

AUSTIN FIRE DEPARTMENT

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2024 Wildland-Urban Interface Code (WUIC) Guide to WUIC Drawing Details

Development applications must follow the <u>WUI Code Plan Review Submittal Checklist</u>. This guide explains what type of information to include in your drawings to show how your materials meet the Wildland-Urban Interface Code (WUIC).

To avoid confusion, plan review delays, and costly construction changes, your plans must clearly show:

- Exact product details. Include the manufacturer name, product model or number, and fire test data for each material. Fictional example: "StoneHaven StrataBoard Horizontal Siding, ASTM E84 Class A"
- Where materials are used. Label materials in your wall sections, elevations, floor plans, and roof plans. You can also add a materials schedule to list everything in one place.
- **Code references with product info.** If you mention a code section (like WUIC 504.7), make sure you also list the specific product that meets that section. *Don't just copy and paste the code text without showing what product you're using as this often leads to mistakes and delays.*

The **Plan Review** checks your materials before construction starts. This helps make sure everything meets code and avoids expensive changes later. The **Inspection** only checks that what you built matches your approved plans.

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Specific Versus General Information

What type of information to show on your plans:

- 1. **Specific Information:** Some parts of your project need **exact product details** (like manufacturer, model, and fire rating). When in doubt, provide this for the most streamlined review and inspection process. See How to Show Specific Product Information for more instruction.
- General Information: Other parts of your project can use a *General Note* that provides basic
 information and references the code. Use the example text in the table below to create your own
 notes or copy the language directly into your drawings. If it's not accurate for your project,
 provide specific product and/or material information on plans. Failure to do so can cause both
 review and inspection delays.

Certain elements have multiple options listed in {red bracketed italicized text} that says "select one". Only select and list the one product that will be used for the specific project.

Additional *General Notes* may be helpful as well, see <u>Exhibit B: Material Schedule Template</u> to help you create your own notes.

Tip: If "Drawing Required" is listed, make sure to include a labeled drawing showing where the material is used. See Exhibit B: Material Schedule Template for a sample Material Schedule.

		Drawing
Element	What to Include	Required?
Ember Ignition Zone	Specific Product Information	Site or Floor Plan
Ember Ignition Zone -	Specific Information and/or Grass Species	Site or Floor Plan
Proximity Zone C		
Roof - Metal or Clay	Specific Information + Underlayment/Fireblocking	
Tile	General Info	
Roof - Flat Roof	Specific Information +	Roof Section
	UL Assembly, and	
	Specific Information for layers	
Roof - Composition	General Note:	
Shingles (Sloped)	Composition Asphalt Shingles, Class A rated per ASTM	
	E 108 or UL 790	

Element	NATIONAL AND	Drawing
Element	What to Include	Required?
Roof valley	General Note: Valley flashings shall be not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4 kg) mineral-surfaced,	
	nonperforated cap sheet complying with ASTM D 3909 running the full length of the valley.	
Woven roof valleys	General Note: Valley shingles shall be weaved or woven (closed valley) 26 gage (0.019 inch) galvanized sheet metal flashing running the full length of the valley and extending at least 12 inches on both planes of the roof surface. Flashing shall be visible at the valley end for inspection.	
Raised-deck system	Specific Product Information	
Skylights	General Note: Metal frame with {select one: dual pane, tempered, 20-minute fire-rated} glazing	
Walkway Pads	Specific Product Information	
Soffit	Specific Product Information	Wall or Eave Section
Fascia	Specific Product Information	Wall or Eave Section
Exposed rafter tails	Specific Product Information	Wall or Eave Section
Exterior ceilings	Specific Product Information	
Gutters and downspouts	General Note: Gutters & downspouts will be constructed of noncombustible material and will be provided with a noncombustible, corrosion resistant means to prevent the accumulation of leaves and debris.	
Exterior walls	Specific Product Information	Wall Section
Flashing	General Note: 6 inch metal flashing applied vertical behind exterior finishes on exterior wall at ground, decking, and roof intersections.	
Underfloor Areas	derfloor Areas Specific Product Information	
Appendages and structures	Specific Product Information	Section Detail
Appendages at slopes	Specific Product Information	Section Detail

Flowers	Minat to Include	Drawing
Element	What to Include	Required?
Fences	Specific Product Information	
Glazing	General Note: Window Glazing, Zone A: {select one: Dual pane, Tempered, 20-minute fire-rated, Glass block} Skylight Glazing, all Zones: {select one: Dual pane, Tempered, 20-minute fire-rated}	
Doors	General Note: Select one: Metal, 1-3/4" solid core wood, 20-minute fire- rated	
Vents: Building Code Structures (Commercial, Multi- family, etc.)	Specific Product Information	Mechanical Ventilation Detail
Vents: Residential Code Structures	General Note: All ventilation openings, including but not limited to exhaust vents, attic vents, underfloor vents or any vent in the exterior walls or roof, must be made of non-combustible material with a corrosion-resistant mesh having openings of 1/8" or less. Alternatively, vents designed to prevent flame or ember penetration are acceptable. Roof vents must not exceed 144 square inches. Dryer vents and associated ductwork shall be noncombustible material. Dryer vents, kitchen exhaust, and standard roof plumbing vent stacks are otherwise exempt.	
Spark Arrestors	General Note: Spark arresters shall be required for all chimneys serving a fireplace, barbecue, incinerator and/or a decorative heating appliance. Spark arresters shall be constructed of woven or welded wire screening equivalent to 12 USA standard gage (SWG) wire (0.1046 inch) (2.66 mm), 19 SWG galvanized wire (0.040 inch)(1.02 mm), or 24 SWG stainless steel wire (0.022 inch) (0.56 mm) having openings not exceeding 1/2 inch (12.7 mm).	
Boat Dock: Walking Surface & Roof	Specific Product Information	

How to Show Specific Product Information

Where specific information is required, your plans or material schedule should clearly list:

- Manufacturer Name
- Product Name or Model
- Fire Test Data (where required)

The following is more information on what to show for specific material categories:

- **1. Ignition-Resistant Products.** These materials slow down fire spread but aren't always non-combustible.
 - a. Show ignition-resistant materials like this on your plans or schedule (fictional examples):
 - ForestForm Legacy Series Composite Decking
 - BlazeBlocker ShieldLine Soffit Vent
 - CinderGuard ProMesh Barrier System
 - PyroSafe TimberTreat Exterior FRTW
 - b. Submit fire test data demonstrating compliance with requirements outlined in WUIC 503.2, unless the product is already included in the AFD WUI Approved Materials List.
- **2. Non-Combustible Materials.** This includes metal, masonry, fiber cement, stucco, glass, and any material that is noncombustible per ASTM E 136. Not all ignition-resistant materials are noncombustible. Examples for how to label noncombustible material on plans or in a material schedule:
 - Steel
 - Aluminum
 - Brick
 - Fiber Cement Board
 - Type X Gypsum Board
 - Dual Pane Tempered Glazing
- **3. Heavy Timber.** Clearly label the plans with the size of the heavy timber being used and confirm that it is solid lumber. Minimum sizes are listed in <u>Building Code Section 2304.11</u>, but structural analysis is required and may result in larger dimensions. If you need assistance in performing a structural analysis, consider working with a registered design professional such as a licensed engineer who is experienced with structural analysis.
- **4. Fire-Resistant Assemblies.** If you are unsure how to find or properly show fire-rated assemblies on your plans, it may be helpful to consult a registered design professional, such as an architect who is experienced in identifying and documenting fire-resistant assemblies.

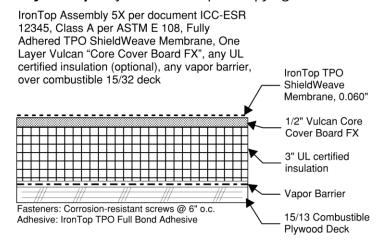
- 1. **Reference the Tested Assembly**. Always begin by identifying the specific tested and approved assembly you're using. This includes:
 - Testing agency (e.g., UL, Intertek, FM)
 - Assembly designation (e.g., UL Design No. U419)
 - Rating (e.g., 1-hour, 2-hour)
 - Application type (e.g., wall, floor/ceiling, roof)

Example Reference (*fictional*): "Assembly conforms to UL Design No. U419 – 1-Hour Fire-Rated Wall Assembly."

- 2. Include a copy of the UL Assembly Listing or ICC-ES report. This document can often be obtained from product manufacturers, ICC Evaluation Service online directory, the UL Product iQ website. The information on this document should match the information you provide in your scaled drawing and notes. This is how we verify that your proposed design meets the requirements of the tested assembly.
- 3. **Include a Scaled Drawing.** Provide a detail drawing of the assembly in your architectural set. This should be:
 - To scale (typically 1½" = 1'-0" or similar)
 - Cross-sectional to show all layers
 - Clearly dimensioned for thicknesses, spacing, and fasteners
 - Labeled with callouts for each component
- 4. Label Each Component Precisely. Each element in the assembly should be labeled with:
 - Manufacturer name (or "Approved Equal" if flexibility is needed)
 - Product name
 - Material type and thickness
 - UL or ICC-ESR reference number, if applicable

Use leader lines and callouts in the drawing to tie each label to the correct location.

Fire-Resistant Assembly Example. (fictional example - copying will result in rejection comments)



1 Fire-Rated Roof Assembly Cross Section Scale: XX" = 1'-0"

Last revised: 08/20/2025 by BC

WUI Detail Drawing Sheets

Thinking about using a standard WUI Detail sheet across multiple projects? Or wondering if it's better to customize drawings for each project?

Ultimately, it's your choice, but here are a few things to consider if you're leaning toward a standardized sheet:

- Every detail must be accurate, even if it doesn't apply to the current project.
- Irrelevant information can cause confusion, trigger review comments, and lead to delays.
- You'll still need to provide project-specific material info, such as creating a customized material schedule.
- Over time, adding specialty details to a general sheet can make it bulky and harder to manage, increasing the chance for errors and longer review times.
- Avoid copying large sections of code into your plans unless absolutely necessary. Generic code language without clear project context can slow down both review and inspection.
- See Exhibit A: WUI Detail Drawing Sheet Template and Exhibit B: Material Schedule Template to help you create your own streamlined detail sheets and material schedule.

The ultimate goal? To provide clear, complete, and project-specific information so City staff can easily verify that selected products meet code requirements. It also ensures contractors know *exactly* what to install. This helps ensure a smooth inspection process, successful construction, and a final building that meets code and protects residents and our community.

Tip: Customizing your WUI details may take a little more time upfront, but it often results in simpler, cleaner plans with fewer surprises later.

Exhibit A: WUI Detail Drawing Sheet Template

The template below shows one way to meet the WUI code using a standard detail sheet that can be customized for each specific project.

For example, make sure the product names and materials listed in the **Material Schedule** and **General Notes** match what you plan to use for that project. The drawings should clearly show how the building will be built. What is shown in the approved plans must match what is built on-site when it is inspected.

Below is an example of a WUI Detail Sheet for Proximity Zone A. Do not copy and paste this example into your plans. Instead, use it as a guide to help you create your own WUI Detail Drawing Sheet.

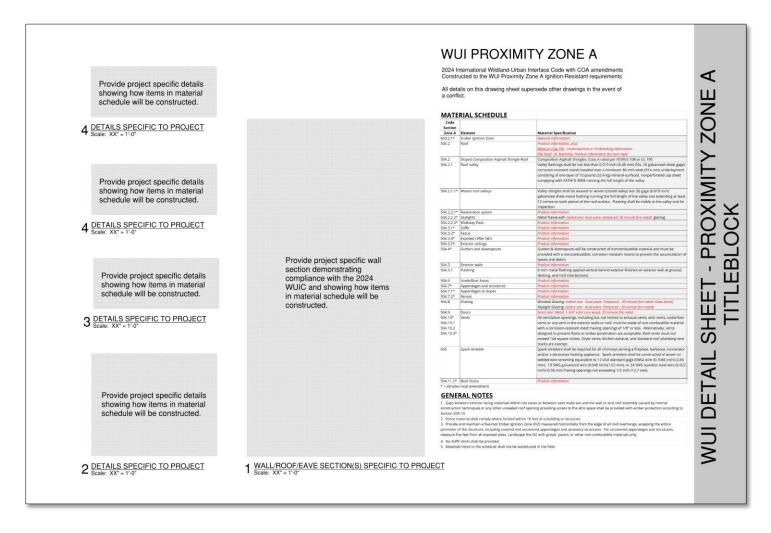


Exhibit B: Material Schedule Template

Instructions for Using the Material Schedule Templates:

Replace the *red italicized text* with the specific product information for your project. Be sure to
include both the manufacturer name and the product name for each material you list.

<u>Exception</u>: For noncombustible materials you may include only the material type without the product name if desired. This includes fiber cement, metal, stucco, concrete, masonry, and stone.

- If you plan to use a material not listed in the AFD WUI Approved Materials List, you must submit a copy of the product fire test data from a recognized fire testing laboratory. This documentation can typically be obtained from the product manufacturer.
- Certain elements have multiple options listed in {red bracketed italicized text} that says "select one".
 Only select and list the product that will be used for the project.
- If your project does not include a certain element (such as a specific construction component), you
 may omit that row from your schedule <u>or</u> add a note stating that it is not applicable to your
 project.
- You are responsible for providing correct information. Verify all information is correct prior to using the following templates.

Zone A - Material Schedule Template

Code Section		
Zone A	Element	Material Specification
603.2.1*	Ember Ignition Zone	Material Information
504.2	Roof	Product information, plus: <u>Metal or Clay Tile</u> : Underlayment or Fireblocking information <u>Flat Roof:</u> UL Assembly, Product information for each layer
504.2	Sloped Composition Asphalt Shingle Roof	Composition Asphalt Shingles, Class A rated per ASTM E 108 or UL 790
504.2.1	Roof valley	Valley flashings shall be not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4 kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D 3909 running the full length of the valley.
504.2.1.1*	Woven roof valleys	Valley shingles shall be weaved or woven (closed valley) iver 26 gage (0.019 inch) galvanized sheet metal flashing running the full length of the valley and extending at least 12 inches on both planes of the roof surface. Flashing shall be visible at the valley end for inspection.
504.2.2.1*	Raised-deck system	Product information
504.2.2.2*	Skylights	Metal frame with {select one: dual pane, tempered, 20-minute fire-rated} glazing
504.2.2.3*	Walkway Pads	Product information
504.3.1*	Soffit	Product information
504.3.2*	Fascia	Product information
504.3.4*	Exposed rafter tails	Product information
504.3.5*	Exterior ceilings	Product information
504.4*	Gutters and downspouts	Gutters & downspouts will be constructed of noncombustible material and will be provided with a noncombustible, corrosion resistant means to prevent the accumulation of leaves and debris.
504.5	Exterior walls	Product information
504.5.1	Flashing	6-inch metal flashing applied vertical behind exterior finishes on exterior wall at ground, decking, and roof intersections.
504.6	Underfloor Areas	Product information
504.7*	Appendages and structures	Product information

504.7.1*	Appendages at slopes	Product information
504.7.2*	Fences	Product information
504.8	Glazing	Window Glazing, Zone A: {select one: Dual pane, Tempered, 20-minute fire-rated, Glass block} Skylight Glazing, all Zones: {select one: Dual pane, Tempered, 20-minute fire-rated}
504.9	Doors	Select one: Metal, 1-3/4" solid core wood, 20-minute fire-rated
504.10* 504.10.1 504.10.2 504.10.3*	Vents	All ventilation openings, including but not limited to exhaust vents, attic vents, underfloor vents or any vent in the exterior walls or roof, must be made of non-combustible material with a corrosion-resistant mesh having openings of 1/8" or less. Alternatively, vents designed to prevent flame or ember penetration are acceptable. Roof vents must not exceed 144 square inches. Dryer vents and associated ductwork shall be noncombustible material. Dryer vents, kitchen exhaust, and standard roof plumbing vent stacks are otherwise exempt.
605	Spark Arrester	Spark arresters shall be required for all chimneys serving a fireplace, barbecue, incinerator and/or a decorative heating appliance. Spark arresters shall be constructed of woven or welded wire screening equivalent to 12 USA standard gage (SWG) wire (0.1046 inch) (2.66 mm), 19 SWG galvanized wire (0.040 inch)(1.02 mm), or 24 SWG stainless steel wire (0.022 inch) (0.56 mm) having openings not exceeding 1/2 inch (12.7 mm).
504.11.2*	Boat Docks	Product information

^{* =} denotes local amendment

Additional General Notes:

- 1. Gaps between exterior facing materials within the eaves or between eave materials and the wall or and roof assembly caused by normal construction techniques or any other unsealed roof opening providing access to the attic space shall be provided with ember protection according to Section 504.10 of this code.
- 2. Fence material shall comply where located within 10 feet of a building or structure.
- 3. Provide and maintain a five-foot Ember Ignition Zone (EIZ) measured horizontally from the edge of all roof overhangs, wrapping the entire perimeter of the structure, including covered and uncovered appendages and accessory structures. For uncovered appendages and structures, measure five feet from all exposed sides. Landscape the EIZ with gravel, pavers, or other non-combustible materials only.
- 4. No Soffit Vents.
- 5. Materials listed in the schedule shall not be substituted in the field.

Zone B - Material Schedule Template

Code Section		
Zone B	Element	Material Specification
603.2.1*	Ember Ignition Zone	Material Information
504.2	Roof	Product information, plus: <u>Metal or Clay Tile</u> : Underlayment or Fireblocking information <u>Flat Roof:</u> UL Assembly, Product information for each layer
504.2	Sloped Composition Asphalt Shingle Roof	Composition Asphalt Shingles, Class A rated per ASTM E 108 or UL 790
505.2.1	Roof valley	Valley flashings shall be not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4 kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D 3909 running the full length of the valley
505.2.1.1*	Woven roof valleys	Valley shingles shall be weaved or woven (closed valley) 26 gage (0.019 inch) galvanized sheet metal flashing running the full length of the valley and extending at least 12 inches on both planes of the roof surface. Flashing shall be visible at the valley end for inspection.
505.2.2.1*	Raised-deck system	Product information
505.2.2.2*	Skylights	Metal frame with {select one: dual pane, tempered, 20-minute fire-rated} glazing
505.2.2.3*	Walkway Pads	Product information
505.3.1*	Soffit	Product information
505.3.2*	Fascia	Product information
505.3.4*	Exposed rafter tails	Product information
505.3.5*	Exterior ceilings	Product information
505.4*	Gutters and downspouts	Gutters & downspouts will be constructed of noncombustible material and will be provided with a noncombustible, corrosion resistant means to prevent the accumulation of leaves and debris.
505.5*	Exterior walls	Product information
505.6	Underfloor Areas	Product information
505.7*	Appendages and structures	Product information
505.1**	Appendages at slopes	Product information
505.7.2*	Fences	Product information
505.8*	Glazing	Skylight Glazing, all Zones: {select one: Dual pane, Tempered, 20-minute fire-rated}

505.10* 505.10.1 505.10.2 505.10.3*	Vents	All ventilation openings, including but not limited to exhaust vents, attic vents, underfloor vents or any vent in the exterior walls or roof, must be made of noncombustible material with a corrosion-resistant mesh having openings of 1/8" or less. Alternatively, vents designed to prevent flame or ember penetration are acceptable. Roof vents must not exceed 144 square inches. Dryer vents and associated ductwork shall be noncombustible material. Dryer vents, kitchen exhaust, and standard roof plumbing vent stacks are otherwise exempt.
605	Spark Arrester	Spark arresters shall be required for all chimneys serving a fireplace, barbecue, incinerator and/or a decorative heating appliance. Spark arresters shall be constructed of woven or welded wire screening equivalent to 12 USA standard gage (SWG) wire (0.1046 inch) (2.66 mm), 19 SWG galvanized wire (0.040 inch)(1.02 mm), or 24 SWG stainless steel wire (0.022 inch) (0.56 mm) having openings not exceeding 1/2 inch (12.7 mm).
505.11.2*	Boat Docks	Product information

^{* =} denotes local amendment

Additional General Notes:

- 1. Gaps between exterior facing materials within the eaves or between eave materials and the wall or and roof assembly caused by normal construction techniques or any other unsealed roof opening providing access to the attic space shall be provided with ember protection according to Section 505.10 of this code.
- 2. Fence material shall comply where located within 10 feet of a building or structure.
- 3. Provide and maintain a five-foot Ember Ignition Zone (EIZ) measured horizontally from the edge of all roof overhangs, wrapping the entire perimeter of the structure, including covered and uncovered appendages and accessory structures. For uncovered appendages and structures, measure five feet from all exposed sides. Landscape the EIZ with gravel, pavers, or other non-combustible materials only.
- 4. No Soffit Vents.
- 5. Materials listed in the schedule shall not be substituted in the field.

Zone C - Material Schedule Template

Code Section		
Zone C	Element	Material Specification
603.2.1*	Ember Ignition Zone	Material Information, Grass Species
506.2*	Roof	Product information, plus: <u>Metal or Clay Tile</u> : Underlayment or Fireblocking information <u>Flat Roof:</u> UL Assembly, Product information for each layer
504.2	Sloped Composition Asphalt Shingle Roof	Composition Asphalt Shingles, Class A rated per ASTM E 108 or UL 790
506.2.1	Roof valley	Valley flashings shall be not less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4 kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D 3909 running the full length of the valley
506.2.1.1*	Woven roof valleys	Valley shingles shall be weaved or woven (closed valley) iver 26 gage (0.019 inch) galvanized sheet metal flashing running the full length of the valley and extending at least 12 inches on both planes of the roof surface. Flashing shall be visible at the valley end for inspection.
506.2.2.1*	Raised-deck system	Product information
506.2.2.2*	Skylights	Metal frame with {select one: dual pane, tempered, 20-minute fire-rated} glazing
506.2.2.3*	Walkway Pads	Product information
506.4.1*	Soffit	Product information
506.4.2*	Fascia	Product information
506.4.4*	Exposed rafter tails	Product information
506.4.5*	Exterior ceilings	Product information
506.4.6*	Gutters and downspouts	Gutters & downspouts will be constructed of noncombustible material and will be provided with a noncombustible, corrosion resistant means to prevent the accumulation of leaves and debris.
506.3	Underfloor Areas	Product information
506.6*	Appendages and structures	Product information
506.6.1*	Fences	Product information
506.7*	Glazing	Skylight Glazing, all Zones: {select one: Dual pane, Tempered, 20-minute fire-rated}

506.5*	Vents	All ventilation openings, including but not limited to exhaust vents, attic vents, underfloor vents or any vent in the exterior walls or roof, must be made of noncombustible material with a corrosion-resistant mesh having openings of 1/8" or less. Alternatively, vents designed to prevent flame or ember penetration are acceptable. Roof vents must not exceed 144 square inches. Dryer vents and associated ductwork shall be noncombustible material. Dryer vents, kitchen exhaust, and standard roof plumbing vent stacks are otherwise exempt.
605	Spark Arrester	Spark arresters shall be required for all chimneys serving a fireplace, barbecue, incinerator and/or a decorative heating appliance. Spark arresters shall be constructed of woven or welded wire screening equivalent to 12 USA standard gage (SWG) wire (0.1046 inch) (2.66 mm), 19 SWG galvanized wire (0.040 inch)(1.02 mm), or 24 SWG stainless steel wire (0.022 inch) (0.56 mm) having openings not exceeding 1/2 inch (12.7 mm).
506.8.2*	Boat Docks	Product information

^{* =} denotes local amendment

Additional General Notes:

- 1. Gaps between exterior facing materials within the eaves or between eave materials and the wall or and roof assembly caused by normal construction techniques or any other unsealed roof opening providing access to the attic space shall be provided with ember protection according to Section 506.5 of this code.
- 2. Fence material shall comply where located within 10 feet of a building or structure. The distance may be reduced in Proximity Zone C to 5 feet for buildings and structures constructed per the Residential Code.
- 3. Provide a five-foot Ember Ignition Zone (EIZ) measured horizontally from the edge of all roof overhangs, wrapping the entire perimeter of the structure, including covered and uncovered appendages and accessory structures. For uncovered appendages and structures, measure five feet from all exposed sides. Landscape the EIZ with gravel, pavers, or other non-combustible materials only. Properties within Proximity Zone C shall be allowed green, moist, and closely mowed lawn grass in lieu of hardscape in the EIZ. Dormant grass shall be seeded with a perennial grass species to maintain the fire resistance during the lawn grass dormant periods.
- 4. Materials listed in the schedule shall not be substituted in the field.