necessary action to check and approve the work at site prior to concrete placing.

2- After hand over the post tension work to the respected party, the specialist contractor shall apply to the CED for final inspection.

3- Based on final inspection, CED will decide the final approval of the specialist and the system as well.

4- All the above procedures shall be submitted to CED under the lead consultant cover letter.

3.3 SOFTWARE APPROVAL & DESIGN GUIDELINES

3.3.1 SOFTWARE APPROVAL

Specialist contractor/consultant shall use licensed software only. Software used by the specialist contractor require CED certification and approval prior to implementation in the design. The software could be certified and approved following the below procedures:

Specialist contractor shall submit original license for the software, along with user technical manual and all related technical sheets, via cover letter from the specialist.

To ensure a better understanding of the software capability and performance enhancement, the specialist shall respond to all CED enquiries and if necessary to conduct a technical demonstration or/and presentation as per the CED arrangement.

The specialist contractor will be notified on the final approval of the software as per the relevant discipline.

3.3.2 DESIGN GUIDELINES

3.3.2.1 APPLIED DESIGN CODES

The following codes and report are permitted for design of post tension slabs. Unlisted codes shall be submitted for approval prior to use in design.

a. BS 8110 1997 structural use of concrete.

b. Technical Report (TR 43).

c. ACI-318 latest edition.

d. Post Tension Manual, fifth and sixth edition.

e. Euro code 2.

f. ASCE-7-5

g. IBC-latest edition.

3.3.2.2 GENERAL CONSIDERATIONS

a. Slab Thickness

1. Slab thickness should be decided based on the loads and spans.

2. For normal loads in residential and commercial areas, the thickness of flat slab should be proposed to be as explained in Fig. (3.8) provided that the ultimate and service limits requirements are met.

3. Vibration shall be considered in the design of the offices areas, following the above mentioned codes.

4. Cubic strength for the concrete used in pre stressed slabs shall not be less than 40 N/mm2.

Section Type	Total imposed load (kN/m)	Span/depth ratios 6m ≤ L ≤ 13 m (kN/m)
1. Solid flat slab	2.5	40
	5.0	36
	10.0	30
2. Solid flat slab with drop panel (> span/3)	2.5	44
	5.0	40
	10.0	36
3. Banded flat slab (span/5)		Slab / Beam
	2.5	45 / 25
	5.0	40 / 22
	10.0	35 / 18
4. coffered flat slab	2.5	25
	5.0	23
	10.0	20
5. coffered flat slab with solid panels (> span/3)	2.5	28
	5.0	26
	10.0	23

Section Type	Total imposed load (kN/m)	Span/depth ratios 6m ≤ L ≤ 13 m (kN/m)
6. coffered slab with band beam (> span/6)	2.5	28
	5.0	26
	10.0	23
7. Ribbed slab	2.5	30
	5.0	27
	10.0	24
8. One-way slab with narrow beam (> span/15)		Slab / Beam
	2.5	42 / 18
	5.0	38 / 16
	10.0	34 / 13

b. Concrete cover

1. Concrete cover shall comply with durability or fire resistance requirements, whichever condition is the more onerous.

2. The cover shall be measured to the outside surface of the duct; the minimum net cover for bonded