



Monmouth, IL

WOODARD & CURRAN

Preliminary Engineering Report Review
Downtown Sewer Improvements

October 5, 2020

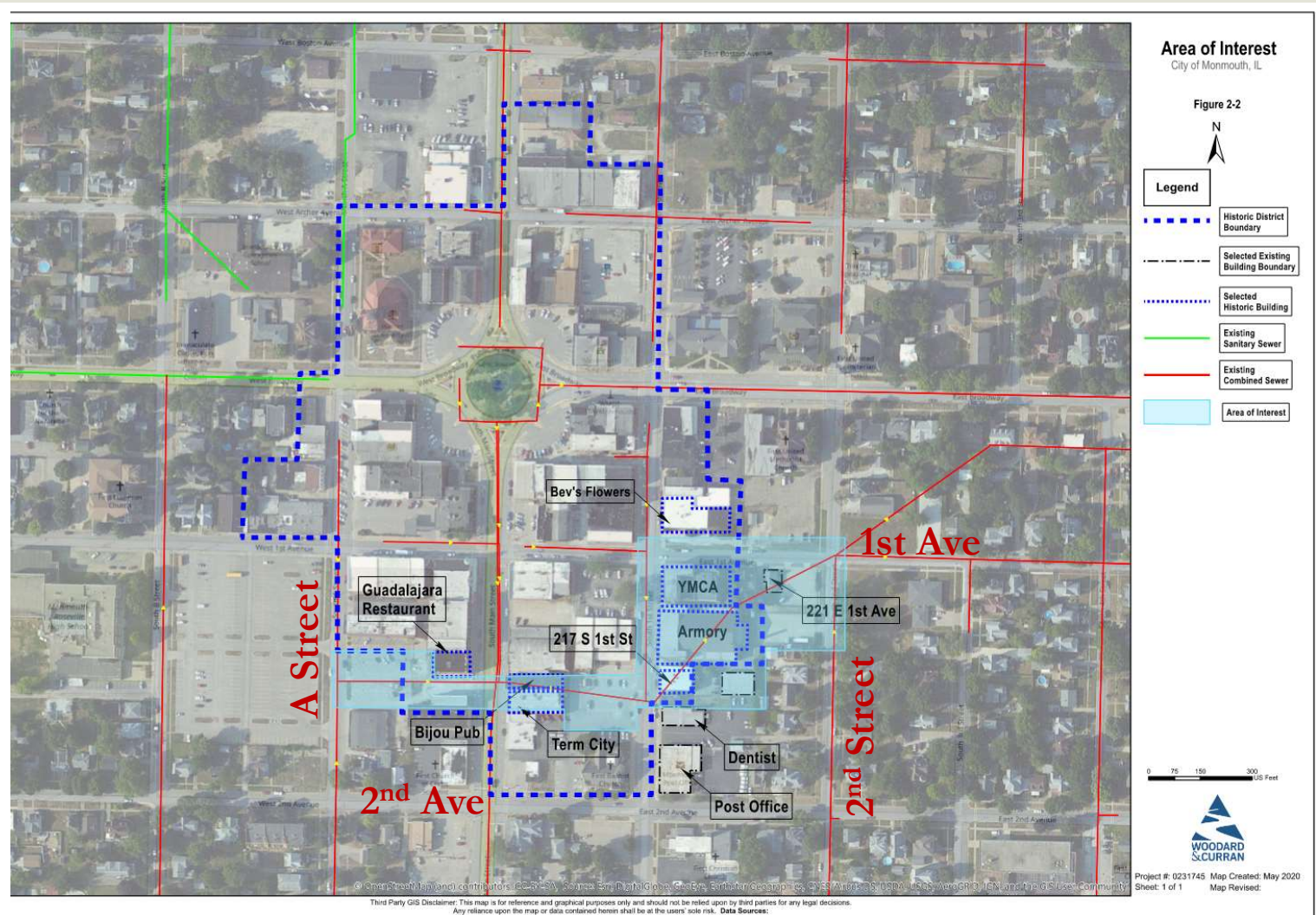


Agenda

- Project/Funding Overview
- PER Review
 - Collection System Alternatives
 - Recommended Alternative/Cost
- Next Steps
 - USDA process
 - Timeline



Project Area



USDA/RD Funding

- Requirements – based on 2010 census
 - Population <10,000 (currently 9,444)
 - MHI and project needs determine funding rates and grant allowances
 - MHI = \$34,403
 - Qualifies for intermediate interest rate (currently 1.75%)
 - Qualifies for up to 45% grant (cap of \$1M per application)
 - Will consider more than \$1M, but difficult to get
 - General Note: Poverty interest rate is 1.25% with 75% grant



Reason For Project

■ Health, Sanitation & Security -

- The importance of these sewer sections in conveying upstream sanitary and combined flows to the WWTF,
- Difficult access to the sewer line for investigation or repairs in the event of line blockage or collapse,
- The potential for existing building structural and foundational issues to cause a line collapse and CSO event, and
- The lack of short-term detention for combined sewer flows to lessen the frequency and severity of basement back-ups and CSOs.

■ Aging Infrastructure –

- Original to the initial 1800s construction (beyond their design life).
- It is anticipated that sections of the stone channel sewer have an open-bottom



Archive-Integrations, S.A./iStock



Existing Conditions

- Vitrified clay pipe (VCP) – poor condition
- Brick sewer –
 - Relatively acceptable condition in some areas
 - Needs structural and infiltration protection
- Rectangular stone sewer.
 - Limited access with much of the sewer being severely degraded
 - Previously collapsed required the demo of a historic bldg adjacent to 217 South 1st St.
 - Structural issues lead to infiltration which adds to hydraulic load on sewer system
- Lack of storage to aid with wet weather events and CSO compliance



Recommendations – Areas 1 & 2



1. From South A Street Towards Main Street
 - a. 210 feet of 18-inch Vitrified Clay Pipe (VCP)
 - b. 210 feet VCP – Open Cut Replace with 30-inch pipe with additional CSO storage
2. Brick Sewer Transition to Center of Main Street
 - a. 240 feet of 18-inch Brick Sewer
 - b. 240 feet brick sewer – CIPP line



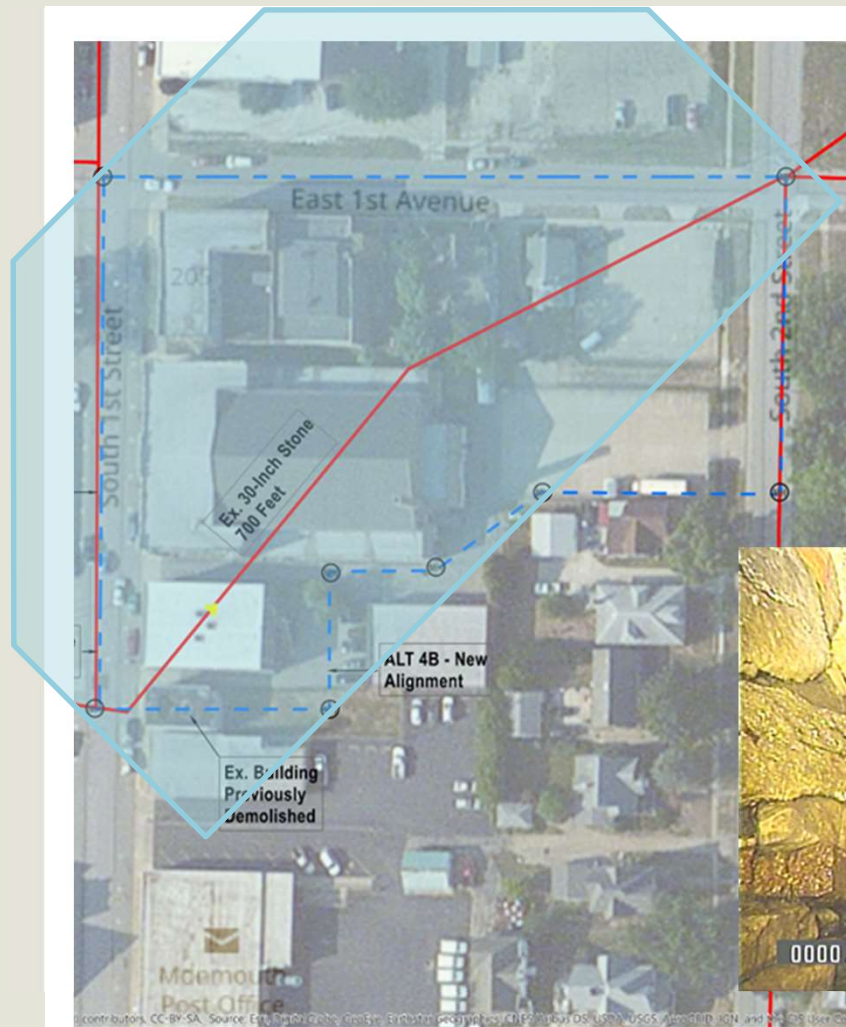
Recommendations – Area 3



3. Center of Main Street to Center of South 1st Street
 - a. 30 feet of 30-inch VCP; 240 feet of 30-inch Brick Sewer; 155 feet of 30-inch Stone Sewer
 - b. 30 feet VCP - CIPP line; 240 feet brick sewer – CIPP line; 155 feet stone sewer – Open cut replace with additional CSO storage



Recommendations – Area 4



4. Center of South 1st Street to Center of South 2nd Street
 - a. 700 feet of 30-inch Stone Channel Sewer (Irregular Shape)
 - b. Re-route to North and East; Abandon existing



The Numbers

- Project Cost (based on previous PER and escalation)
 - \$2.7M in 2022 dollars
 - \$2.3M - \$3.4M (-15% to +25%)

	No grants	With Grant
Project Cost	\$2.7M	\$2.7 M
USDA Grant	\$0	\$1 M
Annual debt service	~\$94,000	~\$60,000

Based on 1.75% for 40 yrs



USDA Process



- Pre-Application
 - PER – October 2020 submittal
 - Will require Environmental Review/Report
- State Engineer Review -1-3 months
- Invitation for full Application
 - Lots of paperwork
 - Funding allocation with grant amount
- Design/Bidding – City pays upfront and is reimbursed through USDA loan
- Final Underwriting
 - Post bidding
 - Project considered Funded
 - Loan closing – beginning of construction





THANK YOU!
QUESTIONS?

