

ENR227371

Owner Feedback in the Clouds: Using AutoCAD Plant 3D to Facilitate Owner Reviews

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Learning Objectives

- Take further advantage of Collaboration for AutoCAD Plant 3D.
- Learn how to add clients to BIM 360 projects for review.
- Learn how to track comments and get them back to the design team.
- Learn how to develop workflows for tracking updates to the 3D model.

Description

Collaboration for AutoCAD Plant 3D software is a great tool for facilitating owner reviews. By keeping the information in the cloud and providing access to owners earlier in the project, it is much easier to implement the changes than it is at a more traditional stage of the project. Learn different strategies for how to use this technology for different types of clients, from those who are familiar with AutoCAD software to those with more of 2D backgrounds. This class utilizes BIM 360 software on the web, AutoCAD Plant 3D, and Navisworks software.

Speaker(s)

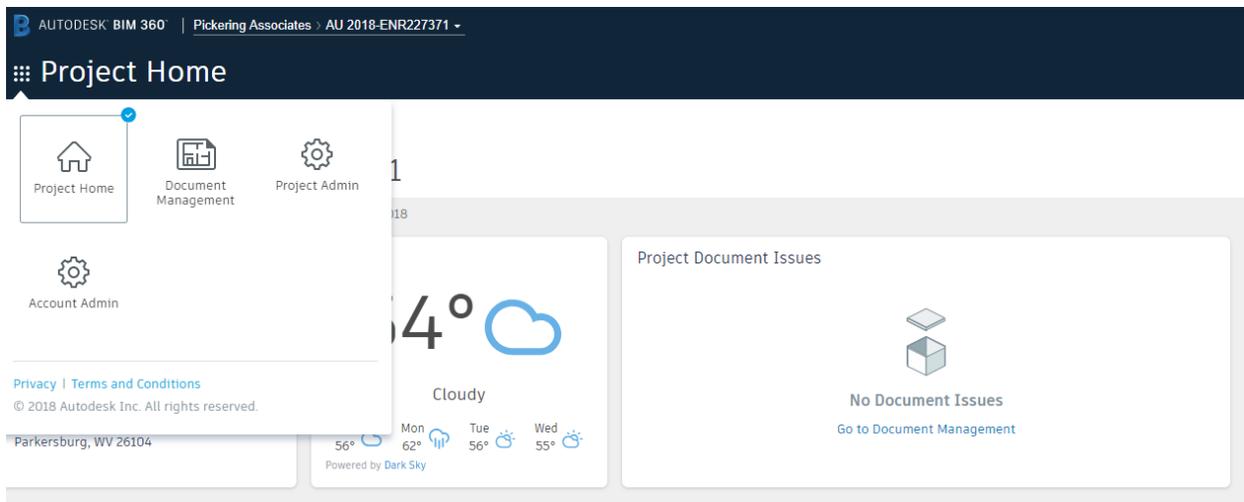
Patrick Flora is currently the Piping Engineering Department Manager at Pickering Associates, a design firm located in Parkersburg, WV. Since he started there in 2014, Patrick has implemented Plant 3D to assist industrial clients in taking full advantage of BIM. He places a strong emphasis on utilizing technology on piping and plumbing design. His skill in combining 3D scanning of existing conditions with an accurate 3D model of new designs reduces installation time and field rework. A native of Mason County, West Virginia, Patrick graduated from West Virginia University with a BS in Chemical Engineering and a MS in Engineering Management through Marshall University. pflora@pickeringusa.com

Adding clients to BIM 360 Design

Adding clients to BIM 360 Design as a viewer is the easiest way to make sure they can't "mess anything up." That is a comment that we hear most often from owners is that they want access to the information but do not want to be held responsible if they click the wrong button. This limits what they can do but also still gives them access for what we WANT them to do.

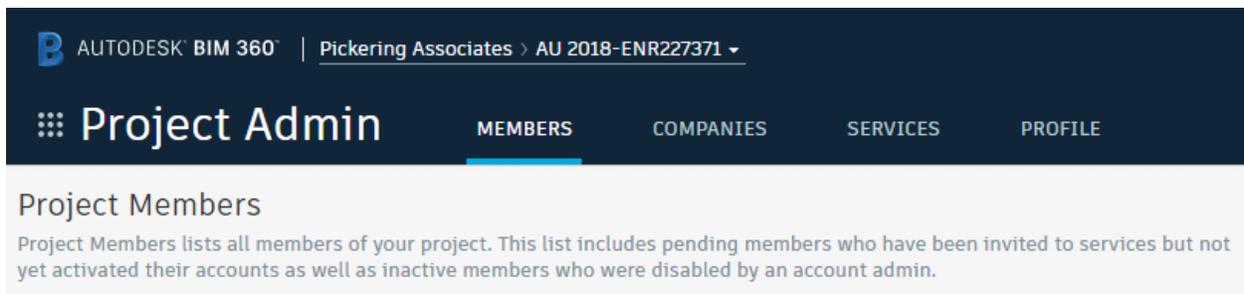
Adding Viewers

This step assumes you have a working collaboration project in Plant 3D and BIM 360 Design. On the left of the top ribbon, click the dot matrix to expand the selection and navigate to other areas of the project. Click the Project admin section to begin adding owners/clients.

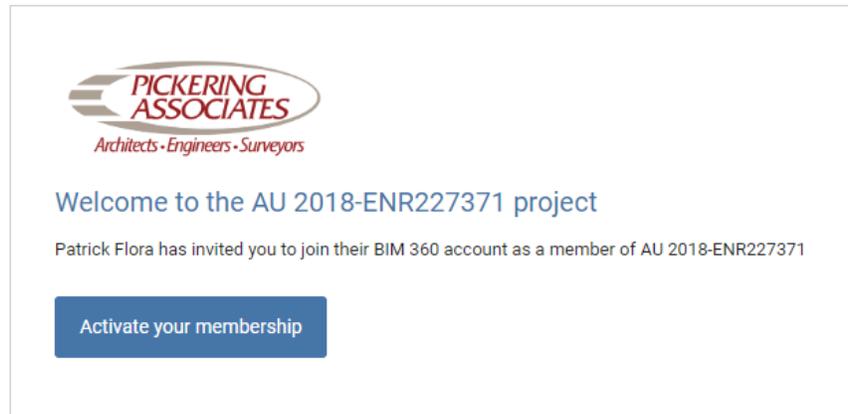


Project Home view after clicking the dot matrix.

You can now add members to the project by putting their email address in the next dialog box. We like to keep users separated and organized by clients. This makes it helpful for this project to assign issues, but it is also helpful for future projects and building a client database. Once the information is completed, the user will get an email as shown below.



Project Admin view in BIM360 Design.



Add [Autodesk BIM 360](#) to your address book to ensure you receive emails. For more information, visit [BIM 360 Help](#).

Snip from the email that the client will receive when added to the project.

At this point, they either need to login into their Autodesk account, or in most cases, they will need to create one. That is a very typical process with creating a password, confirming email, etc.

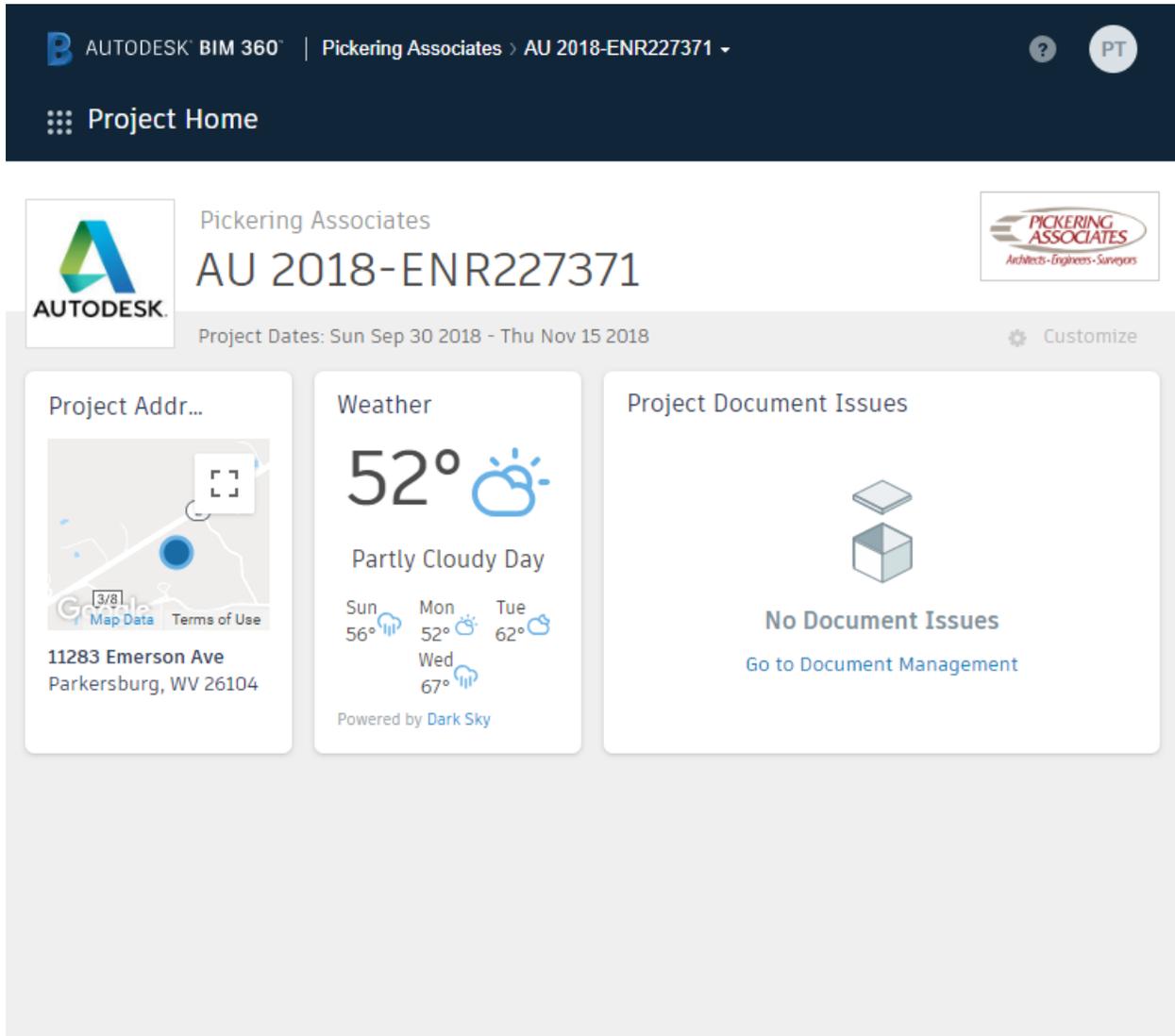
It is important to manage access levels and what each client can do. As mentioned previously, most just want access to view things and not delete/edit. For questions about permission levels and what they can and can't do, please review this article "Design Collaboration permission levels" on the Autodesk Knowledge Network.

<https://forums.autodesk.com/t5/bim-360-design-collaboration/design-collaboration-permission-levels/td-p/7977023>

For the example, the "P3DTestor" account has the owner title and can only view and comment. It is unable to edit or delete items. You can edit permissions by clicking the ... beside the root folder, or at any sublevel that you want.

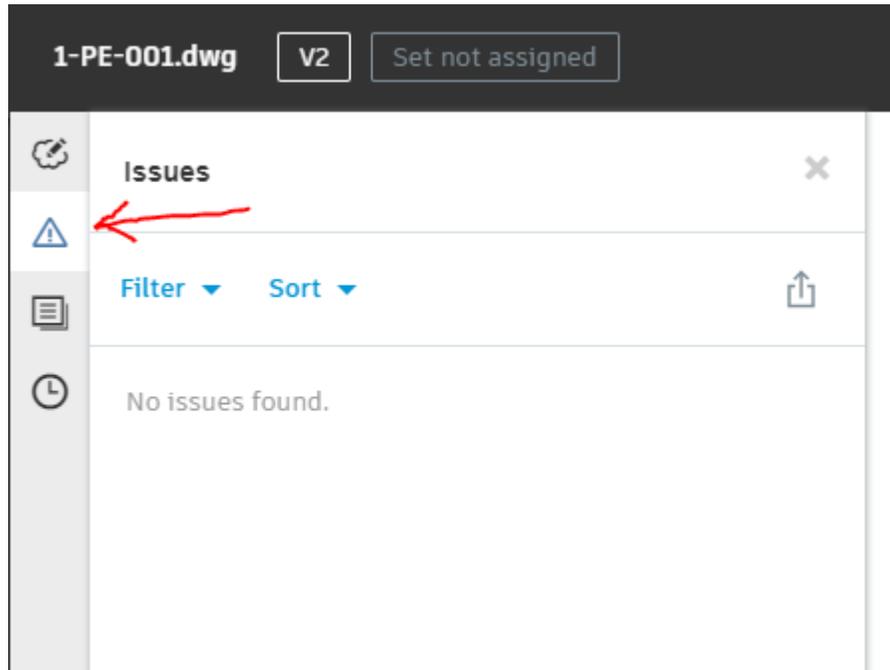
Adding Comments

Once they are logged into the BIM360 Design site, they will see a page of projects that have been shared with them. If they are assigned in more than one project, they will need to select the list in the top left and then click the correct project.



Client view once they log into BIM 360 Design.

There are multiple ways to track comments/issues. The preferred method for this is to create an "Issue". This allows for the most efficient tracking and archiving the question and answer. To create an issue, open either the 2D or 3D view of the file which you would like to review. Then click the Triangle symbol in the top left, as shown below.



View of the symbols in the top left of the review window.

Next, click the Create Issue button at the bottom left to open the next window. After the window opens on the left, click in the drawing in the area of the issue/question. This will set the focal point when the reviewer opens the file. Complete the open New Issue dialog box with the required information. My advice is to put as much information as possible in the description box. This will help give the reviewer as much context as possible. The description box looks like this.

1-PE-001.dwg V2 Set not assigned

Issues

< New Issue

Status *
Open

Title *

Description

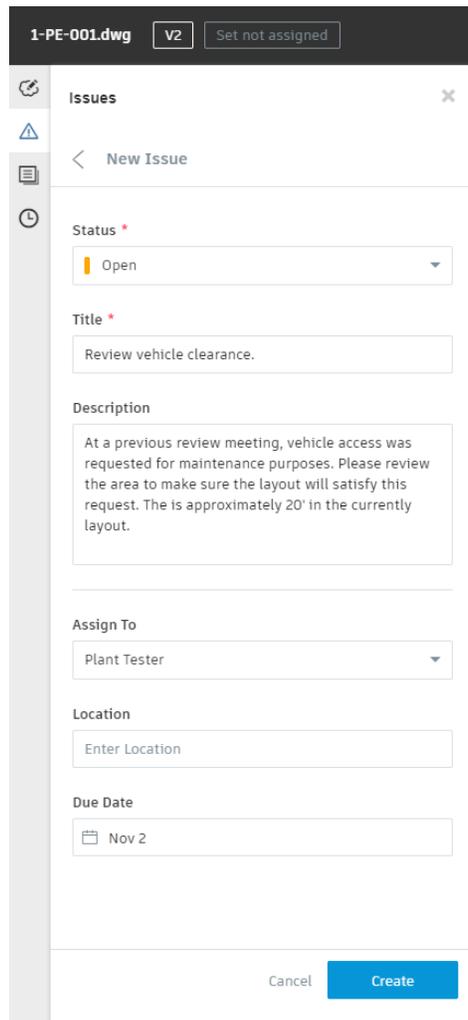
Assign To
Select User, Role or Company

Location
Enter Location

Due Date
Choose date

Cancel Create

Blank copy of the issue dialog box.



1-PE-001.dwg V2 Set not assigned

Issues

< New Issue

Status *
Open

Title *
Review vehicle clearance.

Description
At a previous review meeting, vehicle access was requested for maintenance purposes. Please review the area to make sure the layout will satisfy this request. The is approximately 20' in the currently layout.

Assign To
Plant Tester

Location
Enter Location

Due Date
Nov 2

Cancel Create

Completed copy of the issue dialog box.

Once you click the create button to finish generating the issue, an email is automatically generated to the person the issue was assigned to. The email doesn't go into much detail. It lists the title, who assigned it, and which drawing it was created in. For additional details, they will need to click the "View the issue" button in the email as shown below. They can also navigate to the issue by logging into the BIM360 site. The issues assigned to them will show on the Project Home view. They will then click the issue to see the summary page with more information as shown below.

B

Plant Tester,

Patrick Flora assigned Issue 4 to you.

4 **OPEN** Due on Nov 02, 2018

Review vehicle clearance.

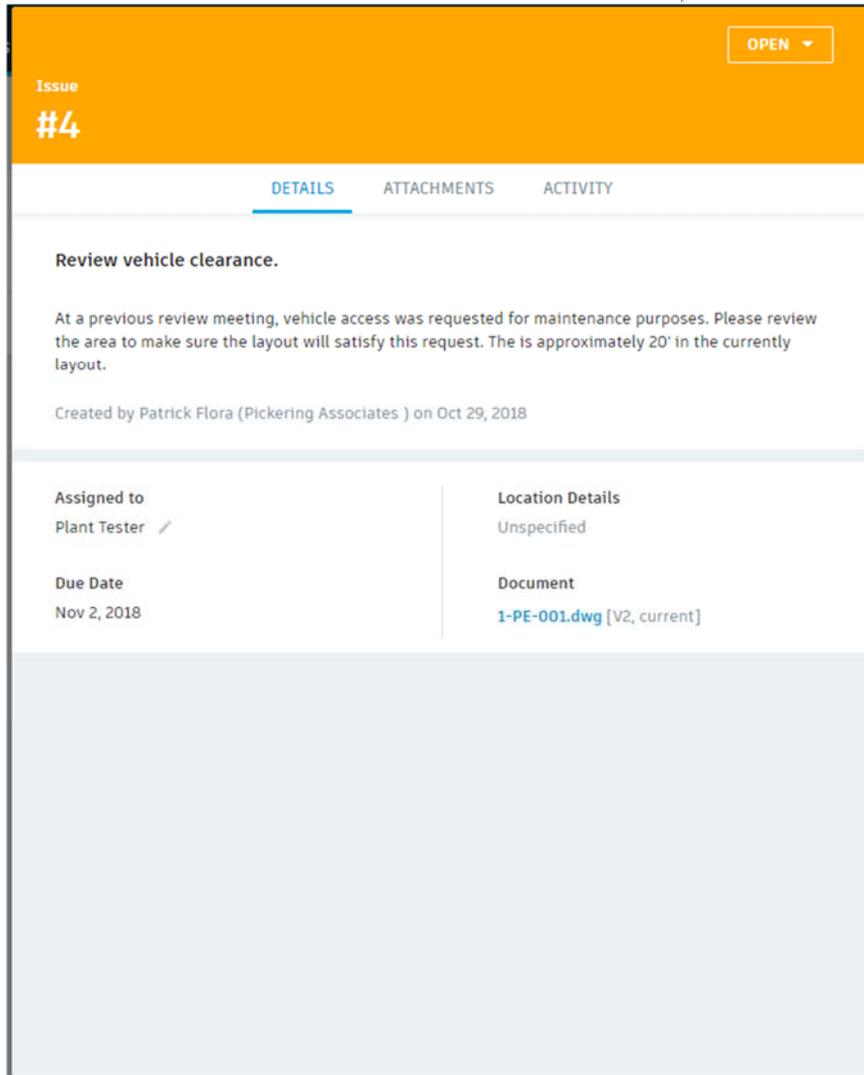
Assigned to: Plant Tester

Created by: Patrick Flora on Oct 29, 2018

 AU 2018-ENR227371 / Project Files / SampleProject / Plant_3D_Models / Ar
ea_1 / 1-PE-001.dwg

[View the issue](#)

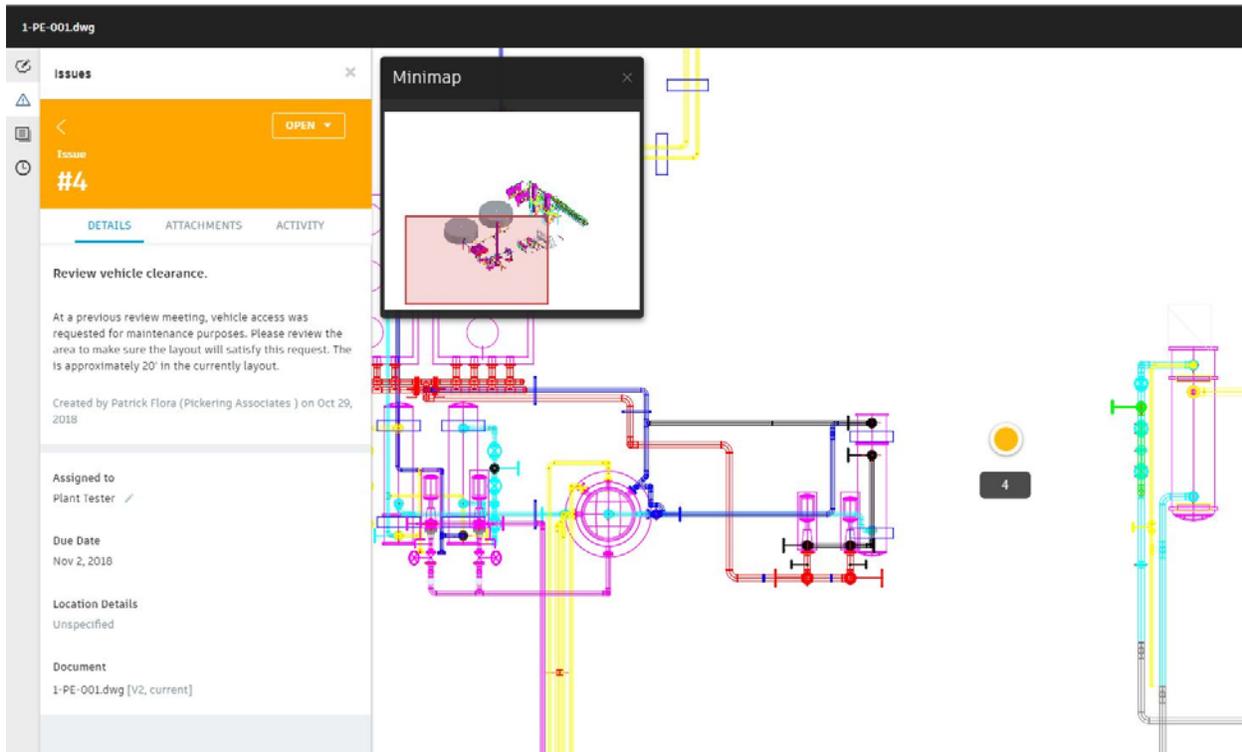
Copy of the automated email that BIM360 sends



The screenshot shows a software interface for an issue summary sheet. At the top, there is an orange header bar with the word "Issue" and a large "#4" on the left, and an "OPEN" button with a dropdown arrow on the right. Below the header is a navigation bar with three tabs: "DETAILS" (which is selected and underlined), "ATTACHMENTS", and "ACTIVITY". The main content area has a title "Review vehicle clearance." followed by a paragraph of text: "At a previous review meeting, vehicle access was requested for maintenance purposes. Please review the area to make sure the layout will satisfy this request. The is approximately 20' in the currently layout." Below this is a line of text: "Created by Patrick Flora (Pickering Associates) on Oct 29, 2018". A horizontal line separates this from a metadata section. This section is divided into two columns. The left column contains "Assigned to" (Plant Tester with a pencil icon) and "Due Date" (Nov 2, 2018). The right column contains "Location Details" (Unspecified) and "Document" (1-PE-001.dwg [V2, current]). The "Document" text is highlighted in blue. Below the metadata section is a large, empty light gray rectangular area.

Issue summary sheet.

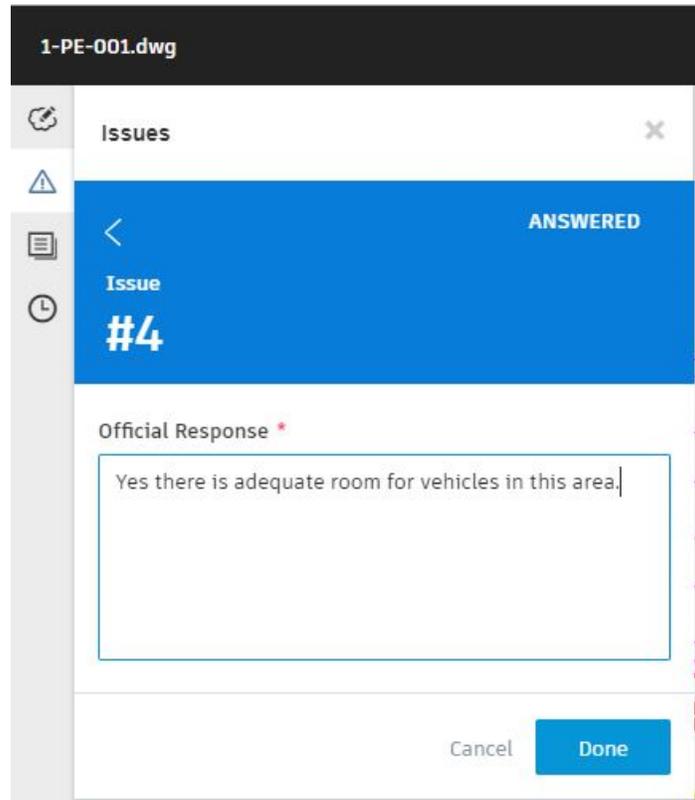
Notice that the Document is highlighted blue in the image. This is a link directly to the drawing that the issue is in. Once there, the reviewer is then able to comment on the issue, add additional content, or mark resolved and close the issue.



View for the reviewer after clicking the link to the document.

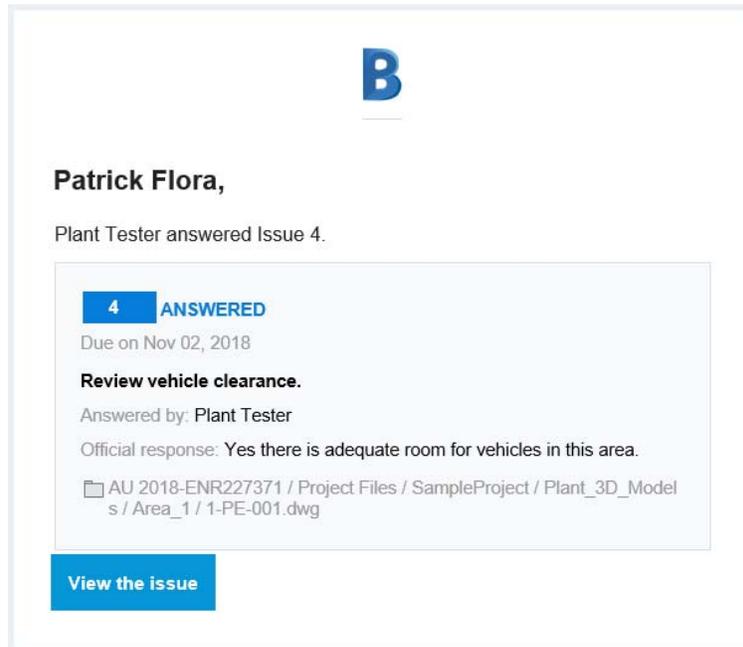
Notice the 3 tabs at the top. The details pane shows the original description, who created it, and what time. In the attachment pane you can add additional files for reference. In the activity pane, you can add additional comments or pose further questions back to the originator of the issue.

To change the status from open to answered, click the drop-down button that says open in the top right of the box. Once you click answer, a comment will need to be entered. That window is shown below.



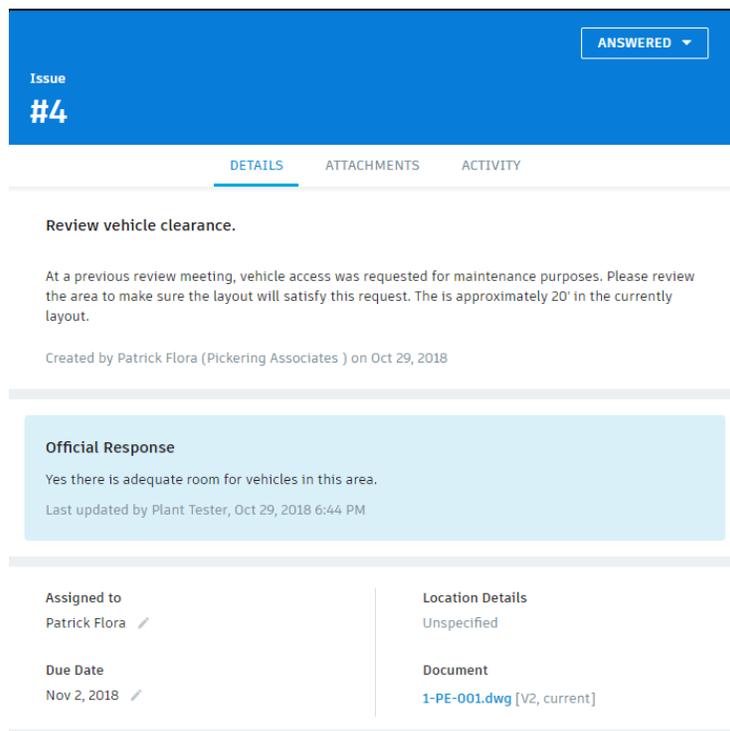
View for the reviewer after clicking the link to the document.

Once that step is completed, another automated email will be sent. This time the originator of the issue will get a notification that it has been answered.



Sample of the email sent to the issue originator.

When the originator clicks similar links as described above, they're shown the original issue and the official response given for the answer as shown below.



View of the "Answered" pane.

Now the issue can officially be marked closed. There is the ability to add additional comments at this time but if the answer is adequate, then we generally just mark it closed.

It is important to note that issues cannot be deleted once they are created. Even if the drawing and reference file is deleted (i.e. equipment removed from project) the issue will still remain in the project history.

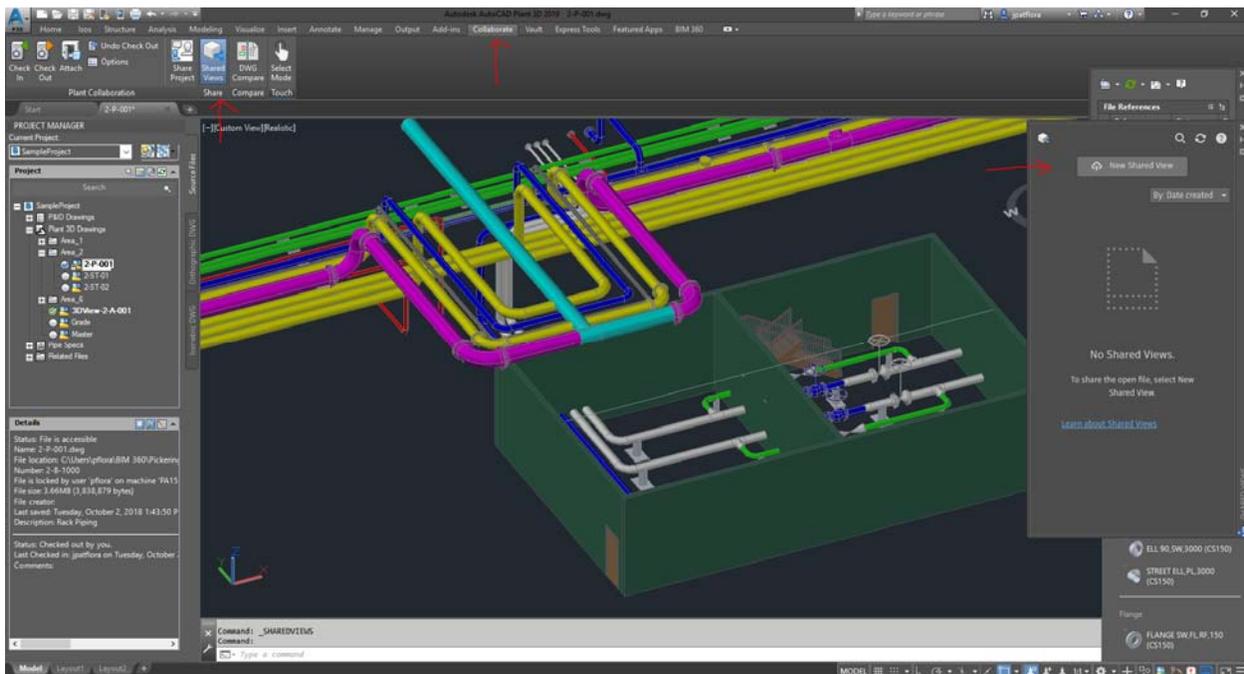
One reason that we really like this method of tracking issues is the ability to export for historical project records. We simply export the list to Excel so when the BIM360 project is archived, the issues and their answers can be easily accessed whether the person was a member of the project team or not.

Shared View Comments Plant 2019

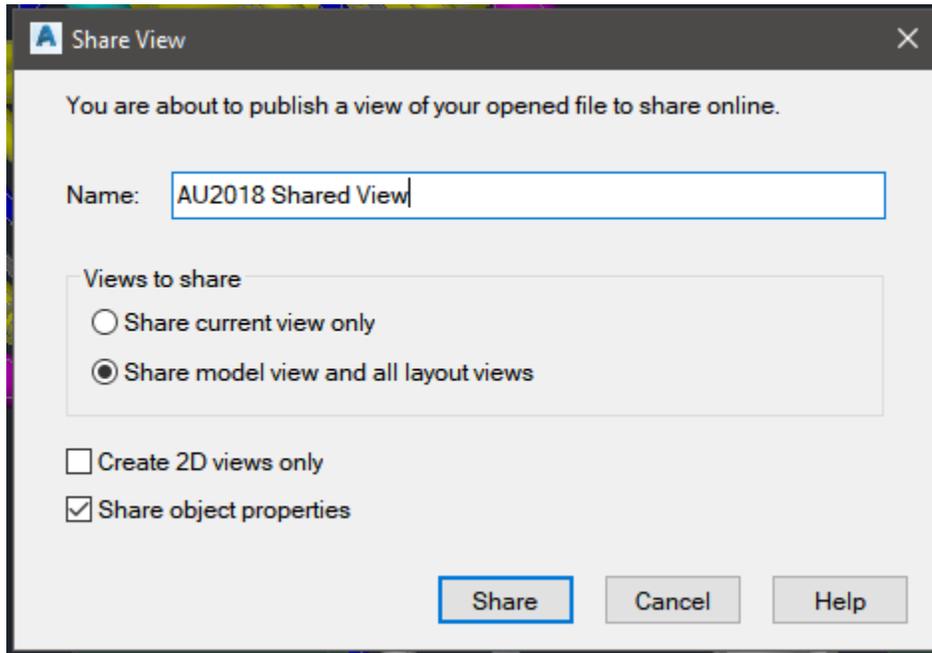
Shared views are new to Plant 3D in 2019. For an overview of Shared Views check out the link below from the knowledge network.

<https://knowledge.autodesk.com/support/autocad/learn-explore/caas/CloudHelp/cloudhelp/2019/ENU/AutoCAD-Core/files/GUID-459FD977-18F2-46C4-B238-B91E6DC27536-htm.html>

To create a shared view in an open drawing, click on the Collaborate tab of the Ribbon. This will open the Shared Views window. Once the window is open, click the New Shared View button in the top middle of the window. An example is shown below.

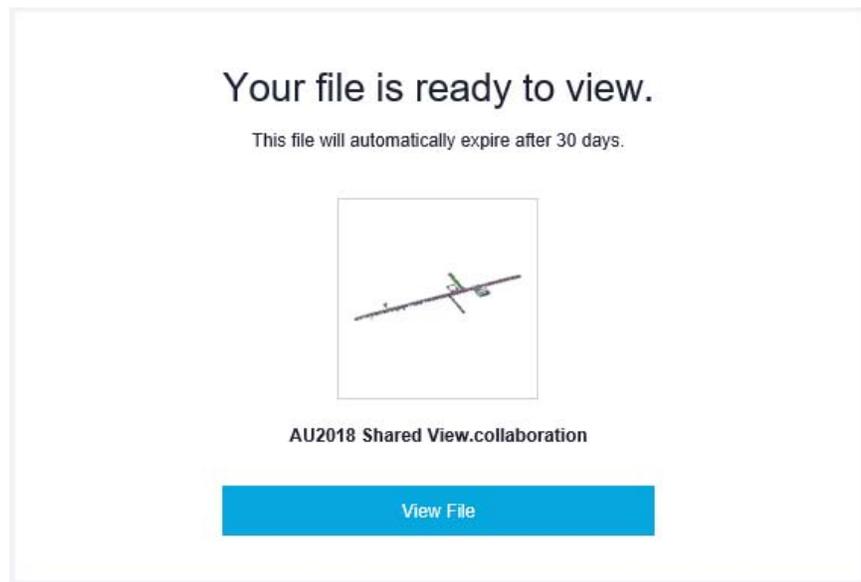


Screenshot of the shared view buttons and how to start one.



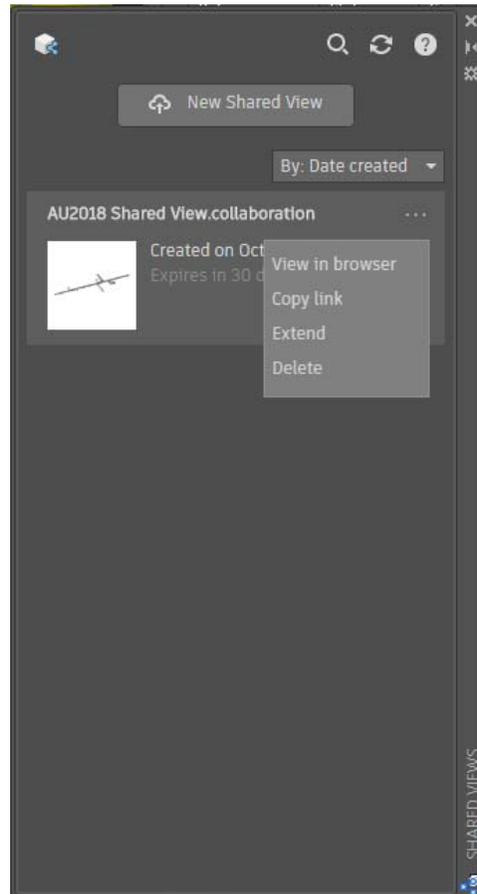
Create Shared View dialog box.

Once the Shared view is named then another dialog box will pop up stating that the shared view is being processed and that a notification will display when it is ready. You will also receive an email with a link to the view. The view will also appear in the Shared View window in Plant 3D.



Automated email for creating Shared Views.

By clicking the ... beside the shared view from in Plant 3D will give you additional options such as viewing it in a browser, copy the link, extend the life of the view, or delete it.



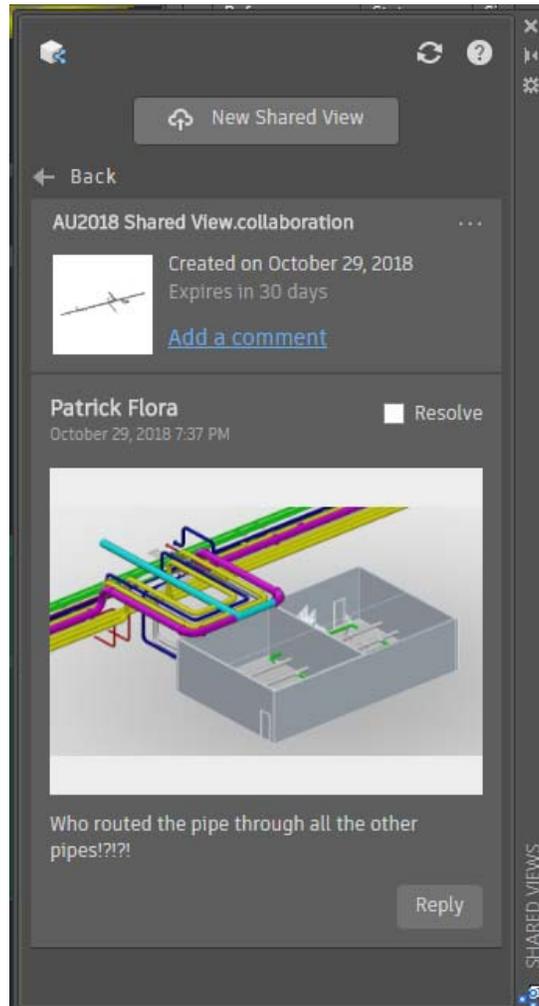
Showing the shared view in the Shared Views window.

By clicking view in browser, the view is then opened in your default web browser. Our experience is that Chrome works best but I'm sure other browsers work just as well. Shared views are very helpful if you want to send someone an overall model view similar to Navisworks, but without needing the extra software. They can still comment, measure, and even section the view (something that can't be done inside Plant 3D). The comments work really well for internal coordination. My design team uses them to ask me questions so that I can quickly see what they were looking at when the question came to mind. I can then answer, and they see my reply all inside of Plant 3D. No need to go to BIM360 or anywhere else. It is on the same screen that they are designing from.

There really isn't an easy way to create historical record of the comments without taking a screenshot and pasting into a word document. That is why for client coordination I prefer BIM360 but for internal coordination, shared views are very convenient.

This can also be viewed from a mobile browser as well, making it easy for me to send a view of the 3D model to a construction administrator in the field.

To add a comment from the browser, you just need to sign in from an Autodesk account. From there you can add new comments or reply to existing comments.



View of the comment in the Shared Views window.

You can also mark comments resolved and track items that way but once again there is no real way to create a historical record.