

METAL-LITE and **PERFECT WALL, INC** present

**THE ONLY PATENTED
BACKING SYSTEM THAT
MEETS ADA CODE
WITH A SMOOTH WALL**



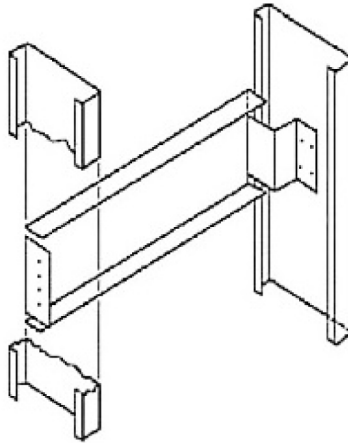
Flush-Mount **METAL STUD BACKING**

For more information, please call:

Metal-Lite
Ph: (800) 236-0302
www.metal-lite.net

Fax: (931) 277-5805

Flush-Mount Backing



Flush-Mount ADA Compliant Backing (pat# 5,189,857) :

Flush-Mount is the backing solution that is easy and fast to install between studs when a smooth wall is demanded.

UL Tested to 250 push/pull point load complying with ADAAG Section 4.26.
Mounts in a straight line for path of travel in hospitals, schools, etc.

Meets the requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG), the BOCA (1999), Standard Code (1997), and UBC (1997) model building codes, the International Building Code 2000, and both the ICC/A117.1-1998 Section 609 (Grab Bars) Section 610 (Seats) and ANSI/ASCE 7-98 Standards.

ALLOWABLE LOADS (Pounds)				
Stud Spacing	Load Type	Stud Gauge		
		16ga	18ga	20ga
16"	T	284	284	284
	V	566	570	306

(Americans with Disabilities Act Accessibility Guidelines)

ADAAG Section 4.26

4.26 Handrails, Grab Bars, Tub and Shower Seats.

4.26.1* General.

All handrails, grab bars, and tub and shower seats required to be accessible by **4.1** (application), **4.8** (ramps), **4.9** (stairs), **4.16** (water closets), **4.17** (toilet stalls), **4.20** (bath tubs) or **4.21** (shower stalls) shall comply with 4.26.

4.26.3 Structural Strength.

The structural strength of grab bars, tub and shower seats, fasteners, and mounting devices shall meet the following specification:

- (1) Bending stress in a grab bar or seat induced by the maximum bending moment from the application of 250 lbf (1112N) shall be less than the allowable stress for the material of the grab bar or seat.
- (2) Shear stress induced in a grab bar or seat by the application of 250 lbf (1112N) shall be less than the allowable shear stress for the material of the grab bar or seat. If the connection between the grab bar or seat and its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.
- (3) Shear force induced in a fastener or mounting device from the application of 250 lbf (1112N) shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.
- (4) Tensile force induced in a fastener by direct tension force of 250 lbf (112N) plus the maximum moment from the application of 250 lbf (1112N) shall be less than the allowable withdrawal load between the fastener and the supporting structure.
- (5) Grab bars shall not rotate within their fittings.

ICC/A117.1-2003 Section 609 (Grab Bars)

Section 609 (Grab bars)

609.8 Structural Strength.

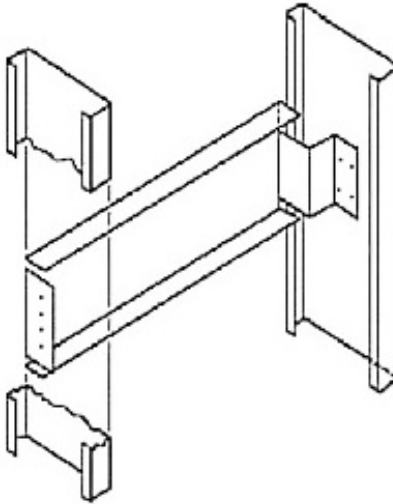
Allowable stresses in bending, shear, and tension shall not be exceeded for materials used where a vertical or horizontal force of 250 lb (1112 N) is applied at any point on the grab bar, fastener mounting device, or supporting structure.

Section 610 (Seats)

610.4 Structural Strength.

Allowable stresses in bending, shear, and tension shall not be exceeded for materials used where a vertical or horizontal force of 250 pound (1112 N) is applied at any point on the seat, fastener mounting device, or supporting structure.

Flush-Mount ADA Compliant Backing (pat# 5,189,857)



Flush-Mount Backing is the only product on the market today to meet the requirements of the Americans with Disabilities Act Accessibility Guidelines 4.26 (ADAAG), the BOCA (1999), Standard Code (1997), and UBC (1997) model building codes, the International Building Code 2000, and both the ICC/A 117.1-2003 Section 609 (Grab Bars) Section 610 (Seats) and ANSI/ASCE 7-98 Standards. Flush-Mount is the only product ever tested to UL Standards requiring 250 pull/point load for handrails, grab bars, and seats.

Replaces:

Steel Plate Backing

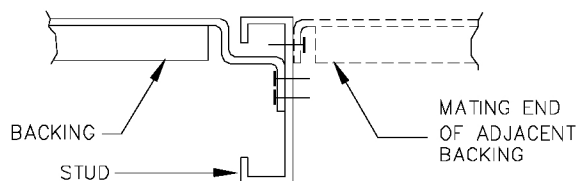
Steel Plate backing has never been UL Tested to 250 lbs pull/point load and does not pass any code.

Flat Strap Backing

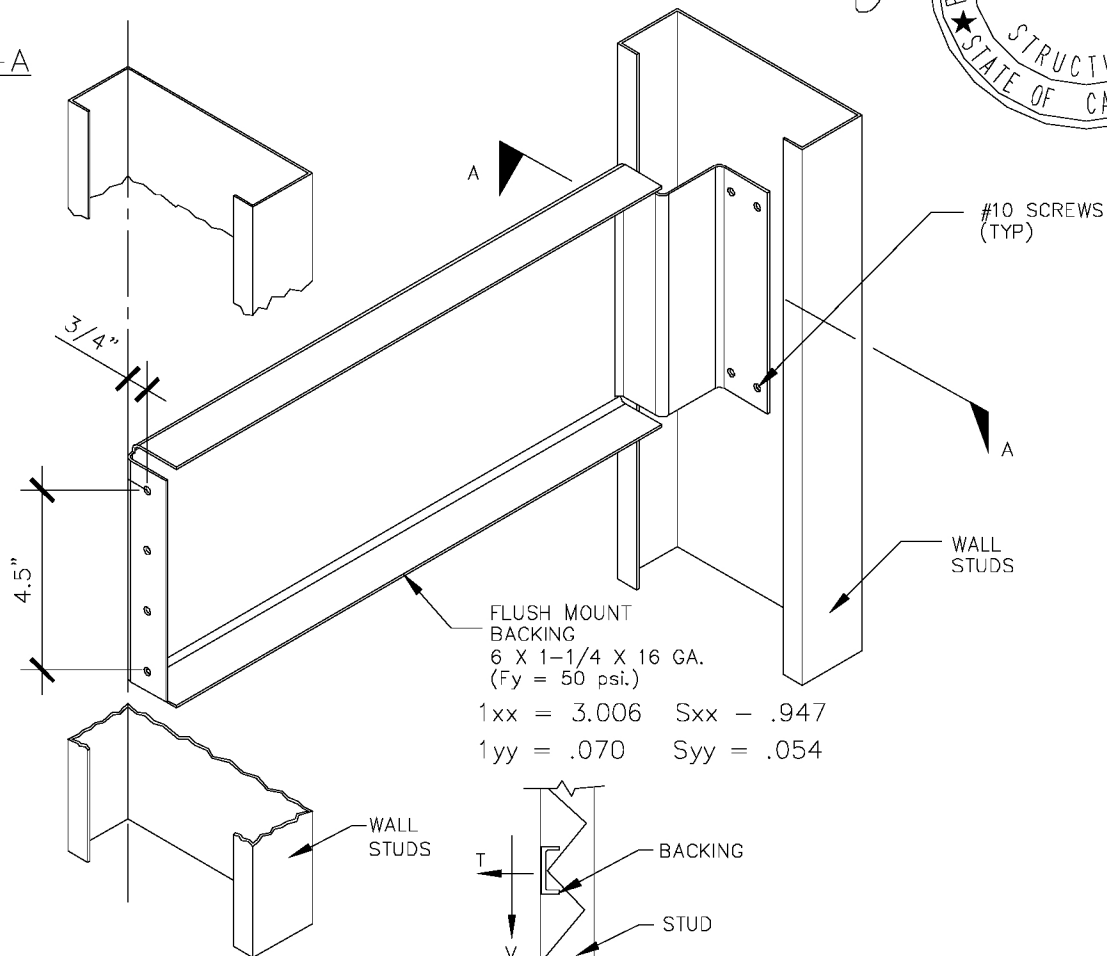
Flat strap backing has never been UL Tested to 250 lbs pull/point load and does not pass any code.

Flush-Mount Backing is the most cost effective means where ADA Code applies and a smooth wall is needed. No other product on the market today can accomplish this with full code compliance. Flush-Mount is the only patented backing system that meets ADA Code with a smooth wall.

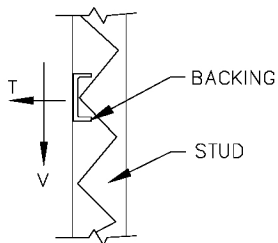
METAL-LITE Flush Mount Backing : 6 x 1-1/4 x 16 Ga. 50 ksi. Face - Edge Projection Free	(800) 236-0302	DES J.H.T.	SHEET 1 OF 2 SHEETS
		JOB 8-9150	
		DATE 9-25-97	



PLAN A-A



FLUSH MOUNT
BACKING
6 X 1-1/4 X 16 GA.
(Fy = 50 psi.)
1xx = 3.006 Sxx = .947
1yy = .070 Syy = .054



LOAD TYPES

ALLOWABLE LOADS (LBS)

STUD SPACING	LOAD TYPE	STUD GAGE		
		16	18	20
16"	T	264	264	264
	V	566	570	306



METAL-LITE	800-236-0302	DES J.H.T.	SHEET 2 OF 2 SHEETS
		JOB 8-9150	
		DATE 9-25-97	

Flush Mount Backing : 6 x 1-1/4 x 16 Ga. 50 ksi.
Face - Edge Projection Free

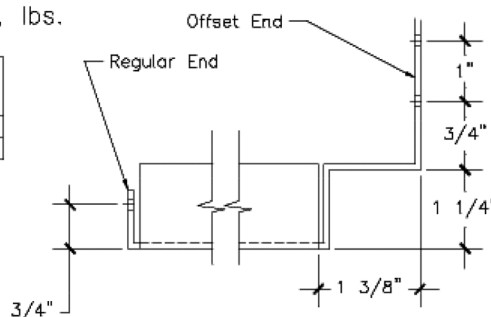
Screws - Allowable loads, lbs.

Number of Screws	LOAD TYPE	STUD GAGE			LOCATION
		16	18	20	
4 - #10	T	1,044	1,052	564	Regular End
	V	566	570	306	
4 - #10	T	1,044	1,052	564	Offset End
	V	707	713	382	
6 - #10	T	(See note 3)			Offset End
	V	834	843	450	



Track - Allowable loads, lbs.

Stud Spacing	LOAD TYPE	50 ksi steel
16"	T	264
	V	9,135

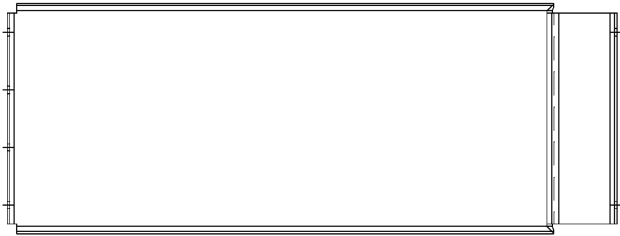


Backing (Track) Plan

Notes:

1. Allowable loads on table on sheet 1 are for either "T" or "V" acting alone, as a single backing load. If both "T" or "V" are acting on the same piece of backing, use a "unity" check to show that the combined stress ratios are less than 1.0.
2. Loads are assumed to act at the most critical position on backing at the midspan for bending at the "offset end" for weak axis bending, and at the connections for screw stress.
3. "T" load for 6 screw end connection can be ratioed directly from 4 screw loads, but should only be used if exact location of load is known.
4. This pre-approval covers a standard wall backing, of 14 gage steel that is applied to a partition for the purpose of supporting vari wall mounted elements that are connected to the backing. Allowable loads are listed that give the backing load capacity.
5. The Architect or engineer of record must verify the adequacy of the connection of the applied element, and of the wall, and the walls attachment to the primary structure, and the primary structure itself, as appropriate.

THOMPSON AND LA BRIE, STRUCTURAL ENGINEERS, PASADENA, CA.		
METAL-LITE Flush Mount Backing : 6 x 1-1/4 x 16 Ga. 50 ksi. Face — Edge Projection Free	(800) 236-0302	DES J.H.T.
		JOB 8-9150
	DATE 9-25-97	SHEET 1 OF 1 SHEETS



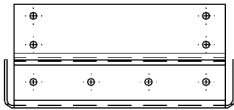
TOP VIEW



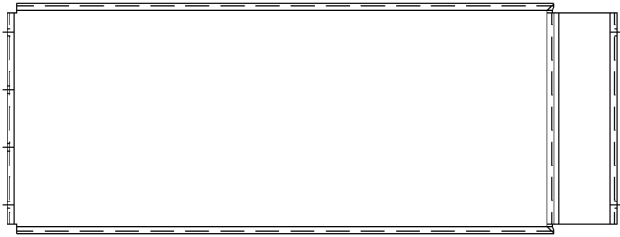
LEFT VIEW



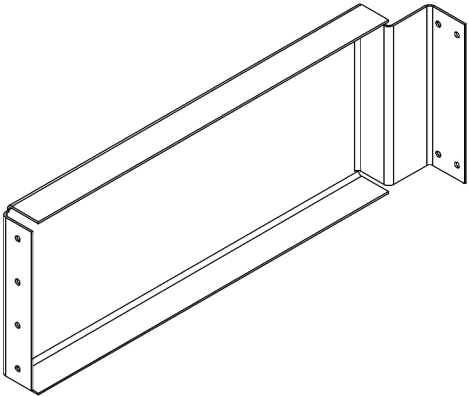
FRONT VIEW



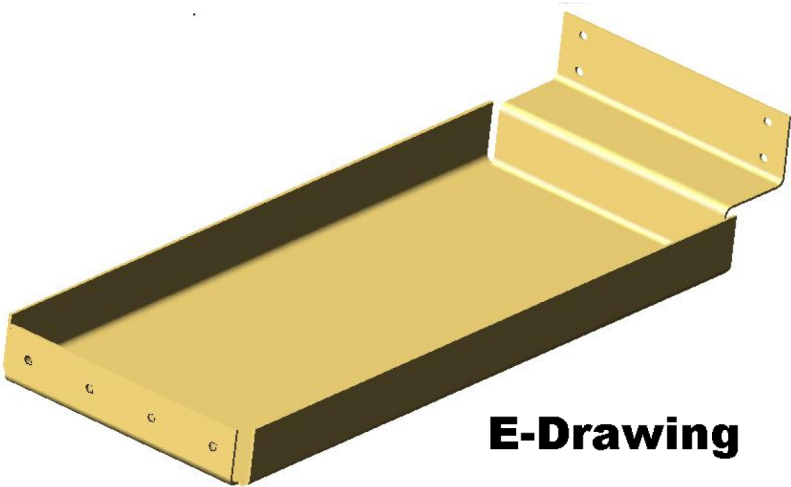
RIGHT VIEW



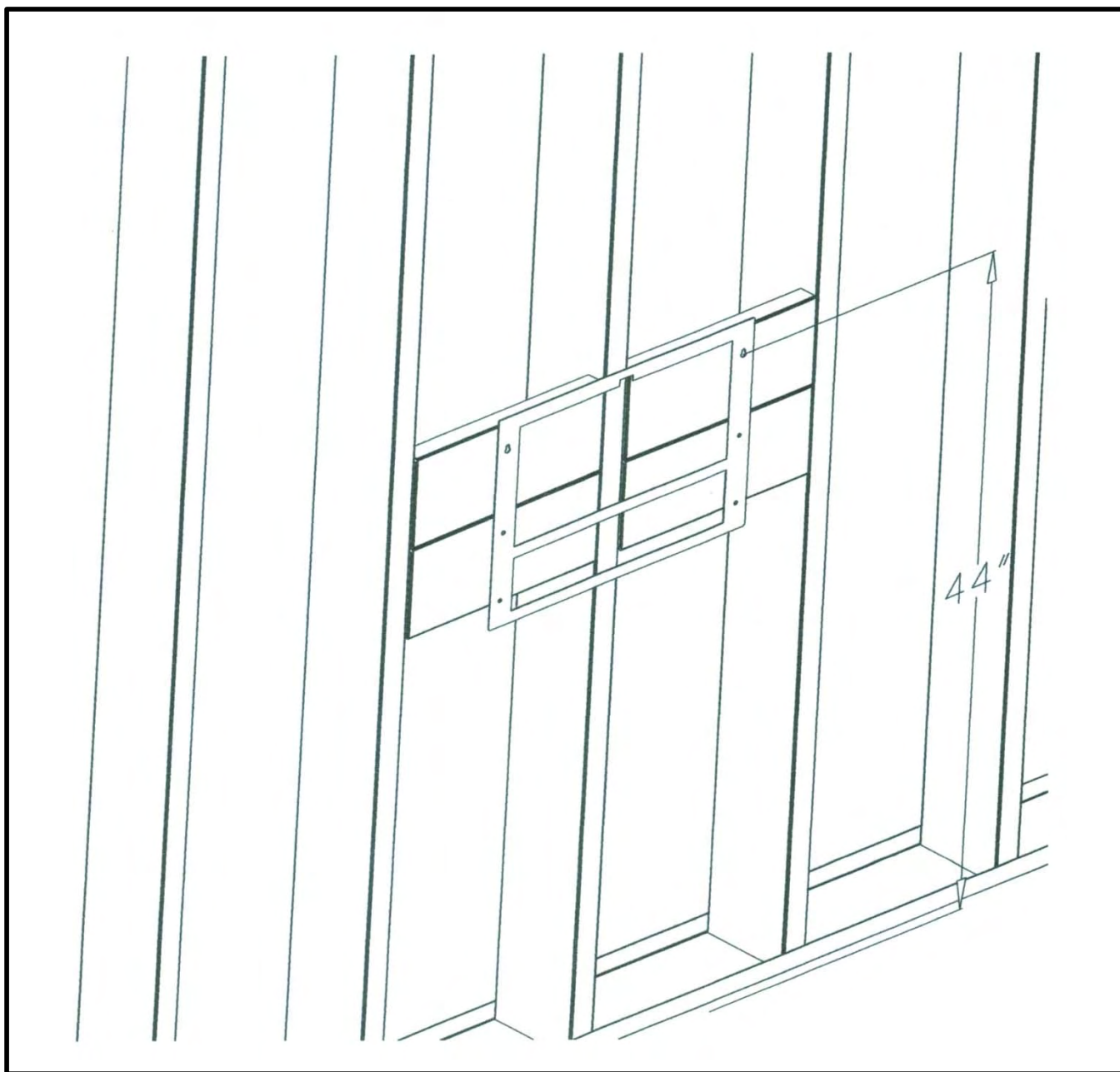
BOTTOM VIEW



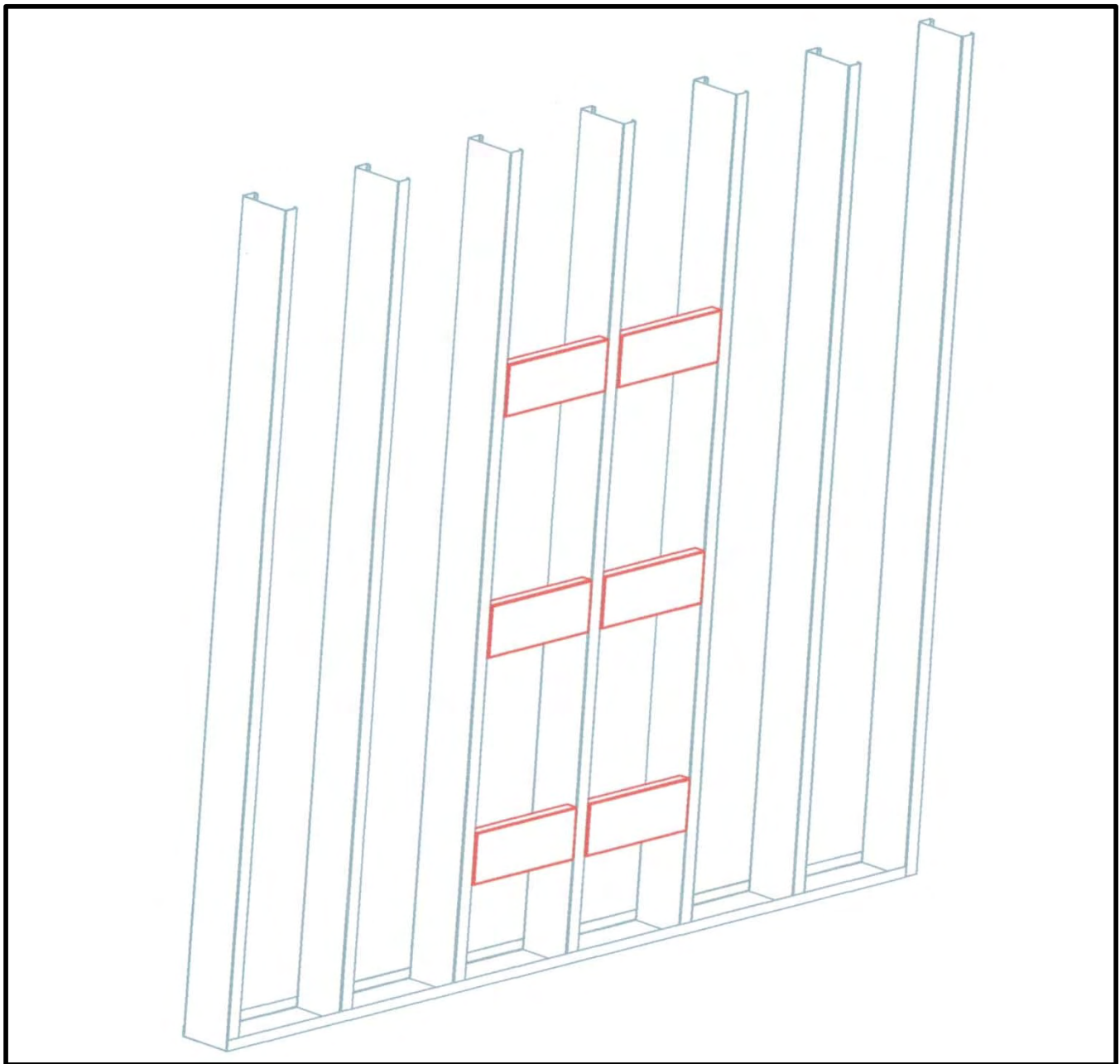
ISOMETRIC VIEW



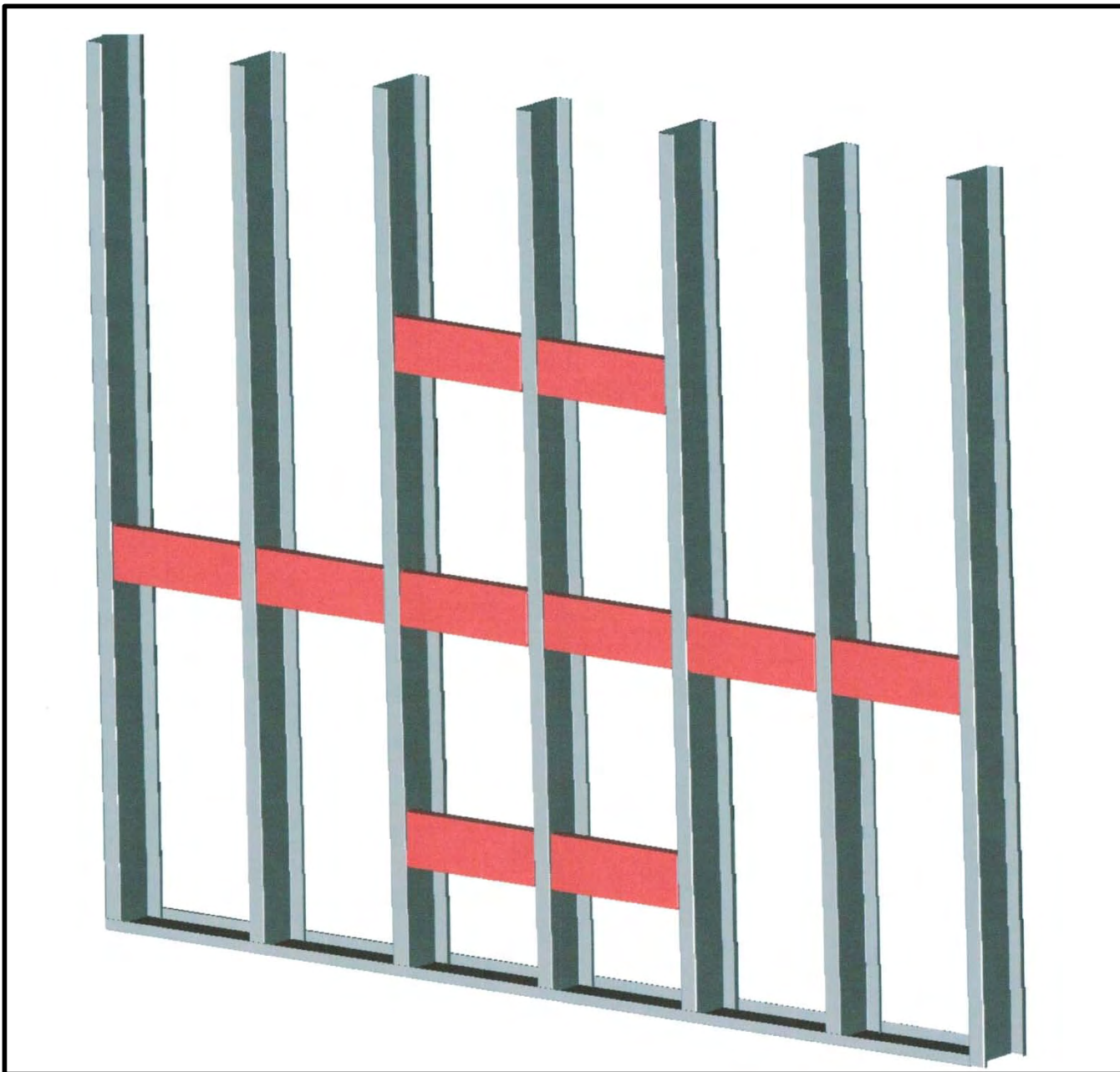
E-Drawing



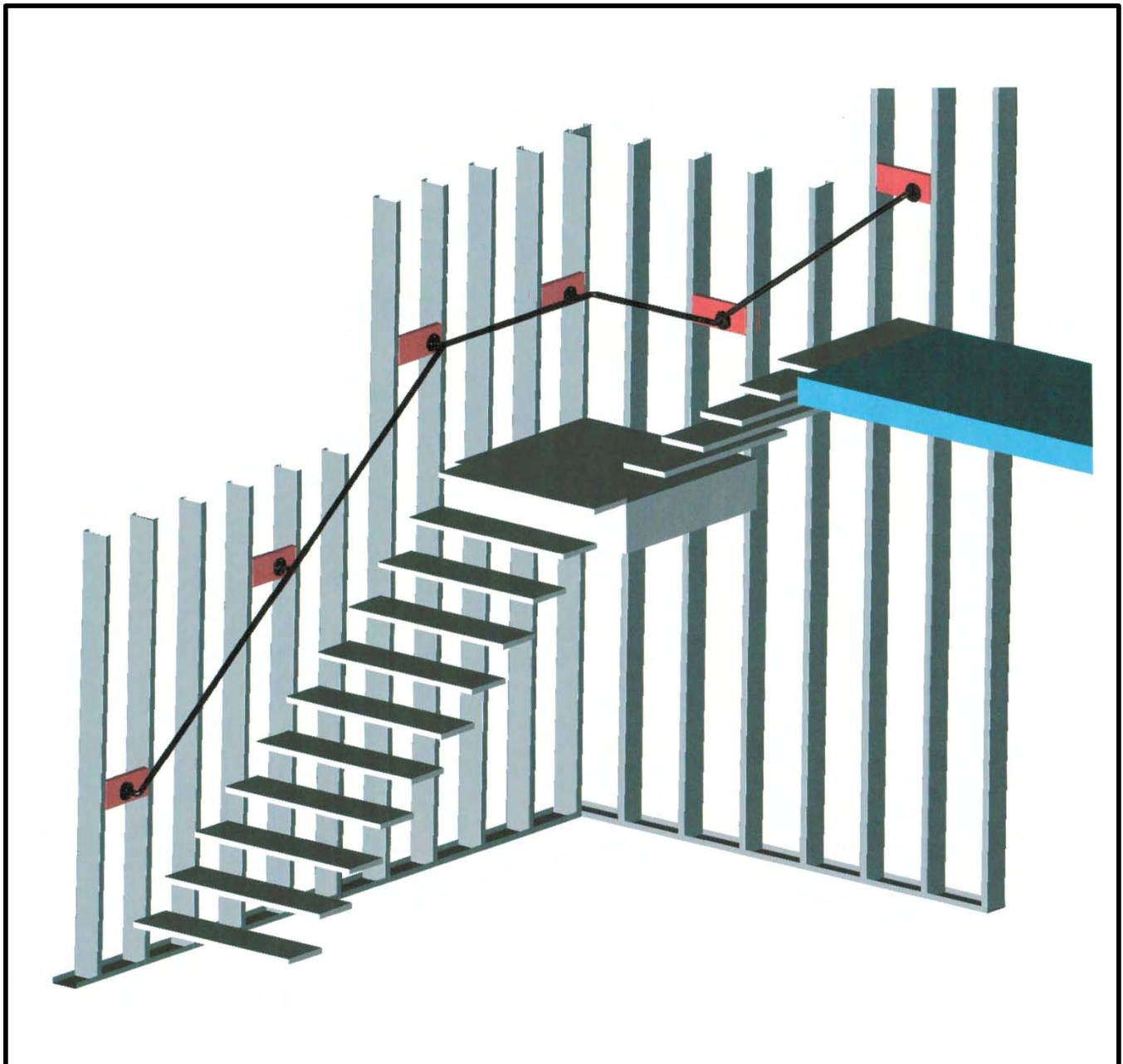
Here is an example of our Flush-Mount Backing assembled for the installation of a baby changing station. Our patented design allows 8 inches of lateral movement as well as 2 inches of vertical movement. Metal-Lite's P.E. stamped Backing system is the only ADA Code Compliant product on the market.



This rendering illustrates the versatility of Metal-Lites patented Flush-Mount backing system that allows your wall mounted applications to be positioned at any location along your wall. Metal-Lite has the only Code Compliant Backing available.



Metal-Lite's patented Flush-Mount Backing is the only installation solution for continuous Handrails that meet ADA and all nationwide code requirements. This backing system can also be used for the installation of individual applications.



The example above represents the adaptability of Metal-Lites Flush-Mount Backing which is the only product on the market today to meet the requirements of the Americans with Disabilities Act Accessibility Guidelines.