

### **Suncrest Substation**

## Surface Treatment Plan

Revised June 13, 2012

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#### Background

In accordance with mitigation measure V-7a of the Mitigation, Monitoring, Compliance, and Reporting Program (MMCRP) for the approved Sunrise Powerlink Project, SDG&E submits this revised Surface Treatment Plan for construction and operation activities at Suncrest Substation (SCR). The full text of V-7a is provided at the end of this document.

Mitigation measure V-7a requires SDG&E to submit a Surface Treatment Plan 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the ancillary facility component, whichever comes first. An original Surface Treatment Plan was approved on October 25, 2010, and this revision is being submitted to address changes, which include the addition of a warehouse to be constructed at the site and changes to surface treatments.

SCR is located in San Diego County south of Bell Bluff Truck Trail, approximately 2.8 miles west of Japatul Valley Road, southwest of the intersection of Interstate 8 and Japatul Valley Road, and east of the community of Alpine, California. The substation is located on SDG&E owned property in a rural, sparsely developed setting. The site is bordered by the Cleveland National Forest to the north, west, and south and private lands to the east. Interstate 8 is approximately two miles north of the Substation.

#### **Description of Construction Activities**

SCR accommodates the termination of one 500 kV and two 230 kV transmission lines. Construction of the substation included: grading and fencing of a 40 acre pad; construction of a single-story relay/control shelter and storage shelter; installation of a 300,000 gallon water tank with associated irrigation plumbing and fire hydrants; revegetation of disturbed slopes; installation of a pre-engineered steel warehouse building; and widening, improving, and paving an existing 2.6 mile access road. Electrical equipment installation includes: 500 kV and 230 kV circuit breakers; 500 kV and 230 kV disconnect switches; 500/230kV transformers; 500 kV series capacitor; 230 kV shunt capacitors; substation bus support and dead-end structures; buswork; and associated hardware, fire walls, and foundations. The layout of these items is depicted in Appendix A.

The tallest structures installed in the substation are the 500 kV line and transformer dead-end structures. Maximum heights for these structures would be 130 feet and 75 feet, respectively. With the exception of a reduction in overall disturbance area impacts, there has been no change to the proposed construction activities for this site as compared to those described in the approved Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS).

#### **Sensitive Receptors**

The existing terrain blocks the view of the substation from properties to the west, north, and east. However, the substation will be visible from some locations to the south, southwest and southeast.

The closest existing residences to the southeast and south of the substation are approximately 1/2 mile away. Depending on the elevations of residences to the south, they may have a view of some portion or the entire substation.

In addition, as shown in the visual simulations in Appendix C, there are views of the substation and views of some of the transmission towers from a few locations along Japatul Valley Road approximately 1.8 miles southeast and approximately 2.8 miles southwest of the substation. Appendix C also includes visual simulations of the substation from a residential area to the south of the substation.

Appendix C-1 simulates the view of SCR from approximately 2.8 miles southwest of the substation near the Key Viewpoint 69 identified in the Sunrise EIR¹. This simulation depicts several 500kV towers with a distant view of the upper portions of several substation structures. Appendix C-2 simulates the view of SCR from approximately 1.8 miles southeast of the substation on Japatul Valley Road near the intersection with Esperanza Lane. Although this location is slightly closer to the substation, there are only distant views of the transmission and substation structures. In addition to the views analyzed in the Sunrise EIR are views provided in Appendix C-3 and C-4 from a residential area approximately 1 mile south of the substation. Appendices C-3 and C-4 provide visual simulations of the substation at 2-years and 5-years following construction.

There is a single point of access to the substation via Bell Bluff Truck Trail (BBTT). The last two miles of BBTT traverses SDG&E owned or other private property and are not accessible to the general public. This portion of the road provides access to two private properties in addition to the SDG&E owned property. Two locked gates were located along this private portion of the road to control access. One gate was approximately 0.8 miles east of the substation and the second gate was approximately two miles east of the substation. As part of this project new locked gates will be established in approximately the same locations.

#### **Surface Treatment**

The location of this substation was selected to provide the greatest possible natural screening from the public. As discussed, the site's topography result in the substation being completely hidden from view on the east, north, and west and partially hidden from most public views from the south, southwest and southeast. Therefore, SDG&E is proposing to use standard surface treatments at SCR.

SDG&E proposes to use unpainted standard surface, gray concrete masonry blocks for the relay and control shelter and the storage shelter. A sample of the standard block is included as Appendix E-3. The transformer fire walls will be constructed of reinforced concrete without color treatment and the major electrical equipment with a painted finish will use SDG&E and industry standard colors as described below.

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<sup>&</sup>lt;sup>1</sup> Sunrise Powerlink EIR, Figure E.4.3-3B.

SDG&E is using a standard galvanized chain link steel fence to surround the substation. The fence is eight feet high and topped with two feet of barbed wire strands. The fence will not be obtrusive from a distance of <sup>3</sup>/<sub>4</sub> of a mile; however, brown slats will be installed in sections of the fence, as depicted in Appendix B.

The major structures are standard galvanized steel primarily due to the proven long-term durability, and minimal maintenance of these structures for up to 25+ years

A part of the overall surface treatment consideration is the design of retaining walls and other hardscape features related to the substation pad development. The walls were designed to incorporate non-linear features (both horizontal and vertical curves) to create a more natural appearance that blends with the existing undulating topography. There are six mechanically stabilized earth (MSE) retaining walls with heights up to 32 feet. Five are located within the substation grading area and are planted with native vegetation. One MSE wall along Bell Bluff Truck Trail is not visible and was not planted. The MSE retaining walls were constructed of "buff" colored concrete blocks and the three walls located on the south slope were treated with Permeon ® to reduce visual contrast and blend into the landscape using a deeper color brown.

Along Bell Bluff Truck Trail there will be a retaining wall with a maximum height of 5-feet. The retaining wall has been color treated to blend in with the landscape. Also, concrete lined drainage ditches were constructed at various locations along the access road. These drainage ditches were constructed with pre-mixed Omaha Tan colored concrete. A sample of Omaha Tan (5084) is included in the Davis Colors brochure attached as Appendix D-1.

Based on the questionable stability of soil material between portions of the exposed rock, a soil nail wall was installed on a portion of the east cut area near the center of the substation pad. The soil nail wall was covered with stained and textured concrete to simulate a natural rock surface. Where the soil nail wall was not required and the exposed rock was capable of supporting vegetation, the slope area(s) have been revegetated with native plants or hydroseed. Areas of exposed rock that cannot support vegetation were treated with Permeon® to reduce glare and contrast with the light-colored soil, allowing the exposed rock and soil to better blend with the natural landscape colors.

Drainage ditches outside the substation pad were constructed with pre-mixed Omaha Tan colored concrete. Vertical concrete features outside of the substation, such as headwalls, were treated to simulate the surrounding natural soil. The treatment provides a spectrum of brown earth tone colors closely matching those found on adjacent exposed soil and natural rock. The treatment shall produce color variations and shades that help disguise the concrete surface when viewed at a distance. The stain colors are permanent, UV resistant and color stable. The treatment was applied to allow for natural looking variations in shading. These hardscape features, combined with the landscaping of the slope areas with vegetation native to the site where feasible,

will allow the sloped areas around the substation to blend in with the undisturbed areas surrounding the substation within approximately five years after the completion of construction.

The 300,000 gallon concrete water tank (approximately 50 foot in diameter by 26 feet tall) was finished with a dark brown colored concrete paint. A sample of this paint is included as Appendix E-1. The water tank was constructed approximately a thousand feet northeast of the substation pad and is not visible from the west, south and east due to the existing topography. There may be a partial view of the upper portion of the tank from Interstate 8, which is approximately two miles north of the tank location.

The pre-engineered steel warehouse building was constructed in the central portion of the substation pad, east of the 500kV bays and adjacent to the driveway. The warehouse is approximately 25 feet tall and 60 feet by 120 feet in area. The warehouse provides an easily accessible, secure and weatherproof storage facility for critical spare equipment and material. The exterior of the warehouse is finished in a standard mesa wall with the color "Surrey Beige" as depicted in Appendix D-2.

The warehouse is visible from some offsite locations to the south and southeast. At a minimum, the surfaces of the south and east facing walls and south facing roof will be darkened to an earth tone color consistent with the nearby natural landscape. The application of this color may be uniform or may be in a pattern that serves to break up the overall apparent size of the warehouse. Prior to application, SDG&E will consult with CPUC as to the final color selection and application.

Table 1 summarizes the colors proposed for the major elements of the substation and associated site development features. The elements within the substation will use standard colors that are currently used at SDG&E bulk power substations in similar settings. Special consideration was given to the treatment of the slopes that will be created as part of the substation grading operation. These features combined with the landscaping planned for these areas (as described in the separate Revised Screening Plan) will help blend the developed area with the surrounding native landscape.

Table 1: Suncrest Substation Surface Treatment				
Structure	Color	Finish		
Relay/Control Shelter	Standard light gray concrete block	Unpainted concrete block		
Storage Shelter	Standard light gray concrete block	Unpainted concrete block		
Transformers	ANSI 70 (Gray)	Factory applied finish		
Breakers	ANSI 70 (Gray)	Factory applied finish		
Insulators	ANSI 70 (Gray)	Manufactured porcelain or epoxy		
Chain Link Fencing	Gray links with brown earth tone colored slats installed as shown in Appendix B	Untreated galvanized steel wire with brown slat inserts		
Structures	Gray	Untreated galvanized steel		

Table 1: Suncrest Substation Surface Treatment					
Structure	Color	Finish			
Transformer Concrete Fire Walls	Standard light gray concrete	Unpainted concrete			
Concrete lined detention basins	Standard light gray concrete. South detention basin was partially treated to match adjacent exposed soil and natural rock	Unpainted concrete. South detention basin – field applied treatment.			
Retaining Walls	Buff except the south slope walls will be treated to match those found on adjacent exposed soil and natural rock	Field applied treatment			
Reinforced Concrete Block Retaining Walls along BBTT	Treated with brown earth tones to match those found on adjacent exposed soil and natural rock	Field applied treatment			
Concrete drainage ditches outside the substation	Omaha Tan #5084, Davis Colors <sup>2</sup>	Color mixed with concrete at batch plant			
Soil Nail Wall	Stained and textured concrete to simulate a natural rock surface	Stained and textured concrete			
Concrete inlet and outlet drainage structures outside of the substation fence with visible vertical surfaces	Treated with brown earth tones to match those found on adjacent exposed soil and natural rock	Field applied concrete stains			
Concrete Water Tank	Dark Brown	Field applied concrete paint over cast in place smooth concrete			
Water System Equipment Shelter	White	Field applied paint or manufacture applied finish			
Warehouse	Surrey Beige <sup>3</sup> with application of dark earth tone color in a uniform manner or a pattern to the south and east facing sides and roof	Manufacturer applied finish with subsequent field applied dark earth tone color treatment on selected surfaces			

#### Inspection

For the vertical surface concrete staining outside the substation fence, SDG&E notified the CPUC when surfaces were treated at the site and the treatments were inspected by the CPUC's consultant on April 24, 2012.

To demonstrate compliance of the entire substation installation with V-7a, within 30 days following the start of commercial operation, anticipated in 2012, upon request SDG&E shall provide access to the BLM and CPUC to inspect all buildings and structures.

<sup>2</sup> Davis Colors, 3700 East Olympic Blvd., Los Angeles, CA 90023, http://www.daviscolors.com

<sup>&</sup>lt;sup>3</sup> All Weather Insulated Panels, 929 Aldridge Road, Vacaville, CA 95688, http://www.awipanels.com

#### **Maintenance Procedure**

The appearance of the standard and pre-colored concrete material used in the retaining walls, drainage ditches, transformer fire walls, control shelter and maintenance shelter is not expected to deteriorate. The appearance of the stained concrete is considered permanent and not expected to deteriorate. The factory finished major equipment including the transformers and breakers is not expected to require repainting for 15 to 20 years. Standard galvanized steel structures and fencing would be expected to weather slightly and dull over the first two years but remain maintenance free for more than 25 years. The warehouse exterior finish is anticipated to remain maintenance free for 30 years. SDG&E's existing substation maintenance programs address the repainting of equipment and would resolve any deterioration issues associated with the structures and equipment.

#### **Compliance with Mitigation Measure**

The remoteness, natural topography, private properties surrounding the substation site, limited access and substation design combine to minimize the potential public views of the substation. In addition, the treatment of structures and cut and fill slopes around the substation pad and the revegetation of the slopes with native plant materials is anticipated to result in blending the overall substation development into the natural surroundings to the extent feasible. As a result, the development is in compliance with the visual contrast reduction goals of mitigation measure V-7a.

#### **Applicable Mitigation Measure**

V-7a: Reduce Visual contrast associated with ancillary facilities.

SDG&E shall submit to BLM and CPUC a Surface Treatment Plan describing the application of colors and textures to all new facility structures, buildings, walls, fences, and components comprising all ancillary facilities including substations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to BLM and CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated during manufacture, or (b) construction of any of the ancillary facility component, before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a revised Plan: The Surface Treatment Plan shall include:

- Specification and 11" x 17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture.
- A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation)
- Two sets of brochures and or/color chips for each proposed color
- A detailed schedule for completion of the treatment
- A procedure to ensure proper treatment maintenance for the life of the project.

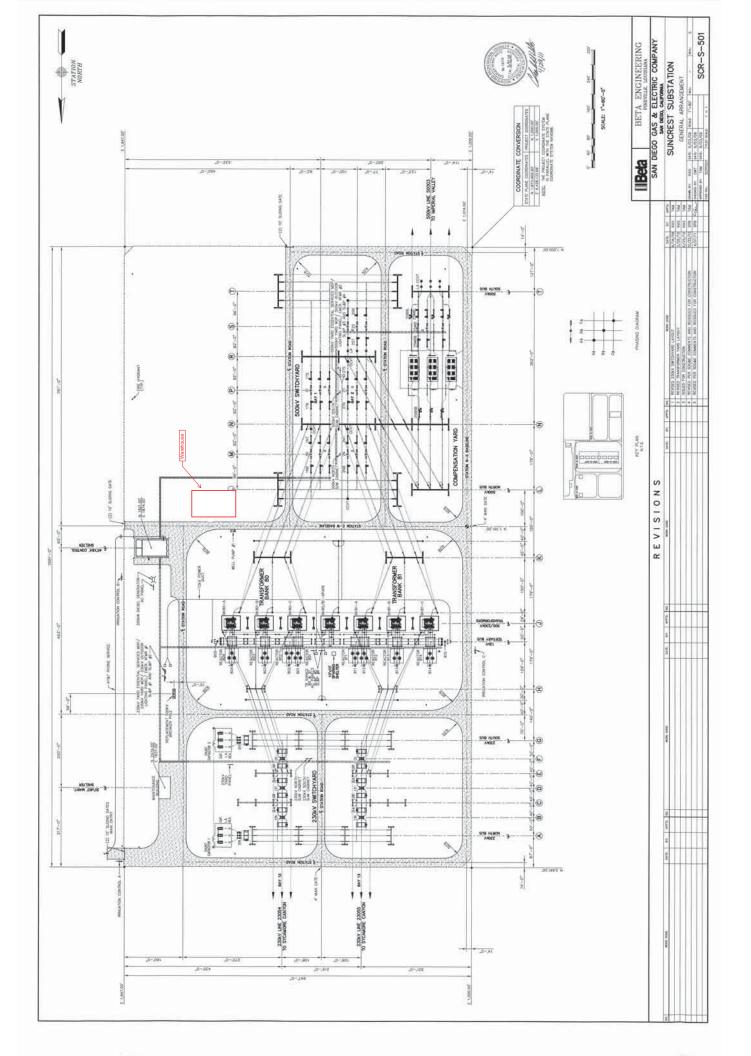
SDG&E shall not specify to the vendors the treatment of any buildings or structures

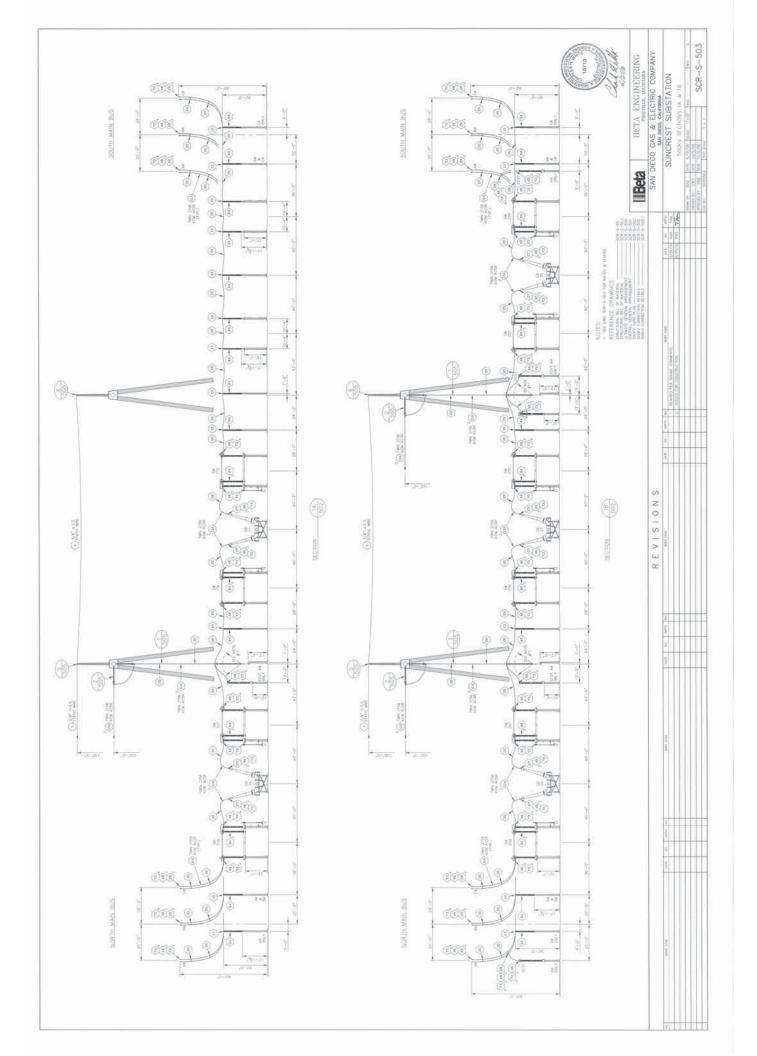
treated during manufacture, or perform the final treatment on any buildings or structures treated onsite, until SDG&E receives notification of approval of the Treatment Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SDG&E shall notify the BLM and CPUC that all buildings and structures are ready for inspection.

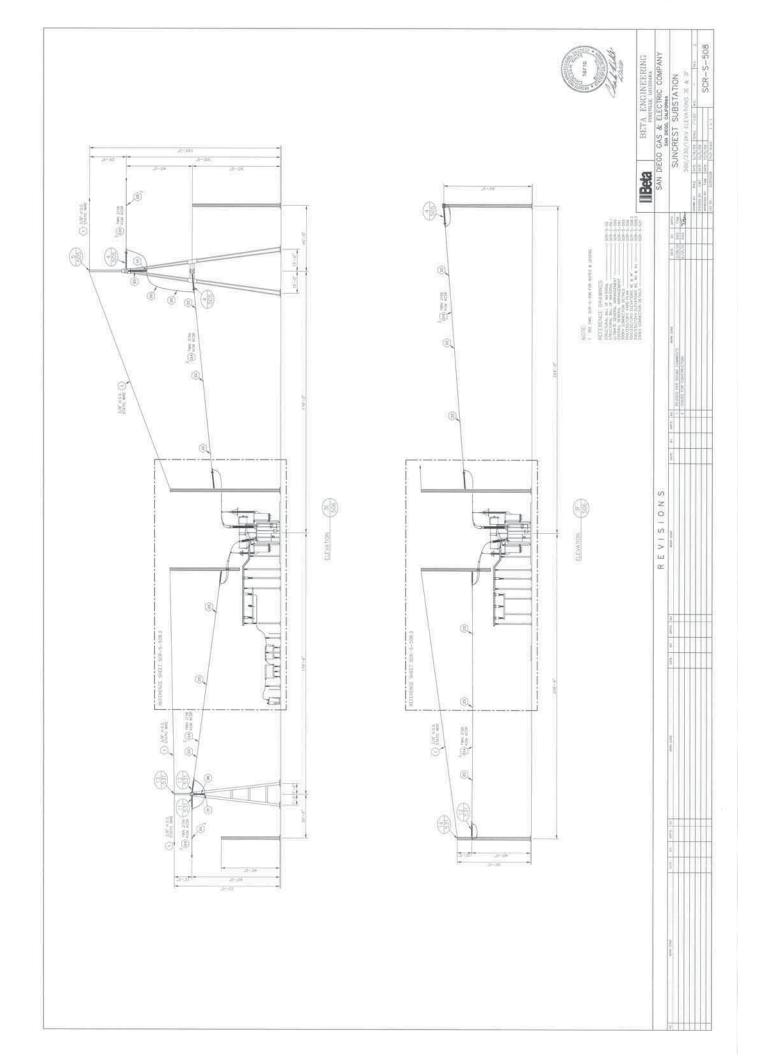
Effectiveness Criteria: The occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible.

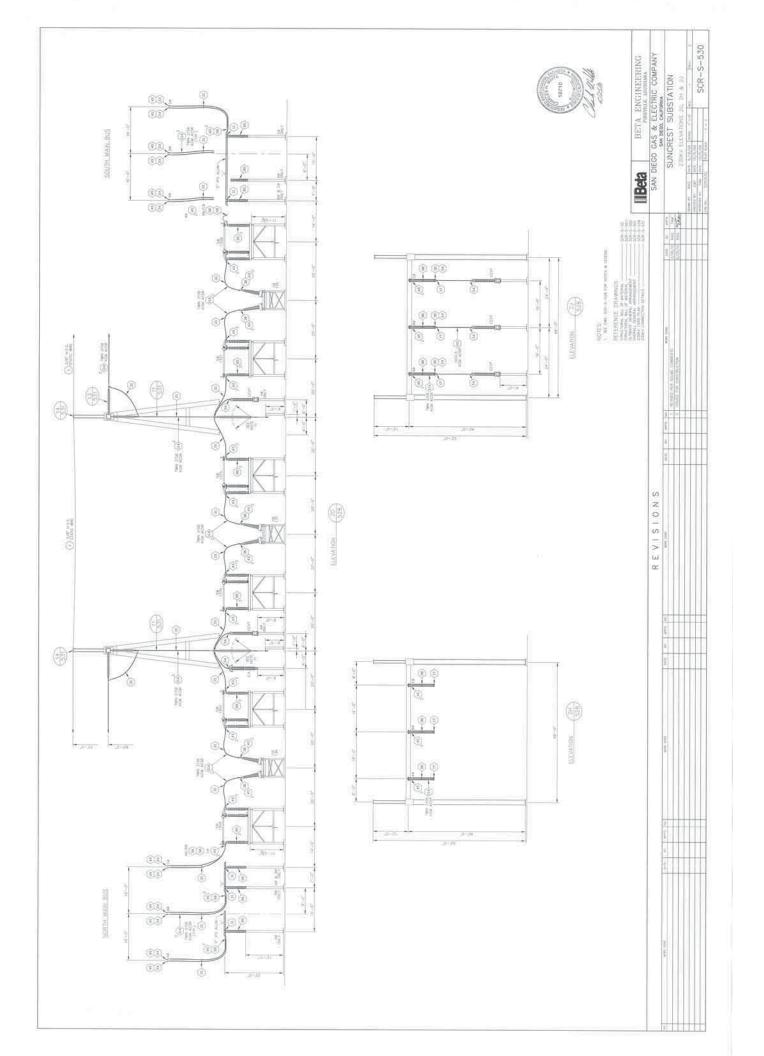
## **APPENDIX A**

Suncrest Substation General Arrangement



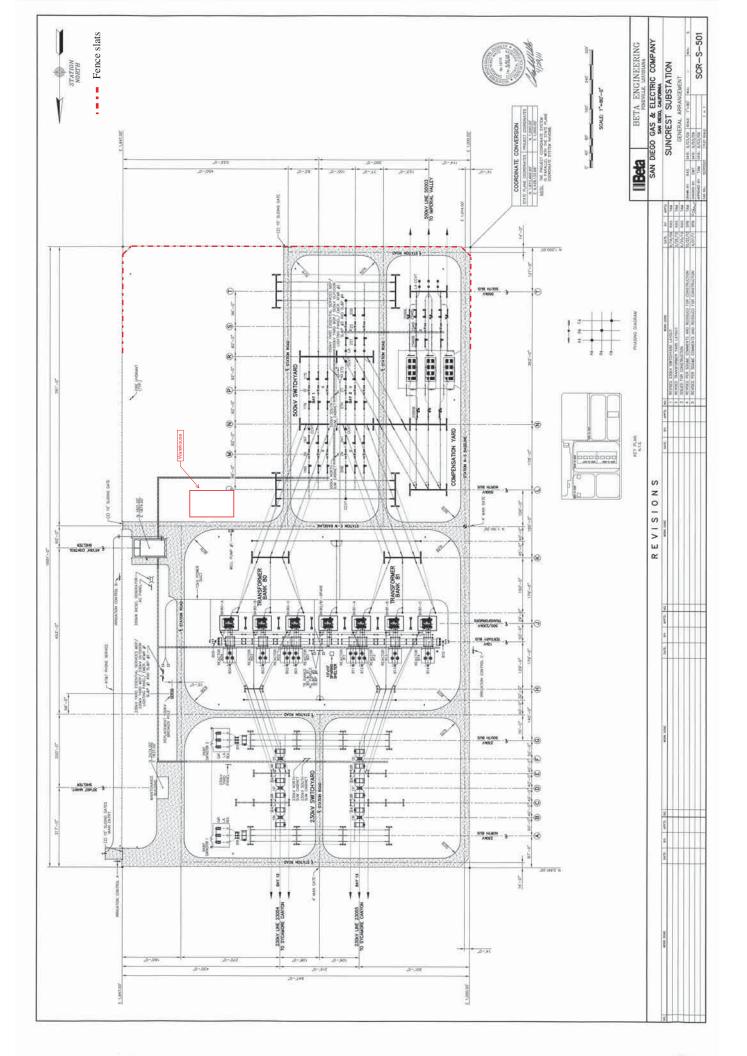






## **APPENDIX B**

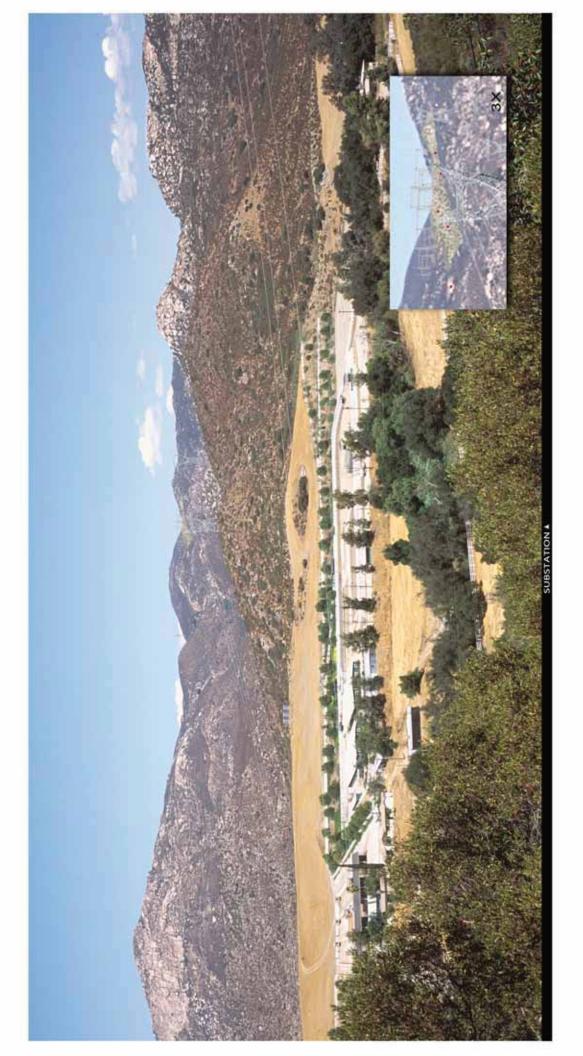
Suncrest Substation Fence Slat Placement



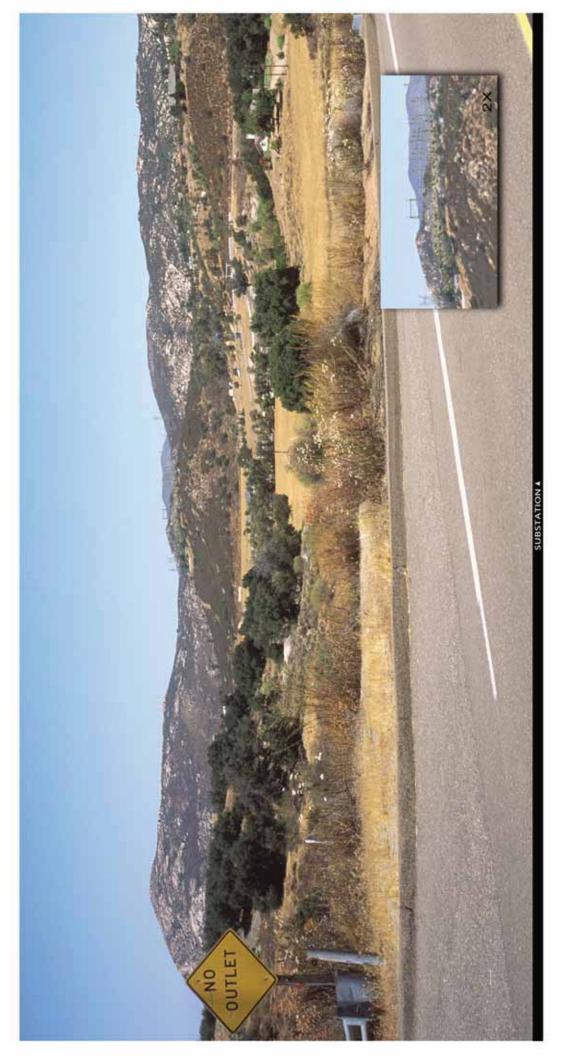
# **APPENDIX C**Suncrest Substation Visual Simulations

Japatul Road Looking Northeast





Japatul Valley Road & Esperanza Lane Looking Northwest





Japatul Lane Looking North-Northwest

Suncrest Substation Visual Rendering with plantings shown at 2 years growth Japatul Lane Looking North-Northwest

Suncrest Substation Visual Rendering with plantings shown at 5 years growth Japatul Lane Looking North-Northwest

Japatul Highlands Road Looking Northwest

Suncrest Substation Visual Rendering with plantings shown at 2 years growth Japatul Highlands Road Looking Northwest

Suncrest Substation Visual Rendering with plantings shown at 5 years growth Japatul Highlands Road Looking Northwest

APPENDIX C-4

## **APPENDIX D**

**Brochures & Information Sheets** 

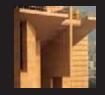
Davis Colors (Mix-In Colors for Concrete)



Davis Colors: Setting the Standard for Concrete Colors.















## **Colors for Concrete**

Davis Colors<sup>m</sup> mix into any concrete, transforming it into a new design feature for building and paving projects or to enhance appearance around the home. Davis Colors<sup>m</sup> are strong, durable and last as long as the concrete. There are bold and intense premium colors, standard colors that add less than a dollar per square foot, and subtle shades for any budget.

This pdf color card is just for ideas. If you choose a color by viewing this on your PC or from a printout of the pdf file, your colored concrete may be a big surprise. Please make your selection from our printed color card, hard samples or job site test.



## color group: Premium

As the leading producer of colors for concrete since 1952, we offer the widest spectrum available. This pdf color card is just for ideas. If you choose a color by viewing this on your PC or from a printout of the pdf file, your colored concrete may be a big surprise. Please make your selection from our printed color **SANGRIA 1117 TILE RED 1117 BRICK RED 160** card, hard samples or job site test. **SAN DIEGO BUFF 5237 SUNSET ROSE 160 BAJA RED 160 TERRA COTTA 10134 SPANISH GOLD 5084 SOUTHERN BLUSH 10134 SALMON 10134 MESA BUFF 5447 PALOMINO 5447 FLAGSTONE BROWN 641 MESQUITE 677 TAUPE 677 SIERRA 61078 ADOBE 61078 KAILUA 677** 

**GRAPHITE 8084\*** 

**WILLOW GREEN 5376** 

**GREEN SLATE 3685** 

**COBBLESTONE 860** 

**PEWTER 860** 

#### MIX-IN COLORS FOR CONCRETE

**Uses:** Davis Colors are used in cast-in-place, slab-on-grade, precast, tilt-up and decorative concrete; shotcrete, mortar, concrete masonry units, pavers, retaining wall units and rooftile. They can also be used to color cast stone, plaster, stucco and other cement-based construction materials. Designed for mix-in use only, they should not be sprinkled or dusted onto the concrete surface.

**Ingredients:** Pure, concentrated pigments made of high-quality metal oxides recycled from iron or refined from the earth and specially processed for mixing into concrete. Davis Colors comply with ASTM C979 *Pigments for Integrally Colored Concrete.* They are lightfast, alkali-resistant, weather-resistant, durable and long-lasting like concrete. Davis Colors are available in a wide spectrum of standard colors and can be custom formulated to match design requirements. \* Unlike other Davis Colors, Supra-Instant® black #8084 is a specially treated carbon black. Carbon black is the highest in tint strength and the most economical, but can fade if concrete is not sealed against water penetration. Sealing and periodic re-sealing can minimize this effect.

**Packaging:** Concrete suppliers use our Mix-Ready® disintegrating bags or Chameleon® bulk handling system. The Chameleon® is a computer-controlled automatic color dosing system used by concrete producers. Mix-Ready® bags are tossed into the mix without opening or pouring. They disintegrate under mixing action, releasing pigments to disperse uniformly leaving no bags to litter the environment.

**Installation:** Integrally colored concrete is installed the same way as high quality uncolored concrete. Choose a color on the inside of this color card and specify it by name and color number. Create a custom color by varying the amount of color added to the mix. Confirm desired color with a fully-cured job-site test panel. Dry color dose rates range from 1/2 to 7 lbs. per 94 lbs. of cement content and should never exceed 10% of cement content. (Liquid dose rates are higher). Cement content includes portland cement, fly ash, silica fume, lime and other cementitious materials but does not include aggregate or sand. Davis Colors have been used successfully in a wide variety of mix designs and are compatible with commercially available admixtures. The only known incompatibility is with calcium chloride set accelerator which causes blotching and discoloration. \* Supra-Instant® black #8084 reduces or negates the effect of air-entraining admixtures.

**Finishes:** Paving and floors can be finished with pattern-stamped, broomed, troweled, exposed aggregate, salt-finished, sand-blasted, diamond-polishing or many other visually appealing textures. Cast-in-place, precast and tilt-up structures can be textured with sand-blasting, bushhammering, grinding, polishing, special forms or form liners. The combinations and possibilities are endless. Here are just a few:



Exposed

Aggregate



Light Broom

(wavy)



Stamped/

**Patterned** 







Sand I Blasted I

**Curing & Sealing:** W-1000 Clear™ is a non-clouding, spray-on cure and sealer that meets or exceeds ASTM C309 standards and is specially formulated for colored concrete and exposed aggregate finishes. Other curing methods, such as water curing or plastic sheets cause discoloration. Color Seal™ is an optional, thin-film sealer that's tinted to match the shades on this Color Selector. When applied over colored concrete or the W-1000 Clear™, it provides a more uniform appearance.

Finish

**Quality Tips:** For best results; materials, curing, weather conditions and workmanship should be uniform throughout a project. Quality starts with the concrete mix; use a low water-content, high-performance mix design. When planning a project, budget for craftsmanship.

**Consumer Advice:** Contractors are independently owned and operated without affiliation to Davis Colors. Choose a licensed and qualified contractor who provides written information and example projects you can see before you buy. Check the yellow pages, ask your local ready mix or building material dealer or visit <a href="https://www.concreteconnection.com">www.concreteconnection.com</a> to find contractors who specialize in colored concrete.

**Specify Davis:** Choose a color from this color selector and specify it by name and color number. Add color call-out to plan documents or specifications. For complete architectural and guide spec information, visit our web site, refer to our architectural binder, call, fax or write. Our guide specifications can be found in SweetSource®, Spec-Data®, ARCAT/Spec-Disk® or at <a href="www.daviscolors.com/specs.">www.daviscolors.com/specs.</a>

For samples or additional information contact:





# Because the conditions of use and application of our products

#### **Mixing Guide:**

Use the same pigment-to-cement ratio, type and brand of cement and aggregates throughout project. Changes in cement and aggregate color affect final color.

Keep slump less than 5" (12.5 cm) and water content consistent. High water content causes concrete to appear pale or "faded". If higher slump is required, use a water reducing admixture instead of added water.

Calcium Chloride set-accelerator causes discoloration; Do not use with color.

Specify air content of 5% to 7% for improved workability and long term durability in freeze/thaw climates.

Schedule loads for consistent mix times. Deliver and discharge in less than 1-1/2 hours. Clean mixer thoroughly between color change-overs.

Confirm color number and weight in Mix-Ready® bag (or combination of bags) is the same required by mix design.

Wet mixer with 1/2 to 2/3 total batch water. Toss in Mix-Ready® bags and mix at charging speed for at least one minute. Add cement, aggregate and remaining batch water. Continue mixing at charging speed for at least 5 minutes (7 minutes for pea-gravel mixes).

Notice: In mixes with small aggregate or batches with short mixing duration, Mix-Ready® bags may not completely disintegrate. In sand-blasted or exposed aggregate finishes, use small bag sizes (15 lbs. maximum) or open bag and pour color normally.

The Chameleon® is a computer-controlled color dosing system for Ready Mix operators exclusively from Davis. It improves color accuracy and availability. Chameleon® dose rates differ from the rates on front of this card. For more information, go to <a href="https://www.daviscolors.com/chameleon">www.daviscolors.com/chameleon</a>.

#### **Contractor's Guide:**

Prepare a well-drained subgrade. Add a 2 to 3 inch (50 to 75 mm) layer of sand, gravel or crushed stone. Uniformly compact the subgrade and moisten evenly, leaving no puddles, standing water, ice, frost, or muddy areas.

If vapor barrier is used, overlap sheets and tape over holes in barrier. Place a 3" (75mm) layer of granular self-draining compactible fill over the barrier to minimize shrinkage cracking.

Position forms for uniform slab thickness. Follow American Concrete Institute standards for reinforcement and joint placement to control cracking.

Allow ample time and manpower for placement and finish work. Finish evenly and with care.

Begin troweling after bleed water evaporates. Late or hard troweling and edging causes "burns" or dark spots.

Water added at job-site to mixer or pumps will cause color to pale. Keep additions to a minimum and consistent among loads. Don't wet finishing tools or brooms or sprinkle water on the surface.

Do not sprinkle pigment or cement onto the surface.

Rotary, dry-broom, pattern stamped or rough finishes usually cure more even-colored than smooth-troweled finishes.

Uneven curing=uneven drying=uneven color. Cure colored concrete with Davis W-1000 Clear™ cure and seal. (info at: www.daviscolors.com/literature)

Do not use plastic sheets, water curing or curing products which discolor. Wood and other objects left on curing concrete cause discoloration.

Efflorescence is a white powdery substance that appears on concrete surfaces. A result of water evaporation, it is more noticeable on colored surfaces making them look faded or lighter in color when not cleaned off. Proper curing and protection against water penetration reduces tendency for efflorescence to occur. Remove with detergent or mild-acid cleaners formulated to remove efflorescence. Follow cleaner instructions and test in a small area to make sure cleaner will not etch or discolor the surface. Wear rubber gloves and eye protection.

Because the conditions of use and application of our products are beyond our control, DAVIS COLORS MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE and expressly disclaims liability for consequential or incidental damages whether based on warranty or negligence. Buyer's sole remedy shall be refund of color purchase price from point of purchase.

AWIP (Warehouse Panels)





FINDING BETTER WAYS TO BUILD FOR THE FUTURE

## **All Weather Insulated Panels**

#### The Company

All Weather Insulated Panels is a leading innovator in the design and construction of insulated sandwich panels. With over 90 years of combined experience in the industry, the management of the Company is keenly aware of how to meet the challenges facing our building industry today with composite wall and roof systems. These challenges include escalating energy costs, environmental concerns, increasing labor rates and safety issues. Since "sandwich" panels are manufactured composites comprised of rigid facings and an insulating core, they offer superior thermal resistance, structural integrity and one step installation compared with field assembled building systems that must rely on skilled workmanship, ideal weather conditions and design variations for different climates.

#### The Products

All Weather Insulated Panels offers a complete line of rigid urethane core wall and roof panels with a choice of flat or profiled walls with hidden fastenings, standard and low slope roof panels with hidden or exposed fastenings, roof deck panels designed for use with single ply membranes or standing seam metal roof coverings and all related trims and accessories for a complete installation.

### **Manufacturing**

All Weather panels are manufactured on a state of the art, fully automated, continuous production line providing absolute precision in roll forming tolerances, adhesion and uniformity of core cell structure. Features include a long length self contained double belt lamination conveyer, cooling conveyer to eliminate heat related face distortion, quick change roll form tooling sections and four stream chemical metering to ensure uniform in-place densities at all thicknesses.

#### Services

Services include a knowledgeable sales staff capable of assisting with panel assembly design, lump sum or component pricing, complete CAD shop/erection drawings in coordination with customer supplied structural drawings, extremely fast turnaround of standard color finish orders and a choice of pre-paid or collect freight terms.





For more information on these products, please visit www.awipanels.com

### **Architectural Wall Panels**

#### **FL40**

FL40 panels are produced with a smooth or micro-embossed, flat 22 gauge factory coated steel exterior face for a hi-tech architectural appearance. They can be installed either vertically or horizontally.

The horizontal wall assembly incorporates a clean, simple end joint design that utilizes a unique self aligning pre-painted aluminum extrusion.

Standard thicknesses (inches): 2, 2.5, 3

40" width



#### **FL40 Wall specifications:**

Standard exterior facing: 22 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available interior steel facings: 24, 22

Module lengths: 8' to 40'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 2"=16, 2.5"=20, 3"=24



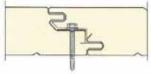
### AdobeTexture™ Wall Panels

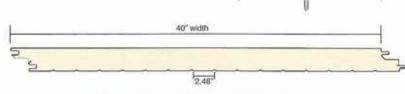
#### HE40-A

The HE40-A **AdobeTexture**<sup>™</sup> panel provides a low gloss multi-textured profile and finish system that simulates a troweled stucco style appearance without the problems common to field assembled stud and stucco construction or factory sprayed composite panels. The proprietary **AdobeTexture**<sup>™</sup> finish system carries a 25 year limited warranty against chalking, fading and loss of adhesion.

Standard thicknesses (inches): 2, 2.5, 3, 4

Typical Wall Joint with Clip and Fastener







#### **HE40-A wall specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel. AdobeTexture™ finish is available in Sandstone, Surrey Beige, Pearl Grey, and Snowdrift White only. Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester Module lengths: 8' to 50'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 2"=16, 2.5"=20, 3"=24, 4"=32

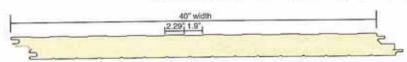


### **Profiled Wall Panels**

SW40

The SM40 standard mesa profile panel is perfect for exterior/interior wall and ceiling applications on industrial and cold storage use buildings. The low profile linear exterior surface simplifies flashing connections designed to inhibit moisture vapor transmission compared with other deep fluted products offered on the market. This product is also available with the mesa profile on both sides and is referred to as double mesa (DM40). The DM40 is ideal for thicker, long-length walls.

Standard thicknesses (inches): 2, 2.5, 3, 4, 5, 6

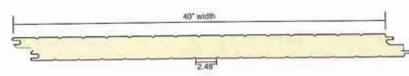




**MV40** 

The MV40 micro vee panel offers an extremely economical exterior or interior wall where a clean, flat profile appearance is desired. The nominal .2 millimeter deep stiffening beads help maintain an acceptable flatness tolerance in the light 26 gauge facings. This product is suitable for exterior applications up to 3" and up to 6" for interior use.

Standard thicknesses (inches): 2, 2.5, 3, 4, 5, 6



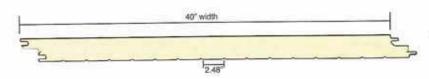


HE40

The HE40 heavy embossed panel is installed on exterior walls with a factory applied paint finish or may be field sprayed with an acceptable textured elastrometric coating.

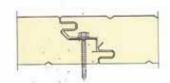
The heavy embossment adds rigidity to the light gauge surface in order to maintain an otherwise flat appearance.

Standard thickness (inches): 2, 2.5, 3, 4





Typical Wall Joint with Clip and Fastener



#### **General wall specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22 (HE available in 26 ga exterior only)

Module lengths: 8' to 67'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 2"=16, 2.5"=20, 3"=24, 4"=32, 5"=41, 6"=49



Micro Vee Wall



Mesa Wall

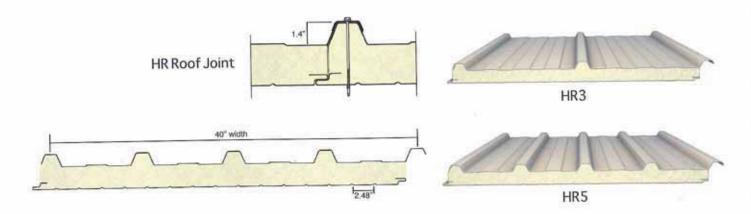
# **Hi Rib Roof Panels**

#### HR3 and HR5

The HR3 (three rib) high rib panel is an economical solution to field assembled metal roofing. This product installs quickly and easily by through fastening at standing ribs into supporting structural members.

The HR5 (5 rib) high rib panel was developed for long span and/or severe loading conditions. Fastening is identical to the HR3 panel.

Standard thickness (inches): 2.5, 4, 5, 6



### **HR roof specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

Module lengths: 8' to 60'

Joinery: Overlapping (HR series), Preformed snap-on cap (CR series)

R-Values: 2.5"=20, 4"=32, 5"=41, 6"=49



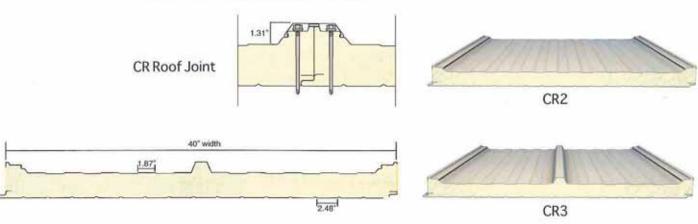
# **Cap Rib Roof Panels**

#### CR2 and CR3

The CR2 (two rib) cap rib panel is designed for use on minimum 1/2:12 roof slopes. The easy snap-on sealing batten cap allows for a hidden fastener installation and eliminates stitch fastening or seaming.

The CR3 (three rib) cap rib panel offers increased spans when needed and is otherwise identical to the CR2 panel.

Standard thickness (inches): 2.5, 4, 5



#### **CR roof deck specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

Module lengths: 8' to 60'

Joinery: Preformed snap-on cap R-Values: 2.5"=20, 4"=32, 5"=41



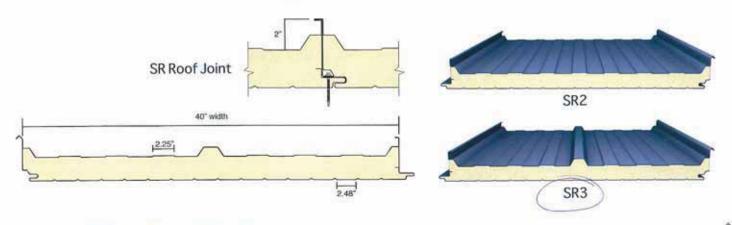
## **Standing Seam Roof Panels**

SR2 and SR3

The SR2 (two rib) standing seam roof panel offers a field seamed, hidden fastener joinery for maximum protection against the elements. The trapezoidal rib design provides added strength against potential foot traffic damage compared with other vertical standing seam roof products. Because the SR2 joint design utilizes a rollformed steel base to support the attachment assembly, the thermally broken clip is only one piece. An optional base only clip design is available for applications not requiring high wind resistance.

The SR3 (three rib) panel offers increased spans when needed and is otherwise identical to the SR2.

Standard thicknesses (inches): 3.25, 4, 5, 6



#### **SR** roof specifications:

Standard facings: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

Module lengths: 8' to 60'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 3.25"=26, 4"=32, 5"=41, 6"=49

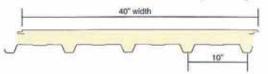


### **Roof Deck**

#### RD5

The RD5 roof deck panel provides the steel deck, insulation and substrate for white single ply membrane or non-structural standing seam roof coverings in a single composite as opposed to rigorous and expensive field assembled roof deck systems. Advantages include longer spans between supports, a working platform during installation, superior deflection resistance, a white reflective interior and fewer trades to install. The topside substrate can be either primed steel sheet or an approved flexible facer depending on the roof covering attachment requirements.

Standard thickness (inches): 2.5, 4, 5, 6





#### **Roof deck specifications:**

Standard exterior facing: 28 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

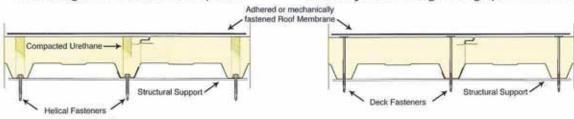
Module lengths: 8' to 60' Joinery: Overlapping

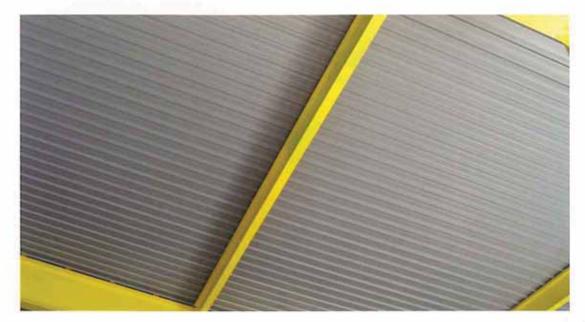
R-Values: 2.5"=20, 4"=32, 5"=41, 6"=49

Core: Continuously foamed-in-place urethane with nominal 2.2 to 2.5 pcf density

Fastening at roof base from topside

Deck Style fastening through panel from topside





### **In-stock Colors and Finishes**

Color	Туре	<b>Application</b>	<b>Standard Warranty</b>
Imperial White	1.0 mil Composite Polyester	exterior / interior	20 years
Snowdrift White Sandstone	1.0 mil Premium Ceramic 1.0 mil Premium Ceramic	exterior exterior	30 years
Surrey Beige	1.0 mil Premium Ceramic	exterior	30 years
Regal Blue Natural Green	1.0 mil Premium Ceramic 1.0 mil Premium Ceramic	exterior exterior	30 years
Pearl Grey	1.0 mil Premium Ceramic	exterior	30 years
White Plastisol	4 mil PVC	exterior/interior	inquire
Stainless Steel	304 2B	interior	N/A

#### Notes:

- All Weather offers embossed metal surfaces as a standard on wall panels and non-embossed (smooth) for roof exterior surfaces. Non-embossed finishes may be available on wall panels upon request depending on color, gauge and end use.
- 2) Complete paint system specifications are available upon request.
- 3) The standard interior paint finish for all panels is Imperial White.
- 4) All colors except Imperial White are available in a fluorocarbon (PVDF) finish upon request.
- 5) All colors shown below are Cool Roof formulations meeting High and Low Slope ENERGY STAR ® specifications.
- 6) AdobeTexture™ finish is available in Sandstone, Surrey Beige, Pearl Grey, and Snowdrift White only.

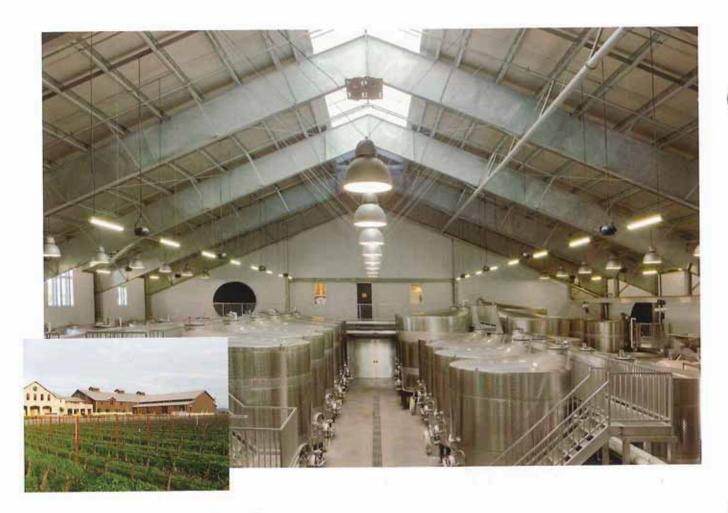
# **Cold Storage and Food Processing Facilities**



### From This



To This

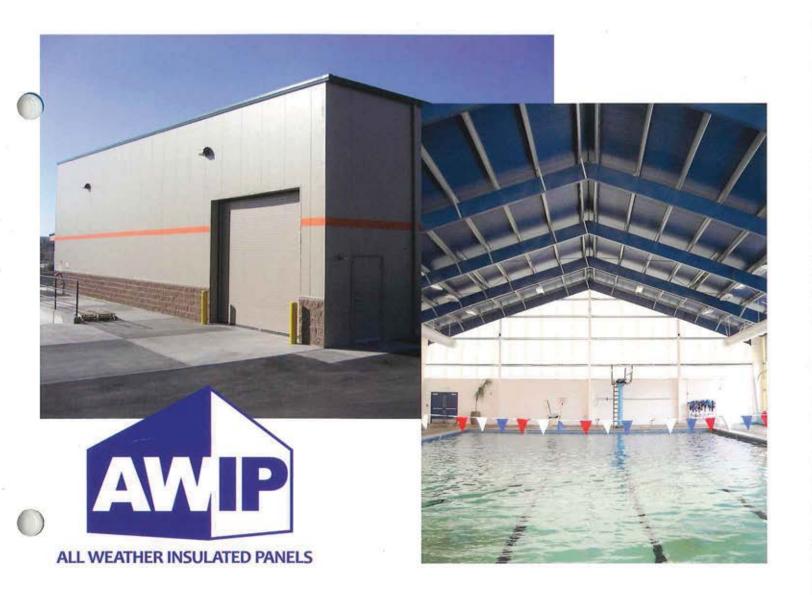


#### **All Weather Insulated Panels**



is committed to business practices that promote environmental conservation and to delivering energy efficient products that support the efforts of the global community to ultimately succeed in creating a truly sustainable living environment for all of us.

- We produce highly insulative wall and roof panels that provide the best thermal resistance to a building envelope economically. The product design greatly minimizes the use of energy required to heat or cool the building interior.
- We incorporate finishes that are engineered to reduce carbon footprint (CO2) through "Cool Roof" solutions and technologies. All Weather roof products maximize solar reflectance and thermal emissivity optimizing energy efficiency. Our standard color offerings meet Energy Star high and low roof slope requirements.
- We use recyclable materials to produce recyclable products. All Weather panels are manufactured with approximately 33% recycled materials. The steel facings and urethane foam core are 100% recyclable.
- All Weather panels have zero ozone depleting potential (ODP), do not produce measurable volatile organic compounds (VOC) and meet current EPA blowing agent requirements for the reduction global warming potential (GWP).
- All Weather panels significantly contribute to LEED ratings of a building.



#### Tests/Approvals Type

Procedure or Standard



Structural

ASTME72

Thermal Transmission

ASTM C 518, ASTM C 1363

Air/Water Infiltration ASTM E 283/E 331

Factory Mutual 4880 Room Corner, Flame Spread, Potential Heat, Ignition

Factory Mutual 4880 Unlimited Height Wall/Ceiling (Passed)

Factory Mutual 4881 Exterior Wall Windstorm Factory Mutual 4471 Wind Uplift, ASTM E 108

CAN/ULC S101-04, S102-07, S126-M86

Complete general specifications, test reports, load span tables and suggested installation details are available upon request or can be downloaded directly from our Website at www.awipanels.com



#### Disclaimer

All information published and distributed by All Weather Insulated Panels is thought to be reliable and correct. Installation details are meant to represent typical product applications based on standard construction practices. It is the ultimate responsibility of the buyer or his owner or architect to verify that the product(s) selected are suitable for the specific application. In accordance with our ongoing efforts to improve our products, All Weather Insulated Panels reserves the right to change any information contained in its publications without notice.





#### Insulated Metal Panels

### Color Availability Chart

The colors shown here are representative only and not necessarily true reproductions of actual coating colors. Coll coat color chips are available on request.

> For information regarding USDA and CFIA approved colors please contact your Vicwest / AWIP sales representative.



SMP In-stock Colors



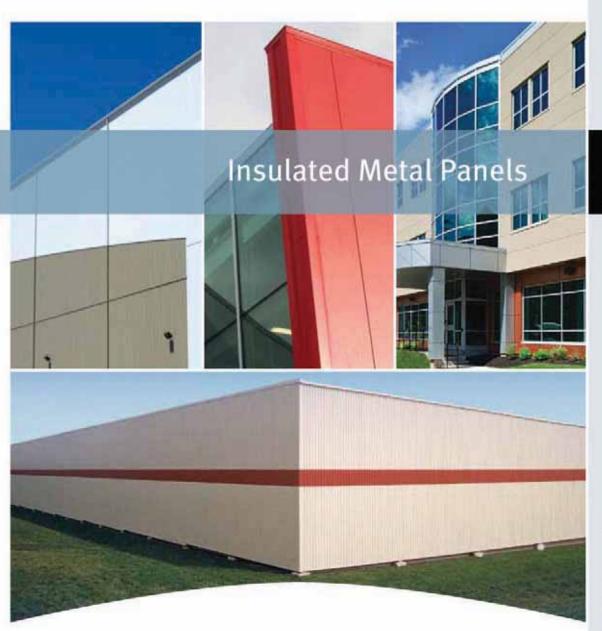
Available PVDF Non-stock Colors



Interior Colors







Energy Efficient. Innovative. Adaptable.



- Complete paint system specifications are available upon request.
- The standard interior paint finish for all panels is Imperial White. All other colors are available as exterior facings only.
- AdobeTexture™ finish is available in Sandstone, Surrey Beige, Pearl Gray and Regal White only.
- Non-stock colors and paint systems and special orders are typically subject to higher pricing and may increase lead times from point of order;











In accordance with ongoing efforts to improve our products and their performance, AWIP / Vicwest reserves the right to change without notice the specifications contained herein.

The contents herein are for general information and illustrative purposes only and are not intended to serve as any type of advice. Every effort is made to ensure the accuracy of the information included in this brochure and it is believed that the information contained herein is accurate and reliable as of the date of publication. AWIP / Vicwest, however, does not warrant or represent the accuracy or reliability of any information included in this brochure. Any reliance on any information without consultation with AWIP / Vicwest or a duly authorized representative shall be at the user's OWD risk.

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VW00167EN05/11

### APPENDIX E Samples

# **APPENDIX E-1**

Dark Brown



### **APPENDIX E-2**

KCC – ANSI 70 gray (sample depicts color only, the actual treatment will use a flat finish)

# APPENDIX E-2 KCC – ANSI 70 gray



### **APPENDIX E-3**

RCP: Block & Brick Natural

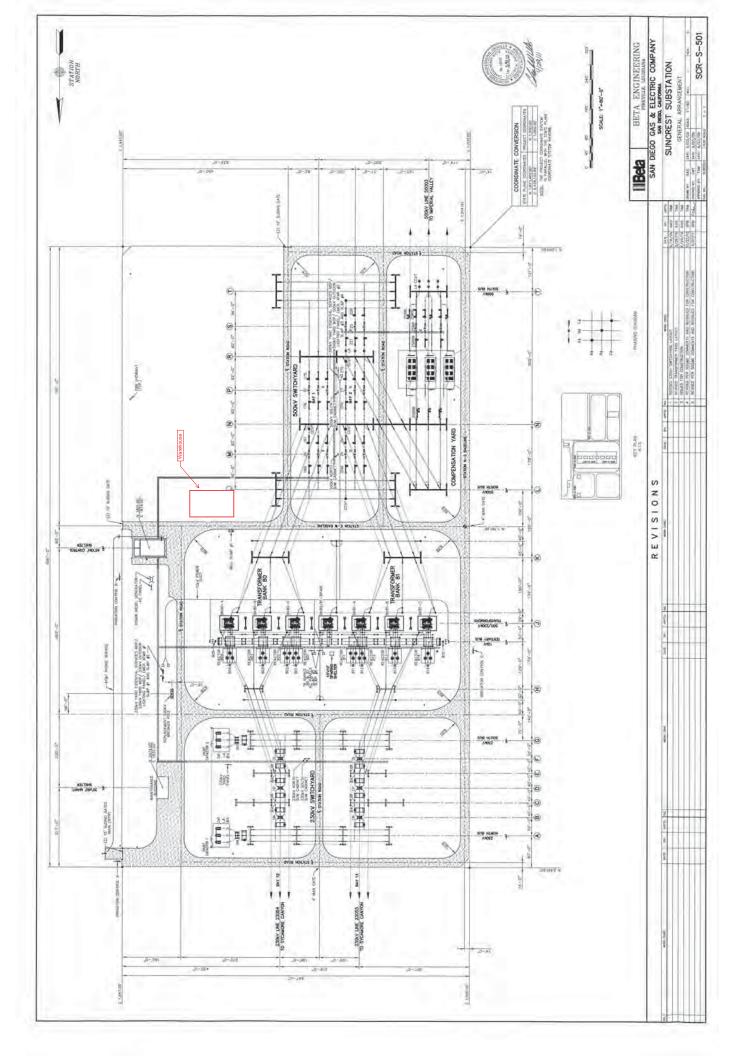
# **APPENDIX E-3**

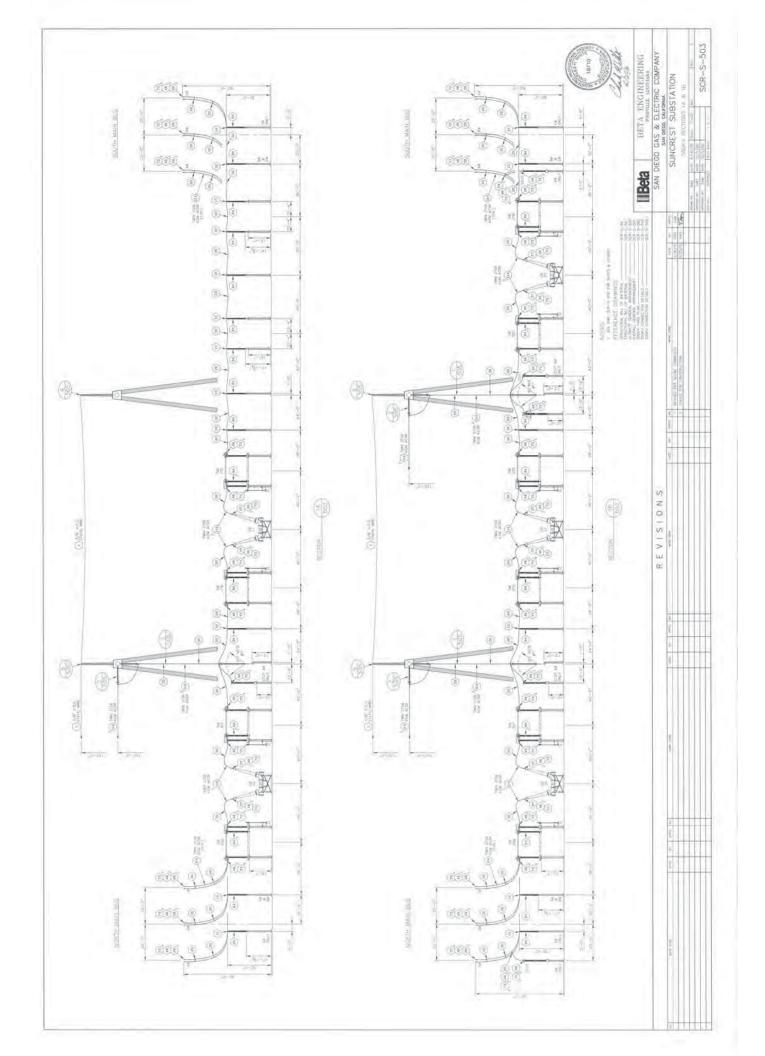
RCP: Block & Brick Natural

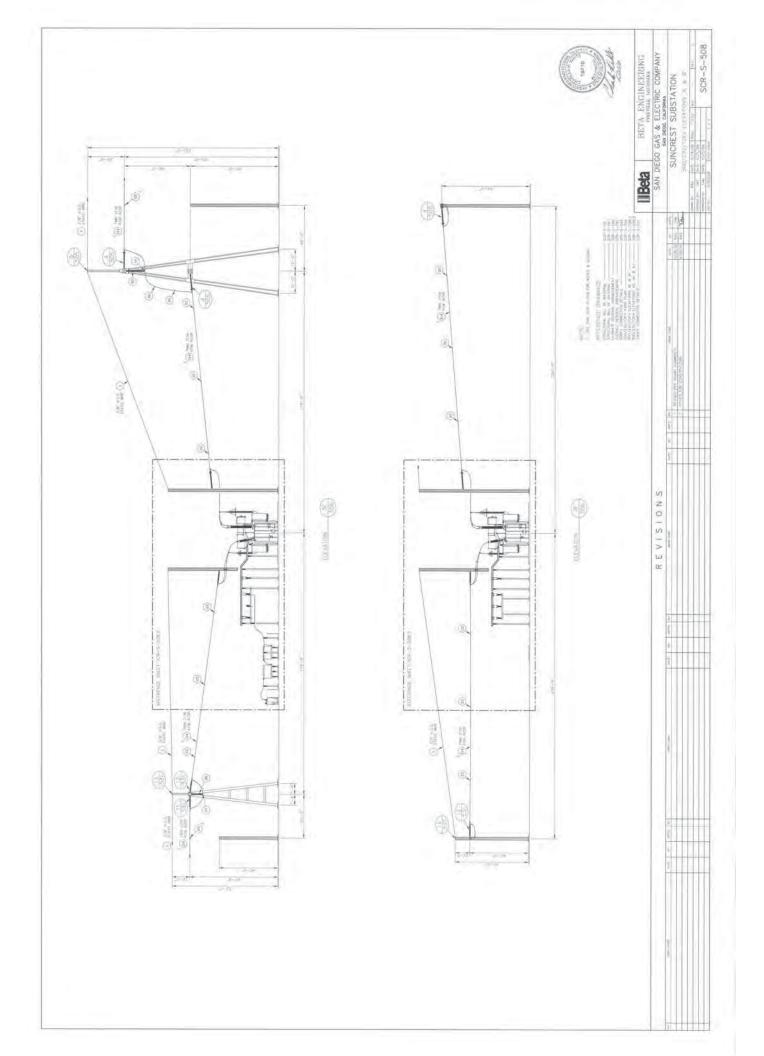


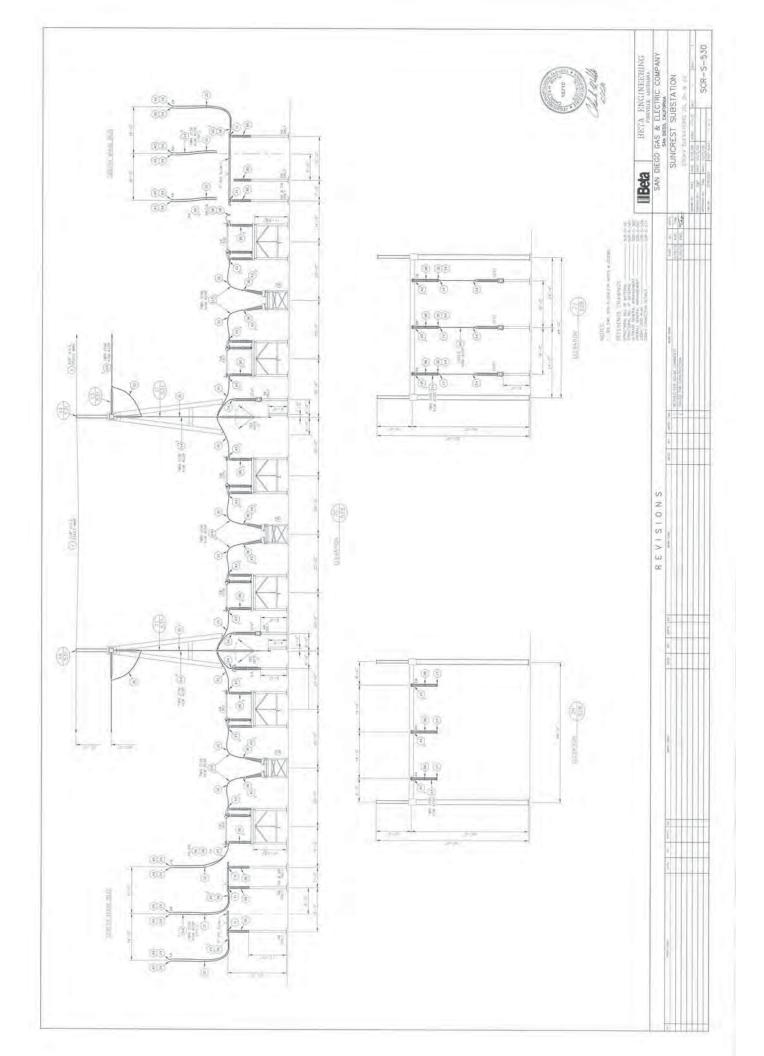
### **APPENDIX A**

Suncrest Substation General Arrangement



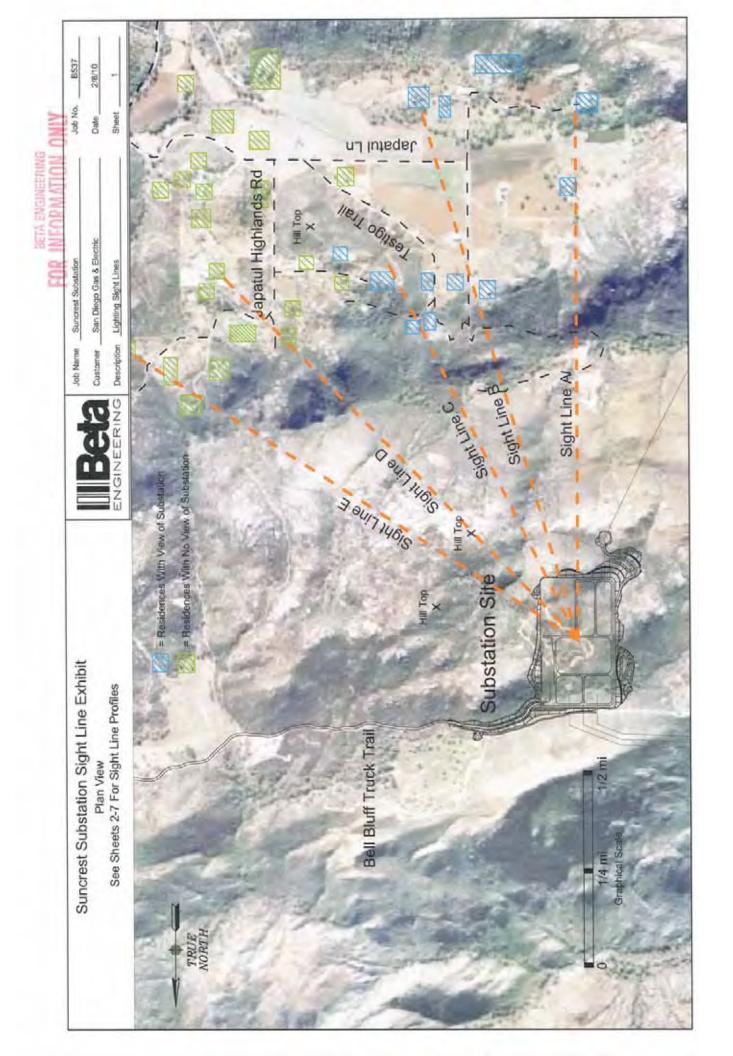






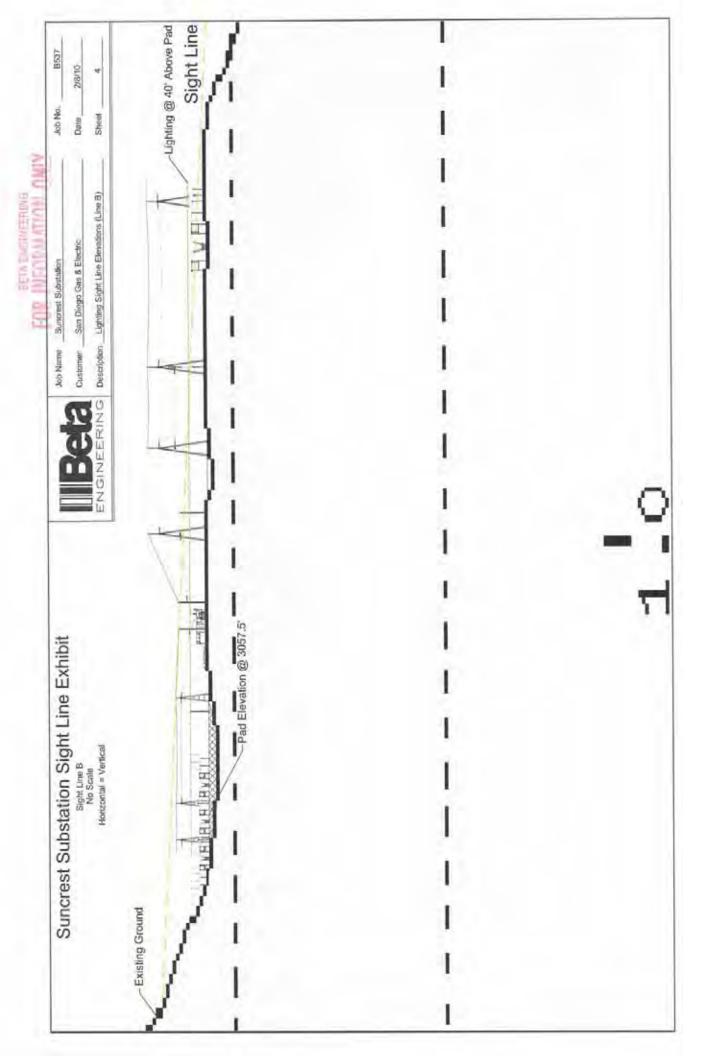
### **APPENDIX B**

Suncrest Substation Sight Line Exhibit



Z.5 miles 2.5 miles 2.5 miles 2.5 miles 2.5 miles 8537 2/8/10 Job No. Site Line E Sheet Date END INCOMMERNING ONLY Description Lighting Sight Line Elevations Oustomer San Diego Gas & Electric 2.0 2.0 2.0 2.0 2.0 Site Line D Job Name Surcrest Substation Site Line C Site Line B Site Line A ENGINEERING 2.5 1.5 1.5 1.5 1.5 Pad Elevation @ 3057.7" Pad Elevation @ 3057.7 -Pad Elevation @ 3057.7 Pad Elevation @ 3057.7 - Pad Elevation (3) 3057.7" Suncrest Substation Sight Line Exhibit THE PARTY 1.0 1.0 2.0 1.0 1.0 Lighting @ 407-Lighting @ 40"/ Above Pad Lighting (2) 40° Above Pad Above Pad Lighting (2 40'-Above Pad Horizontal = Vertical 0.5 -0 0.0 0.5 0.5 3000E 3000 Ft SOCOFE 3000EF 3000E 2500 2800 2500 2500 2500 0.0 0.0 0.0 0.0 0.0

8537 2/8/10 Sight Line Job No. Date Sheet FOR INFORMATION DAILY Lighting @ 40' Above Pad Description Lighting Sight Line Elevations (Line A) Customer San Diego Gas & Electric Job Namo Suncrest Substation ENGINEERING -Pad Elevation @ 3057.5 Suncrest Substation Sight Line Exhibit Horizontal = Vertical THAT HALL Existing Graund



EDIO TUTETO LA FERNING TANNA

8537 2/8/10

Exhibit	
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No Scale Harizontal = Vertical

Existing Ground

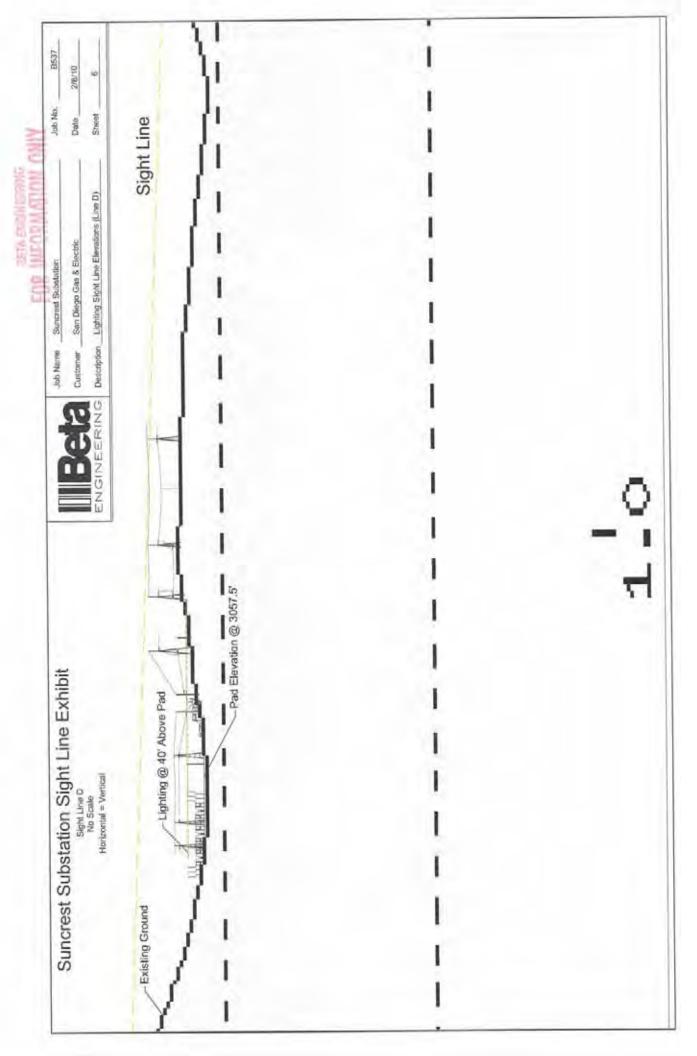
ENGINEERING ENGINEERING

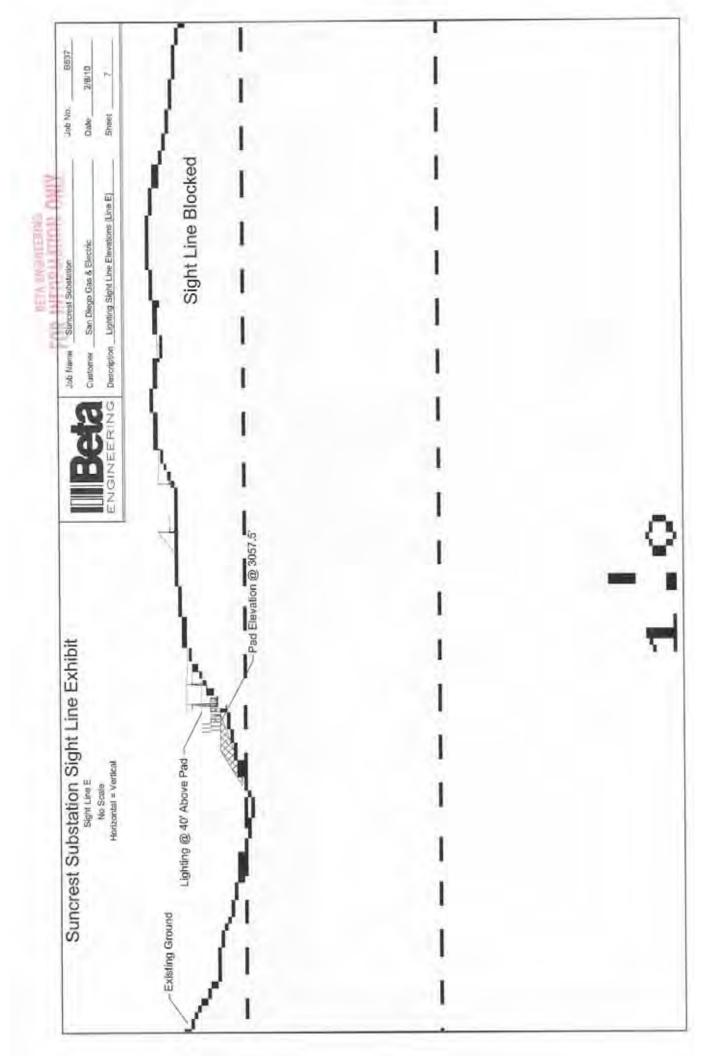
Sheet Joh No. Date Description Lighting Signt Line Elevations (Line C) Customer Sart Diego Gas & Electric Suncrest Substition

-Lighting @ 40' Above Pad

Sight Line

Pad Elevation @ 3057.5

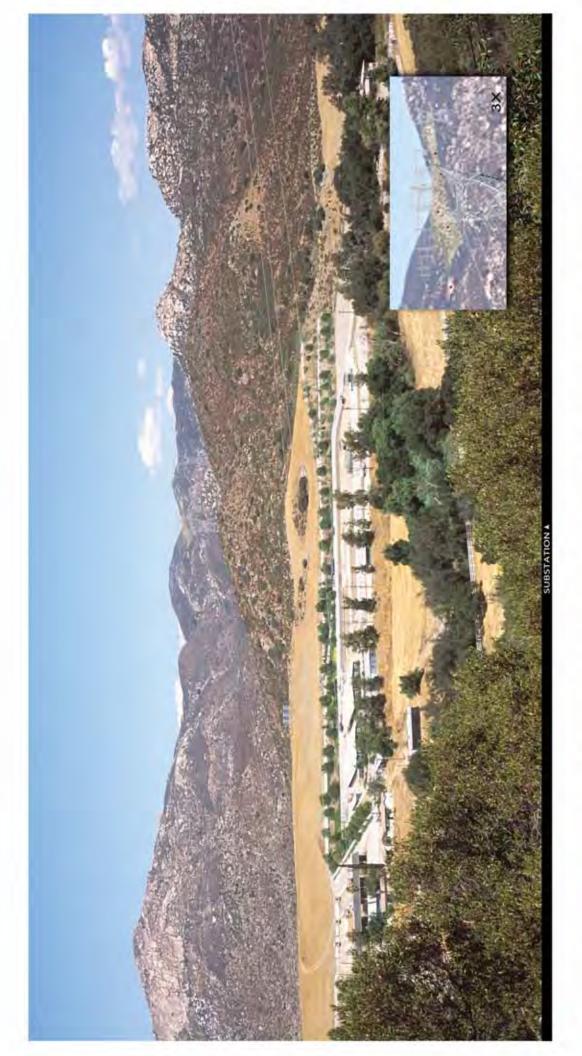




# **APPENDIX C**Suncrest Substation Visual Simulations

Japatul Road Looking Northeast

THIS RENDERING IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE PLANTINGS SHOWN AS 5 YEARS AFTER INSTALLATION.



Japatul Valley Road & Esperanza Lane Looking Northwest



Japatul Lane Looking North-Northwest

Suncrest Substation Visual Rendering with plantings shown at 2 years growth Japatul Lane Looking North-Northwest

APPENDIX C-3

Suncrest Substation Visual Rendering with plantings shown at 5 years growth Japatul Lane Looking North-Northwest

Japatul Highlands Road Looking Northwest

Suncrest Substation Visual Rendering with plantings shown at 2 years growth Japatul Highlands Road Looking Northwest

5-14-2012

Suncrest Substation Visual Rendering with plantings shown at 5 years growth Japatul Highlands Road Looking Northwest

APPENDIX C-4

# **APPENDIX D**

**Brochures & Information Sheets** 

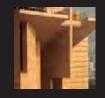
Davis Colors (Mix-In Colors for Concrete)



Davis Colors: Setting the Standard for Concrete Colors.















### **Colors for Concrete**

Davis Colors<sup>m</sup> mix into any concrete, transforming it into a new design feature for building and paving projects or to enhance appearance around the home. Davis Colors<sup>m</sup> are strong, durable and last as long as the concrete. There are bold and intense premium colors, standard colors that add less than a dollar per square foot, and subtle shades for any budget.

This pdf color card is just for ideas. If you choose a color by viewing this on your PC or from a printout of the pdf file, your colored concrete may be a big surprise. Please make your selection from our printed color card, hard samples or job site test.



# color group: Premium

As the leading producer of colors for concrete since 1952, we offer the widest spectrum available. This pdf color card is just for ideas. If you choose a color by viewing this on your PC or from a printout of the pdf file, your colored concrete may be a big surprise. Please make your selection from our printed color **SANGRIA 1117 TILE RED 1117 BRICK RED 160** card, hard samples or job site test. **SAN DIEGO BUFF 5237 SUNSET ROSE 160 BAJA RED 160 TERRA COTTA 10134 SPANISH GOLD 5084 SOUTHERN BLUSH 10134 SALMON 10134 MESA BUFF 5447 PALOMINO 5447 FLAGSTONE BROWN 641 MESQUITE 677 TAUPE 677 SIERRA 61078 ADOBE 61078 KAILUA 677 PEWTER 860 COBBLESTONE 860 GRAPHITE 8084\* WILLOW GREEN 5376 GREEN SLATE 3685** 

#### MIX-IN COLORS FOR CONCRETE

**Uses:** Davis Colors are used in cast-in-place, slab-on-grade, precast, tilt-up and decorative concrete; shotcrete, mortar, concrete masonry units, pavers, retaining wall units and rooftile. They can also be used to color cast stone, plaster, stucco and other cement-based construction materials. Designed for mix-in use only, they should not be sprinkled or dusted onto the concrete surface.

**Ingredients:** Pure, concentrated pigments made of high-quality metal oxides recycled from iron or refined from the earth and specially processed for mixing into concrete. Davis Colors comply with ASTM C979 *Pigments for Integrally Colored Concrete.* They are lightfast, alkali-resistant, weather-resistant, durable and long-lasting like concrete. Davis Colors are available in a wide spectrum of standard colors and can be custom formulated to match design requirements. \* Unlike other Davis Colors, Supra-Instant® black #8084 is a specially treated carbon black. Carbon black is the highest in tint strength and the most economical, but can fade if concrete is not sealed against water penetration. Sealing and periodic re-sealing can minimize this effect.

**Packaging:** Concrete suppliers use our Mix-Ready® disintegrating bags or Chameleon® bulk handling system. The Chameleon® is a computer-controlled automatic color dosing system used by concrete producers. Mix-Ready® bags are tossed into the mix without opening or pouring. They disintegrate under mixing action, releasing pigments to disperse uniformly leaving no bags to litter the environment.

**Installation:** Integrally colored concrete is installed the same way as high quality uncolored concrete. Choose a color on the inside of this color card and specify it by name and color number. Create a custom color by varying the amount of color added to the mix. Confirm desired color with a fully-cured job-site test panel. Dry color dose rates range from 1/2 to 7 lbs. per 94 lbs. of cement content and should never exceed 10% of cement content. (Liquid dose rates are higher). Cement content includes portland cement, fly ash, silica fume, lime and other cementitious materials but does not include aggregate or sand. Davis Colors have been used successfully in a wide variety of mix designs and are compatible with commercially available admixtures. The only known incompatibility is with calcium chloride set accelerator which causes blotching and discoloration. \* Supra-Instant® black #8084 reduces or negates the effect of air-entraining admixtures.

**Finishes:** Paving and floors can be finished with pattern-stamped, broomed, troweled, exposed aggregate, salt-finished, sand-blasted, diamond-polishing or many other visually appealing textures. Cast-in-place, precast and tilt-up structures can be textured with sand-blasting, bushhammering, grinding, polishing, special forms or form liners. The combinations and possibilities are endless. Here are just a few:



Aggregate



Light Broom

(wavy)



Stamped/

**Patterned** 





Blasted



FO Lir

**Curing & Sealing:** W-1000 Clear™ is a non-clouding, spray-on cure and sealer that meets or exceeds ASTM C309 standards and is specially formulated for colored concrete and exposed aggregate finishes. Other curing methods, such as water curing or plastic sheets cause discoloration. Color Seal™ is an optional, thin-film sealer that's tinted to match the shades on this Color Selector. When applied over colored concrete or the W-1000 Clear™, it provides a more uniform appearance.

Finish

**Quality Tips:** For best results; materials, curing, weather conditions and workmanship should be uniform throughout a project. Quality starts with the concrete mix; use a low water-content, high-performance mix design. When planning a project, budget for craftsmanship.

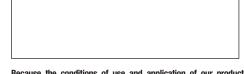
**Consumer Advice:** Contractors are independently owned and operated without affiliation to Davis Colors. Choose a licensed and qualified contractor who provides written information and example projects you can see before you buy. Check the yellow pages, ask your local ready mix or building material dealer or visit <a href="https://www.concreteconnection.com">www.concreteconnection.com</a> to find contractors who specialize in colored concrete.

**Specify Davis:** Choose a color from this color selector and specify it by name and color number. Add color call-out to plan documents or specifications. For complete architectural and guide spec information, visit our web site, refer to our architectural binder, call, fax or write. Our guide specifications can be found in SweetSource®, Spec-Data®, ARCAT/Spec-Disk® or at <a href="www.daviscolors.com/specs.">www.daviscolors.com/specs.</a>

For samples or additional information contact:







#### **Mixing Guide:**

Use the same pigment-to-cement ratio, type and brand of cement and aggregates throughout project. Changes in cement and aggregate color affect final color.

Keep slump less than 5" (12.5 cm) and water content consistent. High water content causes concrete to appear pale or "faded". If higher slump is required, use a water reducing admixture instead of added water.

Calcium Chloride set-accelerator causes discoloration; Do not use with color.

Specify air content of 5% to 7% for improved workability and long term durability in freeze/thaw climates.

Schedule loads for consistent mix times. Deliver and discharge in less than 1-1/2 hours. Clean mixer thoroughly between color change-overs.

Confirm color number and weight in Mix-Ready® bag (or combination of bags) is the same required by mix design.

Wet mixer with 1/2 to 2/3 total batch water. Toss in Mix-Ready® bags and mix at charging speed for at least one minute. Add cement, aggregate and remaining batch water. Continue mixing at charging speed for at least 5 minutes (7 minutes for pea-gravel mixes).

Notice: In mixes with small aggregate or batches with short mixing duration, Mix-Ready® bags may not completely disintegrate. In sand-blasted or exposed aggregate finishes, use small bag sizes (15 lbs. maximum) or open bag and pour color normally.

The Chameleon® is a computer-controlled color dosing system for Ready Mix operators exclusively from Davis. It improves color accuracy and availability. Chameleon® dose rates differ from the rates on front of this card. For more information, go to <a href="https://www.daviscolors.com/chameleon">www.daviscolors.com/chameleon</a>.

#### **Contractor's Guide:**

Prepare a well-drained subgrade. Add a 2 to 3 inch (50 to 75 mm) layer of sand, gravel or crushed stone. Uniformly compact the subgrade and moisten evenly, leaving no puddles, standing water, ice, frost, or muddy areas.

If vapor barrier is used, overlap sheets and tape over holes in barrier. Place a 3" (75mm) layer of granular self-draining compactible fill over the barrier to minimize shrinkage cracking.

Position forms for uniform slab thickness. Follow American Concrete Institute standards for reinforcement and joint placement to control cracking.

Allow ample time and manpower for placement and finish work. Finish evenly and with care.

Begin troweling after bleed water evaporates. Late or hard troweling and edging causes "burns" or dark spots.

Water added at job-site to mixer or pumps will cause color to pale. Keep additions to a minimum and consistent among loads. Don't wet finishing tools or brooms or sprinkle water on the surface.

Do not sprinkle pigment or cement onto the surface.

Rotary, dry-broom, pattern stamped or rough finishes usually cure more even-colored than smooth-troweled finishes.

Uneven curing=uneven drying=uneven color. Cure colored concrete with Davis W-1000 Clear™ cure and seal. (info at: www.daviscolors.com/literature)

Do not use plastic sheets, water curing or curing products which discolor. Wood and other objects left on curing concrete cause discoloration.

Efflorescence is a white powdery substance that appears on concrete surfaces. A result of water evaporation, it is more noticeable on colored surfaces making them look faded or lighter in color when not cleaned off. Proper curing and protection against water penetration reduces tendency for efflorescence to occur. Remove with detergent or mild-acid cleaners formulated to remove efflorescence. Follow cleaner instructions and test in a small area to make sure cleaner will not etch or discolor the surface. Wear rubber gloves and eye protection.

Because the conditions of use and application of our products are beyond our control, DAVIS COLORS MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE and expressly disclaims liability for consequential or incidental damages whether based on warranty or negligence. Buyer's sole remedy shall be refund of color purchase price from point of purchase.

AWIP (Warehouse Panels)





FINDING BETTER WAYS TO BUILD FOR THE FUTURE

# **All Weather Insulated Panels**

### The Company

All Weather Insulated Panels is a leading innovator in the design and construction of insulated sandwich panels. With over 90 years of combined experience in the industry, the management of the Company is keenly aware of how to meet the challenges facing our building industry today with composite wall and roof systems. These challenges include escalating energy costs, environmental concerns, increasing labor rates and safety issues. Since "sandwich" panels are manufactured composites comprised of rigid facings and an insulating core, they offer superior thermal resistance, structural integrity and one step installation compared with field assembled building systems that must rely on skilled workmanship, ideal weather conditions and design variations for different climates.

### The Products

All Weather Insulated Panels offers a complete line of rigid urethane core wall and roof panels with a choice of flat or profiled walls with hidden fastenings, standard and low slope roof panels with hidden or exposed fastenings, roof deck panels designed for use with single ply membranes or standing seam metal roof coverings and all related trims and accessories for a complete installation.

### Manufacturing

All Weather panels are manufactured on a state of the art, fully automated, continuous production line providing absolute precision in roll forming tolerances, adhesion and uniformity of core cell structure. Features include a long length self contained double belt lamination conveyer, cooling conveyer to eliminate heat related face distortion, quick change roll form tooling sections and four stream chemical metering to ensure uniform in-place densities at all thicknesses.

### Services

Services include a knowledgeable sales staff capable of assisting with panel assembly design, lump sum or component pricing, complete CAD shop/erection drawings in coordination with customer supplied structural drawings, extremely fast turnaround of standard color finish orders and a choice of pre-paid or collect freight terms.





For more information on these products, please visit www.awipanels.com

# **Architectural Wall Panels**

### FL40

FL40 panels are produced with a smooth or micro-embossed, flat 22 gauge factory coated steel exterior face for a hi-tech architectural appearance. They can be installed either vertically or horizontally.

The horizontal wall assembly incorporates a clean, simple end joint design that utilizes a unique self aligning pre-painted aluminum extrusion.

Standard thicknesses (inches): 2, 2.5, 3

40" width



### **FL40 Wall specifications:**

Standard exterior facing: 22 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available interior steel facings: 24, 22

Module lengths: 8' to 40'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 2"=16, 2.5"=20, 3"=24

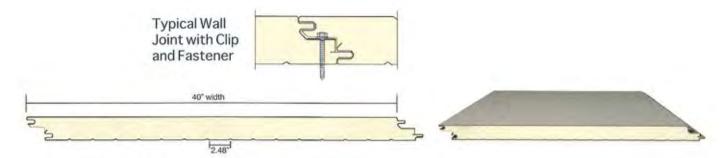


# AdobeTexture™ Wall Panels

### HE40-A

The HE40-A AdobeTexture™ panel provides a low gloss multi-textured profile and finish system that simulates a troweled stucco style appearance without the problems common to field assembled stud and stucco construction or factory sprayed composite panels. The proprietary AdobeTexture™ finish system carries a 25 year limited warranty against chalking, fading and loss of adhesion.

Standard thicknesses (inches): 2, 2.5, 3, 4



### **HE40-A wall specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel, AdobeTexture™ finish is available in Sandstone, Surrey Beige, Pearl Grey, and Snowdrift White only. Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester Module lengths: 8' to 50'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 2"=16, 2.5"=20, 3"=24, 4"=32

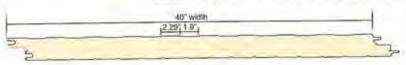


# **Profiled Wall Panels**

SM40

The SM40 standard mesa profile panel is perfect for exterior/interior wall and ceiling applications on industrial and cold storage use buildings. The low profile linear exterior surface simplifies flashing connections designed to inhibit moisture vapor transmission compared with other deep fluted products offered on the market. This product is also available with the mesa profile on both sides and is referred to as double mesa (DM40). The DM40 is ideal for thicker, long-length walls.

Standard thicknesses (inches): 2, 2.5, 3, 4, 5, 6

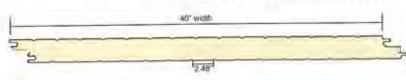




### **MV40**

The MV40 micro vee panel offers an extremely economical exterior or interior wall where a clean, flat profile appearance is desired. The nominal .2 millimeter deep stiffening beads help maintain an acceptable flatness tolerance in the light 26 gauge facings. This product is suitable for exterior applications up to 3" and up to 6" for interior use.

Standard thicknesses (inches): 2, 2.5, 3, 4, 5, 6



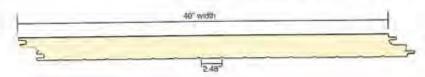


### HE40

The HE40 heavy embossed panel is installed on exterior walls with a factory applied paint finish or may be field sprayed with an acceptable textured elastrometric coating.

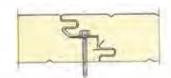
The heavy embossment adds rigidity to the light gauge surface in order to maintain an otherwise flat appearance.

Standard thickness (inches): 2, 2.5, 3, 4





Typical Wall Joint with Clip and Fastener



### **General wall specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22 (HE available in 26 ga exterior only)

Module lengths: 8' to 67'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 2"=16, 2.5"=20, 3"=24, 4"=32, 5"=41, 6"=49



Micro Vee Wall



Mesa Wall

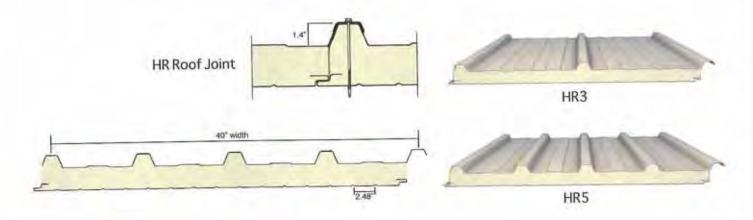
# **Hi Rib Roof Panels**

### HR3 and HR5

The HR3 (three rib) high rib panel is an economical solution to field assembled metal roofing. This product installs quickly and easily by through fastening at standing ribs into supporting structural members.

The HR5 (5 rib) high rib panel was developed for long span and/or severe loading conditions. Fastening is identical to the HR3 panel.

Standard thickness (inches): 2.5, 4, 5, 6



# **HR roof specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

Module lengths: 8' to 60'

Joinery: Overlapping (HR series), Preformed snap-on cap (CR series)

R-Values: 2.5"=20, 4"=32, 5"=41, 6"=49



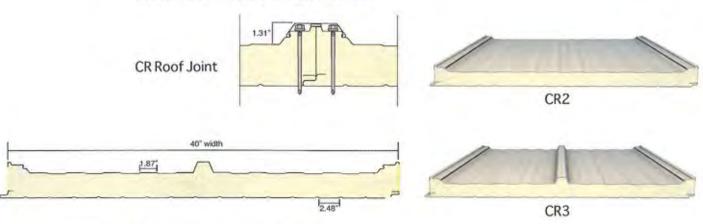
# **Cap Rib Roof Panels**

### CR2 and CR3

The CR2 (two rib) cap rib panel is designed for use on minimum 1/2:12 roof slopes. The easy snap-on sealing batten cap allows for a hidden fastener installation and eliminates stitch fastening or seaming.

The CR3 (three rib) cap rib panel offers increased spans when needed and is otherwise identical to the CR2 panel.

Standard thickness (inches): 2.5, 4, 5



### **CR roof deck specifications:**

Standard exterior facing: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

Module lengths: 8' to 60'

Joinery: Preformed snap-on cap R-Values: 2.5"=20, 4"=32, 5"=41



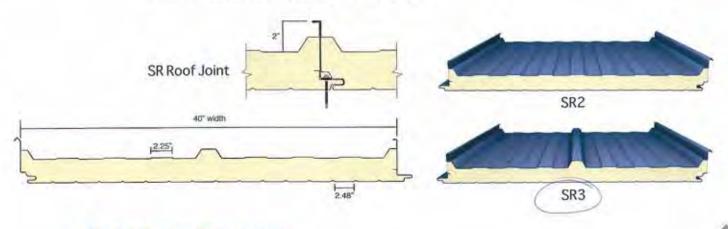
# **Standing Seam Roof Panels**

SR2 and SR3

The SR2 (two rib) standing seam roof panel offers a field seamed, hidden fastener joinery for maximum protection against the elements. The trapezoidal rib design provides added strength against potential foot traffic damage compared with other vertical standing seam roof products. Because the SR2 joint design utilizes a rollformed steel base to support the attachment assembly, the thermally broken clip is only one piece. An optional base only clip design is available for applications not requiring high wind resistance.

The SR3 (three rib) panel offers increased spans when needed and is otherwise identical to the SR2.

Standard thicknesses (inches): 3.25, 4, 5, 6



### SR roof specifications:

Standard facings: 26 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

Module lengths: 8' to 60'

Joinery: Offset double interlocking tongue and groove with hidden fastening

R-Values: 3.25"=26, 4"=32, 5"=41, 6"=49

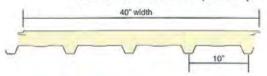


# **Roof Deck**

RD5

The RD5 roof deck panel provides the steel deck, insulation and substrate for white single ply membrane or non-structural standing seam roof coverings in a single composite as opposed to rigorous and expensive field assembled roof deck systems. Advantages include longer spans between supports, a working platform during installation, superior deflection resistance, a white reflective interior and fewer trades to install. The topside substrate can be either primed steel sheet or an approved flexible facer depending on the roof covering attachment requirements.

Standard thickness (inches): 2.5, 4, 5, 6





### **Roof deck specifications:**

Standard exterior facing: 28 gauge G-90 galvanized steel

Standard interior facing: 26 gauge G-90 galvanized steel, Imperial White polyester

Other available steel facings: 24, 22

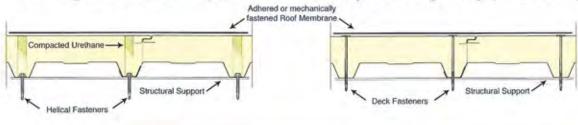
Module lengths: 8' to 60' Joinery: Overlapping

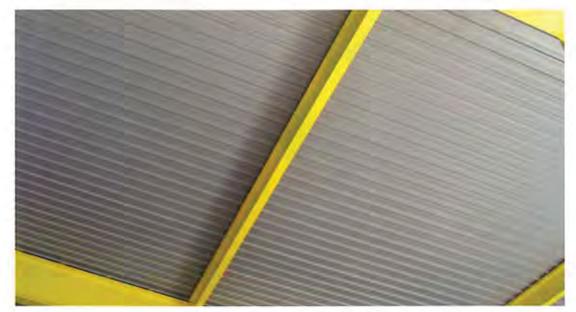
R-Values: 2.5"=20, 4"=32, 5"=41, 6"=49

Core: Continuously foamed-in-place urethane with nominal 2.2 to 2.5 pcf density

Fastening at roof base from topside

Deck Style fastening through panel from topside





# **In-stock Colors and Finishes**

Color	Туре	Application	<b>Standard Warranty</b>
Imperial White	1.0 mil Composite Polyester	exterior / interior	20 years
Snowdrift White Sandstone	1.0 mil Premium Ceramic 1.0 mil Premium Ceramic	exterior exterior	30 years
Surrey Beige	1.0 mil Premium Ceramic	exterior	30 years
Regal Blue Natural Green	1.0 mil Premium Ceramic 1.0 mil Premium Ceramic	exterior exterior	30 years
Pearl Grey	1.0 mil Premium Ceramic	exterior	30 years
White Plastisol	4 mil PVC	exterior/interior	Inquire
Stainless Steel	304 2B	interior	N/A

### Notes:

- All Weather offers embossed metal surfaces as a standard on wall panels and non-embossed (smooth) for roof exterior surfaces. Non-embossed finishes may be available on wall panels upon request depending on color, gauge and end use.
- 2) Complete paint system specifications are available upon request.
- 3) The standard interior paint finish for all panels is Imperial White.
- All colors except Imperial White are available in a fluorocarbon (PVDF) finish upon request.
- 5) All colors shown below are Cool Roof formulations meeting High and Low Slope ENERGY STAR ® specifications.
- AdobeTexture™ finish is available in Sandstone, Surrey Beige, Pearl Grey, and Snowdrift White only.

### **Color Chart**



<sup>\*</sup>Colors depicted herein closely approximate actual coating colors. Coil coat color chips are available upon request.

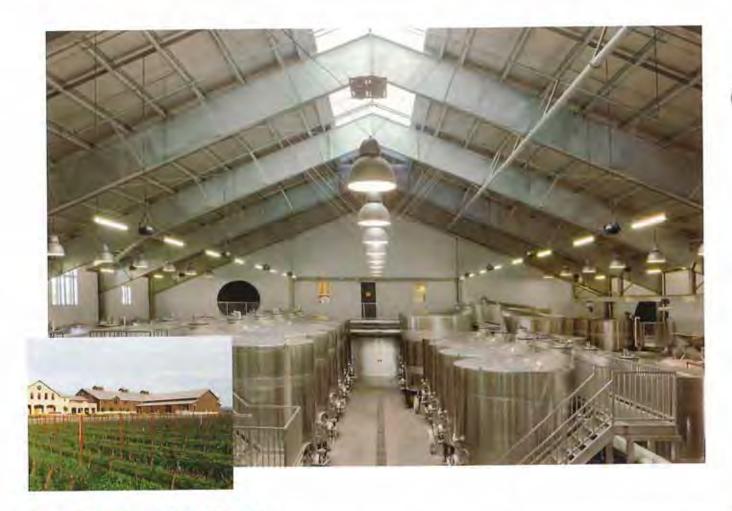
# **Cold Storage and Food Processing Facilities**



### From This



To This



### **All Weather Insulated Panels**



is committed to business practices that promote environmental conservation and to delivering energy efficient products that support the efforts of the global community to ultimately succeed in creating a truly sustainable living environment for all of us.

- We produce highly insulative wall and roof panels that provide the best thermal resistance to a building envelope economically. The product design greatly minimizes the use of energy required to heat or cool the building interior.
- We incorporate finishes that are engineered to reduce carbon footprint (CO2) through "Cool Roof" solutions and technologies. All Weather roof products maximize solar reflectance and thermal emissivity optimizing energy efficiency. Our standard color offerings meet Energy Star high and low roof slope requirements.
- We use recyclable materials to produce recyclable products. All Weather panels are manufactured with approximately 33% recycled materials. The steel facings and urethane foam core are 100% recyclable.
- All Weather panels have zero ozone depleting potential (ODP), do not produce measurable volatile organic compounds (VOC) and meet current EPA blowing agent requirements for the reduction global warming potential (GWP).
- All Weather panels significantly contribute to LEED ratings of a building.



### Tests/Approvals Type

Procedure or Standard



Structural

ASTME72

Thermal Transmission

ASTM C 518, ASTM C 1363

Air/Water Infiltration

ASTM E 283/E 331

Factory Mutual 4880

Room Corner, Flame Spread, Potential Heat, Ignition

Factory Mutual 4880

Unlimited Height Wall/Ceiling (Passed)

Factory Mutual 4881

Exterior Wall Windstorm

Factory Mutual 4471

Wind Uplift, ASTM E 108

CAN/ULC

S101-04, S102-07, S126-M86

Complete general specifications, test reports, load span tables and suggested installation details are available upon request or can be downloaded directly from our Website at www.awipanels.com



#### Disclaimer

All information published and distributed by All Weather Insulated Panels is thought to be reliable and correct. Installation details are meant to represent typical product applications based on standard construction practices. It is the ultimate responsibility of the buyer or his owner or architect to verify that the product(s) selected are suitable for the specific application. In accordance with our ongoing efforts to improve our products, All Weather Insulated Panels reserves the right to change any information contained in its publications without notice.





### Insulated Metal Panels

# Color Availability Chart

The colors shown here are representative only and not necessarily true reproductions of actual coating colors. Coll coat color chips are available on request.

> For information regarding USDA and CFIA approved colors please contact your Vicwest / AWIP sales representative.









Available PVDF Non-stock Colors





Warm White

Slate Blue

Slate Gray



Evergreen



Colonial Red



Interior Colors





Energy Efficient. Innovative. Adaptable.



- Complete paint system specifications are available upon request.
- . The standard interior paint finish for all panels is Imperial White. All other colors are available as exterior facings only.
- AdobeTexture™ finish is available in Sandstone, Surrey Beige, Pearl Gray and Regal White only.
- . Non-stock colors and paint systems and special orders are typically subject to higher pricing and may increase lead times from point of order.





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In accordance with ongoing efforts to improve our products and their performance, AWIP / Vicwest reserves the right to change without notice the specifications contained herein.

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# APPENDIX E Samples

Dark Brown



KCC – ANSI 70 gray (sample depicts color only, the actual treatment will use a flat finish)

# APPENDIX E-2 KCC – ANSI 70 gray

