including changes as indicated by the Regional Traffic and Safety Group.
3. The contractor shall remove any plowable reflective markers in the pavement, if present, prior to paving. The hole left in the existing pavement, shall then be filled with a hot mix asphalt material; 9.5 mixture, or mixture approved by the Resident Engineer. Cost to be included in the bid price for the associated project.
4. Contractor shall use non-vibratory rolling over culverts or known utilities within the project limits or as ordered by the engineer in charge. Specific locations for non-vibratory rolling will be discussed at the pre-pave meeting.
5. Some projects may require loop detectors to be re-established prior to or once microsurfacing has been completed. This shall be done by others and coordinated by the Resident Engineer.
6. The installation of temporary rumble strips at the beginning of each project work zone shall be at the discretion of the engineer.
7. Any and all debris generated as part of the work shall be removed by the Vendor within five days of completion of microsurfacing operations.

REGION 4 Temporary Lane closure Restrictions for Major Holidays

There shall be no temporary lane/shoulder closures on roadway facilities owned and/or maintained by NYSDOT on the major holidays listed below.

Construction activities that will result in temporary lane/shoulder closures shall be suspended to minimize travel delays associated with road work for major holidays as follows:

Holiday	Falls on	Temporary lane closures are NOT allowed from
Memorial Day	Monday	6:00 AM Friday before to 6:00 AM Tuesday after
Independence Day	Thursday	6:00 AM Thursday to 6:00 AM Monday after
Labor Day	Monday	6:00 AM Friday before to 6:00 AM Tuesday after
Thanksgiving Day	Thursday	6:00 AM Wednesday before to 6:00 AM Monday after

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.2 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)

REGION 4 Temporary Lane closure Restrictions for Major Holidays (Cont'd)

Exceptions can only be made under the following conditions:

- Emergency work.
- Work within long-term stationary lane/shoulder closures.
- Safety work that does not adversely impact traffic mobility and has been authorized by the Regional Traffic Engineer.

Note: The Department reserves the right to cancel any work operations, including lane closures and/or total road closures, that would create traffic delays by unforeseen events. The Contractor would be notified at least seven (7) calendar days prior to the proposed work.

Project 402132 – Ontario County (Rte 21, Village of Naples)

1. This project is a microsurfacing project. The microsurfacing will be applied to the full pavement width, from curb to curb (including parking lanes) and/or travel lanes and shoulders.
At the intersection of Route 21 and Route 53 the microsurfacing shall be applied to all legs of the intersection.
2. Time Restrictions:
 - a) Route 21 (within Village limits) – No Time Restrictions
 - b) Major Holiday Lane Restriction Special Note applies to this project
3. Abrading of pavement centerline, fog lines, special markings, and associated Work Zone Traffic Control, shall be included in the bid price for the microsurfacing item.

Project 400576 – Livingston County (Routes 5/20 & 15A, Village of Lima)

1. This project is a microsurfacing project. The microsurfacing will be applied to the full pavement width, from curb to curb (including parking lanes) and/or travel lanes and shoulders.
2. Time Restrictions:
 - a) Route 5/20 (within Village limits) – No Time Restrictions
 - b) Route 15A (within Village limits) – No Time Restrictions
 - c) Major Holiday Lane Restriction Special Note applies to this project
3. Abrading of pavement centerline, fog lines, special markings, and associated Work Zone Traffic Control, shall be included in the bid price for the microsurfacing item.

4.14.3 NYSDOT REGION 7 General Special Notes (Micro-surfacing)

Special Work Zone Traffic Control – Pilot Vehicle – Region 7 Projects

Unless otherwise specified, the highway shall be kept open to traffic at all times. Traffic shall be discontinued on the lanes where work is being performed on these projects; and as soon as HMA is applied and rolled, controlled traffic may be permitted thereon. For Region 7 VPP projects in this solicitation, the Contractors shall provide sufficient two-way radio equipped pilot vehicles to guide traffic around paving work at a speed not to exceed 15 mph. The pilot vehicles shall be equipped with G20-4 “PILOT CAR FOLLOW ME” signs meeting the requirements of Sections 6F.58 and 6C.13 of the Manual on Uniform Traffic Control Devices. The delineation of the closed lane (cone placement) as required by Section 619-3.02J of the Standard Specifications shall be evaluated by the Resident

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.3 NYSDOT REGION 7 General Special Notes (Micro-surfacing) (Cont'd)

Engineer based on the traffic control plan presented by the Contractor and, after consultation with the Regional Traffic Safety & Mobility Office, a determination will be made as to what will be required on the project. **Daytime lane closures may be used in lieu of pilot vehicles on controlled access highways as deemed appropriate by the Resident Engineer at the time of preconstruction conference.**

SIGN	MINIMUM SIZE	LOCATION
PILOT VEHICLE FOLLOW ME	G20-4 CONVENTIONAL 36"x 18"	ON BACK OF PILOT VEHICLES

The pilot vehicle shall have the name of the Contractor prominently displayed.

All cost for Work Zone Traffic Control including flagging, temporary pavement markings, channelizing devices, construction signs, and pilot vehicles shall be included in the prices per ton for the bituminous concrete. No separate payment shall be made.

4.15 Detailed Specifications – Micro-surfacing

Please, see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*

4.15.1 Project Dimensions - Micro-surfacing

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed in Attachment 12 – Project Dimensions are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. NYS OGS/NYS DOT assumes no responsibility for erroneous information listed herein.

Please refer to Attachment 12 – Project Dimensions for the Project Dimensions Data.

SECTION 5: HEATER SCARIFICATION - SPECIFIC PROJECTS

5.1 Introduction

Heater scarification is a continuous multi-step process in which the existing hot mix asphalt (HMA) pavement surface is recycled using specialized equipment. The HMA pavement surface is heated causing the asphalt to soften. The softened asphalt surface is then immediately scarified and milled to a specified depth. The reclaimed asphalt pavement is then mixed with a recycling agent that rejuvenates the asphalt. The recycled mix is then placed and compacted back onto the roadway. A new bituminous concrete sealing layer is added later. Existing cracks are eliminated, and the resulting pavement should provide a longer life.

5.2 Pricing Information

5.2.1 General

Price quoted for heater scarification shall be net per square yard completed with contractor's equipment totally by the contractor at the locations indicated herein. The price quoted for heater scarification per square yard shall also include mobilization to the project site and the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids.

The price quoted per gallon for recycling agent shall include heating, hauling, and applying the recycling agent at the project locations indicated herein.

5.3 Asphalt Price Adjustments

5.3.1 General

- a. Asphalt price adjustments allowed will be based on the January 2020 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The January 2020 average is \$504,000.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the "Adjustment Date", during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

- c. The unit prices of liquid bituminous materials (recycling agent) purchased from any award based on this specification will be subject to adjustment based on the following formula:

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline \text{New Monthly Average} \\ \text{FOB Terminal Price} \\ \hline \end{array} - \begin{array}{|c|} \hline \text{Base Average} \\ \text{Terminal Price} \\ \hline \end{array}}{235} \times \begin{array}{|c|} \hline \text{Total} \\ \text{Allowable} \\ \text{Petroleum \%} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.
 Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of January 2020.

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Item	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
417.0101	Recycling Agent	65.0	1.0	66.0%

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.

All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

5.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Item 417.0101

Base Avg. Price per Ton = \$504.000

New Avg. Price per Ton = \$514.000

Total % Asphalt Plus Petroleum Allowance = 73.2%

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{(514.000 - 504.000)}{235} \times \begin{array}{|c|} \hline 0.66 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \begin{array}{|c|} \hline +\$0.028 \text{ per gallon} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

5.4 Payment

Payment for heater scarification shall be made at the contract price bid for the actual number of completed square yards of heater scarification; the actual number of gallons of recycling agent at 60 degrees F verified by the receiving agency used in the accepted portions of the work. The determination as to quantities involved in any contract shall be accepted as final and binding upon the contractor.

A delivery slip stating quantities of recycling agent shall accompany each shipment. An invoice listing the quantities of heater scarification and recycling agent shall be sent promptly by the contractor to the engineer.

No separate payment will be made for the use of water in the mixing process. Any work required for the maintenance and repair of the heater scarification including sweeping by the contractor during the ten-day curing period and for an additional twenty days thereafter shall be done at the contractor's expense.

Payment for work zone traffic control shall be included in the payment for the number of square yards of completed heater scarification.

5.5 Pre-Heater Scarification Conference

The contractor shall schedule a Pre-Heater Scarification Conference with the affected resident engineer after the acceptance of the mix design by the State and at least one week prior to the start of the heater scarification. Project-level supervisors for both the owner agency and the contractor shall be present at this conference. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional insurance requirements set forth in the INSURANCE clause, their proposed work schedule, procedure, equipment, mix design, calibration and Work Zone Traffic Control Plan to the State for approval. Prior to the start of heater scarification, the contractor shall coordinate the details of the heater scarification with the resident engineer.

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

5.6 Supervision

The Department of Transportation shall provide supervision for the heater scarification operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

5.7 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (09/18). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

5.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

5.9 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

5.10 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

5.11 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

5.11.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs:

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36" x 36" Freeways 48" x 48"	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

permitted.

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

5.11.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

5.11.3 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

e. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

f. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectORIZED removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

g. Basis of Payment

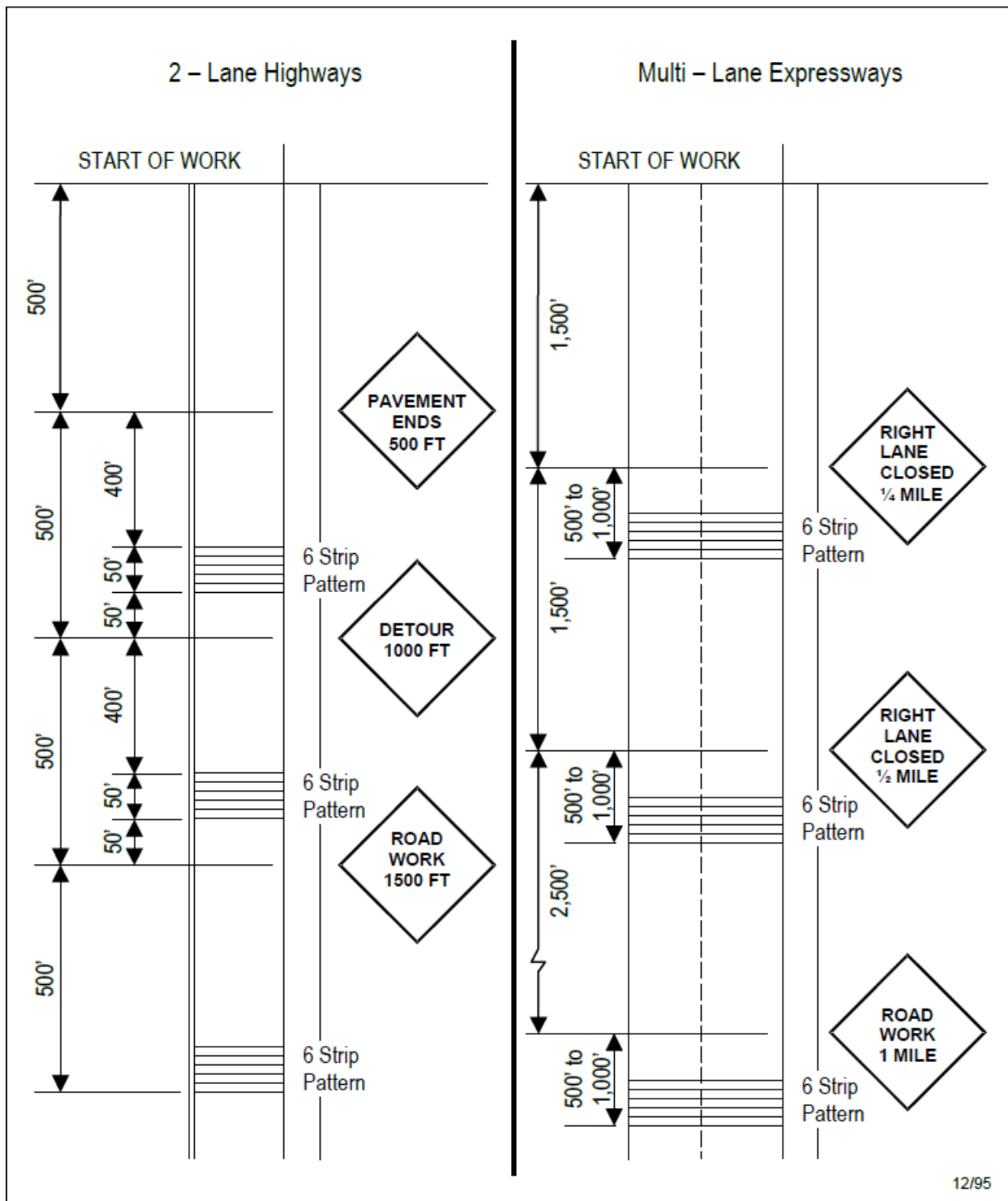
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

h. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing on the **next page**.

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



12/95

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

5.12 Special Notes – Heater Scarification

5.12.1 Funding Source (Heater Scarification)

All heater scarification projects in this solicitation will be funded by Federal Aid.

5.12.2 Special Note for Coordination with Other Projects (Heater Scarification)

All the projects in this Contract Award Notification involve HMA overlay or chip seal to the heater scarification through separate contract(s). All projects shall require that the heater scarification contractor coordinates their work with the top course contractor(s) to provide required curing period before placing the next course as well as to minimize disruption to the traveling public and the time traffic is running over a recycled surface.

5.12.3 Special Note for Pilot Vehicle (Heater Scarification)

Unless otherwise specified, the highway shall be kept open to traffic at all times. Traffic shall be discontinued on the lanes where work is being performed on these projects; and as soon as heater scarification is done and rolled, controlled traffic may be permitted thereon. The Contractors shall provide sufficient two-way radio equipped pilot vehicles to guide traffic around heater scarification work at a speed not to exceed 15 mph. The pilot vehicles shall be equipped with construction signs meeting the requirements of Section 6F.58 and 6C.13 of the Manual of Uniform Traffic Control Devices and a rotating amber beacon. The delineation of the closed lane (cone placement) as required by Section 619-3.02J of the Standard Specifications shall be evaluated by the Resident Engineer based on the traffic control plan presented by the Contractor and, after consultation with the Regional Traffic Safety & Mobility Office, a determination will be made as to what will be required on the project. Daytime lane closures may be used in lieu of pilot vehicles on controlled access highways as deemed appropriate by the Resident Engineer at the time of preconstruction conference

SIGN	MINIMUM SIZE	LOCATION
PILOT VEHICLE FOLLOW ME	G20-4 CONVENTIONAL 36"x18"	ON BACK OF PILOT VEHICLES

The pilot vehicle shall have the name of the Contractor prominently displayed.

All cost for Work Zone Traffic Control including flagging, temporary pavement markings, channelizing devices, construction signs, and pilot vehicles shall be included in the prices per square yard for heater scarification. No separate payment shall be made. **The use of the pilot shall be as ordered by the Resident Engineer.**

5.12.4 Special Note - Rail Road Involvement in Federal Funded Projects (Heater Scarification)

Bidders are advised that there may be active at-grade railroad crossings within the limits of projects in this Invitation for Bids. The following at-grade railroad crossings have been identified, but there may be others within the limits of these projects that have not been identified:

Project Number	County	Route	Rail Road Name	Location
9V2064	Delaware	30	Delaware & Ulster Railroad	RM 30 9301 1446

At the identified at-grade crossings, and any other active at grade railroad crossings encountered on the projects in this Invitation for Bids, the contractor shall conduct its work and handle the equipment such that no part of any material or equipment shall foul a track, catenary, electrical facility or signal facility. A track is fouled when any object is brought within 7.62 M (25') of the centerline of the track or the nearest point of a rail road's catenary, electrical facility or signal facility.

5.12.5 NYSDOT REGION 5 Special Notes (Heater Scarification)

Time Restrictions:

All Region 5 Projects shall follow the time restrictions outlined in the "Work Zone Traffic Control - for Design/Construction on State Highways in Region 5" available on the NYSDOT website or through the Regional Transportation Systems Operations group.

SECTION 2: HEATER SCARIFICATION - SPECIFIC PROJECTS (Cont'd)

5.12.6 NYSDOT REGION 6 Special Notes (Heater Scarification)

Region 6 Specific Special Notes:

To minimize travel delays associated with major holidays, no work shall be permitted during the following periods:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Monday, July 6, 2020 - (July 4th Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

Heater scarification will be performed on the travel lanes and 1 foot over the white edge line. Shoulders will not be heater scarified.

The Region requests all Preconstruction paperwork be submitted electronically as .pdf files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as .pdf files on a CD or USB “thumb” drive that will not be returned to the contractor.

In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per section 619-3.02 J.2 (every 800') and at strategic locations, such as intersections and driveways.

All Region 6 Heater Scarify projects shall be completed no later than August 31, 2020. A schedule reflecting this shall be submitted before start of work to the Region's ARDO, Karen Patterson, for approval.

Paint with beads is the only option permitted in Region 6 for temporary and interim pavement markings, unless approved on a case by case basis by the Resident Engineer. Offset the centerline temporary/interim pavement markings so that the permanent markings will cover up the temporary/interim markings, as follows: 8" centerline offset for 2 lane roads, 6" centerline offset for multi-lane roadways.

All stockpile, spoils, and clean-out sites need to be preapproved by the Regional Maintenance Environmental Coordinator, Ruth Hart, prior to use.

5.12.7 NYSDOT REGION 9 Special Notes (Heater Scarification)

PIN 9V2064 Delaware County

Region 9 Materials has already cored the highway and the cores for this project are stored at the Region 9 Technical Services building. The winning bidder will need to contact Region 9 Materials to arrange core pickup to develop the project's mix design.

Heater scarification only performed at 23 total width.

5.13 Detailed Specifications – Heater Scarification

Please see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

5.13.1 Project Dimensions – Heater Scarification

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed in Attachment 12 – Project Dimensions are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. NYS OGS/NYSDOT assumes no responsibility for erroneous information listed herein.

Please refer to Attachment 12 – Project Dimensions for the Project Dimensions Data.