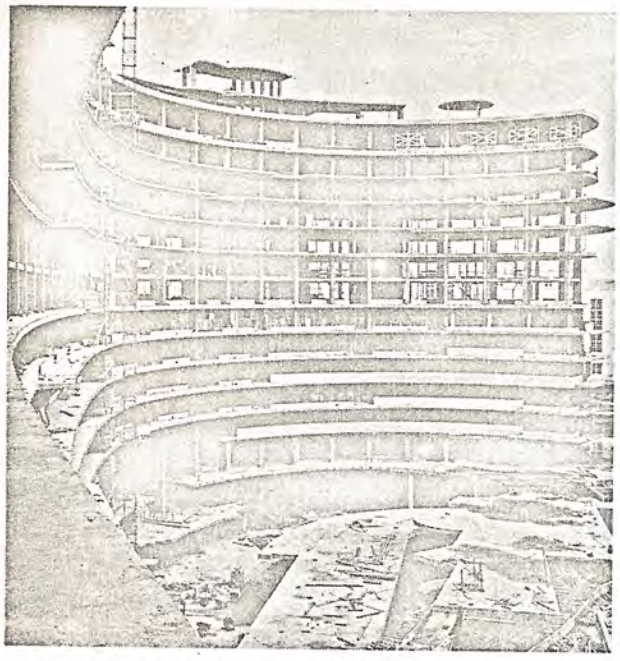
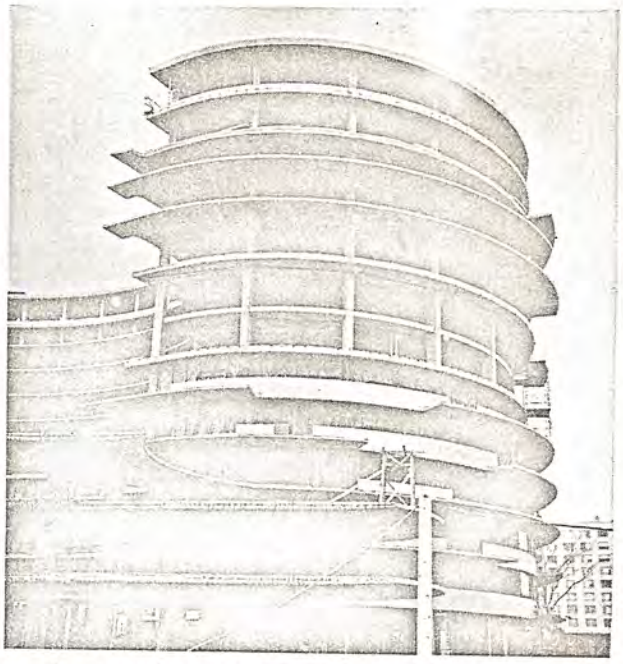


Curved lines predominate Washington co-ops . . .



so, for coordinating working dimensions . . .

Designers Throw Curves to a Computer

Without an electronic computer, the irregularly curving walls and unstandardized floor plans of Washington's Watergate complex would have given incurable headaches to everyone on the job, from the architects and engineers to the curtain-wall manufacturers. But thanks to the computer, Roman architect Luigi Moretti's free-flowing imagination has already been captured in one of the five buildings.

The $66-million project comprises four buildings on a 10-acre site by the Potomac—three apartments, an office-hotel. Viewed from above, the buildings will look like the letters C, I, J and T molded by a giant with a flair for modern sculpture. They will enclose landscaped grounds terraced as the ground slopes toward the river. Underground are three levels of parking for 900 automobiles.

The J-shaped Watergate East, now topped out, is a 13-story luxury apartment. It will contain 238 cooperative apartment units, with a cost range of $19,000 to $235,000.

Though he made some concessions to straight lines in interior partitions, Mr. Moretti still favored curves in every place possible—in elliptical entrance halls and some curved partitions.

ALPHABET-SHAPED Watergate apartments will occupy 10-acre site by the Potomac.

With no typical floors, and with constantly changing wall curvatures, balcony dimensions and column-to-window distances, the use of a computer for layout and structural design joined such use for Critical Path Scheduling. The individualism of this project affected even the CPM. Because the seventh and eighth floors are duplex apartments the finish work proceeds from the sixth floor down, returns to the seventh-eighth floors, and then goes to the 12th floor down. And indecisive tenants who have not made up their minds on interiors can further complicate things by requesting that their apartments be removed from the cycle.

The complexity of the layout work gives the Watergate project one advantage over a conventional project, according to Corlis Erb, job captain for Corning, Moore, Elmore & Fischer, Washington, D.C., (architects associated with Mr. Moretti). By making all parties dependent on the computer program, all worked to the same as-built dimensions. The concrete subcontractor, manufacturers of windows, spandrel panels and fan-coil units were all supplied with identical working dimensions. This procedure eliminated the chance of errors developing as the result of manufacturers carrying out their own computations.

Structural engineers are Heinzman & Clifton, Washington. Survey engineers are Matz-Childs & Associates, of Rockville, Md. Engineering Physics Co. ran the computer program.