



One-Half Mile Walking Distance Standard for Transit-Oriented Development

Executive Summary

The SDA's proposed one-mile walking distance to transit assumes that residents located a full mile from the nearest transit stop will be as likely to use transit as those living a half-mile away. But professional and academic research overwhelmingly confirm that isn't true. The vast majority of people will not walk beyond one-half mile - or about ten minutes - to transit.

SANDAG conducted local research so we know how people here in San Diego get to transit. 70% of passengers walked 5 minutes or $\frac{1}{4}$ mile or less and 92% walked 10 minutes or $\frac{1}{2}$ mile or less. And most people do walk - 97% of transit users walk from home to transit and 89% walk home. Driving is a distant second (2% drive to and 10% drive or are driven home from transit), while only 1 or 2% of transit users bike or ride a scooter to or from transit.

This data makes clear that San Diegans are not going to suddenly start walking beyond $\frac{1}{2}$ mile to access public transit, nor are they going to begin rolling to transit when only 1-2% of them do so now.

SB743 established TPAs at $\frac{1}{2}$ mile walking distance from transit. California requires that all grants for transit-oriented grants projects apply within $\frac{1}{2}$ mile walking distance of actual transit – not transit planned for 20 or more years down the road.

The Federal Transit Authority states that “by considering pedestrian improvements located **within the one-half mile of a public transportation** stop or station to have a de facto physical and functional relationship to public transportation, individuals will benefit from improved traffic flow, shorter trip lengths, safer streets for pedestrians and independence for individuals who prefer not to or are unable to drive.”

The attached list of international, national, state, county (including SANDAG), city (including MTS) and professional and academic sources and organizations makes clear that the San Diego Planning Department stands alone in its quest to declare housing projects 1 mile from transit as “transit-oriented development.” SDAs one mile from transit is a construct unsupported by research either locally or at any level. It is instead a

transparent ploy to open ever larger areas of San Diego up to dense development without regard to environmental impacts of any kind, including VMTs.

The City of San Diego's own 2020 Transportation Study Manual (TSM) clearly establishes ½ mile walking distance to transit as the appropriate measure for transportation planning:³³ Its screening Criteria for "Affordable Housing" requires that the project have access to transit - **"Access to transit is defined as transit being located within a reasonable walking distance (1/2 mile) from the project driveway."**³³

Just because the San Diego Planning Department decides that SDAs should be 1 mile walking distance from transit, unsupported by research, and declares that housing built in these areas will be "transit-oriented development" (TOD) does not make it so.

¼ to ½ MILE WALKING DISTANCE TO TRANSIT IS THE APPROPRIATE MEASURE FOR TRANSIT-ORIENTED DEVELOPMENT

AGREEMENT BY RESEARCH AND CONSENSUS - FACTS & SOURCES

- High access to public transit (PuT) is one of the key factors to reduce dependence on private vehicles ^{1,3}
 - To improve access to PuT, improvements must be made in walking catchment areas to transit stops ^{1,2,3}
 - Short walks increase the probability of using PuT for commutes ^{2,13}
 - Walking behavior is influenced by availability of walking pathways ^{1,3,13}
- People are willing to walk further/longer for faster rail services (train or subway) than for bus or tram services ^{1,2,4,5,12,15}
 - Walks are longer on the workplace side than on the home side ²
- Most people are willing to walk 5-10 minutes or approximately ¼ to ½ mile to a transit stop ^{5,6,8,9,12,24}
 - If you chose a single walking distance standard for all situations or transit oriented development (TOD), 400 meters (¼ mile) walking distance of PuT is recommended ^{3,4,5,6,13}
 - However, if you vary distance from transit by service mode
 - 400 meters or ¼ mile is most commonly applied for bus and tram (trolley) service ^{3,5,6,12,13,15}
 - Less than 10% of transit users said they would walk 15 minutes (¾ mile) to take a bus ¹
 - 800 meters or ½ mile is most commonly applied for heavy rail or a train station, including by the U.S. Department of Transportation ^{2,7,12,13,18,21}

- The American Public Transportation Association defines the “primary catchment area” for transit as: “The area within which land use and urban design features and the ease and directness of access to the stop or station both have a substantial impact [on] transit ridership, and pedestrian access will generate a significant portion of transit trips to and from the stop or station.”³²
 - Walking distance from transit is ½ mile/10 minutes or less except for “Rapid Transit” (defined as “heavy rail”) which increases to only 2/3 mile³² (and impacts only .8% of San Diego transit users¹⁰)

APTA-SUDS-UD-RP-001-09 | Defining Transit Areas of Influence

In this context, a typical adult would be able to walk half a mile in roughly 10 minutes. These typical area radii can be expanded or contracted based on these and other factors as described in Sections 4.1 and 4.2.

TABLE 2
Typical Area Radius by Transport Mode

	Local Street Transit	Rapid Street Transit	Semirapid Transit	Regional Transit	Rapid Transit
Core station area	not applicable	1/8 mile	1/4 mile	1/4 mile	1/3 mile
Primary catchment area	1/8 mile	1/4 mile	1/2 mile	1/2 mile	2/3 mile

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- Station or stop infrastructure that does not create access barriers to and from the surrounding community.
 - Absence of non-transit barriers, such as freeways or gated communities that impede direct connections to the transit stop or station.
 - Relatively flat topography.
 - Reasonably connected gridded or grid-like street network that allows for direct routes to and from the transit stop, with a complete and connected pedestrian facility network.
 - 20 minute headways for transit service.³²
- In California, distance to transit makes a big difference
 - Only 15.9% of residents who live within ½ mile of San Diego transit options use it¹⁰
 - 13.5% take bus
 - 1.6% take street car (trolley)
 - 0.8% take train
 - Beyond that ½ mile, transit usage falls by 74% to 4.2%¹⁰

- CA SB 743 establishes ½ mile walking distance to transit as the appropriate measure for infill development to encourage land use and transportation planning decisions and investments that “reduce vehicle miles traveled and contribute to” reductions in greenhouse gas emissions.³¹
 - SEC. 4. Section 65088.4 of the Government Code is amended to read:
*65088.4. (a) It is the intent of the Legislature to balance the need for level of service standards for traffic with the need to build infill housing and mixed use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes competing needs.*³¹
 - SEC. 5. Chapter 2.7 Section 21099 of the Government Code:
*(7) “Transit priority area” means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.*³¹

- Even the CA Department of Health believes ½ mile is the optimal and healthy distance for a PuT walkshed³¹

- San Diego Association of Governments (SANDAG)
 - Scores transit access “within a comfortable ¼-mile walk of a transit corridor, or a transit stop”²³
 - Recommends the walking “catchment area” as “conveniently accessible within 5-minutes of each transit station by foot”²⁵
 - Considered transit equity within a 5-minute walkshed²⁹

- In SANDAG’s 2021 Regional Plan, ½ mile from transit is again a key measure
 - “Only 12% of low-income residents currently live within a half-mile of a commuter rail, light rail or Rapid transit stop.”³⁶
 - “2021 Regional Plan performance results show a threefold increase in social equity focused populations (people with low incomes, people of color, and seniors) living within a half-mile of a commuter rail, light rail, or Rapid transit stop”³⁶

- SANDAG’s Smart Growth Incentive Program is intended to “contribute to the reduction in GHG emissions and vehicle miles traveled, and improve public health by encouraging travel by means other than single-occupant vehicle. In particular,

proposed projects should support public transit usage by improving access to transit and be located in areas served by transit.”³⁴

- Its scoring rubric is based on projects being ½ mile from a transit stop and it even differentiates between Rapid and heavy rail versus buses/light rail.
 - “Project area includes or is within 0.5 miles of an existing or planned Rapid and/or rail stop (10 points)”³⁴
 - “Project includes or is within 0.5 miles of an existing or planned major transit stop (non-Rapid/non-Rail) (5 points)”³⁴

- SANDAG’s Housing Acceleration Program (HAP) is intended to fund activities that accelerate housing production “while shifting modes of travel to more sustainable methods to reduce vehicle miles traveled and greenhouse gasses.”³⁵ HAP grant criteria also acknowledges the key factor of ½ mile distance to transit
 - “Relationship to Regional Transit” – “Prioritize projects within ½-mile of Rapid, passenger rail or major transportation stop”³⁵

- In the San Diego region, most people walk **to/from** PuT
 - In 2015²⁶
 - **88%/90%** walk
 - **9%/7%** come/**go** via auto
 - 3% roll via bike, skateboard, etc.
 - Males were 70% more likely to roll vs. females
 - 0.3% travel via wheelchair

 - In 2019¹⁹
 - **97%/89%** walk
 - **2%/10%** come/**go** via auto
 - **1%/2%** roll via bike, skateboard, etc.
 - **1.5%/0.8%** come/**go** via transit/air (long distance mode)

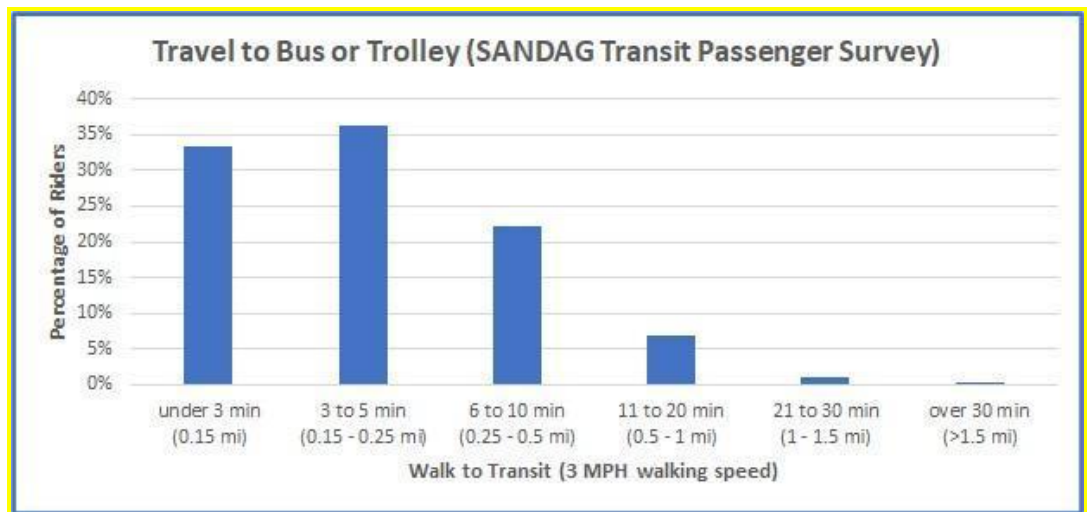
- People assume that micromobility options will reduce climate change emissions.
 - However, a 2022 big data study including 35 international cities (8 in the U.S.) found that, with the possible exception of station-based bike-sharing (SBBS),
 - “Shared micro-mobility programs have not achieved desirable GHG emissions reduction benefits”

- Many factors “make shared micromobility more likely to be an environmentally unfriendly mode of transportation”
 - Lifecycle of devices
 - Power sources
 - Whether scooters/ebikes/eskateboards are replacing walking vs. car trips
 - Environmental impacts of manufacturing, collection, maintenance and disposal³⁰

- Another new study shows shared electric bikes and scooters can increase the carbon footprint of urban transportation^{37,38}
 - Because people primarily use these vehicles for trips they would otherwise have made via walking, (non-electric) cycling, or public transit – modes of transportation with an even lower climate impact^{37,38}

- In San Diego, per Metropolitan Transit System (MTS): "Passengers are typically willing to walk between a quarter mile and a half of a mile from a transit station to their destination; this range varies based upon factors such as route frequency, neighborhood walkability, lighting, and security."²⁰

- SANDAG research supports this.²⁶
 - 92% of people in the San Diego transit region walk 10 minutes or less to access transit (1/2 mile or less)²⁶
 - 70% walk 5 minutes or less to access transit (1/4 mile or less)²⁶
 - Only 8% walk further than ½ mile²⁶



2015 On-Board Transit Passenger Survey; Results of the 2015 On-Board Transit Passenger Survey for San Diego Region; Prepared for: San Diego Association of Governments pg. 19
https://www.sandag.org/uploads/projectid/projectid_494_21412.pdf

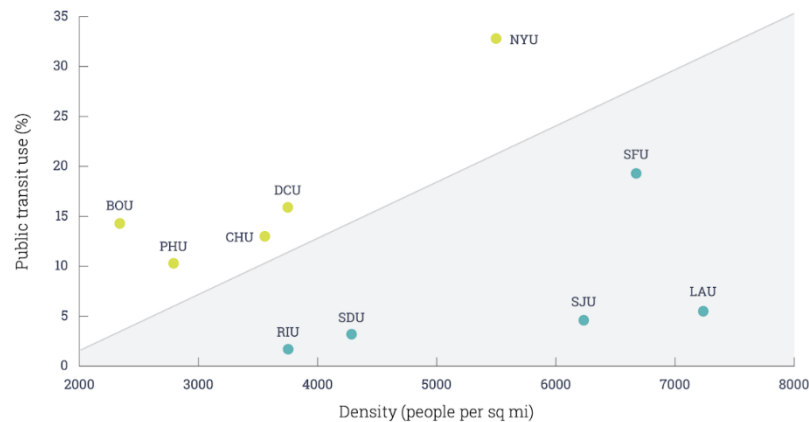
- The **City of San Diego’s own 2020 Transportation Study Manual (TSM) clearly establishes ½ mile walking distance to transit as the appropriate measure for transportation planning:**³³
 - Screening Criteria for “Affordable Housing: The project has access to transit⁴...
⁴Access to transit is defined as transit being located within a reasonable walking distance (1/2 mile) from the project driveway.”³³
 - Recognizing that TPAs are ½ mile walking distance from a major transit stop per SB743,³¹ the TSM clearly links “transit-supportive residential densities” within that ½ mile walking distance to increased transit ridership and decreased VMT:
 - Additionally, as described in the *City of San Diego Climate Action Plan Consistency Checklist, Technical Support Documentation*, projects located in a TPA can help reduce VMT by increasing capacity for transit-supportive residential and/or employment densities in low VMT areas and by doing so implement the General Plan’s City of Villages strategy and the General Plan’s Mobility Element. The increased density that is associated with projects in a TPA can increase transit ridership and therefore justify enhanced transit service which would in turn increase the amount of destinations that are accessible by transit and further increase transit ridership and decrease VMT.³³
 - “Table 1 can be used for the percentage of trips that are expected to be transit, bicycling, or walking trips if a project is located within 1/2 mile path of travel to a Major Transit Stop. If the project is not located within 1/2 mile path of travel to a *Major Transit Stop*, then these values should be entered as 0%.”³³
 - Housing Element Objective J: “Promote the Reduction of Greenhouse Gas (GHG) Emissions in Accordance with SB 375 and the California Long-Term Energy Efficiency Strategic Plan; and Promote Consistency with the General Plan’s City of Villages Strategy and Other Citywide Planning Efforts”
 - “Seek to locate higher-density housing principally along transit corridors, near employment opportunities, and in proximity to village areas identified elsewhere in community plans.”³³
- As a causal factor, density itself is a weak predictor of transit usage^{12,13,17}

- Density *plus* transit provides a precondition for other factors that can reduce driving
- Higher density is often thought to be a precondition to produce higher transit usage. However, CA and San Diego specifically already have some of the densest urbanized areas (UZAs) in the U.S., yet still ridership falls below less dense UZAs in the country.¹⁷

DESPITE OUR DENSITY, TRANSIT USE IS COMPARATIVELY LOW

Higher density is often thought to be a condition for better transit, theoretically producing higher use. However, California already has some of the most dense UZAs in the country, yet still ridership falls below many less dense UZAs in the country. In California, only San Francisco-Oakland is competitive.

Urbanized areas:
Public Transit Use
vs. Density



Source: American Community Survey 5-year (2017), Federal Transit Administration, National Transit Database UZA Sums 2017.

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- Only 3.8% of San Diegans commute via public transit.²⁷
- “Dense development beyond walking distance from transit does not support ridership and may actually detract from it if existing transit services are rerouted in an inefficient manner” to accommodate larger walkshed.¹³

CONCLUSIONS

There are no data to suggest that people are going to

- Walk further than ¼- ½ mile (bulk of PuT users)

- Significantly increase bike trips to transit
 - Buses carry only two bikes
 - Trolleys carry only one to two bikes per car
 - Only approximately secure 700 bike parking spaces at PuT in San Diego County; reserved for regular commuters²⁸
- Significantly increase other “rolling” trips to transit, now at 1-2% total access to transit¹⁹

There are no data to support making the Sustainable Development catchment areas $\frac{3}{4}$ to 1 mile (or beyond with specific plan areas) from public transit.

- Doing so will create density in unwalkable neighborhoods, increasing
 - Urban sprawl
 - VMT
 - Congestion
 - GHG emissions
- Doing so will not
 - Increase transit adoption
 - Create compact, walkable neighborhoods
 - Create the concentrated mass needed to sustain economic development

SOURCES

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PLEASE SCROLL DOWN FOR A LIST OF SAMPLE ORGANIZATIONS THAT USE

1/4 TO 1/2 MILE WALKING DISTANCE TO TRANSIT AS THE APPROPRIATE

MEASUREMENT FOR TRANSIT-ORIENTED DEVELOPMENT

WHO USES 1/4 TO 1/2 MILE WALKING DISTANCE TO TRANSIT AS THE APPROPRIATE MEASUREMENT FOR TRANSIT-ORIENTED DEVELOPMENT?

**American Public Transportation Association
U.S. Department of Transportation
U.S. Federal Transportation Administration
U.S. Federal Transit Administration
U.S. Federal Highway Administration
U.S. D.O.T. Build America Bureau
Railroad Rehabilitation Improvement Financing Program (RRIF)
Transportation Infrastructure Finance and Innovation Act (TIFIA)
Center for Transit-Oriented Development
Institute for Transportation and Development Policy
Institute for Transportation and Development Policy Translink.ca
Ford Foundation
UN HabitatClimate Works
New Jersey Transit-Oriented Development
Jarrett Walker, Public Transit Consultant (HumanTransit.org) Metropolitan
Washington Council of Governments
California Affordable Housing and Sustainable Communities Program
California Department of Public Health
California Department of Housing and Community Development (HCD)
California Legislature/SB743
SANDAG
San Diego Metropolitan Transit System
City of San Diego
Hundreds of academic and professional articles**

WHO USES 1 MILE WALKING DISTANCE TO TRANSIT AS THE APPROPRIATE MEASUREMENT FOR TRANSIT-ORIENTED DEVELOPMENT?

ONLY The San Diego Planning Department