

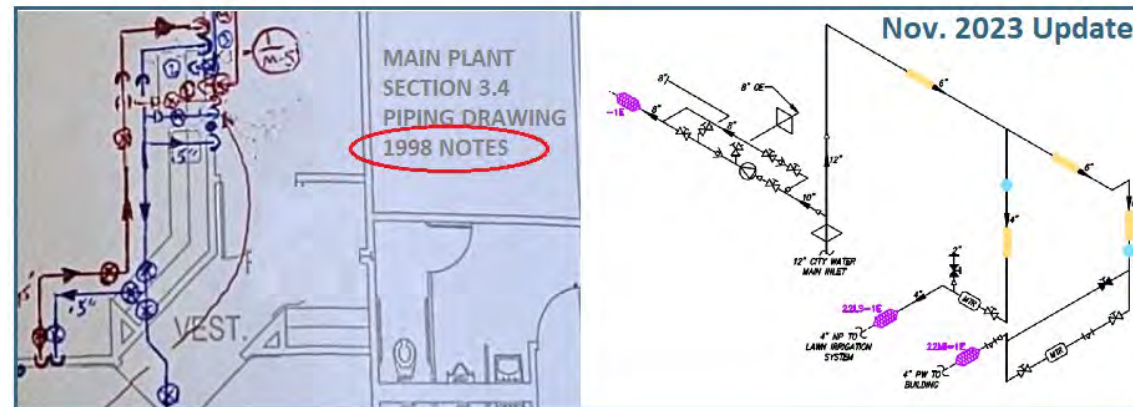
Addressing Out of Date Hospital Piping Schematics



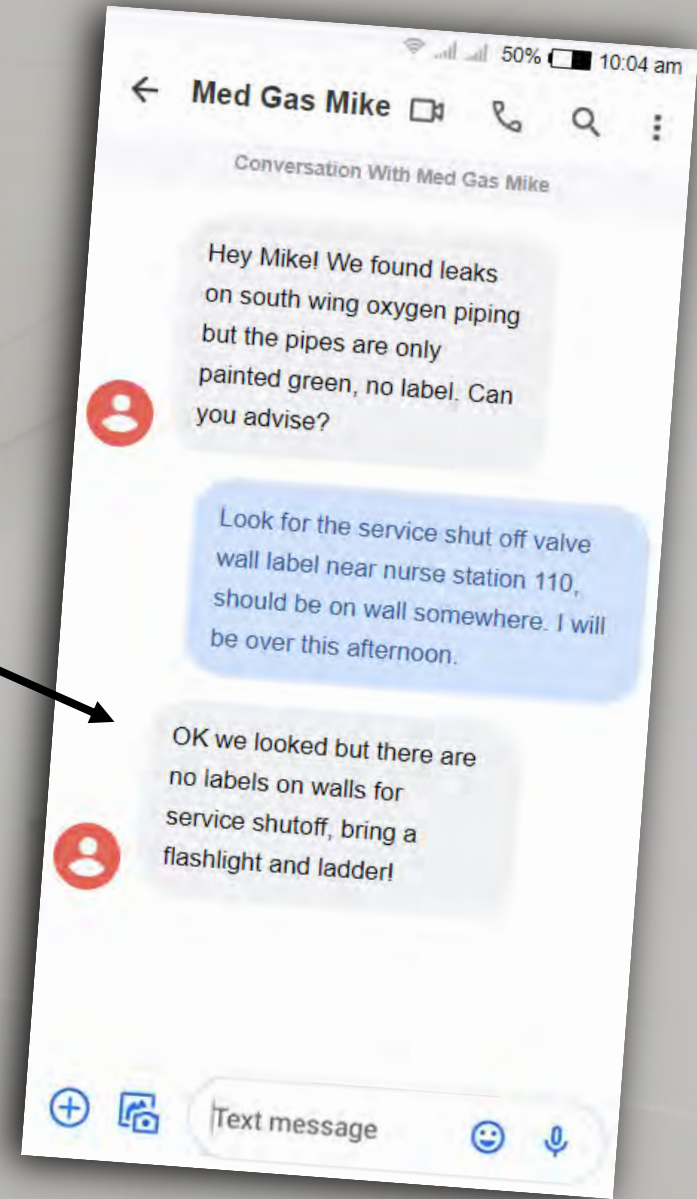
Key Points We Will Cover:



1. **Prioritize** which piping system needs updated first.
2. **Redefine** how your facility will utilize reliable piping schematics.
3. **Value of intel** found when updating schematics.
4. **Cost reduction**, compliance and safety improvement examples

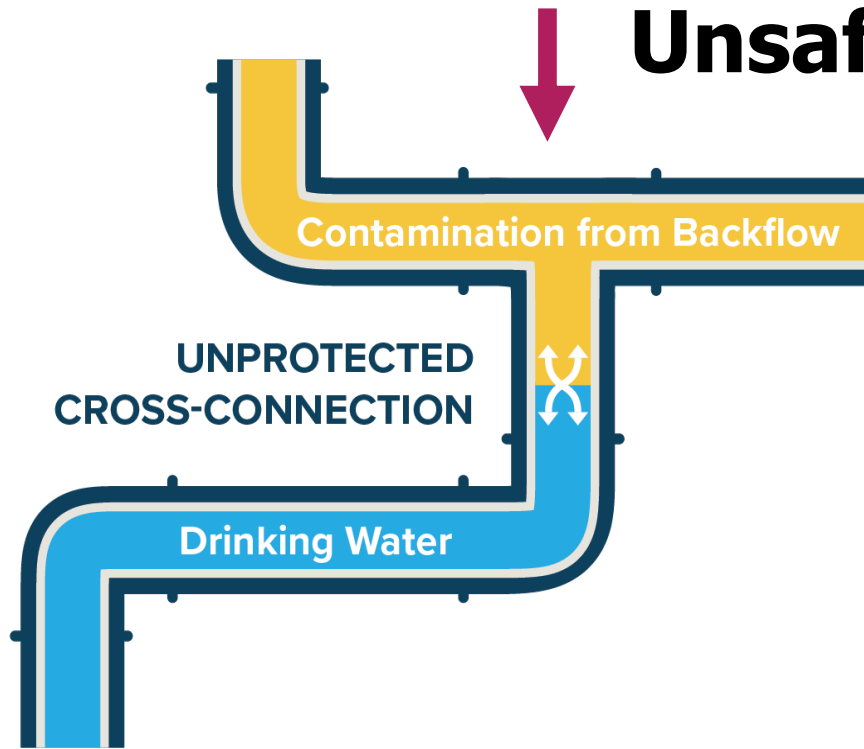


“...no labels on wall for service shutoff, bring a flashlight and ladder!”

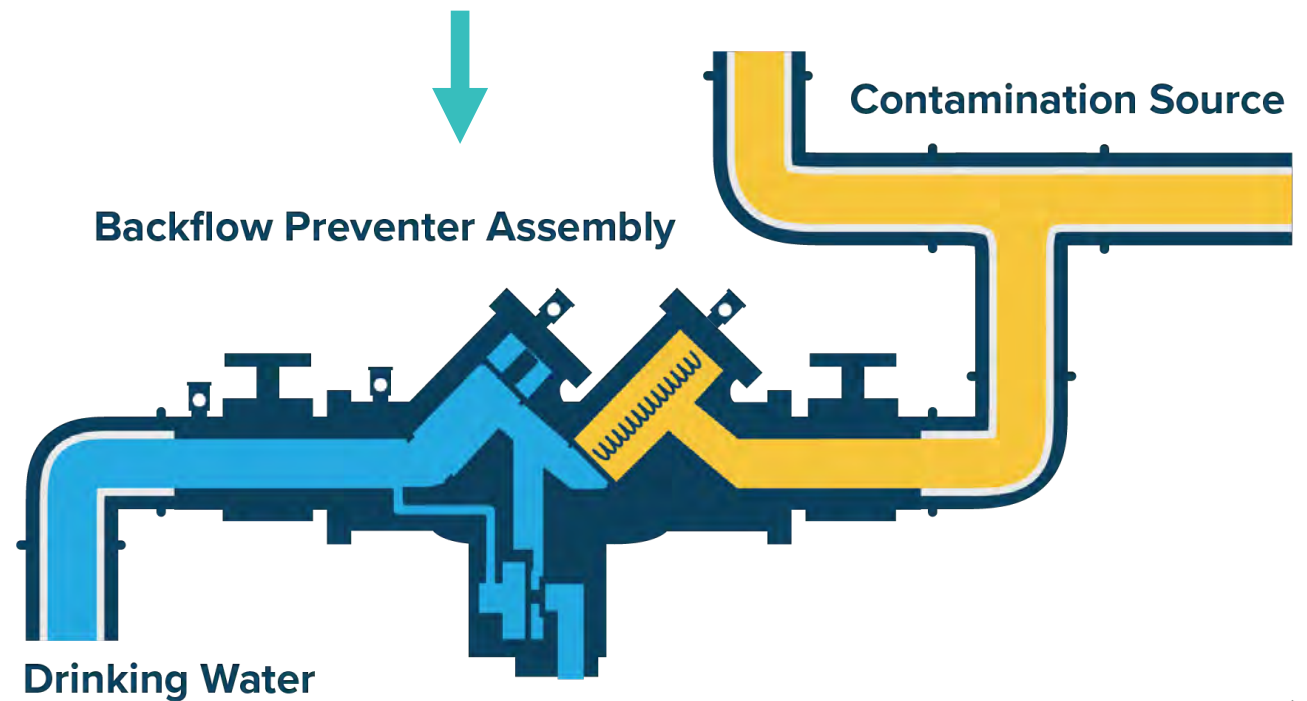


Hazard Detection Scenario:

Unsafe Cross-Connections



Protected, Safe



Hazard Detection Scenario:

- Unsafe cross-connection to Potable Water
- Medical facility built in 1993
- 27 additional cross-connections
- Facility averted potential contamination

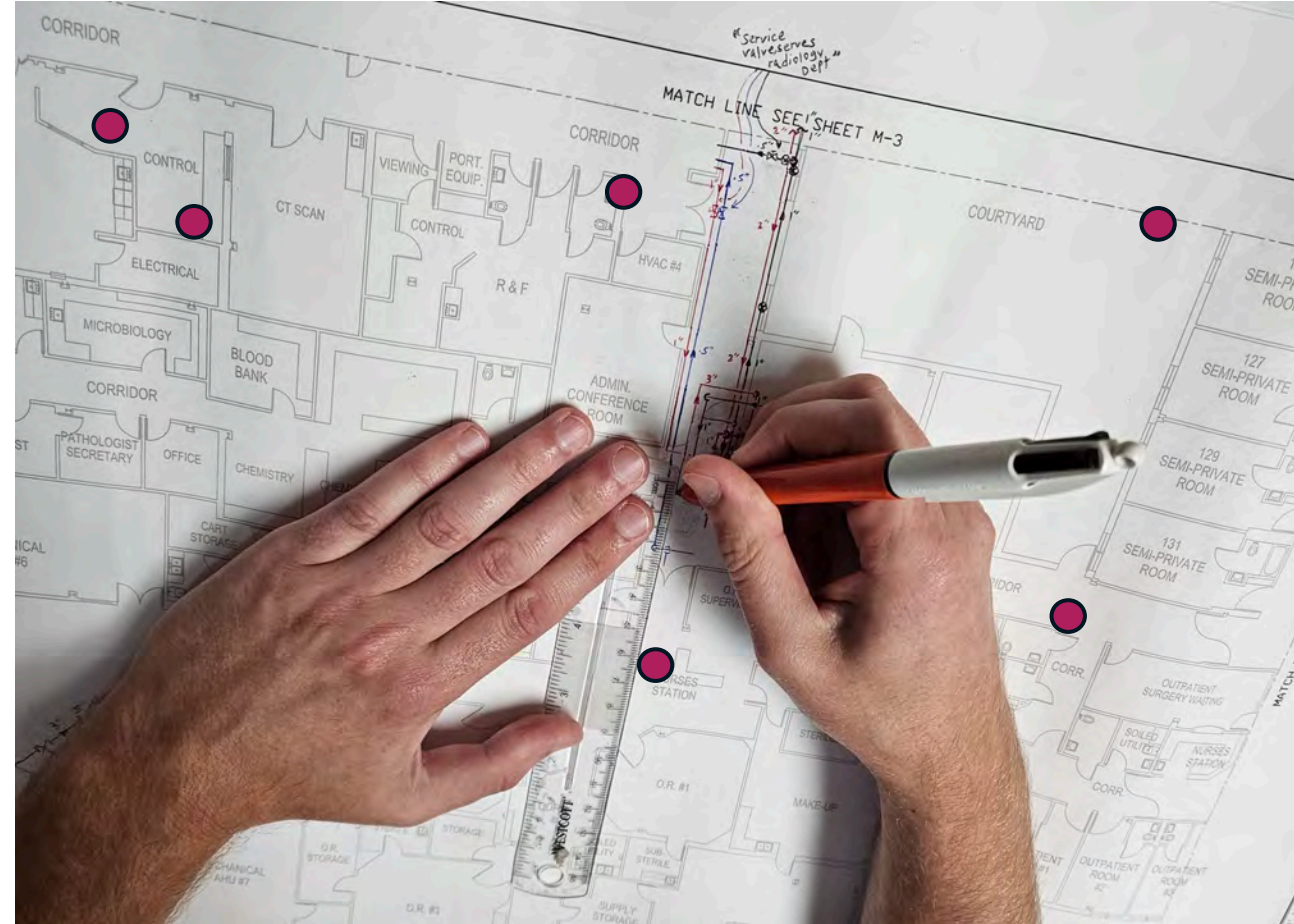
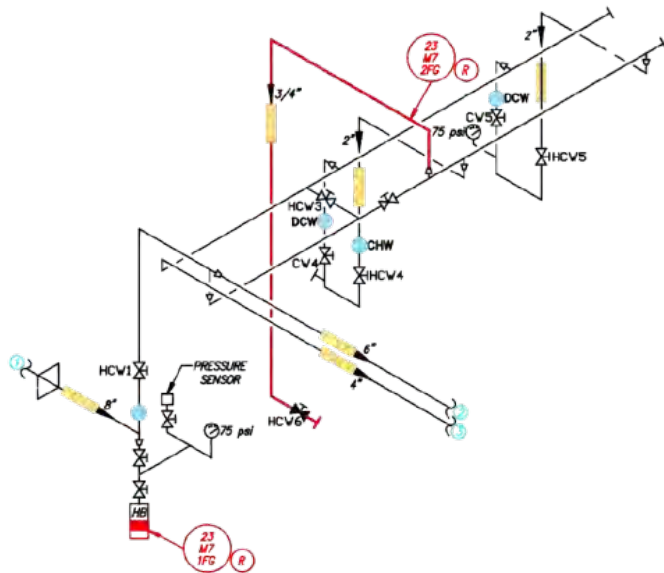
-Wrong type of backflow preventer
-Leaking indicates malfunction
-False sense of protection

-Replaced by Hospital staff
-Properly protected with Testable Type
-Now on Schematic + Maintenance Log



Surprising Stats

- 15-50 valves per 500 feet of hospital water piping
- 20% of valve locations are unknown



Prioritize Which System First

Potable Water - Medical Gas – Chilled Water – Other?

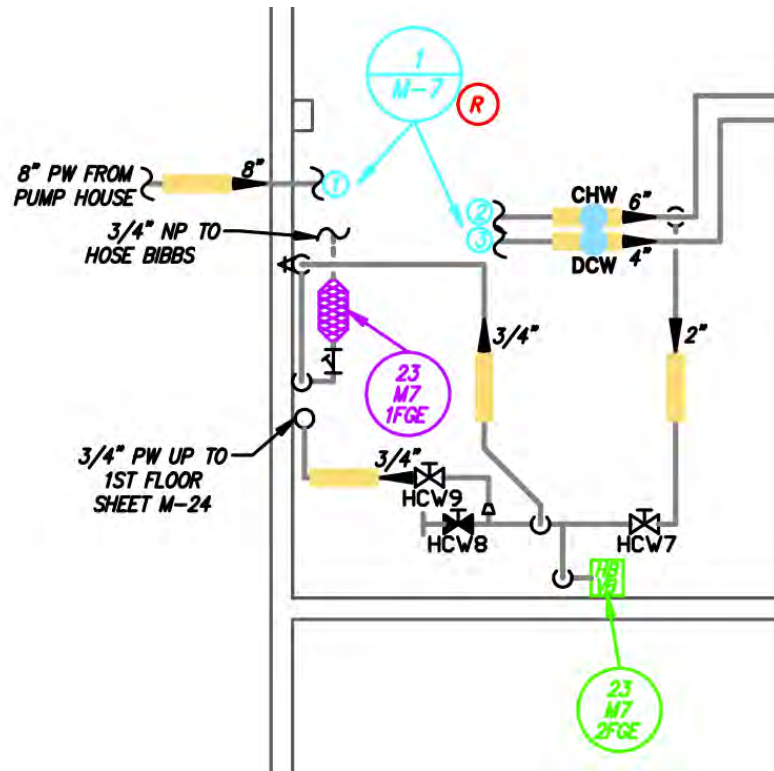
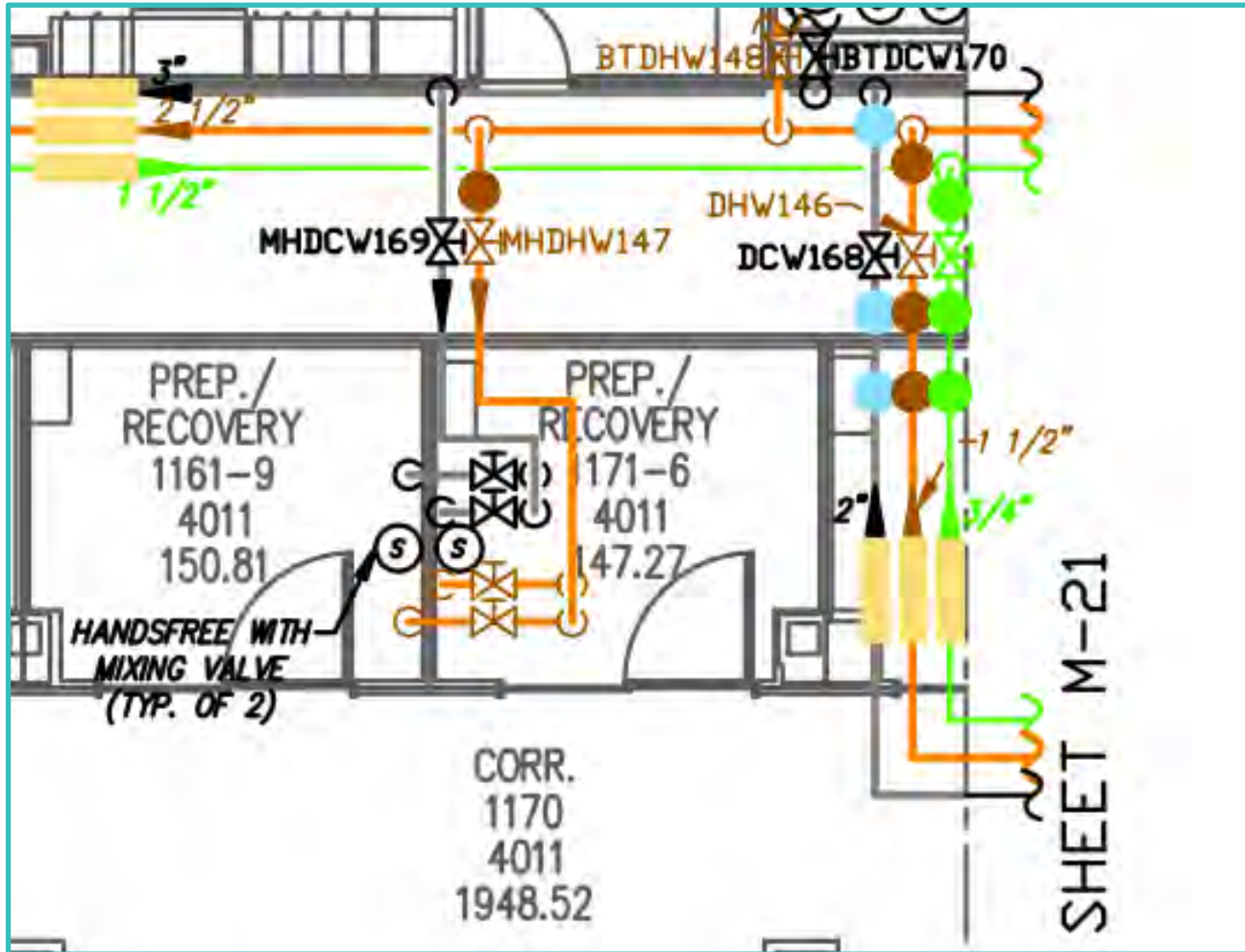


Fig 1. Building Containment - protects upstream public water supply from building domestic water and fire protection water (Not Organization Facility).

Prioritize Which System First

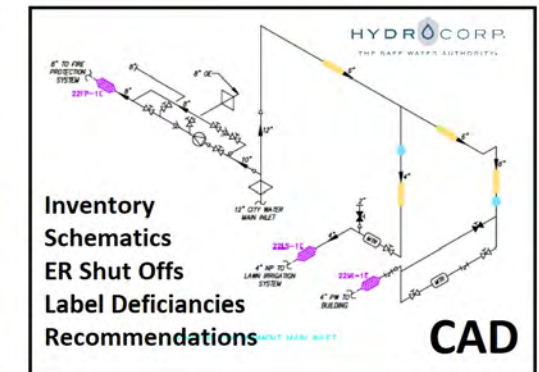


- Color Coded
- System Flow Directions
- Existing/Missing Label Locations
- Valve Tag Reference, Labeling
- Pipe Size
- Room Number/Location
- Customizable Findings

Prioritize Which System First

Create the Path to Reliable Piping Schematics

- Visual onsite survey
- Utilizing existing drawings/legacy knowledge
- Captures existing conditions

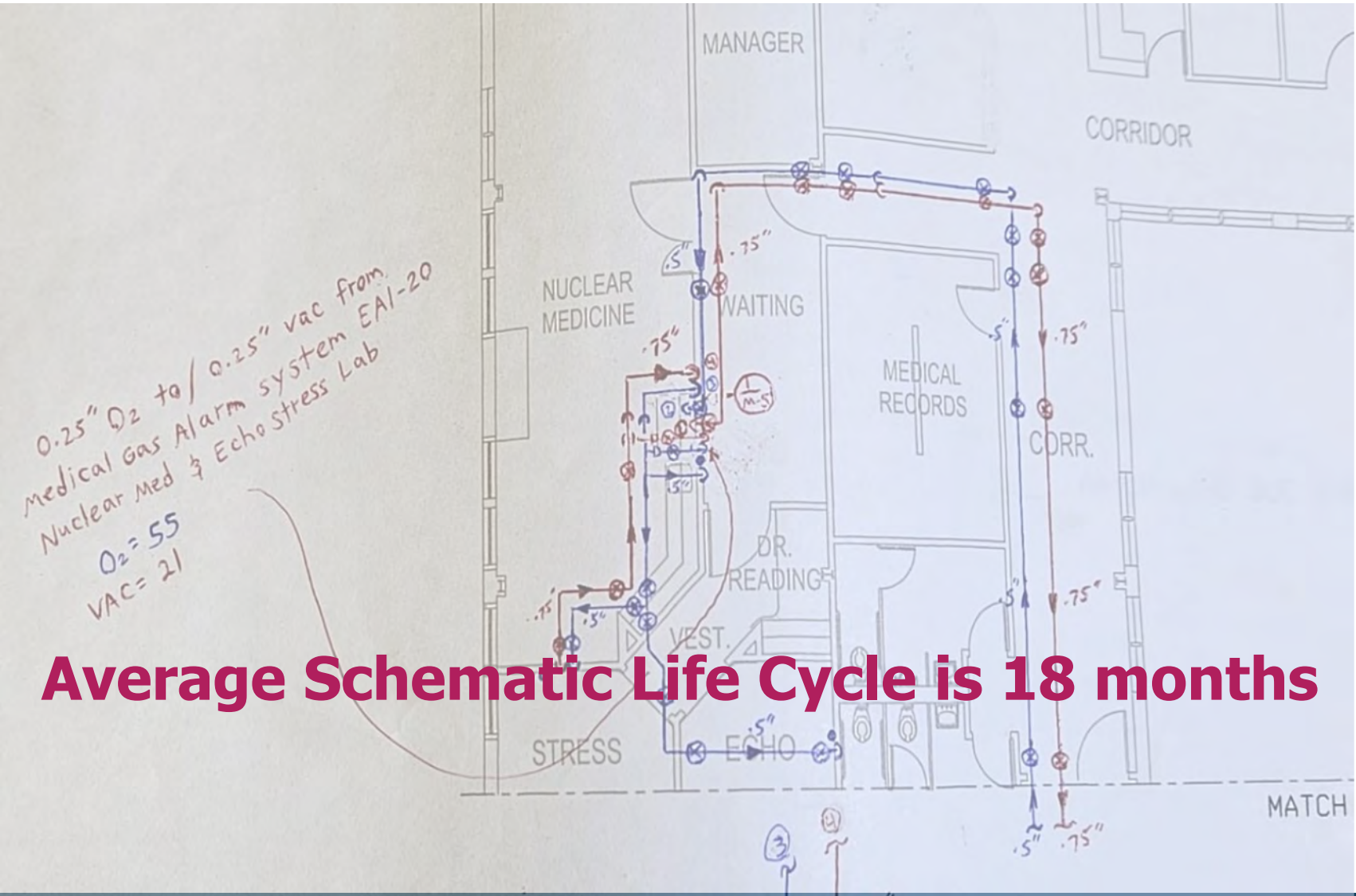


Redefining Current Schematics



“We learned 4 departments routinely needed trustworthy schematics to operate efficiently.”

Redefining Current Schematics



Average Schematic Life Cycle is 18 months

Last Update?

Complete?

Accessible?

Reliable?

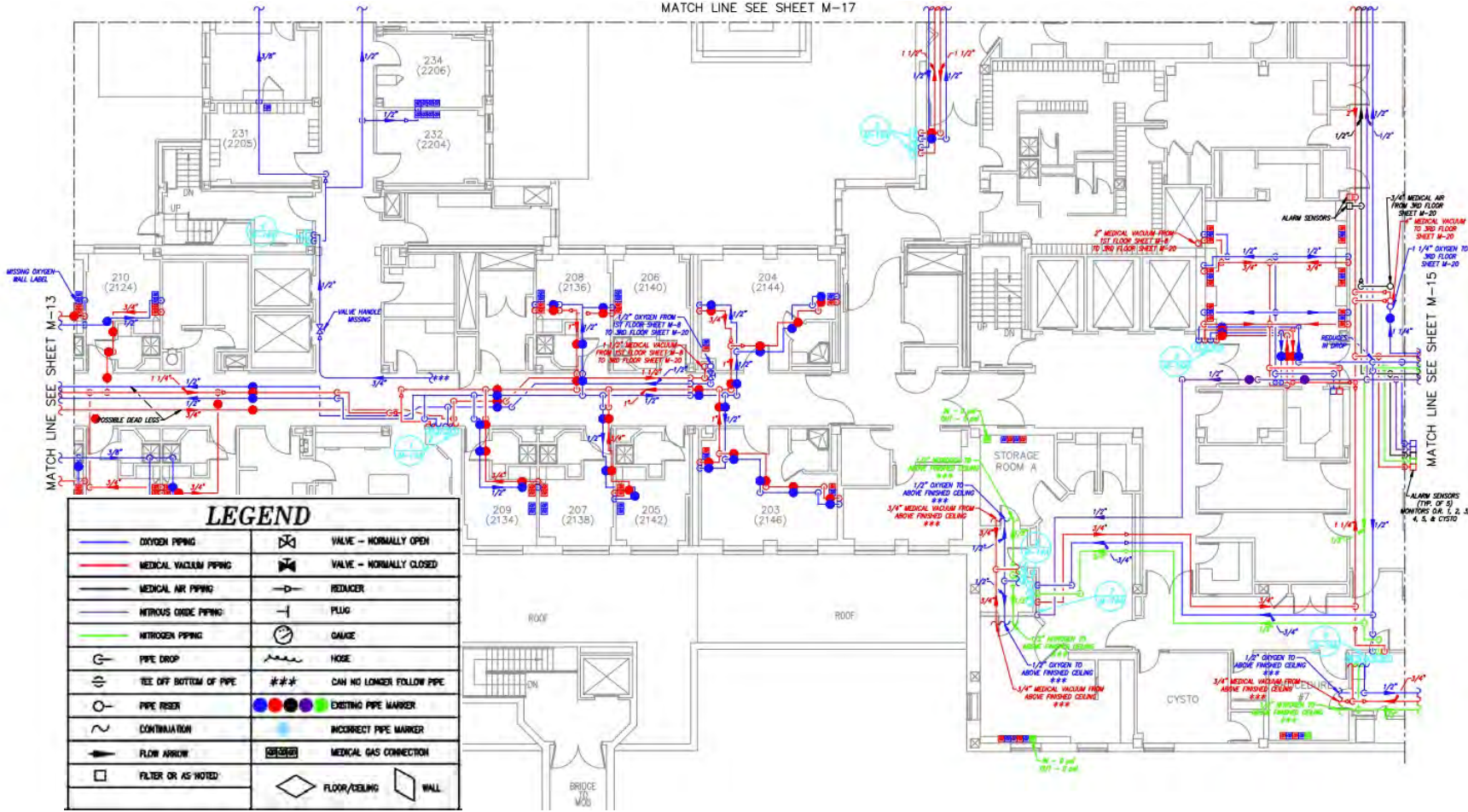


Value of Intel From Periodic Surveying

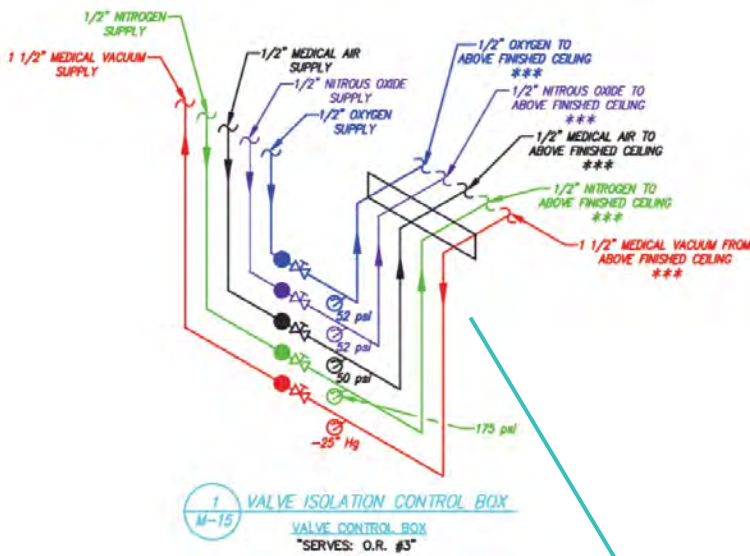
“During the piping survey process, the team gathered critical legacy knowledge about the system before he retired.”



Cost Reduction, Compliance, Safety



“The intel captured, and clear roadmap of piping, radically changed how we maintain the building.”



REQUIREMENTS LIST Sorted by Drawing and I.D. Number

Drw. #	Dev.Type	Size	PT	I.D.#	Location Description and Remarks
M-04	REMOVE	1	I	23M4-5FG	Piping not in use - disconnect and cap
M-04	HBVB	0.75	I	23M4-6FG	Hose bibb
M-08	LABEL	0.75	I	23M8-1FG	Non-potable water piping mislabeled as "DOMESTIC COLD WATER" in multiple locations - relabel as "NON-POTABLE WATER"
M-08	REMOVE	3	I	23M8-2FG	Piping not in use - disconnect and cap
M-09	REMOVE	1	I	23M9-5FG	Domestic hot water piping not in use - disconnect and cap
M-09A	RPBP	1	I	23M9A-1FG	R.O. water make-up - replaces inappropriate existing DCV I.D. #23M9A-1FGE



The Data Indicates a Need for Reliability

Top 5 building services equipment projects being replaced and upgraded by hospitals in the next year are:

- 12% Plumbing
- 14% Chillers
- 14% Electrical
- 15% Elevators
- 24% Air handlers



Source: 2024 ASHE Hospital Construction Survey

Piping Schematics Will Enable Efficiency

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- 9.0 APPENDIX B
 - FIXTURE VACUUM BREAKER DRAWING AND TYPICAL INSTALLATION DRAWINGS

Prepared for:

Organization Name: Hospital

**POTABLE WATER PIPING SURVEY/
CROSS CONNECTION CONTROL SURVEY REPORT**

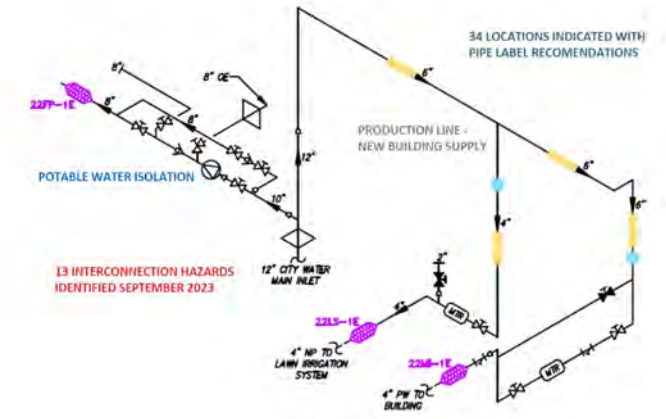
for

Organization Name Hospital

Final Site Review: March 15th, 2024
Final Generation: May 10th, 2024

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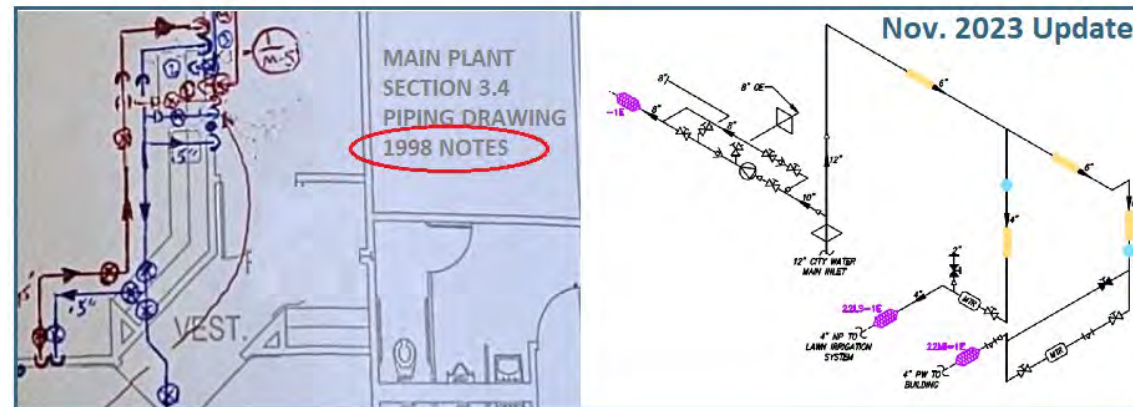
Sorted by Drawing and I.D. Number

Sorted by Drawing and I.D. Number					REQUIREMENTS LIST
Drw. #	Dev.Type	Size	PT	I.D.#	Location Description and Remarks
M-27	RPBP	1.5	I	23M27-2	R.O. water make-up for boiler and storage tanks
M-27	RPBP	2	I	23M27-3	Back-up "SERVICE WATER" feed to MOB2 and walk-in coolers in kitchen - install RPBP or disconnect and cap
M-27	LABEL	2	I	23M27-4	Non-potable water piping mislabeled as "COLD WATER" in multiple locations - relabel as "NON-POTABLE WATER"
M-27A	LABEL	4	I	23M27A-4	Piping mislabeled as "DOMESTIC HOT WATER" in multiple locations - relabel as "POTABLE WATER" or "DOMESTIC COLD WATER"
M-27A	REMOVE	0.75	I	23M27A-5	Remove hose bibb on test cock #1 of existing RPBP I.D. #23M27-1E
M-27A	REMOVE	0.375	I	23M27A-6	Piping not in use - disconnect and cap



Recap

1. **Prioritize** which piping system needs updated first.
2. **Redefine** how your facility will utilize reliable piping schematics.
3. **Value of intel** found when updating schematics.
4. **Cost reduction**, compliance and safety improvement examples



Reliable Piping Schematic Anatomy

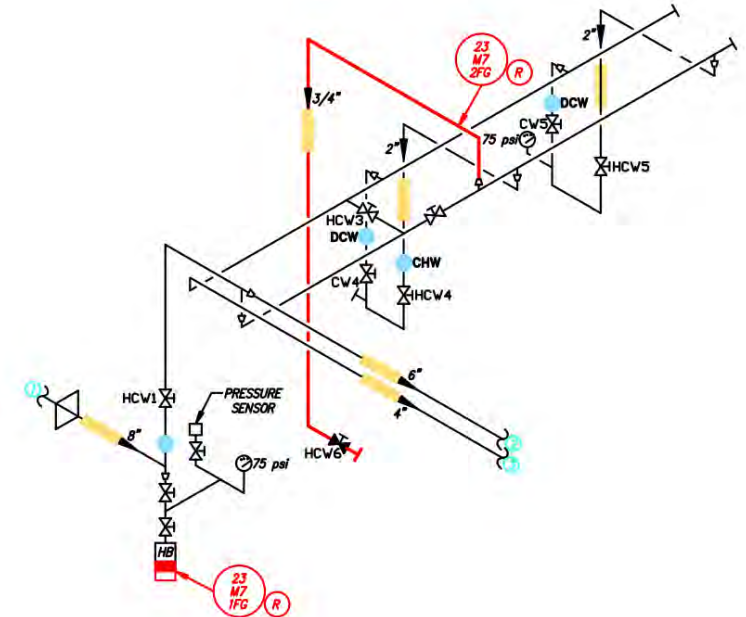
- **Pipes:** Material, diameter, and insulation status are noted, along with any signs of wear or corrosion.



RPBP in Common Supply - Medical Vacuum Pumps.



RPBP-Supplies to Irrigation System and Dec. Fountain.



PHONES ON - RINGER OFF

Join at menti.com

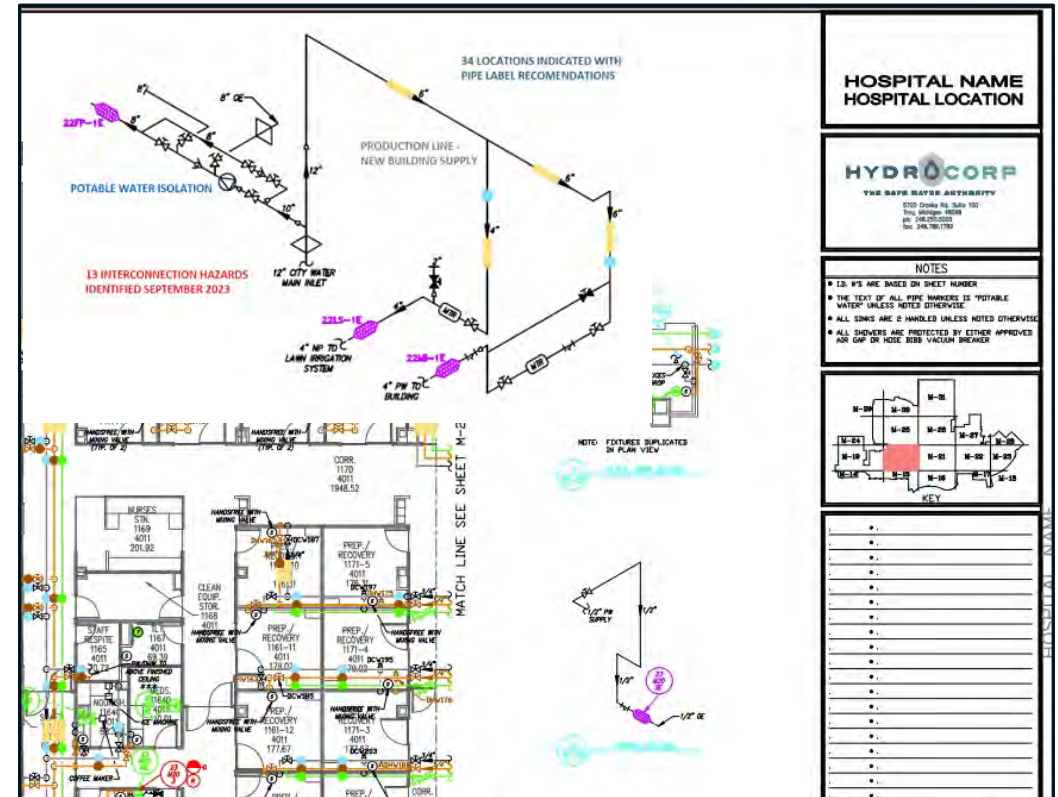
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A hand is holding a smartphone. The screen of the phone displays the text 'menti.com' at the top, followed by 'Code:' and the number '35 98 994'. The phone is held against a background of a blurred indoor setting, possibly a conference room or meeting space. The phone's screen is the primary focus, showing the Menti poll information.

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Key Takeaway

-Reliable piping schematics are necessary, justifiable, and attainable.



Jim Fout

Let's connect on :

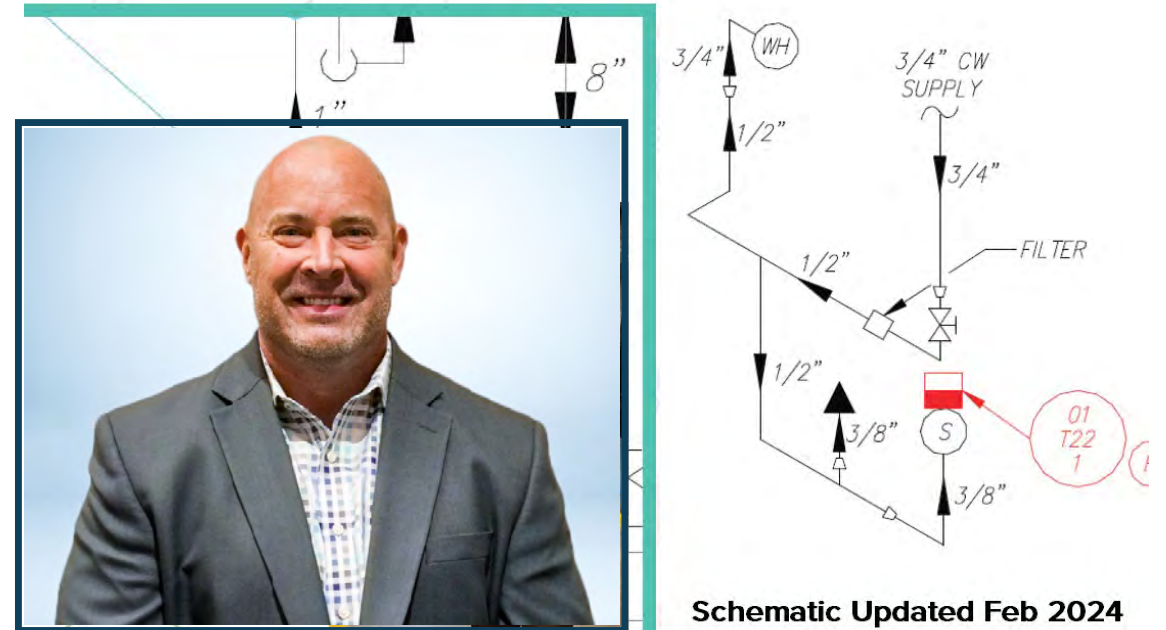


Since 1983

Visual Surveying of Piping Systems

Piping Schematics for Any System

Enable cost effective planning/maintenance



CONDENSATE PIPING		REDUCER		INSULATION
MILL WATER PIPING		PIPE DROP		CONTINUATION
NATURAL GAS PIPING		TEE OFF BOTTOM OF PIPE		VALVE - NORMAL