

## APS Roofing Design Criteria

1. Design to International Building Code, edition adopted by Authority Having Jurisdiction.
2. Current APS/PSFA Specifications
  - a. Built up Roofing over Light Weight Concrete (LWC) dated Jan 10
  - b. Built up Roofing over Insulation Dated Jan 10
3. Division 5 **Sheet Metal Decking**: (Make sure this language is used in section for puddle welds – preferred method of attachment Is tek screw or powder actuated i.e. Hilti)
  - a. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
  - b. Repair Painting: Wire brush and clean rust spots, welds, and abraded areas on both surfaces of prime-painted deck immediately after installation and apply repair paint.
  - c. Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.
4. Make sure the **Rough Carpentry Section** (Division 6) does not indicate any Pressure Treated wood on the roof area. All wood blocking / nailer, parapet framing coverings, etc. are to be Fire-Retardant Treated Wood only. **Use ES-1 Nailing Detail.** (See APS Rough Carpentry Spec)
5. **Sheet Metal Flashing and Trim** All coping and edge metal securement must meet ES-1 standard. Continuous cleats and tapered perlite need to be installed under the coping gap.
6. **Roof top accessories**: (Section 7720); Roof top ladders / Parapet wall crossing ladders: Can not touch roofing. Must have walk pad at bottom of ladder, each side. If crossing a parapet, must have minimum 6" clearance above coping cap / top of parapet. Must have walk plate surface across coping cap / parapet.
7. All **roof top penetrations** must be a minimum of 8" above finished roof system including roof hatch.
8. All **mechanical equipment** curbing must allow for 18" clearance above finished roof system. This can be accomplished with a curb only or a combination of curb and metal equipment stand/rack.
9. When using the **Perma Flash system** (JM flashing product for penetrations) must specify 1 coat of TopGard Base Coat, and 2 coats of TopGard 4000 be applied, Thirty (30) day must elapse prior to the application of the Coating. No aluminizing acceptable.
10. All penetration will have a minimum **18" radius clear space** to allow warrantable flashing.

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11. **Crickets** are to be dimensioned on drawings. Calculation: (1/6 distance between roof drains plus distance roof drain is from wall) divided by 4. Always round up to 4' interval for maximum material usage.
12. **Flashing and Sheet Metal - Canales/Scuppers.** All canals and/or scuppers must have a metal pan lining extending not less than 6 inches (152 mm) past the inside of the parapet and not less than 6 inches (152 mm) from each side of the canale or scupper opening. All canals and scuppers must have positive drainage.
13. If this is a LEED project, must ensure JM GlasKap CR or GAF EnergyCap Cap sheet is specified, This will also apply to the wall flashings.
14. Contractor shall provide and maintain a flume recovery system acceptable to the Owner for the duration of the project to control fumes/odors associated with the bitumen kettle.  
3.5B
15. **Add to Summary of Work:** If during the course of this project, the rooftop mechanical equipment (heating and/or cooling) must be taken out of service to accomplish the work, Contractor shall provide temporary portable heating and/or cooling systems to maintain the building's interior environment equal to the building's own heating and/or cooling system.
16. Roof drains shall be detailed as Froet drains. Use the LP "Low Profile" OFS "over flow strainer" detail. Ensure the details identify the appropriate extension rind detail (DEX) and elevation from roof deck.
17. Any roofing slope over 1" / 12" needs to have back nailing identified on the prints for the GC to install.
18. Coping cap installation shall have continuous cleats installed. No Chair systems currently acceptable.
19. Under coping cap, continuous tapered perlite will be installed to provide for rigidity.
20. An Isometric drawing of the roofing system will be detailed in the drawings for every roofing system called in the specifications.
21. Calculations for corners and perimeters:

Perimeter (x) is the lesser of 10% of least horizontal Dimension (0.10 times least width of building) or 40% (0.4 times the height), But not less than 4% (0.04) of least horizontal dimension or minimum 3' for buildings under 60' in height.

Example: 22' high \* .4 = 8.8' or 36' wide \* .1 = 3.6' – so perimeter would be 3.6' and corner would be 3.6' x 3.6' enhanced fastening.

\*\*\*\*\*Corners may be treated as perimeters if the parapet is greater than or equal to 3' above finished roof system everywhere.

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22. **Roof Assemblies with gypsum board:** Hot mop a ½" layer of retrofit perlite board over the top layer of gypsum board; the roof membrane is mopped to the retrofit board (this isolates the fasteners and plates from the roof membrane).