

MEMO

Department of Engineering & Capital Projects

File: DRN0219



DATE: November 2, 2022

TO: The Honorable Mayor and City Council

VIA: Maria Kachadoorian, City Manager
Kelly Broughton, Deputy City Manager

FROM: William S. Valle, Director of Engineering & Capital Projects *WSV*

SUBJECT: Final Report of Expenditures for the Emergency Storm Drain Repairs at 855 Energy Way (DRN0219)

This report will serve as the final report of expenditures and summary of work completed for the emergency City storm drain repair work at 855 Energy Way.

Background

On December 31, 2019, a sink hole was discovered at a recycled aggregate processing and storage facility operated by Pavement Recycling Systems Inc. at 855 Energy Way. Research revealed that the sinkhole was within a City of Chula Vista drainage easement and centered on an access riser on a 66 inch diameter Corrugated Metal Pipe (CMP) owned by the City of Chula Vista. As repair work on the sinkhole progressed, it was discovered that the pipe segment downstream of the sinkhole and under Energy Way was severely deteriorated and in immediate need of replacement. The repair to the sinkhole and replacement of the downstream pipe were done as emergency change orders to ongoing City CIP projects (CIP numbers DRN0211, and DRN0205 & DRN0212). The repair work to the sinkhole and replacement of the downstream pipe segment was completed in Mid-2021.

Upon completion of the above referenced repair work, the condition the pipe upstream was investigated (Pipe segment from Manhole 9152 to Manhole 9143 as shown in Figure 1 Below). Initial attempts to video the pipe by City crews were unsuccessful because the condition of the pipe had deteriorated to the point where standard sewer video equipment could not access more than a few feet into the pipe. On September 13, 2021, Red Zone Robotics was hired to video the pipe using specialty equipment. The review of the video showed the pipe condition to be in urgent need of repair. The invert of the pipe was completely eroded away, and the underlying earth was exposed.

The City Engineering & Capital Projects Department assessed the pipe and prepared a bid package based on the Centrifugally Cast Concrete Pipe (CCCP) repair method. The CCCP repair method was selected because of the unique project conditions. CCCP allows for making repairs without the expense and disruption of deep excavation (the pipe is up to 35 feet deep). When cured, the CCCP lining acts as a new fully structural stand-alone pipe that does not rely on

the old pipe for strength. Furthermore, the City has used this method successfully on recent projects.

The scope of work consisted of the installation of two replacement storm drain manholes and rehabilitation of approximately 710 feet of 66-inch diameter CMP pipe.



Figure 1 – Repaired Pipe Segment

On December 3, 2021, staff solicited bids from three qualified contractors with experience performing this type of storm drain rehabilitation work in accordance with the provisions in the City's Municipal Code Section 2.56.100, Emergency Purchases. Bids were received January 13, 2022. The bid results were:

- 1) National Plant Services, Inc.: \$863,427.20
- 2) Sancon Technologies Inc.: \$991,830.00
- 3) Spinello Infrastructure West, Inc.: \$2,145,500.00

A notification memo was sent to the City Manager on March 4, 2022, regarding the emergency storm drain repairs at 855 Energy Way.

The low bidder was found to be responsive and responsible. A construction contract was executed with National Plant Services, Inc. for \$863,427.20 on April 12, 2022. Work began on April 27, 2022, and was completed on schedule, August 10, 2022.

FISCAL IMPACT:

CIP project DRN0219, CMP Rehab Outside the Right of Way Phase III – Measure P, was established to repair storm drain failures outside the right of way. The final project expenses are summarized in the table below.

DRN0219 Final Report of Expenditures		
A.	Construction Contract (including base contract and change orders)	\$872,500.20
B.	Materials Testing (RMA)	\$8,452.00
C.	Specialty Pipe Video (Red Zone Robotics)	\$28,000.00
D.	Staff Time (Construction Management, Inspection Engineering, design, survey)	\$ 101,247.42
E.	Miscellaneous Expenses (software)	\$1,000.00
TOTAL		\$1,011,199.62

cc: Matt Little, Director of Public Works
Nicola Kavanagh, Principal Civil Engineer
Francisco Rivera, Principal Civil Engineer
Jose Gomez, Principal Civil Engineer
Beth Gentry, Senior Civil Engineer
Jonathan Salsman, Senior Civil Engineer
Robert Beamon, Administration Services Manager

Attachments:

March 4, 2022, Memo to City Manager titled “Emergency Storm Drain Repairs at 855 Energy Way”





Department of Engineering & Capital Projects

File: CIP #DRN0219

DATE: March 4, 2022

TO: Maria Kachadoorian, City Manager

VIA: Kelly Broughton, Deputy City Manager 

FROM: William Valle, Director of Engineering & Capital Projects/City Engineer 
Nicola Kavanagh, Principal Civil Engineer

SUBJECT: Emergency Storm Drain Repairs at 855 Energy Way

On December 31, 2019, a sink hole was discovered at a recycled aggregate processing and storage facility operated by Pavement Recycling Systems Inc. at 855 Energy Way. Research revealed that the sinkhole was within a City of Chula Vista drainage easement and centered on an access riser on a 66 inch diameter Corrugated Metal Pipe (CMP) owned by the City of Chula Vista. As repair work on the sinkhole progressed, it was discovered that the pipe segment downstream of the sinkhole and under Energy Way was severely deteriorated and in immediate need of replacement. The repair to the sinkhole and replacement of the downstream pipe were done as emergency change orders to ongoing City CIP projects (CIP numbers DRN0211, and DRN0205 & DRN0212). The repair work to the sinkhole and replacement of the downstream pipe segment were completed in Mid-2021.

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The City Engineering Department assessed the pipe and prepared a bid package based on the Centrifugally Cast Concrete Pipe (CCCP) repair method. The CCCP method was selected for multiple reasons including:

- CCCP allows for making repairs without the expense and disruption of deep excavation (the pipe is up to 35 feet deep).
- When cured, the CCCP lining acts as a new fully structural stand-alone pipe that does not rely on the old pipe for strength.
- The City has used this method successfully on recent projects.

The scope of work consists of the installation of two replacement storm drain manholes and rehabilitation of approximately 710 feet of 66-inch diameter CMP pipe.



Figure 1 - Pipe segment to be repaired

On December 3, 2021, staff solicited bids from three qualified contractors with experience performing this type of storm drain rehabilitation work in accordance with the provisions in the City's Municipal Code Section 2.56.100, Emergency Purchases. With your concurrence, staff will award the contract to the lowest responsible, responsive bidder.

FISCAL IMPACT:

CIP project DRN0219, CMP Rehab Outside the Right of Way Phase III – Measure P was established to repair storm drain failures outside the right of way. This project is expected to use approximately \$1,130,000.00 from this project, as shown in the table below.

PRELIMINARY ESTIMATE OF FUNDS REQUIRED FOR CONSTRUCTION		
A.	Construction Contract	\$900,000.00
B.	Engineering Construction Management and Inspection	\$60,000
C.	Engineering Advanced Planning, Survey and Design	\$60,000
D.	Public Works	\$10,000
E.	Contingency	\$100,000
TOTAL PRELIMINARY ESTIMATE		\$1,130,000.00

March 4, 2022

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The estimate above may change based on the conditions encountered. Staff will return to the City Council with an agenda item to report the final emergency repair cost and to appropriate funds, as necessary.

cc: Matt Little, Director of Public Works
Francisco Rivera, Principal Civil Engineer
Jose Gomez, Principal Civil Engineer
Beth Gentry, Senior Civil Engineer
Jonathan Salsman, Senior Civil Engineer
Robert Beamon, Administration Services Manager