

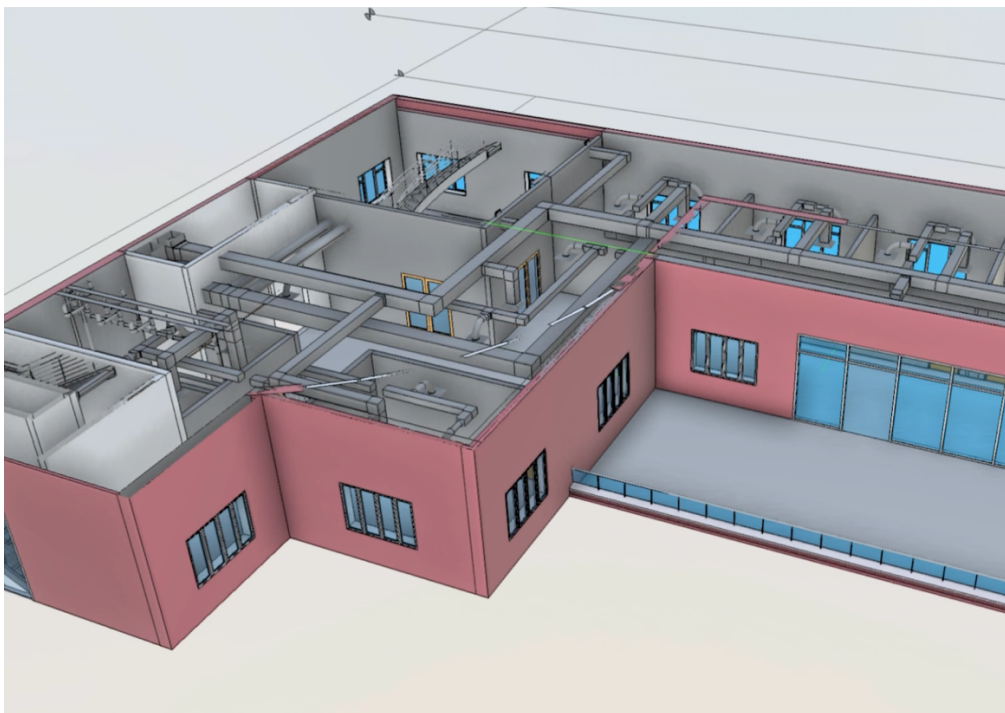
Project challenge – Grading rubric

Coordinate structural and systems models using Model Coordination

Using Model Coordination in Forma for Construction, perform clash detection between the provided **Structural model.rvt** and **Systems model.rvt**.

Scenario:

As the VDC coordinator on a project, your goal is to identify coordination conflicts between structural elements and building systems, analyze clashes using model filters and clash settings, and create coordination issues for conflicts that require resolution.



Complete the required activities

- Create a new folder in Forma Data Management and add the two models to it.
- Create a new coordination space in Model Coordination based on the folder you created in the first step. This way your work for this exercise is independent from any previous work you may have done.
- Create an object exclusion to exclude flex ducts from clash results.

- Open both models in the viewer and verify that the models are correctly loaded, positioned, and ready for clash detection.
- Use the model browser to create filters that display plumbing components, such as piping and plumbing fixtures. Run clash checks between plumbing elements and structural elements to identify conflicts caused by routing through beams, columns, slabs, and other structural members.
- Review plumbing versus structural clashes and determine which conflicts require coordination. Create coordination issues for actual clashes, assign them to the instructor, and include relevant viewpoints to communicate the location of each clash. Any clash that does not require attention should be tagged as Not an Issue.
- Use the model browser to create filters that display mechanical components, such as ductwork, air terminals, and mechanical equipment. Run additional clash checks to identify conflicts between mechanical systems and structural elements.
- Review mechanical versus structural clashes and determine which conflicts require design coordination. Identify issues such as ducts or equipment passing through beams, columns, slabs, or other structural elements.
- Review plumbing versus structural clashes and determine which conflicts require coordination. Create coordination issues for actual clashes, assign them to the instructor, and include relevant viewpoints to communicate the location of each clash. Any clash that does not require attention should be tagged as Not an Issue.

Success criteria

- **Accurate clash setup:** Separate clash tests are created correctly for plumbing versus structural and mechanical versus structural coordination using the correct model selections and clash tolerance.
- **Effective clash analysis:** Model filters are used correctly to isolate plumbing and mechanical systems and identify relevant coordination conflicts.
- **Complete issue creation:** Significant clashes are converted into coordination issues with appropriate assignments, locations, and viewpoints.
- **Clear coordination summary:** Clash results are documented accurately, including the number of clashes, clash groups, and issues created for each discipline.

What to submit

- **Model Coordination:** Your instructor has access to your work on Autodesk Forma for Construction so there is no need to submit anything beyond the required activities above.
- **Coordination report:** Submit a coordination report showing the number of clashes and clash groups found, the clash groups identified as coordination issues, and the clash groups that were closed.

Grading rubric

	Advanced	Proficient	Basic	Emerging
Clash test setup	Both clash tests are correctly configured with the appropriate models, selections, tolerance settings, and discipline filters.	Clash tests are correctly configured with minor setup errors.	Some clash tests or settings are incomplete or incorrect.	Clash tests are missing or incorrectly configured.
Clash analysis	Plumbing and mechanical clashes are accurately identified, filtered, reviewed, and documented with clear understanding of coordination impacts.	Most clashes are correctly identified and reviewed with minor inconsistencies.	Several clashes are missed, incorrectly filtered, or not fully analyzed.	Clash analysis is incomplete or does not demonstrate effective coordination review.
Issue creation and documentation	Coordination issues are created correctly with assignments, viewpoints, and sufficient information for resolution.	Most required issues are created with minor missing information.	Some issues are created but lack required details or assignments.	Issues are incomplete, missing, or not usable for coordination.