

Addendum

DATE: 08/21/2020

615 Woodside Drive, Englewood, Ohio 45322

T 937.836.8898 F 937.832.3696

PROJECT: Beavercreek Township Fire Station No. 65

www.app-arch.com

PROJECT ADDRESS: 1777 Trebein Road
Beavercreek Township, Ohio 45385

ADDENDUM NO. 2

RECEIPT OF THIS ADDENDUM MUST BE NOTED ON THE FORM OF PROPOSAL

TO ALL BIDDERS:

This addendum supplements and amends the original Plans and Specifications and shall be taken into account in preparing proposals and shall become part of the Contract Documents.

GENERAL ITEMS:

ITEM G1 BID DUE DATE

1. Bid due date is revised to: **Wednesday, August 26 at 2:00 EDT**. The Bid Opening will still be streamed live via YouTube immediately thereafter.

ITEM G2 BIDDER QUESTIONS & ANSWERS

Q12. We are missing prevailing wage information for:

- Carpenter
- Operator
- Truck Driver

A12. Additional prevailing wage information can be found here:

<https://wagehour.com.ohio.gov/w3/webwh.nsf/wrlogin/?openform>

This link is provided as a courtesy only. All Contractors are responsible for determining the most current and applicable prevailing wage rates for Greene County, Ohio.

Q13. I plan to bid on the fabricated building letters, and the drawing provides all the needed information, but I don't see any spec section (1014**)?

A13. Specification Section 10 1419 Dimensional Letter Signage was included in Addendum No. 1 which was released on 08/13/2020.

Q14. I don't see a Spec Section for the ADA panel signs so I wanted to confirm if the signage is included in the bid?

A14. All interior signage is removed from the project. It will be provided by the Owner.

- Q15. Drawing C6.1 only shows hatched areas which is wire mesh per the symbol key at a few areas along the perimeter. Is wire mesh required for the entire concrete paving area shown on C6.1 or only where the hatched areas are shown on C6.1.
- A15. Only need mesh where hatching is shown.
- Q16. What size wire mesh should be used? Is the wire mesh required to be epoxy coated?
- A16. Wire mesh to be non-epoxy 6x6-W2.9xW2.9, chaired at midpoint.
- Q17. Drawing C2.5 shows details of contraction joints/isolation joints. No dowels/dowel baskets are shown. Please confirm that no dowel bars/baskets are required? If required, please provide details so we know what to bid and if they are to be epoxy coated. Load transfer dowels are only required at joints where new pour abuts against existing or previously poured concrete.
- A17. If new paving and new curb are poured monolithically, then the tie bars are not required. Recommendations to be provided upon review of contractor's submitted joint/pour plan.
- Q18. Please reference "Tie Bars" section on C1.1. Note 1 mentions #4 Tie Bars at 30" O/C. Are these required to be installed at the joint between new paving and new curb (i.e. doweled out of the curb)? These are not shown on the C2.5 Details. Please confirm this is required or if not required.
- A18. Tie Bars are not expected and will only be required if directed upon review of contractor's submitted joint/pour plan.
- Q19. Please reference "Tie Bars" section on C1.1. Note 2 mentions #4 Tie Bars at 30" O/C. at the joint between curb and paving (i.e. doweled out of the curb) or at first longitude joint in from inside of the edge of pavement if no curb. These are not shown on the C2.5 Details. Please confirm this is required or if not required. If tie bars are required, are the tie bars supposed to be epoxy coated? What is the length of the tie bars?
- A19. Tie Bars are not expected and will only be required if directed upon review of contractor's submitted joint/pour plan.
- Q20. C1.1, Item 204 Geogrid. Is Geo grid required to be installed between subgrade and subbase? Please advise, as this is not shown on the typical paving section cuts.
- A20. Geogrid is not required unless proof roll of subgrade fails and calls for additional reinforcement. Geogrid note is included for reference if proof roll does fail.
- Q21. It appears that the Plumbing Contractor is responsible for providing and installing the Oil Separator. Who is responsible for the pump station?
- A21. The site contractor is responsible for the pump station. The electrical contractor is responsible for providing power and furnishing/installing the controls for the unit within the building.
- Q22. Boring reports provided are for the building location only. Do any boring reports exist for the Manholes Located at the intersection of Trebein Road and Turfland Blv. In the area of proposed manhole #1?
- A22. There are no boring reports outside of the ones already provided in the Geotechnical Report.

- Q23. In the specification a “Milestone Schedule” was provided for earlier bid date. Is the project time going to be the approximate same duration? Is any additional time consideration being given due to starting project in later portion of year?
- A23. Refer to item AS1 below. An allowance for temporary heat for masonry work and concrete blankets is included to help offset the potential variable winter conditions.
- Q24. In the unit Pricing #4,” Provide and place lime for the purpose of drying wet soils”, You have provided for 500 yards Unit Price. Has a Geotechnical provided information as to the percentage of lime and type that is required based from proctors or samples that have been collected?
- A24. No- please refer to Specification Item AS1 below for further clarification.
- Q25. On the Logistics Drawing Provided showing temporary roads and fencing of site there is no indication of stockpile areas for topsoil or other material. Also, with the limitation of a 72” high pile configuration and other construction, storm routes, detention pond, drive areas and other utilities installations. Where are the stockpiles to be placed?
- A25. It is understood that this is a very tight sight. Please use creativity in the solution for stockpiling of material. It may need to be in the form of several linear earthen mounds around the site.
- Q26. On print C-7.1.e: states “manholes shall be placed every 400” the force main is laid over 3000 foot with only two inline double cleanout manholes. Will additional manholes be required?
- A26. The max 400’ spacing is only for gravity sewer, so it will not require additional manholes on the force main beyond what is shown.
- Q27. **Will the owner be paying for the Water and Sewer tap fees, and the Meter connection charge?**
- A27. **Yes.** Also refer to previously issued Addendum 1 for further clarification.

ARCHITECTURAL SPECIFICATIONS:

ITEM AS1 SECTION 01-2200 UNIT PRICES

Please ignore all references to quantities. The intent is to receive unit prices per single unit as indicated on the Bid Form. No unit pricing should be included in the Base Bid amount.

ITEM AS2 SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

The site plan shown at the end of the section is merely a suggested layout and can be disregarded. A perimeter fence is not required and there is no CM, hence no CM trailer. The use and organization of the site during construction will be up to the discretion of the General Contractor.

Also, the Milestone Schedule can be disregarded. The start date of the project is tentatively planned for September 8. A Contractor-determined number of calendar days to substantially complete the project is required to be stated on the Bid Form. A reminder that liquidated damages will be assessed on the project. Refer to the Owner-Contractor Agreement sample in the Project Manual for the rate schedule.

- ITEM AS3 SECTION 04 4313 – ANCHORED BRICK AND MASONRY VENEER
Part 2 – Products, 2.2 – Decorative Burnished Concrete Masonry Units:
Add Echelon Masonry - Trenwyth Trendstone to the list of acceptable alternate manufacturers.
- ITEM AS4 SECTION 06 1600 – SHEATHING
Part 2 – Products, 2.5 – Composite nail base insulated roof sheathing
Paragraph A.1. Manufacturers:
Delete – c. Hunter Panel (H Shield NB).
Add – c. Hunter Panel (Cool-Vent).
- ITEM AS5 SECTION 08 4113 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
Part 2 – Products, 2.6 – Entrance door hardware
Paragraph A. – Entrance Door Hardware
Delete - A. Hardware not specified in this Section is specified in Section 08 7100
“Door Hardware.”
Add - A. Hardware is specified in Section 08 7100 “Door Hardware.”

Part 2 – Products, 2.6 – Entrance door hardware
Delete paragraphs B. through Q.
- ITEM AS6 SECTION 08 1416 – FLUSH WOOD DOORS
Part 2 – Products, 2.3 – Veneer-faced doors for transparent finish
Paragraph A. Solid-Core Doors
2. Species: delete “select white birch”, add “red oak.”
- ITEM AS7 SECTION 08 7100 – DOOR HARDWARE
Part 3 – Execution, 3.9 Hardware Sets
Sets 01, 02, 03 Description
Delete – medium stile aluminum door
Add – wide stile aluminum door
Add – Hardware this set to be furnished by storefront contractor.
Set 06, Description
Add – Hardware this set to be furnished by storefront contractor.
- ITEM AS8 SECTION 08 7100 – DOOR HARDWARE
Part 2.5 CYLINDERS AND KEYING, B. Source Limitations is revised to read:
B. Source Limitations: none.
- ITEM AS9 SECTION 10 4413 – FIRE PROTECTION CABINETS
Part 2 – Products, 2.1 – Fire-protection cabinet
Paragraph A.1.
Add – g. Larsen’s Manufacturing Company.
- ITEM AS10 SECTION 28 1300 - Access Control and Security Management Software:
All items in this section will be provided by the Owner by their security systems vendor.
The GC will be required to coordinate with this contractor as the GC is still responsible to
run all cabling and provide termination boxes and any required pathways.
- ITEM AS11 SECTION 28 2113 - CAMERAS
All items in this section will be provided by the Owner by their security systems vendor.
The GC will be required to coordinate with this contractor as the GC is still responsible to
run all cabling and provide termination boxes and any required pathways. Refer to

ARCHITECTURAL DRAWINGS:

ITEM A1 Drawing Sheet G0.01 Cover Sheet
Sheet has been reissued removing Brumbaugh Construction as the CM.

MECHANICAL DRAWINGS:

ITEM H1 SHEET H0.2 – SCHEDULES
1. Cooling/heating split systems
a. Trane and Lennox are acceptable alternate manufacturers.

ELECTRICAL DRAWINGS:

ITEM E1 SHEET NUMBER E0.2
1. Lighting Fixture Schedule, add the following equal Manufacturers/Models:
 “B2” – Lithonia “CPNL”
 “D2” – Prudential “Flair”
 “F4” – ABL “2900 Series”
 “BL1” – US Architectural “BDAC8”, Design Pole “DB500 Series”
 “UC1” – Juno “UPLD”

ITEM E2 SHEET NUMBER E2.1
1. Revise fixture tag indicated on all exterior under canopy downlights from “F4” to “F2”.
2. Revise fixture tag indicated for Kitchen peninsula lights (Quantity of 3) from “F1” to “F4”.
3. Revise fixture tag indicated for Apparatus Bay nightlights (Quantity of 2) from “F5” to “F4”.

ITEM E3 SHEET NUMBER E0.5

Circulation Fan Schedule, Type CF1 Model “Canarm”, Type CF2 Model “Hunter are basis of design, available thru Global Industrial (globalindustrial.com).

SUBSTITUTION REQUESTS:

ITEM SR2 Englert is added to the list of approved manufacturers for standing seam roof panels.

ITEM SR3 Englert is added to the list of approved manufacturers for metal soffit panels.

END OF ADDENDUM NO. 2

ATTACHMENTS:

G0.01, SR-2 Documentation, SR-3 Documentation

Beavercreek Township

Fire Station No. 65

1777 Trebein Road, Beavercreek Township, Ohio 45385

ARCHITECT

App Architecture

615 Woodside Drive
Englewood, Ohio 45322
(937) 836-8898

STRUCTURAL ENGINEER

Jezerinac Geers & Associates

5640 Frantz Road
Dublin, Ohio 43017
(614) 766-0066

PLUMBING, MECHANICAL & ELECTRICAL ENGINEERS

Nauman & Zelinski, LLC

204 South Ludlow Street, Suite 400
Dayton, Ohio 45402
(937) 223-3821

CIVIL ENGINEER

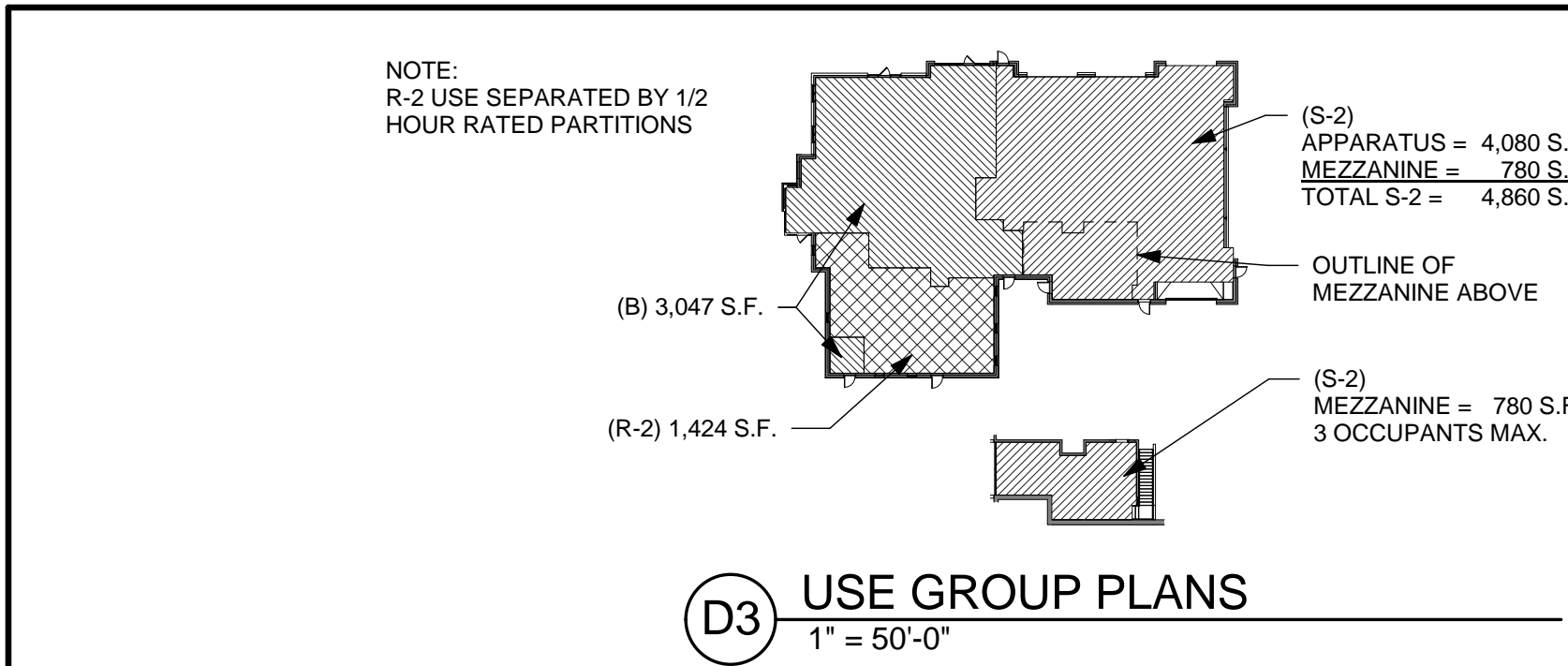
Choice One Engineering

440 E. Hoewisher Road
Sidney, Ohio 45365
(937) 497-0200

LANDSCAPE ARCHITECT

Yellow Springs Design, LLC

830 Xenia Avenue
Yellow Springs, Ohio 45387
(937) 767-8199



DRAWING INDEX

GENERAL

G0.01 COVER SHEET
G0.02 STORM SHELTER INFORMATION
G0.03 SITE COORDINATION PLAN

CIVIL

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C2.0 GENERAL DETAILS
C2.1 GENERAL DETAILS
C2.2 GENERAL DETAILS
C2.3 GENERAL DETAILS
C2.4 GENERAL DETAILS
C2.5 GENERAL DETAILS
C3.0 GRADING PLAN
C3.1 GRADING SLOPES
C4.0 PVMT. ELEV PLAN
C5.0 UTILITY PLAN
C6.0 DIMS & PAVEMENT
C6.1 PAVEMENT JOINT LAYOUT
C6.2 ALTERNATE PLAN
C7.0 SANITARY DETAILS - (1)
C7.1 SANITARY DETAILS - (2)
C7.2 FORCEMAIN - (1)
C7.3 FORCEMAIN - (2)
C7.4 FORCEMAIN - (3)
C7.5 FORCEMAIN - (4)
C7.6 FORCEMAIN - (5)
C7.7 FORCEMAIN - (6)
C7.8 FORCEMAIN - (7)
C8.0 SWPPP COVER
C8.1 SWPPP NOTES & DETAILS
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LANDSCAPE

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A0.02 SCHEDULES & PARTITION TYPES
A0.03 DOOR AND WINDOW SCHEDULES AND ELEVATIONS
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A1.12 FLOOR PLANS DIMENSIONED
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A5.02 EXTERIOR DETAILS - STOREFRONT
A5.03 EXTERIOR DETAILS - OVERHEAD DOORS
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A5.06 EXTERIOR DETAILS - ROOF
A5.07 EXTERIOR DETAILS - ROOF
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A5.09 EXTERIOR DETAILS - LOUVERS & AWNINGS
A5.10 EXTERIOR PATIO AND SCREEN WALLS
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A5.12 ALTERNATE G-1 METAL ROOF DETAILS
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A7.02 ENLARGED PLAN & INTERIOR ELEVATIONS
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S3.04 FOUNDATION DETAILS
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P2.0F UNDER FLOOR PIPING PLAN
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P3.1 ENLARGED PLANS
P4.1 MATERIAL SCHEDULES
P4.2 DETAILS
P4.3 DETAILS
P5.1 SOIL, WASTE, AND VENT DIAGRAM

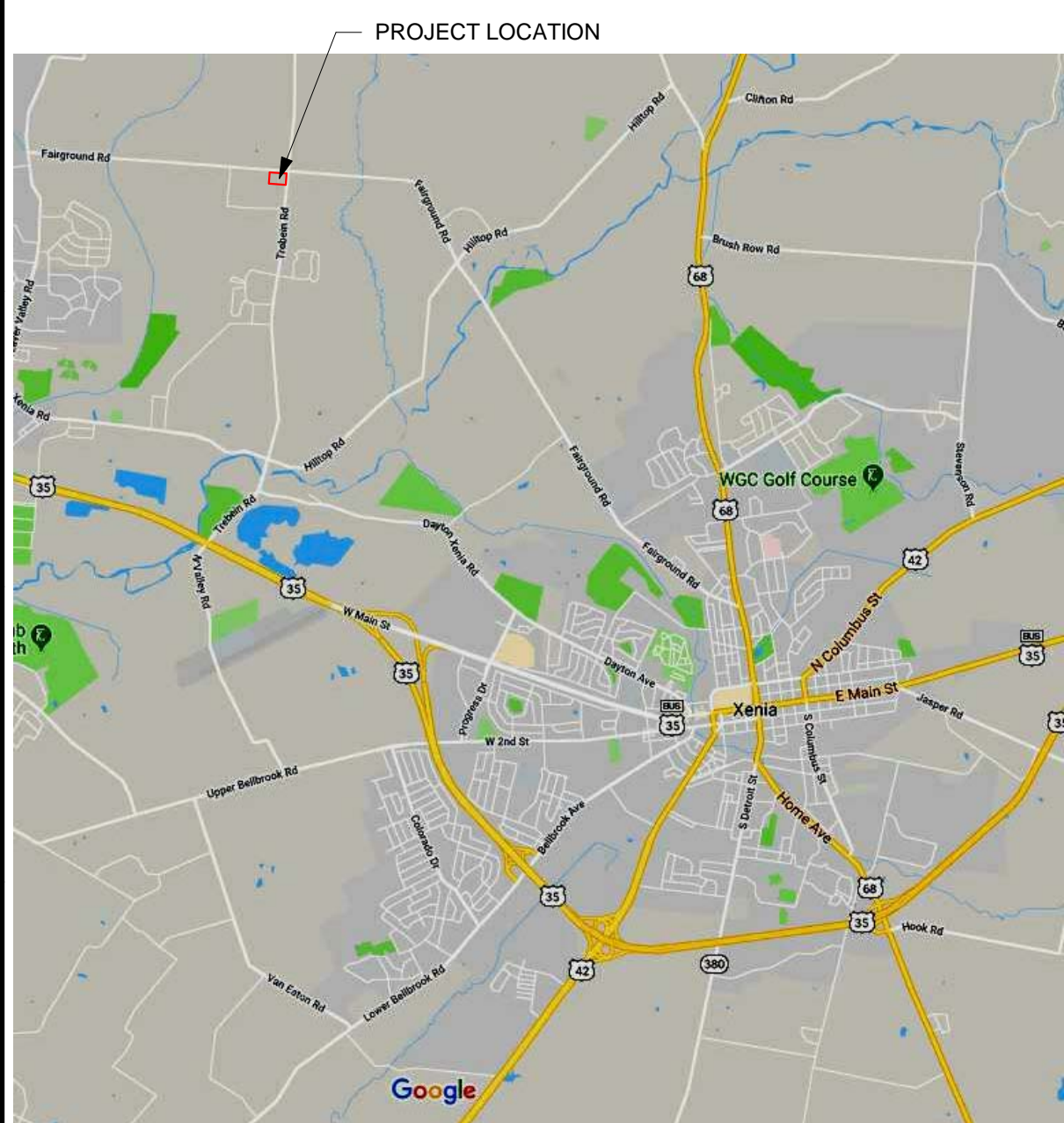
HVAC

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H0.2 SCHEDULES
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H2.2 MEZZANINE PLAN
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E2.1 LIGHTING PLANS
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E4.1 SYSTEMS PLANS

VICINITY MAP



CODE INFORMATION

(Ohio Building Code 2017)

PROJECT DESCRIPTION:

PROJECT CONSISTS OF CONSTRUCTION OF A NEW FIRE STATION.

BUILDING DESCRIPTION:

FIRE STATION: 1 STORY + MEZZANINE

BUILDING IS CONSTRUCTED OF LIMITED COMBUSTIBLE AND NON-COMBUSTIBLE MATERIALS. FIRE-RETARDANT WOOD ROOF TRUSSES, STEEL FRAMING AND STEEL JOIST SYSTEM WITH METAL DECK, AND CONCRETE SLAB. LOAD BEARING EXTERIOR MASONRY WALL AT APPARATUS BAYS; LOAD BEARING AND NON-LOAD BEARING COLD-FORMED METAL FRAMING WITH BRICK VENEER EXTERIOR WALLS FOR SUPPORT AREAS.

USE GROUP CLASSIFICATION:(REFER TO USE GROUP PLAN THIS SHEET)

OBC (302) USE GROUP= B: STATION OFFICES
R-2: CREW QUARTERS
S-2: APPARATUS BAYS AND MEZZANINE

OBC (508.3) MIXED OCCUPANCIES=

UNSEPARATED MIXED USE
EXCEPTION 2: R-2 DWELLING AND SLEEPING UNITS SHALL BE SEPARATED FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 420.

OBC (708.3) FIRE RESISTANCE RATING= EXCEPTION 2: DWELLING UNIT AND SLEEPING UNIT SEPARATIONS IN BUILDINGS OF TYPE IIB, IIIB, AND VB CONSTRUCTION SHALL HAVE FIRE-RESISTANT RATINGS OF NOT LESS THAN 1/2-HOUR IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM.

SLEEPING UNITS TO HAVE 20 MIN. RATED DOORS AND FRAMES IN ACCORDANCE WITH OBC TABLE 716.5.

CONSTRUCTION TYPE CLASSIFICATION:

OBC (602) CONSTRUCTION TYPE= II B

OCCUPANT LOAD

OBC (1004) ALLOWABLE= 100 S.F. PER OCCUPANT

FIRE STATION
B: 3,047 S.F. / 100 = 31
S-2: 4,860 S.F. / 300 = 17
R-2: 1,424 S.F. / 200 = 8

TOTAL = 56 OCCUPANTS

DESIGN OCCUPANT LOAD=

B: 7
S-2: 0
R-2: 6

TOTAL = 13 OCCUPANTS

FIRE PROTECTION

BUILDING DESCRIPTION= FULLY SUPPRESSED

CONCEALED SPACES EXCEPTION FOR ATTIC SPACE PER NFPA 13 - 8.15.1.2 "CONCEALED SPACES NOT REQUIRING SPRINKLER PROTECTION" AND 8.15.2.1.2.1

HEIGHT AND AREA LIMITATIONS OBC (503) BUILDING AREA & HEIGHT

ALLOWABLE = 68,480 S.F.

NEW CONSTRUCTION
FIRST FLOOR: 8,551 S.F.
MEZZANINE: 780 S.F.
TOTAL = 9,331 S.F.

ALLOWABLE HEIGHT = 60'-0" FT. (4 STORY)
ACTUAL HEIGHT = 33'-9" FT. (1 STORY)

USE GROUP	TABLE 506.2 AREA	TOTAL ALLOWABLE
B	92,000 S.F.	R-2 IS THE MOST RESTRICTIVE
R-2	64,000 S.F.	USE GROUP AT 64,000 S.F.
S-2	104,500 S.F.	ALLOWABLE

PLUMBING FIXTURES REQUIRED

USE GROUP	WC	LAVS	SHOWERS	D.F.	SERVICE SINK
B	1	1	0	1	1
R-2	1	1	1	1	1
S-2	1	1	1 (EYEWASH/SHOWER)	1	1
TOTAL	3	3	2	3	3

PLUMBING FIXTURES PROPOSED

USE GROUP	WC	LAVS	SHOWERS	D.F.	SERVICE SINK
B	1	1	0	1	1
R-2	3	3	3	1	1
S-2	1	1	1/1 (EYEWASH/SHOWER)	0	1
TOTAL	5	5	4	2	3

STORM SHELTER PROVISIONS

REFER TO SHEET G0.02 FOR STORM SHELTER INFORMATION.

OTHER PROVISIONS

AN EMERGENCY BACK-UP GENERATOR WILL SUPPLY ALL CRITICAL FUNCTIONS INCLUDING EGRESS LIGHTING.

REFER TO SHEET S0.1 FOR ADDITIONAL CODE NOTES AND REFERENCES

GOVERNING CODE: 2017 OHIO BUILDING CODE.

BUILDING RISK CATEGORY: CATEGORY IV

DESIGN LOADS:

FLOOR LIVE LOADS (WITH ALLOWABLE REDUCTIONS WHERE APPLICABLE)
- STAIRS & EXITS 100 PSF
- MEZZANINE/STORAGE (LIGHT) 125 PSF

OTHER PROVISIONS (CONTINUED)

ROOF LIVE LOADS
- ORDINARY FLAT, PITCHED, AND CURVED ROOFS 20 PSF
- FABRIC AWNINGS/CANOPIES ON SKELETON STRUCTURE 5 PSF

SNOW

- GROUND SNOW LOAD (Pg) 20 PSF
- FLAT ROOF SNOW LOAD (Pi) 20.2 PSF
- SNOW EXPOSURE FACTOR (Ce) 1.0
- SNOW LOAD IMPORTANCE FACTOR (Is) 1.2
- THERMAL FACTOR (Ci) 1.2
- SNOW DRIFTING SEE PLAN

WIND

- BASIC ULTIMATE WIND SPEED (Vult) 120 MPH
- BASIC ALLOWABLE WIND SPEED (Vasd) 93 MPH
- SITE EXPOSURE CATEGORY C
- INTERNAL PRESSURE COEFFICIENT (Gcpi) +/-0.55

SEISMIC

- SEISMIC IMPORTANCE FACTOR 1 .5
- MAPPED SPECTRAL RESPONSE ACCELERATION, Ss 0.153
- MAPPED SPECTRAL RESPONSE ACCELERATION, S1 0.071
- SEISMIC SITE CLASS D
- DESIGN SPECTRAL RESPONSE ACCELERATION, SDS 0.163
- DESIGN SPECTRAL RESPONSE ACCELERATION, SD1 0.114
- SEISMIC DESIGN CATEGORY C

BASIC SEISMIC FORCE-RESISTING SYSTEM(S)

1. STEEL SYSTEMS NOT SPECIFICALLY DETAILED
2. ORDINARY REINFORCED MASONRY SHEAR WALLS
3. LIGHT-FRAME (COLD-FORMED STEEL) WALL SYSTEMS USING FLAT STRAP BRACING

RESPONSE MODIFICATION COEFFICIENT(S), R

- RESPONSE MODIFICATION COEFFICIENT(S), Cs 2.0
- SEISMIC RESPONSE COEFFICIENT(S), Cs 0.122
- SEISMIC DESIGN BASE SHEAR, V 74 K

ANALYSIS PROCEDURE

GEOTECHNICAL

- GEOTECHNICAL ENGINEER: PROFESSIONAL SERVICE INDUSTRIES, INC.

- REFERENCE REPORT ID OR NUMBER: 01051248

- REFERENCE REPORT DATE: 04/10/2018

- FOUNDATION TYPE: SHALLOW SPREAD FOOTING

- ALLOWABLE DESIGN BEARING PRESSURE 3,000 PSF

SPECIAL LOADS

- INTERIOR WALLS & PARTITIONS 5 PSF HORIZONTAL

- HANDRAIL LOADS 50 PLF/200# CONC.

- RETAINING WALLS 50 PCF

- BASEMENT WALLS 60 PCF

App Architecture
creative focused design

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Beavercreek Township
Fire Station No. 65

1777 Trebein Road, Beavercreek Township, Ohio 45385

ISSUE:		
NO.	DATE	DESCRIPTION
	04/03/2020	FOR CONSTRUCTION

DATE	04/03/2020
JOB NO.	3541.01
DRAWN	CMS
CHECKED	TJB
CAD	-

TITLE
COVER SHEET

SHEET NO.
G0.01

SUBSTITUTION REQUEST FORM

DATE: 8/14/20

615 Woodside Drive, Englewood, Ohio 45322

T 937.836.8898 F 937.832.3696

TIME:

www.app-arch.com

PROJECT: Beaver Creek Township
FIRE STATION No. 65

PROPOSED SUBSTITUTION: Section 07 4113.16 - Standing Seam Metal Roof Panels - Part 2.2.6

Propose Englert Series 2000, 24 gauge prefinished standard color 3-coat as specified (note a 3-coat is optional and available at additional cost). Note Englert Series 2000 does not have the Part 2.1.C

Hydrostatic Head testing, as I suspect the specified basis of design product also does not carry.

Note Part 2.2.B.2.a indicates 0.028" material which is 22 gauge, and Part 2.2.B.6 states 24 gauge (please clarify).

REQUEST AUTHOR: Jeff Barnard - Englert Inc. **REQUIRED REPLY DATE:** _____

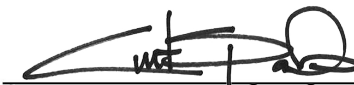
REPLY: 24 gauge is the appropriate thickness.

Englert is added to the list of approved manufacturers for standing seam roof panels.

Actual panels submitted must be equal to or greater than specification requirements.

Part 2.1.C excluded from requirements.

REPLY AUTHOR:


Curt Sparks

REPLY DATE: 08/14/2020

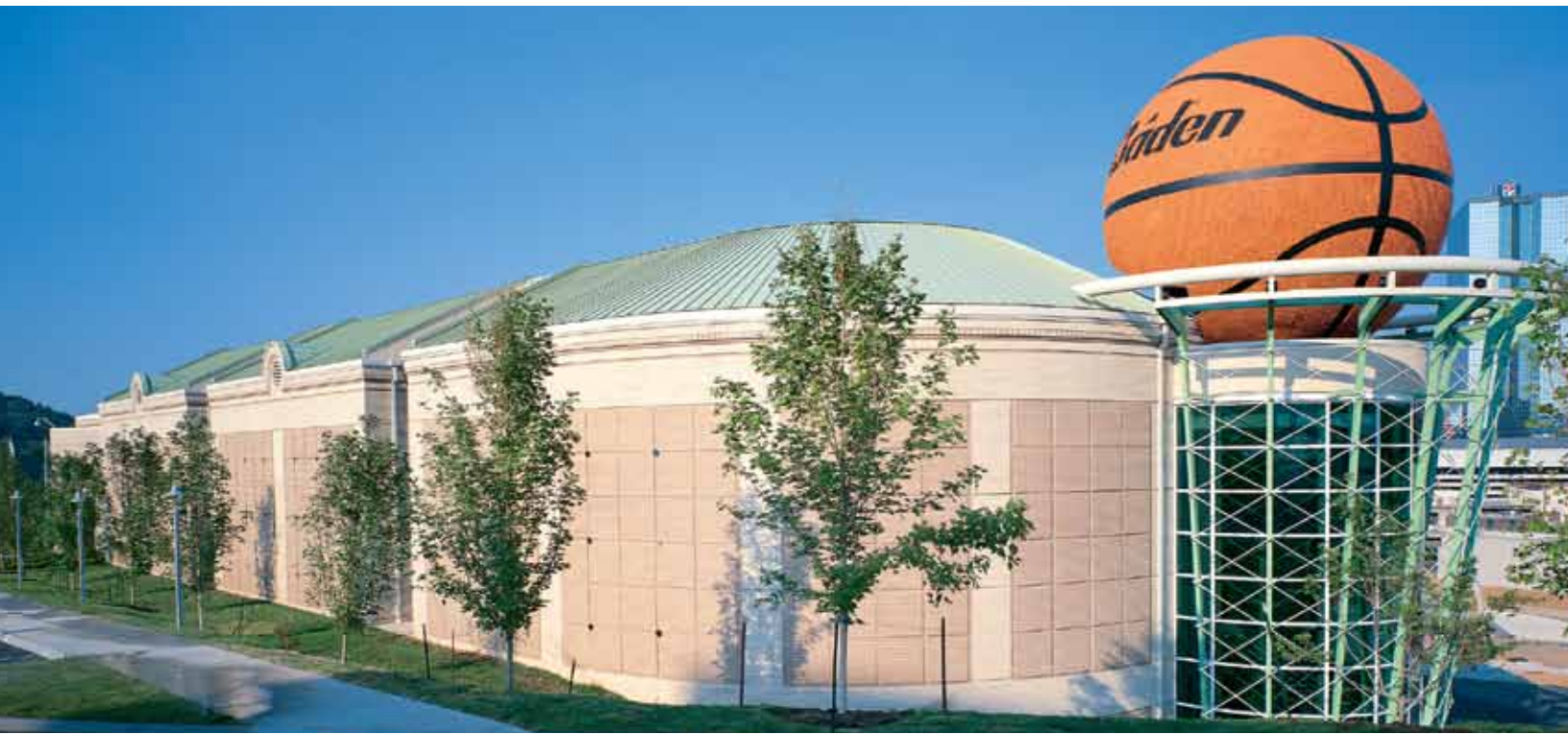
App Architecture
creative focused design

ATTACHMENTS:

ACTION REQUIRED:

DISTRIBUTION:

END OF SECTION 01 2500



ARCHITECTURAL/STRUCTURAL SYSTEM FOR COMMERCIAL AND INSTITUTIONAL

1-3/4" STRUCTURAL AND ARCHITECTURAL SNAP-LOCK PANEL SYSTEM

Englert's most popular system, the Series 2000 integral snap-lock panel system combines architectural versatility – for cleanly detailed, continuous seam transitions from roof to mansard, fascia, wall panel or soffit – with the dramatically increased spanning and uplift capabilities of a structural system.

SYSTEM APPLICATIONS

- Medium duty for residential, commercial and industrial use
- 3"/12" minimum slope
- Can be installed over a solid deck or open framing
- Requires seam sealant if air and water tests are specified
- Engineering available for various panel sizes and substrates upon request

SUBSTRATES

- 26, 24 and 22 gauge steel
- .032" and .040" aluminum



FINISHES

Englert's Series 2000 system is available in a wide variety of coatings and colors. See the Englert color card for our full range of standard colors and paint system specifications.

Englert can match the color of virtually any material – including brick, wood and fabric – with short lead times as needed. Custom colors are available in quantities as low as 5,000 lbs. on steel or aluminum.

SYSTEM WARRANTIES

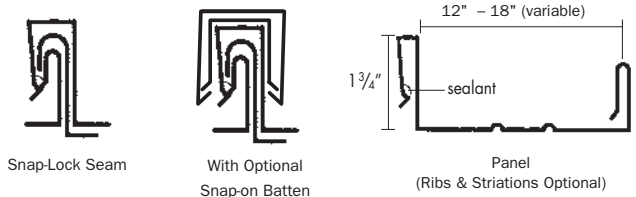
- Galvalume Plus® – 25-year steel warranty on acrylic coated Galvalume®
- PermaColor 3500 – 35-year steel or aluminum warranty on Kynar 500®/Hylar 5000® coating
- PermaMetallic 2000 – 20-year steel or aluminum warranty on Kynar 500®/Hylar 5000® coating
- Siliconized Modified Polyester – 15-year steel or aluminum coating warranty

RATINGS AND CERTIFICATIONS

- UL-90 rated over 22 gauge metal deck at 18" wide with clips at 48" o.c. (24 ga. steel)
- UL-90 rated over 16 gauge purlins at 18" wide with clips at 48" o.c. (24 ga. steel)
- ASTM-E-1646-95 and ASTM-E-331 water penetration tested
- ASTM-E-1680-95 and ASTM-E-283 air infiltration tested
- ASTM-E-1592-98 and ASTM-E-330 uplift tested (24 ga. steel)
- ASTM-E-84 Class A fire rating on coating and substrate (24 ga. steel)
- Florida Building Code product approval listed
- Metro-Dade County certified



Series 2000 1-3/4" Integral Snap-Lock



Allowable Uniform Live Load (PSF)

No. of Spans	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
--------------	-------	-------	-------	-------	-------

16" Width — 24 ga. steel

2	62	49	40	33	27
3 or more	72	57	46	38	32

16" Width — 22 ga. steel

2	80	63	51	42	35
3 or more	93	74	60	49	41

16" Width — .032" aluminum

2	23	18	15	12	10
3 or more	27	21	17	14	12

18" Width — 24 ga. steel

2	55	43	35	29	24
3 or more	64	51	41	34	28

18" Width — 22 ga. steel

2	71	56	45	38	32
3 or more	83	65	53	44	37

18" Width — .032" aluminum

2	20	16	13	11	9
3 or more	23	19	15	12	10

Note: Load values shown may be increased by 1/3 for allowable wind load.

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DEEP RED

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MANSARD BROWN

MEDIUM BRONZE

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PACIFIC BLUE

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Full Strength 70% Kynar 500®/Hylar 5000®

All colors available in
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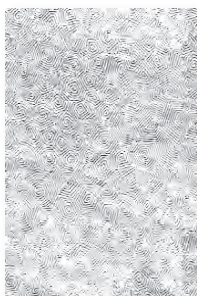


To view current SRI values,
please visit the Englert website.

Colors shown are close to actual finishes
however, due to the limitations of
printing processes, slight variations
may exist. Please contact Englert for
actual color chips before ordering.



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PERMAMETALLICS 3500*

*Premium priced paint systems.

CHAMPAGNE* (Metallic) Mica 2-Coat System



COPPER* (Metallic) Mica 2-Coat System



PREWEATHERED GALVALUME®*

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MILL FINISH (Aluminum) Made to order – available in sheets only



FINISHES THAT MEET ANY DESIGN OBJECTIVE

Englert is one of the few single-source metal roof manufacturers with an in-house coil coating line and an exceptionally broad range of finishes, whether the design calls for a natural weathered appearance or bright, high-performance, full-strength fluorocarbon colors.

Custom Colors

We can match the color of virtually any material, including brick, wood and fabric. Englert offers short lead times, and our minimum custom-color order requirements are among the industry's lowest.



ROOFING KYNAR-COATED STANDARDS IN STOCK - SHEET AND COIL

COLORS	STEEL			ALUMINUM			
	22g	24g	26g	.032	.040	.050	.063
Galvalume-Plus®	●	✓	✓	NA	NA	NA	NA
Burgundy	●	✓	✓	✓	●	●	●
Bone White	●	✓	●	✓	✓	✓	●
Charcoal Gray	●	✓	✓	✓	✓	✓	●
Colonial Red	●	✓	✓	✓	●	✓	●
Dark Bronze	●	✓	✓	✓	✓	✓	●
Dove Gray	●	✓	✓	✓	✓	✓	●
Deep Red	●	✓	●	✓	●	●	●
Everglade Moss	●	✓	●	✓	●	●	●
Forest Green	●	✓	✓	✓	✓	✓	●
Hartford Green	●	✓	✓	✓	✓	✓	●
Hemlock Green	●	✓	●	✓	●	✓	●
Mansard Brown	●	✓	✓	✓	✓	✓	●
Medium Bronze	●	✓	✓	✓	✓	✓	●
Mill Finish (Aluminum)*	NA	NA	NA	✓	✓	✓	✓

*Made to order – available in sheets only.

COLORS	STEEL			ALUMINUM			
	22g	24g	26g	.032	.040	.050	.063
Matte Black	●	✓	✓	✓	✓	✓	●
Pacific Blue	●	✓	●	✓	●	●	●
Patina Green	●	✓	●	✓	●	●	●
Royal Blue	●	✓	●	✓	●	●	●
Slate Blue	●	✓	✓	✓	●	✓	●
Slate Gray	●	✓	✓	✓	✓	✓	●
SunNet Blue	●	✓	●	✓	●	●	●
Sandstone	●	✓	●	✓	✓	✓	●
Sierra Tan	●	✓	●	✓	✓	✓	●
Stone White	●	✓	●	✓	✓	✓	●
Terra Cotta	●	✓	●	✓	●	●	●
Champagne (Metallic)**	●	✓	●	✓	✓	●	●
Copper (Metallic)**	●	✓	●	✓	✓	●	●
Prewheathered (Metallic)**	●	✓	●	✓	✓	✓	●

**Mica 2-Coat System

✓ - Standard ● - Minimum Quantities Required NA = Not Available

POLYESTER COATED SHEETS* - ALUMINUM

COLORS (TWO-SIDED)		4' x 10'	4' x 8'
		.032	.032
Bronze	Low-Gloss White	✓	✓

*Contact Englert for information on additional polyester colors.

Colors shown are close to actual finishes however, due to the limitations of printing processes, slight variations may exist. Please contact Englert for actual color chips before ordering.

Specifications subject to change without notice.

DISTRIBUTED BY:

PRODUCT DATA SHEET



METALMAN H/T

METALMAN H/T

DESCRIPTION

MetalMan H/T is a self-adhered non-reinforced underlayment composed of special elastomeric modified bitumen blends of SBS and other polymers. MetalMan H/T is designed to be used under metal and tile roof systems and is available in split-back release material. MetalMan H/T can be exposed for periods up to ninety (90) days before the roof assembly is installed. Foot and equipment traffic, especially on steeper sloped roof areas can affect the finished surfacing and water tightness of the sheets. Traffic should be limited until specified roof assembly is installed

COMPOSITION, PACKAGING & TECHNICAL DATA

Product/ Property	METALMAN H/T
Reinforcement	none
Elastomeric Bitumen	blend of bitumen & SBS polymers
Topside	tri-laminate polyethylene
Underside	self-adhered with release material
Approx. Nominal Thickness	40 mils (1.0 mm)
Approx. Gross Roll Coverage	200 ft ² (18.6 m ²)
Side Lap (if applicable)	3" (76 mm)
End Lap (if applicable)	6" (152 mm)
Roll Length	67 feet (20.5 m)
Roll Width	36" (914 mm)
Approx. Roll Weight	43 lbs (20 kg)
Rolls Per Pallet*	25 boxed rolls
*Rolls stacked upright on pallet	

TECHNICAL INFORMATION		
Test Results	METALMAN H/T	
Load strain properties @ 77° F (25° C)	MD	XD
Maximum load (lbs/inch)	64	88
Elongation @ maximum load (%)	52	24
Low Temperature Flexibility ASTM 1970	-22° F (-30° C)	
Peel Resistance on plywood ASTM D 903	11.4 lbs/ft	
Maximum Service Temperature	240° F (116° C)	
Water Vapor Permeance perm (ng/Pa·s·m ²) per ASTM E 96	0.017 (0.92)	
Air Permeability, (L/sec·m ²) Per ASTM E 283 (75 Pa)	<0.007	



APPLICATION INSTRUCTIONS

The MetalMan H/T membrane is bonded to a properly prepared, dry (not damp), clean substrate which is defined as, but is not limited to: free of dirt; dust; debris; oils; unadhered coatings; any other contaminants that may result in a surface that is not sound or is un-even and affects the adhesion of the membrane to the substrate. Acceptable substrates for MetalMan H/T are plywood, OSB, wood plank or composition, concrete, masonry or faced gypsum substrates. Other surfaces may be acceptable, but the installer is responsible to determine substrate surface quality and whether priming is required so that MetalMan H/T will stay adhered to that substrate.

Installation of MetalMan H/T membranes occur when the release material is removed and the self-adhesive underside is matted onto the approved substrate using applied pressure. Starting at the low point, position a full roll or cut the membrane into ten to fifteen (10' to 15') feet (3 to 5 m) lengths and re-roll loosely. Peel back one to two (1' to 2') feet (300-600 mm) of release material, align the membrane, and continue to peel the release film from the membrane. Press the membrane in place with heavy hand pressure. Apply pressure to the membrane roll side and end laps to insure water tightness and bonding to the substrate. Membrane installation must not prevent ventilation of existing structure.

Always work from the low to the high point of the roof. Follow good roofing practice by orientating MetalMan H/T so side laps shed water. Apply the membrane in valleys before the membrane is applied to the eaves. For valley and ridge application, peel the release material, center the sheet over the valley or ridge, drape, and press it in place. Work the center of the valley or ridge outward in each direction. Following placement along the eaves, continue application of the membrane up the roof. If nailing of the membrane is necessary on steep slopes during hot weather, back nail and cover the nails by overlapping with the next sheet. Extend MetalMan H/T to the height as recommended by the local building code or to the highest locally expected level in order to maintain water tightness from wind driven rain, headwater back-up, ice dams and snow load.

Install discontinuous and water shedding finished roof materials in accordance with roof supply manufacturers installation guidelines, requirements and local building codes with the most stringent requirements prevailing.

SPECIFIER NOTES

Specifiers use MetalMan H/T as a vapor retarder, air barrier and as shingle/tile underlayment. The Specifier and/or end-user are responsible for other type installations. Specifiers and underlayment installers must check with the individual metal roof system manufacturers to determine what limitations their metal or metal roof systems might have when an asphalt based material, which can be classified as a vapor retarder, is placed in close proximity to various finished insulated and non-insulated metal colors.

APPROVALS

See Underwriters Laboratories Inc. File #R11436, FM Approvals, ICC/ES, Miami-Dade County or Florida Building Code Product Approval Listings for current Approved Roof Assembly combinations.



THE BEST CHOICE IN WEATHERPROOFING SYSTEMS



STRENGTH, SAFETY, DURABILITY

Englert Nailable Roofing Underlayment is a premium product that delivers exceptional long term weather barrier performance compared to traditional asphalt felt products and other synthetic underlayments.

Englert Premium Underlayment is 100% synthetic with slip-resistant coatings on both sides. The bottom is designed to reduce slippage between the underlayment and the roof sheathing. The **textured** top side contains a rubberized polyolefin coating that provides unsurpassed slip resistance ensuring a safer and more secure work surface. . . And Englert Premium Underlayment can be left exposed to the elements for up to six (6) months.

ENGLERT PREMIUM UNDERLAYMENT

- Does not support mold growth, rot or dry out as it contains no organic material and will not absorb moisture.
- Is 100% recyclable.
- Is far stronger, lighter and less costly to install than #30 felt and has much greater coverage per roll.
- Requires fewer nails than conventional felt underlayments.

ENGLERT PREMIUM UNDERLAYMENT SYSTEM BENEFITS

- **Exceptional Barrier Performance:** Woven Synthetic Rubber Barrier engineered with 100% synthetic polypropylene weave and modified polyolefin coatings.
- **Endurance:** The underlayment withstands prolonged exposure in all climates.
- **High Temperature Resistance:** Withstands surface temperatures up to 250°F (120°C). Won't flow or leach out at high temperatures like some asphalt felts.
- **Fire Resistance:** Meets Class A under ASTM E1098/UL790.
- **Exposure Period:** Englert Premium Underlayment can remain exposed for up to six (6) months.
- **Wind Uplift Resistance:** Offers exceptional tear and puncture strength, tougher than felt in inclement weather.
- **Low Temperature Application:** Remains flexible in cold weather and will roll out without cracking or chatter when fastened.
- **Slip Resistant Textured Surface:** Coated on both sides with special slip resistant coatings that also provide a layer of toughness. The top side contains a rubber-modified polyolefin coating.



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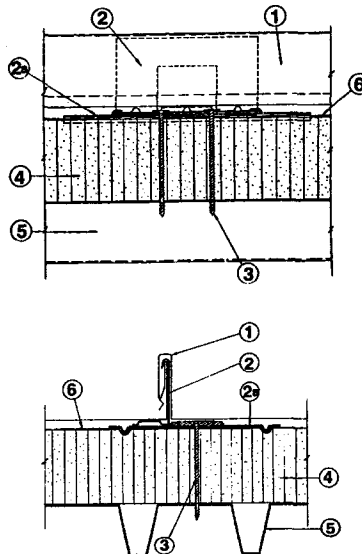
Your most recent listing is shown below. Please review this information and report any inaccuracies to the UL Engineering staff member who handled your project.

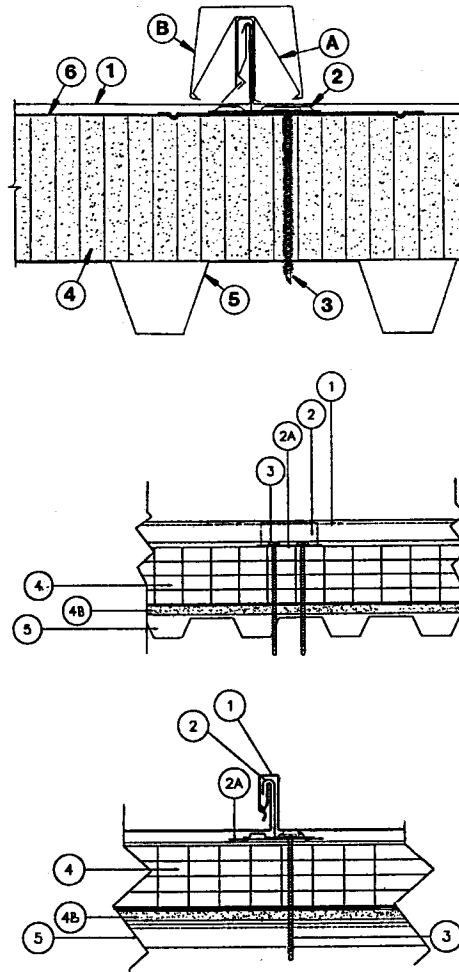
For information on placing an order for UL Listing Cards in a 3 x 5 inch format, please refer to the enclosed ordering information.

TGKX
Roof Deck Constructions

November 19, 1999

Construction No. 303
Uplift — Class 90
Fire Not Investigated





1. **Metal Roof Deck Panels*** — No. 24 MSG min thickness coated steel. Panel width 18 in. max., 10 in. min. ribs height 1-3/4 in. at female side. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints.

AEP-SPAN

A UNITED DOMINION CO — "18 in. Snap-Seam"; "12 in. Snap-Seam"; "10 in. Snap-Seam"

ARCHITECTURAL BUILDING COMPONENTS INC — "Permaseam Panel-12 or -18"

ARS INDUSTRIES INC — "US 175LS"

CARLISLE ENGINEERED METALS INC — "Architectural Panel with Versalok"

CENTRIA — "SDP 175-12, -16, -18"

CONSOLIDATED METALS OF FLORIDA, DIV OF

ALUMINUM SERVICE INC — "CSL-675"

CUSTOM PANEL INDUSTRIES LLC — "Design-Lok"

ENGINEERED METAL SYSTEMS INC — "Structural Standing Seam"

ENGLERT INC — "Series 2000"

HAWAII METAL ROOFING INC — "Tropa-Lok"

KOVACH INC — "K-Lok Structural Panel"

MADDOX ROOFING & CONSTRUCTION INC — "SS675 SNAP-LOK"

METAL BUILDING PRODUCTS INC — "Lock-Seam-10, -12 or -18"

METAL-FAB INC — "MetFab Snap-On 675"

METAL SALES MFG CORP — "Vertical Seam"

NEW TECH MACHINERY CORP — "Snap Panel 675"

PETERSEN ALUMINUM CORP — "Snap-Clad"

ROYAL ALUMINUM INC — "Royal RL-16"

STEELOX SYSTEMS INC — "LS"

TOMEN BUILDING COMPONENTS INC — "SS-200-12", "SS-200-16", "SS-200-18"

2. **Roof Deck Fasteners* (Panel Clips)** — One piece assembly, No. 24 MSG min thickness, 3-1/2 in. wide, 1-15/16 in. high. Clip spacing to be 48 in. OC. Clips to interface with Item 2A (bearing plate).

AEP-SPAN

A UNITED DOMINION CO — "Snap-Seam Clip"

ARCHITECTURAL BUILDING COMPONENTS INC — "Permaseam Clip"

CARLISLE ENGINEERED METALS INC — "AP Panel Clip"

CENTRIA — "C175"

CUSTOM PANEL INDUSTRIES LLC — "Design-Lok Clip"
 KOVACH INC — "K-Lok Structural Clip"
 METAL BUILDING PRODUCTS INC — "Lock-Seam Clips"
 METAL SALES MFG CORP — "Vertical Seam Clip"
 PETERSEN ALUMINUM CORP — "Snap-Clad Clip"
 STEELOX SYSTEMS INC — "LS Clip"
 TOMEN BUILDING COMPONENTS INC — "Series 200 Clips"
 U S METALS CORP — "Snap Lock Clip-675"

- 2A. Roof Deck Fasteners* (Bearing Plate) — One piece assembly, No. 24 MSG min thickness steel, 4-1/2 in. wide, 6 in. long.

AEP-SPAN

A UNITED DOMINION CO — "Snap-Seam Plate"

- 2B. Bearing Plate (Not Shown) — To be used with "Lock-Seam Clips", "Permaseam Clip" or "K-Lok Structural Clips" only, (Item 2). Bearing plates to be 16 MSG min coated steel, 3-7/8 wide by 5 in long (50,000 psi min yield strength).
- 2C. Bearing Plate* — (Not Shown) — To be used with "Snap-Clad Clips" only (Item 2). To be 24 MSG thick coated steel, nom 4-5/8 in. wide by 6 in. long.
- PETERSEN ALUMINUM CORP — "Snap-Clad Bearing Plate"
- 2D. Bearing Plate — (Not Shown) — To be used with "Vertical Seam Clip" only (Item 2) — Flat plate, 4-1/2 in. wide, 6 in. long fabricated from No. 24 MSG coated steel. Two 1/4 in. diam guide holes located to accommodate panel clip screw fasteners. (33,000 psi min yield strength).
3. Panel Fasteners — (Screws) — Fasteners used to attach panel clips and bearing plates (Items 2 & 2A) through rigid insulation and optional OSB and/or gypsum board and into light gauge steel deck (Item No. 5) to be No. 14 truss head type with No. 3 Phillips drive, self-drilling steel screws. Two screws per clip to be used, inserted through 1/4 in. diam guide holes. Fasteners to penetrate liner panel 3/4 in. min.
4. Foamed Plastic — (Rigid Insulation) — Min thickness 1 in., max thickness 4-1/2 in. Density to be a min of 2 pcf.
- 4A. Oriented Strand Board (OSB) — (Optional) — (Not Shown) — Located over foamed plastic (Item 4). Max thickness 7/16 in. Note: Bearing plates not required when OSB is used.
- 4B. Gypsum Board — (Optional) — Max thickness 5/8 in. Located over liner panel (Item 5).
5. Liner Panel — Min thickness No. 22 MSG. Coated steel (33000 psi) min yield strength min depth 1-1/2 in., max pitch 6 in. fabricated to various profiles.
6. Underlayment — (Not shown) — One ply of 30 lb roofing felt or one layer of bituminous resin type water proofing membrane.
7. Supports (Not Shown) — Used to support liner panels, spaced per deck manufacturer's specifications for uplift.
- The following items may be used in conjunction with the "AEP SPAN" Metal Roof Deck Panels (Item 1). When used, the panel system is identified as "SNAP-SEAM (SBS)"

- A. Batten Clips* — Slipped over ribs formed by roof deck panels. One piece assembly, 1-3/4 in. high, 1-3/4 in. max width, with four legs and two arms. Formed to engage ribs of AEP SPAN Panels and Batten Cap (Item B). Clips spaced 48 in. OC.

AEP-SPAN

A UNITED DOMINION CO — "SNAP-SEAM (SBS) Clip"

- B. Batten Cap* — Slipped over batten clip. Two inches high 1-1/2 in. wide at top with sides formed to engage batten clip. Snapped over batten clips.

AEP-SPAN

A UNITED DOMINION CO — "SNAP-SEAM (SBS) Batten"

The following items may be used with the "Architectural Panel with Versalok" Metal Roof Deck Panels (Item 1).

- A. Batten Clips* — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "Architectural Panel with Versalok" (Item 1) and Batten Cap (Item B). Spaced 48 in. OC.

CARLISLE ENGINEERED METALS INC — "AP Batten Clip"

- B. Batten Cap* — Slipped over batten clip (Item A) and formed to snap and engage batten clip.

CARLISLE ENGINEERED METALS INC — "TRB/AP Batten Cap"

The following items may be used in conjunction with the "K-Lok Structural Panel" (Item 1).

- A. Batten Clips* — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "K-Lok Structural Panels (Item 1) and Batten Cap (Item B). Spaced 48 in. OC.

KOVACH INC — "K-Lok Structural Batten Clip"

- B. Batten Cap* — Slipped over batten clip (Item A) and formed to snap and engage batten clip.

KOVACH INC — "K-Lok Structural Batten"

The following items may be used in conjunction with the "Design-Lok" panel (Item 1).

- A. Batten Clips* — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "Design-Lok" panels (Item 1) and "Design-Lok Batten Cap" (Item B) spaced 48 in. OC.

CUSTOM PANEL INDUSTRIES LLC — "Design-Lok Batten Clip"

- B. Batten Cap* — Slipped over batten clip (Item A), formed to snap over and engage batten clip.

CUSTOM PANEL INDUSTRIES LLC — "Design-Lok Batten Cap"

The following items may be used in conjunction with the "Structural Standing Seam" panel and a Classified Batten Clip as described in this construction.

- A. Snap-on-Batten — Slipped over a Classified Batten Clip, formed to snap over and engage batten clip.

The following items may be used in conjunction with the "SDP 175-12, -16, -18" panels. (Item 1).

- A. Batten Clips* — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "SDP 175-12, -16, -18" panels. (Item 1) and "SDP 175B" battens (Item B). Spaced 48 in. OC.

CENTRIA — "175B"

- B. Batten Cap* — Slipped over batten clip (Item A) and formed to snap and engage batten clip.

CENTRIA — "SDP 175B"

Refer to General information, Roof Deck Constructions (Roofing Materials and Systems Directory) for items not evaluated.

*Bearing the UL Classification Marking

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DATE: July 29, 1997

Report # 25889

SUBMITTED BY: Englert, Inc.
1200 Amboy Avenue
Perth Amboy, New Jersey 08862

DATE OF TESTING: July 29, 1997

TESTING FACILITY: The Dallas Laboratories, Inc.
Dallas, Texas

WITNESSED BY:
Yoosef Lavi, P.E. - Lavi & Associates
Andy Wilson - The Dallas Laboratories, Inc.

TESTS:

ASTM E-1680-95- Standard Test Method For:
Rate of Air Leakage Through Exterior Metal Roof
Panel Systems

ASTM E-1646-95- Standard Test Method For:
Water Penetration of Metal Roof Panel Systems
by Uniform Static Air Pressure Difference

DESCRIPTION OF UNIT TESTED

Type: Metal deck roof panel
Series: Series 2000 roof panel
Panel Profile: 18" wide by 1-3/4" high
Overall size: 8'-0" wide by 10'-0" long

Englert, Inc.
Series 2000
July 29, 1997
Report # 25889
Page 2 of 5

18 in. wide by 1-3/4 in. high, and 0.024 in. thick Series 2000 roof panels were installed over 6 in. deep by 16 ga. thick "C" purlins, which in turn were attached to a 8'-0" wide by 10'-0" long chamber. Purlins were spaced at 3'-4" on centers as shown on roof plan drawing of this report.

Panels were installed using the Series 2000 roof panel standard clips. Panels were installed with factory applied sealant installed at female corrugation of the panel. No endlap condition was included in this evaluation.

Side, ridge, and eave condition was not a part of this evaluation, and therefore were excluded from this evaluation. This was accomplished by sealing the ends and sides of the panel to the test frame.

The specimen was constructed using the following sequence:
A 16" wide start up panel was secured over the purlins using Series 2000 roof panel standard clips, and 2-#10 Pancake head fasteners. Following installation of the start up panel a full width panel was installed by snapping the female portion of the panel over the male section. This sequence was followed throughout the installation.

Upon completion of the panel installation, the test specimen was preloaded for 22.5 psf positive and negative load respectively. Following preloading, the specimen was tested for air infiltration, and water penetration in accordance with:
ASTM E-1680-95 and ASTM E-1646-95 respectively.

The summary of test results are shown below.

SUMMARY OF TEST RESULTS

<u>Title of test</u>	<u>Test Method</u>	<u>Measured</u>
Air Infiltration @ 1.57 psf	ASTM E-1680-95	.027 cfm/ft2 .043 cfm/Lft
Air Infiltration @ 6.24 psf	ASTM E-1680-95	.068 cfm/ft2 .109 cfm/Lft
Water Penetration @ 6.24 psf	ASTM E-1646-95	No leakage

Englert, Inc.
Series 2000
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Page 3 of 5

The above test results were obtained using the applicable ASTM test methods.

Panels tested were not the actual job condition length.

Ambient temperature was measured at 85, and 86 degrees fahrenheit, prior to and during testing respectively.

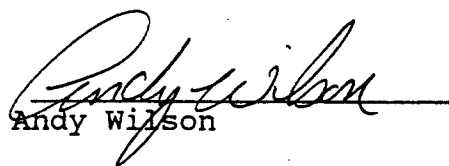
Surface temperature of the panel during the test was measured at 80 degrees fahrenheit.

TEST SUPERVISED BY:



Yoosef Lavi, P.E.

TEST CONDUCTED BY:



Andy Wilson

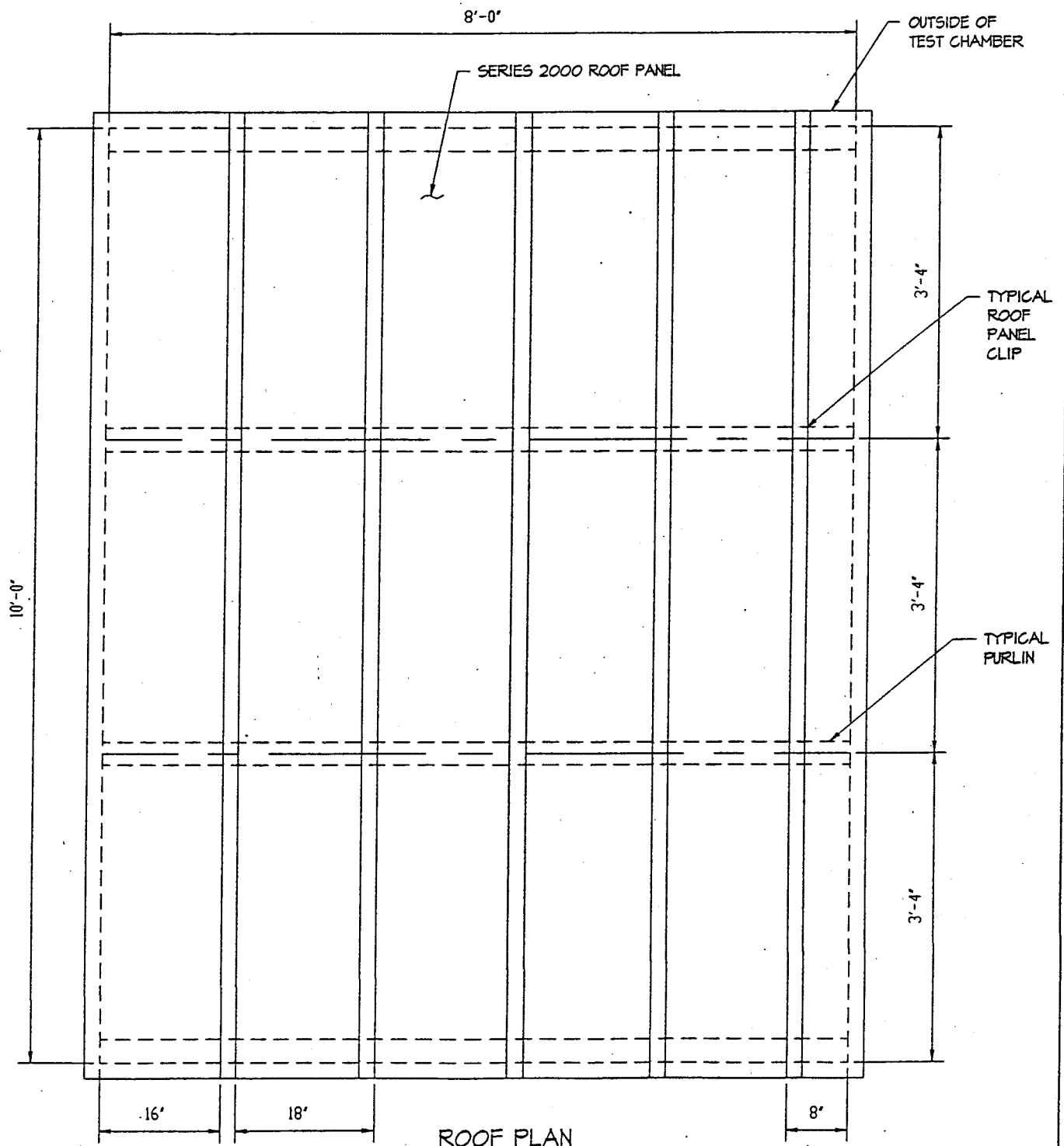
JOB NAME: ENGLERT, INC.

REPORT NO.: 25889

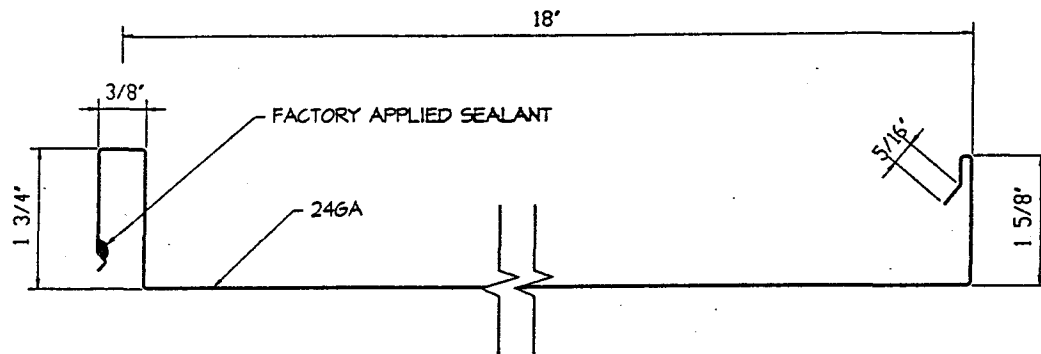
SUBJECT: SERIES 2000

DATE: 7/29/97

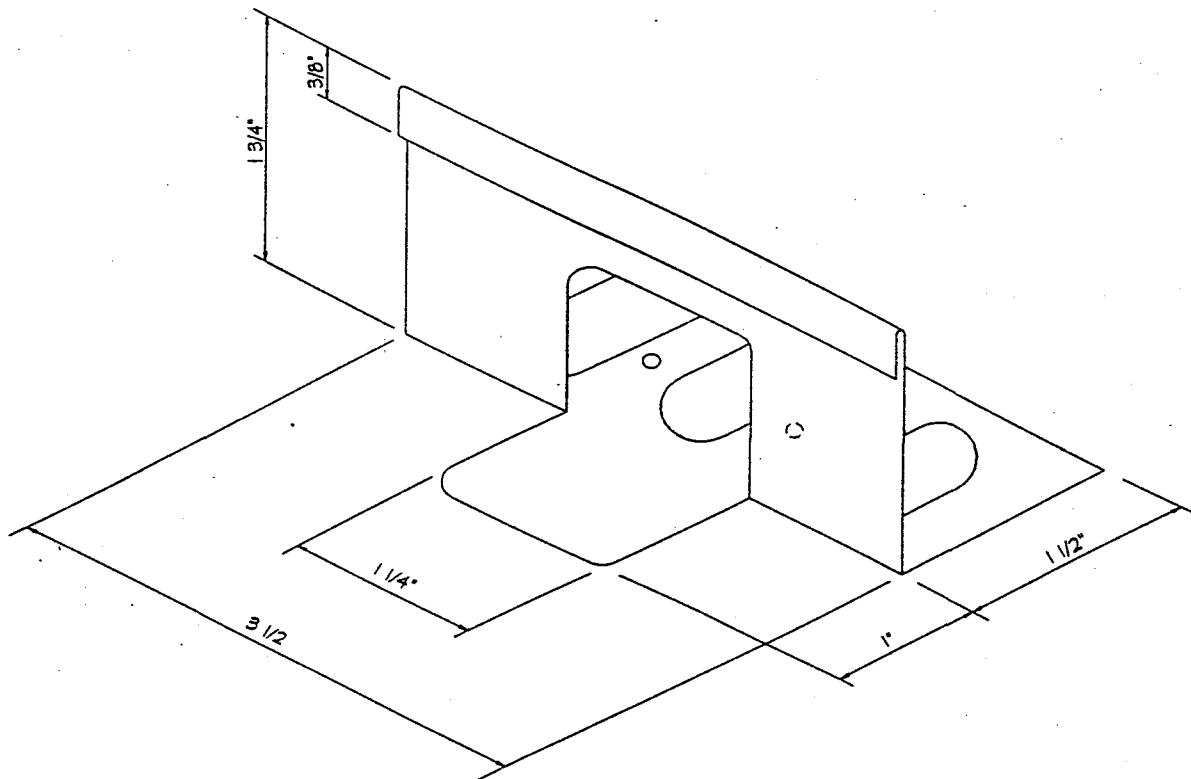
SHEET NO.: 4 OF 5



	JOB NAME: ENGLERT, INC.	REPORT NO.: 25889
	SUBJECT: SERIES 2000	SHEET NO.: 5 OF 5
	DATE: 7/29/97	



SERIES 2000 PANEL PROFILE



SERIES 2000 ROOF PANEL CLIP



TWENTY-YEAR LIMITED WEATHERTIGHTNESS WARRANTY
SERIES _____ ROOFING SYSTEM

(Level 2)

MANUFACTURER:

Address:

Telephone:

ENGLERT, INC.

1200 Amboy Avenue

Perth Amboy, New Jersey 08861

(732) 826-8614

INSTALLATION CONTRACTOR:

Address:

Telephone:

OWNER:

Building Location:

ARCHITECT:

Address:

Telephone:

GENERAL CONTRACTOR:

Address:

Telephone:

PROJECT NAME:

Address:

Area of Metal Roof:

Type of Product Approved and Applied: Series _____ Roofing

WARRANTY PROVISIONS FOR MATERIALS AND WORKMANSHIP

Englert, Inc., a New Jersey Corporation (hereinafter "Englert"), and the Installation Contractor identified above, hereby warrant to the Owner listed above that for a period of twenty (20) years from the date of substantial completion of the Series _____ Roofing System (the "Roofing System"), applied to the above described Building, should leaks develop in the Roofing System due solely to manufacturing defects, ordinary wear and tear by the elements or workmanship on the part of the Installation Contractor, then subject to each and every term, condition and limitation contained herein, they shall be responsible for completing such repairs to the Roofing System as are necessary to return it to watertight condition. Notwithstanding anything contained herein to the contrary, during the first five years of this Warranty, Englert shall only be responsible for water leaks caused by defects in material. The Installation Contractor shall be solely responsible for any and all cost to correct any roof water leak caused by defective workmanship or installation for the first five years after substantial completion. For the remaining fifteen years of this warranty, Englert will correct water leaks caused by defective material and will be jointly responsible with the Installation Contractor to correct leaks caused by defective workmanship.

EXCLUSIONS

This Limited Warranty shall apply only to Roofing Systems installed in areas of normal atmospheric exposure and specifically does not cover leaks caused, in whole or in part, by any one of the following:

1. Marine (salt water) atmosphere or regular spray of either salt or fresh water.
2. Heavy fallout or exposure to corrosive chemicals, ash or fumes from any chemical plant, foundry, plating works, kiln, fertilizer manufacturing plant, paper plant or the like.
3. Any corrosive substance or condensate of any harmful substance contained, generated or released from inside the building; or condensation from the underside of the roof.
4. Worker traffic on the roof, other than traffic during the course of installation.
5. Hail, fire, lightning, wind damage, from wind pressures higher than the building was designed to accommodate, hurricane, tornado, earthquake, or any acts of God (the roof system is covered for damage up to the limits of standard UL-90 uplift ratings for this product).
6. Alterations, such as, but not limited to, structures, fixtures, or utilities being placed upon or attached to the roof without prior written authorization from Englert or repairs performed or materials furnished by entities other than Englert or the Installation Contractor.
7. Failure by the Owner or any lessee or other occupant or user of the Building to take reasonable care in maintaining the roof, such as cleaning the gutters, valleys, etc. so as to allow water to run off uninterrupted.
8. Faulty building design or construction.
9. Birds, vermin, rodents, insects, or other animal or pests.
10. Settlement, failure or cracking of the roof deck, walls, or foundation of the building, or defects or failures of coping gravelstop due to cracking of walls or any part of the building structure.
11. Englert shall have no liability or responsibility under or in connection with this Warranty if the Installation Contractor failed to use all roof curbs, roof jacks, sealants, mastics, subframing, roof panels, clips, and flashings provided by Englert or approved by Englert, nor shall Englert have any liability or responsibility in connection with this Warranty if the Installation Contractor failed to follow Englert's standard recommended installation instructions for the layout, design and erection of the Roofing System, or if the Roofing System is constructed in such a manner as not to permit drainage of water from all surfaces and permit standing or ponding water.
12. Any other cause beyond the control of Englert and the Installation Contractor.

THE WARRANTY CONTAINED HEREIN EXCLUDES ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE EXPRESSLY PROVIDED IN THIS WARRANTY. ENGLERT AND THE INSTALLATION CONTRACTOR SHALL NOT BE LIABLE TO THE OWNER FOR ANY CLAIM BASED UPON STRICT LIABILITY, NEGLIGENCE, BREACH OF WARRANTY, TORT OR OTHER THEORY OR CAUSE OR ACTIONS, NOR SHALL THEY BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES HOWEVER ARISING OR BE RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OR LOSS TO THE BUILDING, ITS CONTENTS, OR OCCUPANTS.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

NOTICE OF CLAIMS AND GENERAL PROVISIONS

All claims hereunder must be submitted, in writing, to Englert within the Warranty period and within thirty (30) days of the discovery of any leak in the Roofing System. Failure of the Owner to do so shall relieve Englert and the Installation Contractor of any and all responsibility and/or liability under the terms hereof. If, after inspection by Englert, it is determined that the leak is caused by defects in the Roofing System's material or workmanship in accordance with this Warranty, the Roofing System shall be repaired in accordance with this Warranty, the Roofing System shall be repaired in accordance herewith. Such work shall be completed within a reasonable period of time after notice to Englert of the weathertightness or watertightness failure. The Owner's exclusive remedy and Englert's and the Installation Contractor's liability shall be limited to repair of the Roofing System and their liability for the cost of said repairs shall not exceed the dollar amount paid by the Owner for the Roofing System, including the cost of installation. All notices given under or pursuant to this Warranty shall be in writing and sent by certified mail, return receipt requests, to Englert and the Installation Contractor to the following addresses:

Warranty Department **ENGLERT, INC.**
1200 Amboy Avenue
Perth Amboy, New Jersey 08862

INSTALLER

During the term of this Warranty, Englert and the Installation Contractor, their sales representatives, and employees, shall have free access to the roofing during regular business hours upon reasonable notice to the Building Owner.

This document constitutes the entire Warranty made by Englert and the Installation Contractor. No modification or amendment of this Warranty shall be binding on Englert or the Installation Contractor unless made in writing and signed by their authorized representatives. The terms, conditions, and provision contained in this Warranty may be waived only in writing signed by Englert. No oral statements, course of conduct or course of dealing shall be deemed or constitute a waiver.

The invalidity or unenforceability of any provisions of this Warranty shall not affect the enforceability and validity of any remaining provisions, and this Warranty shall be construed in all respects as if the invalid or unenforceable provisions were omitted.

This Warranty shall be governed by and construed in accordance with the laws of the State of New Jersey.

This Warranty is tendered for the sole benefit of the Owner as named above and is not transferable or assignable.

Neither Englert nor the Installation Contractor, shall have any obligation under this Warranty unless all invoices for materials and installation have been paid in full by or on behalf of the Building Owner.

EXECUTED AS OF THIS _____ DAY OF _____.

ATTEST:

MANUFACTURER:

ENGLERT, INC.

1200 Amboy Avenue
Perth Amboy, New Jersey 08862

BY: _____

TITLE: _____

ATTEST:

INSTALLATION CONTRACTOR:

CERTIFICATION NO: _____

BY: _____

TITLE: _____

ATTEST:

OWNER:

BY: _____

TITLE: _____



LIMITED EXTERIOR PRODUCT FINISH/BASE METAL WARRANTY

Revision 5 - Issued 8/1/2013

I. INTRODUCTION

Englert, Inc., Perth Amboy, New Jersey, (*hereinafter referred to as "Englert"*) hereby offers the following paint finish warranties and base metal warranties to only the original and first owner(s) of the project and/or building where Englert's coil and flat stock is used for formed roofing, fascia, mansard, wall panels, siding and soffit applications (*hereinafter to be referred to as "Product"*). The warranted paint systems will be the PermaColor 2000, PermaMetallic 2000, PermaColor 3500 ULTRA-Cool® low gloss, and PermaMetallic 3500 ULTRA-Cool® low gloss paint colors which is comprised of a full-strength 70% Kynar 500®/ Hylar 5000® Fluorocarbon. Aluminum will only be offered as a prepainted product. Galvalume® will be offered in prepaint, as a passivated mill finish, or as an acrylic coated mill finish product in both AZ55 or AZ50 coating weights. Englert warrants that its Products, upon delivery, will be free from defects, excluding any freight damage. (*The term "the material will be free from defects" does not include waviness present in the flat/planer areas of Englert's product, due to inconsistency in the metal making process and uneven substrates over which the product is applied, which the industry has accepted as being prevalent and normal.*) Waviness shall not be a cause for a claim under this or any other warranty.

II. GENERAL INFORMATION

This warranty covers three separate and distinct products as outlined below:

1. Prepainted Aluminum Warranty

- When Prepainted Aluminum materials are installed on a property that is located over one-half mile from the seacoast, salt water, or brackish water, Englert will offer a 30-year limited warranty on PermaColor 2000 paint colors, a 35-year limited warranty on PermaColor 3500 ULTRA-Cool® low gloss paint colors, a 30-year limited warranty on PermaMetallic 2000 paint colors, and a 35-year limited warranty on PermaMetallic 3500 ULTRA-Cool® low gloss paint colors.
- When Prepainted Aluminum materials are installed on a property that is located within one half mile from the seacoast, salt water, or brackish water, Englert will offer a 25-year limited warranty on PermaColor 2000 paint colors, PermaColor 3500 ULTRA-Cool® low gloss paint colors, PermaMetallic 2000 paint colors, and PermaMetallic 3500 ULTRA-Cool® low gloss paint colors.

2. Prepainted Galvalume® Warranty

- When Prepainted Galvalume® materials are installed on a property that is located over one-half mile from the seacoast, salt water, or brackish water, Englert will offer a 25-year limited warranty on the Galvalume®, a 30-year limited warranty on PermaColor 2000 paint colors, a 35-year limited warranty on PermaColor 3500 ULTRA-Cool® low gloss paint colors, a 30-year limited warranty on PermaMetallic 2000 paint colors, and a 35-year limited warranty on PermaMetallic 3500 ULTRA-Cool® low gloss paint colors
- When Prepainted Galvalume® materials are installed on a property that is located within one half mile from the seacoast, salt water, or brackish water, Englert does not offer any warranty for any period of time on prepainted Galvalume®.

3. Mill Finish Galvalume® Warranty

- When Mill Finish Galvalume® materials are installed on a property that is located over one-half mile from the seacoast, salt water, or brackish water, Englert will offer a 25-year warranty on an AZ55 coating weight on the base metal and a 20-year warranty on an AZ50 coating weight on the base metal.
- When Mill Finish Galvalume® materials are installed on a property that is located within one-half mile from the seacoast, salt water, or brackish water, Englert does not offer any warranty for any time period on the mill finish Galvalume®.

III. ENGLERT, INC.'S 30-YEAR AND 35-YEAR PERMACOLOR 2000 / 3500 AND PERMAMETALLIC 2000 / 3500 PAINT FINISH WARRANTY

This portion of the warranty applies to the paint finish as outlined below. The Galvalume® base metal is covered in Section IV.

The paint finish on Englert's PermaColor 2000 / 3500 and PermaMetallic 2000 / 3500 is comprised of a full-strength 70% Kynar 500® /Hylar 5000® fluorocarbon paint which will not:

- Chip, crack, check, or peel. (*These terms shall not mean deviations to the paint finish as a result of exposed raw edges, or as a result of roll-forming, embossing, and end cutting of Product, which may occur in and during proper fabrication of the Product.*)
- Chalk in excess of eight (8) numerical ratings, when installed 0 degrees to 86 degrees from vertical, when measured in accordance with the standard test procedures as specified under ASTM D4214-89.
- Fade in excess of five (5) E Units (NBS), when installed 0 degrees to 86 degrees from vertical, measured on exposed painted surfaces which have been cleaned of external deposits, as determined under ASTM D-2244-85, Paragraph 6.3. Color change shall be measured on an exposed, painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed, painted surface, equally exposed to the sun and elements.

This paint finish warranty applies only to Englert's pre-painted coils and flat stock in steel or aluminum used for formed roofing, fascia, mansard, wall panels, siding, and soffit applications and only to **Product erected within the Continental United States** and has been exposed to normal atmospheric conditions. This warranty does not apply to product exposed at any time to corrosive or aggressive atmospheric conditions, including, but not limited to:

- Areas subject to salt-water marine atmospheres or to spraying of either salt or fresh water. (Except pre-painted aluminum.)
- Areas subject to fallout or exposure to corrosive chemicals, fumes, ash, cement dust, animal waste or its decomposition by-products, carbon black, or fallout from copper, lead, salt, nickel or silver mining or refining operations.
- Areas subject to water run-off from lead or copper flashing or piping or areas in contact with lead or copper.
- Conditions/circumstances where corrosive fumes or condensates are generated or released inside the building.

This warranty **DOES NOT APPLY** in the event of:

- Bends less than 4T inside bend diameter for all coil and flat stock thicknesses.
- Roof or sections of the roof flatter than ¼:12 slope.
- Mechanical, chemical, or other damage sustained during shipment, storage, forming, fabrication, or during or after erection including damage caused by walking on the roof.
- Forming which incorporates severe reverse bending or which subjects the coating to alternate compression and tension.
- Failure to provide free drainage of water, including internal condensation, from overlaps and all other surfaces of the sheets or panels.
- Any form of moisture entrapment resulting from, but not limited to, the improper handling, fabrication and/or installation of the product. **Moisture entrapment due to the improper handling, fabrication, and/or installation of the product may cause product failure.**
- Failure to remove debris from overlaps and all other surface of the sheets or panels.
- Damage caused to the metallic coating by improper forming (*including, but not limited to, roll forming, press braking or embossing*) or scouring or cleaning procedures.
- Deterioration of the panels caused by contact with green or wet or pressure-treated lumber, or wet storage stain caused by water damage or condensation.
- Presence of damp insulation, soil, vegetation, cement, or other corrosive materials in contact with or in close proximity to the sheets or panels.
- Deterioration to the panels caused directly or indirectly by panel contact with fasteners or by overdriving the fasteners so as to damage the panel. Selection of suitable long-lasting fasteners to be used with aluminum and Galvalume panels rests solely with the Buyer. Fasteners are to be electrically insulated from the panel surface (*e.g., with elastomeric grommets*) to prevent dissimilar metal contact.
- Failures caused by acts of God, falling objects, external forces, hurricanes, explosions, fires, riots, civil commotions, acts of war, terrorist acts or radiation.
- The installation of any unapproved fixture, attachment, device, equipment, accessory, or appurtenance to, upon, or through the Product, including but not limited to, snow guards, lightning protection, solar panels, or communications devices. Englert reserves the sole and exclusive right to approve the installation of any such fixture, attachment, device, equipment, or accessory. This approval shall be in writing and must be signed by an authorized officer of Englert.
 - Regardless of any installation approval by Englert, any Product failure caused by, arising from, or relating to the installation of any such products or devices as listed above voids this warranty.

The limited warranty does not extend to, or cover: (a) any damage to the coating system caused by the installation of the photovoltaic cells laminates; (b) any damage to coating system caused by removal of the photovoltaic cells laminates; (c) any differential fade or chalk caused by removal of, differential shielding by or reflection of light by the photovoltaic cells laminates; (d) damage, discoloration, differential fade or chalk due to run off from the photovoltaic cells laminates as a result of cleaning, rain, etc.; (e) any damage caused by water entrapment by the photovoltaic cells laminates; or (f) any deficiency in the cleaning, photovoltaic cells laminates pretreatment, or failure of the photovoltaic cells laminates for any reason. This limited warranty will only extend to, or cover applications of photovoltaic cells laminates where the photovoltaic cells laminates are applied over profiles where there are no panel ribs or where striations are either absent or are less than or equal to 15 degrees.

On prepainted aluminum product located less than a half mile from a seacoast, salt water, or brackish water, annual maintenance must be performed by the owner(s) including annual "sweet water" (*fresh tap water*) rinse in accordance with AAMA 610.1-1979 (*copy available upon request*). It will be the owner's responsibility to maintain records to demonstrate this maintenance has occurred and such records must be produced to Englert upon request. Failure of the owner to produce the maintenance

records upon request will void the warranty and Englert shall have no further obligation under the warranty. The Product must not be cleaned with abrasive or chemical cleaners. The use of any such cleaners will void the warranty and Englert shall have no further obligation under the warranty.

This paint finish warranty is strictly limited to the Product as outlined herein and shall not apply to failures, leaks, or consequential damages caused by application of the Product. This paint finish warranty is offered to the original owner(s) only, who is the registered purchaser of the Product, and is not transferable or assignable. Englert expressly precludes others from claiming, representing, or implying that this paint finish warranty extends to or is available to anyone other than the original and first owner(s). It is the responsibility of the building owner(s) to maintain such identification records for purposes of exercising the rights under this paint finish warranty throughout the duration of the paint finish warranty period.

All claims must be submitted in writing to Englert within the paint finish warranty period and within thirty (30) days after discovery of the claimed defect. Failure to timely submit a claim shall constitute a material breach of the Warranty and Englert will not provide any coverage under this for any claim that is not submitted within the thirty (30) day time period. The claim must describe the defect and refer to the paint finish warranty, date of issuance, and include the name of the contractor and invoice of purchase. Englert will then examine the Product or cause it to be examined. If after inspection by Englert it is determined that the claim is valid and in accordance with the terms of the Warranty, Englert agrees at its option to repair or replace the defective Product.

Englert will assume 100% of the cost of refinishing or replacing Product on a non-prorated basis for 25-years, 30-years, or 35-years (in accordance with the applied warranty as outlined in Section I) from the date of installation. The basis for computing cost of refinishing or replacing Product shall be at the current market price. Englert will have sole discretion as to whether the Product is to be refinished, or replaced. If Englert determines that refinishing is the appropriate measure to be taken, then the building owner(s) shall extend a license to Englert or to any of its authorized representatives or contractors to proceed with uninterrupted work for such refinishing. The building owner(s) shall indemnify and hold Englert or any of its agents, authorized representatives, or contractors, harmless from any damages or claims arising out of or connected with such refinishing, provided that such indemnification shall not extend to acts of negligence by Englert, its agents, employees, authorized representatives or contractors.

In the event replacement of Product is deemed necessary by Englert, it shall mean and is limited to Englert furnishing replacement Product only, F.O.B. Perth Amboy, New Jersey. **The term “replacement” does not include labor costs of Product removal, fabrication, or installation.** The refinished or replaced product shall be warranted for the unexpired term of the original warranty. This paint finish warranty does not confer upon the owner(s) the right to refinish, restore, repair, or replace Product without a written authorization executed by a duly authorized officer of Englert. Any restoration, refinishing, repairing, or replacement of Product not authorized in writing by a duly authorized officer of Englert shall result in this warranty becoming null and void.

IV. **ENGLERT, INC.’S LIMITED 20 or 25-YEAR GALVALUME® BASE METAL WARRANTY**

This portion of the warranty applies to the base metal of Galvalume® as outlined below. The paint finish is covered in Section III.

Englert offers the following base metal warranty on Galvalume® (AZ50 or AZ55) to the original and first owner(s). Englert warrants that the base metal of Galvalume® will not rupture, fail structurally, or perforate due to exposure to normal atmospheric conditions, **if erected within the Continental United States.** Visual or cosmetic variations caused by weathering of mill finish Product or variations in spangle are specifically excluded from this base metal warranty. The Product shall be free from material defects, excluding any freight damage. This warranty shall commence from the date of the completion of the installation of all of the Product at the project. The warranty shall apply for the following time periods:

- A. 25-years on prepainted Galvalume® AZ50 or AZ55 coating weight or Galvalume Mill Finish passivated AZ55 or Galvalume Mill Finish Acrylic Coated AZ55 coating weight, **excluding product that is installed less than half a mile from the seacoast, salt water or brackish water.** The warranty does not apply for product installed less than a half mile from the seacoast, salt water, or brackish water.
- B. 20-years on Galvalume Mill Finish passivated AZ50 or Galvalume Mill Finish Acrylic Coated AZ50 coating weight, **excluding product that is installed less than half a mile from the seacoast, salt water or brackish water.** The warranty does not apply for product installed less than a half mile from the seacoast, salt water or brackish water.

This warranty **DOES NOT APPLY** to coil and flat stock exposed at any time to corrosive or aggressive atmospheric conditions, including, **BUT NOT LIMITED TO:**

- 1. Areas subject to salt-water marine atmospheres or to spraying of either salt or fresh water.
- 2. Areas subject to fallout or exposure to corrosive chemicals, fumes, ash, cement dust, animal waste or its decomposition by-products, carbon black, or fallout from copper, lead, salt, nickel or silver mining or refining operations.
- 3. Areas subject to water run-off from lead or copper flashings or piping or areas in contact with lead or copper.
- 4. Conditions/circumstances where corrosive fumes or condensates are generated or released inside the building.

This warranty **DOES NOT APPLY** in the event of:

- 1. Bends less than 4T inside bend diameter for all coil and flat stock thicknesses.
- 2. Roof or sections of the roof flatter than ¼:12 slope.
- 3. Mechanical, chemical, or other damage sustained during shipment, storage, forming, fabrication, or during or after erection including damage caused by walking on the roof.
- 4. Forming which incorporates severe reverse bending or which subjects the coating to alternate compression and tension.
- 5. Failure to provide free drainage of water, including internal condensation, from overlaps and all other surfaces of the sheets or panels.
- 6. Any form of moisture entrapment resulting from, but not limited to, the improper handling, fabrication and/or installation of the product. **Moisture entrapment due to the improper handling, fabrication, and/or installation of the product may cause product failure**
- 7. Failure to remove debris from overlaps and all other surface of the sheets or panels.
- 8. Damage caused to the metallic coating by improper forming (*including, but not limited to, roll forming, press braking or embossing*) or scouring or cleaning procedures.
- 9. Deterioration of the panels caused by contact with green or wet or pressure-treated lumber, or wet storage stain caused by water damage or condensation.
- 10. Presence of damp insulation, soil, vegetation, cement, or other corrosive materials in contact with or in close proximity to the sheets or panels.
- 11. Deterioration to the panels caused directly or indirectly by panel contact with fasteners or by overdriving the fasteners so as to damage the panel. Selection of suitable long-lasting fasteners to be used with Galvalume panels rests solely with the Buyer. Fasteners are to be electrically insulated from the panel surface (*e.g., with elastomeric grommets*) to prevent dissimilar metal contact.
- 12. Failures caused by acts of God, falling objects, external forces, hurricanes, explosions, fires, riots, civil commotions, acts of war, terrorist acts or radiation.
- 13. The installation of any unapproved fixture, attachment, device, equipment, accessory, or appurtenance to, upon, or through the Product, including but not limited to, snow guards, lightning protection, solar panels, or communications devices. Englert reserves the sole and exclusive right to approve the installation of any such fixture, attachment, device, equipment, or accessory. This approval shall be in writing and must be signed by an authorized officer of Englert.
 - a. Regardless of any installation approval by Englert, any Product failure caused by, arising from, or relating to the installation of any such products or devices as listed above voids this warranty.

The limited warranty does not extend to, or cover: (a) any damage to the coating system caused by the installation of the photovoltaic cells laminates; (b) any damage to coating system caused by removal of the photovoltaic cells laminates; (c) any differential fade or chalk caused by removal of, differential shielding by or reflection of light by the photovoltaic cells laminates; (d) damage, discoloration, differential fade or chalk due to run off from the photovoltaic cells laminates as a result of cleaning, rain, etc. (e) any damage caused by water entrapment by the photovoltaic cells laminates; or (f) any deficiency in the cleaning, photovoltaic cells laminates pretreatment, or failure of the photovoltaic cells laminates for any reason. This limited warranty will only extend to, or cover applications of photovoltaic cells laminates where the photovoltaic cells laminates are applied over profiles where there are no panel ribs or where striations are either absent or are less than or equal to 15 degrees.

This limited base metal warranty applies only to Product used for formed roofing, fascia, mansard, wall panels, siding, and soffit applications and only to **Product erected within the Continental United States** which have been exposed to normal atmospheric conditions. It does not apply to Product that has been exposed to corrosive or aggressive atmospheric conditions, as defined and described above.

This base metal warranty is strictly limited to the Product as identified above and shall not apply to failures, leaks, or consequential damages caused by application of the Product. This base metal warranty is offered to the original owner(s) only, who is the registered purchaser of the Product, and is nontransferable or assignable. Englert expressly precludes others from claiming, representing or implying that this warranty extends to or is available to anyone other than the original and first owner(s). It is the responsibility of the owner(s) to maintain such identification records for purposes of exercising the rights under this base metal warranty throughout the duration of the base metal warranty period.

All claims must be submitted in writing to Englert within the base metal warranty period and within thirty (30) days after discovery of the claimed defect. Failure to timely submit a claim shall constitute a material breach of the Warranty and Englert will not provide any coverage under this for any claim that is not submitted within the thirty (30) day time period. The claim must describe the defect and refer to this base metal warranty number and the date of issuance, and to include the name of the contractor and invoice of the purchase. Englert will then examine the Product or cause it to be examined. If, after inspection, it is determined by Englert that the claim is valid in accordance with the terms of the base metal Warranty, Englert agrees, at its option, to repair or replace the defective Product. Englert will assume 100% of the cost of repairing or replacing Product for 25-year metal limited warranty for prepainted Galvalume AZ55 and AZ50 with a 30-year limited warranty on the PermaColor 2000 paint

colors, a 35-year limited warranty on PermaColor 3500 ULTRA-Cool® low gloss paint colors, a 30-year limited warranty on PermaMetallic 2000 paint colors, and a 35-year limited warranty on PermaMetallic 3500 ULTRA-Cool® low gloss paint colors.

A limited base metal warranty of 25-years is given for Mill Finish Galvalume AZ55 and 20-years for Mill Finish Galvalume AZ50. This is outlined in Section IV; A and B, above. The basis of computing cost of repairing or replacing Product shall be the current market price. Englert has sole discretion as to whether the Product shall be the current market price. Englert has sole discretion as to whether the Product is to be repaired or replaced. If Englert determines that repairing is the most appropriate measure to be taken, the owner(s) shall extend a license to Englert or to any of its authorized representatives or contractors to proceed with uninterrupted work for such repairing of Product. The owner(s) shall indemnify and hold Englert or any of its agents, authorized representatives, or contractors, harmless from any damages or claims arising out of or connected with such repair, provided however, that such indemnification shall not extend to acts of negligence by Englert, its agents, employees authorized representatives or contractors.

Repaired or replaced Product shall be warranted for the unexpired term of the original base metal warranty. The term “replacement” shall mean and is limited to Englert furnishing replacement Product only F.O.B., Perth Amboy, New Jersey. **The term “replacement” does not include labor costs of Product removal, fabrication, or installation.** This base metal warranty does not confer upon the owner(s) the right to refinish, restore, repair, or replace product without a written authorization executed by a duly authorized officer of Englert. Any restoration, refinishing, repairing, or replacement of Product not authorized in writing by a duly authorized officer of Englert shall result in this warranty becoming null and void.

Inconsistencies, such as waviness or oil canning, of the flat/planer surfaces of Englert’s Product are not a defect and are expressly excluded from this base metal warranty as this is considered an inherent characteristic of the Product when roll-formed. On Mill Finish Galvalume, both passivated and acrylic coated, uniform visual appearance is not guaranteed. If uniform visual appearance is necessary or desired then a prepainted product should be purchased.

V. **General Terms of All Warranties Contained Within This Certificate**

- A. **DISCLAIMER OF ALL OTHER WARRANTIES: ENGLERT’S WARRANTIES PROVIDED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES. ENGLERT PROVIDES NO OTHER WARRANTIES BEYOND THE DESCRIPTION OF THE WARRANTIES PROVIDED HEREIN. ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR IMPLIED WARRANTIES OF FITNESS OF USE FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED.**
- B. The purchased product warranties contained in this certificate are not valid unless issued by Englert, duly signed by an authorized officer of Englert for the Product on a specific project, identifying its name and location and proof of purchase of the Product from Englert. The warranty certificate must be completed and submitted to Englert. The provisions hereof shall constitute the owner's exclusive remedy for breach of warranty, given under this certificate. Englert shall not be liable to the owner(s) for incidental, special or consequential damages for breach of any written or implied warranty on the Product or its application and under no circumstances shall Englert be responsible for any consequential damages or loss to the building, its contents or other material.
- C. Some states do not allow the exclusion or limitation of incidental or consequential damages or the disclaimer of implied warranties, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary, from state to state. In the event that any provisions of this Warranty are found to be invalid or unenforceable by a court of competent jurisdiction, all other provisions shall remain in full force and effect.
- D. This certificate covers any and all agreements under this Warranty, either expressed or implied, and shall not be modified or extended, except in writing by an authorized officer of Englert.
- E. Failure to apply for any of the warranties herein within thirty (30) days of substantial completion of the component of the building of which the Product is a part shall result in all warranty/warranties becoming null and void.
- F. The parties agree that the warranties in this certificate shall be governed by, construed, and enforced in accordance with the laws of the State of New Jersey. Legal action to construe or enforce any of the warranties in this certificate shall be brought in a Court of competent jurisdiction in Perth Amboy, NJ, USA. The owner(s) expressly agree to submit to the jurisdiction and laws of the courts as set forth above.
- G. No waiver of any provision or condition of this Warranty by Englert, through the course of performance, action, or otherwise, shall be construed by the owners(s) to be a waiver of any other provision or condition of the Warranty.
- H. In the event of any litigation or alternative dispute resolution proceeding arising out of, under, related to, or in connection with this Warranty, the prevailing party shall be entitled to recover all of its reasonable attorney's fees and costs from the non-prevailing party, including but not limited to, pre-trial, trial and appellate levels.



No. _____

Customer Name: _____

Customer Address: _____

City/State/Zip Code: _____

Telephone No.: _____

Order Date: _____

Invoice Number(s): _____

Material Lot Numbers: _____

Color: _____

Building Owner(s) _____

Owner Location: _____

Architect: _____

General Contractor: _____

Project Name: _____

Project Location: _____

Project Completion Date: _____

Panel Profile: _____

Project Size in Sq.Ft _____

Roof/Panels: _____

Components: _____

Within ½ mile from seacoast, salt water, brackish water Yes No

End Use – SIC Code (church, school, etc.) _____

New Roofing/Paneling Re-Roof

Contracting Method: _____

Photos Required: _____

By _____ Title _____ on this _____

SUBSTITUTION REQUEST FORM

DATE: 8/14/20

615 Woodside Drive, Englewood, Ohio 45322

T 937.836.8898 F 937.832.3696

TIME:

www.app-arch.com

PROJECT: Beaver Creek Township
FIRE STATION No. 65

PROPOSED SUBSTITUTION: Section 07 4213.53 - Metal Soffit Panels - Part 2.2.B

Propose Englert B4000, .032" prefinished standard color aluminum, perforated as noted on drawings.

Note B4000 has ASTM E330 structural testing which is comparable to the specified ASTM E1592 Wind Uplift testing.

REQUEST AUTHOR: Jeff Barnard - Englert Inc. **REQUIRED REPLY DATE:** _____

REPLY: Englert is added to the list of approved manufacturers for metal soffit panels.

REPLY AUTHOR:  **REPLY DATE:** 08/14/2020

Curt Sparks

ATTACHMENTS:  **App Architecture**
creative focused design

ACTION REQUIRED:

DISTRIBUTION:

END OF SECTION 01 2500

B4000 CONCEALED FASTENER WALL PANEL SYSTEM



ENGLERT®

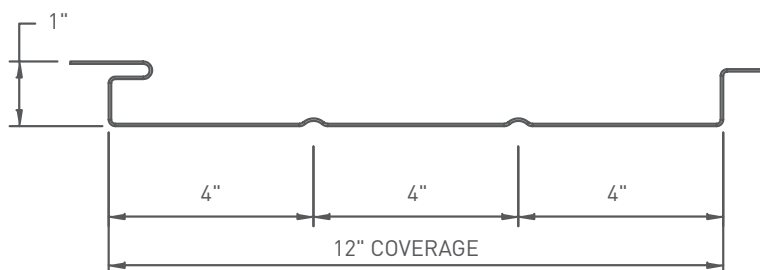
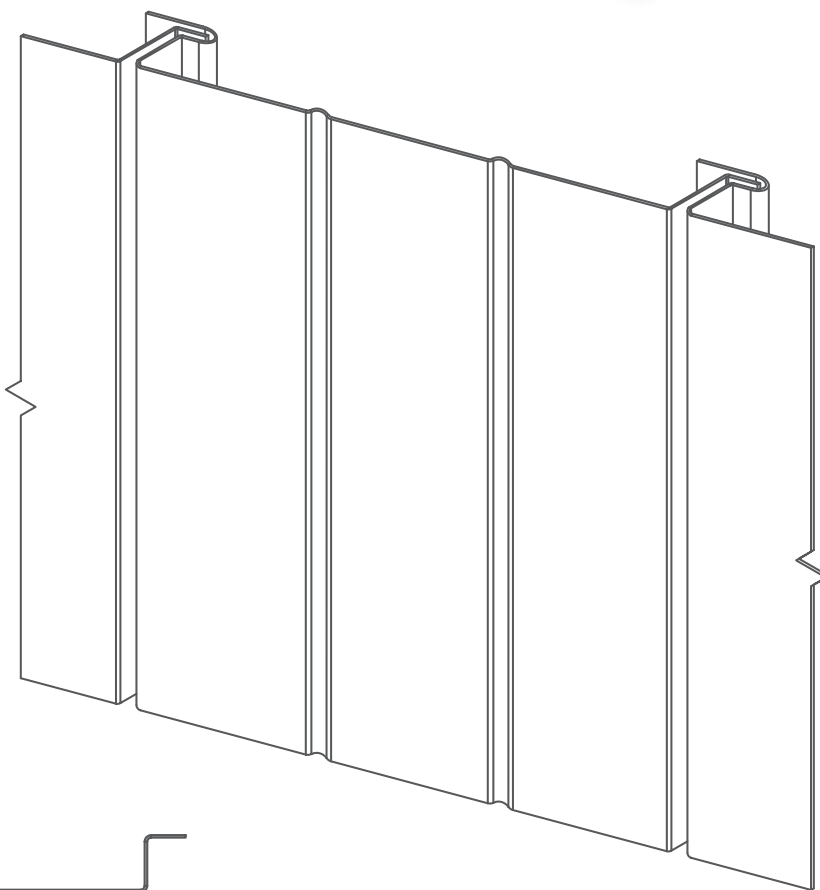
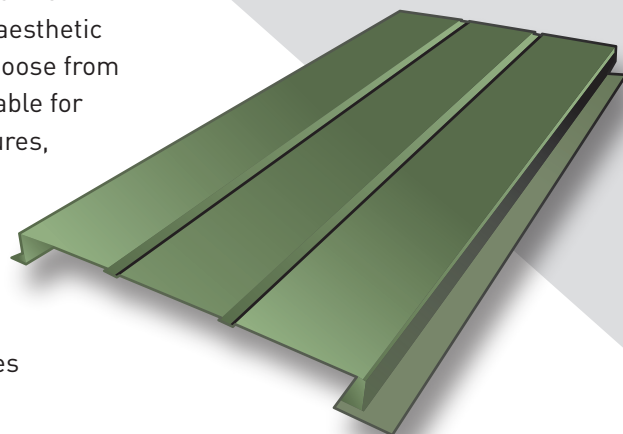
1-800-ENGLERT englertinc.com

Englert offers a full line of commercial/industrial wall panels, available in a wide range of colors all in a Kynar 500® paint finish that meet specific aesthetic and corrosion resistance requirements. Architects and builders can choose from a variety of Englert's economical and durable wall panel systems, suitable for use in pre-engineered metal building applications, agricultural structures, commercial buildings and industrial buildings.

Englert B4000 Concealed Fastener Wall Panel System

The **Englert Series B4000** flush interlocking wall panel system provides consistently smooth wall surfaces. Unobtrusive vertical seams with concealed integral fasteners are secured without the need for additional clips or mechanical seaming. Optional stiffeners are recommended for lighter gauge material. The panels also may be detailed in combination with insulation to produce an insulated siding system.

All of the Englert Commercial/Industrial Wall Panels can be designed with either rigid board insulation, or liner panels and fiber glass batt insulation, to produce field assembled, insulated siding systems.



Englert Series 4000

Architectural Flush Soffit / Flush Wall Panel Profiles

Product Presentation

Englert's Flush Wall and Soffit Panel Systems (A4000 1.5", B4000 1") are uniformly dimensioned and rollformed to variable widths. The tongue-and-groove interlocking system utilizes concealed fasteners, giving it a flush exterior appearance with vertical seams.

Material, finishes

Steel panels are available in all Englert Standard Kynar Colors with a panel width of 12" or 16" on 1" leg and 14" on 1.5". The panels utilize 24 gauge galvalume conforming to ASTM A-792 AZ-55, 50 KSI or equal with baked on Permacolor 3500 Kynar™ 500/ Hylar™ 5000 in smooth finish or Permametallc 2000 metallic coatings. All other colors or widths are subject to special order lead times and quantities.

Aluminum panels are available in all Englert Standard Polyester Gutter Colors with a panel width of 12" or 16". The panels utilize .032" aluminum alloy 3105-H14 or equal with baked on polyester finish, or Permacolor 3500 Kynar™ 500/Hylar™ 5000. Aluminum panels are available in either smooth or perforated styles. Non-standard widths and non-standard colors are all subject to special order lead times and quantities.

Flashings and Flat Stock

All exposed flashings shall be field-formed in the same gauge, finish, color and texture to match the panels with strippable film that can be removed upon installation.

Uses and Applications

Englert's Flush Wall and Soffit System can serve as a wall panel system with a flush finish, no rib effect, or as field-insulated panel assembly for siding applications by dropping insulation boards between hat sections or zees (between spans) and securing panels to the sub-girts.



Limitations

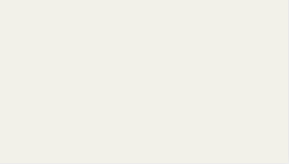
Because of the light gauge metal being employed to rollform the panel system, waviness or oil canning can occur in the planer surface of the panel system. This is not cause for product refusal.

To minimize metal distortion in the planer surface of the panel system, install the panels with an even pressure against adjacent panels, forcing it in a slight convex manner in the planer surface, before securing the next surface with fasteners.

Do not install panels over chemically treated plywood; use #30 felt when applying over plywood deck. Application of Englert Series 4000 Panels on sloped mansards or as a roof system is not recommended.

...another fine product from





BONE WHITE



BURGUNDY



CHARCOAL GRAY



COLONIAL RED



DARK BRONZE



DOVE GRAY



DEEP RED



EVERGLADE MOSS



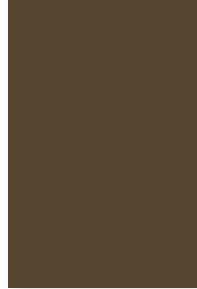
FOREST GREEN



HARTFORD GREEN



HEMLOCK GREEN



MANSARD BROWN



MEDIUM BRONZE



MATTE BLACK



PACIFIC BLUE



PATINA GREEN



ROYAL BLUE



SLATE BLUE



SLATE GRAY



SUNSET BLUE



SANDSTONE



SIERRA TAN



STONE WHITE



TERRA COTTA



Standard COLORS and COATINGS

PERMACOLOR 3500

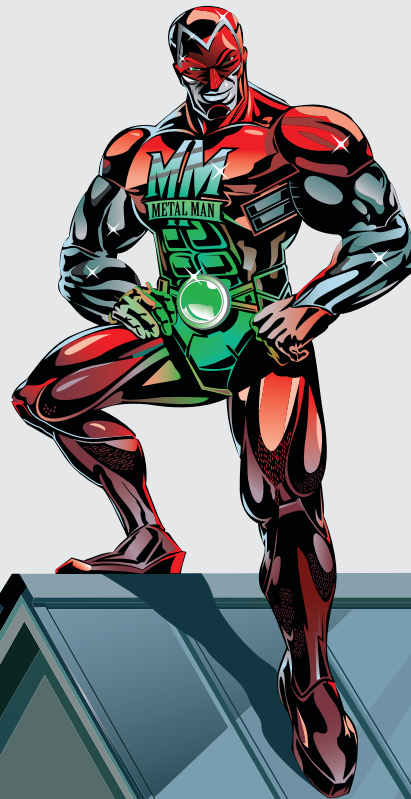
Full Strength 70% Kynar 500®/Hylar 5000®

All colors available in
Galvalume and Aluminum

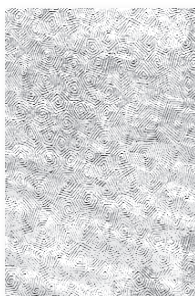


To view current SRI values,
please visit the Englert website.

Colors shown are close to actual finishes
however, due to the limitations of
printing processes, slight variations
may exist. Please contact Englert for
actual color chips before ordering.



MILL FINISH GALVALUME-PLUS®



PERMAMETALLICS 3500*

*Premium priced paint systems.

CHAMPAGNE* (Metallic) Mica 2-Coat System



COPPER* (Metallic) Mica 2-Coat System



PREWEATHERED GALVALUME®*

(Metallic) Mica 2-Coat System

MILL FINISH (Aluminum) Made to order – available in sheets only



FINISHES THAT MEET ANY DESIGN OBJECTIVE

Englert is one of the few single-source metal roof manufacturers with an in-house coil coating line and an exceptionally broad range of finishes, whether the design calls for a natural weathered appearance or bright, high-performance, full-strength fluorocarbon colors.

Custom Colors

We can match the color of virtually any material, including brick, wood and fabric. Englert offers short lead times, and our minimum custom-color order requirements are among the industry's lowest.



ROOFING KYNAR-COATED STANDARDS IN STOCK - SHEET AND COIL

COLORS	STEEL			ALUMINUM			
	22g	24g	26g	.032	.040	.050	.063
Galvalume-Plus®	●	✓	✓	NA	NA	NA	NA
Burgundy	●	✓	✓	✓	●	●	●
Bone White	●	✓	●	✓	✓	✓	●
Charcoal Gray	●	✓	✓	✓	✓	✓	●
Colonial Red	●	✓	✓	✓	●	✓	●
Dark Bronze	●	✓	✓	✓	✓	✓	●
Dove Gray	●	✓	✓	✓	✓	✓	●
Deep Red	●	✓	●	✓	●	●	●
Everglade Moss	●	✓	●	✓	●	●	●
Forest Green	●	✓	✓	✓	✓	✓	●
Hartford Green	●	✓	✓	✓	✓	✓	●
Hemlock Green	●	✓	●	✓	●	✓	●
Mansard Brown	●	✓	✓	✓	✓	✓	●
Medium Bronze	●	✓	✓	✓	✓	✓	●
Mill Finish (Aluminum)*	NA	NA	NA	✓	✓	✓	✓

*Made to order – available in sheets only.

COLORS	STEEL			ALUMINUM			
	22g	24g	26g	.032	.040	.050	.063
Matte Black	●	✓	✓	✓	✓	✓	●
Pacific Blue	●	✓	●	✓	●	●	●
Patina Green	●	✓	●	✓	●	●	●
Royal Blue	●	✓	●	✓	●	●	●
Slate Blue	●	✓	✓	✓	●	✓	●
Slate Gray	●	✓	✓	✓	✓	✓	●
SunNet Blue	●	✓	●	✓	●	●	●
Sandstone	●	✓	●	✓	✓	✓	●
Sierra Tan	●	✓	●	✓	✓	✓	●
Stone White	●	✓	●	✓	✓	✓	●
Terra Cotta	●	✓	●	✓	●	●	●
Champagne (Metallic)**	●	✓	●	✓	✓	●	●
Copper (Metallic)**	●	✓	●	✓	✓	●	●
Prewheathered (Metallic)**	●	✓	●	✓	✓	✓	●

**Mica 2-Coat System

✓ - Standard ● - Minimum Quantities Required NA = Not Available

POLYESTER COATED SHEETS* - ALUMINUM

COLORS (TWO-SIDED)		4' x 10'	4' x 8'
		.032	.032
Bronze	Low-Gloss White	✓	✓

*Contact Englert for information on additional polyester colors.

Colors shown are close to actual finishes however, due to the limitations of printing processes, slight variations may exist. Please contact Englert for actual color chips before ordering.

Specifications subject to change without notice.

DISTRIBUTED BY: _____

TEST REPORT

Report No.: D6555.02-109-44

Rendered to:

ENGLERT, INC.
Perth Amboy, New Jersey

PRODUCT TYPE: Wall Panel System
SERIES/MODEL: B4000 (0.032" Aluminum)

Title	Summary of Results	
	Test Specimen #1 (Riveted)	Test Specimen #2 (Plain)
Air Infiltration (1.57psf)	0.1 L/s/m ² (0.01 cfm/ft ²)*	<0.1 L/s/m ² (<0.01 cfm/ft ²)*
Air Infiltration (6.27 psf)	0.1 L/s/m ² (0.02 cfm/ft ²)*	<0.1 L/s/m ² (<0.01 cfm/ft ²)*
Air Infiltration (15.04 psf)	0.2 L/s/m ² (0.04 cfm/ft ²)*	<0.1 L/s/m ² (<0.01 cfm/ft ²)*
Water Penetration	720 Pa (15.04 psf)*	720 Pa (15.04 psf)*
Design Pressure	+1594 Pa (+33.33 psf) -1116 Pa (-23.33 psf)	+1594 Pa (+33.33 psf) -637 Pa (-13.33 psf)

Reference must be made to Report No. D6555.02-109-44, dated 06/06/2014 for complete test specimen description and detailed test results. *Reference Architectural Testing, Inc. Report No. D6555.01-109-44, dated 06/06/14 for test results.

1.0 Report Issued To: Englert, Inc.
1200 Amboy Avenue
Perth Amboy, New Jersey 08861

2.0 Test Laboratory: Architectural Testing, Inc.
130 Derry Court
York, Pennsylvania 17406-8405
717-764-7700

3.0 Project Summary:

3.1 Product Type: Wall Panel System

3.2 Series/Model: B4000 (0.032" Aluminum)

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). Test specimen description and results are reported herein.

3.4 Test Dates: 04/21/2014 – 04/23/2014

3.5 Test Record Retention End Date: All test records for this report will be retained until April 23, 2018.

3.6 Test Location: Architectural Testing, Inc. test facility in York, Pennsylvania.

3.7 Test Sample Source: The test specimens were provided by the client. Representative samples of the test specimen(s) will be retained by Architectural Testing for a minimum of four years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Scott Gill	Architectural Testing, Inc.
Jeremy R. Bender	Architectural Testing, Inc.
Stephen R. Fowler	Architectural Testing, Inc.
Michael D. Stremmel, P.E.	Architectural Testing, Inc.
Eric M. Brennan	Architectural Testing, Inc.

4.0 Test Method(s):

ASTM E 283-04 (12), *Test Method for Determining Rate of Airflow Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.*

ASTM E 331-00 (09), *Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

ASTM E 330-02 (10), *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Test Specimens #1 and #2:

Overall Area: 5.9 m ² (64.0 ft ²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	2438	96	2438	96
Panel size	305	12	2438	96

5.2 Wall Construction:

Frame Member	Material	Description
2 x 6 Steel studs	18 gauge roll-formed steel (0.044")	Four vertical studs were utilized, spaced 24" on center and secured to the top and bottom 18 gauge steel track with two #8-16 x 1" long self-tapping washer head screws through the front and back of the studs and into the track.
3" wide by 1-1/2" high "Hat" channel	20 gauge roll-formed steel (0.034")	Three horizontal hat channels were located at the head, sill, and midspan. Each hat channel was secured with four #8-16 x 1" long self-tapping washer head screws at each stud location.

5.0 Test Specimen Description: (Continued)

5.3 Panel Installation Details: (Test Specimen #1)

Components	Details	Attachment Method
B4000 wall panel	Fabricated from 0.032" thick aluminum	Installed vertically from jamb to jamb
Gun-able non-curing butyl sealant	Approximately 1/2" wide bead of non-curing butyl sealant	Utilized at each panel interlock, (Reference Drawing W.B4.03)
Installation screws	#10-16 x 1" long pan cake head screws	Spaced approximately 48" on center at each hat channel location, (Reference Drawing Detail W.B4.03)
Pop-rivets	1/8" stainless steel pop-rivets	Spaced 24" on center through the panel interlock, (Reference Drawing W.B4.03)

5.4 Panel Installation Details: (Test Specimen #2)

Components	Details	Attachment Method
B4000 wall panel	Fabricated from 0.032" thick aluminum	Installed vertically from jamb to jamb
Gun-able non-curing butyl sealant	Approximately 1/2" wide bead of non-curing butyl sealant	Utilized at each panel interlock, (Reference Drawing W.B4.03)
Installation screws	#10-16 x 1" long pan cake head screws	Spaced approximately 48" on center at each hat channel location, (Reference Drawing Detail W.B4.03)

6.0 Test Results: The temperature during testing was 19°C (66°F). The results are tabulated as follows:

Test Specimen #1: (Riveted)

Title of Test	Results	Allowed	Note
Air Leakage, per ASTM E 283 at 75 Pa (1.57 psf)	0.1 L/s/m ² (0.01 cfm/ft ²)	N/A	2
Air Leakage, per ASTM E 283 at 300 Pa (6.27 psf)	0.1 L/s/m ² (0.02 cfm/ft ²)	N/A	2
Air Leakage, per ASTM E 283 at 720 Pa (15.04 psf)	0.2 L/s/m ² (0.04 cfm/ft ²)	N/A	2
Water Penetration, per ASTM E 331 at 720 Pa (15.04 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E 330 taken between the middle and bottom hat channel +1676 Pa (+35.00 psf) -1197 Pa (-25.00 psf)	10.2 mm (0.40") 17.0 mm (0.67")	N/A	1
Uniform Load Structural, per ASTM E 330 taken between the middle and bottom hat channel +2394 Pa (+50.00 psf) -1676 Pa (-35.00 psf)	0.8 mm (0.03") 13.7 mm (0.54")	N/A	1

6.0 Test Results: (Continued)

Test Specimen #2: (Plain)

Title of Test	Results	Allowed	Note
Air Leakage, per ASTM E 283 at 75 Pa (1.57 psf)	<0.1 L/s/m ² (<0.01 cfm/ft ²)	N/A	2
Air Leakage, per ASTM E 283 at 300 Pa (6.27 psf)	<0.1 L/s/m ² (<0.01 cfm/ft ²)	N/A	2
Air Leakage, per ASTM E 283 at 720 Pa (15.04 psf)	0.1 L/s/m ² (0.01 cfm/ft ²)	N/A	2
Water Penetration, per ASTM E 331 at 720 Pa (15.04 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E 330 taken between the middle and bottom hat channel +1676 Pa (+35.00 psf) -718 Pa (-15.00 psf)	8.6 mm (0.34") 2.3 mm (0.09")	N/A	1
Uniform Load Structural, per ASTM E 330 taken between the middle and bottom hat channel +2394 Pa (+50.00 psf) -958 Pa (-20.00 psf)	2.0 mm (0.08") 0.5 mm (0.02")	N/A	1

General Note: All testing was performed in accordance with the referenced standard(s).

Note 1: Loads were held for 10 seconds.

Note 2: Reference Architectural Testing, Inc. Report No. D6554.01-109-44, dated 05/09/14 for test results.

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.



Digitally Signed by: Eric Brennan

Eric M. Brennan
Project Manager

EMB:vlm/asm



Digitally Signed for: Michael D. Stremmel by Vicki L. McElwain

Michael D. Stremmel, P.E.
Senior Project Engineer

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Photographs (1)

Appendix-B: Drawing (1)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
1	06/06/14	Appendix B-Drawings	Replaced drawings packet with new drawings packet

Appendix A

Photographs



Photo No. 1
B4000 Aluminum Wall Panel



Photo No. 2
B4000 Failure



Architectural Testing

Test Report No.: D6554.02-109-44

Revision 1: 06/06/14

Report Date: 05/09/14

Appendix B

Drawing



Architectural Testing

Report #:

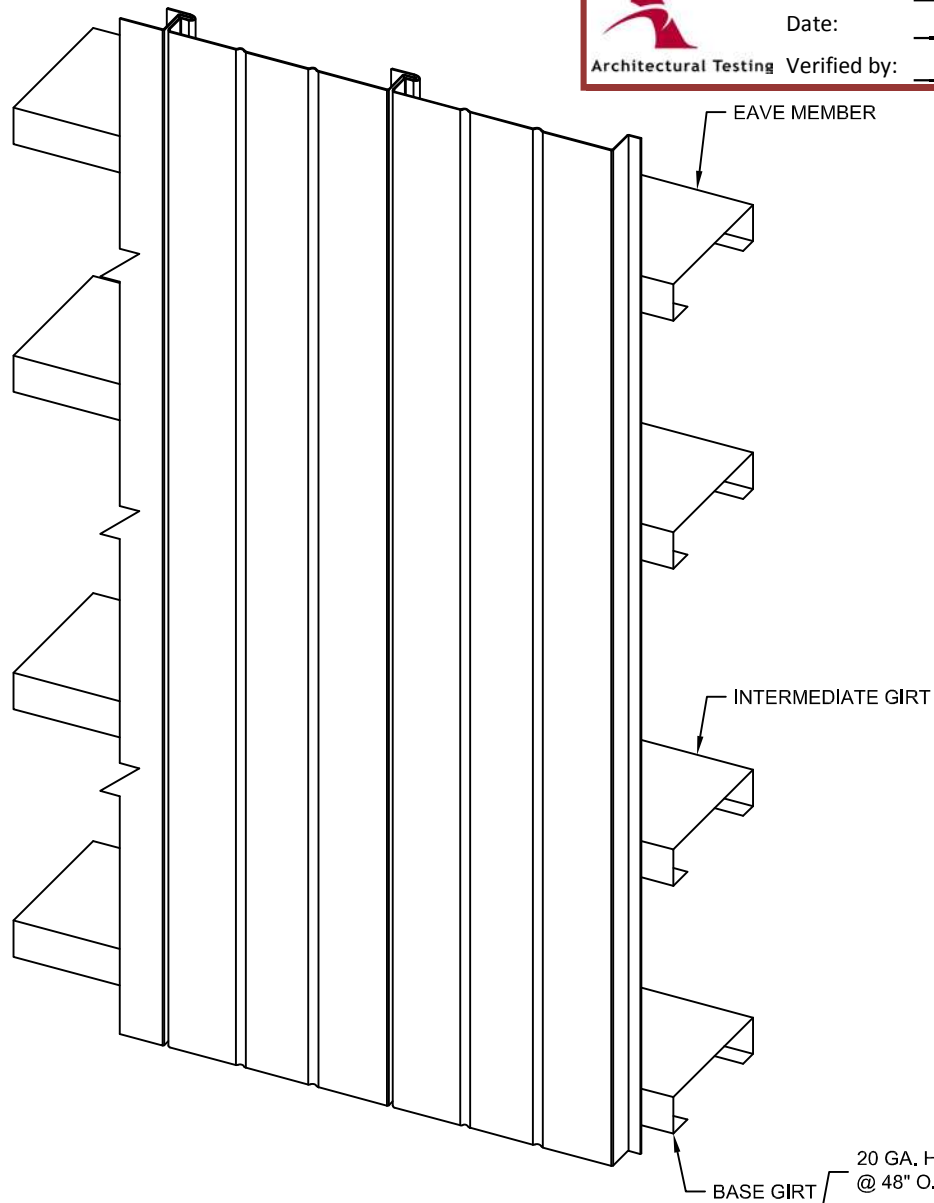
D6555

Date:

06/06/14

Verified by:

[Signature]

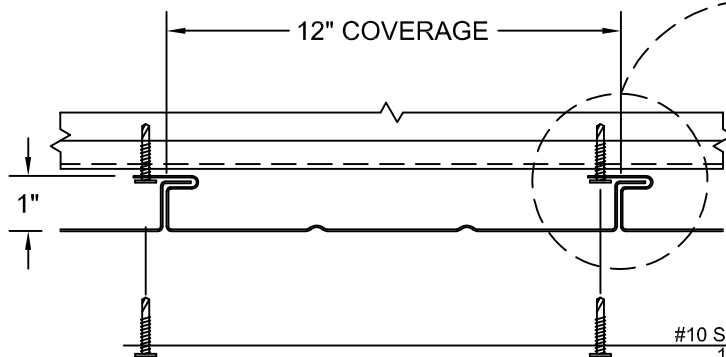


EAVE MEMBER

INTERMEDIATE GIRT

BASE GIRT

20 GA. HAT CHANNEL
@ 48" O.C.

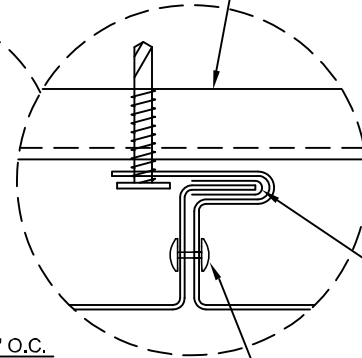


12" COVERAGE

1"

#10 SCREW @ 48" O.C.
1/PANEL/GIRT

$\frac{1}{8}$ " DIAMETER STAINLESS STEEL POPRIVETS
@ 24" O.C. (SEAL RIVETS WITH GUNNABLE BUTYL)



GUNNABLE
BUTYL



B4000 CONCEALED FASTENER STANDARD DETAILS

ISOMETRIC SIDING FASTENER DETAIL

DETAIL SUBJECT TO CHANGE
WITHOUT NOTICE.

Detail #

B4-032-A

GENERIC BEST PRACTICE ASSEMBLY
SHOWN. WATERTIGHTNESS
WARRANTY NOT IMPLIED.
WHEN SITE CONDITION DIFFERS,
SPECIFIC ENGINEERING NECESSARY.

Project: B4000 0.032" ALUMINUM

Date: MAY 2014

Scale: N.T.S.

Location:

By: DAV