

MASSACHUSETTS WATER RESOURCES AUTHORITY
100 FIRST AVENUE
BOSTON, MASSACHUSETTS 02129

**WESTON AQUEDUCT SUPPLY MAIN 3
CONSTRUCTION PACKAGE 2
REHABILITATION OF WATER MAIN SECTION W10
WALTHAM, MA**

MWRA CONTRACT NO. 6543

QUESTIONS AND ANSWERS NO. 1

Q1: The work hours are not typical for CFRP install because crews generally work continuous shifts 24 hours/day, 5-6 days/week in order to maximize productivity and material setup time. Will extended hours and shifts be allowed for this particular scope?

A1: See Section 01015, Paragraph 1.03.B.7 and Addendum No. 1, Item 1-1.

Q2: Contractor proposes using Cement Type IL for the cement mortar lining. The current AWWA C602 standard allows Cement Type IL. Request: Please confirm that Cement Type IL is acceptable for this project.

A2: No. See Section 02511, Paragraph 2.01.

Q3: For the cement mortar lining can the troweling requirement be waived for this pipe and that an untraweled cement mortar lining meeting the specified thickness be acceptable?

A3: No. See Section 02511, Paragraph 1.05.E.2.

Q4: Would a geopolymer lining be approved as an alternate to the cement mortar lining?

A4: No. See Section 02511, Paragraph 2.01.

Q5: Would spin-cast finish be acceptable in place of the trowel finish?

A5: No. See Section 02511, Paragraph 1.05.E.2.

Q6: Please confirm the material testing requirements for spray mortar.

A6: See Section 02511, Paragraph 1.02.A

Q7: Please confirm the surface prep requirement before applying cement mortar.

A7: See Section 02511, Paragraph 3.02.A and Addendum No. 1, Item 1-2.

Q8: Due to CFRP quality installation requirements, can working hours for in-pipe work be extended beyond the 8-hour/day, 5-day/week schedule to allow 12-hour shifts, 6 days a week?

A8: See Section 01015, Paragraph 1.03.B.7 and Addendum No. 1, Item 1-1.

Q9: Due to CFRP curing requirements, please confirm that equipment can operate continuously (24 hours) during in pipe work to ensure proper curing conditions.

A9: See Section 01015, Paragraph 1.03.B.7.a.5 and Addendum No. 1, Item 1-1.

Q10: The Bid Documents indicate that MWRA will shutdown their water mains from September 15th to May 15th. While Belmont and Waltham have Winter Moratoriums in Effect between Nov.15 and April 15. This leaves the Contractor with only three months each year to work on the MWRA pipelines, between September 15th and November 15th and between April 15th and May 15th.)

- Is it the MWRA's intention that the Contractor will perform all the work within the during these three month each year?
- Or has Belmont and/or Waltham indicated that they will allow work to be performed during the winter months?

A10: See Section 01015, Paragraph 1.03.B.9 and Addendum No. 1, Item 1-1.

Q11: Transient pressure, P_t , is specified as 165 psi (compared to the working pressure of 110 psi). Please confirm whether this transient pressure includes the working pressure or is in addition to the working pressure, i.e., working plus transient pressure is 275 psi.

A11: See Section 02512 Paragraph 2.01.C Addendum No. 1, Item 1-3.

Q12: The drawings show the steel pipe to be less than 1 ft under a road. Please confirm if this is correct, as this indicates a potential for some high surface live loads for the original flexible pipe that may have resulted in more deflection.

A12: See Drawings C-101 through C-105.

Q13: The drawing details (Detail E/C-509) call for the addition of CML at the CFRP terminations within the existing pipe. At the termination locations, the CFRP system is required to structurally bond to the host pipe for transfer of loads. Addition of CML hinders that bond and is likely to challenge the effectiveness of the termination. Please confirm if the termination detail is allowed to be modified by the designer as deemed fit in accordance with the best practices and structural considerations.

A13: See Section 02512 Paragraph 1.04 B.

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Douglas J. Rice, Director of Procurement

Date: January 5, 2026