BIM Plan : Level of Development
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Level of Development?
BIM – Process Overview

Concept → Design Model

- Federated Model
- Drawings
- Schedules
- Analysis
- Visualise

Design Model → Construction Model

- Fabrication 3D
- QS Takeoff
- Site

Construction Model → As Built Model

- Fabricate
- Set Out
- Install
- Commission
- Hand Over

3D model & data is handed down the line
We Need a Plan

- The BIM PLAN
- Defines the controlling protocols for:
  - model creation
  - model use
  - information provision
  - information use
  - team collaboration.
- Contract Document?
BIM – Process Overview

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Level of Development
Level of Development?

- Originates from USA
- American Institute of Architects
- Contract template
  - establishes the protocols, expected levels of development, and authorised uses of Building Information Models on a Project
  - assigns specific responsibility for the development of each Model Element to a defined Level of Development at each Project phase.
BIM Plan

What does it say about Level of Development?
Level of Development

- Of all of the things in a BIM Plan, this one will catch you out.
- There are 5 levels:
  - LOD 100 - Concept
  - LOD 200 – Design Model
  - LOD 300 – Construction Model
  - LOD 400 – Fabrication Model
  - LOD 500 – As-Built Model
- Note the numbering jump of 100
BIM – Process Overview

LOD 100 → LOD 200 → LOD 300 → LOD 400 → LOD 500

Concept → Design Model → Construction Model → Fabricate → Set Out → Install → Commission → Hand Over

LOD 500

3D model & data is handed down the line
“We are designing to LOD 200”

- LOD 200 “generalised systems with approximate quantities, size, shape, location and orientation. The model may be analysed for performance of selected systems by application of generalised performance criteria”

- VS

- LOD 300 “suitable for the generation of traditional construction documents and shop drawings. The model may be analyzed for performance of selected systems for specific performance criteria”
“We are designing to LOD 200”

- Far too general
- It is intended that the levels of LOD 200 be further defined to suit the project.
- LOD 201, LOD 202, etc.
“We are designing to LOD 200”

- Consider
  - 3D Model
  - 2D Layout Drawings
  - Schematic Drawings
  - Specification

- LOD can mean something different for each of these for the same object.
  - The information can differ
  - The representation can differ
Which LOD?

- LOD 100 – Concept
- LOD 200 – Design Model
- LOD 300 – Construction Model
- LOD 400 – Fabrication Model
- LOD 500 – As-Built Model
Which LOD? 200 or LOD 300

- It is a *fuzzy* line between LOD 200 and LOD 300
- One size does not fit all
- Some designers will carry though into LOD 300
- Others clearly stop at LOD 200 or 299.99
Watch out for

- **Level of Development**
  - It defines the detail of your deliverables
  - It can redefine the detail in your deliverables
  - It will define what you are being delivered.

- **BIM Plan**
  - Do you have one for every job?
  - Do you have an internal default position?

- **Have you considered the different mediums?**
  - Model, drawing, schematic, specification, schedules

- **Don't forget Building Information Modeling**
The BIM Train Has Left the Station

Ask Yourself!

- Are you on the train?
- Do you have the right people on the train?
- Are they in the right seats?