# Midas Civil
# Self-Learning

## Pile Reaction Review in Table Format

# midas Civil Learning – Pile Reactions

**Pile Reactions in midas Civil**

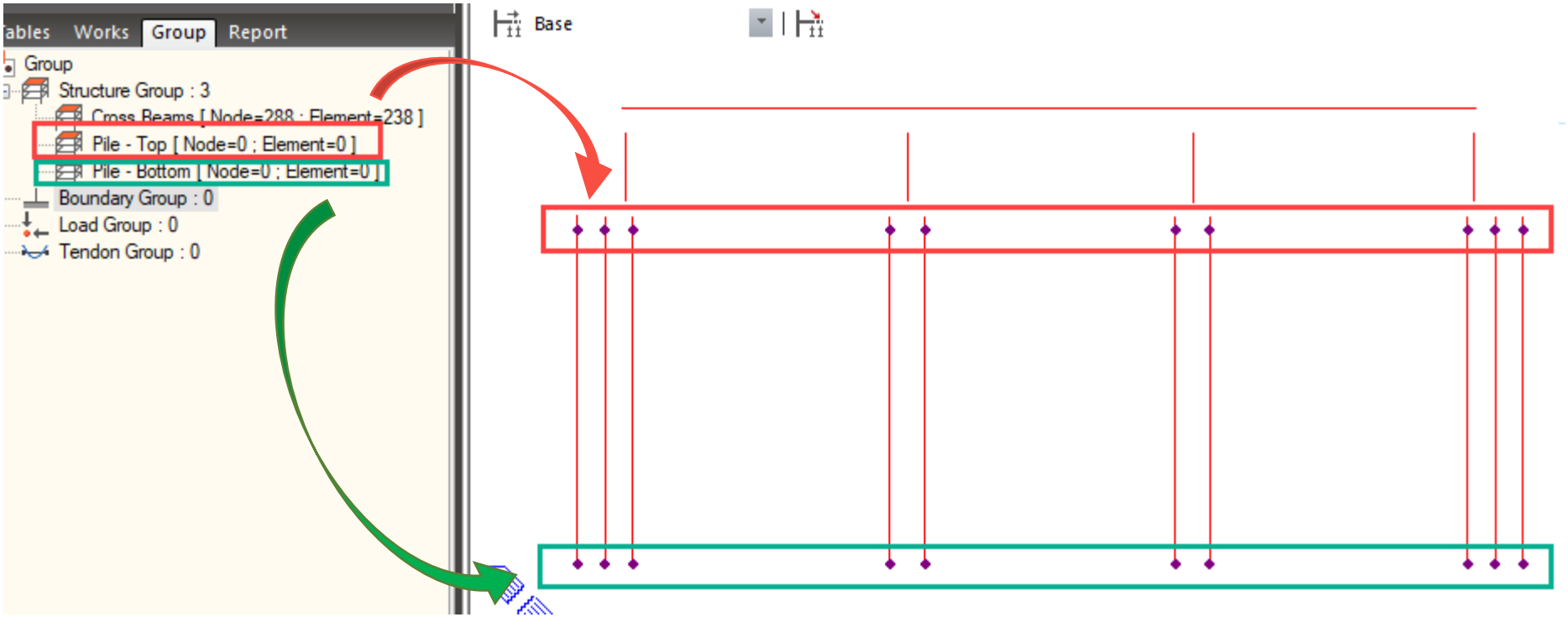
"One thing we always need to get are the min/max pile reactions (loads on pile at top of pile). It would be good to identify what would be the easiest way to see these pile reactions: do we have to click on each top of pile node and view the reaction? or can we add those top of pile nodes to a group and then report on them?" one of the Midas user questioned.

To answer this question, midas Civil provides node reactions in graphic and table format. A few steps in post post-processing can transform the reaction data to useful pile data. This tutorial explains various methods to modify the reaction data in midas Civil.

**Ways to review the reaction data?**

- Graphic View
- Table View

# midas Civil Learning – Pile Reactions




**Structure Groups**

1. In the Works Tree, go to Group Tab
2. Right click on Structure group, and create two new structure groups – 'Pile-Top' and 'Pile-Bottom'
3. Drag & Drop to assign 'Pile-Top' group to nodes on the top of the pile
4. Drag & Drop to assign 'Pile-Bottom' group to nodes on the bottom of the pile

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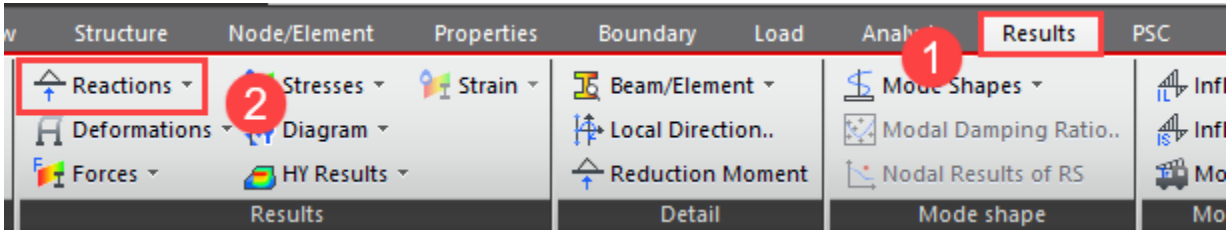


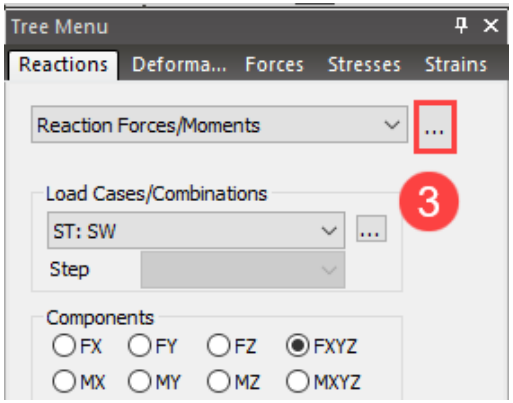
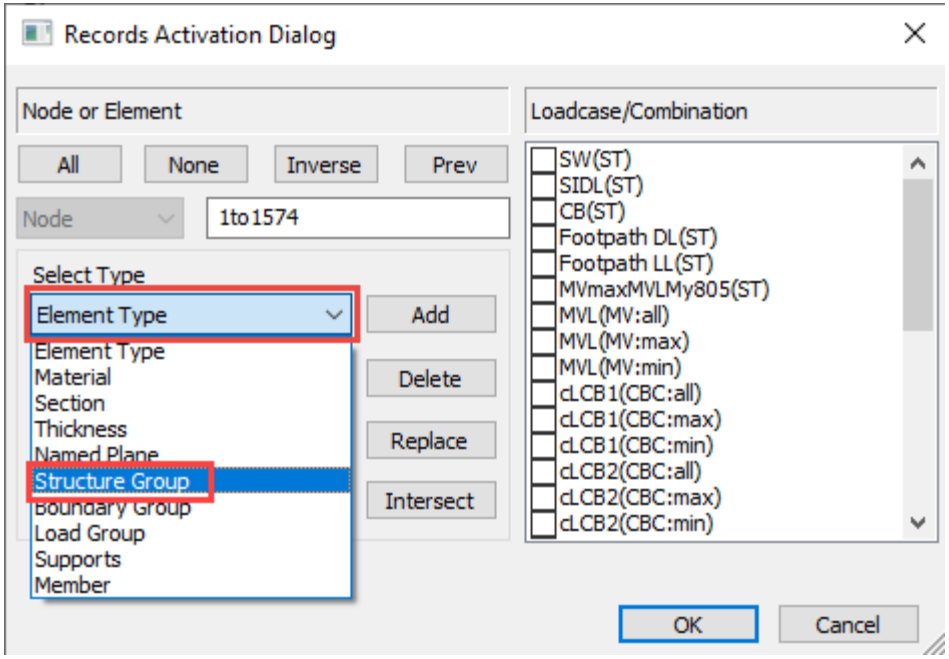
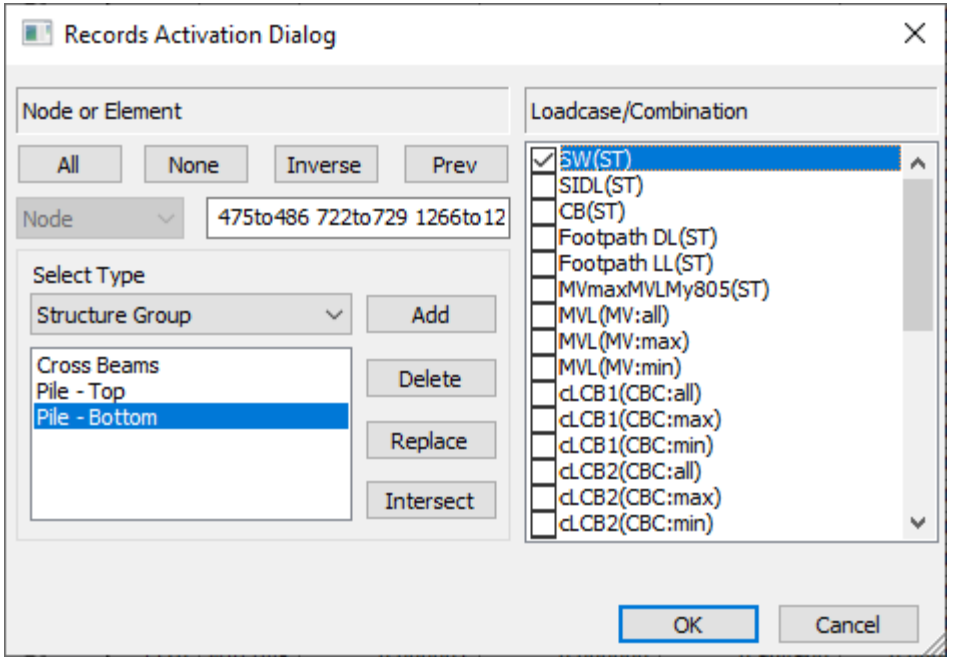




**Table View**

1. Click on the Results Tab
2. Go to Reactions option in the Results group
3. Click on button with three dots to switch to table view.

# midas Civil Learning – Pile Reactions

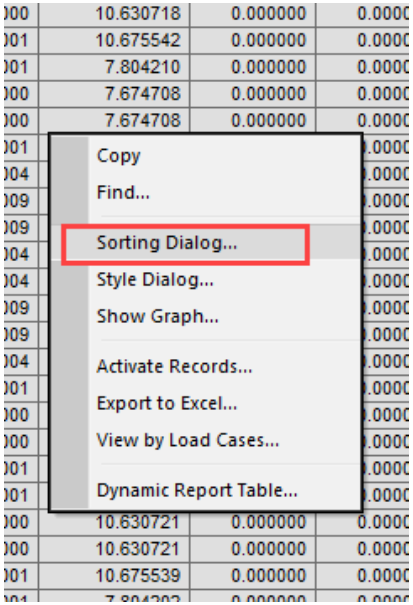


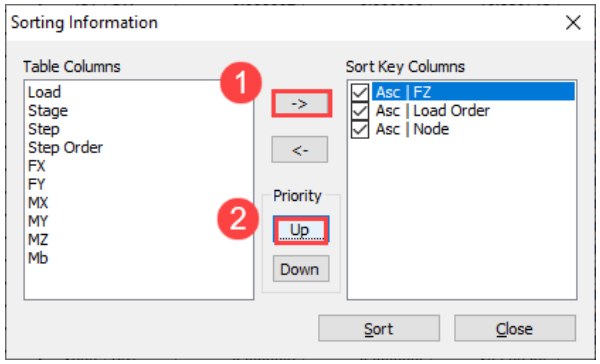




**Activate Records**

1. From the drop-down menu, select Structure Group
2. Select the structure group 'Pile-Bottom' and select the desired loadcase/combination
3. Click OK.

# midas Civil Learning – Pile Reactions




| | Node | Load | FX (kN) | FY (kN) | FZ (kN) | (k |
|---|---|---|---|---|---|---|
| | 484 | SW | 0.000002 | 0.000000 | 7.674708 | 0 |
| | 485 | SW | 0.000002 | -0.000000 | 7.674708 | 0 |
| | 1275 | SW | -0.000002 | 0.000000 | 7.674717 | 0 |
| | 1276 | SW | -0.000002 | -0.000000 | 7.674717 | 0 |
| | 1274 | SW | -0.000002 | 0.000001 | 7.804202 | 0 |
| | 1277 | SW | -0.000002 | -0.000001 | 7.804202 | 0 |
| | 483 | SW | 0.000002 | 0.000001 | 7.804210 | 0 |
| | 486 | SW | 0.000002 | -0.000001 | 7.804210 | 0 |
| | 481 | SW | 0.000002 | -0.000000 | 10.630718 | 0 |
| | 480 | SW | 0.000002 | 0.000000 | 10.630718 | 0 |
| | 1272 | SW | -0.000002 | -0.000000 | 10.630721 | 0 |
| | 1271 | SW | -0.000002 | 0.000000 | 10.630721 | 0 |
| | 1273 | SW | -0.000002 | -0.000001 | 10.675539 | 0 |
| | 1270 | SW | -0.000002 | 0.000001 | 10.675539 | 0 |
| | 482 | SW | 0.000002 | -0.000001 | 10.675542 | 0 |
| | 479 | SW | 0.000002 | 0.000001 | 10.675542 | 0 |
| | 723 | SW | -0.000005 | 0.000009 | 11.031315 | 0 |
| | 724 | SW | -0.000005 | -0.000009 | 11.031315 | 0 |
| | 1514 | SW | 0.000005 | 0.000009 | 11.031738 | 0 |
| | 1515 | SW | 0.000005 | -0.000009 | 11.031738 | 0 |
| | 727 | SW | -0.000005 | 0.000009 | 12.446429 | 0 |
| | 728 | SW | -0.000005 | -0.000009 | 12.446429 | 0 |
| | 1518 | SW | 0.000005 | 0.000009 | 12.446752 | 0 |
| | 1519 | SW | 0.000005 | -0.000009 | 12.446752 | 0 |
| | 722 | SW | -0.000005 | -0.000004 | 13.472153 | 0 |
| | 725 | SW | -0.000005 | 0.000004 | 13.472153 | 0 |
| | 1513 | SW | 0.000005 | -0.000004 | 13.472737 | 0 |
| | 1516 | SW | 0.000005 | 0.000004 | 13.472737 | 0 |
| | 478 | SW | 0.000002 | -0.000001 | 13.546874 | 0 |
| | 475 | SW | 0.000002 | 0.000001 | 13.546874 | 0 |
| | 1269 | SW | -0.000002 | -0.000001 | 13.546877 | 0 |
| | 1266 | SW | -0.000002 | 0.000001 | 13.546877 | 0 |
| | 1268 | SW | -0.000002 | 0.000000 | 13.586725 | 0 |
| | 1267 | SW | -0.000002 | -0.000000 | 13.586725 | 0 |
| | 477 | SW | 0.000002 | 0.000000 | 13.586728 | 0 |
| | 476 | SW | 0.000002 | -0.000000 | 13.586728 | 0 |
| | 726 | SW | -0.000005 | -0.000004 | 15.351908 | 0 |
| | 729 | SW | -0.000005 | 0.000004 | 15.351908 | 0 |
| | 1517 | SW | 0.000005 | -0.000004 | 15.352291 | 0 |
| ▶ | 1520 | SW | 0.000005 | 0.000004 | 15.352291 | 0 |
| | | | | SUMMATION OF REACTION FORCES PRINTO | | |

**View Min/Max Results**

1. In the table view, right click and select 'Sorting Dialog' from the menu.
2. Click on FZ and use the right arrow to move FZ to Sort Key Columns. Then use the Priority Up button to move FZ to top priority.
3. Click Sort.
4. In the table view, reaction are sorted in ascending order. You can easily find min/max by looking at the top and the bottom of the table, respectively.