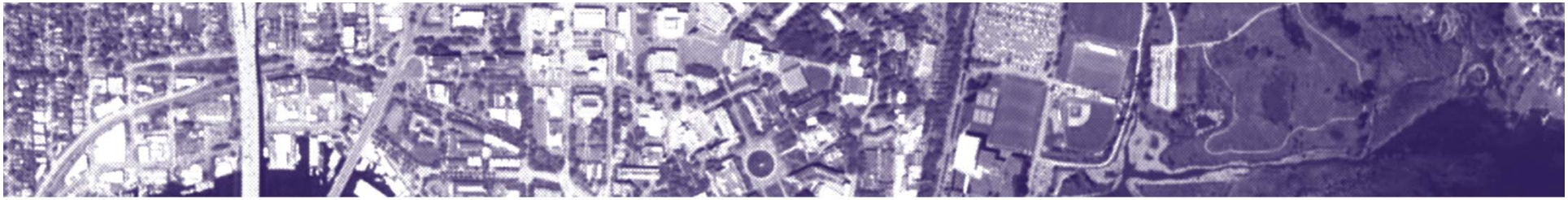


UW GIS Interior Space Mapping

CAD and GIS Integration

Presented by Aaron Cheuvront

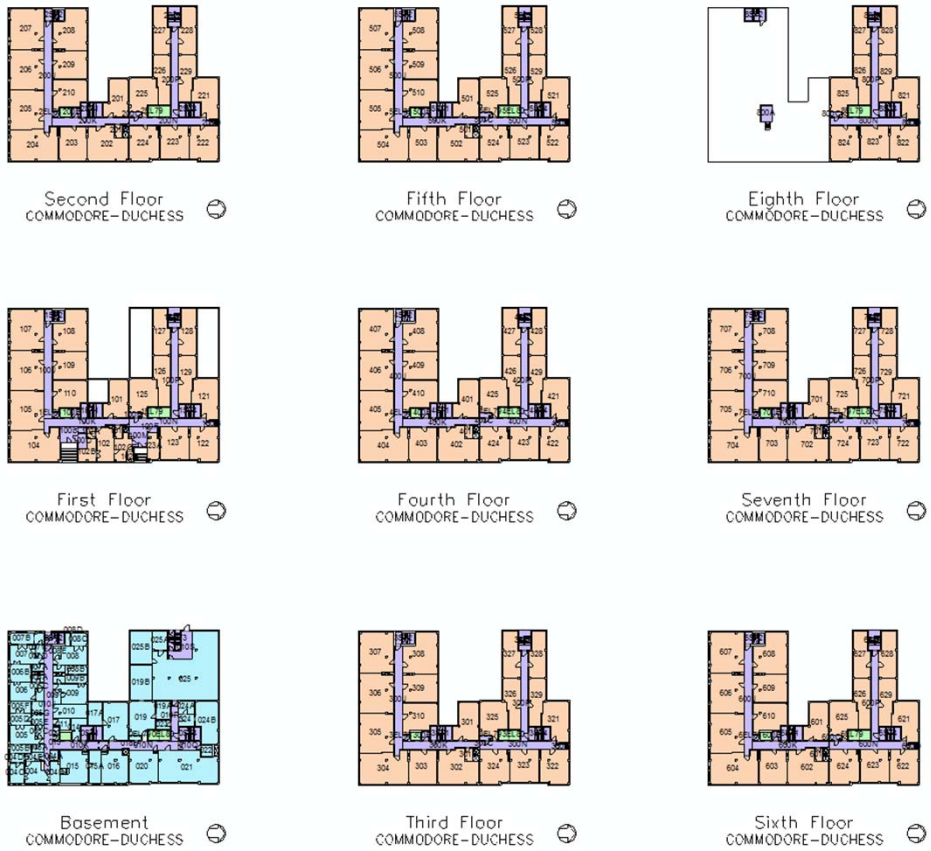
CAPITAL PROJECTS OFFICE
UNIVERSITY of WASHINGTON
Finance & Facilities

Overview

- UW CAD/GIS History
- Drawing Prep
- Translation
- Utilization
- What's Next

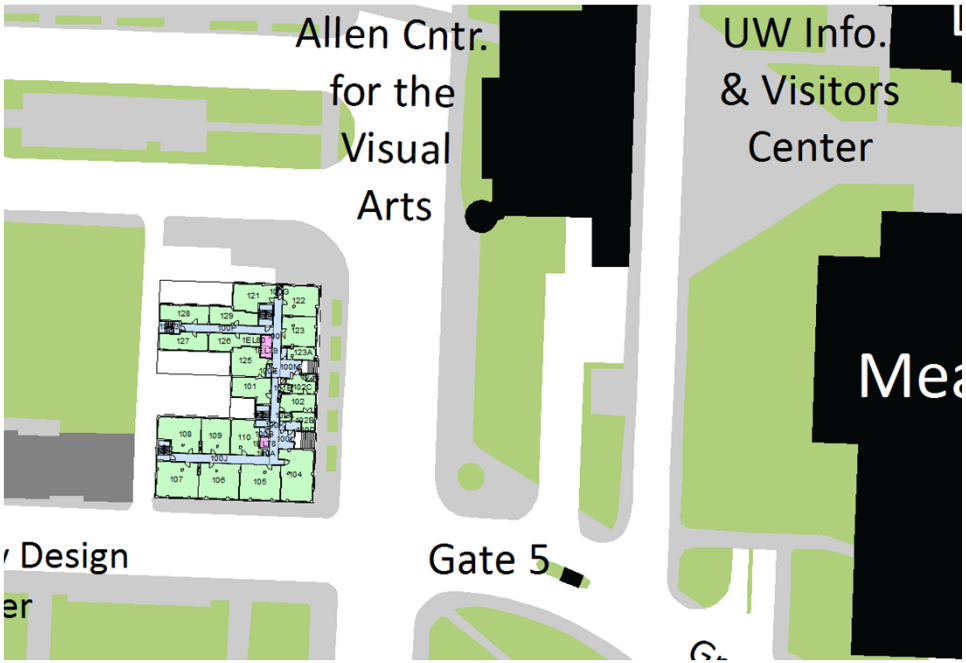
UW CAD/GIS History - In the past…

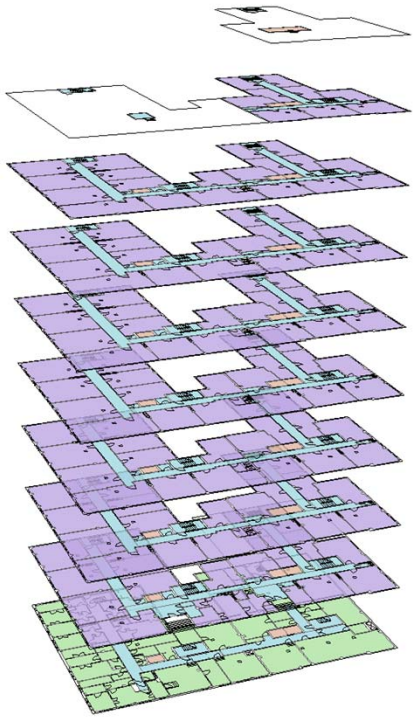
- Not Georeferenced
- Not Standardized
- Manual GIS Translation

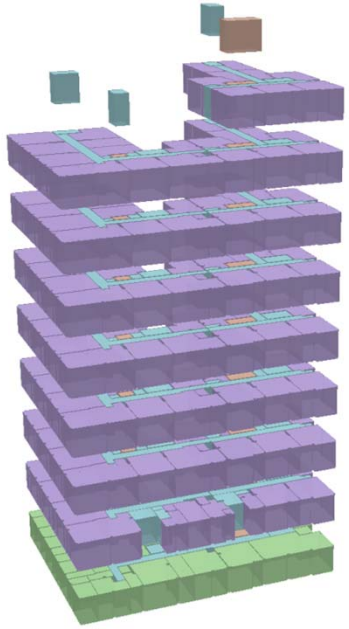


UW CAD/GIS History - Now…

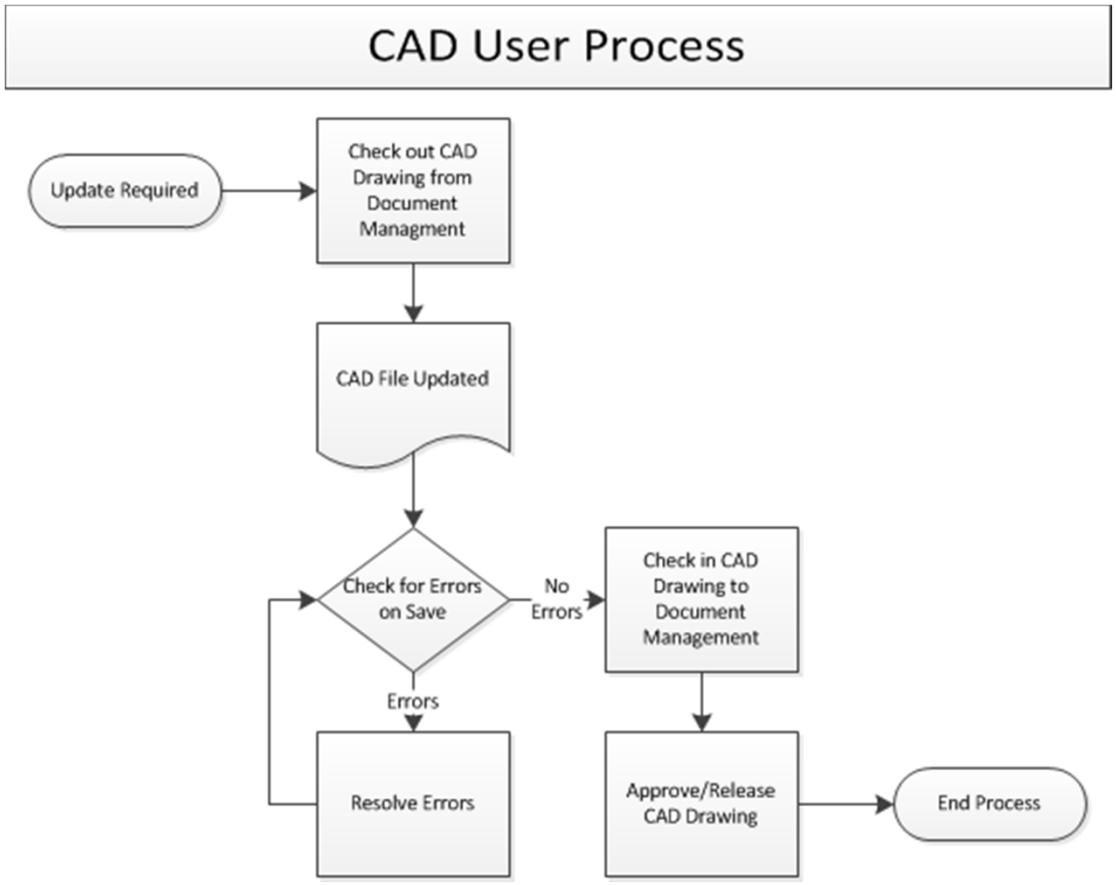
- Georeferenced
- Standardized
- Automatic GIS Translation



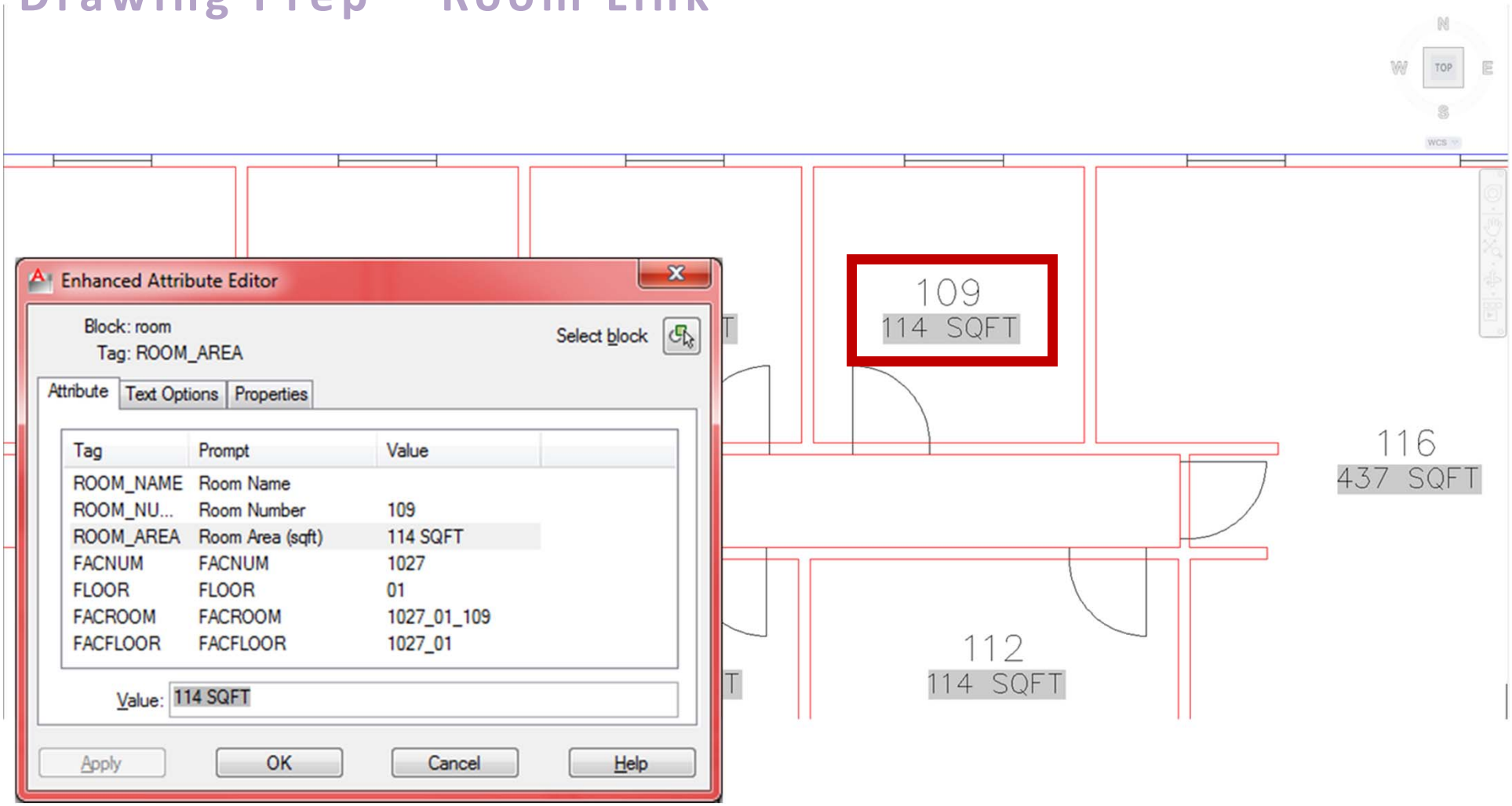




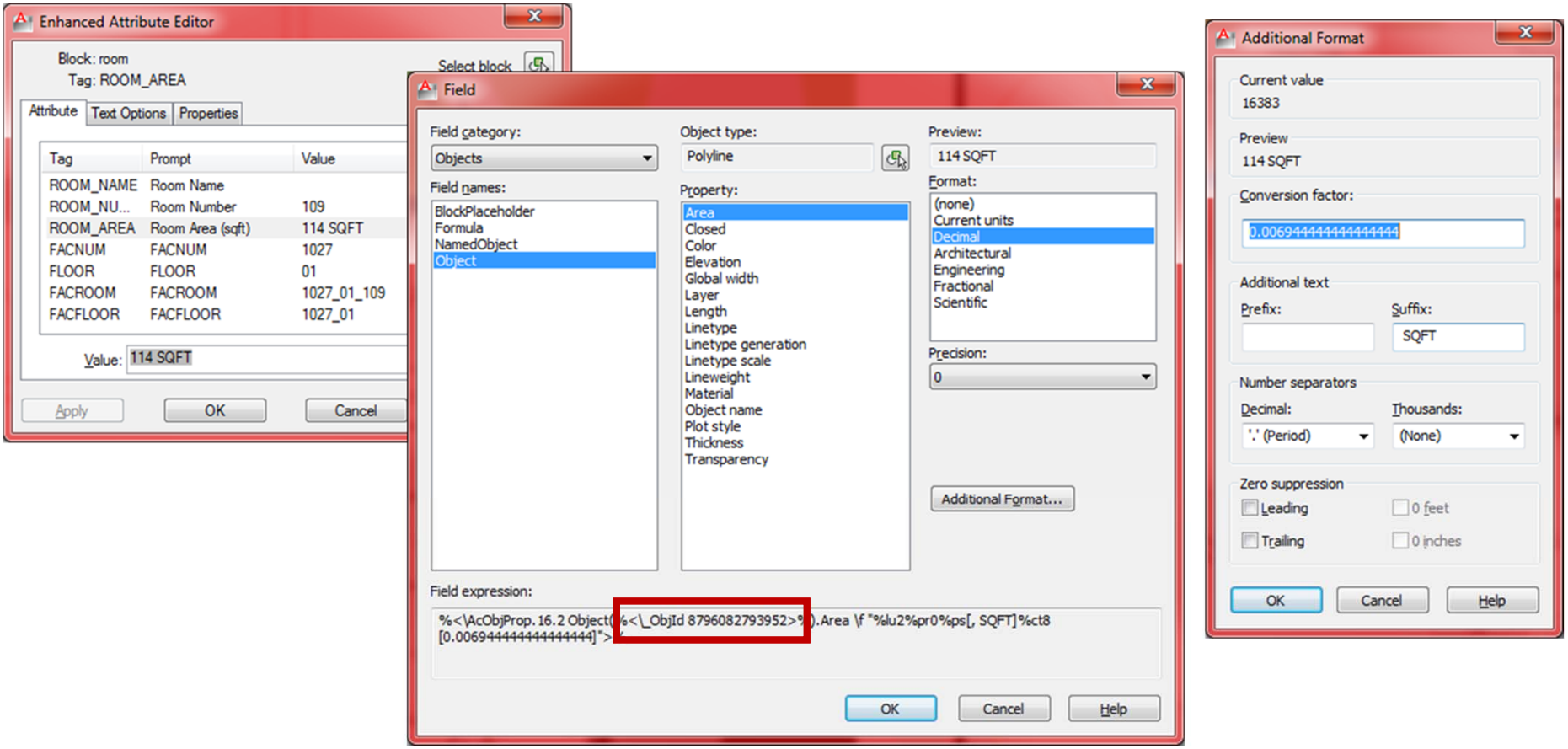
Drawing Prep - Process



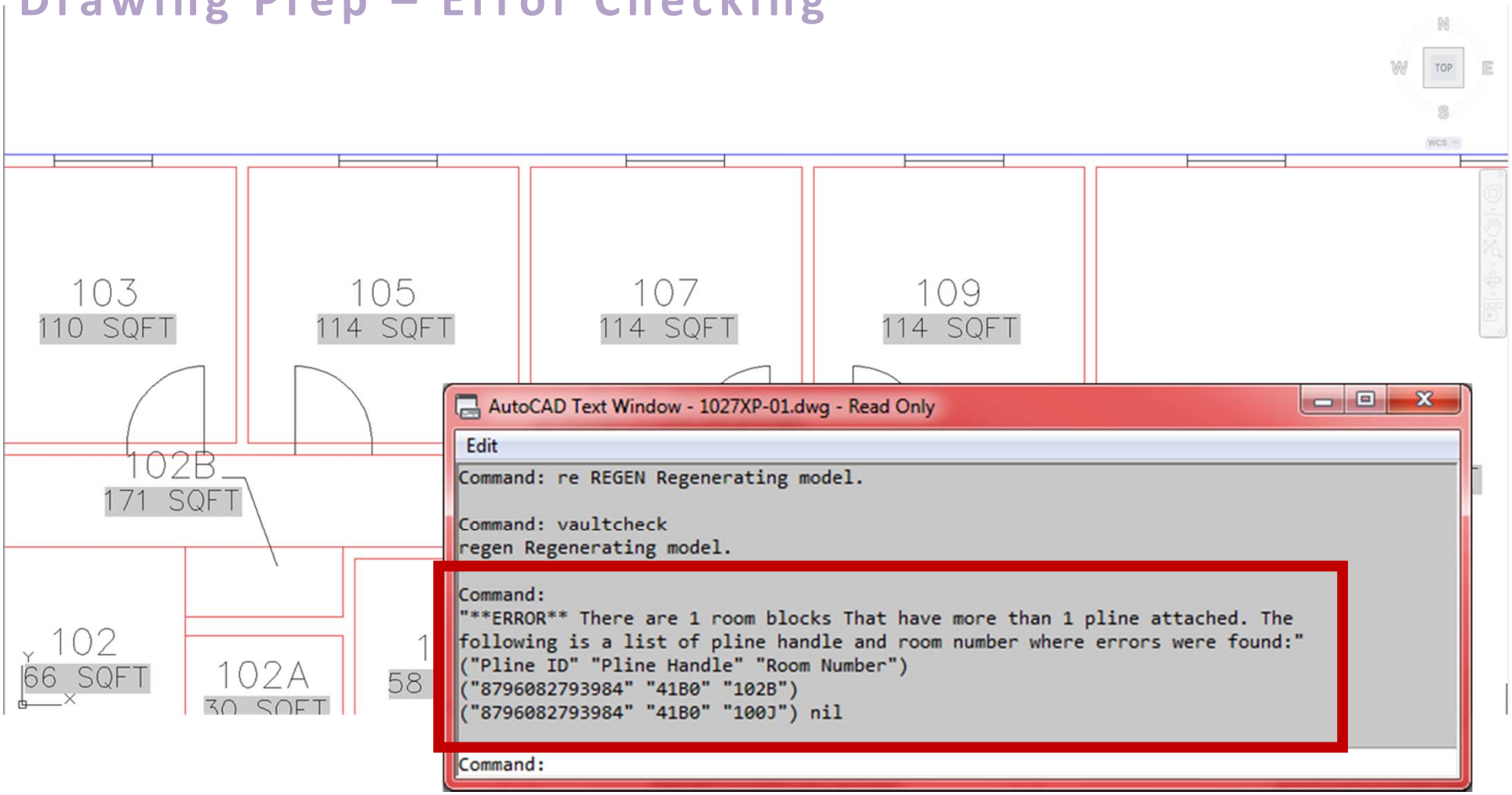
Drawing Prep – Room Link



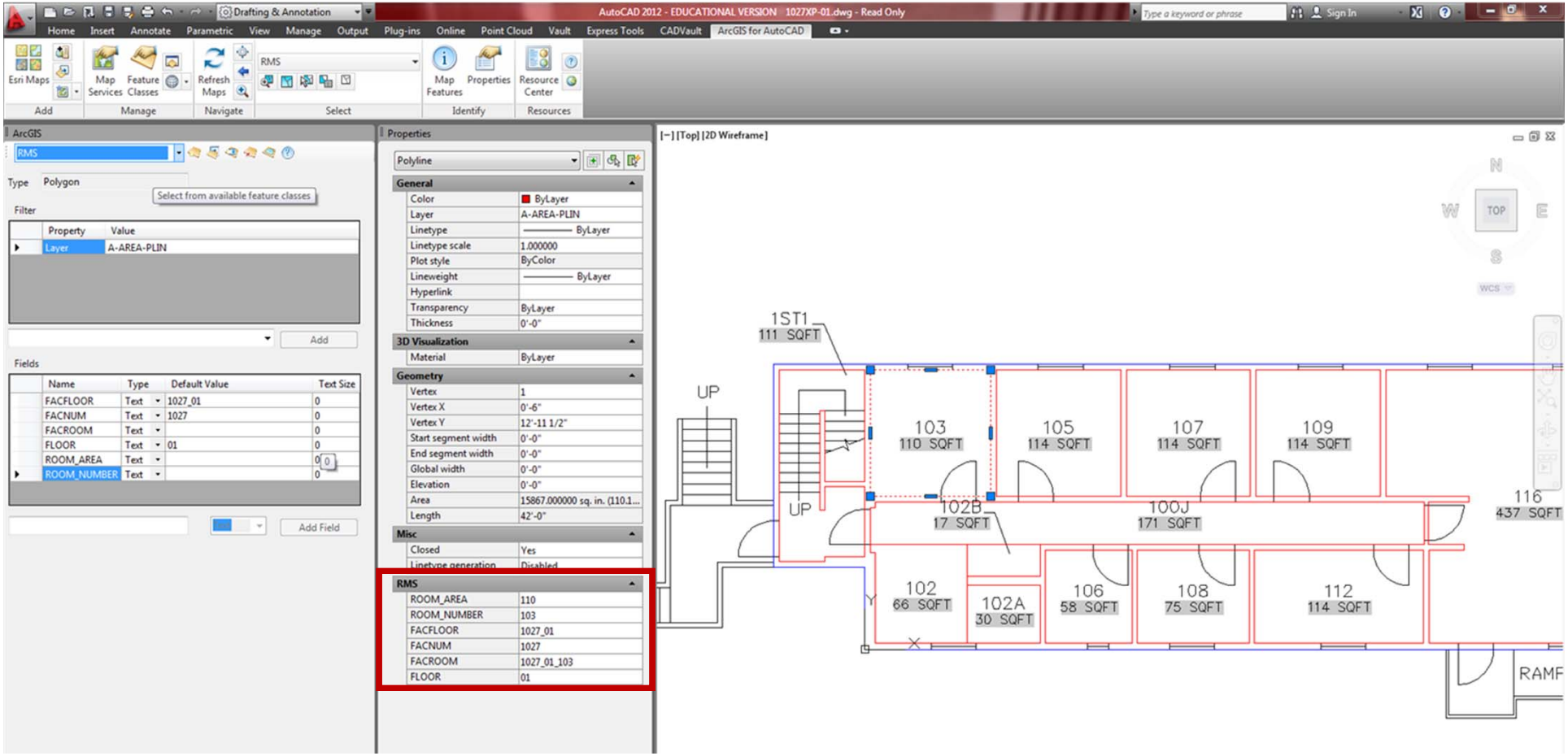
Drawing Prep – Room Link



Drawing Prep – Error Checking

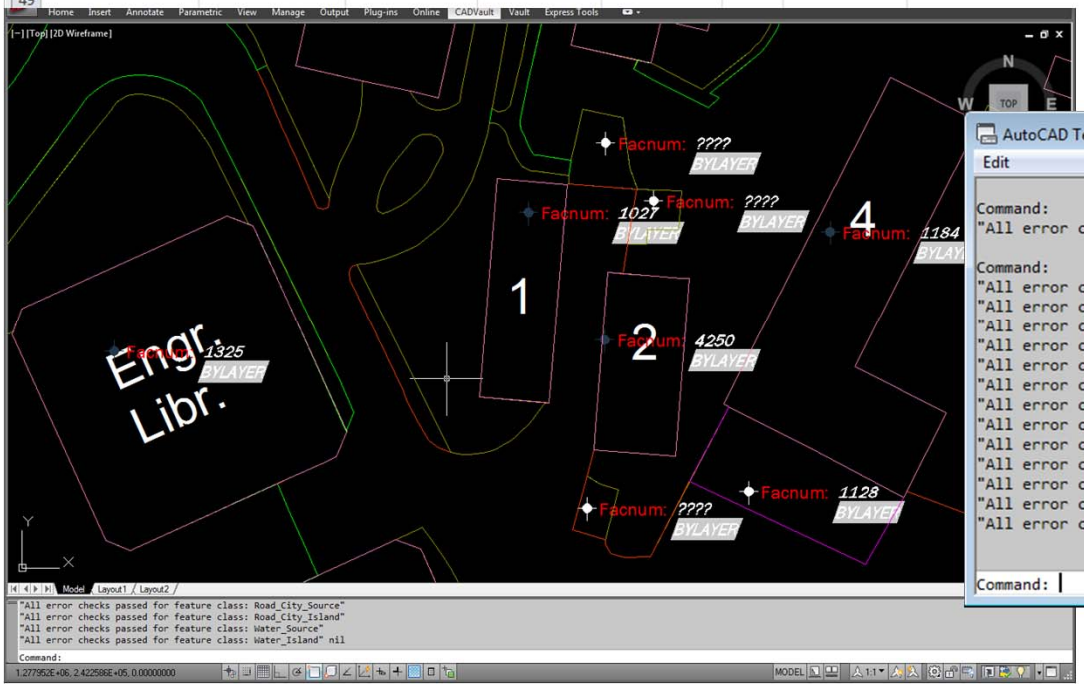


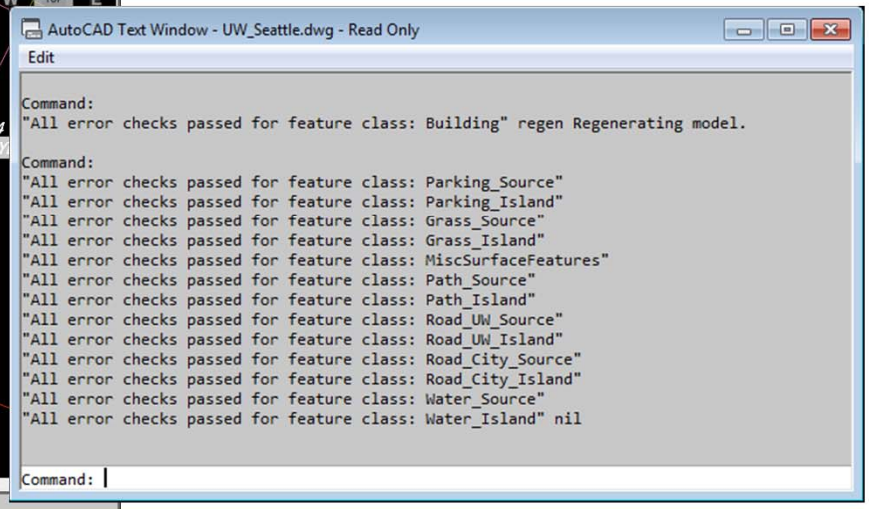
Drawing Prep – Featureclasses in CAD



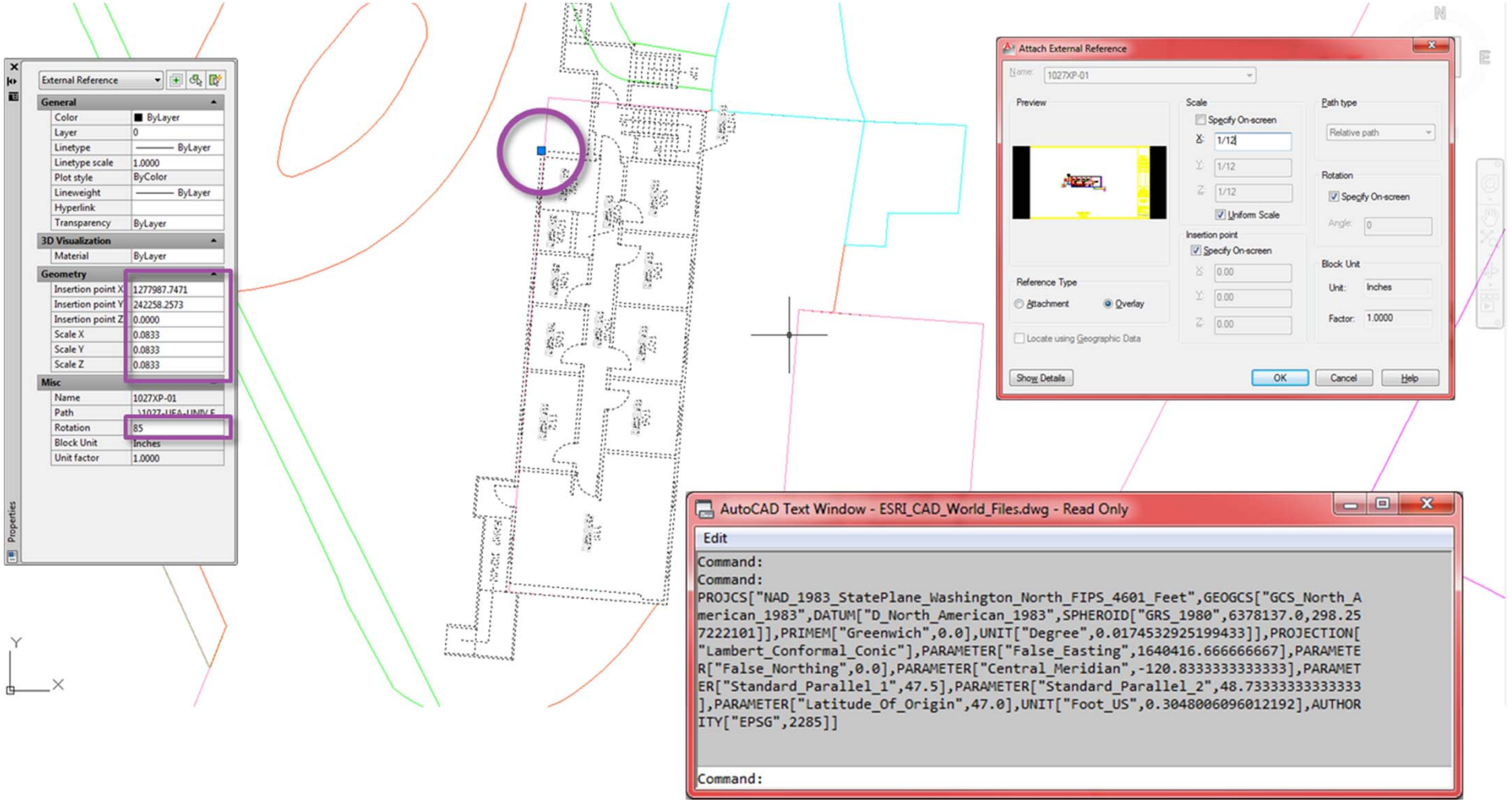
Drawing Prep – Basemap

	A	B	C	H	I	J	K	L	M
1	single	single	single	single	single	single	multiple	mutliple	multiple
2	drawing name	feature class name	feature class type	data block name	data block layer	ID Field	other fields	entity layers (CAD Layer Names)	Representations (Layer = Rule ID)
8	UW_Seattle.dwg	Building	Polygon	BuildingData	BLDG-DATA		FACNUM,RULEID	BLDG-UW,BLDG-UW-UG,BLDG-NONUW	BLDG-UW=1,BLDG-UW-UG=2,BLDG-NONUW=3
9	UW_Seattle.dwg	Parking_Source	Polygon	ParkingData	PRKG-DATA		FACNUM,RULEID	PRKG-UW,PRKG-UW-UG,PRKG-UW-OFF,PRKG-UW-UNLABEL	PRKG-UW=1,PRKG-UW-UG=2,PRKG-UW-OFF=3,PRKG-UW-UNLABEL=4
10	UW_Seattle.dwg	Parking_Island	Polygon					PRKG-UW-ISLAND	
11	UW_Seattle.dwg	Grass_Source	Polygon				RULEID	GRASS	GRASS=1
12	UW_Seattle.dwg	Grass_Island	Polygon					GRASS-ISLAND	
13	UW_Seattle.dwg	MiscSurfaceFeatures	Polyline				RULEID	MISC-FENCE,MISC-SURF-FEAT	MISC-FENCE=1,MISC-SURF-FEAT=2
14	UW_Seattle.dwg	Path_Source	Polygon				RULEID	PATH	PATH=1
15	UW_Seattle.dwg	Path_Island	Polygon					PATH-ISLAND	
16	UW_Seattle.dwg	Road_UW_Source	Polygon				RULEID	STREET-UW	STREET-UW=1
17	UW_Seattle.dwg	Road_UW_Island	Polygon					STREET-UW-ISLAND	
18	UW_Seattle.dwg	Road_City_Source	Polygon				RULEID	STREET-NONUW	STREET-NONUW=1
19	UW_Seattle.dwg	Road_City_Island	Polygon					STREET-NONUW-ISLAND	
20	UW_Seattle.dwg	Water_Source	Polygon				RULEID	Water_Source	Water_Source=1
21	UW_Seattle.dwg	Water_Island	Polygon					Water_Island	
49									

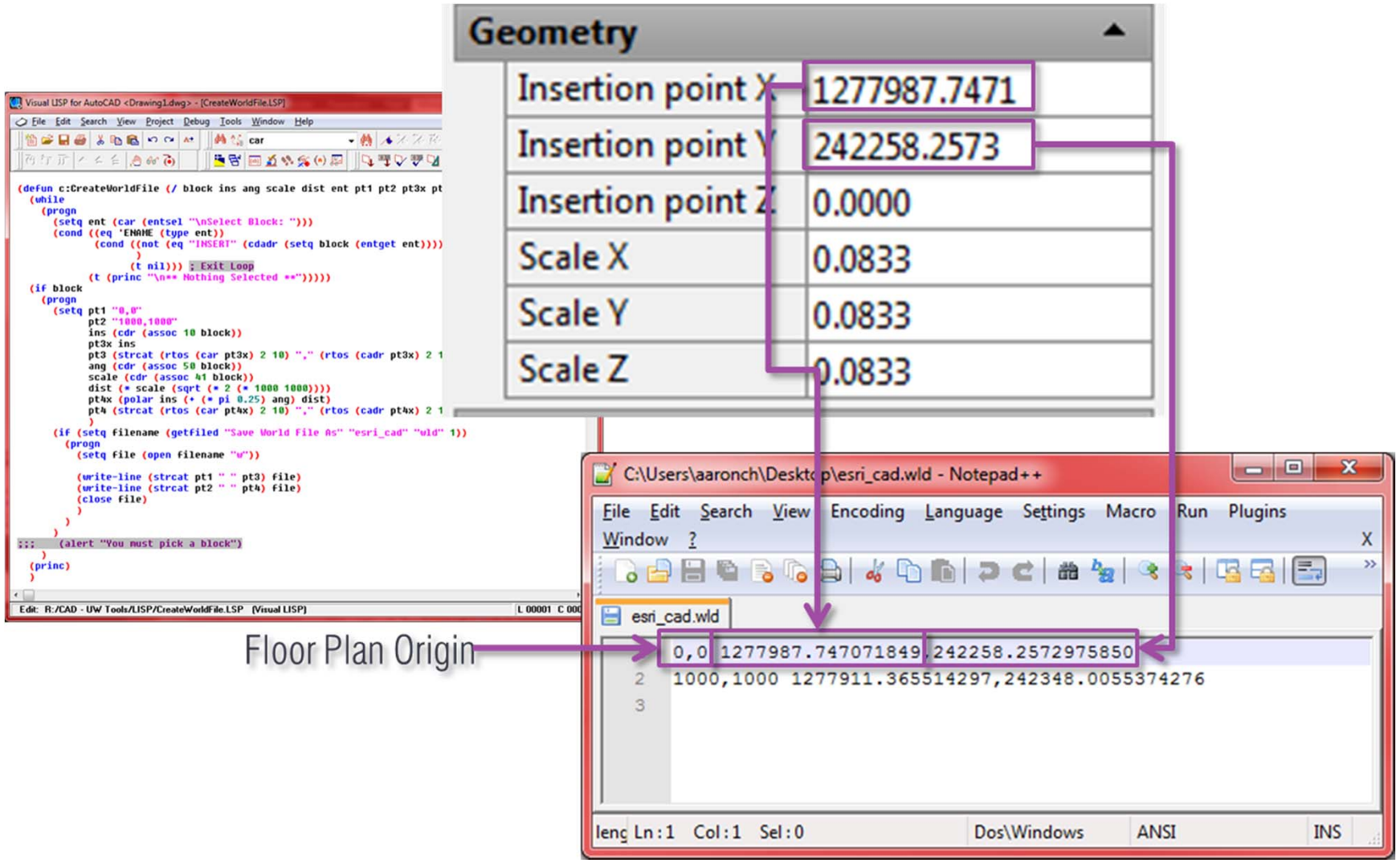




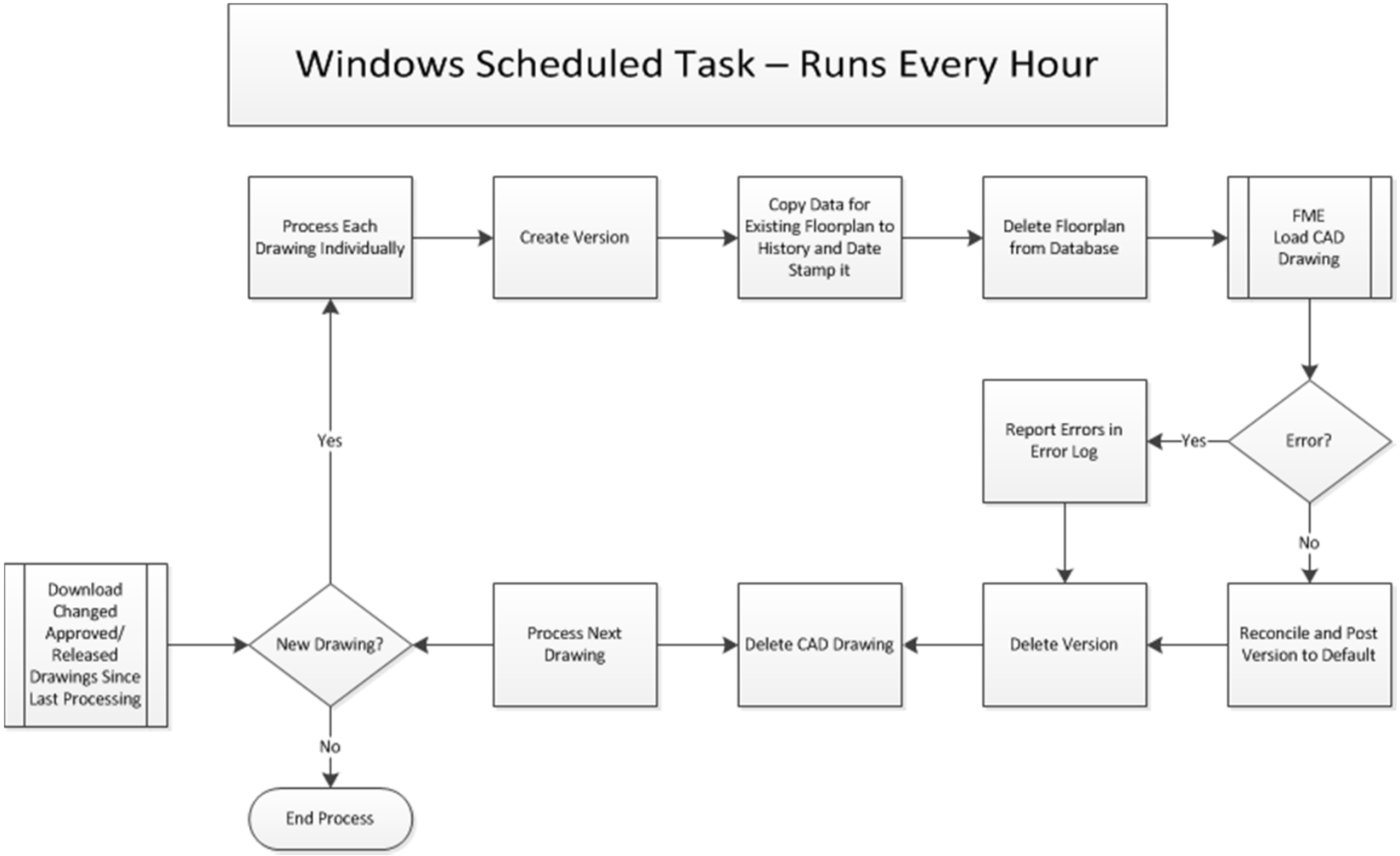
Translation – World File



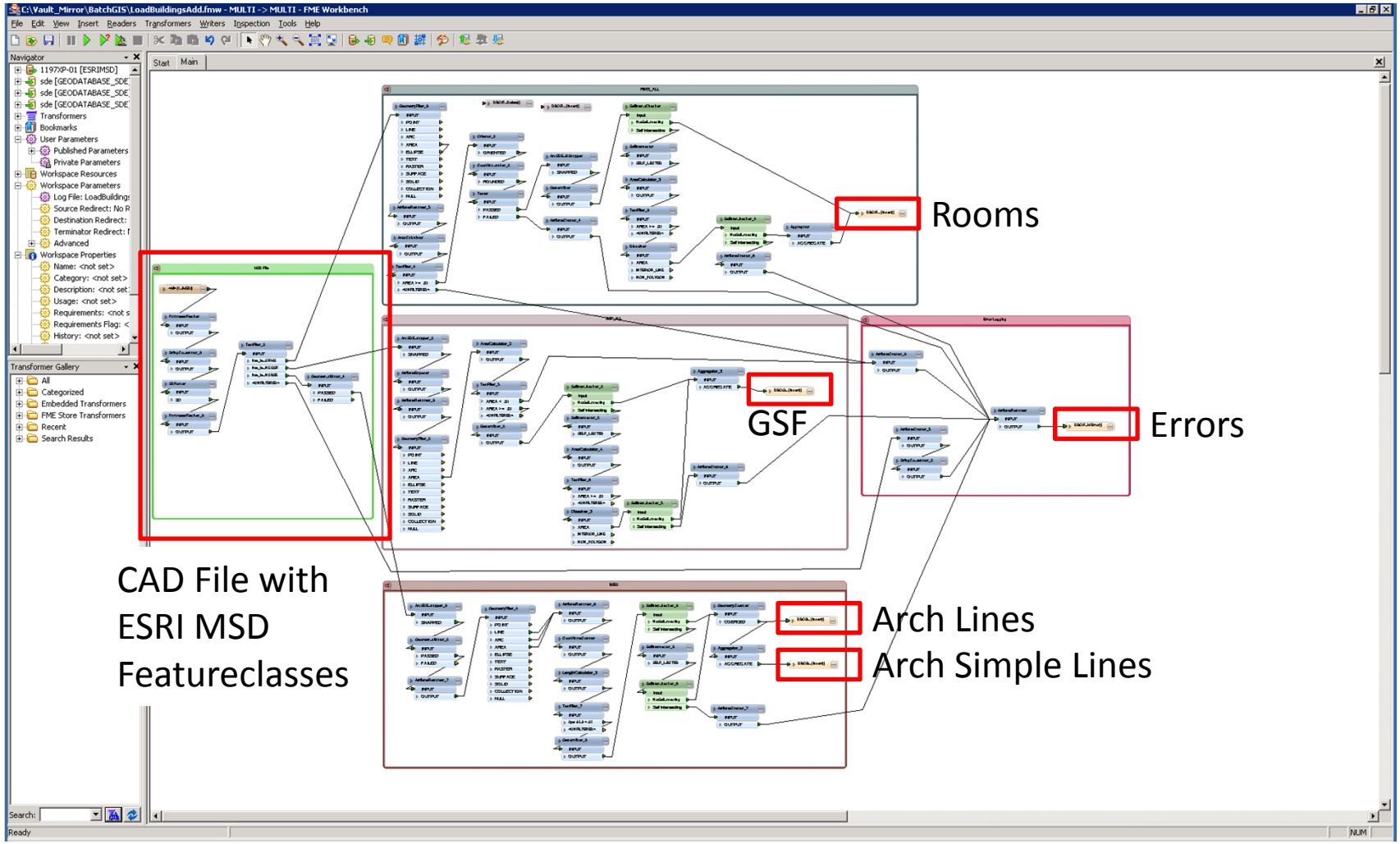
Translation – World File



Translation – Floorplan Automated Processing

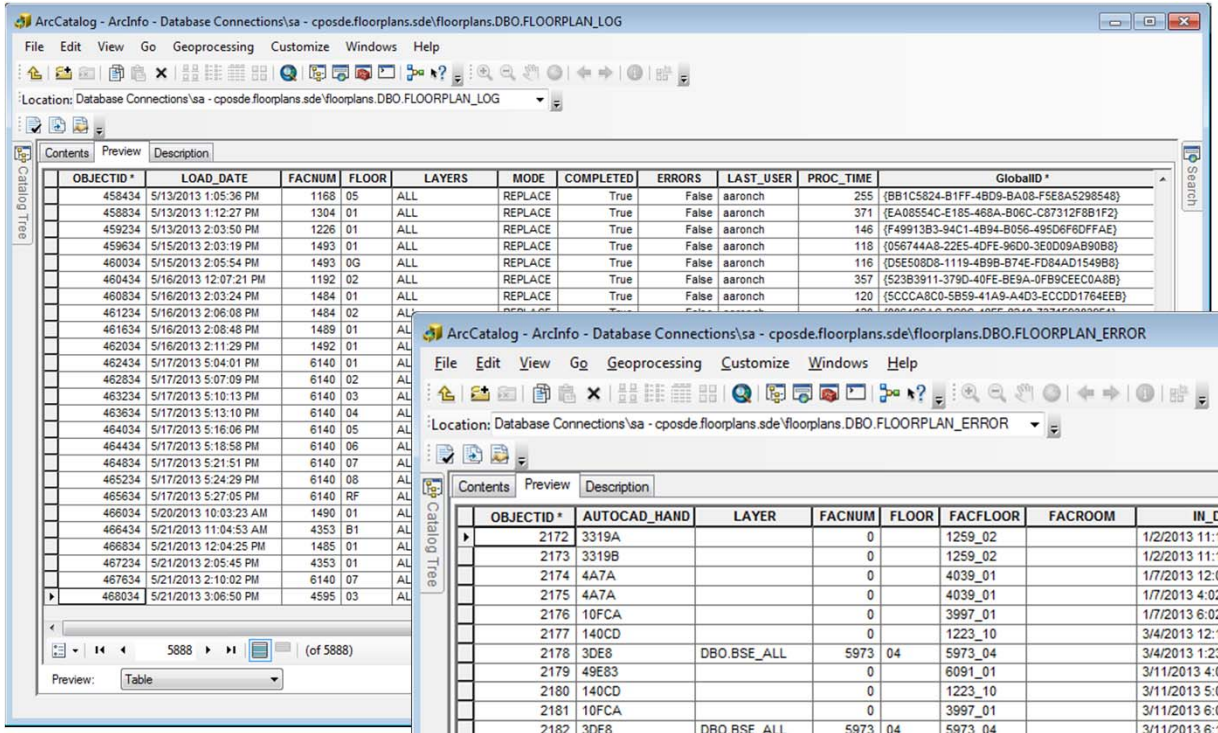


Translation – Floorplan FME Process

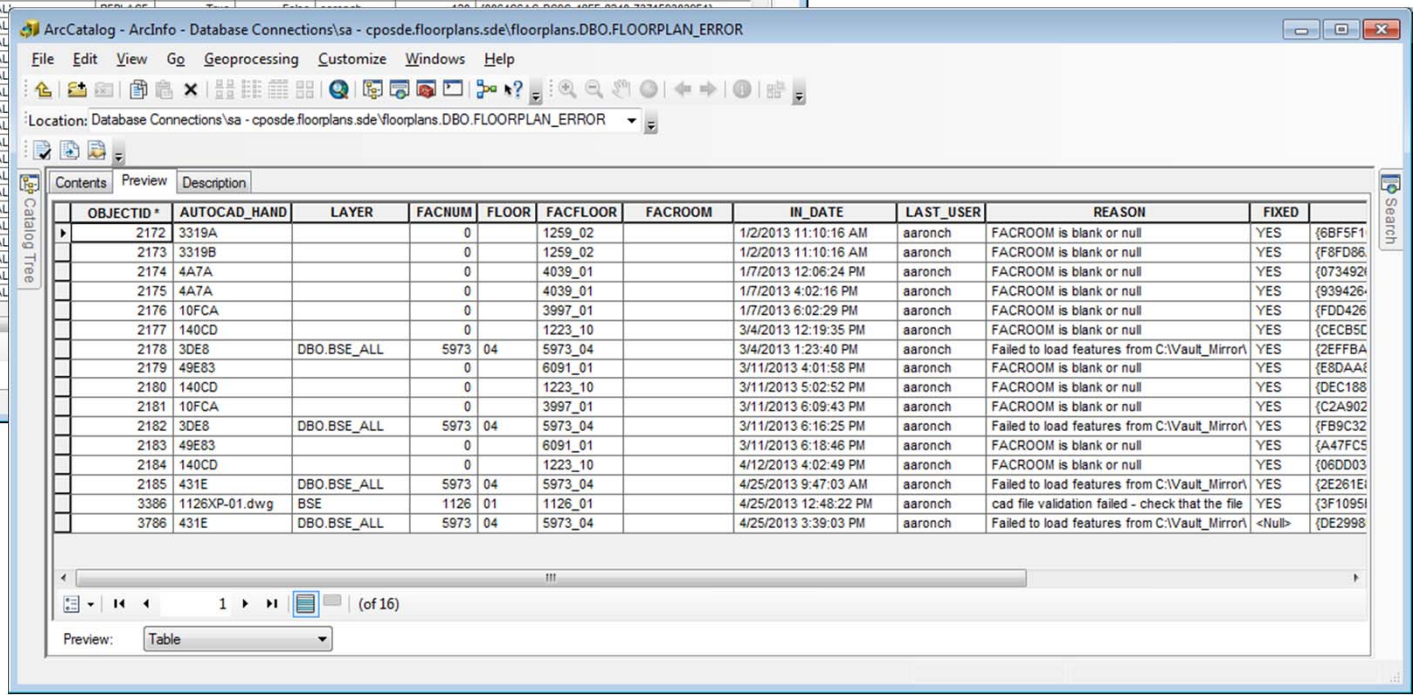


Translation – Floorplan Log Tables

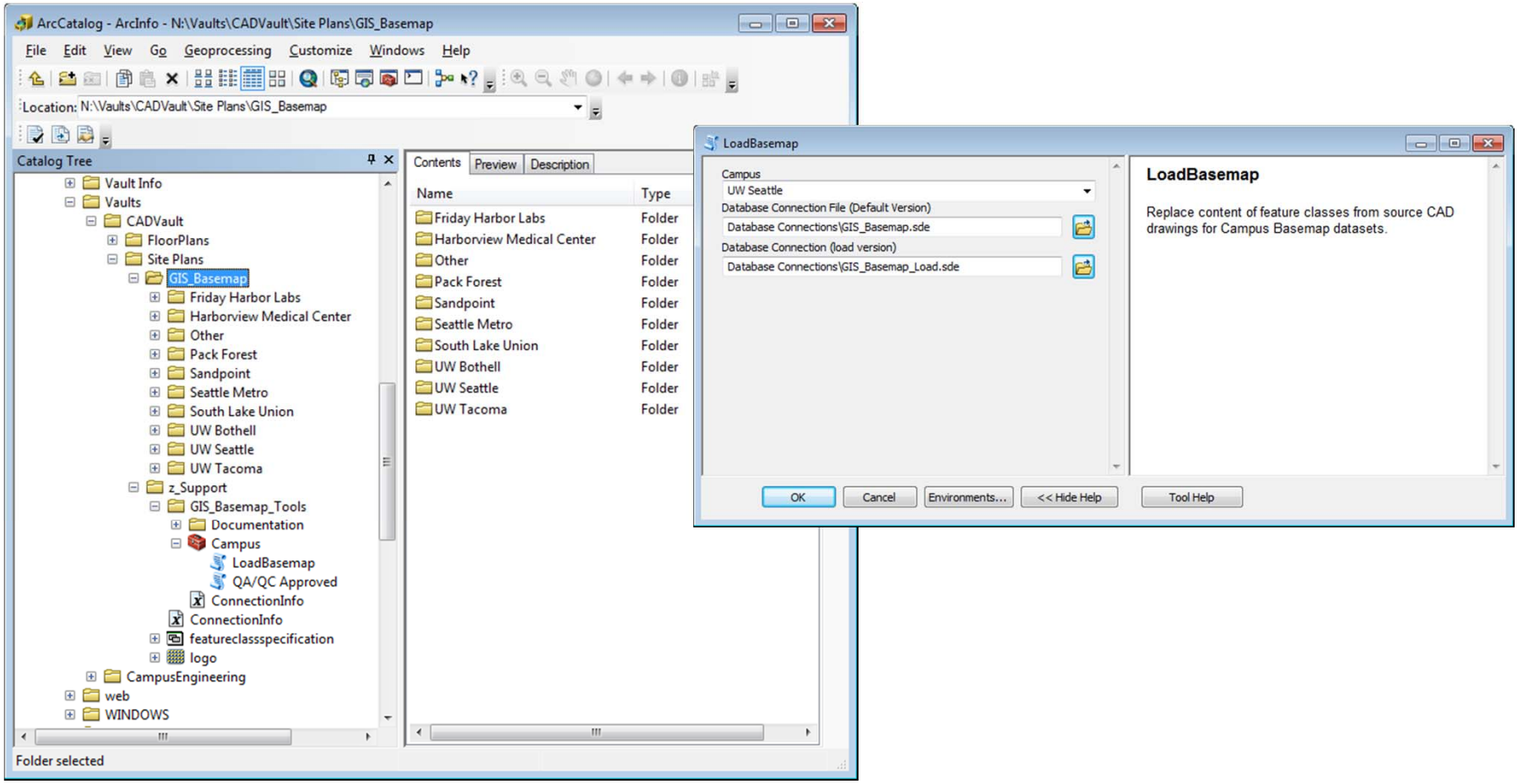
Processing Log



Error Log

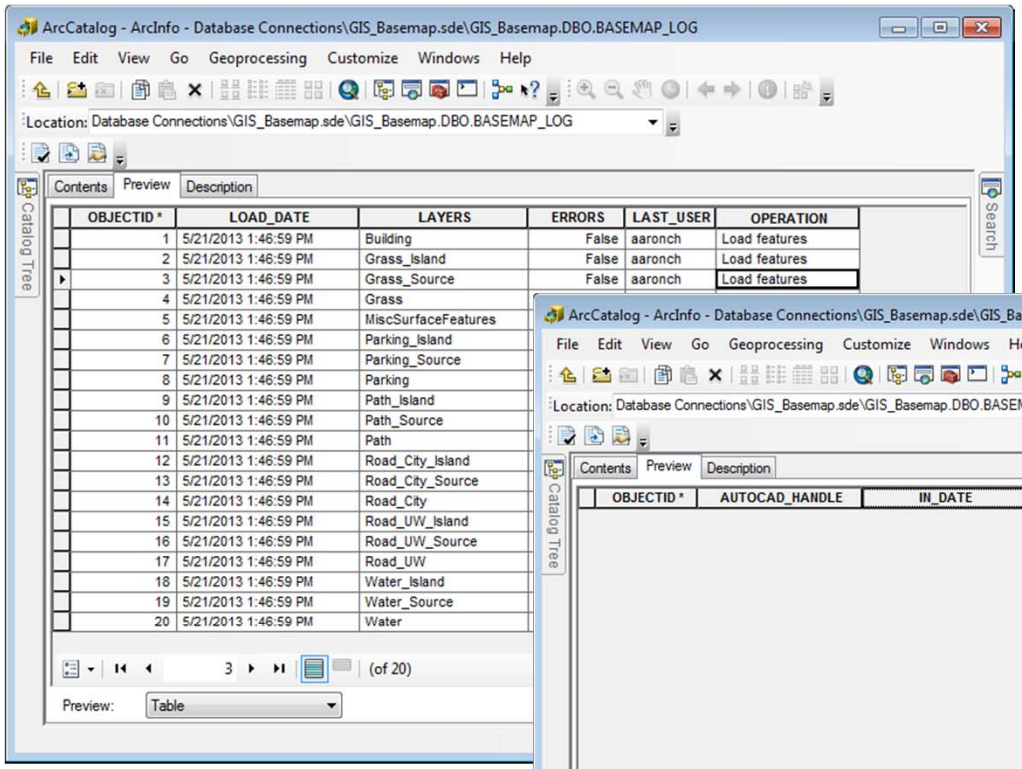


Translation – Basemap Load Tool

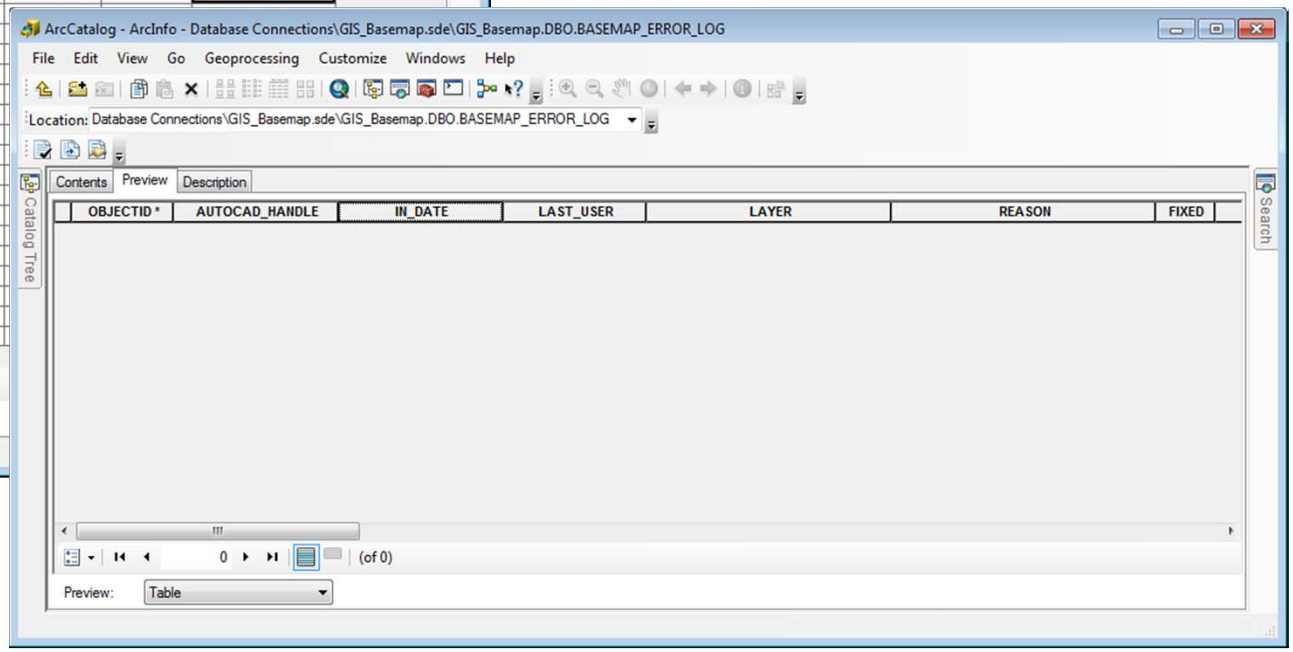


Translation – Basemap Log Tables

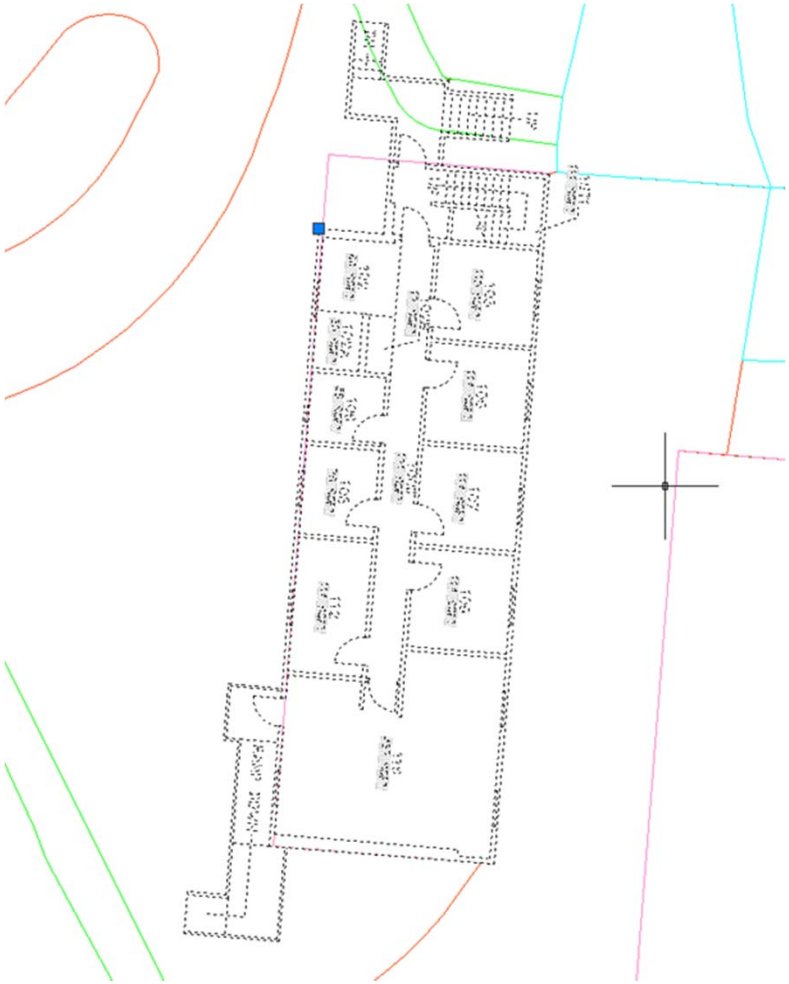
Processing Log



Error Log

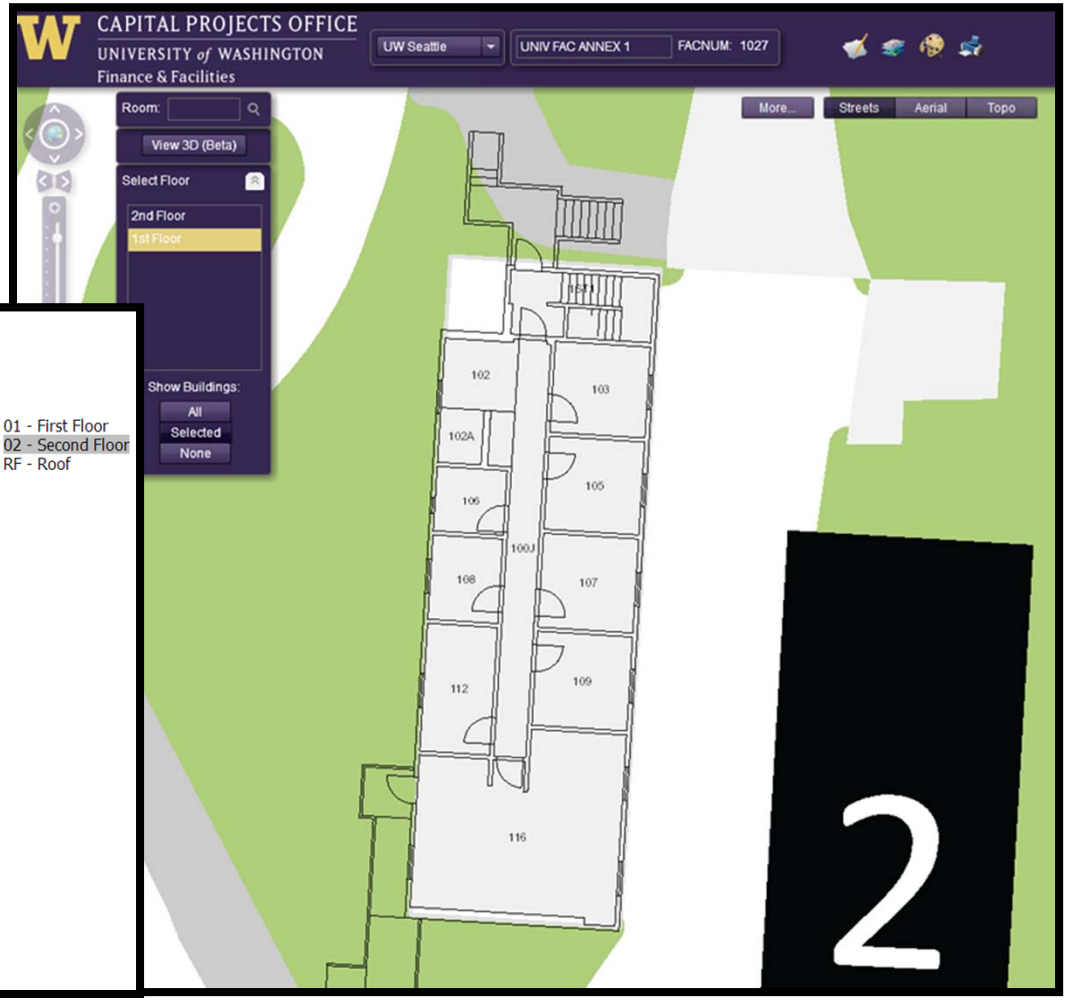


Translation – Before and After



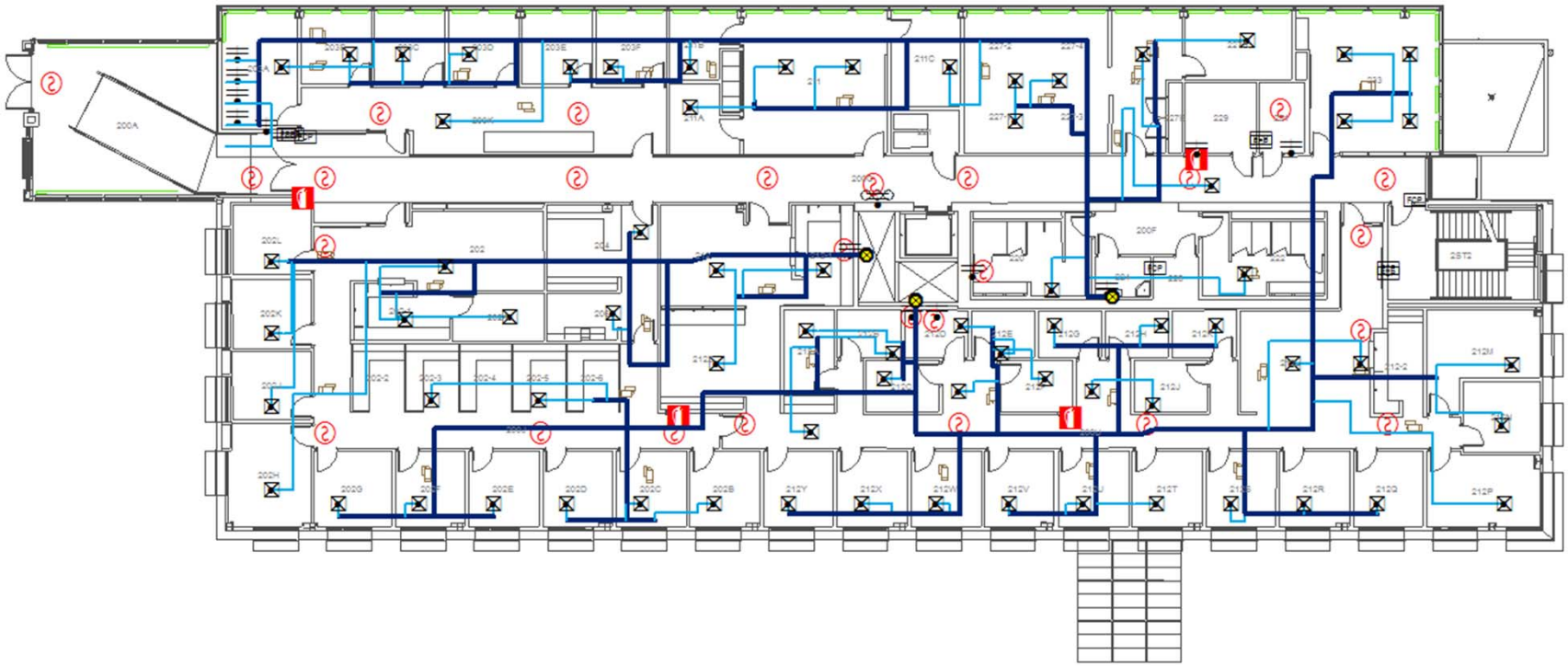
Utilization – Web Applications

Flex

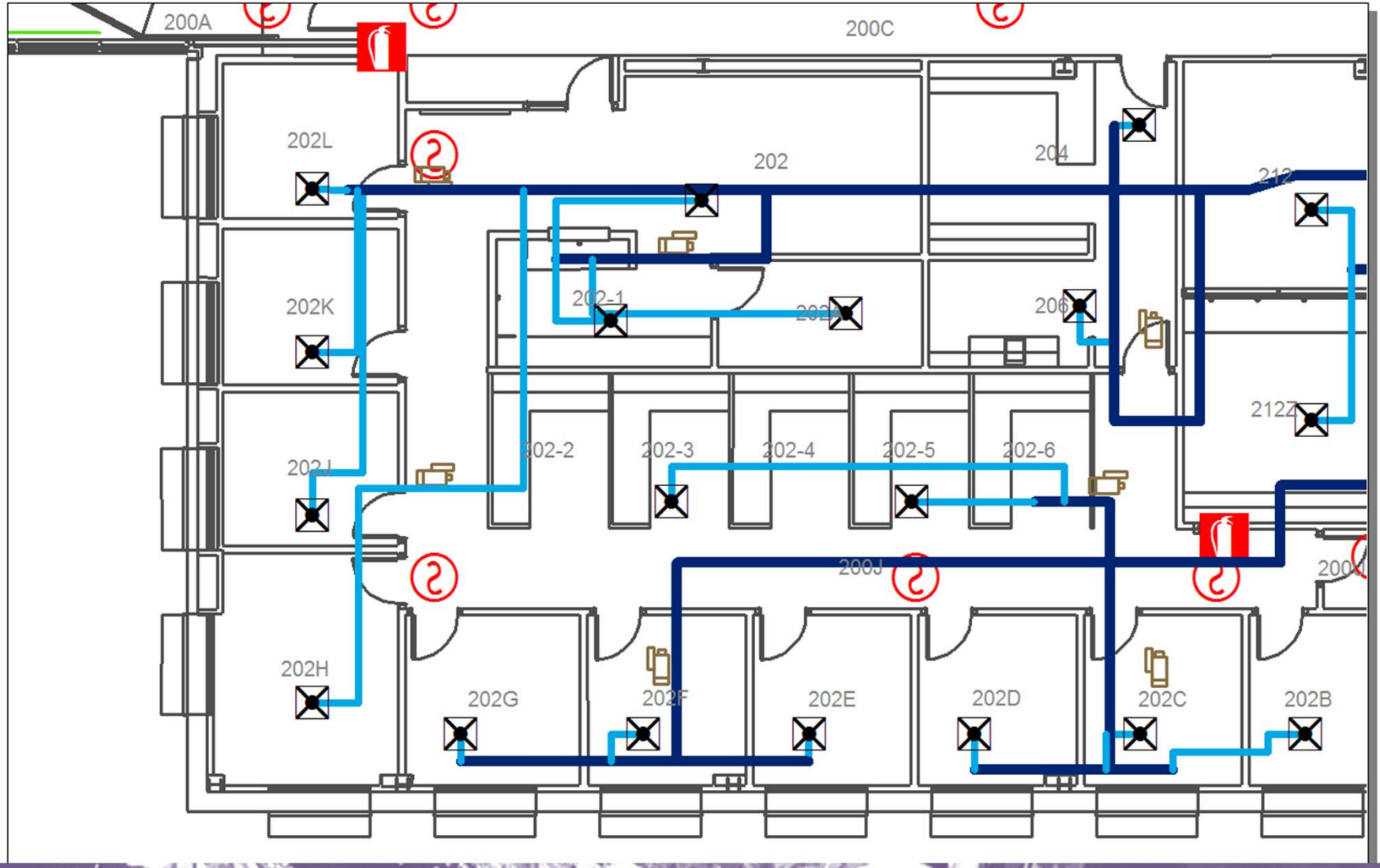


Javascript

Utilization – Asset Management



Utilization – Asset Management

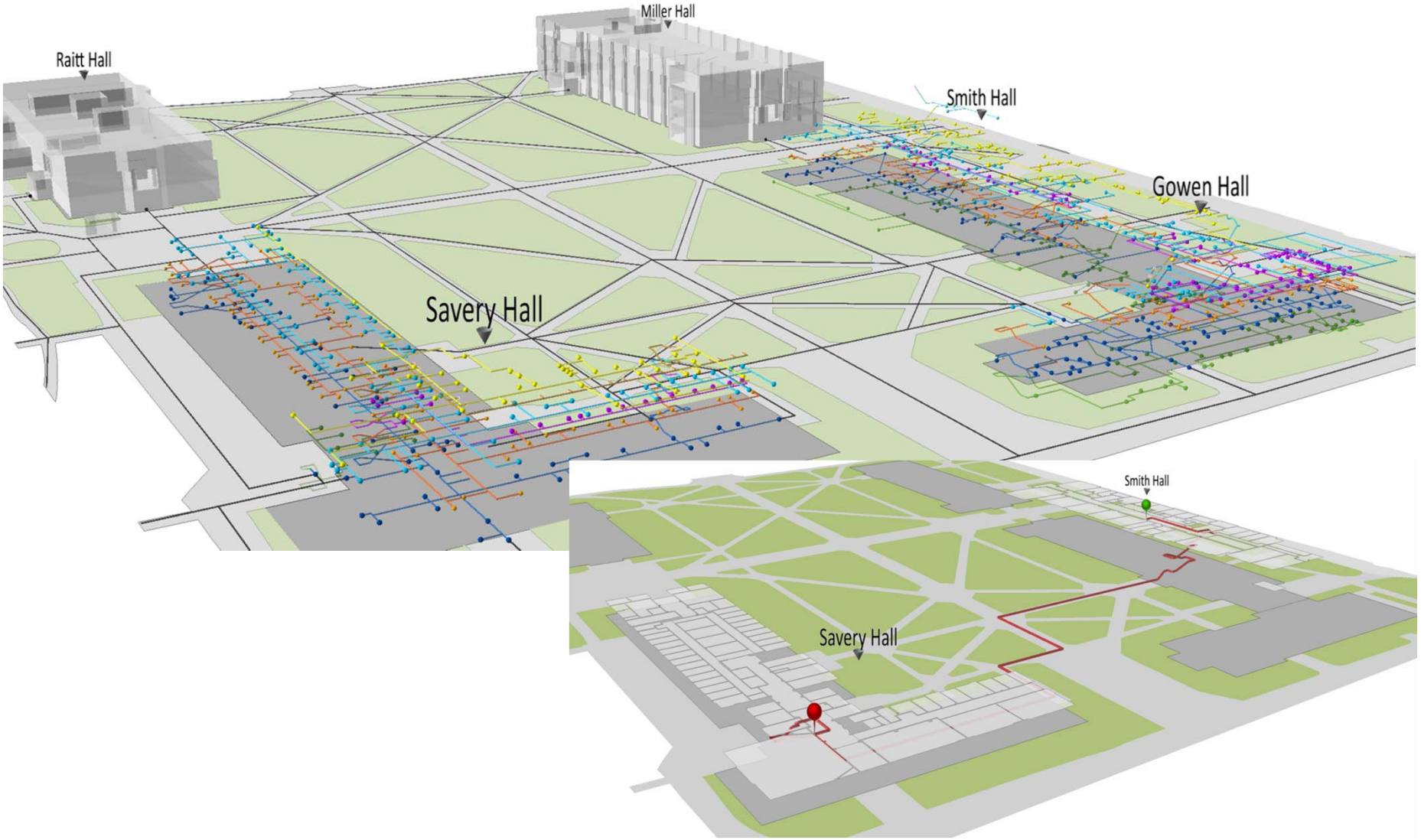


Utilization – 2D & Schematic 3D

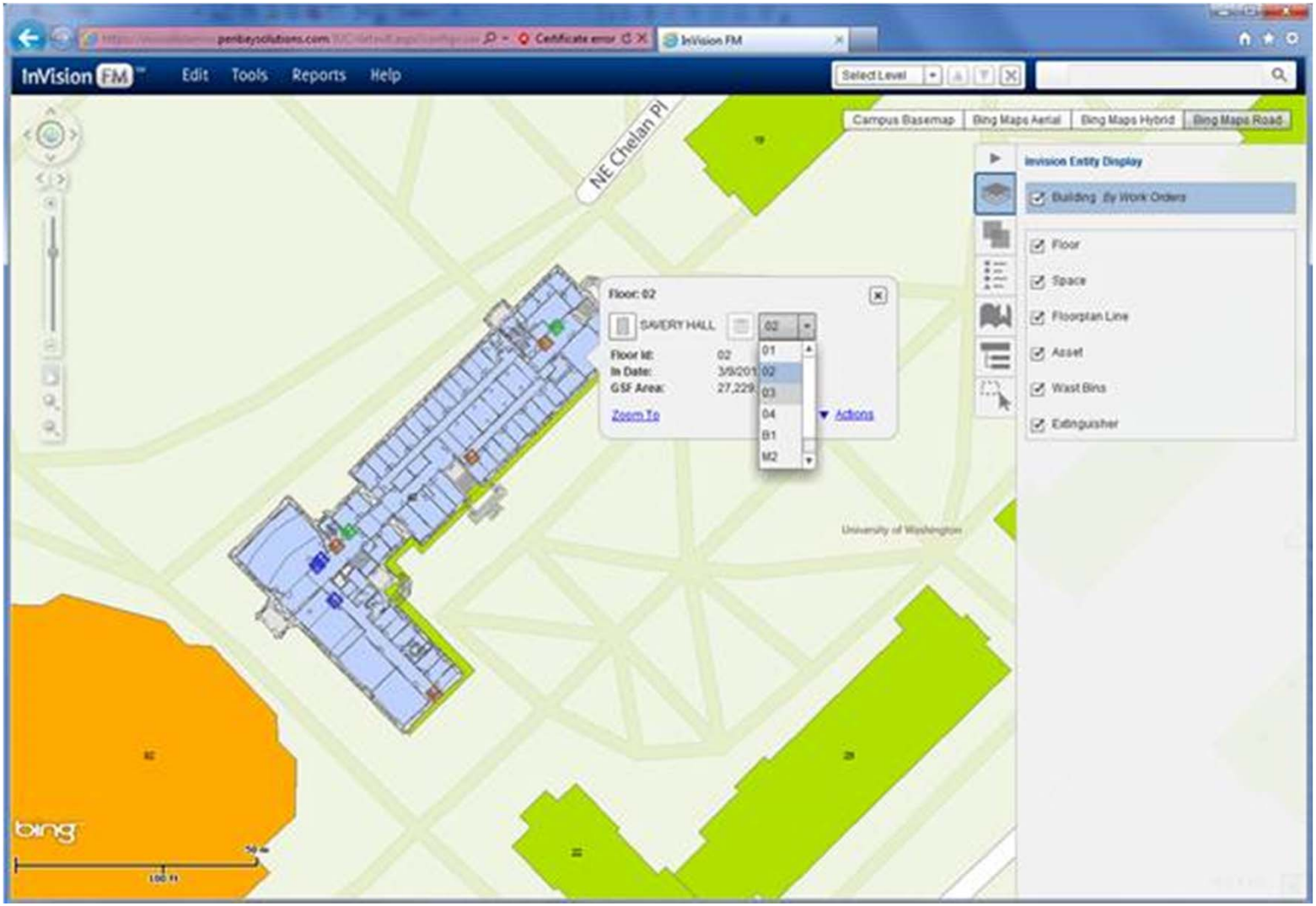
What's Next?

- Automate supporting infrastructure
- Way-finding
- Mobile Devices
- Larger Audience
- Crowdsourcing
- InVision FM from PenBay Solutions
- More Data, More Data, More Data…

Way-finding


Miller Hall
Raitt Hall
Smith Hall
Gowen Hall
Savery Hall
Smith Hall
Savery Hall

InVision FM


InVision FM
Edit
Tools
Reports
Help
Campus Basemap
Bing Maps Aerial
Bing Maps Hybrid
Bing Maps Road
NE Chelan Pl
Floor: 02
SAVERY HALL
Floor Id:
In Date:
GSF Area:
Zoom To
Actions
Invision Entity Display
Building By Work Orders
Floor
Space
Floorplan Line
Asset
Waste Bins
Extinguisher
bing

Q&A

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