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GENERAL MEZZANINE INFORMATION AND SPECIFICATIONS

1. A “Mezzanine,” as recognized by Nucor Building Systems, is an intermediate level between the floor and ceiling usually occupying a partial area of floor space.

2. Mezzanines may be ordered and designed to accommodate conditions involving storage and/or occupancy.

3. Nucor Building Systems will engineer all mezzanine material specified on the signed “Nucor Order Documents” that is to be supplied by Nucor. Nucor Building Systems will not be responsible for materials outside of that ordered on the contract. It is imperative therefore that all applicable information and an accurate sketch is generated to insure that Nucor understands and provides for the correct conditions.

4. Three general areas of information are involved with mezzanine structures. (This information must be provided by the builder.)
   
   – Establishment of mezzanine parameters including critical vertical clearances and penetration locations and sizes.
   
   – Specification of design criteria.
   
   – Specification of material to be supplied by Nucor.

5. Design of mezzanine material shall be determined by Nucor Building Systems, unless specifically noted otherwise. Size, shape and depths of material will be to the discretion of Nucor’s Engineering department limited only by the parameters documented in the “Nucor Order Documents”.

6. Mezzanine designs involving joist and/or decking require field work for erection. The manufacturer of the joist, deck or detailed drawings provided by Nucor shall provide installation literature for these items.

7. Refer to mezzanine plan information.
SM0010PE – MEZZANINE PLAN INFORMATION

DETAIL NAME IF APPLICABLE

SM0010PE.DWG 4.5.3

REFERENCE PAGE 4.5.4 FOR DESCRIPTION OF NOTED AREAS ON ABOVE PLAN INVOLVING NECESSARY INFORMATION FOR MEZZANINE ORDERING.

EXAMPLE MEZZANINE LAYOUT

(PROVIDED BY NUCOR CUSTOMER)
INFORMATION REQUIRED FOR MEZZANINE STRUCTURES

NOTE: Accuracy showing mezzanine information on the Nucor Building Systems order documents greatly reduce the chance of additional costs and scheduling delays. Accurate and complete foundation reactions cannot be calculated without penetration locations and load requirements.

1. Establishment of mezzanine parameters and penetration locations and sizes: (Reference ‘Example Mezzanine Layout’ this section)
   a. The size and location of mezzanine within the building structure must be determined. A mezzanine/building sketch is an excellent way to ensure information and placement of mezzanine is correct.
   b. Provide information that allows for or prohibits additional support column placement. Also convey any other structural restrictions relevant to the mezzanine framing.
   c. Establish direction of joist. If direction of joist and placement of mezzanine beams is not provided by the customer, Nucor Building Systems will determine a framing layout utilizing Nucor Building Systems standards. Don’t forget standard joist camber when calculating floor elevations and finishes. See SJI or manufacturer’s information for requirements.
   d. Provide exact location of any floor penetrations requiring special framing. Provide “clear” width and length dimensions needed. Design of framing material will establish center to center of beams.
   e. Establish Mezzanine interior edge condition. Provide projection dimensions beyond support framing if applicable.
   f. Establish Mezzanine exterior edge condition. Provide projection dimensions beyond support framing if applicable.

2. Define whether or not Nucor Building Systems is supplying support for stairwells. If so, show location and specify loads.

3. Mezzanine confirmation drawings will be issued to the builder on all jobs that have mezzanine steel by Nucor Building Systems, for coordination with other trades. These are not approval drawings; they simply convey what Nucor is supplying. If changes are required to these drawings, significant cost and delivery delays can occur. Therefore, it is important that accurate requirements are given as soon as possible.

![Diagram of mezzanine floor termination at edge of beam or column flange unless noted otherwise.]

LAST REVISION
DATE:   02/09/01
BY: CDM   CHK: RJF
FLOOR AND/OR MEZZANINE DESIGN INFORMATION FORM

MEZZANINE I.D. (1, 2, 3...):_________

Design Loads:
Dead Load: _____ psf  Live Load: _____ psf  Collateral Load: _____ psf (Top Chord)
(Does NOT include the weight of the floor joist or support beams)
_____ psf (Bottom Chord)

Mezzanine Dimensions:
Length: _____ (Perpendicular to frame)  Width: _____ (Parallel to frame)
_____ Slab Thickness  Light Weight Concrete  Standard Weight Concrete  Other: ___________
_____ Plywood Thickness  Plywood  Metal deck

If the building has a stairwell, the size, location, and method of support, if required, MUST be shown on the Sketch page.
(Dimensions shown should be the inside clear dimensions)
Sizes of required Floor Openings: ________________________
Total Stairwell Weight: ________________________

MATERIALS PROVIDED BY NUCOR BUILDING SYSTEMS:
Auxiliary Support Columns  Deck Type: ______ C _______ Gauge  ______ ______ ______ Gauge
Support Beams  Deck Attachment: Welded  Self-Drilling Screws
Bar Joists and Bridging  Deck Finish: Prime gray  Galv. G-80  Other: ___________
Bolted Joists  Welded Joists  Edge Angle / Pour Stop

INDICATE APPLICABLE SIDEWALL DETAILS AND PROVIDE REQUESTED DIMENSIONS:
The details shown below are suggested methods of framing only. If framing methods other than shown below are required, show the details required on the sketch page. Frame columns will be straight or tapered, depending on the building type. Endwall column depth will vary depending on loads.
Use additional Mezzanine Design Information forms if there is more than one mezzanine area.
Joist design, including camber considerations, is performed in accordance with Steel Joist Institute (SJI) standards.
Deck is designed and fabricated in accordance with Steel Deck Institute (SDI) standards.

DIMENSIONAL DATA

<table>
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<th>DIMENSIONAL DATA</th>
<th>REQUESTED</th>
<th>PROVIDED</th>
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<tr>
<td>A - RATED FLOOR TO TOP OF MEZZANINE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B - MINIMUM REQUIRED CLEARANCE UNDER JOIST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C - MINIMUM REQUIRED CLEARANCE UNDER FLOOR BEAMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D - MINIMUM REQUIRED CLEARANCE UNDER FRAME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E - EDGE OF FLR / DECK DECK SPACING FROM STEEL FLANGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F - CLEARANCE UNDER FRAME</td>
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MEZZANINE JOINT SPACING / JOINT HOLE DEPTH: / /
SM0030PE – WELDED JOIST ATTACHMENT

1/2"

JOIST

MEZZANINE BEAM

JOIST
1. Mezzanine framed openings are typically achieved by placing a column at the edge of the opening that is not already adjacent to a mezzanine beam, as shown above. Because of that, it is important that opening sizes and locations are given at order entry, so as not to cause delays or pricing impacts. It is also important to include at least general framed opening information at the quote stage so that additional pricing can be avoided at order entry. For openings at stairwells, please indicate whether or not the Nucor steel is supporting the stairway on the mezzanine form of the order documents.

2. Typically, base plates for mezzanine columns are recessed below floor. Please indicate required base plate elevations in box 28 of the order documents. If not stated otherwise, they will be set at finished floor elevation.

3. Standard mezzanine column and beam shapes are built-up “H” sections. Special requirements can and usually do have pricing impacts. Consult Nucor Sales Engineering or estimating if special requirements are needed.

4. If “X” bracing is allowed between mezzanine columns, please show available locations on the order document sketch.
BEAM CONNECTION DETAILS

AP0010 – BEAM END CONNECTION WITH “I” SHAPE COLUMN

BEAM CONNECTION DETAIL
MEZZ. BEAM END CONDITION WITH “I” SHAPE COLUMN

AP0010
AP0040 – FLUSH BEAM END CONNECTION WITH “I” SHAPE COLUMN

BEAM CONNECTION DETAIL
MEZZ. BEAM END CONDITION WITH “I” SHAPE COLUMN

AP0040
AP0070 – INTERIOR CONNECTION WITH “I” SHAPE COLUMN

BEAM CONNECTION DETAIL
MEZZ. BEAM TO INTERIOR ”I” SHAPE COLUMN
AP0100 – FULL HEIGHT COLUMN (2 BEAMS – FLANGE CONNECTION)

BEAM CONNECTION DETAIL
MEZZ. BEAM TO FLANGE OF FULL HEIGHT COLUMN

CLIP MK# (NS & FS)
W/ ( ) 3/4” X 3” A325

JOIST

BEAM

COLUMN

CLIP MK# (NS & FS)
W/ ( ) 3/4” X 3” A325

3 3/4” TYP.

NOTE:
3/4” WASHERS REQUIRED OVER ALL SLOTS.

VIEW "A"

AP0100
AP0110 – FULL HEIGHT COLUMN (1 BEAM – FLANGE CONNECTION)

NOTE:
3/4" WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO FLANGE OF FULL HEIGHT COLUMN.
AP0120 – FULL HEIGHT COLUMN (2 BEAMS – WEB CONNECTION)

NOTE:
3/4” WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO WEB OF FULL HEIGHT COLUMN

AP0120
AP0130 – FULL HEIGHT COLUMN (1 BEAM – WEB CONNECTION)

NOTE:
3/4” WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO WEB OF FULL HEIGHT COLUMN

COLUMN

CLIP MK# (NS & FS) WITH ( ) 3/4" X 3" A325

3 3/4"

JOIST

BEAM

VIEW "A"

AP0130
AP0140 – END CONNECTION TO DEEPER BEAM (2 BEAMS – SAME ELEVATION)

CLIP MK# (NS & FS) WITH
(  ) 3/4" X 3" A325

CLIP MK# (NS & FS) WITH
(  ) 3/4" X 3" A325

NOTE:
3/4" WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO WEB OF DEEPER BEAM AT SAME ELEVATION

AP0140
CLIP MK# (NS & FS) WITH ( ) 3/4” X 3” A325

NOTE:
3/4” WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO WEB OF DEEPER BEAM AT SAME ELEVATION

AP0150
AP0160 – END CONNECTION TO DEEPER BEAM (2 BEAMS – DIFFERENT ELEVATION)

DETAIL NAME IF APPLICABLE
AP0160.DWG

NOTE:
3/4” WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO WEB OF DEEPER BEAM AT DIFF. ELEVATION
AP0170 – END CONNECTION TO DEEPER BEAM (1 BEAM – DIFFERENT ELEVATION)

NOTE:
3/4” WASHERS REQUIRED OVER ALL SLOTS.

BEAM CONNECTION DETAIL
MEZZ. BEAM TO WEB OF DEEPER BEAM AT DIFF. ELEVATION

AP0170