Project Name:
Date:

Checklist		
STRUCTURAL (STRUCT)		
Schematic Design (SD)		**Notes**
By the end of Schematic Design, the structural engineer should have developed preliminary gravity and lateral systems, established structural design criteria, and prepared a structural narrative outlining key assumptions. Framing plans and conceptual sketches should support early cost estimating and consultant coordination. A structural BIM model should be in progress in Revit, and geotechnical input, site constraints, and sustainability goals—including material efficiency and embodied carbon—should inform system selection.		
1. Title Block – Confirm structural drawings use the correct title block and follow the architectural sheet numbering format, typically aligning with floor-based sheets (e.g., A-101 to S-101). Verify drawing scale, orientation, and background coordination match the architectural set.	☐	
2. Structural Design Criteria & Code References – Confirm that the structural general notes or narrative identify key design criteria, even in preliminary form. At a minimum, verify that the following are addressed: Risk Category, Use Group, Construction Type, Fire Resistance Rating, Wind Design Criteria, Seismic Design Parameters, Site Class, Vibration Requirements, and applicable loading (e.g., snow, wind, seismic, and façade maintenance loads). Ensure all referenced codes and editions are current and applicable to the project jurisdiction. Early coordination with consultants and review of Chapter 4 of the IBC is recommended to confirm any use-specific structural requirements are addressed.	☐	
3. Floor Plans – Confirm that structural floor plans align with architectural backgrounds, including all column and structural grid references. Identify any supplemental grid lines required for structural elements. Ensure plans are graphically clean, with unnecessary worksets, duplicate grids, or reference layers turned off to maintain clarity.	☐	
4. Floor-to-Floor Heights & Structural Depth – Confirm that floor-to-floor heights are sufficient to accommodate the structural system and anticipated MEP zones above ceilings. Coordinate early with architectural and MEP teams to identify any potential height constraints.	☐	
5. Lateral Systems & Placement – Coordinate the type and placement of lateral systems, including shear walls, braced frames, and core structures, with the architectural program and circulation requirements. Confirm that these elements do not conflict with openings, egress paths, or major spatial layouts.	☐	
6. Core Shafts & Egress Strategy – Coordinate the location and size of stair, elevator, and major MEP shaft openings with the structural engineer. Confirm alignment with the architectural egress strategy and verify that openings are framed and detailed to support core functions.	☐	
7. Preliminary Load Diagrams – Confirm that initial structural load diagrams reflect the building program and vertical stacking. Verify that heavy mechanical equipment such as AHUs, pumps, and generators are accounted for in structural loading. Also confirm that concentrated loads from items like storage tanks or dense shelving are clearly identified.	☐	
8. Geotechnical Report Delivery – Confirm that the geotechnical report has been delivered to the structural engineer and that its contents are being used to inform the structural design criteria. This includes site class, seismic design category, and allowable soil bearing pressure, which should be reflected in the structural notes and code references.	☐	
9. Flood Zone Confirmation – Identify applicable flood zone designations using FEMA maps and confirm that the civil engineer has provided the required data for flood elevation, resilience, and hydrostatic uplift resistance. Verify that the structural engineer is incorporating this information into the foundation and structural design criteria.	☐	
10. Review Outline Specifications – Confirm that the structural outline specifications or design narrative includes key assumptions and criteria. This should cover design codes, loading assumptions, structural systems for floor framing, roof decks, slabs, topping, and miscellaneous components such as stairs, catwalks, and platforms. Also verify that early sustainability goals are addressed, including recycled steel content and embodied carbon reduction targets.	☐	

STRUCTURAL (STRUCT)		
Design Development (DD)		**Notes**
By the end of Design Development, the structural engineer should advance schematic systems into coordinated framing plans, finalize loading assumptions, and collaborate closely with architectural, MEP, envelope, and civil consultants. The structural model should support clash detection and coordination of slab openings, anchorage points, and secondary support elements. Lateral systems and foundation design should be further developed based on geotechnical input and project-specific criteria. The structural narrative should be updated to reflect current assumptions, including design criteria, system descriptions, and sustainability targets such as recycled content and embodied carbon goals.		
1. Clash Detection and Model Coordination – Confirm that the structural model is fully coordinated in Revit or the BIM platform in use. Review all major elements, including framing, slab edges and openings, foundation walls, and lateral systems, for conflicts with architectural layouts, MEP systems, vertical shafts, and façade assemblies. Use clash detection tools or detailed visual review to identify unresolved interferences and confirm that items flagged during coordination meetings have been addressed in the current model.	☐	
2. Plan Readability and Graphic Clarity – Verify that structural plans are legible, properly scaled, and consistent with the architectural backgrounds. Confirm that grid lines, framing layouts, section markers, and reference annotations are clearly shown and do not overlap or conflict with other plan elements. Ensure line weights, hatching patterns, and text hierarchy support clean documentation and allow for quick interpretation by the broader consultant and construction teams.	☐	
3. Framing Plans – Confirm structural framing plans reflect the finalized system selection and are fully coordinated with architectural layouts, including core walls, shafts, and major openings. Ensure all primary framing members are identified and sized, and that joist, beam, and deck directions are clearly indicated.	☐	
4. Final Load Diagrams – Confirm the structural engineer's updated load diagrams reflect current program areas and finalized equipment zones. Review with MEP and architectural teams to verify that inputs for high-load areas, such as mechanical rooms, storage zones, roof-mounted equipment, and landscaped terraces, are properly considered and coordinated.	☐	
5. MEP Equipment Coordination – Confirm all final mechanical and plumbing equipment weights, vibration isolators, and support requirements have been provided to the structural engineer. Coordinate the structural support strategy for suspended units, rooftop equipment, and large floor-mounted systems.	☐	
6.Heavy Equipment & Truck Loading Zones – Confirm structural design accounts for dock equipment, vehicular loading, and truck access areas. Coordinate with civil engineering drawings and loading dock elevations to avoid conflicts with slab thickness and reinforcement design.	☐	
7. Elevator Machine Room Coordination – Confirm elevator equipment loads, layout, and support requirements are reflected in the structural plans. Ensure that beams or slabs below machine rooms are sized for concentrated loads, and that hoist beams are provided above the equipment and coordinated with vertical transportation requirements.	☐	
8. Pit Sizes and Locations – Coordinate sump, elevator, and ejector pit dimensions and locations with the structural foundation plan. Confirm pit walls, base slabs, and depths are structurally detailed and coordinated with MEP layout requirements.	☐	
9. Slab Depressions – Confirm locations, extents, and depths of slab depressions required for showers, kitchens, cold rooms, entryways, or access flooring systems. Ensure depressions are clearly indicated and coordinated across disciplines.	☐	
10. Built-up Slabs – Identify areas requiring concrete toppings or raised slabs and confirm that they are dimensioned and detailed on structural drawings. Coordinate with floor finish requirements and confirm step transitions or ramping are resolved in the architectural plans.	☐	
11. MEP Overhead Clearance – Verify that beam depths, hanger zones, and truss profiles allow for required ceiling clearances and major duct routing. Coordinate early with MEP for large ductwork, cable trays, and piping runs.	☐	
12. MEP/Structure Interference Check – Review structural framing and deep beams to ensure no conflicts exist with ductwork, piping, or conduit routing. Confirm that holes or block-outs are properly detailed or scheduled for CD phase coordination.	☐	

13. Curtain Wall Anchor Coordination – Confirm the location, embed requirements, and coordination of curtain wall anchorage with slab edges and perimeter framing. Coordinate backup steel and edge-of-slab dimensions with the envelope consultant.	☐	
14. Brace Frame Conflicts – Review brace frame locations to ensure they do not obstruct door openings, glazing areas, egress paths, or key architectural views. Coordinate concealment strategies where needed.	☐	
15. Elevator Hoistway Steel – Confirm divider beams, hoist rail supports, and associated steel elements are correctly sized and coordinated with the elevator consultant and shaft wall enclosure requirements.	☐	
16. Column Base Plate Conflicts – Ensure base plate dimensions, grout pads, and anchor bolt patterns are clear of interior walls, raised floors, or architectural finish elements. Coordinate slab recesses or block-outs where required.	☐	
17. Masonry Wall Support – Confirm bearing locations for CMU or brick veneer walls are identified and coordinated with slab or beam layouts. Ensure lintels, ledgers, and deflection criteria are documented.	☐	
18. AESS Steel Identification – Identify all exposed structural steel elements requiring architectural finishes. Confirm size, shape, and coating requirements are clearly communicated and coordinated with finish specifications.	☐	
19. Floor Flatness Criteria – Confirm that floor flatness and levelness tolerances (FF/FL) have been defined for specialized areas such as labs, clinical spaces, and any locations with floor finishes or equipment requiring tight control.	☐	
20. Drainage Slopes – Coordinate structural design of sloped slabs and roof areas to meet drainage requirements. Confirm alignment between structural slopes, topping slabs, and tapered insulation strategies.	☐	
21. Floor Thickness – Verify total floor system thicknesses, including concrete, toppings, insulation, and fireproofing. Coordinate with architectural sections and ceiling clearances, and confirm that floor assemblies meet requirements for fire separation, acoustics, and vibration control.	☐	
22. Wind & Seismic Design Parameters – Confirm wind loads, drift limits, and seismic design criteria have been finalized and incorporated based on project location, height, and program.	☐	
23. Expansion Joints & Seismic Gaps – Confirm that expansion and seismic joint locations are identified and properly sized. Verify that detailing accommodates anticipated building movement and is coordinated across structural, architectural, and envelope systems.	☐	
24. Cantilevers & Overhangs – Confirm structural design and detailing for balconies, sunshades, canopies, and other projecting elements. Coordinate framing with waterproofing and architectural enclosure.	☐	
25. Transfer Girders and Outrigger Trusses – Confirm location, depth, and span of major structural transfer elements. Coordinate with floor layouts and ensure sufficient clearance for MEP routing.	☐	
26. Miscellaneous Structural Supports – Confirm structural support for items such as signage, partition headers, façade lighting, and equipment pads. Coordinate locations, loads, and anchorage requirements with consultants.	☐	
27. Facade Maintenance – Confirm location and structural requirements for davit bases, tie-offs, and permanent anchor systems for facade access. Coordinate with FM and façade consultant.	☐	
28. Sustainability Goals – Confirm structural material selections (e.g., steel, concrete) support project sustainability goals. Coordinate recycled content, low-carbon alternatives, and sourcing documentation as needed.	☐	
29. Outline Specification Review – Review the structural narrative and specifications to confirm consistency with design assumptions, material selections, loading criteria, and coordination requirements. Confirm that sustainability targets, including embodied carbon, recycled steel content, and low-carbon concrete mixes, are clearly defined. Specifications should also address AESS finish levels and any specialty concrete toppings requiring specific aggregate, exposure, or polishing/gloss levels. Ensure alignment with architectural and MEP scopes.	☐	

STRUCTURAL (STRUCT)		
Construction Documents (CD)		**Notes**
By the end of the Construction Documents phase, structural documentation should be fully detailed, coordinated, and ready for bid, permitting, and construction. The structural model must reflect all finalized systems, dimensions, and loads, and integrate inputs from architectural, MEP, envelope, civil, and specialty consultants. Coordination should address all edge conditions, penetrations, support elements, and finish interfaces. Specifications must align with performance goals, sustainability targets, and construction requirements.		
1. Title Block and Formatting – Confirm that structural drawings use the correct title block and follow the architectural sheet numbering format, typically mirroring floor-based sheets (e.g., A-101 corresponds to S-101). Ensure scale, orientation, and backgrounds match the architectural set. Include the submission name and date.	☐	
2. Contractual Requirements – Confirm that the structural scope, deliverables, and performance criteria comply with Owner/Architect and Architect/Consultant agreements. Incorporate delegated design responsibilities, special structural systems, and any contractual coordination expectations.	☐	
3. Documentation Completeness – Ensure all structural drawings, narratives, and schedules are complete, legible, and coordinated. Include general notes, typical details, key sections, and framing diagrams. Verify coordination with MEP, civil, envelope, and specialty systems.	☐	
4. Clash Detection and Model Coordination – Perform final clash detection in the BIM/Revit model. Confirm resolution of all interferences involving framing, foundations, openings, slab edges, anchorage, and specialty supports. Pay particular attention to conflicts with MEP systems, including major ducts, piping, and equipment supports. Validate that all prior coordination issues have been addressed and reflected in the final model.	☐	
5. Review Comment Incorporation – Confirm that all structural-related comments from internal QA/QC, the client, CM, peer reviewers, or coordination meetings have been addressed and reflected in the final documentation.	☐	
6. Finalized Framing and Structural Layouts – Verify that all framing plans are fully detailed and coordinated with architectural layouts. All beams, joists, decks, and lateral elements should be dimensioned, tagged, and cross-referenced with schedules and typical details.	☐	
7. Foundation Coordination and Detailing – Confirm that foundation design reflects final geotechnical inputs, site grading, utility coordination, and waterproofing strategy. Verify all pile caps, footings, elevator pits, and retaining walls are dimensioned and coordinated with civil and MEP drawings.	☐	
8. Penetrations and Openings – Verify that all required slab, beam, and wall openings are shown and coordinated with architectural, MEP, and envelope systems. Label openings where appropriate, and confirm that typical details are included for sleeves, block-outs, conduit runs, and curtain wall anchors. Ensure the set includes standard details for rebar layout around openings, maximum unreinforced openings before additional slab reinforcing is required, and typical beam opening requirements.	☐	
9. Edge Conditions and Envelope Support – Confirm that slab edges, parapets, canopies, and transitions are fully coordinated to support the building envelope. If a curtain wall contractor has been engaged through design assist, verify that embed plates, anchorage locations, movement joints, and load transfer requirements have been incorporated into the CD set. Ensure all structural edge conditions reflect coordination with the base building attachment strategy.	☐	
10. Lateral System Detailing – Confirm that all shear walls, braced frames, and moment frames are clearly documented in the structural drawings. Ensure that door and wall openings, particularly in concrete shear walls, are fully dimensioned and coordinated with the architectural model, MEP drawings, elevator layouts, and the door schedule. Allow sufficient space for structural steel connections, such as gusset plates, and confirm these clearances are respected in adjacent architectural layouts.	☐	

11. Transfer and Deep Structure Elements – Confirm that transfer girders, outriggers, and trusses are fully dimensioned, detailed, and coordinated with architectural layouts and MEP routing. Include deflection criteria and coordination notes where required.	☐	
12. Vertical Shaft and Core Integration – Confirm that structural framing around all vertical shafts, including stairs, elevators, and MEP risers, is fully coordinated with the architectural layout. Verify alignment at machine rooms, pit walls, and shaft openings, and ensure sufficient space is provided for MEP systems running through or adjacent to the cores.	☐	
13. Slab Edge Plans (if provided) – Confirm that slab edge plans are included for all floors, clearly documenting slab edge conditions, openings, depressions, elevation transitions, and concrete curbs. Pay particular attention to transitions between the foundation wall and ground floor slab. Verify that all dimensions align with architectural plans and are coordinated for curtain wall support, floor finishes, transitions, and waterproofing strategies.	☐	
14. Floor Assembly Confirmation – Confirm that structural thicknesses, slopes, depressions, toppings, and tolerances align with acoustical, vibration, fire-rating, and finish requirements. Coordinate final assemblies with mechanical equipment zones, clinical areas, and public spaces.	☐	
15. Final Specification Review – Review structural specification sections for concrete and structural steel to confirm that key items impacting design and sustainability are clearly defined. This includes AESS classification, concrete topping treatments, galvanized finishes, recycled content, and low-carbon material targets. Ensure these align with the project's design intent and overall narrative.	☐	