



# City of Gulfport Sanitary Sewer Evaluation Survey Program -

December 1, 2015

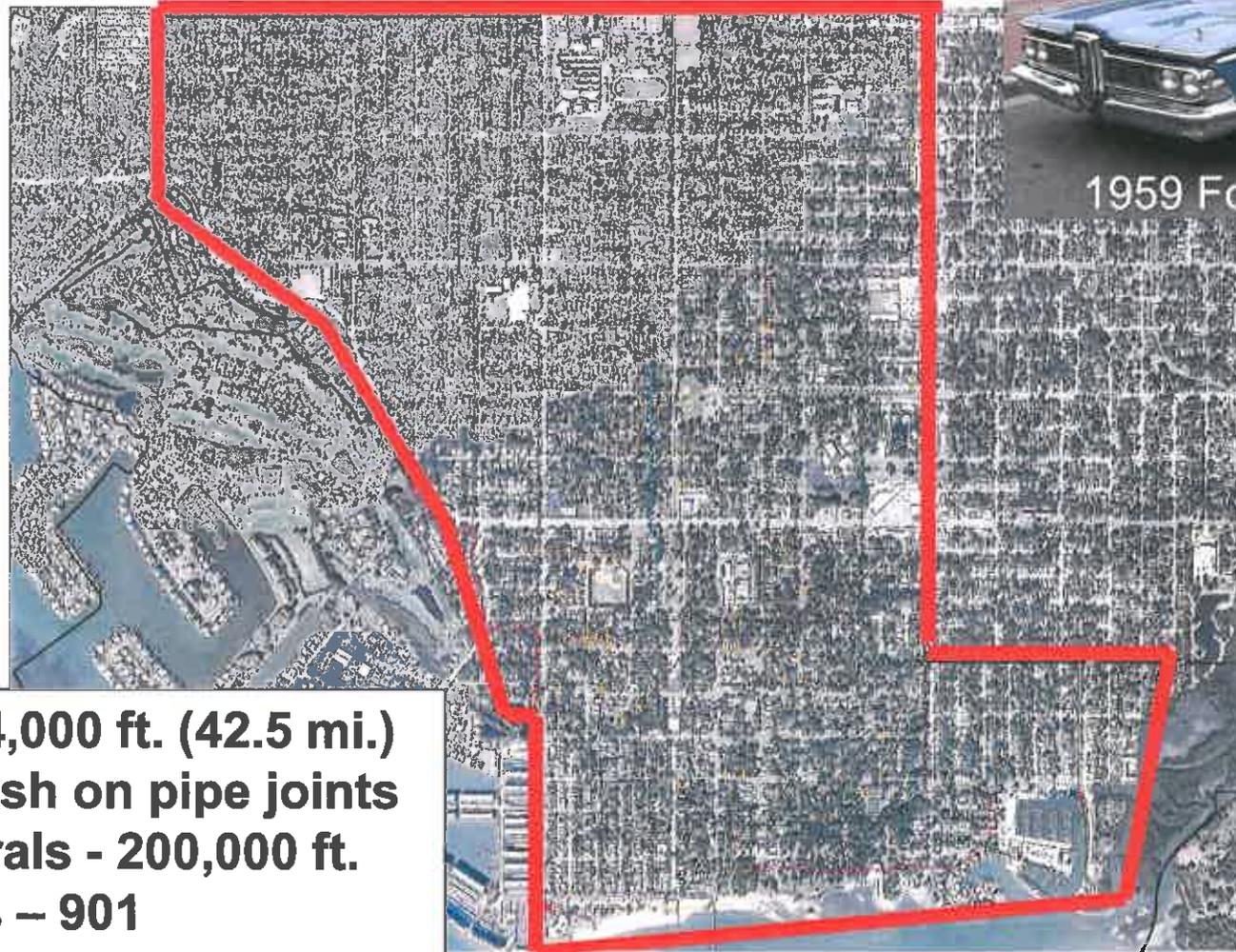
# Agenda

- Sewer System Overview
- Prior Pipe Lining
- Repairs in this Phase
- CCTV Findings
- 3 Priority Levels
- Rehabilitation Program
- Summary
- Questions

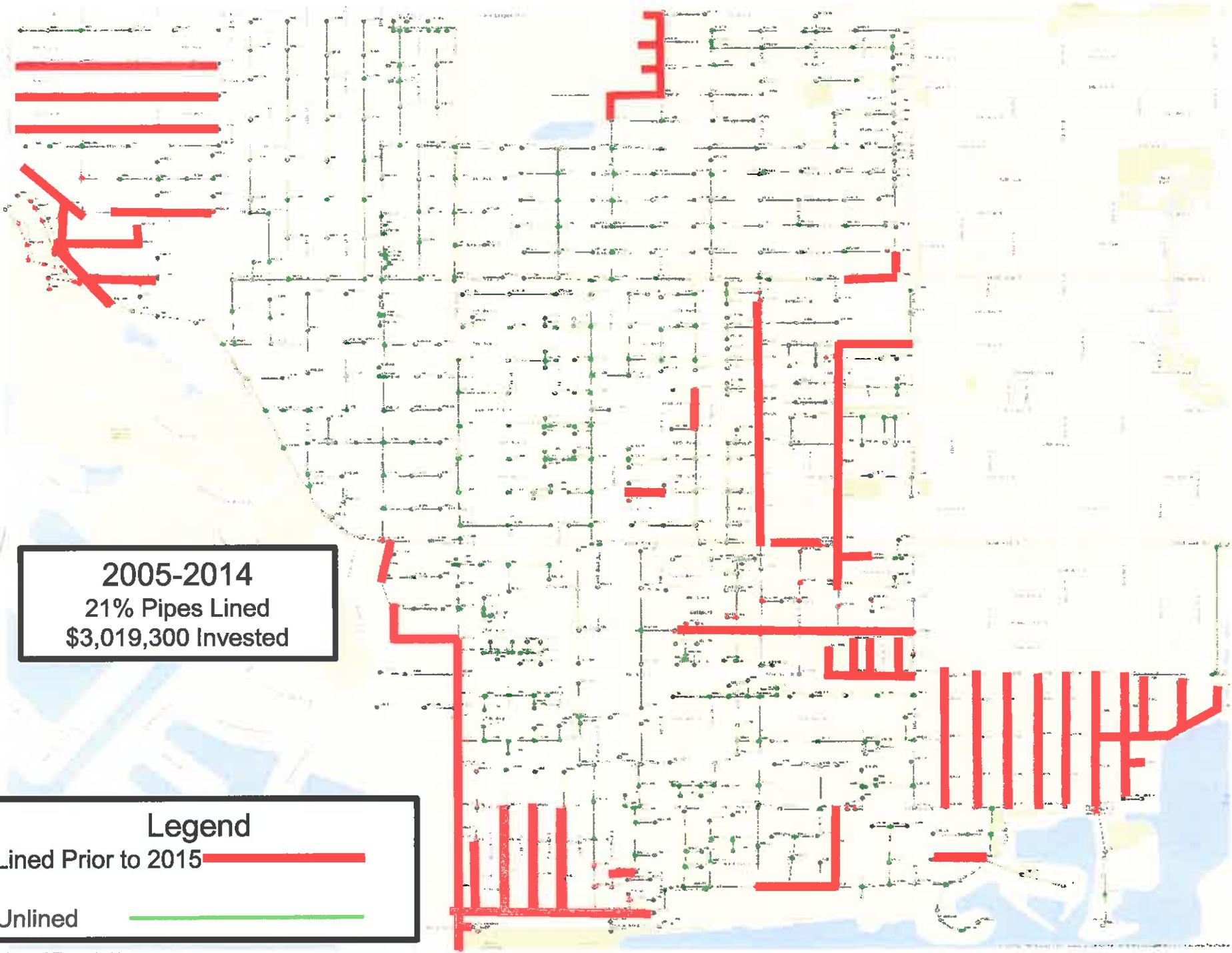
## Sewer System – Built in 1959



1959 Ford Edsel



**Pipe - 224,000 ft. (42.5 mi.)**  
**45,000 push on pipe joints**  
**City Laterals - 200,000 ft.**  
**Manholes – 901**  
**Pumping Stations- 2**



**2005-2014**  
21% Pipes Lined  
\$3,019,300 Invested

**Legend**  
Lined Prior to 2015 ———  
Unlined ———

# System Repairs

## 3 types of repairs

- **Grouting existing lined pipes**
  - Lateral connections to lined pipe
  - Liner connections to manholes
- **CIPP Liner in existing pipes**
  - Structural and I/I issues
  - No significant loss of flow or cross-sectional area
- **Point Excavations**
  - Structural and I/I issues
  - Existing pipe flow area issues
    - Dips
    - Collapsed Pipe

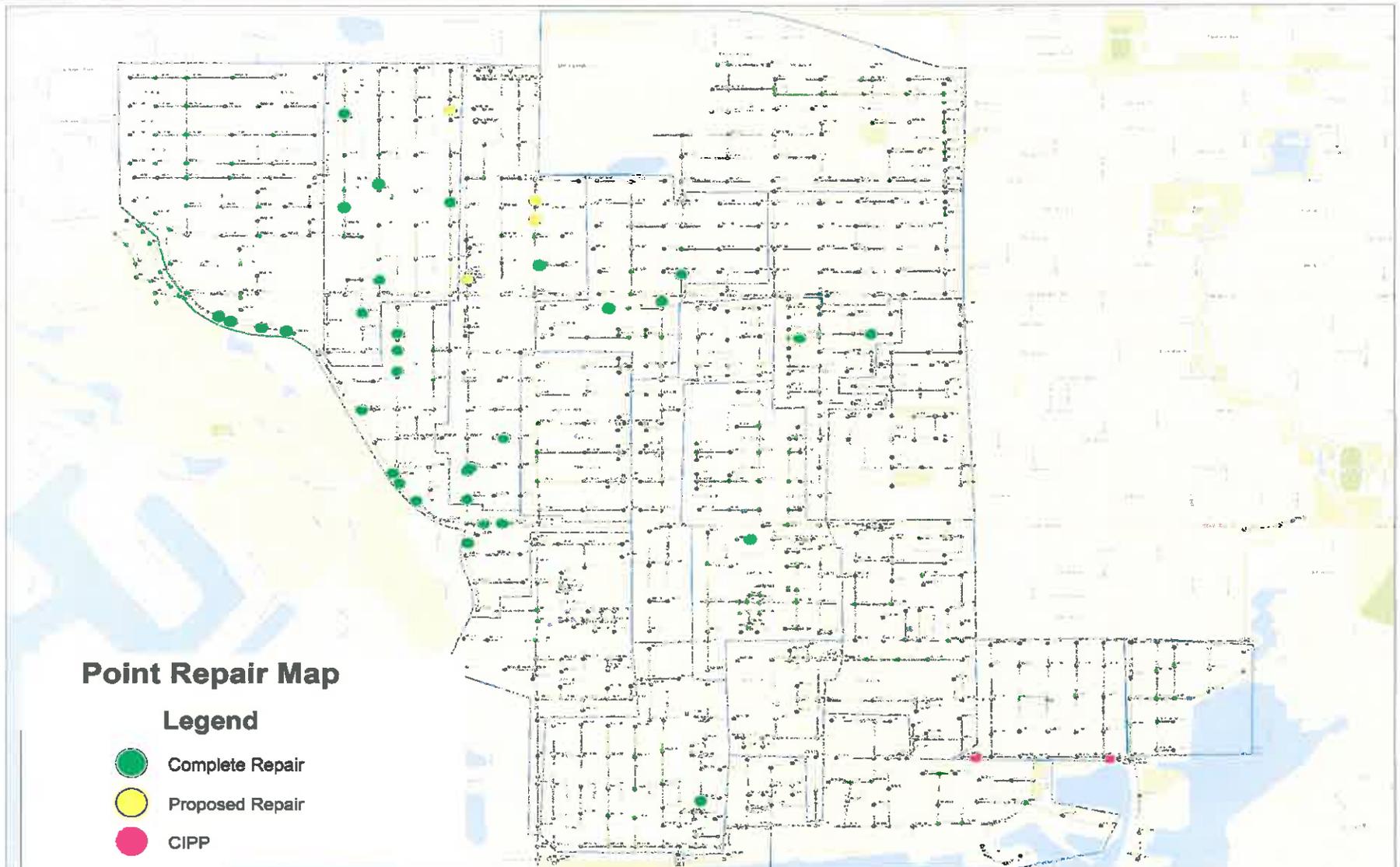


## Dig and Fix Repairs – 35 Repairs

- 25 point repairs throughout City (\$180,000)
- 10 repairs on Gulfport Blvd (\$200,000)



# Defects Repaired



# Grouting Repairs

## Grout repairs that have been completed:

- 183 laterals on the 24 line segments
- 151 laterals tested and grouted, (TG)
- 15 laterals tested and passed, (TP)



## Actual Cost for Phase 1

Item	Quantity	Cost
Dig-up and repair defects	30 complete 5 Pending	380,000
Slip line (15" and 24" Dia.)	478 Ft	51,000
Grout I/I sources	151 laterals Numerous others	102,000
CCTV	84,050	313,000
Manhole I/I survey	130	11,000
Flow monitoring	19 Basins	167,000
Data analysis, design, loan compliance	As Needed	441,000
Total		1,465,000

# Manholes

Looked at 139 manholes:

*Your manholes are not a major source of I&I !*

Although some work required the manhole repairs are not as high a priority as pipeline repairs



## CCTV

Based on flow monitoring and manhole observations we focused on more CCTV work.

- > 84,050 LF of pipe cleaned and CCTV
- > 8,900 LF of pipe where roots were removed

Allowed us to fix more problems associated with structural defects and Infiltration



## Priority Defects

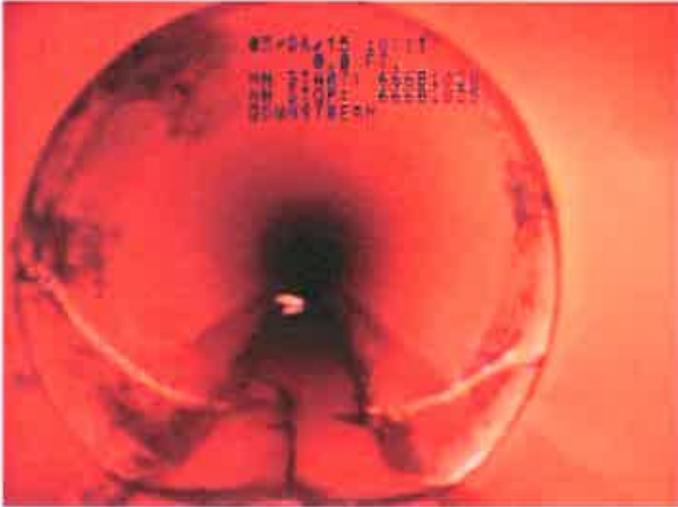
**Priority 1 – Structurally Deficient**

**Priority 2 – Need Repair**

**Priority 3 - Monitor**



## Priority 2 Defects (Need Repair)





## Next Phase (1-7 Years)

Item	Cost
Fix identified Priority 1 Defects	\$2,480,000
Clean/CCTV remaining Pipe	\$560,000
Fix Some additional Priority 1 Defects	\$200,000
<b>Total</b>	<b>\$3,240,000</b>

## Future Program (8-25 Years)

Item	Cost
Balance of Priority 1 Repairs	\$4,000,000
Priority 2 Repairs	\$3,500,000
LS 1 Force Main	\$1,500,000
Manhole Rehabilitation	\$2,100,000
Lateral Rehabilitation	\$2,000,000
Smoke Testing	\$200,000
<b>Total</b>	<b>\$13,300,000</b>

Does not include Priority 3 defects - \$3,600,000

Questions?



Leak in Basin 10  
Fixed



Roots in Basin 5  
Removed

**Thank You!**



**CITY OF GULFPORT  
CITY COUNCIL  
AGENDA MEMORANDUM**

**FROM:** Don Sopak, Public Works Director

**DATE:** December 1, 2015

**AGENDA ITEM: 8.1**

**SUBJECT:** Presentation - Sanitary Sewer Evaluation Survey (SSES)

Dr. Robert Brown from Cardno, Inc., the City's contracted engineering firm, for the Sanitary Sewer Evaluation Survey (SSES) will provide a presentation on the City's sanitary sewer system. This presentation will discuss the background and present condition of the sanitary sewer system and the methodology to repair it.

- The amount the City has spent to repair the system
- The amount of repairs completed in the last 10 years
- A review final report of the SSES performed
- Discussion of the use of the \$335,00 budgeted in FY 2016