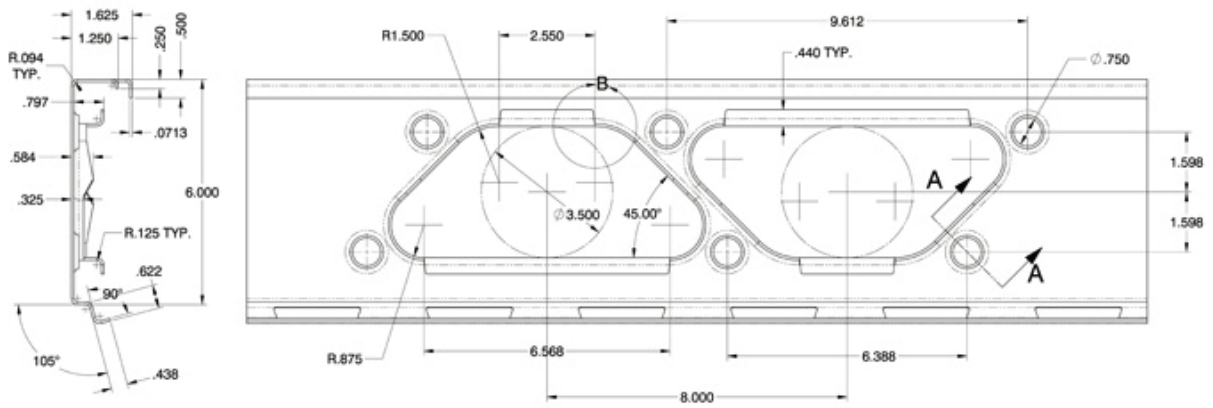


Lightweight Steel Framing



Composite DeltaStud Load Tables

January 2011

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COMPOSITE FLOOR JOISTS

FULL DELTA Double (Back to Back)

Allowable Live Load (Includes Dead Load) in psf	APPENDIX A
06.000" JOIST / 12" SPACING	1
06.000" JOIST / 16" SPACING	2
06.000" JOIST / 24" SPACING	3
06.000" JOIST / 32" SPACING	4
08.000" JOIST / 12" SPACING	5
08.000" JOIST / 16" SPACING	6
08.000" JOIST / 24" SPACING	7
08.000" JOIST / 32" SPACING	8
10.000" JOIST / 12" SPACING	9
10.000" JOIST / 16" SPACING	10
10.000" JOIST / 24" SPACING	11
10.000" JOIST / 32" SPACING	12
12.000" JOIST / 12" SPACING	13
12.000" JOIST / 16" SPACING	14
12.000" JOIST / 24" SPACING	15
12.000" JOIST / 32" SPACING	16
14.000" JOIST / 12" SPACING	17
14.000" JOIST / 16" SPACING	18
14.000" JOIST / 24" SPACING	19
14.000" JOIST / 32" SPACING	20

WALL STUDS

Combined Load (Wind and Gravity)

Allowable Compressive Load in Kips	APPENDIX B
03.625" STUD / Single Stud	1
03.625" STUD / Double Stud	2
06.000" STUD / Single Stud	3
06.000" STUD / Double Stud	4
08.000" STUD / Single Stud	5
08.000" STUD / Double Stud	6

Wind Bearing Composite Stud Wall Allowable Heights

Maximum Allowable Single Span in Feet	APPENDIX C
Single Stud	1-2
Double Stud	3-4

INTRODUCTION AND SCOPE

This publication and Load Tables provide technical information on the **Imperial Building Products** light gauge perforated studs and joists **Composite System** (steel and concrete) for curtain walls, load bearing walls, walls carrying combined load of gravity and wind, and floors. All calculations applicable to the steel components have been evaluated based on AISI/COS/NASPEC 2001, approved in Canada by CSA S136-01 and approved in Mexico by Canacero. The concrete segment is based on CSA STD. CAN3-A23.3 and ACI, latest editions, modified to suit composite applications using light gauge perforated (reinforced) joists or studs.

DESIGN RESPONSIBILITY

This Manual and Load Tables are prepared as a guide for structural engineers and design professionals. Every precaution has been taken to ensure that all information presented is factual and that numerical values are accurate. Imperial Building Products assumes no responsibility for any design liability or errors resulting from the use of this information and Load Tables.

DESIGN CRITERIA AND TECHNICAL DATA

Composite Action

Composite action (steel and concrete) is developed when two load-carrying structural members, such as concrete and steel, are integrally connected and deflect as a single unit under any load. The basic advantages resulting from composite design are:

- Reduction in weight of steel (approx. 30%)
- Shallower steel joists or studs
- Increase in wall or floor stiffness (improved deflection performance)
- Increase in span length for a given joist or stud member
- Increase in overload capacity (safety due to overload).

While there are no major disadvantages in composite construction, some limitations do apply and they are:

- Effect of continuous support (more than single span)
- Long term deflection (concrete creep)
- Composite walls under wind suction when the concrete's outer face cover is subjected to tension force (strength criteria only, strength governs).

In the composite design, only the portion of the concrete face acting in compression is considered to be effective, therefore, in the case of continuous beams or wind suction on walls, the advantage of composite action is reduced in the area of the negative bending moment, with only the bar reinforcing to provide continuity of composite action. The matter of long term deflection (concrete creep) is addressed by increasing the modulus of elasticity ratio from (n) to (2n).

The Imperial Building Products Composite System – Description and Use

The Imperial Building Products Composite System is composed of two major components:

- State-of-the-art reinforced perforated steel studs or joists **which act as a truss rather than a solid stud or joist** with steel strength varying from 33.0 ksi to 50.0 ksi yield, depending on the member's thickness.
- Concrete 2.0" thick for walls and 2.50" thick for floors, varying from $f'c = 3500$ psi to $f'c = 5000$ psi.

The two components are integrated at the stud's outer flange into a fully effective composite system by the use of special shear bond slots which provide the required shear bond capacity connection between steel and concrete. The steel studs or joists are made of pre-galvanized steel (min. 1.25 oz.) and can be provided in galvalum material, if required, thus eliminating any damage due to corrosion or galvanic action between concrete and steel.

Materials

Steel studs or joists meet the requirements of ASTM A446 standard specification for steel sheet, zinc coated by the hot-dipped process (galvanized). The steel has a minimum yield stress of 33.0 ksi or 50.0 ksi. The sheet steel meets the requirements of CSA S136-01. The minimum yield stress is 33.0 ksi for products having thickness less than 0.0566". For products having thickness equal or greater than 0.0566", the yield stress is 50.0 ksi.

Limit State Design (LSD)

Limit State Design is a design method in which the performance of a structure is checked against various limiting conditions at appropriate load levels. Different load factors, such as $\phi_c D$, $\phi_c L$, $\phi_c Q$, and $\phi_c T$ are assigned to the different load effects.

Limit State Design is in accordance with CSA S136-01 and the National Building Code of Canada 1995, which were used to develop the Imperial Building Products Load Tables, ($\phi_c D = 1.25$), ($\phi_c L = 1.50$). Thus, the Load Tables for walls and floors provide **factored resistance**. When using the Load Tables for strength evaluation, strength governs, factored resistance must be compared with **factored loads**. When deflection criteria governs, **unfactored** live loads and moving dead loads (furniture, etc.) are considered only.

Curtain Wall (Wind Bearing) Composite Stud Tables

The maximum single span composite stud lengths are presented for:

- factored loads - strength governs,
- an even distributed wind pressure (psf) acting on the wall, concrete outer skin is under compression,
- indicated loads (unfactored) for deflection criteria of L/360, L/480, L/600 and L/720 for wind pressure or suction mode. Serviceability is set at **L/480** and should be used in design,
- shear bond criteria (for wind pressure or suction mode),
- web crippling criteria (for wind pressure or suction mode).

The Load Tables are based on single supported span.

The tabulated values do not apply when the steel stud is continuous over a support. Both stud flanges must be attached to the bottom and top track, and end connections must be designed for the applied reaction.

A proper reduction in height capacity must be considered when the same wall is subjected to suction force of wind as **concrete outer skin is under tension**. The reduction magnitude will depend on the amount of steel reinforcing provided in the concrete outer skin, the concrete skin thickness, and the geometrical properties of the Composite System section.

Approximate Reduction Factors (RF) on allowable span as shown in Load Tables, are as follows:

- Studs 3.625" x 1.625" x 0.5" – **RF = 0.794**
- Studs 6.0" x 1.625" x 0.5" – **RF = 0.89**
- Or 8.0" x 2.0" x 0.75" – **RF = 0.90**

For more detailed information, contact Imperial Building Products.

The serviceability limit is set at **L/480** and should be used in design. The backside (inside) must be stiffened by a continuous lateral steel bracing spaced at 48" c/c maximum.

Composite wall, concrete and stud are fully bearing on continuous top and bottom support. Because of the concrete wall's dead weight, the column height is limited by code to $KL/r \leq 200$ which is not reflected in the Load Tables and must be evaluated by the design professional before choosing the shown maximum allowable single span in feet.

Gravity and Combined Load (Wind and Gravity)

The factored axial resistance is based on continuous bracing in back of wall at 48.0" c/c maximum. The following modes of failure are examined:

- Weak axis KL/r ratio (largest)
- Torsional flexural buckling mode.

Load Tables are based on simple supported spans. The tabulated values do not apply when the studs are continuous over supports.

Both stud flanges must be attached to the bottom and top track sections and end connections must be designed for the applied reaction. Composite wall concrete and stud are fully bearing on continuous top and bottom supports. The magnification of deflection by axial load is neglected. Deflection of wall, due to wind load only, was considered.

Composite Floor Joist Tables

The allowable shown load includes factored concrete load $(31.25 \times 1.25) = 39.0$ psf and factored live load $(12.0 + WLL) (1.5)$ psf. Allowable uniformly distributed loads psf for single span joist condition are shown.

The serviceability limit is set at $L/480$ and should be used in design. The deflection criteria considers only unfactored live loads plus unfactored moving dead loads such as furniture, etc.

For $L/360$ deflection criteria, multiply allowable span by factor = **1.10**.

For $L/600$ deflection criteria, multiply allowable span by factor = **0.927**.

For $L/720$ deflection criteria, multiply allowable span by factor = **0.8735**.

Strength criteria are established using Limit State Design (LSD), by the use of factored loads:

$$[(LL + ML) (1.5) + (DL) (1.25) = WF]$$

LL = Live Load psf.

ML = Moving Dead Load (furniture etc.) psf.

DL = Dead Load psf.

WF = Total Factored Load psf.

WLL = Unfactored Live Load psf.

Composite Joist Load Tables are based on continuous lateral support of the compression flange. Lateral bracing (bridging) should be provided at equally spaced intervals not exceeding 82.0" c/c in accordance with CSSBI S6.00

guide specifications. For lightweight steel framing, lateral bracing is also required to align the joists during construction.

Shoring and Curing Requirements for Composite Floor Joists or Composite Stud Walls

Minimum concrete strength at 28 days to be $f'c = 3500$ psi. All joists or studs to be shored at 1/3 points prior to slab pour. Shores to remain in place until concrete has attained strength of 2500 psi or 3 days, whichever is the longer.

Calibration and Validation

The composite section properties are determined from the sections geometry. The strength and deflection equations are adapted from universally recognized engineering beam and column equations. Supplementary full-scale tests to ASTM E72-9802 **Conducting Strength Test of Panels for Building Construction**, including Finite Element Analysis, were used to validate the theoretical mathematical strength and deflection results. Stub column tests were also conducted to establish the shear bond capacity of the special patented slot device in the Imperial Building Products Composite Stud and Joist System.

All tests and Finite Element Analysis were conducted in December 2004 at:

Bodycote Material Testing Canada Inc.,
2395 Speakman Drive
Mississauga, Ontario,
Canada, L5K 1B3

Michael Sommerstein, P. Eng.
M&H Engineering
February 7, 2005

IMPERIAL BUILDING PRODUCTS COMPOSITE SYSTEM



MIKE SOMMERSTEIN, P. Eng

Chief Engineer and Engineering Manager

VicWest 1960-1999

EDUCATION:	Professional Civil Engineer (Structural). Also diplomas in: electronic control for automation, architectural technology, roll forming technology, computer aided structural engineering technology and structural welding technology.	TECHNICAL PAPERS:
EXPERIENCE:	40 years in metal and building industry with a total of over 1000 major and intermediate projects completed since 1960.	National Aviation Museum, Wall Cladding, Symposium/Workshop on Serviceability of Buildings N.R.C., Ottawa (1988 – 30 countries)
COMMITTEES:	Canadian Standard Association (CSA S136 – 94), Canadian Sheet Steel Building Institute committee on research and development in light gauge design.	Design, Testing and Installation of Simcoe St. Bridge – International Conference of Steel & Aluminum Structure, Singapore, 1991 (27 countries)
AFFILIATION:	Association of Professional Engineers of the Province of Ontario and Manitoba as well as International Conference of Building Officials.	Latest Design Equations, Testing and Criteria of Headed Concrete Anchors in Application of Composite Construction – First World Conference on Construction Steel Design – Acapulco, Mexico, Dec. 6-9, 1992
PATENTS:	USA 8616532, CAN 964833 – Space frame joint. CAN 1329690 – Panel mounting clip. USA 5226274 – Panel mounting clip. USA 5544461 – Panel mounting structural. USA 5522193 – Panel mounting arrangement. Patent pending seaming machine.	Plate Aluminum Wall Retrofit Design Application Using Latest Open Rain Screen Design – Third international Conference on Steel and Aluminum Structures, Istanbul, Turkey, May 24-26, 1995 The National Archive Building – Gaithersburg, Maryland, USA, 1997 Modern Open Rain Screen Cladding Retrofit of Occupied Residential Complex – Singapore 1997
		TECHNICAL MANUALS:
		Shear Diaphragm Manual, 1999. Alpolic Manual, 1999 Marquis System Manual, 1998 Plate Aluminum System Manual, 1999 TSR System Manual, 1998 Explosion Penal Manual, 1999 Roof Dec Manual, 1999 Floor Deck Manual, 1999



IMPERIAL BUILDING PRODUCTS COMPOSITE SYSTEM

APPENDIX A FLOOR JOISTS

Allowable Live Load in psf

COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

6 " Joist (Double)	t1= 0.0346	t3= 0.0566
12 " Joist Spacing	t2= 0.0451	t4= 0.0713

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 20	Gage 18	Gage 16	Gage 14	Units
Stud (steel) spacing (bo)	12	12	12	12	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	33	50	50	ksi
Stud depth (d)	6	6	6	6	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0346	0.0451	0.0566	0.0713	Inch
Steel stud section properties (As)	0.542	0.704	0.878	1.098	Inch ²
Stud Inside Bend Radius	0.07645	0.0712	0.0849	0.10695	Inch
Ix-x	3.55	4.59	5.712	7.116	Inch ⁴
Weight	2.028	2.634	3.286	4.11	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

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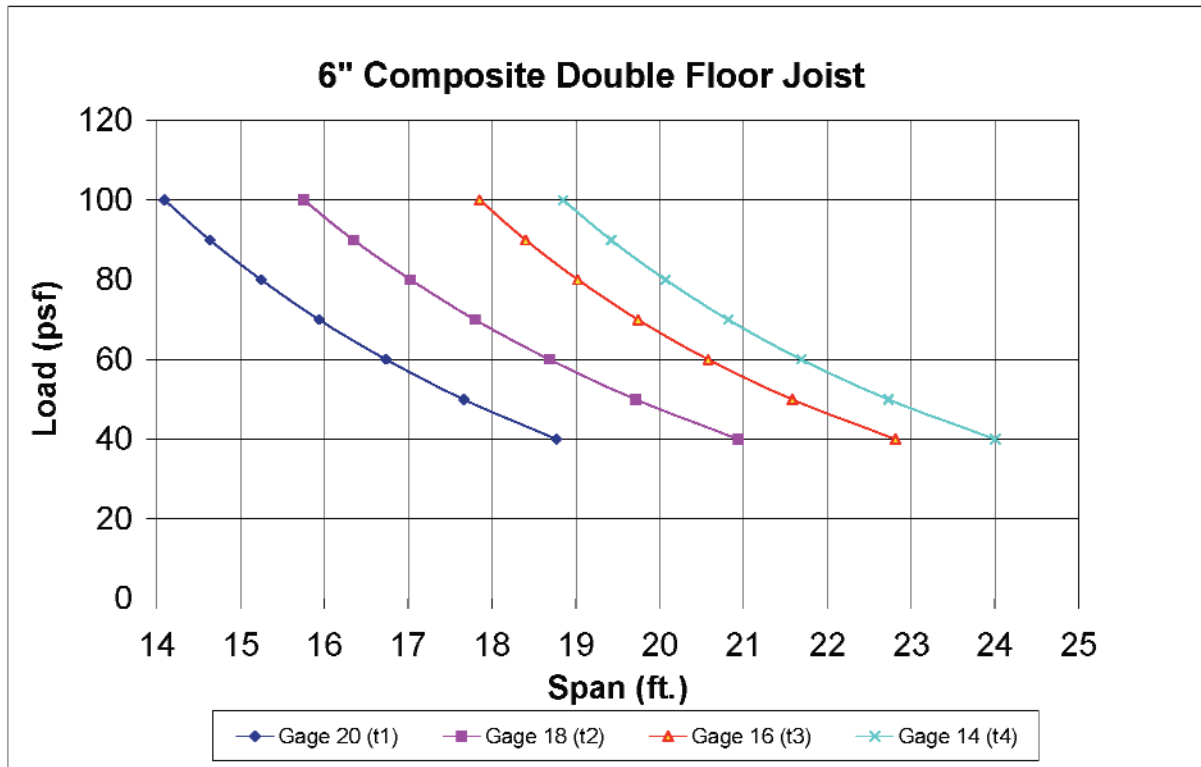
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.067	1.974	4.364	6.251

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0346")	18.77	17.66	16.73	15.94	15.24	14.63	14.09	ft
Unsupported Span of the Composite Joist (t2=0.0451")	20.94	19.71	18.68	17.80	17.03	16.35	15.75	ft
Unsupported Span of the Composite Joist (t3=0.0566")	22.81	21.58	20.58	19.74	19.02	18.40	17.85	ft
Unsupported Span of the Composite Joist (t4=0.0713")	24.00	22.73	21.69	20.82	20.07	19.42	18.85	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

6 " Joist (Double)	t1= 0.0346	t3= 0.0566
16 " Joist Spacing	t2= 0.0451	t4= 0.0713

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 20	Gage 18	Gage 16	Gage 14	Units
Stud (steel) spacing (bo)	16	16	16	16	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	33	50	50	ksi
Stud depth (d)	6	6	6	6	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0346	0.0451	0.0566	0.0713	Inch
Steel stud section properties (As)	0.542	0.704	0.878	1.098	Inch ²
Stud Inside Bend Radius	0.07645	0.0712	0.0849	0.10695	Inch
Ix-x	3.55	4.59	5.712	7.116	Inch ⁴
Weight	2.028	2.634	3.286	4.11	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

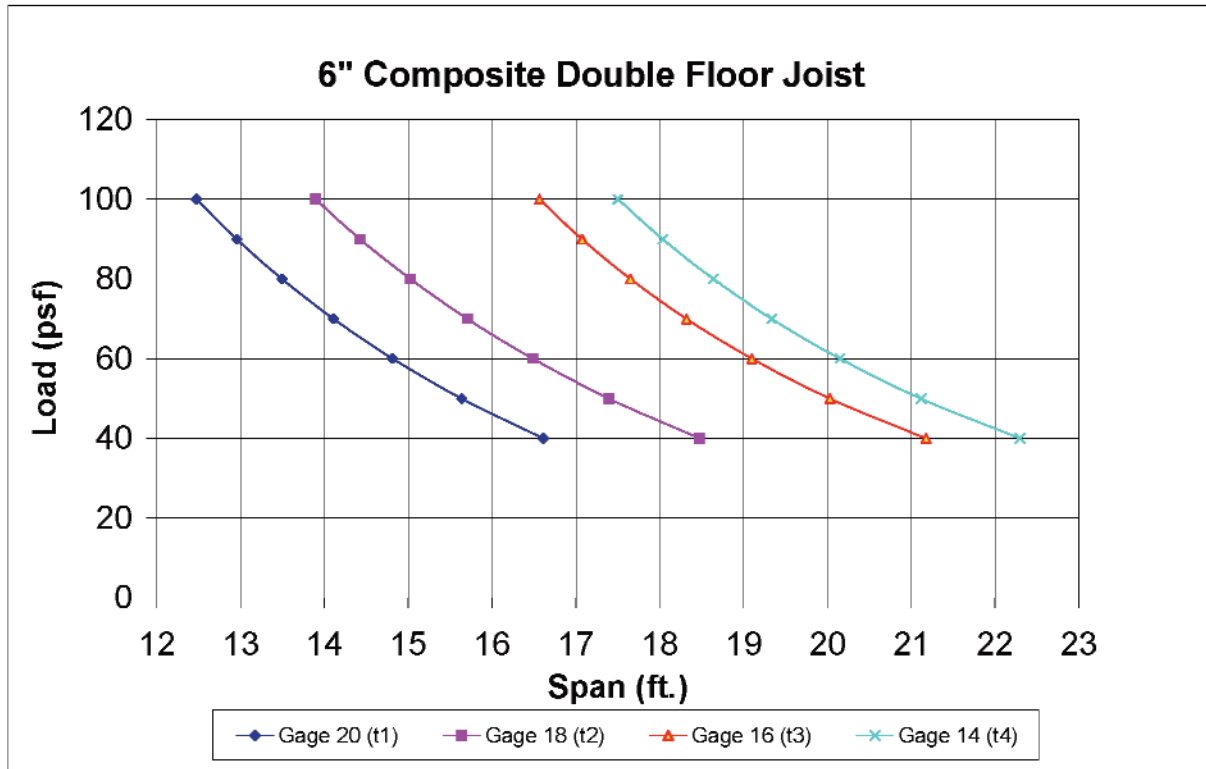
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.067	1.974	4.364	6.251

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0346")	16.61	15.64	14.81	14.11	13.49	12.95	12.47	ft
Unsupported Span of the Composite Joist (t2=0.0451")	18.47	17.40	16.49	15.71	15.03	14.43	13.90	ft
Unsupported Span of the Composite Joist (t3=0.0566")	21.18	20.03	19.10	18.32	17.65	17.07	16.56	ft
Unsupported Span of the Composite Joist (t4=0.0713")	22.30	21.12	20.15	19.34	18.64	18.04	17.50	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

6 " Joist (Double)	t1= 0.0346	t3= 0.0566
24 " Joist Spacing	t2= 0.0451	t4= 0.0713

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 20	Gage 18	Gage 16	Gage 14	Units
Stud (steel) spacing (bo)	24	24	24	24	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	33	50	50	ksi
Stud depth (d)	6	6	6	6	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0346	0.0451	0.0566	0.0713	Inch
Steel stud section properties (As)	0.542	0.704	0.878	1.098	Inch ²
Stud Inside Bend Radius	0.07645	0.0712	0.0849	0.10695	Inch
Ix-x	3.55	4.59	5.712	7.116	Inch ⁴
Weight	2.028	2.634	3.286	4.11	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

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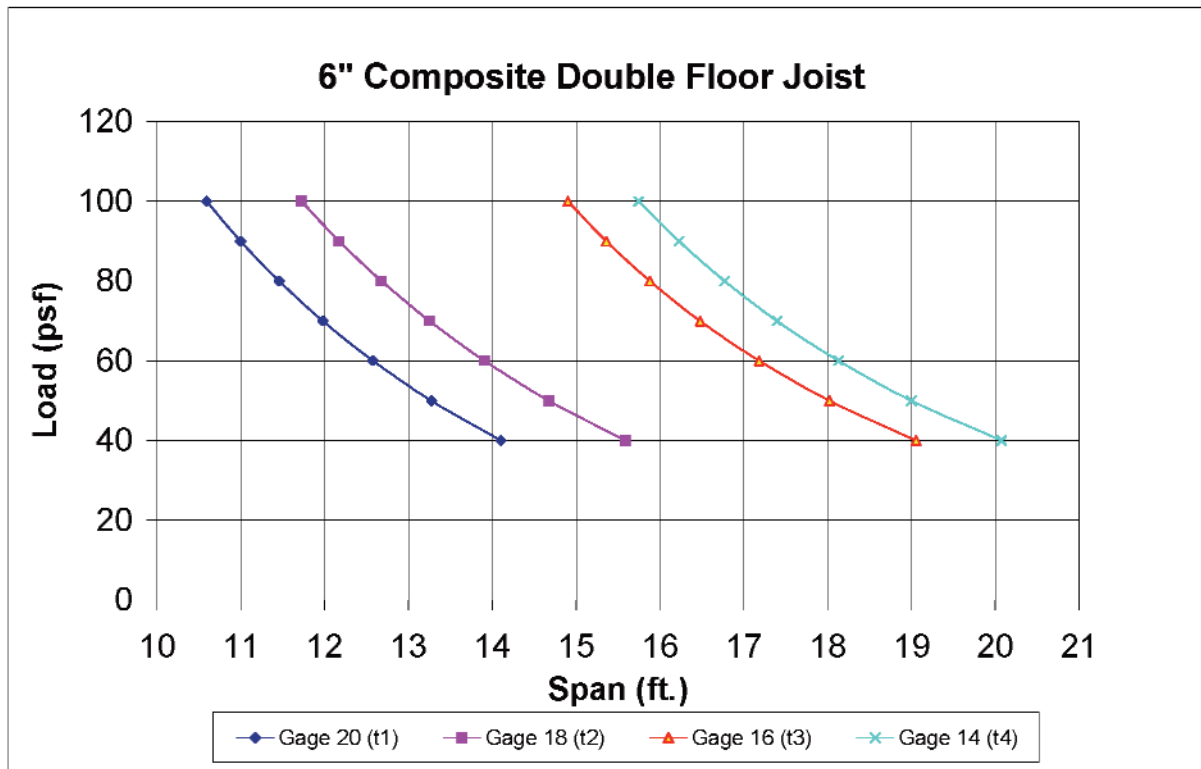
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.067	1.974	4.364	6.251

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0346")	14.10	13.28	12.58	11.98	11.46	11.00	10.59	ft
Unsupported Span of the Composite Joist (t2=0.0451")	15.59	14.68	13.91	13.25	12.68	12.17	11.72	ft
Unsupported Span of the Composite Joist (t3=0.0566")	19.05	18.02	17.18	16.48	15.88	15.36	14.90	ft
Unsupported Span of the Composite Joist (t4=0.0713")	20.07	19.00	18.13	17.40	16.77	16.23	15.75	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

6 " Joist (Double)	t1= 0.0346	t3= 0.0566
32 " Joist Spacing	t2= 0.0451	t4= 0.0713

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 20	Gage 18	Gage 16	Gage 14	Units
Stud (steel) spacing (bo)	32	32	32	32	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	33	50	50	ksi
Stud depth (d)	6	6	6	6	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0346	0.0451	0.0566	0.0713	Inch
Steel stud section properties (As)	0.542	0.704	0.878	1.098	Inch ²
Stud Inside Bend Radius	0.07645	0.0712	0.0849	0.10695	Inch
Ix-x	3.55	4.59	5.712	7.116	Inch ⁴
Weight	2.028	2.634	3.286	4.11	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

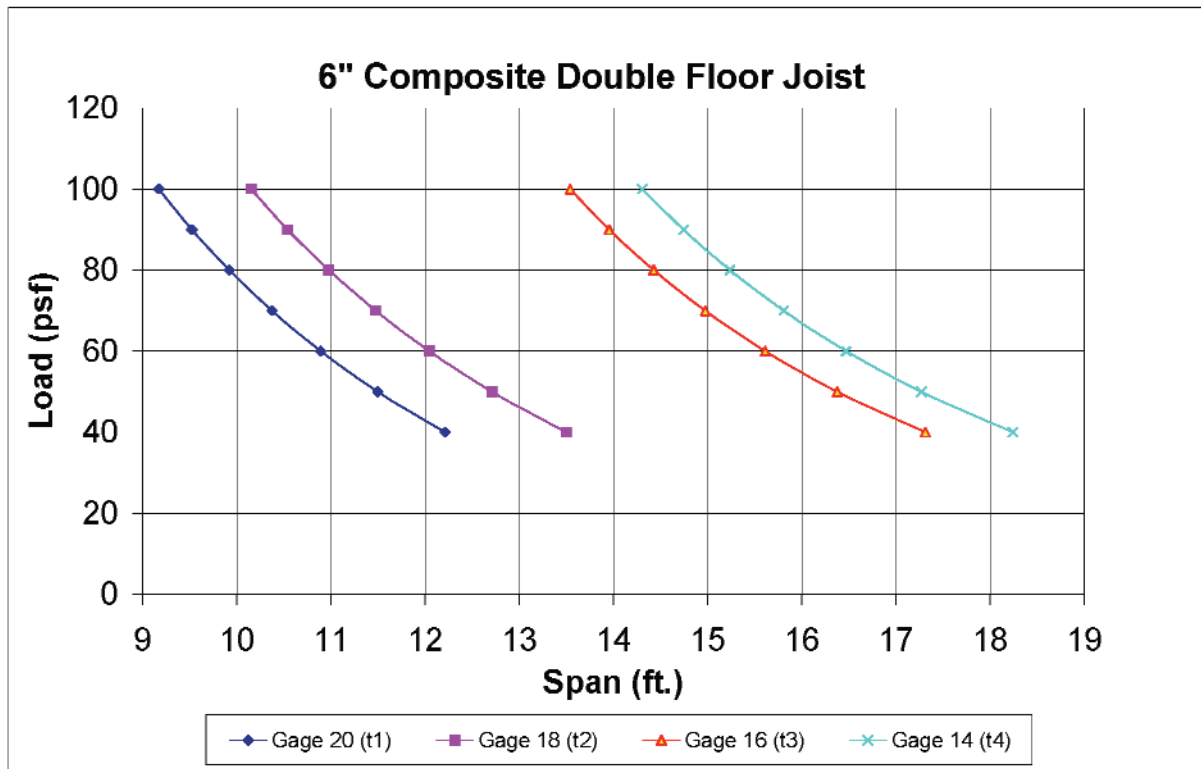
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.067	1.974	4.364	6.251

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0346")	12.22	11.50	10.89	10.37	9.92	9.53	9.17	ft
Unsupported Span of the Composite Joist (t2=0.0451")	13.50	12.71	12.05	11.48	10.98	10.54	10.15	ft
Unsupported Span of the Composite Joist (t3=0.0566")	17.31	16.38	15.61	14.97	14.43	13.96	13.54	ft
Unsupported Span of the Composite Joist (t4=0.0713")	18.24	17.27	16.47	15.81	15.24	14.74	14.31	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

8 " Joist (Double) t1= 0.0451 t3= 0.0713
12 " Joist Spacing t2= 0.0566 t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	12	12	12	12	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	8	8	8	8	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	0.792	0.988	1.232	1.722	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	8.744	10.86	13.496	18.708	Inch ⁴
Weight	2.964	3.698	4.612	6.446	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

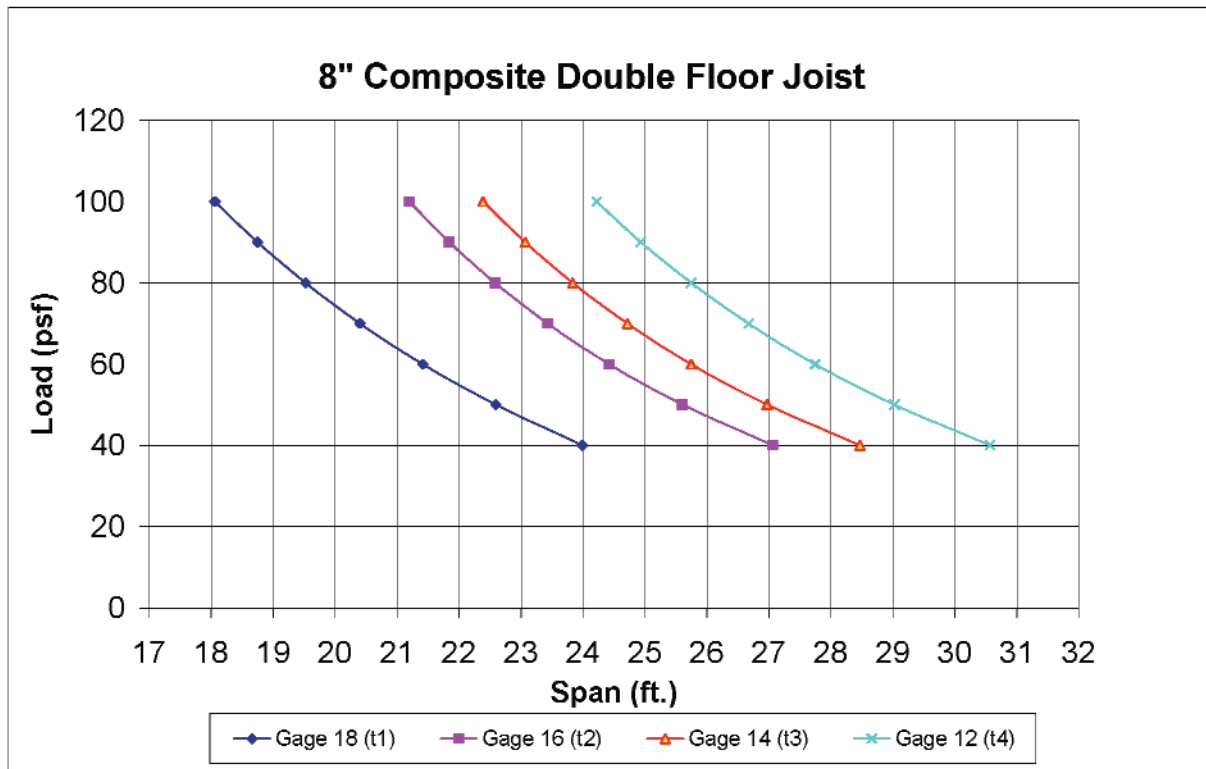
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.970	4.357	6.242	12.248

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	23.99	22.59	21.41	20.40	19.52	18.75	18.06	ft
Unsupported Span of the Composite Joist (t2=0.0566")	27.06	25.61	24.42	23.43	22.58	21.84	21.20	ft
Unsupported Span of the Composite Joist (t3=0.0713")	28.47	26.97	25.75	24.72	23.83	23.07	22.39	ft
Unsupported Span of the Composite Joist (t4=0.1017")	30.57	29.02	27.75	26.67	25.75	24.94	24.22	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

8 " Joist (Double)	t1= 0.0451	t3= 0.0713
16 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	16	16	16	16	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	8	8	8	8	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	0.792	0.988	1.232	1.722	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	8.744	10.86	13.496	18.708	Inch ⁴
Weight	2.964	3.698	4.612	6.446	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

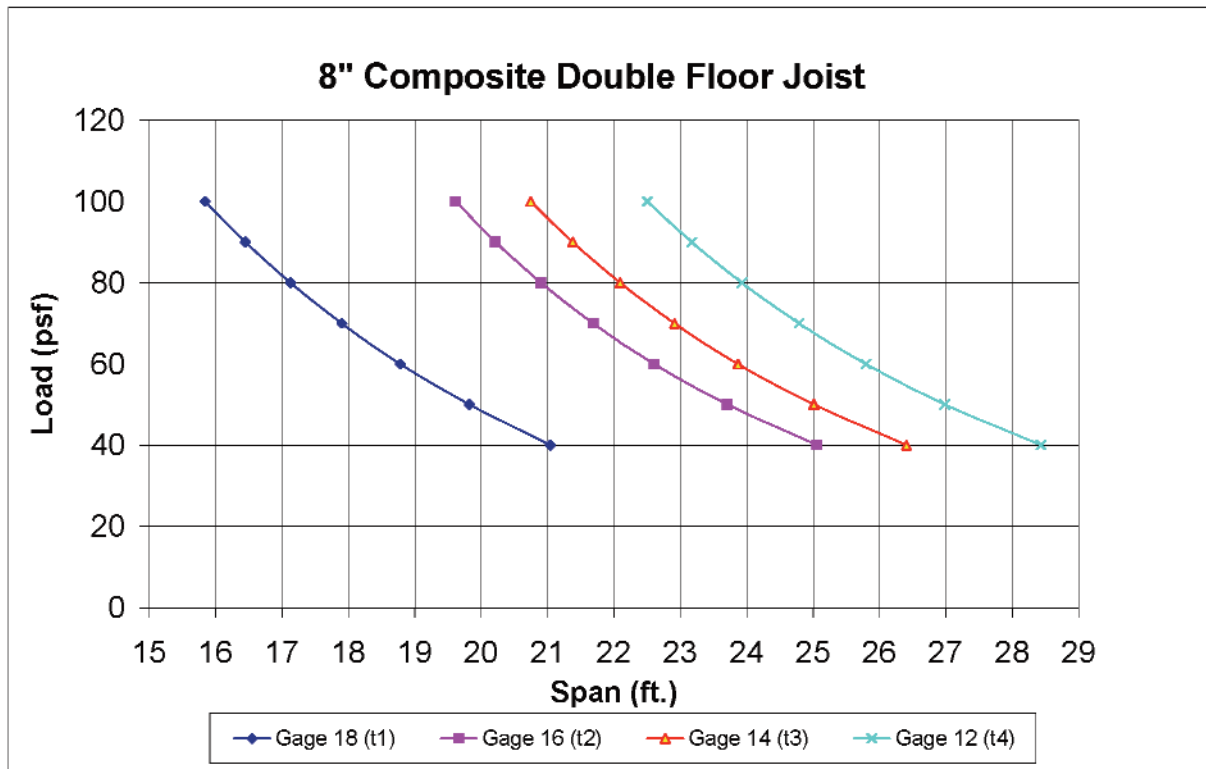
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.970	4.357	6.242	12.248

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	21.04	19.82	18.78	17.90	17.13	16.45	15.84	ft
Unsupported Span of the Composite Joist (t2=0.0566")	25.06	23.71	22.61	21.69	20.90	20.22	19.62	ft
Unsupported Span of the Composite Joist (t3=0.0713")	26.41	25.01	23.87	22.91	22.09	21.38	20.75	ft
Unsupported Span of the Composite Joist (t4=0.1017")	28.43	26.99	25.80	24.79	23.93	23.17	22.50	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection: L/480

8 " Joist (Double)	t1= 0.0451	t3= 0.0713
24 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	24	24	24	24	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	8	8	8	8	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	0.792	0.988	1.232	1.722	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	8.744	10.86	13.496	18.708	Inch ⁴
Weight	2.964	3.698	4.612	6.446	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

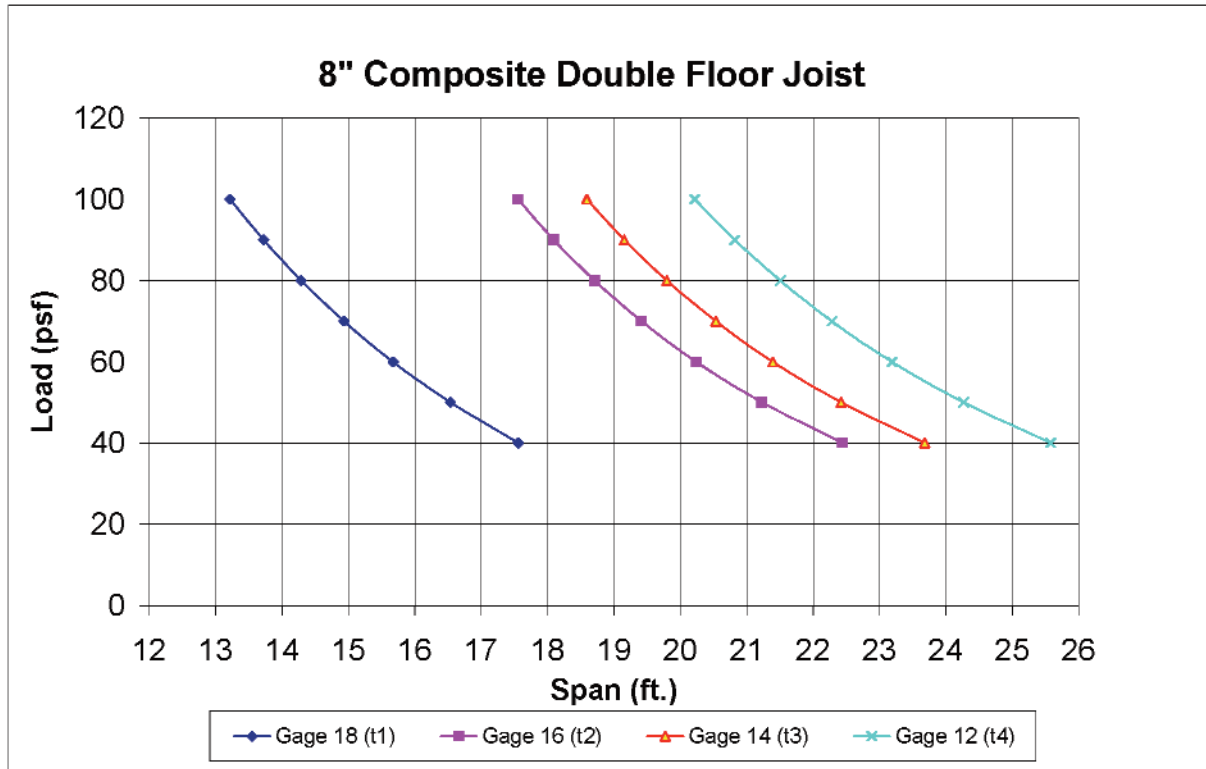
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.970	4.357	6.242	12.248

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	17.56	16.53	15.67	14.93	14.29	13.72	13.22	ft
Unsupported Span of the Composite Joist (t2=0.0566")	22.44	21.23	20.24	19.41	18.71	18.09	17.55	ft
Unsupported Span of the Composite Joist (t3=0.0713")	23.68	22.42	21.39	20.53	19.80	19.15	18.59	ft
Unsupported Span of the Composite Joist (t4=0.1017")	25.57	24.27	23.19	22.28	21.50	20.82	20.22	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

8 " Joist (Double) t1= 0.0451 t3= 0.0713
32 " Joist Spacing t2= 0.0566 t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	32	32	32	32	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	8	8	8	8	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	0.792	0.988	1.232	1.722	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	8.744	10.86	13.496	18.708	Inch ⁴
Weight	2.964	3.698	4.612	6.446	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

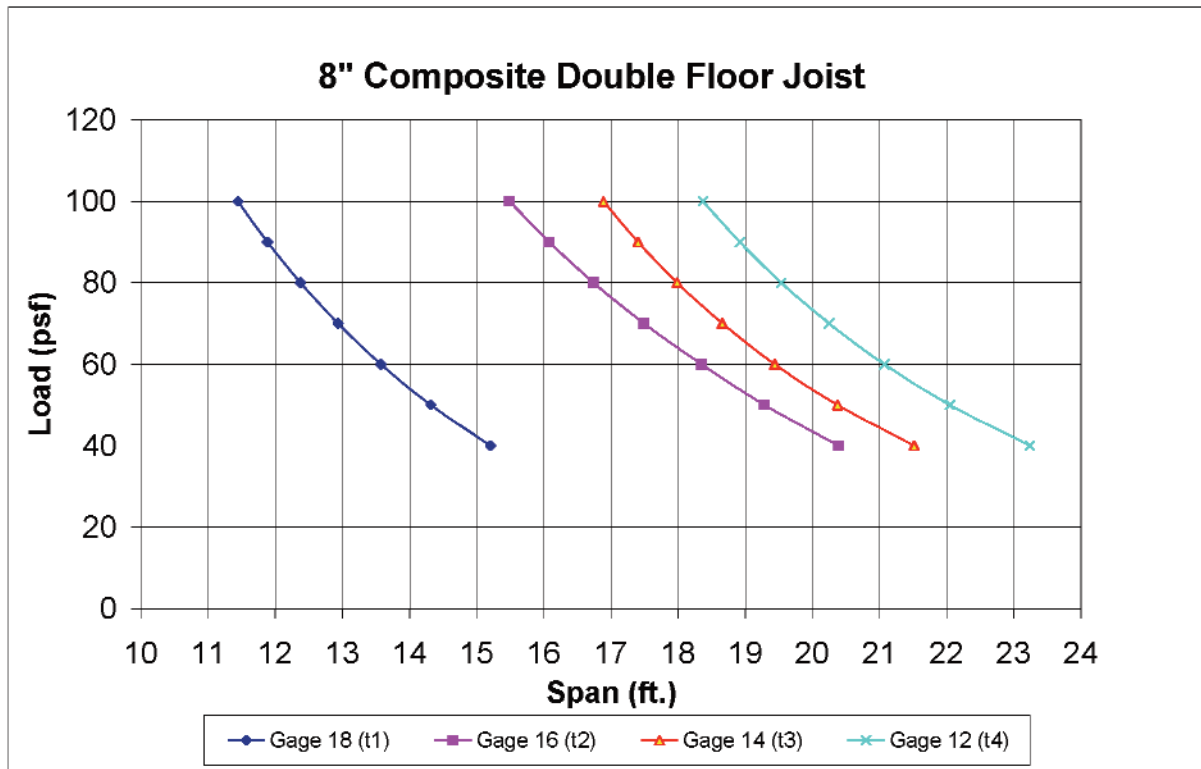
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.970	4.357	6.242	12.248

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	15.20	14.32	13.57	12.93	12.37	11.88	11.45	ft
Unsupported Span of the Composite Joist (t2=0.0566")	20.39	19.29	18.35	17.49	16.74	16.08	15.49	ft
Unsupported Span of the Composite Joist (t3=0.0713")	21.52	20.37	19.44	18.66	17.99	17.40	16.89	ft
Unsupported Span of the Composite Joist (t4=0.1017")	23.24	22.05	21.07	20.25	19.54	18.92	18.37	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

10 " Joist (Double)	t1= 0.0451	t3= 0.0713
12 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	12	12	12	12	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	10	10	10	10	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.018	1.270	1.588	2.232	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	15.896	19.776	24.632	34.31	Inch ⁴
Weight	3.81	4.754	5.944	8.354	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

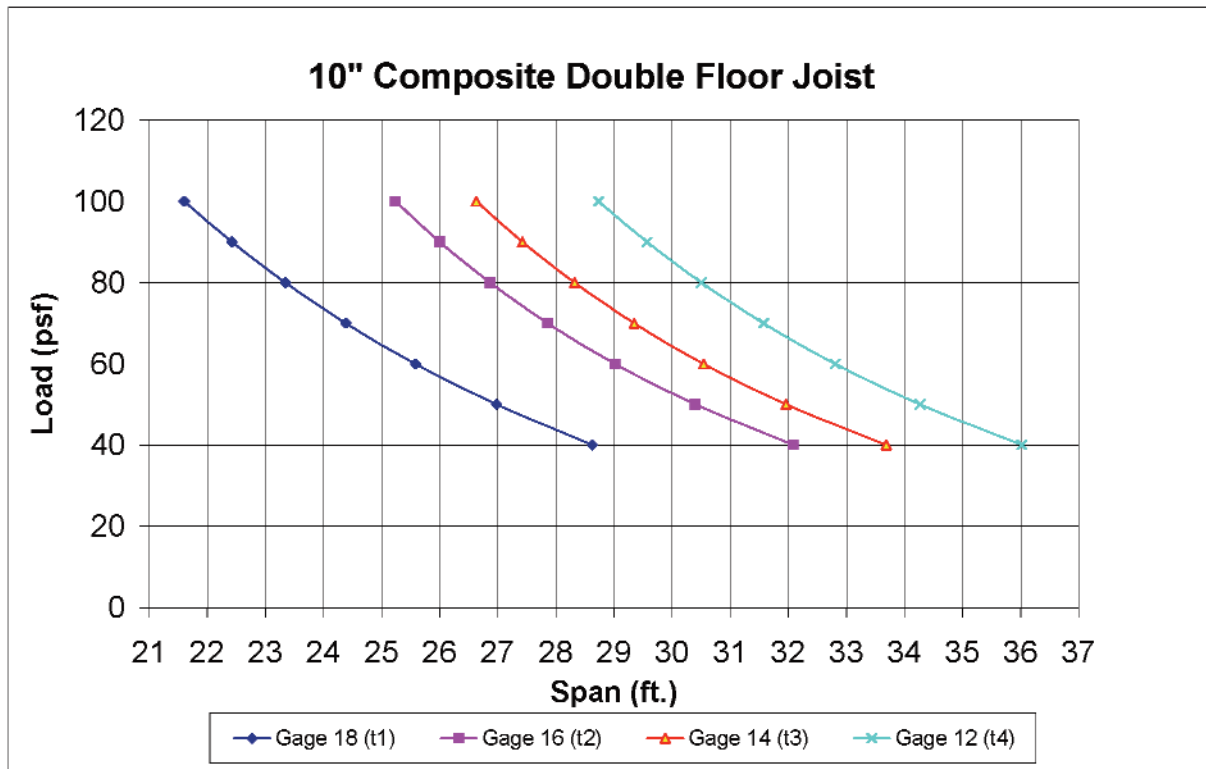
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.967	4.351	6.234	12.235

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	28.63	26.98	25.58	24.39	23.34	22.42	21.60	ft
Unsupported Span of the Composite Joist (t2=0.0566")	32.08	30.40	29.02	27.86	26.87	26.00	25.24	ft
Unsupported Span of the Composite Joist (t3=0.0713")	33.69	31.96	30.54	29.35	28.32	27.42	26.63	ft
Unsupported Span of the Composite Joist (t4=0.1017")	36.02	34.27	32.81	31.57	30.51	29.57	28.74	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

10 " Joist (Double)	t1= 0.0451	t3= 0.0713
16 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	16	16	16	16	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	10	10	10	10	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.018	1.270	1.588	2.232	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	15.896	19.776	24.632	34.31	Inch ⁴
Weight	3.81	4.754	5.944	8.354	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

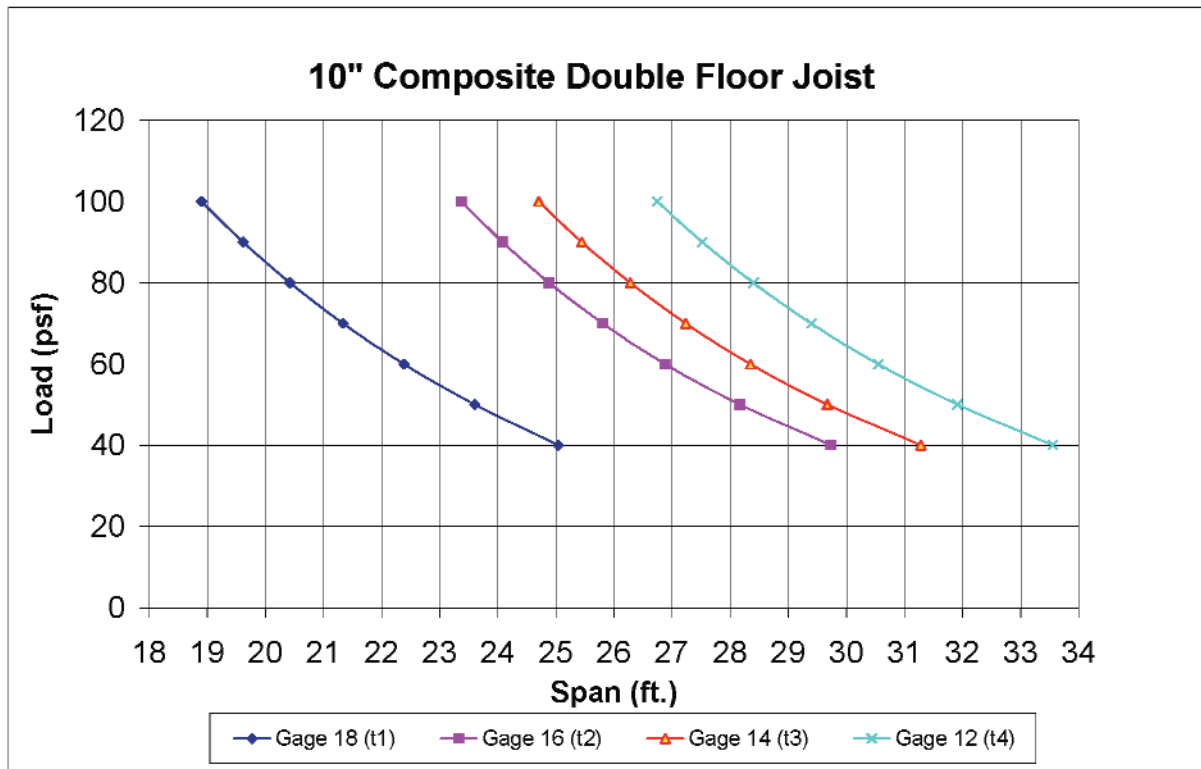
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.967	4.351	6.234	12.235

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	25.04	23.60	22.38	21.33	20.42	19.61	18.90	ft
Unsupported Span of the Composite Joist (t2=0.0566")	29.74	28.17	26.88	25.81	24.88	24.08	23.37	ft
Unsupported Span of the Composite Joist (t3=0.0713")	31.28	29.67	28.35	27.24	26.28	25.44	24.70	ft
Unsupported Span of the Composite Joist (t4=0.1017")	33.55	31.91	30.55	29.39	28.40	27.52	26.74	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

10 " Joist (Double)	t1= 0.0451	t3= 0.0713
24 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	24	24	24	24	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	10	10	10	10	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.018	1.270	1.588	2.232	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	15.896	19.776	24.632	34.31	Inch ⁴
Weight	3.81	4.754	5.944	8.354	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

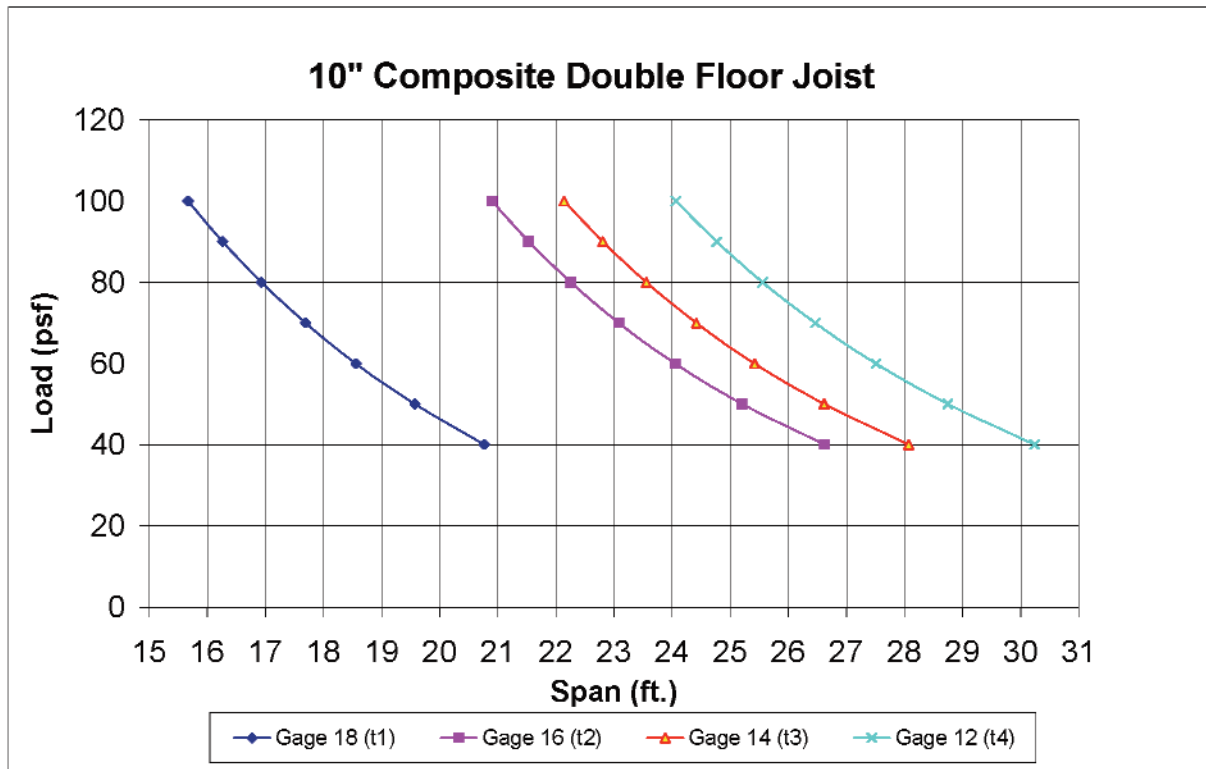
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.967	4.351	6.234	12.235

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	20.76	19.57	18.56	17.69	16.93	16.26	15.67	ft
Unsupported Span of the Composite Joist (t2=0.0566")	26.62	25.21	24.05	23.08	22.26	21.53	20.90	ft
Unsupported Span of the Composite Joist (t3=0.0713")	28.07	26.62	25.42	24.42	23.56	22.80	22.14	ft
Unsupported Span of the Composite Joist (t4=0.1017")	30.24	28.75	27.51	26.46	25.56	24.77	24.07	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

10 " Joist (Double)	t1= 0.0451	t3= 0.0713
32 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	32	32	32	32	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	10	10	10	10	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.018	1.270	1.588	2.232	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	15.896	19.776	24.632	34.31	Inch ⁴
Weight	3.81	4.754	5.944	8.354	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

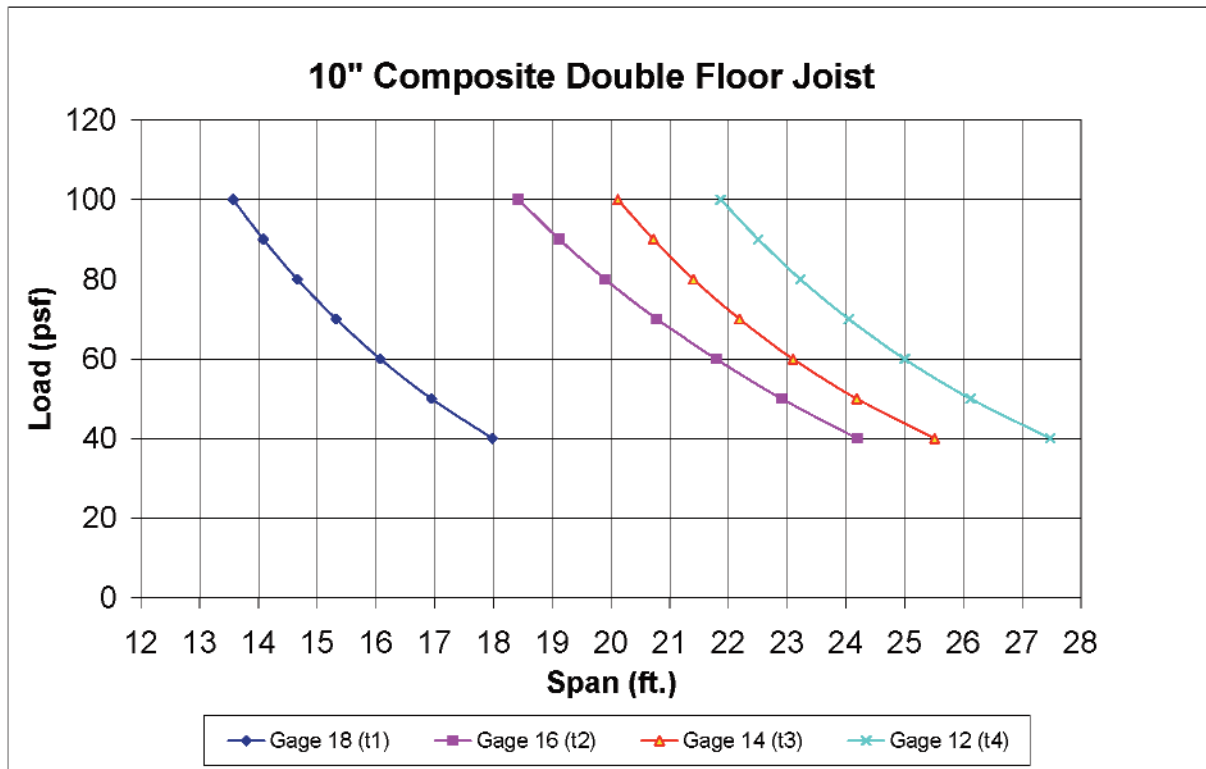
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.967	4.351	6.234	12.235

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	17.98	16.95	16.07	15.32	14.66	14.08	13.57	ft
Unsupported Span of the Composite Joist (t2=0.0566")	24.19	22.90	21.79	20.78	19.90	19.12	18.43	ft
Unsupported Span of the Composite Joist (t3=0.0713")	25.51	24.18	23.10	22.19	21.40	20.72	20.12	ft
Unsupported Span of the Composite Joist (t4=0.1017")	27.48	26.12	25.00	24.05	23.22	22.51	21.87	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

12 " Joist (Double)	t1= 0.0451	t3= 0.0713
12 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	12	12	12	12	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	12	12	12	12	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.054	1.316	1.648	2.320	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	24.53	30.562	38.144	53.356	Inch ⁴
Weight	3.946	4.926	6.168	8.684	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

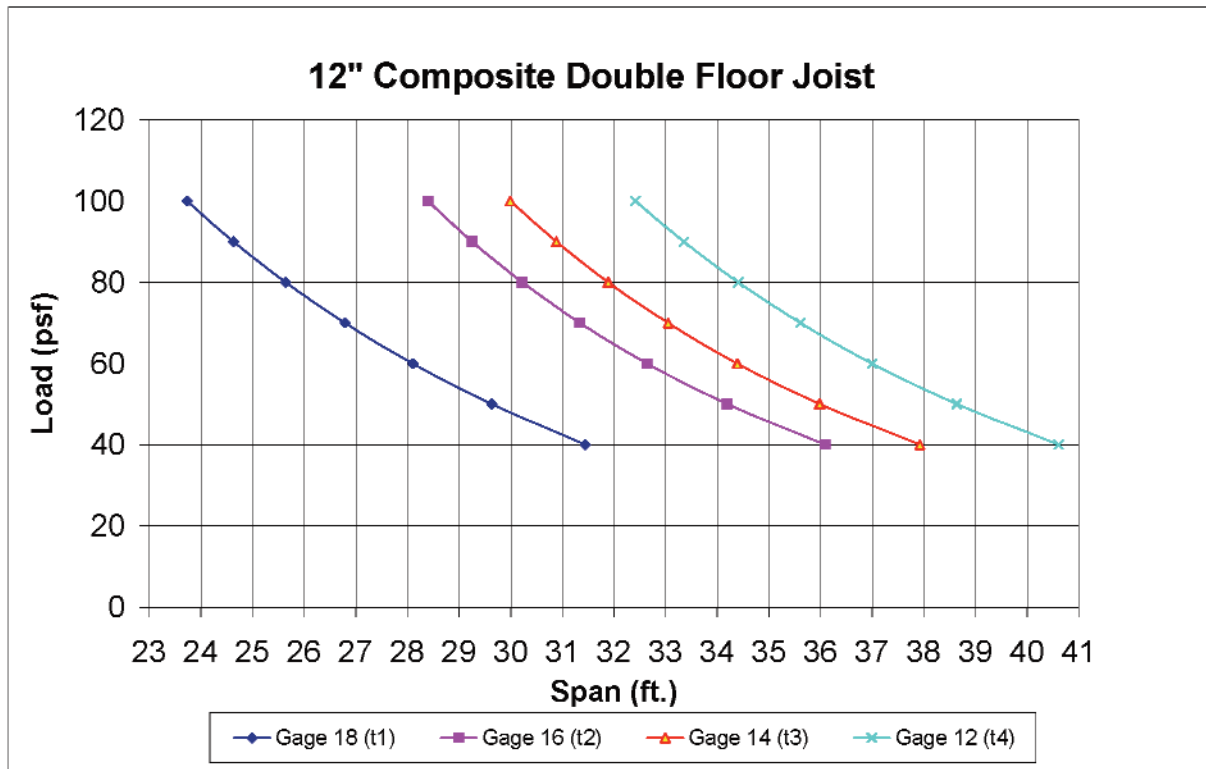
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.964	4.345	6.227	12.224

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	31.44	29.63	28.10	26.79	25.64	24.63	23.73	ft
Unsupported Span of the Composite Joist (t2=0.0566")	36.09	34.19	32.64	31.34	30.22	29.25	28.39	ft
Unsupported Span of the Composite Joist (t3=0.0713")	37.92	35.98	34.39	33.05	31.89	30.88	29.99	ft
Unsupported Span of the Composite Joist (t4=0.1017")	40.61	38.64	37.00	35.61	34.41	33.35	32.42	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

12 " Joist (Double)	t1= 0.0451	t3= 0.0713
16 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	16	16	16	16	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	12	12	12	12	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.054	1.316	1.648	2.320	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	24.53	30.562	38.144	53.356	Inch ⁴
Weight	3.946	4.926	6.168	8.684	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

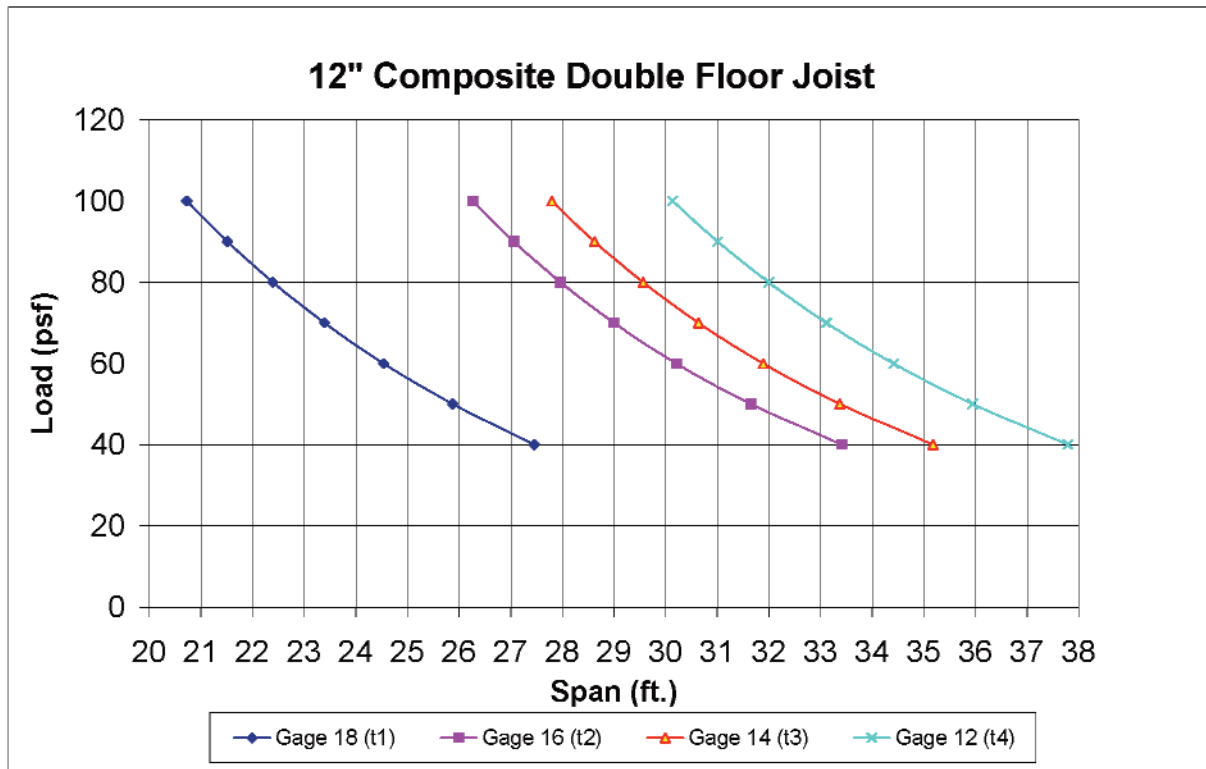
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.964	4.345	6.227	12.224

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	27.45	25.88	24.54	23.39	22.39	21.51	20.73	ft
Unsupported Span of the Composite Joist (t2=0.0566")	33.41	31.65	30.21	29.00	27.96	27.06	26.26	ft
Unsupported Span of the Composite Joist (t3=0.0713")	35.18	33.37	31.89	30.64	29.56	28.62	27.79	ft
Unsupported Span of the Composite Joist (t4=0.1017")	37.79	35.94	34.41	33.12	31.99	31.01	30.14	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

12 " Joist (Double)	t1= 0.0451	t3= 0.0713
24 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	24	24	24	24	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	12	12	12	12	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.054	1.316	1.648	2.320	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	24.53	30.562	38.144	53.356	Inch ⁴
Weight	3.946	4.926	6.168	8.684	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

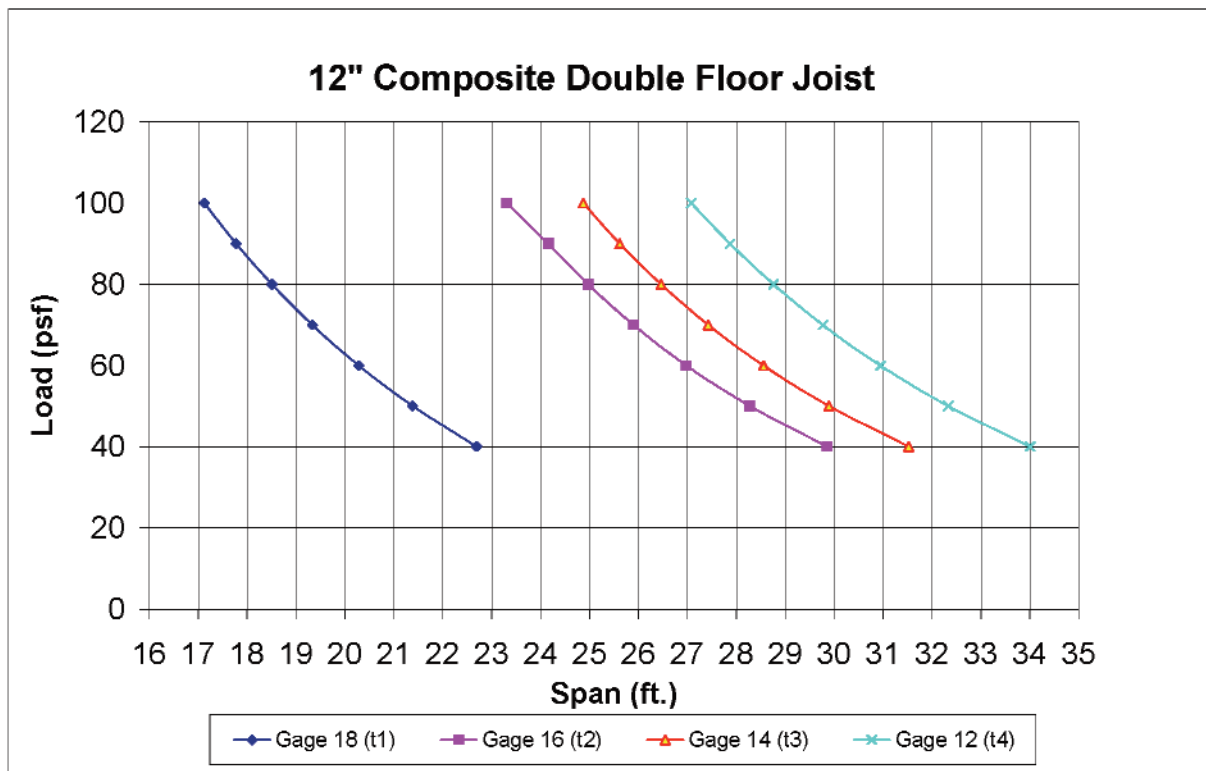
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.964	4.345	6.227	12.224

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	22.69	21.38	20.28	19.33	18.51	17.78	17.13	ft
Unsupported Span of the Composite Joist (t2=0.0566")	29.86	28.28	26.98	25.90	24.97	24.16	23.31	ft
Unsupported Span of the Composite Joist (t3=0.0713")	31.52	29.89	28.55	27.43	26.46	25.62	24.87	ft
Unsupported Span of the Composite Joist (t4=0.1017")	34.00	32.33	30.95	29.77	28.76	27.87	27.08	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

12 " Joist (Double)	t1= 0.0451	t3= 0.0713
32 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	32	32	32	32	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	12	12	12	12	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.054	1.316	1.648	2.320	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	24.53	30.562	38.144	53.356	Inch ⁴
Weight	3.946	4.926	6.168	8.684	P L F
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

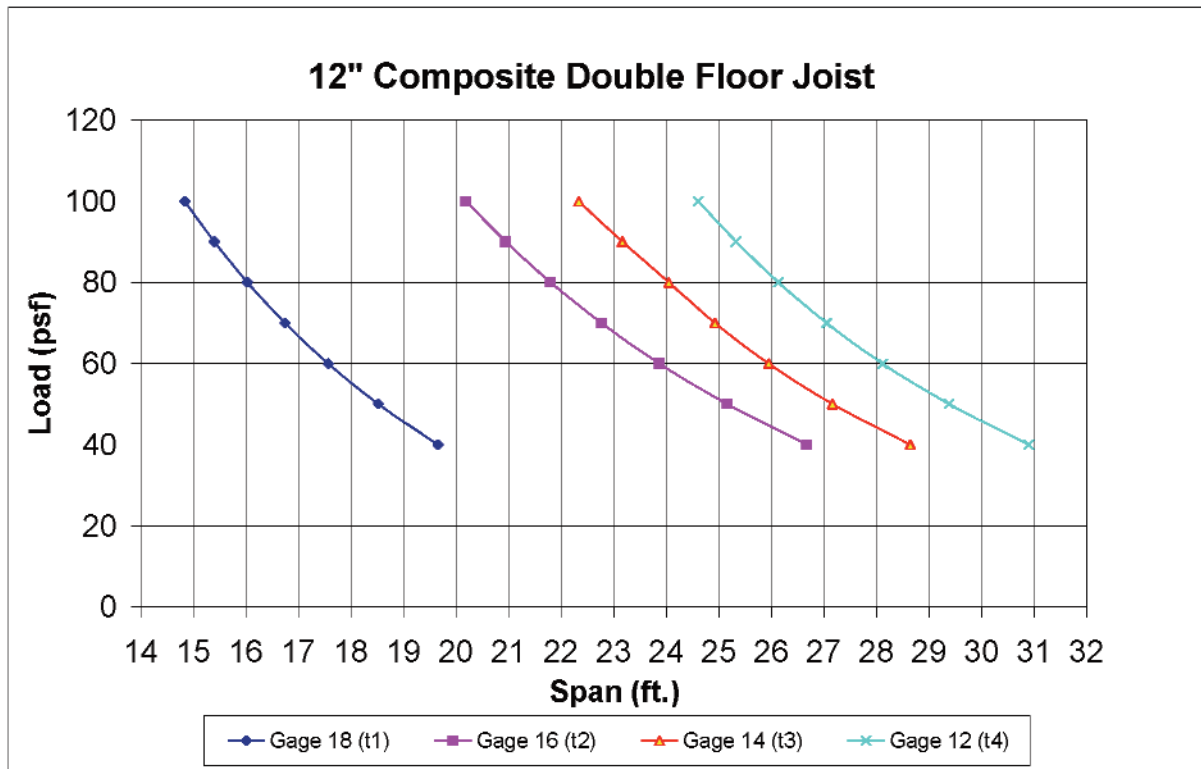
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.964	4.345	6.227	12.224

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	19.65	18.52	17.56	16.74	16.03	15.40	14.83	ft
Unsupported Span of the Composite Joist (t2=0.0566")	26.67	25.15	23.87	22.76	21.80	20.95	20.19	ft
Unsupported Span of the Composite Joist (t3=0.0713")	28.64	27.16	25.95	24.92	24.04	23.16	22.33	ft
Unsupported Span of the Composite Joist (t4=0.1017")	30.90	29.38	28.12	27.05	26.13	25.32	24.61	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

14 " Joist (Double)	t1= 0.0451	t3= 0.0713
12 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	12	12	12	12	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	14	14	14	14	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.234	1.542	1.932	2.726	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	36.41	45.408	56.738	79.566	Inch ⁴
Weight	4.618	5.772	7.232	10.204	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.962	4.340	6.221	12.214

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	35.50	33.47	31.76	30.28	29.00	27.86	26.85	ft
Unsupported Span of the Composite Joist (t2=0.0566")	40.59	38.50	36.78	35.33	34.09	33.01	32.05	ft
Unsupported Span of the Composite Joist (t3=0.0713")	42.56	40.43	38.68	37.19	35.91	34.79	33.80	ft
Unsupported Span of the Composite Joist (t4=0.1017")	45.41	43.27	41.48	39.96	38.64	37.47	36.44	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

14 " Joist (Double)	t1= 0.0451	t3= 0.0713
16 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	16	16	16	16	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	14	14	14	14	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.234	1.542	1.932	2.726	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	36.41	45.408	56.738	79.566	Inch ⁴
Weight	4.618	5.772	7.232	10.204	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.962	4.340	6.221	12.214

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	30.99	29.22	27.73	26.44	25.31	24.32	23.44	ft
Unsupported Span of the Composite Joist (t2=0.0566")	37.63	35.68	34.08	32.73	31.58	30.57	29.68	ft
Unsupported Span of the Composite Joist (t3=0.0713")	39.54	37.55	35.91	34.53	33.33	32.29	31.36	ft
Unsupported Span of the Composite Joist (t4=0.1017")	42.31	40.31	38.63	37.21	35.97	34.89	33.92	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

14 " Joist (Double)	t1= 0.0451	t3= 0.0713
24 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	24	24	24	24	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	14	14	14	14	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.234	1.542	1.932	2.726	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	36.41	45.408	56.738	79.566	Inch ⁴
Weight	4.618	5.772	7.232	10.204	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

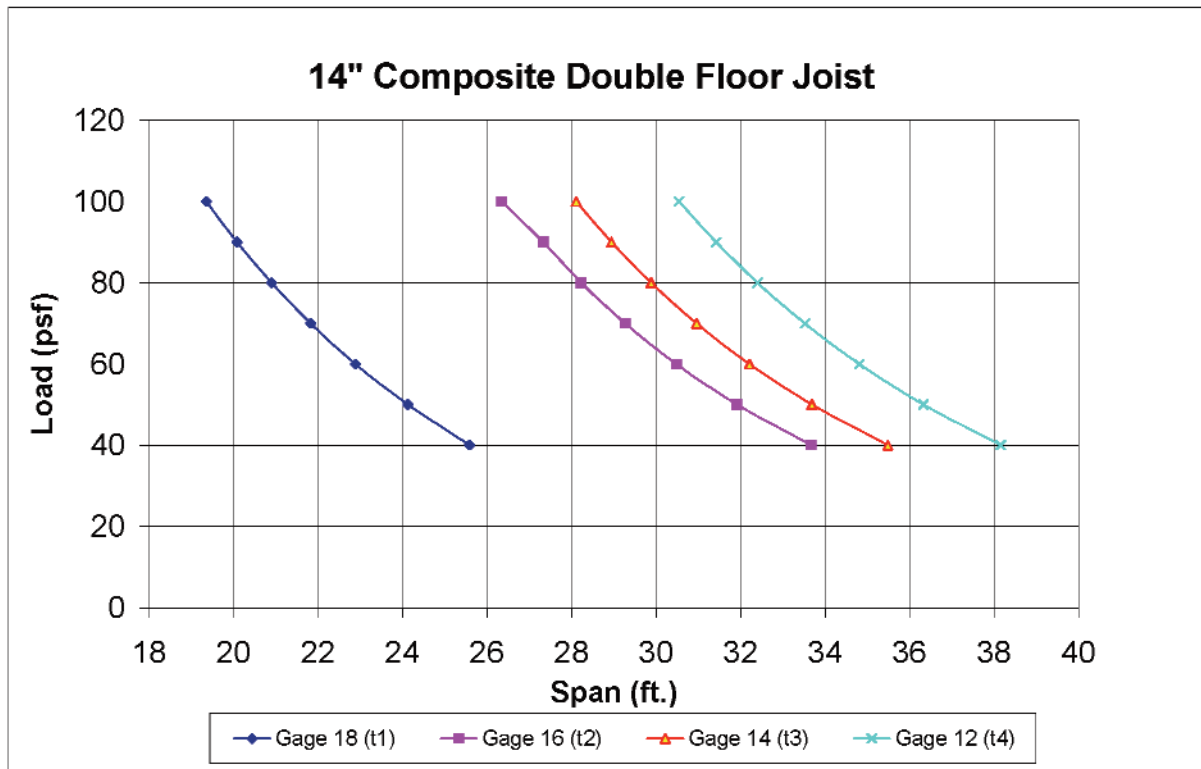
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.962	4.340	6.221	12.214

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	25.58	24.12	22.89	21.82	20.89	20.08	19.35	ft
Unsupported Span of the Composite Joist (t2=0.0566")	33.67	31.91	30.47	29.26	28.23	27.32	26.35	ft
Unsupported Span of the Composite Joist (t3=0.0713")	35.48	33.69	32.21	30.96	29.88	28.94	28.11	ft
Unsupported Span of the Composite Joist (t4=0.1017")	38.15	36.33	34.81	33.52	32.40	31.41	30.54	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)



COMPOSITE FLOOR JOIST - Full Delta Double Back to Back



Allowable Live Load (Includes Dead Load) in psf
Limit State Design (LSD) Deflection:L/480

14 " Joist (Double)	t1= 0.0451	t3= 0.0713
32 " Joist Spacing	t2= 0.0566	t4= 0.1078

INPUT SECTION:

SECTION PROPERTIES

Description	Gage 18	Gage 16	Gage 14	Gage 12	Units
Stud (steel) spacing (bo)	32	32	32	32	Inch
Concrete strength (fc)	3.5	3.5	3.5	3.5	ksi
Steel stud strength (fy)	33	50	50	50	ksi
Stud depth (d)	14	14	14	14	Inch
Concrete depth (ts)	2.5	2.5	2.5	2.5	Inch
Stud thickness (t)	0.0451	0.0566	0.0713	0.1078	Inch
Steel stud section properties (As)	1.234	1.542	1.932	2.726	Inch ²
Stud Inside Bend Radius	0.0712	0.0849	0.10695	0.15255	Inch
Ix-x	36.41	45.408	56.738	79.566	Inch ⁴
Weight	4.618	5.772	7.232	10.204	P.L.F.
Steel modulus of elasticity	2.95E+07	2.95E+07	2.95E+07	2.95E+07	psi
Concrete modulus of elasticity	3.40E+06	3.40E+06	3.40E+06	3.40E+06	psi

OUTPUT SECTION:

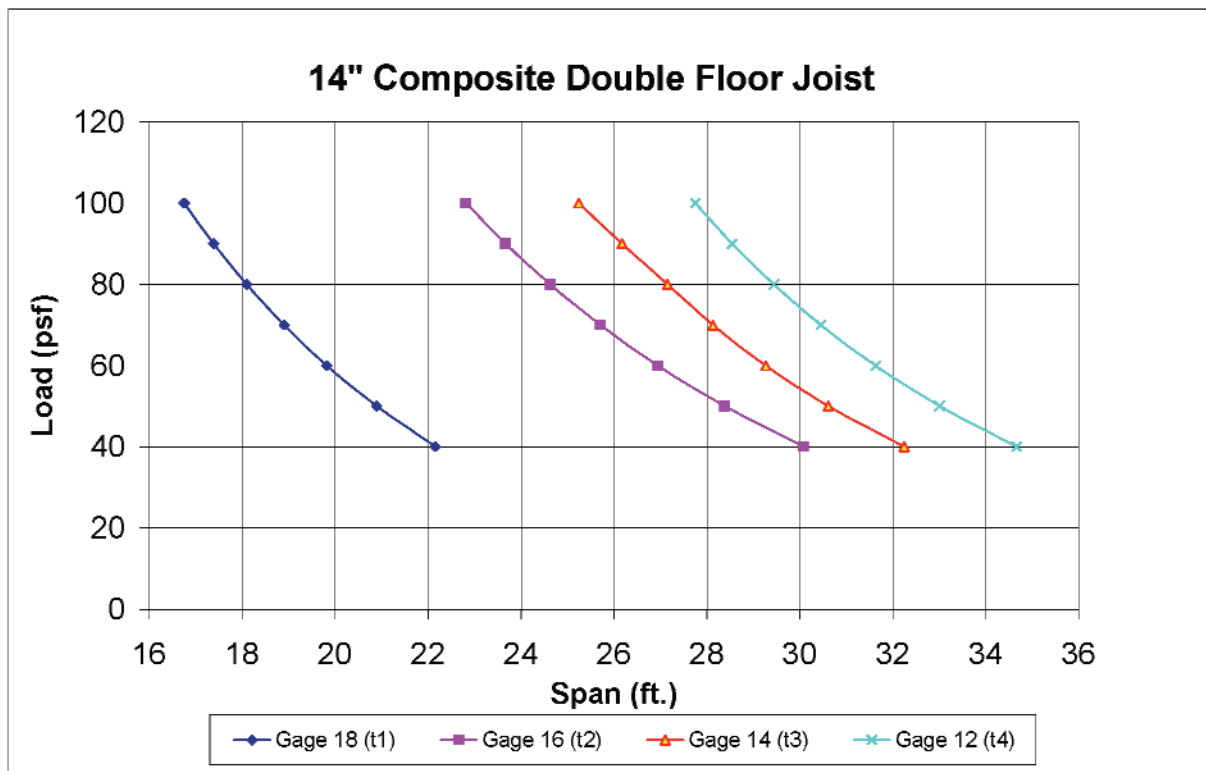
ALLOWABLE REACTION AT SUPPORTS (FLANGE AND WEB CRIPPLING)

Stud Thickness	t1	t2	t3	t4
Allowable Reaction (Kips)	1.962	4.340	6.221	12.214

PLOT DATA

Live Load on the Structure	40.0	50.0	60.0	70.0	80.0	90.0	100.0	psf
Unsupported Span of the Composite Joist (t1=0.0451")	22.15	20.89	19.82	18.90	18.10	17.39	16.75	ft
Unsupported Span of the Composite Joist (t2=0.0566")	30.08	28.38	26.95	25.71	24.63	23.67	22.82	ft
Unsupported Span of the Composite Joist (t3=0.0713")	32.24	30.61	29.26	28.13	27.15	26.18	25.24	ft
Unsupported Span of the Composite Joist (t4=0.1017")	34.66	33.01	31.63	30.46	29.44	28.54	27.75	ft

* Shear Bond Allowed = $4.69 \times (f_c)^{1/2}$ kips/ft (Validated by Test)





IMPERIAL BUILDING PRODUCTS COMPOSITE SYSTEM

APPENDIX B WALL STUDS

Combined Load (Wind and Gravity)
Allowable Compressive Load in Kips

**Allowable Compressive Load in Kips (Table P1)
Composite Steel Stud Wall -LSD (Limit State Design)
Concrete Thickness 2.0"
Combined Load (Wind and Gravity)**

**Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support**

SINGLE STUD - Stud Size : 3.625"



		Indicated Wind Load (P-S-F)																										
		W=0		W=10PSF WF=15PSF		W=20PSF WF=30PSF		W=40PSF WF=60PSF		W=50PSF WF=75PSF		W=60PSF WF=90PSF																
Length (ft)		0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713											
Stud Spacing (to) at 12" C/C Max.																												
8	9.23	10.60	13.19	14.54	8.59	9.99	12.77	14.15	7.95	9.37	12.35	13.76	7.30	8.76	11.92	13.37	6.66	8.15	11.50	12.97	6.02	7.54	11.08	12.58	5.38	6.93	10.65	12.19
9	9.07	10.40	12.67	13.98	8.27	9.64	12.15	13.50	7.47	8.88	11.64	13.02	6.88	8.12	11.13	12.55	5.88	7.36	10.61	12.07	5.08	6.61	10.10	11.59	4.28	5.85	9.58	11.12
10	8.91	10.20	12.19	13.44	7.94	9.28	11.58	12.88	6.97	8.36	10.96	12.31	6.00	7.44	10.35	11.75	5.04	6.52	9.74	11.18	4.07	5.61	9.13	10.61	3.10	4.69	8.52	10.05
11	8.74	9.99	11.73	12.94	7.59	8.90	11.02	12.28	6.44	7.81	10.31	11.62	5.29	6.72	9.60	10.96	4.15	5.64	8.88	10.30	3.00	4.55	8.17	9.64	1.85	3.46	7.46	8.98
12	8.57	9.78	11.30	12.47	7.23	8.51	10.48	11.71	5.89	7.24	9.67	10.95	4.55	5.98	8.85	10.20	3.21	4.71	8.04	9.44	1.87	3.44	7.22	8.69	0.53	2.17	6.40	7.93
14	8.22	9.35	10.51	11.59	6.47	7.70	9.47	10.64	4.72	6.05	8.44	9.68	2.97	4.40	7.41	8.72	1.22	2.75	6.38	7.76	0.00	1.10	5.34	6.81	0.00	0.00	4.31	5.85
16	7.86	8.90	9.80	10.81	5.68	6.85	8.54	9.64	3.49	4.80	7.28	8.48	1.30	2.75	6.02	7.31	0.00	0.69	4.77	6.15	0.00	0.00	3.51	4.98	0.00	0.00	2.25	3.82
18	6.88	7.64	8.47	9.52	4.44	5.41	7.09	8.22	2.03	3.18	5.72	6.92	0.00	0.95	4.34	5.63	0.00	0.00	2.97	4.33	0.00	0.00	1.59	3.03	0.00	0.00	0.21	1.73
20	5.56	6.19	6.86	7.71	3.14	3.96	5.49	6.41	0.73	1.73	4.11	5.12	0.00	0.00	2.73	3.82	0.00	0.00	1.36	2.32	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00
Stud Spacing (to) at 16" C/C Max.																												
8	9.23	10.60	13.19	14.54	8.45	9.84	12.67	14.05	7.67	9.09	12.14	13.56	6.88	8.34	11.61	13.06	6.11	7.59	11.08	12.57	5.33	6.83	10.56	12.08	4.55	6.08	10.03	11.58
9	9.07	10.40	12.67	13.98	8.10	9.46	12.03	13.38	7.13	8.53	11.39	12.78	6.16	7.59	10.75	12.18	5.19	6.66	10.10	11.58	4.22	5.72	9.46	10.98	3.25	4.79	8.82	10.38
10	8.91	10.20	12.19	13.44	7.73	9.06	11.42	12.73	6.56	7.93	10.66	12.02	5.38	6.80	9.90	11.31	4.20	5.67	9.14	10.60	3.03	4.54	8.38	9.89	1.85	3.41	7.62	9.17
11	8.74	9.99	11.73	12.94	7.34	8.65	10.84	12.11	5.95	7.31	9.96	11.28	4.55	5.97	9.07	10.45	3.16	4.62	8.18	9.63	1.76	3.28	7.30	8.80	0.37	1.94	6.41	7.97
12	8.57	9.78	11.30	12.47	6.94	8.22	10.28	11.52	5.31	6.65	9.27	10.57	3.68	5.09	8.25	9.62	2.06	3.53	7.23	8.66	0.43	1.97	6.22	7.71	0.00	0.40	5.20	6.76
14	8.22	9.35	10.51	11.59	6.10	7.31	9.22	10.39	3.97	5.28	7.93	9.19	1.84	3.25	6.65	7.98	0.00	1.22	5.36	6.78	0.00	0.00	4.07	5.58	0.00	0.00	2.79	4.37
16	7.86	8.90	9.80	10.81	5.21	6.37	8.23	9.34	2.55	3.84	6.66	7.88	0.00	1.31	5.10	6.41	0.00	0.00	3.53	4.95	0.00	0.00	1.96	3.48	0.00	0.00	0.40	2.02
18	6.86	7.64	8.47	9.52	3.93	4.90	6.76	7.89	0.99	2.15	5.04	6.26	0.00	0.00	3.33	4.62	0.00	0.00	1.61	2.99	0.00	0.00	0.00	1.36	0.00	0.00	0.00	0.00
20	5.56	6.19	6.86	7.71	2.62	3.44	5.15	6.08	0.00	0.69	3.43	4.45	0.00	0.00	1.72	2.81	0.00	0.00	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stud Spacing (to) at 24" C/C Max.																												
8	9.23	10.60	13.19	14.54	8.23	9.61	12.49	13.88	7.24	8.63	11.79	13.21	6.25	7.65	11.09	12.54	5.25	6.67	10.39	11.88	4.26	5.68	9.69	11.21	3.26	4.70	3.98	10.55
9	9.07	10.40	12.67	13.98	7.83	9.18	11.82	13.17	6.60	7.96	10.96	12.36	5.36	6.74	10.11	11.55	4.12	5.52	9.26	10.74	2.88	4.30	8.41	9.93	1.65	3.08	7.35	9.12
10	8.91	10.20	12.19	13.44	7.41	8.72	11.17	12.48	5.91	7.24	10.16	11.52	4.41	5.76	9.15	10.56	2.91	4.29	8.14	9.60	1.41	2.81	7.12	8.63	0.00	1.33	6.11	7.67
11	8.74	9.99	11.73	12.94	6.96	8.24	10.55	11.82	5.18	6.49	9.37	10.70	3.40	4.73	8.19	9.58	1.62	2.98	7.01	8.46	0.00	1.23	5.83	7.34	0.00	0.00	4.66	6.22
12	8.57	9.78	11.30	12.47	6.49	7.74	9.95	11.18	4.41	5.70	8.60	9.90	2.34	3.66	7.24	8.61	0.26	1.62	5.89	7.33	0.00	0.00	4.54	6.05	0.00	0.00	3.19	4.76
14	8.22	9.35	10.51	11.59	5.51	6.69	8.80	9.97	2.80	4.04	7.09	8.34	0.08	1.38	5.37	6.72	0.00	0.00	3.66	5.09	0.00	0.00	1.95	3.46	0.00	0.00	0.24	1.84
16	7.86	8.90	9.80	10.81	4.47	5.69	7.71	8.83	1.08	2.30	5.63	6.85	0.00	0.00	3.55	4.87	0.00	0.00	1.46	2.89	0.00	0.00	0.00	0.91	0.00	0.00	0.00	0.00
18	6.88	7.64	8.47	9.52	3.12	4.05	6.19	7.32	0.00	0.47	3.91	5.11	0.00	0.00	1.63	2.90	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	5.56	6.19	6.86	7.71	1.81	2.60	4.58	5.51	0.00	0.00	2.30	3.30	0.00	0.00	0.02	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

W=Indicated Wind Load WF=Factored Wind Load (1.5)

Allowable Compressive Load in Kips (Table P2)
Composite Steel Stud Wall -LSD (Limit State Design)
Concrete Thickness 2.0"
Combined Load (Wind and Gravity)

Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support

DOUBLE STUD - Stud Size : 3.625"



Wind Speed (ft/s)	WF=10PSF WF=15PSF				WF=20PSF WF=30PSF				WF=40PSF WF=60PSF				WF=50PSF WF=75PSF				WF=60PSF WF=90PSF			
	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713
(ft)	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713
Stud Spacing (in) at 12" C/C Max.																				
8	12.97	15.56	20.10	22.95	12.43	15.04	19.74	22.60	11.90	14.53	19.38	22.26	10.76	13.37	18.01	20.87	10.84	13.50	18.65	21.57
9	12.74	15.27	19.31	22.05	12.08	14.63	18.86	21.64	11.42	13.99	18.42	21.22	10.31	12.91	17.54	20.38	9.44	12.07	17.09	19.96
10	12.51	14.97	18.57	21.21	11.71	14.20	18.04	20.72	10.91	13.42	17.52	20.22	10.11	12.65	16.99	19.72	9.31	11.88	16.47	19.23
11	12.28	14.67	17.88	20.42	11.33	13.75	17.26	19.84	10.38	12.83	16.65	19.36	9.43	11.92	16.04	18.69	8.48	11.08	15.43	18.11
12	12.04	14.36	17.22	19.67	10.93	13.29	16.52	19.01	9.82	12.22	15.82	18.35	8.71	11.15	15.12	17.68	7.61	10.08	14.41	17.02
14	11.55	13.72	16.01	18.29	10.10	12.33	15.12	17.45	8.86	10.94	14.24	16.61	7.21	9.55	13.35	15.77	5.76	8.16	12.46	14.93
16	11.04	13.07	14.93	17.05	9.24	11.34	13.85	16.03	7.43	9.61	12.77	15.01	5.62	7.88	11.68	13.99	3.81	6.15	10.60	12.96
18	9.63	11.22	12.91	15.03	7.64	9.34	11.73	13.89	5.64	7.46	10.54	12.75	3.65	5.59	9.36	11.61	1.65	3.71	8.18	10.47
20	7.81	9.09	10.46	12.17	5.81	7.21	9.27	11.03	3.81	5.33	8.09	9.89	1.82	3.45	6.91	8.75	0.00	1.57	5.72	7.61
Stud Spacing (in) at 15" C/C Max.																				
8	12.97	15.56	20.10	22.95	12.30	14.91	19.64	22.50	11.63	14.25	19.18	22.06	10.96	13.60	18.71	21.62	10.30	12.95	18.25	21.18
9	12.74	15.27	19.31	22.05	11.91	14.46	18.74	21.52	11.08	13.65	18.18	20.98	10.25	12.83	17.61	20.45	9.42	12.02	17.05	19.91
10	12.51	14.97	18.57	21.21	11.51	13.99	17.90	20.56	10.50	13.01	17.23	19.94	9.49	12.03	16.56	19.30	8.49	11.04	15.89	18.67
11	12.28	14.67	17.88	20.42	11.08	13.50	17.10	19.66	9.89	12.34	16.31	18.94	8.70	11.18	15.53	18.20	7.50	10.01	14.75	17.45
12	12.04	14.36	17.22	19.67	10.65	13.00	16.33	18.82	9.25	11.65	15.43	17.97	7.86	10.29	14.54	17.12	6.47	8.94	13.64	16.27
14	11.55	13.72	16.01	18.29	9.73	11.96	14.88	17.22	7.91	10.20	13.75	16.14	6.09	8.43	12.61	15.06	4.27	6.67	11.48	13.99
16	11.04	13.07	14.93	17.05	8.77	10.87	13.55	15.74	6.50	8.68	12.17	14.43	4.23	6.49	10.79	13.12	1.95	4.30	9.41	11.81
18	9.63	11.22	12.91	15.03	7.12	8.84	11.40	13.57	4.62	6.46	9.89	12.10	2.11	4.07	8.38	10.64	0.00	1.69	6.67	9.18
20	7.81	9.09	10.46	12.17	5.30	6.71	8.95	10.71	2.79	4.32	7.44	9.25	0.28	1.94	5.93	7.79	0.00	0.00	4.42	6.33
Stud Spacing (in) at 24" C/C Max.																				
8	12.97	15.56	20.10	22.95	12.06	14.66	19.46	22.33	11.16	13.76	18.81	21.71	10.26	12.87	18.17	21.09	9.36	11.97	17.52	20.47
9	12.74	15.27	19.31	22.05	11.62	14.15	18.52	21.30	10.50	13.04	17.74	20.55	9.38	11.93	16.95	19.80	8.26	10.81	16.17	19.05
10	12.51	14.97	18.57	21.21	11.15	13.62	17.64	20.32	9.79	12.27	16.71	19.43	8.44	10.93	15.78	18.53	7.08	9.58	14.85	17.64
11	12.28	14.67	17.88	20.42	10.66	13.07	16.79	19.36	8.27	10.64	15.71	18.34	7.44	9.87	14.62	17.30	5.82	8.28	13.54	16.26
12	12.04	14.36	17.22	19.67	10.16	12.50	15.98	18.48	7.63	9.95	14.73	17.29	6.39	8.77	13.49	16.09	4.51	6.91	12.25	14.90
14	11.55	13.72	16.01	18.29	9.09	11.30	14.44	16.78	6.63	8.88	12.86	15.27	4.17	6.46	11.29	13.76	1.72	4.04	9.72	12.25
16	11.04	13.07	14.93	17.05	7.97	10.06	13.01	15.21	4.90	7.04	11.09	13.38	1.83	4.03	9.18	11.54	0.00	1.02	7.26	9.70
18	9.63	11.22	12.91	15.03	6.24	7.95	10.81	12.96	2.85	4.68	8.71	10.93	0.00	1.40	6.62	8.88	0.00	0.00	4.52	6.83
20	7.81	9.09	10.46	12.17	4.42	5.82	8.36	10.12	1.02	2.54	6.26	8.07	0.00	0.00	0.00	4.16	6.02	0.00	2.07	3.97

WF=Indicated Wind Load WF=Factored Wind Load (1.5)

**Allowable Compressive Load in Kips (Table P3)
Composite Steel Stud Wall -LSD (Limit State Design)
Concrete Thickness 2.0"
Combined Load (Wind and Gravity)**

**Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support**

SINGLE STUD - Stud Size : 6"



Length (ft)	W ₀ =0		W ₀ =10PSF WF=15PSF		W ₀ =20PSF WF=30PSF		Indicated Wind Load (P, S, F)		W ₀ =40PSF WF=60PSF		W ₀ =50PSF WF=75PSF		W ₀ =60PSF WF=90PSF	
	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451	0.0566	0.0713	0.0346	0.0451
Stud Design Thickness (in)														
Stud Spacing (bo) at 12" O/C Max.														
8	9.48	11.53	15.38	17.24	9.02	11.09	15.06	16.95	8.56	10.64	14.73	16.65	8.10	10.20
9	9.35	11.34	14.79	16.56	8.78	10.79	14.39	16.20	8.20	10.23	14.00	15.84	7.83	9.82
10	9.22	11.14	14.22	15.93	8.52	10.47	13.76	15.50	7.92	9.86	13.29	15.07	7.12	9.16
11	9.08	10.94	13.69	15.33	8.25	10.14	13.15	14.84	7.42	9.34	12.61	14.34	6.58	8.54
12	8.94	10.74	13.19	14.77	7.97	9.81	12.57	14.20	6.99	8.87	11.94	13.63	6.02	7.94
14	8.65	10.32	12.26	13.73	7.37	9.10	11.48	13.01	6.09	7.88	10.69	12.29	4.80	6.66
16	8.36	9.89	11.43	12.80	6.74	8.36	10.47	11.92	5.12	6.83	9.51	11.05	3.50	5.30
18	8.05	9.44	10.68	11.96	6.08	7.59	9.55	10.92	4.10	5.74	8.41	9.88	2.13	3.90
20	7.73	8.97	10.00	11.21	5.39	6.80	8.69	10.00	3.05	4.64	7.38	8.80	0.71	2.47
Stud Spacing (bo) at 16" O/C Max.														
8	9.48	11.53	15.38	17.24	8.90	10.96	14.96	16.86	8.31	10.39	14.55	16.48	7.73	9.82
9	9.35	11.34	14.79	16.56	8.62	10.63	14.28	16.09	7.89	9.92	13.77	15.63	7.16	9.20
10	9.22	11.14	14.22	15.93	8.33	10.28	13.62	15.38	7.44	9.42	13.02	14.82	6.55	8.55
11	9.08	10.94	13.69	15.33	8.02	9.92	12.99	14.69	6.96	8.89	12.29	14.04	5.90	7.86
12	8.94	10.74	13.19	14.77	7.70	9.54	12.39	14.03	6.46	8.34	11.58	13.29	5.22	7.14
14	8.65	10.32	12.26	13.73	7.02	8.75	11.25	12.80	5.38	7.18	10.23	11.86	3.75	5.62
16	8.36	9.89	11.43	12.80	6.29	7.92	10.19	11.66	4.23	5.96	8.96	10.53	2.17	4.00
18	8.05	9.44	10.68	11.96	5.53	7.07	9.22	10.62	3.02	4.70	7.76	9.27	0.50	2.33
20	7.73	8.97	10.00	11.21	4.75	6.19	8.31	9.65	1.77	3.41	6.62	8.09	0.00	0.83
Stud Spacing (bo) at 24" O/C Max.														
8	9.48	11.53	15.38	17.24	8.67	10.73	14.79	16.70	7.87	9.93	14.20	16.15	7.06	9.13
9	9.35	11.34	14.79	16.56	8.34	10.34	14.07	15.90	7.33	9.35	13.35	15.23	6.32	8.35
10	9.22	11.14	14.22	15.93	7.99	9.93	13.37	15.14	6.76	8.72	12.52	14.35	5.53	7.51
11	9.08	10.94	13.69	15.33	7.62	9.51	12.70	14.41	6.15	8.07	11.71	13.49	4.69	6.63
12	8.94	10.74	13.19	14.77	7.23	9.06	12.05	13.72	5.51	7.38	10.92	12.66	3.80	5.70
14	8.65	10.32	12.26	13.73	6.40	8.12	10.83	12.40	4.14	5.93	9.39	11.07	1.88	3.73
16	8.36	9.89	11.43	12.80	5.51	7.14	9.68	11.18	2.66	4.39	7.93	9.55	0.00	1.64
18	8.05	9.44	10.68	11.96	4.58	6.12	8.61	10.04	1.11	2.80	6.54	8.12	0.00	0.00
20	7.73	8.97	10.00	11.21	3.62	5.07	7.61	8.98	0.00	1.18	5.22	6.76	0.00	0.00

W₀=Indicated Wind Load WF=Factored Wind Load (1.5)

**Allowable Compressive Load in Kips (Table P4)
Composite Steel Stud Wall -LSD (Limit State Design)
Concrete Thickness 2.0"
Combined Load (Wind and Gravity)**

**Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support**

DOUBLE STUD - Stud Size : 6"



Length (ft)	W0=0		W1=10PSF WF=15PSF		W2=20PSF WF=30PSF		W3=30PSF WF=45PSF		W4=40PSF WF=60PSF		W5=50PSF WF=75PSF		W6=60PSF WF=90PSF	
	0.0346	0.0451	0.0568	0.0713	0.0346	0.0451	0.0568	0.0713	0.0346	0.0451	0.0568	0.0713	0.0346	0.0451
8	13.83	17.58	24.28	28.15	13.47	17.22	24.01	27.89	13.11	16.85	23.74	27.63	12.75	16.49
9	13.64	17.29	23.95	27.03	13.19	16.84	23.02	26.72	12.74	16.38	23.27	26.41	12.28	15.93
10	13.45	16.99	22.46	26.00	12.90	16.44	22.07	25.53	12.35	15.89	21.68	25.26	11.79	15.34
11	13.25	16.68	21.62	25.03	12.59	16.03	21.16	24.60	11.93	15.38	20.71	24.17	11.28	14.72
12	13.05	16.37	20.83	24.11	12.28	15.61	20.30	23.62	11.51	14.85	19.78	23.13	10.74	14.08
14	12.63	15.73	19.37	22.42	11.61	14.74	18.70	21.80	10.60	13.74	18.04	21.17	9.58	12.74
16	12.20	15.07	18.05	20.90	10.92	13.82	17.25	20.14	9.64	12.57	16.44	19.38	8.96	11.33
18	11.75	14.38	16.87	19.53	10.19	12.88	15.92	18.63	8.63	11.37	14.96	17.73	7.07	9.86
20	11.29	13.68	15.80	18.29	9.43	11.91	14.70	17.25	7.58	10.14	13.59	16.21	5.73	8.37
Stud Spacing (in) at 12" C/C Max.														
8	13.83	17.58	24.28	28.15	13.36	17.11	23.93	27.81	12.89	16.64	23.58	27.48	12.42	16.16
9	13.64	17.29	23.95	27.03	13.06	16.70	23.92	26.63	12.47	16.11	22.49	26.22	11.88	15.52
10	13.45	16.99	22.46	26.00	12.73	16.27	21.95	25.52	12.02	15.56	21.44	25.04	11.31	14.85
11	13.25	16.68	21.62	25.03	12.40	15.84	21.03	24.47	11.05	14.99	20.43	23.91	10.70	14.14
12	13.05	16.37	20.83	24.11	12.05	15.38	20.15	23.47	11.05	14.39	19.46	22.83	10.05	13.40
14	12.63	15.73	19.37	22.42	11.31	14.44	18.50	21.61	10.00	13.14	17.64	20.79	8.69	11.84
16	12.20	15.07	18.05	20.90	10.54	13.45	17.00	19.91	8.88	11.83	15.95	18.92	7.22	10.21
18	11.75	14.38	16.87	19.53	9.73	12.43	15.63	18.36	7.71	10.47	14.39	17.19	5.68	8.51
20	11.29	13.68	15.80	18.29	8.89	11.38	14.36	16.94	6.49	9.08	12.93	15.58	4.09	6.78
Stud Spacing (in) at 16" C/C Max.														
8	13.83	17.58	24.28	28.15	13.16	16.90	23.77	27.65	12.49	16.22	23.27	27.18	11.82	15.54
9	13.64	17.29	23.95	27.03	12.81	16.44	22.73	26.45	11.97	15.60	22.11	25.86	11.13	14.75
10	13.45	16.99	22.46	26.00	12.43	15.96	21.72	25.31	11.41	14.94	20.99	24.61	10.39	13.91
11	13.25	16.68	21.62	25.03	12.03	15.46	20.76	24.22	10.82	14.25	19.91	23.41	9.61	13.03
12	13.05	16.37	20.83	24.11	11.62	14.95	19.84	23.18	10.20	13.52	18.86	22.25	8.78	12.10
14	12.63	15.73	19.37	22.42	10.75	13.87	18.12	21.24	8.88	12.01	16.88	20.06	7.01	10.15
16	12.20	15.07	18.05	20.90	9.83	12.74	16.54	19.47	7.47	10.41	15.02	18.03	5.10	8.08
18	11.75	14.38	16.87	19.53	8.87	11.57	15.08	17.93	5.98	8.76	13.29	16.14	3.10	5.94
20	11.29	13.68	15.80	18.29	7.87	10.37	13.73	16.33	4.45	7.07	11.66	14.37	1.03	3.76
Stud Spacing (in) at 24" C/C Max.														
8	13.83	17.58	24.28	28.15	12.49	16.22	23.27	27.18	11.15	14.86	22.25	26.21	10.46	14.18
9	13.64	17.29	23.95	27.03	11.82	15.54	22.76	26.70	10.30	13.91	20.87	24.68	9.46	13.06
10	13.45	16.99	22.46	26.00	11.13	14.75	21.49	25.27	9.38	12.88	19.51	23.21	8.36	11.86
11	13.25	16.68	21.62	25.03	10.39	13.91	20.25	23.91	8.39	11.81	18.19	21.78	7.18	10.59
12	13.05	16.37	20.83	24.11	9.61	13.03	19.05	22.59	7.36	10.68	16.89	20.39	5.93	9.25
14	12.63	15.73	19.37	22.42	8.78	12.10	17.88	21.32	5.13	8.28	14.39	17.71	3.26	6.42
16	12.20	15.07	18.05	20.90	7.01	10.15	15.63	18.88	2.74	5.75	11.99	15.16	0.38	3.42
18	11.75	14.38	16.87	19.53	5.10	8.08	13.51	16.59	0.22	3.13	9.70	12.74	0.00	0.31
20	11.29	13.68	15.80	18.29	1.03	3.76	9.58	12.40	0.00	0.46	7.51	10.44	0.00	0.00
WF=Indicated Wind Load WF=Factored Wind Load (1.5)														
8	13.83	17.58	24.28	28.15	12.49	16.22	23.27	27.18	11.15	14.86	22.25	26.21	10.46	14.18
9	13.64	17.29	23.95	27.03	11.82	15.54	22.76	26.70	10.30	13.91	20.87	24.68	9.46	13.06
10	13.45	16.99	22.46	26.00	11.13	14.75	21.49	25.27	9.38	12.88	19.51	23.21	8.36	11.86
11	13.25	16.68	21.62	25.03	10.39	13.91	20.25	23.91	8.39	11.81	18.19	21.78	7.18	10.59
12	13.05	16.37	20.83	24.11	9.61	13.03	19.05	22.59	7.36	10.68	16.89	20.39	5.93	9.25
14	12.63	15.73	19.37	22.42	8.78	12.10	17.88	21.32	5.13	8.28	14.39	17.71	3.26	6.42
16	12.20	15.07	18.05	20.90	7.01	10.15	15.63	18.88	2.74	5.75	11.99	15.16	0.38	3.42
18	11.75	14.38	16.87	19.53	5.10	8.08	13.51	16.59	0.22	3.13	9.70	12.74	0.00	0.31
20	11.29	13.68	15.80	18.29	1.03	3.76	9.58	12.40	0.00	0.46	7.51	10.44	0.00	0.00

**Allowable Compressive Load in Kips (Table P5)
Composite Steel Stud Wall -LSD (Limit State Design)
Concrete Thickness 2.0"
Combined Load (Wind and Gravity)**

**Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support**

SINGLE STUD - Stud Size : 8"



Length (ft)	We=0		WF=10PSF WF=15PSF		WF=20PSF WF=30PSF		WF=30PSF WF=45PSF		Indicated Wind Load (P.S.F.)		WF=40PSF WF=60PSF		WF=50PSF WF=75PSF		WF=60PSF WF=90PSF	
	0.0451	0.0566	0.0713	0.1017	0.0451	0.0566	0.0713	0.1017	0.0451	0.0566	0.0713	0.1017	0.0451	0.0566	0.0713	0.1017
Stud Spacing (to) at 12" CIC Max.																
8	11.87	20.08	24.62	31.58	11.53	19.77	24.30	31.26	11.18	19.45	23.99	30.99	10.83	19.14	23.67	30.69
9	11.79	19.80	24.21	30.99	11.35	19.41	23.81	30.62	10.92	19.01	23.42	30.26	10.48	18.62	23.03	29.89
10	11.70	19.51	23.79	30.39	11.17	19.04	23.31	29.94	10.64	18.56	22.84	29.50	10.11	18.08	22.36	29.05
11	11.61	19.22	23.36	29.77	10.97	18.65	22.80	29.25	10.34	18.08	22.23	28.72	9.70	17.51	21.87	28.19
12	11.52	18.92	22.93	29.15	10.77	18.25	22.27	28.53	10.02	17.59	21.61	27.92	9.26	16.92	20.95	27.31
14	11.34	18.31	22.03	27.86	10.33	17.43	21.17	27.06	9.32	16.55	20.31	26.26	8.31	15.67	19.45	25.46
16	11.15	17.67	21.10	26.53	9.85	16.56	20.03	25.53	8.56	15.46	18.95	24.54	7.26	14.35	17.87	23.55
18	10.96	17.01	20.15	25.15	9.34	15.66	18.84	23.96	7.73	14.31	17.54	22.76	6.12	12.96	16.24	21.57
20	10.75	16.33	19.15	23.72	8.80	14.73	17.62	22.33	6.84	13.13	16.10	20.94	4.89	11.53	14.57	19.56
Stud Spacing (to) at 16" CIC Max.																
8	11.87	20.08	24.62	31.58	11.42	19.67	24.20	31.19	10.97	19.26	23.79	30.81	10.52	18.85	23.38	30.42
9	11.79	19.80	24.21	30.99	11.22	19.29	23.69	30.51	10.66	18.78	23.18	30.03	10.09	18.26	22.67	29.55
10	11.70	19.51	23.79	30.39	11.01	18.89	23.17	29.81	10.32	18.27	22.55	29.22	9.62	17.64	21.93	28.64
11	11.61	19.22	23.36	29.77	10.78	18.48	22.62	29.08	9.95	17.73	21.89	28.39	9.12	16.99	21.15	27.70
12	11.52	18.92	22.93	29.15	10.54	18.05	22.06	28.34	9.56	17.18	21.20	27.54	8.58	16.31	20.34	26.74
14	11.34	18.31	22.03	27.86	10.03	17.16	20.90	26.82	8.71	16.02	19.78	25.77	7.40	14.87	18.65	24.72
16	11.15	17.67	21.10	26.53	9.46	16.23	19.70	25.23	7.78	14.78	18.29	23.93	6.09	13.34	16.88	22.63
18	10.96	17.01	20.15	25.15	8.86	15.25	18.44	23.59	6.76	13.49	16.74	22.03	4.66	11.73	15.04	20.47
20	10.75	16.33	19.15	23.72	8.21	14.25	17.16	21.90	5.67	12.16	15.16	20.09	3.12	10.07	13.16	18.27
Stud Spacing (to) at 24" CIC Max.																
8	11.87	20.08	24.62	31.58	11.23	19.49	24.02	31.02	10.58	18.90	23.42	30.45	9.93	18.30	22.83	29.89
9	11.79	19.80	24.21	30.99	10.98	19.06	23.46	30.29	10.16	18.32	22.72	29.59	9.35	17.58	21.98	28.89
10	11.70	19.51	23.79	30.39	10.71	18.61	22.89	29.54	9.71	17.71	21.99	28.69	8.72	16.81	21.09	27.84
11	11.61	19.22	23.36	29.77	10.42	18.15	22.29	28.77	9.23	17.07	21.22	27.76	8.03	16.00	20.15	26.76
12	11.52	18.92	22.93	29.15	10.11	17.66	21.68	27.98	8.71	16.41	20.43	26.80	7.30	15.15	19.18	25.63
14	11.34	18.31	22.03	27.86	9.45	16.65	20.40	26.34	7.56	15.00	18.76	24.81	5.68	13.34	17.13	23.29
16	11.15	17.67	21.10	26.53	8.73	15.58	19.06	24.63	6.30	13.50	17.01	22.74	3.88	11.41	14.97	20.84
18	10.96	17.01	20.15	25.15	7.94	14.47	17.67	22.87	4.92	11.93	15.20	20.90	1.91	9.38	12.73	18.32
20	10.75	16.33	19.15	23.72	7.10	13.32	16.25	21.07	3.45	10.30	13.35	18.42	0.00	7.29	10.45	15.77

WF=Indicated Wind Load WF=Factored Wind Load (1.5)

Allowable Compressive Load in Kips (Table P6)
Composite Steel Stud Wall -LSD (Limit State Design)
Concrete Thickness 2.0"
Combined Load (Wind and Gravity)

Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support

DOUBLE STUD - Stud Size : 8"



Length (ft)	W _o =0		W=10PSF WF=15PSF		W=20PSF WF=30PSF		Indicated Wind Load (P S F)		W=40PSF WF=60PSF		W=50PSF WF=75PSF		W=60PSF WF=90PSF	
	0.0451 0.0566		0.0451 0.0566		0.0451 0.0566		WF=30PSF WF=45PSF		Stud Design Thickness (in)		0.0451 0.0566		0.0451 0.0566	
	0.0451	0.0566	0.0451	0.0566	0.0451	0.0566	0.0451	0.0566	0.0713	0.1017	0.0451	0.0566	0.0713	0.1017
Stud Spacing (bo) at 12" C/C Max.														
8	18.44	32.28	40.83	54.62	18.16	32.02	40.56	54.35	17.60	31.49	40.01	53.82	17.04	30.96
9	18.31	31.83	40.15	53.60	17.96	31.50	39.81	53.27	17.25	30.84	39.13	52.80	16.55	30.18
10	18.18	31.37	39.46	52.56	17.75	30.97	39.05	52.16	16.88	30.16	38.22	51.55	16.01	29.36
11	18.05	30.90	38.75	51.50	17.52	30.42	38.26	51.02	16.48	29.46	37.28	50.06	15.44	28.50
12	17.91	30.42	38.03	50.42	17.29	29.86	37.46	49.86	16.06	28.73	36.31	48.75	14.83	27.61
14	17.62	29.43	36.54	48.19	16.80	28.69	35.80	47.47	15.15	27.21	34.30	46.02	13.51	25.74
16	17.33	28.41	35.01	45.89	16.27	27.48	34.07	44.98	14.16	25.61	32.20	43.18	12.04	23.75
18	17.02	27.35	33.42	43.50	15.71	26.21	32.29	42.42	13.08	23.94	30.03	40.26	10.45	21.67
20	16.71	26.26	31.77	41.03	15.11	24.91	30.44	39.77	11.93	22.22	27.79	37.25	8.74	19.53
Stud Spacing (bo) at 16" C/C Max.														
8	18.44	32.28	40.83	54.62	18.08	31.94	40.48	54.27	17.34	31.24	39.76	53.67	16.92	30.90
9	18.31	31.83	40.15	53.60	17.85	31.40	39.71	53.17	16.93	30.53	38.82	52.30	16.46	30.10
10	18.18	31.37	39.46	52.56	17.61	30.84	38.92	52.03	16.48	29.79	37.84	50.88	15.91	29.26
11	18.05	30.90	38.75	51.50	17.36	30.27	38.11	50.87	16.00	29.02	36.83	49.62	15.32	28.39
12	17.91	30.42	38.03	50.42	17.10	29.68	37.28	49.69	15.49	28.21	35.78	48.23	14.69	27.48
14	17.62	29.43	36.54	48.19	16.55	28.46	35.57	47.24	14.39	26.53	33.61	45.35	13.31	25.56
16	17.33	28.41	35.01	45.89	15.94	27.19	33.78	44.71	13.18	24.75	31.34	42.35	11.79	23.53
18	17.02	27.35	33.42	43.50	15.30	25.86	31.94	42.09	11.86	22.89	28.98	39.26	10.14	21.40
20	16.71	26.26	31.77	41.03	14.62	24.49	30.04	39.39	10.45	20.97	26.56	36.10	8.37	19.21
Stud Spacing (bo) at 24" C/C Max.														
8	18.44	32.28	40.83	54.62	17.91	31.78	40.31	54.11	16.83	30.77	39.27	53.09	15.76	29.75
9	18.31	31.83	40.15	53.60	17.64	31.20	39.50	52.97	16.29	29.94	38.20	51.70	14.94	28.67
10	18.18	31.37	39.46	52.56	17.35	30.60	38.67	51.79	15.70	29.06	37.09	50.25	14.05	27.53
11	18.05	30.90	38.75	51.50	17.05	29.98	37.81	50.59	15.07	28.15	35.94	48.76	13.08	26.32
12	17.91	30.42	38.03	50.42	16.74	29.35	36.94	49.35	14.39	27.20	34.75	47.23	12.05	25.06
14	17.62	29.43	36.54	48.19	16.05	28.02	35.12	46.81	12.91	25.19	32.26	44.04	11.34	23.78
16	17.33	28.41	35.01	45.89	15.31	26.63	33.22	44.17	11.28	23.07	29.64	40.73	9.26	21.29
18	17.02	27.35	33.42	43.50	14.52	25.18	31.26	41.44	9.50	20.84	26.93	37.31	6.99	18.67
20	16.71	26.26	31.77	41.03	13.67	23.68	29.24	38.63	7.59	18.54	24.16	33.82	4.56	15.97

WF=Indicated Wind Load WF=Factored Wind Load (1.5)



IMPERIAL BUILDING PRODUCTS COMPOSITE SYSTEM

APPENDIX C WALL STUDS

Wind Bearing Composite Stud Wall Allowable Height
Maximum Allowable Single Span in Feet

SINGLE STUD



Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support

Wind Bearing "Composite" Stud Wall Allowable Height Tables (Table - WT1)
(Maximum Allowable Single Span in Feet) - Concrete Thickness = 2.0"
(Limit State Design-LSD) - Wf=Indicated Wind Load WF=Factored Wind Load (1.5)

Steel Stud		Indicated Wind Load (P.S.F)																				
Size (in)	Thick (in)	WF=10PSF							WF=20PSF							WF=30PSF						
		ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G.	WC.G.	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G.	WC.G.	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G.	WC.G.
Stud Spacing at 12" C/C (Max)																						
3 5/8"	0.0346	30.34	23.72	21.56	20.00	18.83	OK	21.46	18.83	17.11	15.88	14.95	OK	OK	17.52	16.45	14.95	13.87	13.06	OK	OK	
	0.0451	33.33	25.15	22.85	21.20	19.96	OK	23.57	19.96	18.14	16.83	15.85	OK	OK	19.24	17.44	15.85	14.70	13.85	OK	OK	
	0.0566	44.66	26.49	24.07	22.33	21.03	OK	31.58	21.03	19.11	17.73	16.70	OK	OK	25.78	18.37	16.70	15.49	14.59	OK	OK	
	0.0713	48.73	27.93	25.38	23.55	22.17	OK	34.46	22.17	20.15	18.69	17.60	OK	OK	28.13	19.37	17.61	16.33	15.38	OK	OK	
6"	0.0346	36.34	30.64	27.84	25.83	24.32	OK	25.70	24.32	22.10	20.50	19.31	OK	OK	20.98	21.25	19.31	17.91	16.87	OK	OK	
	0.0451	40.69	32.87	29.87	27.71	26.10	OK	28.77	26.10	23.72	22.00	20.72	OK	OK	23.49	22.80	20.72	19.22	18.10	OK	OK	
	0.0566	55.23	34.91	31.73	29.43	27.72	OK	39.05	27.72	25.19	23.37	22.00	OK	OK	31.89	24.22	22.01	20.41	19.22	OK	OK	
	0.0713	61.05	37.10	33.71	31.28	29.45	OK	43.17	29.45	26.76	24.83	23.38	OK	OK	35.25	25.73	23.38	21.69	20.43	OK	OK	
8"	0.0451	46.90	39.22	35.64	33.06	31.14	OK	33.16	31.14	28.29	26.25	24.72	OK	OK	27.08	27.20	24.72	22.93	21.60	OK	OK	
	0.0566	63.91	41.74	37.93	35.19	33.14	OK	45.19	33.14	30.12	27.94	26.31	OK	OK	36.90	28.95	26.31	24.41	22.99	OK	OK	
	0.0713	70.79	44.41	40.35	37.44	35.25	OK	50.05	35.25	32.04	29.72	27.99	OK	OK	40.87	30.80	27.99	25.97	24.45	OK	OK	
	0.1017	82.66	48.67	44.23	41.03	38.64	OK	58.45	38.64	35.11	32.58	30.68	OK	OK	47.72	33.76	30.68	28.46	26.80	OK	OK	
Stud Spacing at 16" C/C (Max)																						
3 5/8"	0.0346	27.53	22.31	20.28	18.81	17.71	OK	19.46	17.71	16.10	14.93	14.06	OK	OK	15.89	15.48	14.06	13.05	12.29	OK	OK	
	0.0451	30.02	23.56	21.41	19.86	18.71	OK	21.23	18.71	17.00	15.77	14.85	OK	OK	17.33	16.34	14.85	13.78	12.97	OK	OK	
	0.0566	40.01	24.76	22.50	20.87	19.65	OK	28.29	19.65	17.86	16.57	15.60	OK	OK	23.10	17.17	15.60	14.48	13.63	OK	OK	
	0.0713	43.46	26.05	23.68	21.96	20.68	OK	30.73	20.68	18.80	17.44	16.42	OK	OK	25.09	18.07	16.42	15.23	14.35	OK	OK	
6"	0.0346	32.20	28.38	25.79	23.93	22.53	OK	22.77	22.53	20.47	18.99	17.89	OK	OK	18.59	19.69	17.89	16.60	15.63	OK	*	
	0.0451	35.92	30.41	27.63	25.63	24.14	OK	25.40	24.14	21.94	20.35	19.17	OK	OK	20.74	21.09	19.17	17.78	16.74	OK	OK	
	0.0566	48.63	32.27	29.33	27.21	25.62	OK	34.38	25.62	23.28	21.60	20.34	OK	OK	28.07	22.39	20.34	18.87	17.77	OK	OK	
	0.0713	53.64	34.29	31.16	28.91	27.22	OK	37.93	27.22	24.74	22.95	21.61	OK	OK	30.97	23.79	21.61	20.05	18.88	OK	OK	
8"	0.0451	41.12	36.13	32.83	30.46	28.68	OK	29.08	28.68	26.06	24.18	22.77	OK	OK	23.74	25.06	22.77	21.13	19.89	OK	OK	
	0.0566	55.95	38.46	34.95	32.43	30.54	OK	39.56	30.54	27.75	25.74	24.24	OK	OK	32.30	26.68	24.24	22.49	21.18	OK	OK	
	0.0713	61.92	40.94	37.21	34.52	32.50	OK	43.78	32.50	29.54	27.40	25.81	OK	OK	35.75	28.40	25.81	23.94	22.55	OK	OK	
	0.1017	72.26	44.96	40.85	37.90	35.69	OK	51.10	35.69	32.43	30.09	28.33	OK	OK	41.72	31.18	28.34	26.29	24.75	OK	OK	
Stud Spacing at 24" C/C (Max)																						
3 5/8"	0.0346	24.37	20.65	18.76	17.41	16.39	OK	17.23	16.39	14.90	13.82	13.01	OK	OK	14.07	14.32	13.02	12.07	11.37	OK	*	
	0.0451	26.27	21.66	19.68	18.26	17.20	OK	18.58	17.20	15.63	14.50	13.65	OK	OK	15.17	15.02	13.65	12.67	11.93	OK	OK	
	0.0566	34.69	22.65	20.58	19.09	17.98	OK	24.53	17.98	16.34	15.16	14.27	OK	OK	20.03	15.71	14.27	13.24	12.47	OK	OK	
	0.0713	37.39	23.73	21.57	20.01	18.84	OK	26.44	18.84	17.12	15.88	14.96	OK	OK	21.59	16.46	14.96	13.88	13.07	OK	OK	
6"	0.0346	27.41	25.60	23.26	21.58	20.32	OK	19.38	20.32	18.47	17.13	16.14	OK	*	15.82	17.76	16.14	14.97	14.10	OK	*	
	0.0451	30.35	27.33	24.84	23.04	21.70	OK	21.46	21.70	19.72	18.29	17.23	OK	OK	17.52	18.96	17.23	15.98	15.05	OK	OK	
	0.0566	40.88	28.94	26.30	24.40	22.98	OK	28.91	22.98	20.88	19.37	18.24	OK	OK	23.60	20.08	18.24	16.92	15.94	OK	OK	
	0.0713	44.92	30.71	27.91	25.89	24.38	OK	31.76	24.38	22.16	20.55	19.36	OK	OK	25.93	21.30	19.36	17.96	16.91	OK	OK	
8"	0.0451	34.31	32.21	29.27	27.16	25.57	OK	24.26	25.57	23.24	21.56	20.30	OK	OK	19.81	22.34	20.30	18.84	17.74	OK	*	
	0.0566	46.55	34.27	31.14	28.89	27.21	OK	32.92	27.21	24.72	22.93	21.60	OK	OK	26.88	23.77	21.60	20.04	18.87	OK	OK	
	0.0713	51.40	36.48	33.15	30.75	28.96	OK	36.34	28.96	26.31	24.41	22.99	OK	OK	29.67	25.30	22.99	21.33	20.09	OK	OK	
	0.1017	59.85	40.10	36.44	33.80	31.83	OK	42.32	31.83	28.93	26.83	25.27	OK	OK	34.55	27.81	25.27	23.44	22.08	OK	OK	

ST.G. = Strength Governs SB.G. = Shear Bond Governs Wc.G. = Web Crippling Governs * = Web Reinforcing Required
For Column Height Limits See General Design Guide Lines (KL/r<=200)

Wind Bearing "Composite" Stud Wall Allowable Height Tables (Table - W2)
(Maximum Allowable Single Span in Feet) - Concrete Thickness = 2.0"
(Limit State Design-LSD) - Wf=Indicated Wind Load WF=Factored Wind Load (1.5)

Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support

Steel Stud		Indicated Wind Load (P.S.F)																				
		W=40PSF WF=60PSF						W=50PSF WF=75PSF						W=60PSF WF=90PSF								
Size (in)	Thick (in)	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G.	WC.G.	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G.	WC.G.	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G.	WC.G.
Stud Spacing at 12" C/C (Max)																						
3.5/6"	0.0346	15.17	14.95	13.59	12.60	11.87	OK	OK	13.57	13.88	12.61	11.70	11.02	OK	OK	12.39	13.06	11.87	11.01	10.37	OK	*
	0.0451	16.66	15.85	14.40	13.36	12.58	OK	OK	14.90	14.71	13.37	12.40	11.68	OK	OK	13.61	13.85	12.58	11.67	10.99	OK	OK
	0.0566	22.33	16.70	15.17	14.07	13.25	OK	OK	19.97	15.50	14.09	13.07	12.31	OK	OK	18.23	14.59	13.26	12.30	11.58	OK	OK
	0.0713	24.37	17.60	16.00	14.84	13.98	OK	OK	21.79	16.34	14.85	13.78	12.97	OK	OK	19.89	15.38	13.98	12.97	12.21	OK	OK
6"	0.0346	18.17	19.31	17.55	16.28	15.33	OK	*	16.25	17.93	16.29	15.11	14.23	OK	*	14.84	16.87	15.33	14.22	13.39	OK	*
	0.0451	20.35	20.72	18.83	17.47	16.45	OK	OK	18.20	19.23	17.48	16.22	15.27	OK	OK	16.61	18.10	16.45	15.26	14.37	OK	OK
	0.0566	27.62	22.00	20.00	18.55	17.47	OK	OK	24.70	20.43	18.56	17.22	16.22	OK	OK	22.55	19.22	17.47	16.21	15.26	OK	OK
	0.0713	30.52	23.38	21.25	19.71	18.56	OK	OK	27.30	21.71	19.73	18.30	17.23	OK	OK	24.92	20.43	18.56	17.22	16.22	OK	OK
8"	0.0451	23.45	24.72	22.46	20.84	19.62	OK	OK	20.98	22.95	20.85	19.35	18.22	OK	OK	19.15	21.60	19.62	18.21	17.14	OK	*
	0.0566	31.95	26.31	23.91	22.18	20.89	OK	OK	28.58	24.43	22.20	20.59	19.39	OK	OK	26.09	22.99	20.89	19.38	18.25	OK	OK
	0.0713	35.39	27.99	25.43	23.59	22.22	OK	OK	31.66	25.98	23.61	21.90	20.63	OK	OK	28.90	24.45	22.22	20.61	19.41	OK	OK
	0.1017	41.33	30.68	27.88	25.86	24.35	OK	OK	36.97	28.48	25.88	24.01	22.61	OK	OK	33.75	26.80	24.36	22.59	21.28	OK	OK
Stud Spacing at 16" C/C (Max)																						
3.5/6"	0.0346	13.76	14.06	12.78	11.85	11.16	OK	OK	12.31	13.06	11.86	11.01	10.36	OK	*	11.24	12.29	11.16	10.36	9.75	OK	*
	0.0451	15.01	14.85	13.49	12.52	11.79	OK	OK	13.42	13.79	12.53	11.62	10.94	OK	OK	12.26	12.97	11.79	10.94	10.30	OK	OK
	0.0566	20.00	15.60	14.18	13.15	12.39	OK	OK	17.89	14.49	13.16	12.21	11.50	OK	OK	16.33	13.63	12.39	11.49	10.82	OK	OK
	0.0713	21.73	16.42	14.92	13.84	13.04	OK	OK	19.44	15.24	13.85	12.85	12.10	OK	OK	17.74	14.35	13.04	12.09	11.39	OK	OK
6"	0.0346	16.10	17.89	16.25	15.08	14.20	OK	*	14.40	16.61	15.09	14.00	13.18	OK	*	13.15	15.63	14.20	13.17	12.41	OK	*
	0.0451	17.96	19.17	17.42	16.16	15.21	OK	OK	16.06	17.79	16.17	15.00	14.13	OK	OK	14.66	16.74	15.22	14.12	13.29	OK	*
	0.0566	24.31	20.34	18.48	17.15	16.15	OK	OK	21.75	18.88	17.16	15.92	14.99	OK	OK	19.85	17.77	16.15	14.98	14.11	OK	OK
	0.0713	26.82	21.61	19.64	18.22	17.16	OK	OK	23.99	20.07	18.23	16.92	15.93	OK	OK	21.90	18.88	17.16	15.92	14.99	OK	OK
8"	0.0451	20.56	22.77	20.69	19.20	18.08	OK	*	18.39	21.14	19.21	17.82	16.78	OK	*	16.79	19.89	18.08	16.77	15.79	OK	*
	0.0566	27.98	24.24	22.03	20.44	19.25	OK	OK	25.02	22.51	20.45	18.97	17.87	OK	OK	22.84	21.18	19.25	17.86	16.81	OK	OK
	0.0713	30.96	25.81	23.45	21.75	20.49	OK	OK	27.69	23.96	21.77	20.20	19.02	OK	OK	25.28	22.55	20.49	19.01	17.90	OK	OK
	0.1017	36.13	28.33	25.75	23.89	22.49	OK	OK	32.32	26.30	23.90	22.18	20.88	OK	OK	29.50	24.75	22.50	20.87	19.65	OK	OK
Stud Spacing at 24" C/C (Max)																						
3.5/6"	0.0346	12.18	13.01	11.83	10.97	10.33	OK	*	10.90	12.08	10.98	10.19	9.59	OK	*	9.95	11.37	10.33	9.59	9.03	OK	*
	0.0451	13.13	13.65	12.41	11.51	10.84	OK	OK	11.75	12.67	11.52	10.68	10.06	OK	OK	10.72	11.93	10.84	10.05	9.47	OK	*
	0.0566	17.35	14.27	12.97	12.03	11.33	OK	OK	15.52	13.25	12.04	11.17	10.52	OK	OK	14.16	12.47	11.33	10.51	9.90	OK	OK
	0.0713	18.69	14.96	13.59	12.61	11.88	OK	OK	16.72	13.89	12.62	11.71	11.03	OK	OK	15.26	13.07	11.88	11.02	10.38	OK	OK
6"	0.0346	13.70	16.14	14.66	13.60	12.81	OK	*	12.26	14.98	13.61	12.63	11.89	OK	*	11.19	14.10	12.81	11.88	11.19	OK	*
	0.0451	15.18	17.23	15.65	14.52	13.67	OK	*	13.57	15.99	14.53	13.48	12.70	OK	*	12.39	15.05	13.68	12.69	11.95	OK	*
	0.0566	20.44	18.24	16.58	15.38	14.48	OK	OK	18.28	16.94	15.39	14.28	13.44	OK	OK	16.69	15.94	14.48	13.44	12.65	OK	OK
	0.0713	22.46	19.36	17.59	16.32	15.37	OK	OK	20.09	17.97	16.33	15.15	14.27	OK	OK	18.34	16.91	15.37	14.26	13.43	OK	OK
8"	0.0451	17.15	20.30	18.45	17.11	16.12	OK	*	15.34	18.85	17.13	15.89	14.96	OK	*	14.01	17.74	16.12	14.95	14.08	OK	*
	0.0566	23.27	21.60	19.63	18.21	17.15	OK	OK	20.82	20.05	18.22	16.90	15.92	OK	OK	19.00	18.87	17.15	15.91	14.98	OK	OK
	0.0713	25.70	22.99	20.89	19.38	18.25	OK	OK	22.88	21.34	19.37	17.99	16.94	OK	OK	20.98	20.09	18.25	16.93	15.95	OK	OK
	0.1017	29.92	25.27	22.96	21.30	20.06	OK	OK	26.77	23.46	21.32	19.78	18.62	OK	OK	24.43	22.08	20.06	18.61	17.53	OK	OK

ST.G. = Strength Governs
SB.G. = Shear Bond Governs
WC.G. = Web Crippling Governs
For Column Height Limits See General Design Guide Lines (KL/ry<=200)

* = Web Reinforcing Required

DOUBLE STUD



Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support

Wind Bearing "Composite" Stud Wall Allowable Height Tables (Table - W3)
(Maximum Allowable Single Span in Feet) - Concrete Thickness = 2.0"
(Limit State Design-LSD) - Wf=Indicated Wind Load WF=Factored Wind Load (1.5)

Steel Stud		Indicated Wind Load (P.S.F)																				
Size (in)	Thick (in)	WF=10PSF					WF=20PSF					WF=30PSF										
		ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	SB.G. (ft)	WC.G. (ft)	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G. (ft)	WC.G. (ft)	ST.G. (ft)	L/360 (ft)	L/480 (ft)	L/600 (ft)	L/720 (ft)	SB.G. (ft)	WC.G. (ft)	
Stud Spacing at 12" C/C (Max)																						
3 5/8"	0.0346	39.55	27.92	25.37	23.53	22.16	OK	OK	27.96	22.16	20.14	18.68	17.59	OK	OK	22.83	19.36	17.60	16.32	15.37	OK	OK
	0.0451	43.99	29.75	27.03	25.08	23.61	OK	OK	31.10	23.61	21.46	19.91	18.75	OK	OK	25.40	20.63	18.75	17.39	16.38	OK	OK
	0.0566	59.46	31.42	28.55	26.49	24.94	OK	OK	42.05	24.94	22.67	21.03	19.80	OK	OK	34.33	21.79	19.80	18.37	17.30	OK	OK
	0.0713	65.34	33.16	30.14	27.96	26.33	OK	OK	46.21	26.33	23.92	22.19	20.90	OK	OK	37.73	23.00	20.90	19.39	18.26	OK	OK
6"	0.0346	49.39	37.01	33.63	31.20	29.38	OK	OK	34.92	29.38	26.70	24.77	23.32	OK	OK	28.51	25.67	23.33	21.64	20.38	OK	OK
	0.0451	55.60	39.72	36.09	33.48	31.53	OK	OK	39.31	31.53	28.65	26.58	25.03	OK	OK	32.10	27.55	25.03	23.22	21.87	OK	OK
	0.0566	75.71	42.13	38.28	35.51	33.44	OK	OK	53.53	33.44	30.39	28.19	26.55	OK	OK	43.71	29.22	26.55	24.63	23.20	OK	OK
	0.0713	83.86	44.66	40.58	37.65	35.46	OK	OK	59.30	35.46	32.22	29.89	28.15	OK	OK	48.41	30.98	28.15	26.11	24.59	OK	OK
8"	0.0451	64.76	47.66	43.31	40.18	37.84	OK	OK	45.79	37.84	34.38	31.90	30.04	OK	OK	37.39	33.06	30.04	27.87	26.24	OK	OK
	0.0566	88.34	50.59	45.98	42.65	40.17	OK	OK	62.47	40.17	36.50	33.86	31.89	OK	OK	51.00	35.09	31.89	29.58	27.96	OK	OK
	0.0713	97.88	53.64	48.74	45.22	42.58	OK	OK	69.21	42.58	38.69	35.90	33.80	OK	OK	56.51	37.20	33.81	31.36	29.54	OK	OK
	0.1017	114.18	58.42	53.08	49.24	46.37	OK	OK	80.74	46.37	42.14	39.09	36.82	OK	OK	65.92	40.52	36.82	34.16	32.17	OK	OK
Stud Spacing at 16" C/C (Max)																						
3 5/8"	0.0346	35.27	26.04	23.66	21.95	20.67	OK	OK	24.94	20.67	18.79	17.43	16.41	OK	OK	20.36	18.06	16.41	15.23	14.34	OK	OK
	0.0451	39.06	27.71	25.18	23.36	22.00	OK	OK	27.62	22.00	19.99	18.54	17.46	OK	OK	22.55	19.22	17.46	16.20	15.26	OK	OK
	0.0566	52.64	29.25	26.58	24.66	23.22	OK	OK	37.22	23.22	21.10	19.58	18.44	OK	OK	30.39	20.29	18.44	17.10	16.11	OK	OK
	0.0713	57.72	30.88	28.06	26.03	24.51	OK	OK	40.81	24.51	22.28	20.67	19.46	OK	OK	33.32	21.72	19.46	18.06	17.00	OK	OK
6"	0.0346	43.40	34.21	31.08	28.84	27.16	OK	OK	30.69	27.16	24.68	22.89	21.56	OK	OK	25.06	23.43	21.56	20.00	18.84	OK	OK
	0.0451	48.77	36.73	33.38	30.96	29.16	OK	OK	34.49	29.16	26.50	24.58	23.15	OK	OK	28.16	25.48	23.15	21.48	20.22	OK	OK
	0.0566	66.35	39.00	35.44	32.87	30.96	OK	OK	46.92	30.96	28.13	26.10	24.58	OK	OK	38.31	27.05	24.58	22.80	21.47	OK	OK
	0.0713	73.46	41.40	37.62	34.90	32.86	OK	OK	51.95	32.86	29.86	27.70	26.09	OK	OK	42.41	28.71	26.09	24.21	22.79	OK	OK
8"	0.0451	56.61	43.99	39.98	37.09	34.93	OK	OK	40.03	34.93	31.74	29.44	27.73	OK	OK	32.69	30.52	27.73	25.72	24.23	OK	OK
	0.0566	77.21	46.77	42.50	39.43	37.13	OK	OK	54.60	37.13	33.74	31.30	29.48	OK	OK	44.58	32.44	29.48	27.35	25.75	OK	OK
	0.0713	85.56	49.67	45.13	41.87	39.43	OK	OK	60.50	39.43	35.83	33.24	31.30	OK	OK	49.40	34.45	31.30	29.04	27.35	OK	OK
	0.1017	99.90	54.25	49.30	45.73	43.07	OK	OK	70.64	43.07	39.14	36.31	34.19	OK	OK	57.67	37.63	34.19	31.72	29.87	OK	OK
Stud Spacing at 24" C/C (Max)																						
3 5/8"	0.0346	30.34	23.72	21.55	20.00	18.83	OK	OK	21.46	18.83	17.11	15.88	14.95	OK	OK	17.52	16.45	14.95	13.87	13.06	OK	OK
	0.0451	33.33	25.15	22.85	21.20	19.96	OK	OK	23.57	19.96	18.14	16.83	15.85	OK	OK	19.24	17.44	15.85	14.70	13.85	OK	OK
	0.0566	44.66	26.49	24.07	22.33	21.03	OK	OK	31.58	21.03	19.11	17.73	16.70	OK	OK	25.78	18.37	16.70	15.49	14.59	OK	OK
	0.0713	48.73	27.93	25.38	23.55	22.17	OK	OK	34.46	22.17	20.15	18.69	17.60	OK	OK	28.13	19.37	17.61	16.33	15.38	OK	OK
6"	0.0346	36.34	30.64	27.84	25.83	24.32	OK	OK	25.70	24.32	22.10	20.50	19.31	OK	OK	20.98	21.25	19.31	17.91	16.87	OK	OK
	0.0451	40.69	32.87	29.87	27.71	26.10	OK	OK	28.77	26.10	23.72	22.00	20.72	OK	OK	23.49	22.80	20.72	19.22	18.10	OK	OK
	0.0566	55.23	34.91	31.73	29.43	27.72	OK	OK	39.05	27.72	25.19	23.37	22.00	OK	OK	31.89	24.22	22.01	20.41	19.22	OK	OK
	0.0713	61.05	37.10	33.71	31.28	29.45	OK	OK	43.17	29.45	26.76	24.83	23.38	OK	OK	35.25	25.73	23.38	21.69	20.43	OK	OK
8"	0.0451	46.90	39.22	35.64	33.06	31.14	OK	OK	33.16	31.14	28.29	26.25	24.72	OK	OK	27.08	27.20	24.72	22.93	21.60	OK	OK
	0.0566	63.91	41.74	37.93	35.19	33.14	OK	OK	45.19	33.14	30.12	27.94	26.31	OK	OK	36.90	28.95	26.31	24.41	22.99	OK	OK
	0.0713	70.79	44.41	40.35	37.44	35.25	OK	OK	50.05	35.25	32.04	29.72	27.99	OK	OK	40.87	30.80	27.99	25.97	24.45	OK	OK
	0.1017	82.66	48.67	44.23	41.03	38.64	OK	OK	58.45	38.64	35.11	32.58	30.68	OK	OK	47.72	33.76	30.68	28.46	26.80	OK	OK

* = Web Reinforcing Required

W.C.G. = Web Crippling Governs

SB.G. = Shear Bond Governs

ST.G. = Strength Governs

For Column Height Limits See General Design Guide Lines (KL/r<=200)

Wind Bearing "Composite" Stud Wall Allowable Height Tables (Table - W4)
(Maximum Allowable Single Span in Feet) - Concrete Thickness = 2.0"
(Limit State Design-LSD) - Wf=Indicated Wind Load WF=Factored Wind Load (1.5)

Composite Wall Concrete and Stud
are Fully Bearing on Continuous Top
and Bottom Support

Steel Stud		Indicated Wind Load (P.S.F)										WF=60PSF WF=90PSF											
Size (in)	Thick (in)	WF=40PSF					WF=50PSF					WF=75PSF					WF=60PSF						
		ST.G. (ft)	L/80 (ft)	L/40 (ft)	L/720 (ft)	SB.G. (ft)	WC.G. (ft)	ST.G. (ft)	L/80 (ft)	L/40 (ft)	L/720 (ft)	SB.G. (ft)	WC.G. (ft)	ST.G. (ft)	L/80 (ft)	L/40 (ft)	L/720 (ft)	SB.G. (ft)	WC.G. (ft)				
Stud Spacing at 12" C/C (Max)																							
3.5/8"	0.0346	19.77	17.59	15.99	14.83	13.97	OK	OK	17.69	16.33	14.84	13.77	12.97	OK	OK	16.15	15.37	13.97	12.96	12.20	OK	OK	
	0.0451	21.99	18.75	17.04	15.80	14.88	OK	OK	19.67	17.40	15.82	14.67	13.82	OK	OK	17.96	16.38	14.88	13.81	13.00	OK	OK	
	0.0566	29.73	19.80	17.99	16.69	15.72	OK	OK	26.59	18.38	16.71	15.50	14.59	OK	OK	24.27	17.30	15.72	14.58	13.73	OK	OK	
	0.0713	32.67	20.90	18.99	17.62	16.59	OK	OK	29.22	19.40	17.63	16.36	15.40	OK	OK	26.68	18.26	16.59	15.39	14.50	OK	OK	
	0.0346	24.69	23.32	21.20	19.68	18.52	OK	OK	22.09	21.65	19.88	18.25	17.19	OK	OK	20.16	20.38	18.52	17.18	16.18	OK	OK	
6"	0.0451	27.80	25.03	22.75	21.10	19.87	OK	OK	24.86	23.24	21.12	19.59	18.45	OK	OK	22.70	21.87	19.87	18.44	17.36	OK	OK	
	0.0566	37.85	26.55	24.13	22.38	21.08	OK	OK	34.86	24.65	22.40	20.78	19.57	OK	OK	30.91	23.20	21.08	19.58	18.42	OK	OK	
	0.0713	41.93	28.15	25.58	23.73	22.35	OK	OK	37.50	26.13	23.75	22.03	20.75	OK	OK	34.23	24.59	22.35	20.73	19.52	OK	OK	
	0.0451	32.38	30.04	27.30	25.32	23.85	OK	OK	28.96	27.89	25.34	23.51	22.14	OK	OK	26.44	26.24	23.85	22.12	20.84	OK	OK	
	0.0566	44.17	31.89	28.98	26.88	25.31	OK	OK	39.51	29.60	26.90	24.96	23.50	OK	OK	36.06	27.86	25.32	23.49	22.12	OK	OK	
8"	0.0713	48.94	33.80	30.72	28.50	26.84	OK	OK	43.77	31.38	28.52	26.46	24.92	OK	OK	39.96	29.54	26.84	24.90	23.45	OK	OK	
	0.1017	57.09	36.82	33.46	31.04	29.23	OK	OK	51.06	34.18	31.06	28.81	27.13	OK	OK	46.62	32.17	29.23	27.12	25.54	OK	OK	
	Stud Spacing at 16" C/C (Max)																						
	3.5/8"	0.0346	17.64	16.41	14.91	13.84	13.03	OK	OK	15.77	15.24	13.85	12.84	12.10	OK	OK	14.40	14.34	13.03	12.09	11.38	OK	OK
		0.0451	19.53	17.46	15.87	14.72	13.86	OK	OK	17.47	16.21	14.73	13.67	12.87	OK	OK	15.95	15.26	13.86	12.86	12.11	OK	OK
0.0566		26.32	18.44	16.75	15.54	14.64	OK	OK	23.54	17.12	15.55	14.43	13.59	OK	OK	21.49	16.11	14.64	13.58	12.79	OK	OK	
0.0713		28.86	19.46	17.69	16.41	15.45	OK	OK	25.81	18.07	16.42	15.23	14.34	OK	OK	23.56	17.00	15.45	14.33	13.50	OK	OK	
0.0346		21.70	21.56	19.59	18.17	17.12	OK	OK	19.41	20.02	18.19	16.87	15.89	OK	OK	17.72	18.84	17.12	15.88	14.95	OK	OK	
6"	0.0451	24.39	23.15	21.04	19.51	18.38	OK	OK	21.81	21.49	19.53	18.12	17.06	OK	OK	19.91	20.22	18.38	17.05	16.06	OK	OK	
	0.0566	33.18	24.58	22.33	20.72	19.51	OK	OK	29.67	22.82	20.73	19.23	18.11	OK	OK	27.09	21.47	19.51	18.10	17.05	OK	OK	
	0.0713	36.73	26.09	23.71	21.99	20.71	OK	OK	32.85	24.22	22.01	20.42	19.23	OK	OK	29.89	22.79	20.71	19.22	18.10	OK	OK	
	0.0451	28.31	27.73	25.20	23.37	22.01	OK	OK	25.32	25.74	23.39	21.70	20.44	OK	OK	23.11	24.23	22.01	20.42	19.23	OK	OK	
	0.0566	38.61	29.48	26.79	24.85	23.40	OK	OK	34.53	27.37	24.87	23.07	21.73	OK	OK	31.52	25.75	23.40	21.71	20.45	OK	OK	
8"	0.0713	42.78	31.30	28.45	26.39	24.85	OK	OK	38.26	29.06	26.41	24.50	23.07	OK	OK	34.93	27.35	24.85	23.08	21.71	OK	OK	
	0.1017	49.95	34.19	31.07	28.82	27.14	OK	OK	44.67	31.74	28.84	26.76	25.20	OK	OK	40.78	29.87	27.15	25.18	23.71	OK	OK	
	Stud Spacing at 24" C/C (Max)																						
	3.5/8"	0.0346	15.17	14.95	13.59	12.60	11.87	OK	OK	13.57	13.88	12.61	11.70	11.02	OK	OK	12.39	13.06	11.87	11.01	10.37	OK	OK
		0.0451	16.66	15.85	14.40	13.36	12.58	OK	OK	14.90	14.71	13.37	12.40	11.68	OK	OK	13.61	13.85	12.58	11.67	10.99	OK	OK
0.0566		22.33	16.70	15.17	14.07	13.25	OK	OK	19.97	15.50	14.09	13.07	12.31	OK	OK	18.23	14.59	13.26	12.30	11.58	OK	OK	
0.0713		24.37	17.60	16.00	14.84	13.98	OK	OK	21.79	16.34	14.85	13.78	12.97	OK	OK	19.89	15.38	13.98	12.97	12.21	OK	OK	
0.0346		18.17	19.31	17.55	16.28	15.33	OK	OK	16.25	17.93	16.29	15.11	14.23	OK	OK	14.84	16.87	15.33	14.22	13.39	OK	OK	
6"	0.0451	20.35	20.72	18.83	17.47	16.45	OK	OK	18.20	19.23	17.48	16.22	15.27	OK	OK	16.61	18.10	16.45	15.26	14.37	OK	OK	
	0.0566	27.62	22.00	20.00	18.55	17.47	OK	OK	24.70	20.43	18.56	17.22	16.22	OK	OK	22.55	19.22	17.47	16.21	15.26	OK	OK	
	0.0713	30.52	23.38	21.25	19.71	18.56	OK	OK	27.30	21.71	19.73	18.30	17.23	OK	OK	24.92	20.43	18.56	17.22	16.22	OK	OK	
	0.0451	23.45	24.72	22.46	20.84	19.62	OK	OK	20.98	22.95	20.85	19.35	18.22	OK	OK	19.15	21.60	19.62	18.21	17.14	OK	OK	
	0.0566	31.95	26.31	23.91	22.18	20.89	OK	OK	28.58	24.43	22.20	20.59	19.39	OK	OK	26.09	22.99	20.89	19.38	18.25	OK	OK	
8"	0.0713	35.39	27.99	25.43	23.59	22.22	OK	OK	31.66	25.98	23.61	21.90	20.63	OK	OK	28.90	24.45	22.22	20.61	19.41	OK	OK	
	0.1017	41.33	30.68	27.88	25.86	24.35	OK	OK	36.97	28.48	25.88	24.01	22.61	OK	OK	33.75	26.80	24.36	22.59	21.28	OK	OK	

ST.G. = Strength Governs
For Column Height Limits See General Design Guide Lines (KL/r<=200)

SB.G. = Shear Bond Governs

Wc.G. = Web Crippling Governs

* = Web Reinforcing Required