

Checklist for Metal Ceiling / Grille / Louvre Plan Submissions

(This checklist is **not** required to be submitted to the BD)

- : information to be shown on plan and given in supporting document
○ : information to be accompanied with the submission

Part A – Administration

Typical Items	Requirements	Reference
1. Statutory Forms	○ Form BA4 (for appointment of AP/RSE/RGE) ○ Form BA5 (for application for approval) ○ Form BA6 (Stability Certificate if applicable) ○ Form BA16 (Application for exemption/modification as necessary)	ADM-8 APP-16 B(A)R 18A and 29(1)
2. Fee for plan processing	○ Payment required when fees are charged according to total number of plans submitted	APP-55
3. Plans and Documents	○ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141

Part B – Documents

Typical Items	Requirements	Reference
1. Design Document: Part I – Synopsis and Essential Information	<input type="checkbox"/> Approved GBP and superstructure plan (parent structure) <input type="checkbox"/> Design standards and references <input type="checkbox"/> Design approach (e.g. ultimate limited state) <input type="checkbox"/> Description of the metal ceiling, grille or louvre system: <ul style="list-style-type: none"> ● spanning of metal ceiling, grille or louvre and its supporting frame ● load path ● load transfer, etc. <input type="checkbox"/> Building materials/components and workmanship specifications <input type="checkbox"/> Design data for metal ceiling, grille or louvre system: <ul style="list-style-type: none"> ● design strength of steel/stainless steel/aluminium, etc. ● allowable deflection limits, etc. <input type="checkbox"/> Summary of reaction forces, loading capacity for fixing brackets, adequacy check of assumed loading on parent structures and deflection of metal ceiling, grille or louvre members	ADM-8 ADM-19 APP-16 APP-53
	<input type="checkbox"/> Specifications on design loads: <ul style="list-style-type: none"> ● wind loads ● thermal loads (for metal ceiling / grille only) ● maintenance loads ● lateral notional loads (for design of bracing members of metal ceiling only) 	

Typical Items		Requirements	Reference
		<input type="checkbox"/> BD pre-accepted structural computer program (if applicable): <ul style="list-style-type: none"> • BD reference no. • RSE's statement 	ADM-6
		<input type="checkbox"/> Information on the computerised calculations: <ul style="list-style-type: none"> • assumptions made and justifications on parameters used such as material properties, boundary conditions, etc. • input data with computer-generated graphics or hand sketch showing the framing & layout of the system, nodes & elements, joint fixity, etc. 	ADM-8 ADM-19
2.	Design Document: Part II – Detailed analysis and design	<input type="checkbox"/> The metal ceiling panel, grille or louvre and its supporting frame should be designed to resist the most unfavorable condition of dead, imposed and wind load with consideration of overall lateral stability <input type="checkbox"/> Supporting members (steel/stainless steel/aluminium): <ul style="list-style-type: none"> • thermal effect consideration (if appropriate) • design for bending, shear and deflection • connection details design • fixing brackets with anchor bolts or cast-in embeds <input type="checkbox"/> Supporting parent structures: <ul style="list-style-type: none"> • adequacy check of assumed loading on parent structures 	ADM-8 ADM-19 APP-16 APP-53

Part C – Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	<input type="checkbox"/> Plans to be properly indexed and each drawing to bear a title and number <input type="checkbox"/> Vertical space (90mm wide x 200mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	ADM-8 ADM-10
2.	Plans showing the layout and arrangement of metal ceiling, grille or louvre	<input type="checkbox"/> Plans including setting out and layout arrangement of the metal ceiling, grille or louvre together with main and secondary elements with sections Structural layout of the supporting frames <input type="checkbox"/> Location and setting out of fixing brackets	ADM-8
3.	Plans and sections in appropriate scales for readability	<input type="checkbox"/> Scale to follow B(A)R 13: <ul style="list-style-type: none"> • avoid excessive large scale shop drawing details • plans and sections/elevation to be in a scale not less than 1:100 except that a scale of not less than 1:200 may be accepted for cases of very extensive works 	B(A)R 13

Typical Items		Requirements	Reference
4.	General Notes	<input type="checkbox"/> Design Codes and Standards: <ul style="list-style-type: none"> • design code of practice • construction standards <input type="checkbox"/> Design loading (e.g. wind load, maintenance load, notional load, etc) <input type="checkbox"/> Location/general layout of metal ceiling, grille and louvre tallying with the latest approved GBP and structural information of the parent structures in superstructure plans with the approval date	ADM-8 ADM-19 APP-16 APP-53
5.	General Notes on Material Specifications and quality control standards	<input type="checkbox"/> Structural steel, stainless steel or aluminium, etc (if applicable): <ul style="list-style-type: none"> • a schedule of major structural steel, stainless steel or aluminium members indicating the member mark, grade, general dimensions and thickness • specification and standard of weld/bolt/fastener • welding standard and material grade of aluminium studs • corrosion protection specification for steel • protection against bimetallic action <input type="checkbox"/> Cast-in embeds (if applicable) <ul style="list-style-type: none"> • a schedule of design loads <input type="checkbox"/> Drilled-in anchors (if applicable) <ul style="list-style-type: none"> • design and material specifications • product name, model no. and CDB reference no. • a schedule of drilled-in anchors indicating the anchor type, embedment length, loading capacity and test load 	ADM-8 ADM-19 ADM-20 APP-16 APP-53
6.	Structural details of metal ceiling, grille or louvre	<input type="checkbox"/> Typical layout plans, sections and elevations showing all types of metal ceiling, grille or louvre, setting-out dimensions, and span direction of metal panels <input type="checkbox"/> Typical details of metal panel with metal stiffeners and studs (profile, dimension, thickness, size and arrangement of metal stiffeners) with connection details to the supporting frame <input type="checkbox"/> Typical details of all types of fixings of the metal ceiling, grille or louvre to the supporting members/frames, stiffener arrangement and studs/bolts connections <input type="checkbox"/> Typical details of all types of connections (e.g. embeds/anchor bolt) between members of supporting frames and fixing details to the parent structures (e.g. fixing brackets to slabs, beams, columns, walls, curbs, plinths, etc.)	ADM-8 ADM-19 APP-16 APP-53

Typical Items	Requirements	Reference
	<input type="checkbox"/> Location of representative unit for performance test (where aluminium/stainless steel/steel or the like extruded section is to be used and the method of connection of the extruded section to its supporting structure relies solely on interlocking without mechanical fixing, such as bolting or welding) (if applicable)	