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Our name stands for Service, Stability, Solutions, and Innovation



MEZZANINES

Specialized Storage Systems can help you double the capacity of any available space without incurring the cost of new construction. Mezzanines can reduce the need to lease additional space or add on to your building, enable you to utilize the overhead space within your facility and avoid costly expansion. We design, fabricate and install mezzanine systems for any application. Mezzanines can be used in a variety of industries for storage, order picking, conveyor support, office space, lunch or break rooms, tool cribs, locker rooms.

There are generally three types of mezzanines or multi-level systems available to help make the best use of the space in your facility. The type of mezzanine or multi-tier selected depends on your budget, picking operation, type of product to be stored, building clear heights, and local building codes.



Free-standing structural steel multi-level mezzanines

Free-standing structural steel multi-level mezzanines are designed to maximize floor space and take advantage of unused overhead space. These systems can be a cost-effective alternative to new construction and allow unlimited placement of shelving, racking, modular or stick-built offices, production equipment, or inventory above and below the deck. These multi-level systems may require stamped and sealed drawings along with footing designs to make sure the concrete floor will withstand the column loads and not crack (considered a structural building failure by local code officials). Column spacing on the ground floor will vary depending on door locations, equipment locations, existing building columns locations, and/or offices, and the load on these columns will vary according to what the mezzanine design capacity will be. It follows that columns on the perimeter of the mezzanine will support either half or a quarter of the load compared to the interior ones. Typical capacities for these mezzanines range from a minimum of 125 psf up to 300 psf.

The type of decking used depends on the application. The most common and least-costly form of decking is tongue and groove plywood over a corrugated steel “b-deck”. Typically this is used for bulk box storage in buildings that do not have sprinklers and where there is only foot traffic and limited use of rolling carts. It is not recommended for areas with high humidity or where the possibility of moisture gathering exists because plywood will warp.

Resindeck installed over corrugated decking is typically used in scenarios where there is heavy cart or pallet jack usage, and where durability is a major concern. You will typically require the installation of sprinklers above and below the deck even though the corrugated steel deck acts as a fire baffle. It is not recommended for areas with high humidity or where the possibility of moisture gathering exists because these products will warp.

Bar grating is a very common method of deck used with the structural mezzanine, and is typically used where there is a desire for air flow or light needing to penetrate through the deck to the lower level. Even though the steel grating allows for 80 percent pass-through of air and water, building code officials will still require the installation of sprinklers under the deck to prevent fires from spreading. This deck is not recommended for applications where there is a lot of pallet jack or cart usage, because the wheels will typically get “chewed up” and the grating will deflect at the seams because it is not meant for point loads.

Another common type of deck is aluminum or steel diamond plate, which can be installed with or without corrugated decking as an underlayment for structural support. The load on the mezzanine, traffic pattern, thickness of the deck, and deflection limit of the mezzanine manufacturer will determine whether or not you will need to have the corrugated decking used for support. Steel diamond plate tends to be more durable than softer aluminum, and it is more often used in warehouse storage applications. Aluminum diamond plate is frequently used in most sanitary food or pharmaceutical applications but corrugated decking is usually prohibited because of the possibility of food products “pooling”, causing contamination and rodent infestation. In many instances, the seams of the deck should be welded to form a “pan” to facilitate washdown of the production equipment for sanitary purposes.

The type of handrail required will be determined by the local building code and whether the multi-level structure will be used for storage or offices with personnel walking up and down the system on a daily basis. Vertical picket railing is typically required in an office environment and IBC code regulations state that a stair must have an internal rail to make it handicap accessible.* The horizontal railing on the perimeter of the mezzanine level will typically be three-rail (BOCA) or two-rail (OSHA) compliant. Self-closing swing gates or sliding gates are used in instances where product must be lifted through an opening on to the mezzanine with a lift truck or vertical reciprocating conveyor (VRC).

The type of stair required also depends on the application. Local fire codes typically state that you cannot have more than 75 feet from a primary means of egress in order to be in compliance. If you have that condition, a second set of stairs will be required.*

*See your local building code for compliance.



Multi-level Mezzanines



Shelving Supported Mezzanines



Catwalk Mezzanines

Shelving Supported Mezzanines

Shelving supported mezzanines consist of a second floor of decking over an entire lower level of shelving or pallet rack. The second level consists of rack, shelving, offices, or work areas, and allows relatively unlimited placement of items on the second floor. Typical applications include automotive parts, spare parts, modular offices, conference rooms, and break rooms in warehouses where the capacity will not exceed 125 pounds per square foot. These multi-level systems may require stamped and sealed drawings from an engineer registered in that particular state who is familiar with local code compliance.

The type of decking used depends on what the application is. Resindeck installed over corrugated decking is typically used in scenarios where there is heavy cart or pallet jack usage, and where durability is a major concern. Bulk rack or shelving can be placed anywhere on the second level with minimum deflection and does not have to be restricted to being supported by the shelving or rack below it. You will typically require the installation of sprinklers above and below the deck even though the corrugated steel deck acts as a fire baffle. A common way to maximize space with the shelving supported mezzanine is to install a modular office or conference room on the second level.

Bar grating is another very common method of deck furnished with the shelving supported mezzanine, and is typically used where there is a desire for air flow or light needing to penetrate through the deck to the lower level. Even though the steel grating allows for 80 percent pass-through of air and water, most building code officials will still require the installation of sprinklers under the deck to prevent fires from spreading.

The type of handrail required around the perimeter will be determined by the local building code and whether the multi-level structure will be used for storage or offices with personnel walking up and down the system on a daily basis. Vertical picket railing is typically required in an office environment and IBC code regulations state that a stair must have an internal rail to make it handicap accessible.** The horizontal railing on the perimeter of the mezzanine level will typically be three-rail (BOCA) or two-rail (OSHA) compliant. Self-closing swing gates or sliding gates are used in instances where product must be lifted through an opening on to the mezzanine with a lift truck or vertical reciprocating conveyor (VRC).

The type of stair required also depends on the application. Local fire codes typically state that you cannot have more than 75 feet from a primary means of egress in order to be in compliance, so if you have that condition a second set of stairs will be required. IBC code regulations state that a stair must have an internal rail to make it handicap accessible, but if the shelving supported mezzanine is for storage, you may not require the internal railing.*

**See your local building code for compliance and for horizontal stair runs.

Catwalk Mezzanine Systems

Catwalk mezzanine systems consist of high-rise racking or shelving with decking placed only in aisles. This mezzanine requires shelving to be the same on all levels, but makes catwalks less expensive to construct. Common applications include small automotive parts, sheet metal, pipes and exhausts, tools, samples, archives, or any common-sized items. These double or triple level systems usually require stamped and sealed drawings from an engineer registered in that particular state who is familiar with local code compliance.

The type of decking used in the aisles depends on what the application is. Resindeck installed over corrugated decking is typically used in scenarios where there is heavy cart or pallet jack usage, and where long-term durability is a major concern. You will typically require the installation of sprinklers below the deck to compensate for product density even though the corrugated steel deck acts as a fire baffle. Bar grating is a very common and durable method of deck used with the catwalk mezzanine, and is typically used where there is a desire for air flow or light needing to penetrate through the deck to the lower level. Even though the steel grating allows for 80 percent pass-through of air and water, most building code officials will still require the installation of sprinklers under the deck to prevent fires from spreading.

The type of stair required also depends on the application. Local fire codes typically state that you cannot have more than 75 feet from a primary means of egress in order to be in compliance and if you have that condition a second set of stairs will be required. IBC code regulations state that a stair must have an internal rail to make it handicap accessible railing.**

The type of handrail required at the row ends will be determined by the local building code and whether the multi-level structure will have personnel walking up and down the system on a daily basis. Vertical picket railing is typically required in high traffic areas and IBC code regulations state that the stair must have an internal rail to make it handicap accessible.** The horizontal railing on the row ends of the multi-tier mezzanine will typically be three-rail (BOCA) or two-rail (OSHA) compliant. Self-closing swing gates or sliding gates are used in instances where product must be lifted through an opening on to the mezzanine structure with a lift truck or vertical reciprocating conveyor (VRC).

**See your local building code for compliance.

OSHA STAIRS

Based on 9 3/4" tread and 7" to 9" riser, open stair.
Add 1 1/2" to run for closed stair

BOCA/IBC STAIRS

Based on 11" tread and 5" to 7" riser, open stair.
Add 1 1/2" to run for closed stair

| Deck Height | No. of Risers | No. of Treads | Horizontal Stair Run | Deck Height | No. of Risers | No. of Treads | Horizontal Stair Run |
|-----------------------|---------------|---------------|----------------------|------------------------|---------------|---------------|----------------------|
| 2'-0" to 2'-3" | 3 | 2 | 1'- 7 1/2" | 1'-9 1/2" to 2'-4" | 4 | 3 | 2'-9" |
| 2'-3 1/2" to 3'-0" | 4 | 3 | 2'-5 1/4" | 2'-4 1/2" to 2'-11" | 5 | 4 | 3'-8" |
| 3'-0 1/2" to 3'-9" | 5 | 4 | 3'-3" | 2'-11 1/2" to 3'-6" | 6 | 5 | 4'-7" |
| 3'-9 1/2" to 4'-6" | 6 | 5 | 4'- 0 3/4" | 3'-6 1/2" to 4'-1" | 7 | 6 | 5'-6" |
| 4'- 6 1/2" to 5'-3" | 7 | 6 | 4'-10 1/2" | 4'- 1 1/2" to 4'-8" | 8 | 7 | 6'-5" |
| 5'-3 1/2" to 6'-0" | 8 | 7 | 5'- 8 1/4" | 4'- 8 1/2" to 5'-3" | 9 | 8 | 7'-4" |
| 6'-0 1/2" to 6'-9" | 9 | 8 | 6'-6" | 5'- 3 1/2" to 5'-10" | 10 | 9 | 8'-3" |
| 6'- 9 1/2" to 7'-6" | 10 | 9 | 7'- 3 3/4" | 5'- 10 1/2" to 6'-5" | 11 | 10 | 9'-2" |
| 7'- 6 1/2" to 8'-3" | 11 | 10 | 8'- 1 1/2" | 6'- 5 1/2" to 7'-0" | 12 | 11 | 10'-1" |
| 8'- 3 1/2" to 9'-0" | 12 | 11 | 8'- 11 1/4" | 7'-0 1/2" to 7'-7" | 13 | 12 | 11'-0" |
| 9'- 0 1/2" to 9'-9" | 13 | 12 | 9'-9" | 7'- 7 1/2" to 8'-2" | 14 | 13 | 11'-11" |
| 9'-9 1/2" to 10'-6" | 14 | 13 | 10' - 6 3/4" | 8'- 2 1/2" to 8'-9" | 15 | 14 | 12'-10" |
| 10'- 6 1/2" to 11'-3" | 15 | 14 | 11'-4 1/2" | 8'-9 1/2" to 9'-4" | 16 | 15 | 13'-9" |
| 11'- 3 1/2" to 12'-0" | 16 | 15 | 12'- 2 1/4" | 9'-4 1/2" to 9'-11" | 17 | 16 | 14'-8" |
| 12'- 0 1/2" to 12'-9" | 17 | 16 | 13'-0" | 9'- 11 1/2" to 10'-6" | 18 | 17 | 15'-7" |
| 12'- 9 1/2" to 13'-6" | 18 | 17 | 13'- 9 3/4" | 10'- 6 1/2" to 11'-1" | 19 | 18 | 16'-6" |
| 13'-6 1/2" to 14'-3" | 19 | 18 | 14' -7 1/2" | 11'-1 1/2" to 11'-8" | 20 | 19 | 17'-5" |
| | | | | 11'- 8 1/2" to 12'-3" | 21 | 20 | 18'-4" |
| | | | | 12'- 3 1/2" to 12'-10" | 22 | 21 | 19'-3" |
| | | | | 12'- 10 1/2" to 13'-5" | 23 | 22 | 20'-2" |
| | | | | 13'-5 1/2" to 14'-0" | 24 | 23 | 21'-1" |
| | | | | 14'-0 1/2" to 14'- 7" | 25 | 24 | 22'-0" |
| | | | | 14'- 7 1/2" to 15'-2" | 26 | 25 | 22'-11" |



To find the right solution for your needs, contact us at 973-227-0018
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