3.6.2.6 CONNECTIONS

Typical connections details shown in Figs (3.17 a - f) shall be followed.

1. The connection must have adequate strength to transfer the forces to which it will be subjected during its lifetime.
2. The connection must have ability to undergo relatively large inelastic deformations without failure.
3. The stresses caused by restraint of creep, shrinkage and temperature change (Volume change) must be considered in the design.
4. The connection must meet the durability and fire resistance requirements.
5. Connections shall be checked for the expected earthquake and wind forces.

Design Considerations:

- Can transfer internal diaphragm forces
- Can be designed as structural integrity tie

Fabrication Considerations:

- Advantageous to have no hardware in slab
- Beam embedments must line up with slab joints
- Accommodates variations in slab length

Erection Considerations:

- Advantageous to have connection completed by follow-up crew
- Difficult for welder to hold loose plate in position

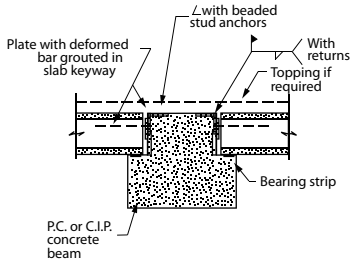

Fig. 5.3.1

Design Considerations:

- Can transfer internal diaphragm forces
- Can be designed as structural integrity tie

Fabrication Considerations:

- May increase beam reinforcement for shallower beam
- Layout must have opposing slab joints lined up

Erection Considerations:

- Clean and simple

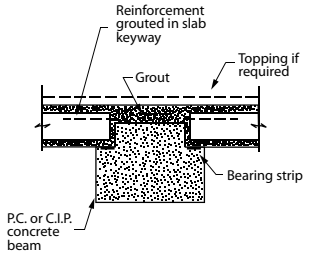

Fig. 5.3.2

Fig. (3.17a) Connections

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Design Considerations:

- With large factors of safety, friction may transfer nominal forces
- Additional structural integrity ties may be required

Fabrication Considerations:

- Clean and simple

Erection Considerations:

- Clean and simple

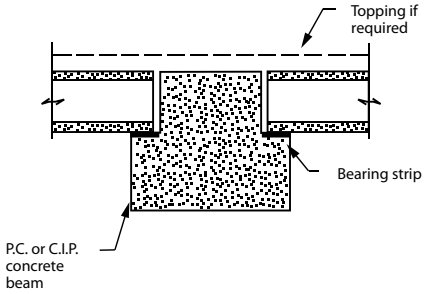

Fig. 5.3.3

Design Considerations:

- Can transfer internal diaphragm forces
- Can be designed as structural integrity tie
- Consider concrete cover on reinforcement over beam

Fabrication Considerations:

- Slab layout must have opposing joints lined up

Erection Considerations:

- Clean and simple

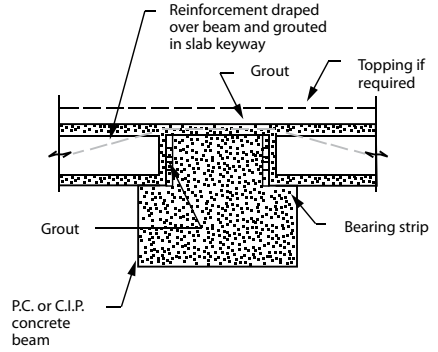

Fig. 5.3.4

Fig. (3.17b) Connections