

**B. Check-list for documents requirements and project technical review**

	BCM			N/A	Yes	No
	1	2	3			
<b>1. DRAWING REQUIREMENTS AND PROJECT TECHNICAL REVIEW</b>						
<b>1.1. For the Development Area Permit Section</b>						
<b>1.1.1. Architectural designs</b>						
<b>A. Drawing sheets</b>						
- Equipment technical specification schedule, abbreviation						
- Drawing list						
<b>B. Location Map (not to scale)</b>						
- North Point						
- Surrounding main Roads, nearest junctions & landmarks (traffic lights, etc.) near by the proposed site						
- Topography mentioning the Above Mean Sea Level (AMSL)(if needed)						
- Traffic flow directions						
<b>C. Site Plan (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")</b>						
- Orientation and scale						
- Traffic flow directions						
- Name, width and type of the principal access roads. For the plot located at a corner, also mention the roads nearby.						
- Plot dimensions, building dimensions & set-backs, building to be demolished						
- Dimensions, setbacks, type, use & orientation of existing buildings						
- Location and distance between the proposed building and the creek, well, lake, water supply pipe line, gas pipe line & electrical transmission line in the proposed site (if necessary)						
- Topographic map (if there is any level difference)						
- Distance between antique buildings & proposed site (if necessary)						
- Distance from Shwedagon Pagoda with respect to Shwedagon Restricted Area Map (if necessary)						
- Key plan of photoshoots						
- Location of trees, distinguishing those to be maintained, felled and planted, and specifying their species and the ground projection of their crowns						
- Location and dimensions of parking areas, garages, interior service roads and their connection to the main access road, specifying the nature of the materials used (permeable and impermeable)						
- Location and space provision for transformer, generator & septic tank (if necessary)						
- Location and space provision for the water supply and sewage system (with indication of the depth)						
- Springs, bodies of water, wetlands or marshes(if necessary)						
- Back drain space and side drain space (if necessary)						
- Location and space provision of the site drain system						
- Greening areas						
- Description of the nature of the materials used (permeable and impermeable) for principal access roads with percentage of each type						
- Description of the nature of the materials used (permeable and impermeable) for parking area with percentage of each type, garages and interior service roads						
- Line of building coverage & building coverage ratio						
- Site google map and GPS location (which includes Latitude / longitude) of site information						
<b>D. Perspective drawings</b>						
- Perspective view of proposed building						
<b>E. Area Data Sheet</b>						
- Site/Plot Area						
- Gross Floor Area (NFA, Parking, Service Area,etc...)						
- Building Coverage Ratio Calculation						
- Gross floor Area Ratio Calculation (for use risk evaluation and occupancy rates) with polygons						
- Car Parking Provisions (if necessary)						
- Green Area /Open Space percentage, Permeable Area, Road Area Ratio						

- Road Building Ratio in relation to building height									
- Total areas of the different types of occupancies taken into account for the Building Categorization Matrix in relation with the polygons detailing the different areas taken into account									
<b>F. Architectural Floor Plans (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")</b>									
- Key Plan of elevations and sections									
- Name of the occupancy type for each room and/or spaces contained in the building									
- Dimensions and areas of each room									
- Door openings with swing directions									
- Windows									
- Stairs & vertical shafts, escalators									
- Ramp, driveway width & flow directions									
- Setbacks with plot boundaries (for irregular shape)									
- Section Line									
- Location and provisions of the mechanical, electrical and plumbing installations									
<b>G. Elevations (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")</b>									
- Plinth level mentioning the natural ground level									
- Building height mentioning the natural ground level / road level									
- Building height mentioning the Above Mean Sea Level (AMSL)									
- Building height mentioning the Above Mean Sea Level (AMSL) if the building is located in the Shwedagon Restricted Area (if necessary)									
- Setbacks with boundary limits									
- Building heights with different natural ground level / road level (for plot with slope)									
- Description of the materials and colors used for the facades									
<b>H. Architectural Sections (Scale- 1/8"=1'-0",3/32"=1'-0",1/16"=1'-0")</b>									
- Mass and voids									
- Plinth level mentioning the natural ground level and the projected ground level									
- Building height mentioning the natural ground level / road level									
- Level of existing and projected profile of the ground									
- Building height mentioning the Above Mean Sea Level (AMSL)									
- Building height mentioning the Above Mean Sea Level (AMSL) if the building is located in the Shwedagon Restricted Area(if necessary)									
- Stair section with riser , tread and landing									
- Lift shafts and data									
- Ramp design with indication of the slope and head room									
- Proposed building cross section continuously with existing building (if necessary)									
- Description of the materials used									
- Ceiling heights (if the ciling is mentionned in the drawings)									
- Floor to floor heights									
- Veranda or balcony handrails heights									
<b>I. Architectural Details (Scale- 1/4"=1'-0",3/16"=1'-0")</b>									
<b>I.1. Stairs</b>									
- Dimension of riser, tread & landing									
- Landing to landing height									
- Stair head room									
- Handrail heights									
<b>I.2. Doors and Windows</b>									
- Dimensions									
- Glass specification (if necessary)									
- Safety measures (if necessary)									
- Types and materials									
<b>I.3. Car Ramp &amp; Drive Way</b>									
- Ramp Slope									
- Width of drive way									
- Head room height									
<b>I.4. Mechanical Car Parking</b>									
- Queuing space									
- Technical Specification									
<b>I.5. Façade design consideration</b>									

- Specification of finishing material									
- Curtain wall									
- Green wall									
<b>J. Foundation Plan (Scale- 1/8"=1'-0", 3/32"=1'-0", 1/16"=1'-0")</b>									
- Plot boundaries with dimensions									
- Foundation type									
<b>K. Accessibility provisions (if needed)</b>									
- Dimensions and numbers of parking lots									
- Dimensions of entrance and doors									
- Dimensions of corridors and walk ways									
- Floors materials									
- Dimensions of handrails									
- Dimensions of ramps and slope									
- Dimensions of lifts and stairs									
- Dimensions of restrooms and toilets									
<b>1.1.2. Pile Load Test (Bored, ultimate or working) when structural system requires</b>									
<b>A. Method of Statement</b>									
- Code of practice and design reference									
- Method of Statement of pile load test									
- Material Properties									
- Pile design report by foundation designer (geotechnical and structural design)									
- Geotechnical Report (should consist adequate c, $\Phi$ and SPT value for pile design calculation) and Borehole Profile									
- Site Location Plan with adjacent building and bore holes									
- Columns loading calculation (for working pile load test)									
- Piling Plan with Test Pile Locations									
- Test pile details (Anchor pile details if anchor method)									
- Sample Record Form									
- Load Conversion Table									
<b>B. Report</b>									
- Code of Practice and Design Reference									
- Material Properties									
- Piling Plan with Test Pile Locations									
- Test Pile details									
- Anchor Pile Details ( if necessary)									
- Test Results									
- Recommendation for Pile Capacity Results									
- Calibration Certificate									
- Record Form									
<b>C. Submission Set</b>									
<b>C.1. Signatures</b>									
- Local Design: Signature of the PE and RSE (Geotechnical)									
- Foreign Design: Signature of Original Geotechnical Design Engineer									
- Foreign Design: Signature of National Counter Part (PE)									
<b>C.2. Document Set</b>									
- Set of design drawing, calculation and report submitted through the YDPS									
<b>1.1.3. Structural designs</b>									
<b>A. Design Report</b>									
<b>A.1. Structural system design criteria</b>									
- Code of Practice and DesignReference, Specification									
- Basic Structural System									
- Material Properties									
- Soil Investigation Report									
- Design loads									
- Load combination									
<b>A.2. Structural analysis</b>									
- Static Analysis									
- Dynamic Analysis									

- Analysis Input Data									
- Analysis Output Results									
- Analysis Soft Copy									
<b>A.3. Super Structure Design</b>									
<b>A.3.1. Super structure design</b>									
- Beam Design									
- Column Design									
- Slab and Stair Design									
- Shear Wall Design									
- Car Ramp Design									
- Others (if necessary)									
<b>A.3.2. Super structure stability checking</b>									
- Storey unit weight									
- Base Shear/weight ratio and Calculation									
- Storey drift limit									
- Mode Participation Ratio									
- Soft Storey									
- P-Δ Effect									
- Overturning									
- Torsional Irregularity									
- Sliding									
- Analysis Results									
- Structural Design Results									
- Dual system									
- Diaphragm Discontinuity									
<b>A.4. Sub structure Design</b>									
<b>A.4.1. Substructure (Pile foundation)</b>									
- Pile Capacity Calculation									
- Lateral Subgrade Reaction Calculation (if necessary)									
- Pile Base Spring and Skin Friction Calculation (if necessary)									
- Pile Cap Design									
- Cap Beam Design									
- Pile Settlement Calculation									
- Liquefaction Analysis									
<b>A.4.2. Substructure (shallow foundation)</b>									
- Allowable bearing capacity of soil									
- Modulus of subgrade reaction of soil									
- Punching Shear Check									
- Settlement Calculation									
<b>A.4.3. Substructure (basement)</b>									
- Basement Retaining Wall Design									
- Basement Slab Design									
<b>A.5. Steel structure</b>									
- Bolted and Welded Connection Design									
- Slab Design									
- Bracing Design									
- Base Plate Design									
- Others (if necessary)									
<b>A.6. Earth retaining structure</b>									
- Overturning Check									
- Sliding Check									
- Bearing Capacity Check									
- Others (if necessary)									
<b>B. Drawings</b>									
<b>B.1. Foundation Drawing</b>									
<b>B.1.1. General drawings</b>									
- List of Drawings									
- Standard drawings and general notes									

- Site Location Plan with adjacent building and bore holes									
- Foundation plan									
- Basement floor beam and slab plan									
- Car ramp, lift pit beam & slab plan (if necessary)									
<b>B.1.2. Detail drawings</b>									
- Structural detail drawings: beams, columns, slabs, shear walls and retaining walls (up to another level)									
- Detail of Pile (longitudinal and transverse section, joint end plate, connection)									
- Detail of the different types of pile caps (steel layout and dimension)									
- Detail of cap beams (steel layout and dimensions)									
- Basement floor beam and slab details									
- Car ramp detail (if needed)									
<b>B.1.3. Schedules</b>									
- Schedules (mat, strip, strap, combined, single, wall footing)									
- Schedules ( pile, pile cap and cap beam)									
- Schedules (basement floor beam & slab)									
- Other Schedules (if necessary)									
<b>B.2. Super Structure Drawing</b>									
<b>B.2.1. General drawings</b>									
- List of Drawings									
- Standard Drawings and General Notes									
- Structural Plans (beams, columns, slabs)									
- Structural Sections									
- Stair Landing Beam & Slab Plans									
- Tendon Profile Plans (for Post-tension, Pre-tension Slab with Method of statement)									
<b>B.2.2. Detail drawings</b>									
- Beam Details									
- Column Details									
- Slab Details									
- Opening Slab and Wall Details (if necessary)									
- Stair Detail(Main Stair, Fire Escape)									
- Lift Pit Detail									
- Shear Wall Detail									
<b>B.2.3. Schedules</b>									
- Beam Schedules									
- Column Schedules									
- Shear Wall Schedules									
<b>B.3. Steel structures drawings</b>									
- Connection Detail									
- Base Plate Detail									
- Bracing(Plan and Elevation)									
<b>C. Submission Set</b>									
<b>C.1. Signatures</b>									
- Local Design: Signature of PE and RSE (Structure) and PE and RSE (Geotechnical)									
- Foreign Design: Signature of Original Structural and Geotechnical Design Engineers									
- Foreign Design: Signature of National Counter Part (PE)									
<b>C.2. Document Set</b>									
- Set of design drawing, calculation and report submitted through the YDPS									
<b>1.1.4. Deep excavation design</b>									
<b>A. Design Report</b>									
- Code of Practice and Design Reference									
- Analysis Methodologies (monitoring instrumentation general note)									
- Material Properties									
- Analysis Results									
- Structural Member Checks									
- Geotechnical Report and Bore Hole Profile and Location									
- Construction Sequences									
<b>B. Design Drawings</b>									



- Equipment schedule									
<b>B. Design Drawings</b>									
- Drawing list									
- Legend, note & abbreviation									
- Air conditioning design drawings									
- Exhaust and fresh air mechanical ventilation									
- Car-park mechanical ventilation									
- Staircase pressurization (schematic)									
- Smoke stop and fire fighting lobbies									
- Mechanical ventilation									
<b>C. Submission Set</b>									
<b>C.1. Signatures</b>									
- Local Design: Signature of PE and RSE (mechanical)									
- Foreign Design: Signature of original building services design engineers									
- Foreign Design: Signature of National Counter Part (PE)									
<b>C.2. Document Set</b>									
- Set of design drawing, calculation and report submitted through the YDPS									
<b>1.2. For the Drainage and Sewage Management Task Force</b>									
<b>A. Design report</b>									
<b>A.1. Design report for drainage</b>									
- Sizing of drain pipe									
- Sizing of perimeter drain and main drain									
- Rainfall intensity									
<b>A.2. Design report for sewage</b>									
- Sizing of soil branch, soil stack and ventilation									
- Sizing of waste branch, waste stack and ventilation									
- Waste water treatment plant / waste water treatment system (with respect to the method used)									
- Rainfall intensity									
- Sizing of gutter and gutter outlet									
- Sizing of rain water down take pipe									
- Disposal pump when required									
<b>B. Design Drawing</b>									
<b>B.1. Design drawing for drainage</b>									
- Site plan and layout plan with the location, type and dimensions of the drainage system (drains, etc.) until the public main drainage									
- Site plan and layout plan with the location and dimensions of rain water retention tanks (if necessary)									
- Is the drain made with a removal cover?									
<b>B.2. Design Drawings for sewage</b>									
- Site plan and layout plan specifying the location and dimensions of the water evacuation system specifying the means of waste water treatment systems (septic tanks, waste water treatment plant, etc.)									
- Location and dimensions of the septic tank or the waste water system within the site plan (in the back drain space, side drain space or within the plot)									
- Plan and section of the septic tank or the waste water treatment system (Hydraulic profile)									
- Floor plan, elevation, cross section or schematic diagram of the connection system from the WC to the septic tank or to the waste water treatment system									
- Location and detailed drawings of the waste water treatment system (anaerobic or aerobic) including the calculation sheet									
- Detail of the perforated slab (in the case of an up flow filter system)									
- Technical specification of the waste water treatment system if prefabricated									
- Schematic diagram of the cold water, hot water and soil, waste and vent pipes lines									
- Calculation of the number of all showers, bathtubs, sinks, separate tap, urinal and WC									
- Detail drawings and flow sheet of the water treatment plant									
- Detail drawings and flow sheet of the waste water treatment plant / sewage treatment plant									
<b>C. Submission Set for the Drainage and Sewage Management</b>									
<b>C.1. Signatures</b>									

- Local Design: Signature of professional engineer (water and sanitation)									
- Foreign Design: Signature of original water and sanitation engineer									
- Foreign Design: Signature of National Counter Part (PE)									
<b>C.2. Document Set</b>									
- Set of design drawing, calculation and report submitted through the YDPS									
<b>1.3. For the Water and Water Supply Management Task Force</b>									
<b>1.3.1. Design report</b>									
- Source of water supply									
- Cold and hot water demand with respect to design PE									
- Sizing of ground water reservoir and roof tank reservoir									
- Water treatment plan									
- Sizing of transfer pump and transfer pipe									
- Head loss calculation at critical location									
- Positioning of Pressure Reducing Valve (PRV)									
- Sizing of booster for boosting pressure for floors with inadequate (low) pressure									
- Sizing of water meter									
- Sizing of hot water supply facilities									
<b>1.3.2. Design drawings</b>									
- Drawing list									
- Equipment, schedule, abbreviation									
- Site plan with the location and dimension of the main pipe line									
- Site plan with the location and dimension of the ground tank									
- Site plan with the location and dimensions of the storage tank (for the construction phase)									
- Floor plan and cross section of the water connection system									
<b>1.3.3. Supplements and notes</b>									
- Well logs if ground water is used									
- Provide both chemical and bacteriological analysis of water sample									
- Provide chart, table, monograph, ac., which are used during design calculation									
<b>1.3.4. Submission Set</b>									
<b>A. Signatures</b>									
- Local Design: Signature of professional engineer (water and sanitation)									
- Foreign Design: Signature of original water and sanitation design engineers									
- Foreign Design: Signature of National Counter Part (PE)									
<b>B. Document Set</b>									
- Set of design drawing, calculation and report submitted through the YDPS									
<b>1.4. For the Environmental Management Task Force</b>									
<b>1.4.1. Design report</b>									
- Estimation of solid waste volume									
- Calculation of the number of compactor bin or dust bin									
- Calculation of bin center or bin room size									
- Description of collection and disposal system									
- Coordination and contact with relevant task force for the disposal of construction waste									
- IEE, EIA, ESIA, EMP if required									
<b>1.4.2. Design drawings</b>									
- Site plan with the location and dimensions of the bin center (if necessary)									
- Floor plans with the location and dimensions of the bin room(s) and chute system (if necessary)									
- Sections with the location and dimensions of the chute system (if necessary)									
<b>1.4.3. Submission Set</b>									
<b>A. Signatures</b>									
- Local Design: Signature of professional engineer (water and sanitation)									
- Foreign Design: Signature of original water and sanitation design engineers									
- Foreign Design: Signature of National Counter Part (PE)									
<b>B. Document Set</b>									
- Set of design drawing, calculation and report submitted through the YDPS									
<b>1.5. For the Streets and Bridges Task Force</b>									
- Name and width of the principal access road. For plots located at a corner, also mention the roads nearby.									



- Location and dimensions of parking areas, garages, interior service roads and their connection to the main access road						
- Number and type of car-parking						
- Location and dimension of platform areas						
- Distance to the nearest main road junction if the plot is situated within a distance of less than 100 meter from this main road junction						