BIM Protocols + AEC Workflows in Modern Methods of Construction
Applying Advanced BIM for Offsite Design & Fabrication
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01. 01. LOD 100 / Building Assembly Design
02. 02. Integrated Design & Fabrication
03. Integrated Design, Fabrication & Construction
04. Fabrication Modeling & Building Assembly
05. Building Design & Assembly Logistics
06. Summary
01. LOD 100 / Building Assembly Design

Parts

Assemblies

Modules
01. LOD 100 / Building Assembly Design
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Image: James Garrison Architects
01 01. LOD 100 / Building Assembly Design
02. Integrated Design & Fabrication
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Images: KPF
02. Integrated Design & Fabrication
03 - Integrated Design, Fabrication & Construction
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Integrated Design, Fabrication & Construction

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03 - Integrated Design, Fabrication & Construction

Design and Fabrication Model Coordination
03 - Integrated Design, Fabrication & Construction

Images: KPF

Images: DPR
03. Integrated Design, Fabrication & Construction
03. Integrated Design, Fabrication & Construction

Use of Model-Driven (BIM) Prefabrication by percentage of respondents

Source: McGraw Hill Construction
03. Integrated Design, Fabrication & Construction

78% of modular adopters in the AE industry use BIM

Prefabrication and Modular Construction Users Utilizing Model-Driven Prefabrication

Source: McGraw Hill Construction
03. Integrated Design, Fabrication & Construction

Images: KPF
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Images: KPF
04. Fabrication Modeling & Building Assembly
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Level of Detail and Model Tolerance
04. Fabrication Modeling & Building Assembly

Multi-Trade Workstations: Shop Drawings and Work Instructions
04. Fabrication Modeling & Building Assembly

Building Data Distribution: G Code for CNC

Images: PCL
04. Fabrication Modeling & Building Assembly

BOM, Cut lists and Data: Part by Part
04. Fabrication Modeling & Building Assembly

Multi-Trade Workstations: Shop Drawings and Work Instructions: Information Push
04. Fabrication Modeling & Building Assembly

Offsite/ Onsite Building Assembly Production Design
04. Fabrication Modeling & Building Assembly

Offsite Shop Drawings, Work Instructions and onsite Building Assembly
04. Fabrication Modeling & Building Assembly

Multi-Trade Workstations: Shop Drawings and Work Instructions: Information Pull
05. Building Design & Assembly Logistics
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In Summary
col·lab·o·rate  \kə-ˈla-bə-ˈrāt\

1: to work jointly with others or together especially in an intellectual endeavor
2: to cooperate with or willingly assist an enemy of one's country and especially an occupying force
3: to cooperate with an agency or instrumentality with which one is not immediately connected

Source: Merriam Websters Dictionary
06. BIM Protocols + AEC Workflows in Modern Methods of Construction

Images: KPF
06. BIM Protocols + AEC Workflows in Modern Methods of Construction

Design

Document

Communicate

Automate

Parts

Assemblies

Sub-Assemblies

Modules

Building Assembly Design