

Chapter 8: Constrained Long-Range Plan

The LRTP must include a fiscally-constrained list of projects referred to as the Constrained Long Range Plan (CLRP). The CLRP includes projects with funding committed through the State's Six Year Improvement Program (SYIP), and projects not yet funded, but which the MPO and its members intend to fund between 2020 and 2045 with projected available funds. The Plan's fiscal constraint is based on projected available revenue over the 25-year period. Projects not included in the CLRP are identified as Vision List Projects, which address important needs, but for which projected funding may not be available (see **Appendix A**).

In the spirit of full compliance with Title VI, CLRP projects should neither unduly burden, nor underserve the region's minority and underserved populations identified in **Chapter 3: Existing Conditions**.

This chapter addresses:

8 – 1 The Constrained Long Range Plan

8 – 2 Social Equity and Environmental Justice Benefits and Burdens Analysis

8 – 3 Environmental Mitigation Measures

8 – 1 Performance-Based Planning

The 2045 LRTP includes 68 transportation projects. Of those, 49 projects are included in the CLRP, with 22 of those projects added for the 2045 update. The remaining 20 projects are documented in the Vision List. Of the 49 projects in the CLRP, 26 are funded in the current VDOT Six Year Improvement Program (SYIP). In total, these projects represent \$348,567,761 in committed and projected funding. The balance to finance for the I-81 projects is already committed, but fall outside of the current SYIP. The CLRP projects are listed in **Table 10 and Table 11**.⁵

Bicycle and Pedestrian Projects

Bicycle and pedestrian facilities are included in many of the corridor improvement and new location projects in the CLRP. The CLRP also includes stand-alone bicycle and pedestrian projects, which are listed together.

Transit Projects

Transit revenues are formula funds for capital and operating costs. The revenues are included in the Revenues Summary in **Chapter 7**. Future transit operating and capital needs are addressed in **Chapters 6** and reflected in the **TDP**. When BRITE Transit approves an updated TDP in FY22, that document will be included in the 2045 LRTP by reference as the transit plan for the SAWMPO.

⁵ CLRP Table: VDOT assigns each committed project a UPC number. The UPC number can be used to search projects on VDOT's Six-Year Improvement Program (SYIP) website: <http://syip.virginia-dot.org/Pages/allProjects.aspx>

Table 10: CLRP Projects Previously Committed

CLRP Projects Previously Committed										
PROJECT ID	UPC	JURISDICTION	PROJECT NAME	PROJECT DESCRIPTION	TYPE	Funding Source	COST ESTIMATE	YOE ESTIMATE	PRIOR ALLOCATIONS	BALANCE TO FINANCE (CLRP COST)
Interstate										
MPO-5	116277	Augusta	I-81 Weyers Cave Area Truck Climbing Lane Northbound	Add a northbound truck climbing lane between MM 233 and 237; Weyers Cave TCL	Interstate	I-81 Program	\$100,798,170	-	\$95,798,170	\$5,000,000
MPO-6	116278	Augusta	I-81 Weyers Cave Area Truck Climbing Lane Southbound	Add a southbound truck climbing lane between MM 234 and 236; Weyers Cave TCL	Interstate	I-81 Program	\$29,581,960	-	\$10,765,797	\$18,816,163
MPO-7	116279	Staunton/Augusta	I-81 Southbound Auxiliary Lane	Add a southbound auxiliary lane between Exits 220 and 221	Interstate	I-81 Program	\$14,326,755	-	\$14,326,755	\$0
MPO-8	116269	Staunton/Augusta	I-81 Widening	Widen to three lanes north and southbound between MM 221 and 225	Interstate	I-81 Program	\$140,209,650	-	\$122,060,585	\$18,149,065
MPO-9	116271	Augusta	I-81 Mt. Sidney Rest Area Northbound Acceleration Lane Extension	Extend northbound acceleration lane from MM 232.4 to 232.8	Interstate	I-81 Program	\$4,985,000	-	\$4,985,000	\$0
MPO-10	116276	Augusta	I-81 Mt Sidney Rest Area Southbound Acceleration Lane Extension	Extend southbound acceleration lane from MM 232.5 to 231.9	Interstate	I-81 Program	\$1,285,000	-	\$1,285,000	\$0
MPO-11	116275	Augusta	I-81 Mt Sidney Rest Area Southbound Deceleration Lane Extension	Extend southbound deceleration lane from MM 232.9-232.7	Interstate	I-81 Program	\$4,985,000	-	\$4,985,000	\$0
Secondary System										
J-2	88663	Augusta	VA Route 262 Improvements	Option to extend southbound Middlebrook Road on-ramp to tie into the 2-lane section to the south and there is a second alternative to extend the northbound 2-lane section to the Middlebrook Road interchange and have the outside line become the current off-ramp.	Interchange	Legacy CN	\$5,133,676	-	\$5,133,676	\$0
F-6	111229	Augusta	WWRC Roundabout	Single lane roundabout at the intersection of Woodrow Wilson Avenue / VO Tech Road / Hornet Road	Corridor	DG; Legacy CN	\$1,727,222	-	\$1,727,222	\$0
F-1	115715	Augusta	WWRC Short-term Access Improvement	Addition of turn lanes and signal timing improvements at the intersection of US 250 and SR 358	Intersection	DG	\$4,294,032	-		
V-1	111058	Augusta	Mill Place Parkway Access Improvements	Addition of a dual left on westbound Route 612 into the commerce park and widening a short section of Mill Place Parkway to accommodate the additional receiving lane for the dual lefts	Intersection	DG; Legacy CN	\$1,789,041	-	\$1,789,041	\$0
WC-1	111055	Augusta	I-81 Exit 235 Improvements	Addition of right turn lanes on Route 256, serving the I-81 Exit 235 on-ramps	Intersection	DG; Legacy CN	\$1,787,244	-	\$1,787,244	\$0
Urban System										
W-1	105907	Waynesboro	Shenandoah Drive/Southern Corridor	A 1.6-mile construction/reconstruction of a 2-lane limited access road linking US 340 (Rosser Ave) (Exit 94) to Delphine Ave (Exit 96); will add Bike and Sidewalk facilities	New Location	DG; Legacy CN; RS	\$17,371,000	-	\$17,371,000	\$0

CLRP Projects Previously Committed

PROJECT ID	UPC	JURISDICTION	PROJECT NAME	PROJECT DESCRIPTION	TYPE	Funding Source	COST ESTIMATE	YOE ESTIMATE	PRIOR ALLOCATIONS	BALANCE TO FINANCE (CLRP COST)
ST-12	111048	Staunton	Staunton Crossing Way Extension	Realign and upgrade street section to serve commercial and residential use; to include sharrows and sidewalks.; from end of Phase I (ST-11) to N. Frontier Drive via the existing access road	New Location	HPP; Legacy CN; HSIP	\$8,765,000	-	\$8,749,000	\$16,000
ST-19	111051	Staunton	US 250 (Richmond Road) at the Villages at Staunton	Road diet, including curb/gutter, sidewalk and bike lanes	Corridor	DG	\$2,246,000	-	\$2,246,000	\$0
ST-4	111047	Staunton	Richmond Avenue and Statler Boulevard Improvements	Add a second left turn lane for the southbound Statler approach. Apply access management at intersection, provide medians to eliminate left turns into/out of businesses at intersection.	Intersection	HSIP	\$579,000	-	\$579,000	\$0
W-6	111049	Waynesboro	Waynesboro Town Center Park and Ride	Expansion and access improvements to the existing park and ride	TDM	HPP	\$2,197,261	-	\$2,197,261	\$0
W-12	115136	Waynesboro	13th Street and Rosser Avenue Roundabout	Install Roundabout to replace removed traffic signal	Intersection	DG	\$579,000	-	\$579,000	\$0
W-19	115133	Waynesboro	East Main Street Streetscape	FROM: Main Street Bridge TO: ECL Waynesboro	Corridor	DG	\$2,250,000	-	\$2,250,000	\$0
Bike & Pedestrian										
ST-20	80485	Staunton	Central Avenue Streetscape	From Frederick Street to Pump Street. Add streetscaping elements including lighting, brick sidewalk with pervious pavers, and landscaping. Sharrows from Pump St. to Baldwin St.	Streetscape	TAP	\$2,269,114	-	\$2,269,114	\$0
V-2	113687	Augusta	Verona Pedestrian Improvements	Installation of pedestrian facilities on the north side of Laurel Hill Road (VA 612) from approximately .67 miles from the Shenandoah Valley Railroad crossing to the Park & Ride on Lodge Lane (Rt 1906) and 2) on the eastern side of US 11 from Dick Huff Lane into the City of Staunton to approximately 400' south of the Augusta County/City of Staunton line;	Pedestrian	TAP	\$1,968,374	-	\$1,248,548	\$719,826
W-8	113684	Waynesboro	South River Greenway Phase 2B	Runs from the current terminus at Shiloh Baptist Church up to North Park.	Greenway	TAP	\$593,699	-	\$593,699	\$0
W-9	108879	Waynesboro	Rosser Avenue Sidewalk	Install new sidewalk along Rosser Avenue between Lucy Lane and Tiffany Drive on the west side of the street	Pedestrian	RS	\$92,000	-	\$92,000	\$0
W-10	111425	Waynesboro	South River Greenway Trail Phase 3	Runs along the current trailhead at Loth Springs to Ridgeview Park	Greenway	TAP	\$1,091,563	-	\$1,091,563	\$0
ST-21	115135	Staunton	Edgewood Road Sidewalk Improvements	FROM: North Coalter Street TO: North Augusta Street on north side of street	Pedestrian	DGP	\$1,098,000	-	\$1,098,000	\$0
ST-22	115137	Staunton	North Augusta Sidewalk	FROM: Intersection of Lambert Street TO: Intersection of Terry Street on the west side of the street	Pedestrian	DGP	\$1,477,000	-	\$1,477,000	\$0
ST-23	115140	Staunton	North Augusta Sidewalk - Terry Street to Meadowbrook	From Terry Street TO: Meadowbrook Road on the west side of the street	Pedestrian	DGP	\$1,058,000	-	\$1,058,000	\$0

Table 11: CLRP Projects Newly Committed

CLRP Projects Newly Committed										
PROJECT ID	UPC	JURISDICTION	PROJECT NAME	PROJECT DESCRIPTION	TYPE	Funding Source	COST ESTIMATE	YOE ESTIMATE	PRIOR ALLOCATIONS	BALANCE TO FINANCE (CLRP COST)
INTERSTATE										
No projects identified due to I-81 Improvement Plan										
PRIMARY										
MPO-2		Augusta	US 250 / I-81 Exit 222 Interchange Ramp Improvements	Richmond Road Corridor Study North and Southbound Ramp Improvements	Intersection	HPP	\$3,411,000	\$6,731,904	\$0	\$6,731,904
F-4		Augusta	Augusta/F-4 US 250 (Jefferson Highway) at VA 792 (Sangers Lane/Brand Station Road)	Intersection improvements to add pedestrian signal heads, crosswalks, and formalized transit stops with supporting sidewalks to the existing signalized intersection.	Intersection	HPP	\$1,442,000	\$2,246,589	\$0	\$2,246,589
F-7		Augusta	US 250 (Jefferson Highway) STARS Study Improvements	Addition of a raised median, sidewalk (one side), revision of signal phasing and systemic signal safety and operational improvements from the western corporate limits to Goose Creek Rd/Old White Bridge Rd	Corridor	DGP	\$1,900,000	\$2,960,138	\$0	\$2,960,138
J-3		Augusta	US 11 improvements from Christian's Creek Road to Staunton Corporate Limits	Shoulder widening from Christian's Creek Road to Rolling Thunder Ln. (with maintenance \$\$) Convert Rolling Thunder Ln. to right in and right out. Install an overhead sign in advance of the Rt. 262 northbound on-ramp. Extend median and install straight through green arrow on the NB approach at intersection with Frontier Drive. Directional median opening at Payne Lane. Add median with directional opening from Orchard Hill Road to city limits. Add sidewalk on east side of US 11 from city limits to Rt. 262.	Corridor	DGP, Maintenance Funds	\$2,277,975	\$3,549,011	\$0	\$3,549,011
WC-2		Augusta	VA 256 (Weyers Cave Road) from I-81 NB ramp and Triangle Drive	Improve Weyers Cave Road (Rt. 256) from the northbound I-81 ramps to Triangle Drive by adding a median, turn lanes and a shared use path. Project includes the construction of a new park and ride facility.	Corridor	DGP	\$4,950,000	\$7,711,939	\$0	\$7,711,939
SECONDARY										
SD-12		Augusta	Augusta/SD-12 VA 909 (Johnson Rd) from current southern terminus to VA 608 (Cold Springs Rd)	Upgrade to 2-lane urban secondary road standards with turn lanes and a shared use path	Corridor	HPP, TA, Maintenance	\$9,229,545	\$14,379,330	\$0	\$14,379,330
URBAN										
W-5		Waynesboro	Rosser Ave Corridor Improvements	Implement 2017 corridor study recommendations for the corridor from Shenandoah Village Drive to Tiffany Drive	Corridor	HPP	\$845,775	\$1,317,690	\$0	\$1,317,690
ST-22		Staunton	Greenville Avenue / Statler Road / Ritchie Blvd Intersection Safety Improvements	At Statler: Extend existing island and signalize westbound right turn. Replace span wire with mast arms. Install crosswalks with pedestrian phasing. Install a sidewalk on the east side of US 11 between Amherst Road	Intersection	RS	\$645,360	\$1,273,674	\$0	\$1,273,674

CLRP Projects Newly Committed

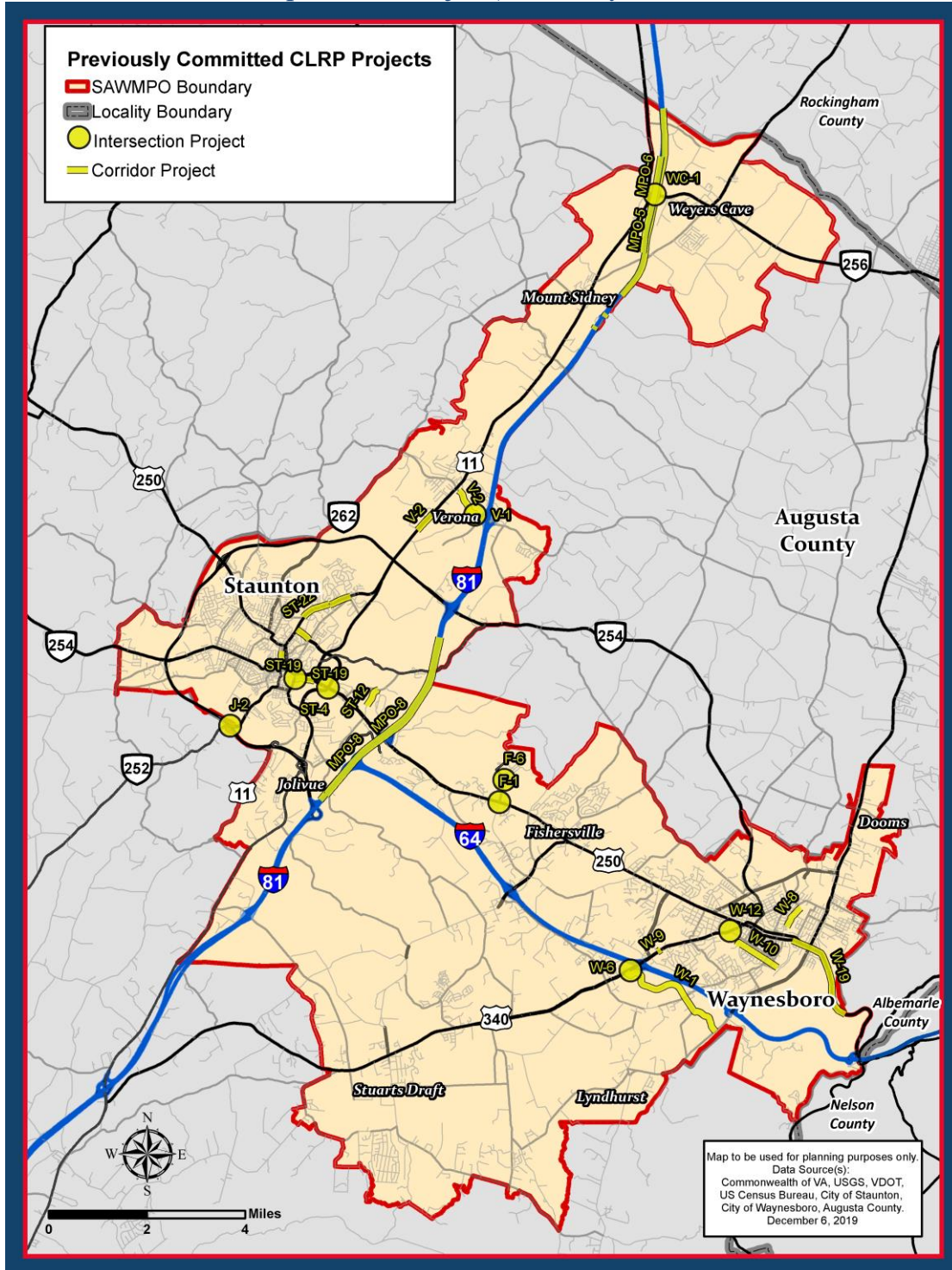
PROJECT ID	UPC	JURISDICTION	PROJECT NAME	PROJECT DESCRIPTION	TYPE	Funding Source	COST ESTIMATE	YOE ESTIMATE	PRIOR ALLOCATIONS	BALANCE TO FINANCE (CLRP COST)
				and Statler Boulevard. Install a raised median and extend to Ritchie Boulevard. At Ritchie Blvd: Install median to restrict left turns out of Ritchie Boulevard onto US 11. Improves access management and reduces potential of angle crashes						
ST-21		Staunton	Greenville Avenue / Coalter Street / Commerce Road Intersection Improvements	Short Term: Eliminate eastbound left turn/through movement and allow right turns only. Signalize right turns. The eastbound through and left turning vehicles will make a right onto US 11 southbound and then a U-turn at Richmond Avenue intersection	Intersection	HSIP	\$800,000	\$1,578,869	\$0	\$1,578,869
ST-24		Staunton	Greenville Avenue Safety / Multimodal Access Improvements (Barterbrook Road to Amherst Road)	Orchard Hill Road: Close north driveway to Hertz on the west side of Greenville Avenue. Directional median opening. Install median at Orchard Hill Road to restrict left turns from auto dealership. Barterbrook Road: Restrict right turns from the CVS Pharmacy to Greenville Avenue. Dedicated right turn lane and extend it to the intersection approach. Change side streets' split phase to concurrent phase. Improve signal timings. Install median along US 11 from Orchard Hill Road to Barterbrook Road	Corridor	SHPP	\$1,168,935	\$2,306,994	\$0	\$2,306,994
ST-23		Staunton	Greenville Avenue Safety / Multimodal Access Improvements (Ritchie Blvd to Richmond Road)	Road diet with Intermittent median closures. Provide bike lanes on both sides of US 11. Install pedestrian refuge for crossing at Gay St.	Corridor	SHPP	\$1,540,220	\$2,399,613	\$0	\$2,399,613
ST-20		Staunton	Richmond Road / Frontier Drive Operational / Safety / Access Management Improvements	Additional southbound and eastbound left turn lanes at Richmond Road and Frontier Drive. Close driveways, relocate crosswalks and implement access management on Frontier Drive at Lowes and Sheetz entrances	Intersection	DGP	\$1,733,000	\$3,420,225	\$0	\$3,420,225
W-3		Waynesboro	W-3 Delphine Ave (VA 340) at Hopeman Pkwy	Realign eastbound and westbound approaches and incorporate westbound approach into the signal control. Will add sidewalk facilities.	Intersection	DGP	\$1,504,200	\$2,968,669	\$0	\$2,968,669
W-20		Waynesboro	West Broad Corridor Improvements	Access management and pedestrian improvements along the full length of Broad Street from East Main Street to Rosser Avenue/West Main Street. This project will include installation of medians, sidewalk repair, filling sidewalk gaps, and improving pedestrian crossings.	Corridor	DGP	\$3,500,000	\$5,452,886	\$0	\$5,452,886
W-17		Waynesboro	West Main Corridor Improvements	Access management and pedestrian improvements along West Main Street from Hopeman Parkway to Lew Dewitt Boulevard. This project will include medians, restriping, and sidewalk repair and installation to increase safety and accessibility on West Main Street.	Corridor	DGP	\$5,200,000	\$8,101,431	\$0	\$8,101,431
ST-8		Staunton	George Cochran Parkway Extension	Construct new two-lane curb and gutter facility from current terminus of George Cochran Parkway at the	New Location	Developer	\$5,313,000	\$8,277,481	\$0	\$8,277,481

CLRP Projects Newly Committed

PROJECT ID	UPC	JURISDICTION	PROJECT NAME	PROJECT DESCRIPTION	TYPE	Funding Source	COST ESTIMATE	YOE ESTIMATE	PRIOR ALLOCATIONS	BALANCE TO FINANCE (CLRP COST)
				roundabout to S. Frontier Drive. Will include shared use path per Greenway and Bike Ped Plans						
W-7		Waynesboro	Lew Dewitt/Rosser Connector	New roadway construction for road to connect to Rosser Ave (via Tiffany Drive) and Lew Dewitt Blvd near Bookerdale Road. Will add Bike, Sidewalk, and greenway facilities.	New Location	Developer	\$11,500,000	\$17,916,625	\$0	\$17,916,625
BIKE/PEDESTRIAN										
ST-19		Staunton	Richmond Road / Crossing Way Shared Use Path Project	Shared use path on US 250 (Richmond Road) from Frontier Drive to Crossing Way with supporting crossing improvements at signalized intersections. Add shared use way along Crossing Way to roundabout.	Bike/Ped	HPP	\$1,719,000	-	\$0	\$2,678,146
SD-19		Augusta	Howardsville Turnpike/Hodge Street Pedestrian improvements	Install sidewalk along Howardsville Turnpike and Hodge Street with upgrades signal head	Ped	TA	\$1,700,000	\$3,355,097	\$0	\$3,355,097
ST-25		Staunton	Commerce Road Diet and Shared Use Path	Reduce Commerce Road to 2-lane section between Greenville Ave and Statler Boulevard. Construct 10-ft wide shared use path on north side of the road as part of planned Greenway network	Bike/Ped	HPP	\$2,332,428	\$3,633,847	\$0	\$3,633,847
SD-18		Augusta	Cold Springs Road Pedestrian Improvements	Installation of sidewalk along Cold Springs from Draft Avenue to Horseshoe Circle	Bike/Ped	DGP	\$2,440,000	\$4,815,551	\$0	\$4,815,551
SD-16		Augusta	Wayne Avenue Pedestrian Improvements - Draft Avenue to Patton Farm Road	New and upgraded sidewalk from Draft Ave to Crestview Drive, and installation of a greenway or multi-use path from Crestview Drive to Patton Farm Road	Bike/Ped	DGP/TA	\$3,730,000	\$5,811,218	\$0	\$5,811,218

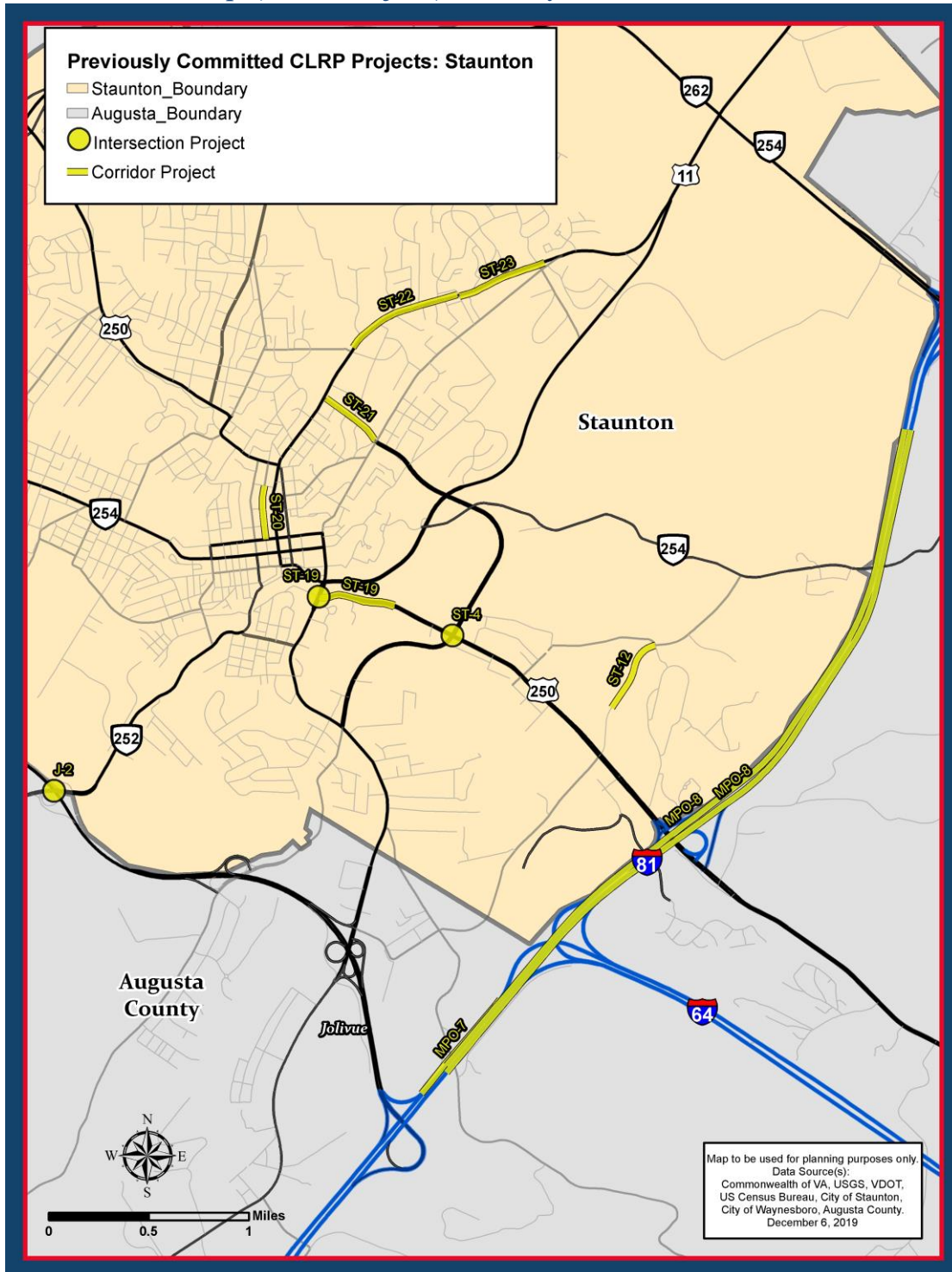
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Map 26: CLRP Projects, Previously Committed



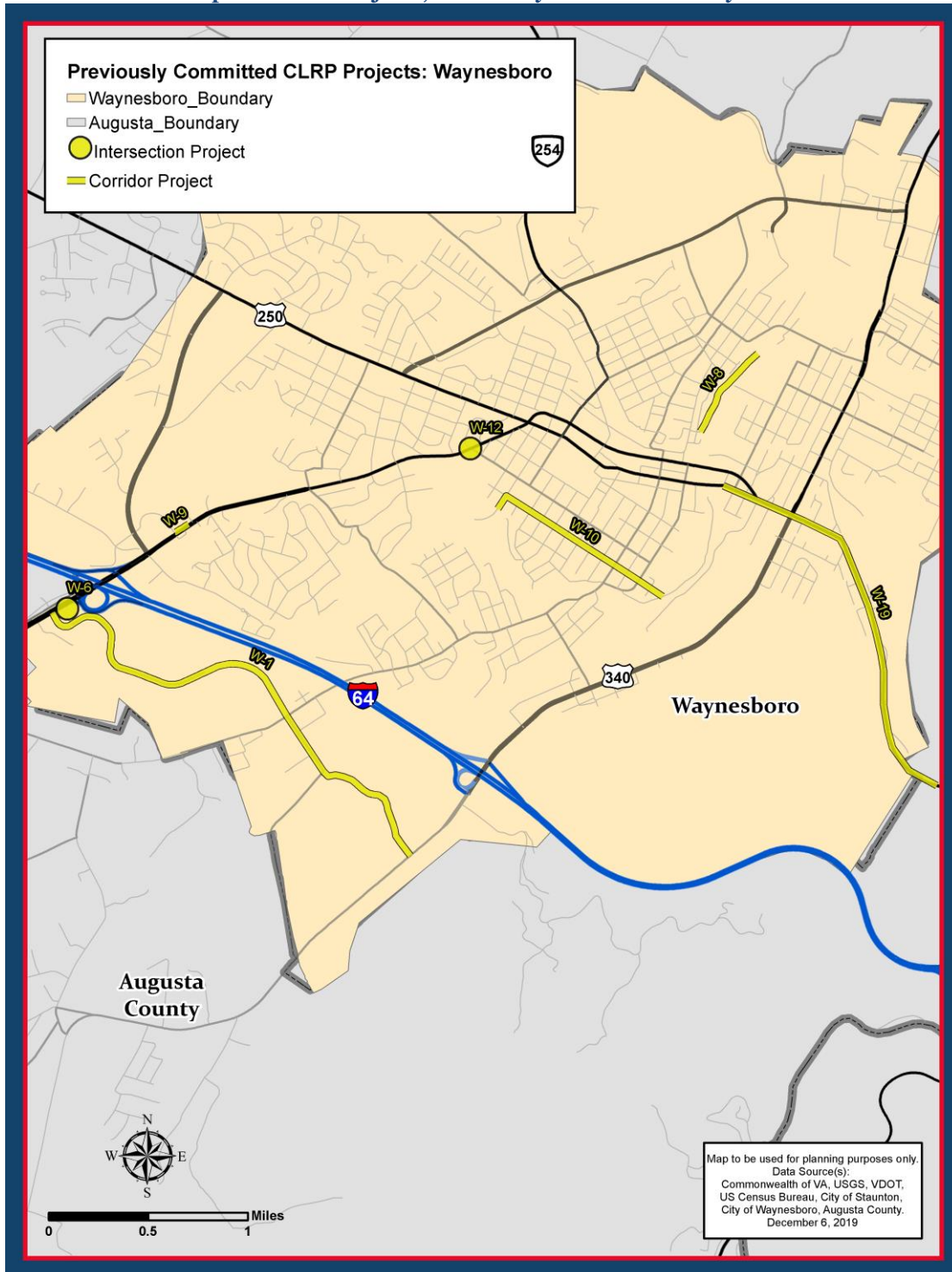
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Map 27: CLRP Projects, Previously Committed - Staunton



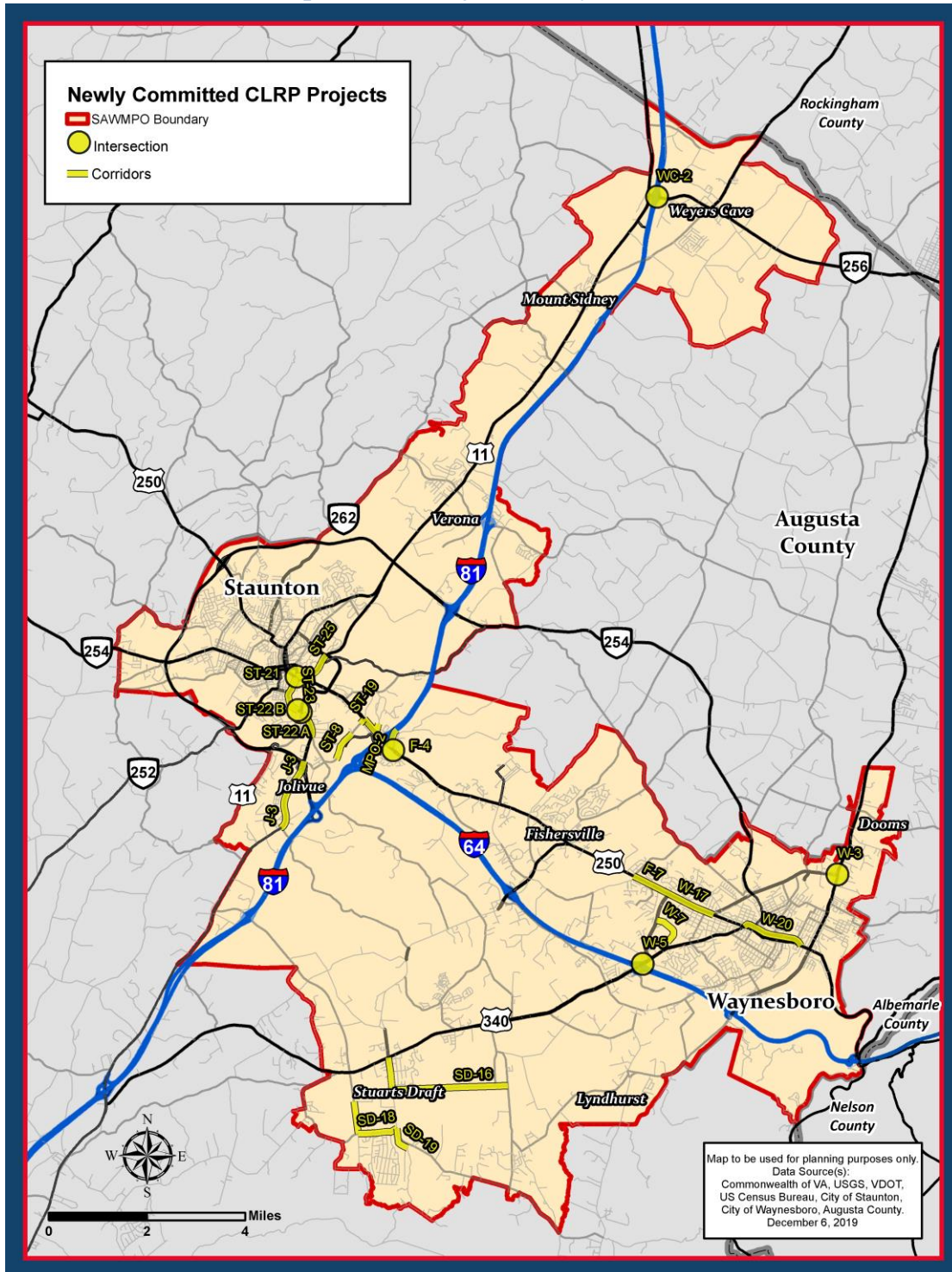
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Map 28: CLRP Projects, Previously Committed - Waynesboro



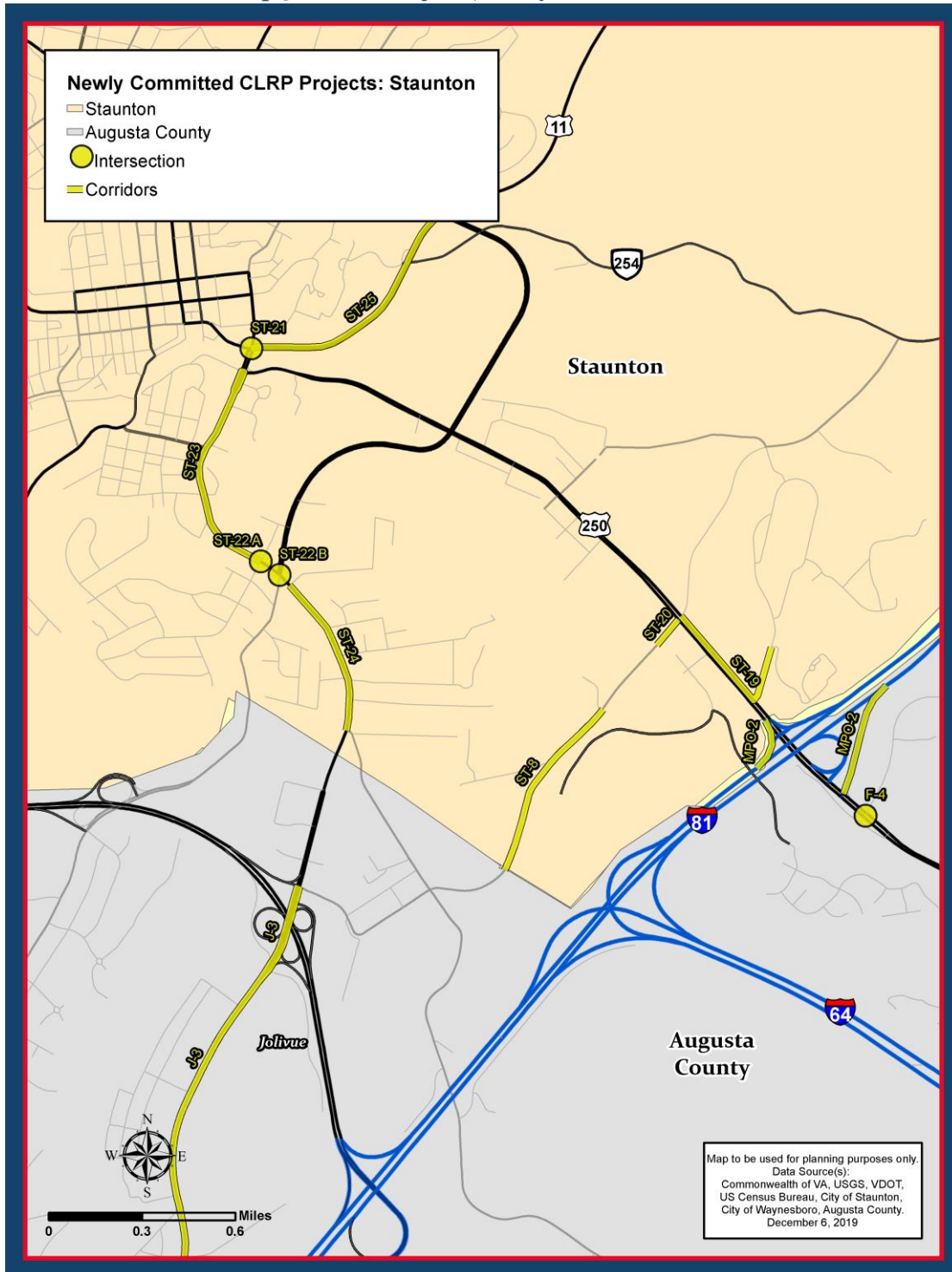
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Map 29: CLRP Projects, Newly Committed



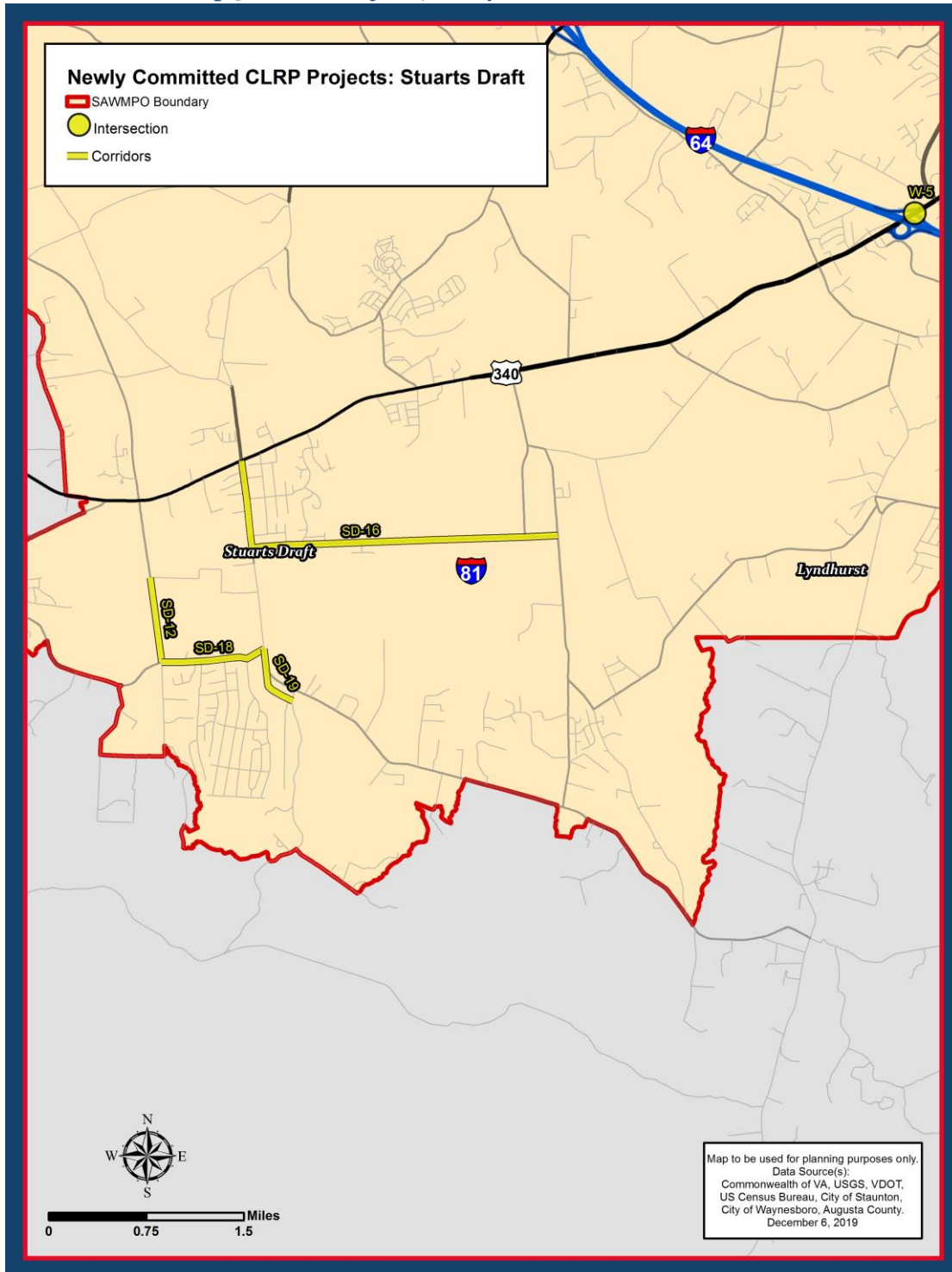
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Map 30: CLRP Projects, Newly Committed - Staunton



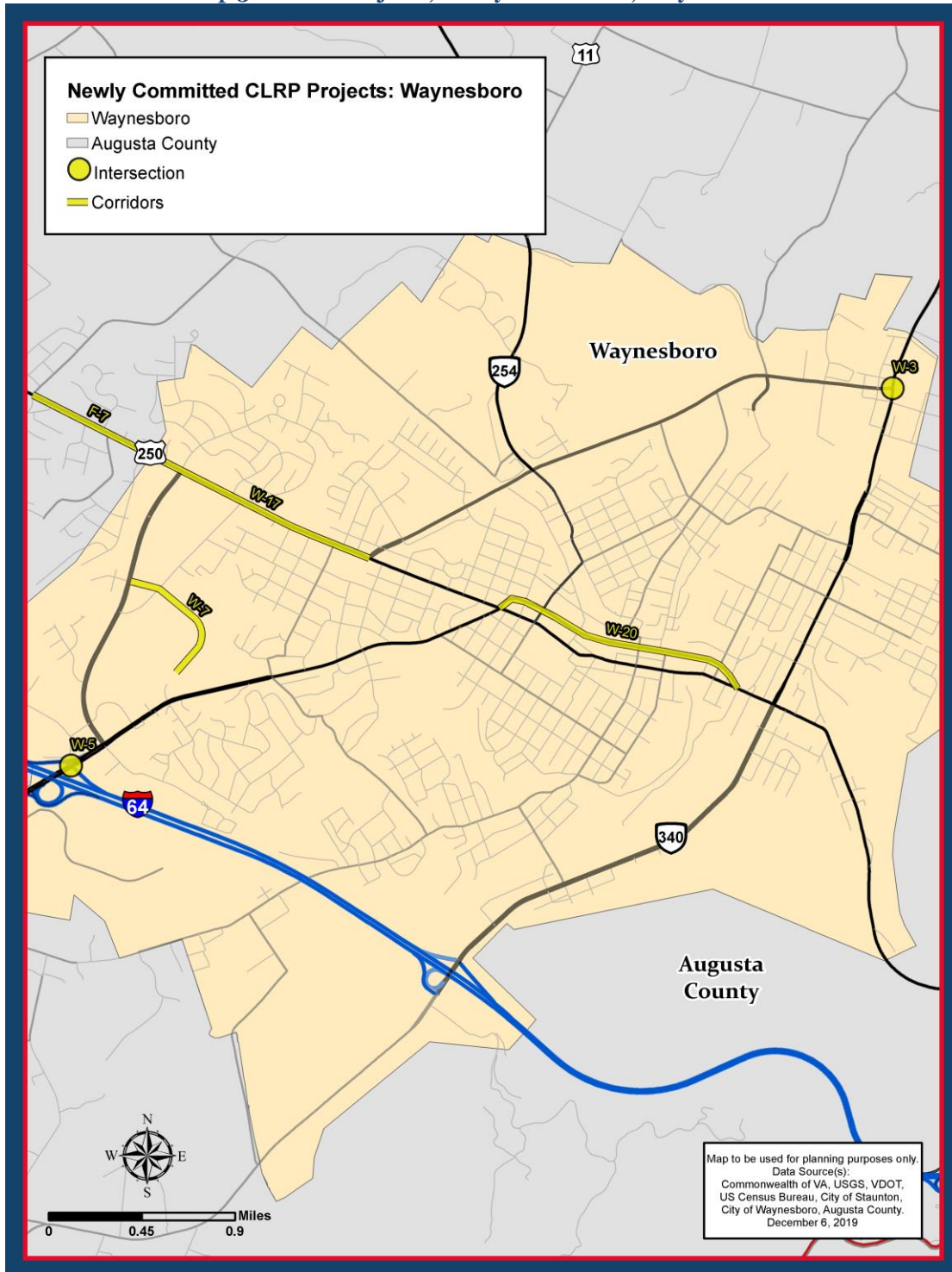
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Map 31: CLRP Projects, Newly Committed – Stuarts Draft



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Map 32: CLRP Projects, Newly Committed, Waynesboro



2045 Long Range Transportation Plan

8 – 2 Social Equity and Environmental Justice Benefits and Burdens Analysis

A benefits and burdens analysis is a tool in the long-range transportation planning process that provides information on the social equity or environmental justice of a transportation investment plan or program. The analysis, which is applied to data on disadvantaged populations or groups, examines the potential for positive or negative impact (benefits and burdens) that a given transportation investment program could have on certain persons, demographic groups, or geographic locations. The analysis can also address environmental justice concerns by identifying the potential for disproportionate impacts on the population or groups of concern.

Benefits are the positive impacts from transportation investment such as enhancements in transportation services, increases in public safety, congestion relief, and increased economic vitality. Burdens are the adverse effects of investment such as pollution, displacement of persons or businesses, diminution of economic vitality, congestion, or the denial, delay, or reduction of receipt of benefits.

No standardized methodology or set of criteria has been established for assessing the benefits and burdens of transportation investments. The FHWA/FTA certification review process seeks evidence that MPOs have established a thoughtful process for assessing the regional benefits and burdens of transportation system investments, with specific consideration as to how these effects are distributed among different demographic and socio-economic groups. This includes evidence that there is a data collection process, and that the analytical process seeks to assess the benefit and impact distributions of the transportation investments.

Newly Committed CLRP Projects In Relation to Disadvantaged Populations

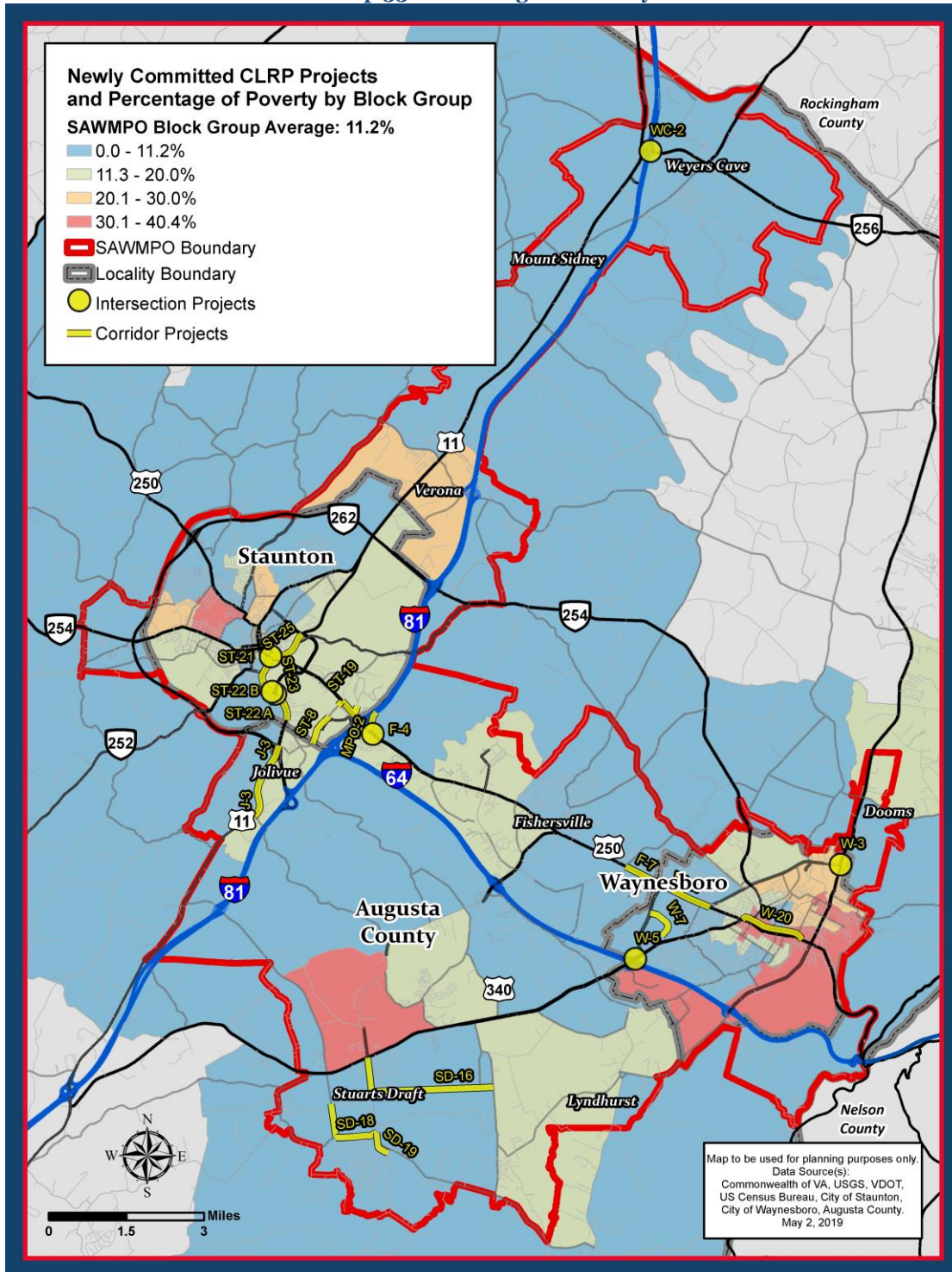
The newly committed CLRP projects were mapped in relation to the six disadvantaged population categories detailed in **Chapter 3** to provide insight about the potential for positive and negative impacts on each population group. **Table 12** summarizes the six demographic subsets, and **Maps 3 - 8** show each project's location compared to the geographic distribution of each demographic group. Based on the geographic analysis, the newly committed CLRP projects are not expected to result in a disproportionate impact on any disadvantaged population.

Table 12: Disadvantaged Population Comparison

	National	State	Augusta County	Staunton	Waynesboro
Poverty	14.1%	10.9%	9.2%	13.7%	17.4%
Minority	27%	32%	6.9%	16.4%	18.5%
Senior	15.6%	15%	20.7%	20.3%	18.6%
Disability	12.6%	11.5%	12.8%	15%	16.2%
Limited English	4.5%	2.6%	0.4%	0.4%	2.4%
Zero Car	8.7%	6.2%	4.2%	6.6%	8.4%

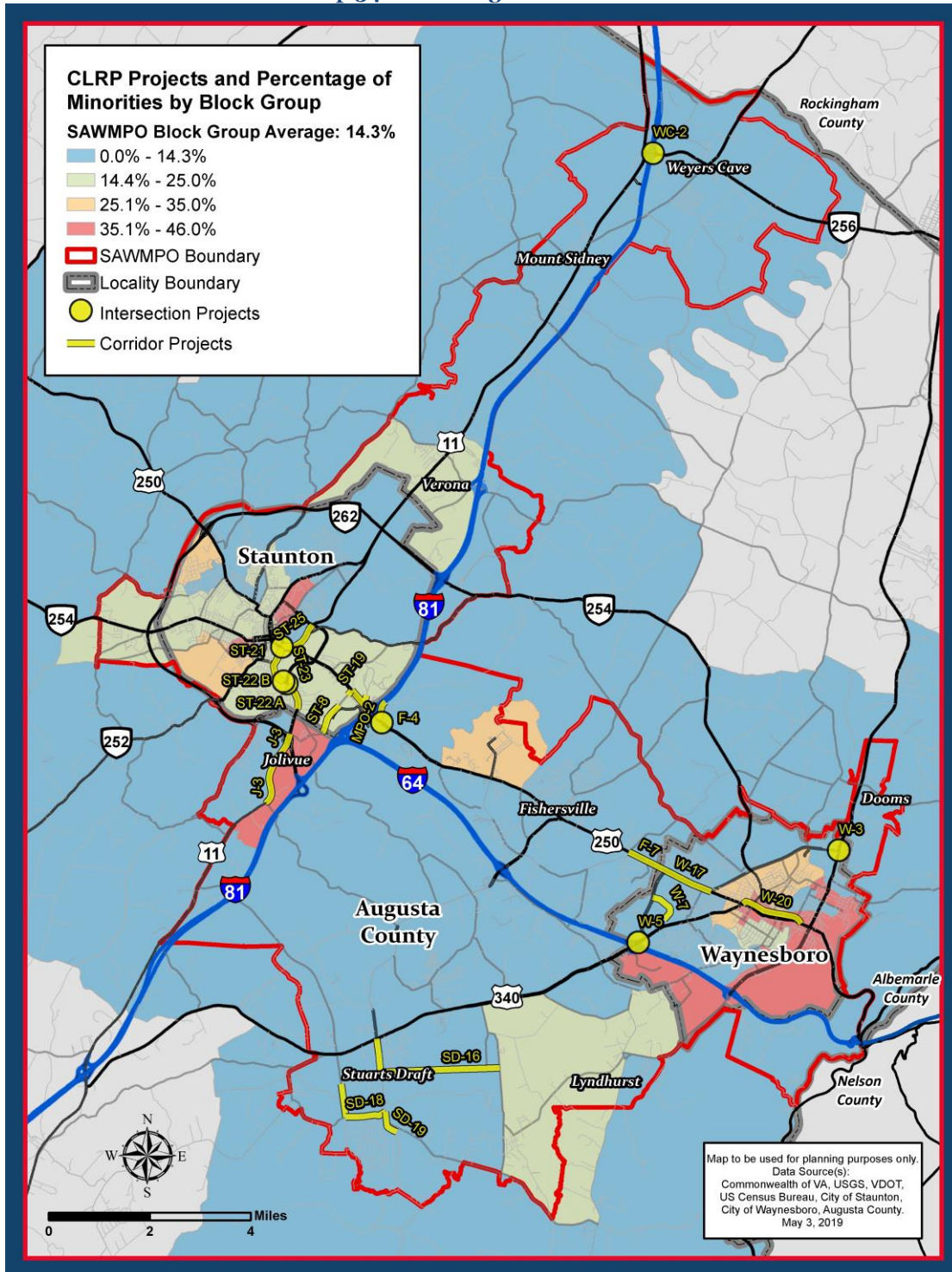
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Map 33: Percentage of Poverty



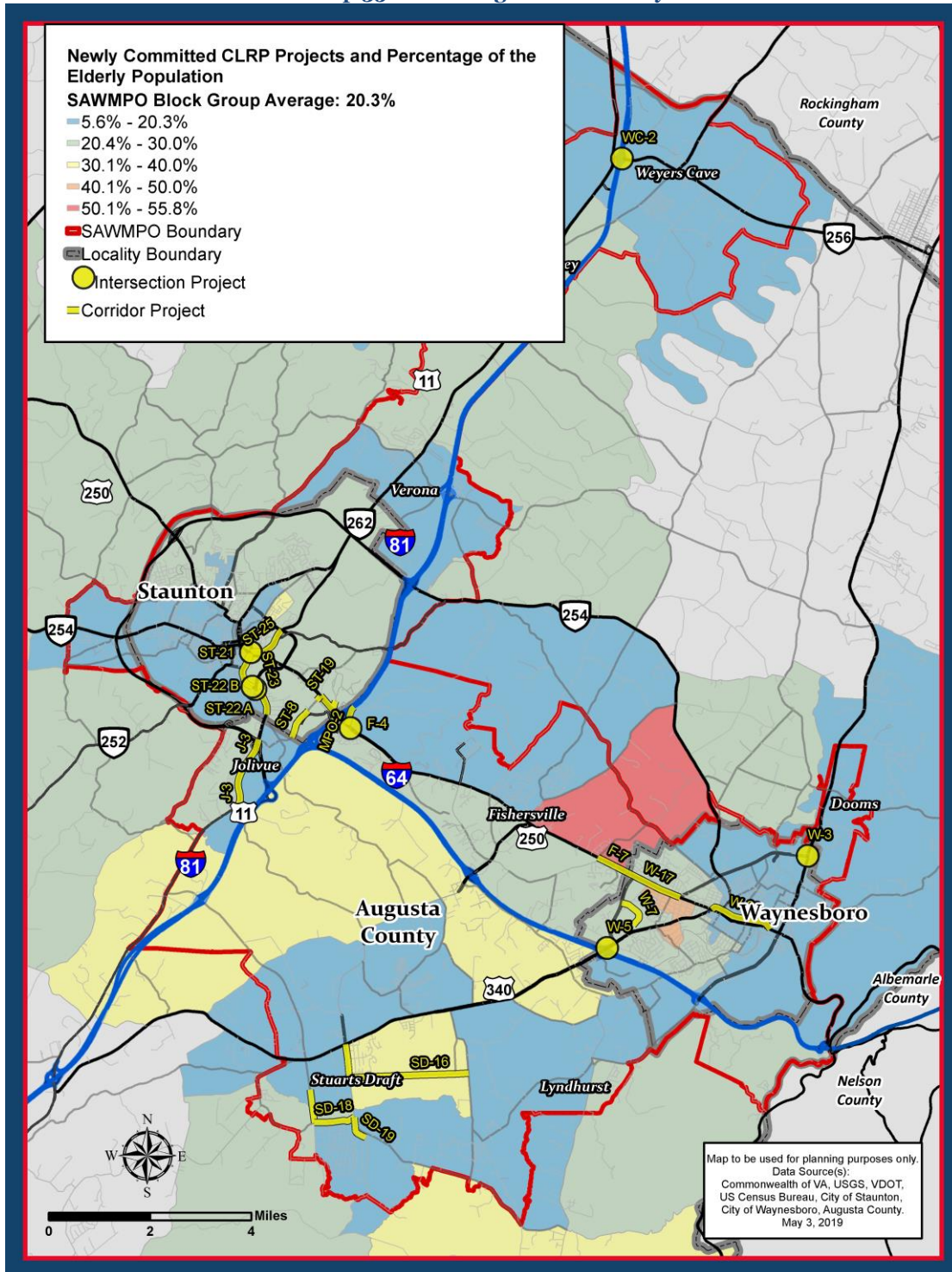
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Map 34: Percentage of Minorities



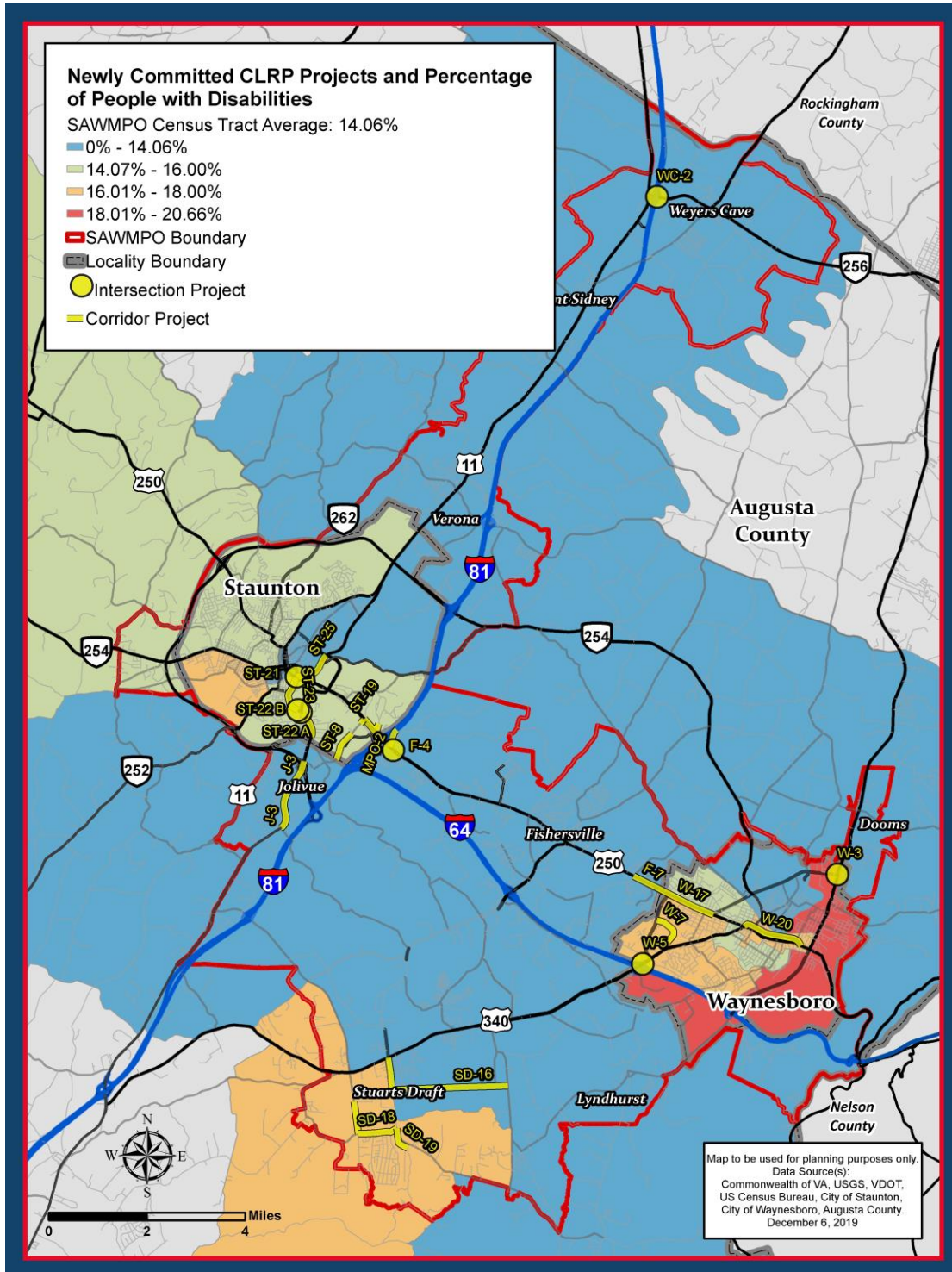
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Map 35: Percentage of the Elderly



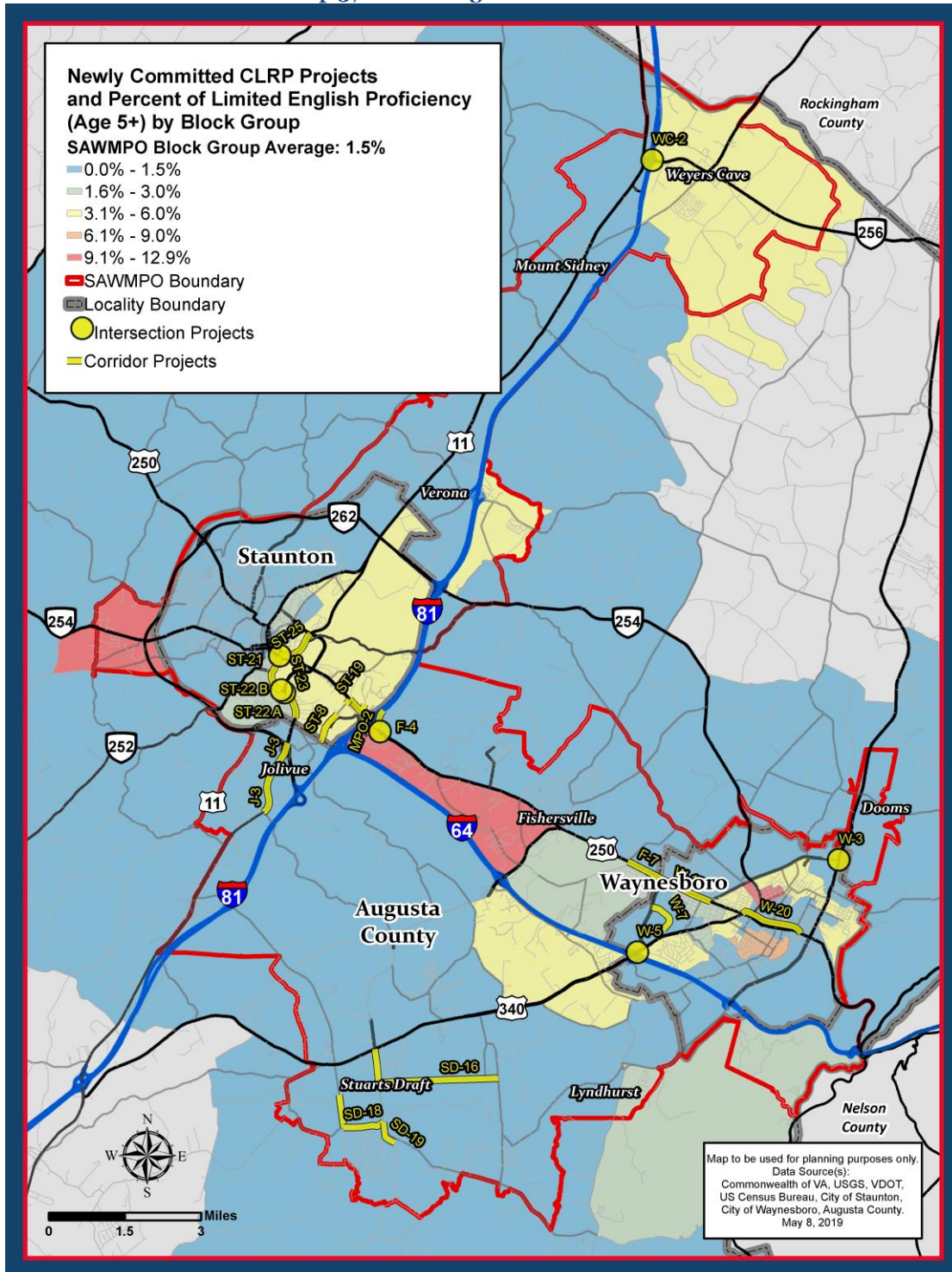
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Map 36: Percentage of People with Disabilities



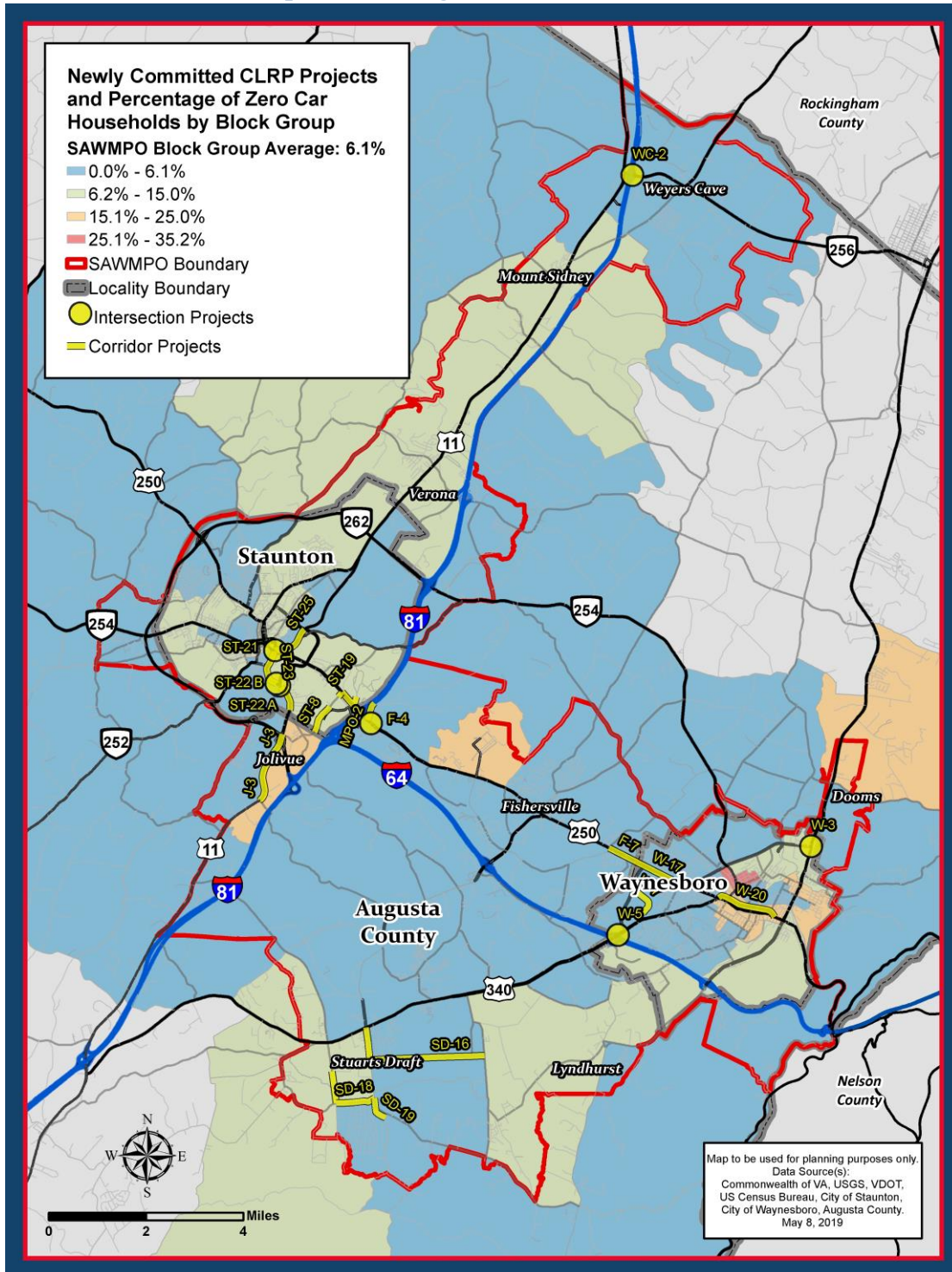
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Map 37: Percentage of LEP Individuals



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Map 38: Percentage of Zero Car Households



2045 Long Range Transportation Plan

8 – 3 Environmental Mitigation Measures

Mitigation measures are required where the potential for adverse impacts may result with a transportation project. Mitigation measures can include limiting project scope, rehabilitating/restoring the affected environmental/cultural feature, or avoidance entirely. The LRTP considered the proximity of proposed transportation projects to the presence of cultural and environmental resources. During the preliminary planning stage, all projects are evaluated for the potential to impact private property, historic/archaeological resources, threatened and endangered species, farmland, public recreational facilities, jurisdictional waters, land use, contaminated sites, and noise levels as required by federal, state and local laws/regulations.

Programmatic mitigation measures include the following elements:

- **Historic/Archaeologic Resources:** mitigation for impacts is accomplished through avoidance or scientific excavation and documentation. Surveys, including deep testing and evaluations on a case-by-case basis are developed in consultation with key stakeholders.
- **Wetlands:** where unavoidable, consultation occurs with various resource agencies to develop replacement wetlands within the affected watershed. There are also wetland banking programs where projects commit funding to offset impacts.
- **Floodplains:** transportation projects must accommodate impacted floodplains through either avoidance, or designing highway elements (e.g., bridge/culvert openings, etc.) that allow water to flow without increasing the regulated floodplain level. Any adjustments to the floodplain level must conform to requirements set forth by the Army Corps of Engineers that may result in requiring adjustments to FEMA-regulated flood maps.
- **Threatened & Endangered (T&E) Species:** transportation projects must review and consider the presence of T&E species in consultation with the US Fish and Wildlife Service (FWS), Virginia Department of Game and Inland Fisheries (DGIF), and the Division of Natural Heritage (DNH) within the Virginia Department of Conservation and Recreation (DCR). Biological and habitat assessments must be conducted to determine if T&E species are present. The project must either avoid the impact or consider mitigation to include relocation of species, time of year restrictions for construction, etc.
- **Marine Resources:** when impacts to fish and aquatic resources cannot be avoided, transportation projects are required to protect resources by effectively managing storm water runoff, incorporating design features that minimize impacts to fisheries or minimize disruption to natural cycles such as not working within waters during periods of spawning activities.
- **Surface and Ground Water:** projects that impact waters are required to obtain all necessary regulatory approvals, permits, and licenses for each project. Where avoidance is not available, mitigation measures are required to be addressed through design and construction. VDOT requires completion of the Natural Resources Due Diligence Checklist (Form EQ-555) early in the design process.

2045 Long Range Transportation Plan

- **Noise:** federal regulations require that VDOT determine and analyze anticipated noise impacts and alternative noise abatement measures for those impacts for specific types of highway construction projects. Noise impact studies are conducted to consider options for reducing noise levels along proposed federally funded highway improvement projects. FHWA has set forth project types that require noise abatement studies, but typically, these are projects where a new highway is constructed on a new location, or an existing highway's alignment is adjusted substantially either horizontally or vertically.
- **Air Quality:** the Clean Air Act requires that transportation projects not result in or contribute to violation of the National Ambient Air Quality Standards, or delay timely attainment of them. NEPA requires that each federally funded transportation project be evaluated for its potential impact on air quality in the immediate vicinity of the project, known as a "hot spot" analysis. Each applicable project must demonstrate that sensitive populations will not be exposed to pollutant concentrations above an applicable air quality standard.
- **Hazardous Materials:** due diligence must be performed to determine any "recognized environmental conditions" (REC's) on properties that will be acquired for the transportation project. REC's can indicate a continuing release, past release, or a material threat of a release of a hazardous substance into the soil, groundwater, or surface water. When REC's are determined to be present, the project is responsible for coordinating with appropriate environmental agencies to determine what regulatory requirements must be met or followed ahead of or during construction.
- **Public Recreational Resources (Section 4(f) properties):** the Department of Transportation Act of 1966 included a special provision stipulating that the FHWA and state DOTs cannot approve the use of land from publicly owned parks, recreational areas, wildlife refuges or public/private historical sites unless there is no feasible and prudent alternative to the use of the land and the action includes all possible planning to minimize harm to the property resulting from the use.
- **Right of Way Acquisition:** mitigation measures for impacted property owners, including minority and low-income populations should be considered, which may include avoidance, minimizing project scope, compensation and/or relocation. The Uniform Act must be adhered to for all federally-funded transportation projects.

Depending on complexity, size, and potential impacts, transportation projects with federal funding must be evaluated to determine three "classes of action" to determine how compliance with NEPA is implemented and documented. These include:

- **Categorical Exclusions (CEs),** which are issued for transportation project actions that do not individually or cumulatively have a significant impact on the environment.

2045 Long Range Transportation Plan

- Environmental Assessments (EA), which are prepared for transportation project actions in which the environmental impact is not clearly understood or established. Should environmental analysis at the interagency review process result in a finding of no significant impact to the quality of the environment, a Finding of No Significant Impact (FONSI) is issued.
- Environmental Impact Statements (EIS), which are prepared for projects where it is known and evident that a transportation project action will have a significant impact to the environment.