Tru-Brix™

A Mechanically Attached Brick Rainscreen Cladding System

The Tru-Brix Rainscreen system is produced by Redland Brick Inc., a wholly-owned subsidiary of Belden Holding & Acquisition Company, Inc.

Desana Partners

- Engineered Rainscreen Systems -

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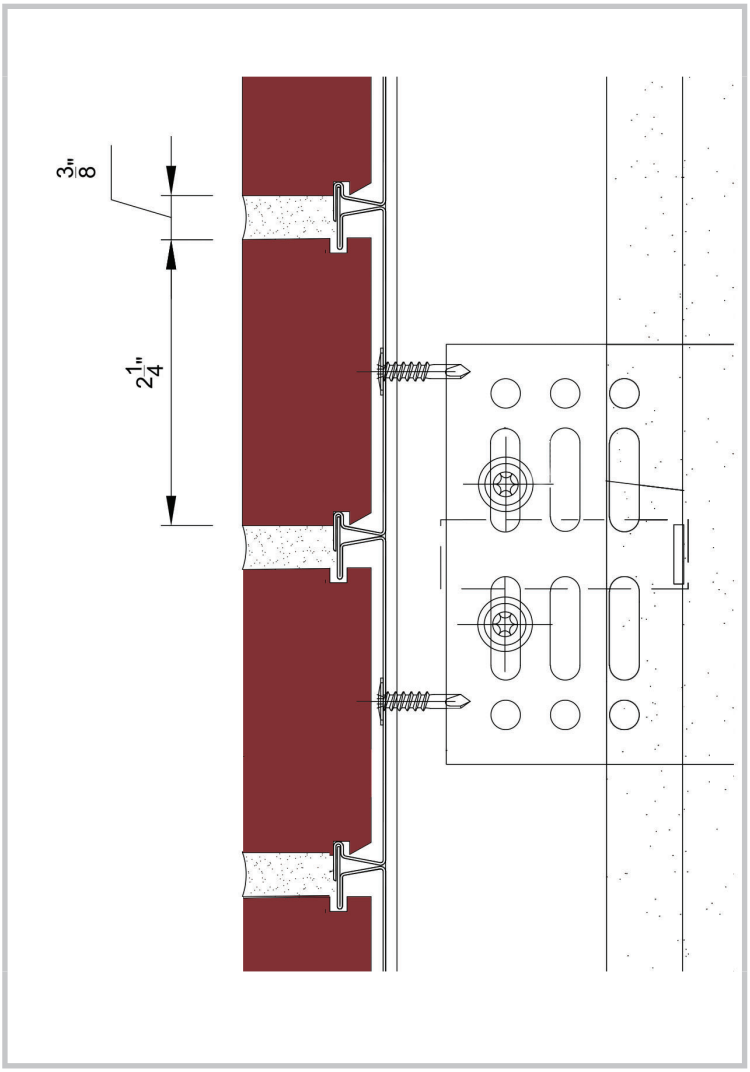
200 Midway Road • Suite 8371 | Cranston, RI 02920

401-942-5640

www.desanapartners.com • info@desanapartners.com

Brick Performance Takes a Giant Leap Forward

Brick may be the oldest man made building material in existence today dating back some 6,000 years. Over these many centuries brick has evolved from clay and straw to structural construction with walls that can be as much as five feet thick. While brick is still occasionally used as a structural product, the twentieth century saw another evolution of brick as a single wythe facing material over steel or reinforced concrete. Today's construction practices continue to demand higher performance materials and wall assemblies. Desana and Belden Brick have answered the challenge with the Tru-Brix System – a fully engineered rainscreen assembly, mechanically attached bricks and a rear ventilated cavity for commercial and institutional construction.



- Mechanically attached
- Made in the USA by Belden/Redland
- Suitable for new construction and recladding
- Real bricks at 1" thick
- Saves time and money over conventional brick
- Fully tested
- Designed to last the life of the building
- Low cost of ownership

Designed for commercial projects the Tru-Brix rainscreen system is ideally suited for mid to high rise construction and recladding improving overall wall performance while saving both money and time.

Utilizing the vast array of genuine brick options from Belden and Redland, Tru-Brix are custom cut to be mechanically attached to coated galvanized trays. The perforated trays anchor the bricks and provide a full drainage plane behind the brick tiles.

Tru-Brix is the only brick cladding company that offers a

50 -YEAR WARRANTY

Benefits and Advantages of a Tru-Brix Rainscreen

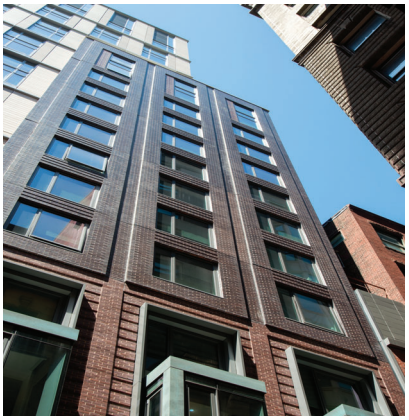
- All bricks are mechanically fastened – no reliance on glue
- Designed to last the life of the building
- Rainscreen design with a fully ventilated cavity
- Meets or exceeds the principles of ASHRAE 90.1 for thermal performance
- Lightweight at only 13 pounds per square foot
- Built in water management with multiple layers of protection against water infiltration
- Fully engineered with complete set of shop drawings for each project
- Eliminates shelf angles, lintels and the need for additional steel in the back up wall
- No tenting needed
- Smaller staging area

LEED

- Trays produced by Redland Brick and are completely recyclable
- Brick manufacturing includes post industrial waste displacing raw materials and reducing waste to landfills
- High tech and efficient methods of manufacturing reduces gas consumption by using lower firing curves
- More bricks per truck means reduced carbon footprint with freight
- Waste reduction contributes to LEAN Project guidelines
- Manufacturing locations within 150 miles of Boston, Washington DC, Baltimore and New York City

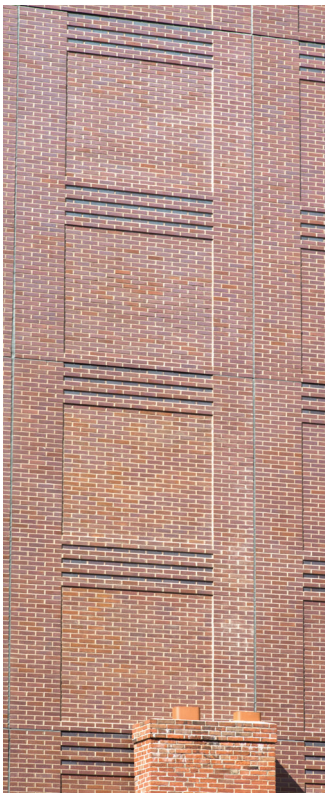
Thermal Efficiency – Bridge Free Subframing

- A full rainscreen assembly with rear ventilation providing the highest thermal performance
- Allows for up to five inches of continuous insulation
- Allows for an uninterrupted air/moisture barrier
- Thermally broken subframing ensures maximum reduction in thermal breaks



Effective Thermal Performance

Based on the details and information provided by Desana Partners Inc., and the previous work conducted by ROCKWOOL (EDC2016-198_Thermal Analysis_v2.0), the overall thermal performance of the Desana Sub-Framing System was calculated using HEAT3 6.0. Typical 6" steel frame and CMU substrates were analyzed, using both 2" and 4" exterior stone wool insulation, with and without a thermal break pad.



Effective Thermal Performance for Steel Frame Substrate

Substrate		6" Metal Stud @ 16" o.c. w/ R24 ROCKWOOL COMFORTBATT®							
Bracket Spacing		32" x 36"				16" x 36"			
Assembly Description		U-Value [W/m²·k]	RSI [m²·K/W]	U-Value [BTU/(hr·°F.ft²)]	R Value [(hr·°F.ft²)/BTU]	U-Value [W/m²·k]	RSI [m²·K/W]	U-Value [BTU/(hr·°F.ft²)]	R Value [(hr·°F.ft²)/BTU]
Desana Sub-Frame System w/ stainless steel screws									
5mm Thermal Spacer	2" ROCKWOOL CAVITYROCK® Insulation	0.243	4.114	0.043	23.363	0.250	4.006	0.044	22.752
	4" ROCKWOOL CAVITYROCK® Insulation	0.177	5.636	0.031	32.005	0.187	5.342	0.033	30.334

Effective Thermal Performance for Concrete Substrate

Substrate		8" CMU							
Bracket Spacing		32" x 36"				16" x 36"			
Assembly Description		U-Value [W/m²·k]	RSI [m²·K/W]	U-Value [BTU/(hr·°F.ft²)]	R Value [(hr·°F.ft²)/BTU]	U-Value [W/m²·k]	RSI [m²·K/W]	U-Value [BTU/(hr·°F.ft²)]	R Value [(hr·°F.ft²)/BTU]
Desana Sub-Frame System w/ stainless steel screws									
5mm Thermal Spacer	2" ROCKWOOL CAVITYROCK® Insulation	0.532	1.879	0.094	10.669	0.539	1.856	0.095	10.541
	4" ROCKWOOL CAVITYROCK® Insulation	0.297	3.367	0.052	19.118	0.307	3.262	0.054	18.524

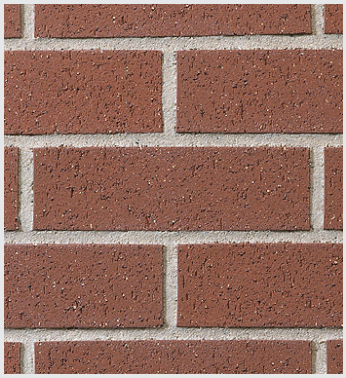
Analysis is Provided by ROCKWOOL™

Brick Colors and Options

470-479 Dark Range Smooth

470-479 Medium Range Smooth

Admiral Red



Alaska White Velour

Changing the way we install bricks in America.

Beacon Velour

Black Diamond Velour

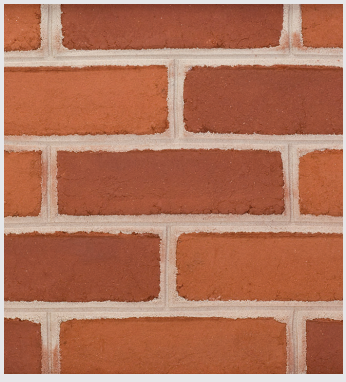
Mayo Blend Full Range

Nutmeg Velour

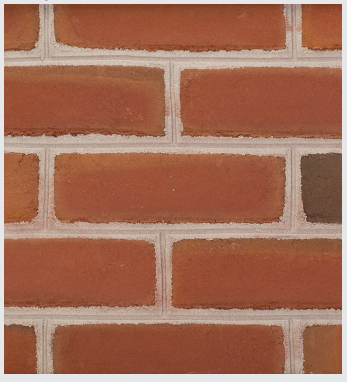
Seal Brown Velour

Tumbleweed Velour

Camden Blend 170



Georgian 103



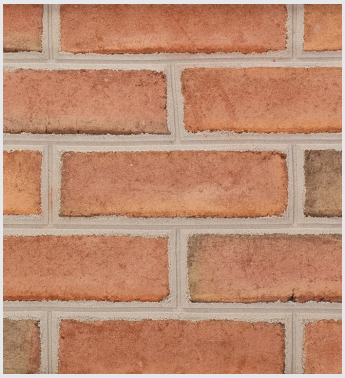
Tru-Brix is a registered trademark of Redland Brick Incorporated , a wholly- owned subsidiary of Belden Holding & Acquisition Company, Incorporated.

For a complete color selection please visit www.beldenbrick.com/onlinecatalog/ and www.redlandbrick.com/onlinecatalog/

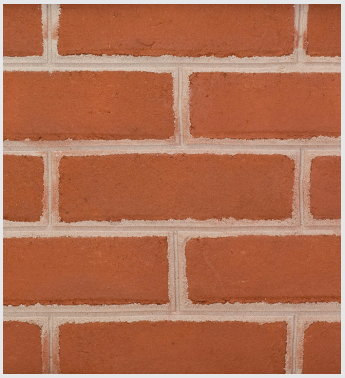
Brick Colors and Options

Lexington 238

Rose Full Range 030



Victorian 104



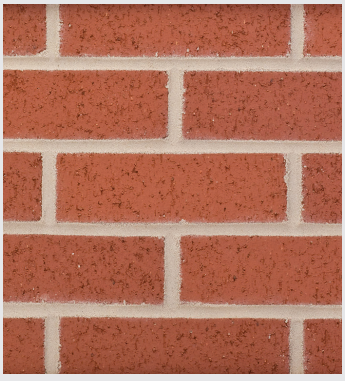
Golden Buff Matt 830

The largest selection of rainscreen brick colors and shapes in North America.

Honey Brown Matt 810

Metro Gray Smooth 877

Red Matt 301

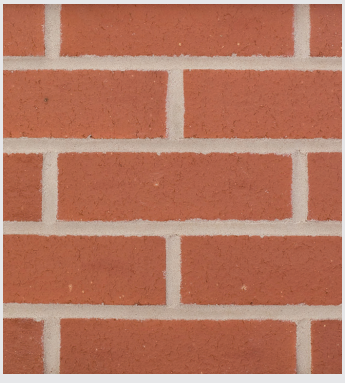


Boston Colonial 023

Brown Matt 077

Gunmetal 070

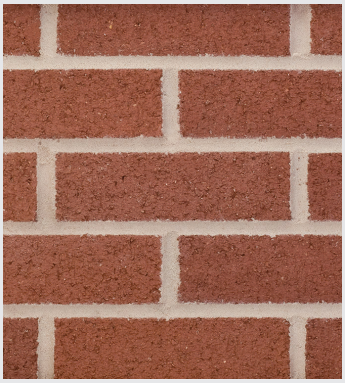
Hartford Red 303



Oxford 515

Princess Royal 263

Red Matt 233



Please contact Desana Partners for product samples before final color selection.

Colors and Options

Brick Unit	Size in Inches (Face Height x Length)	Units Per Sq. Ft. Wall	Size In Millimeters
Modular	2-1/4" x 7-5/8"	6.86	57 x 194
Norman	2-1/4" x 11-5/8"	4.57	57 x 295
Ambassador	2-1/4" x 15-5/8"	3.43	57 x 397
Jumbo Modular	2-3/4" x 7-5/8"	5.76	70 x 194
Jumbo Standard	2-3/4" x 8"	5.5	70 x 203

Corner Brick

Variable Thicknesses

Bark Brick

Sill Brick

BUFF

TAN

DESERT TAN

DEEP TAN

BEACH SAND

LIGHT BUFF

Technical Data

System Weight	13 PSF
Brick Coursing	2-3/4" (Oversize) Rails: 5 Courses = 16 Inches Adjusts up to: 5 Courses = 16-5/8 Inches 2-1/4" (Modular) Rails: 6 Courses = 16 Inches Adjusts up to: 3 Courses = 16-3/4 Inches
Brick Specifications	ASTM C216 Face Brick Grade SW (Severe Weathering) ASTM C1088 Thin Brick Grade Exterior (Severe Weathering)
Mortar	ASTM C270 Type N Mortar Cement ASTM C144 Sand
Trays	0.027" HDG, Commercial CS Type B, Non-Chemical Treated, Minimum Spangle, Smooth, Cold Roll Formed G-90 Galvanizing. 50-Year Proprietary protective coating

Test Data Summary

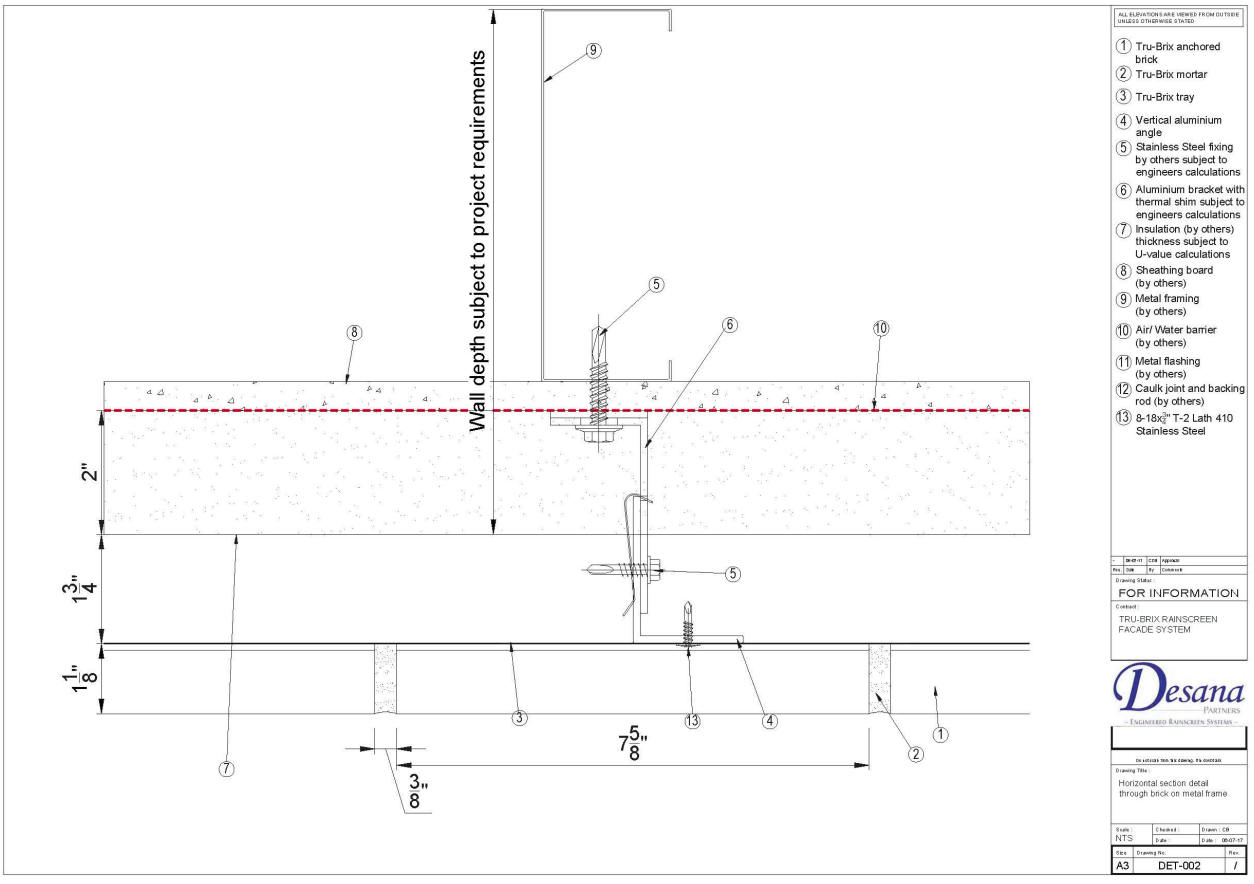
REPORT NUMBER	TEST NUMBER	DESCRIPTION
1516.01-106-11	AAMA 509-14	Voluntary Test and Classification Method for Drained and Back Ventilated Rainscreen Wall Cladding Systems
1517.02-106-11	AAMA 501.5	Test Method for Thermal Cycling of Exterior Walls
1517.01-106-11	ASTM E283-04(12)	Test Method for Rate of Air Leakage Through Exterior Window, Curtain Walls, and Doors Under Specified Pressure
	ASTM E330/330M-14	Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure
	ASTM E331-00(09)	Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure
RBS2018-RES-37	EDC2016-198 Thermal	Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure
	ASTM E514	Thermal performance - conductivity evaluation/test
	ASTM E1105	Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure
	ASTM E72	Test Methods of Conducting Strength Tests of Panels for Building Construction
	ASTM C216	Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)
	ASTM C1088	Specification for Thin Veneer Brick Units Made From Clay or Shale
	ASTM C270	Specification for Mortar for Unit Masonry
	ASTM C144	Specification for Aggregate for Masonry Mortar

Use and Installation

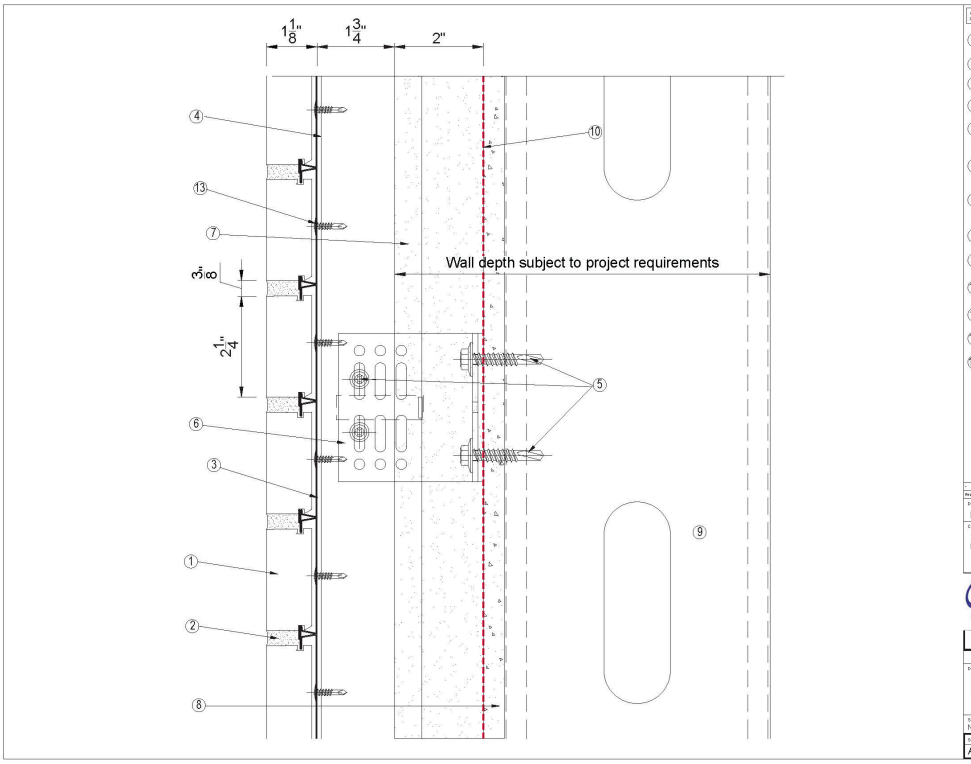
Tru-Brix technology takes the skill out of the labor and puts it into the components. The patented roll formed trays ensure that the bricks are permanently secured – no glue. Precision trays automatically establish uniform bed joints across the elevation. Design flexibility is front and center allowing for a myriad of bond patterns, profiles and projected courses. Whether new construction or recladding, the installation of the Tru-Brix system is easier, cleaner, and faster than traditional brick.

1. A series of thermally broken aluminum brackets are attached to structurally sound substrate at approximately 32" on center
2. Vertical profiles are attached to the brackets
3. Tru-Brix trays are interlocked and fixed to the trays ensuring proper coursing and uniform bed joints. Varieties of brick patterns can be achieved with Tru-Brix trays
4. Tru-Brix tiles are permanently secured into the trays
5. Tru-Brix specially formulated mortar is installed using mortar or sealant guns. Installed properly no wash-down would be necessary

PLAN



SECTION



ALL ELEVATIONS ARE VIEWED FROM OUTSIDE UNLESS OTHERWISE STATED

1. Tru-Brix anchored brick
2. Tru-Brix mortar
3. Tru-Brix tray
4. Vertical aluminium angle
5. Stainless Steel fixing by others subject to engineers calculations
6. Aluminium bracket with thermal shim subject to engineers calculations
7. Insulation (by others) thickness subject to U-value calculations
8. Sheathing board (by others)
9. Metal framing (by others)
10. Air/ Water barrier (by others)
11. Metal flashing (by others)
12. Caulk joint and backing rod (by others)
13. 8-18x1" T-2 Lath 410 Stainless Steel

Drawing Status: FOR INFORMATION

Contract: TRU-BRIX RAINSCREEN FACADE SYSTEM

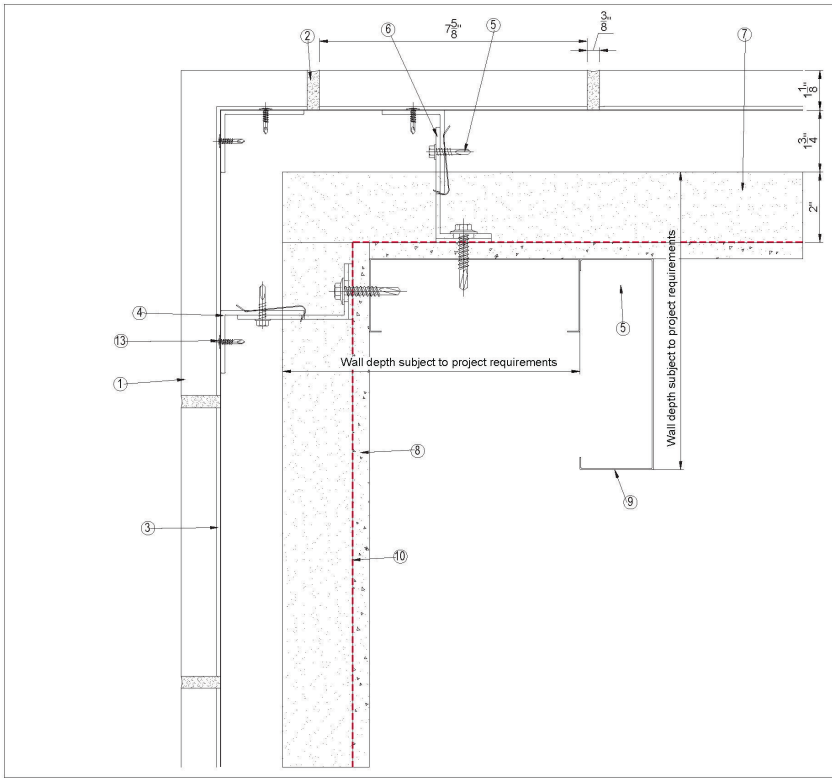
Desana Partners – Engineered Rainscreen Systems –

Drawing Title: Vertical section detail through brick on metal frame

Scale:	Checked:	Drawn: CB
NTS	Date:	Date: 08-07-17

Size	Drawing No.	Rev.
A3	DET-001	/

EXTERIOR CORNER



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Drawing Status: FOR INFORMATION

Contract: TRU-BRIX RAINSCREEN FACADE SYSTEM

Desana Partners – Engineered Rainscreen Systems –

Drawing Title: Horizontal section detail through brick external corner

Scale:	Checked:	Drawn: CB
NTS	Date:	Date: 08-07-17

Size	Drawing No.	Rev.
A3	DET-009	/

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. . . at Desana we know the exterior facade is the most important standard by which any building is measured.

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Redland Brick, a division of Belden, is one of the country's largest producers of bricks with multiple plants throughout the country.