

**REQUEST FOR PROPOSAL
CITY OF DULUTH, MN**

October 18, 2018

Lift Station No. 15 Relocation

Project No.: 1803

RFP Number: 18-19AA

**Proposals Due: November 2, 2018
2:00 PM, Local Time**

PROJECT OVERVIEW

The City of Duluth is interested in retaining a consultant to provide design services for the relocation of City sanitary sewer Lift Station No. 15. The lift station is being relocated to facilitate the construction of the new Twin Ports Interchange for Interstate 35 and Highway 53. Disadvantage Business Enterprises are encouraged to submit.

BACKGROUND

Lift Station No. 15 is located near the intersection of 22nd Ave W and W Michigan St and is located in the City's Sanitary Basin #18. This basin area includes Rice's Point, the Goat Hill neighborhood, and part of the Lincoln Park neighborhood. The existing station consists of a wet well and dry well configuration. A 48-inch influent line from the collection vault drains in the wet well and passes through a bar screen that is typically cleaned on a daily basis. The capacity of the existing station is 2400 gpm.

The new station will be a duplex submersible pump configuration with a cast in place concrete wet well. The new station will also include a grinder installed in an influent channel ahead of the pump station, valve vault, building for controls, backup generator, control building. All facilities will be designed to the City of Duluth's normal lift station standards.

A facility report describing the proposed relocation and a cost estimate are attached.

The project will be funded through Minnesota Department of Transportation. Buy American clauses will apply.

The City of Duluth will provide the following:

- All available street and utility drawings from previous projects.
- Assistance in obtaining other related information in City files pertaining to the project if needed.

GENERAL PROJECT SCOPE

Consulting Engineering Services are expected to include all work necessary to provide final design including plans and specifications and bidding services. Construction management and inspection are NOT included in this proposal.

All work shall be performed in accordance with the most recent version of the City Standard Specifications and Engineering Guidelines (available on the City of Duluth website.)

SCOPE OF SERVICES

1. Initial Site Visit and Consultations

- a. The Consultant shall meet with City of Duluth representatives to review project scope and complexity, design criteria, related requirements, view existing conditions, gather data from the City engineering files and previously prepared reports. Additional consultations shall, where necessary, clarify the technical requirements and objectives

of the contract and may be in the form of letters, emails and/or telephone conversations.

- b. The Consultant shall provide documentation of meetings and data provided.
- c. The Consultant shall ascertain the applicability of information provided, review data for completeness, and notify the City of any additional data required. It shall be the responsibility of the Consultant to determine, by site inspection procedures, the reliability of all the existing topographic survey. If information is found to be missing, the City will determine if this information should be collected as additional work.

2. Plans and Specifications

- a. The consultant shall prepare construction drawings as necessary to provide for the complete reconstruction of the lift station on a new site including replacement existing force main and new influent sewers to connect to the existing sewers. These drawings shall include all details, plans and specifications necessary for all work as required by appropriate approval agencies.
- b. The specification preparation shall also include appropriate sections for bidding, bonding, agreements, general and special provisions, and other appropriate contract provisions. These sections shall be developed in accordance with the City standards, which shall be made available to the consultant.
- c. The drawings shall include all necessary site maps, plans, elevations, sections, details, and notes as needed or necessary to adequately show, explain or describe all features of the project.
- d. City of Duluth fall protection standards and details shall be incorporated into the plan set.
- e. The contract drawing sequence shall follow the standard City of Duluth format.

3. Cost Estimate

Following the completion of the plans and specifications a quantity takeoff and a detailed itemized construction cost estimate for each individual phase of the project shall be provided.

4. Project Bidding

Upon completion of plans and specifications, the consultant shall provide all documents and services to provide for bidding and award for construction. The consultant shall answer any questions brought up during bidding and attend a pre-bid conference. This design phase shall be considered complete upon award of the project following bidding.

5. Construction Administration

Construction Administration services are NOT a part of this proposal.

6. Construction Inspection

Construction Inspection services are NOT a part of this proposal.

PROJECT COMPLETION DATES

October 18, 2018	RFP Issued
November 2, 2018	Proposals Due
November 5, 2018	Selection of Consultant
November 13, 2018	Council Approval to Award Contract
January 18, 2019	60 % Plans submitted for City review
February 8, 2019	Plans and Specifications complete
February 14, 2018	Advertise for bids
March 14, 2018	Receive bids

QUALIFICATION PROPOSAL CONTENTS

The proposal shall be submitted in the following format broken into the 7 sections identified below. Proposals not following the specified format will not be reviewed. No additional sections or appendices are allowed. The proposal shall be limited to 20 pages plus a cover letter (The page limit includes all resumes. Proposals that exceed this limit will not be reviewed. Dividers and covers are not included in the page limitation). The proposal format shall be as follows:

1. Goals and Objectives

A restatement of the goals and objectives and the project tasks to demonstrate the responder's view and understanding of the project.

2. Experience

An outline of the responder's background and experience with similar projects. Project descriptions shall include a list of key staff and their role. Within the experience section, the consultant should demonstrate and provide proof of competency in the following areas:

- Pump station design
- Installation of HDPE force mains (or water mains)
- Familiarity with Duluth Pump Station standards.

3. Personnel

Identify personnel to conduct the project, detail their training, and work experience. Identify how personnel proposed for this project were involved with the projects listed as experience. Identify a professional engineer registered in the State of Minnesota who will oversee the overall project. No change in personnel assigned to the project will be permitted without approval of the City.

4. Knowledge of Duluth Requirements

Include a description of the firm's knowledge of City of Duluth street and utility standards.

5. Work Plan

Include a detailed work plan identifying the work tasks to be accomplished and the budget hours to be expended on each task and subtask for both roadway and utility design. The work plan shall be in spreadsheet format and shall list each task and the number of hours for each staff person on that task. The work plan shall also identify the deliverables at key milestones in the project as well as any other services to be provided by the City. The City staff intends to be actively involved with the project and three (3) status meetings held at City Hall are to be contained in the work plan in addition to any data collection or input/review meetings. Do NOT include any costs in the work plan.

6. Work Schedule

An anticipated work schedule shall also be provided. The work schedule shall identify all key milestone dates.

7. References

A listing of names, addresses and telephone numbers of at least three (3) references for whom the respondent has performed similar pump station and force main design.

COST PROPOSAL CONTENTS

Provide, in separate, sealed envelope, one copy of the cost proposal, clearly marked on the outside “Cost Proposal” along with the responder’s official business name and address. Terms of the proposal as stated must be valid for the project length of time.

The consultant must include a not to exceed total project cost, as well as subtotals for design services and bidding and any sub consultant fees. The cost proposal shall include all of the following:

- A cover/transmittal letter
- A breakdown of the hours by task for each employee. This shall be in the same format as the work plan in the Qualifications proposal with the addition of costs.
- Hourly rates for each specific employee proposed. (not general rates by category)
- Identification of anticipated direct expenses and rates for miscellaneous charges such as mileage and copies.
- Identification of any assumption made while developing this cost proposal.
- Identification of any cost information related to additional services or tasks. Include this in the cost proposal, but identify it as additional costs and do not make it part of the total project cost.
- The Consultant must have the cost proposal/cover letter/transmittal signed in ink by an authorized member of the firm.
- The consultant must not include any cost information within the body of the RFP qualification proposal response.

SELECTION

The proposals will be reviewed by City Staff. The intent of the selection process is to review proposals and make an award based upon qualifications as described herein. A 100-point scale will be used to create the final evaluation recommendations. The factors and weighting on which proposals will be judged are:

	Item	Percent
1	Goals and Objectives	10%
2	Experience	30%
3	Personnel	10%
4	Knowledge of Duluth requirements	5%
5	Work Plan	25%
6	Work Schedule	10%
7	Inclusion of DBE team member	5%
8	Completeness of the proposal	5%

Proposals will be evaluated based upon qualifications. The review committee will not open the cost proposal until after the qualification points have been awarded. The cost proposal will only be opened for the top ranked firm. The City will then negotiate a price with the top ranked firm. If negotiations are not successful, the City will begin negotiations with the second ranked firm.

SUBMITTAL DATE

Submit original and three (3) copies in an envelope marked, RFP 18-19AA, Lift Station 15 Relocation, by 2:00 PM CDT, November 2, 2018 to:

Amanda Ashbach, Purchasing Agent
City Purchasing
Room 120 City Hall
Duluth, MN 55802

CONTACT

All questions concerning the project shall be directed to:

Eric Shaffer, Chief Engineer
City of Duluth - Engineering Division
411 W. 1st Street, Room 211 City Hall
Duluth, Minnesota 55802-1191
(218) 730-5072, FAX (218) 730-5907

LIMITATIONS

This Request for Proposal does not commit the City of Duluth to award a contract or pay costs incurred in the preparation of the proposal, or to procure a contract for services or supplies.

The Proposal shall not in any way include any restrictions on the City of Duluth. The Consultant shall NOT provide proposed contract language.

The City of Duluth specifically reserves the right to accept or reject any or all proposals, to negotiate with any qualified source, to cancel in part or in its entirety the Request for Proposal, to waive any requirements, to investigate the qualifications of any proposal, to obtain new proposals, or proceed to have the service provided in any way as necessary to serve the best interests of the City of Duluth.

The selected consultant must sign the City of Duluth standard Professional Engineering Services Agreement. The template is available for viewing at <http://www.duluthmn.gov/purchasing/forms/>. Any questions concerning this agreement should be asked PRIOR to proposal submittal. These questions should be directed to Eric Shaffer in the City Engineering Office.

All materials submitted in response to this RFP will become property of the City and will become public record after the evaluation process is completed and an award decision made.

Prior to entering into an agreement with the City, the Consultant shall furnish proof that it has all legal requirements for transacting business in the State of Minnesota.

FACILITY REPORT

For

City of Duluth

Lift Station No. 15 Relocation



City Project # 1596

October 1, 2018

Introduction

This facility report is being prepared to identify the scope of the upcoming Lift Station No. 15 relocation project. The City of Duluth's existing lift station at 2116 West Michigan Street is being relocated as an impact to MnDOT's Twin Ports Interchange Project. This report will discuss the evaluation process of a new site location, functional requirements, and design standards of the proposed facility.

Existing Conditions

Location

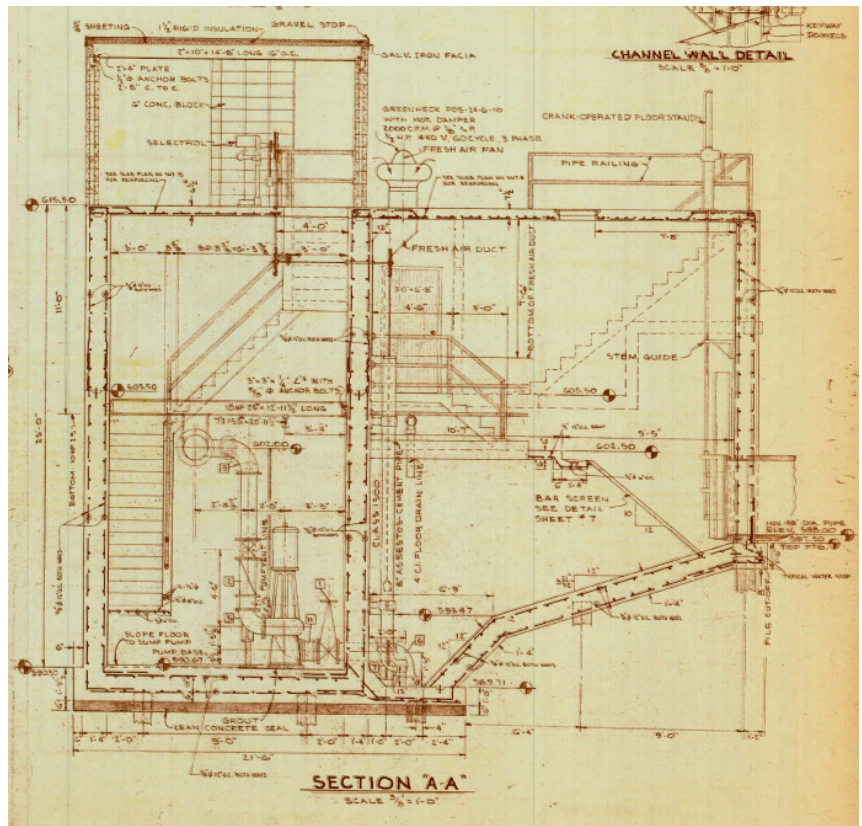
Lift Station No. 15 is located near the intersection of 22nd Ave W and W Michigan St and is located in the City's Sanitary Basin #18. This basin area includes Rice's Point, the Goat Hill neighborhood, and part of the Lincoln Park neighborhood. The area includes a mixture of industrial, commercial, and residential areas. The original collection system in this area was combined storm and sanitary and included a large diversion chamber for Coffee Creek. They have since been separated, however, some of the large diameter pipe still remains in place.

Influent Sewer Information

Two influent sewer lines come into the station at a collection vault controlled by a sluice gate. The sewer line from the west is a 24" RCP and the line from the east includes a short run of 48" RCP until the first manhole and 48" circular brick immediately thereafter.

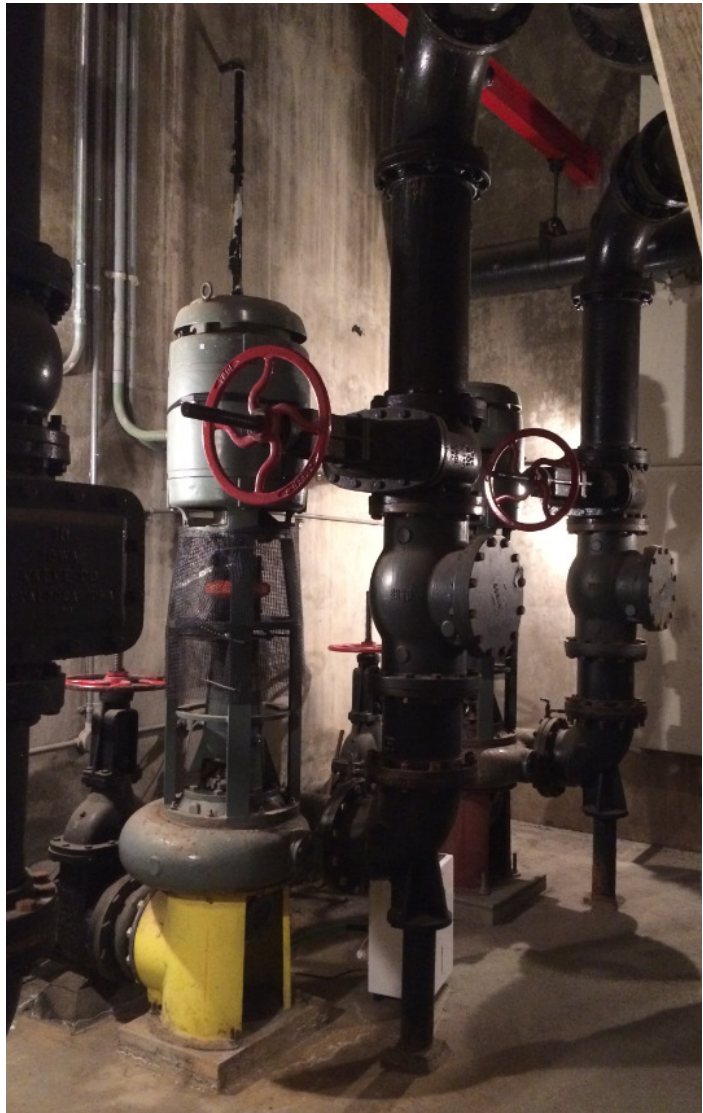
Wet Well/Dry Well Configuration

The existing station consists of a wet well and dry well configuration. A 48-inch influent line from the collection vault drains in the wet well and passes through a bar screen that is typically cleaned on a daily basis. The interior dimensions of the wet well are approximately 20ft by 21ft and is accessed from above by a stairwell. The adjacent dry well is approximately 13ft by 21ft and contains the three centrifugal pumps. Access is gained via a stairwell from the above grade control room located directly above the dry well.



Centrifugal Pumps

Lift Station No. 15 is currently conveying wastewater by three vertical centrifugal Chicago Pumps. These 40 horse power pumps have been in service since approximately 1975, and are driven by three phase 480 volt electric motors. Individually each pump has a capacity of 2400 GPM. In high flow situations the station functions in duplex operation, with the third pump always intended to be available as a backup. In duplex operation this lift station is estimated to have a pumping capacity of 4,500 GPM. Historically this pump station operated in duplex mode just a few times each calendar year for several hours. Typical run times for each pump average approximately 1/2 hour per day. The pumps are powered through across the line motor starter and currently controlled by a submersible level transducer with back up float switches.



Force Main

The station pumps into a 16" cast iron force main heading west within the Michigan Street right of way. The force main travels approximately 680 feet and has a positive elevation change of 22 feet. The force main discharges into manhole SW0310039, part of the Western Lake Superior Sanitary Districts East Interceptor, which gravity feeds down to WLSSD's wastewater treatment plant. The force main was installed when the existing lift station was built in the late 1960s.

Operations, Controls, & S.C.A.D.A.

When the station was originally constructed the pumps were controlled with a lead/lag float system. Primitive telemetric alarms systems notified the operators of a pump failure or high wet well levels. In approximately 2010 the City of Duluth upgraded all the sanitary lift station sites to Systems Control and Data Acquisition system (SCADA).

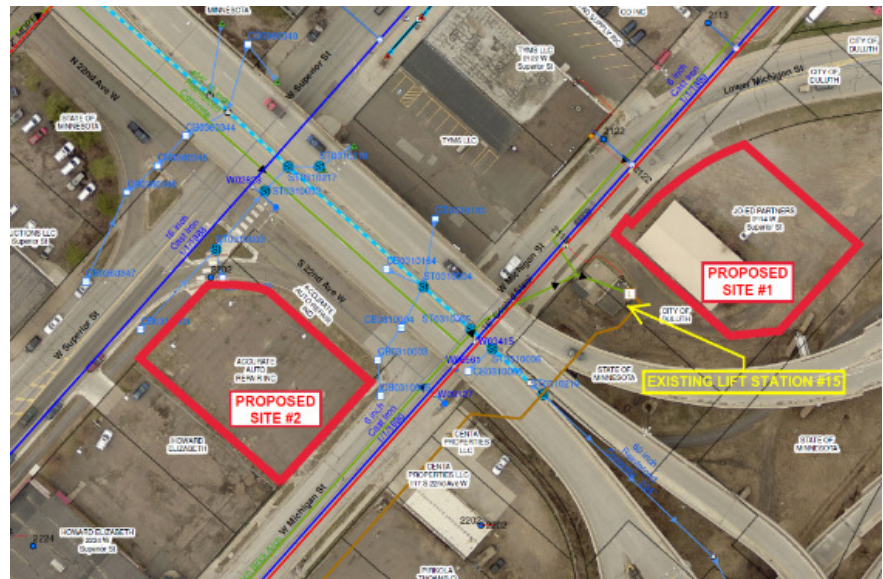
The pumps in the lift station are controlled by pressure transducers which sense the sewage depth in the wet well. A handful of float switches are still installed as a backup level sensing device. The depth signals are processed by a programmable logic controller (PLC) which then performs several functions, namely control the motor starters for the pumps. The PLC decides how to alternate pumps and determines the operating duration. The City of Duluth has developed an elaborate system of control. Operators can remotely access the controls on a network from a computer, smart device, or through an HMI on the control panel. The operator can then control equipment by hand or modify operational set points from any location. The PLC also records trends from the lift station such as pump run times, flow rates, and wet well levels just to name a few.

Alternate Site Selection/Site Development

The proposed location of the relocated Lift Station is on Michigan Street on the parcel just east of the current facility. There is an existing structure on this parcel that would need to be demolished and the new lift station would be placed approximately in this location.

Site #1 was chosen as the primary location due to its close proximity to the existing sanitary sewer lines. This location will require relatively minor modifications to the influent lines leading to lower costs for the new lift station. This site is also on the same side of Michigan Street as the existing lift station allowing the replacement force main to remain close to its current location which will minimize construction and design costs.

Site #2 was also studied but is less desirable for several reasons. The existing grade at this location is roughly 4ft higher than the grade at the existing station and would be further away from the influent sewer lines causing the depth of the lift station structure needing to be deeper than what would be required at site #1. Site #2 would also introduce additional utility and road crossings which would contribute to an increase in design and construction costs.



Pump Station Configurations

The City of Duluth operates both wet well/dry well and submersible pump stations within the collection system. The recent trend has been to install submersible lift stations because they are simpler to maintain and less costly to construct. The foot print of the submersible lift station will be approximately half the size, reducing costs of the structure and deep foundation supports. Submersible lift stations are also safer by limiting confined space and below grade entries because the pumps and other equipment are designed to be easily removed from the surface.

Given all the considerations the City has decided to construct submersible pump station with a separate valve vault structure containing the isolation and check valves for each individual pump. This valve vault may also contain a flow meter, pressure monitoring equipment, drain valves, bypass ports, and a maintenance access points to the force main. At this site the control building may or may not be located on top of the valve vault, these details will be determined during the design phase.

The existing station has a manual bar screen to remove large solids prior to pumping. The City of Duluth no longer uses manual bar screens and has instead installed grinders where required prior to the pump station. The new station will need to include a grinder.

Soil Condition and Geotechnical Engineering Assumptions

At the time of this report, no soil borings or additional geotechnical data had been gathered. With the close proximity of Site #1 to the existing lift station it was assumed the soil characteristics would be similar to the borings that are shown in the existing lift station plans. The boring log shows various layers with loamy sand, peat, silty clay loam, fine sand, and some organic material. The existing lift station was constructed on a total of 21, untreated timber piles and it was assumed that a similar number of steel H-piles, to similar depths, will need to be driven to similar minimum bearing values for the relocated lift station.

Influent Sewer Necessary Modifications

The current lift station has two influent sewer lines coming into the station. It is assumed that one of the existing man hole structures in the middle of Michigan street could be removed and a new manhole structure over the existing 48" sewer at a location perpendicular from the new lift station would need to be installed. The 24" RCP sewer from the west would need to be rerouted to the new manhole and a single line would come into the new lift station.

Hydraulic Design

The design conditions for the new lift station will be primarily driven based upon the existing Lift Station No. 15 ultimate capacity and historical flow events. A design flow rate of 2,500 GPM is currently being targeted as the peak flow rate. The pumps will be designed to be non-overloading, which means they will be supplied with large enough motor horsepower to pump the range of the curve for the selected impeller. The existing pumps have 40 HP motors; it is currently assumed the new pumps will be the same.

Duplex Submersible Pumps

Most of the City's lift stations are currently submersible duplex stations. This is very common for municipal lift stations, as a minimum of two pumps are required so there is a redundant pump for the largest capacity pump at the facility. In recent decades the City has reduced impacts of inflow and infiltration in this collection basin, as a result the sanitary flows are comparatively consistent and stable, even during large rain events since the currently lift station was built. Since it appears this lift station no longer needs to pump such a large range of flows, one pump can be sized appropriately for the peak flow conditions. The SCADA system has recorded trends at this site for almost a decade, only a few large events caused both pumps to run, and for very short durations. The City has analyzed that a single submersible pump with better efficiency and performance characteristics will replace the need for two pumps to meet the peak flow demands. This allows the City not to have a third pump, which saves on wet well size, mechanical and electrical equipment. Due to the large size of the pumps and the relatively low flows during dry periods, the electrical design will include variable frequency drives.

Submersible pumps in Duluth lift stations are completely extractable from above the structure without a manned entry into the confined space wet well. The pumps will be provided with a stainless steel guide rail system that allows the pump to be lifted on and off their permanently set bases. The weight of the pump itself keeps the pump stationary on its base. The impellers for submersible pumps come in many shapes and sizes, in the application of wastewater the biggest factor is the ability for that pump to pass 3" diameter solids through the pump without clogging. Submersible pumps are required to have explosion proof motors for applications where the pump could potentially operate above the water in a gaseous environment.

Wet Well Design

The new wet well to house the submersible pumps is planned to be a cast in place rectangular structure. The influent pipe will enter into a short cast in place channel that will direct normal flows through a channel monster, which is the City's preferred brand of inline sewer grinders. This grinder will chew up debris like cloth rags, ropes, and even large chunks of wood that enter the station. The chewed up particles are small enough that the likelihood of ever plugging a pump is very rare. If the grinder happens to stop functioning the effluent can spill over the channel and still enter into the wet well.

For wet well cleaning purposes, we have an isolation valve or sluice gate on the influent sewer, possibly in the first upstream manhole structure. The bottom of the wet well will contain steep concrete fillets to direct any settling solids close to the pump intakes to minimize sludge build up.

Valve Vault Configuration

The valve vault will contain isolation gate valves and check valves on each pump discharge before it enters into the collection manifold. The City is evaluating the need to install a flow meter at this location which would impact the size of the valve vault due to the required straight lengths of pipe upstream and downstream of the meter placement.

The distribution manifold will have a gate valve at the exiting location from the vault to isolate the force main from the mechanical piping. At the beginning of the manifold a removable blind flange will be provided so cleaning pigs can be inserted into the pipe. The manifold includes a drain pipe to facilitate

draining the force main for maintenance. Valves in the vault will be provided with valve operator extensions so valves can easily be operated from the top of the valve vault structure.

New Force Main

The existing force main is 16" cast iron and was installed when the existing lift station was built in late 1960s. The main runs parallel to Michigan Street heading to the west approximately 680 feet before discharging into a manhole below Michigan Street in the area of 23rd Ave West. Considering the age of this force main, it is considered to be beyond its serviceable life span and would need to be replaced at the time the new lift station is constructed. The new force main will be constructed of HDPE pipe materials and size would be determined during the final hydraulic design phase.

The proposed location of the new lift station would not require drastic changes to the routing of the force main. The overall length would increase by a couple hundred feet and the route would be optimized to avoid any utility conflicts or proposed bridge footings for the new elevated structure as part of the Interchange Project. Currently it appears that the best new force main alignment will be under the driving lanes of Michigan Street.

Controls Building

The City will construct a new building on the lift station site with the primary function of housing the electrical components, SCADA controls, and switch gear. Housing all this equipment inside a building provides security from vandals and allows for easier maintenance. Like the existing building, space will be provided for a workbench, spare parts storage, and a small library of operation manuals. The City is planning the new lift station controls building to be approximately 300 SF in size.



The new Lift Station will be equipped with a SCADA system equivalent to the existing system. A new control panel will be constructed such that both the new station and the old station can be operational consecutively during the transitional period. The new control panel will also be mounted inside a small building along with the motor starters, variable frequency drives, transfer switch, and all other significant electrical equipment. The equipment enclosures will be less costly when they are not required to be weather rated.

During the final design the City will determine if the building will be partially incorporated with the below grade valve vault. If the building sits over the valve vault, it will impact the ventilation requirements because wastewater containing the potential to discharge dangerous gasses will be passing through the building. In this case a ventilation system will be provide to exchange the air several times each hour.

Backup Power Generation

Due to recent negotiations with the State and EPA, the City now installs backup generators at all major pump stations when they are upgrade to provide pumping during utility power outages caused by storm events. The permanently located backup power generation relieves a burden from the City's wastewater operators to mobilize a large trailer mounted generator during storm events, which often have a short response time before sewer back up occur. The permanent generator will be fully automated so wastewater operators can attend to other needs throughout the City. This site in particular is known for frequent power outages so a generator will be included.

The City is not considering the option of providing a redundant power service from a second distribution grid. It is assumed the additional costs to install that infrastructure and switch gear at the site, plus the ongoing facility charges are not in the best interest of the City. The City has a preference to install a natural gas standby generators, because not only does the City own the natural gas utility which provides affordable, reliable energy, but maintenance costs are also expected to be less than comparative diesel generators.



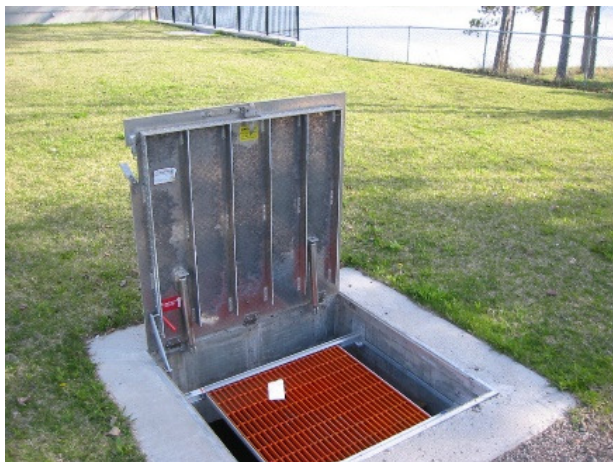
The natural gas generator will be packaged with its own outdoor rated enclosure. The generator will be equipped with an automatic transfer switch typically mounted at an exterior location just downstream of the utility power meter. The City in the past has purchased a generator capable of operating one pump and all the site, building, and miscellaneous control system loads. The required starting inrush current for the typical pump station is usually the leading factor when selecting the size of the generator. At the proposed Lift Station 15 site it is estimated that generator capacity will be 80 kW.

Safety Equipment

Each of the City of Duluth's Wastewater Lift Stations is fitted with standard safety equipment to provide fall protection and assist employees during confined space entries. All below grade vaults and wet wells are equipped with a davit arm stanchion base, compatible with the City's SALA confined space entry equipment. These stainless steel bases are cast into the concrete structures.



The aluminum access hatches at all locations will be provided with an integral 300 PSF internal safety grating. Surrounding most access hatches the City also installs stainless steel sleeves cast into the concrete structure covers. These sleeves are used to insert standard width aluminum railings to protect workers from an open fall hazard. The City has several sets of aluminum railing that they transport from site to site as needed when entries are performed. The stainless steel railing sockets are each supplied with an aluminum cap consisting of a compressible rubber seal.



Construction Cost Estimate

ENGINEER'S ESTIMATE OF CONSTRUCTION COSTS

LIFT STATION #15 RELOCATION

CITY PROJECT NO. 1596

MNDOT Spec.	Description	QTY	Unit	Unit Price	Total	
Structural						
	Building - Underground Structure	300	SF	\$425	\$127,500	
	Building - Above ground Structure	300	SF	\$400	\$120,000	
	Misc. Metals (cranes, railings, gates, hatches)	1	LS	\$30,000	\$30,000	
	Hardware (doors)	1	LS	\$30,000	\$30,000	
2452603	STEEL H-PILING 12"	1000	LF	\$50	\$50,000	
2452520	STEEL H-TEST PILE 55 FT LONG 12"	2	EACH	\$6,500	\$13,000	
Mechanical						
	Guages	1	LS	\$5,000	\$5,000	
	Grinder	1	EACH	\$83,000	\$83,000	
	10" Piping	26	LF	\$250	\$6,500	
	16" Piping	28	LF	\$480	\$13,440	
	Pumps w/base elbow	2	EACH	\$40,000	\$80,000	
	Check valve	2	EACH	\$6,800	\$13,600	
	Gate valve	2	EACH	\$4,000	\$8,000	
	45° fitting	2	EACH	\$600	\$1,200	
	Wye	2	EACH	\$2,000	\$4,000	
	LR Elbow	2	EACH	\$2,300	\$4,600	
	Magmeter Flowmeter	1	EACH	\$15,000	\$15,000	
	Reducer	1	EACH	\$2,200	\$2,200	
	Wye with blind flange (pig launch)	1	EACH	\$2,600	\$2,600	
	2" Ball valve	1	EACH	\$750	\$750	
	Vent Pipe	1	LS	\$1,500	\$1,500	
	Sump pump w/piping	1	LS	\$3,000	\$3,000	
Electrical						
	Controls	1	LS	\$85,000	\$85,000	
	Power Service	1	LS	\$25,000	\$25,000	
	Backup Generator	1	LS	\$60,000	\$60,000	
	Main Circuitry	1	LS	\$5,000	\$5,000	
	Sensors	1	LS	\$3,000	\$3,000	
Site Work						
	2021501	MOBILIZATION	1	LS	\$150,000	\$150,000
	2103501	BUILDING REMOVAL	1	LS	\$65,000	\$65,000
	2103511	BASEMENT EXCAVATION FILL	1000	CY	\$20	\$20,000
	2104505	REMOVE BITUMINOUS PAVEMENT	1500	SY	\$3	\$4,500
	2104513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	600	LF	\$3.50	\$2,100
	2105604	GEOTEXTILE FABRIC TYPE V (non-woven)	711	SY	\$1.50	\$1,067
	2106501	EXCAVATION - COMMON	2100	CY	\$6	\$12,600
	2106522	SELECT GRANULAR EMBANKMENT MOD 7% (CV)	260	CY	\$12	\$3,120
	2118607	AGGREGATE SURFACING (CV) CLASS 5	270	CY	\$35	\$9,450
	2360501	TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,B)	170	TON	\$60	\$10,200
	2360501	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	150	TON	\$65	\$9,750
	2401515	SIDEWALK CONCRETE (3S52)	2736	SF	\$15	\$41,040
	2401607	STRUCTURAL CONCRETE	1	LS	\$3,500	\$3,500
	2545501	LIGHTING SYSTEM	1	LS	\$5,000	\$5,000
	2557501	WIRE FENCE DESIGN 60V-9322	250	LF	\$22	\$5,500
	2557516	PEDESTRIAN GATE	2	EACH	\$2,000	\$4,000
	2557517	VEHICULAR GATE-DOUBLE	1	EACH	\$2,200	\$2,200
	2563601	TRAFFIC CONTROL	1	LS	\$5,000	\$5,000
	2571501	CONIFEROUS TREE 8' HT B B	3	TREE	\$700	\$2,100
	2571502	DECIDUOUS TREE 2" CAL B&B	3	TREE	\$600	\$1,800
	2573601	TEMPORARY EROSION CONTROL	1	LS	\$1,500	\$1,500
	2575605	TURF ESTABLISHMENT	1	LS	\$3,000	\$3,000
Utility Piping						
	2104501	REMOVE SEWER PIPE (FORCE MAIN)	680	LF	\$20	\$13,600
	2104501	REMOVE SEWER PIPE (SANITARY)	280	LF	\$15	\$4,200
	2104503	REMOVE CONCRETE SIDEWALK	2736	SF	\$2	\$4,104
	2104509	REMOVE MANHOLE	2	EACH	\$1,000	\$2,000
	2105601	DEWATERING	1	LS	\$5,000	\$5,000
	2106501	EXCAVATION - COMMON	4600	CY	\$6	\$27,600
	2503541	24" RC PIPE SEWER DESIGN 3006 CLASS III	150	LF	\$75	\$11,250
	2503541	48" RC PIPE SEWER DESIGN 3006 CLASS III	50	LF	\$140	\$7,000
	2503602	CONNECT TO EXISTING MANHOLES (SAN)	1	EACH	\$2,000	\$2,000
	2503602	CONNECT TO EXISTING SANITARY SEWER	1	EACH	\$2,000	\$2,000
	2503602	SEWER BYPASS PUMPING	1	LS	\$30,000	\$30,000
	2503603	FORCE MAIN - 10" HDPE	800	LF	\$150	\$120,000
	2506502	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL	2	EACH	\$4,500	\$9,000
		ENGINEER'S ESTIMATE TOTAL=				\$1,393,071
		DESIGN & CONSTRUCTION ADMIN & CHANGE ORDERS = 20%				\$278,614
		SUBTOTAL=				\$1,671,685
		CONTINGENCY= 10%				\$167,168
		RECOMMENDED BUDGET=				\$1,838,853

Conclusion

The City understands that this project is being required by the Twin Ports Interchange Reconstruction project and that costs of the project will be reimbursed by federal and state sources. The City intends to construct this project in 2019 as a City project. It is our plan to hire a consultant as soon as possible to design the new lift station as described in this document at location Proposed Site #1.