



Roll Call Number

Agenda Item Number

53

June 13, 2011

Date

Communication and petition regarding Beaver Avenue Reconstruction Project, and removal of sidewalk from the east side of Beaver.

Moved by _____ to receive, file and refer to the City Manager for review and recommendation and to work with Polk County.

FORM APPROVED:

XXXXXX, Assistant City Attorney

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
COWNIE				
COLEMAN				
GRIESS				
HENSLEY				
MAHAFFEY				
MEYER				
MOORE				
TOTAL				
MOTION CARRIED			APPROVED	

CERTIFICATE

I, DIANE RAUH, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

Mayor

City Clerk

A PETITION
TO
POLK COUNTY, IOWA
AND
CITY OF DES MOINES, IOWA
FROM THE

Residents and Property owners of the area affected by:

THE BEAVER AVENUE IMPROVEMENT PROJECT

From Aurora Avenue to the I 35/80 Overpass in Des Moines and
Polk County, Iowa.

We hereby petition the City of Des Moines and Polk County

TO

Abandon The Proposed Sidewalk on the East Side of Beaver Avenue.

PETITION TO ABANDON PROPOSED SIDEWALK ON EAST SIDE OF BEAVER AVENUE

As Residents and Property owners of the area affected by:
THE BEAVER AVENUE IMPROVEMENT PROJECT
From Aurora Avenue to the I 35/80 Overpass in Des Moines and Polk County, Iowa.
We hereby petition the City of Des Moines and Polk County to
Abandon The Proposed Sidewalk on the East Side of Beaver Avenue.

Resident / Property Owner

Address

Date

<i>[Signature]</i>	4315 Beaver Ave	5/22/11
<i>[Signature]</i>	4315 Beaver Ave	5-22-11
<i>[Signature]</i>	4291 Beaver Ave	5-22-11
<i>[Signature]</i>	4291 Beaver Ave	5-22-11
<i>[Signature]</i>	4267 Beaver Ave	5-22-11
<i>[Signature]</i>	4247 Beaver Ave	5-22-11
<i>[Signature]</i>	4239 Beaver Ave	5-22-11
<i>[Signature]</i>	4355 Beaver Ave	5-22-11
<i>[Signature]</i>	4355 Beaver Ave	5-22-11
<i>[Signature]</i>	4365 Beaver Ave	5-22-11
<i>[Signature]</i>	4369 Beaver	5-22-11
<i>[Signature]</i>	4411 Beaver Ave	5-22-11
<i>[Signature]</i>	4401 BEAVER AVE	5-22-11
<i>[Signature]</i>	4401 Beaver Ave	5-22-11
<i>[Signature]</i>	4320 BEAVER HILLS	5-22-11
<i>[Signature]</i>	4515 BEAVER AVE	5/22/11
<i>[Signature]</i>	4517 Beaver Ave	5-22-11

PETITION TO ABANDON PROPOSED SIDEWALK ON EAST SIDE OF BEAVER AVENUE

As Residents and Property owners of the area affected by:
 THE BEAVER AVENUE IMPROVEMENT PROJECT
 From Aurora Avenue to the I 35/80 Overpass in Des Moines and Polk County, Iowa.
 We hereby petition the City of Des Moines and Polk County to
Abandon The Proposed Sidewalk on the East Side of Beaver Avenue.

Resident / Property Owner Address Date

CHRIS ARNOLD 4551 BEAVER AVE. 5-23-2011

Alice J. Biering 4305 BEAVER 5/23/11

Michael Welch 4373 Beaver 5/23/11

Michael D. Welch 4513 Beaver 5/23/11

Christa R. Wild 4573 BEAVER 5-23-11

Jean Wang 4645 Beaver Ave. 5/23/11

Trevor Crosson Renter 4665 Beaver Ave 5/23/11

Tom Messing 4677 Beaver Ave 5/23/11

Carol Anderson 4200 Beaver Hills Dr 5/24/11

Marlon Smith 4655 Beaver Ave 5/24/11

National Catholic Rural Life 4625 Beaver 5/24/11

Edwards (nee) + Joyce Parnell 4565 Beaver 5/24/11

Donald Parnell 4101 Beaver 5/24/11

Bonnie Swanson 4101 Beaver 5/24/11

John Charles 4151 Beaver 5-24-11

John Stumme 4333 BEAVER AVE 5/24/11

Christine Hollister 4111 Beaver Ave 5/24/11

Jean Schmeizer 4155 Beaver Ave 5/24/11

Roy Schmeizer 4155 BEAVER AVE 5/24/11

PETITION TO ABANDON PROPOSED SIDEWALK ON EAST SIDE OF BEAVER AVENUE

May 25, 2011

Numbers for this Petition:

1. Of the 36 Properties: 33 Were contacted. 3 Were unavailable.
2. Of the 33 contacted: 31 Have signed this Petition in favor.
2 Have not signed yet.
Angela Connolly of 4707 Beaver Ave.
Declined for obvious reasons.
New Hope Church, 4525 Beaver Ave. is waiting
for their June Board of Directors Meeting
3. Of those contacted: 94% have signed in favor of the Petition.
4. Of the total Properties: 86% have signed in favor of the Petition.

Reasons for signing given by the Signers:

1. Loss of Mature Trees and Shrubs on the East Side of Beaver Ave. that provide a Valuable Visual and Sound Barrier from the ever increasing traffic on Beaver Ave. in addition to desirable Shade, a Wind Break and Blocking Fumes from the traffic, all adding substantially to the Value of our Properties. Some of these Trees are Magnificent and Should Not Be Destroyed. Many of them (not so magnificent) are still 20 yr. plus Trees not easily replaced.
2. The area West of Beaver Ave. is densely populated and is already equipped with a sidewalk system. Expecting pedestrian traffic from the West side of Beaver Ave. to cross Beaver Ave. with a projected traffic count of 18,000 cars per day is not only **Dangerous, it is Irresponsible.**
3. No one wants the responsibility of clearing snow off a sidewalk, especially one that we all know will not be used in this area.
4. No one wants to be responsible for the cost of upkeep of a sidewalk.
5. The sidewalk is not needed.
6. Why spend our money for something that we don't need or want ?
7. Some expressed "If they want a sidewalk put it on the West side of Beaver Ave. because, ... the terrain is better, ... not as many trees, ... they already have sidewalks in that neighborhood, ... the sidewalk on the west side already extends north to Aurora Ave., ... there is more Right of Way on the West side of Beaver Ave. over a good share of the length of this project, ...we don't need a sidewalk on either side of Beaver Ave.".

8. All of the school age children in this Area North of Aurora on both sides of Beaver Ave. are in the Johnston School District and do not walk to school, they ride the Johnston School Bus and if they live on the east side of Beaver Ave they are picked up and dropped off on the east side at their driveways for safety reasons.
9. Why incur the expense of a underpass at Lower Beaver to connect to the Trestle-to-Trestle Trail when you have already installed an underpass beneath Beaver Ave. just South of the I 35/80 overpass. If the proposed Sidewalk/Bike Trail north of Meredith Dr. were on the West side of Beaver Ave. the existing underpass would be all that is needed.
Please don't waste our tax dollars.
10. We were told at the May 5 th. meeting, "This project will not cost us anything". This is not true, the **Cost will be in Loss**, Loss of Trees, Loss of Property Value, Loss of Privacy, Loss of Our Time and Expense with Snow Removal, Loss in Maintenance Expense of the Sidewalk and Walls.
11. We were also told at the May 5 th. meeting, "The sidewalk was not a given, and if we do not want it you would not build it".

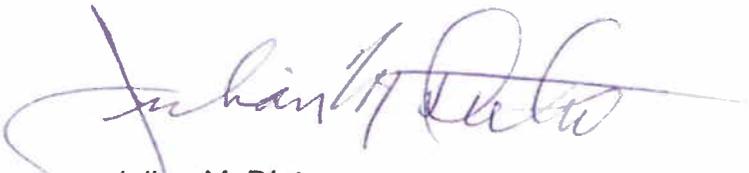
This Petition should clear that up.

94% of the Property Owners contacted on the East Side of Beaver Ave.

Do Not Want It.

Thank you for your consideration.

Petition prepared, circulated and presented by:



Julian M. Dieter
4315 Beaver Ave., Des Moines, Ia. 50310
Ph. 229-6680

On behalf of the Residents and Property owners on the East side of Beaver Ave.



COUNTY OF POLK
Public Works Department

53
Larry L. Land, Director
5885 NE 14 Street
Des Moines, Iowa 50313
Ph 515.286.3705
Fax 515.286.3437
Email:publicwrks@polkcountyiowa.gov
www.polkcountyiowa.gov

May 31, 2011

RE: Petition to remove Sidewalk from east side of Beaver Avenue Reconstruction Project.

Dear Petitioner:

This letter is in response a petition recently received by this office whereby you indicated your support of the removal of a proposed sidewalk on the east side of Beaver Avenue as part of the above-referenced reconstruction project.

This office has considered the comments presented in the petition and developed the following response regarding Polk County and the City of Des Moines' decision to include a sidewalk and other pedestrian and bicycle facilities as part of this project.

1. Federal Funding Issue

As noted in the project brochure, this project is utilizing \$2,341,776 in Federal Surface Transportation Program funds for construction of this project. These funds must be utilized according to Federal Highway Administration (FHWA) laws and regulations. The FHWA stipulates that when federal funds are used for transportation projects, agencies must integrate walking and bicycling facilities in their design where practical. During the design process for this project, it was determined that bicycle and pedestrian facilities similar to those on Beaver Ave. south of Aurora could be incorporated within the existing road right-of-way.

These funds were awarded through the Des Moines Area Metropolitan Planning Organization, which represents 23 member governments in the metro area, and supports the "Complete Streets Initiative" which includes consideration of all modes of transportation in the design of improvement projects.

If we chose to eliminate the sidewalk on the east side of Beaver Ave. from the proposed plan, then we would place ourselves in jeopardy of losing the Federal funds. Polk County and the City of Des Moines worked together to obtain these funds to reduce the costs to the local taxpayers and assure this much needed project is completed in a timely manner.

2. Proposal to move sidewalk to the west side of Road.

A sidewalk on the west side of Beaver Ave. is not proposed because this would essentially force those property owners to maintain two sidewalks along their property because none of those properties have frontage along Beaver Ave. It did not seem reasonable to force property owners on one side of the road to maintain two sidewalks and those on the other to maintain none.

3. Sidewalk is being installed at no cost to property owners

If we did decide to remove the sidewalk from the project, it is very possible that in the future, residents in the neighborhoods south of Aurora Ave., or future property owners along this project, could petition the Des Moines City Council to have sidewalk installed so they could have

access to the trail system without having to drive to a trailhead. If approved, the sidewalk would be constructed with the construction costs most likely assessed to the adjacent property owners. The costs to install the sidewalk as part of this project will not be passed on to the adjacent property owners.

4. Connectivity issue.

The design of this roadway mirrors the design of Beaver Ave. south of Aurora, so we do not believe the property owners on the east side are being singled out or impacted in a manner different than many of the other residents along Beaver Ave. This sidewalk will provide connectivity to the sidewalks south of Aurora and allow those residents to safely walk or bike to the Trestle-to-Trestle trail that connects to the overall metro trail system. It does not seem logical to deny the hundreds of residents south of Aurora Ave. this opportunity to use these facilities to improve their quality of life when they can be constructed as part of this project.

5. Snow Removal and Maintenance Issue

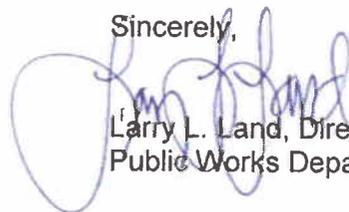
Those residents within the City of Des Moines will be required to maintain the new sidewalk in compliance with the City's current Ordinance. Because the County does not have a sidewalk ordinance, we are investigating maintenance options including the assistance of the Polk County Conservation Board.

6. Impacts to Trees and Landscaping in the existing Road right-of-way

While we acknowledge the trees and some privately installed landscaping in the existing right-of-way will be removed, but it should be noted the road right-of-way was originally obtained for transportation purposes, so this project is a continuation of this use.

Thank you in advance for your understanding concerning this matter and we hope this information provides you with an assurance that this matter was carefully considered by both Polk County and the City of Des Moines as the design of this project was developed. Please don't hesitate to contact this office if you have any additional questions.

Sincerely,



Larry L. Land, Director
Public Works Department

CC:	Angela Connolly	-Fifth District Supervisor
	Tom Hockensmith	-Third District Supervisor
	Halley Griess	-Ward 1 Councilman
	Chris Coleman	-At-Large Councilman
	Jeb Brewer	-City Engineer

Mr. Bob Rice
Assistant County Engineer
5885 N.E. 14th Street
Des Moines, IA 50313

Dear Mr. Rice:

First, on behalf of the Beaver Woods Neighborhood Association (BWNA), I would like to express our thanks for the opportunity to attend the open house regarding the Beaver Avenue Improvement Project including the handouts and the staff available at the various stations that described the project and answered questions.

The BWNA represents 36 residential properties in the Beaver Woods Neighborhood with a combined assessed value of \$8.4 million generating approximately \$377,000 in gross property taxes annually. Within Beaver Woods there are 10 residential properties that have property lines adjacent to the Beaver Avenue Improvement Project with a combined assessed value of \$2.3 million generating approximately \$104,000 in gross property taxes annually. The only ingress/egress to Beaver Woods is directly west of New Hope Methodist Church. As such, the residents have a great deal of interest and concern regarding the Beaver Avenue Improvement Project and its impact on the neighborhood as a whole and the individual properties in the neighborhood.

After meeting with Polk County and City of Des Moines staff and reviewing the plans and schedules, the BWNA is submitting a list of items of concerns/requests to be considered in developing the final plans for the project.

Sidewalk

As reflected in the preliminary design, the proposed sidewalk should remain on the east side of Beaver Avenue. A sidewalk/recreation trail is a desired improvement but if located on the west side of Beaver Avenue there will be property owners legally responsible for the maintenance of the sidewalk (such as snow removal) who will have no access to the sidewalk except by traversing two streets (44th Place and Brinkwood) and then either north or south along Beaver Avenue to reach the sidewalk they are required to maintain.

No Truck Route

Several years ago Beaver Avenue was designated a "No Truck Route" by the County and City. This designation significantly reduced road noise and greatly increased the quality of life in the neighborhood. The "No Truck Route" designation needs to remain indefinitely after the completion of the project.

Speed Limit

The speed limit in the project area is currently 35 mph changing to 30 mph south of the intersection of Beaver and Aurora. With the addition of a stop light at the Beaver/Aurora intersection, the 30 mph speed limit should be extended north to the Beaver/Meredith intersection at which point northbound traffic would not encounter another traffic control device until Johnston Drive and an increase to 35 mph would be more appropriate.

Gate Entrance

The Gate Entrance should be returned to its current state if moved or dismantled. The iron work (gates and fencing) should be saved and reinstalled. Landscaping, brick piers and lighting should be returned to their current state as well.

Street Lights

Street lights should be updated to more efficient and directed illumination to the roadway. Current lighting illuminates yards and windows.

Fencing

The planned fencing to be constructed on top of the retaining wall should be a sound barrier design utilizing the same material as the present fence and will be maintained by the County/City.

Retaining Wall

The BWNA understands the need to construct a concrete retaining wall along the west side of the project. However, to blend with the existing brick entrance piers, replaced fencing and the general surrounding construction, we request that the following items be incorporated into the project:

1. Concrete colorant additive used in the retaining wall concrete mix, in a brick or stone color (such as Davis Colors Mesa Buff or Omaha Tan), to help make the wall look more natural.
2. Decorative formliner used on the wall, to create a more typical stacked block or stone retaining wall look. If possible it would be nice to have this look also on the ***west side*** of the retaining wall for the three properties immediately north of the neighborhood entrance that will have a concrete wall reaching a height of approximately five feet facing their backyards.
3. For the same three properties the planting of trees or bushes on the ***west side*** of the wall to help enhance the view of up to an 11 foot wall (5 foot retaining wall plus 6 foot fence).

Thank you in advance for your consideration. I'd be happy to meet with you to discuss the neighborhood's concerns and requests at your convenience. I can be reached via email (jillg@invisionarch.com) or cell phone 515.556.2835.

Sincerely,



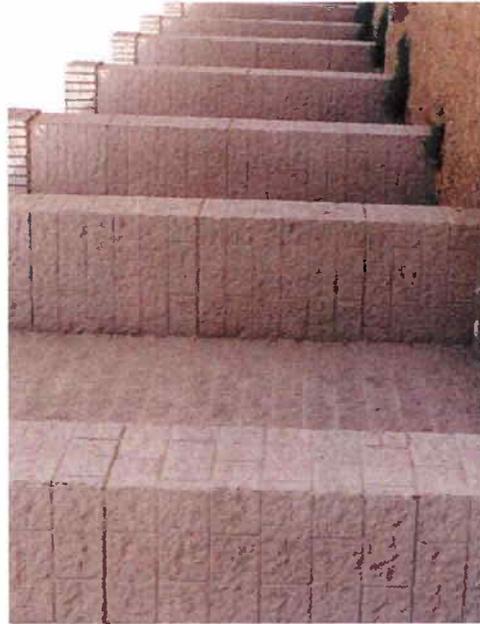
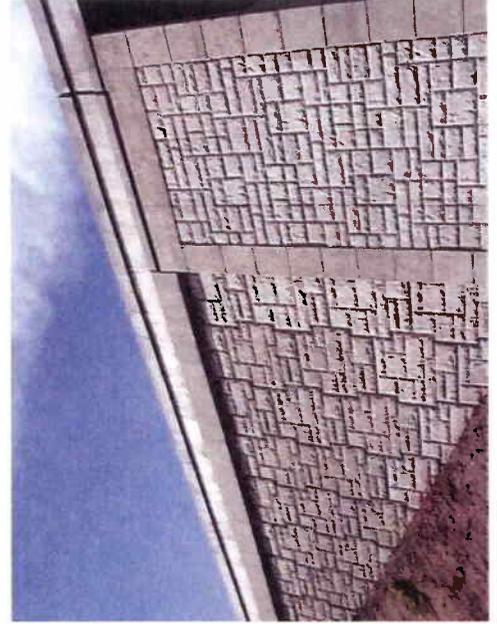
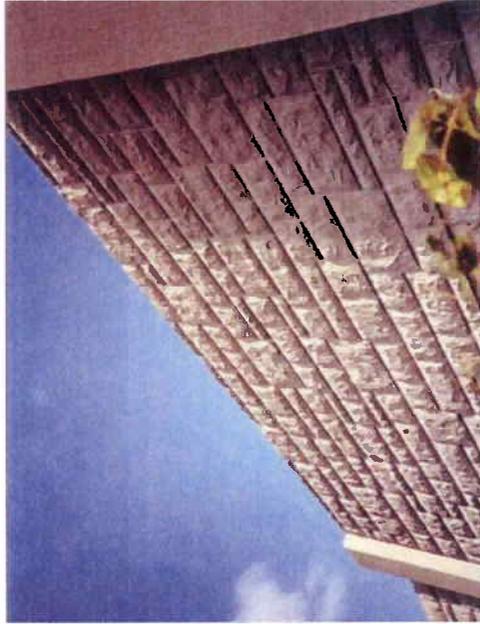
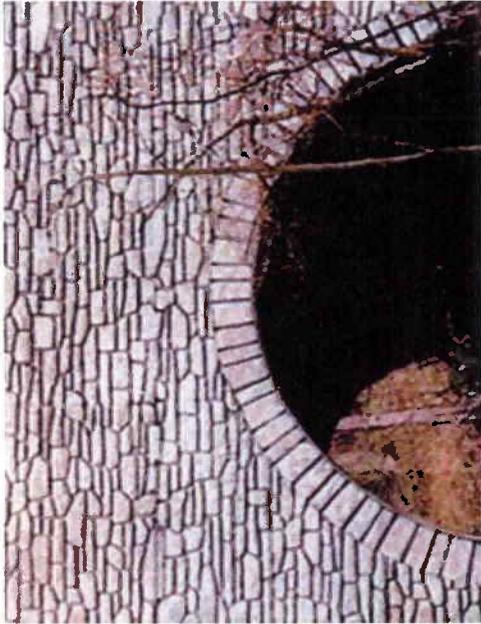
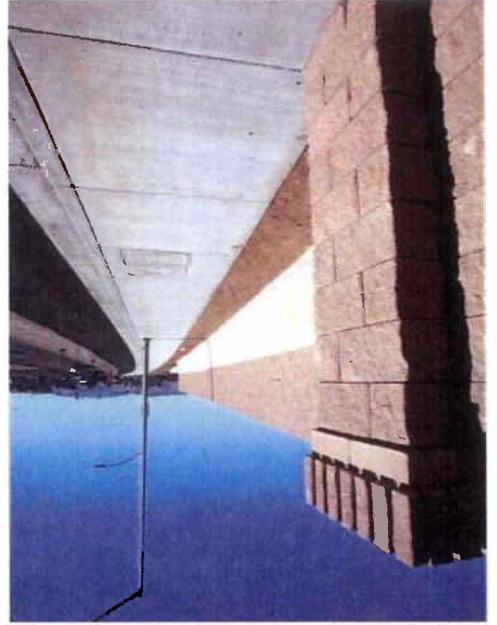
Jill R. Goedken
4417 44th Place

BWNA 2011 President

Attachments:

1 page – formliner examples

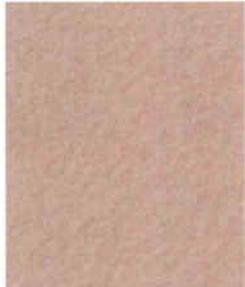
3 pages – concrete colorant information



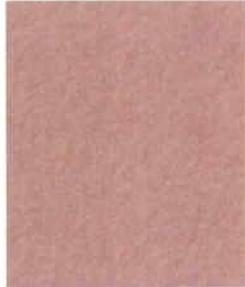
Colors for Concrete

Davis Colors™ 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™ 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.

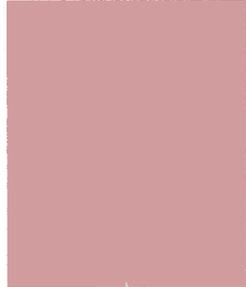
This pdf color card is just for ideas. If you choose a color by viewing this on your PC or from a printout of the pdf file, your colored concrete may be a big surprise. Please make your selection from our printed color card, hard samples or job site test.



SANDSTONE 5237



CANYON 160



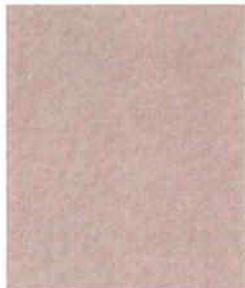
SANTA FE 1117



MOCHA 6058



RUSTIC BROWN 6058



PEBBLE 641



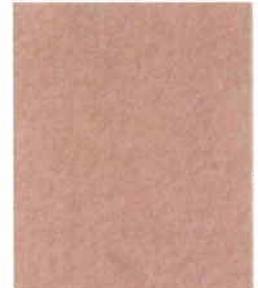
DUNE 6058



OUTBACK 677



SEQUOIA SAND 641



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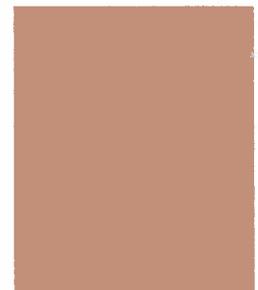
SILVERSMOKE 8084*



LIGHT GRAY 8084*



OMAHA TAN 5084

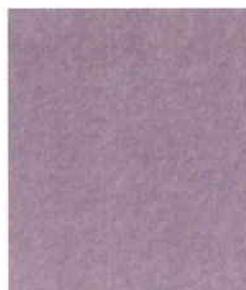


HARVEST GOLD 5084



◀ Concrete Base Color

The natural base color of concrete, finishing and curing method determines final color. This card simulates lab samples made with a light broom finish from Type II gray cement, sand and water at 0.56 water/cement ratio for a 4" slump (see uncolored reference at left). Different cements, sand, rock, mixing and job-site conditions and contractor technique can alter color from this card. Concrete is produced from natural materials. Surface variation common to uncolored concrete can impact colored concrete.



DARK GRAY 8084*



BAYOU 6130



COCOA 6130

* Caution: 8084 is not compatible with air-entraining admixtures. See back page for more information.

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 card, hard samples or job site test.



SANGRIA 1117



TILE RED 1117



BRICK RED 160



SAN DIEGO BUFF 5237



SUNSET ROSE 160



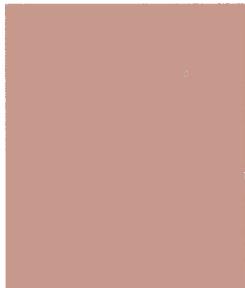
BAJA RED 160



TERRA COTTA 10134



SPANISH GOLD 5084



SOUTHERN BLUSH 10134



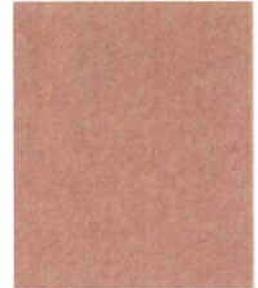
SALMON 10134



MESA BUFF 5447



PALOMINO 5447



FLAGSTONE BROWN 641



MESQUITE 677



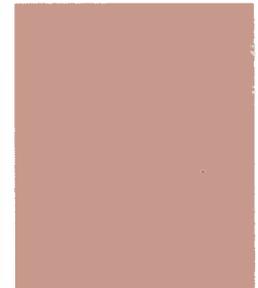
TAUPE 677



SIERRA 61078



ADOBE 61078



KAILUA 677



PEWTER 860



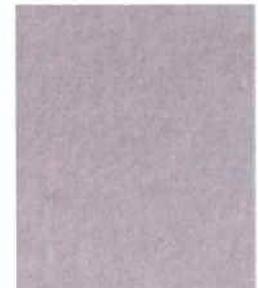
COBBLESTONE 860



GRAPHITE 8084*



WILLOW GREEN 5376



GREEN SLATE 3685

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 roof tile. 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:



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.

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 www.concreteconnection.com 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 www.daviscolors.com/specs.

For samples or additional information contact:



Tel: 800-356-4848
 Fax: 323-269-1053
www.daviscolors.com



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.

©2009 Davis Colors all rights reserved. Chameleon®, Mix-Ready® and Supra-Instant® are registered trademarks of Davis Colors. Printed in U.S.A. 5/09 ●

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 www.daviscolors.com/chameleon.

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.