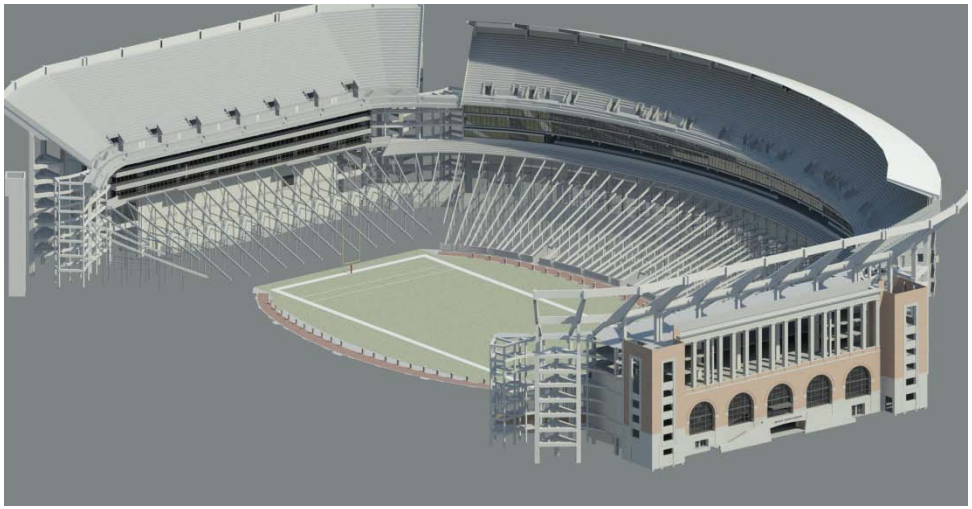
Building Information Modeling (B.I.M.)

SEC Courtyard

Building Information Services

B.I.M. is more than just 3D design, it's intelligent!

- BIM knows what a wall is, what it is made out of, what color it is, how big it is and where it is. All of the intelligent parameters of a BIM model can be defined by the owner. Things like model, size and color are just a few examples.
- With BIM, we no longer think in a horizontal environment, we begin thinking vertically. In our current space management process, we can track space and space types in AutoCAD, but with Revit, we can track and define every existing condition within a building.
- With BIM, our drawings are more than flat lines, they become a virtual building.
- The BIM can quickly track and report the space, occupancy, department, occupant, area and volume. Within BIM, our drawings and spreadsheets are one. The cross walk of data from one program to the other no longer needed. If data within the drawing changes, the spreadsheet within the BIM is updated instantly.



Bryant-Denny Stadium – in development

Smart Drawings

Once the BIM is created, there is virtually nothing that can't be viewed or stored within the drawings. No more going to the plan room to find information, things can be viewed in a virtual, real time environment, from anywhere at any time. Links can be placed within the drawing to take you directly to information provided in the building repository.

- View elevations and change vantage points on the fly
- View sections and change cut planes on the fly
- Shade and color fill rooms instantly, by room or department, complete with legends
- Generate walkthroughs for any area in the building as needed
- View current real time schedules
- 3D renderings from any vantage point, both inside and outside the building

Adams Hall - completed

B.I.M. for
Space/Facilities Management

- Archival and Retrieval of Material & Vendor Data
- Material or Equipment Inventories
- Space and Asset Management
- Building Security
- Emergency Preparedness & Evacuation Plans
- Energy Analysis
- Renovation Planning, Design, Construction
- Maintenance & Replacement Scheduling
- Life Cycle Analysis

Ferguson Center - completed

At this point we have incorporated mostly room/space data in to our models. We will continue to add data to our models as needed. Our models are a living virtual building and will be modified as changes are made to the buildings.

The following slides are samples of our B.I.M. files and this will be available on Estus for use throughout campus.

Sciences & Engineering Research Complex - Phase 1 & 2

THE UNIVERSITY OF ALABAMA

BUILDING INFORMATION SERVICES

1 Level 3 Coordination Plan - Departments
1/16" = 1'-0"

Sciences & Engineering Research Complex - Phase 1 & 2

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1 Level 3 Sector B - Departments
1/8" = 1'-0"

Sciences & Engineering Research Complex - Phase 1 & 2

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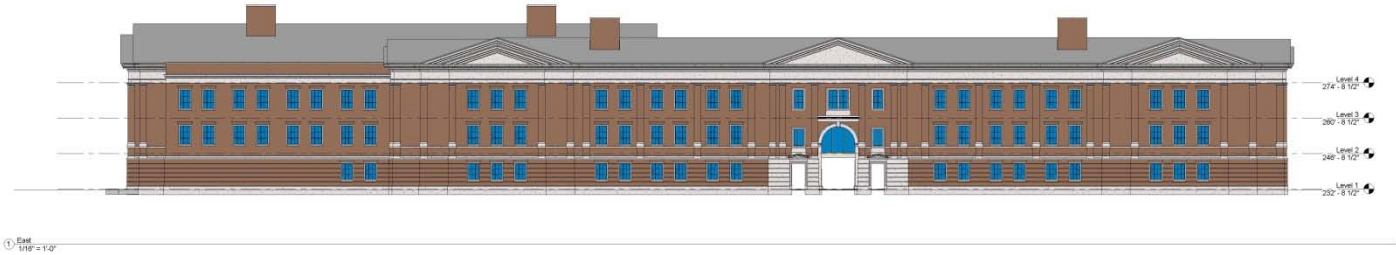


1 East
1/16" = 1'-0"

2 North
1/16" = 1'-0"

Sciences & Engineering Research Complex - Phase 1 & 2

THE UNIVERSITY OF ALABAMA

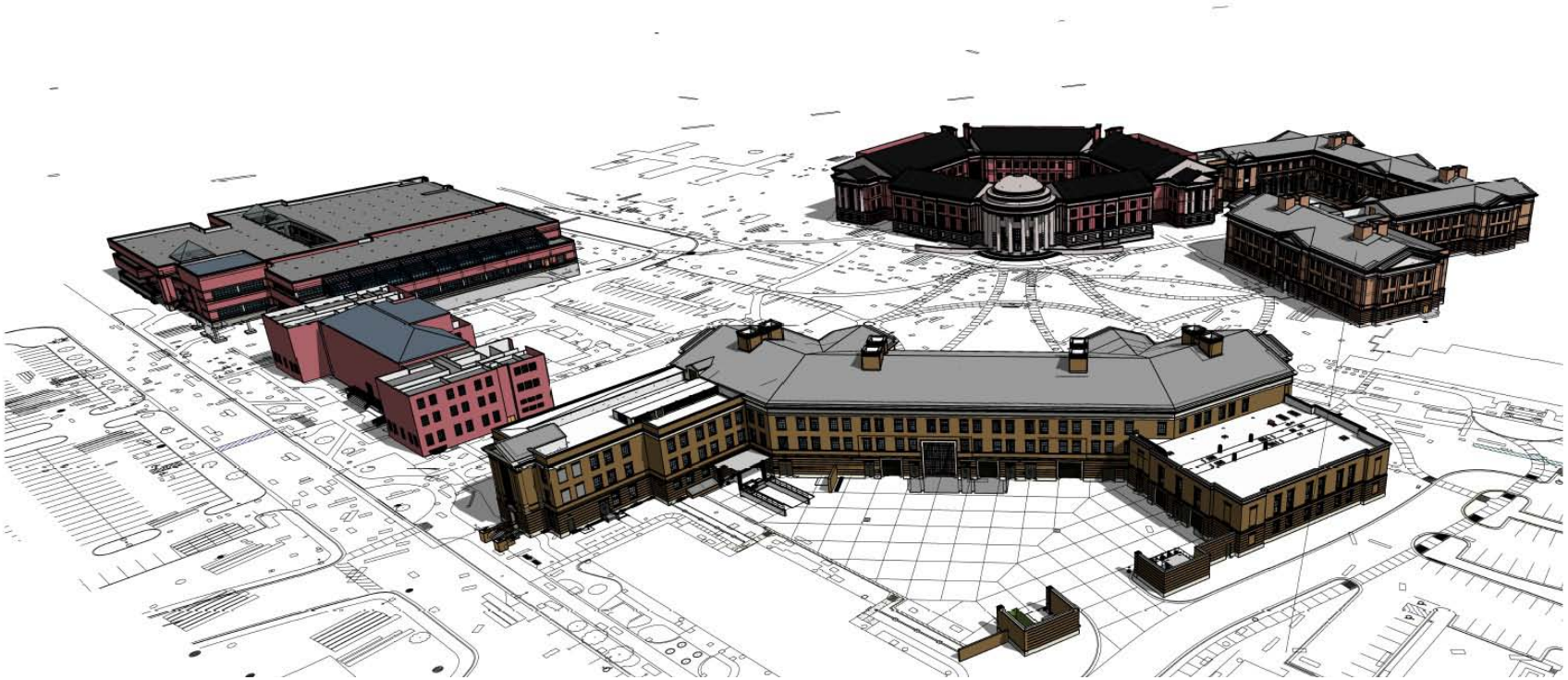
BUILDING INFORMATION SERVICES

By using a cut away floor plan (like the building below) we are able to more accurately show building features that can benefit UAPD, EHS and improve wayfinding within a building.

Below is a sample of the spreadsheet that is generated from our BIM model. The difference between our BIM spreadsheet and normal space data sheets is that ours is directly linked to our BIM model and changes as the drawing changes, therefore eliminating the crosswalk between two different programs.

The amount of data that we can track within our model is limitless. We can also create links within our data to link to Estus documents (such as warranty information, specifications etc).

Number	Name	Level	FICM	Capacity	Occupancy	Area	College	Department	Org. Name	Org. Number	Hazardous Materials
1301	Research Laboratory	Level 1	250 - Research/Non Class Lab.			597.14 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	Contains Hazardous Materials
1302	Research Service	Level 1	255 - Research/Non Class Lab. Service			152.13 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1303	Research Laboratory	Level 1	250 - Research/Non Class Lab.			899.05 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	Contains Hazardous Materials
1304	Research Service	Level 1	255 - Research/Non Class Lab. Service			150.72 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1305	Office	Level 1	310 - Office			620.20 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1306	Research Laboratory	Level 1	250 - Research/Non Class Lab.			887.59 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	Contains Hazardous Materials
1307	Research Laboratory	Level 1	250 - Research/Non Class Lab.			104.46 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1308	Research Laboratory	Level 1	250 - Research/Non Class Lab.			97.14 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1309	Research Laboratory	Level 1	250 - Research/Non Class Lab.			99.63 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1310	Research Laboratory	Level 1	250 - Research/Non Class Lab.			110.33 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1311	Research Laboratory	Level 1	250 - Research/Non Class Lab.			110.87 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1312	Research Laboratory	Level 1	250 - Research/Non Class Lab.			117.79 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1313	Research Service	Level 1	255 - Research/Non Class Lab. Service			137.72 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1314	Office	Level 1	310 - Office			171.54 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1315	Office	Level 1	310 - Office			173.61 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1316	Office	Level 1	310 - Office			169.56 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1317	Office	Level 1	310 - Office			173.61 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	
1318	Office	Level 1	310 - Office			166.57 SF	College of Arts and Sciences	Natural Sciences	Biological Sciences	204411	



These are two aerial views of the SEC area of campus showing Shelby Hall, SEC, SERC, HM Comer and Bevill. As we complete buildings, we will have the ability to view existing conditions of any zone on campus.

Who will benefit from the use of BIM?

- Construction and Planning
- Facilities Administration
- Building Information Services
- Furnishings and Design
- Public Safety
- University Planning
- EHS
- Athletics
- Housing
- Logistics and Support Services
- Academic Affairs

Ridgecrest South Entry

We are developing the most critical buildings first, in the same manner we did when developing the CAD floor plans in 2008. BIS anticipates having all buildings located on the main campus modeled by early 2014.