MEMORANDUM

To: ARTS MPO
From: Alta Planning + Design
Date: December 12, 2022
Re: ARTS Bicycle and Pedestrian Plan System Update 2022-2023 – Demand Analysis

Live, Work, Play 2.0

Overview

The Live, Work, Play 2.0 tool can be used to assess both existing and suppressed demand for active transportation. This suppressed demand, known as *latent demand,* comprises trips that are not or cannot be taken because a key factor—like safe, comfortable, and connected infrastructure—is missing. By creating a composite heat map that considers both the location of trip *generators*, such as where people live and work, and trip *attractors*, such as schools and retail establishments where people learn and play, it is possible to develop a generalized picture of existing and latent demand across an area. The resulting, generalized picture of demand can be used on its own or combined with other more detailed transportation data, such as information about areas with high concentrations of short trips, to identify network gaps along existing transportation desire lines and locations that will immediately benefit from more infrastructure.

Methodology

The Live, Work, Play 2.0 tool estimates the latent travel demand for both walking and biking within a study area and is built on 14 variables (shown in **Table 1**, later in this memo) that collectively define suitable conditions for walking or biking trips. These factors are grouped into the following categories:

- **Built environment factors**, such as intersection density and existing walking and biking infrastructure
- **Proximity to trip attractors and generators**, like schools, parks, residential areas, and job locations
- **Existing demographic or trip-making patterns**, including areas and corridors that already support concentrations of short trips that could be served by walking and biking

Data for these variables is pulled from national standardized databases (**Table 1**) and supplemented with locally provided data.

Figure 1 illustrates the overall Live, Work, Play 2.0 scoring process, from assembling the study area unit of analysis and data to computing final walk and bike scores. Details on variable sources, notes, assumptions, and weights are found in **Table 1**.

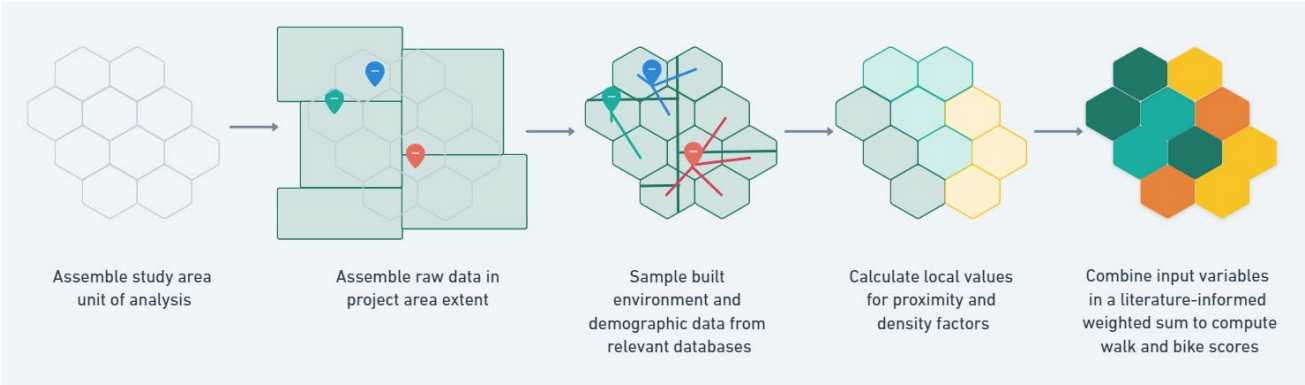

Figure 1. Live, Work, Play 2.0 Scoring Process

Each indicator is associated with the hex grid using one of the techniques described below:

- **Proportional average**: Data is aggregated based on the average value of the underlying data within each hex grid cell, weighted by percent coverage.
- **Proximity**: Data is aggregated based on the Euclidean (straight-line) distance from the centroid of the hex grid to the nearest feature.
- **Kernel density sampling**: Data is aggregated based on the average weighted density of features within each hex grid cell. Weighting allows for greater importance to be placed on different types of features.

After the score for each indicator has been associated with the hex grid, scores are percentile ranked and normalized so all scores range from 0–1. Proximity measures are scored based on the distance in miles according to the classifications in **Table 2**, shown at the end of this memo**.**

Finally, a local, composited demand index score for each hex grid cell is calculated through the application of weights shown in **Table 1**. Higher values indicate more demand for walking or biking, and lower scores indicate less demand for walking and biking. As mentioned previously, the results of the Live, Work, Play 2.0 tool are unique to each geographic area, meaning analysis results from two independent geographies may not be directly comparable.

Table 1. Data Inputs and Assumptions

Variable	Source	Spatial Treatment	Notes and Assumptions	Walk Score Weight	Bike Score Weight
Built Environment Factors					
Intersection Density	Smart Location Database (EPA, 2021) D3B	Proportional average	Weighted street intersection density, where an intersection includes locations where three or more network links meet at a single point and at least one is a non-auto-oriented facility.[1]	10%	0%

Variable	Source	Spatial Treatment	Notes and Assumptions	Walk Score Weight	Bike Score Weight
			Higher intersection density is often used as an indicator of increased walkability, and this variable is included in the National Walkability Index (EPA, 2021) and is reported at the census block group level.		
Bike Facility Density (quality adjusted)	ARTS	Kernel density sampling	Each polygon in the demand surface is assigned the average value of a weighted bike facility density raster that indicates the proximity and quality of bike facilities. The kernel density bandwidth is 1/4 mile, and weights are applied as follows: 1 – shared road or equivalent; 5 – bike lane (unprotected) or equivalent; 10 – protected bike lane, shared-use path, or equivalent.	0%	15%
Proximity to Trip Attractors & Generators					
Proximity to Transit Stops	ARTS	Proximity from demand surface centroid to nearest feature	Contains voluntarily submitted General Transit Feed (GTFS) Specification data for stops along fixed-route services. Walking and biking often serve as first-last mile connectors for transit trips.	10%	5%
Proximity to Entertainment	OpenStreetMap	Proximity from demand surface centroid to nearest feature	Locations tagged as cinema, community center, planetarium, nightclub, theater, social center, conference center, arts center, fast food, food court, restaurant, cafe, bar, pub, aquarium, attraction, museum, theme park, or zoo in OpenStreetMap. These serve as trip generators and may	5%	5%

Variable	Source	Spatial Treatment	Notes and Assumptions	Walk Score Weight	Bike Score Weight
			increase trip-making activity in the vicinity.		
Proximity to Grocery Stores	OpenStreetMap	Proximity from demand surface centroid to nearest feature	Locations tagged as supermarket, general, convenience, grocery, or greengrocer in OpenStreetMap. These serve as trip generators and may increase trip-making activity in the vicinity.	5%	5%
Proximity to Parks	OpenStreetMap	Proximity from demand surface centroid to nearest feature	Locations tagged as parks in OpenStreetMap. These serve as trip generators and may increase trip-making activity in the vicinity.	10%	10%
Proximity to Schools	Homeland Infrastructure Foundation-Level Data (HIFLD)	Proximity from demand surface centroid to nearest feature	Centroid points of public and private elementary and secondary school campuses for the 2019–2020 school year. These serve as trip generators and may increase trip-making activity in the vicinity.	10%	10%
Demographic & Trip-Making Behavior					
Employment Mix	Smart Location Database (EPA, 2021), D2B_E8MIXA	Proportional average	Eight-tier employment entropy is used as a proxy for measuring the diversity of land uses present in a certain area. Increased land use diversity is associated with increased walkability, and this variable is included in the National Walkability Index (EPA, 2021) and is reported at the census block group level.	5%	5%
Employment + Housing Mix	Smart Location Database (EPA, 2021), D2A_EPHHM	Proportional average	Employment and household entropy is another proxy for measuring land use mix. Higher values indicate a greater diversity of land uses, which is associated with increased walkability. This	5%	5%

Variable	Source	Spatial Treatment	Notes and Assumptions	Walk Score Weight	Bike Score Weight
			variable is included in the National Walkability Index (EPA, 2021) and is reported at the census block group level.		
Housing Unit Density	Smart Location Database (EPA, 2021), D1A	Proportional average	Gross residential density on unprotected land,[2] measured as housing units per acre and reported at the census block group level. Increased housing unit density generally indicates more people living in an area, and thus more trip-making activity.	5%	5%
Job Density	Smart Location Database (EPA, 2021), D1C	Proportional average	Gross employment density on unprotected land,[2] measured as jobs per acre and reported at the census block group level. Increased job density generally indicates more people working or shopping in an area, and thus more trip-making activity.	5%	5%
Percent Zero Vehicle Households	Smart Location Database (EPA, 2021), Pct_AO0	Proportional average	Percent of zero-car households in the census block group. Households without vehicles available are more likely to walk or bike for their primary trip mode.	15%	10%
Walk/Bike Mode Commute Split	2020 5-Year American Community Survey (ACS)	Proportional average	Percentage of workers aged 16 or over who commuted to work via walking or biking, respectively, reported at the census tract level for the workers' home locations.	5%	10%
Short Trip Making	Replica Places	Proportional average	The percentage of modeled person trips with destinations in the study area that are less than 1 mile or less than 3 miles. This is used to estimate trips that could	10%	10%

Variable	Source	Spatial Treatment	Notes and Assumptions	Walk Score Weight	Bike Score Weight
			reasonably be converted to walking or biking modes, respectively. Data is modeled for a typical travel weekday during fall 2019.		
1. *Auto-oriented facilities* are defined as (1) any controlled access highway, tollway, highway ramp, or other facility on which automobiles are allowed but pedestrians are restricted; (2) any link with speeds 55 mph or higher; (3) any one-way link with speeds between 41 and 54 mph; or (4) any link with four or more travel lanes in a single direction (EPA, 2021). 2. *Unprotected land* is land available for existing or future development.					

The proximity bands outlined in **Table 2** are informed by typical walking and biking trip distances, as observed in the 2017 National Household Travel Survey (ORNL, n.d.). In general, both walking and biking mode shares decline with increasing trip distances, but the shapes and thresholds are different for each form of active transportation.

Table 2. Walking and Biking Proximity Bands

Walking Proximity Bands	Points	Biking Proximity Bands	Points
< 1/8th mile	1	< 1/4th mile	0.85
1/8th – 1/4th mile	0.9	1/4th – 1 mile	1
1/4th – 1/2 mile	0.6	1 – 2 miles	0.75
1/2 – 3/4th mile	0.3	2 – 3 miles	0.5
3/4th – 1 mile	0.1	3 – 6 miles	0.25
> 1 mile	0	> 6 miles	0

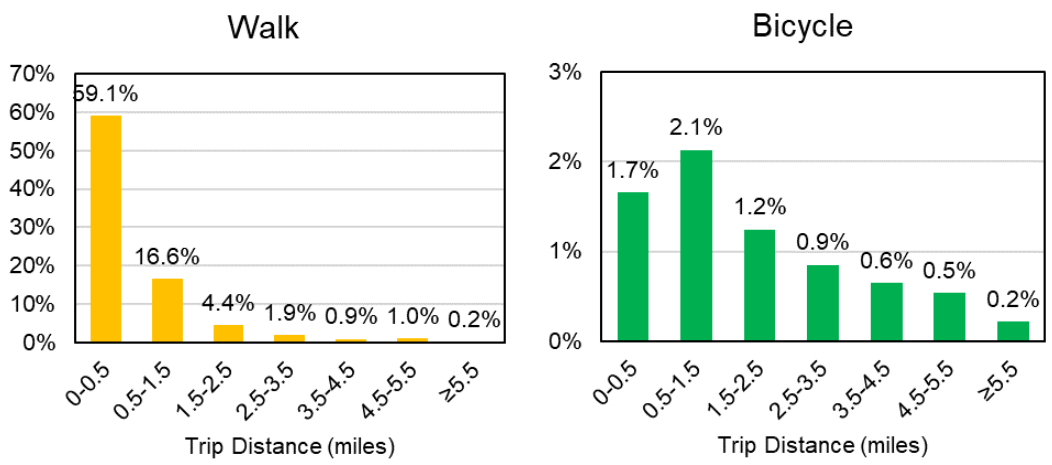

Figure 2. US Mode Shares for Walking (left) and Bicycling (right) by Trip Distance, 2017 National Household Travel Survey Estimated Person Trips (ORNL, n.d.)

Limitations

This methodology is informed by key pieces of literature across the US and internationally to inform the considerations for this analysis, but it does have the following limitations:

- The results are a relative index rather than an absolute estimate of trips that can be unlocked. Further analysis would be required to provide absolute estimates, including calibration to an appropriate local dataset via regression modeling.
- The index does not consider all potentially relevant factors to latent travel demand, such as weather, slopes, and barriers to bicycle and pedestrian activity.
- The analysis is subject to edge effects from the sampling of census geographies and omitted data in OpenStreetMap, given the volunteer nature of the database.

Results

The Live Work Play Demand analysis was performed in the ARTS MPO area, utilizing existing conditions and the variables listed above. The results of the analysis are shown in the following maps for the entire region, and detailed maps of portions of the region. Overall, bicycling and walking demand is concentrated in the cities within the region, especially downtown areas. However, there are other key areas for each mode which are highlighted below.

Estimated Demand for Walking

Walking demand is in many cases around dense shopping centers, as these areas provide many types of services. These areas are often near schools, increasing the number of people traveling to these destinations regularly. Higher-density residential areas, often located near shopping centers, can also lead to a higher level of demand, as there are many residents nearby using the facilities. In addition to K-12schools, higher education centers also show a high demand for walking because of the number of students and employees regularly traveling around these areas. The Savannah River is an attraction for both residents and visitors, and as expected, high demand for walking is seen along the riverfront of both the City of Augusta and City of North Augusta, extending on either side of the downtown areas.

In addition to downtown Augusta, much of Augusta-Richmond County shows key areas where there is high demand for walking, and high demand for connections from these areas to downtown. Relatively small areas of high demand can be seen in Bristol Woods and West Augusta, covering some of the more commercial areas along Washington Rd. These areas are connected to downtown Augusta and Columbia County by a bus route. Pockets of high walking demand in the western part of the county exist in Forest Hills, the intersection of Jackson Rd and Wrightsboro Ave, and areas adjacent to the intersection of Claussen Rd and Washington Rd: each containing commercial areas and schools. To the east of downtown, industrial areas and schools near the riverfront show high levels of demand, likely because of those traveling to that location for work or school. The commercial and medical area around Carl Sanders Hwy and Bobby Jones Exp is another part of the region where walking demand is expected to be high, primarily due to the services and employment opportunities there.

One interesting area with high demand in Augusta-Richmond County is around Mike Padgett Hwy and Phinizy Rd that has many government services and non-profits. Moving further away from downtown, walking demand lessens and is centered around smaller shopping areas and schools, especially in the southern portion of the ARTS region. These are also areas with fewer and more disconnected sidewalks. The ARTS bicycle and pedestrian plan system update should strive to provide more connections between residences, shopping centers, and schools with new facilities, especially in these areas of higher un-met walking demand.

In Aiken County, areas with shopping centers that show high walking demand include Knox Ave in North Augusta, which is also near parks and North Augusta Middle School, and the area around West Ave and Georgia Ave that also includes Creighton Living History Park. While there are some existing facilities in these areas, they are concentrated on the larger roads in each area. Similarly, commercial areas near Aiken show high walking demand, such as Rutland Ave NE near Aiken High School and the intersection of Pine Log Rd and Whiskey Rd that includes multiple schools and the Odell Weeks Activity Center and Virginia Acres Park. Each of these areas likely see high demand because of those accessing services, park facilities, and attending school. While both of these have some existing facilities, there are gaps that could be filled to improve walkability. USC Aiken also shows a relatively high demand for walking.

The Aiken Mall is a shopping area that shows slightly less walking demand, although it is likely a popular destination and employment center. Park facilities that provide destinations for residents and visitors show high levels of demand throughout the ARTS region, even when they are more distanced from shopping areas. In Aiken County, demand is seen around the Beverly Generation Park, although this area is largely undeveloped and has no existing facilities. Park and equestrian facilities along Pine Log Rd also show relatively high walking demand. While many of these hot spots for walking demand show similar demand connecting to downtown, there are pockets of relatively high demand in areas between North Augusta and Aiken, such as Clearwater and Gloverville/Langley, where there is some density between the larger downtown areas

In Columbia County, high demand is scattered over central Grovetown where there are commercial areas along Wrightsboro Rd, Grovetown Middle School, and Cedar Ridge Elementary School. There are very few existing sidewalks in this area of Grovetown, which may be a key gap to fill. Other areas of demand, although not of the same level, include areas with shopping centers like S Belair Rd, the Martinez area, and Evans. Some of these areas are also near schools, such as Baker Place Elementary School located in Martinez, likely leading to a higher demand for walking facilities. Industrial areas north of Grovetown shows some walking demand, likely because of the employment that comes from these businesses. Interestingly, some demand exists near Snead, covering a much less dense commercial and residential area compared to other parts of the county, as well as some undeveloped land; this is likely because of the relationship to Riverside Elementary School, Riverside Middle School, and the Nature and Adventure Community Center that generate regular trips throughout the week.

The portion Edgefield County within the ARTS boundary has little potential walking demand, spanning the residential area of Murphy Estates around Fox Creek High School and a rural residential and undeveloped area along the edge of the ARTS border.

Estimated Demand for Bicycling

Biking demand in the ARTS region covers many of the same areas as walking demand, although the pattern of demand across the region is slightly different. Areas of high biking demand cover wider areas overall, and include portions of the region that saw slightly lower levels of walking demand; this is because of the distances that one can quickly travel on a bike compared to on foot.

High potential demand in downtown Augusta extends along the riverfront and to south Augusta, with demand in many of the commercial areas in the south, as well as demand for connections between these areas. With few existing facilities in this area, these areas of demand in south Augusta may be a key gap to fill in order to connect residents to shopping centers, as well as downtown. High expected demand extends further beyond Bobby Jones Expressway; interestingly, high demand areas include the residential area south of Tobacco Rd, although this is a less dense area and there are no existing facilities. This is likely due to the schools in the area, Diamond Lakes Regional Park, and the presence of the shopping center, although smaller than others in the region, likely serving as a popular destination for residents in the southern part of the county that would otherwise travel much farther to reach larger shopping areas. There are also various governmental service buildings that residents across the county may need to access here.

There is high demand in much of western August-Richmond County, including West Augusta, Montclair, the Bobby Jones Exp and Carl Sanders Hwy interchange, and down to Wrightsboro Rd. This high demand connects into areas of Columbia County as well. The western areas of Augusta-Richmond County have very few existing bike facilities and may be a key gap to fill in order to connect shopping centers, parks, and downtown Augusta to residences in both August-Richmond and Columbia County.

High demand for biking in downtown North Augusta continues from the riverfront to the Summer Hill area, where there is relatively dense commercial area along Georgia Ave and Knox Ave. High demand ends in Belvedere, although there is slightly lower demand around much of the residential area to the north and southeast of downtown North Augusta. Interestingly, a pocket of high demand exists adjacent to Atomic Rd and Fred W Scott Hwy, south of walking demand, in an area that is largely undeveloped with a few residences, business, and churches. This may be due to the number of jobs provided by these businesses and the proximity to central Clearwater. Several bicycling facilities exist in North Augusta, many reaching areas of high demand.

High potential demand for bike facilities is seen in downtown Aiken, extending north to Crosland Park to existing bike facilities and west in the direction of Richland Ave W to the University and shopping areas of Richland Ave. Nearby but not connected, high demand includes park and equestrian facilities, along with some undeveloped area in between industrial uses. While some of these areas of demand are connected around Aiken, there are still gaps in the connectivity provided to the area. Slightly lower demand exists around central Aiken. Most of New Ellenton shows relatively high demand, although this includes less dense commercial areas, horse farms and equestrian facilities, rural residential areas, and some undeveloped areas. This may be due to the ability of downtown New Ellenton to provide a convenient shopping opportunity for those that live in the southern region of the county further away from more dense shopping areas like Aiken and North Augusta. The popularity of equestrian activities in the region may be another reason for demand here.

There is high demand throughout the eastern portion of Columbia County. The area of Grovetown and north to Carl Sanders Hwy shows high demand, and demand connects to Evans. The demand around Evans extends in all directions to Columbia Rd that provides shopping, residential, and industrial areas. Demand near Snead exists, although it includes more low density residential and undeveloped land; this is likely because of the number of schools and parks in the area that may be regular destinations for many. Existing bike facilities are scattered throughout the county and exist in many areas of low demand based on this analysis. Connecting these existing facilities and extending to areas of high demand, especially shopping centers may be important to connect to key destinations in the area.

Within the portion of Edgefield County that is included in the ARTS region, there is more demand near the river and the middle of the area, lessening towards the north.

Conclusions

Overall, bicycling and walking demand is concentrated in the cities within the ARTS region, especially downtown areas. Key pockets of expected demand do exist outside of downtowns, and connecting these key areas with sidewalks and bike facilities will be important for the ARTS Bicycle and Pedestrian Plan System Update. This analysis, used in conjunction with the equity and safety analyses will inform the overall walking and bicycling network.

Works Consulted

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BICYCLING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN
PLAN SYSTEM UPDATE
2022-2023

COMPOSITE DEMAND SCORE

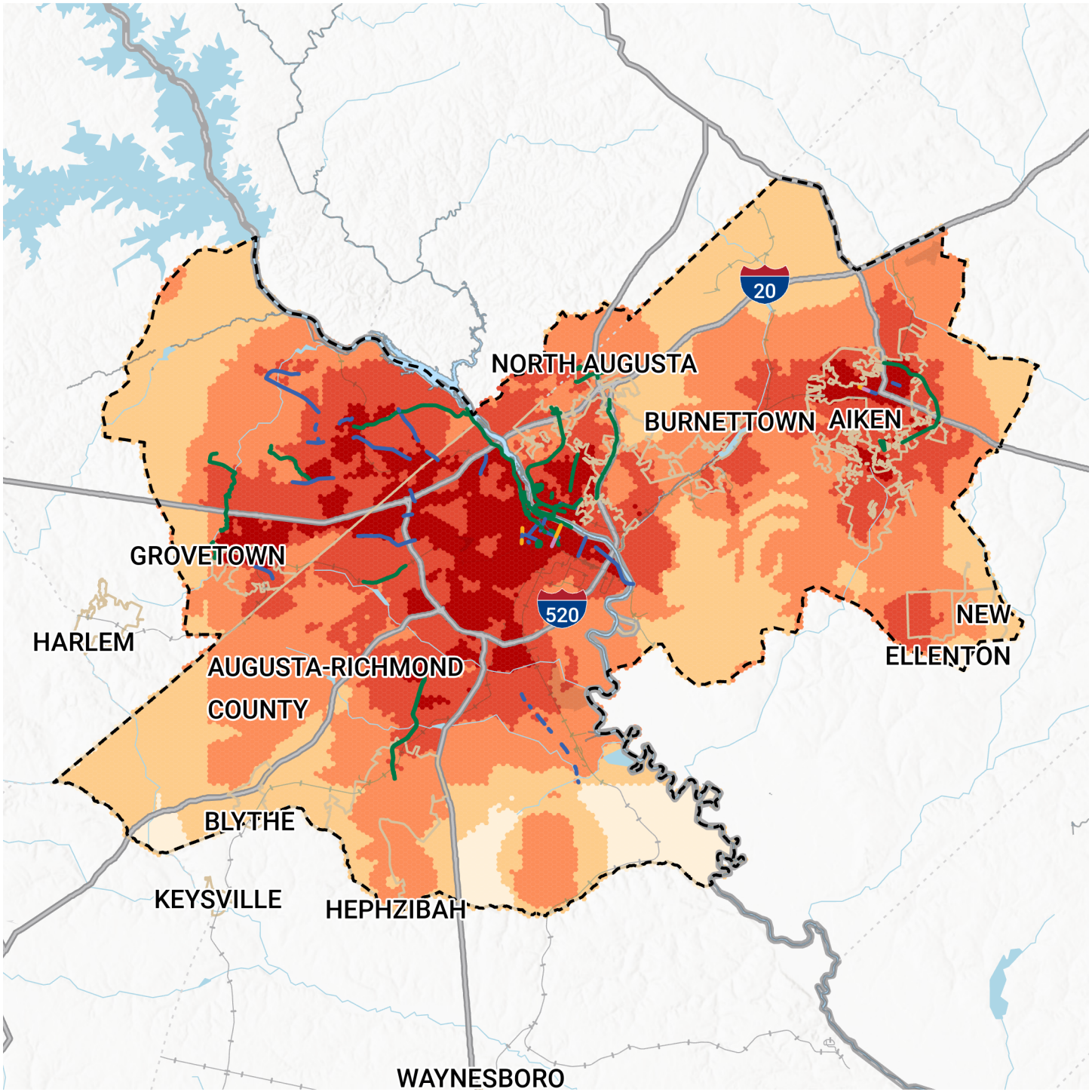
- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS



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Data sources: ARTS MPO, Columbia, Augusta-Richmond, Aiken and Edgecombe counties, OSM, GDOT, SCDOT, U.S. Census, EPA, CDC, Opportunity Atlas. Date Saved: 12/8/2022

BICYCLING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE
2022-2023

AIKEN AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS

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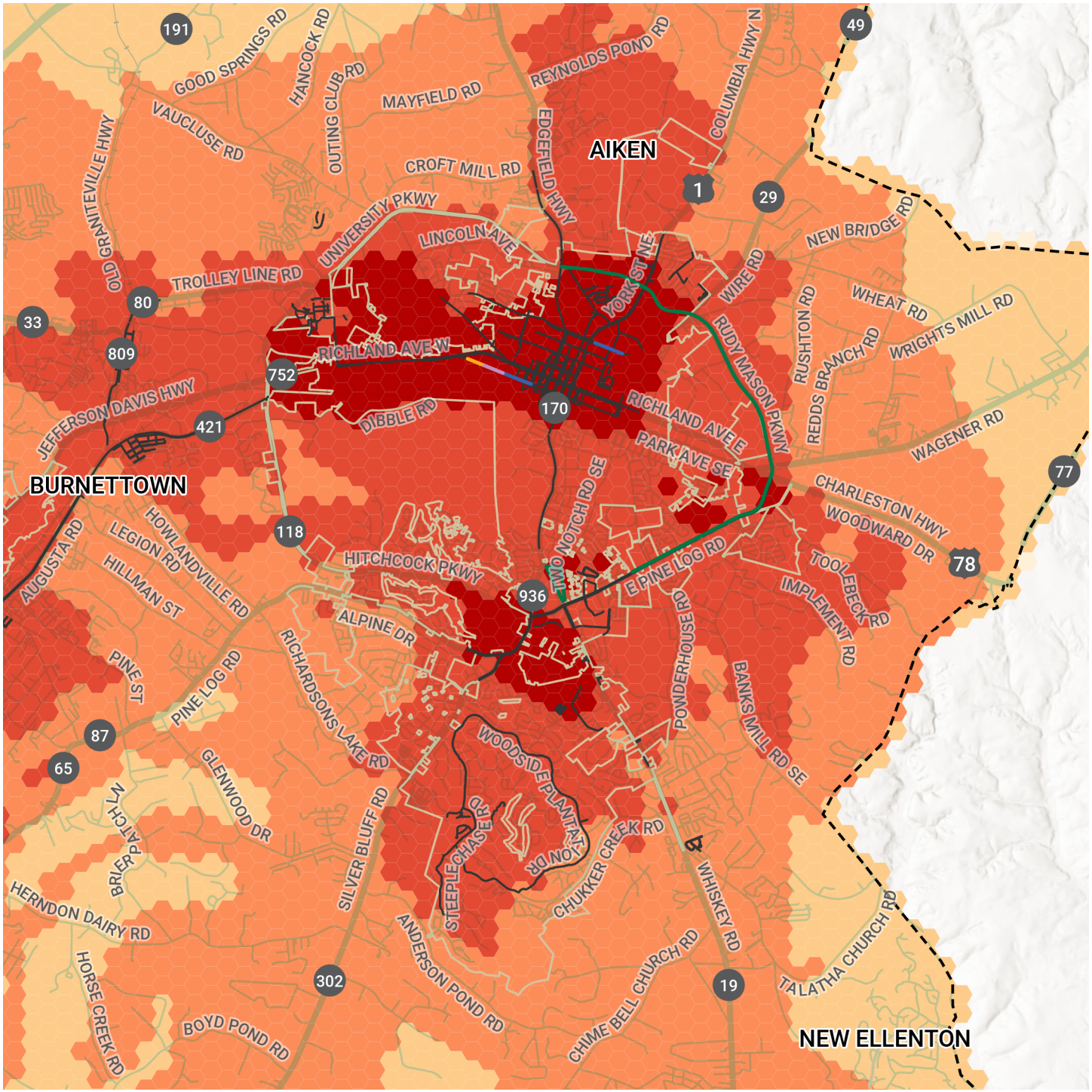

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BICYCLING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE
2022-2023

AUGUSTA AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
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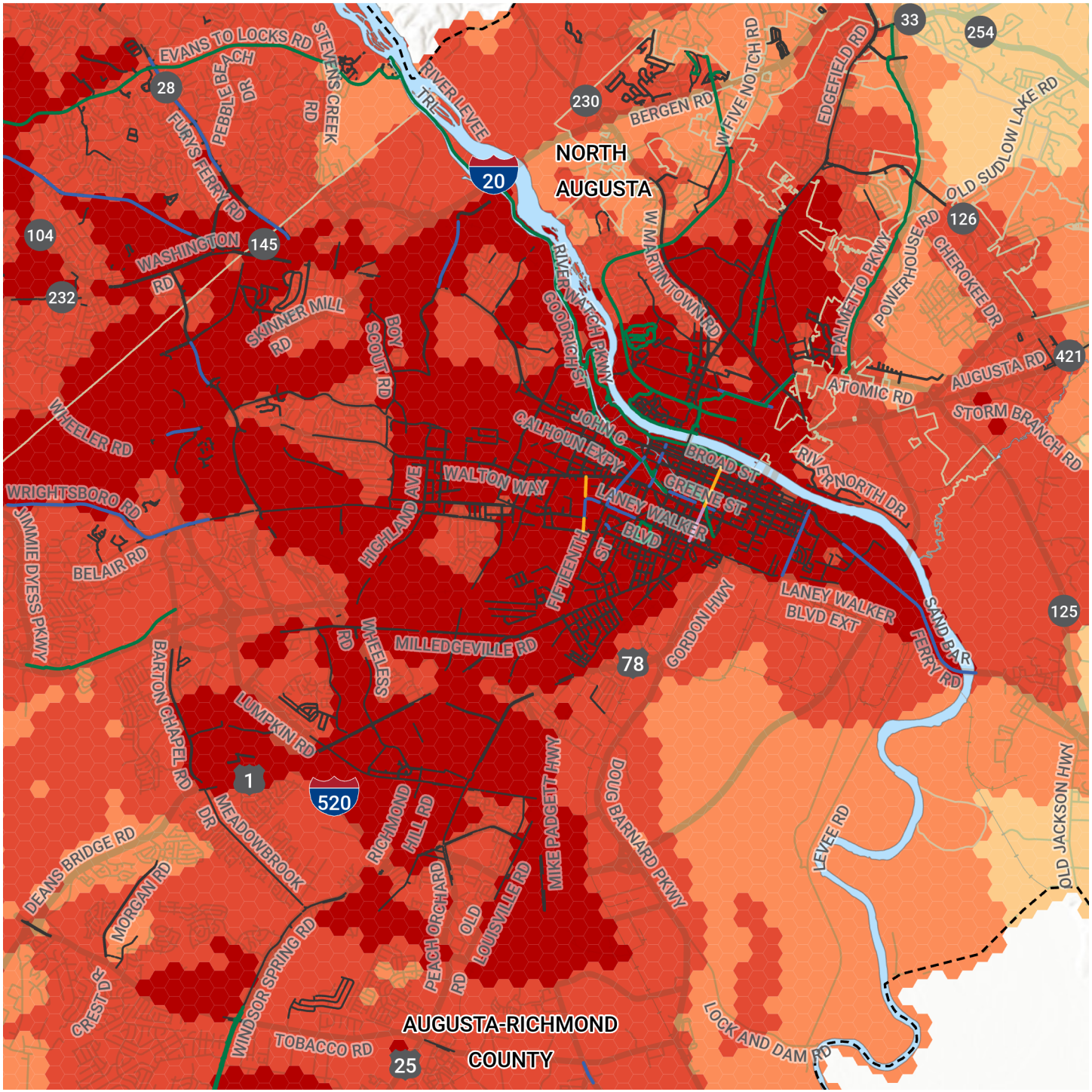
0 0.5 1 MILES



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BICYCLING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE
2022-2023

COLUMBIA COUNTY AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
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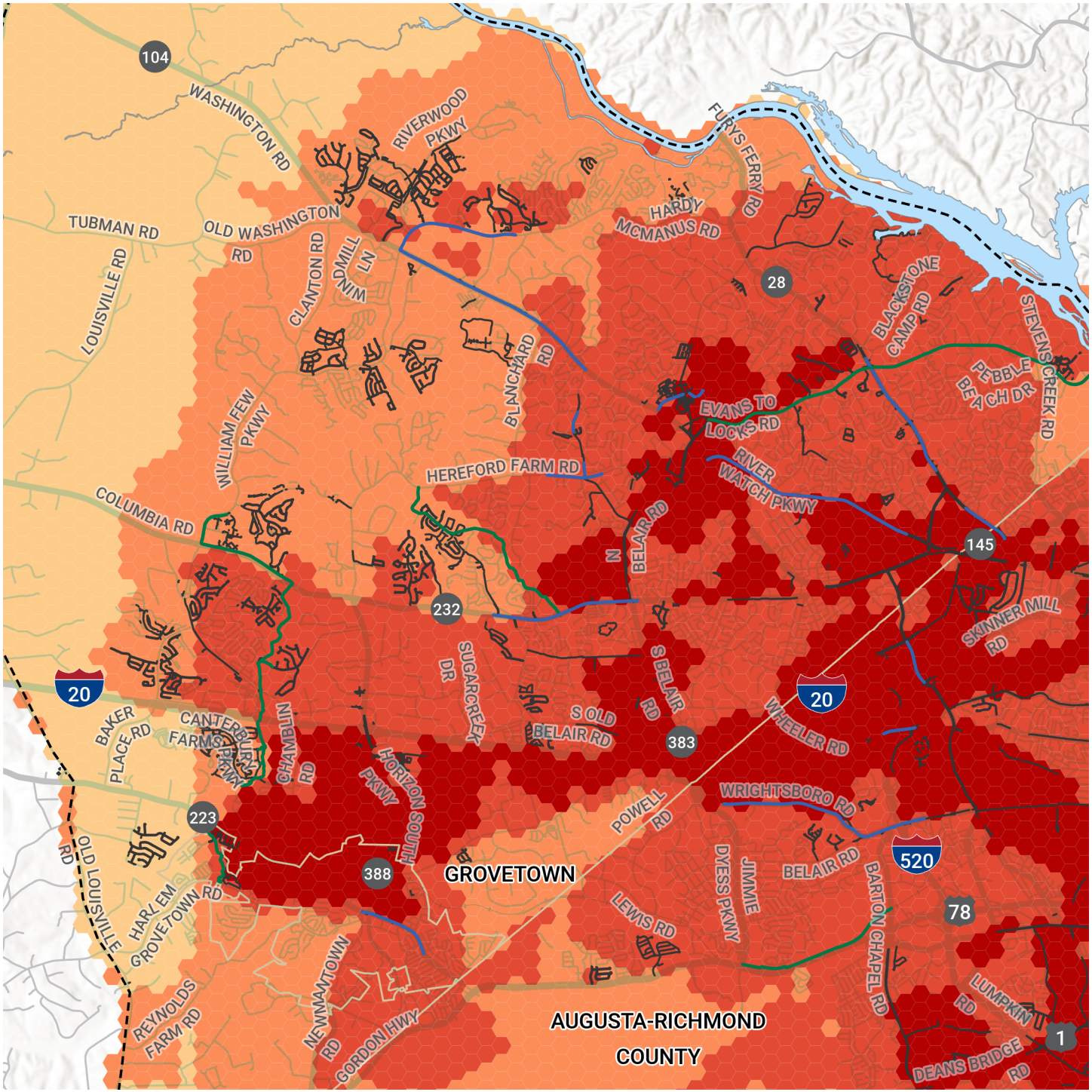

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BICYCLING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE
2022-2023

HEPHZIBAH AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
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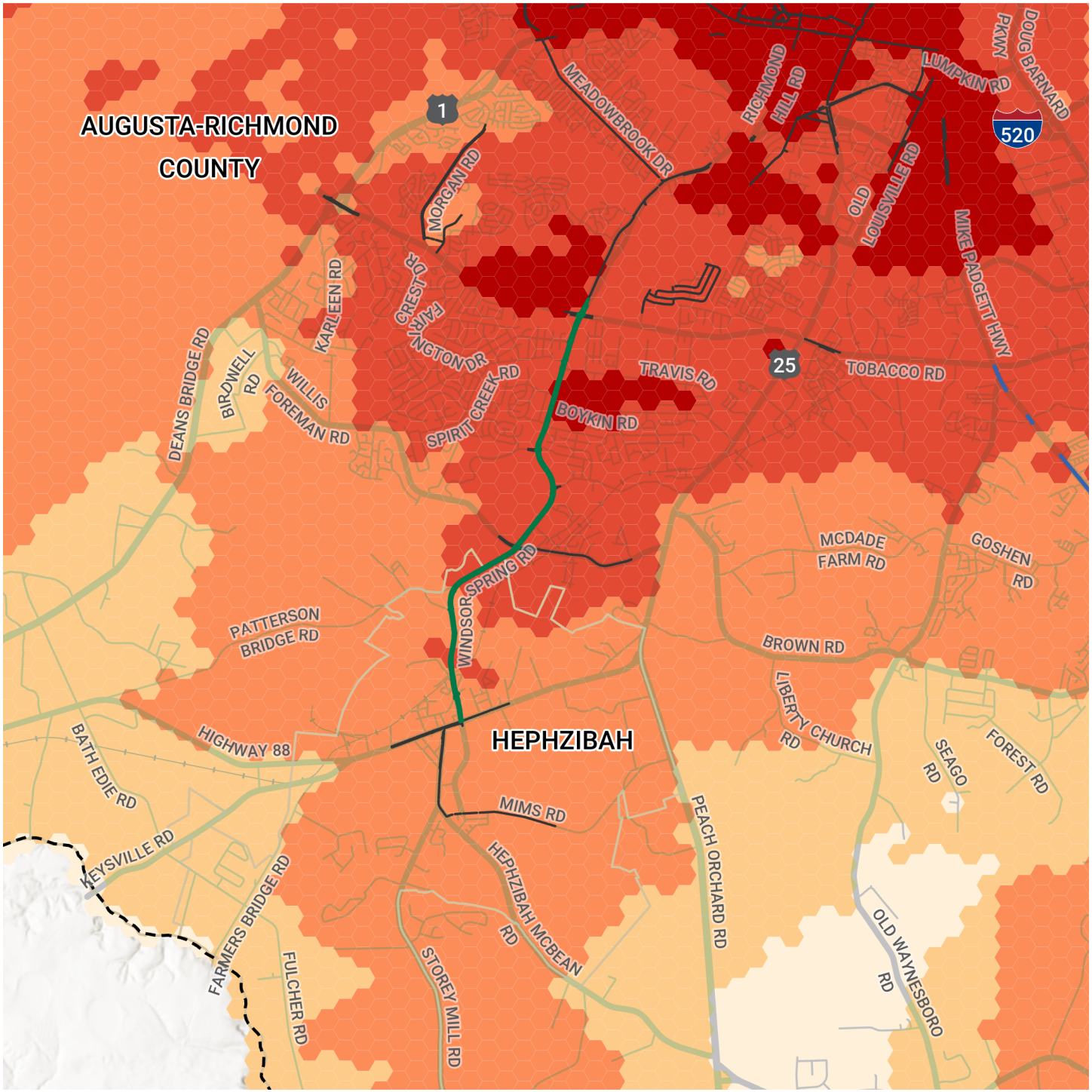

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BICYCLING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN
PLAN SYSTEM UPDATE
2022-2023

NORTH AUGUSTA AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
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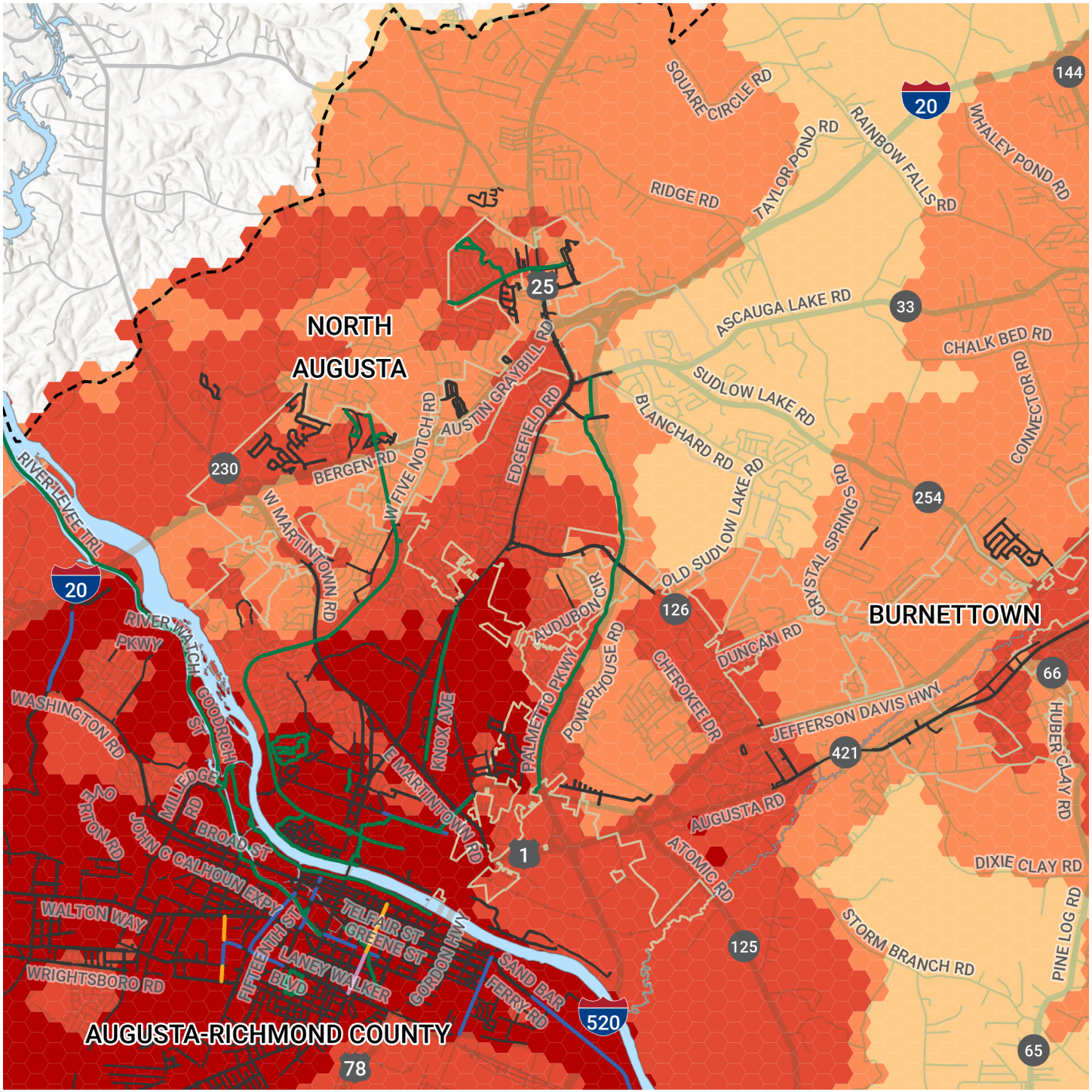

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WALKING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN
PLAN SYSTEM UPDATE
2022-2023

COMPOSITE DEMAND SCORE

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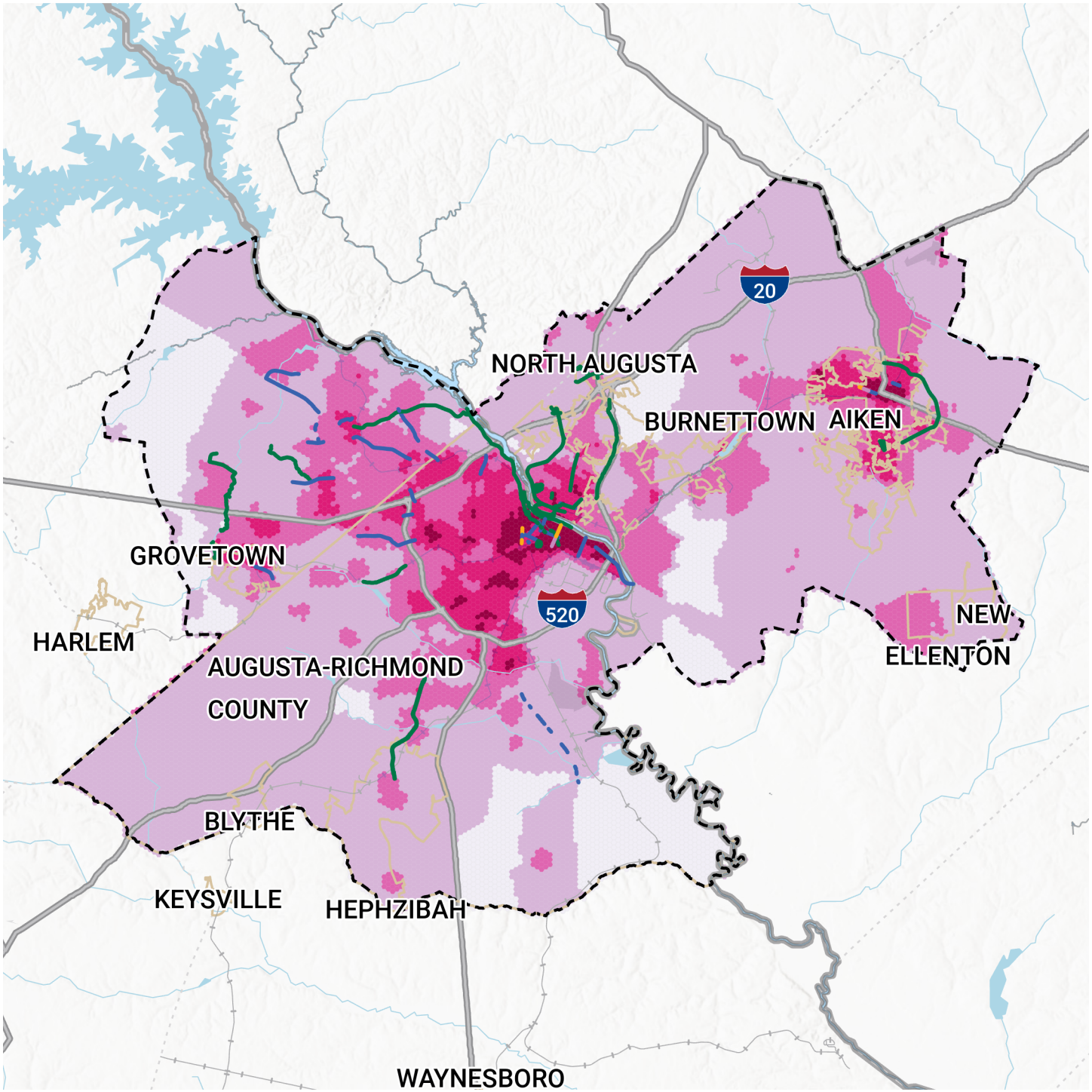
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS



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Data sources: ARTS MPO, Columbia, Augusta-Richmond, Aiken and Edgecombe counties, OSM, GDOT, SCDOT, U.S. Census, EPA, CDC, Opportunity Atlas. Date Saved: 12/8/2022

WALKING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE
2022-2023

AIKEN AREA

COMPOSITE DEMAND SCORE

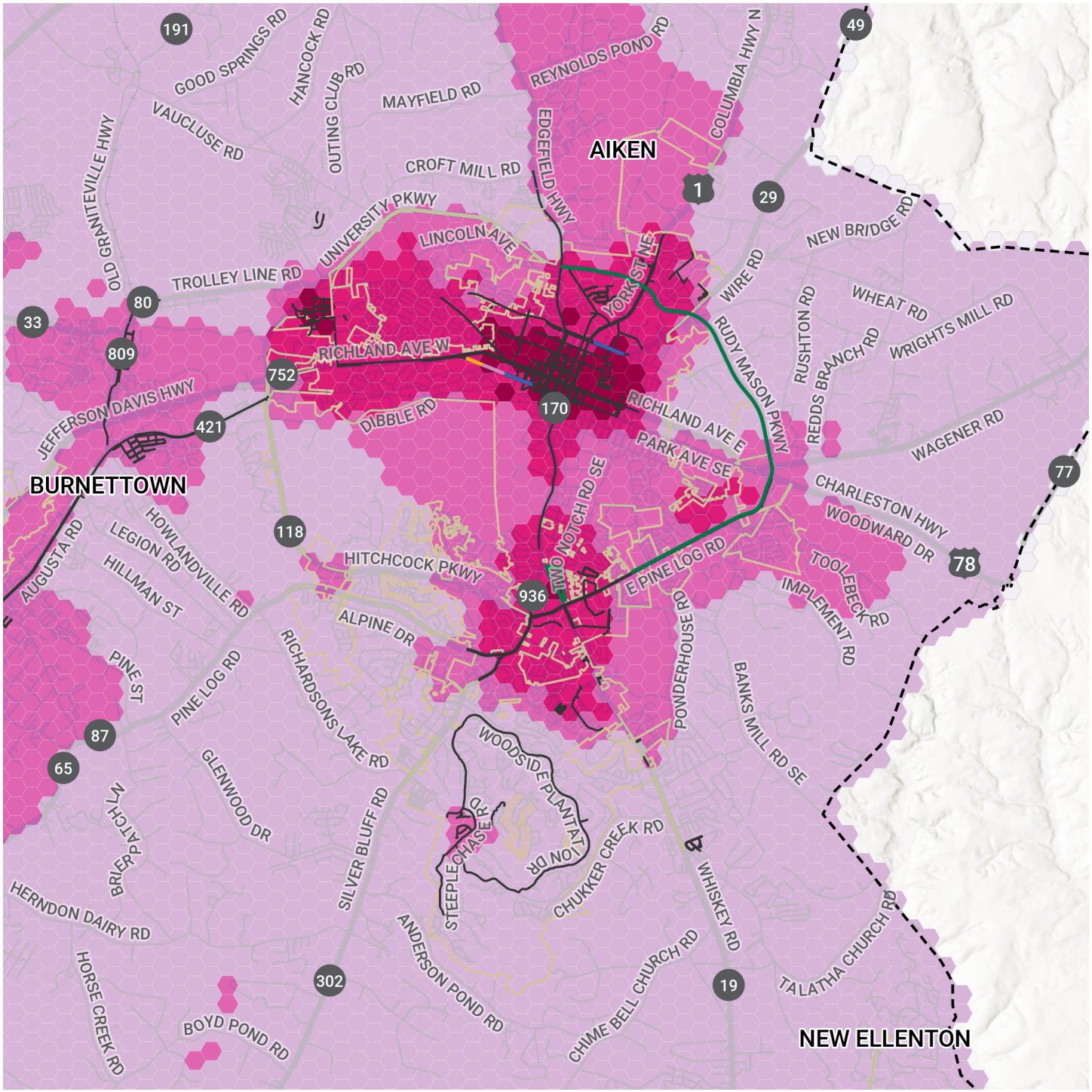
- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS



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Data sources: ARTS MPO, Columbia, Augusta-Richmond, Aiken and Edgecombe counties, OSM, GDOT, SCDOT, U.S. Census, EPA, CDC, Opportunity Atlas. Date Saved: 12/8/2022

WALKING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE
2022-2023

AUGUSTA AREA

COMPOSITE DEMAND SCORE

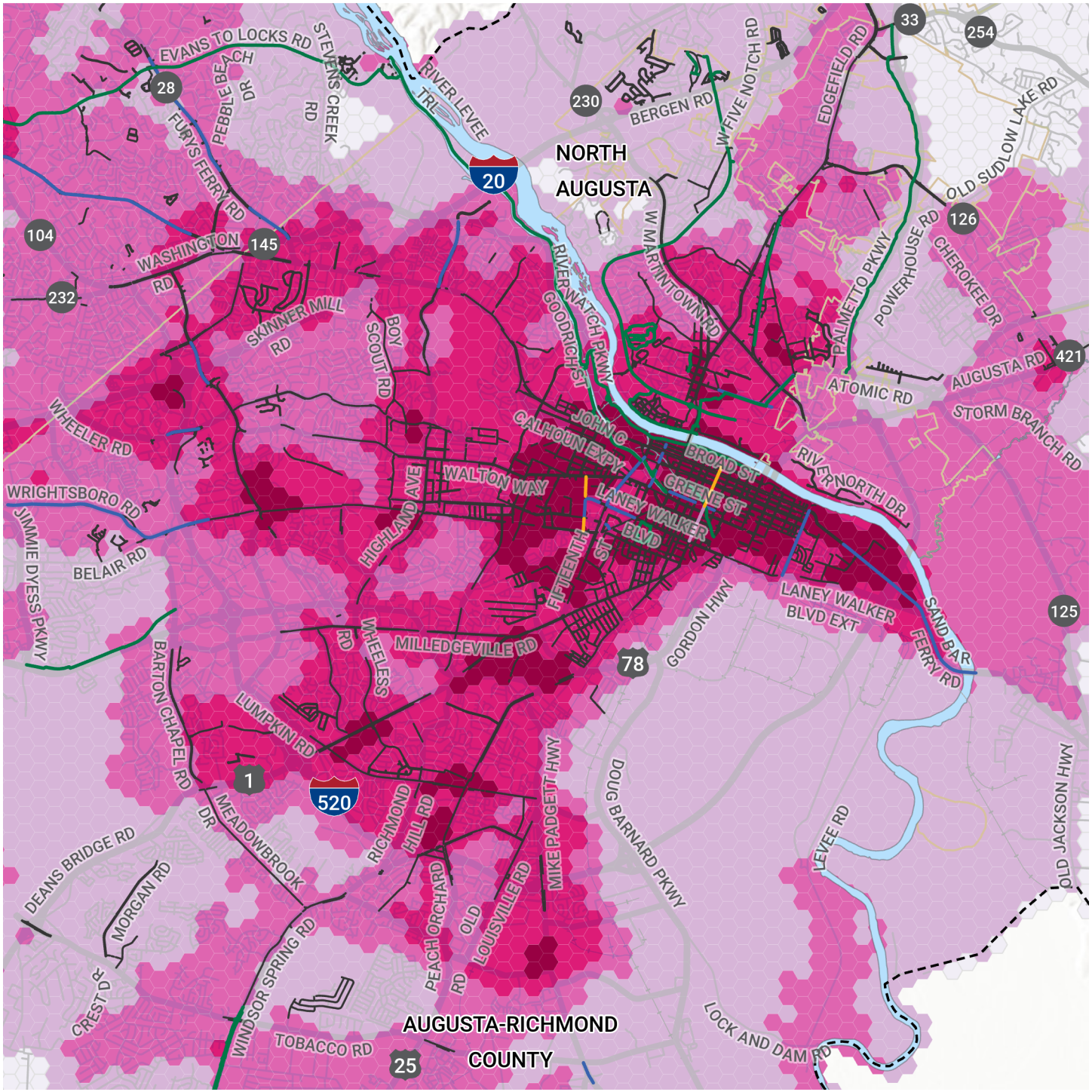
- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS



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Data sources: ARTS MPO, Columbia, Augusta-Richmond, Aiken and Edgecombe counties, OSM, GDOT, SCDOT, U.S. Census, EPA, CDC, Opportunity Atlas. Date Saved: 12/8/2022

WALKING DEMAND ANALYSIS

ARTS MPO BICYCLE AND PEDESTRIAN PLAN SYSTEM UPDATE 2022-2023

COLUMBIA COUNTY AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS

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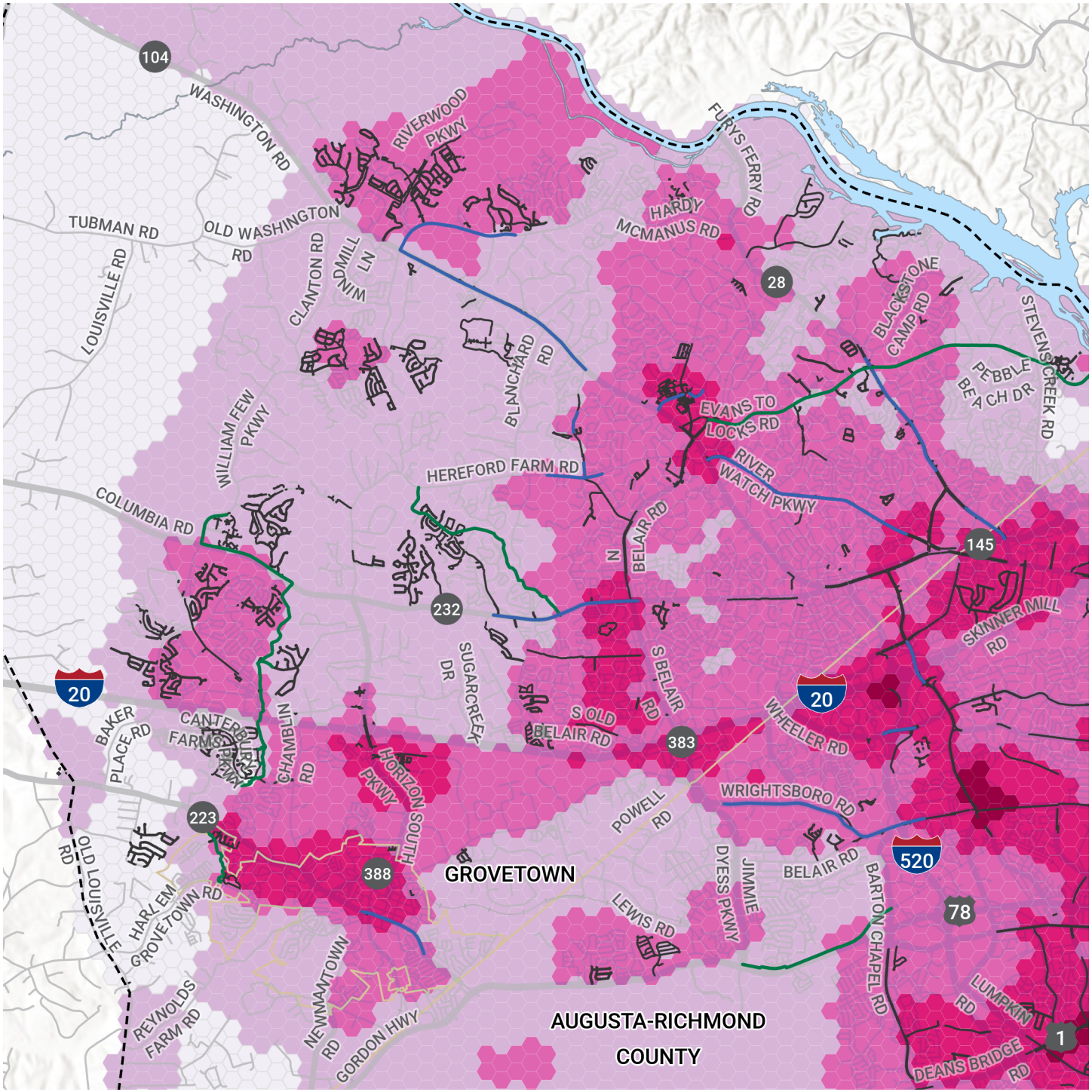

Data sources: ARTS MPO, Columbia, Augusta-Richmond, Aiken and Edgecombe counties, OSM, GDOT, SCDOT, U.S. Census, EPA, CDC, Opportunity Atlas. Date Saved: 12/8/2022

WALKING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN
PLAN SYSTEM UPDATE
2022-2023

HEPHZIBAH AREA

COMPOSITE DEMAND SCORE

- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS

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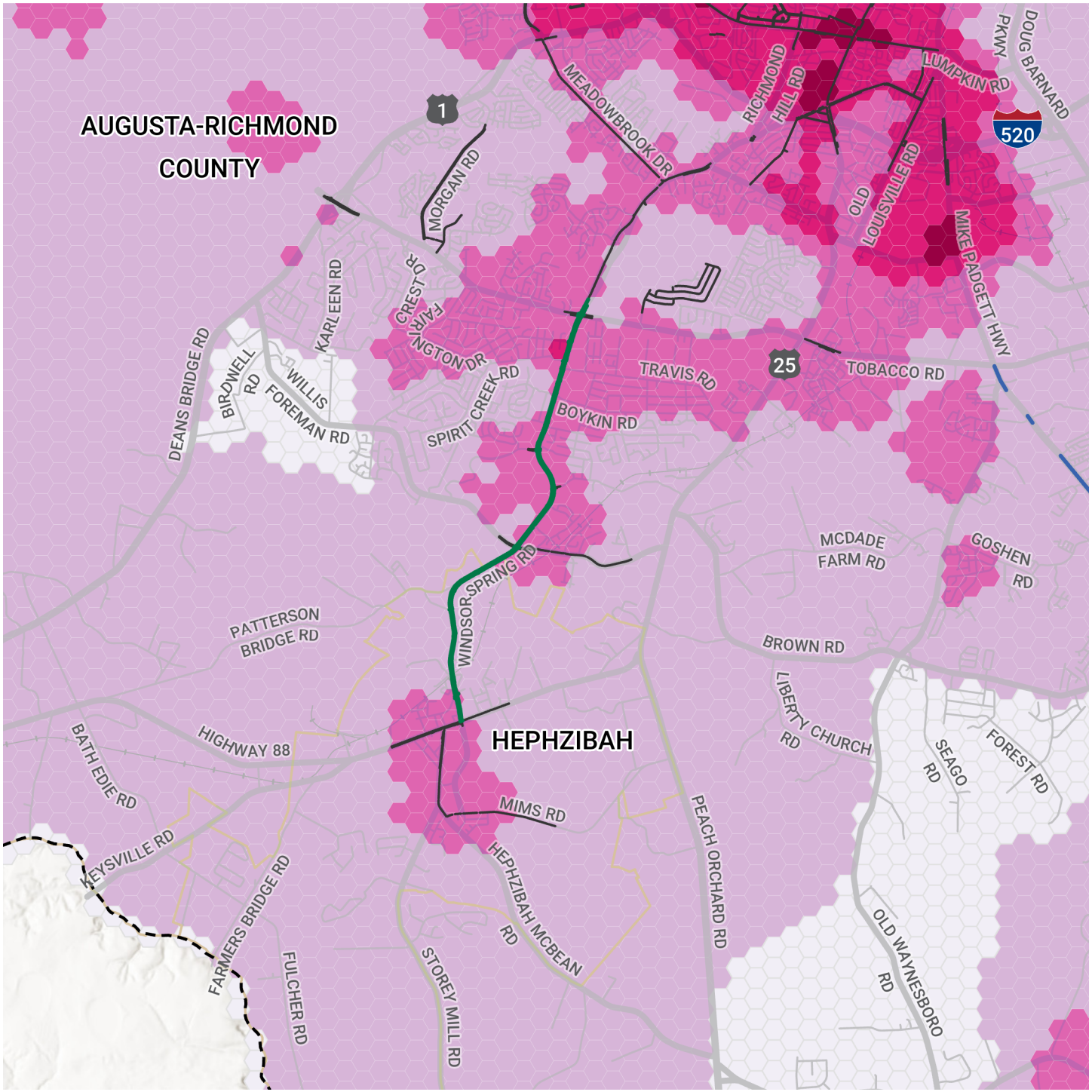


Data sources: ARTS MPO, Columbia, Augusta-Richmond, Aiken and Edgecombe counties, OSM, GDOT, SCDOT, U.S. Census, EPA, CDC, Opportunity Atlas. Date Saved: 12/8/2022

WALKING DEMAND ANALYSIS

ARTS MPO
BICYCLE AND PEDESTRIAN
PLAN SYSTEM UPDATE
2022-2023

NORTH AUGUSTA AREA

COMPOSITE DEMAND SCORE

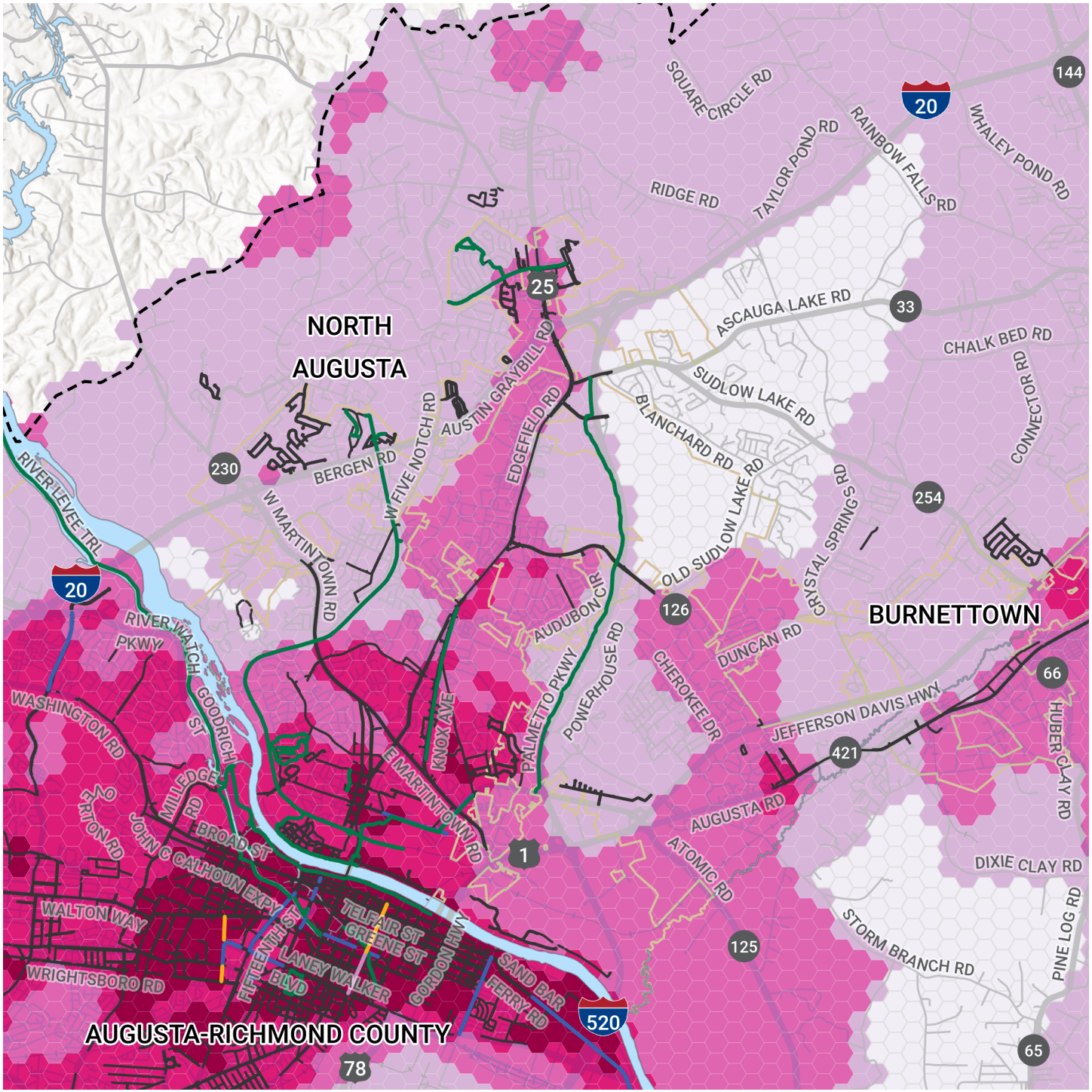
- HIGH SCORE
- LOW SCORE

EXISTING INFRASTRUCTURE

- EXISTING SIDEWALKS
- RAILROADS
- SAVANNAH RIVER
- MUNICIPAL BOUNDARIES
- ARTS BOUNDARY

EXISTING BICYCLE FACILITIES

- GREENWAY
- BIKE LANE
- BIKE LANE ONE SIDE/ SHARROW ONE SIDE
- SHARED LANE MARKINGS



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