Transitway Corridor Feasibility Study

Corridor B (Duke Street) Recommendation by High Capacity Transit Corridor Work Group
Dated: March 15, 2012

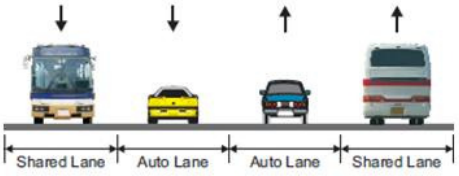
The following motion was passed by the High Capacity Transit Corridor Work Group at its March 15, 2012 meeting, regarding transit in Corridor B:

"The combination of Duke Street Alternatives 1a and 3c, are the preferred approach for phased implementation of a dedicated transitway in Corridor B. Alternative 1a would be the first phase of transitway implementation on Duke Street. It would create dedicated transit lanes in existing six-lane sections of Duke Street between Landmark Mall and Jordan Street and between Roth Street and Diagonal Road. In the remaining section of Duke Street between Jordan Street and Roth Street, transit would operate in mixed flow. A parallel off-corridor bicycle facility should be examined to accommodate bicyclists along Duke Street and improved pedestrian facilities would be provided at intersections and near transit stations. Preliminary implementation should prioritize enhanced pedestrian safety and improvements at Taylor Run Parkway.

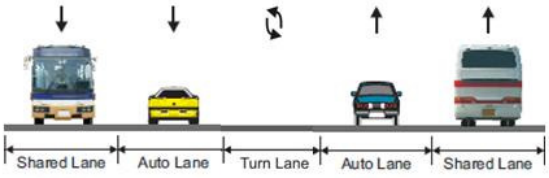
Alternative 3c would be the subsequent phase of transitway implementation on Duke Street. It would build on Alternative 1a by widening Duke Street to provide a reversible lane between Jordan Street and Roth Street. The reversible lane would be configured to allow Duke Street to accommodate a dedicated transit lane in the peak hour and peak direction of traffic flow during the a.m. and p.m. peak periods along Duke Street. Alternative 3c should continue to examine a bicycle facility along Duke Street along with corridor-wide pedestrian improvements. However, the Work Group believes that bicycles should be accommodated in this corridor if studies demonstrate that the streetscape can still be enhanced."

Alternative 1A

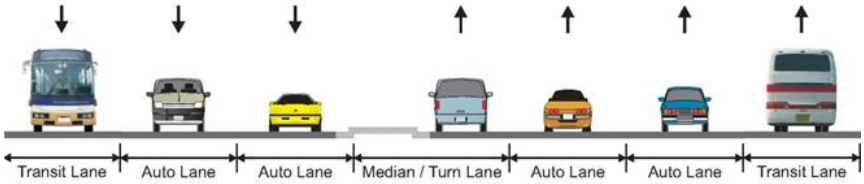
Gordon Street to Wheeler Avenue



S. Quaker Lane to Roth Street



Landmark Mall to Jordan Street,
Roth Street to Taylor Run Parkway, &
Callahan Drive to King Street Metro

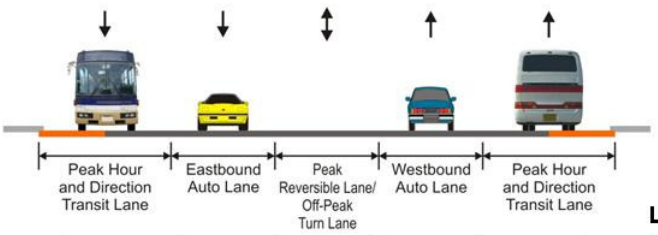


Description

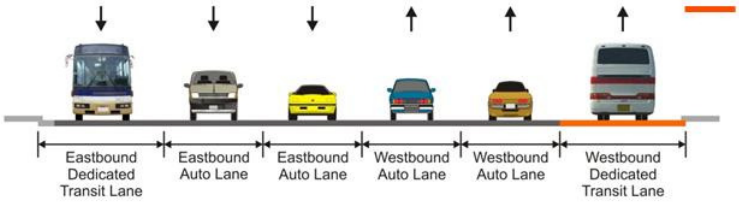
- Transit in mixed flow on existing 4-lane segments and in dedicated lanes on existing 6-lane segments. Curb lanes would also allow right-turns for general purpose traffic.
- Transitway uses queue jumps to avoid congestion and reduce disruption to Duke Street traffic.
- Adds a westbound lane between Jordan Street and Gordon Street, converting service road from two-way to one-way.
- Adds a westbound lane between Wheeler Ave and S. Quaker Lane.
- Realigns eastbound on-ramp at Telegraph Road and access to adjacent property
- Examines an off-Duke Street facility / route to accommodate bicyclists.

Alternative 3C

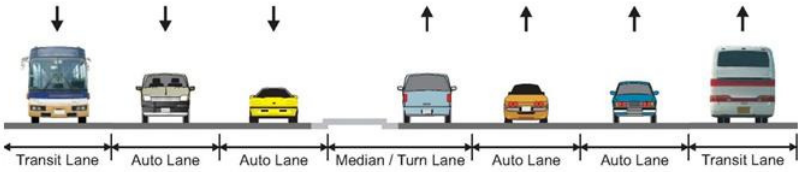
Jordan Street to Wheeler Avenue



S. Quaker Lane to Roth Street



Landmark Mall to Jordan Street, Wheeler Avenue to S. Quaker Lane & Roth Street to King Street Metro



Description

- Travelway identical to Alternative 1a between Landmark Mall and Jordan Street, Roth Street and Taylor Run Parkway, Callahan Drive and King Street Metrorail Station.
- Travelway widened to approximately 61 feet between Jordan Street and Wheeler Avenue (same width as existing section between Wheeler Avenue and Roth Street).
- Travelway widened to 72 feet between S. Quaker Lane and Roth Street (adds lane to accommodate heavy traffic flow from Quaker Lane to Telegraph Road).
- No left-turn lane during peak periods between Jordan Street and Wheeler Avenue.
- Off-Duke (parallel) bicycle facility, and examines a Duke Street bicycle facility (such as bike lanes, cycle track or multi-use path).

Alternative 3C – Costs and Characteristics

Planning-Level Cost Estimate

- Capital: $39 million
- Fleet (25-year): $16 million
- ROW: $4 million
- Operating (25-year): $60 million

Physical Characteristics

- Low-floor BRT vehicles
- Dedicated (curbside) lanes
- Off-board fare collection
- Service specific branding and identity
- Substantial transit stations

Operational Characteristics

- Transit signal priority at intersections
- Real-time service information
- 7.5-minute peak period headways
- 15-minute off-peak headways
- 18 hours of service (Monday through Saturday)
- 12 hours of service on Sunday
- Peak period travel time of 19 minutes (one-way from Landmark Mall to King Street Metrorail Station)
- 2035 Weekday Ridership estimate of 9,000 to 13,000 riders per day

Cost Estimate Note: Planning level cost estimates are shown in year 2012 dollars and do not include additional contingency or escalation to a future year mid-point of construction. Totals listed do not include costs for major utility relocations/new service, or the capital costs for roadway/streetscape improvements that may be implemented concurrently, but are not required for the transit project.