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## Installation Manual Galv-Alum Under 30" Design

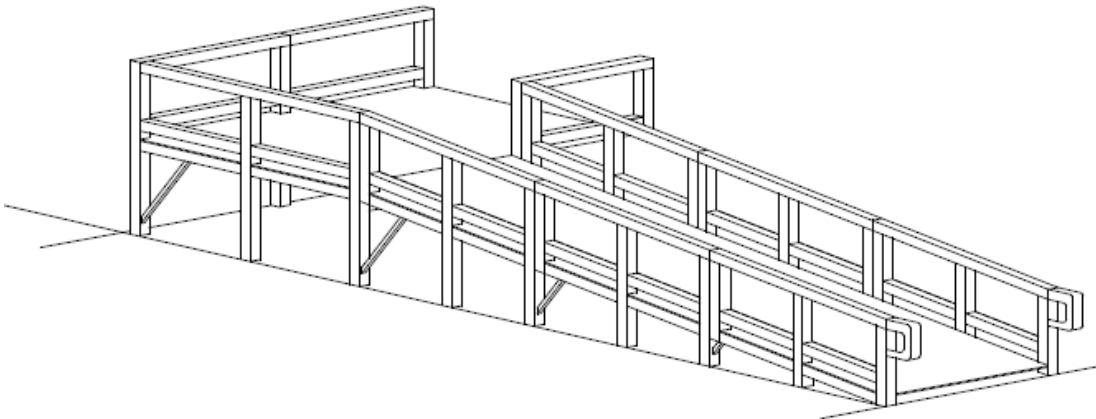


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# Installation Guide

## Tools Required:

- Generator (or power from building)
- ½" Drill (heavy duty)
- Abrasive Saw (hot saw)
- Dry Wall Screw Gun for Self Tapping Screws
- Combination Wrench and Socket Set 9/16"
- 4' or 6' Level (preferably smart level)
- C-Clamp (preferably locking type)
- 3/8" and 5/16" Magnet Drive Hex Bit Attachment
- 7/16" Drill Bit
- Measuring Tape
- String Line (if using optional offset)



## View Packing List:

Each ramp system is shipped with a packing list, TMP layout of the site design, and sales order. Be sure to check that all items are on hand prior to beginning the installation.

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# Getting Started

- A. Unpack ramp. All handrails and hardware are packaged in between ramp and landing sections.



Figure A

- B. Measure from grade to door threshold. This will give you the approximate ramp length.

*Please Note:* Maximum slope is per 1:12 code.

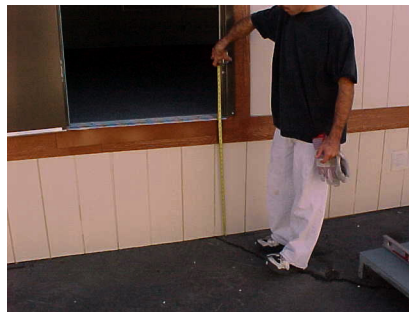


Figure B

- C. Now measure the end of the building in the direction of the ramp, grade to where door threshold would be if door were in that location.



Figure C

- D. If measurement is less than original door threshold measurement, you are gaining grade; your ramp length will be the difference in the two measurements shorter.  
*Example:* Grade to threshold is 30", grade at end of building to threshold is 24", and ramp length will now be approximately 24'. If the reverse is true, grade to threshold is 30", grade at end of building to threshold is 36", and ramp length will now be approximately 36'. (Note: Per code, in a 1:12 slope, any ramp with the length of 30' of more, must have intermediate resting stop, this would make ramp length 42'.)
- E. Lay out landing and ramp sections, as they will approximately be installed.



Figure D

- F. Lay out legs in groups of same length. **You want to use the longer legs at landings and first ramp sections** and sleeve through pockets. Shorter legs for inside leg pockets that do not sleeve through and towards the end of the ramp. Legs with half pads are used for the toe section of the ramp.



Figure E

## Installing First Landing Section

- A. It is important that you get the first landing and the first ramp section set level at connection, as all other sections will follow the same line.
- B. Stand landing section on its side and place the longest legs through the welded pockets (in all four corners). Adjust leg length to 1/8" below the grade to door threshold measurement. Hand-tighten set screws.

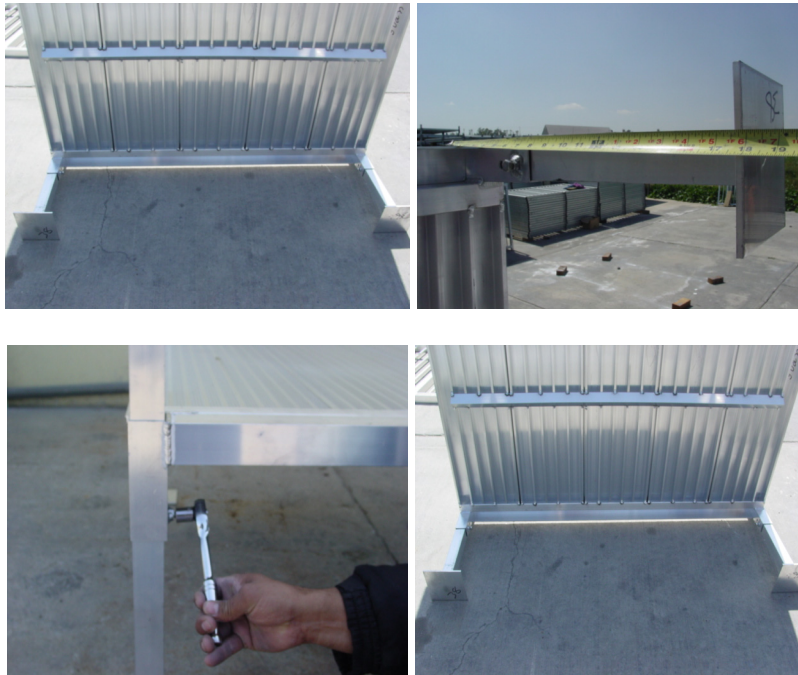


Figure F

- C. Place landing with legs attached under threshold. Re-adjust legs to level landing. Make sure door swings over landing section smoothly.



Figure G

- D. Make sure the placement of the landing at threshold leaves a 42" diagonal from the door to the **center of the intersection of landing and first ramp section**. (Please see TMP drawings that show the typical filler detail. Or refer to Figure I and Figure I-1).



Figure H

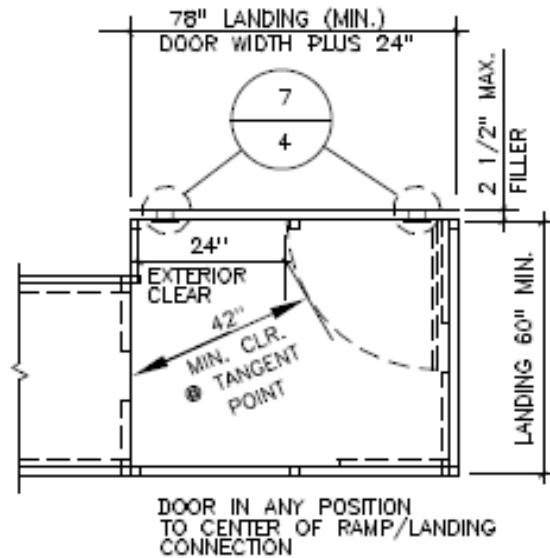


Figure I

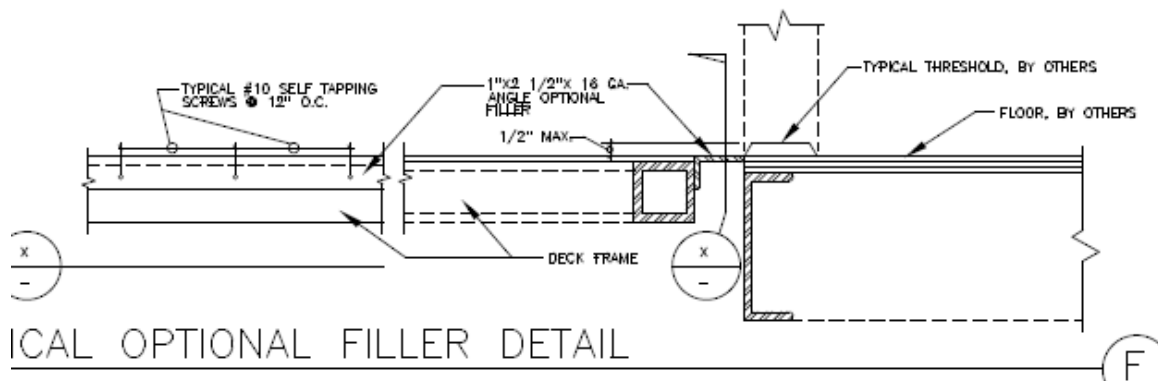


Figure I-1

*Please Note:* Landing must maintain a 60" inside dimension.

- E. Also, when legs sleeve through welded pockets, they must sleeve a minimum of 18” above top of landing deck.



Figure J

- F. Measure for center legs. Measure from top of center leg pockets to grade, and subtract 2” for play. Cut your center legs.

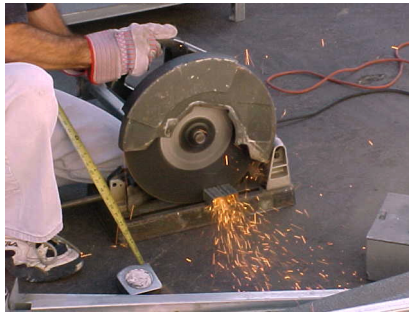


Figure K

- G. Insert your center legs, and hand-tighten screws.



Figure L



- H. Place landing under threshold again, re-level by loosening and tightening setscrews.

*Please Note:* Place 1/8" shim under level to provide drainage, which will give you 1/2" drainage in 6' way from door.



Figure M

- I. Attach (1) angle clip under the landing on each side of door using (2) each 1/4"x4" lags. Use self-tapping screws to 1 1/2" steel landing members.

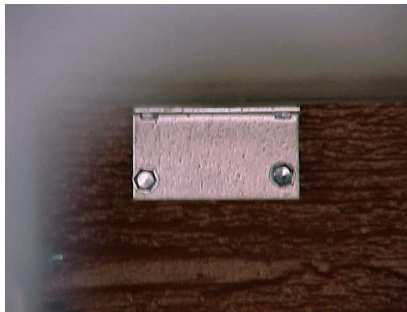


Figure N

- J. Make sure all leg plates are firmly on the ground. Using 1/2" drill with 7/16" drill bit, drill through predrilled holes of all legs underneath landing.



Figure O

- K. Now insert handrails through legs. Landing rails will be plumb straight up and down.

*Please Note:* If you have common landing sections, you will only sleeve (2) out of (3) legs as you are sharing legs at connections.



Figure P

- L. When handrails are in correctly, bottom of handrail attachment will be flush with deck at bottom, and top of handrails will be flush with adjacent handrail. It is important that top is flush to make continuous handrail.



Figure Q

- M. Drill through pre-drilled holes and legs directly above landing surface. Use 2 ½” bolts and nuts for single legs, and 4” bolts and nuts for two leg connections. Bolt top hole. There should be a total of three holes to be bolted per each vertical. (2) bottom holes must be drilled through legs.

## Installing First Ramp Section:

- A. Using smart level, measure grade drop for 1:12, or approximate 6" drop (ramp section is 6' long). Insert male end of ramp section into female end of landing section.

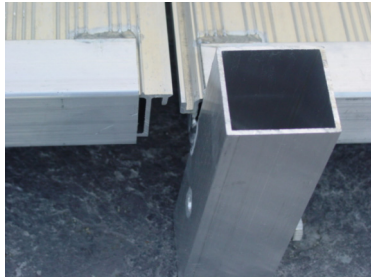


Figure R

- B. Place legs through welded pockets adjusting for smart level measurement or 6" if approximating.

*Please Note:* You have only 4 legs per ramp section, as you share a leg at top with the landing.



Figure S

- C. If you do not have smart level, approximate 1:12 slope and hand tighten, in either case, place in handrails. Handrails are manufactured 1:12, and if handrails fit plumb and flush at top and bottom, then you are automatically at 1:12 grade. If not, adjust leg.



Figure T

- D. Once you are flush with handrails, and level from side to side. Drill in (2) locations as you did in landing section, and bolt in the (3) locations.
- E. Continue to add ramp sections the same as per A-F. You should have no more than (5) ramp sections without level landings, per code. (See options page)

## Installing Toe Section

- A. The last section to be installed is the toe section. This is basically the same as a ramp section, except the last welded pocket is flush with the bottom-framing member.



Figure U

- B. Measure and complete the same as a ramp section. However, since you are at or close to grade, you can only screw in self-tapping screws through welded pocket into legs.

*Please Note:* 6' clearance required at end transition, end transition by others.



Figure V

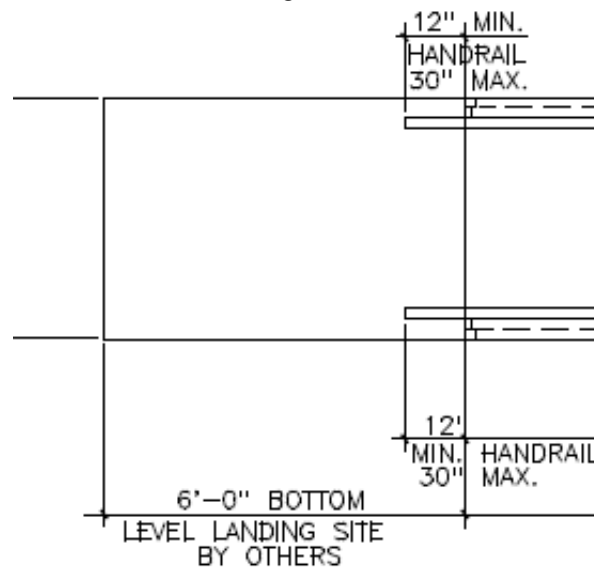


Figure W

C. The handrail that you use will have the 12" return attached.

*Please Note:* Per code, 12" extension required past end transition of ramp.

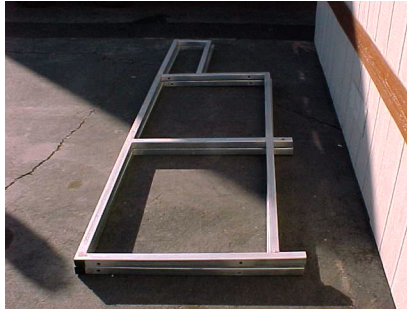


Figure X

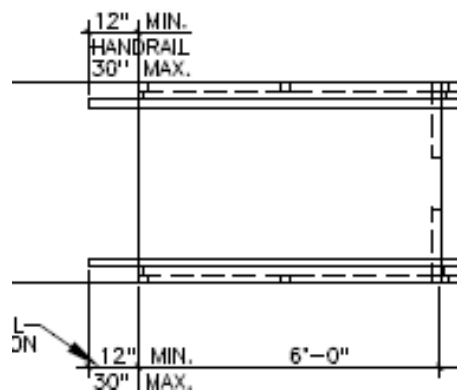
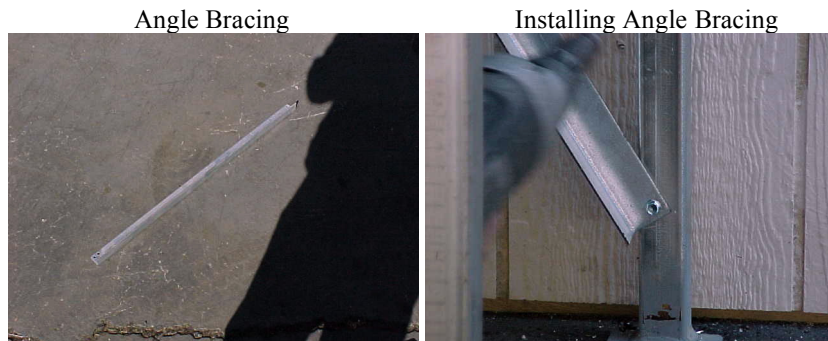


Figure Y

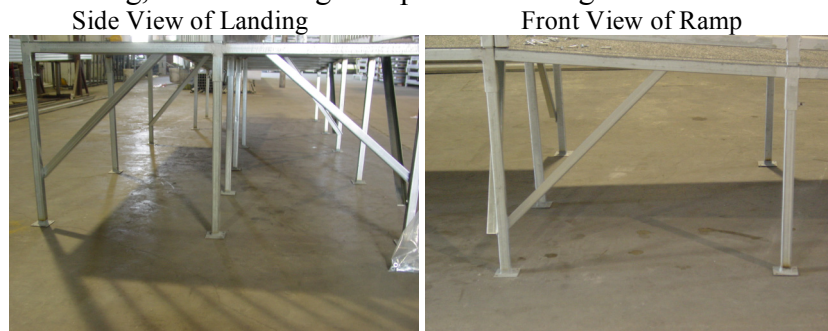
## Installing Angle Bracing

- A. Angle bracing is required when any landing or ramp decking is 24" or over. Each landing section takes (4) bracing sections, and each ramp section takes (4) bracing sections, since they share legs with either a landing or a ramp. Once the landing surface falls below 24", angle bracing is not required.

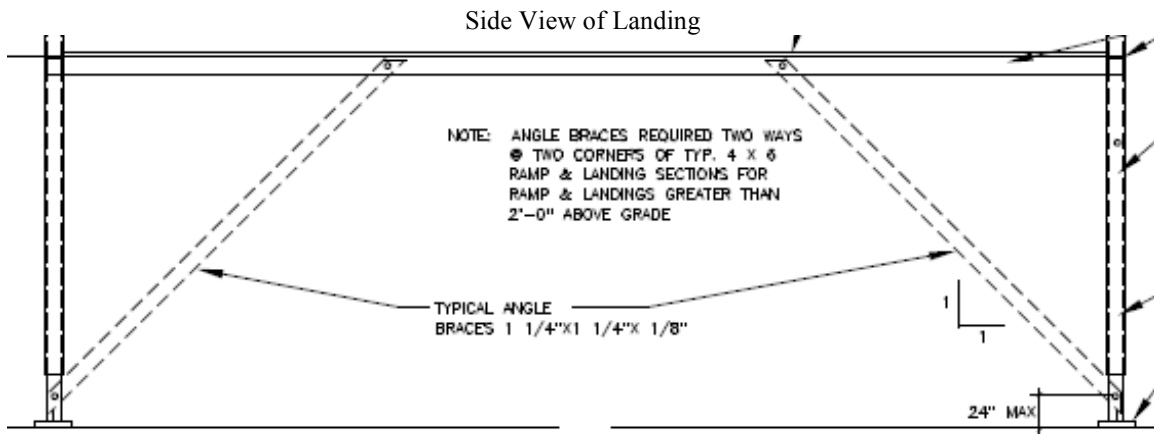


Figures Z

- B. Attach to legs on the inside of landing, so angle support does not stick past the edge of landing, thus allowing for optional skirting.



Figures AA



Figures BB

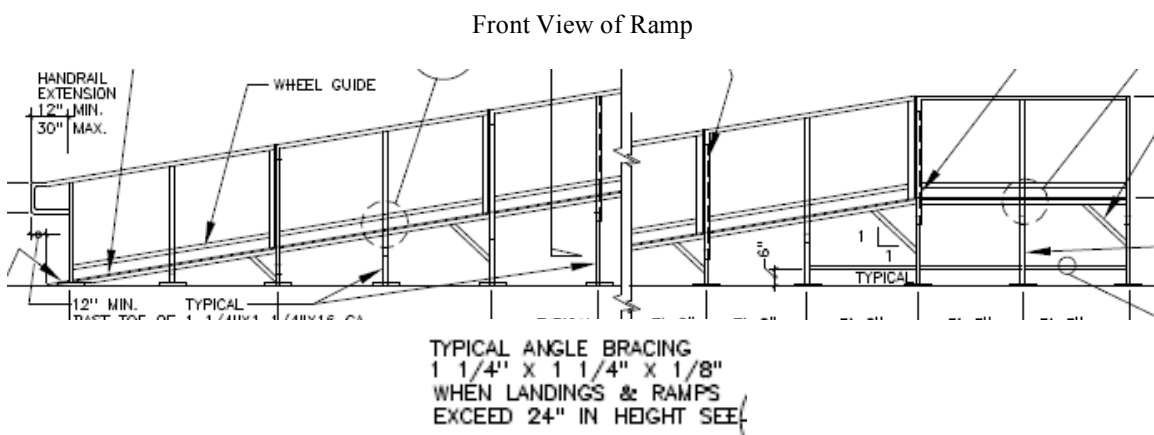


Figure CC

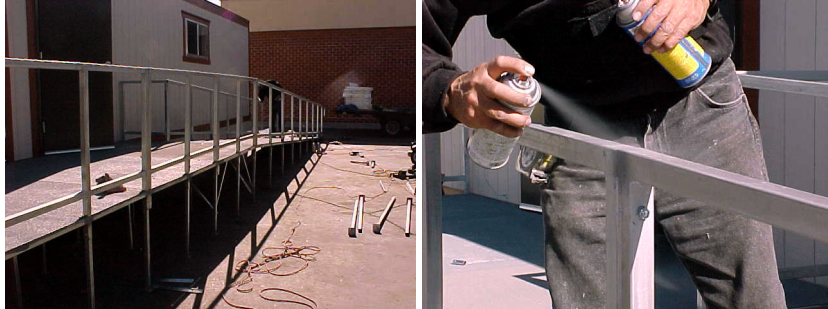
C. Use (2) self-tapping screws, (1) in top and (1) in bottom of each support.



## Touch Up and Completion

- A. You should have completed the ramp. Check handrails for burrs. Run your hands along the handrails. If there are any burrs, take grinder and grind until smooth. Use touch-up paint (98% zinc solution) and touch up areas void of galvanized coating.

*Please Note:* Touch up paint not included.



Figures DD

## Options

### *Optional Off Set:*

- A. Move first ramp section inward 2" from outside landing.
- B. Using string line, attach to top of landing surface, and run to grade at length of ramp sections provided. Attach string line to grade. This will be the slope you set your ramp sections to.  
*For Example:* If threshold height is anywhere from 24" to 30", 30' of ramp is provided, measure your string line out 30'.
- C. When you have the correct slope matching the string line, follow A-G on installing ramp sections.



Figures EE

*Optional Switchback Landing:*

*Please Note:* When a switchback is used, (1) 4'x6' ramp section will have a male-to-male connection. Please be sure this ramp section is used **prior** to the switchback section.

- A. Stand both 6'x9' level section on its sides. Slide legs through welded pockets and adjust to level all (4) corners.



Figure FF

- B. Flip landing over to top side and connect into existing ramp section (with male-to-male connection). Recheck for level.

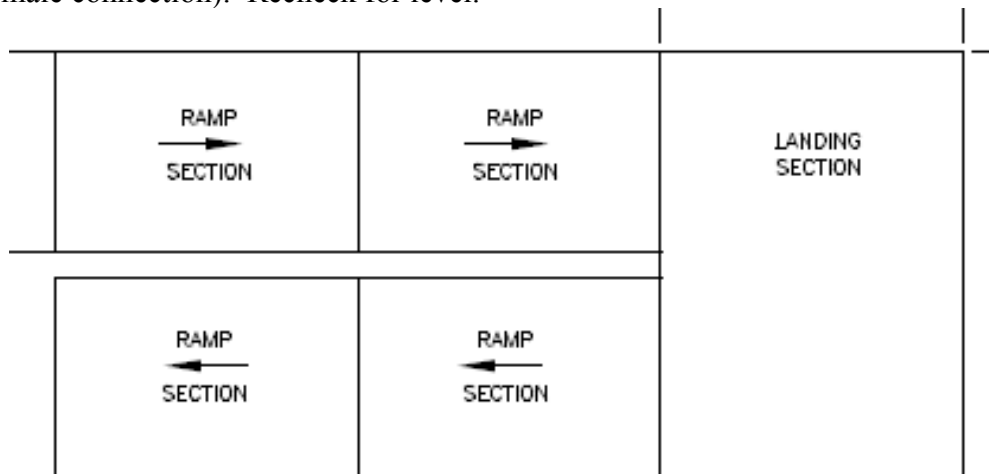


Figure GG

- C. Continue following steps and installation of ramp.

*Optional Level Landing:*

- A. Stand 4'x6' level section on its side. Slide legs through welded pockets and adjust to level all (4) corners.



Figure HH

- B. Flip landing over to the topside and connect into existing ramp pockets, recheck for level.
- C. Continue follow steps A-G on installing ramp sections.

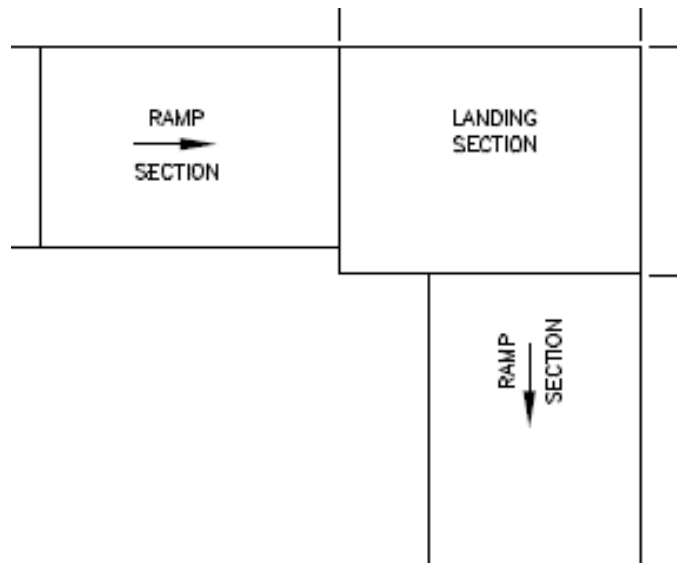


Figure II

*Optional Step Attachment:*

- A. Install landing per instructions on Installing First Landing Section.
- B. Measure outside edge of landing from finished floor to top surface of landing, this will determine your measurement of your step height.
- C. Flip step on side and proceed to sleeve legs in 4 corners of step.  
*Please Note:* One leg with half pad will need to be installed in top sleeve, where it will butt up against outside of landing.



Figure JJ

- D. Start at top of step rise and measure to end of base pad on let, measurement should be the same as your landing height.
- E. Flip step over on its stop side and butt against landing. Make sure top of step rise is flush against top surface of landing.  
*Please Note:* Leg with half pad will sit on top of leg with full pad.



Figure KK

- F. Proceed to adjust bottom legs so they are level.

G. Sleeve in step handrail over legs.



Figure LL

H. After handrails are installed, screw in self-tapping screws 12" on center at top of step riser.



Figure MM

I. Follow Up Touch Up Procedures.



Figure NN