# Enhancing the Client Experience with 3D Design

PRESENTED BY
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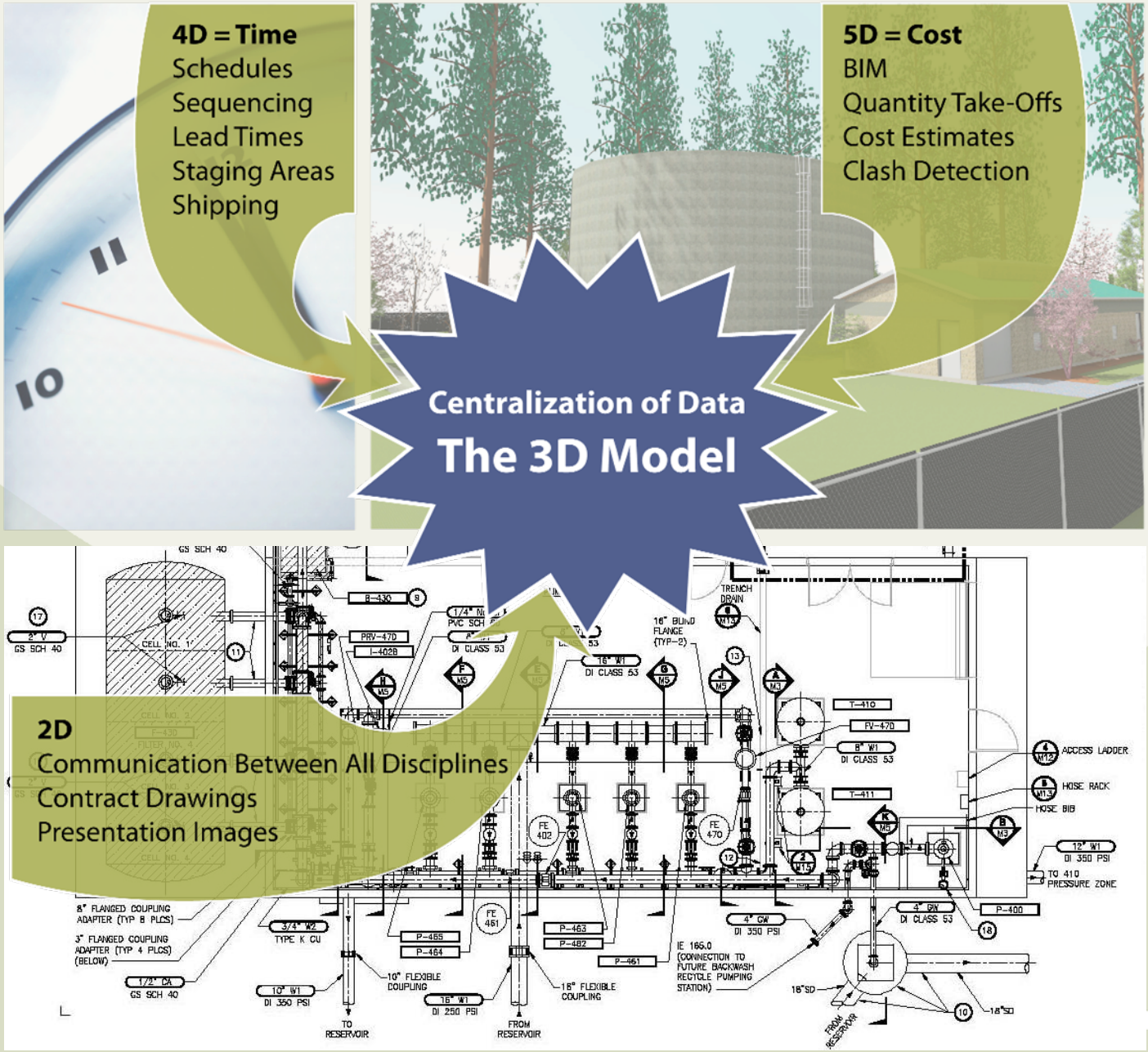
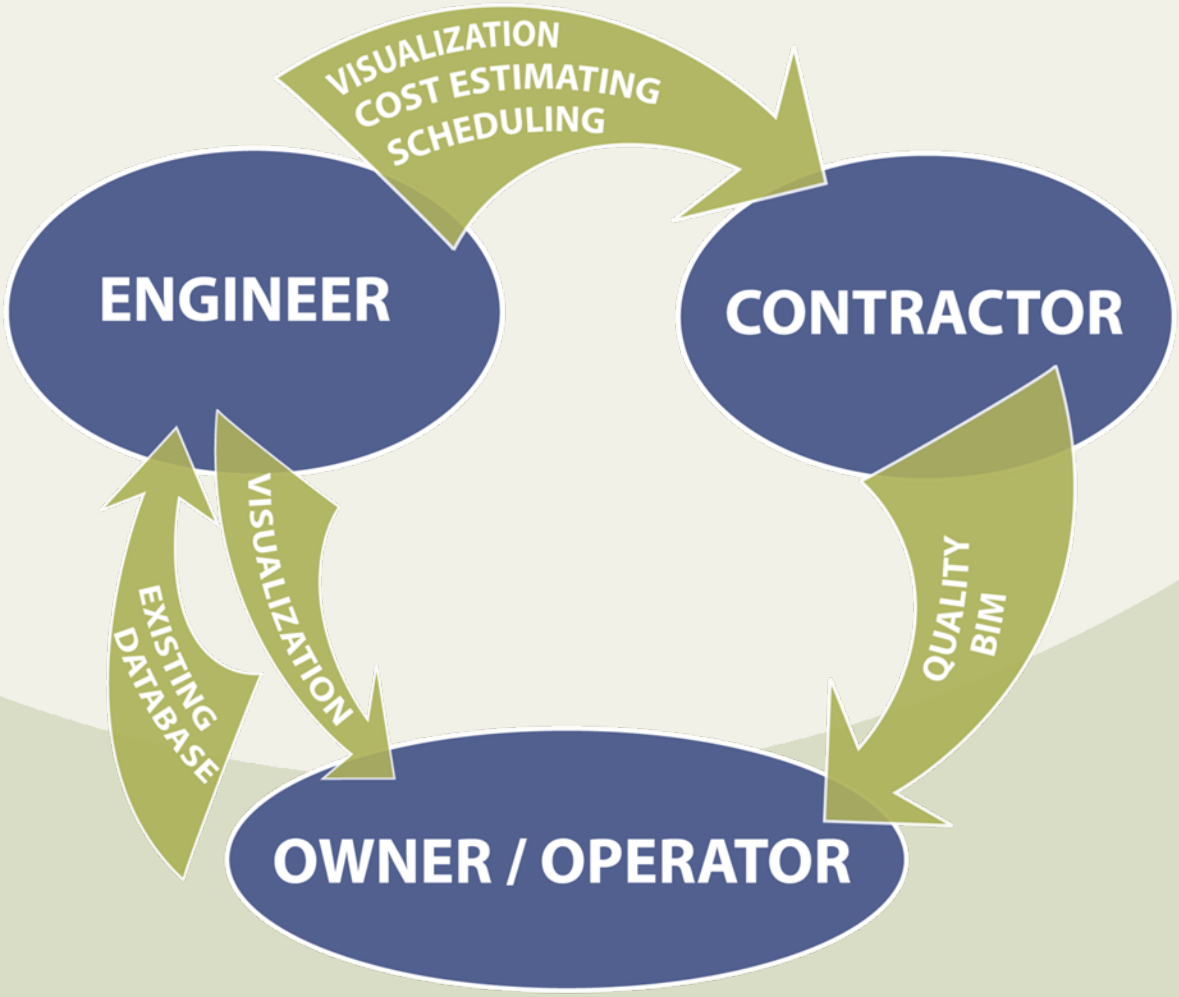
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
inspired people - inspired solutions - making a difference

# Power of 3D Modeling

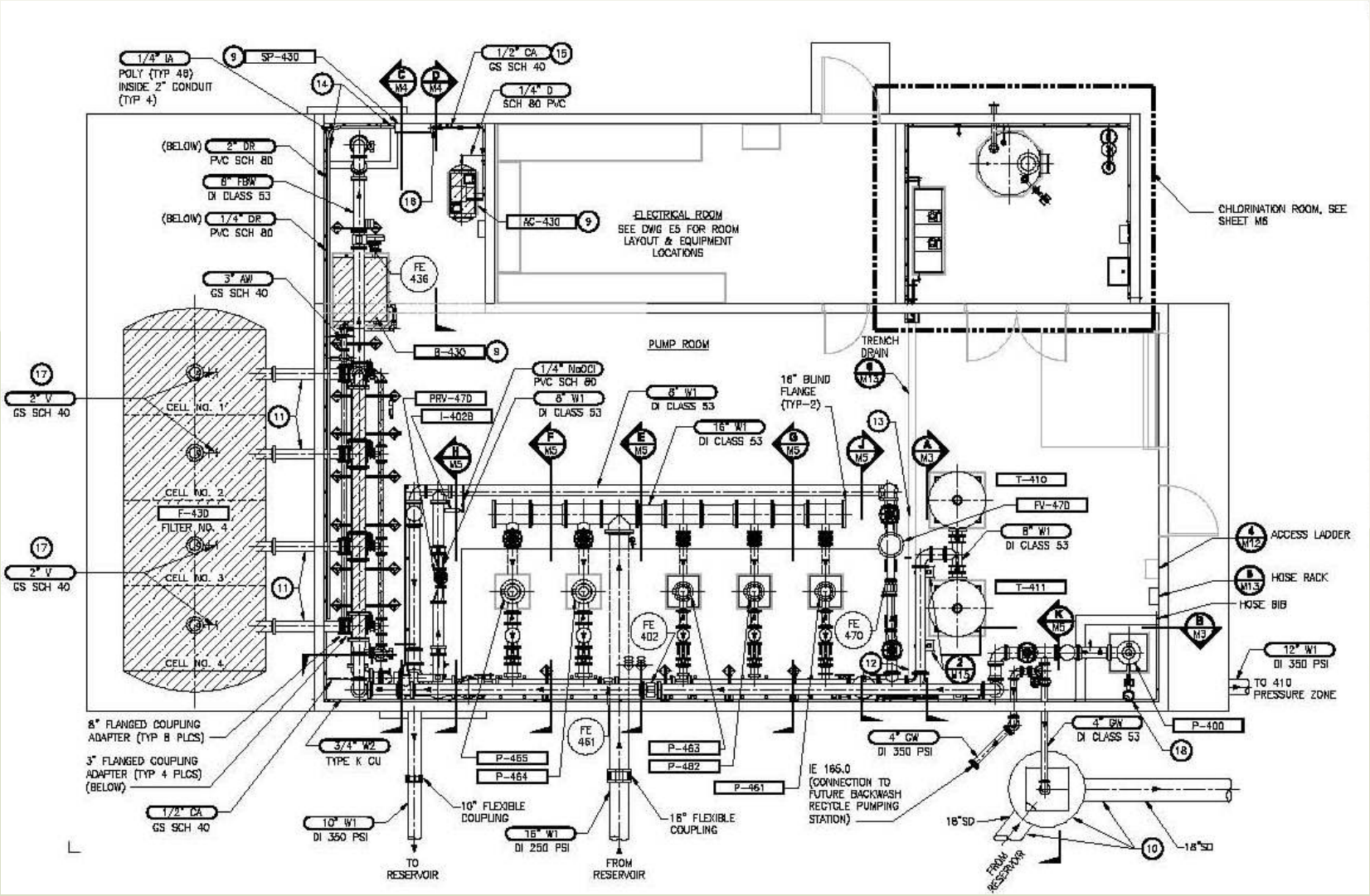


# Benefits

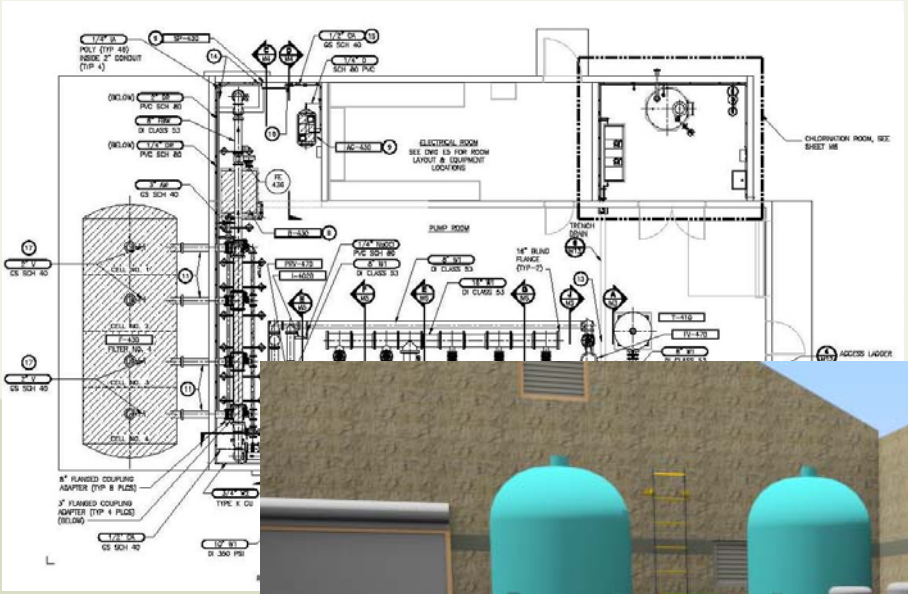
- Visualization
- Design Quality
- Construction
- Maintenance

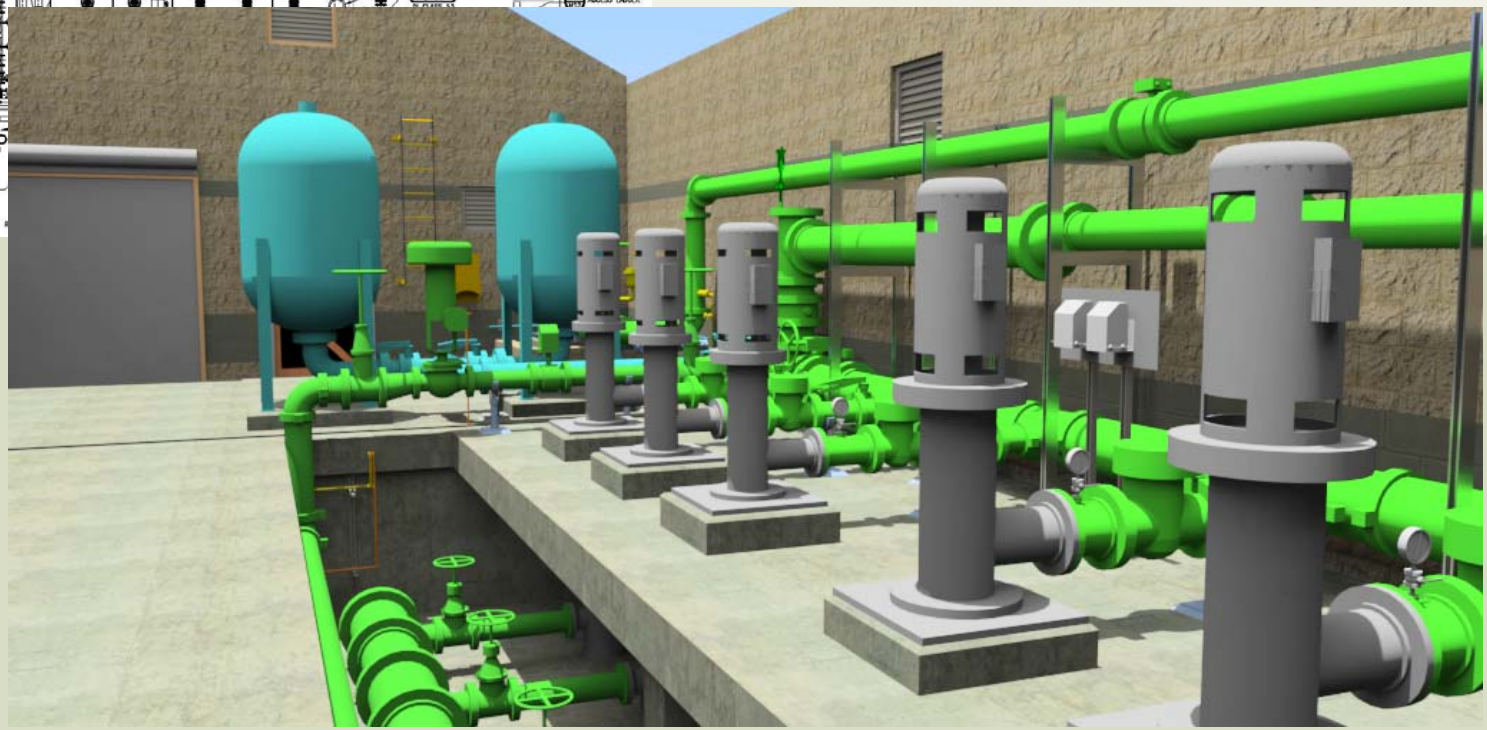


# Visualization

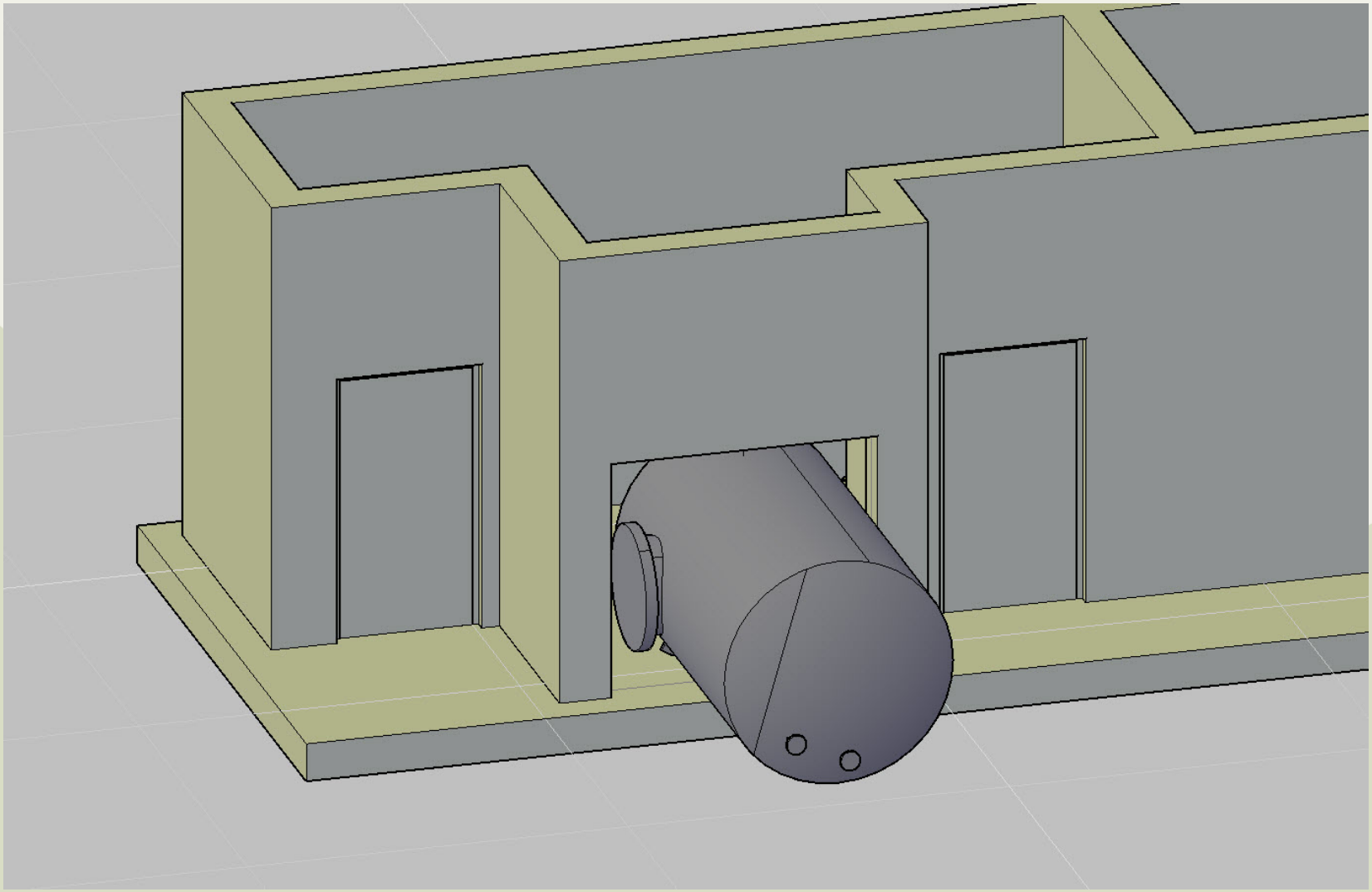


# Visualization



# Design Quality



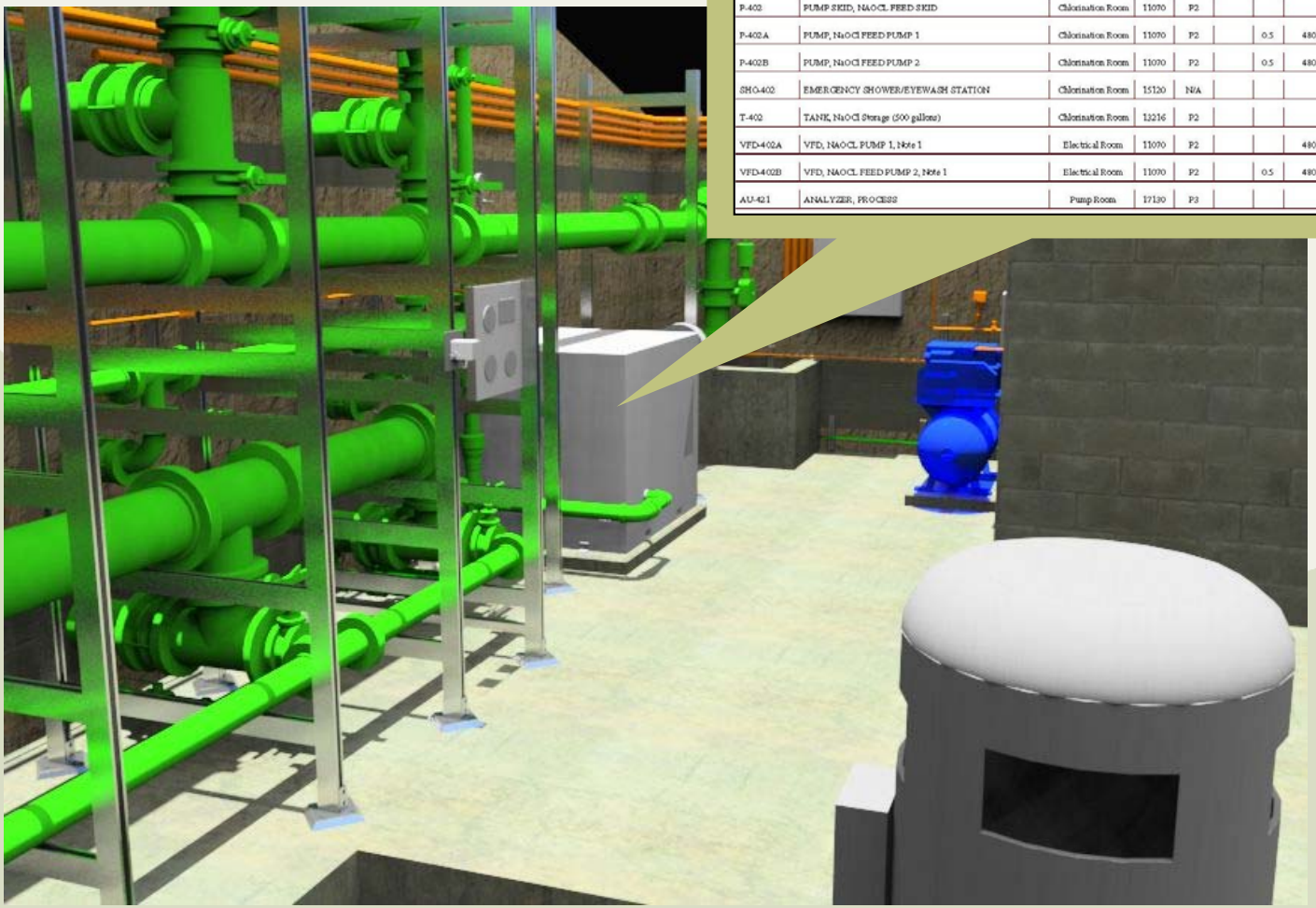
# Construction

- Owner buy-in early
- Higher quality design
- Fewer change orders

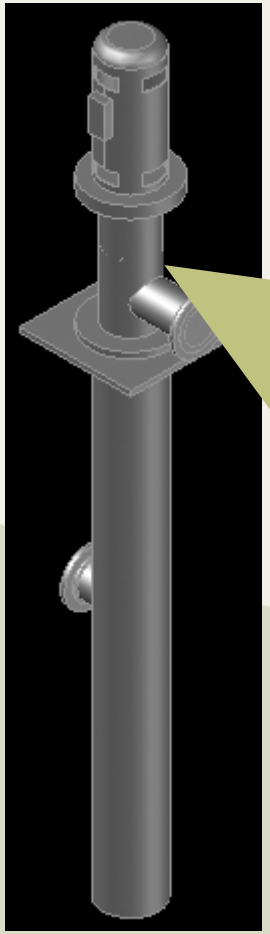
# Construction

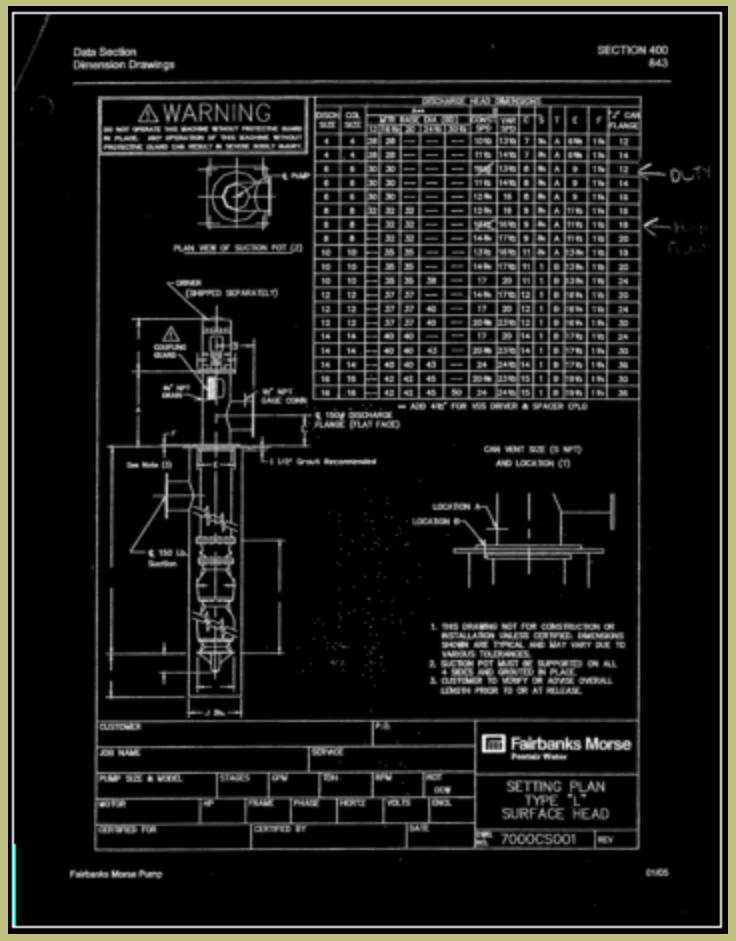
SECTION 11009
EQUIPMENT LIST SCHEDULE "B"
Sorted by: Sequence, Function

| Equip No | Description | Location | Spec Section | PID | kW | HP | Volts | Notes |
|---|---|---|---|---|---|---|---|---|
| P-400 | PUMP, WELL NO. 4 PUMP | Pump Room | 11212 | P2 | | 60 | 480 | Mount to end of existing 16" well casing |
| VFD-400 | VFD, WELL NO. 4 PUMP, Note 1 | Electrical Room | 16924 | P2 | | | 480 | |
| I-402A | INJECTOR NO. 1 | Pump Room | 11070 | P2 | | | | Primary NaOCl Injection Point |
| I-402B | INJECTOR NO. 2 | Pump Room | 11070 | P4 | | | | Secondary NaOCl Injection Point |
| P-402 | PUMP SKID, NAOCL FEED SKID | Chlorination Room | 11070 | P2 | | | | |
| P-402A | PUMP, NaOCl FEED PUMP 1 | Chlorination Room | 11070 | P2 | | 0.5 | 480 | |
| P-402B | PUMP, NaOCl FEED PUMP 2 | Chlorination Room | 11070 | P2 | | 0.5 | 480 | |
| SHO-402 | EMERGENCY SHOWER/EYEWASH STATION | Chlorination Room | 15120 | N/A | | | | |
| T-402 | TANK, NaOCl Storage (500 gallons) | Chlorination Room | 12216 | P2 | | | | |
| VFD-402A | VFD, NAOCL PUMP 1, Note 1 | Electrical Room | 11070 | P2 | | | 480 | |
| VFD-402B | VFD, NAOCL FEED PUMP 2, Note 1 | Electrical Room | 11070 | P2 | | 0.5 | 480 | |
| AU-421 | ANALYZER, PROCESS | Pump Room | 17130 | P3 | | | | |



# Maintenance



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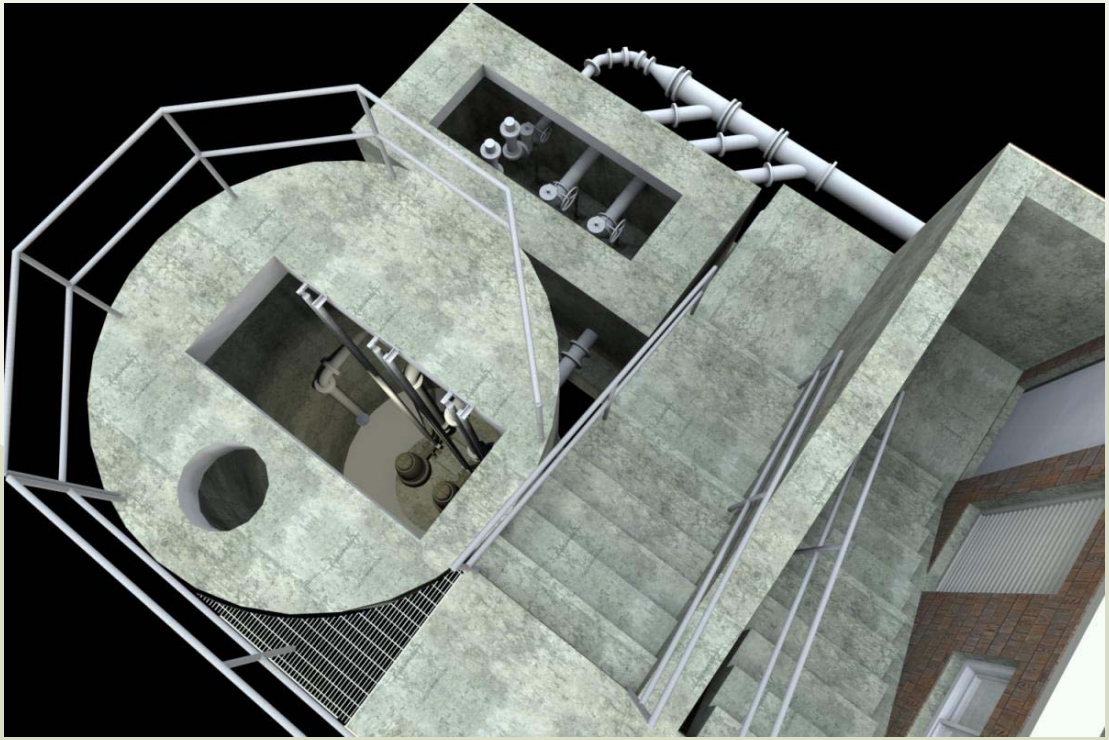
# Software

- AUTOCADD
- AUTOCADD (MEP)
- Revit (MEP)
- Rhino
- 3D Studio Max
- AccuRender
- NavisWorks



# Accessing Model

## Model Editors

- MEP

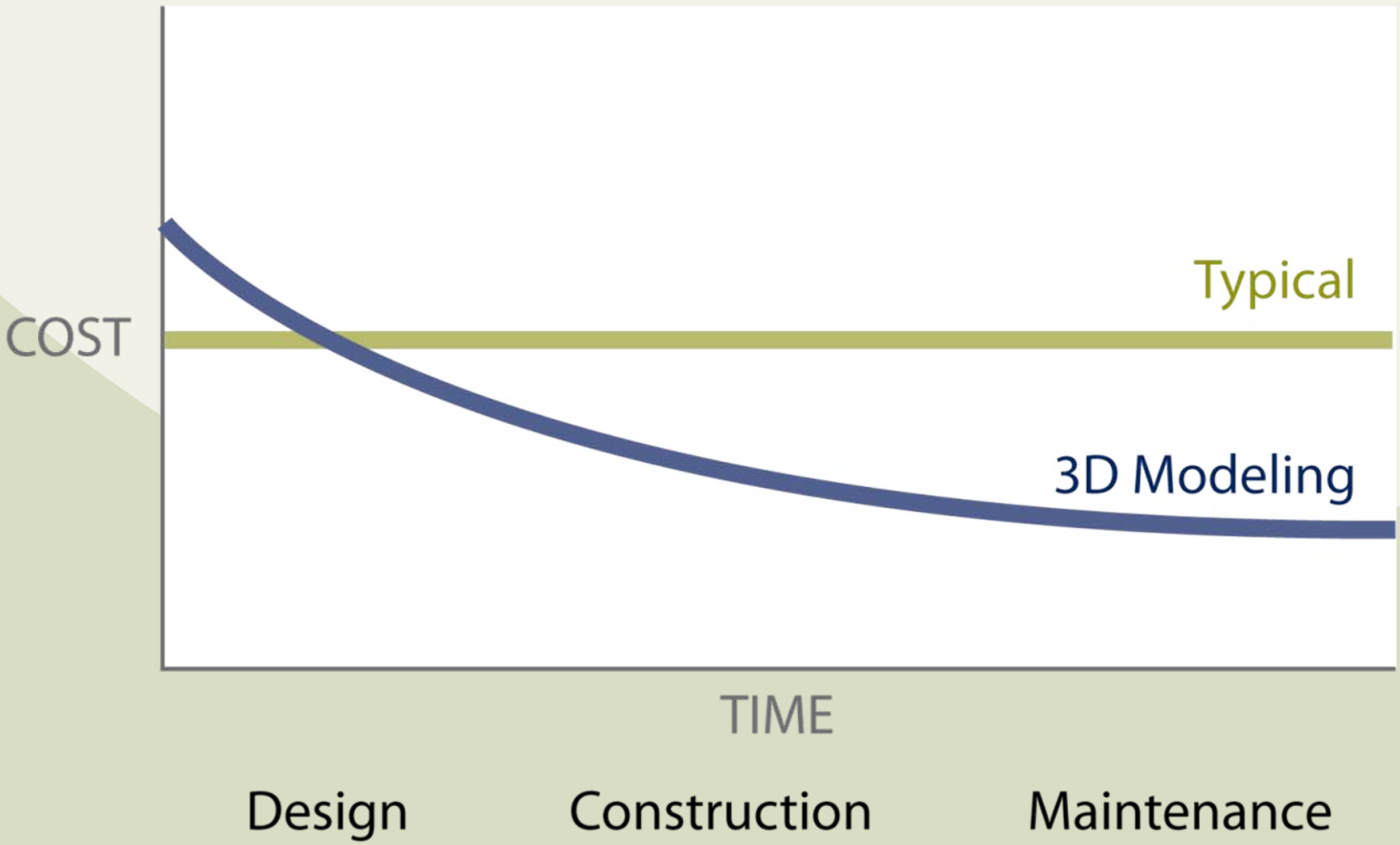
## Data Extractors

- Design Review
- NavisWorks (Freedom Viewer)

## Viewers

- Design Review

# Costs

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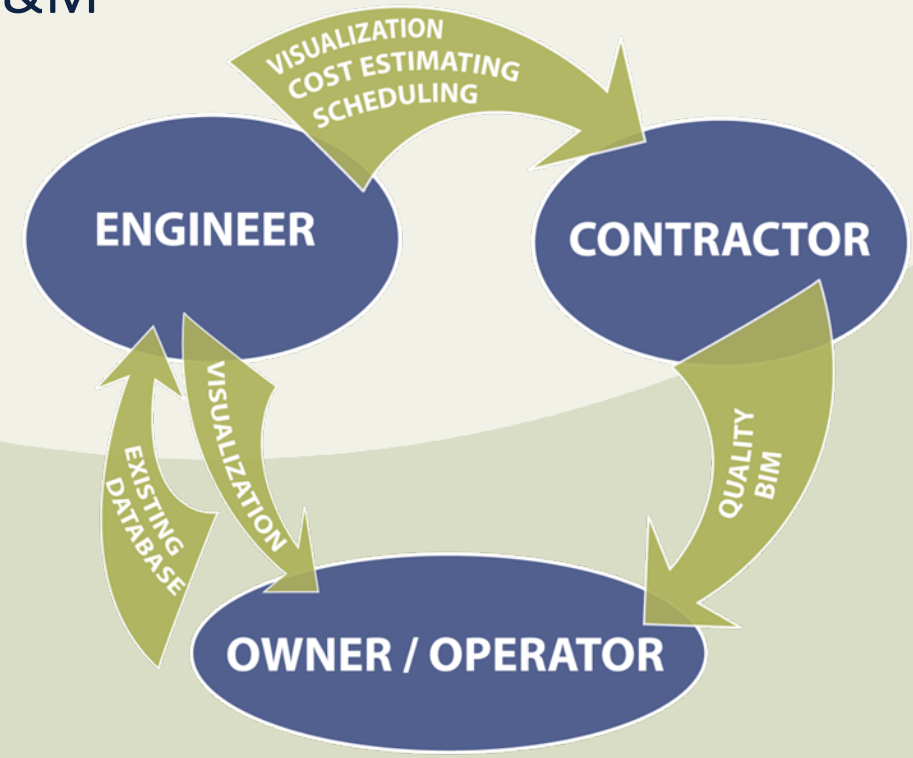
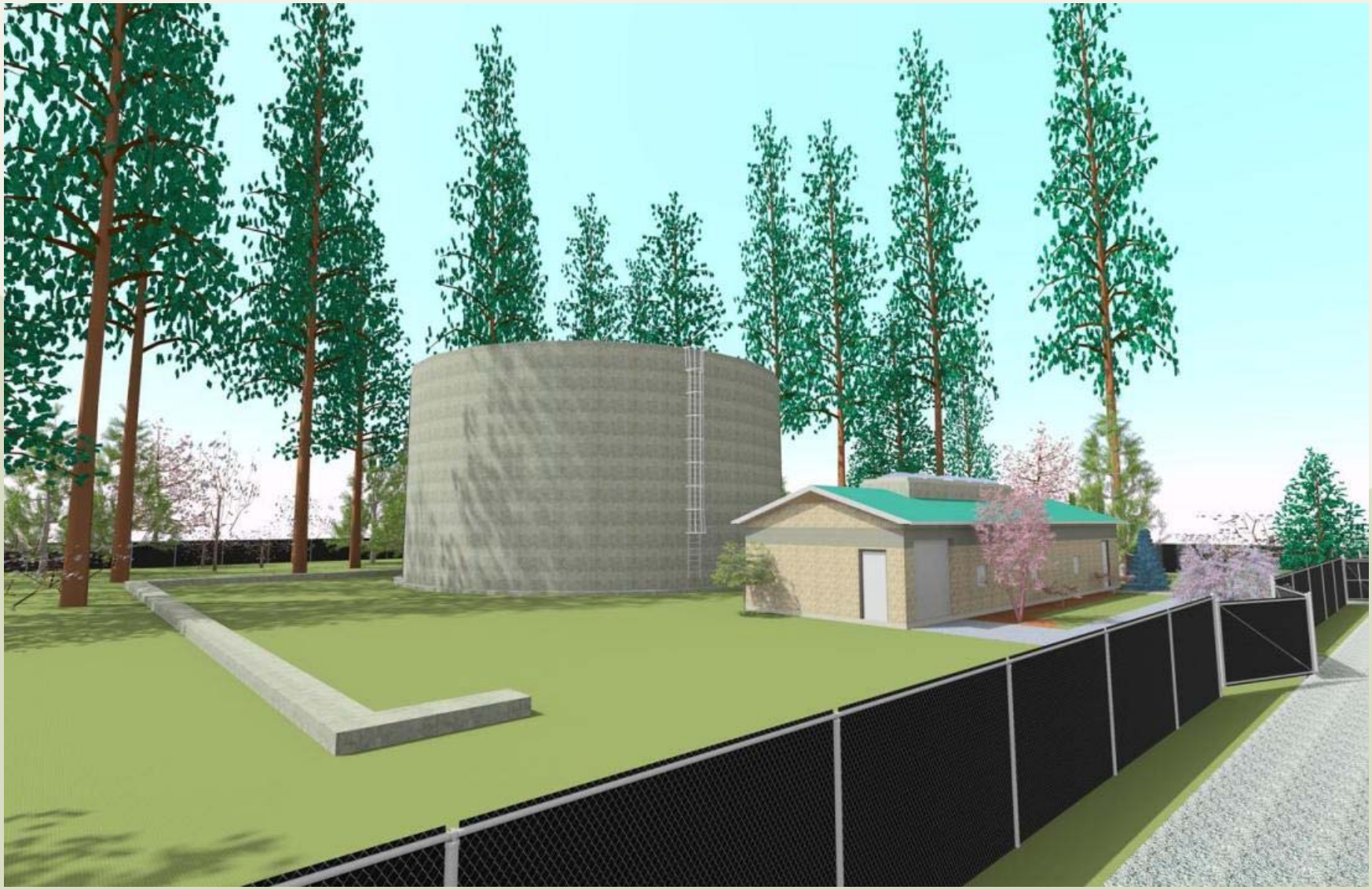
# The Future of 3D Modeling…?

- Get everyone speaking 3D
  - Model delivered to contractors
  - Continuous model updates (dynamic tool)
  - Owner uses model for O&M



# Questions?



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