A fully configured TS3500 tape library with one L23 frame and 15 D23 frames supports up to 192 drives. An L23 base frame and 15 D23 expansion frames with a minimal drive configuration provide a maximum capacity of 6260 storage slots, with a total capacity of 125.2 PB without compression by using the TS1160 tape drive.

The base frame (model L*xx*) is always on the left and as many as 15 other expansion frames (model D*xx* or *Sxx*) can be added to the right side. During the installation of more D23 or S24 frames, the x-rail of the L frame is extended where the accessor is so that the accessor can move through the newly installed frame.

If a D23 or S24 frame is attached to an L53 frame, the First Expansion Frame Attachment Feature (FC9002) for the L53 must be specified. Subsequent expansion requires the Additional Expansion Frame Attachment feature (FC9003).

More 16-slot I/O stations for 3592 media must be ordered by using FC1659 if a D23 or S24 frame is attached to an L53.

Feature code 1656, a 4 I/O station door, is available on newly purchased D23 frames. One 4 I/O station door has four 16 slot I/O stations for a total of 64 other I/O storage slots. Feature Code (FC) 1451 must be ordered as a prerequisite when a 4 I/O station door is ordered.

> **Important:** If the L frame is not an L52, or L53, the first D frame of a mixed media library has one less storage slot to accommodate a diagnostic cartridge.

13.1.3 TS3500 tape library storage-only frames S24 and S54

IBM TS3500 storage-only frame includes the Model S24 Frame and the Model S54 Frame. The TS3500 tape library Model S24 and S54 frames are high density (HD) version 1 storage only expansion frames compatible with existing TS3500 tape libraries and frames.

ALMS is required for S*xx* storage-only frame support. For more information, see 13.6, "Advanced Library Management System" on page 408.

The TS3500 tape library Model S24 expansion frame is for 3592 data cartridges. Up to 15 Model S24 expansion frames can be added to the TS3500 Model L22 or L23 base frame to increase 3592 cartridge storage. Each Model S24 Frame supports up to 1000 IBM 3592 cartridge slots.

The TS3500 tape library Model S54 expansion frame is for LTO data cartridges. Up to 15 Model S54 expansion frames can be added to the TS3500 tape library Model L52, or L53 base frame to increase LTO cartridge storage. Each Model S54 Frame supports up to 1320 LTO cartridge slots.

High-density technology

The depth of a cartridge location in an HD slot is known as the *tier*. The cartridge that is immediately accessible in the HD slot is a tier 1 cartridge. Behind that tier is tier 2, then tier 3, and so on. The maximum tier in an LTO HD slot is tier 5. The maximum tier in a 3592 HD slot is tier 4 because the 3592 cartridge is slightly longer than the LTO cartridge. The single HD slots on the door side of HD frames and in non-HD frames are referred to as *tier 0 slots*.