



CITY OF LONG BEACH TRANSPORTATION MASTER PLAN



Prepared For

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City of Long Beach 2025 Transportation Plan

EXECUTIVE SUMMARY

The 2025 Long Beach Transportation Master Plan (TMP) is developed to serve as a long-term document outlining the vision, goals, and strategy for guiding transportation improvement planning & decision-making and investment for the City of Long Beach throughout the next 20-30 years. The TMP also includes the ADA Transition Plan in accordance with ADA requirements.

Vision & Goals

The vision of the TMP is to provide safe, sustainable and fiscally responsible transportation infrastructure and services to meet the mobility and access needs for all users.

The goals of the TMP are:

- Ensure effective and efficient management of the existing transportation system in a cost-effective manner
- Ensure safety for all modes of transportation
- Promote the local economy and increase resiliency to economic changes
- Ensure equitable access for all users regardless of age, income or ability

Purpose of this Report

The purpose of this report is to provide the City a document consolidating recommendations from previous traffic studies, reviewing the condition of the existing transportation infrastructure, and planning for maintenance, and future investment. The City's transportation system aims to provide transportation options that prioritize safety, comfort, accessibility, and uninterrupted availability for individuals of all ages and abilities.

The TMP aims to offer diverse transportation options, enabling individuals to choose the preferred form of transportation and reducing the dependence of a single mode of transportation. The Transportation Plan emphasizes and supports walking, cycling, movement of goods, and driving.

Section 1: INTRODUCTION

The TMP provides a long-term outlook and plan for guiding transportation decision-making and investments for the next 20-30 years. The TMP provides information regarding how people and goods travel within the City and establishes the City's vision and priorities in developing a system with multiple modes of transportation. As the City continues to experience changes in demographics, travel patterns, transportation services, and fiscal prioritization, different modes of transportation and how people travel will determine the future planning of the transportation system. Planning for the transportation system must consider ways of providing safe, reliable, convenient, and affordable travel options meeting the needs of the current and future generations.

The TMP includes the following sections.

Section 1: Introduction

Section 2: Planning of Transportation improvements

Section 3: Annual Transportation Maintenance Program

Section 4: Funding & Investment

Section 5: Appendices

Section 2: PLANNING OF TRANSPORTATION IMPROVEMENTS

2.1 Current & Future Transportation Trends

The City is a member of the Gulf Regional Planning Commission (GRPC) which is a federally mandated transportation policy-making body made up of representatives from local governments and transportation agencies responsible for developing and maintaining the long-range transportation planning along the Mississippi Gulf Coast. GRPC publicizes a document titled the Long Range Transportation Plan (LRTP) every 5 years which provides a comprehensive regional assessment of the existing infrastructure for all modes of transportation, identifies potential projects for planning purposes to meet the future transportation needs, and compares the cost of the proposed projects with the federal funds anticipated over the next 25 years. The last edition of the LRTP was published in 2020, and the draft of the 2025 edition is available for review on the GRPC website.

As part of the development of the LRTP, multiple in-person and virtual presentation are held to gather public input, which is combined with current Federal regulations to establish transportation priorities. As part of the draft 2025 LRTP, GRPC collected information from the public and identified common words and/or phrases to identify challenges and possible solutions. Based on the surveys, the key terms or phrases that appeared the most were congestion, flooding, and unsafe roads. Regarding possible solutions, the most common words or phrases mentioned were expanding public transit, widening roads, adding bike/ped paths, and repairing roads. Another question solicited from the public was to rank the transportation goals. Below is the ranking of the top results:

1. Improve safety for all users
2. Reduce traffic congestion
3. Improve biking and walking
4. Improve public transportation
5. Advance community development
6. Minimize negative impacts
7. Support logistics/freight industry
8. Preserve current infrastructure
9. Support visitors and tourism

GRPC also asked the public to assign budget priorities for transportation improvements. Below is the result of the responses:

1. Provide more transit options
2. Build sidewalk and pedestrian trails
3. Improve pavement/bridge conditions
4. Implement safety improvements
5. Add/widen lanes
6. Use technology to improve traffic operations
7. Build/designate bicycle lanes
8. Add road connections
9. Improve freight infrastructure

The LRTP also provides information regarding the usage rates of different modes of transportation comparing the GRPC planning area with the nationwide usage rates. The data shows the following:

- The usage rate for people who drive alone is higher within the GRPC area than the Nationwide average
- The usage rate for public transportation is lower within the GRPC area than the Nationwide average
- The rate of people working from home is lower within the GRPC area than the Nationwide average

Anticipated & Changing Transportation Demands

There are many factors that impact trends in transportation, travel behavior, and revenue over time which include changing economic & population characteristics, energy regulations, environmental concerns, new technologies, and political transitions.

Population & Economics

The LRTP indicates the population and number of employees to increase by about three (3%) percent from 2022 to 2050. While population and employment estimates can be considered to assist in the planning of transportation needs, information regarding vehicle miles traveled (VMT) and vehicle hours traveled (VHT) are better benchmarks to evaluate future traffic trends. VMT is a benchmark that indicates the number of miles traveled on the area's roadway by all vehicles either utilizing a direct route between two points or an alternate route based on traffic congestion. An increase of VMT can be associated with population and employment growth, limited infrastructure improvements, and/or transportation policy changes. Based on the current transportation infrastructure and improvements included in the LRTP, and anticipated funding available, the VMT and VHT are estimated to increase 33% and 40%, respectively, between 2022 and 2050.

Demographics

Nationally, the population aged 65 or older will grow rapidly over the next 25 years. The suggestion is as the population gets older, there will be an increase in demand for alternatives to driving. For people with limited mobility or disabilities, this could increase the demand for public transportation.

Before the COVID pandemic, people younger than 65 were making fewer trips per day. Some of the reasons for this trend include working from home, online shopping, and less face-to-face socializing. If these changes in behaviors continue, major transportation projects requiring long-term planning may not be necessary. Instead, other traffic improvements such as intersection or additional turn lanes may meet the needs of the traveling public.

Another trend is more people are using ride-hailing services such as Uber, Lyft, etc. The long-term trend is that car ownership rates could decrease and will lead to an increase for investment in bicycle, pedestrian, public transit, and other mobility options.

Environmental Concerns

The LRTP recognizes that natural events such as flooding, high winds, and wildfires are more prevalent within this region compared to others in the State or nationally. Other impacts such as train derailments and hazardous waste incidents are also a challenge.

Energy Regulations

Electric and alternative fuel vehicles have become more prevalent in recent years. Some current estimates indicate that electric vehicles will make up nearly one-third of all cars in the United States by 2030. Electric and alternative fuel vehicles have the potential to reduce automobile related emissions. Also, cities will need to consider the infrastructure needs for vehicle charging stations. While electric vehicles are being promoted to reduce automobile related emissions, one concern is the reduction of money generated from the gas tax. Currently, the State of Mississippi uses the gas tax to fund construction, maintenance, and repair of State roads. Over the past couple of decades, social movements to increase fuel mileage and promote alternative fuels have resulted in a decrease in gas consumption. As alternative fuel vehicles become more popular, city leaders and policy makers should consider the economic impact of reduced fuel sales and find solutions to provide sustainable funding sources for improvements and maintenance of the transportation infrastructure regardless of the type of fuel sources used by vehicles.

New Technologies

Currently, technology is being developed for connected and autonomous vehicles (CAV) utilizing Intelligent Transportation System (ITS). Connected vehicles use communication technologies similar to wireless signal on cell phones to operate the vehicle and communicate with traffic signals, other wireless cars, other telemetry, etc. Autonomous vehicles will use on-board technology such as sensors to navigate traffic. Most new vehicles have many of these technologies such as adaptive cruise control, blind-spot detection, lane departure warning, etc. The potential timeline suggests CAVs could make up between 20% to 50% on the roadway in the next 10 to 20 years.

The potential transportation impacts due to the change to CAV are:

- In the long term, CAV technology is anticipated to reduce human error and improve overall traffic safety
- Current technology has developed focusing on vehicular traffic, but pedestrian and bicycle interaction with CAV is a major safety concern
- CAV could have the ability to improve overall traffic flow and reduce congestion by using alternate routes which may increase vehicle miles traveled
- CAV could receive and communicate historical and real-time travel data that could be used for transportation planning
- CAV could also be used to reduce the cost associated with public transit and freight

CAV technology could make longer commutes more appealing and increase the size of urban areas

The City can transition projects on the LRTP into construction projects by applying for the project to be included on the State Transportation Improvement Program (STIP) which assigns federal and local funding for the project and allows the project to move to the design phase, followed by the construction phase.

2.2 Previous and Current Traffic Studies & Plans and Bridge Reports

L RTP

The L RTP has identified capital and maintenance projects within the Gulf Coast region, including the City of Long Beach, that best serves the needs based on anticipated funding.

Roadway Capital & Maintenance Projects

Roadway capital and maintenance projects are separated into two categories:

- Prioritized & Fiscally Constrained Projects are projects that have been prioritized based on a cost-benefit analysis and the anticipated funding available. These projects include maintenance projects and roadway projects that reduce congestion for lesser costs, support non-motorized travel, increase safety, support economic development, and/or support freight movement. This category can also be used to perform traffic studies pertaining to safety, efficiency and accessibility.
- Visionary Projects are projects that are unfunded. These projects are included in case additional funding becomes available.

Below are lists of projects in the draft 2025 L RTP:

Prioritized & Fiscally Constrained Roadway Projects		
Type	Location	Limits
Roadway	Beatline Road	U.S. 90 to Johnson Road
Roadway	Cleveland Avenue	Klondyke Road to Railroad Steet
Roadway	Klondyke Road	Commission Road to 28 th Street
Intersection	Klondyke Road	at Commission Road
Intersection	28 th Street	at Klondyke Road

Roadway Visionary Project		
Type	Location	Limits
Roadway	E-W Corridor Phase VI	Beatline Road to Jeff Davis Avenue

- Regarding the Beatline Road project between U.S. Highway 90 to Johnson Road, MDOT initiated a Planning and Environmental Linkage (PEL) Study to identify the purpose and need for improvements within the Beatline Road/County Farm Road area and develop viable concepts for the long-term needs for this corridor. This corridor would provide access between I-10 and the City of Long Beach on the Mississippi Gulf Coast. Per the study, the future traffic demand and lack of connectivity are anticipated to cause mobility and safety issues to “unacceptable levels” prior to year 2040.

The study found Beatline Road is traveled by a high percentage of heavy vehicles. The roadway has narrow or no shoulders which creates a traffic safety issue for all vehicles, nut especially a roadway used by heavy vehicles. The report also mentions the lack of roadway connection between Beatline Road at Railroad Street has a connectivity issue limiting access between I-10 and U.S. Highway 90.

The study also examined the capacity of roadway and found the existing roadway is adequate, but under future traffic demands, the roadway capacity will not be adequate. In addition to roadway capacity, the study also analyzed intersections along Beatline Road. Based on the analysis, the intersection at 28th Street and Beatline Road under existing conditions is not adequate. Under future traffic demand, the analysis found the intersections of Beatline Road and Daugherty Road will not be adequate based on future traffic demands. Multiple intersections along White Harbor Road from Railroad Street to U.S.

Highway 90 also will not be adequate based on future traffic demands. The study also found crash rates along Beatline Road at 28th Street, Daugherty Road, Pineville Road, and Johnson Road and along White Harbor Road at Railroad Street and 2nd Street were higher than the average crash rate for intersections.

The study identified the additional capacity for future traffic demand, need for pedestrian and/bicycle facilities, roadway connectivity, and improved safety as the needs for future improvements along the Beatline Road corridor. The improvements along this corridor would also serve as a hurricane evacuation route between I-10 and U.S. Highway 90.

The recommendation of the study was to widen Beatline Road from a two-lane roadway to a four-lane divided roadway with raised median, ten-foot multi-use pathway on both sides of the road, and improved intersections at Johnson Road, Pineville Road, Daugherty Road and 28th Street.

Since this project includes coordination with other government entities, the City's current stance is to not pursue with this project and focus the City's resources on improvements along the Klondyke Road and Canal Road corridor.

Biking and Walking Projects

The 2025 LRTP encourages expanding the biking and walking infrastructure to promote healthy activity, reduce traffic and congestion, and add another mode of travel to the transportation system. As previously mentioned, the public comments expressed an interest in more bicycle and pedestrian infrastructure. The 2020 LRTP included sidewalks along Pineville Road which are currently under design, and bicycle and sidewalks along Beatline Road.

Public Transit

Regarding transit related projects, the LRTP references the Coast Transit Development Plan 2016-2040. This plan included extending the Beachcomber Route from Gulfport to Bay St. Louis. CTA already has a comfort station located at the Long Beach Harbor.

Previous Traffic Analysis on behalf of the City

In addition to the LRTP, the City has received traffic studies for specific areas within the city where developments were planned and could have a significant impact on the transportation system. Below are the traffic studies and a summary of their findings. Copies of these traffic studies are available at the City Engineer's Office.

Traffic Analysis of September 2021

In 2021, a traffic analysis was prepared for the City that analyzed the intersections at:

- Jeff Davis Avenue and Railroad Street
- Railroad Street and Klondyke Road
- Klondyke Road and Pineville Road

Below is a summary of the analysis, recommendations, and current solutions that have been implemented, if any, since the report:

- Jeff Davis Avenue and Railroad Street Intersection

Analysis:

Traffic volumes, crash data and other data related to railroad activity were collected and analyzed to determine the possible need for traffic signalization and widening of the westbound approach to the

intersection. Based on the traffic volume collected, the analysis determined a traffic signal could be considered at this intersection. Data related to railroad activity also provided justification of a traffic signal.

Recommendations:

Widening the westbound approach along Railroad Street to provide a combination thru/tight turn lane and Installing traffic and pedestrian signals.

Current Solutions:

In the time since this study was complete, the City has installed flashing stop signs which are starting to become more prevalent in lieu of traffic signals based on current traffic observations.

- Railroad Street and Klondyke Road Intersection

Analysis:

Based on the traffic volume data collected the existing traffic control is adequate. The crash data showed this intersection has the highest volume of crashes with rear-end crashes accounting for 62% of the total crashes which are common with traffic controlled intersections.

Recommendations

Construct a roundabout or signalized intersection

Current Solutions:

Similar to the Jeff Davis Avenue and Railroad Street intersection, the City has installed flashing stop signs at the intersection based on current traffic observations. If traffic conditions do not improve, a roundabout or signalized intersection could be considered in the future.

- Klondyke Road, Pineville Road and Russell Street Intersection

Analysis:

After analyzing the traffic volume and crash data, traffic signalization was recommended. This intersection had the highest number of angle crashes compared to the other intersections. Side crash incidents are collisions where the front of one vehicle strikes the side of another vehicle.

Recommendations:

Recommendations proposed were to Install traffic and pedestrian signals and Re-align intersection to create a typical T-Intersection.

Traffic Analysis of April 2022

In 2022, a traffic analysis was prepared for the City that analyzed the traffic effects for upcoming developments throughout the City. The upcoming developments included Castine Pointe, The Grove, Magnolia Run, Mitchell Road Subdivision/The Enclave, Summer Grove & Bear Point. The study area included the following intersections:

- Commission Road/Daugherty Road
- Pineville Road/Beatline Road
- Pineville Road/Mitchell Road
- Pineville Road/Daugherty Road
- Klondyke Road/Cleveland Avenue/Todd Terrace Road
- Highway 90/Cleveland Avenue

Roadway segments evaluated included:

Roadway	From:	To:
Pineville Road	Espy Avenue	Beatline Road
Commission Road	Daugherty Road	E. City Limits
28 th Street	Beatline Road	E. City Limits
Klondyke Road	28 th Street	Cleveland Avenue
Cleveland Avenue	Klondyke Road	US Hwy 90

In general, the analysis recommended construction of a multi-use path or sidewalks along 28th Street, Commission Road, Pineville Road, Cleveland Avenue and Klondyke Road. In addition to pedestrian improvements, the analysis found many of the vehicular incidents along 28th Street, Commission Road, Pineville Road, Cleveland Avenue and Klondyke Road involved running off the road or sideswipe type incidents. These crashes are attributed to narrow travel lanes, lack of shoulders, and distracted driving trends. Typical improvements such as providing center turn lane, curb/gutter or paved shoulders would help reduce the frequency of run off and sideswipe incidents.

Below are recommendations for each roadway segment included in the study.

Pineville Road

As mentioned above, construction of a multi-use path or sidewalks from A Avenue east to Beatline Road is recommended to provide safe access for pedestrians.

The other recommendation is construction of a signalized intersection or roundabout at the intersection of Pineville Road and Beatline Road. If a signalized intersection is planned, a left turn lanes will be needed on each approach to the intersection. If a roundabout is planned, the left turn lanes would not be needed.

Other recommendations include westbound left turn lanes at the entrance to the Bear Point subdivision, Beatline Road intersection, and Mitchell Road intersection. For the Pineville Road/Daugherty Road intersection, eastbound left turn and westbound right turn lanes are recommended.

Commission Road

The traffic study recommends installing curb & gutter or paved shoulders to reduce the cars running off the side of the road and sideswipe incidents. The construction of curb & gutter or paved shoulders is also essential to protect pedestrians since a multi-use path or sidewalk is also recommended. The analysis also recommends adding a left turn lane at Castine Point Boulevard intersection and adding pedestrian signalization at the intersection of Commission Road and Klondyke Road.

28th Street

In addition to the construction of a multi-use path or sidewalks mentioned above, the roadway should be widened to a 3-lane roadway with a center turn lane from Beatline Road east to Klondyke Road.

Klondyke Road

A multi-use path or sidewalks is proposed to connect to other proposed pedestrian facilities along 28th Street and Cleveland Avenue. Klondyke Road from Cleveland Avenue north to Addison Boulevard is recommended to be widened to a 3-lane roadway section with a center turn lane. Another recommendation is to widen the two driveways at the Long Beach Ball Fields to provide left turn lanes onto Klondyke Road.

Cleveland Avenue

Cleveland Avenue provides access to Long Beach Middle School & High School and the EMERGE Center. The EMERGE Center is a training center to prepare blind people to live independently, which includes how to travel along public pedestrian access routes such as multi-use paths and sidewalks. Cleveland Avenue is recommended to be widened to a 3-lane roadway from Allen Road south to Railroad Street. In addition to the widening, left turn lanes at the High School and Middle School entrances and a right turn lane at the High School entrance are recommended. A multi-use path is recommended due to the pedestrian and bicycle traffic traveling to the schools and the EMERGE Center. The analysis also recommended the construction of a roundabout at the intersection of Cleveland Avenue and Klondyke Road and signalized intersection or roundabout intersection at Cleveland Avenue and Railroad Street.

Bridge Report Findings

The Mississippi Office of State Aid Road Construction conducts routine bridge inspections every 2 years for every bridge within the City of Long Beach. The last bridge inspection reports were completed in April of 2024. Below is a summary of the findings:

Daugherty Road Bridge over West Creek

There were no major deficiencies noted. The inspection recommended routine maintenance which includes cleaning the bridge deck joints and remove overgrown vegetation.

Daugherty Road Bridge over Canal No. 2

The report recommended replacing damaged bridge rail post. Routine maintenance includes cleaning the bridge span joints on the bridge deck, clean and seal all spalls & exposed rebar related to the superstructure, place fill material in eroded areas, refill gabion rock baskets and seal the baskets around the substructure, fill a minor sinkhole behind the northwest wingwall, remove overgrown vegetation at the bridge ends and remove drift and debris from the channel.

Beatline Road Bridge over Canal No. 2

There were no major deficiencies noted. Routine maintenance includes cleaning the joints of the deck, clean and seal all spalls and exposed rebar related to the superstructure, grade the approach shoulder and repair damaged guardrail at the bridge ends, and remove beaver dams and grassy obstructions within the channel.

Klondyke Road Bridge over Canal No. 1

There were no major deficiencies noted. Routine maintenance includes cleaning the bridge deck, place erosion control to reduce scouring around the substructure, place asphalt in areas where settlement is occurring and place fill in a sink hole at the northeast guard rail at the bridge ends, and place erosion control measures around two drain culverts within the channel to reduce erosion and scouring.

Beatline Road Bridge over Canal No. 1

There were no major deficiencies noted. Routine maintenance includes clean, fill, and seal all spalls and areas of section loss on the bridge deck and superstructure, and place asphalt on the north approach where settlement has occurred.

2.3 Proposed Improvements

Based on the information from the previous traffic studies, below are projects which are currently under design and have funding allocated:

- Pineville Road Sidewalk Improvements Phase II from Clower Avenue to Five Points intersection
This purpose of this project is to provide a pedestrian link from residential areas to the commercial developments and City's downtown area. The City has decided to place the project on hold.
- Pineville Road Sidewalk Improvements Phase III from Five Points intersection to Railroad Street
This project is a continuation of Phase II to provide a pedestrian link from residential areas to the commercial developments and City's downtown area. The City has also decided to place this project on hold.
- Intersection Improvements at Klondyke Road and 28th Street
The purpose of the project is to increase capacity (allow more traffic to pass through the intersection) and reduce travel time at the intersection. The City has decided to place this project on hold while the City seeks additional improvements along the Klondyke Road and 28th Street corridors.
- Intersection improvements at Klondyke Road and Commission Road
Similar to the intersection improvements at Klondyke Road and 28th Street, the purpose of the project is to increase capacity and reduce travel time at the intersection. This project is also on hold until proposed improvements along Klondyke Road have been determined.
- Intersection improvements at Railroad Street and Jeff Davis Avenue
The purpose of the project is to increase capacity, reduce travel time, and improve safety at the intersection.

Based on the information from the previous traffic studies, below are recommended projects from the traffic studies and consultation with City for consideration by the City to address safety, roadway capacity improvements, and bicycle/pedestrian access.

Proposed Projects					
Project	Roadway/ Intersection	Limits	Project Description	Length (mi.)	Estimated Project Cost
Klondyke Road/Pineville Road Intersection Improvements	Klondyke Road/Pineville Road	Intersection	Realign the intersection approaches and install traffic/pedestrian signals	-	\$1,402,443.40
28th Street Widening	28th Street	Beatline Road to Eastern City Limits	Widen to 3-Lane Roadway w/ Bicycle/Pedestrian Pathway	2.5	\$ 21,490,361.24
Cleveland Avenue Widening & Intersection Improvements	Cleveland Avenue	Klondyke Road to Railroad Street	Widen to 3-Lane Roadway w/ Center Turn Lane and right-turn lanes at school entrances & Bicycle/Pedestrian Pathway	0.86	\$5,317,782.00
Commission Road/Klondyke Road Intersection Improvements	Commission Road	Klondyke Road	Intersection Improvements w/Pedestrian Pathway Improvements	-	\$ 1,622,871.00
Commission Road Bicycle/Pedestrian Pathway	Commission Road	Daugherty Road to Eastern City Limits	Install curbing or paved shoulder w/ Bicycle/Pedestrian Pathway	1.00	\$ 3,350,925.38
Klondyke Road Widening	Klondyke Road	Cleveland Avenue to 28th Street	Widen to 3-Lane Roadway, add turn lanes at the driveways for the ball field, and install Bicycle/Pedestrian Pathway	1.01	\$ 12,516,714.25
Pineville Road/Beatline Road Intersection improvements	Pineville Road	Beatline Road	Construct a Roundabout Intersection	-	\$ 3,300,000.00

Due to construction cost, utility coordination, widening of roadways and funding available, the roadway projects can be phased over years to allow the City to implement these projects over time.

2.4 Planning for Future Projects

As the City considers the projects listed above and begins planning for their implementation, there are some issues to be considered based on recent experience with projects of similar scope.

For functionally classified roadways funded by the Federal Highway Administration (FHWA) via MDOT, the width of the roadway and right-of-way is based on the dimensions established by MDOT in the MDOT Roadway Design Manual. Appendix A includes typical roadway sections based on the types of functional classified roads within the City limits. If funding from another source is used, the City has more flexibility over roadway and right-of-way widths. In addition to the minimum roadway dimensions required by MDOT, the City should also consult with utility companies to determine if additional right-of-way is needed.

Over the past 20 years, it has become common practice for utility companies, specifically communication companies, to install new infrastructure underground. When this practice started, there were no standards in place to inventory and locate these lines. In the last several years, despite best efforts to locate these lines prior to construction, cities and counties in the area have experienced additional construction costs and construction delays to resolve unforeseen utility conflicts during construction. The City should review franchise agreements with these utility companies to determine if the remedies specified in the agreements are sufficient, require utility companies to submit permits to the City showing the proposed utility improvements and allow the City to have a chance to review prior to the installation, and require utility companies to provide accurate as-built information showing location and depth of utility lines.

Section 3: ANNUAL TRANSPORTATION MAINTENANCE PLAN & FUNDING

The City's maintenance of its transportation systems has historically involved the use of City funds (either budgeted directly by the Board of Aldermen or in special funds such as the Internet Sales Tax/Road & Bridge fund). Such projects have occasionally been supplemented with goods and services performed under direction of the Harrison County Supervisor over the Long Beach area. The overwhelming majority of such maintenance projects has occurred via asphalt overlays and repairs. There is also significant overlap in "maintenance" via improvement-styled projects when the City receives funding for transportation improvements, often funded through MDOT's LPA project process as detailed elsewhere herein. These improvement projects include intersection improvements, overlays and other roadway improvements, bridge replacements, sidewalk construction, and even the construction of recreational trails.

The City bids an annual term bid for asphalt installation, allowing flexibility in issuance of work orders for time-efficient paving maintenance. The term bid includes three tiers for pricing: patching, small, and large. Generally, the smaller the scope of work, the more costly the pricing tiers.

In 2018, the City funded a "Road Maintenance and Improvements Plan" performed by Southern Mississippi Planning & Development District (SMPDD). The City's portion of the study was part of a larger County-wide study performed by SMPDD for the Harrison County Board of Supervisors. That study was designed to provide a then-current estimate of the "asphalt age" of the City's roads, which are majority asphalt. The study's deliverable is a web portal showing a map with "street view" styled videos and pictures, along with an "asphalt age" rating of incremental segments of each street and includes an approximation of SMPDD's estimate to repair the road per their recommendations. SMPDD recommends two methods of road improvement and maintenance: traditional repair or rehabilitation. Repair is the typical "mill and fill" or asphalt overlay methodology. Rehabilitation proposes to use more modern materials to perform roadway maintenance, such as crack sealing, fog sealing, microsurfacing, etc. Rehabilitation projects can be very effective per mile, assuming the project size is appropriate. After several attempts over the course of the last 7 years, the City has been unable to successfully procure an economically viable rehabilitation contractor for its somewhat small scale projects. Therefore, maintenance of City streets has exclusively been performed using traditional repair methods. Since 2018, the City has spent approximately \$3 million using its asphalt term bid contractor to perform maintenance of City streets and has repaired many of its oldest and worst conditioned asphalt roads.

In or around August 2025, the City performed a "ride analysis" of all roads which hadn't been recently repaired or which weren't currently designated. That analysis combined four factors to determine a priority for road overlays: the "asphalt age" rating from the SMPDD study, a "rideability" analysis approximating the International Roughness Index (IRI), a traffic volume/road function rating, and a cost estimate, all of which were combined to create a cost-benefit factor/priority ranking. This ranking information was offered in summary form at the City meeting of September 2, 2025. For the near future, the SMPDD study and the priority ranking should be sufficient to guide City decisions regarding continued City maintenance of its roads subject to funding availability.

Section 4: CAPTIAL IMPROVEMENT FUNDING & INVESTMENT

4.1 Federal Highway Administration Funding

Surface Transportation Program (STP) and Transportation Alternatives (TA) Projects

The City has primarily used funding from the FHWA through MDOT for transportation improvements. The funding for these projects is a Federal-aid reimbursement program which is usually an 80/20 split with the Federal share being 80% and the Local Public Agency (LPA) share being 20%. The funds can be used for design, right-of-way acquisition, and construction. Using this source of funding does require the project design to conform to MDOT requirements. This funding is typically used for the following types of projects:

- Intersection improvements
- Roadway widening
- Roadway resurfacing or rehabilitation
- Pedestrian and bicycle access routes

Earmarks

Earmark funds is funding associated with a specific project through legislation. The federal funding may vary for projects using this type of funding.

Recreational Trails Program (RTP)

RTP funding is available through FHWA and is administered by the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP). Funding is distributed as follows:

- Motorized Trails – 30% (there is no cap on the grant award for these projects)
- Non-motorized – 30% (minimum grant award is \$8,000.00 and the maximum is \$120,000.00)
- Diversified (combination of motorized & non-motorized trails) – 40%

The funding available varies from year to year. The types of activities eligible for this funding include:

- Maintenance & restoration of existing trails,
- Development and rehabilitation of trailside and trailhead facilities and trial linkages,
- Construction of new trails by persons with disabilities,

The funding cannot be used for:

- Property condemnation (eminent domain),
- Facilitating motorized access on otherwise non-motorized trails.
- Roadside improvements such as pedestrian/bicycle access routes

4.2 Community Development Block Grant (CDBG) Funding

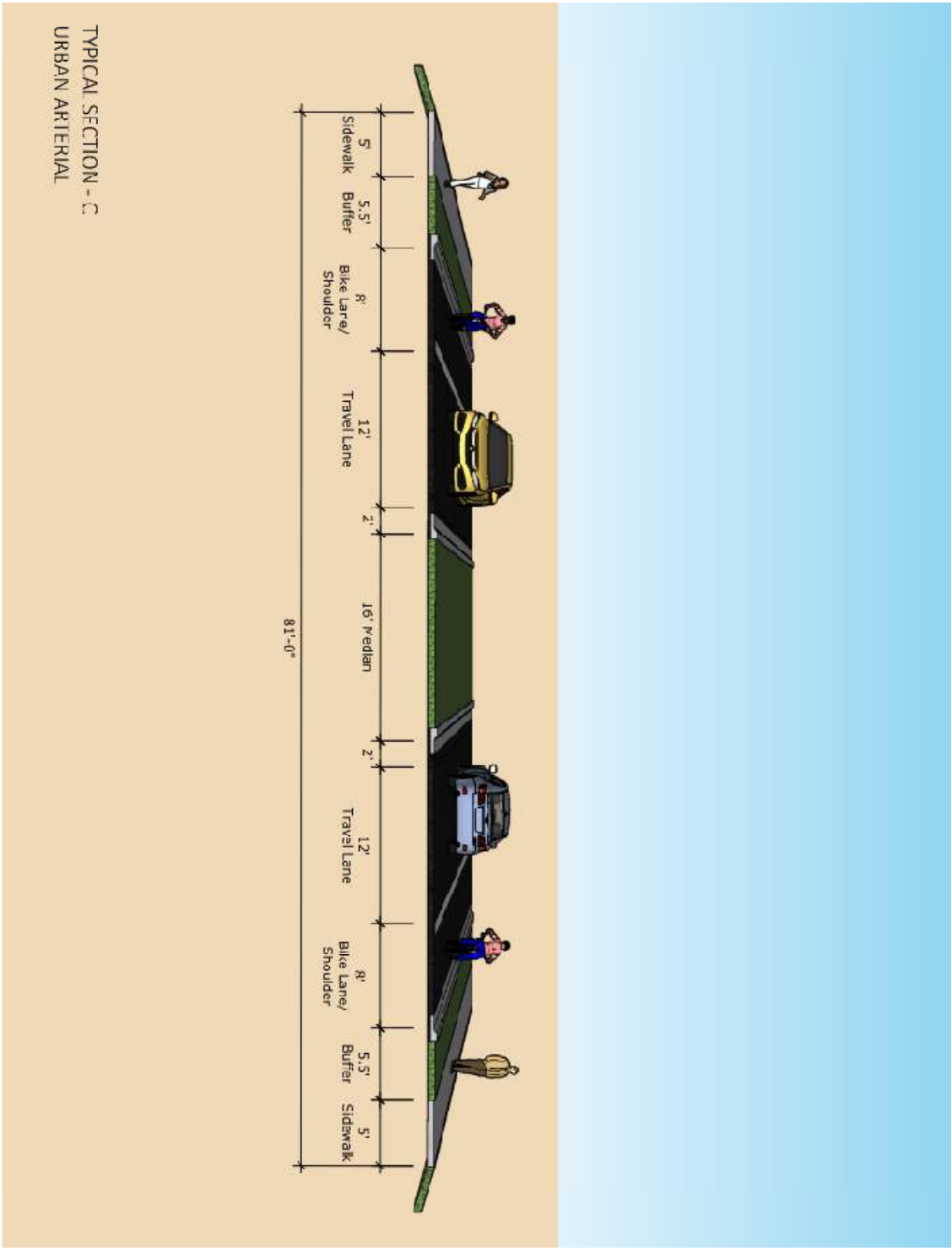
CDBG funds are eligible to cities based on the percentage of low and moderate income people and vary from project to project. Unlike FHWA projects, MDOT design requirements do not need to conform to MDOT requirements. CDBG funding may be used, but is not limited to the following activities:

- Acquisition of real property,
- Construction of public facilities and improvements such as streets
- Activities relating to energy conservation and renewable energy resources

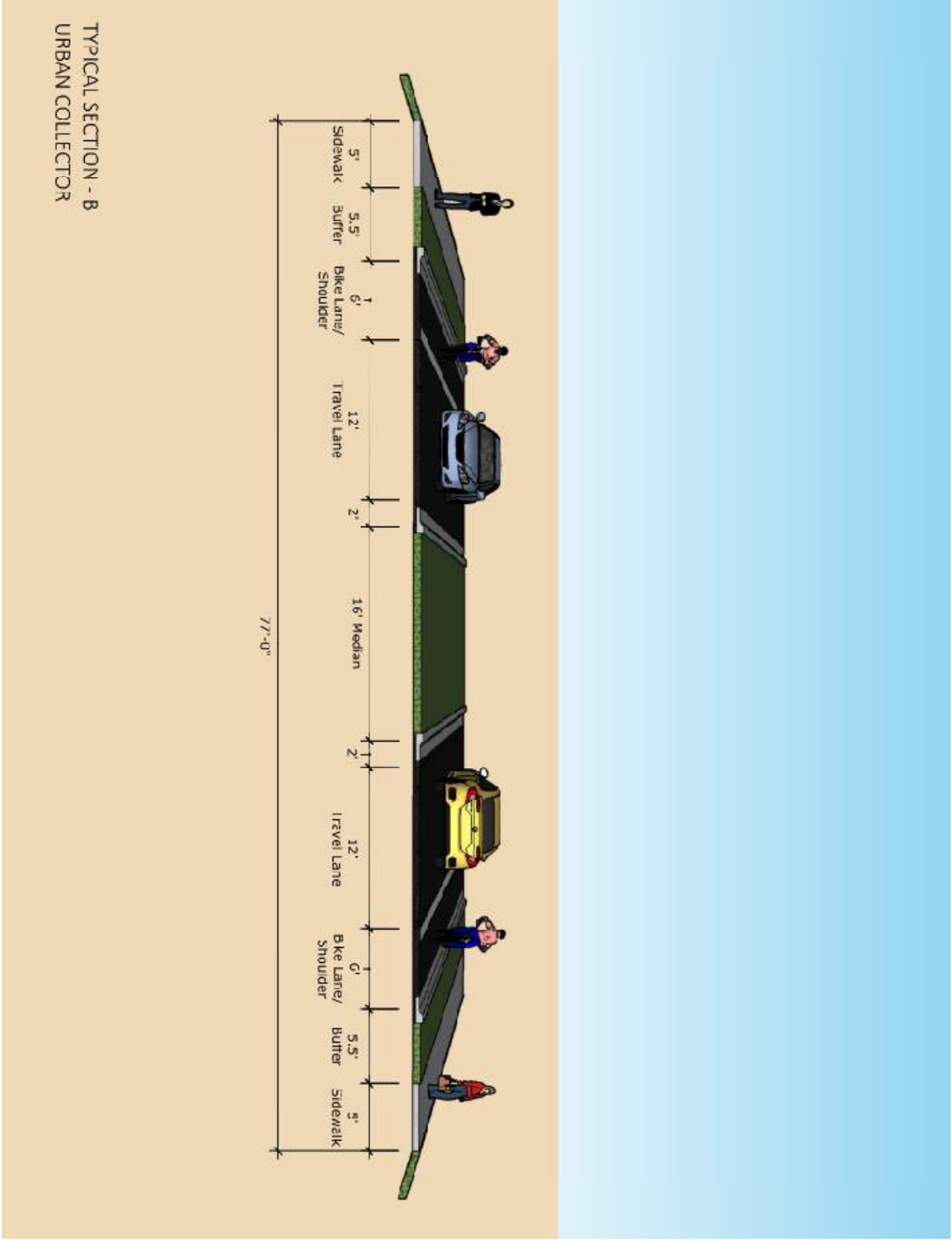
Each activity must meet one of the following national objectives for the program:

- Benefit low and moderate income persons,
- Prevention of slums or blight, or
- Address community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community for which other funding is not available.

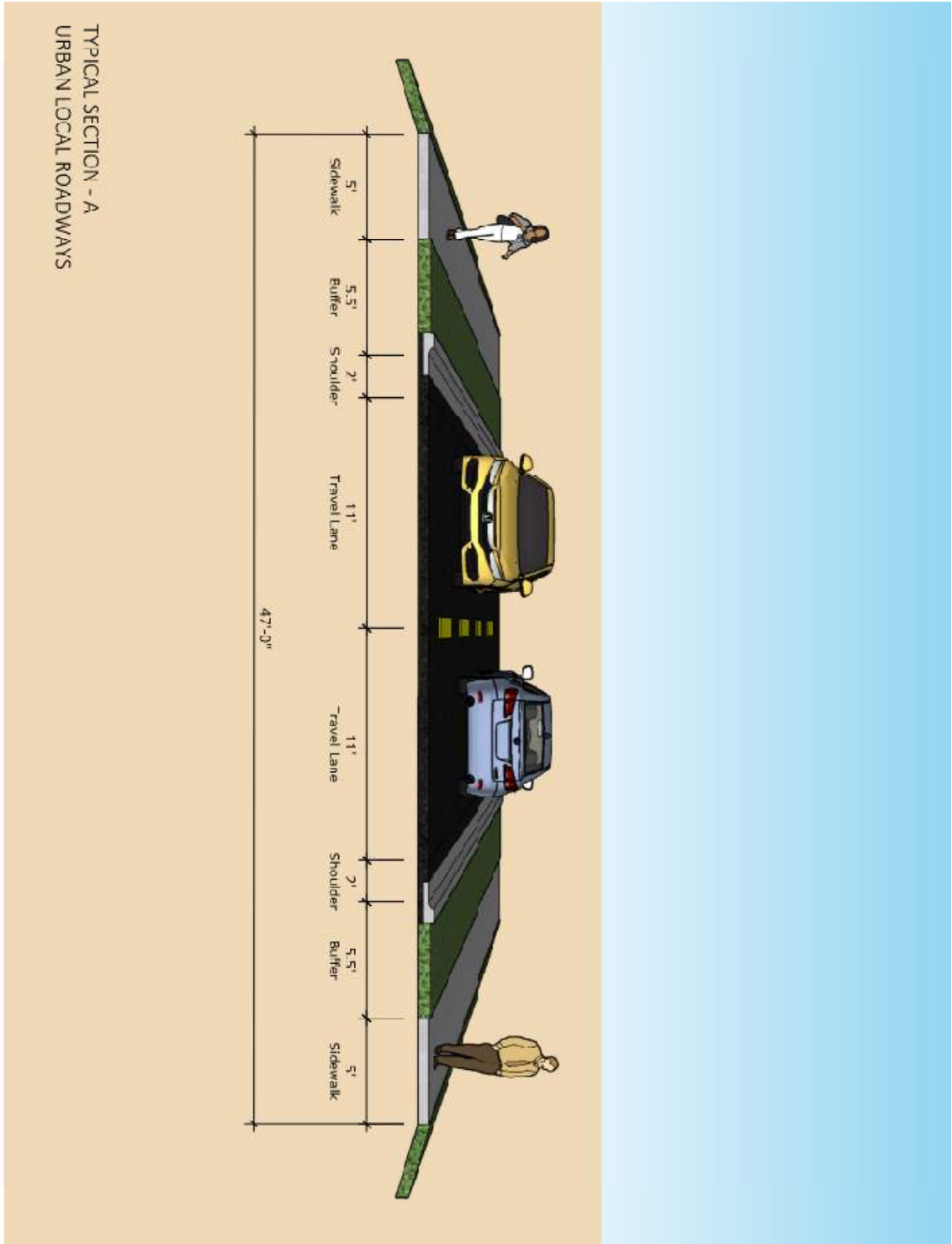
Appendix A Typical Sections



TYPICAL SECTION - C
URBAN ARTERIAL

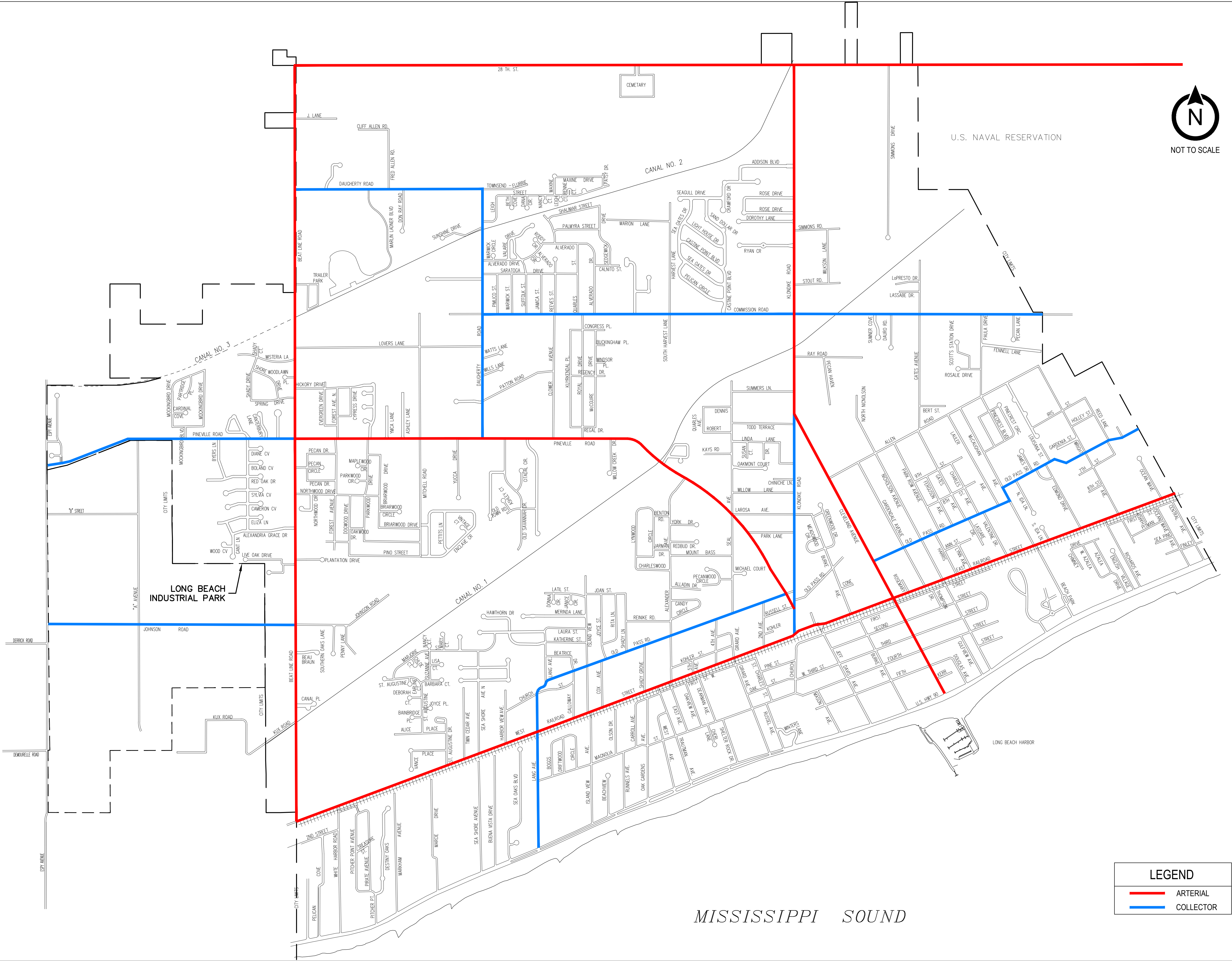


TYPICAL SECTION - B
URBAN COLLECTOR



Appendix B

Roadway Functional Classification



LEGEND

ARTERIAL

COLLECTOR

CITY OF LONG BEACH

TRANSPORTATION MASTER PLAN

PROJECT NO: 1252

DATE: 11/19/25

DRAWN BY: mbt

CHECKED BY: gjm

FUNCTIONAL CLASSIFIED ROADWAYS

SHEET NUMBER

NO:

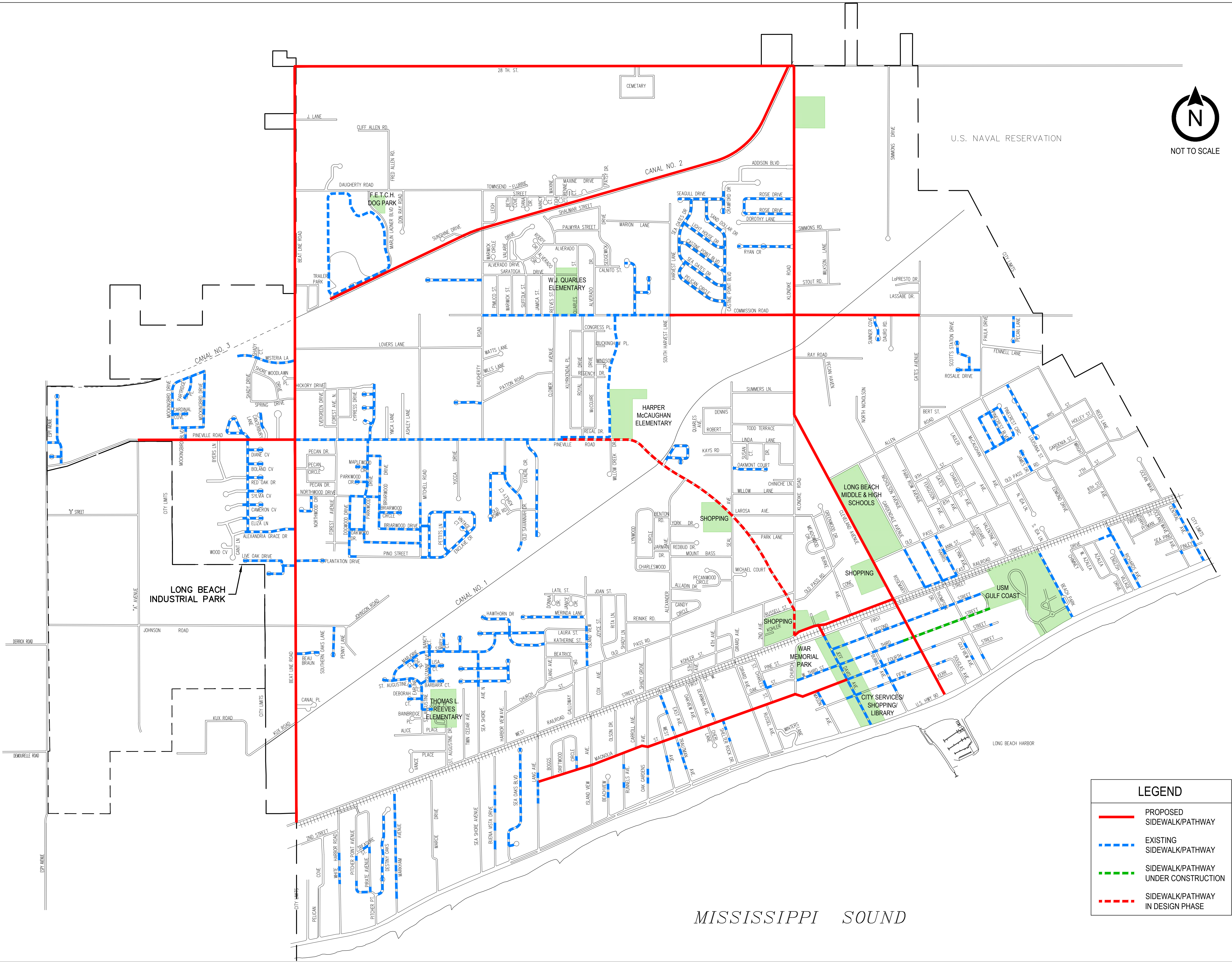
DATE:

REVISIONS DESCRIPTION:

BY

Appendix C

Pedestrian Map



CITY OF LONG BEACH

TRANSPORTATION MASTER PLAN

PROJECT NO: 1252

DATE: 11/19/25

DRAWN BY: mbt

CHECKED BY: gjm

PEDESTRIAN ACCESS EXHIBIT

SHEET NUMBER

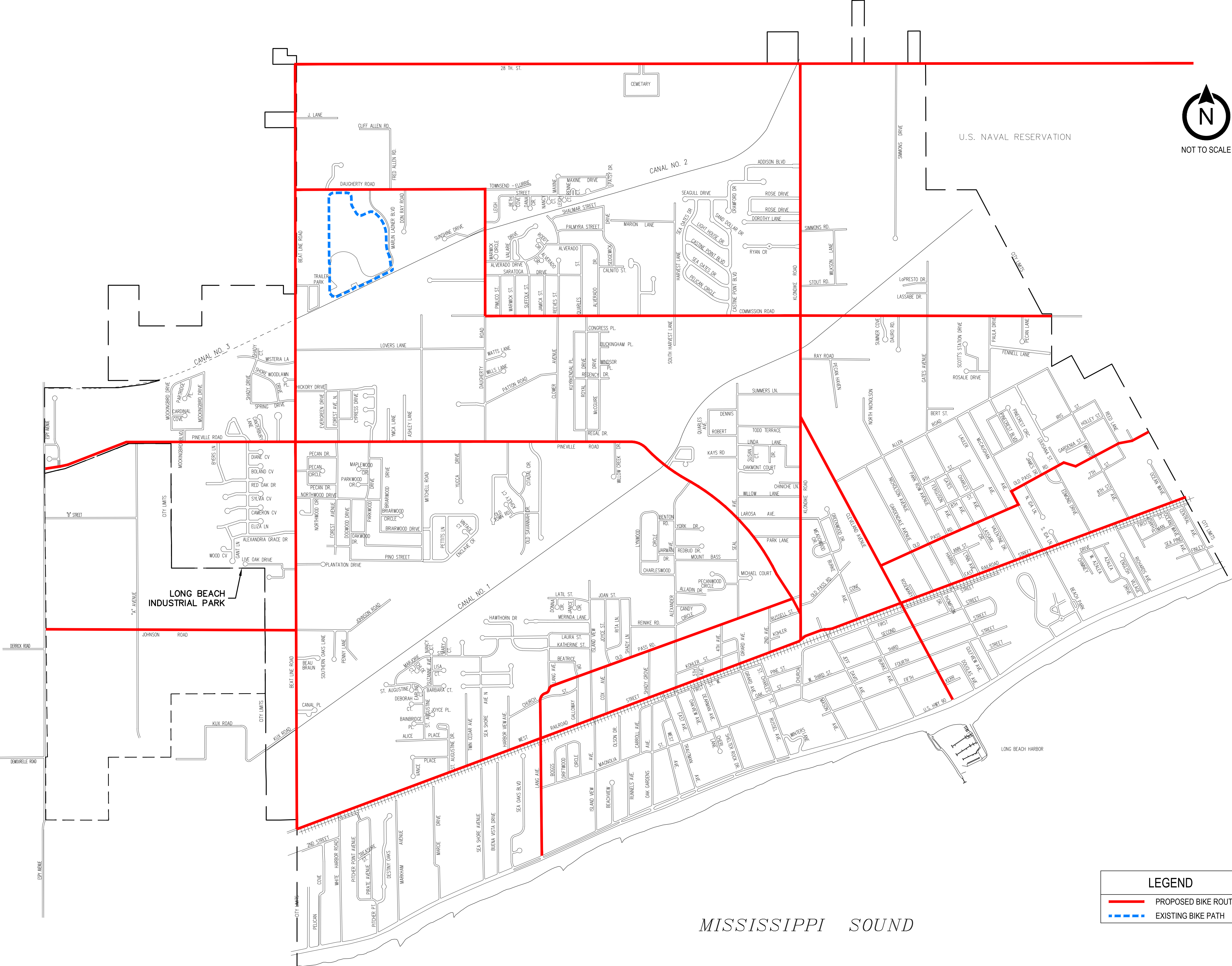
NO:

DATE:

REVISIONS DESCRIPTION:

BY

Appendix D Bicycle Map



CITY OF LONG BEACH

TRANSPORTATION MASTER PLAN



PROJECT NO.: 1252			CITY OF LONG BEACH TRANSPORTATION MASTER PLAN		NO:	DATE:	REVISIONS DESCRIPTION:	BY
DATE:	11/19/25							
DRAWN BY:	lmbt							
CHECKED BY:	gjin							
SHEET NUMBER		BICYCLE EXHIBIT						