

Some Assembly Required: Lessons Learned in Complete Streets Implementation

New Partners for Smart Growth Conference St. Louis, MO February 3, 2017





ASLA MISSON AND VISION

2011 ASLA Professional Awards Winner Portland Mall Revitalization – Portland, OR Firm: ZGF Architects, LLP



ASLA Advocacy



U.S. Capitol – Washington, DC



National Complete Streets Coalition





NATIONAL COMPLETE STREETS COALITION

let's complete america's streets



Dangerous by Design 2016



This project was made possible by the following organizations:









Landscape Architecture Complete Streets Projects



Landscape Architects and Allied Professionals



Tom Tavella, FASLA Alta Planning and Design



Bert Kuyrkendall, P.E. City of Chattanooga



Peg Staeheli, FASLA MIG, Inc.



Some Assembly Required: Lessons Learned in Complete Streets Implementation

New Partners for Smart Growth 2017 – St. Louis, MO Tom Tavella, FASLA



What Happened???



Cartoon courtesy of Walter Kulash



The Problem









AutoCentric Transportation Philosophy

- Emphasis
 - Capacity
 - Operational Efficiency
 - Vehicular LOS
 - Minimize Vehicular
 Delay
- Sometimes Prohibited
 - Speeds Lower Than 45 mph
 - Narrow Lanes
 - Two Lane Roads
 - On Street Parking
 - Street Trees/Furniture
 - Crosswalks/Sidewalks





The Size and Character of Road Influences the Quality of Urban Environment





The Results



April 22, 2003



By Martha T. Moore USA TODAY

Why don't Americans walk anywhere?

Old answer: They're lazy. New answer: They can't. There is no sidewalk outside the front door, school is 5 miles away, and there's a six-lane highway between home and the supermarket.

Many experts on public health say the way neighborhoods are built is to blame for Americans' physical inactivity - and the resulting epidemic

The health concern is a new slant on the issue of suburban sprawl, which metro regions have been strugging with for a decade. These health experts bring the deep-pocketed force of private foundations and public agencies into discussions about what neighborhoods should look like.

The argument over whether suburbs are bad for your health will hit many Americans

Cover

the follos who have tackled tobacco, is

enormous," says Ellen Vanderslice, head of America Walks, a pedestrian advocacy group based in Portland, Ore.

A study by the federal Centers for Disease Control and Prevention is tracking 8,000 residents of Atlanta to determine whether the neighborhood they live in influences their level of physical exercise. The Robert Wood Johnson Foundation in New Jersey.

Please see COVER STORY next page >



are developed could be bad

for your health



Source: Mokdad AH, et al. J Am Med Assoc 1999;282:16.









 31% of US adults are obese, 65% are obese or overweight -- and gaining

1-2 lbs a year

- Between 10% and 15% of children and teens are overweight/obese -- and more likely to become obese adults
- Overweight/obesity rates highest in low-income and minority populations
- Obesity health and productivity costs exceed \$147 billion per year
- 956 Billion in cost 2030



Paradigm Shift for Public Health Research: Community Design and Transportation Matter



"Everyone should have access to spaces and places that make it safe and easy for us to walk. ... Walkable communities are good for social connectedness, good for business, good for the environment, and, most importantly, good for our personal health."

- U.S. Surgeon General, Vivek H. Murthy



The Cure



Complete Streets

- Context Sensitive
- Connected
 - Seamless connections among modes
 - Street connectivity
- Zones
- Street components
 - Beyond the travel lane



Context Sensitivity: General Street Typologies



- Boulevard
- Avenue
- Main Street
- Local Street
- Alley
- Additional types and cross-sections as desired by jurisdiction
- Ideal and optional elements vary by street type







Anatomy of a Street







AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

Frontage Zones



Frontage Zone Provides clearance to pedestrians, door openings

Width

Minimum: 0" (adjacent to groundcover) to 18" (adjacent to buildings) Ideal: 2 – 3'



Throughway Zones



Throughway Zone

Unobstructed walkway for two or more

Width

Ideal: 6-10'

Residential Street Minimum: 5'

Commercial Street

Minimum: 6'



Furnishings Zone

- Activities dining, resting, food vendors
- Buffer Protection from vehicles
- Utility parking meters, bus stops, lighting, wayfinding, wifi?
- Environmental pollution mitigation (noise, air, water)
- Landscaping
- Art





 Furnishings: 4 – 10' (tree wells, outdoor dining, gardens, benches, utilities, etc)



Edge Zone

- Curb, clearance for car doors, parking overhang, transit shelters, bike racks, etc.
- Width: 0.5' 6'







Parking

ANGLED PARKING OPTIONS



PARALLEL PARKING OPTIONS

Image Courtesy of Daily Mail (UK), March 29, 2011

- Parallel Parking
 - Narrower roadways
 - Parking lane width -6-8', length -20'
- Angle Parking
 - Wider roadways, more parking per block
 - 45° Angle 16' projection
 - 60° Angle 18' projection
 - Back-in angle parking





Bike Facilities





Bike Lanes: 5-6' wide Between vehicle lanes & parking Most appropriate for streets 25-35 mph

Shared Lanes: Most appropriate for streets ≤ 25 mph Typically installed in middle of street



Cycle Track: Buffered, 6-11' wide



Raised Side Path: Shared Trail adjacent to roadway Min. 10' wide Optimally 12-20' wide Optional landscape buffer or barrier On one side of road

> AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

Images from NACTO Urban Bikeway Design Guide

Midblock Crossings

- 75% of pedestrian fatalities occur away from intersections
- Most appropriate when:
 - High pedestrian volume
 - Intersections > 600' apart
 - Low-to-moderate speeds (<40 mph)
 - Enforcement
- Visibility is paramount!
 - Crosswalk markings
 - Street lighting
 - Bulbouts, Medians
 - Vehicular warnings (HAWK, etc)





Median

- Benefits
 - Aesthetic Improvement
 - Reduces apparent road width
 - Improves pedestrian crossing safety
 - Consolidates left turn movements
- Minimum Width
 - 4' for raised median without landscape
 - 8' for landscaped median
 - 10' to accommodate left turn lanes
 - 14' to accommodate left turn lanes with adjacent median







Green Infrastructure

- Stormwater Management
- Bioswales
- Rain Gardens
- Permeable Pavement















Shared Streets





Shared Streets





Pavements















Furnishings





'PITTSFIELD' BANNERS AND SIGNS







Plantings





Opportunity Spaces










Local Culture - Art











ARTISTIC / SCULPTURAL BENCHES AND PLANTERS











Great Streets









Guidance Today

ITE – Designing Walkable Urban Thoroughfares:

A Context Sensitive Approach

"This report has been developed in response to widespread interest for improving both mobility choices and community character through a commitment to creating and enhancing walkable communities."

From Chapter 1 of the Recommended Practice, 2010

Local guidelines are popping up all over the country and are a great resource.

Model for LIVING STREETS Design Manual -Los Angeles County 2011

NACTO Manuals on Bikeways and Streets







So you have a plan...now what?



Main Street/US 64 Downtown Streetscape - COMPLETED



El Paso Avenue Complete Street – COMPLETED



Pitfalls AFTER Planning: The Usual Suspects

- Doesn't conform to local/state standards
- Community resistance
- Agency resistance (especially with respect to motorized traffic performance)
- Constructability issues
- Funding constraints (including cost escalation)



Jumpstarted with Tactical Urbanism



November 19 & 20 | Broad Avenue Arts District





Design







Challenges

- City engineering and state DOT didn't understand project
 - City has been brought along thru education and is now partner in advocating to TDOT



Hampline – Segment 1&2



Landscape architect – Alta Planning + Design



Payoffs – Broad Avenue Corridor

\$20+ million

in properties purchased, built and/or renovated, completed and/or planned

New Businesses

bringing retail, bars/restaurants, medical/dental, spiritual and related services





Water Tower Pavilion

ArtPlace America Grant Winner

- Water Tower becomes beacon
- Street and loading dock area are knitted together via terraced seating
- 500 foot linear park developed
- Community-based
 programming delivered





El Paso Corridor – Master Plan





Charrette Concept







Challenges

- Discovered massive concrete slab under roadway (former state highway)
 - Solution: Modify design concept to keep centerline in place to avoid significant demolition



El Paso Corridor – Refined Concept



Graphic courtesy Fuss & O'Neill



Design (Fall 2012-Spring 2013)



Landscape architect – Alta Planning + Design



Construction (2013-2014)



Key: progressive City traffic engineer and supportive university (\$)

"Though El Paso Avenue has its own design, the concept is similar to the H **Street and Parker Road** project, with vehicle travel lanes, bike lanes, trees, sidewalks and period lighting. "It's going to be one cool street," Oakes said... He added that capital road projects such as these are paid for with proceeds from the city's one-cent sales tax."

Landscape architect – Alta Planning + Design

Post-construction:

2014

New businesses along corridor
New businesses downtown
Foot and bike traffic
University pursuing mixed use with housing corridor

QUALITY OF LIFE | WINNER



RUSSELLVILLE

Strategies to Overcome

- Use national guidance; change the rules
- Collaborate with community at all stages
- Quantify impacts; accept congestion
- Be flexible with design, but respect the vision
- Tap non-traditional funding; know your contracting community



Complete Streets | Chattanooga



Bertran Kuyrkendall, P.E., CNU-A, LEED AP ND City Transportation Engineer Chattanooga Department of Transportation bkuyrkendall@chattanooga.gov 423-643-5950



Complete Streets | Chattanooga



- VISION
- NEIGHBORHOOD
 [RE]GENERATION
- PROJECTS



VISION | Identity



- MULTIDISCIPLINED
- PARTNERS
 - RPA, PW, ECD, Public Art
 - River City Co.
 - Foundations
 - Nonprofits





GREENHEALTHY





- GREEN
- HEALTHY



Mode Share of Mid-Size Cities



- GREEN
- HEALTHY





GREENHEALTHY



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GREENHEALTHY





GREENHEALTHY



VISION | Measure



WALKABLE CITY



VISION | Method



A CITY OF HEALTHY SELF-SUSTAINING NEIGHBORHODS



VISION | Method



A CITY OF HEALTHY SELF-SUSTAINING NEIGHBORHODS



VISION | Method

STANDARDS



Street Type X

Transect

Standard

=





- DAILY NEEDS
- TRANSIT TO JOBS
- DIVERSITY





- DAILY NEEDS
- TRANSIT TO JOBS
- DIVERSITY





- DAILY NEEDS
- TRANSIT TO JOBS
- DIVERSITY





So does the city of Chattanooga and the Lyndhurst Foundation, which are splitting \$800,000 in costs to refurbish East Lake Park.

The park — home to the city's first zoo, and once a destination for residents and visitors — is the centerpiece of a what used to be a solidly middle-class community at the foot of Missionary Ridge.



- DAILY NEEDS
- TRANSIT TO JOBS
- DIVERSITY



Miguel Lopes, Juan Lopes, and Odani Agustin-Perez play... Photo by Doug Strictions /Times Free Press.
NEIGHBORHOOD [RE]GENERATION | Elements



- DAILY NEEDS
- TRANSIT TO JOBS
- DIVERSITY





- PLANNING/ ZONING
- TRANSPORTATION
 INVESTMENT
- PARTNERSHIPS
- FOCUS ON
 CENTER
- AFFORDABLE
 HOUSING
- SMALL BUSINESS
 INCENTIVES
- GENERATION





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(17) Padrice Institute

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THE RESULTS AND STRATEGIES

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- SMALL BUSINESS **INCENTIVES**
- GENERATION



BUSINESS DEVELOPMENT

GOAL #2:

Bring three [3] vacant commercial spaces 'back.

to life' with temporary events/installations along Glass Street.

Selected Highlighted Successes

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Rest C. L. Lawrence, C. M. 2. The static spectral of the state of t

Transformer: Exhibition and wants with the conversion, and conference have welcost the site to believe we with a measurement to primary the according on

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Mid-Term Strategies:

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Long-Term Strategies:

March Control (1) and species.



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Division 4. BRAINERD OVERLAY ZONE

Sec. 38-13. Brainerd Overlay Zone Standards

- (1) The intent of the Brainerd Road Overlay Zone is to realize the primary objectives of "BRAINERD...a vision for Today" – the community's master plan. Adopted by the Chattanooga City Council in 2011, the Plan's goal is to create a vibrant town center along Brainerd Road that is well connected to adjacent neighborhoods.
- (2) Applicability.
 - (a) The following requirements apply to ALL properties fronting Brainerd Spring Creek Road intersection to the East Brainerd Road intersectio Overlay Zone Map).

- PLANNING/
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- **GENERATION**

PROJECTS | Virginia Avenue Greenway

- **FUNDING**: \$400k City, Lyndhurst
- OUTREACH: Urban planning charrette
- DESIGN STANDARDS: CSDS, MUTCD
- OBSTACLES/
 INNOVATIONS:
 Bike/Ped lane

PROJECTS | Virginia Avenue Greenway

- **FUNDING**: \$400k City, Lyndhurst
- **OUTREACH**: Urban planning charrette
- **DESIGN STANDARDS**: CSDS, MUTCD
- OBSTACLES/ INNOVATIONS: Bike/Ped lane

PROJECTS | MLK/Bailey

CREEN ENHANCED SICYCLE LANE MARKING 4¹ DSYL 4² STOP BAR 4² 4³ 5³ 5⁴ 5⁴

- **FUNDING**: \$2m, City, Benwood, CMAQ, STP
 - OUTREACH: Neighborhood meetings, online survey
- **DESIGN STANDARDS**: NACTO, CSDS
- OBSTACLES/ INNOVATIONS: Road diet, green lanes

PROJECTS | Glass Street

FUNDING: \$650k City, CDBG **OUTREACH:** GHC planning charrette **DESIGN STANDARDS:** CSDS, ITE Walkable Urban Thoroughfares **OBSTACLES**/ **INNOVATIONS:** State route, public art

PROJECTS | Station Street

- FUNDING: \$500k
 City, Benwood,
 Developer
- OUTREACH: Stakeholders
- **DESIGN STANDARDS:** CSDS, ITE Walkable Urban Thoroughfares
- OBSTACLES/ INNOVATIONS: Timeframe, PPP, stormwater

Complete Streets | Chattanooga

- VISION
- NEIGHBORHOOD
 [RE]GENERATION
- PROJECTS

Some Assembly Required: Lesson Learned in Complete Streets

Implementation

New Partners for Smart Growth 2017 – St. Louis, MO

Peg Staeheli, FASLA

Implementation

Full Replacement

- Yesler Way, Seattle WA
- Bell Street, Seattle WA

Reconstruction

- Winslow Way, Bainbridge Island WA
- Main Street Auburn WA

ADA and Ped/Bike Upgrades

Historic Downtown
 Bellingham,WA

Top Aerial View Yesler Way, Seattle WA MIG | SvR Lower Bell Street, Seattle WA MIG | SvR

Elements:

- Arterial
 - Major access downtown Seattle to Lake Washington
- Multi-modal
 - Transit
 - Streetcar
 - Bicycles
 - Pedestrian (Parks, Schools, Senior & Multifamily Housing)
- Tree Protection and New Trees
- Street Furnishings

Yesler Way, Seattle WA MIG | SvR

Lessons Learned

- Construction Phasing
 - Streetcar came first with no time to pause to complete the street
- Space is space / right of way
- ADA and Hillside intersections
- Mixing bikes and peds
- Mixing school age and commuters
- Tree Protection and Pressure
- Street Furnishings and art

Yesler Way, Seattle WA MIG | SvR

Details

- Mixing Zones
- Pause points

Details Yesler Way, Seattle WA MIG | SvR

Details

- Pause points
- Hillclimb assist- all ages
- Tree enhancement

Complete Streets – Full Replacement Bell Street, Seattle WA

Elements:

- Park Use in Active Street
 - Links South Lake Union to Waterfront
- Multi-modal
 - Bus, Delivery Trucks, Emergency
 - Bicycles
 - Pedestrian
- Vegetation
- Street Furnishings

Bell Street, Seattle WA MIG|SvR

Complete Streets – Full Replacement Bell Street, Seattle WA

Bell Street Early Model Seattle WA MIG | SvR

Lessons Learned

- Interagency approvals & permits,
- Funding
- What is underground might drive design
- Grades might dictate approach
- Working with less- theory vs practice
- Staff changes trends changeadaptive management
- Gentrification and getting along
- Pilots it now looks easy

Complete Streets – Full Replacement- Bell Street, Seattle WA

Complete Streets – Full Replacement- Bell Street, Seattle WA

Complete Streets – Full Replacement- Bell Street, Seattle WA

Complete Streets – Reconstruction Winslow Way, CoBI, WA

Winslow Way, Bainbridge Island WA MIG | SvR

Elements:

- Main Shopping Street
 - Town Center
 - Tourism
 - Parking
- Multi-Use
 - Commuter Corridor
 - Shopping
 - Bicycles
 - Pedestrians
 - Events
- Green Stormwater & Trees
- Street Furnishings

Winslow Way: Broad Goals and Dreams



- Keep some of the old elements- benches, bricks, community driven art, trees.
- Wider, well-lit, accessible crosswalk with texture treatment
- Bicycle racks, landscaping, pedestrian seating areas
- Stormwater Planter, street trees, porous paving

Complete Streets – Reconstruction Winslow Way, CoBI,WA





Winslow Way Before and After, Bainbridge Island WA MIG | SvR



Complete Streets – Reconstruction Winslow Way, CoBI, WA



Winslow Way Before and After, Bainbridge Island WA MIG | SvR



Complete Streets – Reconstruction-Main Street, Auburn WA



Elements:

- Traditional Shopping Street
 - Town Center
 - Not capturing commuters
- Multi-Use
 - Light Rail Commuter Corridor
 - Shopping
 - Bicycles
 - Pedestrians
 - Events
 - Parking
- Green Stormwater & Trees
- Street Furnishings



Main Street Existing Conditions, Auburn WA MIG|SvR

Complete Streets – Reconstruction- Main Street, Auburn WA





Main Street Concepts, Auburn WA MIG | SvR





Main Street Concepts, Auburn WA MIG | SvR



Elements:

- Historic Downtown Streetscape
 - ADA retrofits
 - Established character









Elements:

- Multi-modal
 - Transit
 - Commercial
 - Bicycles / College Town
 - Pedestrians
 - Parking
- Mature Trees and pavement
- Street Furnishings
- Drainage and GSI







Downtown beilingnam vvA NIG Jovk





Lessons Learned

- Streetscape Standards and Adaptive Design
- Maintenance crews key to material decisions
 - Pavers
 - R2D2
 - Scoring
- Pavers and ADA
- Parking and ADA





Downtown Bellingham WA MIG | SvR

Lessons Learned

- Trends and Politics
 - Adaptive design
- Construction
 - Which projects sets the stage
 - Who has control
- Tree Enhancement & Protection
- Street Furnishings





Downtown Bellingham Details WA MIG | SvR



Complete Streets – Lessons Learned Integrating Green Stormwater Infrastructure













Complete Streets – Lessons Learned Integrating Green Stormwater Infrastructure











Complete Streets – Assembling all the little parts requires the team to pay attention; there are no fixed directions





Questions



2015 ASLA Professional Award Winner The Lawn on D – Boston, MA Firm: Sasaki Associates, Inc.





Contact Information

Tom Tavella, FASLA

Alta Planning and Design thomasrtavella@gmail.com

Bertran Kuyrkendall, P.E.

City of Chattanooga bkuyrkendall@Chattanooga.gov

Peg Staeheli, FASLA

MIG, Inc. pstaeheli@migcom.com

Mark Cason

American Society of Landscape Architects mcason@asla.org

