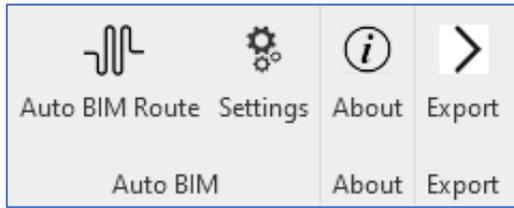


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Revit Ribbon



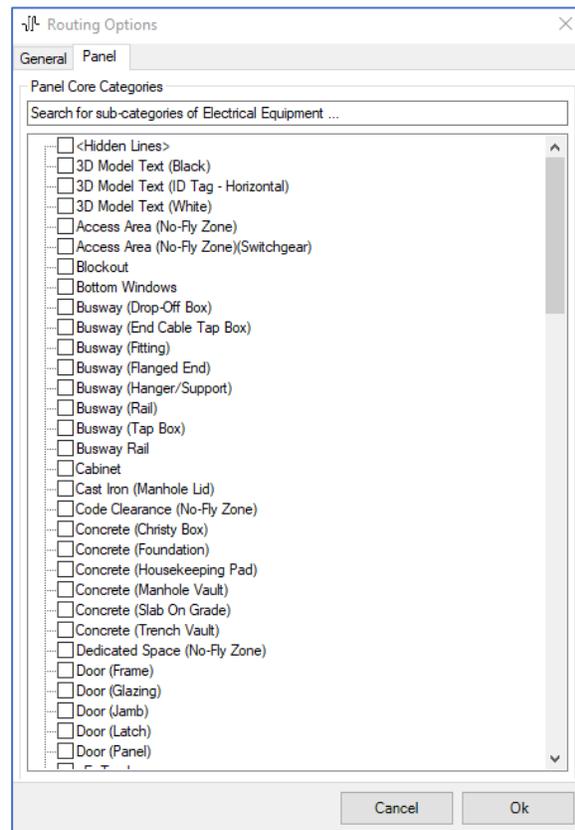
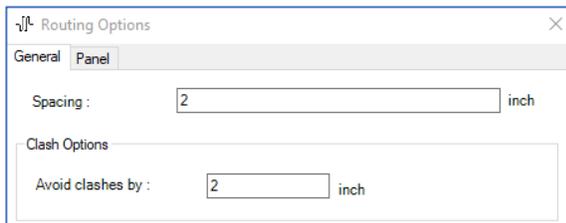
Auto BIM Route: Open ABR with an opened 3D view.

Settings: Conduit spacing requirements, clash detection settings

About: License information

Export: System-Area-Level, Preview/Quick Export

Settings



Routing Options

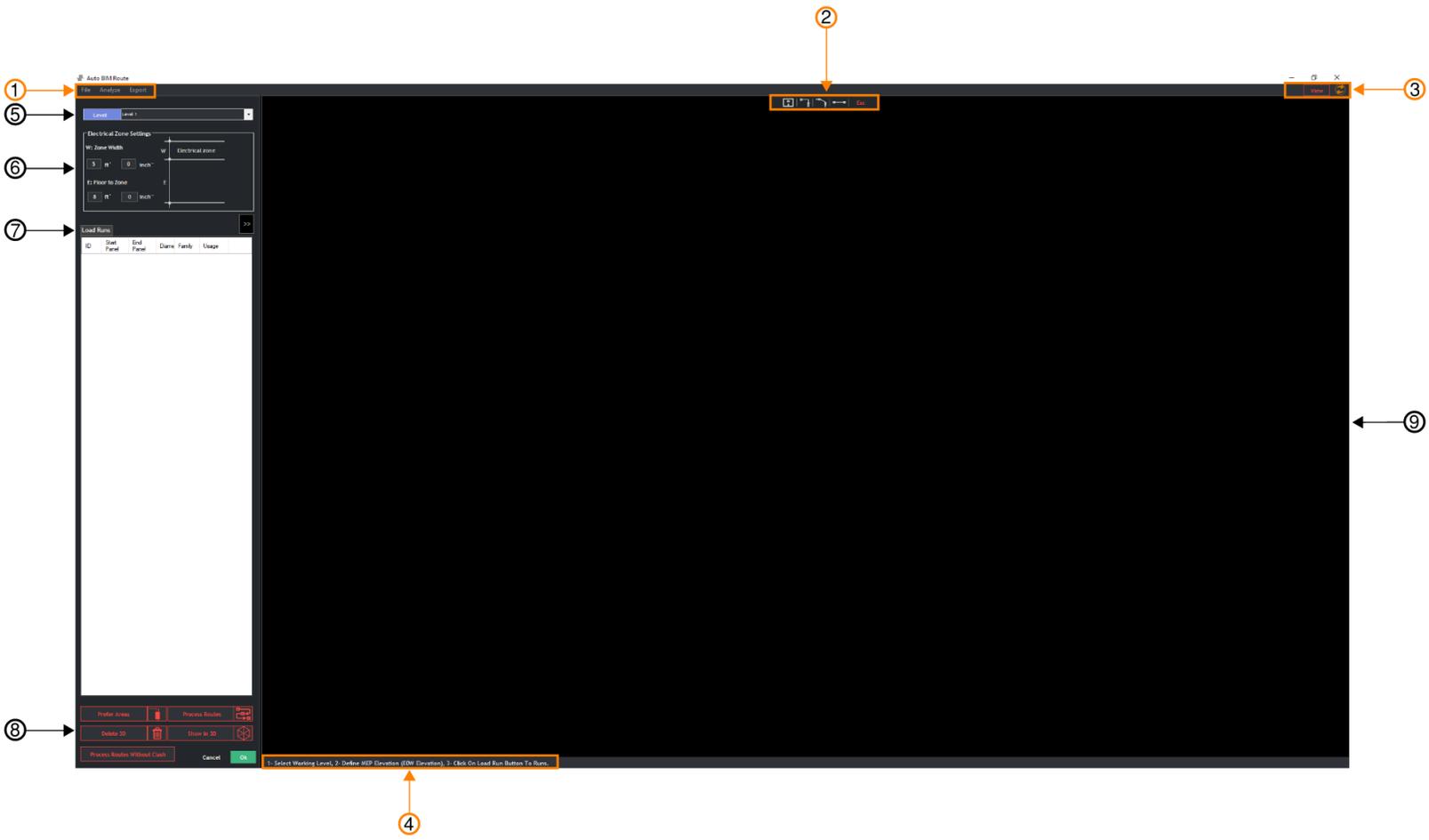
General: Conduit spacing from inside edge to inside edge (any size).

Avoid clashes by: Clash spacing requirements (any size).

Checkboxes to ignore elements during clash detection (walls, etc.)

Panel: Checking the box representing the panel's body category helps ABR AI easily define the panel's top face to avoid getting confused with the top of the panel clearance zone.

User Interface



1. Tabs

2. Tool Bar

3. Hide/View, Model Status

4. Information/Instruction Bar

5. Reference Level

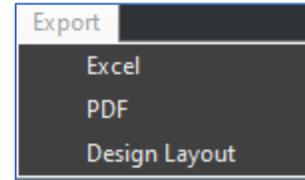
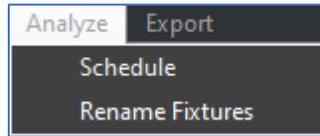
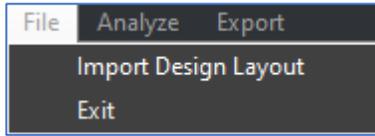
6. Electrical Zone Settings

7. Feeder Schedule Browser

8. View Controls

9. Drawing Area

Tabs



File: Import detailed design routes provided by the detailer. Desktop App component, which does not require Revit, allows detailer/GF to provide conduit routing to modelers.

Analyze: Schedule – Creates schedule of processed routes.

(Schedule/Quantities > Auto BIM Route Conduit Schedule)

Rename Equipment – Generates unique IDs for all elements with the "Electrical Fixture ID" parameter. Aids in generating random IDs so ABR can recognize the devices when uploading Excel files. While you still have the option to enter the ID you want manually, this feature is designed to accelerate the process.

Export: Export schedules, PDFs, and conduit routing.

Toolbar



Panel Info | Add Run | Offset | Single Run | **Escape**

Panel Info: Select the panel to confirm the panel name.

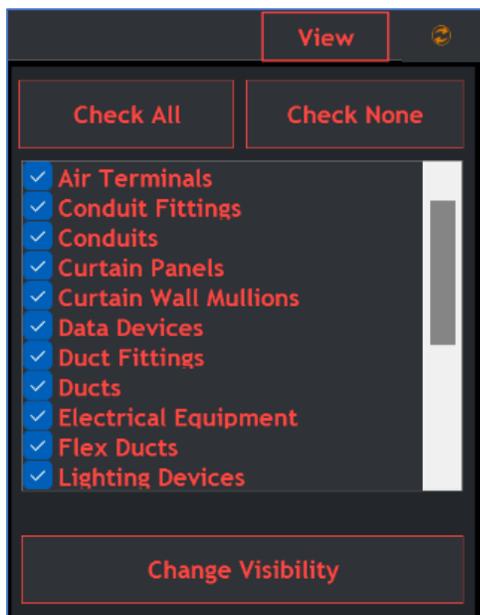
Add Run: Select the *panel* to add new run(s) quickly.

Offset: Create conduit offsets by following prompts.

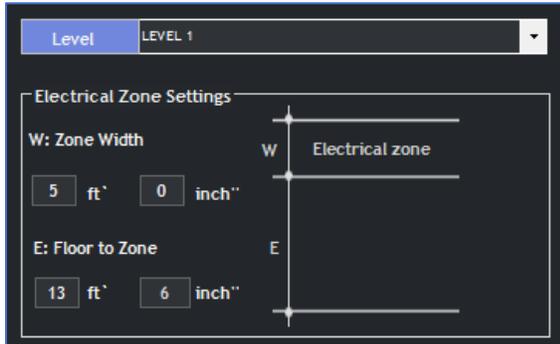
Single Run: Individually select run segment or single run(s).

Hide/View, Sync

Hide and Unhide categories on ABR UI Viewer - helps to visualize better and navigate through the 2D design layout. Uncheck items you want hidden in view. Keep ABR up to date with the orange sync button to the right of the View tab.



Reference Level, Electrical Zone Settings



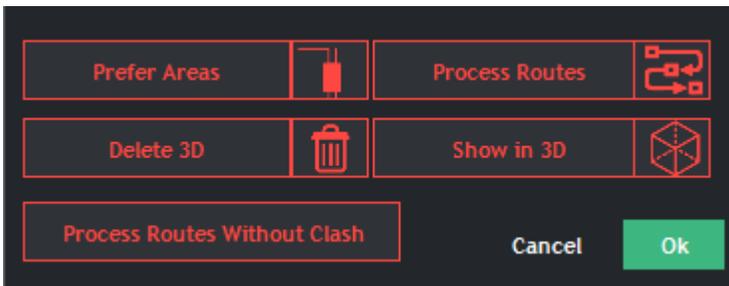
Set the following before importing the feeder schedule:

Level

W: MEP Zone Width (above ceiling)

E: Floor to Ceiling Zone Height (below ceiling)

View Controls



Prefer Areas: Adjust conduit path

Process Routes: Generate routes in 3D

Delete 3D: Deletes processed routes

Show in 3D: Isolates processed routes in 3D

Process Routes Without Clash: Process routes at a specific elevation without clash detection feature.

Information/Instruction Bar

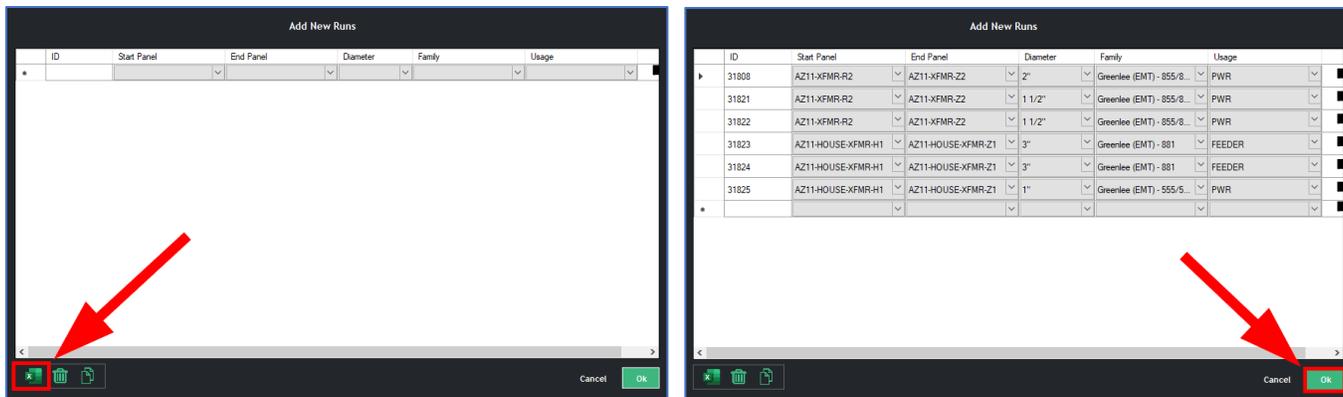
It helps to illustrate what is needed to use the software or what the software is expecting as next(s) to work properly.

The screenshot displays the Auto BIM Route (ABR) software interface. On the left, there is a 'Load Runs' table with columns for ID, Start Panel, End Panel, Diameter, and Usage. Below the table are several control buttons: 'Prefer Areas', 'Process Routes', 'Delete 3D', and 'Show in 3D'. At the bottom left, the weather is shown as 98°F Sunny. On the right, a 3D wireframe model of a building is shown with yellow and green highlighted routing paths. A blue circle highlights a text instruction at the bottom of the interface: 'Use Preferred Area Or Create Path Buttons To Relocate And Group Runs, Click On Process Route Button to Process In 3D.'

ID	Start Panel	End Panel	Diameter	Famil	Usage
1	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
2	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
3	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
4	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
5	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
6	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
7	MP-2B	Transfor...	1/2"	Ele...	LIGHTING
8	PP-1A	Panel 3	1/2"	Ele...	PWR
9	PP-1A	Panel 3	1/2"	Ele...	PWR
10	PP-1A	Panel 1	1/2"	Ele...	PWR
11	PP-1A	Panel 4	1/2"	Ele...	PWR
12	T-SVC	Panel 4	1/2"	Ele...	PWR
13	T-SVC	Panel 1	1/2"	Ele...	SECURI...
14	T-SVC	Panel 1	1/2"	Ele...	SECURI...
15	T-SVC	Panel 3	1/2"	Ele...	SECURI...
16	T-SVC	Panel 4	1/2"	Ele...	SECURI...

Feeder Schedule Browser

Import Feeder schedule: Feeder schedule information is used from panel to panel to determine the best possible route. Click **Load Runs** and select feeder schedule.



If multiple elevations are needed after the schedule is imported, select >> to expand and change Zone Width (W'-W'') and Floor to Zone elevation (E'-E'').

Level: LEVEL 1

Electrical Zone Settings

W: Zone Width
5 ft' 0 inch"

E: Floor to Zone
13 ft' 6 inch"

W Electrical zone E

Load Runs >>

ID	Start Panel	End Panel	Dia	Family	Usage
FDR...	AZ12-...	DM13-...	2 1...	Green...	FEEDER
FDR...	AZ12-...	DM13-...	2 1...	Green...	FEEDER
FDR...	AZ12-...	DM13-...	2 1...	Green...	FEEDER
FDR...	AZ12-...	DM13-...	2 1...	Green...	FEEDER
FDR...	AZ12-...	DM13-...	2 1...	Green...	FEEDER
FDR...	AZ12-...	DM13-...	2 1...	Green...	PWR
FDR...	AZ12-...	DM13-...	2 1...	Green...	PWR
FDR...	AZ12-...	DM13-...	2 1...	Green...	PWR
FDR...	AZ12-...	DM13-...	2 1...	Green...	PWR
FDR...	AZ12-...	DM13-...	2 1...	Green...	PWR

R. ID	W'	W''	E'	E''
FDR-01	5	0	8	0
FDR-01	5	0	8	0
FDR-02	5	0	8	0
FDR-02	5	0	8	0
FDR-03	5	0	8	0
FDR-03	5	0	8	0
FDR-04	5	0	8	0
FDR-04	5	0	8	0
FDR-05	5	0	8	0
FDR-05	5	0	8	0
FDR-21	5	0	8	0
FDR-21	5	0	8	0
FDR-22	5	0	8	0
FDR-22	5	0	8	0
FDR-23	5	0	8	0
FDR-23	5	0	8	0
FDR-24	5	0	8	0
FDR-24	5	0	8	0
FDR-25	5	0	8	0
FDR-25	5	0	8	0

Parallel IDs

Before importing the conduit schedule, add a count column to include the quantity of conduit.

ID	First Panel	Last Panel	Diameter (Inch)	Type	Usage	Count
1	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH	4
2	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH	4

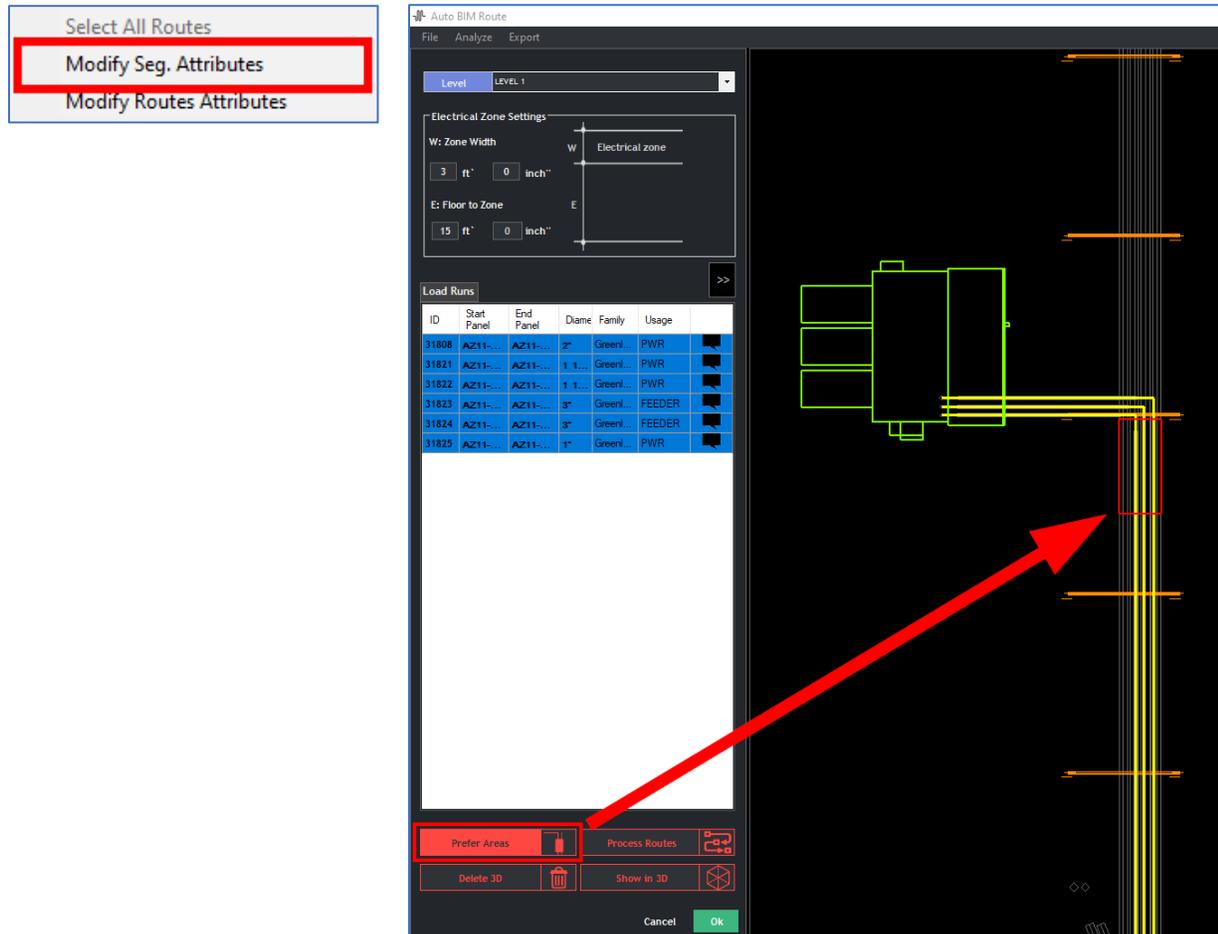
ABR will add a new row to the schedule for each parallel run and will add -1, -2, -3, etc. to the end of each conduit run ID with the same ID.

Load Runs					
ID	Start Panel	End Panel	Diam	Family	Usage
1-1	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
1-2	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
1-3	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
1-4	2UPS.HCDP.A01	2GSIDF-A1.HCP.01	1"	PVC Branch	BRANCH
2-1	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH
2-2	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH
2-3	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH
2-4	2UPS.HCDP.A02	2GSIDF-A1.HCP.02	1"	PVC Branch	BRANCH

Prefer Areas

Select **Prefer Area** (found in *View Controls*) Create rectangle shape windows in the direction you want the conduit to travel. Once preferred areas are placed, select the routes and edit elevation:

Right-click, select *Modify Seg. Attributes* and edit the conduit elevation (Zone Width/Floor to Zone)



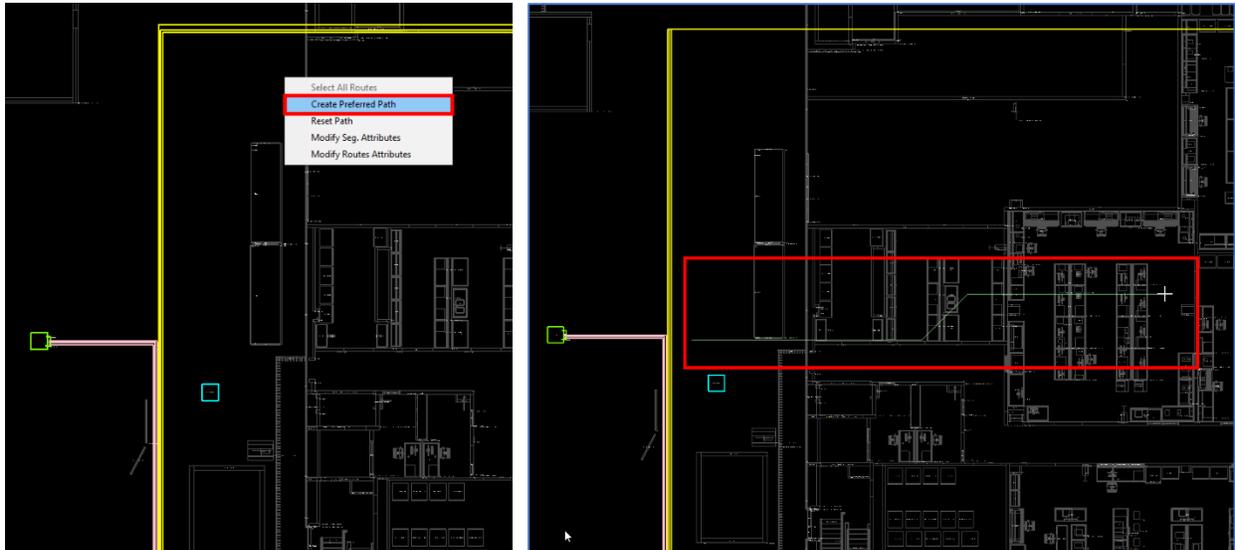
Click **Process Routes** to draw the route in your 3D model. Select **Delete 3D** to remove the route.

Closing ABR will keep the processed route in your model, manual changes will be required.

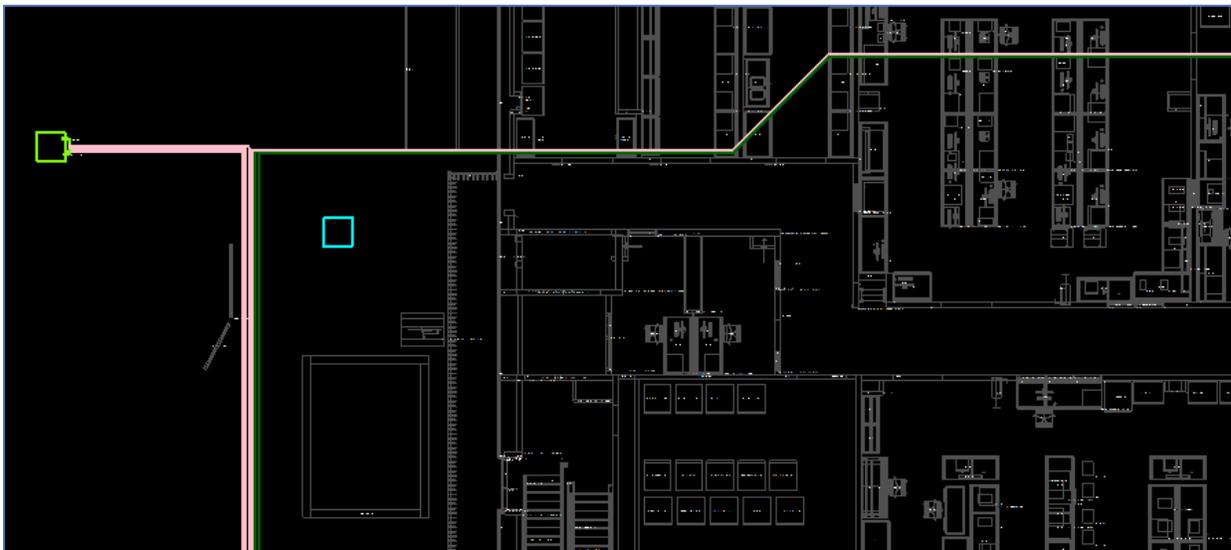
Preferred Path

Draw a line for a selected run(s) and ABR will move the runs to mimic the drawn line.

Select runs > right-click > Create Preferred Path > Start drawing a path.



Draw a path > right-click to move the runs to mimic the drawn line.



Select the runs > right-click > Reset Path to take it back to its original design.

Note:

You cannot add more than one path for runs that have already gone through this logic. You need to select the runs and reset them first so you can create a new path.

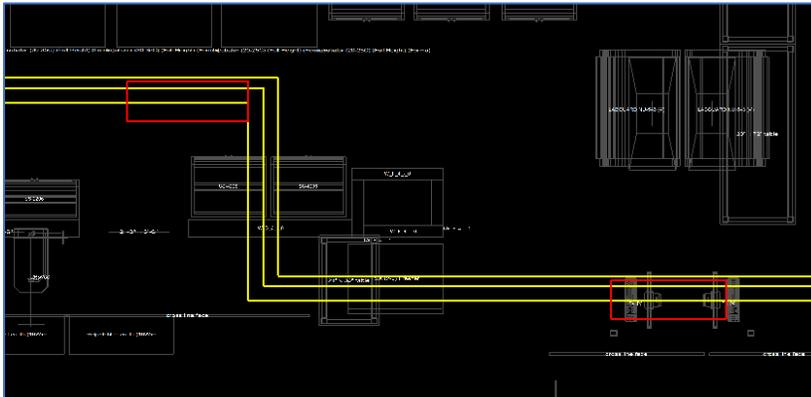
Auto BIM Route (ABR) Guide

Offset

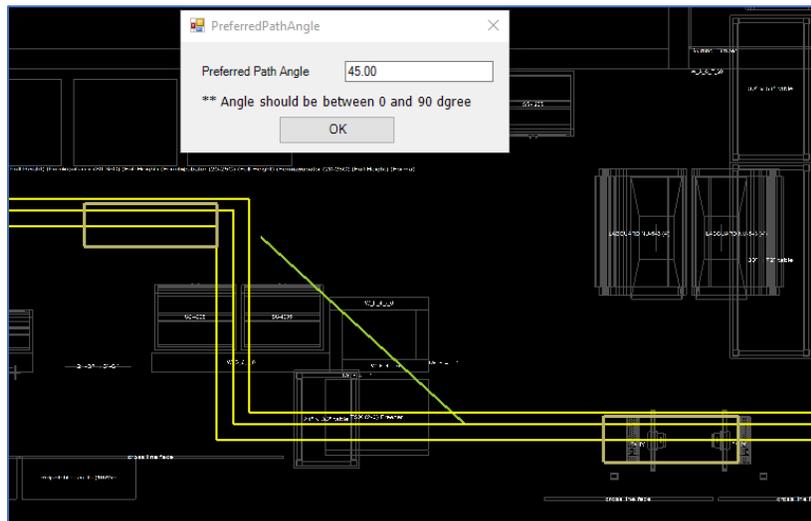
In the Tool Bar, click the Offset tool and follow the prompts to create an offset.



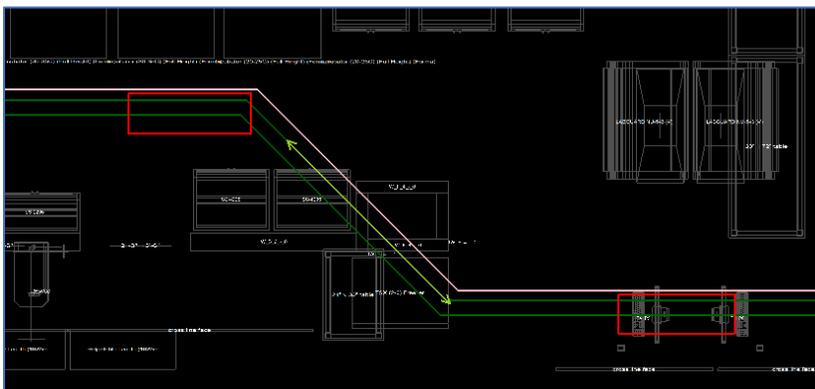
Select two preferred areas.



Draw a line for the preferred angle, set degree of angle.



Click in view, offset created.

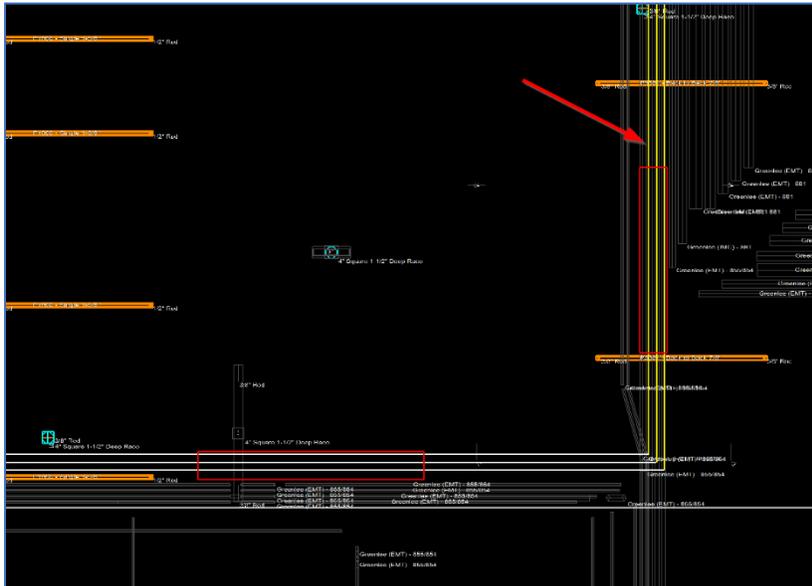


Single Run

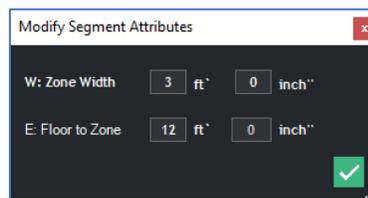
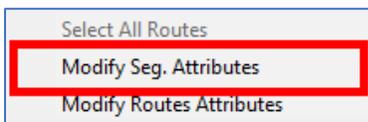
Elevation Changes: Select the Single Run tool.



Select a conduit segment (or a single conduit) for a new elevation.

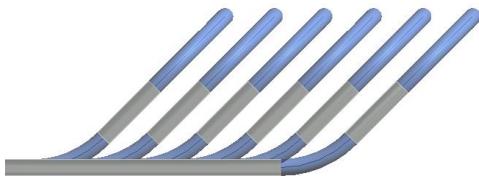


Right-click to modify elevation. Adjust Zone Width and Floor to Zone Height. Click Process Routes

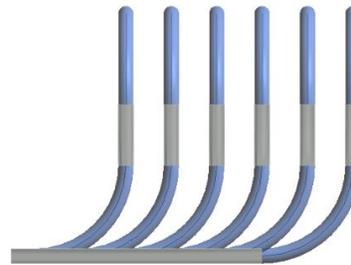


Minimizing Zone Width allows for a smoother transition (conduit kick) instead of a conduit stub up/down.

Small elevation changes will create kicks, and large elevation changes will create stubs.



Approx. 1'-6" and below



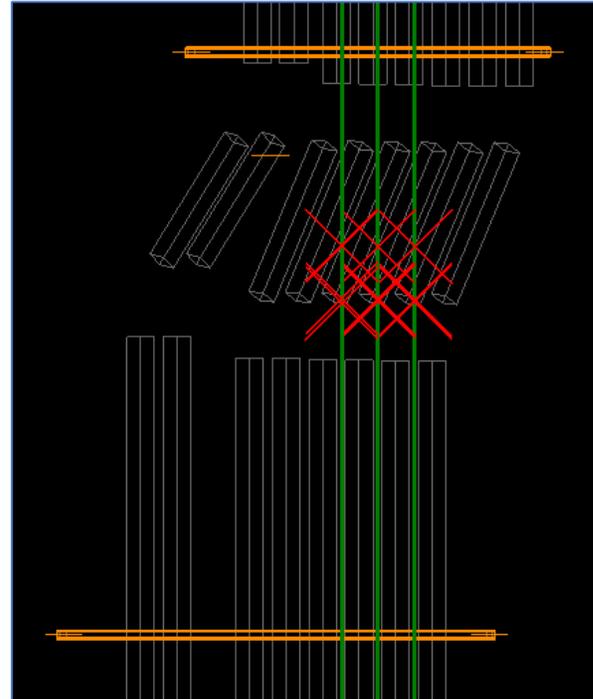
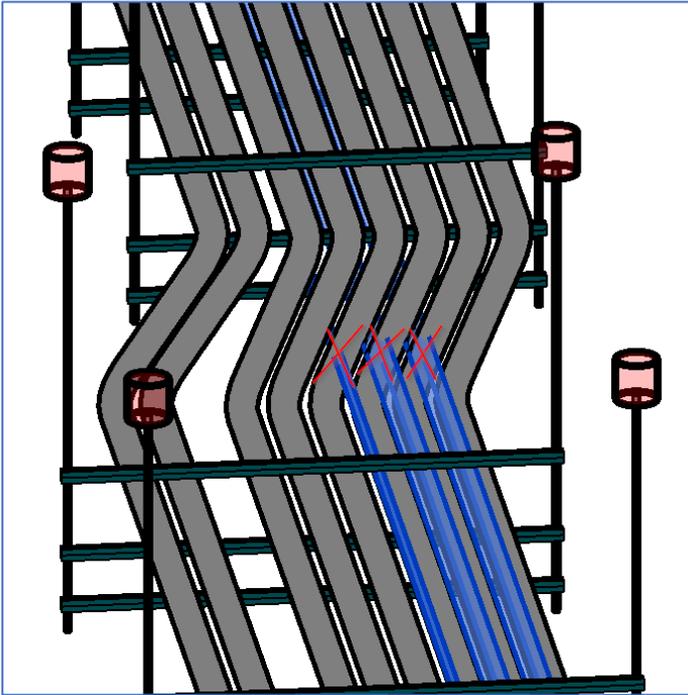
Approx. 1'-7" and above

Clash Detection

After routes are processed, a clash detection summary will be provided.

Red X's will appear in the plan view, showing where internal/external clashes were created.

Example: Internal clashes with existing conduit



Example: External clashes with steel

