



Broadway Road Streetscape

City of Tempe

27 April, 2009

Agenda

1. Confirm project issues and goals
2. Discuss public comments to dates.
3. Discuss traffic analysis results.
4. Discuss preliminary lane configuration recommendation in the study area.
5. Present examples of streetscape treatments for 5 lane or 4 lane design.
6. Discuss options with the BRAT.

Identified Issues in Study Area

- Safety
- Bike and pedestrian improvements
- Noise from cars and trucks
- Cut-through traffic
- Retain community character

Project Goals

- Reduce traffic noise
- Protect community character
- Address community safety concerns
- Provide 5-foot bicycle lanes
- Provide 8-foot sidewalks
- Retain Broadway lane
- Improve streetscape character
- Discourage cut-through traffic
- Maintain Traffic Flow

Public Comment Recap

- Comments
 - Public Meeting
 - Website
 - Phone/E-mail
- Broadway Road Walk
 - Written and verbal comments
 - Photos

Public Meeting, Website, Phone

- Planning
 - Use College Avenue and Rural Road as templates for this project
 - Expand project beyond Mill/Rural boundary
 - Cancel the College Avenue project
- Modes
 - Add bus element
 - Enhance/facilitate pedestrian usage/safety
- Traffic
 - Improve intersections
 - Reducing traffic flow will create cut-through traffic and increase pollution
- Noise
- Neighborhood
 - Build a wall

Broadway Road Walk

- Our community is defined by:
 - Trees and shrubs
- Would like to see these things remain or be enhanced:
 - Limited access to neighborhood
 - Wider sidewalks and/or bike lanes, consistent sidewalks
 - Protected bike lanes and sidewalks on both sides
 - Bus pullouts
- To make Broadway Road better, we should:
 - Provide a mini park on the north side, south end of Sierra Vista
- What amenities should be on Broadway Road and how would they benefit the community?
 - Provide more separation (via sound barrier)
 - Landscaping
 - Recognition/statement of uniqueness
 - Gateway element

Broadway Road Walk – Flickr Site



“3-lanes going east - too many lanes inviting too much traffic...”



“Can we do better, aesthetically, in closing off frontage road? (Facing west on north side of College).”



“No character here - it's flat, noisy, busy, hazardous and uninviting to pedestrians. No neighborhood feel...”

Broadway Road Walk – Flickr Site



“Here's a close-up of a typical stretch of Broadway Road curbside.”



“The wheelchair cut-out is invisible to cyclists, even this close to the curb. At this point, you don't even know if there is a cut-out, let alone if it's clear to ride through.”

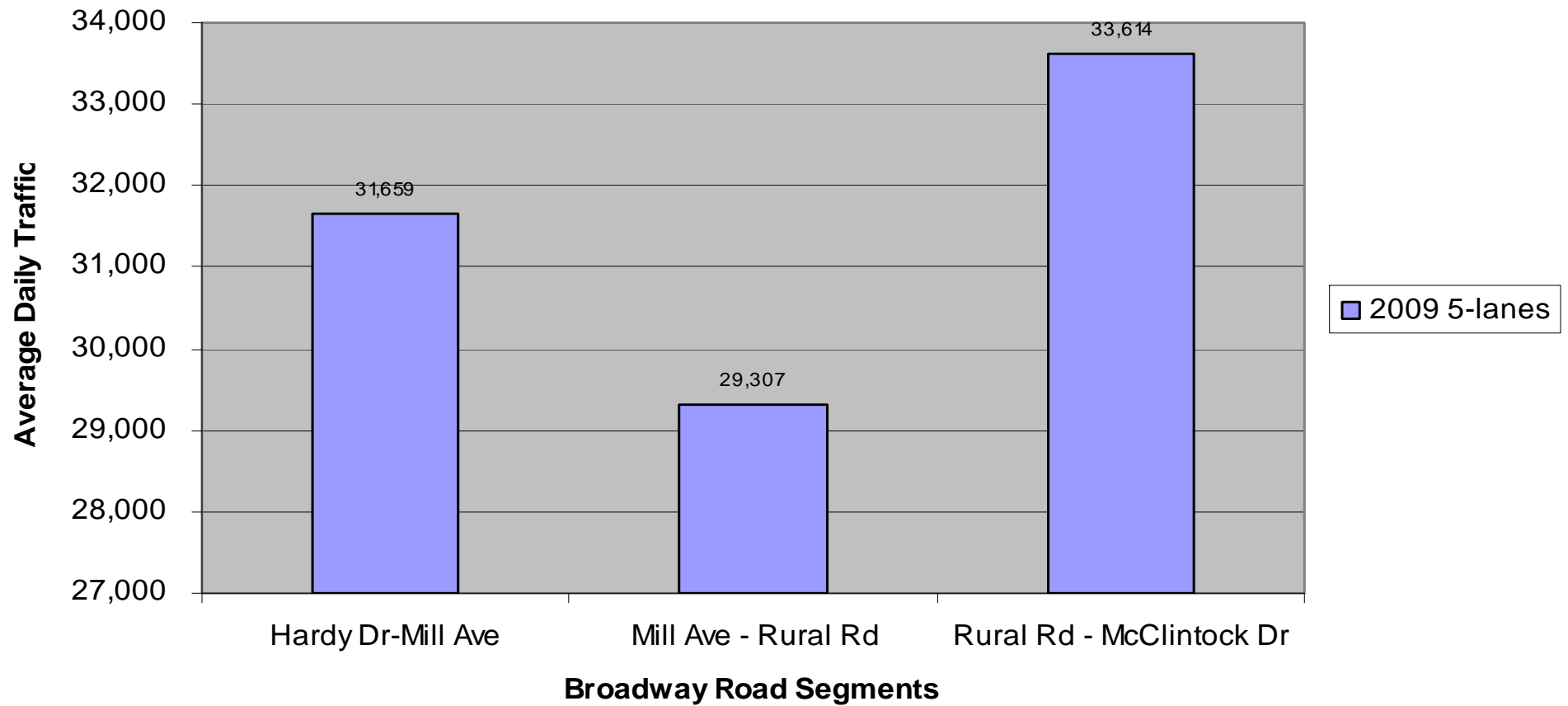
Traffic Analysis

Questions we were asked to answer from the traffic study:

1. Existing traffic conditions on Broadway Road.
2. Future traffic conditions with revised lane configuration on Broadway Road.

Existing ADT

Average Daily Traffic Volumes

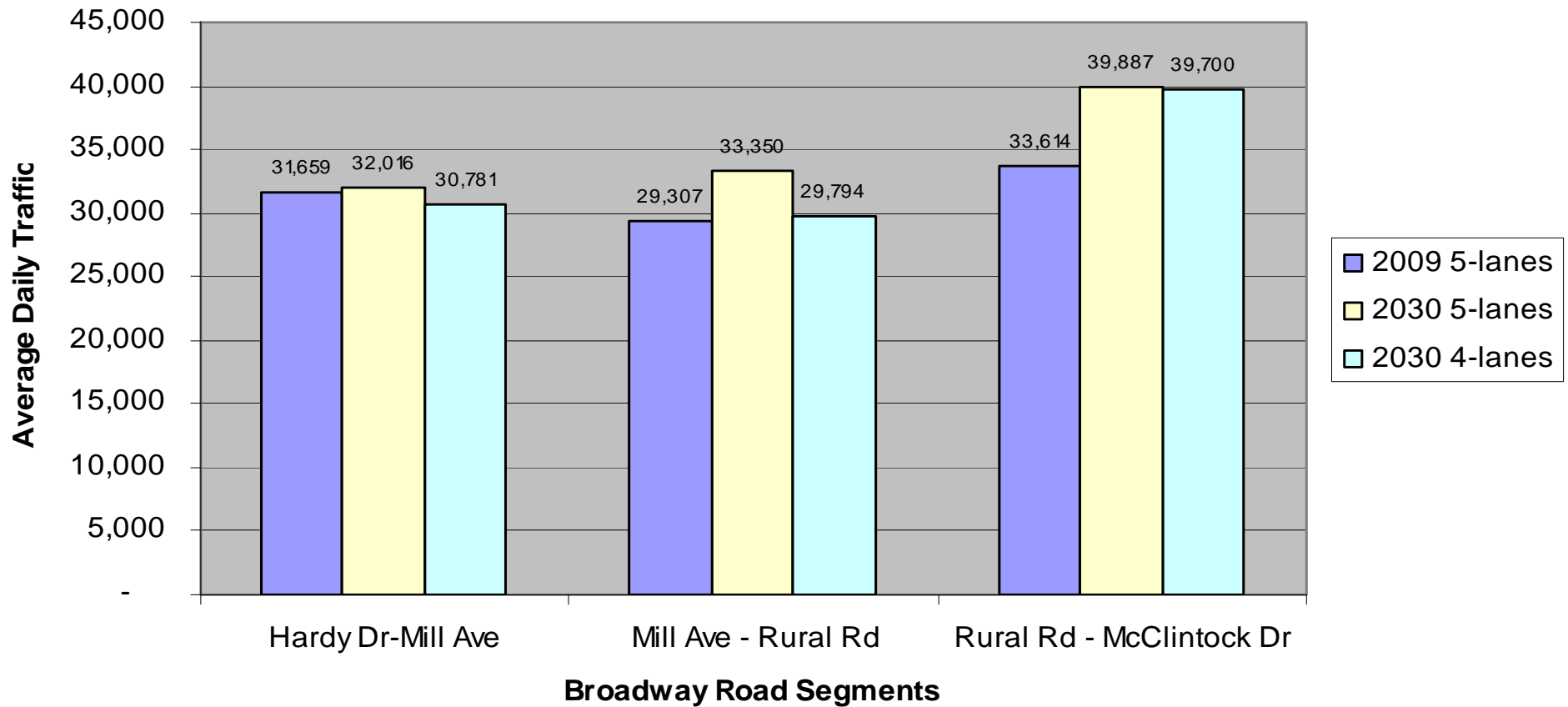


Existing Peak Hour Intersection LOS

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Broadway Rd & Mill Ave	49.0	D	72.6	E
Broadway Rd & College Ave	9.0	A	11.1	B
Broadway Rd & Rural Rd	55.3	E	100.7	F

MAG Model 2030 ADT Forecasts

Average Daily Traffic Volumes



2030 5 Travel Lanes on Broadway Rd

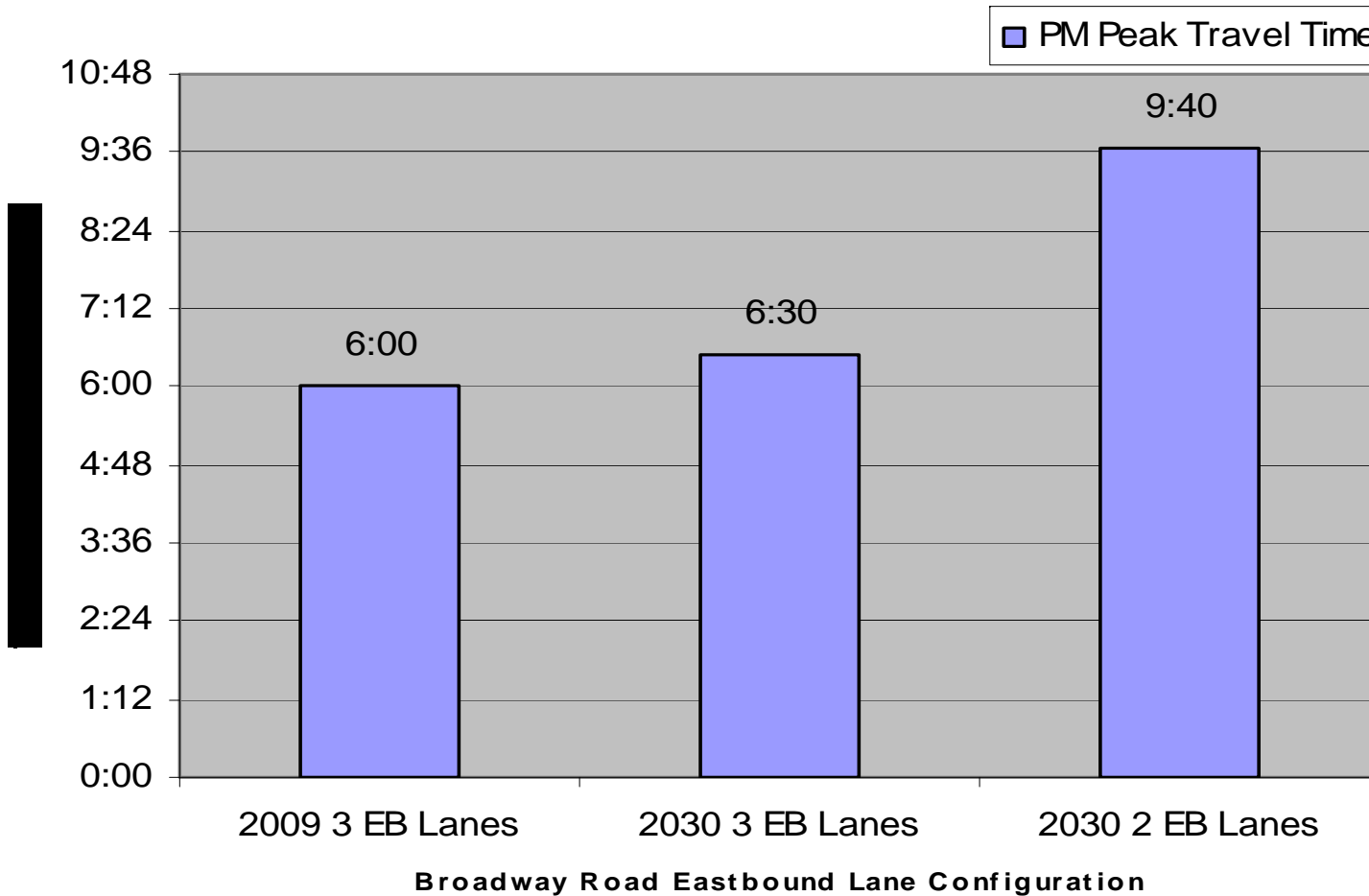
Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Broadway Rd & Mill Ave	49.5	D	77.6	E
Broadway Rd & College Ave	7.8	A	13.1	B
Broadway Rd & Rural Rd	77.9	E	117.1	F

2030 4 Travel Lanes on Broadway Rd

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Broadway Rd & Mill Ave	45.7	D	93.9	F
Broadway Rd & College Ave	8.2	A	17.9	B
Broadway Rd & Rural Rd	104.9	F	151.8	F

PM Peak Travel Time Comparison

Travel Time Comparison (Eastbound Broadway Rd: Roosevelt Rd to Terrace Rd)



Traffic Analysis Summary

With 4 lanes on Broadway Rd:

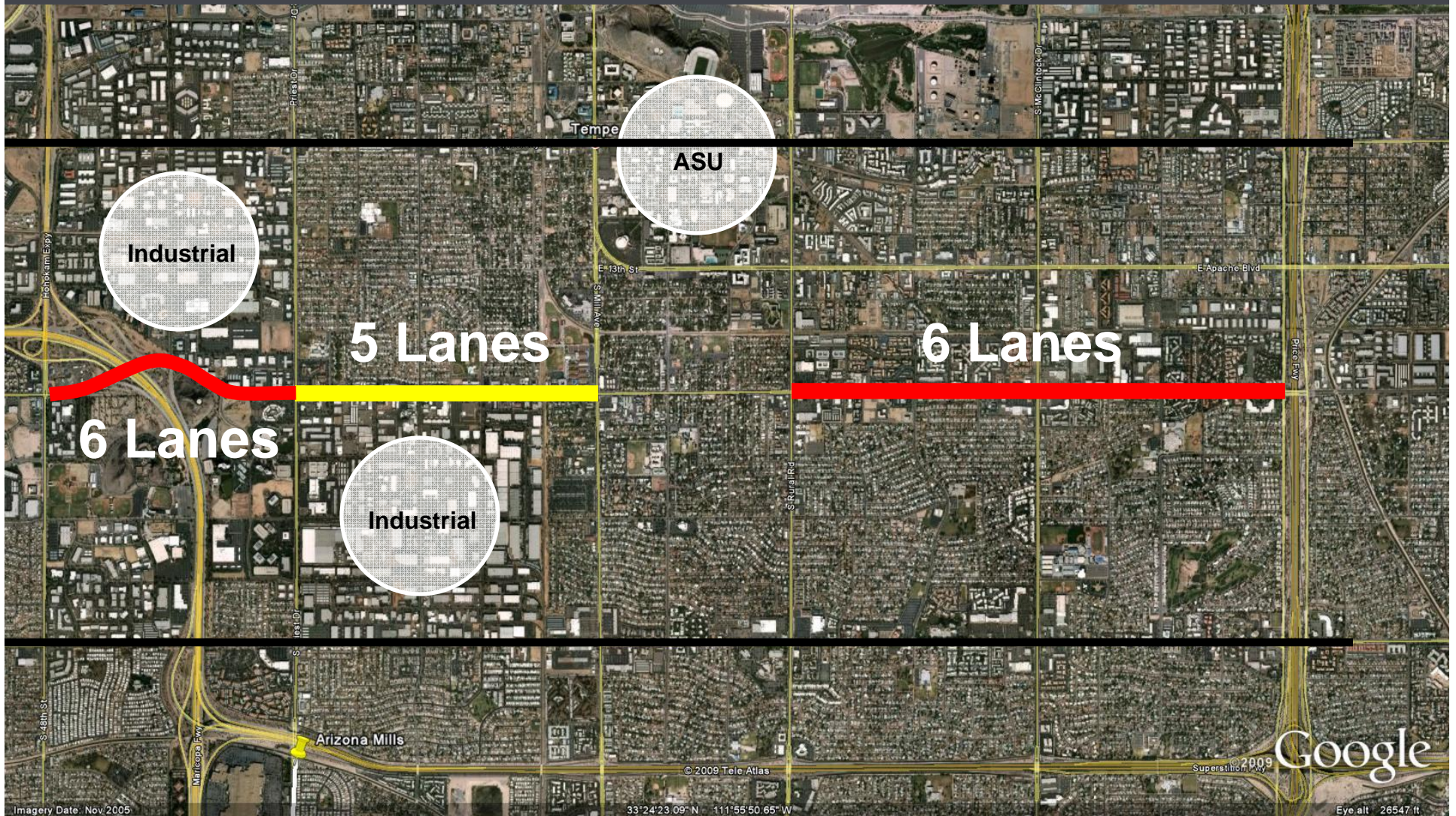
1. The arterial street intersections of Broadway Rd (Mill Ave and Rural Rd) will operate at reduced **LOS (F)**.
2. Increased delays and queuing on eastbound approach of Broadway Rd at Mill Ave.
3. Travel times increase by **1.5 times** the existing travel time through the corridor.
4. Travelers **will** find alternative routes to reach their destinations.
5. Broadway Road **will** be better scaled for residential.

Traffic Analysis Summary

With 5 lanes on Broadway Rd:

1. The arterial street intersections of Broadway Rd **will eventually** operate at LOS F.
2. Increased delays and queuing on eastbound approach of Broadway Rd at Mill Ave.
3. Travel times **will** increase through the corridor.
4. Broadway Road **will** be less suited for residential.
5. The character and quality of Broadway Road **will deteriorate** due to 5 lanes in a narrow ROW.

Lane configurations b/w 101 & I-10



Preliminary recommendations

- 5 lane configuration in the study area
 - 6 lanes on both sides of study area: reduction creates an extreme bottleneck.
 - 9 minutes to travel 1 mile with 4 lane option.
 - Existing policy direction to reduce congestion.
- Expand study area from 101 to I-10
 - Study regional impacts of lane reduction in corridor.

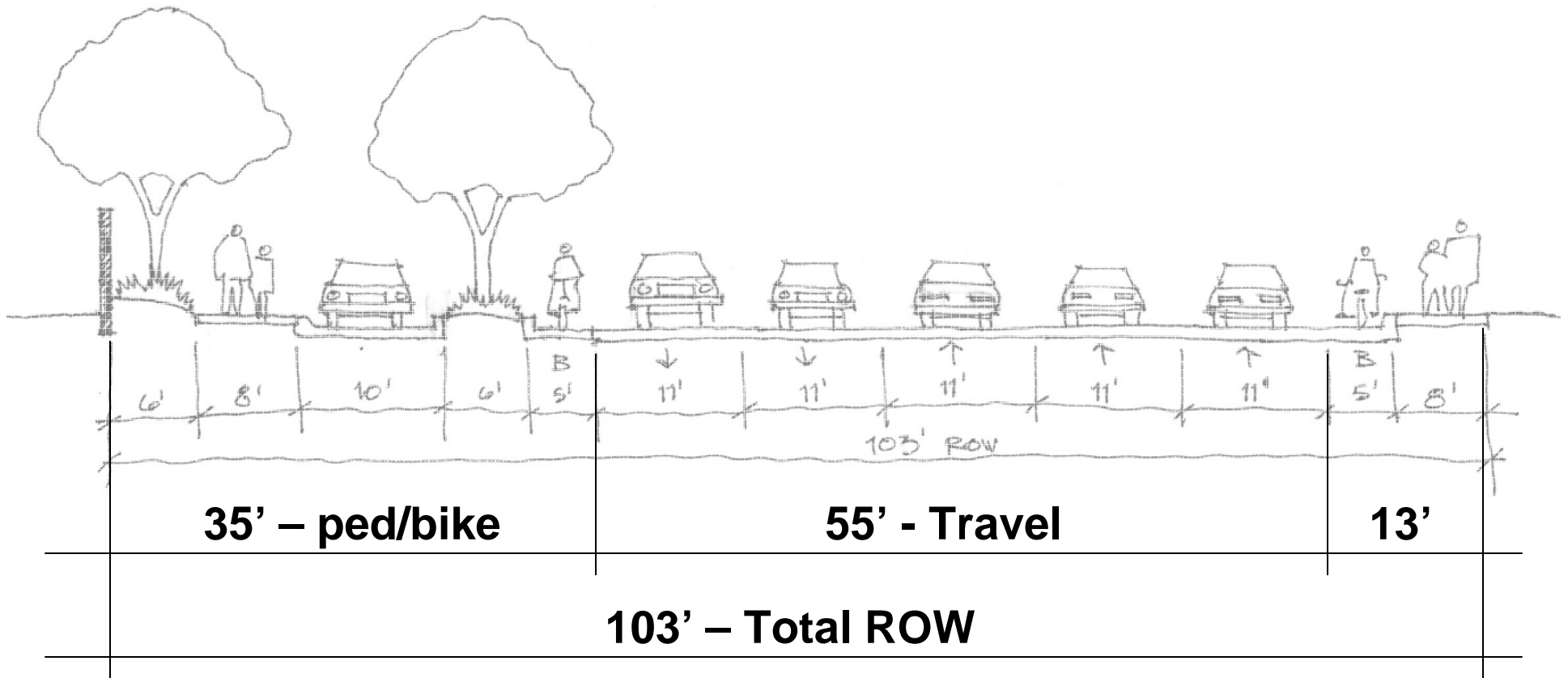
Broadway Lane Alternatives



Street Criteria / Issues

- 8' sidewalks – both sides
- 5' bike paths – both sides
- Wall
 - On property line: creates more privacy
 - In lane median: creates security issue
 - Bikes have no where to go in emergency.
 - Can't see behind wall from road.
- Bikes should be on road
- Peds should be seen from road
- 18' feet clear space for fire trucks on lane

Streetscape framework



South side bike/ped option

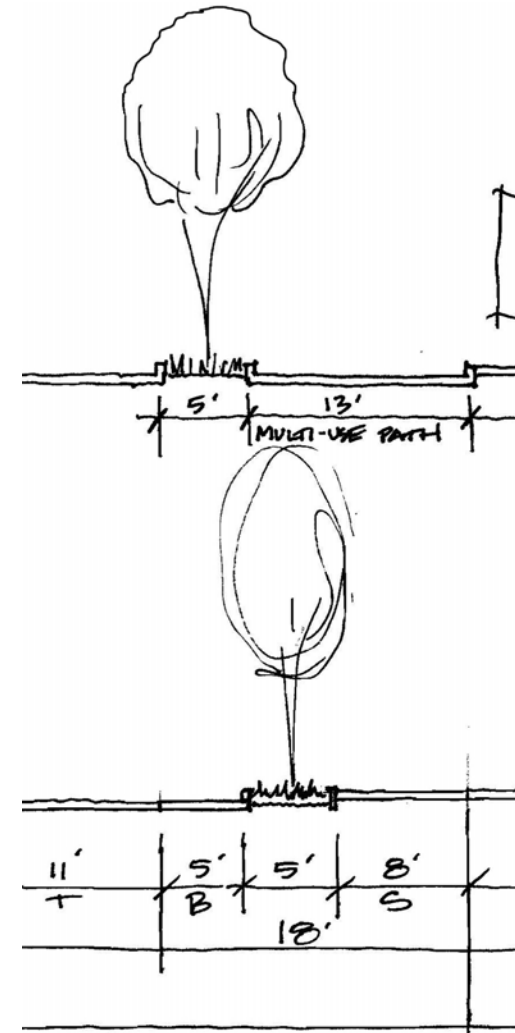
Combine bike and ped paths into 13' wide multi-use path.

Opportunities:

- Bikes separated from cars
- Bike and ped zones striped or contrasting paving
- Clean biking surface

Constraints:

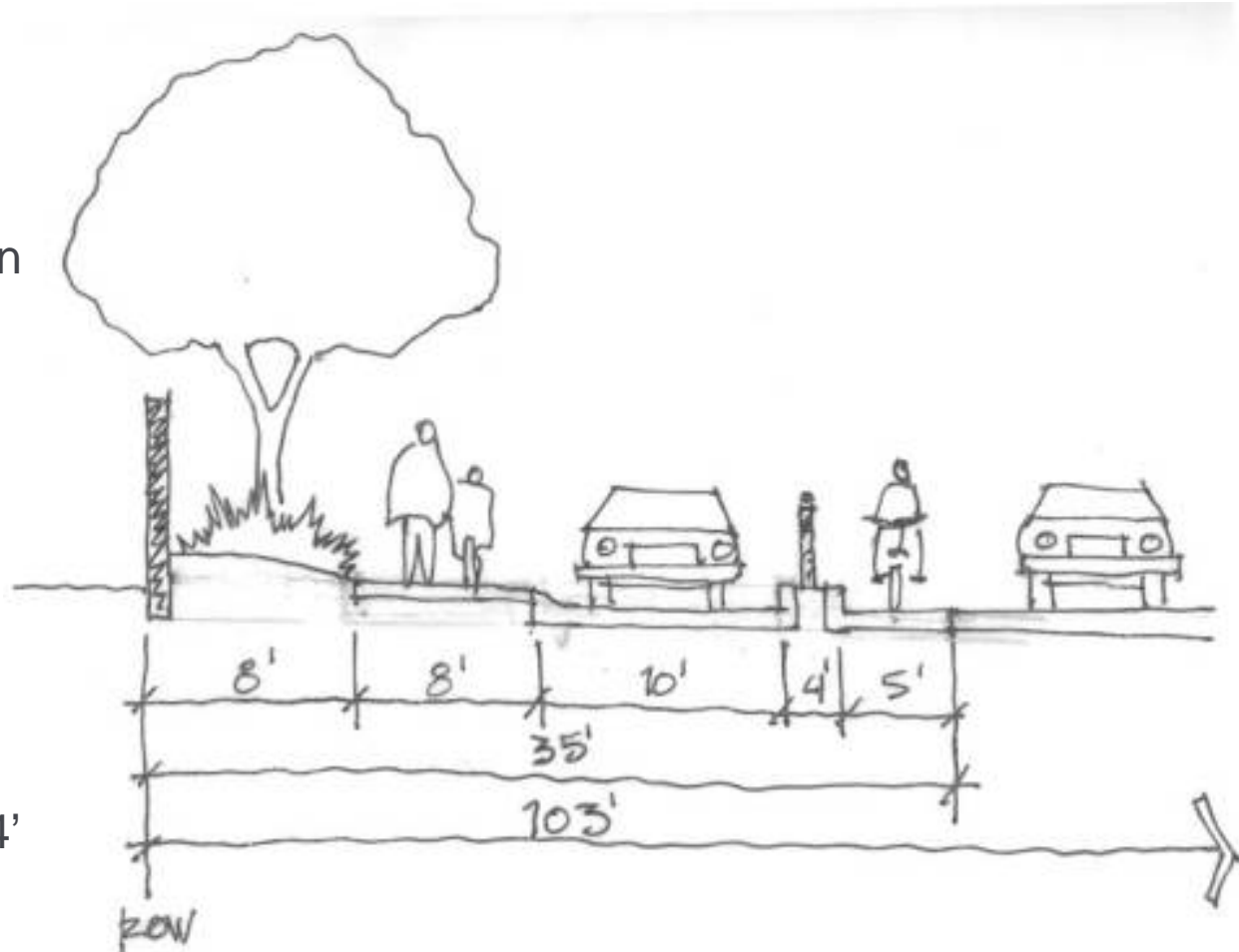
- Potential bike/ped conflicts



This will take away space from the north side

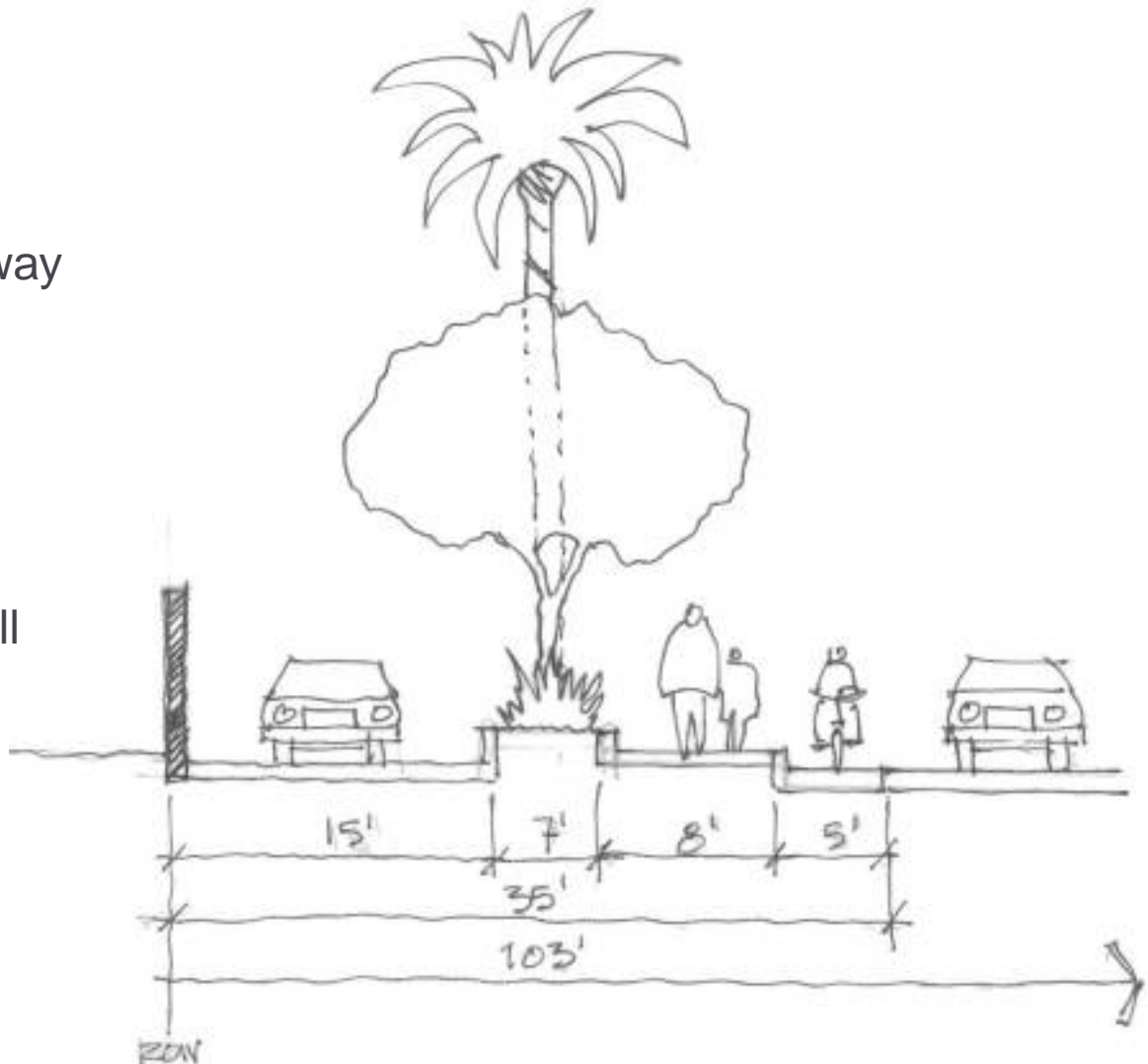
Wall on P/L – bikes on road

- Landscape Wall at ROW
- 8' landscape buffer in front of wall
- Broadway Lane 10' with rolled curb & 8' sidewalk
- Bikes on Broadway Road
- Broadway Lane and Road separated by 4' median w/ bollard and chain



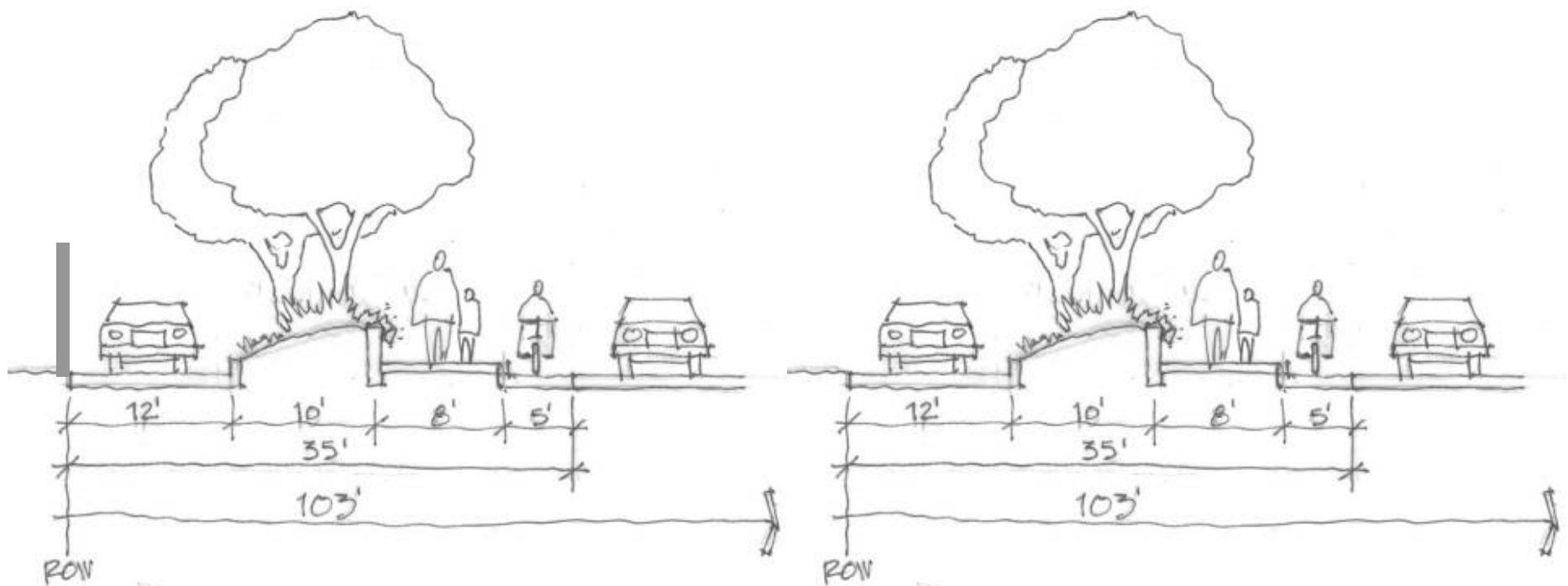
Wall on P/L – bike/peds on road

- Landscape Wall at ROW
- Broadway Lane 15' one-way
- Sidewalks and bikes on Broadway Road
- 7' median w/ 3 layers of landscape: low shrub, medium flowering tree, tall palm



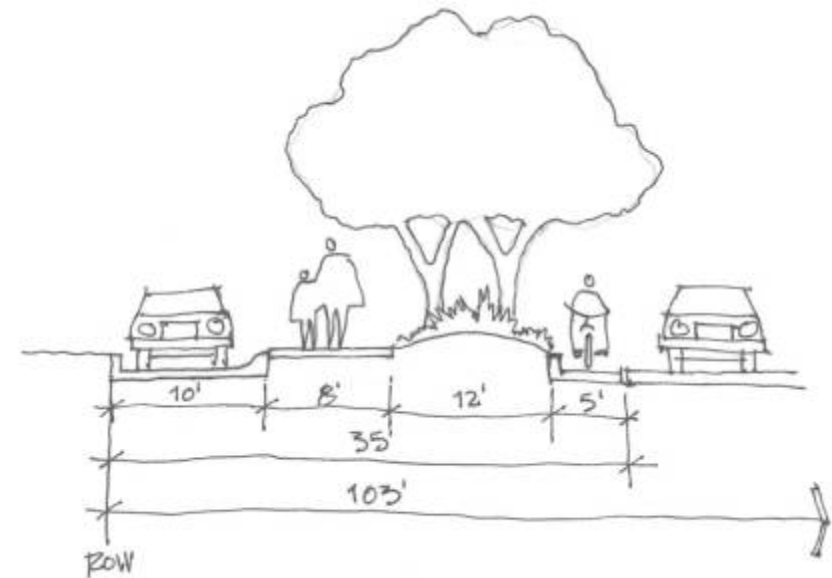
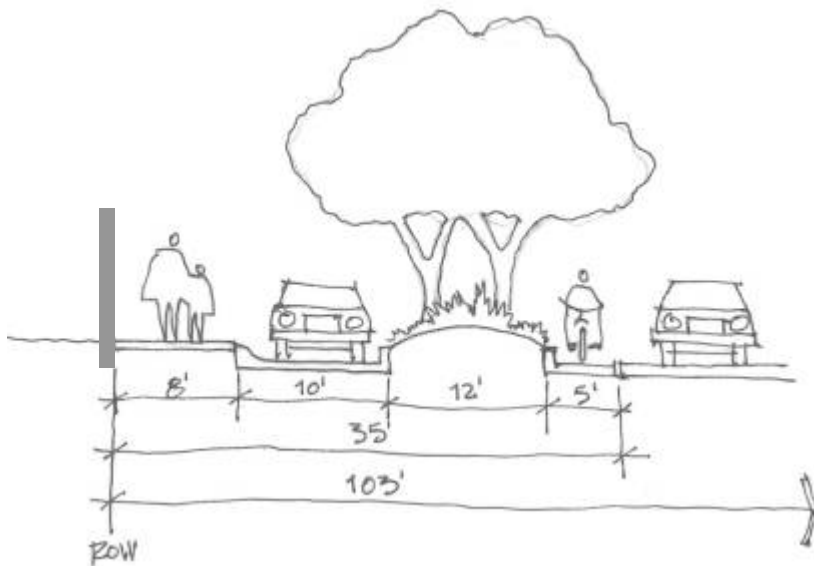
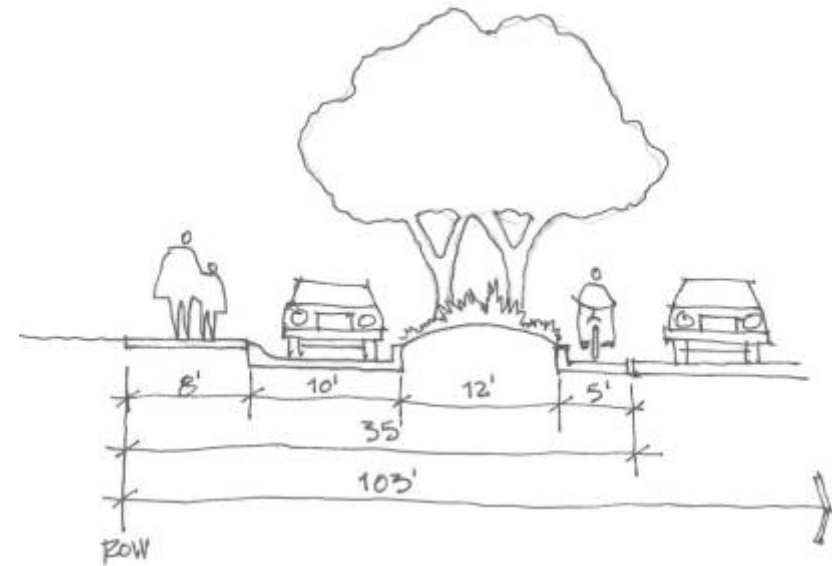
Bikes & peds on road

- 10' landscape median w/ berm and low retaining wall
- Broadway Lane 12' one-way
- Sidewalk and bikes on Broadway Road



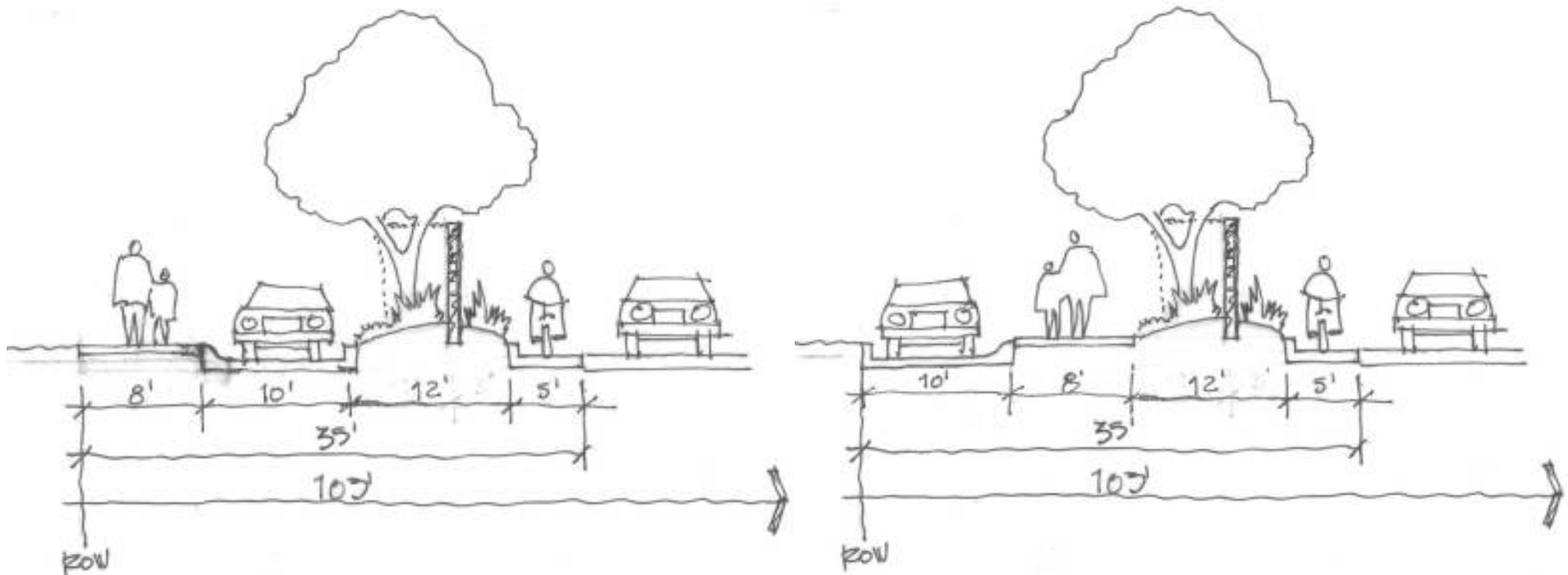
Buffer between bikes & peds

- 12' landscape median w/ intensive tree planting
- Broadway Lane 10' with rolled curb & 8' sidewalk (2 configurations)
- Bikes on Broadway Road



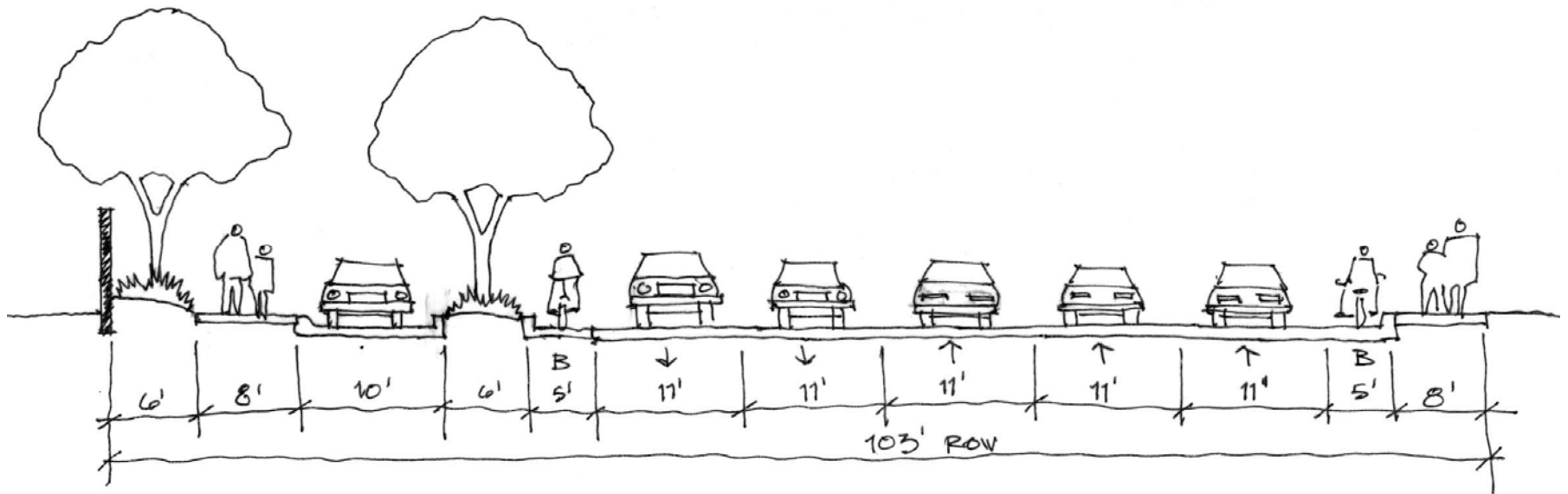
Wall between bikes & peds

- 12' landscape median w/ wall
- Broadway Lane 10' with rolled curb & 8' sidewalk (2 configurations)
- Bikes on Broadway Road



Peds can't be seen behind wall

Pedestrian row of trees

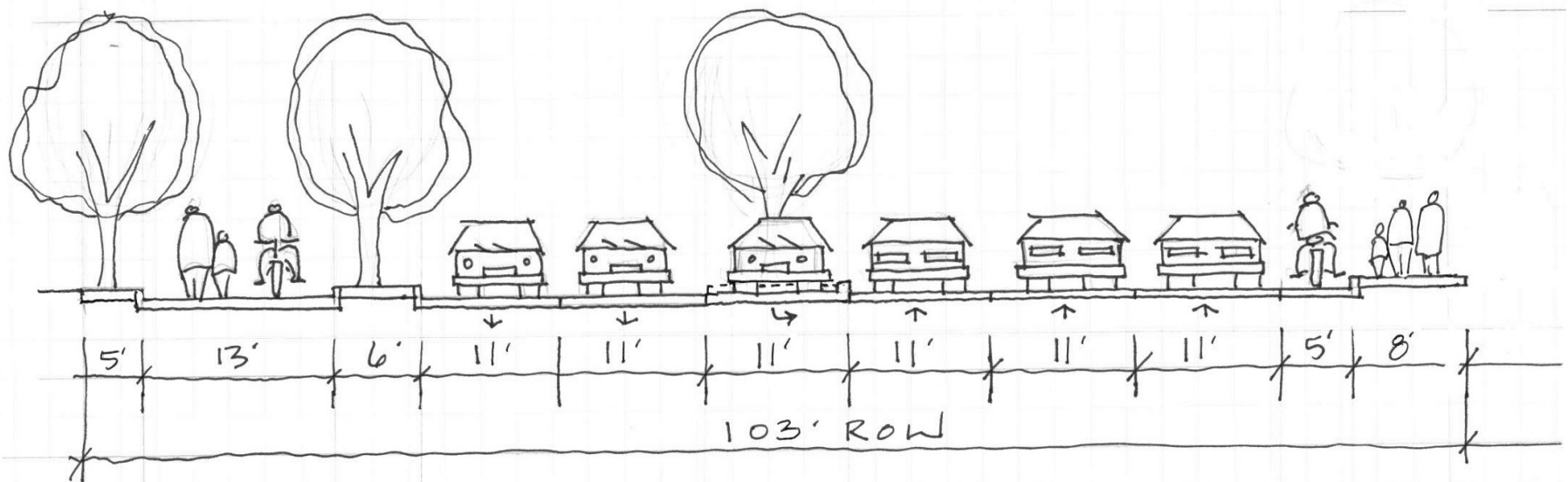


- 3/2 or 2/2 configuration
- Landscape Wall at ROW
- 6' landscape buffer in front of wall
- Broadway Lane 10' with rolled curb & 8' sidewalk
- Bikes on Broadway Road
- Broadway Lane and Road separated by 6' landscape median
- Shade trees benefit sidewalk

3/2 Configuration Studies



Mixed-use path: no lane



Opportunities:

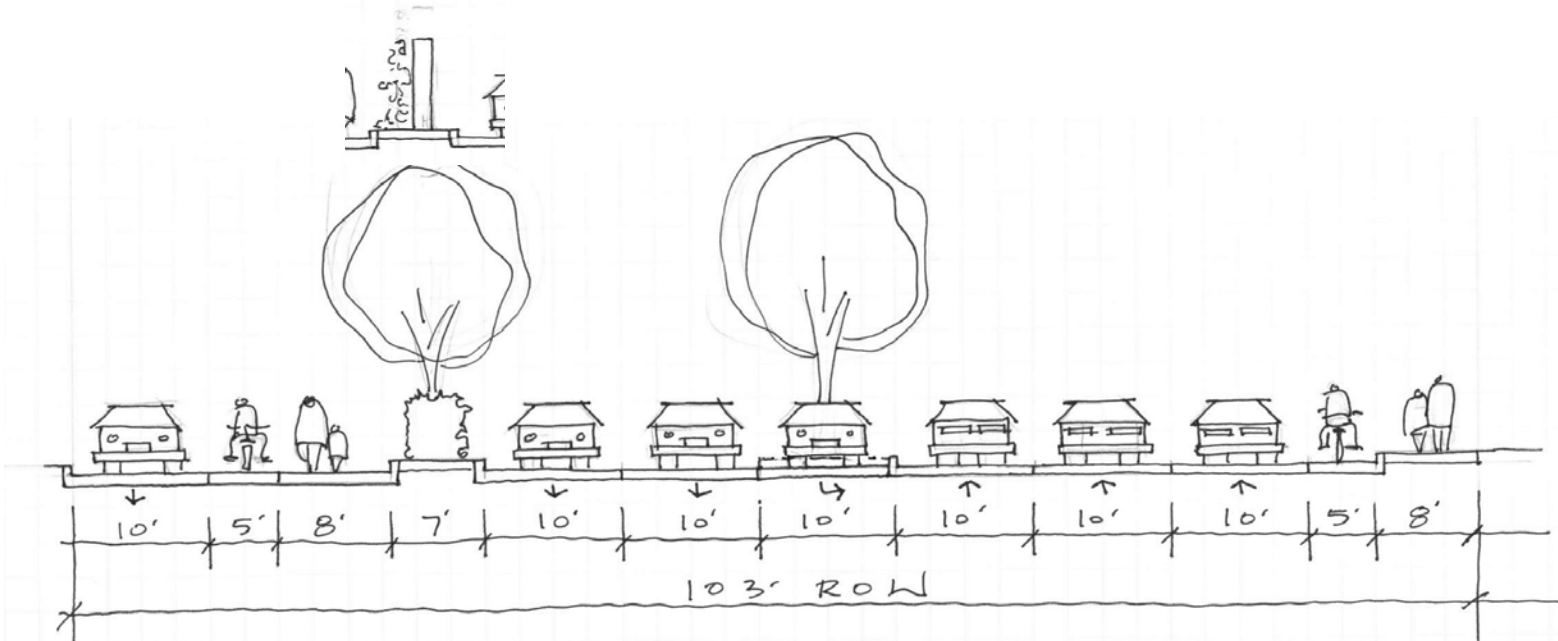
- Center landscape median where center turn lane not required

Constraints:

- No landscape strip on south side
- Potential bike/ped conflicts on north side

Need lane access to homes

Mixed-use path w/ median



Opportunities:

- Planted center median where center turn lane not required
- Landscape strip on north side can be Green Screen wall or tree and hedge planting

Constraints:

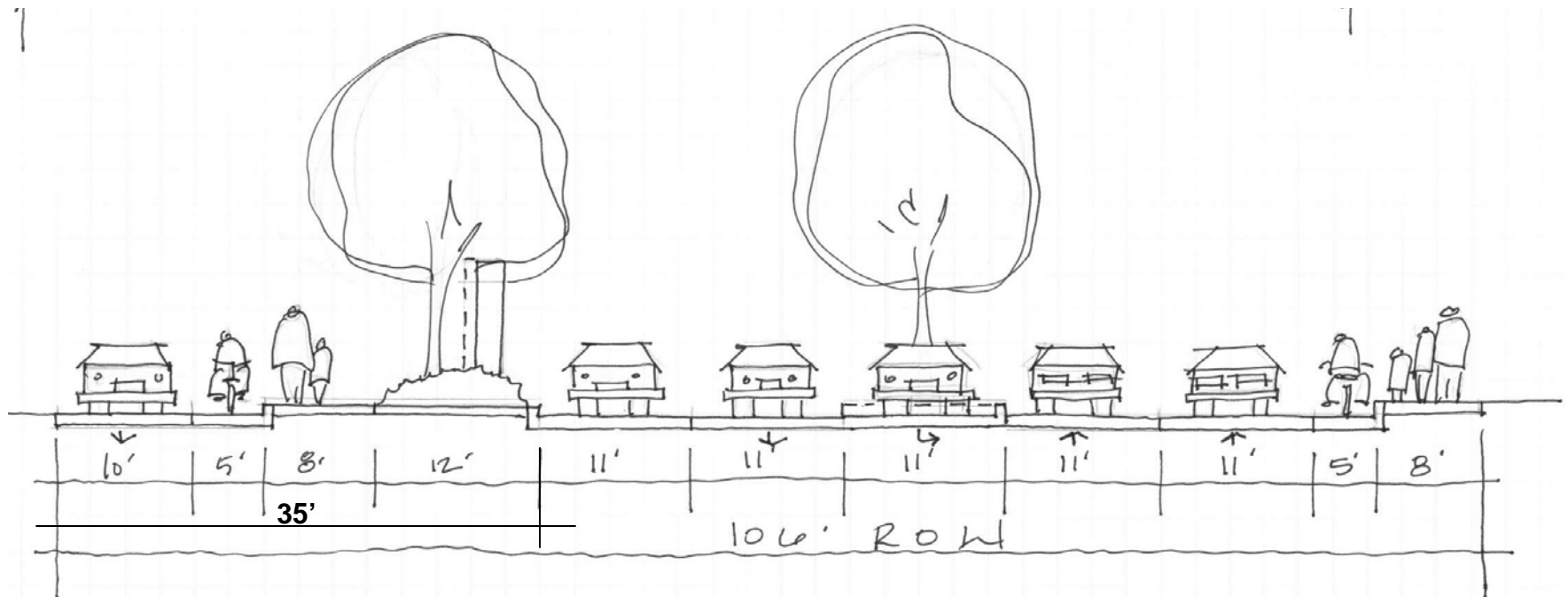
- Landscape strip on north side narrow
- If 10' lanes are too narrow; this option will not work.

Need 11' lanes – differentiation of path/road

2/2 Configuration Studies



2/2 – 2 Tree Rows w/ Wall



Opportunities:

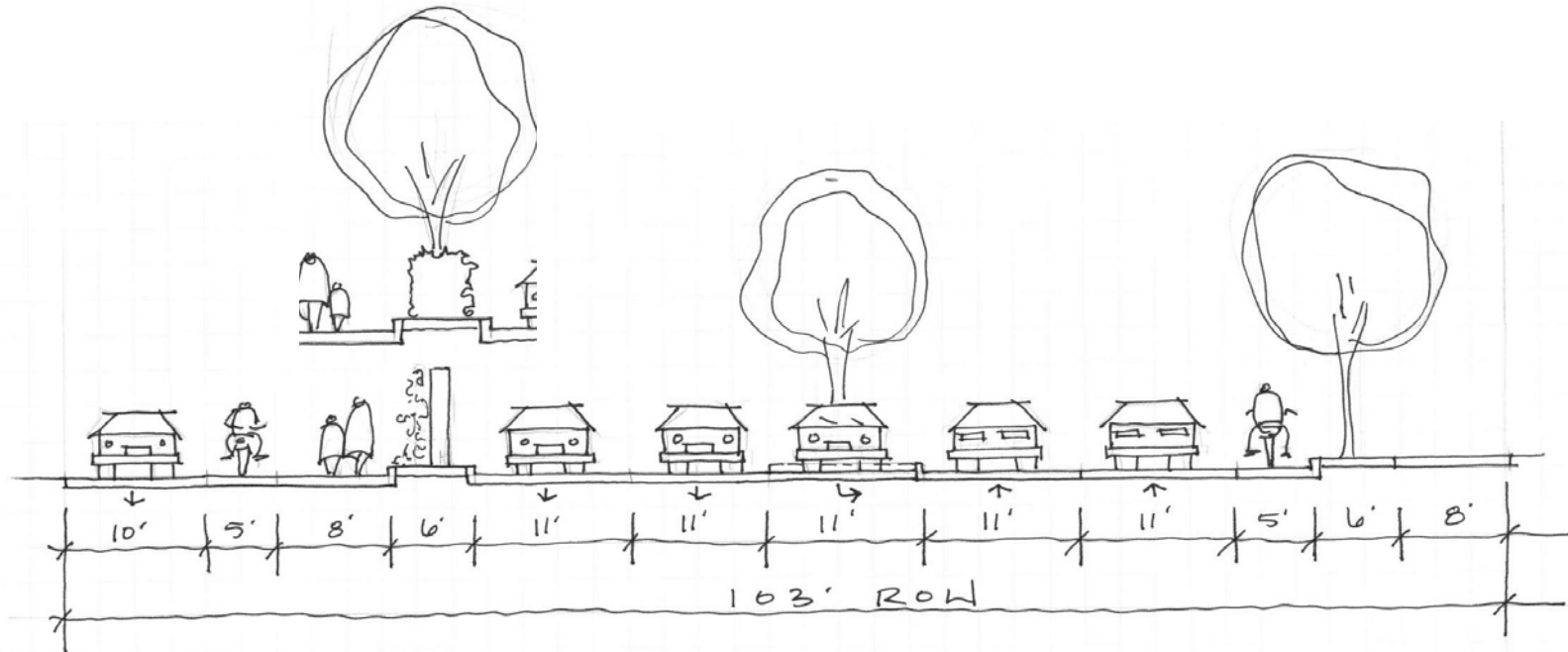
- Center planted median where no turn lane required.
- 12' landscape strip on north side

Constraints:

- No landscape strip on south side

Peds can't be seen behind wall

2/2 – 3 Rows of Trees



Opportunities:

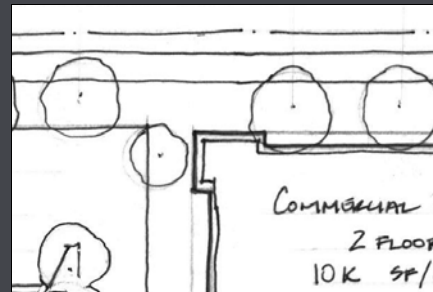
- Planted center median where center turn lane not required
- Landscape strip on south side (Aesthetic wall)
- Landscape strip on north side can be Green Screen wall or tree planting

Constraints:

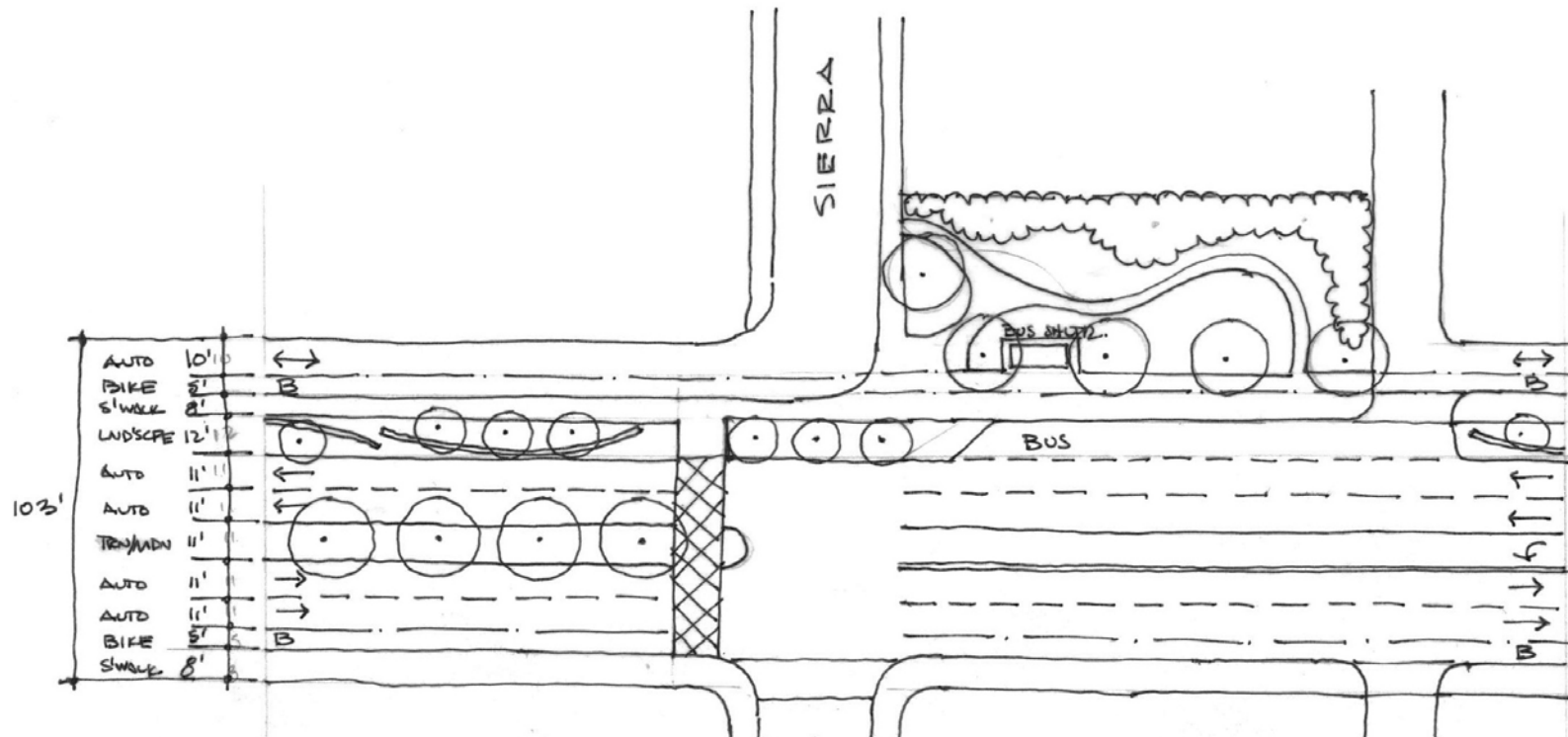
- Landscape strip on north side narrow

Peds can't be seen behind wall

Other Plans

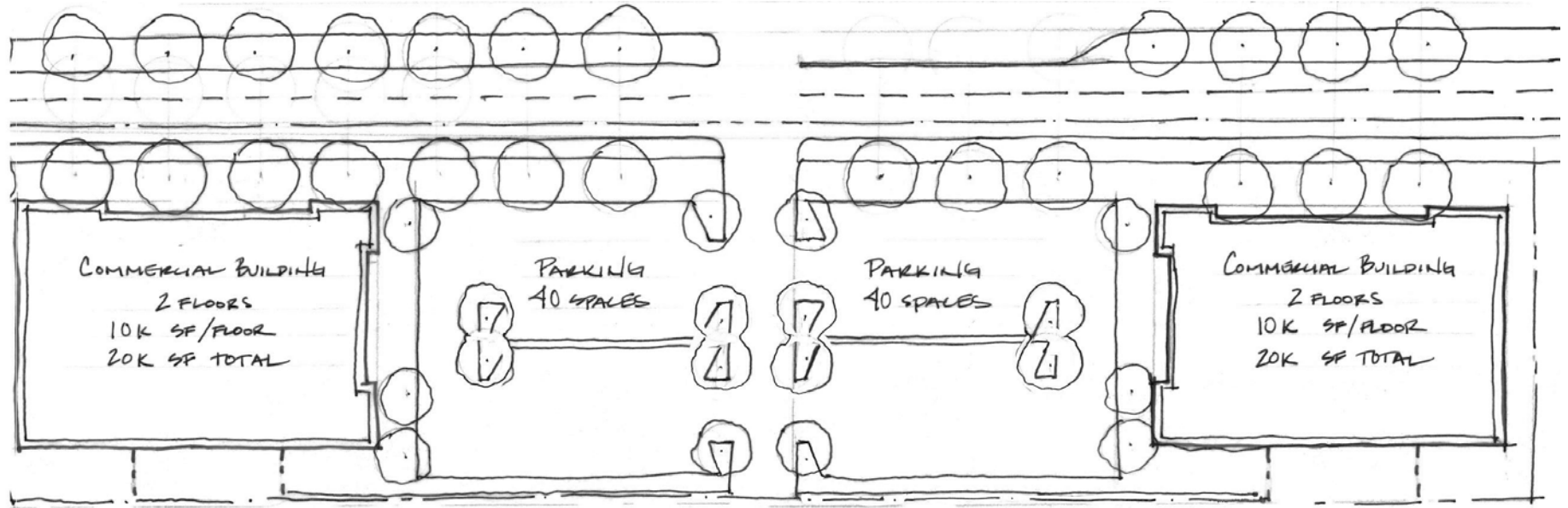


Sierra Crossing and Open Space



- Non-signalized pedestrian crosswalk with center refuge island.
- Neighborhood park with bus shelter.
- Bus pull-out lane.

Commercial Redevelopment



- 2, 2-story commercial buildings = 40k sf
- 2 parking spaces/1k sf shared lot w/ 1 access point off of Broadway Road
- Service access off of alley – Lot depth approx. 110'
- Mid-block location low visibility for retail
- Between Sierra Vista El Camino

Questions