

## ProStructures Section and Material Mapping

### Summary:

New Approach of Section and Material Mapping will allow user to map all unmapped entities (Sections or Materials) at a one time. Automatically system will save all mapped entities to text file. New approach will also allow user to updated already mapped entities.

### Requirements:

With old Mapping approach user need to map each and every unknown entity (Section or Material) individually. Apart from this with old approach user need to follow the same procedure next time working on the same model as system is not saving mapped entities. With old approach we are not taking care of following scenarios:

Common differences between standard sections due to convention:

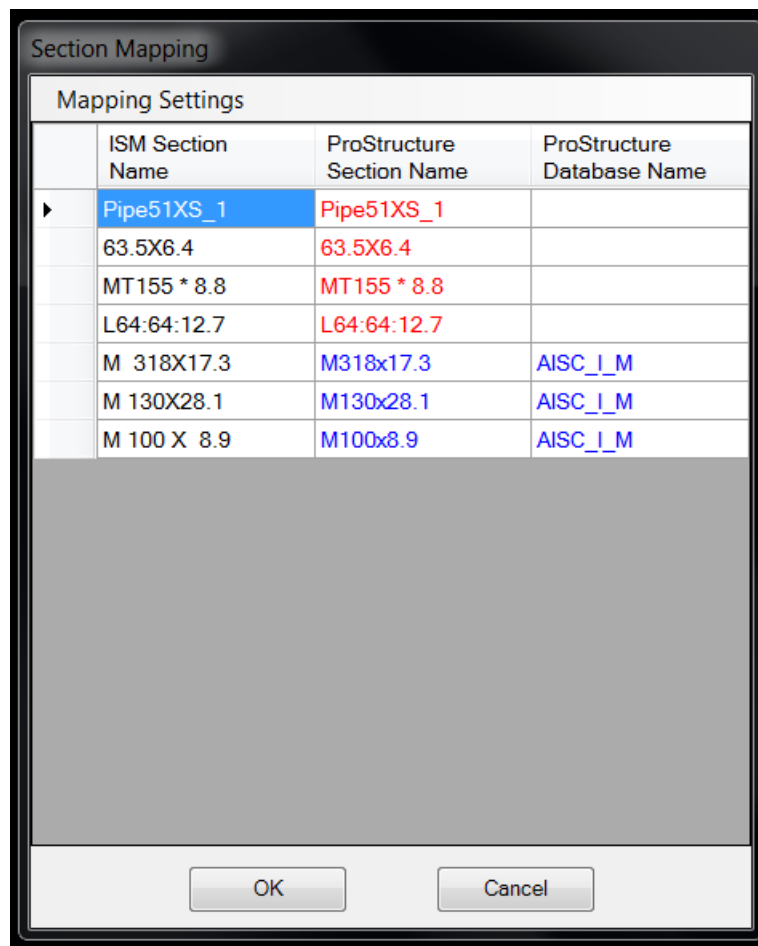
- i. Units (e.g. 2x1 vs. 24x12)
- ii. Spaces (e.g. "w10x12" vs. "w 10x12")
- iii. Fractions vs. Decimal (e.g. L6x4x0.25 vs. L6x4x1/4 )
- iv. Capitalization (e.g. w10x12 vs. W10x12 or w10X12 or W10X12)
- v. Transposition (e.g. 2x1 vs. 1x2)

So we do require new approach for:

1. To list all unknown entities (Sections or Materials) at one time.
2. To allow user to map all unmapped entities at one time.
3. To save mapped entities within system.
4. To allow user to update already mapped entities (Sections or Materials).
5. System should take care of above mentioned common scenarios automatically without user input.

## Design

With New mapping (Section and Material) approach mapping dialog will look like below.



In below dialog,

**First Column :**

Will always contains list of unmapped entities (Sections or Materials) which user need to map.

**Second Column :**

- i. If entity is unmapped it will be in **RED** and Second column will be as same as First one.
- ii. If entity is already mapped before by user it will contain actual mapped entity in **BLUE**.

**Third Column:**

It will contain Database name from where mapped entity is coming.

The screenshot shows a dialog box titled "Section Mapping" with a "Mapping Settings" table. The table has four columns: "ISM Section Name", "ProStructure Section Name", and "ProStructure Database Name". The first row is highlighted in blue, indicating a mapped entity. The second and third rows are in red, indicating unmapped entities. The fourth, fifth, and sixth rows are in blue, indicating already mapped entities with database names.

ISM Section Name	ProStructure Section Name	ProStructure Database Name
Pipe51XS_1	Pipe51XS_1	
63.5X6.4	63.5X6.4	
MT155 * 8.8	MT155 * 8.8	
L64:64:12.7	L64:64:12.7	
M 318X17.3	M318x17.3	AISC_I_M
M 130X28.1	M130x28.1	AISC_I_M
M 100 X 8.9	M100x8.9	AISC_I_M

Callouts from the image:

- Unmapped Entities List**: Points to the first column of the table.
- Unmapped Entities (User Input Required)**: Points to the red rows in the table.
- Database Name of Mapped Entity**: Points to the third column of the table.
- Mapped Entities List**: Points to the blue rows in the table.
- Already Mapped Entities (No User Input Required)**: Points to the blue rows in the table.

## Workflow:

With new mapping approach user can perform following actions.

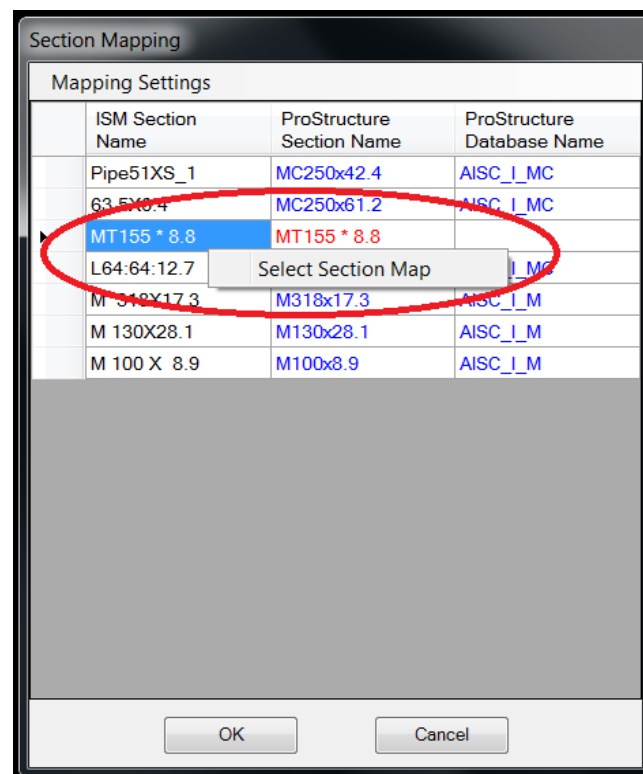
1. Map entities (Sections or Materials)
2. Update already mapped entities
3. Save already mapped entities to text file ( If required) \*
4. Attach saved mapping text file to load saved mappings (If required) \*

\* In general scenario system is taking care of saving and loading of mapping file. But with this facility user can save and load mapping file additionally.

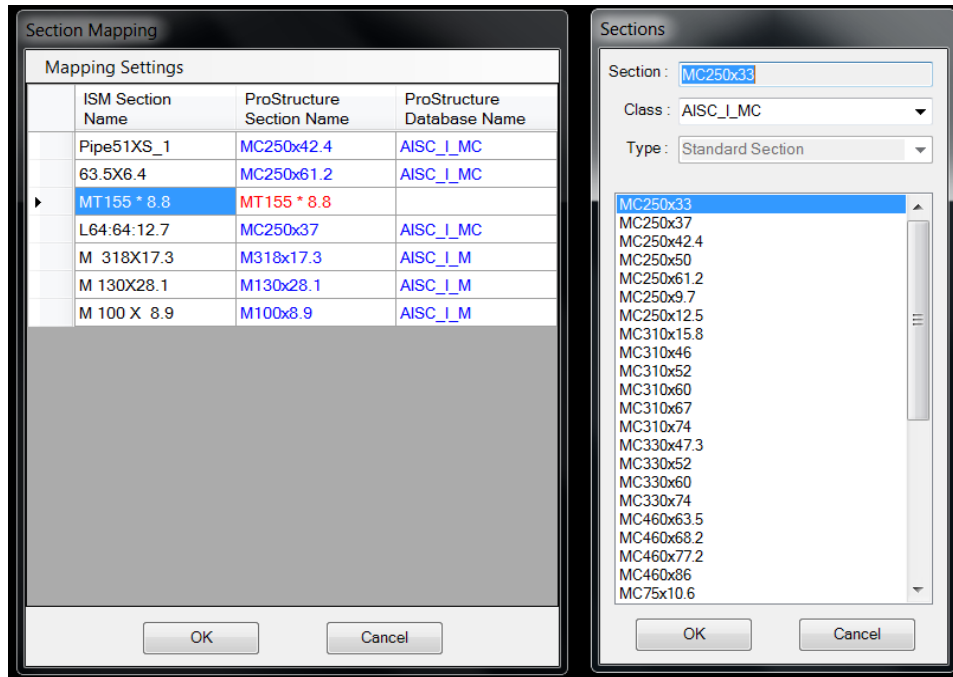
Work flow of both Section and Material mapping will be same. I have taken section mapping as example to describe workflow.

## Map Entities (Sections or Materials)

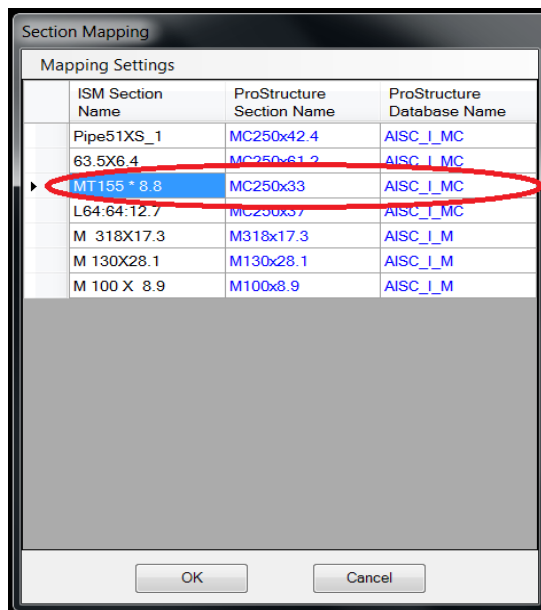
1. Right click on **Unmapped Sections** row.
2. "Select Section Map" right click menu will come up.



3. Click on "Select Section Map" right click menu.
4. "Sections" Dialog will come up to select mapping section.



5. Select required section and click **OK** button.
6. **Unmapped Section** will be **mapped** with selected Section.
7. Now repeat this procedure for all unmapped sections which you want to map.
8. Now click **OK** button of mapping dialog and System will save mapped sections to Mapping file (Text File).
9. Next time no user inputs required to map these sections. System will read these mappings from mapping file and load it accordingly.

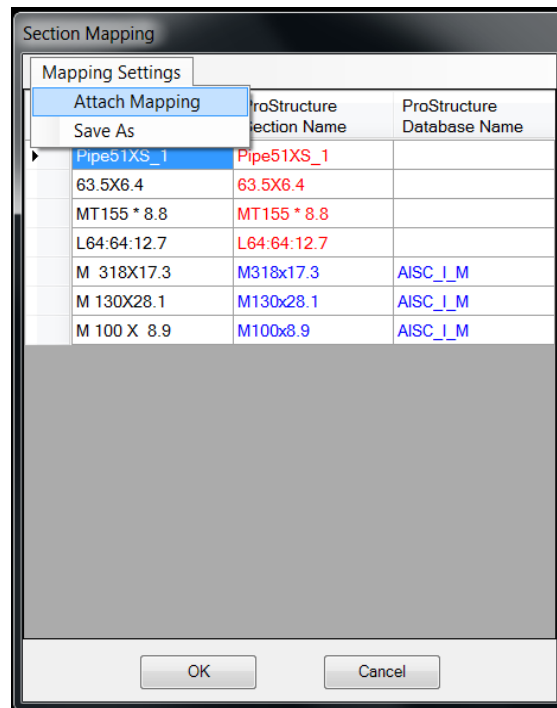


## Update already mapped entities

1. Right click on **Mapped Sections** row.
2. **"Select Section Map"** right click menu will come up.
3. Click on **"Select Section Map"** right click menu.
4. **"Sections"** Dialog will come up to select mapping section.
5. Select required section and click **OK** button.
6. **Already Mapped Section** will be updated by newly Selected Section.
7. Now repeat this procedure for all mapped sections which you want to update.
8. Click **OK** button of mapping dialog. And it will update mapping file as well with respective updated sections.

## Save already mapped entities to text file

1. Click on **"Mapping Settings"** menu of mapping Dialog.
2. **"Attach Mapping"** and **"Save As"** menu items will come up.
3. Click on **"Save As"** menu item.
4. It will open up Save As file dialog.
5. Save file with required name and location.



## Attach saved mapping file to load saved mappings

1. Click on "**Mapping Settings**" menu of mapping Dialog.
2. "**Attach Mapping**" and "**Save As**" menu items will come up.
3. Click on "Attach **Mapping**" menu item.
4. It will open up Open file dialog.
5. Select file from which you need load mappings.