

IV. DESIGN MANUAL

A. Introduction

Purpose and Organization

The Design Manual establishes design concepts and guidelines for the Town Center Specific Plan Area and provides a clear yet flexible guide for the development and review of individual projects.

The Design Manual is organized in two sections. Section B contains design concepts which serve as a guide in developing Town Center. The design concepts should be viewed as elements establishing a framework for the development of Town Center. Section C contains design standards that are to be applied in specific project development. The intent of the standards is to provide a continuity to the Town Center as individual projects are built.

B. Design Concepts

The general concepts established as a guide to developing Town Center are a result of the community participation process and subsequent Task Force Workshops. The Design Manual reinforces both the goals and objectives set forth in the Town Center Specific Plan and the community's concept of Town Center.

- Town Center is perceived as a focus for community, cultural and civic activities. Therefore, the physical image of the Civic Center should be one of a "village center".
- The San Diego River corridor is a significant natural resource and presents a potential for establishing the landscape character for the open space network in all of Town Center.
- The Civic Center area and the River are intended to set the spirit for Town Center and ultimately for the entire community.

- o The Town Center area and the River are intended to set the spirit for Town Center and ultimately for the entire community.
- The Town Center setting should reinforce a park-like campus ambience with development clustered around activity centers.
- All development within Town Center should be concerned with the creation of outdoor spaces relating to human scale and activity.
- The automobile is acknowledged but not emphasized. The pedestrian orientation of Town Center is to be reinforced with the development of continuous pedestrian links between activity centers, the river, open space areas and adjacent developments.

1. Introduction

Section I describes the design concepts for individual areas within Town Center and presents site design considerations for project development.

2. Open Space

A comprehensive open space is comprised of three major components: Floodway Open Space, Corridor Open Space and Park Open Space.

San Diego River: Floodway Open Space

The development of the San Diego River Floodway for passive recreation and trail systems makes it a key component of the comprehensive Town Center Open Space system.

The character of the landscape within Town Center draws from the image of the vegetation native to the San Diego River corridor. Generally, the landscape of the river is characterized by the mature tree canopy, marsh planting and emergent wetland plantings (see illustrations below). A detailed description of the revegetation plan is contained in <u>Volume 5: Technical Appendices</u>. The Flood Control Plan and the Open Space and Park Plan are descriptions of the physical form of the Floodway Open Space.



Open Area



Riparian Habitat



Typical Floodway Conditions

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Corridor Open Space

The intent of the Corridor Open Space is to preserve pedestrian and visual access through Town Center development to the San Diego River (see illustration below). The precise location of the corridor open space areas will be determined in conjunction with future development plans. Primarily linear in form, the character of these connectors is substantiated by the visual significance of the landscape. The Corridor Open Space provides a safe, aesthetically pleasing access to the river, and adds substantially to the imageability of the Town Center. The Corridor Open Space system will guarantee the Town Center floodway and Park Open Space is accessible to the surrounding development. All Corridor Open Space systems should include a walkway, bike path, street furniture, lighting, appropriate signage and landscape area.



Corridor Open Spaces have been refined by the Department of Planning and Community Development to include both "promenades" and active/passive trail systems. The definition of Corridor Open Spaces as either promenade or trail would be dependent on adjacent land uses and development patterns.

Promenades are defined as urban style walkways, connected plazas, and mall type(s) of linear walking elements. Promenades are characterized by their integration into high density urban style development and an emphasis on hardscape, plazas, raised planters, and other formal landscape elements/design organization (see page 104). The illustration on page 84 also gives an example of a promenade approach to design of a Corridor Open Space.

Active and passive trails are Corridor Open Space elements used in a park-like natural setting, to provide connections to various land uses and the San Diego River. Trail type Corridor Open Spaces are characterized by an emphasis on plant materials and a naturalistic design theme with meandering paths, natural appearing landscape, and an informal organization (see pages 103 and 105).



Park Open Space

Because of its adjacency to the San Diego River, the character of the river landscape should extend visually into the Park Open Space through the use of similar materials as in other Town Center structures. Consistency in furniture, lighting, signage, walkway patterns and materials will retain the Town Center design character (see illustration below).



Park Open Space

3. Site Design Considerations

Individual site plans within Town Center should provide the necessary open space and circulation links set forth by the Town Center Specific Plan. By both site design and architecture all developments should recognize the San Diego River and the Civic Center as the focal point for Town Center. The Design Manual does not mandate an architectural theme or style, rather it addresses design concerns relating to buildings, site development and land use in a general sense and as relates to the different type of developments.

Building and site features should be located to take advantage of adjacencies to open space or activity areas. Site design should consider solar orientation of buildings and other site elements as well as the effect on adjacent development. Private and public courts and plazas should be sited to take advantage of sun and wind patterns (see illustrations below).



Relationship of Development to Open Space

Step Back Buildings to Acknowledge Appropriate Scale Relationship Between Buildings and Adjacent Open Space -Maintain Path/Walkway Views

Public Open Space

Development Adjacent to Open Space



Buildings Sited to Form Plazas



Pedestrian Areas



Centralize Parking Structures to Accommodate Multiple Users

Shared Parking Facilities



To Building or Open Space System

Pedestrian Link Through Parking Areas

Parking areas and parking structures should be developed in distinct precincts and be screened from open space and parkways. Landscaped pedestrian links are required through parking areas to building entries and open space (see illustration below).



Minimize Impact of Parking Structure with Landscape and Berming.

Screening of Parking Structure

Individual project entries should be featured by a distinctive landscape statement as well as special paving such as interlocking pavers. Identification signs for projects should be ground mounted. The minimum distance between project entries should be 150' and a 200'-300' distance should be maintained from street intersections. Common driveways which provide vehicular access to more than one site are encouraged (see illustration below).



Service areas should be designed as an integral part of a structure and shall be screened from view to all adjacent land uses. Conflict between service and other vehicular and pedestrian movement should be minimized. A clearly defined pedestrian circulation system should be developed for individual projects and should be designed to provide a link to the open space systems and activity corridors.

Slopes within Town Center developments shall not exceed 5:1. A minimum of 1% slope must be maintained on all paved areas, and a minimum of 2% slope must be maintained on all landscaped and semi-porous materials. Porous landscape and other surfaces should be used where applicable to permit rain infiltration at the source (see illustration below).



Minimize Street and Parking Area Surfaces for Solar Reflection, Heat Radiation Control and Surface Water Run-off

Minimize Street and Parking Surfaces for Solor Reflection and Radiation Control

4. Civic Center

The Civic Center area plays a special role in establishing an image for Town Center. Consideration should be given to the physical and visual connection of the Civic Center area to the San Diego River and the surrounding community. In anticipation of a national competition to design the Civic Center, a comprehensive program and design considerations will be developed in the future.

5. Commercial Areas

The commercial areas within Town Center are the "activity centers" for the project. The major commercial development occurs in the southern areas of the project in conjunction with the Civic Center and the San Diego River, as well as having frontage on the existing major arterials and the new Town Center Parkways. To ensure that a "village center" character scale and function is retained throughout, building layout should emphasize the creation of pedestrian streets and outdoor courts and plazas. Pedestrian connections over major roads will ensure that pedestrian movement is facilitated between all areas. In order to take advantage of the Mediterranean climate and provide protection from sun and rain, a continuous system of freestanding or attached arcades should be developed within the commercial areas. This arcade system then becomes the common imageable element for identifying commercial zones (see illustration below).



Commercial Concept

6. Office and Institutional Areas

The intent within these areas is to provide a continuous landscaped park-like setting uninterrupted by fencing. Building materials and design provides diversity and interest. Buildings should be clustered using common drives and motor courts. Private interior courts and entry plazas are encouraged for buildings. The use of water elements such as fountains or ponds is suggested to reinforce the symbolic connection to the San Diego River (see illustrations below).



Conceptual Illustration, Commercial Core



Office & Institutional Concept

The screening and fencing of service, loading, and parking should be integrated into the building and site design in order to provide the appearance of landscape continuity within the street yard setbacks of adjacent projects.

7. Residential Area

Because of its unique location, residential development within Town Center should emphasize an urban character and provide connections to adjacent commercial, employment and recreation centers. The site planning of the projects should take into account the adjacent land use and provide appropriate buffers as well as open view. Open space within residential projects should be maximized. Publicly visible landscape of residential areas should acknowledge the adjacent Town Center landscape (see illustration below).



Residential Concept

8. Gateways at Existing Intersection/Edges

As Town Center develops, four existing major intersections will take on greater significance as perceived gateways (see illustration below):

- o Mast Boulevard/Cuyamaca Street
- o Cuyamaca Street/Mission Gorge Road
- o Mission Gorge Road/Magnolia Avenue
- Magnolia Avenue/Mast Boulevard.



Enhancement of Existing Intersections

Existing development, either on Town Center or adjacent corners, should be upgraded and enhanced by landscape and signage to compliment Town Center development. When the opportunity occurs to reorganize uses at these major intersections, cohesive gateway statements should be developed.

Gateway statements should also be developed at the following proposed intersections:

- o Civic Center Drive/Mission Gorge Road
- o Town Center Parkway/Mission Gorge Road

- Town Center Parkway/Cuyamaca Street (minor gateway)
- o Town Center Parkway/Magnolia Avenue
- Cuyamaca Street/River Park Drive (minor gateway)
- o River Park Drive/Magnolia Avenue
- Cottonwood Avenue/Mast Boulevard

A street tree program for Mission Gorge Road, incorporating a distinctive median planting similar to the median planting west of Cuyamaca, could serve to transition and integrate existing developed edges with Town Center development. A similar land-scape treatment of medians is appropriate for other perimeter roads. The improvement of existing major perimeter roads should allow for medians (see illustration below).



Transition From Existing to New Development

Development adjacent to Cuyamaca Street and Mission Gorge Road will need to consider a number of special concerns relating to site development. Major vehicular entry into Town Center is focused at the entry gateways. Individual project entry will occur primarily from the Town Center parkways and internal streets. Because of traffic restrictions, locating individual project entry and exit drives will be limited along Cuyamaca or Mission Gorge Road. Project visibility, especially for commercial areas, is both desirable and necessary, however, the concept of a well developed continuous landscaped edge fronting the arterials should be maintained. Site design is of primary concern. Preferably, parking areas should be located having a minimum of frontage along Cuyamaca or Mission Gorge. A combination of landscape, earth berming and setbacks can be utilized to screen parking areas when they are located adjacent to an arterial. Varied setbacks of buildings are encouraged. Compatibility of building, site and landscape materials of adjacent projects will maintain visual continuity along the street edge. Accent statements are reserved for the designated gateway areas (see illustrations below).



Typical Site Design Along Arterial

C. Design Standards

1. Introduction

The design standards developed apply primarily to public area site improvements within Town Center. Standards and specific concepts are presented for entry gateway areas, parkways, interior streets, Corridor Open Space, parking areas, trails and walkways. Signage, lighting, and street furniture standards are also described under separate headings.

The design standards do not set forth an architectural theme or style. It is intended that the standardization of site elements and material in the public areas of Town Center provide visual and design continuity. In addition to the Design Manual will be used to evaluate private development projects in Town Center.

2. Gateways/Parkways/Interior Streets

Entry Gateways

Because of their strategic locations, entry gateways to Town Center draw attention to themselves as some of the most easily identifiable design features. A special statement composed of landscape, signage, hardscape and other featured elements serve to give the entry gateway a distinct design character.

The landscape within an entry gateway should be reminiscent of the River landscape, however, a formal organization rather than informal plantings should be used to give the gateways a distinctive character (see illustrations below).



ENTRY GATEWAYS

Entry Gateway Locations



Entry Gateway Intersection

Monument signs within gateways should be low (a maximum of 42"), substantial sculptural elements, incorporated into the composition of the special gateway design statement. Smooth river rock and wood are the two main materials used in gateway signs (see illustration below).



Entry Gateway

Consideration should be given to all elements introduced into the gateway zone to ensure continuity of design. Particularly within the gateway zone, above ground utilities and other components such as manholes, irrigation controllers, backflow preventers and valves should be located so as not to detract from the attractiveness of the area.

Gateways of special note should incorporate water features or artwork which relates to Santee history or the San Diego River.

Parkways

Parkways are the major collectors and thoroughfares through Town Center (see illustrations below). Where appropriate, grease traps shall be provided to avoid polluted runoff into the River system. A unified statement composed of landscape, signage, walkways and lighting serves to give the parkways a distinct design character. A coordinated system of street furniture also supports the design continuity of the site elements within the parkway. Specific standards for parkway signage, lighting, walkway paving and street furniture are noted under separate headings within this chapter.



CIVIC CENTER PARKWAY

---- PARKWAY

Parkway Locations





Civic Center Drive

The parkway connecting Mission Gorge Road to the Civic Center area is intended as the symbolic main entry to Town Center area. A special median landscape treatment reinforces that symbolism (see illustration below). The Civic Center Drive should be included as an element of the Civic Center design competition.



Suggested Civic Center Dr. Median Tree: Platanus racemosa (California Sycamore)

Civic Center Drive

Interior Streets

Interior streets should maintain a similar concept of design continuity within the right-of-way (see illustration below). Grease traps shall be provided where appropriate to avoid polluted runoff into the River system. Street tree planting (other than parkways) will include varieties from the permitted street tree list. Trees may be located within the landscaped parkway or in tree wells with grates located in the walkway. All street trees should be planted with root barriers to inhibit surface roots.



Street Tree Conditions

3. Corridor Open Space

Similar to other public areas of Town Center, a uniform system of lighting, signage, street furniture and paving provides design continuity within the Corridor Open Space. A key component of the Corridor Open Space landscape is the feature tree - Alnus rhombifolia (White Alder).

Minimum dimensions have been established for the Corridor Open Space, however, varying the width and incorporating Corridor Open Space areas with public activity areas within individual projects is encouraged. Meandering bike paths and walkways are preferred within parking areas. A Corridor Open Space area can be jointly used, for example, as a building setback or within parking area. The 50-foot corridor may also include undeveloped private land. Public access will not necessarily be required throughout Corridor Open Space areas (see illustrations below).



SPACE

Corridor Open Space Locations



Typical Corridor Open Space Section



Retail/Commercial With Frontage on Corridor Open Space



Open Space, Office Development and Plaza Adjacent to Corridor Open Space



Residential Development Adjacent to Corridor Open Space

4. Trails/Walkways

There are several categories of trails within Town Center. They include bike paths (which are categorized based on location), equestrian trails and pedestrian paths and walkways.

Bike Paths

Several categories of bike paths are located within Town Center. Dimensions and paving material for the bike paths vary according to location and intended use (see illustrations below). Bike paths in open space areas will be used for access of service maintenance vehicles.





TYPICAL: DAVIS #61222 (EASTERN TAN) AT 1.5 LBS./SACK MIX BROOM FINISH.

Bike Paths

Equestrian Trails

An equestrian trail is located in the Floodway Open Space as part of a linear trail system proposed along the San Diego River (see illustration below). The 8' to 10' wide path can be either decomposed granite or, preferably, compacted natural soil.



Paths and Trails in Floodway Open Space

Pedestrian Paths/Walkways

Walkway dimensions and materials are partly a function of use and location. Walkways should be paved and well lighted. All standard walkways in the public right-of-way shall be a minimum of 5'-0" wide. Meandering walkways are preferred. The primary paving material is exposed aggregate concrete, however, other complementary suitable material, such as interlocking paving stones, may be submitted for approval (see illustrations below).



Sidewalk Section



Major Street Intersection



Walkway Intersection



Project Entry Drive

A separate hiking or jogging trail system is to be incorporated within the Floodway Open Space. Paths shall be unpaved and a minimum of three feet (3') wide. They should be located within the less sensitive vegetation or riparian habitat areas of the floodway and are intended to provide some measure of control for pedestrian movement in order to offer protection to restored riparian habitat areas (see illustration below).

Buffer Planting Sensitive Riparian Habitat Unpaved Hiking Trail

Trails Within Riparian Area

5. Parking Areas

Landscape plays a significant role in integrating parking areas with the rest of the site. Design continuity is reinforced through the use of standard lighting, signage and planting. All parking areas will have well defined pedestrian circulation that is integrated with the site circulation. Interlocking paving or equivalent decorative paving material shall be used to define pedestrian paths in parking areas. Grease traps shall be provided where appropriate to avoid polluted runoff into the River system (see illustrations below).



Concept for Parking Area





Section Through Parking Area



Screen Parking Areas From View

Screening Parking Area

6. Signage

A complete system of signage for the overall area should clearly identify and direct individuals to and through the Town Center and to specific facilities. The system can be divided into signs for business identification, internal direction and traffic control, and temporary signage.

All signs shall be designed to blend with the size, scale and character of the architecture or as in the case of open space-the site.

All identification signs must be either attached to the building or ground mounted. Each business is allowed one identification sign, unless approved by the Director of Planning and Community Development. Ground mounted signs shall not have a gross surface area of more than twenty four square feet and shall not exceed four feet in height from grade. Ground mounted signs shall be minimum of five feet from public right-of-way. A concrete base may be an extension of site features such as retaining walls, planters or building walls (see following illustration).



Gateway Signage

Building mounted signs will be installed so as to be parallel to and be contiguous with the building wall in a manner proportionate to the wall on which it is mounted. No sign shall project more than fifteen inches from the building wall and shall not project above the roof line. The design and materials shall be compatible with the building design and materials. One square foot of sign area is allowed for every three feet of building footage not to exceed twenty four square feet. Flashing or rotating signs and internally illuminated signs are not acceptable.

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Directional Signage

The only other allowed signs will be internal directional signs or temporary signs.

Directional signs indicating loading or delivery areas, employment offices, various building entries, parking lots, trail systems, etc., shall not exceed eight square feet nor employ lettering larger than eight inches in height. The design of these signs should reflect the character of the signage used for the project and be constructed for low maintenance (see preceeding illustration).

All standard signing such as stop signs, traffic control signs, no parking, or yield, will generally be the international sign system subject to conformance to the California Motor Vehicle Code. The color and shape of poles and fixtures for regulatory signs and such elements as traffic control lights should match the anodized black finish of other fixtures within Town Center.

Temporary signs shall meet the following requirements:

A sale or lease sign shall be permitted not exceeding thirty two square feet in area advertising the sale, lease or hire of the site.

One construction sign not to exceed six square feet in area, noting the contractor, architect, engineers and other related subjects at the beginning of construction shall be permitted. This sign shall be removed prior to occupancy.

All signs shall obtain approval by a sign permit granted by the Director of Planning and Community Development. Modifications to the above criteria may be requested from the Director of Planning and Community Development.

7. Building Height

8. Setbacks

Corridor/open space or other similar buffering shall be provided between dissimilar land uses. A 75 to 100 foot buffer shall be provided around the Las Colinas detention facility. A setback of 50 to 100 feet shall be required between any development and the revegetation area of the floodway. As per Figure 20, the setback from designated parkways is 35 feet from curb to parking and 50 feet from curb to buildings. The development standards for setbacks from collector streets, side yards, rear yards, etc., will be established in the future via an amendment to the City Zoning Ordinance.

9. Lighting

Exterior Lighting complements and reinforces the architecture and site design character of projects. Site lighting also contributes to site security and provides for a safe and efficient use of a facility. Site lighting should be designed to eliminate the intrusions of glare on to adjacent property and streets such as to decrease the safety of vehicular movement. Specific products and models listed are approved for use within Town Center, however, similar fixtures may be submitted for approval to the Director of Planning and Community Development (see illustrations below).

- . Building illumination and architectural lighting shall be indirect in character. The light source shall not be visible. Indirect wall lighting or wall washing overhead, dowel lighting or interior illumination which spills outside is encouraged. Architectural lighting should articulate and provide lighting for the particular building design as well as provide the required functional lighting for safety and clarity of pedestrian movement.
- Project lighting adjacent to revegetation areas of the floodway shall be designed so as not to cast light into the revegetation area.
- Lighting levels should emphasize the walking areas so as to clearly identify the pedestrian walkway and direction of travel. Stairway, steps and changes of vertical level shall be clearly identified and safely lit.
- Service area lighting shall be contained within service yard boundaries and enclosure walls. No light spillover should occur outside the service area and the lights should not be visible from the streets.
- Lighting for park activity areas shall not intrude on residential or institutional areas.
- Special lighting may be introduced at gateways and other key entries (auto and pedestrian) to indicate points of entry and should be combined with identity signing.



NOTE: USE HOUSESIDE SHIELD IN RESTRICTED SPACE APPLICATIONS. WOODFORM COLUMBIA CASCADE TIMBER CO. 1975 S.W. FIFTH AVENUE PORTLAND, OR 97201 (503) 223-1157

Light Bollards



Pole Lighting

10. Site Furniture

Site furniture includes elements such as benches, trash containers, bollards, kiosks and any special elements introduced into the landscape. Specific products and models listed are approved for use within Town Center, however, similar fixtures may be submitted for approval to the Director of Planning and Community Development (see illustrations below).



Tree Grate Olympian M7204 Ironsmith Inc. Design 826 So. Crenshaw Boulevard Los Angeles, CA 90005 (213) 963-7273 (or equivalent)

NOTE: HALF GRATE SHOWN, GRATE IS MADE IN QUARTERS

Tree Grate





Jupiter Colorburst I (use in street)



Venus Colorburst II (use in medians) PERMA CONCRETE 12490 DAY STREET RIVERSIDE, CA 92508 (714) 653-1187

Interlocking Pavers



Plan





Plan



Shadowline Bench 3.1 PE 2272 (or equivalent)



Side View

Timberline Bench 3.13 PE 2572 (or equivalent)

Landscape Forms, Inc. 431 Lawndale Avenue Kalamazoo, MI 49001 (616) 381-0396 (or equivalent)

Benches



Tables and Benches



PEDESTAL DRINKING FOUNTAIN 3176 HAWS DRINKING FAUCET CO. 1435 4TH STREET P.O. BOX 1999 BERKELEY, CA 94701 (415) 525-5801 (OR EQUIVALENT)

E

Drinking Fountain



wood bollard to match wood light bollard Columbia Cascade

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Bollards



CONCRETE BOLLARD TO

MATCH LIGHT BOLLARD

Kim Lighting

#TR25S SAN DIEGO PRECAST CONCRETE 9702 PROSPECT AVENUE SANTEE, CA 92071 (619) 449-6810

Trash Container





Jack Dovle iry Council Jim Bartell Mike Clark Jack E. Dale Hai Ryan

ty Manager Ronald L. Ballard

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> > T0:

Craig Stampher Senior Civil Engineer

Steve Cresswell Associate Clyttl Engineer

John Frenken Open Space Coordinator

Brad Nguyen Junior Civil Engineer

Ed Ruiz Assistant Planner

- FROM: Arne Salonen Ave Associate Planner
 - DATE: June 1, 1992
 - SUBJECT: TOWN CENTER DESIGN STANDARDS 11

Attached for your use is a synopsis of the Town Center Design Standards as amended to date. These standards list the established design specifications for improvements and site amenities. It should be remembered that, based on past projects, the City has exercised flexibility in the use of these standards, particularly for site design outside of the public right-of-way.

Please call if you have any questions or comments.

AS:ava

cc: Town Center File

RECEIVED JUN 1 1992 PUBLIC WORKS

1 OWN Center Brown PALLERON RT-1405 OR Drylac RAL SOIL

TOWN CENTER DESIGN STANDARDS SUMMARY

Please note that the proprietary product specifications discussed below are intended as a guide to the type of product desired for the Town Center. The specifications may be substituted with equivalent products from other manufacturers with the approval of the Department of Planning and Community Development.

SIGNAGE

Public Signage -Gill Sans Bold Typeface Size to vary according to application Other Signage -Type styles, size and color to vary according to application. Maximum number of colors (except black and white) to be five (5) RIGHT-OF-WAY LIGHTS Parkway Street Lights - Hadco Polyquad 15 fixture/pole 35 foot, 5 or 6 inch non-tapered square pole with 15 x 21 inch shoe box light AMERSHIELD "Rapid Response" AMERON RT-1405 (dark brown) finish Street Lights -Hadco Polyquad 15 fixture/pole 27 or 30 foot, 5 inch non-tapered square pole with 15 x 21 inch shoebox fixture. Finish same as parkway lights. Use of different height poles is dependent on what type of street poles are located on. WALKWAYS/BIKEPATHS Walkways -4 to 5 foot wide exposed aggregate (3/8" maximum) Concrete color to be Davis Eastern Tan #61222 (1-1/2 1bs./sack mix) or Solowon Liquid Color # 306 Burlap Bikepaths -5 feet wide for one way, 8 feet wide for two way. Broom finish Color to be same as walkways Observe CALTRANS Highway Design Manual standards for physical layout and obstruction clearance. Bikepaths are generally closer to curb than walkways.

Basic features of bikeways to be noted

Design Speed: 20 mph (minimum recommended) Width: as specified in Specific Plan or by a specific project conditions. Superelevation: 2 percent (minimum) Curve Radius: at 2 percent superelevation and 20 mph design speed, the radius is 64 feet. Seventy feet is recommended. Minimum Clearance to Obstacles: 2 foot (minimum), 3 foot recommended Maximum Grade: 5 percent. For sustained grades, 2 percent is recommended.

These standards are to be applied to all bikeways within Town Center.

Bike Lane Signage - per City specification. Standard regulatory sign (12" x 12") on wood post (4" x 16") painted with AMERON RT-1405. Three foot lateral clearance to edge of bikepath.

Note: Wattage for all lights is to be established via photometric analysis. This is particularly important for bikepaths and walk. Minimum of 0.5 foot-candle to be maintained on bikepath.

Walkways/bikepaths - use 8 inch shoebox fixture mounted on street lights. Between street lights, use bollard lighting to create minimum foot candles necessary according to CALTRANS standards. Fixture same as main street light fixture. Use AMERON RT-1405 color.

> In certain cases, it is appropriate to use a 12 foot high Hadco Polyquad 15 fixture/pole. Fixture dependent on photometrics. Four inch non-tapered square pole. Finish same as right-of-way lighting.

> >

Walkways and bikepaths to meander slightly and be laterally separated if right-of-way allows.

PAVERS

Pavers in street - Perma Concrete interlocking Jupiter pattern Colorburst 1 100 mm thick herringbone pattern laid in concrete cradle Pavers in medians - Perma Concrete interlocking Venus II pattern Colorburst 2 60 mm thick herringbone pattern Note: Mast Blvd. has Venus II Red pavers On-site pavers - mostly Jupiter pattern Colorburst 1 Other materials may also be considered. No stamped concrete. SITE FURNISHINGS

Benches -Landscape Forms Inc. Model 3-13 PE2572 Timberline, Model 3.1 PE2272 Shadowline Bench and Table -Landscape Forms Inc. Forum Bench and Table Model 3.9 PE1917 and 3.9 PE4029 Drinking Fountain -Haws Model 3380 Pedestal Drinking Fountain Tree Grate -Ironsmith Inc. Design Olympian M7204 Light Bollards -Kim Lighting Model B31-10RC (either natural or buff) Unlighted Bollards -KIm Lighting Model B31-10BRC (either natural or buff) Note: 10 inch square bollards by Kim Lighting may also be used in certain applications. Bicycle Rack -Brandir International Inc. Ribbon Rack Trash Can (w/in ROW) - San Diego Precast Model #T525. Sand colored concrete. Light sandblast finish. Note: all on-site amenities must observe CALTRANS standard clearance (2 foot lateral) from bikepath. Note: on-site furniture may deviate from specifications with approval of Department of Planning and Community Development. STREET TREE PROGRAM

LOCATION	PARKWAY THEME	MEDIUM THEME	ACCENT
Town Center Parkway	Canary Island Pine (Pinus Canariensis)	Flame Tree (Bræchychiton Acerlfolium)	Crape Myrtle (Lagerstromia Indica)
	Red Iron Bark (Eucalyptus Sideroxylon)	Maiden Hair Tree (Gingko Biloba)	
Cuyamaca Street	Holly Oak (Quercus llex <u>or</u> V i rginiana)	American Sweetgum (Liquidambar Styraciflua)	
	Tulip Tree (Liriodendron Tulipifera)	Golden Rain Tree (Koelreuteria Paniculata)	

Mast Boulevard

Torrey Pine (Pinus Torreyana)

Magnolia AvenuneBrisbane BoxMagnolia Tree(Tristania Conferta)(Magnolia Grandifiora)

Civic Center Drive London Plane Tree California Sycamore (Platanus Acerifolia) (Platanus Racemosa)

Other street trees to be selected from City of Santee <u>Permissible Street</u> <u>Right- of-Way Tree List</u>.

Note: other Town Center Parkways will have theme street trees selected in the future.

Tree planting barriers are required for all trees within 10 feet of the public right-of-way.





The colors above are shown in gray portland cement and have been matched to actual concrete mixes. However, differences in portland cement used on the job and printing limitations can create differences between these color chips and the finished concrete. We strongly recommend that a test slab be poured and approved prior to starting the job.

SGS COLOR-FLO LIQUIDS

CHARACTERISTICS

APPLICATIONS

TELEPHONE 1-800-624-0261 (217) 522-3112 Website: www.solomoncolors.com

FAX NO. 1-800-624-3147 (217) 522-3145 E-mail: sgs@solomoncolors.com

1. PRODUCT NAME SGS COLOR FLO-LIQUID CONCRETE COLORS

2. MANUFACTURER Mailing address Solomon Grind-Chem Service, Inc. P.O. Box 8288 Springfield, IL 62791

UPS and Shipping Address: Solomon Grind-Chem Service, Inc. 4050 Color Plant Road Springfield, IL 62702

Phone: 800-624-0261 or 217-522-3112 Fax: 800-624-3147 217-522-3145

3. PRODUCT DESCRIPTION

Basic_Use: SGS Color-Flo Liquid Concrete Colors are predispersed iron oxide pigments containing high pigment solids in an aqueous base liquid. The use of SGS Color-Flo Liquid Concrete Colors provides an easy handling, dust-free environment for integral coloring of concrete block, concrete pavers, concrete floors, plus vertical precast and poured-inplace concrete construction.

Composition and Materials: The SGS Color-Flo Liquid Concrete Color is a water based liquid color containing propietary chemicals for dispersion and suspension of the iron oxide pigments. All SGS products are thixotropic in nature which means they remain thick when standing for an extended period. However, when manually or mechanically agitated, the product thins out and becomes flowable for pumping or pouring into a batch. SGS Color-Flo products are produced under closely controlled conditions to assure constant flow properties for ease of handling without plugging of hoses and pumps. Color-Flo products provide fast color dispersion and color uniformity.

Packaging: SGS Color-Flo Liquid Colors are packaged in 600 lb. (272.4 kg) fiber drums, 3,250 lb. (1476 kg) disposable totes and 3,950 lb. (1793.3 kg) returnable totes. Each container is clearly marked with color name and number ..

Color Range: Color-Flo Concrete Colors are available in several standard colors. By altering the percentage of color added or mixing colors together, the potential color shades are virtually

Limitations: Color-Flo Concrete should should be kept from freezing although the actual pigments will remain stable in a freeze-thaw situation. Each freeze-thaw cycle does cause some separation which requires additional remixing before the liquid color can be used.

4. TECHNICAL DATA

SGS Color-Flo Liquid Concrete Color has been formulated at high solids of iron oxide in order to minimize shipping cost and produce a maximum coloring value. Depending upon the SGS color index name and number, the typical properties of each vary depending upon the iron oxide used.

pH:

8-9 1.9-2.0 Specific Gravity: 15.7-16.5 lbs. per gallon Density: 5-6- Zahn Seconds Viscosity: Orifice .005

5. USAGE

Color-Flo Liquid Concrete may be added either automatically by the use of a metering or volume measuring system or manually by weight or volume. The SGS Color-Flo color should be agitated before use manually or by using a propeller type mixer to obtain the proper viscosity. If the drum is opened and only partially used, it should be resealed tightly to prevent moisture loss.

Manual Measuring or Weighing: The SGS Color-Flo Liquid Concrete Color may be either pumped from the drum or emptied by gravity flow into a small container which is either weighed on a scale or filled to a predetermined line on the side of the container.

Automated Metering Pump System: Color-Flo Liquid Concrete Color can be added automatically through the use of any quality metering system. To assure color uniformity, the automatic addition system should be checked by cycling the system prior to use each day. At the end of each day or when changing colors, the pipe lines and metering system should be cleaned by flushing with water. Further information on metering systems is available upon request.

Application: SGS Color-Flo should be agitated prior to use to insure uniformity. Regardless of the addition method best results will occur when Color-Flo is added just after the pre-wetted aggregate

aggregate to distribute the color uniformly which will promote an even distribution of pigment particles on the surface of the cement crystals. Keep liquid containers covered to prevent evaporation and reseal partial drums when put into storage.

6. LIMIT OF WARRANTY AND LIABILITY

Solomon Grind-Chem Service, Inc. warrants that all their product conforms to the description and standards as stated on the product packaging (specific product literature). If properly mixed and applied, SGS warrants the Color-Flo Liquid Concrete Color to be uniform, limeproof and sunfast. The exclusive remedy of the user or buyer and the limit of liability of the company shall be the purchase price paid by the user or buyer for the quantity of the SGS product involved.

7. TECHNICAL SERVICES

The SGS Color Laboratory with over 50 years experience is available at no charge to match existing colored concrete, develop special color tones or to provide expert color assistance to solve your individual color needs. Since the color shades of cements and aggregates (coarse and fine) are different in each locality, it is recommended to send 10 lbs. of the coarse and fine aggregate that is to be used in the concrete mix design. Please indicate the bag mix of cement and proportion of aggregates that is to be used, along with a sample of the desired color that is to be produced. Send to:

(Mail) SGS Color Laboratory P.O. Box 8288 Springfield, IL 62791 (United Parcel) SGS Color Laboratory 4050 Color Plant Road Springfield, IL 62702

Samples: Samples of SGS standard Color-Flo Concrete Colors and specially blended colors are available for submittals either in convenient cement color blocks, and/or for constructing on the job site mock-up sections or slabs. The color block samples are mixed in the SGS Lab with either the supplied local cement and aggregates or SGS available cement and aggregates.

SGS SOLOMON

IRON OXIDE PIGMENTS FOR THE CONCRETE INDUSTRY

P.O. Box 8288 · Springfield, IL 62791 1-800-624-0261 · FAX 1-800-624-3147 Website: www.solomoncolors.com E-mail: sgs@solomoncolors.com

I. PRODUCT IDENTIFICATION

PRODUCT NAME
CHEMICAL FAMILY
CHEMICAL NAME
SYNONYMS
CAS NUMBER
DOT CLASS
OSHA HAZARD COMMUNICATION STATUS
CHEMICAL FORMULA

II. INGREDIENTS

1 4 1 1

<u>COV</u>	<u>/IPO</u>	NENTS
Iron	(111)	Oxide

<u>%</u> Proprietary

OSHA-PEL None Est.

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III. PHYSICAL DATA

APPEARANCE
COLOR
ODOR
MELT POINT/FREEZE POINT
BOILING POINT
VAPOR PRESSURE
SPECIFIC GRAVITY
BULK DENSITY
SOLUBILITY IN WATER
% VOLATILE BY VOLUME

IV. FIRE AND EXPLOSION DATA

FLASH POINT °F (°C)
FLAMMABLE LIMITS
Lel
Uel
EXTINGUISHING MEDIA
SPECIAL FIRE FIGHTING PROCEDURES
UNUSUAL FIRE & EXPLOSIVE HAZARDS

V. REACTIVITY DATA

STABILITY
INCOMPATIBILITY
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS
HAZARDOUS POLYMERIZATION

VI. HUMAN HEALTH DATA

PRIMARY ROUTE(S) OF EXPOSURE
HUMAN EFFECTS AND SYMPTOMS OF
OVEREXPOSURE ACUTE
CHRONIC
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
CARCINOGENICITY
EXPOSURE LIMITS
OSHA PEL
ACGIH TLV

MATERIAL SAFETY DATA SHEET

• SGS Color-Flo Liquid Colors

> SGS Color-Flo Liquid Concrete Colors Inorganic Metal Oxides Iron (III) Oxide Color-Flo, Iron Oxide Slurry 1309-37-1, 18624-44-7,1317-61-9 Not regulated Nuisance Dust Fe₂O₃, Fe₂O₃ H₂O, Fe₃O₄

> > ACGIH-TLV None Est.

Liquid Buff, Tan, Yellow, Brown, Black, Red None 28° F 160 - 200° F Not known 1.7 - 1.9 14 - 16 lb./gallon Very Slightly Not known

Not applicable

Not applicable Not applicable Not flammable None None

Stable None None Will not occur

Eye and skin contact, inhalation, ingestion

None known None known None known None known

Not established Not established

Color Standards for the Concrete Industry

Available at:

QUANTITIES INDICATED APPLY PER SACK OF CEMENT

Note: Colors shown approximate the shade achieved using Type I-II cement and the amount of pigment indicated. Variations can be expected due to the differences in cement, aggregates and method of application. Concrete should be batched, placed and cured as directed in Davis Data Sheet IC-88-1. *DAVIS Black 807 may be substituted at twice the dosage of 8084.

PAGE 01

SETTING THE STANDARD FOR CONCRETE COLORS

3700 E. Olympic Blvd. Los Angeles, California 90023-3123 Tel 800-356-4848 Tel 323-269-7311 Fax 323-269-1053

November 8, 2005

Mr. Gregory Ray

Via email fibconc@nethere.com

Fax 619-231-4778 and 619-448-8670

page 1 of 1

Project reference: 61222 Eastern Tan

CERTIFICATE OF CONFORMANCE

Davis Colors Synthetic Iron Oxide #61222 Eastern Tan

This letter will certify that Davis Colors Synthetic Iron Oxide #61222 is a pure, nonfading, inert synthetic iron oxide prepared especially for mixing into concrete and concrete products. It contains less than one-half of one percent of water- soluble salts, the remainder is insoluble in water. It is fast to sunlight, resistant to alkali and weak acids and free of calcium sulfate. The fineness is less than 0.2% retained on a 325 mesh screen. Davis Colors Synthetic Iron Oxide #61222 also complies with ASTM C-

979 Standards for Integral Concrete Colors.

When incorporated into concrete mixes at a rate of 1 lb. per sack of cement, Davis Colors #61222 will produce Eastern Tan.

Please keep in mind the final color of concrete or concrete products depends on many factors including the base color of the cement and other mix materials, the placement, finishing and curing technique; or in the case of masonry, precast and paver products, the manufacturing and curing process. The actual results achieved may differ from our color card.

Sincerely,

Uni

Nick L. Paris Vice President Marketing

Solonni Burlop # 206

EAVIS COLORS IS A BRAND OF ROCKWOOD

Cc:

UTILITIES COORDINATION NOTES:

- 1. THESE PLANS CONTAIN MEANDERING BIKE AND PEDESTRIAN PATHS. THE LOCATION OF ALL ABOVE GROUND AND AT GRADE UTILITIES SHALL BE COCRDINATED WITH THE MEANDERING PATH. NO ABOVE GROUND FACILITIES SHALL BE LOCATED WITHIN TWO FEET OF THE PATH (PREFERRED MINIMUM IS THREE FEET). ACTUAL LOCATION OF FACILITIES IS SUBJECT TO APPROVAL BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A CONSTRUCTION/ENCROACHMENT PERMIT. ALL ABOVE GROUND FACILITIES SHALL BE PAINTED WITH AMERON AMERSHIELD RAPID RESPONSE RT1405 PAINT IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
- 2. THESE PLANS REQUIRE SPECIAL COORDINATION OF UTILITY INSTALLATIONS. PRICE TO ISSUANCE OF THE ENCROACHMENT PERMIT FOR INSTALLATION OF THE UTILITIES THE DEVELOPER SHALL, WITH CONCURRENCE AND CORRDINATION FROM THE UTILITY COMPANIES, SUBMIT TWO SETS OF UTILITY CORRDINATION PLANS TO THE DEPARTMENT OF PUBLIC WORKS FOR ACCEPTANCE. THE PLANS SHALL BE DRAWN TO SCALE ON THE FINAL APPROVED IMPROVEMENT PLANS AND SHOW THE LOCATION OF ALL UTILITY STRUCTURES ABOVE OR BELOW GROUND. THE DEVELOPER SHALL BE RESPONSIBLE FOR ENSURING THE FACILITIES ARE CONSTRUCTED IN ACCORDANCE WITH THE ACCEPTED PLANS. ANY FACILITIES NOT INSTALLED IN ACCORDANCE WITH THE PLANS MAY BE SUBJECT TO RELOCATION AT THE DISCRETION OF THE CITY ENGINEER.

PRIOR TO THE PLACEMENT OF CONCRETE FOR ALL MEANDERING SIDEWALK, THE CITY OF SANTEE'S PLANNING AND COMMUNITY DEVELOPMENT DEPT. SHALL INSPECT AND APPROVE IN WRITING THE FORM ALIGNMENT. CONCRETE PLACED WITH-OUT WRITTEN APPROVAL IS SUBJECT TO REMOVAL. Town Center Design Specification – Pedestrian Walkway Lighting

For public walkways/bikepaths that are not co-located along the street right of way.

Provide a 12-foot tall light as circled below that is spaced approximately 90-feet apart.

Walkways/bikepaths use 8 inch shoebox fixture counted on street lights. Between street lights, use bollard lighting to creat minimum foot candles necessary according to CALTRANS standards. Fixture same as main street light fixture. Use AMERON RT-1405 color. In certain cases, it is appropriate to use a 12 foot high Hadco Polyquad 15 fixture/pole. Fixture dependent on photometrics. Four inch non-tapered square pole. Finish same as right-of-way lighting. Walkways and blkepaths to meander slightly and be laterally separated if right-of-way allows. THE FOLDWARD STRUCTURES SHALL BE FURSIED WITH AMERSIETD "RAPHD RESPONSE" COLOR AVERON RT-1405 (PANIS DROWN) INSTALLED PEN THE WANNFACTURERS SPECIFICATIONS: 1) STREET LIGHTS AND PXTURES, 2) PEDESTRIAN LIGHTS, CONTROLLERS AND HETERS, 3) S.D.G.ME. TRANSFORMERS, 4) COX CABLE BOARS AND PEDESTAILS, 5) FAC BELL TELEPHONE BOXES AND PEDESTALS, 6) REMOATION CONTROLLERS AND HETERS, 7) THATTIC CONTROL STRUCTURES BAPPERTHANT, INTURES SUCH AS COMPACILER BOXES, ADDITIONAL STRUCTURES MAY DE INCLUDED AT THE DISCRETION OF THE CITY ENGINEER OR THE DRECTOR OF PLANNING AND COMMUNITY DEVELOPMENT. 16 3. STREET LIGHT SPECIFICATIONS: ALL STREET LIGHTS TO CONFORM TO TOWN CENTER MANNARDS SYMBOL UNLESS OTHERWISE NOTED. INTRATES HADOO POLYOLAD TYPE II 250 WATT. 30,000 LUMEN HIGH PRESSURE SOLIUM SINGLE LUMINAIRE WITH REAR OUT OFF SHIELD FOR TYPE II DISTRIBUTION ON 30' HIGH, 5" SQUARE POLE. HIGH PRESSURE SODIUM SINGLE LUMINAIRE WITH REAR OUT OFF SHIELD FOR TYPE II DISTRIBUTION ON 25 HIGH, 5 SQUARE FOLE SHILLD FOR TYPE IL UPSTRIBUTION ON 28 HIGH, 5 "SALARE FOLL INDICATES HADCO POLYQUAD TYPE III, 250 MATT, 30 (XO LUMEN/GHZET) SINCJAVO ISO WATT, 16 (XO LUMEN/GIDEWALK SIDE) HIGH PRESSURE SODWAL LUMINAIRES WITH REAR COL OFF SHIELDS FOR TYPE II DEFRISOTION ON 30 HIGH, 5 "SQUARE HULE. INDICATES HADCO POLYQUAD TYPE III, ISOMATT, 16,000 LUMEN HIGH PRESSURE SODIAN SINCLE LUMINAIRE WITH REAR CUT OFT SHIELD FOR TYPE II DISTRIBUTION ON 12 HIGH, 4" SQUARE FUL, Xett -d

WDI Shoebox Style Luminaire ILSFLA - 55E

20 ¹

CITY OF SANTEE

SUBMITTAL NO: __ SPEC. SECTION NO:

PROJECT NAMEINO .: STREETLIGHT JPGPADE PROJECT PHASE 11 PROJECT NAMENO.: <u>STREETLIENT</u> <u>PERATES PROJECT NAMENO.</u>: <u>STREETLIENT</u> <u>PERATES PROJECT NAMENO.</u> WITH THE DESIGN CONCEPT OF THE PROJECT AND <u>GENERAL COMPLIANCE WITH THE INFORMATION GIVEN</u> IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS, CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK. HIS WORK.

NO EXCEPTION TAKEN O REVISE/RESUBMIT O MAKE CORRECTIONS NOTED REJECTED O SUBMIT SPECIFIED ITEM O

_DATE _ 11-16-11 L BYC Ð ~ -C Payes

FIXTURE SPECIFICATIONS:

Flicture Model No.	Lamp	Wattage (V/)	Rated Initial Luminance (LM)	Efficacy (LM/W)	Fixture Model No.	Lamp	Watlage (W)	Rated Initial Luminanco (LM)	Efficacy (LM/W)					
LERA-SE	-1680554	-95	4125	75	1818 P.A-2005	Linton	259	1.2986	нő	YASH M	Ener Tençoritas (R)	Antorna Teresentes (E)	10000	Cur P
ILEFLA THE	Lagien	7-0	5280	15	MSNA-2004	A.S0280%	750	122102.03	90	-	-			-
1970 - 1996	126019944	1.00	84 69	60	ILSELG 2001	A.SCERWV	369	121900	90	Densitae 129-277	1.10	27511432	Latare Poa	251
8.354.6-156E	L.S.C. 15447	150	2756	95	, 11 SEL B-2705	(LEC250%/	250	22300	00					
					ILSELN JODE	ILSC JUOW	300	27000	50					

Noto: Color Temperature 2720-6500 evailable upon request. Dimining options available

105

90

H

45

-19(-127)

ILSE LA-200E

WD: International (10 - www.zwdlaubling.com) - Inte@wdilightna.com - P 371 599 5008 (1 Pr 371 389 2735

CITYWIDE STREET LIGHTING UPGRADE PROJECT PHASE II

ADDENDUM NO. 1

"Mounting arm bolt pattern shall match the following in Figure 1 on page 2 of addendum number 1. If the existing bolt pattern on the pole is different from the pattern in Figure 1, CONTRACTOR shall contact the CITY for instructions on how to drill new holes to mount the luminaire. CONTRACTOR shall be responsible for patching existing holes if they are exposed after new mounting arm is installed. All costs associated with attaching the mounting arm shall be covered under "INSTALL RESIDENTIAL SHOEBOX STYLE STREETLIGHT LUMINIAIRE"

11/08/2011 Project: City of Santee Type: ILSFLA-55E / 55W ROADWAY LUMINAIRE - 120/277V

2.9.1

Identification: Each luminaire shall have the manufacturer's name, trademark, model number, serial number, date of manufacture (month and year), and lot number as identification permanently marked inside each unit and the outside of each packaging box.

WDI International, Ltd. | www.wdlighting.com | info@wdlighting.com | P: 323.599.5008 | F: 323.389.2735

, s. 4. - ¹

ILSFLA-55E - OUTDOOR PHOTOMETRIC REPORT

MANUFACTURER:		
CATALOG #:	ILSFLA-55E	No
LUMINAIRE:	OUTDOOR SQUARE WELDED ALUMINUM HOUSING	
LAMP CAT #:	ILSC55W	Photo
LAMP:	(1) 55W INDUCTION CIRCULAR SYSTEM	2
LAMP OUTPUT:	1 LAMP(S), RATED LUMENS/LAMP: 6000	Available
INPUT WATTAGE:	58	
LUMINOUS OPENING:	ELLIPSOIDAL SPHEROID (L: 17.72", W: 17.72", H: 5.91")	

MAX CD:	3,321.7 AT HORIZONTAL: 0°, VERTICAL: 17.5"
CUTOFF CLASS:	CUTOFF
ROADWAY CLASS:	TYPE V
EFFICIENCY:	183.6%
	SEE REPORT NOTES **

SNT	S			Project Nam	DF SANT	EE SNTS-45-	g Number: 7-12'-128c-136-s1-g/	L/CC-HCR-RAL8011	1ype 12'
			12333	101110		Sp	ecificatio	ns	
				Hand Hole	 Square Non Tapered Steel Pole Pole Shaft ASTM A500 Grade B tubing with minimum yield strength of 46,000 PSI. Shaft is furnished with ground lug inside pole, opposite hand hole opening. Center line of hand hole is 12" from base plate. Base Plate Steel Plate base is ASTM-A36 hot rolled steel, meets or exceeds minimum yield strength of 36,000 PSI. Base templates provided with order. Do not pre-pour. Base Cover Die-formed from heavy gauge quality aluminum. Two piece cover for easy installation. Pole Cap Color-impregnated polymer snap-to-close pole cap provided in black. Finish All poles are shot-blasted and cleaned to a near-white finish prior to painting. A Quali-Guard[®] textured thermoset polyester powder coat is then applied to a minimum of 3 millimeters and then oven-baked at a temperature of 400 °F to promote exceptional adherence and finish hardness. Pole finish is warranted for a full two (2) years. An optiona five (5) year extended warranty is also available (external prime coal and internal rust inhibiting coating). Anchor Bolts Poles are provided with hot-dip galvanized anchor bolts, with a J bene on one end and two hex nuts and two flat washers per bolt. Anchor bolt conform to ASTM-A36, meets or exceeds a minimum yield strengti 36,000 PSI. Anchor bolts conform to ASTM F1554 Grade 55 and an provided. 				
SNTS	4S	7	12'	12BC	136	S1	GAL/CC	HCR-RA	L801
Model	Shaft Size	Gauge	Height	Base	Anchorage	Mounting	Finish	Optio	ns
SNTS	4" × 4" (4S)	(4S) 11 (4S) (11) 7 (7)	10' 12' 14' 16' 18' 20'	9" Base -9-3/16° BC (9BC)	¾" × 30" (343)	Bolt-On Arm Single (S1) ■~ D180 (D2)	Bronze (BZ) Black (BK) White (WH) Tennis	GFI Rece *Standard location (GFI Coupl *Specify size al (CUF Custom Bo	ptacle is in hand hole) ing nd location P) olt Circle
			22' 25' 28'	12" Base *12% BC (12BC)	1" × 36" (136)	D90 (D9)	Green (GN) Forest Green	Consult factory (CBC) Rust-Inhibiting Inter Coating & Prime	ng Internal Primer
	5" × 5" (5S)	11 (11) 7 (7)	20' 22' 25' 28' 30'	12" Base 12% BC (12BC)	1" × 36" (136)	(T9) Quad (QD)	(FG) Grey (GY) Silver Metallic (SL)	Single Ban (SB/ Double Ban (DB/	ner Arm A) ner Arms A)
	6" × 6" (6S)	5" × 6" 7 (6S) (7)	28' 30'	12" Base 1234" BC (12BC)	1" × 36" (136)	Tenon Options	Custom Color (CC)	Direct Burial Coupling *Specify Size and Location	
			35	Custom Base *Consult factory (CB) Direct Burial *Specify below-grade length in the form of DB-xx, where "xx" = feet (DB) NOTE CUP and/or HHC Options required.		(1238K) 3" (T3R)	Galvanized "No paint (GAL)	CUP_5-xx "xx" = 'x' "yy" = feet from b (CUP_S Hand H "Specify cover ar HHC_C-xy "xx" = Y for yes (HHC_C	yy. or W ⁻ ottom of pole L) Hole d location as L-yy. or N for no ottom of pole L)

Any use of this information requires the written approval of Visionaire Lighting, LLC In keeping with our TQM policy of continuous improvement. Visio notice re reserves the right to change any

TAISIONAIRE LIGHTING

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SNTS

Pole EPA for Square Non-Tapered Steel Poles												
Pole	Maximum Allowable EPA (ft ²) with 1.3 gust factor								Pole	10 10 10 10 10 10 10 10 10 10 10 10 10 1	Bolt	Anchor
Height	80 mph	90 mph	100 mph	110 mph	120 mph	130 mph	140 mph	O.D.	Gauge	Base Plate	Circle	Bolts
10'	30.1	23.5	18.4	11.0	10.3	7.6	6.1	4"	11	9"sq × 3/4"	9"	³ / ₄ " × 30"
12'	23.0	17.4	13.7	8.5	7.4	5.7	4.4	4"	11	9"sq × 3/4"	9"	³ / ₄ " × 30"
14'	18.6	13.9	10.6	6.6	5.7	4.3	3.1	4"	11	9"sq × 3/4"	9"	³ / ₄ " × 30"
16'	15.0	10.9	10.1	4.8	3.9	3.1	1.9	4"	11	9"sq × 3/4"	9"	3⁄4" × 30"
18'	11.7	8.4	6.0	3.4	2.8	1.9	-	4"	11	9"sq × 3⁄4"	9"	³ / ₄ " × 30"
20'	9.3	6.4	4.3	2.4	1.7	1.3	-	4"	11	9"sq × ¾"	9"	³ ⁄4" × 30"
20'	15.8	10.9	8.2	5.0	4.2	3.1	2.0	4"	7	9"sq × 3/4"	9"	³ ⁄ ₄ " × 30"
20'	17.1	12.3	8.9	5.0	4.1	3.0	1.4	5"	11	12"sq × 1"	12"	1" × 36"
20'	27.4	22.1	16.7	13.2	8.3	6.0	3.9	5"	7	12"sq × 1"	12"	1" × 36"
22'	6.3	3.7	1.9	1.3	-	-	-	4"	11	12"sq × 1"	12"	1" × 36"
22'	11.8	8.0	5.4	3.5	2.3	2.0	-	4"	7	12"sq × 1"	12"	1" × 36"
22'	12.6	8.4	5.4	3.2	1.9	1.6	-	5"	11	12"sq × 1"	12"	1" × 36"
22'	21.4	15.4	11.1	6.9	5.0	4.3	2.3	5"	7	12"sq × 1"	12"	1" × 36"
25'	5.0	2.9	1.3	-	-	-	-	4"	11	12"sq × 1"	12"	1" × 36"
25'	10.9	7.4	5.2	2.1	1.3	1.0	÷.	4"	7	12"sq × 1"	12"	1" × 36"
25'	10.2	6.6	4.0	1.6	-	-	-	5"	11	12"sq × 1"	12"	1" × 36"
25'	18.8	13.0	9.5	4.8	3.7	2.7	-	5"	7	12"sq × 1"	12"	1" × 36"
28'	5.6	3.1	1.4	1.1	-	-	-	4"	7	12"sq × 1"	12"	1" × 36"
28'	5.5	3.0	1.3	-	-	-	-	5"	11	12"sq × 1"	12"	1" × 36"
28'	12.0	7.6	4.4	2.8	1.3	1.1	-	5"	7	12"sq × 1"	12"	1" × 36"
28'	20.9	14.1	9.4	5.7	3.6	3.1	-	6"	7	12"sq × 1"	12"	1" × 36"
30'	5.0	2.2	-	-	-	-	-	5"	11	12"sq × 1"	12"	1" × 36"
30'	11.4	6.8	4.0	1.7	-	-	-	5"	7	12"sq × 1"	12"	1" × 36"
30'	18.9	12.8	8.4	4.3	3.0	1.9	-	6"	7	12"sq × 1"	12"	1" × 36"
35'	6.7	2.3	1.8	-	-	-	-	5"	7	12"sq × 1"	12"	1" × 36"
35'	12.1	7.0	3.8	-	-	-	-	6"	7	12"sq × 1"	12"	1" × 36"

*9" bolt circle is 9- 3/16″, 12" bolt circle is 12-3/4". For Direct Burial EPA, consult factory

POLES + BASES