ATLAS OF POTENTIAL METRO RAIL RIDERSHIP



LOS ANGELES COUNTY

PREFACE

Los Angeles County is internationally known as an automobile-oriented region. Like many metropolitan areas, the county is coping with increasing street and highway traffic. Transit, and particularly rail, is often regarded as a strategy to help reduce urban traffic congestion, especially in these times of economic downturn, rising gas prices, pollution, and growing awareness of global climate change.

It was estimated that 100,000 riders access the Metro Rail system by walking, based on the 2006 Los Angeles County Metropolitan Transportation Authority (LACMTA) On-Board Survey. The objectives of this project are to identify the potential ridership and current utilization by those who walk to the Metro Rail system in Los Angeles County using the process of "Trip Generation," a travel demand forecasting model, and to present the results of the Trip Generation analysis in the *Atlas of Potential Metro Rail Ridership* to support visual planning about public transit.

The potential ridership produced and attracted to each station was estimated using Origin-Destination (O-D) flow patterns from residential and employment regions. Estimation of the number of potential riders accessing the Metro Rail system by walking involves a spatial analysis of the location of current Metro Rail stations serving populations in a reasonable access time. Service Area Zones (SAZ) then were delineated and mapped to indicate the areas that the potential riders could be served by existing stations within a ten minute walking interval. This potential ridership by walking to a Metro Rail Station was measured to be approximately one million, a figure ten times larger than the present level of Metro Rail utilization. The analysis results across stations were compiled into the *Atlas of Potential Metro Rail Ridership* to support both general audiences, as well as transit planning for ridership promotion, system forecasting, and service improvement in Los Angeles County.

For further information about this project, please check the featured article "Mapping Potential Metro Rail Ridership in Los Angeles County" published by *Cartographic Perspectives*. Number 72. 2012.

ATLAS OF POTENTIAL METRO RAIL RIDERSHIP IN LOS ANGELES COUNTY

Content

Preface	ii
Table of Potential Metro Rail Ridership in Los Angeles County	iv
2011 Los Angeles Metro Rail System.	1
Potential Metro Rail Ridership in Los Angeles County	2
Potential Metro Rail Ridership in Los Angeles County – Transfer Stations	3
Potential Metro Rail Ridership in Los Angeles County – Red / Purple Lines	4
Potential Metro Rail Ridership in Los Angeles County – Blue Line	5
Potential Metro Rail Ridership in Los Angeles County – Green Line	6
Potential Metro Rail Ridership in Los Angeles County – Gold Line	7
Key to Section Maps	8
1. Downtown Los Angeles	9
2. West Section of the Metro Red / Purple Lines	10
3. North Section of the Metro Red Line	11
4. North Section of the Metro Blue Line	12
5. Central North Section of the Metro Blue Line	13
6. Central Section of the Metro Blue / Green Lines	14
7. Central South Section of the Metro Blue Line	15
8. South Section of the Metro Blue Line.	16
9. West Section of the Metro Green Line	17
10. Central West Section of the Metro Green Line	18
11. East Section of the Metro Green Line	19

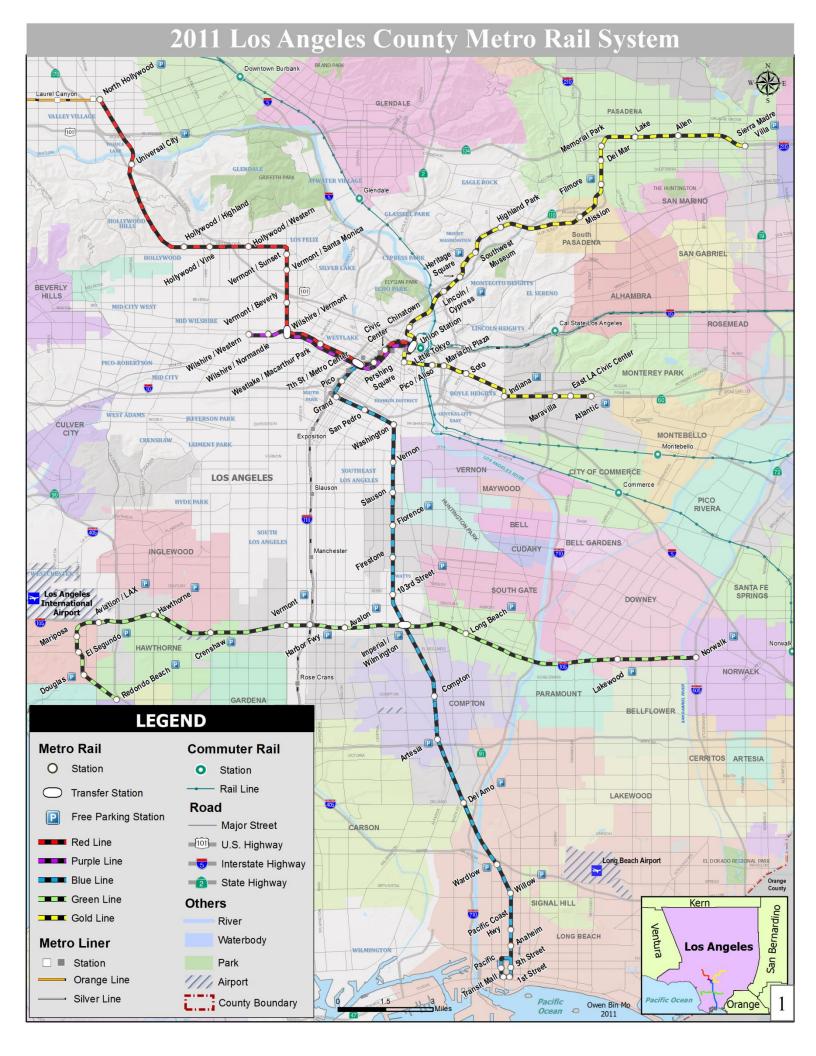
12.	North Section of the Metro Gold Line	20
13.	Central Section of the Metro Gold Line.	21
14.	Downtown and East Los Angeles Section of the Metro Gold Line	22
15.	East Los Angeles Section of the Metro Gold Line	23

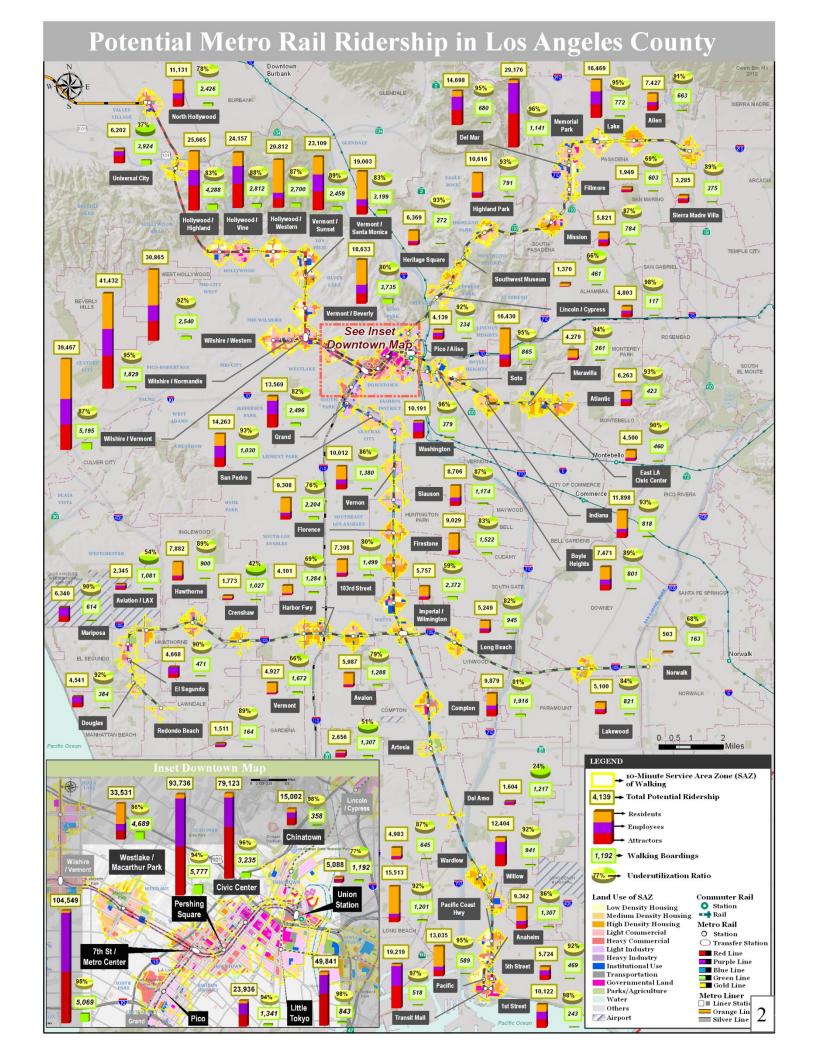
Table

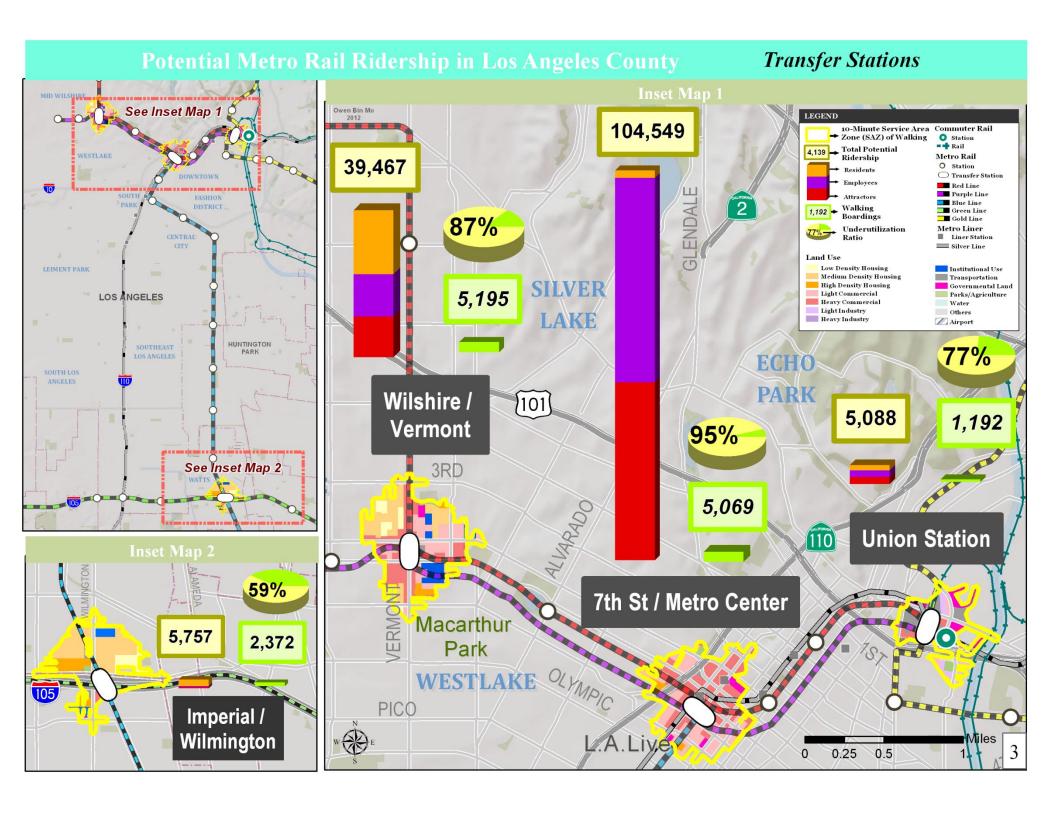
Total integrated potential ridership of Metro Rail system in Los Angeles County

(Transfer stations are excluded in Red / Purple lines, Blue Line, Green Line and Gold Line)

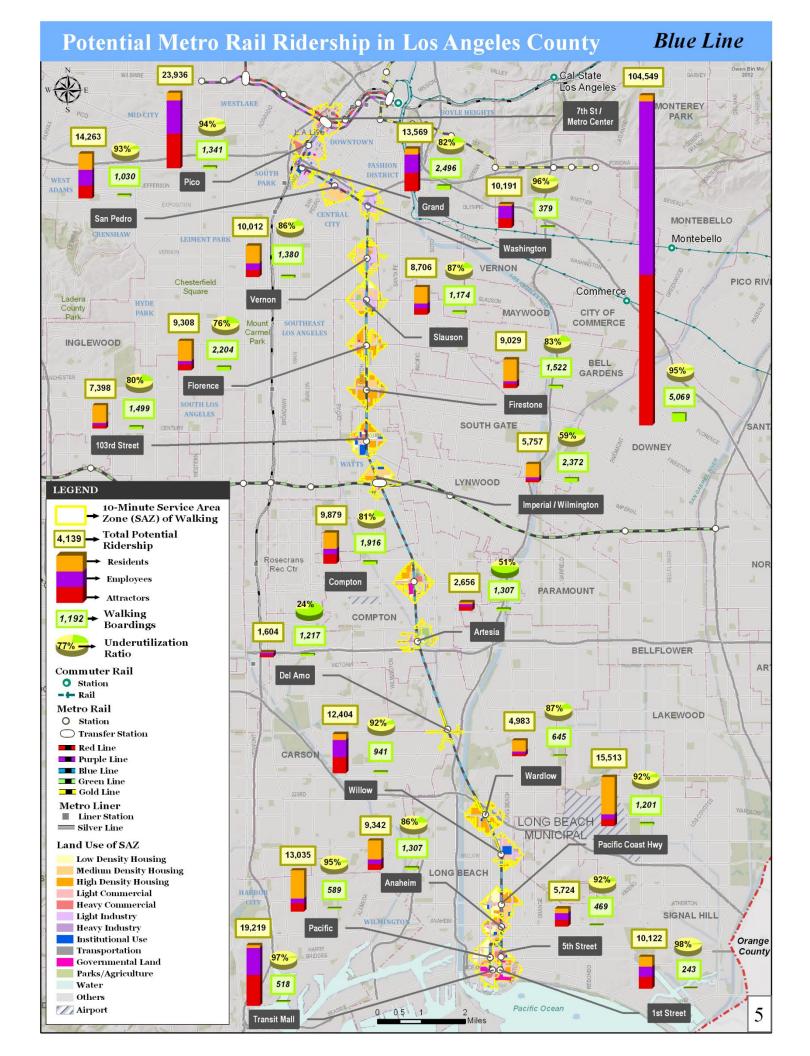
	Walking Boarding	10-Minute SAZ Integration						
Metro Rail Station		Residents	Employees	Trip Attractors	Potential (Total)	Under- utilization	Under- Utilization ratio	Cover Area (Sq. Mi)
Transfer Stations	13,828	23,065	68,867	64,894	156,826	142,998	91%	1.24
Red / Purple Lines	43,613	124,218	131,936	169,280	425,434	381,821	90%	4.68
Blue Line	23,800	83,158	59,382	65,633	208,173	184,373	89%	5.94
Green Line	10,814	26,173	15,227	13,527	54,927	44,113	80%	2.88
Gold Line	11,400	73,733	63,795	86,998	224,526	213,126	95%	6.17
Total	103,455	330,347	339,207	400,332	1,069,886	966,431	90%	20.91

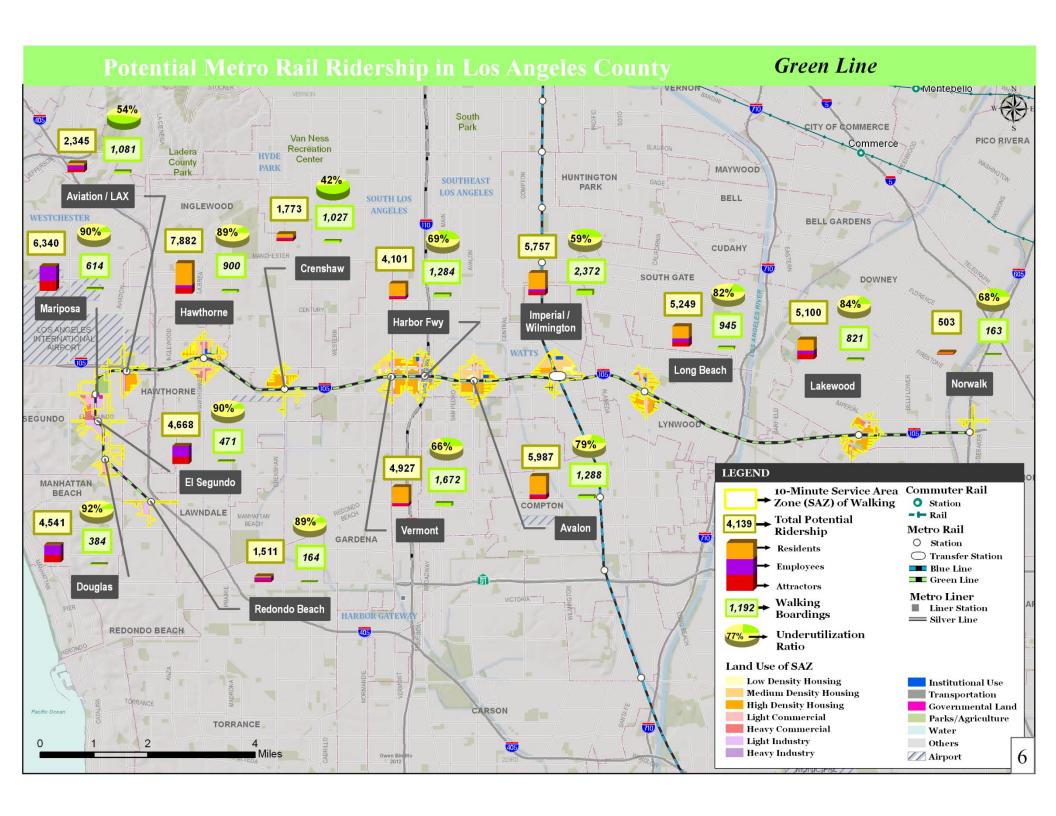




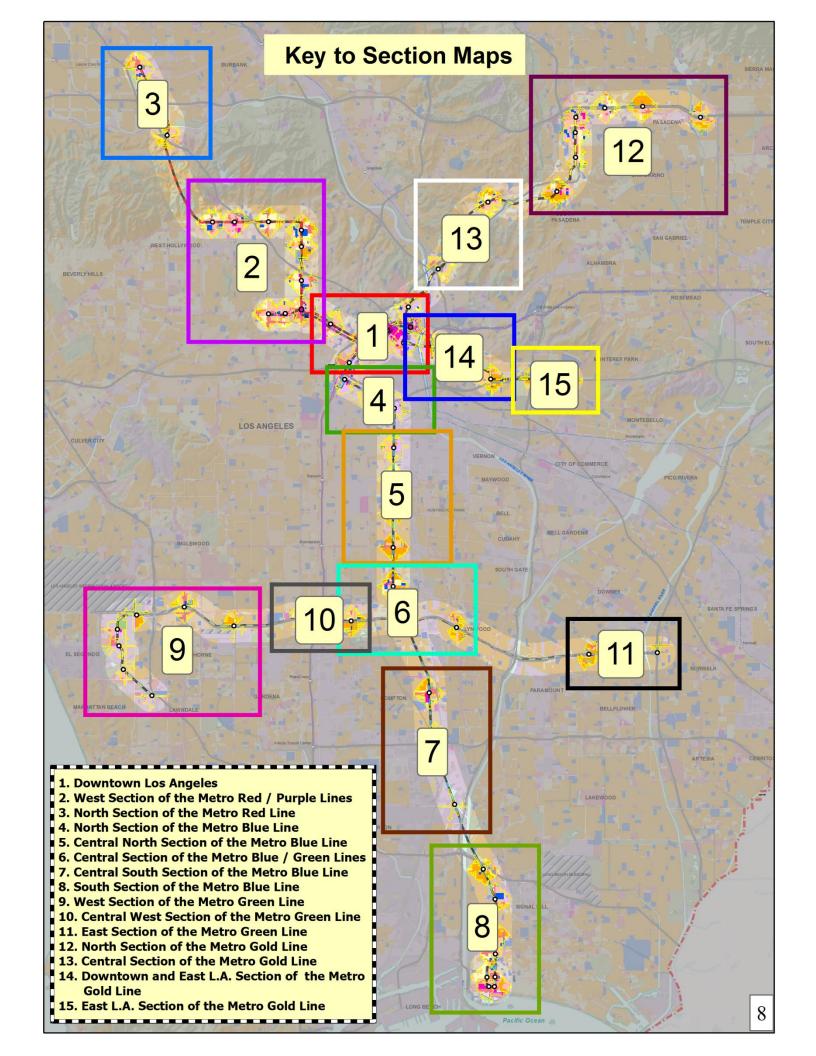


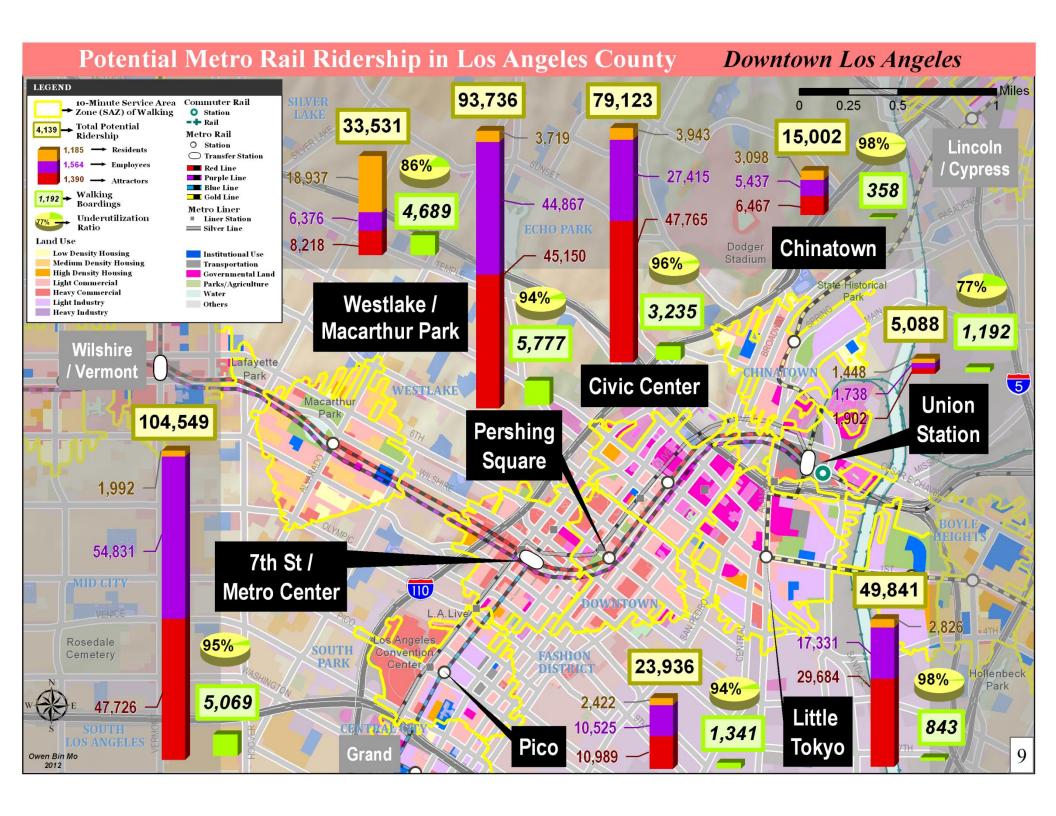
Potential Metro Rail Ridership in Los Angeles County Red / Purple Lines 10-Minute Service Area Commuter Rail Land Use of SAZ 78% 11,131 Zone (SAZ) of Walking Station Low Density Housing - Rail Medium Density Housing **Total Potential** 4.139 Metro Rail **High Density Housing** Ridership Light Commercial 2,426 O Station Residents **Heavy Commercial** Transfer Station Employees **Light Industry** Red Line Purple Line Heavy Industry VICTORY Institutional Use Blue Line NORTH Walking Transportation Green Line Gold Line Do North Hollywood Boardings Governmental Land OLLYWOOD Parks/Agriculture Underutilization **Metro Liner** ☐ Liner Station Others Orange Line /// Airport Silver Line BURBANK Miles North 6,202 0.5 Hollywood ALAMEDA Park GLENDALE 3,924 104,549 VALLEY VILLAGE 93,736 MOORPARK Mount Sinai **Universal City** Memorial Park BROADWAY Los Angeles Universal 25,665 79,123 Zoo Studios 24,157 20,812 CEN 23,109 83% 88% 87% 89% 4,288 2,812 2,700 Hollywood / 2,459 Juntos Park Glendale Highland Laurel Canyon Park Hollywood / Hollywood / 19,003 Western Vermont / 83% Sunset Wattles Garden Park LOS FELIZ 3,199 94% Vermont / HOLLYWOOD 96% Santa Monica ANTA MONICA 95% 5,777 18,633 3,235 SILVER 30,865 WEST 80% 5,069 LAKE HOLLYWOOD MID CITY WEST 101 Pershing Civic 3.735 Vermont / 41,432 Square Beverly Center BURTON 7th St / 92% **Metro Center ECHO** MID WILSHIRE PARK 2,540 Western Macarthur SAN VICENTE MID CITY 95% WESTLAKE 39,467 Union Westlake / 1,829 33,531 Station Wilshire / **Macarthur Park** Normandie DOWNTOWN Convention PALMS NASH 77% SOUTH Center 5,088 86% **EFFERSON** 1,192 WEST PARK ADAMS 5,195 4,689 RODEO Wilshire / CENTRAL **EXPOSITION** Vermont CITY

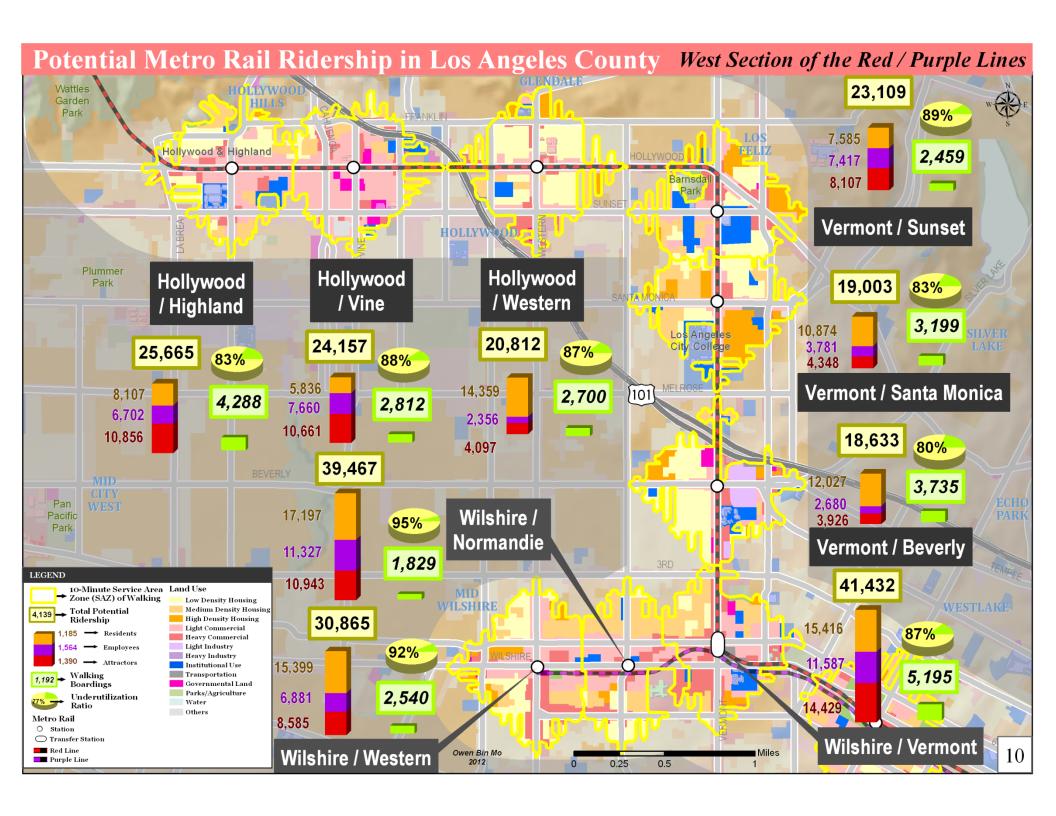


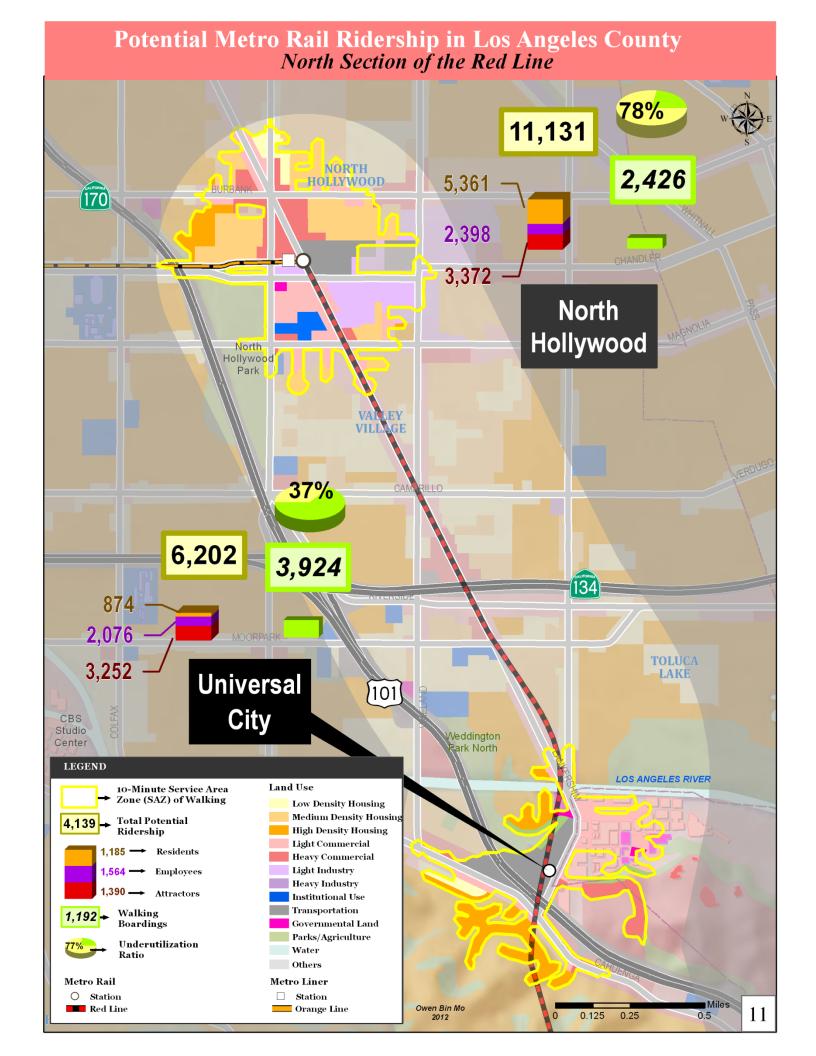


Potential Metro Rail Ridership in Los Angeles County Gold Line LEGEND 10-Minute Service Area Zone (SAZ) of Walking 29,176 4,139 → Total Potential Ridership 16,469 Residents - Employees - Attractors 7,427 91% 95% 89% 14,698 96% 1,192 → Walking Boardings 95% 772 663 3,285 **Underutilization Ratio** 375 1,141 Land Use of SAZ Commuter Rail 680 Low Density Housing Station = Rail Medium Density Housing Sierra Madre Memorial High Density Housing Metro Rail Villa Light Commercial O Station Park Del Mar Heavy Commercial Transfer Station Light Industry Red Line Heavy Industry Purple Line Institutional Use Blue Line 10,616 Transportation Gold Line 93% **PASADENA** Governmental Land **Metro Liner** 69% Parks/Agriculture Liner Station Water Silver Line Others 791 1,949 603 **Fillmore** Glendale 6,369 SAN MARINO **Highland Park** 272 HIGHLAND 5,821 PARK 49,841 Mission 784 SOUTH Heritage 66% PASADENA Square 15,002 1,370 Southwest 461 Museum SAN GABRIEL 98% HEIGHTS CYPRESS 358 4.803 ALHAMBRA 117 Lincoln / Cypress Chinatown LINCOLN Lincoln 98% Cal State HEIGHTS Park Los Angeles 5.088 **Union Station** 843 ROSEMEAD 93% 6,263 1,192 MONTEREY 423 BOYLE Little Tokyo PARK HEIGHTS DOWNTOWN **Atlantic** 92% 4,139 334 90% 4,500 FASHION 460 DISTRICT East LA Pico / Aliso Soto Civic Center CENTRAL Indiana MONTEBELLO CITY 7,471 16,430 89% 11,898 4,279 801 95% Maravilla 93% 261 CITY OF COMMERCE 72 865 818 PICO RIVERA **Boyle Heights** Commerce MAYWOOD SOUTHEAST HUNTINGTON GAGE 0.5 LOS ANGELES PARK BELL



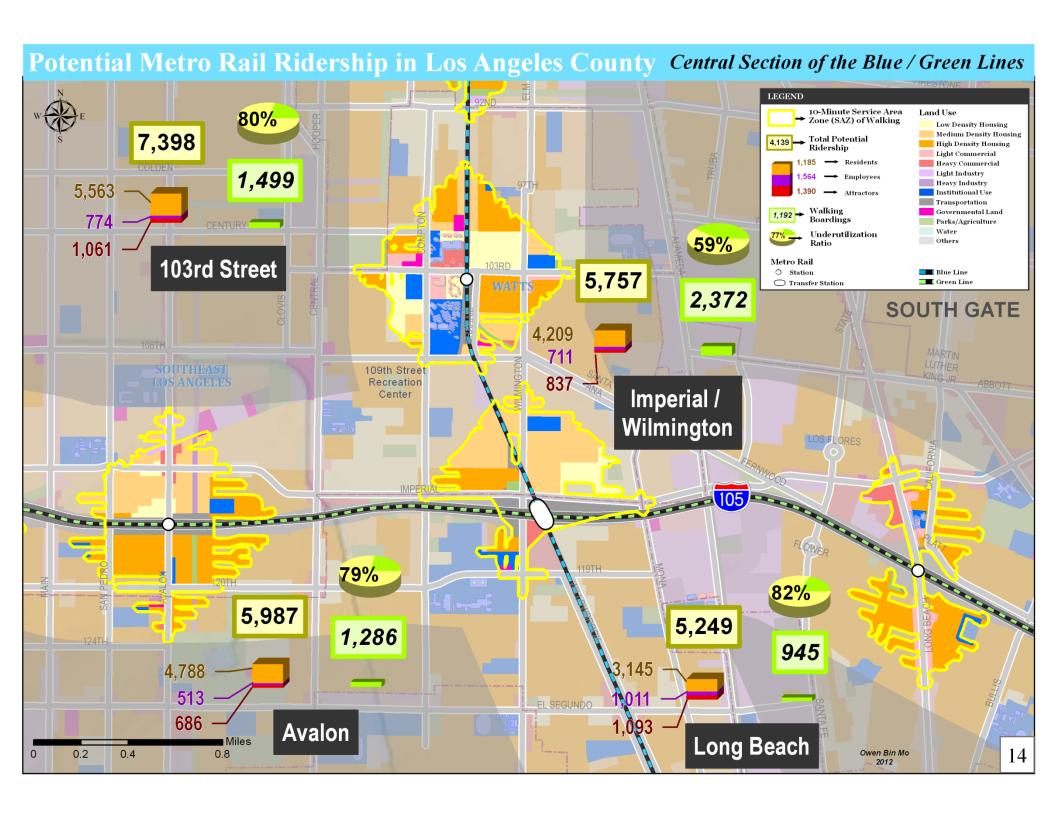


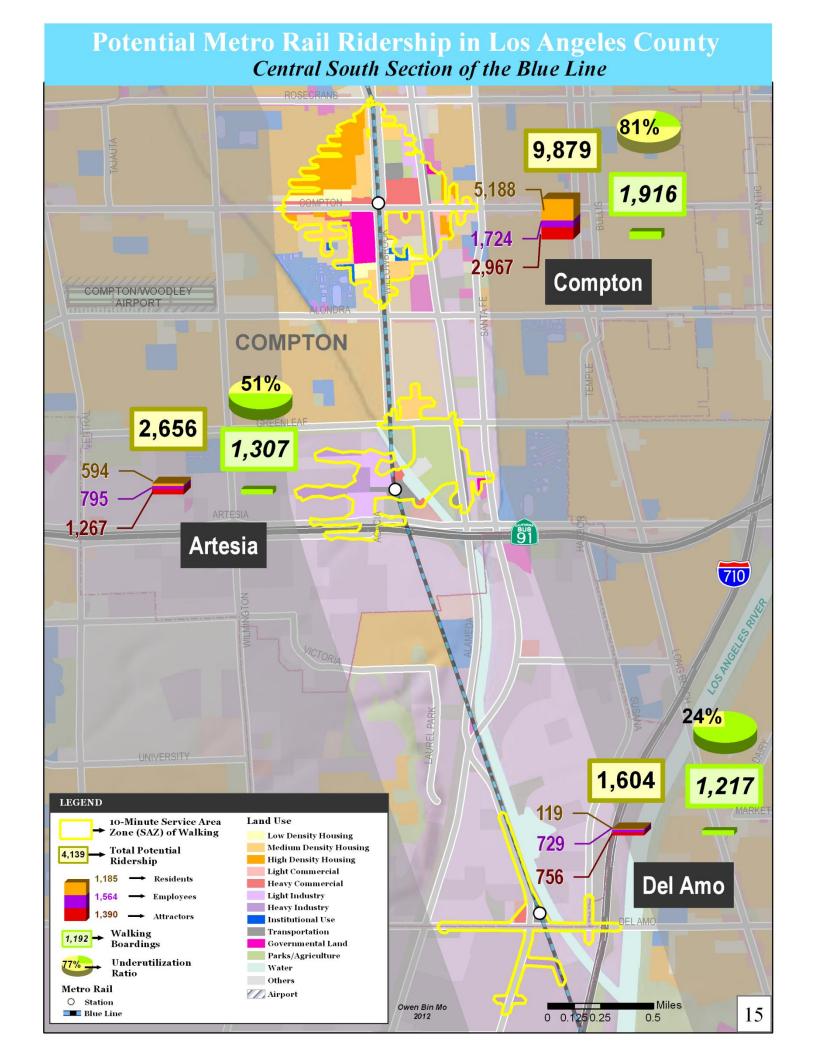




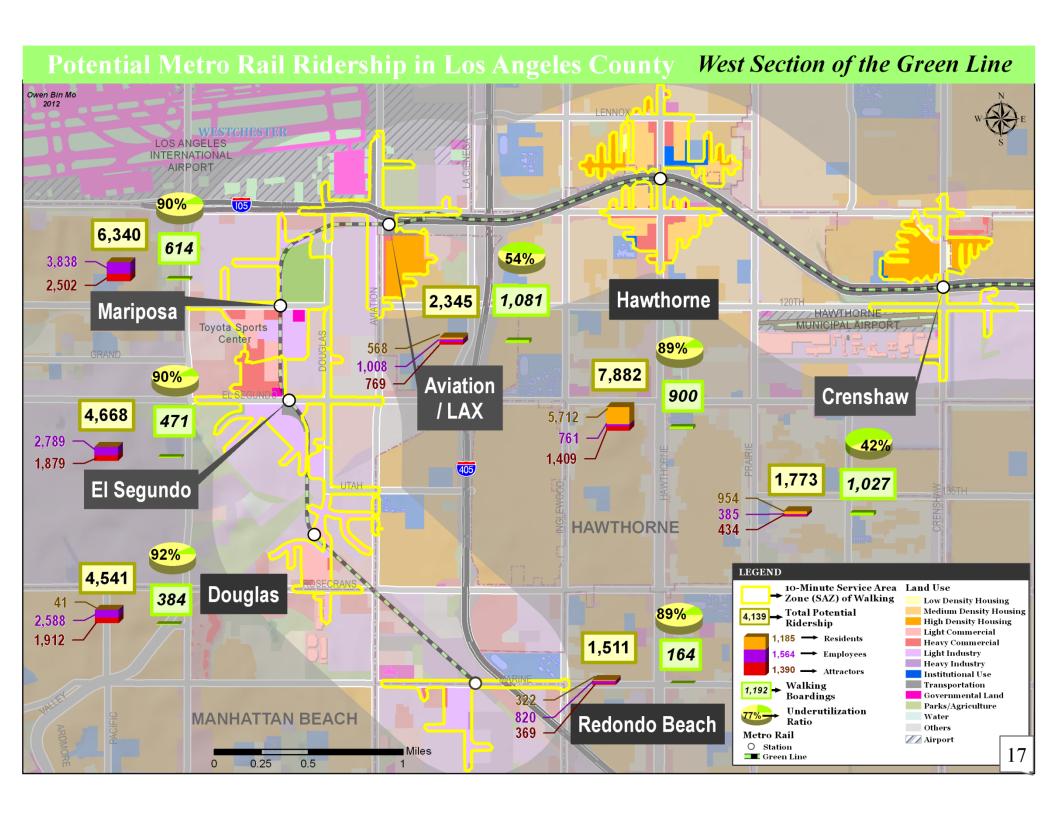
Potential Metro Rail Ridership in Los Angeles County North Section of the Blue Line 10-Minute Service Area Commuter Rail →Zone (SAZ) of Walking Terrace DOWNTOWN 4,139 Total Potential Ridership Park L.A.Live Metro Rail O Station 23,936 1,185 Residents Red Line Staples Purple Line 1,564 Employees 94% Blue Line Los Angeles 1,390 Attractors 1,192 ► Walking Convention Metro Liner 2,422 Boardings Silver Line Underutilization Ratio 1,341 10,525 Toberman Playground Low Density Housing Medium Density Housing Institutional Use Park Transportation High Density Housing Governmental Land 10,989 Light Commercial Parks/Agriculture Water Heavy Commercial Light Industry Others Heavy Industry 89% Pico 7,471 801 544 **FASHION** DISTRICT Saint 3,945 James Park 2,982 Washington 82% 13,569 Trinity Recreation Center 2,496 CENTRAL 1,889 5,867 Central 5,813 Recreation Center 14,263 93% San Pedro Exposition Grand 5,159 1,030 5,053 4,051 ■ Miles 12 Owen Bin Mo 2012 0.125 0.25 0.5

Potential Metro Rail Ridership in Los Angeles County Central North Section of the Blue Line MIK JE MARTIN LUTHER KING JR 86% Mini Pk 10,012 Ross Snyder Recreation Center 38TH Gilbert Lindsay CENTRAL 1,380 Central Community 5,663 Center Park Avenue CITY Jazz Park 2,030 2,319 Vernon Roberts, Fred Park LOS ANGELES **VERNON** South Park 87% Slauson 54TH Recreation Cente 8,706 1,174 Hawkins, Augustus F 5,174 Natural Park 1,569 1,963 Slauson 76% LEGEND 9,308 10-Minute Service Area 2,204 Zone (SAZ) of Walking 6,331 **Total Potential** 4,139 Ridership 1,152 1,185 --- Residents → Employees 1,825 1,390 - Attractors **Florence** Walking 1,192 Boardings Underutilization Ratio **Metro Rail** O Station Green Line 83% 9,029 Land Use Low Density Housing Medium Density Housing 1,522 High Density Housing 6,940 Light Commercial **Heavy Commercial** 707 Light Industry Heavy Industry 1,382 Institutional Use Firestone Transportation Governmental Land Parks/Agriculture Water Others Miles /// Airport Owen Bin Mo 2011 0.25 0.5 13

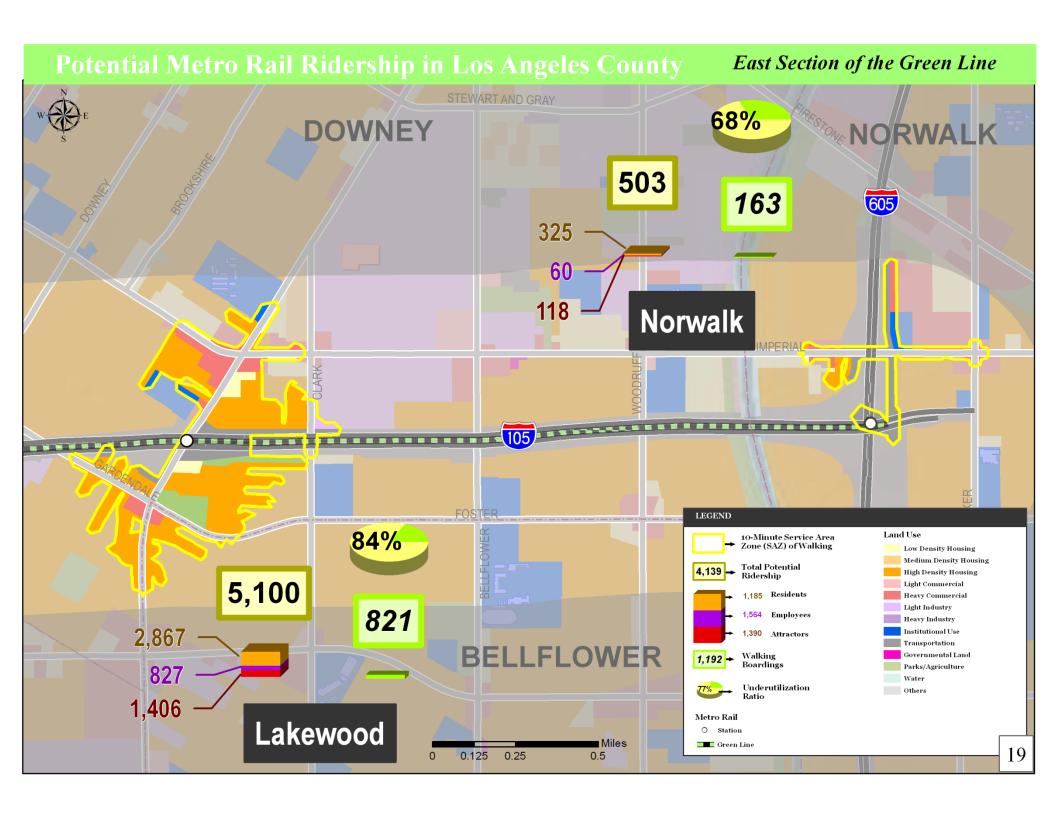




Potential Metro Rail Ridership in Los Angeles County South Section of the Blue Line 405 10-Minute Service Area Zone (SAZ) of Walking Low Density Housing Medium Density Housing **Total Potential High Density Housing** 87% Ridership Light Commercial Heavy Commercial 4,983 Light Industry ➤ Employees Heavy Industry 645 Attractors 3,532 Institutional Use **Transportation** Walking 693 Governmental Land Boardings Parks/Agriculture 758 Underutilization Water Ratio Others Wardlow Metro Rail /// Airport O Station ■■ Blue Line 12,404 92% 1,853 941 5,406 SIGNAL HI 5,145 92% Willow 15,513 11,835 1,201 1,431 86% 2,247 9,342 **Pacific Coast Hwy** 1,307 5,945 1,486 1,911 Anaheim LONG BEACH 92% 95% 13,035 5,724 469 589 1,490 8.905 2,117 1,477 2,117 2,653 **Pacific** 5th Street 19,219 98% 10,122 97% 3,173 839 243 518 3,254 8,648 3.695 9,732 1st Street Transit Mall Pacific Ocean Miles 16 Owen Bin Mo 2012 0.3 0.6



Potential Metro Rail Ridership in Los Angeles County Central West Section of the Green Line Miles 69% 10-Minute Service Area 0.2 → Zone (SAZ) of Walking 0.4 Low Density Housing Medium Density Housing 4,139 → Total Potential High Density Housing Ridership Light Commercial 4,101 1.185 Residents Heavy Commercial Light Industry Heavy Industry Institutional Use 1,284 1.390 Attractors Transportation Walking Governmental Land 3,323 Parks/Agriculture Boardings Underutilization Others SOUTH LOS ANGELES Metro Liner 295 O Station **■** Station Silver Line Green Line 483 **Harbor Fwy SOUTHEAST** LOS ANGELES **IMPERIAL** 105 **79%** 66% 5,987 4,927 1,288 1,672 788 4,128 513 332 686 **Avalon** Vermont 18 Owen Bin Mo



Potential Metro Rail Ridership in Los Angeles County North Section of the Gold Line Rose Bowl **29,176** ORANGE GROVE 1.305 **PASADENA** 96% 13,139 1,141 14,732 91% **Memorial** COLORADO 7,427 **Park** 663 GREEN 3.597 16,469 1,316 95% 14,698 95% 2,514 772 Allen Caltech 680 89% CALIFORNIA 69% 5.021 2,324 3,285 1,949 5,588 375 603 5,907 Sierra Lake **Del Mar** 1,193 6,467 5,860 **Madre Villa** 701 788 535 **Fillmore** Huntington 1,304 Library LEGEND 10-Minute Service Area Land Use Zone (SAZ) of Walking Low Density Housing 4,139 → Total Potential SAN MARINO **Medium Density Housing** Ridership **High Density Housing** 87% **Light Commercial** 1,185 → Residents **Heavy Commercial** 1,564 → Employees Light Industry 5,821 Heavy Industry 1,390 - Attractors 2,793 784 Institutional Use 1,192 → Walking Transportation Boardings Governmental Land 1.204 Parks/Agriculture Underutilization Water Ratio Others 1,824 Mission Metro Rail SOUTH O Station Miles 20 PASADENA 0.25 0.5 2012 Gold Line

Potential Metro Rail Ridership in Los Angeles County Central Section of the Gold Line Glassel Park and **Recreation Center** 110 **EAGLE** Oxamo 66% 93% / Park 1,370 461 10,616 1,154 791 SOUTH 8,333 91 **PASADENA** 746 125 **Southwest Museum** 1,537 **Highland Park** 96% 6,369 272 4,489 802 98% LEGEND Square 1,078 10-Minute Service Area Land Use 4,803 Heritage Square → Zone (SAZ) of Walking Low Density Housing MONTECITO Medium Density Housing 4,139 Total Potential 117 High Density Housing HEIGHTS 1,700 **Light Commercial Heavy Commercial** Light Industry 1,225 Heavy Industry 1,390 Institutional Use 1,878 Transportation Walking 1,192 Boardings Governmental Land Lincoln / Cypress Parks/Agriculture Underutilization Others Metro Rail Commuter Rail Owen Bin Mo --- Rail O Station 2012 Gold Line 21 Dodger Stadium

