Aesthetic Conceptual Theme Development



#### **ACKNOWLEDGEMENTS**

The I-710 Corridor Aesthetic Master Plan was developed with the cooperation and assistance of the following agencies and individuals:

#### **Community Stakeholders**

City of Bell – Joe Perez

City of Bell Gardens – Carmen Morales

City of Commerce – Alex Hamilton

City of Compton – G. Harold Duffey

City of Long Beach – Robert Zur Schmiede, Barbi Clark

City of Lynwood – Emilio Murga, Elias Saikaly

City of Paramount – Chris Cash

City of South Gate – Steve Lefever

City of Vernon – Kevin Wilson

LA County – Claire Robinson

Gateway Cities COG – Karen Heit, Richard Powers, Jack Joseph, Genny Cisneros

Metro – Ernesto Chaves, Lucy Olmos

#### **California Department of Transportation**

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# I. Project Description

# I-710 Corridor Aesthetic Master Plan Route I-710 Project Description

The Long Beach Freeway (I-710) is a vital transportation artery, linking the ports of Long Beach and Los Angeles to major Southern California distribution centers and intermodal rail facilities. An essential component of the regional, statewide and national transportation system, it serves both passenger and goods movement vehicles.

As a result of population growth, increased cargo container volume at the ports of Los Angeles and Long Beach, increasing traffic volumes, and an aging infrastructure, the I-710 Freeway experiences serious congestion and safety issues.

In March 2005, following an extensive technical and community participation process, Metro completed the I-710 Freeway Major Corridor Study (MCS). The study analyzed congestion and mobility along the corridor in order to develop transportation solutions that preserve and enhance the quality of life of surrounding neighborhoods and communities. Metro and six project participants are now conducting an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to analyze the range of possible improvement alternatives for the I-710 corridor. The I-710 Corridor Project EIS/EIR will study 18 miles of the I-710 Freeway between the Ports of Long Beach and Los Angeles and the Pomona Freeway (SR-60).

# I-710 Corridor Aesthetic Master Plan - Project Location







# II. <u>Development of the</u><u>Corridor Aesthetic Theme</u>

# I-710 Corridor Aesthetic Master Plan The Aesthetics Committee

# The Formation of the I-710 Aesthetics Committee

#### Composition of Committee

- Caltrans
- Local City/County Representatives
- Metropolitan Transportation Agency
- Council of Governments (COG)

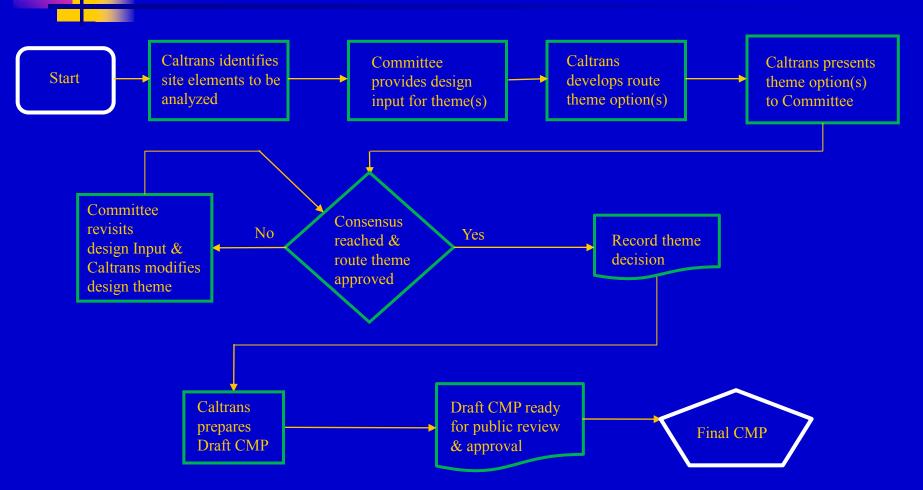
#### Function of the Committee

- Provide background information and community preferences for design
- Develop and approve the aesthetic corridor theme

## Coordination of Meetings and Tasks - Caltrans

• Caltrans develops and designs aesthetic treatments consistent with a unified theme for the entire corridor

# I-710 Corridor Aesthetic Master Plan Aesthetics Committee Decision Making Flowchart



Establish the Purpose, Goals, and Strategies

# Purpose

Plans Corridor Visual Quality: The Corridor Aesthetics Master Plan for Theme Development (CMP), serves to plan the visual quality of the I-710 transportation corridor. Thereafter, any future transportation project, within the corridor, shall have an accompanying document which identifies the appearance of planned physical elements, and structures; which when fully implemented, shall develop the communities' overall vision for the I-710. The CMP is significant because it involves local public agencies in the planning process; and will represent the State and its people.

Creates Context Sensitive Design: The CMP incorporates Caltrans policies of Context Sensitive Design Solutions; to plan, design, maintain, and operate its transportation system in a way that reflects and enhances the surrounding environment, while meeting Caltrans transportation goals and policies.

**Develops Corridor "Design Theme":** Guides new highway design by developing comprehensive urban design and aesthetic "themes" for the transportation corridor.

**Guides Hardscape Component Design:** Guides the designer for architectural and aesthetic treatment of the I-710 character defining features, e.g., lighting, bridge rail design, fencing, superstructures, column design, retaining and sound wall design, etc.

# I-710 Corridor Aesthetic Master Plan Establish the Purpose and Goals

# Goals

- To Provide a Conceptual Design Concept Comprised of a Continuous, Unified, and Enhanced Visual Experience Along the Corridor.
- •To Promote Transportation Safety and Management Efficiency.
- To Advocate Cooperation and Communication with Regional, Local, and Public Participants.
- To Minimize Environmental and Social Impacts.
- To Facilitate Protection and Restoration of the Corridors Natural, Environmental, and Cultural Heritage.
- To Leave a Lasting Public Works Legacy.

# I-710 Corridor Aesthetic Master Plan Establish the Purpose, Goals, and Strategies

# Strategies

- The I-710 CMP is a policy document to be used by Caltrans, public agencies, and stakeholders involved in the design and construction of improvements within the freeway right-of-way.
- The I-710 CMP provides conceptual images for the structural design elements and its components utilizing the Modern theme for the corridor.
- Projects in all phases will be reviewed for consistency with the CMP.
   Modifications and further detail will be required and will be added to
   this document after agreement between Caltrans and the sponsoring
   agency.
- Improvements requiring a Caltrans permit will be reviewed for application of and consistency with the CMP and will require approval to proceed by the District 7 Landscape Architect.

Process and Methodology for Developing the Corridor Theme - Using Context Sensitive Solution (CSS) Policy

# Caltrans policy:

- "The Department uses "Context Sensitive Solutions (CSS)" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. CSS are reached through a collaborative, interdisciplinary approach involving all stakeholders." (Director's Policy DP-22, Context Sensitive Solutions).
- CSS Purpose: Development of transportation design highway elements and structures that are responsive to local values and concerns, through involvement of stakeholders, early in the planning stage. These interventions provide consistency and unity in the appearance and image of the route, through application of corridor aesthetic themes; while enhancing individual community identities.

Process and Methodology for Developing the Corridor Theme – Site Analysis: The Totality of A Particular Place: The Visible & The Invisible

**ANALYSIS** 

**ANALYSIS** 

ANALYSIS



THE ANALYSIS OF THE SITE, MATERIALS, & FORMS, AS THEY ARE REALIZED IN THE LANDSCAPE, IS A PROCESS THAT ENGENDERS A QUALITATIVE STANCE TO BEGIN DESIGN; THUS ANCHORING DESIGNED AND BUILT STRUCTURES WITHIN THE LOGIC OF THE COMMUNITY.

I-710 Corridor Aesthetic Master Plan Process and Methodology for Developing the Corridor Theme – Design Synthesis

# **Corridor Theme Options**

Vision Materials Scale

Color Style

Quality Future Fashion

**Visual Objectives** 

**Composition** 

**Expressiveness** 

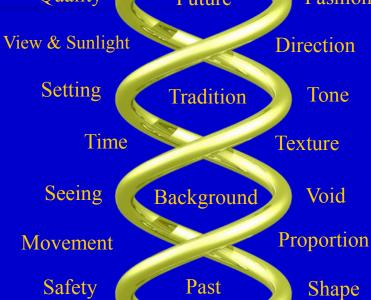
**Magnitude** 

Values observed to produce beauty

**SYNTHESIS** 

**SYNTHESIS** 

**SYNTHESIS** 



Security Present Solid

Fire

Vitality Dominance

Aspects of Design

Harmony

Form

Process and Methodology for Developing the Corridor Theme - Aesthetics Committee Collaboration

- Aesthetics Committee Members Participate in Theme Surveys and Data Collection (Analysis)
  - Members are asked to participate in surveys of societal and physical values, that would reveal the "origins," of the I-710 corridor communities, in a positive manner. The survey, with a view towards the future, inventories the historical establishment of cultural and visual resources, as well as the physical and aesthetic development of the study area.
  - Committee team building exercises that assess the existing historical, natural, and man-made landscape of the I-710 corridor.
- Caltrans Integrates and Implements Theme Coordination (Synthesis)
  - Lead responsibility for physical design of state highway components.
  - Charged with integrating aesthetic features into corridor projects, including treatments for bridges, median barriers, walls, fencing, and sound wall design.
  - Charged with highway design policy enforcement; thus, traveler and worker safety are the highest priority in designing the state highway system.

Process & Methodology for Developing the Corridor Theme -Aesthetics Committee Collaboration – Theme Survey & Data Collection



# Developing Aesthetic Treatment Options and Themes Structural Design Elements: Aesthetic Hardscape Components

The following are structural design elements within a highway corridor that could have theme or aesthetic treatment to and items which Caltrans has previously designed aesthetics for statewide. Examples of Caltrans designed structural design elements are presented in the following pages and include:

- Bridge Structures
  - Overcrossings (OC)
  - Undercrossings (UC)
  - Pedestrian OC/UC
  - Viaducts
  - Interchanges
- Bridge Abutment Faces
- Bridge Columns/Bents
- Outrigger Bents
- Bridge Barriers

- Light fixtures
- Slope Paving
- Wing Walls
- Sound Walls
- Sound Wall Pilasters
- Retaining Walls
- MSE Walls

Developing Aesthetic Treatment Options and Themes

Structural Design Elements: Bridge Examples



#### **Bridge Structures**

Bridge design along the I-710 corridor will mostly consist of typical two span highway overcrossings where both ends if the structure can be viewed by approaching traffic at one time. Treatment on bridges at local intersections shall comply with typical structural design standards. Where designated, sound walls located on top of structures will have consistent color accents on both bridge and sound wall.





Developing Aesthetic Treatment Options and Themes



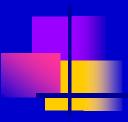


#### **Columns**

Columns should appear to support the structure as simply as possible. The proportion of elements is important. The goal is a balance between the apparent mass of the superstructure and the size of the column. Columns that are too thin will look too spindly and columns that are too thick will look too squat.

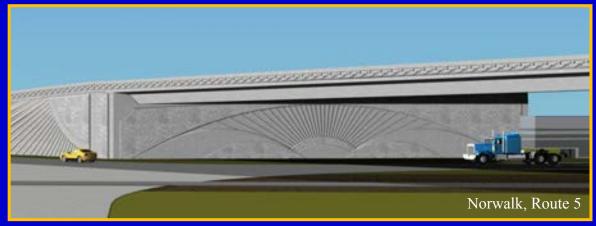


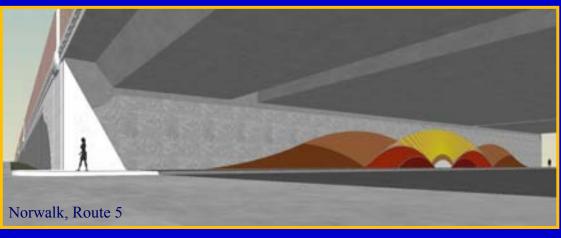




Developing Aesthetic Treatment Options and Themes Structural Design Elements: Bridge Abutments & Wing Wall Examples









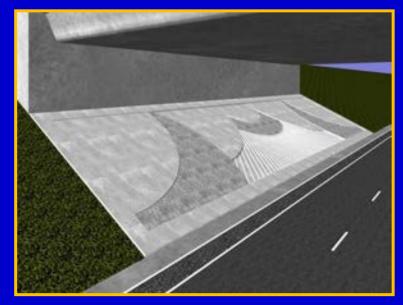
Developing Aesthetic Treatment Options and Themes Structural Design Elements: Slope Paving Examples



#### **Slope Paving**

The selection of materials under bridges can be varied. Colored pavers with rock blankets or unit pavers can be designed to be compatible with the established corridor color palettes, textures, and themes. Alternative slope paving treatments for surfaces facing the community could include artistic relief sculptures, patterns, murals, etc.

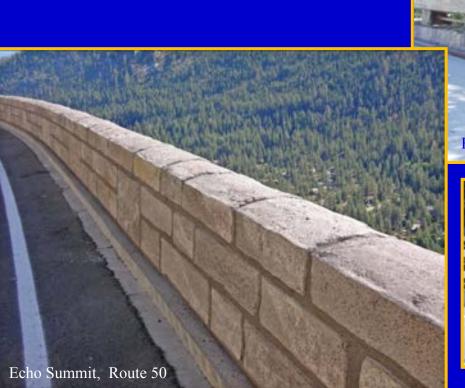




Developing Aesthetic Treatment Options and Themes Structural Design Elements: Bridge Barrier Rail Examples



Developing Aesthetic Treatment Options and Themes Structural Design Elements: Bridge Barrier Rail Examples





Ten Mile River, Route 1

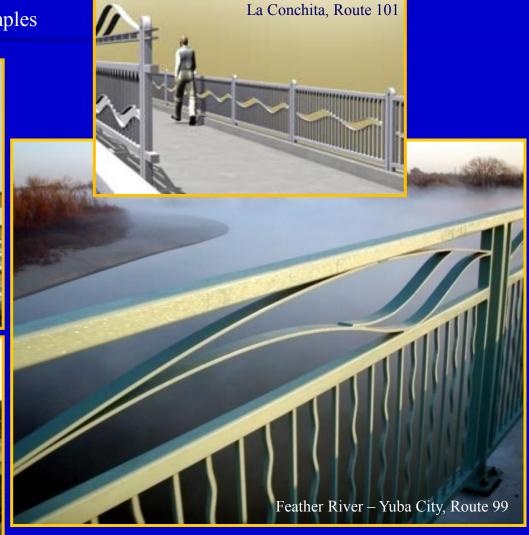
Developing Aesthetic Treatment Options and Themes

Structural Design Elements:

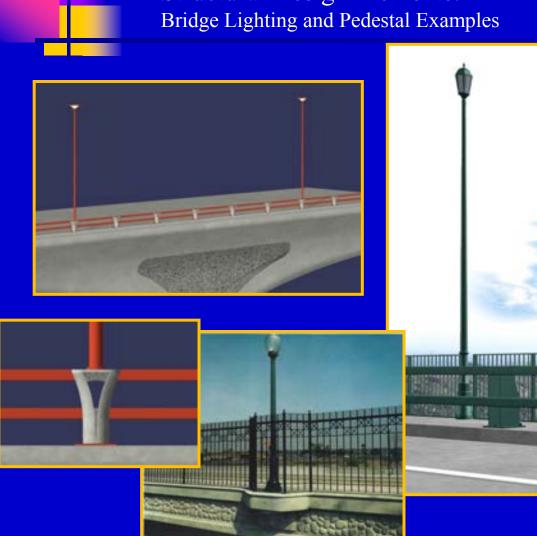
Metal Bridge Fencing Examples













Developing Aesthetic Treatment Options and Themes Structural Design Elements: Concrete Retaining Wall Surface Treatment Examples



#### **Retaining Walls**

Retaining walls within the corridor shall have textured form lined surfaces; utilizing both typical and customized textures and patterns. The form liner method affords flexibility for innovative design, as well as adding interest to retaining wall surfaces.



Fractured Rib



Split Slate



Heavy Sandblast

Split Face



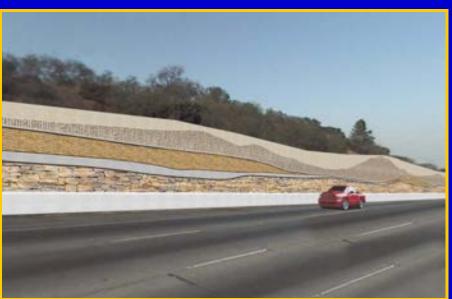


**Combined Textures** 



**Custom Textures** 





Developing Aesthetic Treatment Options and Themes
Structural Design Elements: Concrete Retaining Wall Surface Treatment Examples





Developing Aesthetic Treatment Options and Themes

Structural Design Elements:

Concrete Sound Wall Surface Treatment Examples



# III. Design Guidelines



# I-710 Corridor Aesthetic Master Plan Design Guidelines

# Design Guideline Benefits

- Create Safe Design Solutions
- Unify Freeway Corridor Improvements
- Integrate Roadway Aesthetic Treatments
- Enhance Natural and Human Environments
- Ensure Safe, Maintainable, Durable Highway Design
- Leave a Lasting Public Works Legacy
- Fulfill Public Expectations
- Provide an Interdisciplinary Design Team
- Provide Stewardship of Natural Resources



# Safety and Maintenance Considerations

- Visually Distracting Aesthetic Treatments
- Clear Recovery Zones
- Use of Veneers Over the Roadway
- Vandalism / Graffiti
- Reduced Worker Exposure
- Use of Materials
- Adequate Shoulder Width

# I-710 Corridor Aesthetic Master Plan Design Guideline Considerations

# **Environmental Considerations**

- Introduce Aesthetic Treatments which Compliment the Existing Surroundings
- Aesthetics and Structure Design Coordination for Varying Environmental Conditions
- Coordination of Aesthetic Design for Integration with Existing Structures
- Geological Constraints

# I-710 Corridor Aesthetic Master Plan Design Guideline Considerations

# Historical and Cultural Considerations

- Regional Historical Context
- Archaeological Impacts
- Industrial/Agricultural Heritage
- Historic Landmarks

# I-710 Corridor Aesthetic Master Plan Design Guideline Considerations

# Aesthetic Structure Design Considerations

- Provide visual continuity and a unified experience for the driver, from the coastal city of Long Beach to East Los Angeles to the north.
- Bridge concrete barriers and railing shall contribute to the visual continuity of the travel way.
- Select a distinctive light standard design that is compatible with the lines and shapes of the proposed aesthetic theme for structures and that reflects an artistic solution for pole lighting.
- Travel way appurtenances shall exhibit simple design language that unifies various travel way components (e.g., bridge rails, abutments and security fencing).
- The form and surfacing of all vertical elements such as abutments, bridge superstructures, columns, retaining walls and sound walls along the travel way, shall exhibit a consistent aesthetic treatment and style (e.g., Modern)

# IV. Conceptual Corridor Aesthetics Modern Theme

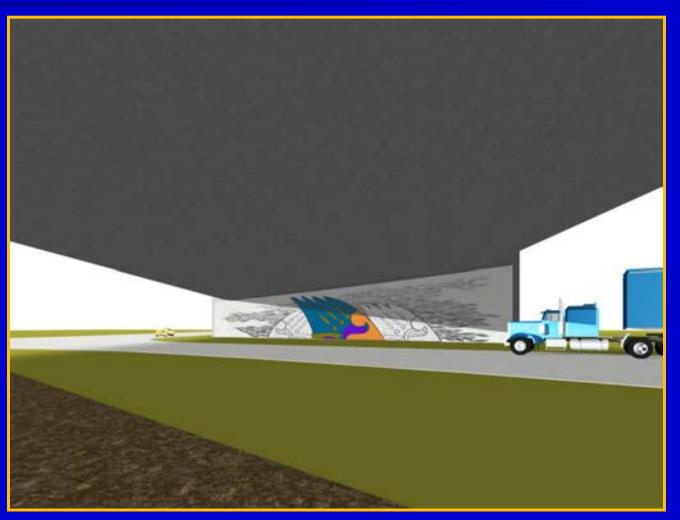
During the course of this process it has been determined the "Modern Theme" will be the concept for the I-710 corridor. Conceptual images representing the "Modern Theme" for all structural elements as described previously is portrayed in the following pages. Further detail of these elements will need to be documented and have concurrence by Caltrans, Metro and the Cities throughout each stage of the project.



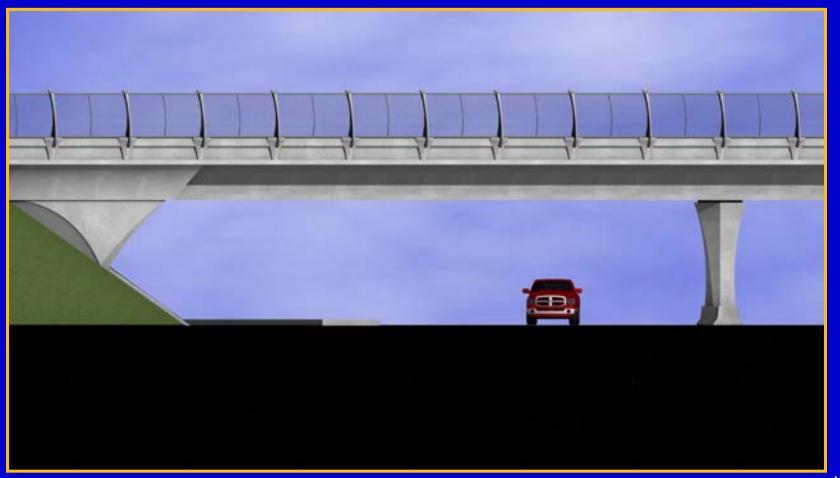
### Rte 710 Corridor Aesthetic Master Plan Conceptual Bridge Metal Light Standard Design - Modern Theme



#### Rte 710 Corridor Aesthetic Master Plan Conceptual Bridge Abutment Abstract Design - Modern Theme



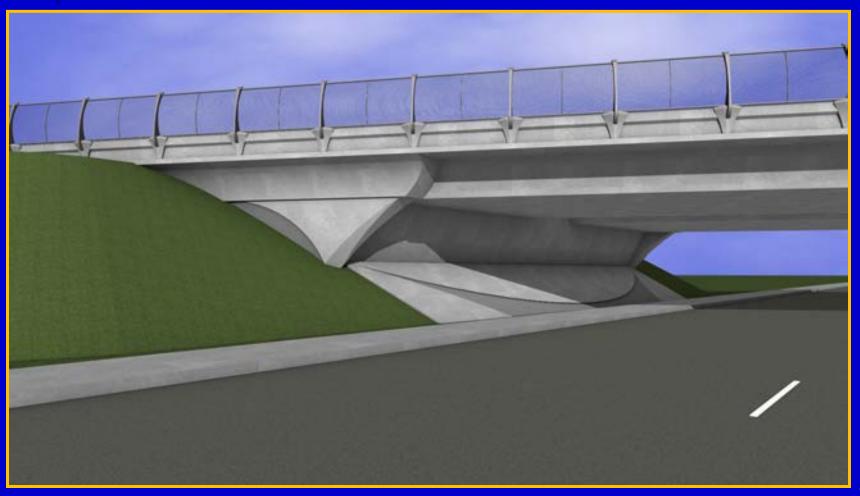
#### Rte 710 Corridor Aesthetic Master Plan Conceptual Superstructure & Column Design Option – Modern Theme



#### Rte 710 Corridor Aesthetic Master Plan Conceptual Bridge Abutment/Retaining Wall Design – Modern Theme



#### Rte 710 Corridor Aesthetic Master Plan Conceptual Bridge Abutment/Retaining Wall Design – Modern Theme



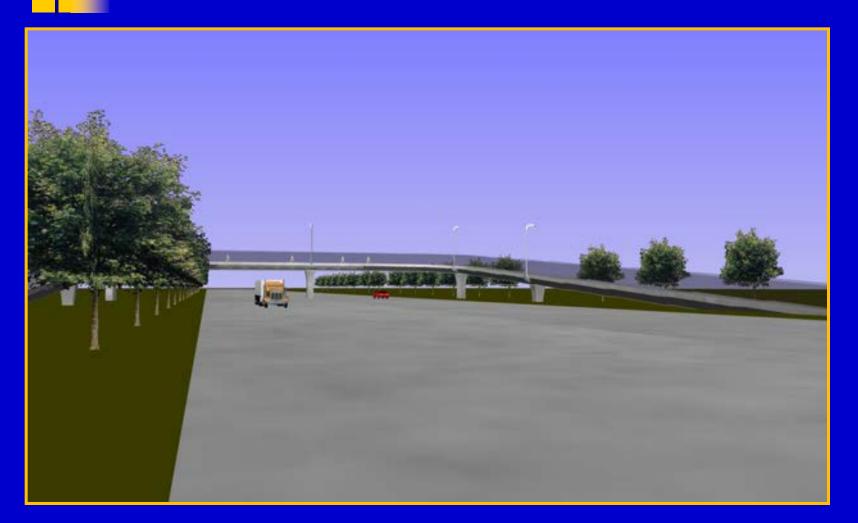
#### Rte 710 Corridor Aesthetic Master Plan Conceptual Superstructure & Fence Design Option – Modern Theme



#### Rte 710 Corridor Aesthetic Master Plan Conceptual Abutment & Retaining Wall Design - Modern Theme











#### Rte 710 Corridor Aesthetic Master Plan Conceptual Elevated Freight Corridor with Outrigger Bents – Modern Theme















## V. Sound Walls

#### Rte 710 Corridor Aesthetic Master Plan

Sound Walls: Responding to Community

#### Sound Wall Program & Design Criteria:

- Construction meets State and Federal requirements.
- Sound wall aesthetics and design to receive close coordination between the Department and local communities throughout the life of the project.
- Sound wall to use split face block with vertical score border, custom pilaster.
- Sound wall color to be 'tan'. Referee samples shall be made available to Department and local communities for approval of final color during design phase and documented in this report.
- Existing walls to be stained or colored to match new additional block color.
- Vines, shrubs, trees and groundcover shall be planted on the back or front of new and existing sound walls where feasible.

#### Rte 710 Corridor Aesthetic Master Plan

Sound Walls: Block Types



# Rte 710 Corridor Aesthetic Master Plan Sound Walls: Existing Condition



#### Rte 710 Corridor Aesthetic Master Plan Conceptual Sound Walls: "Traditional" Design Scheme: Tan Color Split Face Block, Vertical Score Border, and Custom Pilaster



#### Rte 710 Corridor Aesthetic Master Plan

Conceptual Sound Walls: "Traditional" Design Scheme:
Tan Color Split Face Block, Vertical Score Border, and Custom Pilaster

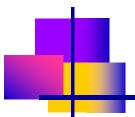


#### Rte 710 Corridor Aesthetic Master Plan

Conceptual Sound Walls: "Traditional" Design Scheme:
Tan Color Split Face Block, Vertical Score Border, and Custom Pilaster



Placement of two vines per plant hole is highly recommended. Core holing for vines has shown not an effective method and not a recommended option.



#### I-710 Corridor Aesthetic Master Plan

#### APPROVAL

City of Bell – Joe Perez	
City of Bell Gardens – Carmen Morales	
City of Commerce – Alex Hamilton	
City of Compton – G. Harold Duffey	
City of Long Beach – Robert Zur Schmiede, Barbi Clark	
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