The Step Child Named BIM

Cliff Ragan, Andrew Cooper
VDC Engineers – AECOM Hunt
Please Silent Phones

THANK YOU!!
Cliff Ragan

VDC Engineer – AECOM Hunt

-Raised in construction.
-Associates in Applied Science
-"BIMming" since 2010
-Various roles in the BIM realm
-CM-BIM, Certified UAS Pilot, CP in Revit MEP and Arch
-Responsibilities at Hunt, IMPLEMENT BIM
  
  Field Training, Coordination, 4D, 5D, 6D, etc.
Andrew Cooper

VDC Engineer – AECOM Hunt

- Architectural and Engineering Design Background
- Terrible at ping pong
- Various roles in the BIM realm
- Certified UAS Pilot
- Responsibilities at Hunt, IMPLEMENT BIM
  Coordination, Drones, Laser scanning
AECOM Hunt

Hunt Construction Group was acquired by AECOM in 2014/2015? We represent a portion of the C in AECOM, “A”rchitecture “E”ngineering “C”onstruction “O”peration “M”aintenance
WHO’S HERE??
Why am I Here?

LEVERAGE SOFTWARE
Capitalize on using the correct software for the appropriate task

TEACH YOUR TEAM
Gain some pointers for teaching those that struggle with adopting new technology.

WE DON’T NEED BIM
Learn how to defeat the we don’t need BIM attitude.

COMMON COORDINATION PROBLEMS
Learn from a few of the problems we have tackled in the past.

…….Walk Away With Some Knowledge
LEVERAGING SOFTWARE

PUSH THE LIMITS OF THE SOFTWARE

• Press Every Button
• Break It
• Engage your team
LEVERAGING SOFTWARE
LEVERAGING SOFTWARE

ENHANCED 4D TIME LINER

- Not a 4th Dimension
- Adds time, or a schedule, to the model.
- Many different applications and detail levels.
- Use multiple software to create the best visuals.
LEVERAGING SOFTWARE

ENHANCED 4D WITH DRONE BACKDROP & TIMEBAR
LEVERAGING SOFTWARE

ENHANCED 4D WITH PIP
LEVERAGING SOFTWARE

ENHANCED 4D WITH CASHFLOW
TEACHING YOUR TEAM

LET THEM KNOW BOUNDARIES

• You are not a IT person, however, help when you can.
  o Need to know basic computer functions.

• Make sure they understand your role, but assist as necessary.

• Have resources available........
TEACHING YOUR TEAM

INNOVATION CENTER

BD
BUSINESS DEVELOPMENT

BEP, BxP
BIM EXECUTION PLAN

BIM
BUILDING INFORMATION MODELING

BIM 360
SUBCONTRACTOR COORDINATION IN THE CLOUD
BIM 360 GLUE / BIM 360 FIELD

LOD
LEVEL OF DEVELOPMENT, DEFINED BY AIA DOCUMENT E202-2008

SHOP DRAWINGS
2D DRAWINGS EXTRACTED FROM SUBCONTRACTOR MODELS FOR FABRICATION AND INSTALLATION

VDC
VIRTUAL DESIGN & CONSTRUCTION

2D
PAPER OR PDF DRAWINGS PRODUCED FROM THE MODEL

3D
VISUALIZATION COORDINATION CLASH DETECTION

4D
COMBINE TIME & GEOMETRY FOR SCHEDULING

5D
QUANTITY TAKE-OFF & ESTIMATING

6D
"AS-BUILT" MODEL WITH INFORMATION FOR FACILITIES MANAGEMENT

LEVEL OF DEVELOPMENT

CONCEPTUAL
overall building massing indicative of area, height, volume, location and orientation
non-geometric information may also be attached to model elements

APPROXIMATE GEOMETRY
elements are modeled as generalized systems or generic assemblies with approximate quantities, size, shape, location and orientation
non-geometric information may also be attached to model elements

PRECISE GEOMETRY
elements are modeled as specific assemblies accurate in terms of quantity, size, shape, location and orientation
non-geometric information may also be attached to model elements

FABRICATION
elements are modeled as assemblies accurate in terms of quantity, size, shape, location and orientation with fabrication and detailing information
non-geometric information may also be attached to model elements

AS-BUILT
elements are modeled as constructed assemblies actual and accurate in terms of quantity, size, shape, location and orientation
non-geometric information may also be attached to model elements
TEACHING YOUR TEAM

GET TO KNOW THE PROJECT TEAM

• Gain trust.
• Prove the value of yourself and BIM early in the project.
• Immerse yourself in the goals of your project team.
TEACHING YOUR TEAM

BE AVAILABLE

• ANSWER YOUR PHONE

• Use email for documentation and sending memos, not to carry on a conversation.
“Whatever Good Things We Build, End up Building Us”

-Jim Rohn
“The Road to Success is Always Under Construction”

-LILY TOMLIN
“We Don’t Need BIM”

-TOO MANY PEOPLE
YES YOU DO!
“WE DON’T NEED BIM”

BAD EXPERIENCES

- Get feedback on what issues with BIM they’ve seen in the past.
  - Cost, Ineffective Coordination, Schedule Impact, etc.
- Ask what common problems they face on a project in general.
  - Look for opportunities for BIM to aid in those problems.
“WE DON’T NEED BIM”

BIM IS SCALABLE

• BIM is not just modeling and coordination.
• Stress the Information in “BIM”
• Keep current drawings posted in digital form.
“WE DON’T NEED BIM”

BIM IS SCALABLE

• Have answers for common questions.
• Be fluent in pricing, available tools, processes, and workflows.
COMMON COORDINATION PROBLEMS

- COVER YOURSELF BY CONTRACT
- HAVE RESOURCES
- COMMUNICATION BARRIERS
- BE READY TO TRAIN
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