Safety in the Suburbs
Cobb County ADA Transition Plan & Roadway Safety Audits

Cobb County DOT
Eric Meyer
March 2019
Benefits of Improving Walkability & Bikeability

**Improves Safety for All Road Users**
Streets that are designed for pedestrians create safety benefits for all users of the road.

**Preserves Open Space and Greenspace**
Compact, walkable places allow for more green space, water sources, and wildlife habitats.

**Public Infrastructure Savings**
Compact, walkable places save construction and maintenance costs on roadway and other public infrastructure investments.

**Improves Economic Mobility**
Concentrated jobs that are easily accessible on foot provide residents with more opportunities.

**Improves Housing Values**
Walkable communities have higher housing values and greater stability than auto-dependent communities during an economic downturn.

**Improves Mental Health**
Walking reduces symptoms of depression and anxiety, and prevents the onset of cognitive decline while improving mental function.

**Attracts Businesses**
Walkable downtowns have lower vacancy rates and offer convenient commutes for residents and visitors.

**Attracts Visitors**
Walkable communities with lively streets and storefronts, short lengths between attractions, and a unique sense of place attract tourist dollars.

**Attracts Recreation Spending**
Outdoor recreation culture loves walkable places. Trails and safe streets attract events and people who pump money into the local economy.

**Reduces Individual Transportation Costs**
Residents save money on costs associated with transportation, including vehicle ownership and operating costs, and parking fees.

**Improves Air Quality**
Replacing short vehicle trips with walking reduces emissions and our reliance on fossil fuels.

**Improves Physical Health**
Residents of walkable places have lower rates of chronic disease related to physical inactivity and are twice as likely to get enough physical exercise.
Demand for Walkability & Bikeability in Cobb County

Survey results from Cobb County Greenways and Trails Plan

- 72% of Respondents support more trails and greenways
- 71% Cited access and connectivity as a barrier to using trails

Regional demand map for walking and biking, from ARC’s “Walk, Bike, Thrive”
80+ MILES OF SHARED-USE AND SIDE PATHS

REGIONAL ATTRACTIONS:
1. SILVER COMET TRAIL
2. NOONDAY CREEK TRAIL
3. KENNESAW MOUNTAIN NAT’L BATTLEFIELD PARK
4. CHATTAHOOCHEE RIVER NAT’L RECREATION AREA
5. MOUNTAIN TO RIVER TRAIL
6. ARMY CORPS PROPERTY TRAILS
Greenways and Trails Plan

*Priority Projects*

- 28+ Miles of New Trails
- 8 New Connections to Existing Trails
- Improved Access in All 4 Commission Districts
- New Connections to 10 Park Properties
- Expanded Connectivity for All 6 Cities
- 3 Opportunities for Regional Connections

### Priority Greenway and Trail Projects

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>From</th>
<th>To</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Chattahoochee River Trail</td>
<td>Mableton Pkwy</td>
<td>I-285</td>
<td>3.11 miles</td>
</tr>
<tr>
<td>P2</td>
<td>Silver Comet Connector</td>
<td>East-West Conn</td>
<td>Chattahoochee River</td>
<td>3.38 miles</td>
</tr>
<tr>
<td>P3</td>
<td>Rottenwood Creek Trail (Ph 1)</td>
<td>Alumni Dr</td>
<td>Franklin Gateway</td>
<td>3.31 miles</td>
</tr>
<tr>
<td>P4</td>
<td>Austell Powder Springs Rd Trail</td>
<td>Joe Jerks Blvd</td>
<td>Silver Comet Trail</td>
<td>4.16 miles</td>
</tr>
<tr>
<td>P5</td>
<td>Allatoona Creek Greenway</td>
<td>Harrison H.S.</td>
<td>Allatoona Creek Park</td>
<td>5.03 miles</td>
</tr>
<tr>
<td>P6</td>
<td>Noonday Creek Trail</td>
<td>Bells Ferry Trailhead</td>
<td>Noonday Creek Park</td>
<td>3.67 miles</td>
</tr>
<tr>
<td>P7</td>
<td>Nickjack Creek Greenway</td>
<td>Chattahoochee River</td>
<td>Buckner Rd</td>
<td>3.05 miles</td>
</tr>
<tr>
<td>P8</td>
<td>Hyde Farm-Johnson Ferry Trail</td>
<td>Lower Roswell Rd</td>
<td>Johnson Ferry Rd</td>
<td>2.72 miles</td>
</tr>
</tbody>
</table>
Greenways and Trails Plan
CobbLinc Forward

- Sunday Service
- Limited-Stop Route from Town Center to Midtown Atlanta
- 16 more miles all-day frequent (every 15 min) weekday service
- Better reliability on local routes for 70% of existing passengers
- Later night and weekend service and more midday service
- 42 square miles of on-demand coverage with TNC partnership zone
- Fits within existing budget
Cobb County ADA Transition Plan
Introduction
The Cobb County Americans with Disabilities (ADA) Transition Plan is a plan aiming to make the county’s transportation system more accessible to people with disabilities.

The Plan outlines the identified needs and potential improvements in the County’s physical infrastructure, policies, and processes and the necessary steps to address deficiencies.
Why we do it?

- Title II of ADA requires non-discrimination on the basis of disability in state and local government services. It is required a Transition Plan to include the following elements to comply with the ADA Act:

  - Identify physical barriers in the public agency’s facilities
  - Describe the methods that will be used to make the facilities accessible
  - Outline the steps necessary to achieve compliance with the timeframe.
  - Identify the public official responsible for the implementation of the Transition Plan.
Purposes of Cobb County ADA Transition Plan

- Provide a comprehensive strategy to guide the County to create accessible, barrier-free passageways.
- Guide the work of future projects.
- Rehabilitate areas that are inaccessible to people with disabilities.
- Create a culture that considers accessibility for people with various disabilities as a normal practice for new development.
Cobb County ADA Transition Plan History

- 1997 - First Transition Plan;
- 2011 - Update to meet 2010 Standards;
- 2017-2018 - New Update:
  - Transit Focused;
  - New Technology;
  - Checking new sidewalks and trails.
Survey Area

- Along bus routes
- 245 miles
- 215 intersections
- 3992 ramps
- 2254 curb-cuts
Data Collection for Sidewalks

- Georgia Tech Sidewalk Sentry™ system, runs on Android and iOS phones

- While the wheelchair traverses the sidewalks, Sidewalk Sentry™ collects video, high-frequency data on vibration and tilt, and second-by-second GPS position.

- When processed, produce geo-located data points that represent averages data.
Data Collection - Sidewalks

- Also takes screen captures every 50 feet via its interactive web interface. Screen captures are used to identify sidewalk quality problems.

- Sidewalk defects are automatically location-tagged for GIS mapping.

- Researchers generate problem reports
Issues Identified – Sidewalks

- Uneven: 60%
- Potholes: 16%
- Debris: 15%
Data Collection - Ramps and Curb-cuts

- Georgia Tech Sidewalk Scout™ app.

- The app automatically presents data input fields tailored to the ramp type.

- The inspector measures and enters all applicable ramp parameters into the app.

- The inspection data, with a photo and GPS location, are uploaded to sidewalk asset management system.
Issues Identified - Ramps and Curb-cuts

- **Ramps:**
  - Cross Slopes: 19%
  - Right/Left Flare Slopes: 19%
  - Gutter Slopes: 11%

- **Curb-cut:**
  - Right/Left Flare Slopes: 34%
  - Right/Left Cross Slopes: 28%
  - Cross Slopes: 22%
Prioritization Methodology

Project Hierarchy
- Public Requests
- Immediate Need
- Potential Need

Project Evaluation
- Severity of defect
- Expected pedestrian activity

Project Delivery
Prioritization Evaluation

- Severity of defects (maximum score of 100)
- Pedestrian Activity (maximum score of 100)

### Performance Measures for Sidewalk Sections
- Status of section based on type of defects
- Width
- Number of defects per section

### Performance Measures for Curb Cuts
- Cross Slope
- Width
- Ramp Slope
- Ramp Cross Slope

### Performance Measures for Crosswalks
- Cross Slope
- Missing Crosswalks
- Marking Conditions
- Other Surface Issues

### Performance Measures for Ramps
- Ramp Absent
- Cross Slope
- Ramp Slope
- Width
- Flare Slope
- Gutter Slope
- Landing

### Performance Measures for Pedestrian Signals
- Push Button Conditions
- Push Button Height / Reach
- Pedestrian Signs
- Condition of Signal Heads

### Performance Measures for Pedestrian Activity
- Population, Households without access to a vehicle and Employment within ½ mile
- Senior Population
- Served by paratransit and Disabled population within ½ mile
- Ridership on nearby bus stops
- Distance to the nearest school
- Distance to other public facilities
Policy Recommendations

- Construction policy
  - Ensuring standards are being met in construction
  - Encourage use of digital levels and other relevant tools during construction
- Improve ease of reporting ADA issues
  - Add a separate category for ADA related issues on YourGov
  - Webform on County’s website to report ADA related issues
- Improve accessibility of information
Project Delivery and Next Steps

- Update construction monitoring standards to ensure design standards are being met

- Prioritized list of projects with a path to delivery:
  - Grouping projects by location to streamline project delivery
  - Separate funding bucket for ADA improvement
  - Seek to utilize alternate funding sources for project delivery

- Next ADA Transition Plan Update
  - Review status of projects recommended in this ADA Transition Plan Update
  - Define focus area for next ADA Transition Plan: Schools, Major employers, CBD
Roadway Safety Audits
- Sunday Service
- Limited-Stop Route from Town Center to Midtown Atlanta
- 16 more miles all-day frequent (every 15 min) weekday service
- Better reliability on local routes for 70% of existing passengers
- Later night and weekend service and more midday service
- 42 square miles of on-demand coverage with TNC partnership zone
- Fits within existing budget
Boarding / Alighting
Transit Access (local context)
Transit Access (local context)

SITE 1 PLAN VIEW: Cumberland Parkway/Cumberland Boulevard

A

B

C

Design to include pedestrian and bicycle facilities on the Cumberland Connector Road.

Erect signs to indicate Cumberland Parkway and the Cumberland Connector Road.

Reduce right turn lane width to 11 feet.

Install 12 ft. wide curb adjacent to left turn lane.

Provide bike lanes and sidewalks.

Provide pedestrian crossing at 7th Street.

Install bike lanes.
Road Safety Audits

Five Completed RSAs
(20 miles)

1) Veterans Memorial Hwy
2) Johnson Ferry Road/Roswell Road
3) South Cobb Rd/Windy Hill Road/Austell Road Triangle
4) Safe Routes to School Corridors in NW Cobb
5) Sandy Plains Road
OVERVIEW

- Participants represented GDOT, Cobb DOT, Cobb Police, Cobb Schools, PEDS, GA Safe Routes, and Consultants
- Walked full length of each corridor
- Noted driver and pedestrian behavior, existing ped facilities and condition, crossing distance, signal timing, ADA compliance
Road Safety Audits

SUMMARY DOCUMENTS INCLUDE:

- Corridor Conditions
- Intersection Conditions
- Recommendations Maps
- Priority Action Steps
Road Safety Audits

Recommendations grouped into:

- ADA improvements
- Sidewalks/sidewalks
- Lighting
- Signage and striping
- Signal improvements
- Medians/median islands
- Routine maintenance
- Enforcement operations
- Further Engineering required
Arterial Design Considerations
Lateral Separation - Buffers

- 6 ft minimum on arterial roads
- 4.5 ft minimum on collector roads
- also if planting trees
- 2 ft minimum if constrained

- Width per desired LOS
Lateral Separation - Buffers

POOR

BETTER
Local Example: Johnson Ferry Rd
Driveway Design Strategies

- Consolidate them
- Improve sight lines
- Slow them down (raised, width, radius)
- Bring awareness to them (signs, markings)
- Set them back
- Be experimental
Local Example from RSA: S. Cobb Dr (sidepath proposed in this location)
Access Management

Uncontrolled accesses create 8 potential conflict points at every driveway.

A raised median and consolidating driveways reduce conflict points.

Intro Fig. Access Management - Caption: Benefit of Access Management
Alert Trail Users
Alert Motorists
Experimental

FHWA issued interim approval for optional use of green colored pavement for bike lanes in 2011. FHWA’s evaluation found “positive operational effects” associated with green colored pavement in and between bike lanes, including more accurate bicyclist positioning through and across conflict areas. The research also revealed that green colored pavement increased driver awareness that bicyclists may be present, and made bicyclists feel safer.

Charlotte, NC – treatment not approved by FHWA, needs request to experiment
Experimental

- Experimental measures are not yet proven to improve safety...although: pavement markings increase visibility at potential conflict areas while improving recognition of high-volume trails at street crossings
- Establish a consistent treatment option that clearly identifies sidepaths in Cobb
- Green markings/experimental treatments improve wayfinding for trail users
- Standard crosswalks are designed for pedestrians only
Experimental

FHWA’s interim approval for green, however, is explicitly limited to bike lanes (exclusive on-street bikeways, which could also include separated bike lanes) and does not cover shared-use paths or shared-use path crossings.
Midblock Crossings
What Are They?

Potential Characteristics:
- Signalized or Unsignalized
  - Signage and or beacons
- Volume and Class
  - Local Collector up to State Highways
- Physical Features
  - Bumpouts
  - Median Refuges
  - Raised Crosswalk
  - Grade-Separated

US 36, Boulder, CO
Source: Google

SH7, Lyons CO
Source: Google

Midblock Crossing Location, Before and After
Conflicts Points
When Are They Appropriate?

Existing Pedestrian Desire Line
- Schools
- Parks
- Cultural Facilities
- Transit Stops

Can be appropriate in locations with excessive walking distance to nearest signalized crossing

Midblock Crossing Location, After
Source: NACTO
Types
Rectangular Rapid Flashing Beacons

Providing secondary installations of RRBs on median islands improves driver yielding behavior.

Median refuge islands provide added comfort and should be angled to direct users to face oncoming traffic.

Rectangular Rapid Flash Beacons (RRFB) dramatically increase compliance over conventional warning beacons.

W11-15, W16-7P
Types
Pedestrian Hybrid Beacon (PHB)

Hybrid Beacon

Should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs

Push button actuation
Lighting
Lighting and Crash Safety

- Streetlighting helps to reduce night-time crashes by improving visibility.
- Can reduce pedestrian crashes by approximately 50%, especially if used at intersections.
- Can help to aid navigation.
- Route lighting can help to reduce glare from vehicle headlights.
Lighting and Personal Safety

- There is no evidence that increased outdoor lighting deters unwanted behavior or crime.
- Lighting public space increases safety perceptions, which may encourage use.
- Lighting can aid in emergency vehicle response.
Thank you!

Questions

Eric Meyer
eric.meyer@cobbcounty.org