6.0 PERMITS AND MITIGATION

6.1 Permit Identification and Preparation

The Selected Alternative would involve the preparation and submittal of several federal and state permit applications as indicated in **Table 6-1**. The table indicates that a Section 10/404 permit, Section 401 Certification, a Storm Water General Permit would be required, a Coastal Use Permit (CUP) for the portions of the Selected Alternative in Links 3 and 4, and a Bridge Permit and a Class B Scenic Stream Permit for the portion of the Selected Alternative in Link 2. The I-49 South improvements to the existing crossing of Bayou Lafourche may require a Bridge Permit. Louisiana Pollutant Discharge Elimination System (LPDES) permits in addition to a Storm Water General Permit may also be required.

Table 6-1
Permits Required by the Selected Alternative

PERMIT	LINK					
	1	2	3	4	5	6
Section 10/404	X	X	X	X	X	X
Section 401 Certification	X	X	X	X	X	X
Storm Water General Permit	X	X	X	X	X	X
Coastal Use Permit			X	X	X	X
USCG Bridge	Possible	X				
Class B Scenic Streams		X				
Levee Board Authorization					X	
Other LPDES Permits	Possible	Possible	Possible	Possible	Possible	Possible

6.1.1 USACE Section 10/404 Permit

USACE requires a permit under the authority of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for impacts to navigable waterways and jurisdictional wetlands that may be impacted by construction of the proposed project.

Activities covered by a USACE Section 10/404 Permit include:

- Construction, excavation, or deposition of materials in, over, or under navigable waters;
- Any work which would affect the course, location, condition, or capacity of navigable waters; or
- Discharges of dredged or fill material into waters of the US, including wetlands.

This project is following the FHWA Region 6 Interagency NEPA and 404/10 Concurrent Process Agreement, which is designed to streamline project decision-making by pursuing a single federal public interest decision for a federal-aid project. There are three concurrence stages included in the NEPA/404 Concurrent Process:

1. Purpose and Need;
2. Alternatives Development and Screening; and
3. Determination of the Preferred or Selected Alternative.

The agreement anticipates that the agencies with jurisdiction by law will respond to a request for concurrence or comment within 30 days. Lack of response is to be

considered concurrence. In the case of the Purpose and Need and the alternatives development and screening, there were no responses within the 30 day period, which ended on March 22, 2005.

Subsequently, on March 24, 2004, USFWS concurred in the Purpose and Need; on March 29, 2004, USACE commented on the length and format of the Purpose and Need, but made no statement of non-concurrence; and on April 1, 2004, USEPA concurred in the Purpose and Need and the alternatives screening. Later in April 2004, following a field visit to the corridor by the project sponsors and the agencies with jurisdiction, concurrence in the Alternatives to be included in the third public meeting, the Alternatives to be included in the SIU 1 DEIS, and the determination of a Preferred Alternative were achieved and documented in the minutes of meetings.

On May 3, 2005, the project sponsors met with the Agencies to discuss the possibility of a Preferred Alternative for SIU 2 in preparation for completing the SIU 2 DEIS. As Links 3 and 4 were included in both SIUs, it was decided that the same link alternatives would be preferred in both SIU's in those Links. In Link 6 there was only one alternative as the FHWA had determined that the existing ROW of the incomplete elevated Westbank Expressway (US 90 Business) would be the alignment of I-49. The major discussion concerned Link 5 in which there were two alternatives, 5A and 5B. Alternative 5A would remain on the US 90 alignment. Alternative 5B would turn south in Jefferson Parish, traverse the undeveloped area south of Avondale, and return to the US 90 alignment between Avondale and the TPC Golf Course. Concern was expressed that 5B would not be found to be the least damaging, yet practicable alternative. No Preferred Alternative would be identified for Link 5, and it was planned that both alternatives would be advanced in the SIU 2 DEIS.

Following the public comment period for the SIU 1 DEIS, it was determined by DOTD and FHWA that the two SIUs were to be combined to avoid the possibility of segmentation. It also was determined that the entire mainline of I-49 would be elevated in the project study area. The result of the second decision was the elimination of Alternative 5B and the need to revise Alternatives 1A and 6A. The elimination of 5B, in turn, resulted in there being only a single Build alignment alternative remaining in Links 5 and 6. As there was already a Preferred Alternative in Links 1 through 4 that was a Build alignment, the sponsors determined that there would be a single Build alignment in the DEIS for the combined project. After completion of the geometric refinements required to accomplish the combining of the SIUs and the fully elevated mainline, an agency coordination meeting was held on September 28, 2006. At that meeting the agencies were asked to formally agree to combining of the SIUs and to approve the alignment of the Preferred Alternative. They had previously informally approved the concept of there being a Preferred Alternative. Concurrence was received from the Agencies present or later by correspondence.

6.1.2 Section 401 Water Quality Certification

Section 401 of the Clean Water Act (CWA) requires that a Water Quality Certification be obtained in conjunction with the submittal of the 404 permit application. LDEQ, under the authority contained in the Louisiana Revised Statutes

of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the CWA (PL 95 217), must certify that any work placing dredged or fill material into waters of the state including wetlands will not violate the state's water quality standards.

6.1.3 Storm Water General Permit / Louisiana Pollutant Discharge Elimination System

LDEQ requires projects with discharges of storm water from construction areas of greater than one acre, as defined in the Louisiana Administrative Code (LAC) at LAC 33:IX.2511.B.14.j, to obtain a Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water General Permit for Construction Activities. Proposed I-49 South will require obtaining a storm water general permit prior to initiation of construction. Other LPDES applications or permits also may be required for discharges into state waters.

6.1.4 Coastal Use Permit

The Coastal Use Permit process is part of the Louisiana Coastal Resources Program (LCRP). Activities that may affect the coastal zone, such as dredging or filling, should be performed in accordance with LCRP guidelines. These guidelines are established so that development in the coastal zone can be accomplished with the greatest benefit and the least amount of damage. Preparation of a Coastal Use Permit requires the same information as the Section 10/404 application process, and, as appropriate, can be facilitated through the Join Permit Application for Work within the Louisiana Coastal Zone, which includes both permits.

6.1.5 US Coast Guard Bridge Permit

A USCG Bridge permit is required to construct or modify a crossing of a navigable waterway of the US, including temporary bridges used for construction access or traffic detour. The new crossing of Bayou Des Allemands, and possibly the improvements to the crossing of Bayou Lafourche, would require this permit.

6.1.6 Class B Scenic Streams Permit

Bayou Des Allemands is a Scenic Stream. Any activity with the potential to cause direct and significant degradation is regulated by this LDWF permit including a multi-agency review by the LDEQ; the Louisiana Department of Agriculture and Forestry; the Louisiana Department of Culture, Recreation and Tourism; and the Office of State Planning and Budget.

6.1.7 Levee Board Authorization

The Southeast Louisiana Flood Protection Authority West regulates the activities within 300 feet of the centerline of the Cataouatche Hurricane Protection Levee. Authorization for the construction of the Selected Alternative in Link 5 will be secured in the form of a Letter of No Objection (LONO), waiver, or other documented approval from the Authority. A condition of that approval is a written agreement from the USACE and the LDOTD District Office.

6.2 Mitigation

6.2.1 Relocation

Residential relocations and displacements associated with the Selected Alternative will be addressed through the Uniform Act of 1970 as discussed in Section 5.2.2 and through the project commitment discussed in 6.2.2. Relocation resources are available to all residential and business relocates without discrimination. If necessary, DOTD will provide housing of last resort to residential displacements. **Table 5-1** provides a summary of relocations and displacements. A conceptual stage relocation plan will be prepared during design.

6.2.2 Environmental Justice

The Boutte neighborhood of Census Tract 628 that exceeds the minority population and poverty classification of St. Charles Parish would be affected by the project as a result of residential takings. As a mitigation strategy, the project sponsors have agreed to relocate an entire family occupying several residences as a unit. **Appendix 6-A** includes the initial letters documenting this project commitment dating from 2005, and other documents that provide the current status of the discussion with the family from 2007.

Residences elsewhere in that tract on Pit Road and in Mosella, another minority neighborhood that is not in a census tract with poverty level that exceeds the Parish percentage, also would be impacted. In these areas, the project will continue to make special efforts to involve the residents in planning and implementing the project. Opportunities for participation in the planning of the project previously afforded to residents are presented in **Table 7-5**. The relocations of residents will be managed through the Uniform Act of 1970.

6.2.3 Aquatic Ecology

In general, the Selected Alternative would generate typical roadway use pollutants, but this would be comparable to those currently generated by US 90.

During construction, there could be interruptions in the flow of surface drainageways and the possibility of increased siltation that would impact the aquatic environment.

The drainage for the at-grade sections of the project in rural areas would utilize swale drainage that would preserve existing drainage patterns. Storm water runoff impacts would be mitigated by diverting flow overland from paved areas through vegetated swales and vegetated areas abutting the roadways prior to discharging to surface waters. This will function to slow runoff rates and enable waterborne contaminants to be filtered from the runoff prior to discharge, thereby protecting water quality and minimizing the potential for siltation.

Project construction would be planned to avoid and mitigate impacts on aquatic ecology by prohibiting construction activities in existing waterways except where culvert construction necessitates such activity, exclusive of the open water areas. Best management practices (BMP's) would be utilized to mitigate impacts by minimizing the area of disturbance required, creating temporary diversion channels to maintain waterway flows during construction, stabilizing slopes and exposed soils to minimize

siltation and erosion, restoring flow to the original channels following construction, and restoring the pre-existing condition where temporary channels were created. Impacts to water areas will also be mitigated throughout the construction period by installing and maintaining soil erosion and sediment control protection devices such as silt fencing and hay bales. All protective measures and mitigation will be consistent with the DOTD's soil erosion control procedures.

Mitigation of adverse impacts to aquatic ecology in open water areas would involve limiting the proposed work areas to the minimum sizes required for construction and access. Methods to reduce temporary sediment dispersion in open water areas resulting from construction equipment may include silt screens or other devices.

6.2.4 Wetlands

Unavoidable primary impacts to wetlands will result from construction. **Table 5-7** presents the potential wetland impacts associated with the project. Those wetlands are primarily bottomland hardwoods (65%) and scrub/shrub (22.9%) under the jurisdiction of the USACE and the LDNR, Coastal Management Division (CMD), when the resource is in the Louisiana coastal zone.

Unavoidable wetland impacts as a result of implementing proposed I-49 South would be subject to compensatory mitigation. Mitigation would be required to replace wetlands functions and to assure compliance with the National "no overall net loss" of wetlands policy. Suitable compensatory mitigation for primary and secondary impacts resulting from construction and operation will be determined through the USACE Section 404[1] and LDNR Coastal Use Permit processes.

During the design phase of the project and in coordination with the USACE and LDNR, a mitigation plan would be developed that identifies how compensatory mitigation would be undertaken. The mitigation plan would determine the types and functions of wetland mitigation required, the amount of mitigation required for each type of wetland impacted, and would evaluate a full range of mitigation options under the broad headings of creation, restoration, enhancement and preservation. Mitigation options would be evaluated according to a range of objectives, the key ones being: providing in-kind mitigation (marsh, forest, etc) within the same watershed where reasonably practicable, providing functional replacement of wetlands lost, and achieving consistency with state and local plans in site selection and design. Based on the potential impacts presented in **Table 5-7**, the mitigation plan would include in-kind mitigation to the extent practicable for unavoidable impacts on freshwater marsh, bottomland hardwoods, scrub/shrub, cypress/tupelo swamp, and farmed/pasture.

Compensatory mitigation of the wetland functions and values impacted by proposed I-49 South may be accomplished by artificial regeneration of the appropriate species on sites underlain by hydric soils with suitable wetland hydrology. The appropriate number of acres would be determined through the 404 permit process. At least two approaches to accomplish this would be explored through the permit process:

[1] Pursuant to the US Army Corps of Engineers' "Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program" (RGL 02-2).

1. Purchase of mitigation credits in the Paradis Mitigation Bank that would be planted with bottomland hardwood species and, where appropriate, cypress/tupelo. This would assure that the trees would be monitored and maintained in accordance with Mitigation Area Review Team (MART) guidelines.
2. Replant temporary roadway construction workspaces that affect jurisdictional wetlands with the appropriate bottomland hardwood and/or cypress tupelo seedlings. Prior to replanting, disturbed areas will be returned to pre-project contours to the maximum extent practicable to improve seedling survival.

Mitigation planning will also include developing performance standards, monitoring requirements and other mechanisms to assure success of the mitigation plan.

6.2.5 Floodplains

Impacts to floodplains would be limited to at-grade roadways. Project design and construction of at-grade sections of roadway would meet federal requirements to result in no adverse impacts on floodplains. Frontage roads and connecting roads are the only at-grade roadways in the project. Therefore, the finished roadway grade measured at the inside travel lane would be at least 5.0 feet msl, which is above the 50-year floodplain elevation. New or reconstructed culvert structures would be designed to convey normal drainage as well as storm flows.

6.2.6 Levees

If an alignment for the proposed Donaldsonville to the Gulf levee, or any other proposed levee, is determined prior to construction of proposed I-49 South, the roadway profiles for this project would be designed to provide adequate clearance for maintenance of such levees that may cross the I-49 alignment.

The Davis Pond Freshwater Diversion Canal guide levees are currently under the jurisdiction of the USACE, but are scheduled to be transferred to the Office of State Lands in 2007. All issues related to construction near a levee would be coordinated with the USACE.

6.2.7 Protected Species and Habitats

Active bald eagle (*Haliaeetus leucocephalus*) nests have been identified in the project area. The Selected Alternative is located within the secondary buffer zone of identified nests in Links 1, 2 and 3. Consultation with the USFWS and the LDWF has been initiated and is ongoing. All protected species consultation has been completed prior to the distribution of this FEIS.

Mitigation measures to protect nesting bald eagles during construction could include orientation of exhaust ports from construction equipment away from the direction of the nests, deflection and reduction of equipment noise by the use of baffles or mufflers, and providing deflection of light sources for nighttime operations, if applicable, away from nests.

Wading bird rookeries are provided protection during the nesting season and may be present in the project area. Rookeries, by nature, are mobile, and locations may change from season to season. Should a rookery be located in, or adjacent to, the

proposed ROW during construction, construction activities would be suspended within 300 meters (984 feet) of the rookery pending consultation with the LDWF regarding appropriate efforts to protect the rookery.

6.2.8 Prime Farmlands

Insufficient prime farmland will be taken to warrant realignment of the Selected Alternative. Impacts to prime farmland will be minimized.

6.2.9 Hazardous Sites

Further investigation would be required prior to construction at the following sites:

- A former, apparently uncontrolled, landfill near the existing intersection of US 90 with LA 182;
- The HIST LUST (Circle K) east of the ROW; and
- The 42 sites in Links 5 and 6 that are within or adjacent to the ROW.

Sites determined in the Phase I ESA to have impacts on the existing or additional required ROW would be further investigated. Site conditions would be confirmed or denied, and if required, a remedial action plan would be developed.

If USTs or spill areas are discovered within the proposed or existing ROW, the tanks would need to be properly closed and removed. Permanent closure of USTs would follow the procedures set forth in LAC 33:XI.905 and LAC 33:XI.907. Mitigation measures, if needed, might require that the contaminated soil be excavated and transported to an approved disposal area.

If areas of hazardous waste contamination are encountered during the construction, construction would be stopped and the policies and procedures of DOTD's PPM No. 48 would be implemented. PPM No. 48 sets forth DOTD's Underground Storage Tank and Contaminated Site Policy and Procedures.

6.2.10 Utilities

Typically relocation plans for utilities would be developed during final design. Functional and financial responsibility for relocation of specific facilities differ depending on prior agreements between the utility providers, current landowners, local government, and DOTD. The determination of responsibility would be in accordance with DOTD policies and procedures.

In addition, a special study during the design phase would define the series of actions on the Monsanto property required to relocate pipelines, railroad lines, drainage structures, roadways, and such other infrastructure as may be determined. This study would provide for direct participation by Monsanto and would determine the appropriate actions, the responsible parties, and the sequence of work. All work that is determined to be the responsibility of DOTD would be accomplished prior to beginning construction of I-49 on the Monsanto property.

In the event that a water well would be impacted, it would be relocated or capped to assure that no impacts to groundwater resources will occur.

6.2.11 Visual Quality

The most valued visual resource in the project area is Bayou des Allemands, a designated Scenic Stream. Construction of the Selected Alternative would affect views over Bayou des Allemands. Mitigation for impacts to Bayou Des Allemands would be determined through the Class B Scenic Streams Permit process.

The elevated mainline of I-49 between the US 90/US 90 Business interchange and the Ames Boulevard interchange would incorporate the visual elements of the existing elevated Westbank Expressway (US 90 Business).

6.2.12 Construction Impacts

Construction sequence plans would be developed during final design to ensure continued access to all properties in conjunction with the Access Management process discussed in Section 6.2.14. The US 90 corridor would have at least two through lanes of traffic available in each direction at all times. Temporary lane closures would only be allowed during off-peak hours as determined by DOTD. A detailed traffic control plan will be developed by DOTD during the design process to minimize impacts to traffic and included in the construction contracts.

Relative to the natural environment, the construction specifications shall require BMP relative to control of non-point source pollution and potential impacts to groundwater during construction.

Specifications also will require the monitoring of vibration during construction in developed areas of the corridor.

6.2.13 Cumulative Impacts

Efforts to avoid or minimize impacts to water quality, as well as the use of mitigation strategies, will be re-examined during final design to reduce the project's contribution to adverse surface water quality.

6.2.14 Changes in Traffic and Access Patterns

Changes in traffic patterns on full access roadways and in access to certain properties would result from control of access at interchange ramps. Properties impacted by control of access would be compensated in accord with DOTD policies and procedures. During preliminary design, DOTD would conduct Access Management workshops to inform the public and receive comments regarding this matter. Special considerations would be identified and addressed through that process.

6.3 Summary of Commitments

The following list is intended to summarize all actions to be taken to minimize or mitigate the impacts of the project. To the extent possible these are grouped under the phases of Permit Process, ROW Acquisition, Design, and Construction although some commitments apply to more than one of these phases of project development:

Permit Process

- Obtain the permits from Federal and State agencies as discussed in Section 6.1.
- In association with the Section 404 Permit and the Coastal Use Permit, purchase mitigation credits in the Paradis Mitigation Bank or other approved bank, especially for the mitigation of fresh marsh that is not available in Paradis, and / or, potentially, create wetland acres through construction.
- Also, in association with these Permits, return areas disturbed by construction to their pre-construction condition.
- Undertake Navigation Studies, as required, in association with the US Coast Guard Bridge permit applications.
- Coordinate with Jefferson Parish regarding the design of the project storm drainage in Avondale.
- Relative to Section 401 Water Quality Certification, project construction would be planned to avoid, minimize, and mitigate temporary impacts to aquatic ecology by prohibiting construction in waterways except where necessitated by culvert construction or bridge piers. BMP's would be used to reduce impacts.

ROW Acquisition

- All residential and commercial relocations would be in accord with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
- All members of the Honor Family residing on the family property partially within the ROW would be given the opportunity to be relocated in accord with the commitments described in **Appendix 6-A**.
- To assure that every effort is made to identify and avoid disproportionate impacts on minority and low-income residents, community involvement would be scheduled during the ROW acquisition, design, and construction of the project.
- Prior to ROW Acquisition, if a NEPA process has been completed for the relocation of LA 3060, the conceptual design of I-49 will be revised to relocate the proposed Willowdale interchange to the selected alignment for LA 3060.
- Prior to ROW acquisition, potential hazardous materials sites within the ROW would be further investigated and appropriate measures would be taken.
- Prior to ROW acquisition, if possible, and prior to Final Design and construction in any event, any area not previously investigated for the presence of cultural resources because of access being denied or other reasons would be investigated and the findings discussed with the SHPO.
- Prior to ROW acquisition and Final Design of Segment 7 within the site of the Monsanto Plant in Luling, a study will be completed to determine the required relocation of pipelines, railroads, roadways, drainage structures, and other infrastructure within the ROW. Monsanto would be invited to participate in the management of this study. The study findings would be implemented prior to, or in association with, the design and construction of I-49, as appropriate.

Design

- Impacts to floodplains have been minimized by elevating the mainline roadway. New at-grade roadways constructed as part of the project would be elevated above the 50-year floodplain elevation.

- Regarding protected species and habitats, consultation with USFWS and LDWF has been completed. Currently it is believed that there are no impacts to protected species or habitats, consultation would be renewed to assure that any new condition is appropriately addressed, as each segment enters Final Design.
- Determine impacts on existing water wells in Segment 9, and oil and gas wells and the plan for well relocation during design.
- Prior to Final Design, traffic studies would be updated for US 90 to determine the appropriate capacity for 2030 as projected at that time, especially:
    - West of Live Oak Boulevard in Link 5 the 2-lane frontage road in the center of the ROW. The frontage road would become a 4-lane facility with a 16 foot median and left turn lanes, if traffic warrants; and
    - From Live Oak Boulevard to Segnette Boulevard, the 4-lanes for both the mainline and the frontage road would become 6-lanes for either or both if traffic warrants.
- A delineation and evaluation of archaeological Site 16JE29 will be done after acquisition of the ROW and prior to construction of the project. If determined eligible, mitigation measures will be undertaken in coordination with the SHPO.
- The archaeologically sensitive nature of the ROW in the vicinity of Bayou Saut d'Ours will be noted in the Final Design Plans.
- The possibility exists that there are unmarked graves outside the apparent boundaries of the Old Mt Airy Cemetery in Boutte. Prior to construction, tests would be made in any area of potential construction disturbance so that appropriate measures can be taken prior to construction.
- The portion of the elevated mainline of I-49 between the existing elevated Westbank Expressway and the mainline ramps connecting to US 90 East and the Huey P. Long Bridge, would be designed to have the same appearance as the existing Westbank Expressway.
- To reduce the impacts along existing full access roadways that result from the control of access at ramp terminals and connecting roads, a public involvement process including Access Management Workshops will be undertaken during design where this condition may occur. Examples are the interchanges along US 90 and US 90 Business from LA 3127 to Ames Boulevard. Special conditions would be identified and addressed through this process.

Construction

- The construction of the project would be scheduled to minimize or avoid impacts to agricultural harvests, school access, and wading bird nesting season.
- Construction sequence plans will be required to ensure
    - continued access to all properties in conjunction with the Access Management process discussed in Section 6.2.14; and
    - continuous availability of at least two through lanes of traffic in each direction in the US 90 corridor. Temporary lane closures would only be allowed during off-peak hours.
- Traffic impacts during construction will be minimized by a Traffic Control Plan.
- In open water, work areas would be restricted to the minimum size required, and measures would be taken to reduce temporary sediment dispersion.

- BMP will be followed to control non-point source pollution and potential impacts to groundwater during construction.
- Monitoring of vibration during construction will be required in developed areas.
- Work would stop and the indicated steps would be taken if the following conditions were encountered during construction:
    - hazardous materials require implementation of DOTD PPM No. 48;
    - wading bird rookeries require consultation with LDWF; and
    - cultural resources require consultation with the SHPO.

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