FINAL REPORT

May 2012

TRANSPORTATION IN LOUISIANA

PREPARED FOR:

Office of Cultural Development Department of Culture, Recreation, & Tourism P.O. Box 44247 Baton Rouge, LA 70804

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TRANSPORTATION IN LOUISIANA: HISTORIC CONTEXT

ntroduction

The development of Louisiana has been linked inexorably to transportation since its earliest history. Waterways brought the first explorers and colonists, and they remain important to the state's modern shipping industry. Roads evolved from Native American trails and early footpaths to create migration and shipping routes that have expanded to link into today's nationwide asphalt network. As the regional population and economy expanded, railroads eased travel and commerce, giving Louisiana more expedient connections to destinations and markets beyond the boundaries of the state. In urban areas, streetcars became an important means of passenger conveyance, evolving from steam to horse to electric power. By the mid-twentieth century, airlines began to take over many transportation needs; however, all of the above-named transport methods remain significant in modern Louisiana. This context focuses on Louisiana transportation as it relates to the structures built to facilitate or enhance each general transport method.

Waterborne Transportation

Waterways have been integral to transportation in Louisiana from its earliest history to the present time. The earliest settlements were established along the principal navigable water courses - initially, the chief means to transport people, supplies, crops, and manufactured products. Sawmills and timbering were among the industries that relied on waterborne transport. Until supplanted by the railroad system during the late nineteenth century, waterways were key to the development of towns, plantations, industry, and commerce throughout the state. Improved roads and the introduction of air transport brought a further decline to business and travel by water in the twentieth century. Today, though, the deepwater ports along the Louisiana coast provide valuable import/export freight services that maintain the state's significant national ranking in the shipping industry, while the thousands of miles of waterways host the best recreational fishing areas in the Gulf Coast.

Early Exploration through Colonial Era

The history of waterborne transportation in Louisiana's historic period began with its earliest European explorations. During the sixteenth century, Spanish explorers sailed along the Louisiana coastline, and, in 1543, survivors of the Hernando de Soto expedition traveled down the Mississippi River en route to safe haven across the Gulf of Mexico in Vera Cruz. The Spaniards were followed over a century later by French leader Réné Robert Cavalier. Sieur de la Salle, who traveled down the Mississippi River, from its confluence with the Illinois River to the Gulf of Mexico. La Salle explored the various outlets near the mouth of the Mississippi River, claiming all lands drained by the great river for Louis XIV, King of France, on April 9, 1682.1

The French began colonization efforts toward the close of the seventeenth century with the expedition of Pierre le Moyne, Sieur d'Iberville, who arrived at the mouth of the Mississippi River in March 1699. Iberville and his brother, Sieur de Bienville, investigated the Mississippi River and connected waterways, primarily to find a suitable place to establish a fort in order to maintain French control of the Mississippi River basin. The French feared the expansion of rival European colonial interests into the region. The navigation difficulties and the inhospitable swamplands along the lower reaches of the Mississippi River initially discouraged settlement there; consequently, in the spring of 1699, Iberville established the first French post (Fort Maurepas) on Biloxi Bay, east of

¹ Edwin Adams Davis, *Louisiana, A Narrative History*, Third Edition (Baton Rouge: Claitor's Publishing Division 1971[1961]), 27-29.

the marshy lowlands of the Mississippi and Pearl Rivers.²

In order to protect the new French possession, Iberville ordered the immediate construction of fortifications on the first high ground located above the mouth of the Mississippi River. Bienville chose a site approximately 18 leagues (87 km [54 mi]) upriver on the east bank of the river near the presentday community of Phoenix in Plaquemines Parish. Completed in 1700, the Fort du Mississippi, more commonly known as Fort de la Boulaye, became the first European settlement established in the lower Mississippi River Valley. Within a relatively short period of time, however, Fort de la Boulaye became obsolete, due to its poorly chosen location and to the founding of settlements and concessions farther upriver. The fort, which had not been garrisoned officially since 1707, finally was abandoned after the 1718 establishment of New Orleans.³

During the spring and summer of 1700, Bienville journeyed beyond the lower reaches of the Mississippi River to explore the northern Louisiana interior west of the great river. The Bienville expedition traveled first along the Ouachita River before heading to the Red River country of western Louisiana. Their experiences along the lower Red River laid the groundwork for future settlement in the region. With the help of area Native Americans, the French group constructed a warehouse and living quarters in 1713-1714 on the present-day site of the city of Natchitoches, thereby marking the genesis of the oldest European settlement within the territory that would become the modern state of Louisiana. Because of the raft of logs that then obstructed the Red River, the Natchitoches locale was considered to be the head of navigation.⁴

In 1718, Bienville chose a site between the Mississippi River and Lake Pontchartrain as the anchor for the Louisiana colony. This location was selected because it was protected by a natural levee and located near the shortest portage from river to lake - that is, the most efficient overland route to carry supplies, cargo, and canoes from the Mississippi River to Bayou St. John, which flowed into Lake Pontchartrain. Because it was surrounded by water. Bienville dubbed the new town "L'Isle de la Nouvelle Orléans," or the Island of New Orleans.⁵ Bienville believed that the placement of the new colony base would "offer a commercial metropolis unparalleled access to the continent's interior as well as to markets throughout the Atlantic World of trade."6

With the exception of the Natchitoches, Opelousas, and Attakapas posts, early French settlements in the Louisiana colony generally concentrated along the Mississippi River, Lake Pontchartrain, and the Gulf Coast. A number of agricultural concessions were established above and below New Orleans after 1718, although most were situated within 48 km (30 mi) of the new settlement.⁷ On the north shore of Lake Pontchartrain, the French government encouraged the development of commerce and naval stores fabrication, rather than agriculture, among its north shore colonists. In 1725, official reports noted an established lake trade between New Orleans and the Bayou Castine Acolapissa, Native American hunters who supplied most of the fresh meat for

² Davis, Louisiana, 31-41.; Frederick S. Ellis, St. Tammany Parish, L'Autre Côté du Lac (Gretna, Louisiana: Pelican Publishing Company, 1981), 8-10.; John Wilda, Charles L. Dufour, & Walter G. Cowan, Louisiana Yesterday and Today: A Historical Guide to the State (Baton Rouge: Louisiana State University Press, 1995), 8-9.

³ James Eberwine, Martin Engseth, Susan Barrett Smith, Tyler Leben, Ashley Sanders, and William P. Athens, *Phase I Cultural Resources Survey and Archeological Inventory of Two Proposed Borrow Areas, Plaquemines and St. Bernard Parishes, Louisiana* (New Orleans: Draft report submitted by R. Christopher Goofwin & Associates, Inc. to Royal Engineers & Consultants, 2009), 40.; Louisiana Division of Historic Preservation, Office of Cultural Development, Department of Culture, Recreation & Tourism, "Plaquemines Parish: Fort de Boulaye Site NRHP nomination document summary (2010).

⁴ Cecile Elkins Carter, Caddo Indians: Where We Come From (Norman, Oklahoma: University of Oklahoma Press, 1995), 103-09, 262.; Donald E. Chipman, Spanish Texas, 1591-1821 (Austin: University of Texas Press, 1992), 103-04.; Davis, Louisiana, 41, 48-49.

⁵ Ari Kelman, A River and Its City: The Nature of Landscape in New Orleans (Berkeley: University of California Press, 2003), 4.; Fred B. Kniffen and Sam Bowers Hilliard, Louisiana: Its Land and People, Revised edition (Baton Rouge: Louisiana State University Press, 1986[1968]), 122.

⁶ Kelman, A River, 6.

⁷ Anonymous cartographer, "Carte Particuliere Du Fleuve St. Louis dix lieües au dessus De La Nouvelle Orleans... Au Mississipy," (ca. 1723).; Heloise H. Cruzat, "Louisiana in 1724, The Louisiana Historical Ouarterly 12:121-133 (translated 1929).

the town colonists.⁸ In addition, court proceedings provided evidence of commerce between the fledgling south shore city and white settlers "at the Colapissas."⁹

By 1727, the census listed permanent European residents along the north shore of Lake Pontchartrain. It was during this time that the production of naval stores began to serve an important role in the area economy. The extensive long-leaf yellow pine forests of the region provided abundant raw materials for the manufacture of pitch, tar, resin, and charcoal. By the early 1730s, three or four tar works had been established along the north shore waterways that drained into Lake Pontchartrain.¹⁰

Upstream from New Orleans, French colonial settlements were established along the Mississippi River at various points, including Baton Rouge and Pointe Coupée. Along the river in present-day St. Charles and St. John the Baptist Parishes was the German Coast, initially settled by Germans, Alsatians, and Swiss who arrived ca. 1721 to work as indentured agricultural laborers. After the concession to which they were bound failed, the newly independent Germans remained, planting subsistence crops and raising livestock.¹¹ Le The German Coast farmers sold their surplus downriver in the New Orleans market, and, according to at least one source, "probably saved the Louisiana colony."¹²

After the Spanish gained dominion of colonial Louisiana, posts and accompanying settlements were established farther up the Mississippi River in the vicinity of present-day Vidalia (Concordia Parish) and along the Ouachita River near present-day Monroe (Ouachita Parish), among other locations. During the mid-1760s, Louisiana

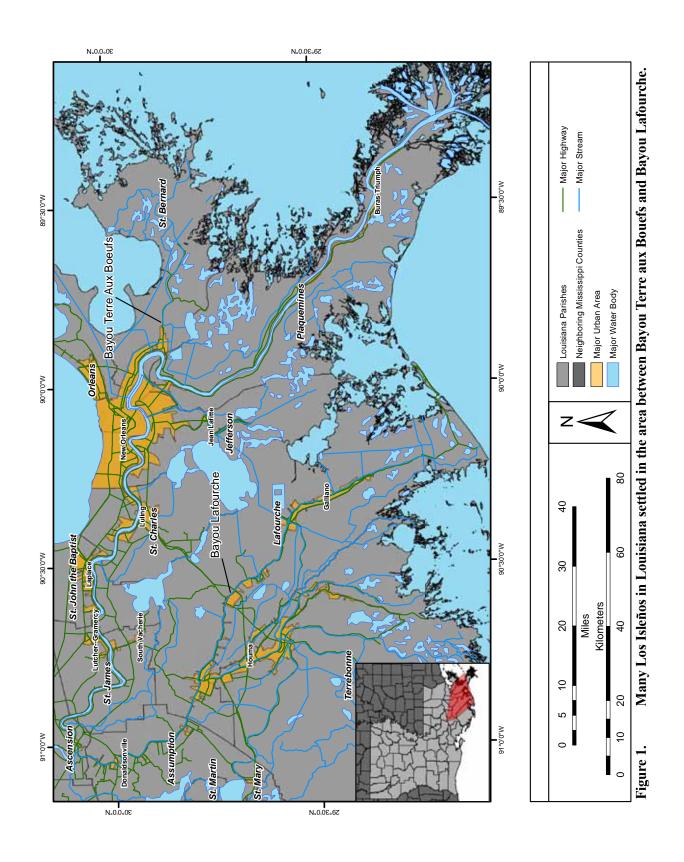
- 8 Davis, Louisiana, 42-46.; Ellis, St. Tammany Parish, 27, 31.
- 9 Ellis, St. Tammany Parish, 31.
- 10 Ellis, St. Tammany Parish, 32-40.
- 11 Helmut Blume, *The German Coast during the Colonial Era, 1722-1803* (Destrehan, Louisiana: German-Acadian Coast Historical and Genealogical Society 1990[1956]), 10-12, 14-15.; J. Hanno Deiler, *The Settlement of the German Coast of Louisiana and the Creoles of German Descent* (Baltimore: Genealogical Publishing Company, 1969[1909]), 36-38.; René Le Conte, "The Germans in Louisiana in the Eighteenth Century," *Louisiana History* 8:67-84 (1967[1924]), 72-77.
- 12 Davis, Louisana, 58.

began receiving an influx of Acadian immigrants, most of whom were placed in settlements along the Mississippi River, Bayou Lafourche, the Vermilion River, and bayous west of the Atchafalaya River. A decade later, a few Isleño (Canary Islander) settlements were established in scattered locations from Bayou Lafourche to Bayou Terre au Boeufs¹³ (Figure 1).

Aside from New Orleans and the military posts, the early Louisiana settlements generally were agrarian in nature, based around agricultural concessions, plantations, and small farms. Particularly in the coastal region, though, settlers supplemented their farm production with fishing, hunting, and trapping – necessities in the marshlands. In addition, the wooded swamps offered timber resources for both boat building and land-based construction. During the last years of the Spanish colonial government, the first primitive canals were cut through the area marshes to aid these early settlers in their pursuits. Some canals were dredged for farmland drainage, others for trapping use (traiñasses), and still others for access to navigable waterways and the port at New Orleans. While many of these early channels eventually became artificial bayous, some have been maintained and improved through the years and remain in use today.14

Descriptions of southwestern Louisiana during the colonial era indicate that waterways such

- 13 Carl A. Brasseaux, *The Founding of New Acadia: The Beginnings of Acadian Life in Louisiana, 1765-1803* (Baton Rouge: Louisiana State University Press, 1987), 93, 97.; Gilbert C. Din, *The Canary Islanders of Louisiana* (Baton Rouge: Louisiana State University Press, 1999[1988]), 30.
- Donald Davis, "Canals of the Lafourche Country," The Lafourche Country, edited by Philip D. Uzee (Lafayette, Louisiana: Center for Louisiana Studies, University of Southwestern Louisiana, 1985), 150-52.; R. Christopher Goodwin, Galloway Walker Selby, & Laura Ann Landry, Evaluation of the National Register Eligibility of the M/V Fox, an Historic Boat in Lafourche Parish, Louisiana (Submitted by R. Christopher Goodwin & Associates, Inc. to the Department of the Army, New Orleans District, Corps of Engineers, New Orleans, 1984), 21-22.; John Stuart Speaker, Joanna Chase, Carol Poplin, Herschel Franks, & R. Christopher Goodwin, Archeological Assessment of the Barataria Unit, Jean Lafitte National Historical Park (Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Department of the Interior, National Park Service, Southwest Region, Santa Fe: 1986), 13-14, 57.



as the Vermilion and Calcasieu Rivers did not become important transport and commerce routes until after the region came under U.S. jurisdiction in the nineteenth century. The area colonists would have used the water courses for their own needs, using shallow-draft dugout canoes for reaching their fishing, trapping, and timbering destinations.15 Bayou Teche, with its eastward waterborne connections, was the water route most commonly used for transportation to the Mississippi River and New Orleans. The portage between Vermilion Bay and Bayou Teche was approximately 6.4 km (4 mi), allowing small Spanish gunboats carrying "immense quantities of bullion and specie from Vera Cruz and the coast of Mexico" to evade enemy detection and make "an easy inland navigation ... to New Orleans."¹⁶

The Vermilion River was known notoriously as a smugglers' "highway" during the Spanish period. Pinhook Bridge, which today is the Highway 182 (Pinhook Road) crossing of the Vermilion River in present-day Lafayette, once was the site of a small settlement called Petit Manchac, which served as a trading center for Native Americans, trappers, and colonists. During low water periods, Petit Manchac, later called Pinhook, was the farthest inland that English smugglers could deliver their goods up the Vermilion River. By the early nineteenth century, the contraband had expanded to include the illegal slave trade.¹⁷

In particular, the history of Louisiana and the history of the Mississippi River are inexorably intertwined. The river is the reason Bienville chose the site of New Orleans in 1718 to anchor

the French colonial empire, and it has been at once the ally and the adversary of the city since that time. Situated just far enough from the Gulf of Mexico to be relatively protected from hurricanes, yet close enough to make it an effective deep-water port, New Orleans, from its inception, has been the singular hub of oceanic and riverine commerce in the nation. That very singularity drew colonists and immigrants from all over the world to the banks of the Crescent City and the surrounding region, creating a cultural heritage that shapes the character of Louisiana even today.¹⁸ In fact, the significant position of New Orleans was a primary impetus for the 1803 Louisiana Purchase. As Thomas Jefferson once noted of the city:

New Orleans will be forever, as it is now, the mighty mart of the merchandise brought from more than a thousand rivers This rapidly increasing city will, in no distant time, leave the emporia of the Eastern World far behind. With Boston, Baltimore, New York, and Philadelphia on the left; Mexico on the right; Havana in front, and the immense valley of the Mississippi in the rear, no such position for the accumulation and perpetuity of wealth and power ever existed.¹⁹

His words still apply, two hundred years later.

Throughout the colonial era, settlements and agricultural properties were concentrated along navigable water courses, while most of the Louisiana "back country" remained largely unpopulated. The early posts and communities were dependent on waterways for transportation, commerce, defense positions, mill power, and much more. In other words, the pioneer communities, homesteads, and plantations simply couldn't survive without navigable waterways – the links to

¹⁵ Calcasieu Parish Planning Board, Calcasieu Parish Resources and Facilities (Baton Rouge: State of Louisiana, Department of Public Works, Planning Division, 1945), 10-12.; Lafayette Parish Bayou Vermilion District, "Vermilion River," Bayou Vermilion District (n.d.).

¹⁶ Lewis Dumain, "Survey of the Coast of Louisiana [1806-1807, communicated to the Senate 1811] Document Number 158 in the American State Papers... [vol. VII], Class IV, Commerce and Navigation, vol. I," (Washington, D.C.: Gales and Seaton 1832), 842.

¹⁷ Harry Lewis Griffin, *The Attakapas Country: A History of Lafayette Parish, Louisiana* (New Orleans: Pelican Publishing Company, 1959), 27.; Harry Hansen, *Louisiana: A Guide to the State* (New York: Compiled by the Federal Writers' Program of the Louisiana Work Projects Administration, 1971[1941]), 396.; Lafayette Parish Bayou Vermilion District, "Vermilon River."

¹⁸ Kari Krause, Katy Coyle, Sam Turner, J.B. Pelletier, Jeremy Pincoske, David George, William P. Athens, & R. Christopher Goodwin, *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Carrollton Revetment Project, Orleans Parish, Louisiana* (Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District: 2004), 129.

¹⁹ Thomas Jefferson quoted in Richard Campanella, *Time* and Place in New Orleans: Past Geographies in the Present Day (Gretna, Louisiana: Pelican Publishing Company, 2002), 36.

markets, to established towns and ports, and to areas beyond the Louisiana colony.²⁰

Louisiana remained sparsely populated throughout the colonial era. The scattered military posts, settlements, and trade centers generally would have been located near navigable waterways during this time period, although rough trails provided overland connections between rivers and facilitated upriver travel and transport. Structures built near waterways might have included dwellings, warehouses, farm and plantation complexes, trading posts, landings, and defense works, as well as their various associated amenities (Figure 2).

Associated Building Examples

Defensive Works

The French and Spanish governments situated fortifications along significant waterways to provide protection for their nascent colonies. Construction materials for these early forts pri-

20 Kniffen & Hilliard, Louisiana, 123.

marily consisted of wood, such as Fort St. Jean Baptiste in Natchitoches, or brick, such as Fort San Carlos in New Orleans. Often these materials would be used in combination with an earthen component to provide additional strength and bulk to the defensive work; sometimes, defense works may have been constructed entirely of dirt. such as Fort St. Ferdinand outside New Orleans. The larger forts usually featured a surrounding wall, often with projecting bastions, in a largely geometric form to maximize the effectiveness of the artillery of the period. These defensive works often consisted of multiple components, such as barracks, magazines, and officers' quarters. These ancillary structures were often constructed of the same material as the surrounding wall and clustered within the fort. Many colonial era fortifications also included a surrounding ditch for additional protection, which would only be identifiable through the archeological record. As the Louisiana colony changed hands, these early fortifications were often absorbed into modifications



Figure 2. Pitot House (constructed ca. 1799-1800), New Orleans, Orleans Parish. Located on the east bank of Bayou St. John, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹

¹ Louisiana Division of Historic Preservation, "Orleans Parish, Pitot House," online photograph extracted from *Louisiana National Register of Historic Places Database* (1971), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.

and alterations, in an effort to modernize them based on prevalent military theory. As a result, the earliest components may remain extant but hidden.

Early Plantation Complexes

The early plantation complexes of colonial era Louisiana were located along rivers and bayous, not only for their ready access to the prevalent transportation mode of the period, but also to benefit from the rich soils deposited over years of seasonal flooding. The colonial era plantation was heavily influenced by French architectural styles and construction methods adapted to meet the demands of the humid climate of south Louisiana, particularly for the main house. These buildings combined brick on the first floor with timber framing on the upper floor. The gaps between the heavy timbers were often filled with bousillage or bricks and mortar. To shade the house from the heat of the Louisiana sun and its occasional driving rains, deep galleries often surrounded the structure. These iconic Creole houses were often oriented towards the river or waterway with the dependencies located to the rear of the property.

Private Levee

The location on the banks of the Mississippi River subjected the burgeoning colony to annual spring flooding, thus the French began construction of artificial levees in 1722 to keep the river water out of the settlement. As development spread along the River, the French colonial government mandated that individual landowners construct and maintain levees on their property. The chain of levees along the Mississippi was not a coherent system until well after the Civil War, and these bulwarks lacked uniform height, depth, and materials, even while they provided some measure of protection against annual river risings. With the development of a cohesive system of levees along the Mississippi River in the late nineteenth century, these older levees often were removed or included within the new levee system. Older back levees or along minor waterways may remain extant.

For more information on transportation related buildings constructed in the Colonial Era, see:

- Bacot, Barbara SoRelle and Jessie Poesch, ed. Louisiana Buildings, 1720-1940. Baton Rouge: Louisiana State University Press, 1997.
- Casey, Powell A. 1983. Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981. Claitor's Publishing Division, Baton Rouge.
- Wilson, Jr., Samuel. *The Architecture of Colonial Louisiana*. Lafayette: Center for Louisiana Studies, University of Southwestern Louisiana [University of Louisiana at Lafayette], 1987.

Territorial Period through Antebellum Era

No single event influenced the development of river travel more than the Louisiana Purchase in 1803. The Mississippi River immediately became the primary transportation corridor for goods within the growing nation, as well as between America and international trade partners. Early vessels designed to travel the river were either one-way vessels, such as rafts and flatboats, or vessels that were pulled or polled up the river against the current.²¹

During the early nineteenth century, the southeastern Louisiana waterways, particularly the Barataria network, became infamously known as black market trade routes for privateer Jean Laffite and his Baratarians. Laffite developed a highly successful smuggling and contraband business in slaves, weapons, wine, and other saleable goods. Bayou Barataria was his back door to New Orleans, where he openly proclaimed his presence and activities. Despite U.S. government efforts to curb his operations, Laffite conducted his privateer/merchant "business" throughout his Louisiana tenure. During the War of 1812, Laffite recognized the vulnerability of New Orleans to British attack via Barataria Bay and the Barataria waterway system, and, eventually, the Americans acknowledged that threat, as well. In late 1814, defense preparations were made in the event of a British advance along that route, with defensive forces placed at Barataria (probably near the present-day location of the community of Barataria) and at other loca-

²¹ Krause et al., *Phase I*, 140.

tions southward toward Barataria Bay, including the Baratarians' various havens. Laffite volunteered his services to help defend the city (accepted reservedly), and in 1815, after helping General Andrew Jackson's forces win the Battle of New Orleans, he and his men were granted presidential pardons. Laffite and some of his Baratarians left to begin new operations on Galveston Island, while others of his band settled in lower Barataria and the New Orleans area, pursuing more respectable occupations.²²

Since the most likely route for any foreign threat to the colony was waterborne, all routes to the city via water required military protection. The War of 1812 spurred the construction of defense works along several waterways that were viewed as potential British invasion routes to New Orleans. These defense positions included fortifications, redoubts, and batteries that were built across southeastern Louisiana, e.g., Fort Petite Coquilles (also known as the Fort of the Rigolets) along the eastern shore of Lake Pontchartrain and south of the Rigolets, Camp Lafourche on Bayou Lafourche near its junction with the Mississippi River, and an unnamed redoubt on Bayou Dupre between the Mississippi River and Lake Borgne. The British also constructed temporary redoubts and breastworks to protect their communications and marching routes. After the British withdrawal in early 1815 following the Battle of New Orleans, the United States constructed a number of military fortifications along waterways in the greater New Orleans area in an effort to modernize the protection of the city through the replacement of the haphazardly constructed defensive works and the rebuilding of extant colonial fortifications.²³

The advent of steam engines dramatically affected Mississippi River traffic, making efficient travel against the flow of the river possible. These steam-powered vessels, first side-wheelers and then stern-wheelers, revolutionized cargo movements around the nation. Additionally, the new vessels were capable of traveling between New Orleans and the interior in less than a month. The reduced voyage time also spurred the development of a new passenger industry.²⁴

Although designer Robert Fulton is widely regarded as the inventor of the steamboat, several individuals throughout the late eighteenth and early nineteenth centuries experimented with steam vessels. It was Henry M. Shreve, an experienced keelboat captain, who had the most crucial success in the advancement of steamboats. In 1814, he took the newly designed steamboat, the Enterprise, on the Ohio and Mississippi rivers from Pittsburgh to New Orleans, and the next year reversed his route, which resulted in the first successful upriver journey of a steam-powered vessel. This was the first of many such sailings on what was to become one of the best known of the established trade routes. He followed this up two years later in a vessel of his own design, the Washington. The trip took twenty-five days, or a little less than a quarter of the time it took to pole a keelboat against the current; this was the beginning of the end for the keelboat. Henry Shreve went on to invent and develop the snag boat to remove sunken logs that frequently were the cause of shipwrecks and other disasters. Shreve's use of the snag boat in the removal of the Great Raft from the Red River has been summarized below. The development and application of steam power to river navigation, combined with the use of the snag boat, were the most significant events in the development of transportation on Louisiana waterways.25

²² Powell A. Casy, Encyclopedia of Forst, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981 (Baton Rouge: Claitor's Publishing Division, 1983)12, 28.; Nathanael Heller, Troy Nowak, Lindsay Hannah, Emily Crowe, & William P. Athens, Phase I Cultural Resources Survey and Marine Creation Project, Orleans and St. Bernard Parishes, Louisiana (Submitted by R. Christopher Goodwin & Associates, inc. to the U.S. Army Corps of Engineers, New Orleans District: 2009), 126, 131, 163-164.; Patrick F. Roblee, Jon Vandenbosch, Katy Coyle Paul Heinrich, Susan Barrett Smith, Cheraki Williams, and William P. Athens, Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Endymion Pipeline LLC (Grand Isle to Clovelly) Project Corridor, Jefferson and Lafourche Parishes, Louisiana (Submitted by R. Christopher Goodwin & Associates, Inc. to T. Baker Smith & Son, Inc.: 2003), 30-33.; Speaker et al., Barataria, 57.

²³ Casey, Encyclopedia.; Heller et al., Phase I, 114-130.; Frank Lawrence Owsley, Jr., Struggle for the Gulf Borderlands: The Creek War and the Battle of New Orleans, 1812-1815 (Gainesville, Florida: University Presses of Florida, 1981).

²⁴ Krause et al., Phase I, 140.

²⁵ Krause et al., Phase I, 143-47.

As in the colonial era, the population of early nineteenth century Louisiana was concentrated largely in the south. Early settlement of northwestern Louisiana was hindered by the enormous log jam that blocked the Red River above the town of Natchitoches, obstructing access to the region. Measuring over 241 km (150 mi) long, this obstruction, commonly called "the Great Raft," actually was a series of log jams formed by fallen trees, driftwood, brush, and debris that created damming effects along the Red River. As the water level rose, the main channel flow escaped through outlet channels in order to detour to the open watercourse downriver. The evolution of the log jam and the development of the Red River floodplain combined to produce raft lakes along the channel, e.g., Spanish Lake (located immediately west-northwest of Natchitoches) and Lake Bistineau (along the Bossier, Bienville, and Webster Parish lines). In order to journey into the upper regions of territorial Natchitoches Parish, travelers had to detour through these outlet channels and raft lakes. One common route was to travel upstream through Loggy Bayou (between the present-day towns of Coushatta and Shreveport) into Lake Bistineau, then return to the Red River via Bayou Dorcheat.²⁶

A major effort to clear the Great Raft from the Red River was undertaken during the 1830s. This task was accomplished by Captain Henry Miller Shreve, who served as the Superintendent of Improvements on Western Rivers for the U.S. Army Corps of Engineers. Shreve correctly predicted that the obstructions would reoccur and require continued removal, a problem that plagued the river for years. However, his initial efforts, utilizing his self-invented snag boats, cleared navigation on the Red River through northwestern Louisiana, thereby opening the region to settlement and commerce.²⁷ Shreve also designed a steamboat better able to navigate the shallow waterways of the interior lands. As a result, steamers "invaded every Louisiana stream that was navigable, even if only at flood stage," and, by the end of the antebellum era, "they penetrated nearly every nook and cranny of the state."²⁸

Ships traveling through any of the Mississippi River passes were plagued by debris, shoals, sandbars, and mud lumps. Certain of these passes could be navigated easily during high water periods; however, low water conditions prevented the passage of fully loaded vessels. In 1835, the U.S. Congress approved the first appropriations for dredging the passes, marking the beginning of Mississippi River navigation improvements – both successful and unsuccessful – that have continued to the present day. In 1858, Federal engineers even exploded torpedoes in Pass a Loutre, but that proved to be one of the unsuccessful obstruction removal efforts.²⁹

Prior to the Civil War, the Louisiana population remained concentrated near navigable waterways and the few major roadways that traversed the state. Interior settlement was sparse, with scattered communities located near water bodies needed for providing drinking and cooking water, mill power, and connections to larger rivers. Structures built along or near these waterways would have included houses, stores, wharves, landings, woodyards, warehouses, mills, fortifications, inns, and taverns, as well as buildings associated with towns, commercial enterprises, and farm/plantation complexes. Nearby structures also would have included stables and other facilities needed to support passengers and freight transitioning from vessel-to-land transport and vice-versa (Figures 3 and 4).

Associated Building Examples Defensive Works

Once the Louisiana Purchase transferred the colony to the United States, American forces renovated outmoded colonial defensive works

²⁶ Hubert Davis Humphreys, "The 'Great Raft' of the Red River," North Louisiana, Volume One: To 1865, Essays on the Region and Its History (Ruston, Louisiana: McGinty Trust Fund Publications, 1984), 76-81, 85.; Kniffen & Hilliard, Louisiana, 61.; Billie Gene Poland, History of Bienville Parish, vol. 1 (Bienville, Louisiana: Bienville Parish Historical Society, 1984), 3.

²⁷ Hansen, *Louisiana*, 359-360.; Knifen & Hilliard, *Louisiana*, 61-62.

²⁸ Kniffen & Hilliard, Louisiana, 147.

²⁹ Marion Bragg, Historic Names and Places on the Lower Mississippi River (Vicksburg: Mississippi River Commission), 267-68.; R. Christopher Goodwin, Kenneth R. Jones, Debra M. Stayner, and Galloway W. Selby, Evaluation of the National Register Eligibility of Burrwood, Plaquemines Parish, Louisiana (Submitted by R. Christopher Goodwin & Associates, Inc. to the Department of the Army, Corps of Engineers, New Orleans District: 1985), 53-54, 58.

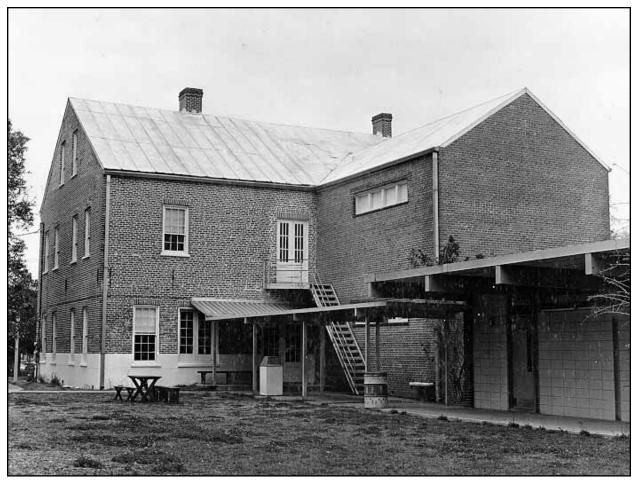


Figure 3. Old Castillo Hotel (constructed ca. 1835-1840), St. Martinville, St. Martin Parish. Located on the west bank of Bayou Teche, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.²

² LDHP, "St. Martin Parish, Old Castillo Hotel, St. Martinsville," online photograph extracted from *Louisiana National Register* of Historic Places Database (1971), accessed April 12, 2012, http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP.



Figure 4. The Old Castillo Hotel, still an operating hotel, in present day, St. Martinville.

and constructed new fortifications, particularly after the invasion by the British during the War of 1812. This campaign included the construction of Fort Pike in 1819, Fort Jackson in 1822, and Battery Bienvenue in 1828, as well as the renovation of Fort St. Philip starting in 1840. As with their predecessors, these forts, batteries, and other defensive works often were marked by brick masonry forming thick walls with pointed bastions. Larger works, such as Fort Jackson, also had earthen components, such as embankments. Ancillary buildings included barracks, magazine, hospital, quarters, and the like, constructed generally of the same material as the surrounding wall. As with the earlier colonial forts, the defensive works of the early nineteenth century were strategically located to protect the key routes of Louisiana, designed to allow canon to fire at waterborne threats.

Plantation Complexes

Plantation complexes of the early nineteenth century flourished along the significant waterways of Louisiana following the rise of the sugar industry. The influx of Americans into Louisiana following the Louisiana Purchase and subsequent statehood resulted in the rise of Anglican influenced architectural styles during the period, most notably at plantations such as Crescent Plantation and Southdown Plantation in Terrebonne Parish. While various layouts developed for plantations, the connection with the waterway remained important, and the main house often was located in a position of prominence in relation to the river. Outbuildings were clustered around or behind the main house. These dependencies were constructed of brick or wood with plain exteriors or elaborate designs to reference the architectural of the main house. Large sugar mills, often built of brick and containing the latest in steam powered technology, replaced smaller, linear sugar houses on the eve of the Civil War.

Lighthouses and Keeper Dwellings

Lighthouses dot the coast and significant waterways of Louisiana. For the first half of the nineteenth century, lighthouses often were modeled on their New England counterparts, consisting primarily of brick cylinders crowned with a Fresnel light. The structures have traditionally been painted white, occasionally with a contrasting stripe in black to allow the lighthouse to function as a waterway or navigation marker during daylight hours. Louisiana also has an Egyptian Revival cast iron lighthouse, the Southwest Reef Lighthouse, presently located in Berwick. Traditionally, each lighthouse was accompanied by housing for the keeper, whether it was part of the lighthouse itself or an associated building. A keeper's dwelling generally followed the prevalent architectural and construction trends of the period. Many lighthouses have experienced extensive damage or alterations as a result of modernization or repair due to damage caused by weather or war.

River Landings/Warehouses

Landings at private properties, such as plantations, often consisted of little more than a preferred spot along the river with no improvements. For cities and towns, more formal landings and docks were required, especially with the rise of steamboats. Few permanent structures were built along riverfronts initially, as arguments arose regarding the public nature of the waterfront. Eventually wharves were constructed along riverfronts, often subject to extensive alteration and repair during spring floods. These wharves included warehouses to store the goods off loaded from the vessels plying various waterways. These warehouses tended to be open on the interior with few internal divisions with exteriors generally void of excessive architectural ornamentation. Given the utilitarian nature of the structures, the buildings often were constructed of brick and timber to support and protect the goods held within.

Bargeboard Homes

Increased traffic meant more watercraft along the Mississippi River, some decidedly temporary in nature. These vessels - often little more than rafts with meager shelter - were built solely for a one-way trip, terminating in New Orleans. Upon landing in the city, these boats were then stripped and their materials sold off. Many of these resultant timbers were used to build houses in the growing town of New Orleans. Historic bargeboard consists of non-standard width planks oriented vertically with in a wall or partition. Often the presence of bargeboard is obscured by plaster or other finishes. The presence of bargeboard within a structure does not necessarily mean the building is eligible for the NRHP under the transportation context, since other factors such as integrity must also be considered.

For more information on transportation buildings of the Antebellum period, see:

- Bacot, Barbara SoRelle and Jessie Poesch, ed. Louisiana Buildings, 1720-1940. Baton Rouge: Louisiana State University Press, 1997.
- Casey, Powell A. 1983. Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981. Claitor's Publishing Division, Baton Rouge.
- Delgado, James and Kevin Foster, National Register Bulletin 34: Guidelines for Evaluating and Documenting Historic Aids to Navigation to the National Register of Historic Places.
- Rehder, John B. *Delta Sugar*. Baltimore: The Johns Hopkins University Press, 1999

The Civil War

The primary Federal strategy in Louisiana during the early years of the Civil War was directed toward a grand plan to split the Confederacy by gaining control of the lower Mississippi River and its connections. New Orleans and Baton Rouge fell under Union occupation in the spring of 1862, followed the next year by the surrenders of Vicksburg and Port Hudson in July 1863. With the opening of the lower Mississippi River, Federal attention turned toward the Red River, which had become an important supply line connecting Texas and western Louisiana to Confederate forces east of the Mississippi River.³⁰

During the Civil War, the Mississippi River passes assumed critical strategic importance when control of the entire course of the river became a major military objective of the Union. By May of 1861. Federal vessels were stationed at Pass a Loutre in lower Plaquemines Parish as part of the U.S. naval blockade at the mouth of the river. A few weeks later, the Confederate cruiser Sumter, first-commissioned of the Confederate Navy raiders, anchored downriver from New Orleans between Forts Jackson and St. Philip, where it prepared to break the blockade. Commanded by Raphael Semmes, the CSS Sumter made her escape through Pass a Loutre into the Gulf of Mexico on June 30, 1861, outrunning the pursuing Union vessel in a three-and-a-half-hour chase. This blockade run was the first encounter between the Union and Confederate navies on the Mississippi River, and it began Commander Semmes' history as a commerce raider, considered the most successful in American naval history.³¹

In the chronicle of his Confederate naval service, Rear Admiral (and later Brigadier General) Raphael Semmes wrote that the pilots along the coast of the Confederacy "were, with few exceptions, Northern men, and as a rule they went over to the enemy, though pretending, in the beginning of our troubles, to be good secessionists."³² These pilots guided Commodore David C. Farragut through the passes in April 1862 when he led a fleet of 40 Union vessels into the Mississippi River. After bombarding the Confederate defenses at Forts Jackson and St. Philip, Farragut's fleet steamed upriver and captured New Orleans in late April - early May of 1862, followed by the Union seizure of Baton Rouge a few weeks later. The early surrender of these key cities and the lower Mississippi River to Federal control effectively diminished hostile military actions downstream of Baton Rouge; however, naval traffic continued along the lower reaches of the river throughout the war.³³

Other than vessel conversions to military usage, there would have been few changes to waterborne transportation in Louisiana during the Civil War. Major waterways such as the Mississippi and Red Rivers were important conduits for transporting supplies, food, troops, and ammunition across the state and into the Confederate interior: however, access would have been limited due to the Union blockade of Southern ports and the occupation of riverside cities and towns. The coastal waterways were traveled by smugglers and blockade runners, and the smaller water courses provided alternate routes to bypass occupied areas. In addition, troops of both sides exploited the Louisiana waterways in their wartime strategies, employing gunboats, fire rafts, rams, obstructions, and other vessels and devices in their efforts to gain advantage over the opposing forces.

Structures built near waterways during this period would have included defense works, e.g., forts, barracks and other housing quarters, breastworks, parapets, magazines, lookout towers, and artillery emplacements. There also were structures built in aid of military logistics, such as Bailey's Dam. In addition, there would have been coal and wood fuel depots, telegraph stations, military campsites, and supply warehousing, although many such structures probably were

³⁰ Davis, Louisiana, 253-265.

³¹ Greg Goebel, "ConfederatePrivateers & Commerce Raiders" (2003). Goodwin et al., Burrwood, 58.; U.S. Naval Historical Center, "U.S. People- Rear Admiral Raphael Semmes, Confederate States Navy (1809-1877)", Online Library of Selected Images, Department of the Navy- Naval Historical Center (2000).; U.S. Naval Historical Center, "Ships of the Confederate States- CSS Sumter," Online Library of Selected Images, Department of the Navy- Naval Historical Center (2001).; U.S. Secretary of the Navy, Official Records of the Union and Confederate Navies in the War of the Rebellion, Series 1:1:34 (1999[1894-1922]), 628-30, 691-94.

³² Raphael Semmes, *Memoirs of Service Afloat, during the War Between the States* (Baltimore: Kelly, Piet & Co., 1869), 110.

³³ Goodwin et al., Burrwood, 58, 60.; U.S. Secretary of the Navy, Official Records.; U.S. Secretary of War, The War of the Rebellion: A Compilation of the Offical Records of the Union and Confederate Armies (1997[1880-1901]).; John D. Winters, The Civil War in Louisiana (Baton Rouge: Louisiana State University Press, 1963), 90-105.

temporary in nature. It should be noted, too, that many bridges and other existing structures were damaged or destroyed as the result of hostile actions (Figure 5).

Associated Building Examples Defensive Works

Defensive works utilized during the Civil War may consist of older forts, batteries, and other older defensive assemblies pressed into service during urgent circumstances. New buildings and structures constructed specifically during this time period, such as the fortifications at Port Hudson in Baton Rouge and Fort Turnbull near Shreveport, are also extant. Civil War fortifications in Louisiana may range from simple defensive works consisting of little more than amassed dirt to more elaborate combinations of trenches, redoubts, berms, and parapets constructed of timbers, bricks and bags of sand. Larger cities, such as New Orleans or Shreveport, employed a system of these defensive works to protect the city from invading Federal (and, later, Confederate) troops, often resulting in defensive efforts surrounding the main urban center of the mid-nineteenth century. Federal troops also were responsible for the military construction during the Civil War, such as the installation of rifle pits at Port Hudson after the close of the siege.

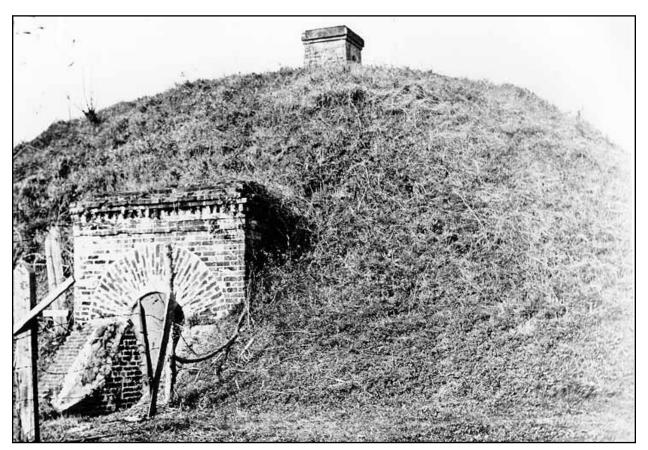


Figure 5.

Camp Parapet Powder Magazine (Civil War era), Metairie, Jefferson Parish. Located on Metairie Ridge near the east bank of the Mississippi River, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.³

³ LDHP, "Jefferson Parish, Camp Parapet Powder Magazine, Metairie," online photograph extracted from *Louisiana National Register of Historic Places Database* (1977), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/</u> SEARCHBY.ASP.

For more information on defensive works constructed during the Civil War, see:

Casey, Powell A. 1983. Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981. Claitor's Publishing Division, Baton Rouge.

Postbellum Era through Early Twentieth Century

Following the Civil War, efforts resumed to clear the passes at the mouth of the Mississippi River. By the 1870s, though, dredging had come into disfavor, and the construction of a canal was promoted by the Corps of Engineers. An alternative, and less popular, solution was advocated by James B. Eads, who proposed a jetty system in order to maintain and deepen the channels. On June 14, 1875, the Eads crew began work at South Pass. A construction camp (christened Port Eads) was built on the east side of the mouth, and an associated pilot station was established directly across the pass from the worker community. The construction of the South Pass jetties took advantage of the process of sedimentation. Eads' plan was to construct walls of piled willow-brush mattresses and then to allow the river to fill the crevices in the mattresses with sediment. After the mattresses were packed with river sand and mud, the crew flanked them with rubblestone, commonly called riprap, and later capped them with concrete slabs. Despite storms and gales that destroyed some of the work and delayed the operation, construction continued, and, in 1876 and 1877, sill dams were added across Southwest Pass and Pass a Loutre to restrict and channel the flow of water through South Pass.³⁴

The Eads experiment at South Pass proved to be such a success that exports from New Orleans increased 2,600 percent between the beginning and the completion dates of the jetty construction. Freight and shipping costs fell dramatically, and insurance rates on perishable items dropped, since the threat of a cargo ship stranded on a bar was slight. Furthermore, New Orleans moved up from eleventh to second place in total traffic among American ports within five years of the completion of the jetties. As a result of the Eads project, the South Pass became the major navigational gateway to New Orleans until superseded during the early twentieth century by the larger channel created at Southwest Pass, the location Eads originally had argued for his jetties.³⁵

During the last decades of the nineteenth century, the pass improvements and burgeoning ship commerce dominated the history of lower Plaquemines Parish, and new marine facilities were built to handle the increased traffic. For instance, a pilot station was added along the lower Mississippi River between Cubit's Gap and the entrance to Pass a Loutre that eventually would become the historic Pilottown that exists at Head of Passes today.³⁶ In addition, a quarantine station was established at Port Eads. Operating in conjunction with this station was a quarantine lazaretto (an isolation hospital for those affected with contagious diseases) that was located on the left descending bank of Pass a Loutre, a short distance downriver from the Head of Passes and far enough downstream from the pilot station to prevent the communication of diseases.37

Through its history, Louisiana has been plagued by flooding troubles. La Tour and Pauger initiated construction of the first substantial artificial levees in 1722. By 1727, levees measures eighteen feet wide and three feet tall.³⁸ Despite this early effort, levee construction remained sporadic and largely the responsibility of individual property owners. Following the close of the Civil

³⁴ Albert E. Cowdrey, "Land's End: A History of the New Orleans District, U.S. Army Corps of Engineers, and Its Lifelong Battle with the Lower Mississippi and Other Rivers Wending Their Way to the Sea" (1977), 16-21.; Florence Dorsey, *Road to the Sea: The Story of James B. Eads and the Mississippi River* (New York: Rinehart Company, 1947), 182.; Goodwin et al., *Burrwood*, 60-61.; U.S. Army Corps of Engineers, "Eads' South Pass Jetties" (n.d.).

³⁵ Dorsey, Road to the Sea, 216.; Goodwin et al., Burrwood, 61.; Arthur E. Morgan, Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works (Boston: Porter Sargent, 1971), 167.

³⁶ Pilottown suffered suffered near total destruction during Hurricane Katrina. While the Crescent River Port Pilots' Association maintains housing for members at Pilottown, the Associated Branch Pilots have relocated to Venice, Lousiana.

³⁷ Goodwin et al., Burrwood, 70.; William J. Hardee, Official Map of Louisiana, Embracing Portions of Kansas, Alabama, Mississippi, and Texas (1895).

³⁸ Richard Campanella, "Bienville's Dilemma: A Historical Geography of New Orleans," page 22.

War, significant efforts were made to improve the levee system (both natural and manmade) along the Mississippi River. By 1869, levee work was recommended at a number of riverfront plantations. During the late nineteenth and early twentieth centuries, a number of levee leaks and crevasses occurred along both sides of the lower Mississippi River due to floods, crayfish holes, and muskrat damage. The increased usage and poor maintenance of agricultural rice flumes (for irrigation) also contributed to weakened points in the regional levee system.³⁹

During the postbellum years, the timber industry became increasingly important to the Louisiana economy. Vast quantities of lumber were needed to repair the wartime ravages throughout the South and to supply the demands of Northern industry. Lake Charles (Calcasieu Parish), central to both forests and transportation, may be viewed as an example of the lumber centers scattered throughout the state. Cut timber was transported down the Calcasieu River to Lake Charles. where it was "rafted" before conveyance to the local sawmills. Lake-berthed vessels then carried the processed lumber downriver to the Gulf of Mexico for shipment to various markets. By the 1880s. Lake Charles had become the chief timber center of Louisiana. The coming of the railroad, though, drastically changed the industry. As the timber supply was depleted alongside Calcasieu waterways toward the turn of the century, narrow-gauge railways replaced the log "floats."40

Toward the end of the nineteenth century, the success of the expanding Louisiana railroad network brought the decline of vessel trade. Until railways crossed the state, schooners and steamboats <u>dominated commercial transportation across Loui-</u>

- 39 Donald W. Davis, "Historical Perspective on Crevasses, Levees, and the Mississippi River," in *Transforming New Orleans and Its Environs: Centuries of Change*, edited by Craig E. Colten (Pittsburgh: University of Pittsburgh Press, 2000), 94-96.; Eberwine et al., *Phase I*, 66-70.
- 40 Robert Brantley Cagle, "Formative Years," in *The Centennial History of Lake Charles, 1867-1967*, edited Donald J. Millet (Lake Charles, Louisiana: Lake Charles Letter Shop 1967).; Calcasiau Parish Planning Board, *Calcasieu Parish Resources and Facilities* (Baton Rouge: State of Louisiana, Department of Public Works, Planning Division, 1945), 13-21.; Donald J. Millet, "The Lumber Industry of 'Imperial' Calcasieu: 1865-1900" in *Louisiana History* 7(1):52-54, 64-66.

siana, carrying the sawmill products and other area exports across its lakes and down its rivers to the Gulf ports. Interestingly, in southeastern Louisiana, as commerce dwindled across Lake Pontchartrain, the steamboat companies expanded their excursion ventures. The resulting tourist traffic combined to boost population growth and economic development along the north shore of the lake, particularly in St. Tammany Parish, which was becoming well known as a resort area by the turn of the century.⁴¹

In general, structures built alongside Louisiana waterways during the mid-nineteenth century to early twentieth century would not have differed greatly from those constructed prior to the Civil War. There would have been increased building of structures related to the timber industry; however, as time passed, more of these would have been associated with railroads, more commonly used by the lumber companies toward and beyond the turn of the century. In addition, this was a period when waterborne transport dwindled in favor of railways; therefore, many riverside structures might have been abandoned during this time. Still, major ports such as the City of New Orleans would have maintained active warehousing and dock facilities. In addition, the popularization of resort areas spurred the building of structures linked to leisure activities along Lake Pontchartrain, and along the coastal region, including Grand Isle and Isle Dernière (Figure 6).

Associated Building Examples Plantation Stores

After the Civil War and the shift away from slave labor, plantation complexes often added plantation stores in order to sell goods and food to the local workers. While existing buildings may have been converted for this purpose, many structures were constructed expressly for this purpose. These stores often were built with frame construction, with relatively low rise, and enclosed a large open space for shelves and display counters. The stores often were located immediately adjacent to the neighboring waterway or road for convenience of transporting merchandise and customer

⁴¹ Calcasieu Parish Planning Board, Calcasieu Parish, 16-17.; Ellis, St. Tammany Parish, 177.; J.I. Sanford and W. Sanford, The World Famou "Ozone Belt," St. Tammany Parish, Louisiana (Covington, Louisiana: W.T. Kentzel, 1982[ca. 1905]),



Figure 6. Lutzenberger Foundry & Pattern Shop Building (constructed ca. 1882-1895), New Iberia, Iberia Parish. Located along Bayou Teche, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.⁴

⁴ LDHP, "Iberia Parish, Lutzenberger Foundry & Pattern Shop Building, New Iberia," online photograph extracted from *Louisiana National Register of Historic Places Database* (1998), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/</u>nationalregister/nhl/SEARCHBY.ASP.

access. The exterior of the store may be relatively simple or architecturally elaborate, referencing other commercial structures of the period.

Levees

At the close of the Civil War, both state and federal regulations called for more substantial levees that required more earthen fill materials than their predecessors. As a result, there was an increased need for more efficient earth moving machines given the predominately earthen construction of levees of the period. Horse and muledrawn scrapers were developed which enabled a scraping team to move between 35 to 40 cubic yards of dirt per day, i.e., over twice the distance of the wheelbarrow system previously used. Even so, the horse and mule-drawn scrapers proved inadequate for building the larger levee system. As

a result, between 1892 and 1914, engineers developed several experimental machines for levee construction. Levee crews used dump wagons, which held from 6 to 10 cubic yards of fill each, in conjunction with elevating graders, which allowed dirt to be hauled from considerable distances away from the construction site. Initially drawn by mule teams, mechanized wagons and graders were mechanized by the early twentieth century, substantially increasing the efficiency of levee construction projects up and down the Mississippi River. By the 1930s, the Army Corps of Engineers, largely responsible for contracting levee construction, only used scrapers for shaping and smoothing the levee slopes, while fill was provided by draglines which filled wagons and dump trucks.

Eads Jetty

The Southwest Pass, South Pass, and Pass a l'Outre provided entry to the Mississippi River from the Gulf of Mexico, but the shallow waters caused by constant silt deposition created shoals, limiting riverine access. In the late nineteenth century, Captain James Eads developed a system to build jetties extending from the banks of the passes, causing the river to run faster , which scoured out deeper channels. For those jetties, Eads utilized a system of willow mattresses, stone, and logs, eventually topped by concrete. The successful jetty system allowed larger, deeper draft ocean-going vessels to consistently have access to the Mississippi River, thus accelerating trade in the late nineteenth century Louisiana.

For more information on transportation related buildings of the postbellum period in Louisiana, see:

- Athens, William, Katy Coyle, David R. George, Kari Krause, Susan Barrett Smith, Ralph Draughon, Jr., James Eberwine, J.P. Pelletier, and William Lowthert. *Historical Research and Remote Sensing of the Former Location of the Braziel Baptist Church and Cemetery Complex (Site 16IV49), Iberville Parish, Louisiana.* Report prepared for U.S. Army Corps of Engineers, New Orleans District, 2000.
- Bacot, Barbara SoRelle and Jessie Poesch, ed. Louisiana Buildings, 1720-1940. Baton Rouge: Louisiana State University Press, 1997.
- Caspiana Plantation Store National Register of Historic Places Nomination, 1992.
- New Orleans District, U.S. Army Corps of Engineers. *Eads' South Pass Jetties.*, n.d.

Early Twentieth Century through Modern Era

By the late 1920s, New Orleans was ranked "the nation's second port and the geographical center of shipping of North and South America."⁴²

According to a nearly full-page advertisementstyle article sponsored by New Orleans civic leaders in the local newspaper:

Only New York exceeds New Orleans' record of foreign commerce. Across these wharves comes coffee for all the Mississippi [River] Valley, bananas for most of North America, sugar to keep New Orleans' big refineries busy, bauxite for aluminum products, palm oil for soaps, sisal for binder twine, cocoa, cocoanut oil, copra, cork, mahogany, molasses for 90% of the nation's industrial alcohol and hundreds of other products of as many countries and climates.

Outward bound these ships take the Valley's products, corn, rice, wheat, cotton and cotton products, tobacco, lumber, petroleum and many others that the world needs.

Nearly one hundred steamship lines had sailings from New Orleans last year, with a gross tonnage of 11,204,573. 2984 vessels arrived in New Orleans from foreign and coastal ports during that time.

And the port, like industrial New Orleans, is forging ahead, growing!

Historically, New Orleans was the principal Louisiana port; however, during the early twentieth century, Baton Rouge expanded its port facilities, which, by the mid-1920s, were capable of handling ocean-going vessels, as well as the Mississippi River trade.⁴³

During the late 1920s, the lower Mississippi River entered a new commercial transport phase when Belle Chasse (Plaquemines Parish) became a link in the U.S. – Cuba shipping trade. Belle Chasse served as the Port of New Orleans terminal for Overseas Railways, Inc., which, in 1929, began to transport goods between Belle Chasse and Havana via the enormous "car ferry" *Seatrain* and its ground-breaking loading/unloading system for railroad cars. In late 1931, Seatrain Lines, Inc., acquired the net assets of Overseas Railways, and, by October 1932, Seatrain interstate service was in operation between Belle

⁴² Times-Picayune, "New Orleans: America's Second Port," November 11, 1927, scanned article extracted from The Times-Picayune Historical Archive, accessed August 18, 2011, <u>http://nl.newsbank.com/nl-search/we/</u>

<u>Archives?p_product=HA-TP&p_theme=histpaper&p_action=keyword</u>.

⁴³ Ralph Draughon, Jr., "Down by the River: A History of the Baton Rouge Riverfront" (Booklet prepared by R. Christopher Goodwin & Associates, Inc. on behalf of the U.S. Army Corps of Engineers, New Orleans District, 1998), 21, 23.

R. Christopher Goodwin & Associates, Inc.

Chasse and Hoboken, New Jersey (the New York port), via Havana.⁴⁴

At each terminal, the loading operation was managed in a very precise manner in order to ensure efficient handling and to maintain vessel balance. The terminal apparatus included an electric control cabin, a traveling crane, winches, and cradles that could be positioned for shunting freight cars from the land rail track into place for lifting and loading into the *Seatrain*. The steel gantry and tower structure supporting the apparatus was situated in the center of a wooden trestle built in a long, shallow arc just off the edge of the Mississippi River. Tracks extended from the main railroad line to and along the trestle in order to permit loading and unloading at the Seatrain terminal.⁴⁵

By introducing standardized containers, the Seatrain company revolutionized port-rail shipping procedures with its "car ferries," utilizing operations that evolved into modern shipping methods. With the exception of the years 1942 – 1947, when most of its vessels were requisitioned for use during World War II (followed by a period of reconditioning), Seatrain Lines operated out of Belle Chasse for 35 years before shutting down its terminal facility there in mid-1964 – a casualty of terminated U.S.-Cuban trade relations, shipping rate competition, and problems keeping the Belle Chasse dock area dredged. The company later filed for bankruptcy and closed in 1981.⁴⁶

45 Louisiana State Site Files, State of Louisiana Site Record Form: Sea Train [Seatrain] Terminal Site, State Site No. 16Pl87, Record on file, Division of Archaeology, Office of Cultural Development, Louisiana Department of Culture, Recreation & Tourism, Baton Rouge.; *Popular Science Monthly*, "Steamer Carries a Mile of Cars," *Popular Science Monthly* 114(5)[May]:53 (1929).; U.S. Army Corps of Engineers, *Mississippi River Hydrographic Survey below Old River, New Orleans to Head of Passes*, Sheet No. 101 (survey data 1932-33)(1935-36).

The Seatrain system was not the only innovation in Louisiana waterborne transport during the 1920s-1930s. The concept of a national network of connected canals and waterways across the United States interior had been introduced during the early nineteenth century; however, it wasn't until the early twentieth century that the idea began to take shape across the Gulf Coast states. Surveys and studies were made early in the century, but Congress did not authorize construction funding for the Louisiana and Texas Intracoastal Waterway until 1925. Impetus factors included the defense needs that were highlighted during World War I and, more importantly, the rapidly expanding oil and gas industry, which "produced a great demand for cheap transportation of bulk materials."⁴⁷ The Gulf Intracoastal Waterway [GIWW] across southern Louisiana was constructed from the late 1920s through the late 1940s. The segment from Mobile Bay to the Inner Harbor Navigation Canal in New Orleans was completed in 1933, and the western portion extending beyond the Sabine River to Galveston Bay was finished in the following year, with extensions and tributary channels added to the system over the next 15 years. On June 18, 1949, the GIWW through southernmost Texas was completed, providing a continuous passage composed of linked natural and dredged waterways that extended from Apalachicola (Apalachee Bay), Florida, to Brownsville at the Texas/Mexico border.48

The Gulf Intracoastal Waterway has proved to be an enormously important factor in the economic development of coastal Louisiana. While it connects the Gulf Coast states, it also links to the Louisiana interior (and that of the nation) via the Port of New Orleans. Created through a se-

- 47 Art Leatherwood, Gulf Intracoastal Waterway, article extracted from *The Handbook of Texas Online* (2011).
- 48 Lynn M. Alperin, *History of the Gulf Intracoastal Waterway*, National Waterways Study, Navigation History NWS-83-9 (Alexandria, Virginia: Institute for Water Resources, U.S. Army Corps of Engineers, Water Resources Support Center, 1983), 1-6, 15-16, 21-30, 36-37, 59-63.; Cowdrey, "Land's End," 61-65.; U.S. Army Corps of Engineers, "The Gulf Intracoastal Waterway Project, U.S. Army Corps of Engineers, New Orleans District" (ca. 2010).

⁴⁴ Loislaw.com, Inc., New York State Bar Association, Loislaw Federal District Court Opinions: Seatrain Lines v. Pennsylvania R. Co., (1952) 108 F. Supp. 113 (2010).; U.S. District Court for the District of New Jersey, Interstate Commerce Commission v. Hoboken Manufacturers' R. Co., 320 U.S. 368, appeal argued and decided November-December 1943, rehearing denied January 1944 (2010).; U.S. Supreme Court, United States v. Pennsylvania R. Co., 323 U.S. 612 (1945), Case argued and decided January 1945 (2010).

⁴⁶ Dennis Hevesi, "Howard M. Pack, Shipping Mag-

nate, Dies at 90," *The New York Times* (19 December 2008:B-11).; Loislaw.com, *Seatrain Lines v. Pennsylvania R. Co.*; U.S. Supreme Court, U.S. v. Pennsylvania R. Co.

ries of man-made channels and naturally occurring canals, commercial cargoes routed along the GIWW include petroleum products, chemicals, grain, seafood, and many other items. Industries, large and small, line the waterway, and small fishing boats share the channel with commercial barges.⁴⁹ To the present day, work has continued to maintain and improve the Gulf Intracoastal Waterway, said to be "the most remarkable artery of transportation in America."⁵⁰

In 1956, Congress authorized the construction of a federal navigation channel to "provide an emergency outlet from the Mississippi River in the interest of National defense and general commerce and to provide a safer and shorter route between the Port of New Orleans and the Gulf of Mexico."⁵¹ Construction of the Mississippi River-Gulf Outlet began in 1958, and it was completed a decade later, in 1968. Commonly called MRGO, this 36-foot deep, 500-foot wide (bottom width) channel "extends from the Inner Harbor Navigation Canal to the 38-foot depth contour in the Gulf of Mexico."⁵²

Maintenance ceased on the MRGO shipping channel following the regional catastrophic destruction triggered by Hurricane Katrina, which made landfall on August 29, 2005. In 2006-2007, the U.S. Army Corps of Engineers conducted "a study to de-authorize deep-draft navigation on the portion of MRGO between the Gulf Intracoastal Waterway (GIWW) and the Gulf of Mexico."⁵³ With the submission of this report to the U.S. Congress on June 5, 2008, the MRGO navigation channel was officially de-authorized, bringing an end to that shipping route. By April of 2009, MRGO was closed to all vessels due to the navigation hazards created as work neared

- 49 Alperin, *Gulf Intracoastal Waterway*, 36-37.; Cowdrey, "Land's End," 73-74.; U.S. Army Corps of Engineers (ca. 2010).
- 50 U.S. Army Corps of Engineers (ca. 2010).
- 51 U.S. Army Corps of Engineers, New Orleans District, Engineer Research and Development Center, "Information about MRGO (2006), accessed April 27, 2009, <u>http://mrgo.usace.army.mil/default.aspx?p=MRGOInfo.</u>
- 52 Ibid.
- 53 U.S. Army Corps of Engineers, New Orleans District, "Fact Sheet: MRGO Closure and Coastal Restoration," October 28, 2008, online article extracted from *MRGO Ecosystem Restoration Fact Sheets*, accessed April 27, 2009, <u>http://mrgo.usace.army.mil/default.</u> aspx?p=MRGO Ecosystem FactSheet.

completion on the channel closure structure located between Bayou La Loutre and Hopedale, St. Bernard Parish.⁵⁴ A few months later, in July of 2009, "the last loads of armor stone [were placed] onto the Mississippi River Gulf Outlet rock closure structure," completing the closure of the MRGO navigation channel.⁵⁵

The Inner Harbor Navigation Canal, also known as the Industrial Canal, was constructed during 1918-1923, providing a modern connection between Lake Pontchartrain and the Mississippi River. In 1942, Congress approved the routing of the ICW through the Inner Harbor Navigation Canal, maintaining state ownership of the New Orleans channel, but providing a significant link in the federally-operated Intracoastal Waterway system.⁵⁶

In addition to these large channels, smaller canals have been cut through the Louisiana marshes and riverside properties for a variety of reasons over the years. Canal improvements have proved vital to the economic development of Louisiana's parishes throughout their histories. Small plantation canals were expanded for flood control, as well as for transportation, and channels were constructed or expanded for the passage of trapping pirogues and for transporting timber from the swamps. In addition to these traditional marsh passages, canals have been cut by the petroleum industry during the modern period.⁵⁷

Although petroleum exploitation began in Louisiana during the early twentieth century, the <u>development of its</u> offshore oil and gas fields did not

- 54 U.S. Army Corps of Engineers, "Fact Sheet: MRGO."; U.S. Army Corps of Engineers, "MRGO Closure," (2009), accessed April 27, 2009, <u>http://mrgo.usace.army.mil/default.aspx.</u>; U.S. Army Corps of Engineers, "MRGO Navigation Channel Closure," (2009), accessed October 15, 2011, <u>http://www.mrgo.gov/MRGO Closure.aspx</u>.
- 55 U.S. Army Corps of Engineers, "MRGO...Closure."
- 56 Alperin, "Gulf Intracoastal Waterway," 32-34.; Cowdrey, Land's End, 70-71.; U.S. Army Corps of Engineers, "The Gulf Intracoastal Waterway Project," (ca. 2010), accessed October 6, 2011, <u>http://www.mvn.usace.army.mil/pao/BRO/GIWW%20Brochure.pdf</u>.
- 57 Donald W. Davis, "Canals of the Lafourche Country, *The Lafourche Country*, edited by Philip D. Uzee (Lafayette, Louisiana: Center of Louisiana Studies, University of Southwestern Louisiana, 1985), 150-60.; David O. Whitten, "Rural Life along the Mississippi: Plaquemines Parish, Louisiana, 1830-1850," Agricultural History 58(3)(1984), 483-85.

begin until ca. the 1940s. Since that time, numerous petroleum production facilities and pipelines have been established along the lower reaches of the Mississippi River. Petroleum canals crisscross the modern Louisiana landscape. The first such canals were cut as service routes to oil and gas wells; now, though, pipeline routes appear to dominate the Louisiana petroleum network, particularly in the coastal region. Today, submerged petroleum pipelines extend across the Mississippi River, while pipeline canals traverse parishes throughout the state. Not only do these channels transport domestic petroleum products across Louisiana, but, with the development of the Louisiana Superport, located off the coast of Lafourche Parish, designed to support deepwater tankers, foreign oil also can be conveyed to American markets through the southeastern Louisiana coastal parishes.⁵⁸ The banks of the Mississippi River throughout Louisiana are home to the many types of petroleum-related businesses.

Since the mid-twentieth century, commercial traffic along Louisiana waterways has been limited primarily to the Mississippi River, the Intracoastal Waterway, and the Gulf Coast. Instead of steamboats, towboat-propelled cargo-laden barges now command the waterborne traffic. Today, Louisiana boasts six deep draft ports, several coastal ports, and numerous smaller inland ports (Table 1). Passenger cruise ships sail down the Mississippi River out of New Orleans and into the Gulf of Mexico, while smaller ports host river tour cruises and sportsman outings. Despite the loss of much traditional waterborne transportation, today, as in the past, commercial fishermen and trappers travel the bayous and backwaters of the Louisiana marshes.59

As transportation along Louisiana's waterways declined during the twentieth century, a number of associated structures were removed from service; in fact, many once-flourishing river towns simply disappeared as railroad and highway traffic bypassed them. Cargo shipments are the staples of the Louisiana waterway system today. and, in recent decades, ship-to-rail and ship-totruck freight operations have become significant factors in modern commercial service. Port and dock-side structures would include warehouses, freight depots, ship-to-rail wharves, marine repair shops, fueling facilities, tour boat facilities, bait shops and launches, seafood processing facilities, locks, canoe and boat rental facilities, and various related appurtenances (Figures 7 and 8).

Associated Building Examples

Port Facilities

Upon the completion of the Eads Jetty and the subsequent improvement in river traffic, mercantile agents substantively improved ports throughout Louisiana, constructing new warehouses, grain elevators, coal storage, and wharf space. During this period, ports began the seismic shift away from stevedore labor to container shipping, resulting in the addition of cranes to the waterfront. In New Orleans, this era also witnessed the consolidation of the extant port facilities under a single Dock Board, resulting in a unified approach to construction and improvements along the waterfront.

Camps

Along the lakeshores and watery bayous, early occupants lived in buildings constructed on large wooden pilings that jutted out over the water itself. The designs of these waterway structures allowed for the natural fluctuations of the water levels without damage to the buildings. Fishing camps began as practical housing stock for residents of these settlements. However, the charm and nostalgia of these buildings led to their popularity with urbanites who wished to escape hectic city life, particularly along the lakefront of New Orleans. Fishing camps dotted the lakeside until the mid 1920s lakefront projects signaled the demise for all of the camps. Some of the camps were relocated to the Little Woods area in New

⁵⁸ Design Technics Corporation, Louisiana Parish Pipeline & Industrial Atlas (Houston: 1992).; Tanya Brady Ditto, The Longest Street: A Story of Lafourche Parish and Grand Isle (Baton Rouge: Moran Publishing Company, 1980), 29-30, 70.; Mississippi River Commission and the U.S. Army Corps of Engineers, 1998 Flood Control and Navigation Maps, Mississippi River, Below Hannibal, Missouri to the Gulf of Mexico, 61st ed. U.S. Army Corps of Engineers, Mississippi Valley Division (1998).

⁵⁹ Charles Robert Goains and John Michael Caldwell, *Historical Atlas of Louisiana* (Norman, Oklahoma: University of Oklahoma Press, 1995), 73, 89.; Kniffen & Hilliard, *Louisiana*, 147-48.

DODT TUT	HEADQUARTERS LOCATION			COLORISON
PORT TYPE	PARISH	CITY	OFFICIAL PORT NAME	COMMON NAME
Deep draft	Calcasieu	Lake Charles	Lake Charles Harbor & Terminal District	Port of Lake Charles
Deep draft	Orleans	New Orleans	Board of Commissioners of the Port of New Orleans	Port of New Orleans
Deep draft	Plaquemines	Braithwaite	Plaquemines Port, Harbor & Terminal District	Plaquemines Port
Deep draft	St. Bernard	Chalmette	St. Bernard Port, Harbor and Terminal District	Port of St. Bernard
Deep draft	St. John the Baptist	LaPlace	Port of South Louisiana	Port of South Louisiana
Deep draft	West Baton Rouge	Port Allen	Greater Baton Rouge Port Commission	Port of Greater Baton Rouge
Coastal	Calcasieu	Sulphur	West Calcasieu Port	West Calcasieu Port
Coastal	Cameron	Cameron	West Cameron Port Commission	West Cameron Port
Coastal	Iberia	New Iberia	Port of Iberia District	Port of Iberia
Coastal	Jefferson	Grand Isle	Grand Isle Port Commission	Grand Isle Port
Coastal	Lafourche	Galliano and Port Fourchon	Greater Lafourche Port Commission	Port Fourchon
Coastal	St. Mary	Franklin	West St. Mary Parish Port, Harbor & Terminal District	Port of West St. Mary
Coastal	St. Mary	Morgan City	Morgan City Harbor & Terminal District	Port of Morgan City
Coastal	Terrebonne	Houma	Terrebonne Port Commission	Port of Terrebonne
Coastal	Vermilion	Abbeville	Abbeville Harbor & Terminal District	Port of Vermilion
Inland	Acadia	Crowley	Mermentau River Harbor & Terminal District	Port of Mermentau
Inland	Caddo	Shreveport	Caddo-Bossier Port Commission	Port of Shreveport-Bossier
Inland	Caldwell	Columbia	Columbia Port Commission	Port of Columbia
Inland	East Carroll	Lake Providence	Lake Providence Port Commission	Port of Lake Providence
Inland	Jefferson	Metairie	Jefferson Parish Economic Development & Port District	JEDCO
Inland	Natchitoches	Natchitoches	Natchitoches Parish Port Commission	Natchitoches Parish Port
Inland	Ouachita	West Monroe	Greater Ouachita Parish Port Commission	Greater Ouachita Port
Inland	Pointe Coupee	Lettsworth	Pointe Coupee Parish Port	Port of Pointe Coupee
Inland	Rapides	Alexandria	Alexandria Regional Port	Port of Alexandria
Inland	Red River	Coushatta	Red River Parish Port Commission	Red River Parish Port
Inland	St. Landry	Krotz Springs	Greater Krotz Springs Port Commission	Port of Krotz Springs
Inland	Tangipahoa	Manchac and Ponchatoula	South Tangipahoa Parish Port Commission	Port Manchac
Developing	Avoyelles	Simmesport	Avoyelles Parish Port Commission	Avoyelles Parish Port
Developing	Calcasieu	Vinton	Vinton Harbor & Terminal District	Port of Vinton
Developing	Cameron	Grand Chenier	East Cameron Port, Harbor, & Terminal District	East Cameron Parish Port
Developing	Concordia	Vidalia	Vidalia Port Commission	Port of Vidalia
Developing	Grant	Colfax	Grant Parish Port Commission	Grant Parish Port
Developing	Madison	Tallulah	Madison Parish Port Commission	Port of Madison
Developing	Tensas	St. Joseph	Tensas Parish Port Commission	Tensas Parish Port
Developing	Vermilion and Iberia	Delcambre	Twin Parish Port District	Port of Delcambre
Developing	West Feliciana	St. Francisville	West Feliciana Parish Port Commission	Port of West Feliciana

Table 1.Modern Louisiana ports (Ports Association of Louisiana 2011; Shaw Environmental and Infrastructure 2007:1-1;
Shaw Environmental and Infrastructure et al. 2009:1-2).

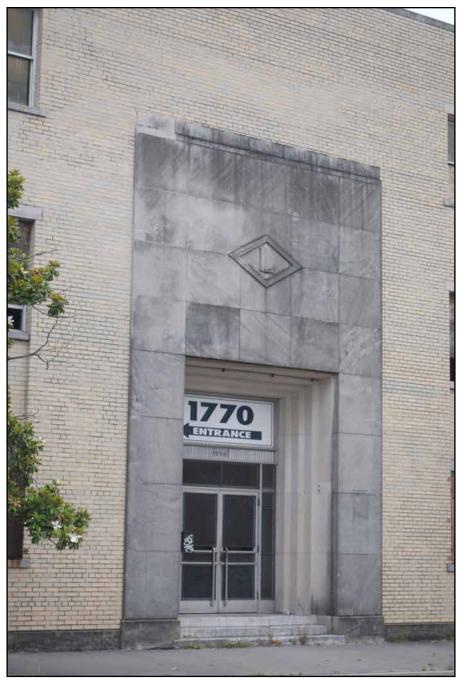


Figure 7.

Lykes Bros. Steamship Co. Historic District (period of significance, ca. 1948-1961), New Orleans, Orleans Parish. Located in the Port of New Orleans near the east bank of the Mississippi River, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.⁵

⁵ LDHP, "Orleans Parish, Lykes Bros. Steamship Co. Historic District, New Orleans," online photograph extracted from *Louisiana National Register of Historic Places Database* (2011),accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.</u> <u>ASP</u>.



Figure 8. Modern warehouse building along Mississippi River, New Orleans.

Orleans East. Over many years of brutal storms, the fishing camps dwindled in number. The final remaining camps were destroyed by Hurricane Katrina in 2005.

Pilot Housing

Given the treacherous currents of the Mississippi River, ships and boats availed themselves of local pilots to guide the ships upriver. The pilots lived in a small settlement near the mouth of the river, referred to as Pilottown. Only accessible by boat or air, Pilottown remains a small outpost with few permanent residents. Pilottown consists of a network of residential structures raised on piers and connected via a system of raised sidewalks. Traditional elements of Louisiana buildings, such as deep porches and the linear shotgun-style homes, are employed within the buildings collected at Pilottown.

Associated Branch Pilots abandoned their station after Hurricane Katrina destroyed many of the buildings in 2005.

Ferries

Given the prevalence of water throughout Louisiana, ferries became a necessary mode of transportation to conduct passengers and goods from one point to another. In the modern era, these ferries expanded to include the transfer of automobiles, linking both water and road transportation in one form. The Louisiana Department of Transportation continues to run multiple ferries across the state. Each ferry landing may include improvements that could range from small buildings for staff to more elaborate structures that provide amenities to passengers, such as restrooms and a ticket booth. For ferries that transport automobiles, access roads and ramps also will be present.

For more information on transportation related buildings in the twentieth century, see:

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Campanella, Catherine. *Images of America: Lake Pontchartrain*. Chicago: Arcadia Publishing, 2007.

- Cresecent River Port Pilots' Association. "Pilottown". <u>http://www.crescentpilots.com/DNN/</u> <u>AboutUs/Pilottown/tabid/91/Default.aspx</u>. Accessed 24 May 2012.
- Lewis, Peirce. *New Orleans: The Making of an Urban Landscape*. Charlottesville: University of Virginia Press, 2003.

Summary

The development of Louisiana has been linked to its waterways throughout its history. Ships brought the first explorers and colonists, and ready access to water courses meant the difference in survival or failure for pioneer settlements. Early town and parish growth relied on waterways that facilitated transportation, commerce, livelihoods, and even defense measures. Today, despite declines in dependence on waterborne transportation, Louisiana's rivers, bayous, and lakes remain important to the state's modern industries, shipping businesses, and leisure activities. In 2012, the Port of South Louisiana alone accounted for 15% of the total U.S. exports, the most in the nation.⁶⁰ Table 2 lists the general structure types that might have been found along-side Louisiana's waterways during various historic periods.

Roads

Land transportation in Louisiana began along pathways originally tracked by animals and Native Americans. As settlement increased, the most accessible of these trails were improved as immigration and trade routes. Some roads developed alongside waterways in order to facilitate upriver travel, others linked overland destinations, and a few evolved with the passage of military forces. During the nineteenth century. factors influencing road construction included cattle drives, settlement growth, and the timber industry. The twentieth century and the rise of the automobile resulted in the introduction of paved highways, the trucking industry, and increased recreational travel – elements that remain vital to modern Louisiana.

60 Port of South Louisiana, "Overview, <u>http://www.portsl.</u> <u>com/overview.htm (13</u> April 2012).

TIME PERIOD						
GENERAL STRUCTURE TYPES	EXPLORATION - COLONIAL ERA	19th CENTURY - EARLY 20th CENTURY	MID-20th CENTURY TO PRESENT			
Transportation Operations	Boatyards, private levees, livery stables, woodyards	Lighthouses, storage facilities, stables, boat racks & hoists, vessel repair facilities, locks, dams, levees, woodyards, ferry toll stations	Lighthouses, operations & administration buildings, storage facilities, boat racks & hoists, vessel repair facilities, floodgates, locks, pump stations, dams, levees, bridge & ferry toll stations			
Migration/Travel	River landings, ferry landings, inns, taverns, livery stables	River landings, ferry landings, inns, hotels, restaurants, taverns, livery stables	Ferry landings, cruise ship terminals, hotels, restaurants			
Commercial	Trading posts, docks, warehouses, plantation landings	Wharves & berths, warehouses, freight shipping enterprises, post offices, stores, plantation landings & stores, port facilities	Wharves & berths, port facilities, warehouses, marine supply stores, recreational boat rentals & tours, casinos			
Industrial	Shipyards, loading docks, naval stores production facilities, tanneries	Shipyards, loading docks, lumber mills & yards, timber-related industries, brickyards, tanneries, mills, manufacturing facilities	Shipyards, loading docks, petrochemical plants, manufacturing facilities			
Military	Forts & defense works	Forts & defense works, obstructive dams, training camps	U.S. Coast Guard & Navy facilities			
Residential	Houses & affiliated structures, plantation landings	Lighthouse keeper dwellings, pilot stations, plantation & farm homes with affiliated structures & landings, fisherman/trapper cabins & camps	Pilot housing, offshore petroleum worker housing, fisherman/trapper cabins & camps			

 Table 2
 General structure types that might have been built along Louisiana waterways.

Colonial Era

As noted in the previous section of this historical context, the earliest settlements in colonial Louisiana developed along the principal navigable waterways, which initially served as the chief means of transport of people and goods. The first land routes evolved from animal paths and Native American trails, generally following rivers and ridges as they connected water crossings, homesteads, and communities. As travel and settlement increased, some of these rough traces became important immigration and market routes; however, most migration and trade continued to follow waterways throughout the colonial era.⁶¹

Roads roughly paralleling watercourses were among the earliest routes established during the colonial era. Pathways included those beaten out alongside the Ouachita River as far north as Fort Míro (present-day Monroe), the Red River to its head of navigation at the Natchitoches post, and the Amite River through the West Florida districts of Baton Rouge and Feliciana into the Mississippi Territory. Another trace followed the natural levees along Bayous Teche and Black, forming the western part of the trail used by Acadian herdsmen to drive their cattle to market in New Orleans; Louisiana Highway 90 approximates that route today.⁶²

Chief among the waterside routes was the "Great River Road," which actually developed along each side of the Mississippi River. This early thoroughfare system connected riverfront towns and properties, and, like other such riverside roads, it facilitated upstream travel that would have been particularly difficult prior to the development of steam-powered vessels.⁶³ In 1732, the French colonial government mandated that landowners build and maintain levees along the Mississippi River frontage of their properties. In addition, each landholder had to construct "a foot-and-bridle path on the land side and a twelve-foot-tall boat-hitching post on the river

side."⁶⁴ After the Spanish took over the Louisiana colony, they continued the policy of requiring riverfront landowners to build and maintain the levees and roads fronting their properties.⁶⁵

The colonial era produced few overland routes, and these generally were blazed trails rather than constructed roads. Principal thoroughfares across Louisiana during this period included the Camino Real and Nolan's Trace. Travel along these routes, little more than linked path networks, was hampered by dangers and obstructions, including hostile Native Americans, wild animals, swamps, swollen waterways, and vegetative overgrowth. Because of such obstacles, a route often was altered, following another trail in the road network in order to provide safer passage for the traveler.⁶⁶

The Camino Real (also called the King's Road or the Old San Antonio Road) connected Fort St. Jean Baptiste (the Fort at Natchitoches) along the Red River to the Texas settlements west of the Sabine River. Located along this road was Los Adaes, the mission and presidio settlement established by the Spanish in 1717 and 1721 northeast of present-day Robeline in western Natchitoches Parish. Situated less than 15 miles apart, Fort St. Jean Baptiste marked the western limit of French civilization within the Louisiana colony, and Los Adaes, which served as the capital of Spanish Texas from 1729 to 1773, represented the easternmost settlement of New Spain. The Camino Real was a vital link in the survival of these outposts – the isolated and struggling eastern Spanish missions, including Los Adaes, needed the goods that could be supplied through Natchitoches, and the French hoped for future profits from the Spanish livestock and mission trade. In Louisiana, this thoroughfare began its existence as a rough animal path and Native American trail that generally followed the ridges between the Red River and the Sabine River. Although the road east of the Sabine River was little more than a pathway, the Camino Real

⁶¹ Goins & Caldwell, Atlas, 27-29.; Steven D. Smith, A Good Home for a Poor Man: Fort Polk and Vernon Parish, 1800-1940 (Fort Polk Heritage Publications, 1999), 53.

⁶² Brasseaux, *Founding*, 123-24.; Goins & Caldwell, *Louisiana*, 29.

⁶³ Kniffen & Hilliard, Louisiana, 143.

⁶⁴ Mary Ann Sternberg, *Along the River Road: Past and Present on Louisiana's Historic Byway* (Baton Rouge: Louisiana State University Press, 1996), 33.

⁶⁵ Kniffen & Hilliard, *Louisiana*, 129.; Sternberg, *River Road*, 33-34.

⁶⁶ Goins & Caldwell, Atlas, 29.; Smith, Good Home, 53-54.; Texas State Historical Association, "Old San Antonio Road," extracted from *The Handbook of Texas Online* (2005).

was an important route traveled by adventurers, missionaries, soldiers, settlers, and herdsmen. Today, Louisiana Highway 6 generally follows this historic trace from Natchitoches through Many (the Sabine Parish seat) to the Toledo Bend Reservoir, where the road bridges the Sabine River into Texas at the site of the former Chabanan/ Gaines Ferry (in operation under various names ca. 1795-1937).⁶⁷

Extending south of the Camino Real/Old San Antonio Road was the lesser-known Coushatta Trace, which popularly became known as the Contraband Trace or Smugglers' Road (and in Texas, as El Camino del Caballo), one of multiple "contraband trails" linking Louisiana and Texas during the eighteenth and nineteenth centuries. This trail bypassed the colonial officials posted at Los Adaes and Natchitoches, dropping southeastward from the Sabine River region toward Alexandria and Opelousas, thereby facilitating the smuggling of contraband goods between Louisiana and Texas. This route may have been part of the road network used by Philip Nolan, whose adventurous career is summarized below.⁶⁸

Nolan's Trace was a trail system linking Natchez and the Mississippi Territory to Texas, via Louisiana's Concordia and Rapides Posts. Irish-born Philip Nolan was an adventurer, wrangler, and protégé of General James Wilkinson, the U.S. commander at Fort Adams, the southwestern port of entry for the Mississippi Territory. During the late eighteenth century, Nolan supplied both French Louisiana and the U.S. Army with captured wild horses from the Spanish Southwest. Nolan also was the first Anglo to accurately map Spanish Texas. The Spanish government became suspicious of Nolan's scouting and mapping activities, not to mention his illegal mustang trade, and orders were issued in 1799 to put him "out of the way" if found again in Texas. Despite this threat, Nolan continued his expeditions into Texas and, on March 21, 1801, he was killed near the Brazos River by Spanish forces sent from Nacogdoches to track his party. Today, U.S. Highway 84 and Louisiana Highways 28 and 8 form a road network (through Vidalia, Jonesville, Alexandria, and Leesville to the Sabine River) that roughly traces Nolan's chief mustanging route.⁶⁹

Another important overland trail that existed during the colonial era was the Spanish Trace, also known as the Lower Road, which connected the Opelousas post to the Sabine River and Texas, where the route was known as La Bahía Road (colloquially, that portion of the road extending through Lake Charles also has been called the Old Spanish Trail: however, that name more correctly should be identified with the early twentieth century highway developed under that appellation). Opelousas actually was the nucleus for a network of roads that radiated in various directions from the military post. In fact, all of the colonial posts served as hubs for roads connecting to other posts, trade centers, river crossings, and territorial entry points.⁷⁰

Throughout the colonial era, Louisiana remained sparsely populated. The scattered military posts, settlements, and trade centers generally would have been located near navigable waterways during this time period; however, a rough trail network slowly evolved to provide overland connections and to facilitate upriver travel and transport. Buildings constructed near these early roadways might have included houses, agricultural complexes, trading posts, and defense works, as well as their various associated structures (Figure 9).

- 69 T.R. Fehrenbach, Lone Star: A History of Texas and the Texans (New York: Wing Books, 1991[1968]), 116-117.; Hansen, Louisiana, 459.; Smith, Good Home, 33, 64-65.
- 70 Goins & Caldwell, *Louisiana*, 29.; John Berton Gremillion, "Calcasiau Parish," (2008[1963]).; Smith, *Good Home*, 53-54.; Texas State Historical Association, "La Bahia Road," article extracted from *The Handbook of Texas Online* (2011b).

⁶⁷ Carter, *Caddo Indians*, 131-32, 143-44, 165.; Carl Dilbeck, transcriber, "Historical Places: El Camino Real, Sabine Parish, "*Sabine Index* April 21, 1999.; James L. McCorkle, Jr., "Los Adaes," article extracted from *The Handbook of Texas Online* (2001).; Texas State Historical Association, "Gaines Ferry," article extracted the *The Handbook of Texas Online* (2001).; Texas State Historical Association, "Old San Antonio Road."

⁶⁸ Don C. Marler, *The Neutral Zone: Backdoor to the United States* (Woodville, Texas: Dogwood Press, 1995).; Howard N. Martin, "Coushatta Trace" and "Upper Coushatta Trace" article extracted from *The Handbook of Texas Online* (2011).; T.C. Richardson, "Historic Travel Routes of the Southwest," *Texas Almanac, 1945-1946* (Denton, Texas: Texas State Historical Association, 1945), 303-304.; Texas State Historical Association, "El Camino del Caballo," article extracted from *The Handbook of Texas Online* (2011a).



Figure 9. Venus House (constructed ca. 1800), Opelousas, St. Landry Parish. Originally located in the Grand Prairie region of the parish (moved to Opelousas in 1973), this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.⁶

Associated Building Examples Blacksmith Shops & Stables

Blacksmith shops and stables were located in towns along popular routes and roads to care for the horses utilized by travelers. Stables consisted of 1-to-1.5-story buildings with roofs; wooden walls with pegs for equipment; and stalls, usually facing a breezeway, which allowed for individual care. These buildings could be affiliated with local boarding houses or independently operated. Owners located the stables as close to open pasture as possible to give equines the necessary exercise and grazing room. Smiths often built fires and used anvils in small lots adjacent to the shop which was often built of wood. In general, the fireproof materials or the forge may still survive while the wooden shop will not.

Trading Posts

Colonial era trading posts formed the local economy and influenced the visitors to an area. Many owners located their stores within or adjacent to military posts for protection against Native Americans, hostile colonial powers, and thieves. Privately owned stores often started as small wooden structures that were replaced with larger buildings and evolved into the brick parapet gable commercial structures of the early twentieth century. In many cases, the original structure is unlikely to be extant although evidence of its importance to the surrounding community, such as orientation of buildings or lay-out of blocks, may still be evident.

⁶ LDHP, "St. Landry Parish, Venus House, Opelousas," online photograph extracted from *Louisiana National Register of Historic Places Database* (1991), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.

Forts & Defense Works

Colonists faced hostilities from other colonial powers, Native Americans, competing neighbors, exposure, starvation, and weather. The protection of a fort and the proximity to other settlers provided a small measure of support against these mortal threats. Forts consisted of buildings clustered within walls often made of dirt and stones with protruding wooden stakes. The buildings housed soldiers and supplies and provided living space. Landlocked forts required wells for water. Soldiers placed outward-facing cannons and guns along the walls for protection. For example, Fort Adaes, a Spanish built fort north of the presentday city of Natchitoches, consisted of a hexagonal fort with walls approximately 150 feet long with cannon at three bastions.⁷¹ Roads developed to and from the forts as people settled nearby and established trade routes.

For more information, see:

- Bacot, Barbara SoRelle and Jessie Poesch, ed. Louisiana Buildings, 1720-1940. Baton Rouge: Louisiana State University Press, 1997.
- Casey, Powell A. 1983. Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981. Claitor's Publishing Division, Baton Rouge.
- Louisiana State Parks. 2012. Los Adaes State Historic Site.

Territorial Period through Antebellum Era

Following the Louisiana Purchase in 1803, there were few changes in overland transportation through the new U.S. Territory of Louisiana. For the most part, so-called roads remained rough trails, and waterways continued to provide the principal mode of travel and shipping. Migration into the territory increased; however, settlements generally were established along watercourses, even after statehood was declared in 1812. Due to various factors, road construction remained a difficult proposition in Louisiana throughout the nineteenth century: [Roads] had to be built on naturally high ground, on ridges or along natural levees, whenever possible. Bridges were too expensive and difficult to build. If streams were shallow enough they were forded. If they were too deep to ford, traffic had to be ferried across. Roads built on sandy soils were not made impassable by rain, but if built on clay, rain made them useless for wheeled vehicles.⁷²

In other words, roads were a last resort throughout much of Louisiana's early history – to be "built and maintained where waterways did not serve better."⁷³

Despite these difficulties, the growing population in other parts of the expanding United States helped to develop the Louisiana road system. Postal routes were developed so that mail could be transported across the country, and military roads were constructed to facilitate overland troop movements. In addition, small feeder roads were established to connect interior settlements to navigable waterways.⁷⁴

Ca. 1805, the Creek Nation granted permission for the United States to blaze a horse path through their territory in order to facilitate mail delivery between Washington City and New Orleans, and, in 1806, Congress appropriated funds to begin its construction. In 1811, with war with the British imminent, work began to convert the narrow postal trail into a wagon road capable of supporting military traffic. Following the War of 1812, the Federal Road became an important immigration route. In northeastern Georgia, the Federal Road linked with earlier established roads that traversed the Piedmont region; from that point, it extended westward through Georgia, Alabama, Mississippi, and into southeastern Louisiana, where a Lake Pontchartrain crossing would have been made to reach New Orleans.⁷⁵

The War of 1812 was a tremendous impetus to road improvements in the new state of Louisiana. Trails that had been adequate for foot and horseback travel needed to be cleared, widened, and leveled in order to bear military traffic with

⁷² Kniffen & Hilliard, Louisiana, 143.

⁷³ Kniffen & Hilliard, Louisiana, 144.

⁷⁴ Davis, Louisiana, 173-74, 207.; Kniffen & Hilliard, Louisiana, 143.

⁷⁵ Beverly Whitaker, American Migration Fact Sheets: The Federal Road (2007).; James D. Wise, Families Migrating West: American Migration Timeline (2010).

⁷¹ Casey, Encyclopedia:1.

its troop, artillery, and supply movements. Following the close of hostilities, roads also developed along unimproved paths that had been traveled by military forces. One such route was the Jackson Military Road, which was authorized by Congress in 1816 and completed some four vears later through St. Tammany and Washington Parishes, across Mississippi, and into Tennessee. Apparently instigated by the problems faced by Andrew Jackson and his men as they slogged through the southern marshes in 1814 en route to New Orleans prior to the battle for that city during the War of 1812, this thoroughfare began as a military project to expedite traffic between Nashville and New Orleans. This route also became the pathway for the first telegraph line and the first stage line connecting those two cities.⁷⁶

Another example of a military road was Military Road No. 11, constructed in 1827-1828 by troops garrisoned at Fort Jesup (present-day Sabine Parish). In 1822, this outpost was established along the Camino Real as Cantonment Jesup in order to help control illicit activities within the Neutral Zone, the "no man's land" between the Sabine and Calcasieu Rivers that had been disputed territory between the Spanish, British, and French governments since the colonial era and differences continued after the formation of the United States. Ca. 1832-1833, the post was renamed Fort Jesup. In addition to maintaining order in the Neutral Zone, the troops surveyed area lands, helped clear Red River obstructions, built roads such as the Military Road between Fort Jesup and the Arkansas/Indian Territory outposts, and performed other tasks geared toward opening the western frontier. By the 1840s, Military Road No. 11 linked with other military road projects to connect the nation's western defense network from northernmost Fort Snelling (in present-day Minnesota) to the Gulf of Mexico.77

Prior to the advent of the railroad, the principal east-west route across northern Louisiana was the Wire Road. This thoroughfare began as a series of rough trails sporadically improved by individual settlers. Ca. 1825, the first stagecoach traveled along the route from the Ouachita River to Shreveport. By 1857, a telegraph line had been extended along this rude stage road, and, improved and maintained by the telegraph company, the route became known as the Wire Road.⁷⁸

Market roads also were important throughout antebellum Louisiana. Among these routes was Hickman's Trace, which followed at least part of the old Nolan's Trace between the Sabine and Red Rivers. As the middle branch of the Beef Trail (or Beef Road) system from Texas across Louisiana, Hickman's Trace carried cattle drives from Hickman's (later Burr's) Ferry on the Sabine River across central Louisiana to Alexandria on the Red River. The northern fork of the Beef Trail crossed the Sabine at Bevil's (later Haddon's) Ferry and headed northeastward to Natchitoches. while the southern branch, which became known as the Opelousas Road, followed the old La Bahía/ Lower Road to Opelousas and then eastward to the Mississippi River and down to New Orleans. In southeastern Louisiana, turkeys, as well as cattle, were driven to market down the Holmesville Road (present-day Louisiana Highway 25), which extended from eastern Pike County (today's Walthall County), Mississippi, through Washington Parish, and then to Covington in St. Tammany Parish.79

[May 1942].; Casey, *Encyclopedia*, 93-98, 119.; Philip C. Cook, "The North Louisiana Upland Frontier: The First Three Decades" in *North Louisiana, Volume One: To 1865, Essays on the Region and Its History* (Ruston, Louisiana: McGinty Trust Fund Publications, 1984), 43-44.; Louisiana Office of State Parks, "Fort Jesup State Historic Site" (2011).; National Park Service, Survey of Historic Sites and Buildings: Fort Jesup, Louisiana (2005).

- 78 John Agan, "Echoes of Our Past: The Old Wire Road," *Minden Press-Herald*, September 25, 2009.; Cook, "Upland Frontier," 45.
- 79 Ellis, St. Tammany Parish, 103.; Fort Tour Systems, "Newton County [Texas] Historical Markers," (n.d.).; Joy J. Jackson, "The Piney Woods- Tangipahoa, St. Helena, and Washington Parishes," in Folklife in the Florida Parishes (Louisiana Folklife Program, Division of the Arts, Office of Cultural Development, Department of Culture, Recreation & Tourism, Baton Rouge, and Center for Regional Studies, Southeastern Louisiana University, Hammond, Louisiana, 1989),

⁷⁶ Casey, Encyclopedia, 119, 402-04.; Federal Writers' Project of the Works Progress Administration, Mississippi: The WPA Guide to the Magnolia State (Jackson, Mississippi: University Press of Mississippi, 1988[1938]), 86-87.; John Melish, Map of Mississippi, Constructed from Surveys in the General Land Office and other Documents (1820).; Wise, Families Migrating.

⁷⁷ Louise Barry, "The Fort Leavenworth-Fort Gibson Military Road and the Founding of Fort Scott, originally published in *Kansas Historical Quarterly* 11(2)

Linking the more-traveled roads were smaller er byways, or feeder roads, that developed as settlement increased in the region. These "feeders" connected the backcountry to principal trails and navigable waterways, forming a road network that led to the expansion of settlement, agriculture, and commerce in the Louisiana interior. Together with the major thoroughfares, these smaller passages formed the basis for the highway system that exists today.⁸⁰

During the decades preceding the Civil War, the population remained relatively sparse in the Louisiana interior, with settlement concentrations located near navigable waterways and the few major thoroughfares. As the overland connections improved, hamlets, farmsteads, plantations, and a few military posts were established in the backcountry. Likewise, because of the increase in such population points, more land routes were traced throughout the state. Structures built along or near these early roadways would have included houses, markets, warehouses, fortifications, and travel accommodations, as well as structures associated with towns, commercial enterprises, and farm/plantation complexes. In addition, there may have been beef stands with livestock pens and driver lodgings built alongside the cattle drive routes (Figure 10).

Associated Building Examples Plantation & Town Homes

Antebellum plantation owners required accessible markets to sell the large cash crops they produced as well as a place to buy what little the plantation could not provide. Most owners arranged the plantation complex with paths to the large house as well as the cotton gin or sugar houses. Arteries such as the famed River Road led past adjacent farms to the larger shipping ports. Long drives welcomed visitors with expansive

53.; Texas State Historical Association, "La Bahìa."; Robert Wooster, "Burr's Ferry," article extracted from *The Handbook of Texas Online* (2007). views of the primary residence and surrounding landscapes with access to the stables. Oak Alley Plantation has been restored to allow visitors to experience the shaded approach through rows of mature trees. The commercial egresses were less scenic but financially more important to the economy of the plantation. Plantation architectural styles varied widely, including the French Creole style of Laura Plantation, the Steamboat Gothic of San Francisco Plantation, and the Greek Revival of Albania Plantation.

Cattle Pens

Texas cattle ranching grew in the decades leading to the Civil War. This industry created a network of roads dotted with "cow towns" offering goods to the cowboys responsible for the goods. In the 1840s, many farmers tried to make overland routes out of Texas and into the port of Shreveport viable for the commercial transportation of cattle. These plans failed and Texas cattlemen opted to drive herds to large market towns such as Abilene, Kansas, where railcars shipped beef throughout the nation. The rough trail life left little time for creating permanent structures or enclosures and little evidence of these drives remain.

For more information on transportation buildings of the Antebellum period, see:

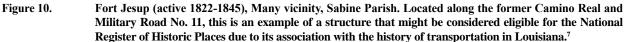
- Bacot, Barbara SoRelle and Jessie Poesch, ed. Louisiana Buildings, 1720-1940. Baton Rouge: Louisiana State University Press, 1997.
- Rehder, John B. *Delta Sugar*. Baltimore: The Johns Hopkins University Press, 1999

The Civil War

Because of the Federal blockade of the Gulf Coast ports, overland passages became important trade and military routes through Louisiana during the Civil War. After New Orleans and Baton Rouge fell in 1862, military operations in the state were focused primarily along Bayou Teche, the Mississippi River, and the Red River. Both Confederate and Union cartographers depicted Louisiana roads on their military surveys, which also included notes regarding the advantages and

⁸⁰ Kniffen & Hilliard, Louisiana, 143.; Don C. Marler, The Neutral Zone: Backdoor to the United States (Woodville, Texas: Dogwood Press, 1995).; John D. Winters, "The Cotton Kingdom: Antebellum Northeast Louisiana" in North Louisiana, Volume One: To 1865, Essays on the Region and Its History (Ruston, Louisiana: McGinty Trust Fund Publications, 1984a), 50-54, 63, 67.





⁷ LDHP, "Sabine Parish, Fort Jesup, Many," online photograph extracted from *Louisiana National Register of Historic Places Database* (1967), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.

disadvantages of many of these overland routes, e.g., terrain conditions and comparative distances to towns.⁸¹

Until Federal forces gained control of the lower Mississippi River in the summer of 1863, the Beef Trail branches provided important supply routes for the Confederacy. In anticipation of an invasion of Texas, defense works were constructed by Confederate troops along crossings of the Red and Sabine Rivers. For instance, a breastworks and trench system was built on the Louisiana side of Burr's Ferry, which, with its location along "the best route for Military Operations from Alexandria La. to Huntsville, Texas" was considered a "good crossing" of the Sabine River (Wooster 2011). In addition, guarded supply depots were established along the roads into Texas. Burr's Ferry, Huddleston, and Hineston (in present-day Vernon and Rapides Parishes) were among the storage depots warehousing food, salt, and forage for Confederate troops traveling along Hickman's Trace, the middle Beef Trail.⁸²

Control of the Red River became a major Federal objective in 1864. Shreveport, the

82 Casey, *Encyclopedia*, 189.; Fort Tour Systems (n.d.).; Smith, *Good Home*, 70, 78.

⁸¹ Davis, *Louisiana*, 253-65.; Smith, *Good Home*, 59-61.; Wooster "Burr's Ferry."

temporary state capital at that time, was vital to the Confederate cause as a road juncture for the armies of the southwest. With the Federal blockade of Southern ports, the "Texas Trail" through this Red River city became an essential transport line between western suppliers and the Confederacy. Shreveport hosted a steady stream of cattle. bacon, flour, and other Texas-produced necessities that were shipped down the Red River to the Mississippi River. From this point, resources were directed from various downstream landings to Confederate troops, thus avoiding the Union port blockade. Conversely, Southern cotton was transported by wagon trains through Shreveport into Texas and across the border into Mexico, where it was bartered for medicines, machinery, and other indispensable goods. Besides serving the Shreveport supply hub, the northwestern Louisiana roads became important transit routes for Confederate forces.83

The Shreveport-Natchitoches Road (also known as the Old Stage Road, the Mansfield and Fort Jesup Road, and the Mansfield-Pleasant Hill Road) and its feeder roads proved to be significant transportation routes during the spring 1864 Red River Expedition, a joint Federal army and naval venture into northwestern Louisiana. Campaign objectives included the termination of supply lines to the Confederacy, the invasion of Texas, and the confiscation of cotton, livestock, equipment, and other supplies that could be diverted to meet Union needs, both military and civilian. Both Confederate and Union forces traveled, camped, and fought along the Shreveport-Natchitoches Road. The Union defeats at Mansfield and Pleasant Hill along this thoroughfare were major factors in the dissolution of the threat to Shreveport and the Red River district. Rather than retreat quietly, though, the Federal army burned and destroyed property all along their route toward Grand Ecore (a short distance upriver from Natchitoches) and the Red River, followed by harassing Confederate forces throughout the march.84

There would have been few changes to the Louisiana road system during the Civil War: however, road usage throughout the state would have shifted to increased military traffic and alternate supply routes, particularly as Southern ports were blockaded and railroads were destroyed. Structures built near roads during this period would have included defense works (e.g., forts, barracks and other housing quarters, trenches, breastworks, parapets, magazines, and artillery emplacements), military campsites, sutlers' stores, and supply warehousing, although many such structures probably were temporary in nature. In addition, it should be noted that many existing structures would have been damaged or destroyed as the result of hostile actions (Figure 11).

Associated Building Example

Defensive Works & Military Complexes

The South entered the Civil War with a small population eligible for fighting, limited industrial facilities, and a disjointed system of transportation networks. Extant roads and waterways were better suited to shipping raw materials and crops to shipping centers than they were for the transport of heavy machinery and battalions of troops. Confederate forces erected forts and defensive works over the strategic ports and transportation arteries to protect them from Union soldiers. Soldiers in both blue and gray traveled the roads between cities and defensive works as part of troop movements and solitary expeditions. Both sides used water and land transportation systems to prepare for battle and during fighting. Union troops took Baton Rouge by water in July 1862 but Confederates fought to retake the city that August, largely by traveling the roads from Camp Moore in Tangipahoa Parish to the capital city.

The Confederacy carefully guarded transportation networks, both overland and water, to the extent possible. These works were hastily erected from nearby materials. The open road framed by thick Louisiana woods offered prime

⁸³ Viola Carruth, "Shreveport as Civil War Capital," Shreveport Magazine 15:20-21, 31-38.; Shreveport Centennial, Shreveport Centennial: The Story of Shreveport (1935).; Winters, Civil War, 210-11, 381-19, 408-09.

⁸⁴ Carruth, "Shreveport," 20-21.; Davis, Louisiana, 257-

^{59.;} Leatherwood, "Red River."; John D. Winters, "Secession and Civil War in North Louisiana" in *North Louisiana, Volume One: To 1865, Essays on the Region and Its History* (Ruston, Louisiana: McGinty Trust Fund Publications, 1984b), 184-90.

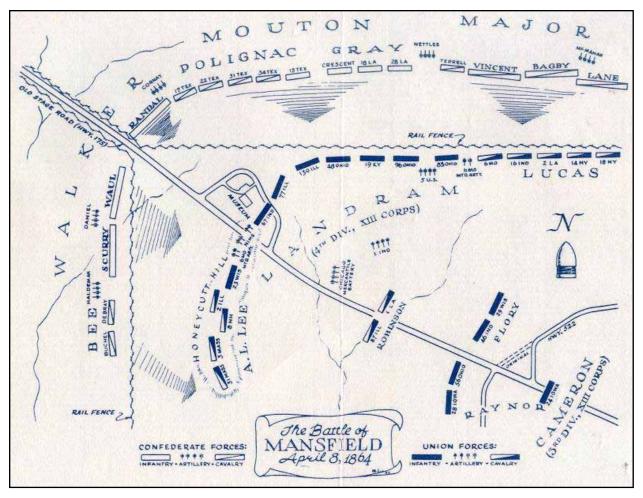


Figure 11. Mansfield State Commemorative Area Battlefield Map (Civil War era), Mansfield, DeSoto Parish. Located along the Old Stage Road (now Louisiana Hwy. 175), this battlefield site would have included structure types that might have been considered eligible for the National Register of Historic Places due to the site's association with the history of transportation in Louisiana.⁸

⁸ Mansfield State Historic Site, *The Battle of Mansfield, PAril 8, 1864,* (also referred to as the Mansfield State Commemorative Area Battlefield Map)(1994), accessed January 8, 2010, <u>http://www.civilwaralbum.com/louisiana/mansfield_map.htm</u>.

enemy shooting areas where small numbers of men could overpower larger units.

For more information on the relationship between roads and military complexes, see:

Casey, Powell A. 1983. Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981. Claitor's Publishing Division, Baton Rouge.

Postbellum Era

With the destruction and economic losses suffered as a result of the Civil War, Louisiana roads fell into disrepair. Like other states throughout the South, Louisiana had limited means to repair damaged roads, maintain existing thoroughfares, or build new ones. In addition, railroad construction expanded throughout the state, rendering obsolete a number of formerly significant roadways.⁸⁵

Until the twentieth century, there were relatively few innovations in Louisiana road construction. Despite the introduction of macadam surface roads in the United States during the 1820s, few Louisiana roads were surfaced. Short, swampy passages were traversed by "corduroying" the road, i.e., placing logs or small tree trunks side-by-side across the boggy area. By the early 1850s, limited plank road construction had started in Louisiana, e.g., the Baton Rouge and Clinton Plank Road (modernized since then, but still called the Plank Road) and the Grosse Tete and Baton Rouge Plank Road. There also were a few urban planked streets in New Orleans; however, due to heavy use and warpage, these board thoroughfares rotted and deteriorated within a few years. Continued troubles with an existing market road led to the construction in 1874 of a unique toll road between Red Chute Bayou and the Red River, near present-day Bossier City, that due to its unusual construction came to be called the Shed Road. Over a nine-mile distance, the earth was banked to form a ridged road, and a roof was built on posts along its route, with eaves extending beyond the drainage ditches paralleling the road. This "shed roof" successfully kept the road dry and in good condition, facilitating the shipment of cotton and other market goods until the mid-1880s, when railroad commerce replaced the Shed Road market transport⁸⁶

As the nineteenth century drew to a close, the timber industry became increasingly important to the Louisiana economy. Following the Civil War, vast quantities of lumber were needed to repair the wartime ravages throughout the South and to supply the demands of Northern industry. Louisiana contained thousands of timber acres, and the lumber and mill companies cut numerous logging roads into the interior forests. These new roads were utilitarian in purpose, though, and few would have been improved for more permanent usage. As railroad construction increased throughout the state during the 1880s and 1890s, rail transport became the preferred method of timber products conveyance, via both logging spurs through the forests and main lines for shipping to market. With the later decline of the timber boom, the old logging roads became neglected through disuse, and, today, their remnants may be seen along hiking trails and in wildlife preserves.87

With the increasing preference given to railways during the late nineteenth century, maintenance ceased on many Louisiana roads, a number of which simply were abandoned. Population and trade centers were established near the railroads in order to take advantage of that more efficient transportation system, and, in several cases, settlements were moved from roadside to rail-side, leaving behind ghost towns. One such community was Pleasant Hill, the site of an important DeSoto Parish battle during the Civil War. When the Texas and Pacific Railway Company constructed its line through the region ca. 1881-1882, bypassing Pleasant Hill, the village was moved a few miles southeastward into Sabine Parish in order to access the new railroad.88

⁸⁵ Kniffen & Hilliard, Louisiana, 144-45.; U.S. Department of Commerce, Bureau of Public Roads, United States Transportation History (University of Florida Digital Collections: History & Heritage, 2004), 144.

Goins & Caldwell, *Louisiana*, 71.; Hansen, *Louisiana*, 240, 453, 478.; Kniffen & Hilliard, *Louisiana*, 144-45.;
 U.S. Department of Commerce, *Transportation*, 6

⁸⁷ Eleanor Owen Heath, "Trails to Take: Louisiana's Red Dirt Preserve," *Backpacker* 7(6):29 (January 1980), 29, Google Books.; Millet, "Imperial' Calcasieu," 52-66.

⁸⁸ Kniffen & Hilliard, Louisiana, 145.; Jo Ann McCollister, "Pleasant Hill," accessed May 25, 2011, <u>http://files.usgwarchives.net/la/sabine/history/plhill.txt</u>.; Sabine

Toward the turn of the century, there was a nationwide effort to promote road improvements. This Good Roads Movement was generated, in part, by the bicycle craze of the late nineteenth century, and it extended into the early twentieth century. Seeking smoother rural roads for long-distance rides, bicyclists added their voices to those of farmers who needed reliable market roads for their crop shipments. As a result, on October 3, 1893, Congress created the first U.S. road agency: the Office of Road Inquiry (originally established under the U.S. Department of Agriculture), predecessor to today's Federal Highway Administration.⁸⁹

In general, structures built along Louisiana roadways during the late nineteenth century would not have differed greatly from those constructed prior to the Civil War. There would have been increased building of structures related to the timber industry; however, many of these would have been temporary in nature. At least one "shed road" was constructed in northwestern Louisiana, but little, if anything, remains of the posts and roof that once sheltered that passage. Also of note, this was a period when roads were abandoned in favor of railways; therefore, many road-side structures would have been abandoned during this time. As noted previously, there were situations in which entire towns were abandoned as their populations moved and re-centered around depots in order to take advantage of the new railroads (Figures 12 and 13).

Federal Highway Administration, U.S. Department of Transportation, "Highway Excellence- 100 Years and Beyond: Federal Highway Administration 1893-1993, Historical Highlights," accessed May 24, 2011, http:// isddc.dot.gov/OLPFiles/FHWA/008064.pdf.; Rickie Longfellow, "Highway History, 'Back in Time' column: The Object Lesson Road," accessed May 24, 2011, http://www.fhwa.dot.gov/infrastructure/back0607.cfm.; New York Times, "Gossip of the Cyclists:...Movement for Good Roads..." January 21, 1900, accessed June 9, 2011, http://query.nytimes.com/mem/archive-free/pdf?r es=F30917F63A5811738DDDA80A94D9405B808CF 1D3.; New York Times, "Good Roads Movement Stirring the South," December 20, 1908, accessed June 8, 2011, http://query.nytimes.com/mem/archive-free/pdf?res=F60 617F83C5517738DDDA90A94DA415B888CF1D3.

Associated Building Examples

Inns/Taverns/Restaurants

Roadside inns often consisted of several amenities under one roof to better provide for customers. An inn often included adjacent stables, a first floor restaurant/tavern, second story rooms, some provisions, and sometimes, light smithing. Inkeepers often erected these buildings quickly, constructing them of locally available materials in order to jumpstart business; many expanded these structures over time. Roadside restaurants required larger kitchens than private residences and successful owners protected the lucrative food and alcohol businesses by constructing these areas from fireproof materials. Taverns featured bars of varying lengths with a narrow keep space and visible shelving. The success of these business depended upon traffic; whenever possible, taverns were located at the intersection of roads to attract visitors from multiple directions.

The persistence of these types of buildings is dubious. The "boom and bust" cycle of trading towns left many abandoned buildings in its wake which were later demolished. It is likely that these facilities left more information in the archeological record rather than the architectural record. Customers expected more of restaurants than their home cuisine and such places offered a wider array of foods. Their location along trade routes provided owners an opportunity to stock their shelves with a variety of alcohols not available to travelers. Privies likely contain a collection of broken glassware; ceramics such as plates and platters; and flatware.

Timbering Facilities

The transport of freshly lumbered planks to market required roads from the rural forests to the plant as well routes from the plants to larger urban areas. Lumber companies often expanded existing roads through the piney woods rather than build completely new. Many of these roads have since been adapted into modern-day routes. Whenever possible, lumber companies located their plants close to major thoroughfares, waterways, or rails to facilitate transport. Timber facilities consisted of machinery and wooden buildings clustered within a fence with specific points

Parish Library, "A Brief History of Pleasant Hill, Louisiana," accessed May 25, 2011, <u>http://www.toledo-bend.</u> <u>com/sabinepar/history/index.asp?request=pleasant</u>.



Figure 12. Keegan House (period of significance, nineteenth century), Robeline, Natchitoches Parish. This house was moved three miles from its original location to the postbellum railroad town of Robeline and converted to hotel usage, making it an example of a road-side structure moved to take advantage of the railroad boom and, therefore, an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.⁹

⁹ LDHP, "Natchitoches Parish, Keegan House, Robeline," online photograph extracted from *Louisiana National Register of Historic Places Database* (1995), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.



Figure 13. Warehouse building located near road and railroad, near Livonia.

of entrance and exit. As companies grew, many built rail lines to ship the finished product.

For more information on inns and timbering facilities, see:

- Dominiaue Lalanne Store & Residence (Old Schmidt Hotel) National Register of Historic Places Nomination. 1976.
- Fricker, Donna. *The Louisiana Lumber Boom*, *c.1880-1925*. Louisiana Division of Historic Preservation, 2012
- Fullerton Mill and Town National Register of Historic Places Nomination. 1986.
- Kingsley, Karen. *Buildings of Louisiana*. Oxford: Oxford University Press, 2003.

Twentieth Century through Modern Era

The introduction of the automobile to Louisiana resulted in tremendous changes in the state's highway system. During the early years of the twentieth century, many considered automobiles "toys" for the moneyed few. For instance, while serving as president of Princeton University, future U.S. President Woodrow Wilson stated in 1906 that "Nothing … has spread Socialistic feeling in this country more than the use of automobiles. To the countryman they are a picture of arrogance of wealth with all its independence and carelessness."⁹⁰ Indeed, motor cars initially were used for touring and sport; however, small town

⁹⁰ New York Times, "Motorists Don't Make Socialists, They Say. Not Pictures of Arrogant Wealth, as Dr. Wilson Charged," March 4, 1906, accessed May 26, 2011, <u>http://query.nytimes.com/mem/archive-free/pdf?res=FB</u>0910F63B5A12738DDDAD0894DB405B868CF1D3.

stationmasters (realizing the advantages of motor service from railroad depot to local destination) and rural physicians were among those who soon recognized automobiles as vehicles "useful for the ordinary work and duties of life."⁹¹

The State of Louisiana began a highway construction program in 1911: however, this early effort (supplemented by local and parish planning) was focused toward the improvement of principal roads connecting cities, rather than rural routes. For example, in 1914-1915, the city of Lafayette sponsored an area plan to replace dirt roads with gravel-surfaced thoroughfares, followed in 1918 by a Lafayette Parish bond issue (\$300,000.00) that financed a system of gravel roads to connect Lafayette with the governmental seats of all adjacent parishes. The state and federal government added \$200,000.00 to this road building effort; however, during the 1920s, it became increasingly clear that gravel roads were inadequate for the burgeoning automobile-owning population. Until 1922, most Louisiana roads were surfaced with gravel, and various pavement types were utilized statewide over the next six years. Despite the clamor for better highways across Louisiana, relatively little mileage had been completed by 1928.92 Contemporary sources varied in estimates of the completed hard-surfaced roads as of 1928, but, according to a Louisiana State Highway Commission memorandum, the figures were as follows: "31 miles of concrete roads completed and 20 miles under construction. 65 miles of asphalt roads completed and 4 miles under construction."93

In 1928, newly-elected Governor Huey P. Long, one of the most popular yet controversial governors in Louisiana's history, "launched the most comprehensive paving program ever undertaken in the Deep South."⁹⁴ In fact, it has been conjectured that the campaign promise of a new road network was the issue that swayed the election in his favor. Bringing pressure to bear on the state legislature, Long carried through on his word. From 1929 to 1936, under his administration and that of his "handpicked" successor Oscar Kelly (O.K.) Allen (popularly referred to as the Long-Allen Administration), some 9,800 miles of roads were constructed throughout Louisiana, both paved and graveled.⁹⁵

Among the paved roads completed during the 1920s was the Louisiana section of the Old Spanish Trail, a transcontinental highway that extended across the southern United States from St. Augustine, Florida, to San Diego, California. The idea for this thoroughfare was introduced in late 1915 through the Old Spanish Trail Association, an organization that proposed connecting New Orleans to the Florida east coast. Within a few years, though, momentum had gathered to add a westward passage to southern California. and the entire route was completed in 1929, with the exception of two Louisiana water crossings - the Mississippi River and Berwick Bay - that were completed later in the Long administration. During the late 1920s, much of the eastern Old Spanish Trail, including the Louisiana mileage, was designated U.S. Highway 90% (Figures 14 and 15).

The opening of the Old Spanish Trail was echoed across northern Louisiana by the completion of the Dixie Overland Highway, designated

⁹¹ Maude Reid, "Early Calcasiue Doctors, 1850-1912," accessed May 27, 2011, <u>http://library.mcneese.edu/ depts/archive/FTBooks/reid%20doctors.htm.</u>; Randy Willis, "Daniel Oscar Willis, M.D., Vernon Parish, Louisiana," accessed May 27, 2011, <u>http://files.usgwarchives.org/la/vernon/bios/dowillis.txt.</u>; *New York Times*, "Motorists."

⁹² Henry Lewis Griffen, *The Attakapas Country: A History of Lafayette Parish, Louisiana* (New Orleans: Pelican Publishing, 1959), 89-90.; Hansen, *Louisiana*, 78.;
T. Harry Williams, *Huey Long* (New York: Alfred A. Knopf, 1970[1969]), 318-19.

⁹³ Williams, *Huey Long*, 318.

⁹⁴ Hansen, Louisiana, 78.

⁹⁵ Hansen, *Huey Long*, 78.; Louisiana Secretary of State, "Huey Pierce Long, 1928-1932" and "Oscar Kelly Allen, 1932-1936," online articles extracted from Louisiana Governors, 1877-Present, accessed May 26, 2011, <u>http://www.sos.louisiana.gov/tabid/358/Default.aspx.</u>; Williams, *Huey Long*, 318-21.

⁹⁶ Drive the Old Spanish Trail, "The Old Spanish Trail Home Page," "The Old Spanish Trail: Building the Shortest Highway in the Longest Amount of Time," and "OST Highlights: Louisiana," in Drive the Old Spanish Trail: Old US 90/290/80- St. Augustine, FL to San Diego, CA, accessed May 29, 2011, <u>http://www. drivetheost.com/index.html</u>.; OST100, Old Spanish Trail Centennial: History of OST, accessed May 11, 2011, <u>http://www.oldspanishtrailcentennial.com/History/history%20index.htm</u>.; Charles L. Sullivan, "Good Roads: Building the 'Old Spanish Trail," accessed May 26, 2011, <u>http://mshistory.k12.ms.us/articles/22/building-the-Old-Spanish-Trail.</u>



Figure 14. Historic gas station, possibly eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana, Ponchatoula.



Figure 15.

Historic gas station, possibly eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana, Hammond.

U.S. Highway 80, which once connected San Diego and Savannah. These thoroughfares, along with the completion of thousands of miles of smaller paved roads throughout Louisiana, ushered in a new era of transportation in the state. As the number of surfaced roads increased, so did traffic statewide – trucks carried agricultural products from farm to market, automobiles facilitated business travel and family vacations, and buses conveyed schoolchildren and passengers to destinations urban and distant. Gas (or filling) stations, roadside diners, tourist courts, and motels were among the structures built to accommodate the escalated motor travel in Louisiana.⁹⁷

With the increase of motor vehicle travel during the early twentieth century, the Louisiana Highway Commission was established. In 1922, the Commission appointed inspectors to enforce highway laws – 16 motorcycle officers to patrol the entire state. By mid-1936, this small highway patrol had evolved into the Louisiana Department of State Police, a force of 146 who handled criminal investigations in addition to traffic infractions. A decade later, further responsibilities were added when the 1946 Drivers License Law went into effect, requiring every driver - not just commercial operators - to carry a motor vehicle operator's license. During the 1950s, the State Police participated in gambling raids, and, in the following decade, the organization worked with the Louisiana National Guard to provide security during civil rights events. Today, the Louisiana State Police operates under the Louisiana Department of Public Safety & Corrections with a force of 1,022 male and female officers who engage in duties ranging from highway traffic monitoring to event security to narcotics enforcement.98

The mid-twentieth century marked the beginning of the interstate highway movement. The idea of such a system was introduced to Congress in the late 1930s, and, in 1941, President Franklin

D. Roosevelt appointed the National Interregional Highway Committee to study and refine the concept. It wasn't until after the close of World War II, though, that construction began in earnest on the interstate highway system. Particular impetus was provided by President Dwight D. Eisenhower, who perceived the Interstate Highway System as a contributory element to national defense - a means to connect major metropolitan centers, to provide access to military installations and supply bases, and to provide evacuation routes in case of attack. Of course, those early fears were voided with the wane of the Cold War, but the interstate network has proved vital since that time in facilitating recreational and business travel, commercial trucking enterprises, and even hurricane evacuations.99 Structures associated with major highways and interstates- gas stations, automobile repair stations, strip shopping centers, and rest areas- have become a piece of the American fabric.

In Louisiana, the routes of modern Interstates 10 and 20 generally parallel portions of U.S. Highways 90 and 80, respectively – the Old Spanish Trail and the Dixie Overland Highway. The state's newest interstate, I-49, connects southwestern Louisiana to Shreveport, extending to the west of the Red River for much of its upper length. I-12 forms an east-west link to I-10 across the Florida Parishes, while Interstates 55 and 59 provide north-south connections from southeastern Louisiana to Mississippi and the states beyond. In addition, plans are in progress for a future interstate route connecting Arkansas and Texas, via northwestern Louisiana.¹⁰⁰

The rapid expansion of motor vehicle travel and commerce during the twentieth century

- 99 Federal Highway Administration, "History of the [Eisenhower] Interstate Highway System," accessed May 23, 2011, <u>http://www.fhwa.dot.gov/interstate/ history.htm</u>.; Federal Highway Administration, "Infrastructure: Civil Defense, 1995," accessed May 23, 2011, <u>http://www.fhwa.dot.gov/infrastructure/civildef.</u> <u>cfm</u>.; Richard F. Weingroff, "Milestone for U.S> Highway Transportation and the Federal Highway Administration, originally published in the Spring 1996 issue of *Public Roads* 59(4), accessed May 23, 2011, <u>http://</u> <u>www.fhwa.dot.gov/publications/publicroads/96spring/ p96sp44.cfm</u>.
- 100 Entergy Corporation, "Louisiana Site Selection Center: Profiles," accessed May 31, 2011, <u>http://louisianasite-selection.com/SelectProfile.aspx.</u>; Goins & Caldwell, *Atlas*, 71.

⁹⁷ Milburn Calhoun, ed., Louisiana Almanac, 1995-1996 (Gretna, Louisiana: Pelican Publishing Company, 1995), 590.; Lee Estes, "Dixie Overland' Was North Louisiana Main Drag," accessed May 25, 2011, http:// www.thepineywoods.com/DixieOverlandMay08.htm.; OST100, Centennial.

⁹⁸ Louisiana Department of Public Safety & Corrections, Public Safety Services, "Louisiana State Police: LPS History," accessed June 7, 2011, <u>http://www.lsp.org/ about_hist.html</u>.

brought significant improvements and changes to the Louisiana highway system and its surrounding landscape. Gravel road surfaces were improved with hardier materials that could withstand the wear and tear of heavy usage. Concurrently, transportation amenities evolved from such structures as filling stations and tourist courts during the early twentieth century to service stations, convenience stores, and motels in more recent decades. Automobile dealerships, freight shipping enterprises, and road-building contractors were among the many services established to facilitate the increased road travel. In addition, populations spread from towns to suburban developments, with housing, shopping, and other support facilities built to provide neighborhood needs and comforts (Figures 16 and 17).

Associated Building Examples

Post WWII Suburban Development

The rush of prosperity and eagerness to shed the hardships of the Great Depression and World War II led citizens of the United States into a midcentury housing boom. Financial assistance of the government coupled with a booming economy made homeownership a reality for millions of young American families. The sheer size of these developments prohibited most from being located in urban areas and instead pushed the communities to the edge of cities, creating suburbs. Living in the suburbs often required a daily commute to jobs in nearby cities which most handled with a family car. House types evolved to include garages/carports, driveways, and other areas for offstreet parking. Owners of older homes altered the existing architecture to include these elements, such as the conversion of an existing shed to a garage, or built new structures to protect automobiles.

Supermarkets

The popularization of the car made possible the spread of large supermarkets and effectively ended the prosperity of smaller community specialty shops. Prior to the advent of supermarkets, shoppers visited a myriad of shops throughout the week to ensure that diverse goods, such as meats, cheeses, breads, and vegetables, could be properly transported and carried. Vehicles with large trunks made "one-stop" shopping easy and convenient, especially for post-WWII brides with growing families. Some supermarkets spread to Louisiana from elsewhere but some developed from smaller community stores and suppliers.

Roadside Motels

Roadside motels evolved from the inns and taverns of previous centuries. The mid-twentieth century generation of roadside motels sprawled along highways and offered guests the opportunity to park in front of their rooms. Brightly lit signs boasted of modern conveniences such as pools, air conditioning, and cocktail lounges. In New Orleans, architect Charles Colbert included all these amenities as well as television hook-ups, a child's play area, elevators, and a check-in station where motorists could register from the driver's seat of their car in the Motel de Ville, a now demolished motel along Tulane Avenue in New Orleans.

Interstate System

President Dwight Eisenhower signed the *Federal-Aid Highway Act of 1956* on July 29, 1956, ushering in a new era in public works and permanently altering transportation in the United States. Interstates benefitted commerce, the national defense, and personal travel. The first project initiated under the new law was located in St. Charles County, Missouri, and became Interstate 70. Construction began in earnest nationwide the following year, including the designation of Interstate 10 running East-West through Louisiana to the California coast.

These construction projects instigated a wave of community activism across the country as neighborhoods united to block construction through urban areas and environmentally sensitive environments. In New Orleans, Interstate 10 cut through the Tremé and damaged the cultural fabric of the vibrant neighborhood. Residents of the French Quarter feared a similar fate when a plan arose to build an elevated interstate through the historic area was approved for construction. The so-called "Second Battle of New Orleans" eventually blocked the construction. Similar epi-



Figure 16.

Milner Motors, also known as McCook's (period of significance, 1918 – mid-1950s), Monroe, Ouachita Parish. Located in the central business district of Monroe, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹⁰

¹⁰ LDHP, "Ouachita Parish, Milner Motors (also known as McCook's), Monroe," online photograph extracted from *Louisiana National Register of Historic Places Database* (2001),accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.</u> <u>ASP.</u>



Figure 17. Historic hotel associated with vehicular traffic, possibly eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana, Shreveport.

sodes played out in other urban areas which led to the system of public involvement and environmental review central to federal projects today.

Gas Stations

Service stations sprang up along existing roads and, later interstates, to capitalize on the needs of drivers. Stations featured canopy or shed roofs to shelter clerks using pumps, a small office or store, and hoses for air and water. Many included a garage area for repairs and tire storage. Modern environmental safety laws have forced many historic gas stations to cap or remove their gas tanks and pumps or replace them with modern equipment. Even without a sign, the footprint and style of a station is evident to passing motorists. Johnny's Conoco Service in Hammond features historic pumps, a sign, garage, crisp colors, and window-framed office as when Johnny Kropog took over the station in 1961.

Signage

Luring motorists cruising down the road requires a good location and eye-catching signage. In towns, store owners used the sides of buildings as space for commercial advertisements. These attractive elements promoted goods and distinguished buildings from others nearby. Roadside billboards often sported even flashier graphics to attract customers. Wooden billboards featuring a blank surface to be painted are being replaced nationwide with taller digital signs (Figures 18 and 19).



Figure 18. Café sign located along major thoroughfare, Maringouin.

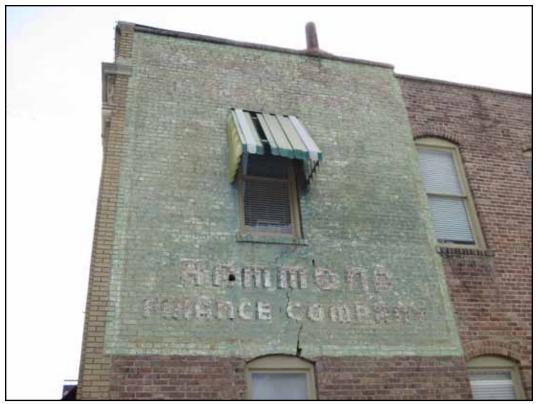


Figure 19. Traces remain of historic advertisement for Hammond Insurance Company, Hammond.

For more information, see:

- Louisiana Division of Historic Preservation. Unknown. Louisiana Architecture: 1945-1965. Post-War Subdivisions and the Ranch House.
- More Mileage Gas Station National Register of Historic Places Nomination. 2004.
- Weingroff, Richard F. 2006. "Essential to the National Interest." *Public Roads*, Vol. 60, No. 5 (May/Apr).

Summary

Louisiana roads have evolved from a sparse network of rough traces that existed during the colonial era to a sophisticated system of highways and lesser roads that connect even the most isolated resident to neighbors, schools, and urban centers. Table 3 lists the roads mentioned in this text, summarized in their past and present incarnations. These are examples of the many thoroughfares that have existed in the state throughout its history. It is important to note that, due to natural and seasonal travel obstacles, the early trails often were route networks rather than single roadways. Today, a modern highway might follow the general path (or a portion) of an early trace; however, modern technology probably has facilitated a more direct route than the early trailblazer could follow. Table 3 is followed by Table 4. which is a catalog of general structure types that might have been found along Louisiana's roads during various time periods.

Railroads

Railroads were introduced in Louisiana in 1830. Only a few lines were constructed prior to the Civil War, and most of that trackage was destroyed during hostilities. Repairs were made, and some rail lines were reinstituted or taken over by other firms during the postbellum period. Limited track mileage was added prior to 1880; however, the late nineteenth and early twentieth centuries brought a tremendous railroad boom to Louisiana, encouraged in large part by the escalation in regional timber industries, a factor that also resulted in increased immigration to the state. Although recreational railroad travel has decreased in recent years, commercial rail transportation remains an important element in Louisiana shipping logistics.

Antebellum Era

"Gravity roads," or railways, were introduced in colonial North America by the British during the latter half of the eighteenth century to facilitate the transport of heavily-loaded military vehicles. By the early nineteenth century, a few commercial horse-drawn tram roads were built in the northeastern United States. The first "common carrier" railroad constructed in the country was the Baltimore and Ohio Railroad, which began initial horse-powered runs in 1830, replaced by a steam locomotive in 1831.¹⁰¹

Following close behind the B&O was the first Louisiana railway: the Pontchartrain Railroad Company, which was chartered on January 20, 1830. Construction began nearly two months later on the 150-ft wide line that extended 4.5 miles from riverfront New Orleans along Elvsian Fields Avenue to Lake Pontchartrain, where a wharf was built to accommodate vessel connections. The harbor amenities included "a respectable hotel for boarders and visitors, to enjoy the lake breezes."¹⁰² Sometimes referred to as the Milneburg & Lake Pontchartrain line, and locally known as the "Smoky Mary," the Pontchartrain Railroad began horse-drawn runs on April 23, 1831; however, in 1832, the track was outfitted with a steam-powered locomotive imported from England. The Pontchartrain engine pulled 12 coach cars that could carry over 300 passengers.¹⁰³ According to a contemporary journal,

103 J.D.B. DeBow [James Dunwoody Brownson], ed., "Railroad System of the South," and "Baton Rouge, Grosse Tete, and Opelousas Railroad," in *DeBow's Re*view: Agricultural, Commercial, Industrial Progress and Resources, vol. 26(5) (1859), accessed June 13, 2011, <u>http://quod.lib.umich.edu/cgi/t/text/text-idx?c=mo</u> <u>ajrnl&idno=acg1336.1-26.005.</u>; Hansen, Louisiana, 77.

¹⁰¹ Library of Congress, "History of Railroads and Maps," accessed June 23, 2011, <u>http://memory.loc.gov/ammem/gmdhtml/rrhtml/rrintro.html</u>.; Jay Phillips, "The Baltimore & Ohio Railroad," accessed June 23, 2011, http://csx.history.railfan.net/history/histbo.html.

¹⁰² American Railroad Journal, "New-Orleans—Internal Improvements" and "Internal Improvements of Louisiana," vol.V (New York: D.E. Minor & George C. Schaeffer, 1836), 516, accessed June 21, 2011, Google Books edition.

COLONIAL ROAD NAME	19th CENTURY ROAD NAME	GENERAL 20th CENTURY ROUTE	LOCATION IN LOUISIANA
River Road	River Road	Great River Road - scenic byway	North-south, generally paralleling both sides of the Mississippi River
Camino Real, aka King's Road		La. Hwy. 6	East-west from Natchitoches on the Red River, through Los Adaes and Fort Jesup, to the Chabanan / Gaines Ferry on the Sabine River
Coushatta Trace, aka Contraband Trace or Smugglers' Road	Coushatta Trace, aka Contraband Trace or Smugglers' Road		Northwest-southeast from the Sabine River to Alexandria and Opelousas
Nolan's Trace	Hickman's Trace - middle route of Old Beef Trail	U.S. Hwy. 84, La. Hwy. 28, & La. Hwy. 8 - road network	East-west from Vidalia on the Mississippi River, through Alexandria on the Red River, to Hickman's / Burr's Ferry on the Sabine River
Spanish Trace, aka Lower Road (and colloq. as Old Spanish Trail)	Opelousas Road - southern route of Old Beef Trail	Old Spanish Trail, later U.S. Hwy. 90, I-10	East-west from the LA/MS state line near Slidell to the Sabine River
	Federal Road	U.S. Hwy. 190	East-west from the LA/MS state line near Slidell to Lake Pontchartrain at Madisonville
	Jackson Military Road	Washington Parish Rd. 6, aka Old Military Road	Southwest-northeast from Madisonville through northeastern Washington Parish
	Military Road No. 11		North-south through Fort Jesup and western Louisiana
	Wire Road	Generally along U.S. Hwy. 80	East-west between Ouachita River and Shreveport
	Holmesville Road	La. Hwy. 25	North-south from the LA/MS state line to Covington
	Shreveport-Natchitoches Road, aka Old Stage Road, Mansfield & Fort Jesup Road, and Mansfield-Pleasant Hill Road	La. Hwy. 175	North-south through Mansfield area
	Baton Rouge and Clinton Plank Road	Plank Road / Louisiana Hwy. 67	North-south between Clinton and Baton Rouge
	Grosse Tete and Baton Rouge Plank Road		East-west between present-day Port Allen and Grosse Tete
	Shed Road	Old Shed Road	East-west between present-day Red Chute and Bossier City
		Dixie Overland Highway, later U.S. Hwy. 80, I-20	East-west across northern Louisiana

 Table 3.
 Selected Louisiana roads, as described in the current text.

Table 4.General structure types that might have been built along Louisiana roads.

TIME PERIOD						
GENERAL STRUCTURE TYPES	COLONIAL ERA	19th CENTURY	20th CENTURY TO PRESENT			
Transportation Operations	Blacksmith shops, livery stables	Blacksmith shops, livery stables, beef stands (cattle pens & drover lodging), toll stations	Toll booths, truck weigh-stations, repair shops, parking garages			
Migration/Travel	Inns, livery stables, taverns	Inns, hotels, livery stables, restaurants, taverns, bicycle repair shops	Motels & tourist courts, restaurants & diners, roadhouses, gas & service stations, tourist attractions, bus stops & terminals, convenience stores, car washes, drive-in restaurants & theatres			
Commercial	Trading posts, warehouses	Post offices, stores, freight shipping enterprises, delivery stables	Auto dealerships, freight shipping enterprises, auto/truck supply shops, post offices, stores, shopping malls			
Industrial	Cart/wagon builders	Cart/wagon builders, road-building contractors, timbering facilities	Vehicle & parts fabricators, road-building contractors, petroleum processing facilities, pipelines & related facilities, wholesale petroleum distribution manifolds			
Military	Forts & defense works	Forts & defense works	Interstate system			
Residential	Houses & affiliated structures	Town residences, boarding houses, plantation & farm homes with affiliated structures, schools	Suburban developments, schools			

"the Pontchartrain railroad was the second completed in the United States; and is second to none in construction and management."¹⁰⁴

Although much of its historical usage was to convey cargo and excursionists to its namesake lake, the Pontchartrain Railroad also played an important role in carrying news to and from New Orleans. In January 1837, George Wilkins Kendall and Francis A. Lumsden began publishing the New Orleans Picayune, "the city's first cheap daily."¹⁰⁵ In addition to being a journalist, Kendall was quite an adventurer, and, through reports of his experiences and imprisonment with the Texan Santa Fé Expedition of 1841-1842, the Picavune "became a powerful force for the annexation of Texas and westward expansion."106 When the Mexican War (1846-1848) broke out, Kendall volunteered with U.S. forces, reporting from the front lines and even participating in reconnaissance and battle. By express rider and steamer, Kendall sent out daily dispatches from Mexico, and he became known as the first American war correspondent.¹⁰⁷ Prior to the Mexican War, Kendall and the Picayune, working with the Baltimore Sun Company, organized a multimodal express system to speed the news between New Orleans and Washington, D.C.:

The route was as follows: New Orleans to Milneburg by the Pontchartrain railroad ...; from Milneburg to Mobile by steamer; thence by horseback via Montgomery, Charleston and Richmond to Washington.

On the steamer which received the dispatches from Washington and the East, The Picayune had cases of type, printers and imposing stones. While the steamer strained its boilers to clip minutes from the run, the printers put the news in type, and locked the chases. Before the lines were made fast to the Milneburg pier, they

104 American Railroad Journal, "New Orleans," 777.

105 Thomas W. Cutrer, "Kendall, George Wilkins (1809-1867), article extracted from *The Handbook of Texas Online*, accessed June 21, 2011, <u>http://www.tsha.utexas.edu/handbook/online/</u>. dashed with the type page to the train, or to a carriage to which was hitched the fastest team in New Orleans, if the train was not running. Eager pressmen received the forms at The Picayune's door, slapped them upon the press, and another scoop was rushing into the world [sic throughout].¹⁰⁸

With this express network in place, the New Orleans *Picayune* "printed the news of the [Mexican War] campaign before the president of the United States had the information,"¹⁰⁹ and the Baltimore *Sun* "was the first source to inform President Polk of the surrender of the city of Vera Cruz, assuring a United States victory in the Mexican War."¹¹⁰

Railroad development may be viewed as a factor in the evolution of New Orleans as an important port city. In 1840, New Orleans ranked third in the world in population and fourth in port commerce - in the latter category falling behind only New York and the English ports of London and Liverpool. Other railroad lines that began operations in New Orleans during the antebellum years included the New Orleans & Carrollton (1835), the Mexican Gulf (1850), the Jefferson & Lake Pontchartrain (1853), the New Orleans, Opelousas & Great Western (ca. 1854-1857), and the New Orleans, Jackson & Great Northern (1858). These city-headquartered lines served various purposes: from urban street railways, facilitating the development and growth of the metropolitan area, to commercial transport, expanding the New Orleans port accessibility from the Mississippi River to Lakes Pontchartrain and Borgne. The south-north New Orleans, Jackson & Great Northern Railroad brought an interior route to the city, while the east-west New Orleans, Opelousas & Great Western Railroad connected the port of New Orleans to Brashear City (present-day Morgan City), another Louisiana Gulf Coast-access port.111

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.; Thomas Ewing Dabney, "The Father of Scoops,"The Times-Picayune/New Orleans States Magazine, November 29, 1936:5, available in The Times-Picayune Historical Archive, accessed June 21, 2011, <u>http://nl.newsbank.com/nl-search/we/</u> <u>Archives?p_product=HA-TP&p_theme=histpaper&p_action=keyword.</u>

¹⁰⁸ Dabney, "The Father of Scoops."

¹⁰⁹ Ibid.

¹¹⁰ Baltimore Sun, "About the Baltimore Sun," accessed June 22, 2011, <u>http://www.baltimoresun.com/about/bal-about-baltsun,0,2763999.htmlstory</u>.

¹¹¹ David L. Bright, "Louisiana and Texas Confederate Railroads," articles extracted from *Confederate Railroads*, accessed June 13-14, 2011, <u>http://www.csa-</u> <u>railroads.com/index.htm.</u>; Hansen, *Louisiana*, 77-78.; Richard Campanella, *Bienville's Dilemma: A Historical Geography of New Orleans* (Lafayette, Louisiana: Center

Only a few rail lines were established beyond New Orleans prior to the Civil War. The West Feliciana Railroad was chartered in 1831 and constructed in 1834-1842 from Bayou Sara, Louisiana, to Woodville, Mississippi. Like a number of early railways, it began its early runs utilizing mule-power, but soon switched to steam operations. During the same general time period and a short distance east of the West Feliciana line, the Clinton & Port Hudson Railroad was built between its namesake towns, with a short spur to Jackson, Louisiana. In central Louisiana, the Red River Railroad was constructed ca. 1836-1841 from Alexandria to Cheneyville, i.e., the Red River to Bayou Boeuf. During the 1850s, the Baton Rouge, Grosse Tete & Opelousas Railroad succeeded the Grosse Tete & Baton Rouge Plank Road Company, referenced in the road transportation section of this report (Table 5).

Some of these antebellum short lines were established to facilitate the transport of cotton and other agricultural products from interior plantations to navigable waterways. For instance, the West Feliciana Railroad connected the cottonrich plantations between Woodville, Mississippi, and St. Francisville, Louisiana, to Bayou Sara, a Mississippi River port situated downstream from the more treacherous upriver bends of that waterway. Other lines were intended to provide connections to other proposed railways, many of which were not completed prior to the Civil War. One such rail line was the Baton Rouge, Grosse Tete & Opelousas Railroad, which was in operation by mid-1857 between the west bank of the Mississippi River (at present-day Port Allen) and

Table 5.	Early Louisiana railroads (American Railroad Journal 2007 [1836]:777-778; Bright 2011; Davis 1971:206; DeBow		
	1859:592-593; Goins and Caldwell 1995:37, 68; Mississippi Railroad Information 2008; Nichols 1979:11-13; Old		
	RailHistory.com 2011; U.S. Supreme Court 2011 [1886]). Any date discrepancies are due to source variations.		

RAILROAD NAME	CHARTERED	CONSTRUCTED THROUGH LOUISIANA	LOCATION IN LOUISIANA
Pontchartrain Railroad, aka Milneburg & Lake Pontchartrain Railroad	1830	1831	Short road between New Orleans and Lake Pontchartrain, east of J&LPRR
West Feliciana Railroad	1831	1834-1842	S-N from Bayou Sara, LA, to Woodville, MS
1) Alexandria & Cheneyville Railroad, reincorporated as 2) Red River Railroad	1) 1833; 2) 1835	1836-1841	N-S from Alexandria to Bayou Boeuf
Clinton & Port Hudson Railroad	1833	ca. 1836-1841	N-S from Clinton to Port Hudson, LA, w/ NW spur to Jackson, LA
New Orleans & Carrollton Railroad	1833	1835	E-W from Tivoli (present-day Lee) Circle in New Orleans to town of Carrollton (now part of New Orleans), w/ various spurs to the Mississippi River
New Orleans & Nashville Railroad	1835	ca. 1830s	E-W from New Orleans to just west of Bayou Labranche
Mexican Gulf Railroad	1837	1850	W-E from New Orleans to Proctorville on Lake Borgne
Jefferson & Lake Pontchartrain Railroad	1840	ca. 1851-1853	Short road between town of Carrollton and Lake Pontchartrain, west of PRR
New Orleans, Jackson & Great Northern Railroad	1852	1852-1854	S-N from New Orleans to LA/MS state line
New Orleans, Opelousas & Great Western Railroad	1852	1852-1857	E-W from Algiers to Brashear City (present-day Morgan City)
Vicksburg, Shreveport & Texas Railroad	1852	ca. 1853-1860	E-W from Vicksburg to Monroe
1) Grosse Tete & Baton Rouge Plank Road Company, reincorporated as 2) Baton Rouge, Grosse Tete & Opelousas Railroad	1) 1852; 2) 1853 or 1854	ca. mid-1850s-1862	E-W from present-day Port Allen to just west of Bayou Grosse Tete
1) Texas Western Railroad Company, reincorporated as 2) Southern Pacific Railroad (different from better-known rail line of same name)	1) 1852; 2) 1856	ca. 1861-1864	W-E from Jonesville, TX to Greenwood, LA

for Louisiana Studies, University of Louisiana at Lafayette, 2008), 33-34, 155.; Mississippi Railroad Information, "Railroad History of Lines Located in Mississippi with Some Information on Lines in Kentucky, Tennessee, Alabama, and Louisiana," accessed June 24, 2011, <u>http://</u> www.icrr.net/rrhist.htm.

Bayou Grosse Tete. As proposed, this line was to continue westward to the Atchafalaya River, with a northward link to the Red River; however, by 1862, the track had been extended beyond Bayou Grosse Tete by only 12 miles. Like many such optimistic rail company expectations, the anticipated connections did not occur until the railroad boom of the late nineteenth – early twentieth centuries.¹¹²

The only rail line to be constructed in northern Louisiana during the antebellum era was the Vicksburg, Shreveport & Texas Railroad, incorporated in 1852. As chartered, this railway was to provide a direct line from northeastern Texas to the Mississippi River, thereby avoiding the unreliable navigation conditions of the Red River. By 1861, the railroad was completed only between Vicksburg, Mississippi, and Monroe, Louisiana. Grading work had been started on the western segment between Shreveport and the Louisiana/ Texas state line, but the work was interrupted by the outbreak of the Civil War.¹¹³

The New Orleans, Jackson & Great Northern Railroad was one of the more significant early Louisiana railways. Constructed during the 1850s, this line extended from New Orleans around the western shore of Lake Pontchartrain and then northward through southeastern Louisiana to Canton, Mississippi, a short distance north of Jackson. The rail company intended to continue through northeastern Mississippi to link with the Mobile & Ohio Railroad; however, that work was abandoned until after the Civil War. Along the track route through eastern Livingston Parish (an area that in 1869 became part of southern Tangipahoa Parish), Gaston T. Raoul established a railcar factory, the Southern Car Works - one of the few railroad materials manufacturers in the South prior to the Civil War. In addition to the plant structures, workers' houses were built nearby, and the village that evolved there became known as Independence. The Southern Car

- 112 Bright, "Railroads."; DeBow, "Railroad System," 593.; Goins & Caldwell, Atlas, 37, 68.; American Railroad Journal, "New Orleans," 777-78.
- 113 Bright, "Railroads."; Goins & Caldwell, Atlas, 68.; U.S. Supreme Court, Vicksburg, S & P R Co [Vicksburg, Shreveport & Pacific Railroad Company] v. Dennis, 116U.S. 665 (1886), accessed July 6, 2011, <u>http:// caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=us&vo l=116&invol=665.;</u>

Works manufactured rolling stock in this location until ca. 1870, when the business failed and was removed to McComb, Mississippi, under new ownership.¹¹⁴

Most importantly to the development of Louisiana, the early railroads encouraged population growth. Due to its location and connections, the New Orleans, Jackson & Great Northern Railroad may be viewed as a good example of this regional expansion. As the line was surveyed in 1851-1852, the value of the adjoining public lands rose and land sales began. Farmers purchased rail-side acreage for the anticipated ease of farm-to-market transportation. Where depots were planned - generally at 10-mile intervals along the track – stores and mills were built, marking the beginnings of future towns along the route, e.g., Amite. In areas already inhabited, enterprising pioneers took advantage of the railroad to build up their isolated settlements. In addition, wealthy New Orleans residents acquired properties north of Lake Pontchartrain in order to establish summer retreats away from the heat and miasma of the city.115

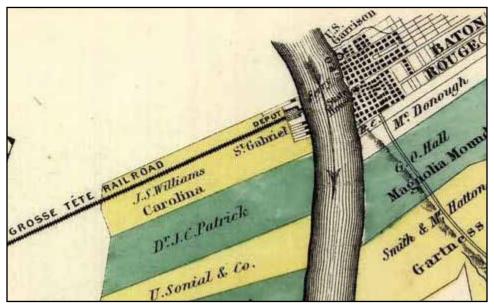
The first three decades of railroad construction in Louisiana brought relatively little trackage to the state. Transportation during this period remained inexorably tied to the state's navigable waterways. This factor focused regional railroad construction toward providing efficient links from interior lands to the Mississippi River, the Red River, and Lake Pontchartrain, where steamboats

- 114 Robert C. Black, III, "The Railroads of the Confederacy," accessed June 28, 2011, Google Books, 22-23.; Emory Libraries, Emory University, Atlanta, "Emory Finding Aids: Raoul Family, Raoul Family Papers, 1865-1985," accessed June 28, 2011, <u>http://findingaids.library.emory.edu/documents/raoul548</u>.; C. Howard Nichols, *Tangipahoa Crossings: Excursions into Tangipahoa History* (Baton Rouge: Moran Publishing, 1979), 16, 43.; Tangipahoa Parish Centennial History Committee, "Out of Four-One: Tangipahoa Parish, Louisiana, 1869-1969, online article originally published in *Tangipahoa Parish, Louisiana, Centennial, March 23-29, 1969: Official Souvenir Program*, accessed June 28, 2011, <u>http://freepages.genealogy.rootsweb.ancestry.com/~washingtonparish/outoffourone.pdf.</u>
- 115 John Valsin Coumes, "Individual Studies of Place-Names in Tangipahoa Parish, Louisiana," in Tangipahoa Parish, Louisiana, Centennial, March 23-29, 1969: Official Souvenir Program.; Nichols, Tangipahoa, 11-15, 18-19, 24-25, 48-49, 55-56.; Tangipahoa Parish Centennial History Committee, "Program."

continued the shipment of local crops and products to market and, conversely, delivered needed provisions and supplies to Louisiana towns and plantations.¹¹⁶ Structures built rail-side would have reflected the dependence on waterborne links. A waterfront railroad terminus during this period would have included rail-to-port facilities such as freight depots, warehouses, and links to shipping wharves. In addition, hotels and other amenities were constructed along Lake Pontchartrain to take advantage of the New Orleans rail lines catering to excursionists.

Because the earliest railroads were pulled by horses or mules prior to the introduction of steam-powered locomotives, stables and blacksmith shops would have been important rail yard appurtenances. Freight deliveries to and from the depot would have been carried by horse-drawn vehicles, as well. In addition, travelers might have boarded their personal mounts while traveling by rail or, upon arrival at a destination, hired horses for transport; therefore, livery stables would have been located near railroad depots. With the increase in steam locomotive use, machine shops would have appeared in the railroad yards. As previously mentioned, Louisiana also was home to the Southern Car Works, a railcar manufactory that would have included sheds, platforms, and other associated structures.

As railroads were constructed through the state, population followed, but remained fairly sparse outside of New Orleans during the antebellum period. Railways facilitated urban development in the New Orleans area, and the expanding rail network encouraged population growth in the Louisiana interior. Structures built to accommodate the growing populace along the railroads would have included houses, stores, mills, and other structures associated with towns, commercial enterprises, and farms (Figure 20).





Excerpt from *Plantations on the Mississippi River from Natchez to New Orleans* [Norman's Chart], West Baton Rouge Parish region. Map excerpt depicts the "Grosse Tete Railroad" depot along the west bank of the Mississippi River, opposite Baton Rouge. Located at the eastern terminus of the 1850s-era Baton Rouge, Grosse Tete & Opelousas Railroad, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹¹

¹¹⁶ Goins & Caldwell, *Atlas*, 37.; Kniffen & Hilliard, *Louisiana*, 148.

¹¹ Adrien Persac, *Plantations on the Mississippi River from Natchez to New Orleans* [Norman's Chart], New Orleans region (1858).

Associated Building Examples Railroad Yards

Before the Civil War, railroads made limited ingress into Louisiana. However, even the new technology required dedicated yard space for the maintenance of equipment. These yards included dedicated buildings for fuel, tools, and passenger depots. These yards were often located at edges of towns or near other modes of transportation to facilitate the transfer of goods. For example, the New Orleans, Jackson, & Great Northern railroad yard was in proximity to the New Basin Canal and numerous lumber yards. These railroad yards often split passenger and freight depots into separate spheres, resulting in distinct structures for the two purposes.

For more information on early railroads, see:

- Hilton, George Woodman. 1990. *American Narrow Gauge Railroads*. Stanford University Press, Palo Alto, California.
- Library of Congress. 1998. "History of Railroads and Maps." Accessed June 23, 2011. <u>http://</u><u>memory.loc.gov/ammem/gmdhtml/rrhtml/rrintro.</u> <u>html</u>.
- "New-Orleans—Internal Improvements" and "Internal Improvements of Louisiana." American Railroad Journal, and Advocate of Internal Improvements, vol. V, pp. 516-517 and 777-778, respectively. 2007. (Originally published 1836, D. E. Minor and George C. Schaeffer, New York.) Accessed June 21, 2011. <u>http://</u> books.google.com.

The Civil War

The Civil War brought a halt to railroad construction in Louisiana. During the war years, the state's rail system took on an altered role, substituting the movement of troops and supplies for the earlier crop shipments and excursion trips. Although Louisiana did not experience as much military activity as certain other southern states, some of its rail lines were brought into service to aid the Confederate cause, while others that did not serve a strategic purpose were neglected.

In May 1861, a Confederate training base, Camp Moore, was established along the east side

of the New Orleans, Jackson and Great Northern Railroad at a location near Tangipahoa Station in eastern St. Helena Parish (which later became part of northern Tangipahoa Parish in 1869). Troops were transferred by rail to Camp Moore, which replaced Camp Walker (the current site of Metairie Cemetery) as the region's primary training center due to a number of problems, including marshy grounds, limited space, an inadequate water supply, poor sanitary conditions, and the distractions of New Orleans. Prior to the Union occupation of New Orleans in April 1862, Confederate forces evacuated the city (in order to save it from bombardment), traveling up the New Orleans, Jackson and Great Northern Railroad to temporarily bivouac at Camp Moore. When the troops left New Orleans, they brought large quantities of arms and ammunition, equipment, wagons, and supplies with them, pressing Camp Moore and the railway into service as Confederate supply warehouse and conduit, respectively.¹¹⁷

In northeastern Louisiana, the Vicksburg, Shreveport & Texas Railroad between Monroe and the Mississippi River also proved strategically important to the Confederacy as a troop and supply conveyance to Mississippi and points eastward during the early years of the war. The line was interrupted when breaks in the river levees caused extensive flooding near the Mississippi River. Confederate transit continued between Delhi (in present-day Richland Parish) and Monroe, though, until Union forces destroyed sections of the track and associated structures along that route ca. 1863.¹¹⁸

After Baton Rouge was captured in 1862 by Federal forces, the Louisiana state capital was moved into the interior to Opelousas, then,

- 117 Casey, Encyclopedia, 122-24, 241-42.; Powell A. Casey, "The Story of Camp Moore," in The Story of Camp Moore; and, Life at Camp Moore among the Volunteers (Baton Rouge: FPHC, 1985), 9-11, 21-24.; U.S. Secretary of War, Series I, 53, 679-80.; Winters, Civil War, 22, 95-101.
- 118 Richland Parish Development Board, Richland Parish Resources and Facilities (Baton Rouge: State of Louisiana, Department of Public Works, Planning Division, ca. 1952), 10.; U.S. Supreme Court, Vicksburg.; Frederick W. Williamson and Lillian Herron Williamson, Northeast Louisiana: A Narrative History of the Ouachita River Valley and the Concordia Country (Monroe, Louisiana: Historical Record Association, 1939), 151.

in January of 1863, to Shreveport. A few months later. Shreveport became headquarters for the Trans-Mississippi Department, composed of the Confederate military districts of northern and western Louisiana, Texas, Arkansas, and the Indian Territory. As noted previously in the Louisiana roads context, Shreveport was vital to the Confederate cause as a base for transport between western suppliers and the Confederacy. Although the Vicksburg, Shreveport & Texas Railroad had been proposed through northwestern Louisiana, the route between Marshall, Texas, and Shreveport only had been graded by the time the war began. Due to the scarcity of iron and its priority usage for Confederate defense measures (e.g., the construction of ironclad vessels and more strategically placed railroads), work was halted for a time on the Shreveport section. By 1864, though, the track had been completed beyond the state line as far as Greenwood, Louisiana - some 14 miles west of Shreveport, but close enough to become part of the important "Texas Trail" transport line. This northwestern segment was built under the auspices of the Southern Pacific Railroad, a different line than the commonly known modern rail system of the same name.119

The Civil War effectively ended railroad expansion in Louisiana for a number of years. During hostilities, iron was needed for other uses. In some areas, occupying troops seized the existing rail lines, and, in other regions, the railroad tracks and rolling stock were destroyed – by either Union or Confederate forces – in order to keep the opposing armies from using those transit lines. Still other rail sections simply were neglected; if they served no strategic purpose, there was no justification for the funds and manpower required to keep them in operation or repair.¹²⁰

Due to the lack of railroad construction in Louisiana during the Civil War, there would have been few affiliated buildings added to the landscape; in fact, it is more likely that many existing structures would have been damaged or destroyed as the result of hostilities. There might have been some replacement operations and maintenance structures on some lines and perhaps a new depot at the Greenwood rail terminus. The New Orleans, Jackson & Great Northern Railroad probably experienced the most building activity of any of the other railways in the state during this period; however, the bulk of that construction was related to the establishment of Camp Moore near Tangipahoa Station. Although largely temporary, structures would have been built there to handle the transport of troops and supplies and to facilitate the storage of provisions, arms, and ammunitions, e.g., freight platforms, warehouses, magazines, and sutlers' stores (Figure 21).

<u>Associated Building Examples</u> Camp Moore

The construction of the New Orleans, Jackson, & Great Northern railroad resulted in a rail line that hugged the western shore of Lake Pontchartrain before moving north. Upon the capture of New Orleans by Federal troops in 1862, the railroad served as an important means of moving troops and goods out of the threatened city, with Ponchatoula serving as the southern Confederate hub of the railroad during the War. Near Ponchatoula, the Confederate Camp Moore became a military headquarters as well as a site for the training of new troops. Hastily constructed, the majority of the camp structures likely were impermanent, such as tents. However, there likely were some more permanent buildings associated with military life, such as a hospital and officers quarters.

For more information on Camp Moore, see:

Casey, Powell A. 1983. Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981. Claitor's Publishing Division, Baton Rouge.

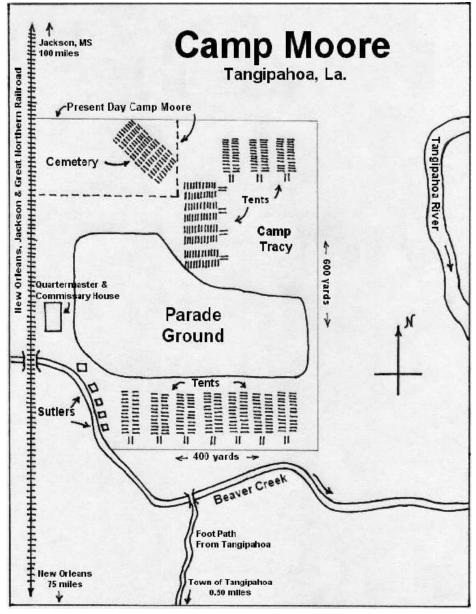
_____1985. "The Story of Camp Moore." In *The Story of Camp Moore; and, Life at Camp Moore among the Volunteers*. FPHC, Baton Rouge.

Postbellum Era through Early Twentieth Century

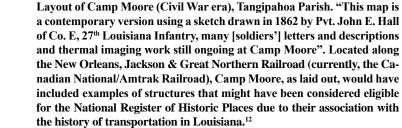
Following the end of hostilities, Louisiana, like much of the South, had limited funds to repair damaged railroads or to build new lines.

¹¹⁹ Bright, "Railroads."; Carruth, "Shreveport," 20-21.; Parish of Caddo, "Caddo Parish: Railroads," accessed July 1, 2011, <u>http://www.caddohistory.com/railroads.html</u>.; Winters, *Civil War*, 210-11, 234, 319-20.

¹²⁰ Bright, "Railroads."; Goins & Caldwell, Atlas, 68.







¹² Camp Moore Historical Association, Layout of Camp Moore (2002), accessed October 19, 2004, <u>http://personal.atl.bellsouth.net/c/o/cosby_w/layout.htm</u>.

Still, work progressed to rebuild the principal antebellum railroads until the Panic of 1873 slowed the economy and brought a halt to much of the railroad construction throughout the country. One Louisiana railway that was completed during the 1870s was the Vidalia & Lake Concordia Railroad & Steamboat line, a nine-mile narrow-gauge railroad that was constructed in 1876 between Vidalia and Concordia to support the area lumber and resort industries; a few years later, it was renamed the Vidalia & Western, which became part of the Natchez. Red River & Texas Railroad in 1881. Despite these early postbellum attempts to regenerate the Louisiana rail business, the track building boom did not begin in the state until the 1880s.121

During the last two decades of the nineteenth century and the pre-World War I years of the twentieth century, Louisiana experienced an extraordinary period of railroad growth. According to one source, "total rail mileage in the state increased ninefold, from 652 in 1880 to 5,728 in 1915."122 Rising industrial demands fed the railway expansion. Rather than existing to aid water transport as they had prior to the Civil War, the postbellum rail lines began to compete with waterborne commerce. Towns vied for railroad access, and Louisiana's trackside public lands sold rapidly. If a new track bypassed a community, its populace was left with a dilemma – move to the railway or face decline. In either case, a ghost town often resulted, whether it was abandoned or it simply faded away.¹²³

The western Louisiana town of Pleasant Hill may be viewed as an example of community migration. The original village was founded in southeastern DeSoto Parish in the 1840s, and it was the site of a pivotal battle of the 1864 Red River Campaign during the Civil War. When the Texas & Pacific Railway Company constructed its line through the region ca. 1881-1882, bypassing Pleasant Hill, the entire community was moved a few kilometers southeastward into northeastern Sabine Parish in order to access the new railroad. The transferred town and its railway depot originally were called Sodus Station; however, most of its residents, who had moved along with the community, persisted in calling their new location Pleasant Hill. The railroad commissioners finally discontinued the name Sodus in 1922, leaving the more popular appellation in its place.¹²⁴

By 1889, there were several mainline railroads crossing the state of Louisiana. These railways included the New Orleans & Mobile (part of the Louisville & Nashville system); the New Orleans & Northeastern: the Chicago, St. Louis & New Orleans (part of the Illinois Central network); the Louisville, New Orleans & Texas; the Texas & Pacific; the St. Louis, Arkansas & Texas (Shreveport Branch); the Vicksburg, Shreveport & Pacific: the Houston & Shreveport: and at least two branches of the Southern Pacific system: Morgan's Louisiana & Texas Railroad and the Louisiana Western Railroad (Figure 22). Some of these lines (or portions of such) existed prior to the Civil War, e.g., the Chicago, St. Louis & New Orleans Railroad, which was a successor to the antebellum New Orleans, Jackson & Great Northern Railroad. Other railways were built along new routes or were extensions of older lines. Most importantly, these mainlines connected Louisiana to other principal railroads and major shipping markets. This expansion of the state's rail network continued well into the early twentieth century.¹²⁵

A number of short lines also were improved or newly constructed throughout Louisiana during the late nineteenth and early twentieth centuries. These railways served various purposes – some

¹²¹ Davis, "Canals," 274-75.; Goins & Caldwell, Atlas, 68-69.; George Woodman Hilton, American Narrow Gauge Railroads (Palo Alto, California: Stanford University Press, 1990), 406.

¹²² Goins & Caldwell, Atlas, 69.

¹²³ Goins & Caldwell, Atlas, 69.

¹²⁴ Viola Carruth, "A Brief History of Sabine Parish," (2002), accessed January 18, 2007, <u>http://www.toledo-bend.com/sabinepar/history/index.asp</u>.; Pape, "Pleasant Hill."; Brian D. Smith, "Railroading in North Louisiana," (2003), accessed February 1, 2007, <u>http://www.briansrails.com/northlouisiana.html</u>.; Unknown author, "A Brief History of Pleasant Hill, Louisiana," (2002), accessed January 18, 2007, <u>http://www.toledo-bend.com/sabinepar/history/index.asp?request=pleasant</u>.

¹²⁵ Goins & Caldwell, Atlas, 37, 68-69.; Tony Howe & David S. Price, comps., "Mainline Railroads of Mississippi" & "Shortline and Logging Railroads of Louisiana," (2009), accessed July 5, 2011, <u>http://www.msrailroads.com/Mississippi Railroads.htm</u>.; Henry Varnum Poor, *Poor's Manual of the Railroads of the United States*, vol. 22 (2008[1889]), 652-711, 810-11, Appendix, accessed June 13, 2011, Google Books.



Figure 22. Historic freight station of the Illinois Central Railroad, possibly eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana, Shreveport.

provided connections to major rail lines, while others facilitated area industries. For instance, the 2-mile Mansfield Railway & Transportation Company and the 11-mile Natchitoches Railroad Company opened in 1882 and 1887, respectively, linking small northwestern Louisiana towns to the main line of the Texas & Pacific Railroad.¹²⁶ In southeastern Louisiana, the New Orleans & Gulf Railroad Company consolidated existing lines below the city and extended the route down the east bank of the Mississippi River and into Plaquemines Parish. As part of the 1887 merger agreement, the New Orleans & Gulf Railroad Company "purchased the three steamboats and the entire business ... of the Red River and Coast Line Steamboat Co., from New Orleans to the Jetties. This purchase included the United States mail contract, and gave the company a monopoly of all traffic from both sides of the Mississippi River, between New Orleans and the Jetties."¹²⁷

In addition to the major railways that attracted economic development, dozens of Louisiana branch lines were built as logging railroads. As the nineteenth century drew to a close, the timber and naval stores industries became increasingly important to the state economy. Following the Civil War, vast quantities of lumber were needed to repair the wartime ravages throughout the South and to supply the demands of Northern industry. Louisiana contained hundreds of thousands of acres of old-growth pine forests, but until the construction of railroads through the wooded regions in the 1880s and 1890s, there was no effective way to transport lumber and timber

¹²⁶ Poor, Poor's Manual, 685, 698.

¹²⁷ Ibid, 698-99.

products to market from the interior lands. Prior to that time, timbermen floated cut logs down the navigable rivers to market town sawmills, but the railroad enabled the development of interior sawmills and lumber/turpentine camps and towns, spawning a timber boom that lasted well into the 1920s.¹²⁸

Many of the corporate lumber interests that purchased Louisiana timber acreage were out-ofstate investors. Lumber was the principal harvest of the state forests; however, Louisiana also supported a lesser naval stores industry (turpentine, rosin, tar, and pitch), particularly during the early twentieth century. In addition to hiring local laborers, the timber concerns brought in hundreds of migrant hands to work the Louisiana forests. The companies established lumber/turpentine camps and mill towns that included crew housing, as well as the sawmills, lumber yards, turpentine distilleries, tar kilns, and other adjunct facilities necessary to the industries. The mills generally were established near main rail lines, and tram railways were constructed from the mills into the forests.129

Many of the lumber/mill towns declined and were abandoned with the depletion of the Louisiana forests by the early 1930s; however, a number of these communities evolved into permanent towns. This development was due largely to workers and their families who migrated to the region following the railroad construction and the timber industry. Some continued westward as the rail and timber industries shifted beyond Louisiana's boundaries, but many remained to establish permanent roots in the state. A large segment of this new Louisiana population came from Iowa, Kansas, Nebraska, and other Midwestern states. Although many came to work the railroads and the pine forests, many others put their agrarian backgrounds to use, adapting their traditional farming methods to their new homes in the South.130

In addition to Midwestern migration, southeastern Louisiana experienced a wave of Italian immigration during the late nineteenth and early twentieth centuries. During the 1870s-1880s, immediately after reconstruction, the railroad companies, in conjunction with sugar planters and the State Immigration Bureau, encouraged Sicilians to immigrate to Louisiana to work in the cane fields of the "sugar parishes" along the Mississippi River. Still more Italian immigrants came to work the fruit boat docks in New Orleans during this period. During the next decade, many of these Italian laborers also were recruited as pickers in the Tangipahoa Parish strawberry fields after the end of cane harvesting season. Encouraged by the low cost of land there, many Sicilian pickers eventually purchased property in Tangipahoa Parish, where their descendants prosper today. Many Sicilians also established homes and truck farms in the New Orleans area, which currently boasts a significant Italian-American population¹³¹ (Figure 23).

While the postbellum railroad network encouraged migration to and permanent settlement in Louisiana, it also became the center of controversy in a legal battle that proved to be a pivotal point in the early struggle for civil rights nationwide. In the aftermath of the Civil War and Reconstruction, racial segregation statutes were instituted in the South; these "Jim Crow laws" gave sanction – "by law or by custom [to] racial ostracism [that] eventually extended to virtually all forms of public transportation, to sports and recreation, to hospitals, orphanages, prisons ..."¹³². As part of this segregation, African Americans were denied first-class accommodation passage on trains, steamers, and other transportation carriers. In 1890, Louisiana became the fourth Southern state to pass a law "requiring railroads to carry Negroes in separate cars or behind partitions" - i.e., out of sight of white passengers (C. Vann Woodward, quoted in Federal Highway Adminis-

¹²⁸ W.T. Block, Early Sawmill Towns of the Louisiana-Texas Borderlands (Hemphill, Texas: Dogwood Press, 1996), 190-92.; Howe & Price, "Railroads."; Smith, Good Home, 95-96, 113-32.

¹²⁹ Block, Early Sawmill.; Smith, Good Home, 116-33.

¹³⁰ Block, Early Sawmill.; Robert Brantley Cagle, "Formative Years," in *The Centennial History of Lake Charles*, 1867-1967 (Lake Charles, Louisiana: Lake Charles Letter Shop, 1967).; Smith, Good Home, 167-90.

¹³¹ John V. Baiamonte, Jr., "Immigrants in Rural America: A Study of the Italians of Tangipahoa Parish, Louisiana" (Ph.D. dissertation, Mississippi State University, 1972).; Campanella, *Dilemma*, 39, 165.; Nichols, *Tangipahoa*, 34-35.

¹³² C. Vann Woodward quoted in Federal Highway Administration, "The Road to Civil Rights: Introducing Jim Crow," (2011), accessed May 23, 2011, <u>http://www. fhwa.dot.gov/highwayhistory/road/s04.cfm</u>.



Figure 23. Historic warehouse built to house strawberries for transport now converted to local grocery store, possibly eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana, Hammond.

tration 2011c). On June 7, 1892, Homer Adolph Plessy, "a Creole of Color," who was one-eighth African American (i.e. he had one great grandparent who was black, and 7 great grandparents who were white), purchased a ticket in New Orleans for first-class passage to Covington on the East Louisiana Railroad.¹³³ Plessy's action was part of a planned challenge to Louisiana's Separate Car Act by a group of New Orleans citizens, with the cooperation of the railway company. As agreed, the train conductor informed Plessy that he must travel in the "colored" car, and he was arrested when he refused to move. Criminal District Court Judge John Howard Ferguson "ruled that the State had a legal right to regulate railroad companies operating solely within its borders."¹³⁴ Judge Ferguson specifically stated that Plessy had not been "deprived of his liberty," but "was simply deprived of the liberty of doing as he pleased, and of violating a penal statute with impunity."¹³⁵ *Plessy v. Ferguson* continued through the legal system, eventually reaching the United States Supreme Court in 1896. On May 18 of that year, the Supreme Court ruled that racial segregation laws were constitutional, provided they were upheld

¹³³ Richard Wormser, "The Rise and Fall of Jim Crow: Plessy v. Ferguson (1896)," (2002), accessed July 15, 2011, <u>http://www.pbs.org/wnet/jimcrow/stories_events_plessy.html</u>.

¹³⁴ Federal Highway Administration, "The Road to Civil Rights: Plessy v. Ferguson," (2011), accessed May 23, 2011, <u>http://www.fhwa.dot.gov/highwayhistory/road/</u><u>s07.cfm</u>.

¹³⁵ Daily Picayune, "Jim Crow Car Law. Judge J.H. Ferguson Declares the Separate Car Act Constitutional," New Orleans: November 19, 1892, accessed July 14, 2011, <u>http://nl.newsbank.com/nl-search/we/</u> <u>Archives?p_product=HA-TP&p_theme=histpaper&p_action=keyword</u>.

according to the so-called separate-but-equal doctrine. This ruling caused little excitement in the press at the time; however, the decision had a marked effect on the expansion of racial segregation throughout the South.¹³⁶

As noted in the preceding paragraphs, the Louisiana railroad network focused primarily on the transport of people and timber products during the late nineteenth and early twentieth centuries; however, that period also saw the introduction of plantation railroads. The internal plantation lines carried the sugar crops from fields to the processing mills, and, in some areas, after the grinding season ended and sugar factories lay idle, some of the plantation operations used their narrow gauge railroads to facilitate timber harvests on the wooded plantation backlands. For a variety of reasons, the plantation lines did not prove to be an efficient or economical method of fieldto-mill transport for most planters. On the other hand, the internal plantation railroads met with some success when utilized in the consolidated plantation system, i.e., the corporate merger of multiple properties, accompanied by the construction of large central mills to serve the surrounding plantations. From the sugar mills, short track lines were constructed to convey bulk sugar and molasses to the main railroads for shipping to market. Use of plantation railroads began to wane by the 1930s due to the economic depression and advances in tractor and truck technology; however, the external transport of bulk cargoes along the main freight lines has continued to be used as a practical shipping method to the present day.137

The Louisiana railroad network reached a peak of 5,728 track miles in 1915. Through at

least the 1880s, New Orleans remained the commercial heart of the state; however, as the railway companies built more track and linked more cities and towns, regional transport centers began to share the market business (Figures 24 and 25). By 1915, Baton Rouge, Alexandria, and Shreveport joined New Orleans as major railroad hubs. Smaller (but significant) rail centers also developed in Opelousas, Eunice, Lake Charles, DeRidder, Monroe, and other towns across Louisiana.¹³⁸

Although there would have been changes in architecture and advances in the technology of associated apparatus and equipment, the structure types built along Louisiana railroads during the late nineteenth and early twentieth centuries would not have differed greatly from those constructed during the antebellum years. It is important to note, though, that certain buildings such as passenger depots would have been built or adapted as segregated structures with either partitions or separate rooms and separate entrances to accommodate the separate-but-equal doctrine established in "Jim Crow" Louisiana. This also was a time when railroad fever resulted in the establishment of new towns or in the migration of entire population centers to the new depots in order to share in the anticipated prosperity expected of the expanding Louisiana railroad system (Figure 26).

Associated Building Examples Railroad Stations

Railroad stations in the postbellum era in Louisiana ranged from small structures that provided minimal shelter to waiting passengers to larger, more elaborate buildings capable of allowing the arrival of multiple trains. Regardless of scale, almost all passenger depots included basic amenities of dedicated waiting spaces for passengers, often segregated based on race. A ticket booth was often prominently located at the center of the structure. The combination of the segregated waiting space and centrally located ticket booth often results in a highly symmetrical structure. Another traditional characteristic of these railroad stations are deep overhangs to shield passengers from the Louisiana sun and rain. These buildings tend to not exhibit any unique mode of

¹³⁶ Federal Highway Administration, "Plessy v. Ferguson."; Federal Highway Administration, "The Road to Civil Rights: The Black Migration," (2011), accessed May 23, 2011, <u>http://www.fhwa.dot.gov/highwayhistory/road/s10.cfm</u>.; U.S. National Archives & Records Administration, "Plessy v. Ferguson (1896)," online article excerpted from *Teaching with Documents*, vol. 2, 1880-1929, accessed July 15, 2011, <u>http://www.ourdocuments.gov/doc.php?flash=true&doc=52</u>.; Wormser, "Plessy."

¹³⁷ W.E. Butler, Down Among the Sugar Cane: The Story of Louisiana Sugar Plantations and Their Railroads (Baton Rouge: Moran Publishing Company, 1980), 198, 211-15.; John Burkhardt Rehder, Delta Sugar: Louisiana's Vanishing Plantation Landscape (Baltimore: Johns Hopkins University Press, 1999), 171-72.

¹³⁸ Goins & Caldwell, Atlas, 69-70.; Kniffen & Hilliard, Louisiana, 148-49.



Figure 24. Southern Railway Freight Office, constructed 1904 and listed in National Register of Historic Places, 2004, New Orleans.



Figure 25.

The Southern Railway Freight Office today, renamed Basin Street Station, New Orleans.



Figure 26.

St. Landry Lumber Company (period of significance, ca. 1890 – 1930s), Opelousas, St. Landry Parish . Located between the railroad and North Railroad Ave. along the western side of downtown Opelousas, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹³

¹³ LDHP, "St. Landry Parish, St. Landry Lumber Company, Opelousas," online photograph extracted from *Louisiana National Register of Historic Places Database* (1989), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.

construction or architectural style but employed common tends of the era. Several railroad stations may exhibit common designs, architectural styles, and floor plans if they were constructed by a single railroad company.

Roundhouse

A railroad roundhouse allowed for the servicing and maintenance of railroad locomotives. The roundhouse was routinely paired with a turntable which rotated locomotives into the appropriate bay of the roundhouse. A roundhouse can be a complete circle or only a section of an arc, depending on the relative needs of the railroad in that particular location. If warranted, the roundhouse could be expanded with additional bays. Given the roundhouse's function as a place for maintenance and preparation of locomotives, the structures had specific requirements as to lighting and ventilation. No one method was employed to secure adequate light and ventilation, but ceiling vents, clerestory windows, partially glazed doors, and deep overhangs with no doors were all common means of addressing these issues. Roundhouses were constructed of the same building materials as others in the period, such as predominately wooden framing with an eventual shift to cementitious materials.

Railroad Hotel

Hotels were often located adjacent to major railroad stations and rail lines, providing accommodations for travelers during the late nineteenth and early twentieth centuries. These hotels were often not the most lavish or ostentatious structures, emphasizing function over elaborate architectural styles. The upper floors featured linear arrangements of rooms along a corridor with guest bathrooms at the end of the halls. The first floor typically contained the lobby, but may also have been used for various commercial enterprises, such as restaurants. Construction materials for these railroad hotels would not have varied widely from the contemporaneous structures of the era, including brick and mass produced decorative elements.

Railroad Towns

After the Civil War, when railroads dominated the transportation systems of Louisiana, towns cropped up along the lines to take advantage of the benefits of the railroad system. Some existing towns even relocated, as described previously in this context on page 55. Given the centrality of the railroad to these towns, the historic core of the town is often located immediately adjacent to the line itself, with prominence given to the railroad depot. Commercial buildings and warehouses are also often in near proximity to the lines to allow for transfer of goods with minimal delay.

For more information on railroad related transportation buildings, see:

- Bacot, Barbara SoRelle and Jessie Poesch, ed. Louisiana Buildings, 1720-1940. Baton Rouge: Louisiana State University Press, 1997.
- Connecticut Valley Railroad Roundhouse and Turntable Site National Register of Historic Places Nomination, 1994.
- Various National Register of Historic Places Nominations for Kansas City Southern Railroad Depots in Louisiana, available here: <u>http://www.crt.state.la.us/hp/nationalregister/nhl/</u> <u>SEARCHBY.ASP</u>

Early Twentieth Century through Modern Era

The Louisiana railroad industry reached its apex in both track mileage and transportation significance during the early twentieth century. The decline in the timber industry, improvements in road-building, and advances in automobile and truck technology all combined to reduce the need for rail shipments and passenger transit by mid-century. The introduction of air shipping and travel further contributed to the decreased use of railroads in the state. By 1986, Louisiana railroad track mileage measured 3,347 miles – only 58.4 percent of the state's peak mileage in 1915.¹³⁹

With the competition from other transportation carriers, passenger rail service began to wane during the 1920s and 1930s, and it experienced a severe decline during the latter half of the twentieth century, particularly with the construction of interstates and the rise of air travel. In 1956, before the greatest loss of statewide rail service. there were a number of daily passenger trains operating throughout Louisiana, including five across the southern part of the state, four crossing the state from New Orleans to Shreveport and beyond, four northbound dailies to Memphis and Chicago, and nine daily trains running eastward to Alabama, where they made connections to cities scattered from the Midwest to Florida. Only 15 years later, there were just a few long-distance routes remaining. In 1971, Congress established the Amtrak system to operate the national passenger train network. Today, only three Amtrak passenger routes extend through Louisiana, all emanating from New Orleans.¹⁴⁰

Although faced with similar transportation rivalries to those that have affected passenger service, freight rail traffic remains an important shipping mode throughout the state - largely due to recognition of the competition and the resultant development of faster, more efficient means of conveyance. These improved shipping methods include the use of bulk freight containers that can be moved from rail to ship and vice-versa, creating a cooperative link between railway agency and port. Although hundreds of track miles have been removed from service in recent decades, the major (Class 1) railroads have negotiated agreements to share the 2,699 route miles that existed as of 2003. In addition to several short line and terminal/switching railroad systems scattered throughout the state, there are six Class 1 railroad lines that traverse Louisiana today. All of the Class 1 lines connect in the city of New Orleans and serve its port; Shreveport, Alexandria, and Baton Rouge also remain important railroad hubs. Freight car-

¹³⁹ Goins & Caldwell, *Atlas*, 70.; Kniffen & Hilliard, *Louisiana*, 149.

¹⁴⁰ Louisiana Department of Transportation and Development, with assistance from Wilbur Smith Associates, *Louisiana Statewide Rail System Plan*, (2003), accessed May 24, 2011, <u>http://www.dotd.la.gov/intermodal/marineandrail/documents/LA Rail Plan.pdf</u>.; National Railroad Passenger Company, Amtrak Routes (with Amtrak System National Route Map), (2011), accessed July 11, 2011, <u>http://www.amtrak.com/servlet/ContentServer/Pa</u> <u>ge/1237405732511/1237405732511</u>.

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ried through the state via rail includes chemicals, pulp and paper, petroleum products, minerals, agricultural products, lumber and other wood products, food products, construction materials, transportation equipment, and waste/scrap materials.¹⁴¹

141 Asaf Ashar and Stan Swigart, "A Comparative Analysis of Intermodal Ship-to-Rail Connections at Louisiana Deep Water Ports," (2007), accessed May 24, 2011, <u>http://www.dotd.la.gov/intermodal/marineandrail/documents/A Comparative Analysis of Intermodal Ship to Rail Connections at Louisiana Deep Water Ports.pdf.</u>; Association of American Railroads, "Railroad Service in Louisiana," (2006), accessed June 15, 2011, <u>http://www.aar.org/PubCommon/Documents/About-TheIndustry/RRState LA.pdf.</u>; Goins & Caldwell, *Atlas*, 70.; Kniffen & Hilliard, *Louisiana*, 149.; Louisiana Department of Transportation & Development, *Statewide Rail*, 15.

With the decline in railroad transportation during the twentieth century, a number of associated structures were taken out of service, notably many passenger depots, although a limited number remain in existence. Freight shipment is the staple service of the Louisiana rail network today, and, in recent decades, rail-to-ship and railto-truck shipping operations have become significant factors in that freight service. Rail yard structures would include warehouses, freight depots, rail-to-ship wharves, machine/repair shops, fueling facilities, and other related appurtenances (Figure 27).



Figure 27. Vicksburg, Shreveport and Pacific Railroad Depot, also known as Arcadia Railroad Depot (period of significance, 1910 – mid-twentieth century), Arcadia, Bienville Parish. Located along the railroad corridor of downtown Arcadia, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹⁴

¹⁴ LDHP, "Bienville Parish, Vicksburg, Shreveport and Pacific Railroad Depot (also known as Arcadia Railroad Depot), Arcadia," online photograph extracted from *Louisiana National Register of Historic Places Database* (1988), accessed April 12, 2012, http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP.

Associated Building Examples

Passenger Depots

During this period, railroads declined from the pinnacle of transportation in Louisiana, gradually superseded by the automobile. As a result, many railroad depots of this era likely date to the period before World War II. The larger depots often featured a central waiting area for passengers, containing a ticket counter, amenities such as restaurants and restrooms, and egress directly onto major thoroughfares. Trains arrived and departed from separate areas, maintaining a clear distinction between the public arena of the passenger and the darker, dirtier arena of the locomotive. The rail lines often were located at areas behind or beneath the passenger areas, further maintaining a distinction between the two spheres. As was the case with earlier train stations, these depots often organized around racially segregated spaces. Architect-designed passenger depots were common during this period, resulting in grand structures exhibiting the latest in popular architectural styles.

Rail-to Ship

During the early twentieth century, rail lines and ship routes were linked to facilitate quick and easy transfer of goods between port cities and the hinterlands. These systems included rail lines constructed on piers that projected into large bodies of water, such as the Mississippi River. To facilitate the process, goods were packed in standardized containers to expedite transfer between modes of transportation. As a result, specialized cranes and other equipment were located on these piers. These piers were constructed in a similar fashion to other piers, with large timbers creating a forest of framing to support the weight of the railcars and locomotive.

For more information on railroad buildings of the twentieth century, see:

Kingsley, Karen. *Buildings of Louisiana*. Oxford: Oxford University Press, 2003.

Summary

The Louisiana railroad network evolved from a handful of lines that existed during the antebellum era to an early twentieth century peak

that sent a web of tracks throughout the state, connecting interior communities to towns and shipping centers both statewide and nationwide. Today, the Louisiana railway system has been streamlined – a result of competing modern transportation modes; however, the state rail network remains an important transit mode, particularly for shipping freight. Table 6 lists the present-day major, or Class 1, railroads, with reference to their origins. Although not inclusive of all railroads constructed through the state, they are examples of the many lines that have existed in Louisiana at one time or another. Table 7 is a listing of general structure types that might have been found alongside Louisiana's railroads during various historic periods (Figure 28).

Streetcar and Intraurban Systems

Streetcar and intraurban¹⁴² systems had their beginnings in Louisiana with the early railroads that were drawn by horse or mule. Most lines were constructed within cities: however, a few interurban railways were built to connect towns in more rural areas. There also were electricity-powered tramways that served industrial and logging operations, as well as a few such connections to river ferries. These interurban railways differed from their larger railroad cousins; these railroads were constructed on a much smaller scale, only linking a handful of neighboring smaller towns with no connections to larger lines, and often served a singular purpose, such as transporting tourists to lakefront resorts or moving industrial goods within a single property. These railways rarely crossed state lines, remaining fully within the boundaries of Louisiana.

Antebellum Era through the Civil War

As noted above, the first Louisiana intraurban street railway actually was the state's first suburban railroad: the Pontchartrain Railroad Company, which was constructed in 1830-1831 from riverfront New Orleans, up Elysian Fields Avenue, to Lake Pontchartrain. Until the line's steam-powered locomotive arrived in June 1832, the Pontchartrain Railroad was drawn by horse in 1831-1832. For a time, both power modes con-

¹⁴² *Interurban* refers to travel systems between cities/ towns while *intraurban* refers to travel systems within one city.

Table 6.Major Louisiana railroads (Association of American Railroads 2006; Bright 2011; DeBow 1859:592-593; Goins
and Caldwell 1995:37, 68-70; Louisiana Department of Transportation and Development 2003:2; Mississippi Rail-
road Information 2008; National Railroad Passenger Corporation 2011; OldRailHistory.com 2011). Most lines had
a number of corporate mergers and/or name changes over time, but, for the current table, the predominate railroad
names have been listed for each general time period.

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Image: Source of the second	est
Shreveport & Texas; 2) Vicksburg, Shreveport & Pacific	
North Louisiana & Gulf	
Houston & Shreveport, Southern Pacific Union Pacific Northwe constituent line to Southern Pacific system	est
St. Louis, Iron Mountain & Union Pacific Central Southern network	
New Orleans, Texas & Mexico South	
New Orleans Pacific Texas & Pacific	
Red River* Central	
Louisiana & Kansas City Northwe Arkansas Southern / Union Pacific southeast	
Louisiana Railway & Kansas City Navigation Southern	
Louisiana & Arkansas North	

--- Non-existent during this period

* Destroyed during the Civil War; not replaced during postbellum period

	TIME PERIOD					
GENERAL STRUCTURE TYPES	ANTEBELLUM ERA - CIVIL WAR	LATE 19th - EARLY 20th CENTURIES	MID-20th CENTURY TO PRESENT			
Transportation Operations	Car maintenance shops, blacksmith shops, stables, fuel stations, water towers	Railroad yard offices, machine shops & foundries, roundhouses, turntables, fuel stations, water towers, storage facilities, telegraph offices	Railroad yard offices, machine shops & foundries, roundhouses, turntables, switch control towers, water towers, fuel stations, storage facilities, telegraph offices			
Migration / Travel	Passenger depots, railroad hotels, livery stables	Passenger depots, railroad hotels, restaurants, livery stables	Passenger depots, railroad hotels, restaurants			
Commercial	Freight depots, warehouses, links to shipping wharves, stores	Freight depots, warehouses, plantation railroads with associated sugar cane product facilities (storage, processing, & loading), links to shipping wharves, railway mail & parcel offices, "drummer" display buildings, newsstands, stores	Freight depots, warehouses, rail-to-ship storage & loading facilities, railway mail & parcel offices			
Industrial	Port facilities, manufacturing facilities, railroad car manufactory, sawmills	Lumber mills & yards, timber-related industries, brickyards, various types of manufacturing facilities	Lumber mills & yards, timber-related industries, brickyards, petro-chemical processing facilities, petroleum products storage & loading facilities, various types of manufacturing facilities			
Military	Training camps, transport facilities, supply & armament warehousing facilities	Transport facilities	Training camps, transport facilities, supply & armament manufacturing facilities			
Residential	Houses & affiliated structures for railroad workers, e.g., fuel station and depot attendants, town structures	Railroad towns, lumber & turpentine towns, section houses, boarding houses for railroad workers	Housing for railroad workers			

Table 7.	General	structure	types	that mi	ght have	been	built a	along l	Louisiana	railroads.



Figure 28.

Historic Illinois Central Railroad Depot, possibly eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana, Hammond. The depot remains active as a station for Amtrak.

tinued to co-exist on the track, with seven daily steam train runs (nine on Sunday) and three daily horsecar runs, except Sundays. The Pontchartrain line transported freight as well as passengers, and it has been credited with introducing the first freight loading platform, a more efficient alternative to traditional hand-loading and unloading.¹⁴³

New Orleans was the only Louisiana city to have a intraurban street railway system prior to the Civil War. The 1831 Pontchartrain Railroad opening was followed in 1835 by the New Orleans & Carrollton Railroad, which followed various routes (the Poydras-Magazine, Jackson-Lafayette, and Carrollton [present-day St. Charles] branches) and was considered the city's "first true street railway line."144 The Magazine and Lafavette Line cars were drawn by horses or mules; however, the Carrollton Line initially was steam-powered, later adding horsecar service to the route. As the city of New Orleans expanded, other branches of the New Orleans & Carrollton Railroad were constructed – all built through the bustling American section that was fast developing upriver from the French Quarter.¹⁴⁵

In 1853, The Jefferson & Lake Pontchartrain Railroad began operations, connecting the New Orleans & Carrollton Railroad and the town of Carrollton (later absorbed by metropolitan New Orleans) to Lake Pontchartrain. Like the Pontchartrain Railroad, this steam line was more a suburban railroad than a street railway; however, it served, too, in the growth and development of New Orleans as a significant antebellum city. Although sources vary as to its name – Lakeview, Lakeport, or New Lake End (present-day Bucktown/West End) – the lake terminus of the rail line became known as a recreational destination, with a restaurant, saloon, dance hall, hotel, pistol gallery, bath houses, and other amusement amenities.¹⁴⁶

In 1860-1861, the New Orleans City Railroad Company began construction of a six-route mule-drawn street railway system within the American sector of the metropolitan area. Despite the delays caused by the outbreak of the Civil War, the company began operations on its various lines in June and July 1861. Until New Orleans fell under Union occupation in the spring of 1862, the city's street railways and suburban lines continued public transportation operations, supplemented by horse or mule-drawn omnibuses that covered areas where there was no street railway service.¹⁴⁷

In late April 1862, Union forces occupied New Orleans. Although it was seized without a battle, the city endured significant economic hardships throughout the Federal occupation that lasted through the end of the Civil War. Street railway and omnibus operations continued, but fares were reduced as business activities decreased in the city and the surrounding region (Figure 29). A few new lines were put into service; however, others ceased operations and were abandoned, temporarily, if not permanently.¹⁴⁸

¹⁴³ Hansen, *Louisiana*, 71.; Louis C. Hennick and E. Harper Charlton, *The Streetcars of New Orleans*, (Gretna, Louisiana: Pelican Publishing Company, 2000[1965]),
5-6.; *American Railroad Journal*, "New Orleans," 516.

¹⁴⁴ Hennick & Charlton, Streetcars, 7.

¹⁴⁵ Campanella, Dilemma, 156, 186.; John Churchill Chase, Frenchmen, Desire, Good Children, and Other Streets of New Orleans (New York: Collier Books, Macmillan Publishing Company, 1979[1949], 121-32.; Louisiana Division of Historic Preservation, Orleans Parish: St. Charles Line (streetcar) NRHP nomination document summary, online record extracted from Louisiana National Register of Historic Places Database, accessed April 8, 2011, http://www.crt.state.la.us/hp/ nationalregister/nhl/SEARCHBY.ASP.; Louisiana Division of Historic Preservation, Orleans Parish: Carrollton Historic District NRHP nomination document summary. online record extracted from Louisiana National Register of Historic Places Database, accessed June 24, 2011, http://www.crt.state.la.us/hp/nationalregister/nhl/ SEARCHBY.ASP; Hennick & Charlton, Railways, 7-9, 68-69.

¹⁴⁶ Greater New Orleans Community Data Center, "Orleans Parish, Lakeview District: West End Neighborhood Snapshot," (2002), accessed July 25, 2011, <u>http://www.gnocdc.org/orleans/5/39/snapshot.html</u>.; Hennick & Charlton, *Streetcars*, 8, 69.; Betsy Swanson, "New Orleans History- Lake Pontchartrain: The History of Bucktown, U.S.A.," (n.d.), accessed July 25, 2011, <u>http://www.stphilipneri.org/teacher/pontchartrain/content.php?type=1&id=437</u>.

¹⁴⁷ H. George Friedman, Jr., "Canal Street: A Street Railway Spectacular, Parts 1-5," (2011), accessed May 5, 2011, <u>http://www.cs.illinois.edu/~friedman/canal/canal.</u> <u>htm</u>.; Hennick & Charlton, *Railways*, 9-11.

¹⁴⁸ Bright, "Railroads."; Friedman, "Canal Street."; Hennick & Charlton, *Railways*, 11-12.

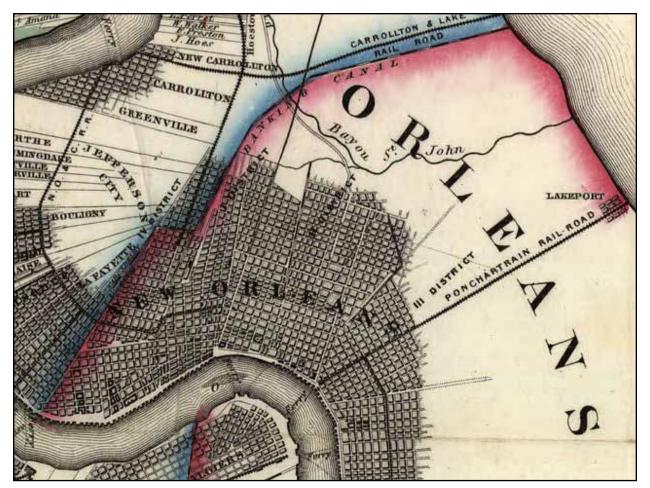


Figure 29. Excerpt from *Plantations on the Mississippi River from Natchez to New Orleans* [Norman's Chart], New Orleans region. Map excerpt depicts street railways through the city of New Orleans, as well as the antebellum Lakeport community that developed along Lake Pontchartrain. Located at the lakefront terminus of the "Pontchartrain Rail-Road," Lakeport would have included examples of structures that might have been considered eligible for the National Register of Historic Places due to their association with the history of transportation in Louisiana.¹⁵

¹⁵ Adrien Persac, *Plantations on the Mississippi River from Natchez to New Orleans* [Norman's Chart], New Orleans region (1858).

Associated Building Examples Stables

Early urban railroads, such as the Pontchartrain Railroad in New Orleans, featured cars drawn by horses and mules. As a result, stables were required to house the animals. These stables likely followed traditional wood frame construction of the era, consisting of narrow pens extending from a central corridor under a common roof. The stables frequently were located in the same yard as the barn for the cars, coal storage, and other railroad supplies. These facilities were positioned at strategic points along the route to allow for sufficient access to provisions.

Suburban Development

The network of rail lines encouraged development beyond the traditional urban centers. These early suburban developments were driven by the ability of the occupants to commute to the city for work via the new rail system. For example, the development of the Carrollton neighborhood of New Orleans was spurred by the rise of the New Orleans & Carrollton railroad. Carrollton followed the traditional development pattern of New Orleans, typically consisting of long narrow lots suitable for the construction of iconic shotguns and double shotguns. The ease of access to the city likely encouraged the use of the suburb as a summer retreat for some New Orleanians, possibly responsible for some of the grander architecture in the neighborhood. The architecture of the neighborhood is not notably different from contemporaneous development in New Orleans, exhibiting Greek Revival, Italianate and other expected architectural styles.

Postbellum Era through Modern Era

Immediately following the end of the Civil War, improvements and additions were made to the New Orleans intraurban street railways; however, it wasn't until later in the nineteenth century that urban rail lines began to appear elsewhere in the state. Although Louisiana did not suffer the severe physical devastation that other Southern states experienced, the war nevertheless produced economic losses that slowed statewide recovery for decades. The development of street railways and interurban rail systems in Louisiana's major cities appears to have coincided with the railroad boom that swept the state during the late nine-teenth and early twentieth centuries.¹⁴⁹

Shreveport was the first Louisiana city bevond New Orleans to construct an intraurban street railway system. The Shreveport City Railroad Company was chartered in June of 1870, and service began six months later on December 31. This line was mule-drawn until 1893, when the route was electrified. A few years earlier, a street railway was constructed by the Shreveport Land & Improvement Company in 1889-1890 to operate specifically as an electricity-powered line - the first in Louisiana to run via an overhead current transmission mechanism, preceding the New Orleans permanent shift to that system by nearly three years. Both of these Shreveport lines maintained their separate corporate identities, but eventually collaborated in order to maximize improvements to their respective intraurban properties. By 1914, the Shreveport Railways Company had taken over all street railway operations in Shreveport (Table 8).150

Other Louisiana cities soon followed the lead of New Orleans and Shreveport by adding intraurban street railways to their cityscapes. Alexandria, Baton Rouge, and Lake Charles all built mule-drawn lines during the late nineteenth century, and, within the first decade of the twentieth century, these intraurban railways were operating with electricity (Table 8). The town of Monroe followed the larger cities a few years later, constructing its electricity-powered Municipal Street Railway in 1905-1906. It appears that these citybased rail lines became known more popularly as streetcars around the time that the electric trolley system became the dominant operation method.¹⁵¹

Most of the city-based streetcars were intraurban lines that ran exclusively within each municipality; however, there also were several short interurban railways that connected communities within a limited district. Across the Mississippi River from New Orleans, lines were constructed that linked Algiers, Gretna, and other west bank towns (first by steam and equine power, later by

151 Hennick & Charlton, Railways.

¹⁴⁹ Hennick & Charlton, Railways, 12-14.

¹⁵⁰ Ibid, 57-64, 97.; Hennick & Charlton, Streetcars, 22-23.

LOCATION	NAME	POWER	CONNECTIONS	IN OPERATION
Alexandria	Alexandria City Railway Co.	Mules	Two city railway depots	1891 - 1899
Alexandria	Alexandria Electric Railways Co.	Electricity	Multiple intraurban lines	1906 - 1913
	Southern Traction & Power Co.			1913 - 1915
	City of Alexandria - Municipal Street Railway			1915 - 1926
Algiers	Algiers & Gretna Railway Co.	Steam; horses & mules by 1884	Algiers to Gretna	1882 - early 1890s
	Algiers, Gouldsboro & Gretna Railway Co. / Algiers, McDonoghville & Gretna Railroad Co.			Early 1890s - 1907
	Algiers Railway & Lighting Co.	Electricity		1907 - 1917
	South New Orleans Light & Traction Co.			1917 - 1927
Algiers / Gretna	New Orleans & Western Railway Co.	Electricity	Gretna to Amesville (present-day	1912 - 1917
	West New Orleans Light & Traction Co.		Marrero)	1917 - 1927
Algiers	Louisiana Power & Light Co.	Electricity	Algiers to Amesville	1927 - 1931
Baton Rouge	Baton Rouge Street Railway	Mules	Intraurban line	1890 - 1890
	Baton Rouge Railway & Improvement Co.			1890 - 1892
	Capital Railway & Lighting Co.	Mules; electricity by 1893	-	1892 - 1895
	Home Electric Co.	Electricity	1	1895 - 1900
	Baton Rouge Electric & Gas Co.			1900 - 1909
	Baton Rouge Electric Co.		Multiple intraurban lines	1909 - 1936
Bayou Teche	Southwestern Traction & Power Co.	Electricity	New Iberia to Jeanerette	1912 - 1918
Jefferson Parish	Orleans-Kenner Electric Railway Co. [O-K Line]	Electricity	Orleans/Jefferson Parish line to Jefferson/St. Charles Parish line	1915 - 1918
	Orleans-Kenner Traction Co. [O-K Line]			1918 - 1930
Lake Charles	Lake Charles Street Railway	Mules; electricity by 1906	Multiple intraurban lines	1891 - 1909
	Lake Charles Street Railway, Light & Water Works Co.	Electricity		1909 - 1924
	Louisiana Electric Co.			1924 - 1926
	Gulf States Utilities Co.			1926 - 1927
Lake Charles	Kansas City, Watkins & Gulf Railway Co.	Steam	Lake Charles to Goosport	1893 - 1902
	St. Louis, Watkins & Gulf Railway			1902 - 1906
Monroe	Municipal Street Railway	Electricity	Multiple intraurban lines	1906 - 1938
Shreveport	Shreveport City Railroad Co.	Mules; electricity by 1893		1870 - 1902
	Fairfield Street Railway Co.	Mules	Shreveport to Fairfield community (now part of city)	1872 - 1877
	Shreveport Railway & Land Improvement Co.	Electricity	Intraurban line	1890 - 1893
	Shreveport Belt Railway Co.	-	Multiple intraurban lines	1893 - 1902
	Shreveport Traction Co.	_		1902 - 1914
	Highland Park Traction Co.		Intraurban line	1903 - 1904
	Shreveport Suburban Railway Co.		Shreveport to Gladstone Park (now part of city)	1908 - 1913
	Shreveport Railways Co., successor to all Shreveport street lines		Multiple intraurban lines	1914 - 1939
St. Tammany Parish	St. Tammany & New Orleans Railways & Ferry Co. (the "Motor Road")	Gasoline	Covington to Abita Springs and Mandeville	1909 - 1915
	St. Tammany Railway & Power Co.	Electricity		1915 - 1918

 Table 8.
 Louisiana street and interurban railways outside of the city of New Orleans (Hennick and Charlton 1998).

electricity), while, on the east bank, the Orleans-Kenner Railway Company (known popularly as the O-K Line) was established as an electric railway that brought a New Orleans connection into developing Jefferson Parish. North of Lake Pontchartrain, an interurban line extended from Covington to Abita Springs and Mandeville by 1909, and, according to local sources, there may have been a mule-drawn route connecting those towns as early as 1890. In southwestern Louisiana, a steam-powered "dummy train" linked downtown Lake Charles to its industrial suburb of Goosport. There also was a short-lived interurban electric railway - the Southwestern Traction & Power Company – that connected the west bank Bayou Teche communities between New Iberia and Jeanerette during the early twentieth century (Table 8).¹⁵²

Besides the "destination" street railways, there were a few short lines scattered across Louisiana that were dedicated to specific purposes (Figure 30). For instance, in St. Tammany Parish, local tradition notes that, for visitor convenience, a mule-drawn line was established (during the late nineteenth century) that extended from the Abita Springs Hotel to the East Louisiana Railroad depot and the Bogue Falaya River landing. In Ascension Parish, the mule-powered Burnside Tramway transported passengers and package freight between the Burnside ferry landing (located across the Mississippi River and downstream from Donaldsonville) and the Yazoo & Mississippi Valley Railroad depot, saving travelers and freightmen a walk of about 900 feet. The Burnside Tramway ended service in May 1923, making it the last mule/horse car line in operation



Figure 30. Engine from Louisiana Cypress Company, now located in Ponchatoula.

152 Ibid.

in Louisiana and the next-to-last in the United States.¹⁵³

A unique electric railway was established in September 1928 at the Great Southern Lumber Company in Bogalusa. Throughout its history, this industrial system, which also utilizes diesel power, has existed solely for the purpose of moving materials between departments on the plant site, and, for shipping convenience, its standard gauge trackage joins the main railroad line extending through Bogalusa. This plant car line has remained in operation through successive corporate owners (and purposes, from sawmill to paper, pulpwood, and related products) – the Great Southern Lumber Company, Gaylord Container Corporation, Crown-Zellerbach Corporation, and Temple-Inland – to the present day.¹⁵⁴

The streetcar's prime reign in Louisiana cities existed from just before the turn of the century to the mid-1920s. The streetcar lines were important factors in city development across the state. With available transportation into business districts, suburbs began to evolve around the trolley-operated routes, and small communities were absorbed into the metropolitan areas. By the late 1920s, though, the increased use of automobiles, the advent of public motor buses, and the high costs of track extensions and streetcar maintenance all contributed to the decline of street railways throughout the state. By 1940, New Orleans was the only Louisiana city maintaining streetcar lines (Table 8).¹⁵⁵

On August 18, 1922, New Orleans Public Service, Inc., was chartered in order to reorganize the city infrastructure – electric and gas power lines, streetcar lines, and the nascent motor bus system. From 1922 through 1925, this city services company, commonly referred to as N.O.P.S.I., purchased the existing New Orleans streetcar lines, made improvements, and built new tracks.¹⁵⁶ In 1924, the city streetcar network measured 221 miles of track, "with 367 double truck passenger motor cars, 42 double truck passenger trailers, 241 single truck passenger cars, 1 baggage trailer, and 74 work cars."¹⁵⁷ New Orleans "street railway patronage … reached an all-time peak in 1926," with some 148,000,000 passengers riding "N.O.P.S.I.'s twenty-six street railway lines and five motor bus lines during this vear."¹⁵⁸

After 1926, added bus lines caused a decline in streetcar operations, rather than a supplement to that service. Furthermore, the increase in automobile travel through the city began a shift from public transit toward private transportation.¹⁵⁹ Adding to the woes of New Orleans public transportation was the onset in July 1929 of "one of the lengthiest and most violent street railway strikes the nation has ever witnessed."160 Lasting from July 1 to October 10, 1929, the streetcar operators' strike was triggered by N.O.P.S.I.'s "unwillingness to accept a closed shop provision plus stronger curbs on the company's power to discharge men."¹⁶¹ Wages and hours were not an issue, but the "increasingly heated contract negotiations" brought into question "the survival of the carmen's union and 1,100 jobs."¹⁶²

In general, there was strong public support for transit strikes across the nation; after all, striking motormen and conductors served the public and represented the working man. In New Orleans, 10,000 citizens gathered downtown on July 5 to watch "strike supporters disable and then burn the first car operated by a strike breaker."¹⁶³ In addition, New Orleanians boycotted the tran-

- 159 Ibid, 38-39.; New Orleans Regional Transit Authority, "RTA History."
- 160 Hennick & Charlton, Streetcars, 39.
- 161 Ibid.

163 Ibid.

¹⁵³ Ibid, 116, 135.

¹⁵⁴ Hennick & Charlton, *Railways*, 132-33.; Patricia Darlene McClendon, "Bogalusa, Washington Parish, Louisiana: History, Links, Maps, and Photos (2008), accessed July 22, 2011, <u>http://freepages.genealogy. rootsweb.ancestry.com/~mcclendon/Bogalusa</u>.; Personal communication, Temple Inland employee (2011).

¹⁵⁵ Campanella, *Dilemma*, 178.; Hennick & Charlton, *Railways*, 18-19, 64-79.; Hennick & Charlton, *Streetcars*, 23-38.

¹⁵⁶ New Orleans Regional Transit Authority, "RTA History," (2011), accessed July 29, 2011, <u>http://www.norta.</u> <u>com/about/History/index.html</u>.; Hennick & Charlton, *Streetcars*, 37-38.

¹⁵⁷ Hennick & Charlton, Streetcars, 38.

¹⁵⁸ Ibid.

¹⁶² Michael Mizell-Nelson, "New Orleans Po-Boy Preservation Festival: The History of the New Orleans Po-Boy," (2011), accessed July 28, 2011, <u>http://www.poboyfest.com/files/History_of_the_Po-Boy_web.pdf</u>.

sit system, refusing to ride the streetcar lines, and local businesses donated food, supplies, and services to the carmen's union. Interestingly, a longtime New Orleans sandwich staple was created due to this supportive largesse. Bennie and Clovis Martin - former streetcar conductors turned restaurateurs – offered free meals to the strikers out of their French Quarter establishment, the Martin Brothers Coffee Stand and Restaurant. In order to accomplish this generosity, the Martin brothers made large meat-filled French bread sandwiches for the strikers. According to Bennie Martin. "We fed those men free of charge until the strike ended. Whenever we saw one of the striking men coming, one of us would say, 'Here comes another poor boy", and so was born the poor boy sandwich, commonly known today as a po' boy or po-boy.¹⁶⁴

The 1929 strike caused a tremendous decline in New Orleans streetcar travel, with 40,000,000 fewer riders in that year than in 1928. Although immediate improvements were made to the N.O.P.S.I. streetcar system, the network began to fade in the early 1930s. In a reversal of that downturn, World War II brought a significant increase in public transit ridership, and, to compensate for the loss of manpower to military service, N.O.P.S.I. employed conductorettes, the first women to operate the city's streetcars. As veterans returned in 1945, there was an enormous rise in private automobile travel, which resulted in a drastic drop in the use of streetcars. By 1949, fewer than ten New Orleans streetcar lines remained in operation. Over the next 15 years, most routes were converted to trackless trolleys and buses. In mid-1964, the Canal-Cemeteries Line became a bus route, leaving the St. Charles Line the only surviving streetcar route in New Orleans for the next few decades.¹⁶⁵

Following the shutdown of the Canal-Cemeteries Line in 1964, preservationists worked

to keep New Orleans' sole remaining streetcar route in operation, and, on May 23, 1973, the St. Charles Line was placed on the National Register of Historic Places. In 1983, the state-established Regional Transit Authority [RTA] succeeded N.O.P.S.I. as the entity responsible for the operation and maintenance of the New Orleans public transportation system, including the streetcars. Half a decade later, the Riverfront streetcar line was opened along the Mississippi River edge of the French Quarter, primarily serving visitors and convention-goers in that area. In 2004, the Canal Street (Canal-Cemeteries) Line was returned to operation, four decades after its abandonment to bus transit; its modern route also includes a branch from Canal Street eastward along North Carrollton Avenue (Figure 31). This streetcar line. like the St. Charles Line, serves local commuters as well as tourists, and its success has helped instigate plans for the development of future lines in New Orleans.166

Transportation played a unique role in the American Civil Rights movement of the 1950s. Two years before the Montgomery Bus Boycotts led by Dr. Martin Luther King, Jr., the African American community of Baton Rouge banded together to ensure enforcement of a city ordinance designed to promote better (if not total) equality in bus seating arrangements. White passengers and bus operators objected to the revisions, appealing to the state government, and on June 19, 1953, the attorney general of Louisiana declared the law unconstitutional. African American religious leaders rallied and announced a city-wide bus boycott that afternoon. The boycott lasted eight days and ended when city leaders revised the city ordinance to ensure that both white and black riders had reserved seating- white passengers in the front of the bus and African Americans in the rear. This successful resolution buoyed the community and set a precedent for the larger

¹⁶⁴ Ibid.

¹⁶⁵ Hennick & Charlton, *Streetcars*, 39-45, 73-104.; New Orleans Regional Transit Authority, "RTA History."; Chris Sattler & Peter Ehrlich, "New Orleans, Louisiana," (2005), accessed May 5, 2011, <u>http://world.nycsubway.org/us/neworleans</u>.

¹⁶⁶ Louisiana Division of Historic Preservation, "St. Charles Line."; New Orleans Transit Authority, "RTA History."; Sattler & Ehrlich, "New Orleans, Louisiana."

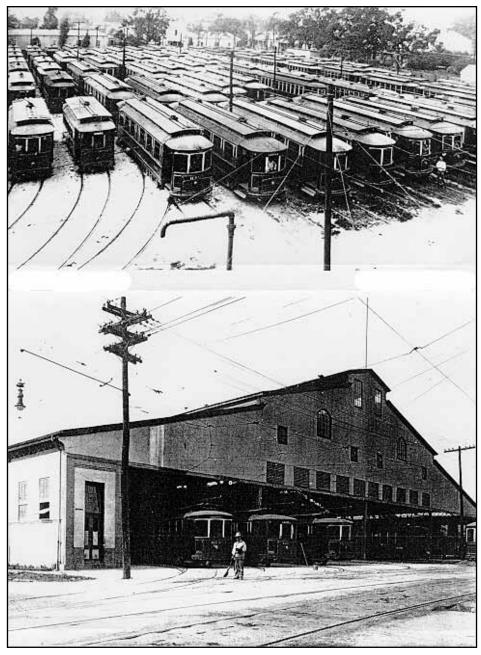


Figure 31.

Arabella Station/Carbarn (period of significance, 1893 – mid-twentieth century), New Orleans, Orleans Parish. Located on Magazine St. at Arabella St. in the Uptown district of New Orleans, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹⁶

¹⁶ LDHP, "Orleans Parish, Arabella Station/Carbarn, New Orleans," online photograph extracted from *Louisiana National Register of Historic Places Database* (1996), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.

bus boycotts across the South later in the movement. $^{\rm 167}$

Associated Building Examples Streetcar Barns

Streetcar barns for this period resembled their earlier counterparts with their elongated footprints and relatively low-rise profile. The buildings often were constructed of a combination of bricks, wooden framing and cast iron elements. The sides could be open or closed, depending on the needs of the individual lines, but most allowed streetcars to enter in one direction and exit via the opposite side. As with other railroad buildings, the cars had to be accessed for maintenance and repair, necessitating either a raised track or below grade pit. Larger lines may have multiple tracks entering a single barn, including a central area designated for access to the cars. The barns could be elaborate architectural pieces or simple, functional buildings with little or no ornament.

Power Plants

As the streetcars were powered by electricity, dedicated power plants often were a part of the streetcar complexes. The streetcar power plants sometimes supplied power to the city. These power plants usually consisted of one or two stories, constructed of brick or wooden framing. Multiple smokestacks may have been present, depending on the scale of the streetcar system and the size of the power generators. Plants typically housed multiple generators, steam engines, and boilers. Smaller substations often supplemented the main power plant.

Streetcar Lines

Individual streetcar lines have been found to be eligible for the National Register of Historic

Places, most notably the St. Charles streetcar line of New Orleans (formerly the New Orleans & Carrolton). The St. Charles street car spurred development along St. Charles Avenue and the growing neighborhood of Carrollton. The line also drove technological changes, including ammonia gas engines and eventually the shift to electricity, as well as increased efficiency. The physical line itself, along with the cars and associated buildings such as the barn, all play a significant role in the historic character of the streetcar line.

For more information on streetcars, see:

Carrollton National Register Historic District, Nomination, 1987.

- Hennick, Louis C., and E. Harper Charlton. 1998. Street Railways of Louisiana. Revised. Firebird Press Book ed. Pelican Publishing Company, Gretna, Louisiana. Originally published 1962 as vol. 1 of Louisiana, Its Street and Interurban Railways, by authors, Shreveport.
- St. Charles Streetcar Line National Register of Historic Places Nomination, 1973.

<u>Summary</u>

Other than updates in architecture and advances in associated apparatus and equipment technology, the structure types built along Louisiana street and interurban railways probably saw few changes through the years. Some of these buildings might have been temporary in nature, e.g., the living quarters of a construction foreman; however, most structures would have been associated with system operations: passenger depots, streetcar stops, horse and mule stables, fuel facilities, power plants, streetcar barns, freight delivery facilities, and fabrication and maintenance shops (Figure 32). In a few instances, there would have been amenities provided for recreational visitors, for instance, restaurants, saloons, and lakefront bath houses, which were built only after the "Smoky Mary" made the lakefront an accessible recreation resort. Table 9 summarizes a general listing of structure types that might have been found alongside Louisiana's street and interurban railways during various historic periods.

¹⁶⁷ Debbie Elliott, "The First Civil Rights Bus Coycott: 50 Years Ago, Baton Rouge Jim Crow Protest Made History," National Public Radio, June 19, 2003, accessed April 13, 2012, www.npr.org/templates/story/ story.php?storyld=1304163.; Mary Price, Ph.D., "Baton Rouge Bus Boycott Background," accessed April 13, 2012, www.lib.lsu.edu/special/exhibits/e-exhibits/ boycott/background.html. The scant reliable materials available regarding rural bus routes in this period suggest the impact to these rural communities was limited to non-existent.



Figure 32. Historic streetcars in Willow Street barn, New Orleans.

Table 9.	General structure types that might have been built along Louisiana street and interurban railways (Hennick and
	Charlton 1998, 2000).

	TIME PERIOD					
GENERAL STRUCTURE TYPES	ANTEBELLUM ERA - CIVIL WAR	LATE 19th - EARLY 20th CENTURIES	MID-20th CENTURY TO PRESENT			
Transportation Operations	Streetcar barns, horse & mule stables, fabrication & maintenance shops, storage facilities	Streetcar barns, horse & mule stables, fabrication & maintenance shops, storage facilities, electrical power plants & substations, coal storage, fuel facilities, office buildings	Streetcar barns, fabrication & maintenance shops, storage facilities, electrical power plants & substations, fuel facilities, office buildings			
Migration / Travel	Streetcar stops, depots, dock-side facilities, restaurants, saloons, bath houses, and other recreational amenities	Streetcar stops, depots, dock-side facilities, restaurants, saloons, bath houses, and other recreational amenities	Streetcar stops			
Commercial	Freight-loading platforms, dock-side delivery facilities	Specialized delivery service facilities, e.g., baggage & packaged freight; dock-side delivery facilities				
Industrial		Plant-site delivery platforms, parts manufacturing facilities				
Military		Streetcar stops at military bases				
Residential		Employee housing (e.g., construction foreman)				

--- Information unknown or not available

Air Transportation

The history of air transportation in Louisiana began less than a century ago. For a number of years following the Wright brothers' first successful controlled engine-powered flight in late 1903, air travel was viewed nationwide as a novelty and sport, rather than as a practical means of transit. It wasn't until after World War I that serious attention was focused toward airplanes as freight and passenger carriers. During those introductory years, Louisiana played a significant role in the development of air transportation as an efficient means of shipping and travel.

Early to Mid-Twentieth Century

During the early years of flight, aviators joined athletes in filling the nation's newspaper sports sections. In late December 1910, a group of New Orleans businessmen organized "the South's first aviation tournament," a week-long event based at the New Orleans City Park Race Track (inactive by then as a horse racing course) and headlined by "International Aviators, Inc., a dare-devil crew of airmen led by ... Illinois native John B. Moisant."¹⁶⁸ A few months prior to the New Orleans event, Moisant became the first aviator to complete a passenger flight from Paris to London, carrying along his mechanic and his kitten mascot across the English Channel, and, also on that flight, he became the first pilot to navigate via compass. In the previous year, he designed and built the first all-metal aircraft, a monoplane that, interestingly, he dubbed "L'Ecrevisse" – the crawfish - named for its angular shape (and perhaps red color). Moisant and the International Aviators participated in a number of air races and shows across the United States, and "L'Ecrevisse" was brought along for exhibition only. The New Orleans tournament began on December 24 with a record-breaking 46-minute flyover around the city - from City Park and "Mid-City along Canal Street to the [Mississippi] river, past Gretna, over Audubon Park and back."¹⁶⁹ The event was

to conclude several days later with the race for the Michelin Distance Cup, but, instead, it ended tragically with the death of Moisant during a practice run. On the morning of December 31, 1910, he took off from the City Park track and flew west of the city, where a new, safer three-mile course had been built near Harahan for the duration race. Moisant circled twice around the field before a wind gust tilted the monoplane in a vertical drop, throwing him from the aircraft to his death. Following the crash, the Michelin racing field was converted into cattle vards and named Moisant Stock Yards, in memory of the pioneer aviator who died there. When an airport was built on that site many years later, it was called Moisant Field, the name the landing field has retained to the present day (along with the airport code MSY, for Moisant Stock Yards), although the airport facility has been renamed the Louis Armstrong New Orleans International Airport.¹⁷⁰

Aircraft became important carriers during World War I, useful in reconnaissance missions and aerial combat. Still, flight generally remained a novelty – the bailiwick of barnstormers, racers, and stunt pilots – until the late 1920s. On May 20, 1927, Charles Lindbergh's historic nonstop flight from New York to Paris inspired pilots and entrepreneurs worldwide, and aviation entered a new phase in its history.¹⁷¹

- 170 Louisiana State Museum, "Early Aviation in Louisiana,""The Williams Family," and "Jimmie and Walter Wedell," online articles extracted from Louisiana Aviation Since 1910: Wedell-Williams Memorial Aviation Museum, Patterson, La., a Property of the Louisiana State Museum (2008), accessed August 8-10, 2011, http://lsm.crt.state.la.us/aviation/wedwm.htm.; U.S. Centennial of Flight Commission, "History of Flight: John Moisant," (2009), accessed May 3, 2011, http://www.centennialofflight.gov/essay/Dictionary/J MOISANT/DI147.htm.; Daily Picayune, various John B. Moisant, December 30, 1910-January 2, 1911, scanned articles extracted from The Times-Picavune Historical Archive, accessed May 3, 2011, http://nl.newsbank. com/nl-search/we/Archives?p_product=HA-TP&p_ theme=histpaper&p_action=keyword.; The Times-Picayune, "How Moisant Fell; Descending at a Sharp Dip, Is Hurled Out as a Gust Upturns Machine," January 1, 1911:1, online article originally published in a Special to the New York Times, accessed May 4, 2011, http://query. nytimes.com/mem/archive-free/pdf?res=9502E2DD133 1E233A25752C0A9679C946096D6CF.
- 171 David H. Onskt, "Explorers, Daredevils, and Record Setters- An Overview," (2009), accessed August 5, 2011, <u>http://www.centennialofflight.gov/essay/Explor-</u>

¹⁶⁸ Sally K. Evans Reeves and William D. Reeves, with Ellis P. Laborde and James S. Janssen, *Historic City Park, New Orleans*, (New Orleans: Friends of City Park, 1982), 42.

¹⁶⁹ Doug MacCash, "John Moisant, Aviation Pioneer, Died a Century Ago in New Orleans, *The Times-Picayune*, December 31, 2010, accessed May 3, 2010, <u>http://www. nola.com/arts/index.ssf/2010/12/post_35.html</u>.

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Among the Louisiana citizens swept up in the aviation enthusiasm was Harry Palmerston Williams, who was introduced to flying by barnstormer and racer James R. "Jimmie" Wedell ca. 1927-1928. Williams was the son of Louisiana cypress magnate Frank B. Williams, and, at the time of his meeting with Wedell, he was running the family's main logging/mill operation in Patterson (St. Mary Parish). In 1928, Williams purchased his first airplane, and, within months, he and Wedell established the Wedell-Williams Air Service - Wedell had the design genius, while Williams held the capital and business background. The "We-Will" Flying Service built air fields in Patterson and eastbank Jefferson Parish (the presentday Elmwood area). The partners designed and built airplanes, raced aircraft, gave flight instruction, worked with aviation mechanics students at the Delgado Trades School (present-day Delgado Community College, New Orleans), and flew humanitarian missions that ranged from missing person searches to the speed transport of an infant from Houston to Baltimore for a life-saving operation at Johns Hopkins Hospital. Tragically, both Wedell and Williams were killed in plane crashes less than a decade after their first meeting. On June 24, 1934, Wedell died when his biplane nosedived into a rice field near Patterson, shortly following takeoff for a flight lesson. Less than two years later, Williams was killed on May 19, 1936, when his plane crashed immediately after takeoff from the Baton Rouge Airport following a conference with the Louisiana governor. Several months after Williams' death, his widow (former silent film star Marguerite Clark Williams) sold the Wedell-Williams company to Eastern Air Lines, whose general manager was former World War I flying ace Eddie Rickenbacker.¹⁷²

ers Record Setters and Daredevils/EX OV.htm.; Paul F. Stahls, Jr., "Louisiana's Aviation History," originally published in *Louisiana Life* September-October 2009, accessed August 3, 2011, <u>http://www.myneworleans.com/</u> Louisiana-Life/September-October-2009/Louisianarsquos-Aviation-History.

172 Paul Freeman, "Abandoned & Little Known Airfields: Louisiana, Western New Orleans Area," (2011), accessed August 8, 2011, <u>http://www.airfields-freeman.</u> <u>com/LA/Airfields_LA_NewOrleans_W.htm.</u>; Louisiana State Museum, *Louisiana Aviation.*; Asif Siddiqi, "Air Transportation: Eastern Airlines," (2009), accessed August 9, 2011, <u>http://www.centennialofflight.gov/essay/Commercial_Aviation/EasternAir-</u>

One of the primary reasons for the Wedell-Williams acquisition by Eastern Air Lines was to assume control of the air mail route between New Orleans and Houston. Experiments in mail transport by air had been flown in Louisiana as early as 1912, and, in 1923, New Orleans was chosen as one of two cities tapped by the U.S. government to test foreign mail deliveries by air. New Orleans Air Line and its team of former naval aviators carried mail via seaplanes from a Poland Avenue riverfront hangar to Pilot Town, located at the mouth of the Mississippi River, where the mail was transferred to steamers traveling to South America. In 1928, regular air mail delivery began between New Orleans and a handful of major Southern cities, including Atlanta, from which point the service continued to New York. These first air mail deliveries were flown from the Alvin Callender Field, located in Belle Chasse (Plaquemines Parish) and, today, part of the Naval Air Station Joint Reserve Base, New Orleans. Dedicated in November 1926, this landing field was named to honor a New Orleans native who died in service with the British Royal Air Force during World War I.¹⁷³

On May 1, 1929, the air mail service routed through New Orleans was transferred from Callender Field to Menefee Field, a new landing field dedicated in June 1928 along St. Bernard Highway in western St. Bernard Parish. By this time, the U.S. air mail contract between Atlanta and

lines/Tran13.htm.; Stahls, "Aviation History."; Time, Inc., "Aeronautics: Death of Wedell," July 2, 1934, accessed August 8, 2011, http://www.time.com/time/ magazine/article/0,9171,754336,00.html.; The Times-Picayune, "Jimmy [Jimmie] Wedell Killed in Airplane Crash near Patterson," June 25, 1934, scanned article extracted from The Times-Picayune Historical Archive Database, accessed August 9, 2011, http://nl.newsbank. com/nl-search/we/Archives?p_product=HA-TP&p_ theme=histpaper&p_action=keyword.; The Times-Picayune, "Wedell's Death is Crushing Blow to Air Students," June 26, 1934:2, scanned article extracted from The Times-Picayune Historical Archive Database, accessed August 9, 2011, http://nl.newsbank.com/nl-search/we/ Archives?p_product=HA-TP&p_theme=histpaper&p_ action=keyword.

¹⁷³ Paul Freeman, "Abandoned & Little Known Airfields: Louisiana, Eastern New Orleans Area," (2010), accessed August 8, 2011, <u>http://www.airfields-freeman.</u> <u>com/LA/Airfields_LA_NewOrleans_E.html</u>.; Louisiana State Museum, *Aviation History*.; Siddiqi, "Transportation."

Houston, via New Orleans, was handled locally by Texas Air Transport and Gulf Airways, subsidiaries of Southern Air Transport.¹⁷⁴ The following description of Menefee Field was related by Bill Banker, a Tulane University star football player (the "Blond Blizzard") who flew U.S. mail deliveries for Texas Air Transport during the 1928-1929 off-season:

We didn't have radio communication with the ground One day it was after dark when we got back to the Menefee Air Field in St. Bernard. There were no lights on the runway, so a field attendant poured gasoline down the middle of the runway and then lit it. The pilot was able to line up the plane with the runway, and we came in as soon as the fire went out. It was a horrifying experience.¹⁷⁵

In April 1929, Southern Air Transport announced that extensive improvements had been approved for Menefee Field, including night lighting facilities that would be in place by midsummer. Half a decade later, the Wedell-Williams Air Service was operating an aviation school at Menefee Field and had taken over the U.S. air mail contract between New Orleans and Houston.¹⁷⁶

Other areas of Louisiana were also important locations in the history of aviation with airports

and landing fields opening in or near such towns as Shreveport (1924, 1928, 1930, 1931), Lafavette (1930), Ruston (early 1930s), Baton Rouge (1931), and DeRidder (1934) prior to the onset of World War II.¹⁷⁷ One of the most significant air facilities in the northeastern part of the state was the Scott Airfield (also called Shirlev Field), which was built in 1922 on Shirley Plantation near Tallulah (Madison County) to facilitate experiments in aerial crop dusting for the U.S. Department of Agriculture's Delta Laboratory. This entomology research facility had been established in 1909 to investigate methods of controlling the country's ruinous boll weevil infestation. In 1923, the New York-based Huff-Daland Company (a military aircraft manufacturer) worked with the Delta Laboratory to create an airplane specifically designed for dusting crops. Although federal funding for the Delta aerial dusting project ended after 1923, Huff-Daland and other private entities continued development of the process. In 1928, Standard Oil Company built an air terminal at Scott Airfield (which still stands today), and the facility was expanded to add commercial and passenger services to its operations.¹⁷⁸

- 177 Beauregard Regional Airport Board, "Airport Features" and "History," (ca. 2010), accessed August 3, 2011, <u>http://www.beau.lib.la.us/~airport.</u>; City of Shreveport, "Shreveport Downtown Airport- History," (2009), accessed August 2, 2011, <u>http://www.shreveportla.gov/ dept/airport/dtnhistory.htm.</u>; Freeman, "Baton Rouge Area," (2009), accessed August 8, 2011, <u>http://www. airfields-freeman.com/LA/Airfields_LA_BatonRouge. html.</u>; Paul Freeman, "Abandoned & Little Known Airfields: Northern Louisiana,"(2009), accessed August 8, 2011, <u>http://www.airfields-freeman.com/LA/Airfields_ LA_N.htm.</u>; Lafayette Regional Airport, "Lafayette Regional Airport: Airport History (2011), accessed August 2, 2011, <u>http://www.lftairport.com/PageDisplay. asp?p1=4709</u>.
- 178 Delta Air Lines, Inc., "Delta Air Lines Newsroom-Press Kit: History [Delta Timeline]," (2011), accessed April 11, 2011, <u>http://news.delta.com/index.php?s=18&cat=39</u>.; Delta Air Transport Heritage Museum, "Delta Museum- Delta History," (2011), accessed August 10, 2011, <u>http://deltamuseum.org/M</u> <u>Education DeltaHistory Facts History.htm.</u>; Lee Estes, *Fading Textures: Vintage Architecture, Industry, and Transportation in Northeast Louisiana* (Lafayette, Louisiana: Center for Louisiana Studies, University of Louisiana at Lafayette, 2000), 367.; Louisiana Division of Historic Preservation, Madison Parish: Shirley Field/Scott Airfield NRHP nomination document summary, online record extracted from Louisiana National

¹⁷⁴ Paul Freeman, "Abandoned & Little Known Airfields: Louisiana, Western New Orleans Area," (2011), accessed August 8, 2011, http://www.airfields-freeman.com/LA/Airfields LA NewOrleans W.htm.; Times-Picayune, "Menefee Field to Be Expanded on Large Scale; More Planes Arriving for Southern Air Transport Service," April 28, 1929:16, scanned article extracted from The Times-Picayune Historical Archive Database, accessed August 9, 2011, http://nl.newsbank. com/nl-search/we/Archives?p_product=HA-TP&p theme=histpaper&p action=keyword.; The Times-Picayune, various articles regarding the building and dedication of Menefee Field, May-June 1928, scanned articles extracted from The Times-Picayune Historical Archive Database, accessed August 9, 2011, http://nl.newsbank.com/nl-search/we/Archives?p_ product=HA-TP&p_theme=histpaper&p_ action=keyword.

¹⁷⁵ Louisiana Sports Hall of Fame, "Bill Banker, Sport: Football," (2010), accessed August 8, 2011, <u>http://</u> <u>www.lasportshall.com/index.php?src=directory&view=</u> <u>inductee&srctype=detail&back=inductee&refno=217</u>.

¹⁷⁶ Louisiana State Museum, Aviation History.; Times-Picayune, "Menefee Field."

The Huff-Daland Company moved its crop dusting activities to Macon. Georgia, where the corporation established a subsidiary firm, Huff Daland Dusters, ca. 1924-1925. Its unsuccessful first season prompted a headquarters move in 1925 to Monroe, Louisiana, located about 55 miles northwest of Tallulah and Scott Airfield. In 1928, a group of Monroe businessmen purchased Huff Daland Dusters and renamed the company Delta Air Service (and Delta Air Corporation in 1930). Crop dusting operations continued, but the company soon added passenger service in 1929 and then air mail service in 1934, at which time, the company was rechristened Delta Air Lines. In 1941, the corporate headquarters and aircraft maintenance operations were moved to Atlanta, Georgia, leaving only the crop dusting division in Monroe (which remained active until 1966). Since then, Delta Air Lines has evolved into one of the country's leading airlines.¹⁷⁹

In southeastern Louisiana, there were a number of small air fields built prior to World War II; however, it wasn't until the early 1930s that a major airport was constructed to serve the region: the Shushan Airport (today, called the New Orleans Lakefront Airport), instigated by Governor Huey P. Long in 1929 and dedicated on February 9, 1934. This state-of-the-art facility, inaugurated as a "combination land and seaplane terminal," was built on "approximately 300 acres of reclaimed land on the shores of Lake Pontchartrain."¹⁸⁰ The Shushan Airport Terminal Complex was designed by Weiss, Dreyfous, and Seiferth, the same architectural firm responsible for the Louisiana State Capitol building completed in Baton Rouge in

Register of Historic Places Database (1985), accessed April 11, 2011, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.ASP</u>.; John Earl Martin, *A History of Ag Aviation in Madison Parish* (2004), accessed August 10, 2011, <u>http://www.rootsweb.ances-</u> try.com/~lamadiso/articles/agaviation.htm.

- 179 Delta Air Lines, Inc., "Newsroom."; Delta Air Transport Heritage Museum, "Delta History."; Estes, *Fading Textures*, 366-68.; Martin, *Ag Aviation*.
- 180 *The Times-Picayune*, "New \$4,000,000 Airport Dedicated Despite Heavy Rain Shortening Program," February 10, 1934:1, 3, online article extracted from *The Times-Picayune Historical Archive Database*, accessed August 11, 2011, <u>http://nl.newsbank.com/</u><u>nl-search/we/Archives?p_product=HA-TP&p_theme=histpaper&p_action=keyword</u>.

1932.¹⁸¹ The Art Deco terminal "was considered a wonder of architecture and decor" at the time of its dedication, and, with ongoing restoration work, it remains "an architectural gem" to the present day¹⁸² The Lakefront Airport has retained its status as a general aviation airport; however, it was replaced by Moisant Field as the primary New Orleans commercial airport in 1946.¹⁸³

Like the New Orleans region, the Shreveport area was home to a number of early air fields. One of the most significant of these facilities was the Barksdale Field, constructed in 1931-1932 for the U.S. Army Air Corps on 22,000 acres of former cotton plantation land in Bossier Parish, across the Red River from Shreveport. At the time of its dedication in early 1933, Barksdale Field - graded and prepared by an estimated 150 men and 350 mules - was reported to be "the world's largest airfield."184 The first squadrons based at Barksdale focused on "bombing and gunnery training and made history by pioneering the development of techniques for engaging hostile aircraft."185 Now known as Barksdale Air Force Base, this facility remains "a key Air Force Global Strike Command Base," and it continues to serve "a pivotal role in providing a large part of the nation's deterrent force."186

The onset of World War II brought massive changes to airports and air fields throughout the state as Louisiana and the nation prepared for im-

- 181 Frank Donze, "Clear for Takeoff," *The Times-Picayune*, July 25, 2008, accessed May 4, 2011, <u>http://www.nola.com/news/index.ssf/2008/07/clear for take-off.html.</u>
- 182 New Orleans Lakefront Airport, "Lakefront Airport's History," accessed May 4, 2011, <u>http://www.lakefrontairport.com/History.htm.</u>; Frank Donze, "Lakefront Airport Landmark's Sad Story Gets Happy Ending," *Times-Picayune*, July 5, 2011, accessed May 4, 2011, <u>http://www.nola.com/business/index.ssf/2011/07/</u> <u>lakefront_airport_landmarks_sa.html</u>.
- 183 Louis Armstrong New Orleans International Airport, Armstrong International History, accessed May 3, 2011, <u>http://www.flymsy.com/PageDisplay.asp?p1=5715</u>.
- 184 Barksdale Air Force Base, 2nd Bomb Wing Public Affairs, "U.S. Air Force Fact Sheet: Barksdale Information, *From Cotton Fields to Airfield*, accessed August 11, 2011, <u>http://www.barksdale.af.mil/library/factsheets/factsheet.asp?id=4409</u>.

186 Barksdale Air Force Base, "Barksdale Information."

¹⁸⁵ Stahls, "Aviation History."

pending participation in the war effort. During this time. Louisiana was home to ten U.S. Army air fields and one U.S. Navy air base, as well as numerous support facilities (Table 10). Several of these air fields had been converted from civilian to military use, and they performed a variety of functions, e.g., pilot, navigation, gunnery, reconnaissance, instructor, and bomber crew training. During the early 1940s, a number of the air fields located in the northwestern part of the state were designated as grounds for the U.S. Army's Louisiana Maneuvers - large unit war games that simulated anticipated combat operations in Europe. Besides training programs, these facilities handled other missions, including submarine reconnaissance patrols and military aircraft maintenance. In addition to the principal air fields, there were numerous smaller support fields scattered throughout the state. For instance, toward the close of World War II, the New Orleans Naval Air Station on the south shore of Lake Pontchartrain was supported by at least nine outlying fields -Kenner, Wedell-Williams, Sellers, Willswood, Marrero, Callender, Norman, Stanton, and Menefee – all spread across the region between Kenner in western Jefferson Parish and Belle Chasse in northern Plaquemines Parish (Figure 33). Following the war, most of these facilities, large and small, were returned or converted to civilian use, or they simply were deactivated and abandoned, with only a few remaining under military tenure.187

Mid-Twentieth Century through Modern Era

Although aircraft carried passengers and freight prior to World War II, it wasn't until the second half of the twentieth century that flight developed into a common mode of popular travel and transport. Wartime conditions forced an increase in technological developments in the aircraft industry. In addition, municipalities purchased many of the deactivated military airfields for conversion to commercial use. Passenger flight figures note that only 3,000,000 Americans flew in 1940; however, by 1956, that number had increased more than 18-fold to 55,000,000 passengers. The introduction of safer and more reliable jet engine powered planes during the late 1950s further revolutionized air travel. During the 1960s, air travel remained largely restricted to the wealthy and to business travelers. By the 1970s, though, lower air fares and federal deregulation of the airlines opened the skies to the average person, and flying became commonplace travel throughout America. In 1975, flight records counted 205,000,000 commercial air passengers, but, 25 years later, air traffic data recorded 638,000,000 fliers in 2000. It was during the same general time period - 1970s into the new millennium - that freight deliveries became big business for the air transport industry.¹⁸⁸

While scheduled commercial flights and military aviation historically have taken the primary air transportation focus in Louisiana, general aviation also has been considered an important element in both the public and private sectors. General aviation operations have been defined as follows:

These uses include, but are not limited to, private and sport flying, aerial photography and surveying, cropdusting, business flying, medical evacuation, flight training, and the police and fire fighting uses of aircraft. The airplanes used in general aviation range from small, single-engine, fabric-covered aircraft to multi-million dollar business jets. They also include helicopters, restored warbirds, and homebuilt aircraft designed to use advanced composite technology.¹⁸⁹

Seaplanes also are utilized in Louisiana's coastal region, primarily by petroleum companies.¹⁹⁰

- 188 James C. Kruggel, "Air Travel: Its Impact on the Way We Live and the Way We See Ourselves," (2009), accessed August 15, 2011, <u>http://www.centennialof-flight.gov/essay/Social/impact/SH3.htm.</u>; Asaf Siddiqi, "The Opening of the Commercial Jet Era," "The Era of Commercial Jets," and "A History of Commercial Air Freight," online articles extracted from History of Flight Essays: Commercial Aviation (2009), accessed August 15, 2011, <u>http://www.centennialofflight.gov/essay_cat/8. htm</u>.
- 189 Janet Bednarek, "General Aviation- An Overview," (2009), accessed August 15, 2011, <u>http://www.centennialofflight.gov/essay/GENERAL_AVIATION/GA_OV.htm.</u>
- 190 Federal Aviation Administration, "Louisiana Airport Facilities Data, Information Current as of 06/03.2011,"

¹⁸⁷ Casey, *Encyclopedia.*; Paul Freeman, "Abandoned & Little Known Airfields: Southwestern Louisiana," (2010), accessed August 8, 2011, <u>http://www.airfields-freeman.com/LA/Airfields_LA_SW.htm</u>.; Stahls, "Aviation History."

Table 10. Louisiana air fields during the World War II era (Barksdale Air Force Base 2011; Baton Rouge Metropolitan Airport 2011; Beauregard Regional Airport Board ca. 2010; Casey 1983:12-13, 21-23, 44-45, 53, 58, 62-63, 73-74, 104, 128, 140, 219, 236; England Airpark & Community 2011; Federal Aviation Administration 2011; Freeman 2008, 2010a, 2010b, 2011; Louis Armstrong New Orleans International Airport 2011; Monroe Regional Airport 2011; Navy USA 2009; Pierce 2005; Stahls 2009).

LOCA	TION	PRE-WW	Π	WORLD WAR II	MILITARY	CUDDENT NAME
PARISH	CITY	ORIGINAL NAME	EST.	DESIGNATION	SERVICE	CURRENT NAME
Beauregard	DeRidder	Beauregard Field	1934	DeRidder Army Airbase	1941-1948	Beauregard Regional Airport
Bossier	Bossier City	Barksdale Field	1932	Barksdale Field	1932 - present	Barksdale Air Force Base
Calcasieu	Lake Charles			Lake Charles Army Flying School / Lake Charles Army Airfield (1943) / Chennault Air Force Base (1958)	1942-1947, 1951-1963	Chennault International Airport
East Baton Rouge	Baton Rouge			Baton Rouge Army Air Field / Harding Army Airfield (1942)	1941-1948	Baton Rouge Metropolitan Airport, Ryan Field
Jefferson	Kenner			Moisant Army Airfield	ca. 1941-1946	Louis Armstrong New Orleans International Airport
Orleans	New Orleans	Shushan Airport / New Orleans Airport (1940)	1934	New Orleans Army Air Base / Camp Leroy Johnson (1947)	1941-1964	New Orleans Lakefront Airport
Orleans	New Orleans			New Orleans Naval Reserve Air Base / New Orleans Naval Air Station (1943)	1941-1957	Moved to Belle Chasse (Plaquemines Parish) in 1957; exists today as Naval Air Station Joint Reserve Base, New Orleans
Ouachita	Monroe	Selman (or Monroe) Airport	1940	Selman Army Airfield	1942-1949	Monroe Regional Airport
Rapides	Alexandria	Alexandria Municipal Airport	1939	Alexandria Army Air Base / Alexandria Air Force Base (1950) / England Air Force Base (1955)	1942-1946, 1950-1992	Alexandria International Airport
Rapides	Pineville	Camp Beauregard Airport	late 1920s - early 1930s	Camp Beauregard Army Field / Esler Army Airfield (1942)	1940 - ca. 1950s, 2001 - present	Esler Regional Airport / Esler Airfield, combination civilian and Louisiana National Guard use
Tangipahoa	Hammond	Hammond Airport	1932	Hammond Army Airfield	1942 - ca. 1946	Hammond Northshore Regional Airport

--- Facility non-existent prior to military development



Figure 33. Shirley Field/Scott Airfield Terminal (constructed 1928), Tallulah, Madison Parish. Located northeast of Tallulah, this is an example of a structure that might be considered eligible for the National Register of Historic Places due to its association with the history of transportation in Louisiana.¹⁷

Today, there are 492 Louisiana airport facilities registered with the Federal Aviation Administration: 232 public and private airports or airfields, 229 public and private heliports (mostly for private use by such groups as medical teams, law enforcement, military crews, petroleum industry services, news crews, and corporate businesses), 12 private seaplane bases, and 19 private ultralight facilities. Of the total number, most facilities are privately or publicly owned for private usage.¹⁹¹ There currently are 69 Louisiana facili-

ties – 68 airports and 1 heliport – that are publicly owned for public usage and that are registered with both the Federal Aviation Administration and the Louisiana Department of Transportation and Development (Table 11). Only seven of these facilities handle scheduled commercial air service: Baton Rouge Metropolitan Airport, Lafayette Regional Airport, Lake Charles Regional Airport, Louis Armstrong New Orleans International Airport, Monroe Regional Airport, and Shreveport Regional Airport.¹⁹²

¹⁷ LDHP, "Madison Parish, Shirley Field/Scott Field, Tallulah," online photograph extracted from *Louisiana National Register of Historic Places Database* (1985), accessed April 12, 2012, <u>http://www.crt.state.la.us/hp/nationalregister/nhl/SEARCHBY.</u> <u>ASP.</u>

online data retrieved from FAA Airport Data & Contact Information (2011), accessed August 3, 2011, <u>http://</u> <u>www.faa.gov/airports/airport_safety/airportdata_5010</u>. 191 Ibid.

¹⁹² Boyd Group International, "Feasibility Assessment & Structural Recommendations: Statewide Air Service Incentive Program," (2011), accessed May 24, 2011, <u>http://www.dotd.la.gov/intermodal/aviation/documents/</u>

Table 11.	Louisiana publicly owned airports for public use, information current as of June 30, 2011 (Boyd Group Internation-
	al 2011:17-18; Federal Aviation Administration 2011; Louisiana Department of Transportation and Development
	2011).

PARISH	СІТУ	FACILITY NAME	*YEAR ACTIVATED
Acadia	Crowley	Le Gros Memorial Airport	1943
Acadia	Eunice	Eunice Airport	1964
Allen	Oakdale	Allen Parish Airport	1968
Ascension	Gonzales	Louisiana Regional Airport	1992
Avoyelles	Bunkie	Bunkie Municipal Airport	1950
Avoyelles	Marksville	Marksville Municipal Airport	1950
Beauregard	DeRidder	Beauregard Regional Airport	1940
Bienville	Arcadia	Arcadia-Bienville Parish Airport	
Caddo	Shreveport	Shreveport Downtown Airport	1940
Caddo	Shreveport	Shreveport Regional Airport**	1952
Caddo	Vivian	Vivian Airport	1960
Calcasieu	DeQuincy	DeQuincy Industrial Airpark	
Calcasieu	Lake Charles	Chennault International Airport	1964
Calcasieu	Lake Charles	Lake Charles Regional Airport**	1961
Calcasieu	Sulphur	Southland Field	1987
Caldwell	Columbia	Columbia Airport	1964
Catahoula	Jonesville	Jonesville Municipal Airport	1950
Claiborne	Homer	Homer Municipal Airport	1970
Concordia	Vidalia	Concordia Parish Airport	
De Soto	Mansfield	C. E. "Rusty" Williams Airport	1944
East Baton Rouge	Baton Rouge	Baton Rouge Metropolitan Airport, Ryan Field**	1942
East Carroll	Lake Providence	Byerley Airport	1951
Franklin	Winnsboro	Winnsboro Municipal Airport	1945
Grant	Pollock	Pollock Municipal Airport	1944
Iberia	Jeanerette	Le Maire Memorial Airport	1947
Iberia	New Iberia	Acadiana Regional Airport	1944
Jackson	Jonesboro	Jonesboro Airport	1964
Jefferson	Kenner	Louis Armstrong New Orleans International Airport**	1944
Jefferson Davis	Jennings	Jennings Airport	1945
Jefferson Davis	Welsh	Welsh Airport	1947
La Salle	Jena	Jena Airport	1960
La Salle	Olla	Olla Airport	
Lafayette	Lafayette	Lafayette Regional Airport**	1940
Lafourche	Galliano	South Lafourche Leonard Miller, Jr., Airport	1987
Lincoln	Ruston	Ruston Regional Airport	1994
Madison	Tallulah	Scott Airport	1941
Madison	Tallulah	Vicksburg-Tallulah Regional Airport	1992
Morehouse	Bastrop	Morehouse Memorial Airport	
Natchitoches	Natchitoches	Natchitoches Regional Airport	1940
Orleans	New Orleans	New Orleans Downtown Heliport	1997
Orleans	New Orleans	New Orleans Lakefront Airport	1940
Ouachita	Monroe	Monroe Regional Airport**	1940
Pointe Coupee	New Roads	False River Regional Airport	1974
Rapides	Alexandria	Alexandria International Airport**	1944

PARISH CITY		PARISH CITY FACILITY NAME	
Rapides	Pineville	Esler Regional Airport	1941
Rapides	Pineville	Pineville Municipal Airport	1971
Rapides	Woodworth	Woodworth Airport	1960
Red River	Coushatta	Red River Parish Airport	
Richland	Delhi	Delhi Municipal Airport	1960
Richland	Rayville	John H. Hooks, Jr., Memorial Airport	1950
Sabine	Many	Hart Airport	1940
St. John the Baptist	Reserve	St. John the Baptist Parish Airport	1989
St. Landry	Opelousas	St. Landry Parish - Ahart Field	1947
St. Mary	Patterson	Harry P. Williams Memorial Airport	1940
St. Tammany	Covington	St. Tammany Regional Airport	1971
St. Tammany	Slidell	Slidell Airport	
Tangipahoa	Hammond	Hammond Northshore Regional Airport	1941
Tensas	St. Joseph	Tensas Parish Airport	1986
Terrebonne	Houma	Houma-Terrebonne Airport	1940
Terrebonne	Thibodaux	Thibodaux Municipal Airport	1972
Union	Farmerville	Union Parish Airport	1964
Vermilion	Abbeville	Abbeville Chris Crusta Memorial Airport	1948
Vernon	Leesville	Leesville Airport	
Washington	Bogalusa	George R. Carr Memorial Airport	1941
Washington	Franklinton	Franklinton Airport	
Webster	Minden	Minden Airport	1955
Webster	Springhill	Springhill Airport	1966
West Carroll	Oak Grove	West Carroll / Kelly-Dumas Airport	
Winn	Winnfield	David G. Joyce Airport	1945

Table 11, continued

*Activation years are those recorded by the FAA, and may not reflect the dates of original establishment

**Louisiana airports with scheduled commercial air service

--- Information not provided

Besides the common forms of air travel, Louisiana also boasts a connection to space exploration through the Michoud Assembly Facility in eastern New Orleans. Commonly referred to simply as Michoud, this enormous fabrication plant "has a long, successful history and proven expertise in the manufacture and assembly of large aerospace systems and structures supporting NASA programs and projects."¹⁹³ Following the outbreak of World War II, the U.S. government purchased acreage from the former Michoud Plantation in 1940, and a contract was issued to Andrew Jackson Higgins (noted for the design and manufacture of World War II landing craft, or "Higgins boats") for ship construction on the site, which had deep-water port access. Military needs prompted a change in plans in 1942, and, instead, the tract was developed for aircraft construction, specifically, plywood cargo planes – a project also to be overseen by Higgins. Production began after the main production building was completed in October 1943 – "the world's largest production building at the time, covering 43 acres under one roof."¹⁹⁴ The facility was closed in 1945, but was reactivated in 1951-1953 for the manufacture of

Air Service Development Study.pdf.

¹⁹³ NASA, "Michoud Assembly Facility- History of MAF," (2007), accessed August 15, 2011, <u>http://maf.</u> <u>msfc.nasa.gov/history.html</u>.

¹⁹⁴ Ibid.

tank engines during the Korean Conflict. In 1961, NASA acquired the Michoud property through a transfer from the U.S. Department of Defense, and the 833-acre site was redeveloped in support of the National Space Program. During the 1960s, Apollo Program spacecraft were powered by Saturn booster rockets built at Michoud. By 1973. though, the focus at Michoud turned to the design, manufacture, and assembly of external fuel tanks for NASA's space shuttles. That program ended with the final shuttle touchdown on July 21, 2011. The Michoud facility will continue the development of other components for the space program (Figure 34); however, that work will proceed, at least initially, with drastically reduced employment numbers.195

Associated Building Examples

Humans quickly adapted the rudimentary flyer at Kitty Hawk into the aerodynamic supersonic jets of today. These advancements keep flyers safer than the Wright Brothers could have hoped but prevent airplanes and their related structures from being in use for long periods of time. Aircraft require constant treatment to remain safe; these treatments can affect materials and workmanship integrity. Alterations are often not enough to keep aircraft in service and most commercial airliners are retired at approximately 30 years of age, despite the daily service and inspection.¹⁹⁶ Older airplanes and their equipment become objects of memorialization or are scrapped for parts.

Airports, runways, towers, and other aircraft support objects are more likely to remain in service than their flying counterparts. Updates to these structures and objects are necessary to keep pace with modern aircraft. These alterations may damage the materials, design, and/or work-

 $\underline{ness/index.ssf/2011/07/giant_michoud_complex_pon-ders.html}.$

196 Omega, *Environmental aspects of fleet turnoever, retirement and life cycle*, Final Report: 2.



Figure 34. Aerial View of Michoud Assembly Facility (period of significance, mid-twentieth century to present), Orleans Parish. This facility includes examples of structures that might be considered eligible for the National Register of Historic Places due to their association with the history of transportation in Louisiana.¹⁸

¹⁹⁵ Freeman, "Louisiana, Eastern New Orleans Area."; NASA, "NASA Fact Sheets: Michoud Assembly Center," accessed August 15, 2011, <u>http://www.nasa.gov/ centers/marshall/pdf/169340main MSFC%20MAF%20</u> <u>FS-eps%20logo.pdf</u>.; NASA, "End of an Era," and "The Final Space Shuttle Landing," *Michoud Messenger* 3(8):1, 3, accessed August 1, 2011, <u>http://www.nasa.gov/ centers/marshall/pdf/382051main_TMM_online110801. pdf.</u>; Jaquetta White, "Giant Michoud Complex Ponders Wide-Open Future as the Sun Sets on Space Shuttle Era," *Times-Picayune*, July 3, 2011, <u>http://www.nola.com/busi-</u>

¹⁸ Lockheed Martin, Aerial View of Michoud Assembly Facility, online photo extracted from "History: NASA's Michoud Assembly Facility," accessed April 13, 2012, <u>http://www.nasa.gov/centers/marshall/michoud/maf_history.html</u>.

manship integrity of the property. Shirley Field (Scott Field) outside Tallulah in Madison Parish is comprised of a collection of ancillary buildings surrounding a historic taxiway that served early Louisiana crop dusters. The field is listed in the National Register of Historic Places for its association with agriculture, not transportation, although it may be eligible for listing under Criterion B under the historic theme of transportation for its association with the creation of Delta Airlines.

Passenger Terminals

The expansion of the commercial airline industry in the middle of the twentieth century led to the construction of airports and passenger terminals in urban areas across the United States. Airlines, eager to embrace modern methods of transportation, hired prominent architects to design buildings featuring modern materials and styles. Many mid-century terminals are still in service either as small, stand-alone airports or as part of larger, more modern structures. The most prominent airport of this era is Lakefront Airport in New Orleans, a 1930s Art Deco terminal which was substantially damaged by Hurricane Katrina.

The setting of passenger terminals may speak more to the property's National Register eligibility than the interior materials. The proximity of passenger terminals to historic runways, taxiways, and towers may also affect the historic integrity of the property.

World War II Bases

The massive mobilization of troops and materials to support combat missions in World War II necessitated the construction of military bases across the nation. The armed forces operated air bases across Louisiana to train pilots and monitor suspected German U-boat activity in the Gulf of Mexico. Some bases, such as Barksdale Air Force Base in Bossier, existed prior to the conflict and ramped operations to wartime levels. Others, such as Moisant Field in Kenner, were built specifically to serve the military's needs at the time and then decommissioned and converted for civilian use. It is important to note that the Air Force did not formally separate from the Army until 1947, two years after the cessation of fighting in World War II. The historic names of these air bases will reflect their Army heritage. Other historic elements left behind may include hangars, runways, signs, and barracks.

For more information on air transportation, see:

Barksdale Field Historic District National Register of Historic Places Nomination. 1992.

- National Park Service. 2004. *American Aviation Heritage*. National Historic Landmark Theme Study Update.
- R. Christopher Goodwin & Associates, Inc. 1997. *Historic Context for Deapartment of Defense Facilities World War II Permanent Construction*. Submitted to the US Army Corps of Engineers Baltimore District.
- Shirley Field (Scott Airfield) National Register of Historic Places Nomination. 1985.

<u>Summary</u>

The Michoud Assembly Facility "contains one of the largest production buildings in the nation, a vertical assembly building for stacking external tank components, pneumostatic and systems test buildings, a deep-water port for shipment, manufacturing support buildings and administrative offices."197 Other than this vast NASA campus, the aviation facilities scattered across Louisiana have more typical structures associated with air transport, e.g., airport passenger terminals, airplane hangars, control towers, maintenance and repair facilities, beacon towers, and freight terminals. To accommodate air travelers, motels and vehicle rental facilities would be among the amenities established on or near airport sites. Military air fields would contain many structures similar to those built on civilian facilities, but they also might include base housing, parachute lofts, and other buildings necessary for maintaining defense and disaster aid preparedness (Figure 35). Other than modifications in architecture and updates in associated navigation and equipment technology, the structure types built to support air transportation probably saw relatively little change through the years. Table 12

¹⁹⁷ NASA, "History of MAF."

sketches a general inventory of structure types that might have been found on or near Louisiana's airports and air fields throughout the state's aviation history.

Transportation Summary

As noted in the introduction, the evolution of Louisiana has been intertwined with transportation from its earliest days. Waterways, roads, railroads, streetcars and interurban railways, and airlines – all of these transport systems have developed along with the state. Through the years, structures have been built to support and to take advantage of transportation modes throughout Louisiana. Technology has brought significant changes to the state's transportation network, and the architecture and design of related structures has evolved, as well.



Figure 35. Residential development spurred by neighboring England Air Force Base, Alexandria.

 Table 12.
 General structure types that might have been built on or associated with Louisiana airport properties.

GENERAL STRUCTURE TYPES	REPRESENTATIVE STRUCTURES
Transportation Operations	Airport runways, airplane hangars, control towers, airfield sheds, beacon towers, weather observatories, repair facilities
Migration / Travel	Passenger terminals, airport motels, vehicle rental facilities
Commercial	Freight terminals, heliports, seaplane bases
Industrial	Parts manufacturing facilities, storage and supply warehouses, crop dusting facilities
Military	Air bases, parachute lofts
Residential	Air base housing

The criteria for inclusion in the National Register of Historic Places (NRHP) provide general guidance and a framework for evaluating historic properties. The criteria are flexible enough to embrace a wide variety of historic properties yet specific enough to limit applicability to only worthwhile historic properties. Within the historic context of transportation, every NRHP criteria may be applicable, but certain ones may be found to be more prevalent. Those historic properties for which the transportation theme is applicable are either directly linked with the history of transportation in Louisiana or tangentially linked wherein transportation may be more appropriate as a secondary theme or in conjunction with additional historic themes.

Criterion A

Criterion A, defined as "associated with events that have made a significant contribution to the broad patterns of our history," likely is the criterion most broadly applicable to those historic properties considered within the historic context of transportation.¹⁹⁸ Given Louisiana's broad transportation history, associated historic properties will likely fit within at least one, and possibly multiple, of the subtypes referenced in the context.

Historic themes can be helpful guides for informing a NRHP nomination for a historic property. As the sprawl of transportation prevents rendering precise limits on the types of properties that fall within the transportation rubric, dividing properties into two categories may prove to be helpful. Those historic properties for which the transportation theme is applicable are either structures intimately linked with the history of transportation in Louisiana or tangentially linked wherein transportation is a secondary theme.

The buildings that fall into the first category, those that are directly associated with the historic theme of transportation are often buildings with a highly specialized, and often discrete, purpose. For example, many structures associated with railroads, such as roundhouses, were constructed with a very specific and narrow purpose and illustrate those properties where transportation is a primary theme. Other historic properties may also be associated with the historic theme of transportation, but another historic theme such as agriculture or commerce may prove to be more applicable. These properties are often those that are geographically located along a transportation subtype, but were not constructed specifically to serve a transportation need, such as taverns, warehouses, and hotels. These properties generally do not have a significant link to transportation, but their development and construction are often driven by various modes of transportation.

Criterion B

Structures eligible under the transportation context under Criterion B, defined as "associated with the lives of significant persons in our past," may not be as prevalent as those under Criterias A and C, but the possibility for these associations exists. Structures found eligible under Criterion B in Louisiana tend to be domestic in character, leaving few ties to transportation available. However, certain individuals may have associated warehouses, construction facilities, design studios, and the like that may be applicable under Criterion B. For example, buildings associated with Robert Fulton's development of the steamboat or Andrew Higgins' construction of his eponymous boats may rise to the level of eligibility under Criterion B.

Criterion C

Criterion C, defined as those structures and objects that "embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or

¹⁹⁸ Applicable for all definitions of NRHP Criteria: Department of the Interior, National Park Service, *How* to Apply the National Register Criteria for Evaluation ([Washington, D.C]: U.S. Government Printing Office, 1990; reprint, 1995), 2.

that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction," may also apply to some buildings eligible under the transportation context. Given the wide variety of structures that fall within the broad theme of transportation, many will undoubtedly exhibit characteristics ripe for consideration under Criterion C.

Certain building types may be more likely candidates for Criterion C, such as railroad depots and plantations than those buildings more functional in character. For example, had it survived, Louis Sullivan's Union Station in New Orleans would have been eligible primarily for its association with a master architect, followed closely by eligibility under Criterion A for its association with rail transport in early twentieth century New Orleans. However, any secondary support buildings on the same rail yard that had not been designed by Sullivan would likely not be considered eligible under Criterion C, but still could be eligible under Criterion A.

Architecture and transportation are intimately tied together in some listed properties. For example, the Algiers Point National Register Historic District in Orleans Parish is listed for both its nineteenth century architecture as well as the development spurred by modes of transportation found in the area. The collection of shotguns, double shotguns, and camelbacks nestled in a small town adjacent to the urban center exemplifies the historic architecture of New Orleans. As described in the NRHP nomination for Algiers Point, "The railroad and the dry docking and ship repair industries contributed directly to the growth of residences of architectural interest and value."

Criterion D

Criterion D, the criterion defined as "yielded or may be likely to yield, information important in history or prehistory," is likely to be rarely applicable to those properties found eligible under the transportation context. Primarily used for archeological properties, Criterion D poses certain limitations when it comes to buildings and structures. However, archeological properties related to transportation have been successfully listed in the NRHP under Criterion D, such as the Connecticut Valley Railroad Roundhouse and Turntable Site in Connecticut and Chickahominy Shipyard Site in Virginia. Criterion D may be the most helpful for the earliest modes of transportation where little remains extant.

Integrity

Eligibly under to the NRHP requires the individual property to meet the necessary requirements for integrity of materials, design, location, setting, workmanship, association, and feeling, as integrity "is the ability of a property to convey its significance."¹⁹⁹ While a preponderance of these integrities is necessary, no minimum number is required to meet the requirements for the NRHP; this determination of "how much integrity is enough" is left to the professional practioner. For more detailed description of integrity and eligibility considerations, please see Section VIII of the National Register Dulletin entitled *How to Apply the National Register Criteria for Evaluation.*

For those properties eligible under the transportation context, each property may have a different set of integrities that is more applicable than others. For example, eligibility of the architect designed railroad deport may hinge on the integrity of design and materials, while the lighthouse may require location and setting integrity as its determining factors. Alternatively, those properties for which transportation is a secondary theme must still exhibit the various types of integrity, but their primary theme will serve as a better guide for which types of integrity are applicable.

Those properties intimately linked with transportation, and eligible under Criterion A such as specialized structures associated with railroads, will likely require integrity of design for eligibility, given their specialized function and strict construction requirements. For example, a railroad roundhouse that had been altered to the point it no longer retained even a hint of the necessary arc or complete circle would likely be too changed to retain its design integrity. If those functions had changed, such as a railroad depot

¹⁹⁹ Department of the Interior, National Park Service, How to Apply the National Register Criteria for Evaluation ([Washington, D.C]: U.S. Government Printing Office, 1990; reprint, 1995).

that no longer retained its segregated spaces but kept the highly symmetrical floor plan, the building may retain integrity of design, despite a fundamental change in purpose.

Certain integrities, such as setting, location, and association, may prove to be pitfalls for many transportation-themed historic properties if the historic mode of transportation has been long gone. Given the constantly changing transportation modes in Louisiana history, it is inevitable some structures remain extant long after their associated mode of transportation fell by the wayside. A railroad depot adjacent to an empty railroad bed or an airport no longer serviced by airplanes may still be eligible for the NRHP, provided other integrities are evident. Furthermore, some properties associated with transportation are designed to move, such as locomotive engines and ships, thus often rendering integrity of location and setting moot.

The evaluation of integrity of a transportation-related historic property must be tied intimately with the significance of the structure. Once significance has been determined, the applicable evaluation of integrity can be gauged, as can the necessary physical elements of the building that are critical to eligibility. However, the comparative rarity of a structure may also be taken into consideration when evaluating integrity and eligibility.

As transportation is a rich and varied historic theme in Louisiana, a broad spectrum of properties can fit within its encompassing boundaries. The structures associated with transportation in Louisiana exhibit a wide range of architectural types and styles, can date from virtually any historic period, and may be located anywhere in the state. While many structures are specialized to meet the specific needs and demands of a certain transportation type, such as a roundhouse associated with a railroad, others buildings may serve a more generalized function where its association with transportation is one of many applicable historic themes, such as a roadside motel that may also be notable for its architecture. The common theme of transportation links these buildings together in ways that style, construction date, building type, and location do not.

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