A Contractors Perspective on BIM for Masonry
A Profile of Power Reveals Subtle Differences and Benefits

- Founded in 1926
- Management and family-owned
- Chicago-only focus
- Strong safety culture - .57 EMR
- Financially strong
- History of No Litigation
- Nature of Power
  - Relationships Matter
  - People Driven. Driven People
  - Finding a Better Way
  - The Long Term Counts
• What is BIM?
• Benefits
• Implementing technology
• Approach and Strategies

• Case Study on Masonry Openings
• Case Study on Existing Conditions
• What’s next for Technology
• Questions
BIM is the “process” in which we develop an integrated digital representation of the actual project including elements of time, space and cost, from conception to completion.”
Benefits from BIM in Construction

Reduction on RFI’s during construction
Increased accuracy
Increased efficiencies on installation
Enhanced communication and Coordination

Uses for BIM in Construction:

• 3D MEPFP Coordination
• 4D Scheduling
• 3D Site Logistics
• FIM Documentation
• 3D Shop DWGs
• Digital Submittals

• Estimating and Quantitative Surveys
• Prefabrication
Implementing technology

• Follow the five steps for success.
  ➢ Formulate the plan
  ➢ Develop the plan
  ➢ Aggregate the information
  ➢ Check the Viability
  ➢ Execute and Recheck the plan

• Get buy in
• Train staff
• Verify platforms (computer), and formats (applications)
• Storage, communication, and access

BIM Standards to follow as reference: https://bimforum.org/lod/
List of Areas for concern on this Project

- Masonry Openings
- Misc. Details
- Scheduling and Communication
- Working with Existing Conditions
- Wall thicknesses and risers

Soap End instead of Pilaster. Riser to large for wall.

MEPs into Bond Beam
Masonry Openings – Typical process
Masonry Openings – Typical process
Masonry Openings – New Process

Case Study
Masonry Openings – New Process Summary

- Isolate or remodel Masonry walls utilizing Revit for ease of communication, use modeling data where available.
Masonry Openings – New Process / Modeling practices

- Opening Families and setup
  - Modeled Openings (Color coded by Trade)
  - Unique Number or IDs (Piece Number)
  - Dimension Practices (contractor specific)
Masonry Openings – New Process / Coordination

- Exported Opening into Coordination Software for tracking and validation
Masonry Openings – New Process / Coordination

- Areas that we concentrated on:
  - Changes to the model after Elevation dwgs we issued
  - Correct opening sizes/locations

Oversized

Moved sleeve

Bond beam

Case Study
BIM and Masonry – Case Study/Masonry Openings

Masonry Openings – New Process Summary

- After Approval from Sub involved
- Produced color coded Plans and Elevations
BIM and Masonry – Case Study/Masonry Openings

Masonry Openings – New Process Results

Case Study
Existing Conditions/Surveying

Goals – How to utilize Tech to evaluate and understand existing construction condition with Masonry
Existing Conditions/Surveying

Process – Laser Scanned Facade Check for Plumb and Alignment.
Existing Conditions/Surveying

Process – Scanned data incorporated into drawings for field conditions
Existing Conditions/Surveying

Process – Final drawing we generated to the field for in/out of tolerances (shims)
BIM and Masonry – What's next?

Future of BIM in Construction

Future
Questions?