

## 1 1/4" STAIR STRINGERS

### MAXIMUM STRINGER RUN

#### 1 1/4" X 1.5E-2250F PWLVL MAXIMUM STRINGER RUN – 40 PSF LIVE LOAD AND 12 PSF DEAD LOAD

Stringer Depth	36" Tread Width				42" Tread Width		44" Tread Width		48" Tread Width	
	2 Stringers		3 Stringers		3 Stringers		3 Stringers		3 Stringers	
	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement
9 1/2"	5'-3"	6'-0"	6'-0"	7'-6"	6'-0"	6'-9"	6'-0"	6'-9"	5'-3"	6'-9"
11 7/8"	9'-0"	9'-9"	10'-6"	11'-3"	9'-9"	10'-6"	9'-9"	10'-6"	9'-0"	9'-9"
14"	12'-0"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"	12'-9"

Table values are based on a maximum step rise of 7 3/4" and a minimum step run of 9".

#### 1 1/4" X 1.5E-2250F PWLVL MAXIMUM STRINGER RUN – 100 PSF LIVE LOAD AND 12 PSF DEAD LOAD

Stringer Depth	36" Tread Width				42" Tread Width		44" Tread Width		48" Tread Width	
	2 Stringers		3 Stringers		3 Stringers		3 Stringers		3 Stringers	
	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement	No Reinforcement	With Reinforcement
9 1/2"	3'-8"	4'-7"	4'-7"	5'-6"	4'-7"	5'-6"	4'-7"	5'-6"	3'-8"	4'-7"
11 7/8"	6'-5"	7'-4"	8'-3"	8'-3"	7'-4"	8'-3"	7'-4"	8'-3"	7'-4"	7'-4"
14"	9'-2"	10'-1"	11'-0"	11'-0"	10'-1"	10'-1"	10'-1"	10'-1"	10'-1"	10'-1"

Table values are based on a maximum step rise of 7" and a minimum step run of 11".

### GENERAL NOTES:

1. Verify compliance with the local building code.
2. Table values are limited by deflection equal to L/360 at live load or L/240 at total load.
3. For other design loads, stair constructions or attachment details, consult with the project designer or engineer of record.
4. Stringers are unstable until treads are installed.
5. To minimize squeaks, install treads with panel adhesive in addition to nails or screws.
6. Stringers shall be separated from concrete or masonry in accordance with the building code.

### PWLVL PROPERTIES

#### 1.5E-2250F PWLVL Allowable Design Stresses<sup>(1)</sup>

Modulus of Elasticity	E = 1,500,000 psi <sup>(2)</sup>
Bending	F <sub>b</sub> = 2,250 psi <sup>(3)(4)</sup>
Horizontal Shear (joist)	F <sub>v</sub> = 230 psi
Compression Perpendicular to Grain (joist)	F <sub>c⊥</sub> = 750 psi <sup>(2)</sup>
Compression Parallel to Grain	F <sub>c</sub> = 1,950 psi

- (1) These allowable design stresses apply to dry service conditions.
- (2) No increase is allowed for load duration.
- (3) Multiply by (12/d)<sup>1/5</sup> where d = depth of member (in).
- (4) A factor of 1.04 may be applied for repetitive members as defined in the National Design Specification<sup>®</sup> for Wood Construction.

### EVALUATION REPORTS

ICC-ES ESR-2909

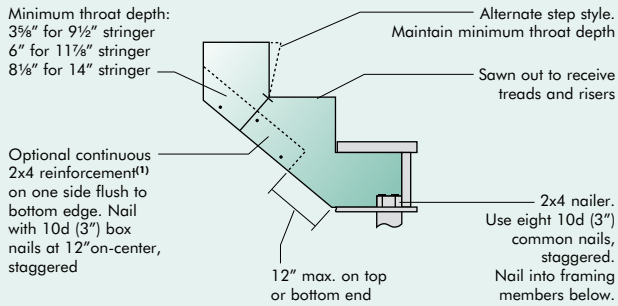
HUD MR 1310a

LA CITY RR 25448

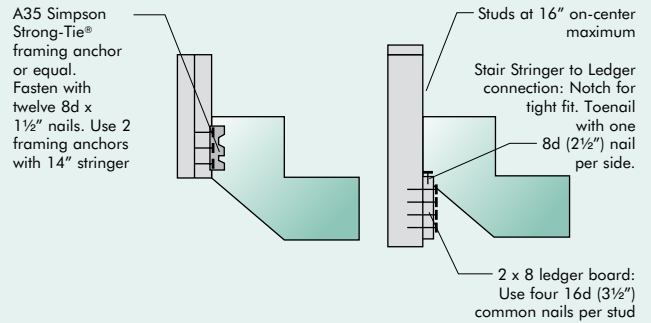
APA PR-L233

# SUGGESTED ATTACHMENTS – 40 PSF LIVE LOAD AND 12 PSF DEAD LOAD

## LOW-END ATTACHMENTS



## HIGH-END ATTACHMENTS

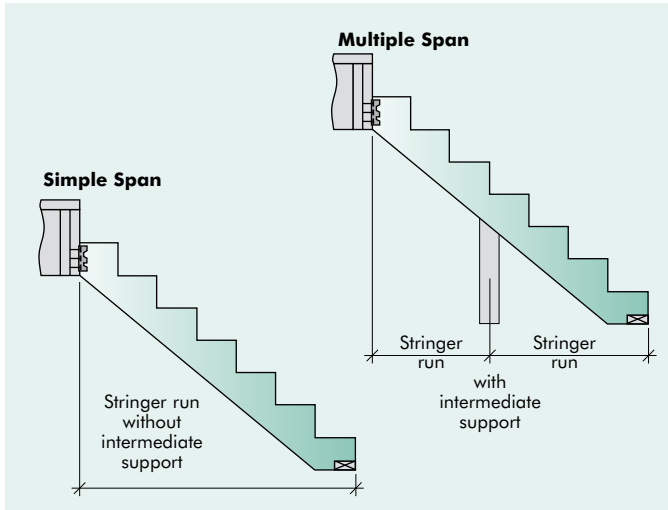


(1) Min. No. 2 hem-fir, spruce-pine-fir or better grade.

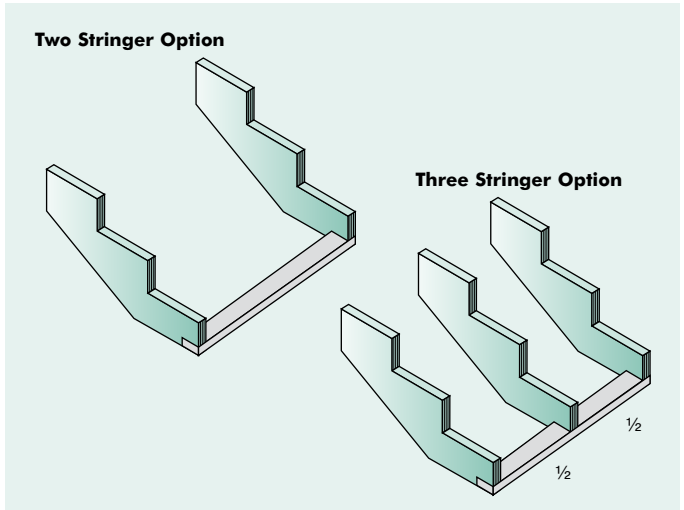
**CAUTION: Stair Stringer Attachment Details are intended for use with PWLVL only. Consult with the Project Designer or Engineer of Record for attachment details when the total load is greater than 52 psf.**

# SPAN & ASSEMBLY OPTIONS

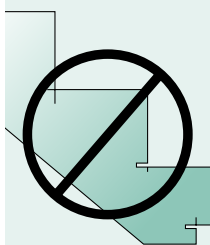
## SIMPLE AND MULTIPLE SPANS



## TWO- AND THREE-STAIR STRINGER ASSEMBLIES



## CUTTING PRECAUTION



**DO NOT**  
overcut stair stringer

## GLOSSARY OF TERMS

TERM	DEFINITION
<b>Stringer Depth</b>	Depth of stringer before steps are cut.
<b>Step Rise</b>	Unit rise of individual step.
<b>Step Run</b>	Unit run of individual run (nosing ignored).
<b>Stringer Rise</b>	Vertical span between stairway supports. Equal to the upper floor to lower floor height for stringers without intermediate supports.
<b>Stringer Run</b>	Horizontal span between stairway supports.
<b>Throat Depth</b>	Net depth of stringer once steps are cut. Measured from step perpendicular to bottom edge of stringer.

