

University Avenue Mobility Study

prepared for



PRESENTATION



April 26, 2011



DAVID EVANS
AND ASSOCIATES, INC.

Darnell & ASSOCIATES, INC.
TRANSPORTATION PLANNING & TRAFFIC ENGINEERING



PARTERRE



Outline



- Introduction
- Review of Action Items
- Community Walk Audits Summary
- Mobility Assessment
- Draft Measures of Effectiveness
- Potential Design Solutions
 - Guidelines
 - Concepts
- Community Workshop – May 16, 2011
- Next Working Group Meeting – June 16, 2011



Technical Team Introduction



- Thomas Landre – City of SD PM
- Oscar Valdivieso – City of SD
- Tracy Reed – City Redevelopment
- Bill Darnell – Darnell & Assoc. Inc, Traffic
- Lewis Michaelson – Katz and Associates
- Tricia McColl – David Evans (DEA), Civil Engineer
- Lili O'Connor – Parterre, Landscape Architect



Working Group Introduction



- Laura Riebau – EACPC
- Jody Talbott – CNF
- Betty White – RPCC
- Lee Rittiner – RPCC/EAPAC
- Jeannette Maxwell – Crossroads PAC BOD
- Jim Stone – Walk San Diego
- Jennifer Finnegan – College Area BID
- Anna Orzei-Arnita – Redwood Village CC
- Jim Bartell – Northgate Markets
- Mario Ingrassi – Crossroads PAC
- Randy VanVleck - CHCDC
- Samantha Ollinger – San Diego County Bicycle Coalition



Input from the Community Workshop



- 54th Street to 58th Street
 - 54th Street is not safe for pedestrians
 - High volume of children and elderly pedestrians
 - Free right turn encourages speeding
 - Intersections are very wide
 - Intersections are too far apart
 - J-walking east of 54th Street
 - Sight distance is poor on the north side of the street
 - Median island is not complete
 - Median landscaping is needed
 - Chollas Intersection is not safe
 - The skewed angle limits visibility
 - The stop signs are not effective



Input from the Community Workshop



- 58th Street to College Avenue
 - No sidewalk on the north side
 - No steps or ramp across from University Square
 - Bus stop waiting area is too small
 - Pedestrian timing seems too short
 - Limited number of pedestrian crossings over long distances
 - Semi Trucks and Trailers park on the street
 - Need left turn signal at 58th Street
 - Missing sidewalk east of 60th Street
 - Obstructions in the sidewalks east of 60th Street
 - Steep driveways east of 60th Street
 - Need left turn signal at 58th



Input from the Community Workshop



- College Avenue to Bonillo
 - Missing sidewalk
 - Parking lots and drive aisles in the public right of way
 - On street parking is needed for businesses
 - Sometimes there is spill over of parking into the community
 - Need wider sidewalks in commercial areas
 - Drainage Improvements needed at Bonillo Drive
 - Drainage improvements needed at Cartagena Boulevard
 - Cars back out onto University Avenue in some locations
 - Driveways are very close together



Input from the Community Workshop



- Bonillo Drive to Aragon Drive
 - Missing sidewalk
 - Parking lots and drive aisles in the public right of way
 - On street parking is needed for businesses
 - Drainage Improvements needed at Rolando Boulevard
 - Cars back out onto University Avenue in some locations
 - Driveways are very close together on the north side of the street



Input from the Community Workshop



- Aragon Drive to 69th Street
 - Improvements at Kroc Center are in good condition
 - Median and Landscaping is in good condition
 - Staging Buses cause sight distance problem at 69th Street
 - Drainage improvements needed at Alamo Drive
 - Parking lots and drive aisles in the public right of way
 - On street parking is needed for businesses
 - Drainage Improvements needed at Rolando Boulevard
 - Cars back out onto University Avenue in some locations
 - Driveways are very close together on the north side of the street



Walk Audit Results



- **Walk Audit Summary**

- Pedestrian Safety – Poor at 54th, Bonillo to Aragon, Aragon to 69th
- Bicycle Facilities – Poor
- Transit – Poor at 54th and Bonillo to Aragon
- Potential to reduce on street parking west of College
- Need for dedicated bike lanes
- Street trees 54th Street and east of Bonillo
- Consolidate driveways east of Bonillo
- Free rights create a conflict



Mobility Assessment



- Questions





Mobility Assessment

Summary 2030 Conditions

- Vehicular Traffic increase – 24%
- Pedestrian Traffic – 25% increase
- Bicycle Traffic 25% increase
- Transit Ridership – 19% increase





Mobility Assessment



- 4 lane major roadway
- Future condition dual left turns at College Avenue
- Future Conditions dual left turns at 54th Street if Chollas Parkway is closed
- Chollas Parkway intersection
 - Close to through traffic
 - Realign with signalized Tee Intersection
- Surface improvements to be ADA compliant
- Traffic Signals to be ADA compliant
- Mid block cross walks don't meet warrants
- Striped cross walks at non-signalized intersections don't meet City Council Policy



Mobility Assessment



- Sidewalks – 10 feet preferred – ADA
- Crosswalk – 10 feet minimum
- Two ramps per corner preferred
- Bike Lanes – Planned
- Transit Improve Shelters and Access
- Parking – Maintain some street parking East of College



Draft Measures of Effectiveness



Pedestrian

Walkability

Sidewalk Accessibility

Crosswalks

Potential Vehicle/Pedestrian Conflicts at intersections

Potential Vehicle/Pedestrian Conflicts at Mid-Block Locations

Pedestrian Safety



Transit

Transit Access

Transit Amenities



Bicycle Facilities

Potential Vehicle/Bicycle Conflicts at intersections

Potential Vehicle/Bicycle Conflicts at Mid-Block Locations



Other

Aesthetics

Parking



Draft Measures of Effectiveness



Engineering

Roadway Level of Service (Volume to Capacity Ratio)

Intersection Level of Service (Volume to Capacity Ratio)

Intersection Delay

Passenger Vehicle Travel Time

Corridor Delay

Parking Capacity Change

Parking Maneuver/Traffic Flow Conflicts

Storm Drainage

Stormwater management

Compliance with City Design Standards

Right of Way Impacts

Environmental Impacts

Maintenance

Liability



Design Solutions



- City of San Diego Street Design Manual
- ADA Guidelines for Access and Signals
- Street Lighting Standards
- San Diego Regional Standards
- No Additional City Maintenance Budget
 - Landscaping
 - Ladder Crosswalks
 - Street Furnishings
 - Decorative Pavement
- No Right of Way Acquisition



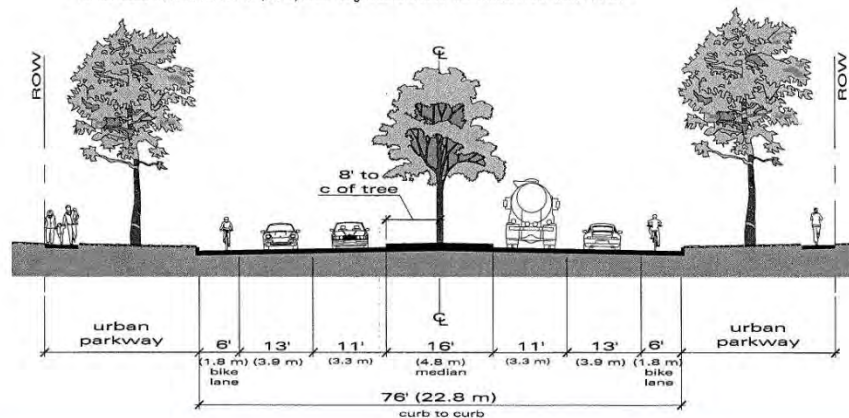
Four Lane Major



Width, Right-of-Way	120 ft. (36.0 m)	
Design ADT	LOS C	30,000
	LOS D	35,000
Design Speed	55 mph (90 km/h)	
Width (includes bike lanes and 16 ft. (4.8 m) raised center median), Curb-to-Curb^{1,2}	76 ft. (22.8 m)	
Maximum Grade	7%	
Minimum Curve Radius	1,850 ft. (585 m) with no superelevation 1,350 ft. (430 m) with 2% (min.) superelevation 880 ft. (275 m) with 10% (max.) superelevation	
Land Use	Single Dwelling Residential-no front or side yards; Multiple Dwelling Residential-no front or side yards; Community Commercial-no front yards; Regional Commercial; Commercial Office; Visitor Commercial; Church; Public Building; Industrial; Open Space	
Parkway	U-4 (b)	

¹ Widen additional 10 ft. (3.0 m) at approaches to intersecting four-or-six-lane streets to provide a minimum of 250 ft. (75 m) of two-lane left-turn storage, exclusive of transitions. Receiving lanes for dual lefts shall be 12 ft. (3.6 m) wide. In instances where supporting information exists, such as an approved traffic impact study, showing clearly that dual left-turn lanes would not be warranted, the standard curb-to-curb width may be permitted.

² At intersections, a minimum 6 ft. (1.8 m) wide refuge island shall be maintained in the center median.





Four Lane Urban Major

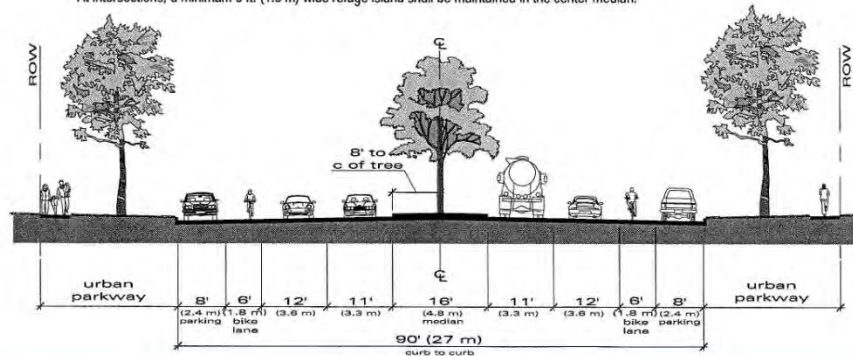


Width, Right-of-Way	118 ft. (35.6 m) - 130 ft. (39.0 m)
Design ADT	LOS C 30,000 LOS D 35,000
Design Speed	45 mph (70 km/h)
Width (includes bike lanes and 16 ft. (4.8 m) raised center median), Curb-to-Curb^{1,2}	90 ft. (27.0 m)
Maximum Grade	7%
Minimum Curve Radius	1,090 ft. (325 m) with no superelevation 830 ft. (245 m) with 2% (min.) superelevation 660 ft. (195 m) with 6% (max.) superelevation
Land Use	Single Dwelling Residential-no front or side yards; Multiple Dwelling Residential-no front or side yards; Neighborhood Commercial; Community Commercial; Regional Commercial; Commercial Office; Visitor Commercial; School (high school and above); Church; Public Building; Urban Village Commercial Retail; Industrial
Parkway Options	U-4 (a); U-5 (a,b); U-6 (a,b)

NOTE: Four-Lane Urban Major street classification is applicable to streets of limited length, where intersections are closely spaced, where there is extensive driveway access, or in other situations where the speed is expected to be less than 45 mph (70 km/h) or less.

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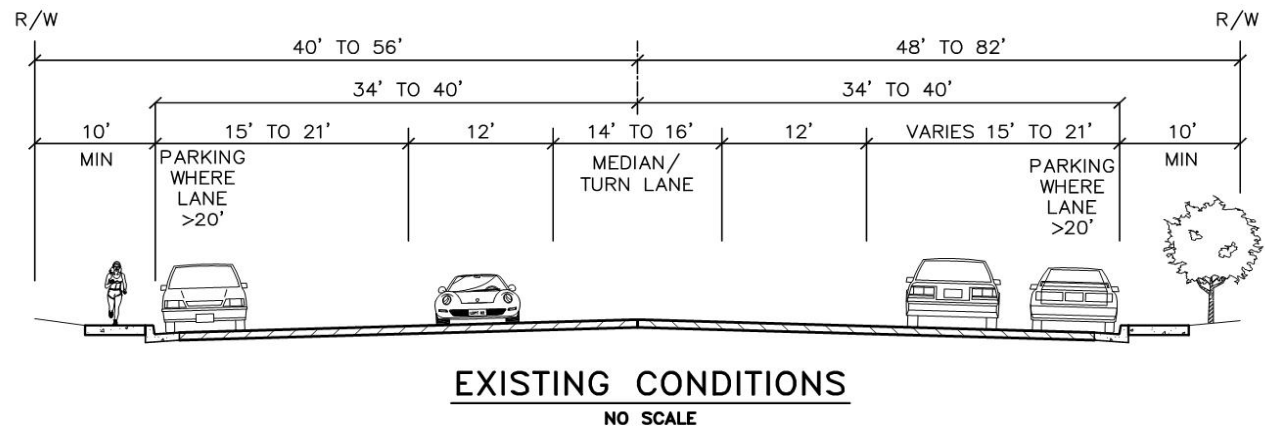
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Cross Sections

54th Street to 58th Street

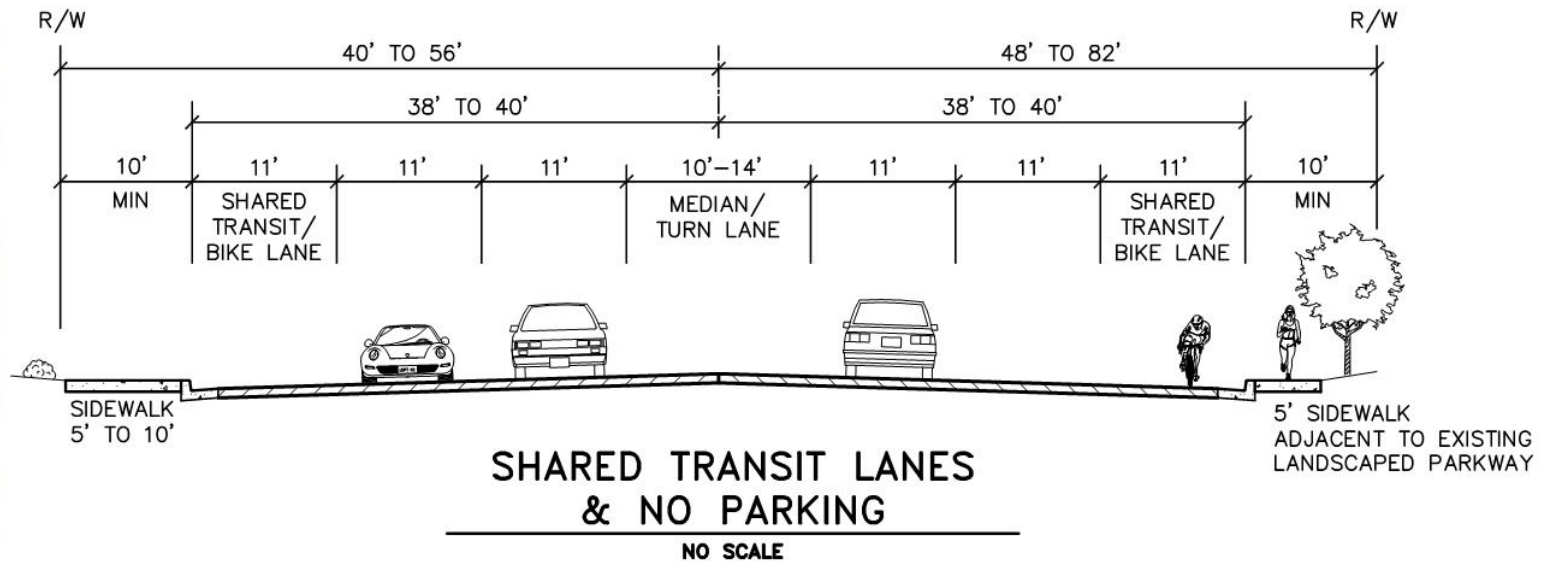




Cross Sections



54th Street to 58th Street

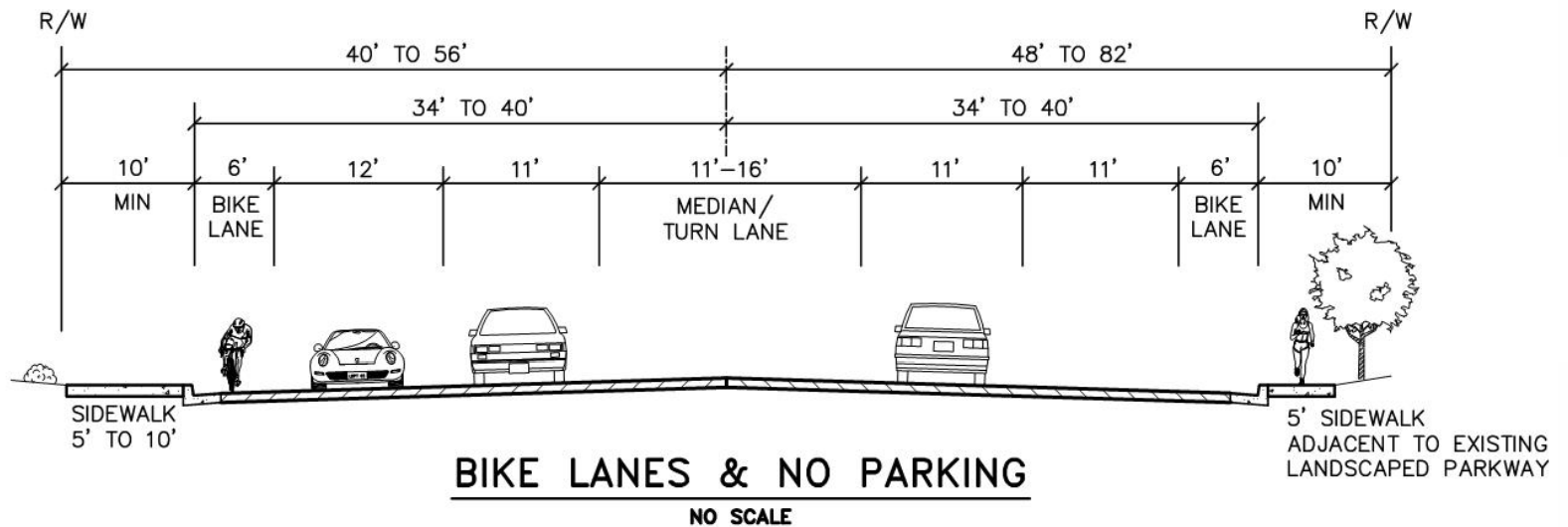




Cross Sections



54th Street to 58th Street





54th Street to 58th Street



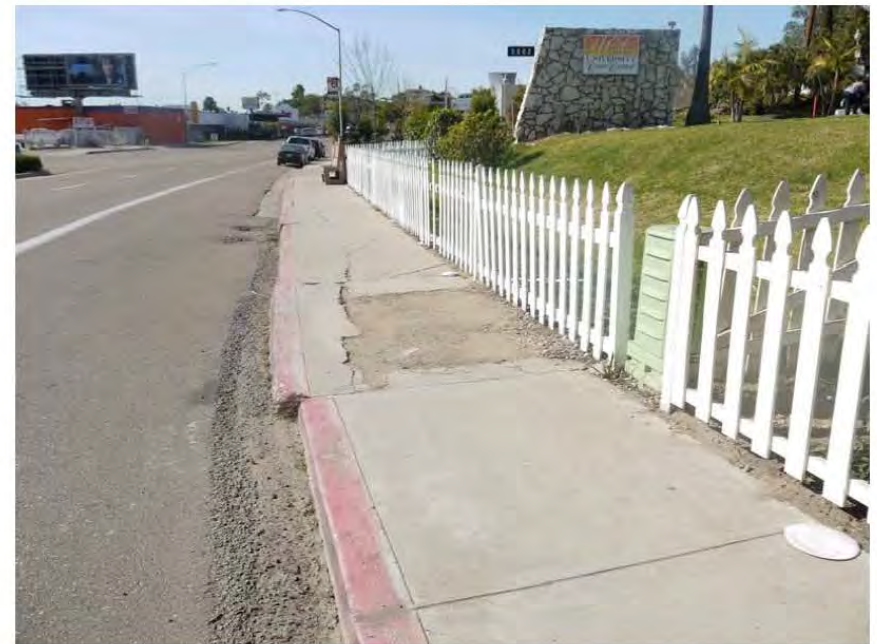


54th Street to 58th Street



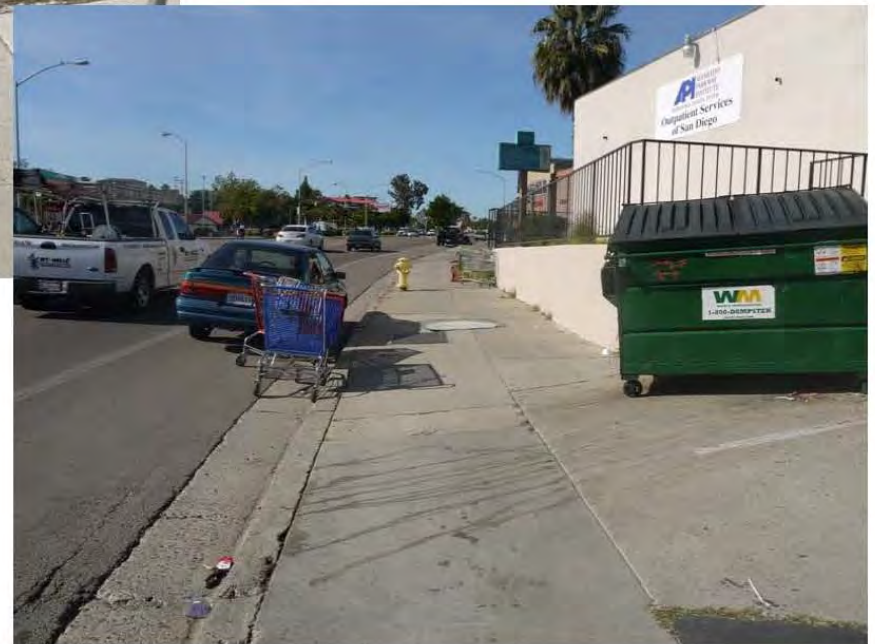
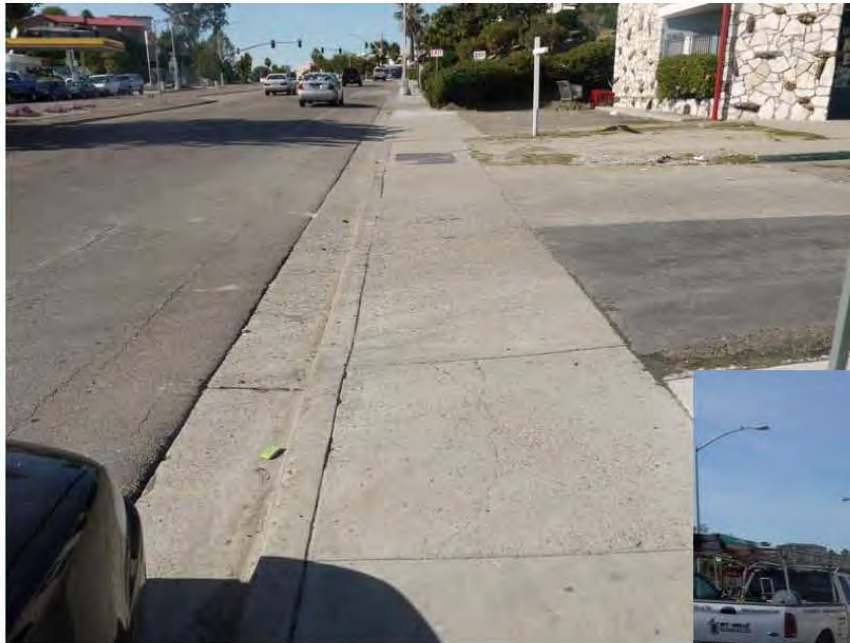


54th Street to 58th Street



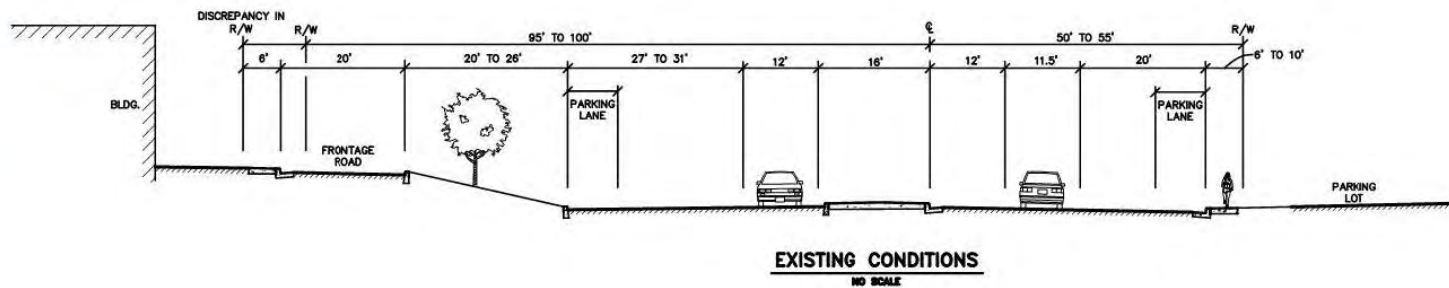


54th Street to 58th Street



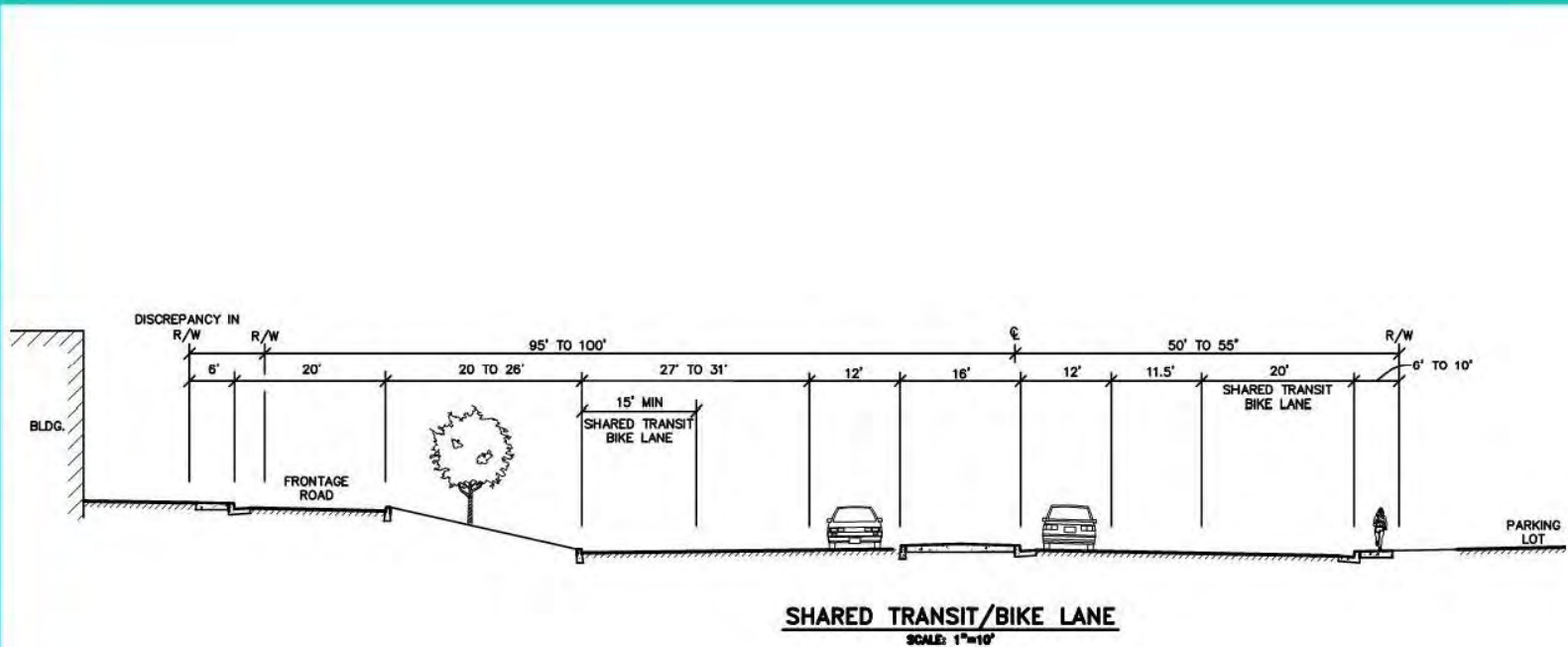


58th Street to 60th Street



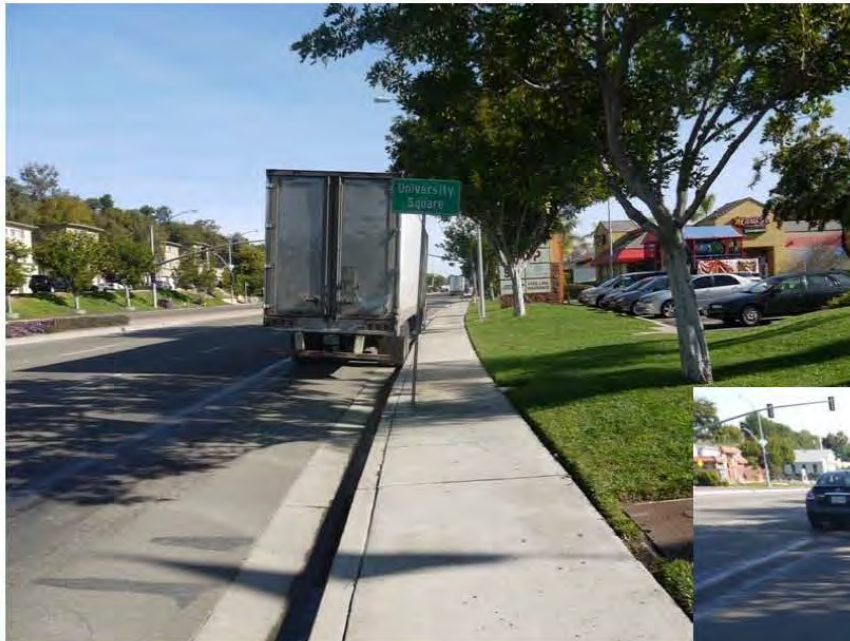


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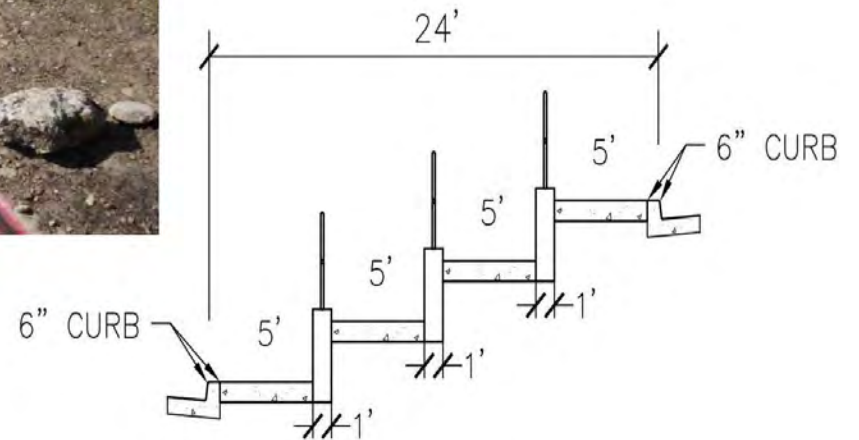


58th Street to 60th Street





58th Street to 60th Street



8% MAX GRADE
WITH HANDRAILS

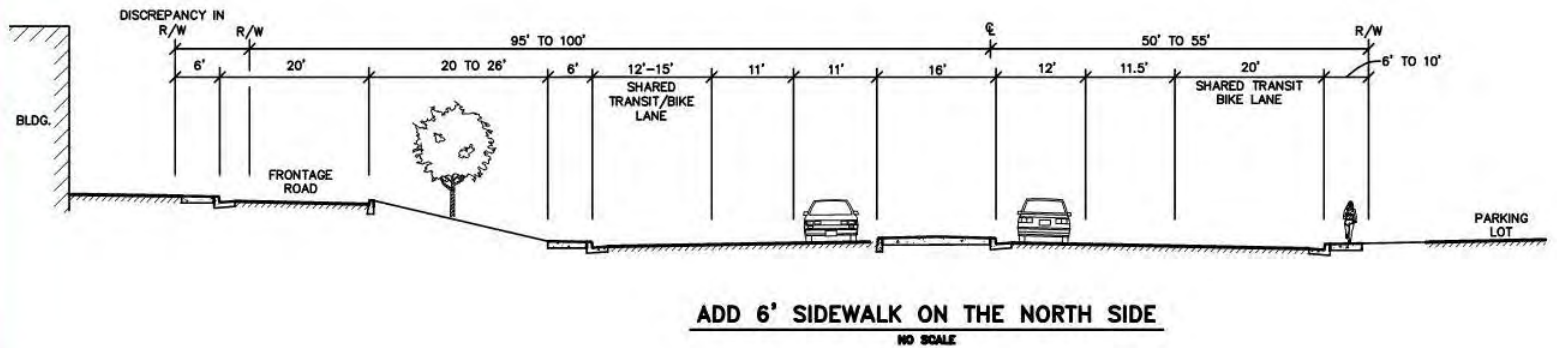


58th Street to 60th Street



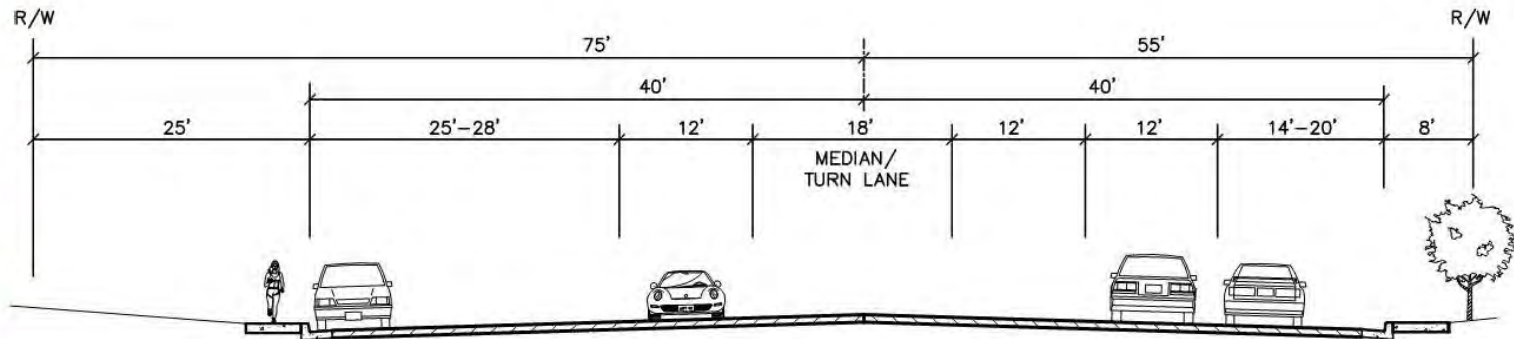


58th Street to 60th Street

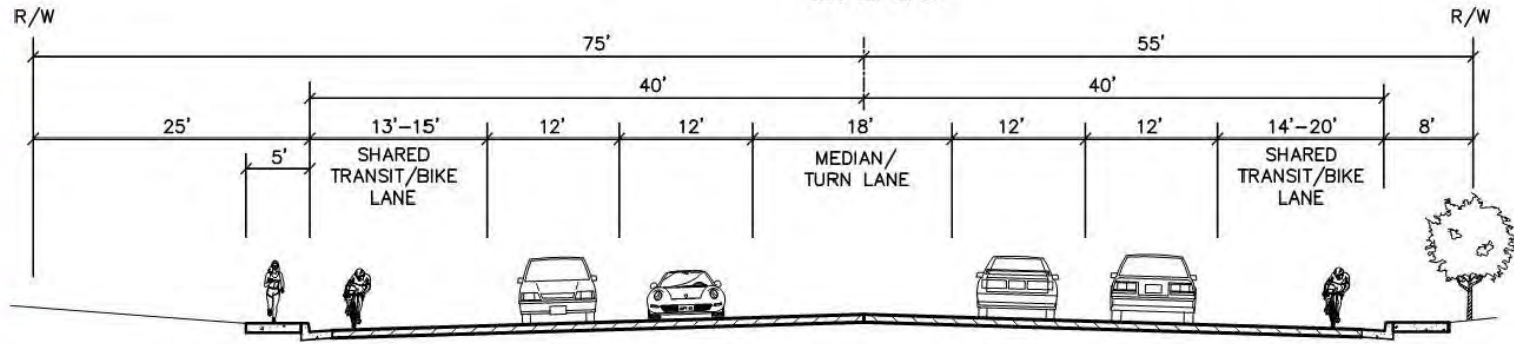




60th Street to College Avenue



EXISTING CONDITIONS
NOT TO SCALE

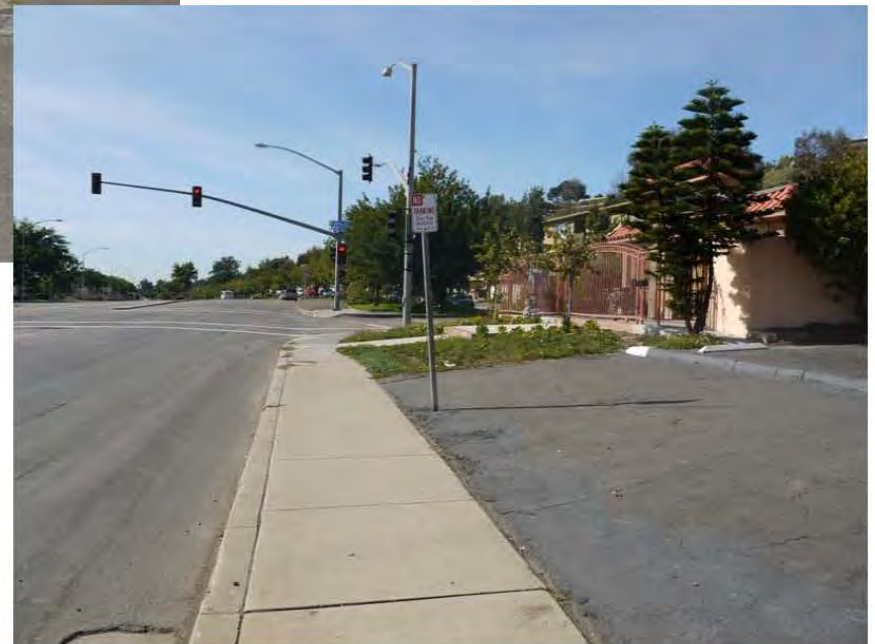


**SHARED TRANSIT/BIKE
LANE & NO PARKING**
NOT TO SCALE





60th Street to College Avenue

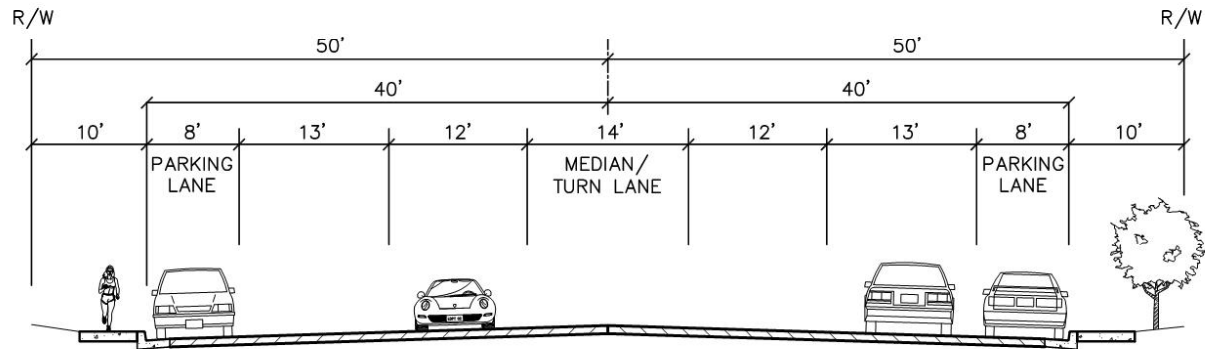




College Avenue to Aragon Drive

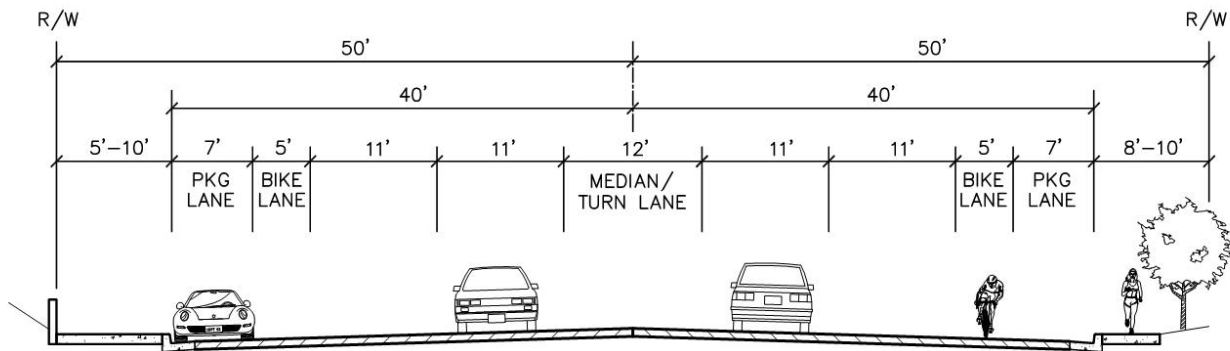


College Avenue to Aragon Drive



EXISTING CONDITIONS

SCALE: 1"=10'



BIKE LANES & PARKING

SCALE: 1"=10'

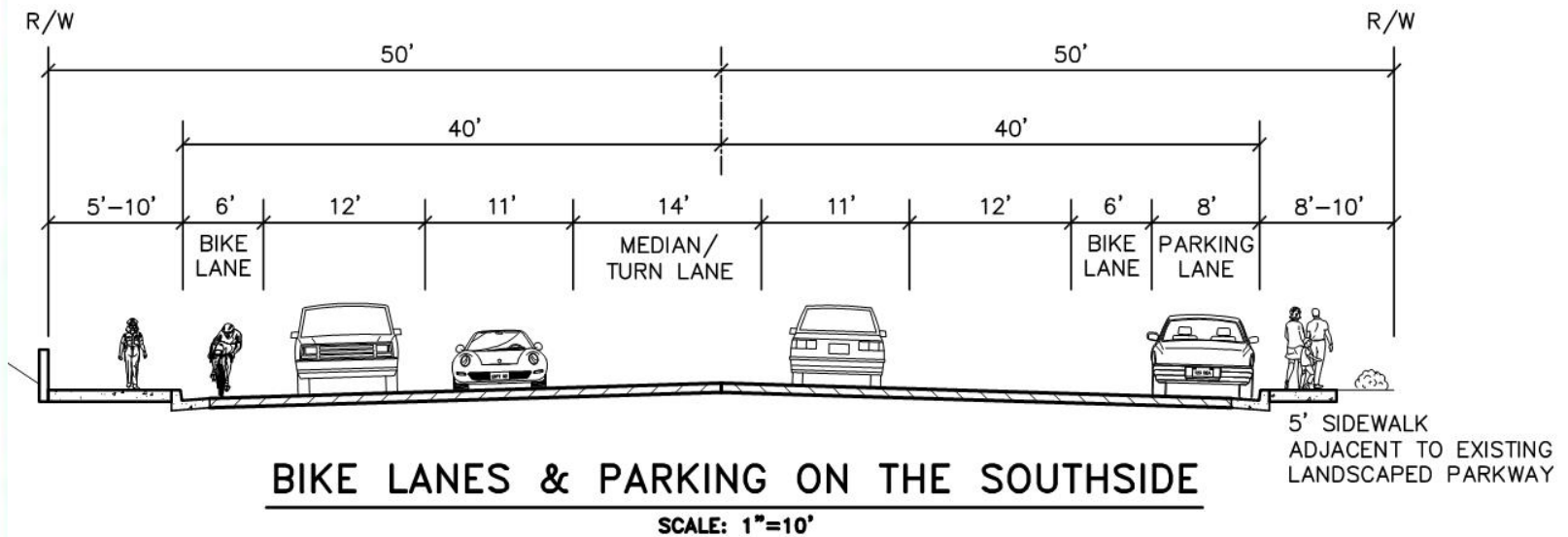




College Avenue to Aragon Drive



College Avenue to Aragon Drive



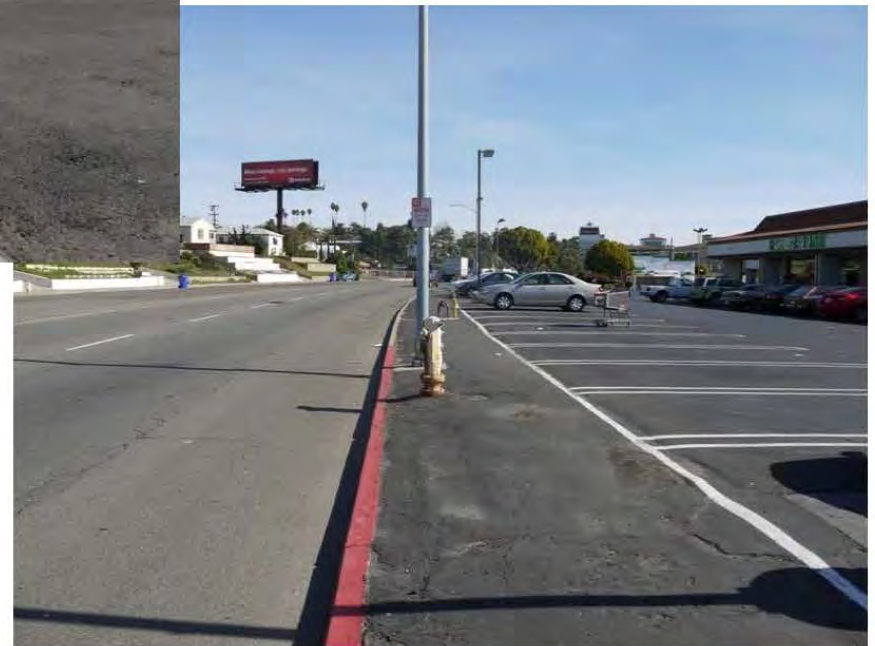


College Avenue to Aragon Drive





College Avenue to Aragon Drive



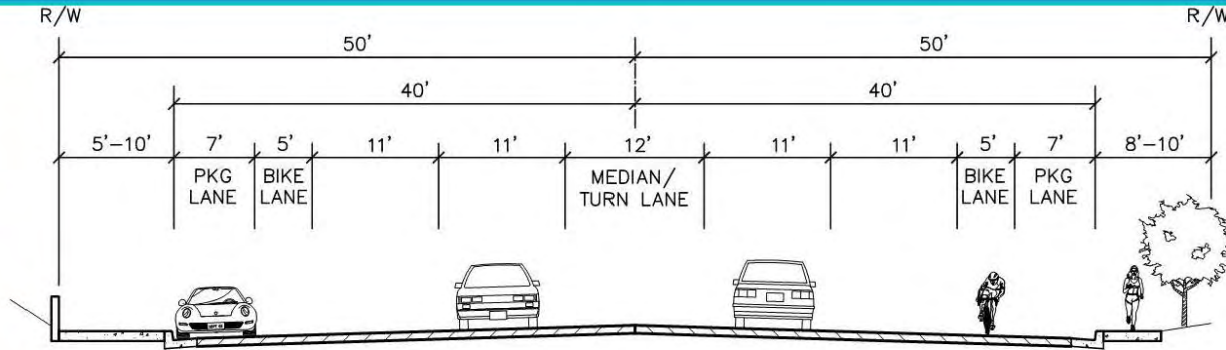


College Avenue to Aragon Drive





College Avenue to Aragon Drive



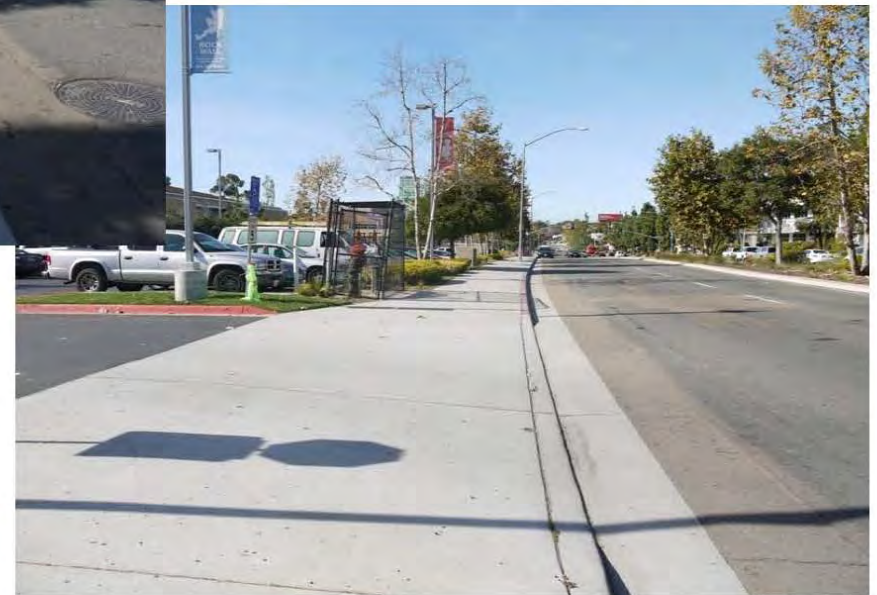
BIKE LANES & PARKING

SCALE: 1"=10'



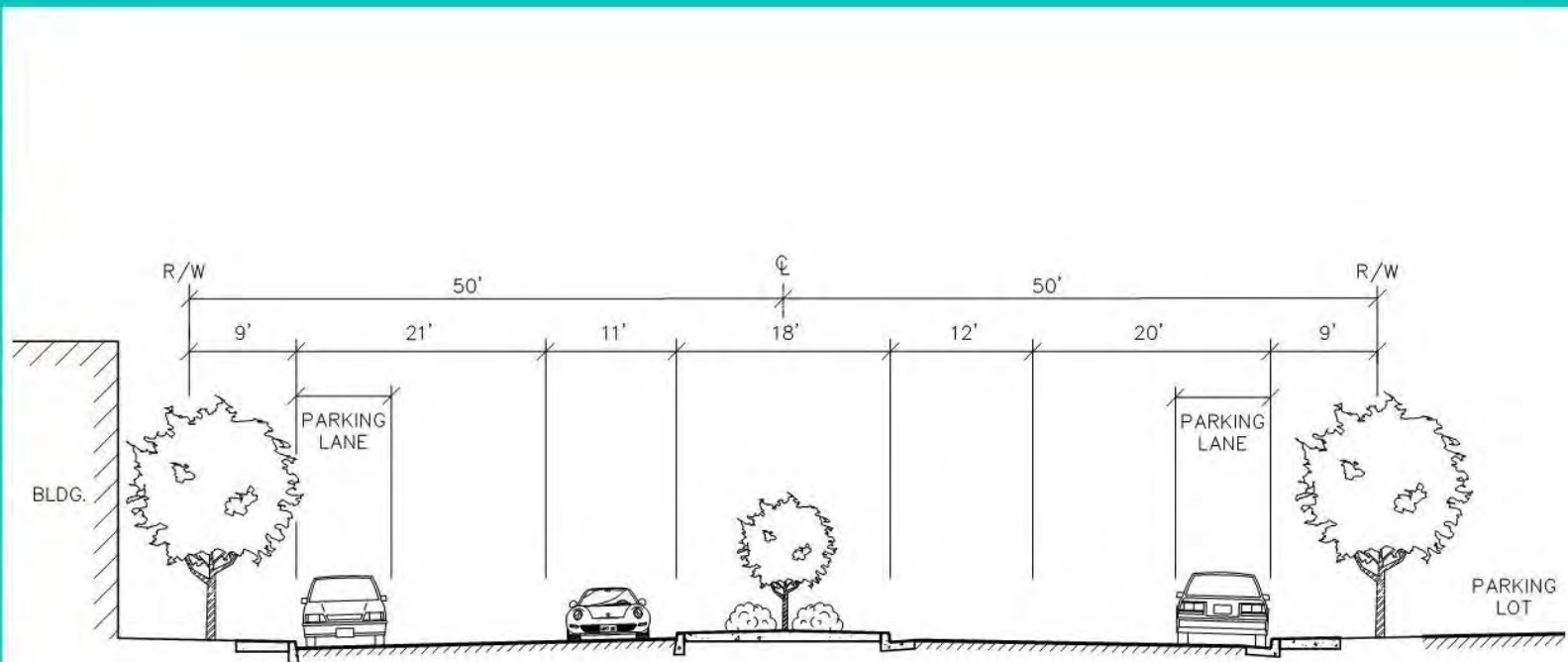


Aragon Drive to 68th Street





Aragon Drive to 68th Street



EXISTING CONDITIONS

NOT TO SCALE





Aragon Drive to 68th Street





Aragon Drive to 68th Street



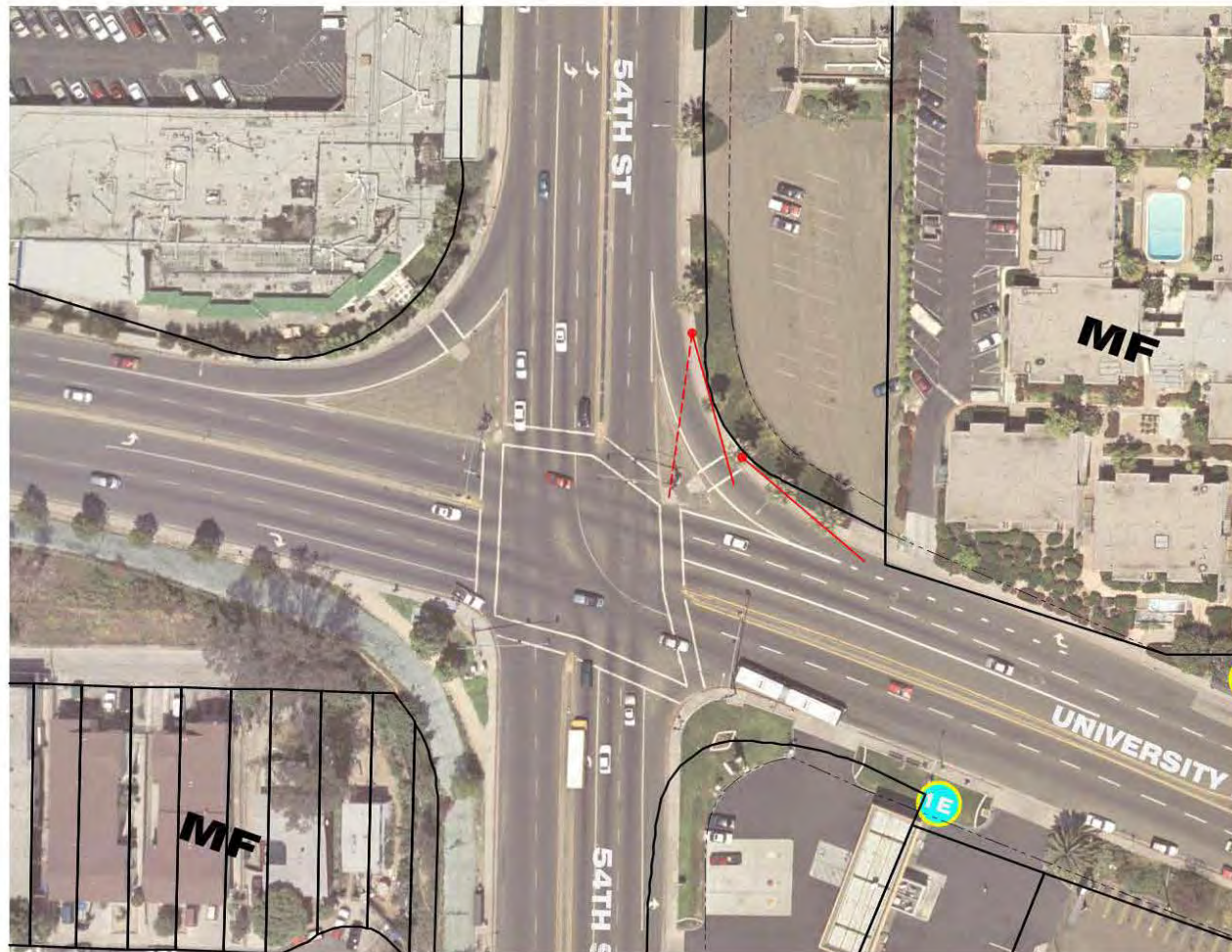


Aragon Drive to 68th Street



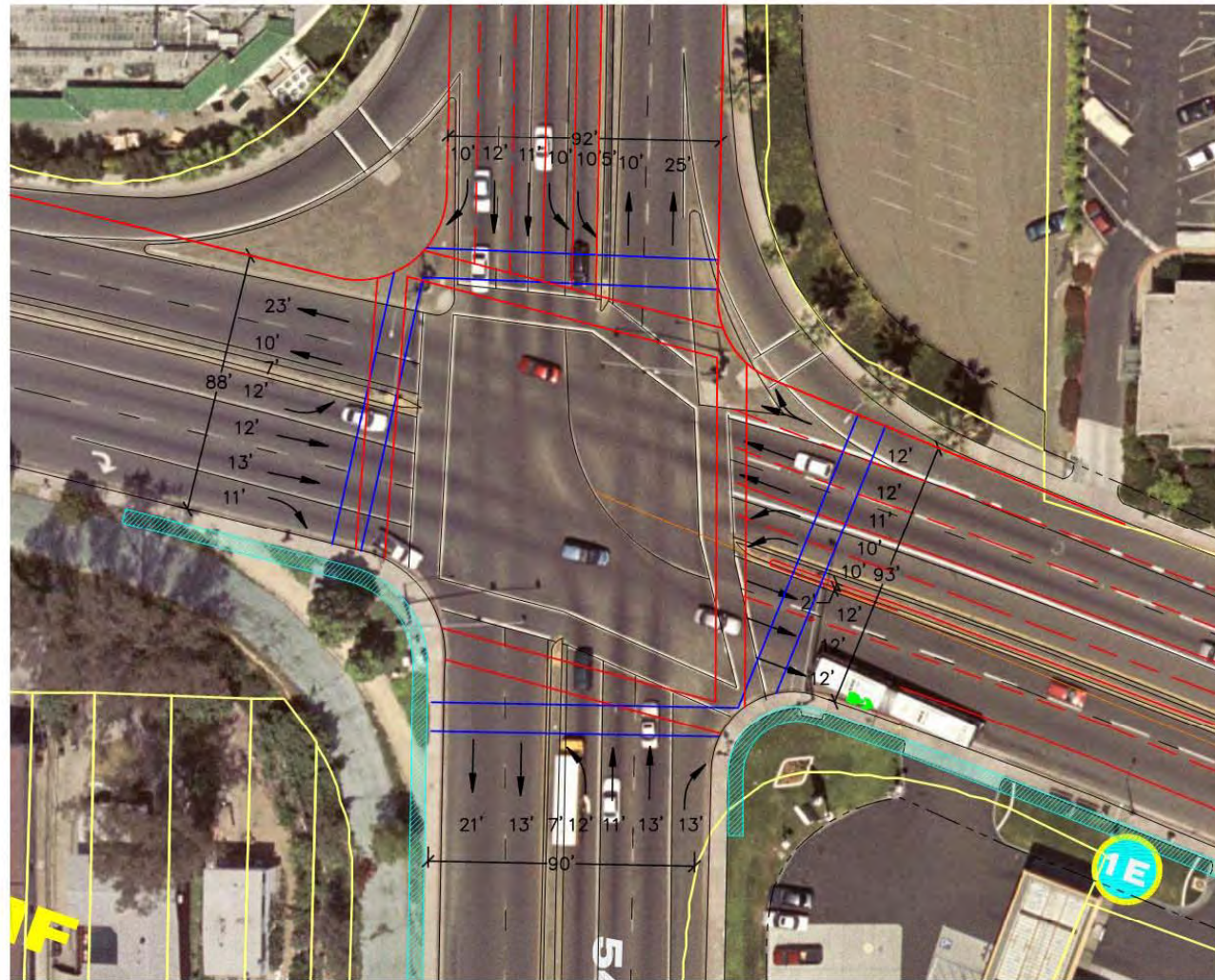


54th Street – Free Right Turns



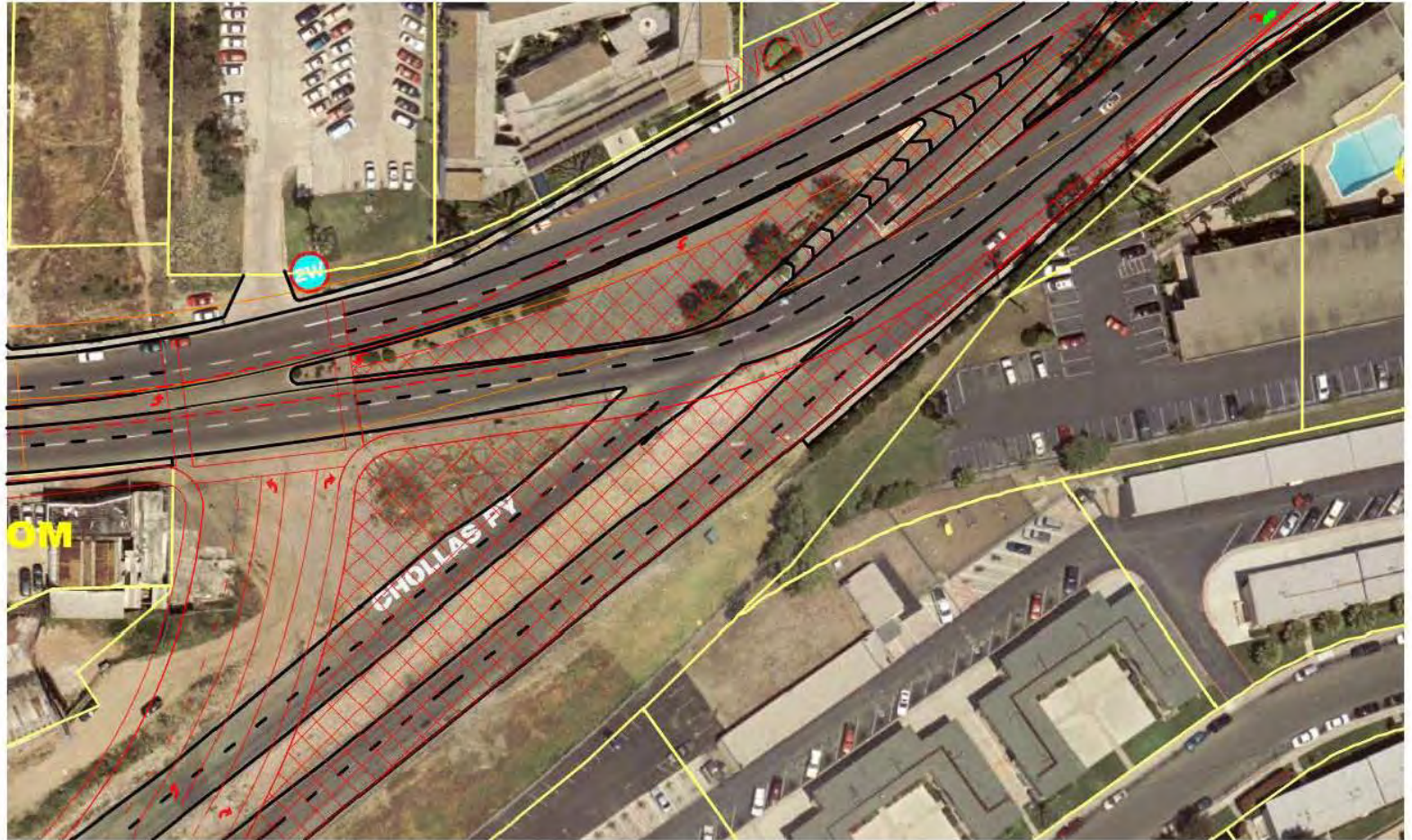


Re-striping at 54th Street – Delete Free Right Turns



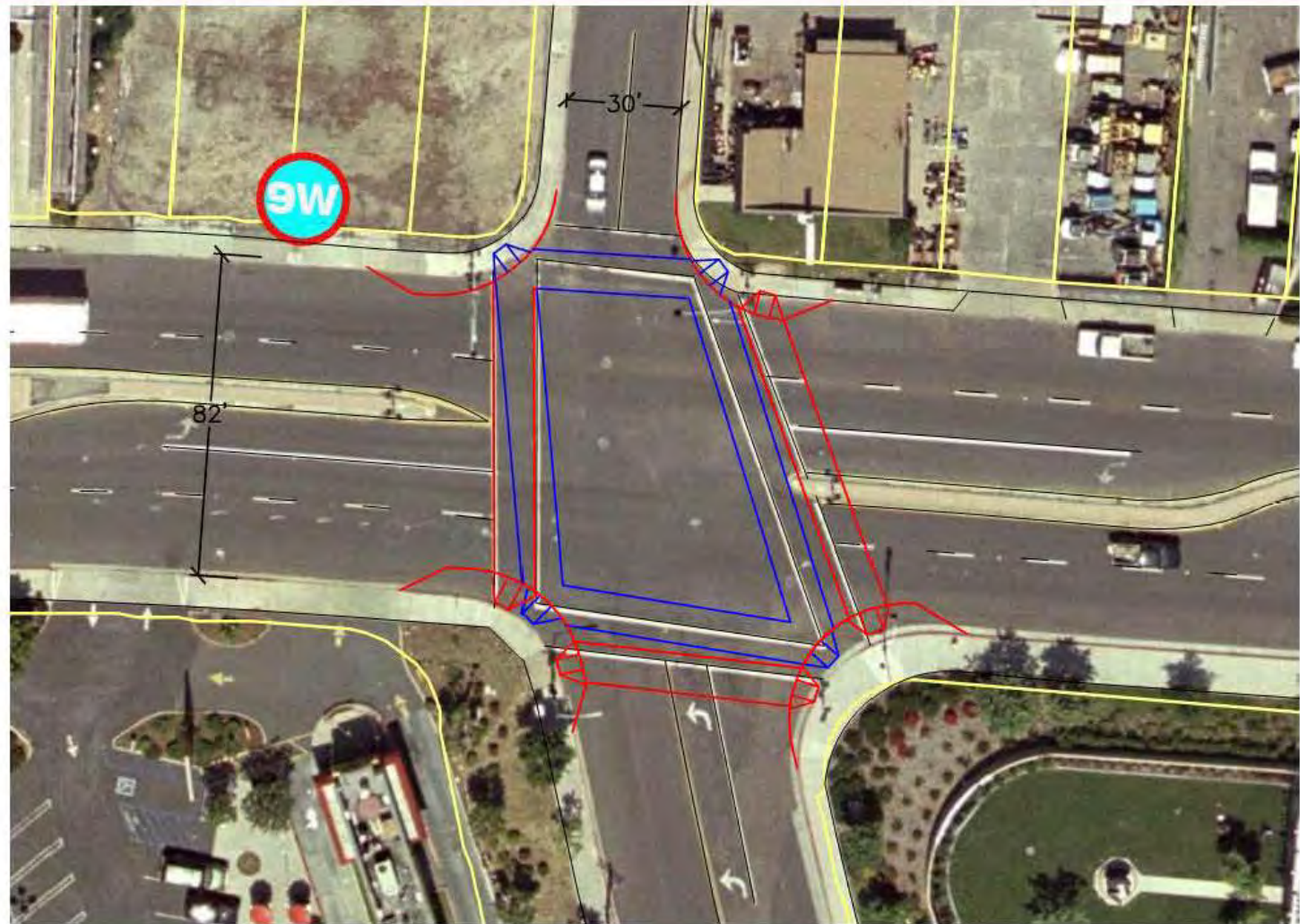


Realign intersection at Chollas Pkwy





Pop-Outs at Aragon Drive





Community Meeting Schedule



- **Community Workshops**
 1. Tuesday, March 8, 2011
 2. Monday, May 16, 2011
 3. Thursday, July 21, 2011
- **Working Group Meetings**
 1. Tuesday, February 22, 2011
 2. Tuesday, March 22, 2011
 3. Tuesday, April 26, 2011
 4. Thursday, June 16, 2011
- **Community Planning Group Meetings**
 1. Tuesday, September 13, 2011 – Preliminary Alternatives
 2. Tuesday, October 11, 2011 – Present Report



University Avenue Mobility



- The End

