

Project Name:

Date:

Checklist		
MECHANICAL (HVAC)		
Schematic Design (SD)		Notes
<i>By the end of Schematic Design, mechanical layouts should be developed enough to illustrate system concepts, major equipment locations, and preliminary shaft and riser zones. Drawings should support early coordination with architecture and structure and identify major spatial or code-related constraints.</i>		
<b>1. Title Block</b> - Confirm the title block, specific project name, date and milestone/issuance all match the architectural dwgs.	<input type="checkbox"/>	
<b>2. Code &amp; General Notes</b> - Review code references and general notes for accuracy and alignment with the project's jurisdiction and scope. Confirm that any statements referencing the architect or architectural intent are appropriate and correctly represented.	<input type="checkbox"/>	
<b>3. Floor Plans</b> - Confirm that floor plan backgrounds align with the architectural drawings, including column grid references. Ensure plans are graphically clean, with unnecessary worksets, duplicate grids, or reference layers turned off to maintain clarity and consistency.	<input type="checkbox"/>	
<b>4. Duct Risers</b> - Confirm that the locations of ductwork risers are generally coordinated with the architectural and structural drawings. Verify that all risers are clearly tagged and that identifiers match those shown on the mechanical riser diagrams.	<input type="checkbox"/>	
<b>5. Dampers</b> - Confirm dampers are documented on the plans or risers diagrams and are generally coordinated with wall types and shafts.	<input type="checkbox"/>	
<b>6. Plan Layouts</b> - Confirm duct and piping layouts are coordinated with architectural drawings and free of major conflicts. Ensure plans include duct dimensions, clear notations and that all louver locations are coordinated with the building envelope.	<input type="checkbox"/>	
<b>7. Mechanical Equipment Rooms</b> - Verify equipment layouts allow for required access and egress paths. Confirm layouts align with structural loading diagrams and reflect coordinated equipment placement.	<input type="checkbox"/>	
<b>8. Riser Diagrams</b> - Confirm diagrams reflect the correct number of floors, including mezzanines, and are labeled consistently with the floor plans. Ensure all ducts, piping, fans, dampers, and key dimensions are shown and clearly labeled.	<input type="checkbox"/>	
<b>9. Noise &amp; Vibration</b> - Check for annotations addressing noise mitigation (e.g., sound attenuators) and vibration control measures (e.g., isolators) near sensitive areas such as offices and auditoriums.	<input type="checkbox"/>	
<b>10. Review Outline Specs</b> - Confirm that narratives align with the architectural intent and clearly describe system types, preliminary equipment selections, and design criteria for the building and its program spaces.	<input type="checkbox"/>	

MECHANICAL (HVAC)		
Design Development (DD)		Notes
<i>By the end of Design Development, mechanical documents should be generally complete, showing coordinated system layouts, equipment selections, and riser and shaft locations. Drawings must support verification of spatial fit, code compliance, and integration with architectural and structural design.</i>		
<b>1. Clash Detection and Model Coordination</b> - Verify all MEP/FP risers and above-ceiling infrastructure are fully coordinated in the BIM/Revit model. Use clash detection software or visual review to confirm that systems avoid conflicts with beams, columns, trusses, ceiling systems, and lighting layouts.	<input type="checkbox"/>	
<b>2. Plan Readability and Graphic Clarity</b> - Confirm all floor plans show ductwork and piping with legible dimensions, annotations, and to-scale representations. Eliminate duplicate grids, worksets, or visual clutter from views.	<input type="checkbox"/>	
<b>3. Risers</b> - Ensure all risers are tagged, fit within shafts or chases, and, if not offset, align vertically floor to floor. Riser diagrams must be complete and consistent with floor plans in routing, labeling, and number of floors served. Confirm all slab penetrations for risers are sized to accommodate tolerances, firestopping, and ideally future capacity, and are clearly shown on both structural and mechanical plans.	<input type="checkbox"/>	
<b>4. Dampers and Fire-Rated Assemblies</b> - Verify all required fire and smoke dampers are provided per code and wall type. Confirm labeling, accessibility, and alignment with architectural and fire-rated assemblies.	<input type="checkbox"/>	
<b>5. Acoustic Control Measures</b> - Ensure mechanical ductwork and piping include acoustic treatments such as sound attenuators and vibration isolators in noise-sensitive areas. Confirm measures are documented in drawings and specifications.	<input type="checkbox"/>	
<b>6. Louvers, Sizing and Placement</b> - Check all louvers meet free area requirements, AMCA requirements, and are located to avoid obstructions, are coordinated with fire separation distances, and property lines. Confirm mounting heights and alignment with exterior wall.	<input type="checkbox"/>	
<b>7. Plenum and Louver Connection Details</b> - Verify that plenums are detailed with drainage provisions, proper slope, and secure connections to louvers and walls. Interior finishes and insulation must comply with code for concealed spaces.	<input type="checkbox"/>	
<b>8. Roof Equipment Curbs, Dunnage, and Flashing</b> - Confirm all rooftop equipment includes properly sized curbs and structural dunnage, coordinated with the roofing consultant. Details must show flashing, clearances, anchorage, and compatibility with the roofing system and equipment base requirements.	<input type="checkbox"/>	
<b>9. Containment Around Fuel and Emergency Systems</b> - Areas with fuel oil tanks, generators, or similar systems must show containment curbs and appropriate floor finishes. Confirm coordination with slab edge plans.	<input type="checkbox"/>	
<b>10. Rated Enclosures for Fuel Lines</b> - Ensure horizontal and vertical fuel lines are routed through fire-rated enclosures as required. Confirm supports match rating of enclosure. Verify this in sections and reflected ceiling plans.	<input type="checkbox"/>	
<b>11. Drip Pan Coordination</b> - Confirm the need for and location of drip pans under mechanical equipment, particularly in interstitial or ceiling-mounted units. Coordinate drainage routes and tie-ins.	<input type="checkbox"/>	
<b>12. IDF/MDF Mechanical Clearances</b> - Confirm that mechanical systems serving IDF/MDF rooms maintain appropriate clearances around units and overhead. Coordinate with IT consultant layouts, ceiling heights, and cable tray routing to avoid conflicts with ductwork, piping, or access zones.	<input type="checkbox"/>	
<b>13. Structural Coordination of Mechanical Loads</b> - Verify mechanical equipment locations, weights, and anchorage requirements are coordinated with structural drawings. Check for adequate support and loading capacity at each level.	<input type="checkbox"/>	
<b>14. Response to Air Entrainment Studies</b> - Ensure mechanical designs and louver placements reflect recommendations from air entrainment or wind analysis studies. Verify mitigation measures are implemented where required.	<input type="checkbox"/>	
<b>15. LEED and WELL Filter Requirements</b> - Confirm filter selections meet sustainability standards for MERV ratings and carbon filtration if pursuing LEED or WELL certification. Verify compliance in specifications and equipment schedules.	<input type="checkbox"/>	
<b>16. AHU Access Door Clearance</b> - Check that air handling unit access doors are not blocked by walls, columns, or adjacent equipment. Maintain manufacturer-recommended service clearances on all sides.	<input type="checkbox"/>	

<b>17. Double-Tiered AHU Access Provisions</b> - If double-stacked AHUs are used, verify access between levels is provided via ladders or platforms. Annotate dimensions and access zones clearly on plans.	<input type="checkbox"/>	
<b>18. Access Platforms</b> - Ensure mechanical equipment requiring regular service is provided with access via ladders, catwalks, or platforms. Access areas must be sized for maintenance and part replacement, meet OSHA requirements, and be fully coordinated with architectural and structural plans.	<input type="checkbox"/>	
<b>19. Seismic Restraint Provisions</b> - Verify seismic bracing and restraints are included for applicable mechanical systems based on project seismic zone. Details must be provided and referenced in specifications.	<input type="checkbox"/>	
<b>20. Exhaust and Quench Vent Clearances</b> - Confirm clearances around exhaust stacks, grease ducts, and quench vents per mechanical code and fire department regulations. Check setbacks from intakes, openings, and adjacent buildings.	<input type="checkbox"/>	
<b>21. Separation of Intake and Exhaust Louvers</b> - Verify that supply and exhaust louvers meet minimum separation distances and are located to avoid cross-contamination. Coordinate with code and mechanical engineer requirements.	<input type="checkbox"/>	
<b>22. Diffuser Model and Trim Coordination</b> - Review diffuser schedule to ensure specified models and trim types match architectural ceiling design and finish intent. Adjust ceiling details if diffuser depth or shape requires accommodation.	<input type="checkbox"/>	
<b>23. Fan Coil Unit Integration</b> - Confirm selected fan coil units meet the architectural intent, whether recessed into walls, concealed in soffits, or exposed. Validate unit size, trim, and service access requirements with ceiling and wall layouts.	<input type="checkbox"/>	
<b>24. Post Fire Smoke Purge</b> - If required based on the building type, size, or height per Chapter 4 of the IBC, confirm that a dedicated post-fire smoke purge system is documented in the mechanical drawings. If designed as a separate ducted exhaust system, verify that duct routing is coordinated in the BIM/Revit model with floor openings, ceiling zones, and structural elements. Confirm that the system layout allows for integration with fire alarm controls and other life safety systems.	<input type="checkbox"/>	
<b>25. Outline Specifications Review</b> - Confirm that mechanical outline specifications are included and coordinated with the architectural scope. Review sections requiring architectural input—such as fan coil units, diffusers, registers and grilles, chilled beams (if applicable), unit heaters, convectors, and radiant panels. Verify that the acoustician has reviewed duct silencers, acoustic treatments, and vibration control components. Confirm that sustainability requirements for LEED, WELL, or other certification targets are incorporated as directed by the sustainability consultant.	<input type="checkbox"/>	

MECHANICAL (HVAC)		
Construction Documents (CD)		Notes
<i>By the end of Construction Documents, all mechanical systems must be fully coordinated with final equipment selections, access provisions, and structural support clearly documented. No new scope should be introduced. All prior SD and DD expectations apply, and any value engineering (VE) decisions must be fully incorporated into the drawings and specifications.</i>	<input type="checkbox"/>	
<b>1. Contractual Requirements</b> - Confirm that all mechanical system requirements outlined in Owner/Architect and Architect/Consultant agreements are incorporated into the documents. Coordinate scope language, deliverables, and performance expectations with project contracts.	<input type="checkbox"/>	
<b>2. Documentation Completeness</b> - Verify that mechanical drawings and specifications are complete, legible, and fully coordinated. Confirm no missing layouts, schedules, legends, or system details.	<input type="checkbox"/>	
<b>3. Clash Detection and Final Coordination</b> - Perform final clash detection in the BIM model and resolve all conflicts that cannot reasonably be deferred to contractor coordination. Address any layout shifts or system adjustments required by late-phase consultant coordination.	<input type="checkbox"/>	
<b>4. Value Engineering (VE)</b> - Ensure all accepted VE decisions from earlier phases are fully incorporated into the final documents. Update related notes, specifications, and performance data as needed.	<input type="checkbox"/>	
<b>5. Review Comment Incorporation</b> - Confirm that all mechanical-related comments from prior reviews—whether from the client, construction manager, peer reviewers, or internal QA/QC—have been addressed and incorporated into the final documentation.	<input type="checkbox"/>	
<b>6. Mechanical Room Layouts</b> - Confirm that mechanical rooms are accurately sized and support required egress and maintenance access. Coordinate acoustical treatments per the final acoustical report, including wall types, absorption, and STC ratings.	<input type="checkbox"/>	
<b>7. Stack Effect Mitigation</b> - Ensure stack effect mitigation measures are implemented where required, including vestibules, dampers, pressurization strategies, and heating near entrances.	<input type="checkbox"/>	
<b>8. Final Acoustical Coordination</b> - Confirm all final recommendations from the acoustical consultant are included in the mechanical design. Verify vibration isolation details and mounting systems for equipment are shown and specified.	<input type="checkbox"/>	
<b>9. Final Air Entrainment Response</b> - Ensure final air entrainment study recommendations are implemented, particularly for louver placement, intake protection, and exterior air management.	<input type="checkbox"/>	
<b>10. Controls Coordination</b> - Confirm all thermostats, sensors, and control devices are shown on mechanical drawings and coordinated with architectural plans. Check for conflicts with millwork, ceiling types, finishes, and room layouts. Coordinate device locations with electrical and IT consultants where applicable.	<input type="checkbox"/>	
<b>11. Exhaust Systems Confirmation</b> - Confirm that all required exhaust systems (e.g., toilet rooms, food service areas, locker rooms, janitor closets, storage) are complete, routed, and meet applicable code and clearance requirements.	<input type="checkbox"/>	
<b>12. Temperature and Humidity Requirements</b> - Verify that temperature and relative humidity setpoints for each zone are clearly documented and reflected in AHU sizing and equipment schedules.	<input type="checkbox"/>	
<b>13. Filtration Requirements</b> - Confirm that mechanical schedules and notes reflect required air filtration levels, including MERV, carbon, or HEPA filters where applicable. Review these selections against sustainability goals and any health-related concerns, such as WELL certification or enhanced filtration for airborne pathogen mitigation.	<input type="checkbox"/>	

<b>14. Clear Equipment Tagging and Schedules</b> - Confirm that all mechanical equipment is tagged consistently between floor plans, riser diagrams, details, and schedules. Ensure schedule data aligns with final selections and load requirements.	<input type="checkbox"/>	
<b>15. Labeling, Notation, and Abbreviations</b> - Ensure all plans use consistent and clearly defined abbreviations, symbols, and system labels. Provide a legend and standard nomenclature throughout the document set.	<input type="checkbox"/>	
<b>16. MEP Specification Cross-Check</b> - Cross-check Division 23 specifications against the final drawings to confirm alignment of product types, performance data, and installation requirements. Remove legacy specs from earlier design options or alternates.	<input type="checkbox"/>	
<b>17. Equipment Access Zones</b> - Confirm that floor plans and sections show adequate service clearances around mechanical equipment. Coordinate access pathways and verify they align with architectural layouts and structural obstructions.	<input type="checkbox"/>	
<b>18. Roof Coordination Finalization</b> - Confirm all rooftop mechanical equipment, dunnage, curbs, and penetrations are fully coordinated with the roofing system and documented in architectural and structural plans. Verify flashing, drainage, and wind/seismic restraint details are included.	<input type="checkbox"/>	
<b>19. Fire and Life Safety Coordination</b> - Confirm that fire/smoke dampers, shaft wall types, and rated enclosures for ductwork and piping are clearly indicated on mechanical and architectural drawings. Check alignment with the life safety plan and code summary.	<input type="checkbox"/>	
<b>20. Final Specifications Review</b> - Confirm that mechanical specifications are complete and coordinated with architectural documents. Verify that architecturally integrated equipment is fully addressed and that acoustical and vibration control requirements are incorporated. Confirm all sustainability-related criteria for LEED, WELL, or other certifications are included per the consultant's direction.	<input type="checkbox"/>	