



Fig. (3.11) U-Bar at the edge of slab and junction of wall and slab

- 4. All columns should be checked for punching shear, manually or by using applied software.
- 5. Anchor bursting reinforcement should be added to resist the tensile stresses caused by the concentration of the force applied at the anchors, Fig. (3.12).



Fig. (3.12) Anti Burst steel at dead and live ends

g. General

- 1. Temperature and lateral force analysis should be done by 3-D building model, Pre stressed programs shall be used for gravity loads analysis only.
- 2. Bottom steel at columns and support locations should be not less than 30% of the top steel at the same location.
- 3. Elongation of the strands should be submitted with design drawings in separate sheet.
- 4. The accepted deviation between site recorded elongation and software output elongation shall be within $\pm 10\%$.

- 5. Transfer slabs or beams shall be of RCC only, pre stressed tendons could be used to reduce the deflection only.
- 6. It should be noted that after stressing the bonded system and before grouting has taken place, it should be considered as un-bonded system.
- 7. Grouting should be done at least three days before removing the scaffolding. If the grouting has placed after removal of the scaffolding, the design should be checked as un-bonded system.
- 8. P/A should be not less than 0.7 MPa as an average value, If the average precompression exceeds 3.0 MPa, the design engineer shall explicitly recognize and account for the consequence of shortening of the member in connection with the restraint of the member's supports.
- 9. In members where early stressing is desired to reduce the risk of early shrinkage cracking, it is common to stress the tendons in two stages. The first stage is usually about 25% of the final pre stress force, and is carried out as soon as the concrete has gained adequate strength for the anchorage being used. This concrete strength could be between 10 and 15MPa. It is important that sufficient site-cured cubes or cylinders are provided to determine the transfer strength.
- 10. Where prestressing is seating be wedges a minimum value of draw in value of 6mm should be used in the design calculation.
- 11. Where a slab or system of secondary beams is stressed across primary beams, attention must be given to the sequence of stressing in order to avoid damage to the formwork of the primary beams.

3.4 GENERAL NOTES FOR SPECIALIST & SYSTEM APPROVAL

- 1. CED-Trakhees has the right to cancel any previously approved post tension system in case experienced several defect during the system application.
- 2. CED-Trakhees has the right to cancel any designer registration, if the same did not perform satisfactory.