



City of Grand Island

Tuesday, December 18, 2018

Council Session

Item G-2

**#2018-375 - Approving Certificate of Final Completion for
Emergency Sanitary Sewer Repair on the North Interceptor-
Seedling Mile Road Area**

Staff Contact: John Collins, P.E. - Public Works Director

Council Agenda Memo

From: Keith Kurz PE, Assistant Public Works Director

Meeting: December 18, 2018

Subject: Approving Certificate of Final Completion for
Emergency Sanitary Sewer Repair on the North
Interceptor- Seedling Mile Road Area

Presenter(s): John Collins PE, Public Works Director

Background

Emergency sanitary sewer repairs were needed for the North Interceptor in the Seedling Mile Road area.

On May 16, 2018, a seriously buckled section of sanitary sewer pipe was discovered in the North Interceptor. The pipe section in question (at least 200 feet) was raised between 30 and 48 inches from its normal grade line. This section is a 54-inch sanitary sewage line that handles approximately 40% of the household and commercial wastewater in the City. Exactly what may have caused this failure is under investigation. While the problem had not yet prevented flow, it was definitely a very serious problem that the City had to address on an emergency basis.

As shown in the picture below, the north interceptor pipe floated in 2 locations. Forensic analysis eliminated most common causes, but identified several minor deficiencies that could have contributed. One of the bells was cracked, but this was possibly from excavating to repair; no defects were found in the pipe. Records indicate that the contractor and consultants met the requirements of their contract. Since this project we have increased inspection requirements utilizing staff for video and analysis. Records and testing are insufficient for determining the cause of this failure.



The hollow walls of this type of large PVC pipe makes it easy to fracture the bells during installation by inserting the tail too far into the bell. The manufacturer specifies that the tail be inserted only partially into the bell to prevent this, with the expectation that installing the next segments will push the tail further into the bell so that it is properly seated. The most likely cause of the failure is that one or more joints were not fully seated and the force of the startup caused a joint or two to rise and pull apart. Vibrations from construction, fines and organic material further facilitated the failure. This type of failure is unlikely to occur again as the City has employed experts on staff and has improved its inspections.

On June 26, 2018, via Resolution No. 2018-191, City Council approved necessary repairs be completed by Myers Construction, Inc. of Broken Bow, Nebraska in the amount of \$438,456.00.

On October 23, 2018, via Resolution No. 2018-314, City Council approved Change Order No. 1 to the original agreement in order to adjust line item quantities in the total amount of \$33,901.60, resulting in a revised amount of \$472,357.60.

Discussion

The project was completed in accordance with the terms, conditions, and stipulations of the contract, plans and specifications. Construction was completed for a total cost of \$472,357.60. Additional project costs are shown below.

Additional Project Costs:

Public Works Engineering Services	\$ 3,233.85
Olsson Associates- Engineering Services	\$ 42,250.00
Nebraska Machinery	\$ 14,192.00
Additional Costs Total= \$ 59,675.85	

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

Recommendation

City Administration recommends that the Council approve the Certificate of Final Completion for Emergency Sanitary Sewer Repair on the North Interceptor- Seedling Mile Road Area.

Sample Motion

Move to approve the resolution.

ENGINEER'S CERTIFICATE OF FINAL COMPLETION

North Interceptor- Seedling Mile Road Area
CITY OF GRAND ISLAND, NEBRASKA
December 18, 2018

TO THE MEMBERS OF THE COUNCIL
CITY OF GRAND ISLAND
GRAND ISLAND, NEBRASKA

This is to certify that North Interceptor- Seedling Mile Road Area has been fully completed by Myers Construction, Inc. of Broken Bow, Nebraska under the contract dated July 6, 2018. The work has been completed in accordance with the terms, conditions, and stipulations of said contract and complies with the contract, the plans and specifications. The work is hereby accepted for the City of Grand Island, Nebraska, by me as Public Works Director in accordance with the provisions of Section 16-650 R.R.S., 1943.

Item No.	Description	Total Quantity	Unit	Unit Price	Total Cost
Base Bid Section-					
1	Mobilization / Demobilization	1.00	LS	\$ 25,000.00	\$ 25,000.00
2	Remove Existing 54" Pipe	196.00	LF	\$ 150.00	\$ 29,400.00
3	54" Gravity Sewer Line, DR 41	196.00	LF	\$ 350.00	\$ 68,600.00
4	Sewer Connection	2.00	EA	\$ 15,000.00	\$ 30,000.00
5	Concrete Encasement	472.00	LF	\$ 130.00	\$ 61,360.00
6	Surface Restoration	1.00	LS	\$ 7,500.00	\$ 7,500.00
7	Dewatering	1.00	LS	\$115,000.00	\$115,000.00
8	Bypass Pumping	1.00	LS	\$ 80,000.00	\$ 80,000.00
9	Traffic Control	1.00	LS	\$ 6,500.00	\$ 6,500.00
10	Erosion Control	1.00	LS	\$ 4,500.00	\$ 4,500.00
11	Remove and Replace Concrete Flow Liner	253.30	LS	\$ 152.00	\$ 38,501.60
CO1-1	Additional Concrete for Concrete Encasement	1.00	SY	\$ 5,996.00	\$ 5,996.00
Total Base Bid=					\$ 472,357.60

Additional Costs:

Public Works Engineering Services	\$ 3,233.85
Olsson Associates- Engineering Services	\$ 42,250.00
Nebraska Machinery	\$ 14,192.00
Additional Costs Total= \$ 59,675.85	

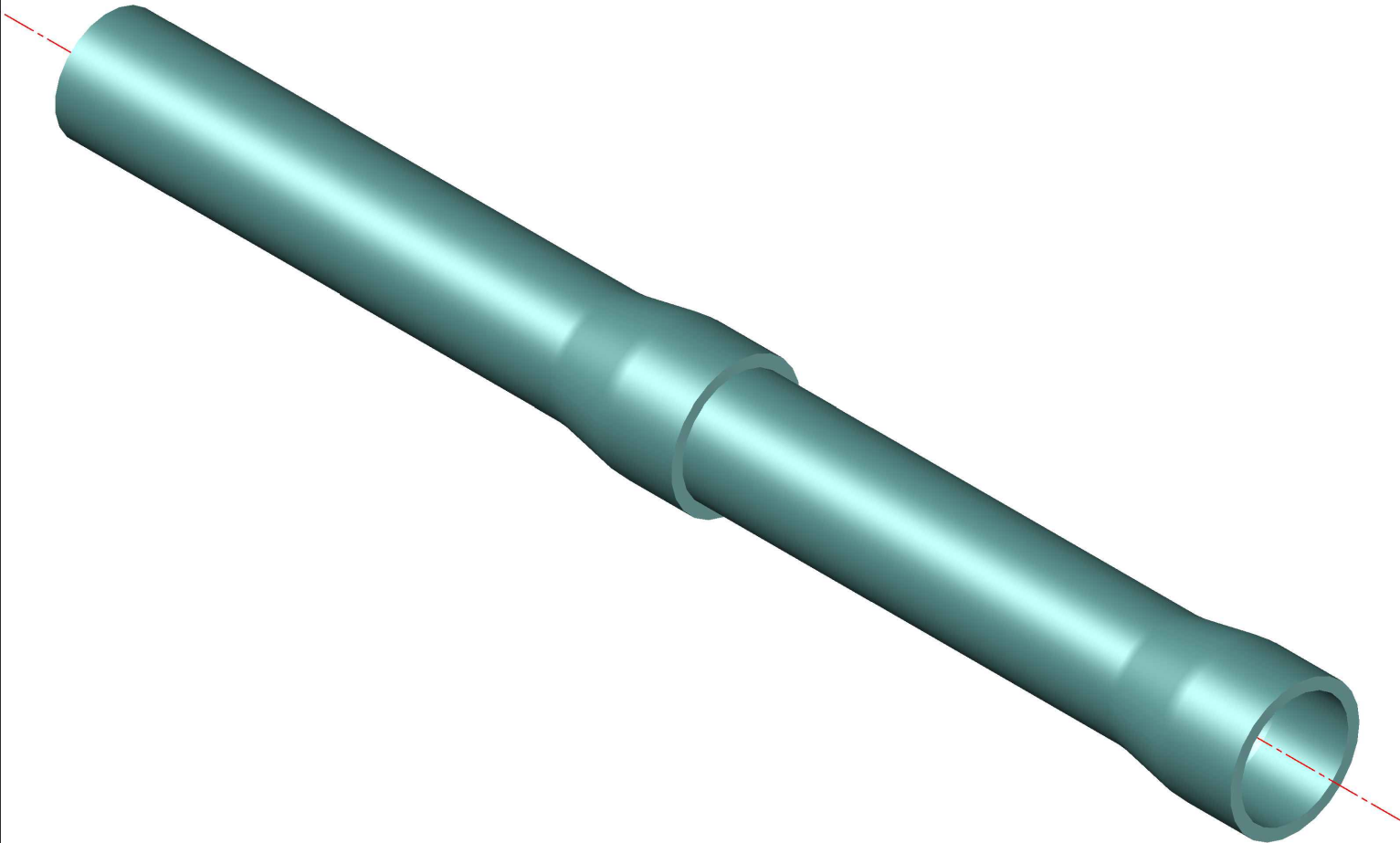
Total Project Cost=	\$532,033.45
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I hereby recommend that the Engineer's Certificate of Final Completion for North Interceptor- Seedling Mile Road Area be approved.

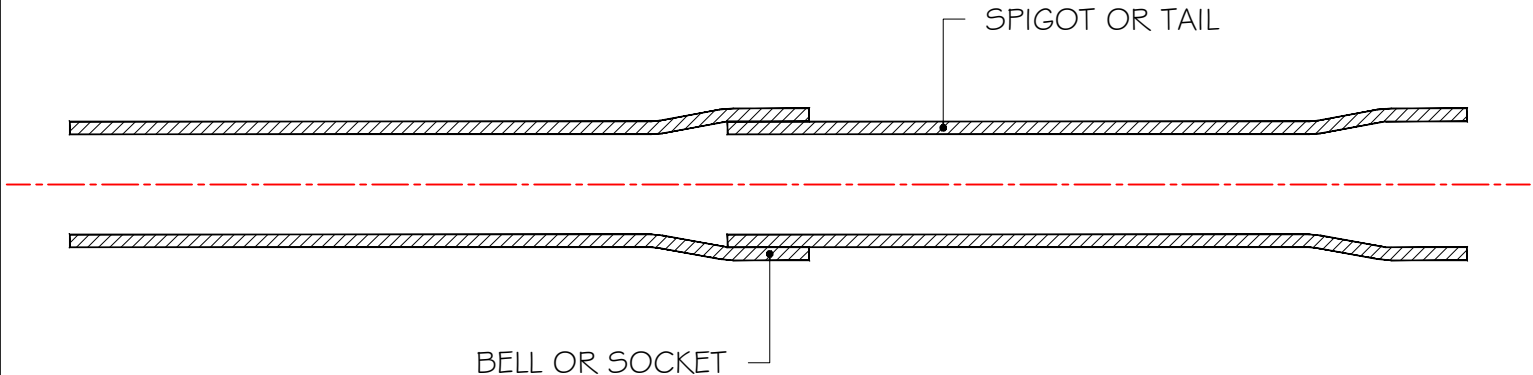
John Collins – City Engineer/Public Works Director

Roger G. Steele – Mayor

CONCEPTUAL RENDERING



LONGITUDINAL CROSS SECTION



R E S O L U T I O N 2018-375

WHEREAS, the City Engineering/Public Works Director for the City of Grand Island issued a Certificate of Final Completion for North Interceptor in the Seedling Mile Road area certifying that Myers Construction, Inc. of Broken Bow, Nebraska, under contract, has completed such project for the total construction amount of \$472,357.60; and

WHEREAS, the City Engineer/Public Works Director recommends the acceptance of the project; and

WHEREAS, additional project costs equate to \$59,675.85, as shown

ADDITIONAL COSTS

Public Works Engineering Services	\$ 3,233.85
Olsson Associates- Engineering Services	\$ 42,250.00
Nebraska Machinery	\$ 14,192.00
Additional Costs Total= \$ 59,675.85	

WHEREAS, the Mayor concurs with the recommendation of the City Engineer/Public Works Director, and

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that:

1. The Certificate of Final Completion for North Interceptor in the Seedling Mile Road area, in the amount of \$532,033.45 is hereby confirmed.

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Adopted by the City Council of the City of Grand Island, Nebraska, December 18, 2018.

Roger G. Steele, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form	□ _____
December 14, 2018	□ City Attorney