



July 7, 2025

To All Bidders:

Subject: **Bid No. 8454-M6 – Sewer Rehabilitation – Western Interceptor / DPW**

ADDENDUM NO. 4

To Whom It May Concern:

With reference to our bid request relative to the above subject, please refer to the changes/modifications/clarifications to the original proposal request.

General Bid Clarification:

SECTION 02431 – GEOPOLYMER LINING OF SANITARY SEWERS

1. Section 1.05.C, DELETE the following phrase in its entirety:

“together with pull testing and vacuum testing to assure a high-quality project.”

2. Section 3.11.B., DELETE the following sentence in its entirety:

“Sample and make five test cylinders per ASTM C31 and analyze with ASTM C39, for testing compressive strength from every 32,000 lbs. of material for Horizontal Infrastructure.

And REPLACE with the following:

“Sample and make **nine (9)** test cylinders per ASTM C31 and analyze with ASTM C39, for testing compressive strength from every 42,000 lbs. or per truckload/batch of material, whichever represents the smaller amount in weight of material, for Horizontal and Vertical Infrastructure.”

3. Section 3.11.B., DELETE the following sentence in its entirety:

“Test the geopolymer material for compressive strength at 7 days (1 cylinder) and 28 days (3 cylinders) and leave 1 cylinder for retainage.”

And REPLACE with the following:

“Test the geopolymer material for compressive strength at 7 days (**3** cylinder) and 28 days (**3** cylinders) and leave **3** cylinders for retainage.”



4. Section 3.11.B.a.ii., DELETE the following sentence in its entirety:

“The project superintendent will require that samples of applied material be taken representative of each day’s work of material use.”

5. Section 3.12.A, DELETE the following sentence in its entirety:

“Defects shall include, but not be limited to, dry spots; lifts; wrinkles; fins; delaminations; pinholes (with or without infiltration); mineral deposits; staining; and infiltration. Defects shall also include reinstated non-active service connections, reinstated connections specifically identified on the drawings to not be reinstated, and over cut reinstated service connection. Removal and replacement of lined pipe with defects shall be performed if required by the Engineer.”

And REPLACE with the following:

“Defects shall include, but not be limited to, cracking, delaminations; inconsistent thickness; and infiltration (active or non-active, including mineral deposits and staining).

QUESTIONS

Can the owner / engineer please provide typical dry weather flow rates (gpm)?

A1. **Flows observed during temporary flow monitoring, from April 15 to August 31, 2024, in the project area are provided in Appendix B - Temporary Flow Monitoring Data_0, which is posted on the City’s website.**

Q2. Can the owner / engineer please provide anticipated depth of debris (in inches, % of pipe, or just total CY) to be removed from these pipes in order for contractors to bid similar scope?

A2. **Debris information is not available. Bidders are encouraged to conduct field investigations to confirm depth of debris. Bidder shall notify the City prior to the site visit.**

Q3. Will the owner / engineer please provide a nearby disposal site for any of the debris removed from the pipe?

A3. **According to Specification Section 02440 – Cleaning and Inspection, Section 3.01 D., “...The Contractor shall not expect the Owner to provide a dump site.”**



- Q4. In the Geopolymer lining Sewer Manhole Rehabilitation spec section 02435, Paragraphs 2.07 and 2.08, it references brick and concrete. Will the owner accept Hyperform & Quad Plug to be utilized for patching holes for missing bricks rather than trying to install new bricks in the void? These areas would be then top coated with Geopolymer.
- A4. **Bids shall be based on the performance of the finished product as specified within the Contract Documents. Contractor may elect to submit alternative processes and/or products for review as an approved equal.**
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- Q5. The MH spec calls for grouting every joint in precast concrete MH's and every 2 FT in all directions with brick MH's (essentially curtain grouting). Can the owner / engineer revise this to grout any and all areas that exhibit infiltration in lieu of curtain grouting?
- A5. **The Engineer shall determine any modifications to the scope of work for exterior grouting of sewer manholes and structures based upon observed conditions. Such modifications shall be made on a case-by-case basis. At a minimum, grout injection shall be performed at all pipe connections as shown on the Contract Drawings.**
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- Q6. The contract docs do not mention any union requirements nor any Project Labor Agreements (PLA's). However, in the wage rate sheet it indicates a "Local 4" for operators. Should it be assumed that this project is an open shop contract and we do not have to utilize union personnel?
- A6. **Yes.**
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- Q7. Considering the series of questions, size / scope of work, coupled with the July 4th Holiday, would the owner / engineer consider extending the bid due date by a minimum of 7 or 10 days?
- A7. **Please see Addendum 3.**
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- Q8. Per Specification 02431, Paragraph 1.05/C, it has been requested that the in-place liner be both pulled and vacuum tested. Will the Owner/Engineer consider removal of the pull and vacuum testing requirements?
- A8. **Specification 02431, Section 1.05 C has been modified, see changes included in this addendum.**
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- Q9. For the pipe liner, Per Specification 02431, Paragraph 2.03/B, it has been requested that a 2.0-inch minimum liner thickness be installed regardless of design. This conflicts with 3.06/B which calls for a more reasonable 1.0-inch application. Will the Owner/Engineer reconsider their request for a 2.0-inch minimum installation thickness and modify to



A9. **The minimum thickness requirement has been modified, see Addendum No. 2.**

Q10. Per Specification 02431, Paragraph 3.11/B, sampling comprised of five test cylinders per every 32,000 lbs if installed liner is required. It later goes on to direct that samples be taken representative of each days work, which at times can be as little as a few thousand pounds of material depending upon what activities are planned. Will the Owner/Engineer clarify that samples are not required daily and consider modifying this requirement to nine cylinders every 42,000 lbs?

A10. **The testing requirement per Specification Section 0431, Geopolymer Lining Of Sewers has been modified. See Changes included in this addendum.**

Q11. Per Specification 02431, Paragraph 3.11/B, cylinders are to be sent to a third-party laboratory of the manufacturer for verification. Will the Owner/Engineer consider modifying this requirement to require that all samples be produced onsite by a third-party independent testing lab, who then also transports that samples to their lab for testing??

A11. **No.**

Q12. The defects as defined per Specification 02431, Paragraph 3.12/A are applicable to a CIPP liner, not a mortar lined pipe or asset. Will the Owner/Engineer consider changing the statement beginning with 'Defects shall include' to a more accurate set of defects based upon the liner material called for?

A12. **The warranty inspection requirement is modified, see changes included in this addendum.**

Q13. Per Specification 02435, Paragraph 2.02/A, grouting is called to be performed in accordance to a pipeline packer injection specification. Will the Owner/Engineer consider removing the requirement that a pipeline packer injection be used for MH work?

A13. **The reference to the latest edition of the NASSCO Specification for Pipeline Packer Injection Capital Grouting pertains to chemical sealing materials.**

Q14. For the Manholes, Per Specification 02435, Paragraph 2.06/B, it has been requested that a 2.0-inch minimum liner thickness be installed regardless of design. This conflicts with Specification 02435, Paragraphs 3.04/D/8/d and 9/c which call for a more reasonable 1.0-inch application. Will the Owner/Engineer reconsider their request for a 2.0-inch minimum installation thickness and modify to allow for a 1.0-inch minimum thickness?

A14. **The minimum thickness requirement has been modified, see Addendum No. 2.**



- Q15. Per Specification 02435, Paragraph 3.04/D/5, ‘a flash coat of the liner material shall be applied three (3) inches into each service connection.’ Will the Owner/Engineer consider the use of Quadex Flex Guard FM and / or Flex Seal leak sealer Rubber for this purpose?
- A15. **Bids shall be based on the performance of the finished product as specified within the Contract Documents. Contractor may elect to submit alternative processes and/or products for review as an approved equal.**
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- Q16. Would the city consider rehabilitating the pipe using cured-in-place pipe (CIPP) rather than geopolymer? Given the sensitivity of the area during rain events, the CIPP lining would greatly reduce the amount of time a bypass would need to be in place, thus shortening the duration of this work and minimizing the time workers would need to be in the pipe. Additionally, the CIPP would offer a lower coefficient of friction, which would allow the flow during a rain event to dissipate more quickly.
- A16. **No.**
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- Q17. Can the city confirm that during dry weather, the flow that typically runs through the 48” pipe to be rehabilitated can be put into the combined sewer overflow collector and pumped downstream of this project utilizing the QACSOTF?
- A17. **During dry weather, the Contractor may bypass flow into the Combined Sewer Overflow Collector. According to the Contract Drawing C101 and Specification Section 01535, Temporary Bypass Pumping System, the City may cease operation of the 600 gpm pumps only during dry weather days. The bypassed flow will be pumped and discharged to the 72-inch Main Interceptor downstream of the project area. The bypass plan shall be reviewed and approved by the Engineer.**
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- Q18. Would the city allow for the flow to be put into the drainage system running down Quinsigamond Ave utilizing MH SS00657a during the pipe rehabilitation process?
- A18. **No. Flow shall not be bypassed into the drainage system.**
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- Q19. Can the city confirm that any testing required on this project will be paid through the allowance?
- A19. **Any testing required on this project shall not be separately measured for payment, but shall be considered incidental to the project. Additional testing not required on this project will be paid through the Lump Sum Reserved for City Use (Item 900).**
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The City of **WORCESTER**

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Q20. Can the city provide more detail on how the chamber SS07177 operates? It appears there are mechanical components within the structure. Is everything to be coated in geopolymer?

A20. **Additional details are not available. Bidders shall assume that all interior surfaces and components of the manhole/structure are to be coated with geopolymer. Any components that should be excluded from coating will be evaluated on a case-by-case basis and must receive approval from the Engineer.**

Q21. If mechanical components are encountered within the structures throughout this scope of work, how are they to be handled with geopolymer rehabilitation? Are they to be sprayed over??

A21. **See the response for Q20 above.**

Q22. Will the city remove all flow meters prior to the start of work?

A22. **Yes.**

Q23. Can a new link be provided for the television inspection reports and videos?

A23. **To download inspection videos and reports -**
<https://sharefile.wseinc.com/link/yqKGUGlyD2JEvmORFIMrf4>

Bidders are requested to acknowledge and/or include this addendum with submission. All other terms, conditions and specifications remain unchanged.

Very truly yours,

Stephen R. McDonald
Assistant Purchasing Director