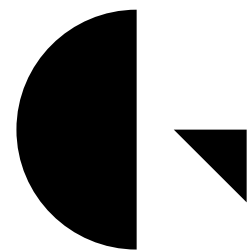




Can I Sell You a Trail?



**Gresham
Smith**

Genuine Ingenuity

My Experience

- 30+ Years Multi-Modal and Transportation projects
- Recreational; Community and Regional Linkages; Access to Transit
- Spent 4 years in the public sector
- My wife & I are big trail users – especially on vacations



Today's Agenda

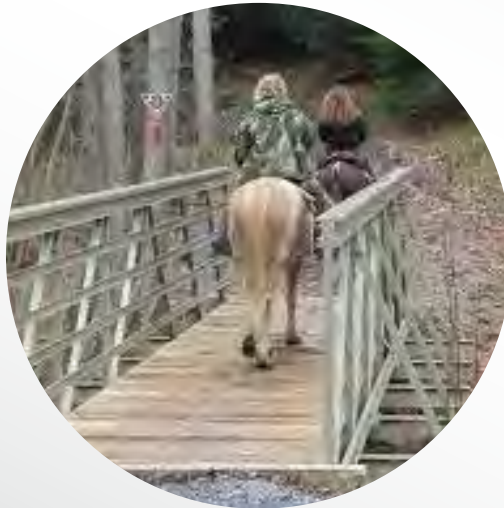
- Trail Planning & Public Engagement
- Trail Design
- Trail Operations & Maintenance
- Q&A





Trail Planning

Accommodate all users





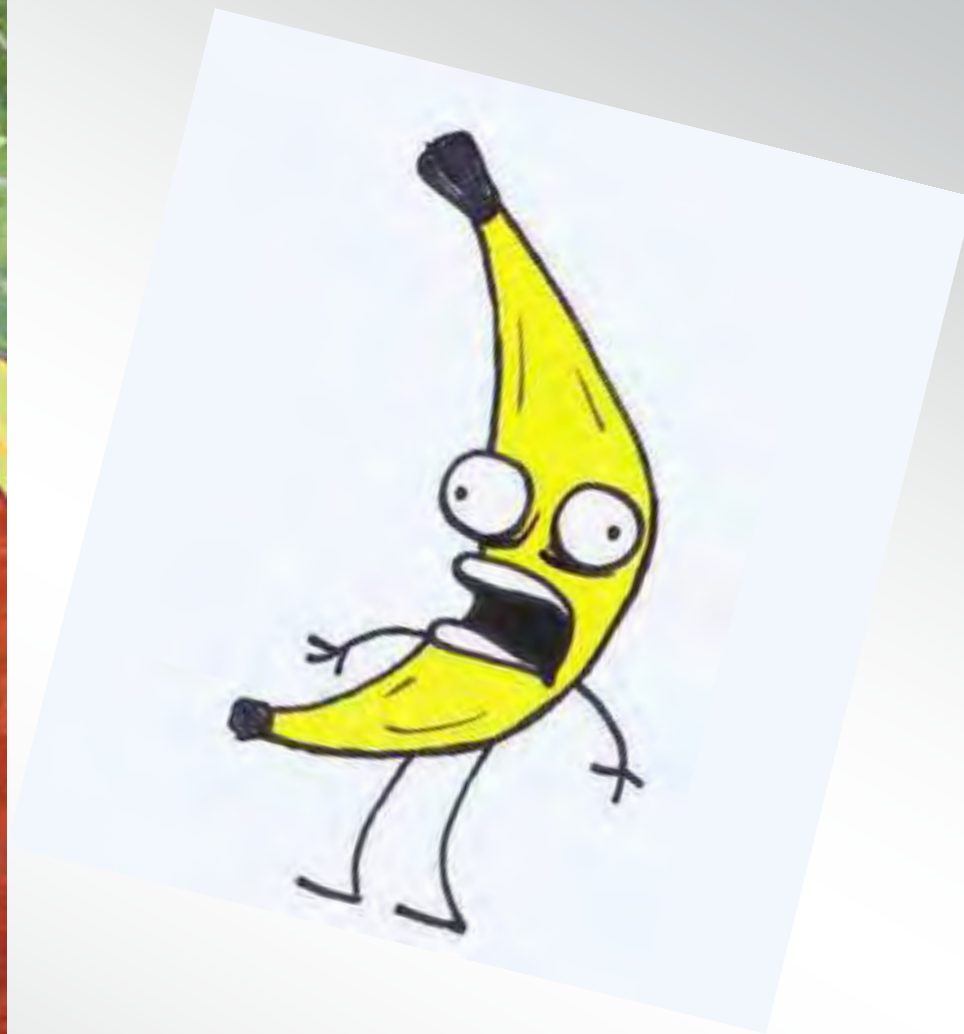
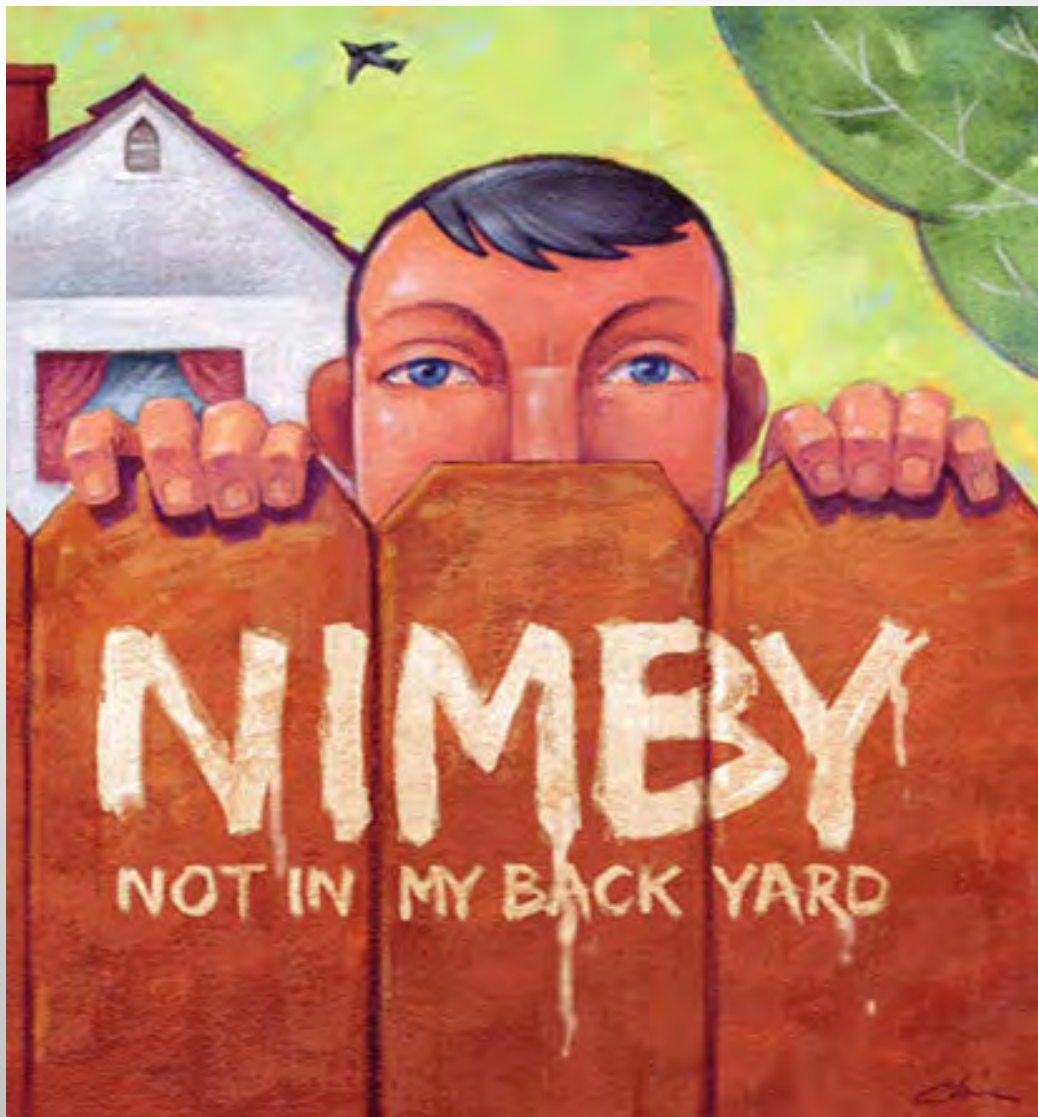
RAILS TO TRAILS
OF THE WITHLACOOCHEE
ANNUAL BIKE RIDE IN OCTOBER
→ OCTOBER 4, 2009 ←

Planning Objectives

- Close gaps in existing network (complete earlier trail plans)
- Provide safe and separated facilities for non-motorists
- Community connections
- ***Community engagement***



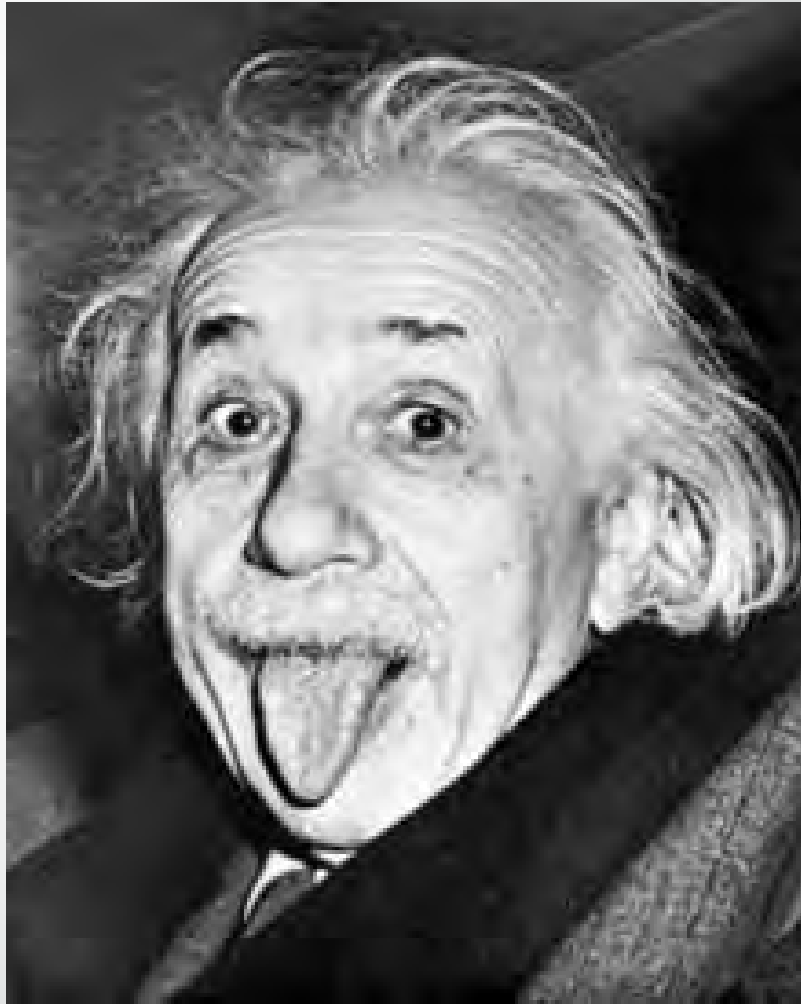




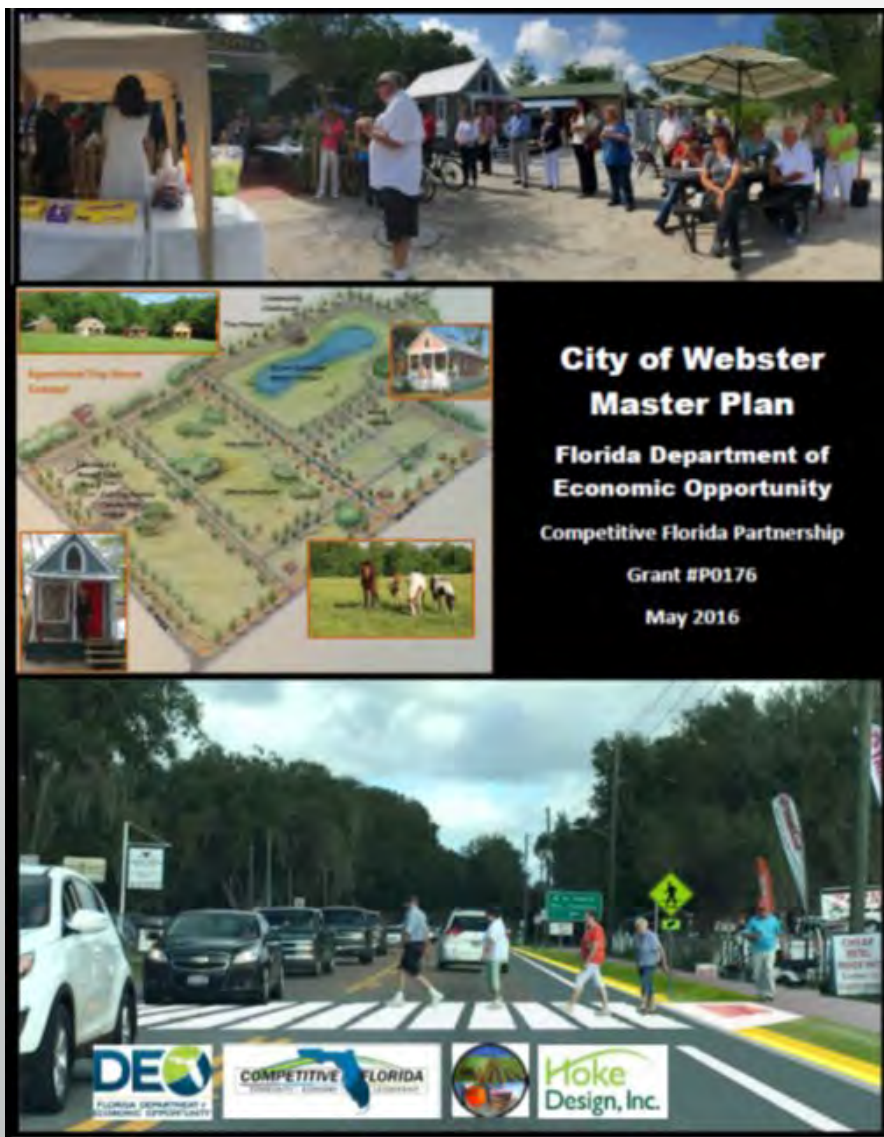
Rule 1:

Inform...
don't sell





"WHO CAME UP WITH THIS BRILLIANT IDEA ?!"



**City of Webster
Master Plan**

**Florida Department of
Economic Opportunity**

Competitive Florida Partnership

Grant #P0176

May 2016

DEO
FLORIDA DEPARTMENT OF
ECONOMIC OPPORTUNITY

COMPETITIVE FLORIDA
Partnership

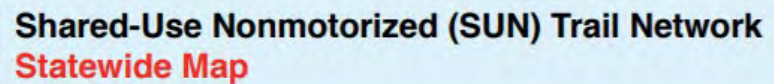
**Hoke
Design, Inc.**

Florida Greenways & Trails System Plan

2013-2017



Florida Greenways + Trails



Shared-Use Nonmotorized (SUN) Trail Regional System – Coast to Coast Trail



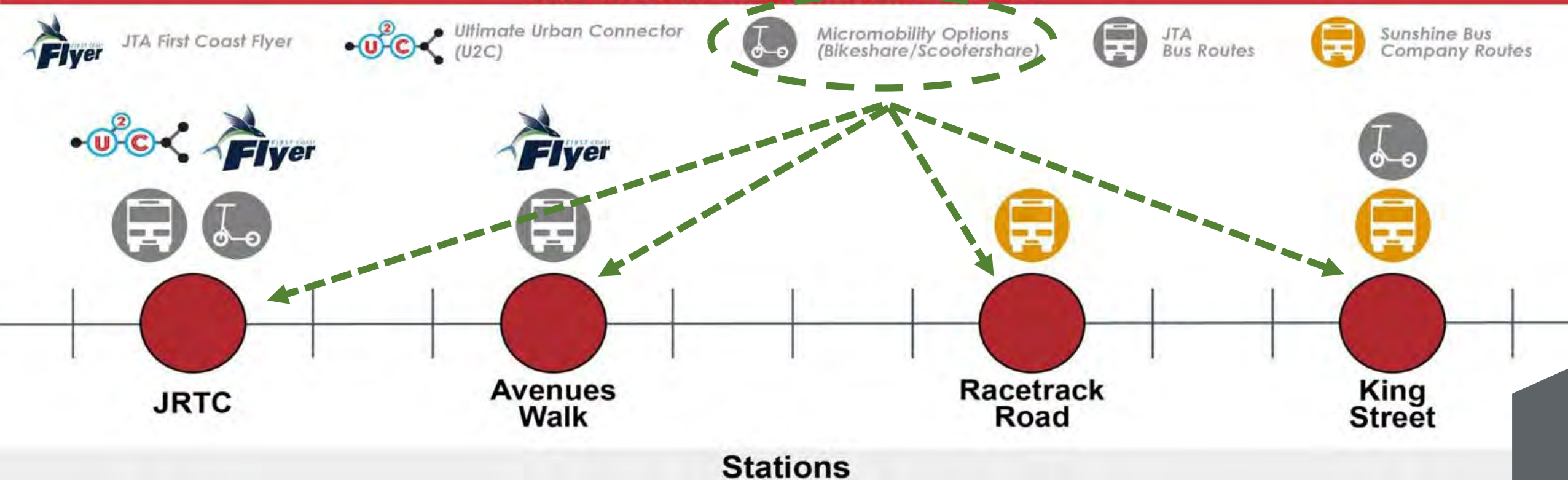
Shared-Use Nonmotorized (SUN) Trail Regional System – St. Johns River-to-Sea Loop

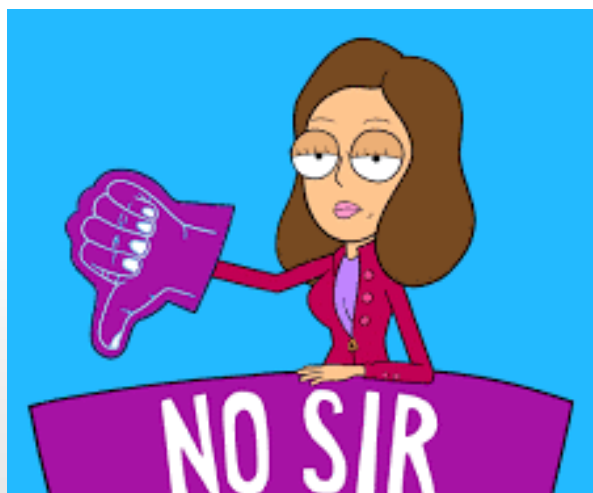


Commuter Rail Multi-Modal Access

All stations are accessible by bus routes operated by the Jacksonville Transportation Authority and/or St. Johns County's Sunshine Bus Company.

Bus & Other Multi-Modal Services





22 WAYS TO SAY

I DON'T LIKE

1. I am not passionate about it.
2. I am not a big fan of it.
3. I am not keen on it.
4. I am not mad about it.
5. I don't appreciate it.
6. I'm not crazy about it.
7. I'm not really fond of it.
8. That's not for me.
9. That's not for me.
10. That's not my thing.
11. I've had enough.

I DON'T LIKE



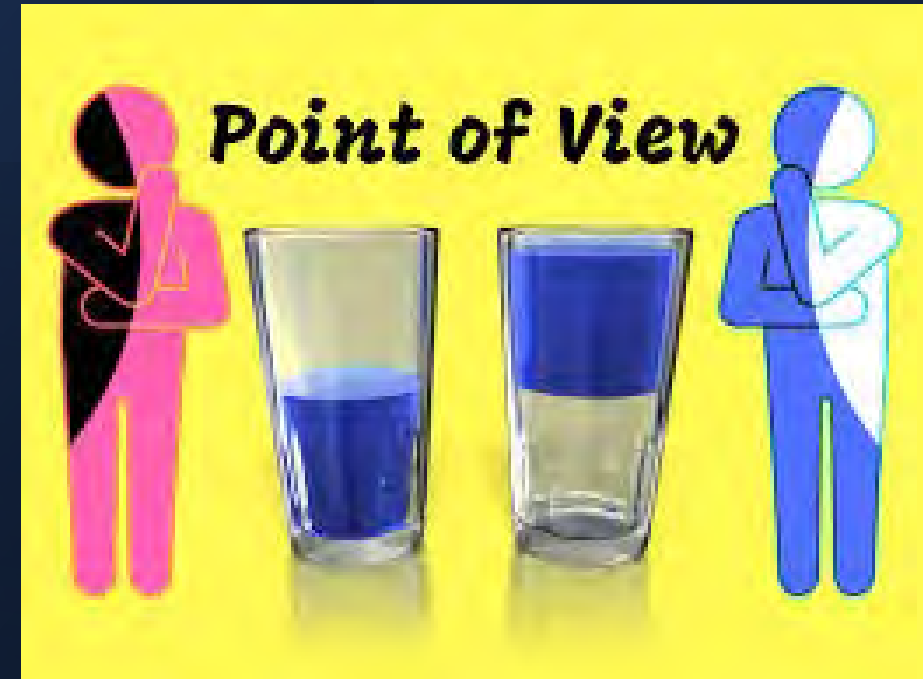
I DON'T LIKE

15. I loathe it.
16. I'll pass.
17. I'm not into it.
18. I detest it.
19. I dislike it.
20. I hate it.
21. I am sick of it.
22. I can't stand it.

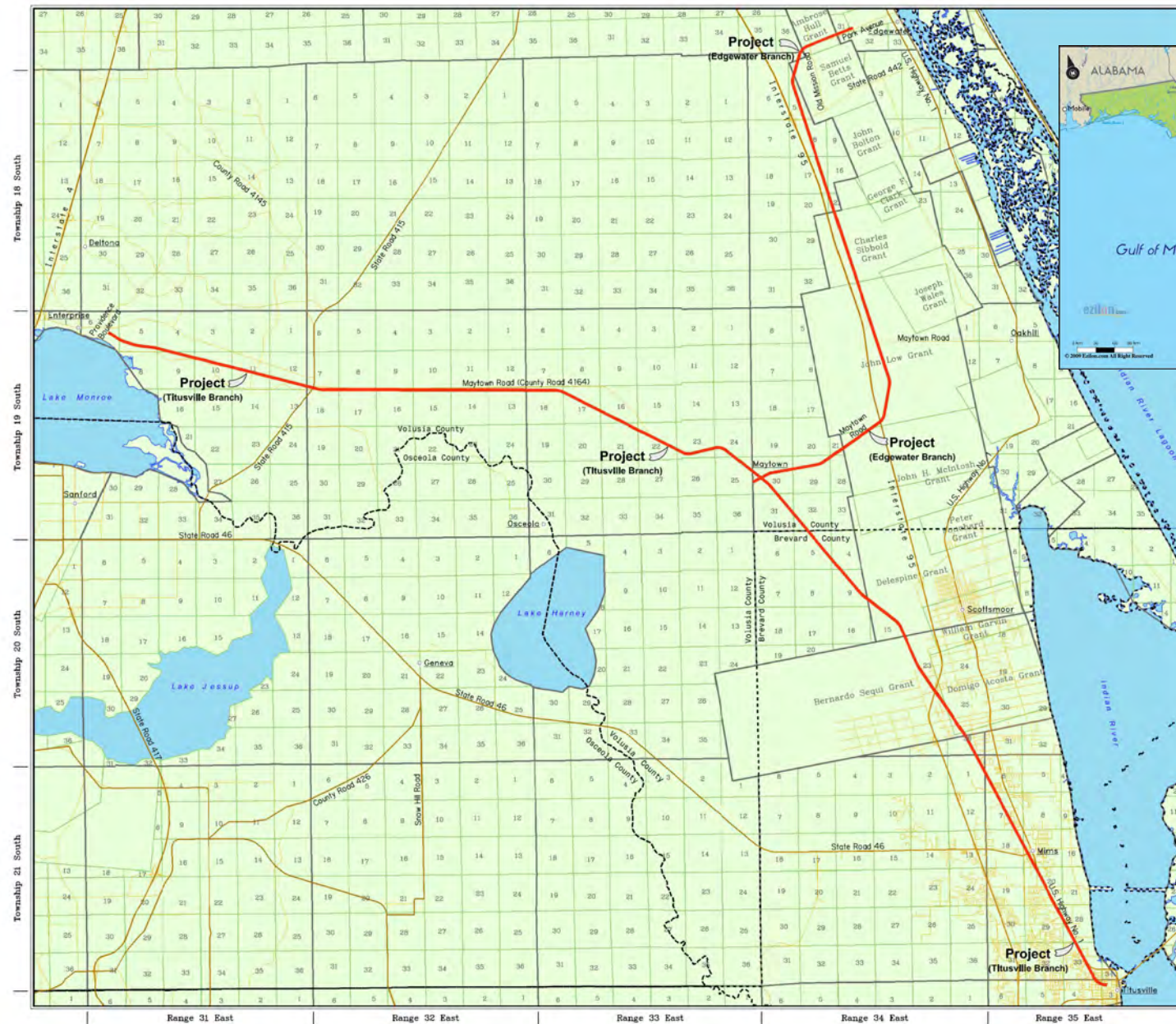
..... www.materialsenglish.com



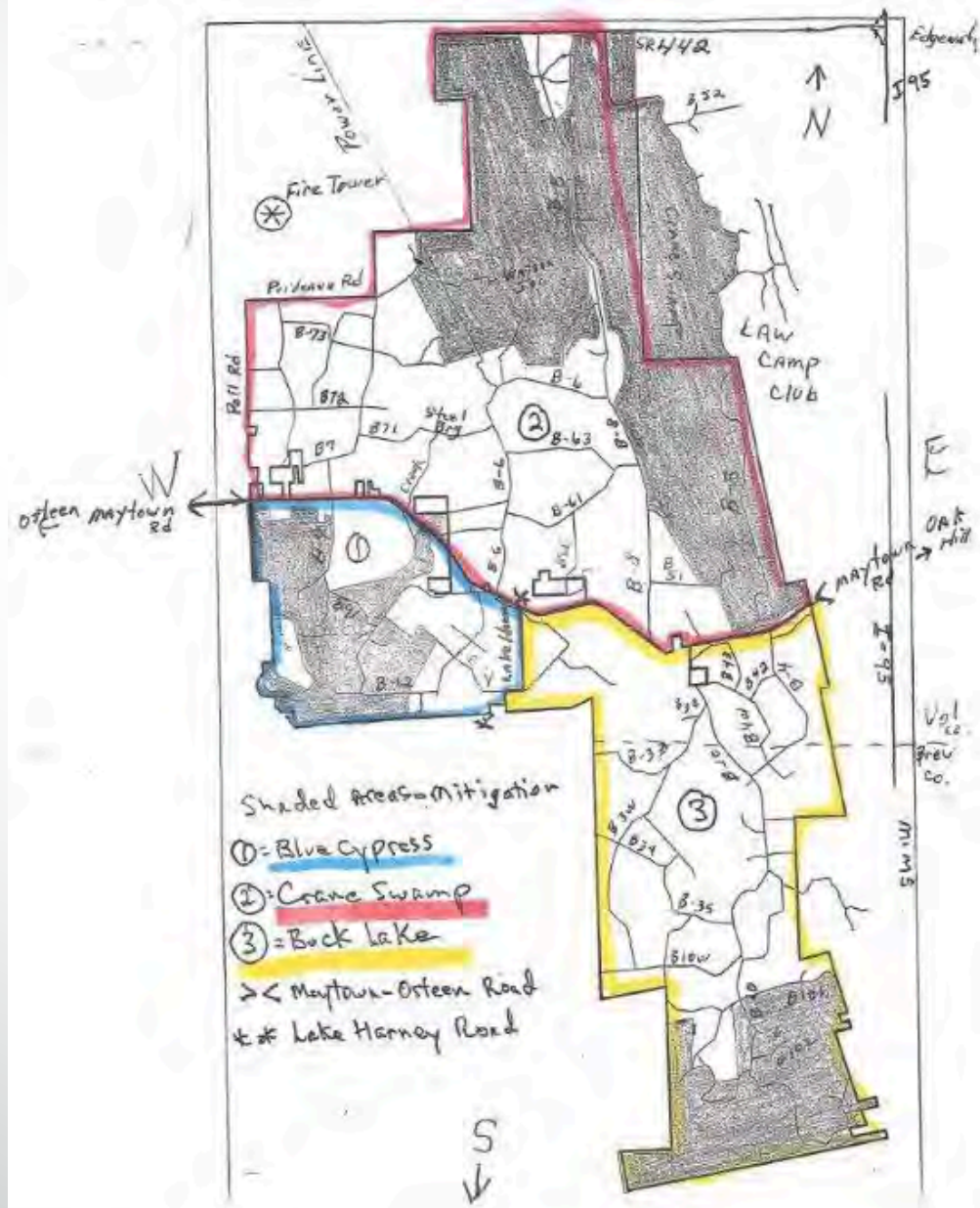
Rule 2













"Don't tell me where your priorities are. Show me where you spend your money and I'll tell you what they are."

- James W. Frick



**KEEP
CALM
AND
DON'T TAKE
IT PERSONALLY**

Rule 3



"If your identical twin
got cosmetic surgery,
it would be hard not to
feel a little insulted."

Woody Page, ESPN



Thank you, Mr. Customer
for personally insulting
me. I'll be happy
to assist you in the
most minimal way
possible.



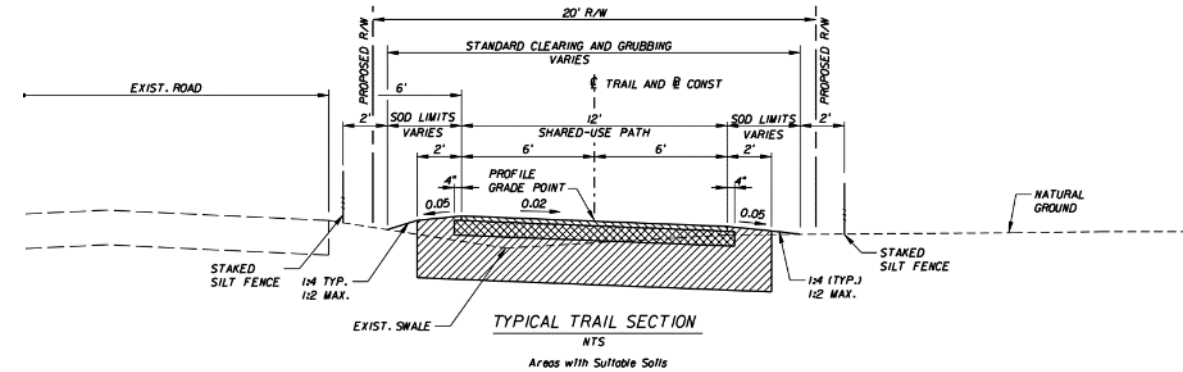
NEVER !





Trail Design

“It’s just a
single-lane
road”



A scenic view of a Dutch street. On the left is a canal with a grassy bank and trees. A red-paved bicycle lane runs along the canal. A cyclist is riding in the lane. On the right are historic brick buildings. A speed limit sign of 30 is visible. The text 'Empathic Analytics' is overlaid on the road.

Empathic Analytics

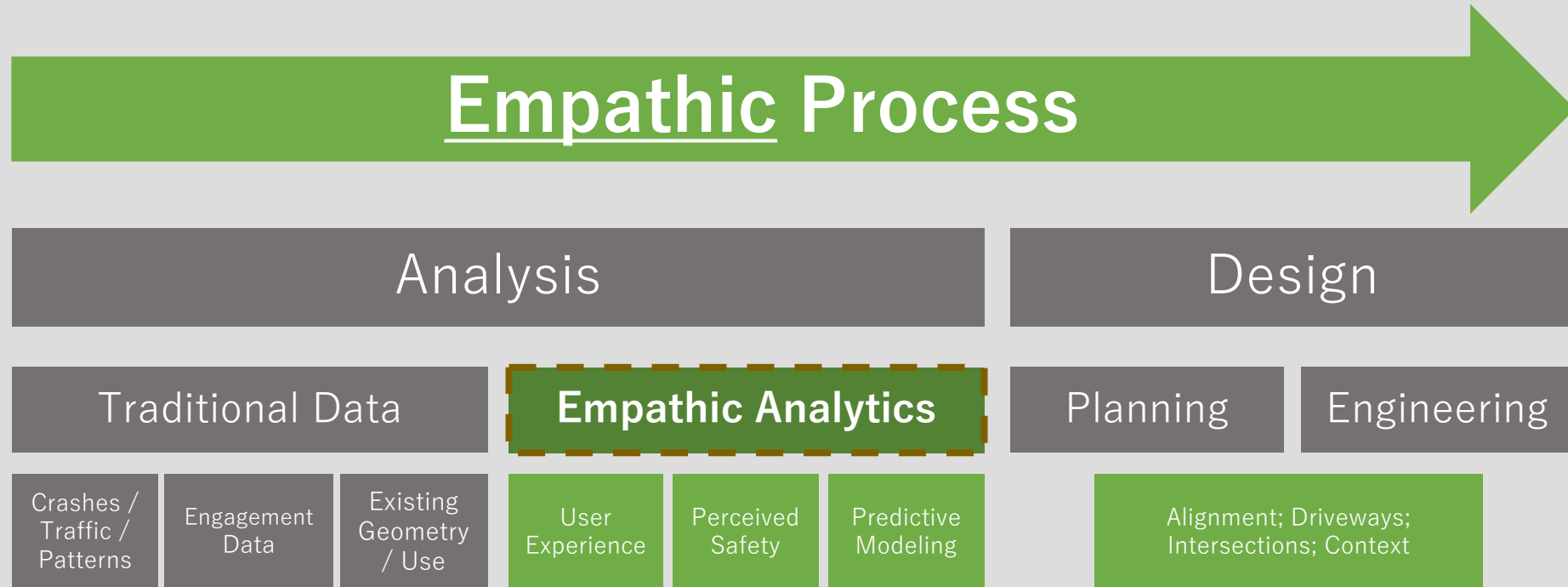
Mike Sewell
Gresham Smith

Being Empathic pertains to a person's ability to perceive emotion in someone else, **and whether we know it or not, that is a big part of what we do as designers and engineers – we build environments. Sometimes those environments evoke positive emotions and sometimes negative.**

We believe the future of design, whether its roadway design, signal design, hospital design, or airports, will be centered around the **user experience.**

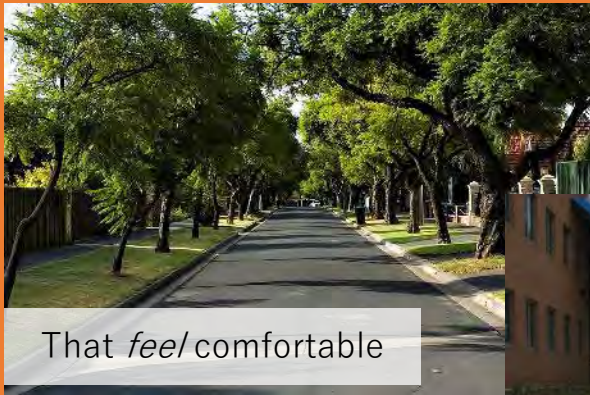


Innovation in the Design Process



Stress-Free

What causes us to be stress-free?



That *feel*/comfortable



That allocate space



That are intuitive

Stressful

What causes us to be stressed?



Inadequate facilities



Connectivity



Bad conflicts



How it Works

- Field users wear heart rate monitors
- Correlated with location data
- Walk / ride / drive (ANY USER)
- Platform communicates directly with device (backend via API)
- Platform determines locations of comfort and stress
- Correlated with other substantive datasets to establish scenarios



Empathic Analytics in Preliminary Design

- Developed in partnership with medical professionals
- Measurement is based on heart rate and advanced algorithms to detect stress

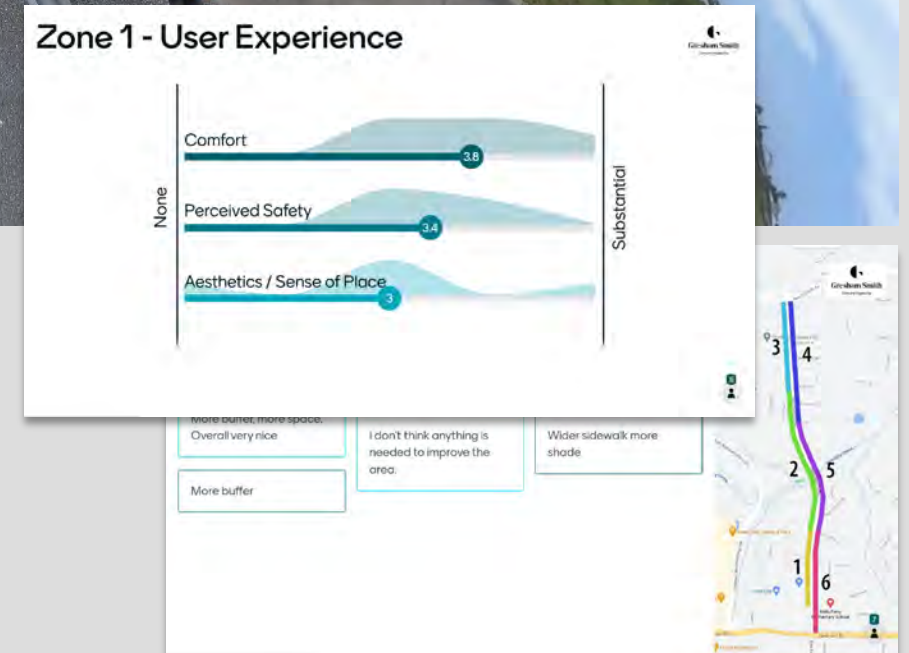
- Project Scoping

- Alignment Determination

FDOT

- Planning & Design (SR A1A – D2)

Projects in Lexington, Atlanta, Dallas (2022), Netherlands



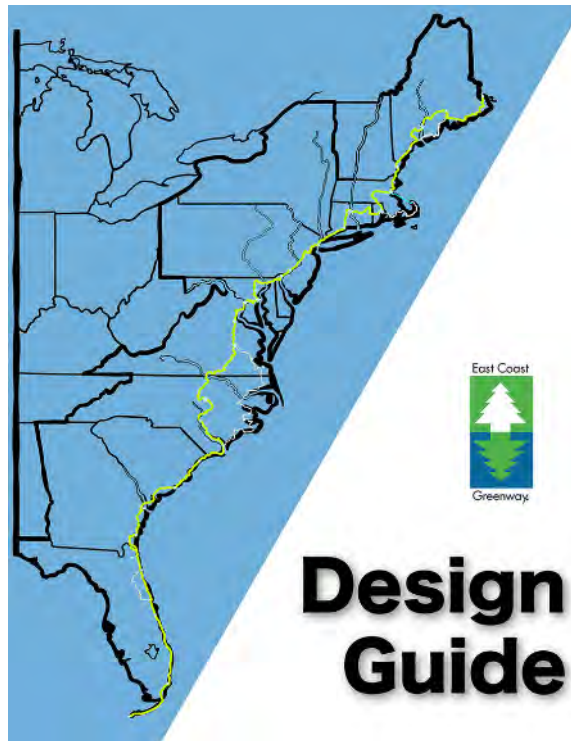
Common “headscratchers” during design

- Typical Section
- Available R/W
 - Property Titles
 - Abandoned corridors (RR)
 - Easements
- Crossings & Intersections
- Environmental/Contamination
- Utilities (UG & OH)

FL Design Manual

1. Ch. 222 – Ped Facilities
2. Ch. 223 – Bicycle Facilities
3. Ch. 224 – Shared Use Paths

East Coast Greenway Design Guide



“Greenbook”





FLORIDA
State Parks
The Real Florida



Florida State Trail Design Standards

Natural/ Rural



Tallahassee - St. Marks
State Trail
Crawfordville, FL

Trail Width: 12'-14'
Distance between Trailheads: 8-12 miles
Rest stops between trailheads: 1-2

Trailheads should include restrooms, drinking water, a parking area, and informational panels. Rest stops should include a covered bench.

Corridors are typically associated with adjacent road right-of-way, utility corridors, and defunct railroad lines.

Planning for support facilities should include an analysis of existing and potential recreation and tourism opportunities along the trail corridor and incorporate existing and planned facilities into trailhead and rest stop design.

Permeable **surfaces** should be incorporated into the design of parking areas at trailheads.



Suburban



Blackwater Heritage
State Trail
Milton, FL

Trail Width: 10'-14'
Distance between Trailheads: 5-8 miles
Rest stops between trailheads: 1/mile

Trailheads should include restrooms, drinking water, a parking area, and informational panels. Rest stops should include a covered bench.

Corridors are typically associated with adjacent road right-of-way, utility corridors, and defunct railroad lines.

Planning for support facilities should include an analysis of tourism opportunities along the trail corridor and incorporate existing and planned facilities into trail design. Trail-friendly businesses can help supplement the need for facilities, such as restrooms, when appropriate.

Permeable **surfaces** should be incorporated into the design of parking areas at trailheads, when appropriate.



Urban



East Coast Greenway
Hollywood, FL

Trail Width: minimum of 8'

Trailheads are not mandatory at regular intervals in most urban areas due to easily accessible amenities provided by public facilities and businesses.

Corridors are typically associated with linear public spaces and park facilities and can be designed with the pedestrian in mind, resulting in esplanades and promenades, or focusing on cyclists, which would lead to separated bicycle lanes; or both.

Planning an urban trail will aim to encourage an active and heavily used trail corridor that will facilitate alternative modes of transportation for users.

Trail **surfaces** can vary widely based on the general vision for the corridor. Bike lanes will be paved, but wider pedestrian oriented corridors could incorporate a variety of permeable surfaces such as packed gravel or shell, cobblestone, or other pavers.



Key Design Considerations

Paved trail width

- 10 to 14'
- 8' under constrained conditions for a limited distance

Horizontal clearance from travel lane (posted speed ≤ 45)

- 5' flush shoulder
- 4' curb section

Clear zone

- 4' on each side of trail
- 2' with max. 1:6 slope

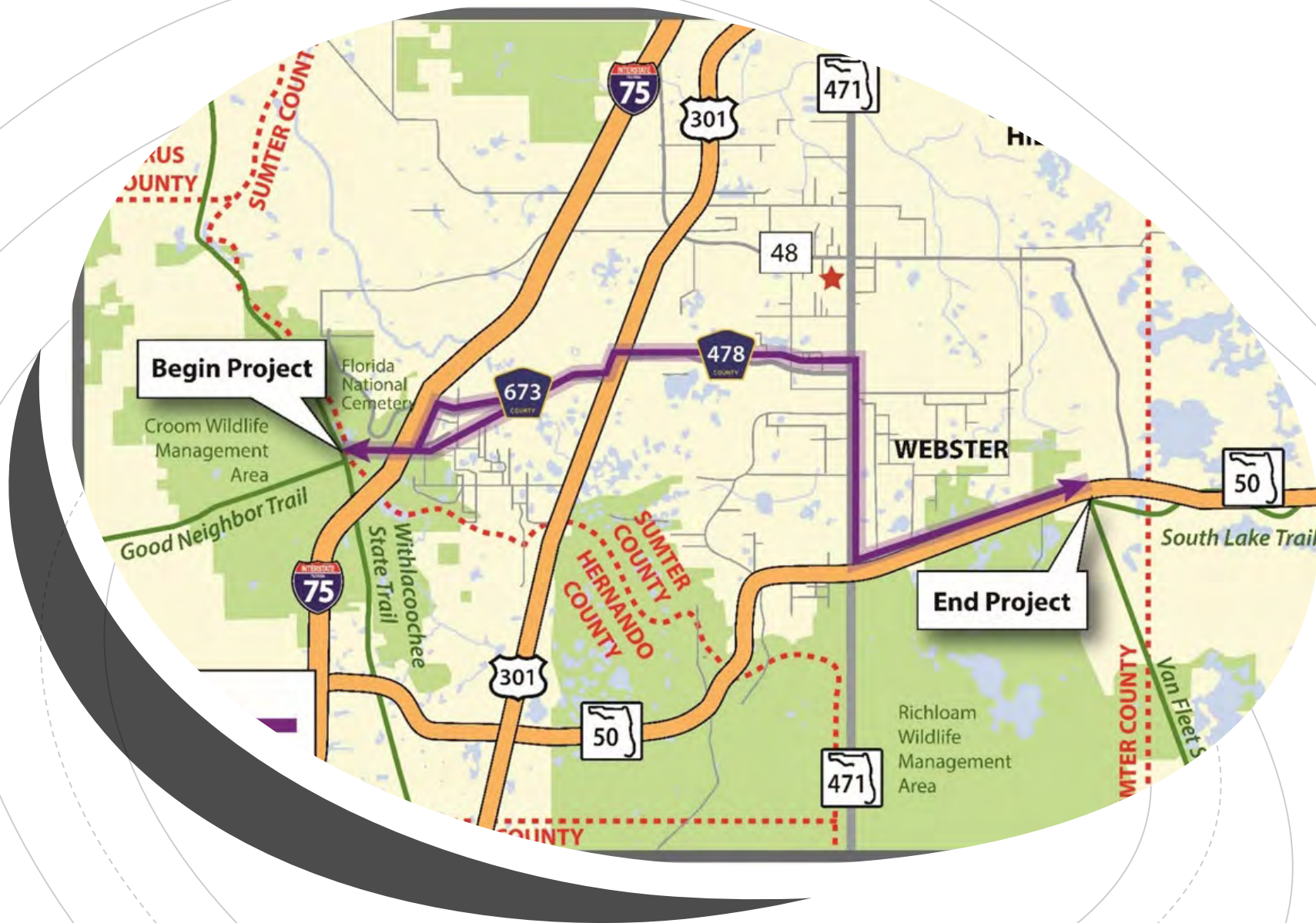
Maximum longitudinal grade = 5%

Max. ramp grades = 8.33%

- Max. rise of 30"
- Level landing of 5' distance

Vertical clearance = 12' (desired)

- 8' under constrained conditions



Right-of-Way

Boundary Survey of Florida East Central Regional Rail Trail



Right-of-Way

ECRRT project:
FDEP Acquisition &
Title Issues



Trail operations &
maintenance
considerations

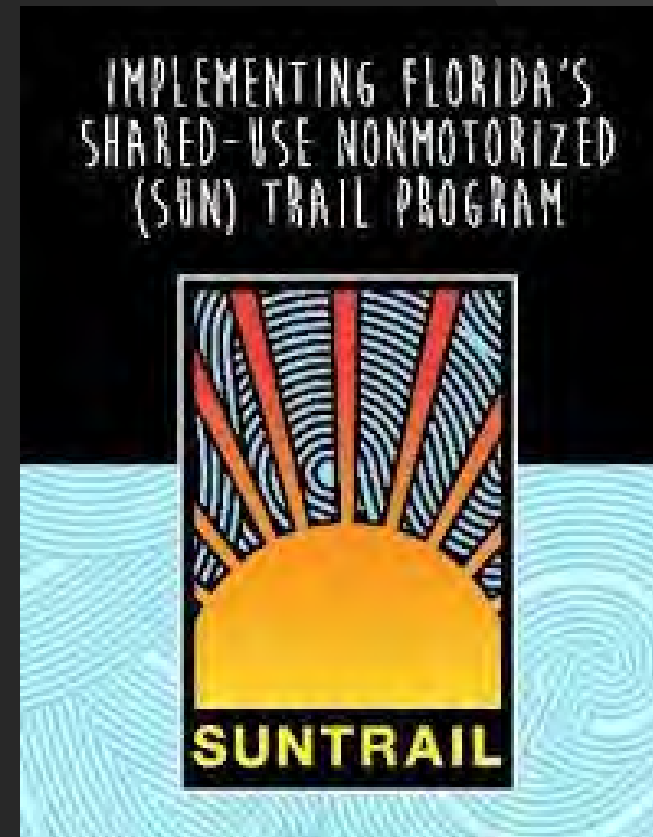
Maintenance & Operations

- Maintaining agency (MOU/MOA) & continual funding
- Surface material (repaving; boardwalk/bridge maintenance)
- Vegetation management (CPTED)
- Signing & pavement markings
- Rail crossings
- Patrolling
- Equestrian use
- Accommodating other area uses (hunting)
- Enlisting stakeholders (users, healthcare industry, adjacent/benefitting businesses)



SUN Trail MMOA

- On-System
 - FDOT - repairing, restoring or replacing major components
 - Also minor repairs (sealing pavement, repainting)
- Off-System
 - All maintenance is by local agency





Recognizing various user groups

- Hunting within adjacent lands
 - Farnton Hunt Club (Volusia) – C2C Trail
 - Green Swamp and Rochloam WMA (Polk) – Van Fleet Trail
- ATVs / Scooters / E-Bikes
- Golf carts
- Equestrian



Value of Partners

Advocacy for program support

Trail Town Program / local economic development

Hospitals advocating health benefits & sponsorships

Amenities, connections, community enhancement

P3 opportunities

From local officials to users to businesses/residents



Q&A / Discussion

Greg Kern, MBA, AICP

Active Transportation Leader

Gresham Smith

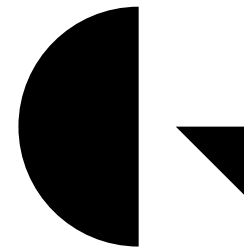
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Gresham Smith

Genuine Ingenuity