ARTESIA *Boulevard*

Complete Street Master Plan Evaluation Report

Prepared By

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

March 28th, 2017

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GATEWAY CITIES
COUNCIL OF GOVERNMENTS

ARTESIA *Boulevard*

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

This study is intended to evaluate complete street elements that will assist in creating a more attractive, livable, and pedestrian and bicycle friendly Corridor that operates effectively and efficiently for all modes of transportation along Artesia Boulevard within the Gateway Cities Council of Governments (GCCOG) jurisdiction. The preparation of it required close coordination and significant collaboration with the Cities of Compton, Long Beach, Cerritos, Artesia, and Bellflower.

The purpose of the study is to quantify a multijurisdictional multimodal Corridor that incorporates complete street features, wherever possible, including ways to reduce greenhouse gas emissions, and considerations for stormwater treatment, while preserving mobility.

The Artesia Boulevard Corridor (Corridor) is a major regional East-West travel corridor through the GCCOG jurisdictions. Recent studies, including the GCCOG Strategic Transportation Plan (STP), adopted in April 2016, identified the Corridor as deficient in many locations, and with a wide range of technical issues. Identified issues along the Corridor include future 2035 volume/capacity and Average Daily Traffic (ADT) volume failure, and vehicular delay, which all result in poor Level of Service (LOS), as well as high accident/collisions rates, high truck volumes, and poor freeway ramps operations. Additionally, the Corridor is used by regional traffic as State Route 91 (SR-91) overflows at peak hours, due to the freeway congestion. Traffic calming measures are incorporated to mitigate freeway traffic bypass.

This study evaluated the exiting conditions of the Corridor for an upgrade to a Complete Street. The primary concept considered in this study incorporates Complete Street elements as an overall Corridor Master Plan. The Corridor can generally be defined using four (4) general street designations, including the Downtown Lifestyle, Urban Activity, Residential Calming, Principal Route. These general street designations provide a "tool kit" which are used to further detail is developed for the various focus areas, for each jurisdiction. These focus areas are used to quantify the feasibility and order of magnitude cost estimates. The results of this study provide the jurisdictions and any potential funding partners with an understanding of the holistic context of the improvements.

The overall construction capital cost to upgrade the Artesia Boulevard Corridor to a Complete Street through all five jurisdictions is estimated at: $347.5M.

EXECUTIVE SUMMARY (cont.)

The improvement assumptions and approximate preliminary cost estimates for each City are as follows:

	City of Compton: • Storm water treatment improvements, and reclaimed water for aesthetic improvements • Bicycle lanes, lighting and sidewalk improvements, including for Americans with Disabilities Act (ADA) compliance • Improvements to the SR-91 ramp interchanges at Wilmington & Central Avenues • Underground Utilities Estimated Support and Capital Cost- $40.5M
	City of Long Beach: • Potential excess Proposition A funds to upgrade possible curb ramps close to bus bays and to beautify bus shelters • City-owned former RDA lot at the corner of the Artesia Boulevard/Atlantic Avenue intersection • Proposal to include a traffic circle at this intersection and the plan can be provided for incorporation into the Master Plan • Underground Utilities Estimated Support and Capital Cost- $100.6M
	City of Bellflower: • Inventory signal equipment and other similar items to identify old versus current standard • All sidewalks and crossing ramps to be upgraded to ADA compliance. • A truly signal synchronized hardwired Corridor • Lighting - Bring up to standards for uniformity and spacing • Including bicycle facilities along the entire length of the Corridor • Repair items such as broken curbs, gutters, and pavement • Underground Utilities Estimated Support and Capital Cost- $50.2M

EXECUTIVE SUMMARY (cont.)

The improvement assumptions and approximate preliminary cost estimates for each City are as follows (cont.):

City of Artesia:

- Landscape medians using reclaimed water, which would need to be brought in via the City of Cerritos
- Incorporation of storm water treatment measures such as bio-swales inside the medians, and tree planter boxes
- Undergrounding utilities
- Procurement of an adequate property to accommodate a potential parking structure that could potentially facilitate the removal of parking along the south side of the Corridor and generate additional parking for key businesses such as the Ice Palace
- Replace deficient and antiquated street light poles with decorative median lighting
- Additional bicycle guide signs
- Hardwired signal synchronization to a Traffic Management Center (TMC)
- Additional traffic signal at Alburtis Avenue and Artesia Boulevard

Estimated Support and Capital Cost- $23.4M

City of Cerritos:

- Upgrades to existing bus stops including seating and lighting
- Undergrounding the existing overhead utilities
- Incorporate an uninterrupted Class 2 bike lane,
- Construct needed National Pollutant Discharge Elimination Systems (NPDES) improvements
- Reductions in lane widths as needed to accommodate other Complete Street elements that can be safely utilized

Estimated Support and Capital Cost- $132.8M

ARTESIA *Boulevard*

CONCEPTUAL PLANNING EXHIBITS

Prepared By

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

March 28th, 2017

ARTESIA BOULEVARD MASTER PLAN & COMPLETE STREET EVALUATION STUDY

This package is intended to outline the concepts developed that will assist in creating a more attractive, livable, and pedestrian and bicycle friendly Corridor that operates effectively and efficiently for all modes of transportation along Artesia Boulevard within the Gateway Cities.

The goal of this project is to improve the Corridor by promoting a balanced, comprehensive multimodal transportation system in an effort to enhance sustainability of the communities that it serves and to address local and regional transportation needs.

Specific goals are to:

1) Improve the multimodal mobility and access;
2) Promote and preserve multimodal transportation system;
3) Improve safety and security;
4) Foster livable and healthy communities;
5) Promote social equity and environmental justice;
6) Improve the air quality, and
7) Support economic vitality and quality of life of its communities.

In addition, the study will evaluate:

- Corridor enhancements for multimodal mobility, access, safety, and linkages;
- Transit improvement opportunities to preserve transit facilities and optimize transit infrastructure; and
- Accessibility and connectivity of the multimodal transportation network.

The presence of a Master Plan provides opportunities to revitalize the Corridor through urban design; diversity of higher density mixed use development; and improved transit, bicycle, and pedestrian connectivity. The higher densities of populations in the areas results in higher volumes of traffic and transit. The "new" street will attract development to the areas because of the improved access to the larger markets of Los Angeles and Orange County. Specific areas along the Corridor may become destinations as more commercial businesses are attracted to the area. In addition, residential growth, via multi-use or live-work space, can be expected as a result of increases in retail, nightlife, and improved multimodal connectivity, which may lessen the desire of residents to commute to Los Angeles, Orange or Riverside Counties.

This package includes the concepts developed for the Corridor, from both a Corridor wide perspective, including our "Tool Box" used to assist each city in defining their street designation, as well as city specific Focus Areas (FA's) that are illustrated in this package.

These concepts will be used for the public participation component, and will be updated based on input received, and the final master plan cost estimate will be quantified based on these concepts applied throughout the Communities.

ARTESIA BOULEVARD – EXISTING CONDITION DATA COLLECTION SUMMARY

City of Compton

	*Varies/Avg			Thru Lanes			LT		RT		Parking		Sidewalk		OH		Bicycle				Frontage		
Segment Description	Approximate R/W Width (ft)	Begin PM	End PM	EB	WB	Median	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	Transit Stop	RR Crossing	EB	WB	Comments
I/S of S. Central Ave	60*	0.0		4	3	0	0	0	0	0	0	0	No	No	No	No	No	No	None	None	No**	No**	**One-way streets/shared ramps, each a frontage road itself
500' E/O Central Ave to gore of EB 91 on ramp	80*	0.0	0.1	2	2	0	0	0	0	0	0	0	No	No	BB	BB	No	No	None	None	No**	No**	**One-way streets/shared ramps, each a frontage road itself. BB=Billboard
Gore of EB 91 on ramp to Wilmington I/S	35*	0.1	0.6	2	3	0	0	0	0	0	0	0	No	No	BB	BB	No	No	None	None	No**	No**	**One-way streets/shared ramps, each a frontage road itself
I/S of Wilmington	60*	0.6		2	3	0	0	0	0	0	0	0	No	No	No	No	No	No	None	None	No**	No**	**One-way streets/shared ramps, each a frontage road itself
500' E/O Wilmington Ave to gore of EB 91 on ramp	80*	0.6	0.7	4	3	0	0	0	0	0	0	0	No	No	BB	BB	No	No	None	None	No**	No**	**One-way streets/shared ramps, each a frontage road itself
Gore of EB 91 on ramp to Acacia Ct	35*	0.7	1.3	2	2	0	0	0	0	0	0	0	No	No	BB	BB	No	No	None	None	No**	No**	**One-way streets/shared ramps, each a frontage road itself
300' along Acacia Ct	90*	1.3	1.3	2	N/A	N/A	0	N/A	0	N/A	0	N/A	Yes	N/A	No	N/A	No	No	None	None	No	No	SR-91 U/C structure 145' wide
I/S S. Acacia Ct	75*	1.3		2	2	15 RCM	0	0	0	0	0	0	Yes	Yes	No	No	No	No	None	None	No	No	EB & WB Artesia one-way frontage roads reconnect
300' E/O Acacia to 300' W/O Santa Fe Ave	80*	1.4	2.0	2	2	15 RCM	12	0	0	12	0	0	Yes	Yes	No	No	No	No	None	Yes	No	No	RR and River crossings
I/S Santa Fe	100*	2.0		3	3	5-15 RCM	12	12	12	0	0	0	Yes	Yes	No	No	No	No	None	None	No	No	
300' E/O Santa Fe to City Limit at Gale	105	2.0	2.5	2	2	0	2x12	2x12	12	2x12	0	0	Yes	Yes	Yes	No	No	No	None	None	No	No	Power lines along EB. Landscaped median w/ trees.

ARTESIA BOULEVARD – EXISTING CONDITION DATA COLLECTION SUMMARY

City of Long Beach

	*Varies/Avg			Thru Lanes			LT		RT		Parking		Sidewalk		OH		Bicycle				Frontage		
Segment Description	Approximate R/W Width (ft)	Begin PM	End PM	EB	WB	Median	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	Transit Stop	RR Crossing	EB	WB	Comments
I/S Gale	105	2.5		2	2	16	12	12	0	0	No	No	Yes	Yes	No	Yes	Yes	Yes	None	None	Yes	Yes	**20ft painted median w/ 4ft RCM. Frontage roads not in entire segment.
I/S Gale to 300' E/O Gale	115	2.5	2.5	2	2	18	0	12	0	0	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	None	None	No	No	WB CL 2 Bike lane terminates 200' W/O Gale
300' E/O Gale to 300' W/O Long Beach Blvd	110	2.5	2.6	2	2	20	0	0	0	0	No	Yes	Yes	Yes	No	Yes	Yes	Yes	None	None	No	No	
I/S Long Beach Blvd	110	2.6		2	2	5	12	12	11	11	No	No	Yes	Yes	No	No	Yes	Yes	None	None	No	No	
300' E/O Long Beach to 300' W/O Butler Ave	110	2.6	2.9	2	2	5-20 RCM	12	12	12	12	Yes	Yes	Yes	Yes	N/S	N/S	Yes	Yes	None	None	No	No	North/South (N/S) OH crossings at various locations
I/S Butler Ave	110	2.9		2	2	5	11	11	11	11	Yes	Yes	Yes	Yes	Bridge	Yes	Yes	Yes	None	None	No	No	SR-91 crosses over SE corner of I/S
I/S Butler Ave to 650' E/O Butler	110	2.9	3.0	2	2	20-May	0	0	0	0	No	No	Yes	Yes	Bridge	Bridge	Yes	Yes	None	None	No	No	SR-91 undercrossing structure 500' in length +/-
650' E/O Butler to 300' W/O Atlantic Ave	105*	3.0	3.5	2	2	4	0	0	0	0	No	No	Yes	Yes	Yes**	No	Yes	Yes	None	None	No	No	**Large power distribution xing near LA river, OH power E/O LA river, south side. Artesia Blvd. crosses LA River.
I/S of Atlantic Ave	110	3.5		2/3	2	0/5	2x12	12	10	10	No	No	Yes	Yes	Yes	No	Yes	Yes	None	None	No	No	
300' E/O Atlantic to 300' W/O Orange	110	3.5	4.0	2	2	4-18 RCM	12	12	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	None	None	No	No	Note: Bike lanes discontinued at Atlantic
I/S of Orange	110	4.0		2	2	5 RCM	12	12	12	12	No	No	Yes	Yes	Yes	No	No	No	None	None	No	No	RT lanes unmarked
300' E/O Orange to 300' W/O Cherry	110	4.0	3.2	2	2	3-15 RCM	12	12	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	None	None	No	No	
I/S Cherry Avenue	110	4.5		2	2	4 RCM	12	12	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	None	None	No	No	
300' E/O Cherry to 300' W/O Downey	110	4.5	5.5	2	2	4-15 RCM	12	12	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	None	Yes**	No	No	**400' E/O I/S Santa Fe
I/S Downey Avenue	110	4.2		2	2	6 (West only)	12	12	0	0	No	No	Yes	Yes	Yes	No	No	No	None	None	No	No	** City Limit at Downey

ARTESIA BOULEVARD – EXISTING CONDITION DATA COLLECTION SUMMARY

City of Bellfower

	*Varies/Avg			Thru Lanes			LT		RT		Parking		Sidewalk		OH		Bicycle				Frontage		
Segment Description	Approximate R/W Width (ft)	Begin PM	End PM	EB	WB	Median	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	Transit Stop	RR Crossing	EB	WB	Comments
300' E/O Downey to 300' W/O Lakewood	105	5.5	6.0	2	2	12	Var.	Var.	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
I/S of Lakewood	100	6.0		2	2	0	12	12	12	10	No	No	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
300' E/O Lakewood to 300' W/O Clark	100	6.0	6.5	2	2	0-12 RCM	12	12	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
I/S of Clark	100	6.5		2	2	0-2 RCM	12	12	12	12	No	No	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
300' E/O Clark to 300' W/O Bellflower	100	6.5	7.0	2	2	12	12	12	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
I/S of Bellflower	100	7.0		2	2	0-2 RCM	12	12	12	12	No	No	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
300' E/O Bellflower to 300' W/O Woodruff	100	7.0	7.5	2	2	12**	12	12	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	None	No	No	Painted TWLTL
I/S of Woodruff	100	7.5		2	2	0	12	12	12**	12**	No	No	Yes	Yes	Yes	Yes	No	No	No	None	No	No	RTL's not delineated
300' E/O Woodruff to 300' W/O Palo Verde	100	7.5	8.1	2	2	12**	12	12	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	None	No	No	Painted TWLTL
I/S of Palo Verde	100-115*	8.1		2	2	4	12	12	12	0	No	No	Yes	Yes	Yes	Yes	No	No	No	None	No	No	
I/S Palo Verde to San Gabrial River Mid Trail/City Limit	60-95*	8.1	8.2	2	2	0-9	0	12	0	0	Yes	No	Yes	No	Yes	No	No	No	No	None	No	No	

ARTESIA BOULEVARD – EXISTING CONDITION DATA COLLECTION SUMMARY

City of Artesia

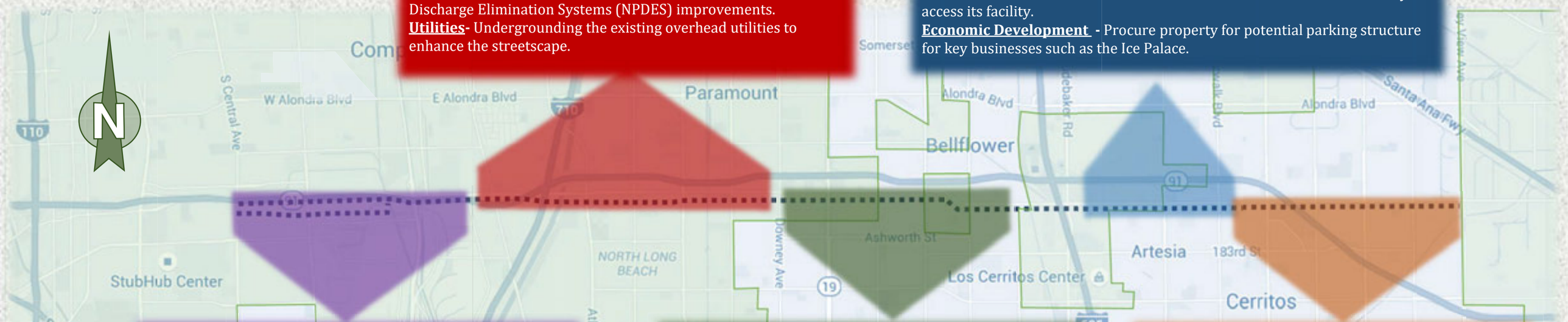
	*Varies/Avg			Thru Lanes			LT		RT		Parking		Sidewalk		OH		Bicycle				Frontage		
Segment Description	Approximate R/W Width (ft)	Begin PM	End PM	EB	WB	Median	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	Transit Stop	RR Crossing	EB	WB	Comments
I/S Gridley Rd/City Limit to 300' W/O Pioneer	100	9.1	9.6	2	2-3	4-18 RCM	12	12	12**	12	No	No	Yes	Yes	No	Yes	No	Yes	None	None	No	No	**Unmarked RTLs. Class 2 bike lane WB.
I/S Pioneer	100	9.6		2	2	4-18 RCM	2x12	2x12*	0	0	No	No	Yes	Yes	No	Yes	No	Yes	None	None	No	No	**Painted island blocking 2nd LTL
300' E/O Pioneer to I/S Clarkdale**	100	9.6	9.7	2	2	4-18 RCM	12	0	0	0	No	No	Yes	Yes	No	Yes	No	Yes	None	None	No	No	**I/S Clarkdale is City Limit for WB half of corridor
I/S Clarkdale to 100' E/O Belshire/City Limit	50	9.7	10.3	2		4-18 RCM	12		0		No		Yes		No		No		None	None	No		**E/W city boundaries along median of corridor

ARTESIA BOULEVARD – EXISTING CONDITION DATA COLLECTION SUMMARY

City of Cerritos

	*Varies/Avg			Thru Lanes			LT		RT		Parking		Sidewalk		OH		Bicycle				Frontage		
Segment Description	Approximate R/W Width (ft)	Begin PM	End PM	EB	WB	Median	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	Transit Stop	RR Crossing	EB	WB	Comments
I/S Clarkdale to 100' E/O Belshire/City Limit	50	10.3			2	4-18 RCM		12										No	None	None		No	**E/W city boundaries along median of corridor
100' E/O Belshire to 300' W/O Bloomfield	100	10.3	10.6	2	2	4-18 RCM	12	12	0	0	No	No	Yes	Yes	No	Yes	Yes	Yes	None	None	No	No	
I/S Bloomfield	100	10.6		2	2	4-18 RCM	12	2x12	12	0	No	No	Yes	Yes	No	Yes	No	No	None	None	No	No	
300' E/O Bloomfield to SR-91	65-100	10.6	10.9	2	2	4-30 RCM	12	0	0	0	No	No	Yes	Yes	No	No	No**	No	None	None	No	No	**Under construction, bike lane possible
San Gabrial River Mid Trail/City Limit to 300' W/O Studebaker	64-100*	8.2	8.6	2	2	5 RCM	12	12	0	0	No	No	Yes	Yes	Yes	No**	No	No	None	None	No	No	**I-605 UC length = 172', multiple structures
I/S Studebaker	100	8.6		2	2	5-12 RCM	2x12	12	12	12	No	No	Yes	Yes	Yes	No	No	No	None	None	No	No	
300' E/O Studebaker to Gridley Rd/City Limit	100	8.6	9.1	2	2-3	5-12 RCM	12	12	12**	12	No	No	Yes	Yes	No	Yes	No	No	None	None	No	No	**Unmarked RTLs
SR-91 to 300' W/O Shoemaker	70-100*	10.9	11.2	2	2	4-15 RCM	10	10	0	0	No	No	Yes	Yes	No	No	No	No	None	None	No	No	SR-91 on/off ramps in this segment
I/S Shoemaker	100	11.2		2	2	4 RCM	10	10	10	10	No	No	Yes	Yes	No	Yes	No	No	None	None	No	No	
300' E/O Shoemaker to 300' W/O Carmenita	100	11.2	11.6	2	2	4-15 RCM	10	10	0	0	No	No	Yes	Yes	No	Yes	Yes	Yes	None	None	No	No	
I/S Carmenita	100	11.6		2	2	4 RCM	10	10	0	0	No	No	Yes	Yes	No	No	Yes	Yes	None	None	No	No	**Under construction, bike lane possible
300' E/O Carmenita to 300' W/O Marquardt	100	11.6	11.9	2	2	4-15 RCM	10	10	0	0	No	No	Yes	Yes	Yes	Yes	Yes	Yes	None	None	No	No	OH lines cross near I/S of Garrett
I/S Marquardt	100	12.2		2	2	4 RCM	10	10	0	0	No	No	Yes	Yes	Yes	No	Yes	Yes	None	None	No	No	
300' E/O Marquardt to 300' W/O Valley View	100*	12.2	12.7	2	2	4-15 RCM	10	10	0	0	No	No	Yes	Yes	Yes	Yes	Yes/N	Yes/N	None	None	No	No	Section contains Coyote Creek crossing-- R/W narrows & bike lanes end
I/S Valley View	100	12.7		2	2	4 RCM	10	12	10	12	No	No	Yes	Yes	Yes	No	No	No	None	None	No	No	N/S OH crossing on east side of I/S

ARTESIA BOULEVARD – CORRIDOR VISION



City of Long Beach

Promotes Transit - Upgrade possible curb ramps close to bus bays and beautify bus shelters.
Promotes Active Transportation – Bicycle lanes provided along Artesia Blvd. Upgrade curb ramps to ADA compliance.
Economic Development - There is a City-owned former RDA lot at the corner of the Artesia Boulevard/Atlantic Avenue intersection.
Stormwater Management - Construct needed National Pollutant Discharge Elimination Systems (NPDES) improvements.
Utilities- Undergrounding the existing overhead utilities to enhance the streetscape.

City of Artesia

Water Conservation - Landscape medians using reclaimed water.
Stormwater Management - Storm water treatment measures such as bioswales, and tree planter boxes.
Active Transportation - Additional bicycle guide signs. Undergrounding utilities to make room for a Class 2 bike lane on the south side of the Corridor. Inventory and upgrade ADA features. Improved street lighting features.
Facilitate Goods Movement – Add traffic signal at Alburtis Avenue and Artesia Boulevard so that the "California Milk Producers" trucks can safely access its facility.
Economic Development - Procure property for potential parking structure for key businesses such as the Ice Palace.

City of Compton

Stormwater Management and Water Conservation - Storm water treatment measures such as bio-swales, and tree planter boxes. Connection to the west basin near Avalon for reclaimed water.
Utilities – Undergrounding of utilities.
Active Transportation - Improve bicycle lanes and sidewalks.
Street Improvements - Dedicated right turn lanes from WB Artesia to NB Wilmington, and from WB Artesia to NB Central. Ramp improvements for SR-91 interchanges at Wilmington & Central Avenues.
Congestion Reduction - Improvements to the SR-91 ramp interchanges at Wilmington & Central Avenues will Facilitate Goods Movement.

City of Bellflower

Congestion Reduction - Update signal equipment and other similar for a signal synchronized hardwired Corridor
Active Transportation - All sidewalks and crossing ramps to be upgraded to ADA compliance. Improve lighting for uniformity and spacing. Provide bicycle facilities along the entire length of the Corridor.
Promotes Transit – Upgrade Bus Stops and potential bus bays.
Street Improvements - Repair items such as broken curbs, gutters, and pavement.
Utilities – Undergrounding of utilities.

City of Cerritos

Promotes Transit - Upgrade existing bus stops including seating and lighting.
Active Transportation - The ability to incorporate an uninterrupted Class 2 bike lane.
Stormwater Management and Water Conservation- Construct needed National Pollutant Discharge Elimination Systems (NPDES) improvements. Surplus of reclaimed water available for adjacent municipalities.
Utilities- Undergrounding the existing overhead utilities to enhance the streetscape.

NOTE:

1. *Areas shaded in green have been identified as disadvantaged communities. (source: Office of Environmental Health Hazard Assessment)*

ARTESIA BOULEVARD – STREET DESIGNATION

Street Designations

No	Type	Description
1	Downtown Lifestyle	Street designed to serve retail and mixed land uses, promoting walking, bicycling, and transit within an attractive landscaped corridor.
2	Urban Activity	Street designed to serve mixed use commercial, retail and residential areas with active transportation activities.
3	Residential Calming	Street designed to promote slowing traffic.
4	Principal Route	Multi-lane facility designed to serve higher volume traffic corridor movements.

Focus Areas

City of Compton

- F-1 Central Avenue and Wilmington Avenue at SR-91

City of Long Beach

- F-2 Atlantic Avenue Area

City of Bellflower

- F-3 Bellflower Boulevard Area

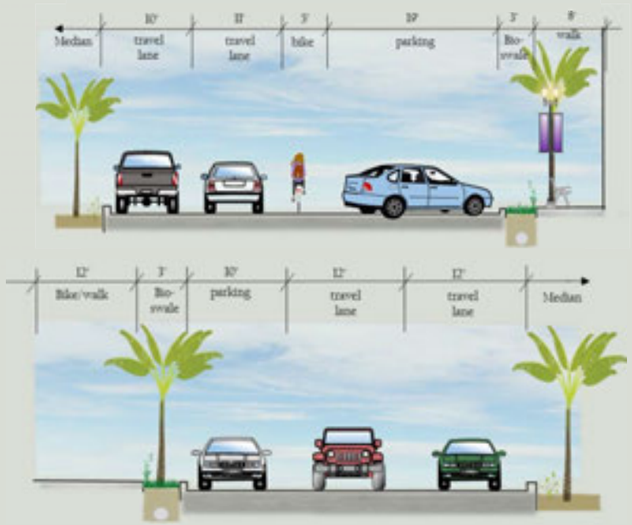
City of Cerritos

- F-4 I-605 and the San Gabriel River

City of Artesia

- F-5 Pioneer Boulevard Area

Street Typical-Sections

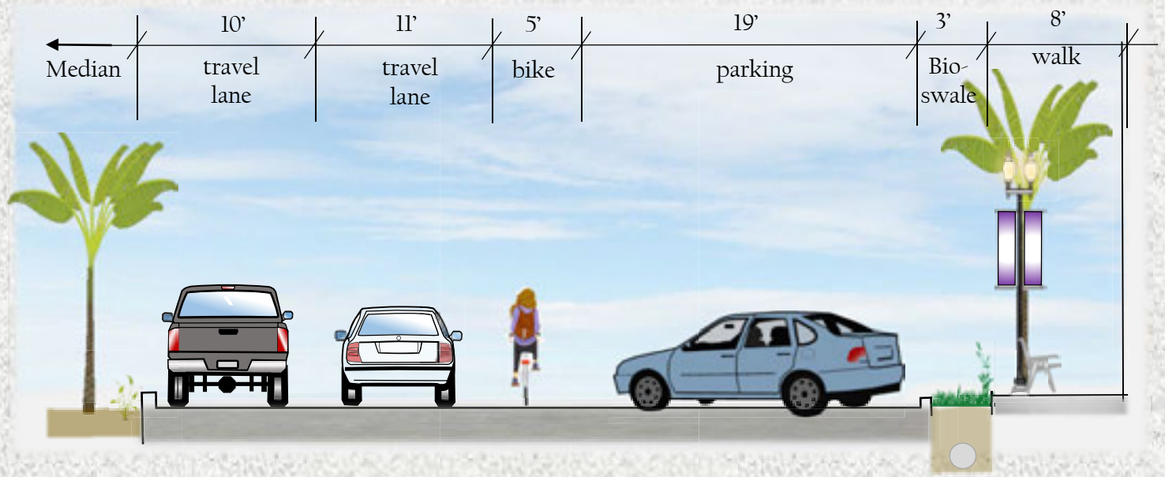


DOWNTOWN LIVING

Characteristics of Downtown Living Streets:

- Reduce Traffic Speeds
- Promote Pedestrian Activity
- Landscape Medians
- Mature Street Trees
- Special Districts
- Transit Connections

1 Street Tree
2 Landscaped Median
3 Decorative Cross Walk
4 Decorative Street/Pedestrian Lighting
5 Bus Stop with amenities
6 Streetscape Bike Racks



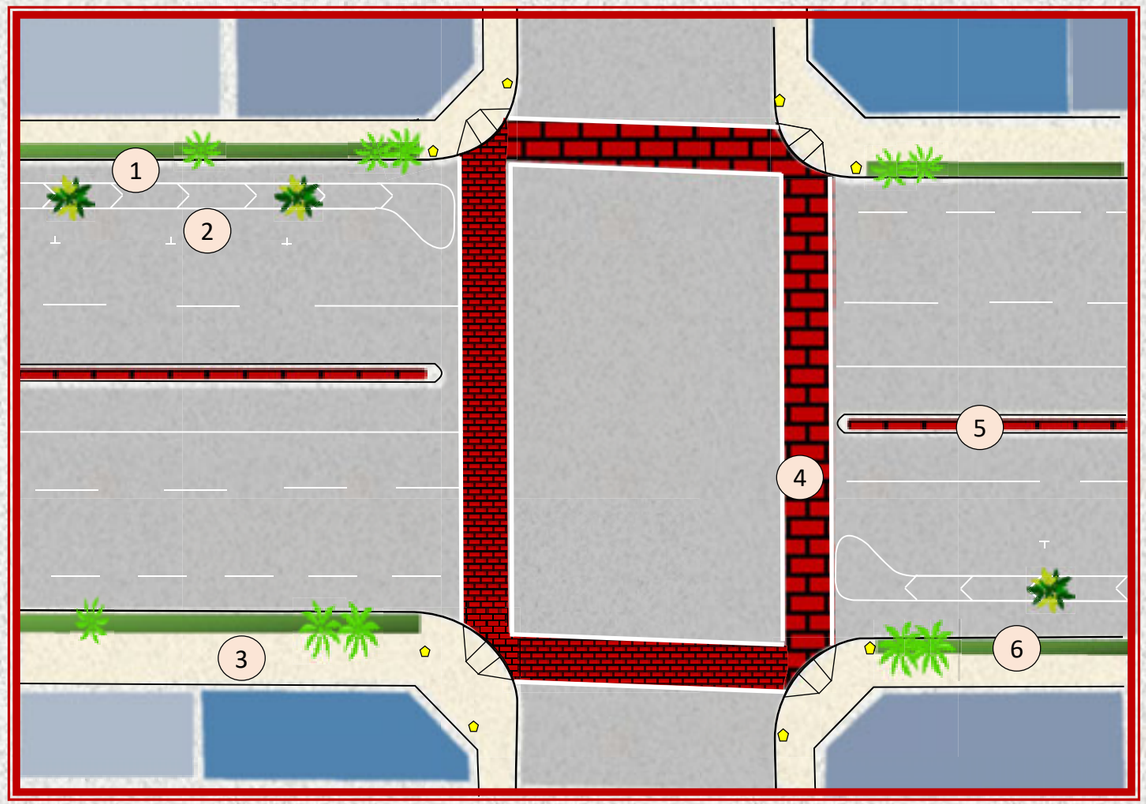
Downtown Living

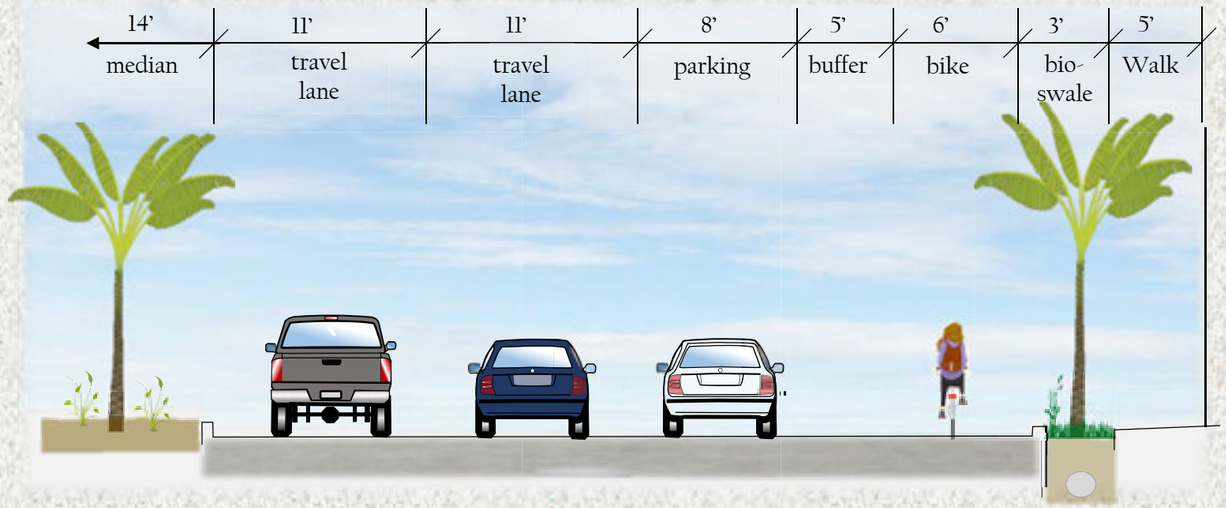
Roadway Half-Section

URBAN ACTIVITY

Characteristics of Urban Activity Streets:

- Promote Active Transportation
- Landscape Medians
- Defined Crosswalks
- Water Quality Features
- On-street Parking





1 Bikeway
2 Street Parking
3 Walkway
4 Decorative Cross Walk
5 Landscaped Median
6 Bio-Swale

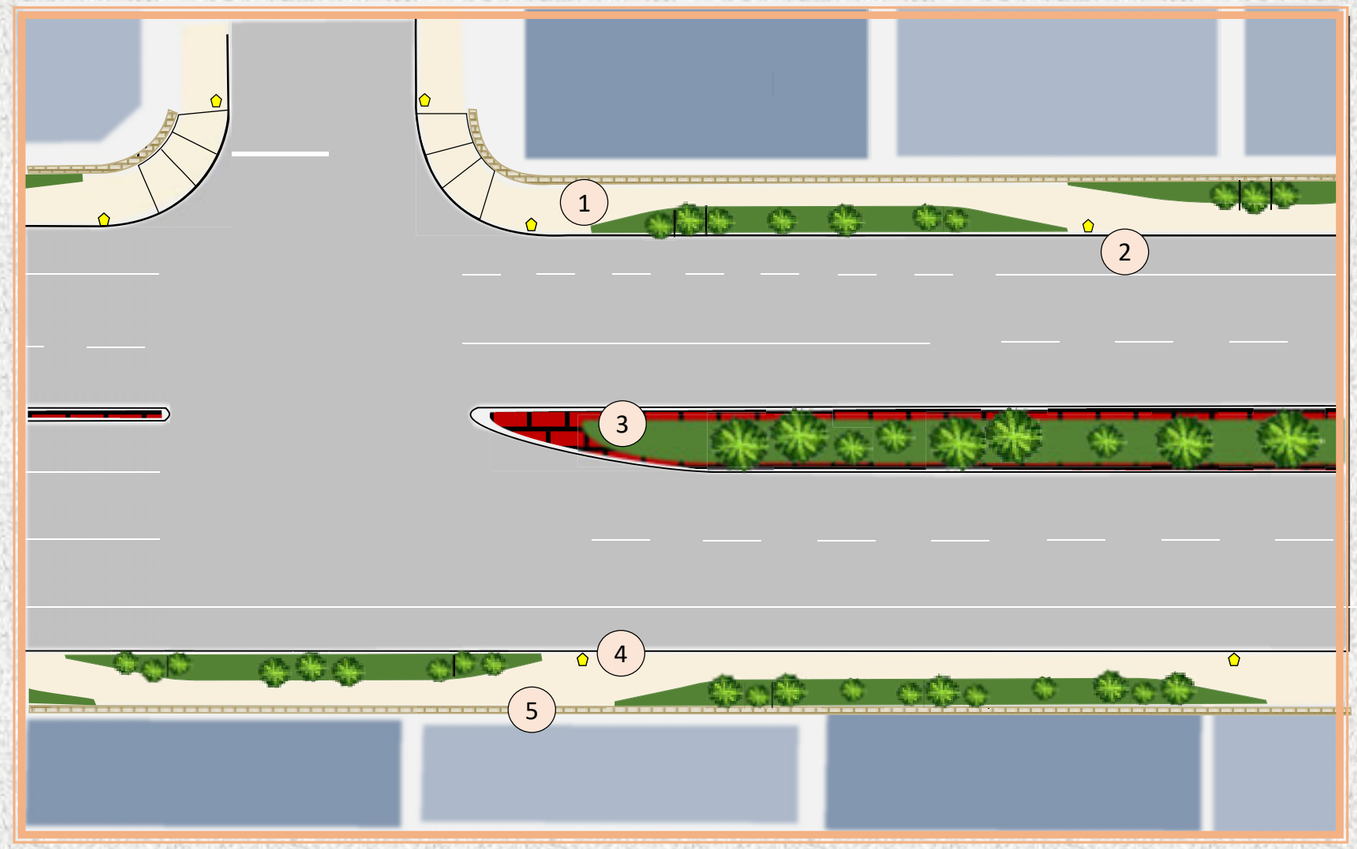
Urban Activity

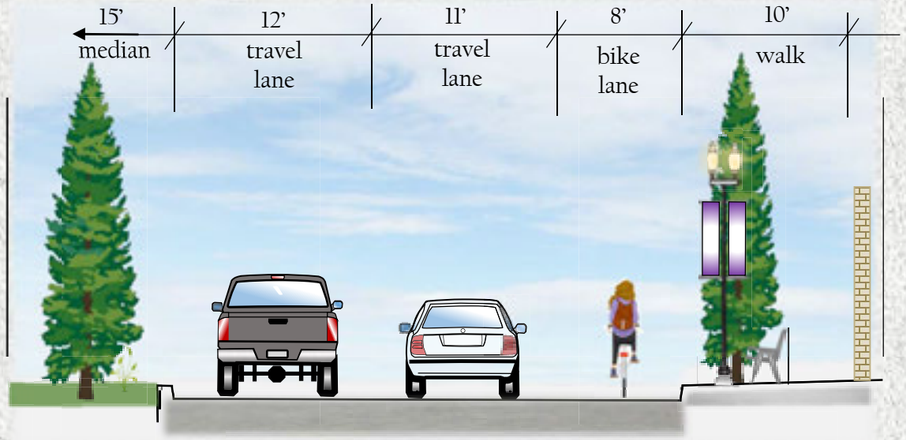
Roadway Half-Section

RESIDENTIAL LIVING

Characteristics of Residential Living Streets:

- Narrower Lanes to Reduce Traffic Speeds
- Promote Bike Activity
- Promote Pedestrian Activity
- Mature Street Trees
- Soundwalls





1 Meandering Walkway
2 Bike Lane
3 Landscape/Hardcape Medians
4 Decorative Street/Pedestrian Lighting
5 Soundwalls

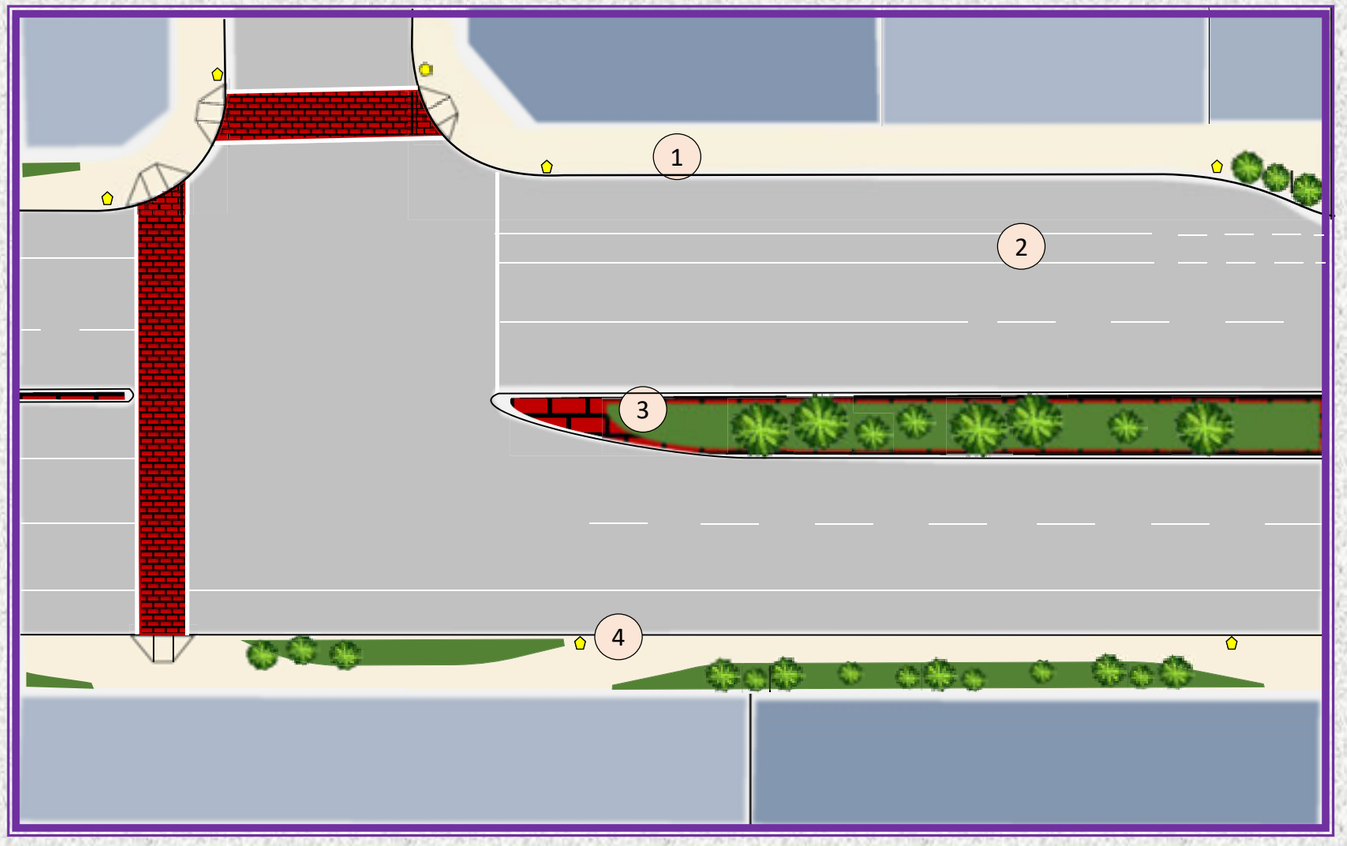
Residential Living

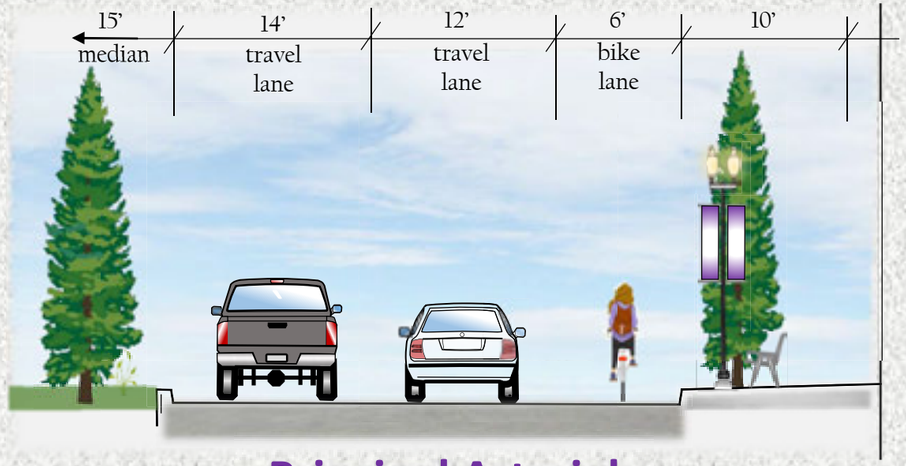
Roadway Half-Section

PRINCIPAL ARTERIAL

Characteristics of Principal Arterial Streets:

- Standard lanes
- Promote Bike Activity
- Promote Pedestrian Activity
- Mature Street Trees
- Transit Connections





Principal Arterial

Roadway Half-Section

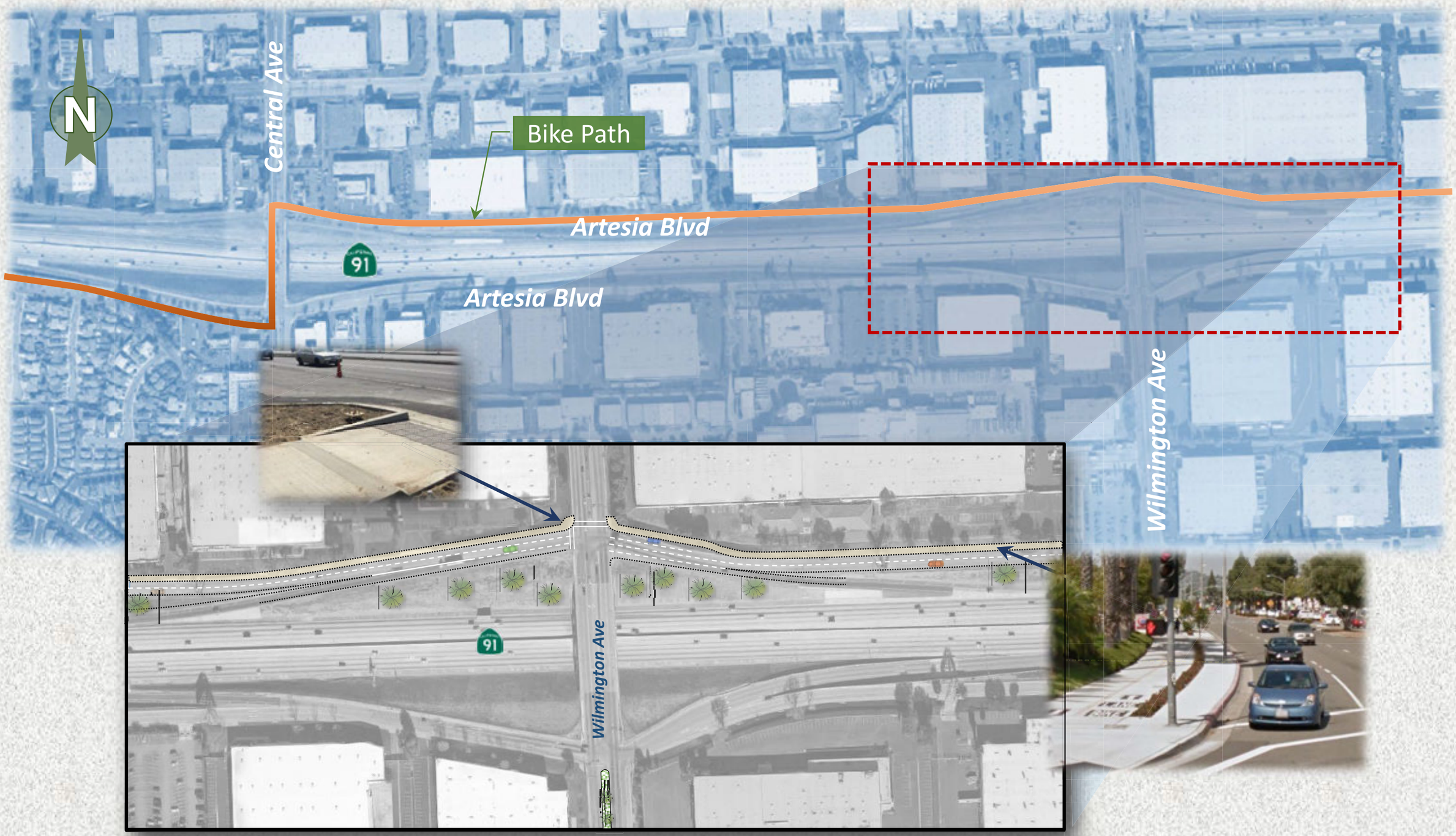
1 Meandering Walkway

2 Bike Lane

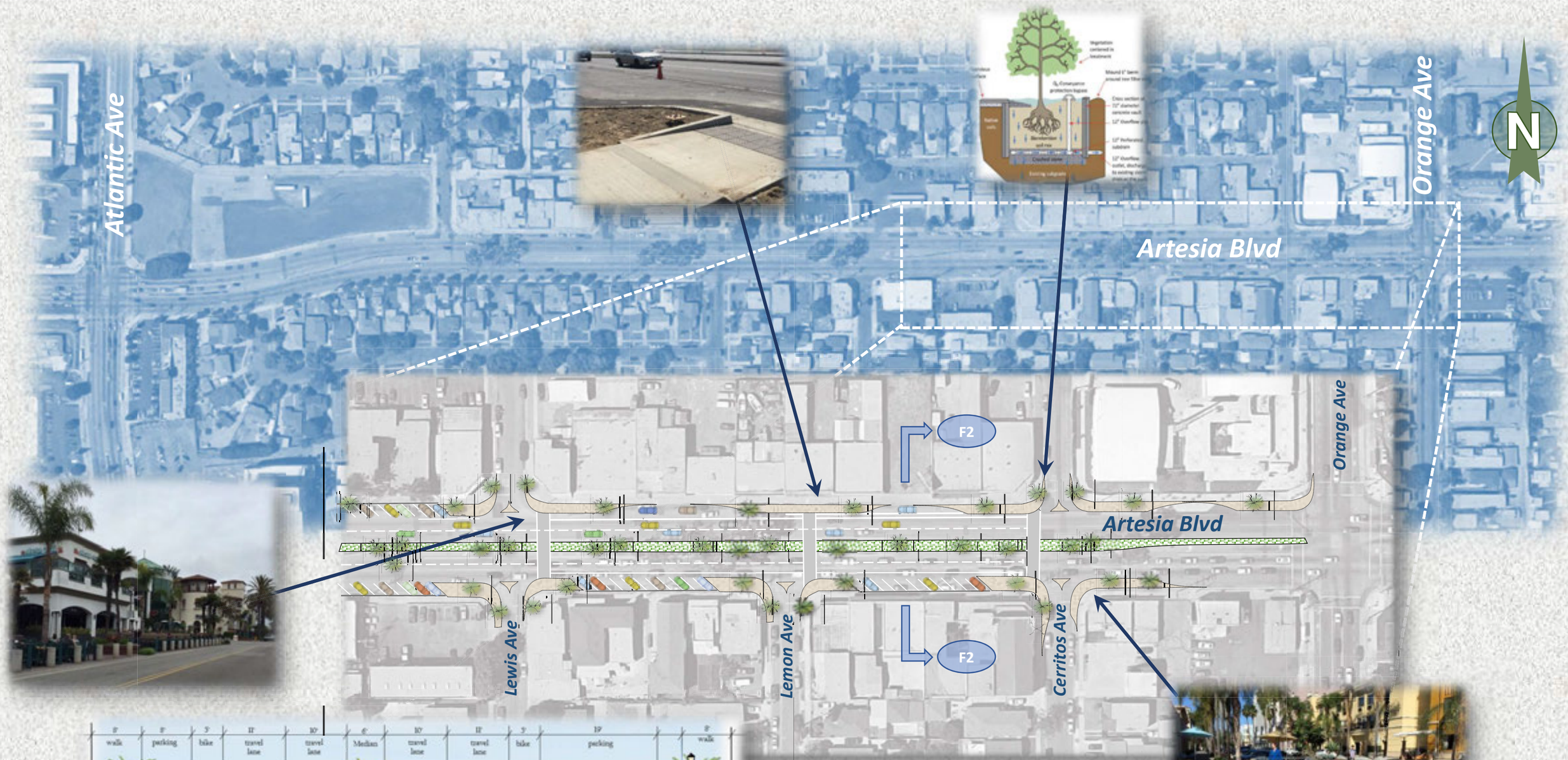
3 Landscape/Hardcape Medians

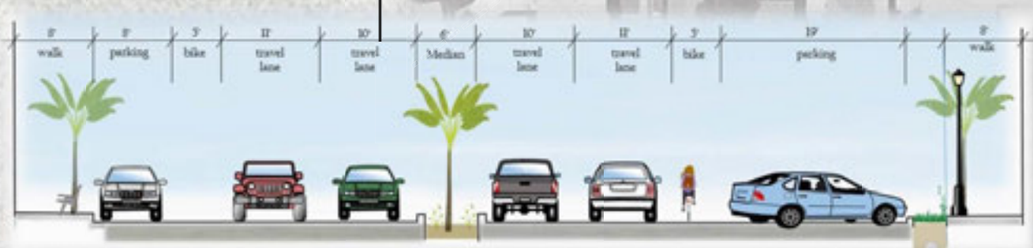
4 Decorative Street/Pedestrian Lighting

COMPTON STREET FOCUS AREA F-1 CENTRAL AVE & WILMINGTON AVE



LONG BEACH STREET FOCUS AREA F-2 ATLANTIC AVE TO ORANGE AVE





Typical Section

Section F2-F2

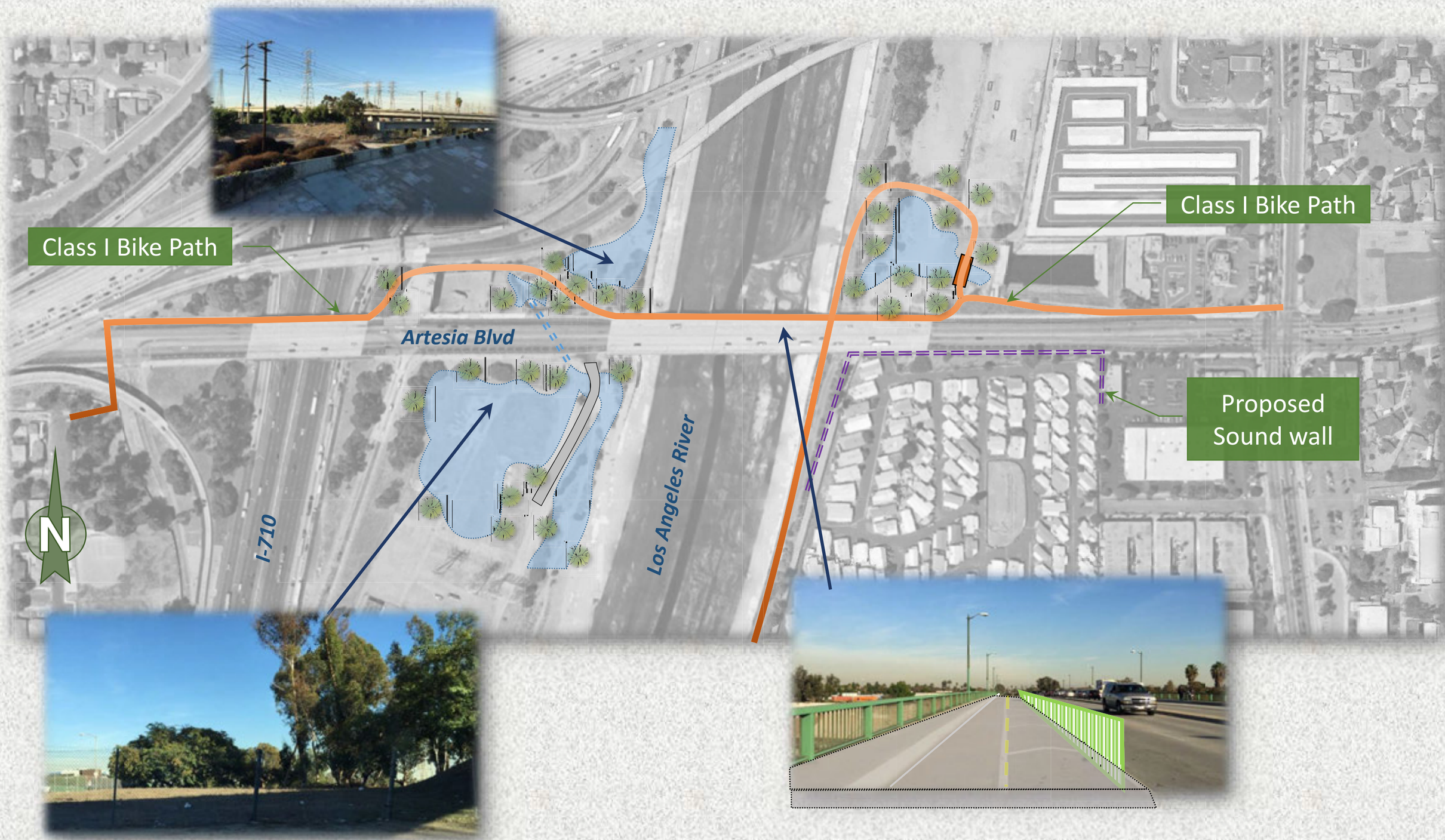
BELLFLOWER STREET FOCUS AREA F-3 BELLFLOWER BLVD AREA

ARTESIA BOULEVARD WATER COURSES & URBAN GREENING

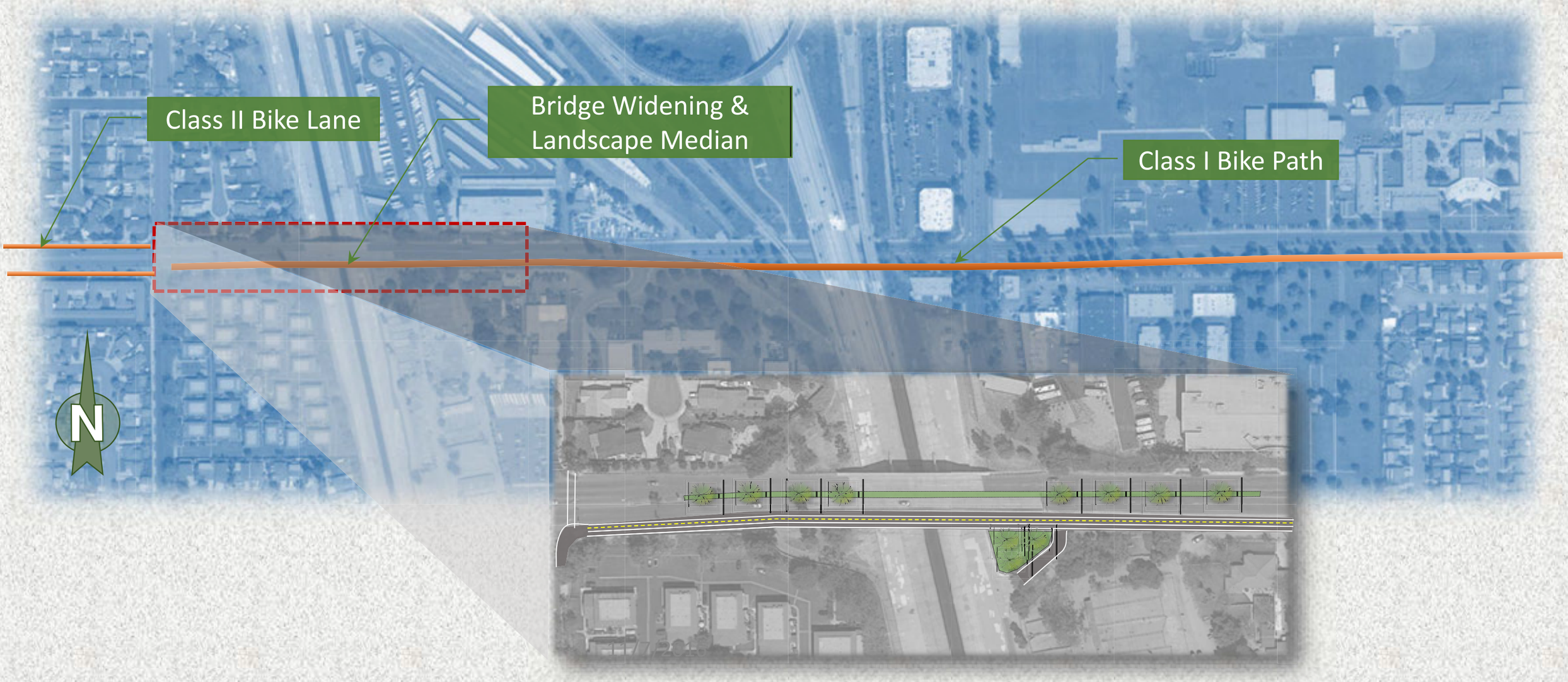
Focus Areas

- W-1 Compton Creek
- W-2 LA river
- W-3 San Gabriel River
- W-4 Coyote Creek

FOCUS AREA W-2 COOLIDGE PARK & ATLANTIC AVE



FOCUS AREA W-3 SAN GABRIEL RIVER CROSSING



ARTESIA BOULEVARD – PARKING

Bicycle lane with back-in/head-out angle parking

Curb Extensions w/ Angle Parking

Street Parallel Parking

ARTESIA *Boulevard*

EVALUATION REPORT

Prepared By

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

March 28th, 2017

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

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1.0 INTRODUCTION

1.1 Project Goals and Objectives

This report is intended to serve as a guide for implementation of a project that will create a more attractive, livable, and pedestrian and bike friendly environment that operates effectively and efficiently for all modes of transportation along Artesia Boulevard within the Gateway Cities.

The goal of this project is to improve the Corridor by promoting a balanced, comprehensive multimodal transportation system in an effort to enhance sustainability of the communities that it serves and to address local and regional transportation needs. The study results and the Complete Street Master Plan are expected to lead to the programming, development, and construction of a Complete Street along Artesia Boulevard. Specific goals are to: 1) improve the multimodal mobility and access, 2) promote and preserve multimodal transportation system, 3) improve safety and security, 4) foster livable and healthy communities, 5) promote social equity and environmental justice, 6) improve the air quality, and 7) support economic vitality and quality of life of its communities.

Objectives of this report include:

- Identify improvements to reduce transportation related greenhouse gases
- Identify concepts for creating sustainable communities
- Identify and develop community to school or safe routes to school plans
- Identify and develop Complete Street plans and streetscapes plans
- Identify and develop bike and pedestrian safety enhancement plans
- Identify traffic operations and safety enhancements opportunities

In addition, this report will evaluate:

- Corridor enhancements for multimodal mobility, access, safety, and linkages
- Transit improvement opportunities to preserve transit facilities and optimize transit infrastructure
- Accessibility and connectivity of the multimodal transportation network

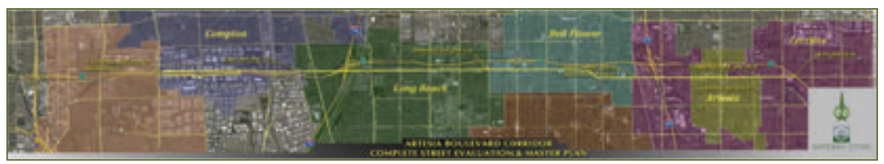
The presence of a Master Plan provides opportunities to revitalize the Corridor through urban design; diversity of higher density mixed use development; and improved transit, bike, and pedestrian connectivity. The higher densities of populations in the areas results in higher volumes of traffic and transit. The “new” street will attract development to the areas because of the improved access to the larger markets of Los Angeles and Orange County. Specific areas along the Corridor may become destinations as more commercial businesses are attracted to the area. In addition, residential growth, via multi-use or live-work space, can be expected as a result of increases in retail, nightlife, and improved multimodal connectivity, which may lessen the desire of residents to commute to Los Angeles, Orange or Riverside Counties.

1.2 Project Limits

The project limits, broken by jurisdiction and distance, of the study are the following:

JURISDICTION	LIMITS ALONG THE CORRIDOR	LENGTH ALONG THE CORRIDOR
Compton	Intersection of S. Central Ave to 300' East Of Santa Fe to City Limit at Gale	2.25 Miles
Long Beach	Intersection of Gale to intersection of Downey Avenue	3.0 Miles
Bellflower	300' East Of Downey to 300' West of Lakewood to intersection of Palo Verde to San Gabriel River Mid Trail/City Limit	2.25 Miles
Artesia	Intersection of Gridley Rd/City Limit to 300' West of Pioneer to Intersection Clarkdale to 100' East of Belshire/City Limit	0.875 Mile
Cerritos	1. San Gabriel River Mid Trail/City Limit to 300' West of Studebaker to Intersection of Valley View 2. Intersection of Clarkdale to 100' East Of Belshire/City Limit to 300' East of Bloomfield to SR-91	3.375 Miles
Total		11.75 Miles

The Project Map is shown as follows:



1.3 Scope of Work

This report generally follows the scope tasks included in the GCCOG Implementation agreement, which is consistent with the initial kick-off meeting and scope of work provided and presented at that time. The tasks necessary to create a Master Plan for Artesia Boulevard is as follows:

- Data Collection and Review of Existing Conditions
  - Field Review
  - Meet with each jurisdiction/stakeholder
  - Gather relevant document and literature for review
- Multimodal Corridor Evaluation and Analysis
  - Evaluate the existing conditions Corridor
  - Develop and provide a high-level analysis of a future Corridor
- Complete Streets Needs Analysis
  - Conduct a needs analysis for Complete Streets and multimodal Corridor, and identify constraints/opportunities.
- Community and Stakeholder Outreach
- Complete Streets Implementation
  - Quantify the Unconstrained Condition concept
  - Develop areas of focus concept plans for each jurisdiction
  - Demonstrate achievement of a Multi-modal Corridor with Consistency Across the Sub-Region
- Order of Magnitude Cost Estimates
- Presentations to Committees and City Councils
- Finalized Corridor Master Plan

1.4 Project Timeline

The Project Schedule was planned in a manner to allow for ample research/outreach working directly with Public Works and Planning Departments. The creative approach of the vision building was the product of not rushing the concept development phase.
In short the schedule was perfect.

The major project milestones include the following:

MAJOR SCOPE MILESTONES	DATE:
NTP - Master Plan and Complete Street Evaluation Study	August 5, 2015
Data collection, field reviews and one-on-one meetings	August - October 2015
Corridor Evaluation and Analysis – Existing and Future Conditions	October – December 2015
Conduct Complete Streets Needs Analysis	December 2015 – April 2016
Community/Stakeholder Outreach/Public Works	April-August 2016
Complete Street Implementation Alternatives	August - November 2016
Prepare Conceptual Design of Complete Street Master Plan	September-November 2016
Develop Conceptual Design with Cost Estimates	October-November 2016
Presentation to Committees and City Councils	July-November 2016
Finalize Conceptual Design of Complete Streets Corridor Master Plan	November 2016 – February 2017

2.0 DATA COLLECTION AND REVIEW OF EXISTING CONDITIONS

2.1 Existing Conditions by Jurisdiction

Individual jurisdictional meetings were held to better understand the existing conditions and to obtain perspective regarding the deficiencies, constraints and opportunities along the Corridor. The various existing transportation modes were discussed and missing modes were identified and documented as part of the existing condition summaries.

At the time of the meetings, project data needs were reviewed and information was collected, as needed. A detailed field review was completed along the Corridor, which included both driving and walking the entire project limits. The field reviews included a general inventory of the overhead utilities, landscaped medians, ADA access, the changes in land uses, and drainage/ponding during the few rain events.

The following are summaries of the meetings conducted with each jurisdiction.

2.1.1 City of Cerritos

On July 14, 2015, a meeting was held at the City of Cerritos with the Assistant City Engineer and Current Planning Manager. Deficiencies, opportunities and challenges along the Corridor were identified.

Generally, the City has a residential land use with some commercial uses along the Artesia Corridor. There are existing noise and visual buffers including sound walls and dense landscape to protect the residential section from the arterial. The Corridor is not a designated truck route as truck traffic utilizes SR-91. Los Angeles County completed a signal synchronization project that improved the Level of Service of Artesia Boulevard with the City.

There is a 300 to 400 unit multifamily residential complex under construction on the northeast quadrant of the intersection of Bloomfield and Artesia Boulevard. This is an Interstate 605 (I-605) Hotspot location that has recently completed the environmental planning phase using Measure R funds. The Los Angeles Metropolitan Transportation Authority (Metro) is going to be the lead agency for the design phase and the City is going to be responsible for right of way certification.

The City has existing raised curb planted medians that utilize recycled water along the Corridor and general parking is prohibited on the street.

Deficiencies include:

- There are a total of three (3) deficient bridges along the Corridor within Cerritos: 1) over the San Gabriel River, 2) over Coyote Creek, and 3) over SR–91. All three bridges compromise the ability for bicycles to access either the existing Class 1 bike lanes below along the river(s) or the ability to connect and construct a Class 2 lane along the entire Corridor.
- The Class 2 bike lane is interrupted by the City of Artesia primarily due to street parking.
- East of Shoemaker, there is a Class 2 bike facility that extends nearly to the Coyote Creek bridge Class 1 entrance, but does not fully connect.
- West of Shoemaker, there is an unmarked Class 3 facility, which requires analysis for possible upgrade.

Opportunities include:

- Upgrades to existing bus stops including seating and lighting.
- Undergrounding the existing overhead utilities to enhance the streetscape
- The ability to incorporate an uninterrupted Class 2 bike lane,
- Construct needed National Pollutant Discharge Elimination Systems (NPDES) improvements
- Reductions in lane widths as needed to accommodate other Complete Street elements that can be safely utilized.

Challenge:

- Along the Corridor, the City of Artesia is surrounded completely by the City of Cerritos, and the existing lack of Class 2 lanes within the City of Artesia will make it difficult to construct a seamless Class 2 bike lane from the eastern City boundary to the western City boundary. The break within the City of Artesia is primarily due to the on street parking.

2.1.2 City of Artesia

On July 16, 2015 a meeting was held with the City of Artesia to discuss the Artesia Boulevard Corridor Master Planning and Complete Street Study effort.

The major intersection crossing within the City is on Artesia at Pioneer Boulevard. It is uncertain whether this intersection is part of an identified Measure R fundable I-605 Hotspot, but was described by the City as a heavily congested intersection. The existing Corridor within the City boundaries includes overhead utilities; a Class 2 bike lane that runs along the north side of the roadway from Clarkdale to Gridley Road; potable irrigated landscaped medians; and parking along both sides of the street.

There are currently no transit stops within the City limits along the Corridor, although an old bus shelter does exist, which is planned to be moved to another location within the City. There are no major drainage issues such as ponding or flooding. The intersection of Pioneer/Artesia has been heavily impacted due to recent utility relocations and other roadway work, and is in need of resurfacing. The City has an Artesia Boulevard specific plan on their City website. The City is open to a reduction in lane widths, pending evaluation of the speed limit(s) in the subject area.

The City is interested in the following opportunities:

- Landscape medians using reclaimed water, which would need to be brought in via the City of Cerritos.
- Incorporation of stormwater treatment measures such as bio-swails inside the medians, and tree planter boxes.
- Undergrounding utilities to help generate additional room for features such as a Class 2 bike lane on the south side of the Corridor.
- Procurement of an adequate property to accommodate a potential parking structure that could potentially facilitate the removal of parking along the south side of the Corridor and generate additional parking for key businesses such as the Ice Palace.
- The replacement of deficient and antiquated street light poles with possible decorative median lighting.
- Additional bicycle guide signs.
- Hardwired signal synchronization to a TMC as the current system is wireless radio antenna timing.
- An additional traffic signal at Alburtis Avenue and Artesia Boulevard so that the "California Milk Producers" trucks can safely access its facility.
- Inventory and upgrade all ADA features as needed.

Challenges within the City include: 1) the already obligated Rule 20 funds to construct underground utilities, 2) lack of any transit stops, and 3) limited parking availability for the businesses along the Corridor.

2.1.3 City of Bellflower

On July 16, 2015, a meeting was held at the City of Bellflower to discuss the Artesia Boulevard Corridor Master Planning and Complete Street Study effort.

From a technical perspective the Corridor is classified approximately 85% principal arterial and 15% residential, which is commingled with single-family residences, mobile homes and apartments. The major intersections along the Corridor include the Lakewood Boulevard, Woodruff Avenue, Bellflower Boulevard, Clark Avenue and the Downey Avenue intersections. There is one funded Measure R I-605 Hotspot project at Artesia, Bellflower and the SR-91.

The Corridor stakeholders include several shopping centers, the former Ford West site at Artesia/Passage, the Department Motor Vehicle and the Bellflower hospital. The Corridor is a designated truck route. The signals are synchronized via timing but are not hardwired synchronization into a TMC. The City has recently exhausted its Rule 20 funds to underground utilities along the Corridor from Downey Avenue to Lakewood Boulevard, which is currently underway with conduit and vaults already placed. Parking along the Corridor is a realistic constraint and cannot feasibly be removed. While there are currently no bike lanes within the City along the Corridor, there are significant bike facilities to connect to including the Pacific Electric right of way and the San Gabriel River Trail. Artesia Boulevard has emergency vehicle preemption but not transit preemption.

The City is interested in:

- Inventory signal equipment and other similar items to identify old versus current standard.
- All sidewalks and crossing ramps to be upgraded to ADA compliance.
- A signal synchronized hardwired Corridor.
- Lighting - Bring up to standards for uniformity and spacing.
- Including bicycle facilities along the entire length of the Corridor.
- Repair items such as broken curbs, gutters, and pavement.

The City is open to a reduction in travel-lane widths, the elimination of dual left turn lanes in the center roadway, connecting to reclaimed water irrigation lines for potential landscape medians, intersection bulb outs, and additional undergrounding of utilities to make additional room within the roadway right of way, for features such as bike lanes and stormwater

treatment. The east side of the Corridor, at the limit between the Cities of Bellflower and Cerritos, is a challenge due to the convergence of the roadway typical section over the besiege, existing Metro bus stops, the proximity of I-605, the San Gabriel River bridge, some City property and the Palo Verde neighborhood. This area has a significant homeless problem, and presents numerous safety and health issues.

The City has an opportunity to help the Corridor with an initial implementable and funded phase that will place predesigned bus shelters at up to 34 potential locations within the project study limits. The City has approximately $1.7 million in an approved federal grant to install bus shelters at a cost of approximately $50-$75,000 each. Since the funds are federally earmarks as a pilot program, the bus stop design itself is not negotiable, and is essentially a cookie cutter design. The City plans to install 12 bus shelters along this Corridor.

2.1.4 City of Long Beach

On July 27, 2015, a meeting was held at the City of Long Beach to discuss the Artesia Boulevard Corridor Master Planning and Complete Street Study effort.

The following are **existing conditions and information** available to the Team, as well as some of the opportunities that should be further vetted and/or incorporated into the study:

- The Long Beach mobility element includes Artesia Boulevard as an "opportunity for Street character change". This document is on the City's website.
- Artesia Boulevard is generally not a "parking impacted area" and includes two lanes in each direction. There is a desire to increase the live/work density within the Corridor.
- The City has a traffic management center, which is believed to also be connected to LA County, Lakewood and Bellflower, as well as they are open to including other cities.
- The City has a bike boulevard plan, which is currently had dated however Nate is working on an update which includes the Class 2 bike lanes along the entire Corridor.

Other opportunities discussed includes:

- There may be excess Proposition A funds to upgrade possible curb ramps close to Bus bays and to beautify bus shelters.
- There is a City-owned former Redevelopment Agency lot at the corner of the Artesia Boulevard/Atlantic Avenue intersection.
- There is a proposal to include a traffic circle at this intersection and the plan can be provided for incorporation into the Master Plan.

2.1.5 City of Compton

On September 22, 2015 a meeting was held with the City of Compton to discuss the Artesia Boulevard Corridor Master Planning and Complete Street Study effort.

The Corridor is unique through the City of Compton as it's primarily commercial business uses, broken into a one-way pair on each side of SR – 91, with Artesia Boulevard running westbound and Albertoni Street running eastbound. There are significant trucks near Wilmington Avenue and Central Avenue that merge with the SR-91 freeway. The trucks have deteriorated the pavement significantly including rolling/peeling and alligator cracks. There are also drainage issues that result in ponding water during storm events.

There is a blue line light rail station along Willowbrook Avenue, along with Gardena, Long Beach transit and Metro bus routes along the Corridor. If it is possible, the City would prefer that bus bays are relocated to the far side of the intersections to help remove stacking as well as to provide a safer area that keeps buses from being trapped. Other deficiencies include that there are no bike paths. The heavy truck traffic makes it difficult to narrow lanes in order to incorporate a potential bike. The City has an approved bike lane study that can be provided and incorporated into the Master Planning effort.

The City is interested in bringing in reclaimed water piping either from central basin or West basin. The nearest reclaimed water facility approximate half-mile from the Corridor. The City feels that it might be a good opportunity for Caltrans to use reclaimed water along the slope facilities of the SR-91, in addition to possibly utilizing a Cal fire grant to plant trees. If there is enough commercial demand from the businesses along the Corridor, the City feels that the West Basin may be willing to pay for the capital cost of piping to this project area. Significant traffic and business attractors include Compton College, the unemployment office at Santa Fe Avenue and Crystal Casino.

The City is interested in pursuing an outreach effort to encourage safe, Class 1, if possible, protected bicycle facilities, bringing in reclaimed water, and possibly undergrounding overhead utilities along the Corridor via land dedication, or other means, from the businesses. The City feels that the interchange at Central Ave./ SR-91 and Wilmington Ave./ SR-91 could be improved with regard to the turning radius at the ramps as well as by constructing a concrete surface. The City will likely pursue a hotspot project(s) with the I-605/SR-91/I-405 Technical Advisory to obtain Measure R funding and have Caltrans complete the work. The City has

3.0 MULTIMODAL CORRIDOR EVALUATION AND ANALYSIS

3.1 Overview

This section evaluates the existing conditions and findings that develops a variety of multimodal corridor improvements bundled into four proposed Street Designations, which are then used to develop the Specific Areas of Focus for each jurisdiction, as part of the overall creation of the Corridor Master Plan. The various possible street designations were shown during original scoping of the project, and further discuss during the jurisdictional meetings. The Areas of Focus are specific locations, or nodes, that are modified and developed for each jurisdiction to provide a concept plan illustrating a multimodal Complete Street concept. Using the "Tool Kit" of Street Designation that would be applied to other parts of the Corridor. The Street Designations are used as a baseline to illustrate and provide the high-level future Corridor concept.

3.2 Street Designations along the Corridor

The existing corridor street design standards vary from location to location, but in general the street design and traffic engineering were all about moving traffic from their origins to their destinations. For decades, the purpose and goal of the street design has been to move motorized traffic as expeditiously as possible, however developing a transportation system primarily for motorized vehicular traffic has failed to meet the traveling needs and preferences of a large population of the region.

Our focus is ensuring that the road will provide safe mobility for all travelers, not just motor vehicles, by envisioning and planning our corridor as a complete corridor. This corridor will address the needs of public health and fitness, creating vibrant neighborhoods, reducing fossil fuel emissions, adopting greener and more sustainable communities and accommodating the needs of our aging population.

STREET DESIGNATIONS

No	Type	Description
1	Downtown Lifestyle	Street designed to serve retail and mixed land uses, promoting walking, bicycling, and transit within an attractive landscaped corridor.
2	Urban Activity	Street designed to serve mixed use commercial, retail and residential areas with active transportation activities.
3	Residential Calming	Street designed to promote slowing traffic.
4	Principal Route	Multi-lane facility designed to serve higher volume traffic corridor movements.

Complete streets policies help communities make clear the commitment to planning future transportation improvements and to provide for safe travel of everyone using the road. The street designations provide transportation choices; support communities through transit oriented, mixed-use development and activation of abandoned, vacant and underused properties; invest in healthy, safe and walkable neighborhoods. Visually documenting these goals along the corridor so City Planners and Engineers have a clear direction to develop solutions is a difficult task because of the length of the project (11.75).

To accommodate the complete streets, approach we begin by breaking down the corridor into Specific Street Designations so that the strategies and stakeholder partnerships can successfully develop and manage the public spaces in the neighborhoods and bordering connections to this major east-west corridor. The Street Designations we developed along corridor provide a "tool box" of options to apply at specific street limits. We applied these Street Designations along the entire corridor and also focused on how the various designations transitions between one another.

The Street Designations principles below were developed through our outreach to capture the key civic goals and objectives that should shape the creation of the "new" roadway footprint, public spaces and expand on established principles from existing city policies and civic efforts.

Street Designations Principles

Street Designations - Define Context Sensitive Solutions

Applying Context Sensitive Solutions (CSS) to the corridor confirms that indeed it is "complete" in the sense of being appropriate for the area in which the project is planned. A collaboration of stakeholders and interdisciplinary mix of members from all Cities formed the visioning team to provide the concepts that fit its setting. Using design visualization to focus on areas that enhance the scenic view shed and aesthetics; bringing the community and history of the corridor together; activate and enhance the environmental resources and open space; improving safety, mobility for all users. Develop of multiple alternatives and review with public officials and community, to optimize the opportunities and build a consensus. All of which will provide an emphasis of enhancing the uniqueness of the area and the sense of place in this urban environment that will be viewed as a valued resource.

Create a bold vision that is adaptable over time.

The project will come together over time, being implemented in phases based on funding received. Many complex infrastructure and engineering elements must be completed before the corridor is becomes a complete street. The vision developed now should clearly define an overall framework for how the corridor will take shape, what the key elements will be, and define their essential character. At the same time, the vision must be flexible enough to adapt as conditions inevitably change.

Innovative and sustainable design at the forefront

The Street Designations are the basis for developing visual urban design principles that bring people to the focus areas allowing them to experience the unique planning, geography and ecology of the area. At the same time, we must take steps to improve the natural environment and ecology while also preserving and enhancing the activities that remain central to the corridor cities. The complete streets should, in its planning and visioning, reflect GCCOG's commitment to sustainability, innovation and responding to climate change and air quality improvements.

Create a public asset for all

The Complete Street Master Plan engages the entire community along the corridor. It is a public asset and should remain focused on public use and activities that attract people from all walks of life. It should be a place for locals and visitors alike – a place where everything comes together effortlessly. The process for developing a Complete Street Master Plan will draw on the goals and dreams of the entire community along the corridor. The resulting public spaces and surrounding development will engage through a range of planned activities as the program develops.

3.3 Corridor Wide Considerations

Corridor wide transportation strategies include not only the GCCOG STP but also various "Livability" considerations, which are generally described as the non-technical features outside the STP, detailed later in this report. These will be applied to the Areas of Focus, or Nodes, and will also be considered as part of the order of magnitude cost estimates.

Additionally, strategies to create space for Corridor wide improvements and benefits must be considered. Ways to justify and create space include, but are not limited to: streetscape and stormwater treatment measures; active transportation features such as a potential Class 1 bicycle facility; and median, center divider or traffic separation operational improvements. It would likely be necessary to underground a vast majority of the overhead utilities that exist on both sides of the roadway for nearly the entire length of the Corridor. Other considerations to create space also include narrowing existing traffic lanes, which could affect the operational efficiency of the Corridor, or the purchase or right-of-way to accommodate widening. These three strategies, underground utilities, narrowing lanes and or purchase of right-of-way will be evaluated along the Corridor to determine which combination, if any, are most prudent in each of the areas of focus.

4.0 COMPLETE STREETS NEEDS ANALYSIS

This section includes a description of the criteria used to document the existing technical, non-technical, and featured elements along the corridor. The evaluation and analysis of the features will be identified for consideration as part of a Complete Street Needs Analysis. The Evaluation Criteria Matrix will identify the corridor elements and features for each jurisdiction and the transitions from the various concept alternatives. The goal is to incorporation as many of the improvements into the Corridor Concept Plan via the Focus Areas, defined for each jurisdiction. Embracing the Complete Streets approach will provide a framework to foster a more livable community. The analysis to follow will document the process on building this framework and defining the evaluation factors. Restating what a compete street involves will help define the elements evaluated in the needs analysis.

> *The guiding principle per FHWA for a complete street is to create roadways and related infrastructure that provide safe travel for all users, each complete street must be customized to the characteristics of the area that street serves. A complete street also must accommodate the needs and expectations of the travelers who want to access or pass through the surrounding neighborhoods, community, and region.*

Areas of the roadway needs analysis include: median islands and enhancements, traffic calming, added bike lanes, shared use paths, sidewalks, safe crossing location for pedestrians, Pedestrian signal improvements, transit enhancements and fixed rail services (Blue-Line and Eco-Rapid), curb extension for added public space, parking, planting & linear forests, and water quality.

Needs Analysis topic area goals.
Reconnect the Public to its City's Open Spaces, and activate unused resources. The corridor is the gateway to the neighborhoods and the community. It will connect and build a network of green connections and public spaces that connect visually and physically, to vital civic and commercial destinations, nearby neighborhoods and the larger urban pockets (focus areas), city and regional open spaces. This will allow a phased approach that is implemented over a longer timeframe, but the big picture (master plan) needs to be in view from the beginning.

Improve access and mobility.
The corridor is and will remain a crossroads, as corridor users rely on safe and efficient access to provide an important connection for moving people and goods between the east and west. At the same time, the corridor will be an increasingly attractive place for walkers, bicyclists, joggers, recreational and other uses. The future corridor will accommodate safe, comfortable and efficient travel by pedestrians, bicyclists, vehicles and freight. The interactions among these many modes of travel must be designed carefully for the safety, comfort, and efficiency for all.

Needs Analysis and Context Sensitive Solutions.
Improving the appearance and image of the corridor is a primary goal of the community. Focus on the viewshed beyond the right-of-way which has an influence on the perception of the community and traveling public. The visual elements need to be responsive to the local values and concerns. The various elements need to provide corridor consistency while enhancing individual community identity. Innovative inclusive approaches that integrate and balance community, aesthetics, historic and environmental values with transportation safety, maintenance and performance goals. These planning goals are reached through a collaboration, interdisciplinary approach involving all stakeholders with the goal of improving the boundary between the transportation corridor and the communities and people that share the common open space. Embrace and celebrate the Region's past, present and future.

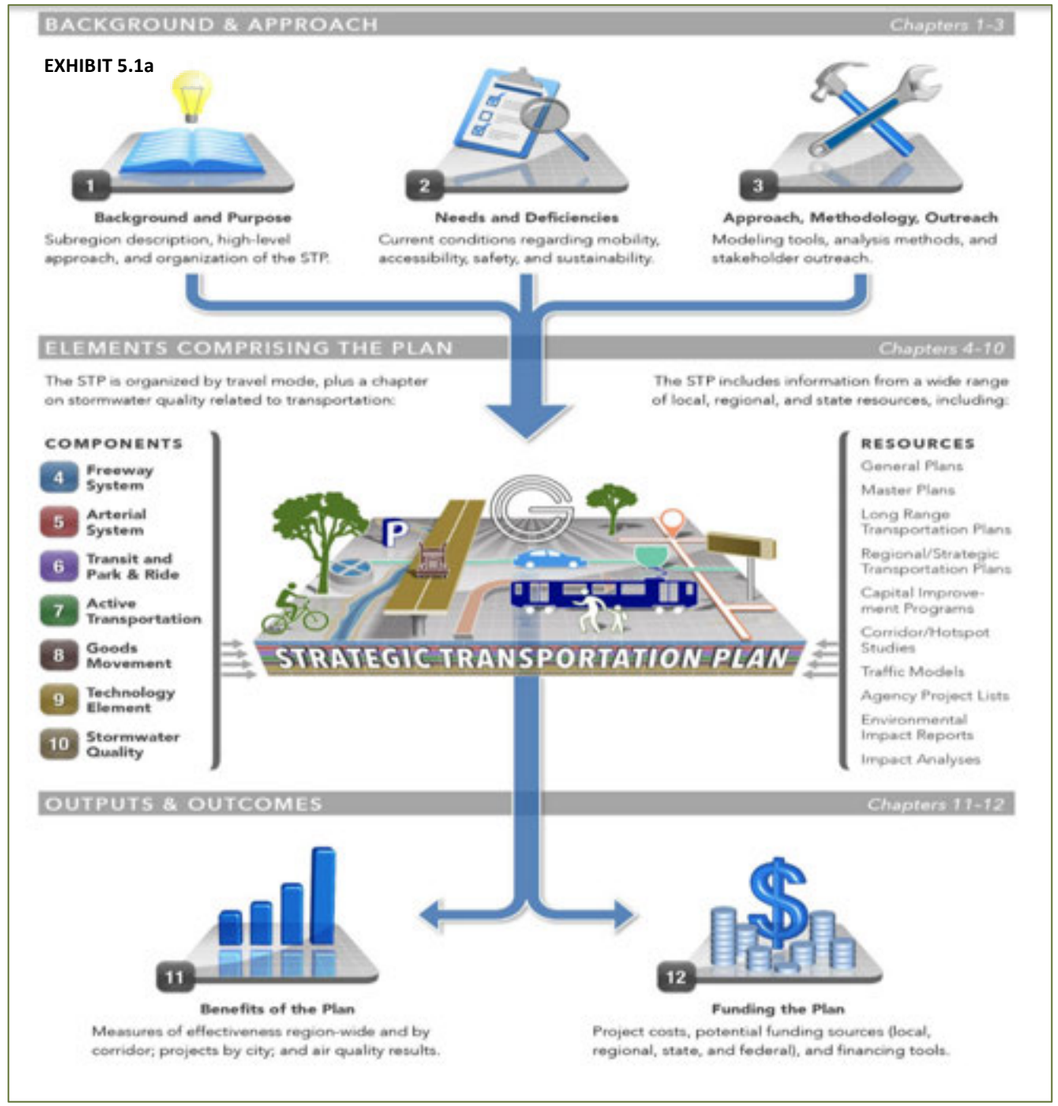
The corridor is a path through which Communities past, present and future understand from its rich geologic and natural history and early Native American settlements, to the founding of the region's maritime, goods movement from the port, to industrial, commercial and recreational activities today. The region is and should continue to support these activities, to provide essential connections and access to surrounding neighborhoods. New public spaces should tell these stories in ways that are authentic and bring them to life for people today and preserve these connections into the future.

4.1 Technical Elements/Features included in STP

The GCCOG STP followed a similar strategy to this effort, as shown in the Exhibit 5.1a. The technical information from the STP components was readily available and extracted relative to the Corridor. The study used the STP as a baseline and built upon it based on project specific Corridor needs. The GCCOG, via Metro Measure R funds, conducted the largest multi-model transportation planning effort second to only New York City, to create a unified long term Strategic Transportation Plan (STP). This large scale effort was able to quantify significant baseline conditions along the Corridor that are incorporated into the Master Plan and Complete Street evaluation criteria, and do not require additional analysis effort.

Artesia Boulevard is considered a subregional facility that due to it's proximity to the SR-91 is utilized as a relieve arterial in addition to the city specific land uses and functions along the Corridor.

This Master Plan has a goal of reducing the Corridor's use as a SR-91 relieve arterial and maximizing it's ability to serve the communities as a complete street with enhanced/increased development.



4.1.1 Arterial Smart Corridor

Out of the 25 corridors considered and ranked, according to variables that included truck volumes, V/C ration, SCAN, On-Street Parking, Freeway Access, Connectivity, Safety, Truck Route, and Community Sensitivity, the Artesia Corridor ranked 10th (with 5 other tied Corridors) with a total score of 20 out of 25 being the highest score. While the Corridor is parallel to SR-91 and would seem to be an intuitive choice for a Smart Corridor, the reason why Artesia Boulevard was NOT selected was primarily due to the lack of trucks using it, as well as, a generally acceptable Volume over Capacity Ratio, compared to others GCCOG corridors, which deemed that the spending funds on the Smart Corridor technology could be better spent elsewhere within the sub region.

Per the GCCOG STP, the Smart Corridor(s) have 6 primary objectives[1]:

1. Reduce recurrent intersection delay and improve travel time reliability and information, fuel consumption, and emissions on designated truck route arterials through cross-jurisdictional signal coordination and updated signal controllers and systems;
2. Fill ITS coverage gaps along identified truck route arterials for freight traffic management and traveler information;
3. Generate data for the provision of real-time traveler information to drivers and freight operators through the use of mid-block detection or other enhanced detection;
4. Generate data for ongoing performance measurement/management of the regional arterial network;
5. Improve incident detection and management on arterials, as well as improve freight traffic management and traveler information, in response to freeway incidents and emergency situations; and
6. Utilize a variety of ITS and technology improvements to accomplish these, including, but not limited to, adaptive signal control, detection, closed-circuit television (CCTV) cameras, changeable message signs (CMS), communications, blue-tooth technology, third-party transportation data, etc.

[1]http://www.gatewaycog.org/media/userfiles/subsite_128/files/rl/StrategicTransportationPlan/ArterialSmartCorridorProjects.pdf

[2]https://www.dropbox.com/sh/cykpx0tckh8xca9/AAB6Zo3VRYN1jMYXG7sQr45Ja?dl=0&preview=STP+Summary+Report+03+18+2016.pdf

4.1.2 Transit/Park and Ride

The Gateway Cities will see steady growth in both population and jobs between now and 2035, which will put more strain on the already overburdened transit network. Average weekday transit ridership in the subregion is projected to increase by 11% by 2035 even if no additional transit improvements are made. Currently, many municipal transit operators report limited seated capacity at bus stations and on several high-demand bus routes. Expansion of services is already needed to meet current demand.

Various local and regional transit facilities run along the Corridor. The following graphic highlights the major facilities along or crossing the Corridor area.

The Gateway Cities currently has 18 park-and-ride lots with approximately 7,100 spaces. These facilities provide access to Metrolink, Metro Blue and Green Lines, and local and express bus routes. Currently one-third of park-and-ride lots operate at or near capacity. If no additional improvements are made by 2035, roughly half of the Gateway Cities park-and-ride facilities will be operating at or over capacity. To meet this demand, additional park-and-ride facilities are needed. [2]

The existing public transit infrastructure that serves the Corridor will become more accessible with improved connectivity of streets, sidewalks and green space that encourage residents to walk and bike to transit stops. A neighborhood with a strong network of internal streets and good connections to surrounding area, allows pedestrians, bicyclists, and drivers to move more safely and efficiently. This will reduce vehicle trips, which will in turn reduce the carbon footprint of the community. The success of improved neighborhood connectivity through this Corridor Concept Plan will also strengthen the sustainable opportunities for future developments in the various Cities.

The Artesia Corridor has several transit lines, which were inventoried as show in the exhibit below. It should be noted that the City of Artesia does NOT have a transit station of any kind, and it's recommended that all services that run the Artesia Corridor consider a stop for connectivity. Additionally, as funds become available to implement the Corridor vision, provisions for park-and-ride lots should be considered.

EXHIBIT 5.1.1A

Focus will be on the connectivity and relationship between the various transit lines. Proper evaluation of the transit connectivity relies on overall public circulation. Attention will be directed to the following planning elements:

- Pedestrian pathways, such as sidewalks, need to occur throughout the community in order to effectively connect neighborhoods with facilities and amenities, such as parks, schools, businesses and social locations.
- Sidewalks and/or trails are to be separated from adjacent streets by parkways and infiltration planters as presented in the streetscape, which are consistent with the Sustainable Strategies.
- Crosswalks are to be clearly delineated and shall include paving enhancements for easy identification and traffic calming.

[2] https://www.dropbox.com/sh/cykpx0tckh8xca9/AAB6Zo3VRYN1jMYXG7sQr45Ja?dl=0&preview=STP+Summary+Report+03+18+2016.pdf

Dedicated bicycle lanes discussed in Section 4.1.2 provide safe routes for bicyclists and to encourage alternative transportation modes. Bicycle storage should be made available at key transit stops.

4.1.3 Active Transportation

While regional centers, within any jurisdiction, are largely dependent on automobile travel, designing them within the context of adjoining neighborhoods has the potential to encourage alternative travel modes such as walking and bicycling. The quality of pedestrian environments also plays a critical role in the success of centers that serve multiple neighborhoods and the region. These centers typically offer retail, employment, cultural activates and transit.

Walkable mixed-use neighborhoods represent the most basic places that are economically stable and environmentally sustainable. Walkable districts mix complementary uses, maintain reasonable distances, and bring building entrances and facades to the streets.

One of the most critical elements of designing Pedestrian, Bicycle and Trail Corridors is safety. Due to the parallel nature of Corridors and adjacent trail, visibility and access, as well as arterial street crossings, need special attention to optimize safety to the users. Warning devices, signage and striping need to properly advise users.

The existing bicycle network in the Gateway Cities Subregion has primarily been developed through individual City or County efforts, and also by regional efforts supported by Metro and other multi-jurisdictional agencies. The area provides an opportunity to create an environment for bicycling, including a temperate climate, a network of schools and open space, a major university and community college, a well-connected street grid, and relatively flat terrain. Despite the fact that bicycling is increasingly popular in Southern California, a safe, well-connected, and accessible bicycle network remains a significant challenge for many bicyclists in the Gateway Cities. [i]

The STP contains fifty-five (55) significant bicycle Corridor project ideas. While the Artesia Corridor is not one of the 55 significant Corridors, as part of this Master Planning effort, and with the coordination of each jurisdiction, the Corridor will still benefit from a contiguous Class 1, or at minimum Class 2 bicycle facility for the entire length. Additionally, through this effort, the bicycle facility that is developed as part of the Corridor Concept Plan should be incorporated in upcoming STP updates.

Bicycle facilities are divided into four Classifications as defined by Caltrans:

Class 1 Bikeway (Bike Path): A shared use bike path is entirely separate from the road. No motor vehicles are allowed on or near these paths, which also serve as multi-use pathways. **For example, along the Rio Hondo Channel.**

Class *2* Bikeway (Bike Lane): A bike lane marked in the road is four feet wide, or five feet wide if adjacent to parked cars. **For example, along on Del Amo Boulevard.**

Class 3 Bikeway (Bike Route)*:* A bike route is simply a route without any designated striping for bikes, but has signs that designate it as a bicycle route. These facilities are usually on neighborhood streets without heavy traffic. **For example, along sections of the Pacific Coast Highway.**

Class 4 Bikeway (Separated Bikeway): A separated bikeway or cycle track, which provide an alternative to other bikeways that may minimize interactions with other modes of travel. A bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking. The City of Long Beach has an example as shown in the photo on the right. The objective is to foster bicycling as a means of transportation, in a manner that improves safety for all users, including motorists, transit users, and pedestrians, including persons with disabilities.

The GCCOG member cities have developed all of the above-listed bicycle facility types along Artesia Boulevard, but the plan isn't complete. This report identifies the deficiencies along the Corridor and incorporates full connectivity along the corridor, and is demonstrated within the concept plans as well as incorporated into the cost estimates.

4.2 Non-Technical Elements/Features Outside of STP

The following list of non-technical elements and features were not generally considered as part of the GCCOG STP and are specific and integral to creating a Complete Street Master Plan for Artesia Boulevard.

4.2.1 ADA Conditions

The Corridor generally has sufficient sidewalk widths and ADA ramps to street level, with a few exceptions. The portion of the Corridor between Harbor Avenue and Santa Fe Avenue in Compton is an area that is a one-way street with two lanes and no sidewalk. Additionally, the area along Artesia between Acacia Avenue and Avalon Boulevard is two lanes in one direction with no pedestrian access to bus stops. One wheelchair ramp was found to be deficient along Artesia Boulevard at Canehill Avenue on the southeast side of the intersection.

The Corridor will be well served by improving ADA pedestrian walking access conditions along the entire stretch and incorporating sidewalks where there are gaps in coverage.

4.2.2 Parking

This evaluation involves the review of the existing conditions within each of the Cities. The parking assessment was limited to the key view areas but applied to the entire Corridor.

Based on the following goals:

- ✓ Document the parking lot requirements and the basis of design.
- ✓ Identify existing parking allocations.
- ✓ Identify proposed parking allocations.
- ✓ Develop a conceptual alternative design option.
- ✓ Identify the alternative parking allocations.

While transit, biking and walking are important pieces of an overall comprehensive transportation strategy, people will continue to own and drive cars. To make optimal use of land planning, it is important to provide an optimal amount of parking capacity.

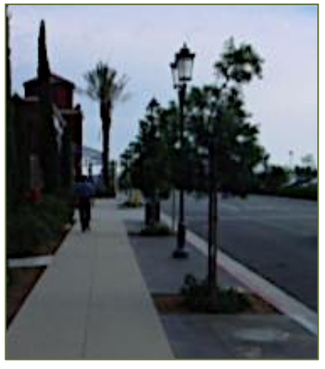
On street parking is a priority for some jurisdictions, while other cities wish to not have any street parking along Artesia Boulevard. Cities requesting to provide or maintain on-street parking are: Cities of Long Beach, Bellflower and Artesia. On-street parking is not desired for the Cities of Compton and Cerritos, which is consistent with the Principle Route Designation.

For cities planning for Artesia Boulevard with a Downtown Living street designation, reverse-diagonal parking, in lieu of the standard diagonal parking, may be a consideration. Reverse diagonal spaces have caught on in some cities as a safety feature meant to slow down traffic, maximize the number of parking spaces, and make it friendlier to pedestrians and cyclists. Reverse diagonal parking improves the sightline for drivers pulling out of spaces into traffic, creates a larger buffer between street traffic and pedestrians, and minimizes the possibility of “dooring” of bicyclists (when a car door opens unexpectedly, hitting a bicyclist). Additionally, when a reverse-diagonally parked car door opens, a blockade is created between passengers and street-traffic, which increases safety.

4.2.3 Aesthetics

Aesthetics are integral features that can provide an overall theme to a Corridor. Incorporating various features **including enhances aesthetics**:

- Undergrounding of existing overhead utilities
- Creatively using stormwater treatment options such as sidewalk planters, permeable pavement or pavers that reduce standing water and hydroplaning while at the same time adding “Green Pockets” along the corridor.
- Provide additional pedestrian enhancements such as intersection bulb-outs which could require a change in parking to an angled layout to make sufficient room
- Including reclaimed water piping throughout the Corridor to that enhanced landscaping can be provided to add beauty to the Corridor.
- Provide outdoor dinning along miscellaneous limits.



Streets throughout the plan area serve different purposes and have variable capacities. The context of the land use along a Corridor heavily influences the design concept of the Corridor. One of the key components of the Corridor Concept Plan is that the Corridor will be multi-modal, meaning it will balance the needs of multiple modes of travel and provide the traveling public the option to walk, bike, take transit or drive.

Streetscape elements will be developed to compliment the character and scale of each street designation distinguish unique areas of the Cities and corridor and create an identifiable sense of space. Elements such as enhanced landscape, signing, pavement, and lighting to establish an experience along the Corridor.

4.2.4 Utilities

Overhead utilities on poles exist for nearly the entire length of the Corridor. These facilities include communication and transmission/ distribution lines for electrical power. Through the City of Cerritos, these utilities primarily run on poles along the north side of the Corridor between Bloomfield Avenue and Pioneer Boulevard. Between Pioneer Boulevard and the eastern boundary of the City, the poles are located on the north side of the Corridor, and several crossover poles exist to provide specific commercial/residential electric services. Power poles also generally run along the north side through the City of Artesia with carrier poles occasionally crossing the street. East of I-605 power poles are on both the north and south sides of the Corridor. Over the San Gabriel River bridge, the utility services are on poles located on the south side of the bridge that crosses the river. West of Palo Verde Avenue within the City Bellflower, the utilities continue to run on both the north and south side of the Corridor. West of Woodruff Avenue the transmission poles generally run on the south side of the road while distribution poles run on the north side, into the City of Long Beach. From Cherry Avenue in Long Beach westerly the transmission poles generally run along the south side.

The transmission poles along the south side of the Corridor terminate just west of the Atlantic Avenue intersection. The Corridor runs along the north side of SR – 91 into Compton. Transmission poles again resume along the south side of Corridor. To improve the street view and provide more usable estate, all participating jurisdiction desire to have the overhead utilities underground.

4.2.5 Community Resources

The Corridor contains several community resources, which were inventoried and considered as part of ensuring a Complete Street, can be incorporated. Schools, parks open space and river crossings require safe access to and from these locations to other destinations along the Corridor.

4.2.5.1 Schools

Creating safe routes to school for children enables and encourages children to walk or ride their bikes to school. This helps reduce traffic and air pollution reducing the need for parents to drive their children which reduces traffic consistency within the vicinities of the school, and simultaneously improves the well-being of the children by encouraging a healthy and active lifestyle.

The following schools are located in close proximity of Artesia Boulevard:

City of Compton	Compton Community College
City of Long Beach	King-Edison Elementary and Jordan High School
City of Cerritos	Gahr High School and Juarez Benito Elementary School
City of Artesia	Burbank Luther Elementary School

Every pedestrian crossing at major road intersections requires a safe and visible crosswalk and sometimes traffic controls and/or crossing guards. Reduced vehicular speeds can create a meaningful improvement of safety for pedestrians and bicyclists. A cost-effective way to reduce speeds is to utilize the concept of “traffic calming” along the Corridor.

Examples of this include the following features:

- Raised crosswalks and intersections
- New medians
- Curb extensions

These features have been incorporated into the Corridor Concept Plan in a variety of locations.

Continuous bicycle facilities are to be provided along all routes to schools. As defined in Section 5.1.2, the Corridor shall include a continuous bicycle facility throughout its entire length.

4.2.5.2 Parks

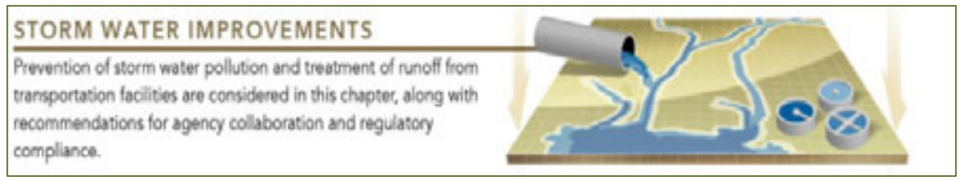
There are several parks either along or near the Corridor that have also been inventoried and considered as part of the Corridor Concept Plan. These include:

City of Compton	Coolidge Park
City of Long Beach	Houghton Park and Ramona Park
City of Cerritos	Ecology Park, Loma Park Saddleback Park, Friendship Park

Additionally, to enhance the use of a Complete Street, jurisdictions are encouraged to require new developments that provide usable open space for recreations demands.

4.2.6 Water Quality and Sustainable Stormwater Design

The Master Plan provides an opportunity to introduce sustainable urban design into an evolving major arterial roadway. Recognizing that healthy water quality is an essential component of quality of life of this region, the State has mandated steps be taken to improve water quality. A focus on contamination prevention at entrances to rivers and streams through storm drain runoff is a complicated effort. Treatment of the runoff from storm drains, which has been identified as a public nuisance and health threat, to produce reclaimed water that can be used for landscape irrigation and other reclaimed water uses is a mutually beneficial strategy.

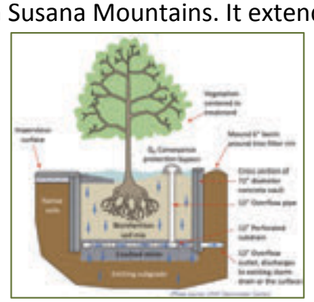


There are five major waterways crossing the Corridor within the Gateway Cities. These waterways are:

- Compton Creek
- Los Angeles (LA) River
- San Gabriel River
- Coyote Creek
- La Canada Creek

Compton Creek is a stream that begins slightly east of South Main Street between 107th and 108th Streets in Los Angeles. It extends approximately 8.5 miles and converges into the Los Angeles River south of Del Amo Boulevard. Most of the waterway is a concrete-lined flood control channel. The basin area of the stream is approximately 42 square miles.

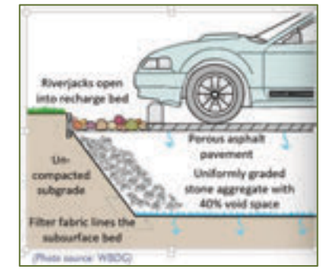
The ***LA River*** is a waterway that begins in the Simi Hills and Santa Susana Mountains. It extends approximately 48 miles to its mouth in Long Beach. The LA River is, for the most part, a concrete-lined channel. Portions of the river have earthen bottoms and restored habitat. The basin area of the river is approximately 827 square miles.



The ***San Gabriel River*** is approximately 60 miles long, extending from the San Gabriel Mountains to the Pacific Ocean. Majority of the river is restrained in a concrete flood control channel. Its basin area is approximately 713 square miles.

Coyote Creek is approximately 14 miles long that extends from the border of LA and Orange County, at the northwestern most corner of Orange County, and converge into the San Gabriel River in Long Beach.

La Canada Verde Creek is the North Fork of La Canada Verde Creek, measuring 9.1 miles. The creek is joined by a small tributary on the left bank and then receives a larger tributary, La Mirada Creek, on the left bank. The creek then flows directly south through a flood control channel before converging with Coyote Creek.



Mitigating the water quality impacts of transportation-related development with “green streets” techniques is a logical step to protect the watershed, groundwater and neighborhood livability.

Existing Water Quality

The majority of the watershed areas within the limits of the Corridor are considered impaired due to a variety of point and nonpoint sources. Some of these constituents are of concern throughout the length of the waterways while others are of concern only in certain reaches. Impairment may be due to water column exceedances, excessive sediment levels of pollutants, or bioaccumulation of pollutants. Common pollutant impairments are: Chlordane (sediment), DDT (sediment), Lead (sediment), PCBs (Polychlorinated biphenyls) (sediment), Sediment ToxiCity, Trash and Zinc (sediment).

Pollutants from dense clusters of residential, industrial and other urban activities have impaired water quality in the middle and lower watershed areas of the river. Added to this complex mixture of pollutant sources (in particular, pollutants associated with urban and stormwater runoff), is the high number of wastewater discharge permits with their constituent loadings that include excessive nutrients, coliform, and heavy metals.

A “green street” is designed to slow the flow velocity of stormwater down in order to essentially pre-treat the dry and low flows prior to entering the storm drain. In other words, to simply reduce the volume of stormwater by utilizing low impact development (LID) practices such as the use of porous pavement to allow water to percolate to the soils, designing a network of rain gardens to slow down and treat stormwater, and planting and/or preserving street trees.

Common sustainable stormwater design features include, but are not limited to:

- Sidewalk planters and street trees
- Vegetated curb extensions to promote greenery
- Permeable pavement or pavers that reduce standing water, the urban heat island effect, and hydroplaning
- Storm drain stenciling
- Storm drain inserts that filter waste to help reduce the amount of trash entering the system

Green Street practices that direct runoff to vegetated areas or areas with porous materials can help recharge groundwater supplies – particularly where drought-tolerant plants and trees are incorporated into the design. This can be particularly important in areas to Southern California where water resources are one of the most important elements in daily life. As Southern California's population continues to grow and water resources remain fixed, the need for potable water is increasing.

The effects of Global warming and existing and future droughts put a strain on the ability to maintain the levels of water enjoyed today. Forecasting the water needs of the future brings awareness of the lingering problem of an inadequate water supply.

Source: Bowhead Environmental and Safety

Ultimately, when there is funding available to incorporate part or all of the Corridor Concept Plan, it should be noted that Federal agencies, such as the U.S. Fish and Wildlife Service (USFWS) and the U.S. Environmental Protection Agency (USEPA), will provide recommendations concerning whether permits should be issued and identify any conditions with the issuance of the permit. **Possible recommendations may include:**

Implement Watershed Control Measures • Minimum Control Measures • Regional Control Measures
Meet the interim and final discharge limitations
Implement Monitoring (CIMP)

A great deal of land area is devoted to hard, typically impervious surfaces such as sidewalks, parking lots, roads and buildings. Surface runoff from rain and irrigation contributes to pollution, which eventually finds its way to the pertinent watersheds.

Parking lots can provide stormwater mitigation by incorporating the following strategies:

- Permeable paving that allows water to filter into the ground as recharge
- Implement vegetated bioswales/cells to capture runoff flowing from parking lot surfaces
- Utilize tree pallets that include large canopy shade trees to reduce heat and provide shade
- Parkways that collect street runoff into infiltration planters

Parking Lot of the Morton Arboretum (Chicago) (Photo source: WSDG)

4.2.7 Sustainability

The Southern California Association of Governments (SCAG) created the Sustainable Communities Strategy (SCS) within our region. The Sustainable Communities Strategy (SCS) is a required element of the Regional Transportation Plan (RTP) intended to integrate land use and transportation strategies that will achieve greenhouse gas emissions reduction targets.

The GCCOG subsequently created a Sustainability Committee on November 5, 2014 as directed by the Board. Similar to the Southern California Associated Governments (SCAG), the GCCOG also has a Sustainability Committee; the primary goal is to work with our "communities and stakeholders to create a dynamic regional growth vision based on the principles of mobility, livability, prosperity and sustainability. The program's work focuses on implementing the region's Sustainable Communities Strategy (SCS), the state-mandated plan for reducing greenhouse gas emissions from cars and light trucks through integrated transportation, land use, housing and environmental planning."[3]

The California legislation SB 375 included a unique provision for the 14 subregions that make up the vast six-county Southern California Association of Governments (SCAG) region.

[3] SCAG Sustainability Definition from their website - http://scag.ca.gov/programs/Pages/Programs/Sustainability.aspx

According to the legislation, a subregion within SCAG may take delegation from SCAG to prepare its own SCS. Two of the fourteen subregions within the SCAG MPO, the Gateway Cities Council of Governments (GCCOG) and Orange County, exercised this option.[4]

The combination of all of the GHG reduction strategies and their synergies should enable the subregion as a whole to reduce GHG per capita from the benchmark in 2005 by approximately 8.5 percent in 2020 and just over 15 percent in 2035, which exceeds the regional targets.[5]

The Artesia Master Plan as proposed, in concept, is consistent with the Gateway Cities SCS, and should be modeled, when funds are available to demonstrate the GHG reduction, so that it can be a viable choice for Cap & Trade grant funds.

4.3 Objectives Criteria Matrix

A primary measure of success is when a study meets the objectives outlined in the scope of work.

The following table summarizes the success of the project with remarks that demonstrate how these objectives were met.

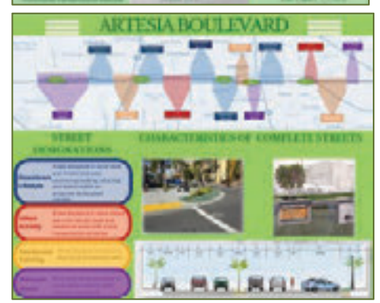
OBJECTIVES	OBJECTIVE MET?	REFERENCED SECTION IN THE REPORT
Identify improvements to reduce transportation related greenhouse gases	✓	SECTION 4.2.7
Identify concepts to creating sustainable communities	✓	SECTION 4.2.7
Identify and develop community to school or safe routes to school plans	✓	SECTION 4.2.5 SECTION 4.2.5.1
Identify and develop Complete Street plans and streetscapes plans	✓	SECTION 4.0
Identify and develop bike and pedestrian safety enhancement plans	✓	SECTION 3.0 SECTION 4.0
Identify traffic operations and safety enhancements opportunities	✓	SECTION 3.0 SECTION 4.0
Evaluate for Corridor enhancements for multimodal mobility, access, safety, and linkages	✓	SECTION 2.0 SECTION 3.0
Evaluate transit improvement opportunities to preserve transit facilities and optimize transit infrastructure	✓	SECTION 4.1.2
Evaluate accessibility and connectivity of the multimodal transportation network	✓	SECTION 3.0

[4] Gateway Cities Subregional Sustainable Communities Strategy, Extended Abstract #58, by Nancy Pfeffer, Network Public Affairs, LLC

[5] Gateway Cities Council of Governments. Gateway Cities Council of Governments Subregional Sustainable Communities Strategy: In Accordance with California Senate Bill 375, 2011. See http://gatewaycog.org/sb375.html.

5.0 COMMUNITY AND STAKEHOLDER OUTREACH

This section summarizes the various community and stakeholder outreach activities completed during the course of the study. The City of Long Beach had a specific methodology in mind for how they wanted to complete the community and stakeholder outreach along the Corridor. The City initially proposed having three community meetings, with an outreach strategy that included:



- A first meeting with the community to listen and provide a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis over at the Helton Park community center near Atlantic.
- A second meeting to discuss proposed ideas and recommendations and to receive feedback.
- A third meeting provided the capital project list that resulted from the outreach and analysis. It included priority recommendations.

During the initial kick-off meeting at the City, presentations are anticipated to be provided to the Planning Commission and likely a Receive and File report/presentation for City Council.

Long Beach: Activate Uptown
Date: Saturday, October 1, 2016 from 10 A.M. - 4 P.M.
Sponsor: City of Long Beach, Vice Mayor Rex Richardson
Event Attendees: 10,000 Community Members

The community experienced North Long Beach's newest protected bikeway on Artesia Boulevard and get a preview of upcoming safety projects on Myrtle Avenue. An Artesia Boulevard informational booth included an interactive banner displaying Artesia Boulevard section within North Long Beach and dedicated brochures. The team provided overall information about the GCCOG's Master Plan and Complete Street Evaluation Study's and the Long Beach section within Artesia Boulevard. The interactive emojis encouraged the community to place the emoji that best represents their opinions.

Lakewood: Cap & Trade Workshops
Date: Friday, October 7, 2016 9am-1:30pm
Sponsor: Rivers and Mountains Conservancy
Event Attendees: 300

The GCCOG Artesia Boulevard team participated in the workshop as a presenter during the breakout sessions. A presentation about the GCCOG's Master Plan and Complete Street Evaluation Study was provided. Additionally, staff was available to hand out brochures and answer questions.

Long Beach: Vice Mayor Rex Richardson's State of the 9th District, Michelle Obama Neighborhood Library
Date: Thursday, November 3, 2016 from 5:30pm to 8:00pm
5870 Atlantic Ave. Long Beach, CA 90805
Sponsor: City of Long Beach, Vice Mayor Rex

Vice Mayor Rex Richardson provided a review of their progress on the Road to the Renaissance and look ahead to what's next in the North Long Beach. GCCOG Artesia Boulevard participated and provided the community with the GCCOG's Master Plan and Complete Street Evaluation Study's and the Long Beach section within Artesia Boulevard. A presentation about the GCCOG's Master Plan and Complete Street Evaluation Study was provided. Additionally, staff was available to hand out brochures and answer questions about the Long Beach section of Artesia Boulevard.

6.0 COMPLETE STREETS IMPLEMENTATION

The intent of the Key Concepts illustrated as focus areas is to provide a high level concept that can be used as a potential template for the greater area surrounding the node. It can be also used to create the order of magnitude cost estimates.

Upon approval of the report, the implementation phase will begin which includes a menu of competitive funding options available that would require that GCCOG staff work with the Cities to help identified pieces or portions of the Corridor that fit within the requirements of the funding opportunity. GCCOG staff will identify opportunities and coordinate with the City a strategy for being able to submit the necessary justification for funds.

7.0 ORDER OF MAGNTIDUE COST ESTIMATES

The intent of the high-level cost estimates is to provide a general magnitude of capital cost necessary to plan, design and construct the projects.

The Order of Magnitude cost estimates are based on

1. Street Designations
2. The specific improvements that each jurisdiction wishes to incorporate
3. Current/recent bid packages from Paramount, Bellflower and Lakewood street improvements that have similar bid items.

Artesia Boulevard Corridor			
CITY	SUPPORT	CAPITAL	TOTAL
Compton	$ 8,103,297	$ 32,413,189	$ 40,516,486
Long Beach	$ 20,114,193	$ 80,456,774	$ 100,570,967
Cerritos1	$ 20,308,918	$ 81,235,671	$ 101,544,589
Artesia	$ 4,687,044	$ 18,748,178	$ 23,435,222
Cerritos2	$ 6,256,146	$ 25,024,585	$ 31,280,731
Bellflower	$ 10,039,668	$ 40,158,671	$ 50,198,339
TOTALS FOR ALL CITIES	$ 69,509,000	$ 278,037,000	$ 347,546,000

These high level estimates include the necessary planning, environmental, design and construction costs to construct the Corridor improvements for each City.

The following is a summary of the order of magnitude cost estimate for each jurisdiction:

7.1 City of Cerritos

The Concept Focus Area for the City of Cerritos is located from Interstate 605(I-605) to the San Gabriel River. This focus area is generally consistent with the "Principal Route" street designation, with the primary characteristics of standard lanes, promote bike activity, promote pedestrian activity, mature trees and transit connections. The cost estimate for this section included these types of features, which should be considered as part of the Master Plan. **Below is the cost breakdown for City of Cerritos – 1.**

	UNIT	QUANTITY	Unit PRICE	AMOUNT
Pavement Grind and Overlay (2.5")	SF	1,490,000	$ 2	$ 2,980,000
Pavcement - Widening	SF	230,000	$ 15	$ 3,450,000
Enhanced Pavement	SF	31,000	$ 20	$ 620,000
Curb and Gutter Removal	LF	28,000	$ 5	$ 140,000
Curb and Gutter Construction	LF	28,000	$ 30	$ 840,000
Median Curbs including removal	LF	10,320	$ 35	$ 361,200
Curb Ramps	EA	41	$ 3,500	$ 143,500
Driveways	SF	43,000	$ 8	$ 344,000
Sidewalk	SF	132,000	$ 6	$ 792,000
Enhanced Sidewalk	SF	32,000	$ 12	$ 384,000
Sidewalk Railing	LF	2,160	$ 50	$ 108,000
Tree Removal	EA	900	$ 500	$ 450,000
Tree Replacement	EA	900	$ 2,500	$ 2,250,000
Power Line Undergrounding				
Transmission Undergrounding Power Polls	LS	1	19,560,000	$ 19,560,000
Distribution Undergrounding Utilities	LS	1	7,200,000	$ 7,200,000
Street Light Replacement	EA	340	5,000	$ 1,700,000
Traffic Signal Mod.	EA	10	150,000	$ 1,500,000
Grading	CY	24,000	15	$ 360,000
Drain Inlets - Includes Connector Pipe	EA	120	10,000	$ 1,200,000
Transit Stops	EA	30	15,000	$ 450,000
Bike Lockers	EA	7	10,000	$ 70,000
Landscape and Irrigation (drought tolerant)	SF	173,000	25	$ 4,325,000
Signing and Striping	LF	42,000	10	$ 420,000
Monument Signage	EA	5	20,000	$ 100,000
Storm Water Treatment	LS	2	600,000	$ 1,200,000
San Gabriel River Bridge Widening	LS	1	15,000,000	$ 15,000,000
				$ 65,947,700
Traffic Control	LS	2.5% total cost		$ 1,648,693
Signal Interconnect Synchronizing	EA	1	$ 100,000	$ 100,000
				$ 67,696,393
				$ 13,539,279
				$ 81,235,671
Preliminary Engineering & Environmental	3%	$		2,437,070
PS&E	9%	$		7,311,210
Construction Management	8%	$		6,498,854
Admin	5%	$		4,061,784
Subtotal Soft Costs		$		20,308,918
				$ 101,544,589

Below is the cost breakdown for City of Cerritos – 2.

	UNIT	QUANTITY	Unit PRICE	AMOUNT
Pavement Grind and Overlay (2.5")	SF	160,000	$ 2	$ 320,000
Pavcement - Widening	SF	20,000	$ 15	$ 300,000
Enhanced Pavement	SF	3,000	$ 20	$ 60,000
Curb and Gutter Removal	LF	3,000	$ 5	$ 15,000
Curb and Gutter Construction	LF	3,000	$ 30	$ 90,000
Median Curbs including removal	LF	1,118	$ 35	$ 39,130
Curb Ramps	EA	4	$ 3,500	$ 14,000
Driveways	SF	5,000	$ 8	$ 40,000
Sidewalk	SF	14,000	$ 6	$ 84,000
Enhanced Sidewalk	SF	3,000	$ 12	$ 36,000
Sidewalk Railing	LF	230	$ 50	$ 11,500
Tree Removal	EA	98	$ 500	$ 49,000
Tree Replacement	EA	98	$ 2,500	$ 245,000
Power Line Undergrounding				
Transmission Undergrounding Power Polls	LS	1	2,120,000	$ 2,120,000
Distribution Undergrounding Utilities	LS	1	780,000	$ 780,000
Street Light Replacement	EA	40	5,000	$ 200,000
Traffic Signal Mod.	EA	1	150,000	$ 150,000
Grading	CY	2,600	15	$ 39,000
Drain Inlets - Includes Connector Pipe	EA	10	10,000	$ 100,000
Transit Stops	EA	-	15,000	$ -
Bike Lockers	EA	1	10,000	$ 10,000
Landscape and Irrigation (drought tolerant)	SF	19,000	25	$ 475,000
Signing and Striping	LF	5,000	10	$ 50,000
Monument Signage	EA	1	20,000	$ 20,000
Storm Water Treatment	LS	-	70,000	$ -
Coyote Creek Bridge Widening	LS	1	15,000,000	$ 15,000,000
				$ 20,247,630
Traffic Control	LS	2.5% total cost		$ 506,191
Signal Interconnect Synchronizing	EA	1	$ 100,000	$ 100,000
				$ 20,853,821
				$ 4,170,764
				$ 25,024,585
Preliminary Engineering & Environmental	3%	$		750,738
PS&E	9%	$		2,252,213
Construction Management	8%	$		2,001,967
Admin	5%	$		1,251,229
Subtotal Soft Costs	25%	$		6,256,146
				$ 31,280,731

7.2 City of Artesia

The Concept Focus Area for the City of Artesia is located within the Pioneer Boulevard along Artesia Boulevard. This focus area is generally consistent with both the "Principal Route" and "Residential Calming" street designations. The "Principal Route" primary characteristics include standard lanes promote bike activity; promote pedestrian activity, mature trees and transit connections. The "Residential Calming" primary characteristics include narrower lanes to reduce traffic speeds, promote bike activity, pedestrian activity, mature trees and soundwalls. The cost estimate for this section included these types of features, which should be considered as part of the Master Plan. **Below is the cost breakdown for City of Artesia.**

	UNIT	QUANTITY	Unit PRICE	AMOUNT
Pavement Grind and Overlay (2.5")	SF	450,000	$ 2	$ 900,000
Pavcement - Widening	SF	70,000	$ 15	$ 1,050,000
Enhanced Pavement	SF	9,000	$ 20	$ 180,000
Curb and Gutter Removal	LF	8,000	$ 5	$ 40,000
Curb and Gutter Construction	LF	8,000	$ 30	$ 240,000
Median Curbs including removal	LF	3,096	$ 35	$ 108,360
Curb Ramps	EA	12	$ 3,500	$ 42,000
Driveways	SF	13,000	$ 8	$ 104,000
Sidewalk	SF	40,000	$ 6	$ 240,000
Enhanced Sidewalk	SF	10,000	$ 12	$ 120,000
Sidewalk Railing	LF	650	$ 50	$ 32,500
Tree Removal	EA	270	$ 500	$ 135,000
Tree Replacement	EA	270	$ 2,500	$ 675,000
Power Line Undergrounding				
Transmission Undergrounding Power Polls	LS	1	5,870,000	$ 5,870,000
Distribution Undergrounding Utilities	LS	1	2,160,000	$ 2,160,000
Street Light Replacement	EA	100	5,000	$ 500,000
Traffic Signal Mod.	EA	3	150,000	$ 450,000
Grading	CY	7,200	15	$ 108,000
Drain Inlets - Includes Connector Pipe	EA	40	10,000	$ 400,000
Transit Stops	EA	10	15,000	$ 150,000
Bike Lockers	EA	2	10,000	$ 20,000
Landscape and Irrigation (drought tolerant)	SF	52,000	25	$ 1,300,000
Signing and Striping	LF	12,000	10	$ 120,000
Monument Signage	EA	1	20,000	$ 20,000
Storm Water Treatment	LS	1	180,000	$ 180,000
				$ 15,144,860
Traffic Control	LS	2.5% total cost		$ 378,622
Signal Interconnect Synchronizing	EA	1	$ 100,000	$ 100,000
				$ 15,623,482
				$ 3,124,696
				$ 18,748,178
Preliminary Engineering & Environmental	3%	$		562,445
PS&E	9%	$		1,687,336
Construction Management	8%	$		1,499,854
Admin	5%	$		937,409
Subtotal Soft Costs	25%	$		4,687,044
				$ 23,435,222

7.3 City of Bellflower

The Concept Focus Area for the City of Bellflower is located within Bellflower Boulevard along Artesia Boulevard. This focus area is generally consistent with the "Downtown Living" street designation, with the primary characteristics of reducing travel speeds, promoting pedestrian activity, landscaping the medians, incorporating urban landscape and stormwater treatments, enhancing transit connections and possibly creating special districts. The cost estimate for this section included these types of features, which should be considered as part of the Master Plan. **Below is the cost breakdown for City of Bellflower.**

	UNIT	QUANTITY	Unit PRICE	AMOUNT
Pavement Grind and Overlay (2.5")	SF	950,000	$ 2	$ 1,900,000
Pavcement - Widening	SF	150,000	$ 15	$ 2,250,000
Enhanced Pavement	SF	20,000	$ 20	$ 400,000
Curb and Gutter Removal	LF	18,000	$ 5	$ 90,000
Curb and Gutter Construction	LF	18,000	$ 30	$ 540,000
Median Curbs including removal	LF	6,579	$ 35	$ 230,265
Curb Ramps	EA	26	$ 3,500	$ 91,000
Driveways	SF	28,000	$ 8	$ 224,000
Sidewalk	SF	84,000	$ 6	$ 504,000
Enhanced Sidewalk	SF	21,000	$ 12	$ 252,000
Sidewalk Railing	LF	1,380	$ 50	$ 69,000
Tree Removal	EA	574	$ 500	$ 287,000
Tree Replacement	EA	574	$ 2,500	$ 1,435,000
Power Line Undergrounding				
Transmission Undergrounding Power Polls	LS	1	12,470,000	$ 12,470,000
Distribution Undergrounding Utilities	LS	1	4,590,000	$ 4,590,000
Street Light Replacement	EA	220	5,000	$ 1,100,000
Traffic Signal Mod.	EA	6	150,000	$ 900,000
Grading	CY	15,300	15	$ 229,500
Drain Inlets - Includes Connector Pipe	EA	80	10,000	$ 800,000
Transit Stops	EA	20	15,000	$ 300,000
Bike Lockers	EA	5	10,000	$ 50,000
Landscape and Irrigation (drought tolerant)	SF	110,000	25	$ 2,750,000
Signing and Striping	LF	27,000	10	$ 270,000
Monument Signage	EA	3	20,000	$ 60,000
Storm Water Treatment	LS	2	380,000	$ 760,000
				$ 32,551,765
Traffic Control	LS	2.5% total cost		$ 813,794
Signal Interconnect Synchronizing	EA	1	$ 100,000	$ 100,000
				$ 33,465,559
				$ 6,693,112
				$ 40,158,671
Preliminary Engineering & Environmental	3%	$		1,204,760
PS&E	9%	$		3,614,280
Construction Management	8%	$		3,212,694
Admin	5%	$		2,007,934
Subtotal Soft Costs	25%	$		10,039,668
				$ 50,198,339

7.4 City of Long Beach

The Concept Focus Area for the City of Long Beach is located at the intersection of Artesia Boulevard and Atlantic Boulevard and extends east to Orange Street. This focus area is generally consistent with the "Downtown Living" street designation, with the primary characteristics of reducing travel speeds, promoting pedestrian activity, landscaping the medians, incorporating urban landscape and stormwater treatments, enhancing transit connections and possibly creating special districts. The cost estimate for this section included these types of features, in addition to incorporating the reconstruction of the bridge over the LA River, which should be considered as part of the Master Plan. **Below is the cost breakdown for City of Long Beach.**

	UNIT	QUANTITY	Unit PRICE	AMOUNT
Pavement Grind and Overlay (2.5")	SF	1,180,000	$ 2	$ 2,360,000
Pavcement - Widening	SF	180,000	$ 15	$ 2,700,000
Enhanced Pavement	SF	24,000	$ 20	$ 480,000
Curb and Gutter Removal	LF	22,000	$ 5	$ 110,000
Curb and Gutter Construction	LF	22,000	$ 30	$ 660,000
Median Curbs including removal	LF	8,170	$ 35	$ 285,950
Curb Ramps	EA	32	$ 3,500	$ 112,000
Driveways	SF	34,000	$ 8	$ 272,000
Sidewalk	SF	105,000	$ 6	$ 630,000
Enhanced Sidewalk	SF	25,000	$ 12	$ 300,000
Sidewalk Railing	LF	1,710	$ 50	$ 85,500
Tree Removal	EA	713	$ 500	$ 356,500
Tree Replacement	EA	713	$ 2,500	$ 1,782,500
Power Line Undergrounding				
Transmission Undergrounding Power Polls	LS	1	15,490,000	$ 15,490,000
Distribution Undergrounding Utilities	LS	1	5,700,000	$ 5,700,000
Street Light Replacement	EA	270	5,000	$ 1,350,000
Traffic Signal Mod.	EA	8	150,000	$ 1,200,000
Grading	CY	19,000	15	$ 285,000
Drain Inlets - Includes Connector Pipe	EA	100	10,000	$ 1,000,000
Transit Stops	EA	20	15,000	$ 300,000
Bike Lockers	EA	6	10,000	$ 60,000
Landscape and Irrigation (drought tolerant)	SF	137,000	25	$ 3,425,000
Signing and Striping	LF	33,000	10	$ 330,000
Monument Signage	EA	4	20,000	$ 80,000
Storm Water Treatment	LS	2	480,000	$ 960,000
LA River Bridge Widening	LS	1	25,000,000	$ 25,000,000
				$ 65,314,450
Traffic Control	LS	2.5% total cost		$ 1,632,861
Signal Interconnect Synchronizing	EA	1	$ 100,000	$ 100,000
				$ 67,047,311
				$ 13,409,462
				$ 80,456,774
Preliminary Engineering & Environmental	3%	$		2,413,703
PS&E	9%	$		7,241,110
Construction Management	8%	$		6,436,542
Admin	5%	$		4,022,839
Subtotal Soft Costs	25%	$		20,114,193
				$ 100,570,967

7.5 City of Compton

The Concept Focus Area for the City of Compton is located between Central Avenue and Wilmington Avenue at State Route 91 (SR-91). This focus area is generally consistent with the "Principal Route" street designation, with the primary characteristics of standard lanes, promote bike activity, promote pedestrian activity, mature trees and transit connections. The cost estimate for this section included these types of features, which should be considered as part of the Master Plan. **Below is the cost breakdown for City of Compton.**

	UNIT	QUANTITY	Unit PRICE	AMOUNT
Pavement Grind and Overlay (2.5")	SF	780,000	$ 2	$ 1,560,000
Pavcement - Widening	SF	120,000	$ 15	$ 1,800,000
Enhanced Pavement	SF	16,000	$ 20	$ 320,000
Curb and Gutter Removal	LF	14,000	$ 5	$ 70,000
Curb and Gutter Construction	LF	14,000	$ 30	$ 420,000
Median Curbs including removal	LF	5,375	$ 35	$ 188,125
Curb Ramps	EA	21	$ 3,500	$ 73,500
Driveways	SF	23,000	$ 8	$ 184,000
Sidewalk	SF	69,000	$ 6	$ 414,000
Enhanced Sidewalk	SF	17,000	$ 12	$ 204,000
Sidewalk Railing	LF	1,130	$ 50	$ 56,500
Tree Removal	EA	469	$ 500	$ 234,500
Tree Replacement	EA	469	$ 2,500	$ 1,172,500
Power Line Undergrounding				
Transmission Undergrounding Power Polls	LS	1	10,190,000	$ 10,190,000
Distribution Undergrounding Utilities	LS	1	3,750,000	$ 3,750,000
Street Light Replacement	EA	180	5,000	$ 900,000
Traffic Signal Mod.	EA	5	150,000	$ 750,000
Grading	CY	12,500	15	$ 187,500
Drain Inlets - Includes Connector Pipe	EA	60	10,000	$ 600,000
Transit Stops	EA	20	15,000	$ 300,000
Bike Lockers	EA	4	10,000	$ 40,000
Landscape and Irrigation (drought tolerant)	SF	90,000	25	$ 2,250,000
Signing and Striping	LF	22,000	10	$ 220,000
Monument Signage	EA	3	20,000	$ 60,000
Storm Water Treatment	LS	1	310,000	$ 310,000
				$ 26,254,625
Traffic Control	LS	2.5% total cost		$ 656,366
Signal Interconnect Synchronizing	EA	1	$ 100,000	$ 100,000
				$ 27,010,991
				$ 5,402,198
				$ 32,413,189
Preliminary Engineering & Environmental	3%	$		972,396
PS&E	9%	$		2,917,187
Construction Management	8%	$		2,593,055
Admin	5%	$		1,620,659
Subtotal Soft Costs	25%	$		8,103,297
				$ 40,516,486

8.0 PRESENTATION TO COMMITTEES AND CITY COUNCILS

The Study included a series of independent meetings with each City/Jurisdiction as well as a series of meetings with the Artesia Boulevard Technical Advisory Committee (TAC) and Policy Committee (PC).

- A first meeting was held with the TAC to outline the scope of work and goals of the study and to provide them with schedule.
- A series of initial independent meetings were conducted with each community to listen and provide a Strengths, Weaknesses, Opportunities, and Constraints.
- A second meeting with each City/Jurisdiction was held to discuss proposed ideas and recommendations and to receive feedback.
- A second meeting with the TAC was held to present and provide the Conceptual Planning Exhibits for review and comment.
- A first meeting with the PC was held to present and provide the updated Conceptual Planning Exhibits that resulted from the previous TAC meetings, input from each City/Jurisdiction and the outreach and analysis.
- A third meeting with the TAC (will be) was held to distribute the draft Master Plan and Complete Street Evaluation Study report and to provide remarks regarding the PC meeting, as well as additional information quantified since prior meetings, including the high level cost estimates.
- A final meeting with the joint TAC and PC (will be) was held to finalize the study and approve the report. A strategy discussion and next steps for implementation of the Master Plan (will be) was also included.

9.0 FINALIZED CONCEPTS FOR MASTER PLAN

The next steps include an implementation strategy necessary to secure funding for the project. Building the project can be completed in a variety of ways, including the following:

General Funding Opportunities	How Funds can be used: Phases & Eligibility
Caltrans Sustainability	Planning Phase Only
Caltrans Active Transportation Program	Planning Phase Only, can be specific to Safe Routes to School
California Cap & Trade	All Phases, per submission requirements, Construction Phase
LA-River (AB-530)	Could be used to improve accessibility near the LA River, all Phases
Gateway Urban Greening (WCA)	Could be used to improve accessibility near the watersheds, all Phases
RMC Prop 1	Could be used to improve accessibility near the watersheds, all Phases
Caltrans Highway Safety Improvement Plan (HSIP)	Improves Traffic Safety, Construction Phase
City Specific Prop. A	For all Phases, along Transit Related Improvements
City Specific Prop. C	Flexible use for all phases along High Quality Transit Line
Metro Call for Projects	Flexible Use, speculative if "Call" will be announced including timing
Local Return Measure R	Flexible use for all phases
Local Return Measure M	Flexible use for all phases
Federal Programs such as the TIGER Grant	Flexible use for Construction Phase

The competitive funding options available will be monitored by GCCOG staff work, who will coordinate with the Cities. Once a sources is identified, coordination will take place regarding the pieces or portions of the Corridor that fit within the requirements of the funding opportunity. GCCOG staff will identify opportunities and coordinate with the City a strategy for being able to submit the necessary justification for funds.

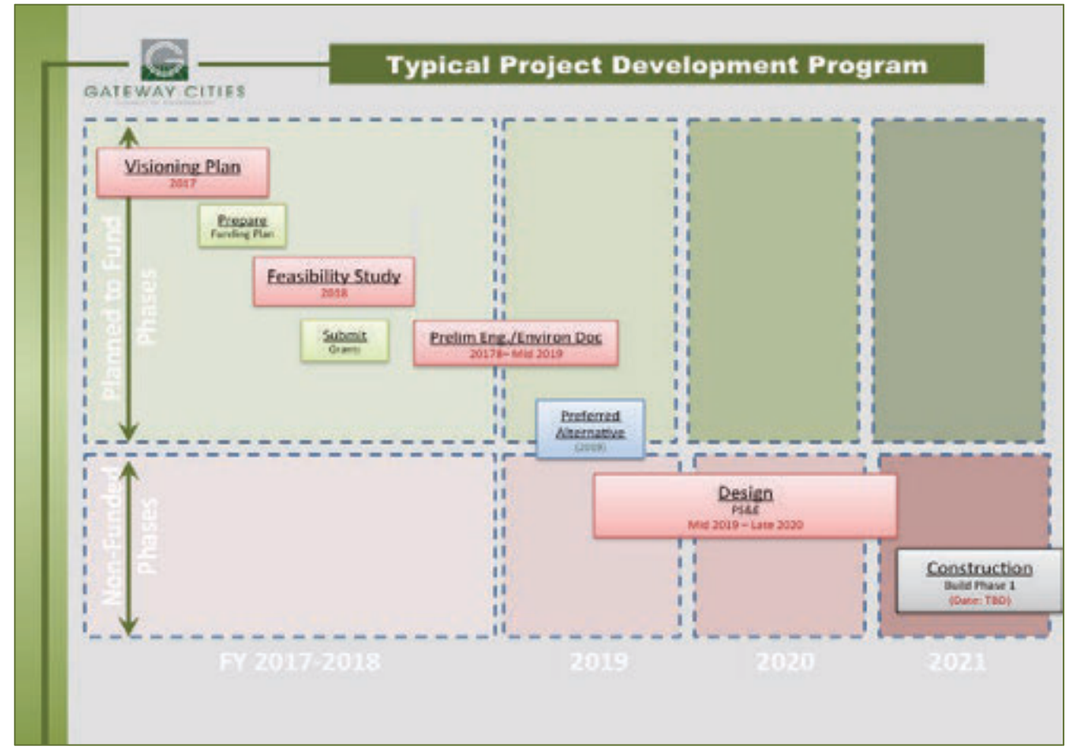
10.0 STEPS FORWARD

Steps forward can include a variety of options. From a general standpoint, the project will follow the traditional project development process, as included in section 2.4. Additionally the project will need to be broken into components by mode or by specific geographical section depending on the funding opportunity. Because the Corridor is large and the cost estimate is high, a multi variable funding plan is necessary in order to implement the master plan. Possible funding options were included in section 9.0.

Several examples of how the project could be implemented are as follows:

Option 1	Fund a geographical section of the master plan including all concept characteristics shown in the master plan.
Option 2	Fund only a portion, such as aesthetically consistent bus shelters, for the overall Corridor.
Option 3	Fund the full concept for intersections only, and tie in to the Artesia Mainline until additional funding becomes available.

There are likely many options to implementing the Master Plan and the Gateway Cities is available to identify funding opportunities consistent with the Corridor Master Plan.



[i] STP Draft Summary 12/15/16

ARTESIA
Boulevard

Prepared By

GATEWAY CITIES
COUNCIL OF GOVERNMENTS