

REPORT ON 24 UNIT APARTMENT BLOCK, WINNIPEG, MAN.

THIS BUILDING was the first in Canada to make use of the Youtz-Slick Slab Lift Method technique of concrete construction. The contractor and owner was Frank R. Lount & Son.

The reinforced concrete design for this building was done by Cowin & Company of Winnipeg. It was designed as a three storey building with four structural slabs (basement floor, 1st, 2nd floors and roof slab). Forty-three feet six inches by ninety-six feet and nine inches thick supported on eight Columns. The basement floor slab was made structural and lifted two feet from the ground due to the local soil conditions. The Columns used in this design were two—eight by eight by one-half Angles stitch welded four inches every two feet in height to form a square section. The lifting collars were the same design as the ones used on the Trinity Administrative Building in San Antonio, Texas.

Bored caissons thirty inches in diameter and spread out on hardpan forty feet below grade were the foundations for the column. Smaller fourteen inch piles were used to support a perimeter beam which supports the exterior wall.

Construction started on the 15th of October 1951, when the building was excavated to a depth of three feet six inches. Then the perimeter and column foundation piles were bored and concrete placed. The columns and lifting collars were then placed on top of the footings and suitably anchored. This work took until November 5th 1951. The weather then turned cold so a tarpaulin housing ten feet high was built using the columns as supports. Under this protection a two inch layer of concrete was poured on the ground as a support for the reinforcing rods of the basement slab and also as a protection against heavy rains and the resulting mud in which it would have been impossible to place concrete.

The reinforcing steel, electrical conduits, plumbing and heating sleeves were then placed and the concrete for the first slab (basement floor) was poured. The following day the separating medium was applied and the process of placing of reinforced steel, electrical conduits, etc., was repeated. This



STAGE 2

continued until all four slabs were completed. The first slab was poured on the ground on the 29th of October 1951 and the last one three weeks later. During this period there were only two carpenters on the job, except for the days when concrete was placed, one of them acting as a foreman.

The concrete was allowed to cure until December 5th. The weather in the meantime was quite cold and the concrete was kept warm by using two gasoline heaters.

On December 5th the first lift was made. It was a very cold day and the hydraulic fluid refused, at first, to operate the small hydraulic motors on the holding nuts of the lifting rods. It was found necessary to thin the fluid out with kerosene. There were other minor difficulties but nothing very serious, and the lift was completed as per schedule on December 12th.

The slabs, when they reached their final position, were welded into place using six inch by six inch by one inch steel collar.

The handling of the one hundred and twenty-five cubic yards of concrete per slab was accomplished in four weeks of placing, two weeks of curing and one week of lifting.

When the slabs were in place the lower floor was then housed in by hanging the tarpaulins from slab to slab and work was again possible with very little heating necessary.

As a construction technique there are several advantages in the Youtz-Slick Slab Lift Method:

- (a) Speed in construction to fit the shorter building season.
- (b) A one-storey housing will close in a four storey building.
- (c) The small housed in space is easier and cheaper to heat.
- (d) A remote job is hard to supply with skilled labor.

When Youtz-Slick Slab Lift Method is used a relatively small number of skilled workmen is required to perform the forming operation.

The above listed advantages are only the ones relating directly to the climate and the vastness of this country. The Parties financially interested were very satisfied with the performance of the equipment and the overall technique.



STAGE 1