

ANALYSIS OF ALTERNATIVES
IN ALLEVIATING RAILROAD-COMMUNITY CONFLICTS
IN
JEFFERSON PARISH, LOUISIANA



MAY 1975

FINAL REPORT

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16. Abstract <p>This report consists of two volumes reporting the results of the analysis of alternatives available to solve or alleviate the impact of railroad operations in Jefferson Parish, Louisiana. Volume 1 records the background and description material collected, the alternatives studied, a brief description of the methodologies used to analyze each alternative, and the costs and benefits of each feasible alternative. Both in-place and relocation alternatives were studied and analyzed in terms of construction costs, railroad costs, and community costs.</p> <p>The purpose of Volume 1 is to report the study in a format which will permit those individuals responsible for effecting a solution to be cognizant of the impacts of each alternative upon the parties involved. Volume 2 contains the engineering drawings associated with each alternative.</p>					
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DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
WASHINGTON, D.C. 20590

ASSOCIATE ADMINISTRATOR

November 3, 1975

Jefferson Parish Council
Attention: Mr. C. J. Eagan,
Chairman
Box 9
Gretna, Louisiana 70053

Gentlemen:

I am transmitting herewith Volumes I and 2 of CONSAD's final report entitled "Analysis of Alternatives in Alleviating Railroad/Community Conflicts in Jefferson Parish, Louisiana." Volume I contains the background and description material collected, the alternatives studied, a brief description of the methodologies used to analyze each alternative, and the costs and benefits of each alternative. Volume 2 contains the engineering drawings associated with the alternatives.

The CONSAD Report was prepared under the sponsorship of the Federal Railroad Administration (FRA) as a special study of specific environmental aspects of urban railroad operations. It has been reviewed for technical adequacy, completion, and stated contract requirements. Copies of the report are also being sent to all other interested parties, and will be available to the general public through the National Technical Information Service (NTIS). In addition, I have used the CONSAD study effort and other FRA analyses to provide you with our conclusions.

The Jefferson Parish study culminates a three-year involvement and effort by the FRA to assist the residents of Jefferson Parish and the railroad companies in resolving a very serious, longstanding, environmental problem involving the facilities and operations of the New Orleans Terminal Railroad (NOTR), one of the key links in the New Orleans railroad gateway, in the primarily residential area of Metairie.

The Jefferson Parish railroad location problem originally came to the attention of the FRA in mid-1972 through the combined offices of the Louisiana congressional delegation. Jefferson Parish residents and officials had requested the aid of their Senators and Representatives in obtaining Federal assistance in dealing with the problem. At the request of the late

Congressman Hale Boggs, FRA representatives met with a task force delegation of Jefferson Parish officials and concerned citizens in his office to review the problem and to discuss possible solutions. An on-site inspection and assistance visit was made in July 1972 to view the problem first-hand and to obtain data and information for an analysis and report of the situation. Since that time we have worked closely with Representative David Treen and his staff as well as the staffs of Jefferson Parish and Orleans Parish in our analysis of the problem. We have also kept Mrs. Boggs and the members of the Louisiana congressional delegation informed as to the progress of the study.

The residents of Metairie argued strongly for complete removal and relocation of the NOTR to another area. To this end, they had advanced several suggestions for relocating railroad facilities including a five-degree curve, ten-degree loop in the vicinity of the Carrollton Avenue Interchange, or a reverse movement utilizing the tracks of the Union Passenger Terminal. The FRA field report of September 1972, recognized these alternatives but questioned the financial and engineering feasibility and impact on Orleans Parish. FRA suggested examining other alternatives that may have been overlooked, and also recommended some near term "in-place" improvements that could be made in a relatively short period of time at substantially less cost. The railroad companies were agreeable to implementing some or all of the possible short-term improvements and were particularly interested in adding another track over the 17th Street Canal to improve the efficiency of their operations and relieve highway congestion caused by trains. However, Metairie citizen groups held to their objective of complete relocation, and rejected FRA's recommendation of interim improvements, particularly double tracking the Canal, stating that such improvements would become permanent to the exclusion of complete relocation.

In order to assist all of the parties concerned to gain a better understanding of the financial, engineering, environmental, and rail operational aspects of the problem, the FRA engaged a consulting team to undertake a complete examination and analysis of the issues and to assess the feasibility and the costs and benefits of all possible alternatives. Our purpose was to provide the community with sufficient detail so that it could assess the practicality of alternative solutions.

In June 1974, the consulting team of CONSAD Research Corporation and Kaiser Engineers was competitively selected and awarded an \$89,000 contract to conduct the feasibility study. CONSAD Corporation was selected for its experience in directing large, multifaceted projects requiring resolution of community

conflicts, railroad system analysis, and cost-benefit and environmental impact analysis. Kaiser Engineers possess a world-wide engineering reputation, having extensive experience in designing and engineering railroad relocation projects. Appropriately, the firm was the engineering consultant in the development of uniform planning guidelines for railroad relocation projects under a previous FRA study conducted by Stanford Research Institute.

Each alternative which was considered feasible by the consultants was based on a thorough analysis of all costs and benefits, railroad operating and engineering impacts, and environmental and quality-of-life impacts affecting the community. Development of alternative plans included using a widely-based participative approach for which a Citizen Review Committee (CRC) and a Railroad Technical Advisory Committee (TAC) were formed. In addition, the consultant conducted three public briefings on the progress of the study at selected milestone points during the course of the project.

It is felt that the consultant's findings and conclusions can best be understood in terms of the long and short-range options that the study identified as possible alternatives. For the long term, the study found that the Carrollton Curve alternative recommendation advanced by the Metairie citizen group is feasible and the least costly of the relocation alternatives. Similar projects have successfully been accomplished elsewhere and, although the radical eleven degree curve which would be introduced would increase costs and impose certain problems on the railroads, they could operate within the proposed configuration. The Carrollton Curve facility would cost \$37.3 million and require three years to complete. However, CONSAD noted that because of a likely four-year delay caused by construction of the new I-10 overpass, the project costs would escalate to \$65.7 million at completion. The report points out that without the new through route, I-10 would be completely severed during the relocation work thus requiring a rerouting of the 100,000 vehicles which use the facility daily.

Other relocation solutions discussed in the report, although perhaps feasible from a physical standpoint, are driven by forces far outside of the New Orleans Regional Area, and possibly affect the entire nationwide railroad system. It is unlikely that either the State or the region would have any control over the outcome of such changes.

The possibility of restructuring railroad facilities in the New Orleans Railroad Terminal Gateway is an issue which is addressed in Phase I of the New Orleans Metropolitan Area Railroad Transportation Study (NOMARTS). This separate but related effort, funded by the FRA and conducted by the Louisiana Office of State Planning, evaluates the existing railroad system facilities, methods of operation, and relationship to other modes of transportation; to determine whether railroad related problems exist in the area; and, if such problems do exist, to outline a program of additional study designed to provide solutions. Phase I of the NOMARTS Report is being released at the same time as the Jefferson Parish study inasmuch as the two reports are complementary to each other within the framework for regional railroad transportation planning. The findings of the Jefferson Parish Study will become an important input source to future New Orleans Regional Rail Planning study efforts.

In the short term, the CONSAD Report finds that an achievable alternative, in terms of time and costs, would be the implementation of all or part of a system of "in-place" improvements. The short-term option has the benefit of giving the community a large degree of relief rather quickly at a cost which is considered manageable and without sacrificing the long-term ability to relocate. These improvements include:

1. Closing selected streets.
2. Building a number of strategically-located grade separations.
3. Installation of grade crossing warning devices.
4. Pedestrian overpasses.
5. Fencing.
6. Aesthetic improvements, i.e., trees and shrubs.
7. Double track operations.
8. Installation of Centralized Traffic Control (CTC) to expedite railroad operations in and through the area.

9. Eliminating sounding of locomotive horn and bell.
10. Increasing train speeds.
11. Improved scheduling of trains.
12. Relocation of railroad interchange facilities.
13. Rerouting selected traffic.
14. Installation of continuous welded rail (accomplished).

The in-place alternatives are presented in terms of "packages" to provide all parties with a desired course of action and an analysis of the costs and benefits of the different levels of improvement. The packages were designed to start from a total alleviation of all problems, maximizing the benefits, for a cost of \$7.4 million down to a package that minimizes cost at the expense of some benefits at \$1.8 million. The packages are presented on an element-by-element basis allowing an opportunity for restructuring the alternatives to meet other criteria that may be imposed.

Throughout the study period, cooperation among all parties has been excellent. If indeed the community is to pursue the objective of complete relocation to conclusion, it needs not only to continue to maintain this cooperation, but also to establish the institutional framework and mechanism for carrying out the implementation activities. Therefore, we suggest that Jefferson Parish Council consider establishing a Railroad Project Steering Committee to include representation from the Council, citizens groups, State, Regional and local agencies, and the affected railroad operating companies. The Railroad Project Steering Committee would evaluate the CONSAD Report and make recommendations to the Council as to a course of action including appropriate institutional and financial mechanisms to carry out project goals and objectives.

The Committee would be expected to deal decisively with the difficult issue of long-term versus short-term improvements in terms of what is best for the entire community of which the railroads are a part. For example, the cost of implementing the Carrollton Curve alternative must be laid against the benefits to be achieved, both real and perceived. The cost appears to be formidable in terms of the Parish's ability to pull together the necessary resources to carry

the project through implementation. There are not any comprehensive Federal or State programs for funding of detailed planning or implementation projects to alleviate urban railroad problems. Regardless of the availability of other funding sources for planning and implementation, it should be assumed that Jefferson Parish would be required to make a substantial investment of its own resources toward the project. For these reasons the probability of the relocation alternative achieving implementation is uncertain.

The Committee will have to consider the forecast that both highway and railroad traffic on the NOTR will grow, with consequential impacts on Jefferson Parish. Although expensive in their own right, a number of in-place improvements are worthy of serious consideration for the purpose of providing critical, near-term relief for the community. These can be implemented in three to five years. Major short-term, in-place improvements include grade separations for improved highway mobility and centralized traffic control (CTC), double tracking the 17th Street Canal, and relocating the existing NOTR interchange tracks.

Under the Highway Safety Act of 1973, funds are being made available for safety improvements in several categories, including the elimination and protection of grade crossings both on (Section 203) and off (Section 230) the Federal-Aid highway system. However, these funds are very limited, and as in the case of regular Federal-aid projects, the States have the responsibility for selecting projects and initiating requests for Federal funding in accordance with their priorities for advancing all types of Federal-aid highway improvements within the limits of available funds. The attention and momentum already established with respect to the safety aspects of the railroad-highway problem will most likely be sufficient to gain a high priority for their construction.

Centralized traffic control and double track are well within the capability of the railroads to finance. Neither the highway nor railroad improvements alone would be entirely satisfactory. Combined into a package, however, they would considerably lessen the immediate problem. Moving the interchange facilities from their present location to a point on the Illinois Central Gulf Railroad west of Shrewsbury can be accomplished by the railroad companies and will greatly relieve the problem at crossings affected by the interchange tracks.

Summarizing our major conclusions drawn from the analysis, we believe that relocation of the NOTR facilities, while feasible, is not probable in the near term.

The time required for complete relocation will require a program plan which should include both short and long-range improvements -- although the most effective short-term solutions may not be the most acceptable to all in the community.

A balance should be struck between railroad and community interests with regard to long-range project planning and financing, early relocation of interchange facilities, construction of grade separations and other crossing improvements, installation of CTC, and double tracking.

The financial cost of a long-term relocation project will be substantial for Jefferson Parish and will require a special study to develop appropriate financing mechanisms such as bonds, taxing authority, etc.

The financial costs of short-term improvements are also expensive for a community the size of Jefferson Parish. However, the Parish is eligible for limited Federal, State, and local funds for these types of projects.

The railroad companies would be expected to meet the costs of projects providing direct benefit in a balanced, community-railroad program.

A Railroad Project Steering Committee could be formed and given responsibility for the development of a program plan and to serve as the focal point for community activity and involvement in the project. It would identify a balanced set of improvements to meet community and railroad company needs. Regional planning coordination is necessary to gain bi-parish and State support.

Finally, FRA is convinced that the study effort has resulted in a thorough and impartial examination of the railroad facilities location problem and has achieved a ventilation of the basic issues. The report represents a baseline from which the community can develop a balanced program of improvements. It is important that continuing emphasis be placed on finding the "common ground" on which Jefferson Parish citizens, their elected officials, and the railroads can develop a common interest.

We recognize that our efforts have not produced a simple, direct solution. There is none available. However, we sincerely hope our assistance gives the community a framework within which it can move forward in resolving its problem. We, of course, will be happy to meet with you to further discuss the study and its result.

Sincerely,



William E. Loftus
Acting Associate Administrator
for Federal Assistance

Enclosure

PREFACE

This study was funded by the Federal Railroad Administration and was conducted to outline the cost and benefits of all alternatives available to alleviate or eliminate the railroad-community conflicts which exist in Metairie, Louisiana, on an order of magnitude basis. During the course of this study, several suggestions were made as to possible alternatives to pursue in addition to those developed by CONSAD. Each suggestion was followed up and analyzed.

CONSAD wishes to express thanks to several individuals and organizations without whose assistance successful completion of this project would not have been possible.

The railroads involved in this study have participated and cooperated to supply data, information and assistance at no small cost where necessary; particularly, the Southern Railway System, Louisville and Nashville Railroad, Kansas City Southern Railway, Illinois Central Gulf Railroad, Missouri Pacific-Texas Pacific and Missouri Pacific-Texas Pacific Terminal Railroad, Southern Pacific, New Orleans Public Belt Railroad and the New Orleans Terminal Railroad Company.

The two Parishes most directly involved offered much cooperation and aid, particularly Mr. Harold Katner, Director, City Planning Department of Orleans Parish and the City of New Orleans, and Mr. Hugh N. Ford, Director, Jefferson Parish Planning Department.

Jefferson Parish Department of Streets supplied traffic counts for the various grade crossings in the study area. The Department of Sewage and Drainage supplied information as did the Parish Department of Water for facility locations. South Central Bell and Louisiana Power and Light cooperated by locating their respective facilities within the study area.

Efforts of Congressman David C. Treen and the Jefferson Parish Council, particularly Mr. C. J. Eagan, Parish Council Chairman, have been most helpful. The Citizens Committee to Relocate the Railroad, Incorporated assisted with much information and guidance during the course of the study.

The Citizens Review Committee consisting of members from both Jefferson and Orleans Parish assisted by reviewing and commenting on information and ideas presented. This committee consisted of Dr. Philip R. Loria, Mr. Rudolph Schulze, Jr., Mrs. A. T. Webber, and Mr. William Gerbst, all of Jefferson Parish and Mr. George Gabler, Mr. Victor A. Landry, and Mr. Price Hall Washington, all of Orleans Parish.

Additional appreciations for assistance is expressed to Mr. W. T. Taylor, Director, Louisiana State Highway Department; Mr. John Bordelon, State Planning Department; Mr. Thomas Schnadelbach, Regional Planning Commission; The Greater New Orleans Chamber of

Commerce; Mr. W. B. Conway, Modjeski and Masters; and Mr. Thomas L. Jackson, Burk and Associates.

Information concerning potential funding sources was developed through the cooperation of Mr. E. LaBruyere, Jefferson Parish Director of Finance, Mr. Morris Reinhart, Federal Highway Administration and Mr. Kelly Nix, Assistant to Governor, State of Louisiana.

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Railroad Names and Abbreviations

<u>Name</u>	<u>Abbreviation</u>
Illinois Central Gulf Railroad	ICG
Kansas City Southern Railway Company	KCS
Louisville and Nashville Railroad Company	LN
Missouri Pacific Railroad Company	MP
New Orleans Public Belt Railroad	NOPB
New Orleans Terminal Company	NOT
Southern Railway Company	SOU
Southern Pacific Transportation Company	SP
Union Passenger Terminal	UPT

1.0 EXECUTIVE SUMMARY

The citizens of the Metairie area of Jefferson Parish, Louisiana, have registered complaints to local, state and federal officials for over 30 years with regard to the New Orleans Terminal Company (NOT) that runs through the heart of their neighborhood. Local ordinances, court cases, and continued bargaining have been used by both the citizens and local officials in an attempt to physically remove the railroad from the neighborhood or to alter current railroad operations. Most of these efforts have been unsuccessful, with the exception of a five-minute grade crossing law prohibiting the railroad from blocking any grade crossing for longer than five minutes. Even this ordinance has been unsuccessfully enforced. Continued pressure by citizens upon the Federal Railroad Administration and local Congressmen to remedy this situation has culminated in this study of the extent of problems created by the railroad in Metairie and the potential for removing the railroad or alleviating the identified problems.

1.1 The Railroad

The NOT, a wholly owned subsidiary of the Southern Railway Company (SOU), serves as a major East-West railroad gateway making major railroad connections between the southwest and the southeast

United States through the New Orleans area. The NOT interchanges cars between four major railroads approaching New Orleans from the west, and two major railroads on the east. It is important to note that approximately 94 percent of the traffic traversing this line (435,000 cars per year, 24 trains per day) neither originates nor terminates in the New Orleans area thus underscoring the NOT's significant role as an interline carrier.

Although a major portion of the 3.0 miles of the NOT in Metairie was double tracked during World War II to provide additional operating capacity, a single track remains across Metairie Road and the 17th Street Canal on the east side of the neighborhood today. The railroad is interested in double-tracking this section to facilitate the movement of trains, but has been prevented from doing so by local citizens who have petitioned the Parish Council to disapprove the railroad request. This study has determined that the NOT presently incurs additional operating costs due to the single track restriction, but they are minimal and hence the net benefit of double-tracking might not be realized for many years or until such time as railroad traffic has increased significantly.

Construction of the second track over Metairie Road would provide benefits to both the community and the railroad. From a community standpoint the second track would eliminate highway delays due to trains

having to wait for another train to clear the single track section. In addition trains could move through the neighborhood at a more constant rate reducing general train noise and acceleration of locomotives. From a railroad standpoint, the second track would remove the constriction in the system which currently exists at Metairie Road and would provide for less restrictive operations. Moving through Metairie at a more constant rate of speed would help the railroad to operate within the five-minute crossing ordinance on a more economical basis.

1.2 Identified Problems

Numerous problems have been identified in the Metairie area which are directly attributable to the existence of the NOT. The frequency with which complaints are registered by citizens about each problem is somewhat indicative of their severity. It is clear that noise pollution, highway user impacts, and the general safety of the residents are the most critical problems experienced.

There are eight railroad-highway grade crossings within the 3.0 miles of the NOT in Metairie. Since Louisiana State law requires that trains sound their horn at each grade crossing, train horn noise intrudes upon the currently low ambient noise level in the neighborhood. This noise can reach as high as 105 decibels at 100 feet. Additional train noises are created in the interchange area in the western portion of

the neighborhood from the braking and acceleration of the locomotives and the bumping of cars being interchanged. The general train noise of steel wheels on steel rails has been reduced since the recent installation of continuously welded rail.

The warning devices at the grade crossings consist of crossbucks and/or flashing lights. Given the severe highway grade of the crossings, the potential does exist for increased accidents as a consequence of increases in both railroad and highway traffic. However, there has not been an extraordinary history of railroad-highway accidents to date.

Highway user delays from the blockage of crossings is a major problem. Although delays are experienced at all crossings, Metairie Road, a major local thoroughfare, experiences the greatest problem. Of the approximately 17,000 vehicles traversing this crossing each day, an average of 1,350 are stopped by trains and/or the vehicle queue for an average of 1.75 minutes per vehicle. For all eight grade crossings, there are approximately 34,100 vehicle crossings per day, of which 3,100 vehicles are stopped by the train blockage and/or vehicle queue. The approximately 7,400 minutes of delay that results from this total blockage costs the highway users \$761 per day in time and operating costs. This highway delay is perceived by highway users as being even more severe since Metairie Road traffic exceeds its service capacity further compounding the delay problem.

The general safety of the residents, particularly the safety of the children is endangered by the presence of the railroad. Pedestrians cross the railroad tracks to gain access to schools, Metairie playground and park, and to visit friends. The potential for a tragic accident is heightened by children crossing the tracks on bicycles and/or riding down the right-of-way to take a short cut to the park. Children also find the railroad cars which are parked on the interchange tracks to be an attractive playground albeit an extremely dangerous one. Air pollution, vibration, the availability of emergency services, the potential for a catastrophic accident, and deteriorating property values are other problems of varying severity, but all are minor as compared with the aforementioned major problems.

1.3 Alternative Solutions

1.3.1 Relocations

Numerous sites for relocating the NOTR were considered in the course of this study, including existing railroad corridors as well as new corridors. Although some time was given to a consideration of regional bypass routes (north of Lake Pontchartrain and the west bank), the primary concentration of effort was given to less costly, less circuitous relocations. The three primary relocation alternatives were

the "Carrollton Curve," the "Carrollton Reverse Move," and the "Riverfront Route." These three routes and the current NOT route are depicted in Exhibit 1.1.

1.3.1.1 Carrollton Curve

In order to complete the "Carrollton Curve" or "Carrollton Reverse Move," major structural modifications to the Interstate 10, Airline Highway Interchange are necessary. These modifications raise the construction costs of these projects to \$37 million for the curve and \$23 million for the reverse move.

Although these alternatives would eliminate all conflicts in Metairie, they do impose new problems for Orleans Parish, where they are located and for the railroads operating over the new route. Orleans Parish residents would be exposed to increased train noises and vibration as well as increased safety hazards.

The Carrollton Curve and the Carrollton Reverse Move would also create additional annual operating costs to the railroad of \$178,000 and \$558,000, respectively, and finally, there are two additional problems which must be considered: 1) the construction must be delayed four years until the current modifications to the highway structure are complete and 2) during the three years of construction, approximately 80,000 vehicles per day must be rerouted. This rerouted daily traffic can create significant negative impacts on all affected areas.

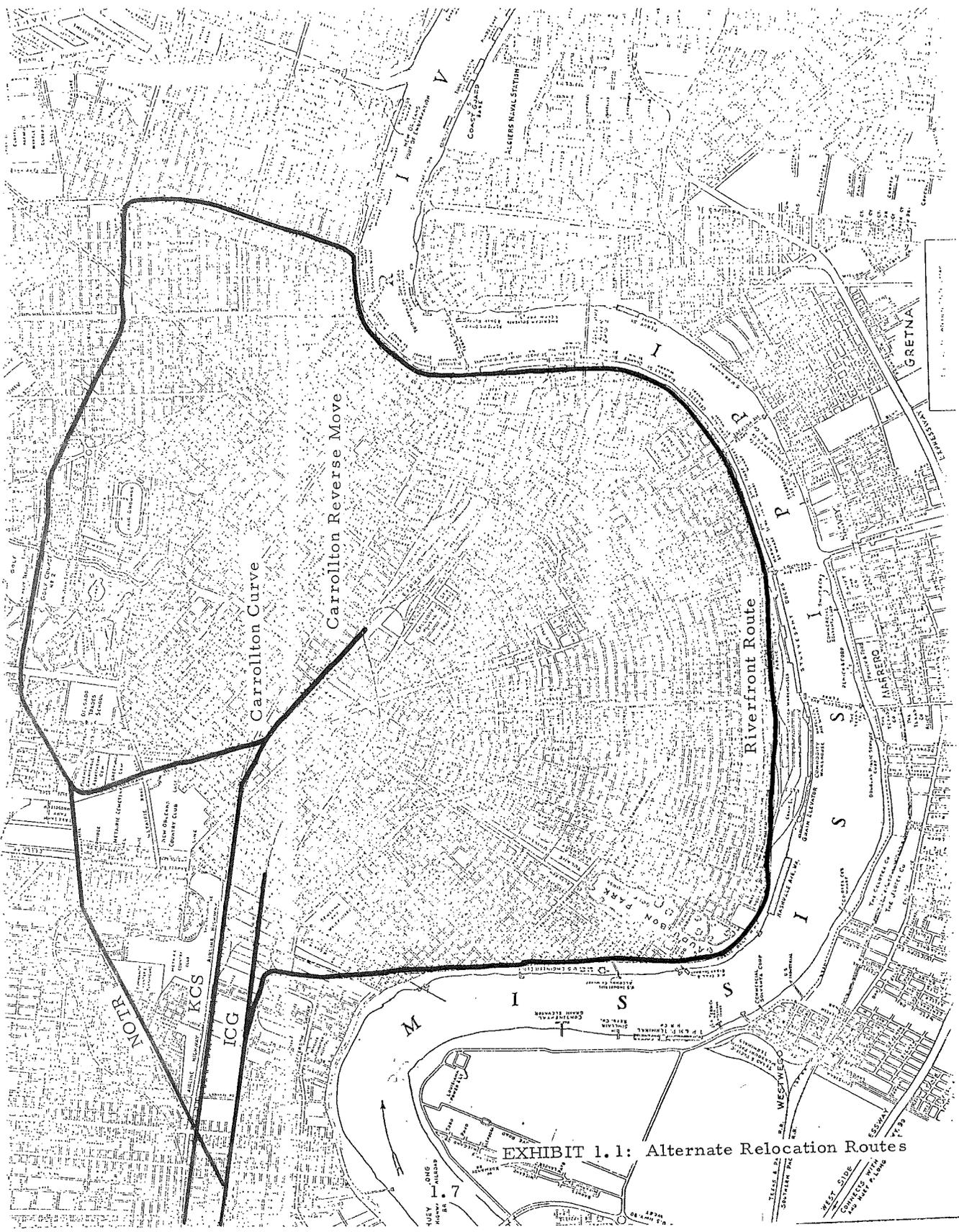


EXHIBIT 1.1: Alternate Relocation Routes

1.7

WEST SIDE
CONVENTS
AND
MARKET ST. BRIDGE

1.3.1.2 Riverfront Route

Although the construction costs of the "Riverfront Route" are slightly lower, the impacts upon Orleans Parish and the railroads are quite severe. Not only would Orleans Parish experience increased noise and vibration level and increased general railroad hazards, but with 26 grade crossings on this route, which include access to automobile-pedestrian ferries, highway delays, highway hazards, and pedestrian hazards would all increase. Given the longer distance and slower speed of this route, the railroads would experience an annual cost increment of \$1.45 million.

1.3.2 In-Place Packages

A series of in-place alternatives were considered and put into three implementable packages as part of the overall analysis. The first package, which has construction costs of \$8.8 million, was designed to alleviate as many problems as possible without removing the railroad. The major elements of this package include three grade separations (with other crossings closed), removal of the interchange facility and the provision of pedestrian overpasses. The impact of these and the other items in the package is to eliminate a majority of the problems, e.g., highway delay, and alleviate most others, e.g., noise pollution.

A second package, which would cost approximately \$6 million, provides a grade separation at Metairie Road, with other crossings

being closed or provided with automatic gates. The interchange would still be removed, but pedestrian overpasses would only be provided if the four central grade crossings were closed. In addition to being less costly to implement, this package avoids some secondary impacts created by the two eliminated grade separations, but naturally provides a lesser degree of problem solution.

The third package, which would cost approximately \$2.1 million to implement, would provide crossing gates at all crossings and relocation of the interchange facility. Although only a partial solution, this package is a low cost alternative that can be implemented in a relatively short period of time with minor secondary impacts.

It should be noted that in both the second and third package, a variance on the state law requiring the sounding of locomotive horns at grade crossings is envisioned. This could be justified on the basis of the increased warning devices to be used at each grade crossing.

1.4 Potential Funding Sources

The most critical barrier in accomplishing a solution to the railroad-community conflicts in Metairie is the limited fund availability to be applied to this problem.

1.4.1 Local Sources

Jefferson Parish Council could float a bond issue on the east bank of the Parish through the creation of a special taxing district. Excluding the cities of Kenner and Harahan, the fiscal structure of the east bank could provide a maximum of \$12.7 million in bond financing. If a bond issue for the solution of this problem were to apply exclusively to the electorate in the eighth ward, the area most directly impacted, approximately \$3.5 million could be obtained from the bond issue.

1.4.2 State Funds

Louisiana Governor Edwards has promised his support in obtaining financing for this problem by advocating the approval of \$2 million from the general fund of the State of Louisiana. Given the rurally dominated nature of the legislature and their recognition of other railroad problems in the state, there is some doubt as to their desire to approve such funding.

1.4.3 Federal Financing

Federal sources applicable to the Metairie railroad conflicts are limited and in most cases depend upon allocations through the Louisiana Department of Streets and Highways. From the "Federal Highway Act of 1973", the Parish obtains \$1.6 million annually in urban systems funds, but must match this amount with \$.7 million. Also from this act, the State of Louisiana receives \$2.6 million annually for improved

2.0 HISTORY OF NEW ORLEANS TERMINAL RAILROAD COMPANY

In order to fully understand the nature of the conflict in Metairie, it is necessary to briefly trace the history of the NOT, the history of the railroad-community conflict, and to review the viewpoints of the parties concerned with this study.

2.1 The Initial Development and Operations

The NOT is one of many individual railroads which comprise the Southern Railway System. All of the 20,000 shares of outstanding capital stock are owned by the Alabama Great Southern Railroad which in turn is part of the Southern System.

On January 7, 1895, under the laws of the State of Louisiana, the New Orleans and Western Railroad Company was incorporated to operate in the Parishes of Orleans, Jefferson, and St. Bernard. Subsequently, the name was changed on April 16, 1901 and the railroad became known as the New Orleans Belt and Terminal Company. On December 31, 1902, the name was changed again to the New Orleans and San Francisco Railroad Company. At this time the railroad properties were leased to the St. Louis and San Francisco Railroad and the Southern Railway until July 1, 2002 for a rental sufficient to pay all expenses and interest on its bonds.

On June 30, 1903, the name was changed to its current nomenclature, the New Orleans Terminal Company.

In 1913, the St. Louis and San Francisco defaulted on its rental payment and its interest in the NOT was transferred under forfeiture to the Southern Railway Company.

9 Currently, the NOT owns extensive terminal properties in New Orleans as schematically represented in Exhibit 2.1. Total track mileage operated is approximately 81 miles, 56 of which are terminal and switching facilities. Approximately 24 miles are trackage rights over the Alabama Great Southern and one mile over the Louisiana Southern, Southern Pacific and Illinois Central Gulf.

The railroad line from Shrewsbury to Chalmette, a distance of approximately fourteen miles, was completed January 11, 1896. In addition, approximately four miles of track was completed at the same time from East City Switch to the Terminal Station which was located at Canal and Basin Streets.

Today the NOT operates over tracks from Oliver Yard on the east side of New Orleans to Chalmette and from Oliver Yard to Shrewsbury with a local line which travels parallel to St. Louis Street and terminates at the Southern Railway Office Building at Basin and St. Louis Streets. In addition, the Southern Railway Company operates

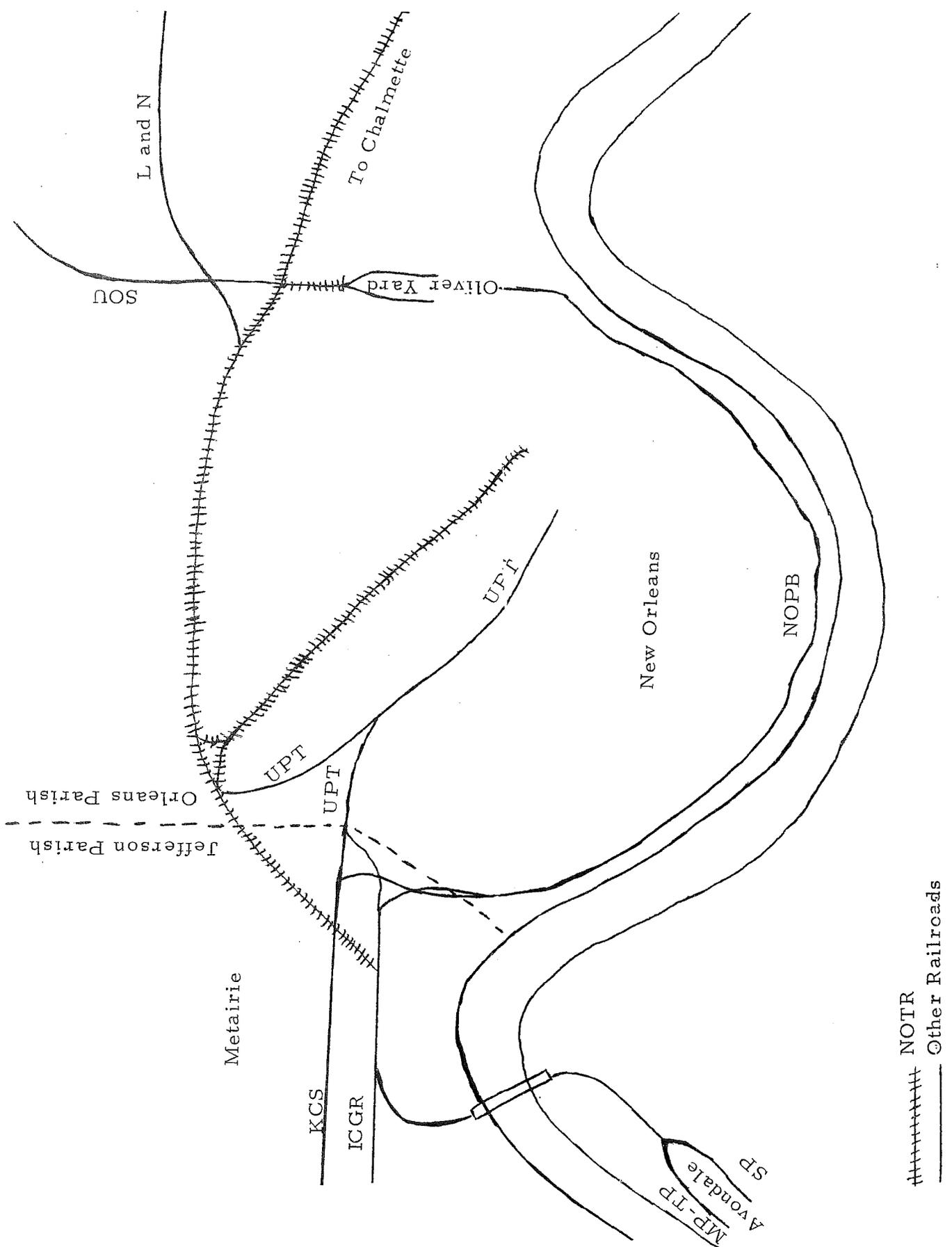


EXHIBIT 2.1: Schematic of New Orleans Terminal Railroad Company

passenger trains to the Union Passenger Terminal Station over UPT and NOT tracks.

The Act of Incorporation authorized the New Orleans Terminal Company to handle railroad business and to lease its lines to other railroads if it chose to do so. The NOT handles both inter- and intra-state traffic, the large majority of the cars handled being interstate business.

2.2 Trackage Rights

Trackage rights, which are directly related to the NOT tracks through Metairie, permit the operation of run through trains and interchange movements between the Southern Railway (SOU) and Louisville and Nashville Railroad (LN) on the east and the Southern Pacific (SP) and Missouri Pacific-Texas Pacific Railway (MP) on the west.

Currently the NOT operates over trackage rights with the Illinois Central Gulf Railroad (ICG) to reach its interchange point with the MP lines at the foot of Huey P. Long Bridge on the East Bank. Trackage rights over the ICG are also involved in the exchange of run through trains and yard cuts at Central Avenue.

Trackage rights over the NOT for the LN, ICG, and the SP were originally entered into on May 17, 1909. (The names and entities of the ICG and SP were different at that time). This agreement

permitted the interchange of traffic over the NOT and delivery of traffic to patrons for the railroads party to the agreement. The LN and the SP (then the Texas and New Orleans Railroad) mutually agreed that their traffic would be handled by the SP across the NOT thereby reducing the total cost of operations.

This agreement stipulated that the instrument would terminate on July 1, 1953. A new agreement was signed on September 1, 1953, which in essence continued the original agreement of 1909 for a period of ten years and after such period shall remain in effect after the term of ten years on a year to year basis. Notification to terminate the agreement must be given twelve months in advance in writing unless a carrier violates the agreement and does not remedy the situation in which case the NOT has the right to terminate the agreement.

The operating agreement of 1953 assigned control of all trains of the participating carriers to the NOT when those trains were on NOT tracks. The terms of this agreement were essentially the same as the original agreement and brought the specified charges up to date with current experience.

The Illinois Central Gulf Railroad withdrew from the agreement insofar as operations over the NOT were concerned. The ICG elected to interchange traffic with SOU at Shrewsbury and transfer cars to the LN over the NOT on a tariff charge basis. Should it be necessary in

the future to alter operations between the ICG and either the SOU or the LN precedent for ICG trackage rights have already been established.

Enactment of the Union Passenger Terminal Agreement did not alter these trackage rights.

2.3 History of Railroad Community Conflicts

Conflict between the citizens of Metairie and the NOT has existed for the past three decades. Although problems existed at Airline Highway prior to the construction of a grade separation, historical evidence in the form of minutes from the Farnham Place Parking Commission meetings held in 1942 indicate that the original controversy over the NOT tracks between the 17th Street Canal and Shrewsbury Road began when the NOT petitioned for and received permission from the Louisiana State Highway Department, Louisiana Public Service Commission and Jefferson Parish Police Jury to construct additional trackage in Metairie. Some of the particulars of the situation are uncertain due to lack of conclusive evidence, but the following information concerning the initiation of the problem does exist.

Minutes of the Farnham Place Parking Commission meetings held in 1942 indicate that the NOT had approached the Jefferson Parish Police Jury for permission to construct additional trackage to facilitate handling of war material. Application to the Police Jury was

necessary to gain permission to build additional tracks across Parish roads. Such trackage was to extend from LaBarre Road to Ridgewood Drive. This segment of track is very close to a description of Long Siding. Further entries in the minutes indicate that the "railroad people did not stick to their promise" and built the track to Metairie Road.

Ordinance Number 812, dated December 6, 1942, granted permission by Jefferson Parish for the NOT to cross LaBarre Road with one additional track, Shrewsbury Road with four additional tracks, and Airline Highway with one additional track. Such permission was granted in order that the railroad might "move National Defense materials and its other freight and business expeditiously."

It is the contention of the citizens that such additional trackage was to be removed at the end of the war although the ordinance does not so indicate. It is this "broken promise" that establishes in the minds of the Metairie residents the strong belief that the railroad has violated its original covenant with the community and subsequent rail and highway traffic growth has merely intensified the controversy. If the NOT, the police jury or some other party had indicated that the tracks would be removed, evidence to such fact cannot be found in the Parish files as the files are no longer available and the railroads categorically deny that promises implying that the tracks would be removed at the end of the war were ever made.

Jefferson Parish and the NOT have contested several issues in court cases. In 1966 in the U. S. Court of Appeals for the Fifth Circuit, the subject of Ordinance 812 and its subsequent repeal by Ordinance 3911 in December 1958, and fines imposed by Ordinance 3967 in March 1959, were contested. The Parish brought suit to compel the railroad to remove the tracks that had originally been constructed as a war time measure. The court ruled that, because the NOT was engaged in the movement of both interstate and intrastate freight and because such tracks under contest were not spur, interchanges, team, switching or side tracks, abandonment of such tracks could not be obtained without certificate of abandonment from the Interstate Commerce Commission. Therefore, the Parish could not compel abandonment but must make application to the Interstate Commerce Commission (ICC) for an abandonment order. Subsequently, the NOT took the necessary action to obtain a permanent injunction from the District Court to preclude the Parish from making application to ICC for such order on the grounds that the Parish did not petition the ICC within the time allotted by the court decision.

Although through the years the Parish had adopted several ordinances designed to minimize delays to vehicular traffic caused by railroad crossing blockage, it was not until 1972 that such ordinances were challenged in court by the railroad. These ordinances limited train

blockage of a grade crossing to five minutes and restricted train length to fifty cars or less. In 1972 the U.S. District Court upheld the five minute law, however, the provision limiting train length was found to be unconstitutional and was dismissed. The railroad petitioned the Supreme Court to reverse the District Court decision concerning the five minute grade crossing blockage law, but the Supreme Court declined to hear the case, thus the five minute blockage law was declared constitutional by virtue of the District Court decision.

The U.S. Court of Appeals for the Fifth Circuit also ruled in 1973 on the Parish's attempt to regulate safety standards on the NOT. Such action resulted in the decision that safety standards came within the scope of the Federal Railroad Safety Act of 1970 and such safety standards were to be set and enforced through the Department of Transportation and not Jefferson Parish.

Historically, Metairie has fought the railroads' existence within the community and indications are that as long as the railroad remains in its present location such resistance will continue at least from the better organized groups in the community. The following sections describe in greater detail the present positions of the railroads and the community as they currently stand, and discuss each point of contention from the viewpoint of the railroads and the community. This discussion will help to clarify the polarization which exists with respect

to this problem and will help to identify the viewpoint taken by the respective parties.

2.4 Position Statement of Respective Parties to the Conflict

2.4.1 Railroad

If there is an alternative which will permit continued rail operation without substantially injuring service and increasing operating costs and at the same time eliminate the problems in Metairie, the railroads would assist in the move. However, the railroads feel that such a relocation alternative is not available and therefore feel that an in-place alternative is the only reasonable path to follow.

Should a mutually agreeable solution exist, then the railroads would be willing to negotiate with the proper authorities to arrive at an amicable financing package to effect the solution. The railroads do not want to contribute money to a solution which increases operating costs, decreases profitability, and reduces the ability of the railroads to meet the obligations imposed by the ICC and the obligation that the railroads have toward the private investor who owns stock in the railroads.

In the past the railroads have approached Jefferson Parish with plans for a grade separation at Metairie Road and the provision to double track the 1200 feet of single track gauntlet between the 17th

Street Canal and Metairie Road in an effort to eliminate traffic delays in Metairie by providing rapid movement over the NOT tracks. The railroads feel that the double track would facilitate the train movement through the neighborhood and help to reduce delay at the other crossings by permitting the trains to move straight through the area without having to slow down or ultimately stop when two trains attempt to negotiate the single track span. This occurs approximately once every two days. Double tracking would also improve the rail operating safety through the neighborhood. Safety would be improved by eliminating the single track gauntlet and permitting the trains to move through the neighborhood with minimum delay. Double tracking seems reasonable to the railroads because the remainder of the Metairie line is already double tracked on each side of the gauntlet.

2.4.2 Citizens Committee to Relocate the Railroads, Incorporated

The position of the Citizens Committee to Relocate the Railroads, Incorporated (CCRR) in this matter is that the railroads have imposed severe impacts upon the Metairie area due to the railroads growth over the past fifty years. The CCRR admits the tremendous residential growth which has taken place along the railroads was done with full knowledge that the railroad was there, but feels that because the service performed by the railroads over the line through their community

does not specifically serve industry in the Metairie neighborhood as either an originator or terminator of railroad traffic and because the railroad traffic is substantially through traffic not even originating or terminating in the New Orleans area, the railroad could be moved without detriment to interstate rail service and with complete benefit to their neighborhood.

The CCRR, Inc. states that it is not their intention to put the railroads out of business, but merely to move the railroads to gain the relief that they seek and deserve as a community.

Historically, a group of people have been fighting the "railroad problem" since the early 1940's. Highway delays at Airline Highway due to the Highway's intersecting not only mainline tracks but also interchange tracks was solved some time ago by the construction of a four lane highway underpass eliminating the railroad-highway interface. Subsequently, when Causeway Boulevard was improved, Causeway and its attendant interchange with Airline Highways ~~was~~ elevated to pass over the top of the railroad tracks.

The citizens' historical argument against permitting the railroad to double track Metairie Road has been that, if the double track were installed, then the rail traffic would be doubled thereby impacting the neighborhood with wall to wall trains. The railroads have disputed this argument since the railroads by themselves do not route traffic and

could not, therefore, double the rail traffic. Regardless of whether one or two tracks are located at Metairie Road, the railroads will handle the traffic routed over their lines. The existence of one track at Metairie Road would create greater problems to the railroads to move this traffic but would also compound impacts upon the Metairie neighborhood. Installation of a second track at Metairie Road would mean that handling of traffic would be easier for the railroads and would alleviate the impacts upon the community.

The historical argument against the construction of a grade separation at Metairie Road is that it will adversely impact the immediate commercial area, create a traffic bottleneck should an accident occur, and, if the separation were an underpass, would create drainage problems. In addition, the citizens indicate that a grade separation would adversely block side streets entering Metairie Road and would isolate residential neighborhoods north of Metairie Road between Focis Street and the 17th Street Canal should either a hurricane or heavy floods strike the area.

The CCRR, Inc. has crystallized its position to the point that no in place alternatives are to be considered. The only solution acceptable is total relocation.

2.4.3 Community

In order to consider the community position with respect to the railroad-community interface problems in the Metairie neighborhood, one must define the community. The community immediately adjacent to the railroad tracks which would be bound between the railroad tracks and Metairie Road and a like distance south of the tracks is really a combination of two groups. If the community is expanded to include the East Bank of Jefferson Parish the total community position changes.

The two groups living within the immediate area of the tracks consist of people who feel the railroad should be removed at all costs and those who feel that, with a combination of in-place improvements, the major portion of the impacts would be solved. Those who favor total relocation include not only members of the CCRR but also other neighborhood groups within Metairie. Those who feel that elimination of locomotive horn noise, relocation of the interchange tracks, thus removing the interchange noise and storage of dangerous commodities in their backyards, and improvement of highway traffic flows would substantially alleviate the problem and return Metairie to the ranks of a "livable neighborhood" include people who live immediately adjacent to the tracks. It has been pointed out by some that the over zealous reaction of a few people to delay at the crossings adversely impacts those who live in the area too.

When one considers the community as the East Bank of Jefferson Parish, community position changes from one of direct involvement to either indirect or no involvement. Consideration of this larger community is important because it is within the larger community that Parish funding sources will be located. People living in the Northwest and Western portions of Jefferson Parish on the East Bank can bypass the Metairie area on either Interstate 10, Veteran's Highway, or Airline Highway in an east-west direction. North-south corridors are Causeway Boulevard and Clearview Parkway. The NOTR is primarily encountered by those people who live north of Airline Highway, west of the 17th Street Canal, south of Interstate 10 and east of Causeway Boulevard or who use Metairie Road as a bypass route.

2.4.4 Jefferson Parish

The railroad problem in Metairie has been discussed over the years as an issue by various local, state and federal officials in public office and those seeking public office. However, Metairie is not the only area having railroad problems in Jefferson Parish. Considerable traffic delays and related safety problems result from Airline Highway's interface with KCS and ICG mainlines at 23 different grade crossings which feed into Airline Highway.

Jefferson Parish is presently negotiating with the KCS and ICG to permit the KCS to move its train operations to the ICG right-of-way

between Kenner and Shrewsbury. If such right-of-way consolidation could be affected, 23 grade crossings could be eliminated. Consolidation of right-of-way would be of tremendous benefit to traffic flows on Airline Highway by eliminating traffic queues resulting from left and right hand turns over the grade crossings and additional queues north and south of Airline Highway on the streets which use the grade crossings. This project has been estimated to cost between \$7 and \$9 million according to Jefferson Parish officials. The eight miles of right-of-way which would be abandoned due to the consolidation would be sold to help finance the project and in this regard it is estimated that \$3 million could be raised from the sale.

2.4.5 Orleans Parish

Orleans Parish (City of New Orleans) is vitally interested in the solution of railroad-community interface problems in Metairie that affect or could potentially benefit Orleans Parish either directly or indirectly. Orleans Parish naturally has railroad interest and problems of its own. The most notable is in the Florida-Desire area which is bounded by railroads and the industrial canal and the desired relocation of the SOU mainline from the shores of Lake Pontchartrain to permit lakeside development. Any situation involving or impacting the railroad facilities along the river front is of vital interest to the City of New Orleans. Impacts upon historical interests and development

interests connected with the Vieux Carre, impacts upon interests of the city to develop the river front to augment its tourist trade, and impacts upon rail service to the Port of New Orleans will be scrutinized very closely with respect to any solution involving river front facilities. Because the City of New Orleans owns the Union Passenger Terminal, any solution either involving or impacting UPT facilities must be negotiated with the city.

The City of New Orleans has faced similar problems in the past as those now confronting Jefferson Parish. The Union Passenger Terminal Agreement signed in 1947 consolidated railroad right-of-way and provided for several grade separations. While the Agreement was under negotiation, Jefferson Parish was invited to join, but declined to do so, because at that time Jefferson Parish could not finance what would have been its portion of the agreement.

Orleans Parish is reluctant to accept a solution to Jefferson Parish's railroad problems that simply transfer the impacts to their Parish, particularly after working hard to gain the benefits of the Union Passenger Terminal Agreement. Orleans Parish does not want more railroad problems, it wants to solve the ones it already has.

The City of New Orleans in drafting the Union Passenger Terminal Agreement designated the UPT track running parallel to I-10 in the Carrollton area for passenger traffic only. The UPT tracks parallel

to Airline Highway and east of Carrollton Avenue are designated for passenger traffic only except that both the KCS and ICG have freight trackage rights to serve their patrons in the Poydras Street area.

Even at the time the Agreement was signed, the City did not want the tracks used for more freight service than was absolutely necessary under the terms of the Agreement. Certainly given the enormous reduction in railroad passenger traffic, an amendment to the 1947 Agreement could possibly be obtained or another agreement reached to permit the use of the UPT right-of-way for more freight service, but such an amendment must be approved by the City of New Orleans.

Thus it appears that a prior condition for obtaining Orleans Parish cooperation and approval to any solution of Jefferson Parish railroad problems must be the establishment of some gain or benefit to Orleans Parish that equals or outweighs any negative impacts created by relocating NOT operations. There are a few potential issues and interest wherein Jefferson Parish could negotiate such a solution with Orleans Parish.

3.0 CHARACTERISTICS OF THE STUDY

This chapter will describe the important factors within the study area and will describe some of the more important rail facilities immediately outside of the study area. Chapter three is presented to review current land use, highway traffic arteries, grade crossings and separations, and railroad facilities. All these items must be understood in order to present the environment in which the NOT operates. This background information will be used in describing the various alternative solutions in Chapter 7.

3.1 Land Use

3.1.1 Residential

The area of old Metairie which is bounded by Causeway Boulevard on the west, Airline Highway on the south, 17th Street Canal on the east and Interstate 10 on the north, is practically all residential. The area of the neighborhood which parallels the railroad tracks is all residential with the exception of Metairie Park and Playground located south of the tracks midway through the neighborhood and a few commercial establishments at Metairie Road and LaBarre Road.

The residential structures in the study area fall within the complete range of residential structures from new, modern, expensive

houses to old, less expensive homes. The residential area basically is older than some of the new areas north of I-10 and west of Causeway Boulevard with the vegetation and trees well grown in.

The old Metairie area is primarily single family dwelling units. A large apartment building is located on the east side of Metairie Road, four blocks south of the railroad tracks, but the area along the railroad tracks is basically single unit structures. The large boom in apartment and townhouse living has taken place in the newer sections of Metairie between Causeway Boulevard and Williams Boulevard. Most of the newer structures are clustered around Veterans Memorial Boulevard and Interstate 10.

The old Metairie neighborhood is a sedate and stable area which has experienced little deterioration in the recent past. The railroad exerts the largest impact in the neighborhood immediately adjacent to the tracks. Most of the residential area south of Metairie Road and north of Airline Highway are buffered from highway traffic noise by brick walls, commercial establishments and thick tree growth. Because the railroad runs through the middle of this quiet residential island, its impacts are somewhat magnified.

3.1.2 Commercial

Although the appearance of Metairie seems cluttered and garbled in the Veterans Memorial Boulevard-Interstate 10 area, along Airline

Highway, and the frontage roads which parallel Interstate 10, the old Metairie area is slightly more consistent with its development. Stores, bars, small shopping centers, gasoline stations, and other small merchants have developed along Metairie Road. The commercial development along LaBarre Road in the study area rests with Schwegmann's Food Store and Gaylord's Discount Store.

The commercial strips along Metairie Road insulate the neighborhoods behind the commercial establishments from the activities and noise along Metairie Road. Insufficient parking facilities at many commercial establishments along Metairie Road require automobiles to park directly perpendicular to the storefronts. Automobiles must therefore make left hand turns into available parking spaces in order to use the shops and then back out into traffic on exiting. That activity together with normal left hand turn requirements and overcrowded traffic conditions adversely impact Metairie Road. The small shopping centers have parking lot facilities which eliminate some parking problems on Metairie Road.

On LaBarre Road both Schwegmann's and Gaylord's have large parking areas to handle their customers. The parking lots do have exits and entrances from LaBarre Road which together with normal LaBarre Road traffic make LaBarre Road between the railroad tracks and Airline Highway a very busy street.

3.1.3 Industrial

Industrial land use in the study area and along the NOT tracks in Metairie is non-existent. Industrial complexes are located south of Airline Highway toward the Mississippi River. Because there is no industrial land use in old Metairie, there are no patrons local to the NOT in Metairie. An old team track was located just east of Metairie Road but has since been abandoned.

3.1.4 Civic/Public

Interspersed among the residential areas in old Metairie are several civic/public facilities.

Directly south of the railroad tracks is the Metairie Park and Playground area which provides a park with recreational facilities to the old Metairie area.

Several churches are located along Metairie Road as are four schools. St. Francis Xavier Church and school are located south of the railroad tracks on the west side of Metairie Road. St. Catherine of Siena Church and school are located on Metairie Road and Bonabel. Metairie County Day School is located south of the railroad tracks and east of the Park and Playground. Metairie Middle School is on Metairie Road where Carrollton Avenue branches north just west of the 17th Street Canal.

Metairie Public Library facilities are located on Metairie Road between Bonnabel and LaBarre Road.

The East Bank office of the Jefferson Parish government is located on Metairie Road between Causeway Boulevard and Severn Road.

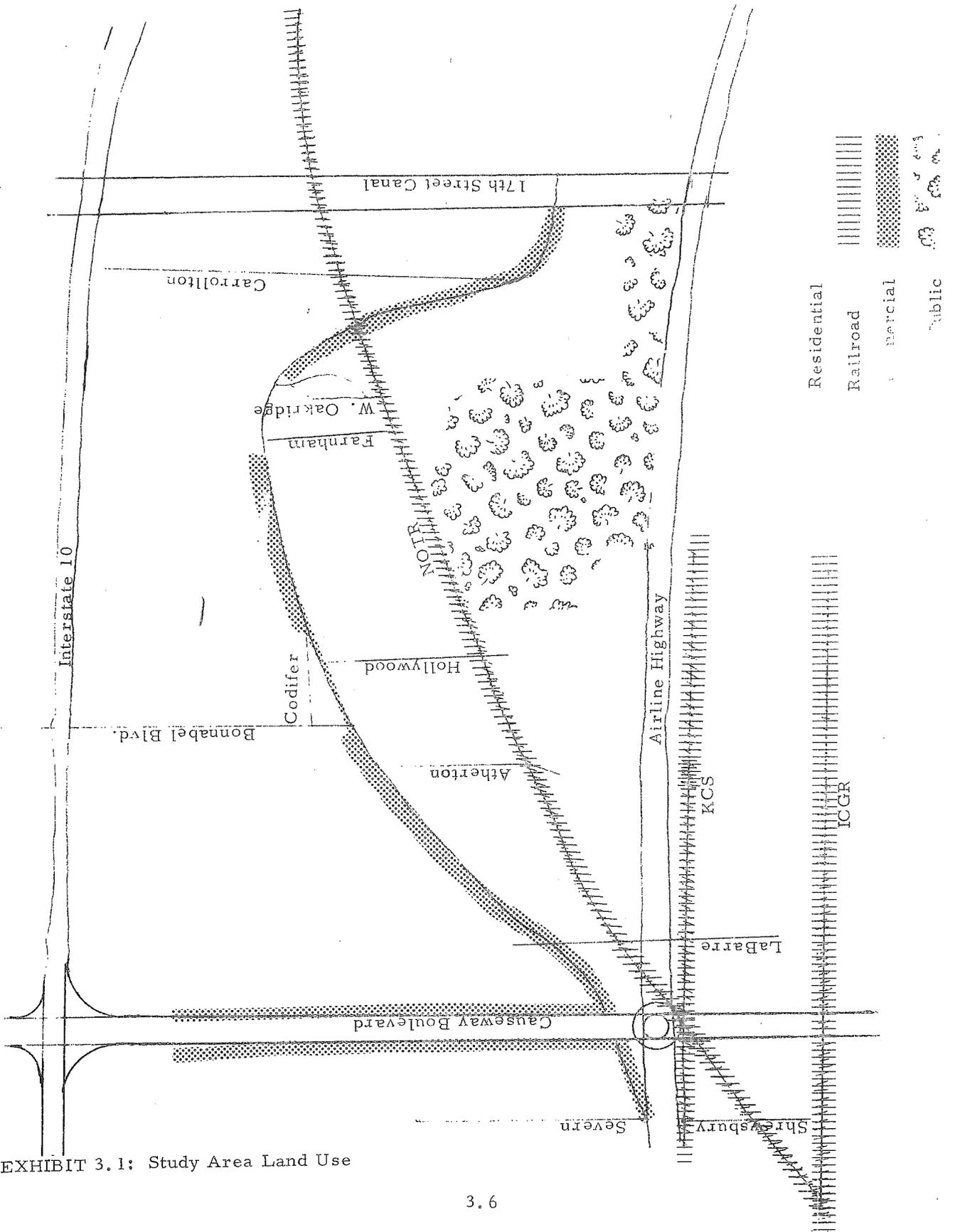
Metairie Hospital is located on Codifer north of Metairie Road and east of Bonnabel. However, this hospital does not have emergency facilities so emergency cases are taken to East Jefferson, Lakeside, Oschner Hospital or downtown to Charity Hospital. These hospitals are all outside of the study area.

A police station is located behind the Jefferson Parish government office building. The police have immediate access to Airline Highway, Causeway Boulevard, Severn Road and Metairie Road.

An ambulance-emergency service is located on Metairie Road near LaBarre Road.

Exhibit 3.1 contains a map of the land uses described in this section. This exhibit is a schematic map designed to indicate the strip commercial areas, residential areas and civic/public areas as they relate to the railroad track. As can be seen from the exhibit, the preponderance of land use is residential as described in this section.

EXHIBIT 3.1: Study Area Land Use



3.2 Highway Traffic Patterns

3.2.1 Major Arteries

There are two major highway systems related to the study area:

1) the system which bypasses the old Metairie area providing access to the Central Business District, and 2) the major arteries within the study area. Exhibit 3.2 schematically outlines the major bypasses of the study area and Exhibit 3.3 outlines the major arteries within the study area.

The major bypass arteries include Veterans Memorial Boulevard and Interstate 10 on the north, Causeway Boulevard on the west, and Airline Highway on the south. These highways normally handle all of the east-west traffic to and from New Orleans and Causeway Boulevard provides the closest north-south bypass from Jefferson Highway to the Lake. People coming from New Orleans could proceed north from Interstate 10 on Pontchartrain Boulevard to obtain access to Veterans Boulevard if they elected not to exit at either Bonnabel Boulevard or Causeway for that purpose. Causeway Boulevard proceeds north from this point over Lake Pontchartrain Causeway to Mandeville thus producing access to residential areas on the north shore of the Lake.

Airline Highway passes over I-10 at the Carrollton Interchange and becomes Tulane Avenue which proceeds toward the Central

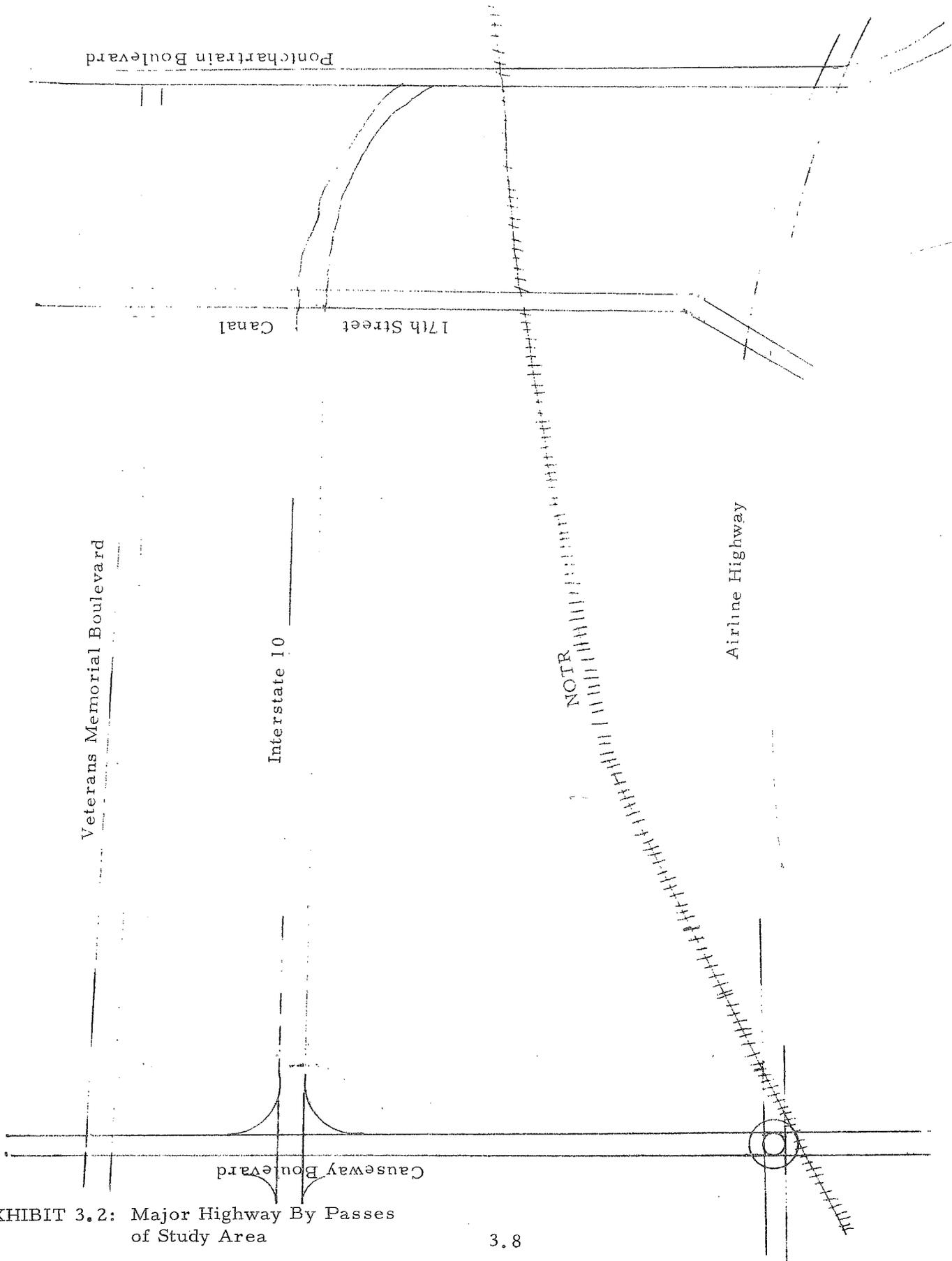


EXHIBIT 3.2: Major Highway By Passes of Study Area

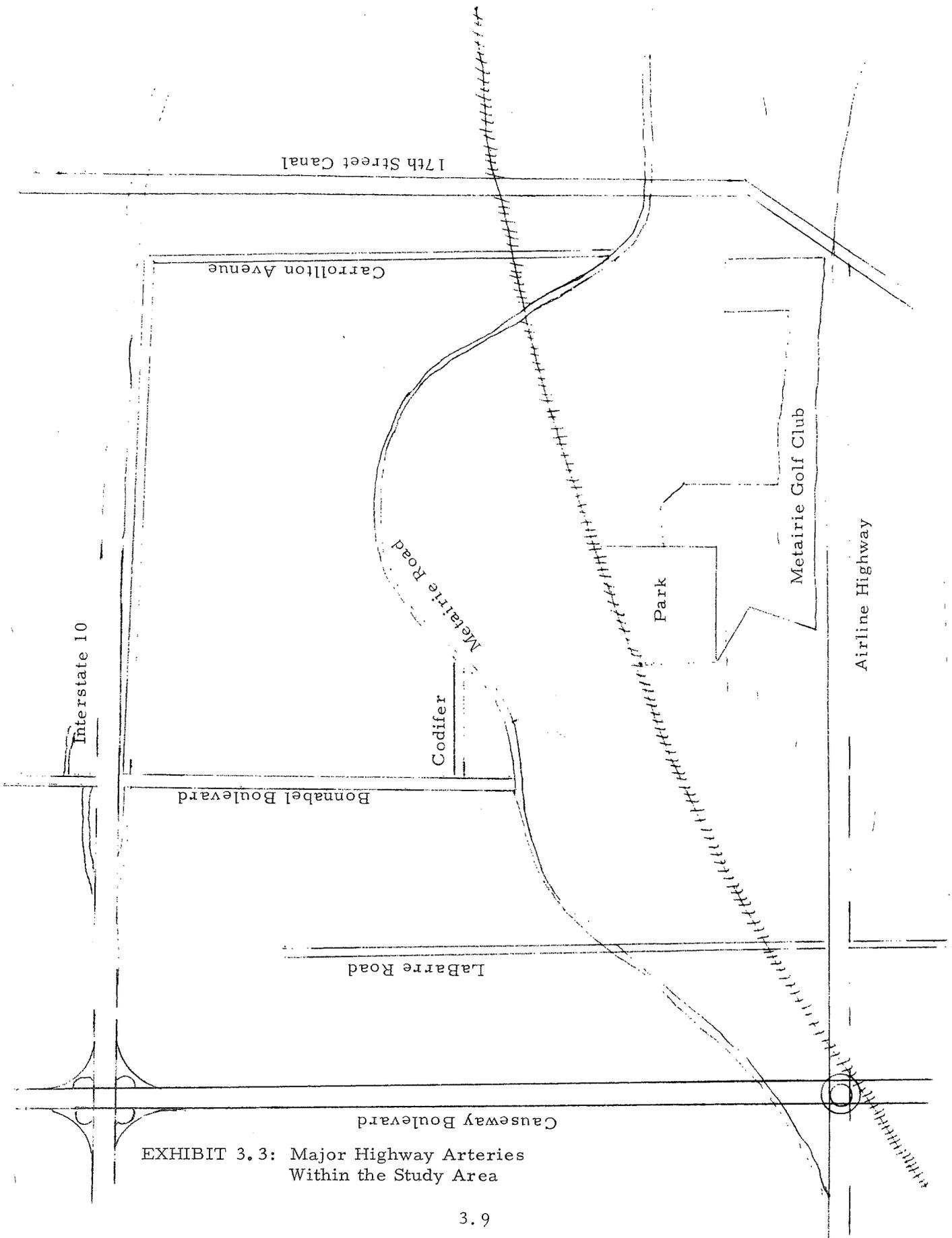


EXHIBIT 3.3: Major Highway Arteries
Within the Study Area

Business District and provides access via Claiborne Avenue to Poydras Street which also proceeds downtown.

Those individuals living within the study area possess an alternate route to the Central Business District by traveling east on Metairie Road and electing to follow either Canal Street, Orleans Avenue or City Park Avenue which provides access to Esplanade Avenue and the downtown area.

There are times when, due to accidents or heavy traffic jams, people will exit I-10 at Bonnabel to follow the frontage road to Carrollton Avenue in Metairie. From that point the traffic would proceed down Carrollton to Metairie Road and east toward New Orleans. Once on Metairie Road the commuter would have the choice of returning to I-10 at the Metairie Road entrance to I-10 or proceeding down either Canal Street or City Park Avenue. At the present time the Metairie Road entrance to I-10 is closed as the state highway project to construct the new overpass over the Carrollton Interchange is underway.

Exhibit 3.3 outlines the major arteries within the study area. Metairie Road provides the only direct east-west flow through the Metairie study area. Although other routes exist on a north-south axis they provide primarily for the local traffic which are served by those streets. The most visible north-south routes are Bonnabel and Carrollton. Bonnabel provides the only major approach to Metairie

Metairie Road from I-10 other than the Carrollton Avenue route described above. The advantage that the Carrollton route has over the Metairie Road route is to bypass the heavy traffic on Metairie Road and the numerous traffic tie-ups due to left hand turns. Both routes must cross the railroad tracks one time and, if one wants to enter Metairie Road at a traffic light, the only requirement is to proceed to Orpheum Avenue once the railroad tracks have been crossed. Entrance to Metairie Road from Carrollton is not protected by a traffic light. Orpheum Avenue parallels the 17th Street Canal.

All of the north-south streets south of Metairie Road proceed to the railroad tracks but only Oakridge, Farnham Place, Hollywood, Atherton, Carrollton and LaBarre actually cross the tracks. The north-south streets north of Metairie Road proceed to the frontage road which parallels I-10 providing access to either I-10 or the residential area north of I-10 via Bonnabel, Oaklawn, or Canal Street.

Other than Metairie Road east-west traffic flows are hampered by the requirement to wend one's way by various streets through the neighborhood. Therefore the study area has a predominantly north-south axis which requires one to use Metairie Road to move in a east-west direction.

LaBarre Road provides the shortest route to move from Airline Highway to Metairie Road unless one were to use the entrance to

Metairie Road from Airline Highway at Severn Avenue west of Causeway Boulevard. LaBarre Road eliminates the hypotenuse of a triangle and provides a direct route to Airline Highway from Metairie Road. LaBarre road also provides access to Gaylord's Shopping Center and Schwegmann's Food Store, the largest in the old Metairie area.

The two residential areas south of the railroad tracks, one on the east side of the Metairie Golf Club and the other on the west side have limited access. The area to the west of the Golf Club can reach Airline Highway via Ridgewood and Mapleridge Drive. Access to Metairie Road is currently provided by Atherton and Hollywood. The residential area east of the Golf Club is provided access to Metairie Road over four streets, Avenue A, Avenue B, Duplessis, and Frederichs Avenue. Access to Airline Highway is only provided via Palmetto. Two streets cross the railroad tracks from this area, Farnham Place and Oakridge.

3.2.2 Grade Crossings and Separations

Two major railroad-highway grade separations are located adjacent to the study area. On the east side of the 17th Street Canal is the railroad overpass over Interstate 10. On the west side of the study area is the railroad overpass over Airline Highway. In both cases the highway is depressed to gain necessary clearance for highway traffic. Causeway Boulevard passes over both the railroad tracks and Airline

Highway at the Airline Highway grade separation. The highway interchange between Airline Highway and Causeway is elevated at this point also.

Within the study area there are eight grade crossings. Starting at the 17th Street Canal and moving westward, the grade crossings are Carrollton Avenue, Metairie Road, Oakridge Drive, Farnham Place, Hollywood Drive, Atherton Drive, LaBarre Road, and Shrewsbury Road. Jefferson Parish took traffic counts at the crossings for use in the highway cost analysis attached in Appendix I. These counts produced the following results:

<u>Grade Crossing</u>	<u>Average Daily Traffic</u>
Carrollton Avenue	4,528
Metairie Road	17,113
Oakridge Drive	1,012
Farnham Place	1,289
Hollywood Drive	2,400
Atherton Drive	2,363
LaBarre Road	4,529
Shrewsbury Road	871

These eight grade crossings are over the NOT tracks.

Located immediately south and parallel to Airline Highway, the KCS track which provides service between New Orleans and Baton Route^{GE}. Intermediate points are also served by this line. Between the KCS and NOT interlocking and the KCS and ICG crossover in Kenner there exist approximately 23 grade crossings. A similar number also exists on

the Illinois Central Gulf Railroad as that line parallels the KCS line to their crossover in Kenner. A separate study is underway to determine the feasibility of combining ICG and KCS right-of-way on ICG property to eliminate the 23 grade crossings on the KCS. Grade separations over the ICG exist at Clearview Parkway and another is under construction at Hickory Avenue which is west of Clearview Parkway. Clearview Parkway is west of Causeway Boulevard. Other grade crossings exist in Jefferson Parish on both the east and west banks, but are removed from the immediate study area.

3.3 Rail Facilities

3.3.1 Metairie Area

The primary definition of the rail facilities which directly impact the Metairie neighborhood and which are located within the study area include those facilities existing between juncture of the NOT with the ICG at Shrewsbury and the 17th Street Canal schematically reproduced in Exhibit 3.4. Interchange facilities exist between LaBarre Road and the NOT-ICG juncture. No industries exist between these two points of definition which are served by the NOT. The total distance of trackage concerned is approximately three and one tenths miles.

Starting with the 17th Street Canal and proceeding westward is a single track which, once it has crossed Metairie Road, becomes a

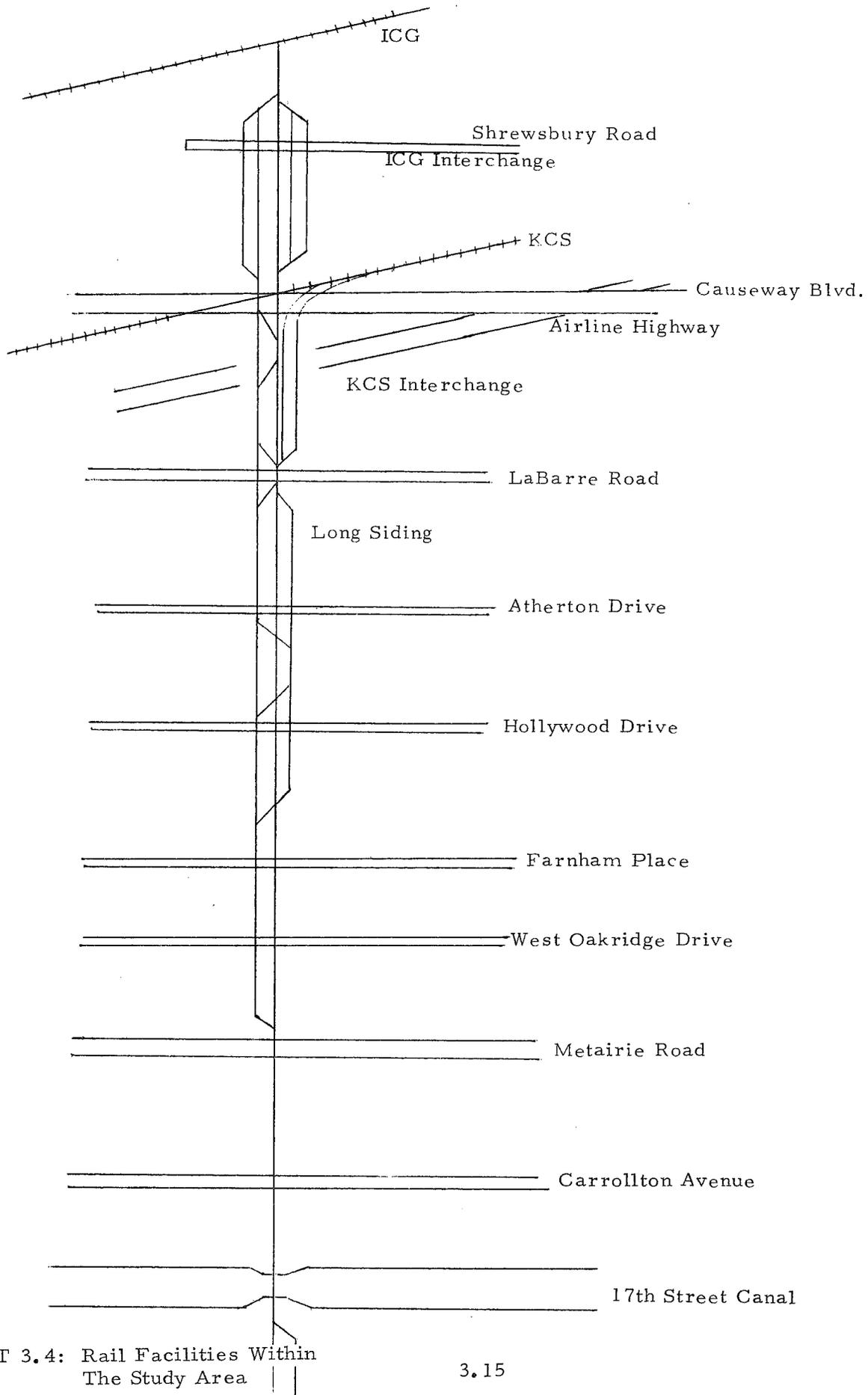


EXHIBIT 3.4: Rail Facilities Within
The Study Area

two track facility. These two tracks proceed west crossing over the KCS mainline to Baton Rouge and become a single track before connecting with the ICG northbound main. This track facility is 132 pound welded rail which was installed in April, 1973.

In addition to the mainline facility, interchange tracks are provided in three places. First, a single track referred to as Long Siding extends from just east of LaBarre Road over Atherton Drive and Hollywood Drive and rejoins the westbound main track east of Hollywood Drive and west of Farnham Place at the foot of Magnolia Drive. The total length of track is approximately four thousand feet.

Second, located just west of LaBarre Road, are two interchange tracks which are used by the KCS and the NOT. These two tracks are located north of the two mainline tracks and parallel the mainline until they join the KCS mainline west of the interlocking between the KCS and the NOT. These two tracks are reached by a single piece of track west of LaBarre Road. The two interchange tracks each join the KCS mainline as opposed to the single track approach from the NOT. Each of these tracks are 1800 feet long and provide usable interchange space of approximately 3400 feet.

Third, located south of the KCS-NOT interlocking and north of the ICG-NOT juncture are three interchange tracks used by the NOT and the ICG. Two tracks are located north of the NOT mainline and

one track is located south of the mains. Approach to the two interchange tracks is via a section of single track as is the exit from the two tracks. The connection from the two tracks is made to the NOT main prior to its juncture with the other NOT main before it joins the ICG northbound main. The single interchange track is approached from the eastbound main of the NOT and rejoins that main prior to juncture of the other NOT main. These three tracks provide approximately 5400 feet of interchange space. The NOT-MP interchange is located at East Bridge Yard at the foot of the Huey P. Long Bridge. The NOT passes over ICG and NOPB tracks to reach these interchange tracks.

Cross-overs are located throughout the study area trackage. A cross-over between the east and west bound main tracks of the NOT exist on each side of LaBarre Road and on the east side of the Atherton Drive grade crossing. Two cross-overs between the westbound main and Long Siding are located at Livingston Place. Just east of these two cross-overs another is located providing movement between the two main line tracks.

There are two major rail structures in the study area. One is the single track trestle which carries the NOT across the 17th Street Canal. The other is the rail bridge which carries the NOT mainline over the Airline Highway underpass. Immediately adjacent to this structure is another rail bridge which carries the two KCS-NOT

interchange tracks over the Airline Highway underpass. Passing over the NOT, KCS, and ICG tracks and over the Airline Highway underpass and Metairie Road is a highway bridge and interchange structure which handles Causeway Boulevard traffic.

Outside of the study are two other rail bridges exits. The first carries the NOT over the Interstate 10 underpass east of the 17th Street Canal. The second rail bridge is a combination railroad-highway facility spanning the Mississippi River.

3.3.2 Union Passenger Terminal Railroad Facilities

East of the Metairie problem area and east of the NOT-Interstate 10 railroad bridge is the connection between the UPT and the NOT. This connection permits eastbound passenger trains to exit the New Orleans area.

The UPT right-of-way extending south from this point is sufficiently wide to accommodate two rail tracks although only one track currently exists. This track progresses south to the Carrollton Avenue rail bridge which provides the UPT access to New Orleans. At this point sufficient right-of-way exists to permit three tracks to be laid. Today two tracks progress from this point toward New Orleans.

The westbound UPT lead passes over the rail bridge at Carrollton Avenue and moves west parallel to Airline Highway. This right-of-way

will also accommodate two tracks even though only one track is in place. Prior to reaching the KCS yard along Airline Highway, the UPT track turns south until it connects with ICG northbound main which continues to ICG yard. Along this route is sufficient space for a double track rail facility.

The eastbound UPT lead underpasses only one highway, Airline Highway at the Carrollton Interchange. Sufficient clearance can be provided under the Airline Highway overpass to accommodate rail freight traffic. The westbound lead moves under two highway overpasses, I-10 and Palmetto Avenue.

The portion of the UPT which moves toward New Orleans passes under Jefferson Davis Parkway, Broad Avenue and Claiborne Avenue and I-10.

These facilities of the UPT are the ones referred to in the sections below dealing with the Carrollton Curve and Carrollton Reverse Move.

3.3.3 Other Rail Facilities

The ICG operates from Mays Yard which is west of Metairie and south of Airline Highway. Mays Yard is located north of the Huey P. Long Bridge. Extending east from Mays Yard are the ICG's north and southbound mainline. These mainlines provided access to New Orleans prior to the UPT Agreement which consolidate rail passenger facilities in New Orleans in 1948.

Illinois Central Gulf access to New Orleans is over its northbound main to the junction with the UPT. From this point to the ICG's Poydras Street Yard, the ICG operates on trackage rights over the UPT.

The KCS serves New Orleans from its West Yard which is located east of Causeway Boulevard and immediately south and parallel to Airline Highway. The KCS proceeds east from its yard to a junction with the UPT, the same tracks utilized by the ICG to reach Poydras Street Yard. The KCS accesses its customers in New Orleans on trackage rights over the UPT in the same manner as the ICG.

The KCS westbound main proceeds toward Baton Rouge from West Yard and crosses the NOT mainline at Shrewsbury.

As mentioned, the Huey P. Long Bridge is located south of Mays Yard. The bridge is owned by the City of New Orleans and is operated and maintained by the New Orleans Public Belt Railroad. The NOPB tracks proceed northwest from the east side of the bridge to the ICG tracks southwest of Shrewsbury. Therefore, access to the bridge and NOT-MP interchange from the NOT is over ICG and NOPB tracks.

4.0 MAJOR CHARACTERISTICS OF THE NEW ORLEANS RAILROAD GATEWAY

Now that the immediate study area has been described, it is important to briefly discuss six major areas which must be taken into account when considering any solution to the Metairie problem. This chapter will review the important factors of the region in order to describe how the Metairie problem relates to several other macro-factors. Description of the six major trunk line railroads, New Orleans Public Belt Railroad, Port of New Orleans, railroad users, the Union Passenger Terminal Railroad and Agreement, and Mississippi River railroad crossings is given at this point to impart the flavor of the larger environment in which the Metairie problem is located.

4.1 Major Linehaul Carriers

The New Orleans railroad gateway provides the necessary means to cross the Mississippi River to affect the exchange of traffic between the southeast and southwest portions of the United States. New Orleans is served by six major trunk line rail systems: Southern Pacific Transportation Company, Missouri Pacific Railroad Company, Kansas City Southern Railway, Illinois Central Gulf, Southern Railway, and Louisville and Nashville Railroad Company as depicted in Exhibit 4.1. Not only do these carriers provide the necessary means to serve the

markets of the southwest and southeast, but they also provide the rail access to the remaining portions of the United States which the Port of New Orleans needs to efficiently distribute its import-export business.

The Southern Pacific serves the southwest, far west and the pacific northwest regions. The Missouri Pacific serves the southwest and the central states as far north as Chicago, Illinois. Kansas City Southern lines provide rail service between Kansas City, Missouri and New Orleans. Kansas City Southern's access to New Orleans is over the Louisiana and Arkansas Railway between Shreveport and New Orleans. Illinois Central provides rail services between the midwest portion of the United States and New Orleans. The Southern Railway System gives New Orleans rail service to and from the southeastern and eastern portions of the United States. Louisville and Nashville provides services to the southeast and the central portion of the country between the Mississippi River and the Eastern states.

These trunk line carriers emanate from New Orleans like the spokes of a wheel. Even though a large portion of the rail services through the New Orleans gateway over the NOT is "bridge" traffic, that traffic moving between the southeast and southwest and not originating from nor destined to New Orleans, it provides a necessary function which provides cheaper and more efficient rail service to the Port of New Orleans. New Orleans is located on this east-west thoroughfare

and port traffic moves with the large volume of through traffic providing economies of scale which would not be available should the "bridge" traffic move elsewhere. Removal of this bridge traffic could exert an adverse effect upon the port by increasing the cost of providing rail service to the Port of New Orleans.

4.2 New Orleans Public Belt Railroad (NOPB)

One of the alternatives to the Metairie railroad problem calls for rerouting rail traffic moving through Metairie around the city on the water front tracks of the New Orleans Public Belt Railroad. This railroad serves the port of New Orleans providing delivery and receipt of rail traffic from the wharves. The physical structure of the NOPB is such that it parallels the river front on the east bank of the Mississippi River crossing numerous streets which provide access to the wharves, ferry depots, and river front industries. Waterborne traffic transloaded at wharves served by the NOPB moving from and to the eastern portion of the United States is interchanged with the SOU at Press Street and the LN Railroad at Barracks Street, Conti Street, France Yard and Gentilly Yard. Traffic to and from the north and west is interchanged with the MP lines at Race Street, with the KCS at Cotton Warehouse Yard and West Yard, and with the ICG at Stuyvesant

Yard and Cotton Warehouse Yard. Traffic to and from the west and pacific northwest is delivered to and received from the SP at Cotton Warehouse Yard. Because the NOPB was exclusively established to provide terminal services, it does not presently function as a major through route for New Orleans bridge traffic especially since a straighter, shorter and quicker alternate route already exists over the NOT. By passing Metairie by means of the river front route of the NOPB would increase the routing and movement of bridge traffic by approximately ten miles. The physical configuration of the port and industries switched by the NOPB requires that continuing access be provided to handle local traffic and to effect interchange with the major trunk line carriers serving New Orleans.

4.3 Port of New Orleans

The port of New Orleans is located approximately 50 miles from the mouth of the Mississippi River which provides waterborne access by means of an extensive inland waterways system to a major portion of the central and midwestern United States.

Based upon volume as well as the value of its foreign trade, the port of New Orleans is the United States' second largest port. Due to moderate year-round temperatures, New Orleans is open all year to handle barge and ship traffic and faces no shutdown due to ice as do

many northern, inland and Great Lakes ports. Over the years the Corps of Engineers has constructed spillways to alleviate the pressure of flooding and has created extensive navigational improvements benefiting the port.

The port of New Orleans is equipped to handle any type of cargo including general cargo, containers, bulk liquids and solids and piggy-back. Trunkline railroads, barge lines, and truck lines provide total intermodal transportation service to the port of New Orleans. Specifically several trunkline railroads operate intermodal yards which provide for quick, efficient movement of containers and trailers to and from railroad flat cars.

Operated by an agency of the State of Louisiana, the port is the state's largest single industry employing approximately 37,000 people in full time jobs. Total economic impact of the port upon the State of Louisiana is approximately \$2 billion a year according to the annual report of the port of New Orleans.

Future prospects of the port of New Orleans are very strong and expansion is foreseen for port activity and facilities. Centroport, located to the east of the City of New Orleans, including the new container facilities at the France Road Container Terminal and the Public Bulk Terminal, is an expanding facility which adds to the wharf capacity located along the river front near New Orleans.

It is estimated that by 1979, Superport will become operational thereby increasing the importance of the New Orleans area and providing not only increased input for petrochemical industries and pipeline facilities which serve the Louisiana area, but also greatly expand regional employment opportunities.

The growth and capacity of the port area increases the need to maintain strong, efficient rail service to meet the transportation demand.

4.4 The Union Passenger Terminal Railroad and Agreement

Because alternatives for solution of the Metairie problem require use of Union Passenger Terminal right-of-way, tracks and railroad bridges, this section is a brief description of the UPT agreement and how the railroads operate the facility. As is described in Chapter 7 use of this facility will require an amendment to the Union Passenger Terminal agreement.

The Union Passenger Terminal agreement, dated October 22, 1947, provided for the construction and use of one rail passenger terminal in the City of New Orleans and the elimination of various grade crossings and the abandonment, rearrangement and relocation of railroad facilities. Prior to this agreement each major trunkline serving New Orleans owned and operated a passenger terminal. This

agreement provides for consolidation of railroad passenger facilities which would eliminate some grade crossings in the city. In addition, the agreement provided for a definite grade separation program to be carried out over the course of the next ten years. The New Basin Street Canal was filled in and provided right-of-way for construction of the UPT and provided land for construction of streets. The railroad right-of-way which was consolidated in New Orleans provided land that the city could develop for other uses. For exchange of this right-of-way, those railroads who served freight customers in New Orleans prior to the agreement were given freight trackage rights over the UPT to continue to serve those customers even though the majority of UPT trackage was designated for passenger service only.

The agreement created a governing board which meets quarterly to handle business pertaining to the operation of the UPT. This board is known as the New Orleans Union Passenger Terminal Committee and membership originally consisted of representatives of each of the railroads serving New Orleans at that time plus members of the New Orleans Public Belt Railroad and three citizen members, representing the City of New Orleans. Since that time, several railroad mergers have taken place and today apportioned by an actual car equivalent usage percentage based upon the previous calendar year passenger railroad traffic which used the approach and station tracks. For 1974,

the affect of this adjustment gave the ICG an additional 9.29 votes raising the ICG total vote to 11.29, the SOU received an additional 5.39 votes raising the SOU total vote to 6.39, and the SP received an additional 5.32 votes raising the SP total vote to 6.32.

This adjustment was based upon the fact that the ICG, SOU, and the SP were the only carriers to operate passenger trains through the Union Passenger Terminal. The ICG and SP trains are part of the Amtrak System. Originally each carrier was billed his portion of the monthly operating expense and the carriers operating Amtrak trains would in turn bill Amtrak. Revisions have been made to bill Amtrak directly for these costs and Amtrak has become a member of the Union Passenger Terminal agreement.

4.5 Mississippi River Railroad Crossings

The Mississippi River provides a formidable barrier to the movement of rail traffic from the east to the west. Only certain river crossings exist which provide east-west movement over railroad mainlines. Three cities provide the major Mississippi River east-west gateways: New Orleans, Memphis, and St. Louis. Each gateway serves certain segments of the country. The New Orleans Gateway serves basically the southwest and the southeast portion of the United States.

Two other river crossings are located between New Orleans and Memphis: Baton Rouge and Vicksburg. Baton Rouge does not provide an east-west route for rail traffic. Vicksburg is a crossing providing east-west access but would require a massive change to existing railroad routes which will adversely affect several of the trunk line carriers who operate through New Orleans.

5.0 FACILITY TRAFFIC ANALYSIS OF THE NEW ORLEANS TERMINAL RAILROAD

The railroad facility in question in Metairie must be described in order to define magnitudes and types of railroad operations which impact the neighborhood. This chapter describes the type of railroad activity conducted on the Metairie line and describes the railroad volumes moving over the NOT through Metairie. NOT traffic is broken down by commodity groups such as metallic ores and non-metallic minerals, paper products, stone products, chemicals, etc., in order to define the commodity groups which move through Metairie. Together with the commodity description, origin-destination information by state is provided as a foundation to analyze why the NOT is what it is and why it is located where it is.

5.1 Market and Traffic Data

5.1.1 Carload Volumes and Projection

The New Orleans Terminal Company performs the interchange movement of traffic between the eastern and western carriers serving the City. The movement of cars between these carriers over the NOT can be categorized as follows:

- Southern Pacific-Southern Railway System
- Southern Pacific-Louisville and Nashville Railroad
- Missouri Pacific and Texas Pacific-Southern Railway System
- Illinois Central Gulf-Southern Railway System
- Illinois Central Gulf-Louisville and Nashville Railroad
- Kansas City Southern-Southern Railway System
- Kansas City Southern-Louisville and Nashville Railroad
- Southern Pacific-Chalmette

The movement to Chalmette is categorized separately because it is a distinct train movement. Cars handled to and from Chalmette by the NOT for other western carriers are handled with the normal interchange traffic.

Exhibit 5.1 compares the volume of cars moving across the NOT for the years 1973 and 1974. In both 1973 and 1974 half of the traffic moved eastbound and half of the traffic moved westbound, 51 percent and 52 percent respectively. Of the total traffic, 94 percent moves through New Orleans and is neither originated in nor destined to the city. In each year a little more than two-thirds of the NOT traffic crossed the Huey P. Long Bridge. In 1973, 70 percent used the bridge and in 1974, 68 percent used the bridge. The mix of traffic between loads and empties is also nearly evenly split.

EXHIBIT 5.1: New Orleans Terminal Company
Traffic Volumes

	<u>1973</u>	<u>1974</u>	<u>Percent Change</u>
Eastbound	215,000	226,200	5.2
Westbound	206,300	209,300	1.5
Total	421,300	<u>435,500</u>	3.4

In 1974, 55 percent of the traffic were loads and 53 percent were loads in 1973. Sixty-two percent of the total traffic moves in railroad owned or leased equipment and the remaining 38 percent is privately owned equipment.

Growth of rail traffic volumes will occur through the New Orleans gateway. The chemical, petroleum and petrochemical industries in the southwest portion of the country, most notably in Texas and Louisiana, will continue to ship to eastern markets. During the period 1967 through 1971, total annual volume over the NOT line through Metairie has average 447,000 freight cars. In 1972 business increased substantially and then fell in 1973 only to recover in 1974. The strength of the future growth will be dependent upon the national economy, but at this time rail traffic on the NOT is expected to grow at a rate between two and three percent per year.

5.1.2 Origins and Destinations

The traffic moving over the NOT for 1974 was broken down to state origin and destination. Exhibit 5.2 details eastbound origins and destinations and Exhibit 5.3 details the westbound traffic.

Eastbound origins include the states of Texas, Louisiana and California with residual traffic from New Mexico and Oregon and other states. Texas accounts for 52.7 percent of the traffic and Louisiana

EXHIBIT 5.2: New Orleans Terminal Company
1974 Eastbound State Origins and Destinations

<u>State Origins</u>	<u>Percent</u>
California	7.3
Louisiana	36.3
New Mexico	1.0
Oregon	1.2
Texas	52.7
All Other	<u>1.5</u>
Total	100.0

<u>State Destinations</u>	<u>Percent</u>
Alabama	24.6
Florida	6.1
Georgia	22.3
Kentucky	1.8
Louisiana	1.0
Mississippi	5.4
North Carolina	11.4
South Carolina	5.7
Tennessee	15.9
Virginia	2.7
All Other	<u>3.1</u>
Total	100.0

EXHIBIT 5.3: New Orleans Terminal Company
 1974 Westbound State Origins and Destinations

<u>State Origins</u>	<u>Percent</u>
Alabama	21.8
Florida	4.5
Georgia	34.9
Kentucky	1.4
Louisiana	1.2
Mississippi	3.6
North Carolina	10.8
Ohio	2.1
Pennsylvania	1.5
South Carolina	8.4
Tennessee	5.8
Virginia	2.1
All Other	<u>1.9</u>
Total	100.0

<u>State Destinations</u>	<u>Percent</u>
California	16.5
Louisiana	24.0
Missouri	1.3
Texas	53.5
All Other	<u>4.7</u>
Total	100.0

36.3 percent, a combined percentage of 89 percent. The other western origin states represent long haul movements primarily from SP origins. Destinations for this traffic include Alabama, Georgia, Tennessee, and North Carolina. These states account for 74.2 percent of the destinations. Other southeastern states, Virginia, South Carolina, Mississippi and Florida account for 19.9 percent of the traffic. Exhibit 5.4 more graphically indicates the origins and destinations by state. Numbers labelled "O" are origin percents and "D" destination percents.

Westbound origins primarily include Georgia, Alabama, North Carolina and South Carolina for these states comprise 75.9 percent of the traffic. Florida, Mississippi and Tennessee account for another 13.9 percent. Destinations primarily include Texas, Louisiana and California or 94 percent of the traffic. Exhibit 5.5 indicates the destination, "D", percents and origin, "O", percents for the westbound traffic.

Exhibit 5.6 and Exhibit 5.7 indicate the percent that the primary states account for the total traffic moving across the NOT on an origin-destination basis. For example, of the total traffic moving across the NOT, Texas originates and terminates 53.0 percent, Louisiana 32.2 percent and California 10.4 percent. The eastern states breakdown of the total traffic on both an origin and destination

EXHIBIT 5.4: New Orleans Terminal Company
 1974 Eastbound Origins and Destinations - Percents

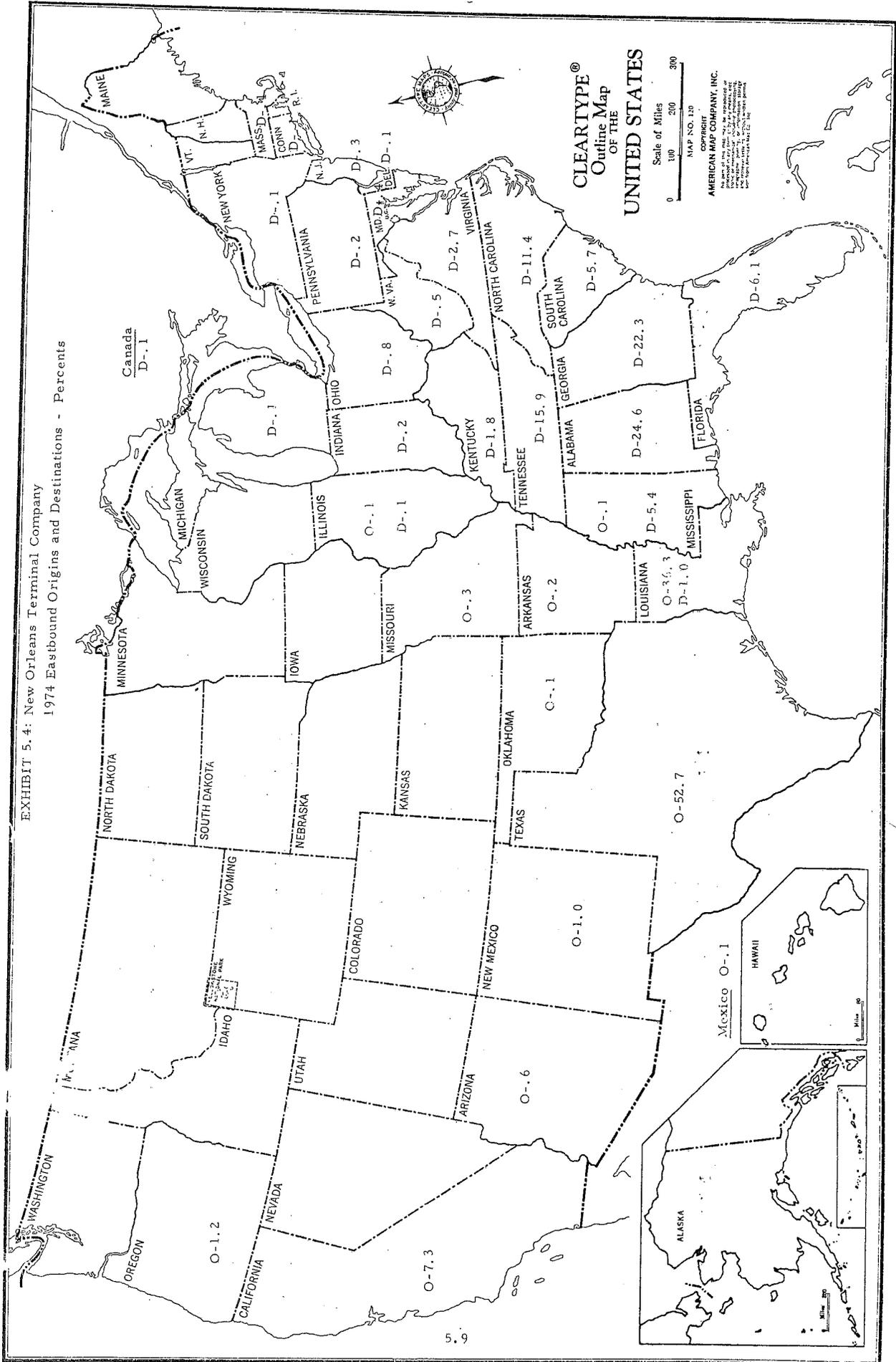


EXHIBIT 5.6: New Orleans Terminal Company
State Origin-Destination Total Percent
Western States

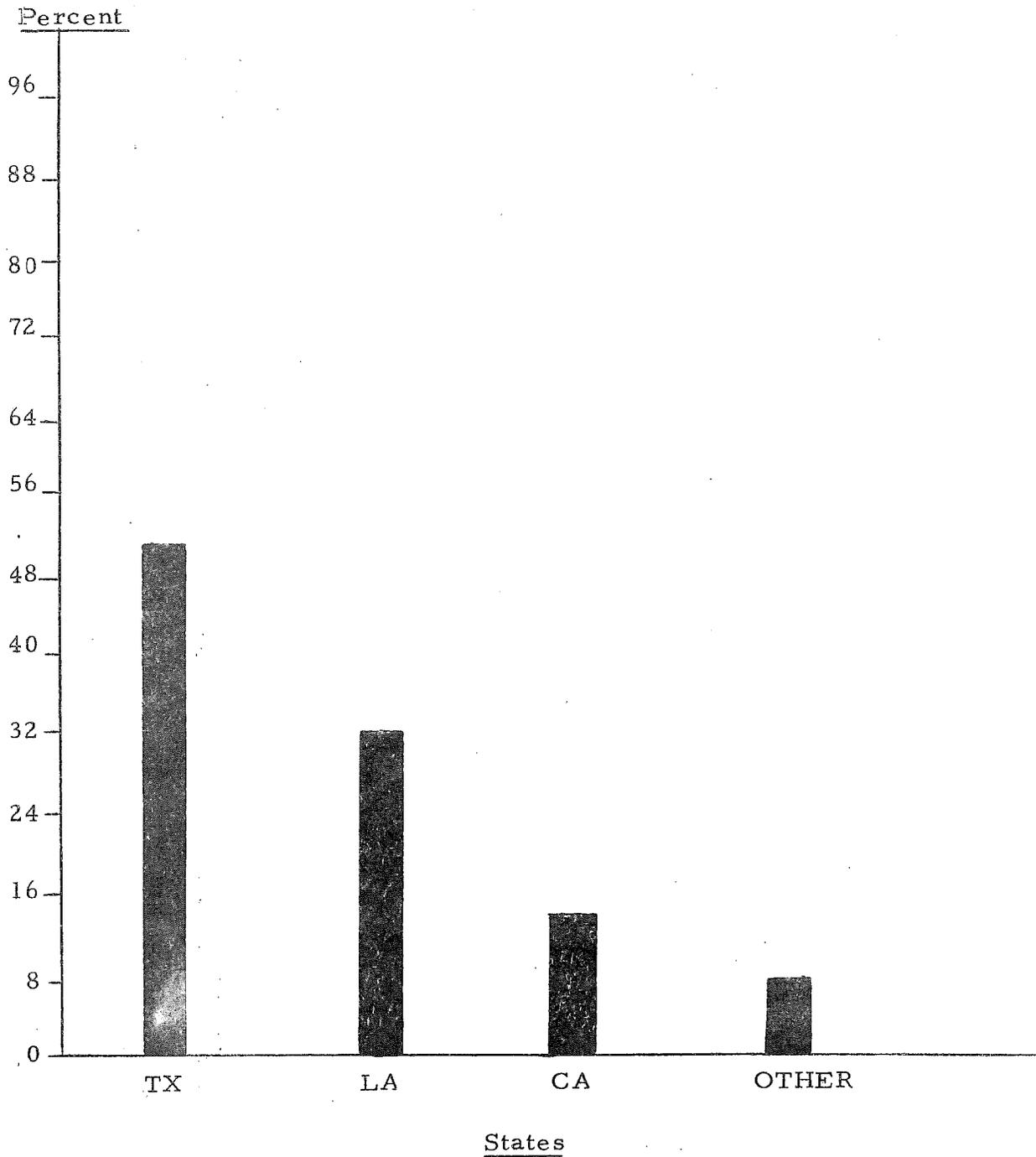
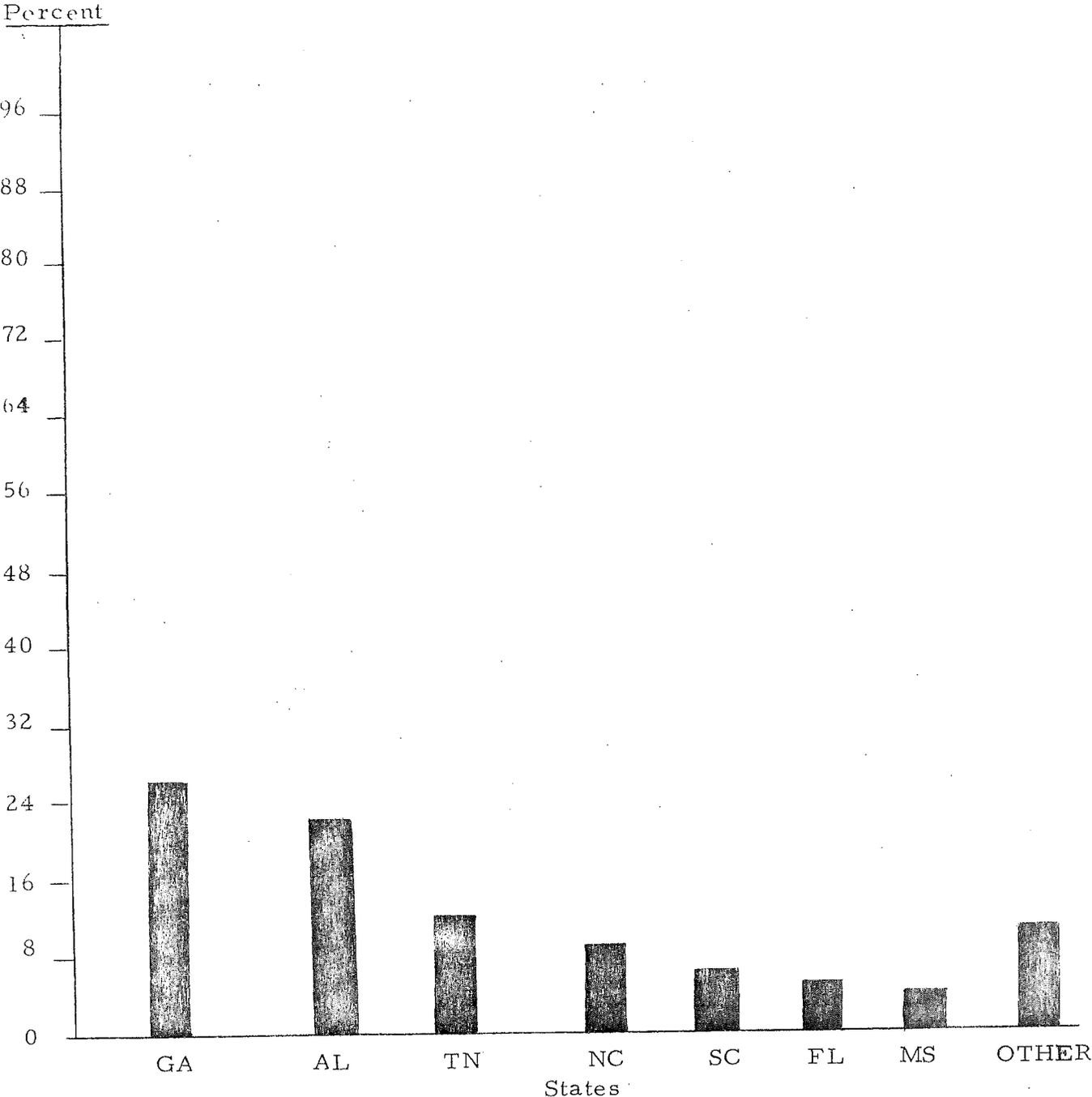


EXHIBIT 5.7: New Orleans Terminal Company
State Origin-Destination Total Percent
Eastern States



basis is Alabama 23.7 percent, Georgia 26.5 percent, North Carolina 11.2 percent, and Tennessee 12.5 percent.

These figures indicate that 85.2 percent of the traffic is originating or terminating in Texas and Louisiana, thus explaining why the New Orleans gateway is so important to rail traffic.

5.1.3 Commodity Mix

Exhibit 5.8 displays the percentage breakdown of commodities on an eastbound and westbound basis for the NOT traffic. Basically, the eastbound traffic indicates raw material flows to eastern markets and the westbound traffic represents manufactured products moving to consuming points.

As noted in the previous section, the majority of the traffic moving eastbound is originating in Texas and Louisiana. Over half of this traffic, 51.3 percent, is originating in the chemical, petroleum and petrochemical industries located in western Louisiana and eastern Texas. Over half of the westbound traffic, 57.2 percent, consists of manufactured goods such as primary and fabricated metal products, stone products, petroleum products, chemicals, and paper products.

The commodity mix was examined to determine the percentage content of potentially dangerous articles being transported over the NOT. Such commodities are defined by Grazanano's Tariff #27 and include flammable liquids, flammable solids, flammable gases,

EXHIBIT 5.8: New Orleans Terminal Company
1974 Commodity Mix

	<u>Percent</u>	
	<u>Eastbound</u>	<u>Westbound</u>
Farm Products	8.3	.7
Metallic Ores and Non-Metallic Minerals	10.7	4.5
Food Products	7.1	8.2
Lumber	4.2	2.4
Furniture	--	6.1
Paper Products	4.5	13.5
Chemicals	39.2	11.8
Petroleum Products	12.1	9.3
Stone Products	3.4	10.5
Primary and Fabricated Metal Products	4.9	12.1
Machinery, Electrical and Transportation Equipment	2.2	5.9
Scrap Materials	1.2	2.8
Miscellaneous Mixed Shipments	.5	4.2
All Other	<u>1.7</u>	<u>8.0</u>
Total	100.0	100.0

oxidizing materials, explosive and poisonous material. Eighteen percent of the loaded traffic fell into this category with the majority moving east. These commodities must be moved to consuming markets as they are vital industrial inputs and without them many industries would be eliminated. Using the railroads as the mode of transportation is the safest means available.

5.2 New Orleans Terminal Company Operations Data

5.2.1 Car and Train Movement

Train movements across the NOT can be divided into four groups to facilitate description. Run through trains, local trains, yard cuts, and interchange moves are the various types of train activity which take place on the NOT. Approximately 65 percent of the traffic handled over the NOT is handled by run through and yard cuts.

5.2.1.1 Run Through Trains

A run through train is a train which runs from one point to another passing through rail yards without being broken down and reassembled into another train containing different cars. The run through trains on the NOT originate in either Meridian, Mississippi or Birmingham, Alabama and run through to Houston, Texas and vice versa.

Basically, five run through trains operate on the NOT. One train per day east and west between the MP and SOU, one train per day east and west between SP, ^{NOT} and one train per day eastbound from the SP to the LN.

The MP-SOU run through passing through Metairie eastbound normally between the hours of 3 p.m. and 9 p.m. and westbound between 9 p.m. and midnight. The crews change at Central Avenue just west of Shrewsbury. (2)

The SP-SOU run through normally operates through Metairie between the hours of 1 a.m. and 7 a.m. eastbound and 6 p.m. and 11 p.m. westbound. The SP crews operate to Oliver Yard and, although they ride the train westbound, do not take over control until Central Avenue. (2)

The SP-LN run through operates normally between the hours of 6 p.m. and 10 p.m. with SP crews delivering the train north of Oliver Yard on the east side of New Orleans and are transported back to Avondale by automobile. (1)

The run through trains move through Metairie at a constant rate of speed averaging 13.3 miles per hour unless the KCS has occupied their mainline toward Baton Rouge or the ICG signal is red because a train occupies the ICG track.

On the average, the run through trains are the longest that operate through Metairie containing an average of 100 cars. Depending upon the level of business these trains will vary from 70 to 150 cars.

5.2.1.2 Local Trains-Chalmette

The Southern Pacific operates a daily local train, normally six days per week, from Avondale Yard to Chalmette to serve industries at Chalmette. This train also interchanges on long siding with the KCS. The SP delivers to the KCS going to Chalmette and picks up from the KCS returning from Chalmette. This train normally operates eastbound through Metairie between the hours of 9:30 a.m. and 11 a.m. and westbound between the hours of 12:30 p.m. and 2:30 p.m. The average number of cars moving through Metairie is 12 although the range is between no cars and 25 cars. This move has fewer cars than other moves because the interchange with the KCS is effected either prior to or after the train moves through Metairie. The speed of this move through Metairie is slower because of the interchange requirement at Long Siding.

5.2.1.3 Yard Cuts

The yard cuts which move cuts of cars across the NOT between yards operate between the SP on the one hand and the SOU and LN on the other.

The SP-SOU yard cut involves those cars originating or terminating at points between the run through trains, Meridian and Houston. The SP-SOU eastbound yard cut normally runs between the hours of 7 p.m. and 10 p.m. and westbound between 10 p.m. and 11:30 p.m. SP crews will deliver to Oliver Yard and return with the westbound yard cut taking control at Shrewsbury. If the Yard cut is not ready, the SP crews will motor back to Avondale and the SOU crews will deliver to Central Avenue where SP crews will move the yard cut to Avondale.

The SP-LN yard cut involves the interchange of cars not moving on the run through. The eastbound yard cut normally operates through Metairie between the hours of 12:30 p.m. and 1:30 p.m. and the westbound yard cut between 2:00 p.m. and 5:30 p.m. If the westbound yard cut is ready to move the SP crew will bring it back to Avondale otherwise they return by automobile.

The yard cuts average 66 cars per move but this average is dependent upon the level of business. Yard cuts normally range between 40-100 cars. These movements traverse Metairie as quickly as the run through trains do because neither train is required to stop in Metairie unless either the bridge or Shrewsbury is congested.

5.2.1.4 Interchange Moves

Interchange moves are made between the SOU and LN on the east and the KCS and ICG on the west. This interchange is accomplished at Shrewsbury on the NOT. An additional interchange occurs between SOU and MP at East Bridge Yard.

Interchange movements also vary in length or number of cars and vary more severely than the run through trains or the yard cuts. Interchanges examined averaged approximately 50 cars per move; however, they can vary from 10 to 110 cars at any time depending upon the volume of business being handled on any given day.

The speed of the interchange moves through Metairie is slower than either the run through trains or the yard cuts. This slower speed is a result of the train slowing down to accomplish the interchange at Shrewsbury or accelerating from Shrewsbury after the interchange has been made. Depending upon the length of the interchange cut, the direct affect of this slower movement is exerted upon the Atherton and Hollywood crossings. La Barre Road and Shrewsbury Road crossings are more severely impacted because these two crossings also experience the switching moves required to accomplish the interchange at Shrewsbury.

Interchange moves pass through Metairie on an east and west basis on a schedule which can best be described as an "as needed" basis which most efficiently accomplishes the interchange movement to provide the necessary rail service to move cars. Generally speaking the interchange moves are made between midnight and 6 p. m. There are exceptions to this statement, but approximately 84 percent of the interchange movements take place between those hours.

5.2.1.5 Time of Movements Over NOT

Exhibit 5.9 lists the times that trains cleared Metairie Road for a sample period September 22 through October 5, 1974. This sample period was used because it corresponded to the same period of time in which the traffic counts were taken by the Parish over the eight grade crossings. Exhibit 5.10 indicates the dispersion of train movements for all hours divided into two groups 0700 to 1900 and 1900 to 0700. According to this sample, 53 percent of the train movements occur within the 1900 to 0700 group, the nighttime group.

In analyzing the train movements during "rush" hours, or the hours that the grade crossings are most likely to bear the majority of automotive traffic, approximately twenty percent of total train movements clear Metairie Road during "rush" hours and correspondingly, these rush hours represent twenty percent of the total time within a day. Generally speaking, one train per hour passes through the Metairie area.

EXHIBIT 5.9: Hourly Dispersion of Train Movements

<u>Time Frame</u>	<u>Total Trains in Sample</u>	<u>Train Equivalency Per Hour</u>
0000	13	.93
0100	15	1.07
0200	7	.50
0300	4	.29
0400	11	.79
0500	6	.43
0600	18	1.29
0700	10	.71
0800	9	.64
0900	11	.79
1000	11	.79
1100	5	.36
1200	15	1.07
1300	13	.93
1400	14	1.00
1500	10	.71
1600	10	.71
1700	11	.79
1800	15	1.07
1900	12	.86
2000	13	.93
2100	20	1.43
2200	12	.86
2300	22	1.57
Total 24 hours	287	20.5

EXHIBIT 5.10: Dispersion of Train Movement
Times Rush Hour Dispersion

<u>Time Frame</u>	<u>Inter-Change</u>	<u>Yard Cuts</u>	<u>Run Through</u>	<u>Chalmette</u>	<u>Total</u>
0700-0900	16		3		19
1200-1300	3	5		7	15
1700-1900	<u>11</u>	<u>5</u>	<u>10</u>	—	<u>26</u>
Total	30	10	13	7	60
Percent of Total	18.4	22.2	22.4	33.4	20.9

Total Dispersion -Day vs. Night

0700-1900	71	24	19	20	134
1900-0700	<u>92</u>	<u>21</u>	<u>39</u>	<u>1</u>	<u>153</u>
Total	163	45	58	21	287

The important fact to remember, in reviewing data displayed in this manner, is that train movements are not functions of time. Rather the data displays the outcomes of several factors which combine to result in train movements through the study area.

6.0 IDENTIFICATION AND ANALYSIS OF RAILROAD-COMMUNITY CONFLICTS

Having identified the environment from which the Metairie railroad-community conflicts have arisen and persist today, this chapter will fully describe the nature of individual conflict elements and analyze their current and/or potential impact upon the Metairie community.

The chapter is divided into four overlapping portions. The first section deals with those conflicts which have a direct impact upon the lives of the Metairie residents. These direct impacts are differentiated from the indirect impacts in the second section on the basis of the degree to which normal living patterns are altered. That is, the direct impacts have the tendency to alter the daily conduct of the residents in some way other than would be true if the railroad were not present. The indirect impacts do not affect daily life of the residents, but have a continual general influence over the Metairie area. Highway user impacts, which would be considered "direct", are discussed in Section 6.3 because of the pervasiveness of the problem and the length of the analysis presented.

Section 6.4 discusses the emotional or psychic impacts of the railroad. These impacts are certainly of an indirect nature, but are discussed separately from the other indirect impacts due to their purely subjective nature. The subjectivity of these impacts does not

reduce their importance, it merely highlights the fact of their unquantitative nature.

6.1 Direct Impacts on Residents

6.1.1 Noise Pollution

Noise from railroad operations is one of the most often mentioned problems with the existence of the NOT in Metairie. The noise intrusion experienced by most residents of Metairie is from the locomotive horn which is sounded at each of the eight crossings in the Metairie area. Those residents living directly adjacent to the tracks also experience general train noise from the wheels and the locomotive, the interchanging of cars in the area of Long Siding, the clanging of warning bells at the signalized crossings and at times the honking of automobile horns from automobiles waiting for a train to pass.

Horn noise is particularly a problem not only because of its intensity, but because of its frequency of use and duration. Louisiana law states and railroad policy dictates that an engineer must sound the locomotive horn and continue sounding the horn into the crossing. There are six grade crossings of the NOT within 1.5 miles from Metairie Road to LaBarre Road. The necessity of sounding the horn six times in a mile and a half stretch causes an unusually long time

duration of the horn noise in the neighborhood. This horn sounding occurs 24 times a day, approximately once every hour. At 100 feet from the track a train whistle can register as high as 105 decibels on the A scale* which would be considered to be highly intensive (see Exhibit 6.1). Of course not everyone lives within 100 feet of the railroad and the noise level will diminish with distance, but the long duration of the whistle and its frequency each day do seem to disrupt the neighborhood.

A variable in the degree of annoyance with the horn is how often and for how long the engineer sounds the horn at each crossing. This of course is something peculiar to each engineer and his perception of the amount of warning necessary at each crossing.

Most train noise other than the sounding of the horn are of minor intrusiveness to the residents. Even residents living directly adjacent to the track feel that the elimination of the horn noise would alleviate their noise problems. The major intrusive noise source other than the horn is the interchanging of railroad cars along Long Siding.

*A decibel is a physical measure of sound waves which is commonly measured on three scales, A, B, and C. The "A" scale is most commonly used for environmental impact studies because it most closely simulates human hearing. An increase of 10 decibels is equivalent to a doubling of the sound level. An increase in decibels from 40 to 60 is not a 50 percent increase, but a 300 percent increase or quadrupling of the sound level.

EXHIBIT 6.1: Weighted Sound Levels and Human Response

Sound Source	dB(A)*	Response Criteria
	150	
Carrier Deck Jet Operation	140	
	130	Painfully loud Limit amplified speech
Jet Takeoff (200 feet)	120	
Discotheque	110	Maximum vocal effort
Auto Horn (3 feet)	110	
Riveting Machine	110	
Jet Takeoff (2000 feet)	100	
Shout (0.5 feet)	100	
N. Y. Subway Station	90	Very Annoying
Heavy Truck (50 feet)	90	Hearing damage (8 hours)
Pneumatic Drill (50 feet)	80	Annoying
Freight Train (50 feet)	70	Telephone use difficult
Freeway Traffic (50 feet)	70	Intrusive
Air Conditioning Unit (20 feet)	60	
Light Auto Traffic (50 feet)	60	
	50	Quiet
Living Room	40	
Bedroom	40	
Library	30	Very quiet
Soft Whisper (15 feet)	30	
Broadcasting Studio	20	
	10	Just audible
	0	Threshold of hearing

*Typical A -- Weighted sound levels taken with a sound level meter and expressed as decibels on the scale. The "A" scale approximates the frequency response of the human ear.

Source: Environmental Quality--1970, the First Annual Report of the Council on Environmental Quality, August 1970.

This is only a problem to those individuals who live directly adjacent to the tracks in the Long Siding area. The honking of automobile horns is an infrequent occurrence and is only indirectly related to the operation of the train. Warning bells at the grade crossings are a problem at Metairie, LaBarre and Shrewsbury Roads, the only crossings at which they are present, but even there the impact is minimal because of the light density of housing in the immediate area.

General train noise is not a serious problem. Average train noise is approximately 69 decibels in Metairie measured from 100 feet. This level has been reduced by the railroads installation of continuously welded rail which eliminates the "clickety-clack" of the wheels.

The greatest impact of the noise intrusion in the Metairie neighborhood is most often in the evening or at night. During the night the ambient noise level of the neighborhood drops from about 45 dBA to 40. Most residents are in their homes at dinner, reading, talking or sleeping. The sudden intrusion of horn noise can be extremely unnerving especially given the low noise level prior to its occurrence.

In order to more accurately reflect the noise level in the Metairie area, a hand-held noise meter was used to systematically record the noise at five locations along the tracks. The five measuring stations along the tracks included Metairie Road, Farnham Place, Livingston Place, LaBarre Road and Shrewsbury Road.

These particular streets were picked to get a cross-section of the immediate area impacted by the noise. Metairie Road was picked because it is all commercial. Farnham Place is all residential and has a grade crossing. Livingston Place is residential but does not cross the tracks. LaBarre Road is commercial and residential. Shrewsbury Road is in the middle of the interchange tracks and the point of heaviest railroad traffic.

On Wednesday, October 9, 1974, readings were taken at these five locations during the period 7 a.m. to 7 p.m. On Friday, October 11 and Saturday, October 12, 1974, readings were taken at these locations between the hours of 7 p.m. to 7 a.m. Each 12 hour period was broken down into 15 minute intervals and every other interval was assigned a noise measuring station. Fifteen minutes was allotted for travel between stations. During each 15 minute noise measurement period, two three minute intervals were chosen in which noise measurements were taken. In total, 144 noise measurements were taken during the three 12 hour intervals or an average of 27 readings per location. All noise measurements were taken 100 feet from the tracks.

Exhibit 6.2 shows the results of these measurements. During each three minute interval, three high readings and three low readings were taken and recorded. The first two columns of Exhibit 6.2 show

rail-highway grade separations, but must match this with \$.3 million. This total of \$2.9 million annually must be allocated by the Department of Streets and Highways on a priority basis to all grade crossings in the State. Hence, it seems somewhat unlikely that all of these funds would be applied to the Metairie problem. From the new community development funds at HUD, the Parish obtains \$2.7 million for three years which could be applied to this problem.

With all conditions taken into consideration, it appears that several million dollars could realistically be raised from all of the previously mentioned sources to solve the railroad-community conflicts in Metairie.

1.5 Summary

The citizens of the Metairie area of Jefferson Parish have a highly visible conflict with the New Orleans Terminal Company, a major link in the New Orleans railroad gateway. Although the relocation of the railroad facility is physically feasible, it is clear that the cost of construction and the annual operating cost increments to the railroad far exceed the funds available through normal funding channels. Even the simplest of in-place alternatives which provide benefits to the community is costly, but far less than that required for relocation of the railroad. The regional solutions received appropriate attention (in

greater study is warranted.

2.

It is clear that an immediate problem exists in Metairie, and the funds for its solution are limited at this time, but this should not preclude long-term planning for the solution of all railroad problems in Jefferson Parish and the New Orleans region as a whole. Selection of the appropriate solution and development of a plan for its implementation will depend upon negotiations between the community and the railroad being completed with the appropriate support of all local, state and federal officials. The ensuing report will provide the necessary facts and analyses to enable all parties to initiate such negotiations.

EXHIBIT 6.2: Exterior Noise Levels at 100 feet (dBA)

	Average High	Average Low	Percent Increase	Maximum High	Minimum Low
Metairie Rd.	63.3	58.0	44	99✓	44
Farnham Pl.	60.6	50.0	108	89✓	42
Livingston Pl.	54.8	48.0	60	90✓	41
LaBarre Rd.	65.2	60.4	39	82✓	48
Shrewsbury Rd.	60.3	48.4	128	97	46

average high and average low readings for all measurements taken. The third column indicates the percentage increase from the average low reading to the average high reading. Although the percentage increase is somewhat dramatic, comparing the average highs to Exhibit 6.1 as a benchmark shows that the noise level is just bordering on being intrusive. It should be re-emphasized that these readings were taken outdoors, 100 feet from the track. Inside of a house at a distance greater than 100 feet the sound level will be dampened considerably. In fact, interior readings were taken in homes approximately 100 feet from the tracks. The following table is illustrative of the differential between interior and exterior readings.

EXHIBIT 6.3: Interior Sound Measurements at
100 feet from the Tracks (dBA)

	<u>Interior</u>	<u>Exterior</u>
Train whistle	73	100
General train noise	48	69

The readings dropped from 20 to 30 decibels on the interior of a home.

What is hidden in this analysis is a temporal dimension of noise level changes and the extent to which they change. The last two columns of Exhibit 6.2 display the maximum high and minimum low readings recorded at the five measuring stations. The jump from a low of approximately 45 to a high of approximately 100 represents a

32 fold increase in sound level. This change does occur somewhat gradually, but most of the increase occurs as the horn is sounded. It is the rapid change in sound level which is intrusive to the citizens, especially at night when the ambient noise level is only about 40 dBA.

It is not believed that sound levels such as those experienced in Metairie are physically harmful when the duration is as short as it is there, but the combination of the rapid change in sound level and the fact that it occurs approximately once every hour does present an annoying problem to the citizens.

6.1.2 Air Pollution

Air pollution from railroad emissions has rarely been cited as a problem by Metairie residents. Even with the volume of railroad traffic crossing the NOT each day, the emissions do not cause a visible problem. Railroad engine exhaust produces from 1.2 to 4.5 grams of carbon monoxide and from 13.4 to 18.4 grams of unburned hydrocarbons and oxides of nitrogen per horsepower-hour. The impact of these pollutants can only be viewed on a national scale in comparison to alternative modes, such as trucks, or in terms of the pollutants marginal impact upon a given regional area. In regions that currently have serious air quality problems, the marginal impact from railroad emissions can be critical. In a region like Metairie, air quality is not a problem and hence the marginal impact of the railroads is very small.

It should also be noted that even the relocation of the railroad only shifts the air pollutants to another community which may already be suffering from poor air quality.

The total net impact of air pollution from railroad emissions must be considered to be zero.

6.1.3 Availability of Emergency Services

A major complaint of the Metairie citizens is that police, fire and ambulance service is limited by the existence of the railroad. If a train should be blocking a highway crossing in Metairie when one of these services is needed, it is feared that it would be unable to access the neighborhood freely.

Investigation of all of these services has shown that in fact service is not limited except in a very rare instance (See Exhibit 6.4 for the location of emergency services). Fire stations exist on both sides of the track enabling the fire companies to access any area of the Metairie neighborhood without delay from the train. From its position at the base of Metairie Road at Airline Highway the Jefferson Parish sheriff's force can access either the Metairie area above the tracks or below the tracks without interference from the train.

Ambulance service creates the only potential problem for Metairie citizens. Most ambulance service to this area is provided by Gold Cross Ambulance Service on Airline Highway. Gold Cross is tied

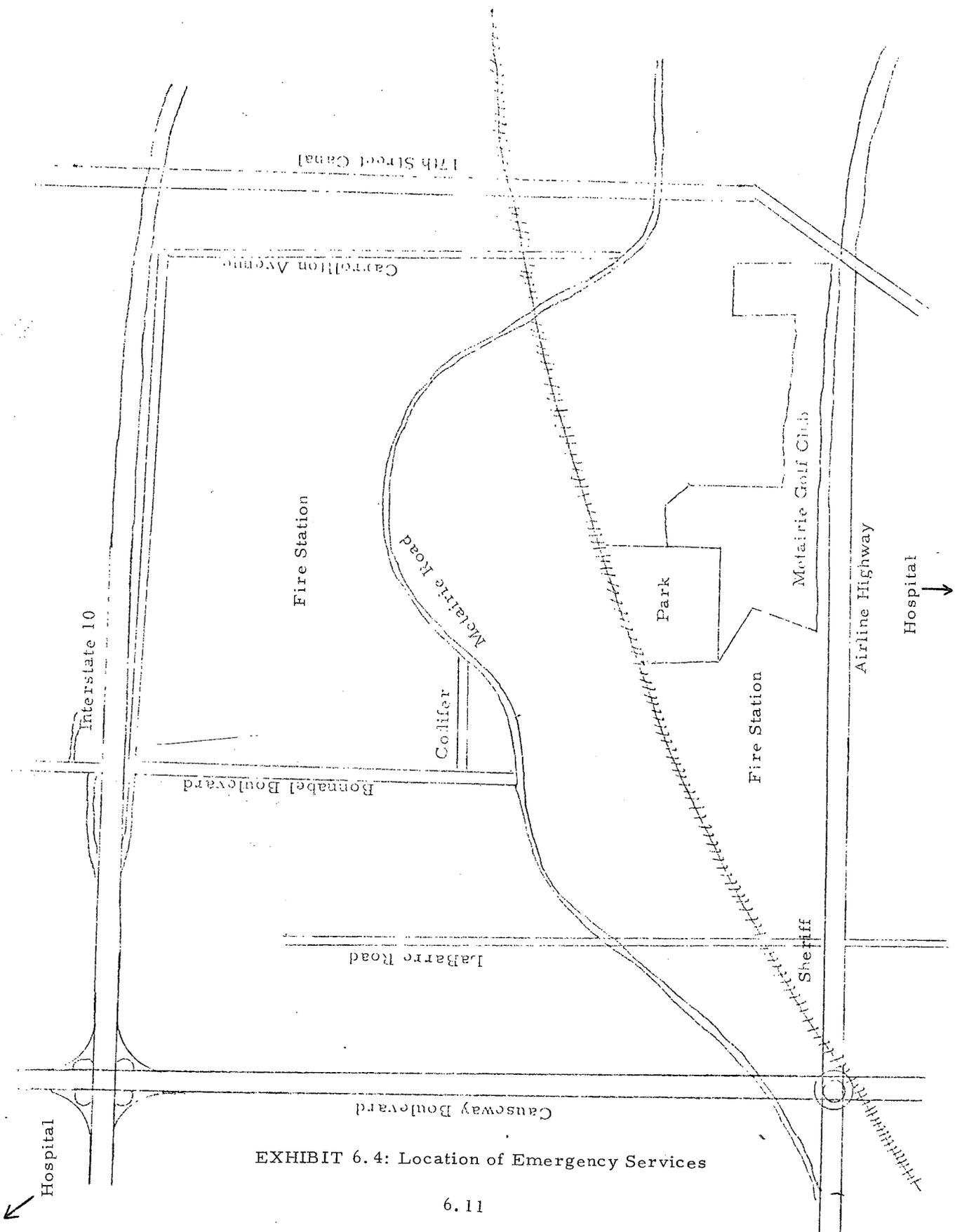


EXHIBIT 6.4: Location of Emergency Services

into the Jefferson Parish emergency unit and provides most of the service for the Parish.

In interviews with supervisory personnel at Gold Cross, they indicated a keen awareness of the hazards of contending with trains blocking railroad crossings. They indicated though that their major problem is with train operations on the KCS and ICG along Airline Highway and that the NOT in Metairie rarely causes a problem. Because of their location on Airline Highway and substations both north and south of the NOT, access can be quickly made to any location in the Metairie neighborhood.

Standard operating procedure dictates taking a patient to the nearest available hospital which would be the Oschner Foundation south of the tracks and East Jefferson Hospital north of the tracks. In special instances a patient may ask for a particular hospital or the driver may decide that a particular hospital can handle the case more efficiently. Charity Hospital in New Orleans, for example, has a special burn unit to which badly burned victims may be taken rather than the closest hospital.

Ambulance drivers are aware of the existence of the tracks and the potential for delay and hence make every effort to avoid contact with the trains. In the rare instance that an ambulance is blocked by a train, the driver determines whether a new route should be pursued

or whether to wait for the train to pass. The drivers are trained to evaluate the urgency of a patient's situation and are capable of making a rational decision on how to proceed if blocked by a train. In addition, the driver is in constant communication with a dispatcher by means of a two-way radio. The dispatcher can redirect the route of the ambulance and help evaluate the urgency of the situation.

There is certainly a potential for a serious delay to an ambulance from a train blocking a crossing and in turn resulting in a death or permanent injury. There are no means of evaluating the cost of such an occurrence. The information gathered on ambulance procedure, though, seems to indicate that the probability of a serious delay is very low.

6.1.4 General Safety of Residents

Any railroad in close proximity to a residential area can be a hazard to the population, particularly to children who are unaware of the magnitude of the danger. The NOT in Metairie does present that community with a daily potential hazard. Highway grade crossing safety and railroad accidents are discussed in Sections 6.2.1 and 6.3.3, respectively. This section deals only with the direct hazard of the railroad to the pedestrians and children of the community.

Most pedestrians traversing the tracks would use the utmost caution. The presence and danger of the railroad are well known to

those residents of the area and hence the necessary precautions would be taken when crossing the tracks. Although the railroad does pose a danger, it is essentially no more dangerous than crossing a street.

The railroad poses the greatest danger to children who are generally unaware of the potential danger. Any child capable of crossing a street should have no more difficulty crossing the railroad tracks, but because children are often less cautious than they should be, the potential for an accident involving a child is greater than with an adult. Children on bicycles may be less cautious than those on foot. Children may often be seen riding across the tracks at top speeds in order to cross before the train, unaware of the danger of falling off the bicycle or even misjudging the speed of the train.

The railroad and the street configuration which surrounds the railroad present a barrier to children walking or riding a bicycle to either the Metairie playground, the Metairie day school or St. Francis Xavier School. Rather than taking a longer walking or riding route to and from their destination along existing streets, children will often walk or ride bicycles down the railroad right-of-way. In the area of Long Siding where railroad cars are placed to wait for interchange, children find these parked cars an intriguing playground. It is not unusual to find children crawling under and through these railroad cars. Box cars are often left open or unlocked providing an additional danger

to curious children. Although the children should be more rigidly instructed in the dangers of the railroad and that they are trespassing on private property, legally the railroad could be considered an attractive nuisance.

6.1.5 Vibration

Vibration from railroad operations in Metairie can be attributed to three distinct sources, the normal movement of the train across the tracks, the interchange bumping of cars and the acceleration of the train engines. The unavailability of an accelerograph prevented quantitative measurements of these vibrations, but were qualitatively evaluated in homes directly adjacent to the tracks.

Because of the existence of continuously welded rail on the NOT the normal passing of a train does not create any noticeable vibration. When a train must stop and start again anywhere along the tracks, vibration from the "taking up" and "letting out" of the slack between cars can cause vibration. In addition, as the engine begins to accelerate additional vibration is evident.

The most severe vibration problem occurs in the area directly adjacent to Long Siding. At least twice a day a train will pull up to the siding, back up to drop off or pick up cars for interchange and then proceed. The stopping and starting, the bumping of the interchange cars and the acceleration of the locomotive combine to produce a 10 minute interval of intermittent vibration.

The vibration from these operations does not appear significant enough to produce structural damage to homes adjacent to the right-of-way, but is significant enough to be noticeable and annoying.

6.2 Indirect Impacts on Residents

6.2.1 Potential of Catastrophic Accident

Due to the train operations through Metairie, interchange and transportation of tank cars, and catastrophic occurrences in other towns and rail yards across the country, the residents of Metairie are fearful of some occurrence in their neighborhood which might destroy property and human lives. Dangerous commodities are in fact transported through the Metairie area by railroad. Transportation of these commodities is highly visible because of the interchange of tank cars in the Shrewsbury area.

Although not unique, the rail operations through Metairie are different from train operations in other areas. First, train speed is not excessive and is actually slow and controlled. Second, the rail facility is double tracked with the exception of Metairie Road. Third, interchange is effected in a deliberate manner. And fourth, transportation by railroad of dangerous commodities is safer than other means.

Steps are available to be taken to improve the rail operations through Metairie to further reduce the potential for catastrophic

occurrence. Relocation of the rail facility does not necessarily reduce the potential impact of a catastrophe.

The fear generated by train operations is one of perception and not actuality.

6.2.2 Impact on Local Business

The impact upon local business establishments is not of a major magnitude. The local businesses primarily service the public local to the Metairie area. The existence of the railroad does not impact that patronage in the sense that removal of the railroad would increase business. In some respects existence of the railroad can in fact improve business. People who have been delayed by the train have an opportunity to look at the store windows of the local merchants and are given the opportunity to notice what is available. Purchases may not be made that instance but could produce purchases in the future.

6.2.3 Impact Upon Residential Property Values

Investigation through real estate firms has revealed that the impact upon property values by the railroad tracks are exaggerated. One potential problem was felt to be a substantial depression of property values due to the railroad operating in the neighborhood.

Property values have continued to rise through time in a fashion at least comparable to other residential property. Turnover in the neighborhood around the railroad tracks is not excessive and, once a

house is placed upon the market for sale, it is normally purchased within a relatively short period of time. Purchase of residential property is accomplished with full knowledge of the railroads existence. Even lots and houses immediately adjacent to the tracks have turned over in a normal period of time, when available.

The Metairie area has been described as being one of the more preferred places to live in the New Orleans area. If this is true, this feeling still exists despite the presence of the railroad.

6.3 Highway User Impacts

6.3.1 Grade Crossing Inventory

The severity of impacts at any particular grade crossing is dependent upon both the volume of automobile traffic and the frequency and type of railroad traffic. The following tables and narrative fully describe the interface between railroad and highway traffic at each of the eight grade crossings along the NOT in Metairie.

Exhibit 6.5 describes each grade crossing in terms of the average daily traffic, the average auto approach speed to the crossing, the speed reduction necessary to traverse the crossing and the type of warning device for oncoming trains.

Metairie Road, being the major thoroughfare through the Metairie community, carries more than 17,000 vehicles per day over the railroad,

or more than half of the total traffic crossing the railroad in Metairie. LaBarre Road and Carrollton Avenue each carry an average of 4500 vehicles per day while the other five streets crossing the NOT carry the remaining 8,000 vehicles per day that cross the NOT.

The average speed of vehicles approaching the grade crossing, shown in column 2 of Exhibit 6.5 is based upon the prevailing speed restrictions at each crossing. Although on some streets such as Farnham Place the speed restriction is twenty miles per hour, the approach to the grade crossing is made at higher speeds. A speed reduction of 100 percent is shown for all grade crossings having just crossbuck signs for warning devices because the Louisiana state law requires all vehicles to stop at grade crossings unprotected by an automatic warning device. Although the majority of vehicles never stop at these crossings, this assumption was used so as not to build law breaking action into the analysis. The dollar difference between a complete stop at the grade crossing and a 65 percent speed reduction can only be measured in small fractions of a cent and hence the total net impact of the assumption is not significant.

Exhibit 6.6 displays the railroad traffic that traverses the eight crossings each day. "Train movements per day" differs from "trains per day" at some of the grade crossings due to the interchange activities of some trains. A train, for example, that comes off of the Huey P.

EXHIBIT 6.5: Highway-Grade Crossing Inventory

Crossing	Average Daily Traffic	Average Auto Approach Speed (mph)	Speed Reduction Percent	Warning Device
1. Carrollton Avenue	4,528	25	100	Crossbucks
2. Metairie Road	17,113	30	65	Flashing Lights
3. W. Oakridge Drive	1,012	25	100	Crossbucks
4. Farnham Place	1,289	25	100	Crossbucks
5. Hollywood Drive	2,400	25	100	Crossbucks
6. Atherton Drive	2,363	25	100	Crossbucks
7. LaBarre Road	4,529	30	65	Flashing Lights
8. Shrewsbury Road	871	25	65	Flashing Lights

EXHIBIT 6.6: Rail-Grade Crossing Inventory

Crossing	Trains per Day	Train Movements Per Day	Cars per Train	Average Train Speed (mph)
1. Carrollton Ave.	24	24	48	10
2. Metairie Road	24	24	48	10
3. W. Oakridge Dr.	24	24	48	10
4. Farnham Place	24	24	48	10
5. Hollywood Dr.	24	27	48	5
6. Atherton Drive	24	27	48	5
7. LaBarre Road	24	27	48	5
8. Shrewsbury Rd.	24	31	48	5

Long Bridge and directly across the NOT is counted as one train per day and one train movement per day at each grade crossing. A train that is delivering or picking up cars on Long Siding or the KCS interchange tracks will necessitate blocking a crossing more than once. The number of times that these trains block a crossing is greater than a through train and hence the second column is greater than the first column.

The average number of railroad cars per train, 48, has the greatest variability of any of the statistics used in the highway analysis. It is evident from on-site inspection and track sheets obtained from the railroad that trains can be as small as one or two cars per train or as large as 150 cars per train. Based on six months of data, the arithmetic average number of cars per train was 48. Short of modeling the highway analysis on a train by train basis, 48 cars per train is the most accurate measure of train length.

Train speed, shown in the last column of Exhibit 6.6 was based on a series of measurements taken with the use of a stop watch. Train speeds also vary quite considerably, but within the range of 0 to 15 mph. The lower speeds at Hollywood Drive, Atherton Drive, LaBarre Road and Shrewsbury Road are a reflection of the slowing down and stopping of trains making an interchange of cars.

6.3.2 Highway User Operating Impacts

The cost to highway users of being stopped or delayed by the train blockage of a railroad crossing and from slowing down or stopping to traverse the railroad tracks has two components: 1) the increased cost of operating the vehicle, and 2) the increased cost from time lost to the vehicle operator. Both costs are based upon the number of vehicles stopped and the average length of delay experienced by stopped vehicles. The following section briefly describes the methodology used in calculating highway user costs. A full description of the methodology is presented in Appendix I.

To determine the number of vehicles stopped by passing trains, an estimate must be made as to the frequency that a train blocks a crossing and for how long the crossing is blocked on average. The average train blockage time can be calculated from the frequency of train blockages, the number of cars per train, and the average speed of the train. The average train blockage time at Carrollton Avenue, Metairie Road, Oakridge Drive, Farnham Place is 3.4 minutes, based on a 48 car train traveling at 10 mph. The average train blocking time at Hollywood Drive, Atherton Drive, LaBarre Road and Shrewsbury Road is 6.3 minutes, based on a 48 car train traveling at 5 mph.

In order to determine the number of vehicles stopped by the train blocking the crossing, an assumption must be made with regard to the flow of highway vehicles. The most common assumption is that vehicles arrive at the crossing in a uniform rate throughout the day. For example, Metairie Road's 17,113 vehicles per day would translate into 713 vehicles per hour for 24 hours. This assumption can create serious distortion in the analysis when a large degree of variability exists in the hourly traffic and/or the direction of the traffic flow. A large variability does exist at the Metairie grade crossing in the number of vehicles per hour and in their direction of flow. As shown in Exhibit 6.7 the traffic at the eight grade crossings was divided into five discrete time periods and split between northbound and southbound traffic. The number in each entry of the table indicates the number of vehicles per hour that traverse the grade crossing in the given direction during the specified block of time. For example, 360 vehicles per hour traveling northbound on Metairie Road traverse the grade crossing between 6 a.m. and 10 a.m. Using this segregated data, a more accurate determination of the number of vehicles stopped can be made.

The number of vehicles stopped that are attributable to a passing train has two components. During the time that the train physically blocks the crossing cars arrive at a uniform rate as specified in Exhibit 6.7 and are stopped. For example, if a 48 car train traveling

EXHIBIT 6.7: Average Hourly Traffic

	12 Mid- night 6 a. m.	6 a. m. 10 a. m.	10 a. m. 3 p. m.	3 p. m. 7 p. m.	7 p. m. 12 Mid.
Carrollton					
Northbound (N)	4	59	93	328	49
Southbound (S)	7	263	101	112	40
Metairie					
N	42	360	596	771	269
S	37	662	480	421	212
W. Oakridge					
N	1	19	28	66	12
S	1	51	21	29	8
Farnham					
N	1	31	40	84	18
S	1	39	28	43	12
Hollywood					
N	11	63	76	117	51
S	3	93	78	75	40
Atherton					
N	2	31	54	91	24
S	3	113	92	94	33
LaBarre					
N	3	62	157	190	50
S	6	158	181	166	47
Shrewsbury					
N	1	16	22	26	4
S	4	44	30	36	15

at 10 mph blocks Metairie Road during the period 10 a.m. to 3 p.m. (total blocking time = 3.4 minutes), then from Exhibit 6.7 we know that 10 vehicles per minute (596 vehicle per hour/60 minutes per hour) traveling in a northbound direction will be stopped by the train. During the full 3.4 minute blocking of the crossing, 34 vehicles that were traveling in a northbound direction will be stopped. When the train passes, the crossing is not cleared because 34 vehicles have formed a queue in front of the crossing blocking the advance of continuously arriving vehicles. Hence, additional vehicles will be blocked.

An allowance of two seconds per vehicle was allowed for dissipating the original queue. In the above example, the 34th vehicle, the last vehicle stopped while the train was present, would begin to move 68 seconds after the train cleared the crossing. During these 68 seconds or 1.13 minutes, vehicles are still arriving at the rate of 10 vehicles per minute and hence an additional 11 vehicles will be stopped by the traffic queue. The 11th vehicle will not proceed until 22 seconds after the 34th vehicle in the original queue begins to move. During these 22 seconds or 0.36 minutes an additional four vehicles will be stopped. The process continues until traffic is again flowing freely. In total, 49 vehicles would be stopped in this example. Exhibit 6.8 displays the total number of vehicles stopped per hour in each discrete time period in each direction.

EXHIBIT 6:8: Vehicles Stopped per Hour

	12 Mid- night	6 a.m.	10 a.m.	3 p.m.	7 p.m.
	6 a.m.	10 a.m.	3 p.m.	7 p.m.	12 Mid.
<hr/> 10 mph, 24 trains per day <hr/>					
Carrollton					
Northbound (N)	0	3	6	23	3
Southbound (S)	0	17	6	7	2
Metairie					
N	2	25	49	70	18
S	2	56	36	31	14
W. Oakridge					
N	0	1	2	4	1
S	0	3	1	2	0
Farnham					
N	0	2	2	5	1
S	0	2	2	2	1
<hr/> 5 mph, 27 trains per day <hr/>					
Hollywood					
N	1	8	9	15	6
S	0	12	10	9	5
Atherton					
N	0	4	7	11	3
S	0	14	12	12	4
LaBarre					
N	0	8	21	26	6
S	1	21	24	22	6
<hr/> 5 mph, 31 trains per day <hr/>					
Shrewsbury					
N	0	2	3	4	1
S	1	6	4	5	2

The average time delay experienced by vehicles is equivalent to one-half the average time the train blocks the crossing. This is based on standard traffic engineering practice and is explained in Appendix II. Exhibit 6.9 summarizes the total number of vehicles stopped per day due to a passing train, the total delay time experienced by these vehicles and the number of vehicles that are stopped or slowed by having to cross the tracks even when no train is present.

It is appropriate to point out that the average time delay may appear low relative to experiences of Metairie citizens particularly at Metairie Road. The time delays calculated do not reflect delays due to highway interference with the flow of traffic. In particular, after a train passes, many vehicles in the queue choose to make left turns across the queue which is dissipating from the other side of the tracks. This causes further queuing and added delay, but this is not directly attributable to the train and is not included in these calculations. Metairie Road in particular is a problem because the traffic far exceeds the capacity of the road which causes delay even without the train. In addition, particular circumstances can arise which make a comparison with averages appear absurd. If a 150 car train moving at 5 mph were to cross Metairie Road during peak evening traffic (771 northbound vehicles per hour), it would block the crossing for approximately 18 minutes, stopping 373 northbound vehicles and causing an average delay per

EXHIBIT 6.9

	Total Vehicles Stopped per Day by Train	Total Vehicle Delay Time From Train Blockage (min)	Vehicles Stopped or Slowed by Crossing	Average Train Blocking Time (min)	Average Delay Time
Carrollton	285	498.75	4,243	3.5	1.75
Metairie	1,337	2339.75	15,776	3.5	1.75
W. Oakridge	60	105.00	952	3.5	1.75
Farnham	74	129.50	1,215	3.5	1.75
Hollywood	332	1062.40	2,068	6.4	3.2
Atherton	294	940.80	2,069	6.4	3.2
LaBarre	599	1916.8	3,930	6.4	3.2
Shrewsbury	124	396.8	752	6.4	3.2
	3,105	7389.8			

vehicle of 10.1 minutes. This is not the normal case, but it can happen. Severe situations like the one described above are offset by many less severe interfaces between the railroad and highway user.

Based on a recently released guidebook for evaluating urban railroad problems prepared for the Federal Railroad Administration and the Federal Highway Administration, the additional operating cost and user time cost from being stopped or slowed by the railroad can be calculated.

Vehicle operating costs are composed of both the cost of slowing down to traverse a crossing and the cost of stopping and idling while waiting for a train to pass. The slowing cost is based on both the average approach speed of vehicles to the crossing and the roughness of the crossing itself. The stop/idle cost is based on the average approach speed and the average time delay. The highway user time cost is also composed of an element for slowing down to traverse a crossing and a stopping cost while waiting in a queue and is based on the roughness of the crossing, the average approach speed of vehicles and the average time delay. Exhibit 6.10 lists the daily operating and time costs incurred at each of the eight Metairie grade crossings.

EXHIBIT 6.10

<u>Street</u>	<u>Total Daily Incremental Operating Costs</u>	<u>Total Daily Incremental User Time Costs</u>	<u>Daily Incremental Accident Costs</u>
Carrollton Ave.	\$ 45.99	\$ 36.93	\$29.24
Metairie Rd.	131.82	170.06	8.31
W. Oakridge Dr.	10.27	8.13	6.54
Farnham Pl.	13.08	10.17	8.33
Hollywood Dr.	26.32	57.03	17.45
Atherton Dr.	25.69	51.34	17.18
LaBarre Rd.	38.59	105.57	2.48
Shrewsbury Rd.	<u>7.37</u>	<u>21.61</u>	<u>0.55</u>
	\$299.13	\$460.84	\$90.08

Total daily incremental highway costs = \$850.05

6.3.3 Grade Crossing Safety

Although Metairie has not experienced a severe history of rail highway accidents, the lack of adequate grade crossing protection, the physical grade of the crossing and the volume of railroad and highway traffic presents a serious danger to the highway users. In the past twenty years, there has been an average of one rail-highway accident per year, most of which have been minor, resulting in little or no harm to individuals and only minor property damage. There has been only one death attributable to a railroad-highway accident in Metairie.

Historical data on railroad-highway accidents is not necessarily a true indicator of the extent of danger at particular crossings and in fact is probably an underestimate of the potential danger in Metairie. There have been numerous attempts to index the severity of grade crossings based on a wide range of variables. In Appendix I, a formula is recommended for the evaluation of the average daily accident costs at rail-highway grade crossings, based on the average daily highway traffic, the number of trains per day and a factor for the type of warning device employed.

A calculation of the average expected accident costs incurred in Metairie based on this methodology is displayed in Exhibit 6.11. The warning device factors are shown below in Exhibit 6.12 and are applied as indicated in Exhibit 6.5.

EXHIBIT 6.11: Average Daily Accident Cost

Crossing	Daily Highway Traffic	Trains per Day	Protection Cost		Total Daily Cost
			Factor	Factor	
Carrollton Avenue	4,528	24	3.06	.00088	\$29.24
Metairie Road	17,113	24	0.23		8.31
W. Oakridge Drive	1,012	24	3.06		6.54
Farnham Place	1,289	24	3.06		8.33
Hollywood Drive	2,400	27	3.06		17.45
Atherton Drive	2,363	27	3.06		17.18
LaBarre Road	4,529	27	0.23		2.48
Shrewsbury Road	871	31	0.23		0.55
Total					\$90.08

Exhibit 6.12:

<u>Warning Device</u>	<u>Protection Factor</u>
Crossbucks	3.06
Stop signs (ADT > 500)	4.51
Stop signs (ADT ≤ 500)	1.15
Flashing lights	0.23
Automatic gates	0.08

6.3.4 Highway Impact Summary

Although the estimated dollar cost of the railroad impact upon highway users disguises the impacts as perceived by these users, they are instructive for comparison with other dollarizable costs and benefits. The total cost to highway users incurred due to the presence of the NOT in Metairie is \$850 per day as calculated in the previous sections. This implies that \$310,250 would be saved annually by highway users if the railroad were completely relocated. Major portions of this total cost could be saved though, through a series of in-place improvements as described in Chapter 7.

6.4 Emotional/Psychic Impacts

6.4.1 Railroad Presence

To some of the residents of Metairie, the existence of the railroad in their neighborhood preys upon their minds by consuming a large amount of thought during an individual's conscious hours. The amount of conscious thought expended can be divided between those who think about the railroad only when they come in direct contact with its operations at grade crossings or by horn noise intruding into their thought patterns and those who permit themselves to think about the railroads' existence through their working hours with or without direct physical stimulus. It is this latter group to whom the railroad presents

actual emotional or psychic impacts. Although latent emotional and psychic impacts may exist, their discovery is very difficult compared to the overt impact whose existence can be measured through conversation with the individual. The existence of the overt psychic impact has both negative and positive impacts upon the individuals in the affected neighborhood.

The presence of the railroad facility in Metairie causes a perceived barrier effect to some people. This barrier is a living thing which operates in the neighborhood. This "thing" creates an attractive nuisance for children whose access to the railroad right-of-way is presently impeded only by vocal or physical admonitions administered by the parents of the child. But in face of direct contact, such admonitions often lose their affect and children will be attracted to the right-of-way. The realization by the parents of such weaknesses on the part of their children will cause the parents to worry about the fact that the railroad is "there" and their child will ultimately come in contact with it. This type of fear or worry was most often voiced by the mothers who attended the public meetings and the mothers who chose to make their thoughts known.

Perceived results of the attractive nuisance fear on the part of parents are divided into three groups. First and foremost is the fear of direct physical contact between the child and the railroad equipment

which may result in injury to the child. Second is the fear of children using the railroad crossings on bicycles, losing control of the bicycle because of riding over the railroad tracks and the child being struck by another vehicle using the crossing at the same time. Such fears gain greater proportions due to the fact that the crossings have a very poor visibility directly in front of the vehicles because the railroad right of way is elevated from four to six feet above the existing level of the surrounding terrain. This is compounded at some of the crossings because the street actually curves immediately after the track is crossed. Also streets parallel to the railroad track enter the main streets at the foot of the grade crossings. The third fear is the possibility that a child may come into contact with lading which has spilled or leaked from passing railroad cars which may be harmful to the child's physical health. Comment has been made that children have broken into railroad equipment and taken articles which could have been dangerous to their health. This action requires the willful act of breaking and entering by the child which is a transgression of well established laws and principles and is not as incidious as a child casually passing by and being attracted to a pile of material on the roadbed. True, such an act requires one to trespass first, but even the simplest of hinderances such as a fence have not been erected along the right-of-way by either the railroads or the parish. The erection

of a fence becomes most effective when some of the less important crossings are closed. This requires the weighing of the tradeoff of increased inconvenience by the motorists to the actual support of the community to offer safety to its children.

Another negative emotional impact is continual thought of the residents of the neighborhood when leaving their home to a destination which requires that individual to cross the tracks. This is most often incurred due to commuting habits, social engagements, trips to church, and normal shopping. Requiring one to think ahead and attempt to out-guess the train is felt to be an imposition by the residents of the area.

Normally speaking when one pictures a residential suburb one does not include railroad tracks in the scenario. Although arterial blight and substantial effects upon property values cannot be proven by discussion of such subjects with local real estate brokers, impacts exist in the minds of the local residents. The existence of the railroad tracks is discordant with the residents ideas as to what their neighborhood should really contain and what it should look like. The local residents feel that Metairie is one of the "finest" neighborhoods if not in the country at least in New Orleans. Part of this feeling stems certainly from some attractive areas around the railroad tracks but is also supported by the different residential taxing structure which exists in Jefferson Parish.

Positive emotional impacts do exist in Metairie because of the presence of the railroad within the neighborhood. The existence of the railroad creates a perceived common nuisance with which many people can identify and feel a common bond. This common bond will bring a neighborhood together to work in unison for the accomplishment of a common goal. This has beneficial effects upon the neighborhood group.

The conflicts created by the railroad-community interface has also created institutions or incorporated groups who are striving for the removal of the railroad. Tremendous lessons of community unity can be learned in such a process and becomes a continuing benefit if carried beyond the single minded purpose of removing the railroad to attacking and solving other problems which exist in the neighborhood.

6.4.2 Potential for Catastrophe and General Safety

The operation of the railroad through Metairie creates another type of emotional or psychic impact. The fact that the railroads carry articles which are potentially dangerous to people and that mishaps in other parts of the United States have occurred which severely impacted industrial, commercial, and residential areas is well known throughout the neighborhood. The fear which is felt by some people who reside in Metairie has been voiced. The railroad cars which often sit on Long Siding between the time that they are delivered and picked

up by the railroads involved created perceived hazards in the minds of the inhabitants of the area. Whether the cars are full of product or empty is immaterial because to the person living next to the track the railroad car personifies a very real danger which could rob that individual of his home, his belongings, and possibly his family.

This fear has become so generalized that the sight of any tank car automatically triggers the reaction that it is a dangerous hazard and should be removed.

The knowledge that freight trains once in motion possess an inordinate amount of inertia and are not as controllable as an automobile causes some people to worry about a railroad car jumping the tracks and demolishing anything in its path until it comes to rest disregards the fact that the Metairie line is not a high speed railroad track. Although derailments have occurred in the past, primarily prior to the new welded rail being installed in 1973, and have not caused substantial damage to the residents along the railroad tracks, the fear that some day it may happen is foremost in their minds. Admittedly, should either a catastrophe or derailment occur on the Metairie line the results could be expensive, but the fear of the occurrence is stronger than the probability of occurrence and thus exerts a negative emotional or psychic impact.

Guesstimations or forecasts of the effects of a catastrophe depend upon so many variables such as the product involved, weather conditions, proximity of additional potentially dangerous products in railroad cars, time of day and exact position of the catastrophe that suffice it to say that should a catastrophe occur, it is generally recognized not only by the community but also by the railroads that the results could be expensive. In any event, the presence of the railroad in the Metairie neighborhood exerts very real emotional impacts.

7.0 IDENTIFICATION, DESCRIPTION AND ANALYSIS OF ALTERNATIVE SOLUTIONS

Having delineated the existing railroad-community conflicts that exist in the Metairie study area and having placed these in perspective to the existing railroad and community conditions, a series of alternatives were developed to either eliminate or alleviate these conflicts. As described in Appendix IV, an effort was made to identify all alternative routes which might be followed in relocating the current rail traffic across the NOT. These routes as described below ranged between complete utilization of existing rail facilities in the New Orleans area to the construction of a new regional railroad system. In addition, a separate effort was made to develop alternatives that would either eliminate or alleviate specific conflicts that were identified without physically removing the rail facilities from the Metairie area. This effort produced numerous alternatives which by themselves produced relatively little benefit to either the community or the railroad as compared to a major relocation. These in-place alternatives taken as a package though, did produce sufficient benefits to warrant consideration in similar depth as the relocation alternatives.

There are three basic in-place alternative packages and two groups of relocation alternatives presented in the following sections.

The in-place alternative packages include a package for complete alleviation of all conflicts, a package which alleviates all conflict that is currently practical to alleviate and a package which is also practical but can be implemented in a relatively short period of time at a relatively low cost. The relocation alternatives are grouped as local or regional depending upon the scope of the alternative.

7.1 In-Place Alternatives

The following subsections fully describe the total packages developed, the elements that comprise the package and the cost and impacts of its implementation. In addition to the three packages described in the introduction to this chapter (complete alleviation, technically feasible and short term-low cost) a fourth section has been added which describes in-place improvements and their impacts that were not given consideration in any package for the reasons that are delineated.

7.1.1 Complete Conflict Alleviation Package

As described in Chapter 5, the major conflict areas in Metairie include horn noise, switching noise, vibration, highway delays and grade crossing safety. In addition, the general safety of children and pedestrians in the neighborhood and the potential for a catastrophic accident were also delineated as less serious conflicts. The

following package is aimed at eliminating or greatly alleviating these conflicts through the combination of various in-place alternative elements.

To eliminate highway delay due to train blockages, a grade separation at Metairie Road, LaBarre Road and Carrollton Avenue was included in the package. The remaining five crossings of the NOT in Metairie would be closed. In addition to eliminating highway delay, these elements would eliminate highway accidents caused by the existence of grade crossings and the necessity of sounding the horn since all grade crossings would be eliminated.

Switching noise and vibrations, vibrations due accelerating locomotives and the potential for a catastrophic accident were all attacked by the removal of the interchange tracks in the Shrewsbury area and Long Siding in Metairie. To alleviate the safety problems of children and other pedestrians, two pedestrian overpasses were included in the package.

7.1.1.1 Grade Separation Metairie Road

7.1.1.1.1 The Need for a Separation

Metairie Road currently carries an average of 17,000 vehicles per day over the NOT. The majority of this traffic is local to the two and a half square mile area bounded by I-10, Airline Highway and Causeway Boulevard, the major arteries on the east bank of Jefferson

Parish. Metairie Road is used by local residents to access these thoroughfares and to access the numerous commercial establishments along Metairie Road. Approximately 1,300 vehicles per day are stopped at this crossing due to the blockage of the train. This blockage costs the community \$73,000 per year in increased operating costs and highway user time lost.

Metairie Road currently has a flashing light warning device, but is still a dangerous crossing. The top of the rail is approximately four feet above the grade of the road creating a sight barrier to oncoming traffic. In addition, the track curves quickly out of sight east of the crossing, shortening the visual sighting time of the train.

As discussed in Section 7.1.1.4, this package contemplates the closing of the five railroad crossings between Metairie and LaBarre Roads. With the closing of these crossings, the average daily vehicular traffic at the Metairie Road will certainly increase, creating an even more serious delay and safety problem. Even without the increased traffic due to the closing of five crossings or the normal yearly increase in traffic, the Metairie Road crossing justifies a grade separation.

7.1.1.1.2 Underpass vs. Overpass

A grade separation at Metairie Road envisions leaving the railroad tracks at their current grade while diverting the highway either

under or over the tracks. (Elevation and depression of the tracks are discussed in Sections 7.1.4.1 and 7.1.4.2 respectively.) The major criteria for the decision as to the type of grade separation are the cost of construction and the impact on the available right-of-way. All other factors remain essentially equal in the comparison of an overpass and an underpass.

The overpass at Metairie Road, although twice the cost of construction of an underpass, does replace some of the right-of-way consumed parallel to the structure that is currently used for parking. The area underneath the overpass could be accessed by parallel service roads and used for business parking. The underpass does not provide this new space and hence reduces the available parking in the area.

Since the necessary vertical clearance for a highway underpass on Metairie Road would be 15 feet and for a highway overpass 23 feet above the railroad tracks, the overpass structure would rise higher above the tracks than the underpass would drop below the tracks. Maintaining the appropriate grade for 30 mph vehicular operations would then require the overpass to be approximately 200 feet longer than the underpass, hence impacting more of the access streets feeding Metairie Road. *or more!*

The following sections 7.1.1.3 to 7.1.1.5 discuss in greater detail the operations and impacts of both types of separation.

7.1.1.1.3 Physical Description

The Metairie Road underpass would be designed to meet Louisiana Department of Highways Minimum Design Standards for a two-lane collector street (see drawing No. 2 in Volume II of this report). The two-lane Metairie Road would be carried underneath the New Orleans Terminal Railroad Company tracks in an open, retained cut, and a double track railroad bridge for the NOT spanning the retained cut would be provided. The existing elevation of the NOT would be maintained unchanged, and the new profile of Metairie Road would be set for thirty miles per hour maximum speed (7 percent grade) with fifteen feet of vertical clearance underneath the railroad bridge structure.

A pumping station with three 1,750 gallon per minute capacity pumps (two operating and one standby) would be provided at the bottom of the underpass. The pump station would discharge directly to the 17th Street Canal via a 1,700 feet long, 18 inch diameter, buried pipeline along the railroad right-of-way.

The underpass would start its descent at the south foot of Wood-Forest Street on the southside of the tracks and come back to grade on the north side of Focis Street on the north side of the tracks. Access to existing buildings along the underpass would be provided by service roads on both sides of the underpass. The underpass and service

roads would be constructed within existing right-of-way limits and hence no new right-of-way would be required.

The Metairie Road overpass would provide grade separation of the NOT by elevating Metairie Road on a structure with 23 feet vertical clearance over the tracks which would be maintained at the existing elevation. The two-lane road structure would be supported on bents spaced approximately 600 feet apart with approaches consisting of short retained fill sections. The vertical profile of the overpass (7 percent grade) would be set for 30 miles per hour maximum speed. !!!

Access to existing buildings along the overpass would be provided by service roads on the north and south side. The area underneath the overpass would be paved and could be used for parking.

The overpass structure and service roads would be constructed within existing right-of-way limits, except for a portion of private right-of-way which would be required for the entrance to the service road on the south side of the tracks on the east side of Metairie Road. This right-of-way would require the consumption of a portion of the parking facilities which serve the Security Homestead Bank Building.

7.1.1.1.4 Operation of Separation

Approaching the underpass from either direction, access to Wood-Forest Street would be unrestricted as would an exit from this street on the Metairie Road. Access to the southwesterly segment of

Frisco Street from a Northbound direction on Metairie Road will still be available via a left turn onto the frontage road. An exit from Frisco Street onto Metairie Road will be restricted to Metairie Road southbound since a 180 degree turn would be necessary to access Metairie Road northbound. Similarly, vehicles traveling southbound on Metairie Road will be unable to access this segment of Frisco Street. This is a minor problem since this segment of Frisco Street handles very little traffic and this traffic can gain access via Hector Road and Avenue A.

On the north side of the tracks, access to Focis and Frisco Streets will be limited to southbound traffic via the frontage road. Similarly, an exit from Focis and Frisco Streets onto Metairie Road would be limited to a northbound direction. (Access is not hindered though since Carrollton Avenue provides access in either direction.) Central Drive which is a dead end street would be restricted to a southbound entrance from Metairie Road and a northbound exit on to Metairie Road via the frontage road. To better serve the 10 or 15 homes on Central Drive, a small street could be provided parallel to the tracks to connect Central Drive with Oakridge Drive. This would provide a route to Metairie Road southbound and from Metairie Road northbound.

Similar access restrictions would be prevalent with the construction of an overpass, but due to the added length of 200 feet Wood-Forest Street would be restricted to a southbound exit and a northbound entrance to and from Metairie Road. Residents of this area who would normally use this access to Metairie Road could make a northbound entrance on to Metairie Road or a southbound exit from Metairie Road via Dahlia Street which is approximately two blocks south of the Wood-Forest Street entrance.

A detailed traffic flow study would be appropriate prior to construction of either an overpass or underpass to determine the need for traffic control devices at each end of the separation. These devices would ease the flow of traffic to and from the frontage roads paralleling the grade separation.

7.1.1.1.5 Impacts

Construction: The order-of-magnitude cost estimate to construct an overpass or an underpass at Metairie Road would be \$2,990,000 and \$1,480,000 respectively. The elements of these cost estimates and the basis for their determination are discussed in Appendix II.

The construction time for these structures would be two years, during which time vehicles would be provided access via temporary service roads. Naturally some of the current traffic might choose to use alternative routes to avoid the delay caused by construction.

Highway: As discussed in Section 6.3, 1,300 vehicles per day of the 17,100 vehicles that traverse the Metairie Road crossing are stopped due to train blockage and its resultant queueing. The delay created by this blockage costs the community approximately \$300 per day in highway user time delay and vehicle operating costs. With the institution of a grade separation these costs would be saved although there would be a total daily cost of approximately \$8 for vehicles operating over a 7 percent grade.

The estimated daily accident costs of \$8 could be saved with the use of a grade separation although there may be a slight decrease in these savings due to operating vehicles over or under the grade separation.

There will be some traffic inconvenience added to the Metairie Road crossing area due to the limited access created at the feeder streets discussed previously. The actual cost of this inconvenience is undetermined but minor relative to the current highway costs imposed by the train blockage. Although access is limited on these feeder streets, they are not completely restricted from the use of Metairie Road.

Noise: With the elimination of the direct rail-highway interface the need for warning devices and locomotive horns would be eliminated. The noise associated with these systems as described in Section 6.1.1 can exceed 100 decibels at 100 feet from the source.

Right-of-Way: Although the underpass would not require any new right-of-way acquisitions, the overpass would necessitate acquiring the northwest corner of the Security Homestead Bank parking lot to allow the frontage road to exit on to Metairie Road.

Local Businesses: Although access to the commercial establishments along Metairie Road directly adjacent to the grade separation would not be eliminated, it would be restricted. In addition, much of the existing parking would be eliminated due to consumption of the current right-of-way that is used for parking. This parking area is part of the right-of-way for Metairie Road, hence it was not mentioned above as a parcel to be acquired. In addition to the limited access and reduced parking, the visibility of the commercial establishment would be reduced by the grade separation structure and the elimination of stopped vehicles. These factors may combine to reduce the economic viability of some of these commercial establishments, but it would not necessarily put them out of business.

7.1.1.2 Grade Separation LaBarre Road

7.1.1.2.1 The Need for A Separation

LaBarre Road is the only major access from Metairie Road and the old Metairie neighborhood to Airline Highway. Although the LaBarre Road grade crossing handles approximately 4,500 vehicles per day, train blockages are relatively more severe than at Metairie Road.

Of the 4,500 vehicles per day, 600 are blocked by train crossings and its attendant queuing effect whereas Metairie Road produces 1,300 blockages from 17,100 crossings per day. The increased proportion of blockages is due to the fact that interchange operations take place over LaBarre Road creating a greater number of blockages per train and each train moves at a slower average speed. In addition, through trains exhibit a slower operating speed over this crossing due to slowing down for the train signal to clear the crossing with ICG in Shrewsbury.

A severe safety problem occurs during peak traffic hours on the south side of the tracks. As vehicles queue at the grade crossing, the back up of vehicles to Airline Highway creates a problem for those vehicles entering LaBarre Road to join the queue or make access to Gaylord's or Schwegmann's. The height of the crossing above the grade of the roadway creates additional safety hazards. The poor visibility down the tracks as well as across the tracks increases the probability of a railroad-vehicular or vehicular-vehicular accident.

These problems will become more severe as traffic increases either from normal growth or from the closing of other grade crossings as discussed in Section 7.1.1.4. For these reasons, a grade separation at LaBarre Road would be appropriate.

7.1.1.2.2 Overpass vs. Underpass

Both the overpass and underpass create a severe interface with Airline Highway (see drawing No. 3 in Volume II of this report). The distance from the center of the tracks to the LaBarre Road intersection with Airline Highway is approximately 475 feet which is the minimum space necessary for an underpass and in fact about 25 feet short of the necessary distance for an overpass. From this standpoint the overpass would seem less feasible because of its impact upon Airline Highway. The underpass, although still creating a problem at the intersection is less severe. In addition, the overpass requires a 12 percent grade as opposed to the 7 percent grade for the underpass, to prevent it from ending in the middle of Airline Highway. This 12 percent grade would decrease the speed limit from 30 mph to 20 mph and induce an increased operating cost for vehicles using the overpass.

The underpass presents a drainage problem during heavy rainfall. The Metairie Road underpass was designed to pump water into the 17th Street Canal which can handle large volumes of water. The LaBarre Road underpass would have to be pumped into the existing storm drain system which is currently inadequate to draw off excess water during a heavy rain.

Unlike the Metairie Road grade separations, major portions of the adjacent right-of-way would be consumed by these separations.

On the south side of the tracks, the right-of-way would consume parts of the parking areas of both Schwegmann's and Gaylords. Some of this parking area could be replaced with the overpass.

7.1.1.2.3 Physical Description

The LaBarre Road underpass would be designed to meet Louisiana Department of Highways Minimum Design Standards for a two-lane collector street. The underpass would be approximately 1000 feet in length and would provide 15 feet of clearance under the tracks. The vertical profile would have a 7 percent grade, suitable for a maximum speed limit of 30 mph.

Because of the proximity of the Airline Highway intersection with LaBarre Road, the overpass would have to be designed with a 12 percent grade in order to reduce the overall length to just over 1000 feet. This would lower the maximum speed limit to 20 mph which would only meet Louisiana Department of Highways Minimum Design Standards for a two lane local street. Twenty-three feet of clearance would be provided under the overpass for the unrestricted movement of trains.

In both types of separation, service roads would be provided parallel and adjacent to the structure. These service roads would provide limited access to Loumor Avenue and Manley Avenue.

The underpass structure would be provided with three 1,750 gallon per minute pumps similar to those designed for the Metairie

Road underpass. The pumps would discharge directly into the existing storm drain system.

The construction of an underpass at LaBarre Road would require, in addition, the relocation of a telephone trunk line which South Central Bell uses to service a major portion of the Metairie area.

7.1.1.2.4 Operation of the Grade Separation

Access to LaBarre Road from Loumor Avenue on the north side of the tracks would be restricted to a north bound direction. Similarly access from LaBarre Road to Loumor Avenue would be restricted to vehicles traveling in a southbound direction on LaBarre Road. Access to Airline Highway from Loumor Avenue or access to Loumor Avenue from Airline Highway would be made via Metairie Road and one of the many streets parallel to LaBarre Road, north of the railroad tracks.

Manley Avenue would be restricted to a southbound exit on to LaBarre Road or into Schwegmann's parking lot adjacent to the separation and to a northbound entrance from LaBarre Road. Access to Metairie Road from Manley Avenue which would have normally been made via northbound LaBarre Road, would have to be made via Airline Highway to the intersection with Metairie Road at Severn Avenue. A similar procedure would have to be followed to gain access to Manley Avenue from Metairie Road. Access to Manley Avenue would be less

restrictive if the grade crossings between Metairie and LaBarre Roads were not closed as described in Section 7.1.1.4.

Because of the proximity of the end of the grade separation to Airline Highway, a severe traffic flow situation would be created. A detailed traffic flow study would have to be performed in order to provide appropriate traffic control devices to ease the interface of vehicles entering this intersection.

7.1.1.2.5 Impacts

Construction: The order-of-magnitude cost estimate to construct an overpass or underpass would be \$2,460,000 and \$1,470,000 respectively. The elements of these cost estimates and their basis for determination are discussed in Appendix II.

The construction time for these structures would be two years during which time vehicles would be provided access via temporary service roads. Naturally some of the current traffic might choose to use alternative routes to avoid delay caused by construction.

Highway: As discussed in Section 6.3, 600 vehicles of the 4,500 vehicles that traverse the LaBarre Road crossing are stopped due to train blockage and the resultant queuing. The delay created by this blockage costs the community approximately \$145 per day in highway user time delay and vehicle operating costs. With the institution of a grade separation these costs would be saved although there would be

a total daily cost of approximately \$2 for vehicle operations over the grade crossing.

A major part of the daily accident costs of \$2.50 would be saved by the grade separation. Some increases in accident cost might accrue due to the severity of the intersection at Airline Highway.

Although access is limited to and from Loumor Avenue and Manley Avenue due to the grade separation, access is not completely eliminated. There will be some undetermined costs to users of these roads due to the circuitry of the new routes that they must follow. These costs are minor compared to the current cost to vehicles using LaBarre Road.

Right-of-way Acquisition: One of the additional costs of instituting a grade separation at LaBarre Road would be the acquisition of right-of-way on both the north and south sides of the track. On the south side of the tracks a small strip of parking area from both Schwegmann's on the east and Gaylord's on the west would be consumed. Gaylord's would only have access at the foot of the grade separation on Airline Highway and via the adjacent service road. Schwegmann's would lose its LaBarre Road access except for the service road, but would retain sufficient access along Airline Highway.

On the north side of the tracks, on the east side of LaBarre Road, four or five homes would be impacted and have to be acquired.

On the west side of LaBarre Road additional homes may have to be acquired due to the physical isolation created by the separation closing off driveways.

Local realtors were unwilling to place a value on the homes that would be consumed on LaBarre Road, but indicated that commercial property on Airline Highway such as would be consumed at Schwegmann's and Gaylord's is selling at less than \$2 a square foot.

Noise: With the removal of the direct railroad-highway interface, the need for warning devices and locomotive horns would be eliminated. The noise associated with these warning systems as described in Section 6.1.1 can exceed 100 decibels at 100 feet from the source.

Local Businesses: Although access to Schwegmann's and Gaylord's would be impaired by the existence of a grade separation, enough access would remain to ~~not severely impact business~~. These stores draw customers from a wide area and hence minor inconvenience would have less impact on a decision to frequent the stores than would be true of local businesses.

7.1.1.3 Grade Separation at Carrollton Avenue

7.1.1.3.1 The Need for a Separation

Carrollton Avenue serves as a local bypass route for traffic at peak commuting hours around Metairie Road. Bonnabel Boulevard, I-10, and most of Metairie north of Metairie Road can be reached by

using Carrollton Avenue. Of the 4500 vehicles using this crossing each day, approximately 285 are stopped by train blockage and the resultant queuing.

Carrollton Avenue has the most severe grade crossing in the entire Metairie area. The top of the rail is approximately six feet above the grade of the road blocking vision across the tracks for oncoming vehicles and down the track for oncoming trains. Crossbucks are the only warning device.

With minor crossings closed, as discussed in Section 7.1.1.4 Metairie Road traffic will increase, further encouraging traffic to use the Carrollton Avenue crossing to bypass the area. A grade separation here would eliminate a severe safety hazard and a potential problem of highway delay.

7.1.1.3.2 Overpass vs. Underpass

Given the residential nature of the area surrounding the Carrollton Avenue crossing and hence surrounding the proposed grade separation, the primary criteria for the decision between an overpass and an underpass is the extent right-of-way acquisition necessary to construct the separation. The overpass would have to provide 23 feet of clearance above the top of the rail and hence would be 29 feet above the grade of the road. This would then require additional right-of-way since the structure would have to be longer than the standard 1150 feet

to maintain a 7 percent grade. Conversely, the underpass would not have to be as deep to provide the necessary highway clearance and hence would require less than the standard 950 feet.

The proximity of Carrollton Avenue to the 17th Street Canal reduces the drainage problems of an underpass. Unlike a LaBarre Road underpass, the Carrollton Avenue underpass could be pumped directly to the 17th Street Canal rather than into the existing drainage system.

It appears that in addition to a cost saving of 1.5 million dollars for an underpass rather than an overpass, the secondary benefits of an overpass outweigh those of the underpass.

7.1.1.3.3 Physical Description

The underpass and overpass would be designed in similar fashion to those discussed for Metairie and LaBarre Roads. Both the underpass and overpass would be designed with 7 percent grades providing the necessary highway or railroad clearances of 15 feet and 23 feet respectively.

As discussed in the previous section, the length of the grade separation will be different from those separations designed for Metairie Road. Approximately 100 additional feet of right of way would be required to provide an overpass 23 feet above the top of the rail which is currently 6 feet above the grade of the road. The

underpass, on the other hand, would not have to be 15 feet below the grade of the road since additional clearance is provided by the raised railroad bridge. The full six feet between the grade of the road and the track could not be gained due to the structural supports of the railroad bridge to be constructed. Two to four feet of clearance could be gained, but the reduction in the total length of the underpass would only be reduced by approximately 50 feet. In fact, there may be no saving in total length if the grade of the underpass is reduced to take advantage of the additional clearance.

Service roads adjacent to the grade separation would only be necessary to provide access to those homes that remained along the adjacent properties. It is contemplated that most homes along the separation would have to be acquired, as explained in Section 7.1.1.3.4, and hence service roads would be unnecessary.

7.1.1.3.4 Impacts

Construction: The order-of-magnitude cost estimate for a grade separation at LaBarre Road is the same as for a grade separation at Metairie Road, Namely, \$1,470,000 for an underpass and \$2,460,000 for an overpass. As with the other grade separations discussed previously, the time of completion of either an underpass or an overpass would be two years. An additional time delay may be realized in the construction of a grade separation at Carrollton Avenue

due to the time necessary to acquire and relocate the houses which must be consumed. During the actual construction period, highway vehicles would be routed over service roads when feasible or be re-routed to Metairie Road.

Highway User Costs and Safety: As discussed in Section 6.3, there are currently an average of 4500 vehicles per day which cross the Carrollton Avenue railroad crossing. Approximately 285 vehicles per day are stopped due to a train blocking a crossing or the queuing which results from such blockage. This train blockage is currently costing the community \$46 per day in vehicle operating cost and \$37 in user time cost. The physical severity of the grade crossing in combination with the large volume of traffic making use of it, produces an average daily accident cost to the community of approximately \$29.

With the implementation of a grade separation at Carrollton Avenue, these costs to the community could be saved. There would be a total cost to the community of \$2 per day in vehicle operating costs for driving over or under the railroad. This \$2 represents the difference of operating costs over a 0 percent grade and a 7 percent grade.

With the implementation of a grade separation at Carrollton Avenue, current traffic using this crossing would flow unimpeded. The only alteration in traffic flow would occur at Frisco Street, where it intersects with Carrollton at the railroad. Unless service roads were

provided, vehicles currently making access to Carrollton Avenue via Frisco Street would have to use Nursery or Papworth Streets to make access to this northern section of Metairie. The new route would be no longer than the current route and hence this rerouting would be a minor inconvenience.

Right-of-way Acquisition: In order to construct a grade separation at Carrollton Avenue, residential property on both sides of the street and on both sides of the track would have to be acquired. The right-of-way acquisition would involve five homes northwest of the crossing, one home to the northeast, four homes to the southeast and three homes to the southwest. It is not definite that all of these homes would have to be relocated, but all would lose property to the grade separation.

Noise: As is true of the Metairie and LaBarre Road grade separations, the elimination of the direct railroad-highway interface, eliminates the need for the train engineer to sound his horn. As previously discussed the locomotive horn is the primary intrusive sound in the neighborhood, reaching over 100 decibels from a distance of 100 feet. Although the general train noise would still be present, the noise impact would be minimal.

7.1.1.4 Close Five Crossings

The five remaining grade crossings along the NOT, Oakridge Drive, Farnham Place, Hollywood Drive, Atherton Drive, and Shrewsbury Road could either be closed or automatic gates installed to alleviate some of the major problems experienced by Metairie citizens. The alternative being described in this section (Section 7.1.1) with its combination of all elements is designed to alleviate as many of the existing problems as is physically feasible. Closing five crossings provides greater benefits to the Metairie area than does placing gates at these crossings, and hence was chosen to be an element of this alternative. The placement of gates at these crossings is discussed in Section 7.1.2.1.

7.1.1.4.1 Description and Intent in Closing Five Crossings

In total, these five grade crossings handle 7,935 vehicles per day as shown in Exhibit 6.5, most of which are local to Metairie.

Closing these crossings would force the current traffic to find alternative routes for crossing the railroad. In terms of the total package, most traffic would be forced to use the grade separation at either

Metairie Road, LaBarre Road or Carrollton Avenue in order to make access from the north side of the tracks to the south or the reverse.

Closing of these five crossings is the logical addition to the three grade

separations and two pedestrian overpasses (Section 7.1.1.5) in the elimination of a great majority of the railroad-community interface in Metairie.

The five crossings would be blocked by a non-permanent barricade which could be removed at any time by the Parish, but secure enough to prevent vandals from removing it. A chain link fence surrounded by trees and shrubs could be used to provide better protection and to enhance the aesthetics.

7.1.1.4.2 Traffic Alterations

There is no doubt that the closing of five crossings will create an inconvenience for most of the 7,935 daily vehicles using these crossings, but in no case will access be completely cut off. These five crossings are often used as a short cut to avoid traffic on Metairie Road and hence those vehicles will only experience a minor inconvenience. The major inconveniences will be experienced by those motorists who are currently making short trips across the tracks. The access routes that would be followed by these motorists after the closing of the crossings is described below and can be seen in Exhibit 7.1.

To make access from the area around Atherton Drive, north of the tracks to the area around Atherton Drive, south of the tracks, motorists would use Metairie Road westbound to Airline Highway eastbound to LaBarre Road, Manley Avenue and Loumor Avenue. The

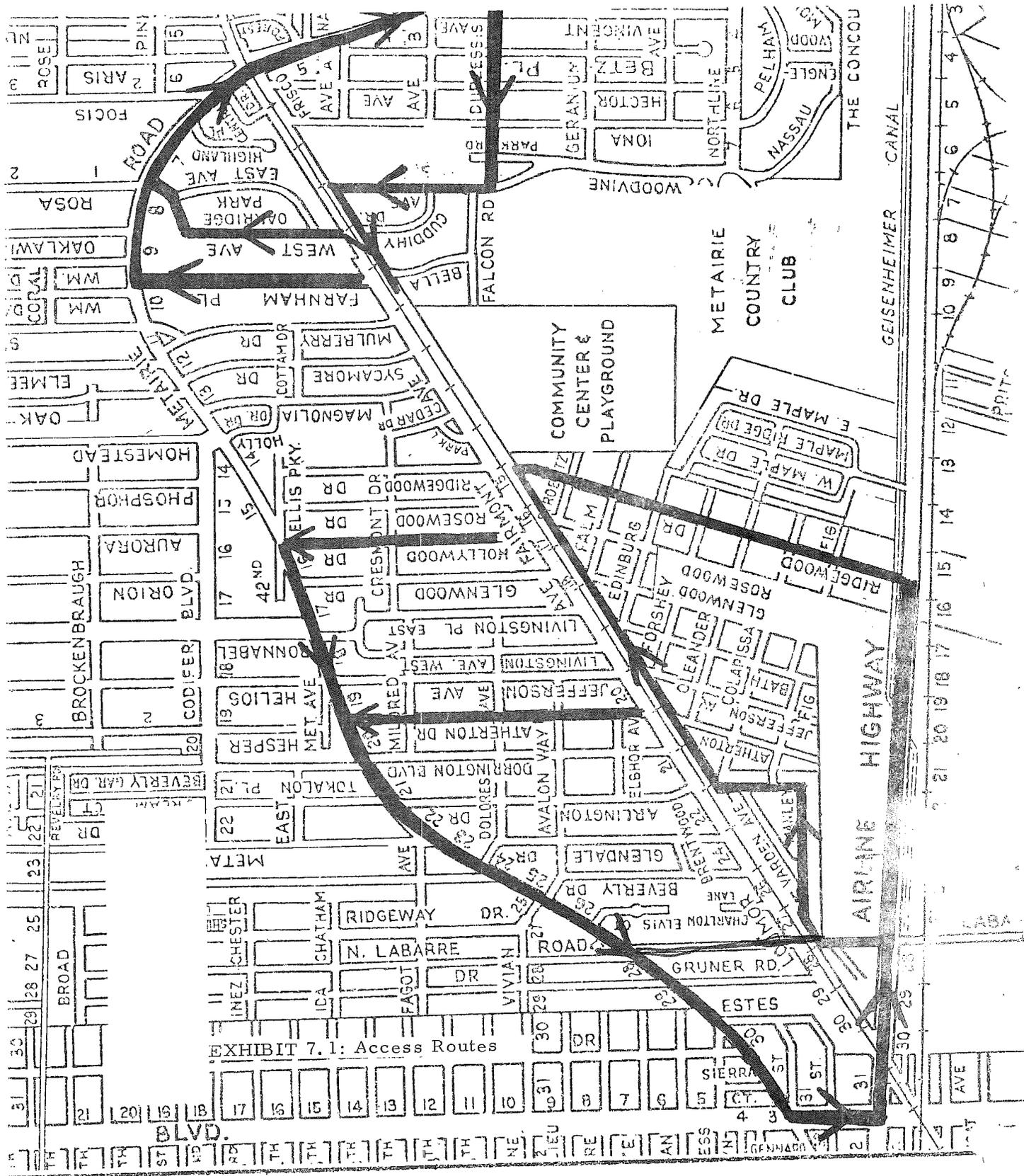


EXHIBIT 7.1: Access Routes

process could be reversed to make access to the north of the tracks from the south.

To make access from Hollywood Drive north of the tracks to the area of Rosewood Drive south of the tracks, or the reverse, a route similar to that described for Atherton Drive would be taken.

To make access from Farnham Place or West Oakridge Drive north of the tracks to the area surrounding the Metairie Country Club, motorists would use the Metairie Road grade separation to Duplessis Street from which all other streets could be accessed.

For those few vehicles using the Shrewsbury Road crossing, access can be made to or from Airline Highway via LaBarre Road.

7.1.1.4.3 Impacts

With these five crossings closed, all current grade crossings of the NOT in Metairie would be eliminated. This in turn eliminates highway delay and the potential for a rail-highway accident which currently costs the community \$281 a day. This saving is somewhat offset by the added cost of rerouting traffic around the closed crossings.

Although general train noise would still be prevalent in the Metairie neighborhood, the major intrusive noise, the train whistle, would be eliminated, with the elimination of the grade crossings.

The general safety of the pedestrians and children would be improved by the closing of these five crossings. The provision of a

fence with the closing of the crossings would force all pedestrians and children to make use of the specially built pedestrian overpasses to cross the tracks on foot. In addition, children would no longer be able to play on the tracks since all access would be eliminated.

The railroads would recognize a saving from reduced maintenance of the grade crossings of approximately \$8,000 per year.

7.1.1.5 Pedestrian Crossings

7.1.1.5.1 Underpass

An underpass could be constructed to provide pedestrian travel across the railroad right-of-way without requiring the individual to come in contact with railroad facilities and operations. The underpass facility would be constructed of concrete, ten feet high and sixteen feet wide with access ramps paralleling the tracks located within the railroad right-of-way, which would provide use by both pedestrians and bicyclists. The ramps would be approximately 100 feet long in a retained cut with a 12 percent grade. A pumping station with two 500 gallon per minute pumps would be provided at the bottom of the underpass and would discharge into the existing storm drain system. The underpass would be well lighted to facilitate use in the evening.

This facility would be located to provide access to the park and playground facilities south of the railroad tracks. Such a facility would require approximately two years to complete and would cost \$460,000

to construct. This figure includes engineering, procurement, and construction management, contingency and escalation costs.

7.1.1.5.2 Overpass

As an alternative for consideration to an underpass, a pedestrian overpass could also be provided. The overpass would be elevated above the railroad tracks to provide sufficient clearance for train operations. The overpass would be supported by concrete columns and would provide spiral access ramps on each side to permit pedestrian and bicyclist use, although the bicyclist would be required to walk his vehicle over the overpass. The ramps and overpass facility would be enclosed in a cyclone fence for safety purposes.

This type facility would require approximately one year to construct and would cost \$240,000.

Consideration of either a pedestrian overpass or underpass is required to provide a means for pedestrians, especially children, to gain access across the tracks without coming in contact with the railroad facility.

7.1.1.5.3 Fencing

In addition to the overpass and underpass, consideration was given to precluding all other pedestrian access to the railroad track by constructing a fence on railroad right-of-way parallel to the tracks for the length of the NOT in the study area. Such a facility would be most effective if the grade crossings were either separated or closed.

A fence could consist of either a cyclone type structure which are commonly seen along interstate highways and which currently exist along Interstate 10 in Metairie. This type fence would cost approximately \$275,000 to provide protection along both sides of the track. A more attractive fence could be provided by combining the cyclone facility with wooden slats. Such a facility would be more costly to maintain and would invite the works of grafitti. Such a facility would cost approximately \$375,000.

The benefit obtained by construction of a fence is the preclusion of pedestrian access to the tracks and the forced use of the pedestrian crossings over either grade separation sidewalks or pedestrian overpass or underpass. A fence would eliminate many of the potential dangers which currently exist due to children using the right-of-way as a thoroughfare and their climbing on cars sitting on the interchange tracks. A fence would also preclude children's access to any hazardous material on the railroad bed.

The combination of pedestrian crossing facilities and fencing would cause minor inconveniences because extra distance may be required to be traveled to reach the crossing facility. However, the safety benefit gained outweighs the inconvenience caused by one's having to travel further to use the facility rather than merely crossing over the tracks.

7.1.1.6 Interchange Relocation

7.1.1.6.1 Description

Currently the interchange tracks used by the NOT to interchange with the KCS and ICG are located in the Shrewsbury area between LaBarre Road and the end of the NOT at ICG northbound mainline. East of LaBarre Road lies Long Siding which is used for the NOT-KCS overflow and ¹KCS-SP interchange (see drawings Nos. 4 and 5 in Volume II of this report).

Long Siding is approximately 4,000 feet long and can accommodate 70 cars when one takes into account the requirement to break the interchange cut at Atherton Drive and Hollywood Drive.

The KCS interchange consists of two tracks located parallel to and north of the NOT mainline between the LaBarre Road grade crossing and the KCS mainline. The two tracks cross over Airline Highway on a railroad bridge. Each track is approximately 1,600 feet long and together will accommodate approximately 70 cars depending upon their length.

The ICG-NOT interchange consists of three tracks, two parallel to and south of the mainline. The one track south of the mainline is approximately 1,650 feet long and the two north of the mainline are approximately 1,450 feet each. These three tracks will accommodate about 85 cars after allowing for the break required at Shrewsbury Road grade crossing.

The only area available to relocate these interchange tracks is located on ICG property west of Shrewsbury. This area is located between the north and south bound main tracks of the ICG. The location of these tracks has taken into account both the proposed location of the Earhart Expressway and the possible relocation of the KCS to ICG property between Kenner and Shrewsbury. The new interchange would be located between approximately the end of the NOT in Shrewsbury and Central Avenue. Additional space could be gained if Central Avenue were closed.

The new interchange would consist of four new tracks, one north of the northbound main and three south of the north bound main. The track north of the northbound main would be approximately 2,600 feet long. The three tracks south of the northbound main would be 2,700 feet, 2,300 feet, and 1,900 feet respectively. Total capacity of these tracks would be approximately 160 cars.

In addition to the four new tracks the ICG's south bound main (A-1 track) could be utilized for interchange purposes. This track would hold approximately 120 cars.

7.1.1.6.2 New Operations

Use of the new interchange could take place in one of two ways. First the NOT could interchange the ICG traffic in Mays Yard, both receiving and delivering. The NOT-KCS interchange activity as well

as the SP-KCS interchange function performed by the SP Chalmette crew could take place on the new interchange. This operation would permit the removal of Long Siding, and the two current interchange functions in Shrewsbury, thus deriving the maximum beneficial impact upon LaBarre Road, Atherton Drive and Hollywood Drive. The removal of the interchange function would remove the spectre of the railroad and its interchange tracks in the Shrewsbury area and would remove the source of complaint concerning the interchanging of cars on Long Siding.

The second use of the new interchange could occur as follows. The NOT-ICG traffic would take place on the new interchange facility. NOT-KCS traffic would be interchanged on both of the old interchange facilities. KCS could deliver to the old KCS-NOT facility and receive from the old ICG-NOT facility. In this case, Long Siding could be removed as the SP could interchange to the KCS on the one track south of the NOT-mainline in the old ICG interchange facility. This type operation would minimize the benefits to the people in the LaBarre Road area for LaBarre Road would still be impacted by the interchange requirement to brake and couple cuts of cars. Also Shrewsbury Road would still be adversely impacted. With only 871 average vehicular crossings per day over the Shrewsbury grade crossing, consideration should seriously be given to closing the

crossing to improve the existing potential grade crossing hazards which exist.

7.1.1.6.3 Impacts

Construction of such an interchange described above would cost approximately \$1.6 million and would require one year to complete.

This alternative, although only one of several alternatives for in-place improvements, is essential to some of the relocation alternatives discussed below. The Carrollton Curve, Carrollton Reverse move, River Front Route, and West Bank Route would all require relocation of the current Shrewsbury interchange facility. If the interchange were not relocated and the Carrollton Curve alternative were in operation, for example, great difficulty and higher cost would be experienced in interchanging cars once the train movements were being made over the UPT tracks and ICG north bound main as described in Section 7.2.1.

Prior to pursuit of this alternative to relocate the interchange, agreement between the concerned parties, ICG, KCS, NOT and SP would be required. Also, because the interchange is located on the ICG, a lease of such property with maintenance agreements would probably be required. These details could be negotiated between the involved railroads should the railroads and the community elect and agree to pursue this alternative.

The railroads using the old interchange facilities could expect to incur added operational costs due to the longer route distance to interchange. The order of magnitude of this cost would be approximately \$69,000 per year. Some of this cost increase could be offset by the advantage of the new interchange over the old interchange, namely elimination of the requirement to break and couple interchange cuts at Shrewsbury Road, Atherton Drive and Hollywood Drive grade crossings. If five minutes per interchange could be gained by the elimination of the braking and coupling of interchange cuts, then annual cost savings could reach \$33,000.

This alternative does have some possible points of contention. The fact that interchange of cars must now take place upon four tracks instead of three, that some carriers must travel further than others to affect interchange, and that the lead to the Huey P. Long Bridge could be tied up due to access requirements are certainly points to be considered. The impact upon access to the bridge lead should not substantially be increased over interchange activity at its current location for the same steps are involved in each case.

The noise and vibration caused by the interchange function at LaBarre Road and on Long Siding would be eliminated. The fear of and potential danger of railroad cars sitting on Long Siding would be removed and would help to defuse and eliminate some of the complaints

of the Metairie residents concerning railroad operations in their neighborhood. Highway hazards would be improved at the four impacted crossings, Shrewsbury Road, LaBarre Road, Atherton Drive and Hollywood Drive should they remain open. Highway user costs would be improved by \$95,000 per year at the four crossings listed above due to the elimination of the interchange activity.

Upon investigation of the Central Avenue grade crossing with particular respect to this alternative concerning the relocation of the interchange function to ICG property, it is felt that the existence of the Central Avenue grade crossing would be more severely impacted than what it is today. Investigation of the residential, commercial, and industrial areas south of the grade crossing revealed that access to Clearview Parkway and the new grade separation currently exists. Moreover that area has direct access to Jefferson Highway which is located to the south of the ICG tracks. The existing highway hazards and improvement of rail operations in the area could be improved by closing the crossing. Without the grade crossing at Central Avenue, the new interchange location may become more acceptable to the railroads for the interchange tracks could be extended for greater capacity. This added distance could also be used to eliminate the potential conflict with the Huey P. Long Bridge lead which possibly would pose operational problems.

7.1.1.7 Double Track

7.1.1.7.1 Description

The NOT facility which runs through Metairie is double tracked from Metairie Road to Shrewsbury. Between Metairie Road and the east side of the 17th Street Canal only a single track exists. The railroad trestle over the 17th Street Canal is a single track facility. Although the NOT right-of-way through Metairie is 100 feet wide, the particular section of right-of-way from Metairie Road to the 17th Street Canal is only 50 feet wide (see drawing No. 1 in Volume II of this report).

Because the 17th Street Canal must be crossed by the railroad in order to maintain freight service over the Metairie line during the construction period, another single track trestle north of the existing trestle is required. The existing single track trestle could be removed and a double track trestle built in its place, but during such construction the Metairie line could not be used. Why?

The two double track segments currently join to make a single track in different configuration. On the east side of the canal the north main joins the south main while on the west side of Metairie Road the south main becomes the north main and the new south main branches off of the north main. For this reason a portion of the existing single track would be required to be moved south of its current location to

make proper connection west of Metairie Road. The new trestle over the 17th Street Canal would carry the north main and the existing trestle would carry the south main.

The existing single track embankment between the canal and Metairie Road requires widening to accommodate the double track which would necessitate the Carrollton Avenue and Metairie Road grade crossing being rebuilt to handle two tracks. Due to the requirement to widen the railroad embankment, Frisco Avenue between Nursery Avenue and Carrollton Avenue would be closed, a distance of two blocks.

Although it has been pointed out that such closure would not meet frontage requirements for the structures along Frisco Avenue, it must be noted that at this time there is currently insufficient frontage between the houses on Frisco Avenue between Nursery and Carrollton. To gain the required frontage the Parish would be required to close Frisco Avenue.

Closing Frisco Avenue between Nursery and Carrollton would not substantially inconvenience motorists as Pink Street is one block to the north and is a through street. Currently Frisco Avenue ends at Carrollton and actually forms a very dangerous intersection protected by a stop sign. The danger results from the vehicles using the grade crossing and not having visibility to see cars entering Carrollton from Frisco Avenue and vice versa.

7.1.1.7.2 Impacts

The impact to the railroads of constructing a second track through the single track gauntlet is one of convenience and safety. Train movements through Metairie can be delayed because of the single track and this delay impacts the residents of the neighborhood. The railroad operating policy is to hold a west bound train east of the canal in Orleans Parish where no grade crossings are impacted rather than hold the east bound train which could impact all the grade crossings in Metairie. Because trains may be held at the canal, operations impact more heavily upon the neighborhood because the trains must accelerate from a dead stop, thus increasing train noise, train vibration, and increasing the highway delay at the grade crossings. Such operations due to the single track cost the railroads money, but not an amount which is substantial enough to pay for the cost of installing the second track at existing rail traffic levels. The magnitude of such cost is approximately \$12,000 per year. But more importantly, the installation of the second track would permit the trains to operate through Metairie with less impact upon the neighborhood.

Highway user costs would be reduced due to the improved movement of trains through the neighborhood. Also highway accident costs would be reduced because delay time would be decreased and would help to eliminate frustration on the part of the highway user which

frequently results in dangerous automobile crossings in front of approaching trains. Removal of the single track gauntlet would improve rail safety by eliminating the need for the start-stop of trains and the potential for rail accident.

Construction of the second track would cost approximately \$1,380,000 and would require a little more than one year to complete. Total shutdown of the Metairie line would be required for a very short period of time to complete the connection of the two tracks, approximately one to two weeks.

The single track facility is sufficient to enable the railroads to move traffic at current levels. Even with steady growth, traffic will be handled over the single track for many years to come. The construction of a second track at Metairie Road would certainly make such movement of traffic easier for the railroads and reduce the impacts upon the community, but the single track at Metairie Road will not "strangle" the flow of rail traffic.

7.1.1.8 Trees and Shrubs

In an effort to improve the aesthetics of the neighborhood, trees and shrubs could be planted in those spaces along the railroad right-of-way which do not now contain foliage. The trees and shrubs would perform two functions. First, the trees and shrubs would hide the railroad from direct sight and therefore lessen the visual impact upon

the neighborhood. Second, the foliage would tend to deaden and dissipate train noises which intrude into the neighborhood. The types of noise most affected would be general train noise as the trees and bushes would not have a substantial impact upon the train whistle noise.

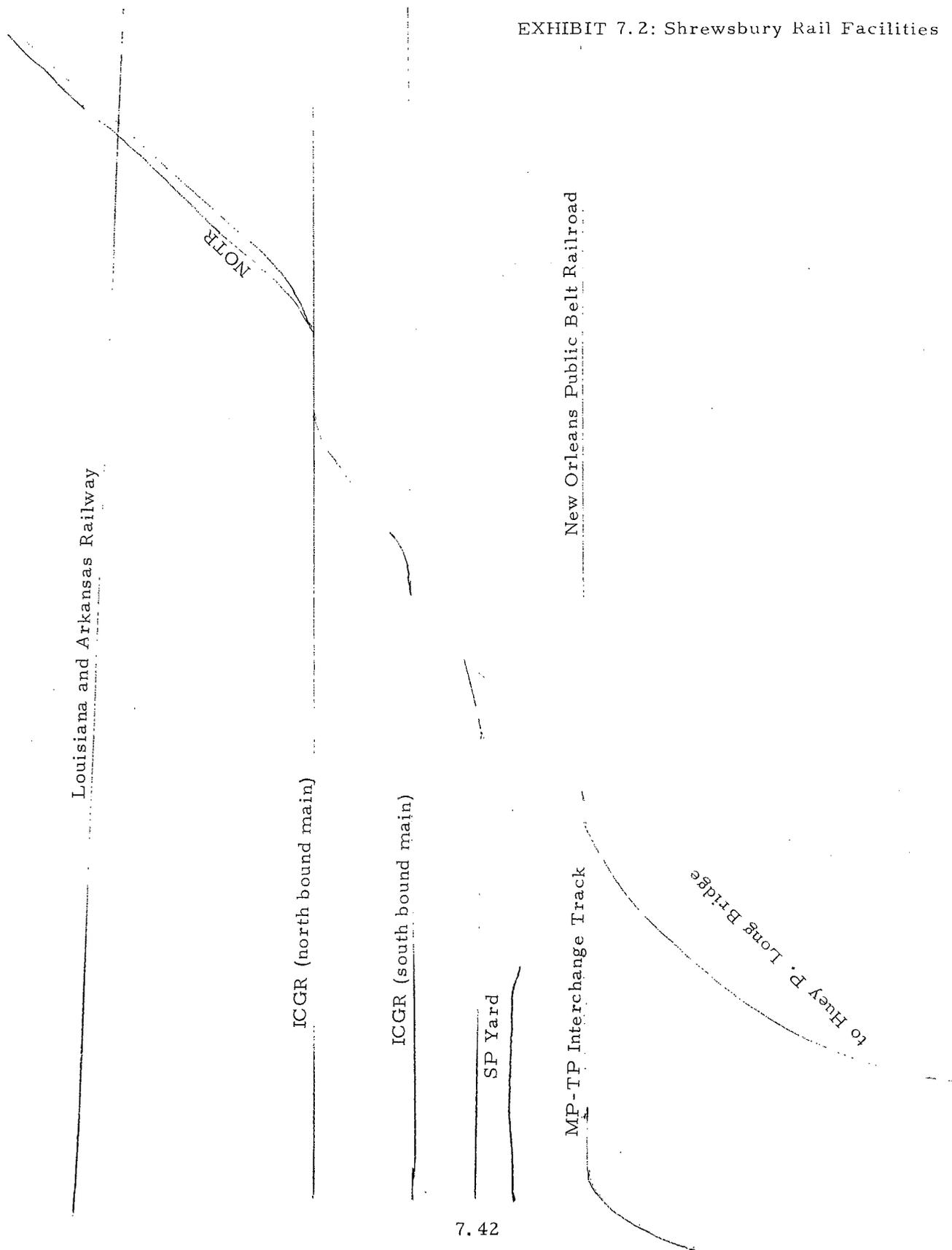
Planting of such trees and shrubs would cost approximately \$470,000.

7.1.1.9 Centralized Train Control

7.1.1.9.1 Description

The Shrewsbury area is the confluence of several rail operations each of which impacts upon all the rest. Exhibit 7.2 is a schematic which highlights the main rail facilities in the Shrewsbury area. Several movements can occur and often do occur simultaneously within this area. The NOPB could be using its tracks and working from its yard just east of Shrewsbury Road; the SP could be moving across the bridge to either its yard or for movement across the NOT; the ICG could be using its tracks to move to Poydras Street Yard or to the docks; passenger trains from or to UPT Station could be using the ICG northbound main; the KCS could be using its mainline to interchange with the NOT, to handle trains to or from Baton Rouge or to handle their local jobs; the NOT facility may have a train destined for interchange or to the Huey P. Long Bridge; and the MP could be using their interchange, moving to the docks, or handling their run

EXHIBIT 7.2: Shrewsbury Rail Facilities



through with the L.N. The possible combination of train movements in this area is very large and requires an extraordinary amount of coordination among all parties concerned.

Train control to Metairie Road from New Orleans is handled by NE tower located north of Oliver Yard on the east side of New Orleans.
The UPT tower located downtown controls trains on UPT facilities.
East Bridge tower handles trains between the NOT, ICG, UPT and the bridge and must coordinate with West Bridge tower in order to move trains over the bridge. Such train activity will increase as business increases and will require closer coordination.

The creation of a single operation authority to coordinate and control train movements through this important area would reduce delays and blockages which occur. Such control would have to rest with one individual and that position must be manned twenty-four hours per day. This single control must have the authority and responsibility to handle trains on a planned basis. The plan of operation would be drawn up by the railroads concerned and would be implemented and discharged by this single authority which would be located at East Bridge tower.
As rail operation requirements changed over time the basic operations plans could be amended to account for these changes. Not only a plan but a collective operations policy would be required to enable the controlling authority to efficiently and equitably move trains through the

area. Such authority or position should have control of the rail facilities which feed into the Shrewsbury area which would include the UPT, NOT, Huey P. Long Bridge, KCS, ICG and NOPB.

Although the creation and operation of such a Centralized Train Control is not a "be all-end all" solution to the Metairie problem, it would substantially improve rail operations through Shrewsbury and eliminate some of the train delay on the Metairie line. Capital improvements upon the Metairie line without improved operations at Shrewsbury will not solve all the problems in Metairie. Benefits of such a central authority would accrue to the railroads and reduce rail impacts upon the communities in the Shrewsbury area through improved rail operations.

Installation of such a centralized control would utilize existing train control facilities but would require work to centralize the control of these facilities at East Bridge tower.

Centralization of control in Shrewsbury could improve operations to the extent that the second track at Metairie Road may not be necessary. This would help to remove a politically explosive issue and enable the Parish and the railroads to negotiate a course of action designed to eliminate the railroad-community conflict which exists not only in Metairie but in Jefferson Parish. Improved operations control would eliminate the need to spend capital dollars for additional trackage

in Metairie. Most importantly, however, removal of the emotional issue of a second track could enable the concerned parties to move to a solution.

7.1.1.10 Impacts of Level I- Complete Alleviation

The items described and discussed in this in-place alleviation package must be considered as a whole in order to alleviate or solve the problems in Metairie due to railroad-community interface. Certain of the items require changes in transportation routes, restriction of access into and across the railroad facility, and other inconveniences. Such restrictions are minimal in comparison to the degree of problem solution which is gained by the various components of complete alleviation.

Noise is substantially reduced primarily due to the elimination of horns sounding. The improved flow of rail traffic due to the double track, removal of the interchange facilities and the centralized traffic control would eliminate the need for acceleration and braking on this segment of track and hence remove that source of noise. The residual railroad noise would be dissipated by the foliage and structure in the area.

Highway delay would be reduced because railroad-highway interface in Metairie has been eliminated in a manner similar to that pursued by the City of New Orleans through the UPT Agreement, namely grade

separations and closed crossings. Increased route distances due to the closing of crossings would be minimal. Although a portion of the traffic which now uses the local crossings would be channelled over the remaining grade separations, not all of the traffic would be so dispersed. For example, an individual who lived south of the tracks and whose commuting route to work was across the tracks, to Metairie Road, and thence to New Orleans will now go via Airline Highway to New Orleans.

Highway hazards due to grade crossings would be eliminated due to construction of three grade separations and the closing of crossings. Therefore the potential occurrence of train-automobile accidents and the costs of actual accidents which have occurred over the years and which will probably continue to occur in the future will be eliminated.

Pedestrian hazards caused by people crossing the tracks, children using the tracks as a route of movement, children climbing on railroad cars, and children being exposed to lading which may be dropped on the right-of-way, would be eliminated by the grade separations, pedestrian crossings and fencing. Some inconvenience would exist because people would be required to travel further to reach the crossing facility, but such inconvenience is the tradeoff for increased safety.

Due to the elimination of the need for trains to accelerate, brake and interchange cars due to the relocation of the interchange facility, and due to the improved flow of rail traffic, train vibrations would be substantially reduced and in some cases eliminated.

General rail hazard would be reduced in the Metairie study area through the improvements outlined above. The installation of the double track would eliminate the single track gauntlet. Relocation of the interchange facility would remove switching operations from the Metairie track segment and improved coordination of train movements would improve the flow of rail traffic. These improvements would reduce the potential of rail mishap to equipment malfunction and would eliminate the various combinations of switching movements thereby restricting the Metairie line to through movement of rail traffic only,

Railroad presence would not be removed from the neighborhood, but the impact of that presence would be substantially reduced.

Enactment of the various items above would alleviate the majority of problems now existing in Metairie.

7.1.2 Level II-Practical Alternatives

7.1.2.1 Level II Items

The items contained in Level II are similar to those contained in Level I and include the following items:

- 1) grade separation at Metairie Road (underpass),
- 2) interchange relocation,
- 3) centralized train control,
- 4) trees and bushes, and
- 5) double track at Metairie Road.

The difference between Level I and II is the elimination of grade separations at Carrollton Avenue and LaBarre Road. Level II contains two courses of action. One course is to place crossing gates at LaBarre Road and Carrollton Avenue and close the five remaining crossings, which would also include two pedestrian overpasses and fencing along the railroad right-of-way.

The second course of action would place crossing gates at all of the remaining seven crossings. Should this be done, the pedestrian overpasses and the fencing would not be needed for the crossings would still be open.

In both cases, in order to completely eliminate the horn noise in the study area, a defined variance to the state law requiring horns to be sounded at grade crossings would be needed. This variance would not require the sounding of horns in Metairie between the 17th Street Canal and the end of the NOT, but in no case should the variance preclude the railroads from sounding horns in time of an emergency.

The physical geography at the LaBarre Road grade crossing is such that, although it is possible to design and construct an overpass at that point, the resultant facility and its impacts upon the immediate

area may not warrant such construction. In order to build a grade separation at LaBarre Road, private right-of-way is required from Schwegmann's Food Store parking lot and Gaylord's Discount Store parking lot. Both facilities are located between Airline Highway and the railroad tracks. Even though frontage roads could be provided, traffic flows would be restricted at the intersection of Airline Highway and LaBarre Road. Currently traffic accessing either store over LaBarre Road can proceed south on LaBarre Road over the tracks and into the parking lots. Also traffic exiting Airline Highway and traveling north on LaBarre Road may currently do so with relative ease and safety.

Construction of a grade separation at LaBarre Road would focus all of the LaBarre Road traffic, access traffic to Gaylord's and a portion of access traffic to Schwegmann's upon the LaBarre Road-Airline Highway intersection. Today the LaBarre Road-Airline Highway intersection also includes access ramps to the elevated Causeway interchange and the Airline Highway underpass under the railroad tracks returns to grade at this intersection. The difficulty of the intersection would be increased by construction of a grade separation. Access to Gaylord's parking lot would be reduced to one small entrance-exit which would create blind access to Airline Highway and restricted sight distance to move onto the grade separation facility. Access to

Schwegmann's parking lot would be primarily forced on to Airline Highway. All these factors combined would create a most dangerous intersection.

Carrollton Avenue grade separation has been removed from Level II because of the impact upon the strictly residential area. Construction of a grade separation would both consume private right-of-way and preclude access to residential structures in the area. Thirteen houses would be adversely impacted.

The estimated cost of the first group of items contained in Level II are displayed in Exhibit 7.3 and total \$5.968 million. Should all seven remaining crossings be gated thus eliminating the need for both pedestrian overpasses and fencing along the railroad right-of-way, the cost of Level II would be reduced to \$5.368 million. In either case, two years would be needed to affect these changes.

7.1.2.2 Level II Impacts

The impact of railroad noise would be reduced through this alternative by eliminating the locomotive horn and relocating the interchange. Improved flow of rail traffic through the area would eliminate the need for braking and accelerating which also produces noise.

Highway delay and highway hazards would be reduced by this alternative. Delay would be eliminated at Metairie Road due to the construction of the grade separation and, if the other crossings were