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Making Walking Routine:
Building Walkability Through Policies and Market Forces

Summary

To build a walkable community, it's not enough to simply make spot improvements where walking is currently dangerous or unappealing. A truly walkable community has a variety of destinations close together and a comprehensive network of facilities that invites safe, accessible walking everywhere, all the time, by people of all ages and abilities. And although small first steps can be a great start, comprehensive networks are most likely to occur when "walkability" is an express priority and institutionalized into the routine policies and decisions a community makes. It should even be woven into the economic forces that guide both development and behavior. This brief summarizes some of the most promising ways to "normalize" walking and walkability. It suggests three broad approaches:

- **Make walking a priority.** Change transportation and land use professions, performance measures, and funding to assure that planning, design, and implementation give pedestrians the priority.
- **Plan and zone for walkability.** Comprehensive plans, zoning ordinances, and permitting practices must institutionalize walkability at every step of the development and redevelopment process.
- **Engage the marketplace.** The growing field of Transportation Demand Management and rising demand for walkable places can harness market forces to shift behavior toward walking and help pay for walkable infrastructure.

Shopping the healthy way—on foot. Plymouth, MA.

Shift Priorities

Perhaps you've gotten some crosswalks improved, slowed a neighborhood's traffic with a mini-circle, or had some benches installed in your downtown. But you realize that winning one improvement at a time isn't enough. How do you move from getting just one subdivision to include sidewalks and a trail connection, to making that the norm in all development work? This takes a systematic embrace of walkability, and every transportation and land use decision in the community must work toward creating great places to walk—not just to drive. Here are three ways to make that a reality.

Begin to Change the Job Description

Engineers and planners have the challenging task of designing a transportation system that is safe and functional for very different users, from pedestrians and bicyclists, to cars and trucks, to buses, trolleys, and rail. Over recent decades the focus of transportation departments has been on building roads to move cars quickly and safely, in part because that's what many communities and leaders have asked for. So if we now want more walkable places, we must make it a priority. A simple first step would be to make all transportation planners' and engineers' job descriptions clarify that their job is the creation of a balanced, safe, and efficient system for all users, from people on foot to those driving cars. For example, the following types of language could be used in describing positions in planning, transportation, public works, even economic and community development.

The profession shall:

- Promote the general health, safety, and welfare of all residents of the community, whatever their activity or mode of travel.
- Create a transportation system that optimizes economic efficiency, environmental sustainability, social equity, and public health in the movement of people, goods, and services to benefit all residents.
- Always measure and count the active transportation modes (pedestrian, bicycle, and transit users), not just motor vehicle trips, when collecting data on facility performance, collisions, injuries, and fatalities.
- For new projects or redevelopment, predict potential pedestrian, bicycle, and transit trips based not on existing use and facilities, but on best-case scenarios.
- Design facilities and policies to optimize the active transportation modes.

In other words, we can never say, "No one walks there now, so no one will in the future, so we don't have to build sidewalks." After all, it may be that few people walk there because of missing sidewalks or dangerous traffic. And if you watch closely, you'll often find more pedestrians than you would have thought!

Look closely before saying, "No one walks here, anyway." Many people struggle against very challenging pedestrian conditions!

This process should make two things clear. First, the focus is on safely moving people and supporting commerce, not simply on moving vehicles. Thus measuring, estimating, and designing only for motor vehicle trips does not achieve this and is no longer acceptable. And second, the goal is to optimize the modes that cost the least and have the fewest adverse impacts: walking, cycling, and transit.

Each community will compose its own approach and particular language, but it's critical that the transportation engineer in particular be rewarded, and their job performance be reviewed, based on their ability to design systems that increase the safety and number of people walking (and taking transit and bicycling) not just driving. Indeed, no less than Secretary of Transportation Anthony Foxx, in an AARP interview, said, "There's no question that we want to encourage biking and walking, as these forms of transportation support many of our national goals: They're environmentally friendly, they're great for health, they help reduce transportation costs and, most importantly, they connect people to opportunities. But, we need to ensure that people can do both safely.

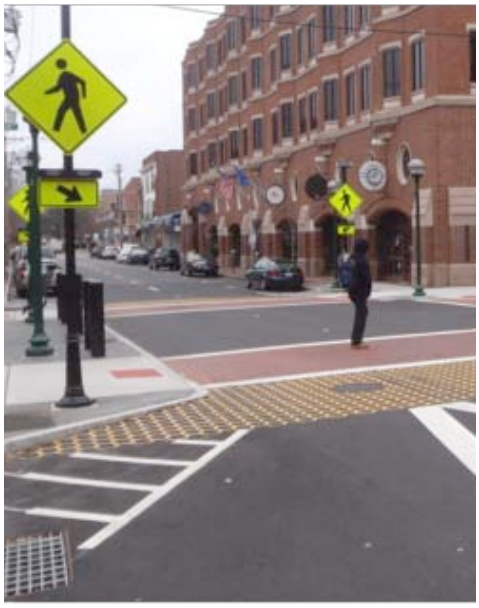
Measure More Than Traffic

Did you know that roads get letter grades, from A to F, just like you did in high school? And it's a problem. Engineers and planners typically measure the performance of a roadway based on its motor vehicle Level of Service, or LOS. This letter grade reflects for example how smoothly traffic flows, delays, and drivers' comfort level. Packed travel lanes and long waits at signal lights lowers the grade, while speedy traffic with lots of maneuvering room scores higher. Unfortunately, if the only measure of a road's performance is LOS, the "best performing" roads will tend to be wide and straight and fast—great for moving cars quickly, but

not for walking along or across, and often not for local businesses, safety, and quality of life. And simply telling engineers and planners to "fit pedestrians in" isn't much help if it's not going to improve their grades. The simple answer? Stop using Level of Service as the definitive measure of a road's performance.

This may sound radical to those long in the transportation field, but there are professionals and communities across the country (as well as the entire state of California, thanks to the law SB 743) rethinking how to measure system performance. Here are some alternative ways to measure and "optimize" the performance of a road, intersection, bridge, or other facility. Keep in mind that estimating some of these requires different skills, data, or at least assumptions than estimating the LOS of a roadway.

- **Reduce Traffic.** Average Daily Traffic (ADT) is the measure of the number of vehicles passing a specific point on a road each day. A quiet neighborhood street might see 1,000 vehicles a day, an active retail district 10,000-15,000, while busy multi-lane roads see 25,000 and more. In general lowering the number of vehicles passing a point should make a roadway friendlier to pedestrians, and may be worth doing near a school or park. But that's no bargain if it's just sending those cars onto other streets. A better goal may be reducing Vehicle Miles Travelled (VMT), the total vehicle miles traveled (say, in a district, community, or region). Reducing this means there are overall fewer vehicles on the road, creating a more pedestrian-friendly network.



A high visibility, slightly raised intersection (called a speed table) greatly enhances pedestrian safety. New Haven, CT.

- **Minimize average trip length.** This also requires a different approach than LOS. One way to make trips shorter is to make land use decisions that put different activities (homes, shopping, work, recreation) closer together. In general shorter trips can be more easily accomplished by walking and bicycling than longer trips. Plus, trip length is a broad indicator of the impact of cars on the roadway system; lower average trip length suggests fewer cars on the road and a more amenable environment for walking. Another approach is to specifically target what you want . . .

- **Maximize walking trips.** The real intent is to get more people walking, so why not make that an explicit goal of transportation projects? Indeed some communities and design firms are utilizing multi-modal level of service measures that estimate the quality of the experience for pedestrians and bicyclists as well for motor vehicles, estimating for example sidewalk width and quality, wait times at intersections, or the challenge of nearby, speeding traffic. Generally higher pedestrian level of service is assumed to encourage more walking.

- **Minimize crashes, injuries, & fatalities.** Pedestrians make up roughly 15% (on the order of 4,500) of all traffic fatalities each year, with closer to 75,000 pedestrians injured annually—one killed or seriously injured every 6.5 hours. Designing a project (or system) specifically to minimize these should be an absolute no brainer, even if it's at the expense of moving vehicles quickly. After all, what good is providing Level of Service A for cars at an intersection if people put their lives at risk to walk?

The simple point is that if you're changing the professional's job description, you must also embrace performance measures that reward doing the "new" job right.

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TIP in the Right Direction

A Transportation Improvement Plan (TIP; or Capital Improvement Plan, CIP) is often a rank-ordered list of transportation projects that regional planning authorities create to determine which infrastructure will receive local, state, and federal transportation funds. Therefore it's a pretty important list, because transportation dollars are finite and if your bridge repair or road widening is ranked highly on the TIP it's more likely to actually get built. Enlightened planning organizations from Nashville to San Diego are updating how they score or rank proposed projects to count pedestrian, bicycle, and transit facilities much more heavily than in the past. Indeed, the Nashville Metropolitan Planning Organization's scoring process intentionally assures that projects which don't accommodate pedestrians and bikes have little chance of getting funded. See their work at www.nashvillempo.org/plans_programs/tip/

Turning up the HEAT: Estimating the Economic Health Benefit of Walkability.

Build a footbridge connecting a trail and residential area to an office park, and you can assume people will walk more, get healthier, and some will actually live longer as a result. But how do we balance that assumed benefit against the cost of building the bridge? By using the Health Economic Analysis Tools (HEAT), developed by the World Health Organization to assess the economic benefit of increased bicycling and walking. It allows an engineer or planner to input an estimated number of walking (or cycling) trips and average trip length that will be generated by a project, and the tool will provide an estimate of the statistical value of life years saved due to the increased physical activity.

So, if you estimate the number of trips and their length generated by the bridge, HEAT will provide a dollar value of the life years saved because people are walking more. And it's based on conservative estimates, not even accounting for reduced illness and medical costs, which would only make the calculated benefits greater. Given that engineers sometimes use similar methods to assess the value of proposed safety measures (e.g. justifying the cost of a guard rail with the value of life-years saved due to fewer traffic fatalities), this familiar method can be used to make the case for enhanced pedestrian facilities as well. Check it out at www.heatwalkingcycling.org

The economic health benefit of Chattanooga's Walnut St. pedestrian/ bicycle bridge can be calculated using the HEAT assessment.

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Planning and Zoning for Walkability

Land use plans and zoning ordinances may seem like esoteric rules that have little to do with walkability, but in fact they are the very foundation of a walkable community. Many studies have shown that people are more likely to walk if a variety of different types of destinations are close together. Place schools and parks near to housing which is close to shopping and businesses, and you'll find more people walking between these activities. Unfortunately many zoning ordinances do the opposite; they require segregated or "single-use" zoning which creates housing subdivisions in one area, shopping (often in the form of strip malls and big box stores) in another, office complexes and industrial parks in yet another. Even schools and sports complexes are increasingly pushed out to the cheap land on the edge of town to save money during development. There are three steps (at least) in the planning and development process at which you can intervene to assure more walkable neighborhoods result.

Plan to Mix It Up

Most states require cities and towns to have some sort of guiding plan for how they will grow and develop over time. Typically called general, master, growth, or comprehensive plans, they have chapters on everything from land use and transportation, to recreation, open space, infrastructure, and economic development. At every opportunity your community plan should specifically call for a greater mix of land uses in proximity, rather than segregating activities and spreading them out. Since these plans tend to get updated every ten years or so, here are ideas you can bring to your next plan revision.

- **Put housing upstairs on Main Street.** Traditional retail districts had retail on the first floor and residential above; modern plans and zoning should support this.

- **Plan walkable, transit oriented centers.** Defining "nodes" or centers of development with a mix of housing, retail, work, and recreation intermingled assures that many routine trips can and will be on foot. A specific approach is Transit Oriented Development (TOD), where mixed growth is specifically targeted near transit hubs (e.g. rail stations, transit centers, high frequency bus stops) to minimize driving and maximize walking and transit trips.

- **Support neighborhood retail.** Residential areas can specifically define places for corner stores and local businesses mixed among housing. This doesn't have to be heavy industry, but space for a grocer, laundry, coffee shop, or pub.

- **Stem the sprawl.** Some of the most successful walkable communities are using a variety of tools from maintaining "agricultural" zoning areas, to purchasing conservation land, to even establishing growth or development boundaries. This slows unwalkable, low-density sprawl and encourages more compact redevelopment in areas close to infrastructure and services.

The mural on this corner store speaks to the value of walkable, neighborhood retail. Madison, WI.

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Zone It for Walking

The only way a plan becomes reality is if the laws that govern new and re-development actually require the desired outcomes. The zoning ordinance and related development guidelines generally detail what types of activities can be built where and the details of their design, from building height and setbacks, to landscaping and parking requirements. Many communities have a specific subset of these rules called subdivision guidelines that dictate details such as lot sizes, street widths, and sidewalk requirements. Some of the best approaches do the following:

- **Mix it up by design.** The ordinance can dictate that different activities such as housing, retail, and office space are built close together. One approach: Hybrid form-based zoning codes, which dictate the size and shape of buildings for particular areas (such as taller, denser development in downtowns; lower densities in neighborhoods), while allowing the specific uses (shopping, offices) to be driven by market demand.

- **Reward mixed-use, affordable, walkable designs.** One approach is a density bonus, which rewards developments that mix parks, shopping, and businesses in among residential projects by allowing them to build more units than is otherwise allowed. Other rewards include expedited permitting and reduced development fees.

- **Skinnier roads, wider sidewalks.** The best subdivision regulations will require sidewalks on both sides of the street, pathway links to multi-use trails and greenbelts, and narrower streets with traffic calming to encourage slower, safer speeds for pedestrians and drivers alike.

Make Walkability Affordable to All

An unintended consequence of the desirability of walkable settings is that as neighborhoods are made more walkable, housing values rise and often make such areas unattainable to lower income residents. Unfortunatlely, poverty is associated with physical inactivity and chronic disease risk, so these residents might reap the greatest health benefits of living in more walkable settings. Help balance this inequity with:

- **Mixed housing stock.** Planning and zoning can target a range of housing types and sizes, for example from single-family homes of varying sizes to row houses, multi-family units, and live-work spaces, both for sale and rental.

- **Accessory dwellings.** In already built-out or suburban neighborhoods, accessory rental units can be encouraged, for example over garages, in basements, and in out-buildings. Some communities ease permitting or lower or eliminate fees if these are designated as affordable rental units.

- **Inclusionary zoning.** For larger developments, many communities simply require a certain percentage of units be set at affordable prices or rents.

Analyze Walking as Transportation

When a new housing development or retail complex is proposed, planners typically require a Traffic Impact Analysis (TIA or something similar) during the permitting process to estimate the number of vehicle trips that will be generated; they then negotiate "mitigation" measures. Lots of anticipated car traffic may require installation of a signal light or turning lane, for example. Increasingly communities are instead requiring a Multi-Modal Transportation Analysis (MMTA) that also estimates trips taken on foot, by bike, and transit. We know features such as quality, separated sidewalks; high visibility crosswalks; buildings rather than parking lots fronting the sidewalk; slower traffic; good transit service and facilities; and a variety of accessible destinations (homes, stores, businesses, schools, and parks) increase the trips taken on foot. An MMTA allows these attributes to be considered and required during permitting, rather than just features for cars.

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Engage the Power of the Marketplace

Americans are demonstrating an increasing desire to live in more walkable communities. The National Association of Realtors' publication, On Common Ground, assesses homebuyers' desires and market trends. Recent issues highlight growing demand for more compact neighborhoods with nearby shopping and recreation; the redevelopment of thriving, walkable city and town centers; and reductions in vehicle miles traveled across the country as Americans choose to take more trips on foot and by bike and transit. A recent cover story in Builder, the publication of the National Association of Home Builders, declared, "Walkability: Why we care . . . and why you should too." Even sprawling suburban malls are being redeveloped into walkable, mixed-use centers. This demand creates an opportunity for market-based policies that support the very walking and walkability that consumers want.

Pay the True Price of Parking

Conventional wisdom has held that providing lots of parking helps businesses thrive. Most zoning ordinances require a certain number of parking spaces for each 1,000 square feet of retail or office space, and downtown districts often provide free or low cost parking. Recent research suggests that this misses the adverse affects of letting parking dominate the landscape, and the benefits of settings that encourage a broader array of consumers who walk, bike, and take transit. A giant parking lot can act as a physical barrier to people trying to access businesses on foot, and providing cheap parking not only induces more car trips, but it means everyone is subsidizing those who drive. Instead, the market should determine the value of parking. Here are some approaches.

Winter Park Village is a redeveloped mall where walkable streets and multi-story, mixed-use buildings replaced big boxes and parking lots.

- **Change the parking requirements in zoning.** Most malls and suburban retail have far more parking spaces than needed, especially when you account for shared visits (a driver that comes to visit multiple stores). Many communities are lowering the amount of parking and now setting the maximum number of spaces allowed, rather than the minimum required. Some account for complementary or shared use – for example, a business that needs daytime parking shares with a movie theater or housing that uses more parking on evenings and weekends.

- **Let the market set the price.** This means the fee paid for a parking space must capture the full cost of the parking facility and the value and opportunity cost of the land on which it sits. For parking structures this can mean each space has to earn from $10,000 to $20,000 a year—which is why parking can cost $35 a day or more in cities from Boston to Honolulu.

- **Charge more when it's busy.** Called congestion pricing, this is just letting the market do its job: charge a higher price for parking during periods of high demand. Thus a downtown parking structure could be expensive when offices and shopping are full, but be less costly for downtown residents who use the parking spaces overnight.

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Price Travel to Reward Pedestrians

Large institutions from universities and hospitals to big businesses and municipal governments are challenged by the costs of providing parking to their employees and customers. Rather than simply demand that people walk or take transit, institutions are increasingly altering the incentives so that walking and transit are actually financially appealing choices; this is all part of a broad approach called Transportation Demand Management, or TDM. (For a comprehensive resource check out the Victoria Transportation Policy Institute's outstanding TDM Encyclopedia, at www.vtpi.org/tdm/index.php) Here are four examples:

- **Employer support.** Many employers provide employees with subsidized or free transit passes and good connections to transit (e.g. pathways or shuttles to transit stops) rather than free parking spaces. Often universities and large employers actually pay a fee to transit agencies so that every student and employee ID acts as a transit pass, making walking to transit the most cost-effective choice.

- **Welcome customers on foot.** Stores can provide discounts and incentives to customers who show up on foot and by transit, rather than just validating for reduced parking prices.

- **Match roadway price to demand.** London's center city congestion charge may be the longest-standing example; driving a car in the downtown core during the busiest hours induces an automatic charge (thanks to cameras catching your license place). But highway tolls can also be adjusted to be higher during high demand periods. High Occupancy Vehicle (HOV) lanes can let car-poolers move quickly, but discourage people from driving alone. A combined approach charges a higher toll if cars with fewer riders wish to use the High Occupancy/Toll (HOT) lane. In every case, when combined with high quality pedestrian facilities and transit service, these are incentives to consider an alternative to driving alone.

Every transit trip starts and ends with a walk, and transit serves walkers of all ages, abilities, and incomes. Somerville, MA.

- **Reward people for living close to work.** A Location Efficient Mortgage is designed to provide a slightly lower mortgage interest rate to those buying a home near to their job, mixed-use areas, and transit hubs. The idea is that such a household will have to spend less on automobile costs due to more walk and transit options, so they are less of a loan risk. For example, the sustainability program at Drury University in Springfield, MO has actually underwritten slightly reduced mortgage interest rates for employees who live within walking and bicycle distance of the campus. It's substantial savings for the employee over the life of the loan, while the university enjoys benefits such as fewer cars to park, improved air quality, and healthier employees.

Share the Cost

The market demand for more walkable settings is apparent in how communities are paying for infrastructure improvements and maintenance; it's not just seen as government's job. For example, homeowners' associations have banded together to pay for sidewalk construction or repair in subdivisions, and downtown business districts often "tax" themselves to make sidewalk improvements and add street furnishings such as benches, plantings, and bike racks. Here are three common approaches.

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- **Special Improvement Districts (SID).** These are often business areas (blocks, streets, historic districts) that impose charges upon themselves to make improvements that none could afford alone, but that will benefit them all collectively. It could be infrastructure, as simple as pedestrian way-finding signs and trash barrels, or as involved as constructing widened sidewalks, curb extensions, and mid-block crossings. Some pay for visitor oriented programs such as public art, music performances, or street ambassadors. In Battle Lake, MN, the downtown SID pays for sidewalk snow clearing to assure year-round pedestrian access; business owners realized it actually cost them less and assured better clearing if they pooled their efforts.

Many downtown districts share sidewalk clearing and maintenance costs, to benefit all customers and businesses. Rapid City, SD.

- **Tax Increment Financing (TIF).** There are myriad approaches and details, but the basic notion is for a public entity to borrow money for development or to make improvements, and then use the resulting increased tax revenues to repay the bonds. Because walkable settings are in high demand, there are often predictable tax revenue increases associated with new pedestrian-oriented development, as well as increased value to existing properties. Everything from large mixed-use development near transit, to streetscape improvements and second-story condos on small town Main Streets have been funded with TIF funds which specifically earmark the increased tax revenues to service the loan.

- **Make the case with health benefits.** Private foundations and businesses increasingly recognize the preventive health benefits of a physically active population, from reduced health care costs to lower employee absenteeism and higher productivity. The result is concrete investments in walking infrastructure such as businesses building walking trails on their campuses with links to adjoining sidewalks and trails. A fine example is the Mary Black Foundation (MBF) in Spartanburg SC, which intentionally located its new office in a rehabilitated site close to walkable downtown. It also provided the required matching funds for a federal transportation grant to construct the 2-mile MBF Rail Trail, linking low-income neighborhoods to the city center. Across the country private and non-profit entities are investing in walking as a way to generate the triple bottom line: economic, environmental, and public health.

About The Every Body Walk! Collaborative

The Every Body Walk! Collaborative is a network of more than 75 national organizations that work collectively to increase walking and make communities safe and easily walkable.

About the Author

Author bio: Mark Fenton is a public health, planning, and transportation consultant and an adjunct associate professor at Tufts University. www.markfenton.com. This brief was compiled from interviews with a dozen expert practitioners in planning, transportation, health, law enforcement, and elected officials whose work has focused on building a more walkable world for decades.