TWENTY-STORY HOUSING MAKES THE GRADE

The University Center of Chicago provides housing for 1,723 students who attend DePaul University, Roosevelt University and Columbia College University. The construction and design team of Turner Construction Co., Antunovich Assoc. V.O.A., and Chris P. Stefanos Associates, chose a post-tensioned concrete frame for the 20-story building.

Above the plaza level, the framing system consisted of a 9.5-in.-thick flat plate with no drop heads or beams. The PT tendons were installed in banded and uniform pattern. Spans varied in dimensions with a maximum span of 32 ft.

The 'E' shape of the structure, with the longest dimension of 355 ft, presented a few construction and design challenges on the thermal expansion and rapid construction schedule. AMSYSCO, the post-tensioning supplier on the project, worked with Adjustable Forms Inc., the concrete shell contractor, in developing a solution. Expansion joints were eliminated and the building was constructed as two independent structures.

A 10-ft-wide pour strip separated each structure, which was left open until both sections of the building were completed and thermally controlled. This option allowed dissipation of all elastic shortening and considerable shrinkage of the two separate sections. The operations manager of Adjustable Forms, Scott Kennedy, says, "The structural modification allowed us to place 1,285 cu yd of concrete, and finish 34,012 sq ft of typical supported work every week. This gave Turner Construction two months of additional-time to complete their finish trades, ensuring an on-time completion for the students." ■