



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbitts-Nutt, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator



April 25, 2024

Proposal No. 609427-125646

ADDENDUM NO. 2

To Prospective Bidders and Others on:

MONTAGUE
Federal Aid Project No. STP(BR-OFF)-003S(734)X
Bridge Replacement, M-28-026, South Street over Sawmill River

**THIS PROPOSAL TO BE
OPENED AND READ ON:**

TUESDAY, MAY 7, 2024, at 2:00 P.M.

Transmitting changes to the Contract Documents as follows:

DOCUMENT 00104: Revised page 3

DOCUMENT 00813: Deleted document in its entirety and
inserted new document (4 pages)

DOCUMENT A00801: Inserted new pages 9a and 9b

Please take note of the above, substitute the revised page for the original, delete document indicated, insert new document and pages in proper order, and acknowledge Addendum No. 2 in your Expedite Proposal file before submitting your proposal.

Sincerely,

Eric M. Cardone, P.E.
Construction Contracts Engineer

EMC/jmr
cc: Christopher Cameron, Project Manager

② ADDENDUM NO. 2, APRIL 25, 2024

NOTICE TO CONTRACTORS (Continued)

PRICE ADJUSTMENTS

- ② This Contract contains price adjustments for hot mix asphalt and Portland cement mixtures, diesel fuel, and gasoline. For reference the base prices are as follows: liquid asphalt \$637.50 per ton, Portland cement \$425.53 per ton, diesel fuel \$3.155 per gallon, and gasoline \$2.695 per gallon, and Steel Base Price Index 420.3. MassDOT posts the **Price Adjustments** on their Highway Division's website at <https://www.mass.gov/massdot-contract-price-adjustments>

This Contract contains Price Adjustments for steel. See Document 00813 - PRICE ADJUSTMENT FOR STRUCTURAL STEEL AND REINFORCING STEEL for their application and base prices.

MassDOT projects are subject to the rules and regulations of the Architectural Access Board (521 CMR 1.00 et seq.)

Prospective bidders and interested parties can access this information and more via the internet at WWW.COMMBUYS.COM.

BY: Monica G. Tibbits-Nutt, Secretary and CEO, MassDOT
Jonathan L. Gulliver, Administrator, MassDOT Highway Division
SATURDAY, MARCH 30, 2024

DOCUMENT 00813

SPECIAL PROVISIONS

PRICE ADJUSTMENTS FOR STRUCTURAL STEEL AND REINFORCING STEEL

April 18, 2024

This special provision applies to all projects containing the use of structural steel and/or reinforcing steel as specified elsewhere in the Contract work. It applies to all structural steel and all reinforcing steel, as defined below, on the project. Compliance with this provision is mandatory, i.e., there are no “opt-in” or “opt-out” clauses. Price adjustments will be handled as described below and shall only apply to unfabricated reinforcing steel bars and unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings.

Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

Price adjustments will only be made if the variances between Base Prices and Period Prices are 5% or more. A variance can result in the Period Price being either higher or lower than the Base Price. Once the 5% threshold has been achieved, the adjustment will apply to the full variance between the Base Price and the Period Price.

Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or unfabricated reinforcing steel bars on a project by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will *not* include guardrail panels or the costs of shop drawing preparation, handling, fabrication, coatings, transportation, storage, installation, profit, overhead, fuel costs, fuel surcharges, or other such charges not related to the cost of the unfabricated structural steel and unfabricated reinforcing steel.

The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

Base Prices and Period Prices are defined as follows:

Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Department and found in the table below. While it is the intention of the Department to make this table comprehensive, some of a project’s unfabricated structural steel and/or unfabricated reinforcing steel may be inadvertently omitted. Should this occur, the Contractor shall bring the omission to the Department’s attention so that a contract alteration may be processed that adds the missing steel to the table and its price adjustments to the Contract.

The Base Price Date is the month and year of the most recent finalized period price index at the time that MassDOT opened bids for the project. The Base Price Index for this contract is the Steel PPI listed in the Notice to Contractors.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices that have been calculated using the Period Price Date and an index of steel prices to adjust the Base Price.

The Period Price Date is the date the steel was delivered to the fabricator as evidenced by an official bill of lading submitted to the Department containing a description of the shipped materials, weights of the shipped materials and the date of shipment. This date is used to select the Period Price Index.

The index used for the calculation of Period Prices is the U.S. Department of Labor Bureau of Labor Statistics Producer Price Index (PPI) Series ID WPU101702 (Not Seasonally Adjusted, Group: Metals and Metal Products, Item: Semi-finished Steel Mill Products.) As this index is subject to revision for a period of up to four (4) months after its original publication, no price adjustments will be made until the index for the period is finalized, i.e., the index is no longer suffixed with a “(P)”.

Period Prices are determined as follows:

Period Price = Base Price X Index Factor

Index Factor = Period Price Index / Base Price Index

Example of a Period Price Calculation:

Calculate the Period Price for December 2009 using a Base Price from March 2009 of \$0.82/Pound for 1,000 Pounds of ASTM A709 (AASHTO M270) Grade A36 Structural Steel Plate.

The Period Price Date is December 2009. From the PPI website*, the Period Price Index = 218.0.

The Base Price Date is March 2009. From the PPI website*, the Base Price Index = 229.4.

Index Factor = Period Price Index / Base Price Index = 218.0 / 229.4 = 0.950

Period Price = Base Price X Index Factor = \$0.82/Pound X 0.950 = \$0.78/Pound

Since \$0.82 - \$0.78 = \$0.04 is less than 5% of \$0.82, no price adjustment is required.

If the \$0.04 difference shown above was greater than 5% of the Base Price, then the price adjustment would be 1,000 Pounds X \$0.04/Pound = \$40.00. Since the Period Price of \$0.78/Pound is less than the Base Price of \$0.82/Pound, indicating a drop in the price of steel between the bid and the delivery of material, a credit of \$40.00 would be owed to MassDOT. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.

* To access the PPI website and obtain a Base Price Index or a Period Price Index, go to

<http://data.bls.gov/cgi-bin/srgate>

End of example.

The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the respective contract pay items for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

Price adjustments, as herein provided for, will be paid separately as follows:

Structural Steel

Pay Item Number 999.449 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.457 for negative (-) pay adjustments (credits to MassDOT Highway Division)

Reinforcing Steel

Pay Item Number 999.466 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.467 for negative (-) pay adjustments (credits to MassDOT Highway Division)

No price adjustment will be made for price changes after the Contract Completion Date, unless the MassDOT Highway Division has approved an extension of Contract Time for the Contract.

TABLE

Steel Type	Price per Pound	
1	ASTM A615/A615M Grade 60 (AASHTO M31 Grade 60 or 420) Reinforcing Steel	\$0.65
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	\$0.90
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	\$0.90
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	\$0.93
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	\$0.99
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	\$0.92
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	\$0.99
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	\$0.92
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	\$1.03
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	\$0.93
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	\$1.03
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	\$0.93
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	\$1.08
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	\$1.15
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	\$1.75
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	\$1.03
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	\$0.93
18	ASTM A276 Type 316 Stainless Steel	\$5.23
19	ASTM A240 Type 316 Stainless Steel	\$5.23
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	\$1.80
21	ASTM A53 Grade B Structural Steel Pipe	\$1.15
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	\$1.15
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	\$0.91
24	ASTM 252, Grade 2 Permanent Steel Casing	\$0.91
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	\$0.98
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	\$1.72
27	ASTM A572 / A572M, Grade 50 Sheetpiling	\$1.72
28	ASTM A36/36M, Grade 50	\$0.99
29	ASTM A570, Grade 50	\$0.98
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	\$0.99
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	\$1.15
32	AREA 140 LB Rail and Track Accessories	\$0.59

NOTE: Steel Castings are generally used only on moveable bridges. Cast iron frames, grates and pipe are not "steel" castings and will not be considered for price adjustments.

END OF DOCUMENT

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M4.02.00: Cement Concrete

(page III.49) Add the following to the end of M4.02.00

Alkali Silica Reactivity - Resistant Portland Cement Concrete

All cement concrete and precast/prestressed concrete products shall be alkali silica reactivity-resistant. Proportion Portland cement concrete mixes to include materials that meet either the aggregate requirement or Alkali-Silica Reactivity (ASR) mitigation criteria listed below. Provide cement mill test reports from certified laboratories that show the materials' source, composition and the cement alkali content expressed as sodium oxide equivalent(s) not to exceed 1.4%. Certified test reports according to test procedures as specified in Table A will be required to be submitted with the trial batch submission to RMS for approval every year or whenever the source of material is changed.

Select non-reactive aggregates that meet all the criteria of Table M4.02.00-2. Mitigate the mix as described below when nonreactive aggregates are unavailable. If non-reactive aggregates are used for portland cement concrete mix, 15% by weight of the cementitious content shall be fly ash meeting AASHTO M 295, Type F.

Select a material or a combination of materials that meet the criteria shown in Table M4.02.00-3 to mitigate ASR when concrete mixes must be proportioned with reactive aggregates. Perform verification test according to AASHTO T 303 and ASTM C295 to determine the effectiveness of the resulting mix design against ASR. Use the same proportion of cement and pozzolan for each test mixture as that proposed for the actual mix design. Provide the Department with certified documentation of the mixtures' effectiveness to control ASR.

Table M4.02.00-2: Tests and Criteria for Proposed Aggregates

Procedure	Description	Limits
AASHTO T 303: Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction	Mean mortar bar expansion at 14 days. Perform a polynomial fit ⁽¹⁾ of 4, 7, 11, and 14 days to determine reliability of results	0.08% maximum metamorphic aggregate; 0.10% maximum all other aggregates. Repeat AASHTO T 303 if r ² is less than 0.95.
ASTM C295: Petrographic Examination of Aggregates for Concrete	Optically strained, microfractured, or microcrystalline quartz	5.0% maximum ⁽²⁾
	Chert or chalcedony	3.0% maximum ⁽²⁾
	Tridymite or cristobolite	1.0% maximum ⁽²⁾
	Opal	0.5% maximum ⁽²⁾
	Natural volcanic glass	3.0% maximum ⁽²⁾
⁽¹⁾ Use a second order polynomial of %Exp = A ⁰ + A ¹ SQRT(t) + A ² t. See publication SD92-04-F.		
⁽²⁾ Based on the total aggregate sample.		

M4.02.00: Cement Concrete (Continued)**Table M4.02.00-3: Mitigation Methods for ASR in Portland Cement Concrete**

Material	Specification	Cementitious Material Percentage ⁽¹⁾
Low alkali cement ⁽²⁾	AASHTO M 85	100%
Fly ash - Class F	AASHTO M 295	15% minimum to 30% ⁽⁴⁾ maximum
Silica Fume ⁽⁵⁾	AASHTO M 307	6% ± 1% ⁽⁶⁾
Slag Grade 100 and 120	AASHTO M 302	25% minimum to 50% maximum

⁽¹⁾ Measure this minimum content of cementitious material as percent by weight of cement plus pozzolan.

⁽²⁾ This single criterion is not effective in all cases in remediating ASR. Low alkali cement (0.60% maximum ⁽³⁾) must be used in combination with other pozzolanic materials in Table B.

⁽³⁾ $\text{Na}_2\text{O equivalent} = \% \text{Na}_2\text{O} + 0.658 (\% \text{K}_2\text{O})$

⁽⁴⁾ Fly ash, Type F, shall replace 15% by weight of the design cement content, and any additional fly ash will be considered as fine aggregate.

⁽⁵⁾ Silica fume shall only be used in silica fume cement concrete.

⁽⁶⁾ The total amount of Type F fly ash and silica fume shall constitute 20% by weight of the design cement content, and any additional fly ash shall be considered as fine aggregate.