

Walk-in Slide: AU 2014 Social Media Feed

1. Click on the link below, this will open your web browser

<http://aucache.autodesk.com/social/visualization.html>

2. Use “Extended Display” to project the website on screen if you plan to work on your computer. Use “Duplicate” to display same image on screen and computer.

Fundamentals of Quality and Consistency in Company-Wide BIM 360 Field Implementation

Presented by: Wendell Barnes, Meghan Hogan, and Michael Digman
Gilbane Building Company

Class summary

This class is designed to show users how to implement BIM 360 Field software on any size project or within any size company, quickly and effectively. We can demonstrate how within just a few months we went from zero to more than 100 projects online companywide using BIM 360 Field software, including one of the world's largest ongoing commercial construction projects. We will examine some of the procedures and practices we used that enabled us to streamline our implementation and provide consistency and quality across our projects and our company.

Key Learning Objectives

By using BIM 360 Field vs. conventional construction punchlist processes you will be able to:

- Understand effective practices for quickly implementing BIM 360 Field software on any size project
- Learn how to create a streamlined project management approach to quality consistency across a company
- Unify a project team and assist to provide a solution that creates a team mindset
- Learn how to enable users to maximize time onsite, cutting down on data entry in the trailer

Having a Current Set of Drawings in the Field



Consolidating Multiple Deficiency Lists

	A	B	C	D
2	The following data were generated randomly for de			
3	First name	Second n	Project name	Project Manager
4	Jeffrey	Marvel	Next Shower	Patrick Benson
5	Sandra	Krachtus	Modern Sunsh	Karen Mathew
6	Marcelo	Chapple	Modern Sunsh	Karen Mathew
7	Scott	Miller	Abandoned La	Scott Williams

+

	A	B	C	D
1	The following data were generated randomly for d			
2	First name	Second n	Project name	Project Manager
3	Brian	Chapps	Modern Suns	Karen Mathew
4	Patrick	Webb	Abandoned L	Scott Williams
5	Napoleon	Runyan	Next Shower	Patrick Benson
6	Sam	Meyercor	Modern Suns	Karen Mathew

+

	A	B	C	D	E
1	The following data were generated randomly for de				
2	First name	Second n	Project name	Project Manager	
3	Mary	Tretyakov	Road Empty	Scott Williams	
4	Evan	Porto	Modern Suns	Karen Mathew	
5	Meagan	Hartell	Road Empty	Scott Williams	
6	Jessamyn	Ilbert	Next Shower	Patrick Benson	

=

Jeffrey	Marvel	Next Shower	Patrick Benson
Sandra	Krachtus	Modern Sunshi	Karen Mathew
Marcelo	Chapple	Modern Sunshi	Karen Mathew
Scott	Miller	Abandoned Las	Scott Williams
Brian	Chapps	Modern Sunshi	Karen Mathew
Patrick	Webb	Abandoned Las	Scott Williams
Napoleon	Runyan	Next Shower	Patrick Benson
Sam	Meyercor	Modern Sunshi	Karen Mathew
Mary	Tretyakov	Road Empty	Scott Williams
Evan	Porto	Modern Sunshi	Karen Mathew
Meagan	Hartell	Road Empty	Scott Williams
Jessamyn	Ilbert	Next Shower	Patrick Benson

Report Distribution



Immediate Benefits by Implementing BIM 360 Field

- Plans in the field
- Ease of use for all users / skill levels
- Photographs linked to items
- iPad efficiencies

Results: Saves Time & Manpower, Increases Client Satisfaction, Reduces Fee Erosion and Enables Faster Project Closeout

ExxonMobil Campus Project



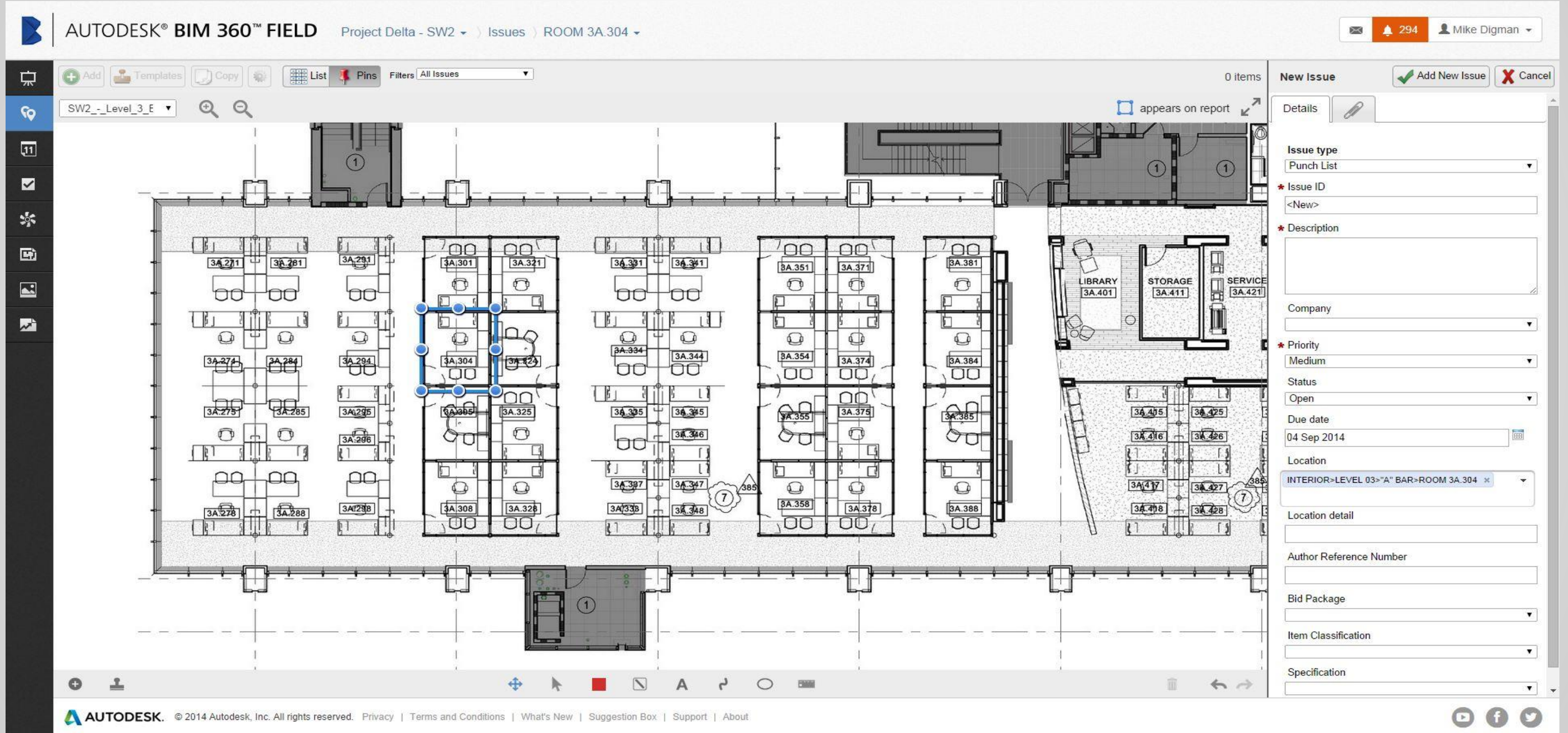
ExxonMobil Campus Project Overview

- Campus Project Consisting of 23 Structures Including Buildings and Garages
- 5,000+ Workers from 250+ Subcontractors / Vendors at the project's peak
- 18 Projects using BIM 360 Field software
 - 1st phase completed before company rollout of BIM 360 Field

Initial BIM 360 Field Rollout

- Process was centralized internally
- Library had a full set of construction drawings to link to building locations
- Set up building locations by room and created issue templates
- Issue templates were based off of contractual scopes of work

Initial Location Format



Initial Location Format

AUTODESK® BIM 360™ FIELD Project Delta - SW2 Issues All Locations

294 Mike Digman

Search Issues

Filter: All Issues

ID: []

Description: []

Company: all

Location: all

Include sub-locations? ☒

Date created: From [] To []

Status: all

Type: all

Custom Properties: Author Reference Number []

Bid Package: all

Item Classification: []

Filters: + New Edit X Remove 50 items Filter: All Issues

Change Location Show All Set Location Cancel

TOP LEVEL > INTERIOR > LEVEL 03 > "A" BAR

- CONNECTORS
 - LEVEL 01
 - LEVEL 02
 - LEVEL 03
 - LEVEL 04
 - LEVEL 05
 - LEVEL 06
 - LOWER LEVEL
 - PENTHOUSE
 - ROOF
 - TUNNEL LEVEL
- "A" BAR
- "B" BAR
- CORE + ATRIUM + ELEV.
- MECH.TOWER + STAIR


- ROOM 3A.284
- ROOM 3A.285
- ROOM 3A.286
- ROOM 3A.287
- ROOM 3A.288
- ROOM 3A.291
- ROOM 3A.292
- ROOM 3A.293
- ROOM 3A.294
- ROOM 3A.295
- ROOM 3A.296
- ROOM 3A.297
- ROOM 3A.298
- ROOM 3A.301
- ROOM 3A.302

Location Path	Type	Status	Author
INTERIOR>LEVEL 06	Punch List	Closed	mburkholder@gilbaneco.com
INTERIOR>LEVEL 03>CORE +	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>LEVEL 01>CORE +	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 01>CORE +	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 06>MECH.1	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>LEVEL 01>MECH.1	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>LEVEL 03>"B" BAR	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 02>CORE +	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>ROOF>MECH.TOV	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>ROOF>MECH.TOV	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>LEVEL 04>CORE +	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 02>CORE +	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 02>CORE +	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>LEVEL 01>CORE +	Punch List	Closed	mburkholder@gilbaneco.com
INTERIOR>LEVEL 03>"B" BAR	Punch List	Closed	mburkholder@gilbaneco.com
INTERIOR>LOWER LEVEL>"A	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 01>CORE +	Work to Com	Closed	mburkholder@gilbaneco.com
INTERIOR>LEVEL 01>CORE +	Work to Com	Closed	mburkholder@gilbaneco.com
INTERIOR>LEVEL 01>MECH.1	Punch List	Closed	ogarcia@gilbaneco.com
INTERIOR>LEVEL 06>MECH.1	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 02>"B" BAR	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 05>CORE +	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>LEVEL 02>MECH.1	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>PENTHOUSE>COF	Punch List	Closed	mburkholder@gilbaneco.com
EXTERIOR>West Elevation	Punch List	Open	adunn@gilbaneco.com
INTERIOR>CONNECTORS	Punch List	Closed	adunn@gilbaneco.com
EXTERIOR>NORTH ELEVATIC	Punch List	Open	bdenman@gilbaneco.com
	Punch List	Closed	cbulmer@harveybuilders.com
INTERIOR>PENTHOUSE>COF	Punch List	Closed	mburkholder@gilbaneco.com
INTERIOR>LEVEL 02	Punch List	Closed	mburkholder@gilbaneco.com
INTERIOR>LEVEL 02>CORE +	Punch List	Closed	dmartin1@gilbaneco.com
INTERIOR>ROOF>MECH.TOV	Punch List	Closed	jegrimm@gilbaneco.com
INTERIOR>PENTHOUSE>COF	Work to Com	Closed	mburkholder@gilbaneco.com

Show: 50 Previous 1 Next

AUTODESK. © 2014 Autodesk, Inc. All rights reserved. Privacy | Terms and Conditions | What's New | Suggestion Box | Support | About



Initial Issue Templates





AUTODESK® BIM 360™ FIELD

Project Delta - SW2

[Home](#) | [Setup > Issues](#)


 68

 Wendell Barnes



Account

Info

Business Units

Projects

Companies

Users

Project

Info

Locations

Issues

Checklists

Equipment

Tasks

My Profile

Types





Standard Properties

Custom Properties

Root Causes

Templates






Groups

☐ Name



☐ 05 - Metals (17)
 ☐ 06 - Casework (1)
 ☐ 06 - Custom Millwork (30)
 ☐ 06 - Rough Carpentry (12)
 ☐ 07 - Metal Panels (15)
 ☐ 07 - Thermal/ Moisture Protection (7)
 ☐ 08 - Access Doors and Frames (17)
 ☐ 08 - Curtain wall Exterior (14)
 ☐ 08 - Curtain wall Interior (9)
 ☐ 08 - Doors and Hardware (13)
 ☐ 08 - Glazing (3)
 ☐ 08 - Storefront (1)
 ☐ 09 - Carpet (5)
 ☐ 09 - Ceiling Tile (12)
 ☒ 09 - Drywall (36)
 ☐ 09 - Flooring (3)
 ☐ 09 - Interior Painting (6)
 ☐ 09 - Raised Access Flooring (10)
 ☐ 09 - Resilient Tile (1)
 ☐ 09 - Stretched Fabric Wall Systems (1)
 ☐ 09 - Tile (0)


Templates

 Add
  Edit
  Add links
  Copy
  Delete

<input type="checkbox"/>	Description	Company	Spec reference	Type
<input checked="" type="checkbox"/>	DW001 - Drywall surface at ceiling not smooth or damaged, repair	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW002 - Wall corner bead: mudding needs further work. If dented, repair	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW003 - Drywall surface not smooth or damaged, repair	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW004 - Wall finish not smooth, repair	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW005 - Wall tape joint visible needs further work	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW006 - Grout uneven joint, remove and replace, float wall.	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW007 - Patch and repair hole in soffit.	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW008 - Install edge bead, tape and float all cut gypsum board walls in mechanical ro	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW009 - Repair / replace studs	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW010 - Install sealant at all gypsum board to concrete transitions	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW011 - Typical at all light coves – correct poor gypsum board finish at the corners, r	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW012 - Typical at light coves – line of gypsum board to be crisp and straight with no	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW013 - Typical at all coves – light fixture is not to be visible from any location within	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW014 - Typical at all floors – Service elevator vestibule needs to have all damaged c	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW015 - Typical at all mechanical rooms – all gypsum board cuts are to be straight ar	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW016 - Typical all mechanical room and electrical room doors – paint touch at door f	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW017 - Final clean all electrical room, mechanical room floors, walls	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW018 -Electrical rooms –Typical, all cut outs in gypsum board walls for electrical co	Marek Bros - Drywall	Division 09 Finishes	Putty
<input type="checkbox"/>	DW019 - Paint columns, full height, all four sides.	Marek Bros - Drywall	Division 09 Finishes	Putty

© 2014 Autodesk, Inc. All rights reserved. [Privacy](#) [Terms and Conditions](#) [Support](#) [About](#)

[Feedback](#)
 AUTODESK.

Current BIM 360 Field Process

- Architect, Owner, and Contractor collaboration
- More effective use of architectural floor plans & reflective ceiling plans for “pinning” of deficiencies
- Use of column lines instead of room numbers for locations
- Removed use of Issue Templates

Current Location Format



Gilbane



Jobsite Condition - Curtainwall



Confusion Between Interior & Exterior Items

AUTODESK® BIM 360™ FIELD Project Delta - SW2 > Issues > AREA @ A-BAR [GL 07-08]

294 Mike Digman

SW2_-_Level_3_E

1 of 21 checked

appears on report

Edit Issue MB-00137 09:09:06 GMT-0500 (Central Daylight Time)

Details

Remind assigned company Show Pin

Issue type
Punch List

Issue ID
MB-00137

Description
Repair Stone at base of curtain wall panel

Company
Oldcastle Building Envelope - Curtainwall

Priority
Medium

Status
Closed

Due date
27 Dec 2013

Location
INTERIOR>LEVEL 03>"A" BAR>AREA @ A-BAR [GL 07-08]

Location detail
Second grille west of column G-7

Author Reference Number

Bid Package

Item Classification

AUTODESK. © 2014 Autodesk, Inc. All rights reserved. Privacy | Terms and Conditions | What's New | Suggestion Box | Support | About

Initial Exterior Plans

AUTODESK® BIM 360™ FIELD

Project Delta - NW3 ▾ Issues ▾ East Elevation ▾

1

217

Mike Digman ▾

+ Add

Templates

Copy

List

Pins

Filters All Issues ▾

NW3_-_East_Elev ▾ 🔍 🔍

appears on report ↗

104 items

New Issue

Add New Issue

Cancel

Details

Issue type

Punch List ▾

* Issue ID

<New>

* Description

Root cause

Company

* Priority

Medium ▾

Status

Open ▾

Due date

21 Aug 2014 📅

Location

EXTERIOR>East Elevation × ▾

Location detail

Author Reference Number

Bid Package

Issue Classification

The main area displays a detailed architectural elevation of a building facade. The drawing features a grid system with vertical labels A through K and horizontal level markers ranging from Lower Level 128'-0" to Penthouse Roof 261'-0". Numerous circular markers are overlaid on the drawing: red circles indicate open or critical issues, while green circles indicate resolved or less urgent items. These markers are distributed across various levels and sections of the facade, particularly concentrated in the lower half. The drawing includes technical annotations such as '02 42 15.13 AIR EXTRUDED ALUM RECESS' and '02 42 15.13 AIR EXTRUDED PLUM RECESS'. On the right side of the drawing, a list of levels is provided: Penthouse Roof 261'-0", Penthouse Top of Slab Elevation 240'-0", Level 06 225'-0", Level 05 210'-0", Level 04 195'-0", Level 03 180'-0", Level 02 165'-0", Level 01 147'-0", and Lower Level 130'-0".

+ 👤

🔍 ⬇️ 🔴 🖋️ ↺ ⌂ 🗑️ ↶ ↷

AUTODESK.

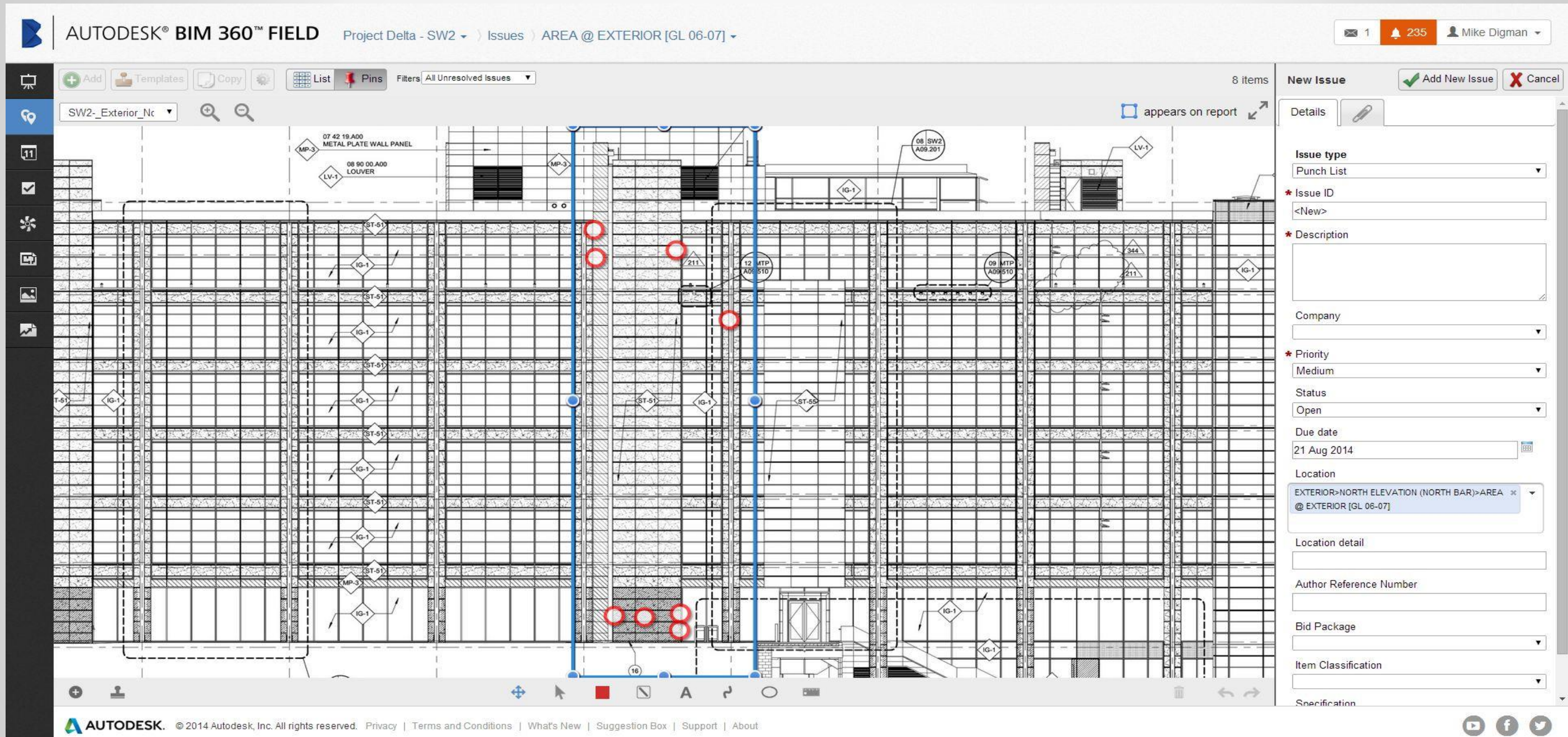
© 2014 Autodesk, Inc. All rights reserved. Privacy | Terms and Conditions | What's New | Suggestion Box | Support | About

▶

f


✈

Current Exterior Plans



Additional Project Specific Lessons Learned

- Accurate descriptions / photos & correct trade contractor assignments
- History Tab helps track items with multiple trades
- Consistent champion approach

An aerial rendering of a city skyline, likely Chicago, featuring a large bridge crossing a river. A vibrant rainbow is visible on the bridge's surface. The city skyline in the background includes several prominent skyscrapers. The foreground shows a landscaped area with trees and a small pond.

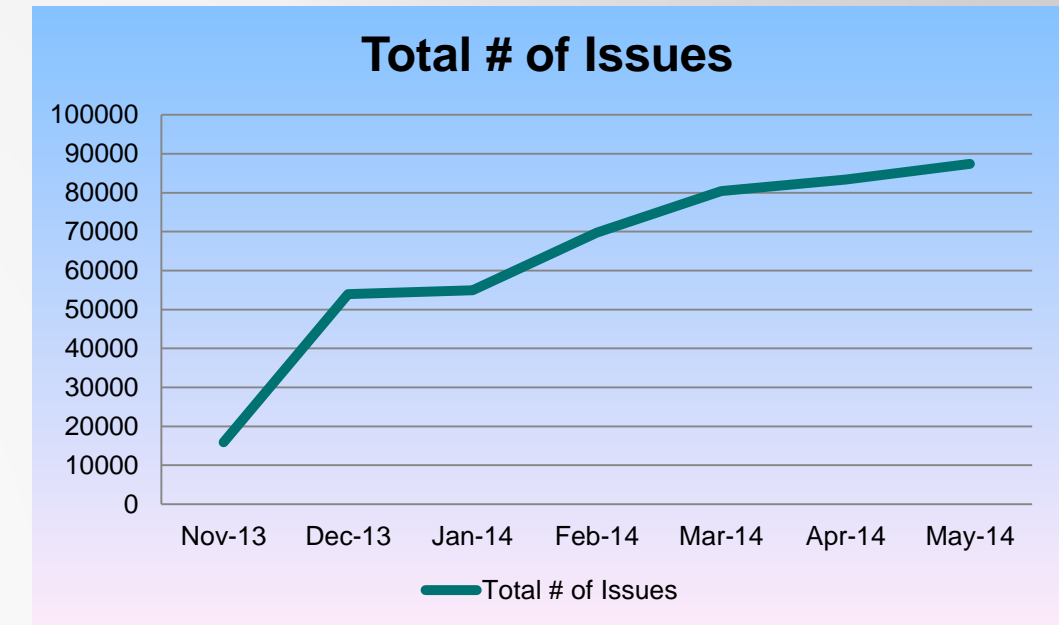
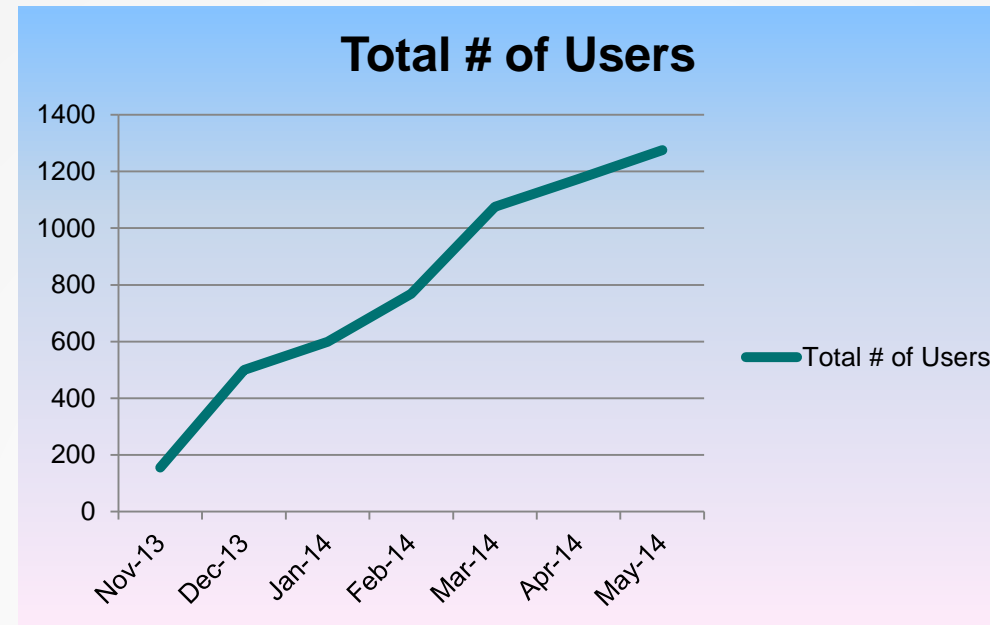
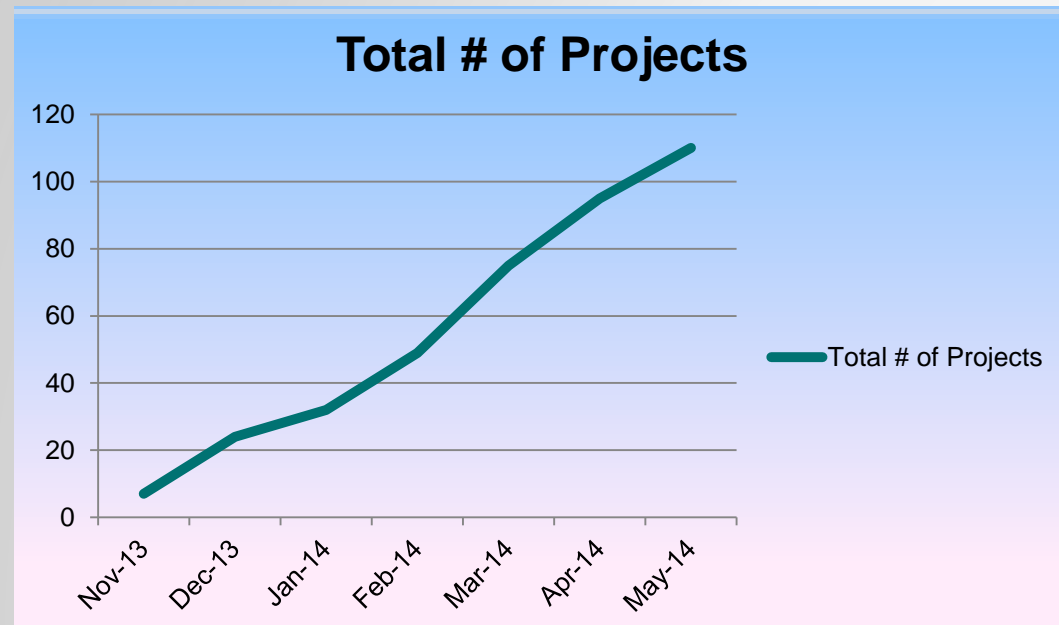
Company-wide Implementation



Why is Quality Tracking Important?

- U.S. Insurance Industry pays more than \$5 Billion annually to settle construction defect claims
 - This is approximately .5% of the value of the U.S construction market
- Nearly 6.5 Million people work at approximately 252,000 construction sites and it is estimated that 24,800 injuries occur per year due to falls from stairs and ladders
- Total cost of work related injuries in 2011 was \$188.9 Billion.
 - \$86.8 billion was from productivity losses
 - \$52.3 billion was from medical costs
 - \$34.2 billion was administrative expenses

Company-wide Metrics



- Project sizes ranged from \$100K – \$3 Billion

How Did We Roll Out So Quickly?

- Business Consultants were trained in less than a week
- Standardized 1 project to use as our template project
- Rolled it out immediately on jobs that needed it
- Created a Kick-Off Agenda to follow on all jobs

BIM 360 Discovery / Kickoff Session
Project:
Meeting Agenda

General Overview / Demo

- Desktop
 - i. Management of data, running reports, project admin functions
- iPad
 - i. Field collection tool, download app, sync to/from database in web application

Strategic Discussion

- What modules are intended to be used?
 - Issues for RCL/PI tracking
 - Checklists
 - Equipment Tracking
 - Tasks
- Who will be participating in usage (Owner, Design Team, Inspectors, Trade Contractor, etc.)?

Setup Process

- Setup Companies (send email)
 - Check for existing users
 - Import Template
- Setup Users (send email)
 - Check for existing users
 - Import Template
- Import Locations
 - Define Locations:
- Customize Issue Types (list types below)
- Import/Review Issue Templates
- Create Checklists
 - Do owner/architect/inspectors have field reports they would like us to make into a template?

Advanced Setup

- Adding Documents to the Library – decide what drawings are needed
- Creating Root Causes

Types | Standard Properties | Custom Properties | Root Causes | Templates

Field Process

Punch List

Issue Type Preview

Issue Type

Punch List

RCL (Rolling Completion List)

Client

Architect/Engineer

AHJ (Authorities Having Jurisdiction)

Work List

Confidential / Internal

QA/QC

Above Ceiling

Below Grade

Building Envelope/Roofing

Business Process

Building Code

Concrete

Types | Standard Properties | Custom Properties | Root Causes | Templates

Root cause categories

Change Management

Root causes

Design Change

Scope Change

Value Engineering

Preview

Root cause

Change Management

Design Change

Scope Change

Value Engineering

Quality

Design Issue

Trade Error

General

Coordination

Emergency Work

Field Condition

Unforeseen Conditions

Uncategorized

Types | Standard Properties | Custom Properties | Root Causes | Templates

Check properties to show on Issues and Issue Templates forms. Uncheck to hide. Properties with a lock icon are required by the system and cannot be changed.

Visible	Label	Type	Required
<input checked="" type="checkbox"/>	Description	textarea	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Issue ID	text	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Issue type	issue_type	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Location	location	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Company	company	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Status	drop-down	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Backcharge	checkbox	<input type="checkbox"/>
<input type="checkbox"/>	Backcharge cost	numeric	<input type="checkbox"/>
<input type="checkbox"/>	Bare equipment cost	numeric	<input type="checkbox"/>
<input type="checkbox"/>	Bare labor cost	numeric	<input type="checkbox"/>
<input type="checkbox"/>	Bare material cost	numeric	<input type="checkbox"/>
<input type="checkbox"/>	Clarification needed	checkbox	<input type="checkbox"/>
<input type="checkbox"/>	Cost type	text	<input type="checkbox"/>
<input type="checkbox"/>	Cost w/ O&P	numeric	<input type="checkbox"/>
<input type="checkbox"/>	Crew	text	<input type="checkbox"/>
<input type="checkbox"/>	Currency	numeric	<input type="checkbox"/>
<input type="checkbox"/>	Daily output	numeric	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Due date	date	<input type="checkbox"/>
<input type="checkbox"/>	Full description	text	<input type="checkbox"/>
<input type="checkbox"/>	Labor hours	numeric	<input type="checkbox"/>

QA/QC | Safety | Commissioning | Standard Properties | Custom Properties

Checklists

☒ BP Concrete Checklist (19)

☒ BP Roofing Checklist (38)

☐ QIC Building Envelope Checklist (92)

☐ QIC Closure Inspection (7)

☐ QIC Concrete Accessories Checklist (16)

☐ QIC Concrete During Placement Checklist (18)

☐ QIC Concrete Formwork Checklist (33)

☐ QIC Concrete Post Placement Checklist (10)

☐ QIC Concrete Prior to Placement Checklist (22)

☐ QIC First Delivery Inspection (6)

☐ QIC First Equipment In-Place Inspection (5)

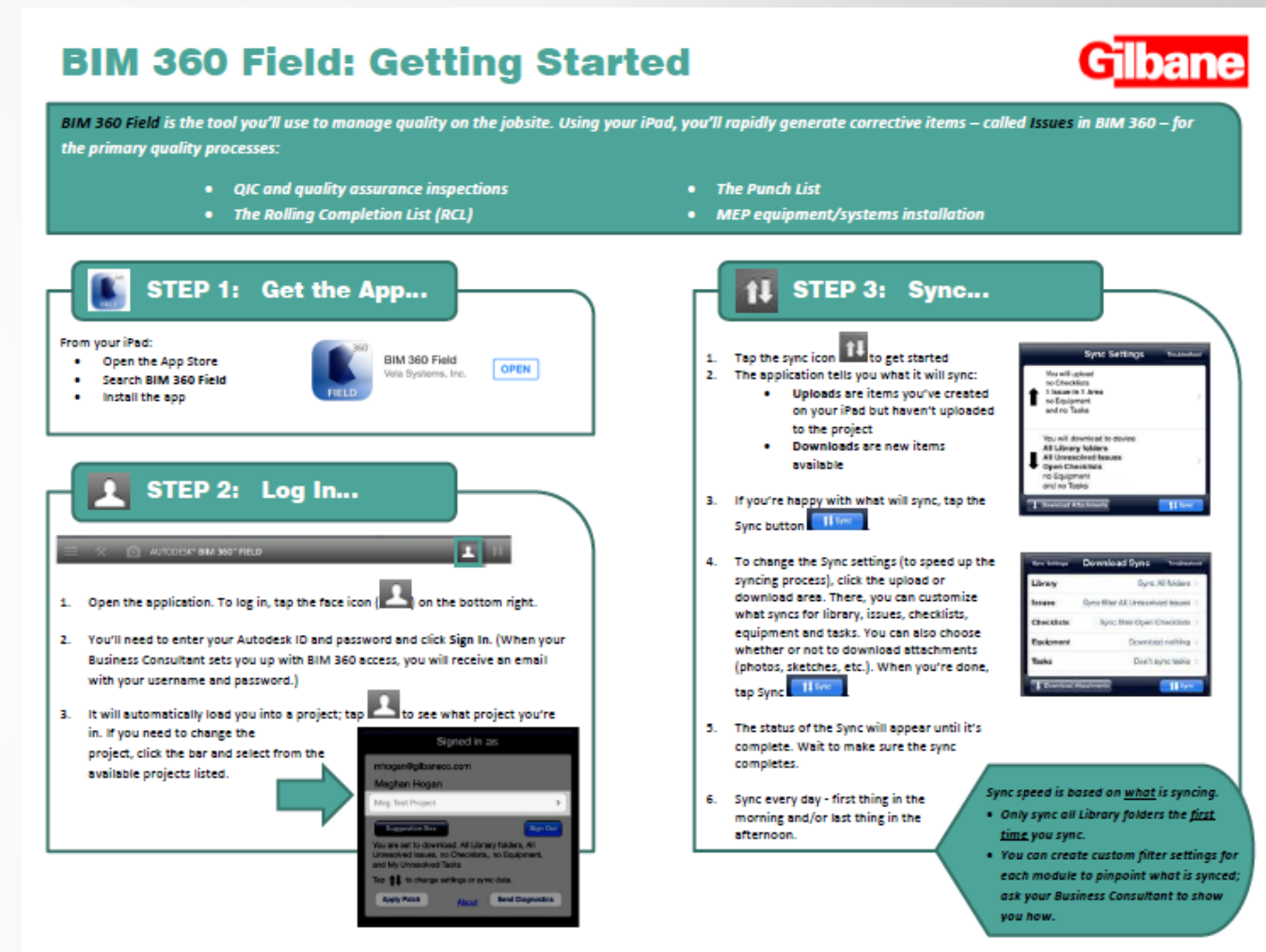
☐ QIC Mock-Up / Benchmark Inspection (8)

☐ QIC Roofing Checklist (34)

☐ QIC Start-Up Inspection (5)

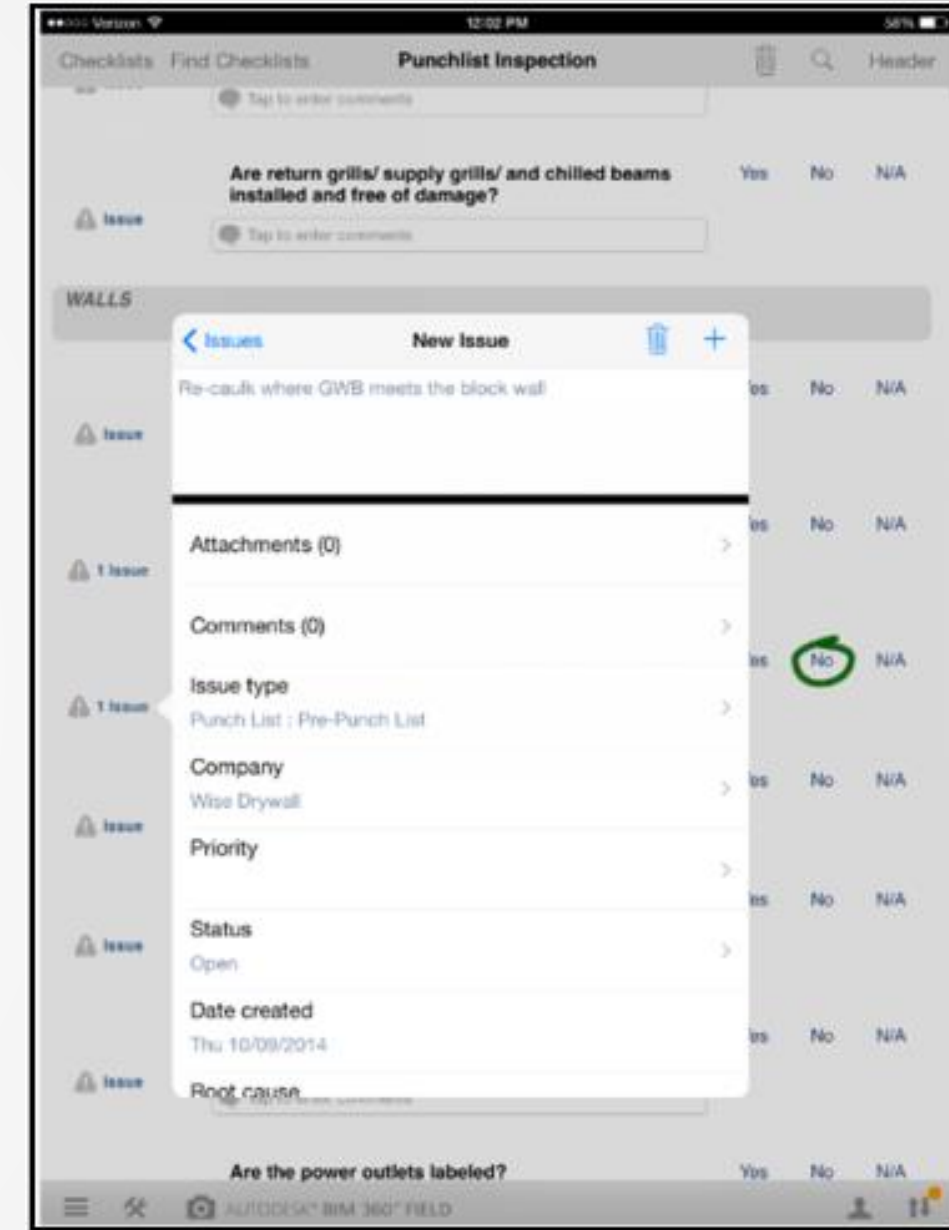
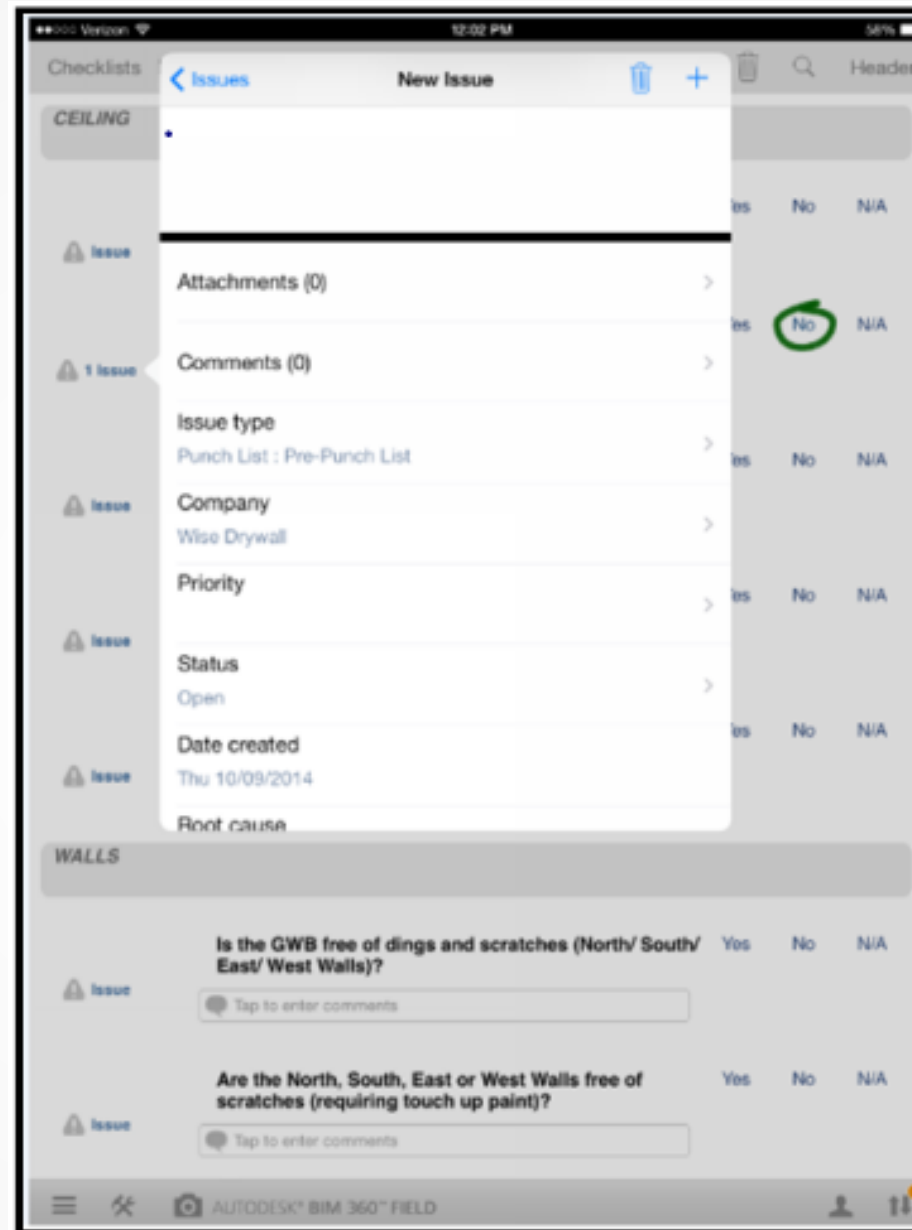
How Did We Get So Many Jobs on Board?

- Advertise/Promote
 - Upper Management
 - Monthly Quality Meetings
 - Peer Groups
 - Presentations to Clients
 - Company Wide Webinars and Intranet
- Champion Concept
- Created Job Aids



Lessons Learned

- Punchlist Checklists:
 - Customize issue description
 - Assign trades ahead of time
- Voice Recognition
- Kick-off Meeting Agenda
- Emailing Issues from phone



An aerial perspective rendering of a city skyline. In the foreground, a multi-lane bridge with a rainbow-colored light strip along its edge spans a body of water. To the right of the bridge is a landscaped park area with green grass, trees, and a blue oval-shaped feature. In the background, a dense urban skyline with various skyscrapers is visible under a clear blue sky. A semi-transparent white banner is overlaid on the left side of the image.

RECAP



Overall Lessons Learned / Best Practices

- Locations & Templates – start small
- Multiple drawings per location (Floor Plan & RCP)
- Power of the History Tab
- Use of Punchlist checklists
- Speak to create items in iPad
- Jobsite Champions

Benefits to Gilbane!

- Allows our teams to be more hands-on in the field
- Eliminate Administrative functions (less company turnover)
- Team Consistency
- Improved closeout time
- Can focus more on the client
- Builds team relationship – Including Architect & Owner
- Makes teams more efficient – SAVES TIME & MONEY!
- WHAT'S NEXT FOR US?

Session Feedback

- Via the Survey Stations, email or mobile device
- AU 2014 passes given out each day!
- Best to do it right after the session
- Instructors see results in real-time





A group of four young adults (three men and one woman) are jumping joyfully in a modern office space. They are all smiling and have their arms raised. The man on the left is wearing an orange t-shirt and blue jeans. The woman on the right is wearing a black blazer over a white shirt and blue pants. The background shows a brick wall, a desk with a computer monitor, and a potted plant.

***Students, educators, and schools* now have**

FREE access to Autodesk design software & apps.

Download at www.autodesk.com/education



Earn your professional Autodesk Certification at AU

Visit the [AU Certification Lab](#)