

and operated by Western Metal Deck

WESTERN METAL DECK

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# **STANDING SEAM**

**INSTALLATION GUIDE** WITH TRIM, FLASHINGS AND DETAILS



Western Metal Deck 616 S. Oaks Ave. Ontario, CA 91762 ☎ (909) 467-2016
 ☑ sales@metalroofingcalifornia.com

For More Information: METALROOFINGCALIFORNIA.COM



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# Western States "Western Lock ™" Standing SeamPanel Installation, Flashings & Shop Drawing Detail Guide

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#### Western States "Western Lock™" Panel

Installation, Flashings & Shop Drawing Detail Guide

# Notes to Designer and Installers

The details contained in this guide are proven industry details and are intended to be used as a design aid and installation guide. It does not depict all situations that may be encountered on all projects. Modifications are the responsibility of the designer/ owner/ installer. Consideration should be given for Fit for Purpose, Building use, Climate conditions such as temperature, snow, wind, and moisture, Governing Building Codes, and Maintenance. It is highly recommended that all trims and flashings be of the same material as the panels (metal, gauge, finish) to ensure long term performance and durability. Where possible, flashing edges should be hemmed to strengthen the edge and protect the cut edge from exposure.

# Framing and Substrates

"Western Lock ™" panels are used over all type of substrates like Steel Decking, open purlins, spaced sheathing, and wood decking such as plywood. Most details in this guide are shown with panels attached to Solid Decking.

# Note on Underlayment

Not all conditions require an underlayment, However metal roofing is susceptible to Condensation and it is recommended that an appropriate Roofing underlayment be use on all wood substrates to protect the structure during installation. For added protection from rain and snow, it is recommended to use rubberized Ice and water shield on eaves, valleys, and areas of roof penetrations.

Technical Assistance Contact your WSDI sales or technical representative for any additional information or assistance.

#### Slope Requirements

It is recommended that "Western Lock ™" panels have a minimum slope requirement of 3:12 on all structures.

#### Valley and Snow Design

Valley design and dimension must be the proper width to accommodate high snow, rain, ice, and slope conditions. If possible, splices, penetrations, valleys, roof elevation changes, should be minimized in areas of high snow and ice accumulations.

# Oil Canning

Oil canning is a condition common with flat metal surfaces. This waviness is caused by steel mill tolerances, forming, variations in the structures surfaces, and hardness of the steel. Measures are taken at the roll forming process, like profile design, steel gauge, corrective leveling, to minimize the effects of oil canning. Oil Canning is a Characteristic of steel and can not be eliminated totally and therefore is not reason for rejection of the panels.

#### Job Site Storage

While waiting to be installed on the job site, Storage of panels, trim crates, and flat sheet should be sloped in order to allow for proper moisture run off. One end should be elevated so as not to allow ponding of water on the metal surface. When using tarps for protection, proper ventilation should be provided to prevent condensation. Moisture or condensation that is trapped inside a bundle can lead to white rust on sheeting.

#### References

For other installation techniques and details, The Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) and NRCA manuals are great resource for working with sheet metal.

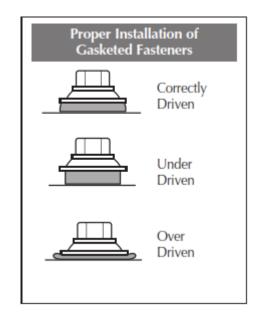
# Western States Metal Roofing "Western Lock <sup>TM</sup>" Standing Seam Panel

Installation, Flashings & Shop Drawing Detail Guide

# **Fastener Selection**

#### Notes to Installers:

- Fastener Selection will vary depending on type and thickness of substrate.
- Design Calculations for clip spacing should be completed by the design engineer.
- The use of Butyl tape mastic, Butyl sealants and Curing Sealants is always recommended to insure weather tight installation.
- Panels and flashings should never be installed in contact with dissimilar metals.
- Use only those flashings and accessories designed for use with this panel.
- Panel clip attachment screws must be long enough to fully penetrate through roof deck substrate or penetrate solid lumber at least one inch.
- Exposed Trim Fasteners should have sealing washers and be coated to provide protection against corrosion.
- Screws must be properly driven to ensure holding strength and proper seal. (see diagram)
- Recommended drill speed is 2000rpm. Improper setting of drill speed can lead to snapping of screw heads.
- Pre drilling of screw holes may be necessary with heavy gauge metals.



# Western States Metal Roofing "Western Lock <sup>™</sup> " Panel

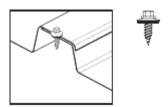
Installation, Flashings & Shop Drawing Detail Guide

#### **Fastener Selection**

Description

Application

14 x 7/8" Lap Self tap 14 x7/8 Lap Stainless Used to attach Trims . Stainless to be used with A606-4 Steel



#10-12 x1" Pancake head Wood #10-12 x 1" SD PH Self Driller Steel Used to attach Panel clips. Used to secure trims to substrates. Also available in Stainless Steel.



1/8" Stainless Rivets

Used for Trim to Trim attachment or trim to wall panels.



Stainless Screws #10 x1 x1/4" Wood Drillers #10 x 1.5 x ¼" #10 x 2" x ¼"

Used for panel attachment for panels made with A606-4 Steel



#### • The table above shows the panel Fasteners provided by WSD. Special order screws are available.

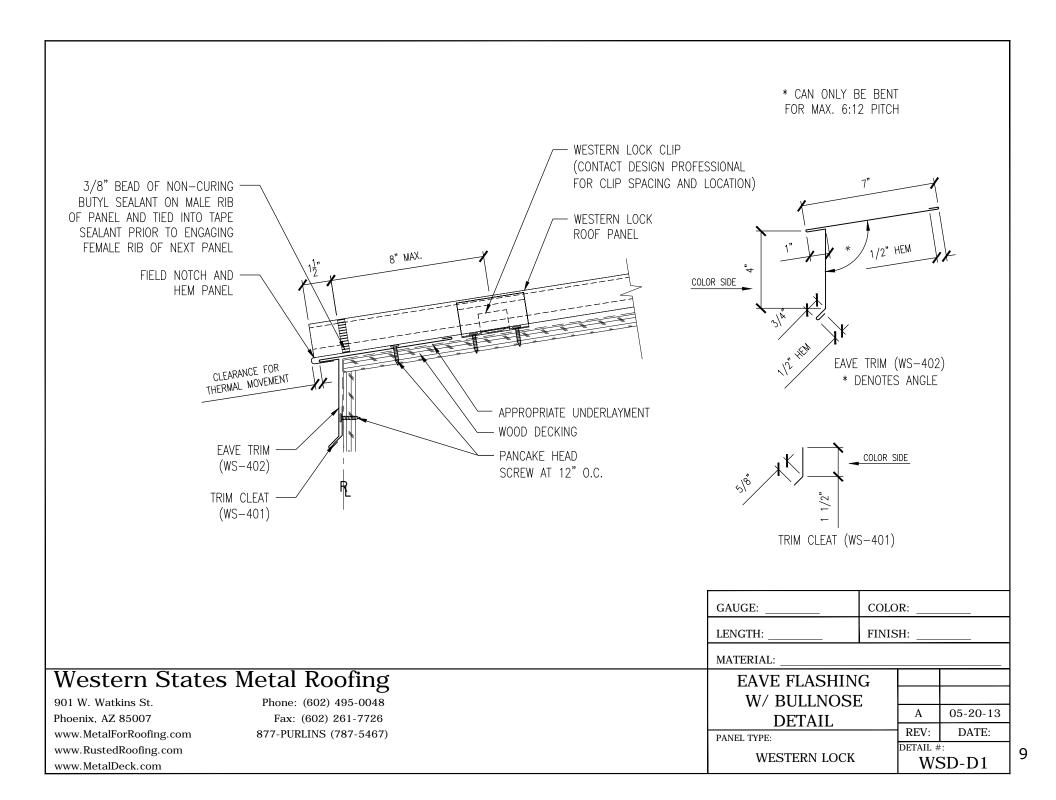
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Western States Metal Roofing 901 W. Watkins St. Phone: (602) 495-0048 Phoenix A7 85007	KEY ROOF PLAN	05-20-13
Phoenix, AZ 85007         Fax: (602) 261-7726           www.MetalForRoofing.com         877-PURLINS (787-5467)           www.RustedRoofing.com         602	PANEL TYPE: REV: DETAIL	DATE:
www.MatalDeck.com	WESTERN LOCK	

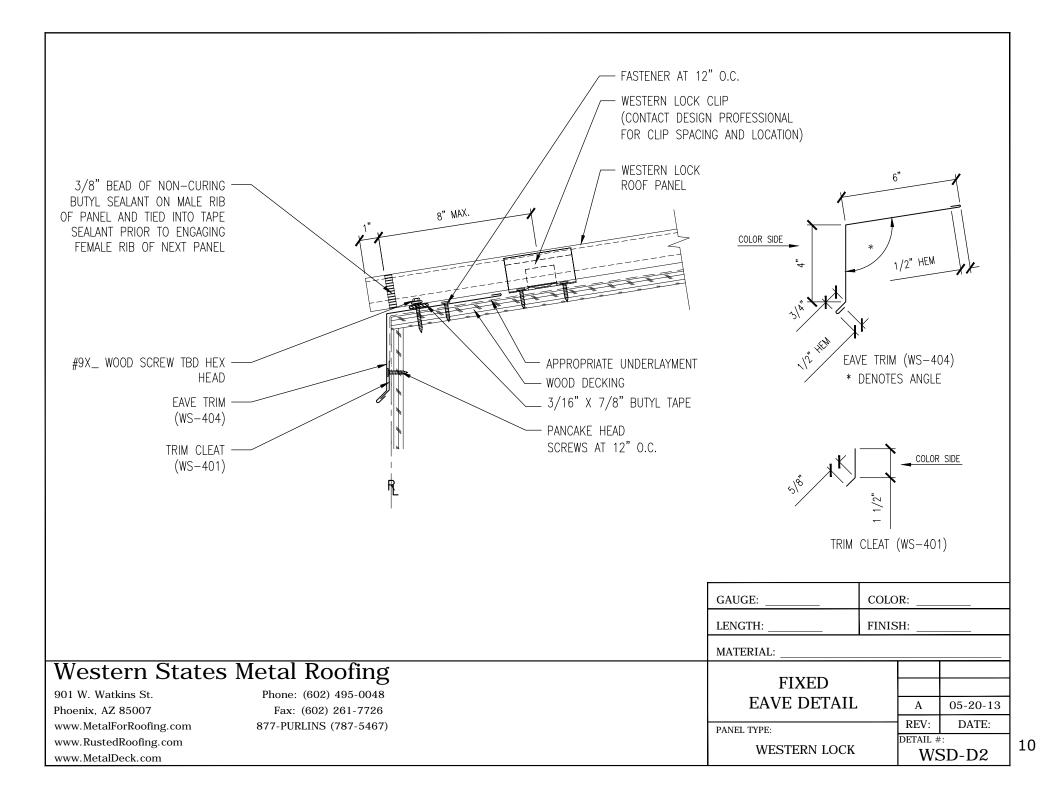
TRIM CLEAT WS-401	BULL NOSE DRIP/ EAVE TRIM WS-402	JOGGLE CLEAT WS-403	STANDARD EAVE TRIM WS-404
SIG MODE	6:12 MAX. PITCH	1 3/8" COLOR SIDE 150. 1 3/4"	COLOR SDE 30 + 1/2" HEM 1/2" HEM
7" RIDGE/HIP CAP FLASHING WS-405H	KNEE/RIB COVER WS-406	DRIP FLASHING WS-407	GUTTER EAVE TRIM WS-408
1 1/2 HEM + 1/2 HEM + 1/2 HEM	COLOR SIDE	COLOR SIDE	COLOR SIDE * 12/1
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Phoenix, AZ 85007 Fa	al Roofing he: (602) 495-0048 x: (602) 261-7726 URLINS (787-5467)		STANDARD TRIM A 05-20-13 REV: DATE: WESTERN LOCK DETAIL #: WSD-ST5

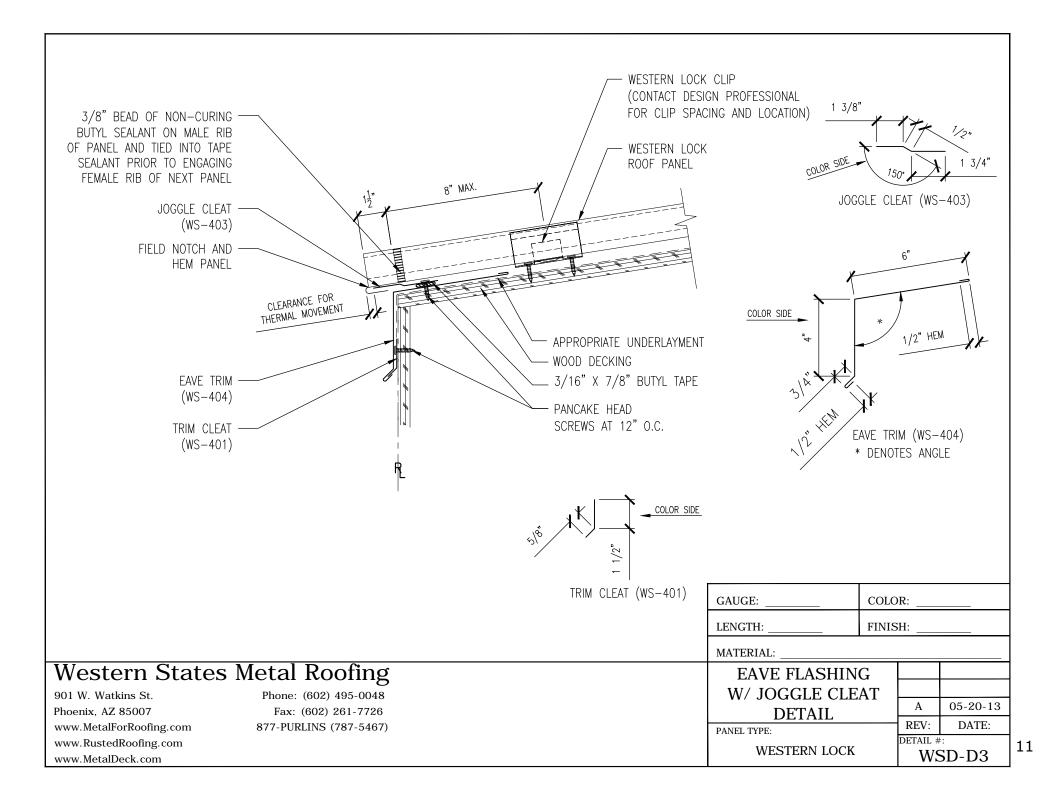
PEAK/HIGH EAVE WS-419	10" VENTED RIDGE CAP WS-420V	VALLEY PAN 18 3/4" WS-425	HEAD/END WA	LL TRIM WS-428
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REGLET FLASHING WS-429	RECEIVER TRIM WS-430	ANGLE TRIM WS-431	RAKE SIDEWAI	L TRIM WS-432
31 <sup>6</sup> 1 1/4" COLOR SIDE	1 1/8"	MEH "2/1"	SIDE NEAD 2/1	MH 1/2/1 COLOR SIDE
GABLE TRIM WS-434	ALTERNATE GABLE TRIM WS-435	TRANSITION TRIM HIGH TO LOW V	WS-436 TRANSITION TR	IM LOW TO HIGH WS-437
COLOR SIDE	1 1/4" COLOR SIDE 	No WARES	8° VARE	5 
Phoenix, AZ 85007 Fai	al Roofing he: (602) 495-0048 x: (602) 261-7726 URLINS (787-5467)	P/	STANDARD TRI ANEL TYPE: WESTERN LOCK	M A 05-20-13 REV: DATE: DETAIL #: WSD-ST6

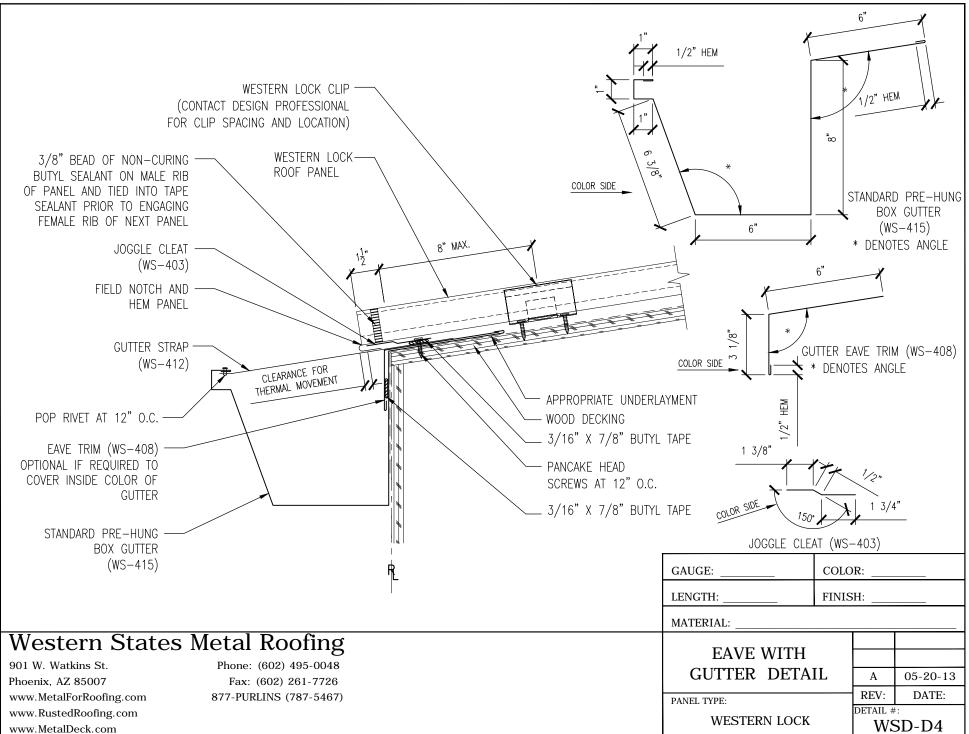
CRICKET FLASHING WS-450	GABLE DRIP TRIM WS-451	GABLE STARTER TRIM WS-452	ALTERNATE GABLE TRIM WS-453
	COLOR SIDE	COLOR SIDE	COLOR SIDE
ALTERNATE RAKEWALL TRIM WS-454	ALTERNATE RAKEWALL TRIM WS-455	DOWNSPOUT STRAIGHT WS-426	DOWNSPOUT W/KICK OUT WS-427
COLOR SIDE	COLOR SIDE	37 COLOR SIDE	COLOR SIDE "45 DEG. BEND UNLESS NOTED"
DOWNSPOUT ELBOW WS-443	DOWNSPOUT OUTLET WS-475	GUTTER STRAP WS-412	GUTTER END WS-414
3 518" COLOR SIDE "45 DEG. BEND UNLESS NOTED"	5 5 10 1/2" VEES COLOR SIDE 1/2" TABS	Nr. 8"	
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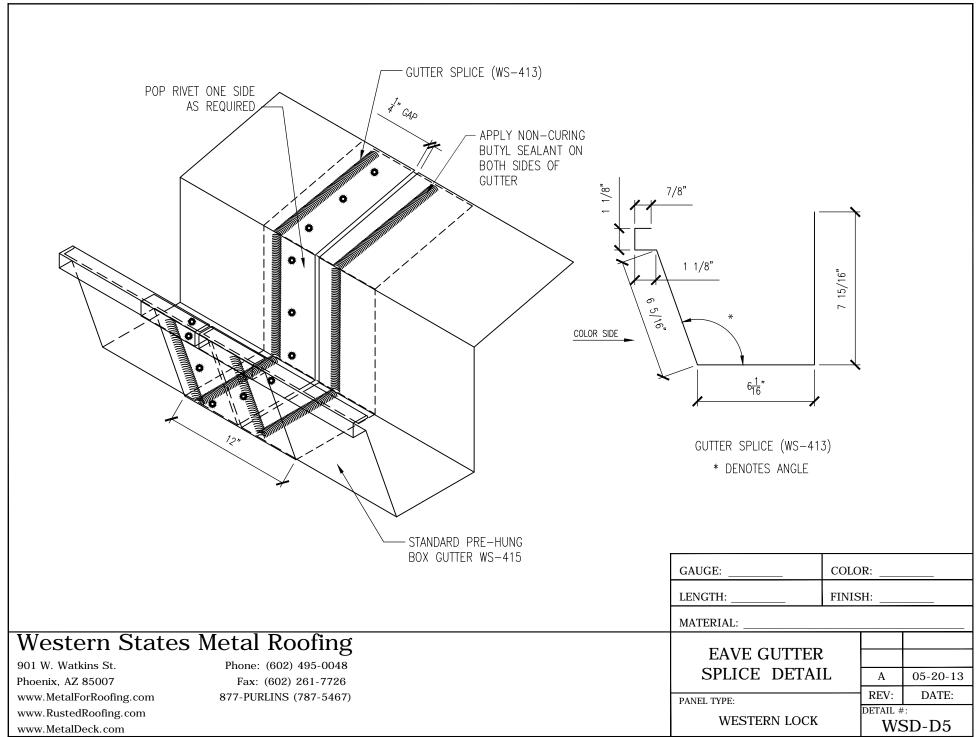
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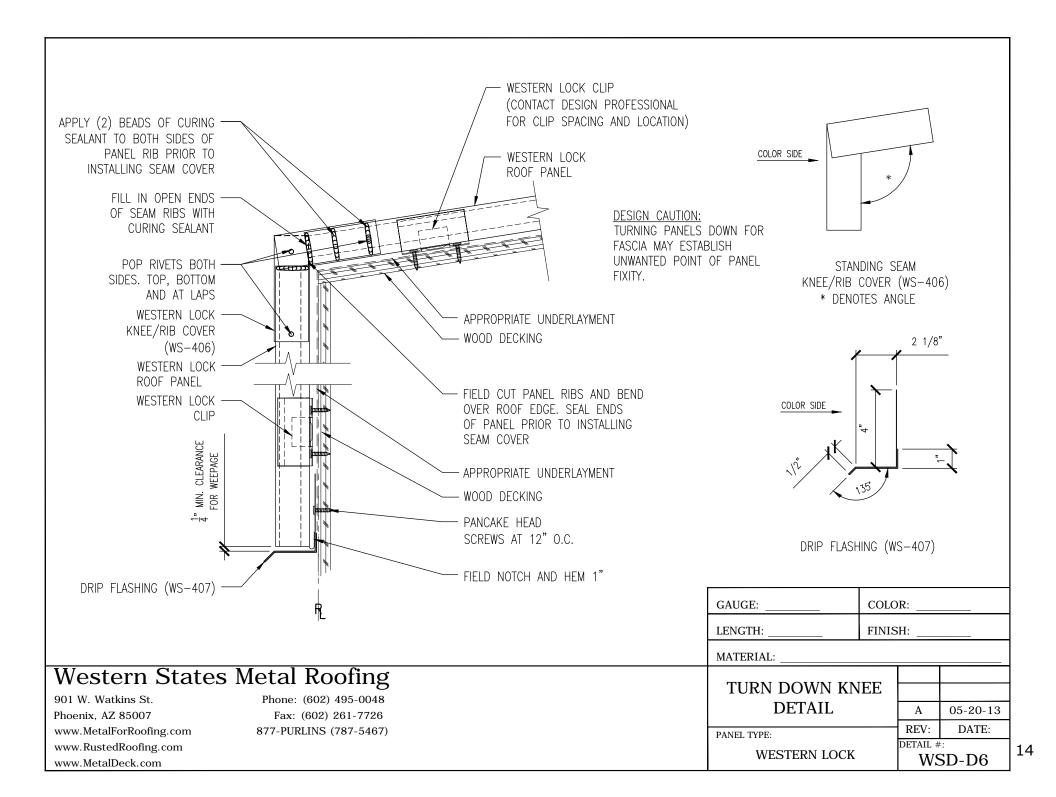


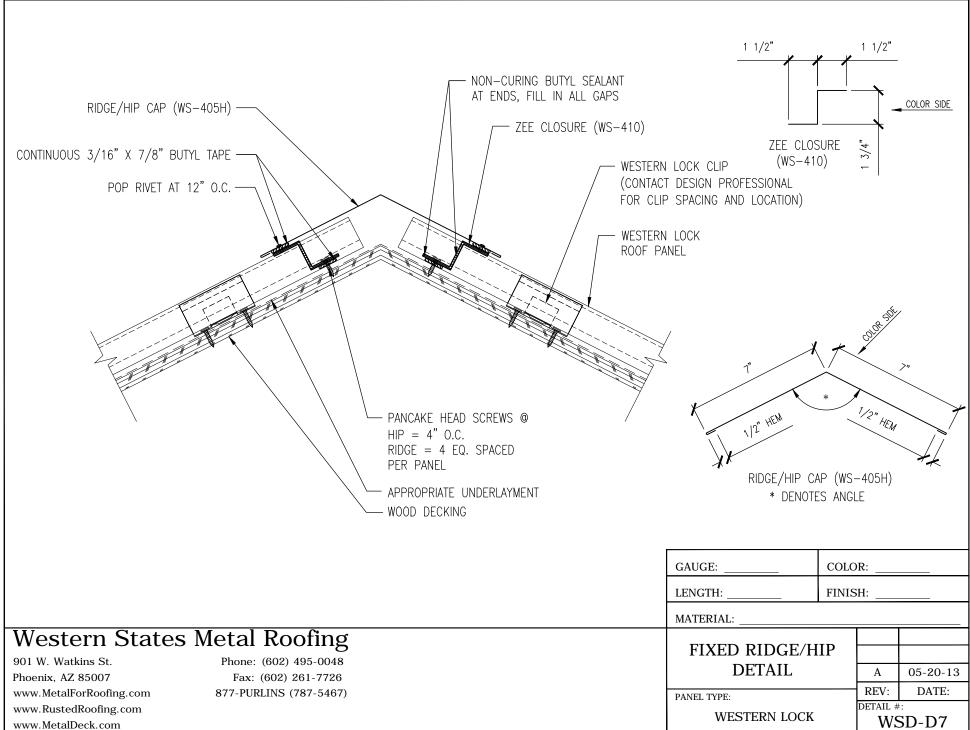


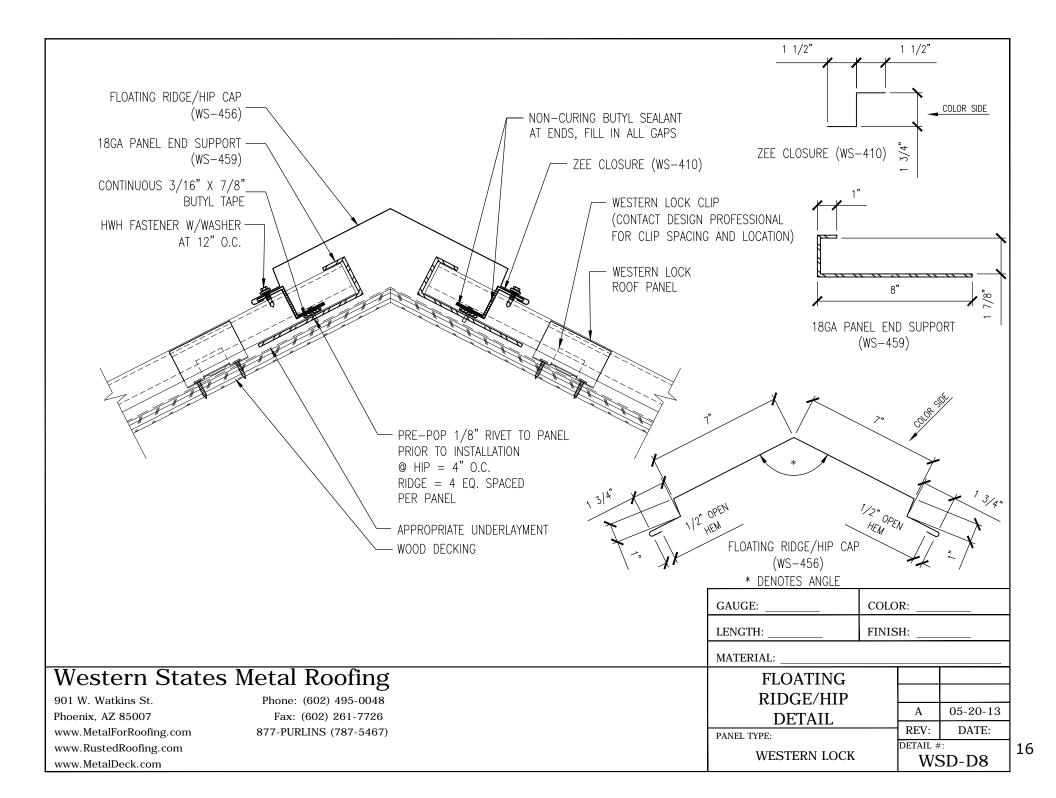


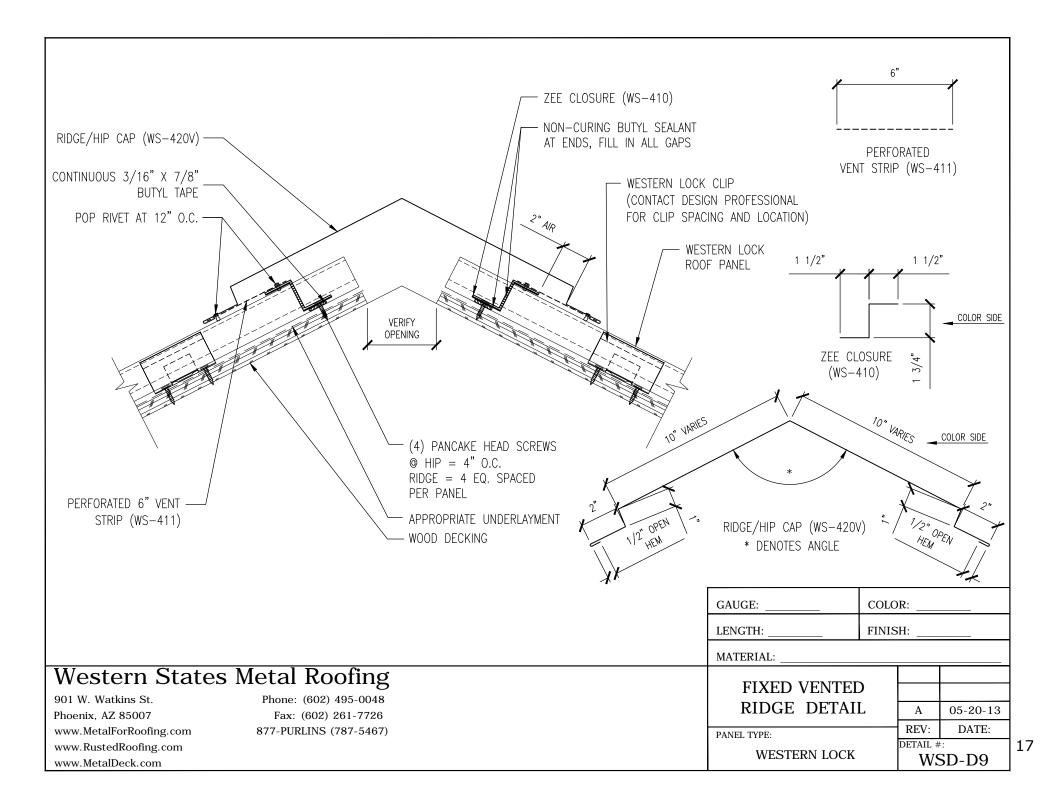


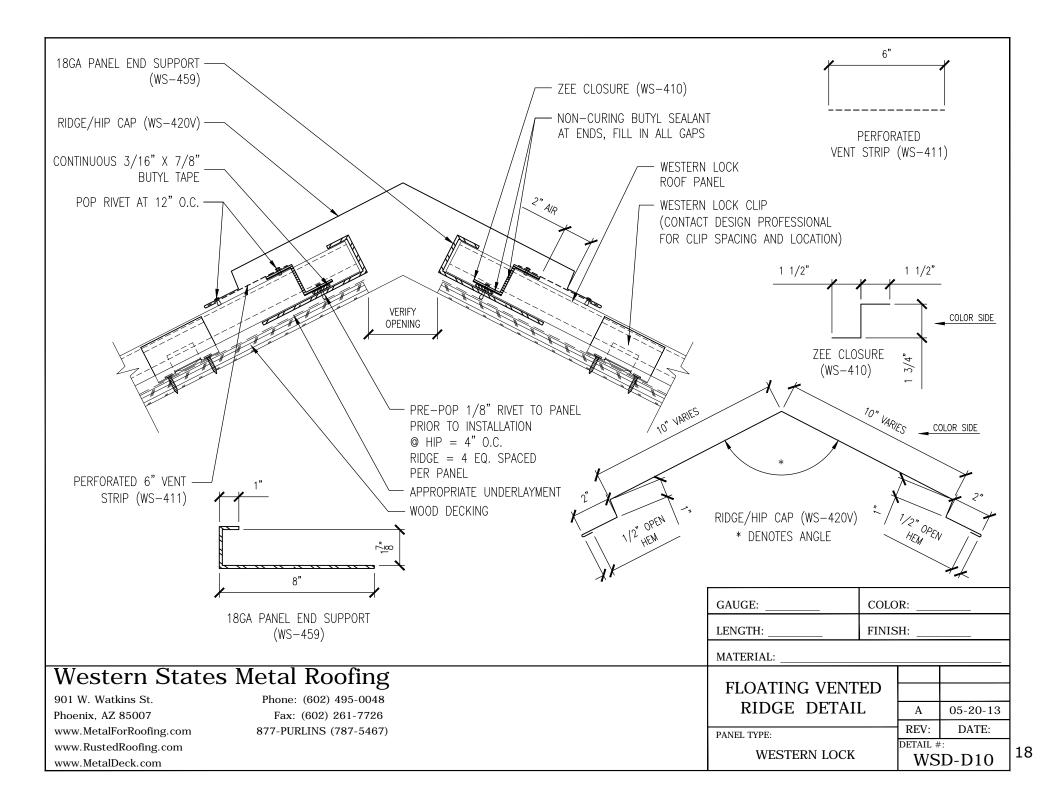


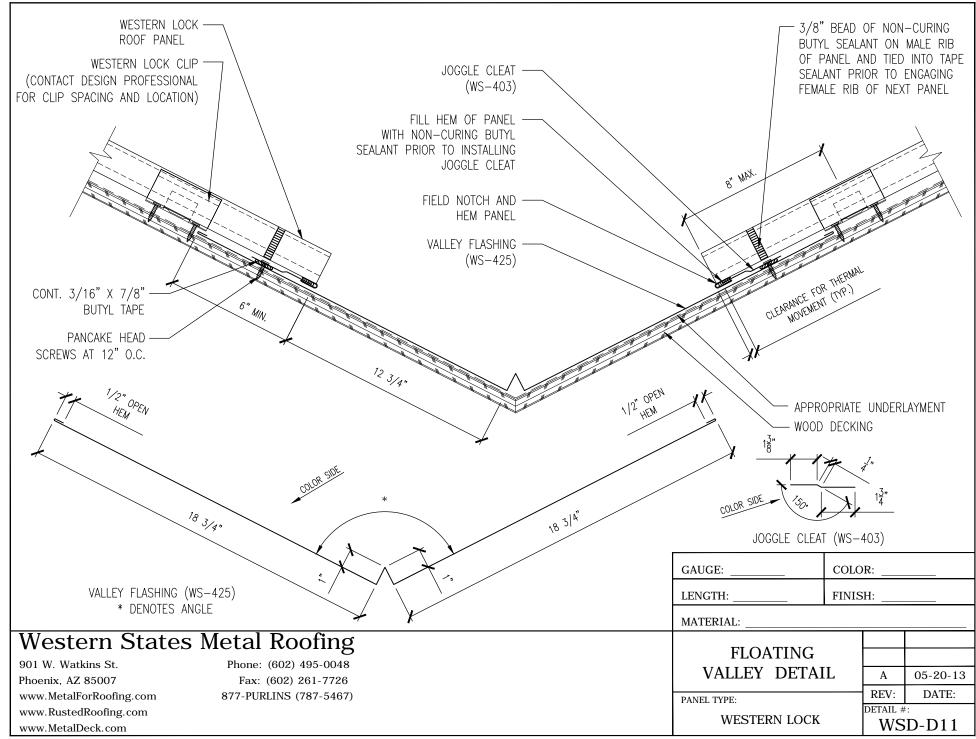


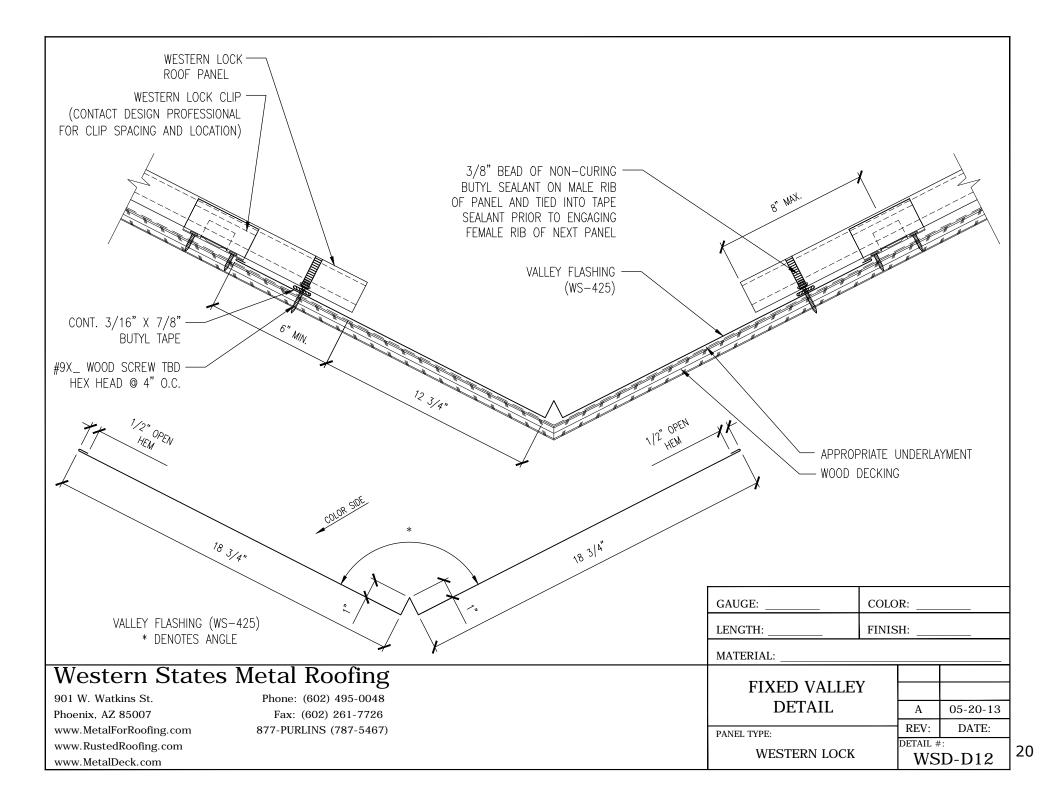


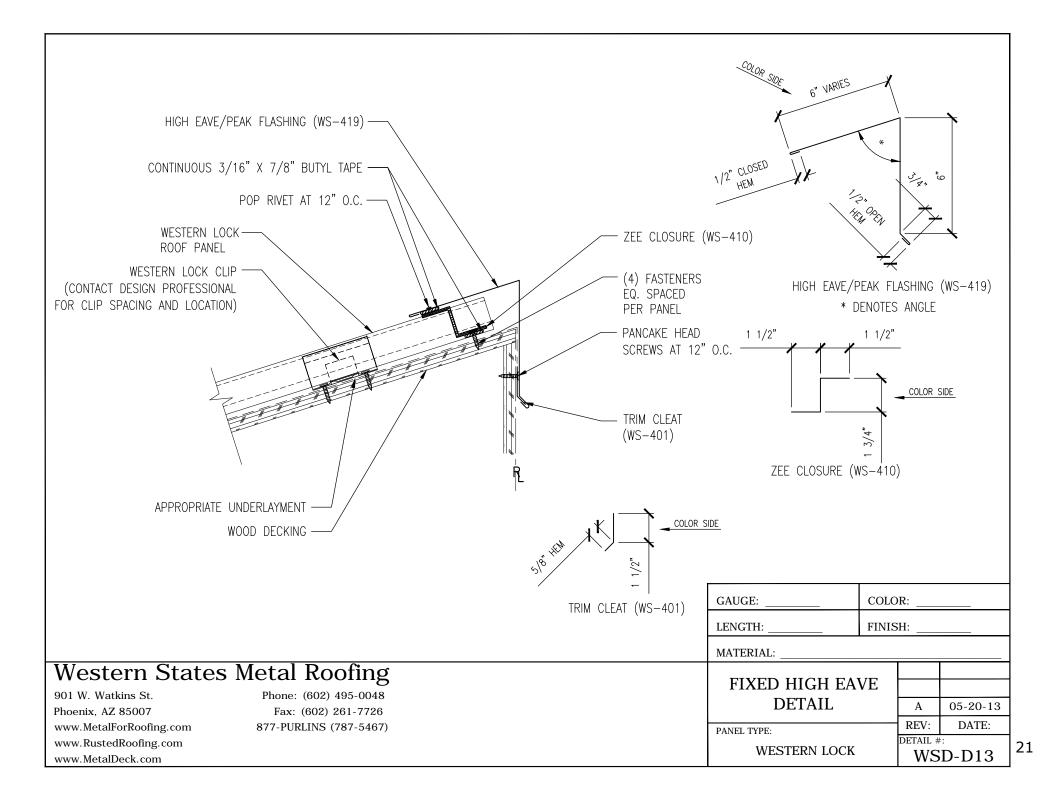


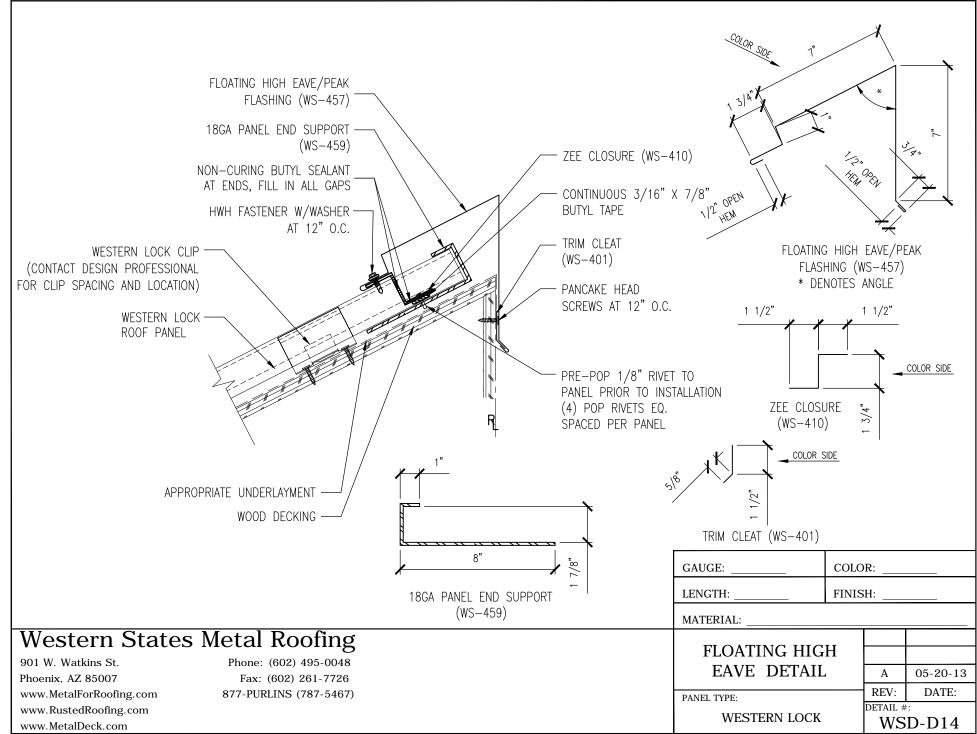


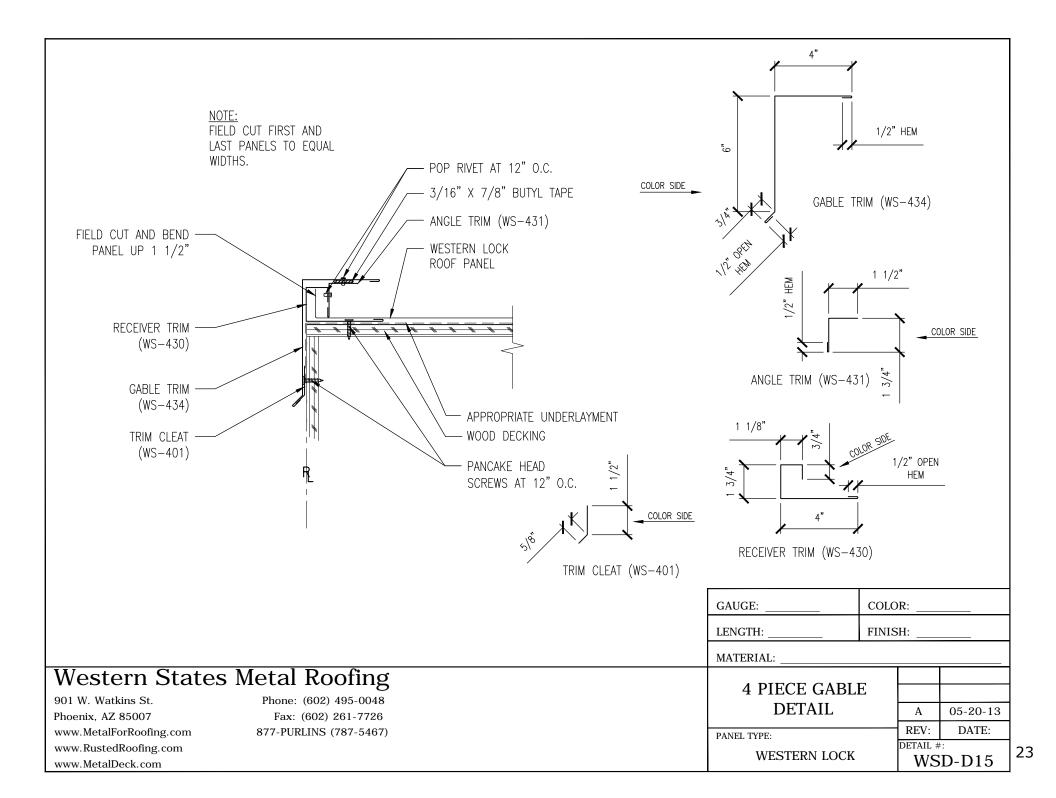


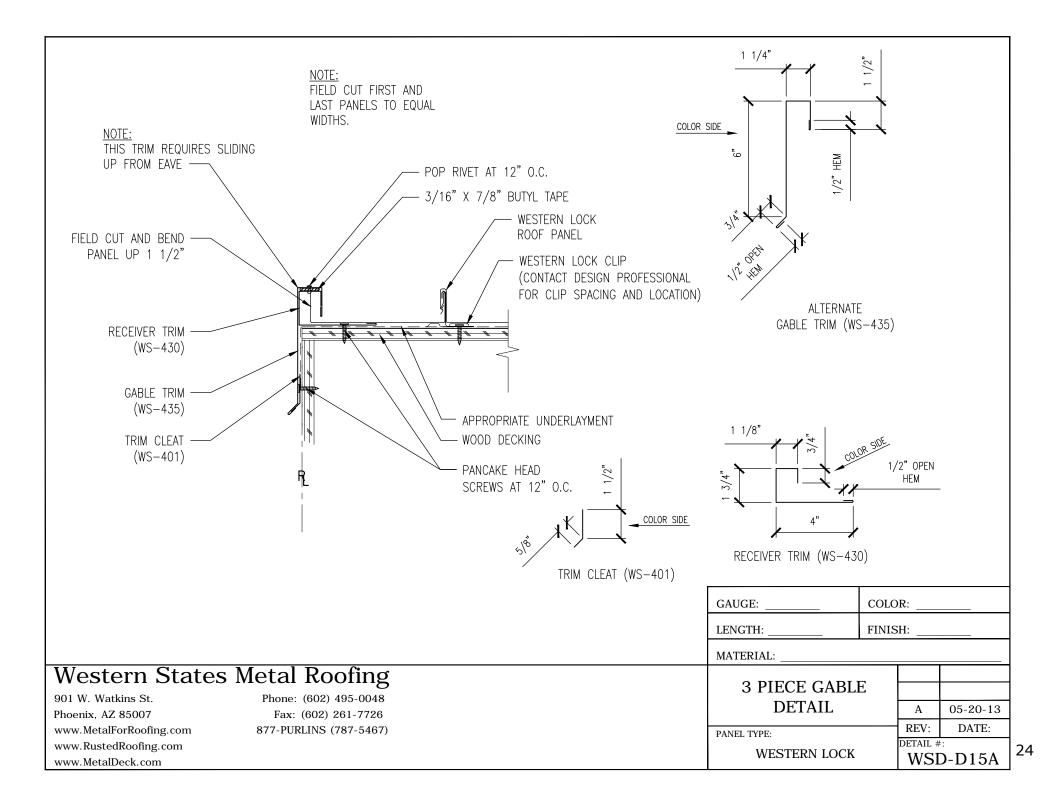


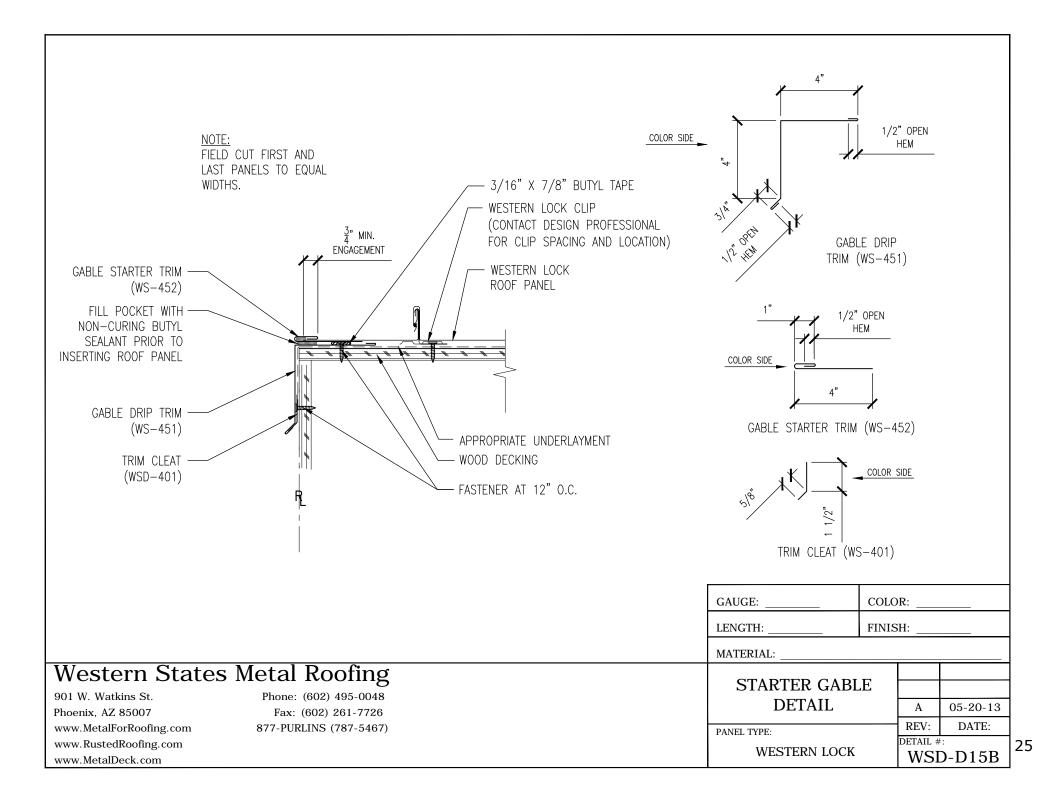


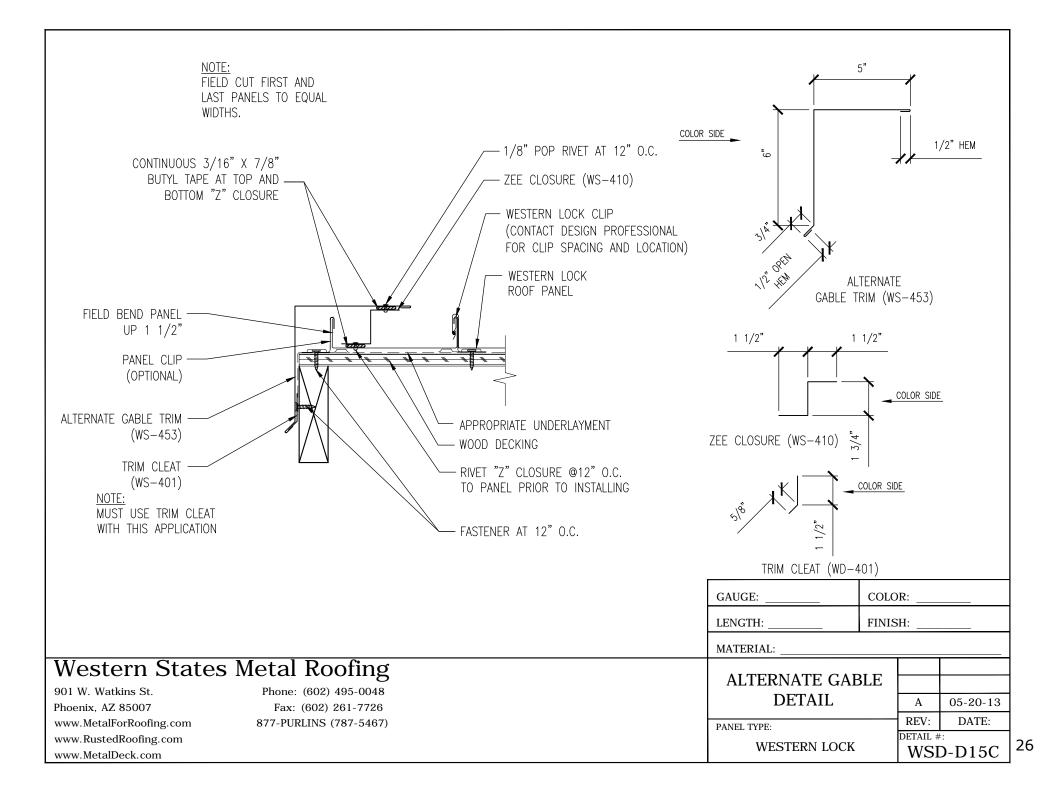


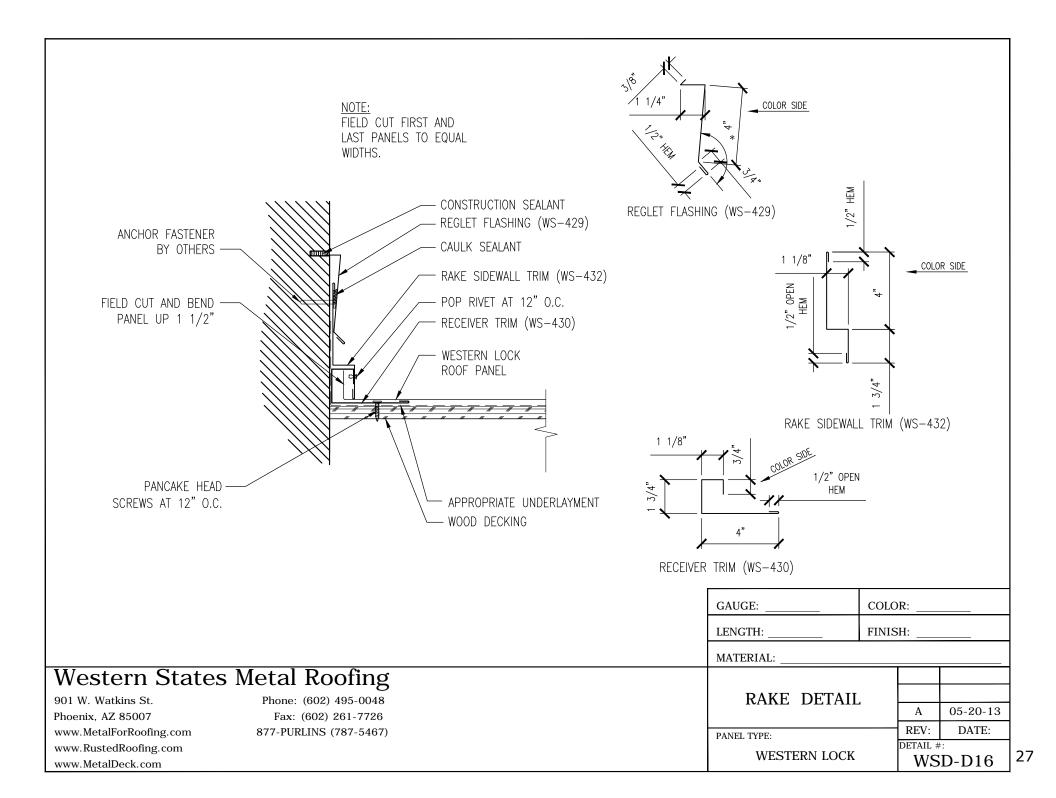


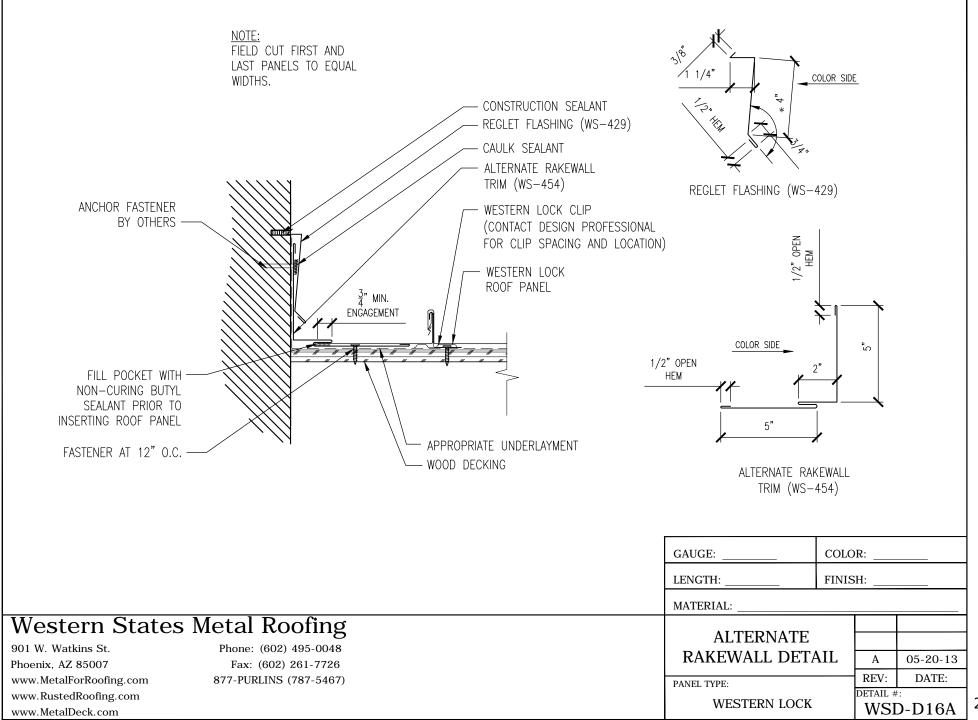


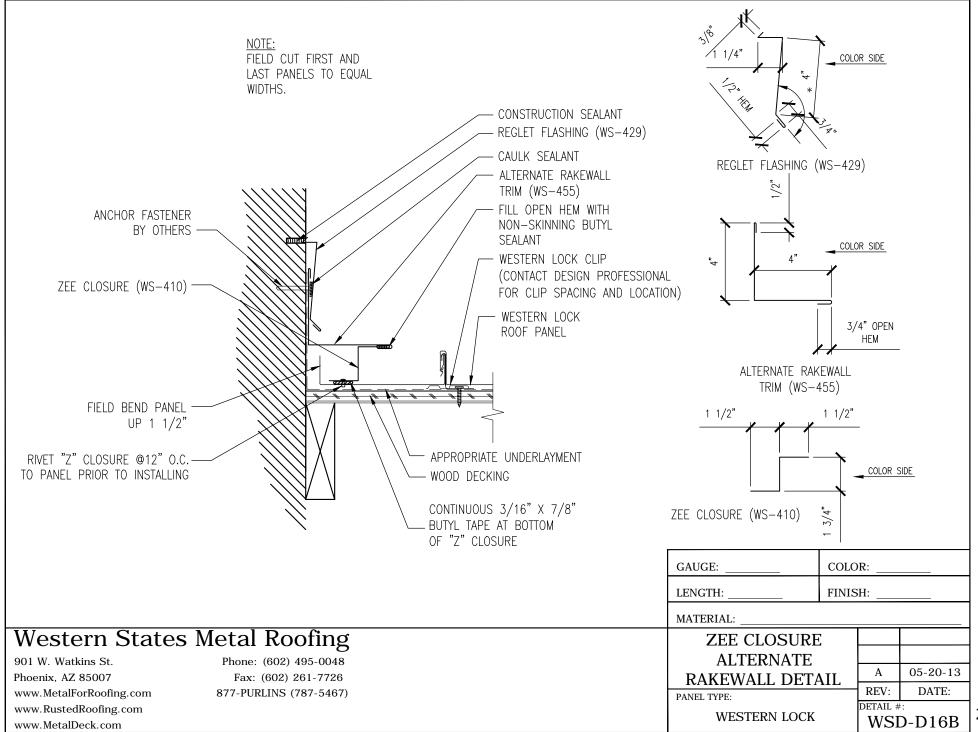


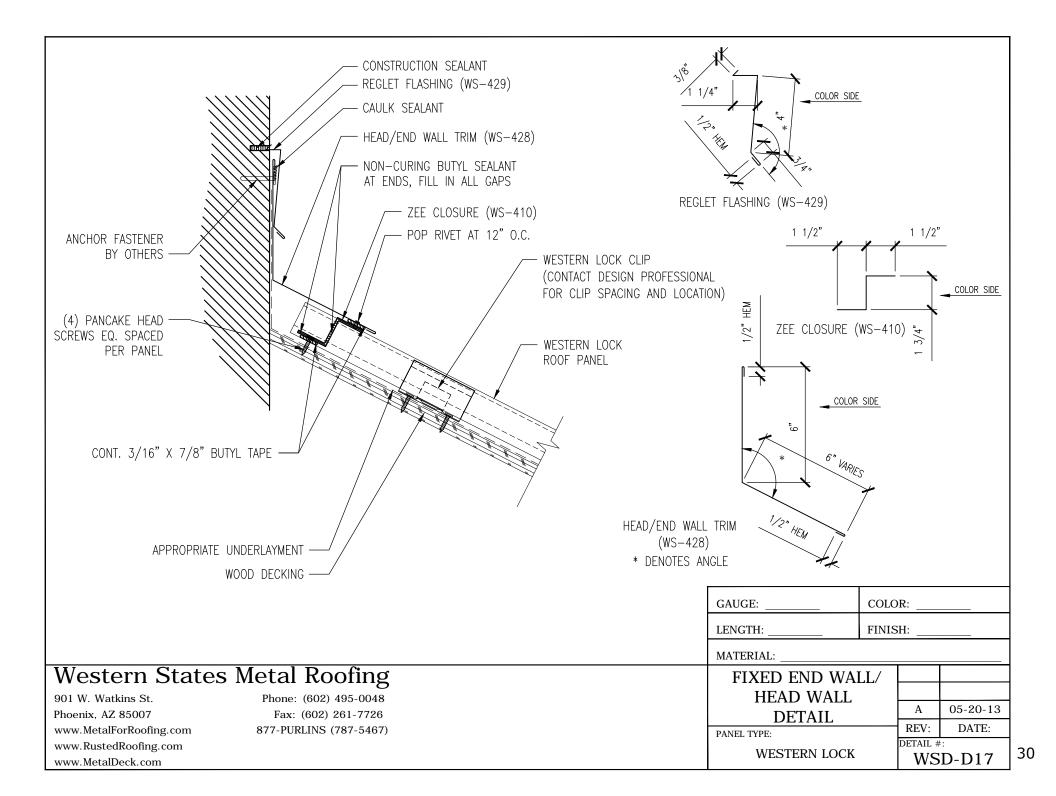


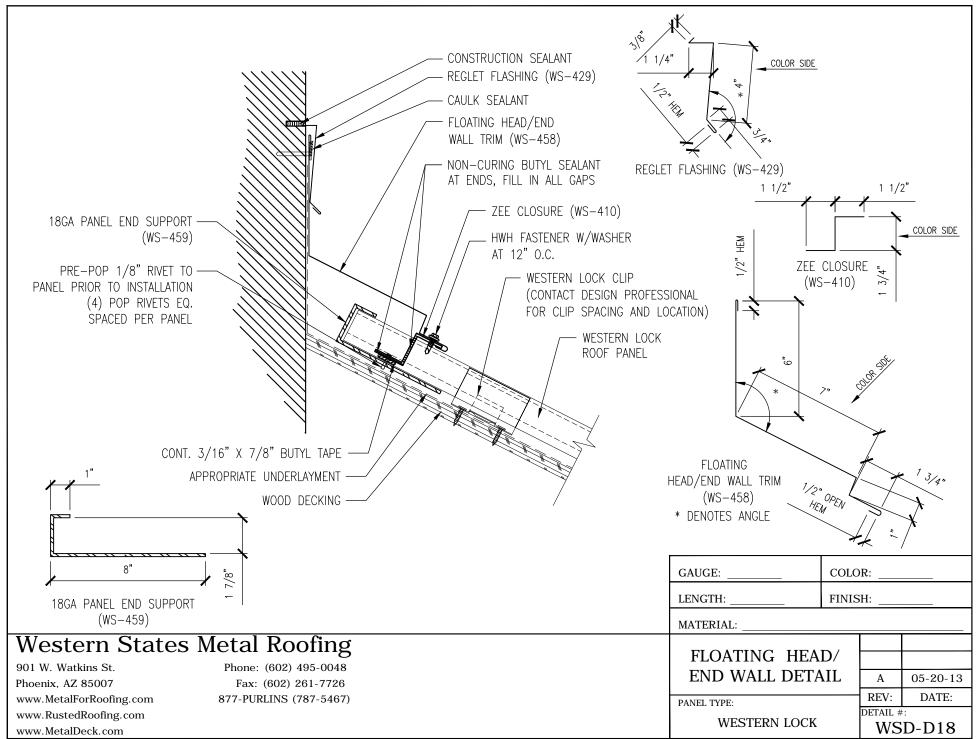


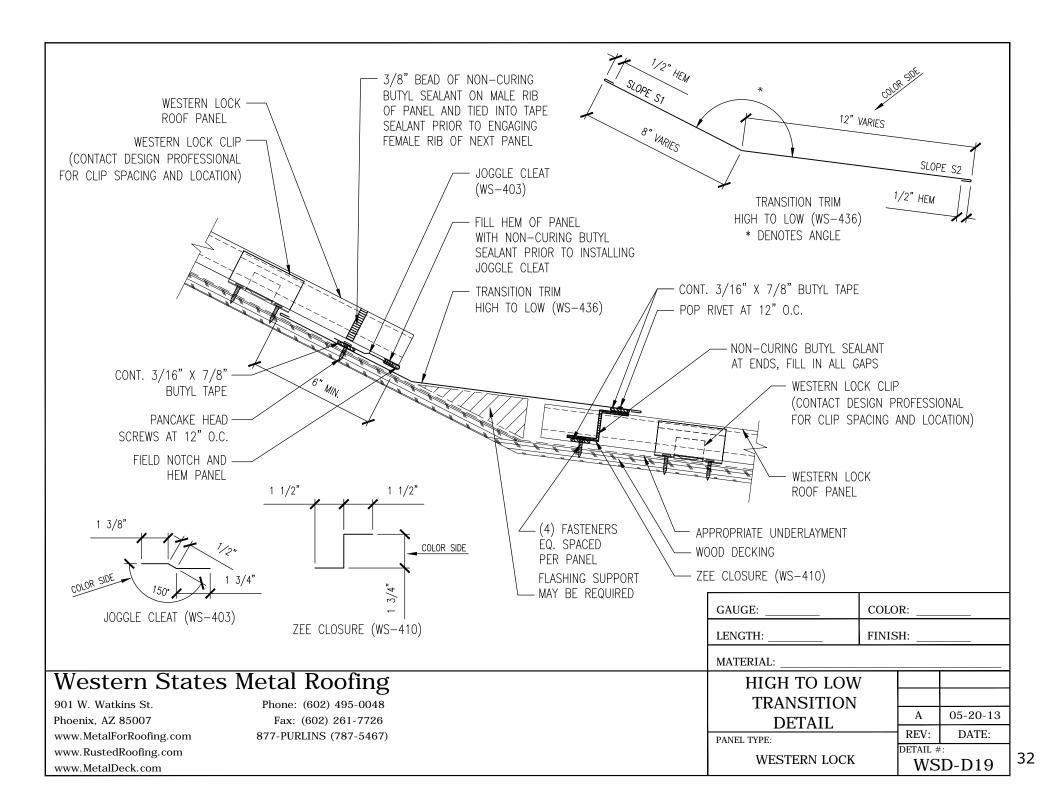


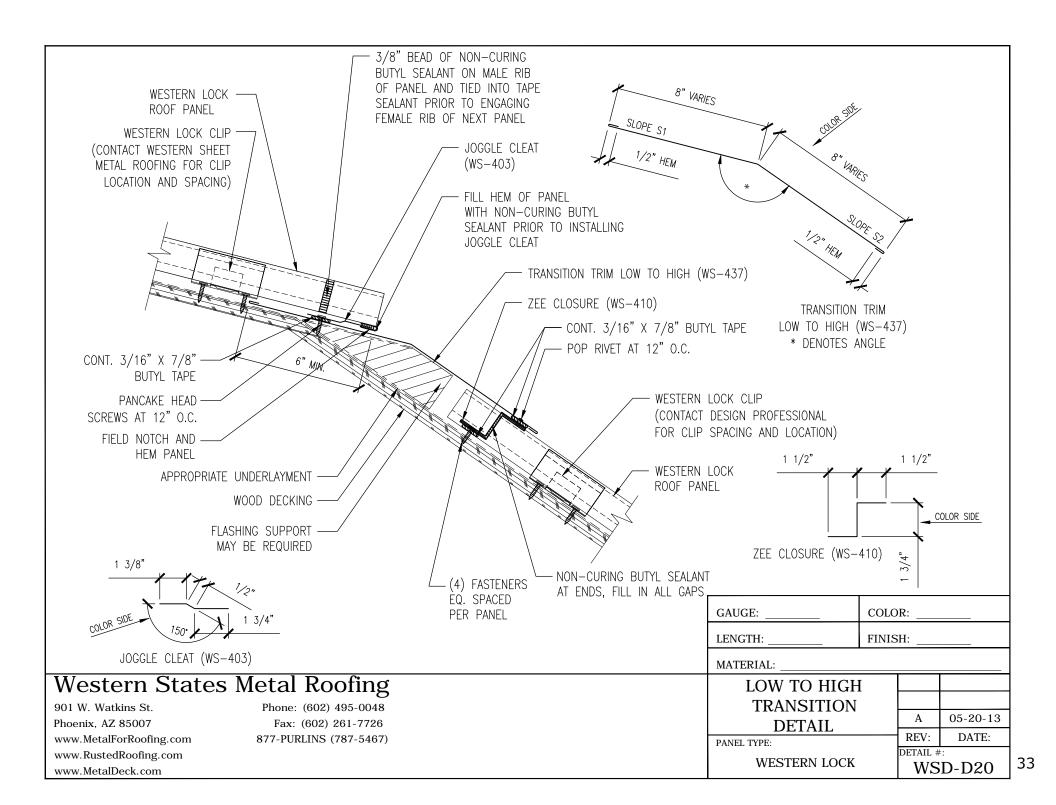


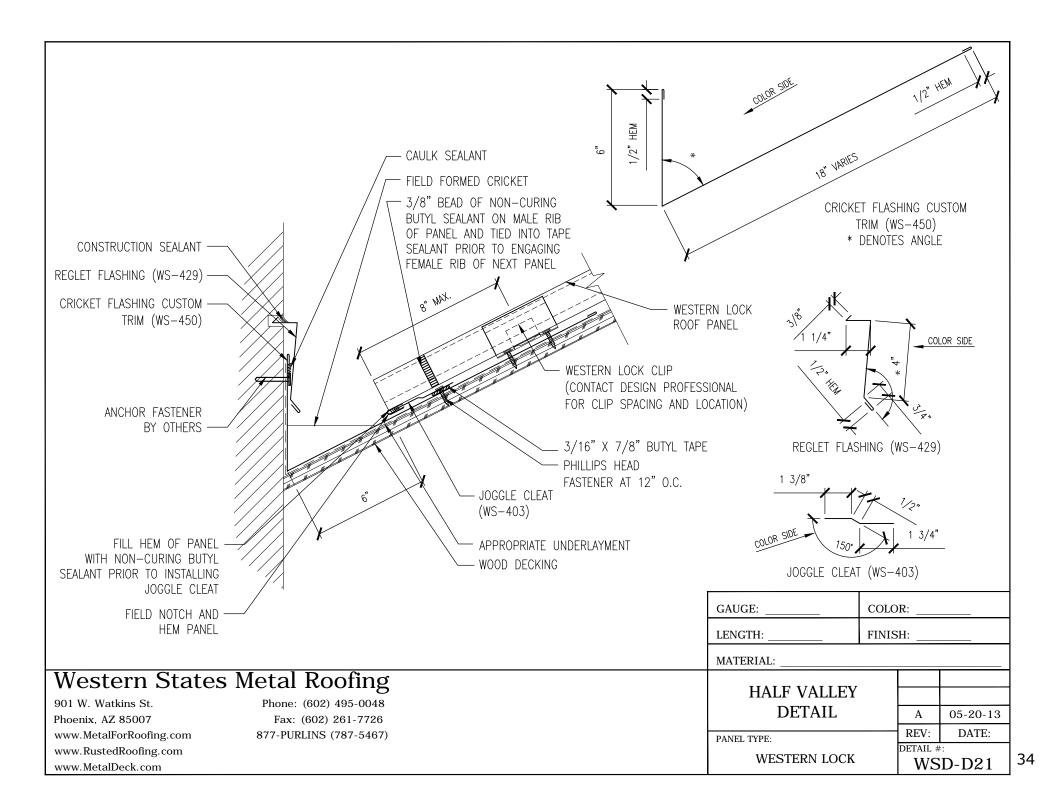


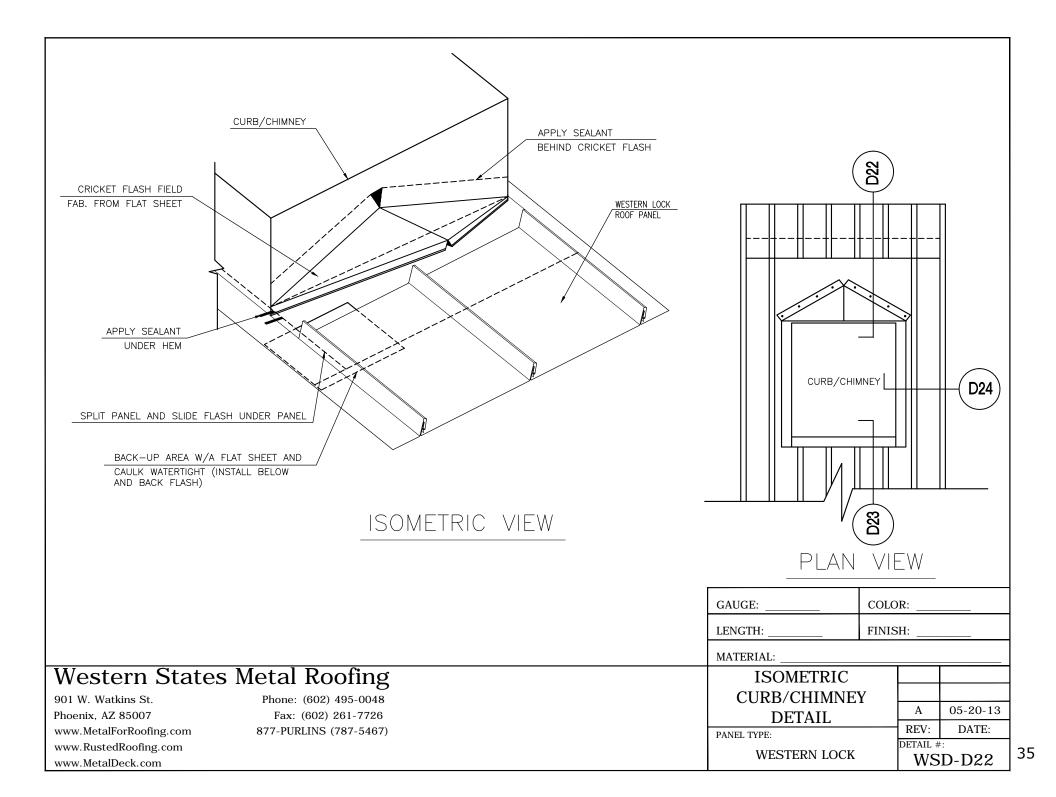


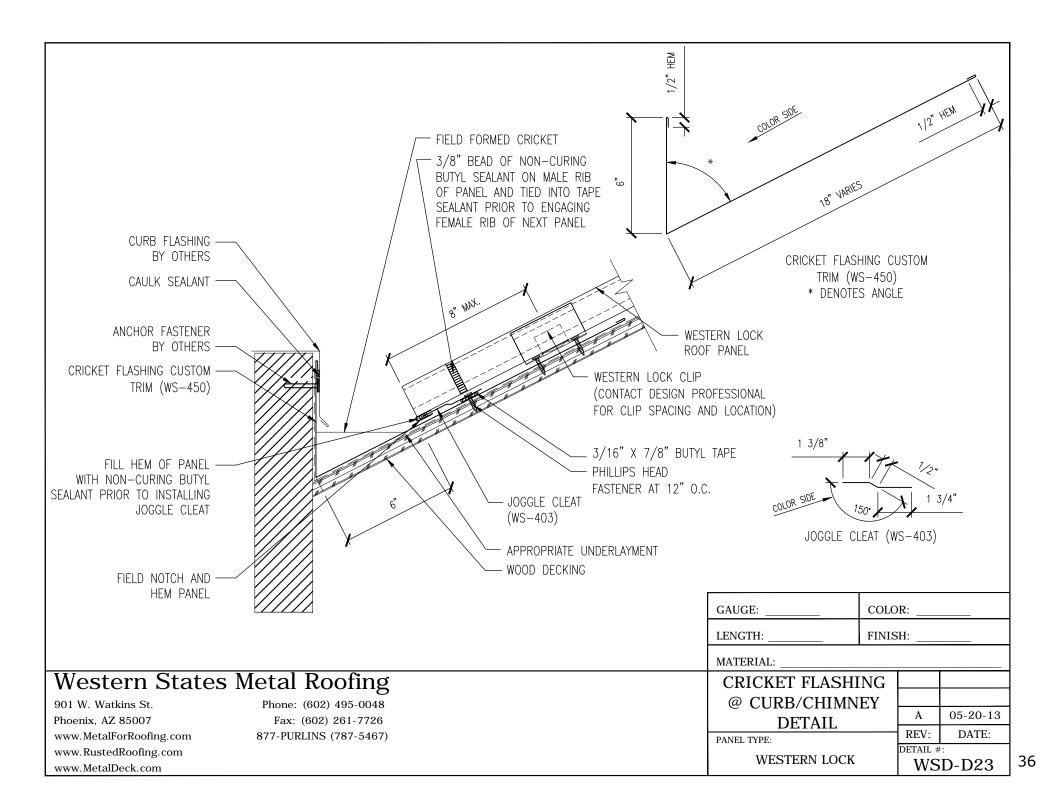


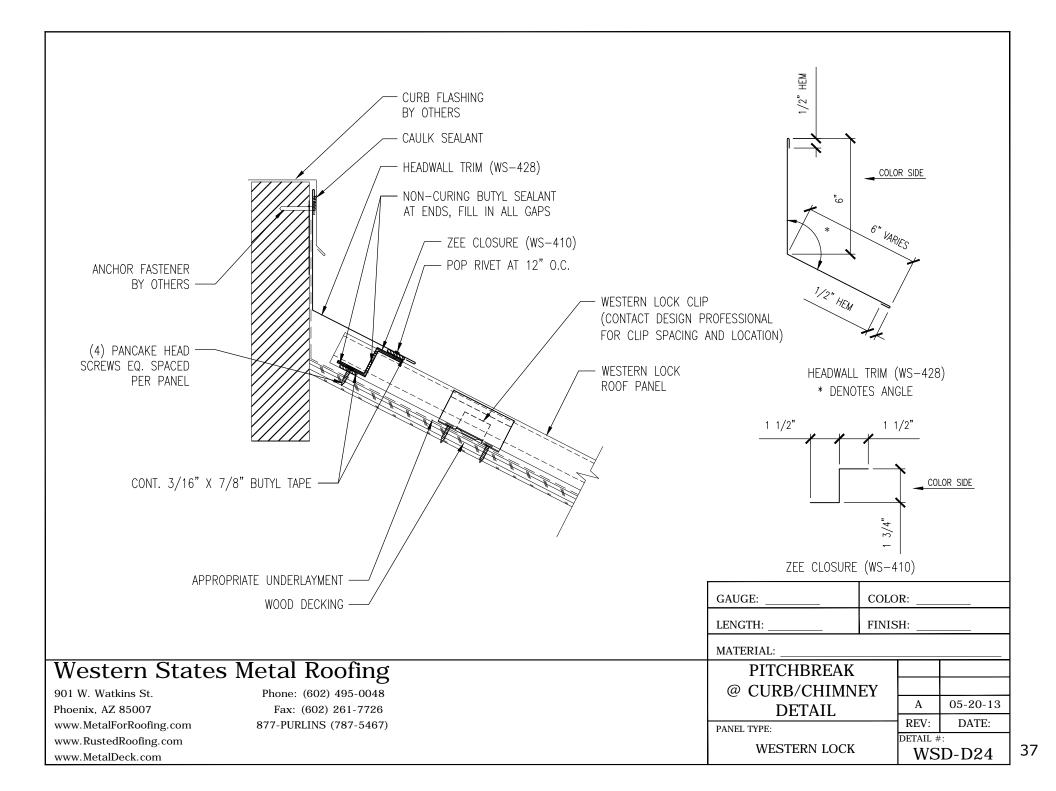


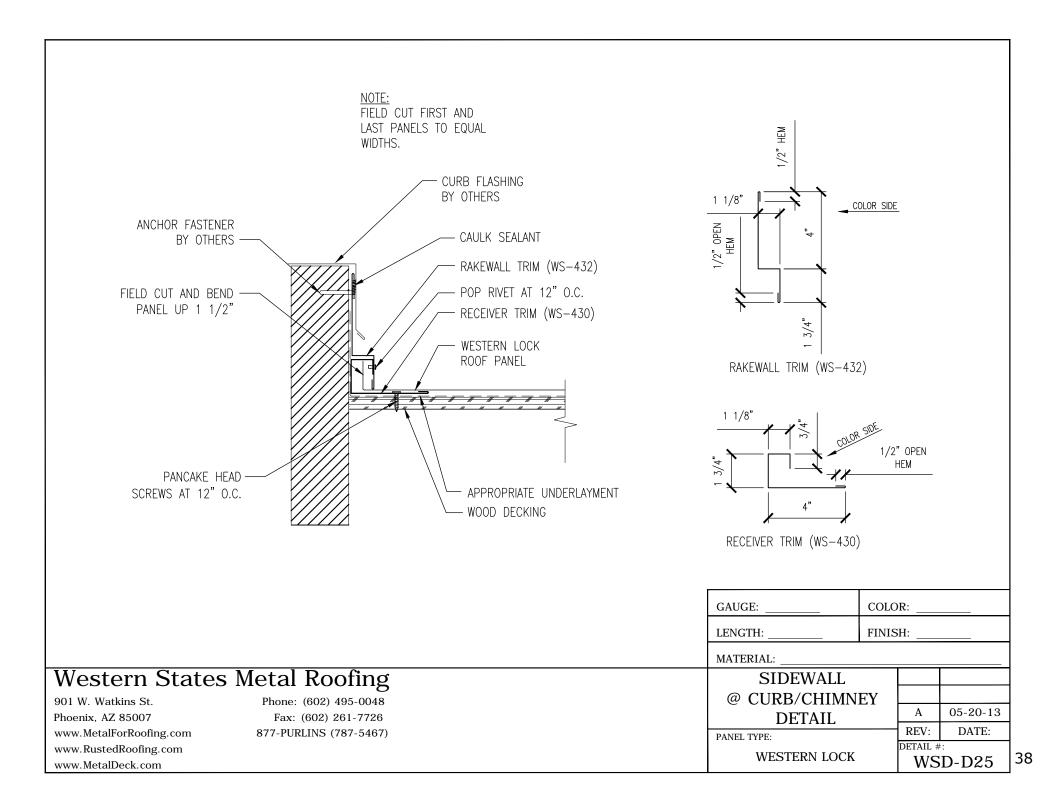


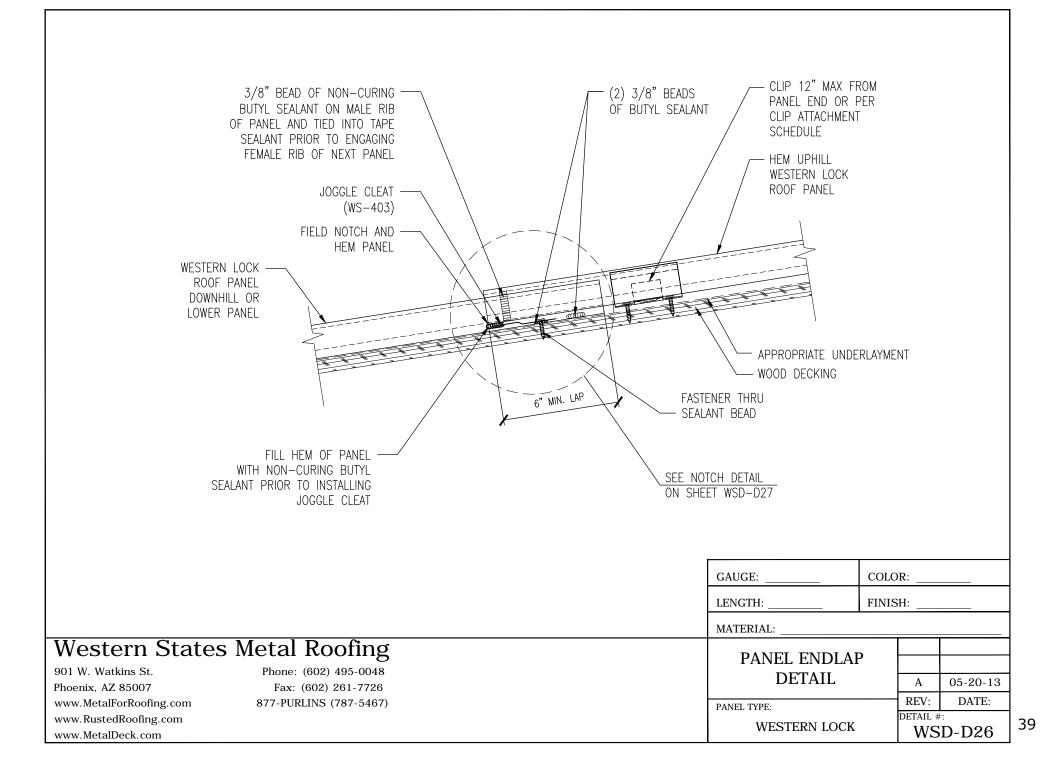


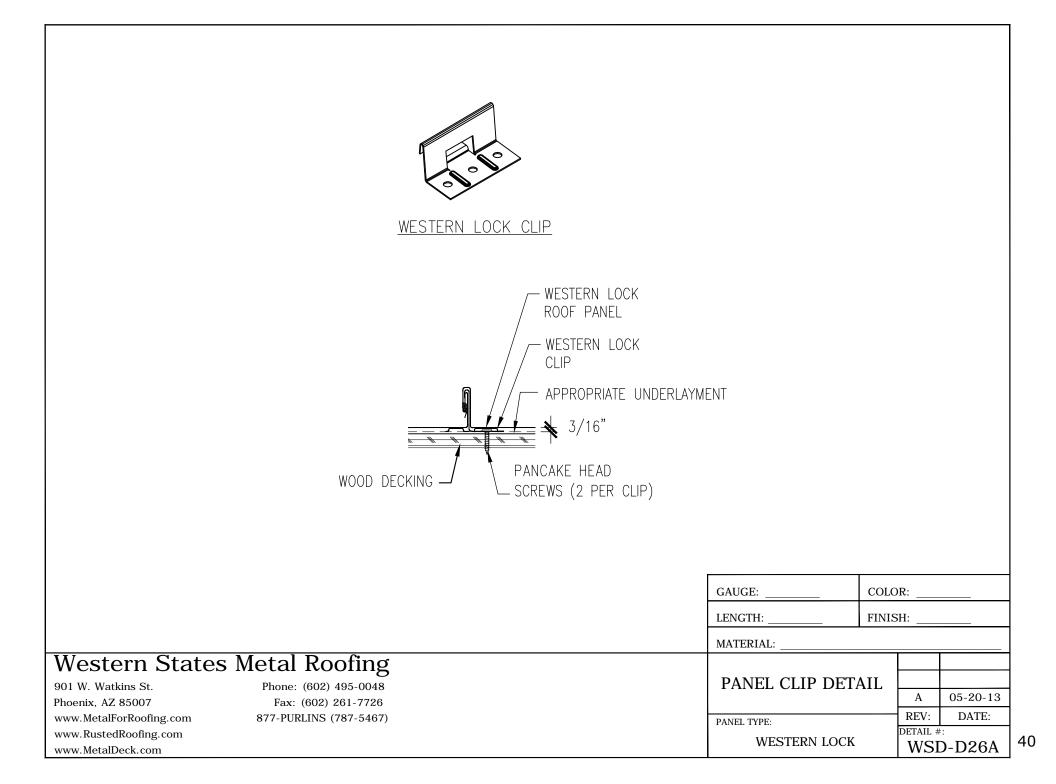




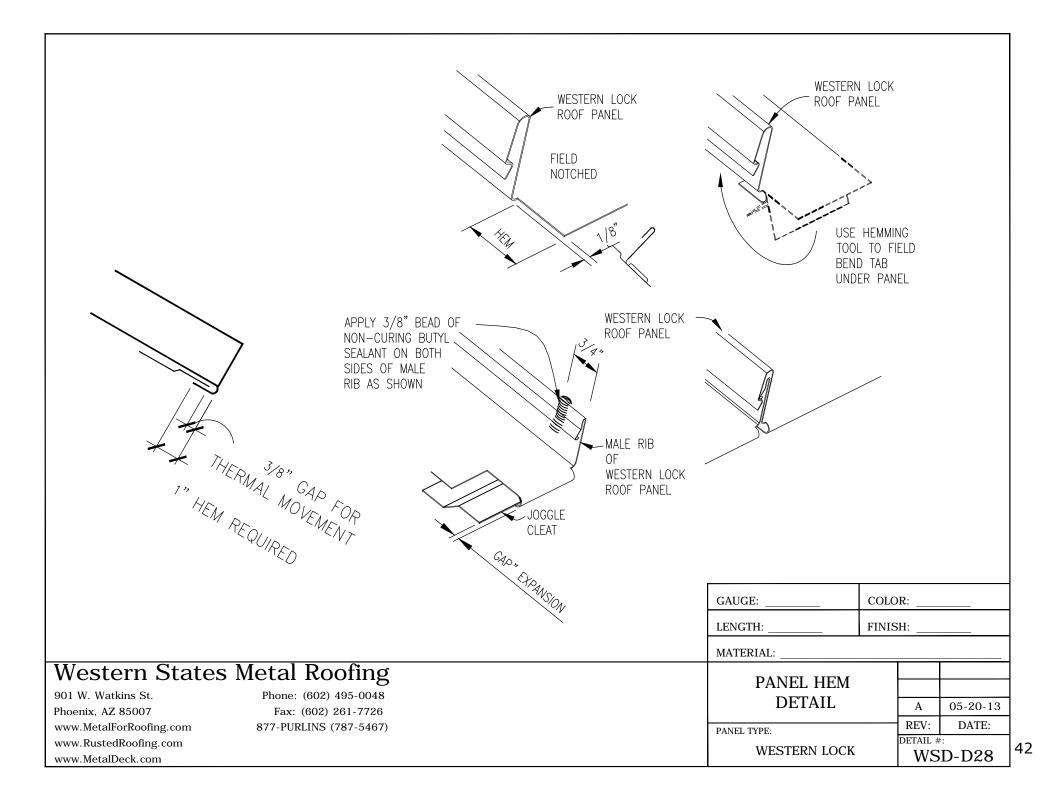


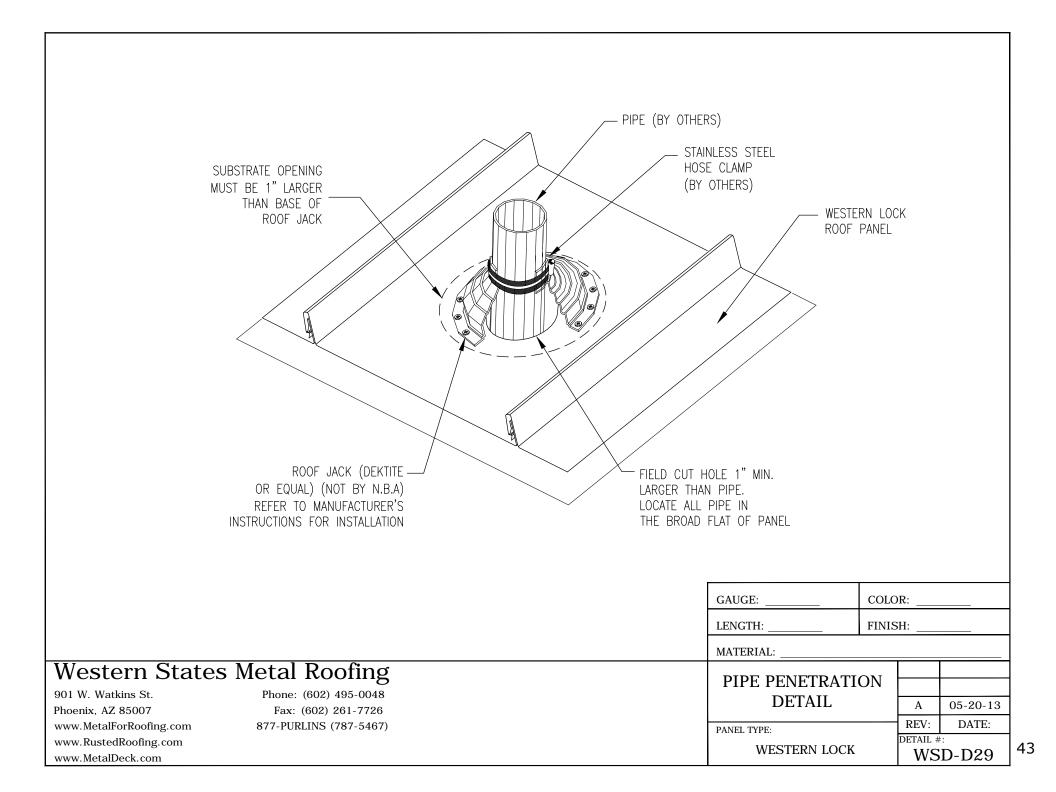






WESTERN LOCK ROOF PANEL DOWNHILL OR LOWER PANEL	- FIELD NOTCH MALE AND FEI RIB (AS SHOWN) 9"	MALE	
	LENGTH:	FINISH:	
	MATERIAL:		
Western States Metal Roofing         901 W. Watkins St.       Phone: (602) 495-0048         Phoenix, AZ 85007       Fax: (602) 261-7726         www.MetalForRoofing.com       877-PURLINS (787-5467)         www.RustedRoofing.com       www.MetalDeck.com	FIELD LAP DETAIL PANEL TYPE: WESTERN LOCK	A REV: DETAIL #	05-20-13 DATE: *: SD-D27





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benix, AZ 85007     Fax: (602) 261-7726       w.MetalForRoofing.com     877-PURLINS (787-5467)	PANEL TYPE:	REV: DATE:	
rw.RustedRoofing.com	WESTERN LOCK	DETAIL #:	
ww.MetalDeck.com		WSD-MN30	

### CUSTOM TRIM

				_		-
		GAUGE:	JGE: COLOR:			-
		BREAKS:	FINIS	FINISH:		
		LENGTH:	STRETCH OUT:			
		MATERIAL:				
Western States Metal Roo	fing	CUSTOM TRIM NAME:				
901 W. Watkins St. Phone: (602) 49	0					4
Phoenix, AZ 85007 Fax: (602) 26	1-7726			A	05-20-13	
www.MetalForRoofing.com 877-PURLINS (78	7-5467)	PANEL TYPE:		REV:	DATE:	
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#### Western States "Western Lock ™" Panel

Installation, Flashings & Shop Drawing Detail Guide

#### **Special Design Considerations**

The details contained in this guide are proven industry details and are intended to be used as a design aid and installation guide. It does not depict all situations that may be encountered on all projects. Modifications are the responsibility of the designer/ owner/ installer.

Consideration should be given for Fit for Purpose, Building use, Climate conditions such as temperature, snow, wind, and moisture, Governing Building Codes, and Maintenance.

It is highly recommended that all trims and flashings be of the same material as the panels (metal, gauge, finish) to ensure long term performance and durability. Where possible, flashing edges should be hemmed to strengthen the edge and protect the cut edge from exposure.

#### Acceptance

Use of this manual is strictly voluntary. Details that are provided are to be used as a guide only. Details may not be applicable for all situations. This guide provides one standard detail and WSDI accepts that other installation details may be needed and other details may exist. WSDI makes no guarantee as to the Weather Tightness of the system or details found with in this guide. The information in this manual is believed to be correct and accurate at the time of printing. WSDI reserves the right to change details, discontinue products, change designs at any time without incurring obligation. It is best to consult your Design Engineer for recommendations.

#### Underlayment

There are many types of underlayment's on the market today. All designed with a special purpose depending on the type of Metal and profile. Many different types of metal will require a different type of underlayment, such as A606-4 (Corten) which requires a High Temperature underlayment. It is best to consult your Design Engineer for recommendations.

#### Valley and Snow Design

Valley design and dimension must be the proper width to accommodate high snow, rain, ice, and slope conditions. If possible, splices, penetrations, valleys, roof elevation changes, should be minimized in areas of high snow and ice accumulations. Details found in this manual may not pertain in areas of high snow and ice accumulations.

#### Panel coverage and fastening

Normal panel width of "Western Lock" panel is 16". However depending on the finish selected and the required coil feed, other sizes may be available. . Please consult with your WSDI representative for details and fastening recommendations.

#### Safety and Maintenance

Walking on and installing any roof is dangerous! Extreme care should always be used when walking on roofs. Safety should always be a top priority and approved fall protection and equipment as approved by OSHA should always be used. No roof is immune to severe weather or is completely maintenance free. To keep your roof performing as it was designed; an inspection and comprehensive maintenance program should be implemented.

#### References

For other installation techniques and details, The Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) and NRCA manuals are great resource for working with sheet metal.

#### Technical Assistance

Contact your WSDI sales or technical representative for any additional information or assistance. To insure you have the latest information available, please inquire or visit our web sites at www.metaldeck .com or Rustedroofing.com



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### **REQUEST A FREE METAL COLOR SAMPLE**

Pick Up or Delivery (Available anywhere on the West Coast)

#### Western Metal Deck

616 S. Oaks Ave., Ontario, CA 91762 ☎ (909) 467-2016 ⊠ sales@metalroofingcalifornia.com



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https://www.instagram.com/westernmetaldeck1/

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