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EFFECTIVE 6/25/98



New York State
Department of
Transportation
**ENGINEERING
INSTRUCTION**

EI
97-024

SUPERSEDED BY
EI 01-023
~~97-024~~, EFFECTIVE 7/11/02

Title: **SPECIFICATIONS FOR THE REMOVAL AND DISPOSAL OF ASBESTOS FROM BRIDGES USING BLANKET VARIANCE 12.**

Distribution:

- Manufacturers (18) Surveyors (33)
 Main Office (30) Consultants (34)
 Local Govt. (31) Contractors/AGC (39)
 Regions/Agencies (32) Special _____ ()

Approved:


P. J. CLARK, DEPUTY CHIEF ENGINEER
DESIGN DIVISION

10/21/97
Date

Administrative information. This instruction takes effect with the letting of February 19, 1998 but the specifications may be used sooner if desired. The specifications issued in Engineering Instruction 96-026 are supplemented by the specifications included herein. These materials will ultimately be incorporated into a future revision of Chapter 1.C Asbestos Management of *Environmental Procedures Manual*.

Transmitted Materials. There are no materials transmitted with standard copies of this instruction. Special distribution copies of this instruction, however, will distribute complete metric and U.S. customary unit specifications in the pay item series 15202.06XX and 15202.07XX for the removal of asbestos containing material from bridges and bridge approaches. The separate distribution will also include copies of Blanket Variance 12 and its 9-22-97 "reopening". Blanket Variance 12 is a newly granted and revised variance, which relaxes the requirements that Temporary Concrete Barrier be provided around the area of the asbestos removal work. The "reopening" clarified that the "jersey barrier" mentioned in the variance is our standard temporary concrete barrier and that the "class 3 barrier" mentioned there is our type III barricade.

Background and Discussion. Most of these specifications were authorized under EI 96-026 and selectively distributed with copies of that instruction. New specifications hereby authorized are:

- | | | |
|----------------|---|----------------------|
| 15202.0622 (M) | Removal and Disposal of Asbestos Containing
Transite Pipe Encased in Sidewalk of Bridge
(Blanket Variance 12) | Linear Feet (Meter) |
| 15202.0623 (M) | Removal and Disposal of Asbestos Containing
Transite Pipe Buried in Ground in Bridge Approach
(Blanket Variance 12) | Linear Feet (Meter) |
| 15202.0624 (M) | Removal and Disposal of Asbestos Containing
Transite Pipe Suspended From Bridge
(Blanket Variance 12) | Linear Feet(Meter) |
| 15202.0625 (M) | Removal and Disposal of Asbestos Containing
Pipe Insulation Suspended From Bridge
(Blanket Variance 12) | Linear Feet(Meter) |
| 15202.0626 (M) | Removal and Disposal of Asbestos Containing
Plastic Asbestos Asphalt Cement
(Blanket Variance 12) | Linear Feet(Meter) |
| 15202.0627 (M) | Removal and Disposal of Asbestos Containing
Graphite Coated Asbestos Sheets | |

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	(Blanket Variance 12)	Square Feet (Meter)
15202.0628 (M)	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 12)	Square Feet (Meter)
15202.0629 (M)	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 12)	Linear Feet (Meter)
15202.0630XX (M)	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges, Blanket Variance 12)	Lump Sum
15202.063XX (M)	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges, Blanket Variance 12)	Linear Feet (Meter)
15202.0632XX (M)	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges, Blanket Variance 12)	Square Feet (Meter)
15202.0722XX (M)	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0723XX (M)	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 12)	Lump Sum, Fixed Price)
15202.0724XX (M)	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0725XX (M)	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0726XX (M)	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0727XX (M)	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0728XX (M)	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0729XX (M)	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0730XX (M)	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges, Blanket Variance 12)	Lump Sum, Fixed Price

The (M) in the above indicates that both the US customary unit version and the SI (metric) versions are being indicated. The XX, if any, in the above indicates that the item is serialized in those places

In addition to the above specifications, the method of measurement section of all the area or linear measure bid items have been rewritten to clarify that lapped materials, such as roofing shingles, would be measured in place for payment purposes with no additional allowances made for any overlap (s). Also, we have changed the title of pay items 15202.0620 and 15202.0620 M to include the word "miscellaneous."

As indicated in EI 96-026, in general, bid items measured by the area or length are preferable when the extent and location of the material are known. Lump sum items, which the contractor is required to competitively bid, such as for the removal of miscellaneous asbestos containing materials from either bridges or buildings, are suitable when there are several kinds of known, but small and miscellaneous, quantities of asbestos containing materials to be removed from known locations. The fixed price items are useful when the quantities and locations of the material are unknown at the time of bidding or when third parties, such as utilities, are paying for the work and request lump sum, fixed price items be used to protect them from unbalancing or other unusual bidding situations.

New Blanket Variances. Blanket Variances 8, 9, and 10 were discussed in Engineering Instruction 96-026. Blanket Variance 12 is a new variance applicable only when removing non-friable asbestos containing materials. The principal effect of Blanket Variance 12 is to eliminate the requirements that 2.4 m (8') tall plywood and polyethylene sheeted barriers and Temporary Concrete Barrier be used within 7.6 m (25 feet) of the asbestos removal work provided the work is protected by "class 3 barrier" (Type III Construction Barricade).

Miscellaneous Designer information. As in the past, the appropriate blanket variances, including the newly issued Blanket Variance 12, and pay items in the 15202 asbestos removal series indicated in the estimate will be inserted into proposals by the Design Quality Assurance Bureau. Because the New York State Labor Law and Industrial Code Rule 56 allow only certified asbestos project designers and licensed asbestos firms to design asbestos projects, as in the past, these specifications can be used only upon the recommendation to use them made by properly certified asbestos project designers employed by the Department or by properly licensed asbestos firms. Neither the project reviewer in the Design Quality Assurance Bureau, nor any other person within that Bureau, is responsible for checking whether or not the individuals are properly certified or the firms are properly licensed to recommend these items and/or variances. This is a Regional responsibility.

The "jersey barriers" required by the Blanket Variances 5, 6R1, 8, 9, and 10 should be separately constructed, measured and paid for under the Item 619.17 (M), Temporary Concrete Barrier. The "class 3 barriers" required by Blanket Variance 12 should be separately constructed, measured, and paid under the Item 619.0413 Type III Construction Barricades. If barricade lighting is required, this may be provided under 619.0502. Pay Items 15202.0612, 15202.0613, 15202.0614, 15202.0710XX, 15202.0711XX, 15202.0712XX, 15202.0802, 15202.0902XX, 15202.1002, 15202.1102XX, and their metric equivalents, are the pay items that require the use of "jersey barrier." Pay items 15202.0622 through 15202.0630 and 15202.0722 through 15202.0730 are the items that require the use of "class 3 barriers."

Any special notes developed should be in "dual units" for metric projects or "U. S. Customary units" for projects that are not metric projects. This is a departure from our normal metric policy not to use "dual units" but the NYSDOL, which is responsible for asbestos standards in the State, is not a metric department.

Contact Persons. Larry Brown of the Design Quality Assurance Bureau at (518) 457-4093 or Jonathan Bass of the Environmental Analysis Bureau at (518) 457-5672.

How to obtain copies of the various mentioned materials. Those who need copies of individual variances or copies of individual specifications may obtain copies of these "from the shelf" by calling the Design Quality Assurance Bureau at (518) 457-6467. Ask for Ms. Bernstein and request individual copies as required. Those who need all the specifications as a set may obtain these by requesting the special distribution copy of this engineering instruction at the same telephone numbers and from the same individuals identified above.

Complete sets of the Blanket Variances and the asbestos chapter of the *Environmental Procedures Manual* may be obtained from the Environmental Analysis Bureau at (518) 457-5672.

There may be printing charges for the specifications, variances, or the asbestos chapter.

ITEM 15202.06XX M REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL (BRIDGES)
ITEM 15202.07XX M REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL (BRIDGES)

DESCRIPTION

Under these items, the Contractor shall remove and dispose of asbestos containing material from the bridges designated in the Contract Documents and/or where directed by the Engineer. All work shall be in accordance with: Industrial Code Rule 56 or, if indicated, an approved variance thereof promulgated by the New York State Department of Labor (NYS DOL); the National Emission Standards for Hazardous Air Pollutants (NESHAP), promulgated by the United States Environmental Protection Agency (USEPA); and the Occupational Safety and Health Act (OSHA).

A partial list of applicable OSHA requirements is indicated below:

29 CFR 1910.1001	29 CFR 1910.2
29 CFR 1926.58	29 CFR 1910.1200
29 CFR 1910.134	29 CFR 1910.145

Asbestos containing material shall be disposed of in accordance with 40 CFR Part 61 and all other requirement and laws, rules, and regulations of Federal, State or local agencies. Disposal sites which accept asbestos containing materials for disposal shall hold a valid Permit to do so issued by the New York State Department of Environmental Conservation (NYSDEC). If disposed of out-of-state, the rules, regulations, and laws of that state shall apply.

Additional project specific requirements may be found on the plans or in the proposal in a note entitled "Asbestos Remediation Supplemental Requirements."

Definition.

Project Monitor. A person engaged by the State and certified by NYSDOL as a project monitor, other than the asbestos abatement contractor or an employee or agent thereof, who oversees the scope, timing, phasing and/or remediation methods to be utilized on the asbestos project. There may or may not be a project monitor assigned to the project.

MATERIALS

All materials used in the performance of the work shall comply with all applicable regulatory standards. Respirators and filters shall comply with NIOSH and MSHA standards. All electrical equipment shall utilize ground fault interrupters and shall be listed by the Underwriter's Laboratory. HEPA filtration systems shall comply with ANSI Z9.2-79.

CONSTRUCTION DETAILS

In addition to the requirements given above, the following shall also apply: Prior to beginning any work under these items, the Contractor shall supply the Engineer with proof that the firm performing the work has a valid asbestos handling license issued by the New York State Department of Labor; that its insurance coverage, whether provided by the Contractor or the Asbestos Subcontractor, is otherwise consistent with §107-06 and includes an asbestos specific occurrence type policy with no deductible or sunset clause; that its project supervisor is a NYSDOL certified asbestos project supervisor; that all employees engaged in the work are properly certified and have current physical examinations and respirator fit tests; and that the proper notification of work beginning on the asbestos project has been given to NYSDOL and USEPA. After the work is completed, the Contractor shall provide the Engineer with a written certification ("Waste Shipment Record") that the material was disposed of in an approved waste

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disposal site. The certification shall include the name and address of the waste disposal site or sites used.

Unless indicated otherwise, the Contractor shall arrange for the air quality monitor. The firm and persons engaged shall be: properly licensed and certified; independent of the Contractor or the Asbestos Contractor performing the asbestos work; properly insured; and approved by the Engineer.

In the event of a conflict between these specification requirements and laws, rules and regulations of other Federal, State or local agencies, the more restrictive of the specification or the laws, rules or regulations shall apply.

Two copies of Daily logs, Visitor Logs, OSHA Air Monitoring record, and New York State Department of Labor compliance air monitoring records shall be provided to the Engineer.

METHOD OF MEASUREMENT

The quantity of asbestos containing material to be measured for payment will be determined by one of the following methods, as indicated:

A. **Square Meters.** For work to be measured by the square meter, the quantity to be measured for payment will be the actual area covered by the asbestos containing materials, measured to the nearest one tenth square meter, from which asbestos containing material has been satisfactorily removed and disposed of in accordance with the contract documents or Industrial Code Rule 56 or an approved variance thereof. The quantity will not be increased for lapped areas.

B. **Linear Meters.** For work to be measured by the linear meter, the quantity to be measured for payment will be the actual length, to the nearest one tenth meter, measured along the line from which the asbestos containing material has been satisfactorily removed and disposed of in accordance with the contract documents, Industrial Code Rule 56, or an approved variance thereof. The quantity will not be increased for lapped lengths.

C. **Lump Sum (Bid).** The quantity will be measured for payment on a lump sum basis. No actual measurements will be taken.

D. **Lump Sum (Fixed Price).** The lump sum of money shown in the itemized proposal for this work will be considered the price bid even though payment will be made only for the actual work performed. The lump sum figure is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figure will be disregarded and the original figure will be used to determine the total amount bid for the contract. Actual payments on contract will be based on one or both of the following:

1 **Agreed Price.** Based on a cost analysis submitted by the Contractor in accordance with the provisions of §109-05 of the Standard Specifications and agreed to by the State in writing prior to performing the work. The analysis shall include a detailed estimate from the licensed asbestos removal contractor for the estimated cost of the removal and disposal.

2 **Force Account.** Payment of the actual and reasonable cost of doing the work in

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accordance with the provisions of §109-05 of the Standard Specifications. A separate force account will be maintained of the total asbestos removal work performed on each bridge to be worked on.

BASIS OF PAYMENT

One of the following shall apply, as appropriate:

A. **Square Meters, Linear Meters, or Lump Sum Bid Items.** The unit prices bid or the lump sum bid for this work shall include the cost of air quality monitoring, unless indicated elsewhere in the Contract Documents. They shall also include all labor, materials, equipment, and fees and insurances of all kinds necessary to complete the asbestos removal and disposal work in accordance with the plans, specifications, and applicable Federal, State, and Local laws, rules, and regulations, except that "jersey barrier" required under the variances shall be constructed and will be measured and paid for under the item for Temporary Concrete Barrier and "class 3 barrier" required under the variances shall be constructed and will be measured under the pay item for Type III Construction Barricades.

Payment for 75% of the completed actual quantity will be made upon the Project Monitor's written concurrence with the Contractor's certification as to the following: that the bridge is visually free of asbestos; that the removal of the asbestos containing material was performed as required; that the final clearance air monitoring results meet the acceptable level specified in Industrial Code Rule 56; and, that the bridge(s) are certified by the Asbestos contractor to be available for normal contractor operations. If there is no Project Monitor on the project, the Engineer's concurrence with the Certification will be necessary before any payments can be released.

The remainder of the payment for completed work will be made upon receipt by the Engineer of a certified statement from the disposal facility, signed by an official thereof, that the asbestos containing material has been accepted and disposed of in accordance with all applicable laws, codes, rules, and regulations.

B. **Lump Sum, Fixed Price Item.** The lump sum amount published in the proposal is an amount estimated by the State to be adequate to complete the work. The Contractor, however, will not be obligated to complete the work within the amount published nor by publishing the price will the State be obligated to pay over to the Contractor the whole or any of the amount published. Actual payments under this work will be made by the force account method or by the agreed price method, or by a combination thereof, as agreed to by the State and the Contractor in writing prior to undertaking the work, in accordance with §109-05. Actual payments may total less than the lump sum amount published in the proposal or, with an order-on-contract, may total more than the lump sum amount published in the proposal.

Payment for 75% of the completed actual quantity will be made upon the Project Monitor's written concurrence with the Contractor's certification as to the following: that the bridge is visually free of asbestos; that the removal of the asbestos containing material was performed as required; that the final clearance air monitoring results meet the acceptable level specified in Industrial Code Rule 56; and, that the bridge(s) are certified by the Asbestos contractor to be available for normal contractor operations. If there is no Project Monitor on the project, the Engineer's concurrence with the Certification will be necessary before any payments can be released.

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The remainder of the payment for completed work will be made upon receipt by the Engineer of a certified statement from the disposal facility, signed by an official thereof, that the asbestos containing material has been accepted and disposed of in accordance with all applicable laws, codes, rules, and regulations.

Asbestos specific insurance premiums will be reimbursed as the actual and identifiable cost of the portion of the premium attributable to the work under the lump sum, fixed price item. No overhead or profit will be allowed on asbestos specific insurance premiums. The cost of other insurance premiums will be reimbursed as given in this specification and §109-05.

payment will be made under:

15202.0601 M	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge	Square Meters
15202.0602 M	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 1)	Square Meters
15202.0603 M	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach	Linear Meters
15202.0604 M	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 2)	Linear Meters
15202.0605 M	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge	Linear Meters
15202.0606 M	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 3R1)	Linear Meters
15202.0607 M	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge	Linear Meters
15202.0608 M	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge (Blanket Variance 3R1)	Linear Meters
15202.0609 M	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement	Linear Meters
15202.0610 M	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 4)	Linear Meters

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15202.0611 M	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets	Square Meters
15202.0612 M	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 5)	Square Meters
15202.0613 M	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 9)	Square Meters
15202.0614 M	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 10)	Linear Meters
15202.0620XX M	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges)	Lump Sum
15202.0622 M	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 12)	Linear Meters
15202.0623 M	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 12)	Linear Meters
15202.0624 M	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 12)	Linear Meters
15202.0625 M	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge (Blanket Variance 12)	Linear Meters
15202.0626 M	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 12)	Linear Meters
15202.0627 M	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 12)	Square Meters

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15202.0628 M	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 12)	Square Meters
15202.0629 M	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 12)	Linear Meters
15202.0630XX M	Removal and Disposal of Miscellaneous Asbestos Material (Bridges, Blanket Variance 12)	Lump Sum
15202.0631XX M	Removal and Disposal of Miscellaneous Asbestos Material (Bridges, Blanket Variance 12)	Linear Meters
15202.0632XX M	Removal and Disposal of Miscellaneous Asbestos Material (Bridges, Blanket Variance 12)	Square Meters
15202.0701XX M	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge	Lump Sum, Fixed Price
15202.0702XX M	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 1)	Lump Sum, Fixed Price
15202.0703XX M	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach	Lump Sum, Fixed Price
15202.0704XX M	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 2)	Lump Sum, Fixed Price
15202.0705XX M	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge	Lump Sum, Fixed Price
15202.0706XX M	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 3R1)	Lump Sum, Fixed Price
15202.0707XX M	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended from Bridge	Lump Sum, Fixed Price

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15202.0708XX M	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended from Bridge (Blanket Variance 3R1)	Lump Sum, Fixed Price
15202.0709XX M	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets	Lump Sum, Fixed Price
15202.0710XX M	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 5)	Lump Sum, Fixed Price
15202.0711XX M	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 9)	Lump Sum, Fixed Price
15202.0712XX M	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 10)	Lump Sum, Fixed Price
15202.0713XX M	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges)	Lump Sum, Fixed Price
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15202.0723XX M	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 12)	Lump Sum, Fixed Price
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15202.0726XX M	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 12)	Lump Sum, Fixed Price

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15202.0727XX M	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0728XX M	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0729XX M	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0730XX M	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges, Blanket Variance 12)	Lump Sum, Fixed Price

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REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL (BRIDGES)

ITEM 15202.07XX

REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL (BRIDGES)

DESCRIPTION

Under these items, the Contractor shall remove and dispose of asbestos containing material from the bridges designated in the Contract Documents and/or where directed by the Engineer. All work shall be in accordance with: Industrial Code Rule 56 or, if indicated, an approved variance thereof promulgated by the New York State Department of Labor (NYSDEL); the National Emission Standards for Hazardous Air Pollutants (NESHAP), promulgated by the United States Environmental Protection Agency (USEPA); and the Occupational Safety and Health Act (OSHA).

A partial list of applicable OSHA requirements is indicated below:

29 CFR 1910.1001

29 CFR 1910.2

29 CFR 1926.58

29 CFR 1910.1200

29 CFR 1910.134

29 CFR 1910.145

Asbestos containing material shall be disposed of in accordance with 40 CFR Part 61 and all other requirement and laws, rules, and regulations of Federal, State or local agencies. Disposal sites which accept asbestos containing materials for disposal shall hold a valid Permit to do so issued by the New York State Department of Environmental Conservation (NYSDEC). If disposed of out-of-state, the rules, regulations, and laws of that state shall apply.

Additional project specific requirements may be found on the plans or in the proposal in a note entitled "Asbestos Remediation Supplemental Requirements."

Definition.

Project Monitor. A person engaged by the State and certified by NYSDOL as a project monitor, other than the asbestos abatement contractor or an employee or agent thereof, who oversees the scope, timing, phasing and/or remediation methods to be utilized on the asbestos project. There may or may not be a project monitor assigned to the project.

MATERIALS

All materials used in the performance of the work shall comply with all applicable regulatory standards. Respirators and filters shall comply with NIOSH and MSHA standards. All electrical equipment shall utilize ground fault interrupters and shall be listed by the Underwriter's Laboratory. HEPA filtration systems shall comply with ANSI Z9.2-79.

CONSTRUCTION DETAILS

In addition to the requirements given above, the following shall also apply: Prior to beginning any work under these items, the Contractor shall supply the Engineer with proof that the firm performing the work has a valid asbestos handling license issued by the New York State Department of Labor; that its insurance coverage, whether provided by the Contractor or the Asbestos Subcontractor, is otherwise consistent with §107-06 and includes an asbestos specific occurrence type policy with no deductible or sunset clause; that its project supervisor is a NYSDOL certified asbestos project supervisor; that all employees engaged in the work are properly certified and have current physical examinations and respirator fit tests; and that the proper notification of work beginning on the asbestos project has been given to NYSDOL and USEPA. After the work is completed, the Contractor shall provide the Engineer with a written certification ("Waste Shipment Record") that the material was disposed of in an approved waste disposal site. The certification shall include the name and address of the waste disposal site or sites used.

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- ITEM 15202.07XX REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL (BRIDGES)

Unless indicated otherwise, the Contractor shall arrange for the air quality monitor. The firm and persons engaged shall be: properly licensed and certified; independent of the Contractor or the Asbestos Contractor performing the asbestos work; properly insured; and approved by the Engineer.

In the event of a conflict between these specification requirements and laws, rules and regulations of other Federal, State or local agencies, the more restrictive of the specification or the laws, rules or regulations shall apply.

Two copies of Daily logs, Visitor Logs, OSHA Air Monitoring record, and New York State Department of Labor compliance air monitoring records shall be provided to the Engineer.

METHOD OF MEASUREMENT

The quantity of asbestos containing material to be measured for payment will be determined by one of the following methods, as indicated:

A. **Square Feet.** For work to be measured by the square foot, the quantity to be measured for payment will be the actual area covered by the asbestos containing materials, measured to the nearest one tenth square foot, from which asbestos containing material has been satisfactorily removed and disposed of in accordance with the contract documents or Industrial Code Rule 56 or an approved variance thereof. The quantity will not be increased for lapped areas.

B. **Linear Feet.** For work to be measured by the linear foot, the quantity to be measured for payment will be the actual length, to the nearest one tenth foot, measured along the line from which the asbestos containing material has been satisfactorily removed and disposed of in accordance with the contract documents, Industrial Code Rule 56, or an approved variance thereof. The quantity will not be increased for lapped lengths.

C. **Lump Sum (Bid).** The quantity will be measured for payment on a lump sum basis. No actual measurements will be taken.

D. **Lump Sum (Fixed Price).** The lump sum of money shown in the itemized proposal for this work will be considered the price bid even though payment will be made only for the actual work performed. The lump sum figure is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figure will be disregarded and the original figure will be used to determine the total amount bid for the contract. Actual payments on contract will be based on one or both of the following:

1 **Agreed Price.** Based on a cost analysis submitted by the Contractor in accordance with the provisions of §109-05 of the Standard Specifications and agreed to by the State in writing prior to performing the work. The analysis shall include a detailed estimate from the licensed asbestos removal contractor for the estimated cost of the removal and disposal.

2 **Force Account.** Payment of the actual and reasonable cost of doing the work in accordance with the provisions of §109-05 of the Standard Specifications. A separate force account will be maintained of the total asbestos removal work performed on each bridge to be worked on.

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BASIS OF PAYMENT

One of the following shall apply, as appropriate:

A. **Square Feet, Linear Feet, or Lump Sum Bid Items.** The unit prices bid or the lump sum bid for this work shall include the cost of air quality monitoring, unless indicated elsewhere in the Contract Documents. They shall also include all labor, materials, equipment, and fees and insurances of all kinds necessary to complete the asbestos removal and disposal work in accordance with the plans, specifications, and applicable Federal, State, and Local laws, rules, and regulations, except that "jersey barrier" required under the variances shall be constructed and will be measured and paid for under the item for Temporary Concrete Barrier and "class 3 barrier" required under the variances shall be constructed and will be measured under the pay item for Type III Construction Barricades.

Payment for 75% of the completed actual quantity will be made upon the Project Monitor's written concurrence with the Contractor's certification as to the following: that the bridge is visually free of asbestos; that the removal of the asbestos containing material was performed as required; that the final clearance air monitoring results meet the acceptable level specified in Industrial Code Rule 56; and, that the bridge(s) are certified by the Asbestos contractor to be available for normal contractor operations. If there is no Project Monitor on the project, the Engineer's concurrence with the Certification will be necessary before any payments can be released.

The remainder of the payment for completed work will be made upon receipt by the Engineer of a certified statement from the disposal facility, signed by an official thereof, that the asbestos containing material has been accepted and disposed of in accordance with all applicable laws, codes, rules, and regulations.

B. **Lump Sum, Fixed Price Item.** The lump sum amount published in the proposal is an amount estimated by the State to be adequate to complete the work. The Contractor, however, will not be obligated to complete the work within the amount published nor by publishing the price will the State be obligated to pay over to the Contractor the whole or any of the amount published. Actual payments under this work will be made by the force account method or by the agreed price method, or by a combination thereof, as agreed to by the State and the Contractor in writing prior to undertaking the work, in accordance with §109-05. Actual payments may total less than the lump sum amount published in the proposal or, with an order-on-contract, may total more than the lump sum amount published in the proposal.

Payment for 75% of the completed actual quantity will be made upon the Project Monitor's written concurrence with the Contractor's certification as to the following: that the bridge is visually free of asbestos; that the removal of the asbestos containing material was performed as required; that the final clearance air monitoring results meet the acceptable level specified in Industrial Code Rule 56; and, that the bridge(s) are certified by the Asbestos contractor to be available for normal contractor operations. If there is no Project Monitor on the project, the Engineer's concurrence with the Certification will be necessary before any payments can be released.

The remainder of the payment for completed work will be made upon receipt by the Engineer of a certified statement from the disposal facility, signed by an official thereof, that the asbestos containing material has been accepted and disposed of in accordance with all applicable laws, codes, rules, and regulations.

Asbestos specific insurance premiums will be reimbursed as the actual and identifiable cost of the portion of the premium attributable to the work under the lump sum, fixed price item. No overhead or profit will be allowed on asbestos specific insurance premiums. The cost of other insurance premiums will be reimbursed as given in this specification and §109-05.

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payment will be made under:

15202.0601	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge	Square Feet
15202.0602	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 1)	Square Feet
15202.0603	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach	Linear Feet
15202.0604	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 2)	Linear Feet
15202.0605	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge	Linear Feet
15202.0606	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 3R1)	Linear Feet
15202.0607	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge	Linear Feet
15202.0608	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge (Blanket Variance 3R1)	Linear Feet
15202.0609	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement	Linear Feet
15202.0610	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 4)	Linear Feet
15202.0611	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets	Square Feet
15202.0612	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 5)	Square Feet

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15202.0613	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 9)	Square Feet
15202.0614	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 10)	Linear Feet
15202.0620XX	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges)	Lump Sum
15202.0622	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 12)	Linear Feet
15202.0623	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 12)	Linear Feet
15202.0624	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 12)	Linear Feet
15202.0625	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge (Blanket Variance 12)	Linear Feet
15202.0626	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 12)	Linear Feet
15202.0627	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 12)	Square Feet
15202.0628	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 12)	Square Feet
15202.0629	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 12)	Linear Feet

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15202.0630XX	Removal and Disposal of Miscellaneous Asbestos Material (Bridges, Blanket Variance 12)	Lump Sum
15202.0631XX	Removal and Disposal of Miscellaneous Asbestos Material (Bridges, Blanket Variance 12)	Linear Feet
15202.0632XX	Removal and Disposal of Miscellaneous Asbestos Material (Bridges, Blanket Variance 12)	Square Feet
15202.0701XX	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge	Lump Sum, Fixed Price
15202.0702XX	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 1)	Lump Sum, Fixed Price
15202.0703XX	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach	Lump Sum, Fixed Price
15202.0704XX	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 2)	Lump Sum, Fixed Price
15202.0705XX	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge	Lump Sum, Fixed Price
15202.0706XX	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 3R1)	Lump Sum, Fixed Price
15202.0707XX	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended from Bridge	Lump Sum, Fixed Price
15202.0708XX	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended from Bridge (Blanket Variance 3R1)	Lump Sum, Fixed Price
15202.0709XX	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets	Lump Sum, Fixed Price
15202.0710XX	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 5)	Lump Sum, Fixed Price

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15202.0711XX	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 9)	Lump Sum, Fixed Price
15202.0712XX	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 10)	Lump Sum, Fixed Price
15202.0713XX	Removal and Disposal of Miscellaneous Asbestos Containing Material (Bridges)	Lump Sum, Fixed Price
15202.0722XX	Removal and Disposal of Asbestos Containing Transite Pipe Encased in Sidewalk of Bridge (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0723XX	Removal and Disposal of Asbestos Containing Transite Pipe Buried in Ground in Bridge Approach (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0724XX	Removal and Disposal of Asbestos Containing Transite Pipe Suspended From Bridge (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0725XX	Removal and Disposal of Asbestos Containing Pipe Insulation Suspended From Bridge (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0726XX	Removal and Disposal of Asbestos Containing Plastic Asbestos Asphalt Cement (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0727XX	Removal and Disposal of Asbestos Containing Graphite Coated Asbestos Sheets (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0728XX	Removal and Disposal of Asbestos Containing Bond Breaker & Joint Fillers from Surfaces on Bridges (Blanket Variance 12)	Lump Sum, Fixed Price
15202.0729XX	Removal and Disposal of Asbestos Containing Caulking Compound from Surfaces on Bridges (Blanket Variance 12)	Lump Sum, Fixed Price

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Removal and Disposal of Miscellaneous Asbestos
Containing Material (Bridges, Blanket Variance 12)

Lump Sum, Fixed Price