one bit per sector specifying either "used" or "available." The two sectors are read into one of four tables in the Executive memory when the quarter-track on which they are located is being modified. The I-O Processor uses the table in memory to locate available sectors, changes the table as additional sectors are used, and rewrites the table on the Fastrand when necessary (as described below). Each of four sector-availability tables in Executive memory ("Table 1" through "Table 4") contains the availability information for one quarter-track. Table 1 is assigned to the quarter-track being used for nonaddressed writes on third Ø. Tables 2 and 3 are used in a like manner for thirds 1 and 2. Table 4 is used for held writes and held or free rewrites on all thirds of the drum. Tables 1, 2, and 3 need to be written out only when the corresponding quarter-tracks are completely filled. Because the contents of Table 4 relate to quarter-tracks designated by the user programs, Table 4 is written back onto the drum and reset with information about another quarter-track very frequently.

Any of the Fastrand operations which a user program may perform (via IOT's) reaches the I-O Processor as one of four basic operations—— read, rewrite, nonaddressed write, or held write. Each of these operations requires certain preconditions to be satisfied before the desired information transfer can occur; the preconditions can frequently be satisfied by the I-O Processor while the user program is being swapped into core in "IOP wants" status. The preconditions for each basic operation are as follows.

A. *Read*

1. Have the boom positioned on the track specified by the user program.