

IFC Release Specific AEC/FM View Description (IFC2x3)

Structural Design to Structural Analysis

Reference	VBL-001	Version	1	Status	Proposal
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Description

General implementation agreements

In every model done according to MVD:

- There must be at least one `IfcStructuralAnalysisModel`.
- There must be at least one `IfcBuilding`.
- There must be at least one link between `IfcStructuralAnalysisModel` and `IfcBuilding`.
- There must be at least one `IfcGeometricRepresentationContext`.
- `StructuralConnection` must be either support or connection. No free flowing nodes are allowed.
- All the `IfcStructuralItems` and `IfcStructuralActivities` with in one `IfcStructuralAnalysisModel` must use the same coordinate system.
- All the objects using the same node must use the same instances of the `IfcVertexPoint`.
- All the objects using the same edge must use the same instances of the `IfcEdge`.

Plausibility agreements:

- All the `StructuralItems` with in the model must be grouped at least one structural analysis model.
- Each `IfcStructuralLoadGroup` should be grouped at least by one instance of `IfcGroup` or `IfcStructuralAnalysisModel`.
- All the `IfcStructuralActions` must to be grouped by at least one `IfcStructuralLoadGroup`.
- All the `IfcStructuralConnections` must be assigned to at least one `IfcMember`.
- All the `IfcBoundaryConditions` must be assigned to at least one `IfcStructuralConnection` or `IfcRelConnectsStructuralMember`
- All the `IfcStructuralLoads` should have at least one `IfcStructuralAction` assigned to them.

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