

STORM WATER COMMITTEE MINUTES NOVEMBER 3, 2021

The Storm Water Committee meeting was held on November 3, 2021 at North Royalton City Hall, 14600 State Road. The meeting was called to order at 6:27 p.m.

PRESENT: **Committee Members:** Chair Jessica Fenos, Vice Chair Linda Barath, Vince Weimer; **Council:** Paul Marnecheck, Jeremy Dietrich, Michael Wos, Joanne Krejci; **Administration:** Mayor Larry Antoskiewicz, City Engineer Justin Haselton, Law Director Tom Kelly, Service Director Nick Cinquepalmi, Wastewater Superintendent Mark Smith; **Other:** Vern Blaze.

APPROVAL OF MINUTES

Approval of the October 5, 2021 Committee meeting minutes. Moved by Ms. Barath, seconded by Ms. Fenos. Vote: Yeas: 3; Nays: 0. **Motion Carried.**

UNFINISHED BUSINESS

Ms. Fenos began the meeting by expressing her appreciation for Mr. Smith, Mr. Cinquepalmi, Mr. Haselton, and everyone, for this would be her last Storm Water Committee Meeting. She felt there has been a lot of progress over the last two years and she appreciated everything.

1. Storm Water/Infrastructure Maintenance Monthly Report

Mr. Smith provided a report by e-mail, in which there were no questions.

2. Maintenance Projects

Mr. Haselton advised that work began on a joint project with the Northeast Ohio Regional Sewer District; at Bunker Road. In the past month, field work was started on the pre-design, in which a survey was done, ecological assessments, and some structural analysis of culverts. That pre-design is currently ongoing.

3. Turnpike Mitigation

Mr. Haselton noted that the purchase order that was needed got lost, however, there was a meeting on Friday and that will be taken care of. That would start very soon.

4. York Road Property

Mr. Kelly explained that the letters required by statute to go to the heirs and owners have all been sent by certified mail. We are already receiving some feedback from some of the heirs; as to their interests. So far, it has been very positive, however, we are still going to be required to file a lawsuit in order to clear up some things; including the discovery of two life estates, whereas there were two people included in a deed back in the 1940's. It was likely that they are deceased, however, in order to clear the title and cover the record, we will have to do some publication as part of the lawsuit. The law will still require that in order to clear the title; we have to take care of it in a specific manner. He indicated that it is coming along.

Ms. Fenos asked if that meant the opportunity for the rest of the heirs to accept the proposal is off, or if it is in addition to. Mr. Kelly indicated that we would run them together; so that as many people who are able to be contacted are willing to proceed; arrangements will be made with them. Everyone must be identified on the litigation. It is just those who are identified and who are willing to participate voluntarily; that will be able to rectify their involvement very quickly.

Mr. Marnecheck asked for more clarification on a life estate. Mr. Kelly explained that when people own real property, typically you own a piece of property in what we call fee simple; in a fee simple estate. That means you are subject to any mortgage or liens; you own it entirely. But there are lessor estates in real estate that you

can have down to permissive use, a lease hold interest. A life estate is a form of title that is essentially less than a fee simple estate, however, it gives the holder the right to live on the property for his or her life time. The classic manner in which these issues are resolved for litigation purposes, is to issue a service by publication. To the extent that no one comes forward, as no one will, the life estates can then be extinguished; as part of the judicial proceedings. Mr. Marnecheck asked if it automatically goes away if they leave the property. Mr. Kelly clarified, no, it goes away if they are deceased only; which we are uncertain.

Ms. Fenos inquired whether it is still a necessary purchase. Mayor Antoskiewicz indicated that it was; Mr. Haselton was in agreeance. Ms. Fenos wondered if it is going to create a delay at all. Mr. Kelly felt no, perhaps a small delay. He went on to say that it is the nature of eminent domain proceedings, unless they are being used for roadway purchases; then that is different.

5. **Cleaning the Mains**

Ms. Smith reported that Spyglass area was completed and they were now in Sherwood Estates; where we are cleaning. A lot of roots and calcium was noticed. The program itself is going better than they had planned. The other truck did come in, which will allow for two guys on a truck cleaning; as long as weather permits. Ms. Krejci asked how long are they anticipate being in Sherwood. Mr. Smith was not certain. Ms. Fenos inquired about what is done with all of the things they come across. Mr. Smith indicated that it is taken back to plant and to the landfill.

Mr. Marnecheck asked if there was anything that Mr. Smith was able to point to, in showing the improvement of this. Mr. Smith felt that Council would be able to see those improvements by not receiving as many calls as before. Looking at some of the heavier rains we have had, there have not been as many calls coming in. Mayor Antoskiewicz concurred.

6. **Small-scale Storm Water Projects – update on status and timeline**

Mr. Smith shared that they are about to finish the last culvert repair; then they will be finished for the year. That is the last culvert that is paid for. There are still some minor jobs to work on, just smaller repairs. Ms. Fenos asked if staffing had returned back to normal. Mr. Smith conveyed that the last gentleman came back last week; they are considered back to normal.

NEW BUSINESS

There is none.

ADJOURNMENT

Moved by Ms. Fenos, seconded by Ms. Barth to adjourn the November 3, 2021 meeting. Yeas: 3; Nays: 0.
Motion carried. Meeting adjourned at 6:40 p.m.

EXHIBIT A
Project Description
City of North Royalton
Plant B Pump Station Conversion and Sewer Conveyance Design
October 28, 2021

GENERAL DESCRIPTION FOR SCOPE OF WORK:

The improvement project engineering task consists of work performed in multiple stages.

- Stage 1 design work is detailed below and includes (a) wet weather evaluation and basis of design report (b) design of a pump station to divert flow from Wastewater Treatment Plant (WWTP) B to WWTP A, (c) design of forcemain and gravity sanitary sewers d) design of two equalization (EQ) tanks at Plant A.
- Stage 2 work has not been fully defined and is dependent on the Stage 1 outcomes. Therefore, an allowance has been included for Stage 2 work. The allowance for Stage 2 was established with the following tentative design items (a) wet weather operational strategy development assistance, (b) NPDES Permit Modification application, (c) rehabilitation and demolition of existing Plant B selected structures and equipment under the City's guidance and (d) conversion of available tanks at Plant B to equalization tanks.
- Flood Control Design is also included as an allowance. Plant A is subject to historic flooding. A flood control design allowance has been included for study, flood modeling, flood control design and floodway/floodplain permitting assistance.

For construction bidding purpose, Stage 1 design will be arranged as: Stage 1 Project A – pump station and EQ basin; and Stage 1 Project B – forcemain and gravity sanitary sewer. Stage 2 and flood control are assumed to be separate construction contracts.

STAGE 1 WORK

Field Investigations

1. Topographic and boundary survey to collect surface data and buried utilities as reported by OUPS field markings across the entire work area at the two WWTPs and project corridor.
2. Geotechnical Investigation for development of a geotechnical investigation report to define:
 - a. Structural design considerations and anticipated ground conditions for Plant B Pump Station
 - b. Structural design considerations and anticipated ground conditions for Plant A Equalization Tanks
 - c. Structural design consideration and anticipated ground conditions for forcemain and gravity sewers.
3. Hazardous Materials Investigation field testing for the presence of hazardous materials in the areas of work, limited to lead-based paint and asbestos testing of

- buildings/structures where modifications are proposed. It is currently assumed soils/groundwater testing is not required for the presence of hazardous materials.
4. Environmental Investigation to satisfy WPCLF funding requirements including the presence of wetlands/streams that may require 401/404 permitting in addition to a Phase I Environmental Site Assessment and historic structure evaluation.
 5. CCTV and clean the interceptor from first MH north of turnpike to the plant.
 6. Conduct metering in the interceptor (two meters up to four months) to confirm capacity and ability to manage additional anticipated flows from the forcemain and gravity sewers.

Basis of Design Report

1. The Basis of Design Reports (BODRs) will incorporate technical memoranda, studies, and field investigation work to clarify design scope elements of the detailed design. Two BODRs will be developed for work proposed at the two WWTPs and for the pipeline work to convey flow, respectively.
2. Wet Weather Study
 - a. Perform a wet weather study to evaluate operations and capacity of both WWTPs to facilitate the design of a new pump station and storage requirements through flow equalization as needed for each facility.
 - b. The study will also investigate grit removal and other operational challenges identified by operating staff during the project kickoff.
 - c. Recommendations from the study will be incorporated into a Basis of Design Report to establish design parameters for both phases of the design work.
3. Technical Memoranda
 - a. Gravity Sewers & Forcemain TM: Identify approximate routing and tie in. Confirm hydraulics and surge analysis findings.
 - b. Plant B Pump Station TM: Evaluate and recommend dry/wet pit design versus submersible. Building layout, need for screening, pump type, number and sizing.
 - c. Plant B Future Modifications TM: Identify future modifications needs for rehabilitation to tanks for equalization tanks, recommended modifications to existing structures to be used by the city for new use.
 - d. SCADA TM: Identify communication/SCADA ductbank at plant A, SCADA improvements associated with Plant B pump station.

Plant B Pump Station Design:

1. The proposed pump station facility (assume 2.5 MGD, 3 to 4 pumps with variable frequency drives) is anticipated to be located on the WWTP B property and composed of a wet well and dry pit. The building is anticipated to be a single-story masonry structure with brick finish wall construction to be roughly 500 to 600 sf max. The pump station is anticipated to be a trench style wet well with dry pit submersible configuration.
2. Determine the pump design criteria and sewer capacity. Perform a surge analysis for the pump station/forcemain.
3. Develop the programming requirements to size the building square footage. Backup power generation will be from the existing permanent on-site generator, additionally

the pump station will be designed with an outlet to plug in a portable generator with receptacle to match the existing fleet.

4. The building will not require a restroom or offices spaces.
5. Review of alternative building layouts with the City and BC for maintenance and access to the pump station. Assume 3 building layouts max.
6. Develop the building mechanical requirements for heating and ventilation.
7. Develop the building electrical requirements.

Plant A Improvements:

1. Design improvements for two (2) additional Equalization Tanks (size each to match storage volume and general configuration) of the existing EQ tank and to be located North and adjacent to the existing tank.
 - a. Drainage and transfer of new EQ tanks will be accomplished similar to the existing EQ tank.
 - b. Grading will provide for stormwater runoff around the new EQ tanks.
 - c. No retaining structure will be required to accommodate regrading of the slope.
 - d. Modifications, if needed, to the tanks for wet weather operation will be designed under Phase 2.
2. Design for the removal and salvage of the existing screw pumps. Design for additional submersible pump to provide redundancy for the existing pump. Pump capacity will be identical to existing, piped and valved into the existing line for back-up purposes. Replace existing submersible pump discharge piping in kind.
3. Design for an interior roof over the electrical room in the Filter Building to replace the temporary roofing material (anticipate design for a waterproof membrane on top of existing roof and sealing of penetrations). No HVAC or electrical relocation is required for the roof replacement.
4. Design for the replacement of a communication duct bank for the SCADA system routing between the Administration building, garage, Filter Building and the Operations Building. Replacement will include all new conduit, wire, cabling, fiber and duct bank to keep existing on line until new is installed.
5. Design for removal of the existing Ashbrook Filter press (for salvage) and removal of all equipment, piping, electrical, and controls associated with that building.
6. Design for a fire suppression system in the existing garage west of the Administration Building.
7. Design for an enclosure to the existing MCCs in the Filter Press building and associated HVAC for that enclosed area.
8. Design for installation of the piping and water cannons for the existing aeration tanks, the existing equalization tank the two new equalization tanks. (6 total tanks with XX total cannons are assumed)
9. Design replacement of the existing HVAC unit on the Control Building with a rooftop unit.

Forcemain and Sewer Design:

1. The proposed forcemain (12" per previous report) starts at the proposed pump station at WWTP B extending west along West Sprague Rd, then south along Abbey near

Harbour Light Drive to the beginning of the gravity sewer. The gravity sewer continues south along Abbey Road to north to I-80 then extending east to an existing trunk sewer that flows to WWTP A under I-80.

2. Evaluate a new gravity sewer extension north of the turnpike for a potential future development site between W 130th Street and Abbey Road.
3. Evaluate and make a recommendation on size of gravity sewer and forcemain. Evaluate pipe material selections and develop horizontal alignment alternatives within the street rights-of-way.
4. Develop potential construction methods for the forcemain and gravity sewer including trenchless technologies to optimize the design.
5. Identify utility conflicts or other issues such as bridge or culvert crossing impacting the alignments.
6. Consider Maintenance of Traffic (MOT) and other impacts on the construction.
7. Determine hydraulic design of the forcemain, gravity sewers and pump station. Utilizing the existing trunk sewer under I-80 is planned in routing the sewer to Plant A. The flow monitoring conducted during the field investigations will be used in conjunction with hydraulic model projections to confirm available capacity downstream of the new tie-in. No design services have been provided for jack and bore under I-80 for a new line to Plant A.

STAGE 2 DESIGN ALLOWANCE

Stage 2 of the project involves the necessary work to finalize decommissioning of Plant B. This includes operational assistance with the new pump station and equalization, permit modification, rehabilitation and decommissioning of Plant B, and additional Plant A improvements

Wet Weather Operational Strategy Development Assistance

1. Assist the City establish the wet weather operational strategy to optimize the treatment efficiency and storage utilization.

NPDES Permit Modification Application

1. Assist the City apply for NPDES Permit Modification to remove the existing discharge permit for Plant B. The application will be prepared within six (6) months of the start of the pump station operation.

Rehabilitation and Decommissioning of Plant B:

1. Design following improvements:
 - a. Demolition of selected structures, if any, under the City's guidance
 - b. Rehabilitation of selected structures under the City's guidance.
 - c. Site restoration.
 - d. Evaluate and design for building wall structural/arch repair, tuckpointing of structures to remain.
2. Design for conversion of selected tanks to equalization basins.

3. Design for removal and salvage of the existing screw pumps.
4. Removal of fine screen and relocation to Plant A at the Headworks to replace the existing bar screen at Plant A.

FLOOD CONTROL DESIGN ALLOWANCE

Plant A has historic flooding issues. The Flood Control Design Allowance will include study and analysis of flooding potential, assessment of current flooding risk using computer modeling and design of flood control improvements. The design is anticipated to result in a separate construction contract from the other work described in this scope of work.

Assumptions:

1. City will provide all the necessary plant operating data.
2. City will provide as-built drawings of the collection system, WWTP A and WWTP B to facilitate the design.
3. City will provide their current front-end documents for the project specifications, including all bid documents required for bidding. It is our understanding that the City utilizes EJDC C-700 Standard General Conditions of the Construction Contract. Any fees or licenses associated with the use of this document are paid and managed by the City of North Royalton and BC will not be responsible or required to pay any fees associated with the use of this document. Any forms or documents which require changes to make them specific to this process will be provided in their original format (word, excel, etc.) so that they can be modified without the need to recreate the document.
4. City will pay for all permit fees to the appropriate agencies. BC will breakout process costs for determination of NOI and PTI fees. 401/404 permitting will not be required for wetlands or stream crossings.
5. City will negotiate and obtain all required easements for land acquisition.
6. Existing utility transformer and/or service at Plant B and Plant B have sufficient capacity to carry all new loads associated with the new equipment as described in this scope of work and will not be replaced or increase. No coordination with utility provider is anticipated.
7. Typical electrical schematic diagrams will be provided. They will include the control logic to function as required but will not include detailed diagrams with terminal numbers, wire numbers, nameplate schedules, etc.
8. Electrical Arc Flash and Coordination Studies/Recommendations are not included in this Scope of Work but can be added if deemed beneficial to the project.
9. SCADA and/or control system programming and integration (commissioning and testing), phone and communication services are not included in this scope of work and are to be completed by Wiring Unlimited.

Breakdown of Stage 1 for each component of work outlined above

Phase 100 - Preliminary Design

Task 100: Project Management

Subtask 101: Project Coordination

Subtask 102: Meetings

- Subtask 103: Site Visits
- Task 110: Field Investigations
 - Subtask 111: Survey
 - Subtask 112: Geotechnical Investigation
 - Subtask 113: Hazardous Materials Report
 - Subtask 114: Environmental Investigations
 - Subtask 115: Gravity Sewer Inspection
 - Subtask 116: Flow monitoring
- Task 120: Technical Memoranda
 - Subtask 121: Wet Weather Operation Plan TM
 - Subtask 122: Gravity Sewers & Forcemain TM
 - Subtask 123: Plant B Pump Station TM
 - Subtask 124: Plant B Future Modifications TM
 - Subtask 125: SCADA TM
- Task 130: Basis of Design Report
- Task 140: Preliminary Design Workshop
- Task 150: Preliminary Permitting

Phase 200 – Detailed Design

- Task 200: Project Management
 - Subtask 201: Project Coordination
 - Subtask 202: Meetings
 - Subtask 203: Site Visits
- Task 210: 50% Plant A and B Improvements Design
- Task 220: 50% Gravity Sewer & Forcemain Design
- Task 230: 100% Plant A and B Improvements Design
- Task 240: 100% Gravity Sewer & Forcemain Design
- Task 250: Design Workshops
- Task 260: Permitting
 - Subtask 261: Permit-to-Install (PTI) Permit Application
 - Subtask 262: Notice of Intent (NOI) General Stormwater Permit
 - Subtask 263: WPCLF Funding Support

Phase 300 - Bidding

- Task 310: Bid Document Assembly
- Task 320: Pre-Bid Meeting and Addenda
- Task 330: Bid Analysis and Recommendation

Phase 400 – Construction Administration

- Task 410: Submittals
- Task 420: Contractor Questions / RFIs
- Task 430: Change Orders
- Task 440: RE Services
- Task 450: Start-up Services
- Task 460: O&M's and Record Drawings

Task 470: Meetings

STAGE 1 SCOPE OF WORK

The following scope of work summarizes the objectives, activities and deliverables associated with each task to be performed by the project team

Phase 100- Preliminary Design

Task 100 - Project Management

The project management task for preliminary design includes the following items:

- Project coordination between field crews, design team and stakeholders
- Monthly progress meetings
- Site visits for field verification and coordination of design elements
- Development of a project management plan and health and safety plan
- Design schedule
- Invoicing and monthly progress reviews

Task 110 – Field Investigations

Field investigations include the following items:

- Topographic and Boundary Survey
- Geotechnical Investigation and Report
- Hazardous Materials Testing and Report
- Environmental Investigations

Task 120 – Technical Memoranda

Tech Memos as identified in the scope above will be prepared outlining existing conditions and basis for proposed improvements for design of replacement or new construction. List of anticipated TMs:

1. Wet Weather Operations Plan
2. Gravity Sewer and Forcemain Routing
3. Plant B Pump Station Design Alternatives (includes Surge Analysis)
4. Plant B Future Modifications
5. SCADA

Task 130 – Basis of Design Report

A BODR will be developed for plant improvements at each of the facilities and a separate report for the linear work. The BODR will incorporate technical memoranda and documents the following items:

- Applicable Code and design criteria by discipline
- Site/Civil Requirements
- Structural Requirements
- Geotechnical Report

- Architectural, HVAC and Plumbing
- Instrumentation and Control
- Permitting Requirements

Task 140 – Preliminary Design Workshop

Conduct a preliminary design workshop to discuss technical memoranda recommendations and preliminary design features for plant operations preferences and requirements.

Task 150 – Preliminary Permitting

Review and establish permitting needs for the project and funding sources.

Task 160 – Engineer’s Opinion of Probable Construction Cost (EOPCC)

Prepare a Class 5 Construction Cost Estimate in accordance with the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice 18R-97.

Phase 200 – Detailed Design

Task 200 - Project Management

The project management task for preliminary design includes the following items:

- Project coordination between design team and stakeholders
- Monthly progress meetings
- Site visits for field verification and coordination of design elements
- Design schedule
- Invoicing and monthly progress reviews

Task 210 – 50% Plant A and B Improvements Design

- Complete 50% Drawings for City review.
- Complete list of anticipated specifications and develop preliminary specifications for all major equipment.
- Prepare a Class 3 Construction Cost Estimate in accordance with the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice 18R-97.

Task 220 –50% Gravity Sewer & Forcemain Design

- Complete 50% Drawings for City review.
- Prepare a Class 3 Construction Cost Estimate in accordance with the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice 18R-97.

Task 230 – 100% Plant A and B Improvements Design

- Complete 100% Drawings for City review.
- Prepare a Class 1 Construction Cost Estimate in accordance with the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice 18R-97.
- Assist City of North Royalton with OWDA loan application.

- Assist City of North Royalton with Notice of Commencement for Advertising.
- Complete all specifications.
- Complete PTI for submittal to OEPA.

Task 240 – 100% Gravity Sewer & Forcemain Design

- Complete 100% Drawings for City review.
- Prepare a Class 1 Construction Cost Estimate in accordance with the Association for the Advancement of Cost Engineering (ACE) International Recommended Practice 18R-97.
- Complete all specifications.
- Complete PTI for submittal to OEPA.

Task 250 –Design Workshops

Prepare for and participate in Constructability Review workshop to evaluate construction procedures and preliminary sequencing of work.

Task 260 – Permitting

Review and establish permitting needs for the project and funding sources.

- Permit-to-Install (PTI) Permit Application
- Notice of Intent (NOI) General Stormwater Permit
- WPCLF Funding Support

Phase 300 - Bidding

Task 310 - Bid Documents

Compile plans and specification for printing and delivery to interested parties (up to 25 copies, 11"x17" drawings for each contract). Prepare legal notice and participate in prebid meeting for each contract.

Task 320 - Addendums

Take contractors questions, develop responses to questions and assemble addendums to answer questions. Assume two (2) addenda for each contract. Assume a 30-day bid period.

Task 330 - Bid Analysis

Evaluate three lowest bids received for each contract for conformance with bid documents. Check references and make a recommendation of award to the City.

Phase 400 – Construction Administration

Task 410 - Submittals

Maintain project files of approved submittals for each contract.

Review detailed construction shop drawings and other information submitted by the Contractors for compliance with the design concept and the requirements of the Contract Documents. Such data shall be recommended for approval, returned for revision, rejected,

or noted as information only. Assume up to 100 shop drawings (70 for plant improvement contract and 30 for pipeline project), a total of ten (10) re-submittals have been assumed.

Task 420 - Contractor questions / RFIs

Prepare responses to Requests for Information (RFIs). Assume up to 20 RFIs for each contract.

Consider and evaluate the Contractors' suggestions for modifications to the respective contract documents and report recommendations to the Construction Supervisor. Assume up to 5 suggestions for modifications for each contract.

Task 430 - Change Orders

Assist in the preparation of and administration of work authorizations and claims. Assume up to five (5) work authorizations and one (1) claim for each contract.

Task 440 - RE Services

Provide for one (1) year Resident Engineering services, 50% full time equivalent for each contract for a total of 2,080 hours.

Task 450 - Start-up Services

Oversee the Contractor's startup for the pump station and forcemain/gravity sewer.

Task 460 - O&M's and Record Drawings

Review Contractor's as-built red line drawings for accuracy and completeness. Compile record drawings from reviewed set in hard copy/electronic format from contractor.

Review Contractors'/Vendors' O&M training outlines and materials and recommend changes as needed.

Task 470 – Meetings

Participate in a Pre-Construction Meeting.

Participate in up to twelve (12) onsite meetings for each contract (24 total) with the Contractor as part of the RE Services.

Deliverables:

1. Basis of Design Report Report (BODR)
2. Drawings (see Attached Table)
3. Specifications
4. PTI Permit Application

Proposed Fee

The proposed fee for the work described above is presented in Table 1.