



**Joint Infrastructure Recovery
Request (JIRR) Program
Abbreviated Consultation Process (ACP)
Semi-Annual Report: SEPTEMBER 2020**

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City of New Orleans

Executive Summary

Purpose

FEMA has allocated 2.4 billion dollars through the Joint Infrastructure Recovery Request (JIRR) for a multi-year road recovery program to the City of New Orleans (CNO) and the Sewerage and Water Board of New Orleans (SWBNO). The Abbreviated Consultation Process (ACP) letter, effective December 17, 2018, and agreed upon by its consulting parties, requires that CNO and SWBNO, together with FEMA, conduct semi-annual consultation meetings throughout the implementation of the JIRR program as part of their reporting requirements outlined in the ACP for adverse effects to archaeology and historic preservation. Since the last semi-annual meeting on March 16, 2020, the CNO Archaeologist and HP Specialist have collected project data and are able to report on the statuses as required and listed in the ACP.

Background

Data for this assessment were collected and assembled in August 2020.

**ACP Activity Data by JIRR Wave
Since ACP Meeting (March, 2020)**

JIRR Wave	Project Reviewed by Archaeologist	Project Reviewed by Archaeologist AND In Sensitive Area	Project Monitored by Archaeologist	Project Reviewed by HP Specialist	Work in National Historic Landmark (NHL) Or is NHL-adjacent	Full Reconstruction Projects	Reviewed Projects Under Construction
Wave 1	0	0	0	1	0	1	0
Wave 2	8	6	2	0	1	5	2
Wave 3	16	11	0	10	2	12	0
Wave 4	14	6	0	2	0	12	0
No Wave Assigned	0	0	0	0	0	0	0
Totals	38	23	2	13	3	30	2

Since the Last ACP Meeting in March 2020

- Thirty-eight (38) total projects were reviewed by the Archaeologist.
- Thirteen (13) projects were reviewed by the HP Specialist
- There were twenty-three (23) total projects reviewed by the Archaeologist that were in the Archaeologically Sensitive Area.
- Two (2) of the projects reviewed have been monitored by the Archaeologist.
- Thirty (30) projects reviewed are full reconstruction projects. Ten (10) of these projects were reviewed by the HP Specialist. Two (2) of the full reconstruction projects reviewed have started construction.
- There were (3) reviewed projects within or adjacent to an NHL. The Archaeologist reviewed three (3) projects within an NHL; the HP Specialist reviewed two (2) projects within or were NHL-adjacent. None of the NHL or NHL-adjacent projects have started construction, however, it is expected there to be little to no effect on NHL properties based upon proposed work.
- There are no discoveries and/or unexpected effects to report from the Historic Preservation Specialist, however, the archaeologist stopped work on Killdeer Street in Lake Vista Group A (RR073) for an unanticipated discovery.
- There was one (1) public objection and dispute resolution re delay in the resetting of original street name tiles for an ongoing project, RR166 in Bywater NRHD. This objection/dispute was quickly and fully resolved (May 2020).
- The cultural resource statement and archaeological focused materials are in development (See Appendix A).
- Avoidance measures are in the process of being implemented on all projects reviewed by the HP Specialist.
- The historic property inventory is in progress (See Appendix B).
- The historic context statement is in development (See Appendix B).

Archaeological Monitoring

Between February 13 and July 31, 2020, 37 JIRR projects have been reviewed by the CNO Archaeologist. Of the projects reviewed, 22 were in the archaeological sensitivity area. Only two of the projects reviewed actually went to construction and required monitoring; however, five projects in the archaeological sensitivity area that had been previously reviewed (Little Woods Group A [RR100], Tremé-Lafitte Group A [RR182], Filmore North Group B [RR038], Lake Vista Group A [RR073], and Hollygrove-Leonidas Group A [RR067]) have been monitored by the archaeologist. Little Woods monitoring switched from mostly sewer line point repair trenches to water line installations (n=13) and one drain line. Tremé-Lafitte monitoring consisted of one sewer line replacement and 11 sewer line point repairs. Filmore North monitoring consisted of monitoring a long sewer line replacement on Perlita Street. Lake Vista monitoring consisted of two water line replacements. Finally, Hollygrove-Leonidas monitoring consisted of three sewer repairs.

Only one segment monitored (Perlita on North Filmore) was on a full reconstruction block. None of these projects affected an NHL. Little Woods, Filmore North and Hollygrove-Leonidas are negative findings thus far, but an archaeological feature was recorded on Tremé-Lafitte and middens were documented on the Lake Vista project area. There were no disputes or avoidance measures implemented.

Tremé-Lafitte Bayou Road Cobblestone Feature

In May, while monitoring a sewer line repair in front of 2116 Bayou Road, a cluster of large river rocks was observed. This location was at a house connection (2116 Bayou Road) for the sewer line in the area between the sidewalk and the curb (Figures 1 and 2).

All different size rocks were observed (20-70 cmbs) between the curb and sidewalk in an area 2x2 m to riverside (southeast) of the house connection pipe and up to 2.0 m back from the existing curb. The rocks were rounded and with varied colors and sizes, some were reddish brown and brown and others appeared white and black like granite. Some were more than a foot long and wide, but most were smaller. A few had been modified into pavers (flat). This spot had been dug out recently, as evidenced by green PVC pipe running into the house northwest of the rocks, but the area immediately over the PVC pipe had been destroyed from digging (Figures 3 and 4).

The southeast (mostly intact) wall around the rocks exhibited three strata in profile. Stratum I (0-20 cmbs) was dark brown (10YR 3/3) silty sand loam. Stratum II (20-70 cmbs) was similar soil becoming more clayey (grayish brown [10YR 5/2]) with several different types of river rocks or ballast stones that must have paved the street. On the curb side of the pit (3.6 m off the iron fence of 2116 Bayou Road) and running parallel to street, a large (77x113x15 cm) slab of granite stone seemed to be related to the ballast stones. It was intact but was removed before it could be photographed. This large cut rock was situated on its long side and appeared to be a curbstone except that it was angled away from the street; after the trench had been widened and the 77x113 cm curbstone had been removed, another rock was visible in the wall next to it and was able to be photographed in situ (Figures 3 and 4). Additional flat paver-like stones were pulled from the upper 20 through 70 cmbs. These were out of place, perhaps from the adjacent sewer line repair, but may have formed a box drain or culvert when intact. A bed of *Rangia* and oyster shells was observed under the rocks, a portion of which can be seen in the lower left of the rocks in Figure 3. This was approximately 20 cm thick, and only present under the rocks in the 60 to 70 cmbs range and not on the sidewalk side of the large curb stone; it was clearly associated with the cobblestones. Under the rock feature was Stratum III (70-150 cmbs), a sterile layer of gray (10YR 5/1) to bluish gray (Gley 2 5B 5/1) clay.

It appears that these rocks once paved the road, and the upright granite piece once formed the curb boundary. These materials were very close to the surface although it is tempting to say they were out of place - especially with some flat pavers mixed in with the round

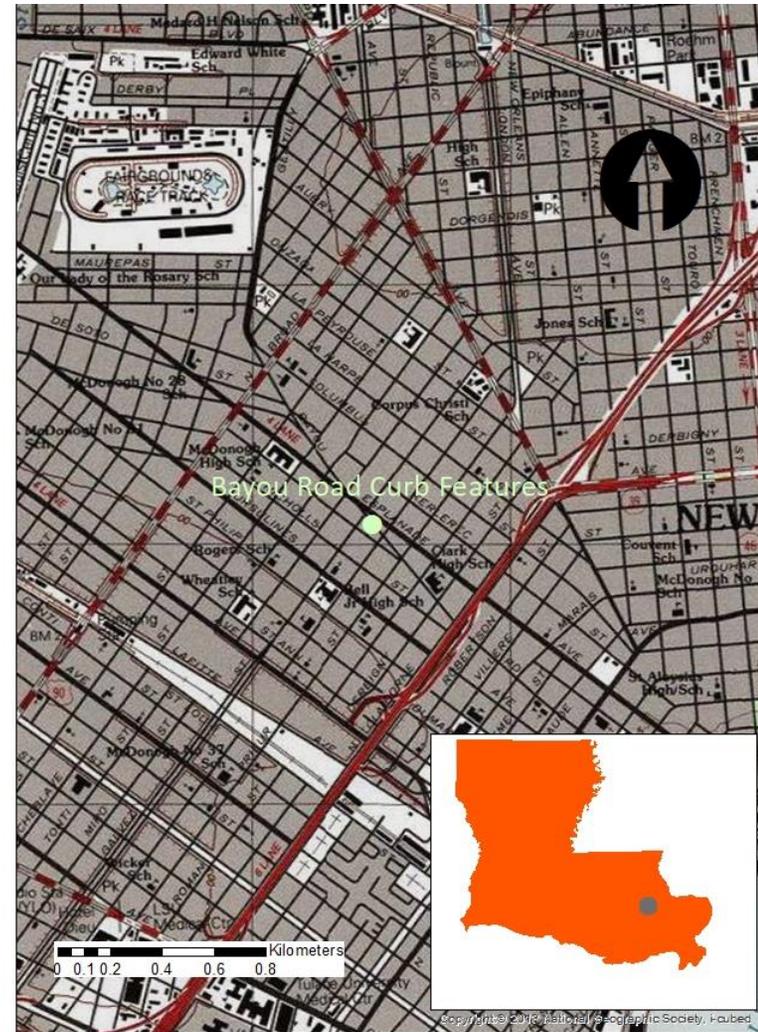


Figure 1. Map of Bayou Road monitoring segment showing location of historic paving features



Figure 2. Locations where in situ curb and cobblestones were observed along Bayou Road.

rocks - the upright (75 degree angle) curbstone assemblage suggests that they are in their original location, but disturbed by various agents including the sewer house connection activity.



Figure 3. Rangia shells, cobblestones, and granite curb (removed) at Bayou Road.

Moving forward, on July 9, 2020 an identical feature was revealed across the street when another sewer repair was monitored (Figures 2 and 5). A sewer house connection to 2123 Bayou Road (rear of 2024 Esplanade Avenue) unearthed an upright (75-degree angle) granite curb stone approximately 2.0 m (northeast) from and parallel to the existing granite curb. It was barely buried at 10 cmbs. At the bottom of the large upright stone (approximately 65 cmbs), a smaller piece of granite stone was placed flat just like the flat stones in Figure 3 and 4. Like across the street, the feature had been disturbed, but remained intact enough to convey these features' original relationship and design.



Figure 4. In situ granite curb at 75 degree angle next to cobblestones observed along Bayou Road.

Another feature to the northwest of this location and on the same side of the street shows a third instance of this upright curb. A second granite curb approximately 2.0 m behind the existing street curb was observed on the surface in front of the pie-shaped coffee/smoothie stand (2032 Esplanade Avenue) at the corner of Esplanade and Bayou Road (Figure 5). In the background of the picture, a line of paving can be seen behind the person and the blue bike stands. This paving is in line with the angled granite curbstone in the foreground of the photograph of the 2123 Bayou Road (2024 Esplanade) sewer trench. This is the same feature and it indicates that historically, Bayou Road was designed to be narrower.

A last angled curb at the same 75-degree angle was observed in a sewer house connection in front of 2126 Bayou Road. In this location, the sewer house connection had tunneled through the angled granite slab, an indication that it was older than the connection (Figure 5). Nearly all the city had been converted from the privy waste system to the new piped sewer system by 1920, suggesting that the angled curb system of Bayou Road must be older (Colton 2000:94). Unfortunately, the building was only illustrated by Sanborn starting with the 1940 series where it is labeled as a store (Sanborn Map Company 1940: Sheet 128). If it had appeared on the 1908 Sanborn then we could infer that the angled curb system was in place by that date.

Bayou Road is completely devoid of historic features within the actual paved portion. The current roadbed was redone not so long



Figure 5. Granite curb with modifications to allow for house connections; curb continues to the end of the street.

ago and may have been redone multiple times in the twentieth century. At least two of the properties on the block have river rocks adorning their gardens. Therefore, no clues to its historic incarnations can be learned from the actual roadbed, except that the curbs are classic granite. However, these curious features unearthed by this sewer repair project suggest that the road was once wider than it is today. Judging by the large live oak trees on this 2100 block that sit over the area between the curb and the sidewalk, it must have been modified sometime in the early-twentieth century before they were planted.

Furthermore, the historic Sanborn Map Company documents the width of the right-of-way (property line to property line) through the periods. This number was documented at 64 and 66 ft throughout the period between 1893 and 1950 (Sanborn Map Company 1893: Sheet 127; 1896: Sheet 41; 1908 Sheet 153; 1940: Sheet 128; and 1950: Sheet 128). The standard New Orleans street right-of-way was 53 ft throughout its downtown historic districts, so Bayou Road was a little wider to begin with than the other streets and it had not been a main thoroughfare since the mid-nineteenth century. This could have helped the decision to make the street narrower, adding more room for sidewalk beautification.

Additionally, the 1896 Sanborn lists Bayou Road as “not paved;” then by the 1908 map it is paved with cobblestones. This would indicate that the cobblestones documented in the sewer repairs were not older than 1896. That in tandem with the fact that the curbstones must have been in place before the live oaks were planted would indicate that they were constructed during the first couple decades of the twentieth century. And if the cobblestones across the whole street were put in place at the same time as the angled curbs, then it was between 1896 and 1908 when Sanborn first labeled the street as paved.

Craig Colton, in his book *Unnatural Metropolis*, relates that in 1915 and 1920 the city’s Parking Commission (later Parks and Parkways) went on a ruthless tree removal campaign along neighboring Esplanade Avenue. Outraged citizens formed a tree protection committee which persuaded the mayor to stop the commission and commit to replacing trees. Ironically, the commission was conceived to plant and care for trees in all neighborhoods, regardless of wealth, however, special assessments to property owners to pay for trees became the norm and only wealthy neighborhoods received trees (Colton 2005: 91, 95-96, 100). Perhaps the trees that intruded on the old cobblestone/curb features were planted around the time of this event. They are a similar size to 100-year-old trees.

It would be instructive to see better examples along Bayou Road, and any other similar feature patterns under or adjacent to the existing roadway should be documented for further explanation of the angled curbstones; however, these features have little research potential.

Killdeer Street Waterline - Lake Vista Group A (RR073)

A waterline was excavated on Killdeer Street in Lake Vista (Figure 6). It extended from the cul-de-sac to Wisner Boulevard near Fort St. John and was approximately 1.1 m wide and 1.7 m deep. Monitoring began just after the cul-d-sac at the western end of the street and ended at the intersection with Beauregard Avenue. Initial stratigraphy was simple. Under the 25 cm of concrete was a heavy 45 cm layer of yellowish brown (10YR 5/6) sand (Stratum I). Stratum II (70-120 cmbs) was a layer of gray (10YR 5/1) sand. This was underlain by dark grayish brown (10YR 4/2) sandy to silty clay (Stratum III). This dark grayish brown clay contained fragments of tree roots leftover from before the Lake Vista's construction. This location was at the lakefront at one time and this bottom layer was indicative of the vegetation in the locality prior to the Lakeshore Improvement project that to construct new land, including Lake Vista, along the relict lakeshore in the 1920s. As the water line trench progressed to the east towards Bayou St. John, these simple strata were progressively replaced with differing soils indicative of beach/estuarine deposits as well as archaeological middens (Figure 7). This area is particularly sensitive because of its proximity to the Spanish Fort (16OR19), an archaeology site on the confluence of Bayou St. John and the original Lakeshore. The property was converted from a Native shell mound to French colonial Fort, which was improved during both Spanish and American governments until it was temporarily abandoned and then repurposed as a resort/hotel/amusement park in the nineteenth century. There were two major fires on the site in 1896 and 1906 that razed the hotel and resort buildings that had been constructed on the fort's grounds (Boyko et al. 2013 :409). These two fires marked the end of this period of Spanish Fort. The amusement park waned in popularity in the early twentieth century, and finally, was halted by the Lakeshore Improvement projects along the lakeshore in the 1920s.

14 Killdeer Midden (Context 1)

A shell midden was encountered during excavation for a waterline in front of the driveway of 14 Killdeer Street in Lake Vista on Friday, June 26, 2020 (Figures 6 and 7). *Rangia* shell began just to the east of the fire hydrant in front of 20 Killdeer. The shells were few in number in the upper stratum immediately under the 15 to 20 cm of concrete roadbed. Gray (10YR 5/1) silty clay and yellowish brown (10YR 5/6) sand was observed in the first 40 cm along with the *Rangia* shell layer, which ranged from 5 to 30 cm thick in the western end of the midden before it thickened to 40 cm at the point where construction was halted (Figure 8). This initial western shell layer was devoid of artifacts and water line excavation continued. When in front of 14 Killdeer Street, 3 or 4 m further east, the shell began to thicken noticeably. At this point, historic period artifacts (aqua glass, animal bone and white bodied ceramic) were observed and the shell was approaching 40 cm thick (Figure 9). This seemed too thick to be the usual New Orleans *Rangia* shell roadbed, and was much looser, so mechanical excavation stopped. Further scrutiny of the deposit yielded both Native American and French pottery. Artifact-rich deposits of thick *Rangia* shell are called shell middens, and often are indicators of Native American archaeological sites in Southeast Louisiana. The shell layer is created through discarded shells from meals consisting of *Rangia cuneata* mixed with artifact trash and debris. Additionally, Native Americans constructed shell mounds throughout Southeast Louisiana, using them for various purposes, including burials. Often, shell deposits, even disturbed deposits of shell, can include human remains and need to be sorted and screened.

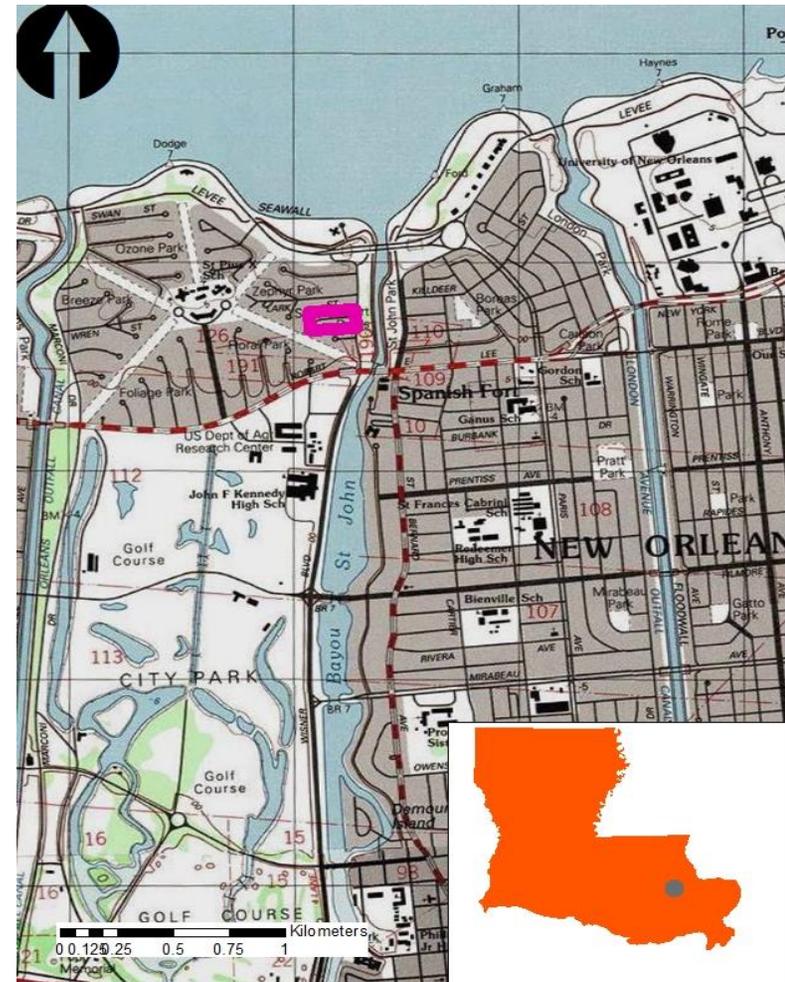


Figure 6. Killdeer Street Project Area within Lake Vista Group A (RR073) in Orleans Parish, Louisiana.

The last water pipe segment up until the point mechanical excavation was interrupted was installed, but further excavation was halted temporarily in order to investigate the archaeological material. Construction workers instead concentrated on installing a fire hydrant that had already been excavated. Two large excavator buckets worth of midden shells (80 x 80 x 80 cm) from the last scoops were set aside for screening. These buckets were screened and trowel sorted the next day by UNO volunteers. Before the contractors left, the mechanical excavator pulled the overburden from the top of the shells and scraped an area along the water line trench to the east for about 20 m. The shells were visible immediately underneath the pavement at 30 cmbs, however, they abruptly ended around the eastern edge of 14 Killdeer's driveway. The untouched portion of the midden then measured approximately 2.6 m from east to west and 1.5 m north to south (within the confines of the contractors' trench) (Figure 10). Hand excavation of the exposed midden ensued so that the water line could be cleared to continue through the 1.5 x 2.6 m exposed midden area.

As soon as the discovery was made, UNO archaeologist Ryan Gray and graduate student Elizabeth Williams came immediately to help with excavations. A plan was devised that focused on getting the 1.5 x 2.6 m area excavated so that the water line could be cleared. The next day, Saturday, actual excavations began and were aided by State Archaeologist Chip McGimsey, Aline Van Den Bold from the SHPO's intern program, and UNO undergraduate students Patrick DeRoche and Tomas Figueroa along with Dr. Ryan Gray and Elizabeth Williams. A 1 x 2 m excavation unit (EU1) was placed in the center of the shell



Figure 7. Aerial photograph of Killdeer Street showing loci discovered during waterline excavation in Lake Vista Group A (RR073) in Orleans Parish, Louisiana.

midden to bisect the feature and control excavation levels. Initially, colonial ceramic was noted in the lower portions of the shell feature. When the two excavator buckets were pulled it seemed that Native American sherds were mixed with French sherds and nineteenth century



Figure 8. West half of the north wall of Lake Vista (A) RR073 Killdeer Street Water Line (top right).



Figure 9. North wall profile of Context 1 at the point where mechanical excavation was halted (bottom right).



Figure 10. Overview of north wall profile in Lake Vista A RR073, Killdeer Street (14 Killdeer Street). Note intact, unexcavated portion center right.

shells and artifacts with little soil. A total of five levels were excavated. Late nineteenth century ceramic and glass artifacts were noted in the first level but some mixing of earlier items was also observed along with large brick fragments, ballast stone fragments and ferrous metal. As excavation progressed into the second level it became clear that the shell feature was sloping down to the north and the southern end of EU1 was approximately 70 cm outside the midden. This slope proved that the midden had not extended to the south. Gray (10YR 5/1) to dark gray (10YR 4/1) sand or silt comprised the soil underneath the shells. (Figure 11). As the last level was excavated, metal spikes and nineteenth century brick fragments were noted in this deepest part of the midden.

English sherds, however, the mechanical excavation could have been responsible for this mixing. However, controlled hand-excavation could reveal if the older artifacts were deeper than the younger artifacts, also establishing if the shell midden was intact. The profile of the north wall of the water line trench shows a thin line of shells deepening to approximately 80 cmbs as it moves east before abruptly rising back to the concrete pavement, forming a pit-like feature. The excavation unit was placed in the deepest part of the shell midden.

Levels excavated by hand in EU1 were comprised mostly of *Rangia*

Late-nineteenth century ironstone was also mixed throughout the lower excavation levels making it clear that this midden had been moved around before.

Chip McGimsey observed that the range of size in the *Rangia* shells was not right for a Native American midden. There were too many baby shells that would not have been selected for meals and would not have ended up on an aboriginal shell midden. This must have been a low area that was filled with items likely from the Fort St. John property. The fact that the native sherds were found in *Rangia* shells would seem to



Figure 11. Photo of the last level of *Rangia* (Context 1) in EU1

indicate a shell midden but if the shells were mined from naturally occurring deposits they could have been added to artifacts that were coming out of a human made shell midden or midden without shell. It does not seem likely that the aboriginal artifacts came from a shell-less midden if the reason for taking the material to Lake Vista was to fill in low spots on the landscape. It seems more likely that the aboriginal artifacts came out of an original or disturbed shell midden and were added to shells taken from a naturally

occurring *Rangia* shell bank. Furthermore, to have had all the colonial and nineteenth century artifacts mixed in with the older sherds could mean that still other sources were utilized for fill material. There is no way to discern where the shell mix came from, but based on the large size of some of the artifacts it would seem that it was not moved around too much. The area around the fort has been shown to have items from all time periods in question and, given its proximity to 14 Killdeer Street, would be the most likely source for this fill. It would have been a rich site to have had all components documented in EU1 and may have come from a source near the fort that has yet to be identified (under the levee?) or is no longer extant.

Although the artifacts were mixed, there were a lot of interesting items that tell of the activities in the vicinity. A large turtle plastron still needs to be identified as to whether it was a fresh water or salt species. Coconut shells (not grown locally) indicate that this site was close to world shipping channels where goods were incoming from far flung ports of call (Figure 12). Pork and beef cuts and some fish species were also collected. Architectural debris was observed in the fill midden all the way to the lowest level (Figure



Figure 12. Turtle plastron (left) and coconut shell (right) from the shell midden at 14 Killdeer Street.

11). Wood planks and tongue-in-groove floorboards, featuring colonial-era design were recovered.

Thin colonial bricks as well as typical nineteenth century bricks were also observed. The Native American artifacts consisted of shell- and grog-tempered sherds. One decorated shell-tempered sherd from a jar or a bowl was identified as Fatherland Incised with local manufacture dates to the late-nineteenth century (Figure 13).



Figure 13. Aboriginal pottery decorated, Fatherland Incised.

Small round rocks, large rocks, a huge 15 cm wide clam shell, metal fragments of all shapes and sizes were found throughout the shells all the way down to 80 cmbs. Wrought iron cookware (a large pan and a pot), French storage vessels and different styles of faience (Figure 14) vessels and flatware were well represented. There was even possibly a small amount of majolica, pottery manufactured in Spain and Spanish colonies during the eighteenth century. English wares such as creamware, pearlware, whiteware and ironstone, Rockingham ware (American) and porcelain manufactured throughout the nineteenth century and into the twentieth century were recovered. Glass consisted of eighteenth and nineteenth century finishes and bases mostly from liquor bottles. Coins,

buttons and a medallion were also found. At least one button is military, possibly Spanish, and has a visible mark of a bird in profile and the number "79." At least two of the coins were German marks, one dated 1891, another date 1895. One find was a Spanish coin with a barely visible coat of arms but will need more time to analyze. The medallion was a Mardi Gras throw from the Rex parade from 1892. It is marked "SOUVENIR OF THE CARNIVAL" and "PRO BONO PUBLICO." A .50-70 rifle cartridge and a smaller,



Figure 14. Tin-enamel earthenware (Normandy Blue on White Faience) vessel handle, decorated blue on white.

maybe .22 caliber, bullet with cartridge were also recovered. The .50-70 came out for US Army use in 1866, and after it was declared surplus could have been used at the amusement/hotel complex at any time in the late-nineteenth and even early-

twentieth century for recreational shooting at ranges or hunting. All of these items were found throughout the feature with no stratification of differing components.

Once the controlled excavation extended through the feature into the soft clay and sand beneath and the midden proven to be of a mixed context, the remaining portions of the shells exposed within the waterline trench corridor were taken out mechanically and set aside so that they could be sorted. As directed by the State Archaeologist, the remaining shells were trowel/shovel sorted. The nature of this exercise was mainly so that in case there were human remains in the deposit they could be recovered. Although the sample size (in the thousands) already taken was quite large, all artifacts were recovered through trowel sorting. Non curatable items such as bricks, wood and stone were all photographed and discarded. Large metal items deemed too unwieldy for the lab such as iron cookware and metal straps were also photographed and discarded. The rest of the ceramic, glass, and metal artifacts were sent to the UNO Archaeology Lab.

However, further excavation to the north and the south of the exposed midden will be necessary when the road is repaved. The area to the north and south will have to be excavated because contractors will need to remove approximately 2 ft for the new roadbed. *Rangia* was only visible in the north wall of the excavation, however, utility line disturbance may hide the presence of shells to the south. The whole area will be searched prior to the installation of new road pavement.

8 Killdeer Midden (Context 2 and Context 3)

Another low spot filled with shells (Context 2) was observed immediately under the pavement in front of the driveway for 8 Killdeer Street (Figures 6 and 7). The shells (mostly *Rangia* but 20 percent oyster) formed a swale or pocket where they filled an area approximately the width of the driveway (6 m) at 8 Killdeer (Figure 15). The shell fill midden was localized in front of the driveway. The bottom of the midden at its deepest was 65 cm from the top of the concrete roadbed, where the roadbed accounted for the top 20 cm (this was immediately in front of the center of the driveway). Stratum I, which included the shell midden fill, consisted of gray (10YR 5/1), dark gray (10YR 4/1) and brown (10YR 4/3), grayish brown (10YR 5/2), reddish brown (2.5YR 4/4) and bluish gray (Gley 2 5B 5/1) sand and clay (Figure 15 and 16). Stratum I material was likely sourced from the lake and pumped in during the filling episodes of the 1920s.

Very few artifacts came from Context 2, but those that did also indicated fill with artifacts mixed from disparate time periods. Historic metal, including heavy rods or spikes, unidentified metal objects corroded in clumps of shells, a red transfer print whiteware sherd, a dark olive glass spirits bottle body fragment, and large mammal bones were recovered along with two Native American ceramic sherds. This much lighter fill midden was excavated mechanically and set aside for sifting as trench work continued.

Another separate midden with a high concentration of artifacts (Context 3) was observed within a black sandy stratum (80-95 cmb), the western terminus of which was observed under the 8 Killdeer driveway directly



Figure 15. Photograph of contexts 2 and 3 at 8 Killdeer Street.

underneath Context 2 (Figures 15 and 16). This midden then extended to the east for 6 m, where it was interrupted by a concrete drain line by which time it had become much thinner (5 cm). It was also visible in the south wall but not to the east of the drain line.



Figure 16. Photograph of Context 3 at 8 Killdeer Street.

Artifacts recovered from Context 3 included ceramic, glass and metal. Water bottles with blob top finishes were the most significant part of the midden and date to the 1890s; six mostly intact whole water bottles were recovered (Figure 17). One was embossed with JB JUNQUA/NEW ORLEANS, another with “CONSUMERS/S&M WATER/MFG CO LTD/NEWORLEANS/LA/THIS BOTTLE NOT TO BE SOLD” (1892-1900), another with “DR HALL/350 BIENVILLE ST/ NEW ORLEANS/THIS BOTTLE TO BE RETURNED,” (1889-1891) and another with “NEW HOPE MFG CO LMTD/1922 BIENVILLE AV/NEW ORLEANS LA” (1893-1895). One of the water bottles with applied blob top was not embossed but had the remnants of a Hutchinson stopper in the finish.



Figure 17. Photograph of locally manufactured water bottles with blob-top finishes (right).

A small but heavy clear glass mug was recovered from the midden with "SPANISH FORT PARK" embossed on its side (Figure 18). Interestingly, this thick glass dimpled beer mug appears to have only held about 5 or 6 oz of liquid; there is a significant push-up in the base. Swindling tourists is a time-honored tradition! Old floorboards, wood siding and ceramic were burned and the whole layer was carbonized suggesting that this deposit could come from one of two fires documented at the Spanish Fort in 1896 or 1906. Undecorated ironstone and porcelain serving dishes, indicative of ceramics used at hotels or restaurants in the late-nineteenth century, were recovered. A green glass champagne finish fragment was also recovered along with a



Figure 18. Photograph of colorless mug, embossed "SPANISH FORT" along the body

graphite pencil and machine cut square nails. An aqua colored, beer bottle base marked LG Co 15 came from a Lindell Glass Company bottle; these bottles were made for the Budweiser beer manufacturers between 1878 and 1882 (Lockhart et al. 2009).

Based on the tight dates for the all of these artifacts, especially the water bottles, this deposit best represents the contents of the Spanish Fort 1896 fire.

When the lower (Stratum II) midden of Context 3 was encountered, trench excavation was halted until the contents could be examined. Once the midden was determined to be a burned refuse deposit from the end of the nineteenth century, a sample of artifacts was taken and excavation for the water line continued. There were at least five times more artifacts that were mechanically excavated into the dump truck than those collected. All artifacts recovered were taken to the UNO laboratory for processing.

The origin of Context 3 seems to be tied to the fort's hotel/amusement park that developed around the fort beginning in the antebellum period. It is located 138 m to the west/northwest of the northwest corner of the fort. The midden extended to the north and to the south and, therefore, more artifacts are still present. Further excavations could yield information pertaining to the activities and businesses that operated on the Fort St. John complex at the end of its hotel period. Unfortunately, this context is not one of the periods predicated by the JIRR for work interruptions and a formal excavation unit was not undertaken.

2 Killdeer Wooden Post (Context 4)

A rectangular post in the ground was observed after being pulled from in front of the driveway of 2 Killdeer Street. It measured 11x18 cm and was 70 cm in length. It had been in situ most likely in a pocket of *Rangia* shell (60-80 cmbs) approximately 20 cm wide (Figures 6 and 7). This was approximately the same depth as the in situ 8 Killdeer midden (Context 3) observed between 60 and 80 cmbs. A faint black (10YR 2/1) silty horizon lens ran to the east of the shells for 3 to 4 m at approximately 65 to 67 cmbs before disappearing near the middle of 2 Killdeer's driveway. In this location, the top 60 cmbs were mixed gray (10YR 5/1) clay and yellowish brown (10YR 5/6) sand. Below this faint horizon (68-165 cmbs) were alternating laminations of bluish gray (Gley 2 5B 5/1) sand and sandy clay. To the west, the strata were sterile. This faint black horizon and *Rangia* deposit may have been associated with the Context 3 midden, the faint black horizon of which proceeded at approximately the same level to the east before being interrupted by the drain line trench. Although the thin black horizon does appear at the same level, the two are 17 m apart and linking them without doubt is not possible at this time. There were no artifacts in this area near 2 Killdeer except the rectangular post. Furthermore, no artifacts or interesting strata were observed between this point and the end of the line at Beauregard Avenue.

8 and 14 Killdeer Shell Midden (Contexts 1 and 2) Discussion and National Register Evaluation

The midden deposit in front of 8 and 14 Killdeer Street has been exhausted of its research potential. This research potential was limited to begin with because of the mixture of artifacts from different periods; however, it seems highly likely that the assemblages mixed originated on the fort site (16OR19). Clues to the date when these items were discarded and where they came from and what they were used for can possibly be conveyed from analysis of the large sample. An analysis of the antebellum ceramic and glass could be compared to other resort amusement complexes of the antebellum and broad themes could be discussed. The nineteenth century items seem to be associated with the use of the fort area as a resort and amusement park. Their analysis can be used to infer generally about the hotel resort amusement complex that began in the 1820s, of which little is known archaeologically. The aboriginal pottery may have been used by the colonial soldiers stationed at the nearby fort and the colonial French pottery could have been used by native people living near the mouth of the bayou. There is no way to know for sure, but the pieces themselves are of some interest.

Faunal material is also of interest in the assemblage's collection of avian, reptilian, mammalian and marine species. Because of the mixing of artifacts from all periods, it is not known if the animal bone was discarded by European or Native American occupants of the area and which era (the assemblage spans from the pre-contact, contact, colonial, antebellum, post-bellum, and into the twentieth century). The hypothesis that the fort was originally placed on a Native American shell mound could also mean that a lot of the bone came from prior to the French occupation of the Bayou St. John area (i.e., pre-colonial). Because European occupants would have subsisted on many of the same fish, reptile, bird and mammals as the Native American population, it cannot be known who exploited each portion of the faunal assemblage.

The driveway middens of 8 and 14 Killdeer Street (Contexts 1 and 2) likely each were placed in their low spots at around the same time. They both were observed right under the concrete road surface, an indication that they came sometime before, or during the time when, the Lake Vista homes were first constructed but after most, or all, of the neighborhood was infilled with dredge spoil, possibly right after the 1920s dredge work that constructed what would become Lake Vista. Given that the shell midden was right on the surface, it could also have been formed right before the subdivision began construction, ca 1950 (Figure 19).

Most all of Killdeer Street was right at the lakefront as late as the 1890s (Figures 6 and 7). The pilings recorded further west on 28 Killdeer are indicative that the area here was underwater or inundated frequently prior to the dredge project (see below). The ca.

1922 aerial photograph of the mouth of Bayou St. John shows the amusement park with roller coaster in the vicinity of Killdeer Street (Figure 20). To the west and away from the commercial development, two buildings with docks leading to dry land and out further into the lake can be seen. These look like fishing camps, a plethora of which can be seen on the east side of the bayou's mouth in Figure 20. The pilings witnessed on Killdeer Street may have been supporting such a structure or structures at the lake's edge. The lower (Context 3) midden under the shells at 8 Killdeer Street has items in it that date to ca. mid-1890s. Therefore, the *Rangia* and oyster shells at the surface in front of both 8 and 14 Killdeer must date later. It is possible that after the amusement park was razed there were low areas still, perhaps from uprooted trees, that were in need of fill. The fill could have come from the fort area, which had already seen many episodes of earth



Figure 19. Aerial photograph of Bayou St. John and south shore of Lake Pontchartrain prior to development of Lake Vista, taken in 1948. Killdeer street is second cul-de-sac from top left corner. Oak trees center of photo hides the ruins of Fort St. John (16OR19).



Figure 20. Ca. 1922 Charles L. Franck aerial photograph of the mouth of Bayou St. John. Roller coaster immediately right of fort.

moving since colonial times, or it could have come from offsite, somewhere else along the New Orleans lakefront that had not yet been so modified. The fill most likely came from right around the fort area proper and not somewhere further off because the items within it so well represented many centuries of prehistoric/historic occupation that have already been documented to have existed on the site by prior excavations (Boyko et al. 2013; UNO 1976 excavations). Because that area was always being built-up, it is difficult to say exactly when the shells were heaped in front of

those driveways, but it had to be around the same time or after the land that the roller coaster was on were installed. Therefore, we cannot pinpoint the relocation of midden to Context 1 and 2 in any tighter dates than ca. 1900 to 1950.

Numerous fill episodes have been documented on the City Park property and neighboring areas along the lakefront (Reeves et al. 1982: 16-17; Boyko et al. 2013: 50). There was an initial push in the late nineteenth century to fill low areas of the newly acquired lands that comprised the current City Park; for example, in 1891 thousands of tons of shells were imported (from unspecified locations) to fill low areas so that the park could be utilized for public activities even during wet periods (Reeves et al. 1982).

Although the shell midden deposits at 8 and 14 Killdeer Street are completely mixed contexts, they have a very interesting array of items from the precontact, contact, colonial, and amusement park/resort hotel periods. Analysis of the items will yield information pertaining to the history of the property through these periods. Over eleven units recently excavated on/within the fort (Boyko et al. 2013), colonial period artifacts were not that numerous (n=40) or highly concentrated. When analyzed, the colonial items from Context 1 may be more numerous and could offer information pertaining to the property's French occupation. The future research potential is limited because of this loss of context; however, the sample already taken can be utilized to infer activities during all the periods. Because of the lack of integrity of the components found within these shell middens (8 and 14 Killdeer), they are not eligible for the National Register of Historic Places (36CFR 60.4 [a-d]). There is, however, some research potential in the sample of artifacts already recovered. For instance, an analysis of the types of French colonial artifacts recovered can yield information pertaining to the diet of people living on the lakefront vs. living in town. Were they of a military nature or could they be indicative of regular citizens living out by the lakefront around the fort area? Can anything pertaining to the colonial period be inferred by the types of ceramics (such as hollowware vs flatware) represented in the collection? Not a lot of French colonial period sites have been found in the New Orleans area that have offered significant research potential outside the Vieux Carre, therefore, even though colonial items were mixed with later and earlier items, some comparison with sites already excavated could be useful. Furthermore, the recent studies that have focused on the fort (Boyko et al. 2013) have documented locations of major disturbances in the soils but also have pointed to there being intact deposits worthy of research. The artifact density of the Killdeer midden was much higher than any of the areas identified during the Phase I shovel testing around the greenspace of the fort. Areas further out from the fort not accessible by the 2012-2013 study, or under the levee, or that were simply missed by the shovel testing are likely to exist in the Lake Vista neighborhood. Furthermore, there could still be intact pit deposits such as privies and wells that have yet to be unearthed.

8 Killdeer Lower Midden (Context 3) National Register Evaluation

This midden was located directly below the *Rangia* shell midden outside the driveway at 8 Killdeer Street. It contained items that were likely discarded after the fire of 1896 that ravaged the hotel resort complex located within the fort. The context of the site was a highly concentrated, intact midden deposit of items discarded when the complex burned. This deposit contained items, such as the “SPANISH FORT PARK” mug, offered by the establishment to its leisure seeking customers. Although no formal excavation units were undertaken, the items recovered indicate that there is research potential pertaining to the business located on site. With such little information recovered by recent excavations (Boyko et al. 2013) on the fort property proper, further excavation to the north and south of the water line trench could yield information on the nineteenth century fort in its role as resort complex. It appears to have qualities of integrity and significance to be eligible for the National Register (36CFR 60.4 [a-d]).

28 Killdeer Midden

Prior to discovery of the plethora of artifacts in the 14 Killdeer midden, a smaller, early-twentieth century midden was identified in front of the driveway at 28 Killdeer Street (Figures 6 and 7). A layer (120 to 150 cmbs) of black organic soil (mostly tree roots) and very coarse sand with some shell was noted beginning at the 30 and 32 Killdeer property line. From the start on the cul-de-sac at the end of Killdeer Street there was a very dark, almost black organic tree root layer under the yellowish brown (10YR 5/6) and bluish gray (Gley 2 5B 5/1) sand and over the gray (10YR 5/1) swamp clay. By the time the trench progressed to 28 Killdeer, the gritty layer was shallower, with a noticeable increase in the amount of more wood and debris, then a glass shard and some brick fragments were noted in front of 28 Killdeer. The concentration became heavy with glass and architectural elements such as a flat (probably floor) board attached to a thin piece of stone.

The area around the higher artifact concentration (under the street in front of 28 Killdeer garage) began and ended in an area no more than 5 to 7 m long. It is unknown how far the midden extended to the north and south outside the right-of-way. This highly concentrated area of artifacts was in black (10YR 2/1) sand with shell between 100 and 130 cmbs. Strata above were comprised of yellowish brown (10YR 5/6) sand (25-65 cmbs) then gray (10YR 5/1) sand (65-100 cmbs). The artifact deposit was above gray (10YR 5/1) silty clay to the bottom of the trench at 170 cmbs (Figure 21).



Figure 21. Black midden deposit at 28 Killdeer Street.



Figure 22. Base of a dark green glass spirits pint bottle embossed with “WHITE HORSE”

Artifacts consisted of a machine manufactured clear glass spirits flask (1/2 pint) and a clear glass screw top jar embossed with “HORLICKS MALTED MILK/TRADEMARK/RACINE WIS. USA/SLOUGH, BUCKS, ENG” that dates to after 1908, when the factory was constructed in the town of Slough, England (Graces Guide to British Industrial History 2020). A brown glass crown top beer bottle, a base of a dark green glass spirits pint bottle embossed with “WHITE HORSE,” milk glass fragments and a clear glass, machine manufactured, brandy finish were also recovered (Figure 22).

After the artifact concentration dwindled to just a faint dark line around 120 cmbs, moving east, there was a heavy brick deposit (75 percent) that extended approximately 80 to 120 cmbs in a layer of pulverized shell and dark brown (10YR 3/3) sand. The shell consisted mostly of *Rangia*. There may have been other types of shells, but they were smashed into small undiscernible pieces. The bricks included both high and low fired examples and appeared to range in dates of manufacture from the nineteenth through the twentieth century. At first the bricks seemed to be connected to the midden but may have intruded upon it; a little farther (2.0 to 3.0 m) to the east of the 26/28 Killdeer property line, the deposit became exclusively bricks. At this point the bricks were only 20 or 40 cmbs but there were twentieth century bricks (higher fired and very smooth dark red) mixed with the older ones. This brick deposit may have been associated with the destruction of the amusement park that was active until the 1920s. Alternatively, they may have even been deposited there during the ca. 1950s construction for manholes.

Strata from here (approximately 5.0 m east of the 26/28 Killdeer property line) to the east within the waterline trench changed to yellowish brown sand (25-65 cmbs) then gray sand (65-120 cmbs) then gray silty clay (120-170 cmbs) and was sterile. The tree roots

were only present in the deep gray silty clay. It is noteworthy how clean the layers became just east of the 26 Killdeer Street driveway.

Out of place pilings were also noted on Killdeer Street. They were first observed in situ not far from the cul-de-sac in the trench around the 30 and 32 Killdeer property line and were thought to be utility trench shoring, likely related to structures once extant on the lakefront. Further to the east of 30 Killdeer, none were observed in situ. These pilings were all round but varied in size. One was 30 cm diameter and 170 cm long (Figure 23). All except one (see 2 Killdeer Post above) were noted within and to the west of the 28 Killdeer midden.

The deposits at 28 Killdeer could have come from one of the camps located on the shoreline just to the west of the Spanish Fort amusement complex. Further excavation of this midden could yield information about the activities of the lakefront camps. Were they a year-round living situation? Did some occupants originally live in the lakefront camp just for the summer months, to get away from the fevers plaguing the town? When were they constructed? Were any of the residents employed at the neighboring hotel/resort? It seems



Figure 23. One 30 cm diameter and 170 cm long piling east of 30 Killdeer property.

that further excavation could yield important information on the lakefront exploitation of resources during the late historic period. There are no Orleans Parish lakefront fishing camps for which there is archaeological data. The midden deposit at 28 Killdeer is NRHP eligible (36 CFR 60.4 [a-d]).

Recommendations

The shell middens at 8 and 14 Killdeer Street extended from the surface just under the roadbed to as deep as 80 cms. When the road is repaved on Killdeer, workers stated that they will need to excavate approximately 2 ft deep. When this is done the remaining *Rangia* midden will need to be sifted for human remains. Because at least some of the shells and artifacts likely did come from a once intact shell midden, and that Native Americans buried their dead in these contexts, then efforts to locate human remains will have to be made when the roadwork commences. Shells may be excavated mechanically and set aside for archaeologists to shovel/trowel sort for bone.

Historic Preservation: Plans Reviewed for Character Defining Features (CDFs)

The HP Specialist has provided data from the reviews of thirteen (13) JIRR-funded projects. All projects are described in detail below with enumeration of the avoidance/minimization efforts for Character Defining Features (CDFs) as required in the ACP, the nature of the effect on a National Register Historic District (NRHD), National Historic Landmark (NHL) or NHL-adjacent properties where applicable, and discoveries and/or unexpected effects. There were no public objections and dispute resolutions recorded on the following reviewed projects.

1. RR002 – Audubon Group B (PMOPI) This is a third-wave project at 90% Design with four (4) segments recently upgraded to full reconstruction in the Carrollton, NRHD. None of the segments in the project area are adjacent to the St. Charles Streetcar NHL. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR002 – Audubon Group B (PMOPI): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR002	Brick/stone sidewalk including footlaps			(3) stone footlaps to be determined. Awaiting response from the designer.
RR002	Street name tiles			(3) sets of street name tiles to be determined. Awaiting response from the designer.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR002	Steel curb guards		(11) steel curb guards in proposed ADA ramp footprint to be removed	May be able to retain tangent sections of steel guard outside of footprint on a case-by-case basis, if technically feasible.
RR002	Traffic Bollards	Existing traffic bollards to be avoided, 800 Lowerline Street/ 7400 block of Maple Street.		
RR002	Utility covers		(5) DMH covers to be removed (1) MH cover to be removed	Additional utility covers to be determined
RR002	Catch basins and grates	(3) catch basins to be avoided	(17) catch basins to be removed (1) drop inlet to be removed	
RR002	Two-track driveways	(1) two-track driveway outside right-of-way to be avoided.		
RR002	Fences/Walls/Gates	All fences/walls/gates to be avoided.		

* RR002 – End of Table

2. RR005 – Bayou St John, Fairgrounds, Seventh Ward Group C (FRC) This is a third-wave full reconstruction project near Design Finish consisting of nine (9) residential blocks within the Esplanade Ridge, NRHD. Construction is expected to begin in December 2020. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR005 – Bayou St. John, Fairgrounds, Seventh Ward, Group C (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR005	Brick or stone curb	Note added to plans for retention of all existing blue stone curb on Desoto Street at Lopez Street intersection.		
RR005	Streetlights	Note added to plans to avoid all (21) existing historic streetlights		
RR005	Hitching posts	Note added to plans to avoid all (6) hitching posts		
RR005	Brick/stone sidewalk including footlaps	Note added to plans to protect/avoid (2) brick footlaps		
RR005	Utility covers	Note added to plans to reset/relay existing utility covers.		

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR005	Catch basins and grates	Note added to plans to reset/relay existing catch basins.		
RR005	Two-track driveways	(14) two-track driveways outside right-of-way to be avoided.		
RR005	Fences/Walls/Gates	All fences/walls/gates to be avoided.		

* RR005 – End of Table

3. RR012 – Broadmoor Group D (FRC) This is a third-wave full reconstruction project in 90% design consisting of ten (10) residential blocks within the Broadmoor, NRHD with a segment extending into the Carrollton NRHD. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR012 – Broadmoor Group D (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR012	Steel curb guards		(26) steel curb guards in proposed ADA ramp footprint to be removed	May be able to retain tangent sections of steel guard outside of footprint on a case-by-case basis, if technically feasible.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR012	Distinctive Concrete Curb			At the time of review plan was to replace all distinctive concrete curbs on the 1900-2000 block of S. Rendon, with mountable curbs. Designer is currently taking another look to see if at least some concrete curb can be retained/avoided.
RR012	Retainer Gardens		(2) retainer gardens to be removed per plans	May be feasible to retain. Awaiting designer's response.
RR012	Utility Covers		(28) Drain manhole covers removed	
RR012	Catch basins and grates	(12) existing catch basins within EHP footprint to be avoided/retained	(39) existing catch basins to be removed and upgraded to single or double mountable type.	May be able to retain/retrofit some of the lids.
RR012	Two-track driveways	All (9) two-track driveways outside right-of-way to be avoided.		
RR012	Fences/Walls/Gates	All fences/walls/gates to be avoided.		

* RR012 – End of Table

4. RR013 – Broadmoor Group E (FRC) This is a third-wave full reconstruction project near Design Finish consisting of six (6) residential blocks within the Broadmoor, NRHD with one segment extending out into the Carrollton NRHD. Construction is expected to begin in December 2020. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR013 – Broadmoor Group E (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR012	Steel curb guards		(26) steel curb guards in proposed ADA ramp footprint to be removed	May be able to retain tangent sections of steel guard outside of footprint on a case-by-case basis, if technically feasible.
RR012	Distinctive Concrete Curb			At the time of review plan was to replace all distinctive concrete curbs on the 1800 block of S. Rendon, with mountable curbs. Designer is currently taking another look to determine existing condition and feasibility of retaining existing curb.
RR012	Utility Covers		(29) Drain manhole covers removed	

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR012	Catch basins and grates	(20) existing catch basins within EHP footprint to be avoided/retained	(38) existing catch basins out of (58) to be removed and upgraded to single or double mountable type.	May be able to retain/retrofit some of the lids.
RR012	Two-track driveways	All (20) two-track driveways outside right-of-way to be avoided.		
RR012	Fences/Walls/Gates	All fences/walls/gates to be avoided.		

* RR013 – End of Table

5. RR022 – Central City Group B (PMOPI). A review of this third-wave project near Design Finish consisted of three (3) full reconstruction blocks within the Central City, NRHD in addition to twenty-six (26) patch mill/overlay projects in the Garden District, NHL, mostly along Carondelet Street but also the side streets lakeside of St. Charles Avenue. Construction is expected to begin in January 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs within the project area. **While there is still some work to be determined regarding particular CDFs (see table), the CNO HP Specialist expects, at this point in time, there to be a very minimal effect overall on the Garden District, National Historic Landmark.**

RR022 – Central City Group B (PMOPI): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR022	Brick or stone curb	Approximately 1,150 LF of bluestone curbs in the Garden District segments to be avoided/retained. Segments include street segments lakeside of St. Charles Avenue and include Carondelet Street.		Designer reassessing existing stone curbs on 1700-1800 blocks of Clio Street as well as in LaSalle near intersection with Sixth Street in Central City, NRHD; these were originally slated for removal/replacement with mountable curb.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR022	Brick or stone gutter bottoms	<p>255 LF brick gutter bottoms to be avoided, 2900 block of Carondelet Street</p> <p>330 LF brick gutter bottoms to be avoided, 2800 block of Carondelet Street</p> <p>420 LF brick gutter bottoms to be avoided, 2600 block of Carondelet Street</p> <p>500 LF brick gutter bottoms to be avoided, 2400 block of Carondelet Street</p> <p>335 LF brick gutter bottoms to be avoided, 2400 block of Carondelet Street</p> <p>210 LF brick gutter bottoms to be avoided, 2300 block of Carondelet Street</p>		<p>380 LF brick gutter bottoms to be determined, 3200 block of Carondelet Street</p> <p>365 LF brick gutter bottoms to be determined, 3000 block of Carondelet Street</p> <p>380 LF brick gutter bottoms to be determined, 2900 block of Carondelet Street</p> <p>440 LF brick gutter bottoms to be determined, 2700 block of Carondelet Street</p> <p>350 LF brick gutter bottoms to be determined, 1600 block of Eighth Street</p> <p>25 LF brick gutter bottoms to be determined, 1700 block of Fourth Street</p> <p>20 LF brick gutter bottoms to be determined, 1700 block of Second Street</p>

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR022	Distinctive Concrete Curbs	760 LF of curb on Carondelet Street to be avoided.	Rounded concrete curb to be removed in all proposed ADA ramp areas	2,825 LF of curb on Carondelet Street still to be determined.
RR022	Street Name Ceramic Tiles	All existing street name tiles to be reset outside ADA footprints.		
RR022	Steel Curb Guards		Steel curb guards to be removed in all proposed ADA ramp areas	HP Specialist will work with designer/contractor to save tangent sections (outside ramp footprint) if/where technically feasible.
RR022	Utility covers	All existing utility covers to be retained on patch mill overlay streets in the Garden District (NHL). Utility covers in street adjusted where necessary in full reconstruction segments in Central City (NRHD).		

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR022	Catch basins and grates	All existing catch basins to be retained on patch mill overlay streets in the Garden District (NHL).		4 CBs removed and replaced with new on 1700 block of Clio Street, Central City (NRHD). 4 CBs removed and replaced with new on 2600 block of Sixth Street, Central City (NRHD).
RR022	Brick/stone sidewalk including footlaps	8 brick sidewalks to be avoided. 5 brick footlaps to be avoided. 1 existing brick footlap with marble piece to be avoided (1600 block of Fourth Street).		6 brick sidewalks, to be determined; 3 in Garden District (NHL) 8 brick footlaps to be determined. 6 in the Garden District (NHL)
RR022	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR022	Mounting block			Stone block, 2400 block of Carondelet St (riverside); treatment still to be determined.
RR022	Streetlights	6 streetlights in ROW (sidewalk) to be avoided, 1600-1700 block of Josephine Street		

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR022	Hitching Posts	5 Hitching Posts, all in Garden District (NHL), to be avoided.		
RR022	Sculpture/Statuary	Existing statue in neutral ground to be avoided (1600 block of Toledano Street).		
RR022	Two-track driveways	All (26) two-track driveways to be avoided.		
RR022	Retainer Garden	5 brick retainer gardens to be avoided		

* RR022 – End of Table

6. RR023 – Central City Group C (PMOPI). A review of this fourth-wave project near Design Finish consisted of one (1) full reconstruction block within the Central City, NRHD. Construction is expected to begin in March 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segment. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR023 – Central City Group C (PMOPI): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR023	Stone curbs	220 LF of stone curb to be avoided.		

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR023	Brick or stone street pavers (including driveway aprons, and crosswalks)	Exposed Belgian Block in parking lane (2000 block of Magnolia Street) retained, patched in-kind where necessary.		
RR023	Steel curb guards		(5) steel curb guards in proposed ADA ramp footprint to be removed	May be able to retain tangent sections of steel guard outside of footprint on a case-by-case basis, if technically feasible.
RR023	Utility Covers	Utility covers retained.		
RR023	Catch basins and grates	(4) existing catch basins within EHP footprint to be avoided/retained		
RR023	Fences/Walls/Gates	All fences/walls/gates to be avoided.		

* RR023 – End of Table

7. RR036 – East Riverside, Garden District, Irish Channel, St Thomas Group B (FRC). A review of this third-wave project near Design Finish consisted of eight (8) full reconstruction blocks within the Uptown, NRHD. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

**RR036 - East Riverside, Garden District, Irish Channel, St. Thomas Group B (FRC):
Avoidance/minimization efforts to CDFs**

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR036	Stone curbs			385 LF bluestone curb mostly on side streets/intersections still to be determined
RR036	Brick curbs	60 LF to be avoided		60 LF to be determined
RR036	Timber Curbs		400 block of Constantinople, 500 block of Marengo.	500 block of Constantinople
RR036	Brick/stone sidewalks including footlaps			Treatment of (8) brick sidewalks still yet to be determined.
RR036	Street name tiles	All existing street name tiles to be reset outside ADA footprint		
RR036	Hitching posts	(4) hitching posts to be avoided.		
RR036	Steel curb guards		(14) steel curb guards in proposed ADA ramp footprint to be removed	May be able to retain tangent sections of steel guard outside of footprint on a case-by-case basis, if technically feasible.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR036	Utility Covers		(16) drain utility covers to be removed	
RR036	Catch basins and grates	(20) existing catch basins within EHP footprint to be avoided/retained	(20) catch basins removed and upgraded to mountable curb.	
RR036	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR036	Two-track driveways	3 two-track driveways outside ROW to be avoided		Treatment for (1) two track driveway with strips extending into sidewalk to be determined (729 Marengo St).
RR036	Retainer gardens			Treatment for (1) brick retainer garden near ADA ramp to be determined

* RR036 – End of Table

8. RR068 – Iberville, Tulane-Gravier, LGD, CBD Group A (PMOPI) A review of this third-wave project near Design Finish consisted of two (2) patch mill overlay blocks, 2100 and 2300 blocks of Magazine Street, within the Garden District, NHL. Construction is expected to begin in January 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along these two patch-mill overlay segments within the Garden District. **Because the following proposed work will not modify, damage or remove any CDFs, the project will have no effect on the Garden District, National Historic Landmark (NHL).**

RR068 – Iberville, Tulane-Gravier, LGD, CBD Group A (PMOPI): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR068	Stone curbs	1,230 LF of granite curbs to be avoided		
RR068	Street name tiles	Existing ADA ramps compliant; All street name tiles to be avoided		
RR068	Steel curb guards	Steel curb guard in neutral ground at Jackson Avenue & Magazine Street to be avoided.		
RR068	Utility Covers	(2) drain covers to be adjusted; all others avoided.		
RR068	Catch basins and grates	(7) existing catch basins within EHP footprint to be avoided/retained		
RR068	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR068	Two-track driveways	(1) two-track driveway outside ROW to be avoided		
RR068	Retainer gardens	(2) brick retainer gardens to be avoided.		

* RR068 – End of Table

9. RR116 – Marlyville-Fontainebleau Group A (PMOPI) A review of this third-wave project near Design Finish consisted of three (13) full reconstruction blocks within the Carrollton, NRHD. Construction is expected to begin in January 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR116 - Marlyville-Fontainebleu Group A (PMOPI): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR116	Street name tiles	All existing street name tiles to be reset outside ADA footprint. A general note will be added to the plans to sawcut, remove, retain and reinstall street name ceramic tiles.		
RR116	Timber curbs		10 LF to be removed, 7000 Fig Street. Concrete curb and gutter improvements are planned to the existing catch basin.	

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR116	Distinctive concrete curbs		640 LF dist. concrete curbs, 4100 block of Vincennes. Roadway is FRC. Not feasible to retain since the profile of the road will be changed to provide positive drainage. The concrete curbs w/exposed aggregate will likely be damaged when the roadway paving is demolished.	
RR116	Brick/stone sidewalk including footlaps	<p>(5) existing brick footlap. A note will be added to remove and reinstall specialty paving in kind.</p> <p>(3) existing stamped concrete driveways/sidewalks. A note will be added to remove and reinstall specialty paving in kind.</p>		

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR116	Steel curb guards		(37) steel curb guards in proposed ADA ramp footprint to be removed. It is unlikely tangent sections will remain due to change in radius and slope to provide adequate drainage & meet ADA requirements.	
RR116	Historic streetlight	A note will be added to the plans to protect (2) existing historic streetlights on Neron Place.		
RR116	Hitching posts	A note will be added to plans to remove, retain, & reinstall (4) existing post hitching posts, (2400 block of Pine Street).		
RR116	Utility Covers			Where applicable, existing frame and cover will be reused. A general note will be added to the pans and the SOV will be updated to salvage and reuse existing metal casting and frame.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR116	Catch basins and grates	(35) existing CB frames and covers to be reused	(53) catch basins to be removed	(28) Where applicable, existing frame and cover will be reused. A general note will be added to the plans and the schedule of values will be updated to salvage and reuse existing metal casting and frame.
RR116	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR116	Two-track driveways	(22) two-track driveway outside ROW to be avoided		

* RR116 – End of Table

10. RR126 – Mid City Group C (FRC) A review of this third-wave project near Design Finish consisted of eight (8) full reconstruction blocks within the Mid-City, NRHD. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR126 - Mid City Group C (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR126	Brick or stone curbs			170 LF of existing stone curbs. Plans indicate replacement with 4" high mountable curbs
RR126	Brick or stone gutter bottoms		Existing small section of exposed brick gutter bottoms in street next to corner, 101 block of N. Bernadotte to be removed.	
RR126	Street name tiles			Awaiting comment from designer on existing street name tiles in corners.
RR126	Timber curbs		60 LF of relic timber curb to be removed, 300 N Bernadotte Street.	
RR126	Brick or stone street pavers (including driveway aprons, and crosswalks)			Existing brick driveway apron 200 block of N. Murat.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR126	Steel curb guards		(8) steel curb guards in proposed ADA ramp footprint to be removed.	(1) set of steel curb guards in neutral ground City Park Ave/N. Bernadotte St. (1) set of steel curb guards in neutral ground Bienville /N. Bernadotte St. (2) sets of steel curb guards in neutral ground Bienville /N. Murat St. Tangent sections of steel curb guards outside ADA footprint
RR126	Brick/stone sidewalk including footlaps	Existing brick pavers in footlap to be avoided (100 block of N. Bernadotte St.		
RR126	Historic streetlights	Existing streetlight in City Park Avenue/N. Bernadotte to be avoided.		
RR126	Utility Covers	Plans indicate utility covers to be reset throughout		Will re-confirm with the designer.

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR126	Catch basins and grates	(12) existing catch basins to remain (5) existing catch basins to be adjusted	(23) catch basins to be removed for upgrade	
RR126	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR126	Two-track driveways	(8) two-track driveway outside ROW to be avoided		

* RR126 – End of Table

11. RR127 – Mid City Group D (FRC) A review of this third-wave project near Design Finish consisted of ten (10) full reconstruction blocks within the Mid-City, NRHD. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR127 - Mid City Group D (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR127	Brick or stone curbs			45 LF of existing stone curbs. Plans indicate replacement with 6” high barrier curbs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR127	Steel curb guards		(16) steel curb guards in proposed ADA ramp footprint to be removed.	Tangent sections of steel curb guards outside ADA footprint
RR127	Brick/stone sidewalk including footlaps	Existing brick pavers in footlap to be avoided, 3500 block of Iberville St.		
RR127	Utility Covers	Plans indicate utility covers to be reset throughout		Will re-confirm with the designer.
RR127	Catch basins and grates	(11) existing catch basins to remain (14) existing catch basins to be adjusted	(58) catch basins to be removed for upgrade	
RR127	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR127	Two-track driveways	(8) two-track driveway outside ROW to be avoided		

* RR127 – End of Table

12. RR128 – Mid City Group E (FRC) A review of this third-wave project near Design Finish consisted of fifteen (15) full reconstruction blocks within the Mid-City, NRHD. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR128 - Mid City Group E (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR128	Brick or stone curbs	(1,980) LF stone curb to be avoided	(200) LF of ROUNDED stone curb in ADA ramp footprint to be removed	Treatment of (1,320) LF of stone curb to be determined
RR128	Timber curbs		(260) LF of timber curb to be removed	
RR128	Steel curb guards		(14) steel curb guards in proposed ADA ramp footprint to be removed.	Tangent sections of steel curb guards outside ADA footprint
RR128	Brick or stone street pavers (including driveway aprons and crosswalks)			(1) set of existing stone bricks in driveway apron, 4100 block of Baudin Street
RR128	Brick/stone sidewalk including footlaps	(2) brick footlaps to be avoided		(1) existing brick footlap, 201 block of S. Solomon Street
RR128	Hitching posts	(5) hitching posts to be avoided		
RR128	Streetlights	(2) historic streetlights to be avoided		

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR128	Utility Covers	(3) sewer covers to be adjusted (1) manhole cover adjusted	(18) drain covers to be removed (manhole abandoned)	Will re-confirm treatment of utility covers with the designer.
RR128	Catch basins and grates	(37) existing catch basins to remain (6) existing catch basins to be adjusted	(36) catch basins to be removed for upgrade	(25) existing catch basins and grates 4100 block of Baudin Street, 400-500 block of S. Solomon St, 4100 S. Ulloa.
RR128	Fences/Walls/Gates	All fences/walls/gates to be avoided.		
RR128	Retainer gardens			(2) brick retainer gardens
RR128	Two-track driveways	(9) two-track driveway outside ROW to be avoided		

* RR128 – End of Table

13. RR142 – Pontchartrain Park Group C (FRC) A review of this third-wave project near Design Finish consisted of twelve (12) full reconstruction blocks within the Pontchartrain Park, NRHD. Construction is expected to begin in February 2021. The table below outlines the current status of avoidance/minimization efforts for CDFs along the full reconstruction segments. **The following proposed work will have no effect on a National Historic Landmark (NHL).**

RR142 - Pontchartrain Park Group C (FRC): Avoidance/minimization efforts to CDFs

Project	CDF	Avoidance/Minimization Efforts	To Be Removed	To Be Determined
RR142	Steel curb guards		(9) steel curb guards in proposed ADA ramp footprint to be removed.	Tangent sections of steel curb guards outside ADA footprint
RR142	Utility Covers	Plans indicate utility covers to be avoided or adjusted throughout		
RR142	Catch basins and grates	(0) existing catch basins to remain (0) existing catch basins to be adjusted	(59) catch basins to be removed for upgrade	

* RR142 – End of Table

APPENDIX A:

UNO JIRR PROJECT UPDATE - ARCHAEOLOGY

UNO JIRR PROJECT UPDATE - ARCHAEOLOGY

In the current reporting period, the University of New Orleans Department of Anthropology and Sociology has continued work on the alternative archaeological mitigation for FEMA's Hazard Mitigation Grant Program (HMGP) and the Sandy Recovery Improvement Act/Joint Infrastructure Recovery Request (JIRR). The current health crisis has limited access to the UNO campus and has disrupted planned timelines for some of the public components of the project. When that was the case, effort was shifted to other project goals so that overall progress could continue. During the current period:

1. All previous investigations and site file records have been organized at the neighborhood level, and Research Associate Ryan Kennedy, PI Gray, and UNO Graduate Researcher Elizabeth Williams, have continued to create the narrative document summarizing the quality and thoroughness of previous archaeological research, research themes, analyses, and future research themes by neighborhood. This narrative section will form an integral portion of the Cultural Resources Context Statement. It is anticipated that the document comprising this section of the Cultural Resources Context Statement will be completed by 1 January 2021 for initial review by CNO.
2. Shape files for archaeological sites in Orleans Parish were transferred from the Louisiana Division of Archaeology on 13 April 2020 pursuant to a data sharing agreement signed in March 2020, and UNO has compiled additional existing map layers available through the City of New Orleans, FEMA, LA SHPO, and public databases. Graduate Researcher Williams and Undergraduate Assistant Tomas Figueroa have been engaged in assigning new attributes for site shape files, creating test/draft versions of map overlays, and doing initial digitization and geoprocessing to develop probability models for the identification of high probability/archaeologically sensitive locations for pre-contact, contact and colonial era sites as required by the ACP. This effort incorporates scoring data for sites developed in previous phases of this project.

3. Cataloging and assessment of sites with multiple National Register eligible components has continued in conjunction with the creation of neighborhood narratives. The integration of these into a coherent database with standard organizational criteria has been hampered by inconsistent analytical methodologies, systems of reporting historical research, and systems of reporting material data. A working metric for assessing data usefulness and comparability is being developed, to aid in the establishment of criteria for site assessment, as specified in the ACP. This will be addressed further in the final Cultural Resources Context Statement, as will suggestions for improving data comparability. While the ACP specifies that previous fieldwork on pre-contact, contact, and colonial era archaeological sites should be a particular focus of the Cultural Resources Context Statement, preliminary research suggests that quality data sets from the late-nineteenth and early-twentieth century are not as common throughout the city as might be assumed from the number of large multi-block data recoveries conducted in the past two decades. This will also be addressed in the suggested criteria for site assessment being developed for the Statement.
4. Neighborhood-level and subject area outreach measures have been largely postponed due to coronavirus restrictions. If social distancing measures and limits on public gatherings continue, outreach will be switched to an on-line only format, with comments submitted through a web-based tool, to be implemented in conjunction with Godzinski.
5. A revised version of the archaeology tour with expanded sites has been launched on the New Orleans Historical web-based application, with an example of an expanded site available at <https://neworleanshistorical.org/tours/show/107>. New Orleans Historical is curated by the Midlo Center for New Orleans Studies, and the archaeology tour there continues to be developed as an independent project of Gray and the Midlo Center. It is expected that materials posted there may be used as the basis for educational and outreach materials for this project. UNO will schedule a meeting with CNO and Godzinski during the next quarter to review material available on New Orleans Historical and select a format for the public outreach/educational program specified in the ACP.

APPENDIX B:

JIRR PROJECT UPDATE – HISTORIC PRESERVATION

JIRR PROJECT UPDATE – HISTORIC PRESERVATION

In the current reporting period, the City of New Orleans' (CNO) Historic Preservation Specialist has continued work on the treatment measures for FEMA's Hazard Mitigation Grant Program (HMGP) and the Sandy Recovery Improvement Act/Joint Infrastructure Recovery Request (JIRR). During this period, the following benchmarks have been completed:

1. The HP Specialist has continued efforts to conduct the historic property inventory of Character Defining Features (CDFs) within JIRR-affected National Register Historic Districts (NRHD) as directed by the treatment measures outlined in the Abbreviated Consultation Process (ACP) letter. To date the following historic districts have been surveyed: The Garden District NHL/NRHD, Algiers Point, NRHD, and South Lakeview, NRHD. The data collected for these districts are currently being assessed according to the seven aspects of integrity, https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf (see Appendix C). Once analyzed, the data will inform the development of the historic context statement as required under the ACP. Plans are in development for surveys of Faubourg Marigny, Bywater, and Pontchartrain Park in the coming months.
2. Street Selection Method: The design approach for the historic property inventory included a randomized selection process of street segments within JIRR-affected NRHD areas. With the aid of Geographic Information System mapping software (ArcGIS Desktop), a standardized 30-by-30-meter landscape/archaeological grid was used as an overlay tool in the street selection process. Street blocks or segments were selected based on a specific distance measurement from the center (centroid) of each grid cell. For example, a distance measurement of three (3) feet from the grid centroid was applied to select street segments within Algiers Point, NRHD. Since historic districts vary in shape and size, street length, street configuration, as well as the number of streets, the distance value was increased or decreased, where necessary, to achieve even coverage i.e., the center and edges of the historic district. Once a full representation of the district was reached, large clusters of selected segments could be de-selected manually or "thinned out" to avoid over-representation of areas within the district while ensuring even coverage. Road class segments such as highway ramps and segments intersecting a district were excluded from the selection process. The randomized street selection process as outlined above produces even coverage of street segments within a historic district allowing "a thorough sampling which will inform the content of and provide a basis for analysis and synthetization in the historic context statement" as required under the *Treatment Measures for the Built*

Environment in the ACP. NOTE: Due to limitations on both time and human resources, it may be necessary to add additional exclusion criteria to the street selection method above in order to reduce the sheer number of streets surveyed to meet the current December 2021 deadline for the Historic Context Statement.

3. Written Descriptions and Assessments of Integrity: Using the National Register Bulletin, No. 15: How to Apply the National Register Criteria for Evaluation, primary and secondary documentation, internet research, and field observations, the CNO HP Specialist is in the process of constructing integrity tables for Character Defining Features to assist in writing descriptions and assessments of integrity for each character defining feature.
4. Research and the Historic Context Statement: The CNO HP Specialist continues to develop a working bibliography for the historic context statement. The list of references includes a wide range of relevant sources such as historic district nominations, existing cultural resource surveys on St. Charles Avenue and Magazine Street, as well as primary resources that include DPW digital maps and DPW standard specifications from 1916, 1921 and 1936. The next steps in the preparation of the historic context statement include completing draft reports on Algiers, NRHD and South Lakeview, NRHD and The Garden District NHL. Other reports will be completed as data gathering and processing continues for additional historic districts. Additional data for each individual NRHD will be aggregated as it becomes available. Please note the following limiting factors:
 - a. Early in the program, it was suggested a qualified person (or personnel) be hired to support the research and inventory aspects of the program. However, to date, the CNO Historic Preservation Specialist has been acting as a principal investigator without any dedicated staff support. With the economic tightening caused by the ongoing Covid-19 pandemic the City is currently constrained in its ability to outsource this work.
 - b. Access to archival records and other research materials has been somewhat constrained at times because of Covid-19 related restrictions.
 - c. The cyberattack on the City required the reacquisition of some lost data, i.e., GIS shapefiles.

Photo Logs: As required by the ACP, the HP Specialist has continued the image capture of stone, brick gutter bottoms and other features slated for removal using a high-resolution GPS-enabled digital camera (See Appendix C).

APPENDIX C:

CDF INVENTORY AND SAMPLE INTEGRITY ASSESSMENT – HISTORIC PRESERVATION

Character Defining Feature (CDF) Inventory: Sample Assessment of Integrity

This appendix includes a sample assessment of integrity for a subset of Character Defining Features (CDF) as part of the required inventory informing the Joint Infrastructure Recovery Request's (JIRR) Historic Context Statement. In *How to Apply the National Register Criteria for Evaluation (National Register Bulletin 15)*, the National Park Service requires significant properties or components of properties within a district be able to demonstrate "the ability to convey its significance" through an assessment of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association (National Park Service, 1995, page 44). Moreover, a "property must retain...the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define both *why* a property is significant (Applicable Criteria and Areas of Significance) and *when* it was significant (Periods of Significance)." (National Park Service, 1995, page 46). Thus, only after this assessment of integrity is resolved can a determination be made of whether an object, structure, building, site, or district contributes to a National Register property.

The sample subset in the appendix includes three common CDFs discovered in Algiers Point NRHD, the Garden District NRHD/NHL and South Lakeview NRHD: *brick curbs*, *street name tiles* and *two-track driveways*. These CDFs have all been assessed applying the seven aspects of integrity within the context of the historic district including its Period of Significance (POS). In some cases, determinations of contributing status for a CDF await the result of further research and conversations with qualified personnel.

Brick Curbs

During the CDF inventory, there were discoveries of brick curbs in areas throughout both Algiers Point NRHD and the Garden District NRHD/NHL (see Figures C1 through C5). While not common, brick curbs exist with enough regularity and variation to be objects worthy of investigation. Many of the bricks used seem to be "old" or reclaimed material and complement well the tradition of using brick pavers on sidewalks throughout both historic districts. However, there is evidence to suggest that most of these brick curbs (if not all) appear to be accretions of new material added on top of earlier curb materials, such as stone (see Figure C5). In addition, the haphazard areas within a particular block in which the brick curbs sections were found, for example, in short segments of a block, imply they may not have been part of standardized road building practices but rather installed by the homeowner/resident of a property they face. Still, it seems brick curbs have been part of the streetscape for some time, perhaps 50 years or more, owing to their settled nature within the streetscape and their general association with both districts. These features could well be within the Period of Significance for both Algiers Point NRHD (1850-1946) and the Garden District NRHD/NHL (1832-1959), yet further investigation is necessary to make definitive determinations re integrity and contributing status.



Figure C1. Contributing status yet to be determined Brick Curb, 628 Pacific Avenue Algiers Point, NRHD, Period



Figure C2. Contributing status yet to be determined: Brick Curb, along corner 1200 block of Ninth Street, Garden District, NRHD/NHL, Period of Significance: 1832-1959



Figure C3. Contributing status yet to be determined Detail of Brick Curb, along corner 1200 block of Ninth Street, Garden District, NRHD/NHL, Period of Significance: 1832-1959



*Figure C4. Contributing status yet to be determined:
Length of Brick Curb, along 3000 block of Camp Street,
Garden District, NRHD/NHL, Period of Significance: 1832-
1959*



*Figure C5. Contributing status yet to be determined: Brick
Curb resting on top of bluestone curb (SEE ARROW), along
3000 block of Camp Street near catch basin, Garden District,
NRHD/NHL, Period of Significance: 1832-1959*

Street Name Ceramic Tiles

During the CDF inventory many examples of street name tiles were found along the sidewalk corners/intersections of the Garden District NRHD/NHL (POS: 1832-1959) as well as some in Algiers Point NRHD (POS: 1850-1946) where in the latter case, ADA ramps had yet to be re-installed on many corners due to ongoing JIRR work. Preliminary research and fieldwork revealed several variants in font, color, material, and age of the street name tiles. The oldest tile seems to be from the early 20th Century and made from either encaustic concrete or porcelain. Such tile still exists on some corners of the Garden District, especially along the district's edges along Josephine and Carondelet Street (see Figure C6). In some cases, damaged tiles like the ones on the corner near 1332 Philip Street may no longer retain integrity or contribute to the district due to severe damage and/or missing letters (see Figure C7). A recent initiative by the Garden District Association has replaced much of the neighborhood's older tile, however, the loss of the original material combined with the difference in material, color, and font signifies their loss of integrity; therefore, they do not contribute to the district. Such an example of this newer tile exists on the corner of 2426 Magazine Street (see Figure C8). While these tiles may not contribute, the newer tiles are visually sympathetic with a nod to the historic area of the district and are compatible as contemporary replacements.



Figure C6. Contributing: Historic cement or porcelain tile, "JOSEPHINE", near 1401 Josephine Street, Garden District, NRHD/NHL, Period of Significance: 1832-1959



Figure C7. May no longer be contributing: Chipped street name tile with missing letter, "PHILIP", near 1332 Philip Street, Garden District, NRHD/NHL, Period of Significance: 1832-1959



Figure C8. Non-Contributing, but compatible: Recent newer ceramic tile installed with a bright yellow outline around blue font against a white background (NOTE RECENT CONCRETE WORK), near 2426 Magazine St, Garden District, NRHD/NHL, Period of Significance: 1832-1959

Two-Track Driveways

As expected, many two-track driveways were found in South Lakeview NRHD, a district which lends its major period of development to the early part of the twentieth century (POS: 1910 -1951). All were assessed for integrity and almost all were found contributing to the historic district (see Figures C9-C10). In Figure C10, the driveway strip to the right was repaired with new concrete not matching in color and perhaps texture, however, overall, the feature still meets most of the seven aspects for integrity such as location, design, setting, workmanship, feeling and association, if not material, and remains a contributing element to the district.

Two-track driveways were also discovered in Algiers Point NRHD (POS: 1850-1946) and were assessed for integrity (see Figures C11 and C12). In Figure C11, while the two-track driveway sharing a lot with a double gallery neo-classical revival home may not be an original feature, the timeframe for this feature fits within the later part of the POS for Algiers Point NRHD. The two-track driveway remnant, however, at 816 Newton Street, has lost many aspects of its integrity (material and workmanship) in addition to its setting due to the loss of the adjacent building. Therefore, it is no longer a contributing element to the historic district (see Figure C12).

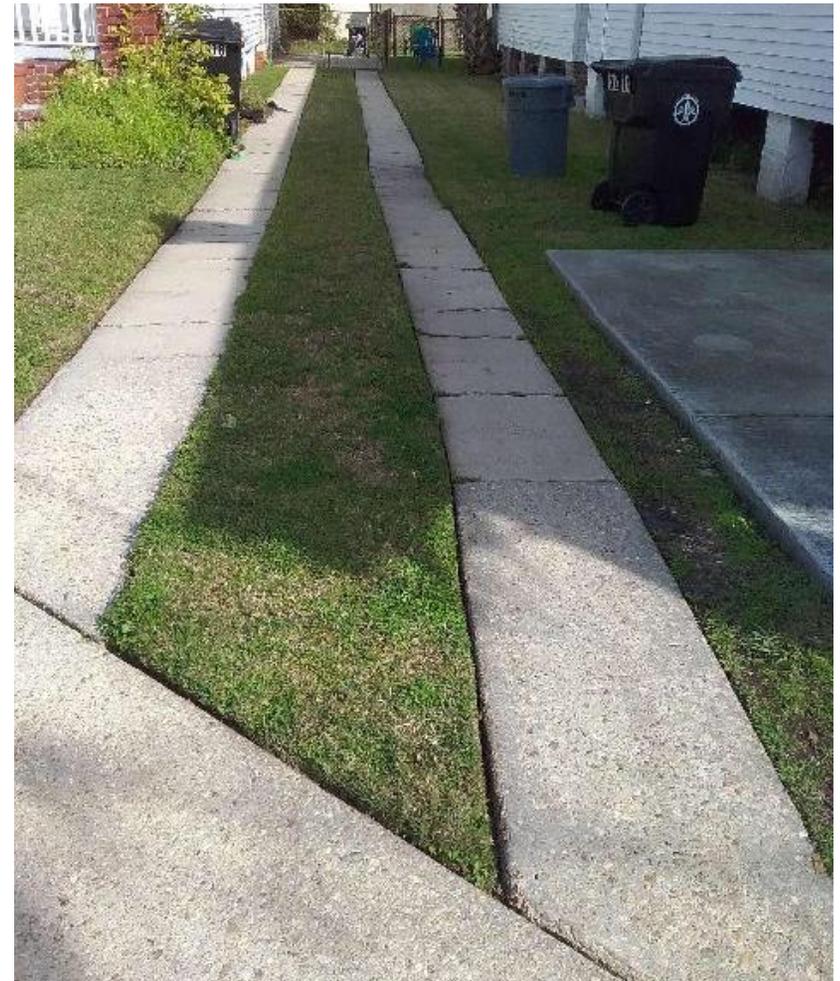


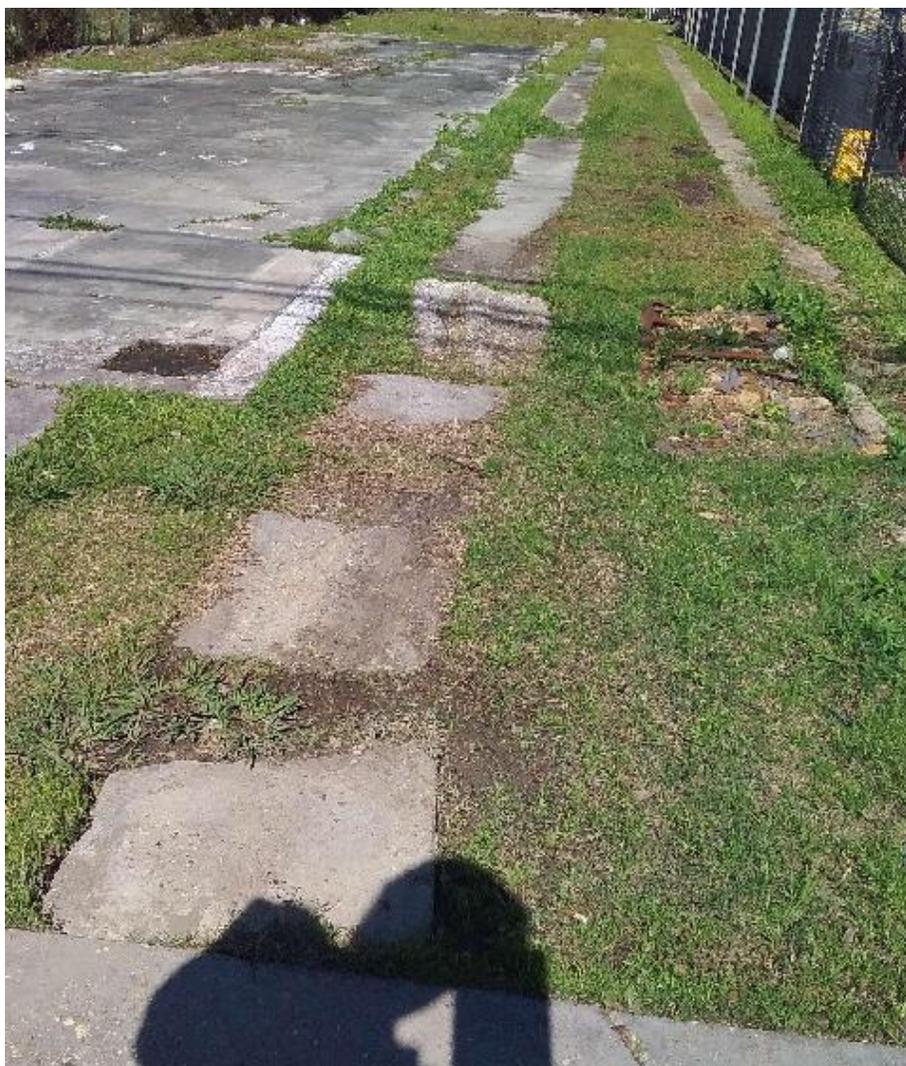
Figure C9. Contributing Two Track Driveway, 5216-18 Hawthorne Place, South Lakeview, NRHD, Period of Significance: 1910-1951



Figure C10. Contributing Two Track Driveway with concrete patch on middle of right strip, 725-27 Voisin Street, South Lakeview, NRHD, Period of Significance: 1910-1951



Figure C11. Contributing Two Track Driveway, 235 Lavergne Street, Algiers Point, NRHD, Period of Significance: 1850-1946



REFERENCES CITED

U.S. National Park Service. (1995). National Register Bulletin, *How to Apply the National Register Criteria for Evaluation*. Retrieved September 1, 2020, from https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf

Figure C12. Non-Contributing: Two Track Driveway (remnant), 816 Newton Street, Algiers Point, NRHD, Period of Significance: 1850-1946

APPENDIX D:

PHOTO LOGS – HISTORIC PRESERVATION

**Recordation of Character Defining Features
400 Millaudon Street, New Orleans, Louisiana**

Photographs taken **July 17, 2020**

Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Brick Open Gutter 400 Millaudon Street, Downriver (4 feet 5 inches long x 1.5 feet wide, variable)					
RR008	0408	W facing showing brick open gutter and drop inlet leading to catch basin	W	29.937767	-90.129488
RR008	0409	SW end of extant brick open gutter with catch basin and drop inlet	NE	29.937742	-90.129510
RR008	0410	SW end of extant brick open gutter with catch basin and drop inlet	NE	29.937742	-90.129510
RR008	0411	W end showing drop inlet and large catch basin opening	E	29.937742	-90.129510
RR008	0412	E facing showing catch basin and grate behind open gutter	E	29.937727	-90.129425
RR008	0413	SW facing, along segment showing catch basin, brick feature and concrete segment	SW	29.937715	-90.129407
RR008	0414	SW facing, along segment showing catch basin, brick feature and concrete segment	SW	29.937715	-90.129407
RR008	0415	NE facing, along concrete segment leading up to open brick	NE	29.937605	-90.129490

**Recordation of Character Defining Features
7800 block of Dominican Street, New Orleans, Louisiana**

Photographs taken **July 17, 2020**

Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Brick Curb 7800 Dominican Street, Lakeside (23 feet, 3 inches long)					
RR008	0402	E end showing length of brick curb.	W	29.939705	-90.133365
RR008	0403	showing brick curb detail	N	29.939697	-90.136000
RR008	0404	showing brick curb detail	E	29.939880	-90.133492
RR008	0405	W end showing length of brick curb.	E	29.939877	-90.133558
RR008	0406	showing context	N	29.939837	-90.133448
RR008	0407	SW facing, along segment showing catch basin, brick feature and concrete segment	N	29.939837	-90.133448

**Recordation of Character Defining Features
Intersection of Pearl Street and Fern Street, New Orleans, Louisiana**

Photographs taken **July 17, 2020**

Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Gutter Bottom at 500 block of Fern Street, SE Corner (23 feet, 3 inches long x 1.5 feet wide)					
RR009	0397	SE corner, showing context	NE	29.941012	-90.133332
RR009	0398	showing SE end of gutter bottom segment	NW	29.940973	-90.133292
RR009	0399	showing NW end of gutter bottom segment	SW	29.941035	-90.133288
RR009	0400	showing NW end detail with asphalt patch	E	29.941017	-90.133288
RR009	0401	showing SE end detail next to asphalt patch	NE	29.941010	-90.133297

**Recordation of Character Defining Features
2300 Pine Street, New Orleans, Louisiana**

Photographs taken **July 10, 2020**

Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Rounded Stone Curb in Proposed ADA Footprint at NW Corner, Lakeside (18 feet, 9 inches long)					
RR116	0367	NW corner, showing feature from street with street name tiles	NW	NA	NA
RR116	0368	NW corner, showing feature from street	SE	29.952618	-90.115985
RR116	0369	SE corner, showing curb detail	W	29.952618	-90.115985

Recordation of Character Defining Features

2400 Pine Street, New Orleans, Louisiana

Photographs taken **July 10, 2020**

Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Rounded Granite Curbs in Proposed ADA Footprint at SW Corner (19 feet, 0 inches long)					
RR116	0370	SW corner, showing feature from street with street tiles	NW	29.952543	-90.115953
RR116	0371	SW corner, showing feature from street with street tiles	NE	29.952622	-90.116025
RR116	0372	SW corner, showing feature from street with street tiles	SE	29.952613	-90.115923
RR116	0373	SW corner, showing curb detail	SE	NA	NA
Rounded Granite Curbs in Proposed ADA Footprint at SE Corner (19 feet, 10 inches long)					
RR116	0374	SE corner, showing feature from street with street tiles	NE	29.952575	-90.115942
RR116	0375	SE corner, showing feature from street with street tiles	NW	29.952555	-90.115907
RR116	0376	SE corner, showing feature from street with street tiles	SE	29.952615	-90.115878
RR116	0377	SE corner, showing curb detail	E	29.952615	-90.115878
Rounded Granite Curbs in Proposed ADA Footprint at SW Corner (21 feet, 2 inches long)					
RR116	0379	NW corner, showing feature from street with street tiles	NW	NA	NA
RR116	0380	NW corner, showing feature from street with street tiles	NNW	29.953345	-90.115362
RR116	0381	NW corner, showing feature from street with street tiles	S	29.953408	-90.115410
RR116	0382	NW corner, showing context	W	29.953355	-90.115370
Rounded Stone Curb at Upriver Northwest Corner, Lakeside (21 feet, 1 inch long)					
RR116	0383	NE corner, showing feature from street with street tiles	ESE	29.953355	-90.115370
RR116	0384	NE corner, showing feature from street with street tiles	NE	29.953260	-90.115243
RR116	0385	NE corner, showing feature from street with street tiles	SW	29.953240	-90.115267
RR116	0386	NE corner, showing context	S	29.953255	-90.115302

**Recordation of Character Defining Features
2500 Pine Street, New Orleans, Louisiana**

Photographs taken **July 10, 2020**

Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Rounded Granite Curbs in Proposed ADA Footprint at SW Corner (21 feet, 0 inches long)					
RR116	0387	SW corner, showing feature from street	NNW	29.953272	-90.115337
RR116	0388	SW corner, showing feature from street	NNW	29.953272	-90.115339
RR116	0389	SW corner, showing feature from street with street tiles	E	29.953415	-90.115297
RR116	0390	SW corner, showing feature from street with street tiles	SSW	29.953432	-90.115290
RR116	0391	SW corner, showing curb detail	NNW	29.953412	-90.115313
Rounded Granite Curbs in Proposed ADA Footprint at SE Corner (21 feet, 1 inch long)					
RR116	0392	SE corner, showing feature from street	ENE	29.953415	-90.115347
RR116	0393	SE corner, showing feature from street with street tiles	SSE	29.953445	-90.115267
RR116	0394	SE corner, showing feature from street with street tiles	N	29.953347	-90.115282
RR116	0395	SE corner, showing curb detail	NE	29.953338	-90.115280

Recordation of Character Defining Features					
Photographs taken October 8, 2019					
Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist					
Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Stone Open Gutter 3000 Camp, Lakeside (28 feet 11 inches long x 1.5 feet wide, variable)					
DPW199	0155	SW end at Eighth Street corner (lakeside), showing length	NE	29.925488	-90.086102
DPW199	0156	SW end at Eighth Street corner (lakeside), showing length	NE	29.925347	-90.085980
DPW199	0157	NE end (lakeside), showing length	SW	29.925437	-90.085951
DPW199	0158	NE end (lakeside), showing length	SW	29.925425	-90.085885
DPW199	0159	along segment showing detail	NE	29.925496	-90.086040
DPW199	0160	along segment showing detail	NE	29.925488	-90.086111
DPW199	0161	SE facing, along segment showing detail	NW	29.925532	-90.086007
DPW199	0162	SE facing, along segment showing detail	NW	29.925558	-90.086000
DPW199	0163	SE facing, along segment showing detail	NW	29.925513	-90.085931
DPW199	0164	SE facing, along segment showing detail	NW	29.925421	-90.085812
DPW199	0165	showing context with steet name sign	WSW	29.925455	-90.085958
DPW199	0166	showing context with steet name sign	WSW	29.925493	-90.085985
Stone Open Gutter 3000 Camp, Lakeside (68 feet 5 inches long x 1.5 feet wide, variable)					
DPW199	0167	SW end at upriver catch basin (lakeside), showing length	NE	29.925413	-90.086026
DPW199	0168	SW end at upriver catch basin (lakeside), showing length	NE	29.925358	-90.085818
DPW199	0169	NE end (lakeside), showing length	SW	29.925646	-90.085820
DPW199	0170	NE end (lakeside), showing length	SW	29.925657	-90.085817
DPW199	0172	along segment showing detail	SW	29.925333	-90.085852
DPW199	0173	SE facing, along segment showing detail	NW	29.925528	-90.085848
DPW199	0174	SE facing, along segment showing detail	NW	29.925506	-90.085827
DPW199	0176	showing context with steet name sign	W	29.925573	-90.085723
DPW199	0182	NW corner, SW end showing corner	NE	29.925808	-90.085410
DPW199	0183	NW corner, SW end showing corner	NE	29.925850	-90.085388
DPW199	0184	NW corner, showing detail	SW	29.925943	-90.085385
DPW199	0185	NW corner, showing detail	SW	29.925965	-90.085420
DPW199	0186	NW corner, showing context	S	29.925995	-90.085370
DPW199	0187	NW corner, showing context	S	29.925986	-90.085375

Recordation of Character Defining Features					
Photographs taken October 8, 2019					
Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist					
Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Gutter Bottom at NE Corner (56 feet 9 inches long x 1.5 feet wide)					
DPW199	0188	NE corner, NW end showing length	SE	29.926006	-90.085385
DPW199	0189	NE corner, NW end showing length	SE	29.926010	-90.085382
DPW199	0190	NE corner, SW end showing corner	NW	29.925935	-90.085263
DPW199	0191	NE corner, SW end showing corner	NW	29.925935	-90.085275
DPW199	0192	NE corner, showing detail	ENE	29.925985	-90.085306
DPW199	0193	NE corner, showing detail	ENE	29.926028	-90.085326
DPW199	0194	NE corner, showing context	SE	29.925995	-90.085390
DPW199	0195	NE corner, showing context	SE	29.925980	-90.085406
Gutter Bottom at SW Corner (38 feet long x 1.5 feet wide)					
DPW199	0196	SW corner, SE end showing length	NW	29.925801	-90.085205
DPW199	0197	SW corner, SE end showing length	NW	29.925825	-90.085181
DPW199	0198	SW corner, SW end showing corner	E	29.925838	-90.085321
DPW199	0200	SW corner, showing detail	SW	29.925761	-90.085333
DPW199	0201	SW corner, showing detail	SW	29.925788	-90.085326
DPW199	0202	SW corner, showing detail with maker's mark	SW	29.925753	-90.085355
DPW199	0203	SW corner, showing detail with maker's mark	SW	29.925753	-90.085355
DPW199	0204	SW corner, showing context with street name sign	NW	29.925780	-90.085323
DPW199	0205	SW corner, showing context with street name sign	NW	29.925817	-90.085338
Gutter Bottom at SE Corner (15 feet 8 inches long x 1.5 feet wide)					
DPW199	0206	SE corner, NE end showing corner	S	29.925897	-90.085240
DPW199	0207	SE corner, NE end showing corner	S	29.925930	-90.085237
DPW199	0209	SE corner, S end showing corner	N	29.925866	-90.085253
DPW199	0210	SE corner, S end showing corner	N	29.925813	-90.085246
DPW199	0211	SE corner, showing detail	SE	29.925872	-90.085187
DPW199	0212	SE corner, showing detail	SE	29.925863	-90.085218
DPW199	0213	SE corner, showing context with street name sign	W	29.925920	-90.085246
DPW199	0214	SE corner, showing context with street name sign	W	29.925903	-90.085240

Recordation of Character Defining Features

Photographs taken **January 28, 2019**, Photographer: Philip Gilmore, City of New Orleans Historic Preservation Specialist

Project ID	Image File No.	Description	Camera Facing	GPS - x coordinate	GPS - y coordinate
Rounded Granite Curbs in Proposed ADA Footprint at SE Corner (22 feet, 1 inches long)					
DPW199	0255	SE corner, showing feature from street	N	29.927075	-90.083025
DPW199	0228	SE corner, showing feature from street	SW	29.927098	-90.082778
DPW199	0230	SE corner, showing curb detail	E	29.927076	-90.083136
DPW199	0233	SE corner, showing context	SW	29.927128	-90.083162
Rounded Granite Curbs in Proposed ADA Footprint at NE Corner (24 feet, 9 inches long)					
DPW199	0234	NE corner, showing feature from street with street tiles	W	29.927198	-90.082997
DPW199	0237	NE corner, showing feature from street with street tiles and cast iron drain cover	E	29.927128	-90.083080
DPW199	0238	NE corner, showing curb detail	S	29.927150	-90.083080
DPW199	0241	NE corner, showing context	NW	29.927175	-90.083060
Rounded Granite Curbs in Proposed ADA Footprint at NW Corner (21 feet long)					
DPW199	0243	NW corner, showing feature from street	NE	29.927023	-90.083250
DPW199	0244	NW corner, showing feature from street with cast iron drain cover	SW	29.927097	-90.083237
DPW199	0246	NW corner, showing curb detail	S	29.927073	-90.083185
DPW199	0249	NW corner, showing context	NE	29.927113	-90.083207
Rounded Granite Curbs in Proposed ADA Footprint at SW Corner (14 feet, 2 inches long)					
DPW199	0251	SW corner, showing feature from street with street tiles	SE	29.927045	-90.083197
DPW199	0253	SW corner, showing feature from street with street tiles	NW	29.927003	-90.083148
DPW199	0254	SW corner, showing curb detail	S	29.927025	-90.083142
DPW199	0257	SW corner, showing context	N	29.927017	-90.083148