

STRUCTURAL DESIGN REVIEW CHECKLIST

NO.	PROJECT DETAILS	INFORMATION	REMARKS
1	Project Name		
2	Project Number		
3	Drawing Title, with Number and Revision		
4	Originator		
5	Checker		
6	Reviewer		
7	North Arrow		

Source: <https://aec.ldschurch.org/aec/>

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STRUCTURAL DESIGN REVIEW CHECKLIST

NO.	CHECKPOINT	COMPLY			REMARKS
		YES	NO	N/A	
	STRUCTURAL SCOPE, CRITERIA, ANALYSIS AND DESIGN				
1	Building Codes and Miscellaneous Items Information				
1.1	Understand Owner Guidelines				
1.2	Determine Applicable Codes, Project Location, and Project Function				
1.3	Verify Floor and Roof Loads with Jurisdiction Authority and Owner's Guidelines				
1.4	Determine the Lateral Loading with Jurisdiction Authority and Owner's Guidelines				
1.5	Determine Occupancy Category or Risk Category as per the Building Code				
1.6	Determine Special Design Provisions with the Jurisdiction Authority				
2	Owner and Architect Supplied Information				
2.1	Obtain Geotechnical Evaluation Report				
2.2	Obtain Overall Project Budget and Structural Budget				
2.3	Determine the Sheet Size and Title Block to be used				
2.4	Determine any Special Drafting Standards and Formats				
2.5	Verify Location of the Building and Site Surroundings				
2.6	Verify Accuracy of Drawings for Buildings in Adjacent Properties				
2.7	Determine the need to Resist Blast Loading from the Owner				
2.8	Determine the Required Vibration Criteria (Temples, Congregation Areas, Cultural Halls, Etc.)				

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		YES	NO	N/A	
2.9	Verify the Fire Resistance Requirements				
2.10	Verify the Security Requirements				
3	Architect Supplied Information				
3.1	Site Plan				
3.2	Floor Plans and Elevation				
3.3	Floor to Floor Heights				
3.4	Coordinate the Location of Expansion Joints				
3.5	Wall Sections				
3.6	Edge of Slab Location				
3.7	Height of Parapets				
3.8	Roof Screen Wall Locations and Configurations				
3.9	Type and Weight of the Roofing System				
3.10	Location and Depth for Floor Recesses				
3.11	Elevator Related Information				
3.12	Panelized Architectural Wall System				
3.13	Stair and Elevator Smoke Hatch Locations				
3.14	Skylight Rough Opening Sizes and Locations				
3.15	Locate All Areas on the Suspended Levels that require Heavier Design Loading Criteria				
3.16	Design Need for High Density File Storage				
3.17	Roof Drainage Plan and Location with Deck Bearing Elevation				
3.18	Roof Top Life Safety Anchorages				
3.19	Footing to accommodate Piping, Roof or Floor Drains				

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		YES	NO	N/A	
3.20	Electrical Information (Rooms, Floor Penetration, Roof Beams And Weight Of Electrical Systems)				
4	Structural System Information				
4.1	General Information				
4.1.1	Floor to Floor Height and Ceiling Height Requirement				
4.1.2	Thermal Loads				
4.1.3	Coordinate the Location of Expansion Joints				
4.1.4	Structural Framing scheme				
4.1.5	Load Path for Transmission of Lateral and Gravity Load to the Foundation				
4.1.6	Structural System and all Material Properties				
4.1.7	Notify the Client about Potential Deflections				
4.2	Lateral Analysis and Design Information				
4.2.1	Seismic Design, Criteria and Coefficients				
4.2.2	Wind Design, Criteria and Coefficients				
4.2.3	Snow Loads				
4.3	Lateral Force Resisting				
4.3.1	Braced Frames (Concentric, Eccentric, BRBF and so forth)				
4.3.2	Moment Frames (Special, Ordinary and so forth)				
4.3.3	Shear Walls (Concrete, Masonry, Wood and so forth)				
4.3.4	Diaphragms (Concrete, Wood, Brace and so forth)				

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		YES	NO	N/A	
	CALCULATION ANALYSIS AND DESIGN REVIEW				
1	General Information				
2	Vertical (Gravity) Load Forces				
3	Lateral Load Forces				
3.1	General				
3.2	Seismic				
3.3	Wind				
4	Computer Analysis and Design				
5	Foundation Analysis and Design				
5.1	General				
5.2	Conventional Foundation System				
5.3	Deep Foundation System				
6	Concrete Analysis and Design				
6.1	General				
6.2	Concrete Beam, Joists and Girders				
6.3	Concrete Columns				
6.4	Concrete Footings				
6.5	Concrete Suspended Slabs				
6.6	Concrete Walls				
7	Masonry Analysis and Design				
7.1	General				
7.2	Masonry Beams/Lintels				

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NO.	CHECKPOINT	COMPLY			REMARKS
		YES	NO	N/A	
7.3	Masonry Columns				
7.4	Masonry Walls				
8	Steel				
8.1	General				
8.2	Steel Beams				
8.3	Composite Steel Beams				
8.4	Steel Braces				
8.5	Steel Columns				
8.6	Steel Connections				
8.7	Steel Open Web Joists and Girders				
9	Wood				
10	Calculation Summary				



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NO.	CHECKPOINT	COMPLY			REMARKS
		YES	NO	N/A	
	STRUCTURAL CONTRACT DOCUMENT REVIEW				
1	General Drawing Format				
1.1	Project Details and Structural Plans				
1.2	Names of the Design Engineer, Reviewing Engineer, BIM Modeler, etc.				
1.3	List of Abbreviations, Symbols, Marks and Legend Symbols				
1.4	Revisions to the Final Plans (Inclusion of Addenda, Change of Scope, Request for Clarification, etc.)				
1.5	Gridlines and Dimensions to be shown on each Plan Sheet				
2	Structural Coordination with Site Civil Drawings				
2.1	Utilities including Pipes, Pipe penetration, Trench backfill, etc.				
2.2	Location of Property Lines in the Design and Detailing of Foundations				
2.3	Analysis and Design of Site Retaining Walls				
2.4	Finish Grades Slope away from the Building as per the Guidelines				
3	Structural Coordination with the Architectural Plans				
3.1	Seismic and Wind Design Criteria should meet with Architectural Design in the Design of Doors, Windows, Cladding and Roofing Systems				
3.2	Verify the Gridlines				
3.3	Verify the Dimensions				
3.4	Verify the Column Orientation				
3.5	Verify the Slab Edge				

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		YES	NO	N/A	
3.6	Verify the Depressed and Recessed Slabs				
3.7	Verify the Slopes to Drain, Roof Slopes				
3.8	Verify the Floor and Roof Elevation				
3.9	Verify the Top of Steel, Top of Concrete, Finished Floor, Joist Bearing, Top of Plywood and Top of Column Elevation				
3.10	Verify the Expansion and Control Joints				
3.11	Verify the Steel Intels				
3.12	Verify the Structural Framing and their Details				
3.13	Verification of Stairs Information				
3.14	Coordination of the Elevator Information				
3.15	Coordination of the Arch. Wall Sections with the Stru. Drawings				
3.16	Design and Connections of Exterior Cladding Systems				
3.17	Review of Arch. Nonstructural Walls and their Bracing				
4	Structural Coordination with MEP Drawings				
4.1	Verify Interference of the Underground Utility Line Locations				
4.2	Verify the Interference of the Toilet Layout, Sanitary Sewer Line Penetration				
4.3	Verify the Location of Pipes and Ducts				
4.4	Verify the Opening through Walls, Beams, Floor Systems needed for Pipes and Ducts				
4.5	Verify the Support Details for Roof Drains				
4.6	Determine the Weight of Large Pieces of MEP Equipments				

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		YES	NO	N/A	
4.7	Verify the Design to Support any Concentrated Loads from Electric Cable Trays				
4.8	Verify the Structural Support for Mechanical Equipments				
4.9	Verify the Conduit Material, Size and Spacing Conforms to Codes				
4.10	Verify the Structure does not Interfere with the Light Fixture Layout				
5	General Structural and Nonstructural Items				
6	Foundations				
6.1	General Foundation Details				
6.2	Conventional Foundation Details (Spread and Continuous Footings and Foundation Walls)				
6.3	Deep Foundation Systems				
6.3.1	Concrete Piers (Drilled)				
6.3.2	Concrete Piles (Precast)				
7	Floor Framing Plan Documents				
7.1	Fabrication Information of Steel Beams and Columns				
7.2	Coordination of the Floor Thickness in Drawings				
7.3	Verify Location of Vertical Force Resisting Systems in Braced Frames, Moment Frames, etc.				
7.4	Mentioning of Dead of Live Loads				
7.5	Mentioning of Beam Sizes				
7.6	Mentioning of all Column Sizes				
7.7	Detailing of all the Connections				
7.8	Detailing of all Floor Details				

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		YES	NO	N/A	
7.9	Concrete, Masonry and Wood Column and Beams Details				
7.10	Structural Framing Details				
7.11	Verify Expansion and Contraction Joints				
8	Roof Framing Plan Documents				
8.1	Fabrication Information to determine the Lengths of Steel Beams and Columns				
8.2	Verify Clear Indication of Floor Thicknesses				
8.3	Verify the Location of Vertical Force Resisting Systems				
8.4	Verify the Design Dead and Live Loads				
8.5	Verify the Beam Sizes and Column Sizes				
8.6	Verify the Roof Details and all the Connections				
8.7	Verify Roof Drains shown and Framed				
8.8	Verify Collectors, Frag Strut and Chords				
8.9	Verify Roof Structure Support for Hoists, Cranes, Monorails, Signs, etc.				
8.10	Verify Concrete, Masonry or Wood Columns/Beams Details				
9	Concrete				
9.1	General Information				
9.1.1	Reinforcing Bars				
9.1.2	Seismic Details				
9.1.3	Bar Splices				
9.1.4	Reinforcing Steel				
9.1.5	Control Joints				

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		YES	NO	N/A	
9.2	Concrete Beams, Joists and Girders				
9.3	Concrete Columns				
9.4	Concrete Suspended Slabs				
9.5	Concrete Walls				
9.6	Concrete Post Tensioned Building Structures				
9.7	Concrete Post Tensioned Building Structures				
9.8	Concrete Tilt Up Wall Panels (Precast Concrete Wall Panels)				
9.9	Post Installed Anchors (Epoxy Bolts, Screw Anchors, Wedge Anchors and So Forth)				
10	Masonry				
10.1	General Information				
10.2	Masonry Beams/Lintels				
10.3	Masonry Columns				
10.4	Masonry Walls				
11	Steel				
11.1	General Information				
11.2	Steel Base Plates				
11.3	Steel Beams				
11.4	Steel Braces				
11.5	Steel - Cold Formed				
11.6	Steel Columns				
11.7	Steel Connections				

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11.8	Steel Decking				
11.9	Steel Prefabricated Metal Building				
11.10	Steel Trusses				
12	Wood				



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