WALKABLE CITY RULES AND I-45

KINDER INSTITUTE, HOUSTON
FEBRUARY 27, 2019

JEFF SPECK  AICP  CNU-A  LEED-ND  Hon. ASLA
TOWARDS A MORE WALKABLE HOUSTON

THE MENIL COLLECTION
APRIL 21, 2015

JEFF SPECK  AICP  CNU-A  LEED-ND  Hon. ASLA
MY LAST TALK
IN HOUSTON

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JEFF SPECK  AICP  CNU-A  LEED-ND  Hon. ASLA
MY LAST TALK IN HOUSTON?

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WALKABLE CITY
HOW DOWNTOWN CAN SAVE AMERICA, ONE STEP AT A TIME
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COAUTHOR OF SUBURBAN NATION
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Boston and its inner-ring suburbs, while the highest could be found in the “ear-dependent” outer ring surrounding Interstate 495. The Boston Globe noted that “health officials suggest these higher rates are due, in part, to a lack of opportunities for everyday recreation and the time-squeezed lifestyle of many residents who have long commutes.”

I am wary of confusing causality with correlation, and it would be fair to say that heavier people are probably more likely to prefer driving over walking, and are therefore also more likely to prefer sprawl over urban neighborhoods. It is theoretically possible that, rather than suburbs making people fat, fat people make suburbs. But only a soulless pundit funded by the automotive industry—and there are several*—would claim that people are not more likely to be healthy in environments that invite walking.

You can tell that an idea has reached its tipping point when it makes enemies, and the sprawl-obesity connection finally has. The American Dream Coalition (“Protecting Freedom, Mobility, and Affordable Homeownership”), a consortium of automotive and sprawl-building interests, has come up with the fairly hilarious concept of the Compactorizer. As celebrated on their website in the (stereotypically effeminate) voice of the fictional Biff Fantastic:

Urban planners and metrosexuals agree that suburbs make you fat! With the Compactorizer, you’ll move out of boring and subtly racist suburban homes and into smallish apartments in high-density transit-oriented developments.

*Wendell Cox and Randall O'Toole. Skipping right past obesity to its outcomes, doctors have found that physical inactivity is associated with a 30 to 50 percent increase in coronary heart disease, a 50 percent increase in hypertension, and a 20 to 50 percent increase in strokes [as well as a] 30 to 40 percent increase in the risk of colon cancer and a 20 to 30 percent increase in the risk of breast cancer” (Valos, “Is Sitting a Lethal Activity?”). The United States’ annual medical costs of physical inactivity have been estimated at between $76 billion and $117 billion, which is more than 10 percent of all medical expenses (Gotsch and Mills, “Active Transportation for America,” 47–48).

Only the Compactorizer uses a patented planning doctrine to create noisy nights, random crimes, and panhandler harassment, triggering the high-stress and abnormal dietary patterns so important for rapid weight loss.18

As both an urban planner and a purported metrosexual, I can feel my credibility tanking here. But I have to admit that this piece is funnier than it is offensive and it appropriately pokes fun at an antisuburban snobbery that I probably share. But, ultimately, I have to ask myself: whom do I trust more: the doctors—who have nothing to gain either way—or the sprawl-builders? I’m going with the doctors.

CLEARING THE AIR

During the 1996 Olympics, more than 2 million visitors descended on the city of Atlanta, effectively increasing the city’s population by 50 percent. Most of these visitors—I was among them—spent many hours huffing around the hot, crowded sports venues. Yet, during this time, asthma hospitalizations surprisingly declined by a full 30 percent.19 What happened?

The difference was walking. Warned of the impossibility of motoring around the downtown during the games, many driving commuters took transit and walked instead. At a time when Atlanta was “one of the nation’s worst violators of federal standards for ground-level ozone, with most of the problem caused by motor vehicle emissions,”20 pollution levels dropped precipitously.

*Sadly, the respite was only temporary, ending with the games’ closing ceremony. Atlanta got a second breath in 1998, when the city’s legendary highway-building binge was put on hold for two years thanks to its repeated violation of the federal Clean Air Act. But those were the exceptions, and by 2002, Atlanta was named “America’s Unhealthiest City for Men” by Men’s Health magazine, thanks to its forty-five days a year of “stay inside” warnings (Doug Monroe, “Taking Back the Streets,” 89).
WALKABLE CITY RULES
101 STEPS TO MAKING BETTER PLACES
JEFF SPECK
Price Parking Based on Its Value

If the curbs are full, the parking is underpriced.

WHEN DRIVING is too cheap, roads get too crowded. When parking is too cheap, parking gets too crowded. And when people park too much, a bunch of bad things happen: people circle in search of spots; they double park; or they get frustrated and drive back home without shopping. Next time, they drive to the mall instead.

Since most places currently price their parking so arbitrarily, a switch to an unsophisticated system that merely tries to respond to demand can have a profound impact.

For a downtown area to function rationally, its parking must be priced rationally. This means that price must reflect value, with the most desirable spots getting the highest price. In many places, this price should vary around the clock to reflect changing demand.

What’s the right price? Donald Shoup suggests that parking be priced at the amount that results in 85% occupancy, which means that there is one empty spot on each curb face. This outcome can be achieved in high-tech ways, such as San Francisco’s sophisticated SPark system, which constantly changes prices based on occupancy measured by in-road sensors. Or it can be achieved, with slightly less accuracy, by setting a price that changes once or twice a day based on a little bit of testing. Since most places currently price their parking so arbitrarily, a switch to an unsophisticated system that merely tries to respond suggests raising the price of parking in over-parked areas, it is almost always the local merchants who fight the hardest.

In some cases, no amount of evidence or reason is adequate to change a merchant’s mind. One restaurateur in Norwalk, CT, recently printed up a flyer. It says: “Donald Shoup’s theories are right—just not here in Norwalk.”

For this reason, Shoup introduced one other great idea, the Parking Benefits District (PBD). A PBD makes a commitment to the merchants that the additional revenue collected from higher meter prices will be spent in the location where it is earned. Typically, it can be directed toward street and sidewalk improvements, street furniture like lighting and benches, new trees and landscaping, and even facade improvements to private businesses. Eventually, it can pay for new parking structures as well. PBDs are an excellent carrot for merchants, but they are potentially much more.

Probably the most effective PBD is the one that Shoup helped establish in Old Town Pasadena. Begun in 1993, it is paid for all of the benefits mentioned above, as well as a team of public service officers, the burying of overhead wires, and the conversion of a rear alley network into a lovely pedestrian zone. There are no dumpsters in Old Town; each block has its own industrial trash compactor.

The experience in Pasadena has been truly transformative: a virtuous circle in which improvement has led to more visitors, which has led to more meter revenue and more improvement. Within five years of its inception, property tax revenue from the district tripled and sales tax revenues quadrupled. Clearly, this is an effort worth copying.

RULE 18: Reprice parking with an eye to Shoup’s 95% rule, and establish a Parking Benefits District to direct revenue toward local improvements.
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Shoup documents how, in city after city, a switch to properly-priced parking has changed merchants' fortunes for the better. He reminds us that the parking meter was introduced (in 1935) by store owners in order to improve revenue by creating more churn at the curb and encouraging workers to park elsewhere. Still, whenever someone suggests raising the price, the local merchants whine.

In some cases, no amount of revenue is enough. The merchant's mind. One merchant said to his local planner:

It says: "Donald Shoup is here.

For this reason, Shoup has coined the phrase Parking District (PBD). A PBD can reallocate any amount of parking revenue collected from businesses to the local board..

RULE 19: Reprice parking to direct revenue.
One of the earliest plans of its type, the 2007 Redwood City, CA, parking plan priced different spaces based upon their desirability, to allocate demand efficiently. Streets closest to the action cost the most, and underutilized parking structures were free.

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TONIGHT’S TALK

INTRODUCTION

WHAT I DON’T HAVE TIME TO TELL YOU.

WHAT I DO HAVE TIME TO TELL YOU.

CONCLUSION
TONIGHT’S TALK

- INTRODUCTION
TONIGHT’S TALK

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- WHAT I DON’T HAVE TIME TO TELL YOU.

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TONIGHT’S TALK

- INTRODUCTION
THANKS TO
- KINDER INSTITUTE
- HOUSTON PARKS BOARD
- LINK HOUSTON
- GREATER NORTH SIDE MANAGEMENT DISTRICT
- MAKE I-45 BETTER COALITION
THANKS ALSO TO
- BRUCE ELEMENTARY
- NORTH SIDE COMMUNITY
- RESIDENTS OF DELANEY STREET HOMES
- PASTOR JOHNSON OF MOUNT OLIVE MISSIONARY BAPTIST CHURCH.
THANKS TO
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- LINK HOUSTON
- GREATER NORTH SIDE MANAGEMENT DISTRICT
- MAKE I-45 BETTER COALITION
COALITION TO MAKE I-45 BETTER – MEMBERSHIP AND OUTREACH

PARTICIPANTS
Air Alliance Houston
Avenue CDC
Bayou City Waterkeeper
Bayou Preservation Association
BikeHouston
Buffalo Bayou Partnership
East Bayou Civic Club
Eastwood Civic Association
First Ward
Freedmen’s Town Preservation Committee
Friends of Woodland Park
Galveston Bay Foundation
Germantown Historic District
Greater Northside
Greater Heights Super Neighborhood 15
Heritage Society
Hermann Park Conservancy
Houston Parks Board
Idyllwood Civic Association
Independence Heights Development Council
LINK Houston
Museum Park Super Neighborhood 66
Monte Beach Civic Club
Pierce SkyPark
Preservation Houston
Scenic Houston
Trees for Houston
Woodland Heights Civic Association
White Oak Bayou Association
Washington Ave/Memorial Park Super Neighborhood 22
White Oak Bayou Association
Woodland Heights Civic Association

ELECTED AND PUBLIC OFFICIALS
Supporting DEIS Letters
Commissioner Rodney Ellis
Congresswoman Sheila Jackson-Lee
State Senator Sylvia Garcia
State Senator Borris Miles
State Representative Harold Dutton
Representative Jessica Farrar
State Representative Jarvis Johnson
Houston City Council Member Dwight Boykins
Houston City Council Member Jack Christie
Houston City Council Member Ellen Cohen

COALITION ISSUES MEETINGS WITH TxDOT:
• PARKS
• CONNECTIVITY / PED-BIKE SAFETY
• WATER QUALITY AND FLOODING
• VISUAL IMPACT
• AIR QUALITY AND ENVIRONMENTAL JUSTICE

PHOTO: BRETT COOMER
Coalition to Make I-45 Better
North Houston Highway Improvement Project
Impacts and Solutions Action Plan
4/13/2018

Project Administration:

I. Process
   a. TxDOT to complete outstanding baseline EIS studies
      i. Visual Impact
      ii. Noise
         1. Acknowledge noise impacts on parks as part of the 4F analysis
         2. Pat Henry committed to groove and grind at the Parks Issues Meeting – 12.13.18 email (but not overpasses?)
         3. Reserve further comments until release of the noise impact study.
   b. TxDOT to hold the DEIS public comment once the studies are published.
   c. TxDOT to accept comments developed during the issues based meetings and incorporate them in the DEIS record.
   d. TxDOT to utilize the issues based meetings and DEIS process to revise the I-45 design to comprehensively address (alternatives and mitigation) community wide concerns.
   e. TxDOT to commit to the design based solutions as part of the FEIS.
   f. TxDOT to provide a timeline going forward.

Issues Based Discussions:

II. Parks and Open Space
   a. TxDOT to recognize White Oak Bayou Greenway as Public Park and open space for 4F purposes.
   b. Coalition has requested COH not to sign de minimis impact letter regarding parks.
   c. TxDOT to follow the strict requirements of 4F in addressing park impacts.
   d. TxDOT to provide more detailed analysis of the physical, noise and environmental park impacts, including Freed Art and Nature Park, Woodland Park and White Oak Bayou Greenway.
   e. Provide additional park land for Sam Houston Park (Pat Henry email 12.13.18).

   f. Develop design alternatives from ramp alignment to column spacing to further mitigate specific impacts to parks and open space.
      a. Reroute ramp at Freed Art and Nature Park
      b. Reduce impact to south bank of White Oak Bayou
      c. Reduce column spacing across White Oak Bayou
      g. Create Little White Oak Bayou (LWOB) Greenway from Acres Home to Freed Art and Nature Park and White Oak Bayou Greenway as an opportunity to mitigate multiple impacts posed by I-45.
         a. Fully daylight and restore LWOB at all highway overpasses and provide benching for a greenway trail. Provide drainage analysis required as part of EIS process.
            1. Between Woodland and Moody Parks (bridge provided in plan but bayou sections are not clear).
            2. At Patton Street (coordinate with HCFCD per Pat Henry email 12.13.18)
            3. At I-610 (coordinate with HCFCD per Pat Henry email 12.13.18)
         b. Restore and expand the existing LWOB pedestrian-bicycle system throughout the greenway as part of an integrated LWOB people-powered transportation system.
         c. Shape detention and provide landscaping within an integrated park design (agreed at Patton St., i-69 south of i-10, Pat Henry email 12.13.18, work with HCFCD, COH to maintain as part of greenway system).
         d. Acquire additional land for flood protection / greenway, especially within the floodway.
         e. Develop landscape with mounding and planting to enhance the greenway park experience while blocking noise and visual impact from I-45 (Limited agreement south of Patton St per Pat Henry email 12.13.18).
         f. Provide appropriate greenway at grade connections to existing streets and new, safe, pedestrian-bicycle connections across the highway.
   h. Fully fund any suggested “deck parks,” especially at N. Main where alternative funding sources do not exist.
      a. Note that, given multiple park needs through out city, local governmental or philanthropic funds should not be relied on to mitigate I-45 park and open space impacts.
      b. See connectivity issues related to unsafe access to deck parks due to feeder roads. TxDOT has committed to reducing feeder road to 2 lanes through N. Main area (Pat Henry at 1/16/2018 Connectivity 2 meeting).

III. Visual Impacts
   a. Visual Impact – undertake a deeper evaluation of visual impact including:
      a. Provide renderings of the project showing what it will look like during the day and at night.
      b. Provide detailed information in writing that includes information about:
         1. Design Plan – landscaping, surface / finishing materials, special place making elements, vandal resistance.
2. Lighting Plan – height and design of lights, technology, focused vs ambient lighting.
3. Maintenance plan – cleaning, mowing, power washing, graffiti mitigation, trash pick-up.
   a. Green Ribbon Plan – Provide a detailed Green Ribbon Plan with a written commitment to utilize all NHHIP Green Ribbon allocation within project boundaries, including design plan and implementation schedule.
   b. Billboards – Provide a commitment that NHHIP project budget will cover all billboard removal costs.

IV. Connectivity
   a. Construct all bridges and streets that are part of NHHIP to the COH standards for pedestrian-bicycle construction and consistent with the City’s complete streets policy.
   b. Improve access for pedestrians, bicyclists and transit riders crossing the NHHIP.
   c. Construct the elements of every bicycle project in the City of Houston Bike Plan that fall in TxDOT right-of-way to the standards described in the Bike Plan. (TxDOT agreed at 3/27 Environmental Justice Impacts meeting).
   d. Provide safe pedestrian-bicycle connections at key streets and intersections including:
      a. Span across I-45 north of Airline Drive.
      b. Across Airline and I-45 at Crosstimbers Street to connect to Northline Commons Stores.
      c. Provide a grade-separated pedestrian facility under I-45 and the elevated feeder roads at CenterPoint easement near Stokes Street to connect Theodore Roosevelt Elementary. (TxDOT agreed at 3/27 Environmental Justice Impacts meeting).
      d. Across I-45 at Calvakade.
      e. Across I-45 at North Main Street.
   f. Provide shared-use path along the west side of Bagby-Hiner Street between Pierce and Allen Parkway to connect Midtown and Fourth Ward to Buffalo Bayou.
   g. Montrose Bridge – Ensure that the design allows for a shared-use path along the south side I-69/US 59 that would connect both to Montrose Bridge, and under Montrose Bridge to extend east to Main Street.
   h. Include a shared-use path along the south side of I-69/US 59 between Montrose and Main Street.
   i. Mitigate for loss of Polk Street pedestrian-bike, transit and vehicular connectivity by shifting pedestrian-bike lanes to Walker Street.
   j. Provide alternate pedestrian-bike connectivity for the removal of North Street Bridge.
   k. Design Cottage Street crossing for safe pedestrian-bicycle access connecting the neighborhoods. Remove U-Turns.

   e. “Deck Park” Connectivity
      a. Provide intersection design improvements for safe access across busy feeder roads to proposed deck parks. Reduce feeder to two lanes.
      b. Design North Main exit ramp to slow vehicles to a design speed of 30mph before reaching cap park area.
      c. Evaluate additional cap opportunities and coordinate with COH and other stakeholders, including:
         1. Deck Park at McKee and Hardy connection to downtown.
         2. Deck Park between North Main Street and Cottage Street Bridges.
      d. Minimize ROW impacts at I-45 / I-610 interchange by selecting lower design speeds, tighter radius.

   g. Frontage Roads
      a. Multi-Lane frontage road design with wide 14” outer lane is a safety concern for residents – reduce width of 14” outer lane along the frontage road, and consider shared-use sidewalk.
      b. Design frontage roads in all of segment 2 as city streets using COH Infrastructure Design Manual (two lane frontage roads in segment 2).
      c. Preserve connectivity and open Little White Oak Bayou across I-45 (see Parks and Open Space item f).
      d. Improve connectivity to downtown
         a. Conduct feasibility analysis and build the San Jacinto / Fulton underpass, alternatively build the Chapman overpass.
         b. Resolve pedestrian and transit access and circulation issues at UH Downtown.
         c. Incorporate comments provided along 44th Ward to improve pedestrian-bicycle connectivity to downtown along Andrew Street.
         d. Coordinate Navigation / Commerce connection to downtown with the COH.
         e. Consider alternate connections to replace Runnels Street closure.
         f. University of Houston Downtown Hernandez Tunnel impacts to be resolved.
         g. Provide Hardy/McKee Street pedestrian-bicycle connections across I-45.
         h. Provide pedestrian-bicycle connection across I-10 between Maury and Semmes Street at Saint Arnold’s Brewery.

V. Flooding and Water Quality
   a. DEIS to recognize existing flooding impact of I-610 culvert on Independence Heights.
   b. Address existing flooding issues before proceeding with new construction.
   c. DEIS to quantify cumulative flooding impact of I-45 paving and provide full mitigation.
      a. Recognize that I-45 is not adding new lanes but is rather a complete rebuild of the highway system. Therefore, it should be brought up to current standards.
      b. Recognize that the COH code is being updated post-Harvey to remove the clause that grandfathers existing pavement from mitigation requirement. It will now require mitigation for the entire project, not just the net pavement being added. TxDOT should build to these new COH code requirements. TxDOT had advised at Water Quality / Flooding Meeting that it would follow COH Task Force lead on detention requirements.
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c. Later, per Pat Henry email dated 4/3/2018, TxDOT plans to mitigate for more impervious surface than required, but will not mitigate for all existing pavement.
d. Conduct Hydraulic and Hydrology analysis of impacts to White Oak Bayou Greenway and Little White Oak Bayou prior to issuing the FEIS.
e. Integrate evaluation of the White Oak diversion channel or other design modifications as it affects the overall function of I-45 and the H&H impact on upstream communities along White Oak and Little White Oak.
f. Work with HCPC to design full mitigation of I-45 within the District's planning for LWOB.

VI. Air Quality

a. Work in partnership with organizations to conduct a health impact assessment (HIA) to evaluate the potential public health impacts including, but not limited to, impacts on:
   1. Physical activity
   2. Pedestrian safety
   3. Mental health
   4. Parks and green space
   5. Mobility

Based on the results of the HIA, include proposed mitigations for addressing adverse public health outcomes. Below is a list of a few health indicators that reflect the greatest challenges to the health of our region (identified by the Houston/Harris County State of Health Committee in its 2015-2016 report):

- 34% of high school students are overweight or obese
- Harris County only has 14 acres of parks/green space per 100 residents, below the national standard of 20 acres
- Motor vehicle accidents (MVAs) are the leading cause of all accidental deaths in Harris County (2012)
- 65.8% of surveyed adults are overweight (BMI of 25.0-29.9) or obese (BMI of 30.0 or above) compared to 64.3% nationally
- 10.8% of Houston-area adults have been diagnosed with diabetes
- 5.5% of Houston-area adults have been diagnosed with some form of heart disease
- 32.8% of Houston-area adults have been diagnosed with high blood pressure
- 91,000 children and 209,000 adults in Harris County have been diagnosed with asthma

The list below highlights some of the potential health outcomes that research has associated with the various social, environmental, and economic concerns outlined in our original letter.

1. Disproportionate impact to low-income communities
   a. Mental health concerns
   b. Health deterioration and premature mortality associated with loss of community-based social resources when low income communities are fragmented

2. Impact to economic development opportunities
   a. Mental health concerns
   b. Obesity/diabetes, due to poorer eating habits

3. Impact to parks and recreation areas
   a. Mental health concerns
   b. Increase exposure to air pollution if located near a freeway

4. Poorly perceived highway/urban interfaces
   a. Increase in motor vehicle and pedestrian/bicycle injuries and deaths
   b. Obesity due barriers to walking

5. Noise impacts
   a. Mental health concerns (particularly stress)
   b. Cardiovascular disease
   c. Hypertension
   d. Children: cognitive impairment, hyperactivity

In particular:

a. Ensure maximum spacing and optimal placement of piers for bridges crossing bayou to not impede future channel restoration;
b. Facilitate access to I-10 corridor R.O.W. in south bank of White Oak Bayou in this area and permit excavation of soil as needed to widen high-water channel and floodplain;
c. Agree to beneficially reuse excavated soils from this are to the extent feasible for ramp construction or projects, thereby eliminating the need for HCPC to incur costs to transport and dispose.
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1. Disproportionate impact to low-income communities
   a. Mental health concerns
   b. Health deterioration and premature mortality associated with loss of community-based social resources when low income communities are fragmented

2. Impact to economic development opportunities
   a. Mental health concerns
   b. Decrease exposure to air pollution if located near a freeway

3. Impact to parks and recreation areas
   a. Mental health concerns
   b. Increase in motor vehicle and pedestrian/bicycle injuries and deaths

4. Poorly conceived highway/urban interfaces
   a. Increase in motor vehicle and pedestrian/bicycle injuries and deaths
   b. Obesity due barriers to walking

5. Noise impacts
   a. Mental health concerns (particularly stress)
   b. Cardiovascular disease
   c. Hypertension
   d. Children: cognitive impairment, hyperactivity
6. Air quality impacts
   a. Respiratory disease (COPD, asthma, allergies, etc.)
   b. Cardiovascular disease
   c. Cognitive function (i.e., neurodevelopmental and neurodegenerative diseases)
   d. Childhood obesity
7. Visual impacts
   a. Views of nature have been correlated with longer life span and better quality of life
   b. Perceived safety
8. Impacts on walkability and cycling
   a. Mental health concerns
   b. Obesity, diabetes
9. Water quality and flooding impacts
   a. Injury and death
   b. Gastrointestinal disease
   c. Exposure to environmental toxins
   d. Respiratory disease after flooding event ends
   e. Mosquito-borne disease after flooding event ends
b. A revised DEIS should include health impact forecasts from fine particulate matter (PM2.5) and mobile source air toxics (MSAT) considering all 9 priority MSATs which include:
   1. Benzene
   2. 1,3 butadiene
   3. Acetaldehyde
   4. Acrolein
   5. Formaldehyde
   6. Naphthalene
   7. Polyunsaturated organic matter
   8. Ethylbenzene
   9. Diesel particulate matter
   c. Establish ongoing exposure assessment plans (indoor and outdoor) at schools and other sensitive sites along the project segment.
   d. Conduct mobile air monitoring in partnership with the Texas Commission for Environmental Quality (TCEQ) to evaluate baseline air quality in neighborhoods along the project expansion to be used to support the evaluation of the highway expansion.
   e. Examine data from the existing air monitor(s) in the project vicinity (North Loop monitoring site) to review historical AQ trends. Compare the mobile air monitoring data with data from the existing air monitor to evaluate differences in AQ data measurements.
   f. Include proposed mitigations for affected homes, group homes, schools, and businesses in the traffic-related air pollution (TRAP) zone. Provide options including, but not limited to, roadside vegetative barriers and HEPA filters in schools, hospitals, and other high-risk sites.
g. TxDOT should work in partnership with TEA and TCEQ to develop recommendations for the state legislature to establish buffer zones for schools away from high traffic roadways.

VII. Environmental Justice
   a. Mitigate displacement – modify project design to minimize impacts to affordable housing units to prevent displacement of residents in affordable homes and rental units. When necessary provide compensation for home owner buy outs and renter relocations commensurate with real market rates for comparable residences in the same neighborhood (i.e., the true cost to relocate to a comparable residence within the same community).
   b. Mitigate noise effects – complete a holistic baseline study of noise impacts and revise the DEIS to include identification of mitigations for residents, such as sound barrier walls, berms, or other devices. - see part I Process, item a. outstanding baseline studies, ii. Noise
   c. Mitigate impacts to cultural resources, specifically places of worship and education/training facilities – these serve as community hubs, childcare centers, and afford local, prestigious educational resources. Modify project design to remove necessity to buy out culturally significant resources, or provide compensation commensurate with real market rates for comparable land and comparable new structure construction in the same community.
      1. DEIS to reflect that Centro Cristiano Alfa Y El Omega Church (5261 North Freeway, Houston TX 77076) is also childcare facility for children age 6+ months.
      2. DEIS to reflect that Culinary Institute LeNôtre is both a public restaurant and a prestigious educational facility with a high rate of student placement post-graduation.
   d. Ensure safe access across/under/over highway by designing pedestrian and bicycle facilities to exceed desirable standards – wide and setback sidewalks, pedestrian level lighting, highly visible and textured crosswalks with adequate crossing signal timing – to ensure safe pedestrian and bicycle infrastructure connects communities on all sides of the project to grocery stores, employment areas, and especially to K-12 schools. - see part IV Connectivity
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   5. Formaldehyde
   6. Naphthalene
   7. Polycyclic organic matter
   8. Ethylbenzene
   9. Diesel particulate matter
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TONIGHT’S TALK

- INTRODUCTION

- WHAT I DON’T HAVE TIME TO TELL YOU.
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WHAT I DON’T HAVE TIME TO TELL YOU

- I-45 WILL WRECK YOUR BAYOU PARKS.
- I-45 WILL DESTROY WILDLIFE HABITAT.
- I-45 WILL MAKE FLOODING WORSE.
- I-45 WILL IMPEDE NEIGHBORHOOD CONNECTIVITY AND ACCESS.
- I-45 WILL REDUCE CITY REVENUES.
- I-45’S BIKE FACILITIES ARE A CRUEL JOKE.
- I-45’S CAPS ARE NOT LIKELY TO SUCCEED.
- I-45 IS SO MUCH MONEY.
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ECOLOGY IMPACT - 81 SPECIES OF BIRDS IDENTIFIED WITHIN THE IMPACT ZONE

AMERICAN KESTREL

SCISSOR-TAILED FLYCATCHER

BELTED KINGFISHER

OSPREY

SAVANNAH SPARROW

ANHINGA
WHAT I DON’T HAVE TIME TO TELL YOU
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REDUCED CONNECTIVITY
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- JENSEN RAMP
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- JENSEN RAMP
- NORTH MAIN RAMP
- NORTH STREET BRIDGE
REDUCED CONNECTIVITY

- JENSEN RAMP
- NORTH MAIN RAMP
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- 55 MPH ACCESS ROADS
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- NORTH MAIN RAMP
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- CUT-THROUGH TRAFFIC
- 55 MPH ACCESS ROADS
- BROADER OVERPASSES
TWO KEY EXCEPTIONS
TWO KEY EXCEPTIONS
- PIERCE ELEVATED
TWO KEY EXCEPTIONS
- PIERCE ELEVATED
- CONVENTION DECK
NOTE: Green space option is conceptual only and would require separate development and funding.
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$134,400,000
PROPERTY
AND SALES TAX / YEAR.
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CONNECTIVITY AND MOBILITY CONCERNS – AIRLINE TO SHEPHERD

- Row being doubled in this area.
- Three lane feeder creates speedway through neighborhood – two lanes preferred.
- Proposed 15' outer feeder to accommodate bicycles is safety concern. Shared-use sidewalks preferred.

Existing typical section Airline Drive to Shepherd Drive

480' proposed row
18 lanes of traffic

225' additional row

255' existing row

Proposed typical section Airline Drive to Shepherd Drive
PROPOSED ROW
OF TRAFFIC

255' EXISTING ROW

TYPICAL SECTION
TO SHEPHERD DRIVE
55 MPH
Study Finds Sharrows Don't Make Streets Safer
momentummag.com
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NOTE: Green space option is conceptual only and would require separate development and funding.
KLYDE WARREN PARK
5.5 ACRES.  $115,000,000
CAP:  $11,000,000 PER ACRE
PARK:  $10,000,000 PER ACRE
30 Acres = $300,000,000

NOTE: Open space option is conceptual only and would require development and funding by parties other than TxDOT
30 Acres = $300,000,000

“Mr. Warren, call your office.”
WHAT I DON’T HAVE TIME TO TELL YOU
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$7,000,000,000,000 TO $10,000,000,000,000
Here are nine things we could buy for $5 billion instead of a border wall:

1. Provide Medicaid for 1.4 million people

The number of uninsured Americans has plummeted since the Affordable Care Act, with 16 million more non-elderly Americans insured than before (elderly Americans are eligible for Medicare). But, 28 million Americans remained uninsured at the end of 2016.

At the program’s current costs, $5 billion could provide Medicaid – cost-effective, quality insurance – for 1.4 million Americans. That’s like giving free, quality health insurance to the entire state of New Hampshire.
BERNIE SANDERS’ PLAN PROVIDES FREE COLLEGE FOR ALL AMERICANS FROM FAMILIES MAKING LESS THAN $125K PER YEAR.
BERNIE SANDERS’ PLAN PROVIDES FREE COLLEGE FOR ALL AMERICANS FROM FAMILIES MAKING LESS THAN $125K PER YEAR.

IT IS BUDGETED AT $47B PER YEAR. HOUSTON’S SHARE OF THAT AMOUNT WOULD BE ROUGHLY $330M.
BERNIE SANDERS’ PLAN PROVIDES FREE COLLEGE FOR ALL AMERICANS FROM FAMILIES MAKING LESS THAN $125K PER YEAR.

IT IS BUDGETED AT $47B PER YEAR. HOUSTON’S SHARE OF THAT AMOUNT WOULD BE ROUGHLY $330M.

THEREFORE, $10 BILLION WOULD PAY FOR FREE COLLEGE FOR ALL NEEDY HOUSTONIANS FOR THE NEXT 30 YEARS.
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WHAT I DO HAVE TIME TO TELL YOU.
WHAT I DO HAVE TIME TO TELL YOU

- 1-45 is a huge investment in the driving economy.
- Driving is the least sustainable thing we do.
- Highway building is bad for cities.
- 1-45 adds lanes to fix congestion, but adding lanes does not fix congestion.
- 1-45 is justified by safety, but it will increase driving deaths.
- 1-45 is justified by air quality, but it will worsen air quality.
- 1-45 will eliminate jobs, displace thousands, and tear communities apart.
WHAT I DO HAVE TIME TO TELL YOU
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$7,000,000,000,000 TO $10,000,000,000,000
For every Pittsburgh, there are dozens of cities subsidizing consumption rather than investing in innovation.
WHAT I DO HAVE TIME TO TELL YOU
- I-45 IS A HUGE INVESTMENT IN THE DRIVING ECONOMY.
- DRIVING IS THE LEAST SUSTAINABLE THING WE DO.
WHY BE WALKABLE?
WHY BE WALKABLE?
1970
10%
2010
How much does your commute cost (or save) society?

Every time you travel you put money into the system, but you also cost the system. Your contribution to and burden on the system differs depending on how you travel.

For example, when you ride the bus you pay a fare – money into the system. Your burden on the system includes the cost of operating the bus, and also less obvious impacts like emissions and noise pollution.

By looking at the ratio of what we put in versus what we cost the system, we see that different ways of travelling are more subsidized than others.

The practice of taking these less tangible costs and benefits into consideration and assigning them a dollar value is known as “full-cost accounting.” While there are many ways of doing this, this infographic shows one example of how those costs and charges can be calculated.

Produced by Discourse Media, data by George Poulos. Calculate your commute at MovingForward.DiscourseMedia.org/CostofCommute
WHY BE WALKABLE?
Hurricane Harvey Is Officially the Largest Rain Event in US History

Brian Kahn
7/10/18 9:05am • Filed to: MAKING IT OFFICIAL

21.9K 42 3
YOU'RE THE WORST!
HOUSTON. . .
YOU’RE THE WORST!
WHY BE WALKABLE?
Urban Sprawl and Public Health

DESIGNING, PLANNING, AND BUILDING FOR HEALTHY COMMUNITIES

Howard Frumkin, Lawrence Frank, and Richard Jackson
GUESS YOUR WEIGHT-RELATED ILLNESS
Unequal Asthma Rates in Houston

Data from the 2015 American Housing Survey reveals the percentage of families with children ages 5 to 17 who have been diagnosed with asthma, gone to the emergency room for asthma or who have taken some sort of medicine for it in recent months.
This man being interviewed after an accident. Like, right after.
WHAT I DO HAVE TIME TO TELL YOU
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Foreword

At the westernmost crossing between Canada and the US stands the Peace Arch monument. The motto “Children of a Common Mother” is written there in two foot high bronze letters, a motto that emphasizes the similar genesis for each country. Looking across the waters of the Georgia Strait from here you can see San Juan Island, site of the short lived “Pig War”, the last armed conflict between Canada (or British North America as it was then known) and the United States. Since that time peace has reigned, but differences persist. In the past fifty years a new and important difference has emerged, the difference between the US metropolitan areas and their Canadian counterparts. What explains these differences, and what can we learn from them? This paper provides an introduction to the question, sketched out in exceedingly broad strokes, for the sake of seeding discussion and provoking debate.
“HIGHWAY INVESTMENT IS THE QUICKEST PATH TO DEVALUING THE INNER CITY.”
“We built an evacuation route. It worked: everybody evacuated.”

- Former public works director, Rochester, NY
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BENEFITS OF THE PROPOSED PROJECT

- +20 mph = 55 mph free flow speed*  
  *(Year 2040 AM Peak)*

- 50% reduction in delay during peak hour around downtown*

- Region-wide reduction in delay and increase to average speeds*

* Potential major air quality improvement for the region – positive overall impacts
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  (Year 2040 AM Peak)
- 50% reduction in delay during peak hour around downtown*
- Region-wide reduction in delay and increase to average speeds*

* Potential major air quality improvement for the region – positive overall impacts

2040 Model Speed VHT Difference Build vs. No-Build

Downtown System

Over $200 million per year in user delay cost savings alone

PRELIMINARY-SUBJECT TO CHANGE
BENEFITS OF THE PROPOSED PROJECT

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- 50% reduction in delay during peak hour around downtown
- Region-wide reduction in delay and increase to average speeds*

*Potential major air quality improvement for the region – positive overall impacts
THIS DOESN‘T HAPPEN.
IT HAS NEVER HAPPENED.
HOUSTON OWNS THE POSTER CHILD FOR HOW IT NEVER HAPPENS.
Road Size, Not Congestion is the Choice
In general terms, traffic is caused by too much demand (from vehicles) meeting too little supply (roads). One solution is to increase supply by building more roads. But that’s expensive, and demand from drivers tends to quickly overwhelm the new supply; today engineers acknowledge that building new roads usually makes traffic worse. Instead, economists have suggested reducing demand by raising the costs of driving in congested areas. The best-known example is the “congestion pricing plan” in London, which charged drivers for entering certain areas of the city. This was implemented in 2003 and has been credited with reducing congestion.
The Fundamental Law of Highway Congestion: Evidence from the US

Gilles Duranton
and
Matthew A. Turner

http://www.pse.ens.fr/axes/convmedad.html
Using: \( \rho_{K}^{P(I)} = \rho_{I}^{P(I)} \times \rho_{K}^{I} \)

Marginal highway welfare gain associated with an additional lane kilometer of highway:

\[
\Delta w_{I} \approx -\rho_{I}^{P(I)} \rho_{K}^{I} P(I) \left(1 + \frac{\rho_{K}^{I}}{200}\right) \frac{I}{K}.
\]
Conclusions

- Fundamental law of traffic congestion: $\rho^I_K \approx 1$
Commuters times on the 405 Freeway may have increased despite a $1 billion project and four in half years of construction along the Sepulveda Pass area, according to one study. Ted Chen reports for NBC4 News at 6 p.m. from west Los Angeles Wednesday, Oct. 8, 2014.

Wednesday, Oct 8, 2014 • Updated at 9:36 PM PDT

After more than four years of construction, $1 billion, two "Carmageddons" and a Jamzilla, a notoriously traffic-choked stretch of the San Diego (405) Freeway has a new carpool lane but not a whole lot of relief to show for it.
California's DOT Admits That More Roads Mean More Traffic

Take it from Caltrans: If you build highways, drivers will come.

ERIC JAFFE | @e_jaffe | 5:00 PM ET | 2 Comments
30%
Reducing congestion: Katy didn’t

By Joe Cortright | 16.12.2015

Here’s a highway success story, as told by the folks who build highways.

Several years ago, the Katy Freeway in Houston was a major traffic bottleneck. It was so bad that in 2004 the American Highway Users Alliance (AHUA) called one of its interchanges the second worst bottleneck in the nation wasting 25 million hours a year of commuter time. (The Katy Freeway, Interstate 10, connects downtown Houston to the city’s growing suburbs almost 30 miles to the west).

Obviously, when a highway is too congested, you need to add capacity: make it wider! Add more lanes! So the state of Texas pumped more than $2.8 billion into widening the Katy; by the end, it had 23 lanes, good enough for widest freeway in the world.
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Source: Houston Transtar

City Observatory
Even Tim Lomax, one of the authors of the congestion-alarmist Urban Mobility Report, has admitted the Katy expansion didn’t work:

“I’m surprised at how rapid the increase has been,” said Tim Lomax, a traffic congestion expert at the Texas A&M Transportation Institute. “Naturally, when you see increases like that, you’re going to have people make different decisions.”

Maybe commuters will be forced to make different decisions. But for the boosters at the AHUA, their prescription is still exactly the same: build more roads.
“WE’RE NOT BULDING ANOTHER KATY FREEWAY!”
CONNECTIVITY AND MOBILITY CONCERNS – AIRLINE TO SHEPHERD

- ROW BEING DOUBLED IN THIS AREA
- THREE LANE FEEDER CREATES SPEEDWAY THROUGH NEIGHBORHOOD – TWO LANES PREFERRED
- PROPOSED 15’ OUTER FEEDER TO ACCOMMODATE BICYCLES IS SAFETY CONCERN. SHARED-USE SIDEWALKS PREFERRED

EXISTING TYPICAL SECTION
AIRLINE DRIVE TO SHEPHERD DRIVE

PROPOSED TYPICAL SECTION
AIRLINE DRIVE TO SHEPHERD DRIVE
CONCERNS – AIRLINE TO SHEPHERD

MANAGED Lanes

255’ EXISTING ROW

EXISTING TYPICAL SECTION
AIRLINE DRIVE TO SHEPHERD DRIVE
NCERNS – AIRLINE TO SHEPHERD

DONE!

EXISTING TYPICAL SECTION
AIRLINE DRIVE TO SHEPHERD DRIVE
WHAT I DO HAVE TIME TO TELL YOU

- I-45 IS A HUGE INVESTMENT IN THE DRIVING ECONOMY.
- DRIVING IS THE LEAST SUSTAINABLE THING WE DO.
- HIGHWAY BUILDING IS BAD FOR CITIES.
- I-45 ADDS LANES TO FIX CONGESTION, BUT ADDING LANES DOES NOT FIX CONGESTION.
- I-45 IS JUSTIFIED BY SAFETY, BUT IT WILL INCREASE DRIVING DEATHS.
This man being interviewed after an accident. Like, right after.
Car Deaths per year per 100,000:

- New York: 3.1
- San Francisco: 2.5
- Portland: 3.2
- Atlanta: 12.7
Car Deaths per year per 100,000:
New York: 3.9
Car Deaths per year per 100,000:
New York: 3.9
San Francisco: 4.0
Car Deaths per year per 100,000:
New York: 3.9
San Francisco: 4.0
Portland: 6.2
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WHY DO HOUSTON’S ROADS KILL SO MANY MORE PEOPLE?
BECAUSE...

...
“THE MORBIDITY OF A TRANSPORTATION SYSTEM IS A DIRECT OUTCOME OF HOW MUCH TIME PEOPLE SPEND DRIVING ON HIGHWAYS.”
Car Deaths per year per 100,000:

New York: 3.9
San Francisco: 4.0
Portland: 6.2
Houston: 12.9
A Novel (But Still Wrong) Argument for Widening a Freeway

FEBRUARY 26, 2019 · 5 MIN READ
Even Agency Experts Agree Road Widening is Futile to Fix Daily Congestion

The project’s advocates have acknowledged that widening I-5 will do nothing to reduce the daily backups on I-5 that are associated with the heavy flows of commuter traffic.
Time and again, cities around the US and around the world have widened freeways with the avowed purpose of reducing congestion. And it's never worked. One need look no further that the current U.S. record holder for widest freeway, Houston’s 23-lane Katy Freeway. It was most recently
So if a wider freeway results in fewer crashes, we ought to see it in the data. Let’s take a look at ODOT’s crash data for this stretch of Interstate 5. ODOT reports crashes on a roadway segment that runs from Lombard Street to the Oregon/Washington border; the project in question represents about half of this segment. Here are the ODOT data on the number of crashes in this roadway.
Crashes on I-5 didn't decline after Lombard/Victory Widening in 2010.
WHAT I DO HAVE TIME TO TELL YOU
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- DRIVING IS THE LEAST SUSTAINABLE THING WE DO.
- HIGHWAY BUILDING IS BAD FOR CITIES.
- I-45 ADDS LANES TO FIX CONGESTION, BUT ADDING LANES DOES NOT FIX CONGESTION.
- I-45 IS JUSTIFIED BY SAFETY, BUT IT WILL INCREASE DRIVING DEATHS.
- I-45 IS JUSTIFIED BY AIR QUALITY, BUT IT WILL WORSEN AIR QUALITY.
demand. The third statement, that congestion saves fuel, requires some evidence to be plausible.

It turns out that there is a strong correlation between a metropolitan area’s average traffic speed and its fuel use. Cities with higher congestion use less fuel per capita, while cities with the least congestion use the most fuel.\textsuperscript{17}

This strange circumstance exists not because driving in traffic is more efficient—it isn’t—but because of the way we pay to
“THE LESS THE CONGESTION, THE GREATER THE CARBON FOOTPRINT.”
“THE MORE HIGHWAY MILES PER CAPITA, THE GREATER THE CARBON FOOTPRINT.”
Cities With the Most Highway Miles: a “Who’s Who” of Decay

By Angie Schmitt | Apr 20, 2012 | 3

This is fascinating. Using data from the FHWA, the esteemed Patrick Kennedy at Network blog Walkable Dallas Fort Worth has cobbled together a list of the American cities with the highest number of estimated highway lane miles per capita.

See if you notice any similarities (this is per 1,000 people):

1. Kansas City – 1.262
2. St Louis – 1.070
3. Houston – .822
4. Cleveland – .816
5. Columbus – .779
6. San Antonio – .759
7. Jacksonville – .745
8. Providence – .742
9. Pittsburgh – .731
10. Baltimore – .724
11. DFW – .719

“It’s like a who’s who of decaying or soon to decay cities,” says Kennedy.
WHAT I DO HAVE TIME TO TELL YOU

- **I-45** is a huge investment in the driving economy.
- Driving is the least sustainable thing we do.
- Highway building is bad for cities.
- **I-45** adds lanes to fix congestion, but adding lanes does not fix congestion.
- **I-45** is justified by safety, but it will increase driving deaths.
- **I-45** is justified by air quality, but it will worsen air quality.
- **I-45** will eliminate jobs, displace thousands, and tear communities apart.
331 BUSINESSES
25,0000 JOBS
331 BUSINESSES
25,000 JOBS
1235 HOMES
5000 PEOPLE
A new home for sale in the area off Loop 610 near Interstate 45 in Houston’s Northside on Jan. 26. The home will eventually be torn down for the massive I-45 widening project that would impact homes and some businesses along a 20-mile route.

Photo: Karen Warren / Karen Warren / Houston Chronicle
THE POWER BROKER
Robert Moses and the Fall of New York
by ROBERT A. CARO
White Man's Road... thru Black Man's Home!
COMMUNITY IMPACTS - CHURCHES THREATENED BY I-45 EXPANSION

GREATER MT. OLIVE MISSIONARY BAPTIST
- 130+ YEAR HISTORY
- PREDOMINATELY AFRICAN-AMERICAN
- REBUILT AFTER IKE, RE-OPENED IN 2016

CENTRO CRISTIANO CHURCH
- 250 MEMBERS
- PREDOMINATELY SPANISH SPEAKING
- PROVIDES CHILDCARE SERVICES

OTHER COMMUNITY RESOURCE IMPACTS:
- CULINARY INSTITUTE LENORTE
- LEONEL CASTILLO COMMUNITY CENTER
WHAT I DO HAVE TIME TO TELL YOU

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- I-45 IS JUSTIFIED BY AIR QUALITY, BUT IT WILL WORSEN AIR QUALITY.
- I-45 WILL ELIMINATE JOBS, DISPLACE THOUSANDS, AND TEAR COMMUNITIES APART.
TONIGHT’S TALK

- INTRODUCTION

- WHAT I DON’T HAVE TIME TO TELL YOU.

- WHAT I DO HAVE TIME TO TELL YOU.

- CONCLUSION
TWO FUTURES
HOUSTON BETS ON THE BAYOU

PARKS AND BIKE PATHS EMBROIDER THE CITY IN THE BAYOU GREENWAY INITIATIVE PLAN.
MOAR ROADZ!!!
OH, BUT WITH TOLL LANES
AMAZON’S HQ2 TOP 20 CITY CANDIDATES

Our competitors are already building their 21st century cities. Houston is falling behind.
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WE’RE NUMBER 65!
WE CAN DO BETTER THAN THAT.
TWO QUESTIONS
1. HOW DID TXDOT END UP AS YOUR CITY PLANNER?
WE'RE ALL NICE GUYS!
WHY GOOD PEOPLE DO BAD THINGS
Understanding Our Darker Selves
JAMES HOLLIS, PH.D.
AUTHOR OF FINDING MEANING IN THE SECOND HALF OF LIFE
“TEXAS IS NOT A PUBLIC TRANSPORTATION STATE.”
YOUR DECISIONMAKING MODEL IS F@&K*D.
2. WHAT IS THE PATHOLOGY THAT HAS LED EVERYONE TO BE SO DEFEATIST?
The Trinity River toll road is dead, and Dallas has Angela Hunt to thank for it

Robert Wilonsky, City Columnist
CHOOSE YOUR BETTER FUTURE.