



Road Safety Audit - NE Polk US 27 Mobility Study: US 27 from North of SR 60 to US 192



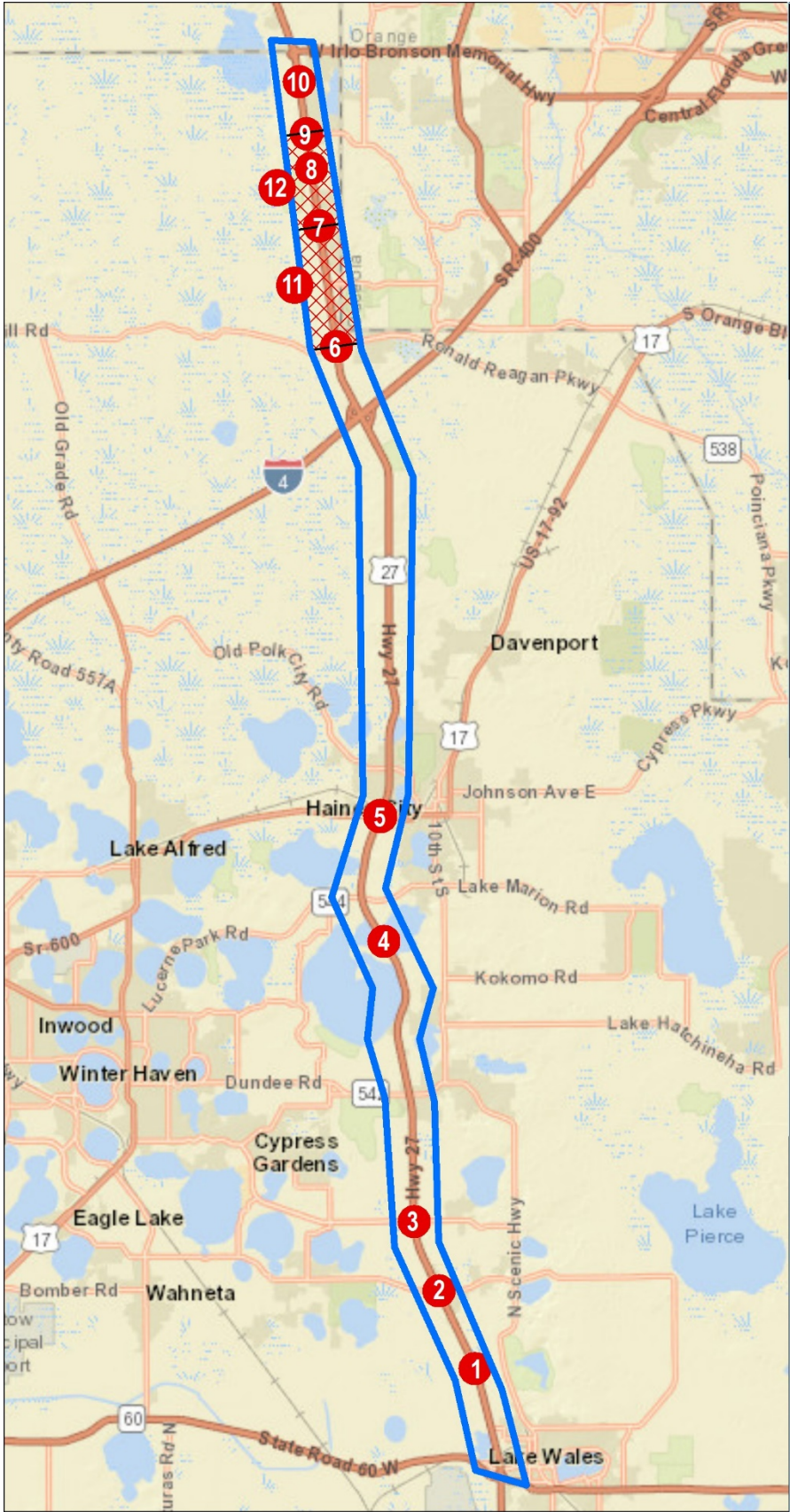
September 2019

Section 16180000

Mile Post: 0.000 - 31.970

Prepared for: FDOT, District One

Prepared by: AECOM



Road Safety Audit Locations:

Intersections:

- 1. Tower Point Circle
- 2. Thompson Nursery Road/Chalet Suzanne Road
- 3. Sunshine Drive/Paradise Island Place
- 4. Cypress Gardens Boulevard/Waverly Road
- 5. US 17 Interchange
- 6. Ronald Reagan Parkway/Deen Still Road
- 7. California Boulevard/McFee Drive
- 8. Sand Mine Road
- 9. Legacy Park Boulevard/Florence Villa Grove Road
- 10. Polo Park Boulevard

Roadway Segments:

- 11. Ronald Reagan Parkway/Deen Still Road to California Boulevard/McFee Drive
- 12. California Boulevard/McFee Drive to Legacy Park Boulevard/Florence Villa Grove Road



Location:	Location Description:	Intersection Type:
1	Tower Point Circle	Non-Signalized Intersection

Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 60 mph posted speed. Private driveways to the Tower Point Apartment Homes located on the east side and the Vanguard School, a private special needs school, on the west side of US 27.Full median openingGrass median with drainage flumesNo street lightingNo sidewalksSB U-turns – heavy from Tower Lakes & Car Dealership to the northTransit stops (Route 35) on both sides of US 27Private Special Needs School on west side of US 27Tower Point Apartment Homes on the east side of US 27Off-tracking at northwest quadrantStop signs with supplemental “Divided Highway” sign mounted below for east and west legsOne pedestrian was observed crossing from the west side to the east side of US 27
Recommendations:
<ul style="list-style-type: none">Convert from full median opening to bi-directional median openingUpdate transit stops with pads and shelter/bench amenities and provide sidewalk connection from driveways on both sides of US 27Reduce northwest curb radiusInstall curb and gutter on all four quadrantsRetrofit full median opening to bi-directional median openingInstall street lighting on both sides of US 27Reduce risks of hydroplaning or other wet surface crashes by performing a Median Drainage Evaluation to eliminate surface erosion or standing waters on US 27Conduct pedestrian crossing analysis

Tower Point Circle	No additional median signage
	
Median drainage flumes	Transit stop with no transit shelter amenities
	
No street lighting	Northwest quadrant off-tracking
	

Southwest quadrant off-tracking	Northwest quadrant off-tracking
	
Northbound nighttime lighting	Southbound nighttime lighting
	

Location:	Location Description:	Intersection Type:
2	Thompson Nursery Road/Chalet Suzanne Road	Signalized Intersection

Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 60 mph posted speed. Thompson Nursery Road and Chalet Suzanne Road are 2-lane undivided roadways with posted speed of 45 mphSkewed intersectionPedestrian signal at all four quadrantsNo sidewalks from hotel or from Pedaler’s Pond Mobile Home Park connectivity to Thompson Nursery Road/Chalet Suzanne Road commercial/retailStreet lighting present at intersection. Several street light poles in advance of intersection with additional ambient lighting from nearby commercial businesses; no lighting present on Thompson Nursery Road/Chalet Suzanne RoadOld black detectable warning pads on southeast and southwest quadrant.Protected/permissive left turn signal for eastbound and westboundLong sidewalk gapsUneven pavement at northeast and northwest quadrantCommercial/retail on all 4 legsWawa’s exit onto northbound US 27 does not have proper signage or pavement markings from adjacent propertyOverhead lighted street sign for Thompson Nursery Road (southbound) is missing (Coordination with FDOT Asset Maintenance work order in progress)Eastbound overhead street 5-section signal housing damaged (Coordination with FDOT Asset Maintenance work order in progress)Pedestrian crossing sign missing roadway name “Thompson Nursery Road”Northeast quadrant pedestrian signal damaged during multi-vehicle/truck nighttime crash on May 3, 2019 (Coordination with FDOT Asset Maintenance work order in progress)Southeast quadrant pedestrian signal rotated making it difficult to pedestrian callVisible ground erosion near signal controller boxA FDOT memorial marker is located on the southeast quadrant adjacent to northbound lanes



Recommendations:
<ul style="list-style-type: none">Install high visibility crosswalks pavement markingsUpdate pedestrian assemblies to current ADA standards with audible push buttons and correct signage and orientationUpdate curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” signs (MUTCD R4-7) in median concrete traffic separators, as neededImplement leading pedestrian interval with “No Right Turn” LED blank out (MUTCD R3-1)Sidewalk gap fill-in at southeast quadrant (Wawa)Install sidewalk from Hampton Inn & Suites to Thompson Nursery RoadRepair Thompson Nursery Road overhead street designation sign (Coordination with Asset Maintenance work order in progress)Install Stop sign, lighting and pavement markings at Wawa’s entrance/exit (from adjacent properties) for northbound on US 27; remove old parking lot space stripingInstall right turn arrow signal for eastbound with No Right Turn on Red blank out (MUTCD R3-1), due to skewed intersection approachInstall supplemental advance 3-section Left Arrow signal for northbound and southbound left turn lanesReplace supplemental advance 3-section signal with 5-section signal for eastbound and westbound directionsInstall curb and gutters at all four quadrantsInstall additional street lighting on US 27 and Thompson Nursery Road/Chalet Suzanne Road



Southeast quadrant sidewalk ends prior to the intersection	Vehicles pull out beyond stop bar to see on-coming traffic to make right turn
	
Northeast quadrant continuous sidewalk on Chalet Suzanne Road	Northeast quadrant detector warning pad missing and off-tracking on sidewalk
	
Northwest quadrant off-tracking near detector warning pad	Southwest quadrant lighted street sign missing on one side
	

Pedestrian crossing sign designation label missing	Construction debris
	
Southwest quadrant old warning detector pad	Vehicle stopping beyond the stop bar
	
Southwest quadrant off-tracking within pedestrian area	Southeast quadrant pedestrian signal head rotated. Difficult to see when crossing on the west leg from north to south
	



Potential ground erosion	Faded pavement paint at median traffic separator nose
	
Westbound 5-section signal damaged	Multi-vehicle plus truck nighttime crash northeast quadrant (Accident Date: May 3, 2019 during PM Videos
	
Driveway from Wawa within adjacent property still has parking lot pavement stripes and there is no Stop sign at driveway entrance/exit for northbound US 27	Northeast quadrant pedestrian signal damaged during crash on May 3, 2019 (Photo taken May 8, 2019 during Corridor Re-visit)
	

Southbound nighttime lighting, south of intersection	Northbound nighttime lighting, north of the intersection
	

Location:	Location Description:	Intersection Type:
3	Cypress Gardens Boulevard/Waverly Road	Signalized Intersection





Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 60 mph posted speed. Cypress Gardens Boulevard is a 4-lane divided roadway with a posted speed of 55 on the west side of US 27 and Waverly Road is a 2-lane undivided roadway with posted speed of 45 mph on the east side of US 27Pedestrian signals present at all four quadrantsLighting present at intersection. Several street light poles present in advance of intersection on US 27; no lighting present on Cypress Gardens Boulevard/Waverly RoadNo sidewalks present along either roadway. Only present at intersectionMarked bike lanes present on Cypress Gardens BlvdRutting of pavement noted in NB center lane of US 27 just north of intersectionTire marks located on median curb nose on north side and west side of intersectionNo lit street description signage from span wire heading southbound for “Cypress Gardens Boulevard”SE Quadrant<ul style="list-style-type: none">Missing detectable warning padOff-tracking of vehicles onto sidewalkRoadside memorial located south of intersection, adjacent to NB right turn laneOvergrown vegetation adjacent to sidewalkNeed to evaluate handrail at back of sidewalk due to slope at back of sidewalkStop bar for NB traffic appears too close to crosswalk across US 27NE Quadrant<ul style="list-style-type: none">Off-tracking of vehicles onto sidewalk, loose detectable warning padPavement marking fadedConcrete strain pole damaged (possibly caused by vehicle accident)NW Quadrant<ul style="list-style-type: none">Pedestrian signal head for crosswalk across US 27 is misaligned; difficult to see display across US 27Missing detectable warning padNeed to evaluate handrail at back of sidewalk due to slope at back of sidewalkRoadside marker located west of intersection in WB direction; vehicles pull over onto grass to look at marker, may need to replace with a FDOT approved destination signOne pedestrian ramp at quadrant for crossing both roads, recommend to separate rampsSW Quadrant<ul style="list-style-type: none">Off-tracking of vehicles onto sidewalkSome car debris (broken glass) present on sidewalk

Recommendations:
<ul style="list-style-type: none">Installation of high visibility crosswalksUpdate pedestrian assemblies to current ADA standards with audible, correct signage and orientationUpdate curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” (MUTCD R4-7) signs as needed in median concrete traffic separatorImplement leading pedestrian intervalInstall “Yield to Pedestrian” (MUTCD R10-15) signsInstall sidewalks from Carlton Arms Apartment to US 27 on the south side of Cypress Gardens BoulevardInstall advance supplement 3-section arrow signal for exclusive left turns for east and west approachesInstall pedestrian handrail at back of sidewalk in southwest andTrim vegetative overgrowthInstall additional street lighting on Cypress Gardens Boulevard/Waverly Road in advance of the intersectionInstall advance supplemental 3-section arrowed signal for exclusive left turns on east and west approaches (Off-system)Repair/install lighted street description sign for Cypress Gardens Boulevard southbound located on concrete poleRepaint pavement markings, as neededRepair rutting street pavement in Northbound center lane on US 27Period cleaning of debris from sidewalks and bike lanes, as needed

Cypress Gardens Boulevard/Waverly Road Intersection	Southeast quadrant off-tracking
	

Southeast quadrant overgrowth vegetation	Southeast quadrant overgrowth vegetation
	
Northeast quadrant warning detector pad missing	Northeast quadrant concrete strain pole damage
	
US 27 long crossing difficult to see pedestrian signal heads	No lighting on Cypress Gardens Boulevard
	

Pedestrian walking on paved shoulder	Pedestrian walking on paved shoulder
	
Pavement damage	Detached warning detector pad
	
Bike lane debris	Steep slope adjacent pedestrian signals
	

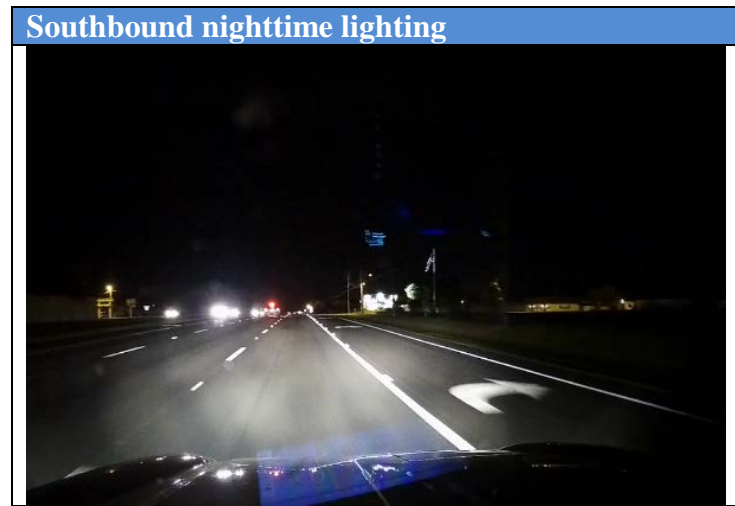
Northwest quadrant warning detector pad missing	Crash marker
	
Northwest quadrant off-tracking	Ground erosion
	
Faded pavement markings	Faded pavement markings
	

Median storm drainage	Median storm drainage
	
Damaged utility box	Cypress Gardens Boulevard monument
	
Northbound nighttime lighting	Southbound nighttime lighting
	

Location:	Location Description:	Intersection Type:
4	Sunshine Drive/Paradise Island Place	Non-Signalized Intersection

Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 60 mph posted speed. Paradise Island Place located on the east side with posted speed limit of 25 mph and the Lake Region Village, a private driveway to the mobile home community, on the west side of US 27.Vehicle seem to be driving at higher speeds (70-75 mph)No sidewalkNo street lightingNorthwest quadrant off-tracking into Lake Region VillageHigh volume left turns at median opening from US 27 and sidestreetsHigh volume U-Turns (southbound to northbound) from Paradise Campground at median opening due to downstream direction median openingStop sign located in advance of stop bar at Paradise IslandOpen drainage ditchesNo Stop sign at exiting from Region Sunshine DriveConvenience store manager indicated one resident crosses US 27 daily from Regency to his store
Recommendations:
<ul style="list-style-type: none">Convert from full median opening to bi-directional median openingMove Stop sign to align with Stop Bar at Paradise Island PlaceInstall Stop sign at Sunshine DriveInstall street lightingReduce northwest quadrant radius to deter right turns in from off-trackingConvert from full median opening to bi-directional median openingConduct spot speed study

Sunshine Drive/Paradise Island Place Intersection	No Lighting
	
Stop Bar Beyond Stop Sign	Northwest Quadrant Off-Tracking
	
No Additional Median Divided Highway Signs	Northbound nighttime lighting
	



Location:	Location Description:	Intersection Type:
10	US 17/92	Interchange

Location Observation Details
<ul style="list-style-type: none">US 27 has a posted speed limit of 45 mph within the interchange.Cloverleaf interchangeStreet lighting on the southbound approach to the bridge; no street lighting on the northbound approach to the bridge; tall pole lighting present at ramp locationsShort concrete median wallShort merge/diverge auxiliary lane northbound and southboundNo bike or pedestrian facilities
Recommendations:
<ul style="list-style-type: none">Install additional street lighting on the northbound approach to be continuous along the entire length of the bridgeInstall supplemental R5-1a “WRONG WAY” signs to the existing R5-1 “DO NOT ENTER” signs at Moss AvenueInstall directional pavement arrow markers within the two-way section of the southbound off/on ramp areaInstall signage and pavement markings for bike lanes within the paved outside shoulder area on both sides of the bridge with dashed striping areas at the rampsInstall sidewalk from Nelson Street/McKay Drive from the interchange to the northInstall sidewalk from the interchange south to SR 544/Scenic HighwayBuild pedestrian paths on both sides of the bridge with signage and pavement markings at ramp locations

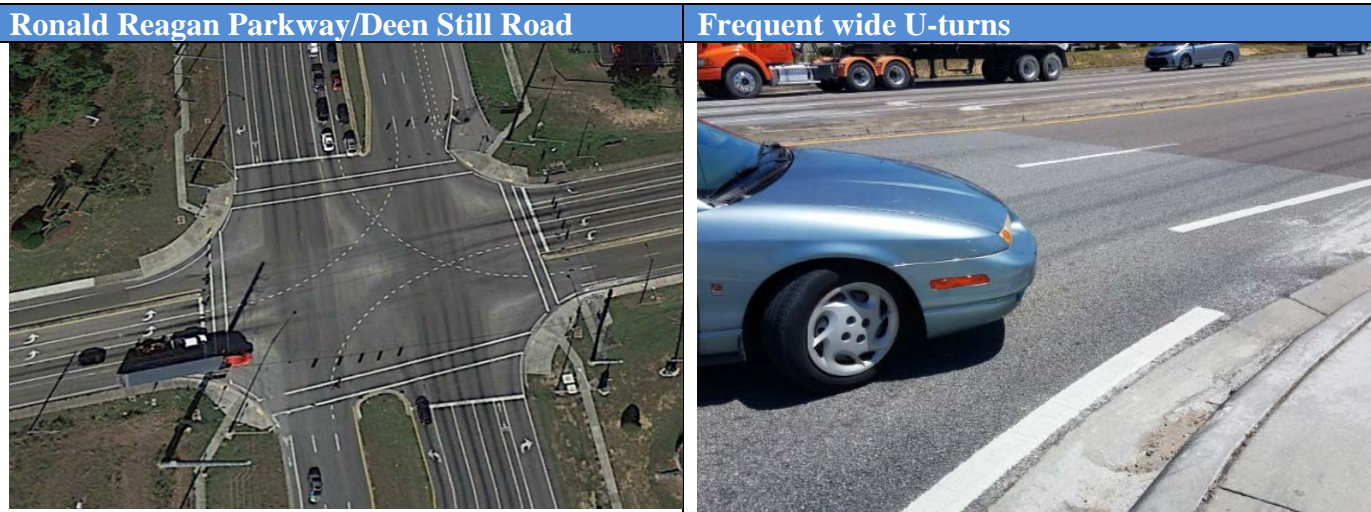
US 17/92 Interchange	Northbound on merge/diverge lane (weaving area approx. 600 feet)
	
Southbound on merge/diverge lane (weaving area approx. 650 feet)	Northbound nighttime lighting
	
Southbound nighttime lighting	
	

Location:	Location Description:	Intersection Type:
6	Ronald Reagan Parkway/Deen Still Road	Signalized Intersection





Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 55 mph posted speed. Deen Still Road is a 2-lane undivided roadway with a posted speed of 40 on the west side of US 27 and Ronald Reagan Pkwy is a 4-lane divided roadway with posted speed of 45 mph on the east side of US 27Pedestrian signals present at all four quadrantsStreet lighting present at intersection; street lighting present in advance of intersection on US 27 and Ronald Reagan Pkwy; no street lighting present on Deen Still RoadSidewalks present along both roadways; along US 27, sidewalk is near ROW line; along Ronald Reagan Pkwy/Dean Still Road, sidewalk is adjacent to curbIntersection is curb and gutter; Ronald Reagan Pkwy/Dean Still Road has curb and gutter; flush shoulders are present along US 27High volume U-turn traffic at east leg and north legSignal head appear to be missing for right turn lanes for NB and SB directions; possibly to be added at a later timePavement markings on Ronald Reagan faded; also, some rutting in WB through laneMedian on west leg shows evidence of damage from vehiclesWB travel lane in west leg appears narrowSE Quadrant<ul style="list-style-type: none">Off-tracking of vehicles onto sidewalk, missing detectable warning padsWB vehicles making U-turn vehicles hit curb in SE quadrantPossible need for handrail adjacent to sidewalk south of intersectionNE Quadrant<ul style="list-style-type: none">Off-tracking of vehicles onto sidewalkClogged underdrain behind sidewalkTransit stop shelter present north of intersection, some damage to windowsNW Quadrant<ul style="list-style-type: none">Pedestrian signal head rotated, difficult to see displayOff-tracking of vehicles onto sidewalkPortion of sidewalk eroding into ditchTransit stop located north of intersection, poor connection to sidewalk; requires walking on shoulder to reach sidewalk connection; no shelter or bench provided at stopUneven sidewalk joint, tripping hazardPedestrian signal button across Deen Still Road is not working in either directionSW Quadrant<ul style="list-style-type: none">Faded pavement marking for crosswalk



<ul style="list-style-type: none">Pedestrian signal button across Deen Still Road is not working in either directionOff-tracking of vehicles onto sidewalkDamaged sidewalk south of intersection
--

Recommendations:
<ul style="list-style-type: none">Install high visibility crosswalksUpdate pedestrian assemblies to current ADA standards with audible push button, correct signage and orientationUpdate curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” (MUTCD R4-7) signs in median concrete traffic separator, as neededImplement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signsInstall street lighting on Deen Still RoadRepair cracked or uneven sidewalks at all four quadrantsInstall right turn arrowed 3-section signal for right turn lanes northbound and southboundInstall “Yield to Pedestrian” signs on east approachInstall advance supplement signs “No Right Turns on Red” for north and east approachesRepaint faded pavement markings crosswalk and stop bar markings for west approachImprovement drainage and ground erosion on northeast and northwest quadrantsRepair transit shelter windowsInstall bike key hole lane pavement markings on Ronald Reagan Parkway and Deen Still RoadRetrofit transit stop connection from sidewalk to shelter, north of intersection heading southboundRepair damaged covers and gratesTrim vegetative overgrowth to help improve stormwater drainageRepair/repaint median traffic separator nose and straighten reflector pole at Ronald Reagan Parkway







No street lighting on Deen Still Road	No pavement markings for bike key hole lanes on Ronald Reagan Parkway and Deen Still Road	Vegetation overgrowth at drainage grate	Faded pavement markings on Deen Still Road
			
Southeast quadrant pedestrian warning detector pads missing	Southeast quadrant clogged drain behind sidewalk	Transit bus stop difficult to reach	Offset sidewalk connection to transit
			
Northeast quadrant Yield to Bikes signage on US 27	Yield to Bikes signage difficult to see from Ronald Reagan Parkway	Sidewalk edge damaged due to ground erosion	Frequent heavy truck right turns from Deen Still Road
			







Clogged drainage	Damaged transit facility
	
Traffic separator nose is damaged and faded on Ronald Reagan Parkway	Damaged utility box cover
	

Northbound nighttime lighting	Southbound nighttime lighting
	

Location:	Location Description:	Intersection Type:
7	California Boulevard/McFee Drive	Signalized Intersection
Location Observation Details:		
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 60 mph posted speed. California Boulevard is a 2-lane undivided roadway with a posted speed of 25 on the west side of US 27 providing access to the Manors of Westbridge residential community and McFee Drive is a private driveway access to Hampton Lakes residential community on the east side of US 27Median nose intrudes slightly into crosswalk on north approachPedestrian signals present at all four quadrantsNo street lighting at intersection or along approachesUS 27 median north and south of intersection, curb radius guides cars into medianOn west leg, old crosswalk pavement markings are still visibleOn west leg, not sure if EB lane is one lane or two; rutting on outside of pavement due to vehicles driving off pavementObserved numerous NB to SB U-turns; may need a bulb out on west side of road to accommodate tractor trailers. Evidence of trucks driving off shoulder onto grassSE Quadrant<ul style="list-style-type: none">Off-tracking of vehicles onto sidewalkSidewalk tripping hazard (cracks)Pedestrian ramp is a diagonal curb ramp for crossing both roadsTransit stop located south of intersection; no shelter or bench provided at stopTwo signal heads provided for EB trafficNE Quadrant<ul style="list-style-type: none">Possible need for handrail adjacent to sidewalk just north of intersection, steep slopePedestrian signal pole is tilted/rotated, difficult to see display (Coordination with Asset Maintenance work order in progress)Detectable warning pad is damagedNW Quadrant<ul style="list-style-type: none">Possible need for handrail adjacent to sidewalk just north of intersection, steep slopeTwo parallel sidewalks; one appears to be for private developmentCable wire or powerline sagging at back of sidewalk; almost possible to touchTransit stop located north of intersection with shelter offset from landing padSW Quadrant<ul style="list-style-type: none">Off-tracking of vehicles onto sidewalk		
Recommendations:		
<ul style="list-style-type: none">Install high visibility crosswalksUpdate pedestrian assemblies to current ADA standards with audible push button, correct signage and orientation		

- Update curb ramps to current ADA standards to include yellow detectable warning pads
- Install “Keep Right” (MUTCD R4-7) signs in median concrete traffic separator, as needed
- Implement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signs
- Update/repair transit stops with pads and shelter/bench amenities
- Remove old crosswalk pavement markings on California Boulevard
- Improve pavement marking for westbound approach to indicate turn designation
- Improve pavement marking for eastbound approach indicating two lanes and lane designation
- Remove landscaping debris
- Repair and level cracked and uneven sidewalks
- Reduce radius for southwest quadrant
- Realign crosswalk for south approach
- Install sidewalk handrail on northwest where shoulder slopes
- Install curb and gutter at all four approaches
- Install street lighting at the intersection and approaches
- Contact responsible agencies for cable/power lines

California Boulevard/McFee Drive	Off-tracking on California Boulevard
	
Old faded crosswalk markings still present on California Boulevard	Shoulder slope adjacent to sidewalk
	

Pedestrian activity	Damaged decorative lighting and aluminum pole
	
Northbound, no transit amenities, north of intersection	Pedestrian signal pole tilted
	
Off-tracking on McFee Drive	Southbound, transit shelter
	

Possible U-turn off-tracking	Northbound right turn off-tracking
	
Northbound right turn off-tracking	Drainage slope adjacent to sidewalk
	
Northbound nighttime lighting	Southbound nighttime lighting
	

Location	Location Description:	Intersection Type
8	Sand Mine Road	Signalized Intersection

Location Observation Details
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a 55 mph posted speed. Sand Mine Road is a 2-lane undivided roadway with a posted speed of 40 on the west side of US 27 and a 2-lane undivided access roadway to Citrus Ridge Academy (K-8) on the east side of US 27 with 15 mph warning signageTransit stop shelter present south of intersectionHeavy trucks observed not stopping southbound right turns when light was redHeavy trucks driving over curbs when turning to and from Sand Mine Road (west side)Drainage issuesOff-tracking on southwest and northwest cornersDamaged inlets on County road off-system eastbound approachVegetation overgrowthNorthwest corner sidewalks do not connectFatal crash indicator postSpeedingSplit signalNo street lighting at intersection or approaches; ambient lighting from nearby commercial businessesAdvance signalized flashing beacon warning signs prior to intersection both northbound and southboundEastbound visibility issuesSoutheast corner includes two back-to-back sidewalks with no connectionsLong left turn lane from Jack’s Road extends south to Sand Mine Road
Recommendations:
<ul style="list-style-type: none">Install high visibility crosswalksUpdate pedestrian assemblies to current ADA standards with audible push button, correct signage and orientationUpdate curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” (MUTCD R4-7) signs in median concrete traffic separator, as neededImplement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signsReduce radius at all four quadrantsRealign crosswalks on north and south approaches

- Install “No Right Turn on Red” LED (MUTCD R3-1) w 5-section head signal for westbound to northbound; also, consider for eastbound to southbound due to sidestreet heavy trucks observed turning on red without stopping
- Improve drainage run-off and erosion
- Install curb and gutter at all four corners
- Connect transit stop shelter to inside sidewalk south of the intersection
- Improve sidewalks connections to and from Sand Mine Road
- Periodic law enforcement to monitor speeding through the intersection
- Install street lighting at intersection and approaches



Western side drainage issue (Off-system)



Western side drainage issue (Off-system)



Southeast dual sidewalks no connection to transit shelter



Left turn storage lane painted pavement markings



Southwest corner no sidewalk on Sand Mine Road connecting to US 27 (Off-system)



Northeast corner no sidewalk on Sand Mine Road connecting to US 27 (Off-system)



Northwest corner sidewalks disconnected between Sand Mine Road to US 27 (Off-system)



Southeast corner sidewalks disconnected between dual sidewalks. No sidewalk on Sand Mine Road (Off-system)



Northbound nighttime lighting




Southbound nighttime lighting



Location:	Location Description:	Intersection Type:
9	Legacy Park Boulevard/Florence Villa Grove Road	Signalized Intersection

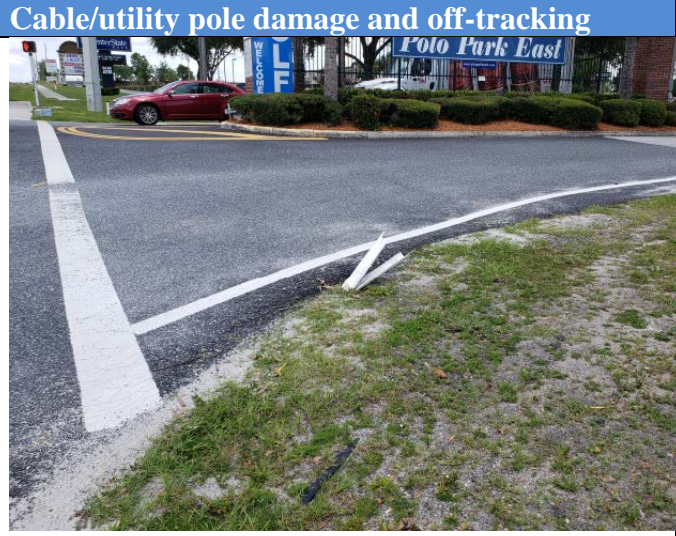
Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a posted speed limit of 55 mph; Legacy Park Boulevard is a 4-lane divided roadway with a posted speed of 30 mph on the west side of US 27 providing access to the Villages of Legacy Park residential community and Florence Villa Grove Road is a 2-lane undivided roadway with a posted speed of 30 mph on the east side of US 27 providing access to the Lake Davenport Estates residential communitySkewed intersectionAdvance signalized flashing beacon warning signs prior to intersection both northbound and southboundNo curb and gutter on all approachesOff-tracking on all approachesDamaged pedestrian crossing signal (Coordination with Asset Maintenance work order in progress)No street lighting at intersection and approachesDebris within bike laneNo sidewalk connection to Florence Villa Grove Road from US 27 (Off-system)
Recommendations:
<ul style="list-style-type: none">Install high visibility crosswalks for north, south, and west approachesUpdate pedestrian assemblies to current ADA standards with audible push button, correct signage and orientationUpdate curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” (MUTCD R4-7) signs in median concrete traffic separator, as neededImplement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signsReduce curb radius at all four quadrantsRealignment of crosswalks for south approachesInstall street lighting at intersection and approachConnect sidewalk from US 27 along south side of Florence Villa Grove Road to Tuscan Hills BoulevardClear debris from bike lane with regular maintenance

Legacy Park Boulevard/Florence Villa Grove Road Intersection	Northwest quadrant off-tracking
	
Northwest quadrant off-tracking and damage	Northbound bike lane run-off
	
Southeast quadrant off-tracking	Southeast quadrant off-tracking
	

<p>Southeast quadrant off-tracking</p>  A photograph showing a white SUV parked at a street corner. A metal pole, likely for a pedestrian signal, is leaning precariously over the sidewalk and into the road. The ground around the base of the pole is uneven and appears to be a mix of dirt and grass.	<p>Southwest quadrant off-tracking</p>  A photograph of a street corner showing significant off-tracking. A large, irregular patch of dirt and gravel has eroded from the pavement at the corner, exposing the underlying soil. The surrounding area is grassy.
<p>Southwest quadrant sidewalk offset and washout adjacent to utility boxes</p>  A close-up photograph of a concrete sidewalk. The sidewalk is uneven and has a significant gap or washout at its edge, adjacent to a grassy area. A red spray mark is visible on the concrete.	<p>Damaged pedestrian signal assembly</p>  A photograph showing a damaged pedestrian signal assembly. The metal pole is bent and leaning, and the signal head is missing or broken. The base of the pole is surrounded by dirt and grass.
<p>Northbound nighttime lighting</p>  A nighttime photograph taken from a vehicle's perspective, looking down a multi-lane road. The road is illuminated by streetlights, and the headlights of other vehicles are visible in the distance.	<p>Southbound nighttime lighting</p>  A nighttime photograph taken from a vehicle's perspective, looking down a multi-lane road. The road is illuminated by streetlights, and the headlights of other vehicles are visible in the distance.

Location:	Location Description:	Intersection Type:
10	Polo Park Boulevard	Signalized Intersection

Location Observation Details
<ul style="list-style-type: none">US 27 is a 6-lane divided highway with a posted speed limit of 55 mph; Polo Park Boulevard is a 2-lane divided roadway with a posted speed of 25 mph on the west side of US 27 and a 2-lane undivided roadway with a posted speed of 15 mph on the east side of US 27 providing access the Polo Park 55 Plus residential/golf communitySkewed signalized intersectionAdvance signalized flashing beacon warning signs prior to intersection both northbound and southboundPedestrian signal at all four quadrantsTransit stop shelters north and south of intersection with missing windowsErosion and drainage run-off at northwest and southwest quadrants adjacent to sidewalkOff-tracking on southwest and southeast quadrantsNo street lighting at intersection and approaches; ambient lighting from commercial businesses presentBike lanes present
Recommendations:
<ul style="list-style-type: none">Install high visibility crosswalksUpdate pedestrian assemblies to current ADA standards with audible push button,Correct pedestrian signage and orientation (Coordination with Asset Maintenance work order in progress)Update curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” (MUTCD R4-7) signs in median concrete traffic separator, as neededImplement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signsReduce curb radius at all four quadrantsInstall curb and gutter at all four quadrants of intersectionInstall windows at transit stop sheltersRealignment of crosswalks for south approachesRelocate cable/utilities underground marker poles from edge of pavement in southeast quadrantInstall street lighting at intersection and approachesInstall sidewalk at southeast quadrant of intersection along Polo Park Boulevard to gas station drivewayFill in ground erosion along sidewalkImprovement drainage and ground erosion on northeast and northwest quadrants





Location:	Location Description:	Segment Type:
11	Ronald Reagan Parkway/Deen Still Road to California Boulevard/McFee Drive	6 Lane Divided



Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway from Ronald Reagan Parkway/Deen Still Road to California Boulevard/McFee Drive with a posted speed of 60 mphAerial image generally reflected existing conditionsIncludes three unsignalized full median openings and one signalized intersectionUnsignalized intersection #1 – Central Grove Road (2-lane undivided with no posted speed sign – dead end road)/Terra Del Sol Boulevard (2-lane undivided with a posted speed of 30 mph)<ul style="list-style-type: none">Missing detectable warning pad in northwest quadrantSevere rutting/drop off on west leg of intersectionPossible sight distance issue at median opening due to vertical profile of US 27 south of intersection; poor sight distance for left turns onto northbound US 27Possible sight distance for eastbound right turns onto NB US 27Stop sign at Terra Del Sol is leaningSignalized intersection #2 – Four Corners Boulevard (2-lane undivided with a posted speed of 25 mph)/Bella Citta Boulevard (2-lane undivided posted speed of 40 mph)<ul style="list-style-type: none">Rutting, off-tracking in all four quadrantsFaded pavement markings on Bella Citta BoulevardLeaning pedestrian pole in southwest quadrantSpilled concrete in southbound bike lanesNo sidewalk connection between sidewalk on west side of US 27 and north side of Four Corners Boulevard; significant elevation differenceDetectable warning pad in southwest and northeast quadrants covered by soilPossible need for handrails adjacent to sidewalk in southwest quadrantObserved conflicts between pedestrians and left/right turning vehicles at intersectionPedestrian signal in southwest quadrant not workingWide sidewalk provided along south side of Bella Citta Boulevard., connection to school to the eastNo school crossing signage provided at intersectionUnsignalized intersection #3 – Elgin Boulevard (Pine West community; no posted speed sign)/Santa Cruz Lane (Santa Cruz community; no posted speed sign)<ul style="list-style-type: none">Transit stop in northwest quadrant has no connection to sidewalk; no bench or shelter providedTransit stop in northeast quadrant does have a connection to sidewalk; no bench or shelter providedLighting provided on Tri County Road; no light provided on US 27Leaning street sign located in southeast quadrantOff-tracking of vehicles in southeast and northwest quadrantsStreet sign pole is too short in northwest quadrantPossible minor sight distance issue for westbound rights onto NB US 27 due to noise barrierUnsignalized intersection #4 – Oglethorpe Road (Lauren Estates community; no posted speed sign)<ul style="list-style-type: none">School bus stop at intersection (private or charter school bus); bus stopped in right turn lane to drop off students; blocked entrance to road; cars headed southbound on US 27 did not stop for school busSpilled concrete in right turn lane shoulderNoted numerous U-turns from northbound to southbound on US 27; vehicles seem to come from storage facility south of intersection

<ul style="list-style-type: none">Minor off-tracking in northwest and southwest quadrants
Recommendations:
<ul style="list-style-type: none">Along US 27 from Ronald Reagan Parkway/Deen Still Road to California Boulevard/McFee Drive, as needed<ul style="list-style-type: none">Improve sidewalks including handrails where there is significant sloping of drainage and fill-in gaps to provide continuous sidewalks and connection to sidestreetsInstall additional street lighting on both sides of US 27Update transit stops with pads and shelter/bench amenitiesDetermine school crossing locations and update with school signsPeriodic cleaning of sidewalk and bike laneConduct pedestrian crossing visibility studyConduct sight distance studyConduct spot speed studyUnsignalized intersection #1 – Central Grove Road/Terra Del Sol Boulevard<ul style="list-style-type: none">Convert to bi-directional median openingInstall high visibility crosswalks at signalized intersection as well as sidestreet crosswalksRepair/retrofit curb radius to eliminate rutting/off-tracking damageUpdate curb ramps to current ADA standards to include yellow detectable warning padsRepair/replace damaged signageRepaint pavement markings, as neededSignalized intersection #2 – Four Corners Boulevard/Bella Citta Boulevard<ul style="list-style-type: none">Repair/replace/update pedestrian assemblies to current ADA standards with audible push button, correct signage and orientation at signalized intersection as well as sidestreet crosswalksRepair/retrofit curb radius to eliminate rutting/off-tracking damageUpdate curb ramps to current ADA standards to include yellow detectable warning padsInstall “Keep Right” (MUTCD R4-7) signs in median concrete traffic separator, as neededImplement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signsInstall handrails adjacent to sidewalk in southwest quadrantInstall raised islands at locations with exclusive right turnsConnect sidewalk from northside of Four Corners Boulevard to westside of US 27, significant elevation differenceConsider split phase signal due to permissive left turn/aggressive driversUnsignalized intersection #3 – Elgin Boulevard/Santa Cruz Lane<ul style="list-style-type: none">At full median opening provide additional signage and (MUTCD R1-1 or R1-2, R6-1 and R6-3) and delineate the median area with pavement stripingRepair/retrofit curb radius to eliminate rutting/off-tracking damageInstall high visibility crosswalks at signalized intersection as well as sidestreet crosswalksUpdate curb ramps to current ADA standards to include yellow detectable warning padsRepair/replace damaged signageRepaint pavement markings, as neededUnsignalized intersection #4 – Oglethorpe Road<ul style="list-style-type: none">At full median opening provide additional signage and (MUTCD R1-1 or R1-2, R6-1 and R6-3) and delineate the median area with pavement stripingRepair/retrofit curb radius to eliminate rutting/off-tracking damageInstall high visibility crosswalks at signalized intersection as well as sidestreet crosswalksUpdate curb ramps to current ADA standards to include yellow detectable warning padsRepair/replace damaged signageRepaint pavement markings, as needed



Central Grove Road / Tierra Del Sol Boulevard	
Missing detectable warning pad	Severe rutting and off-tracking
	
Northwest quadrant missing handrail adjacent to drainage drop-off	Southwest quadrant missing handrail adjacent to drainage drop-off
	

Four Corners Boulevard / Bella Citta Boulevard	
Conflicts with pedestrian at signal, no pedestrian Signs	Severe rutting and off-tracking
	

Faded pavement markings	Rutting and off-tracking
	
Minimal intersection lighting	No sidewalk connection
	

Elgin Boulevard/Santa Cruz Drive	
No lighting on US 27	Northeast transit stop, no shelter
	

Northwest transit bus stop, no shelter, no connection to sidewalk	Southeast quadrant off-tracking
	
Southeast quadrant off-tracking	Northwest quadrant off-tracking
	
Oglethorpe Drive Off-tracking	Spilled concrete near turn lane
	

School bus stop location	Northbound to southbound U-turns
	

Location:	Location Description:	Segment Type:
12	California Boulevard/McFee Drive to Legacy Park Boulevard/Florence Villa Grove Road	6 Lane Divided

Location Observation Details:
<ul style="list-style-type: none">US 27 is a 6-lane divided highway from California Boulevard/McFee Drive to Legacy Park Boulevard/Florence Villa Grove Road with a posted speed of 60 mph transitioning to 55 mph north of Highlands Reserve Boulevard/Student DriveIncludes three unsignalized full median openings and three signalized intersectionUnsignalized intersection #1 – Florida Avenue (2-lane undivided with a posted speed of 10 mph)<ul style="list-style-type: none">Missing detectable warning pad in northwest quadrantRutting/drop off on west leg of intersectionPossible need for handrails adjacent to sidewalk in southwest and northwest quadrantNo street lighting on at intersection and approachesUnsignalized intersection #2 – Ridgeway Boulevard<ul style="list-style-type: none">Rutting on northeast quadrantNo street lighting at intersection and approachesSignalized intersection #3 – Highlands Reserve Boulevard/Student Drive (2-lane undivided with a posted speed of 25 mph)<ul style="list-style-type: none">Median openings with additional pavement cutouts at nosesLeft turns on US 27 appear dangerousDrainage Issues – sediment on sidewalksDamaged sidewalk on Student Drive (Off-system)No street lighting at intersection and approachesNo transit stopsSecondary barrier wall concerns relating to security/lurking placeOff-trackingSignalized intersection #4 – Sand Mine Road<ul style="list-style-type: none">See Audit Location No. 7Unsignalized intersection #5 Jack’s Road (No posted speed limit sign)<ul style="list-style-type: none">Painted pavement markingsSignalized intersection #6 – Legacy Park Boulevard/Florence Villa Grove Road<ul style="list-style-type: none">See Audit Location No. 8
Recommendations:
<ul style="list-style-type: none">Along US 27 from California Boulevard/McFee Drive to Legacy Park Boulevard/Florence Villa Grove Road, as needed<ul style="list-style-type: none">Improve sidewalks including handrails where there is significant sloping of drainage and fill-in gaps to provide continuous sidewalks and connection to sidestreetsInstall street lighting at intersections and approachesUpdate transit stops with pads and shelter/bench amenitiesDetermine school crossing locations and update with school signsPeriodic cleaning of sidewalk and bike laneConduct pedestrian crossing visibility studyConduct sight distance studyConduct spot speed study

- Unsignalized intersection #1 – Florida Avenue
 - At full median opening provide additional signage and (MUTCD R1-1 or R1-2, R6-1 and R6-3) and delineate the median area with pavement striping
 - Install high visibility crosswalks at signalized intersection as well as sidestreet crosswalks
 - Repair/retrofit curb radius to eliminate rutting/off-tracking damage
 - Update curb ramps to current ADA standards to include yellow detectable warning pads
- Unsignalized intersection #2 – Ridgeway Boulevard
 - Repair/retrofit curb radius to eliminate rutting/off-tracking damage
 - Install high visibility crosswalks at signalized intersection as well as sidestreet crosswalks
- Signalized intersection #3 – Highlands Reserve Boulevard/Student Drive
 - Repair/replace/update pedestrian assemblies to current ADA standards with audible push button, correct signage and orientation at signalized intersection as well as sidestreet crosswalks
 - Repair/retrofit curb radius to eliminate rutting/off-tracking damage
 - Update curb ramps to current ADA standards to include yellow detectable warning pads
 - Install “Keep Right” (MUTCD R4-7) signs in median grassed separator, as needed
 - Implement leading pedestrian interval with “Yield to Pedestrian” (MUTCD R10-15) signs at signalized intersections
 - Install raised islands at locations with exclusive right turns
 - Consider split phase signal due to permissive left turn/aggressive drivers
- Signalized intersection #4 – Sand Mine Road
 - See Audit Location No. 7
- Unsignalized intersection #5 – Jack’s Road
 - Install high visibility crosswalks at signalized intersection as well as sidestreet crosswalks
 - Repair/retrofit curb radius to eliminate rutting/off-tracking damage
 - Update curb ramps to current ADA standards to include yellow detectable warning pads
 - Replace painted pavement striped bulb-out in southwest quadrant with a raise grassed bulb-out
 - Install posted speed limit sign
- Signalized intersection #6 – Legacy Park Boulevard/Florence Villa Grove Road
 - See Audit Location No. 8



