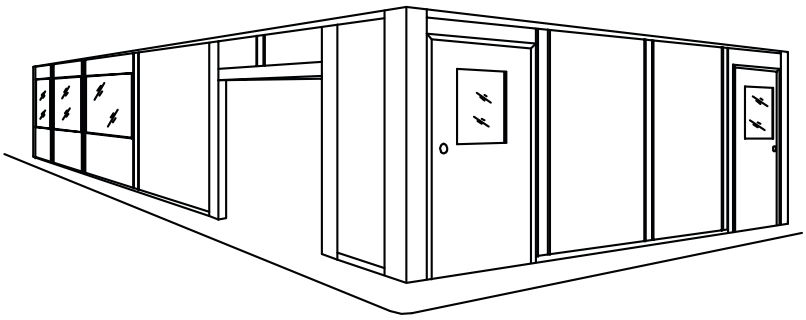
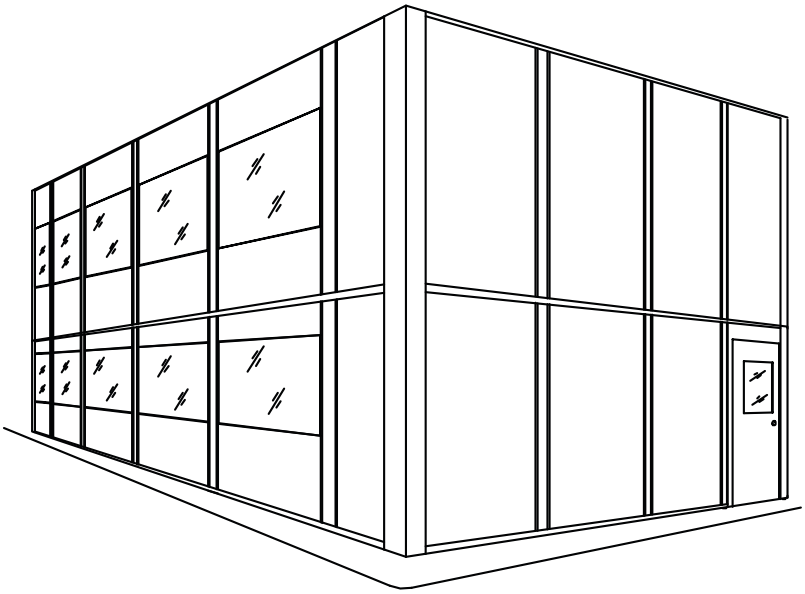
NATIONAL PARTITIONS
BUILD FOR CHANGE





INSTALLATION MANUAL

nationalpartitions.com
service@n-p.com
800-996-7266

TABLE OF CONTENTS

Introduction

The purpose of this manual is to provide a guide to customers on the installation and assembly of National Partitions modular building. At National Partitions, **we recommend that you inspect your materials upon delivery to ensure that no damage or loss has occurred during transportation**. If you experience any problems, please notify us promptly.

Tools Needed For Installation

Tape Measure

Square

4' Level

Tin Snips

Phillips Screw Driver #2

Power Drill

Phillips Head Screwdriver

Flat Head Screwdriver

Chalk Line

Hammer

Rubber Mallet

Razor Knife

5/16" Hex Head Nut Driver

Hammer Anchoring Gun

Concrete Drill Bits(For Gun and Anchors)

Helpful Tool:

Putty Knives(Help with Panel Installation)

Table of Contents

Contents 1

Safety Notes 2

Parts Diagram 3

Fasteners Provided 4

Layout and Floor Track Preparation 5

Corner/ Existing Connection Installation 6

Steel Connection System 7

Aluminum Connection System..... 8

Wall Panel Installation 9

Window/ Single Door Installation 10

Double Door Installation 11

Electrical Locations 12

Standard Electrical 13

Electric Box at an Insert..... 14

Electrical Installations 15

Modular Wiring Instructions 16

H-Mull Connections 17

Steel Connections 18

Drop Ceiling Installation..... 19

Roof Panel Installation 20

Two Story Roof Installation 21

Two Story Roof Installation Side View 22

Warranty Information..... 23

SAFETY NOTES

Use all necessary precautions to ensure your safety and those around you, and always use fall protection. Wear proper clothing, including protective work shoes, hard hat, safety glasses, gloves as needed, etc.

Prior to Starting the Installation:

1. Upon receiving the shipment: Compare the packages to the Bill of Lading's count and descriptions. Inspect all packages and material for damage or loss during transit. All irregularities must be marked on the Bill of Lading and the carrier notified immediately.

2. Compare the parts with our Bill of Materials, insure that the accurate number of each item has been shipped. Notify National Partitions Service Department at 800-996-7266 or service@n-p.com, if you experience any problems.

3. Read all instructions thoroughly before assembling.

Special Circumstances:

This manual is not meant to cover every possible installation circumstance. Please refer to National Partitions drawings and details provided for special assembly instructions.

Important Note:

If you cannot find proper instructions or have questions about what has been provided,
DO NOT PROCEED and contact our Service Department for clarification. National Partitions will not reimburse additional costs for rework, improper assembly or anything beyond the parameters of our written warranty.

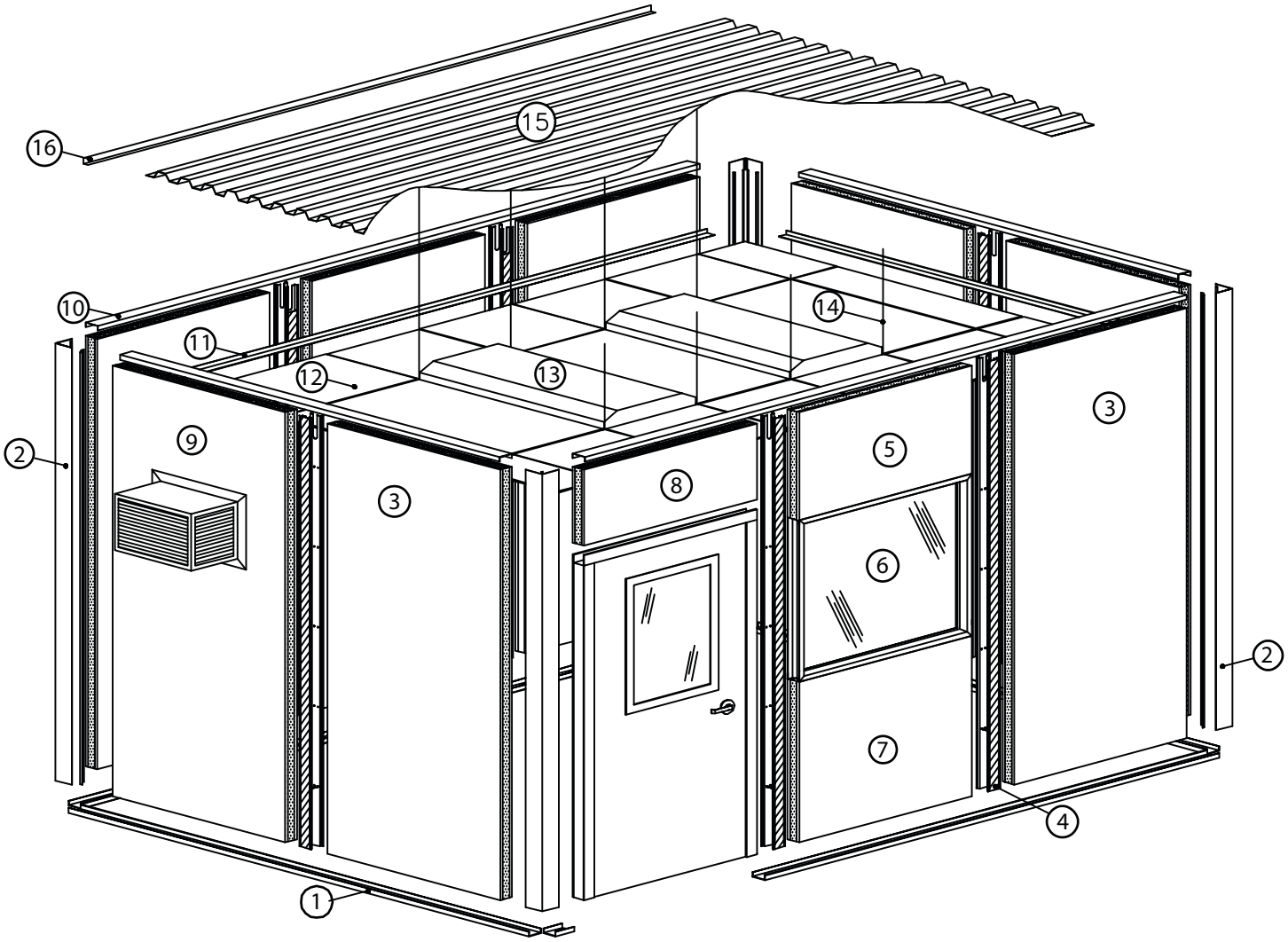
Site Requirements:

Adequacy of the existing structure, including the slab or other floor, to handle the additional applied loads from National Partitions structure is the responsibility of the end user.

During Installation:

1. Care must be exercised in handling these materials.
2. Securely fasten all material during lifts to prevent slippage or tilting.
3. Securely fasten all parts before proceeding to the next step.
4. Do not make any material or fastener substitutions.

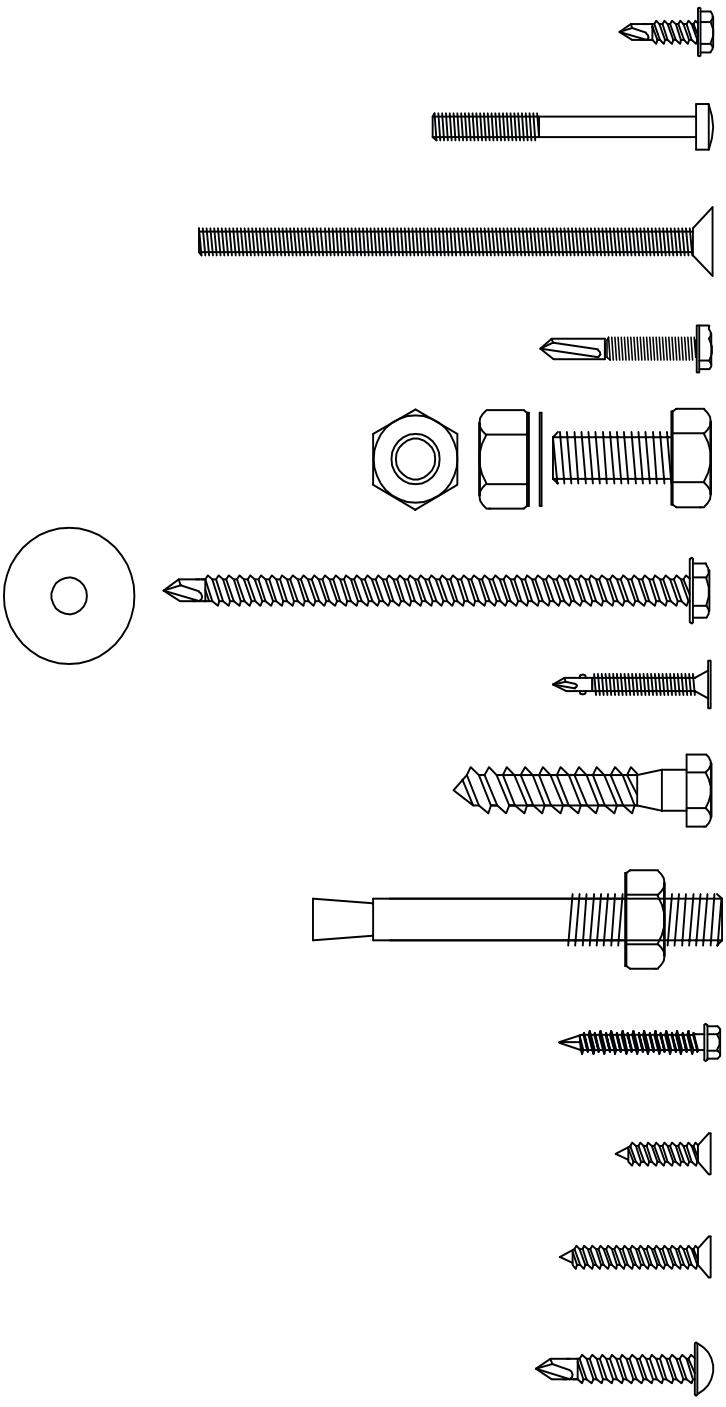
PARTS DIAGRAM NOTES



PART LIST

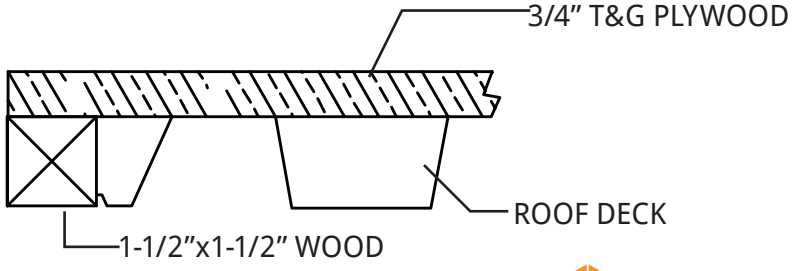
1. BASE CHANNEL
2. CORNER POST
3. SOLID PANEL
4. POST HALF/FEATURE STRIP
5. WINDOW HEADER PANEL
6. HALF LIGHT WINDOW
7. WINDOW BOTTOM PANEL
8. DOOR PANEL
9. A/C PANEL
10. TOP CHANNEL
11. WALL ANGLE
12. ACOUSTICAL TILE
13. LIGHT FIXTURE (TROFFER)
14. TIE WIRE
15. CORRUGATED ROOF DECK
16. ROOF FASCIA

FASTENERS(PER DESIGN)



F-PS	#10x3/4" Hex Head Tek Screw (For Standard Sheet Metal Fastener)
F-PBU	1/4”x2-1/4” Post Bolts (For Inside and Outside Post Halves)
F-CPB	1/4”x4-3/4” Corner Post Bolts (For Inside and Outside Corner Post)
F-TK12	#12-24x1-1/2" Tek Screw (For Roof Deck To Beam)
F-B58	5/8" Hex Head Bolt (A325) (With Nut and Washer) (For All Structural Steel Connection)
Fender	1/4”x5” Tek Screw with Fender Washer (For Roof Panel 3/8 Head)
F-PLY	#10-24x1-7/16” Flat Head Wing Tek (For Plywood to Deck)
F-LAGS	1/2”x2-1/2” Lag Screw (For 2nd Story Columns)
F-RHA2	1/2” Hilti TZ Anchors
TAP	1/4”x1-3/4” TAPCON 18” O.C. (Included with NATIONAL Installs only)
F-DD2	#6x3/4” Flat Head Sheet Metal Screw (For Astragal)
F-DD	#8x1-1/2” Flat Head Sheet Metal Screw (For Door Jambs to Panels)
F-DD1	#10x1-1/4” Pan Head Tek Screw (For Top of Door Jambs)

Two Story Buildings need the addition of 3/4” plywood including 1-½” x 1-½” pressure treated wood around perimeter and fasteners for columns and thresholds as noted above.
NOTE: SEE PAGE 20 FOR ADDITIONAL INSTRUCTIONS.



LAYOUT AND FLOOR TRACK PREPARATION

STEP 1: Refer to the provided National Partitions floor plan drawings. Follow the floor track layout as specified in the National Partitions plan.

STEP 2: Make sure all diagonals are equal in length so that corners are exactly 90 degrees.

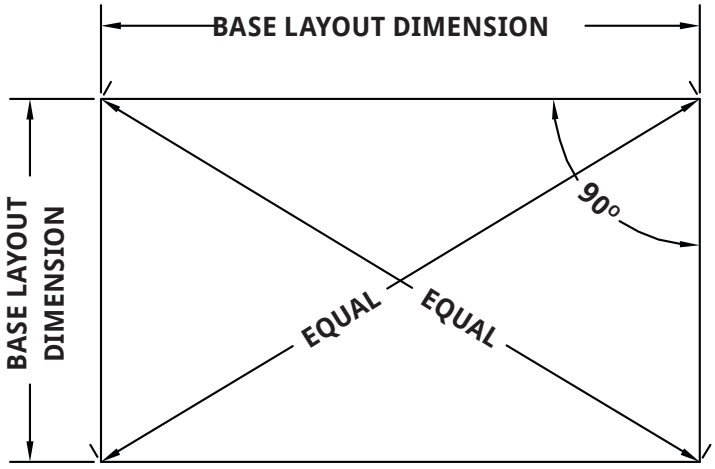
STEP 3: Note the locations of all steel supports inside the floor track and mark the respective column numbers inside the floor track.

ALWAYS USING THE SAME REFERENCE POINT.

STEP 4: Cut the floor track to length and allow 1\4" clearance at all intersections and existing walls.

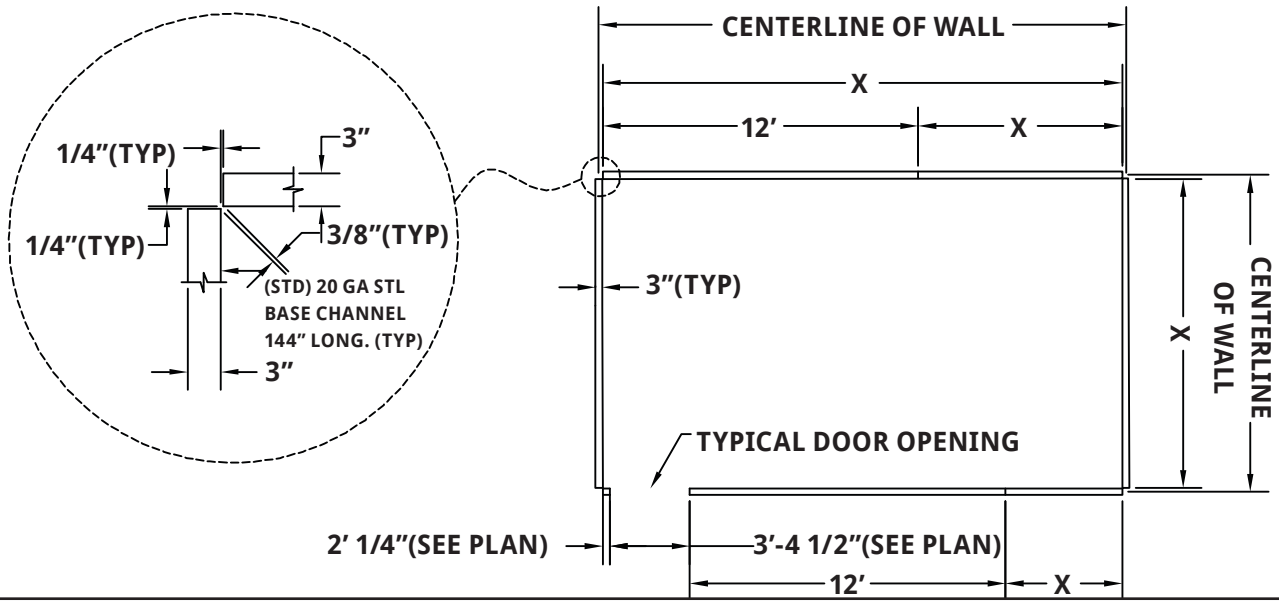
STEP 5: Allow 40 ½" for door openings

STEP 6: Anchors for base channel and wall start by others. Fastened every 18" c/c.



TYPICAL BASE CHANNEL LAYOUT

Base Channel is field cut to to the base channel layout

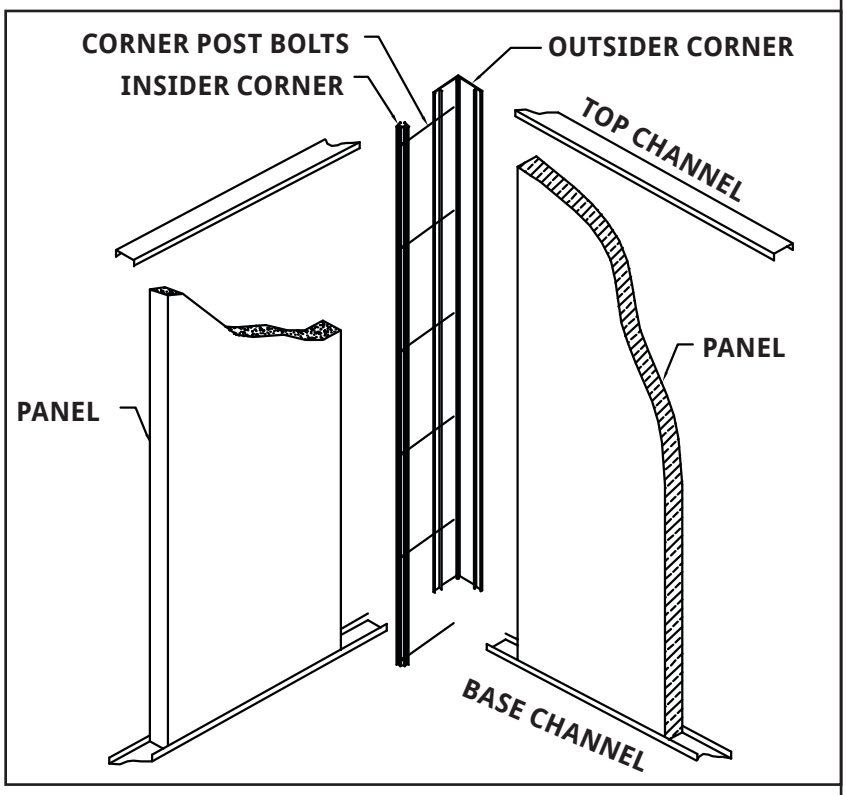


CORNER CONNECTIONS INSTALLATION

Most buildings will have corners. The installation of the wall panels should start at the corner for stability and continue out.

STEP 1: Bolt together the corners using ¼"x4$^{3/4}$" bolts using the pre-drilled inside corner as a guide.

STEP 2: The corner post will set on the outside of the base channel

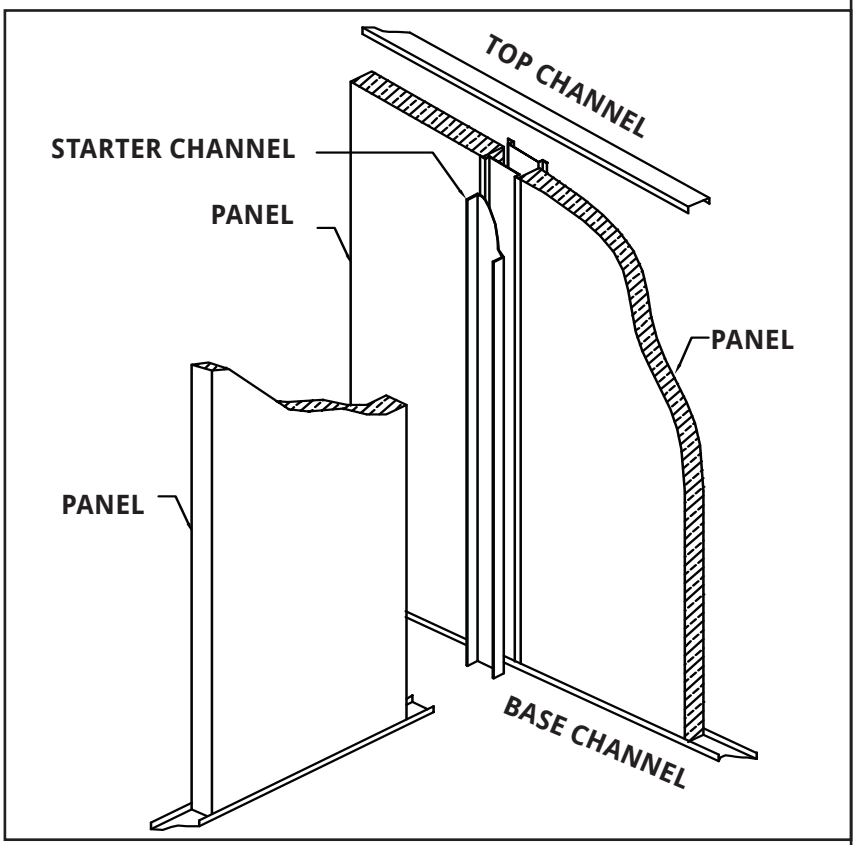


INTERSECTION OR EXISTING CONNECTIONS

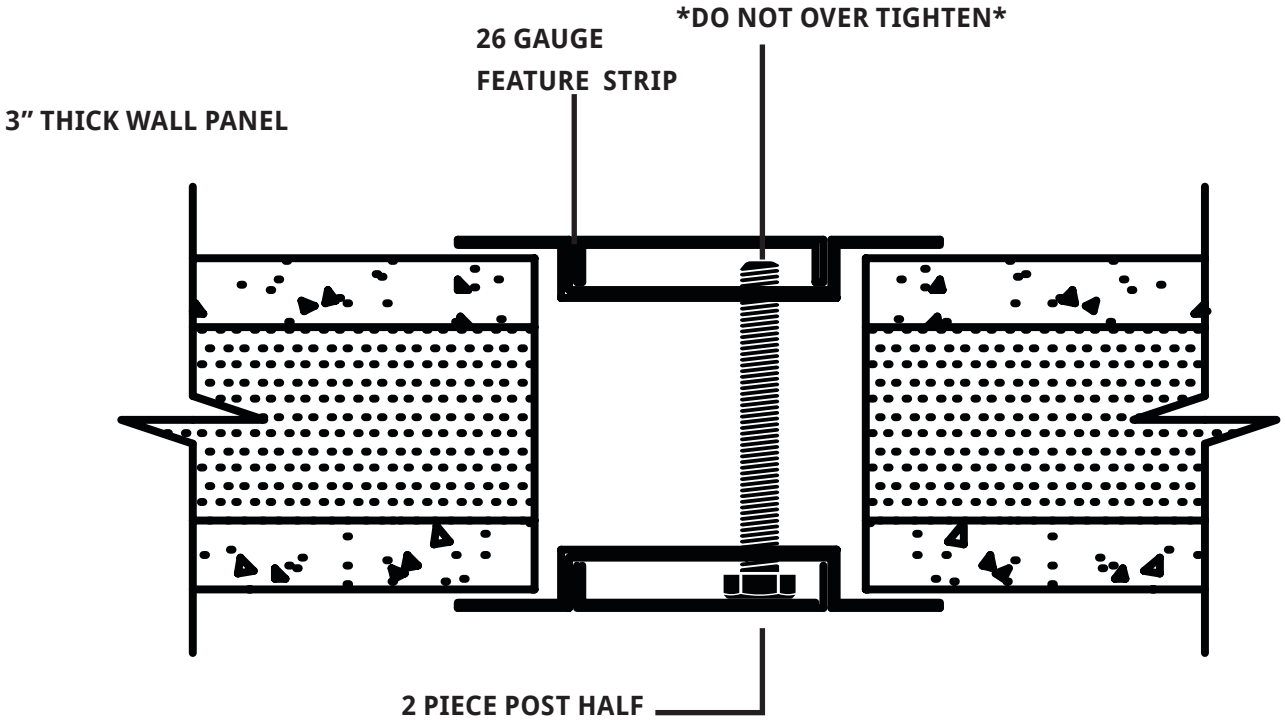
Installation of wall panel at an existing or intersecting wall will utilize a starting channel which is fastened to the perpendicular wall.

Location of the starting channel can be found on the Floor Plan layout.

Anchors for existing walls by others.



STEEL POST CONNECTION SYSTEM



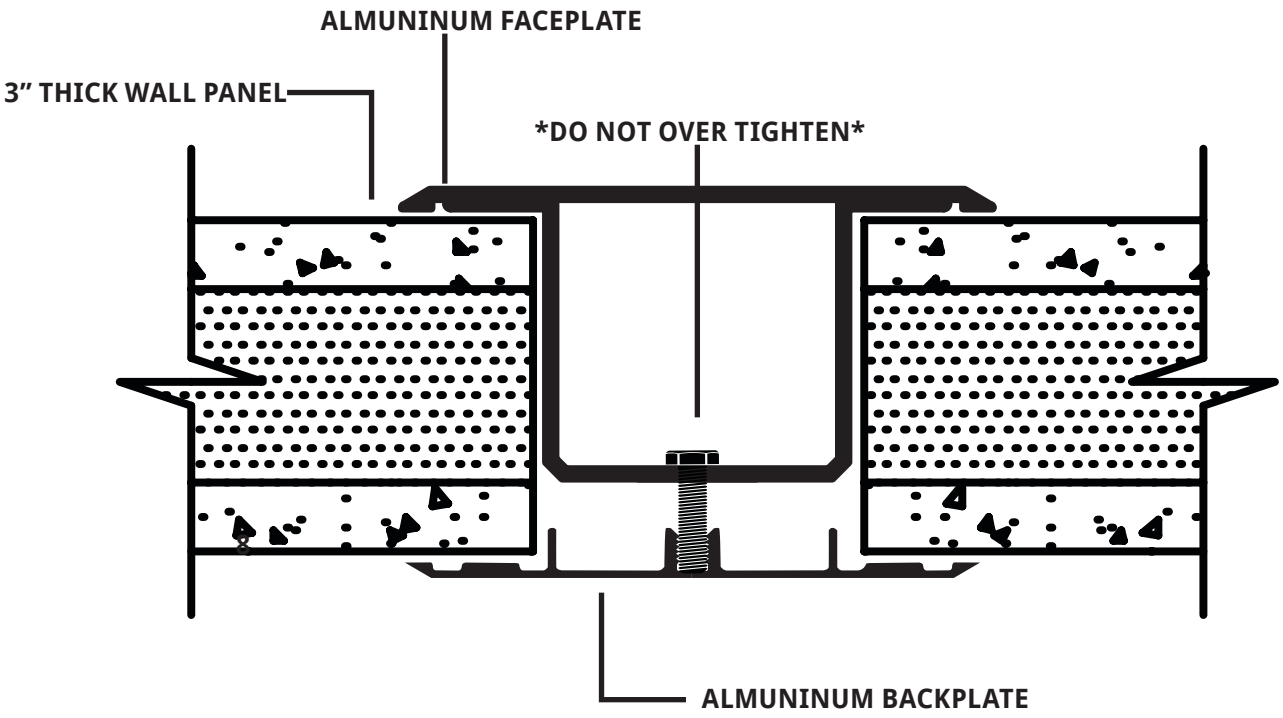
STEP 1: Steel Post is connected using 2 1/2" pan head bolts.

STEP 2: The bolts are only to be inserted from one side of the post.

STEP 3: The steel post can be assembled during installation of panels or prior to it.

It is recommended for easier installation to fit post together with electrical and without electrical prior to installation of panels. Bolts should only be tightened 1 to 2 threads during pre post assembly.

ALUMINUM POST CONNECTION SYYSTEM



STEP 1: Aluminum Post is connected using 3/4” pan head bolts.

STEP 2: The Aluminum post can be assembled during installation of panels or prior to it.

It is recommended for easier installation to fit post together with electrical and without electrical prior to installation of panels. Bolts should only be tightened 1 to 2 threads during pre post assembly.

WALL PANEL INSTALLATION

STEP 1: National Partitions 2 piece post halves are bolted snug tight every 20" in a staggered pattern from the same side.

**** Do Not Over Tighten ****

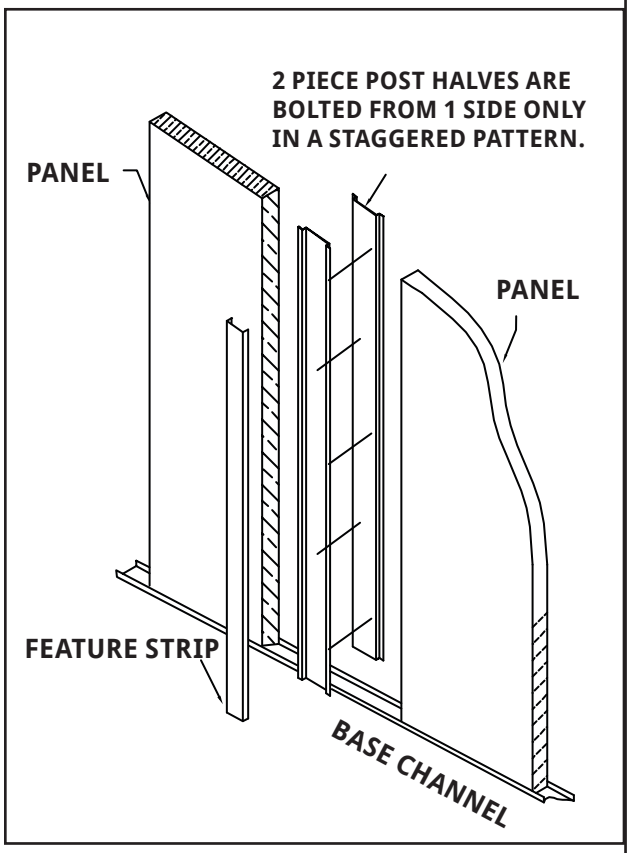
STEP 2: Make sure to fasten the post halves to the base channel and top channel according to the diagram below. 2 piece posts halves are to be installed inside of the base channel.

STEP 3: Use 4' level to ensure that the walls panels and post are plumb and square.

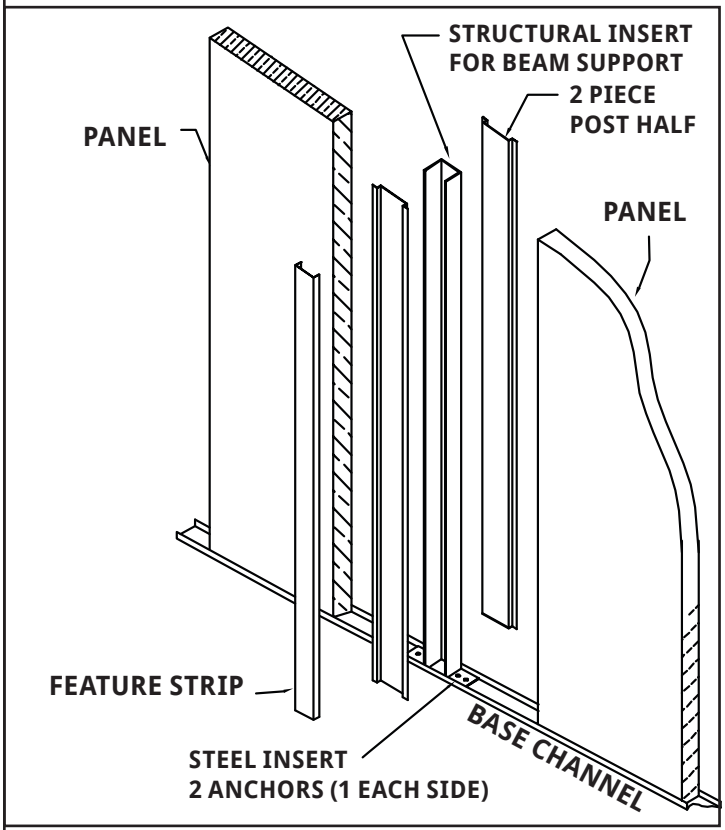
STEP 4: Install the feature strip into the designed slot of the post halves to cover bolts.

Posts halves are constructed for standard or modular electric to be run inside the posts halves. Panels are typically 48" center of post to center post, any variance from this will accumulatively add or subtract from the overall length of the walls.

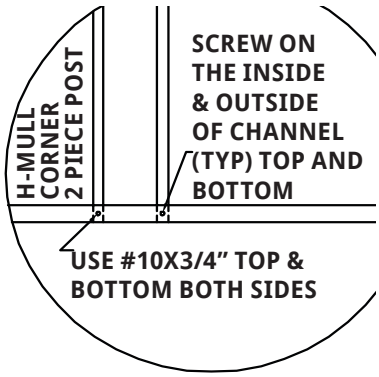
STANDARD PANEL CONNECTION



STANDARD PANEL CONNECTION WITH STRUCTURAL INSERT

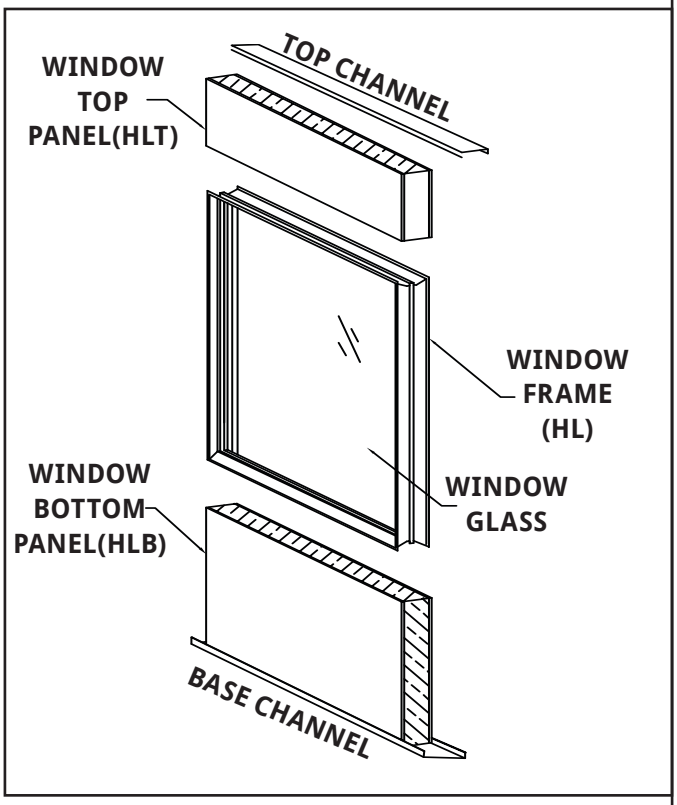


See pages 11, 12, & 13 for electrical assembly.
Electric must be installed before attaching post halves. When your building has a requirement for tube steel columns and/or structural inserts the steel **should be installed as you go along and not beforehand.** The base plates should be securely mounted to the floor using an appropriate Hilti-TZ or equivalent anchor, one on each ear of the base plates. Be certain to check the newly installed column or insert for plumb as this will impact the rest of your installation. If the floor is uneven make sure to shim the baseplate with metal strips to bring the column or insert back into plumb. It's important to keep the walls, 2-piece posts, columns and inserts plumb. Panels will need to be notched for columns.



WINDOW INSTALLATION

Window panels are installed in a similar manner as other wall panels. National Partitions windows are three piece units consisting of a bottom panel, framed window, and a top panel. Window panels install into the stud in the same manner as the wall panels. Make sure that the window unit is completely inside the connecting post halves.



3 PIECE WINDOW PANEL

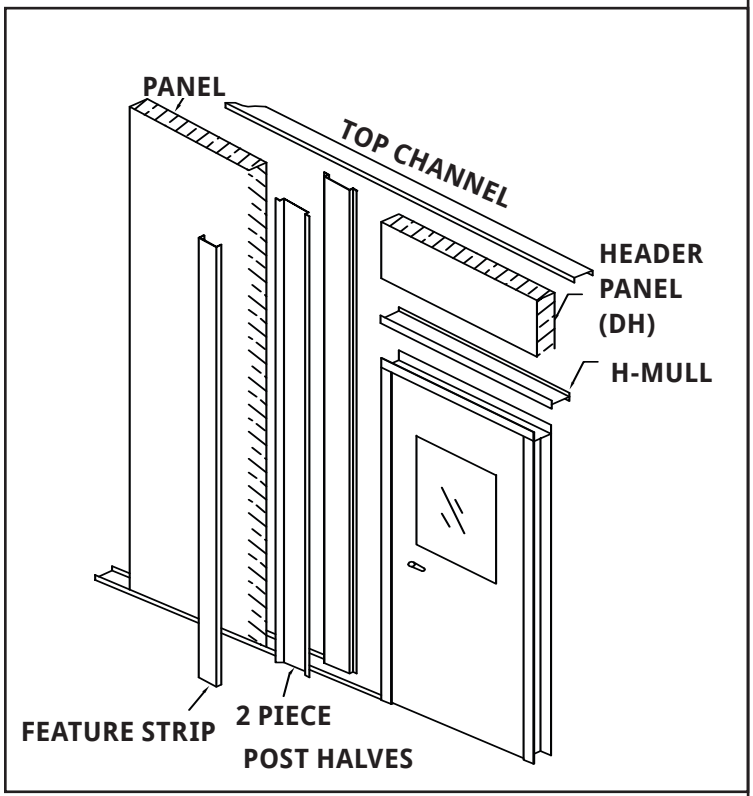
STEP 1: Install bottom panel into track and connection system. DO NOT TIGHTEN POST BOLTS.

STEP 2: Place Window Panel over the top of the bottom panel and slide into connection system. At this time, tighten the 2 lower post bolts.

STEP 3: Install Top Panel into window track and slide into connection system. Then proceed to tighten remaining bolts

DOOR INSTALLATION

Door and jamb assembly is provided either pre-installed in a standard panel or knock-down with a header panel as shown in the diagram to the right.



DOOR PANEL ASSEMBLY

STEP 1: Place doorframe with door into base track, and then slide it into the connection system. After Sliding into the connection system, tighten the lower 2 bolts

STEP 2: Center door h-mull on top of door frame.

STEP 3: Install door header panel into h-mull and then slide into connection system. Tighten remaining post bolts.

DOUBLE DOOR INSTALL

DOUBLE DOOR PANELS WITHOUT FRAME

National Partitions double doors are Shipped knock down with panels, jambs, door leafs, and hardware necessary to installation.

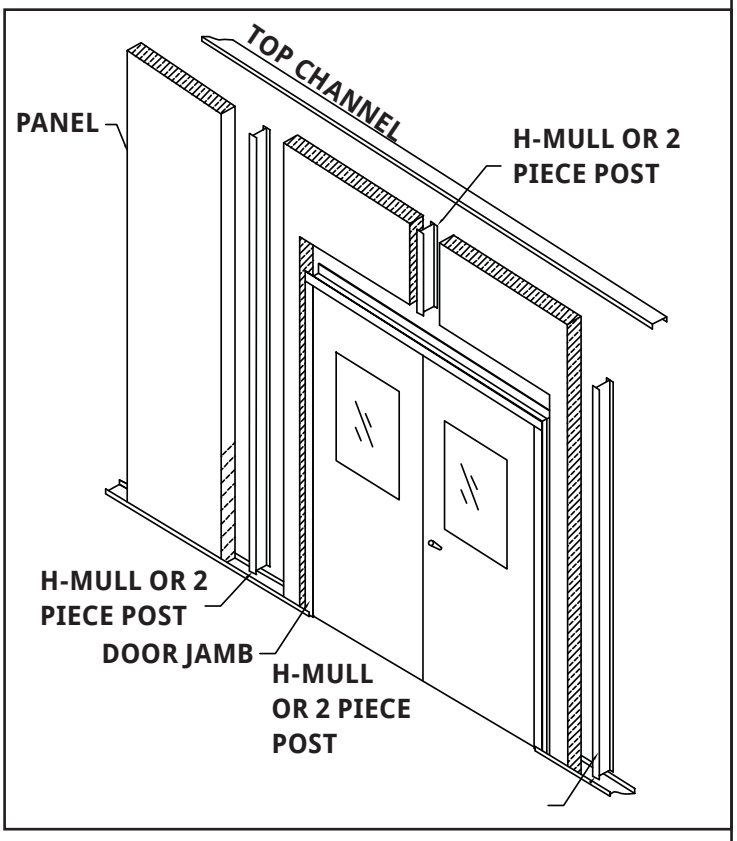
STEP 1: Install panels and door jambs and ensuring they are square and plumb.

STEP 2: Assemble door frame using slotted holes and tabs, bend tabs completely after fully installed in slots. Then place screws through top of the frame in their proper location.

STEP 3: Install door frame between the two connection systems. Tighten bolts in connection system.

STEP 4: Install doors to door frame

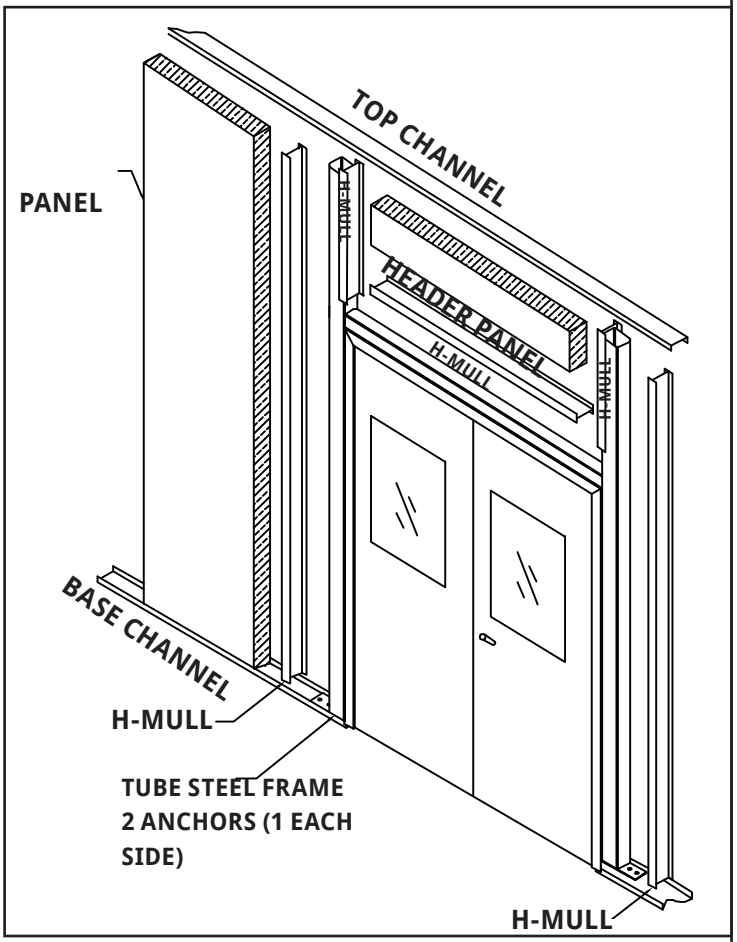
Door sizes will vary in width and height, refer to drawings of your building to verify size



DOUBLE DOOR PANELS WITH FRAME

For a loaded roof there is an additional tube steel frame for support with wood for the door jamb. Attach door jamb to steel frame by placing wood between jamb and frame and attaching with screws. Panel configuration will vary, refer to drawings and details provided with your building.
Door sizes will vary in width and height, refer to drawings of your building to verify size.

Recommendations:
Install 1 column and then h-mull on the side of said column. Install door frame into h-mull. Then attach cross member to the column. Place h-mull on side of door frame and install the other column. You will need to drill clearence holes into h-mull for steel frame connection.



ELECTRICAL LOCATIONS

National's Partitions' electrical positions in the two-piece post halves are shown in the diagram on the right.

Assemble the electrical components to the post halves before attaching them to the wall.

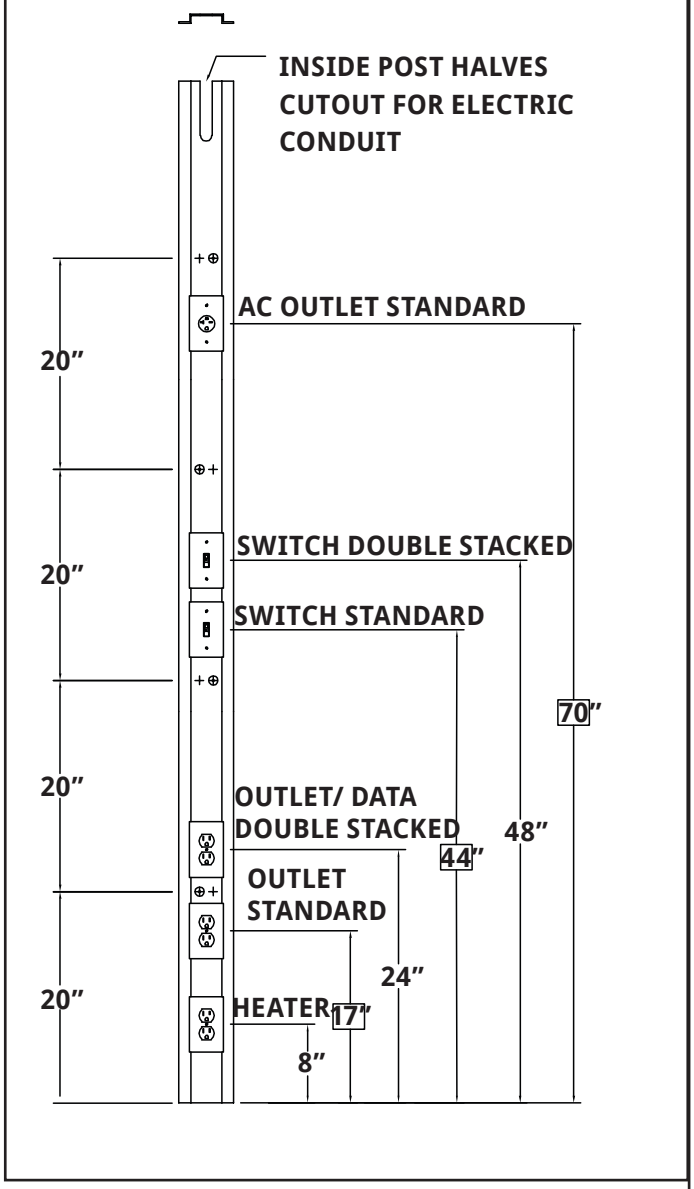
STEP 1: The standard positions have pre-punched holes, and the knockout is easily removed to install the electrical boxes.

STEP 2: The boxes have tabs that allow for a flush-mounted, finished appearance.

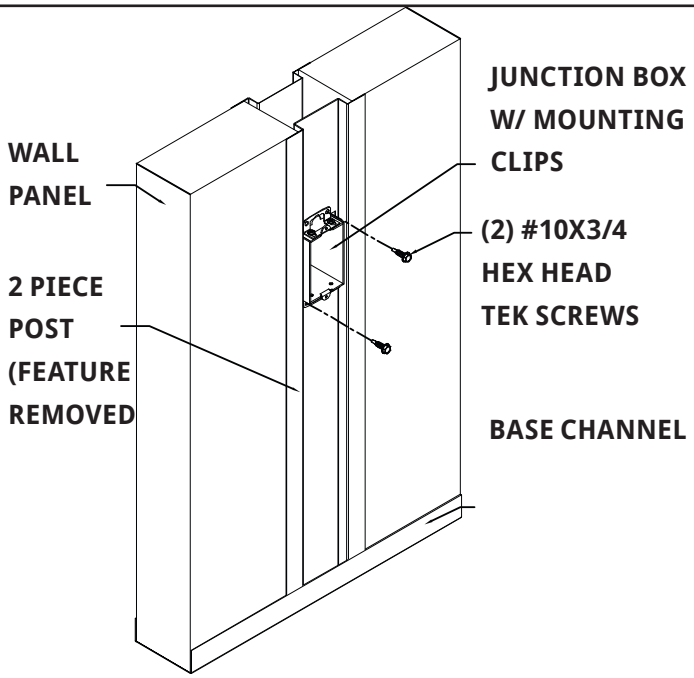
STEP 3: Cut feature strips to fit between any used electrical mounting points.

STEP 4: Reversible mounting clips are provided for securing the electrical box to the post half.

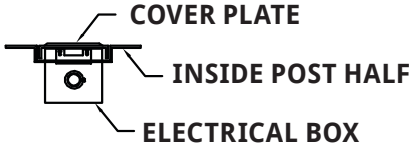
BOLTED EVERY 20" STAGGERED PATTERN FROM SAME SIDE WITH 1/4"X2-1/2" POST BOLTS



MOUNT BOX FLUSH WITH FEATURE STRIP ON POST HALVES



STANDARD ELECTRIC BOX SIZE IS 3"HX2"WX2-¾" DEEP REQUIRES KNOCK OUT ON BOTH INSIDE & OUTSIDE POST INSERTS USE 3"HX2"WX2" DEEP BOX AT INSERT LOCATIONS WITH ELECTRICAL.



STANDARD ELECTRICAL

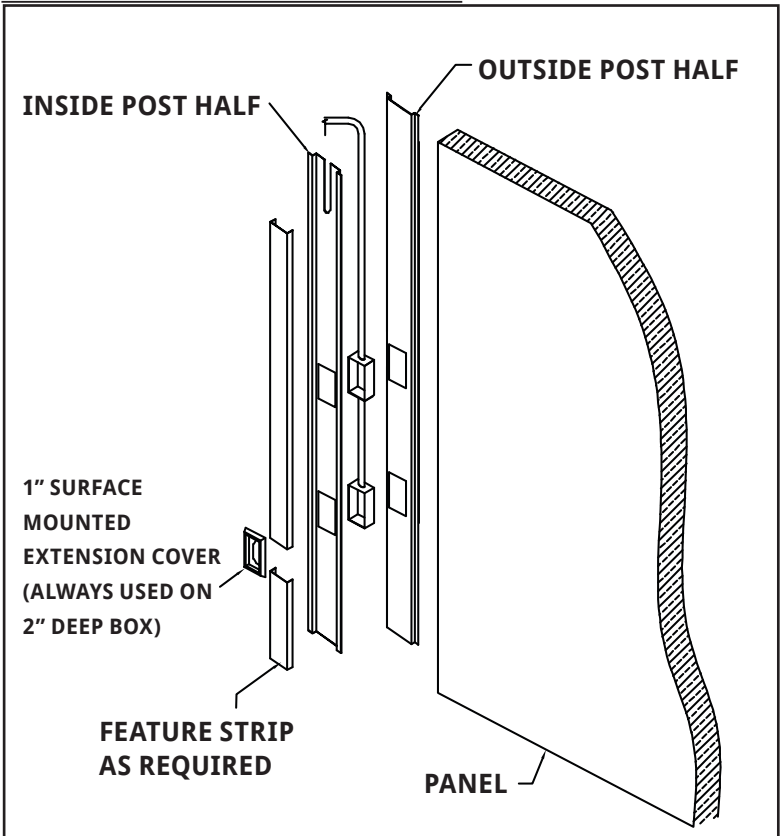
All electrical wiring is to run in the raceway created by the 2 piece post halves with overhead wire to run in the plenum between roof deck and drop ceiling.

National Partitions uses a UL listed modular Wiring system that plugs together with the final connection to the breaker panel made by an electrician.

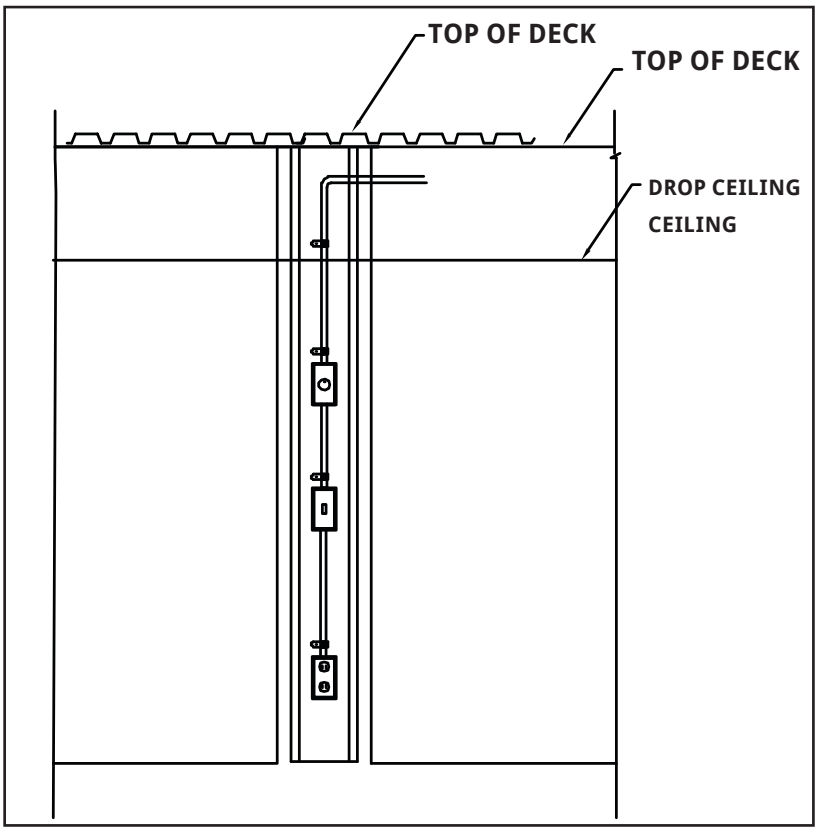
Modular wiring is run in the same place as standard electric, installed at the same time as the walls panels. All modular components are displayed on the page 15.

Some conditions may require surface mounted extension covers. (Field Applied) (Noted by SME on the drawings plans.)

ELECTRICAL POST HALVES



ELECTRICAL INSIDE PLENUM

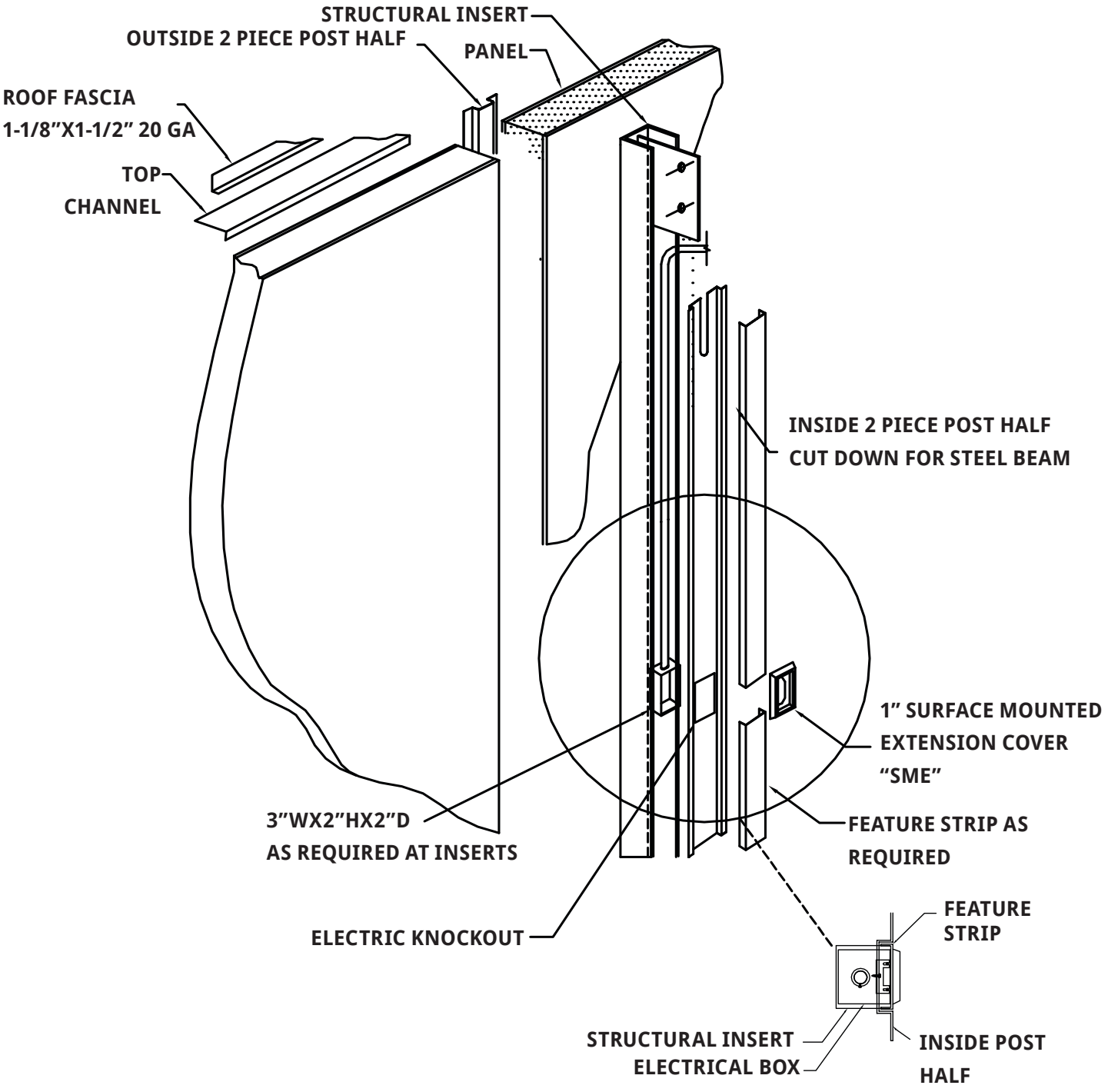


Conduit clips are provided to mount electric to post halves

ELECTRICAL BOX AS A INSERT

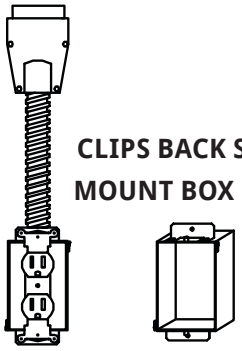
Standard electric box size is 3”Hx2”Wx2-3/4” deep. Requires Knock out on both inside & outside posts.

Use3”Hx2”Wx2” Deep Box at INSERT locations. To meet code a surface mounted 1” extension cover is required note as “SME”.



ELECTRICAL INSTALLATIONS

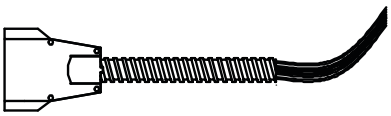
OSS SPLITTER REQUIRED TO CONTINUE OR
END OF RUN DOES NOT REQUIRE OSS



CLIPS BACK SET TO
MOUNT BOX FLUSH

OD: DUPLEX OUTLET ASSEMBLY
STANDARD HEIGHT 17" AFF

OSS SPLITTER
OR
OC1 CABLE



BREAKER
PANEL

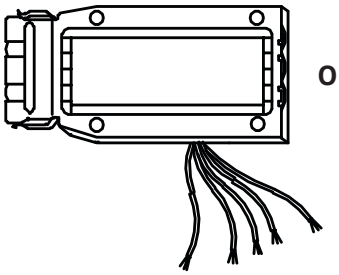
OC: POWER ENTRY

OSS SPLITTER
OR
OC1 CABLE

OSS SPLITTER
OR
OC1 CABLE

OC1: FLEX JUMPER

OC1 CABLE

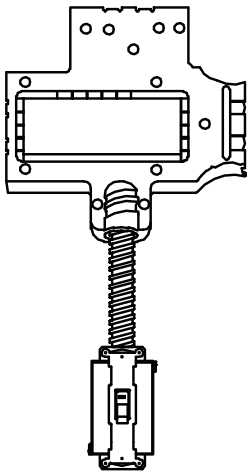


OC1 CABLE

OSU: LIGHT CONNECTOR

LIGHTS
OC1 CABLE

OC1 CABLE

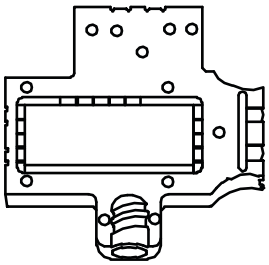


OC1 CABLE

OST: SWITCH ASSEMBLY
STANDARD HEIGHT 44" AFF

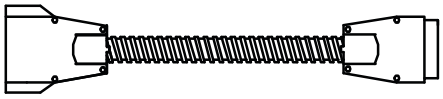
OC1 CABLE

OC1 CABLE



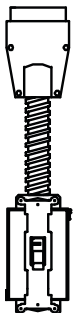
OC1 CABLE

OSS: SPLITTER



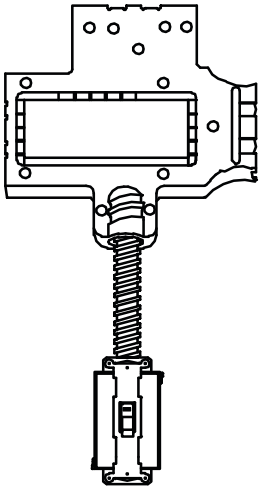
OSS SPLITTER
OR
OC1-3WAY CABLE

OC1-3WAY: FLEX JUMPER
*** SPECIAL ***



OST: 3-WAY SWITCH #2 ASSEMBLY
STANDARD HEIGHT 44" AFF

LIGHTS
OC1 CABLE



OST: 3-WAY SWITCH #1 ASSEMBLY
STANDARD HEIGHT 44" AFF

MODULAR WIRING INSTRUCTIONS

National Partitions Modular Wiring is custom designed snap together wiring system that snaps together as the building is being assembled. The male and female connectors used are directional. This insures the system cannot be assembled incorrectly. 3-way switches must be assembled in accordance to the layout provided with each building. All other pieces are interchangeable allowing for last minute field alterations.

Specifications

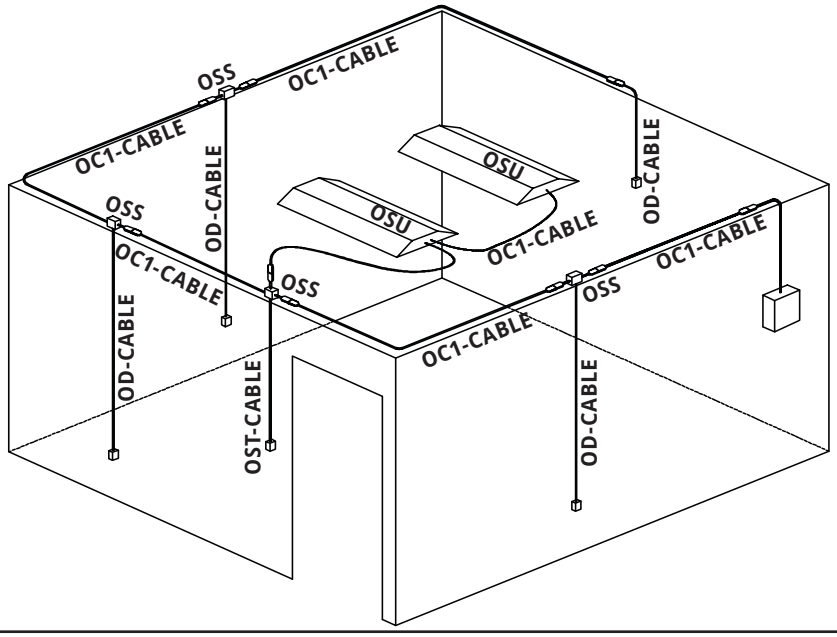
3 wire system utilizing two separate circuits for 110 volts 20 amps only.
Circuit 1 C/1 typically for outlets uses Black-Hot, White-Neutral, Green Ground.
Circuit 2 C/2 typically for lights uses Red-Hot, Gray-Neutral, Green Ground.

All 110 volt wiring is 12 gauge, THHN type, Stranded copper and all conduit is 12" flexible type.
The system conforms to the NEC and all Components are UL listed.
220 volt 10 gauge outlets may be provided as separate dedicated run to the breaker box.
Conduit clips are provided for fastening the cabling and junctions boxes to the roof every 36" and within 12" of every junction box connector.
An electrician will only be required to bring power to the building and complete the hook-up at the breaker box. No other field wiring will be necessary. A complete bill of materials and electrical schematic are provided with each building.

COMPONENTS	DESCRIPTION
OC-Cable	Power entry, pig tail to the breaker panel
OC1-Cable	Flex jumper between outlets lights etc.
OSS	Universal connector junction box.
OD-Cable	Device Assembly
OST-Cable	Switch assembly
H-Cable	220 volt direct wire outlet assembly(always a pig tail)
OSU	Light connector

Warnings

Risk of fire or electric shock. Do not electrically connect to more than one source of supply. Always determine that the wiring assembly is connected to one and only one source of supply. Ensure connection system is snug.



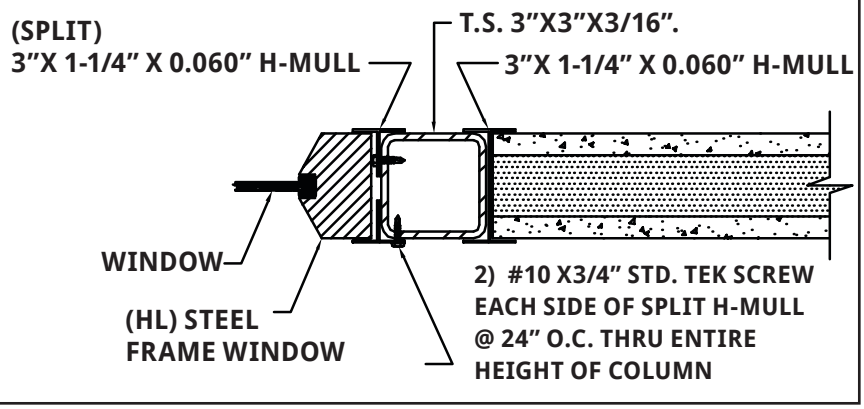
H-MULL CONNECTIONS SYSTEMS

National Partitions H-mull is used as a connection system for some applications.

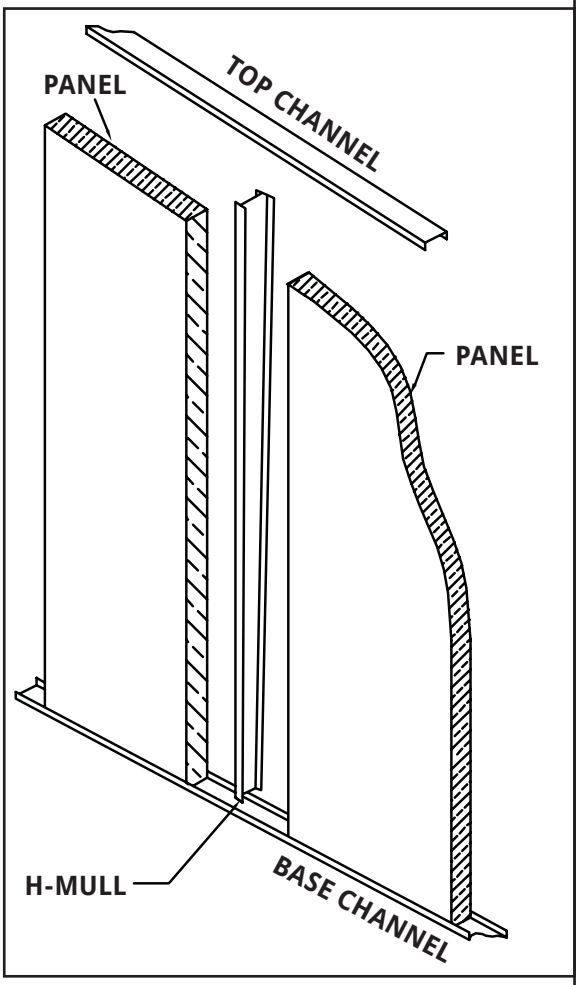
H-mull is used to connect tube steel columns, steel frames or door frames to the wall panels.

Split h-mull is required when next to a window and in some areas where a steel column is close to an existing wall.

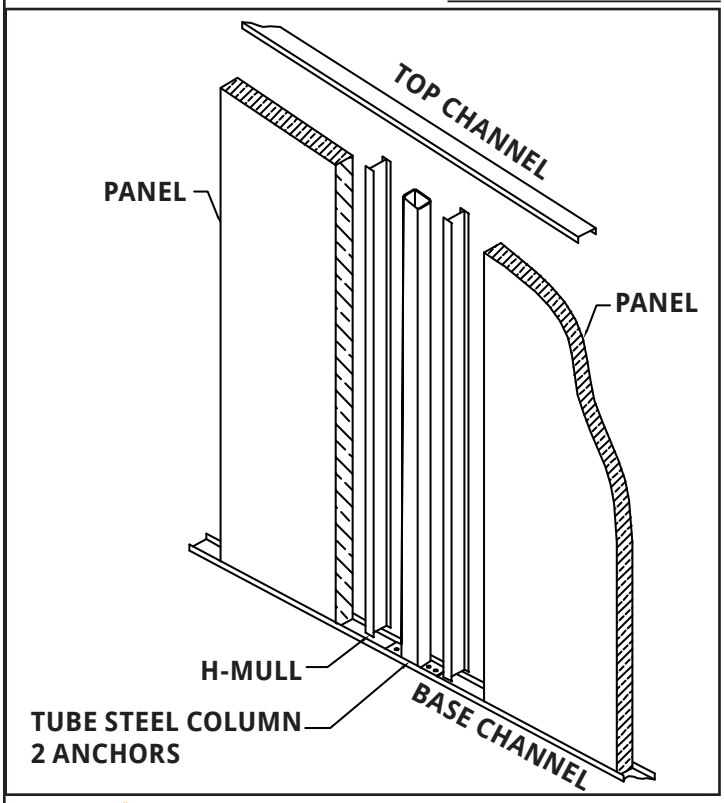
SPLIT H-MULL DETAIL AT HL WINDOWS



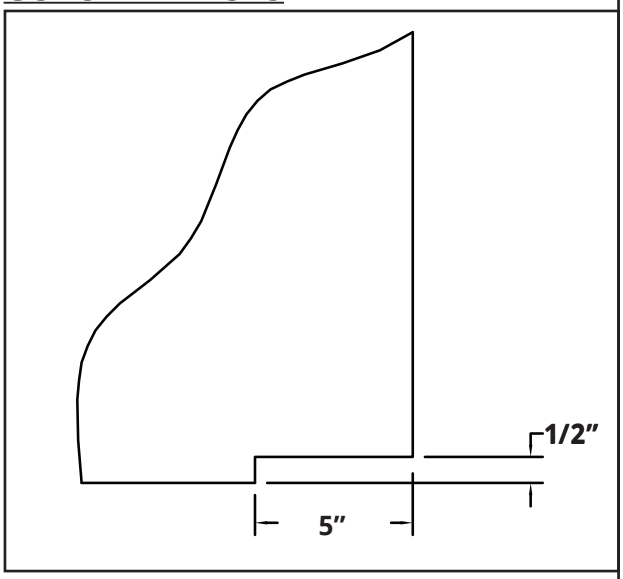
ELECTRICAL POST HALVES



H-MULL CONNECTION WITH TUBE STEEL COLUMN



PANEL FIELD CUTTING FOR COLUMN BASES

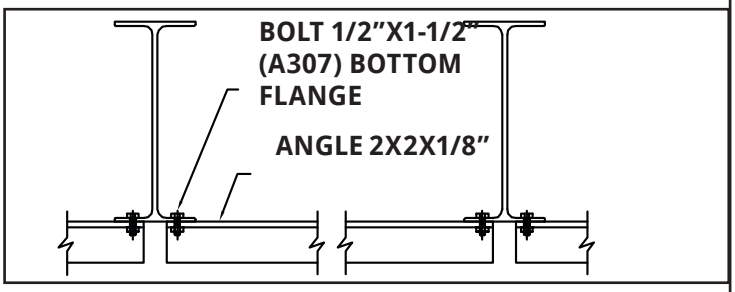


STEEL CONNECTIONS

Installation of all steel components should be done according to the drawings and details provided moving progressively.

****Only use (A325) bolts and fully tighten.****

BEAM BRIDGING CONNECTION



Bridging may be required on the bottom flanges of support beams as shown below. Installation of roof deck or dust cover is perpendicular to the steel beams if present (1-1/2" min. bearing for deck). Roof deck is design to go from center wall panel to center of Walls panels and beams.

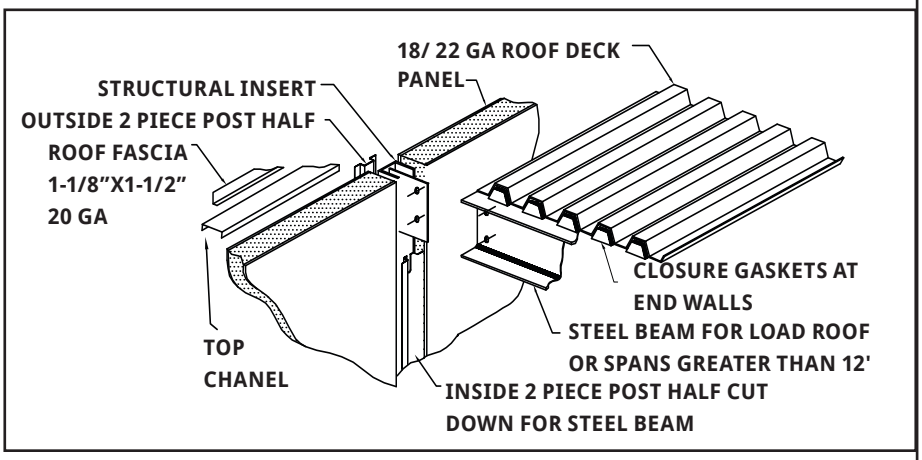
Fasten the roof deck every 6" to steel beams with #12-24x1-12" Tek Screw. Fasten the roof deck every 12" with #10x 3 4" Tek screw on roof deck side overlap and perimeter. Start with the small lip on the centerline of the wall. Overlap sides on the minor rib only

Closure gaskets are placed at the end of the steel deck runs only. If roof deck is to be fastened to an existing wall, roof angle will be provided.

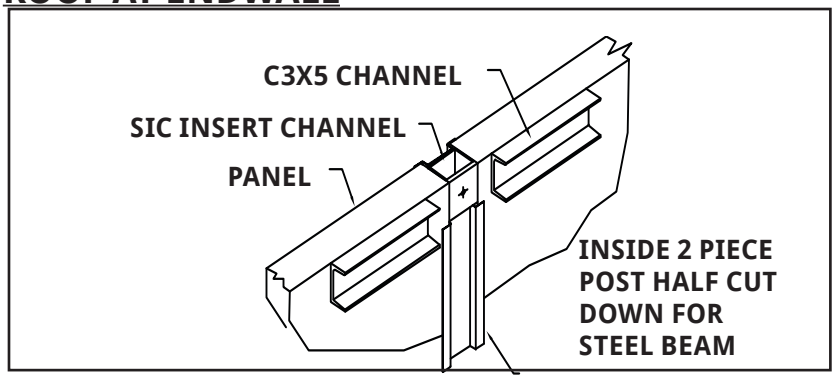
Roof fascia is provided to cover edges for a finished look.

Inside post half shortened to clear C3x5 Channel.Channel at sic insert not shown for clarity.

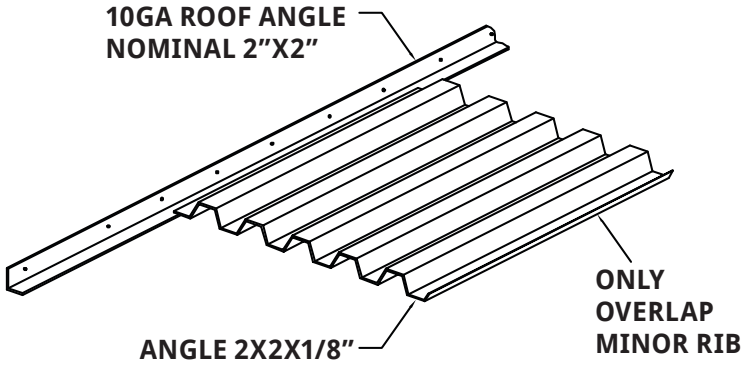
BEAM TO INSERT CONNECTION LOADED ROOF



CHANNEL TO INSERT CONNECTION LOADED ROOF AT ENDWALL



ROOF DECK AGAINST EXISTING WALL NO LOAD ROOF



NOTE:

Unless the building has been designed for a specific load, it is not load bearing and is not intended to support the weight of a person.

DROP CEILING INSTALLATION

Installation of the drop ceiling should start with determining the ceiling height and allowing 4 1/2" minimum clearance for installation of lights.

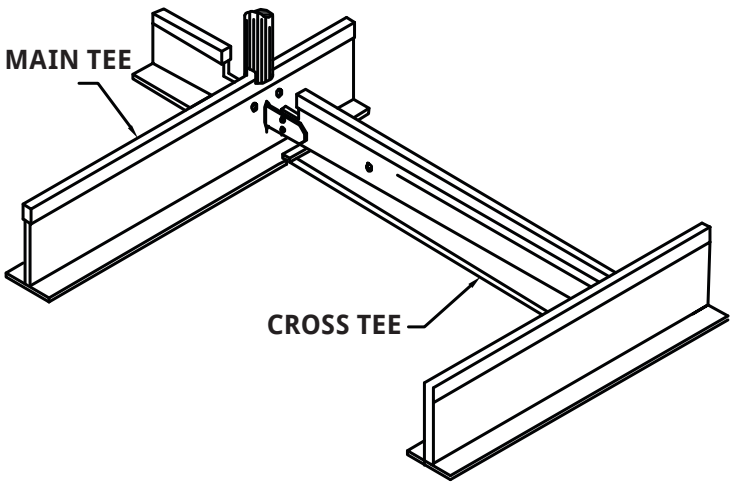
IBC and Most building codes requires a 90" minimum ceiling height.

Care should be taken to install a level ceiling, starting with the perimeter wall angle. Refer to drawing provided for ceiling layout.

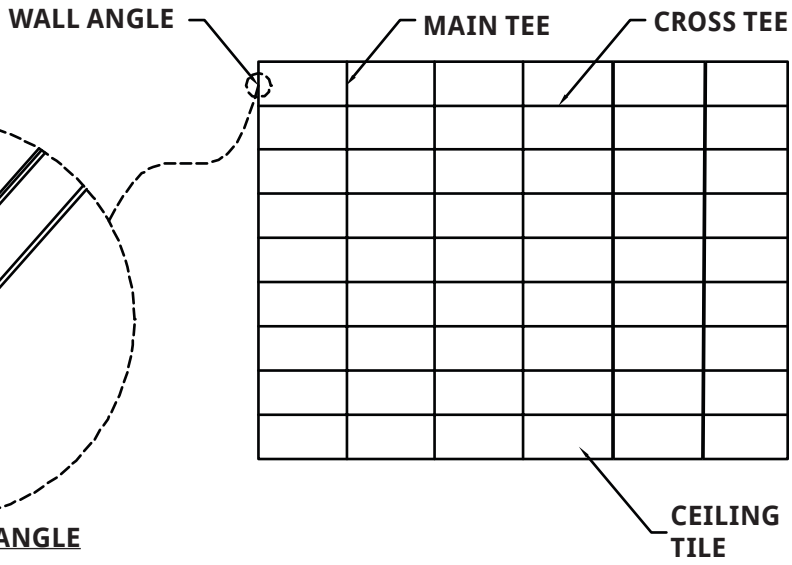
Wire ties are installed next in a straight line every 48" to the roof deck where the main tee is to be placed according to the design.

Install the cross tees and insert ceiling tiles. When seismic ceiling is supplied the wall angle 2" leg should be horizontal and double the tie wire connection.

DROP CEILING GRID



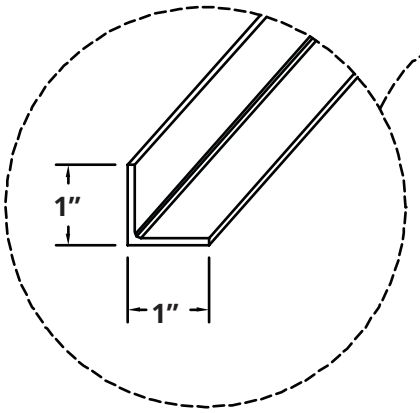
DROP CEILING GRID WALL ANGLES



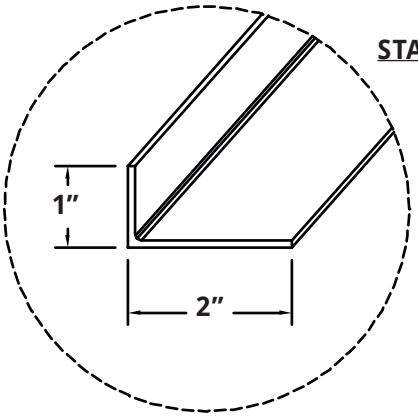
NOTES:

Where main tees rest on the wall angle, end tabs must be cut to lay flat.

REFER TO LOCAL BUILDING CODE.



STANDARD WALL ANGLE



SEISMIC WALL ANGLE

ROOF PANEL INSTALLATION

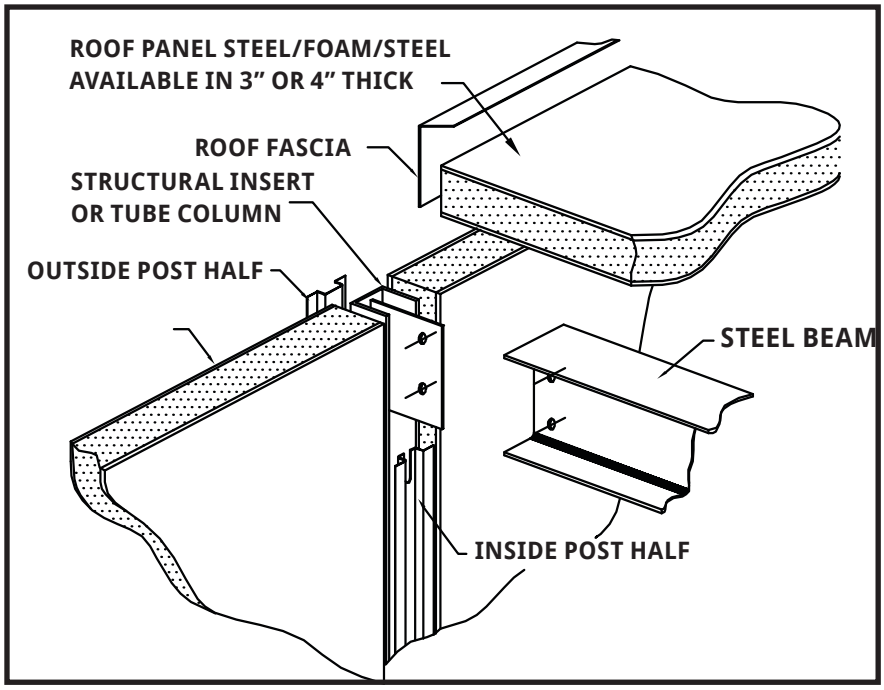
National Partitions manufactures optional roof panels for buildings that can be installed with or without steel beams.

Installation of roof panels on top of the beams is similar to roof deck installation. Roof panels are attached with ¼"x5" tek screw and fender washers every 12" at perimeter walls utilizing h-mull between panels.

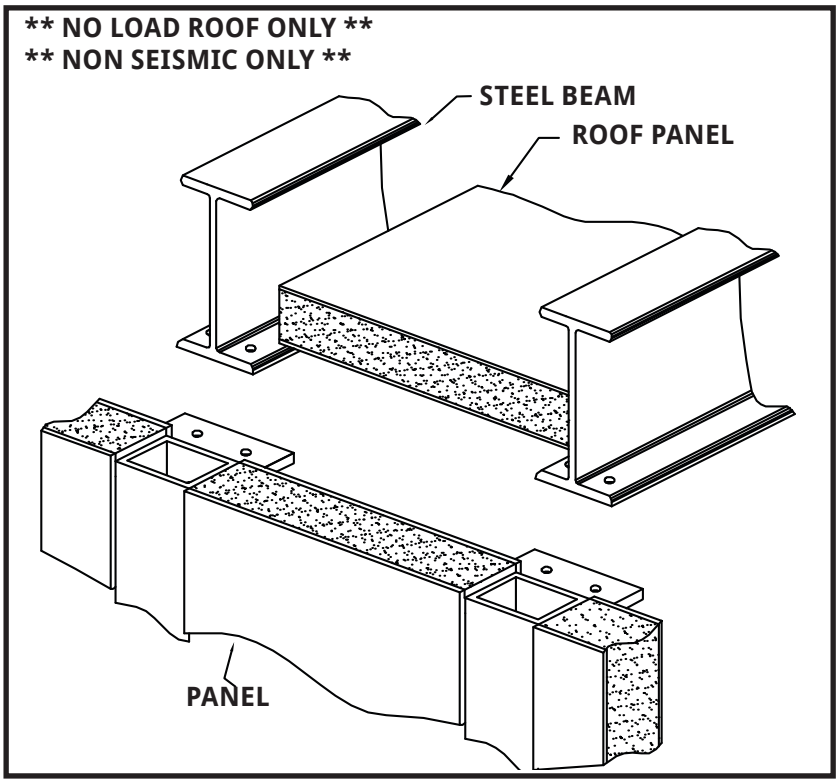
Roof panels can also be installed on the bottom flange of beams with less exposed steel on the interior of the building. panels are installed from the end between the beams and fastened from the underside of the bottom flange using #10x¾" tek screws every 12".

Roof panel design is from outside of wall to outside of wall less 1/2". (each side ¼")
Roof fascia is provided for a finished look.

ROOF PANEL ON TOP OF BEAM



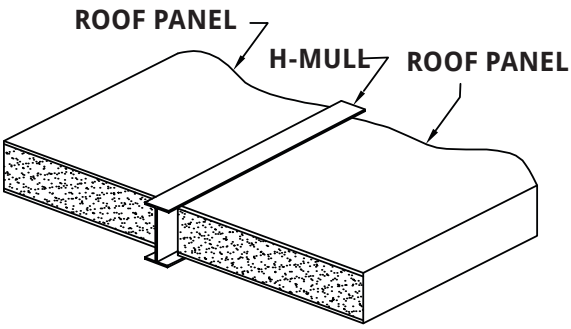
ROOF PANEL ON FLANGE OF BEAM



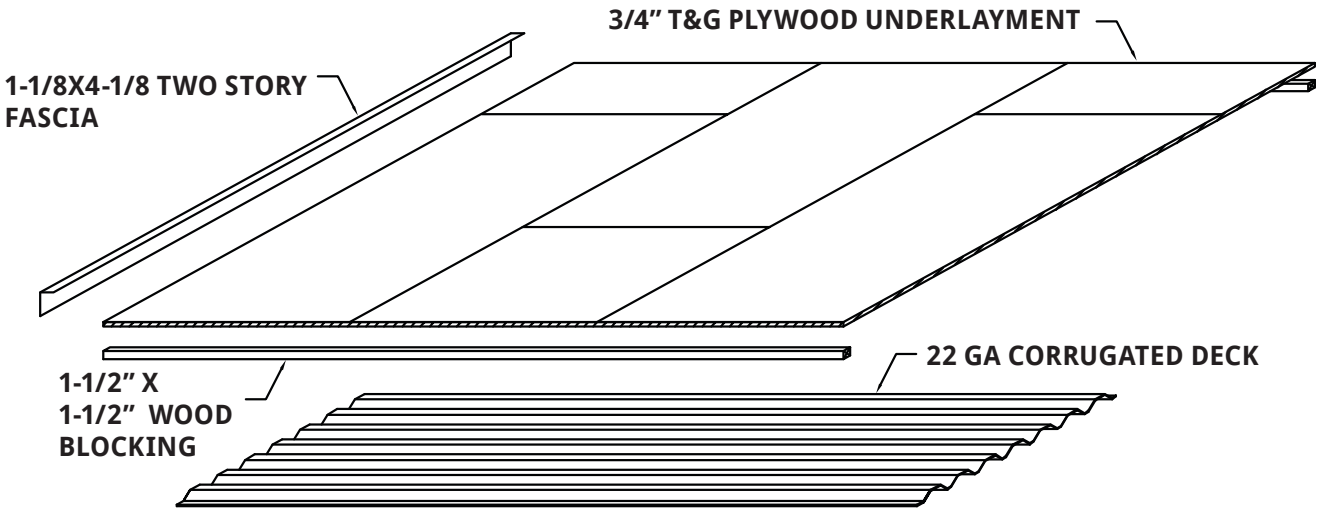
For loaded roofs or seismic conditions, all beam to column connections will be our standard beam web connection and require progressive construction. Panels cannot be inserted from the end.

ROOF PANEL WITHOUT BEAM

LIMITED SPAN

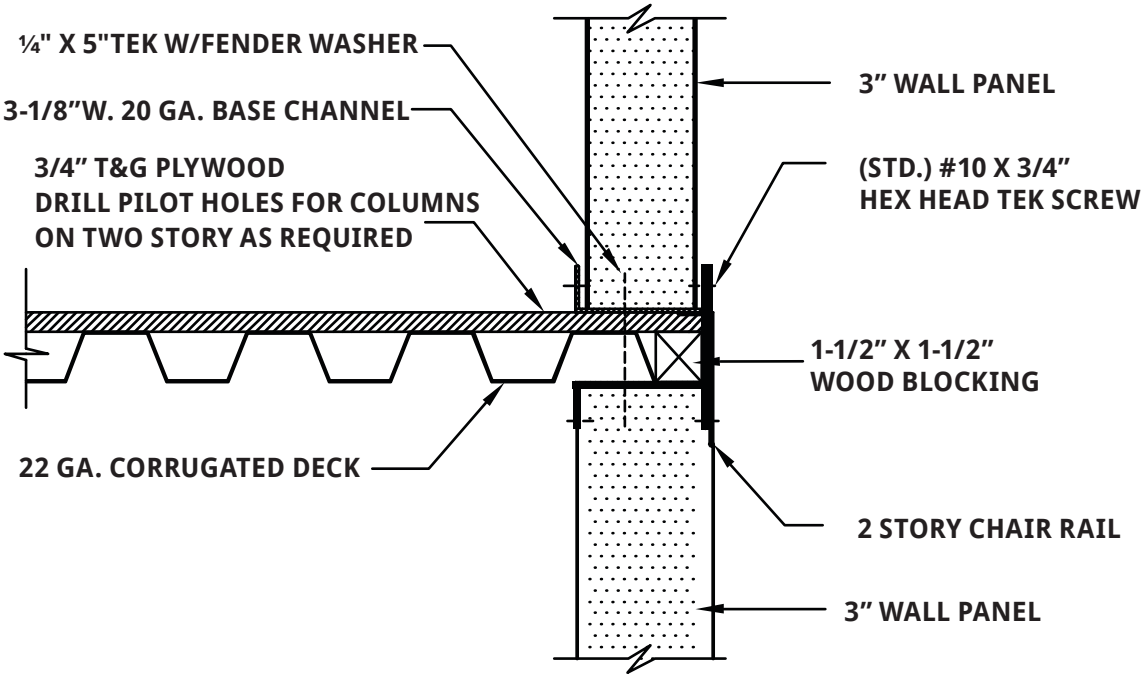


TWO STORY ROOF INSTALLATION



Great care must be taken before the roof deck and plywood installation on the second floor begins. The roof deck and plywood must be fastened with the spacing indicated on the drawings provided, making sure that everything is level. Please pay attention to the direction of the roof deck as indicated on the drawings making sure that the plywood runs perpendicular to the roof deck and allowing for the 1-1/2"x1-1/2" wood blocking around the entire perimeter. The levelness of this surface will impact the outer face of the roof fascia. National Partitions recommends that roof fascia should be installed from the outside of the building and not while standing on the plywood as this will cause some deflection and affect the overall appearance of the building. You may then begin the second floor base channel installation. Please review the diagrams above.

TWO STORY ROOF INSTALLATION



STEP 1: After roof deck installation, now install the 1 1/2" by 1 1/2" wood around perimeter. Ensuring to use liquid nail when installing the wood.

STEP 2: Install the plywood according to the print layout. Liquid nail is placed between the roof deck and the plywood.

After completion of step 2, you can begin installing base track according to floor layout for this area.

LIMITED WARRANTY

- All products sold, except those manufactured by other companies, shall have the following limited warranty:

Manufacturer warrants that the products furnished by the manufacturer shall be free from defects in workmanship and material for (50) years on interior buildings and (1) year on exterior buildings after delivery to the end user. Written notice on any claim defects must be furnished in writing within (30) days of knowledge of same. Upon satisfactory demonstration of the merits of the claim, manufacturer will, within a reasonable time, make any necessary repair or correction, or at the option of the manufacturer, replace defective article free of charge. Charges for correcting defects will not be allowed, unless manufacturer is first notified in writing and the correction is authorized in writing. Any and all charges to correct an item shall be limited to the amount charged for that item, all amounts in excess of that amount shall not be covered by this warranty or reimbursed by the manufacturer. This warranty will not apply to defects caused by improper installation or to any manufactured products which have been repaired or altered by anyone other than manufacturer, without manufacturers written consent, or which have been subject to misuse, neglect or accident. **NO FURTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOT SPECIFIED HEREIN, ARE MADE BY THE MANUFACTURER**, and this paragraph sets forth the full extent of the liability arising from the manufacturer, use or sale of the products, and materials sold hereunder. No allowances will be made for delays or loss of profit, nor for any special indirect or consequential damages or injuries, whether based on tort or contract.

SERVICE POLICY

If you have a service issue, please review the above warranty carefully, then contact our Service Department; **call**: 800-996-7266 or email: service@n-p.com.

DO NOT ATTEMPT TO MAKE ANY REPAIRS OR MODIFICATIONS TO OUR PRODUCT WITHOUT WRITTEN AUTHORIZATION. Failure to contact National Partitions first and receive our written authorization could VOID your warranty. Claims made for work performed without our authorization will be denied.