

ASPE BIM

Revit Family Secrets



Where Are We Going Today?

1. Process Map for Creating a Revit Family
2. Embed Quality Processes into Revit Family
3. Revit Family Tools, Tips & Techniques

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BradleyBIM.com

Daniel Hughes | Bradley BIM Strategist

1. Taught 700 professionals Revit (2002 - present)
2. Managed Revit Implementations for 120 Companies
3. Personally Directed \$5 Billion of Revit Client Projects
4. Corporate Owner / Vice President (15 Years)
5. Worked in 3 Architectural Firms (Madison WI – 8 Years)





US National BIM Standards Committee Member 2013 ASPE

Masdar Headquarters | Masdar City (Abu Dhabi)
Adrian Smith + Gordon Gill (Chicago)

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The Bradley Corporation

- Commercial Washroom Specialists
- Family-Owned Since 1921
- American Manufacturer – WI, OH, CA Facilities
- Thousands of Products Sold Internationally




ASPE BIM 2009-2013 | Bradley BIM Initiative

1000 Revit Models | 3 Million Downloads (2012)
Supporting Designers, Contractors & Owners

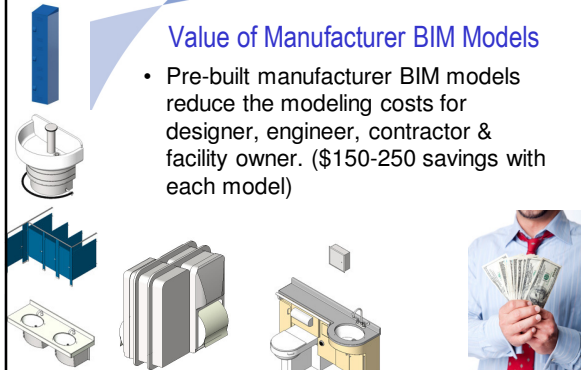
www.bradleybim.com



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Value of Manufacturer BIM Models

- Pre-built manufacturer BIM models reduce the modeling costs for designer, engineer, contractor & facility owner. (\$150-250 savings with each model)



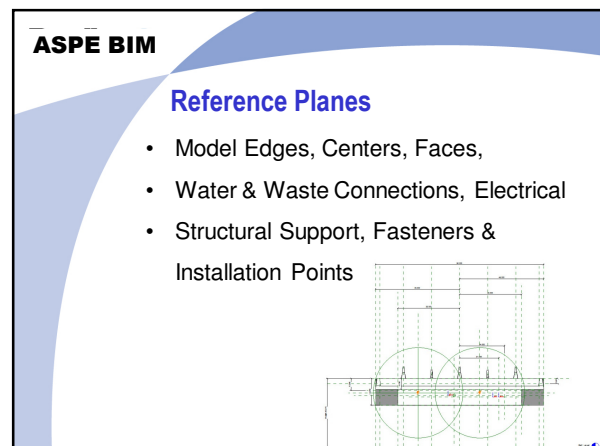
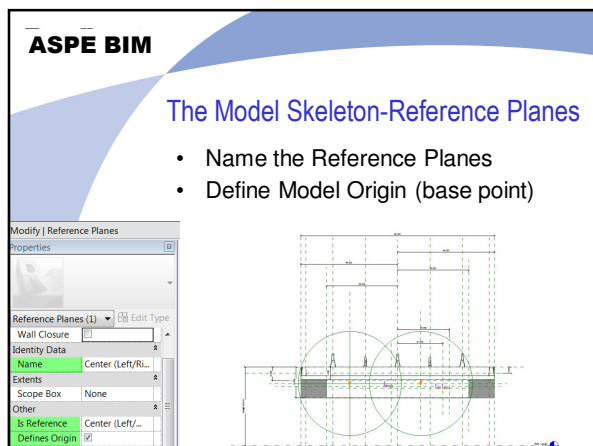
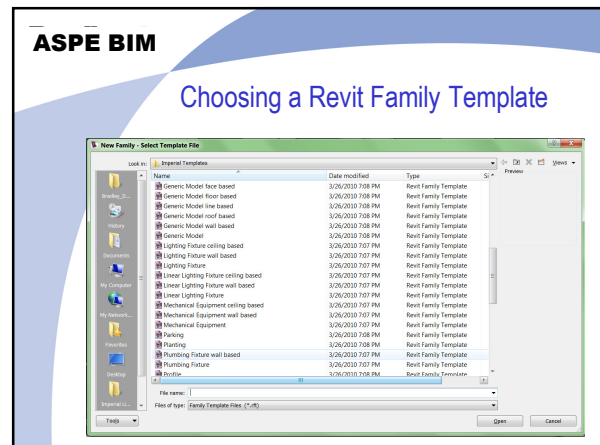
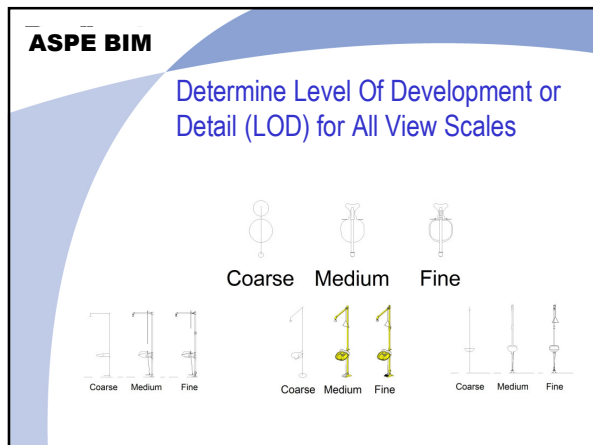
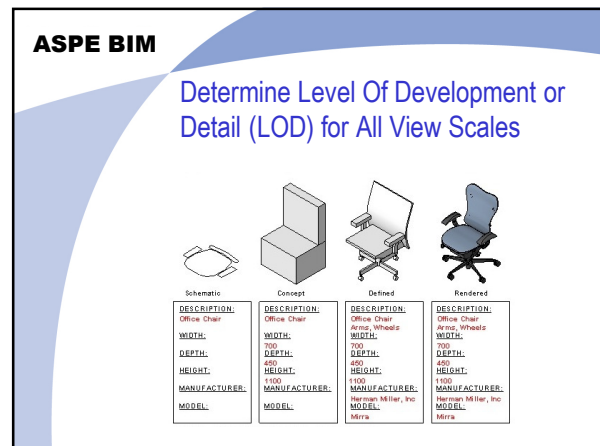
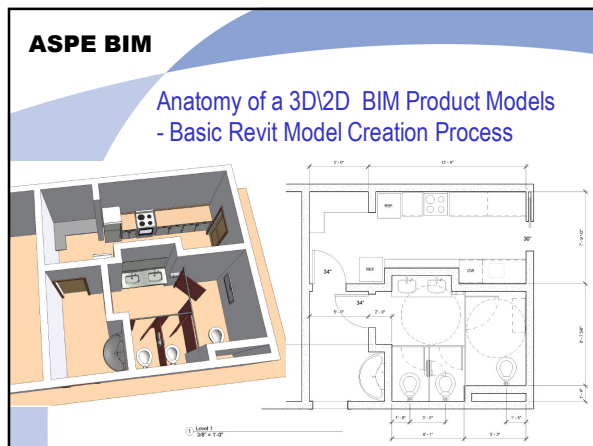
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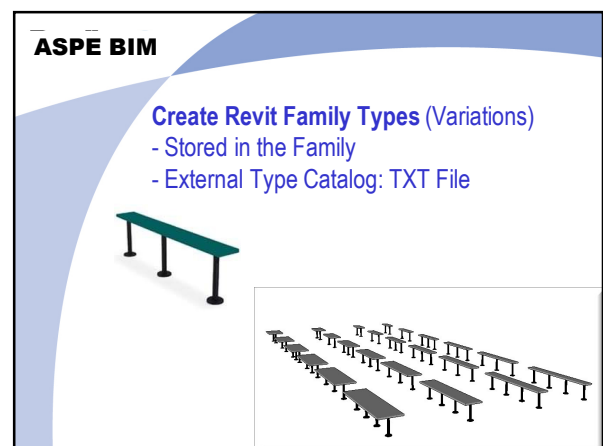
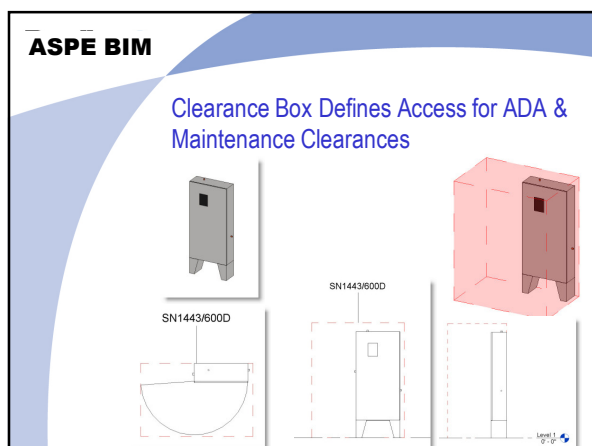
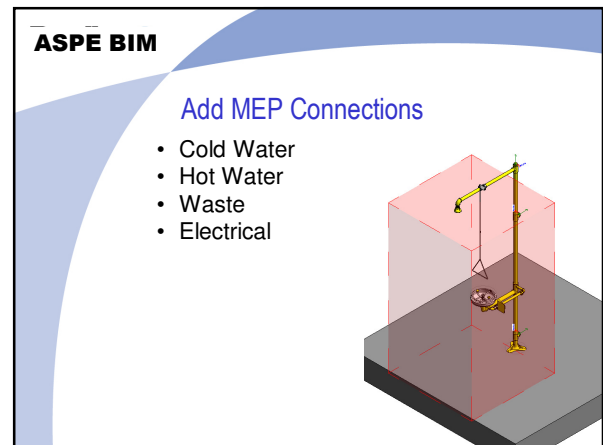
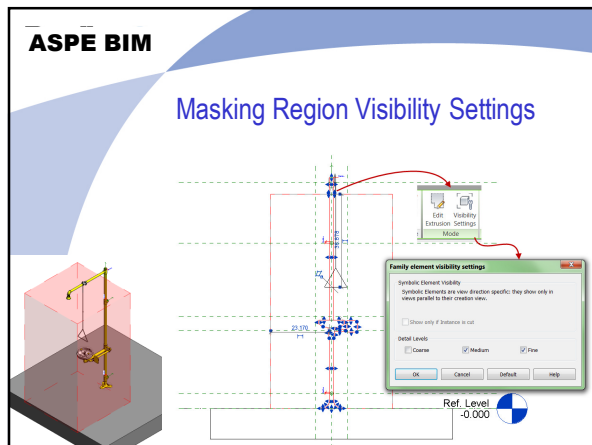
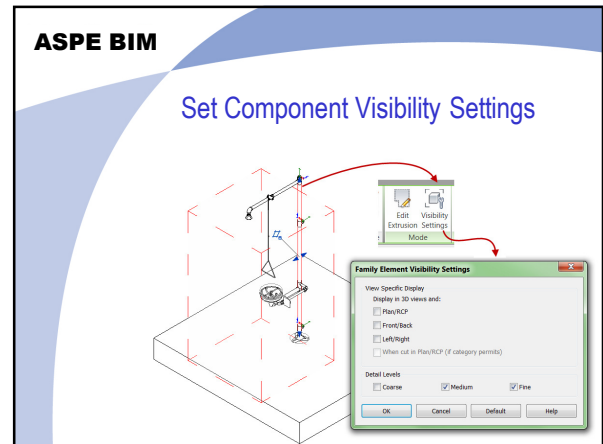
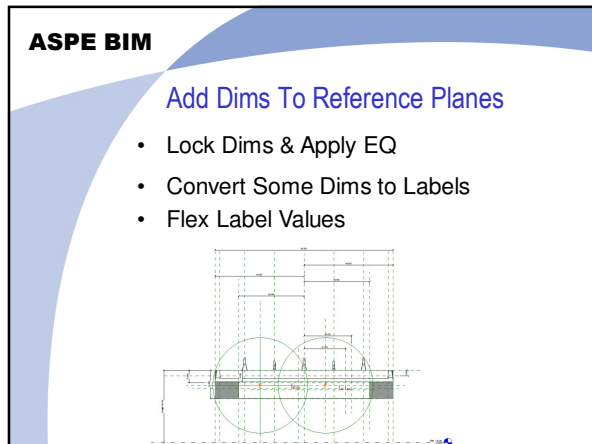
Download Product Manufacturers BIM Models | 3 Examples :

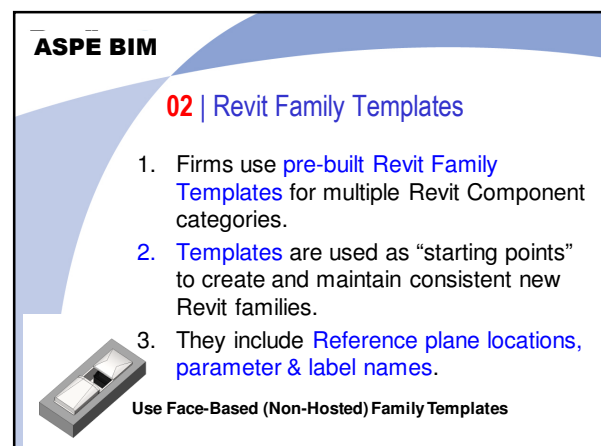
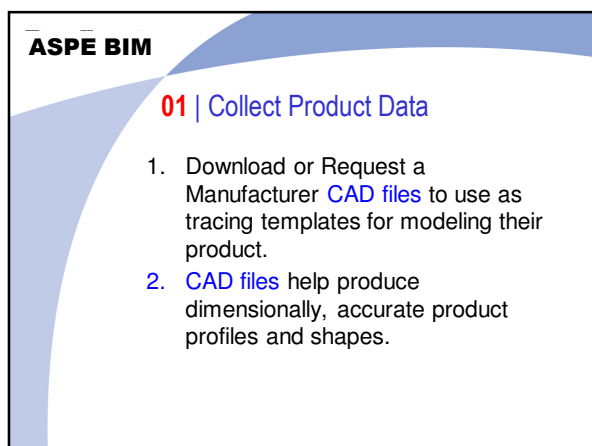
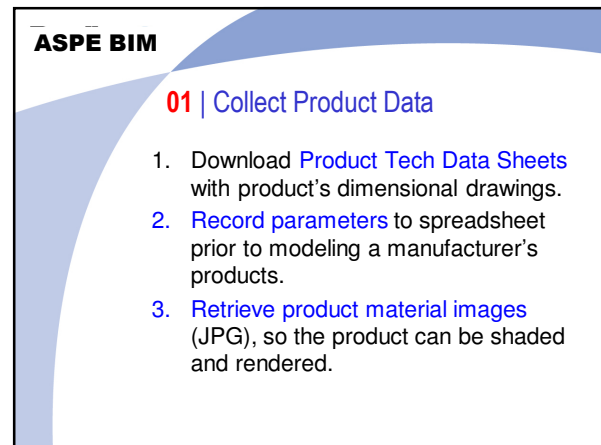
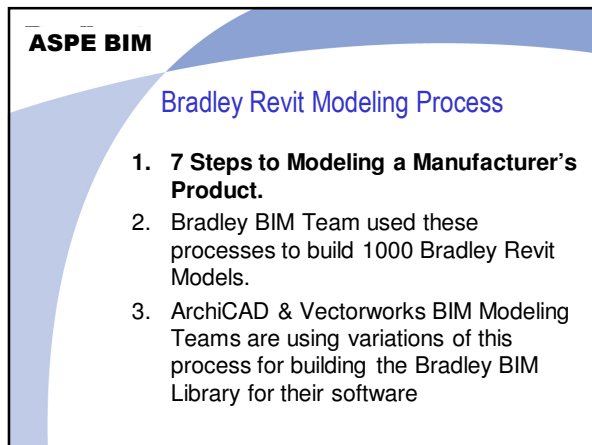
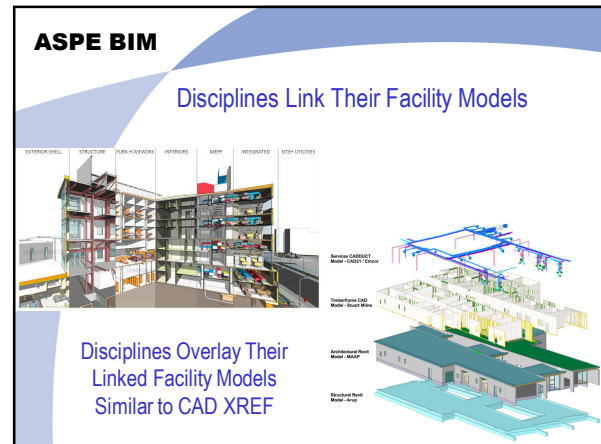
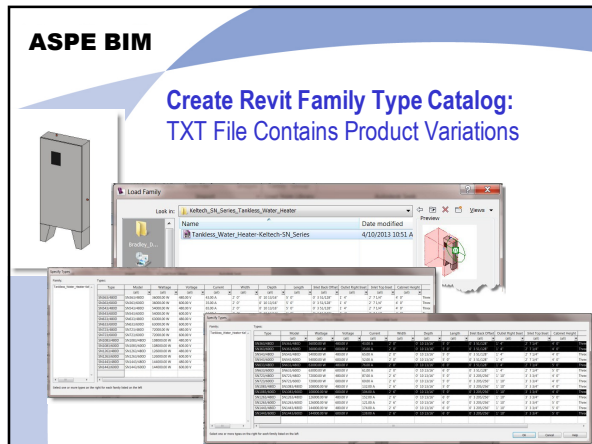
- Manufacturer Website
- Autodesk Seek
- e-SPECS












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03 | Revit Visibility Settings

1. Optimizing these settings in EVERY Family is **THE KEY** to improving Revit Project Performance.
2. 2D plan, front and left views are optimized by turning off the 3D components' visibility in these 2D orthographic views.

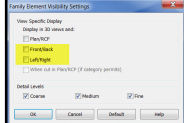


Coarse Medium Fine Coarse Medium Fine

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03 | Revit Visibility Settings

1. 2D Masking regions & symbolic lines are used to display the product in the orthographic views.
2. Each 2D entities in each 2D views is assigned a Coarse, Medium & Fine visibility setting.

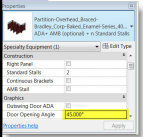


Coarse Medium Fine

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04 | Parameter Types & Values

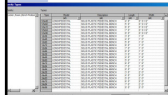
1. Add or fill-in the **Instance** Parameters and **Type**-based Parameters.
2. **Shared Parameters** values will appear in tags & schedules.
3. Uniformat Assembly Code, Omniclass, MasterFormat \ Keynote, Material, Manufacturer URL, material, MEP settings, Model Number.



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05 | Create Family Types or Catalogs

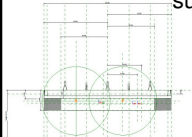
1. Family types or family type catalogs are created to add efficiency to the new Revit model.
2. If a product has 5-7 simple variations; build the family types into the Revit family file.
3. If product has more than 7 variations use Revit Family Catalog.



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06 | Purge & Optimize

1. CAD files imported into Revit Family files (used for tracing) must be deleted in all views.
2. CAD files' layer definitions will contaminate a project file's subcategories & should be purged.




Purge unused Reference Planes for model Name your Reference Planes

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06 | Purge & Optimize

1. **Purge line patterns definitions** to prevent them being added to the project and it helps minimize the family file size.
2. Finally, **SAVEAS** & select the **Compress File** to further reduce the Revit Family file size.




Purge Unused Materials in Family Model

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07 | Quality Control–Project Testing

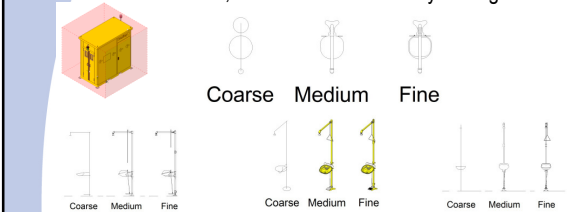
1. Quality control now dictates the model and ALL family types are loaded into a project, flexed, dimensioned, swapped, scheduled, tagged, shaded and rendered.



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07 | Quality Control–Project Testing

1. **EVERY view** (plan, front, left) is checked against the view settings: Coarse, Medium & Fine Visibility Setting



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07 | Quality Control–Project Testing

1. If anything fails, its back to the Revit Family Editor for revision....and the Quality Control process begins again.

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Data Toolsets for Embedded BIM Data

1. **RevitExpressTools.com**
2. **Revit Family Processor** - Single or Batch Update Parameter Editor
3. **Revit Excel Link** | Bi-directional Parameter Edits via Revit & Excel
4. **WaterMark for Revit Families**
5. **Excel2Revit – DotSoft.com** | Spreadsheet linking to Revit – Edit Content in Excel



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BIM Auto-Writes Construction Specifications

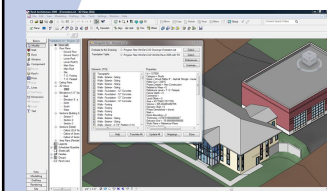
- **e-SPECS**: BIM Facility model helps writes the project's construction specifications based on the manufacturer product BIM models.
- **E-SPECS**: MasterSpec, DoD SpecsIntact, Revit & ArchiCAD
- **BSD SpecLinks / LinkMan**



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BIM Cost Estimating Technologies

WINEST®



50%-80% of cost estimating is spent on **quantification**.

Immediate availability of **area, volume, quantity takeoffs**.

Quantities are accurate and will remain current with the model.

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2012 McGraw-Hill SmartMarket BIM Adoption Reports

71% Architects – 74% Construction General Contractors

* [Download Reports from BradleyBIM.com](#)



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Thank You!



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