



**EVALUATION REPORT**

**FLORIDA BUILDING CODE, 6<sup>TH</sup> EDITION (2017)**

**Manufacturer:** Duro-Last Roofing, Inc.  
 525 Morley Drive  
 Saginaw, MI 48601  
 989-737-3043  
[www.duro-last.com](http://www.duro-last.com)

*Issued February 20, 2019*

**Manufacturing Plants:** Saginaw, MI  
 Jackson, MS  
 Sigourney, IA

**Quality Assurance:** UL LLC (QUA1743)

**SCOPE**

**Category:** Roofing  
**Subcategory:** Single Ply Roof System  
**Code Sections:** 1504.3.1, 1504.6, 1507.13.2, 1515.1.1, 1515.1.4, 1523.1.1, 1523.6.2  
**Properties:** Wind Resistance, Physical Properties

**PRODUCT DESCRIPTION**

Products	Specification	Description
Duro-Last Designer Series Membrane	ASTM D 4434	Nominal 50-mil thick single-ply roof membrane composed of a thermoplastic polyvinyl chloride film laminated to both sides of a polyester fabric scrim. The membranes are available as Rock-Ply® and Shingle-Ply® prefabricated sections or roll goods.
Duro-Last Membrane	ASTM D 4434	Nominal 40-mil (DL40), 50-mil (DL50), or 60-mil (DL60) thick single-ply roof membrane composed of a thermoplastic polyvinyl chloride film laminated to both sides of a polyester fabric scrim. The membranes are available as prefabricated sections or roll goods.
Duro-Fleece Membrane	ASTM D 4434	Nominal 50-mil (DF50), 60-mil (DF60), or 80-mil (DF80) thick single-ply roof membrane composed of a thermoplastic polyvinyl chloride film laminated to both sides of a polyester fabric scrim and backed with fleece. Duro-Tuff membranes are available in the following colors: White for all thickness, and Blue, Copper, Charcoal, Green, Light Gray, Patina, and Light Tan for DF50 and DF60 only The membranes are available as roll goods.
Duro-Fleece Plus Membrane	ASTM D 4434	Nominal 50-mil (DFP50) or 60-mil (DFP60) thick single-ply roof membrane composed of a thermoplastic polyvinyl chloride film laminated to both sides of a polyester fabric scrim and backed with fleece. The membranes are available as roll goods.
Duro-Tuff Membrane	ASTM D 4434	Nominal 50-mil (DT50), 60-mil (DT60), or 80-mil (DT80) thick single-ply roof membrane composed of a thermoplastic polyvinyl chloride film laminated to both sides of a polyester fabric scrim. Duro-Tuff membranes are available in the following colors: White for all thickness, and Blue, Copper, Charcoal, Green, Light Gray, Patina, and Light Tan for DT50 and DT60 only. The membranes are available as roll goods.

## REFERENCES

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
Architectural Testing, Inc. (TST1558)	B8983.01-106-18	TAS 117(A) (1995)
Architectural Testing, Inc. (TST1558)	C0713.01-19.18	TAS 114(J) (1995) <sup>1</sup>
Certified Testing Laboratories (TST1577)	CTLA 107R	TAS 114 (J)(1995)
Certified Testing Laboratories (TST1577)	CTLA 107R-A	TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-013-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-014-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-018-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-021-02-01 Rev 13	ASTM D 1761 (2006); TAS 117(A) & (B) (1995); FM 4474 (2011); TAS 114(D) & (H) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-041-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-029-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-030-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-041-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-045-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-045-02-02	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-046-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-047-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-053-02-01	ASTM D 4434 (2012); ASTM G 155 (2005a)
PRI Construction Materials Technologies (TST5878)	DLRI-055-02-01	ASTM D 4434 (2012); ASTM G 155 (2005a)
PRI Construction Materials Technologies (TST5878)	DLRI-058-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-063-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-068-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-073-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-073-02-02	FM 4474(B) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-077-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-077-02-02	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-079-02-01.1	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-082-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-086-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-086-02-02	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-096-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-096-02-02	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-099-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-100-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-113-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-114-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-115-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-119-02-01	TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-119-02-02	TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-120-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-124-02-02	ASTM D 4434 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-126-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-126-02-02	TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-126-02-03	TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-128-02-01	TAS 117(B) (1995)
PRI Construction Materials Technologies (TST5878)	DLRI-130-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	DLRI-130-02-02	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	NGC-034-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	NGC-035-02-01	FM 4474(D) (2011); TAS 114(J) (1995);



<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
PRI Construction Materials Technologies (TST5878)	NGC-038-02-01	UL 1897 (2012) FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	NGC-041-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
Trinity ERD (TST6049)	02733.01.05-1	FM 4470 (2012); TAS 114(J) (1995)
Trinity ERD (TST6049)	02744.05.06	FM 4470 (2012); TAS 114(J) (1995)
Trinity ERD (TST6049)	D6760.08.07	FM 4470 (2012); TAS 114(J) (1995)
Trinity ERD (TST6049)	02750.02.08	ASTM D 4434 (2012)
Trinity ERD (TST6049)	02762.03.05	TAS 114(D, H & J) (1995)
Trinity ERD (TST6049)	D35210.08.11-R3	ASTM D 4434 (2012)
Trinity ERD (TST6049)	D40260.03.13-1	TAS 110 (2000)
Trinity ERD (TST6049)	D40280.03.13	TAS 110 (2000)
Trinity ERD (TST6049)	D42320.08.12	FM 4474(D) (2012); TAS 114(J) (2011)
Trinity ERD (TST6049)	D44450.05.13-2	ASTM D 4434 (2012)
FM Approvals (TST1867)	J.I. 2M4A8 .AM	FM 4470 (2012)
FM Approvals (TST1867)	J.I. 3Y5A6 .AM	FM 4470 (2012)
FM Approvals (TST1867)	J.I. 1X2A7 .AM	FM 4470 (2012)
FM Approvals (TST1867)	4D6A4.AM	FM 4470 (2012)
FM Approvals (TST1867)	3005604	FM 4470 (2012)
FM Approvals (TST1867)	3006989	FM 4470 (2012)
FM Approvals (TST1867)	3008342	FM 4470 (2012)
FM Approvals (TST1867)	3010289	FM 4470 (2012)
FM Approvals (TST1867)	3010987	FM 4470 (2012)
FM Approvals (TST1867)	3014929	FM 4470 (2012)
FM Approvals (TST1867)	3015816	FM 4470 (2012)
FM Approvals (TST1867)	3023458	FM 4450 (1989)
FM Approvals (TST1867)	3026128	FM 4470 (2012)
FM Approvals (TST1867)	3026508	FM 4450 (2012)
FM Approvals (TST1867)	3032172	FM 4470 (2012)
FM Approvals (TST1867)	3033314	FM 4470 (2012)
FM Approvals (TST1867)	3040346	FM 4470 (2012)
FM Approvals (TST1867)	3044466	FM 4470 (2012)
FM Approvals (TST1867)	3040741	FM 4470 (2012)
FM Approvals (TST1867)	3050118	FM 4470 (2012)
FM Approvals (TST1867)	3054028	FM 4470 (2012)
FM Approvals (TST1867)	3063970	FM 4470 (2012)

<sup>1</sup>Standard test method has been found equivalent to FM 4474 (2004) referenced by the 2017 FBC.



## LIMITATIONS

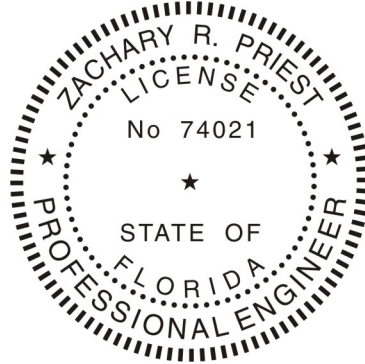
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1. Fire classification is not within the scope of this evaluation.
2. The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads established for components and cladding and in accordance with FBC requirements.
3. Foam plastic insulation shall be installed in accordance with the FBC Section 2603.4.
4. In the HVHZ, fastener spacing for insulation attachment is determined using a Minimum Characteristic Force (F') of 275 lbf as demonstrated via testing to TAS 105. If the field tested fastener value is below 275 lbf, then insulation attachment shall not be acceptable.
5. In the HVHZ, fastener spacing for base sheets or membrane attachment shall meet the minimum fastener resistance value and the *MDP* for the specified roof system. It is permissible for a qualified professional to submit a revised fastener spacing utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137, when the fastener resistance is found less than required.
6. In the HVHZ, if mechanical attachment through the lightweight insulating concrete to the structural deck is proposed, a field fastener withdrawal test shall be conducted in compliance with TAS 105 to determine equivalent or increased attachment densities. Revised fastener densities shall be submitted utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137.
7. For assemblies containing mechanical attachment, the allowable uplift pressure for the selected roof system shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. For perimeter and corner roof zones 2 and 3, the attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in these areas. In the HVHZ, calculations shall be conducted in compliance with RAS 117 and/or RAS 137.
8. Reroofing applications shall be examined in accordance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened roof systems, a field withdrawal resistance test (TAS 105 in the HVHZ; ANSI/SPRI FX-1 or TAS 105 in the non-HVHZ) shall be conducted by a qualified professional to ensure the fastener meets the minimum design load requirements of the roof system. For adhered roof systems, a field uplift resistance test (TAS 124 in the HVHZ; ASTM E 907, FM LPDS 1-52, ANSI/SPRI IA-1, or TAS 124 in the non-HVHZ) shall be conducted to confirm conformance of the existing to the minimum design loads.
9. For assemblies containing fully adhered or ribbon adhered attachment, or where extrapolation of the roof system is not permitted, the *MDP* for the selected roof system shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16 without augmentation.
10. Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
11. The minimum roof slope shall be 1/4:12 for new construction.
12. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.
13. Fasteners applied in rows may impart concentrated loads to structural components of the building. Designers should consider the fastener spacing of the roof system in relation to the spacing of structural supports when selecting a roof system.

## COMPLIANCE STATEMENT

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The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 6<sup>th</sup> Edition (2017) as evidenced in the referenced documents submitted by the named manufacturer.



Zachary R. Priest, P.E.  
Florida Registration No. 74021  
Organization No. ANE9641

## CERTIFICATION OF INDEPENDENCE

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CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

## APPENDICES

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- 1) APPENDIX A – Installation (7 pages)
- 2) APPENDIX B – Nomenclature and Approved Assemblies (33 pages)

**INSTALLATION**

Note - Refer to the [APPROVED ASSEMBLIES](#) section of this report for specific installation details of a selected roof system.

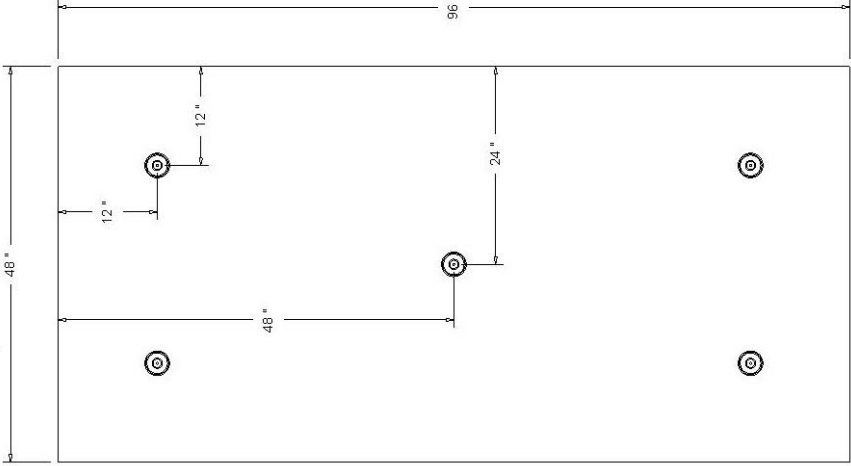
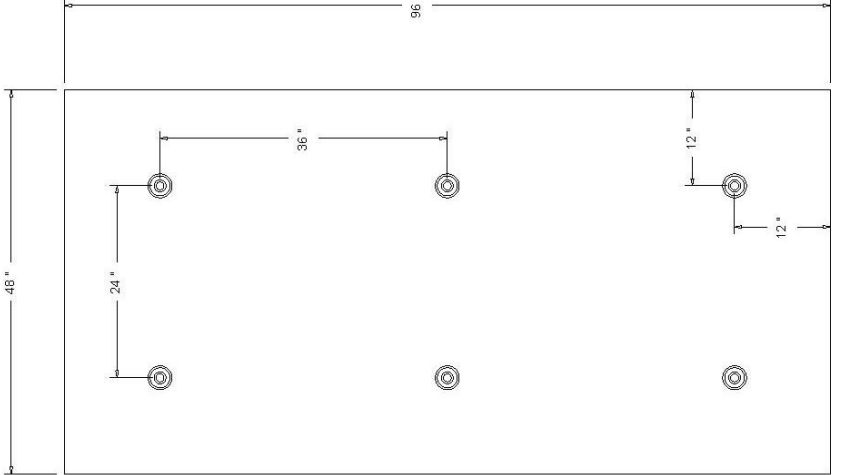
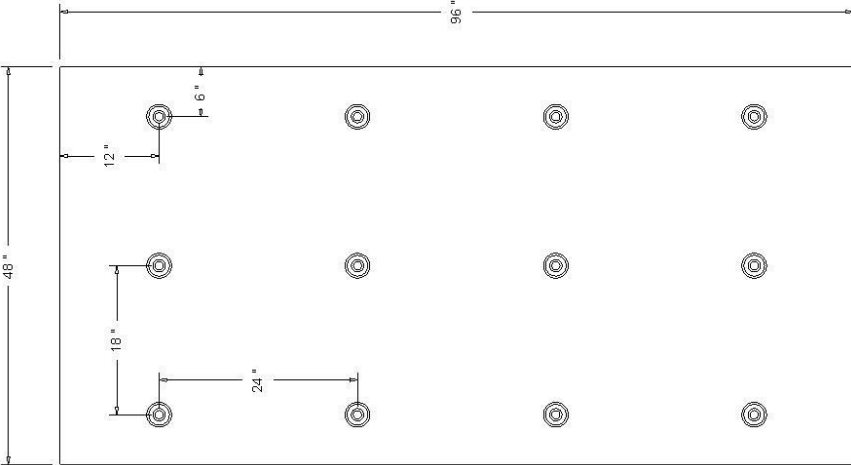
Unless otherwise specified in this report the following installation details shall be met for the named products:

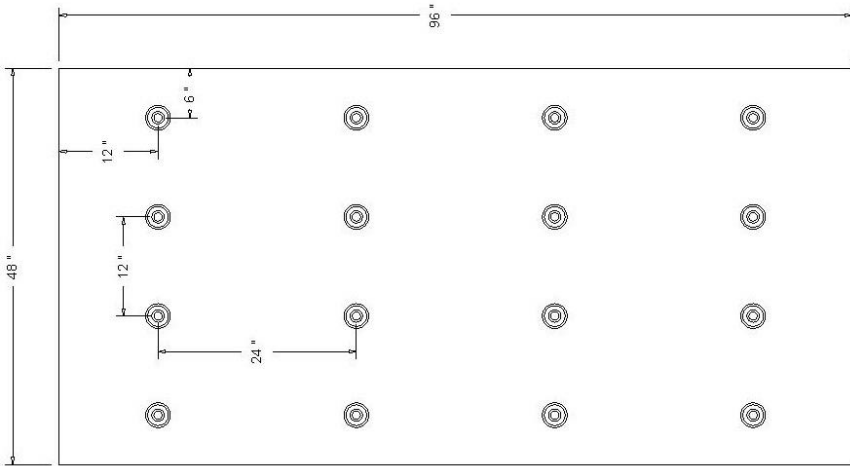
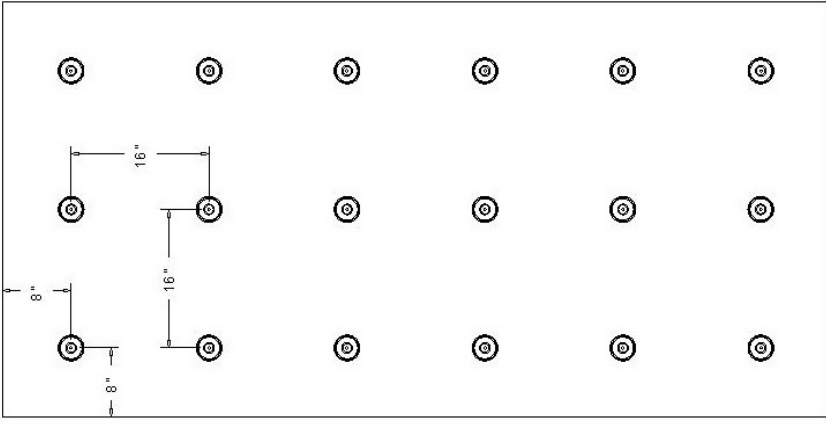
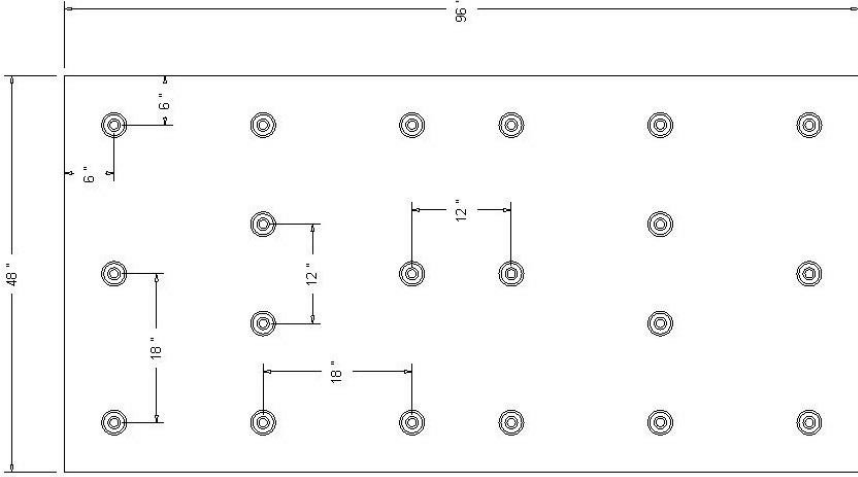
Component	Product	Installation Detail
Fasteners & Plates	Dow ENERFOAM™ Foam Sealant	Dispensed using application gun for 2 full seconds into 7/16-inch pilot hole drilled to a depth of 2.5-inch; Fasteners installed within 20-40 seconds after dispensing
	Duro-Bond Plate 1302	3-inch induction welding plate for PVC membranes; welds not permitted at lap seams
	Duro-Bond PVC IW Plate	
	Duro-Last 3-inch Metal Plates	3-inch x 3-inch square; 0.024-inch thick Galvalume steel
	Duro-Last #14 Concrete Screw	Min. 1.25-inch penetration into concrete
	Duro-Last Cleat Plates	Min. 2 3/8-inch diameter, 0.035-inch thick steel plate with cleats
	Duro-Last Duro-Coated Hex Head Screws	Min. 1.25-inch penetration into concrete
	Duro-Last Fluted Concrete Nail	Min. 1.25-inch penetration into concrete
	Duro-Last #14 HD Fastener	#14 screw; Min. 1-inch penetration into No. 2 wood truss; Min. 3/4-inch penetration through the top rib of the steel deck or through wood deck
	Duro-Last #15 Extra Heavy Duty Drill Point Fastener	#15 screw; Min. 3/4-inch penetration through the top rib of the steel deck or through wood deck
	Duro-Last Auger Fastener	Min. 2-inch penetration into substrate
	Duro-Last Auger Plates	Min. 2-inch diameter steel plate
	Duro-Last Poly-Plate	Min. 2-inch diameter, 0.335-inch thick glass-filled polycarbonate plate with cleats
	OMG XHD Fastener	#15 screw; Min. 3/4-inch penetration through the top rib of the steel deck or through wood deck
	TRUFAST FM-90 Base Sheet Fastener	2.7-inch steel plate with dual grip shanks; Min. 1.7-inch penetration into substrate;
	TRUFAST Twin Loc Coiled Batten Bar	100 ft. long, 1-inch wide, 0.040-inch thick Galvalume coil with pre-punched holes 3-inch o.c.
	TRUFAST DP #12 Fastener	#12 screw; Min. 3/4-inch penetration through the top rib of the steel deck
	TRUFAST 3" Metal Insulation Plate	Min. 3-inch diameter steel plate
	TRUFAST Twin Loc-Nail Assembled Fastener	2.7-inch steel disk with locking staple; Min. 1.8-inch penetration into substrate
	TRUFAST Twin Loc-Nail Batten Fastener	Locking staple; Min. 1.8-inch penetration into substrate; for use with TRUFAST Twin Loc Coiled Batten Bar
TRUFAST VERSA-FAST Fastener	Min. 2-inch embedment into LWIC or Gypsum decks	
TRUFAST VERSA-FAST Metal Plate	3-inch diameter; 0.017-inch thick Galvalume steel plate with one (1) center hole and eight (8) equally spaced perimeter holes for multiple fastening	
Insulation	Continuous ReWall Closed Loop Roof Cover Board with coated fiberglass facer	Min 1/2-inch thick roof board with recycled plastic/cellulose core and coated fiberglass facer
	DEXcell FA Glass Mat Roof Board	Min. 1/4-inch thick gypsum roof board with fiberglass facer
	DEXcell Cement Roof Board	Min. 7/16-inch thick cement roof board with glass mesh

Component	Product	Installation Detail
Insulation (Cont'd)	Duro-Fold Underlayment Board	Min. 0.5-inch thick; Extruded polystyrene (XPS) with polypropylene facer; Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Guard EPS	Min. 0.5-inch, min. 1.8 pcf EPS (HVHZ) or min. 1.5 pcf EPS (non-HVHZ); Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Guard EPS Fan Fold	Min. 0.5-inch, min. 1.25 pcf EPS board with polymeric film facer (non-HVHZ only)
	Duro-Guard EPS Fiberglass Facer (FGF)	Min. 0.5-inch, min. 1.8 pcf EPS (HVHZ) or min. 1.5 pcf EPS (non-HVHZ only) with fiberglass facer; Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Guard XPS Fan Fold	Min. 0.5-inch thick; Extruded polystyrene (XPS) with polymeric facer; Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Last Duro-Guard ISO II-A	Min. 0.5-inch thick; Min. 20 psi polyisocyanurate board with various facers; Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Last Duro-Guard ISO II-G	
	Duro-Last Duro-Guard ISO II-H	
	Duro-Last Duro-Guard ISO III-A	
	Duro-Last Duro-Guard ISO III-G	
	Duro-Last Duro-Guard ISO III-H	
	Duro-Last Duro-Guard ISO IV-A	
	Duro-Last Duro-Guard ISO Foil	
	Duro-Last Duro-Guard ISO HD Composite	Min. 2-inch thick composite polyisocyanurate board; Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Last Duro-Guard ISO HD-A	Min. 0.5-inch thick; Min. 90 psi polyisocyanurate board with coated fiberglass facers; Adhered boards shall be a maximum 4-ft x 4-ft
	Duro-Last Duro-Guard ISO HD-G	
	Duro-Last Duro-Guard ISO HD-H	
	Georgia-Pacific DensDeck, Dens Deck Prime	Min. 0.25-inch thick gypsum roof board with fiberglass facer;
JM Invinsa Roof Board	Min. 0.25-inch thick; Min. 150 psi polyisocyanurate with coated fiberglass facers; Adhered boards shall be a maximum 4-ft x 4-ft	
Insulfoam R-Tech Fan Fold	Min. 0.5-inch ASTM C 578 Type IX (HVHZ) or Type II (non-HVHZ) Expanded Polystyrene with polymeric facers; Adhered boards shall be a maximum 4 ft x 4 ft	
USG SECUROCK Gypsum-Fiber Roof Board	Min. 0.25-inch thick gypsum roof board with fiber reinforcement;	
Insulation Adhesive	Olybond Classic	Applied in 3/4 to 1-inch wide ribbons
	Duro-Grip Board-Max	Apply in 3-inch wide ribbons
	Duro-Grip CR-20 Adhesive	Apply in 3/4 to 1-inch wide ribbons
	Duro-Grip Insta Stik	Apply in 3/4 to 1-inch wide ribbons
	Duro-Grip OlyBond 500	Apply in 3/4 to 1-inch wide ribbons
	Duro-Grip Trufast	Apply in 3/4 to 1-inch wide ribbons
	Duro-Grip WeatherTite One Step	Apply in 1/2 to 3/4-inch wide ribbons
Membrane Adhesive	Duro-Fleece CR-20 Membrane Adhesive	Fleeceback products only; Apply in spatter pattern at a rate of 8 lbs/100-ft <sup>2</sup>

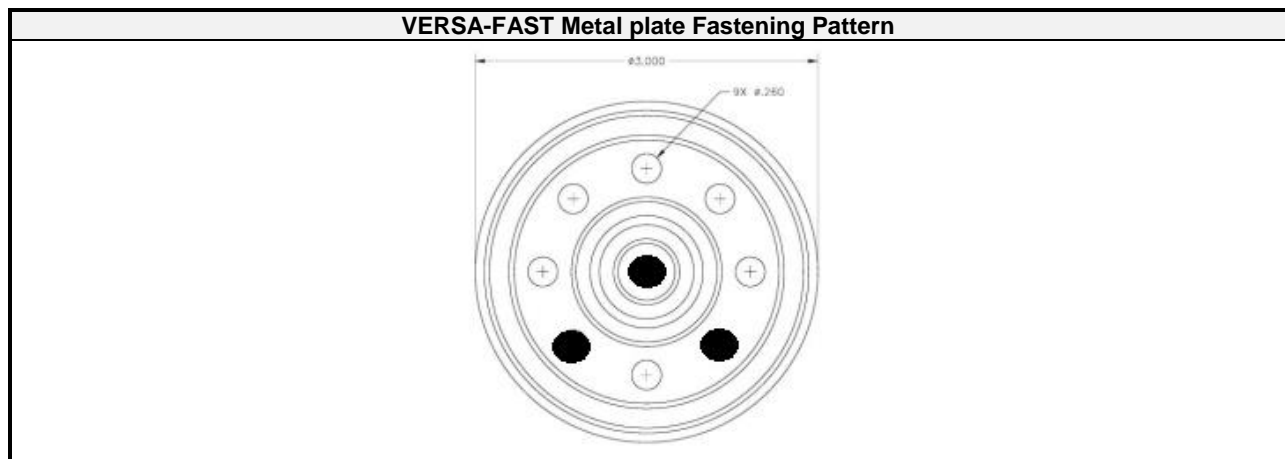
Component	Product	Installation Detail
Membrane Adhesive (Cont'd)	Duro-Fleece Membrane Adhesive	Fleeceback products only; Apply in 3/4-inch wide ribbons
	Duro-Last SB IV Adhesive	Barebacked products only; Fully adhere at a combined rate 60-ft <sup>2</sup> /gal (Apply 120-ft <sup>2</sup> /gal to both membrane and substrate). Coverage will vary depending on porosity of substrate.
	Duro-Last WB II Adhesive	<u>Fleece backed membranes</u> : Fully adhere at a rate of 100-ft <sup>2</sup> /gal to substrate only. Coverage will vary depending on porosity of substrate. <u>Barebacked membranes</u> : Fully adhere at a rate of 140-ft <sup>2</sup> /gal to substrate only. Coverage will vary depending on porosity of substrate.
Single-Ply Membrane	Duro-Last Membrane	Min. 3-inch tab with min. 1.5-inch welded lap seam for adhered and induction welded systems; Side-laps shall be installed parallel to the direction of the wood trusses for mechanically attached systems over wood decks; Side-laps shall be installed perpendicular to the direction of the steel deck ribs for mechanically attached systems over steel deck; For in-lap attachment, the center of the plate shall be 1 1/4-inch from the tab edge.
	Duro-Fleece Plus Membrane	
	Duro-Tuff Membrane	Min. 4-inch lap for mechanically fastened systems and min. 3-inch lap for adhered systems with min. 1.5-inch welded lap seam; Side-laps shall be installed parallel to the direction of the wood trusses for mechanically attached systems over wood decks; Side-laps shall be installed perpendicular to the direction of the steel deck ribs for mechanically attached systems over steel deck.
	Duro-Fleece Membrane	
Thermal Barrier	GAF Versashield Solo	For mechanically fastened systems; Min. 4-inch end lap; Min. 2-inch side lap; Shall be laid perpendicular to the direction of membrane
Vapor Barrier	Duro-Last Vapor Barrier	Self-adhered to substrate with optional ELASTOCOL STICK primer
Edge Systems	Duro-Last Fascia Bar	Designed by others and installed in accordance with Duro-Last's current, published installation instructions.
	Duro-Last Fascia Bar Cover	
	Duro-Last Fascia	
	Duro-Last Snap Coping	
	Duro-Last 2-Piece Metal "T-Edge"	
	Duro-Last Drip Edge	
	Duro-Last 2-Piece Compression Edge	
	Duro-Last Vinyl Coated Metal	
	Duro-Last Gravel Stop	
Duro-Last Versaterm Edge		
Cellular Lightweight Concrete	Celcore S-1	Deck is treated by applying a continuous film with a broom prior to placement of the Celcore lightweight concrete
	Celcore MF with HS Rheology Admixture	Installed over min. 22 ga., 0.5% vented, B-Deck; Slurry coat min. 1/8-inch thick; 1-inch thick EPS board (1 lbs/ft <sup>3</sup> ); Min. 2-inch thick top coat; Celcore PVA curing compound applied at rate of 300 ft <sup>2</sup> /gal
	Elastizell with Zell-Crete Fibers	Slurry coat min. 1/4-inch thick; Min. 1-inch thick EPS board (1 lbs/ft <sup>3</sup> ); Min. 2-inch top coat
	Cellular Lightweight Concrete	

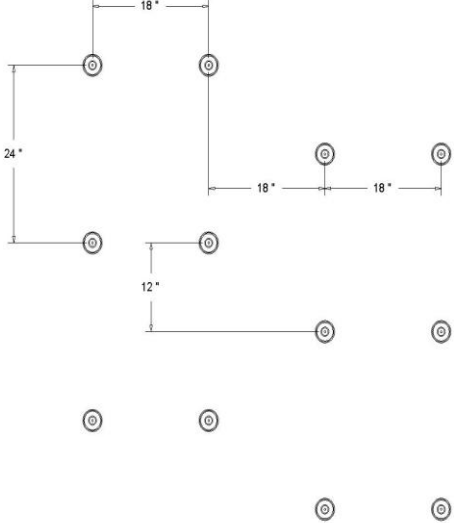
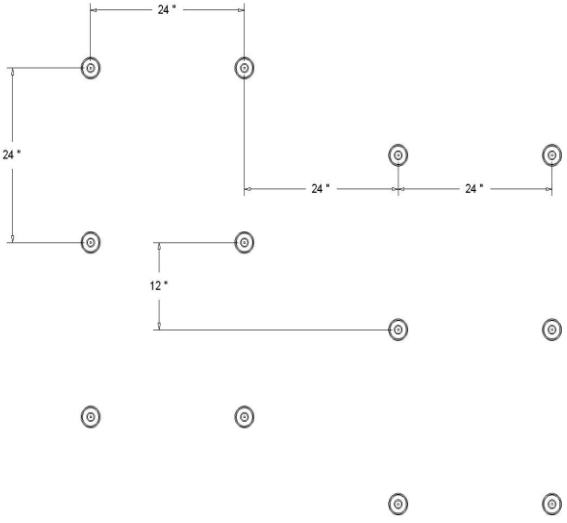
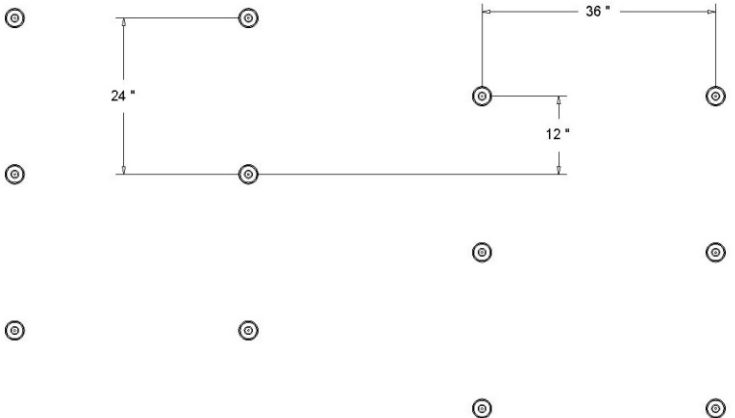


<b>Insulation/Cover Board Fastening Patterns</b>	
Description	Fastening Pattern
5 per 4 ft x 8 ft board	 <p style="text-align: center;">(Max. 6.4ft<sup>2</sup> contributory area per fastener)</p>
6 per 4 ft x 8 ft board	 <p style="text-align: center;">(Max. 6ft<sup>2</sup> contributory area per fastener)</p>
12 per 4 ft x 8 ft board	 <p style="text-align: center;">(Max. 2.67ft<sup>2</sup> contributory area per fastener)</p>

Insulation/Cover Board Fastening Patterns	
Description	Fastening Pattern
16 per 4 ft x 8 ft board	 <p>(Max. 2.0ft<sup>2</sup> contributory area per fastener)</p>
18 per 4 ft x 8 ft board	 <p>(Max. 1.78ft<sup>2</sup> contributory area per fastener)</p>
20 per 4 ft x 8 ft board	 <p>(Max. 1.6ft<sup>2</sup> contributory area per fastener)</p>

Insulation/Cover Board Fastening Patterns	
Description	Fastening Pattern
24 per 4 ft x 8 ft board	<p>(Max. 1.33ft<sup>2</sup> contributory area per fastener)</p>
32 per 4 ft x 8 ft board	<p>(Max. 1.0ft<sup>2</sup> contributory area per fastener)</p>



<b>Induction Weld Patterns</b>	
Description	Fastening Array Repeated Using the Geometric Grid Shown Below
1 per 3.00-ft <sup>2</sup>	
1 per 4.00-ft <sup>2</sup>	
1 per 6.00-ft <sup>2</sup>	

**NOMENCLATURE**

The following naming conventions are utilized to specify products in the [APPROVED ASSEMBLIES](#) section of this report. Refer to the nomenclature below when deciphering the allowable products for use in the selected roof system. Installation requirements shall be as noted in the [APPROVED ASSEMBLIES](#) and [INSTALLATION](#) section of this report.

Name	Definition		
<i>Approved Insulation</i>	One or more layers or combinations of roofing insulation listed in this report or <i>approved</i> under rule 61G20-3, such as gypsum, perlite, polyisocyanurate, polystyrene, or wood fiberboard. Insulation shall be preliminarily secured unless otherwise noted.		
<i>As Tested</i>	Information provided to the report user based on the as tested condition of the roof system		
<i>CR-20</i>	Duro-Fleece CR-20 Membrane Adhesive; For use with <i>DF</i> or <i>DFP</i>		
<i>Deck Detail</i>	All decks shall be designed by others in accordance with FBC requirements. <i>As Tested</i> deck construction details are described as follows:		
	<i>Concrete Deck</i>	Min. $f_c = 2,500$ psi at 28 days	
	<i>CWF Deck</i>	Min. 2.5-inch thick Tectum I cementitious wood fiber panels	
	<i>Steel Deck</i>	Min. 22 ga ( $F_y = \text{min.}33$ ksi) Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for LWIC applications only. The following nomenclature is used to further describe the <i>As Tested</i> condition:	
		<i>F</i> <#>	Number <#> #12-24 HWH self-drilling screws or equivalent fastener at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
		<i>G</i> <#>	Min. Grade <#> of <i>Steel Deck</i>
		<i>L</i> <#>	Max. span of <#> ft
		<i>P</i>	Min. 5/8-inch diameter puddle welds at each flute used to secure the deck to the structural supports
		<i>S</i> <#>	1/4 " -14 HWH x7/8" self-drilling screws or equivalent fastener secured <#>-inch o.c. along the panel side laps
	<i>Wood Deck</i>	<i>W</i>	3/4-inch O.D. flat washer used with indicated fastener
		<b>HVHZ:</b> Min. 19/32-inch thick APA Span-Rated plywood or wood plank for new construction The following nomenclature is used to further describe the <i>As Tested</i> condition:	
		<i>T</i> <#>	Min. <#>-inch thickness of the plywood or wood plank
		<i>L</i> <#>	Max. span of <#> inches
		<i>0.113-&lt;#1&gt;/&lt;#2&gt;</i>	0.113-inch x 2-3/8-inch ring shank nails spaced <#1>-inch o.c. at all intermediate supports and spaced <#2> at the perimeter of each board
	<i>8d-&lt;#1&gt;/&lt;#2&gt;</i>	8d ring shank nails spaced <#1>-inch o.c. at all intermediate supports and spaced <#2> at the perimeter of each board	
<i>Hex-&lt;#1&gt;/&lt;#2&gt;</i>	1/4-inch x 2-inch hex wood screws spaced <#1>-inch o.c. at all intermediate supports and spaced <#2> at the perimeter of each board		
<i>DD</i>	Min. 1/4-inch thickness Georgia-Pacific DensDeck		
<i>DDP</i>	Min. 1/4-inch thickness Georgia-Pacific DensDeck Prime		
<i>DF</i>	One ply of any one of the following products: DF50, DF60, or DF80 membranes		

APPENDIX B

Name	Definition
<i>DFP</i>	One ply of any one of the following products: DFP50 or DFP60 membranes
<i>DG-BM</i>	Duro-Grip Board-Max
<i>DG-CR</i>	Duro-Grip CR-20
<i>DG-IS</i>	Duro-Grip Insta Stik
<i>DG-OB</i>	Duro-Grip OlyBond 500
<i>DG-TF</i>	Duro-Grip Trufast
<i>DG-OS</i>	Duro-Grip WeatherTite One Step
<i>DL</i>	One ply of any one of the following products: DL40, DL50, or DL60 membranes
<i>DL Plates &amp; #15 Fasteners</i>	Duro-Last 3" Metal Plates and Duro-Last #15 Extra Heavy Duty Drill Point Fastener for <i>Steel Decks</i> or <i>Wood Decks</i>
<i>DL Plates &amp; Fasteners</i>	Duro-Last 3" Metal Plates and Duro-Last #14 HD Fastener for <i>Steel Decks</i> or <i>Wood Decks</i> or Duro-Last #14 Concrete Screws for <i>Concrete Decks</i>
<i>DT</i>	One ply of any one of the following products: DT50, DT60, or DT80 membranes
<i>DXF</i>	DEXcell FA Glass Mat Roof Board
<i>DXC</i>	DEXcell Cement Roof Board
<i>Duro-Bond</i>	Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate with Duro-Last #14 HD Fastener for <i>Wood Decks</i> or <i>Steel Decks</i> or Duro-Last #14 Concrete Screw for <i>Concrete Decks</i>
<i>Duro-Bond #15</i>	Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate and Duro-Last #15 Extra Heavy Duty Drill Point Fastener for <i>Steel Decks</i> or <i>Wood Decks</i>
<i>Duro-Grip</i>	Ribbon adhered with any one of the following products: Duro-Grip Board-Max, Duro-Grip CR-20, Duro-Grip Insta Stik, Duro-Grip OlyBond 500, or Duro-Grip WeatherTite One Step
<i>Duro-Guard</i>	One or more layers of the following products: Duro-Guard EPS, Duro-Guard EPS FGF, Duro-Guard ISO II-A, Duro-Guard ISO II-G, Duro-Guard ISO II-H, Duro-Guard ISO III-A, Duro-Guard ISO III-H, Duro-Guard ISO IV-A, or Duro-Guard HD Composite
<i>Duro-Guard II</i>	One or more layers of the following products: Duro-Guard EPS, Duro-Guard ISO II-A, Duro-Guard ISO II-G, or Duro-Last Duro-Guard ISO II-H
<i>EPS</i>	Duro-Guard EPS
<i>FGF</i>	Duro-Guard EPS Fiberglass Facer (FGF)
<i>HD-A</i>	Duro-Guard ISO HD-A
<i>HD-G</i>	Duro-Guard ISO HD-G
<i>HD-H</i>	Duro-Guard ISO HD-H
<i>II-A</i>	Duro-Guard ISO II-A
<i>II-G</i>	Duro-Guard ISO II-G

**APPENDIX B**

Name	Definition
<i>II-H</i>	Duro-Guard ISO II-H
<i>III-A</i>	Duro-Guard ISO III-A
<i>III-G</i>	Duro-Guard ISO III-G
<i>III-H</i>	Duro-Guard ISO III-H
<i>IV-A</i>	Duro-Guard ISO IV-A
<i>LWIC</i>	Poured-in-place; Cellular Lightweight Concrete with encapsulated insulation board
<i>MCRF</i>	Minimum Characteristic Resistance Force as determined by TAS 105 for the named fastener in the selected assembly
<i>MDP</i>	Maximum Design Pressure
<i>Recover</i>	Where assemblies are used to recover an existing roof, the existing roof shall consist of only one layer of roofing, i.e. recovering a previously recovered roof is not permitted. Recover roofing shall be conducted in compliance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened assemblies, the existing roof insulation thickness may be contributory in meeting the minimum insulation thickness requirements for a given roof system.
<i>SB IV</i>	Duro-Last SB IV Adhesive; For use with <i>DL</i> , or <i>DT</i>
<i>SR</i>	USG SECUROCK gypsum-fiber roof board, Min. 1/4-inch thickness
<i>WB II</i>	Duro-Last WB II Adhesive; For use with <i>DF</i> , <i>DFF</i> , <i>DL</i> , or <i>DT</i> ,

**APPROVED ASSEMBLIES**

The following notes shall be observed when using the roof system tables below.

1. *MDPs* were calculated using a 2:1 margin of safety per FBC Section 1504.9 and 1523.4. *MDP* shall exceed -45 psf for use in the HVHZ.
2. Refer to [LIMITATIONS](#) and [NOMENCLATURE](#) sections of this evaluation when using the table(s) below. Items *italicized* refer to specific nomenclature used in this report.
3. Refer to [INSTALLATION](#) section of this report for installation detail when the information is not explicitly stated for the selected roof system.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated roof system.
5. As *Tested* information for roof deck construction is provided for information only. The addition of the *As Tested* deck information does not obviate the requirement for rational design of the roof deck and roof deck attachment in accordance with FBC requirements.
6. Duro-Last Vapor Barrier may be installed direct to deck prior to installing the roof assembly components for following assembly types: C-M-#, C-W-#, G-M-#, LC-M-#, LS-M-#, S-M-#, S-W-#, W-M-#, and W-W-#.

Roof System Numbers and Definitions	
<a href="#">C-A-#</a>	Assemblies with All Layers Adhered over <i>Concrete Deck</i> (New or Existing)
<a href="#">C-AM-#</a>	Assemblies with Adhered Membranes over Insulated <i>Concrete Deck</i> (New, Existing, or <i>Recover</i> )
<a href="#">C-M-#</a>	Mechanically Fastened Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i> )
<a href="#">C-W-#</a>	Induction Welded Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i> )
<a href="#">CW-A-#</a>	Assemblies with All Layers Adhered over <i>CWF Deck</i> (New or Existing)
<a href="#">CW-M-#</a>	Mechanically Fastened Assemblies over <i>CWF Deck</i> (New, Existing, or <i>Recover</i> )
<a href="#">G-A-#</a>	Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)
<a href="#">G-M-#</a>	Mechanically Fastened Assemblies over Poured Gypsum Deck (New or Existing)
<a href="#">LC-A-#</a>	Lightweight Concrete Assemblies with All Layers Adhered over <i>Concrete Deck</i> (New or Existing)
<a href="#">LC-M-#</a>	Mechanically Attached Lightweight Insulating Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)
<a href="#">LS-A-#</a>	Lightweight Concrete Assemblies with All Layers Adhered over <i>Steel Deck</i> (New or Existing)
<a href="#">LS-M-#</a>	Mechanically Attached Lightweight Insulating Concrete Assemblies over <i>Steel Deck</i> (New or Existing)
<a href="#">R-A-#</a>	<i>Recover</i> Assemblies with All Layers Adhered
<a href="#">R-M-#</a>	Mechanically Fastened <i>Recover</i> Assemblies
<a href="#">R-W-#</a>	Induction Welded <i>Recover</i> Assemblies
<a href="#">S-A-#</a>	Assemblies with All Layers Adhered over <i>Steel Deck</i> (New or Existing)
<a href="#">S-AM-#</a>	Assemblies with Adhered Assemblies over <i>Steel Deck</i> (New, Existing or <i>Recover</i> )
<a href="#">S-M-#</a>	Mechanically Fastened Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i> )
<a href="#">S-W-#</a>	Induction Welded Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i> )
<a href="#">W-A-#</a>	Assemblies with All Layers Adhered over <i>Wood Deck</i> (New or Existing)
<a href="#">W-M-#</a>	Mechanically Fastened Assemblies over <i>Wood Deck</i> (New or Existing, or <i>Recover</i> )
<a href="#">W-W-#</a>	Induction Welded Assemblies over <i>Wood Deck</i> (New, Existing, and <i>Recover</i> )



**APPENDIX B**

<b>Assemblies with All Layers Adhered over Concrete Deck (New or Existing)</b>							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
C-A-1	Min. 0.5-inch <i>Duro-Guard II</i>	<i>Duro-Grip</i> or <i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>EPS FGF, II-A, II-G, II-H, III-A, III-H, IV-A, HD-A, HD-G, HG-H, DDP, or SR</i>	<i>Duro-Grip</i> or <i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-60 (Lim. 9)</b>
C-A-2	Min. 1-inch <i>III-H</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	OPTIONAL <i>DDP, DXC, DXF, HD-A, HD-G, or SR</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-90 (Lim. 9)</b>
C-A-3	OPTIONAL Min. 1-inch <i>EPS, II-A, II-G, II-H, III-A, or III-G</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DXF</i> or <i>SR</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-97.5 (Lim. 9)</b>
C-A-4	-	-	-	-	<i>DL</i>	<i>SB IV</i>	<b>-102.5 (Lim. 9)</b>
C-A-5	OPTIONAL Min. 1-inch <i>EPS, II-A, II-G, II-H, III-A, or III-G</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>HD-H</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-112.5 (Lim. 9)</b>
C-A-6	Min. 1-inch <i>EPS, II-A, II-G, II-H, III-A, or III-G</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	OPTIONAL <i>DDP, HD-G, or DXC</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-120 (Lim. 9)</b>
C-A-7	OPTIONAL Min. 1-inch <i>EPS, II-A, II-G, II-H, III-A, or III-G</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>HD-G</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-120 (Lim. 9)</b>
C-A-8	Min. 1-inch <i>II-H</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	OPTIONAL <i>DDP</i> or <i>DXC</i>	<i>DG-TF</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-127.5 (Lim. 9)</b>
C-A-9					<i>DL</i>	<i>WB II</i>	<b>-127.5 (Lim. 9)</b>
C-A-10	Min. 1-inch <i>EPS, II-A, II-G, II-H</i>	<i>Duro-Grip</i> ribbon adhered 12-inch o.c.	OPTIONAL (except <i>EPS</i> ) <i>DXC</i> or <i>DXF</i>	<i>Duro-Grip</i> ribbon adhered 12-inch o.c.	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-135 (Lim. 9)</b>
C-A-11	Min. 0.5-inch <i>EPS FGF, II-A, or II-H</i>	<i>DG-IS</i> ribbon adhered 12-inch o.c.	-	-	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-135 (Lim. 9)</b>
C-A-12	Min. 0.5-inch <i>II-G</i>	<i>DG-IS</i> ribbon adhered 12-inch o.c.	-	-	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-142.5 (Lim. 9)</b>
C-A-13	Min. 0.5-inch <i>EPS FGF, II-A, or II-H</i>	<i>DG-OS</i> ribbon adhered 12-inch o.c.	-	-	<i>DL, DT, DF</i> or <i>DFP</i>	<i>WB II, SB IV, or CR-20</i>	<b>-150 (Lim. 9)</b>

**APPENDIX B**

<b>Assemblies with All Layers Adhered over Concrete Deck (New or Existing)</b>							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
C-A-14	OPTIONAL Min. 1-inch EPS	DG-TF ribbon adhered 12-inch o.c.	DDP	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-165 (Lim. 9)
C-A-15	-	-	DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-180 (Lim. 9)
C-A-16	Min. 0.5-inch Duro-Guard II	DG-CR or DG-BM ribbon adhered 12-inch o.c.	HD-G	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-172.5 (Lim. 9)
C-A-17	Min. 0.5-inch EPS, II-A, II-H	DG-OB ribbon adhered 12-inch o.c.	HD-H, III-A, III-H, DDP, SR, EPS FGF	DG-OB ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-172.5 (Lim. 9)
C-A-18	Min. 0.5-inch EPS FGF, II-A, or II-H	DG-CR or DG-BM ribbon adhered 12-inch o.c.	-	-	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-180 (Lim. 9)
C-A-19	Min. 0.5-inch II-G	DG-OS ribbon adhered 12-inch o.c.	SR or EPS FGF	DG-OS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-195 (Lim. 9)
C-A-20	Min. 0.5-inch EPS FGF, II-A, or II-H	DG-OB ribbon adhered 12-inch o.c.	-	-	DT, DF or DFP	WB II (Fleece only), SB IV, or CR-20	-195 (Lim. 9)
C-A-21	Min. 0.5-inch EPS, II-A, or II-H	DG-OB ribbon adhered 12-inch o.c.	DDP, EPS FGF, III-A, or SR	DG-OB ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-195 (Lim. 9)
C-A-22	Min. 1-inch Duro-Guard II	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DDP	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-202.5 (Lim. 9)
C-A-23	Min. 0.5-inch II-G	DG-OS ribbon adhered 12-inch o.c.	-	-	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-202.5 (Lim. 9)
C-A-24	Min. 1.5-inch Duro-Guard II	DG-CR or DG-BM ribbon adhered 4-inch o.c.	DDP	DG-CR or DG-BM ribbon adhered 4-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-225 (Lim. 9)
C-A-25	Min. 0.5-inch II-G	DG-CR or DG-BM ribbon adhered 12-inch o.c.	-	-	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-232.5 (Lim. 9)
C-A-26	OPTIONAL II-A	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DXF	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-300 (Lim. 9)
C-A-27	OPTIONAL II-A	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DXF	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DL	SB IV	-300 (Lim. 9)
C-A-28	OPTIONAL II-A	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DXF	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-300 (Lim. 9)
C-A-29	OPTIONAL II-A	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DXF	DG-CR or DG-BM ribbon adhered 12-inch o.c.	DFP	CR-20	-300 (Lim. 9)
C-A-30	OPTIONAL II-A	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-382.5 (Lim. 9)
C-A-31	OPTIONAL II-A	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL	SB IV	-382.5 (Lim. 9)
C-A-32	OPTIONAL II-A	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-382.5 (Lim. 9)

**APPENDIX B**

<b>Assemblies with All Layers Adhered over Concrete Deck (New or Existing)</b>							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
C-A-33	OPTIONAL II-A	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DFP	CR-20	-382.5 (Lim. 9)
C-A-34	OPTIONAL II-A	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-382.5 (Lim. 9)
C-A-35	OPTIONAL II-A	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL	SB IV	-382.5 (Lim. 9)
C-A-36	OPTIONAL II-A	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-382.5 (Lim. 9)
C-A-37	OPTIONAL II-A	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DFP	CR-20	-382.5 (Lim. 9)
C-A-38	Min. 1.5-inch II-A or II-H	Olybond Classic ribbon adhered 12-inch o.c.	SR	Olybond Classic ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-457.5 (Lim. 9)
C-A-39	OPTIONAL II-A	ASTM D 312, Type IV hot asphalt	DXF	ASTM D 312, Type IV hot asphalt	DL, DT, DF or DFP	WB II	-495 (Lim. 9)
C-A-40	OPTIONAL II-A	ASTM D 312, Type IV hot asphalt	DXF	ASTM D 312, Type IV hot asphalt	DL	SB IV	-495 (Lim. 9)
C-A-41	OPTIONAL II-A	ASTM D 312, Type IV hot asphalt	DXF	ASTM D 312, Type IV hot asphalt	DF	Duro-Fleece Membrane Adhesive	-495 (Lim. 9)
C-A-42	OPTIONAL II-A	ASTM D 312, Type IV hot asphalt	DXF	ASTM D 312, Type IV hot asphalt	DFP	CR-20	-495 (Lim. 9)
C-A-43	-	-	-	-	DF or DFP	CR-20	-502.5 (Lim. 9)
C-A-44	-	-	-	-	DF or DFP	WB II	-502.5 (Lim. 9)
C-A-45	-	-	-	-	DFP	WB II	-672.5 (Lim. 9)
C-A-46	-	-	-	-	DFP	CR-20	-1,025 (Lim. 9)

<b>Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing or Recover)</b>							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-1	Min. 0.5-inch Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch II-A, II-G, III-A, III-H, IV-A, or Min. 0.5-inch SR	DL Plates & Fasteners secured 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
C-AM-2	Min. 0.5-inch Approved Insulation	Simultaneously secured with top layer	JM Invinso Roof Board	DL Plates & Fasteners secured 16 per 4 ft x 8 ft board	DL	SB IV	-45 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-3	Min. 0.5-inch Approved Insulation	Simultaneously secured with top layer	SR	DL Plates & Fasteners secured at a rate of one fastener per 1.33-ft <sup>2</sup>	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
C-AM-4	Min. 1.5-inch Approved Insulation	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	Min. 0.25-inch DD or II-A	Duro-Fleece Membrane Adhesive ribbons spaced 6-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
C-AM-5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch II-A, II-G, II-H, III-A; Min. 2-inch IV-A; or Min. 0.5-inch SR or DDP	DL Plates & Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
C-AM-6	OPTIONAL Approved Insulation	Simultaneously secured with top layer	SR or DDP	DL Plates & Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
C-AM-7	Min. 1.5-inch Approved Insulation	Simultaneously secured with top layer	DDP or SR	DL Plates & Fasteners secured at a rate of 24 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-67.5 (Lim. 7)
C-AM-8	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch II-A, II-G or III-A; or Min. 2-inch IV-A	DL Plates & Fasteners secured at a rate of 24 per 4 ft x 8 ft board	DF or DFP	WB II	-67.5 (Lim. 7)
C-AM-9	Min. 1.5-inch Approved Insulation	Simultaneously secured with top layer	DDP or SR	DL Plates & Fasteners secured at a rate of 20 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-67.5 (Lim. 7)
C-AM-10	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 2-inch IV-A	DL Plates & Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	SB IV or WB II	-90 (Lim. 7)

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
C-W-1	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Approved Insulation	Duro-Bond secured 6 per 4 ft x 8 ft board	DL or DT	Induction welded to each insulation plate	-45 (Lim. 9)
C-W-2	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch Approved Insulation	Duro-Bond secured 6-inch o.c. in rows spaced 60-inches o.c.	DL or DT	Induction welded to each insulation plate	-45 (Lim. 7)
C-W-3	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch Approved Insulation	Duro-Bond secured 12-inch o.c. in rows spaced 48-inches o.c.	DL60	Induction welded to each insulation plate	-45 (Lim. 7)

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
C-W-4	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 6-inch o.c. in rows spaced 120-inches o.c.	DL60	Induction welded to each insulation plate	-45 <b>(Lim. 7)</b>
C-W-5	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 6-inch o.c. in rows spaced 72-inches o.c.	DL or DT	Induction welded to each insulation plate	-52.5 <b>(Lim. 7)</b>
C-W-6	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 6-inch o.c. in rows spaced 96-inches o.c.	DL60	Induction welded to each insulation plate	-52.5 <b>(Lim. 7)</b>
C-W-7	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 12 per 4 ft x 8 ft board	DL or DT	Induction welded to each insulation plate	-52.5 <b>(Lim. 7)</b>
C-W-8	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	<i>Approved Insulation</i>	<i>Duro-Bond</i> secured 12 per 4 ft x 8 ft board	DT	Induction welded to each insulation plate	-52.5 <b>(Lim. 7)</b>
C-W-9	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 6-inch o.c. in rows spaced 48-inches o.c.	DL or DT	Induction welded to each insulation plate	-82.5 <b>(Lim. 7)</b>
C-W-10	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 6-inch o.c. in rows spaced 60-inches o.c.	DL60	Induction welded to each insulation plate	-82.5 <b>(Lim. 7)</b>
C-W-11	OPTIONAL <i>Approved Insulation</i>	Simultaneously secured with top layer	Min. 1.5-inch <i>Approved Insulation</i>	<i>Duro-Bond</i> secured 6-inch o.c. in rows spaced 48-inches o.c.	DL60	Induction welded to each insulation plate	-82.5 <b>(Lim. 7)</b>

Mechanically Fastened Assemblies over Concrete Deck (New, Existing, or Recover)					
System No.	Insulation	Membrane	Fasteners	Attachment	MDP (psf)
C-M-1	Min 1-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 12-inch o.c. along 6-wide tabs spaced 120-inch o.c.	-30 <b>(Lim. 7; Non-HVHZ)</b>
C-M-2	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 12-inch o.c. along 3-inch wide tabs spaced 60-inches o.c.	-45 <b>(Lim. 7)</b>
C-M-3	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 6-inch o.c. along 3-inch wide tabs spaced 84-inches o.c.	-45 <b>(Lim. 7)</b>
C-M-4	Min. 0.5-inch <i>Approved Insulation</i>	DT	Duro-Last #14 Concrete Screw with Duro-Last Cleat Plates	Fastened 12-inch o.c. within laps spaced 116-inch o.c.	-45 <b>(Lim. 7)</b>
C-M-5	Min 1.5-inch <i>Approved Insulation</i>	DT	Duro-Last #14 Concrete Screw with Duro-Last Cleat Plates	Fastened 12-inch o.c. within laps spaced 56-inch o.c.	-45 <b>(Lim. 7)</b>
C-M-6	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 18-inch o.c. along 3-inch wide tabs spaced 28-inches o.c.	-52.5 <b>(Lim. 7)</b>

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<b>Mechanically Fastened Assemblies over Concrete Deck (New, Existing, or Recover)</b>					
System No.	Insulation	Membrane	Fasteners	Attachment	MDP (psf)
C-M-7	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 6-inch o.c. along 3-inch wide tabs spaced 60-inches o.c.	<b>-52.5 (Lim. 7)</b>
C-M-8	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 6-inch o.c. along 6-inch wide tabs spaced 120-inches o.c.	<b>-52.5 (Lim. 7)</b>
C-M-9	Min. 1.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last 3-inch Metal Plates	Fastened 12-inch o.c. along 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-52.5 (Lim. 7)</b>
C-M-10	Min. 1.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last 3-inch Metal Plates	Fastened 12-inch o.c. along 6-inch wide tabs spaced 84-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-52.5 (Lim. 7)</b>
C-M-11	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Cleat Plates	Fastened 6-inch o.c. along 3-inch wide tabs spaced 84-inches o.c.	<b>-60 (Lim. 7)</b>
C-M-12	Min. 0.5-inch <i>Approved Insulation</i>	DT	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 6-inch o.c. along 6-inch wide laps spaced 54-inch o.c.; fastener centered 1.25-inches from edge of tab	<b>-67.5 (Lim. 7)</b>
C-M-13	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Batten Bar	Fastened 6-inch o.c. along 3-inch wide tabs spaced 60-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-67.5 (Lim. 7)</b>
C-M-14	Min. 1.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw with Duro-Last Cleat Plates	Fastened 12-inch o.c. along 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	<b>-67.5 (Lim. 7)</b>
C-M-15	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last 3-inch Metal Plates	Fastened 6-inch o.c. along 6-inch wide tabs spaced 120-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-82.5 (Lim. 7)</b>
C-M-16	Min. 1.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Cleat Plates	Fastened 6-inch o.c. along 6-inch wide tabs spaced 84-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	<b>-97.5 (Lim. 7)</b>
C-M-17	Min. 1.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Poly-Plates or Cleat Plates	Fastened 6-inch o.c. along 3-inch wide tabs spaced 28-inches o.c.	<b>-105 (Lim. 7)</b>
C-M-18	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last 3-inch Metal Plates	Fastened 6-inch o.c. along 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-105 (Lim. 7)</b>
C-M-19	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last Cleat Plates	Fastened 6-inch o.c. along 6-inch wide tabs spaced 25-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-142.5 (Lim. 7)</b>

<b>Assemblies with All Layers Adhered over CWF Deck (New or Existing)</b>							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
CW-A-1	Min. 1-inch <i>EPS FGF</i>	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP, DXC, DXF, HD-A, HD-G, or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-60 (Lim. 9)</b>

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Assemblies with All Layers Adhered over CWF Deck (New or Existing)							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
CW-A-2	Min. 1-inch III-H	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP, DXC, DXF, HD-A, HD-G, or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-90 (Lim. 9)
CW-A-3	OPTIONAL Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	DXF or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-97.5 (Lim. 9)
CW-A-4	Min. 0.5-inch EPS FGF, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	-	-	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-97.5 (Lim. 9)
CW-A-5	Min. 0.5-inch II-G	Duro-Grip ribbon adhered 12-inch o.c.	HD-G, DDP, EPS FGF, or SR	DG-IS, DG-OB or DG-OS	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-97.5 (Lim. 9)
CW-A-6	Min. 0.5-inch EPS, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	HD-A, HD-G, DDP, EPS FGF, III-A, III-H, IV-A, or SR	DG-OB or DG-IS	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-97.5 (Lim. 9)
CW-A-7	Min. 0.5-inch EPS, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	DXF or DXC	Duro-Grip ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-97.5 (Lim. 9)
CW-A-8	OPTIONAL Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	HD-H	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-112.5 (Lim. 9)
CW-A-9	Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP, HD-G, or DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-120 (Lim. 9)
CW-A-10	OPTIONAL Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	HD-G	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-120 (Lim. 9)
CW-A-11	Min. 1-inch II-H	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP or DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-127.5 (Lim. 9)
CW-A-12	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-150 (Lim. 9)
CW-A-13	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL	SB IV	-150 (Lim. 9)

APPENDIX B

Assemblies with All Layers Adhered over CWF Deck (New or Existing)							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
CW-A-14	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-150 (Lim. 9)
CW-A-15	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DFP, DF	CR-20	-150 (Lim. 9)
CW-A-16	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-150 (Lim. 9)
CW-A-17	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL	SB IV	-150 (Lim. 9)
CW-A-18	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-150 (Lim. 9)
CW-A-19	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DFP or DF	CR-20	-150 (Lim. 9)
CW-A-20	OPTIONAL Min. 1-inch EPS	DG-TF ribbon adhered 12-inch o.c.	DDP	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-165 (Lim. 9)
CW-A-21	-	-	DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-180 (Lim. 9)
CW-A-22	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-180 (Lim. 9)
CW-A-23	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL	SB IV	-180 (Lim. 9)
CW-A-24	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-180 (Lim. 9)
CW-A-25	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DFP, DF	CR-20	-180 (Lim. 9)
CW-A-26	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-205 (Lim. 9)
CW-A-27	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL	SB IV	-205 (Lim. 9)
CW-A-28	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-205 (Lim. 9)
CW-A-29	OPTIONAL II-G	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DFP, DF	CR-20	-205 (Lim. 9)



**APPENDIX B**

<b>Mechanically Fastened Assemblies over CWF Deck (New, Existing, or Recover)</b>					
System No.	Insulation	Membrane	Fasteners	Attachment	MDP (psf)
CW-M-1	-	DL	Duro-Last Auger Fasteners and Auger Plates	Attached 6-inch o.c. within 3-inch tabs spaced 60-inch o.c.	<b>-30</b> (Lim. 7; Non-HVHZ)
CW-M-2	-	DL	Duro-Last Auger Fasteners and Auger Plates with Dow ENERFOAM™	Attached 6-inch o.c. along 3-inch tabs spaced 60-inch o.c.	<b>-37.5</b> (Lim. 7; Non-HVHZ)
CW-M-3	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last Auger Fasteners and Auger Plates	Attached 6-inch o.c. along 6-inch tabs spaced 57-inch o.c.	<b>-45</b> (Lim. 7)
CW-M-4	Min. 0.5-inch <i>Approved Insulation</i>	DL	Duro-Last Auger Fasteners and Auger Plates	Attached 6-inch o.c. along 6-inch tabs spaced 57-inch o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	<b>-52.5</b> (Lim. 7)
CW-M-5	-	DT or DL	Duro-Last Auger Fasteners and Auger Plates with Dow ENERFOAM™	Fastened through the membrane 6-inch o.c. in rows spaced 60-inch o.c.; 10-inch wide membrane welded over fastener rows with 1.5-inch wide heat weld.	<b>-67.5</b> (Lim. 7)
CW-M-6	-	DT or DL	Duro-Last Auger Fasteners and Auger Plates with Dow ENERFOAM™	Fastened through the membrane 6-inch o.c. in rows spaced 96-inch o.c.; 10-inch wide membrane welded over fastener rows with 1.5-inch wide heat weld.	<b>-67.5</b> (Lim. 7)

<b>Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)</b>							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
G-A-1	Min. 1-inch EPS FGF	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP, DXC, DXF, HD-A, HD-G, or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-60</b> (Lim. 9)
G-A-2	Min. 0.5-inch EPS FGF, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	-	-	DL, DT, DF or DFP	WB II or SB IV	<b>-82.5</b> (Lim. 9)
G-A-3	Min. 0.5-inch II-G	Duro-Grip ribbon adhered 12-inch o.c.	HD-G, DDP, EPS FGF, or SR	Duro-Grip ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-82.5</b> (Lim. 9)
G-A-4	Min. 0.5-inch EPS, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	HD-A, HD-G, DDP, EPS FGF, III-A, III-H, IV-A, or SR	DG-OB or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-82.5</b> (Lim. 9)
G-A-5	Min. 0.5-inch EPS, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	DXF or DXC	Duro-Grip ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-82.5</b> (Lim. 9)
G-A-6	Min. 1-inch III-H	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP, DXC, DXF, HD-A, HD-G, or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-90</b> (Lim. 9)

**APPENDIX B**

<b>Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)</b>							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
G-A-7	OPTIONAL Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	DXF or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-97.5 (Lim. 9)</b>
G-A-8	-	-	-	-	DF or DFP	CR-20	<b>-105 (Lim. 9)</b>
G-A-9	OPTIONAL Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	HD-H	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-112.5 (Lim. 9)</b>
G-A-10	Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP, HD-G, or DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-120 (Lim. 9)</b>
G-A-11	OPTIONAL Min. 1-inch EPS, II-A, II-G, II-H, III-A, or III-G	DG-TF ribbon adhered 12-inch o.c.	HD-G	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-120 (Lim. 9)</b>
G-A-12	Min. 1-inch II-H	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL DDP or DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-127.5 (Lim. 9)</b>
G-A-13	OPTIONAL Min. 1-inch EPS	DG-TF ribbon adhered 12-inch o.c.	DDP	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-165 (Lim. 9)</b>
G-A-14	-	-	DXC	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	<b>-180 (Lim. 9)</b>
G-A-15	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	<b>-180 (Lim. 9)</b>
G-A-16	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL	SB IV	<b>-180 (Lim. 9)</b>
G-A-17	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	<b>-180 (Lim. 9)</b>
G-A-18	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF or DFP	CR-20	<b>-180 (Lim. 9)</b>
G-A-19	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	<b>-180 (Lim. 9)</b>

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
G-A-20	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL	SB IV	-180 (Lim. 9)
G-A-21	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-180 (Lim. 9)
G-A-22	OPTIONAL EPS, II-A, II-G, II-H	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF or DFP	CR-20	-180 (Lim. 9)
G-A-23	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-195 (Lim. 9)
G-A-24	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DL	SB IV	-195 (Lim. 9)
G-A-25	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-195 (Lim. 9)
G-A-26	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXF	DG-OB or DG-OS ribbon adhered 12-inch o.c.	DF or DFP	CR-20	-195 (Lim. 9)
G-A-27	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-195 (Lim. 9)
G-A-28	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL	SB IV	-195 (Lim. 9)
G-A-29	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-195 (Lim. 9)
G-A-30	OPTIONAL EPS, II-A, II-H	DG-OS ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF or DFP	CR-20	-195 (Lim. 9)
G-A-31	OPTIONAL II-A	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II	-217.5 (Lim. 9)
G-A-32	OPTIONAL II-A	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DL	SB IV	-217.5 (Lim. 9)
G-A-33	OPTIONAL II-A	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF	Duro-Fleece Membrane Adhesive	-217.5 (Lim. 9)
G-A-34	OPTIONAL II-A	DG-OB ribbon adhered 12-inch o.c.	DXC	DG-OB, DG-OS or DG-IS ribbon adhered 12-inch o.c.	DF or DFP	CR-20	-217.5 (Lim. 9)

Mechanically Fastened Assemblies over Poured Gypsum Deck (New or Existing)					
System No.	Insulation	Membrane	Fasteners	Attachment	MDP (psf)
G-M-1	-	DT	Min. 1.8-inch TRUFAST Twin Loc-Nail Assembled Fastener	Fastened through the membrane 6-inch o.c. in rows spaced 60-inch o.c.; 10-inch wide cover strip welded over fastener rows with 1.5-inch wide heat weld.	-30 (Lim. 7; Non-HVHZ)

Mechanically Fastened Assemblies over Poured Gypsum Deck (New or Existing)					
System No.	Insulation	Membrane	Fasteners	Attachment	MDP (psf)
G-M-2	-	DL	VERSA-FAST Metal Plates and TRUFAST VERSA-FAST Fasteners	Fastened 12-inch o.c. within the 3-inch tabs with one (1) TRUFAST VERSA-FAST Fastener in the center and two (2) TRUFAST VERSA-FAST Fasteners in the perimeter such that one hole is left empty between them; Tabs spaced 60-inch o.c.	-30 (Lim. 7; Non-HVHZ)
G-M-3	Duro-Guard EPS Fan Fold	DL	Min. 3-inch Duro-Last Auger Fasteners and Auger Plates	Fastened 6-inch o.c. along 3-wide tabs spaced 60-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
G-M-4	-	DT or DL	Min. 2.5-inch Duro-Last Auger Fasteners and Auger Plates or TRUFAST Twin Loc Coiled Batten Bar and min. 1.8-inch TRUFAST Twin Loc-Nail Batten Fastener	Fastened through the membrane 6-inch o.c. in rows spaced 48-inch o.c.; 10-inch wide cover strip welded over fastener rows with 1.5-inch wide heat weld.	-45 (Lim. 7)
G-M-5	-	DL	VERSA-FAST Metal Plates and TRUFAST VERSA-FAST Fasteners	Fastened 6-inch o.c. within the 3-inch tabs with one (1) TRUFAST VERSA-FAST Fastener in the center and two (2) TRUFAST VERSA-FAST Fasteners in the perimeter such that one hole is left empty between them; Tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
G-M-6	-	DT or DL	Min. 1.8-inch TRUFAST Twin Loc-Nail Assembled Fastener	Fastened through the membrane 6-inch o.c. in rows spaced 48-inch o.c.; 10-inch wide cover strip welded over fastener rows with 1.5-inch wide heat weld.	-60 (Lim. 7)
G-M-7	-	DT or DL	TRUFAST Twin Loc Coiled Batten Bar and min. 1.8-inch TRUFAST Twin Loc-Nail Batten Fastener	Fastened through the membrane 3-inch o.c. in rows spaced 48-inch o.c.; 10-inch wide cover strip welded over fastener rows with 1.5-inch wide heat weld.	-82.5 (Lim. 7)

Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)					
System No.	LWIC	Membrane	Membrane Attachment	MDP (psf)	
LC-A-1	Min. 300 psi Celcore MF with HS Rheology Admixture	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)	
LC-A-2	Min. 330 psi LWIC (MCRF ≥ 185 lbf using Duro-Last Auger Fasteners)	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)	
LC-A-3	Min. 160 psi LWIC	DF or DFP	CR-20	-62.5 (Lim. 9 HVHZ only)	
LC-A-4	Min. 270 psi Elastizell with Zell-Crete Fibers	DL or DT	WB II	-75 (Lim. 9)	
LC-A-5	Min. 340 psi Celcore MF with HS Rheology Admixture above Celcore S-1	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-82.5 (Lim. 9)	
LC-A-6	Min. 390 psi Celcore MF with HS Rheology Admixture above Celcore S-1.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-90 (Lim. 9)	

**APPENDIX B**

<b>Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)</b>				
System No.	LWIC	Membrane	Membrane Attachment	MDP (psf)
LC-A-7	Min. 270 psi Elastizell with Zell-Crete Fibers	DL or DT	SB IV	-90 (Lim. 9)
LC-A-8	Min. 250 psi Elastizell with Zell-Crete Fibers and topped with Zell-erator tor Sealer	DF or DFP	CR-20	-137.5 (Lim. 9 HVHZ only)
LC-A-9	Min. 300 psi Celcore MF with HS Rheology Admixture topped with Celcore PVA curing compound	DF or DFP	CR-20	-162.5 (Lim. 9 HVHZ only)
LC-A-10	Min. 300 psi Celcore MF with HS Rheology Admixture topped with Celcore PVA curing compound	DL, DT, DF or DFP	WB II	-285 (Lim. 9)
LC-A-11	Min. 200 psi LWIC (MCRF ≥ 60 lbf using TRUFast FM-90 Base Sheet Fastener)	DL, DT, DF or DFP	WB II	-457.5 (Lim. 9)
LC-A-12	Min. 200 psi Elastizell with Zell-Crete Fibers	DL, DT, DF or DFP	WB II	-485 (Lim. 9)

<b>Mechanically Attached Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)</b>				
System No.	LWIC	Membrane	Membrane Attachment	MDP (psf)
LC-M-1	Min. 330 LWIC (MCRF ≥ 185 lbf using Duro-Last Auger Fasteners)	DT or DL	Duro-Last Auger Fasteners and Auger Plates attached 6-inch o.c. in rows spaced 60 in. o.c. and encapsulated with 6-inch wide cover strip of DL	-37.5 (Lim. 7; Non-HVHZ)
LC-M-2	Min. 360 LWIC (MCRF ≥ 91 lbf using TRUFast Twin Loc-Nail Batten Fastener)	DT or DL	TRUFast Twin Loc Coiled Batten Bar and min. 1.8" TRUFast Twin Loc-Nail Batten Fastener attached 3-inch o.c. in rows spaced 48-inch o.c. and encapsulated with 6-inch wide cover strip of DL	-45 (Lim. 7)

<b>Adhered Lightweight Insulating Concrete Assemblies over Steel Deck (New or Existing)</b>					
System No.	Deck Detail	LWIC	Membrane	Membrane Attachment	MDP (psf)
LS-A-1	G33, L5, P, S15	Min. 300 psi Celcore MF with HS Rheology Admixture	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
LS-A-2	Min. 26 ga. HD-Dek, Vented, G80, L5, P, S15	Min. 360 psi LWIC (MCRF ≥ 91 lbf using TRUFast Twin Loc-Nail Batten Fastener)	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-45 (Lim. 9)
LS-A-3	G33, L6, P, S18	Min. 340 psi Celcore MF with HS Rheology Admixture above Celcore S-1	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-82.5 (Lim. 9)
LS-A-4	G33, L5, P, S18	Min. 390 psi Celcore MF with HS Rheology Admixture above Celcore S-1.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-90 (Lim. 9)

Adhered Lightweight Insulating Concrete Assemblies over Steel Deck (New or Existing)					
System No.	Deck Detail	LWIC	Membrane	Membrane Attachment	MDP (psf)
LS-A-5	G33, L5, F1, S15	Min. 330 psi Celcore MF with HS Rheology Admixture; Secure lightweight with OMG HD Batten Bars or OMG Polymer Batten Strips oriented with the length of the bar perpendicular to the deck flutes and spaced 18-inch o.c.; Secure battens with OMG XHD fastened 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-97.5 (Lim. 9)
LC-A-6	G33, L5	Min. 160 psi LWIC	DF or DFP	CR-20	-175 (Lim. 9 HVHZ only)
LC-A-7	G33, L5	Min. 250 psi Elastizell with Zell-Crete Fibers and topped with Zell-erator tor Sealer	DF or DFP	CR-20	-295 (Lim. 9 HVHZ only.)

Mechanically Attached Lightweight Insulating Concrete Assemblies over Steel Deck (New or Existing)					
System No.	Deck Detail	LWIC	Membrane	Membrane Attachment	MDP (psf)
LS-M-1	Min. 26 ga. HD-Dek, Vented, G80, L5, P, S15	Min. 330 LWIC (MCRF ≥ 185 lbf using Duro-Last Auger Fasteners)	DT or DL	Duro-Last Auger Fasteners and Auger Plates attached 6-inch o.c. in rows spaced 60 in. o.c. and encapsulated with 6-inch wide cover strip of DL	-37.5 (Lim. 7; Non- HVHZ)
LS-M-2	Min. 26 ga. HD-Dek, Vented, G80, L5, P, S15	Min. 360 LWIC (MCRF ≥ 91 lbf using TRUFAS TWIN Loc-Nail Batten Fastener)	DT or DL	TRUFAS TWIN Loc Coiled Batten Bar and min. 1.8" TRUFAS TWIN Loc-Nail Batten Fastener attached 3-inch o.c. in rows spaced 48-inch o.c. and encapsulated with 6-inch wide cover strip of DL	-45 (Lim. 7; Non- HVHZ)

Adhered Recover Assemblies						
System No.	Existing Roof	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-A-1	Steel Deck (G33, L6, F1, S24)	DDP or SR	Duro-Last #14 HD Fastener and Duro-Last 3-inch Metal Plates fastened at a rate of 24 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV, or CR-20	-67.5 (Lim. 7)
R-A-2	Steel Deck (G33, L6, F1, S24)	Min. 0.5-inch SR	TRUFAS DP #12 Fasteners and TRUFAS 3" Metal Insulation Plates fastened at a rate of 32 per 4 ft x 8 ft board	DL, DT, DF or DFP	SB IV or WB II	-82.5 (Lim. 7)
R-A-3	Smooth or Granule Surfaced BUR, Granule Surfaced SBS or Granule Surfaced APP Cap Sheet. Subcomponents adhered	-	-	DF	CR-20	-120 (Lim. 9)

**APPENDIX B**

Adhered Recover Assemblies						
System No.	Existing Roof	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-A-4	Granule Surfaced BUR, SBS or APP Cap Sheet. Subcomponents mechanically attached.	-	-	DFP	CR-20	-150 (Lim. 9)
R-A-5	Smooth or Granule Surfaced BUR, Granule Surfaced SBS or Granule Surfaced APP Cap Sheet. Subcomponents adhered.	-	-	DFP	CR-20	-370 (Lim. 9)

Mechanically Fastened Recover Assemblies						
System No.	Existing Roof	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-1	CWF Deck or Gypsum Deck	-	-	DL	Duro-Last Auger Fasteners and Auger Plates fastened through the membrane 6-inch o.c. in rows spaced 48-inch o.c.; 10-inch wide membrane welded over fastener rows with 1.5-inch wide heat weld.	-30 (Lim. 7; Non-HVHZ)
R-M-2	Poured Gypsum	-	-	DL	VERSA-FAST Metal Plates fastened 12-inch o.c. within the 3-inch tabs with one (1) TRUFAST VERSA-FAST Fastener in the center and two (2) TRUFAST VERSA-FAST Fasteners in the perimeter such that one hole is left empty between them; Tabs spaced 60-inch o.c.	-30 (Lim. 7; Non-HVHZ)
R-M-3	Steel Deck (G33, L6, P, S24)	OPTIONAL Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Cleat Plates fastened 12-inch o.c. within 6-inch wide laps spaced 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-4	Poured Gypsum	-	-	DT or DL	Duro-Last Auger Fasteners (min. 2.5-inch penetration into substrate) and Auger Plates or TRUFAST Twin Loc Coiled Batten Bar and TRUFAST Twin Loc-Nail Batten Fastener fastened through the membrane 6-inch o.c. in rows spaced 48-inch o.c.; 10-inch wide cover strip welded over fastener rows with 1.5-inch wide heat weld.	-45 (Lim. 7)
R-M-5	Steel Deck (G33, L6, F1, S24)	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Cleat Plates fastened 12-inch o.c. within 6-inch wide laps spaced 114-inch o.c.	-45 (Lim. 7)
R-M-6	Min. 24 ga. R-Panel or PBR panel metal roofing at max. 5ft span and fastened 12-inch o.c. at each support with min. #12 HWH screws with min. 0.5-inch washers	Approved Insulation filled between ribs. Min. 0.5-inch Approved Insulation above ribs	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. within 3-inch wide tabs spaced 60-inch o.c.	-45 (Lim. 7)
R-M-7	Steel Deck (G33, L6, F1, S0)	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Poly-Plates or Cleat Plates fastened 6-inch o.c. along 6-inch wide tabs spaced 120-inch o.c.	-45 (Lim. 7)

**APPENDIX B**

<b>Mechanically Fastened Recover Assemblies</b>						
System No.	Existing Roof	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-8	Steel Deck (G33, L6, F1, S24)	OPTIONAL Approved Insulation	Preliminarily secured	DT (120-inch wide)	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Cleat Plates fastened 12-inch o.c. within 4-inch wide laps spaced 116-inch o.c.	-45 (Lim. 7)
R-M-9	Wood Deck (T19/32, L24, 0.113-6/6)	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.; fastener centered 1.25-inches from edge of tab	-45 (Lim. 7)
R-M-10	Steel Deck (G33, L6, PW or F1, S24)	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.; fastener centered 1.25-inches from edge of tab	-45 (Lim. 7)
R-M-11	Min. 225 psi LWIC over Steel Deck (Min. 26 ga. HD-Dek, Vented, G80, L5, P, S15)	-	-	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 3-inch wide tabs spaced 60-inch o.c.	-45 (Lim. 7)
R-M-12	Min. 26 ga. R-Panel or PBR panel metal roofing at max. 5ft span and fastened 6-inch o.c. at each support with min. #12 HWH screws	Approved Insulation filled between ribs. Min. 0.5-inch Approved Insulation above ribs	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.	-45 (Lim. 7)
R-M-13	Steel Deck (G33, L6, PW, S24)	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.; fastener centered 1.25-inches from edge of tab	-52.5 (Lim. 7)
R-M-14	Steel Deck (G33, L6, PW, S0)	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Poly-Plates or Cleat Plates fastened 6-inch o.c. along the 3-inch wide tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
R-M-15	Wood Deck (T19/32, L24, 0.113-6/6)	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. along 3-inch wide tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
R-M-16	Wood Deck (T19/32, L24, 8d-6/6)	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates fastened 6-inch o.c. along 6-inch wide tabs spaced 57-inch o.c. (Screws located 2.7-inches from tab edge)	-52.5 (Lim. 7)
R-M-17	Wood Deck (T19/32, L24, 8d-6/6)	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #14 HD Fastener and Duro-Last 3-inch Metal Plates fastened 6-inch o.c. along 6-inch wide tabs spaced 57-inch o.c. Tab Sealer 4725 applied at a rate of 60 ft <sup>2</sup> /gal.	-52.5 (Lim. 7)
R-M-18	Min. 24 ga. R-Panel or PBR panel metal roofing at max. 5ft span and fastened 12-inch o.c. at each support with min. #12 HWH screws with min. 0.5-inch washers	Approved Insulation filled between ribs. Min. 0.5-inch Approved Insulation above ribs	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 12-inch o.c. along 3-inch wide tabs spaced 28-inch o.c.	-52.5 (Lim. 7)



Mechanically Fastened Recover Assemblies						
System No.	Existing Roof	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-19	Min. 26 ga. R-Panel or PBR panel metal roofing at max. 5ft span and fastened 6-inch o.c. at each support with min. #12 HWH screws	Approved Insulation filled between ribs. Min. 0.5-inch Approved Insulation above ribs	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 12-inch o.c. within 6-inch wide laps spaced 24-inch o.c.	-52.5 (Lim. 7)
R-M-20	Poured Gypsum	-	-	DL	VERSA-FAST Metal Plates fastened 6-inch o.c. within the 3-inch tabs with one (1) TRUFAST VERSA-FAST Fastener in the center and two (2) TRUFAST VERSA-FAST Fasteners in the perimeter such that one hole is left empty between them; Tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
R-M-21	Wood Deck (T19/32, L24, 0.113-6/6)	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. along 6-inch wide tabs spaced 120-inch o.c.	-60 (Lim. 7)
R-M-22	Wood Deck (T15/32, L24, 0.113-6/6)	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps in rows spaced 24-inch o.c.	-60 (Lim. 7)
R-M-23	Wood Deck (T15/32, L24, 0.113-6/6)	-	-	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. along 3-inch wide tabs spaced 28-inch o.c.	-60 (Lim. 7)
R-M-24	Steel Deck (G33, L6, F1, S24)	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.; fastener centered 1.25-inches from edge of tab	-67.5 (Lim. 7)
R-M-25	CWF Deck	-	-	DT or DL	Duro-Last Auger Fasteners and Auger Plates with Dow ENERFOAM™ fastened through the membrane 6-inch o.c. in rows spaced 60-inch o.c.; 10-inch wide membrane welded over fastener rows with 1.5-inch wide heat weld.	-67.5 (Lim. 7)
R-M-26	CWF Deck	-	-	DT or DL	Duro-Last Auger Fasteners and Auger Plates with Dow ENERFOAM™ fastened through the membrane 6-inch o.c. in rows spaced 96-inch o.c.; 10-inch wide membrane welded over fastener rows with 1.5-inch wide heat weld.	-67.5 (Lim. 7)
R-M-27	Gypsum Deck	-	-	DT or DL	TRUFAST Twin Loc Coiled Batten Bar and TRUFAST Twin Loc-Nail Batten Fastener fastened through the membrane 3-inch o.c. in rows spaced 48-inch o.c.; 10-inch wide cover strip welded over fastener rows with 1.5-inch wide heat weld.	-82.5 (Lim. 7)

**APPENDIX B**

Mechanically Fastened Recover Assemblies						
System No.	Existing Roof	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-28	Min. 24 ga. R-Panel or PBR panel metal roofing at max. 5ft span and fastened 12-inch o.c. at each support with min. (2) #12 HWH screws with min. 0.5-inch OD washers per rib	Approved Insulation filled between ribs. Min. 1-inch Approved Insulation above ribs	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. along 3-inch wide tabs spaced 28-inch o.c.	-82.5 (Lim. 7)
R-M-29	Concrete Deck	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #14 Concrete Screw or Fluted Concrete Nail with Duro-Last 3-inch Metal Plates fastened 6-inch o.c. along 6-inch wide tabs spaced 120-inch o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-82.5 (Lim. 7)

Induction Welded Recover Assemblies						
System No.	Existing Roof	Weld Plate	Weld Plate Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-1	Steel Deck (G33, L6, F1, S24)	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate	Secured at a rate of 1 per 4.00-ft <sup>2</sup> (See Appendix A - Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	-52.5 (Lim. 7)
R-W-2	Steel Deck (G33, L6, P, S24)	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate	Secured at a rate of 1 per 4.00-ft <sup>2</sup> (See Appendix A - Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	-52.5 (Lim. 7)

Assemblies with All Layers Adhered over Steel Deck (New or Existing)								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-A-1	G33, L6, F1, S24	OPTIONAL Duro-Guard II	Duro-Grip ribbon adhered 6-inch o.c	Min. 1.5-inch EPS FGF, II-A, II-G, III-A, III-H, IV-A; or HD-G, HD-G, HD-A, DDP, SR, DXF or DXC	Duro-Grip ribbon adhered 6-inch o.c.	DL or DT	WB II or SB IV	-37.5 (Lim. 9; Non-HVHZ)
S-A-2	G33, L6, F1, S24	OPTIONAL Duro-Guard II	Duro-Grip or DG-TF ribbon adhered 6-inch o.c	Min. 1.5-inch EPS FGF, II-A, II-G, III-A, III-H, IV-A; or HD-G, HD-G, HD-A, DDP, SR, DXF or DXC	Duro-Grip or DG-TF ribbon adhered 6-inch o.c.	DF or DFP	WB II or CR-20	-37.5 (Lim. 9; Non-HVHZ)

Assemblies with All Layers Adhered over Steel Deck (New or Existing)								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-A-3	G33, L6, P, S24	OPTIONAL Duro-Guard II	Duro-Grip or DG-TF ribbon adhered 6-inch o.c.	Min. 1.5-inch EPS FGF, II-A, II-G, III-A, III-H, IV-A; or HD-G, HD-G, HD-A, DDP, SR, DXF or DXC	Duro-Grip or DG-TF ribbon adhered 6-inch o.c.	DL or DT	WB II or SB IV	-60 (Lim. 9)
S-A-4	G33, L6, P, S24	OPTIONAL Duro-Guard II	Duro-Grip or DG-TF ribbon adhered 6-inch o.c.	Min. 1.5-inch EPS FGF, II-A, II-G, III-A, III-H, IV-A; or HD-G, HD-G, HD-A, DDP, SR, DXF or DXC	Duro-Grip or DG-TF ribbon adhered 6-inch o.c.	DF or DFP	WB II or CR-20	-60 (Lim. 9)
S-A-5	G33, L5	Min. 0.5-inch EPS FGF, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	-	-	DL, DT, DF or DFP	WB II, SB IV or CR-20	-82.5 (Lim. 9)
S-A-6	G33, L5	Min. 0.5-inch II-G	Duro-Grip ribbon adhered 12-inch o.c.	HD-G, DDP, DXC, DXF, EPS FGF, or SR	Duro-Grip ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-82.5 (Lim. 9)
S-A-7	G33, L5	Min. 0.5-inch EPS, II-A, II-G, II-H	Duro-Grip ribbon adhered 12-inch o.c.	HD-A, HD-G, DDP, DXC, DXF, EPS FGF, III-A, III-H, IV-A, or SR	DG-OB or DG-IS ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-82.5 (Lim. 9)
S-A-8	G33, L5	Min. 1-inch EPS, II-A, II-G, II-H, III-A, III-G, or III-H	DG-TF ribbon adhered 12-inch o.c.	OPTIONAL (except over EPS) HD-A, HD-G, HD-H, DDP, DXC, DXF, or SR	DG-TF ribbon adhered 12-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-90 (Lim. 9)
S-A-9	G33, L6, P, S24	Min. 1.5-inch II-H, III-H, or II-G	DG-OS ribbon adhered 6-inch o.c. to the top flange of each deck rib	-	-	DL, DT, DF or DFP	WB II, SB IV or CR-20	-90 (Lim. 9)
S-A-10	G33, L6, F1, S24	Min. 1.5-inch EPS, EPS FGF, II-H, or III-H	DG-OS ribbon adhered 6-inch o.c. to the top flange of each deck rib	DXC, DXF, HD-H, EPS FGF, or SR	DG-OS ribbon adhered 6-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-97.5 (Lim. 9)
S-A-11	G33, L6, F1, S24	Min. 1.5-inch II-G	DG-OS ribbon adhered 6-inch o.c. to the top flange of each deck rib	DDP, DXC, DXF, HD-G, or SR	DG-OS ribbon adhered 6-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-97.5 (Lim. 9)
S-A-12	G33, L6, P, S24	Min. 1.5-inch EPS, EPS FGF, II-H or III-H	DG-OS ribbon adhered 6-inch o.c. to the top flange of each deck rib	DXC, DXF, HD-H, EPS FGF, or SR	DG-OS ribbon adhered 6-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-112.5 (Lim. 9)

**APPENDIX B**

<b>Assemblies with All Layers Adhered over Steel Deck (New or Existing)</b>								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-A-13	G33, L6, F1, S24	Min. 1.5-inch EPS FGF, II-H or III-H	DG-OS ribbon adhered 6-inch o.c. to the top flange of each deck rib	-	-	DL, DT, DF or DFP	WB II, SB IV or CR-20	-135 (Lim. 9)

<b>Assemblies with Adhered Membranes over Steel Deck (New, Existing, or Recover)</b>								
System No.	Deck Detail	Base Layer Insulation	Base Layer Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-AM-1	G33, L5	Min. 1.5-inch Approved Insulation	Simultaneously secured with top layer	JM Invinsa Roof Board	Duro-Last 3-inch Metal Plates with Duro-Last Duro-Coated Hex Head Screws secured at a rate of 16 per 4 ft x 8 ft board	DL	SB IV	-45 (Lim. 9)
S-AM-2	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch II-A, II-G, III-A, III-H, IV-A or Min. 0.5-inch SR	Duro-Last 3-inch Metal Plates with Duro-Last Duro-Coated Hex Head Screws secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV or CR-20	-45 (Lim. 9)
S-AM-3	G33, L5	Min. 1.5-inch Approved Insulation	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	Min. 0.25-inch DD or II-A	Duro-Fleece Membrane Adhesive ribbons spaced 6-inch o.c.	DL, DT, DF or DFP	WB II, SB IV or CR-20	-45 (Lim. 9)
S-AM-4	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch II-A, II-G, II-H, III-A; Min. 2-inch IV-A; or Min. 0.5-inch SR or DDP	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV or CR-20	-45 (Lim. 9)
S-AM-5	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	SR or DDP	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV or CR-20	-45 (Lim. 9)
S-AM-6	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 0.5-inch DXF	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 4 ft <sup>2</sup>	DL, DT, DF or DFP	WB II	-45 (Lim. 9)
S-AM-7	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 0.5-inch DXF	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 4 ft <sup>2</sup>	DL	SB IV	-45 (Lim. 9)
S-AM-8	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 0.5-inch DXF	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 4 ft <sup>2</sup>	DF	Duro-Fleece Membrane Adhesive	-45 (Lim. 9)
S-AM-9	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 0.5-inch DXF	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 4 ft <sup>2</sup>	DF or DFP	CR-20	-45 (Lim. 9)
S-AM-10	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXF	DL Plates & Fasteners secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DL, DT, DF or DFP	WB II	-45 (Lim. 9)

Assemblies with Adhered Membranes over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Layer Insulation	Base Layer Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-AM-11	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXF	DL Plates & Fasteners secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DL	SB IV	-45 (Lim. 9)
S-AM-12	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXF	DL Plates & Fasteners secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DF	Duro-Fleece Membrane Adhesive	-45 (Lim. 9)
S-AM-13	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXF	DL Plates & Fasteners secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DF or DFP	CR-20	-45 (Lim. 9)
S-AM-14	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXC	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DL, DT, DF or DFP	WB II	-45 (Lim. 9)
S-AM-15	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXC	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DL	SB IV	-45 (Lim. 9)
S-AM-16	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXC	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DF	Duro-Fleece Membrane Adhesive	-45 (Lim. 9)
S-AM-17	G33, L5	OPTIONAL Approved Insulation	Simultaneously secured with top layer	DXC	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 1 fastener per 2.67 ft <sup>2</sup>	DF or DFP	CR-20	-45 (Lim. 9)
S-AM-18	G33, L6 F1, S24	Min. 1.5-inch Approved Insulation	Simultaneously secured with top layer	DDP or SR	DL Plates & Fasteners secured at a rate of 24 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV or CR-20	-67.5 (Lim. 7)
S-AM-19	G33, L6 F1, S24	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 1.5-inch II-A, II-G, III-A; or Min. 2-inch IV-A	DL Plates & Fasteners secured at a rate of 24 per 4 ft x 8 ft board	DF or DFP	WB II	-67.5 (Lim. 7)
S-AM-20	G33, L6 F1, S24	Min. 1.5-inch Approved Insulation	Simultaneously secured with top layer	DDP or SR	DL Plates & #15 Fasteners secured at a rate of 20 per 4 ft x 8 ft board	DL, DT, DF or DFP	WB II, SB IV or CR-20	-67.5 (Lim. 7)
S-AM-21	G33, L6 F1, S24	Min. 1.5-inch Approved Insulation	Simultaneously secured with top layer	Min. 0.5-inch SR	TRUFAST DP #12 Fasteners and TRUFAST 3" Metal Insulation Plates secured at a rate of 32 per 4 ft x 8 ft board	DL, DT, DF or DFP	SB IV or WB II	-82.5 (Lim. 7)
S-AM-22	G33, L6 F1, S24	OPTIONAL Approved Insulation	Simultaneously secured with top layer	Min. 2-inch IV-A	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL, DT, DF or DFP	SB IV or WB II	-90 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-M-1	G33, L6, P or F1, S0	Min 1-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point fasteners and Duro-Last Poly-Plates or Cleat Plates fastened 12-inch o.c. along 6-wide tabs spaced 120-inch o.c.	-30 (Lim. 7; Non-HVHZ)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-M-2	G33, L6, P, S24	Min 0.5-inch Approved Insulation	Preliminarily secured	-	-	DT	Duro-Last #15 EHD Drill Point fasteners and Duro-Last Cleat Plates fastened 12-inch o.c. within laps spaced 114-inch o.c.	<b>-37.5 (Lim. 7; Non-HVHZ)</b>
S-M-3	G80, L5.5 (22 ga) or L6 (18 ga) F1, S24	Min 0.5-inch Approved Insulation	Preliminarily secured	-	-	DT	Duro-Last #15 EHD Drill Point fasteners and Duro-Last Cleat Plates fastened 12-inch o.c. within laps spaced 116-inch o.c.	<b>-45 (Lim. 7)</b>
S-M-4	G33, L6, F1, S24	Min 1.5-inch Approved Insulation	Preliminarily secured	-	-	DT	Duro-Last #15 EHD Drill Point fasteners and Cleat Plates fastened 12-inch o.c. within laps spaced 56-inch o.c.	<b>-45 (Lim. 7)</b>
S-M-5	G80, L6, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #14 HD Fastener with Duro-Last Poly-Plates or Cleat Plates fastened 12-inch o.c. along the 3-inch wide tabs spaced 60-inches o.c.	<b>-45 (Lim. 7)</b>
S-M-6	G80, L6, P, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #14 HD with Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. along the 3-inch wide tabs spaced 84-inches o.c.	<b>-45 (Lim. 7)</b>
S-M-7	G33, L6, P or F1, S0	Min 1-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point fasteners and Duro-Last Poly-Plates or Cleat Plates attached 6-inch o.c. along 6-wide tabs spaced 120-inch o.c.	<b>-45 (Lim. 7)</b>
S-M-8	G80, L6, F1W, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 12-inch o.c. along the 6-inch wide tabs spaced 120-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	<b>-45 (Lim. 7)</b>
S-M-9	G33, L6, PW or F1, S24	Min. 0.5-inch Approved Insulation	Preliminarily secured	-	-	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.; fastener centered 1.25-inches from edge of tab	<b>-45 (Lim. 7)</b>
S-M-10	G80, L6, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #14 HD Fastener with Duro-Last Poly-Plates or Cleat Plates fastened 18-inch o.c. along the 3-inch wide tabs spaced 28-inches o.c.	<b>-52.5 (Lim. 7)</b>

Mechanically Fastened Assemblies over <i>Steel Deck (New, Existing, or Recover)</i>								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-M-11	G80, L6, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #14 HD Fastener with Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. along the 3-inch wide tabs spaced 60-inches o.c.	-52.5 (Lim. 7)
S-M-12	G33, L6, P or F1, S0	Min 1-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point fasteners and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. along 3-wide tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
S-M-13	G80, L6, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #14 HD Fastener with Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. along the 6-inch wide tabs spaced 120-inches o.c.	-52.5 (Lim. 7)
S-M-14	G80, L6, PW, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last 3-inch Metal Plates fastened 12-inch o.c. along the 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-52.5 (Lim. 7)
S-M-15	G80, L6, PW, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last 3-inch Metal Plates fastened 6-inch o.c. along the 6-inch wide tabs spaced 84-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-52.5 (Lim. 7)
S-M-16	G80, L6, F1W, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 12-inch o.c. along the 6-inch wide tabs spaced 84-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	-52.5 (Lim. 7)
S-M-17	G80, L6, PW, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates Fastened 6-inch o.c. along the 3-inch wide tabs spaced 84-inches o.c.	-60 (Lim. 7)
S-M-18	G33, L6, PW, S24	Min. 0.5-inch Approved Insulation	Preliminarily secured	-	-	DT	Duro-Last #15 EHD Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.; fastener centered 1.25-inches from edge of tab	-60 (Lim. 7)
S-M-19	G33, L6, F1, S24	Min. 0.5-inch Approved Insulation	Preliminarily secured	-	-	DT	Duro-Last #15 EHD Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.; fastener centered 1.25-inches from edge of tab	-67.5 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-M-20	G80, L5, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Batten Bar fastened 6-inch o.c. within center of 3-inch wide tabs spaced 60-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-67.5 (Lim. 7)
S-M-21	G80, L6, F1W, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 12-inch o.c. along the 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	-67.5 (Lim. 7)
S-M-22	G80, L6, F1, S30	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL (Inverted)	Duro-Last #14 HD Fastener with Duro-Last Poly-Plates or Cleat Plates fastened 12-inch o.c. along the 3-inch wide tabs spaced 27-inches o.c.	-75 (Lim. 7)
S-M-23	G80, L6, P, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last 3-inch Metal Plates fastened 6-inch o.c. within center of 6-inch wide tabs spaced 120-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-82.5 (Lim. 7)
S-M-24	G80, L6, F1W, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 6-inch o.c. along the 6-inch wide tabs spaced 120-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	-82.5 (Lim. 7)
S-M-25	G80, L6, F1W, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 6-inch o.c. along the 6-inch wide tabs spaced 84-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	-97.5 (Lim. 7)
S-M-26	G80, L6, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #14 HD Fastener with Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. along the 3-inch wide tabs spaced 28-inches o.c.	-105 (Lim. 7)
S-M-27	G80, L6, P, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last 3-inch Metal Plates fastened 6-inch o.c. along the 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-105 (Lim. 7)



Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-M-28	G80, L6, F1W, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 6-inch o.c. along the 6-inch wide tabs spaced 57-inches o.c. Tab Sealer 4725 applied at 30 ft <sup>2</sup> /gal.	-135 (Lim. 7)
S-M-29	G80, L6, F1, S24	Min. 1.5-inch Approved Insulation	Preliminarily secured	-	-	DL	Duro-Last #15 EHD Drill Point Fastener with Duro-Last Cleat Plates fastened 6-inch o.c. within center of 6-inch wide tabs spaced 25-inches o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-142.5 (Lim. 7)

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-W-1	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 12-inch o.c. in rows spaced 48-inches o.c.	DL60	Induction welded to each insulation plate	-45 (Lim. 7)
S-W-2	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6-inch o.c. in rows spaced 120-inches o.c.	DL60	Induction welded to each insulation plate	-45 (Lim. 7)
S-W-3	G33, L5	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6 per 4 ft x 8 ft board	DL or DT	Induction welded to each insulation plate	-45 (Lim. 9)
S-W-4	G33, L6, P, S24	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate secured at a rate of 1 per 6.00-ft <sup>2</sup> (See Appendix A- Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	-45 (Lim. 7)
S-W-5	G33, L6, F1, S24	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate secured at a rate of 1 per 6.00-ft <sup>2</sup> (See Appendix A- Induction Weld Patterns)	DL60	Induction welded to each insulation plate	-45 (Lim. 7)
S-W-6	G33, L6, F1, S24	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate secured at a rate of 1 per 4.00-ft <sup>2</sup> (See Appendix A- Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	-52.5 (Lim. 7)
S-W-7	G33, L6, P, S24	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate secured at a rate of 1 per 4.00-ft <sup>2</sup> (See Appendix A- Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	-52.5 (Lim. 7)

**APPENDIX B**

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
S-W-8	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6-inch o.c. in rows spaced 72-inches o.c.	DL or DT	Induction welded to each insulation plate	<b>-52.5 (Lim. 7)</b>
S-W-9	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6-inch o.c. in rows spaced 96-inches o.c.	DL60	Induction welded to each insulation plate	<b>-52.5 (Lim. 7)</b>
S-W-10	G33, L6, F1, S24	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate secured at a rate of 1 per 3.00-ft <sup>2</sup> (See Appendix A- Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	<b>-75 (Lim. 7)</b>
S-W-11	G33, L6, P, S24	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	OMG XHD Fastener with Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate secured at a rate of 1 per 3.00-ft <sup>2</sup> (See Appendix A- Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	<b>-75 (Lim. 7)</b>
S-W-12	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6-inch o.c. in rows spaced 48-inches o.c.	DL or DT	Induction welded to each insulation plate	<b>-82.5 (Lim. 7)</b>
S-W-13	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6-inch o.c. in rows spaced 60-inches o.c.	DL60	Induction welded to each insulation plate	<b>-82.5 (Lim. 7)</b>
S-W-14	G33, L6, F1, S12	OPTIONAL Approved Insulation	Secured with Top Layer	Approved Insulation	Duro-Bond #15 secured 6-inch o.c. in rows spaced 48-inches o.c.	DL60	Induction welded to each insulation plate	<b>-90 (Lim. 7)</b>

Assemblies with All Layers Adhered over Wood Deck (New or Existing)								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
W-A-1	T19/32, L32, 0.113-6/6	II-H	DG-CR Applied in spatter at a rate of 4.6 lbs/100ft <sup>2</sup>	Min. 0.5-inch Continuous ReWall Closed Loop Roof Cover Board	DG-CR Applied in spatter at a rate of 4.6 lbs/100ft <sup>2</sup>	DF or DFP	WB II	<b>-30 (Lim. 9; Non-HVHZ)</b>
W-A-2	T15/32, L24, 0.113-6/6	-	-	DXC	DG-CR Applied in spatter at a rate of 6.8 lbs/100ft <sup>2</sup>	DL or DT	WB II or SB IV	<b>-75 (Lim. 9; Non-HVHZ)</b>
W-A-3	T15/32, L24, 0.113-6/6	-	-	DXC	DG-CR Applied in spatter at a rate of 6.8 lbs/100ft <sup>2</sup>	DF or DFP	WB II or CR-20	<b>-75 (Lim. 9; Non-HVHZ)</b>

**APPENDIX B**

<b>Assemblies with All Layers Adhered over Wood Deck (New or Existing)</b>								
System No.	Deck Detail	Base Layer Insulation	Base Insulation Attachment	Top Layer Insulation	Top Insulation Attachment	Membrane	Attachment	MDP (psf)
W-A-4	T19/32, L32, 0.113-6/6	-	-	DXF	DG-CR Applied in spatter at a rate of 6.6 lbs/100ft <sup>2</sup>	DL or DT	WB II or SB IV	-97.5 (Lim. 9; Non-HVHZ)
W-A-5	T19/32, L32, 0.113-6/6	-	-	DXF	DG-CR Applied in spatter at a rate of 6.6 lbs/100ft <sup>2</sup>	DF or DFP	WB II or CR-20	-97.5 (Lim. 9; Non-HVHZ)

<b>Assemblies with Adhered Membranes over Wood Deck (New, Existing, or Recover)</b>							
System No.	Deck Detail	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Attachment	MDP (psf)
W-AM-1	T19/32, L24, 0.113-6/6	OPTIONAL Approved Insulation	DXF	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DL or DT	WB II or SB IV	-52.5 (Lim. 7)
W-AM-2	T19/32, L24, 0.113-6/6	OPTIONAL Approved Insulation	DXF	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DF or DFP	WB II	-52.5 (Lim. 7)
W-AM-3	T19/32, L24, 0.113-6/6	OPTIONAL Approved Insulation	DXF	DL Plates & #15 Fasteners secured at a rate of 16 per 4 ft x 8 ft board	DF or DFP	CR-20	-60 (Lim. 7)
W-AM-4	T19/32, L24, 0.113-6/6	OPTIONAL Approved Insulation	DXF	DL Plates & #15 Fasteners secured at a rate of 18 per 4 ft x 8 ft board	DL or DT	WB II or SB IV	-62.5 (Lim. 7)
W-AM-5	T19/32, L24, 0.113-6/6	OPTIONAL Approved Insulation	DXF	DL Plates & #15 Fasteners secured at a rate of 18 per 4 ft x 8 ft board	DF or DFP	WB II	-62.5 (Lim. 7)
W-AM-6	T19/32, L24, 0.113-6/6	OPTIONAL Approved Insulation	DXF	DL Plates & #15 Fasteners secured at a rate of 18 per 4 ft x 8 ft board	DF or DFP	CR-20	-75 (Lim. 7)

<b>Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)</b>							
System No.	Deck Detail	Thermal Barrier	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-M-1	T15/32, L24, 0.113-6/6	As required	Min. 0.5-inch Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.	-30 (Lim. 7; Non-HVHZ)
W-M-2	T15/32, L24, 0.113-6/6	As required	Min. 0.5-inch Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 3-inch wide tabs spaced 60-inch o.c.	-30 (Lim. 7; Non-HVHZ)
W-M-3	T19/32, L24, 0.113-6/6	As required	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #14 HD Fastener and Duro-Last Cleat-Plates or Poly-Plates fastened 6-inch o.c. within 6-inch wide tabs spaced 120-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX B

Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)							
System No.	Deck Detail	Thermal Barrier	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-M-4	T19/32, L32, 0.113-6/6	As required	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 6-inch o.c. within 6-inch wide tabs spaced 120-inch o.c.	-45 (Lim. 7)
W-M-5	T19/32, L32, 0.113-6/6	As required	Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 12-inch o.c. within 6-inch wide laps spaced 54-inch o.c.	-45 (Lim. 7)
W-M-6	T19/32, L24, 0.113-6/6	As required	Min. 0.5-inch Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates or Cleat Plates fastened 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.; fastener centered 2-inches from edge of tab	-45 (Lim. 7)
W-M-7	T19/32, L32, 0.113-6/6	As required	Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.	-52.5 (Lim. 7)
W-M-8	T19/32, L24, Hex-12/12	As required	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #14 HD Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. into wood truss within 6-inch wide tabs spaced 120-inch o.c. (Min. 2.5-inch penetration into wood truss)	-52.5 (Lim. 7)
W-M-9	T19/32, L24, 0.113-6/6	As required	Min. 0.5-inch Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. within 3-inch wide tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
W-M-10	T19/32, L32, 0.113-6/6	As required	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 6-inch o.c. within 3-inch wide tabs spaced 60-inch o.c.	-52.5 (Lim. 7)
W-M-11	T19/32, L24, 8d-6/6	As required	Min. 1.5-inch Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates fastened 6-inch o.c. within 6-inch wide tabs spaced 57-inch o.c. (Screws located 2.7-inches from tab edge)	-52.5 (Lim. 7)
W-M-12	T19/32, L24, 8d-6/6	As required	Min. 1.5-inch Approved Insulation	Preliminarily secured	DL	Duro-Last #14 HD Fastener and Duro-Last 3-inch Metal Plates fastened 6-inch o.c. within center of 6-inch wide tabs spaced 57-inch o.c. Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-52.5 (Lim. 7)
W-M-13	T19/32, L24, 0.113-6/6	As required	Min. 0.5-inch Approved Insulation	Preliminarily secured	DL	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. within 6-inch wide tabs spaced 120-inch o.c.	-60 (Lim. 7)
W-M-14	T19/32, L32, 0.113-6/6	As required	OPTIONAL Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Poly-Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.	-60 (Lim. 7)
W-M-15	T19/32, L24, 0.113-6/6	As required	Min. 0.5-inch Approved Insulation	Preliminarily secured	DT	Duro-Last #15 Extra Heavy Duty Drill Point Fastener and Duro-Last Cleat Plates or Poly-Plates fastened 6-inch o.c. within 6-inch wide laps spaced 54-inch o.c.; fastener centered 1.25-inches from edge of tab	-67.5 (Lim. 7)

Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)							
System No.	Deck Detail	Thermal Barrier	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-M-16	T19/32, L24, Hex-12/12	As required	OPTIONAL Approved Insulation	Preliminarily secured	DL	Duro-Last #14 HD Fastener and Duro-Last Cleat Plates fastened 6-inch o.c. into wood truss within center of 6-inch wide tabs spaced 120-inch o.c. (Min. 2.5-inch penetration into truss). Tab Sealer 4725 applied at 60 ft <sup>2</sup> /gal.	-82.5 (Lim. 7)

Induction Welded Assemblies over Wood Deck (New, Existing, or Recover)							
System No.	Deck Detail	Thermal Barrier	Insulation	Insulation or Thermal Barrier Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-1	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss 12-inch o.c. in 6-ft spaced rows	DL60	Induction welded to each insulation plate	-37.5 (Lim. 7; Non-HVHZ)
W-W-2	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss 18-inch o.c. in 4-ft spaced rows	DL60	Induction welded to each insulation plate	-37.5 (Lim. 7; Non-HVHZ)
W-W-3	T19/32, L24, 0.113-6/6	As required	OPTIONAL Approved Insulation	Duro-Bond #15 fastened at a rate of 1 per 4.00-ft <sup>2</sup> (See Appendix A - Induction Weld Patterns)	DL or DT	Induction welded to each insulation plate	-45 (Lim. 7)
W-W-4	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss 12-inch o.c. in 4-ft spaced rows	DL60	Induction welded to each insulation plate	-52.5 (Lim. 7)
W-W-5	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss 6-inch o.c. in 8-ft spaced rows	DL60	Induction welded to each insulation plate	-60 (Lim. 7)
W-W-6	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss 6-inch o.c. in 6-ft spaced rows	DL60	Induction welded to each insulation plate	-60 (Lim. 7)
W-W-7	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss at a rate of 12 per 4 ft x 8 ft board	DL or DT	Induction welded to each insulation plate	-60 (Lim. 7)
W-W-8	T19/32, L24, 0.113-12/6	As required	Approved Insulation	Duro-Bond through-fastened to wood truss at a rate of 16 per 4 ft x 8 ft board	DL or DT	Induction welded to each insulation plate	-90 (Lim. 7)

END OF REPORT