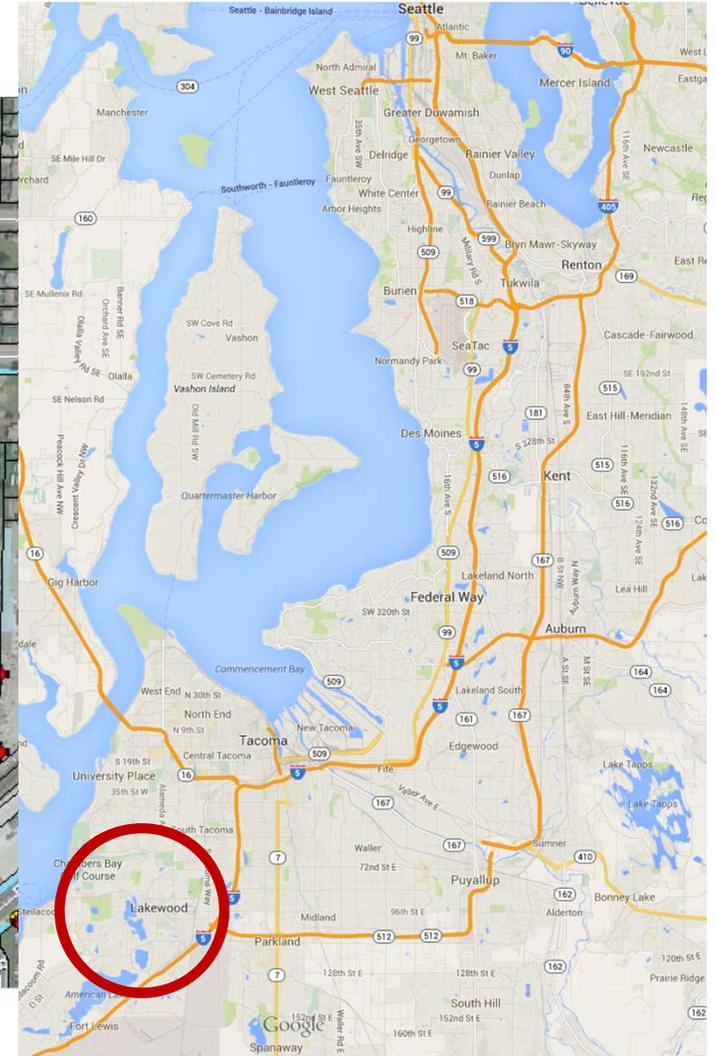
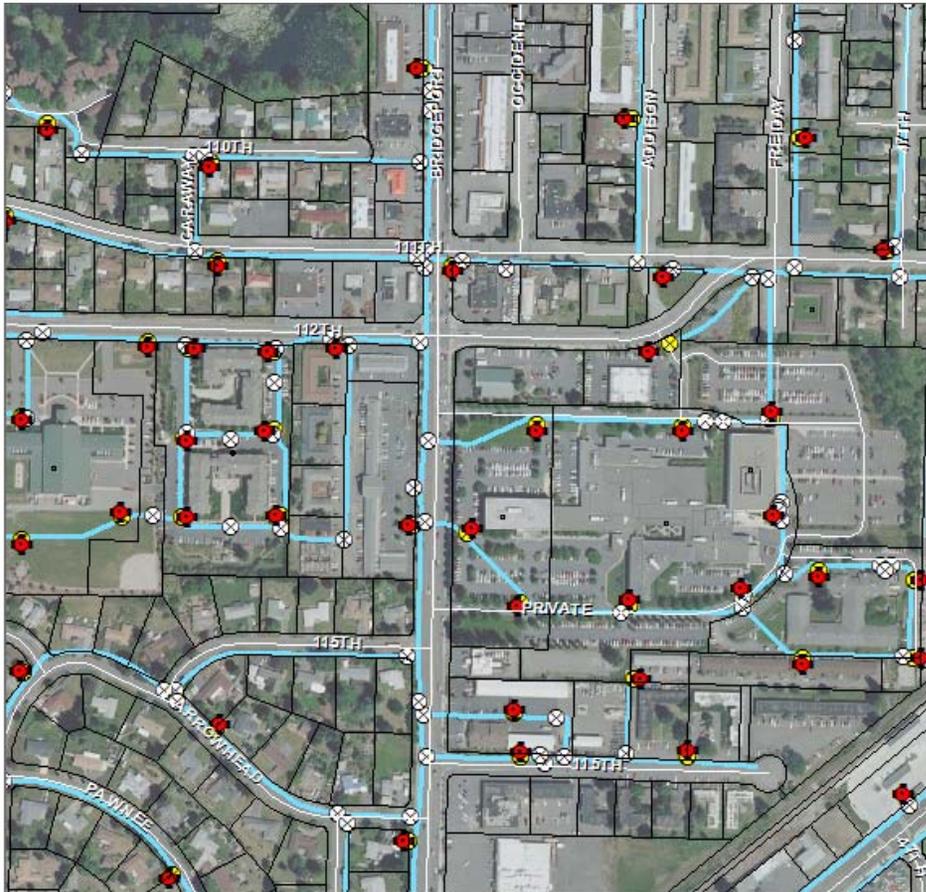


IMPROVING SYSTEM MANAGEMENT THROUGH DEVELOPMENT OF A GIS

Presented by:
Marshall Meyer, P.E.
(WA)



Lakewood Water District



MSA

Project Vision

- **Short-term**

- Reduce Cost
- Improve Accuracy

- **Long-term**

- Accuracy
- Other Data Sources
- Access

GIS Database Implementation

Conceptual Design

Evaluate

- Data Sources
- Data Condition
- Data Integration
- Geometric Network

Design

- Layers
- Attributes
- Attribute Values

Physical Design

Build

- Feature Classes
- Domains
- Relationships
- Geometric Network

Test

- Load Features
- Load Attributes
- Evaluate workflows

Deploy

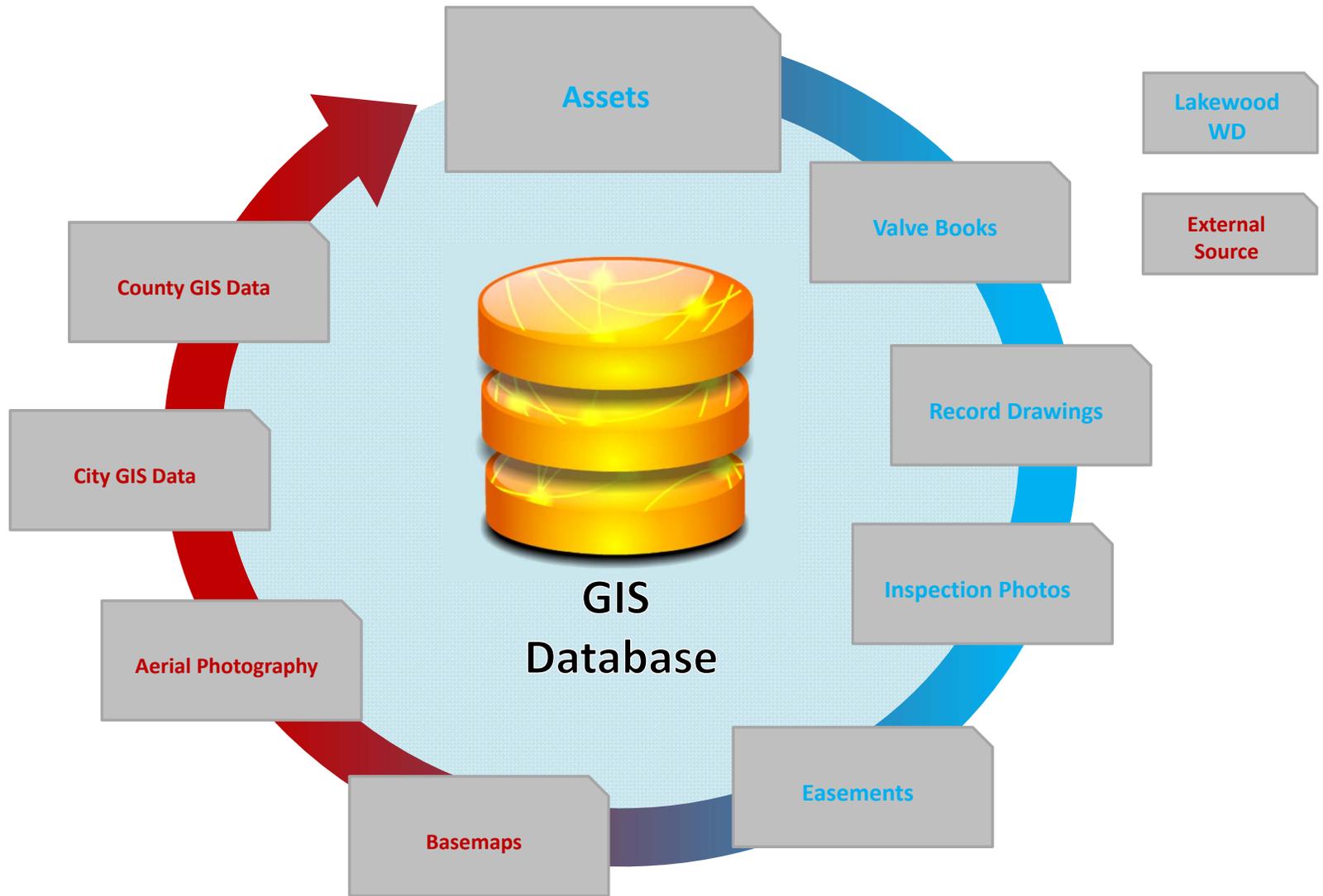
Conversion

- Load Features
- Standardize attributes
- Enforce GN rules
- Update

Use

- Office
- Field
- Engineering

Data Sources

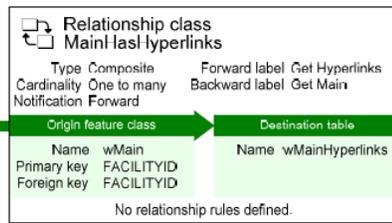


Database Driven Design

Geodatabase Feature Class (Layer):
wMain

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length
OBJECTID	Object ID						
SHAPE	Geometry	Yes					
FACILITYID	String	Yes					20
INSTALLDATE	Date	Yes			0	0	8
MATERIAL	String	Yes		wMaterial			20
DIAMETER	Double	Yes		wMainDistributionDiameter	0	0	
OWNEDBY	String	Yes	PUD	AssetManager			30
LASTUPDATE	Date	Yes			0	0	8
LASTEDITOR	String	Yes	PUD-CR	LastEditor			50
PRESSUREZONE	String	Yes		PressureZone			50
NOTES	String	Yes					255
ROUGHNESS	Long integer	Yes		wMainRoughness	0		
CROWNDEPTH	Float	Yes			0	0	
CONDITION	String	Yes		Condition			20
LEAKS	Long integer	Yes			0		
LIFECYCLESTATUS	String	Yes		LifeCycleStatus			10
SOURCE	String	Yes		DataSource			50
ENABLED	Short integer	Yes	1	EnabledDomain	0		
SHAPE_Length	Double	Yes			0	0	

Geometry ID - Calculated automatically by GIS
 Geometry type - Calculated automatically by GIS
 Master unique ID
 Date of installation
 Pipe Material
 Pipe Diameter
 Owner agency
 Date feature was last updated
 Editor of last change to feature
 Pressure Zone that pipe serves
 General notes
 Hazen Williams C Value (assigned by Engineering)
 Depth to top of pipe
 Condition of pipe
 Number of Pipes Reported on pipe segment
 Life Cycle Status of asset
 Typically will be CAD, Model or Other
 Enabled if flow is allowed - Geometric Network
 Geometry length calculated automatically by GIS



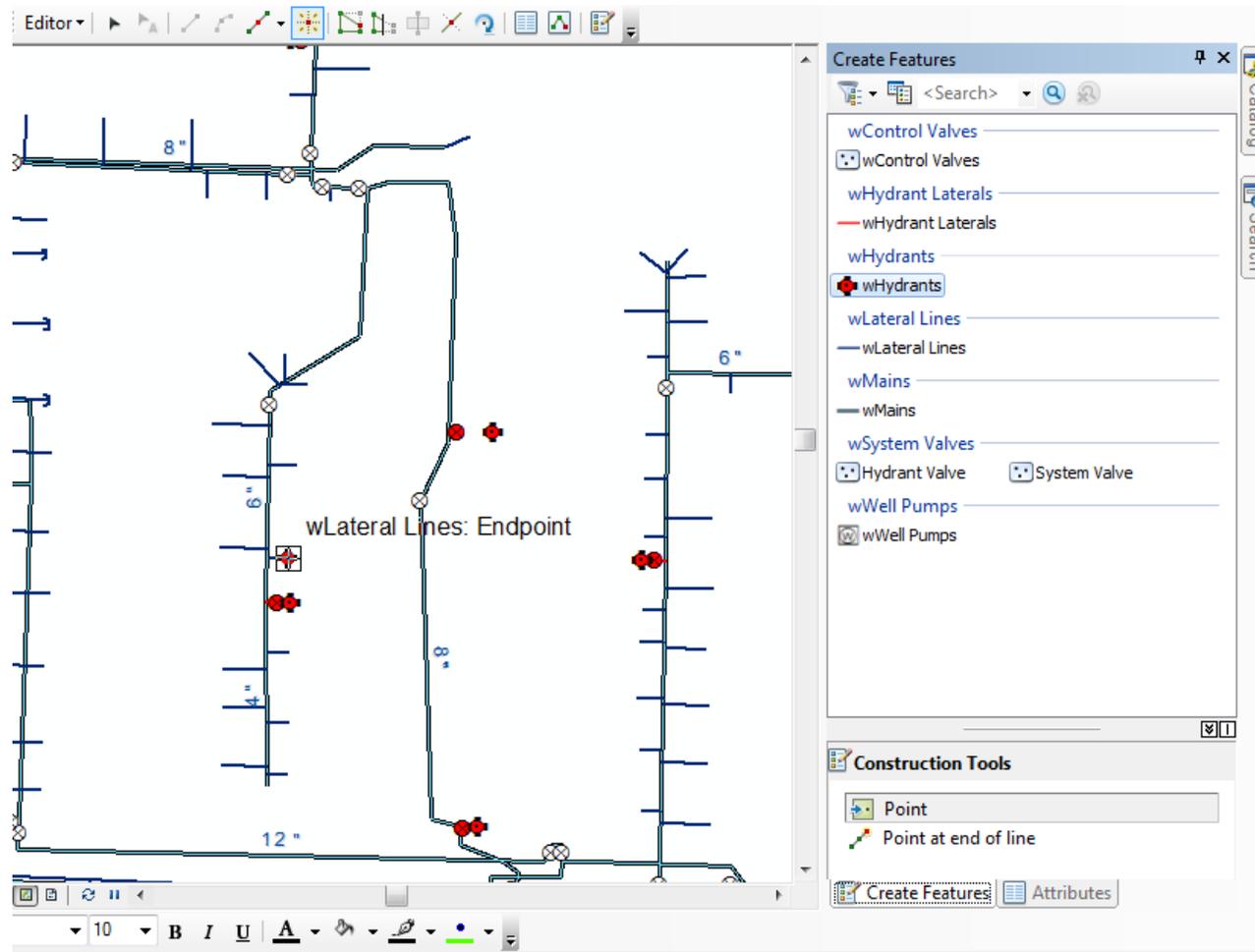
Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length
OBJECTID	Object ID						
FACILITYID	String	Yes					20
HYPERLINK	String	Yes					255
Description	String	Yes					50

Table which allows for hyperlinking to related documents for Main line features

Unique ID - Calculated automatically by GIS
 ID used to match to records to feature class
 File system path of document
 Description of associated document

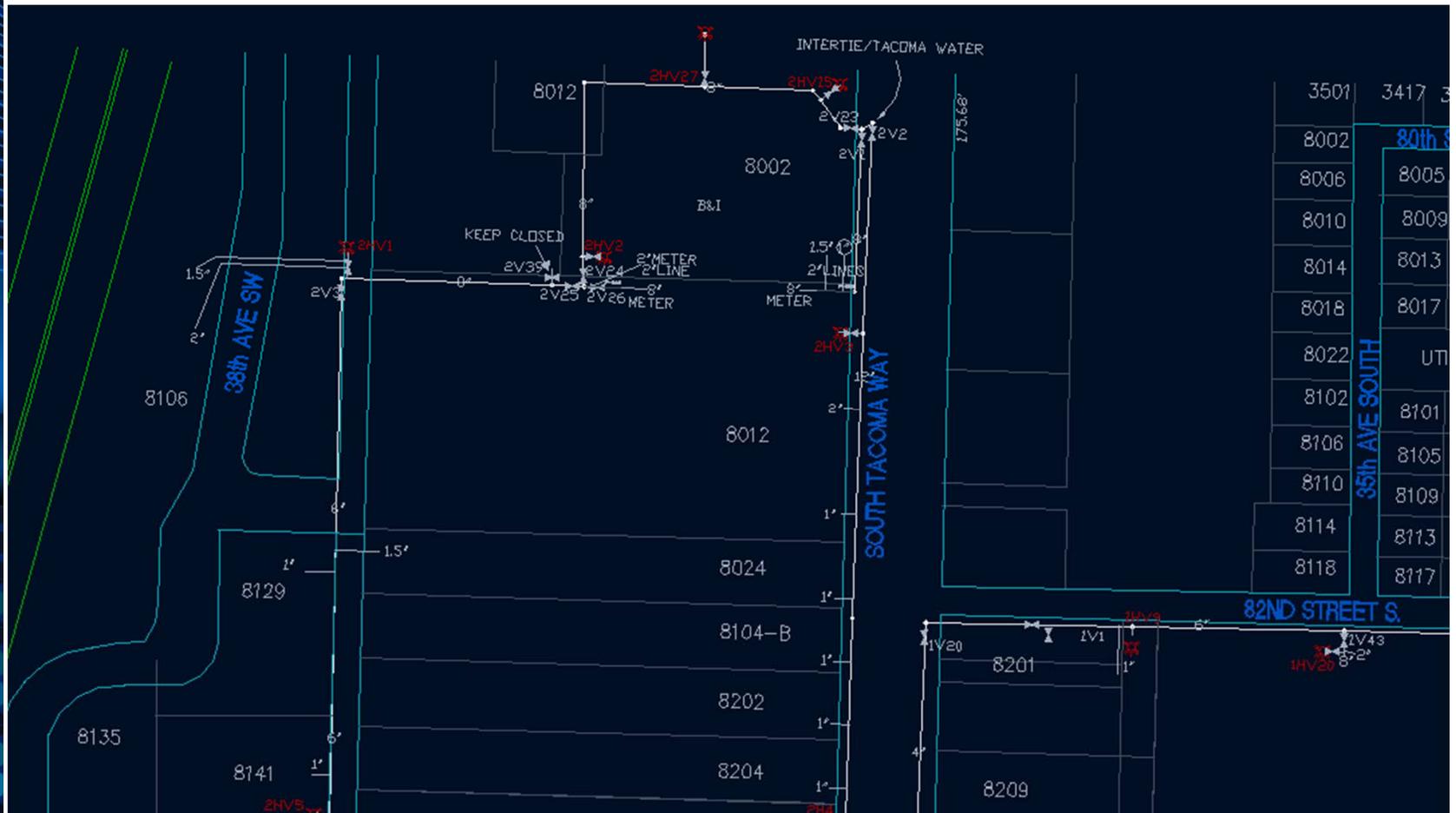


Geometric Network



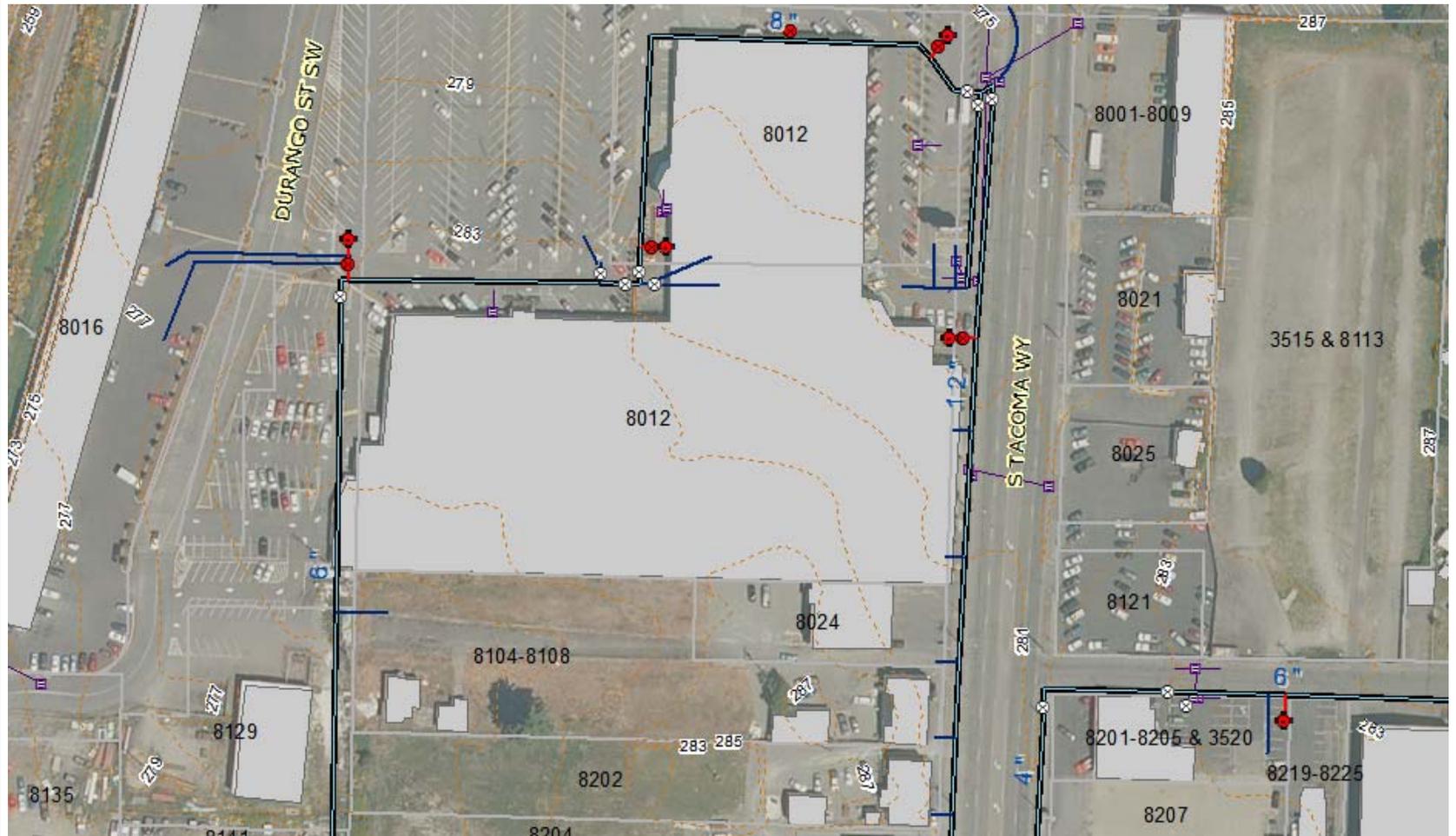
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CAD-Based System

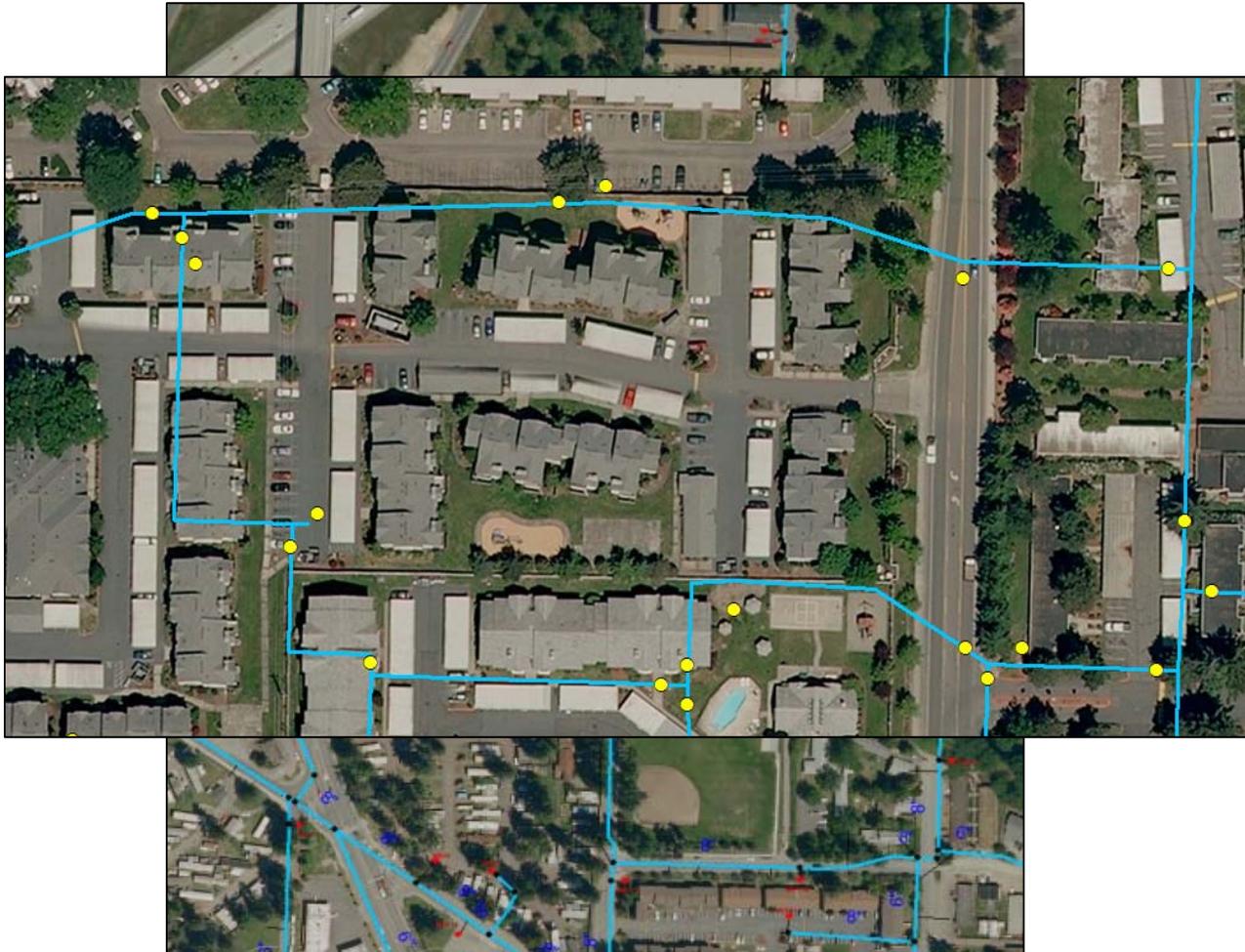


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New GIS

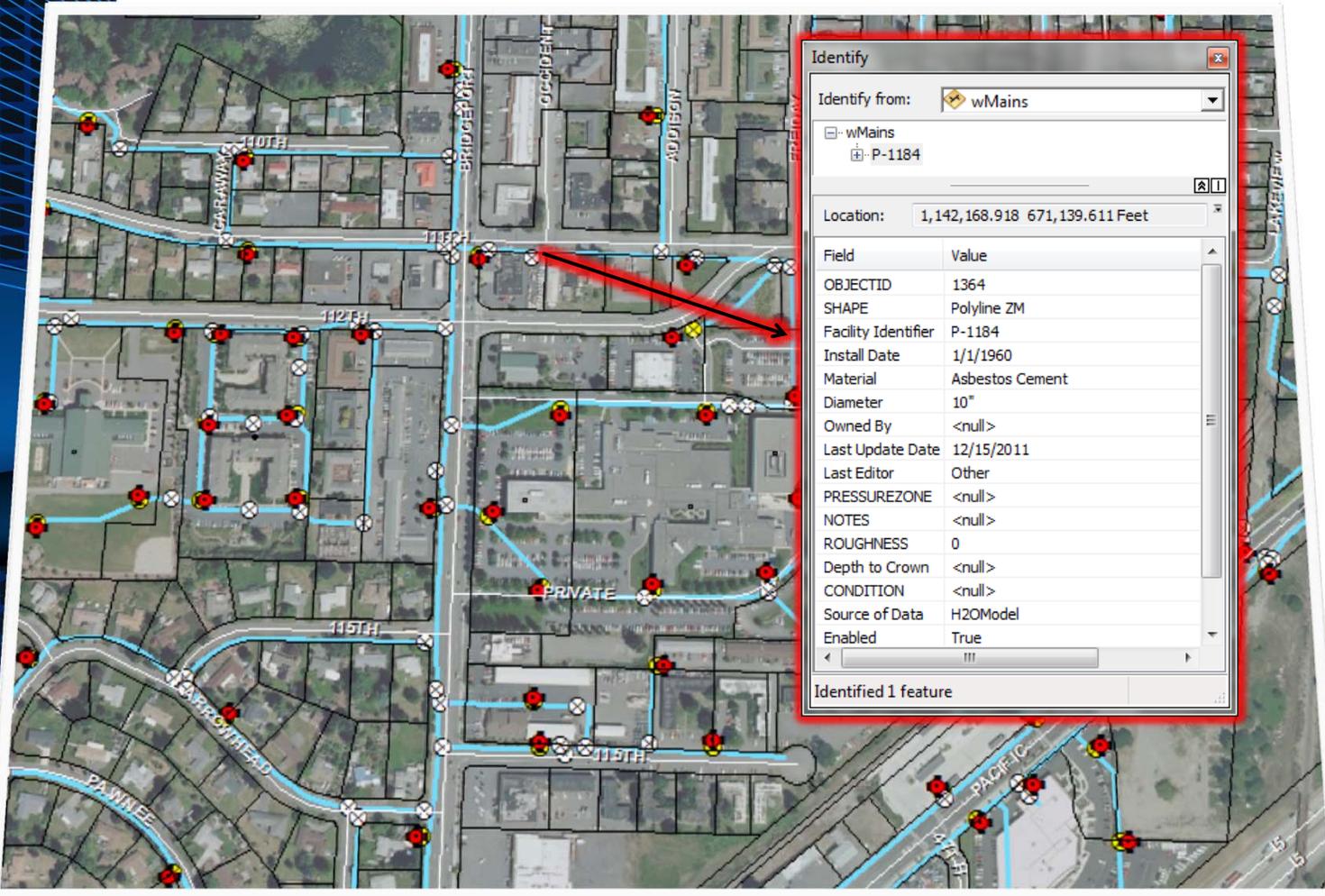


Spatial Accuracy

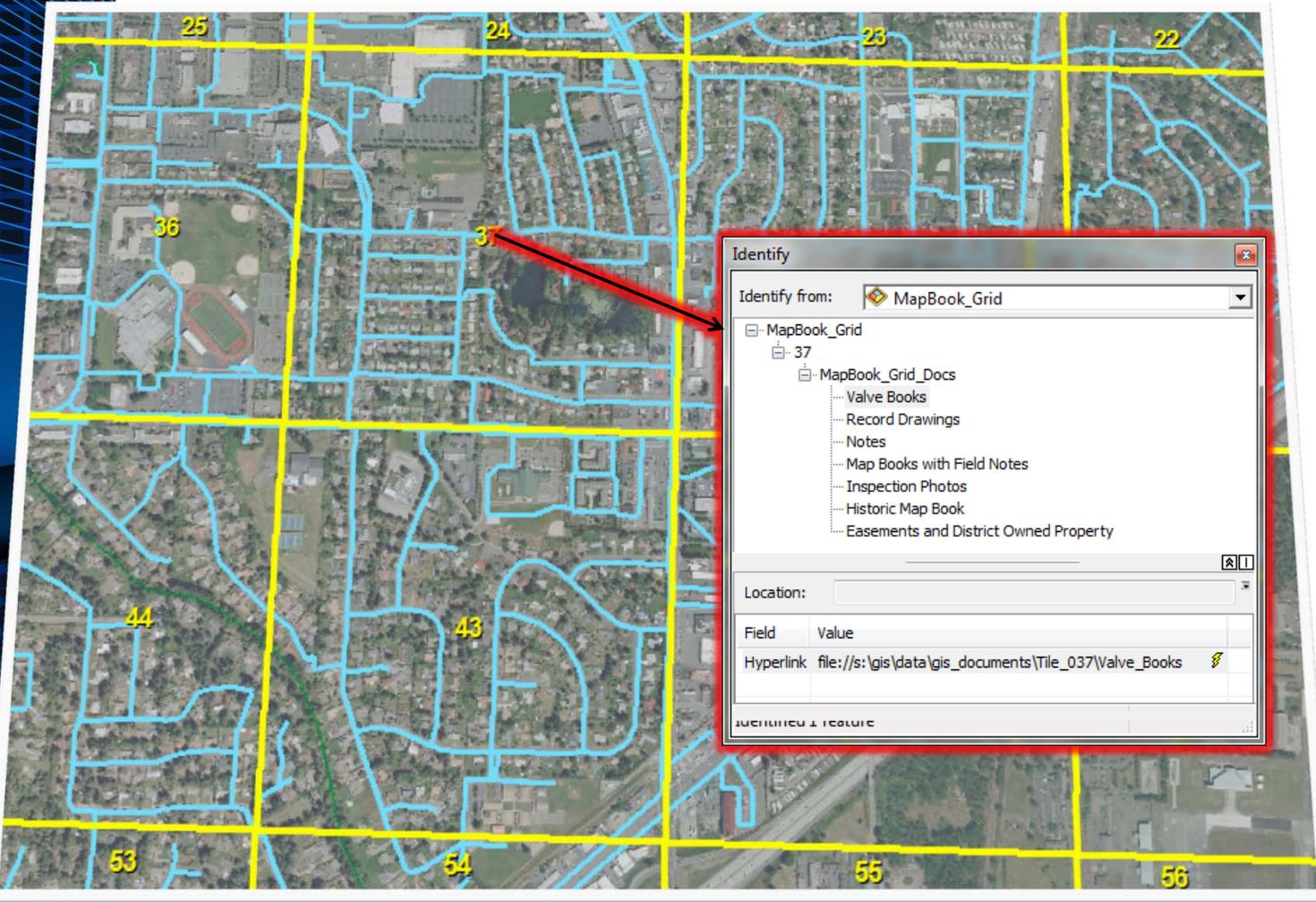


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New GIS Look and Feel



Streamlined Access



Benefits and Value

How is it better

- Access
- Accuracy
- Usability

What savings/improvements are there

- Compatibility
- Ease of Use
- Data from others

Return on investment

- Efficiency
- Find data needed
- Compatible data format
- Reduced mapping work
- Improved and faster customer service

The logo for MSA, consisting of the letters 'MSA' in a bold, white, serif font, positioned in the bottom left corner of the slide. The background of the slide features a blue grid pattern that transitions into a dark blue curved shape at the bottom.

Potential Next Steps for District

GPS

Maps

Record drawing access

Connect to other databases

The logo for MSA (Mississippi State Agency) is located in the bottom left corner of the slide. It consists of the letters "MSA" in a white, serif font, with a horizontal line underneath the letters. The background of the logo is a dark blue grid pattern.

MSA

Questions?

The logo for MSA (Measurement Science Associates) is located in the bottom-left corner of the slide. It features the letters "MSA" in a white, serif font, set against a dark blue background with a grid pattern. The letters are underlined with a thin white line.

MSA