



Sanitary Sewer Assessment, Maintenance & Rehabilitation

Committee of the Whole

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Common terms and abbreviations



- GIS – Geographic Information System – digital maps and databases
- GPS – Global Positioning System – used to collect accurate field data
- CCTV – Closed Circuit Television – used to view inside of pipes
- NASSCO – National Association of Sewer Service Companies
- PACP – Pipeline Assessment Certification Program[®] – used to rate pipe defects
- CIPP – Cast-in-place Pipe – liner
- IEPA – Illinois Environmental Protection Agency
- NPDES – National Pollutant Discharge Elimination System
- CMOM – Capacity Management Operation Maintenance
- CSO – Combined Sewer Overflow
- SSO – Sanitary Sewer Overflow



Assessment and Rehabilitation

Asset Management (Stewardship)

- Assess (CCTV , flow monitors - studies)
- Rehabilitate (CIPP & spot repairs)

Best Practices

- Repair underground infrastructure before roadwork





Sanitary Sewer Assessment



Grove 13171-258

**Structural failure beginning at
point of break-in**

CCTV and Analysis

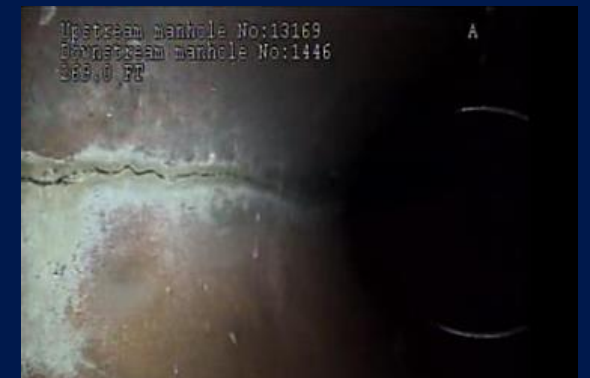
- Identifies problems
- Assesses condition of the main
- Cleans roots out of sewers
- Helps determine what mains to line and locations of point repairs
- Provides Geographic Information System (GIS) better data to locate sewers and manholes in the future
- Provides opportunity to notify property owners of problems with private sewer laterals

SEVERE CRACKING, fractures and holes centered on a TB, which is now capped

268 umh

12 o'clock

The mess continues downstream with multiple fractures in the next section of pipe. (bottom right)





CCTV and Analysis

- Council approved \$50,000 for WinCan software on March 26
- WinCan makes it easier to gather and analyze inspection videos and data and link with the GIS



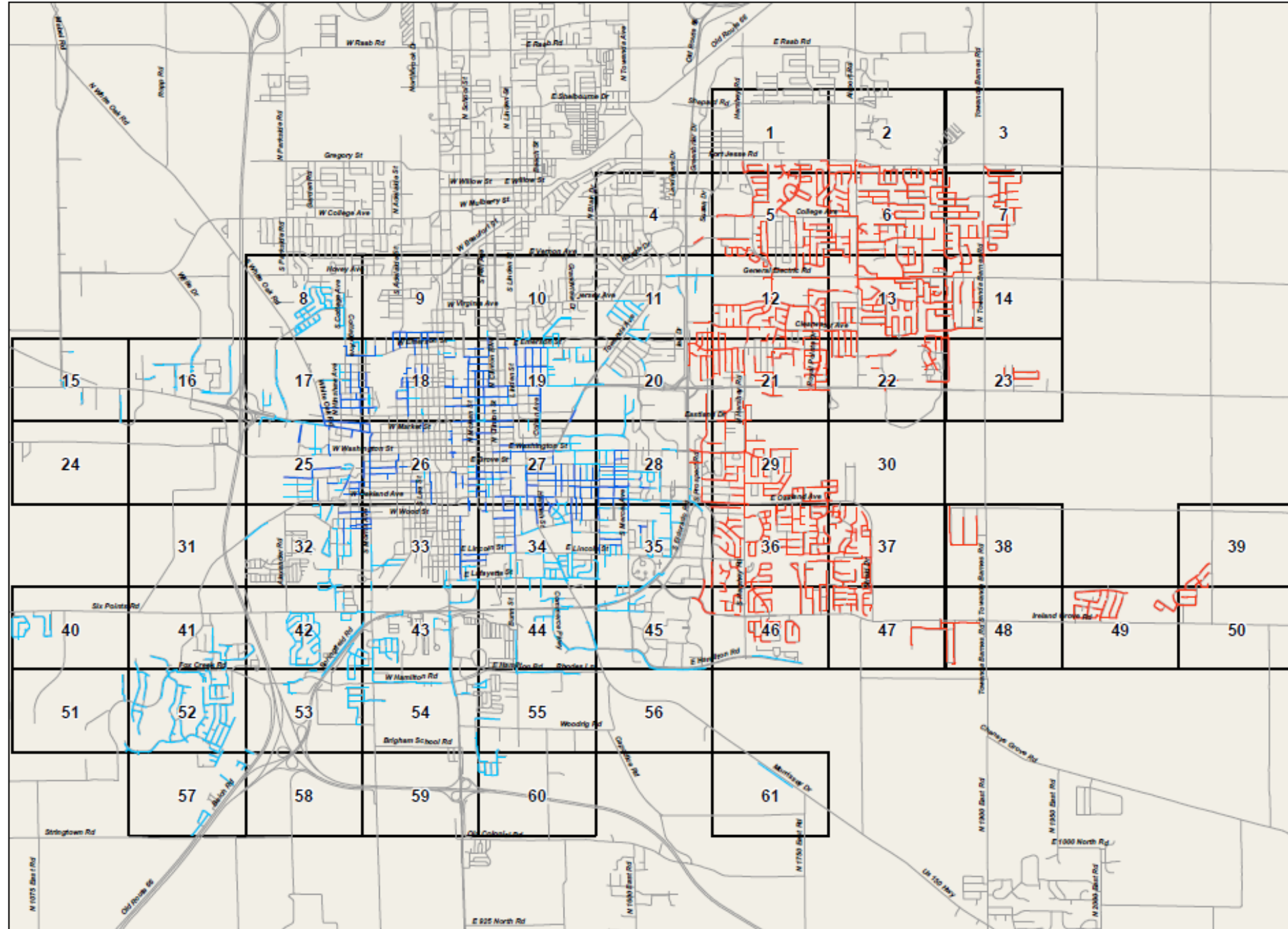


Assessment and Rehabilitation

- This fiscal year focusing on sewer assessment using CCTV
- Assessment is necessary to determine where to rehabilitate
- No budget for rehabilitation this year
- **\$1.9** million agreement for consideration at May 26th meeting
- Next year will go back to about \$400,000 for CCTV
- Goal is to maintain PACP ratings and CCTV records for entire system with no information older than 10 years
- Will recommend appropriate funding for sewer rehabilitation based on findings of sewer assessment







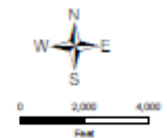
CCTV FY 21



LEGEND

Sewers to CCTV

-  Sanitary, Base Bid
-  Sanitary, Alt 1 Bid
-  Combo Alt 1 Bid
-  Index Page Number





CCTV and Analysis

- Example of what a lack of CCTV and GIS data can have on the sewer system

119.8 DIG

Location:
120 feet
downstream
from
manhole.



Cracking
just up
from
manhole
342 UMG



Most of
this
segment
had little
cracking
upstream.



399
cracking
near
manhole,
structural
problems
within
manhole

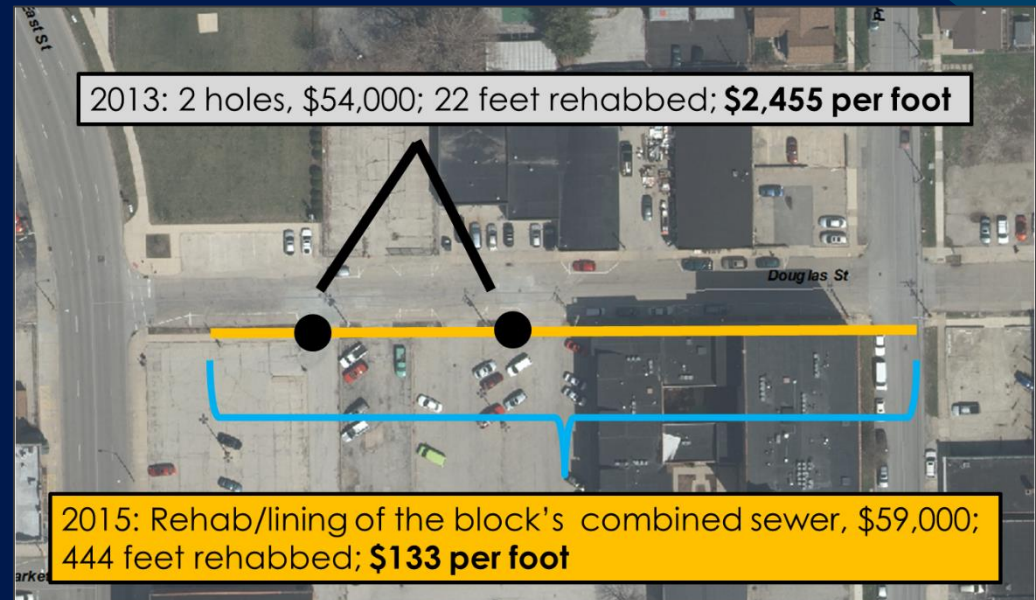


Sanitary Sewer Rehabilitation

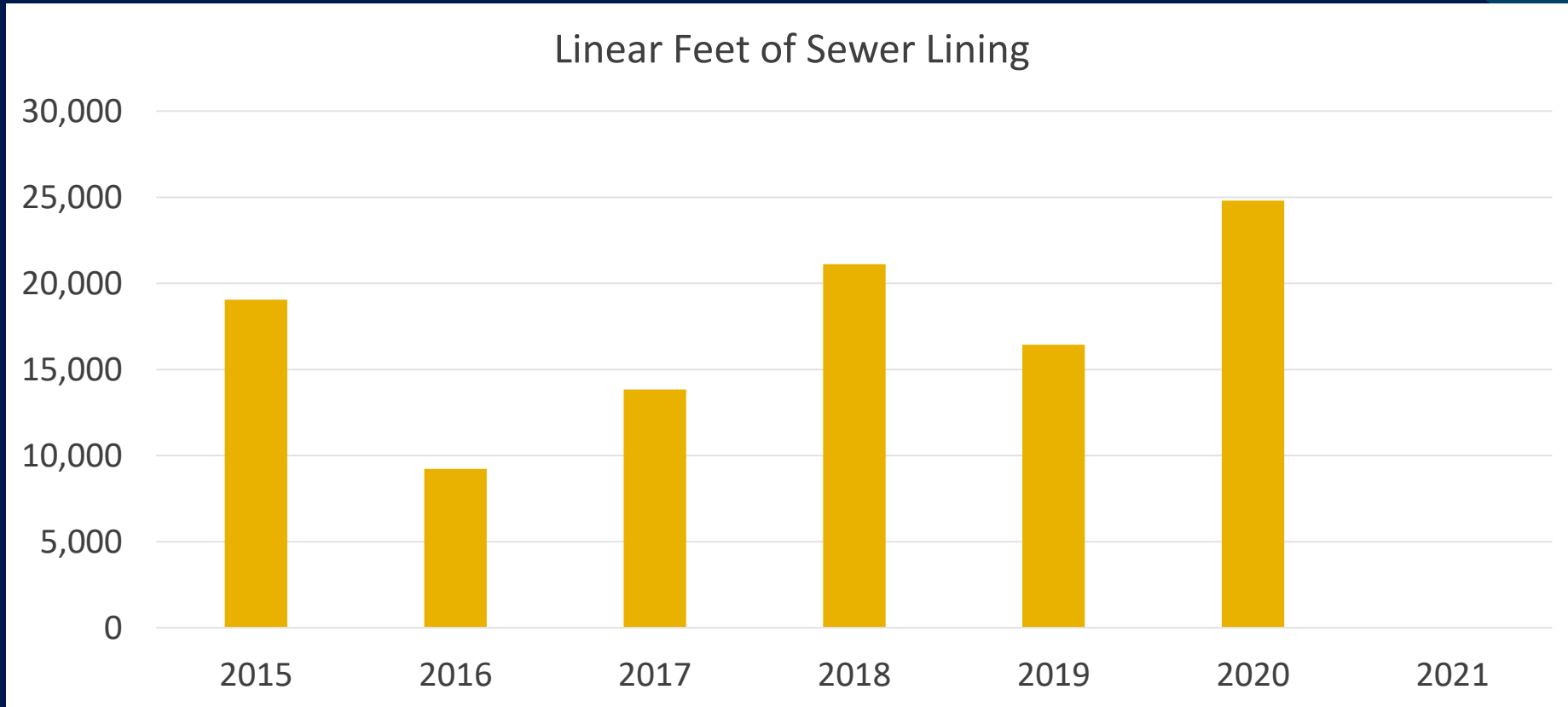


Repairs and CIPP Sewer Lining

- Enacts line and manhole repairs and/or replacements
- Installs sewer lining in sewer mains and rehabilitates manholes as needed
 - Sewer lining restores sewer to like-new condition at a fraction of the cost of new sewer
 - Saves money when compared to emergency repairs

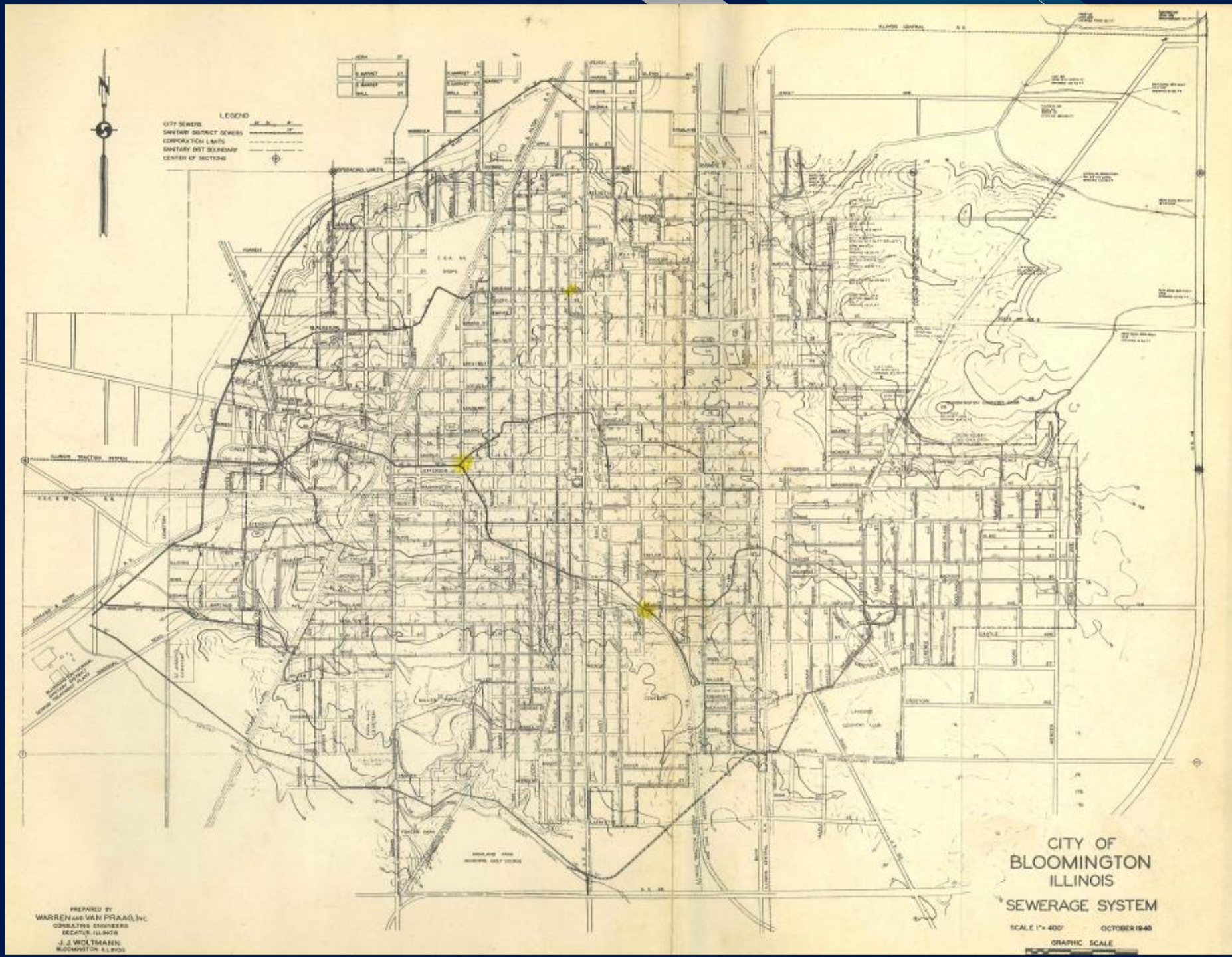


Sewer Lining

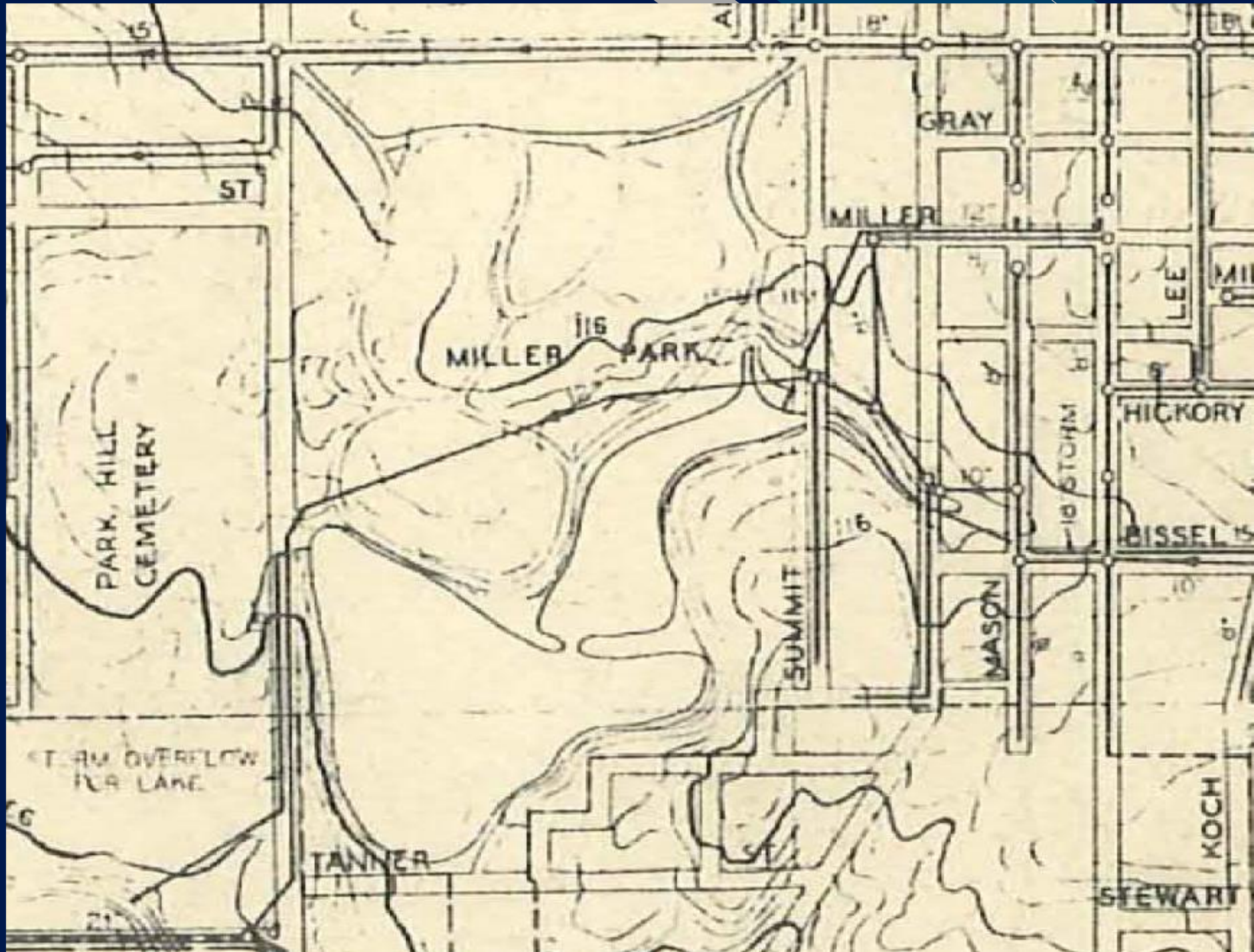


Note: Size of sewer greatly impacts cost per linear foot. Therefore, there is no direct equivalency when compared year-to-year.

Sewer Map 1946



Sewer Map 1946



GIS Sewer Data

Sewer Type: 43410-43400

Facility Identifier	43410-43400
Material	VCP
Diameter	12"
Year Lined	
From Manhole	43410
To Manhole	43400
Owned By	COB
REMARKS	
FILEPTH	P:\SEWER\SCANNED\S0048\
Orig_Up_MH	MH_671_SAN
Orig_Dwn_MH	MH_26054_SAN
Orig_Line_ID	MH_671_SAN/MH_26054_SA

Zoom to ...





Questions or Comments?