



BIM Requirements & Asset Management

AUDREY VOORHIES, BIM COORDINATOR
DENVER INTERNATIONAL AIRPORT
OCTOBER 19th, 2016

BIM Software

4 Software Platforms

- Autodesk Revit – Buildings and building systems
- Autodesk AutoCAD Civil 3D – Site and site utilities
- Autodesk BIM 360 Glue (DEN Provided) – Used for Spatial Coordination & Clash Detection
- Autodesk BIM 360 Field (DEN Provided)

Software – Autodesk Revit

- Modeling instead of Drafting
- Live schedules reflect actual counts, lengths, areas and volumes of elements, rooms and spaces in the project.
- Change something in one view and it is automatically updated in others. i.e. change door number on plan and it is updated in schedule, move a door in plan, it is reflected in elevation and sections.

Software – Autodesk Revit

- 4 Versions
 - Architecture
 - MEP
 - Structure
 - Revit - Three Previous in One
- Not Backwards Compatible. Cannot open a Revit 2014 file in Revit 2013. Once you open a Revit 2013 file in 2014, it becomes a 2014 file permanently.
- DIA Upgrades versions first quarter each year. e.g. Jan 1 2016 will upgrade to Revit 2016

Software – Autodesk AutoCAD Civil 3D

- Surface and Site Utility modeling
- Very similar to standard AutoCAD using Object Based Data Tables
- Live schedules reflect actual counts, lengths, areas and volumes of earth, pipe, equipment, etc.
- Change something in one view and it is automatically updated in others. i.e. change door number on plan and it is updated in schedule, move a door in plan, it is reflected in elevation and sections.
- DIA Upgrades versions first quarter each year. e.g. Q1 2015 will upgrade to Civil 3D 2015

Hardware

[Revit Hardware Requirements](#) / [Civil 3D Hardware Requirements](#)

- Windows 7
- Multi-Core Intel® Pentium®, Xeon®, or i-Series processor or AMD® equivalent with SSE2 technology.
- 4GB RAM
- 5gb Storage

Autodesk BIM 360 (Field / Glue)

- iPad (no Android; Windows works but not mobile friendly)
- More storage the better (photos, drawings add up fast)
- Desktop version is browser based



BIM 360 GLUE

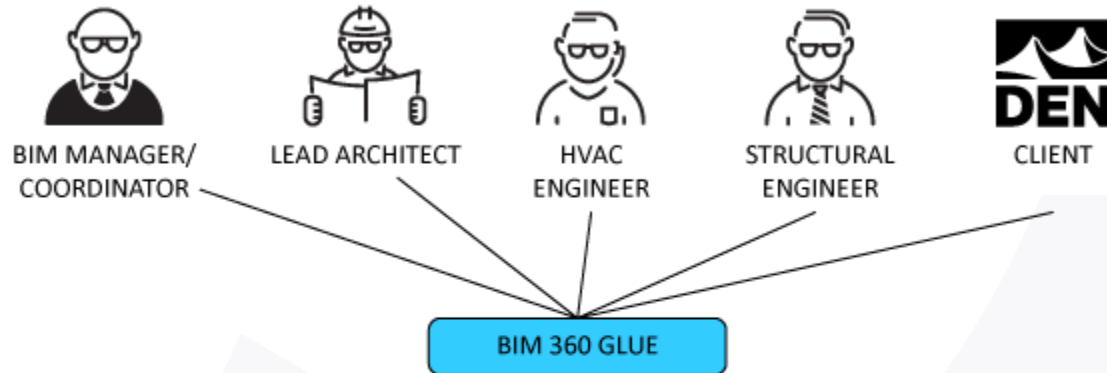
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AUTODESK® BIM 360™ GLUE®

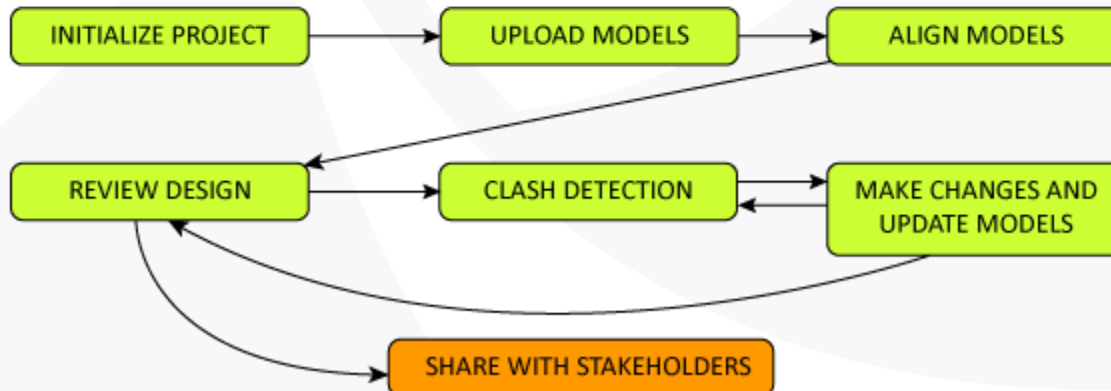
- Cloud-based BIM Management solution that transforms BIM collaboration by simplifying multi-discipline model coordination and clash detection and providing anywhere access to BIM models and intelligent object data for the entire project team.
- It helps architects, engineers, owners and builders across the globe to collaborate in real-time in over 50 different file formats.
 - Revit, Autocad, Civil 3d, Navisworks, 3DS Max, Microstation, ArchiCAD...
 - Complete list can be found at https://b4.autodesk.com/file_compatibility.html

AUTODESK® BIM 360™ GLUE®

DISTRIBUTED PROJECT TEAM



TYPICAL BIM 360 GLUE WORKFLOW



AUTODESK® BIM 360™ GLUE®

AUTODESK® BIM 360™ GLUE® Pcl >

Upload Models ✓

Open Models

Find and Manage Clashes

Create and Share Markups

Access Models on iPad

Video Gallery

Upload Models

To upload models, navigate to a project. Then click + Upload Models and make your selection.

Models + Upload models

Architecture

Structure

Upload Models





Select models to add + Browse

Drag and drop to add models

Maintain folder structure

Cancel Upload

If you are using Autodesk Revit®, AutoCAD®, AutoCAD® Civil 3D®, and Autodesk Navisworks®, install add-ins to directly upload models to BIM 360 Glue.







Click Profile image → Add-ins to launch the [Add-in Apps download page](#).

[Show Me](#) [Learn More](#)

5 steps remaining Next

Pcl Projects




5001316 - DIA Data Center

Markups Clashes Views

Recently Modified

- T11-9-DTC_BS-SS_CE2011310374.dwf
- T11-9-DTC_BS-MEP_CE2011310374.dwf



5021557 - DIA_FS_35_

Markups Clashes Views

Recently Modified

- Level L04a
- Level L02a

James Enright created clash result set **AA-EL** 11/10/2015 1:23 PM


Jim Nordstrom created clash result set **AA vs SS** 11/5/2015 10:14 AM




Jim Nordstrom created clash result set **AA vs. SS** 11/5/2015 10:12 AM

Jim Nordstrom created clash result set **AA vs. CS** 11/5/2015 9:25 AM


PROJECTS DASHBOARD

AUTODESK® BIM 360™ GLUE®

AUTODESK® BIM 360™ GLUE® Pcl > 5021557 - DIA_FS_35_ ? 






5021557 - DIA_FS_35_

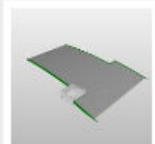


Activities

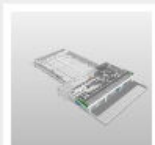
Merged Models + New merged model




Level L04a
Version 37
Chris Tiritas 1/25/2016 5:03:18 PM





Level L03a





Level L02a


- 


Chris Tiritas updated merged model 'Level L04a' to version 37
yesterday at 5:03 PM
- 

Chris Tiritas updated merged model 'Level L03a' to version 57
yesterday at 8:58 AM
- 

Chris Tiritas updated merged model 'Level L02a' to version 76
yesterday at 8:55 AM
- 

Chris Tiritas updated merged model 'Level L01a' to version 95
yesterday at 8:54 AM
- 


Maris Godkin updated merged model 'Level L05a AA' to version 24
01/12/16 11:58 AM
- 

Maris Godkin updated merged model 'Master Merged Model HD' to version 193
01/12/16 11:58 AM
- 

Maris Godkin updated merged model 'Master Merged Model HD' to version 193

SELECTED PROJECT DASHBOARD

AUTODESK® BIM 360™ GLUE®

AUTODESK® BIM 360™ GLUE® Pcl > 5021557 - DIA_FS_35_ ? 

Merged Models


+ Add merged model + Add folder




Folders	Merged Model	Version	Contributor	Last updated
▼ 5021557 - DIA_FS_35_	▶ Level L01a AA	52	Maris Godkin	1/12/2016 11:58 AM
▼ Construction Coordination	▶ Level L02a AA	43	Maris Godkin	1/12/2016 11:58 AM
Architecture	▶ Level L03a AA	43	Maris Godkin	1/12/2016 11:58 AM
Concrete Structure	▶ Level L04a AA	30	Maris Godkin	1/12/2016 11:58 AM
Electrical	▶ Level L05a AA	24	Maris Godkin	1/12/2016 11:58 AM
Fire Protection	▶ Level U00a AA	15	Maris Godkin	1/12/2016 11:57 AM
HVAC Dry	▶ <u>Master Merged Model AA</u>	Version 193	Maris Godkin	1/12/2016 11:58 AM
PCL				

Master Merged Model AA
 Version 193
 Maris Godkin 1/12/2016 11:58:55 AM

MERGED MODELS LIST


AUTODESK® BIM 360™ GLUE®

AUTODESK® BIM 360™ GLUE® Pcl > 5021557 - DIA_FS_35_ ? 

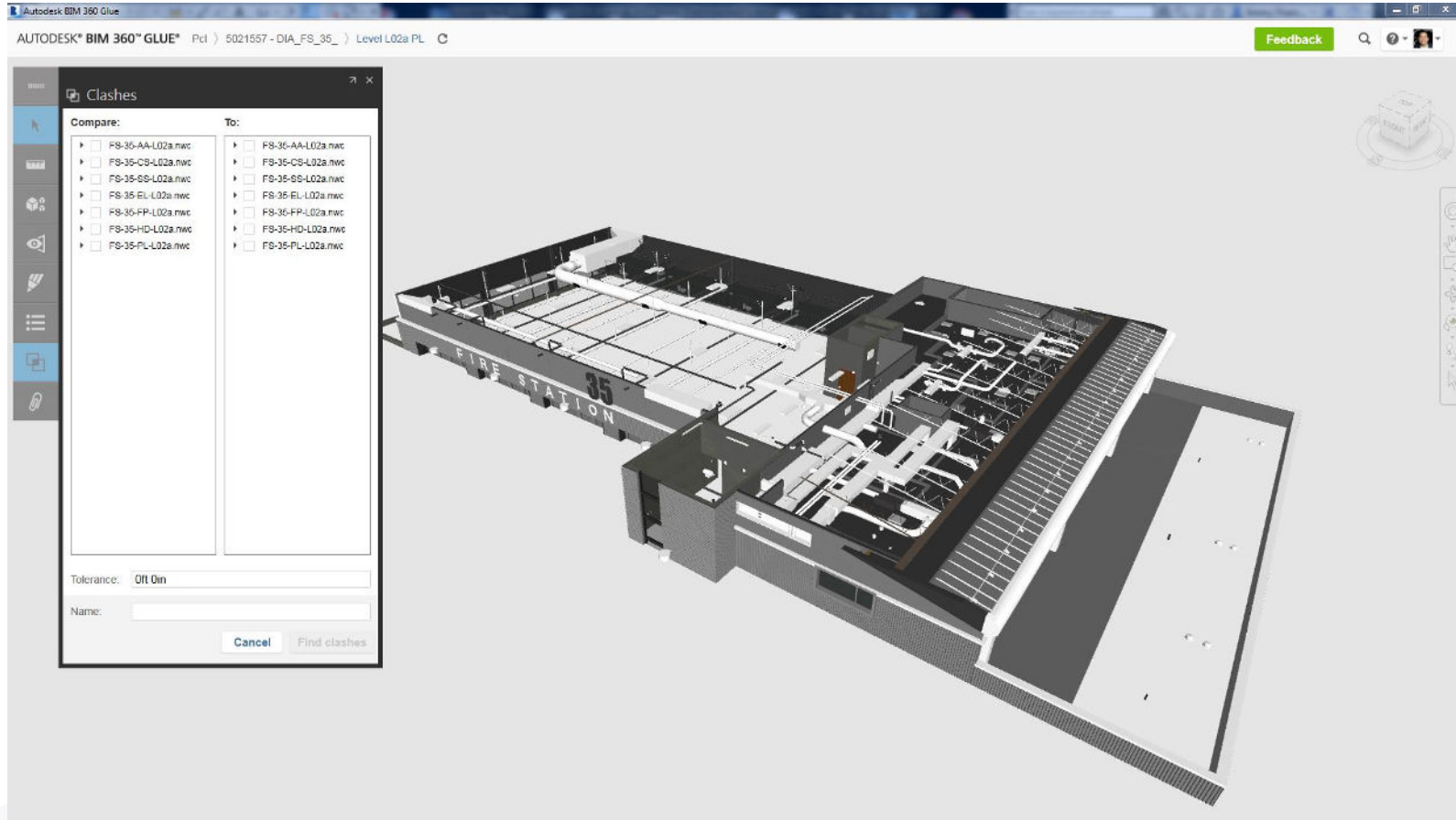
Models

+ Upload models
+ Add folder

Folders	Model	Version	Contributor	Last updated
<ul style="list-style-type: none"> ▼ 5021557 - DIA_FS_35_ <ul style="list-style-type: none"> ▼ Construction Models <ul style="list-style-type: none"> ▶ 6C.05 Issued for Constructi ▶ 6C.06 Model Library ▼ Revit_CAD <ul style="list-style-type: none"> ▼ 01_Revit <ul style="list-style-type: none"> ▼ Arch <div style="text-align: center; margin-top: 5px;">90%</div> <div style="background-color: #0056b3; color: white; padding: 2px 10px; display: inline-block; margin-top: 5px;">Permit</div> ▶ Electrical ▶ Mechanical 	<input type="checkbox"/>  P13-1-FS5_WSA-A_20150521_Central 2015.rvt	7	Jim Nordstrom	12/15/2015 5:...

UPLOADED MODELS LIST

AUTODESK® BIM 360™ GLUE®



CASE STUDY: FIRE STATION 35 - CLASHES

AUTODESK® BIM 360™ GLUE®

Autodesk BIM 360 Glue

AUTODESK® BIM 360™ GLUE® Pcl > 5021557 - DIA_FS_35_ > Level L02a PL

Clashes

Result Sets: 01/26/16 10:56 AM

HD-SS (6)

Overview

Grouped By: Ungrouped (6)

Notifications: All (6)

Status: All (6)

Notify Comment Ignore

ID	Magnitude
6	0ft 3in
5	0ft 0in 11/16
4	0ft 0in 11/16
3	0ft 0in 11/16
2	0ft 0in 3/8
1	0ft 0in 1/4

Clashes Overview

Status

- Active 6
- Open 6
- Ignored 0
- Closed 0
- Resolved 0

Active Clashes per Model

- FS-35-HD-L02a.nwc vs. FS-35-SS-L02a.nwc 6
- FS-35-SS-L02a.nwc vs. FS-35-HD-L02a.nwc 6

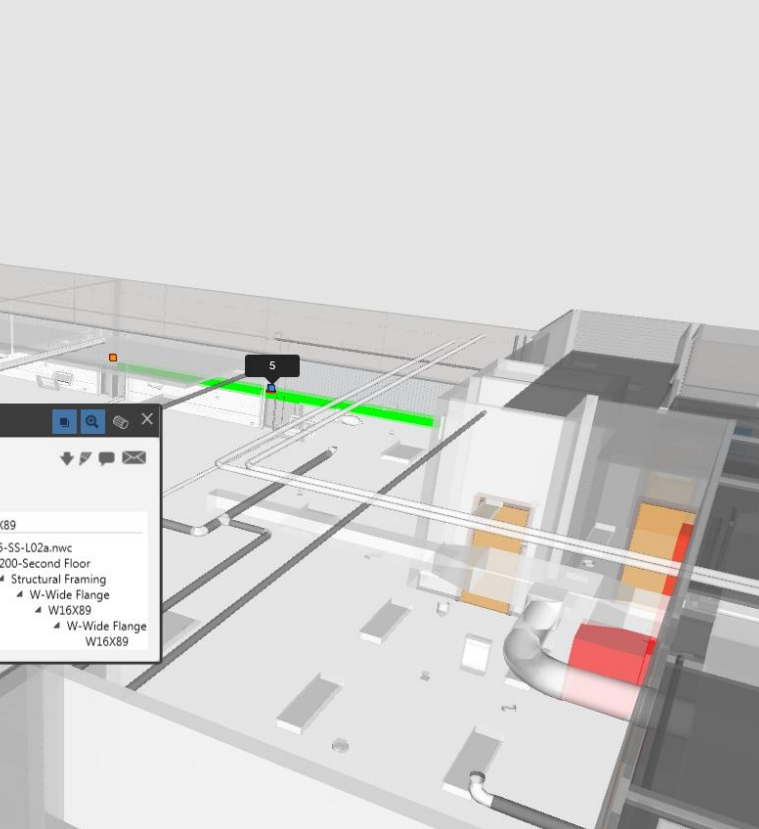
SRI-THERMOSTAT-2014 vs W16X89

Status: Open

ID: 5

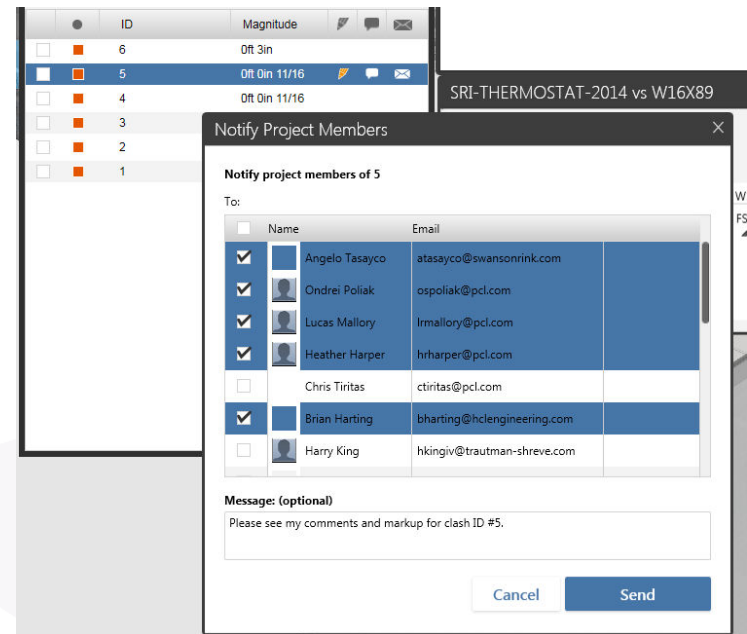
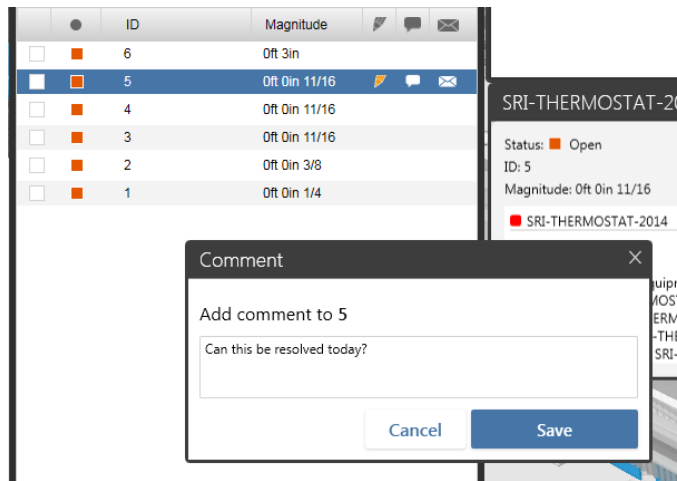
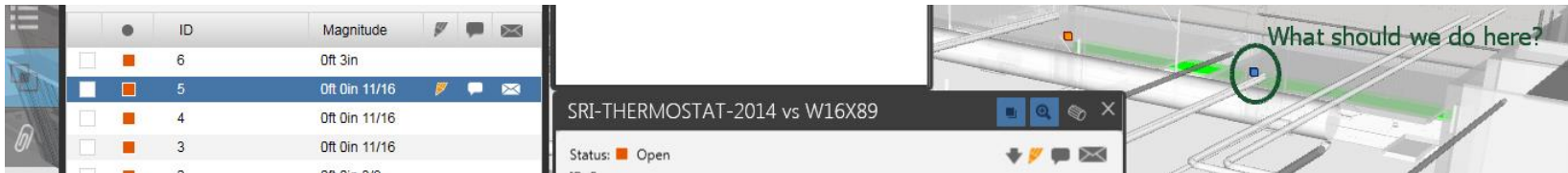
Magnitude: 0ft 0in 11/16

- SRI-THERMOSTAT-2014
 - FS-35-HD-L02a.nwc
 - Second Floor
 - Mechanical Equipment
 - SRI-THERMOSTAT-2014
 - SRI-THERMOSTAT-2014
 - SRI-THERMOSTAT-2014
- W16X89
 - FS-35-SS-L02a.nwc
 - S200-Second Floor
 - Structural Framing
 - W-Wide Flange
 - W16X89
 - W-Wide Flange
 - W16X89



CASE STUDY: FIRE STATION 35 - CLASHES

AUTODESK® BIM 360™ GLUE®



CASE STUDY: FIRE STATION 35 – MARKUP, COMMENT, NOTIFY



DENVER INTERNATIONAL AIRPORT

DEN



BIM 360 FIELD

MICHELLE MURO, CONSTRUCTION ADMINISTRATOR/ARCHITECT
DENVER INTERNATIONAL AIRPORT
OCTOBER 19th, 2016

Features and Benefits

- Improve quality and reduce rework
 - Gather QA/ QC information to help proactively identify trends and minimize contractor risk.
 - Create work-to-complete lists for trades and other parties.
 - Create and manage issues and checklists in the field.
 - Third bullet, size 16pt (0.6" indentation, 0.2" hanging)
- Promote safety
 - Checklists help make inspections faster, more consistent and thorough.
 - Documentation is current and accessible in the field.
- Improve commissioning and handover process
 - Compile quality, safety or commissioning checklist results.
 - Use commissioning information and linked documents from 360 Field as the deliverable for handover and facility operations

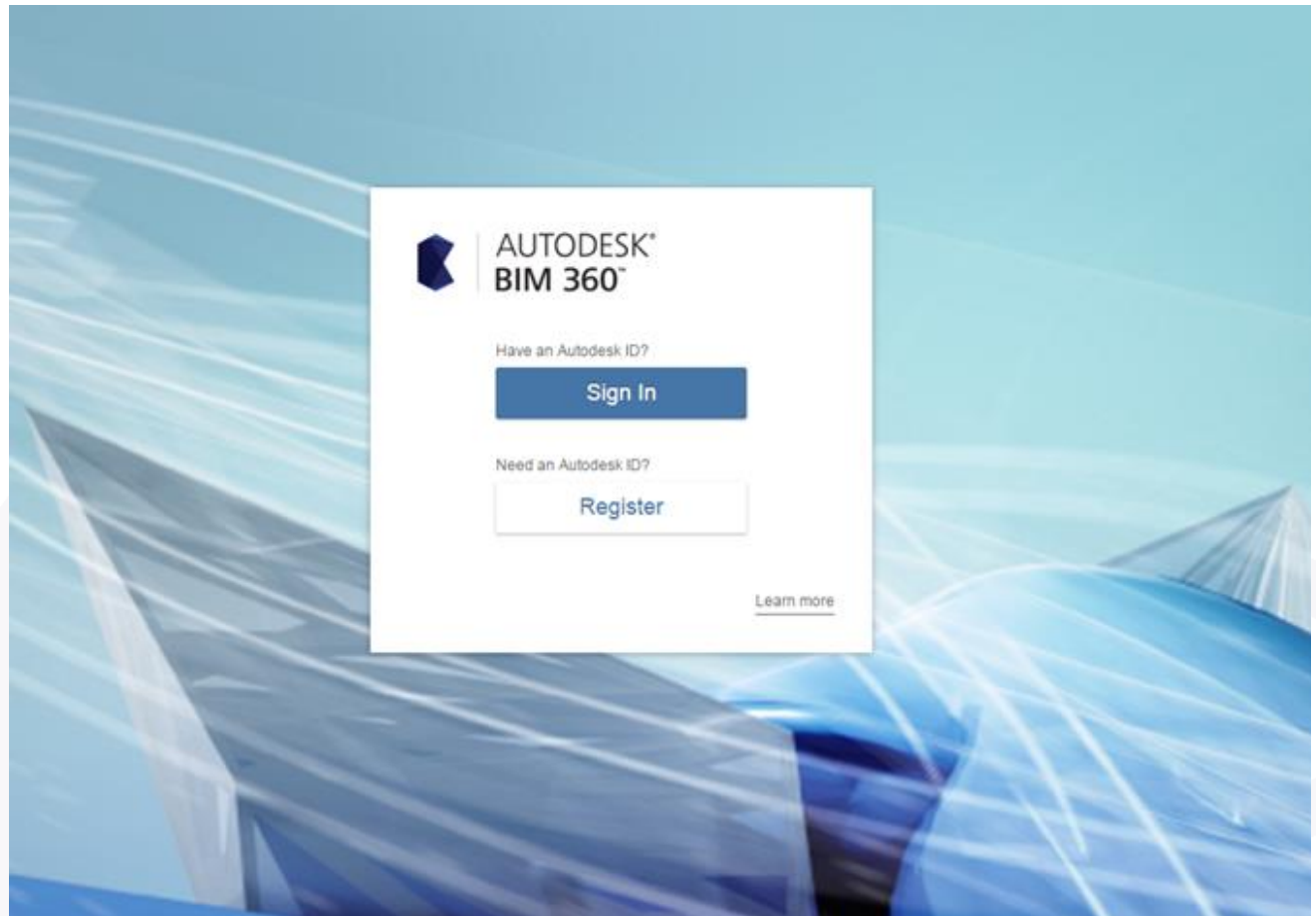
Features and Benefits

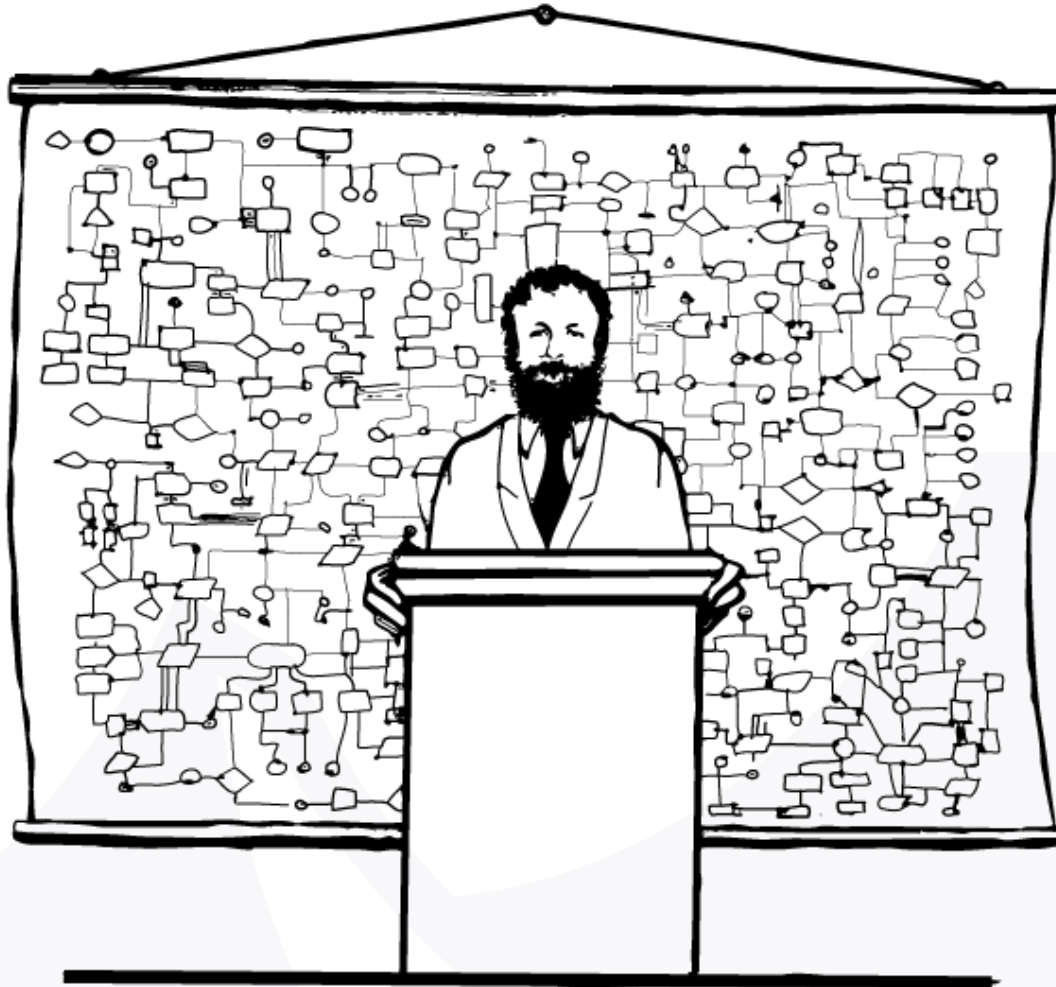
- **Manage field workflow**
 - Access the latest and most current information. Even when offline!
 - Share document changes with field and office professionals.
 - Store and distribute drawings, plans, images, reference materials, and specifications.
- **Enhance workflows within BIM**
 - Integration with BIM 360 Glue takes full advantage of project models in quality, safety, and commissioning workflows.

Layout of the System

- The layout of the BIM360 Field system falls into 9 tabs.

- Overview
- Issues
- Tasks
- Checklists
- Daily Updates
- Equipment
- Library
- Photos
- Reports

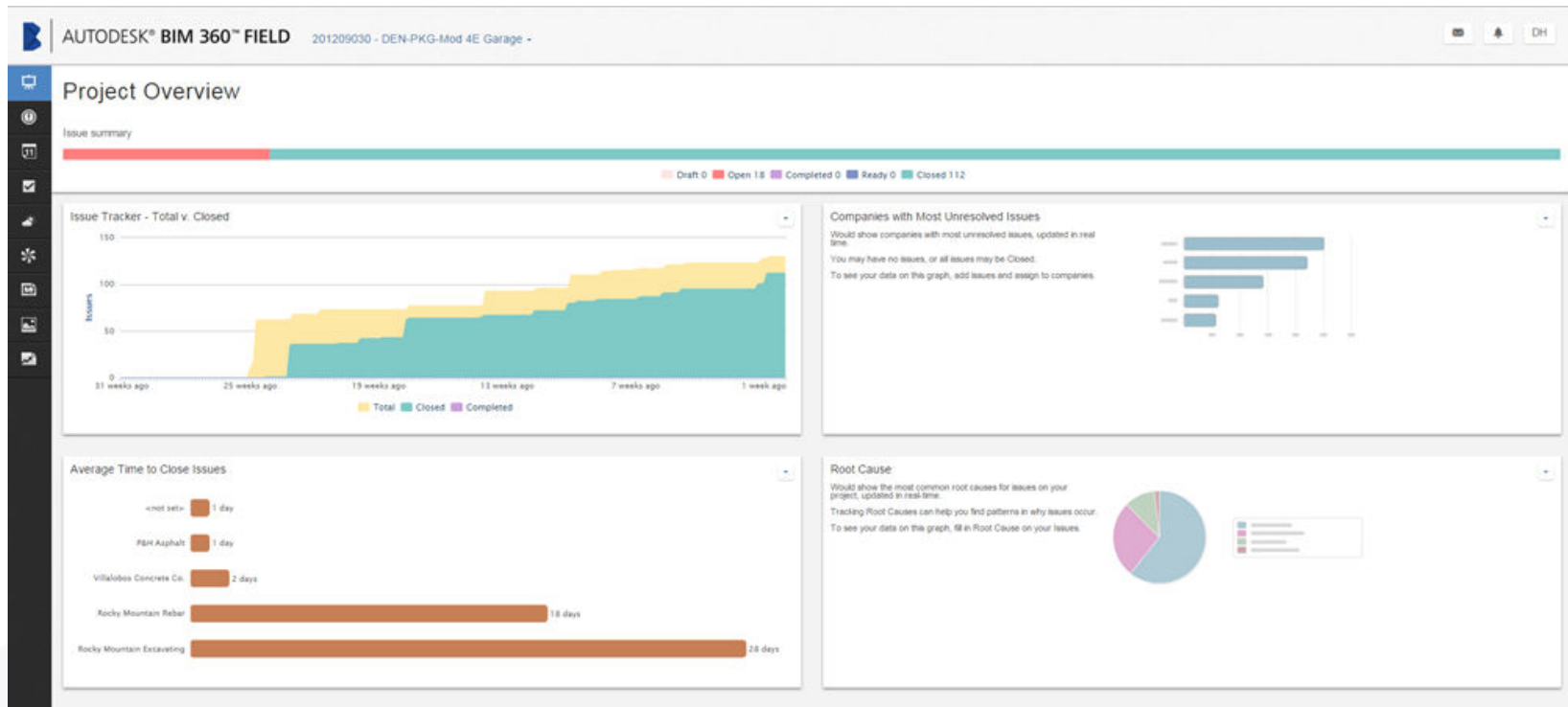




“Now that you have an overview of the system,
we’re ready for a little more detail”

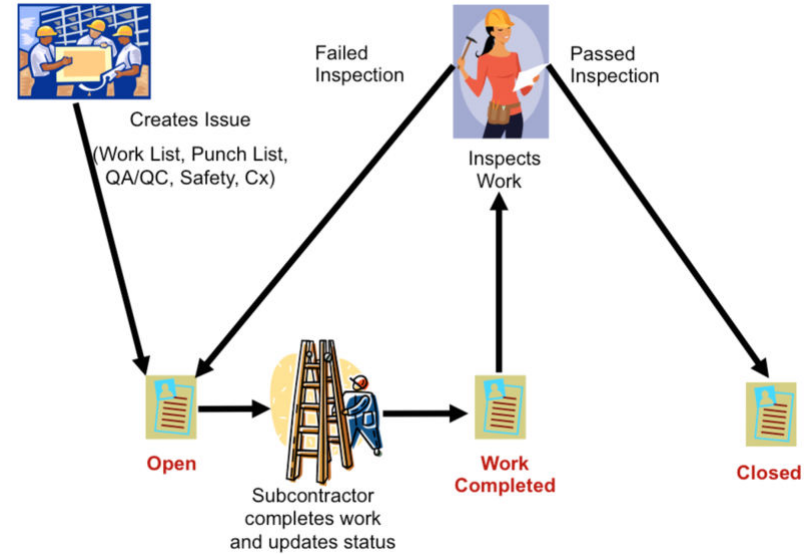
Project Overview

- From here, you can track issues, the root cause of issues, the companies employed, and their progress.



Issues

- In the Issues tab, you can log and track issues that have occurred on site. Additionally, you can track by date, print out a list of issues, and monitor the resolution of issues.



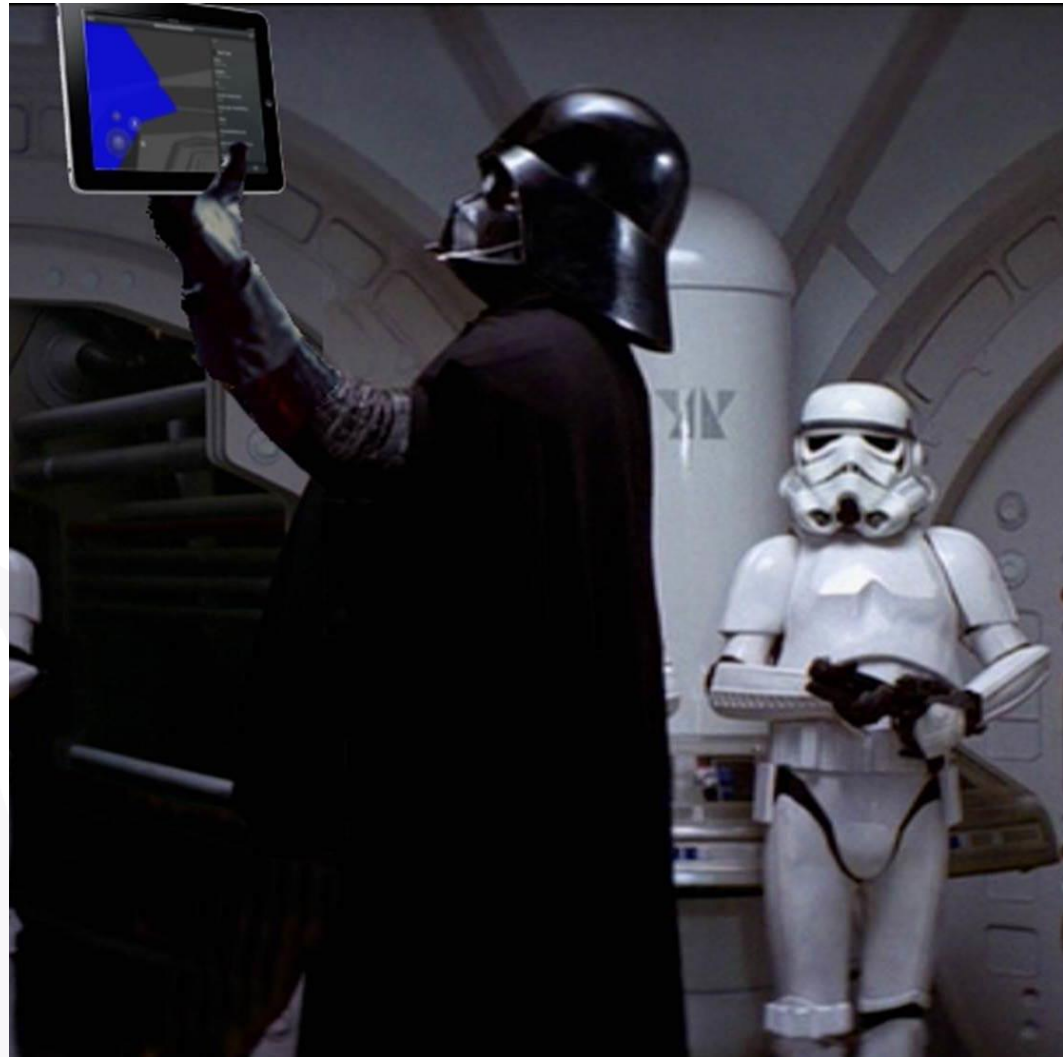
The screenshot displays the Autodesk BIM 360 FIELD interface. On the left, a table lists various issues with columns for ID, Description, Company, Location Path, Type, Status, Author, Due Date, and Date Closed. The main area shows the 'Add New Issue' form with fields for Issue type (Punch List), Issue ID, Description, Root cause, Company, Status (Open), Due date (Feb 2, 2016), Location, and Location detail.

ID	Description	Company	Location Path	Type	Status	Author	Due Date	Date Closed
000002	000002 Low column strength	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Oct 29, 2015	Oct 29, 2015
000003	000003 Low Air Truss Truss	Stanton Bros.	PKG	Deficiency	Closed	devon.hackweg@denver.com	Oct 28, 2015	Nov 18, 2015
000009	000009 Low air content of LA	Bettley Concrete	PKG-Level 03	Deficiency	Closed	devon.hackweg@denver.com	Nov 13, 2015	Oct 30, 2015
000017	000017 Low Air content Level	Bettley Concrete	PKG-Level 03	Deficiency	Open	devon.hackweg@denver.com	Nov 4, 2015	Oct 30, 2015
000012	000012 Low Slump by 1/4"	T. Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 24, 2015	Nov 18, 2015
000013	000013 Low Strength Concrete	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 10, 2015	Nov 10, 2015
000014	000014 Low Strength at grade	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 10, 2015	Nov 10, 2015
000015	000015 Low Strength Concrete	Stanton Bros.	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 12, 2015	Nov 10, 2015
000016	000016 Low Strength Concrete	Stanton Bros.	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 12, 2015	Nov 13, 2015
000017	000017 Low Strength Concrete	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 12, 2015	Nov 13, 2015
000018	000018 Low Strength Concrete	Stanton Bros.	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 12, 2015	Nov 10, 2015
000019	000019 Low Strength Concrete	Stanton Bros.	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 12, 2015	Nov 10, 2015
000040	000040 Ties and other make	McCombs Contract	PKG-Level 02	Deficiency	Open	devon.hackweg@denver.com	Nov 18, 2015	Nov 24, 2015
000042	000042 Low Slump, 1/4" to 3/8"	Bettley Concrete	PKG-Level 02	Deficiency	Closed	devon.hackweg@denver.com	Nov 18, 2015	Nov 20, 2015
000043	000043 Low Slump strength	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 24, 2015	Nov 20, 2015
000051	000051 Low Slump MSE (C)	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 24, 2015	Nov 20, 2015
000052	000052 Low Slump MSE (D)	Bettley Concrete	PKG	Deficiency	Closed	devon.hackweg@denver.com	Nov 24, 2015	Nov 20, 2015
000055	000055 Low Strength Concrete	PKG	PKG	Deficiency	Closed	devon.hackweg@denver.com	Dec 1, 2015	Dec 1, 2015
000056	000056 High air Concrete	Bettley Concrete	PKG-Level 03	Deficiency	Open	devon.hackweg@denver.com	Dec 8, 2015	Dec 8, 2015
000059	000059 Low Air Level 3 P T E	Bettley Concrete	PKG-Level 03	Deficiency	Closed	devon.hackweg@denver.com	Dec 12, 2015	Dec 11, 2015
000060	000060 High Slump, 1" Center	Iron Storage	PKG	Deficiency	Closed	devon.hackweg@denver.com	Dec 16, 2015	Dec 11, 2015
000061	000061 Low strength at grade	Bettley Concrete	PKG-Level 02	Deficiency	Closed	devon.hackweg@denver.com	Dec 14, 2015	Dec 11, 2015
000062	000062 Incomplete Concrete	Iron Storage	PKG	Deficiency	Closed	devon.hackweg@denver.com	Dec 16, 2015	Dec 11, 2015
000102	000102 Low Air by 1/4" to 3/8"	Bettley Concrete	PKG-Level 03	Deficiency	Open	devon.hackweg@denver.com	Dec 21, 2015	Dec 17, 2015
000123	000123 Low Strength on T&I	Bettley Concrete	PKG-Level 03	Deficiency	Open	devon.hackweg@denver.com	Dec 25, 2015	Dec 18, 2015
000134	000134 Top of Formwork	Iron Storage	PKG-Level 03	Deficiency	Closed	devon.hackweg@denver.com	Dec 28, 2015	Jan 11, 2016
000135	000135 Low Strength Concrete	Bettley Concrete	PKG-Level 02	Deficiency	Open	devon.hackweg@denver.com	Dec 30, 2015	Jan 11, 2016
000136	000136 Cracking and area by	Iron Storage	PKG-Level 03	Deficiency	Open	devon.hackweg@denver.com	Dec 31, 2015	Jan 11, 2016
000139	000139 High air by 1/4" to 3/8"	Bettley Concrete	PKG-Level 03	Punch List	Open	devon.hackweg@denver.com	Jan 20, 2016	Jan 12, 2016
000150	000150 Low Slump 2.5 inch	Bettley Concrete	PKG-Level 03	Punch List	Closed	devon.hackweg@denver.com	Jan 26, 2016	Jan 12, 2016
000151	000151 Low Slump by 1 inch	Bettley Concrete	PKG	Deficiency	Open	devon.hackweg@denver.com	Jan 19, 2016	Jan 14, 2016
000152	000152 Low Air by 3/8" to 1/2"	Bettley Concrete	PKG	Deficiency	Open	devon.hackweg@denver.com	Jan 26, 2016	Jan 14, 2016
001	001 DP# E29 T810 and E31	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 15, 2015	Jul 28, 2015
002	002 DP# E29 T810 and E31	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 15, 2015	Jul 28, 2015
003	003 E31 5/8" Turn #5204	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 18, 2015	Jul 28, 2015
004	004 DP# E30 S56	Stanton Builders	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 18, 2015	Jul 28, 2015
005	005 DP# E31 5/8" and E31 3/4"	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 22, 2015	Jul 28, 2015
006	006 DP# E33 S58 and E34 3/4"	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jul 30, 2015	Jul 28, 2015
007	007 DP# E35 S52 and E35 1/2"	KCL Engineering &	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 28, 2015	Jul 28, 2015
008	008 DP# E2588	Stanton Builders	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jun 2, 2015	Jul 28, 2015
009	009 DP# E34 S62	Stanton Builders	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jun 2, 2015	Jul 28, 2015
010	010 DP# E31 5/8" and E32 S54	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 20, 2015	Jul 28, 2015
011	011 Fall of Precast Elements	Stanton	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	May 29, 2015	Jul 28, 2015
012	012 DP# E25 1/4"	Iron Storage	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jul 31, 2015	Jul 28, 2015
013	013 Flat Caps E35 S58, E35	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jul 29, 2015	Jul 28, 2015
014	014 Flat Caps #E35 S and E	McCombs Contract	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jul 31, 2015	Jul 28, 2015
015	015 Flat Caps E35 S512, E35	Bettley Concrete	PKG-Level 00	Deficiency	Closed	michale.mung@denver.com	Jul 31, 2015	Jul 28, 2015

What If???

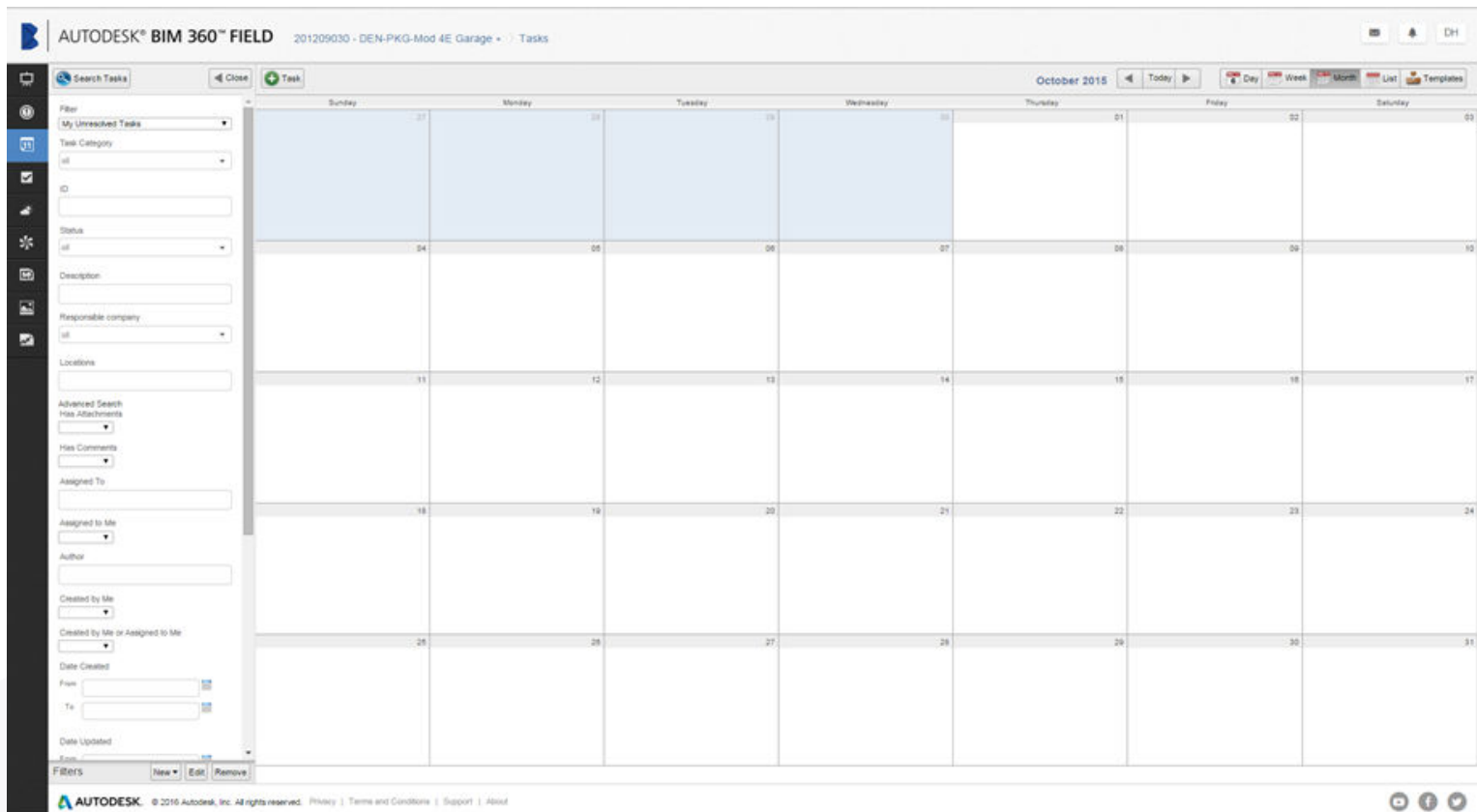
- DARTH VADER uses BIM 360 Field during construction on the Death Star?

"That's no moon. It's a space station."
—[Obi-Wan Kenobi](#)



Tasks

- In the Tasks tab, you can make additions to a calendar, which also tracks tasks on a chronological basis.



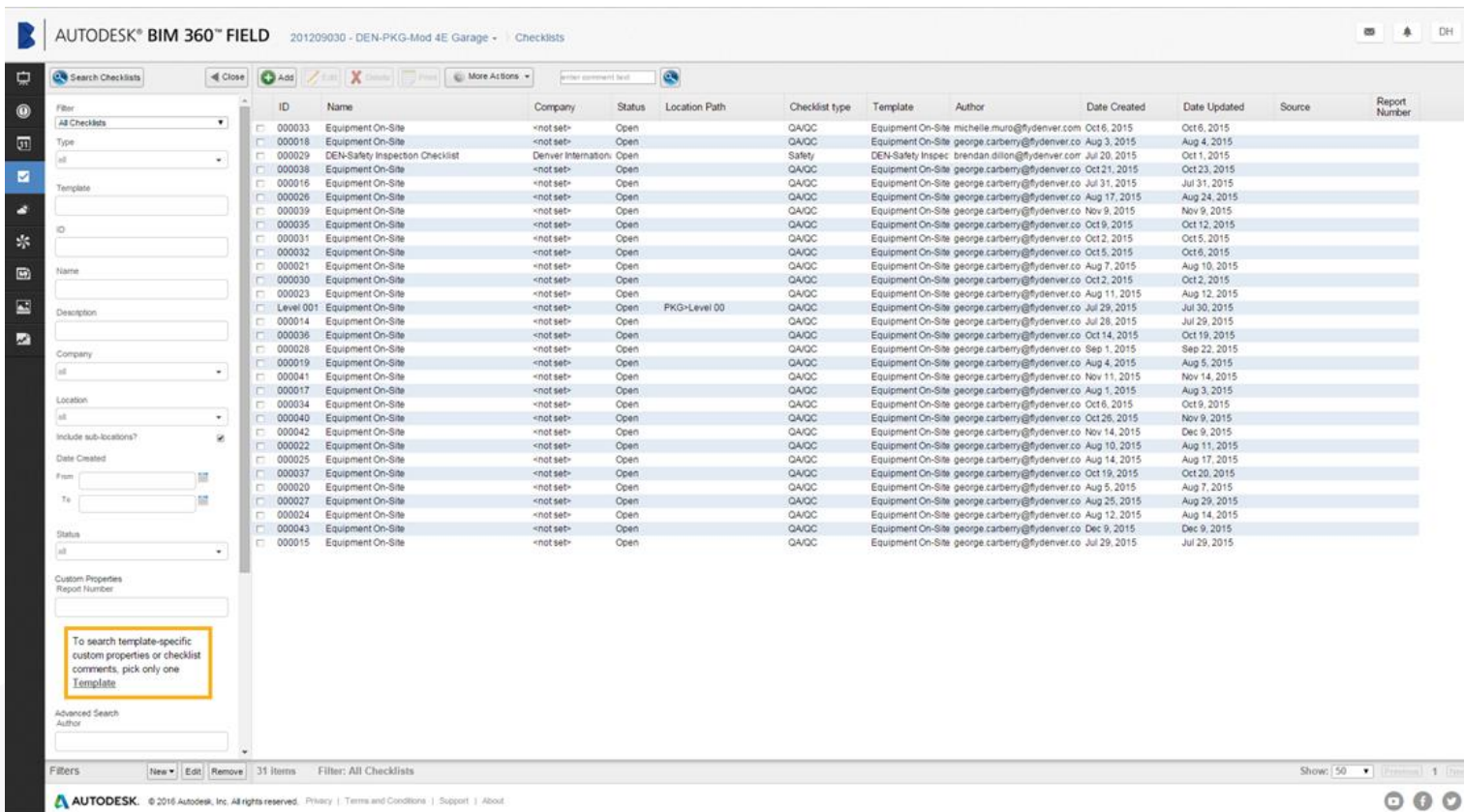
The screenshot displays the Autodesk BIM 360 FIELD interface for the 'Tasks' tab. The window title is 'AUTODESK® BIM 360™ FIELD 201209030 - DEN-PKG-Mod 4E Garage - Tasks'. The interface includes a search bar, a filter sidebar on the left, and a calendar grid for October 2015. The filter sidebar contains the following sections:

- Filter:**
 - My Unresolved Tasks (dropdown)
 - Task Category: all (dropdown)
 - ID: (text input)
 - Status: all (dropdown)
 - Description: (text input)
 - Responsible company: all (dropdown)
 - Locations: (text input)
 - Advanced Search Has Attachments: (dropdown)
 - Has Comments: (dropdown)
 - Assigned To: (text input)
 - Assigned to Me: (dropdown)
 - Author: (text input)
 - Created by Me: (dropdown)
 - Created by Me or Assigned to Me: (dropdown)
 - Date Created:
 - From: (text input)
 - To: (text input)
 - Date Updated:
 - From: (text input)
 - To: (text input)
- Filters:** New, Edit, Remove

The calendar grid shows dates from Sunday, October 25 to Saturday, October 31. The first four days (25-28) are highlighted in light blue. The interface also includes navigation controls for the calendar (Today, Day, Week, Month, List, Templates) and a footer with the Autodesk logo and copyright information.

Checklist

- In the Checklist tab, you can make additions to a calendar, assign tasks to others registered on BIM360, and track tasks on a chronological basis.



AUTODESK® BIM 360™ FIELD 201209030 - DEN-PKG-Mod 4E Garage - Checklists

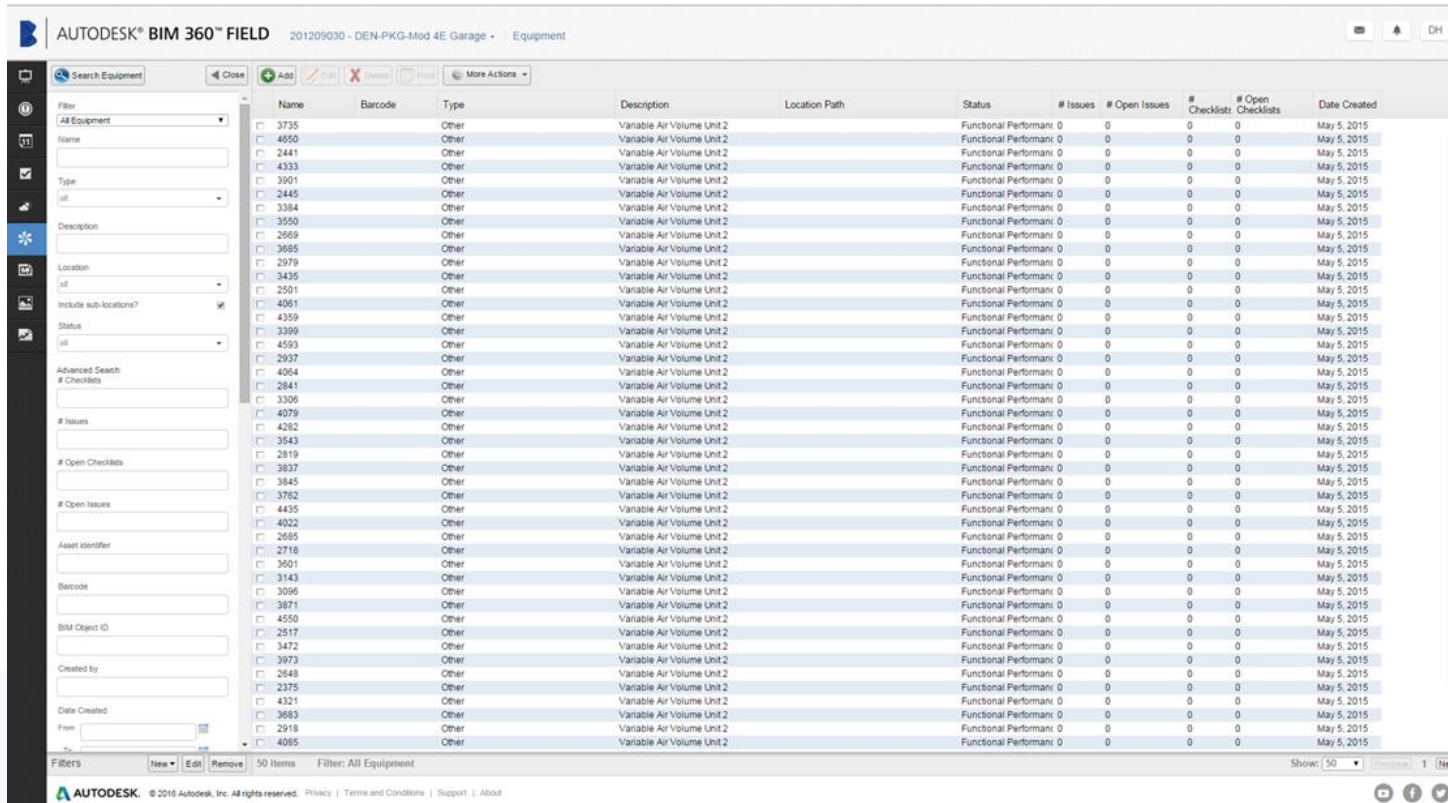
ID	Name	Company	Status	Location Path	Checklist type	Template	Author	Date Created	Date Updated	Source	Report Number
000033	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	michelle.muro@fydenver.com	Oct 6, 2015	Oct 6, 2015		
000018	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 3, 2015	Aug 4, 2015		
000029	DEN-Safety Inspection Checklist	Denver International	Open		Safety	DEN-Safety Inspect	brendan.dillon@fydenver.com	Jul 20, 2015	Oct 1, 2015		
000038	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 21, 2015	Oct 23, 2015		
000016	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Jul 31, 2015	Jul 31, 2015		
000026	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 17, 2015	Aug 24, 2015		
000039	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Nov 9, 2015	Nov 9, 2015		
000035	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 9, 2015	Oct 12, 2015		
000031	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 2, 2015	Oct 5, 2015		
000032	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 5, 2015	Oct 6, 2015		
000021	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 7, 2015	Aug 10, 2015		
000030	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 2, 2015	Oct 2, 2015		
000023	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 11, 2015	Aug 12, 2015		
Level 001	Equipment On-Site	<not set>	Open	PKG-Level 00	QA/QC	Equipment On-Site	george.carberry@fydenver.co	Jul 29, 2015	Jul 30, 2015		
000014	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Jul 28, 2015	Jul 29, 2015		
000036	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 14, 2015	Oct 19, 2015		
000028	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Sep 1, 2015	Sep 22, 2015		
000019	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 4, 2015	Aug 5, 2015		
000041	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Nov 11, 2015	Nov 14, 2015		
000017	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 1, 2015	Aug 3, 2015		
000034	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 6, 2015	Oct 9, 2015		
000040	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 26, 2015	Nov 9, 2015		
000042	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Nov 14, 2015	Dec 9, 2015		
000022	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 10, 2015	Aug 11, 2015		
000025	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 14, 2015	Aug 17, 2015		
000037	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Oct 19, 2015	Oct 20, 2015		
000020	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 5, 2015	Aug 7, 2015		
000027	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 25, 2015	Aug 29, 2015		
000024	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Aug 12, 2015	Aug 14, 2015		
000043	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Dec 9, 2015	Dec 9, 2015		
000015	Equipment On-Site	<not set>	Open		QA/QC	Equipment On-Site	george.carberry@fydenver.co	Jul 29, 2015	Jul 29, 2015		

Filters: New Edit Remove 31 Items Filter: All Checklists Show: 50 Comments 1

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Equipment

- In the equipment tab, you can create and monitor the equipment on site and which have issues, when they were obtained, and what their basic information is. This can be tied to the Revit model for ease of maintenance in the future.



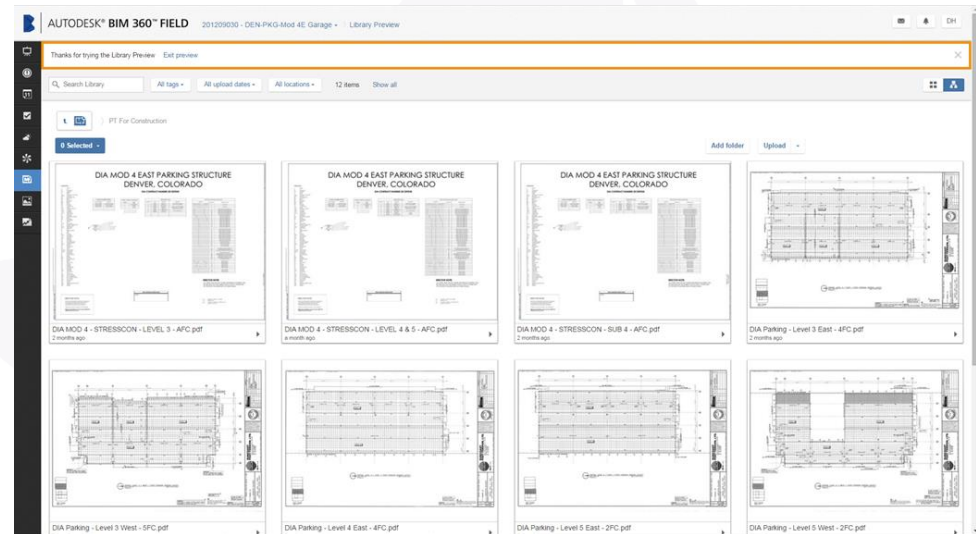
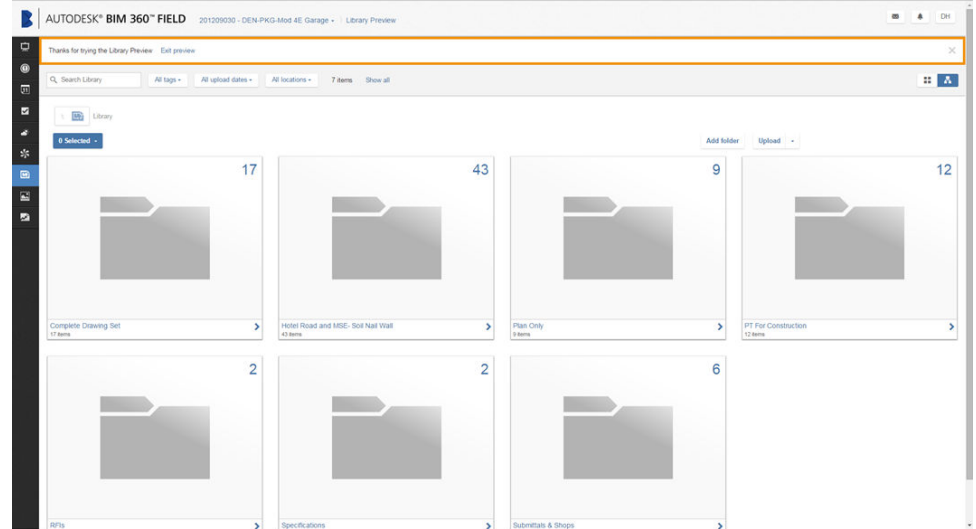
The screenshot displays the Autodesk BIM 360 FIELD software interface. The title bar indicates the project is '201209030 - DEN-PKG-Mod 4E Garage - Equipment'. The main window shows a table of equipment items with various filters on the left side.

Name	Barcode	Type	Description	Location Path	Status	# Issues	# Open Issues	# Checklists	# Open Checklists	Date Created
3735		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4650		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2441		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4333		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3901		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2446		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3384		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3550		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2669		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3685		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2979		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3435		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2501		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4061		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4359		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3399		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4593		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2937		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4064		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2841		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3306		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4079		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4262		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3543		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2819		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3837		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
5845		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3762		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4435		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4022		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2685		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2718		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3901		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3143		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3096		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3871		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4550		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2517		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3472		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3973		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2648		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2375		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4321		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
3683		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
2918		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015
4085		Other	Variable Air Volume Unit 2		Functional Performance	0	0	0	0	May 5, 2015

The interface includes a search bar at the top left, a filter sidebar on the left, and a table of equipment items. The table columns are: Name, Barcode, Type, Description, Location Path, Status, # Issues, # Open Issues, # Checklists, # Open Checklists, and Date Created. The bottom of the interface shows filters, a count of 50 items, and a 'Show: 50' dropdown.

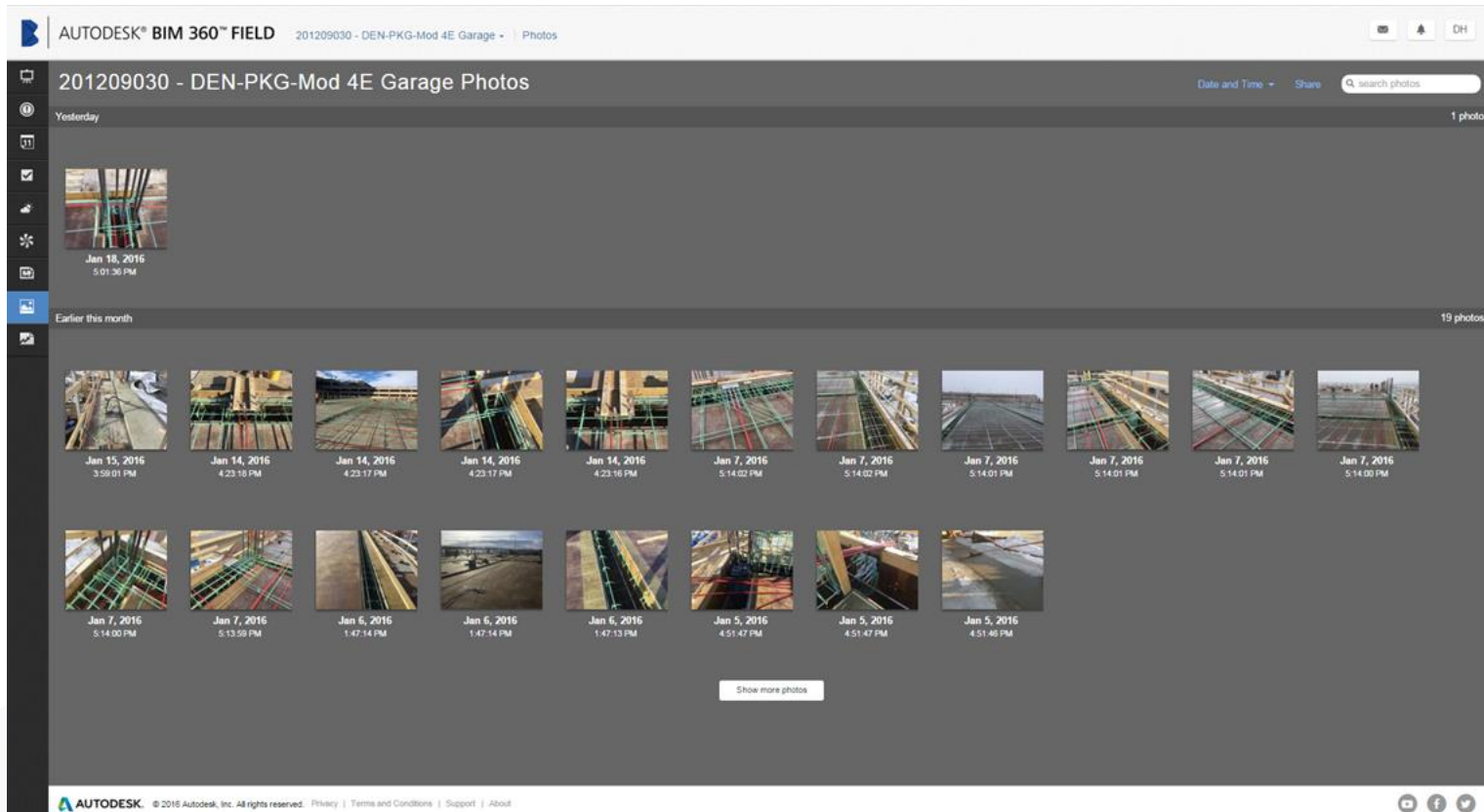
Library

- In the library tab, you can create multiple folders that allow for categorizing reference material.



Photos

- In this tab you can categorize and store photos in chronological or alphabetical order.
- All stored photos can be in multiple formats, however PDF works by far the best.



The screenshot shows the Autodesk BIM 360 Field interface for a project titled "201209030 - DEN-PKG-Mod 4E Garage". The interface is divided into two main sections: "Yesterday" and "Earlier this month".

Yesterday: This section contains one photo taken on Jan 18, 2016, at 5:01:36 PM. The photo shows a construction site with a large, curved structure under development.

Earlier this month: This section contains 19 photos, arranged in two rows. The first row has 11 photos, and the second row has 8 photos. Each photo is accompanied by a timestamp:

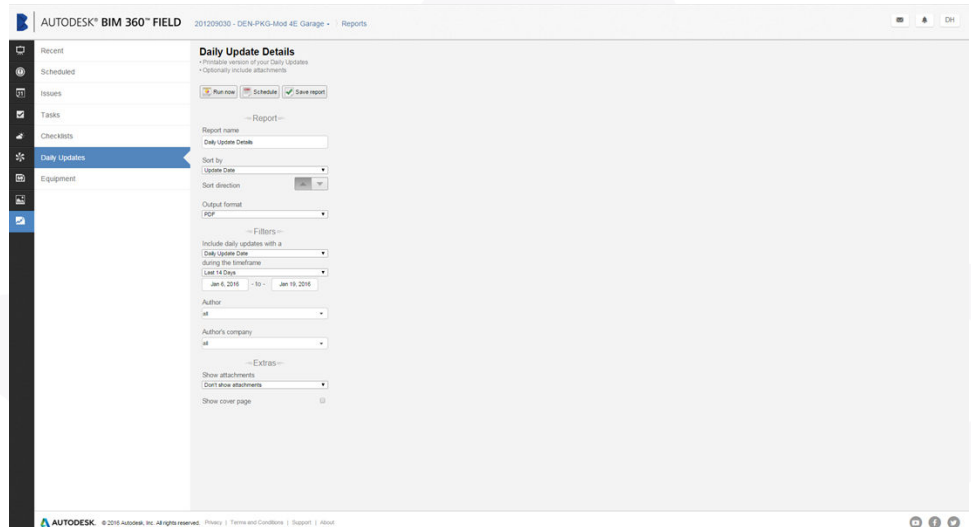
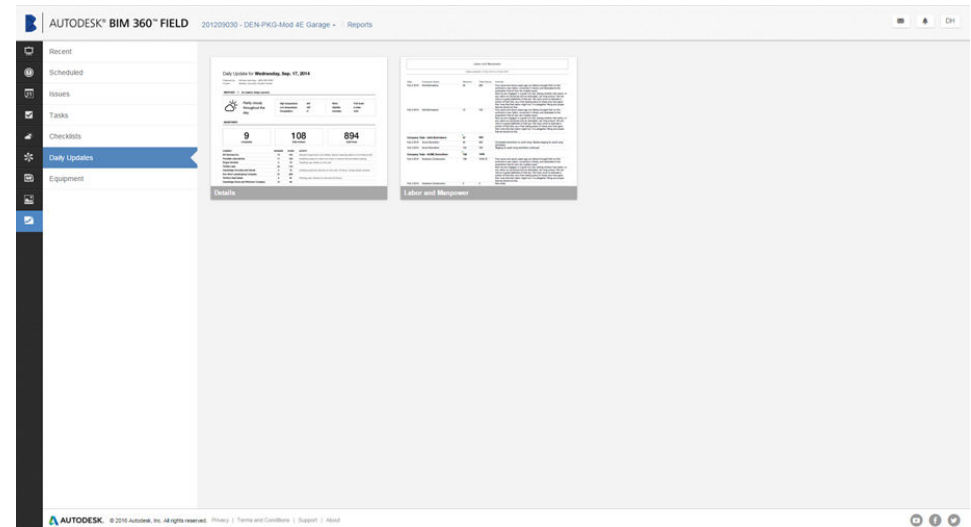
- Row 1:
 - Jan 15, 2016, 3:58:01 PM
 - Jan 14, 2016, 4:23:10 PM
 - Jan 14, 2016, 4:23:17 PM
 - Jan 14, 2016, 4:23:10 PM
 - Jan 14, 2016, 4:23:17 PM
 - Jan 14, 2016, 4:23:16 PM
 - Jan 7, 2016, 5:14:02 PM
 - Jan 7, 2016, 5:14:02 PM
 - Jan 7, 2016, 5:14:01 PM
 - Jan 7, 2016, 5:14:01 PM
 - Jan 7, 2016, 5:14:01 PM
 - Jan 7, 2016, 5:14:01 PM
- Row 2:
 - Jan 7, 2016, 5:14:00 PM
 - Jan 7, 2016, 5:13:59 PM
 - Jan 6, 2016, 1:47:14 PM
 - Jan 6, 2016, 1:47:14 PM
 - Jan 6, 2016, 1:47:13 PM
 - Jan 5, 2016, 4:51:47 PM
 - Jan 5, 2016, 4:51:47 PM
 - Jan 5, 2016, 4:51:46 PM

At the bottom of the "Earlier this month" section, there is a button labeled "Show more photos".

The footer of the interface includes the Autodesk logo and copyright information: "© 2016 Autodesk, Inc. All rights reserved. Privacy | Terms and Conditions | Support | About". There are also social media icons for YouTube, Facebook, and Twitter.

Reports

- From this tab, viewed only from a desktop, you can view/ generate reports made by other individuals.



Resources

- Autodesk BIM 360
- <http://bim360.com/bim-360-field>

- YouTube Tutorials
- https://www.youtube.com/results?search_query=bim+360+field

Wetware / Users

No hardware or software can compensate for a user knowledge base shortfall, while a knowledgeable user can get around many hardware and software limitations.

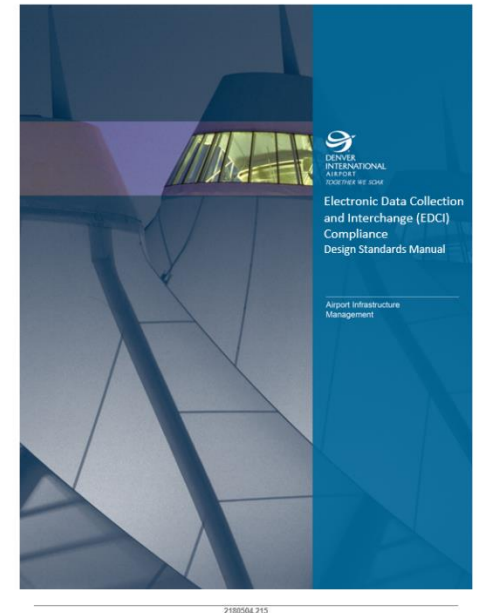
- Train existing staff
- Hire new staff
- Subconsultant
 - In-House
 - Out-of-House
- Which approach? **ALL!**

Industry Contractor Engagement

- Designers, General Contractors, Trade Contractors
- DEN BIM representative comes to your office
- 1 Hour Presentation
- Whole staff education
 - Owners, Principals, Managers, Designers, Modelers, Drafters, Installers, Builders
- What DEN needs from Consultants/Contractors
- How we're using BIM
- Q&A

References & Resources

- [DSM-EDCI](#)
- Mastering Autodesk Revit
Architecture/Structure/MEP
- [Model Performance Technical Note](#) (Best Practices & Hardware Recommendations)
- [Autodesk Users Group International](#) forums
- Rocky Mountain Building Information Society
([RoMBIS](#))



Questions

- Reference DSM EDCI for Design and Construction projects
 - <https://business.flydenver.com/bizops/documents/denEDCIComplianceDSM.pdf>
- Brendan Dillon, BIM Manager
Brendan.Dillon@flydenver.com



DENVER INTERNATIONAL AIRPORT

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