

Call to the Audience Guidelines

- 2 Call to the Audience opportunities
- Must fill out participant card
- Participants called in the order cards are received
- 3 minutes allowed per participant
- CTF Facilitator will call on speakers and manage time
- CTF members cannot discuss matters raised
- CTF cannot take action on matters raised
- CTF members can ask project team to review an item



BROADWAY BOULEVARD

EUCLID to COUNTRY CLUB

Meeting Agenda

1. Call to Order/Agenda Review/Announcements
2. 1st Call to the Audience *15 min*
3. Draft “Non-Transportation” Performance Measures including Related Qualitative Assessment of Example Cross Section Concepts *65 min*
4. Discussion of Updated Initial Cross Section Concepts *35 min*
5. Discussion of Updated Transportation Performance Measures *35 min*
6. 2nd Call to the Audience *10 min*
7. Next Steps/CTF Roundtable *15 min*
8. Adjourn

Call to the Audience

15 Minutes

Please limit comments to 3 minutes

- Called forward in order received
- CTF members cannot discuss matters raised
- CTF cannot take action on matters raised
- CTF members can ask project team to review an item

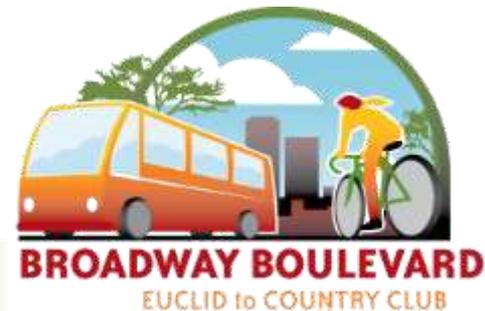
Draft “Non-Transportation” Performance Measures Including Related Qualitative Assessment of Example Sections

Phil Erickson

Community Design + Architecture

Mike Johnson

HDR Engineering



CTF Charrette Approach

- **Charrette** – *an intensive and focused series of meetings and working sessions to advance major work items for Broadway Boulevard*
- This week's charrette is mainly a planning charrette not a heavily design-oriented charrette
- We do not plan to use small group or interactive working sessions
- We will focus on facilitated discussions and decision-making with the full CTF as a group

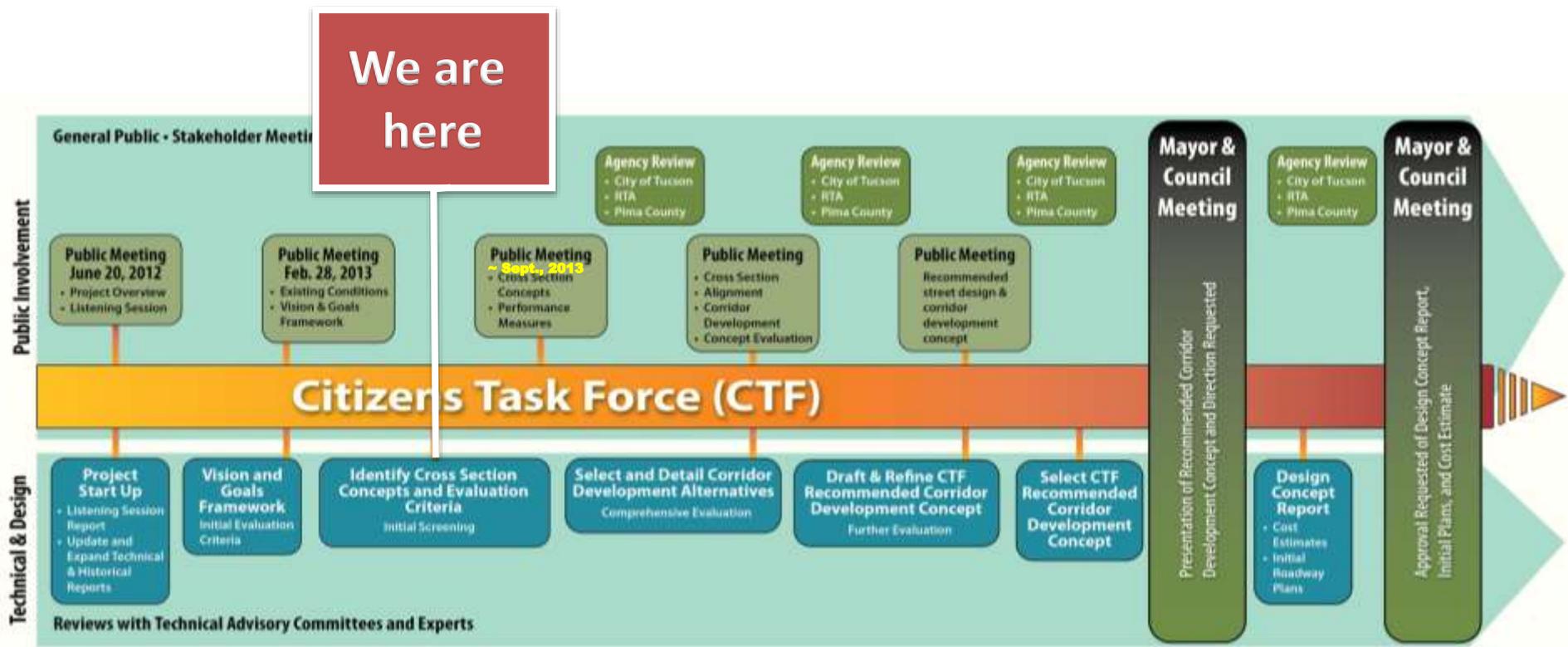
CTF Charrette Approach

- Tuesday night focused on discussion and refinement of
 - Draft Transportation Performance Measures
 - Draft Example Cross Section Concepts
- Wednesday and Thursday the Planning Team
 - Made revisions to the Performance Measures and Example Cross Section Concepts
 - Prepared initial assessments based on the Performance Measures

CTF Charrette Approach

- Tonight is focused on discussion and refinement of
 - Draft **Non**-Transportation Performance Measures
 - Updated Transportation Performance Measures
 - Initial assessments of updated Example Cross Section Concepts
- Thursday, May 30th CTF Meeting will finalize a set of work products for Stakeholder Agency review and comment:
 - Draft Transportation and Non-Transportation Performance Measures
 - Example Cross Section Concepts
 - Initial assessment of Cross Section Concepts

Broadway's Planning & Design Phase



12 ±
Design
Concepts

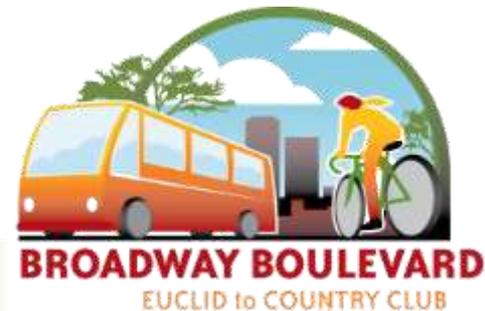
3 ±
Design
Concepts
+
Alignment
Variations

1
Design
Concept
and
Alignment



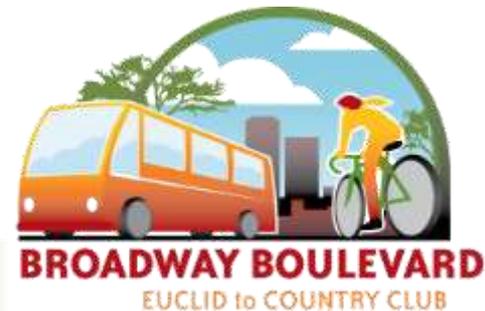
Overview Performance Measures

- Tonight we will discuss potential Non-Transportation Measures organized by topic areas
 - Sense of Place
 - Environment/Public Health
 - Economic Vitality
 - Project Cost
- Later discussion of updated Transportation Measures

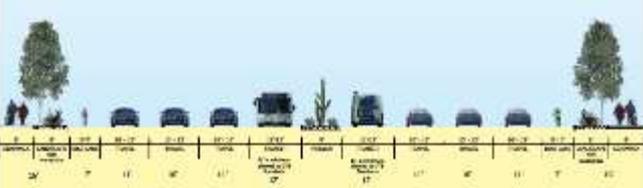


Assessment of Example Cross Section Concepts

- At this level of design development most assessment will be qualitative
- Impacts related to alignment cannot be fully evaluated as alignment is not included in design concepts at this point. But future width allows for some qualitative comparisons.
- We plan on assessment report out being similar to the following—



Assessment of Example Cross Section Concepts

Cross Section Concept	Perf. Measure 1	Perf. Measure 2	Perf. Measure 3	Cost Comparison
	● ● ●	●	○	\$
	● ●	○	● ● ●	\$\$
	○	●	● ● ●	\$\$\$
	● ●	● ●	○	\$\$\$

Legend



Best Performance



Neutral



Worst Performance



Highest Cost



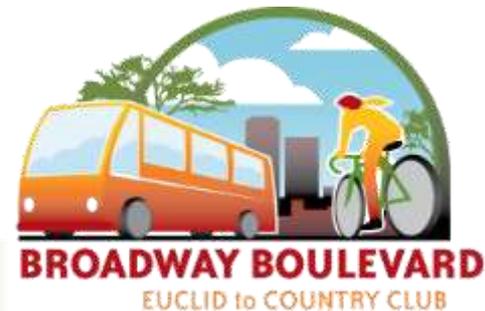
Lowest Cost

Refined Schedule

- Assessment of Street Section Concepts not until May 30th Meeting
- June 20th CTF to include
 - Informational Presentation — BRT Update
 - Review and Endorse potential cross sections and assessments for Stakeholder Agency review
- July 25th CTF to include
 - Informational Presentations
 - Universal Design and ADA
 - Corridor Economic Development & TOD
 - Update on Stakeholder Agency review
 - Discussion of September Public Meeting format

CTF Discussion

- Initial discussion will occur for each of the 4 topic areas covering 2 performance measures (we will “bank” any additional time to return to this or other items if there is time)
- Followed by overall discussion of potential additional measures, refinements, etc.



Sense of Place

5a. Historic Resources

5b. Visual Quality

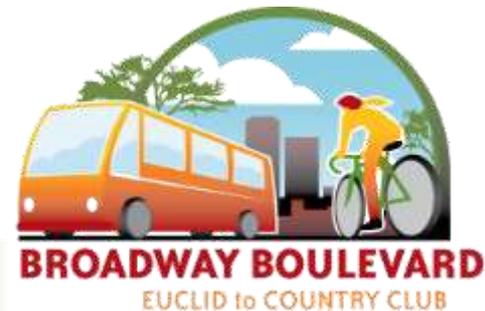
5c. Broadway as a Destination

5d. Gateway to Downtown

5e. Conduciveness to Business

5f. Walkable Community

5g. Certainty



Sense of Place

5a. Historic Resources

Description	<ul style="list-style-type: none">• The number of historic structures lost due to direct impact• The number of historic structures with limited usefulness as a result of loss of parking, setback, site access, and other conditions
Measurement	<ul style="list-style-type: none">• Count of historic structures lost by category
Factors	<ul style="list-style-type: none">• Roadway width• Streetside area width• Alignment placement
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Moderate to High at current level of design• More definitive as intersections and alignment are designed

Sense of Place

5b. Visual Quality

Description	<ul style="list-style-type: none">• Ability of the roadway design to enhance visual quality using a mix of features
Measurement	<ul style="list-style-type: none">• Qualitative assessment (project team and input from CTF)
Factors	<ul style="list-style-type: none">• Design of median and streetside landscaping• Number and location of placemaking features (including public art, wayfinding, lighting, furniture, etc.)• Width of roadside areas for streetscape elements and landscaping
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Moderate at current level of design• Design does not currently include details for streetscape design, but lower cost cross section concepts may allow more budget to be spent on visual quality

Sense of Place

5c. Broadway as a Destination

Description	<ul style="list-style-type: none">• Promote development and civic spaces that would be attractive to users from surrounding neighborhoods, the city, and the region• Provide visual quality, access, and other features that make Broadway appealing to development and customers
Measurement	<ul style="list-style-type: none">• Qualitative evaluation
Factors	<ul style="list-style-type: none">• Factors related to 5b Visual Quality• Coordinate façade improvement, parking management, and other programs and improvements• Land use regulations supporting development sought
Ability to Effect	<ul style="list-style-type: none">• Moderate
Ability to Evaluate	<ul style="list-style-type: none">• Low for current level of design and planning

Sense of Place

5d. Gateway to Downtown

Description	<ul style="list-style-type: none">• Visual quality, ease of mobility, and similar features that improve connection to downtown
Measurement	<ul style="list-style-type: none">• Qualitative evaluation
Factors	<ul style="list-style-type: none">• To be determined through discussions with CTF
Ability to Effect	<ul style="list-style-type: none">• Moderate
Ability to Evaluate	<ul style="list-style-type: none">• Low to Moderate at current level of design

Sense of Place

5e. Conduciveness to Business

Description	<ul style="list-style-type: none">• The type and size of businesses that would be drawn to the corridor under various development approaches
Measurement	<ul style="list-style-type: none">• Qualitative evaluation
Factors	<ul style="list-style-type: none">• To be determined through discussions with CTF and professional experience<ul style="list-style-type: none">• Site access and parking location• Building size and design accommodated• Other TBD
Ability to Effect	<ul style="list-style-type: none">• Moderate
Ability to Evaluate	<ul style="list-style-type: none">• Low at this level of design

Sense of Place

5f. Walkable Community

Description	<ul style="list-style-type: none">• How well the improvements and land use plan place businesses within walking distance for a viable number of residences
Measurement	<ul style="list-style-type: none">• See measures under “1. Pedestrian Access and Mobility”
Factors	<ul style="list-style-type: none">• See measures and factors under “1. Pedestrian Access and Mobility”
Ability to Effect	<ul style="list-style-type: none">• Varies
Ability to Evaluate	<ul style="list-style-type: none">• Varies

Sense of Place

5g. Certainty

Description	<ul style="list-style-type: none"> Relates to comments received, “Do it right this time so it doesn’t have to be done again.”
Measurement	<ul style="list-style-type: none"> Qualitative evaluation
Factors	<ul style="list-style-type: none"> Capacity projections Ridership projections (bus transit; BRT) Flexibility to meet changing transportation needs
Ability to Effect	<ul style="list-style-type: none"> Moderate to High
Ability to Evaluate	<ul style="list-style-type: none"> Moderate to High at current level of design See also performance measures – <ul style="list-style-type: none"> 1a Functionality of Streetside for Pedestrian Activity 1c Pedestrian-Oriented Facilities or Improvements 1g Universal Design 2e Bike Facility Improvements 3f Accommodation of Future High Capacity Transit 4a Movement of Through Traffic 4f Persons Trips

Environment/Public Health

- 6a. Greenhouse Gases
- 6b. Other Tailpipe Emissions
- 6c. Heat Island
- 6d. Water Harvesting
- 6e. Walkability/Bikability
- 6f. Land Use Mix
- 6g. Affordability

Environment/Public Health

6a. Greenhouse Gases

Description	<ul style="list-style-type: none">• Corridor design features that can reduce CO₂ emission
Measurement	<ul style="list-style-type: none">• Quantitative analysis
Factors	<ul style="list-style-type: none">• Proportion alternative modes of transportation• Level of congestion• Quality of vehicle fleet, fuel, etc.
Ability to Effect	<ul style="list-style-type: none">• Moderate
Ability to Evaluate	<ul style="list-style-type: none">• Not at current level of design• Some factors ultimately not effected by this project

Environment/Public Health

6b. Other Tailpipe Emissions

Description	<ul style="list-style-type: none">• Identification and reduction of other important tailpipe emissions, such as particulates
Measurement	<ul style="list-style-type: none">• Quantitative evaluation
Factors	<ul style="list-style-type: none">• Proportion alternative modes of transportation• Level of congestion• Quality of vehicle fleet, fuel, etc.
Ability to Effect	<ul style="list-style-type: none">• Moderate
Ability to Evaluate	<ul style="list-style-type: none">• Not at current level of design• Some factors ultimately not effected by this project

Environment/Public Health

6c. Heat Island

Description	<ul style="list-style-type: none">Determine comparative heat island effect of various alternatives
Measurement	<ul style="list-style-type: none">Qualitative and quantitative evaluation
Factors	<ul style="list-style-type: none">Reduce roadway and sidewalk pavement contribution to heat gain through a combination of shade, solar reflectivity (high albedo) of materials, and area of pavementIncrease landscaped areaIncrease amount of shade
Ability to Effect	<ul style="list-style-type: none">High
Ability to Evaluate	<ul style="list-style-type: none">Moderate at current level of design (amount of landscaped area & number of trees)High with more detailed design and selection of building materials

Environment/Public Health

6d. Water Harvesting

Description	<ul style="list-style-type: none">• Retain rainfall onsite to benefit project landscaping
Measurement	<ul style="list-style-type: none">• TDOT Active Practice Guideline “Green Streets” (draft)
Factors	<ul style="list-style-type: none">• Width and depth of median and streetside areas• Amount of reduction in runoff on paved areas• Types of materials used (pervious pavement)
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Moderate at current level of design• High as design is developed further

Environment/Public Health

6e. Walkability/Bikeability

Description	<ul style="list-style-type: none">• Design elements that will encourage biking and walking over driving
Measurement	<ul style="list-style-type: none">• See 1. Pedestrian and 2. Bicycle Access and Mobility performance measures
Factors	<ul style="list-style-type: none">• Number of bike and pedestrian facilities and features• Continuity of treatments• Comfort and security features
Ability to Effect	<ul style="list-style-type: none">• High to Moderate depending on performance measure
Ability to Evaluate	<ul style="list-style-type: none">• High to not viable at current level of design depending on performance measure• High to Low depending on performance measure

Environment/Public Health

6f. Land Use Mix

Description	<ul style="list-style-type: none"> • Ability to accommodate mixed use development within walking and biking distance of the Broadway corridor, and to support transit ridership
Measurement	<ul style="list-style-type: none"> • Qualitative analysis
Factors	<ul style="list-style-type: none"> • Support of mixed use by current/future zoning • Determine if, and what type of policy and procedural changes are needed • Count and size of parcels conducive to accommodate desired land use mix
Ability to Effect	<ul style="list-style-type: none"> • Low to indirect
Ability to Evaluate	<ul style="list-style-type: none"> • Not at current level of design • Moderate as design is developed in more detail (i.e.; alignment) and policy issues are discussed

Environment/Public Health

6g. Affordability

Description	<ul style="list-style-type: none">• Combined housing and transportation costs for users of the Broadway corridor
Measurement	<ul style="list-style-type: none">• Qualitative evaluation
Factors	<ul style="list-style-type: none">• Relates to other measures:<ul style="list-style-type: none">• 1, 2, & 3 – Pedestrian, Bicycle, and Transit Access & Mobility• 5f Walkable Community• 6b Other Tailpipe Emissions• 7g Job Impacts
Ability to Effect	<ul style="list-style-type: none">• Low
Ability to Evaluate	<ul style="list-style-type: none">• Not at current level of design and planning

Economic Vitality

7a.-7b. **Change in** Economic Potential

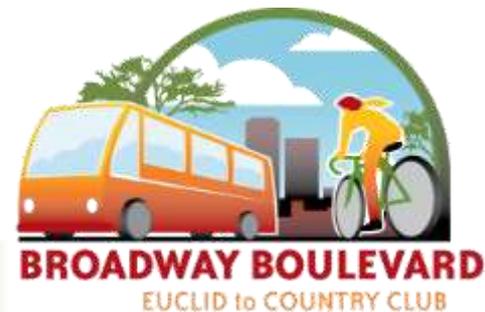
7c.-7d. **Change in** Business Revenue

7e.-7f. **Change in** Sales Tax Revenue

7g.-7h. **Change in** Property Tax Revenue

7i. Business Impacts

7j. Job Impacts



Economic Vitality

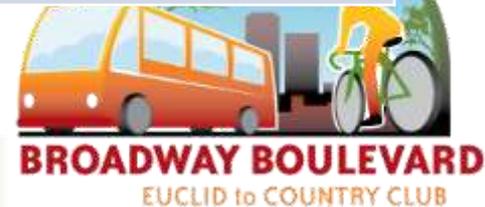
7a. – 7b. **Change in Economic Potential**

Description	<ul style="list-style-type: none"> • Suitability of parcels along Broadway to provide for current commercial or residential use, repurposed, or adaptive reuse, or to provide future mix of commercial and residential uses, and open space
Measurement	<ul style="list-style-type: none"> • Qualitative analysis by economic and other planning team members to estimate use potential of existing and remnant land
Factors	<ul style="list-style-type: none"> • Possibly new land use policy and strategic planning for the disposition of remnant parcels (not part of current project scope of work) • Roadway alignment and width • Access management plan
Ability to Effect	<ul style="list-style-type: none"> • Moderate
Ability to Evaluate	<ul style="list-style-type: none"> • Not at current level of design and planning (cross section width is an indicator, but in some cases remnant parcels may have more economic potential than existing parcels)

Economic Vitality

7c.–7d. **Change in** Business Revenue

Description	<ul style="list-style-type: none"> • Determine current and potential amounts of revenue generated by businesses along the corridor (by segments/not parcel-specific)
Measurement	<ul style="list-style-type: none"> • Analysis by economic and other planning team members <ul style="list-style-type: none"> • City data (confidentiality will be respected) • InfoUSA • Standard & Poor's
Factors	<ul style="list-style-type: none"> • Possibly new land use policy and strategic planning for the disposition of remnant parcels (not part of current project scope of work) • See 7a-7b Change in Economic Potential
Ability to Effect	<ul style="list-style-type: none"> • To be determined
Ability to Evaluate	<ul style="list-style-type: none"> • Not at current level of design and planning (see 7a-7b Change in Economic Potential)



Economic Vitality

7e. – 7f. **Change in** Sales Tax Revenue

Description	<ul style="list-style-type: none">• The amount of existing and anticipated sales tax generated from the businesses on the corridor
Measurement	<ul style="list-style-type: none">• City collected data (confidentiality will be respected)• Qualitative evaluation
Factors	<ul style="list-style-type: none">• Revenues collected on businesses currently in corridor• Anticipated revenues for businesses that would remain in corridor after construction• Possibly new land use policy and strategic planning for the disposition of remnant parcels (not part of current project scope of work)• Width of roadway• Placement of alignment• Access management plan
Ability to Effect	<ul style="list-style-type: none">• To be determined
Ability to Evaluate	<ul style="list-style-type: none">• Not at current level of design and planning (see 7a-7b Change in Economic Potential)

Economic Vitality

7g. – 7h. **Change in** Property Tax Revenue

Description	<ul style="list-style-type: none"> Amount of current and anticipated future property tax generated from the properties along the corridor
Measurement	<ul style="list-style-type: none"> County Assessor data Qualitative evaluation
Factors	<ul style="list-style-type: none"> New land use policy and strategic planning for the disposition of remnant parcels (not part of current project scope of work) Width of roadway Placement of alignment See 7a-7b Change in Economic Potential
Ability to Effect	<ul style="list-style-type: none"> To be determined
Ability to Evaluate	<ul style="list-style-type: none"> Not at current level of design and planning (see 7a-7b Change in Economic Potential)

Economic Vitality

7i. Business Impacts

Description	<ul style="list-style-type: none">The absolute number and size in terms of annual revenue
Measurement	<ul style="list-style-type: none">Quantitative assessment based on InfoUSA data and alignment impact evaluation
Factors	<ul style="list-style-type: none">Limit impacts to businesses/properties to one side of roadway at any particular locationSee 7a-7b Change in Economic Potential
Ability to Effect	<ul style="list-style-type: none">To be determined
Ability to Evaluate	<ul style="list-style-type: none">Not at current level of design and planning (see 7a-7b Change in Economic Potential)

Economic Vitality

7j. Job Impacts

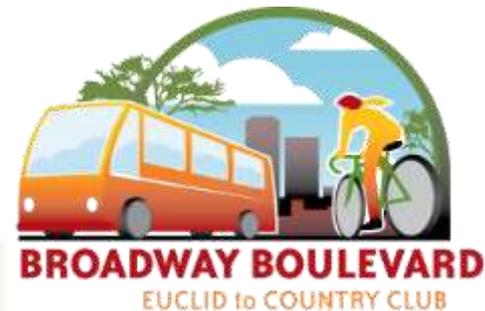
Description	<ul style="list-style-type: none">• Potential change in number of jobs
Measurement	<ul style="list-style-type: none">• Estimate of current and potential future employment in project area (may be challenging to track given business relocations and/or job creation under various alternatives)
Factors	<ul style="list-style-type: none">• To be determined• See 7a-7b Change in Economic Potential
Ability to Effect	<ul style="list-style-type: none">• To be determined
Ability to Evaluate	<ul style="list-style-type: none">• Not at current level of design and planning (see 7a-7b Change in Economic Potential)

Project Cost

8a. Construction Cost

8b. Acquisition Cost

8c. Income for Reuse of City-owned Property



Project Cost

8a. Construction Cost

Description	<ul style="list-style-type: none">• Cost of construction
Measurement	<ul style="list-style-type: none">• Approximate quantity takeoffs of major cost items (pavement, curb)• Approximate typical unit costs (landscaping, bus stop/station improvements, lighting, signals)
Factors	<ul style="list-style-type: none">• Width of roadway cross-section• Scale and quantity of streetside improvements
Ability to Effect	<ul style="list-style-type: none">• High (ROW acquisition is also a significant cost)
Ability to Evaluate	<ul style="list-style-type: none">• Moderate at current level of design (estimates made based on cross sections)• High as intersections and other design elements are established

Project Cost

8b. Acquisition Cost

Description	<ul style="list-style-type: none">• Cost to acquire needed ROW, including the cost of the property, relocation, and other qualified costs
Measurement	<ul style="list-style-type: none">• Quantitative and qualitative evaluation• Federal and State relocation requirements• Potential return on excess/remnant ROW
Factors	<ul style="list-style-type: none">• Number and size of property acquisitions• Street width and alignment
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Low at current level of design and planning (estimates made based on cross sections)• Moderate as intersections and other design elements are established, and impacts and ability to maintain use of properties can be estimated

Project Cost

8c. Income for Reuse of City-Owned Parcels

Description	<ul style="list-style-type: none"> Income from sale or lease of remnant City-owned properties not needed for the project
Measurement	<ul style="list-style-type: none"> Qualitative and quantitative analysis by economic and other planning team members to estimate use potential of existing and remnant land
Factors	<ul style="list-style-type: none"> See 7a-7b Change in Economic Potential
Ability to Effect	<ul style="list-style-type: none"> To be determined
Ability to Evaluate	<ul style="list-style-type: none"> Not at current level of design and planning Moderate at future point in design and planning See 7a-7b Change in Economic Potential

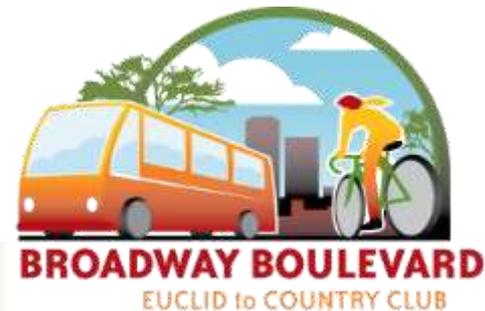
Discussion of Updated Initial Cross Section Examples

Phil Erickson

Community Design + Architecture

Mike Johnson

HDR Engineering



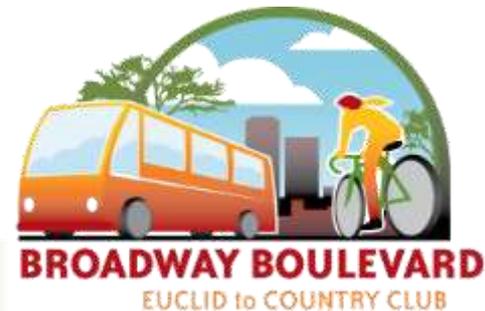
Initial Cross Section Concepts

- Exploring range of potential design solutions based on community input to date
- Five “families” of concepts based on number and function of travel lanes
- Range of types and widths of roadway, roadside, and landscape element “cards”
- To be used in initial evaluations and next round of public and stakeholder agency review and comment

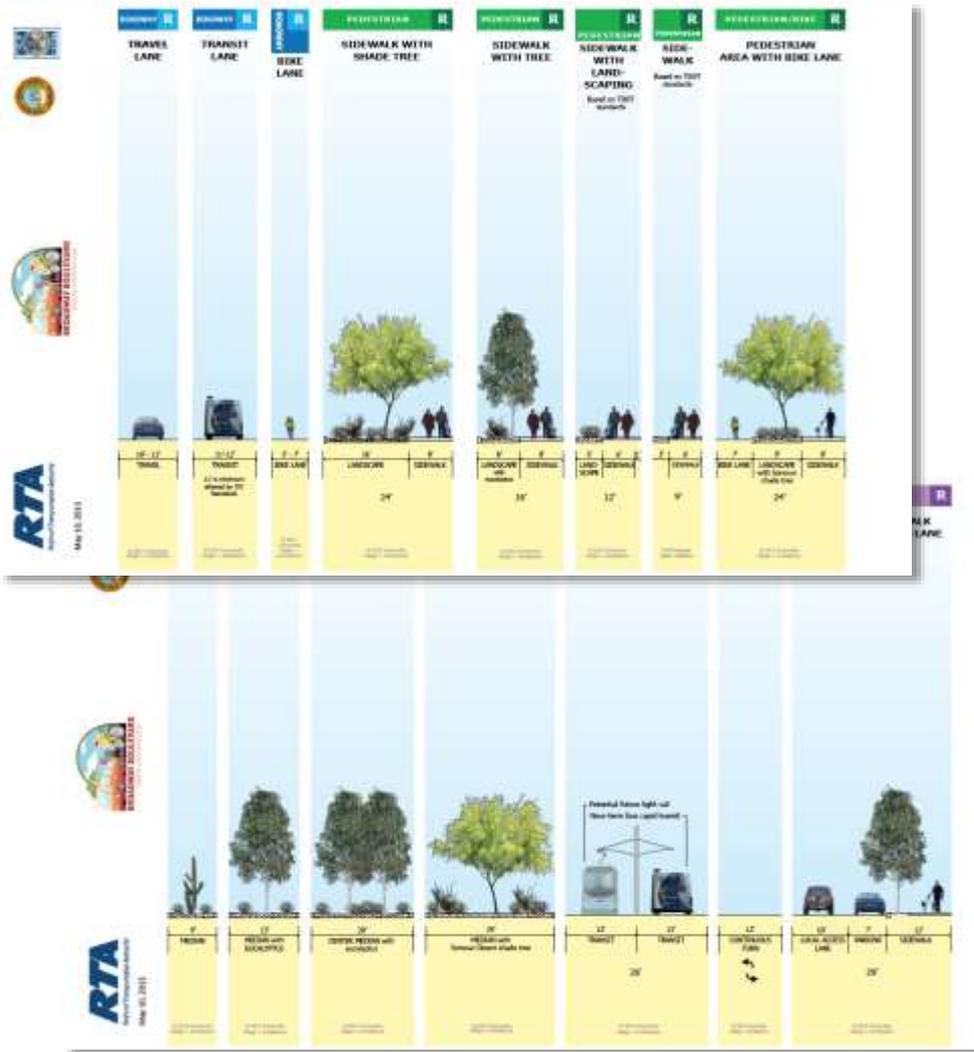
Initial Cross Section Concepts

- Agenda for this item:
 - Overview of section cards
 - CTF discussion of section cards

 - Overview of initial concepts
 - CTF discussion of other options, issues, etc.

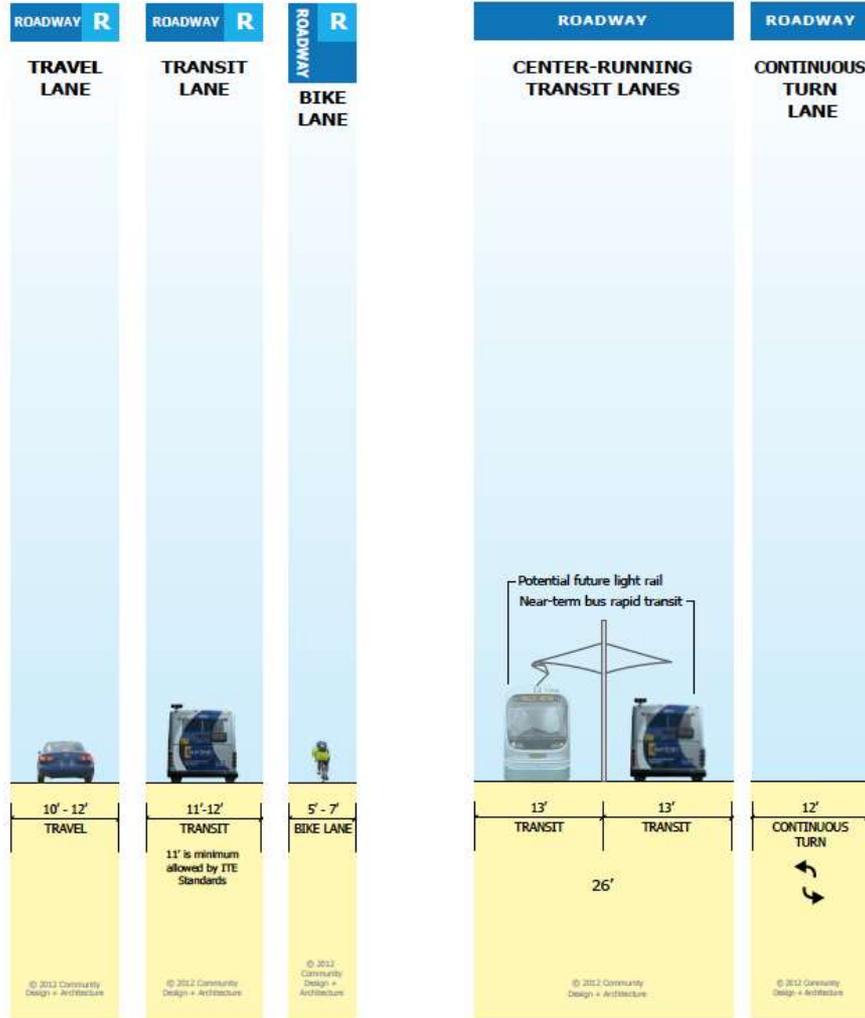


Cross Section Cards



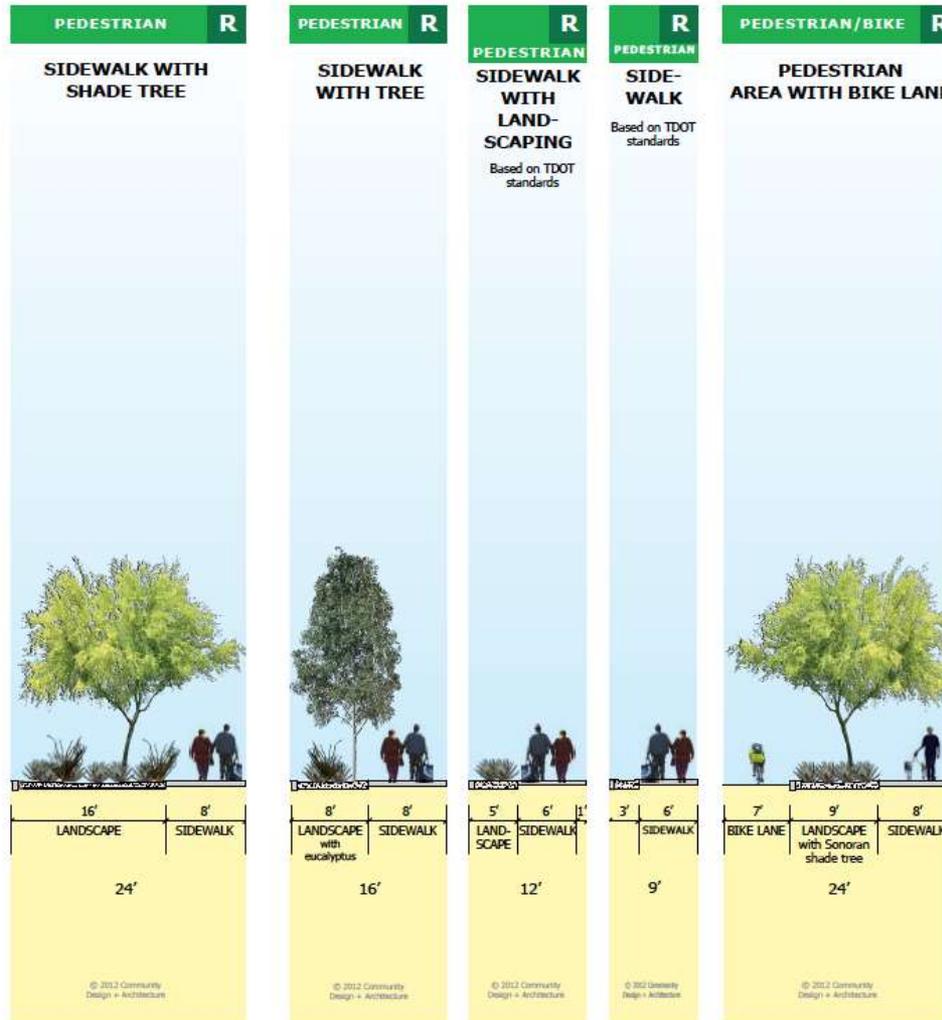
- Roadway lanes
- Sidewalk and associated landscaping
- Medians
- Local access lane, sidewalk, and landscaping

Roadway Lanes

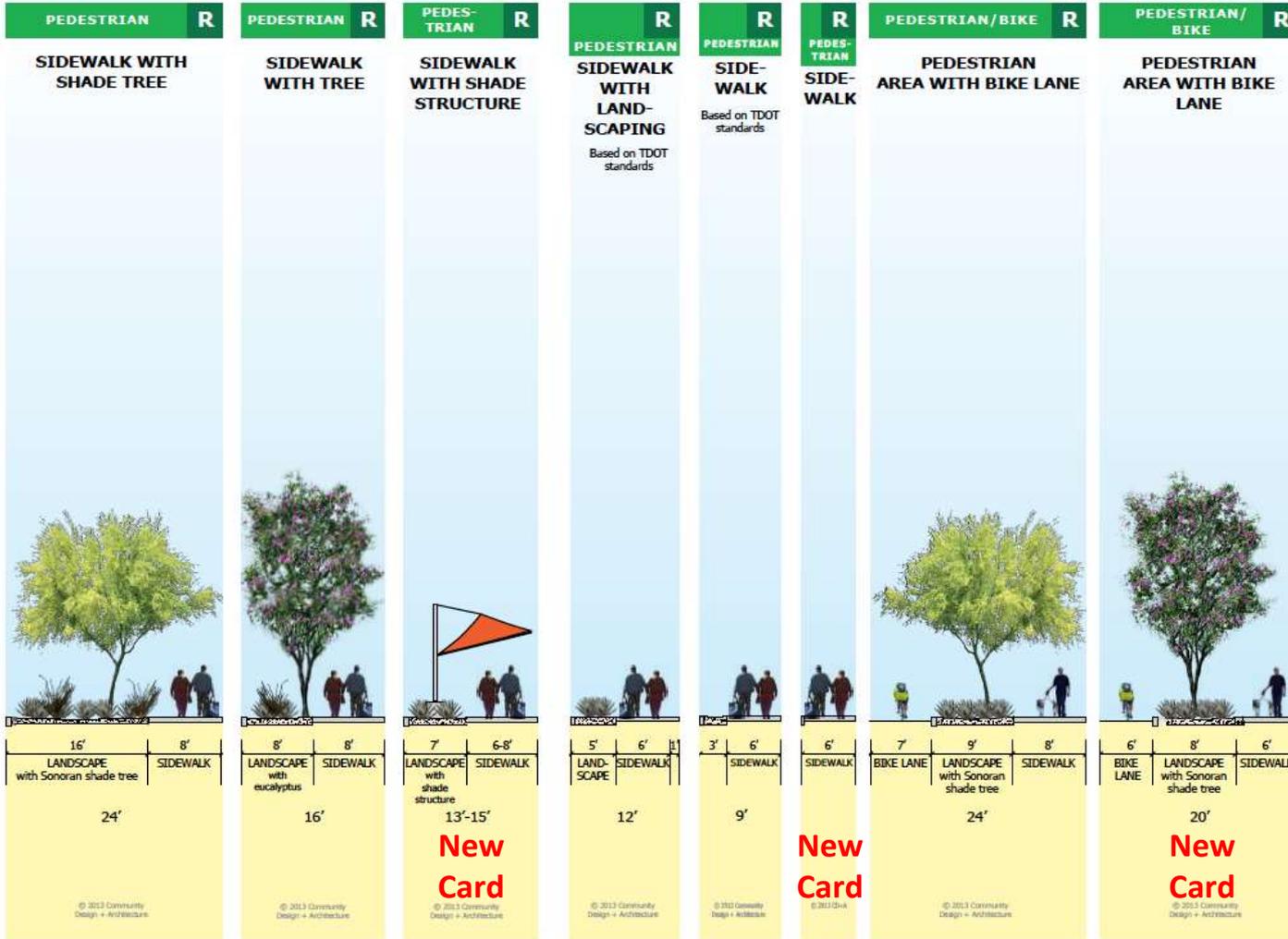


No changes

Sidewalks & Associated Landscaping



Sidewalks & Associated Landscaping







6'

3'

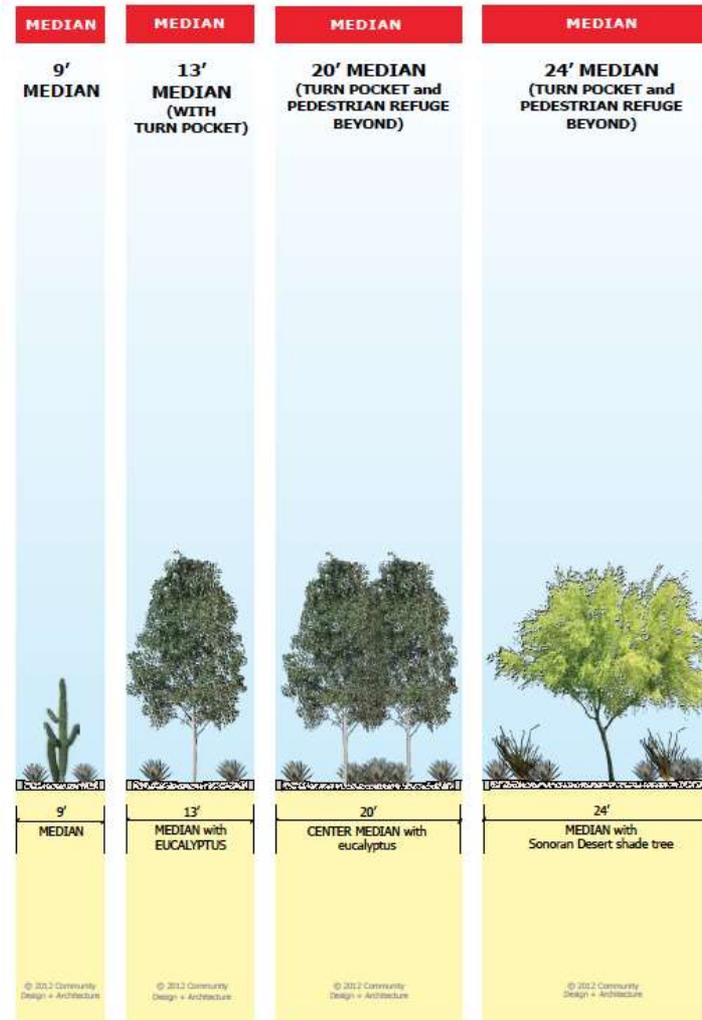




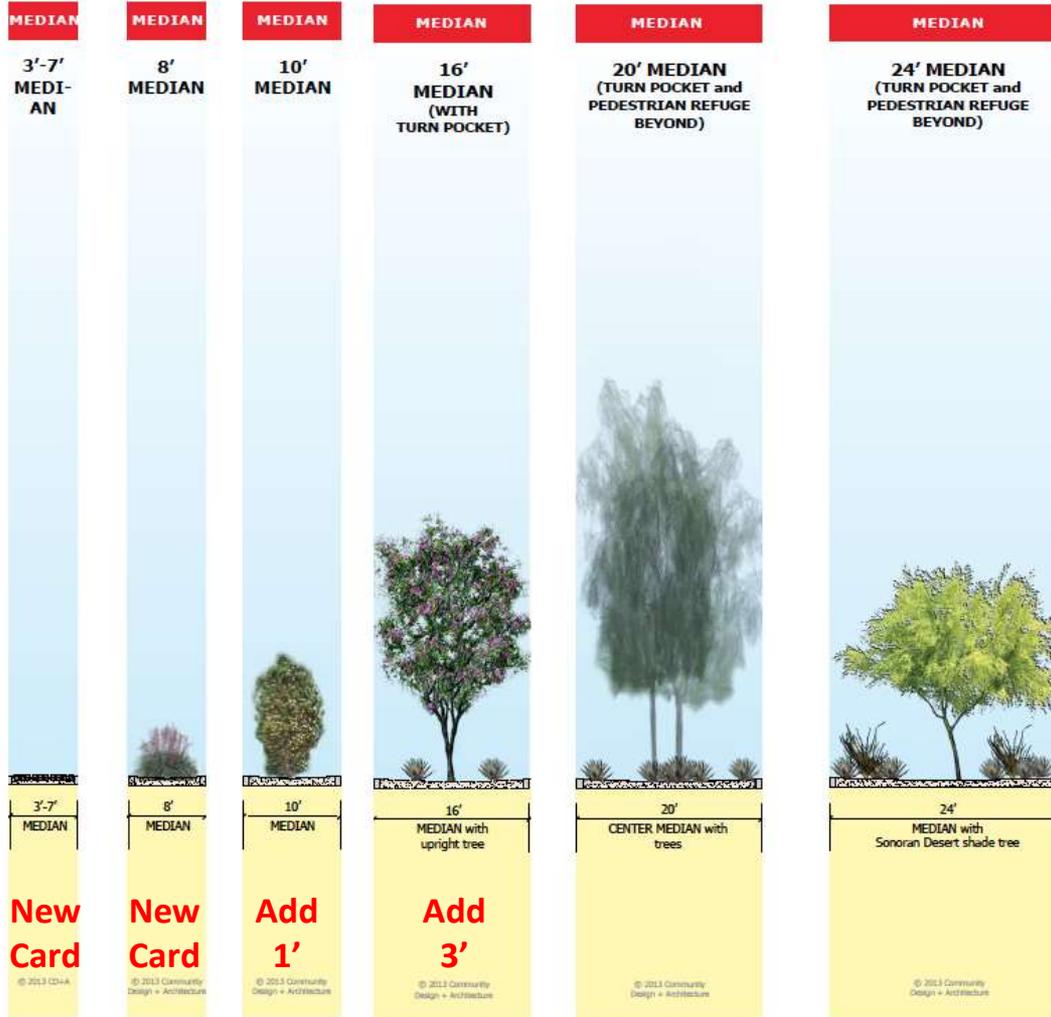
8'

12'

Medians



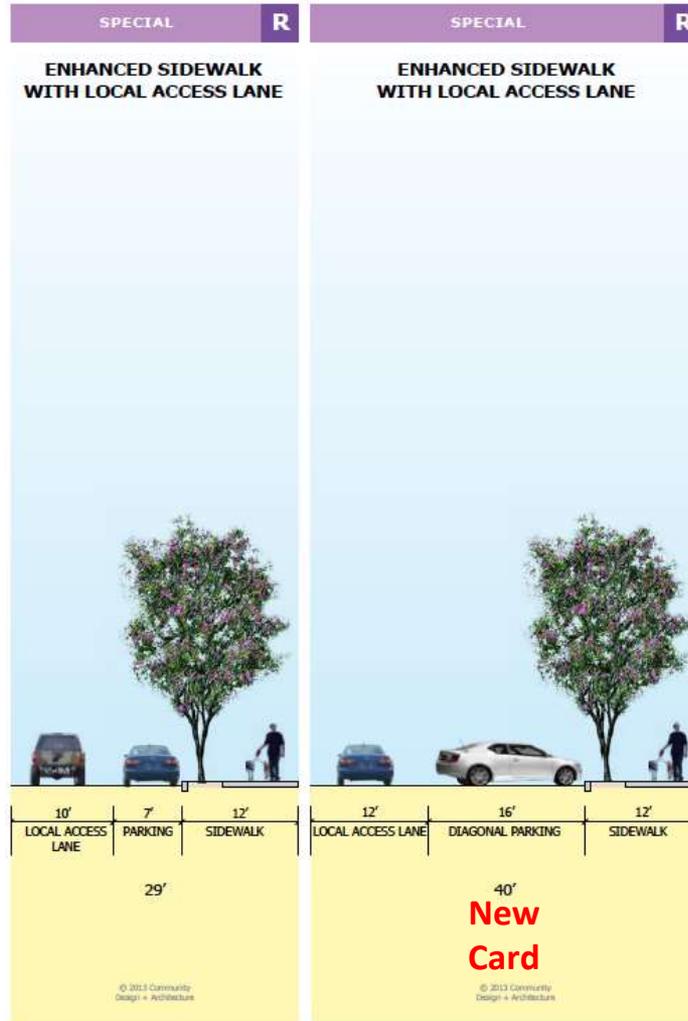
Medians



Local Access Lane



Local Access Lane

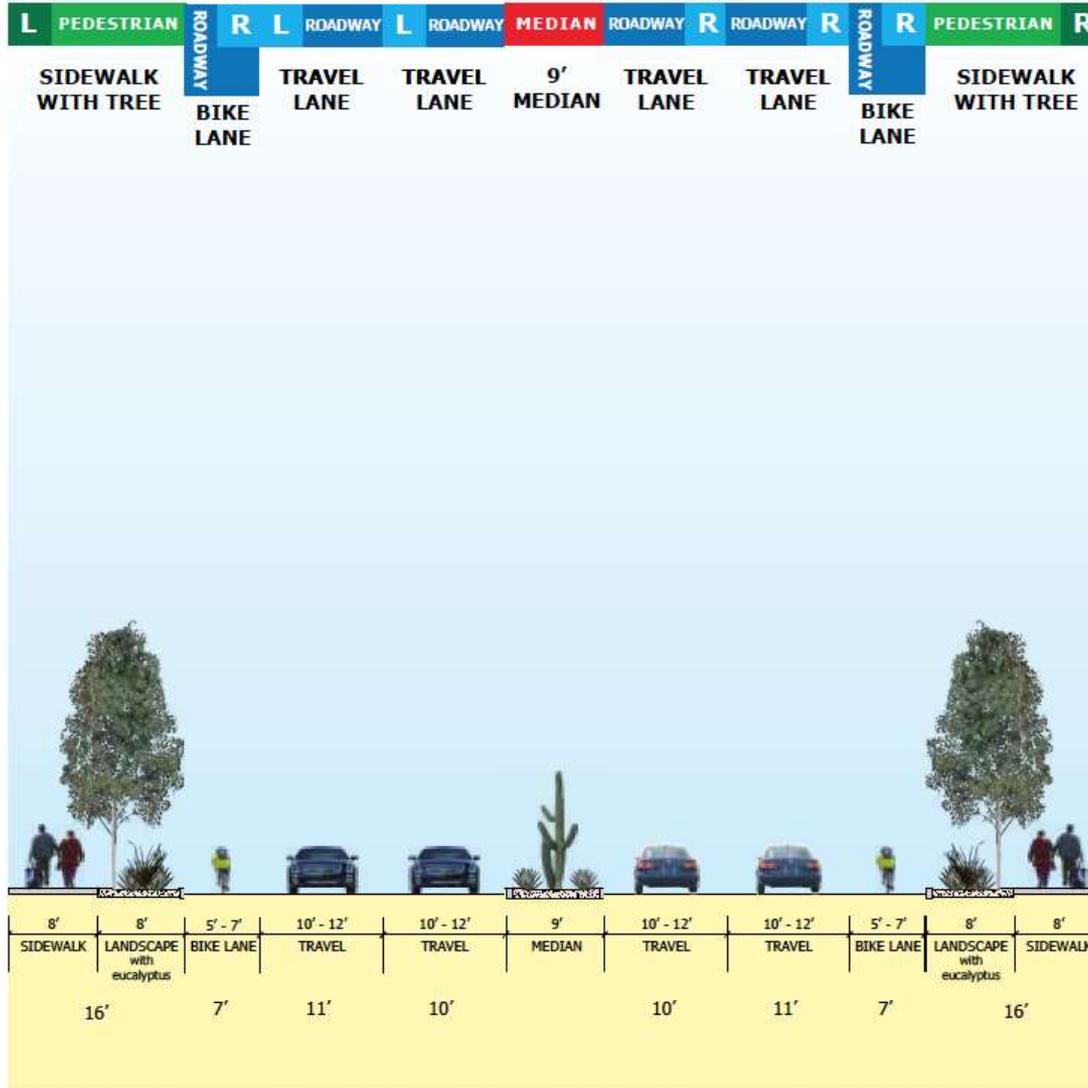


“Families” of Cross Sections

- Dimension range for Cross Section Families
 - Four lane 92 to 130 feet
67 to 134 feet
 - Four lane plus transit lanes 116 to 154 feet
89 to 156 feet
 - Six lane 114 to 152 feet
89 to 152 feet
 - Six lane plus transit lanes 138 to 172 feet
109 to 174 feet

Four Lane

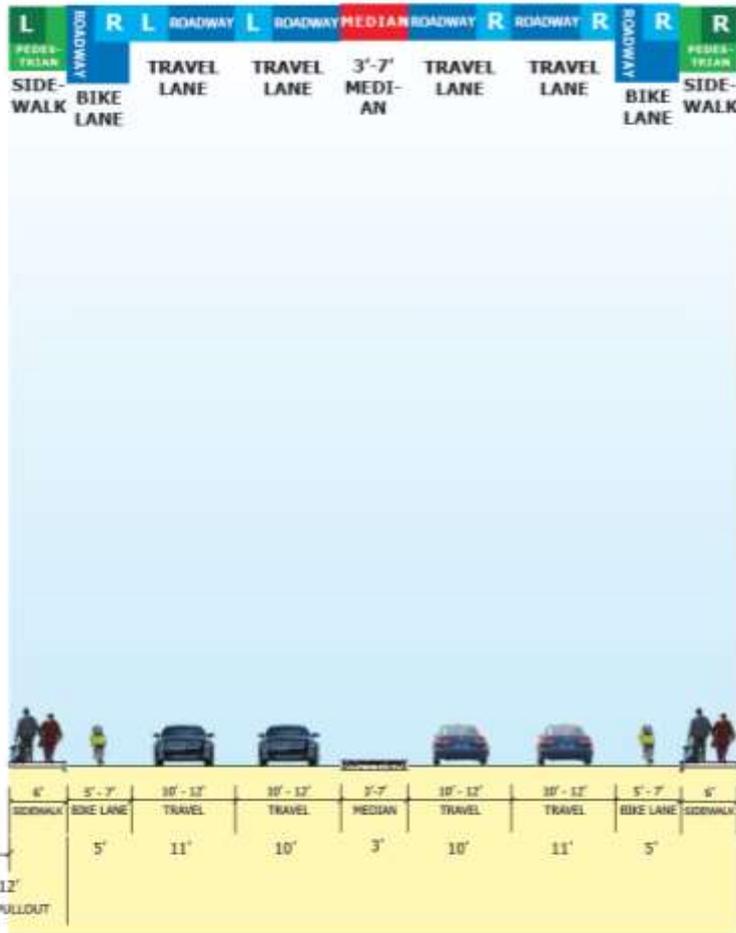
Potential R.O.W. Range – 92 to 130 feet



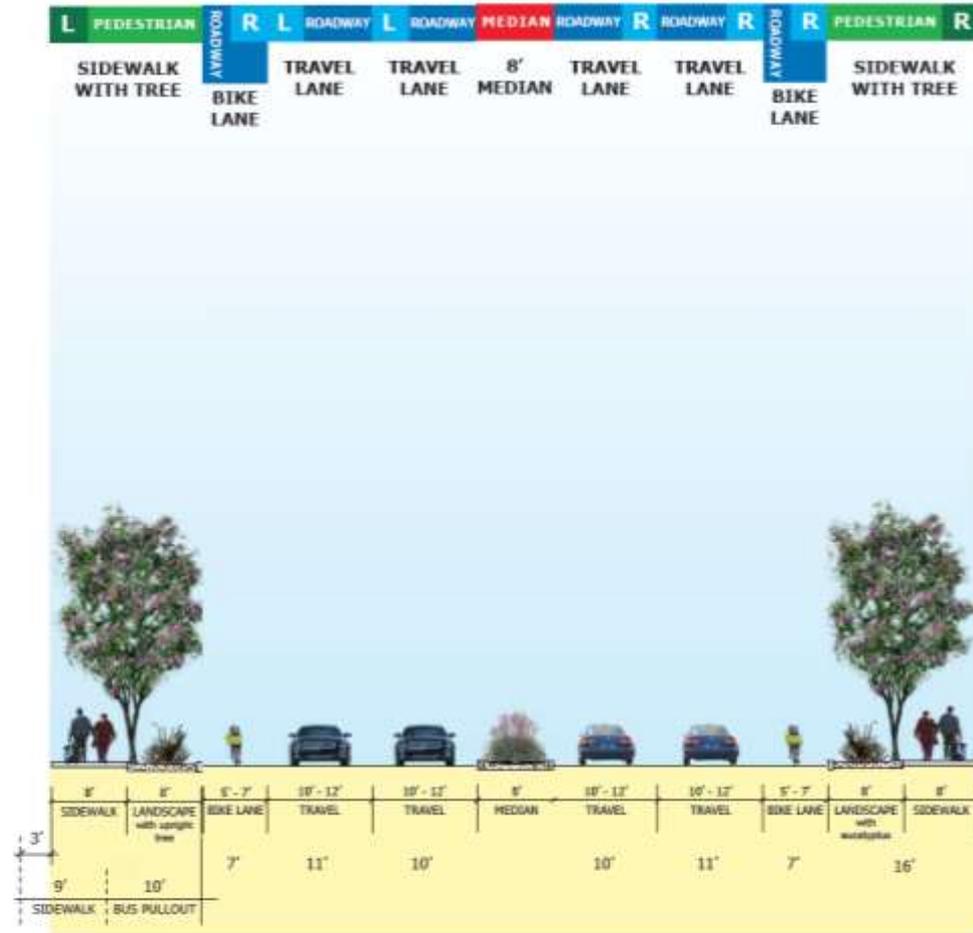
Option A: 97' Right-of-Way

Four Lane

Potential R.O.W. Range – 67 to 134 feet



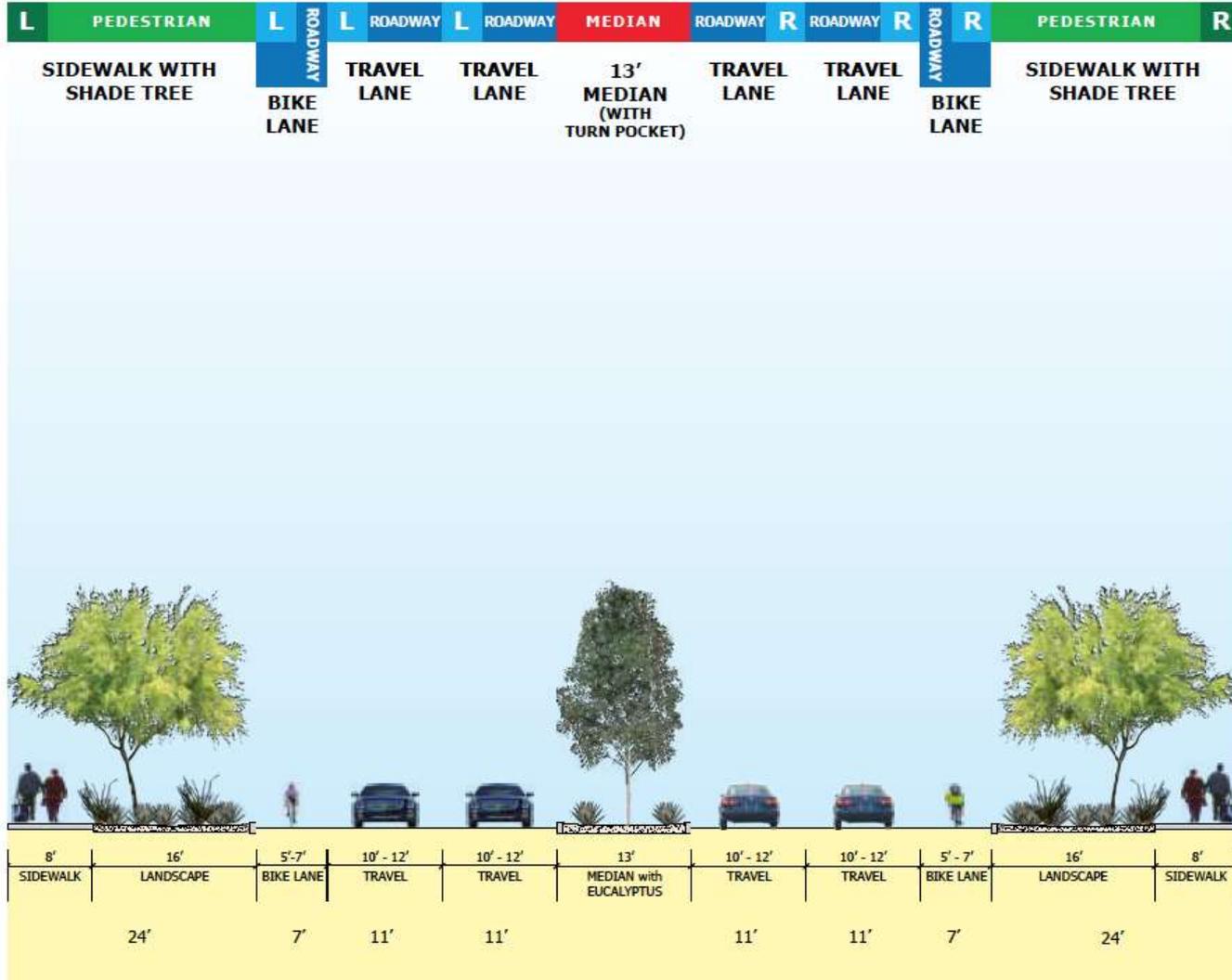
Option A1: 67' Right-of-Way



Option A2: 96' Right-of-Way

Four Lane

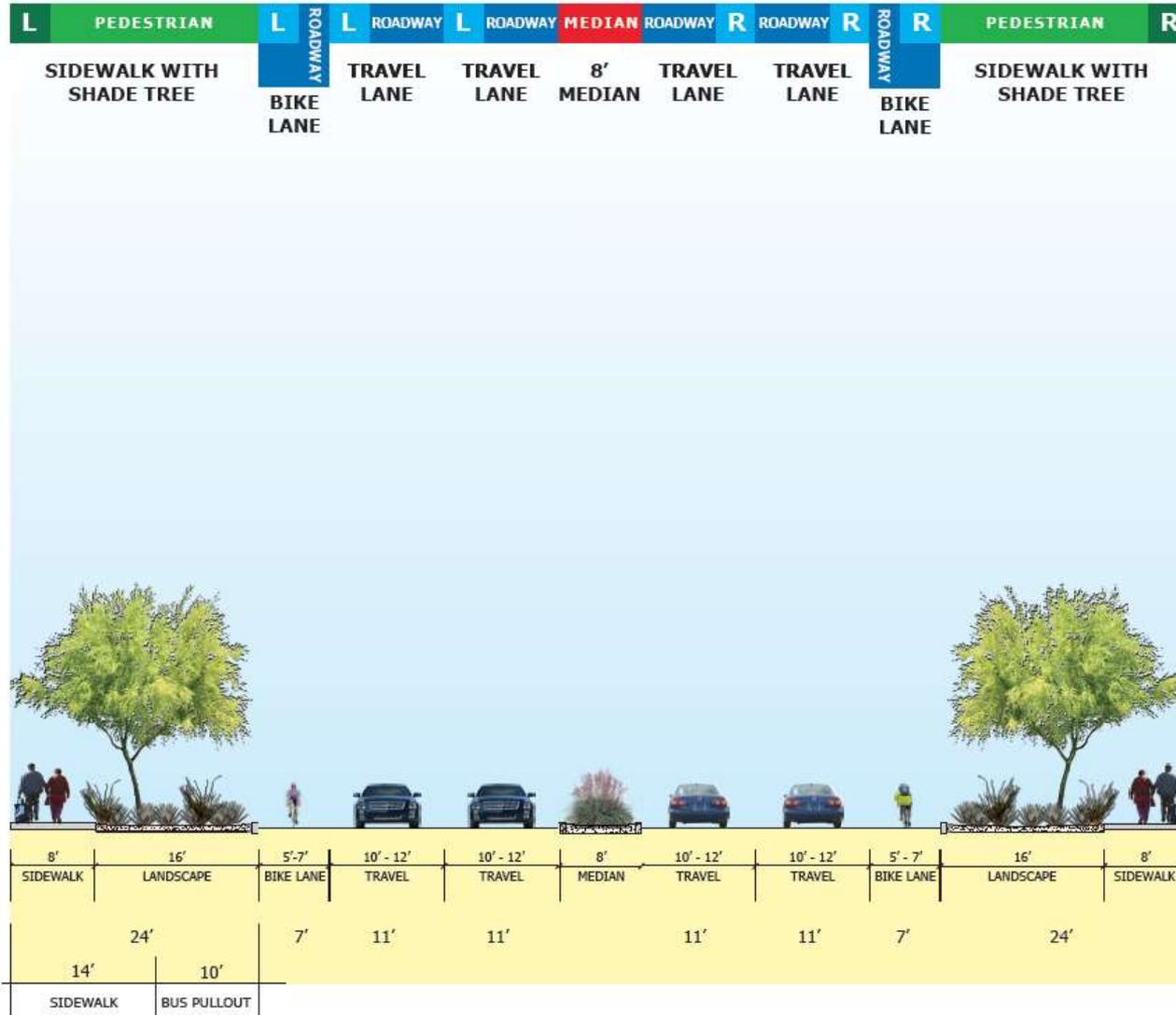
Potential R.O.W. Range – 92 to 130 feet



Option B: 119' Right-of-Way

Four Lane

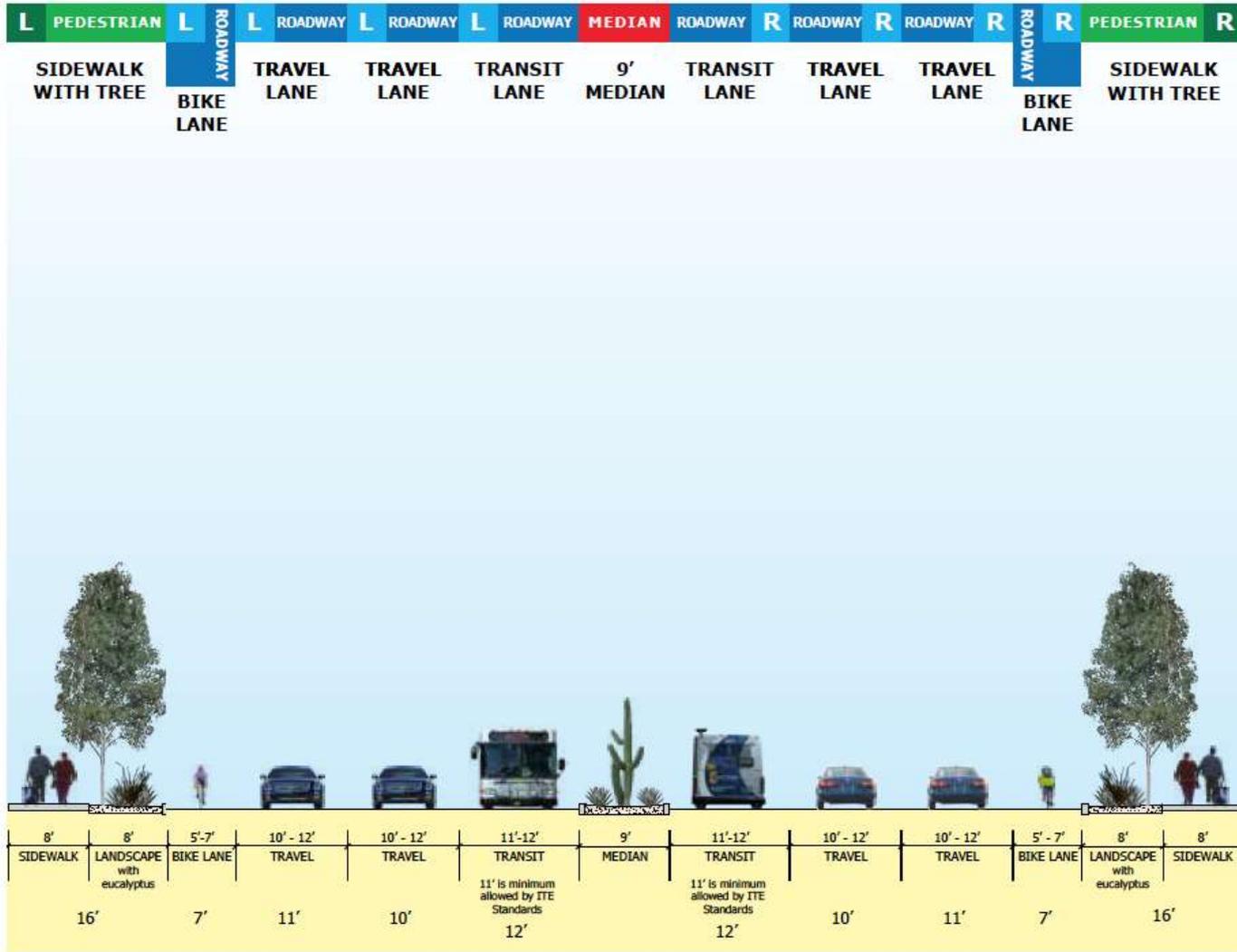
Potential R.O.W. Range – 67 to 134 feet



Option B: 112' Right-of-Way

Four Lane plus Transit Lanes

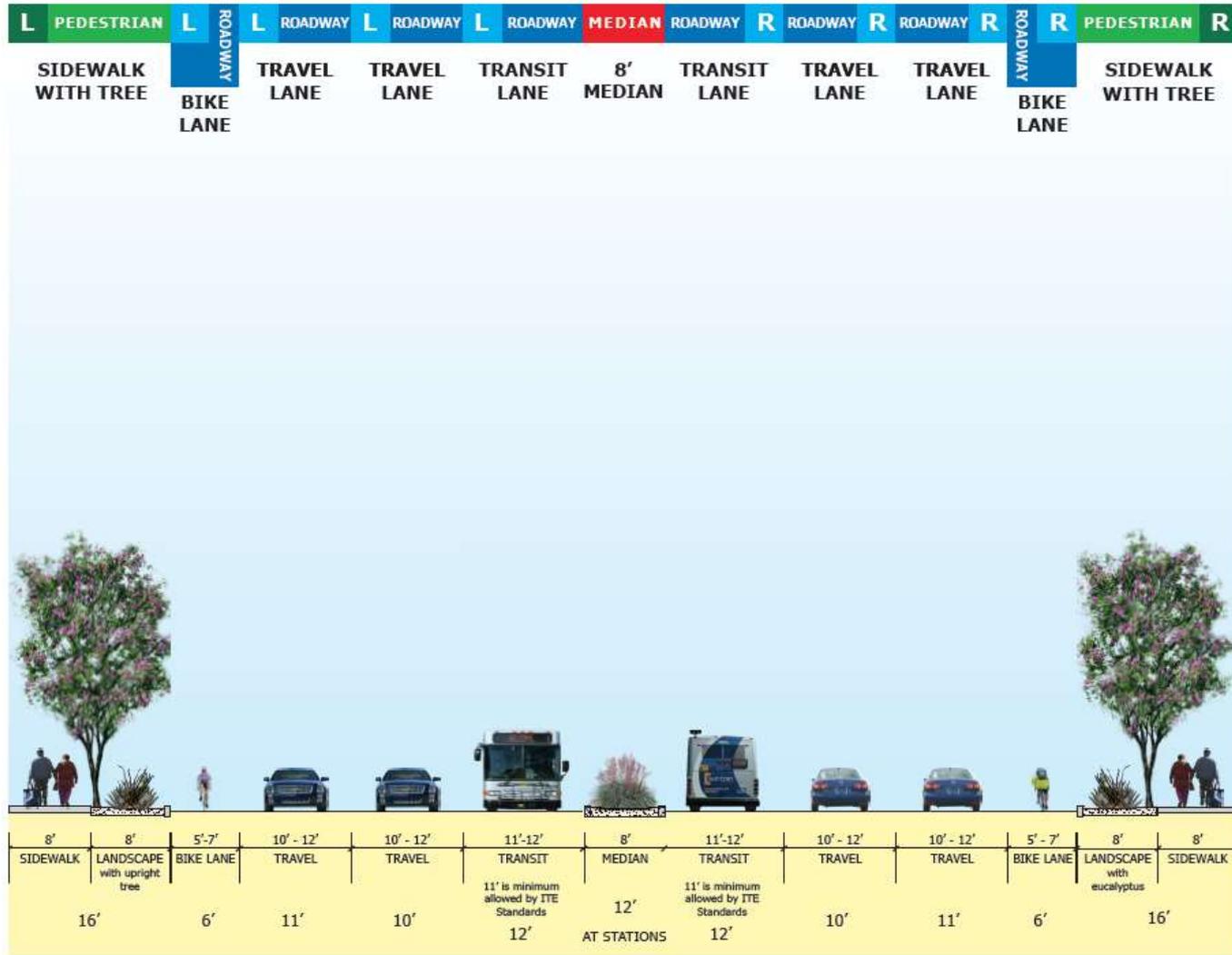
Potential R.O.W. Range – 116 to 154 feet



Option A: 121' Right-of-Way

Four Lane plus Transit Lanes

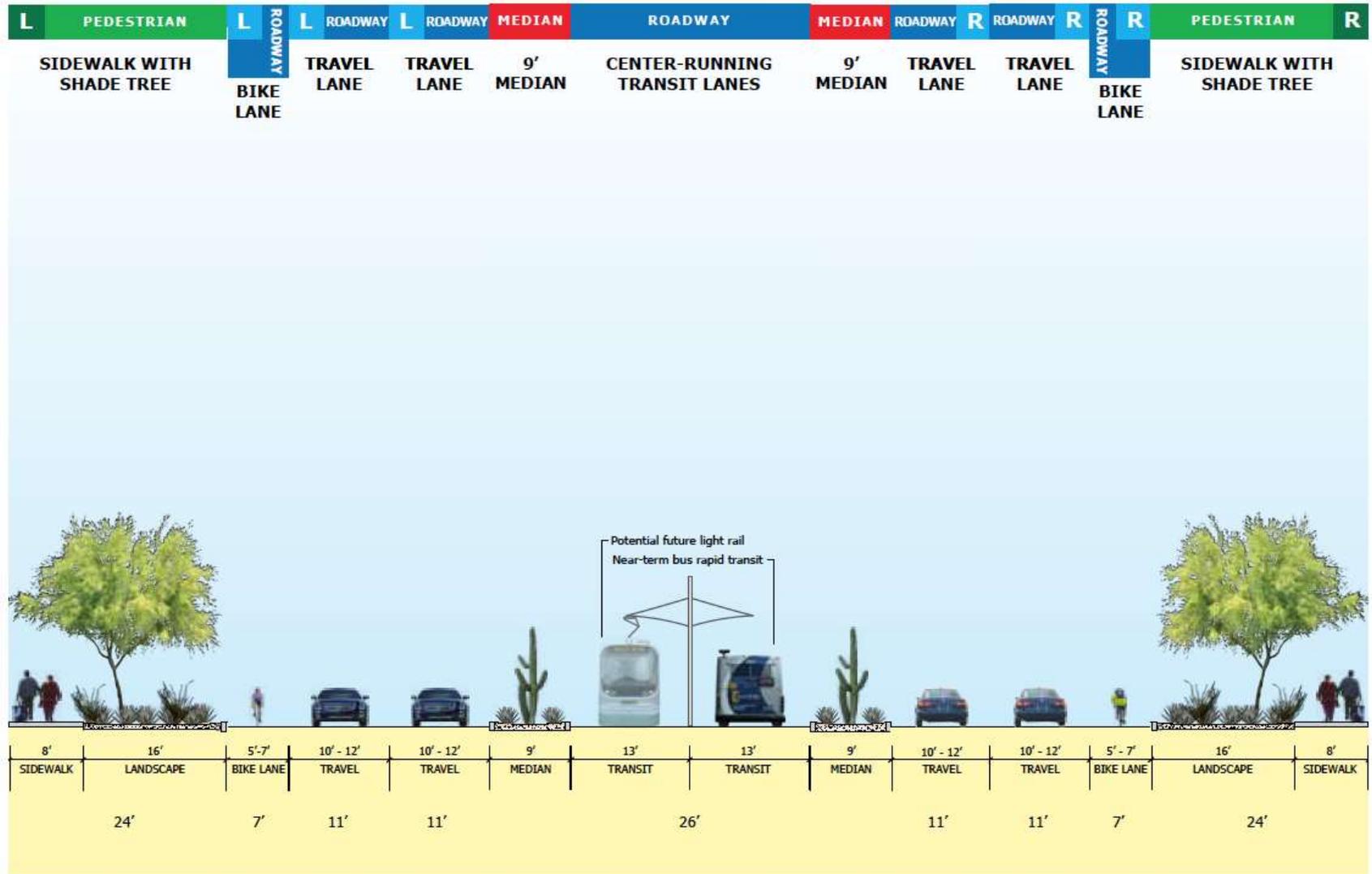
Potential R.O.W. Range – 89 to 156 feet



Option A: 118' Right-of-Way

Four Lane plus Transit Lanes

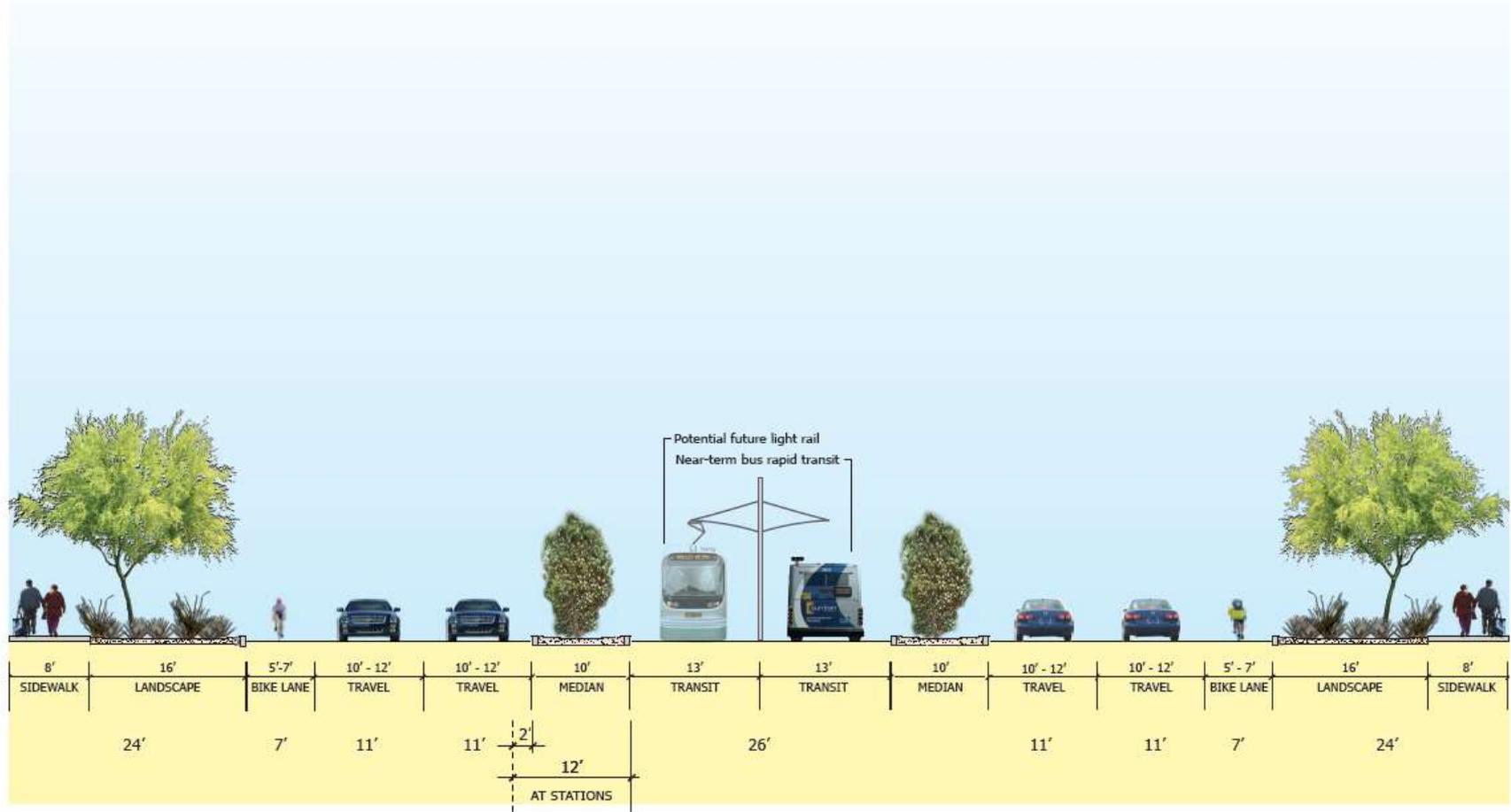
Potential R.O.W. Range – 116 to 154 feet



Option B: 150' Right-of-Way

Four Lane plus Transit Lanes

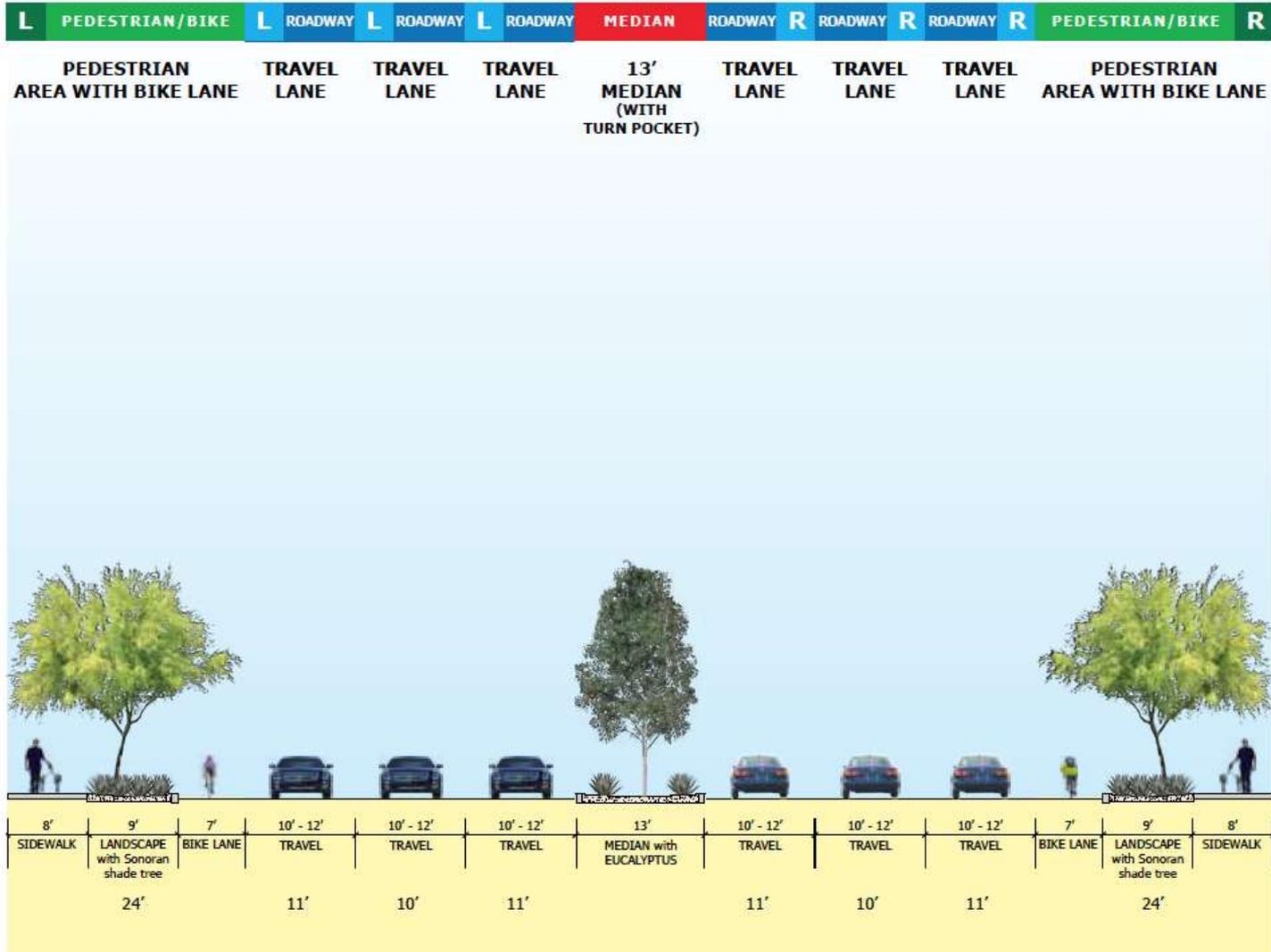
Potential R.O.W. Range – 89 to 156 feet



Option B: 152' Right-of-Way

Six Lane

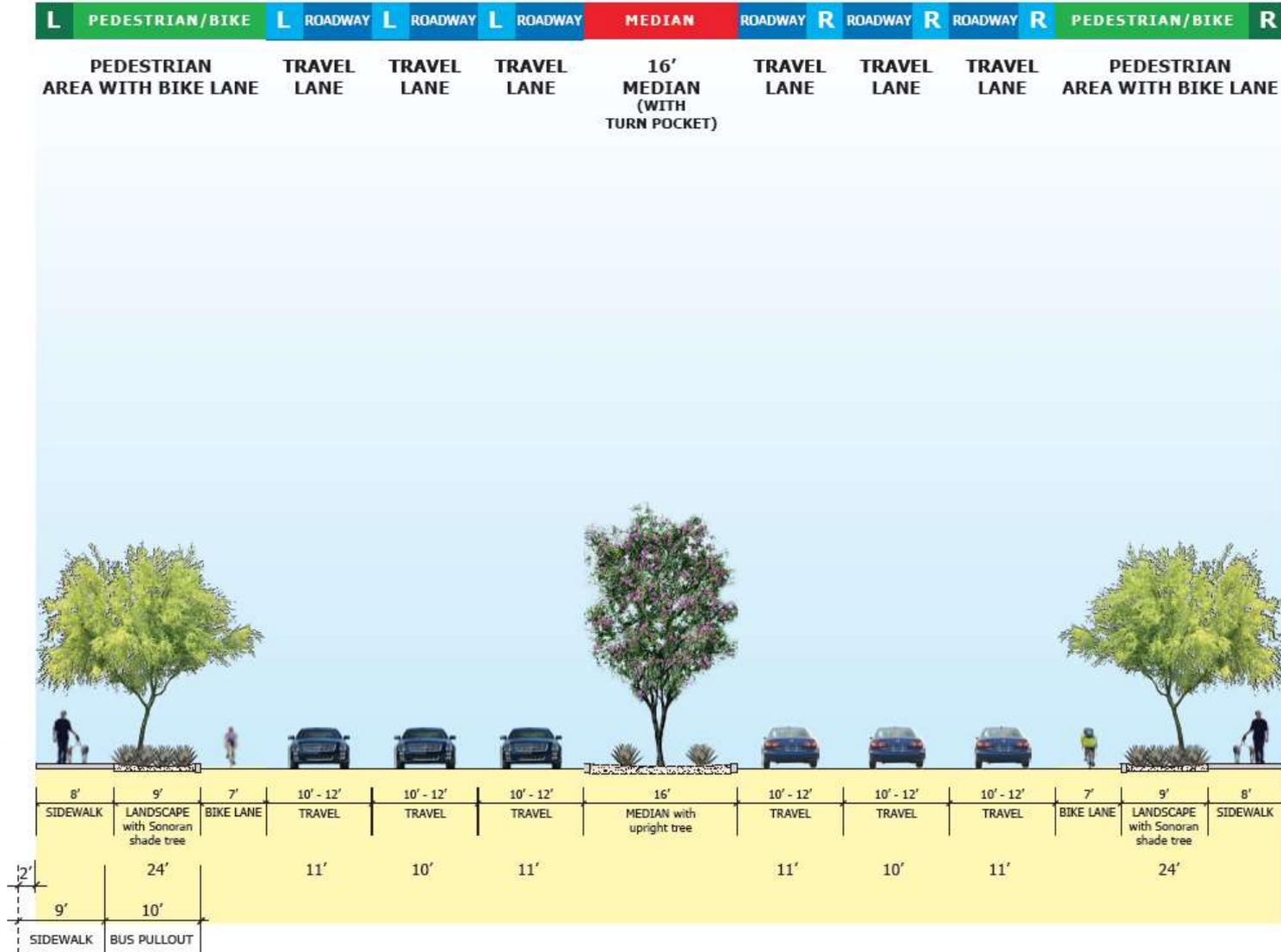
Potential R.O.W. Range – 114 to 152 feet



Option A: 125' Right-of-Way

Six Lane

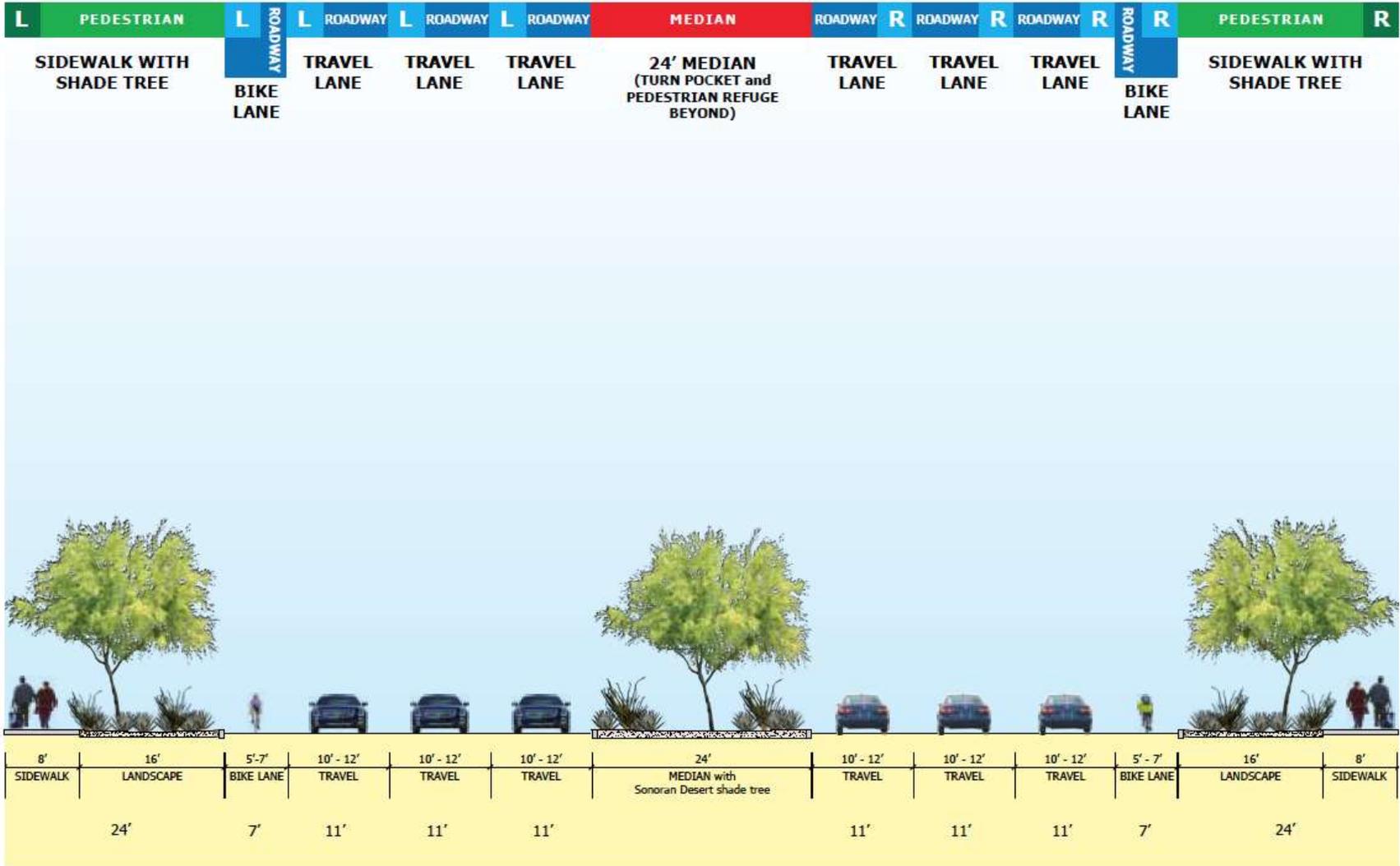
Potential R.O.W. Range – 89 to 152 feet



Option A: 128' Right-of-Way

Six Lane

Potential R.O.W. Range – 89 to 152 feet

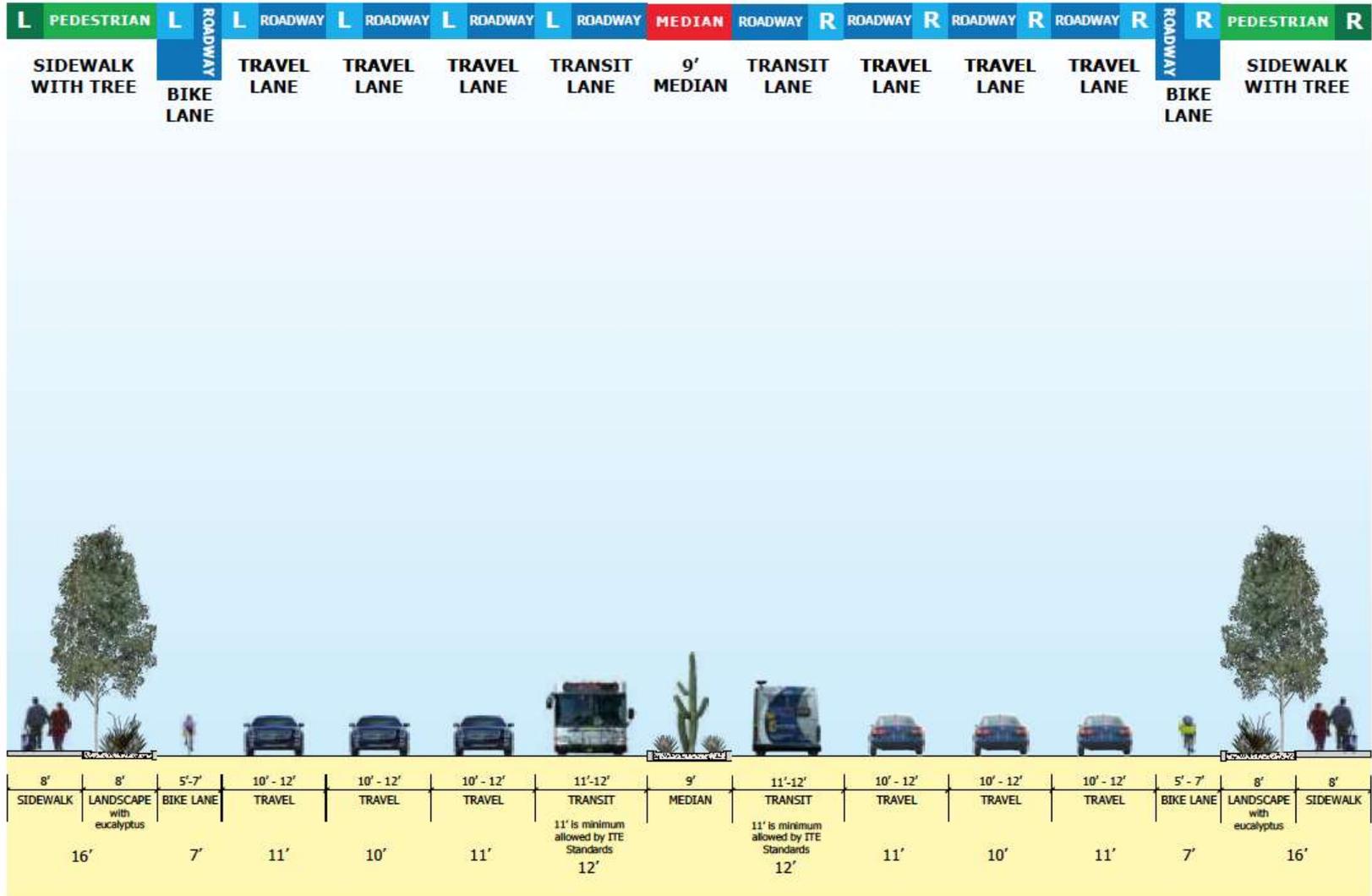


Option B: 152' Right-of-Way

No Change

Six Lane plus Transit Lanes

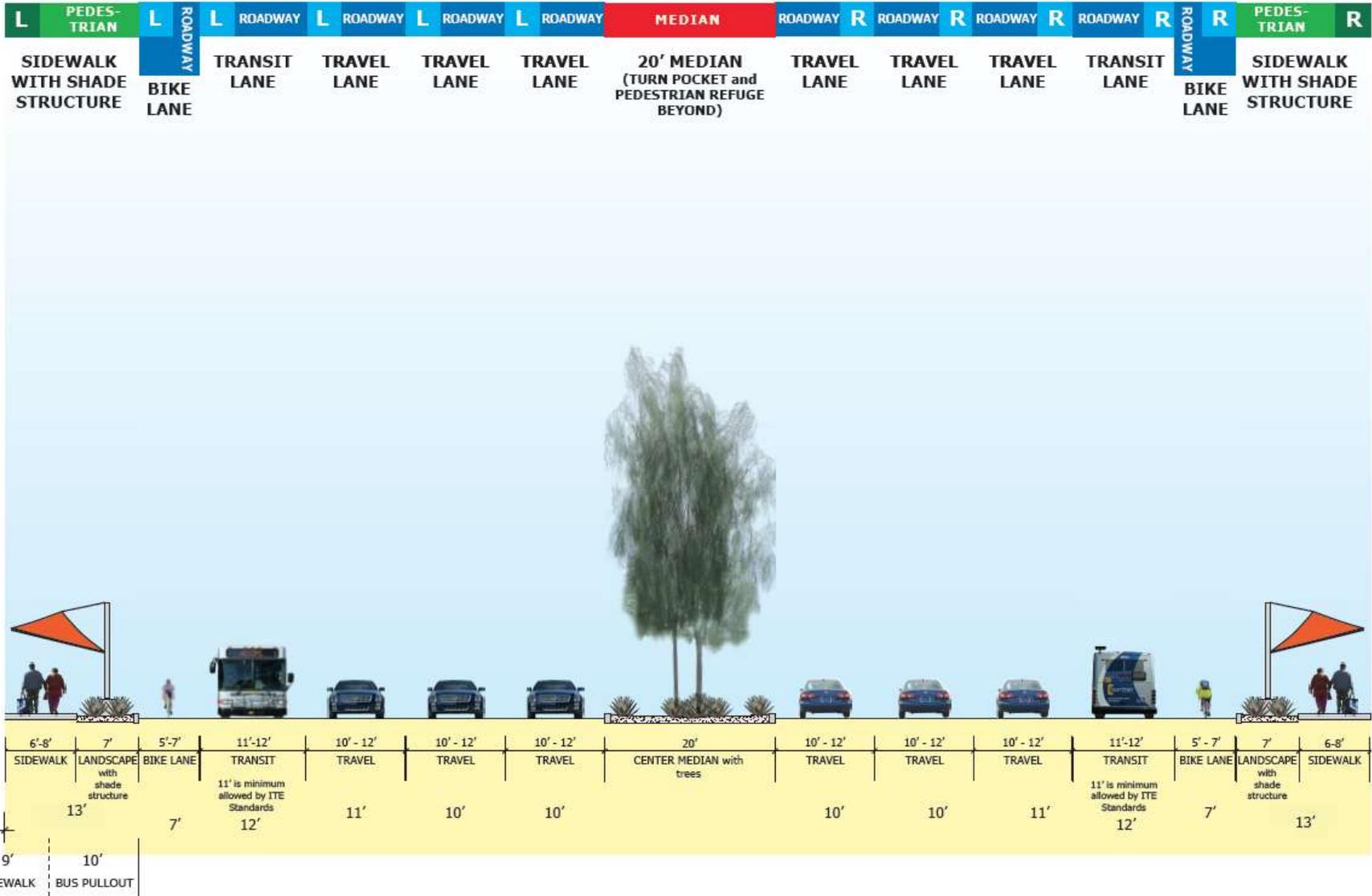
Potential R.O.W. Range – 138 to 172 feet



Option A: 143' Right-of-Way

Six Lane plus Transit Lanes

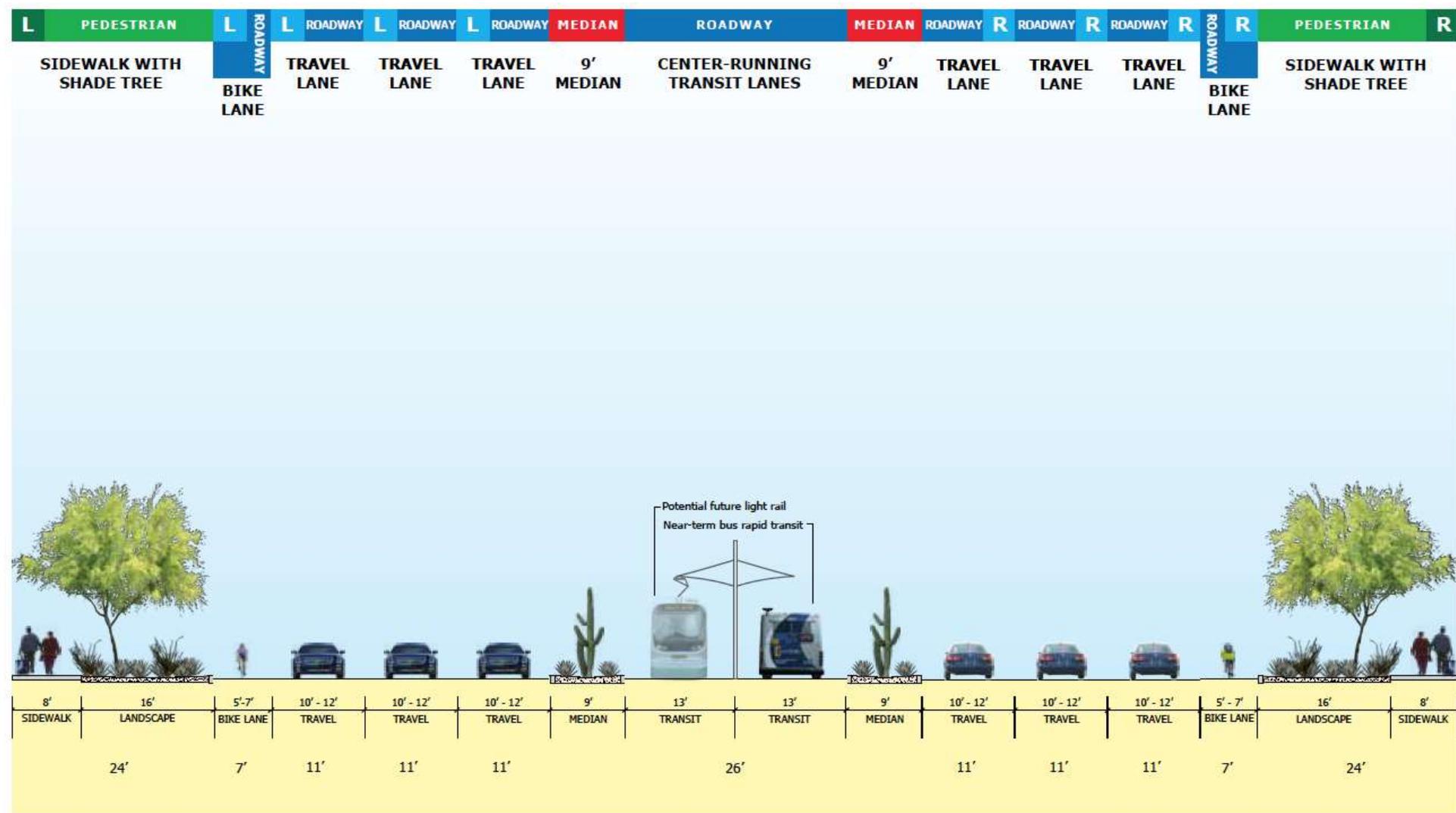
Potential R.O.W. Range – 109 to 174 feet



Option A: 143' Right-of-Way

Six Lane plus Transit Lanes

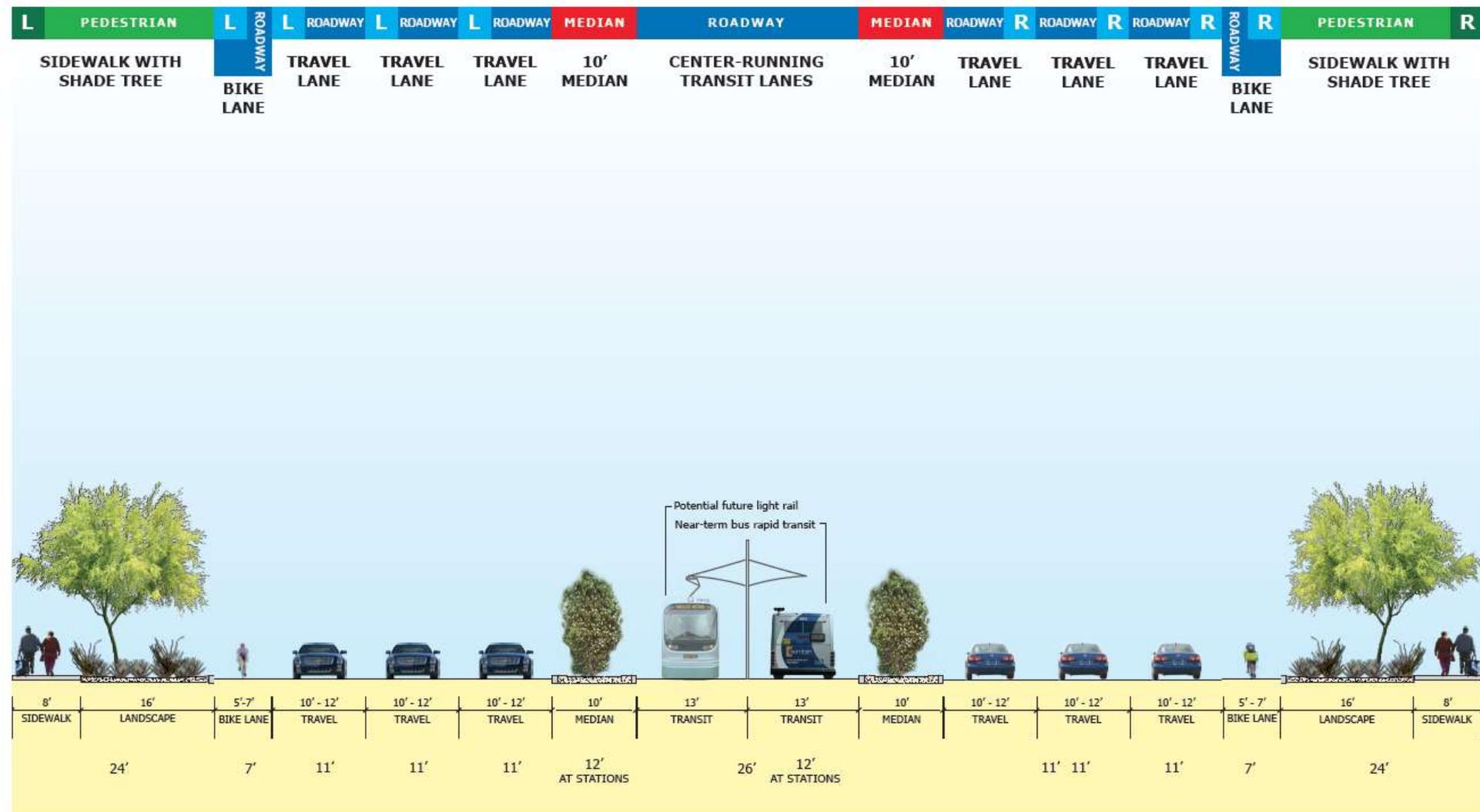
Potential R.O.W. Range – 138 to 172 feet



Option B: 172' Right-of-Way

Six Lane plus Transit Lanes

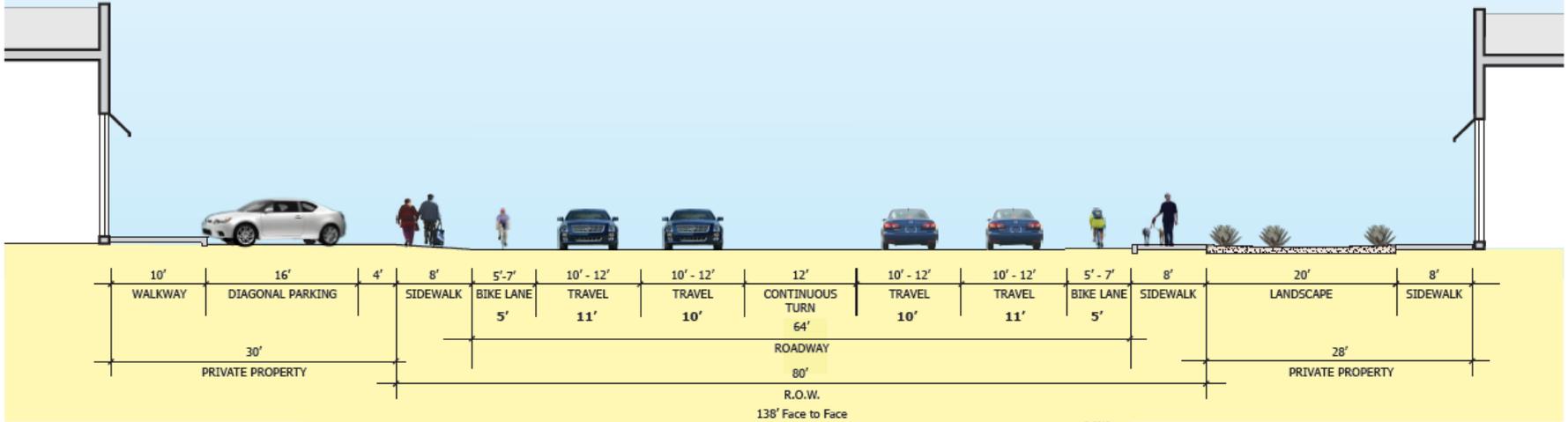
Potential R.O.W. Range – 109 to 174 feet



Option B: 174' Right-of-Way

Local Access Lane Studies

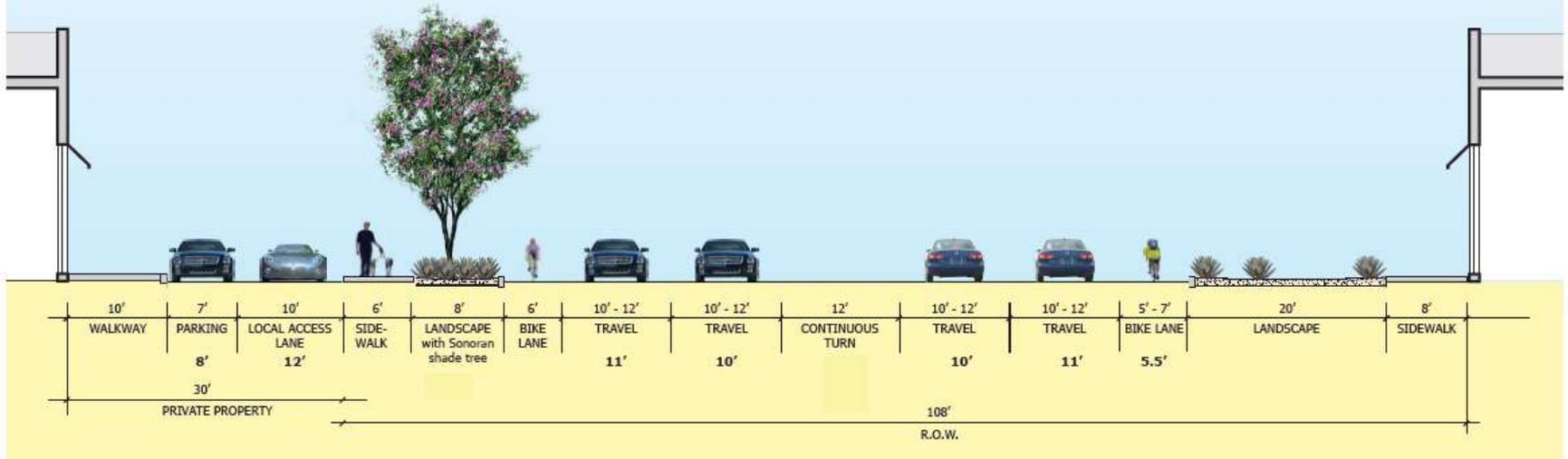
East of Campbell Concepts



Existing Condition

Local Access Lane Studies

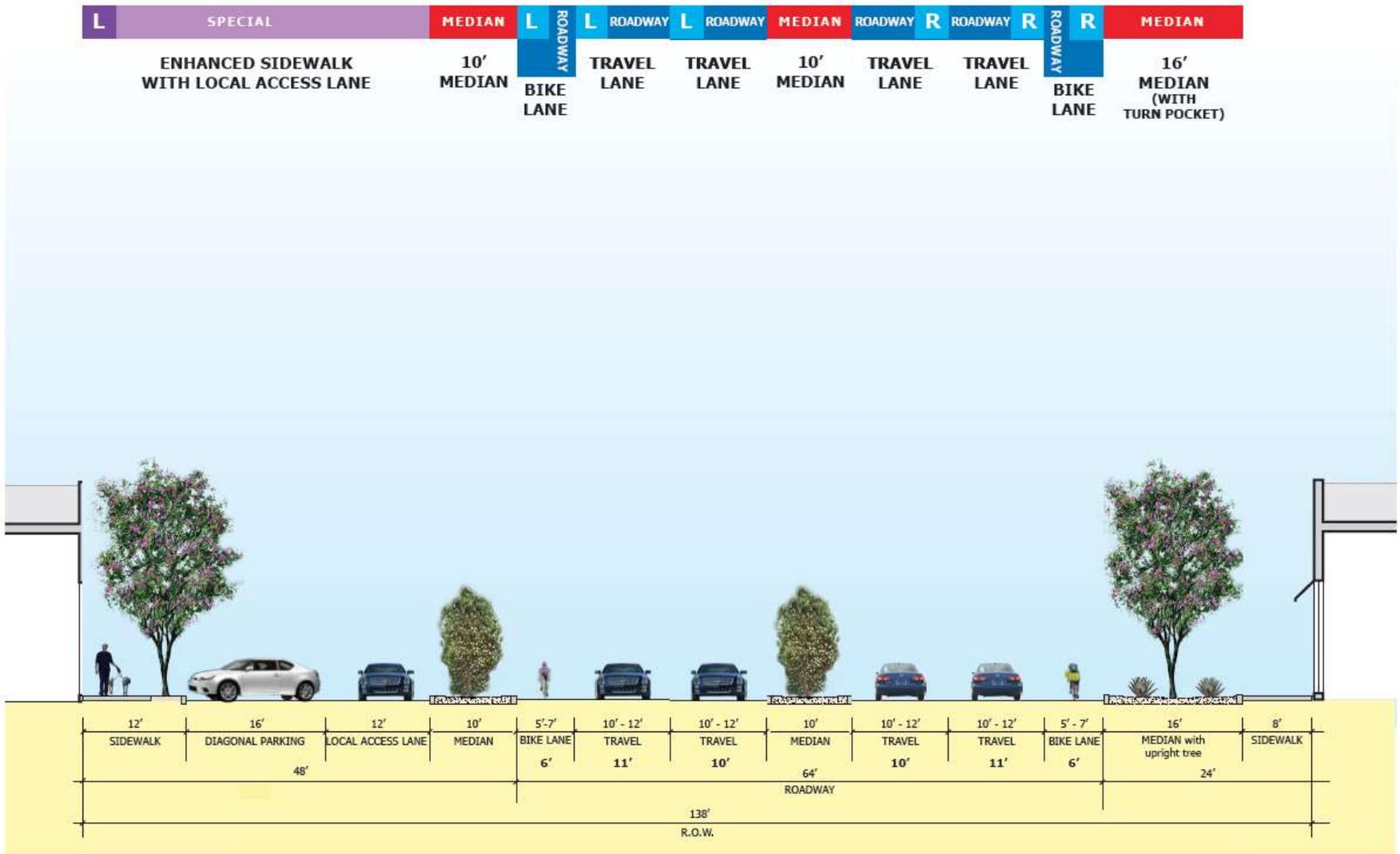
East of Campbell Concepts



Option A

Local Access Lane Studies

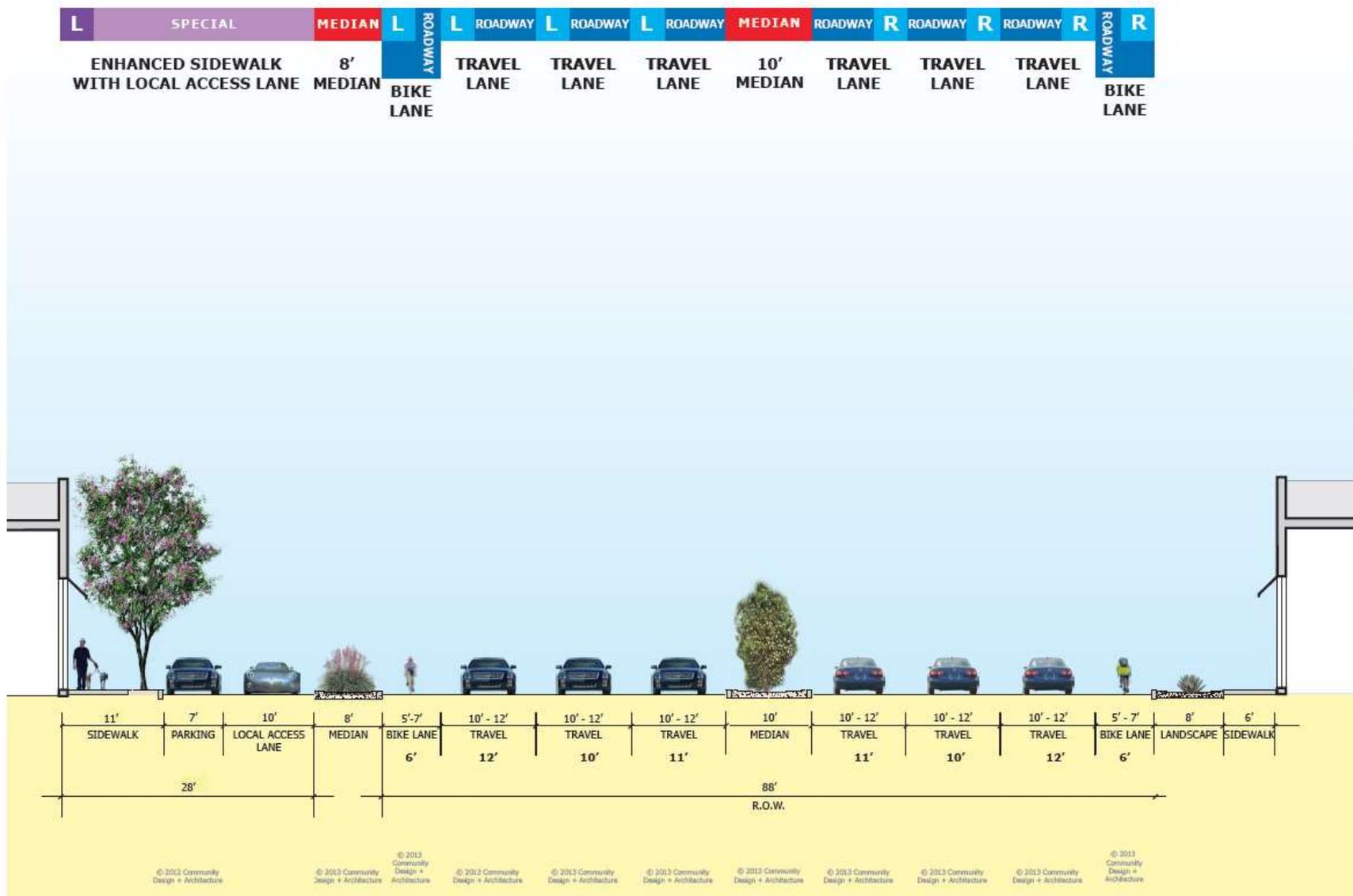
East of Campbell Concepts



Option B

Local Access Lane Studies

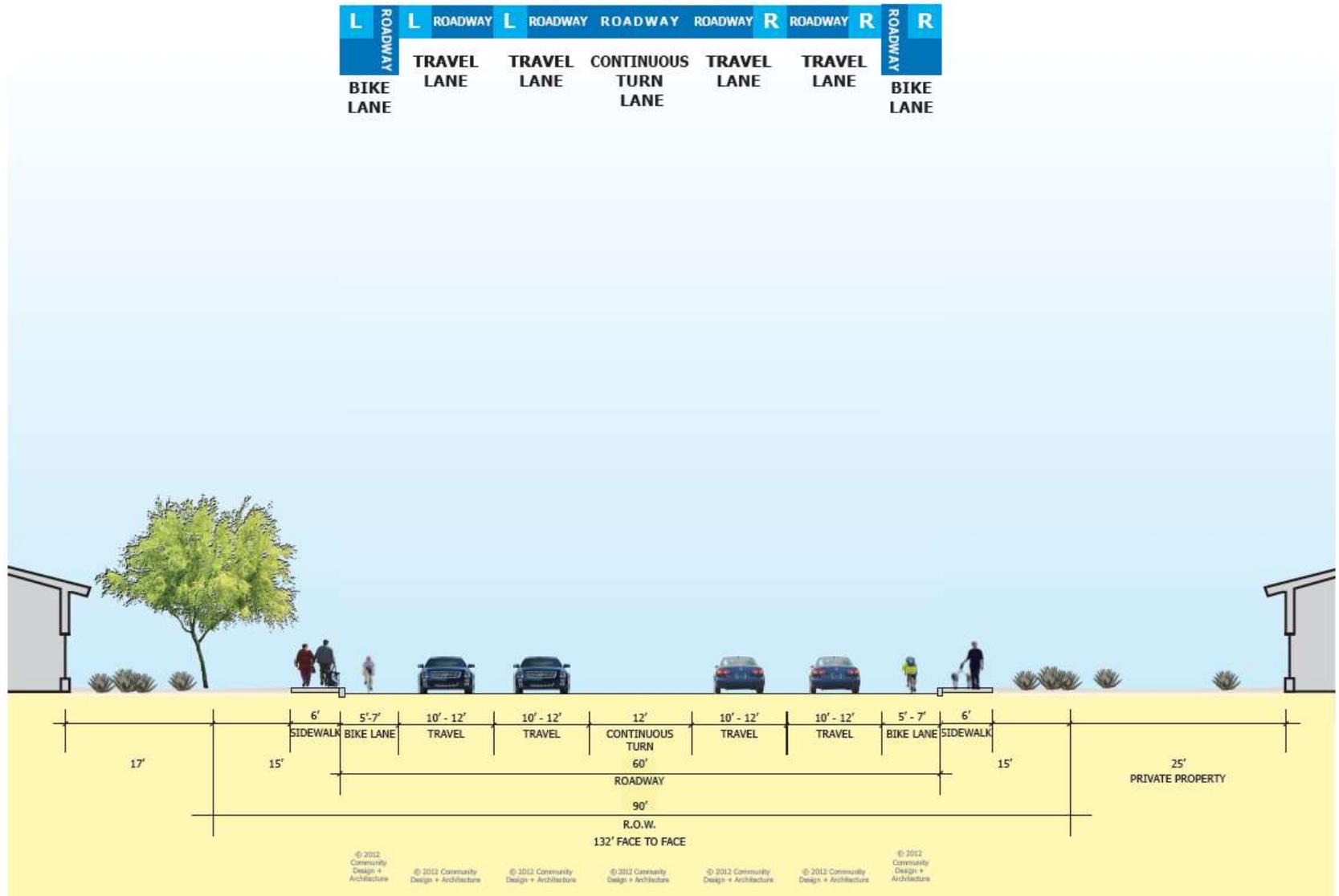
East of Campbell Concepts



Option C

Cross Section Studies

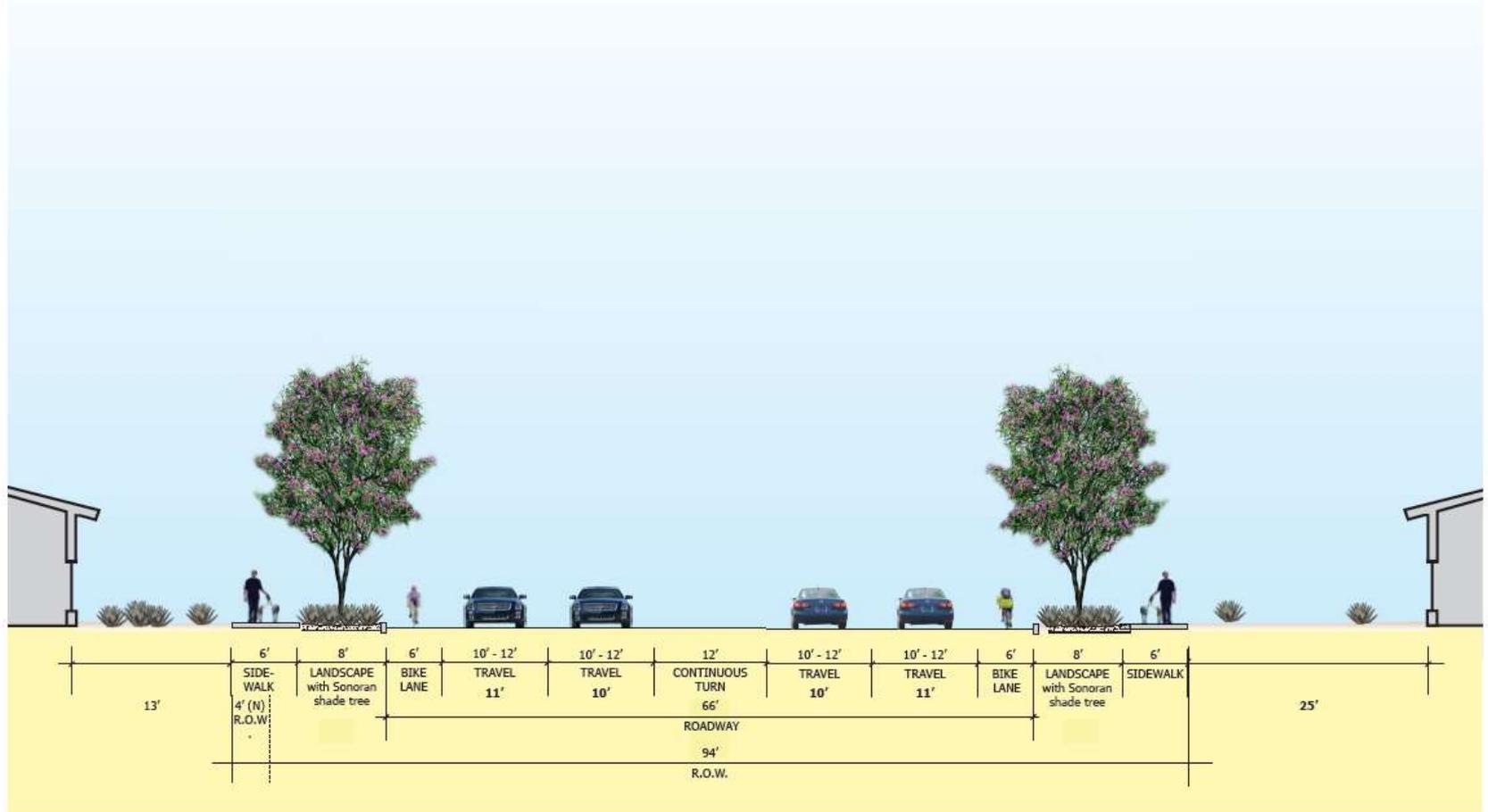
West of Campbell Concepts



Existing Condition

Cross Section Studies

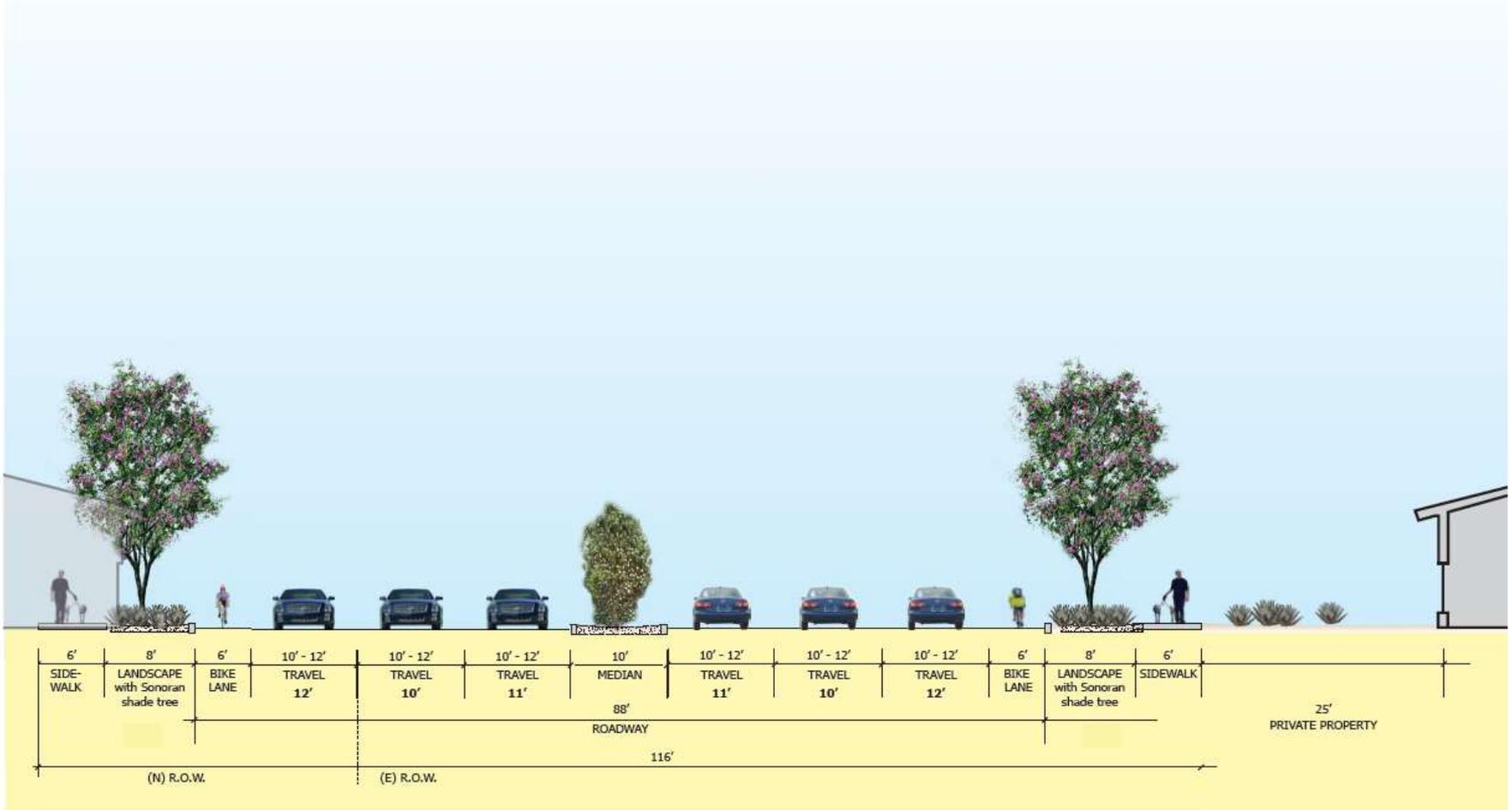
West of Campbell Concepts



Option A

Cross Section Studies

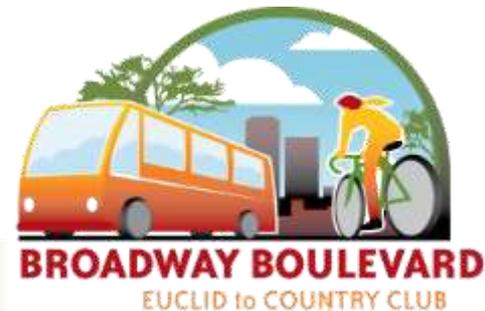
West of Campbell Concepts



Option B

CTF Discussion

- Are there additional “Families” of design approaches to add?
- Are there additional cross section options we should illustrate?
- Are there cross section options we should eliminate?
- Other issues to discuss?



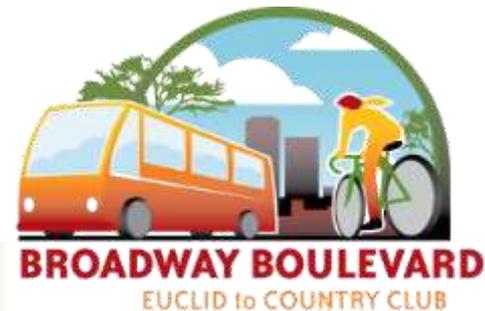
Discussion of Updated Transportation Performance Measures

Phil Erickson

Community Design + Architecture

Mike Johnson

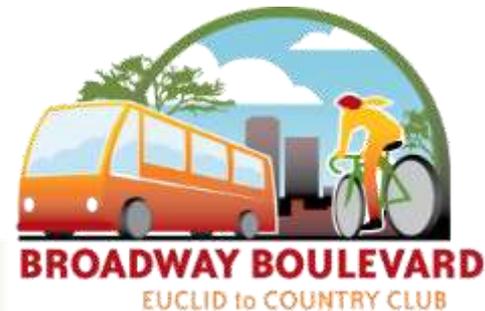
HDR Engineering



Discussion of Updated Transportation Performance Measures

Changes made to measures within:

1. Pedestrian Access and Mobility
2. Bicycle Access and Mobility
3. [Not listed]
4. Vehicular Access and Mobility



Pedestrian Access and Mobility

- 1a. Functionality of Streetside for Pedestrian Activity
- 1b. Separation from Vehicular Traffic
- 1c. Pedestrian-Oriented Facilities or Improvements
- 1d. Walkable Network/Neighborhood Connections
- 1e. **Pedestrian Crossings**
- 1f. **Vehicle/Pedestrian Conflicts at Driveways**
- 1g. Universal Design
- 1h. Walkable Destinations
- 1i. Ease of Choice**

Pedestrian Access and Mobility

1e. Pedestrian Crossings

Description	<ul style="list-style-type: none">• Ease of crossing Broadway
Measurement	<ul style="list-style-type: none">• Frequency, length, and quality of pedestrian crossings• Time needed to cross street• Signal timing for pedestrian phase (VISSIM analysis)
Factors	<ul style="list-style-type: none">• Width and number of lanes (through and turn)• Width and number of medians• Level of pedestrian comfort in medians• Frequency of crossings• Signal timing design• Wait time for crossing signal (including time in median if two or more light cycles are required to cross)
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Moderate at this phase – several factors are directly related to cross section design, several are not

Pedestrian Access and Mobility

1f. Vehicle/Pedestrian Conflicts at Driveways

Description	<ul style="list-style-type: none"> Conflicts between pedestrians and vehicles exist at driveways for site access; strongly related to #2b
Measurement	<ul style="list-style-type: none"> Provision of level pedestrian crossings Travel speed to vehicles Frequency of driveways
Factors	<ul style="list-style-type: none"> Width of roadside to accommodate level pedestrian crossings Target speed and roadway design's support of speed management Frequency and width of driveways Visibility (landscaping, site lines, signage)
Ability to Effect	<ul style="list-style-type: none"> High
Ability to Evaluate	<ul style="list-style-type: none"> Moderate – some factors are directly related to cross section design, several are not

Pedestrian Access and Mobility

1h. Ease of Transition to Walking™

Description	<ul style="list-style-type: none">• The ability of users to become pedestrians
Measurement	
Factors	<ul style="list-style-type: none">• Proximity and number of parking lots• Proximity and number of bicycle parking/lockers• Number of bus stops/transit stations• Number and type of comfort and safety features (lighting, seats, shade)• Number of attractions/commercial uses
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Not at this level of design

Bicycle Access and Mobility

- 2a. **Separation of Bikes and Arterial Traffic**
- 2b. **Bike Conflicts with Crossing Vehicles**
- 2c. ~~Vehicle/Bike Conflicts at Side Streets~~ (combined into 2b)
- 2d. **Pavement Condition**
- 2e. **Bike Facility Improvements**
- 2f. Bike Network Connections
- 2g. Corridor Travel Time
- 2h. Bike Crossings

Bicycle Access and Mobility

2a. Separation of Bikes and Arterial Traffic

Description	<ul style="list-style-type: none">• Greater separation is a factor related to bicyclist safety and comfort, and therefore likely bicycle use of Broadway
Measurement	<ul style="list-style-type: none">• Relationship of proposed separation compared to ITE Walkable Thoroughfares Manual recommendation of 6 feet
Factors	<ul style="list-style-type: none">• Bike lane is a legal bike lane (as opposed to a “striped shoulder”)• Combination of bike lane and buffer (painted line or other) width• Buffer other than painted line• Location of transit stops (street side or median)
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• High for cross section and location of transit stops• Low for intersections (crossings of bike lane for right turns)

Bicycle Access and Mobility

2b. Bike Conflicts with Crossing Vehicles (note this includes the 2c perf. measure)

Description	<ul style="list-style-type: none"> Vehicles cross bike lanes for a variety of reasons, the design and frequency of these crossings can effect bicyclist safety and comfort
Measurement	<ul style="list-style-type: none"> Frequency and type of traffic crossing bike lanes Length of uninterrupted bike lane Design details of crossing area
Factors	<ul style="list-style-type: none"> Reducing number and length of crossing points Design details of crossing area
Ability to Effect	<ul style="list-style-type: none"> High
Ability to Evaluate	<ul style="list-style-type: none"> Moderate at current level of design (location of transit stops and use of local access lanes) Design does not include current details of site access or intersections

Bicycle Access and Mobility

2d. Pavement Condition

Description	<ul style="list-style-type: none">• Smooth pavement is a priority for bicyclist comfort
Measurement	<ul style="list-style-type: none">• Input from TDOT and Bicycle Advisory Committee• Best practice guidance, possibly including elements of NACTO Bike Guide
Factors	<ul style="list-style-type: none">• Concrete with proper joint design versus asphalt• Gutter design• Landscaping palette
Ability to Effect	<ul style="list-style-type: none">• High
Ability to Evaluate	<ul style="list-style-type: none">• Low to none• Pavement type not dependent on cross section design, except for potential for lower cost cross section concepts to allow for more budget to be spent on bike lane pavement

Bicycle Access and Mobility

2e. Bike Facility Improvements

Description	<ul style="list-style-type: none">• Extent of bike racks, shade, drinking fountains, green pavement (bike boxes, etc.) and other features to serve bicyclists needs
Measurement	<ul style="list-style-type: none">• % shade, number/frequency of design features• Qualitative evaluation
Factors	<ul style="list-style-type: none">• Increase in number of features• Continuity of bike treatments through project area
Ability to Effect	<ul style="list-style-type: none">• Minimal at the cross section and alignment level, beyond provision of enough area in streetside to allow for facilities. Evaluation of space is generally covered by measures 1a and 1b.
Ability to Evaluate	<ul style="list-style-type: none">• Moderate at this level of design• Design does not currently include this level of design, but lower cost cross section concepts may allow more budget to be spent on bike facilities

Vehicular Access and Mobility

- 4a. Movement of Through Traffic
- 4b. Intersection Delay – Overall Intersection Performance
- 4c. Intersection Delay – Worst Movement
- 4d. Accident Potential
- 4e. Lane Continuity
- 4f. Persons per Vehicle or Person Trips
- 4g. Access Management to Adjacent Uses**

Vehicular Access and Mobility

4f. ~~Persons per Vehicle or~~ Person Trips for multiple measures

Description	<ul style="list-style-type: none"> Multi-modal measures allowing evaluations on a per person basis
Measurement	<ul style="list-style-type: none"> Convert vehicle, transit, and bicycle trips to person trips for the corridor Use traffic model and VISSIM to assess different modal performance for: <ul style="list-style-type: none"> Corridor travel time Average delay Travel time reliability Other measures as appropriate
Factors	<ul style="list-style-type: none"> Number of traffic lanes Signal design/timing Intersection design Access management Transit service design #2b Bike Conflicts with Crossing Vehicles Dedicated transit lanes, transit priority treatments at intersections, level boarding, off-vehicle ticketing, and other measures
Ability to Effect	<ul style="list-style-type: none"> High
Ability to Evaluate	<ul style="list-style-type: none"> Not viable at current level of design Requires alignment and intersection design

Call to the Audience

10 Minutes

Please limit comments to 3 minutes

- Called forward in order received
- CTF members cannot discuss matters raised
- CTF cannot take action on matters raised
- CTF members can ask project team to review an item

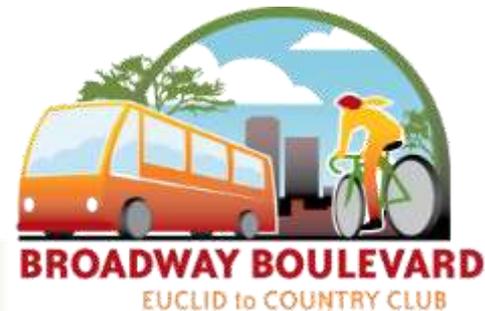
Next Steps/Roundtable

Jenn Toothaker

Next CTF Meeting: **Thursday, 5/30/2013**

5:30-8:30 p.m., Child & Family Resources

- Welcome/Introductions/Agenda Review
- Call to the Audience
- Public Input Report & Reports on Presentations & Outreach
- Review potential cross sections and performance assessments, and endorse a representative set of them to move forward into review by the Stakeholder Agencies
- Initial discussion of September Public Meeting #3
- Call to the Audience (2nd)
- Next Steps/CTF Roundtable



Thank You for Coming – Please Stay in Touch!

Broadway: Euclid to Country Club

Web: www.tucsonaz.gov/broadway

Email: broadway@tucsonaz.gov

Info Line: 520.622.0815

RTA Plan

www.rtamobility.com

