DESIGN-BUILD TRANSFORMATION

BIM’s Big Impact on
The Ohio State University’s NRDT Project
(North Residential District Transformation)

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NORTH RESIDENTIAL DISTRICT TRANSFORMATION

• **10 New Buildings** – 1.1 million sf total new construction

• **3 Additions** to existing dormitories

• **Demolition of 8** existing buildings

• **Extensive sitework** improvements

• **27 acres over 2 years** of construction

• Design-Build team comprised of **18 different** professional services providers (A/E/C)
EXISTING

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COMPLETED

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THE TRANSFORMATIONAL CHALLENGE

• **Scale** of Work Relative to **Overall Schedule**

• **Speed** of Delivery Relative to **Decision-Making**

• **Constant/Consistent** Management Relative to **Expectations**
Circle of Trust

You!
EARLY ENGAGEMENT

Design-Build partners

Design-Build Partners
Acock & Associates (Owner’s Rep)
Brailsford & Dunlavey, Inc. (Program Manager)
HKS (Architect of Record)
Schooley Caldwell (Associate)
Annette Miller (Associate)
KZF Design (Associate)
WA Architects (Associate)
Heapy Engineering (MEP)
Advanced Engineering Consultants (MEP)
SMBH (Structural)
Kabil Associates (Structural)
KORDA (Civil)
MKSK (Landscape)
CTL Engineering (Testing)
Lawhon & Associates (Elevator Consultant)
Mays Consulting (Building Envelope)
Wiss, Janey, Elstner Associates (Design/Peer Review)
EARLY ENGAGEMENT

2

Model as single source of truth

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EARLY ENGAGEMENT

The Ohio State University North Residential District Transformation

DRAFT
BIM PROJECT EXECUTION PLANNING GUIDE
(updated 1/2/13)

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EARLY ENGAGEMENT

Co-location strategy

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Pre-BIMing vs. BIMing

1. Pre-BIMing

2. Living in the moment
Pre-BIMing vs. BIMing

1. Pre-BIMing

- Site Logistics
- Safety BIM

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Pre-BIMing vs. BIMing

1. Pre-BIMing

- 3D Trade Coordination
- On-site Digital File Access
Pre-BIMing vs. BIMing

- Value Engineering “Storm”
- Uncovered Common Coordination Challenges
Pre-BIMing vs. BIMing

- Modified our standard 3D Trade Coordination process through integration of trade + design partners
- Models became drivers for field information
- 3D Trade Coordination drove contract document updates
BELIEVING THE BIMs

1. Power of visualization to influence decisions
2. Areas of high interest
BELIEVING THE BIMs

Power of visualization to influence decisions
BELIEVING THE BIMs

- 3D Fly-Throughs
BELIEVING THE BIMs

- 3D Fly-Throughs
- Virtual Mock-Ups
BELIEVING THE BIMs

- 3D Fly-Throughs
- Virtual Mock-Ups
- Specialty Areas
BELIEVING THE BIMs

• 3D Fly-Throughs
• Virtual Mock-Ups
• Specialty Areas
• Exterior Areas
THE VALUE OF BIM

PROJECT MANAGEMENT
- Engaging and informing the Owner
- Early identification of common issues
- Documenting and adjusting to Owner concerns

VDC MANAGEMENT
- Importance of Virtual Mock-Ups
- 3D Virtual Walk-Thrus post-coordination
- 4D Schedule as a multi-tool
SEAL THE BIM DEAL

• Keeping the models “LIVE”
• Pushing BIM to the documents
• Effective Model Management
• Management use of the Models
• Communication to Point-of-Attack
KEY OWNER TAKEAWAYS

• **Scale** of Work Relative to **Overall Schedule**
  - Single source of truth

• **Speed** of Delivery Relative to **Decision-Making**
  - Importance of visual communication through BIM

• **Constant/Consistent** Management Relative to **Expectations**
  - Know your Owner “areas of high interest”
“BEGIN WITH THE END IN MIND…”
THANK YOU

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