LYNN
WATER & SEWER COMMISSION
400 Parkland Avenue • Lynn, Massachusetts 01905-1138 • (781) 596-2400 • Fax (781) 595-1420

July 25, 2019

Mr. Douglas Koopman
United States Environmental Protection Agency
5 Post Office Sq. Suite 100 OES04-4
Boston, MA 02109-3912

Mr. Kevin Brander
MassDEP
Northeast Regional Office
2015 B Lowell St.
Wilmington, Ma 01887

Re: Lynn Water & Sewer Commission
Third Modified Consent Decree
Semi Annual Report: CSO Separation Project Updates

Dear Mr. Koopman and Mr. Brander:

The Lynn Water and Sewer Commission (LWSC) hereby submits the Semi-Annual Status Report in compliance with the requirements of Paragraph 26 of the Third Modified Consent Decree (TMCD). The purpose of this report is to describe in detail the status, progress, and work to be performed under **Section VI Compliance** Paragraphs 9 through 16 of the TMCD.

Paragraph 9: Implementation of the October 2014 LWSC CSO Supplemental Facilities Plan

At the January 9, 2017 LWSC Commission Meeting the Board voted to approve the TMCD and directed the Executive Director and LWSC Attorney to sign the agreement as presented.

Paragraph 9a. Inflow and Infiltration (I&I) Program Submittal and Approval

In October 2017 LWSC contracted its general engineering service provider Weston & Sampson of Peabody, MA implement a groundwater monitoring program to begin in February 2018. The program incorporates installation of flow meters, identification of sub areas, rainfall and ground water monitoring.

To date, Weston & Sampson and sub-contractor Flow Assessment Services have installed fourteen (14) flow meters and installed four (4) monitoring wells. Data will then be analyzed and a priority ranking will be established, with a Phase I Report to be submitted to DEP and EPA in September 2018.

Paragraph 9b. "Notice of Project Change" filing to Massachusetts Executive Office of Energy and Environmental Affairs (EEA)

On May 22, 2017 LWSC filed a Notice of Project Change with EEA re: the need for a pump

station and the use of existing Outfall 002 located on the grounds of the Lynn Regional Water Pollution Control Facility. In July of 2017 the Notice of project change was accepted by EEA.

Paragraph 9c. "Bennett Street Storm Drain and Outfall Project" Design Plan Submittal

LWSC Board of Commissioners voted to award the 'Preliminary Engineering Design for Sewer Separation in the Bennett Street Area' to Stantec Consulting Services. This Preliminary Design report will be submitted to the regulatory agencies on or before July 31, 2018.

Paragraph 9d. Blossom/ Commercial Street Storm Drain Design Plans

Deliverable due on or before July 31, 2019. See attached pages from LWSC Engineering Firm, Stantec Consulting Engineers, for detailed monthly progress summaries.

Paragraph 9e. Bennett Street Storm Drain and Outfall Construction Completion

Deliverable due on or before October 31, 2019

Paragraph 9f. Blossom/ Commercial Street Storm Drain Project Construction Completion

Deliverable due on or before October 31, 2019

Paragraph 9g. Bennett Area Construction Completion

Deliverable due on or before October 31, 2024

Paragraph 9h. WPCF Sluice Gate Design Plans

Deliverable due on or before March 31, 2024

Paragraph 9i. High Flow Management Plan

Deliverable due on or before September 1, 2024

Paragraph 9j. WPCF Sluice Gate Construction Completion

Deliverable due on or before December 31, 2026

Paragraph 9k. CSO 005 Sewer Separation Design Plans

Deliverable due on or before January 31, 2026
Paragraph 9l. CSO 005 Sewer Separation Construction Completion

Deliverable due on or before July 31, 2030

Paragraph 10. CSO Notification and Monitoring

LWSC will continue to follow the submitted and approved Overflow Response Plan, which

includes real-time monitoring at regulator structures, notification to regulatory agencies and surrounding communities, and publicize the information on LWSC's website.

Paragraph 11. Updated Overflow Response Plan

The Updated Overflow Response Plan was submitted in September of 2015. Comments were received from the Regulatory Agencies and an Updated Overflow Response Plan submitted by LWSC in April 2016. The Final Plan was accepted in April 2017.

Paragraph 12. Overflow Response Plan- Monitoring at King's Beach

For the period of January 1, 2018 – June 30, 2018 zero samples were collected due to CSO overflow event(s) at Sanderson Avenue and Groveland St. overflow structures.

Paragraph 13. CMOM Practices

LWSC will continue to submit on or before January 31, of each year, an annual report complying with the requirements of Paragraph 13 of the TMCD.

Paragraph 14. MS4 Outfall Sampling and Maintenance Practices

LWSC will continue to implement proper operation and maintenance actions for the MS4, WPCF, and Collection System consistent with the LWSC Updated High Flow Management Plan, BMP's for Kings Beach Outfall, and Updated Overflow response plan.

Paragraph 15. Solids and Floatables Plan

A plan was submitted in October 2017 to the Regulatory Agencies. Comments were received and were implemented into the updated/ revised plan, submitted on February 24, 2018.

If you have any questions or require additional information, please contact me at (781) 596-2400, ext. 202

Sincerely,

Anthony J. Marino, P.E.
Chief Engineer

cc: Jeffery Kopf, George B. Henderson II, EES Case Management Unit, Heidi Zisch, Andrew Goldberg

Stantec

**Monthly Progress Report No. 6**

Lynn Water and Sewer Commission
West Lynn Sewer Separation
Professional Engineering Services for Detailed Design & Phase 1 Bid Documents
Purchase Order #19-207
Period: December 22, 2018 through January 25, 2019

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The following is a summary of work activities performed this period:

Project Management

- Prepared Invoice No. 5 and Monthly Progress Report No.5 for the period between November 23, 2018 through December 21, 2018.
- Reviewed and responded to comments on prior invoices.
- Prepared subagreements for geotechnical and chemical testing laboratories.
- Conducted quality review of design documents in preparation for the 60% submittal of Phases 1 & 2.
- Attended monthly Commissioner's Meeting on January 7, 2019.

Financial Capability Assessment (FCA)

- Conducted an internal review of the 1997 Financial Capability Assessement (FCA).
- Reviewed and geocoded billing data for use in the financial models.
- Developed Weighted Average Residential Index (WARi) model.
- Prepared and ran alternative capital expenditure scenarios to review affordability. It is anticipated that a meeting will be held in late February to review the current status and results associated with the FCA.

Field Investigations

- Continued to prepare for the Private Property Inflow Investigation Program. This included further developing forms to be used during the inspections, refining the list of buildings to be inspected, and coordinating the customer mailings. It is anticipated that building will begin in early February.
- Continued to refine and develop the basemapping. A list of comments on the preliminary basemapping was provided to the surveyor (SMC) for revision. Additional survey was also obtained in the vicinity of the proposed outfall.
- Initiated the geotechnical boring program. The program began in early January in the Phase 1 Sewer Separation Area and twenty-two (22) borings have been completed. Chemical testing of soil samples was also initiated.
- Continued to review the results of the CCTV Program. Inland Waters is approximately 65% complete with the inspections. Delays were experienced in January due to inclement weather.

Final Design Engineering Analysis

- Reviewed alternative locations for the proposed outfall and potential options for the proposed force main alignment. A alterantives analysis of both the force main alignment and outfall locations are required to permit the new outfall.
- Continued to develop the ICM model of the proposed storm drain network that will be used to optimize pipe sizes and perform the catch basin spread analyses. Surveyed catch basin locations were input into the model and the proposed pipe alignments were revised based on the design included in the 60% submittal.
- Established approach to the water quality assessment (WQA). The modeling associated with the WQA will focus on the removal of total suspended solids (TSS) from the stormwater prior to discharge to Lynn Harbor. This will potentially be achieved via deep sump catch basins, street sweeping, low-flow connections to the combined sewer and/or isolated detention/retention or green infrastructure.
- Prepared sections of the supplement to the PDR.

Contract Plans, Specifications and Cost Estimates

- Continued to advance the Article 97 process. The Commission has initiated discussions with the Mayor's Office and other local stakeholders.
- Met with the Massachusetts Water Resources Authority to review the potential impacts to their facilities on January 15, 2019. MWRA indicated an 8M permit will be required
- Continued to develop plan and profiles for the proposed sewer and drain facilities, including the proposed force main, in preparation for the 60% design submittal due in late January.
- Continued to develop cover sheet, key plan and detail sheets.
- Identified water mains that need to be replaced to facilitate the installation of new storm drain piping. Sewers to be replaced or relocated are also identified on the design documents that will be submitted as part of the 60% submittal. Due to delays with the CCTV inspections, sewers that require replacement or rehabilitation due to condition have not been identified on the plans to date.
- Reviewed and revised tunnel designs for Phase 2.
- Performed calculations to verify force main pipe size.

Bidding Services

No work activities performed this period.

Stantec

**Monthly Progress Report No. 7**

Lynn Water and Sewer Commission
West Lynn Sewer Separation
Professional Engineering Services for Detailed Design & Phase 1 Bid Documents
Purchase Order #19-207

Period: January 26, 2019 through March 22, 2019

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The following is a summary of work activities performed this period:

Project Management

- Prepared Invoice No. 6 and Monthly Progress Report No. 6 for the period between December 22, 2018 and January 25, 2019.
- Coordinated with Commission staff and subconsultants to execute a right-of-entry agreement to access private property along Alley Street to perform geotechnical investigations.
- Continued to conduct quality reviews of the design documents.
- Reviewed schedule for SRF Funding.
- Attended the following meetings:
  - i. February 11th Meeting with General Electric Staff to provide an overview of the project and review the CCTV Inspection and Geotechnical Boring Program.
  - ii. February 14th Workshop with Commission staff to review LWSC design standards.
  - iii. February 15th Meeting with Commission staff to review design of Phases 1 & 2.
  - iv. February 27th Meeting with Commission staff to review the Financial Capability Assessment.
  - v. February 28th Meeting with Commission staff to review the overall progress of the project.
  - vi. March 13th Meeting with Commission and DPW staff to provide DPW with an overview of the project.
  - vii. March 15th Meeting with National Grid to coordinate the proposed Commission facility upgrades with recent and future gas main replacement work.

Financial Capability Assessment (FCA)

- Continued to develop the Weighted Average Residential Index (WARI) model.
- Prepared color-coded maps displaying the results of the FCA.
- Prepared presentation of preliminary results from the FCA and documented key issues to discuss with Commission staff.
- Continued to develop Capital Improvement Program expenditure scenarios.

- Began development of FCA report. A draft version of the report will be submitted to the Commission in late March.

Field Investigations

- Attended conference call with GE staff to discuss previous geotechnical investigations performed near the GE Property on Bennett Street and the former GE Facility off Federal Street. The data from the previous investigations may eliminate the need for additional investigations to be completed. The data will be reviewed in early April.

- Continued to refine and develop the basemapping. Basemapping features were updated to accommodate the change in drawing scale (40-scale to 20-scale). Additional field work to review invert measurements was also performed.

- Performed and reviewed chemical testing of soil samples.

- Completed the CCTV Program on February 25, 2019. Some segments of pipe could not be inspected due to the need for heavy cleaning. Additional review of CCTV needs will be assessed as the design progresses. Final inspection videos were downloaded and organized to facilitate the review of recommendations for rehabilitation and replacement.

- Continued to manage the geotechnical boring program. The boring program is approximately 50% complete. Delays have been incurred as a result of property ownership issues, coordination with GE and National Grid and additional drilling depths required in Neptune Park.

- Continued to complete private property investigations to identify sources of inflow. All of the small building inspections have been completed. There are several large buildings that still need to be investigated.

Final Design Engineering Analysis

- Continued to review alternative locations/configurations for the proposed outfall and potential options for the proposed force main alignment.

- Developed draft technical memorandum documenting the results of the Outfall #004 Upper Blossom and the Outfall #003 Sewer Restriction Evaluation. The technical memorandum is currently undergoing an internal review.

- Continued to develop the ICM model of the proposed storm drain network. The model has been optimized to refine pipe sizes, establish minimum velocities and evaluate the pump station capacity. The 2D overland flow model has also been used to assess the number and location of additional catch basins required to provide an adequate level of service.

- Continued to prepare sections of the supplement to the PDR.

Contract Plans, Specifications and Cost Estimates

- Continued to advance the Article 97 process. The Commission has initiated discussions with the Mayor's Office and other local stakeholders. Additional meetings were held with the Parks Department and a potential site to mitigate the land taking at Neptune Park has been identified at GEFAA Field off Summer Street. A meeting was also held with the Executive Office of Environmental Affairs (EEA) to review potential for the land taking at GEFAA Field. Further discussions will be held with the stakeholders in Late March.

- Coordinated with the following utilities relative to the proposed work:
  i. City of Lynn DPW
  ii. National Grid Gas and Electric, and
  iii. MWRA
- Continued to develop cover sheet, key plan and detail sheets for Phase 1.
- Continued to develop plan and profiles for the proposed Phase 1 sewer and drain facilities, in preparation for the 90% design submittal due in late April.
- Coordinated with the Commission to identify water mains that need to be replaced due to size and/or condition. All 6-inch water mains that parallel proposed storm drains will be replaced with new 8-inch water pipes.
- Modified Phase 4 and 5 design drawings. Drawings were changed from 40-scale to 20-scale and alignments of the proposed storm drain facilities were adjusted.
- Began the 60% design of the pump station and associated tunneling work. This had been on hold pending resolution of the Article 97 land taking.
- Continued to review force main design. This included a review of the system hydraulics, the configuration of the proposed energy dissipation structure at the proposed outfall, and the size and material of the force main.
- Reviewed initial results of the private property investigations.
- Continued preparation of Traffic Management Plans for Phase 1.
- Continued to develop the technical specifications for the 90% design submittal. Specifications provided by the Commission for previously completed sewer separation projects were reviewed and key items were incorporated into the specifications for the subject project.

Bidding Services

No work activities performed this period.

Stantec

**Monthly Progress Report No. 8**

Lynn Water and Sewer Commission
West Lynn Sewer Separation
Professional Engineering Services for Detailed Design & Phase 1 Bid Documents
Purchase Order #19-207

Period: March 23, 2019 through April 26, 2019

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The following is a summary of work activities performed this period:

Project Management

- Prepared Invoice No. 7 and Monthly Progress Report No. 7 for the period between January 26, 2019 through March 22, 2019.
- Performed quality review of 90% design deliverable. This review was initiated in early April to prepare for the design deliverable due on April 30, 2019. This included an independent review of the Contract Documents as well as specialized quality reviews of the civil, traffic, geotechnical and environmental disciplines. A review of the CAD drawings was also conducted.
- Attended two (2) meetings at GEEAA field in late March to review potential land acquisition to offset the land taking required for the pump station at McManus field. After negotiating briefly with GEEAA, the option of acquiring land at the site to comply with the Article 97 requirements was abandoned.
- Attended meeting on April 2, 2019 with City of Lynn Officials at the site of the former West Lynn National Little League Field along the Saugus River to discuss converting the parcel to conservation land in exchange for the land taking at McManus Field. A follow-up meeting with officials from the EEA office was then conducted at the site on April 10, 2019.
- Attended meeting in conjunction with Commission staff at MassDEP NERO on April 4, 2019 to review the processes for the SRF program.
- Attended meeting with LRWWTF and Veolia staff to discuss the layout and features of the proposed stormwater pumping station. The meeting was held at LRWWTF on April 10, 2019.

Financial Capability Assessment (FCA)

- Continued development of the FCA report narrative and associated figures.
- Submitted Draft FCA report to the Commission on March 26, 2019. A meeting was held with the Commission on April 17, 2019 to review the draft report.
- Began revisions to the Draft FCA report based on Commission comments. It is anticipated the Final FCA report will be issued in early May.

Field Investigations

- Completed the private property investigations to identify sources of inflow. Results will be compiled in early May.
- Performed and reviewed results for geotechnical and chemical tests of soil samples.

- Began preparation of the geotechnical data and hazardous materials reports for the Phase I area.

- Continued to manage the geotechnical boring program. The boring program is approximately 60% complete. The program remains delayed as agreements for entering private property have yet to be executed.

- Began to identify scope for the upcoming subsurface utility exploration program (SUE). It is anticipated this will commence immediately following the 90% design submittal.

Final Design Engineering Analysis

- Continued to review an alternative configuration for the proposed stormwater outfall. This includes an assessment of open versus closed energy dissipation as well as an evaluation of the discharge location.

- Completed modeling of the proposed storm drain network using the ICM Model. Final pipe sizes and slopes and catch basin locations have been established. Modeling was also performed to evaluate the size/configuration of the new stormwater pumping station. A memorandum documenting the results of the modeling has been developed and will be finalized in the upcoming months.

- Continued to prepare sections of the supplement to the PDR.

Contract Plans, Specifications and Cost Estimates

- Continued to coordinate with several utilities, city departments and local stakeholders. The following coordination efforts were undertaken this month:

    i. Contacted DPW to obtain records for trolley tracks.

    ii. Held several conference calls with VHB to discuss an upcoming roundabout project in Aggannis Square.

    iii. Discussed Agganis Square project, the previously completed Magrane Square project and the upcoming separation work in Federal Street with the real estate firm that manages the parcel along Federal Street (LT Development LLC). Follow-up discussions will be held once the 90% design plans are completed.

    iv. Obtained detailed records of electric facilities from National Grid. Potential impacts to electric facilities will be further evaluated in early May.

- Continued to develop design documents for the 90% design submittal due in late April. The limits of storm drain installation, sanitary sewer replacement, sanitary sewer rehabilitation and water main replacement have been established. Potential extensions of the storm drain system to eliminate private inflow are still being evaluated. The design of the storm drain system in the vicinity of Agganis Square was significantly revised to accommodate the improvements associated with the upcoming roundabout project.

- Continued to modify Phase 4 and 5 design drawings for the 60% design submittal in Late July.

- Continued the 60% design of the pump station and associated tunneling work. The following work activities were conducted:

i. Identified the required footprint of pump station, including site layout/configuration and potential storage area.

ii. Developed process diagram for pump station components.

iii. Established diesel generator size and layout. Based on feedback from Commission staff, the use of a gas generator will be further investigated.

iv. Determined configuration of pumps, wet well and valve vaults. This included the use of Fathom model to assess the fluid dynamics and discussions with suppliers to establish pump curves.

v. Reviewed architectural codes.

vi. Reviewed electrical requirements and coordinated with National Grid to determine availability of supply.

vii. Identified geotechnical requirements for pump station wet well and electrical building.

viii. Revised rendering of the pump station facility.

- Continued to review force main design. Work this month focused on evaluating the material of the force main.
- Continued preparation of Traffic Management Plans for Phase 1.
- Continued to develop the technical specifications for the 90% design submittal.

Bidding Services

No work activities performed this period.

Stantec

**Monthly Progress Report No. 9**

Lynn Water and Sewer Commission
West Lynn Sewer Separation
Professional Engineering Services for Detailed Design & Phase 1 Bid Documents
Purchase Order #19-207
Period: April 27, 2019 through May 24, 2019

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The following is a summary of work activities performed this period:

Project Management

- Prepared Invoice No. 8 and Monthly Progress Report No. 8 for the period between March 23, 2019 and April 26, 2019.
- Continued to perform reviews in preparation for the 90% design deliverable for Phase 1. The deliverable date was delayed from April 30, 2019 to May 7, 2019 to allow for design changes to accommodate planned improvements by Lynn DPW at Agganis Square.
- Submitted 90% plans and specifications to the Commission on May 7, 2019. The Opinion of Probable Construction Cost was submitted on May 8, 2019. GIS shapefiles for the proposed improvements were also submitted to the Commission.
- Reviewed geotechnical and environmental technical memorandums developed by Tetra Tech for Phase 1.
- Coordinated with SMC and authorized additional work to perform deed research for the Neptune Boulevard Park and National Little League Field site to facilitate Article 97 approvals.
- Managed sub-consultants' budgets. Met with Tetra Tech to review scope, schedule and budget.
- Prepared for 90% design review meeting for Phase 1. The meeting is scheduled for May 28, 2019.
- Continued to coordinate with stakeholders/agencies to gain approvals for siting the pump station at Neptune Boulevard Park. This included a site walk with stakeholders at the National Little League Field and a meeting with Lynn DPW staff and the Commission to review the proposed approach. Approvals were obtained from Lynn Parks Commission (May 7th), Lynn City Council (May 14th) and Lynn Conservation Commission (May 21st).

Financial Capability Assessment (FCA)

- Continued revisions to the Draft FCA report based on Commission comments.
- The revised FCA report was submitted to the Commission on May 6, 2019.

Field Investigations

- Finalized the survey basemap deliverable from SMC. Existing utility information was revised based on feedback from the utilities.

- Identified scope for the upcoming subsurface utility exploration program (SUE). The program is scheduled to commence in mid-June.

- Stantec's sub-consultant, SDE, compiled the results of the private property inspections and submitted data to Stantec for review.

Final Design Engineering Analysis

- Continued to prepare technical memorandums related to the modeling work.

- Began to review CCTV inspection data for the River-Camden area and develop a technical memorandum documenting the findings.

- Continued to prepare sections of the supplement to the PDR.

Contract Plans, Specifications and Cost Estimates

- Provided the 90% design documents to various utilities, city departments and local stakeholders. A conference call was held with LT Development LLC, the real estate entity managing the parcel along and including Federal Street, to discuss the upcoming sewer separation project. Stantec staff also attended a meeting with National Grid – Electric on May 13, 2019 to discuss the scope of the project.

- Continued to develop documents for the 90% design submittal. Plans identifying the limits of proposed pavement restoration and the cleaning of the Western Interceptor were developed and incorporated into the drawing set. A list of outstanding items to be reviewed with the Commission was also prepared.

- Continued to modify Phase 4 and 5 design drawings for the 60% design submittal in Late July.

- Continued the 60% design of the pump station and associated tunneling work. The following work activities were conducted:

    i. Developed Revit model for the pump station building, wet-well and associated structures.

    ii. Prepared geotechnical and structural recommendations. This included design of the support of excavation system and preliminary wall/beam sizing for the structures.

    iii. Generated civil site layout plans.

    iv. Continued mechanical process design. Pump selection and influent bar rack sizing was completed.

    v. Developed memorandum to compare gas and diesel stand-by generators. Significant cost-savings can be achieved if a diesel generator is utilized rather than the gas generator requested by LRWWTF staff. Based on discussions with the Commission, a diesel generator will be recommended.

- Reviewed force main material. Based on a constructability review, ductile iron pipe will be recommended for the majority of the force main alignment.

- Continued preparation of Traffic Management Plans for all phases of the work.

- Continued to develop the technical specifications for the 90% design submittal.

Bidding Services

No work activities performed this period.

Stantec

**Monthly Progress Report No. 10**

Lynn Water and Sewer Commission
West Lynn Sewer Separation
Professional Engineering Services for Detailed Design & Phase 1 Bid Documents
Purchase Order #19-207
Period: May 25, 2019 through June 21, 2019

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The following is a summary of work activities performed this period:

Project Management

- Prepared Invoice No. 9 and Monthly Progress Report No. 9 for the period between April 26, 2019 and May 24, 2019.
- Prepared for, attended and developed minutes for the following meetings:
  i. 90% Design Review meeting with the Commission on May 28, 2019
  ii. Meeting with LT Development LLC to discuss work adjacent to Federal Street on June 6, 2019.
  iii. Meeting with Commission staff to discuss water system improvements on June 21, 2019.
- Managed subconsultants' and subcontractors' budgets. This included a review of Tetra Tech's projections developed for remaining work.
- Coordinated with MassDEP's SRF Engineer relative to the construction loan application process. Stantec received approval for the filing of the Commission's authorization to provide funding for the sewer separation work ahead of the June 30th deadline.

Financial Capability Assessment (FCA)

- Reviewed financial report and prepared information for upcoming meeting with MassDEP.

Field Investigations

- Completed the field work associated with the subsurface utility exploration program (SUE). The field work, which was completed on June 20, 2019, included fourteen (14) test pits at four (4) separate locations throughout the Phase I area. It is anticipated the results of the SUE Program will be prepared and submitted to Stantec by the end of June.
- Reviewed the results of the private property inspections.

Final Design Engineering Analysis

- Continued to prepare technical memorandums related to the modeling work.
- Performed additional modeling to finalize pipe sizes and catch basin locations in the Phase 4 & 5 areas.

Contract Plans, Specifications and Cost Estimates

- Reviewed process for submitting Article 97 legislation with Commission staff.

- Continued to develop documents for the 100% design submittal for the Phase I area. Comments from Commission staff were reviewed and addressed. Stantec also revised the limits of sewer and water main replacement based on feedback received from the 90% submittal.
- Coordinated with LT Development LLC to obtain plans for recent work in the vicinity of Federal Street. The survey basemaps for the Phase I area were adjusted based on the information received.
- Met with National Grid Gas staff on June 13, 2019 to review the project and establish limits of gas main replacement required.
- Held conference call with National Grid Electric on May 29, 2019 to review potential impacts to electric facilities. National Grid will provide Stantec with GIS files of their underground infrastructure for use on the project.
- Continued to modify Phase 4 and 5 design drawings for the 60% design submittal in Late July.
- Continued the 60% design of the pump station and associated tunneling work. The following work activities were conducted:
    i. Generated plan, profiles and details for the trenchless installations.
    ii. Continued to revise geotechnical and structural recommendations and associated pump station components.
    iii. Completed civil site layout plans. Improvements to the stormwater management facilities will be re-visited following the 60% design submittal.
    iv. Continued to develop the design associated with the mechanical process, building mechanical, electrical, and architecture disciplines.
    v. Began developing instrumentation and control sheets.
- Prepared surge analysis of force main to evaluate operation of the pump station and identify location of surge suppression air release valves. A memorandum was developed documenting the analysis and will be included in the supplement to the PDR.
- Continued preparation of Traffic Management Plans and geotechnical plans for all phases of the work.
- Continued to develop the technical specifications for the 100% design submittal.

Bidding Services

No work activities performed this period.