

- The relevant International Standards such as ISO and EN BS particularly the standards referred to in ADWEA specifications.
- The practice applied by ADWEA and AADC for the design and construction of the water supply schemes in Abu Dhabi Emirates.
- The best engineering practice applied internationally for the design of water supply systems

The designer shall obtain the latest versions of the above documents and the other relevant documents including the documents referred to in this Design Guidelines.

6.3 Project Design Stages and Deliverables

6.3.1 Design Stages and Deliverables

Unless otherwise specified, the design of the water distribution networks shall be carried out in three main stages as follows:-

1. Preliminary Design Stage

A preliminary design report shall be submitted covering the following topics :-

- Scope of works, objectives of the project and project area
- Proposed design criteria and design assumption.
- Possible design options with technical and financial evaluation of different options and recommendations for the option to be applied.
- Surveying and investigations (as applicable).
- Water demand calculations.
- Hydraulic analysis using suitable software.
- Layout of proposed networks showing the tapping points to AADC system, material, route and sizes of pipeline, DMA boundaries, DMA feeding points, required pressure and flow at tapping points.
- Cost estimate details.
- Time frame for project design and construction stages and phases.
- Risk analysis
- Application of suitable Optimized Decision Making (ODM) tools such as Whole Life Cycle Analysis to evaluate the possible design options (as applicable).