

**Work Session of the Village Board of the Village of Brockport was held in the Village Court Conference Room at 49 State Street Brockport, New York, January 27, 2020 at 7:00pm.**

**PRESENT:** Mayor Margaret B. Blackman, Trustee/Deputy Mayor John D. LaPierre, Trustee Annette M. Crane, Trustee Shawn Halquist, Treasurer Daniel P. Hendricks, DPW Spt. Harry G. Donahue, Police Chief Mark T. Cuzzupoli, BI/CEO Chad H. Fabry

**EXCUSED:** Trustee Katherine J. Kristansen

**ALSO PRESENT:** Dan Allen & Scott Mattison of MRB Group, Christine Hamlin, Carol McNeese, Susan Smith, Karen LoBracco, Fred Webster

This was a work session, not a regular meeting. No public comment.

- **CALL TO ORDER:**
- **ACTION ITEMS** (time sensitive):
  - Approval of bills

→ Trustee LaPierre moved, Trustee Crane seconded, carried 4/0 that the bills be allowed and paid upon audit.

**A/P Clearing Account**

	<u>Abstract Date</u>	<u>Amount</u>
FUND (A): <u>General</u>	1/8/20	\$226,337.50
	1/17/20	\$35,335.62
FUND (F): <u>Water</u>	1/8/20	\$80,531.90
	1/17/20	\$1,888.51
FUND (G): <u>Sewer</u>	1/8/20	\$137.69
	1/17/20	\$366.84
FUND (H): <u>Capital</u>	-	-
FUND (T): <u>Trust &amp; Agency</u>	-	-
		\$307,007.09 total 1/8/20
		\$37,590.97 total 1/17/20

- Authorize budget amendments & transfers from contingency -

→ Trustee Crane moved, Trustee LaPierre seconded, carried 4/0 that the following budget amendments be authorized:

**Amendments  
Expenditures  
Account**

#	Description	Amount	Purpose
A3120.4031	Police – Fleet Repairs	\$8,959.00	(1)
A3621.4000	Scanning Grant	\$113,466.00	(2)
	Total	\$122,425.00	

Total General Fund Expense Budget Before Amendment	\$6,072,750.00
Amendment	\$122,425.00
Total General Fund Expense Budget	\$6,195,175.00

**Revenues:  
Account**

#	Description	Amount	Purpose
A2680.0000	Insurance Recoveries	\$8,959.00	(1)
A3089.7000	State Aid – Other	\$113,466.00	(2)
	Total	\$122,425.00	

Total General Fund Revenue Budget Before Amendment	\$6,072,750.00
Amendment	\$122,425.00
Total General Fund Revenue Budget	\$6,195,175.00

**Purpose:**

- (1) Police Vehicle Repairs – Revenue from Insurance
- (2) Expense for Scanning Grant, Large format scanning services contracted services, revenues from New York State. Service includes Village and Town of Sweden.

budget transfers:

Account #	From	Account #	To	Amount	Explanation of Transfer
A3120.4090	Police – Misc.	A1990.4000	Contingency	\$5,250	(1)

(1) Transfer of funds from contingency – new signage for Police Department

**ITEMS FOR DISCUSSION / REVIEW:** with Treasurer & Department Heads

- GIS Proposal – Village Engineer MRB Group (30-45 minutes)
- 6/1/19-5/31/20 Budget development
  - Financial reports for period ending 12/31/19
  - 20-21 Budget – Expenditures – General Fund, Water Fund, Sewer Fund

**EXECUTIVE SESSION:**

→ At 8:45pm, Trustee Crane moved, Trustee Halquist seconded, carried 4/0 that the Board of Trustees of the Village of Brockport enter executive session to discuss collective bargaining negotiations with CSEA (DPW).

Treasurer Hendricks and DPW Spt. Donahue were invited to sit in.

→ At 9:15pm, Trustee Crane moved, Trustee LaPierre seconded, carried 4/0 that the Board of Trustees of the Village of Brockport re-enter the regular meeting.

**ADJOURNMENT:**

→ At 9:15pm, Trustee Crane moved, Trustee LaPierre seconded, carried 4/0 that the meeting be adjourned.

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Leslie Ann Morelli, Village Clerk  
from notes of Daniel P. Hendricks, Treasurer

# VILLAGE OF BROCKPORT GIS MAPPING INITIATIVE



January 27, 2020

Presented by:

Daniel Allen, GISP



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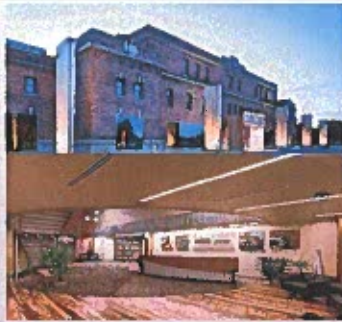
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## Introduction

- MRB Group
  - Expertise
    - Engineering
    - Architecture
    - Surveying
    - GIS
  - Since 1927
- Office Locations
  - Rochester
  - Syracuse
  - Seneca County
  - Finger Lakes
  - Texas



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## Overview

- This Presentation will Cover:
  - Challenges for Public Works
  - Industry Trends
  - Existing Village Water/Sewer Mapping
  - Map Modernization Proposal
  - Tree Mapping/Management

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## Challenges for Public Works

- A typical Village like Brockport will own and maintain underground utility systems that could be worth roughly **\$30 to \$40 million dollars** based on new construction costs
- What is the best way to **manage** these expensive assets that are mostly **buried** and out of sight?
  - Traditionally, paper maps and employee knowledge are the most common

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## Challenges for Public Works

- Paper records and maps **deteriorate** over time
- Paper may **not** provide the most **efficient** access to **critical** information for office and field staff
  - Emergencies
  - Pipe breaks
- Employee retirement
  - Transfer of institutional knowledge

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## Industry Trends

- Modernize utility mapping from **paper** to a geographic information system (**GIS**) **digital** map
- Improve the **accuracy** of utility mapping by using **survey** equipment to locate the X/Y/Z coordinate of every feature
- View utility mapping in the field with smart devices like an iPhone or iPad, and record maintenance activities
- Use the GPS in an iPhone to "walk back" to utility features like valves, hydrants, and manholes

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## Industry Trends

- Why is accurate mapping important?



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## Existing Brockport Water/Sewer Maps

- Paper maps and sketches – updated by hand over time
- Paper, scanned, and AutoCAD construction plans
- Schematic map of water and sewer systems in AutoCAD – Chatfield Engineering
- Institutional knowledge in the memory of each employee

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## Existing Brockport Water Map

- Schematic system map in AutoCAD with approximate locations of valves and hydrants  
– Lacks horizontal and vertical accuracy



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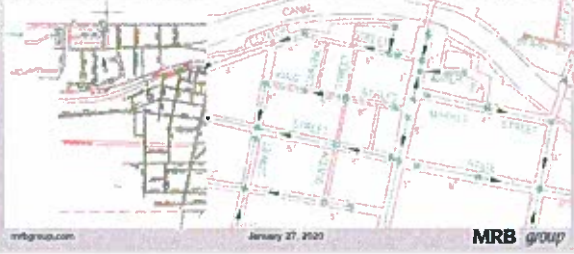
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## Existing Brockport Sanitary Sewer Map

- Schematic system map in AutoCAD with approximate locations of manholes
  - Lacks horizontal and vertical accuracy



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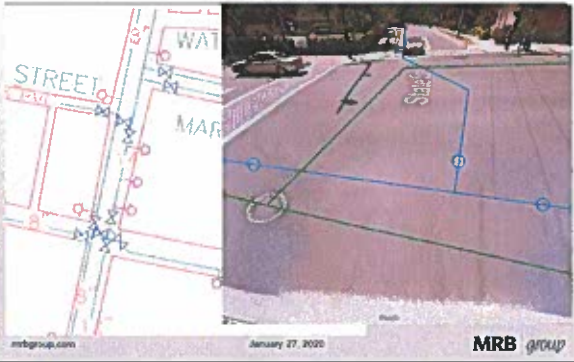
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## Limitations of Schematic Mapping



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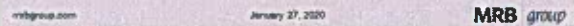
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## Map Modernization Project

- Scan existing paper maps
- Use **survey accurate** equipment to mark the location of all Village water/sanitary/storm point features that can be found by Village staff.
  - Including valves, manholes, and catch basins
- “**Connect the dots**” to draw in pipes between survey points as shown on schematic and record maps
- Assign size, material and age to all features for **capital planning** purposes
- Create **PDF/Paper** 11x17 map book and 34x44 wall map with new aerial photos of water/sewer systems.



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## Map Modernization Project

- Setup an **online map** and **smartphone app** to view all utility mapping in the field
- Setup a map layer to **track water/sewer breaks** with smartphone/tablets
- Setup a map layer to track **map change requests**
- **Training** for Village staff

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## Paper / PDF Map Book

- Detailed mapping
- Aerial photo background
- Tax Parcels / Addresses
- Quick reference for staff, or those that prefer paper to iPhone / Tablet viewer



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## GIS Application Examples

- Desktop map for utilities



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## GIS Application Examples

- Mobile device map for utilities



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## GIS Application Examples

- Mark pipe breaks – Village of Avon



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## GIS Application Examples

- Valve Exercising – Town of Canandaigua



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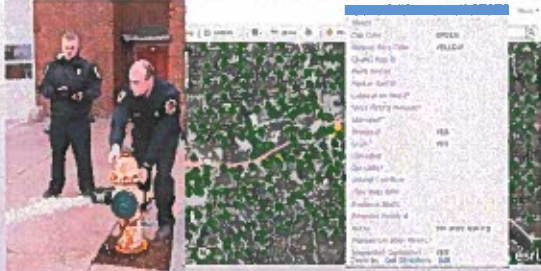
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## GIS Application Examples

- Hydrant Inspections – City of Auburn



## GIS Application Examples

- Sewer Video Inspections – Village of Waterloo



## GIS Application Examples

- Track street assessments and repair



## Utility Mapping Summary

- **Modernize** water and sewer mapping
- **Benefits**
  - Create consistent **survey accurate** maps for water and sewer
  - Increase **efficiency** of office and field staff by providing access to **accurate** digital maps
  - Know the **exact** location and age of all underground utility assets
  - Integrate survey accurate utility mapping into **capital project planning**
  - Capture knowledge about underground utilities from Village staff before **retirement**
  - Record maintenance activities for **asset management**

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## Tree Management

- Manage tree location, health, and pruning
- Track removal, stump grinding, and top soil
- New planting sites, and tree warranties
- GPS existing tree locations within R.O.W.
  - Assign unique ID numbers
  - Merge existing tree survey/inventory with GIS to visualize results
- Proposed project includes GPS location of approximately 2,700 Village trees.

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## Tree Management Examples



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## Tree Management Examples




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## Tree Management Examples




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## Tree Management Examples

Tree ID	Address	Species	DBH	Height	Health	Location	Status
10001	100 Main St	Maple	12	15	Good	100 Main St, 100	100
10002	100 Main St	Oak	15	20	Fair	100 Main St, 100	100
10003	100 Main St	Pine	10	12	Poor	100 Main St, 100	100
10004	100 Main St	Elm	8	10	Good	100 Main St, 100	100
10005	100 Main St	Birch	11	14	Fair	100 Main St, 100	100
10006	100 Main St	Walnut	13	16	Good	100 Main St, 100	100
10007	100 Main St	Cherry	9	11	Poor	100 Main St, 100	100
10008	100 Main St	Plum	7	9	Fair	100 Main St, 100	100
10009	100 Main St	Apple	14	17	Good	100 Main St, 100	100
10010	100 Main St	Hickory	16	19	Fair	100 Main St, 100	100
10011	100 Main St	Sycamore	18	22	Good	100 Main St, 100	100
10012	100 Main St	Poplar	10	13	Poor	100 Main St, 100	100
10013	100 Main St	Alder	6	8	Fair	100 Main St, 100	100
10014	100 Main St	Basswood	12	15	Good	100 Main St, 100	100
10015	100 Main St	Boxelder	8	10	Poor	100 Main St, 100	100
10016	100 Main St	White Birch	11	14	Fair	100 Main St, 100	100
10017	100 Main St	Black Birch	9	11	Good	100 Main St, 100	100
10018	100 Main St	Red Birch	10	12	Fair	100 Main St, 100	100
10019	100 Main St	Yellow Birch	11	13	Good	100 Main St, 100	100
10020	100 Main St	Pink Birch	12	14	Fair	100 Main St, 100	100

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## Questions?

MRB Group Contact Information:

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**Daniel Allen**

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