

## Exercise 15-2

In this exercise, you will move the coordinate system origin of a point cloud in Autodesk ReCap 360 to establish the correct origin when the file is inserted into AutoCAD. You will modify an existing point cloud project file (RCP file) and then export an RCS file to be inserted into AutoCAD.

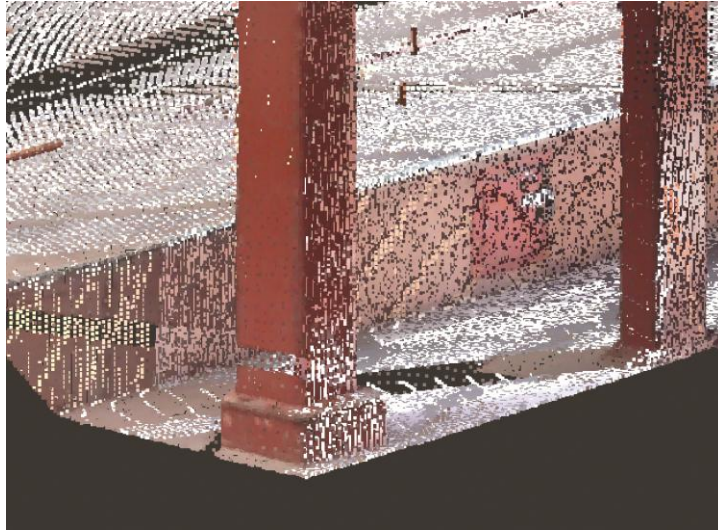
1. Download the Amphitheater Stage.rcs, Amphitheater Stage Revision.rcp, and Amphitheater Stage Revision.dwg files for this exercise from the companion website. Copy the files to a location of your choice.
2. Open Autodesk ReCap 360 and open the Amphitheater Stage Revision.rcp file.
3. Notice the location of the XY grid shown in A. The XY grid is elevated above the columns that are located to the lower right. This is not the correct location. The 0,0,0 origin will be moved to the base of the lower-right column shown in B.



*(Red Rocks Amphitheatre, City & County of Denver)*

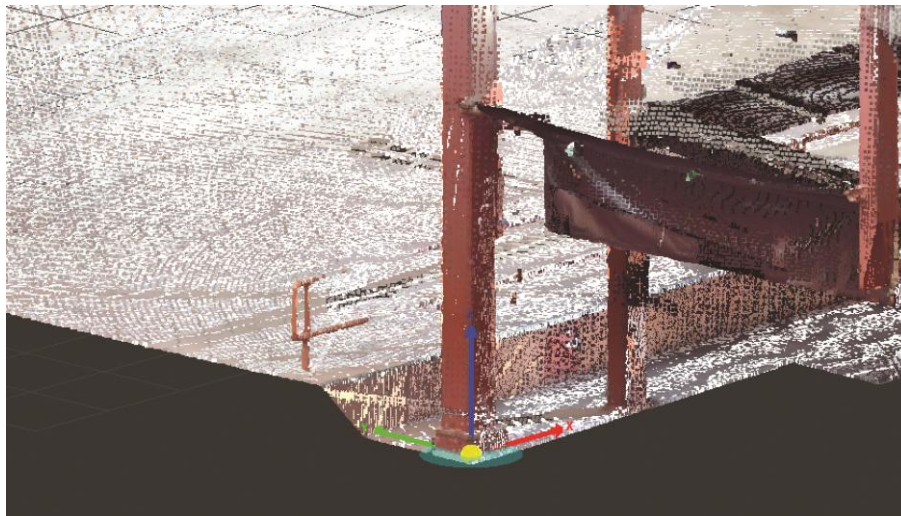
4. Expand the **Display Settings** tile menu and expand the **Toggle UI Elements** flyout. Select the **Perspective** button. This will change the display from a perspective projection to a parallel projection.
5. Expand the **Display Settings** tile menu and expand the **Points** flyout. Select the **Point Display** button and set the point size to 3.

6. Zoom into the lower-right front column of the point cloud. Refer to the following illustration.



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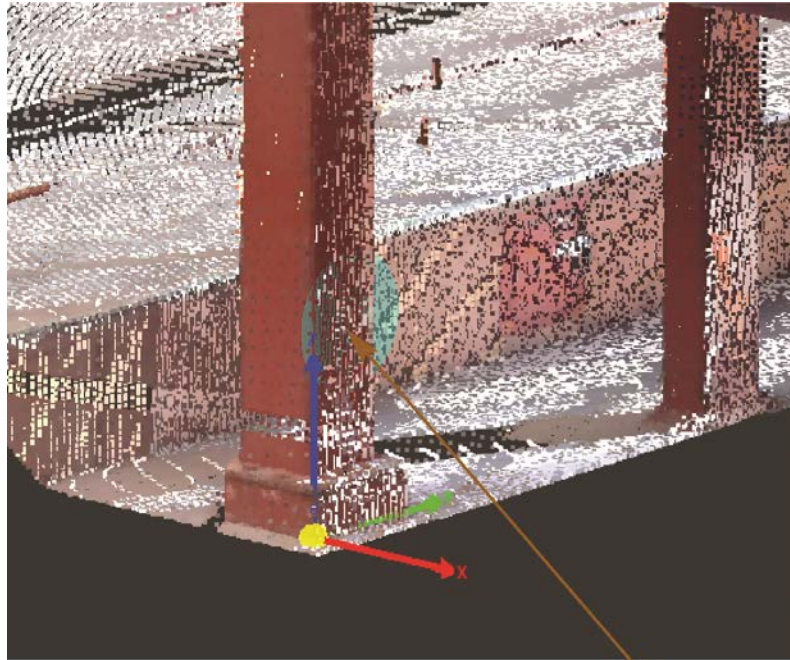
7. Expand the **Display Settings** tile menu and expand the **Points** flyout. Select the **Update Origin** button. Select the front right corner at the base of the column. Refer to the following illustration. Then, press the [Tab] key. Use the tooltip that appears on screen to guide you through the command sequence.



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8. Select the floor at the base of the column to align the direction of the Z axis. This aligns the Z axis perpendicular to the base floor. Press [Enter] to confirm the selection.

9. Select the right face of the column to establish the direction of the X axis. Refer to the following illustration. Press [Enter] to confirm the selection.



Select the  
right face

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10. Notice that the XY grid is now aligned with the base of the column. The coordinate system origin has been relocated. The new origin point will be aligned with the 0,0,0 origin in AutoCAD when the file is inserted.
11. Save the revision by exporting an RCS file, which will then be inserted into AutoCAD. Expand the **Home** tile menu and select the **Export** button from the **Import** flyout. Name the file Amphiheater Stage Revision\_Final.rcs and pick the **Save** button. When prompted, select **Unify my project scans** to export the file.
12. Open the Amphiheater Stage Revision.dwg file in AutoCAD.
13. Using the **POINTCLOUDATTACH** command, insert the Amphiheater Stage Revision\_Final.rcs file. Insert the file at the coordinates 0,0,0. Select **Lock point cloud** to lock the point cloud to the 0,0,0 location. Set the path type to **No path** or **Full path**.
14. Save the drawing with the attached point cloud as EX15-2.dwg.