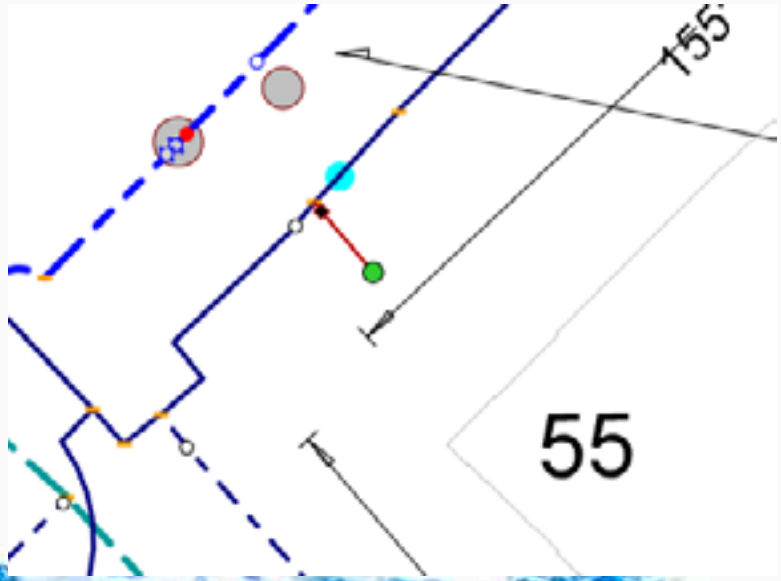
How Denver Water Synced GIS and Work Management

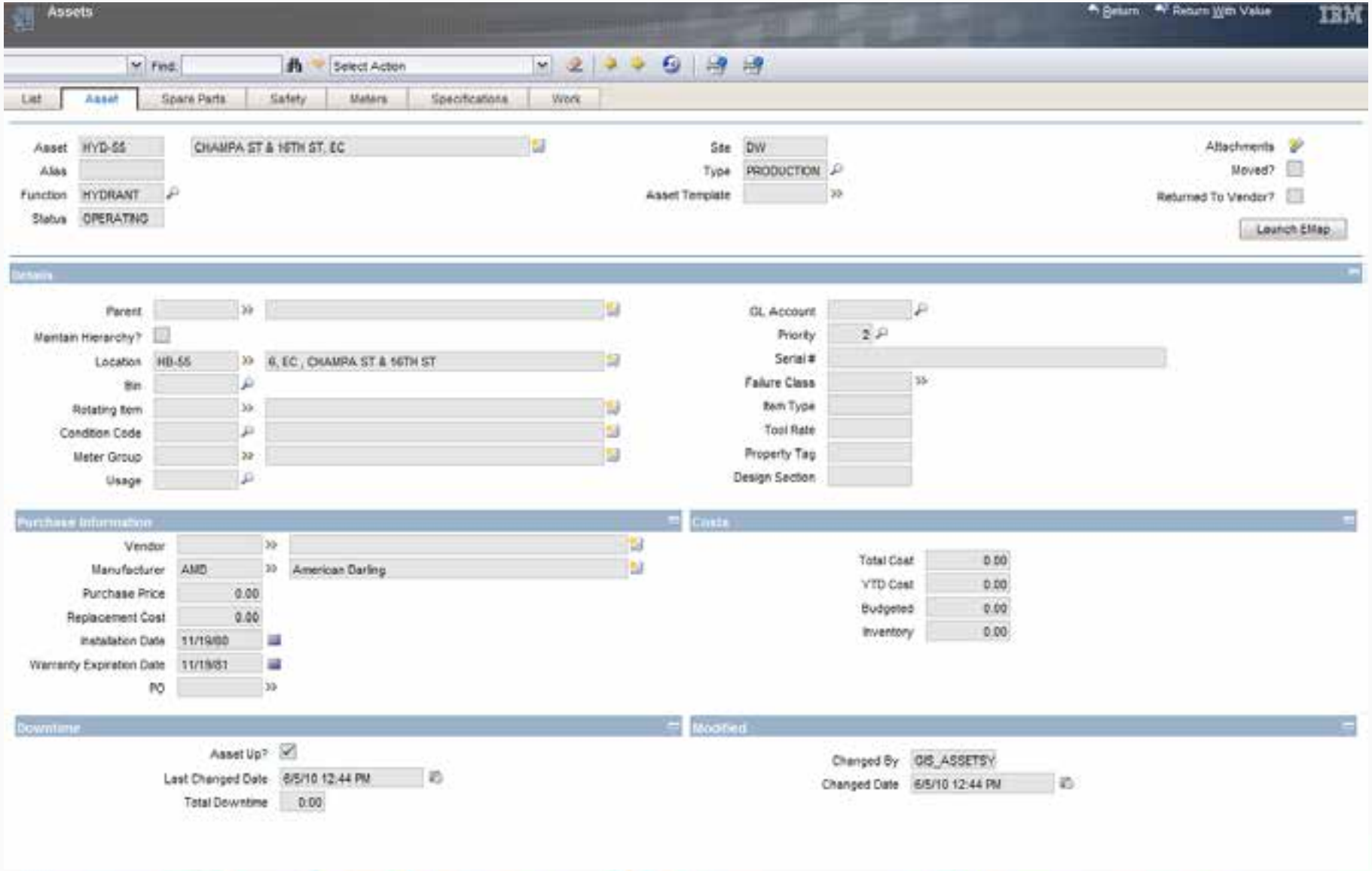
What is Asset Sync?

- **Creates a tie between the spatial representation of an asset to its Work & Maintenance Management System record**

Why did we build it?

- **So everything in the GIS has a corresponding record in Maximo**
- **For example this Fire Hydrant #55**





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Approach

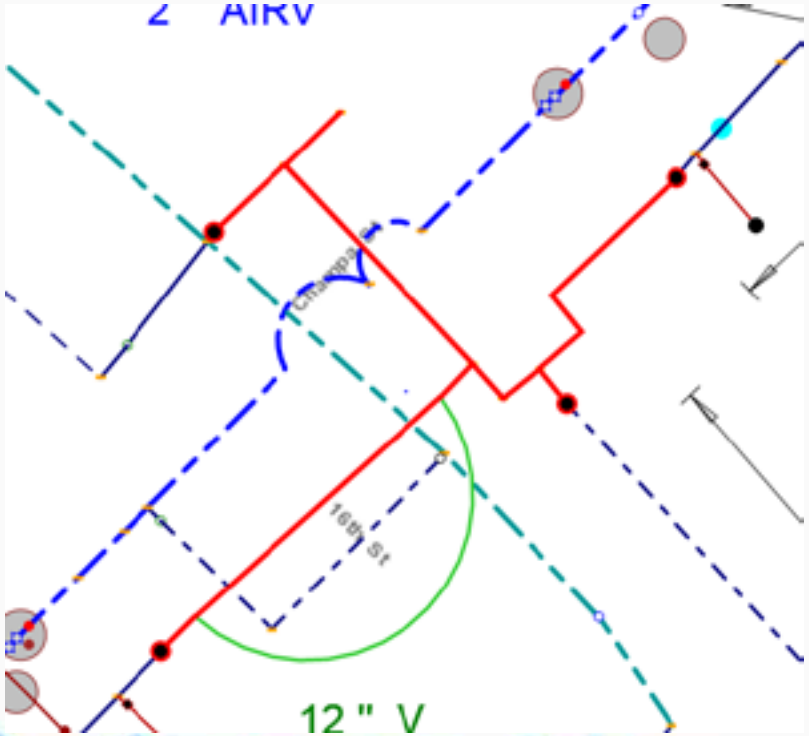
- **Developed sync of Hydrants first**
- **Developed sync of Blow-off as 2nd phase**
- **Water Network project**

Asset Naming

- **Buy-in from Maximo users to utilize a new name**
- **Created a simple structure <Asset Type Prefix>-<Asset Num>**
- **Structure added ‘S’ after prefix**
- **Exceptions**

How to manage Maximo hierarchy?

- **A span is the part of the network between isolation valves – shown as the red segments in this screen shot**



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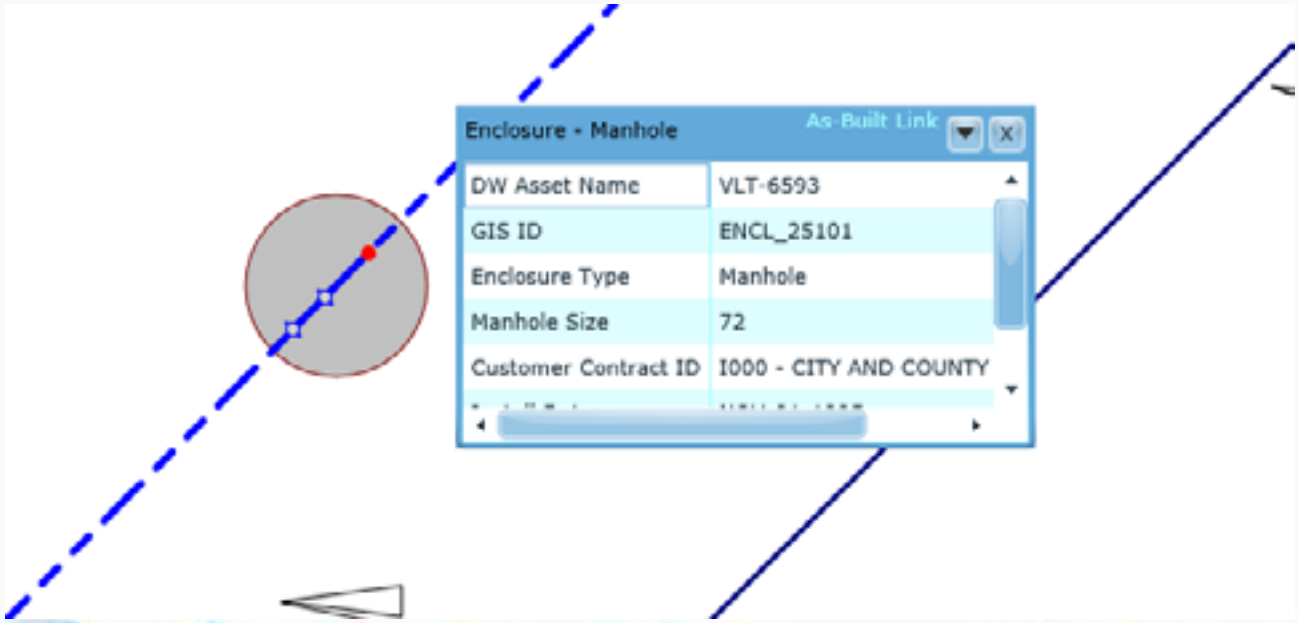
How to manage Maximo hierarchy?

- **A structure contains water assets including collection, treatment, and distribution**



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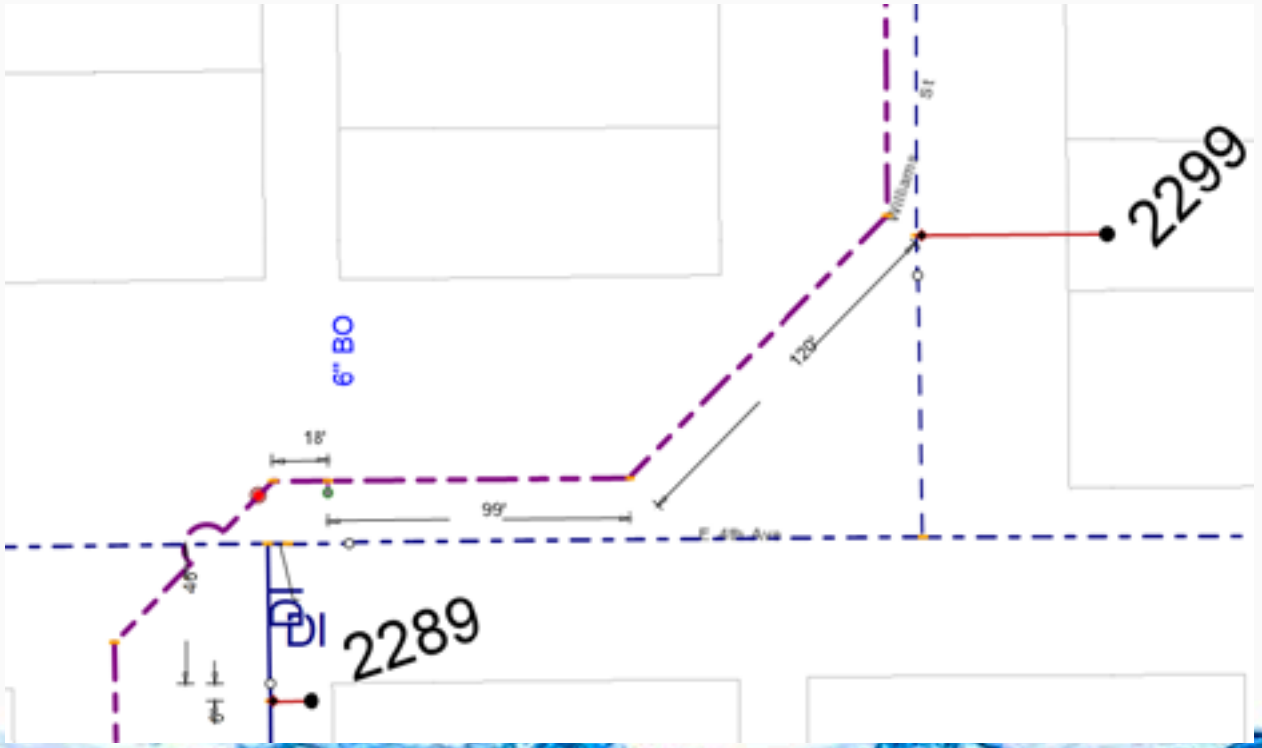
How to manage Maximo hierarchy?

- **Recycle Vs Treated Water – Purple lines in this screen shot are recycle Blue are treated. They are mutually exclusive**



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User Involvement

- **Attempted to involve users**
- **Users didn’t grasp the value of the what we were doing (they do now)**
- **Executive Team put pressure on IT to finish at the end because of lack of understanding**

Scope Change

- Big changes to scope all the way to the end
  - Added delays to the project
  - Created frustration for the team
  - Budget and Time overrun
- Finally froze changes to complete
- Tested and eventually pulled the trigger knowing we might find problems

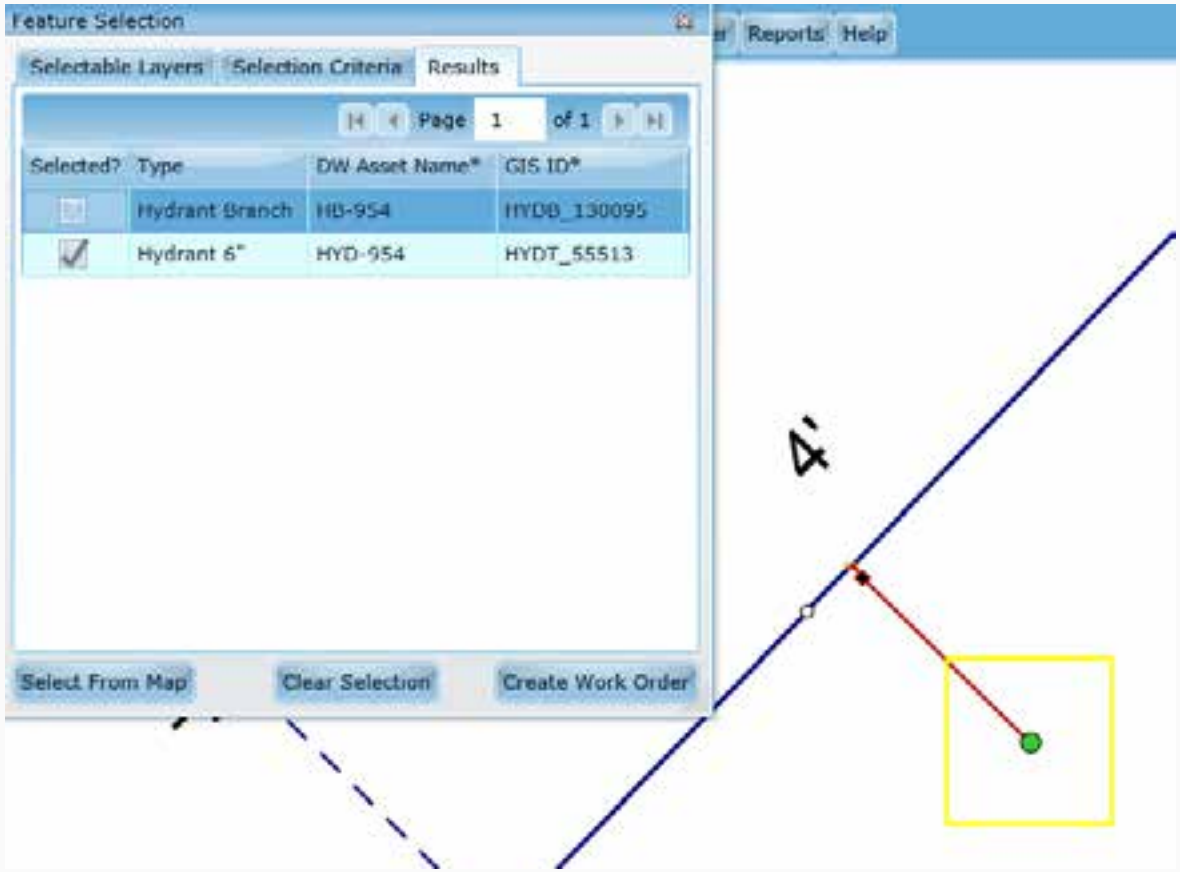
GIS to Maximo Comparison

- **Try to run on a yearly basis**
- **…..Here are some of the result of what we found…..**

Best of Asset Sync

- **The link between GIS and Maximo is really powerful**
  - **Work Order Creation**
  - **Work Order History**
  - **Main Break Isolation**

Creating work order on Fire Hydrant



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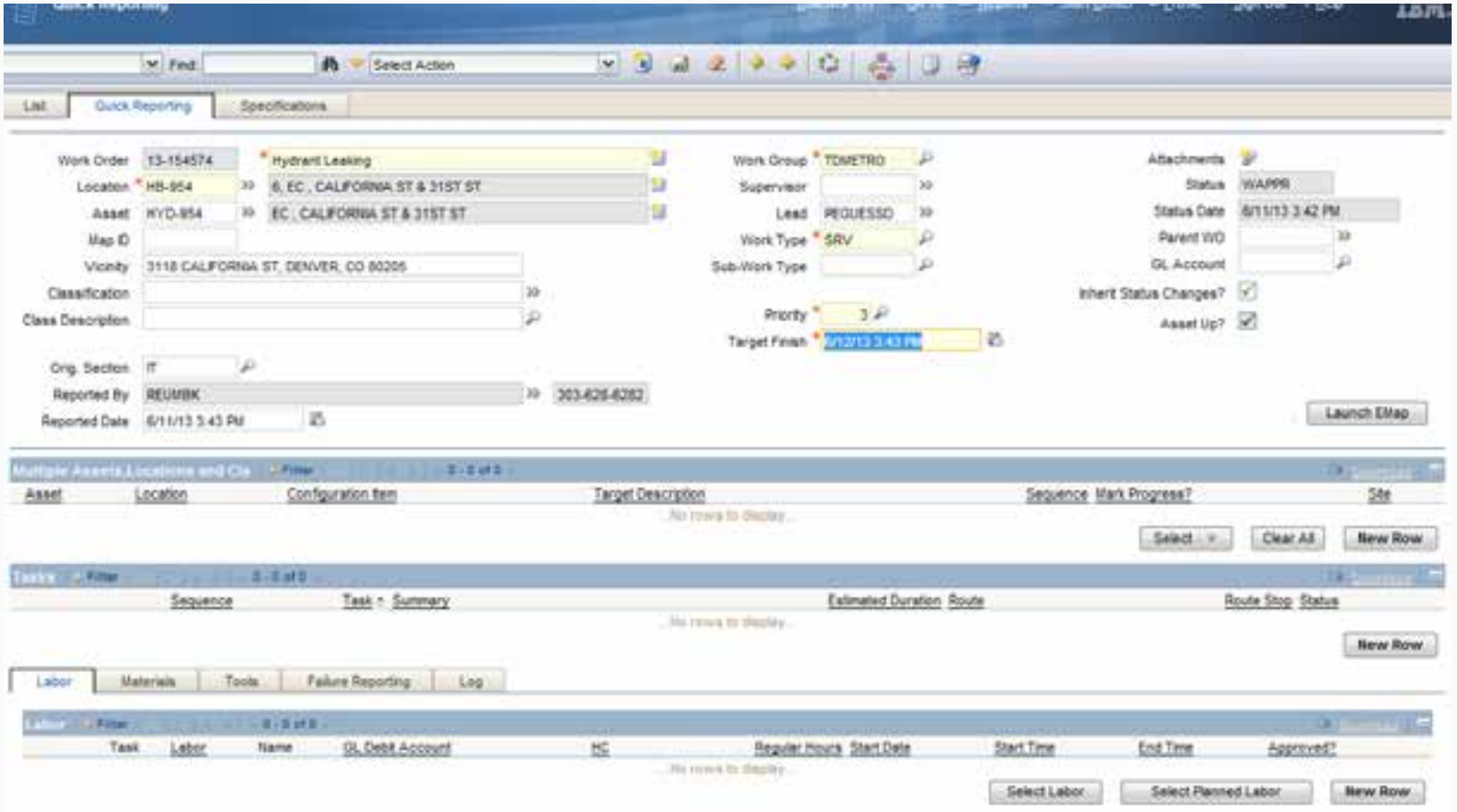
Maximo Work Order created



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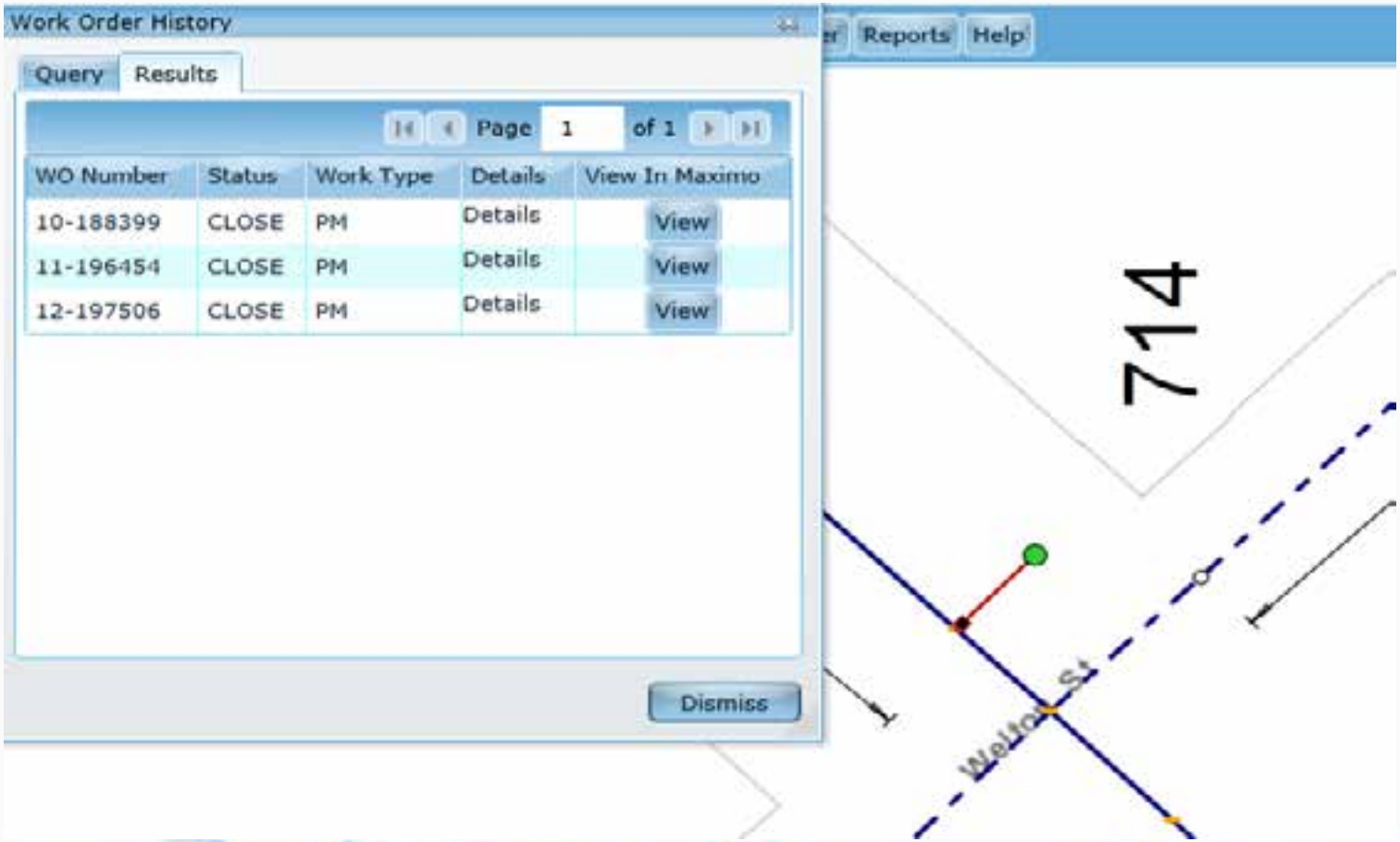
Work Order History on Hydrant



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What would we do differently?

- **Use iterative approach using Agile**
- **Too many people in charge**

What would we do again?

- **Take the time to create the architecture and planning**
- **Taking on small pieces to begin with**
- **Set aside days to put all the needed players in one room to get work done**

Where are we today?

- **Still being tweaked**
- **Additional features being added**
  - **Backflow preventers**
  - **Adding notification to business based on changes**
- **Fully adopted by the business (we've gone from 'doing apps to the business' to 'doing apps for the business' to 'doing apps with the business')**

Future

- **Additional features added to sync**
- **Bi-directional syncing?**
- **Track PM work in a spatial context**

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