2. BIM Modeling services

2.1 Architecture and Structure Modeling Package

- To develop Architecture and Structure BIM models based on CAD drawings provided by Client according to BIM Requirement Specification for clash analysis and constructability review.
- Modeling duration: 2 weeks
- Deliverable: Architecture and Structure model for the basement carparks (including B1/F and B2/F) and podium for clubhouse and residential entrance lobbies (including G/F and 1/F) in Autodesk Revit Format

2.2 Detail M&E Modeling Package

- To develop detail M&E BIM models for all areas based on CAD drawings provided by Client according to BIM Requirement Specification for clash analysis and constructability review
- Modeling duration: 2 weeks
- Deliverable: Detail M&E model for the basement carparks (including B1/F and B2/F) and podium for clubhouse and residential entrance lobbies (including G/F and 1/F) in Autodesk Revit Format

2.3 Update Architecture and Structure Modeling Package (Maximum 5 times)

- To update Architecture and Structure BIM models based on updated CAD drawings provided by Client according to BIM Requirement Specification for clash analysis and constructability review
- Modeling duration: 1 week
- Deliverable: Updated Architecture and Structure model for the basement carparks (including B1/F and B2/F) and podium for clubhouse and residential entrance lobbies (including G/F and 1/F) in Autodesk Revit Format

3. Project Management Services

- To manage BIM documentation systematically to ensure quality of data
- To provide BIM/ CAD manager off-site with the following scope of works
  - To develop BIM project execution plan
  - To develop clash analysis and constructability review matrix
  - To develop systematic procedures for quality assurance, BIM model review and inspect information flow, BIM modeling process, clash analysis process and technical query reporting process.
  - To perform clash analysis based on clash analysis and constructability review matrix
  - To prepare 2D views for example 2D section(s), 3D section(s) from integrated BIM model as requested by Client
  - To prepare technical query of clashes detected and report to the Project team
  - To coordinate with Project team to resolve the clashes detected
  - To attend meetings when request by client and coordinate with Project team in the meetings
  - To assess, control and assure the quality of BIM deliverables
  - To report on project progress and issues
  - To deliver BIM deliverables such as BIM models, Technical Query, Model Progress Report, CSD, CBWD in Autodesk Revit Format and other relevant documents to the main contractor for smooth transition of the information and models.

Building Information Modelling

(xv) The Consultant shall deliver the Project with collaborative Building Information Modelling (BIM) technologies and management processes. The Consultant shall deliver continuously and progressively through the design from the outset, and shall work in close coordination with other Project Consultants, including the BIM Auditor of the Project Management Consultant (PMC), in all Work stages. The Consultant shall extend the use of BIM in supervision and coordination with the Contractor in Work Stages 5 and 6.

Building Information Modelling (BIM)

The goal of the application of BIM is to create a digital 3D building information model of the facility, comprising models from each design discipline in a coordinated and federated format. The creation and management of the BIM are to be delivered by the Consultant continuously and progressively throughout the entire Project duration from the design at the outset to the post-construction stage. The Consultant shall work closely with consultants of other disciplines in achieving the objectives of the BIM. The BIM is for the following beneficial purposes:-

(a) To minimize design discrepancies, improve design coordination and deliver a clash-free design through the use of the 3D digital BIMs and clash analysis tools;
(b) To improve speed and accuracy on quantity take off (QTO) and cost estimating through use of the digital 3D BIMs;
(c) To enhance visual communication between the Design Team and stakeholders and improve mutual understanding of the design intent through the digital modelling process, to achieve a more effective design approval process with reduced timescales;
(d) To support the statutory and non-statutory approvals submission process (for example to the Independent Checker in accordance with Buildings Department's PNAP ADV-34 and compliance with BIM recommendations under ArchSD Design Guide AR03);
(e) To support the efficient delivery of 2D drawings, including Combined Services Drawings (CSDs) and Combined Builder's work Drawings (CBWDs) and 3D room loaded drawings directly derived from the coordinated BIMs;
(f) During the construction stage, (i) to support the Contractor in developing 4D digital construction sequence models to enhance communication, predict and manage construction progress and logistics, and (ii) to support the Contractor in developing an 'as-built' Asset Information Model (AIM) at handover to provide more effective operation of the facility.

The Consultant shall develop a BIM for its scope of works under this Brief and cooperate with consultants of the other disciplines and the PMC in the development and revision of the BIM Project Execution Plan (BIM PXP).