The Future of Mobility

Reimagining Walton County's Route 30A

CNU
Congress for the New Urbanism

Produced in partnership with:

THE SEASIDE INSTITUTE™

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DPZ CODESIGN

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Cover Photo: Seaside, Florida by air. Credit / Seaside Institute™

About this Report

The mass production of private automobiles, marketed at a price affordable to the majority of Americans, did more than just transform the way we travel; it changed our way of life. It enabled the construction of low-cost, mass-produced housing outside of the traditional city centers. Work life and home life became physically separated, with longer and longer commutes between the two. The National Interstate Highway System developed alongside this lifestyle and added 46,876 miles of highway in the 50 years since its inception in 1956. Cities modified their streets to cater to automobile traffic and ensure it had sufficient space to park. Travel by car led to the rise of shopping malls and corporate campuses, surrounded by a sea of parking. These are just a few of the far-reaching effects this revolution in transportation had on the built environment and settlement patterns.

We now stand at the cusp of another transportation revolution, one that once again will affect more than how we get around. Autonomous vehicles (AVs), advances in micro-mobility such as e-scooters, and dynamic parking pricing will all change the design of cities and how we move about them. When deployed at scale, these new mobility technologies will reshape the way cities and towns across the world look and operate.

But there is also the potential for negative consequences, especially if new modes of transportation are implemented without a sensitivity toward community outcomes. Certain projections and models for AVs warn of an increase in vehicle miles traveled, which could lead to a knee-jerk reaction of doubling down on the amount of street space required for travel. If commuters are willing to extend the time and distance they travel, because they no longer have to manually drive, do patterns of development become that much more sprawling? Even the technology that is here today has already presented challenges, from the management of fleets of scooters on city streets and sidewalks to the equity issues posed by the smartphone ownership required to access new mobility-on-demand solutions.

Over the coming years, cities and communities will face all these questions and more. They will need to articulate a vision for how new mobility technologies can best serve all of their residents and help them achieve a higher quality of life. Informed by this vision, they will have to put regulatory policies in place to make it a reality. But they will also have to consider how the design of their built environment will affect the use of AVs and vice versa.

In 2017, the National Association of City Transportation Officials (NACTO) released its first Blueprint for Autonomous Urbanism, which lays out a design vision for incorporating AVs into the urban fabric in a way that encourages and accommodates walking, bicycling, and mixed-use development. NACTO's manual marks an important turning point in the AV debate, in which we stop asking *whether* and instead ask *how* we can integrate AVs into communities in ways that preserve the public realm.

Building on this blueprint, the Congress for the New Urbanism (CNU) has committed to assisting communities implement new transportation technologies that will support thriving urbanist communities decades from now. CNU has leveraged its national membership (composed of architects, urban designers, transportation planners, local

One of many potential 30A street designs incorporating an autonomous shuttle. Produced by Nue Urban Concepts, which is preparing Walton County's 2040 Mobility Plan. Credit / Nue Urban Concepts

government officials, and community activists) to identify the design and policy solutions for real-world cities and towns that make this vision a reality.

This report is an initial effort in this endeavor, with a focus on Route 30A and South Walton County, Florida. County planners are currently preparing their 2040 Mobility Plan, which anticipates future travel demand by transitioning from a transportation system focused primarily on moving cars to a multimodal system that provides safe mobility and accessibility for people of all ages and all abilities. At the same time, the plan seeks to integrate new mobility technologies into its future multimodal system, such as an autonomous transit shuttle and shared multimodal mobility programs.

With the generous funding from the Seaside Institute™, CNU has produced its first Future of Mobility report, to address transportation issues along the Route 30A corridor. The report was generated through the efforts of CNU staff members Ben Crowther and Robert Steuteville. CNU board members Larry Gould (Nelson\Nygaard) and Matthew Lambert (DPZ CoDesign) also contributed and authored sections of the report. Finally, many of the principles and recommendations within rely upon the insights of Patrick Siegman (Siegman & Associates), Rick Hall (Hall Planning & Engineering, Inc.), and Joachim Taiber (Clemson University International Center for Automotive Research).

Introduction

The widespread introduction of new transportation technology is coming, and cities can start planning for its arrival now.

As a champion of walkable urbanism and placemaking, the Congress for the New Urbanism is exploring how these new technologies affect the overall planning and development patterns of cities, towns, and regions. We are also offering recommendations for the implementation of these new technologies in ways that support complete neighborhoods and create vibrant, inclusive places. Regardless of how we travel in the future, the first and last part of every journey will always take place on foot.

Workshop Description and Context

Forty years ago, Route 30A in Walton County, Florida, began an experiment with New Urbanism—with the development of Seaside—that would spread across America and overseas. This coastal corridor, anchored by a series of small, walkable towns like Seaside, Rosemary Beach, and Alys Beach, is one of the region's unique assets and there is a strong desire to preserve its special, walkable character.

The 17-mile-long 30A provides access to the beachfront in Walton County, which has a rapidly growing population of 71,000. This section of beach has become an international destination, partly due to its New Urbanist developments. It is the primary engine of Walton County's economy.

This increase in popularity has not come without drawbacks. During peak season, the traffic on this road becomes congested at key intersections and there are few alternative routes. Providing mobility for residents, extended-stay tourists, commuting workers, and day-trippers is a top priority for the county, which is developing a 2040 Mobility Plan that will address multi-modal transportation, land use, and parking along the corridor.

The 2040 Mobility Plan also looks to new transportation technologies along 30A—like electric, shared autonomous vehicles (AVs)—as a potential solution for the mobility issues faced by those who travel the corridor. However, these solutions need to be implemented in a way that does not compromise the qualities that make the 30A communities places people love. Route 30A is an important test of how to reconcile design for local walkability with the demands of new mobility technologies.

On February 6th, 2020, CNU and theSeaside Institute™ convened a workshop in Seaside to discuss national trends in autonomous urbanism as they related to Walton County's 2040 Mobility Plan for Route 30A. Speakers addressed topics including the design of 30A, transit along the route, the right price for parking, and the infrastructure required to operate autonomous vehicles. Following these presentations, the public was invited to test ride an autonomous shuttle, provided by the company Beep, which operates an autonomous shuttle service in Lake Nona, Florida. Over 450 unique riders rode the Beep shuttle during the two day exposition. CNU and the Seaside Institute™ would like to extend its sincere gratitude to the Walton County Planning and Development Division, individuals, organizations, and businesses who participated in the workshop and exposition.

Beep's autonomous shuttle operating along a pilot route in Seaside's town center. Credit / Rob Steuteville

The Report

Formulated from the results of the workshop in Seaside, this report includes seven principles to guide the development of Walton County's 2040 Mobility Plan:

1. Design walkable streets

2. Prioritize community over transportation technology

3. Design efficient and effective transit

4. Establish policies that support safety and compact mixed use

5. Support micro-mobility

6. Consider short- and long-term solutions

7. Take a realistic view of technology.

Based on these principles, it also makes short- and long-term recommendations for street design along 30A, transit planning, pricing policies for parking, micromobility implementation, and coding.

Finally, it offers two tactical urbanism projects that Walton County can implement right away as demonstrations of these future mobility principles.

While the principles and recommendations it includes are geared toward Walton County's 2040 Mobility Plan, they are also highly relevant to other communities about to undertake similar transportation plans and projects.

PRINCIPLES FOR THE FUTURE OF MOBILITY ALONG ROUTE 30A

Much of the national discussion for AVs has been abstract and centered on major cities. The 30A workshop examined AVs and other new technologies in specific, real-world locations and a range of contexts, from town centers to rural highways.

Walton County's population is expected to grow exponentially over the coming decades, which makes this an ideal time to plan ahead for the future of transportation. County planners report that a single developer—the St. Joe Company—has entitlements to develop housing and services for 300,000 new residents in the region over the next 50 years. "These people will be our new neighbors, and they will want to visit the beach," said Robert Davis, the developer of Seaside, at the workshop. "We need to move more people without putting more vehicles on the road. And we can enhance the character of 30A as it moves through villages and towns."
Public transit is lacking on 30A—yet new technologies open options for transit and multi-mobility that, combined with policies, could take many cars off the road and provide functional transportation far into the future. At the same time, it is imperative to consider placemaking when designing the transportation systems of the future.
Forward-thinking urban design and policies are essential for new transportation technologies to have a positive impact on communities. Here are seven principles for the future of mobility on 30A:

1. Design walkable streets

A wide variety of flexible street design solutions are required for a place like Route 30A. The road has diverse urban contexts, including walkable towns and areas with suburban and rural character. Also, public rights-of-way range from 50 to 110 feet wide. Appropriate designs should account for both the context and right of way (ROW) available, in addition to other considerations like traffic and pedestrian counts and key intersections. The limitations and rapidly changing nature of the technology also call for flexibility.

2. Prioritize community over transportation technology

Any change in street design along 30A needs to maintain the character of a small thoroughfare that is easy to cross on foot. The "sense of place" on 30A accounts for a good deal of what attracts visitors and drives the economy in South Walton County. New transportation ideas and technology in the 20th century offer a cautionary tale for the 21st century. Places with unique, lovable character today were generally those that were not drastically reworked through highway engineering in the 20th century, and that includes the communities along 30A.

3. Design efficient and effective transit

Setting up a system with autonomous shuttles is no different, in many respects, from setting up a conventional transit line. AVs, theoretically, can save a good deal of money because they eliminate the cost of the driver. But the specific vehicles chosen and their capital and operating costs, headways (frequency of service), and frequency of stops are important decisions to setting up an AV shuttle system. Route 30A has the advantage of being a single, relatively straight line that goes through the heart of walkable towns. The ROW constraints, and the need for maintaining the human-scale character of the thoroughfare, point toward smaller vehicles that could be run on short headways for greater capacity.

Seaside's walkable design attracts thousands of visitors a year to its town center. Credit / Nathan Norris

4. Establish policies that support safety and compact mixed-use development

Much has been written about the potential of AVs to unlock the value of land tied up in parking. This benefit will not be realized, however, if there are minimum parking requirements or no market pricing of parking to encourage drivers to make efficient use of this resource. Land use codes may need to change to allow for compact, mixed-use development.

Smart use of parking permits, unbundling the cost of parking from rents and new construction, and congestion pricing are among the policies that jurisdictions may consider to encourage the use of AV transit. In town centers, policy-makers may consider market pricing for curb access and loading. There are sections of 30A with free on-street parking. New mobility lanes will need space currently used for on-street parking. The county is also considering a new development "mobility fee" to pay for streetscape improvements. Expansion of park-and-ride locations, where visitors are encouraged to park outside walkable towns and congested areas and use alternative transportation, is being examined.

5. Support micro-mobility

While AVs are evolving rapidly as a technology, electric-powered "Little Vehicles" like e-bikes, scooters, velomobiles, and golf carts are here today. In its redesign for 30A, the county should plan for these transportation options in addition to conventional bicycles and walking. Little Vehicle options offer pros and cons. Local operators can rent them—in which case they are generally returned to a single location. National firms also provide app-based rentals available 24-hours a day. The latter generally requires more management and policing—because otherwise micro-vehicles are sometimes left in awkward locations. But the benefits of micro-mobility include safer streets and reduced congestion.

Bike rentals available in Rosemary Beach. Credit / Amy the Nurse

The frequent transformation of Seaside's town center for temporary events makes it an ideal location for tactical tests. Credit / Opticos Design

6. Consider short- and long-term solutions

Any change in 30A would be phased over time. A logical place to test ideas would be in and around Seaside, where major landowner Robert Davis is a champion of transit and alternatives to driving. Workshop planners discussed tactical tests during tourist season, such as converting a section of the road to a temporary multimodal "shared space." Other ideas include testing a protected lane for bikes and micro-mobility vehicles, and setting up a "queue-jump" system allowing a shuttle bus to move more quickly through a bottle-neck intersection. Some policies and programs, such as charging for parking in town centers, could be implemented in the short term. Others, such as congestion pricing, would be long-term options for consideration.

7. Take a realistic view of technology

Although shared AVs are running in certain locations, the technology still has limitations in speed and the ability to deal with complex urban environments. At present, the autonomous shuttles available on the market operate at limited speeds. It may therefore be useful to provide dedicated lower-speed lanes on many segments of 30A, so that regular motor vehicle traffic will be able to move faster. However, as autonomous vehicles are evolving rapidly, this limitation may disappear within a few years. What will not change is the need for flexible, context-specific design. The work of planners in Walton County, with the help of CNU and national experts, is pointing the way for solutions that fit the needs of the Route 30A corridor.

The Future of Mobility

Recommendations

Based on the principles prescribed in the previous section, we make the following six recommendations for Walton County's 2040 Mobility Plan.

1. Locate two-way multi-modal lanes on the southern (Gulf) side of Route 30A

The advent of autonomous vehicles introduces a new player in the highly-competitive contest for 30A's existing right-of-way. Currently, the typical rural and suburban sections of Route 30A accommodates automobile drivers with one travel lane in each direction and cyclists, pedestrians, and golf cart drivers on an 8-foot separate paved pathway. Route 30A's right-of-way is variable, ranging from 50' at its narrowest in Seagrove Beach to 110' at its widest section in Alys Beach.

Walton County's current draft mobility plan already includes several alternatives for 30A street sections that add, to all sections of 30A with at least 60' of right-of-way, two new 8' wide multi-modal lanes for electric bikes, electric scooters, golf carts, and autonomous shuttles—all of which operate at a speed of 15-25 MPH. These new forms of mobility provide additional options to access the amenities and jobs along 30A in a way that minimizes increased automobile traffic. Indeed, they have the potential to siphon off automobile trips and lessen the corridor's congestion, especially during peak season, when many vehicles traveling 30A are operating at similar, or even slower speeds due to high traffic volumes.

The addition of these lanes separates travel into three different categories:

1. automobiles operating at the posted speed limits of 25 MPH within the urban communities along 30A, 30-35 MPH in rural and suburban context,
2. the multi-modal mobility options described above, operating at a speed of 15-25 MPH, and
3. bicycles and pedestrians, moving at below 15 MPH on the existing paved pathways/ trails. Cyclists have varied skill levels and professional, or avid, cyclists are still allowed by law to travel with motor vehicles. Many choose this option.

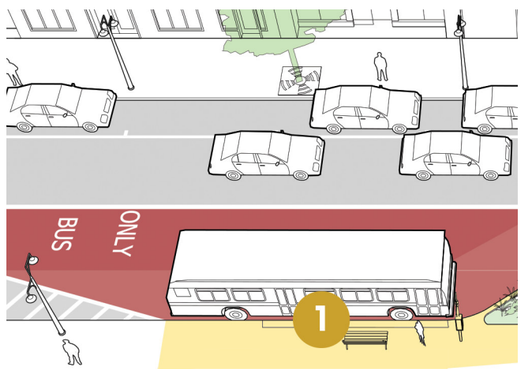
This split accords with the principle to consider speed when organizing transportation. The multi-modal lanes also espouse the principle to design for flexibility, as they accommodate existing micro-mobility options like e-bikes and scooters, while at the same time anticipating future developments like autonomous shuttles.

Designing for Safety

It is important to note that the sharing of a lane between e-bikes, e-scooters, and autonomous shuttles has yet to be tested in a real world setting and so extra precaution is necessary before implementation. We suggest both a pragmatic and a visionary option.

A pragmatic approach would allow only a single category of operator (i.e. human-controlled or autonomous) to use the lanes designated multi-modal. Modes driven by humans include electric bikes, scooters, and golf carts. Autonomous modes would be limited to shared passenger shuttles. If the multi-modal lanes are limited to human-driven modes and an autonomous shuttle shares the travel lanes with trucks and automobiles, we recommend that existing parking lanes along 30A be converted into queue jumps for autonomous shuttles, so they are able to travel more efficiently (see the tactical urbanism project described on page 31). There is also the potential to adopt the innovative approach at a later time.

The visionary approach combines autonomous and human-driven modes operating at a speed of 15-25 mph. This option allows autonomous shuttles using these lanes to avoid congestion caused by automobile traffic delay at signalized intersections. But there are potential safety risks associated with this approach that need to be explored before it is implemented. In particular, conflicts could arise when a shuttle decelerates and stops to allow passengers to board and disembark and e-bike and scooter riders behind it wish to continue at a constant speed. Passengers getting on and off the shuttle also need to be protected from other travelers in the multi-modal lane.



Example of a pull-out bus stop, which allows other vehicles to pass safely. Credit / NACTO Transit Street Design Guide

Design solutions can address some of these challenges. Under medium to heavy usage of the multi-modal lane, ample space must be provided at designated shuttle stops for the vehicle to pull out of the lane and safely allow both other vehicles to pass as well as passengers to get on and off. If flow in the multi-modal lane is heavy, shuttles might experience difficulty re-entering the lane.

Prior to selecting an option, Walton County should perform an operational simulation for each approach to determine which will offer the right combination of efficiency and safety for all users

Approach	Vehicles Allowed in Multimodal Lanes:	Autonomous Shuttle Operates in:
Pragmatic	E-bikes, e-scooters, and golf carts	Travel lanes, with queue jump designed from former parking lanes
Visionary	E-bikes, e-scooters, golf carts, and autonomous shuttle	Multimodal lanes

Summary of approaches to locating an autonomous shuttle on Route 30A's right-of-way.

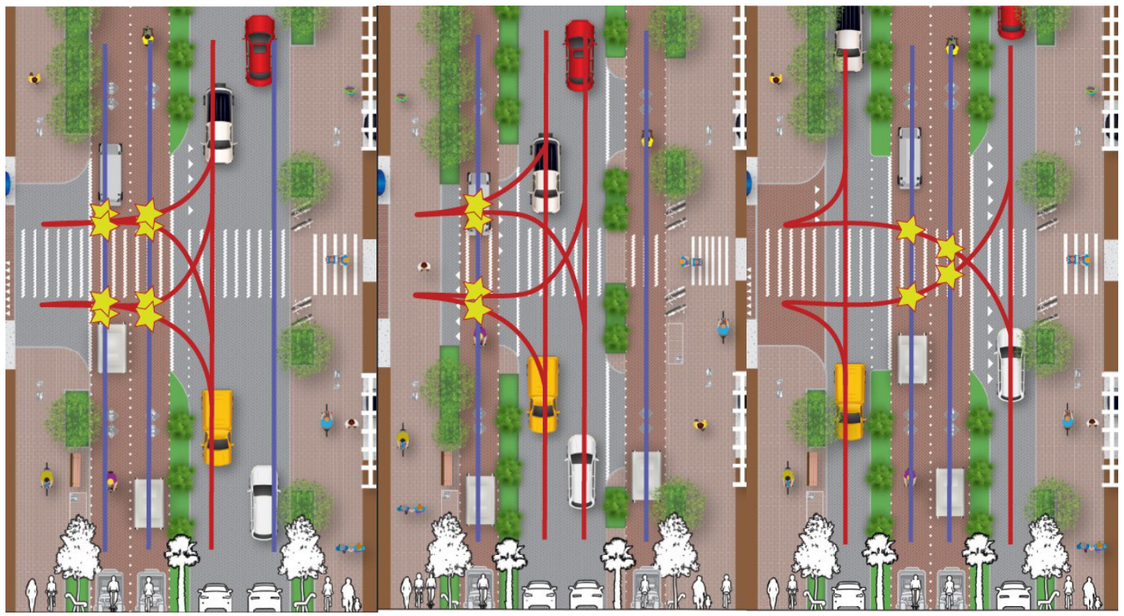
Reducing Conflicts through Design

Regardless of which modes are allowed to use a multi-modal lane, there is an opportunity to improve its safety when organizing the street cross section. Street designs that reduce the number of potential conflicts between turning automobiles and other forms of mobility should be prioritized. More vehicles traveling along 30A tend to turn to and from the north than to or from the south, especially in cases like Seaside where the road is less than 200 feet from the beach. Paths sited on the southern (Gulf) side of Route 30A avoid conflicts with these turning automobiles.

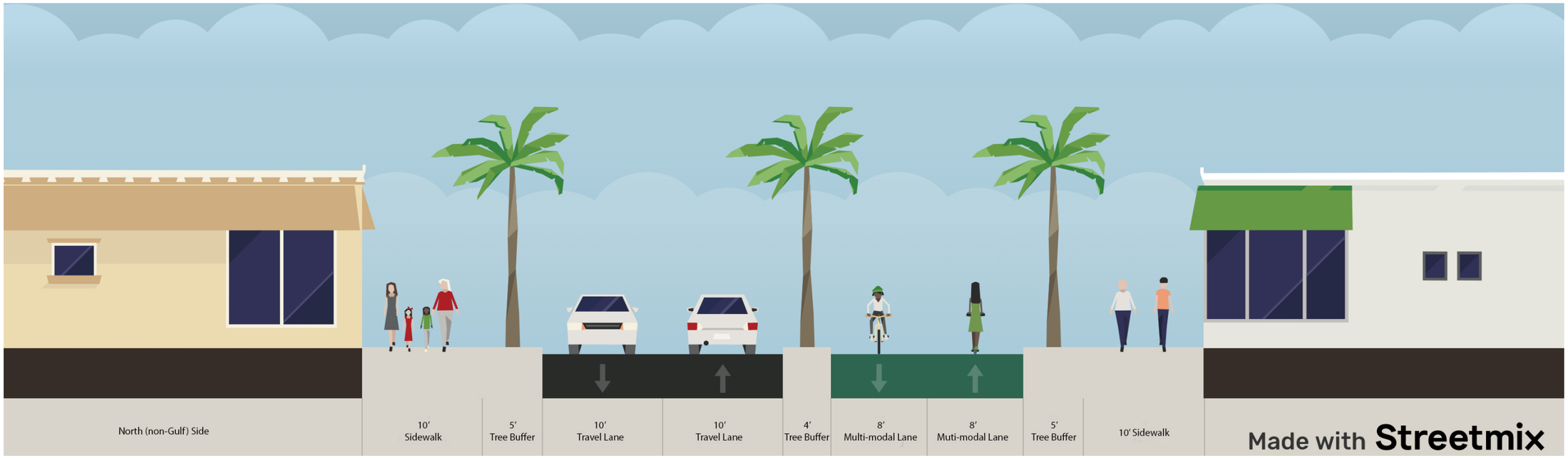
At the moment, the draft 2040 Mobility Plan includes three alternatives for Route 30A. Alternatives 2 and 3 each present four potential conflicts between vehicles in the multi-modal lanes and automobiles turning onto 30A travel lanes from the north or turning from the north onto 30A travel lanes. Alternative 1 presents eight potential conflicts, as any automobile making the turns described above must cross both multi-modal lanes.

Based on these conflicts and the fact that more traffic turns to and from north of 30A, we recommend that the mobility plan includes an alternative that places two adjacent 8' multi-modal lanes (one for travel in each direction) on the south (Gulf) side of Route 30A (with an expanded width for each lane at designated AV shuttle stops, if autonomous shuttles are to share the space with other forms of e-mobility). This has the benefit of protecting the multi-modal lanes from all turning traffic on the arteries that link Route 30A to US 98 to the north.

With this solution, multi-modal mobility options can travel at consistent speeds with only limited interference from automobile traffic. The preservation of the 8' paved pathway for pedestrians separating the multi-modal lanes from private properties provides a buffer between and additional sightlines for faster multi-modal mobility options and automobiles turning onto/from driveways and parking lots.



Points of conflict between vehicles operating in multi-modal lanes (blue) and automobiles turning onto 30A travel lanes from the north or turning from the north onto 30A travel lanes (red) at Seaside. From left to right: Alternative 1, Alternative 2, and Alternative 3.
Credit / Nue Urban Concepts (with modifications)



Proposed alternative cross section for Route 30A at Seaside with two 8' multi-modal lanes located on the south (Gulf) side.

2. Reimagine Route 30A along the town square in Seaside as a shared street

During peak season, there are more people at Seaside's town center who cross 30A on foot than drive through in cars. The five painted crosswalks that traverse the 440' section of 30A adjacent to Seaside's town square attest to the frequency with which pedestrians cross the road here. Given the high pedestrian counts and walkable character of the rest of Seaside, a contextually-appropriate solution is to transform this portion of 30A into a curbless shared street, seamlessly connecting the town center to the beach.

This solution also addresses a public perception that the addition of more lanes to 30A, even if they are multi-modal, will detract from its walkability and make crossing the street more difficult. A shared street removes all marked lanes and gives the pedestrian priority to cross. The number of pedestrians crossing at peak season renders separated automobile and multi-modal lanes ineffective, as all traffic slows to pedestrian speeds. The space allocated for multi-modal lanes elsewhere becomes part of the undistinguished shared street, although multi-modal options are still able to use the space.

We make the following recommendations for the design for Route 30A as a shared street. First, pavers should be used as a surface instead of asphalt, to visually mark for drivers that they are entering a shared space. This design feature will signal to drivers that they are no longer on an open road, should expect to travel at slower speeds, and yield to pedestrians within the space.

If desired, different styles of pavers can be used to distinguish suggested uses for different parts of the shared space, including areas exclusively for pedestrians, areas appropriate for vehicle travel, and areas that still may be paths for multi-modal mobility. Other features can also be used to constrain or limit where automobiles can go, such as street trees, bollards, benches, and other street furniture. This sort of street infrastructure has the additional benefits of attracting pedestrian activity and signaling to pedestrians that this is a safe crossing.

Route 30A along Seaside's town center, where pedestrians frequently cross. Credit / Google Earth

Park Lane, one of Poynton's curbless shared streets. Credit / The Academy of Urbanism

We recommend a phased construction for this shared space. In the first phase, remove both the northern and southern parking lanes along 30A and shift travel lanes to the north side of the street, so that there are two 10' lanes for cars. At this point, the pavers for the shared street can be laid in place of the remaining asphalt on the southern side of the street. This redesign of 30A in phases will slow traffic incrementally and further heighten motorist anticipation of pedestrian crossing. After construction on the southern side is complete, pavers can be laid in the space occupied by the two northern travel lanes, completing the shared street.

The transition of 30A at Seaside's town center to a shared space can also be tested prior to construction with the tactical urbanism project described on page 30.

Shared streets are becoming popular in the United States, but are much more prevalent in Europe, where examples provide testimony to their benefits in situations like Seaside. The shared space at Poynton in the United Kingdom is one such example. Prior to being redesigned as a shared space, the intersection of Poynton's town center with the A523 experienced heavy congestion and traffic backups that could extend for several miles, as drivers took turns navigating its traffic signals. The current shared space manages congestion by allowing vehicles to proceed at a slow, but consistent speed, reducing backups and delays. At the same time, the redesigned space in Poynton has increased levels of pedestrian activity and helped regenerate the town's main shopping street.

A shared space in Seaside, already a hub of pedestrian and commercial activity, plays to its strengths and is appropriate for the town's walkable character. Walton County's planned addition of new transportation options to Route 30A aligns with the modest reduction in parking at Seaside's town center to create a shared space. Visitors and commuters will be less inclined to drive directly to Seaside and more likely to opt for an alternative mode to reach the town center, whether e-mobility or a shuttle operating out of a park-and-ride, especially if these options are set up to allow them to bypass any congestion on 30A.

In addition, a successful shared space in Seaside offers a model for the other communities along 30A to follow in their town centers that are controlled by a signalized intersection, such as Rosemary Beach.

3. Create a transit system along the 30A corridor

Introduction: The Market

A linear resort corridor, such as Route 30A, can offer an alternative to automobile travel in a congested environment by providing an attractive transit option. In order to be an effective option, the transit needs to be protected from congestion, ensuring reliability and reasonable travel times.

In the 30A corridor, the potential markets for this service include:

- Visitors, staying at transient lodging, who can leave their car parked while exploring the area, or can travel without a car.
- Day trip visitors, who can park once and visit several locations.
- Employees, who can use specialized transit service from bedroom communities to reach Route 30A, then connect to the linear corridor to reach their employment location.
- Residents, who would have an option for local trips that protects them from visitor-generated congestion.

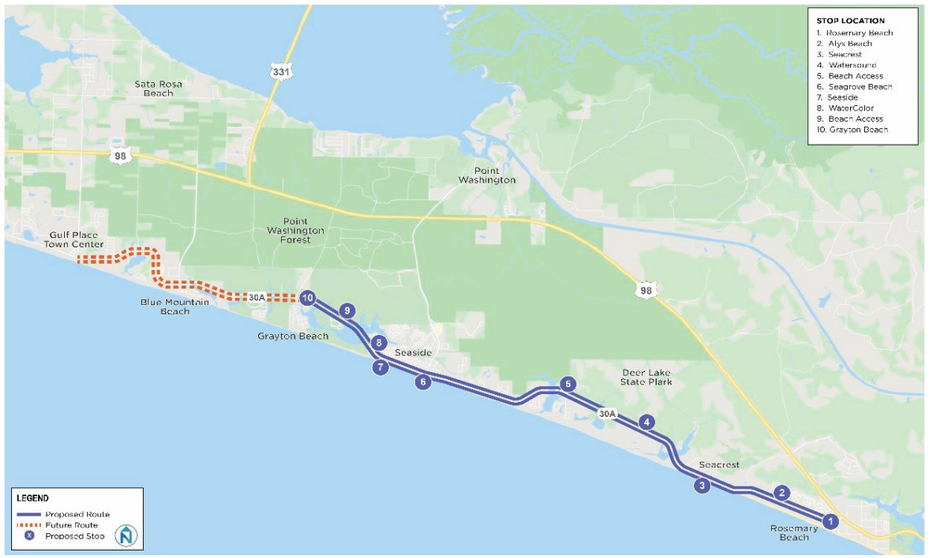
Currently, there are only a handful of targeted transit options in the Route 30A corridor. These services fall into the following categories:

- Employee shuttles that originate in bedroom communities north of the corridor
- A new tour trolley, with narration, serving most of the corridor
- A remote park-and-ride shuttle, serving Seaside
- Transportation Network Companies (Lyft, Uber), local taxis, and airport shuttles

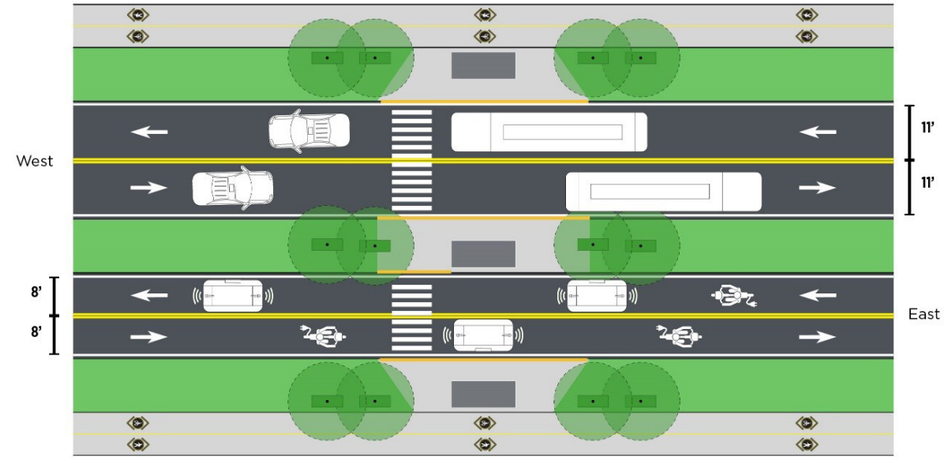
Transit Route Proposal

This proposal would create a scenario for the evolution of a new linear transit route serving the entire corridor. The service would have the following character:

- It would serve a range of markets, including park-and-ride, general circulation, and employment connections.
- It would be available for a relatively long span of hours, every day, for at least the peak season.



Proposed transit route along Route 30A. Credit / Nelson\Nygaard



Proposed right-of-way for Route 30A, with multi-modal lanes located on the south (Gulf) side. Credit / Nelson\Nygaard

- It would be designed for competitive travel time, reliability and frequent service (no need to consult a schedule).
- It would be designed to evolve from smartly-marketed conventional transit, during pilot operation, as various route and service patterns are tested, to more advanced technology, including autonomous operation.

Right-of-Way

One challenge is to ensure reliability and competitive travel time in the context of a constrained right of way. An option to expand the right-of-way to allow for separate lanes for every travel mode would widen the road so expansively that it would degrade the character of the communities, which is the core reason that the area attracts visitors. As a result, the right of way is expected to be limited to the following elements:

- The existing general use roadway, with 10-11' lanes
- The existing 8' multiuse path for pedestrians and bicycles.
- A new, 16' bidirectional path for lower speed motorized, multi-modal vehicles, which can accommodate 11-15 passenger Navya-type autonomous vehicles and the 5 passenger low-speed, human-driven Gem-type electric vehicle.

Near Seaside Town Square, the 3-part right of way (road, shared-use-path, multi-modal path) would be replaced by a shared space, where all traffic and pedestrians would move at pedestrian speed without segregation or control.

Transit Stop Platforms

Specific locations in the right of way need to be identified for transit stops, and queue bypasses for congestion avoidance. The queue bypass is described further in a later section. The transit stops would be small platforms, each servicing one direction of service, assuming right hand loading.

Transit stop platforms should be designed to serve vehicles operating on both the general purpose roadway and (by Navya- or Gem-sized vehicles) on the multi-modal path. This will allow for a range of operating conditions as the service evolves in technology and market.

Under the current design assumptions, both directions of the multi-modal path run to the south (Gulf Side) of the general use roadway. Key design specifications for the transit stops are:

- Initially build the stops of pre-fabricated, modular, rubber panels, to allow adjustments and relocation as service evolves. The panels should be installed at a height that facilitates ADA access.
- Locate stops out of the flow of traffic, in either a former parking lane, wide spot in the right of way or via an easement on private property.

Potential vehicles for 30A transit route. Upper left: Navya-sized vehicle. Upper right: Gem-sized vehicle. Lower left: Cutaway vehicle. Lower right: Small (30') bus. Credit / Nelson\Nygaard

- Provide stops with an amenity and furniture package that supports safety, shelter, accessibility, branding and convenience.

Transit Stop Placement

In the design process, transit platforms should be located separately for the general purpose roadway and the multi-modal path. This generally requires three platform locations per transit stop:

- One, a westbound platform serving transit on the general purpose roadway, on the inland side. Transit vehicles at stops should have sufficient space to move out of the flow of traffic.
- Two, a platform between the motorized vehicle path and the general purpose roadway, serving eastbound transit. This platform could also serve Navya/Gem-sized westbound transit on the motorized vehicle path. This requires that there be sufficient space between these roadways, at transit stops only, to allow both this platform and for transit vehicles to pull out of the stream of traffic.
- Three, an eastbound platform serving Navya/Gem-sized eastbound transit on the motorized vehicle path, on the Gulf side. The transit vehicle should have space to pull out of the flow of traffic on the path.

The transit-stops should not be evenly spaced (such as, every half mile) but instead, siting should be driven by several factors:

- Placemaking: stops should be at centroids of walkable neighborhoods.
- Safety: the stops should be located for safe pedestrian access, including ADA accessibility.
- Connectivity: stops should be placed to connect to employee shuttles and remote parking.
- Spacing: generally, there should be one stop per community or major state park entrance.
- Right of Way: stops will be dependent on the availability of space for the platforms, based on excess right-of-way, private easements or a parking lane.

System Size and Scope

The two factors that determine the size and scope (number of vehicles) of the transit operation are ridership and "running time," the time required for one transit vehicle to make a round trip on the transit route. Ridership is more precisely defined as the number of transit riders in the heavier direction during the heavier hours. For example, at some hours ridership eastbound will be heavier, and in other hours, westbound will be heavier.

System Size and Scope

Forecast ridership is, of course, a moving target. As a result, a more flexible approach is to create a range of scale for the operation.

The 30A roadway, in peak season, generally serves up to 10,000 vehicle trips per day (a handful of data points are higher, but they are outliers.) If the transit operation captured 10% of this traffic, it would carry about 1000 passengers per day (500 in each direction). 20% capture would be 2000 passengers per day (1000 in each direction).

Service Levels

In a resort setting, the heaviest hour in each direction would be equal to about 10% of the all-day ridership (assuming a long service day, such as 8 a.m.-midnight.) Assuming a range of 10-20% capture, the ridership in the heavier hours and heavier direction would be 50-100 passengers per hour. The following are the needed trips per hour to carry this range of load:

- With Navya-size vehicles, this requires 5-10 trips per hour (every 6-12 minutes).
- With Gem-size vehicles, this requires 10-20 trips per hour (every 3-6 minutes).
- With cutaway vehicles (like airport shuttles), this requires 3-6 trips per hour (every 10-20 minutes). These vehicles use the general purpose lanes only.
- With conventional small (30') buses, 2-4 trips per hour (every 15-30 minutes). These vehicles use general purpose lanes only.

Fleet Size

From these estimates, we can approximate fleet size, a proxy for capital and operating costs. Given a 22-mile round trip (Grayton Beach to Rosemary Beach, see map on page 18) and an average speed of 10 mph (including stops), peak vehicle requirements are:

- 12-24 Navya-size vehicles
- 24-48 Gem-size vehicles
- 8-16 cutaway vehicles
- 5-10 small buses

Evolution (Phasing)

The successful evolution of service is heavily dependent on starting with a flexible service model that allows data to accrue on the optimal route and service level over one or two complete seasons. Over time, these data will indicate the correct choice of vehicle, how many vehicles of what technology to acquire, and what operating organization to provide. The most flexible model for initial operation is privatized operation with more conventional vehicles (like cutaways; Circuit vehicles may also, by now, qualify as conventional.)

In any event, from day 1, the operation must be supported by robust marketing and branding. The performance needs to be reliable; and the loading needs to be comfortable.

It may make sense to try a shorter route for the pilot. This allows for a lower initial cost, and simplifies issues of reliability. Results from cell phone-derived origin-destination data are likely to provide some clues to where an initial, short and very productive route segment could be successful.

Capacity	Vehicle	Frequency Range	Vehicle Requirements
50-100 Passengers per hour per direction	Navya-size	6-12 Minutes	12-24 Vehicles
	Gem-size	3-6 Minutes	24-48 Vehicles
	Cutaway	10-20 Minutes	8-16 Vehicles
	Small (30') Bus	15-30 Minutes	5-10 Vehicles

Summary of vehicle requirement for a 10-20% capture. Credit / Nelson\Nygaard

4. Reform county policies to expect (and encourage) a decreased demand for parking

Autonomous vehicles have the potential to drastically reduce parking demand, a continuation of a trend already started by ride-hailing. But AVs by themselves won't necessarily achieve this. To take full advantage of the potential for freeing up parking, cities and counties need to change their existing policies. Walton County should take advantage of this expected decline in demand to reevaluate parking along Route 30A and transform it in ways that will reduce congestion along the corridor.

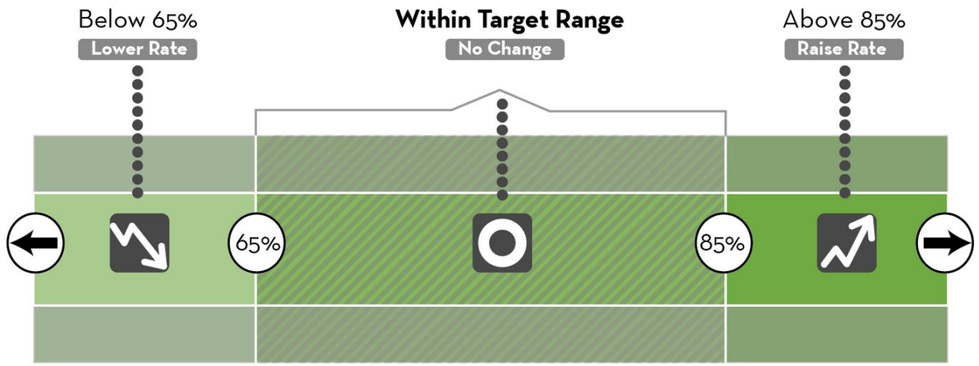
Charge the right prices for curb parking, or remove it

Free parking has a high cost. It encourages more driving, which leads to increased congestion, and undermines other proven methods to reduce congestion, like transit systems. Furthermore, it yields no revenue, occupies valuable real estate, and costs money to build and maintain.

To remedy this situation, Walton County needs to charge the right price for curb parking, or remove it. Parking along 30A in places like Seaside's town center warrants the latter treatment. The space occupied by curbside parking here can be repurposed to create additional room for the pedestrians who crowd Seaside's sidewalks during peak season. Elsewhere, curbside parking can be removed to create queue jumps for transit, making the system more efficient, or to acquire space for multi-modal lanes. These changes can take place today.

What is the right price for curb parking? This varies based on use, demand, and the availability of spots. Residential areas can follow a three-tiered parking system. Existing residents can be grandfathered in, with free or inexpensive parking permits. Future residents will have the number of permits granted limited to the number of curb spaces available, for a modest fee. Non-residents either cannot park there or may do so at an hourly rate. For commercial areas, a high hourly rate will encourage turnover and ensure that several spots are always available for customers and deliveries. A dynamic parking pricing program, which uses connected technology to price parking spots based on demand data, can also be considered as a potential option to ensure the right price. In other dynamic parking pricing programs across the country, rates typically vary between 50 cents at off-peak hours and up to $5 an hour during times of high demand.

Free street parking along Route 30A in Seaside, which can be repurposed as parking demand declines. Credit / Seaside Institute™



Dyanmic parking pricing at work. Credit / Patrick Siegman

Rates have to be balanced and coordinated with other parking strategies employed along the 30A corridor. As the County explores the possibility of park-and-ride facilities at the entrances to the 30A corridor, it becomes even more imperative to charge the right price for curb parking. The combined cost of parking at the park-and-ride lot and a transit ticket must be substantially less than the cost of parking at destinations like Seaside, to ensure the park-and-ride option remains attractive to commuters and visitors alike.

The creation of parking benefit districts can ensure the revenues generated from parking fund improvements and amenities in the areas where that revenue was created. These districts rely on resident and business owner input to help inform how dollars are spent. The City of Ventura, California provides a successful model with its downtown parking benefit district. The district employs a variable pricing program that charges the lowest price needed to achieve 65% to 85% occupancy on each block. This results in a typical rate of between 50 cents and $1 an hour. From it's 318 spaces, the City raises $530,000 annually, from which it has funded a new police officer and 9 police cadets, better lighting, and free public Wi-Fi for the district. Similar programs could be implemented in 30A communities, with noticeable results.

Finally, Walton County should remove parking minimums as a requirement for new development and instead let developers build the amount of parking they think is sufficient. Parking minimums create a large amount of excess capacity by ensuring that cities and towns have more parking spaces than individuals would voluntarily supply. This significantly increases the cost to build, own, and rent and makes it difficult to support other transportation options, as parking is abundant and often free for customers. The removal of parking minimums unburdens new construction from this requirement and coupled with the other strategies described above, allows for a more balanced transportation ecosystem that doesn't depend solely on automobiles.

All of these parking strategies anticipate the more widespread arrival of autonomous vehicles, but are still effective prior to their advent. Ideally, they are implemented as a unified, comprehensive initiative, to reform the state of parking along Route 30A.

5. Develop micromobility options suited for trips on 30A's multi-modal lanes

While AVs are evolving rapidly as a technology, "micromobility" is here today. In its redesign for 30A, the county should anticipate and welcome increased use of electric bikes, scooters, cargo-bikes, velomobiles, as well as bike-share and scooter networks. Battery powered e-bikes are used today on the corridor, and micro-vehicles are likely to become far more common as consumers purchase them and app-based sharing networks are established. Micromobility has the potential to replace a significant number of automobile trips, especially in the peak season.

Micro-mobility is often defined by the weight of a vehicle—electric-powered or shared vehicles under 500 kilograms (1,100 pounds). Most micro-vehicles are under 100 pounds. They range in size from electric skateboards to golf carts, which are about four feet wide. "Micromobility constitutes forms of transport that can occupy space alongside bicycles," notes a report by Deloitte, a multinational firm. In shared networks, micro-vehicles are accessed through smartphone apps that utilize GPS technology. Micromobility is greatly enhanced through recent advances in battery powered electric motors.

Young adults have been early adopters, but micro-mobility has strong potential in all age groups. Baby Boomers are finding their pedaling range greatly extended by e-bikes. Cargo bikes allow micro-vehicles to be used for running errands and shopping. Velomobiles offer protection from weather, giving micro-vehicles some of the comfort and convenience of a car. With a supportive built environment, some households are able to use micro-vehicles to do without a car.

Markets

The market demand for these vehicles is rapidly growing and will likely continue to grow. Sales of e-bikes in the U.S. rose 51 percent for the 12-month period ending in September 2019, according to the market research firm NPD Group. Total US sales were $207 million during that time, which followed several years of strong growth. From 2014 to 2018, e-bike sales rose eight-fold.

Sharing programs have driven much of this demand. Since 2018, "E-scooters and dockless bicycles appeared in city bike lanes suddenly and in great numbers," according to Deloitte. Micro-vehicle networks tend to do well in specific kinds of communities, such as where people are on vacation and therefore more interested in leisurely travel speeds.

Current conditions on 30A

Much of the potential for micromobility on 30A has not yet been realized. Bike-share or scooter-share programs are lacking on the corridor. Outside of individually owned micro-vehicles, there is limited availability of electric bikes and scooters. There is at least one rental business for electric bicycles on the corridor, and many businesses that rent conventional bicycles.

Micromobility arouses a degree of worry and uncertainty in South Walton County. In December 2019, commissioners approved a 270-day moratorium on scooter rentals while the county explores policies to manage these vehicles. The temporary ban was adopted in reaction to state legislation that allows the scooters anywhere that bicycles are permitted. Golf carts have also been controversial—they have been banned from the private streets of two South Walton communities, Rosemary Beach and Alys Beach. Golf carts are allowed on the 30A corridor, however—and scooters will be permitted to operate when the ban expires.

The corridor has significant potential for growth in micro-mobility, especially if 30A is redesigned to be more walkable and bikeable. The major barriers to micromobility in Florida—lack of connected street networks; large,

E-bikes are currently available to rent along Route 30A. Credit / South Walton Visitor's Guide

pedestrian-unfriendly arterials; and dangerous intersections—are manageable and surmountable on 30A. The corridor connects nearly all of the destinations near the beach—and it is a relatively small-scale thoroughfare that has been made walkable in a number of locations. The highway is already somewhat friendly to micro-mobility, and it can be made even more so.

Vacationers and day-trippers are more likely to use micro-mobility vehicles—relative to their day-to-day habits back home. Electric bikes can help these temporary residents avoid automobile trips. The distance of most trips along the 17-mile corridor is well-suited to micro-mobility. In the summer, when it is hot, bike riding is demanding for trips of several miles in the middle of the day. Electric power would make these trips much easier. The proliferation of cargo bikes will make running errands, such as grocery shopping, feasible without an automobile. This will not work for everybody, but even replacing a small percentage of trips would reduce congestion on the corridor.

Advantages

Micro-mobility vehicles use space far more efficiently than cars, both when they are moving and parked. More than one-third of scooter trips in Atlanta are replacing car trips, according to Shaun Green, senior transportation engineer with Atlanta Beltline Inc.

Encouraging the use of micro-vehicles will boost safety on 30A. Streets become safer when more walkers, bicyclists, scooterists, golf cart drivers and other users of low-speed vehicles start using them. Motorists respond to the presence of these vehicles by slowing down and becoming more cautious.

People using low-speed vehicles are also far less likely to kill or injure other road users. If a person is struck by a two-ton pickup traveling at 40 mph, a fatality is almost certain. If a pedestrian is hit by a 500-pound golf cart or a 55-pound electric bike moving at 15 mph, that person will almost certainly live. The pickup has 44 times the kinetic energy of the golf cart, and 126 times that of an electric bike—assuming all three have a 180-pound operator. The force of impact of a crash involving a micro-vehicle is a tiny fraction of a crash involving a conventional motor vehicle.

Welcoming and promoting micromobility

One key to promoting micromobility is to retrofit thoroughfares to calm traffic at dangerous locations and establish protected lanes for bicycles and micro-vehicles. More light-weight, slow-speed vehicles on the corridor creates "safety in numbers," which tends to lower serious crash rates and make thoroughfares safer for everyone, including motorists.

Walton County could begin by implementing quick, short-term safety improvements—such as calming traffic in the most dangerous intersection. Those safety improvements should be informed by crash data, and should focus on reducing speeding and improving conditions for walking, bicycling, golf carts and scooters. Small fixes to intersections, using paint, soft-hit posts and temporary curbs, could go a long way toward fixing problems like inadequate sightlines and high turning speeds at intersections where people on the bike path encounter turning motorists.

The changes in parking regulations described in the previous section would also promote micromobility. Generally, bike-share and scooter companies do well in places where people can save money by using less parking or where there is a reduced amount of parking, both on and off the street.

Local operators can rent micro-vehicles—in which case they are generally returned to a single location. National firms also provide app-based rentals available 24-hours a day. The latter generally requires more management and policing. However, this is no reason to fear micro-mobility. The county can and should set up regulations on micro-mobility parking. These rules are enforced similar to automobile parking regulations, even to the degree that certain spots can be designated for parking. If more management is required, parking fees can be used to support that management. Rental micro-vehicles can even be geofenced so that they are not allowed to enter areas with a heavy concentration of pedestrians, such as Seaside's beachfront. The City of Alexandria, Virginia has adopted all of these measures with great success and have released the findings from their pilot program on their website.

Designated park spaces for e-scooters help reduce instances of improper parking. Credit / Transportation for America

6. Code for an evolving mobility future

To accommodate this report's recommendations and to support community-based outcomes for future mobility technology, updates are needed for Walton County's codes.

Setting the stage with the community

Policies and regulations help achieve the future that a community desires. The evolving mobility landscape presents a specific set of problems that can hamper public knowledge and make it difficult to craft policies and regulations that enjoy widespread community support. These problems include:

- New technologies often emerge quickly,
- Presentations about them often devolve into technological details, and
- Mobility advances challenge the status quo.

To address these problems, planners must continually inform the community about emerging modes of transportation, and engage them concerning their future goals. Likewise, plans and codes, containing policy and regulation, are living documents that should regularly evolve to meet the dynamism of changing circumstances. Efforts must be made to set community expectations around policy and change.

Coding for an evolving mobility future extends beyond the regulatory realm of zoning and subdivision, into other sections of county codes and plans. Each codebook chapter should be analyzed for relevant subject matter, and ideally relocated to a new, unified chapter on mobility and public way usage. Ultimately, planning and regulating the public way should change from a vehicle- or user-defined lane model to a speed-based lane or usage-area model.

Implementing new mobility solutions extends beyond Walton County to include many third-party mobility operators. In its initial actions, the County should establish programs that coordinate between it and mobility operators. At first, these programs may simply require operators to register; over time they should influence code, policy, and ultimately the built environment, evaluating needs as conditions change.

Codes changes

The following recommendations are focused on zoning and subdivision changes to support a new mobility future. As discussed above, these recommendations should be supported by broader public policy, discussions, and coordination.

Permitting

The permitting process is a first-touch opportunity to coordinate between public and private sectors. Given that mobility innovations are constantly in flux, the permitting process should provide an opportunity for both the county to express their desired outcomes and for the private sector to further innovate.

- The county should consider establishing a consolidated review committee (CRC) to coordinate application review between departments that may have competing priorities. The CRC reduces complexity for the applicant and ensures departmental coordination through the review process.
- Require pre-application conferences for large projects that will build new roads or substantially modify existing ones. Pre-application conferences provide early interaction between the county and private sector, where both sides can coordinate mobility plans.

Transportation

Transportation standards are a clear target for change. Most transportation regulations are aimed at cars and freight with little regard for either other users of the public way or adjacent land uses. The decades-long efforts of CNU

members and their affiliates have brought positive change; however, it still focuses on the traditional public way users. Initial transportation reform should at a minimum implement these current and emerging best practices. But new standards have not yet been written for a changing mobility future. To this end, policies are needed outside of standards to encourage innovation, flexibility, and support tactical solutions.

- Establish transportation context areas that are coordinated with the intensity and diversity of land uses. Recently, Florida DOT has adopted context area designations that are current best practice and roughly tied to the New Urbanist Transect. In broader practice, context areas should be used as criteria for transportation decisions. Context should distinguish, at a minimum and at a granularity no less than 40 acres:
    1. Rural areas, excluding rural towns
    2. Special-use areas such as airports, resorts, and industrial parks
    3. Suburban areas, commercial and residential
    4. Compact residential areas
    5. Compact mixed-use areas
    6. Intensive residential areas
    7. Intensive mixed-use areas
- Regularly coordinate travel lane, parking lane, trail, and sidewalk standards with evolving technologies, erring on the side of narrower lanes for higher speed movement and wider accommodations for lower speed movement. While most regulatory situations would benefit from greater objectivity in standards, accommodating evolving roadway users is the perfect application for guidelines. Guidelines should be developed which provide a rough framework of user types, needs, shared, and individual accommodations. Additionally, the land use context and urban forest should be well represented.
- Support tactical urbanism efforts to test new technologies and techniques. Tactical efforts are a reasonable way of supporting micro-mobility and emerging technologies with a permit first and restrict later mentality. With concern for public safety in mind, openly permitting new mobility options across an entire jurisdiction is difficult. Limited, tactical efforts allow operators and communities to experiment over a limited area and time. As a result, they are able to set appropriate regulations and operational plans.

Development

Built environment regulatory reform has focused most heavily on the development community through zoning, buildings, and subdivision codes. Like transportation, development regulation should first and foremost implement the current and emerging best practices endorsed by CNU's Project for Code Reform, which are aimed at converting automobile-centric areas to pedestrian and bike friendly, walkable places.

Our changing mobility future is best supported by compact and walkable built places and a regional declension of place from major urban centers to rural and natural areas. A responsibly-planned region provides distributed centers of jobs and activity, and diverse housing and recreation in close proximity. Such places are well accommodated by last-mile services (such as walking, scooters, and autonomous vehicles), mid-range services (such as bikes, autonomous shuttles and busses), and long-range services (such as regional rail).

A combination of private enterprise and municipal oversight is the primary way emerging technologies are integrated into the built environment, the use of the public way and public properties evolves. Recommendations found in the Project for Code Reform cover most development-centric issues, but can be supplemented with a few additions.

- Future development should require an interconnected street network to avoid the concentration of an increasing number of mobility modes on a single path. The street network should include secondary paths or loops which can be used as contiguous routes for lower speed movement. Multiple parallel paths and options allow streets to remain narrow. Increasing modes of movement drives a tendency to widen rights-of-way, however wider streets erode the public street room and encourage higher speeds.
- Right-size parking standards by reducing or eliminating municipal-specified requirements. Where requirements are retained, re-evaluate actual parking availability and usage, and continually adjust requirements at least every five years. Parking usage evaluation should be surveyed rather than estimated, and analyzed during typical conditions rather than highest peak demand days.
- Enable district managed parking and mobility solutions, both by the county and by third parties such as Business Improvement Districts, Downtown Development Authorities, private parking operators, and developers of substantial projects. The managing organization should be responsible for adequate parking accommodations, eliminating municipal parking requirements from individual properties within the district.
- Encourage or require new structured parking facilities to include electric vehicle charging capacity and space for bikes, scooters, and other micro-mobility vehicles. These accommodations have a real cost, which should be offset where possible by lower fees, streamlined processes, and reduced parking requirements.
- Strategically encourage new structured parking facilities to operate as mobility hubs. Mobility hubs should occur in key, planned locations, which support the interface of multi-modal activities. Town centers and main streets are often the ideal location, however in tourist-heavy areas they are often located at the edge of these districts. The county should study and site general areas where mobility hubs are desired, and make funds available to encourage their development. The county may provide limited grant funding, participate in partnership with the development community, or develop mobility hubs on their own.

Berliner Tor Switchh mobility hub in Hamburg, Germany. Credit / Hamburger Hochbahn AG

TACTICAL URBANISM PROJECTS TO TEST THE FUTURE OF MOBILITY

In addition to our long-term recommendations for the future of mobility along Route 30A, we also recommend a pair of tactical urbanism projects that Walton County can undertake in the near-term as demonstrations. These projects should be undertaken during peak season to fully appreciate their effectiveness and capture the most amount of data.

1. Demonstration of Route 30A 'shared street plaza' at Seaside's town center

A tactical urbanism project can demonstrate how a shared space would operate on Route 30A through Seaside with several simple steps.

A. Close the parking lanes on both the northern and southern sides of 30A, so that pedestrians and drivers do not need to navigate parallel parking.

B. Set up signage at E. and W. Ruskin Street that informs drivers they are entering a shared space and must proceed slowly; this can be reinforced by stop signs at each entrance to the shared space.

C. Paint Route 30A's pavement adjacent to Seaside's town square so that it becomes visually distinct from the rest of the road.

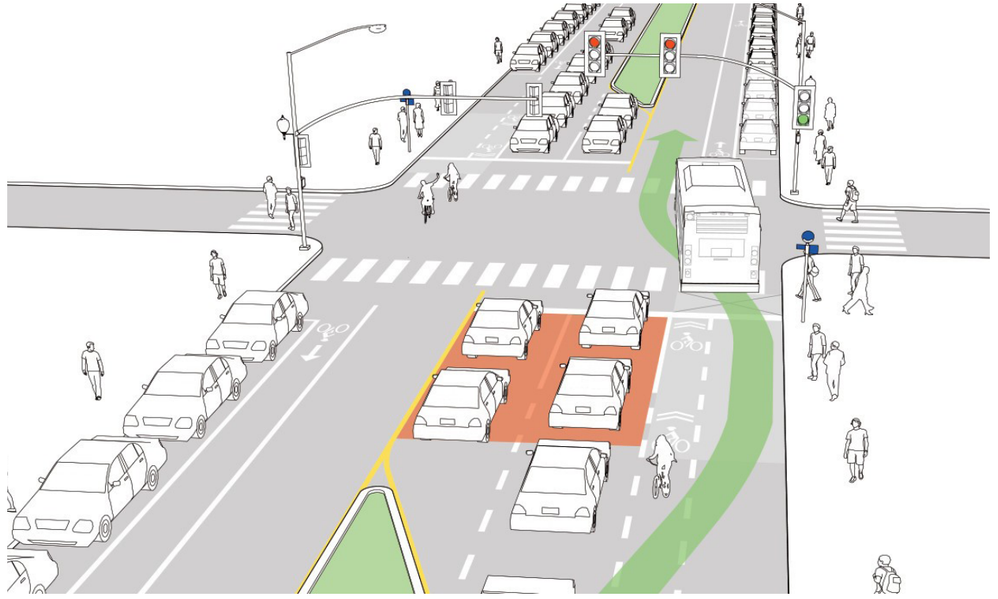
D. Introduce features to calm traffic, such as temporary speed bumps at the intersections with the horseshoe of Seaside's town square, planters along the middle and sides of 30A's travel lanes.

E. Activate closed parking lanes with extra benches, tables, etc. to serve and attract additional pedestrians.

This project presents a new opportunity to create a distinctive public space for Seaside as well as a vision for prioritizing pedestrians and modes of transportation beyond private cars along the 30A corridor. It also has the added benefit of providing a space that supports the activities of adjacent businesses and Seaside residents.

Most importantly for future mobility solutions, it offers a way to all modes to travel safely through Seaside's center, without adding lanes or compromising the town's walkabe character.

Broadway in New York City transformed into a tacitical shared street. Credit / NYC DOT



Example of a queue jump, which allows transit to pass traffic at signalized intersections. Credit / NACTO Transit Street Design Guide

2. 'Queue jump' for 30A transit/shuttle

For transit vehicles operating in general purpose lanes, a queue-bypass system is needed to protect transit vehicles from congestion. This operates under the assumption that congestion spills back from specific congested intersections with the busier north-south routes, such as county roads 283 and 395.

At these intersections, a single added lane is installed on each approach (upstream) to the intersection that is for transit only. Logically, on eastbound 30A, it would be an added right lane and, on westbound 30A, an added left lane. This lane is controlled by a single, short signal phase, and this phase would be activated only when a transit vehicle was in the queue. The length of the lane could be several blocks, depending on the length of the congestion. The lane would be in a previous parking lane or other available right-of-way.

If space does not allow this lane on the approach to the congested intersection, then an alternative location several blocks upstream of the congested intersection can be utilized. This intersection would be signalized and would become a metering signal for the actual congested intersection downstream. The new intersection would be allowed to replicate the congestion that was previously downstream and the queue-bypass would bypass the replicated congestion. The metering would result in the previously congested intersection becoming free, or freer flowing, and it would no longer need a queue bypass.

Just as the service needs to be tested and evolve, the queue bypass lanes may also need adjustment, and this process can be expedited by using a tactical approach, building out prototype queue bypass lanes with temporary construction materials, and rebuilding permanently once successful dimensions have been established.

Moving Forward

Planning for a new mobility future is like trying to hit a moving target. Competing claims about the arrival and capabilities of new technologies make it difficult to fully assess the impact they will have. This is not to say nothing can be done in advance. Communities should define the outcomes and goals they wish to achieve first, then adopt and implement new technologies, but only if they provide a means to achieve the desired outcomes.

Through design and policy, cities and towns can also begin to set the parameters for the future operation of technologies like autonomous vehicles. As places like Walton County look toward the future, they should consider investments that espouse the following guidelines, to ensure a proper return:

Fit the Context

A single design solution is not appropriate for every context. In addition to its variable right-of-way, the 30A corridor has a rich amount of diverse contexts, ranging from the dense, walkable town centers of Seaside and Rosemary Beach, to stretches of rural highway along its state parks. Future street designs for Route 30A should not be uniform, but instead vary according to context, playing to the area's existing or desired character.

Design for Flexibility

A large-scale investment in infrastructure to support an uncertain future technology has the potential not to pan out. Instead, planners should focus their efforts on the transportation technologies here today, with ideas about how to adapt designs to accommodate future developments. The proposed multimodal lanes in Walton County's 2040 Mobility Plan provide an example of this approach. Should the operation of an autonomous shuttle in these lanes prove not viable, they can still be used by e-bike and e-scooter riders. Tactical urbanism projects that test how unproven transportation technologies work within the built environment support this need for flexibility.

Plan for Less Parking

Similar to designing for flexibility, planning for less parking responds to current developments, while still addressing future ones. Ridehailing services, along with an increasing number of micro-mobility options, have siphoned off the need for driving (and parking) private automobiles, not only in Walton County, but nationwide. The advent of autonomous vehicles, especially those that are shared, promises to continue this trend. In addition, a reduction in parking, as well as charging the right price for remaining spots, will increase ridership on 30A's proposed transit system, which achieves the county's goal of lessening congestion along the route. A final added benefit for both the county and developers is a savings in costs that would have gone toward building and maintaining parking.

An EZ10 autonomous shuttle on Finland's streets. Credit / Metropolia UAS

Consider Safety and Speed, not Mode, when Organizing Transportation

Given that walkable places thrive on narrow right-of-ways for vehicles, it is imperative not to create additional travel lanes dedicated exclusively to AVs. Doing so will only add another barrier for pedestrians crossing the street and will compromise Route 30A's walkable character. However, the combination of several modes operating at a similar speed (15-25 mph) along the same path offers an expedient solution in place of adding travel lanes. If properly designed, multimodal lanes will remain pedestrian-friendly, as the modes that travel them operate at a low speed. At the same time, they enable micromobility options and, if appropriate, shared AV shuttles to operate safely and effectively independent from cars.

It is also crucial that street design dedicates ample space among the right-of-way for sidewalks, the foundation for walkable urbanism and all of its benefits. New technologies will not change the fact that pedestrians, walking at a speed of 3 mph, contribute the most to a community's social and economic vitality.

About CNU

CNU's mission is to champion walkable urbanism. We provide resources, education, and technical assistance to create socially just, economically robust, environmentally resilient, and people centered places. We leverage New Urbanism's unique integration of design and social principle to advance three key goals: to diversify neighborhoods, to design for climate change, and to legalize walkable places.

With nineteen local and state chapters and headquarters in Washington, DC, CNU works to unite the New Urbanist movement. Our projects and campaigns serve to empower our members' efforts, identify policy opportunities, spread great ideas and innovative work to a national audience, and catalyze new strategies for implementing policy through design approaches.

All New Urbanists share the conviction that our physical environment has a direct impact on our chances for happy, prosperous lives. Our movement includes professionals, leaders, advocates, citizens, and other like-minded organizations working to identify and address the range of issues impeding the development and redevelopment of well-designed neighborhoods, public places, commercial corridors and rural environments.

CNU works to unite that movement as a connector, convener, alliance builder, and teaching platform. Our staff, members, partners, and allies are the international thought leaders on building better places, and CNU helps bring them together. CNU is committed to ensuring that the benefits of good urbanism are available to all through our work on Equity and Inclusion.

CNU is a nonprofit 501(c)(3) organization headquartered in Washington, DC.

About the Seaside Institute™

Our Mission: "Inspiring Liveable Communities." The Seaside Institute™ believes in promoting the building of sustainable places through design and education, using Seaside as a living laboratory. To learn more about the Seaside Institute or make a donation go to www.seasideinstitute.org.

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