

LAKE PONTCHARTRAIN CAUSEWAY
AND SOUTHERN TOLL PLAZA,
TOLL BOOTH
Causeway Boulevard
Metairie
Jefferson Parish
Louisiana

HAER LA-21-B

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
U.S. Department of the Interior
100 Alabama Street, SW
Atlanta, Georgia 30303

HISTORIC AMERICAN ENGINEERING RECORD

LAKE PONTCHARTRAIN CAUSEWAY AND SOUTHERN TOLL PLAZA, TOLL BOOTH HAER LA-21-B

Location: The Lake Pontchartrain Causeway spans Lake Pontchartrain from Causeway Boulevard in Metairie, Jefferson Parish to Highway 190, Mandeville, St. Tammany Parish, Louisiana. The southern Toll Plaza was located at the Jefferson Parish terminus of the Lake Pontchartrain Causeway.

The southeast corner of the toll booth was located at latitude 30.020556, longitude -90.154444. This coordinate represents the location of the southeast corner. This information was acquired using Google Earth imagery. There are no restrictions on the release of this information to the public.

Dates of Construction: The Toll Booth was installed concurrent with the construction of the second span of the Lake Pontchartrain Causeway in 1969. The Greater New Orleans Expressway Commission originally operated three booths at the southern Toll Plaza but demolished two in 1999. The subject of this narrative was demolished in 2011.

Engineer: Palmer & Baker, Inc. designed the first span to almost exclusively consist of identical panels, caps, and pilings. This allowed for all pieces of the bridge to be prefabricated off site, cutting costs and time needed to build such a large structure. The firm of Palmer & Baker, Inc. began as a one-man operation in 1939. Walter F. Palmer, then Vice-President of the firm of Wilberding & Palmer, moved to Mobile, Alabama, in 1939 to open the firm's southern office. He was joined two years later by Robert Baker, a former chief engineer with Wilberding & Palmer.¹ Palmer, a transportation engineer had substantial experience working with prefabricated concrete structures and brackish water. In 1938, the City of Mobile hired Palmer under a contract with the Works Progress Administration to construct the Bankhead Tunnel in Mobile Bay. Workers constructed seven sections of prefabricated, 10.4' wide tubes at the Alabama Drydock and Shipbuilding Company, towed the sections one mile to the site, and installed.² The mixture of fresh and salt water in the Bay caused challenges when ballasting the elements. When completed in

¹ *The Times-Picayune*, "Engineer Firm Started in 1939," 29 August 1956, 19.

² *The Palm Beach Post*, August 28, 1948, 4.

1950, the tunnel contained two one-way lanes of traffic equipped with hurricane protection gates.³ Palmer also designed tunnels for Houston and Galveston.

The second span was designed by David Volkert & Associates. The Company was founded in New Orleans, Louisiana, in 1925 as Doullut & Ewin, Inc. as an engineering and construction company. The firm moved to Mobile, Alabama, and reorganized in 1946.⁴ Clients of the firm included the Cities of Mobile, Alabama; Pensacola, Florida; and New Orleans, Louisiana; the states of Alabama, Florida, Louisiana, and Tennessee; the U.S. Army Corps of Engineers; the Bureau of Aeronautics; and the Pure Oil Company.⁵ The firm again reorganized in 1963 to become David Volkert & Associates. Volkert & Associates personnel had experience with bridge construction, tunnel installation, and port development. By 1967, the firm had designed causeways and bascule bridges in Miami and Brevard County, Florida, and the Patpsco Avenue Bridge in Baltimore.⁶

Builder:

The Louisiana Bridge Company, a joint venture between Brown & Root, Inc. of Houston, Texas, and the T.L. James Company of Ruston, Louisiana, implemented Palmer & Baker's design for the Lake Pontchartrain Causeway. Like Palmer & Baker, Brown & Root, Inc. also had extensive experience with construction projects in salt water environments. In 1947, the firm built the first oil platform in the Gulf of Mexico beyond the sight of land. This feat led to the expansion of the offshore oil and gas industry worldwide.⁷ The T.L. James Company previously constructed Camp Ruston, a camp northwest of Ruston for the detention of European World War II prisoners of war.⁸ Following award of the contract, the Louisiana Bridge Company worked with the Raymond Concrete Pile Company to construct a yard in Mandeville near the planned site for the northshore Toll Plaza. All pieces of the bridge were

³ Association Internationale des Tunnels et de L'Espace Souterrain-International Tunneling and Underground Space Association, "Bankhead Tunnel, Mobile, Alabama" (2009).

⁴ David Volkert & Associates, Path to Success, 2012, <http://www.volkert.com/history.htm> (accessed 7 August 2012).

⁵ Ewin Engineering Corporation, "Ewin Engineering Corporation," 1950, http://www.volkert.com/PDF%20Files/Ewin_Engineering%20Brochure_1925-1950.pdf (accessed & August 2012).

⁶ David Volkert & Associates, "David Volkert & Associates," 1964, http://www.volkert.com/PDF%20Files/DVA_Historic_Brochure_1964.pdf (accessed 7 August 2012).

⁷ Joseph A. Pratt, Tyler Priest, and Christopher J. Castaneda. *Offshore Pioneers: Brown & Root and the History of Offshore Oil and Gas* (Houston: Brown & Root by Gulf Publishing Company: 1997), 1-3, 100-104.

⁸ Louisiana Tech University Special Collections, "Camp Ruston", (2010).

produced at this location. The Raymond Concrete Pile Company utilized their concrete manufacturing technology to produce prestressed concrete cylinders which could withstand the corrosive conditions of Lake Pontchartrain.

In 1955, the Raymond Concrete Pile Company and the Louisiana Bridge Company built the facility for \$6 million, employing approximately 750 workers. Engineers designed, planned, and built the plant to maximize efficiency in construction of the bridge. Workers dredged a canal from the Lake to the interior of the facility to facilitate loading materials on and off barges. Plant workers manufactured pilings on the east side of the plant and constructed spans on the western portion. Concrete mixing machines and spouts separated the two.

James E. Walters, a World War I veteran with a varied professional career, oversaw construction of the first Lake Pontchartrain Causeway. Walters was a sailor, rancher, and bronco-buster prior to becoming an engineer. He oversaw construction of the Pickwick Landing Dam on the Tennessee River during the Great Depression and spent much of World War II conducting aircraft salvage.⁹ Under Walters' direction and utilizing prefabrication techniques, the first span was completed four months ahead of schedule.¹⁰

Construction on the second span began in June 1967. The GNOEC chose another joint Brown & Root-T.L. James & Company-Raymond International (formerly the Raymond Concrete Pile Company) called Prestressed Concrete Products, Inc. to build the span utilizing the same prefabrication techniques that had proven successful before.¹¹ Prestressed Concrete Products, Inc. manufactured nearly all components of the second bridge at the plant in Mandeville and transported by barge to the construction site in Lake Pontchartrain.¹² James E. Walters, project engineer for the first span, was by then Executive Vice-President of the Prestressed Concrete Pile Company and once again directed construction.

⁹ *The St. Tammany Farmer* 31 August 1956:1

¹⁰ *The Times-Picayune*, August 31, 1956, "Motorcade Reaches St. Tammany End of Causeway", 1.

¹¹ *The St. Tammany Farmer*, May 10, 1969, "Dedication of Causeway's Twin a Giant Safety Step.", 19-20, 22.

¹² Gulf Engineers & Consultants, Krebs, LaSalle, Lemieux Construction, Inc. [GEC-KLL], *GNOEC Consulting Engineers' Annual Report of the Lake Pontchartrain Causeway*, 2-4.

**Original Owner
and Use:**

Greater New Orleans Expressway Commission; toll booth

**Last Owner
and Use:**

The Greater New Orleans Expressway Commission operated the toll booth as a building for safety workers prior to demolition of the southern Toll Plaza in 2011.

Significance:

The southern toll plaza of the Lake Pontchartrain Causeway included a police building, toll booth, canopy, and administration building. When completed in 1956, the Lake Pontchartrain Causeway was the world's longest bridge. This record was broken by completion of the parallel span in 1969. At 23.87 miles long, the Causeway is the world's longest continuous span over water. The prestressed, pre-cast concrete structural system displays mid-twentieth century technology that typifies modern bridge construction techniques. In addition, the Causeway is significant in the development of the Jefferson and St. Tammany parish communities and the expansion of the greater New Orleans area.

Description:

First-hand inspection of the toll booth identified a small aluminum structure with plexi-glass windows. In 1969, the Greater New Orleans Expressway Commission (GNOEC) replaced all toll booths as part of the modernization efforts associated with the construction of the second span.¹³ The new toll booths measured 8'-6" long, 4'-0" wide, and 8'-1" tall (7'-2" at the interior). Stainless steel fasteners and caulked joints held the thick type 6062-TF aluminum skin covering each booth.¹⁴ Manufacturers shipped these booths pre-assembled and workers installed each on a concrete base. At the southern Toll Plaza, the east elevation of each toll booth opened to a lane of traffic. In bad weather, workers could close the 7' tall sliding aluminum doors and look for oncoming vehicles through a removable Plexiglass window. During good weather, toll takers could open the sliding doors and sit behind aluminum spring loaded Dutch doors. A small sign flashed the appropriate toll to oncoming traffic. A sliding door on the west elevation of each toll booth allowed for extra ventilation and space if desired. At the northern Toll Plaza, the booths were rotated 180 degrees to accommodate the direction of traffic.

¹³ *The Times-Picayune*, May 10, 1969, "Over 19 Million Vehicles Have Crossed Bridge.", 20.

¹⁴ David Volkert & Associates, Plans of the Greater New Orleans Expressway [Plans] (1968), 3.

Inside the new booths, toll takers sat behind a stainless steel counter with drawers and a cash tray. For worker comfort, each booth featured a 1500 watt electric heater in the rear wall. Both natural light and an overhead 20 watt ceiling fixture lit the workspace. Following the consolidation of tolls to southbound commuters only, two booths from the southern Toll Plaza were removed to allow for better traffic flow. The remaining booth sat between the flaired columns on the west side of the canopy. From here, Causeway workers were able to look for erratic driving and other hazards that may impact bridge safety. The toll booth was demolished in December 2011. The northern Toll Plaza now operates four toll booths for southbound commuters.¹⁵

History:

The Lake Pontchartrain Causeway has been a toll bridge since its completion in 1956, although the booths were not installed until after opening day of the first span. Traffic engineers De Leuw, Cather and Company created a rate schedule operating on a graduated basis depending on the size of the vehicle. *The New Orleans States-Item*, a popular local newspaper, found the proposed rates to be comparable to other toll bridges in the United States despite that “none [other bridge] is as long as the Causeway”.¹⁶ The GNOEC refused to issue passes, even to law enforcement officials, as in the case of deputy George Oalmann, a St. Tammany Parish deputy sheriff dispatched to handle a minor traffic jam in the southbound lane following opening ceremonies on August 30, 1956. After handling the congestion, Deputy Oalmann completed the drive, entered northbound traffic, and paid a dollar at the southern Toll Plaza Complex. Causeway officials assured motorists that the sheriff’s office could be reimbursed for such instances by the appropriate police jurisdictions.¹⁷

Table 1

RATE SCHEDULE WHEN LAKE PONTCHARTRAIN CAUSEWAY OPENED 1956	
Vehicle	Rate Each Way
Automobiles	\$1.00
Light Trucks	\$1.20
Medium Trucks	\$2.25
3-Axle Trucks	\$2.90
4-Axle Trucks	\$3.75
Busses	\$2.00

¹⁵ David Volkert & Associates, Plans, 3.

¹⁶ *NO States*, August 29, 1956, “Causeway Opens Today.”, 14.

¹⁷ *The Times-Picayune*, August 31, 1956, “Pontchartrain’s 24-Mile Span is Formally Opened to Traffic.”, 20.

Toll Plazas on both shores originally consisted of three concrete toll booths under a canopy. Each toll booth measured 5'-6" long by 2'-0" wide. Much of the interior space was occupied by the desk. Each desk was 2'-6" tall and had a 4" to 8" clock mounted to the counter. To the left of this clock, a toll indicator and a neon toll inspection indicator informed workers of appropriate fares. A rectangular toll register occupied most of the desk. Beneath the counter, each desk contained a cash drawer, shelf, terminal cabinet, as well as wiring and cables to operate the register, toll indicators, and clocks.¹⁸

Sources:

- Association Internationale des Tunnels et de L'Espace Souterrain-International Tunneling and Underground Space Association. "Bankhead Tunnel, Mobile, Alabama." 2009. Accessed April 28, 2010. www.its-aites.org.
- David Volkert & Associates, Plans for the Lake Pontchartrain Causeway and associated Toll Plazas, 1968. Available in the collection of the Greater New Orleans Expressway Commission.
- . Path to Success. 2012. Accessed August 7, 2012. , <http://www.volkert.com/history.htm>.
- . "David Volkert & Associates." 1964. Accessed August 7, 2012. http://www.volkert.com/PDF%20Files/DVA_Historic_Brochure_1964.pdf.
- Ewin Engineering Corporation. "Ewin Engineering Corporation." 1950. Accessed August 7, 2012. http://www.volkert.com/PDF%20Files/Ewin_Engineering%20Brochure_1925-1950.pdf.
- Gulf Engineers & Consultants and Krebs, LaSalle, LeMieux Construction, Inc. *GNOEC Consulting Engineers' Annual Report of the Lake Pontchartrain Causeway*. 1996. Available at the St. Tammany Parish Public Library.
- Historic photos in the collection of the Greater New Orleans Expressway Commission.
- New Orleans States*, August 29, 1956, "Causeway Opens Today." Available on microfilm, East Bank Regional Library, Jefferson Parish Public Library System.
- Palm Beach Post*, August 28, 1948. Accessed April 28, 2010. www.news.google.com.

¹⁸ Palmer & Baker, Inc., Plans, 27.

Palmer & Baker, Inc., Plans for the Lake Pontchartrain Causeway and associated Toll Plazas, 1953-56.
Available in the collection of the Greater New Orleans Expressway Commission.

Pratt, Joseph A., Tyler Priest, and Christopher J. Castaneda. *Offshore Pioneers: Brown & Root and the History of Offshore Oil and Gas*. Houston: Brown & Root by Gulf Publishing Company: 1997. Accessed April 28, 2010. www.books.google.com.

The St. Tammany Farmer, August 31, 1956, "Once a Chauffeur, Now a Big Construction Man." Available on microfilm, Covington Branch of St. Tammany Parish Library System.

---. May 10, 1969, "Dedication of Causeway's Twin a Giant Safety Step." Available on microfilm, Covington Branch of St. Tammany Parish Library System.

The Times-Picayune, August 29, 1956. "Engineer Firm Started in 1939." Available online through subscription database, accessed August 7, 2012. www.nola.com/t-p/.

--. August 31, 1956, "Pontchartrain's 24-Mile Span is Formally Opened to Traffic." Available on microfilm, East Bank Regional Library, Jefferson Parish Public Library system.

---. May 10, 1969, "Over 19 Million Vehicles Have Crossed Bridge." New Orleans, Louisiana. Available on microfilm, East Bank Regional Library, Jefferson Parish Public Library System.

Historian: Kelly Sellers Wittie, R. Christopher Goodwin & Associates, Inc.

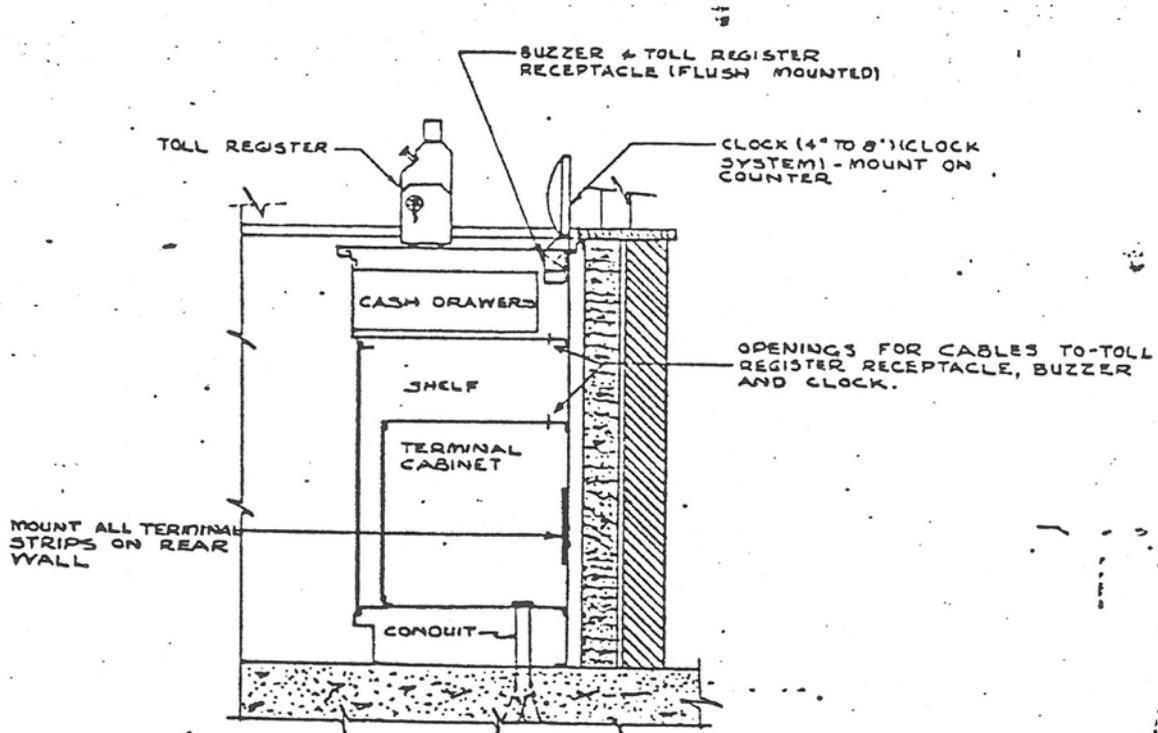
Project Information: Following the unprecedented damage caused by Hurricanes Katrina and Rita, the U.S. Army Corps of Engineers (USACE) committed to a 100 year level of protection in southeast Louisiana. This project calls for the construction and floodwall improvements along the south shore of Lake Pontchartrain as part of the Hurricane Storm Damage Risk Reduction System. In 2009, the USACE determined these improvements will produce an adverse effect on the Lake Pontchartrain Expressway and the southern Toll Plaza, properties determined to be eligible for inclusion in the National Register of Historic Places. In accordance with Section 106 of the National Historic Preservation Act (36 CFR Part 800), the USACE executed a Memorandum of Agreement (MOA) with the Louisiana State Historic Preservation Officer, Greater New Orleans Expressway Commission (GNOEC), and the Coastal Protection and Restoration Authority of Louisiana. As part of the MOA, USACE agreed to document

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the Lake Pontchartrain Bridge and the structures of the Southern Toll Plaza and prepare an accompanying narrative history.

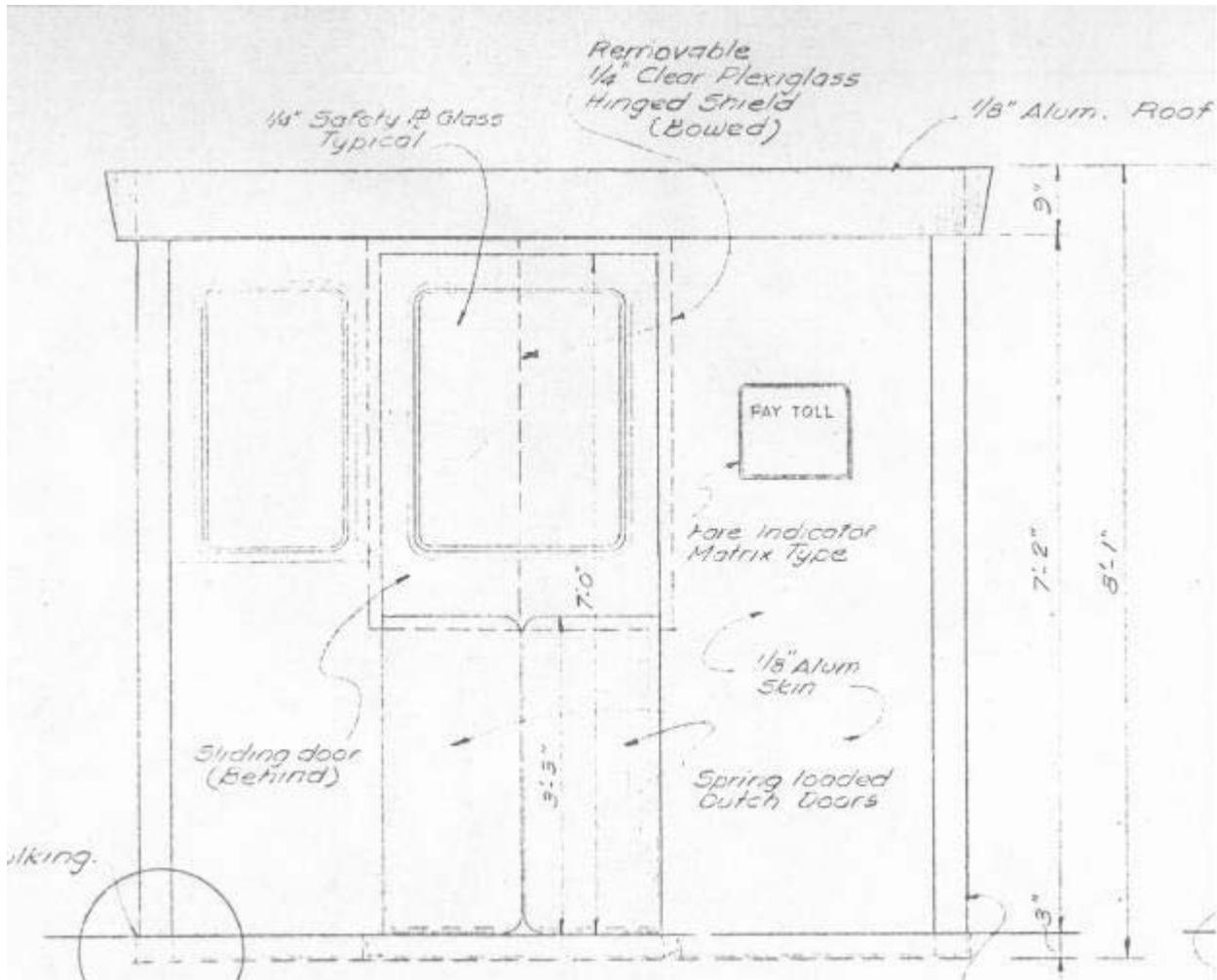
In December 2011, the USACE implemented the plan to improve floodwall protections on Lake Pontchartrain at the Causeway. Since that time, the USACE has demolished the buildings of the southern Toll Plaza and constructed an elevated bridge section to route drivers from Causeway Boulevard in Metairie onto the historic bridge. These alterations allow the USACE to complete a 15' floodwall along the lakeshore to protect the greater New Orleans metro area from flooding.

Figure 1



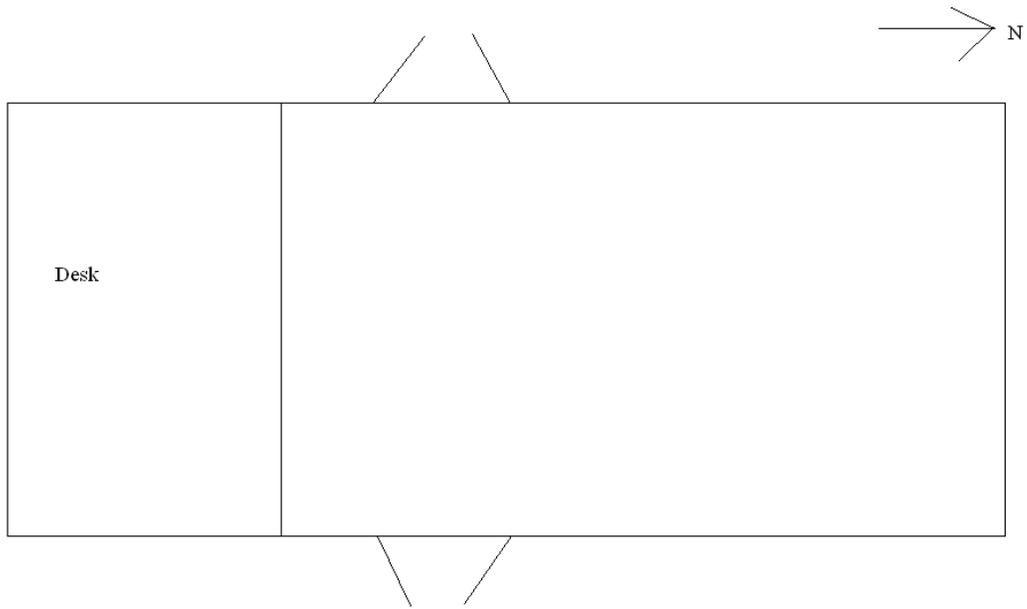
Former Toll Booth desk section
Photocopy of engineering drawing
(original in the files of the Greater New Orleans Expressway Commission)
Palmer & Baker, Inc.
October 15, 1953
Sheet No. 27

Figure 2



Toll Booth Traffic Side (east) Elevation
Photocopy of engineering drawing
(original in the files of the Greater New Orleans Expressway Commission)
David Volkert & Associates
February 27, 1968
Sheet No. 3

Figure 3



Sketch
Southern Toll Plaza Toll Booth
Delineated by Kelly Sellers Wittie
November 2011

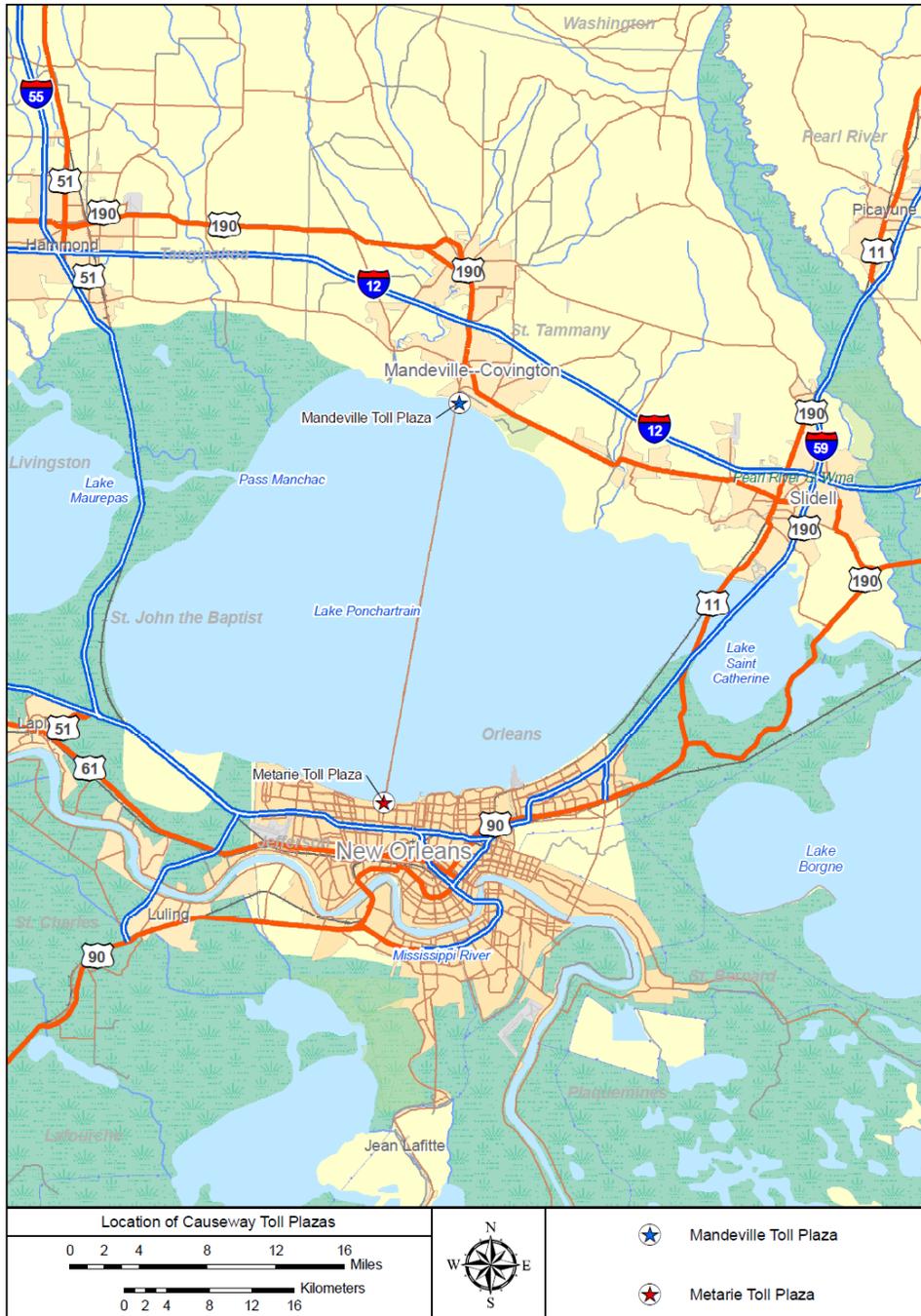
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Map 1

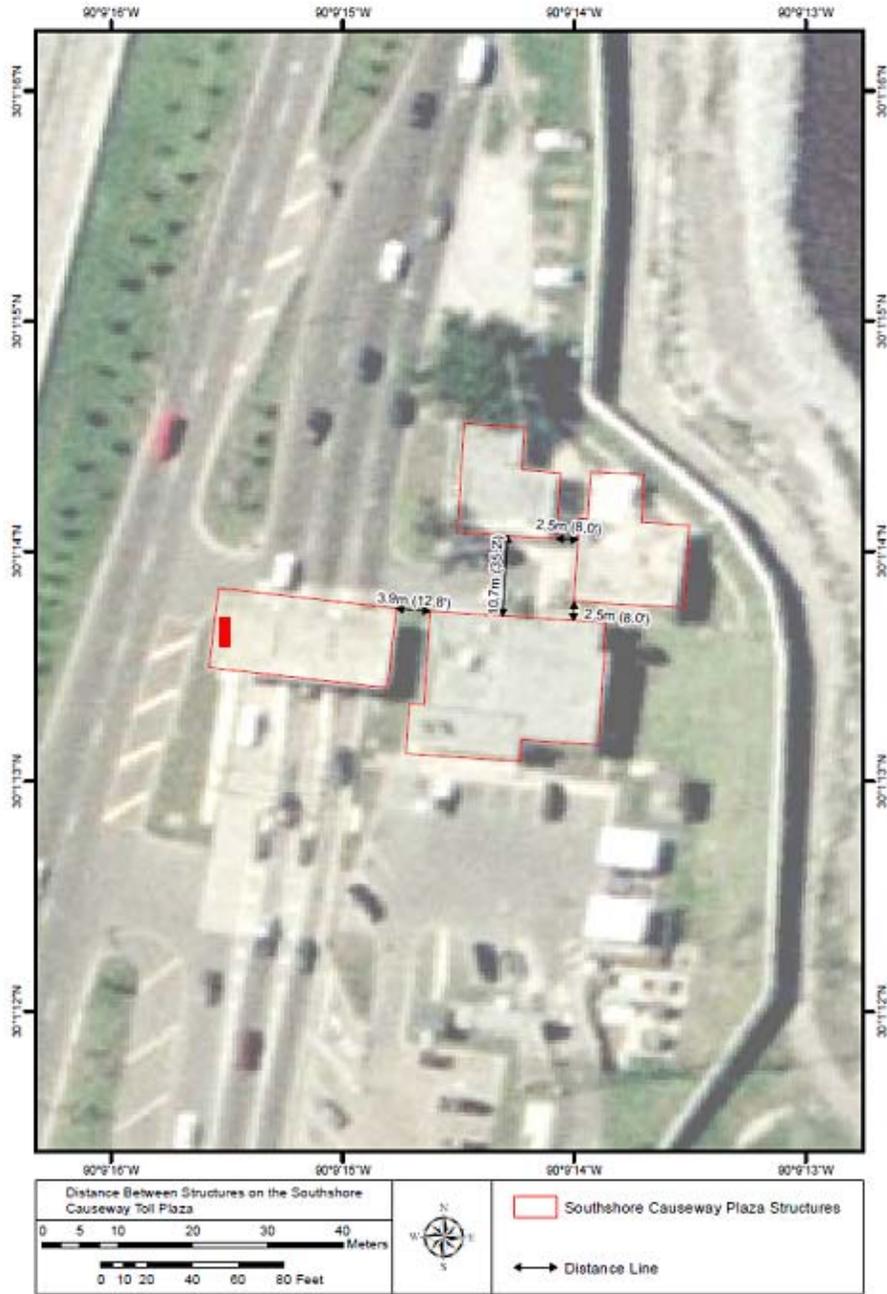


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Map 2



Map 3



The red box indicates the approximate location of the toll booth. The location of the toll booth beneath the canopy prevents its image in aerial photography.