

Fresno Public Transit Infrastructure Study Candidate Case Study City Evaluation Matrix

Candidate City	Regional Transit Network	Regional Needs Served by Transit System	Supporting Infrastructure	Supportive Land Use Programs	Economic Development Strategies	Connectivity Programs	Recommendation																				
United States																											
Fresno, CA <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>922,516</td> <td>5,963</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>554,923</td> <td>139</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>347,787</td> <td>6.24</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>13.0</td> <td>11,300,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>12</td> </tr> </table>	Regional Pop	Total Area (sq mi)	922,516	5,963	Pop in Urban Areas	Urban Area (sq mi)	554,923	139	Employment	Pop/Acre (Urban)	347,787	6.24	Unemployment (%)	Annual Psgr Trips	13.0	11,300,000		Annual Trips per capita		12	Combination of Fresno city (18 lines), Clovis city (5 lines), and Rural Transportation Agency (18 subsystems with a mix of fixed-route and demand-responsive services)	Access to local schools, colleges, medical centers, community centers, senior centers, shopping, intercity stations (Amtrak and Greyhound), airport, regional travel (rural towns to downtown Fresno for essential services), downtown Fresno stadium, intercommunity travel between towns.	Fresno - two transit centers	No			
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Denver, CO <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>2,109,282</td> <td>4,503</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>1,984,889</td> <td>499</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>1,239,382</td> <td>6.22</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>5.6</td> <td>78,600,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>37</td> </tr> </table>	Regional Pop	Total Area (sq mi)	2,109,282	4,503	Pop in Urban Areas	Urban Area (sq mi)	1,984,889	499	Employment	Pop/Acre (Urban)	1,239,382	6.22	Unemployment (%)	Annual Psgr Trips	5.6	78,600,000		Annual Trips per capita		37	2 light rail lines (16 miles-24 stations), 20 regional bus and 38 express bus routes, connecting downtown Denver with outlying cities, the Denver Tech Center, and airport. 66 Park-and-Ride lots. In downtown, free shuttle connects two bus stations with light rail/heavy rail station.	Transit vehicle congestion affected transit operations and downtown traffic patterns. RTD constructed two bus centers connected by a pedestrian/transit mall served by a free shuttle. Bus routes truncated at either end of downtown at the stations eliminated over 678 bus movements.	Two bus stations, one with nine bus bays and the other with twelve, accommodate 40' - 60' buses along with passenger waiting areas. Garage structure with other uses above. Approximately 1.2 miles of a downtown street was closed to create pedestrian/transit mall. Light rail has dedicated right of way. Two reversible HOV lanes ease access for buses and vehicles to downtown.	Substantial downtown redevelopment focused on economic development, parks, and pedestrian mall. The region is now developing a transit oriented development program to focus development along the light rail lines. This will allow for easy connections from one center of development to the next.	Downtown redevelopment activities are focused on the 16th Street mall. Mall pedestrian amenities attracted pedestrians; retailing, hospitality, and downtown living increased; real estate investment increased.	Denver RTD coordinates all service throughout 7-county region.	
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Minneapolis, MN <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>2,968,806</td> <td>5,051</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>2,388,593</td> <td>894</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>1,773,739</td> <td>4.18</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>4.4</td> <td>67,200,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>23</td> </tr> </table>	Regional Pop	Total Area (sq mi)	2,968,806	5,051	Pop in Urban Areas	Urban Area (sq mi)	2,388,593	894	Employment	Pop/Acre (Urban)	1,773,739	4.18	Unemployment (%)	Annual Psgr Trips	4.4	67,200,000		Annual Trips per capita		23	1 light rail line (12 miles-17 stations) and 47 express bus routes. More than 140 Park and Ride lots. Downtown reduced-fare transit zone. Transit and pedestrian mall. Ring of 4 bus transfer centers around edge of downtown in addition to 4 light rail stations in downtown. High frequency grid bus service throughout downtown.	Downtown transit mall and bus circulation. Light rail connects downtown to university, airport, and regional shopping mall. Downtown Minneapolis has federal and county government offices and services, regional sports complex, colleges. Downtown St. Paul has state offices and services. Regional services connect the two cities.	Dedicated street for transit operations, passenger facilities, pedestrian streetscape.	Transit oriented development program to encourage infill development and TOD along the light rail corridor. Regional grant program for transit oriented development Revenue sharing among local jurisdictions	Yes. Redevelopment plan along the transit mall.		
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Pittsburgh, PA <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>2,358,695</td> <td>3,400</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>1,753,136</td> <td>852</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>1,163,151</td> <td>3.22</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>5.6</td> <td>68,200,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>29</td> </tr> </table>	Regional Pop	Total Area (sq mi)	2,358,695	3,400	Pop in Urban Areas	Urban Area (sq mi)	1,753,136	852	Employment	Pop/Acre (Urban)	1,163,151	3.22	Unemployment (%)	Annual Psgr Trips	5.6	68,200,000		Annual Trips per capita		29	3 dedicated busways (total 18.4 miles-24 stations), stations have park-and-ride spaces, express and local routes share busways; 4 light rail lines (25 miles-approx 18 stations); including 5 downtown stations (free rides within downtown); 7 express routes travel on 4.1-mile reversible HOV roadway; 46 express routes total.	Commute to downtown; region is geographically constrained by rivers and mountains which affects the number of bridges and highways. Express routes connect bus stations and park-and-ride lots. Baseball stadium and new convention near downtown.	Dedicated ROW for LRT and buses. South busway has shared BRT/LRT tunnel. HOV lanes in freeway medians. LRT stations downtown include mix of aboveground and underground station. Current projects include: conversion of abandoned railroad tunnel to HOV-only facility with park-and-ride lot to increase access to downtown; extension of LRT through downtown to North Shore and another extension separately to new convention center.	The 2030 Transportation and Development Plan focuses on: efficiency of the transportation system, infill development, and effective use of growth corridors. The Plan identifies existing corridors in the region that connect population centers. The Plan lists the transportation projects—the vast majority of which are planned in corridors with existing population centers and established transportation networks.	The 2030 Transportation and Development Plan identifies economic development projects, the vast majority of which are planned in and around corridors with existing population centers and transportation networks.	Linear park constructed along busway to enhance bike and ped access between neighborhoods.	
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<p>Sacramento, CA</p> <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>1,628,197</td> <td>5,094</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>1,393,498</td> <td>369</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>929,411</td> <td>5.90</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>5.3</td> <td>28,900,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>18</td> </tr> </table>	Regional Pop	Total Area (sq mi)	1,628,197	5,094	Pop in Urban Areas	Urban Area (sq mi)	1,393,498	369	Employment	Pop/Acre (Urban)	929,411	5.90	Unemployment (%)	Annual Psgr Trips	5.3	28,900,000		Annual Trips per capita		18	<p>1 light rail line (30 miles-42 stations), 8 regional bus lines to Yolo County, additional private regional lines to El Dorado and Placer Counties. 14 Park and Ride lots at outlying light rail stations. Regional train station downtown. Dedicated downtown transit mall. Light rail extensions planned along major corridors to connect to airport, regional entertainment center, regional employment centers, downtown train station, and increase downtown circulation.</p>	<p>Commute from outlying suburbs and communities to downtown for employment, government services (city, county, state). Downtown circulation to inner residential neighborhoods, university.</p>	<p>Dedicated street for downtown transit mall. Dedicated right of way, stations for light rail; system extensions recently completed or underway. HOV network on major highways leading to downtown. Remodeled and expanded train station downtown to become Sacramento Intermodal Transportation Facility, with access to local bus, light rail, commuter bus, commuter rail, national rail networks.</p>	<p>The Sacramento Blueprint Project sets a series of growth objectives which frame regional planning and may inform the policies of the transportation investment plan (to be discussed in 2005). Emphasized are community-based planning and creation of livable communities, which feature increased transportation choice, compact development, mix of uses, and diversity of housing choices.</p> <p>SACOG also offers grant funds to projects supporting walking, bicycling, TDM and air quality. The program results from the recognition that land use influences travel behavior and can be a powerful tool to improve the efficiency and effectiveness of the regional transportation system. Through 2025, this fund program will be \$1 billion. \$20</p>		<p>SACOG TLC discretionary grant program supports transportation improvement projects that enhance connections between development projects and transit hubs.</p>	
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Salt Lake City, UT Regional Pop 1,333,914 Pop in Urban Areas 887,650 Employment 518,849 Unemployment (%) 5.4 Total Area (sq mi) 1,618 Urban Area (sq mi) 231 Pop/Acre (Urban) 6.01 Annual Psgr Trips 31,700,000 Annual Trips per capita 24	2 light rail lines (17 miles-23 stations), one originates in downtown and serves major regional travel corridor, other connects downtown with university and medical center. Both routes provide downtown circulation. 43 Park and Ride lots; 12 at light rail stations. Regional bus service to outlying and rural communities in neighboring counties. Downtown free fare zone includes 5 light rail stations. Summer downtown circulator shuttle. Winter bus service to ski resorts. Demand-responsive service provided by each county.	Commute from outlying communities to downtown. Light rail and bus network downtown provides access to office buildings, government services, convention center, university, airport, library, etc.	Dedicated right of way for light rail. Planning underway for BRT and commuter rail. Fare free zone in downtown Salt Lake City. Downtown intermodal center under construction to accommodate light rail extension, heavy rail, intercity bus, and new commuter rail service. Downtown free shuttle under consideration to increase transit usage to state government buildings in north part of downtown.			Utah Transit Authority operates all transit across 6 county area. Bus connections at all light rail stations. 47 routes operate in downtown and connect to 5 downtown light rail stations.	
Saint Louis, MO Regional Pop 2,603,607 Pop in Urban Areas 2,077,662 Employment 1,364,091 Unemployment (%) 6.2 Total Area (sq mi) 5,331 Urban Area (sq mi) 829 Pop/Acre (Urban) 3.92 Annual Psgr Trips 46,000,000 Annual Trips per capita 18	1 light rail line (38 miles-28 stations) serving two corridors, 21 express bus routes.	MetroLink light rail connects suburbs, airport, Air Force base, and major downtown activity centers, including tourist and recreational destinations. MetroLink circulates through downtown (5 stations).	Dedicated right of way for light rail. Park-and-Ride lots at many MetroLink stations and some MetroBus centers.	n/a	n/a	Metro coordinates all transit services in the Saint Louis metro region, crossing city, county, and state (MO-IL) boundaries.	
San Diego, CA Regional Pop 2,813,833 Pop in Urban Areas 2,674,436 Employment 1,445,193 Unemployment (%) 3.9 Total Area (sq mi) 4,205 Urban Area (sq mi) 782 Pop/Acre (Urban) 5.35 Annual Psgr Trips 87,300,000 Annual Trips per capita 31	1 commuter rail line, 19 express bus routes, 2 light rail lines (47 miles-49 stations), downtown loops. MTDB, now SANDAG, is an umbrella organization with several service contracts to local operators.	Downtown circulation; travel to downtown for employment, recreation, and retail district; regional tourism. Commuters to downtown come from Mexico border towns via Trolley.	San Diego is famous for developing a light rail system that was delivered early and under budget. Transit First policy focuses on network of regional transit activity centers, greater use of HOV/HOT lanes, signal priority. BRT allows SANDAG to expand high speed, high quality transit service without capital investments of rail.	To integrate transit and land use planning, the San Diego Association of Governments (land use) was merged with the MTDB (transit operations). These two agencies now form a larger umbrella organization overseeing county wide land use and transportation planning. Under Transit First, funding priority is given to transportation projects that support smart growth. SANDAG is beginning to plan for a region of transit villages linked by BRT and light rail.	n/a	Individual transit operators are all coordinated by the Metropolitan Transportation System. Transit village program	

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Adelaide, Australia <table border="1"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>1,072,585</td> <td>705</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Total)</td> </tr> <tr> <td>466,829</td> <td>2.38</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>7.9</td> <td>35,200,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>33</td> </tr> </table>	Regional Pop	Total Area (sq mi)	1,072,585	705	Pop in Urban Areas	Urban Area (sq mi)			Employment	Pop/Acre (Total)	466,829	2.38	Unemployment (%)	Annual Psgr Trips	7.9	35,200,000		Annual Trips per capita		33	The city of Adelaide has no freeways although it has a 12.5 mi reversible-flow expressway in the outer southern suburbs. The public transport system includes 75 mi of train line, 7.1 mi of tram line and a 7.5 mi guided busway (O-Bahn).	Train lines generally run to the north and south of the city. There are only 6 train lines and a radial tram line from the city to the western suburb of Glenelg. This tram line is the remnant of the former extensive tramway system in Adelaide. The northeast O-Bahn in Adelaide is the largest full-scale operational guided busway in the world and has proven to be a huge success in terms of increasing patronage. The O-Bahn has also sustained this patronage while patronage on the remaining bus, tram and train network has declined.	18 trams (9 new ones on order), over 7000 bus stops and 214 natural gas buses, 85 stations including 17 Park n Ride facilities	Pursuing urban regeneration and providing affordable quality residential areas with good access to services and facilities. Looking at new design approaches to the built form to improve energy efficiency of transport and livability of suburbs. Trying to promote public transport by: <ul style="list-style-type: none"> - more compact communities, - encouraging multiple land use centers, - combining housing and employment, - priority for public transit, - increase opportunities for non car-based transport. 	Government has a number of strategic planning projects to give clear directions for spatial development in the State's metropolitan and regional areas, integrate social, economic and environment policies and to guide private sector development through local Development Plans.	Adelaide's public transport has an integrated ticketing system with most tickets allowing transfers between services on all modes.	
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Fresno Public Transit Infrastructure Study Candidate Case Study City Evaluation Matrix

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<p>Auckland, New Zealand</p> <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>1,158,891</td> <td>212</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Total)</td> </tr> <tr> <td>833,853</td> <td>8.54</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>7.8</td> <td>44,100,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>38</td> </tr> </table>	Regional Pop	Total Area (sq mi)	1,158,891	212	Pop in Urban Areas	Urban Area (sq mi)			Employment	Pop/Acre (Total)	833,853	8.54	Unemployment (%)	Annual Psgr Trips	7.8	44,100,000		Annual Trips per capita		38	<p>3 suburban rail corridors servicing southern and western suburbs – no rail link to northern suburbs or airport. Total of 92km of track with longest line extending 47km from downtown. Regional train connection to south (Wellington, Christchurch). Suburban and regional bus services Busway (also known as busway rapid transit - BRT) due for completion in 2006 to service northern suburbs comprising 5.3mile length, 5 rapid transit stations, high frequency services and park and ride facilities. Exclusive bus lanes in downtown Nightrider bus service (1am to 3am Friday and Saturday nights) 3 ferry services operating from Quay Street in the downtown (near Britomart) and connects to northern suburbs</p>	<p>Northern suburbs not currently well served by prioritized public transport route. Travel to northern suburbs is via only one Harbor crossing (bridge). Much of the current rail patronage is for non-CBD trips, with rail services providing a means of travel to regional sub-centers such as Newmarket, New Lynn, Henderson and Otahuhu. The opening of Britomart has resulted in greater proportion of rail travel to the CBD (30% increase in rail patronage across the Auckland region)</p>	<p>Newly opened 'Britomart' interchange. The rail line was recently extended to better service downtown and integrate with bus and ferry services. Bus priority. Regional bus terminus. Central transit corridor. 40 rail stations with some 600 park and ride parking spaces. Fleet of 19 Diesel Multiple Unit train cars. Major overhaul of public transport is proposed to reach new mode share targets and overcome congestion issues:</p> <ul style="list-style-type: none"> • Establishing exclusive corridors or rights of way for Rapid Transit services • Electrifying and double tracking one corridor, electrifying 2 corridors • construction of a fourth rail line • upgrade of signaling on all lines. • Station refurbishments • Rail line extensions • Upgraded bus fleets 	<p>Regional Growth Strategy, which identifies the best means of accommodating Auckland's growth over the next 50 years. Strategy aims to minimize the effects of growth on the environment by developing more compact land use patterns and intensification of land use along the transport corridors by providing more housing choices, with better public transport, cycling and walking accessibility. Growth is to be focused at Strategic Growth Management Areas (SGMA -on heavy rail lines). Infill development along rail lines to precede expansion. Revitalization of downtown - 'Auckland's CBD into the future' significant increase in population and employment.</p>	<p>Rezoning of land in downtown to increase residential growth. Incorporating new land use zone in priority SGMAs to encourage higher density development. A world-class, multi-functional indoor arena that seats up to 12,000 people is being built at Quay Park in downtown Auckland adjacent to the Britomart. A tax/rate was introduced recently for downtown property owners to assist in the funding of development projects in Auckland's central business district.</p>	<p>ARTNL, Auckland Regional Transport Network Ltd, was formed by six of the Auckland region's councils, to own, lease, develop and manage passenger transport infrastructure within the region.</p>	
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<p>Calgary, Canada</p> <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>951,395</td> <td>1,963</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>911,046</td> <td>286</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>564,045</td> <td>4.98</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>4.9</td> <td>70,100,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>74</td> </tr> </table>	Regional Pop	Total Area (sq mi)	951,395	1,963	Pop in Urban Areas	Urban Area (sq mi)	911,046	286	Employment	Pop/Acre (Urban)	564,045	4.98	Unemployment (%)	Annual Psgr Trips	4.9	70,100,000		Annual Trips per capita		74	<p>Busway, bus only lanes, 5 light rail lines (18 miles), Park and Ride lots, and transit priority measures. Express bus service to employment areas.</p>	<p>Provides circulation downtown with an elevated busway. Innovative school transit/field supervision program. Transit serves commuters and local communities.</p>	<p>Busway, bus only lanes, passenger islands. Major high frequency transit corridors. Highways and transit systems planned to complement each other. Service decisions based on potential ridership benefits per unit of service cost. Paratransit vehicles obtained through ongoing private donations.</p>	<p>Exemplary transportation planning model with significant public input. Full-service single government structure.</p>	<p>n/a</p>	<p>All operations coordinated by single agency.</p>	
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Fresno Public Transit Infrastructure Study Candidate Case Study City Evaluation Matrix

Candidate City	Regional Transit Network	Regional Needs Served by Transit System	Supporting Infrastructure	Supportive Land Use Programs	Economic Development Strategies	Connectivity Programs	Recommendation
Copenhagen, Denmark Regional Pop 1,819,381 Total Area (sq mi) 1,105 Pop in Urban Areas (sq mi) Employment Pop/Acre (Total) 2.57 Unemployment (%) Annual Psgr Trips 350,000,000 Annual Trips per capita 192	Light rail, bus and pedestrianization scheme.	Concentrate growth around rail network.	Street closure for pedestrian and transit access along with bus station to serve regional trip.	Urbanization policies targeting growth to within 1 kilometer of a rail station.	Not explicitly		
Ottawa, Canada Regional Pop 1,063,664 Total Area (sq mi) 2,053 Pop in Urban Areas (sq mi) 990,969 Employment Pop/Acre (Urban) 1.31 Unemployment (%) 5.6 Annual Psgr Trips 74,700,000 Annual Trips per capita 70	Busway	75% of downtown trips are on transit served by Ottawa's busway system. Busway serves commuters, with many commute - only lines. Service, like Calgary, based on potential ridership benefits versus cost. Innovative night safety program. Transecure is a night time program where a couple of things happen - bus drivers are allowed to stop at locations that are closer to a rider's destination in addition to regular stops, and there are also bicycle night patrols that ride from stop to stop, making sure that people walking from the bus stop to their destination are safe.	Dedicated right-of-way allows for a one stop ride with no transfer to nearly all regional employment centers. Buses can enter and leave busway to pick up and drop off passengers.	Strong regional focus. Development centered around Transitway bus stations; TOD and high bus frequencies allow people using Transitway to access personal services and shopping.	No	All operations coordinated by single agency. Transecure transit neighborhood watch program increases night safety by giving buses the ability to stop at non-standard locations, closer to riders' destinations	

Fresno Public Transit Infrastructure Study Candidate Case Study City Evaluation Matrix

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<p>Perth, Australia</p> <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>1,339,993</td> <td>2,080</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Total)</td> </tr> <tr> <td>606,401</td> <td>1.01</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>7.7</td> <td>55,500,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>41</td> </tr> </table>	Regional Pop	Total Area (sq mi)	1,339,993	2,080	Pop in Urban Areas	Urban Area (sq mi)			Employment	Pop/Acre (Total)	606,401	1.01	Unemployment (%)	Annual Psgr Trips	7.7	55,500,000		Annual Trips per capita		41	<p>There are four electrified rail lines - some of which operate along the median of motorways with grade separated bus interchanges. This all comes after the metropolitan passenger rail network was completely closed between 1979 and 1983. It was then re-opened and later in 1991 electrified resulting in a huge increase in public transport usage. The bus system continues to be the predominant public transport mode in Perth and is able to fill the gaps in the rail network.</p>	<p>Rail lines are linked by a network of buses, which do not compete with the rail system - they complement it instead. Many train stations, like Warick, Kelmscott, Stirling, Midland and Fremantle, have major bus connections. This allows for an integrated public transport system that is more efficient and covers a greater area. The Fremantle CAT service commenced operation in August 2000 and operates daily, connecting parking lots on the periphery of the city center, the railway station and other major destinations. Its primary objectives are to improve public transport access to and circulation within the city center and to minimize city center parking demand and vehicle circulation. Three buses operate on a ten minute frequency and the service is free to all users.</p>	<p>2 bus terminals, 4 main electrified train lines (electrified in 1991), 95 km of electrified bi-directional track, tourist tram service, ferry services, and a free bus service called CATS (central area transit service, that services the free transit zone in the central business district). Plans to improve the network include:</p> <ul style="list-style-type: none"> • Establishing a new bus rapid transit route between Morley, Perth City, South Street and Murdoch, and from Fremantle to Rockingham. • Reserving land for future rapid transit extensions to Alkimos, Ellenbrook, Mundijong, Rockingham and Mandurah, via Beeliar. • Progressively developing secondary links with appropriate bus priorities to regional centres, such as Booragoon, Mirrabooka and Karrinyup. 	<p>Land use strategies to increase population densities in areas surrounding train stations. An example of this is Subiaco, an inner suburb of Perth. The new southern railway line through Atwell and Leda and the extension of the northern line to Butler and Brighton has allowed these places to be planned as rail-based urban villages. An electrified rail line extension is planned to Mandurah (a coastal area some 74km south of Perth) to cater for the rapid population growth being experienced (7.8% compared to 1.2% nationally) - expected to more than double annual no. trips made by rail in Perth.</p>	<p>The CAT service is jointly funded by the state government and the City of Fremantle.</p>	<p>Transperth manages Perth's public transport system which is fully integrated across all bus, train and ferry services. This means that all modes represent and carry the Transperth brand, and accept the same ticket irrespective of the service used.</p>	
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<p>Vancouver, Canada</p> <table border="0"> <tr> <td>Regional Pop</td> <td>Total Area (sq mi)</td> </tr> <tr> <td>1,986,965</td> <td>1,111</td> </tr> <tr> <td>Pop in Urban Areas</td> <td>Urban Area (sq mi)</td> </tr> <tr> <td>1,801,291</td> <td>502</td> </tr> <tr> <td>Employment</td> <td>Pop/Acre (Urban)</td> </tr> <tr> <td>1,049,910</td> <td>5.61</td> </tr> <tr> <td>Unemployment (%)</td> <td>Annual Psgr Trips</td> </tr> <tr> <td>7.2</td> <td>118,000,000</td> </tr> <tr> <td></td> <td>Annual Trips per capita</td> </tr> <tr> <td></td> <td>59</td> </tr> </table>	Regional Pop	Total Area (sq mi)	1,986,965	1,111	Pop in Urban Areas	Urban Area (sq mi)	1,801,291	502	Employment	Pop/Acre (Urban)	1,049,910	5.61	Unemployment (%)	Annual Psgr Trips	7.2	118,000,000		Annual Trips per capita		59	<p>Downtown loop, 2 light rail lines (17 miles), 3 Bus Rapid Transit routes; serving major growth corridors; commuter rail.</p>	<p>Access to downtown and distribution. Commuter rail serves downtown workers, whereas SkyTrain provides local, non-work trips in addition to commuting trips. B-Line and SkyTrain developed to serve major corridors, connecting downtown to other growth centers as well as providing major crosstown routes.</p>	<p>SkyTrain is an elevated rail system. The B-Line is a bus rapid transit application on local streets that connects to the SkyTrain automated metro rail system and SeaBus ferry. The B-Line and SkyTrain serve major corridors linking downtown Vancouver to the airport, university, and outlying communities (including via West Coast Express, a commuter rail line). The B-Line and SkyTrain loop through the downtown environment.</p>	<p>Regional growth management plan, the Livable Region Strategic Plan (1999), concentrates 70% of future growth within metropolitan area. Designates regional network of growth centers. Mandates transportation infrastructure funding to support growth management goals. Vancouver has a Downtown Transportation Plan (2002).</p>	<p>Coordinated with LRSP, which calls for investment in network of town centers; equitable distribution of jobs in local communities; and investing in transportation.</p>	<p>New "transit village" study looking at ways to improve access to SkyTrain stations. Regional pedestrian, bicycle and greenways project ensures connectivity from local community to the transit system.</p>	
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Zurich, Switzerland Regional Pop Total Area (sq mi) 1,200,000 664 Pop in Urban Areas Urban Area (sq mi) Employment Pop/Acre (Total) 2.82 Unemployment (%) Annual Psgr Trips 269,000,000 Annual Trips per capita 224	Area wide transit prioritization strategy and street enhancement program.	Improve speed and reliability throughout city. Improve coverage in central city area.	Extensive transit preferential street program including signals, bus lanes, integrated walking and bicycling network, and street design standards	n/a	n/a	System developed as a distributed grid to serve as many residents as possible geographically, as opposed to concentrating investment at a few rail stations with limited catchment areas. With expanded and more reliable bus service, over 70% of the city is covered.	

US Population data based on 2000 census: <http://www.census.gov/population/cen2000/phc-t3/tab01.pdf>
 US metro size area data based on 1990 census data: http://www.census.gov/population/censusdata/90den_ma.txt
 US Employment from Bureau of Labor Statistics, 2004 annual average
 Australian population, employment, and metro size area from 2001 census
 Canadian population, employment, metro size area based on 2001 Community Profiles
 New Zealand population, employment, and metro size area from 2001 census
 US annual passenger trips from NTD 2003 Agency Profiles
 San Diego passenger trips include Trolley, MTS bus, and NCTD
 Seattle passenger trips include King County Metro, Sound Transit, Seattle Monorail, exclude Ferries (24.5 M)
 Phoenix passenger trips based on multi-agency regional total
 US Population and metro size area UZA: http://www.census.gov/geo/www/ua/ua_natl_100302.txt