

Broadway Boulevard has been called Tucson’s Main Street – recognition that it is a special place of business, community interaction and a destination people choose to visit. A Boulevard connotes a grand place that people frequent. It is also part of a transportation system that enables people to move among various sections of a city by car, bicycle, transit, or on foot. Much of Tucson’s history and character is associated with this boulevard.

Many municipalities are being called upon by their citizens to plan, build, and operate transportation systems that in addition to achieving the important goals of mobility and safety – support a variety of economic and community objectives. Stakeholders at the past two public meetings regarding the Broadway Boulevard Project have said they value Broadway – The Sunshine Mile – as a destination, a place, and part of the vital midtown of Tucson.

The Broadway Coalition advocates for the definition of functionality, which is echoed in the motion adopted by the lead agency, the City of Tucson. The Mayor and Council on September 19, 2012’s motion was:

“...and gave direction to the Broadway Boulevard Citizens Task Force to conduct their work under a definition of functionality that allowed for consideration of performance measures detailed in the EPA’s “Guide to Sustainable Transportation Performance Measures.””

Functionality n. Engineer talk for: what is the purpose of a road, and how to design it to meet that purpose.

How does a planner/civil engineer decide how big to build a road?

In the 1920s and 1930s a road classification system was devised to help professionals establish priorities and criteria for road building. The classification concept was applied in two ways; one functional and other administrative. The functional breakdown was related to

how the facilities were or would be used. The administrative concept was related to the authority responsible; federal, state, country or local.

Four categories of street were developed according to function:

1. Expressway; some degree of access control and should be reserved for multilane, divided roads. They serve large volumes of high-speed traffic and serve long trips.
2. Arterial: serves the major movements of traffic within or through the urban area; length of typical trip is more than one mile.
3. Collector; serves internal traffic movements within an area of the city and connects this area with the arterial system.
4. Local; sole function is to provide access to adjacent land. These streets make up a large percentage of total street mileage, but carry a small proportion of vehicle miles of travel.

Classification	Moving Lane Width	Parking Lane Width	Total Street Width	Design Speed
Major Arterial	4-6@12'	2@12'	92-116	50 mph
Arterial	4 @ 12'	2@10'	68'	40 mph
Collector	2@ 12'	2@ 8'	40'	35 mph
Local	2@ 10'		20'	30 mph

When does the transportation planner/civil engineer know it was time to change a road classification and enlarge it?

Road professionals made an assumption that people did not like waiting at stoplights and having to slow down due to roadway congestion. So, they developed a metric “*Level of Service*” or *LOS* that is a letter grade based on how long it takes to get through an intersection, as the major criterion.

LOS	Average delay in seconds per vehicle	Motorists' perception
A	< 10	Free flowing – good
B	10.1-20	Reasonable free flow
C	20.1-35	Stable, but unreasonable delay begins to occur
D	35.1-55	Borderland bad
E	55.1-80	Bad – long queues
F	>80	Unacceptable, long delay, congestion

“LOS analysis seems like a science, free from political and ideological consideration, the perfect traffic engineering tool to rationalize our cities, but the methodology behind it is far from precise,” writes Mathew Rich. When the US prioritized the expansion of roads everywhere, cities were seen as merely job centers to be driven to and from. LOS was the lubricant to facilitate the growth of suburban and exurban rings. While this may have been the idea behind the 1987 plan for Broadway, it is no long the case. Broadway from Country Club to Euclid is a series of historic buildings, shops, business that create a vital midtown living experience.

And why is it unacceptable for a person to sit in an air conditioned car for 35 seconds, about ½ a minute, but it is acceptable for a

pedestrian or a bicyclist to wait out in the hot sun for a minute? And then in addition, have to cross many feet of hot pavement? The traditional LOS is for cars only.

What about other forms of transportation like bicycles, buses and walking? How are they factored into road design?

The challenge is to incorporate environmental, economic, and social sustainability into transportation decision-making through the use of performance measures that value all modes of transportation, not just cars and trucks. EPA suggests 12 performance measures that can readily be applied in transportation decision-making.

1. **Transit accessibility;** measures ability of people to reach a destination using public transportation.
2. **Bicycle and pedestrian mode share;** measures the proportion of trips taken by bicycle and walking.
3. **Vehicle miles traveled per capita:** measure of amount of vehicle activity normalized by population.
4. **Carbon intensity;** measure the amount of CO₂ emitted from transportation per person
5. **Mixed land uses:** measures the proportion of residents living in locations with mixed land uses.
6. **Transportation affordability:** measures of cost of transportation relative to income
7. **Distribution of benefits by income group:** measures transportation plan benefits by income group so that one can evaluate that transportation plans do not disproportionately burden low income and minority communities and those groups receive a fair share of benefits of transportation system improvements.
8. **Land consumption:** measures the amount of land consumed by new transportation infrastructure and/or new development served by new transportation infrastructure.
9. **Bicycle and pedestrian activity and safety:** measures the level

of bicycle and pedestrian activity and safety in specific locations.

- 10. Bicycle and pedestrian level of service:** measures the quality of service from perspective of a bicyclist or pedestrian such as auto traffic volumes and perception of safety.
- 11. Average vehicle occupancy:** measures the average number of people in each vehicle.
- 12. Transit productivity:** average number of riders on transit vehicles.

Using a definition such as the 12 metrics above will serve as an important complement to the Context Sensitive Solutions (CSS) design approach being used by the Broadway Boulevard Design team. It recognizes the function of Broadway is to be a place, a destination, as well as a multimodal corridor connecting people between neighborhoods. No longer is the road a way simply for cars to move from Tucson's far east side to the downtown. It is part of the life of the community, a place, and a destination where we can all meet and interact.

This project is an opportunity for Tucson to be a leader in how to use new ideas, new understandings of how people move about, and preserve the historic and economic fabric of the community. We call on all involved to get creative and enhance the city we love.

You are welcome to join us

The Mission of the Broadway Coalition is to educate and organize citizens in Tucson to guide planners and implementers of the Pima County Regional Transportation Plan Project 17 (The Broadway Corridor) to improve Broadway Boulevard between Euclid and country Club within the existing right-of-way and thereby make the

roadways as efficient as possible without causing the demolition of historic structures and displacement of viable small businesses that contribute to the culture and commerce of the community. Widening the street would worsen air quality and increase noise in adjoining neighborhoods. It would tend to isolate the residents of adjoining neighborhoods from each other and discourage the common use of their streets, open spaces, recreational, commercial and educational facilities. Walking and bicycling across the widened street would be more hazardous especially for the young, elderly, and people with special needs. The Coalition urges citizens who value Tucson's urban core to protest the doubling of the width of Broadway between Euclid and Country Club.

Broadway Coalition

A New View of Functionality

**BROADWAY
COALITION**



*Broadway my way
not a highway!*

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