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For:

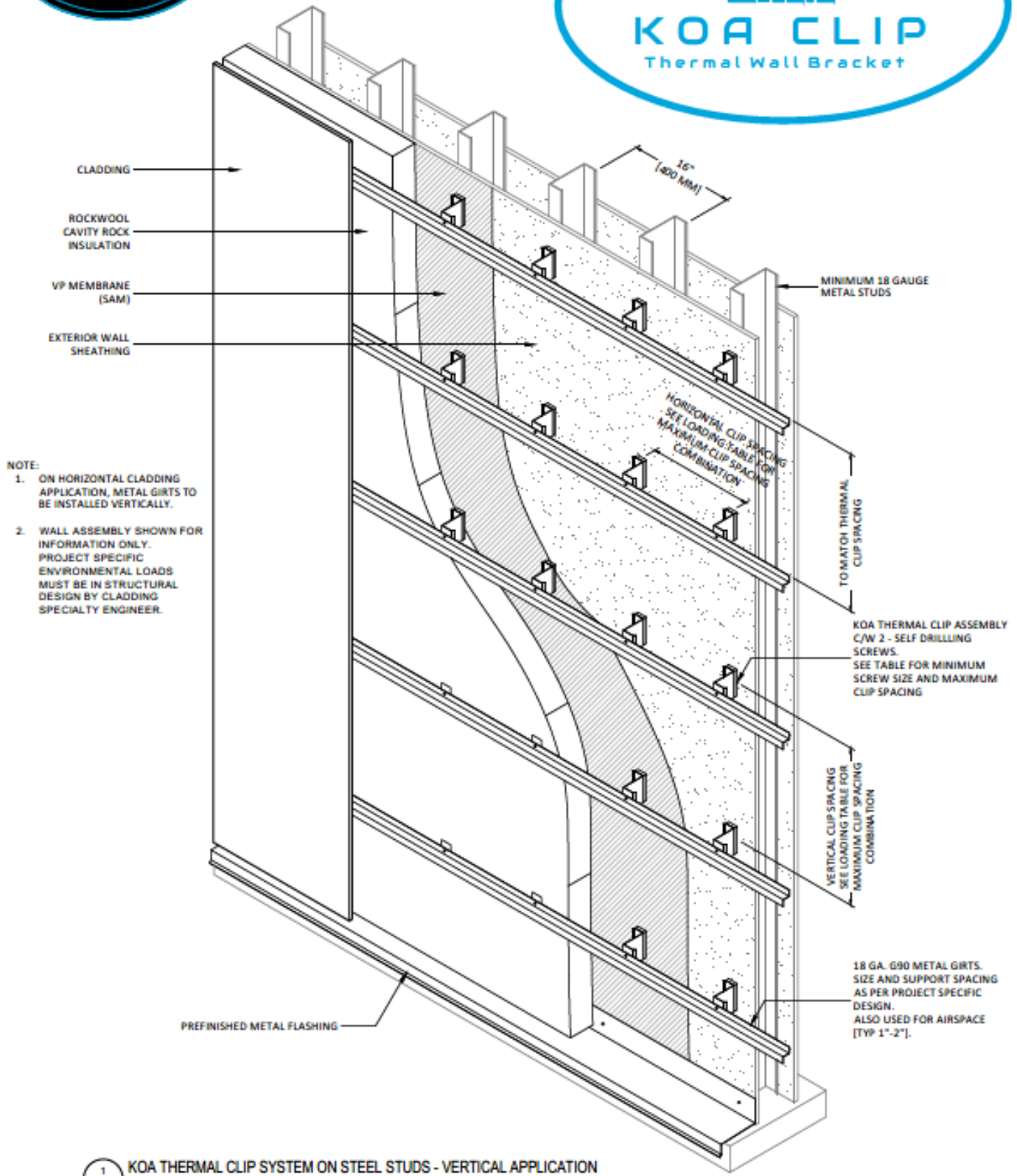


7925 E. Ray Rd. Ste. 133
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SUBJECT: Koa ClipTM – Thermal Wall Bracket Loading Tables and Charts

Design Summary

1. Tables and Charts are provided as a quick reference guide to determine overall cladding system configuration based on thermal clip use.
2. Backup wall capacity to support loads imposed by cladding shall remain the responsibility of the project structural engineer of record.
3. Thermal clips are designed to support vertical loads generated by cladding system self weight and lateral loads due to wind or seismic.
4. Thermal clip spacing is based on material strength of clip and maximum allowable fastener shear and tension capacity based on backup wall material.
5. Thermal clip capacities are based upon a single manufacturers' published capacities, and therefore use of other products will affect clip capacity and require independent review by cladding specialty engineer.



1 KOA THERMAL CLIP SYSTEM ON STEEL STUDS - VERTICAL APPLICATION
C01

WWW.KOACLIP.COM



KOA THERMAL CLIP - METAL STUD BACKUP WALL

LOADING CHART

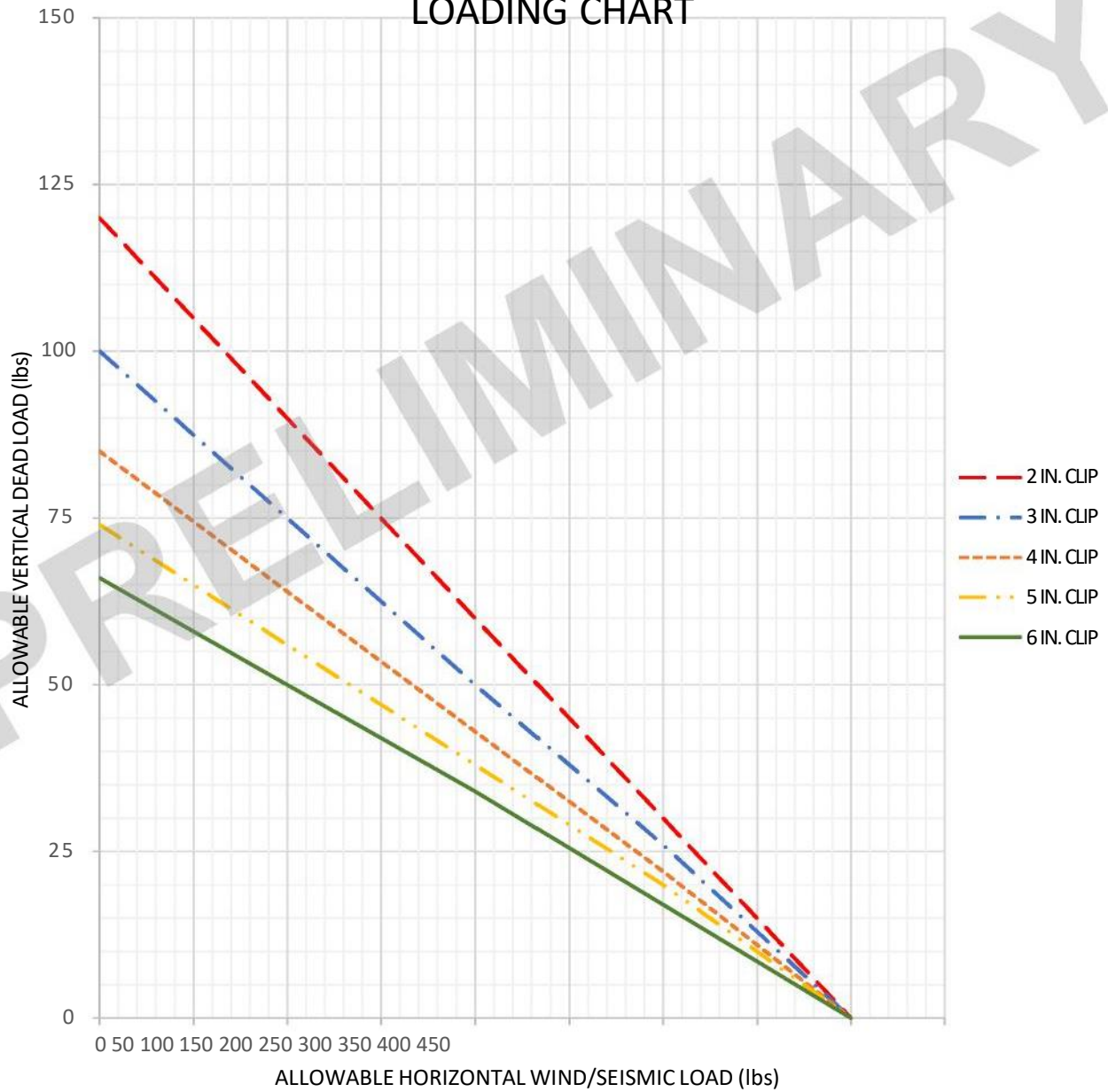




TABLE 1A – Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	18	16	16	2 - #14-14 Self Drillers		
2	2	18	16	26	2 - #14-14 Self Drillers		
2	2	18	16	32	2 - #14-14 Self Drillers		
2	2	18	16	36	2 - #14-14 Self Drillers		
2	2	18	16	48	2 - #14-14 Self Drillers		
2	2	18	24	16	2 - #14-14 Self Drillers		
2	2	18	24	26	2 - #14-14 Self Drillers		
2	2	18	24	32	2 - #14-14 Self Drillers		
2	2	18	24	36	2 - #14-14 Self Drillers		
2	2	18	24	48	2 - #14-14 Self Drillers		
2	2	18	32	16	2 - #14-14 Self Drillers		
2	2	18	32	26	2 - #14-14 Self Drillers		
2	2	18	32	32	2 - #14-14 Self Drillers		
2	2	18	32	36	2 - #14-14 Self Drillers		
2	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 1B - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	18	16	16	2 - #14-14 Self Drillers		
2	2	18	16	26	2 - #14-14 Self Drillers		
2	2	18	16	32	2 - #14-14 Self Drillers		
2	2	18	16	36	2 - #14-14 Self Drillers		
2	2	18	16	48	2 - #14-14 Self Drillers		
2	2	18	24	16	2 - #14-14 Self Drillers		
2	2	18	24	26	2 - #14-14 Self Drillers		
2	2	18	24	32	2 - #14-14 Self Drillers		
2	2	18	24	36	N/A		
2	2	18	24	48	N/A		
2	2	18	32	16	2 - #14-14 Self Drillers		
2	2	18	32	26	2 - #14-14 Self Drillers		
2	2	18	32	32	N/A		
2	2	18	32	36	N/A		
2	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
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TABLE 2A - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	18	16	16	2 - #14-14 Self Drillers		
3	2	18	16	26	2 - #14-14 Self Drillers		
3	2	18	16	32	2 - #14-14 Self Drillers		
3	2	18	16	36	2 - #14-14 Self Drillers		
3	2	18	16	48	2 - #14-14 Self Drillers		
3	2	18	24	16	2 - #14-14 Self Drillers		
3	2	18	24	26	2 - #14-14 Self Drillers		
3	2	18	24	32	2 - #14-14 Self Drillers		
3	2	18	24	36	2 - #14-14 Self Drillers		
3	2	18	24	48	2 - #14-14 Self Drillers		
3	2	18	32	16	2 - #14-14 Self Drillers		
3	2	18	32	26	2 - #14-14 Self Drillers		
3	2	18	32	32	2 - #14-14 Self Drillers		
3	2	18	32	36	2 - #14-14 Self Drillers		
3	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
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TABLE 2B - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	18	16	16	2 - #14-14 Self Drillers		
3	2	18	16	26	2 - #14-14 Self Drillers		
3	2	18	16	32	2 - #14-14 Self Drillers		
3	2	18	16	36	2 - #14-14 Self Drillers		
3	2	18	16	48	2 - #14-14 Self Drillers		
3	2	18	24	16	2 - #14-14 Self Drillers		
3	2	18	24	26	2 - #14-14 Self Drillers		
3	2	18	24	32	2 - #14-14 Self Drillers		
3	2	18	24	36	N/A		
3	2	18	24	48	N/A		
3	2	18	32	16	2 - #14-14 Self Drillers		
3	2	18	32	26	2 - #14-14 Self Drillers		
3	2	18	32	32	N/A		
3	2	18	32	36	N/A		
3	2	18	32	48	N/A		

Notes:

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- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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TABLE 3A - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	18	16	16	2 - #14-14 Self Drillers		
4	2	18	16	24	2 - #14-14 Self Drillers		
4	2	18	16	32	2 - #14-14 Self Drillers		
4	2	18	16	36	2 - #14-14 Self Drillers		
4	2	18	16	48	2 - #14-14 Self Drillers		
4	2	18	24	16	2 - #14-14 Self Drillers		
4	2	18	24	24	2 - #14-14 Self Drillers		
4	2	18	24	32	2 - #14-14 Self Drillers		
4	2	18	24	36	2 - #14-14 Self Drillers		
4	2	18	24	48	2 - #14-14 Self Drillers		
4	2	18	32	16	2 - #14-14 Self Drillers		
4	2	18	32	24	2 - #14-14 Self Drillers		
4	2	18	32	32	2 - #14-14 Self Drillers		
4	2	18	32	36	2 - #14-14 Self Drillers		
4	2	18	32	48	N/A		

Notes:

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TABLE 3B - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	18	16	16	2 - #14-14 Self Drillers		
4	2	18	16	26	2 - #14-14 Self Drillers		
4	2	18	16	32	2 - #14-14 Self Drillers		
4	2	18	16	36	2 - #14-14 Self Drillers		
4	2	18	16	48	N/A		
4	2	18	24	16	2 - #14-14 Self Drillers		
4	2	18	24	26	2 - #14-14 Self Drillers		
4	2	18	24	32	2 - #14-14 Self Drillers		
4	2	18	24	36	N/A		
4	2	18	24	48	N/A		
4	2	18	32	16	2 - #14-14 Self Drillers		
4	2	18	32	26	N/A		
4	2	18	32	32	N/A		
4	2	18	32	36	N/A		
4	2	18	32	48	N/A		

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- 1.All loads noted are unfactored.
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TABLE 4A - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	18	16	16	2 - #14-14 Self Drillers		
5	2	18	16	26	2 - #14-14 Self Drillers		
5	2	18	16	32	2 - #14-14 Self Drillers		
5	2	18	16	36	2 - #14-14 Self Drillers		
5	2	18	16	48	2 - #14-14 Self Drillers		
5	2	18	24	16	2 - #14-14 Self Drillers		
5	2	18	24	26	2 - #14-14 Self Drillers		
5	2	18	24	32	2 - #14-14 Self Drillers		
5	2	18	24	36	2 - #14-14 Self Drillers		
5	2	18	24	48	N/A		
5	2	18	32	16	2 - #14-14 Self Drillers		
5	2	18	32	26	2 - #14-14 Self Drillers		
5	2	18	32	32	2 - #14-14 Self Drillers		
5	2	18	32	36	2 - #14-14 Self Drillers		
5	2	18	32	48	N/A		

Notes:

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TABLE 4B - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	18	16	16	2 - #14-14 Self Drillers		
5	2	18	16	26	2 - #14-14 Self Drillers		
5	2	18	16	32	2 - #14-14 Self Drillers		
5	2	18	16	36	2 - #14-14 Self Drillers		
5	2	18	16	48	N/A		
5	2	18	24	16	2 - #14-14 Self Drillers		
5	2	18	24	26	2 - #14-14 Self Drillers		
5	2	18	24	32	N/A		
5	2	18	24	36	N/A		
5	2	18	24	48	N/A		
5	2	18	32	16	2 - #14-14 Self Drillers		
5	2	18	32	26	N/A		
5	2	18	32	32	N/A		
5	2	18	32	36	N/A		
5	2	18	32	48	N/A		

Notes:

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TABLE 5A - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	18	16	16	2 - #14-14 Self Drillers		
6	2	18	16	26	2 - #14-14 Self Drillers		
6	2	18	16	32	2 - #14-14 Self Drillers		
6	2	18	16	36	2 - #14-14 Self Drillers		
6	2	18	16	48	2 - #14-14 Self Drillers		
6	2	18	24	16	2 - #14-14 Self Drillers		
6	2	18	24	26	2 - #14-14 Self Drillers		
6	2	18	24	32	2 - #14-14 Self Drillers		
6	2	18	24	36	2 - #14-14 Self Drillers		
6	2	18	24	48	N/A		
6	2	18	32	16	2 - #14-14 Self Drillers		
6	2	18	32	26	2 - #14-14 Self Drillers		
6	2	18	32	32	2 - #14-14 Self Drillers		
6	2	18	32	36	N/A		
6	2	18	32	48	N/A		

Notes:

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TABLE 5B - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

TABLE 5B - Koa Clip Fastener and Spacing – Metal Stud Backup Wall							
Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	18	16	16	2 - #14-14 Self Drillers		
6	2	18	16	26	2 - #14-14 Self Drillers		
6	2	18	16	32	2 - #14-14 Self Drillers		
6	2	18	16	36	2 - #14-14 Self Drillers		
6	2	18	16	48	N/A		
6	2	18	24	16	2 - #14-14 Self Drillers		
6	2	18	24	26	2 - #14-14 Self Drillers		
6	2	18	24	32	N/A		
6	2	18	24	36	N/A		
6	2	18	24	48	N/A		
6	2	18	32	16	2 - #14-14 Self Drillers		
6	2	18	32	26	N/A		
6	2	18	32	32	N/A		
6	2	18	32	36	N/A		
6	2	18	32	48	N/A		

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TABLE 1C - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	18	16	16	2 - #14-14 Self Drillers		
2	2	18	16	26	2 - #14-14 Self Drillers		
2	2	18	16	32	2 - #14-14 Self Drillers		
2	2	18	16	36	2 - #14-14 Self Drillers		
2	2	18	16	48	2 - #14-14 Self Drillers		
2	2	18	24	16	2 - #14-14 Self Drillers		
2	2	18	24	26	2 - #14-14 Self Drillers		
2	2	18	24	32	2 - #14-14 Self Drillers		
2	2	18	24	36	2 - #14-14 Self Drillers		
2	2	18	24	48	N/A		
2	2	18	32	16	2 - #14-14 Self Drillers		
2	2	18	32	26	2 - #14-14 Self Drillers		
2	2	18	32	32	N/A		
2	2	18	32	36	N/A		
2	2	18	32	48	N/A		

Notes:

- 1.All loads noted are unfactored.
- 2.N/A indicates assembly Not Acceptable
- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
- 4.Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
- 5.Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
- 6.Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
- 7.Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 1D - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	18	16	16	2 - #14-14 Self Drillers		
2	2	18	16	26	2 - #14-14 Self Drillers		
2	2	18	16	32	2 - #14-14 Self Drillers		
2	2	18	16	36	2 - #14-14 Self Drillers		
2	2	18	16	48	N/A		
2	2	18	24	16	2 - #14-14 Self Drillers		
2	2	18	24	26	2 - #14-14 Self Drillers		
2	2	18	24	32	N/A		
2	2	18	24	36	N/A		
2	2	18	24	48	N/A		
2	2	18	32	16	2 - #14-14 Self Drillers		
2	2	18	32	26	N/A		
2	2	18	32	32	N/A		
2	2	18	32	36	N/A		
2	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 2C – Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	18	16	16	2 - #12-14 Self Drillers		
3	2	18	16	26	2 - #12-14 Self Drillers		
3	2	18	16	32	2 - #12-14 Self Drillers		
3	2	18	16	36	2 - #12-14 Self Drillers		
3	2	18	16	48	2 - #12-14 Self Drillers		
3	2	18	24	16	2 - #12-14 Self Drillers		
3	2	18	24	26	2 - #12-14 Self Drillers		
3	2	18	24	32	2 - #12-14 Self Drillers		
3	2	18	24	36	2 - #12-14 Self Drillers		
3	2	18	24	48	N/A		
3	2	18	32	16	2 - #12-14 Self Drillers		
3	2	18	32	26	2 - #12-14 Self Drillers		
3	2	18	32	32	N/A		
3	2	18	32	36	N/A		
3	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 2D – Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 <= 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	18	16	16	2 - #14-14 Self Drillers		
3	2	18	16	26	2 - #14-14 Self Drillers		
3	2	18	16	32	2 - #14-14 Self Drillers		
3	2	18	16	36	2 - #14-14 Self Drillers		
3	2	18	16	48	N/A		
3	2	18	24	16	2 - #14-14 Self Drillers		
3	2	18	24	26	2 - #14-14 Self Drillers		
3	2	18	24	32	N/A		
3	2	18	24	36	N/A		
3	2	18	24	48	N/A		
3	2	18	32	16	2 - #14-14 Self Drillers		
3	2	18	32	26	N/A		
3	2	18	32	32	N/A		
3	2	18	32	36	N/A		
3	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 3C - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	18	16	16	2 - #14-14 Self Drillers		
4	2	18	16	26	2 - #14-14 Self Drillers		
4	2	18	16	32	2 - #14-14 Self Drillers		
4	2	18	16	36	2 - #14-14 Self Drillers		
4	2	18	16	48	2 - #14-14 Self Drillers		
4	2	18	24	16	2 - #14-14 Self Drillers		
4	2	18	24	26	2 - #14-14 Self Drillers		
4	2	18	24	32	2 - #14-14 Self Drillers		
4	2	18	24	36	N/A		
4	2	18	24	48	N/A		
4	2	18	32	16	2 - #14-14 Self Drillers		
4	2	18	32	26	2 - #14-14 Self Drillers		
4	2	18	32	32	N/A		
4	2	18	32	36	N/A		
4	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 3D - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	18	16	16	2 - #14-14 Self Drillers		
4	2	18	16	26	2 - #14-14 Self Drillers		
4	2	18	16	32	2 - #14-14 Self Drillers		
4	2	18	16	36	N/A		
4	2	18	16	48	N/A		
4	2	18	24	16	2 - #14-14 Self Drillers		
4	2	18	24	26	N/A		
4	2	18	24	32	N/A		
4	2	18	24	36	N/A		
4	2	18	24	48	N/A		
4	2	18	32	16	2 - #14-14 Self Drillers		
4	2	18	32	26	N/A		
4	2	18	32	32	N/A		
4	2	18	32	36	N/A		
4	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 4C - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	18	16	16	2 - #14-14 Self Drillers		
5	2	18	16	26	2 - #14-14 Self Drillers		
5	2	18	16	32	2 - #14-14 Self Drillers		
5	2	18	16	36	2 - #14-14 Self Drillers		
5	2	18	16	48	N/A		
5	2	18	24	16	2 - #14-14 Self Drillers		
5	2	18	24	26	2 - #14-14 Self Drillers		
5	2	18	24	32	N/A		
5	2	18	24	36	N/A		
5	2	18	24	48	N/A		
5	2	18	32	16	2 - #14-14 Self Drillers		
5	2	18	32	26	N/A		
5	2	18	32	32	N/A		
5	2	18	32	36	N/A		
5	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 4D - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	18	16	16	2 - #14-14 Self Drillers		
5	2	18	16	26	2 - #14-14 Self Drillers		
5	2	18	16	32	2 - #14-14 Self Drillers		
5	2	18	16	36	N/A		
5	2	18	16	48	N/A		
5	2	18	24	16	2 - #14-14 Self Drillers		
5	2	18	24	26	N/A		
5	2	18	24	32	N/A		
5	2	18	24	36	N/A		
5	2	18	24	48	N/A		
5	2	18	32	16	2 - #14-14 Self Drillers		
5	2	18	32	24	N/A		
5	2	18	32	32	N/A		
5	2	18	32	36	N/A		
5	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 5C - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	18	16	16	2 - #14-14 Self Drillers		
6	2	18	16	26	2 - #14-14 Self Drillers		
6	2	18	16	32	2 - #14-14 Self Drillers		
6	2	18	16	36	2 - #14-14 Self Drillers		
6	2	18	16	48	N/A		
6	2	18	24	16	2 - #14-14 Self Drillers		
6	2	18	24	26	2 - #14-14 Self Drillers		
6	2	18	24	32	N/A		
6	2	18	24	36	N/A		
6	2	18	24	48	N/A		
6	2	18	32	16	2 - #14-14 Self Drillers		
6	2	18	32	26	N/A		
6	2	18	32	32	N/A		
6	2	18	32	36	N/A		
6	2	18	32	48	N/A		

Notes:

- 1.All loads noted are unfactored.
- 2.N/A indicates assembly Not Acceptable
- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
- 4.Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
- 5.Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
- 6.Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
- 7.Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 5D - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	18	16	16	2 - #14-14 Self Drillers		
6	2	18	16	26	2 - #14-14 Self Drillers		
6	2	18	16	32	2 - #14-14 Self Drillers		
6	2	18	16	36	N/A		
6	2	18	16	48	N/A		
6	2	18	24	16	2 - #14-14 Self Drillers		
6	2	18	24	26	N/A		
6	2	18	24	32	N/A		
6	2	18	24	36	N/A		
6	2	18	24	48	N/A		
6	2	18	32	16	2 - #14-14 Self Drillers		
6	2	18	32	26	N/A		
6	2	18	32	32	N/A		
6	2	18	32	36	N/A		
6	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 1E - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	18	16	16	2 - #14-14 Self Drillers		
2	2	18	16	26	2 - #14-14 Self Drillers		
2	2	18	16	32	2 - #14-14 Self Drillers		
2	2	18	16	36	2 - #14-14 Self Drillers		
2	2	18	16	48	N/A		
2	2	18	24	16	2 - #14-14 Self Drillers		
2	2	18	24	26	2 - #14-14 Self Drillers		
2	2	18	24	32	N/A		
2	2	18	24	36	N/A		
2	2	18	24	48	N/A		
2	2	18	32	16	2 - #14-14 Self Drillers		
2	2	18	32	26	N/A		
2	2	18	32	32	N/A		
2	2	18	32	36	N/A		
2	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 1F - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	18	16	16	2 - #14-14 Self Drillers		
2	2	18	16	26	2 - #14-14 Self Drillers		
2	2	18	16	32	2 - #14-14 Self Drillers		
2	2	18	16	36	N/A		
2	2	18	16	48	N/A		
2	2	18	24	16	2 - #14-14 Self Drillers		
2	2	18	24	26	N/A		
2	2	18	24	32	N/A		
2	2	18	24	36	N/A		
2	2	18	24	48	N/A		
2	2	18	32	16	2 - #14-14 Self Drillers		
2	2	18	32	26	N/A		
2	2	18	32	32	N/A		
2	2	18	32	36	N/A		
2	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 2E - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	18	16	16	2 - #14-14 Self Drillers		
3	2	18	16	26	2 - #14-14 Self Drillers		
3	2	18	16	32	2 - #14-14 Self Drillers		
3	2	18	16	36	2 - #14-14 Self Drillers		
3	2	18	16	48	N/A		
3	2	18	24	16	2 - #14-14 Self Drillers		
3	2	18	24	26	2 - #14-14 Self Drillers		
3	2	18	24	32	N/A		
3	2	18	24	36	N/A		
3	2	18	24	48	N/A		
3	2	18	32	16	2 - #14-14 Self Drillers		
3	2	18	32	26	N/A		
3	2	18	32	32	N/A		
3	2	18	32	36	N/A		
3	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 2F - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	18	16	16	2 - #14-14 Self Drillers		
3	2	18	16	26	2 - #14-14 Self Drillers		
3	2	18	16	32	2 - #14-14 Self Drillers		
3	2	18	16	36	N/A		
3	2	18	16	48	N/A		
3	2	18	24	16	2 - #14-14 Self Drillers		
3	2	18	24	26	N/A		
3	2	18	24	32	N/A		
3	2	18	24	36	N/A		
3	2	18	24	48	N/A		
3	2	18	32	16	2 - #14-14 Self Drillers		
3	2	18	32	24	N/A		
3	2	18	32	32	N/A		
3	2	18	32	36	N/A		
3	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 3E - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	18	16	16	2 - #14-14 Self Drillers		
4	2	18	16	26	2 - #14-14 Self Drillers		
4	2	18	16	32	2 - #14-14 Self Drillers		
4	2	18	16	36	2 - #14-14 Self Drillers		
4	2	18	16	48	N/A		
4	2	18	24	16	2 - #14-14 Self Drillers		
4	2	18	24	26	N/A		
4	2	18	24	32	N/A		
4	2	18	24	36	N/A		
4	2	18	24	48	N/A		
4	2	18	32	16	2 - #14-14 Self Drillers		
4	2	18	32	26	N/A		
4	2	18	32	32	N/A		
4	2	18	32	36	N/A		
4	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 3F - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	18	16	16	2 - #14-14 Self Drillers		
4	2	18	16	26	2 - #14-14 Self Drillers		
4	2	18	16	32	N/A		
4	2	18	16	36	N/A		
4	2	18	16	48	N/A		
4	2	18	24	16	2 - #14-14 Self Drillers		
4	2	18	24	26	N/A		
4	2	18	24	32	N/A		
4	2	18	16	36	N/A		
4	2	18	24	48	N/A		
4	2	18	32	16	N/A		
4	2	18	32	26	N/A		
4	2	18	32	32	N/A		
4	2	18	16	36	N/A		
4	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 4E - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	18	16	16	2 - #14-14 Self Drillers		
5	2	18	16	26	2 - #14-14 Self Drillers		
5	2	18	16	32	2 - #14-14 Self Drillers		
5	2	18	16	36	N/A		
5	2	18	16	48	N/A		
5	2	18	24	16	2 - #14-14 Self Drillers		
5	2	18	24	26	N/A		
5	2	18	24	32	N/A		
5	2	18	24	36	N/A		
5	2	18	24	48	N/A		
5	2	18	32	16	2 - #14-14 Self Drillers		
5	2	18	32	26	N/A		
5	2	18	32	32	N/A		
5	2	18	32	36	N/A		
5	2	18	32	48	N/A		

Notes:

- 1.All loads noted are unfactored.
- 2.N/A indicates assembly Not Acceptable
- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
- 4.Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
- 5.Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
- 6.Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
- 7.Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 4F - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	18	16	16	2 - #14-14 Self Drillers		
5	2	18	16	26	2 - #14-14 Self Drillers		
5	2	18	16	32	N/A		
5	2	18	16	36	N/A		
5	2	18	16	48	N/A		
5	2	18	24	16	2 - #14-14 Self Drillers		
5	2	18	24	26	N/A		
5	2	18	24	32	N/A		
5	2	18	24	36	N/A		
5	2	18	24	48	N/A		
5	2	18	32	16	N/A		
5	2	18	32	26	N/A		
5	2	18	32	32	N/A		
5	2	18	32	36	N/A		
5	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 5E - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	18	16	16	2 - #14-14 Self Drillers		
6	2	18	16	26	2 - #14-14 Self Drillers		
6	2	18	16	32	N/A		
6	2	18	16	36	N/A		
6	2	18	16	48	N/A		
6	2	18	24	16	2 - #14-14 Self Drillers		
6	2	18	24	26	N/A		
6	2	18	24	32	N/A		
6	2	18	24	36	N/A		
6	2	18	24	48	N/A		
6	2	18	32	16	N/A		
6	2	18	32	26	N/A		
6	2	18	32	32	N/A		
6	2	18	32	36	N/A		
6	2	18	32	48	N/A		

Notes:

- 1.All loads noted are unfactored.
- 2.N/A indicates assembly Not Acceptable
- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
- 4.Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
- 5.Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
- 6.Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
- 7.Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

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TABLE 5F - Koa Clip Fastener and Spacing – Metal Stud Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Stud Backup Wall Minimum Gauge	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	18	16	16	2 - #14-14 Self Drillers		
6	2	18	16	26	N/A		
6	2	18	16	32	N/A		
6	2	18	16	36	N/A		
6	2	18	16	48	N/A		
6	2	18	24	16	2 - #14-14 Self Drillers		
6	2	18	24	26	N/A		
6	2	18	24	32	N/A		
6	2	18	24	36	N/A		
6	2	18	24	48	N/A		
6	2	18	32	16	N/A		
6	2	18	32	26	N/A		
6	2	18	32	32	N/A		
6	2	18	32	36	N/A		
6	2	18	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 18 ga. metal stud. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: Minimum 2 - #14-14 x 2" long Self Drillers, as manufactured by Leland Industries or approved equal.

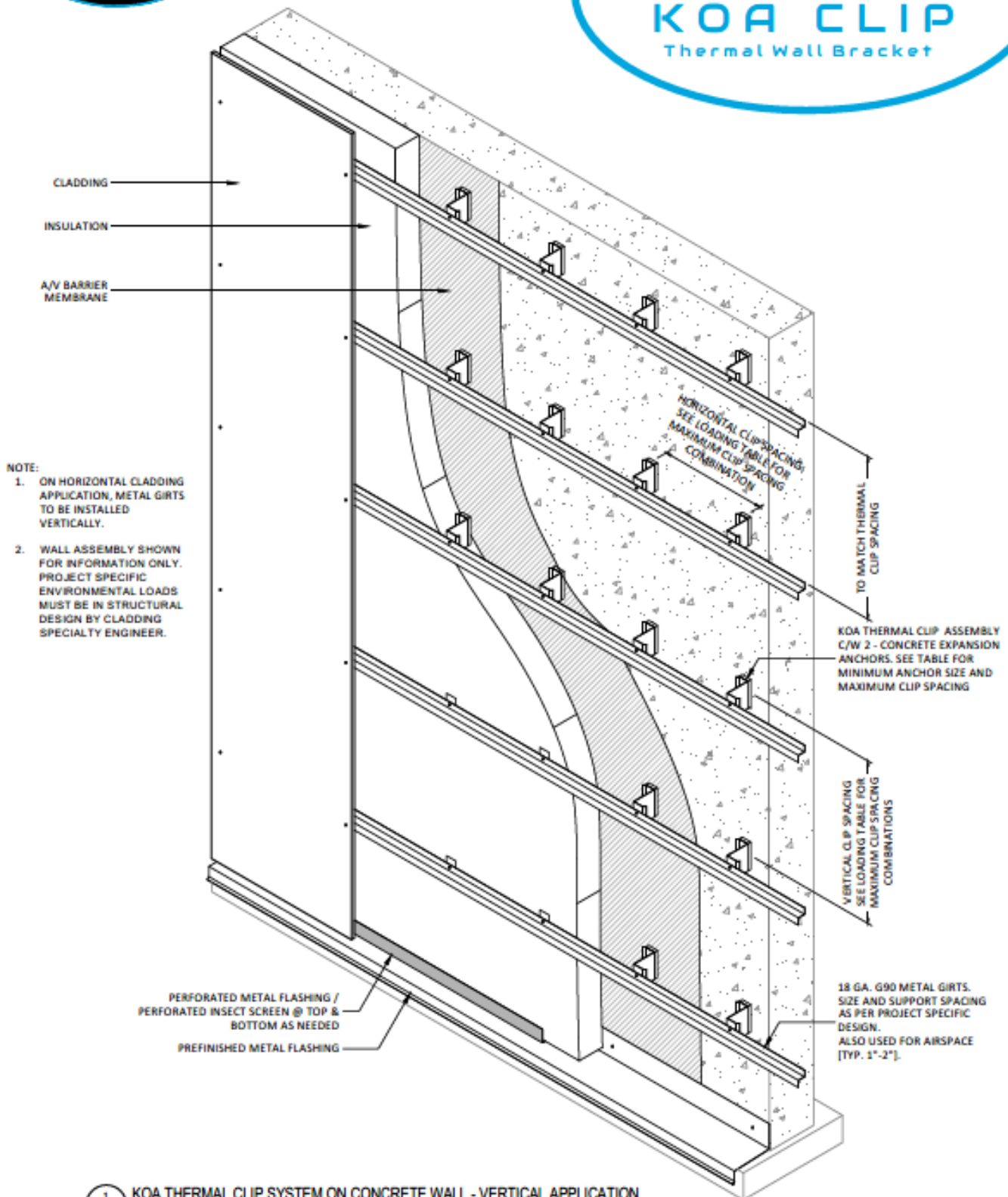
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1 KOA THERMAL CLIP SYSTEM ON CONCRETE WALL - VERTICAL APPLICATION
C02

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KOA THERMAL CLIP - CONCRETE BACKUP WALL LOADING CHART

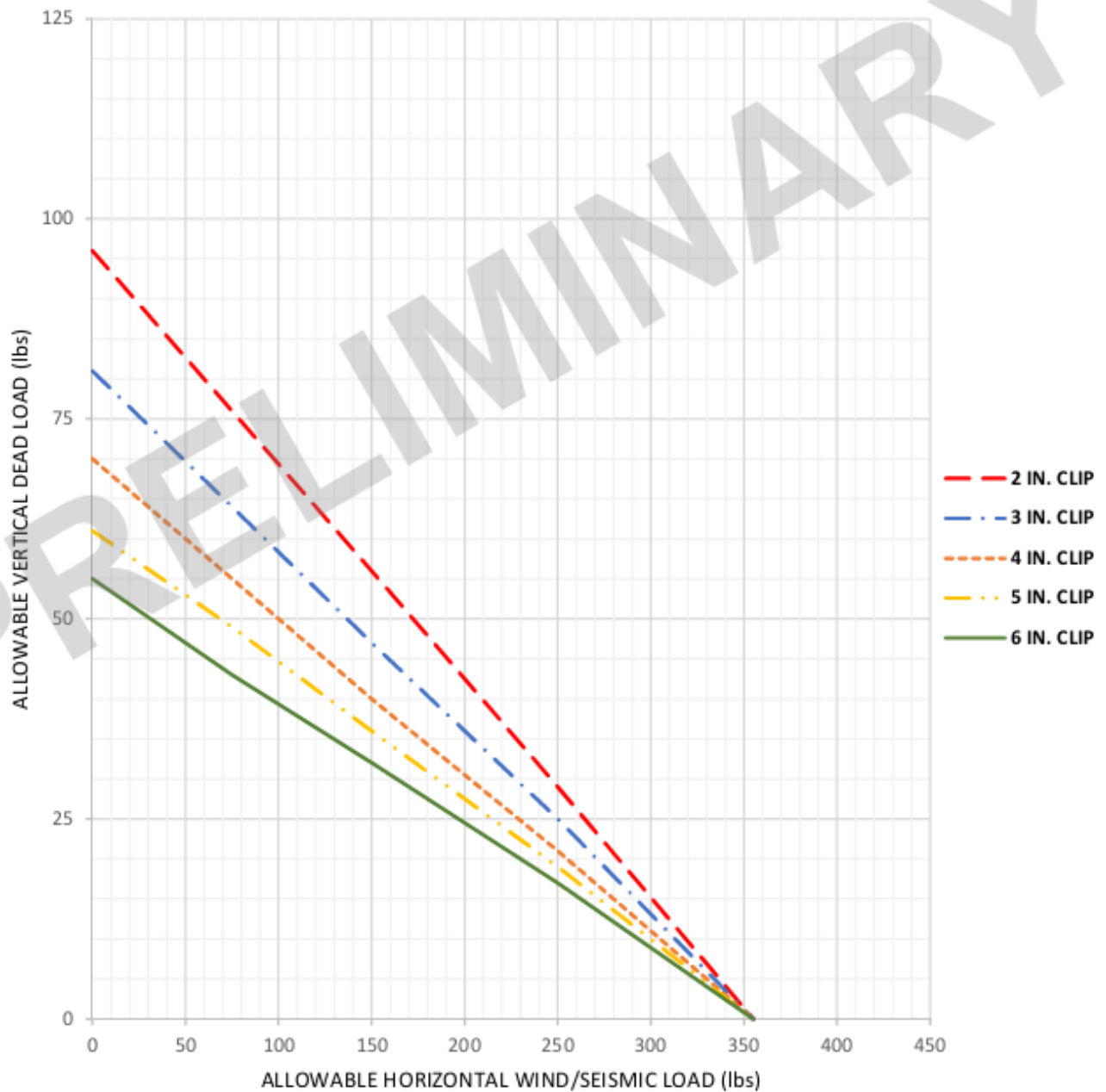




TABLE 1A - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	4	16	16	2-'A Ø x 2" Pin Bolt		
2	2	4	16	26	2-'A Ø x 2" Pin Bolt		
2	2	4	16	32	2-'A Ø x 2" Pin Bolt		
2	2	4	16	36	2-'A Ø x 2" Pin Bolt		
2	2	4	16	48	2-'A Ø x 2" Pin Bolt		
2	2	4	24	16	2-'A Ø x 2" Pin Bolt		
2	2	4	24	26	2-'A Ø x 2" Pin Bolt		
2	2	4	24	32	2-'A Ø x 2" Pin Bolt		
2	2	4	24	36	2-'A Ø x 2" Pin Bolt		
2	2	4	24	48	2-'A Ø x 2" Pin Bolt		
2	2	4	32	16	2-'A Ø x 2" Pin Bolt		
2	2	4	32	26	2-'A Ø x 2" Pin Bolt		
2	2	4	32	32	2-'A Ø x 2" Pin Bolt		
2	2	4	32	36	2-'A Ø x 2" Pin Bolt		
2	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 1B - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	4	16	16	2-'A Ø x 2" Pin Bolt		
2	2	4	16	26	2-'A Ø x 2" Pin Bolt		
2	2	4	16	32	2-'A Ø x 2" Pin Bolt		
2	2	4	16	36	2-'A Ø x 2" Pin Bolt		
2	2	4	16	48	2-'A Ø x 2" Pin Bolt		
2	2	4	24	16	2-'A Ø x 2" Pin Bolt		
2	2	4	24	26	2-'A Ø x 2" Pin Bolt		
2	2	4	24	32	2-'A Ø x 2" Pin Bolt		
2	2	4	24	36	2-'A Ø x 2" Pin Bolt		
2	2	4	24	48	N/A		
2	2	4	32	16	2-'A Ø x 2" Pin Bolt		
2	2	4	32	26	N/A		
2	2	4	32	32	N/A		
2	2	4	32	36	N/A		
2	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 2A - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	4	16	16	2-'A Ø x 2" Pin Bolt		
3	2	4	16	26	2-'A Ø x 2" Pin Bolt		
3	2	4	16	32	2-'A Ø x 2" Pin Bolt		
3	2	4	16	36	2-'A Ø x 2" Pin Bolt		
3	2	4	16	48	2-'A Ø x 2" Pin Bolt		
3	2	4	24	16	2-'A Ø x 2" Pin Bolt		
3	2	4	24	26	2-'A Ø x 2" Pin Bolt		
3	2	4	24	32	2-'A Ø x 2" Pin Bolt		
3	2	4	24	36	2-'A Ø x 2" Pin Bolt		
3	2	4	24	48	N/A		
3	2	4	32	16	2-'A Ø x 2" Pin Bolt		
3	2	4	32	26	2-'A Ø x 2" Pin Bolt		
3	2	4	32	32	2-'A Ø x 2" Pin Bolt		
3	2	4	32	36	N/A		
3	2	4	32	48	N/A		

Notes:

- 1.All loads noted are unfactored.
- 2.N/A indicates assembly Not Acceptable
- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
- 4.Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
- 5.Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
- 6.Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
- 7.Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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M.J.C. YAJBEK

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TABLE 2B - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	4	16	16	2-'A Ø x 2" Pin Bolt		
3	2	4	16	26	2-'A Ø x 2" Pin Bolt		
3	2	4	16	32	2-'A Ø x 2" Pin Bolt		
3	2	4	16	36	2-'A Ø x 2" Pin Bolt		
3	2	4	16	48	N/A		
3	2	4	24	16	2-'A Ø x 2" Pin Bolt		
3	2	4	24	26	2-'A Ø x 2" Pin Bolt		
3	2	4	24	32	N/A		
3	2	4	24	36	N/A		
3	2	4	24	48	N/A		
3	2	4	32	16	2-'A Ø x 2" Pin Bolt		
3	2	4	32	26	N/A		
3	2	4	32	32	N/A		
3	2	4	32	36	N/A		
3	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 3A - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	4	16	16	2-'A Ø x 2" Pin Bolt		
4	2	4	16	26	2-'A Ø x 2" Pin Bolt		
4	2	4	16	32	2-'A Ø x 2" Pin Bolt		
4	2	4	16	36	2-'A Ø x 2" Pin Bolt		
4	2	4	16	48	2-'A Ø x 2" Pin Bolt		
4	2	4	24	16	2-'A Ø x 2" Pin Bolt		
4	2	4	24	26	2-'A Ø x 2" Pin Bolt		
4	2	4	24	32	2-'A Ø x 2" Pin Bolt		
4	2	4	24	36	2-'A Ø x 2" Pin Bolt		
4	2	4	24	48	N/A		
4	2	4	32	16	2-'A Ø x 2" Pin Bolt		
4	2	4	32	26	2-'A Ø x 2" Pin Bolt		
4	2	4	32	32	2-'A Ø x 2" Pin Bolt		
4	2	4	32	36	N/A		
4	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 3B - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight ≤5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	4	16	16	2-'A Ø x 2" Pin Bolt		
4	2	4	16	26	2-'A Ø x 2" Pin Bolt		
4	2	4	16	32	2-'A Ø x 2" Pin Bolt		
4	2	4	16	36	2-'A Ø x 2" Pin Bolt		
4	2	4	16	48	N/A		
4	2	4	24	16	2-'A Ø x 2" Pin Bolt		
4	2	4	24	26	2-'A Ø x 2" Pin Bolt		
4	2	4	24	32	N/A		
4	2	4	24	36	N/A		
4	2	4	24	48	N/A		
4	2	4	32	16	2-'A Ø x 2" Pin Bolt		
4	2	4	32	26	N/A		
4	2	4	32	32	N/A		
4	2	4	32	36	N/A		
4	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 4A - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	4	16	16	2-'A Ø x 2" Pin Bolt		
5	2	4	16	26	2-'A Ø x 2" Pin Bolt		
5	2	4	16	32	2-'A Ø x 2" Pin Bolt		
5	2	4	16	36	2-'A Ø x 2" Pin Bolt		
5	2	4	16	48	2-'A Ø x 2" Pin Bolt		
5	2	4	24	16	2-'A Ø x 2" Pin Bolt		
5	2	4	24	26	2-'A Ø x 2" Pin Bolt		
5	2	4	24	32	2-'A Ø x 2" Pin Bolt		
5	2	4	24	36	2-'A Ø x 2" Pin Bolt		
5	2	4	24	48	N/A		
5	2	4	32	16	2-'A Ø x 2" Pin Bolt		
5	2	4	32	26	2-'A Ø x 2" Pin Bolt		
5	2	4	32	32	N/A		
5	2	4	32	36	N/A		
5	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 4B - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight ≤5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	4	16	16	2-'A Ø x 2" Pin Bolt		
5	2	4	16	26	2-'A Ø x 2" Pin Bolt		
5	2	4	16	32	2-'A Ø x 2" Pin Bolt		
5	2	4	16	36	2-'A Ø x 2" Pin Bolt		
5	2	4	16	48	N/A		
5	2	4	24	16	2-'A Ø x 2" Pin Bolt		
5	2	4	24	26	2-'A Ø x 2" Pin Bolt		
5	2	4	24	32	N/A		
5	2	4	24	36	N/A		
5	2	4	24	48	N/A		
5	2	4	32	16	2-'A Ø x 2" Pin Bolt		
5	2	4	32	26	N/A		
5	2	4	32	32	N/A		
5	2	4	32	36	N/A		
5	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 5A - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	4	16	16	2-'A Ø x 2" Pin Bolt		
6	2	4	16	26	2-'A Ø x 2" Pin Bolt		
6	2	4	16	32	2-'A Ø x 2" Pin Bolt		
6	2	4	16	36	2-'A Ø x 2" Pin Bolt		
6	2	4	16	48	2-'A Ø x 2" Pin Bolt		
6	2	4	24	16	2-'A Ø x 2" Pin Bolt		
6	2	4	24	26	2-'A Ø x 2" Pin Bolt		
6	2	4	24	32	2-'A Ø x 2" Pin Bolt		
6	2	4	24	36	2-'A Ø x 2" Pin Bolt		
6	2	4	24	48	N/A		
6	2	4	32	16	2-'A Ø x 2" Pin Bolt		
6	2	4	32	26	2-'A Ø x 2" Pin Bolt		
6	2	4	32	32	N/A		
6	2	4	32	36	N/A		
6	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 5B - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight <=5 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	4	16	16	2-'A Ø x 2" Pin Bolt		
6	2	4	16	26	2-'A Ø x 2" Pin Bolt		
6	2	4	16	32	2-'A Ø x 2" Pin Bolt		
6	2	4	16	36	2-'A Ø x 2" Pin Bolt		
6	2	4	16	48	N/A		
6	2	4	24	16	2-'A Ø x 2" Pin Bolt		
6	2	4	24	26	2-'A Ø x 2" Pin Bolt		
6	2	4	24	32	N/A		
6	2	4	24	36	N/A		
6	2	4	24	48	N/A		
6	2	4	32	16	2-'A Ø x 2" Pin Bolt		
6	2	4	32	26	N/A		
6	2	4	32	32	N/A		
6	2	4	32	36	N/A		
6	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 1C - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	4	16	16	2-'A Ø x 2" Pin Bolt		
2	2	4	16	26	2-'A Ø x 2" Pin Bolt		
2	2	4	16	32	2-'A Ø x 2" Pin Bolt		
2	2	4	16	36	2-'A Ø x 2" Pin Bolt		
2	2	4	16	48	2-'A Ø x 2" Pin Bolt		
2	2	4	24	16	2-'A Ø x 2" Pin Bolt		
2	2	4	24	26	2-'A Ø x 2" Pin Bolt		
2	2	4	24	32	2-'A Ø x 2" Pin Bolt		
2	2	4	24	36	N/A		
2	2	4	24	48	N/A		
2	2	4	32	16	2-'A Ø x 2" Pin Bolt		
2	2	4	32	26	2-'A Ø x 2" Pin Bolt		
2	2	4	32	32	N/A		
2	2	4	32	36	N/A		
2	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 1D - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	4	16	16	2-'A Ø x 2" Pin Bolt		
2	2	4	16	26	2-'A Ø x 2" Pin Bolt		
2	2	4	16	32	2-'A Ø x 2" Pin Bolt		
2	2	4	16	36	2-'A Ø x 2" Pin Bolt		
2	2	4	16	48	N/A		
2	2	4	24	16	2-'A Ø x 2" Pin Bolt		
2	2	4	24	26	N/A		
2	2	4	24	32	N/A		
2	2	4	24	36	N/A		
2	2	4	24	48	N/A		
2	2	4	32	16	2-'A Ø x 2" Pin Bolt		
2	2	4	32	26	N/A		
2	2	4	32	32	N/A		
2	2	4	32	36	N/A		
2	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 2C - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	4	16	16	2-'A Ø x 2" Pin Bolt		
3	2	4	16	26	2-'A Ø x 2" Pin Bolt		
3	2	4	16	32	2-'A Ø x 2" Pin Bolt		
3	2	4	16	36	2-'A Ø x 2" Pin Bolt		
3	2	4	16	48	N/A		
3	2	4	24	16	2-'A Ø x 2" Pin Bolt		
3	2	4	24	26	2-'A Ø x 2" Pin Bolt		
3	2	4	24	32	N/A		
3	2	4	24	36	N/A		
3	2	4	24	48	N/A		
3	2	4	32	16	2-'A Ø x 2" Pin Bolt		
3	2	4	32	26	N/A		
3	2	4	32	32	N/A		
3	2	4	32	36	N/A		
3	2	4	32	48	N/A		

Notes:

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TABLE 3C - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	4	16	16	2-'A Ø x 2" Pin Bolt		
4	2	4	16	26	2-'A Ø x 2" Pin Bolt		
4	2	4	16	32	2-'A Ø x 2" Pin Bolt		
4	2	4	16	36	2-'A Ø x 2" Pin Bolt		
4	2	4	16	48	N/A		
4	2	4	24	16	2-'A Ø x 2" Pin Bolt		
4	2	4	24	26	2-'A Ø x 2" Pin Bolt		
4	2	4	24	32	N/A		
4	2	4	24	36	N/A		
4	2	4	24	48	N/A		
4	2	4	32	16	2-'A Ø x 2" Pin Bolt		
4	2	4	32	26	N/A		
4	2	4	32	32	N/A		
4	2	4	32	36	N/A		
4	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
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3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 3D - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	4	16	16	2-'A Ø x 2" Pin Bolt		
4	2	4	16	26	2-'A Ø x 2" Pin Bolt		
4	2	4	16	32	2-'A Ø x 2" Pin Bolt		
4	2	4	16	36	N/A		
4	2	4	16	48	N/A		
4	2	4	24	16	2-'A Ø x 2" Pin Bolt		
4	2	4	24	26	N/A		
4	2	4	24	32	N/A		
4	2	4	24	36	N/A		
4	2	4	24	48	N/A		
4	2	4	32	16	2-'A Ø x 2" Pin Bolt		
4	2	4	32	26	N/A		
4	2	4	32	32	N/A		
4	2	4	32	36	N/A		
4	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 4C - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	4	16	16	2-'A Ø x 2" Pin Bolt		
5	2	4	16	26	2-'A Ø x 2" Pin Bolt		
5	2	4	16	32	2-'A Ø x 2" Pin Bolt		
5	2	4	16	36	2-'A Ø x 2" Pin Bolt		
5	2	4	16	48	N/A		
5	2	4	24	16	2-'A Ø x 2" Pin Bolt		
5	2	4	24	26	2-'A Ø x 2" Pin Bolt		
5	2	4	24	32	N/A		
5	2	4	24	36	N/A		
5	2	4	24	48	N/A		
5	2	4	32	16	2-'A Ø x 2" Pin Bolt		
5	2	4	32	26	N/A		
5	2	4	32	32	N/A		
5	2	4	32	36	N/A		
5	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 4D - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	4	16	16	2-'A Ø x 2" Pin Bolt		
5	2	4	16	26	2-'A Ø x 2" Pin Bolt		
5	2	4	16	32	N/A		
5	2	4	16	36	N/A		
5	2	4	16	48	N/A		
5	2	4	24	16	2-'A Ø x 2" Pin Bolt		
5	2	4	24	26	N/A		
5	2	4	24	32	N/A		
5	2	4	24	36	N/A		
5	2	4	24	48	N/A		
5	2	4	32	16	N/A		
5	2	4	32	26	N/A		
5	2	4	32	32	N/A		
5	2	4	32	36	N/A		
5	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
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3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 5C - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	4	16	16	2-'A Ø x 2" Pin Bolt		
6	2	4	16	26	2-'A Ø x 2" Pin Bolt		
6	2	4	16	32	2-'A Ø x 2" Pin Bolt		
6	2	4	16	36	2-'A Ø x 2" Pin Bolt		
6	2	4	16	48	N/A		
6	2	4	24	16	2-'A Ø x 2" Pin Bolt		
6	2	4	24	26	N/A		
6	2	4	24	32	N/A		
6	2	4	24	36	N/A		
6	2	4	24	48	N/A		
6	2	4	32	16	2-'A Ø x 2" Pin Bolt		
6	2	4	32	26	N/A		
6	2	4	32	32	N/A		
6	2	4	32	36	N/A		
6	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 5D – Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 5 ≤ 10 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	4	16	16	2-'A Ø x 2" Pin Bolt		
6	2	4	16	26	2-'A Ø x 2" Pin Bolt		
6	2	4	16	32	N/A		
6	2	4	16	36	N/A		
6	2	4	16	48	N/A		
6	2	4	24	16	2-'A Ø x 2" Pin Bolt		
6	2	4	24	26	N/A		
6	2	4	24	32	N/A		
6	2	4	24	36	N/A		
6	2	4	24	48	N/A		
6	2	4	32	16	N/A		
6	2	4	32	26	N/A		
6	2	4	32	32	N/A		
6	2	4	32	36	N/A		
6	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 1E - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	4	16	16	2-'A Ø x 2" Pin Bolt		
2	2	4	16	26	2-'A Ø x 2" Pin Bolt		
2	2	4	16	32	2-'A Ø x 2" Pin Bolt		
2	2	4	16	36	2-'A Ø x 2" Pin Bolt		
2	2	4	16	48	N/A		
2	2	4	24	16	2-'A Ø x 2" Pin Bolt		
2	2	4	24	26	2-'A Ø x 2" Pin Bolt		
2	2	4	24	32	N/A		
2	2	4	24	36	N/A		
2	2	4	24	48	N/A		
2	2	4	32	16	2-'A Ø x 2" Pin Bolt		
2	2	4	32	26	N/A		
2	2	4	32	32	N/A		
2	2	4	32	36	N/A		
2	2	4	32	48	N/A		

Notes:

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2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
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TABLE 1F - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
2	2	4	16	16	2-'A Ø x 2" Pin Bolt		
2	2	4	16	26	2-'A Ø x 2" Pin Bolt		
2	2	4	16	32	N/A		
2	2	4	16	36	N/A		
2	2	4	16	48	N/A		
2	2	4	24	16	2-'A Ø x 2" Pin Bolt		
2	2	4	24	26	N/A		
2	2	4	24	32	N/A		
2	2	4	24	36	N/A		
2	2	4	24	48	N/A		
2	2	4	32	16	N/A		
2	2	4	32	26	N/A		
2	2	4	32	32	N/A		
2	2	4	32	36	N/A		
2	2	4	32	48	N/A		

Notes:

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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 2E - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	4	16	16	2-'A Ø x 2" Pin Bolt		
3	2	4	16	26	2-'A Ø x 2" Pin Bolt		
3	2	4	16	32	2-'A Ø x 2" Pin Bolt		
3	2	4	16	36	N/A		
3	2	4	16	48	N/A		
3	2	4	24	16	2-'A Ø x 2" Pin Bolt		
3	2	4	24	26	N/A		
3	2	4	24	32	N/A		
3	2	4	24	36	N/A		
3	2	4	24	48	N/A		
3	2	4	32	16	2-'A Ø x 2" Pin Bolt		
3	2	4	32	26	N/A		
3	2	4	32	32	N/A		
3	2	4	32	36	N/A		
3	2	4	32	48	N/A		

Notes:

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5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
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TABLE 2F - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 <= 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
3	2	4	16	16	2-'A Ø x 2" Pin Bolt		
3	2	4	16	26	2-'A Ø x 2" Pin Bolt		
3	2	4	16	32	N/A		
3	2	4	16	36	N/A		
3	2	4	16	48	N/A		
3	2	4	24	16	2-'A Ø x 2" Pin Bolt		
3	2	4	24	26	N/A		
3	2	4	24	32	N/A		
3	2	4	24	36	N/A		
3	2	4	24	48	N/A		
3	2	4	32	16	N/A		
3	2	4	32	26	N/A		
3	2	4	32	32	N/A		
3	2	4	32	36	N/A		
3	2	4	32	48	N/A		

Notes:

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6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
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TABLE 3E - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	4	16	16	2-'A Ø x 2" Pin Bolt		
4	2	4	16	26	2-'A Ø x 2" Pin Bolt		
4	2	4	16	32	2-'A Ø x 2" Pin Bolt		
4	2	4	16	36	N/A		
4	2	4	16	48	N/A		
4	2	4	24	16	2-'A Ø x 2" Pin Bolt		
4	2	4	24	26	N/A		
4	2	4	24	32	N/A		
4	2	4	24	36	N/A		
4	2	4	24	48	N/A		
4	2	4	32	16	2-'A Ø x 2" Pin Bolt		
4	2	4	32	26	N/A		
4	2	4	32	32	N/A		
4	2	4	32	36	N/A		
4	2	4	32	48	N/A		

Notes:

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TABLE 3F – Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
4	2	4	16	16	2-'A Ø x 2" Pin Bolt		
4	2	4	16	26	2-'A Ø x 2" Pin Bolt		
4	2	4	16	32	N/A		
4	2	4	16	36	N/A		
4	2	4	16	48	N/A		
4	2	4	24	16	2-'A Ø x 2" Pin Bolt		
4	2	4	24	26	N/A		
4	2	4	24	32	N/A		
4	2	4	24	36	N/A		
4	2	4	24	48	N/A		
4	2	4	32	16	N/A		
4	2	4	32	26	N/A		
4	2	4	32	32	N/A		
4	2	4	32	36	N/A		
4	2	4	32	48	N/A		

Notes:

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3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
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TABLE 4E - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	4	16	16	2-'A Ø x 2" Pin Bolt		
5	2	4	16	26	2-'A Ø x 2" Pin Bolt		
5	2	4	16	32	N/A		
5	2	4	16	36	N/A		
5	2	4	16	48	N/A		
5	2	4	24	16	2-'A Ø x 2" Pin Bolt		
5	2	4	24	26	N/A		
5	2	4	24	32	N/A		
5	2	4	24	36	N/A		
5	2	4	24	48	N/A		
5	2	4	32	16	N/A		
5	2	4	32	26	N/A		
5	2	4	32	32	N/A		
5	2	4	32	36	N/A		
5	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 4F - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
5	2	4	16	16	2-'A Ø x 2" Pin Bolt		
5	2	4	16	26	N/A		
5	2	4	16	32	N/A		
5	2	4	16	36	N/A		
5	2	4	16	48	N/A		
5	2	4	24	16	2-'A Ø x 2" Pin Bolt		
5	2	4	24	26	N/A		
5	2	4	24	32	N/A		
5	2	4	24	36	N/A		
5	2	4	24	48	N/A		
5	2	4	32	16	N/A		
5	2	4	32	26	N/A		
5	2	4	32	32	N/A		
5	2	4	32	36	N/A		
5	2	4	32	48	N/A		

Notes:

- 1.All loads noted are unfactored.
- 2.N/A indicates assembly Not Acceptable
- 3.Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
- 4.Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
- 5.Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
- 6.Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
- 7.Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 5E - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 25 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	4	16	16	2-'A Ø x 2" Pin Bolt		
6	2	4	16	26	2-'A Ø x 2" Pin Bolt		
6	2	4	16	32	N/A		
6	2	4	16	36	N/A		
6	2	4	16	48	N/A		
6	2	4	24	16	2-'A Ø x 2" Pin Bolt		
6	2	4	24	26	N/A		
6	2	4	24	32	N/A		
6	2	4	24	36	N/A		
6	2	4	24	48	N/A		
6	2	4	32	16	N/A		
6	2	4	32	26	N/A		
6	2	4	32	32	N/A		
6	2	4	32	36	N/A		
6	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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TABLE 5F - Koa Clip Fastener and Spacing – Concrete Backup Wall

Cladding Weight 10 ≤ 15 psf		Lateral Loading = 50 psf max. (Wind/Seismic)					
Clip Depth (Horizontal Projection) (inches)	Maximum Supported Girt Thickness (inches)	Backup Wall Minimum Thickness (inches)	Koa Clip Horizontal Spacing (inches)	Koa Clip Vertical Spacing (inches)	Minimum Fasteners Required		
6	2	4	16	16	2-1/4 Ø x 2" Pin Bolt		
6	2	4	16	26	N/A		
6	2	4	16	32	N/A		
6	2	4	16	36	N/A		
6	2	4	16	48	N/A		
6	2	4	24	16	N/A		
6	2	4	24	26	N/A		
6	2	4	24	32	N/A		
6	2	4	24	36	N/A		
6	2	4	24	48	N/A		
6	2	4	32	16	N/A		
6	2	4	32	26	N/A		
6	2	4	32	32	N/A		
6	2	4	32	36	N/A		
6	2	4	32	48	N/A		

Notes:

1. All loads noted are unfactored.
2. N/A indicates assembly Not Acceptable
3. Tables are provided as a quick reference guide to determine preliminary overall cladding system configuration based on thermal clip use. Final cladding assembly requires design review by cladding specialty engineer.
4. Tables are based upon structural capacity of thermal clip and fasteners. Allowance has been made for maximum 2 inch offset between face of clip and attached cladding for installation of girts. Load capacity of clip supported girt system may govern clip spacing. Design review of cladding assembly by specialty engineer is required to confirm governing load conditions and required clip spacing.
5. Backup Wall: Minimum 4" concrete. Design & capacity is responsibility of project engineer of record.
6. Clip Material: Minimum 18 ga steel, G90 HDG, Grade A653, Fy=33ksi.
7. Fasteners: 2 - 1/4" diameter x 2" long Hilti Metal HIT required or approved equal. Minimum 1.5" embedment.

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