

June 19, 2020

Gulf Regional Planning Commission
1635 Popp's Ferry Road, Suite G
Biloxi, MS 39532

Reference: Statement of Qualifications to Provide Traffic Studies

Dear Mr. Yarrow:

Our Neel-Schaffer team has extensive traffic engineering experience on the Mississippi Gulf Coast that sets us apart from other Engineering firms. Our lead traffic engineer is Jonathan Kiser, PE, PTOE, PTP. Mr. Kiser joined Neel-Schaffer in 2000 and has over 27 years of experience as a traffic/ transportation and civil engineer. He provides support on a wide range of transportation planning and traffic engineering projects. He has worked closely with many of the municipal, county and state agencies in the three Coastal counties. He has conducted more than 20 traffic studies on school sites, from elementary to college campuses, and done hundreds of traffic/planning studies along the Gulf Coast. He spent the majority of his time working from our Biloxi office from 2005-2009, assisting with the Hurricane Katrina recovery and the redevelopment of our Coastal communities.

Mr. Kiser has extensive experience in traffic studies and his expertise in safety studies, pedestrian circulation, ADA design and traffic engineering makes him highly qualified for this particular scope of services. Mr. Kiser regularly hosts public meetings to get input from local officials and the public regarding projects. He conducts field audits/inventory on projects to help identify circulation issues, pedestrian needs, safety deficiencies, compliance with MUTCD standards/ADA standards, and documents existing volumes. Our Neel-Schaffer team uses video cameras to record the intersection(s)/roadway(s)/campus for the analysis period (typically 13 hours of data) and then processes the video to get vehicular turning movement counts, vehicular classification information, and pedestrian/bicycle movements.

Jonathan's experience includes site impact studies, safety studies, speed studies, pedestrian circulation studies, roadway design, public involvement, traffic signal coordination, signing and striping plans, and traffic control plans for road construction. He is certified with MDOT for preparation of work zone traffic control plans. Additionally, he provides ADA training company wide and is a leader within our firm on multi-use trail initiatives.

Mark Sorrell, P.E., PTOE, is a Traffic Engineer who works with Mr. Kiser on traffic/planning studies. Mr. Sorrell has 14 years of experience and works in our Jackson (MS) office. Alex Davis is an Engineer Intern in our Biloxi office who provides support on numerous traffic/planning studies.

I have been personally involved in reviewing many traffic studies and designs of transportation facilities in and around school zones. With our expertise and large local staff of qualified engineers and technicians you can be assured that Neel-Schaffer has the capacity and that Mr. Kiser and his team have the availability and support they need to complete assignments in a timely manner. Our team can assist you with anything from small work assignments/questions, to major corridor studies.

Thank you for considering Neel-Schaffer. If you have questions or need additional information about our team, please let me know.

Sincerely,
NEEL-SCHAFFER, Inc.



Steve Twedt, PE
Senior Vice President/South Mississippi Area Manager



Qualifications and Experience | Who We Are

Neel-Schaffer is a multi-disciplined engineering, planning and construction management firm that was founded in 1983 and today is one of the largest private, employee-owned firms in the South, with 36 offices across nine states.

Based in Jackson, we have 15 other Mississippi offices, including four on the Gulf Coast. We also operate offices in Alabama, Florida, Georgia, Kentucky, Louisiana, South Carolina, Tennessee and Texas.

Our core disciplines include:

Transportation: *Roads & Highways, Transportation Planning, Traffic, Aviation, Bicycle & Pedestrian Facilities, Bridges, Lighting, Maritime, Railroad, and Signage*

Water: *Water Resources, Hydraulics & Hydrology, Coastal Science & Engineering, Storm Water Management, Wastewater Treatment & Collection, Water Treatment & Distribution*

Civil/Site: *Site Development, Electrical Engineering, Landscape Architecture, Recreational, Structural, Telecommunications*

Environmental Services: *Brownfield Assessment & Redevelopment, Environmental Permitting & Compliance,*

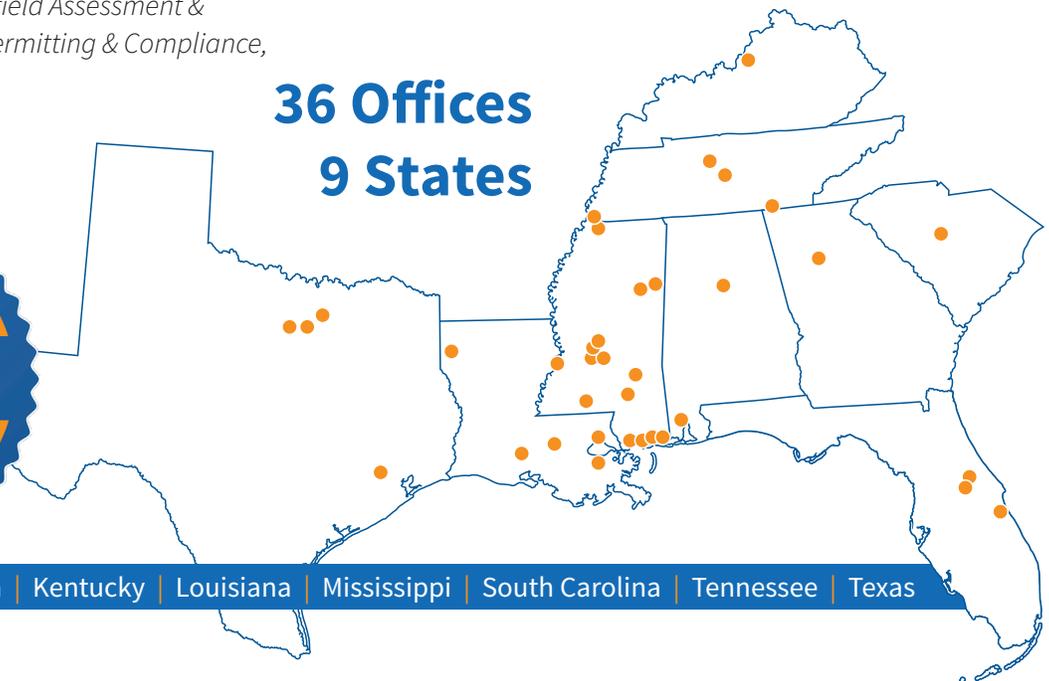
Natural Resources & NEPA Compliance, Phase I & II Environmental Site Assessments, Solid Waste, Underground/Aboveground Storage Tank Management

Support Services: *Construction Engineering & Inspection, Emergency Management, Geotechnical Engineering, Surveying, Urban Planning*

Company founders Hibbett Neel and Gorman Schaffer were committed to building a successful firm with a philosophy of improving the quality of life through service to the community. This belief, coupled with a desire to provide the finest engineering expertise, has helped to set Neel-Schaffer apart and is the underlying strength of the company today.

The firm's corporate structure emphasizes local service, allowing our employees to maintain deeply local connections with clients in the communities we serve, while having the resources of a much larger regional firm at their fingertips. This allows us to provide a full-service approach to program development, design, planning, and construction management.

36 Offices 9 States



Alabama | Florida | Georgia | Kentucky | Louisiana | Mississippi | South Carolina | Tennessee | Texas



Qualifications and Experience | Expertise

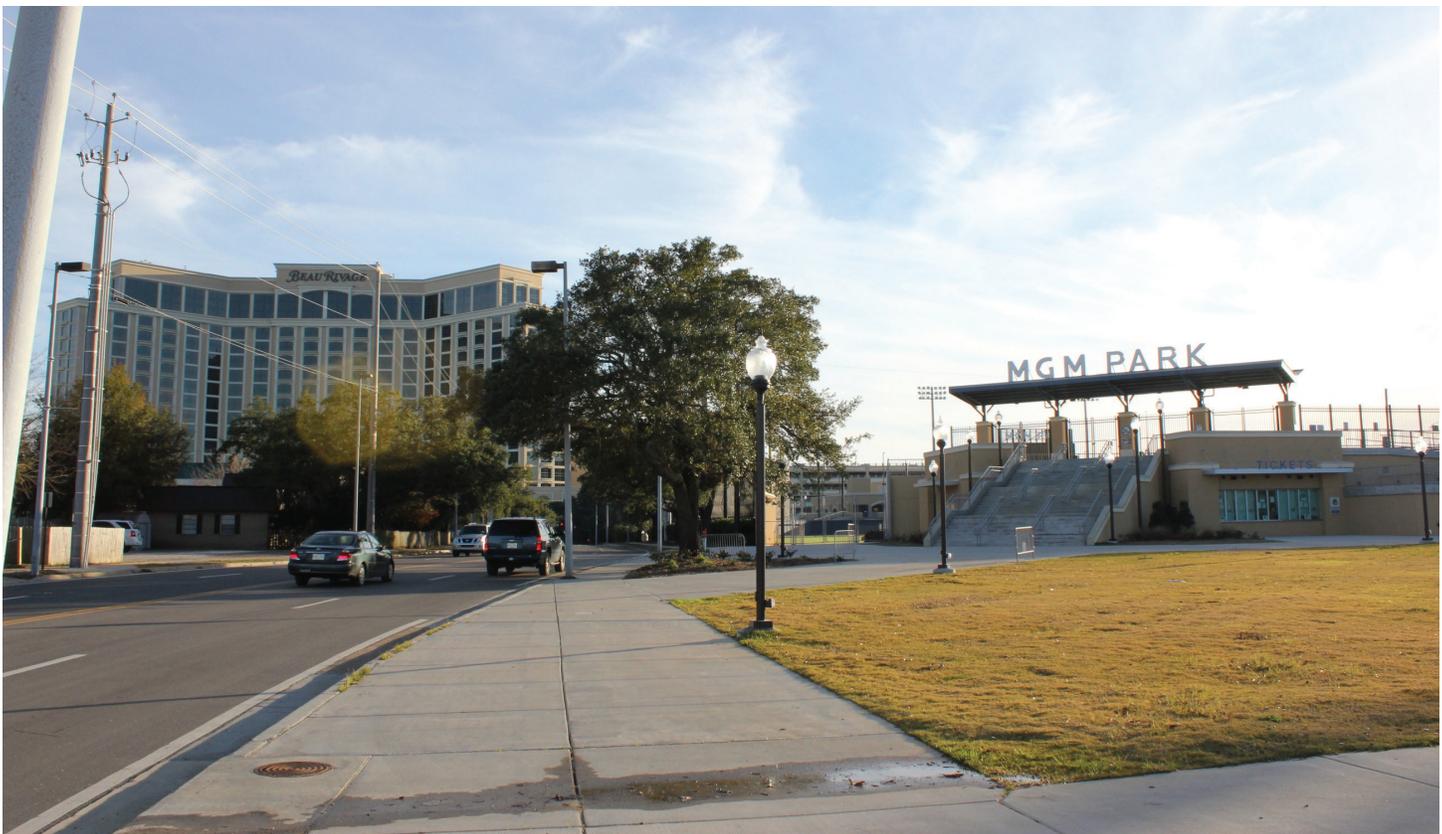
We have Specialty Expertise in many areas as it relates to school systems. We can provide Multi-Modal Transportation and Transit Planning, American with Disabilities Act Compliance, Bike/Ped Safety and Circulation Studies, and Recreation Facility Design. Our firm is organized around regional design centers such as the Biloxi office, which serves South Mississippi. This office is supported by offices throughout the state, strategically located to serve the communities where we live, work, and play. This business model allows us to provide local service and support projects that impact the community with support from a multi-disciplined team able to assist with larger, more complex projects.

The Gulf Regional Planning Commission (GRPC) contract for professional traffic engineering services involves a diverse range of projects. This section presents our similar project experience with schools in Mississippi, many within the MPO area.

These projects include:

- Traffic Studies, Roadway, Parking, Drainage, and Lighting
- Sidewalks, Safe Routes to School, Bicycle and Pedestrian Safety
- Site Development and Buildings (Library, Recreation, Administrative, Classroom, Maintenance)

The project profiles on the following pages illustrate our range of experience.



Biloxi MGM Park, Biloxi, MS



NCBC Access & Mobility Study, Gulfport, MS

Neel-Schaffer performed a traffic analysis under contract with the GRPC for the movement of military traffic to/from the Naval Construction Battalion Center (NCBC) in Gulfport. The project site is located south of I-10, west of US 49, and north of US 90. The analysis was prepared to assess the transportation needs of the existing NCBC facility as it relates to access and mobility for the Base.

The purpose of the analysis was to evaluate the existing/future roadways and intersections adjacent to the base that serve as the primary transportation routes for military traffic traveling to/from military destinations. For this analysis, these military destinations included Camp Shelby in Forrest County to the north and the Port of Gulfport to the south. Traffic impacts related to flooding of Canal Road and congestion along US 49 affect the traffic circulation of the base traffic to/from the north. The use of 30th Avenue to/from the port to the south is the primary truck route to the Port of Gulfport. The trip generation of the existing NCBC site was quantified through traffic counts conducted at the existing gates and at the adjacent roadways and intersections within the project study area.

The congestion along Canal Road, coupled with the lack of paved shoulders, poor pavement condition and frequent flooding make this route less dependable for military traffic during routine training and in the event of emergency deployment. This study forecast military/background traffic to year 2040 and evaluated the 30th Avenue and Canal Road corridors to determine geometric/capacity deficiencies that would impact military readiness on these roadways. Deficiencies were identified, roadway improvements to Canal Road and 30th Avenue and new roadway alternatives were recommended to improve the reliability of access for this important military base.

The access to the NCBC is a top priority for military effectiveness. The lack of available capacity and roadway flooding on Canal Road creates delays that could adversely affect military response times. Additional capacity is needed to/from the north to allow the NCBC to effectively deploy during training exercises and during times of needed military response to national threats/danger. The construction of SR 601 will provide a much needed (all weather) increase in capacity to the north for the base.

Improving Canal Road to provide all-weather availability to traffic, through raising the roadway elevation above the 500-year flood elevation, is recommended, concurrent with widening to a four-lane roadway. This increase in elevation and width of the roadway will have impacts on wetlands and adjacent flood zones, that will likely have to be mitigated. Improvements to 30th Avenue are also recommended, to place a priority on north/south traffic movements to/from the Port of Gulfport. Restricting minor street left turning movements to signalized intersections through median modifications will help to improve the north/south freight movements, as well as the movement of military traffic to/from the Port.

The effectiveness of the military base is of paramount importance to national security. Providing sufficient capacity and an all-weather reliable route through Canal Road improvements will help the NCBC provide effective response times to training exercises and to respond to national threats/disasters. New roadway facilities are recommended place a priority on access to the NCBC and provide for coordinated signal systems connecting to the Port of Gulfport to help promote military readiness.

Cost estimates were developed for the SR 601 construction, raising and widening Canal Road, and conversion of 30th Avenue to a “Super-Street” with limited minor street left turn movements and improvements to north/south thru traffic movements for traffic.





Pedestrian Study for the US Highway 49 Corridor, Gulfport, MS

Neel-Schaffer performed a traffic analysis for the City of Gulfport to evaluate the pedestrian circulation and high incident rate of pedestrians being struck by automobiles along US 49 between Creosote Road and Turkey Creek. Twenty-three pedestrians have been struck in approximately eight years by vehicles along this route, with 18 injured and five killed. The last year and half accounted for eight pedestrian injuries and three pedestrian fatalities. An evaluation of the available right-of-way, existing lane geometry, adjacent land uses/driveways, pedestrian activity and potential mitigation options was conducted.

The purpose of this analysis was to evaluate the existing vehicular and pedestrian traffic and identify recommendations to modify the existing right-of-way/lane geometry to better accommodate pedestrian traffic within this +1 mile corridor. A field survey was conducted to evaluate the topography of the existing corridor, such that proposed pedestrian infrastructure will not adversely affect the drainage along US 49. Pedestrian traffic was quantified along the corridor based on a daytime traffic count. To analyze the related impact to the surrounding area, existing roadway capacity and levels-of-service were evaluated. In addition, a field review was conducted to observe existing land usage within the study area and the existing geometrics of the surrounding roadways.

The volume of pedestrian/bicycle collisions with automobiles is significant for the 1-mile stretch. The volume of pedestrians during the study period (6AM-7PM) identified more than 60-70 pedestrians traveling along/across US 49 at multiple locations. The hotels, Walmart and CSL Plasma Center were identified to be major generators of pedestrian traffic. There are no pedestrian accommodations within the study corridor, other than a CTA bus bench/bus stop in front of the Motel 6. The corridor was observed to have many bicyclists, walking pedestrians, pedestrians in wheel chairs, and lawn mowers crossing on the day of the pedestrian inventory. The lack of pedestrian facilities and low lighting levels, combined with high vehicular volumes and high vehicular speeds are likely contributors to this increased level of bicycle/ pedestrian crashes.





Pedestrian Study for the US Highway 49 Corridor, Gulfport, MS Cont.

Reduction of the posted speed limit from 50 mph to 45 mph is recommended and 10-foot multi-use paths are recommended on both sides of US 49 to accommodate this significant movement of pedestrian and bicycle traffic.

Drainage impacts will need to be evaluated with the construction of a new sidewalk/multi-use path within the existing right-of-way.

The analysis of the pedestrian/bicycle crashes geographically within the study corridor revealed that 10 of 22 bike/ped crashes (and 3 of 5 fatalities) occurred in the section of US 49 between Airport Road and Middle Drive, a distance of approximately 1,700 feet. Installation of a median barrier/fencing is recommended for a distance of approximately 3,700 feet. A pedestrian crossing with a pedestrian hybrid beacon is recommended to be considered just south of the Wal-Mart right-in/right-out drive.

Signing is recommended to accompany the new sidewalk/multi-use path, median barrier and median fence, concurrent with the recommended pedestrian hybrid beacon at the Wal-Mart right-in/right-out driveway. Signing is recommended to include a message that it is illegal to cross mid-block. An offset is recommended at the pedestrian hybrid beacon between the crossings of northbound and southbound travel lanes, directing pedestrians to face oncoming traffic in the median to be more aware of approaching vehicles.

The existing signalized intersections at Creosote Road, Middle Drive and Airport Road have no pedestrian accommodations. These signals are recommended to be modified to:

- Providing accessible crossing islands and pedestrian signals,
- Shorten crossing distance and exposure time with curb extensions or other geometrics,
- Place signs to remind motorists of their duty to yield to pedestrians while turning left or right,
- Provide high-intensity crosswalks, push buttons, ped heads, and -Improve the street lighting to meet minimum design standards (1.6 fc) to help drivers better identify pedestrians along the roadway or crossing the roadway at night as the lighting in the median area and behind the asphalt is deficient, and
- Provide positive contrast in the lighting design in advance of the crosswalks through a lighting design and pedestrian lighting along the proposed multi-use paths.

Lagging left turn phases for US 49 left turns and modification of the channelized right turn lanes are recommended.

Modifying the channelized right turn lanes from the traditional >140 degree angle for line of sight to approximately 115 degree line of sight is recommended to help reduce the pedestrian conflicts by making pedestrians more visible to right turning traffic and also reducing the rear-end crash potential within these channelized right turn lanes.

Providing a dedicated westbound right turn lane at Middle Drive/US Highway 49 with a right turn lane overlap phase is recommended, as the right turning traffic represents nearly 65% of the westbound traffic, including permissive phasing without a dedicated left turn arrow phase.

Restriping the intersection of Creosote Road/US Highway 49 is recommended to have dedicated eastbound dual left turn lanes and a single shared thru/right turn lane. This modification would allow east/west concurrent phasing. Additionally, the shared northern (eastbound) thru/left turn lane does not align with the receiving lane on the east side of the intersection. A southbound right turn overlap phase is also recommended to have this heavy southbound right turning movement be free-flow while the east/west dual left turns are moving.



Ingalls Traffic Study, Pascagoula, MS

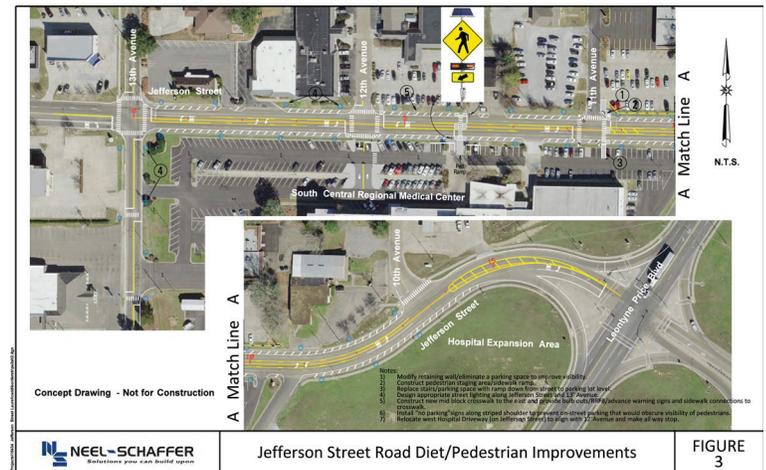
Traffic study was conducted and documented the total vehicular volume of traffic as it arrived/departed and how each parking lot was used. Capacity analyses were conducted and improvements were identified to improve on-site circulation, as well as the access to US 90. Estimates of construction costs were developed for the recommended alternates. A traffic study was presented to Ingalls and they are in the process of implementing the recommended improvements.

Traffic Analysis for Pedestrian Circulation at SCRMC, Laurel, MS

Neel-Schaffer conducted an analysis of the pedestrian circulation for the South Central Medical Center (SCRMC) site. The existing 4-lane Jefferson Street and grade changes along the roadway present potential hazards for pedestrians crossing from parking lots into the main hospital campus. This study was intended to document the pedestrian movements and make recommendations to improve pedestrian access/safety between employee parking areas and the main campus across 13th Avenue and Jefferson Street. A field inventory of the project site was conducted to document the existing conditions of the SCRMC Hospital site.

Of the countermeasure options presented, the following are recommended:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crosswalk warning signs
- Advance Stop Here for Pedestrians sign and stop line
- Curb extension
- Pedestrian refuge island
- Rectangular Rapid-Flashing Beacon (RRFB)
- Road Diet
- Pedestrian Hybrid Beacon (PHB)



A RRFB is recommended over a PHB. The road diet is recommended to include restriping Jefferson Street to a 3-lane roadway with one travel lane in each direction and a center turn lane. The restriping to 3 lanes would help to reduce the pedestrians' exposure to thru traffic to one direction (one lane) at a time. High-visibility crosswalk markings and crosswalk warning signs are recommended at the mid-block crossing at 11th Avenue. The reduction in the number of travel lanes per direction from 2 to 1 is also anticipated to reduce speeds on Jefferson Street. A refuge island is recommended to be provided in the center lane within the dedicated mid-block crosswalk. Curb extensions are recommended at both the mid-block crossing and the 11th Avenue and 12th Avenue crosswalks. Parking restrictions are recommended to prohibit parking along Jefferson Street to keep from obscuring pedestrians entering crosswalks.

The western hospital driveway is recommended to be closed/relocated with the construction of the mid-block crosswalk which will reduce the turning conflicts with the pedestrian crossing movements. Additional recommendations included bringing the existing pedestrian facilities compliant with the American with Disabilities Act (ADA). Ultimately, consideration is recommended to be given to making all the pedestrian facilities along Jefferson Street and 13th Avenue ADA compliant, and to provide dedicated pedestrian space to people walking from the off-site parking areas to the hospital entrances.



Intersection Analyses for Yankee Town Rd. Driveway, Harrison Co., MS

There was concern by Harrison County as it related to the re-opening of a closed dirt pit. Residents were concerned over the safety/sight distance/speeds on the roadway adjacent to the property, and to the proximity of school bus drop off/pick up locations. Harrison County contracted with Neel-Schaffer to conduct a traffic analysis at the intersection of the proposed dirt pit with Yankee Town Road. Site visits were conducted to evaluate and determine if sufficient sight distance is provided at this intersection.

The intersection is located just east of a horizontal curve and west of a vertical curve. Vegetation has been trimmed in the inside of the horizontal curve to the west/north. Field measurements were conducted using a ball bank indicator to measure side friction to determine the appropriate curve speeds based on existing super-elevation. A spot speed study was also conducted to determine the 85th percentile speeds of existing free-flow traffic on the roadway within the area of concern.

Based on our analysis of existing speeds and field measured available sight distance, the intersection studied has sufficient Stopping Sight Distance. The locations of the curve signs and supplemental plaques were recommended to be modified to meet the MUTCD criteria. Additional signs for School Bus Stop Ahead were recommended for north/south traffic on Yankee Town Road entering the horizontal curve in both directions.

The analysis of crash data did not indicate that a crash problem exists within the vicinity of the access roadway for the proposed dirt pit, as sufficient stopping sight distance exists at this location based on the field measurements.





Capability of Project Personnel | Experience

Jonathan Kiser, PE, PTOE, PTP



Registrations

Professional Engineer: Mississippi 13845, Florida 53381, Alabama 28499-E, Arizona 32322, Colorado 33042, Nebraska E-9223

Certifications

Professional Transportation Engineer (PTOE) 1261

Professional Transportation Planner (PTP) 232

Education

Bachelor of Science, Civil Engineering, Mississippi State University, 1993

Professional History

Mr. Kiser joined Neel-Schaffer in 2000 and has over 25 years of experience as a traffic/transportation and civil engineer. He provides support on a wide range of transportation planning and traffic engineering projects. Mr. Kiser provides support to all of Neel-Schaffer's offices, and has lived in Phoenix, AZ, West Palm Beach, FL, Winter Springs, FL, Pensacola, FL and Biloxi, MS, prior to returning to work in Neel Schaffer's corporate headquarters in Jackson, MS. He provides engineering services for local and regional traffic impact analyses associated with public and private developments. Mr. Kiser serves as an extension of the engineering staff of multiple jurisdictions reviewing submittals of other consultants for accuracy and compliance with industry standards.

Mr. Kiser has extensive experience in traffic volume forecasting, modeling and analysis for corridor and intersection studies for public and private sector clients. He also has significant expertise in corridor evaluation studies. Through evaluation of traffic volumes, crash history, area project construction and utility locations, he evaluates the traffic demands and construction alternatives and recommends road improvements. In addition to the alternative selection process, he provides an engineering estimate of the costs of improvements and directs the public involvement process for public meetings for the participating government agency.

His experience includes roadway design, traffic signal coordination, signing and striping plans, and traffic control

plans for road construction. He is certified with MDOT for preparation of work zone traffic control plans. He provides ADA training company wide and is a leader within our firm on multi-use trail initiatives.

Summary of Capabilities

- Traffic Safety Studies
- Traffic Impact Analysis
- Pedestrian Studies
- Regional Impact Analysis
- Corridor Analysis (PD&E)
- Transportation Planning
- Work Zone Traffic Control Plans
- Interstate Access Reports
- Parking Studies
- Travel Time Studies
- ADA Design/Training
- Roadway Design
- Traffic Modeling
- Public Information/Meetings

Related Experience

Traffic Studies

- Naval Construction Battalion Command, Gulfport, MS
- South Central Regional Medical Center, Laurel, MS
- Ingalls Shipbuilding, Pascagoula, MS
- Yankee Town Road Study, Gulfport, MS
- Highway 49 from Turkey Creek to Creosote Road, Gulfport, MS

Traffic Survey Projects:

- LADOTD, Lafayette Transportation Plan Update, Lafayette, LA
- MDOT Multiplan, Jackson Urban Area, Central MS
- MDOT Multiplan, Gulf Coast Urban Area, South MS
- MDOT Port Gibson Truck Survey, Port Gibson, MS
- MDOT Philadelphia Bypass Survey, Philadelphia, MS
- I-95 FDOT HOV Analysis, Dade County, FL

Parking Studies

- Gulf Coast Community College, Gulfport, MS
- Highland Village, Jackson, MS
- Main Street, City of Columbus, MS
- Biloxi MGM Stadium, Biloxi, MS



- Beau Rivage Casino/Hotel, Biloxi, MS
- University of MS Med Center, Jackson, MS
- Bay Village, Ocean Springs, MS
- Retirement Home, Maricopa County, AZ
- Mortuary, Maricopa County, AZ
- Resort Village, Maricopa County, AZ
- Resort Suites of Scottsdale, Maricopa County, AZ
- Westland Mall, Miami, FL
- Okeechobee Commerce Center, Palm Beach County, FL
- Galleria Mall, Broward County, FL
- Spa at Gainey Ranch, Maricopa County, AZ

Crash/Safety Study Projects:

- MDOT Strategic Highway Safety Plan, Statewide MS
- MDOT Circuit Rider, Statewide MS
- US Highway 49, Forrest County, MS
- Clinton Parkway, Clinton, MS
- Cynthia Street, Clinton, MS
- State Farm Most Dangerous Intersections (8 locations), MS Statewide
- Ocean Springs Hospital Circulation Study, Ocean Springs, MS
- City of Scottsdale Accident Study, Scottsdale, AZ
- 51st Avenue Safety Study, Maricopa County, AZ
- 99th Avenue Corridor, Maricopa County, AZ

Gulf Coast Joint Land Use Study – Task 8 Access and Mobility, Gulf Regional Planning Commission, Biloxi, MS:

This project included the preparation of a report summarizing the following tasks: conduct an assessment of the existing and potential disruption to the ingress/egress and transport of military vehicles at Naval Construction Battalion Center (NCBC) in Gulfport, provide recommendations for roadway improvements and opinions of cost for these improvements.

South Central Regional Medical Center, Laurel, MS:

This study was intended to document the pedestrian movements and make recommendations to improve pedestrian access/safety at the South Central Medical Center (SCRMC) site. The study area included the pedestrians crossings from the parking lots into the main hospital campus.

Traffic Analysis on Yankee Town Road, Harrison County Board of Supervisors, Harrison County, MS:

This project included the preparation of a traffic analysis to determine

the sight distance at the entrance driveway of a proposed Dirt Pit on Yankee Town Road and evaluate sight distance limitations at the site driveway.

US 49 from Turkey Creek to Creosote Road, City of Gulfport, MS:

This project included conducting an evaluation of the existing Highway 49 corridor between Turkey Creek and Creosote Road, particularly as it relates to pedestrian safety and circulation for pedestrians crossing Highway 49 in this approximately 1.0-mile section of roadway. Neel-Schaffer, Inc. will prepare a study to recommend possible roadway/pedestrian improvements to Highway 49 within the study corridor and identify recommendations/alternative options and opinion of costs for proposed improvements.

Ingalls Traffic Study, Pascagoula: Project Manager. Traffic study evaluated the arrival and departure of employees at peak shift change times. Study identified low cost/short term and higher cost longer term improvements to help reduce delays in arrival/departure traffic.

MDOT Strategic Highway Safety Program, Statewide Mississippi: Project Manager. Neel-Schaffer worked with MDOT's safety department to update the MDOT five-year State Highway Safety Program. The project included processing state crash data through both the state crash data system (SAMS) and the FHWA's system (FARS). Neel-Schaffer helped coordinate fact sheets and interactive workshops/meetings to gather input from stakeholders. Neel-Schaffer worked with MDOT staff and the Department of Public Safety staff to compile the data and submit to the FHWA for review/approval an updated SHSP. It was approved by the FHWA in November 2018 within the planned schedule and budget.

Keesler Gate Relocation, Traffic Impact Study, Biloxi:

Project Manager. The study provides planning and conceptual design services for the planned move of the main visitor entrance to Keesler AFB from the current location along White Street Avenue to a location near Division Street. Coordination meetings with the City of Biloxi, Keesler, MDOT are used to gather and disseminate information. Neel-Schaffer forecast the traffic on the network using anticipated changes in traffic patterns on the network to determine deficiencies. The findings will be summarized in a report, with a concept improvement plan that will address existing and future deficiencies.



Mark Sorrell, PE, PTOE



Registrations

Professional Engineer: Mississippi 19483,
Arkansas 19049

Certifications

Professional Transportation Engineer
(PTOE) 3187

Education

Bachelor of Science, Civil Engineering,
Mississippi State University, 2004

Master of Science, Civil Engineering,
Clemson University, 2006

Professional History

Mr. Sorrell joined Neel-Schaffer in 2006 and has worked on a variety of traffic engineering and transportation planning projects for MDOT and numerous local governments throughout Mississippi.

Mr. Sorrell has provided traffic signal timing services for some of Mississippi's most heavily traveled corridors, including Lakeland Drive in Jackson, Hardy Street in Hattiesburg, and SR 609 in Ocean Springs. Additionally, Mr. Sorrell has designed traffic signals and traffic signal modifications in Laurel, Oxford, Columbus, and Southaven as well as for MDOT along US 98 in George County and US 49 in Forrest County. Mr. Sorrell also served as project engineer on the replacement or upgrade of 28 signalized intersections in downtown Meridian. Mr. Sorrell has provided transportation planning services analyzing several major interstate corridors for MDOT.

Related Experience

University of Mississippi Medical Center, Jackson: Traffic Engineer. Evaluated existing and projected traffic flows and recommended roadway and access improvements. Study included traffic volume shifts due to the relocation of services and parking on and around UMMC.

I-20 / Norrell Road Interchange, Hinds County, MS: Traffic Engineer Services included developing traffic volume forecasts, performing traffic analysis calculations, evaluating design concepts, and preparing an interchange modification request. Additional services included recommendations for traffic signal designs and signal timings during the design phase of the project.

Reunion Parkway Interchange on I-55, Madison, MS: Traffic Engineer Performed traffic engineering services for the evaluation of a planned interchange along I-55 in Madison County, MS. Services included developing traffic volume forecasts, performing capacity analyses, evaluating design alternatives, developing year-of-need analyses, preparing an Interchange Access Request, and developing a traffic noise model.

Renaissance Traffic Impact Analysis, Ridgeland, MS: Traffic Engineer. Services included determining the trip generation potential for a large commercial development, predicting traffic flow patterns, and analyzing adjacent existing and proposed intersections. Signal warrant analyses were performed based on the anticipated site traffic, and signal timings were prepared for proposed signalized intersection locations

Lakeland Drive Traffic Signal Timing Project, Jackson and Flowood, MS: Traffic Engineer. Services included collecting travel time data, intersection capacity analysis calculations, and developing new signal timings for Lakeland Dr. (SR 25) from I-55 to Airport Road. Technical memorandums and traffic signal timing plans for three times of day were developed.

Lakeland Drive at Old Canton Road Signal Replacement, Jackson MS: Traffic Engineer. Services included traffic signal plans for replacing two signalized, T-intersections in the Fondren district of Jackson, MS, and serving as the project engineer during the MDOT LPA design process.

Main Street Traffic Signal Timing Project, Tupelo, MS: Traffic Engineer. Services included collecting travel time data, performing capacity analysis calculations, presenting recommended signal phasing upgrades, and developing new signal timings for 23 signalized intersections.

Capitol Street Central Business District (CBD) Traffic Study, Jackson, MS: Traffic Engineer. Services included an analysis of the Central Business District traffic flow and intersection capacities for three daily peak hours. Potential future traffic generators were identified, and their anticipated impacts were incorporated in the analysis. In addition, trip distributions and assignments were evaluated to determine the impacts that converting Capitol Street from one-way to two-way operation would have on circulation downtown.



Alex Davis, EI



Registrations

Engineer Intern: Mississippi 27576

Education

Bachelor of Science, Civil Engineering,
Mississippi State University, 2016

Training

Local Public Agency Process (MDOT)
Design and Operation of Work Zone
Traffic Control (MDOT)

Professional History

Mr. Davis joined the Biloxi office of Neel-Schaffer as an Engineer Intern in January 2017. He has experience in project management, construction engineering, aviation, the design, planning, and construction of water and sanitary sewer systems, ArcGIS software, cost estimation, data acquisition, mapping, transportation systems, LPA project development and construction process, construction inspection, and quantity estimation. Prior to joining NSI, Mr. Davis served as the System Engineer for the Water Division of Starkville Utilities in Starkville, MS, where he was heavily involved in the design, maintenance, expansion, and future planning of the City's water and sanitary sewer systems. While pursuing his degree, Mr. Davis served an internship in Neel-Schaffer's Biloxi office, where he gained experience in project management, construction inspection, AutoCAD, and MicroStation. He also served as a cooperative education student for Mississippi Power in Meridian, MS, where he gained experience in electric power distribution and the planning and design of commercial, residential, and lighting projects.

Related Experience

Traffic Impact Analysis, MGCCC Jefferson Davis Campus, Gulfport, MS: This project included the preparation of a traffic analysis related to the existing school campus and the proposed expansion of the campus. Mr. Davis assisted in the data collection (traffic counts, parking inventory), data analysis, and development of the traffic impact analysis.

Traffic Study/Signal Design, Beach Casino, Gulfport, MS: This project included the preparation of a traffic study of the impacted area along Highway 90, the preparation of construction plans and specifications for the construction of a new signal at the intersection of Highway 90 and 32nd

Avenue, and engineering oversight during the construction of the new signal. Mr. Davis assisted in the data collection (traffic counts) and development of the traffic study and signal design and in the construction management and oversight of the signal installation.

Traffic Analysis on Yankee Town Road, Harrison County Board of Supervisors, Harrison County, MS: This project included the preparation of a traffic analysis to determine the sight distance at the entrance driveway of a proposed Dirt Pit on Yankee Town Road and evaluate sight distance limitations at the site driveway. Mr. Davis assisted in the data collection (traffic counts), data analysis, and development of this traffic analysis.

Highway 49 from Turkey Creek to Creosote Road, City of Gulfport, MS: This project includes conducting an evaluation of the existing Highway 49 corridor between Turkey Creek and Creosote Road, particularly as it relates to pedestrian safety and circulation for pedestrians crossing Highway 49 in this approximately 1.0-mile section of roadway. Neel-Schaffer, Inc. will prepare a study to recommend possible roadway/pedestrian improvements to Highway 49 within the study corridor and identify recommendations/alternative options and opinion of costs for proposed improvements. Mr. Davis assisted with the data collection (pedestrian counts), data analysis, and preliminary survey of the study corridor. Mr. Davis is currently assisting with this project.

20th Avenue Improvements, City of Gulfport, MS: Neel-Schaffer, Inc. served as a subconsultant on this project and provided a traffic study, design services for the relocation of an existing traffic signal at the intersection of Highway 90 and 20th Avenue, and design services for a retaining wall. Mr. Davis assisted in the data collection (traffic counts), data analysis, and development of the traffic study.

Gulf Coast Joint Land Use Study – Task 8 Access and Mobility, Gulf Regional Planning Commission, Biloxi, MS: This project included the preparation of a report summarizing the following tasks: conduct an assessment of the existing and potential disruption to the ingress/egress and transport of military vehicles at Naval Construction Battalion Center (NCBC) in Gulfport, provide recommendations for roadway improvements and opinions of cost for these improvements. Mr. Davis assisted in the data collection (traffic counts) and data analysis of the 16 intersections within the study area.



David Stauts



Education

Bachelor of Science, Architectural Engineering Technology, University of Southern Mississippi, 1995

Professional History

Mr. Stauts joined Neel-Schaffer in 1995 and has prepared plans for roadway improvement projects, traffic signal projects, water and sewer system design, and drainage improvement projects. He is also responsible for construction monitoring.

Related Experience

Popp's Ferry Road Extension, City of Biloxi: Served as design technician to develop construction plans for the 0.8 mile extension of Popp's Ferry Road from its terminus at Pass Road to US 90. This required coordination with the Mississippi Gulf Coast Coliseum to accommodate event traffic, MDOT to connect to US 90, and CSX to create a grade crossing of the railroad. The project is currently in the rights-of-way acquisition phase and is scheduled for construction in 2020.

Road and Drainage Improvements, Phase 2 - Popp's Ferry Road Relocation, City of D'Iberville: Served as design technician for the roadway improvements including reconstruction and widening, drainage and utility relocation. Neel-Schaffer is currently providing design phase services. The project is funded by the Mississippi Development Authority (MDA).

Road and Drainage Improvements, Phase 1 - Galleria Parkway and Popp's Ferry Road Improvements, City of D'Iberville: Served as design technician for the project which included the preparation of construction plans and specifications for the relocation and widening of multiple roadways. Traffic signals, roadway lighting, utility relocation, and drainage design are also part of this project.

I-10 Connector Road, Jackson County, MS: Project includes a new roadway to connect Mallett Road to the west with Tucker Road (MS 609) to the east. The Project included the preparation of construction plans and

specifications for new roadway, traffic signals, utility and drainage design.

Popp's Ferry Road Improvements Phase IV, City of Biloxi: Includes the preparation of construction plans and specifications for the widening of Popp's Ferry Road from a two-lane open ditch section to a five-lane curb and gutter section with sidewalks and a new sewer lift station. Project also included upgrades to the Popp's Ferry/Cedar Lake intersection with new lighting, signage and addition of additional turning lanes.

Pass Road Intersection Project, Phase 1, City of Biloxi: Includes the installation of three mast arm signals, a master controller, an emergency signal, construction of auxiliary lanes, and geometric improvements at three intersections along Pass Road.

Hwy 552 and Alcorn State University, Claiborne County, MS: Served as design technician for the project which included preparation of construction plans and specifications for the widening and roadway lighting for Hwy 552. The project also included a new access road, parking lot, RV parking area on the campus of ASU. The projects included roadway and parking areas, roadway lighting, utility relocation, drainage design, retaining walls, and landscaping.

Main Street CSX Railroad Crossing, Biloxi, MS: Served as design technician to develop construction plans to address vertical grade improvements to accommodate an AASHTO Standard Low Boy Truck, including necessary drainage, pedestrian accommodation, traffic control, striping and signage.

Old Fort Bayou Road and Yellow Jacket Road, Jackson County, MS: Project included detailed traffic analysis of the intersection, realignment concepts and signal warrants. As a result of the traffic study, Neel-Schaffer entered into contract with the county to produce design and construction plans as an immediate result of the initial analysis.

Porter Avenue Infrastructure Improvements, Ocean Springs, MS: This LPA project included the preparation of construction plans and specifications for the reconstruction of approximately 1400 feet of Porter Avenue between Williams Street and Martin Avenue. New features include new asphalt roadway surface and subgrade, pavement markings, curb and gutter, improved subsurface drainage, replacement of water infrastructure, concrete sidewalks, and additional on-street parking.



Steve Twedt, PE



Registrations

Professional Engineer: Mississippi 11221

Education

Bachelor of Science, Civil Engineering,
Mississippi State University, 1986

Certifications

Certified Public Manager, National
Certified Public Manager Consortium

Professional History

Mr. Twedt joined Neel-Schaffer in 2010 and is the firm's South Mississippi Area Manager, coordinating work among the Neel-Schaffer offices in Gulfport, Biloxi, Hattiesburg, Laurel, McComb, and Pascagoula. As a Senior Vice President with the firm, he has responsibilities for personnel and the authority to execute contracts on behalf of the company.

Prior to joining Neel-Schaffer, Mr. Twedt worked for 23 years as an engineer with MDOT. As a District Engineer for MDOT, he directed all construction, maintenance and administrative programs in District 6. This district is comprised of 14 counties in Southeast Mississippi, with over 2,000 miles of state maintained highways and 460 employees.

Serving as Project Engineer on the Gulf Coast for approximately 10 years and District Construction Engineer in District 6 for another 10 years, Mr. Twedt has extensive experience in highway construction administration.

Mr. Twedt serves as current President for the Mississippi Board of Licensure for Professional Engineers and Surveyors.

Related Experience

US 49, Covington and Forrest Counties, MS: Project Engineer. Management and project oversight over the plan development for one \$10 million and two \$40 million safety projects that eliminated dangerous elements along this major MDOT corridor. This project identified the elements that could be improved within the existing right-of-way

and budget constraints, while remaining on an expedited schedule. Mr. Twedt's knowledge of MDOT's history along this corridor was paramount in Neel-Schaffer being able to meet MDOT's expectations. This effort required continual cooperation and coordination with MDOT. Retaining wall locations were identified in the design phase which allow for the required improvements to be constructed within the existing right-of-way, which greatly expedited the project schedule. The projects eliminated or drastically improved issues related to median cross overs that lacked the desirable sight distance; and included the addition of shoulder and improved side slopes that will greatly enhance driver safety.

MDOT Construction Manual: In 2017 Neel Schaffer was hired to update the MDOT Construction Manual. Mr. Twedt managed this effort and performed the majority of the work. He performed a heavy edit on the content of the existing manual to conform it to the 2017 Standard Specifications for Road and Bridge Construction. Excel spreadsheets and fillable pdfs were created to allow for electronic completion of forms used for documentation of project information and pay item quantity calculations. The new manual was created in an electronic format with links to internal and external reference materials.

MDOT LPA Efficiency Study: In 2018 Neel-Schaffer was hired to perform an LPA efficiency study to document the existing process and recommend changes to improve efficiency in project delivery. Mr. Twedt documented the existing process and created a flowchart depicting every step from project initiation to final closeout. Each section was reviewed and verified by the appropriate MDOT Division. Decision points were identified, and every possible pathway was detailed. The major categories charted were Planning and Programming, Project Activation, Consultant Selection and Contract Approval for Preliminary Engineering, Pre-Design, Environmental Process, Field Review Plans, Right-of-Way, Office Review Plans, Consultant Selection and Contract Approval for Construction Engineering and Inspection, Final PS&E Assembly, Selection of a Contractor, Construction Engineering and Inspection and Project Closeout.