

judged by the Corps of Engineers to be of sufficient importance to be designated as significant. The attributes and recognition of significant resources discussed in this report are displayed in Tables 7 and 8. The following sections discuss each significant resource occurring in the study area and listed previously in Table 5, Comparative Impacts of Alternatives. The significance of each resource and existing conditions are described, then the effects of the no-action alternative and each of the other alternatives are analyzed. Operation and maintenance activities are included in the discussion of alternative plan effects.

5.3.1.2. The impacts discussed in the following sections represent those which would occur without the implementation of the proposed community impact mitigation plan. However, none of the construction plans described herein would be implemented without community impact mitigation. Immediately after the presentation of effects in many of the following sections, the components of the mitigation plan which would minimize and compensate for the impacts are described.

5.3.1.3. As for social and economic impacts, fish and wildlife habitat impacts discussed in the following sections relate to impacts in the absence of a mitigation plan. Mitigation plans for fish and wildlife impacts are presented following the discussions of impacts.

5.3.2. Waterborne Transportation

5.3.2.1. Affected Environment. The IHNC and associated lock, opened in 1923, serves as a critical link on the Gulf Intracoastal Waterway and provides passage between the Mississippi River and Lake Pontchartrain with a connection to the MRGO and the GIWW. Primarily serving shallow-draft barge traffic, the IHNC lock is capable of accommodating a limited number of deep-draft vessels that operate on the MRGO. A variety of recreational vessels, commercial fishing vessels, and U.S. Government vessels also use the lock.

5.3.2.2. Plan 1 (No Action). Shallow-draft traffic would experience increasing transit delays and higher transportation costs as longer lock processing times and more frequent lock operations reflect the growing volume of future traffic over this portion of the GIWW. As transit delays and transportation costs increase over time, some tows would switch to alternative waterways or products would be diverted to rail carriage.

5.3.2.3. Plan 2. Under this plan, future transit delays for waterborne traffic would be lower as the mid-level replacement bridge at St. Claude Avenue reduces the incidence of interference with waterborne traffic. While transit delays under this plan would be less than under Plan 1, the delays would be higher than under plans which include a lock replacement.

**TABLE 7
ATTRIBUTES OF SIGNIFICANT RESOURCES**

SIGNIFICANT RESOURCE	ECOLOGICAL ATTRIBUTES	CULTURAL ATTRIBUTES	AESTHETIC ATTRIBUTES
Socioeconomic Resources	Socioeconomic resources are generally not associated with ecological significance.	The cultural attributes of some areas are principal reasons for human habitation.	—
Air Quality	Non-polluted air is essential for human health and quality fish and wildlife habitat.	—	Non-polluted air provides a pleasing environment.
Wooded Lands	Provides habitat for terrestrial and avian species. In tidally-influenced areas, this habitat provides escape cover for marsh animals during storms.	Native Americans and early immigrants settled in forested areas along natural ridges. Remaining forested areas support traditional hunting pursuits.	Provides a pleasing visual contrast to expanses of marsh, open water, and urbanized areas.
Coastal Wetlands	Detrital input from the marsh to estuarine waters is a basic element of the food web. Coastal marshes support a multitude of avian species.	Consumptive use of wetland-related fish and wildlife resources is a key component of the local heritage.	Provides a typical Louisiana wetlands setting.
Aquatic Habitats	Shallow protected areas are used as nursery areas for estuarine fish and shellfish. Tidal channels are used as primary migration routes by migratory estuarine fish and shellfish.	Used for recreational and commercial fishing, part of the cultural heritage. Provides traditional trade and navigation routes.	Water bodies surrounded by emergent vegetation provide aesthetically pleasing views. Vessels cruising through deep water passes are pleasing sights.
Aesthetic Values	—	Cultural resources are often high in aesthetic appeal.	—
Recreational Opportunities	Recreational harvest of fish and wildlife is an important component of the area's ecology.	Outdoor recreational activities are an important part of the area's culture.	Outdoor recreational activities flourish in areas of high aesthetic quality.
Cultural Resources including National Register Sites	—	—	Many cultural resources have high aesthetic value.

**TABLE 8
RECOGNITION OF SIGNIFICANT RESOURCES**

SIGNIFICANT RESOURCE	INSTITUTIONAL RECOGNITION	TECHNICAL RECOGNITION	PUBLIC RECOGNITION
Socioeconomic Resources	River and Harbor Flood Control Act of 1970, National Environmental Policy Act.	Important for social harmony in highly urbanized areas.	Social and economic factors affecting the community structure are of great concern to the general public and elected officials.
Air Quality	Clean Air Act.	Poor air quality has been shown to have adverse effects on humans and wildlife.	The public desires clean air for health and aesthetic reasons.
Wooded Lands	Clean Water Act, EO 11990, Fish and Wildlife Coordination Act.	Provides nesting, resting, and escape habitat for marsh species. Provides essential habitat for many terrestrial and avian species.	Environmental groups and the public support preservation of forested areas.
Coastal Wetlands	Clean Water Act, Estuary Protection Act, Coastal Zone Management Act, EO 11990, Coastal Wetlands Planning, Protection and Restoration Act.	Studies by government agencies have shown Louisiana is losing about 25 square miles of coastal wetlands per year. Vital habitat for estuarine species.	Environmental groups and the general public support preservation and restoration of coastal wetlands.
Aquatic Habitats	Clean Water Act, EO 11990, Estuary Protection Act, Fish and Wildlife Coordination Act, River and Harbor Act of 1899 (Section 10).	Important as nurseries for estuarine species and as feeding areas for avian species. Passageways for migratory estuarine-dependent fish and shellfish species.	Environmental groups and the public use and support the preservation of fish and wildlife habitats and deep water passes.
Aesthetic Values	—	—	The public desires preservation of the aesthetic values associated with urban neighborhoods and nearby fish and wildlife habitats.
Recreational Opportunities	Land and Water Conservation Fund Act.	Facilities for recreational activities are very important in urban settings.	The public makes high demands on recreation areas.
Cultural Resources including National Register Sites	National Historic Preservation Act, Archeological Resource Protection Act.	Study area is rich in cultural resources, including listed historic neighborhoods and structures.	Preservation groups support the protection and enhancement of cultural resources.

5.3.2.4. Plans 3a through 3f. The future expected level of transit delays for shallow-draft traffic would be considerably reduced for all of these plans. For Plans 3a, 3b, 3d, and 3e, which would provide for a shallow-draft lock, deep-draft traffic would be required to use the MRGO as an alternative route to the IHNC. As a result, deep-draft traffic could incur higher transportation costs.

5.3.3. Flood Protection Systems

5.3.3.1. Affected Environment. Flood protection for the neighborhoods surrounding the IHNC is provided by the Mississippi River levees which connect to the existing lock chamber. On the tidewater side of the lock, hurricane protection levees and floodwalls protect the adjacent neighborhoods from storm-induced flooding. Floodgates allow motor vehicle access to the industrial facilities located between the IHNC and the flood protection system. The Mississippi River levees in the vicinity of the IHNC provide flood protection to a level of +22.1 feet NGVD. The hurricane protection levees and floodwalls provide protection up to +14 feet NGVD along the east bank of the IHNC and +15 NGVD feet on the west bank. The last time that substantial flooding occurred in the area was a result of floodwater from Hurricane Betsy in 1965. Since that time, the hurricane flood protection system has been substantially upgraded.

5.3.3.2. Plan 1 (No Action). The current level of flood protection would not be expected to change in absence of Federal action.

5.3.3.3. Plan 2. The level of flood protection currently provided would be maintained. The hurricane protection system would be unaffected. The Mississippi River protection system would require a relatively minor amount of levee modification, as compared to the lock replacement plans. The levee currently ties into the foundation and approaches to the St. Claude Avenue bridge and the existing lock. The levee would have to be reconfigured for the new bridge, but proper safeguards would be provided at all times to prevent flooding of developed areas or otherwise compromising the protection system.

5.3.3.4. Plans 3a through 3f. Lock construction would result in higher river stages in that portion of the IHNC that lies between St. Claude Avenue and the replacement lock. Extensive modifications to the existing levee system would be necessary to extend the Mississippi River flood protection system to the new lock. Modifications would mainly be in the form of upgrading the existing hurricane protection system to standards applicable to the Mississippi River levee system. In most areas, floodwalls would be constructed on top of existing hurricane protection levees. In other areas, existing floodwalls and floodgates would be upgraded. The new protection system would be constructed along the same alignment as the existing hurricane protection levees and floodwalls except for an area on the west side of the IHNC in the vicinity of Claiborne Avenue. The new floodwalls would be built approximately along the right-of-way required for each of these plans and all of these plans would require the same right-of-

way requirements. Plates 12 and 13 show some of the details of the new flood protection system. Additional plates are contained in the Engineering Appendix.

The proposed graving site would require realignment of the hurricane protection levee protecting the part of New Orleans east of the IHNC and north of the MRGO/GIWW (Plate 28). The levee would be realigned to form a loop, within which the graving site would be located. The new levee loop would be built to the design standards of the rest of the levee system. Depending on construction scheduling, the section of the levee around the graving site may not meet final design standards during the non-hurricane season, but adequate protection would be maintained during the hurricane season.

While no mitigation is proposed or necessary for the flood control function of the levees and floodwalls, mitigation for the loss of the aesthetic attributes of the existing levees is part of the community impact mitigation plan. Please refer to Section 5.3.20.

5.3.4. Business and Industrial Activity

5.3.4.1. Affected Environment. Businesses and industries located within the IHNC study area include small neighborhood businesses, construction-related businesses and repair services, auto services, wholesaling and warehousing, and light industry. Small neighborhood businesses include corner grocery stores, pharmacies, neighborhood bars, cafes, barber shops, beauty salons, laundrettes and dry cleaners.

Construction-related businesses and repair services include plumbing companies, ornamental iron works, and heating and air conditioning companies. Auto services include towing services, auto repair services, wreckers, tire companies and gasoline stations. Wholesalers and warehousing concerns include marine-related businesses and seafood suppliers. Light industries include bag manufacturers, fabricators of iron and steel products, coffee plants, and asphalt and gravel plants.

Retail businesses within the neighborhoods immediate to the IHNC consist of grocery stores, dry cleaners, day care centers, bars, convenience stores and gasoline stations. Most of the retail establishments in the study area are neighborhood businesses that do not depend upon commuter or transient customers. Located in the Bywater neighborhood are an animal shelter and an independent cinema which serve residents throughout New Orleans. In addition, approximately 15 companies hold leases from the Port of New Orleans for waterfront facilities along the IHNC between the lock and Florida Avenue bridge. Of these 15 companies, only two are actively engaged in operations from the facilities that they lease on the IHNC.

5.3.4.2. Plan 1 (No Action). Under the no-action scenario, business and industrial activity in the study area would likely change very little in the near future (Rigamer, 1991). Ultimately, the viability of the businesses that depend on the patronage of residents and other businesses in the study area would reflect future trends in local population, employment, and income.

5.3.4.3. Plan 2

5.3.4.3.1. Short-term Effects. During the period of bridge closure that is required for implementation of this alternative, local pedestrian and vehicular access to and from a number of local businesses would be hindered. In addition, construction noise could impact those businesses that are in close proximity to the approaches to the St. Claude Avenue bridge. The severity of these impacts to a given commercial enterprise would depend upon the nature of the business, the degree to which customers are drawn from the opposite side of the IHNC, and the proximity of the business to the closed crossing. Reduced vehicular and pedestrian access could lead to lower retail sales. It is probable, however, that a portion of sales lost by affected retail firms would be captured by competing retail establishments elsewhere.

5.3.4.3.2. Long-term Effects. Although the proposed mid-level St. Claude Avenue bridge would require neither access ramp loops nor real estate acquisitions, the configuration of the approach ramp on the west side of the IHNC has the potential, after construction is completed, to significantly impact a number of business in the immediate area. The touch-down point of the replacement ramp on the west side of the IHNC is between Lesseps Street and France Street which is one and one half blocks west of the existing touchdown point at Poland Avenue (Plate 8). As a result, access to and from the St. Claude Avenue bridge from Lesseps Street, Poland Avenue, Kentucky Street and Japonica Street would be possible only through France Street. Required alterations in traffic circulation patterns in this area could impede access to local businesses. Reduced vehicular and pedestrian access would lead to lower retail sales. It is probable, however, that a portion of sales lost by affected retail firms would be captured by competing retail establishments elsewhere. In contrast, the touchdown point of the replacement bridge ramp on the east side of the IHNC is approximately the same as for the existing touchdown point. Therefore, no adverse impacts would be expected for businesses in that area after the project is completed.

A mitigation plan for impacts to businesses and industries, comparable to that described in Section 5.3.4.4.2., would be an integral component of this alternative.

5.3.4.4. Plans 3a through 3f

5.3.4.4.1. Effects

These plans incorporate a temporary bridge at St. Claude Avenue during construction of the permanent St. Claude Avenue bridge, and modifications at the Claiborne Avenue bridge, that would involve minimal disruptions to the existing level of service (four months of two lanes only instead of four at the St. Claude Avenue bridge, and two to four weeks of complete closure at the Claiborne Avenue bridge). As a result, adverse effects on local pedestrian and vehicular access to and from local businesses would be largely avoided during the construction period. However, construction noise would impact those businesses that are in close proximity to the approaches to the St. Claude

Avenue bridge. The severity of these impacts to a given commercial enterprise would depend upon the nature of the business and the proximity of the business to the construction activity.

The new St. Claude Avenue bridge would not require a change in traffic patterns after construction is complete because the touch-down points would be the same as for the existing bridge. Therefore, no adverse impacts to local businesses would be expected after project construction.

This plan would also require demolition of the Galvez Street wharf and improvements on land owned by the Port of New Orleans on the IHNC between the existing lock and the Florida Avenue bridge. According to the Port of New Orleans, only two tenants in this area are still actively operating from these facilities. As a consequence of this plan, the leases would be terminated and the tenants would be required to relocate.

5.3.4.4.2. Proposed Mitigation

a. Monetary compensation would be provided to commercial establishments and landlords that experience a demonstrable decline in sales and rents during the periods of bridge construction. Direct monetary compensation could occur prior to bridge construction on the basis of a percentage of net receipts that are expected to be lost during the period of bridge construction, although the procedures and criteria for a settlement have not been determined.

b. Displaced lessees on the IHNC would be encouraged to relocate in Orleans Parish. Incentives may include new port leases on concessionary terms. This mitigation feature is to be accomplished in cooperation with the Port of New Orleans.

c. A business assistance program would be established in the area to serve as a stimulus for local business development. This mitigation feature is to be accomplished in cooperation with the Port of New Orleans.

5.3.5. Employment

5.3.5.1. Affected Environment. In 1980, the civilian labor force of the IHNC study area comprised 19,971 persons. The labor force participation rate for the IHNC study area was 35.8 percent in 1980, lower than the 40 percent rate for Orleans Parish. The unemployment rate ranged from 7.1 percent in Holy Cross to 11.5 percent in the Lower Ninth Ward. The rate in Bywater was 7.4 percent and in St. Claude it was 9.4 percent. Similar figures are unavailable for 1990 since the Bureau of the Census no longer compiles these data by census tract. There are no alternative sources of data which are specific to the study area.

The unemployment rate in Orleans Parish fell from 7.0 percent in 1980 to 5.3 percent in 1991. To the extent that the direction of change in the unemployment rate of the study

area follows that for the parish as a whole, current unemployment rates are, at worst, no higher than they were in 1980.

5.3.5.2. Plan 1 (No Action). Future levels of employment in the area would likely remain at its current level (Rigamer, 1991).

5.3.5.3. Plan 2. During the period of bridge closure, employment could be adversely affected at the businesses on both sides of the canal that depend on trans-canal traffic for a significant portion of sales. No significant impacts to the general level of long-term future employment would be expected as a result of this plan.

A mitigation plan for impacts on employment, comparable to that described in Section 5.3.5.4.2., would be an integral component of this alternative.

5.3.5.4. Plans 3a through 3f

5.3.5.4.1. Effects

These plans incorporate a temporary bridge at St. Claude Avenue during construction of the permanent St. Claude Avenue bridge and modifications at the Claiborne Avenue bridge that would involve minimal disruptions to the existing level of service (four months of two lanes only instead of four at the St. Claude Avenue bridge, and two to four weeks of complete closure at the Claiborne Avenue bridge). As a result, adverse effects on employment would be largely avoided during the construction period.

This plan would require demolition of the Galvez Street wharf and facilities on property owned by the Port of New Orleans on the IHNC between the lock and the Florida Avenue bridge. According to the Port of New Orleans, only two tenants are actively operating from their leased facilities in this portion of the IHNC. As a consequence of this plan, the leases would be terminated and the tenants would be required to relocate. The effect of this action on employment levels for the two affected firms cannot be determined.

5.3.5.4.2. Proposed Mitigation

a. Contractors would be required to give preference to fully-qualified residents in order to achieve minority and local resident participation goals.

b. The skilled labor workforce of the affected community would be expanded. Citizens who meet local residency requirements would be eligible for tuition grants for training at existing vocational-technical or similar type schools in skills that would be needed in project construction. Contractors would be required to give preference in hiring to any fully-qualified resident of the community. Hiring preferences would replace quotas as the means to include local residents in the project workforce.

5.3.6. Land Use

5.3.6.1. Affected Environment. For the St. Claude neighborhood, current land uses include: 1) a significant industrial area along the west side of the IHNC from Claiborne Avenue to Florida Avenue; 2) a commercial area along St. Claude Avenue; 3) scattered public facilities with few parks and playgrounds; and 4) residential development of primarily single-family and two-family structures.

For the Bywater neighborhood, current land uses include: 1) residential development (single-family and two-family structures); 2) an industrial area along Press Street and the riverfront, including the U.S. Coast Guard facility; 3) the Hebert Defense Complex (Naval Support Facility) where the Mississippi River and the canal intersect; and 4) neighborhood commercial properties, warehouses, and public facilities.

For the Lower Ninth Ward neighborhood, current land uses include: 1) residential development (single-family and two-family structures); 2) an industrial area along the IHNC between Claiborne Avenue and Florida Avenue; 3) a commercial area along St. Claude Avenue; 4) a concentration of public and private uses within an eight block area; and 5) a government facility (Jackson Barracks) along the eastern border of the neighborhood.

For the Holy Cross neighborhood, current land uses include: 1) residential development (single-family and two-family structures); 2) recreational space along the levee from St. Claude Avenue around the IHNC and river to about three blocks downriver to Eganias Street; 3) the Holy Cross High School Complex at Reynes and the levee; 4) a government facility (Jackson Barracks) along the eastern boundary of the neighborhood; and 5) riverfront industrial area (wharves and warehouses) from Eganias Street to Delery Street.

5.3.6.2. Plan 1 (No Action). No significant change in the mix of land uses in the vicinity of the IHNC is expected in the absence of Federal action.

The proposed graving site is located in the New Orleans Business and Industrial District (NOBID). The graving site would be on vacant land which is very low in elevation. The site would require extensive filling and infrastructure improvements before it could be used for industrial purposes. Since other, higher, areas within the NOBID are available for industrial purposes, no development of the graving site is anticipated in the absence of a Federal project.

5.3.6.3. Plan 2. No significant change in the mix of land uses is expected as a result of this plan.

5.3.6.4. Plans 3a through 3f. Under this plan, land-side publicly-owned commercial/ industrial facilities along the IHNC, including the Galvez Street wharf, the U.S. Coast

Guard Station, and industrial sites along the east bank of the IHNC, would be converted into an alternative public use as part of the inland waterway transportation system. Land uses in other parts of the study area are not expected to change. The U.S. Coast Guard Station is not expected to be relocated within the study area. The identity and current land use characteristics of the area to which the station would be relocated is not known. The public uses represented by the Galvez Street wharf would probably not be replaced.

The proposed graving site, which is undeveloped but classified as industrial land, would be converted into a temporary construction facility. After the construction of the lock modules is complete, the site would be abandoned. It would then become available for whatever uses the landowner would deem appropriate. Potential uses include a shipyard, barge repair facility, or docking facility.

5.3.7. Property Values

5.3.7.1. Affected Environment. Property values, in particular residential property values, within the study area reflect a range of influences, an important component of which is the general trend in employment and income growth experienced by the metropolitan area as a whole. In the New Orleans area, real estate values have declined significantly from levels reached in the mid-1980's. The regional recession brought about by the decline in oil and gas prices, high unemployment, increased crime, the resultant exodus from the metropolitan areas, and the substantial number of foreclosures combined to depress real estate values. Most, if not all, neighborhoods comprising the metropolitan area shared in this decline. Since then, property values in some parts of the metropolitan area, particularly in the suburban parishes, have begun to stabilize and even show signs of increasing. The results of the Rigamer study, conducted in 1991, suggest continuing declines in the study area. More recently, the oil and gas industry in Louisiana has begun to recover and in view of the significant reductions in home mortgage interest costs since 1991, property values may have stabilized.

The U.S. Census reported that the median values of owner-occupied housing within each neighborhood in the study area was, in fact, higher in 1990 than it was in 1980. The 1990 Census reported the median value of owner-occupied housing in the study area in a range between \$43,240 in the Lower Ninth Ward to \$53,350 in the Bywater neighborhood. The median value in St. Claude was \$45,550 and in Holy Cross it was \$49,150. The median value in the City of New Orleans in 1990 was \$69,600.

5.3.7.2. Plan 1 (No Action). Future trends in the value of properties in the study area would continue to be subject to both the broad economic forces at work in the regional and national economies and the particular quality of life that is unique to each of the neighborhoods in the study area. Since there is little new homebuilding in the area, the degree of maintenance for existing structures relative to those in other city

neighborhoods would also be an important factor affecting the trend in property values. The rate of removal for abandoned or uninhabitable housing units also represents a significant factor. While the number of residents has declined over the past decade, continued and significant loss of population and occupied housing are not forecast. Over the time frame represented by this project, uncertainty associated with the future supply of housing units and the future trends in the components of housing demand (population, average household size, employment and income) requires that predictions of future property values (a reflection of the convergence of housing supply and demand) be a very speculative exercise. Under a more limited time frame, such as over the next decade, no circumstances are evident that suggest that the trend in property values in each of the IHNC neighborhoods would significantly diverge from one another or from most of the remaining neighborhoods within New Orleans.

5.3.7.3. Plan 2. Property values would be adversely, though temporarily, affected during project construction, most directly during the period of bridge closure. During bridge closure, construction noise and higher levels of traffic congestion would reduce the desirability of living or operating a business in the affected neighborhoods.

Subsequent to project construction, the mid-level St. Claude Avenue bridge, as a replacement for the current low-level bridge, would have an undetermined net effect on property values in the study area. The elimination of most vehicular traffic delays associated with the current bridge, and the improved vehicular access across the canal that results, would tend to increase the desirability of living in the study area. In contrast, the mid-level bridge, which features two vertical lift towers, may be seen by residents, and potential lessors and purchasers, as detrimental to the aesthetic character of the adjacent historic neighborhoods. The mid-level structure would also diminish pedestrian traffic across the canal. Finally, the alteration in the pattern of traffic circulation surrounding the west-side bridge access ramps would likely be viewed very negatively by residents and motorists alike. To this extent, the desirability of living in the study area, particularly in areas closest to the bridge, would be lessened. The net effect of these two impacts over the study area as a whole is not discernable.

A mitigation plan for impacts on property values, comparable to that described in Section 5.3.7.4.2., would be an integral component of this alternative.

5.3.7.4. Plans 3a through 3f

5.3.7.4.1. Effects

Property values would be adversely, though temporarily, affected during project construction, most directly during the period of bridge construction. During bridge construction, construction noise would reduce the desirability of living or operating a business in the affected neighborhoods. These plans incorporate a temporary bridge at St. Claude Avenue during construction of the permanent St. Claude Avenue bridge and modifications at the Claiborne Avenue bridge that would involve minimal disruptions

to the existing level of service (four months of two lanes only instead of four at the St. Claude Avenue bridge, and two to four weeks of complete closure at the Claiborne Avenue bridge). As a result, adverse effects on property values from higher levels of traffic congestion should largely be avoided.

Subsequent to project construction, property values would continue to be adversely affected. The configuration of the reconstructed floodwalls from St. Claude Avenue to Claiborne Avenue, the double bascule bridge that replaces the existing single bascule bridge at St. Claude Avenue, and the raised towers on the Claiborne Avenue bridge would permanently change the aesthetic landscape of adjacent portions of the neighborhoods. To the extent that these changes are viewed by the public as detrimental to the aesthetic character of the affected areas, the desirability of living in the affected area would be diminished and an adverse impact on property values could be expected. Furthermore, after project completion, at a point significantly into the project life, the total open time for both St. Claude Avenue and Claiborne Avenue bridges would be greater compared to the no action plan. This situation would contribute to traffic congestion that could negatively impact property values.

5.3.7.4.2. Proposed Mitigation

A neighborhood housing revitalization program would be established to serve as a source of seed money for a program of progressive housing rehabilitation. The program would be developed in cooperation with the Port of New Orleans and local groups and agencies.

5.3.8. Public/Community Facilities and Services

5.3.8.1. Affected Environment

5.3.8.1.1. Police Protection. The IHNC neighborhoods are served by the 5th District Police Station, located at Claiborne Avenue between Bartholomew and Alvar Streets. There are 117 officers assigned to this station. Twenty-five officers are on duty at any given time and approximately 15 to 20 are on patrol duty each day. Eighteen patrol cars are assigned to the 5th District. One patrol car is kept on the east side of the IHNC at all times, except during emergencies.

5.3.8.1.2. Fire Protection. The IHNC neighborhoods are served by Fire Protection District No. 3 which has five stations. The stations serving the IHNC area are Headquarters Station No. 27 (Elysian Fields Avenue and Interstate-610); Station No. 8 (Florida Avenue and Desire Street); Station No. 24 (Poland Avenue and St. Claude Avenue); Station No. 22 (Egania Street and Florida Avenue); and Station No. 39 (Tupelo Street and St. Claude Avenue). The first three stations listed are located west of the IHNC while the last two are located east of the canal. There are four staff persons at each station, except for the headquarters station which has a staff of eleven. Stations Nos. 8, 22 and 39 are equipped only with a single engine. Station No. 24 is equipped

with an engine and a ladder. Station No. 27 has a salvage unit in addition to an engine and ladder.

5.3.8.1.3. **Schools.** There are ten public schools and eight private and parochial schools in the IHNC study area. These institutions include St. Mary of the Angels, Lockett Elementary School, Frantz Elementary School, and Palmer Elementary School in the St. Claude Neighborhood; St. Paul's First English School, St. Vincent de Paul, George Washington Elementary School, Nicholls Senior High School and St. Cecilia School in the Bywater neighborhood; Ephesus Junior Academy, Holy Cross School and the Semmes School in the Holy Cross neighborhood; and McDonough 19 Elementary School, Edison Elementary School, Lawless Junior and Senior High School, Hardin School and St. David School in the Lower Ninth Ward neighborhood. The Martin Luther King Middle School for Science and Technology has recently been constructed.

5.3.8.1.4. **Social Services.** The social service agencies include the Lower Ninth Ward Multi-Service Center, the Lower Ninth Ward Neighborhood Health Center, and the Lower Ninth Ward Head Start Program. They are located east of the canal in a single center at Claiborne and Caffin Avenues. The United Medical Center (at St. Claude Avenue and Desire Street) is the only major medical facility located west of the canal within the IHNC study area. Others outside the study area are the Katherine Benson Health Center (Claiborne Avenue and Elysian Fields Avenue), the Desire-Florida Multi-Service Center, the Desire Mental Health Clinic, and the Helen Levy Health Clinic (Florida Avenue and Louisa Street).

5.3.8.1.5. **Recreational Facilities.** There are ten parks/playgrounds, two recreation centers, and several pools operated by the New Orleans Recreation Department in the IHNC area. In addition to the parks/playgrounds, recreation centers, and pools there are open space areas that provide passive recreation for local residents. These open space areas include the levee and batture south of St. Claude in the Holy Cross neighborhood. There is a jogging and walking path along the levee crown.

5.3.8.1.6. **Other Facilities.** Other publicly-owned facilities in the IHNC area include the U.S. Coast Guard Station, Bywater U.S. Post Office, the Society for the Prevention of Cruelty to Animals, and the F. Edward Hebert Defense Complex, all located west of the IHNC. The Jackson Barracks, which functions primarily as a training center for National Guard units, is located east of the canal. There are also an estimated 36 churches located within the area bounded by Pauline, Prieur, Andry and Chartres Streets.

5.3.8.2. **Plan 1 (No Action).** No change in the current level of community services would be expected under the no action scenario.

5.3.8.3. **Plan 2.** During the period of closure for the St. Claude Avenue bridge, trans-canal vehicular traffic would be required to divert to the Florida and Claiborne Avenue

bridges. Pedestrian traffic across the canal would also be interrupted. As a result, trans-canal access to public and community facilities would be impeded. Response times for emergency vehicles would also be adversely affected.

In the period following bridge construction, improved vehicular access across the canal at St. Claude Avenue would tend to improve access to community services and facilities and improve emergency response times. However, pedestrian access would be diminished which, for those affected residents, would reduce access to community services and facilities on the opposite side of the canal. Mitigation for this alternative would be the same as described in Section 5.3.8.4.2.

5.3.8.4. Plans 3a through 3f.

5.3.8.4.1. Effects.

These plans incorporate a temporary bridge at St. Claude Avenue during construction of the permanent St. Claude Avenue bridge and modifications at the Claiborne Avenue bridge that would involve minimal disruptions to the existing level of service (four months of two lanes only instead of four at the St. Claude Avenue bridge, and two to four weeks of complete closure at the Claiborne Avenue bridge). As a result, adverse effects on pedestrian traffic access across the canal, trans-canal access to public and community facilities, and response times for emergency vehicles traveling across the canal would largely be avoided during the construction period.

After project completion, at a point significantly into the project life, the total open time for both St. Claude Avenue and Claiborne Avenue bridges would be greater compared to the no action plan. This would negatively affect access to emergencies and community facilities and services.

5.3.8.4.2. Proposed Mitigation.

a. Community facilities, such as playgrounds, gardens, tot lots, and linear parks, would be provided. Facilities would be operated by non-Federal interests.

b. Additional police, emergency medical, and possibly fire protection would be provided over the period of the construction period.

5.3.9. Tax Revenues

5.3.9.1. Affected Environment. The analysis of tax revenues has indicated a very limited property tax base for residential properties within the study area because of the statewide \$75,000 homestead exemption. This tax feature provides homeowners with an exemption from property taxes on the first \$75,000 of value. With recent average residential sales prices well below that figure and with generally conservative assessments of property, very little tax is generated on residential property within the

study area. As a result, the City of New Orleans relies on sales taxes from retail sales more than on residential property taxes for revenues from the IHNC study area.

In 1989, retail sales for the Holy Cross and Lower Ninth Ward neighborhoods were \$16.5 and \$25.1 million, respectively. These figures are higher than those reported in 1980 although the number of retail establishments declined in Holy Cross from 45 to 35 and in the Lower Ninth Ward from 88 to 68. From 1980 to 1989, the number of retail establishments in the Bywater neighborhood, declined from 107 to 95 and in the St. Claude neighborhood, the number fell from 153 to 123. Over the same period, retail sales in the Bywater and St. Claude neighborhoods fell from the 1980 levels to \$52.5 and \$54.1 million, respectively.

5.3.9.2. Plan 1 (No Action). Under the no action scenario, business activity in the study area would likely change very little in the near future (Rigamer, 1991). As a result, the tax revenues generated by this activity would change little. Over the longer term, the level of tax revenues as a function of commercial activity would reflect future trends in local population, employment, and income.

5.3.9.3. Plan 2.

5.3.9.3.1. Short-term Effects. During the period of bridge closure that is required by implementation of this alternative, local pedestrian and vehicular access to and from a number of local businesses would be hindered. In addition, construction noise would impact those businesses that are in direct proximity to the approaches of the St. Claude Avenue bridge. The severity of these impacts to a given commercial enterprise would depend upon the nature of the business, the degree to which customers are drawn from the opposite side of the IHNC, and the proximity of the business to the closed crossing. To the extent that these impacts lead to lower retail sales, tax revenues generated through the sales of affected businesses would be lower. It is probable, however, that a portion of sales lost by affected retail firms would be captured by competing retail establishments elsewhere. For this reason, sales tax revenues generated for the city would, on the whole, be unaffected.

5.3.9.3.2. Long-term Effects. Although the proposed mid-level St. Claude Avenue bridge would require neither vehicular access loops nor real estate acquisitions, the configuration of the approach ramp on the west side of the IHNC has the potential to significantly impact a number of businesses in the immediate area. The touchdown point of the replacement ramp on the west side of the IHNC is between Lesseps Street and France Street which is one and one half blocks from the existing touchdown point at Poland Avenue. As a result, access to and from the St. Claude Avenue bridge from Lesseps Street, Poland Avenue, Kentucky Street and Japonica Street would be possible only through France Street. Required alterations in traffic circulation patterns in this area would impede access to local businesses. To the extent that reduced access leads to lower retail sales, tax revenues generated through the sales of affected businesses

would be lower. It is probable, however, that a portion of sales lost by affected retail firms would be captured by competing retail establishments elsewhere. For this reason, sales tax revenues generated for the city would, on the whole, be unaffected. In contrast, the touchdown point of the replacement ramp on the east side of the IHNC is approximately the same as for the existing touchdown point. Therefore, no adverse impacts to businesses, retail sales, and tax revenues in this area, attributable to altered traffic circulation patterns on the east side of the IHNC after project completion, would be expected.

5.3.9.4. Plans 3a through 3f. These plans incorporate a temporary bridge at St. Claude Avenue during construction of the permanent St. Claude Avenue bridge and modifications at the Claiborne Avenue bridge that would involve minimal disruptions to the existing level of service (four months of two lanes only instead of four at the St. Claude Avenue bridge, and two to four weeks of complete closure at the Claiborne Avenue bridge). As a result, adverse effects to local pedestrian and vehicular access to and from local businesses would largely be avoided. However, construction noise could impact those businesses that are in direct proximity to the approaches to the St. Claude Avenue bridge. The severity of these impacts to a given commercial enterprise would depend upon the nature of the business and the proximity of the business to the construction. To the extent that these impacts lead to lower retail sales, tax revenues generated through the sales of affected businesses would be lower. It is probable, however, that a portion of sales lost by affected retail firms would be captured by competing retail establishments elsewhere. For this reason, sales tax revenues generated for the city would, on the whole, be unaffected. During the period following bridge construction, no effect on tax revenues would be anticipated.

5.3.10. Population

5.3.10.1. Affected Environment. Census data show that the population for the IHNC study area declined by approximately 18 percent, to 45,718 in 1990 from 55,702 in 1980. The Lower Ninth Ward neighborhood experienced the most dramatic decrease in population, with a loss of 4,600 persons, representing 22.1 percent of its 1980 population. In 1990, the Census reported 16,207 persons residing in the Lower Ninth Ward. The Holy Cross neighborhood had the smallest change, losing only 381 persons or 5.9 percent of its 1980 population. In 1990 the population of Holy Cross stood at 6,101. Bywater and St. Claude also lost population from levels reported in 1980 at rates of 19.1 and 17.2 percent, respectively. The 1990 population estimate for Bywater was 5,381, and for St. Claude was 18,209.

The overall population of the IHNC study area continues to increase in age. The percentage of the population under 18 years declined from 34.1 percent in 1985, as reported by the Regional Planning Commission, to 32.5 percent in 1990, as reported in the 1990 Census. Bywater has the smallest percentage of persons under 18 (27.8 percent) and St. Claude has the largest percentage (35.1 percent).

In 1990, the black population reported by the Census represented 88.8 percent of the total population in the study area. The white population represented 10.3 percent of the total and other races represented 0.9 percent. The Lower Ninth Ward has the largest percentage of total population which is black with 99.1 percent. Bywater has the smallest percentage of black population with 65.4 percent.

Nearly half of all households in the IHNC study area are headed by females. This compares to 44 percent in Orleans Parish. The highest percentage of female heads of household is in the St. Claude neighborhood where 52 percent are in this category.

Population densities have decreased somewhat since the 1980 Census, reflecting the decline in study area population. The 1990 Census reported an overall density of 13.8 persons per acre for the study area. In 1980, the Census reported 14.5 persons per acre.

5.3.10.2. Plan 1 (No Action). The 1991 Socio-Economic Impact Analysis prepared by Gregory C. Rigamer and Associates predicted a continued, significant out-migration from the study area, reflecting the cumulative impact of worsening housing stock, poor educational and employment opportunities, and rising crime. The Rigamer study did not quantify this predicted decline. However, the population declines suggested by the Rigamer study appear to be inconsistent with contemporaneous projections of stable employment, business and industrial activity, and tax revenues.

The September 1993 Traffic Impact Analysis prepared for the Corps of Engineers by the Regional Planning Commission (RPC) provides the most recent estimates of population growth in the study area. The RPC predicts that the population of the study area would fall from the 1990 reported figure of 45,718 to 34,740 in the year 2000, a decline of 24 percent over ten years (2.7 percent annually). By the year 2010, the RPC predicts that population would recover to 40,905 persons and then rise again to 44,643 persons in the year 2020.

5.3.10.3. Plan 2. No change in population attributable to residential relocation is expected to occur since no additional rights-of-way are required to implement this plan. However, it is possible that the traffic disruption created by bridge closure and the noise associated with the construction of bridge approaches would compel some residents to move elsewhere in the study area, or out of the study area entirely. Since renters are more mobile than homeowners, it possible that vacancies in rental units would increase. (More than half the housing in the study area is rental housing.)

The effect of this plan on population in the post-construction period is correlated to the effects of this plan on property values which was discussed previously.

5.3.10.4. Plans 3a through 3f. No change in population attributable to residential relocation is expected to occur since no additional rights-of-way are required to implement this plan. However, it is possible that the general disruption created by

bridge construction and the noise associated with the construction of bridge approaches, bridge towers and floodwalls would compel some residents to move elsewhere in the study area or out of the study areas entirely. Since renters are more mobile than homeowners, it possible that vacancies in rental units would increase. (More than half the housing in the study area is rental housing.)

The effect of this plan on population in the post-construction period is correlated to the effects of this plan on property values which was discussed previously.

5.3.11. Community and Regional Growth

5.3.11.1. Affected Environment. The neighborhoods comprising the IHNC study area are mature, developed areas. With little opportunity for expansion, efforts at community growth must be focused on redeveloping or intensifying existing community resources. The Comprehensive Management Plan, adopted in 1980, is the official land use plan for the City of New Orleans. This plan outlines the current policies guiding future growth within New Orleans. Policies for a regionally managed growth plan include: 1) maintaining the Central Business District as the regional center, 2) utilizing transit facilities and services to reduce use of the automobile as the primary transportation mode, 3) expanding industrial land opportunities within the developed and developing sections of the city, 4) limiting development in environmentally sensitive areas, 5) providing for expansion of the City within the hurricane protection system, and 6) conserving existing neighborhoods generally at their current densities and redeveloping existing neighborhoods where conditions so warrant. This plan supports a continuation of the current mix of residential, commercial, and industrial uses. Particular emphasis is given to protecting the character and quality of the older neighborhoods such as those found in the IHNC study area. Buffering and screening between residential and industrial uses is presented as a major long range goal for the IHNC neighborhoods, as well as preserving open space along the Mississippi River levee south of St. Claude Avenue.

5.3.11.2. Plan 1 (No Action). No significant change is expected to existing regional development plans of City and State governments and agencies. The planned construction of a new Florida Avenue vehicular bridge is intended to alleviate vehicular traffic congestion and contribute to continued regional growth.

5.3.11.3. Plan 2. The potential for growth in the communities adjacent to the IHNC would be diminished during the period of bridge closure when increased traffic congestion interrupts patterns of interaction across the canal. In the post-construction period, improved vehicular access across the IHNC would tend to contribute to community and regional growth.

5.3.11.4. Plans 3a through 3f. The potential for growth in the communities adjacent to the IHNC could be diminished during the period of construction due to the general

level of disruption associated with construction. In the post-construction period, it is not expected that the nature and scale of any of these plans would adversely affect the potential for community and regional growth.

5.3.12. Vehicular Transportation

5.3.12.1. Affected Environment. The study area has a well-defined street grid composed of several arterial streets and a dense pattern of neighborhood and local streets. The major east-west arterial routes in the IHNC study area include Florida Avenue, North Claiborne Avenue, North Robertson Street, and St. Claude Avenue. On the east side of the IHNC, North Claiborne Avenue is a wide boulevard. On the west side of the IHNC, North Claiborne Avenue is one way westbound and North Robertson Street is one-way eastbound. The Claiborne and St. Claude Avenue bridges are four-lanes each and the Florida Avenue bridge is a two-lane roadway. The bridge at Claiborne Avenue is a mid-level structure while the other crossings are low-level bridges which are subject to frequent openings to accommodate marine traffic. With respect to bridge openings, rush-hour curfews are in effect on weekdays for the St. Claude and Claiborne Avenue bridges. During curfews the bridges remain in the down position to accommodate vehicular traffic.

Traffic volumes for these crossings have not fluctuated significantly over the past decade. The Regional Planning Commission, in the September 1993 Traffic Impact Analysis, estimated that in 1990, 30,053 passenger vehicles and trucks crossed the St. Claude Avenue bridge daily, 43,696 crossed the Claiborne Avenue bridge daily, and 11,607 crossed the Florida Avenue bridge daily. The Louisiana Department of Transportation and Development (LDOTD) has estimated that 91 percent of the vehicles crossing the St. Claude Avenue bridge are passenger vehicles, 8 percent are trucks and 1 percent are buses. For vehicles crossing the Claiborne Avenue bridge, LDOTD estimated that 83 percent are passenger vehicles compared to 15 percent for trucks and 2 percent for buses.

The major north-south arterial routes include Franklin and Almonaster Avenues, Louisa Street, Piety Street, Poland Avenue, Forstall Avenue, Caffin Street, and Tupelo Street. These roadways primarily serve as feeders to the major east-west arterials. These roadways have more capacity than the present demand and operate at a level of service that is acceptable in an urban environment.

The Regional Planning Commission estimates that approximately 30 percent of the trips across the IHNC bridges (St. Claude, Claiborne and Florida) are non-local commuter traffic and 70 percent is local traffic. The percentage of commuter traffic is low because of the above-average public transit modal split for Lower Ninth Ward residents. The percentage is based on home-based work trips for residents of Lower Ninth Ward and St. Bernard Parish.

The study area is served by a public transit system operated by the Regional Transit Authority (RTA). The system is well-utilized, providing service to the New Orleans Central Business District and system transfer points with ten routes. The RTA routes include Franklin Local, Franklin Express, Louisa, Almonaster, Desire, Galvez, Barracks, Lower Ninth Ward Express, St. Claude Delery and St. Claude Refinery. Transit service is provided seven days a week and generally operates until midnight. Two of the routes provide 24-hour service (St. Claude Delery and Galvez). While six of the transit routes operate only on one side of the IHNC, four use the IHNC crossings on their route. The St. Claude Avenue bridge is used by both St. Claude transit routes. The Claiborne Avenue bridge is used by the Lower Ninth Ward Express and the Galvez transit routes.

Pedestrian traffic across the St. Claude Avenue bridge is estimated to be approximately 750 per day (Rigamer, 1991). Pedestrian traffic includes bicyclists and persons on foot. The mid-level Claiborne Avenue bridge is not designed to accommodate pedestrian traffic.

5.3.12.2. Plan 1 (No Action). The U.S. Coast Guard has designated the existing Florida Avenue railroad/vehicular bridge as a hazard to navigation. As a result of this action, the Federal government has made a commitment to replace the bridge under authority provided in Congressional legislation in the form of the Truman-Hobbs Act. The replacement bridge would feature a 300-foot horizontal clearance (to facilitate navigation), two railroad lines, and two vehicular lanes.

The State of Louisiana and the City of New Orleans plan to construct new mid-level or high-level bridge at Florida Avenue. Some funds have been appropriated for construction of a new bridge, but not enough for the entire project. The long-term plan includes an extension of Florida Avenue to Paris Road, a tie-in with Interstate-10 to the east, and a tie-in with Interstate-610 to the west.

The RPC has estimated that with the construction of the Florida Avenue bridge, traffic across this corridor is expected to increase from 11,610 trips in 1990 to 20,960 trips by the year 2000. Associated with this increase in bridge traffic would be an increase of traffic through the residential neighborhoods of the study area that serve as feeder routes to Florida Avenue. It is probable that most of this traffic would use Caffin Avenue and Tupelo Street which are divided streets. As a consequence of the new Florida Avenue vehicular bridge, traffic on the St. Claude and Claiborne Avenue crossings would not increase as much as it would have if no new bridge were constructed. The RPC estimates that the number of trips across the St. Claude bridge would increase from 30,050 in 1990 to 30,560 in 2000. For the Claiborne Avenue bridge, the RPC estimates the number of trips to drop from 43,700 in 1990 to 41,960 in 2000.

Despite the construction of a new vehicular bridge on Florida Avenue, it is anticipated that the vehicular component of the low-level, replacement Florida Avenue Railroad