

TGFU.R10117 - Roofing Systems

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Roofing Systems

SEAMAN CORP

1000 VENTURE BLVD
WOOSTER, OH 44691-9358 United States

R10117

"Forti-Lock™ SG - White - Liquid Flashing", "Forti-Lock™ WG - White - Liquid Flashing", "Forti-Lock™ SG - Grey - Liquid Flashing" and "Forti-Lock™ WG - Grey - Liquid Flashing" used in any of the following Classifications.

"FTR-Value-III-A" may be substituted for "FTR-Value-A" polyisocyanurate insulation in any of the following Classifications.

"FTR-Value-IV-A" may be substituted for "FTR-Value-III-A" and "FTR-Value-A" polyisocyanurate insulation in any of the following Classifications.

"FiberTite SM" may be substituted for "FiberTite" in any of the following Classifications.

For Combustible Roof Decks - Class A: A minimum 1- in. layer of "FTR-Value-IV-A" placed directly over a combustible roof deck and covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternate, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used above or below a 2-in. minimum total thickness of "FTR-Value-IV-A". All insulation butt joints must be staggered a minimum of 6 in. from the plywood roof deck butt joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly; however, the incline cannot exceed 1:12.

Any roof covering system listed for use over a combustible roof deck can be installed over a non-combustible roof deck and achieve the same classification.

Uniform thickness or tapered insulation may be used in the following systems provided they do not exceed the indicated incline or thickness.

Unless otherwise indicated, on non-combustible roof decks, Seaman Corp. "FTR-Value HD", "FTR-Value HD FA" or "FTR-Value HD Composite", may replace, or be used in addition to, any "FTR-Value H" or any UL Classified wood fiberboard, in any UL Classified insulated roof covering system assembly and retain the classification of that assembly, though the maximum slope cannot exceed 1/2:12 if "FTR-Value HD", "FTR-Value HD FA", or "FTR-Value HD Composite" is used directly below TPO membrane.

Unless otherwise indicated, on combustible roof decks, Seaman Corp. "FTR-Value HD", "FTR-Value HD FA" or "FTR-Value HD Composite" may be used in addition to any "FTR-Value H" product or any UL Classified wood fiberboard, in any insulated UL Classified roof covering system assembly and retain the classification of that assembly, though the maximum slope cannot exceed 1/2:12 if "FTR-Value HD", "FTR-Value HD FA", or "FTR-Value HD Composite" is used directly below TPO membrane.

Seaman Corp. "FTR-Value HD" or "FTR-Value HD FA" (minimum 1/2-in. thickness), "FTR-Value HD Composite" may be used over any UL Classified polystyrene on non-combustible roof decks. Maximum incline shall be in accordance with the Classification established for the insulation/membrane roof covering system but cannot exceed 2:12.

Unless otherwise indicated, minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) or minimum 1/4-in. thick CertainTeed Gypsum Inc. "GlasRoc-2" or minimum 1/4-in. National Gypsum "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" may replace, or be used in addition to, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard".

Unless otherwise indicated, any UL Classified modified bitumen membrane may be utilized as a vapor retarder below United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) or minimum 1/4-in. thick "SECUROCK® Glass-Mat Roof Board" (Type SGMRX) or minimum 1/4-in. thick National Gypsum "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof" or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard".

For Combustible Roof Decks - Class A:

1. A minimum 1/2 in. layer of Hunter Panels "H-Shield HD FR" is placed directly over a combustible deck and is covered with any UL Classified FiberTite roofing membrane used in any UL Class A roofing assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1/2 in. minimum thickness of "H-Shield HD FR". All layers may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6 in. from the deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roofing assembly; however, the incline cannot exceed 1/2:12.

For Combustible Roof Decks - Class B:

1. A minimum 1.9-in. thick layer of Seaman Corp. "FTR-Value H Glass Facer" or "FTR-Value HD Composite" is placed directly over a combustible roof deck and is covered with any UL Classified roofing membrane used in any UL Class B roof covering assembly to achieve a Class B fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum thickness layer of Seaman Corp. "FTR-Value H Glass Facer" or "FTR-Value HD Composite". The insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6 in. from the plywood roof deck butt joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly; however, the incline cannot exceed 1/2:12.

SINGLE PLY MEMBRANE SYSTEMS

Unless otherwise indicated, the insulation and membrane are mechanically fastened to a roof deck with plastic disks and metal screws as per manufacturer's instructions.

The "FiberTite" (KEE) is a nominal 36-mil thick membrane.

The "FiberTite-XT" (KEE) is a nominal 45-mil thick membrane.

The "FiberTite-SM" (KEE) is a nominal 45-mil thick membrane.

The "FiberTite-XTreme" (KEE) is a nominal 80-mil thick membrane. The "FiberTite-XTreme" may be used as an alternate membrane to the "FiberTite" in the Classification below.

Unless otherwise indicated, the following vapor barrier may be used under insulated roof covering systems when limited to noncombustible roof decks: Two plies Type 15 or Type 30 felt, hot mopped in place.

"FTR-Value" insulation may be used in lieu of Johns Manville "ENRGY-2" or "ENRGY-3" insulation in any applicable Classification.

"FTR-190e" adhesive in any adhered FiberTite system.

Reference to Derbigum Americas Inc. "Derbigum" includes "Derbigum GP", "Derbigum XPS" or "Derbigum Resiply".

"FiberTite-FB", "FiberTite-XT FB", "FiberTite-SM FB" or "FiberTite-XTreme FB" may be substituted for FiberTite", "FiberTite-XT", "Fiber-Tite SM" and "FiberTite-XTreme" in any of the following Classifications.

"FiberTite-XT FB", "FiberTite-SM FB" or "FiberTite-XTreme FB" may be substituted for "FiberTite-FB" in any of the following Classifications.

Class A - Ballasted

1. **Deck:** NC

Incline: 2

Insulation: — One or more layers of the following or combinations of the following: (any thickness - except restricted to 2-in. maximum when polystyrene is used alone): Polystyrene, polyisocyanurate, polyisocyanurate/perlite composite, perlite and fiberboard, laid loosely.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE), laid loosely.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter) at 1000-lbs/100-ft.² or minimum 10-lb/ft.² concrete blocks.

Uniform thickness or tapered insulation may be used in the following systems provided they do not exceed the indicated incline or thickness.

2. **Deck:** NC

Incline: 2

Insulation: — "FTR-Value Roof Insulation", "FTR-Value H Roof Insulation", "Tapered FTR-Value H Roof Insulation", "FTR-Value H Glass Facer Roof Insulation" or "Tapered FTR-Value H Glass Facer Roof Insulation", any thickness.

Membrane: — Any "FiberTite", laid loosely.

Surfacing: — River bottom stone (3/4 to 1 1/2-in. diameter), 1000-lbs/100-ft.².

3. **Deck:** NC

Incline: 2

Insulation: — One or more layers "FTR-Value-A", any thickness, loose laid or mechanically fastened.

Slip-sheet (Optional): — One ply "FR-10", "FR-11" or "FR400" loose laid or mechanically fastened.

Membrane: — Any "FiberTite" membrane Classified for use in a ballasted roof covering system.

4. **Deck:** NC

Incline: 3

Membrane: — Any "FiberTite", PVC, EPDM, CPE, CSPE, TRE, nitrile alloy or modified bitumen, loose laid or mechanically fastened.

Insulation: — "FTR-Value-A" or Atlas Roofing Corp. "ACFoam Tapered Composite."

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter) 1000-lbs/100-ft.².

5. **Deck:** NC

Incline: 2

Insulation: — Polyisocyanurate, glass fiber, perlite/polyisocyanurate composite any thickness, laid loosely or mechanically fastened.

Membrane: — Any "FiberTite" EPDM fully adhered with "FTR-290 or FTR-490" bonding adhesive applied at 1-gal/75 to 100-ft.².

Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diameter, applied at 1000-lbs/100-ft.².

6. **Deck:** NC

Incline: 2

Insulation: — Polyisocyanurate, glass fiber, perlite/polyisocyanurate composite any thickness, laid loosely or mechanically fastened.

Membrane: — Any "FiberTite" PVC fully adhered with "FTR-190e" bonding adhesive applied at 1-gal/75 to 100-ft.².

Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diameter applied at 1000-lbs/100-ft.².

7. **Deck:** NC

Incline: 2

Insulation: — "FTR-Value H" or Hunter Panels "H-Shield", any thickness.

Membrane: — Any "FiberTite", UL Classified membrane, laid loosely.

Surfacing: — River Bottom Stone (3/4 to 1-1/2 in. diameter), 1000lbs/100-ft.².

8. **Deck:** NC

Incline: 3

Insulation: — Any UL Classified insulation, any thickness.

Membrane: — Any UL Classified membrane, adhered with "Alpha-Tite Adhesive".

Surfacing: — River bottom stone (3/4 in. to 1-1/2 in. diam) at 1000 lb/sq.

Class A - Fully Adhered

1. **Deck:** NC

Incline: 2

Insulation (Optional): — Firestone Building Products Co. LLC "ISO95+GL", Apache "Pyrox", Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3", any thickness or combination, mechanically fastened or adhered in "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XTreme" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal/60 to 75-ft.² or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

2. **Deck:** NC

Incline: 2

Substrate: — Cellular lightweight concrete or structural concrete.

Membrane: — "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

3. **Deck:** NC

Incline: 2

Substrate: — Cellular concrete, structural cement-fiber units (cementitious wood fiber) or vermiculite lightweight concrete or gypsum concrete.

Vapor Barriers: — Type G2, loose laid or mechanically fastened.

Insulation: — Firestone Building Products Co. LLC "ISO95+GL", Apache "Pyrox", Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3", any thickness or combination, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik", Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive", or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal/60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

4. Deck: C-15/32

Incline: 2

Barrier Board: — Minimum 5/8-in. gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened with all butt joints staggered a minimum of 6-in. from plywood roof deck butt joints.

Vapor Barrier (Optional): — Polyethylene, kraft paper or Type G2, loose laid.

Insulation: — Firestone Building Products Co. LLC "ISO95+GL" or "Thermarof Plus-3", Apache "Pyrox" or Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3" any thickness or combination, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XTreme", or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

5. Deck: C-15/32

Incline: Unlimited

Insulation (Optional): — Any UL Classified, any thickness or combination, loose laid or mechanically fastened.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik", Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt to mechanically attached insulation (if present).

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XTreme" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.².

5A. Deck: C-15/32

Incline: Unlimited

Insulation (Optional): — Any UL Classified, any thickness or combination, loose laid or mechanically fastened.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive", or hot roofing asphalt to mechanically attached insulation (if present).

Membrane: — "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

6. Deck: NC

Incline: 1/2

Substrate: — Cellular, aggregate (Perlite) or vermiculite lightweight concrete or gypsum concrete.

Vapor Barrier: — Type G2 loose laid or mechanically fastened.

Insulation: — Firestone Building Products Co. LLC "ISO95+GL" or Apache "Pyrox" or Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3", any thickness or combination, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite-FB" fully adhered with hot mopping asphalt.

7. Deck: NC

Incline: 1/2

Insulation (Optional): — Dow "Hy-Therm AP" any thickness, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive", or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

8 Deck: NC

Incline: 1-1/2

Substrate: — Cellular, aggregate (Perlite) or vermiculite lightweight concrete or gypsum concrete.

Vapor Barrier: — Type G2 loose laid or mechanically fastened.

Insulation : — Dow "Hy-Therm AP" any thickness, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co."Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XTreme" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

9. Deck: C-15/32

Incline: 1-1/2

Insulation (optional): — Polyisocyanurate, glass fiber, perlite/polyisocyanurate composite any thickness, laid loosely or mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 5/8-in. gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened with all butt joints staggered a minimum of 6-in. from plywood roof deck butt joints.

Vapor Board (Optional): — Polyethylene, kraft paper or Type G2, loose laid.

Insulation : — Dow "Hy-Therm AP" any thickness, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

10. Deck: NC

Incline: 1/2

Insulation (Optional): — Polyisocyanurate, any thickness, adhered in hot roofing asphalt.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" adhered in hot roofing asphalt.

Membrane: — "FiberTite-FB" fully adhered in hot roofing asphalt.

11. Deck: C-15/32

Incline: 2

Slip Sheet: — Three plies GAF "VersaShield FB-1S".

Insulation (Optional): — Firestone Building Products Co. LLC "ISO95+GL" or "Thermarroof Plus-3" or Apache "Pyrox" or Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3" any thickness or combination, mechanically fastened or adhered in The Dow Chemical Co."Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

12. Deck: C-15/32

Incline: 3/4

Slip Sheet: — Two plies GAF "VersaShield FB-1S".

Insulation (Optional): — Firestone Building Products Co. LLC "ISO95+GL", Apache "Pyrox", Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3" any thickness or combination, mechanically fastened or adhered in The Dow Chemical Co."Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

13. Deck: C-15/32

Incline: 1/2

Slip Sheet (Optional): — Two plies GAF "VersaShield FB-1S".

Insulation (Optional): — Celotex "Hy-Therm AP", any thickness, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal/60 to 75-ft.² or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

14. **Deck:** C-15/32

Incline: Unlimited

Insulation (Optional): — Any UL Classified polyisocyanurate insulation, any thickness, mechanically fastened or adhered with hot roofing asphalt or any cold application adhesive Classified under Roof Deck Construction Materials.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. United States Gypsum Co. "SECUROCK® Glass Mat Roof Board" or minimum 1/4-in. thick CertainTeed Gypsum "GlasRoc-2", mechanically fastened or adhered with hot roofing asphalt or any cold application adhesive Classified under Roof Deck Construction Materials.

Membrane: — "FiberTite Brite" adhered with "FTR-490" adhesive applied at 1-gal/100-ft.².

15. **Deck:** NC

Incline: 1

Insulation: — Any UL Classified polyisocyanurate insulation, any thickness, mechanically fastened or adhered with hot roofing asphalt or any cold application adhesive Classified under Roof Deck Construction Materials.

Membrane: — "FiberTite Brite" adhered with "FTR-490" adhesive applied at 1-gal/100-ft.².

16. **Deck:** C-15/32

Incline: Unlimited

Insulation: — Polyisocyanurate, glass fiber, perlite/polyisocyanurate composite any thickness, laid loosely or mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", CertainTeed Gypsum "GlasRoc-2" or United States Gypsum Co. "SECUROCK Glass-Mat Roof Board" (Type SGMRX) or "SECUROCK Gypsum-Fiber Roof Board" (Type FRX-G) glass mat board mechanically fastened.

Membrane: — "FiberTite-FB", "FiberTite-XT FB", "Fiber-Tite-SM FB" or FiberTite-XTreme FB", adhered with FA-490 adhesive at 1-gal/120-ft.².

17. **Deck:** C-15/32

Incline: Unlimited

Vapor Barrier (Optional): — Any polyethylene, polypropylene, Type G2, kraft, membrane, mechanically fastened or adhered.

Insulation: — Polyisocyanurate, glass fiber, perlite/polyisocyanurate composite any thickness, laid loosely or mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik", Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive", or hot roofing asphalt to mechanically attached insulation (if present).

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

18. **Deck:** C-15/32

Incline: 1/2

Vapor Barrier (Optional): — Polyethylene, kraft paper or Type G2, loose laid.

Insulation (Optional): — Any UL Classified (except EPS), any thickness or combination, loose laid, mechanically fastened or adhered with ICP Adhesives & Sealants Inc. "CR-20" or The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive".

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", or United States Gypsum Co. "SECUROCK Glass-Mat Roof Board" (Type SGMRX) or "SECUROCK Gypsum-Fiber Roof Board" (Type FRX-G) mechanically fastened or adhered in ICP Adhesives & Sealants Inc. "CR-20" or The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Base Sheet (Optional): — One or more plies of "FTR SBS Poly 2.2", "FTR SBS Poly 3.0", "FTR SBS Poly 4.0", "FiberTite-SBS 190 Base", "FiberTite-SBS TG Base", CertainTeed "Flintlastic Ultra Poly SMS", adhered with hot roofing asphalt.

Membrane: — "FiberTite-FB", "FiberTite-XT FB", "FiberTite-SM FB" or "FiberTite-XTreme FB" fully adhered with hot mopped, "FTR 290" adhesive at 1-gal/100-ft.² or ICP Adhesives & Sealants Inc. "CR-20" adhesive applied at 4.2-lbs./100-ft.².

19. **Deck:** C-15/32

Incline: 1/2

Thermal Barrier (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" or "SECUROCK® Gypsum-Fiber Roof Board (Type FRX-G)" or National Gypsum "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or minimum 7/16-in. thick "DEXcell" Cement Roof Board mechanically fastened or adhered.

Vapor Retarder (Optional): — One or more plies any UL Classified or Soprema Inc. base sheet, ply sheet or "Sopravap'r" mechanically fastened or adhered.

Base Sheet (Optional): — One or more plies "FTR SBS Poly 2.2", or Soprema Inc. Type G2, "Sopraglass 40", "Sopraglass 100", "Sopra G" or "Modified Sopra G", any combination mechanically fastened or adhered.

Insulation (Optional): — Minimum 1-in. thick polyisocyanurate or polystyrene (EPS, XPS) or minimum 7/16-in. thick glass fiber or minimum 1/2-in. thick mineral wool or perlite, wood fiber or cellular glass insulation, any thickness, any combination, mechanically fastened, loose laid or adhered with hot roofing asphalt or insulation adhesive or cellular concrete.

NOTE: Polystyrene insulation must be covered with minimum 1/4-in. thick G-P Gypsum Corp. "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or United States Gypsum Corp. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)".

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck®" or "DensDeck Prime®" or United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" or "SECUROCK® Gypsum-Fiber Roof Board (Type FRX-G)" or National Gypsum "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or minimum 7/16-in. thick "DEXcell" Cement Roof Board adhered with "Duotack" or "Duotack 365" or any UL Classified insulation adhesive or hot asphalt or mechanically fastened with all butt joints in the barrier board staggered a minimum of 6-in. from the plywood roof deck butt joints.

Base Sheet: — One ply of Soprema Inc. "Elastophene Stick" or "Sopralene Stick" or "Colphene Stick" or "Colvent SA", self-adhered; or Soprema Inc. "Colvent TG" or "Elastophene SP 2.2" or "Colphene SP 2.2" or "Elastophene SP 3.0" or "Colphene SP 3.0" or "Sopralene 180 SP 2.2" or "Sopralene 180 SP 3.0" or "Sopralene 180 SP 3.5" or "Colphene 180 SP 3.5" or "Sopralene 250 SP", heat fused; or Soprema Inc. "Elastophene Sanded" or "Colphene Sanded" or "Elastophene Sanded 3.0" or "Elastophene HD" or "Elastophene HR 2.2" or "Elastophene HS" or "Elastophene HS 62" or "Elastophene HS FR" or "Sopralene 180 Sanded 2.2" or "Colphene 180 Sanded" or "Sopralene 180 Sanded" or "Sopralene 250 Sanded" adhered with Soprema Inc. "Colply EF Adhesive" applied at 2-gal/100-ft.² or hot roofing asphalt.

Membrane: — "FiberTite", "FiberTite-XT", "FiberTite-SM", "FiberTite-XTreme", "FiberTite-FB", "FiberTite-XT FB", "FiberTite-SM FB" or "FiberTite-XTreme FB" fully adhered with hot roofing asphalt or fully adhered with Henry "787" adhesive applied at 1.7-gal/100-ft.² or ICP Adhesives & Sealants Inc. "CR-20" adhesive applied at 4.2-lbs/100-ft.² or mechanically fastened.

20. Deck: NC

Incline: 1/2

Insulation: — "FTR-Value", any thickness, adhered with "FTR 601".

Barrier Board: — Minimum 1/4-in. thick United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board" (Type FRX-G) adhered with "FTR 601".

Membrane: — "FiberTite-XT FB" fully adhered with ICP Adhesives & Sealants Inc. "CR-20" adhesive applied at a rate of 4.2-lbs./100-ft.².

21. Deck: NC

Incline: 1/2

Insulation: — "FTR-Value", "FTR-Value-H", "FTR-Value-A", any thickness, adhered with Adco Products Inc. "Millennium One Step™ Foamable Adhesive."

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", CertainTeed Gypsum "GlasRoc-2" or United States Gypsum Co. "SECUROCK Glass-Mat Roof Board" (Type SGMRX) or "SECUROCK Gypsum-Fiber Roof Board" (Type FRX-G) or National Gypsum "DEXcell Glass Mat Roof Board" or National Gypsum "DEXcell FA Glass Mat Roof Board" mechanically fastened or adhered in Adco Products Inc. "Millennium One Step™ Foamable Adhesive."

Membrane: — "FiberTite-FB", "FiberTite-XT FB", "Fiber-Tite-SM FB" or FiberTite-XTreme FB" adhered with "FA-490" adhesive applied at a rate of 1-gal/120-ft.².

22. Deck: NC

Incline: 1-1/2

Insulation (Optional): — — "Rmax Operating LLC "Multi-Max-3" or "Thermaroom Plus-3", any thickness, mechanically fastened or adhered in "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal/60 to 75-ft.2 or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

23. Deck: NC**Incline:** 1-1/2

Substrate: — Cellular concrete, structural cement-fiber units (cementitious wood fiber) or vermiculite lightweight concrete or gypsum concrete.

Vapor Barriers: — Type G2, loose laid or mechanically fastened.

Insulation: — Rmax Operating LLC "Multi-Max-3" or "Thermarroof Plus-3", any thickness, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik", Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive", or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

24. Deck: C-15/32**Incline:** 1-1/2

Barrier Board: — Minimum 5/8-in. gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened with all butt joints staggered a minimum of 6-in. from plywood roof deck butt joints.

Vapor Barrier (Optional): — Polyethylene, kraft paper or Type G2, loose laid.

Insulation: — "Rmax Operating LLC "Multi-Max-3" or "Thermarroof Plus-3", any thickness, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

25. Deck: C-15/32**Incline:** 1-1/2

Slip Sheet: — Three plies GAF "VersaShield FB-1S".

Insulation (Optional): — Rmax Operating LLC "Multi-Max-3" or "Thermarroof Plus-3", any thickness, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

26. Deck: C-15/32**Incline:** 1/4

Slip Sheet: — Two plies GAF "VersaShield FB-1S".

Insulation (Optional): — Rmax Inc. "Multi-Max-3" or "Thermarroof Plus-3", any thickness, mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal./60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal./100-ft.².

27. Deck: NC**Incline:** 1/2

Substrate: — Cellular lightweight concrete or structural concrete.

Membrane: — "FiberTite-XT FB" fully adhered with ICP Adhesives & Sealants Inc. "CR-20" adhesive applied at a rate of 4.2-lbs/100-ft.².

28. Deck: C-15/32**Incline:** 1/2

Barrier Board: — Minimum 5/8-in. gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened with all butt joints staggered a minimum of 6-in. from plywood roof deck butt joints.

Vapor Barrier (Optional): — Polyethylene, kraft paper or Type G2, loose laid.

Insulation: — "FTR-Value-A", "FTR-Value-III-A", "FTR-Value" or "FTR-Value H" any thickness or combination, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XT", or "FiberTite-XTreme" fully adhered "AlphaTite Bonding Adhesive" adhesive applied at 1-gal./40 - 50 sq.ft..

29. **Deck:** NC

Incline: 1/2

Vapor Barrier (Optional): — Polyethylene, kraft paper or Type G2, loose laid.

Insulation: — "FTR-Value-A", "FTR-Value-III-A", "FTR-Value" or "FTR-Value H" any thickness or combination, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt.

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XT", or "FiberTite-XTreme" fully adhered "AlphaTite Bonding Adhesive" adhesive applied at 1-gal./40 - 50 sq.ft..

30. **Deck:** C-15/32

Incline: Unlimited

Insulation (Optional): — Any UL Classified, any thickness or combination, loose laid or mechanically fastened.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik", Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt to mechanically attached insulation (if present).

Membrane: — "FiberTite", "FiberTite-SM", "FiberTite-XT", or "FiberTite-XTreme" fully adhered "AlphaTite Bonding Adhesive" adhesive applied at 1-gal./40 - 50 sq.ft..

Class C - Fully Adhered

1. **Deck:** C 15/32

Incline: Unlimited

Insulation: — "FTR-Value H", "FTR-Value H Glass Facer", "FTR-Value HD", "FTR-Value HD FA", "FTR-Value HD Composite", or Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD", "H-Shield HD90", "H-Shield HD Composite", any combination, any thickness.

Membrane: — Any "FiberTite" membrane Classified by UL for a Class A, B or C rating when used directly over polyisocyanurate insulation.

Class A - Mechanically Fastened

1. **Deck:** NC

Incline: Unlimited

Insulation (Optional): — Apache Products "Pyrox" or "Whiteline" or Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate insulation, wood fiberboard, perlite, glass fiber, any thickness or combination.

Slip Sheet: — Tritex "Rocroof", loose laid.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

2. **Deck:** NC

Incline: 2

Insulation: — Apache Products "Pyrox" or "Whiteline" or Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate (2-in. maximum), Johns Manville "Fesco Foam" polyisocyanurate/perlite composite (2-in. maximum), GAF "GAFTEMP Permalite" perlite (2-in. maximum) or Johns Manville "Fesco Board" perlite (2-in. maximum) or GAF "GAFTEMP Permalite" perlite (2-in. maximum), Celotex "Regular and High Density Fiberboard" wood fiberboard, glass fiber, any combination.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

3. **Deck:** NC

Incline: 1/4

Insulation: — Apache Products "Pyrox" or "Whiteline" or Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate (any thickness), Johns Manville "Fesco Foam" polyisocyanurate/perlite composite (3-in. maximum) or GAF "GAFTEMP Composite" polyisocyanurate/fiberboard composite (3-in. maximum), Johns Manville "Fesco Board" perlite (3-in. maximum) or GAF "GAFTEMP Permalite" perlite (3-in. maximum), Celotex "Regular and High Density Fiberboard" wood fiberboard, glass fiber, any combination.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

4. **Deck:** NC

Incline: 1

Insulation Concrete: — Cellular, gypsum, vermiculite, perlite or structural concrete.

Barrier Board or Slip Sheet (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", 3/4-in. Partek Insulations "Paroc Baseboard" or "Paroc Capboard" or Atlas Roofing Corp. "FR-10" or Tritex "Rocroof".

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

5. **Deck:** NC

Incline: 1

Insulation: — Polystyrene, any thickness, covered with minimum 1-in. wood fiberboard or minimum 3/4-in. perlite.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

6. **Deck:** C-15/32

Incline: Unlimited

Insulation (Optional): — Polyisocyanurate, polystyrene, wood fiberboard, perlite, glass fiber, any thickness or combination.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" with all butt joints staggered a minimum of 6-in. from plywood roof deck butt joints or minimum 3/4-in. Partek Insulations "Paroc Baseboard" or "Paroc Capboard", mechanically fastened.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

7. **Deck:** C-15/32

Incline: 2

Base Sheet: — Type G2, mechanically fastened.

Slip Sheet: — Tritex "Rocroof", loose laid.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

8. **Deck:** NC

Incline: 1-1/2

Insulation: — Celotex "Energy Lok" or "Hy-Therm AP" wood fiberboard or glass fiber, any combination.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

9. **Deck:** C-15/32

Incline: 1/2

Slip Sheet: — Two plies Atlas Roofing Corp. "FR 50" or two plies GAF "VersaShield Underlayment" or "VersaShield FB-2S".

Membrane: — "FiberTite".

10. **Deck:** C-15/32

Incline: 1/2

Slip Sheet: — One ply Atlas Roofing Corp. "FR 10" or "FR 50".

Insulation: — Atlas Roofing Corp. "ACFoam III", 1.5-in. minimum thickness with all butt joints staggered a minimum of 6-in. from plywood roof deck butt joints.

Membrane: — "FiberTite".

11. **Deck:** C-15/32

Incline: Unlimited

Slip Sheet: — Three plies GAF "VersaShield FB-1S".

Insulation (Optional): — Apache Products "Pyrox" or "Whiteline" or Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate insulation, wood fiberboard, perlite, glass fiber, any thickness or combination.

Slip Sheet: — Tritex "Rocroof", loose laid.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

12. **Deck:** C-15/32

Incline: 2

Slip Sheet: — Two plies GAF "VersaShield Underlayment" or "VersaShield FB-2S" or three plies "VersaShield FB-1S".

Insulation: — Apache Products "Pyrox" or "Whiteline" or Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate (2-in. maximum) or Johns Manville "Fesco Foam" polyisocyanurate/perlite composite (2-in. maximum) or GAF "GAFTEMP Permalite" perlite (2-in. maximum) or Johns Manville "Fesco Board" perlite (2-in. maximum) or GAF "GAFTEMP Permalite" perlite (2-in. maximum) or Celotex "Regular and High Density Fiberboard" wood fiberboard, glass fiber, any combination.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

13. **Deck:** C-15/32

Incline: 1/4

Slip Sheet: — Two plies GAF "VersaShield Underlayment" or "VersaShield FB-2S" or three layers "VersaShield FB-1S".

Insulation: — Apache Products "Pyrox" or "Whiteline" or Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate (any thickness) or Johns Manville "Fesco Foam" polyisocyanurate/perlite composite (3-in. maximum) or GAF "GAFTEMP Composite" polyisocyanurate/fiberboard composite (3-in. maximum) or Johns Manville "Fesco Board" perlite (3-in.

maximum) or GAF "GAFTEMP Permalite" perlite (3-in. maximum) or Celotex "Regular and High Density Fiberboard" wood fiberboard, glass fiber, any combination.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

14. **Deck:** C-15/32

Incline: 1-1/2

Slip Sheet: — Two plies GAF "VersaShield Underlayment" or "VersaShield FB-2S" or three plies "VersaShield FB-1S".

Insulation: — Celotex "Energy Lok" or "Hy-Therm AP" wood fiberboard or glass fiber, any combination.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

Uniform thickness or tapered insulation may be used in the following systems provided they do not exceed the indicated incline or thickness.

"FTR-Value Glass Facer Roof Insulation" is an acceptable substitute in any roof covering assembly which utilizes "FTR-Value Roof Insulation".

15. **Deck:** NC

Incline: 1-1/2

Insulation: — "FTR-Value Roof Insulation", any thickness.

Membrane: — "Fibertite".

16. **Deck:** C-15/32

Incline: See note

Insulation (Optional): — "FTR-Value-A" or "FTR-Value-III-A," any thickness.

Insulation: — "FTR-Value-IV-A," minimum 1 inch thick polyisocyanurate insulation. All insulation butt joints must be staggered a minimum of 6 inches from the roof deck butt joints or from the insulation butt joints directly below.

Insulation (Optional): — "FTR-Value-A" or "FTR-Value-III-A," any thickness.

Membrane: — Any "FiberTite", 40-mil thickness minimum that currently has a noncombustible roof deck rating with "FTR-Value-A" or "FTR-Value-III-A" or insulation.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation ("FTR-Value-A" or "FTR-Value-III-A"), roof covering assembly, however the incline cannot exceed 1:12.

17. **Deck:** NC

Incline: 2

Insulation: — Johns Manville "ENRGY 3", any thickness, mechanically fastened.

Membrane: — "FiberTite-FB", "FiberTite-XT FB", "Fiber-Tite-SM FB" or "FiberTite-XTreme FB" mechanically fastened.

18. **Deck:** C-15/32

Incline: Unlimited

Insulation (Optional): — Any UL Classified (except EPS), any thickness or combination, loose laid or mechanically fastened.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or Millennium Adhesive Products "Weather-Tite One Step Foamable Adhesive" or hot roofing asphalt to mechanically attached insulation.

Membrane: — "FiberTite-FB", "FiberTite-XT FB", "FiberTite-SM FB" or "FiberTite-XTreme FB", mechanically fastened.

Class B - Mechanically Fastened

1. **Deck:** NC

Incline: Unlimited

Insulation (Optional): — Any UL Classified polystyrene, wood fiberboard, glass fiber or perlite, any thickness or combination.

Slip Sheet: — Tritex "Rocroof", loose laid.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

2. **Deck:** C-15/32

Incline: 1

Barrier Board: — Minimum 5/8-in. gypsum board with all butt joints staggered a minimum of 6-in. from the butt joints in the plywood roof deck butt joints.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

3. **Deck:** C3T&G

Incline: 1

Barrier Board: — Minimum 5/8-in. gypsum board.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

4. **Deck:** C-15/32

Incline: 1/2

Slip Sheet: — Tritex "Rocroof", loose laid.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

5. **Deck:** C-3/8

Incline: 1/2

Insulation: — 3/4-in. (minimum) perlite with all butt joints staggered a minimum of 6-in. from the butt joints in the plywood roof deck butt joints.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard".

Membrane: — FiberTite" or "FiberTite-XT" (KEE).

6. **Deck:** C-15/32

Incline: 1-1/2

Slip Sheet: — One ply GAF "VersaShield Underlayment" or "VersaShield FB-2S".

Membrane: — "FiberTite" or "FiberTite-XT" (KEE).

7. **Deck:** C-15/32

Incline: See note

Insulation (Optional): — "FTR-Value-A" or "FTR-Value-III-A", any thickness.

Insulation: — "FTR-Value-IV-A", minimum 1/2-inch thick polyisocyanurate insulation. All insulation butt joints must be staggered a minimum of 6 inches from the roof deck butt joints or from the insulation butt joints directly below.

Insulation (Optional): — — "FTR-Value-A" or "FTR-Value-III-A", any thickness.

Membrane: — Any "FiberTite" membrane, 40-mil thickness minimum, that currently has a noncombustible roof deck rating with "FTR-Value-A" or "FTR-Value-III-A" insulation.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation ("FTR-Value-A" or "FTR-Value-III-A"), roof covering assembly, however the incline cannot exceed 1:12.

Class C - Mechanically Fastened

1. **Deck:** C-15/32

Incline: Unlimited

Insulation: — "FTR-Value H", "FTR-Value H Glass Facer", "FTR-Value HD", "FTR-Value HD FA", "FTR-Value HD Composite or Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD", "H-Shield HD90", "H-Shield HD Composite", any combination, any thickness.

Membrane: — Any "FiberTite" membrane Classified by UL for a Class A, B or C rating when used directly over polyisocyanurate insulation.

Class A, B or C (See Note)

2. **Deck:** NC (See Note 1)

Incline: See Note 1

Insulation: — Any UL Classified, any thickness, adhered with "FTR 601".

Membrane: — Any UL Classified modified bitumen system, BUR system or CPE, CSM, CSPE, EPDM, NBP, PIB, PVC, TPO or TRE membrane system suitable for use with any roof insulation.

Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified Roof Covering System (TGFU) currently limited to noncombustible roof decks.

3. **Deck:** NC (See Note 1)

Incline: See Note 1

Insulation: — Any UL Classified, any thickness, adhered with "FTR 601PG".

Membrane: — Any UL Classified modified bitumen system, BUR system or CPE, CSM, CSPE, EPDM, NBP, PIB, PVC, TPO or TRE membrane system suitable for use with any roof insulation.

Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified Roof Covering System (TGFU) currently limited to noncombustible roof decks.

4. **Deck:** C-15/32

Incline: See Note 1

Insulation: — Any UL Classified, any thickness.

Barrier Board: (See Note 2): — 1/4-in., 1/2-in. or 5/8-in. thick "DensDeck® Roofboard", "DensDeck DuraGuard™ Roofboard" or "DensDeck Prime® Roofboard" or 5/8-in. thick "DensDeck® Fireguard® Roofboard" or "DensDeck Prime® Fireguard® Roofboard" or "DensDeck Prime® STORMX™ Roofboard" mechanically fastened with all butt joints in the barrier board staggered a minimum of 6-in. from the plywood roof deck butt joints.

Membrane: — Any UL Classified insulated or non-insulated FiberTite membrane system currently limited to noncombustible roof deck.

Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified Roofing System (TGFU) currently limited to noncombustible roof deck.

Note 2: The use of the "DensDeck® Roofboard", "DensDeck DuraGuard™ Roofboard" or "DensDeck Prime® Roofboard" or 5/8-in. thick "DensDeck® Fireguard® Roofboard" or "DensDeck Prime® Fireguard® Roofboard" or "DensDeck Prime® STORMX™ Roofboard" as a barrier board over the insulation permits the use of any Classified Roofing System (TGFU) which otherwise is limited to use over noncombustible roof deck.

MAINTENANCE AND REPAIR SYSTEMS

Class A, B and C

1. **Deck:** C-15/32 or NC

Incline: See Note

Existing Roof System: — Any Class A, B or C roof covering system, to retain the existing Classification, is covered with:

Insulation: — "FTR-Value HD", "FTR-Value HD FA", "FTR-Value HD FA", "FTR-Value HD Composite" or Hunter Panels "H-Shield HD", "H-Shield HD90" or "H-Shield HD Composite".

Membrane: — Any "FiberTite" membrane.

Note: Maximum incline shall be in accordance with Classification established for insulation/membrane roof covering system, but cannot exceed 2:12. TPO membranes are limited to a maximum slope 1/2:12.

2. **Deck:** C-15/32 or NC

Incline: 1/2

Existing Roof System: — (To maintain existing Classifications) - Any Class A, B or C, uncoated, insulated or uninsulated, modified bitumen membrane or Type G3 mineral surfaced cap sheet BUR system.

Membrane: — "FiberTite", "FiberTite-XT", "FiberTite-SM", "FiberTite-XTreme", "FiberTite-FB", "FiberTite-XT FB", "FiberTite-SM FB" or "FiberTite-XTreme FB" fully adhered with hot mopped asphalt or Henry "787" adhesive applied at a rate of 1.7-gal/100-ft.² or ICP Adhesives & Sealants Inc. "CR-20" adhesive applied at a rate of 4.2-lbs/100-ft.² or mechanically fastened.

Class A

1. **Deck:** C-15/32

Incline: Unlimited

Existing Roof System: — Class A, B or C cap sheet or smooth surfaced BUR roof, insulated or uninsulated and/or single ply membrane (EPDM, PVC or CPE).

Slip Sheet: — One ply Atlas Roofing Corp. "FR-50" or two plies Atlas Roofing Corp. "FR-10" or one ply Tritex "Rocroof", mechanically fastened.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE), mechanically fastened.

2. **Deck:** NC

Incline: 1/2

Existing Roof System: — Class A, B or C cap sheet or smooth surfaced BUR roof, insulated or uninsulated and/or single ply membrane (EPDM, PVC or CPE).

Insulation: —

a. Any UL Classified polystyrene insulation (tapered or uniform thickness) any thickness covered with 1-in. perlite, 1-in. wood fiber, Atlas Roofing Corp. "FR-10" or Tritex "Rocroof".

b. Apache Products "Pyrox" or "Whiteliner", Atlas Roofing Corp. "ACFoam I", "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate insulation, any thickness.

c. Wood fiber or perlite.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE), mechanically fastened.

3. Deck: C-15/32**Incline:** Unlimited

Existing Roof System: — Class A, B or C cap sheet or smooth surfaced BUR roof, insulated or uninsulated and/or single ply membrane (EPDM, PVC or CPE).

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", 3/4-in. Partek Insulations "Paroc Baseboard" or "Paroc Capboard" mechanically fastened.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE), mechanically fastened.

4. Deck: C-15/32**Incline:** 2

Existing Roof System: — Class A gravel surfaced BUR (gravel maintained).

Insulation: —

a. Any UL Classified polystyrene insulation (tapered or uniform thickness) any thickness covered with 1-in. perlite.

b. Apache Products "Pyrox" or "Whiteline", Atlas Roofing Corp. "ACFoam II" or Johns Manville "ENRGY 2" polyisocyanurate insulation, any thickness.

c. Perlite.

Membrane: — "FiberTite" or "FiberTite-XT" (KEE), mechanically fastened.

5. Deck: NC**Incline:** 2

Existing Roof System: — Class A, B or C, to retain the existing Classification insulated or noninsulated cap sheet, smooth surface BUR or single ply membrane.

Insulation: — Firestone Building Product Co. LLC "ISO95+GL" Maintenance and Repair Systems or Apache "Pyrox" or Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY-2", any thickness or combination, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./65 to 75-ft.² or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

6. Deck: C-15/32**Incline:** 2

Existing Roof System: — Class A, B or C, to retain the existing Classification, insulated or noninsulated cap sheet.

Insulation: — Firestone Building Products Co. LLC "ISO95+GL" or Apache "Pyrox" or Atlas Roofing Corp. "ACFoam II" or "ACFoam III" or Johns Manville "ENRGY 3", any thickness or combination, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./ 60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

7. Deck: NC**Incline:** 1-1/2

Existing Roof System: — Class A, B or C, to retain the existing Classification, insulated or noninsulated cap sheet, smooth surface BUR or single ply membrane.

Insulation: — Celotex "Hy-Therm AP", any thickness mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal/60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

8. Deck: C-15/32**Incline:** 1-1/2

Existing Roof System: — Class A, B or C, to retain the existing Classification, insulated or noninsulated cap sheet.

Insulation: — Celotex "Hy-Therm AP", any thickness mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT" fully adhered with "FTR 190e" adhesive applied at 1-gal/60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.².

9. **Deck:** NC

Incline: See Note

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — A minimum 3-in. layer or minimum two layers of "FTR-Value H Glass Facer" or Hunter Panels "H-Shield-CG".

Membrane: — Any "FiberTite" membrane.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

10. **Deck:** C-15/32

Incline: See Note

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — A minimum 3-in. layer or minimum two layers of "FTR-Value H Glass Facer" or Hunter Panels "H-Shield-CG".

Membrane: — Any "FiberTite" membrane.

Note: The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

11. **Deck:** NC

Incline: 1-1/2

Existing Roof System: — Class A, B or C, to retain the existing Classification insulated or noninsulated cap sheet, smooth surface BUR or single ply membrane.

Insulation: — Rmax Inc. "Multi-Max-3" or "Thermarof Plus-3", any thickness, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", mechanically fastened or adhered in The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./65 to 75-ft.² or "FiberTite-FB", fully adhered with "FTR 290" adhesive at 1-gal/100-ft.²

12. **Deck:** C-15/32

Incline: 1-1/2

Existing Roof System: — Class A, B or C, to retain the existing Classification, insulated or noninsulated cap sheet.

Insulation: — Rmax Inc. "Thermarof Plus-3", any thickness, mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" mechanically fastened or adhered with The Dow Chemical Co. "Insta-Stik" or hot roofing asphalt.

Membrane: — "FiberTite" or "FiberTite-XT", fully adhered with "FTR 190e" adhesive applied at 1-gal./ 60 to 75-ft.² or "FiberTite-FB" fully adhered with "FTR 290" adhesive at 1-gal/100-ft.²

Class B

1. **Deck:** NC

Incline: See Note

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — A minimum 1.9-in. layer of "FTR-Value H Glass Facer" or Hunter Panels "H-Shield-CG".

Membrane: — Any "FiberTite" membrane

Note: The maximum incline shall be in accordance with the Class B Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

2. **Deck:** C-15/32

Incline: See Note

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — A minimum 1.9-in. layer of "FTR-Value H Glass Facer" or Hunter Panels "H-Shield-CG".

Membrane: — Any "FiberTite" membrane.

Note: The maximum incline shall be in accordance with the Class B Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

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