Federal Highway Administration
Region Four

ADMINISTRATIVE ACTION
FINDING OF NO SIGNIFICANT IMPACT

U.S. Department of Transportation
Federal Highway Administration
and
Florida Department of Transportation
in Cooperation with
U. S. Coast Guard

State Project No.10250-1525
Federal Project No. M-1802-(1)
Work Program No. 7113839

22nd Street Causeway / Causeway Boulevard, from S.R. 60 to U.S. 301, Hillsborough County, Florida

This project consists of the construction of a six-lane roadway to replace the existing 2/4 lane roadway beginning at S.R. 60 and extending approximately 7 miles to U.S. 301 (see graphics in Environmental Assessment). The project follows the existing 22nd Street Causeway / Causeway Boulevard corridor south of Maritime Boulevard, while the section from S.R. 60 to Maritime Boulevard is rerouted to the existing 20th Street corridor to avoid a potential historic district. The project also includes 5 bridges, including a new interchange at U.S. 41. The proposed improvements include widening the bridges over McKay Bay by adding a lane to each bridge, and replacing existing bridge structures over Delaney Creek and its tributary.

Submitted Pursuant to 42 U.S.C. 4332(2)(c)

5-24-94
Date

Melissa L. Ridenour
for Division Administrator
Federal Highway Administration

FHWA has determined that this project will not have any significant impact on the human environment. This Finding Of No Significant Impact is based on the attached Environmental Assessment which has been independently evaluated by FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope, and contents of the attached Environmental Assessment.

MAY 18 1994

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This project consists of the construction of a six-lane roadway to replace the existing 2/4 lane roadway beginning at S.R. 60 and extending approximately 7 miles to U.S. 301 (see graphics in Environmental Assessment). The project follows the existing 22nd Street Causeway / Causeway Boulevard corridor south of Maritime Boulevard, while the section from S.R. 60 to Maritime Boulevard is rerouted to the existing 20th Street corridor to avoid an historic district eligible for listing in the National Historic Register of Properties (NHRP). The project also includes five bridges, including a new interchange at U.S. 41. The proposed improvements include widening the bridges over McKay Bay by adding a lane to each bridge, and replacing existing bridge structures over Delaney Creek and its tributary.

The 22nd Street Causeway / Causeway Boulevard corridor is an important link in the area's roadway network, currently carrying between 13,000 and 19,300 vehicles per day. The study corridor is a major route into Tampa from suburban communities located south and east of the downtown area. This corridor is the only major highway providing access to the Port of Tampa, a significant contributor to the local economy. The Ybor City historic district lies slightly outside of the northern project limit; this district contributes significantly to the community economy.

A traffic study was conducted to determine the design year 2015 projected volumes along the roadway network in the study area vicinity. The traffic model used was provided by the Hillsborough County Metropolitan Planning Organization (MPO). This analysis showed the need to provide additional capacity for the traffic volumes that are projected to increase by more than a factor of 3 to a range from 36,800 to 67,400 vehicles per day along the 22nd Street Causeway / Causeway Boulevard corridor. Failure to provide additional capacity in the form of additional travel lanes would result in unacceptable levels of service. The traffic study showed the need to construct a new interchange at the Causeway Boulevard / U.S. 41 intersection. The proposed improvements are contained in the MPO 2010 Long Range Transportation Plan. These improvements will enhance access between the downtown Tampa area, suburban communities, the Port of Tampa and the project area's highway network (see Figure 1-1).

The recommended alternative to provide the needed additional capacity consists of widening the existing 2 / 4 lane roadway between Maritime Boulevard and U.S. 301 to a six-lane divided facility that incorporates both pedestrian and bicycle accommodations. The existing corridor will generally be utilized, with additional roadway right-of-way being acquired as needed. The right-of-way corridor is generally 134 feet wide, but narrows to 123.5 feet wide in the environmentally sensitive causeway area. The decreased width is obtained through narrowing the median, with no changes to the proposed lane widths or pedestrian / bicycle accommodations. A new compressed diamond interchange at U.S. 41 is included in the proposed improvement. A grade separation at the railroad crossing along U.S. 41 south of Causeway Boulevard passed detailed benefit / cost analysis, so this new bridge is included in the recommended improvements. Between S.R. 60 and Maritime Boulevard, a six-lane divided facility will be constructed on a combination of the existing 20th Street corridor, and new alignment that provides connection between 20th Street and 22nd Street. This new alignment is necessary to avoid Section 106 impacts to a historic district eligible for listing in the NHRP that straddles 22nd Street between

Clark Street and Gordon Street. This realigned section places the roadway corridor on the edge of the Palmetto Beach residential area (existing 22nd Street runs through the center of this area). Pedestrian traffic will be accommodated through construction of sidewalks, while bicycle traffic will be accommodated on 22nd Street, a parallel and less congested facility. The deletion of bicycle lanes and a reduced median width in this section reduces the proposed right-of-way width to 118 feet for this 1.2 mile section of the proposed improvement.

The proposed improvements will require approximately 34.4 acres of new roadway right-of-way. Additional right-of-way will be required for construction of stormwater management areas as well as possible floodplain and/or wetland mitigation areas. Projected relocations will consist of 17 businesses and 20 residences. Ample replacement housing for purchase or rent is available in Hillsborough County, as are replacement accommodations for businesses. Additional right-of-way will be required to site stormwater management system facilities, including flood plain encroachment mitigation. The proposed improvements will not affect any particular ethnic group, minority, elderly or the handicapped.

FHWA, in compliance with Section 106 of the National Historic Preservation Act and in consultation with the State Historic Preservation Officer (SHPO), has determined that the proposed action will have no effect upon any properties protected under Section 106. The interaction with SHPO is documented in the Section 106 Report prepared as part of this study, and the coordination with SHPO is documented in exhibits 14 through 16, Appendix B. The proposed action will not use any properties as defined by Section 4(f) of the Department of Transportation Act. FHWA has determined that Section 4(f) does not apply.

The project alternatives were subjected to a graphical air quality Screening Test, which makes various conservative assumptions about meteorology, traffic and site conditions. The Screening Test uses these assumptions in the MOBILE4 and CALINE3 models to produce a series of curves which can be used to determine the critical distance. The critical distance is the closest distance a receptor can be to a given intersection without experiencing any chance of a significant air quality impact. The Screening Test was applied to four intersections for 1995 and 2015 "Build" and "No Build" alternatives. The closest receptors are farther away than the critical distance. Therefore, this project will not have a significant impact on air quality. Additional information may be found in Section 4.9 of the attached Environmental Assessment.

This is in an area which has been designated as nonattainment for the ozone standards under the criteria provided in the Clean Air Act Amendments of 1990. This project is in conformance with the SIP because it will not cause violations of any air quality standards. This project is included in the urban area's current approved conforming TIP which was signed by the Secretary of the Florida Department of Transportation on September 17, 1993. This project is included in the area's Conformity Determination report which was approved by FHWA/FTA on September 2, 1993.

A noise analysis was conducted for the project to evaluate impacts of the proposed project and possible abatement measures. This analysis was conducted in accordance with Title 23, Part CFR

772. The analysis is discussed in detail in a Noise Study Report (available in the FDOT District VII office), and was summarized in section 4.10 of the Environmental Assessment. The project was divided into five sections for noise analysis, with section limits being determined in part by traffic volumes (existing and proposed). The analysis included consideration of mitigative measures where noise levels increased. Approximately 162 noise-sensitive sites located along the project corridor experience noise levels that approach (within 2 dBA) or exceed the FHWA Noise Abatement Criteria (NAC) of 67 dBA. The section between S.R. 60 and Maritime Boulevard had 74 sites, while the section from U.S. 41 to Maydell Drive had only 8 sites. The potential adverse noise impacts included consideration of the potential historic district located along 22nd Street north of Maritime Boulevard. The proposed rerouting of the facility to the 20th Street corridor eliminates any noise impacts to the potential historic district. The acquisition of necessary additional right-of-way was also selected with noise impacts being considered in the minimization of social and economic impacts. Shifts in the recommended alignment will not provide noise mitigation. Consideration of noise barriers included the evaluation of economic reasonableness (cost per benefitted receptor of $25,000 or less), a minimum noise reduction (insertion loss) of 5-10 dBA, and topographic considerations such as location of side streets and driveways. The results of the barrier analysis indicated that barriers could not prevent higher noise levels while staying within FDOT economic reasonableness criteria. Within the northern segment of the project the frequency of side street intersections and driveways did not allow for noise barriers of sufficient length or continuity for an adequate insertion loss. In the eastern section of the project a noise barrier analysis indicated an insertion loss of 3 dBA for a 16-foot barrier. This is below the minimum insertion loss of 5 to 10 dBA used by FDOT. Based on these considerations, noise walls are not included in the recommended alternative.

The proposed construction will include impacts to the delineated floodplain as defined by the Federal Emergency Management Agency (FEMA). The encroachments will have no effect on flood stage elevations, since the floodplain limits represent flooding due to a tidal storm surge and is not associated with a rainfall design event. Therefore, impacts associated with the proposed improvements have been determined to be minimal. Steps to minimize impacts to the natural floodplain values may include: avoidance of wetland encroachment; restoration and mitigation of wetland encroachment; minimization of floodplain encroachment; restoration of floodplain encroachment; and best management practices during construction and maintenance. Floodplain mitigation will be necessary in concert with the construction of stormwater management facilities. Pursuant to Executive Order 11988 "Floodplain Management", the proposed action was determined to be within the base floodplain associated with the designated coastal hurricane surge. Impacts associated with the encroachment have been evaluated and determined to be minimal. Therefore, the proposed action does not constitute a significant encroachment. McKay Bay is not a regulated floodway as defined by FEMA. Delaney Creek and its Tributary "A" are regulated floodways as defined by FEMA.

Lands occurring within the proposed project are highly urbanized, and very few natural communities remain intact. However, in accordance with Executive Order 11990 "Protection of Wetlands", the impacts to wetlands due to the proposed improvements were evaluated. This evaluation is presented in detail in section 4.11 of the Environmental Assessment. Wetlands were

identified and classified on an individual basis, including dominant plant species, contiguity characteristics, size and functional classification. An evaluation of alternative alignments resulted in the development of a reduced-width typical section that minimized impacts to the causeway section. This development is consistent with the use of all practicable measures to avoid impacts or minimize harm to wetlands. In addition, alignment shifts were used to minimize the amount of impacts and quality of wetlands impacted. The project will impact a total of approximately 2.7 acres of wetlands. These impacts are expected to be mitigated through the creation of new wetland areas adjacent to or within the roadway right-of-way without destroying upland habitat. Mitigation ratios will be fully developed during the final design phase, with a minimum of "no net loss" being considered during this phase. One mitigative feature being evaluated as part of the overall mitigation plan is the construction of box culverts in the causeway section that would improve water quality in McKay Bay through improved flushing action via circulation between the areas north and south of the causeway. This concept was considered favorably by FDER (now FDEP) staff, and further consideration of culvert construction for improved flushing action was encouraged. Wetland impacts will be minimized through the use of FDOT Best Management Practices and Section 104 of the FDOT "Standard Specifications for Road and Bridge Construction". Coordination with affected environmental agencies has been ongoing throughout the study, and will continue through the final design phase of the project. It should be noted that wetland impacts were not identified as an unusually sensitive issue during the development of the environmental assessment. Based on the considerations presented above, there is no practicable alternative to the proposed construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

Stormwater runoff from the proposed project will have little to no impact on water quality in the project area when properly treated. The primary concern is the potential for adverse effects of stormwater due to vehicular-related pollutants possibly associated with highway runoff. Drainage along the project will be collected in storm sewers, routed through a new stormwater management system and ultimately discharge into either McKay Bay, Delaney Creek or the Delaney Creek Tributary. The predominant function of the stormwater management system is to attenuate stormwater runoff for flood control. The water quality treatment associated with this system is ancillary. Stormwater management will be provided in accordance with Chapters 40D-4 and 40D-40, Rules of the Southwest Florida Water Management District (SWFWMD) and FDOT Rule 14-86, Florida Administrative Code (F.A.C.) (critical duration analysis). Water quality will be provided in accordance with Chapter 17-25 F.A.C., Rules of the SWFWMD.

The impacts of the proposed project on surface water quality will essentially be limited to the adverse effects of erosion during construction. The potential adverse effects of construction are considered temporary and minimal. This project is not located within a sole source aquifer area and is not expected to have any affect on groundwater, recharge areas, or public water supplies. This will be controlled by adherence to Chapters 17-3 and 17-25, F.A.C. and Section 104 of the FDOT "Standard Specifications for Road and Bridge Construction".

The 22nd Street Causeway / Causeway Boulevard project has been evaluated for impacts on wildlife and their habitats in accordance with the Federal Endangered Species Act of 1973, as

amended. The threatened and endangered species effort included designation of potential habitat within the corridor. Literature review and correspondence with various agencies (including Florida Natural Areas Inventory, Florida Game and Freshwater Fish Commission, U.S. Fish and Wildlife Service) resulted in the development of a list of federally-protected species having the highest probability of occurrence along the project. Based on literature review, agency coordination, field surveys and lack of suitable habitat in the proposed right-of-way, no listed species will be affected by the proposed project. Furthermore, it was determined that there are no designated critical habitats within the project area. The West Indian Manatee has been documented in the estuarine habitats around McKay Bay. Potential impacts to manatees would be limited to the construction phase when boats and barges may be used in the widening of the bridges over the bay. Protective measures are detailed in section 4.19 of the Environmental Assessment. Pursuant to the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended and 16 CFR 661 et. seq.) and the Endangered Species Act of 1973, as amended (16 CFR 1531), a biological assessment report was submitted to the U.S. Fish and Wildlife Service to request their written concurrence that the project will have "No Adverse Effect" on any federally protected threatened or endangered species. In a letter dated May 28, 1993 (see Environmental Assessment appendix), the U.S. Fish and Wildlife Service concurred that the proposed project will not adversely effect any federally listed threatened or endangered species. It has been determined by FHWA, that the project, as proposed, will have no effect on any threatened or endangered species.

Through written correspondence and coordination with the Soil Conservation Service, it has been determined that the project area which is located in the urbanized area of Hillsborough County does not meet the definition of farmland as defined in 7 CFR 658. Therefore, the provisions of the Farmland Protection Policy Act of 1984 do not apply to this project.

The Office of Planning and Budget, Office of the Governor has determined that this project is consistent with the Florida Coastal Zone Management Plan. See the Environmental Assessment Appendix for exhibits.

A Public Involvement Program was conducted as part of the 22nd Street Causeway / Causeway Boulevard study. This program was implemented to ensure that local residents, interested persons, organizations and elected officials concerned with the project and the associated impacts were aware of the project and could participate in the review of the alternatives. An alternatives public workshop was held on April 9, 1992 at the Tampa State Fair Holiday Inn to solicit public comment on the alignment alternatives. The workshop was conducted using an informal format wherein graphics and a slide show were available for public review and comment. The project Public Hearing was held on December 14, 1993 at the Tampa State Fair Holiday Inn to solicit public comment on the recommended alternative. Following informal review of graphics and a slide show, a formal presentation of the project was given by the Department. Public comment was then received and is documented in the public hearing transcript. A detailed discussion on the public hearing is presented in the Comments and Coordination section of the Environmental Assessment. Public comment at the hearing were generally favorable. Concerns were raised over impacts to the businesses along 22nd Street when the primary traffic flow is rerouted to the 20th

Street corridor, over specific location noise impacts and over proposed median opening locations for providing access to the local roadway network. A review by right-of-way acquisition specialists determined that the businesses along 22nd Street will likely not be damaged by a reduction in drive-by traffic, due to their local clientele or type of business. The specific noise impact concerns cannot be addressed through barrier wall construction because of the close proximity of side streets that would result in a discontinuous wall. Median opening locations will require scrutiny during the final design phase of the project to assure compliance with FDOT access management requirements.

The approved Environmental Assessment addresses all of the viable alternatives that were studied during the project development. The environmental effects of all alternatives under consideration were evaluated when preparing the assessment. Prior to the Public Hearing, the approved Draft Environmental Assessment Document was made available for public review. The Finding Of No Significant Impact was made after consideration of all comments received as a result of public availability and the public hearing.

ENVIRONMENTAL ASSESSMENT

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SECTION 1

DESCRIPTION OF THE PROPOSED ACTION

The 22nd Street Causeway/Causeway Boulevard project consists of the construction of additional travel lanes between S.R. 60 (Adamo Drive) and U.S. 301 in Hillsborough County, Florida. The approximate length of the project is 7.0 miles, with the westernmost 3.2 miles lying within the City of Tampa. Included in the project is the evaluation of an interchange at the Causeway Boulevard intersection with U.S. 41. The project location map is shown on Figure 1-1.

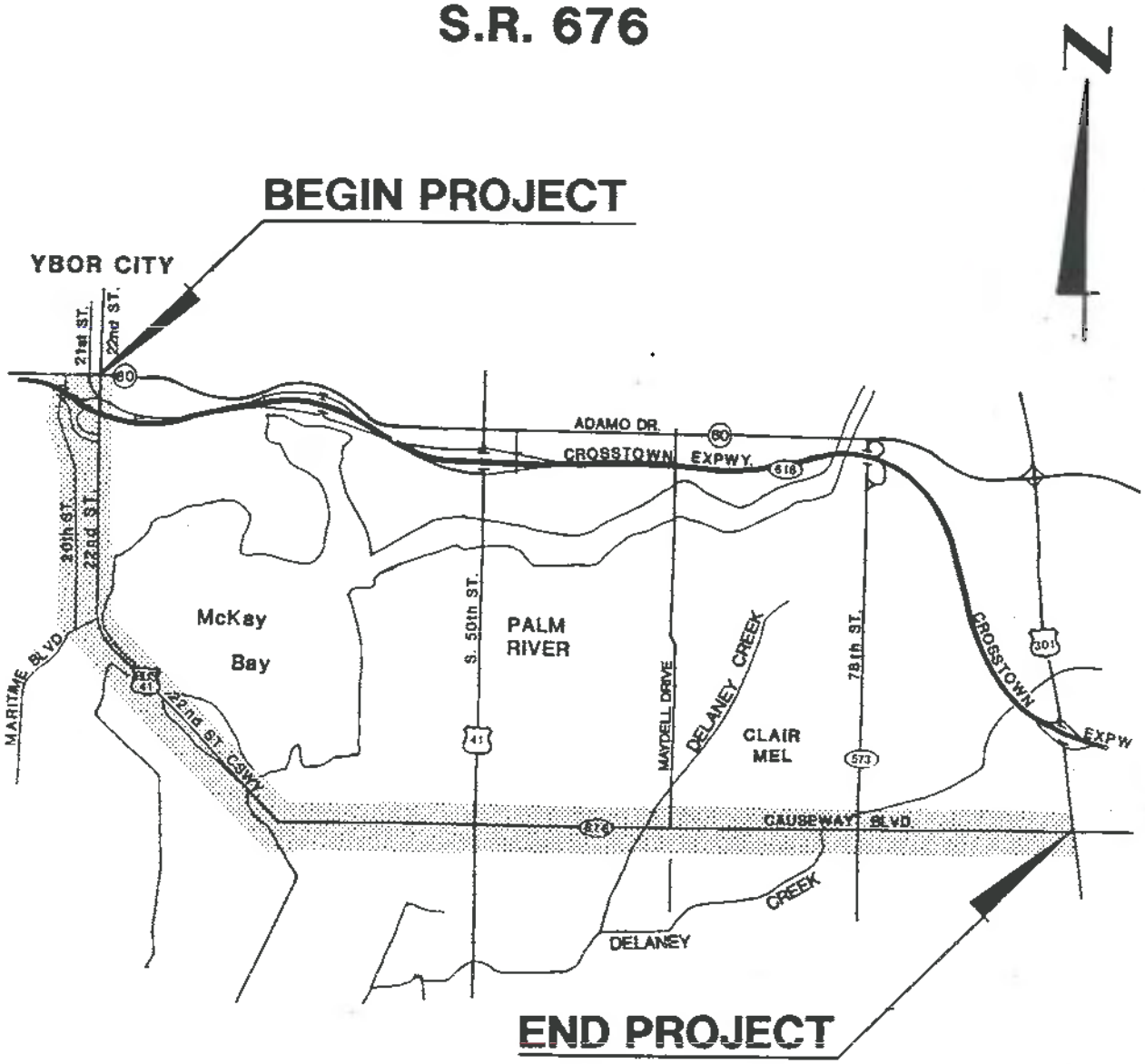
The existing facility varies from a two-lane rural roadway to a three-lane undivided urban roadway to a four-lane divided roadway. The capacity provided by the existing lanes is inadequate to meet projected traffic demands.

The project will include three travel lanes in each direction provided on a six-lane divided urban roadway south of Durham Street. As identified in the alternative analysis, the preferred alternative north of Maritime Boulevard includes a six-lane divided urban roadway on 20th Street. South and east of Maritime Boulevard, the six-lane divided facility follows the existing 22nd Street/Causeway Boulevard alignment. The required right-of-way width varies, depending upon the location within the project.

Bridges will be constructed at the following locations:

- McKay Bay – widening of existing twin bridges
- Delaney Creek – construction of replacement bridge
- Delaney Creek Tributary – construction of replacement bridge
- U.S. 41 – grade separation for interchange
- CSX Railroad crossing on U.S. 41 south of Causeway Boulevard – new grade separation structure under consideration

F.A.P. NO. M-1802 (1)
State Project No. 10250-1525
W.P.I. NO. 7113839
HILLSBOROUGH COUNTY
22ND STREET CAUSEWAY / CAUSEWAY BLVD.
S.R. 676



NOT TO SCALE

PROJECT LOCATION MAP

FIGURE 1-1

SECTION 2
NEED

2.1 SYSTEM LINKAGE

The 22nd Street Causeway/Causeway Boulevard corridor is an important link in the area's roadway network. The study corridor is a major route into downtown Tampa from suburban communities south and east of the city. In addition, this corridor is the only major highway providing direct access to and from the Port of Tampa, a significant contributor to the local economy. At the north end of the corridor is Ybor City, a historic district which also provides significant economic benefits to the community.

Improvements to the 22nd Street Causeway/Causeway Boulevard corridor have the potential for providing significant capacity relief to the surrounding roadway network. Multi-lane state highways in the area, including S.R. 60, U.S. 41 and U.S. 301 should all benefit from the additional capacity proposed for 22nd Street/Causeway Boulevard.

2.2 CAPACITY

Traffic analysis for the 22nd Street Causeway Causeway/Boulevard corridor includes both a thorough inventory of existing traffic characteristics and the projection of traffic volumes for the project opening year of 1995 and the design year of 2015.

The analysis of existing traffic characteristics included a review of available Florida Department of Transportation (FDOT) Average Annual Daily Traffic (AADT), comparison with base year model results, field data collection of daily traffic counts, vehicle classifications and peak period turn movement counts and identification of typical design traffic characteristics.

Design year traffic characteristics were prepared on a link-by-link basis to coincide with anticipated growth and activity throughout the corridor. It is generally accepted that corridors with higher daily volumes exhibit different peak period traffic characteristics than those sections of roadway with lower daily volumes.

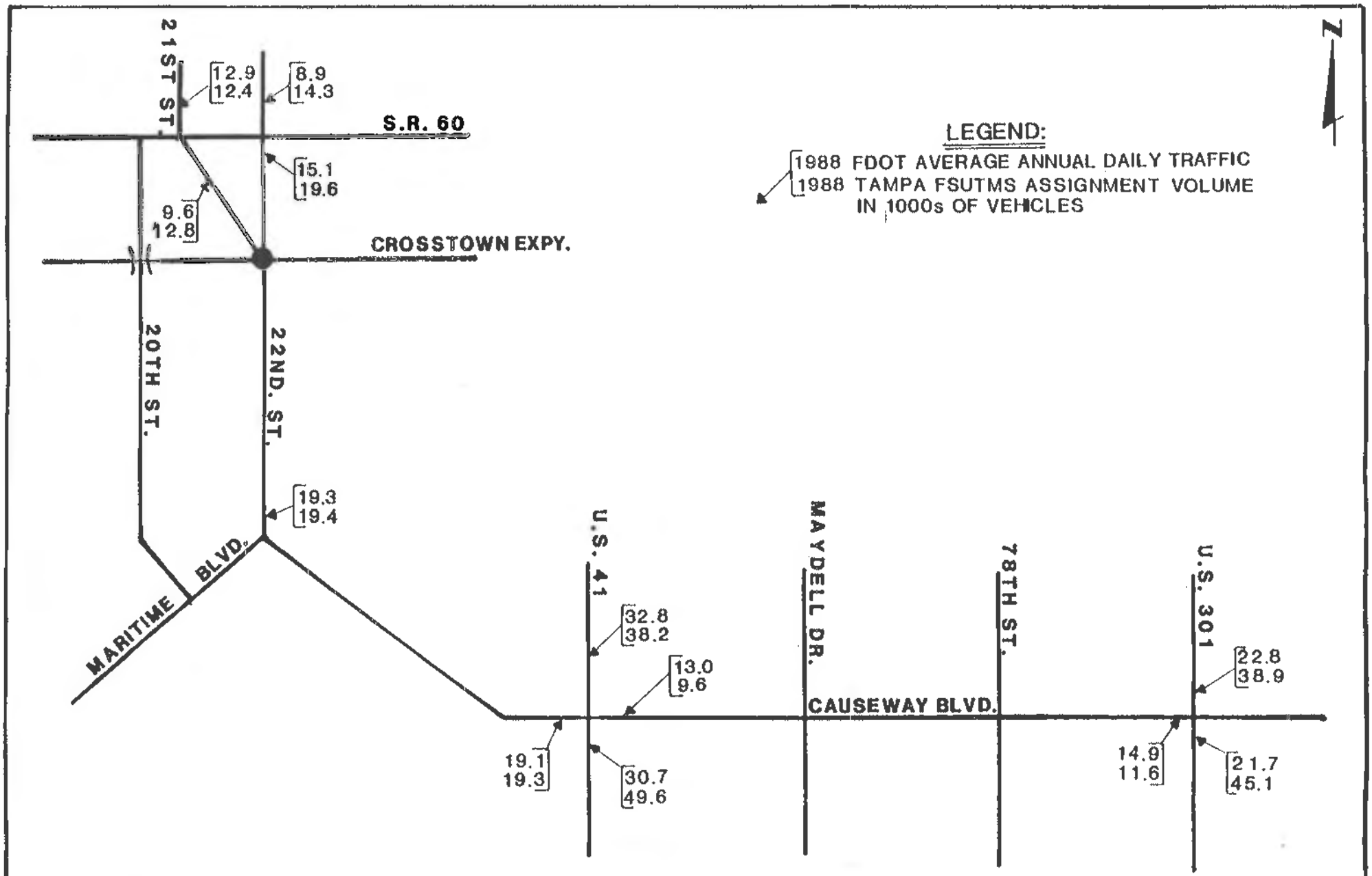
The following subsections report the results of the existing and future traffic data (20-year design traffic) for the entire 22nd Street/Causeway Boulevard corridor and its major intersecting streets.

2.2.1 Existing Corridor Traffic

FDOT 1988 AADT's were obtained for several locations in the project study area to compare with Florida Standard Urban Transportation Model Structure (FSUTMS) validation results and establish an official FDOT record of daily traffic. These are depicted in Figure 2-1 along with FSUTMS volumes for 1988. South of S.R. 60, 21st Street had a 1988 AADT of 9,600 while 22nd Street carried 15,100 AADT at the same location. North and south of Maritime Boulevard, AADTs were approximately 19,000. The 1988 AADT on Causeway Boulevard was 13,000 east of U.S. 41 and 14,190 west of U.S. 301.

2.2.2 Level of Service

Using FDOT's Generalized Daily Level of Service (LOS) Maximum Volumes, and estimates of the signal spacing per mile, existing corridor level of service may be summarized as follows:



YEAR 1988 AADTs AND FSUTMS ESTIMATED TRAFFIC

FIGURE 2-1

Street Segment	LOS "D"		
	Signals Per Mi.	Service Volume	Generalized L.O.S.
21st St., S.R. 60 to Crosstown Expwy.	3.00+	16,200	B
22nd St., Crosstown Expwy. S.R. 60	3.00+	16,200	D
22nd St., Crosstown Expwy. to Maritime Blvd.	0.96	15,300	F
McKay Bridge/Causeway	0.42	34,900	A
Causeway Blvd., U.S. 41 to U.S. 301	0.94	15,300	B-D

Source: Final Technical Memorandum Traffic Methodology, 22nd Street/Causeway Boulevard Project Development & Environment Study; July 1992; 2.4

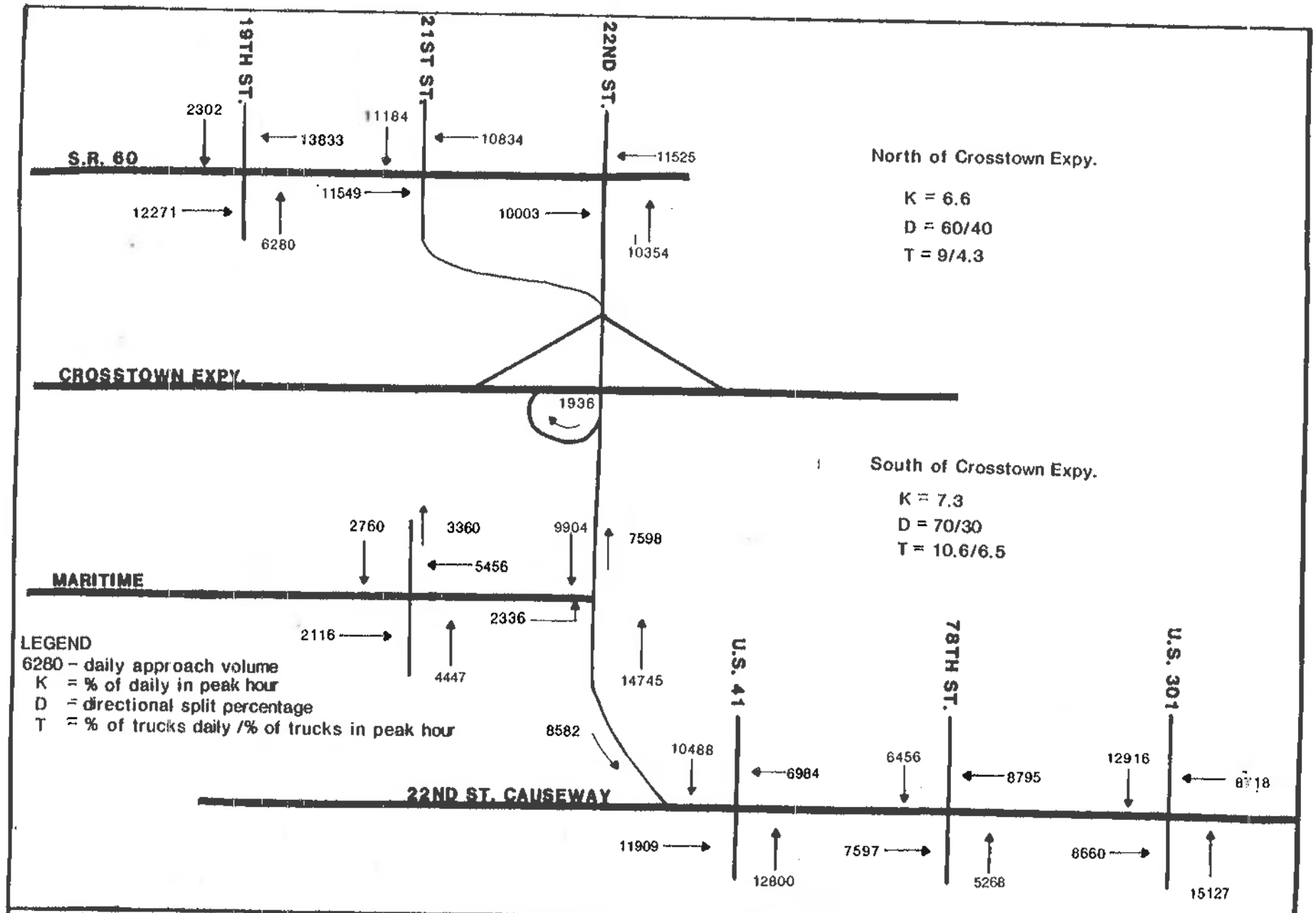
2.2.3 Existing Intersection Traffic

In the Spring of 1991, additional traffic data was collected in the field as part of the 22nd Street Causeway/Causeway Boulevard PD&E Study. This data collection effort consisted of the following elements:

- seven-day directional counts at three locations;
- 24-hour machine approach counts at ten intersections; and,
- four-hour manual vehicle turning movement counts at nine intersections

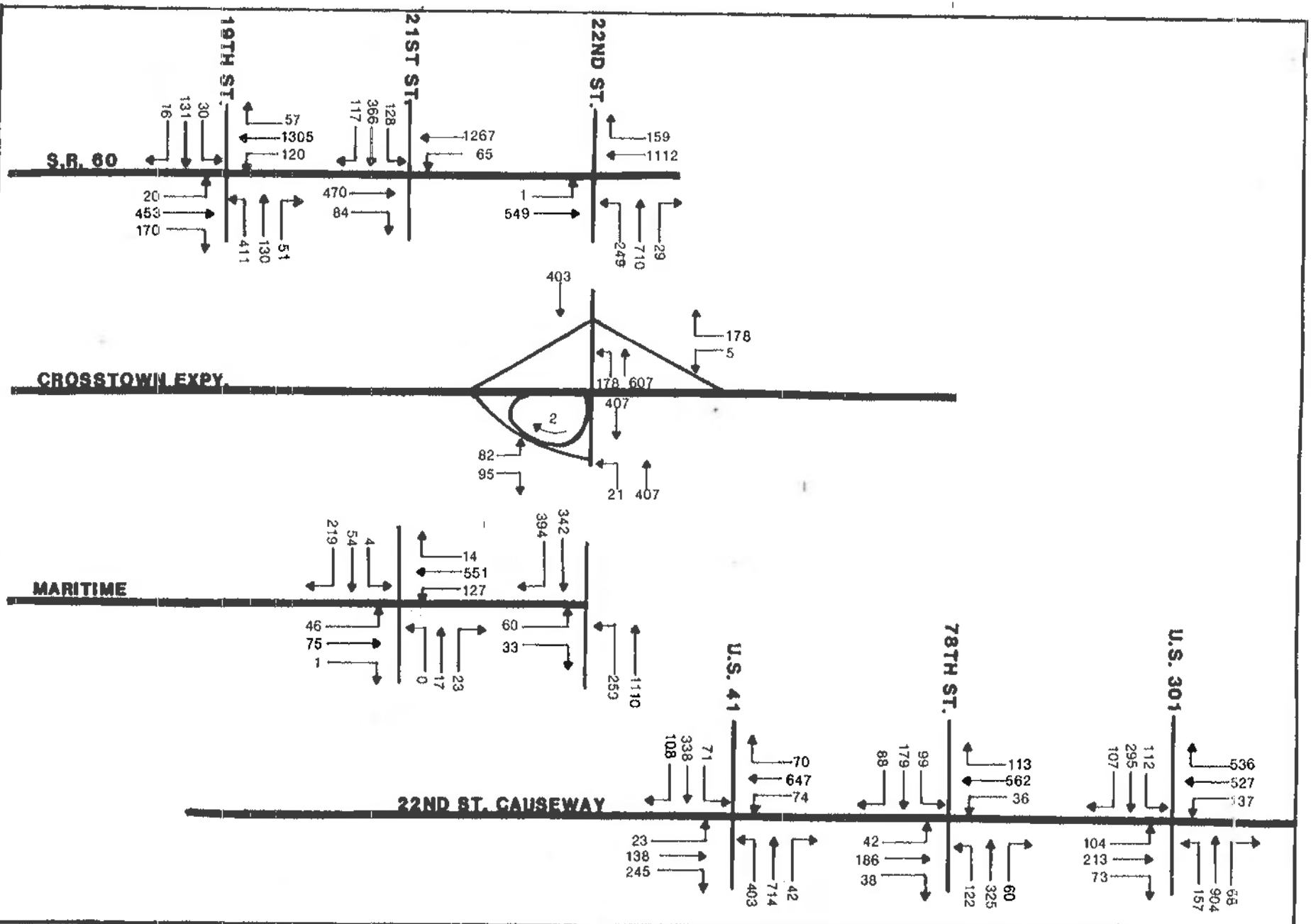
The seven-day machine counts included vehicle classification. The four-hour manual turning movement counts included pedestrians and bicycles during the morning and afternoon peak travel periods.

Figure 2-2 shows the 24-hour intersection approach volumes and the average 24-hour directional volumes at the seven-day count locations. Daily and peak hour truck percentages are also depicted for the seven-day count stations. Manual turning movement counts are presented in Figures 2-3 and 2-4 for the AM and PM peak hours, respectively.



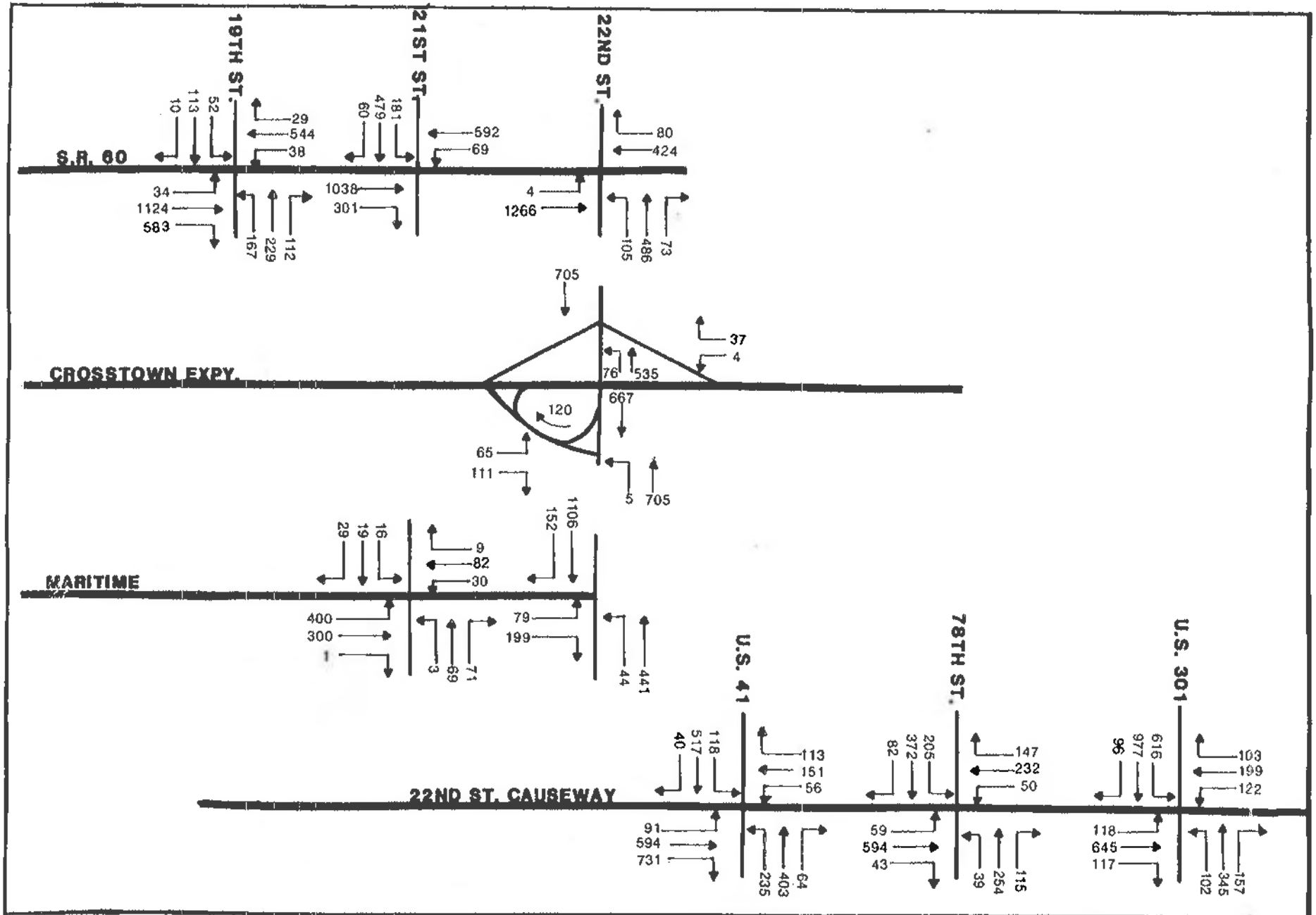
EXISTING 24 HOUR APPROACH VOLUMES

FIGURE 2-2



EXISTING AM PEAK HOUR TRAFFIC ACTIVITY

FIGURE 2-3



EXISTING PM PEAK HOUR TRAFFIC ACTIVITY

FIGURE 2-4

A signalized intersection capacity analysis was performed using a computerized software package based on the 1985 Highway Capacity Analysis. Based on this analysis, existing intersection level of service is summarized in Table 2-1. A brief explanation of LOS "A" through "F," as provided in the Highway Capacity Manual, is provided in Appendix A.

Peak hour traffic is normally identified as a portion of the total daily traffic. This portion is referred to by the term "K-factor." The average existing K is 6.6% north of the Crosstown Expressway and 7.3% south of the Crosstown Expressway. This is illustrated in Figure 2-2.

Peak directional hour distributions (D) were also tabulated based on data collection activities. The direction splits are illustrated in Figure 2-2 and are 60/40 north of the Crosstown and 70/30 south of the Crosstown.

TABLE 2-1
Existing Intersection Level-of-Service

STREET	INTERSECTING STREET	LEVEL-OF-SERVICE	
		AM PEAK	PM PEAK
20th Street	S.R. 60	C	C
21st Street	S.R. 60	B	B
22nd Street	S.R. 60	B	B
22nd Street	Crosstown Expressway northside ramps	B	B
22nd Street	Crosstown Expressway southside ramps	A	A
19th Street	Maritime Boulevard	B	B
22nd Street	Maritime Boulevard	B	B
Causeway Blvd.	U.S. 41	C	C
Causeway Blvd.	78th Street	B	B
Causeway Blvd.	U.S. 301	C	D

Source: Final Technical Memorandum Traffic Methodology, 22nd Street/Causeway Boulevard Project Development and Environment Study; July 1992; 2.9.

2.2.4 Traffic Demand Forecasting

The Metropolitan Planning Organization's (MPO) current adopted 2010 transportation network for Tampa and Hillsborough County is based on a 645 zone model validated to a base year of 1980. As part of the 2010 Plan Update Project (now underway), a new base year 1988 multi-path transit model was validated with 678 zones.

The following subsections describe the methodology used to forecast opening day and design year traffic for the proposed 22nd Street/Causeway improvements. The results of modeling several different network scenarios are also discussed.

2.2.4.1 Forecasting Methodology

For the purposes of travel demand forecasting, the 22nd Street Causeway/Causeway Boulevard project was assumed to be open to traffic in the year 1995, resulting in a deign year of 2015.

Since the MPO did not have a 1995 Network, one was created using the FDOT and the Hillsborough County Transportation Improvement Programs (TIP). Projects that were completed between the years 1988 and 1991 were added to the 1988 base year FSUTMS network. In addition, road projects in the TIP with financial commitments for construction between the years 1991 and 1995 were also added to the base year network.

2.2.4.2 Base Year Model Accuracy

The 1988 base year FSUTMS model accurately replicated existing corridor traffic volumes. On 22nd Street north of Maritime Boulevard, traffic estimates from the model are within one percent of existing 1988 counts. Model estimates on the bridge are 10 percent less than the existing count. The volumes on Causeway Boulevard between U.S. 41 and U.S. 301 are also within acceptable FDOT Standards with a volume-to-count ratio

of 0.84. However, the differences between actual and assigned volumes on the U.S. 41 and U.S. 301 corridors may result in high estimates of design year traffic on these two roadways. Assigned 1988 FSUTMS volumes were previously depicted in Figure 2-1.

2.2.4.3 Future Year Demand Forecasts

Projected traffic volumes for design year 2015 are depicted in Figures 2-5 and 2-6. A review of these traffic volumes leads to the following conclusions.

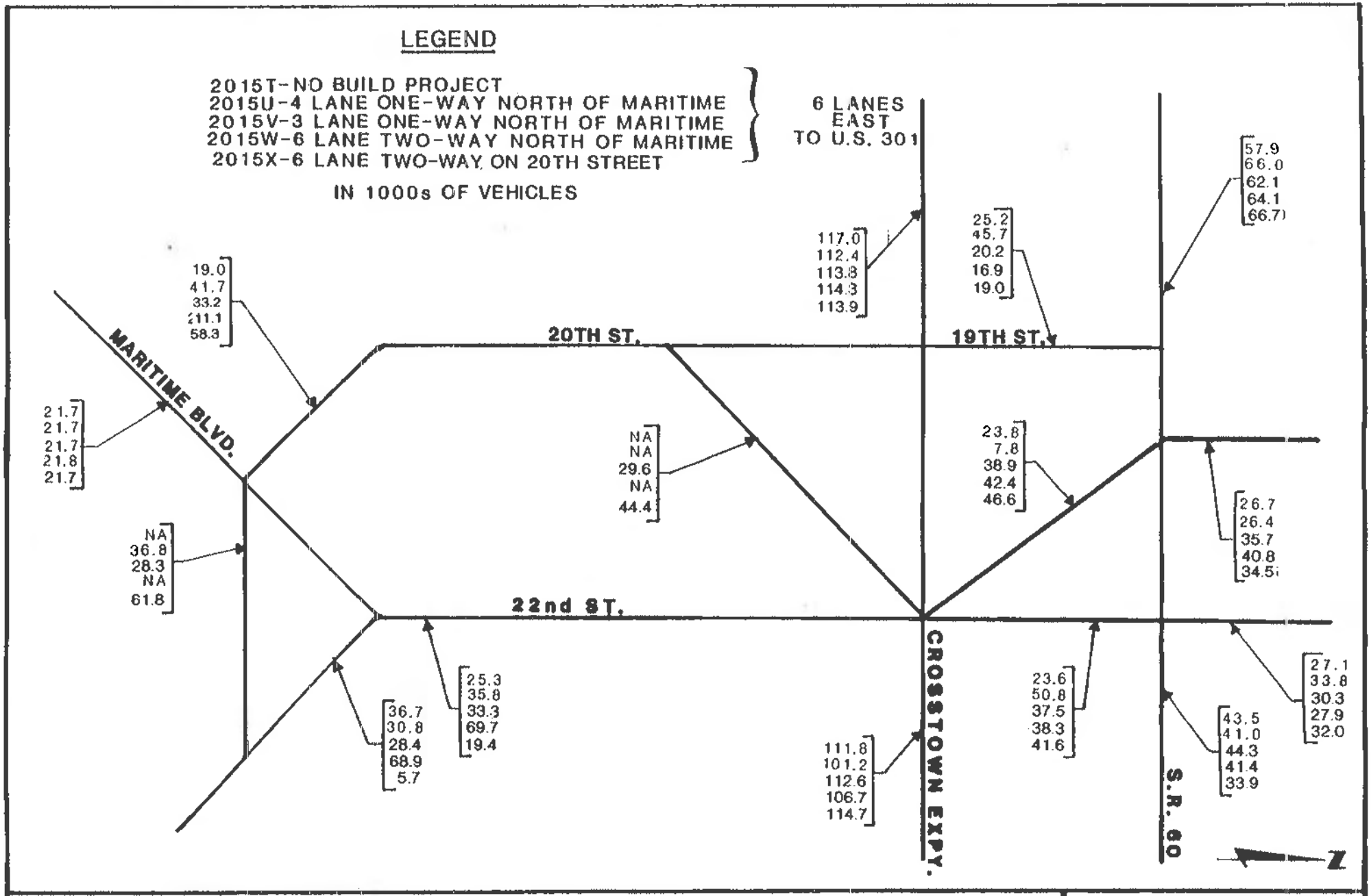
- Traffic assignment volumes on 22nd Street appear to be "capacity driven." As capacity increases on 22nd Street more traffic is diverted from the competing facilities to the project corridor. (For example, if three lanes are coded into the traffic model, projected volumes generally indicate four are required and if four lanes are coded, projected volumes generally reflect five lanes are required, etc.).

- The project corridor between S.R. 60 and the Crosstown Expressway requires a minimum of four lanes in each direction to achieve LOS "D."

- South of the Crosstown Expressway to Maritime Boulevard, the lanes required to achieve a LOS "D" is reduced to three lanes per direction. The MPO's adopted 2010 Needs Plan is in agreement with these findings recommending a four lane one-way pair north of the Crosstown reduced to three lanes south of the Crosstown Expressway because of physical constraints.

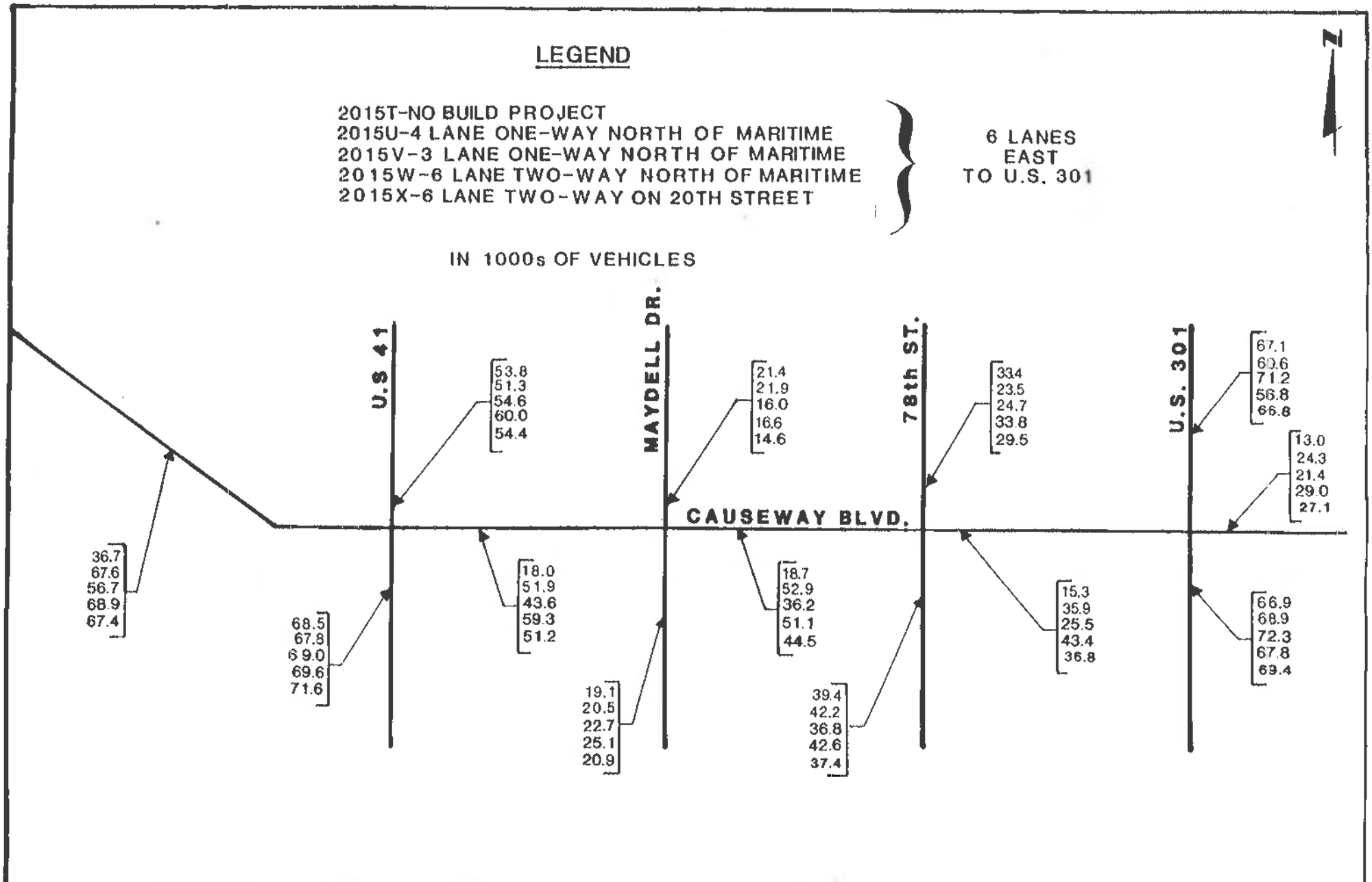
- McKay Bridge/Causeway Boulevard generally functions at either six or eight lanes, depending on the volumes and capacities north of Maritime Boulevard; and

- Causeway Boulevard east of U.S. 41 will also require six lanes ultimately; however, this improvement could perhaps be staged with four lanes constructed initially, and six lanes provided by the year 2015.



YEAR 2015 FSUTMS TRAFFIC FORECASTS

FIGURE 2-5



YEAR 2015 FSUTMS TRAFFIC FORECASTS

FIGURE 2-6

Alternative "X" (the preferred alternative south of Durham Street to the north side of McKay Bay Bridge) assumes a six-lane two-way corridor south and east of the Crosstown Expressway. However, a new alignment immediately south of the Expressway would connect with a six-lane roadway along 20th Street. With six lanes on 20th Street, the existing two-lane configuration of 22nd Street would be maintained. Unfortunately, this alternative results in volumes exceeding the present two-lane capacity of 22nd Street and the proposed six-lane capacity of 20th Street.

Opening year 1995 traffic was also developed for all project alternatives. These traffic volumes are depicted on Figure 2-7.

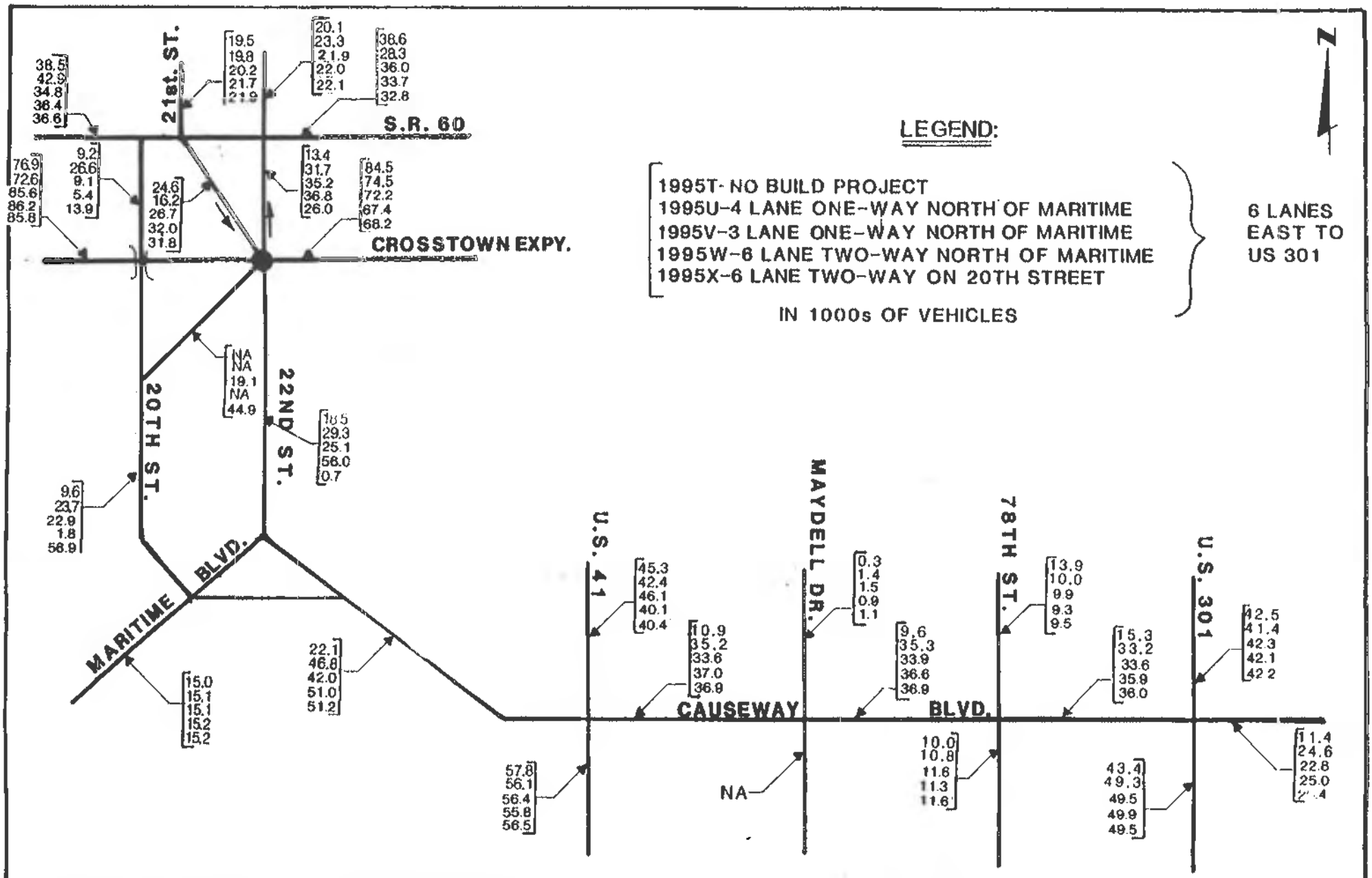
Capacity analyses were also conducted to determine the number of through lanes which will be required along each section of the 22nd Street Causeway/Causeway Boulevard corridor. The 1985 Highway Capacity Manual software was used and a summary of the analysis results is provided in the Traffic Methodology Technical Memorandum prepared for the project. Each segment of the facility was analyzed to determine the lane requirements necessary to maintain LOS "D." The results are summarized below.

TABLE 2-2

Design Year Corridor Lane Requirements

Segment	Directional Through Lanes Required
S.R. 60 to Crosstown Expressway	4
Crosstown Expressway to Maritime Blvd.	3
Maritime Boulevard to U.S. 301	3

Source: Final Technical Memorandum Traffic Methodology, 22nd Street/Causeway Boulevard Project Development and Environment Study; July 1992: 5.4.



YEAR 1995 FSUTMS TRAFFIC FORECASTS

FIGURE 2-7

All of the "Build" alternatives studied will provide adequate levels-of-service west of U.S. 301. More detailed information about traffic volume forecasts and methodologies used during the development of the design traffic for the project is included in the Traffic Technical Memorandum (July 22, 1992) prepared for the Project Development and Environment Study.

2.3 TRANSPORTATION DEMAND

Growth in traffic along the 22nd Street Causeway/Causeway Boulevard corridor has continued over the past 15 years at an average annual rate of one to five percent. Traffic has increased to the point where established FDOT LOS standards are presently being met and even exceeded along sections of the project corridor. Continued development in Tampa and Hillsborough County will result in daily traffic nearly doubling by the year 2015 along some sections of the project corridor even if needed corridor capacity improvements are not implemented. This corridor is so vital to the area's roadway network that once capacity is increased, traffic forecasts indicate that in some sections of the project corridor, traffic volumes will increase threefold by 2015. With the continued growth in traffic volumes, congestion, delay and accidents are expected to increase unless additional capacity is provided. Added congestion will cause increased travel time for motorists, resulting in increased fuel consumption, higher levels of air pollution and greater delays for emergency vehicles.

Under the "No-Build" alternative, 20th and 22nd Streets, north of Maritime Boulevard will carry traffic volumes by 2015 which exceed current capacities. Traffic volumes on Causeway Boulevard between U.S. 41 and U.S. 301 will also exceed present capacities.

The design year forecasts indicate a need for four lanes in each direction between the Crosstown Expressway and S.R. 60 in order to achieve LOS "D". This is consistent with

the 2010 MPO Needs Plan which recommends a four-lane one-way pair north of the Crosstown Expressway.

South of this point to the eastern terminus of the project, three lanes in each direction will be sufficient to achieve LOS "D." The 2010 Needs Plan recommends a three-lane one-way pair south of the Crosstown Expressway to Maritime Boulevard to minimize physical, economic and social impacts. The MPO's recommended three-lane one-way alternative also results in the most desirable set (in terms of LOS criteria) of 2015 FSUTMS forecasts. A six-lane divided arterial is recommended for Causeway Boulevard between Maritime Boulevard and U.S. 301. According to the MPO Needs Plan, grade separations are required at the U.S. 41 and U.S. 301 intersections. The Causeway Boulevard/U.S. 301 interchange is the logical termini of the project. Any grade separated interchange at this location is beyond the scope of this study, and should be included in a separate study should inadequate LOS result from widening 22nd Street Causeway Boulevard. Grade separations at the U.S. 41/Causeway Boulevard interchange and at the CSX Railroad crossing on U.S. 41 south of Causeway Boulevard are discussed in further detail in Section 3 of this report.

2.4 FEDERAL, STATE, OR LOCAL GOVERNMENT AUTHORITY

The 22nd Street Causeway/Causeway Boulevard Project Development and Environment (PD&E) Study was initiated to provide the documentation necessary for the FDOT to reach a decision on the design of improvements to the existing roadway corridor from S.R. 60 to U.S. 301 in Tampa.

The project has been coordinated with the City of Tampa and Hillsborough County governments. The project is part of the Hillsborough County MPO's 2010 Long Range Transportation Plan. The project is consistent with the City of Tampa and Hillsborough County Comprehensive Plans.

Airports

Tampa International Airport provides passenger and other air services on a regional basis. The airport lies 8 miles northwest of the northern project limit at S.R. 60. The project corridor provides access to the airport via connections to S.R. 60 or I-4 outside of the study limits.

Peter O. Knight Airport is a general aviation facility located on Davis Island in Tampa. Access to the facility is provided via connection to S.R. 60 or I-4 outside of the study limits.

Port of Tampa

The Port of Tampa is an important economic entity within the Tampa Bay region. Access to the Hookers Point facilities is primarily via the project corridor. A significant portion of the cargo handled at Hookers Point requires delivery by surface transportation means. The construction of additional travel lanes along the project corridor will enhance Port of Tampa ingress and egress, resulting in higher potential port usage and cargo movement efficiency.

Railroads

The City of Tampa has a terminal servicing passengers using Amtrak. The terminal is located near a Crosstown Expressway interchange in Tampa west of the northern project limit.

The Port of Tampa is serviced by rail, including two lines that cross project roadways. East of U.S. 41, Causeway Boulevard has an at-grade intersection with a CSX Railroad line. U.S. 41, which is included in the study by virtue of the proposed interchange at Causeway Boulevard, has an at-grade CSX crossing south of Causeway Boulevard.

The interaction between rail facilities and transport via truck will be more efficient by adding lanes to the 22nd Street Causeway/Causeway Boulevard corridor. Additional capacity will enhance ingress and egress, resulting in improved intermodal efficiency.

Mass Transit

The project area is currently served by two local bus routes: No. 9 and No. 37. The buses are operated by the Hillsborough Area Regional Transit Authority (HART). Route No. 9 originates at Hookers Point and runs up 22nd Street. Once beyond the project limits it turns north along 15th Street and Nebraska Avenue, stopping at University Square Mall and terminating at the intersection of Bearss Avenue and Florida Avenue. Route No. 37 originates in downtown Tampa, proceeds through Ybor City then down 22nd Street and along Causeway Boulevard to Brandon. Headways for both routes are between 45 minutes and 1 hour. These two routes accommodate residents throughout the project limits.

The MPO is studying the feasibility of implementing a fixed rail guideway transit system in the Tampa urban area. While there are no plans to run the system along the project corridor, S.R. 60 has been identified as a possible location for the Eastern Corridor of this system. The system would extend from the Westshore area in Tampa to Brandon. Buses could be used on 22nd Street Causeway/Causeway Boulevard to provide access to this system, with transit stations at selected locations along S.R. 60. While this system could reduce the traffic demand on the subject corridor, its conceptual status does not allow for an accurate quantification of its impact on the surrounding transportation network.

Pedestrian and Bicycle Facilities

There are no designated accommodations for bicyclists within the project corridor. Pedestrians are served by sidewalks along 22nd Street north of Maritime Boulevard.

The Hillsborough County Bicycle Plan has not been updated since its initial preparation in 1985. The existing plan does not designate the 22nd Street Causeway/Causeway Boulevard corridor as a candidate location for bicycle facilities.

Coordination with the City of Tampa and Hillsborough County MPO confirmed that a preliminary proposal has been developed to provide a bicycle loop around McKay Bay and along Causeway Boulevard. Additional coordination with the City of Tampa and the Hillsborough County MPO has taken place to ensure that the proposed improvements are consistent with future bicycle plans.

The typical sections for both six-lane divided urban roadways and three-lane one-way pair urban roadways include accommodations for both pedestrians and bicyclists. Continuous sidewalks along both sides of the road will facilitate safe pedestrian movement, while four-feet wide bicycle lanes along both sides of the pavement will accommodate bicyclists. On McKay Bay Bridge, bicyclists will be accommodated on the (8-feet wide) bridge shoulders. Pedestrian crosswalks will be located during the design phase of the project.

2.7 SAFETY

Accident data compiled and analyzed for the 22nd Street Causeway/Causeway Boulevard corridor shows accident rates higher than national averages. Information provided by the Florida Department of Highway Safety and Motor Vehicles over the five years analyzed (1985-1989) also shows that these accident rates are higher than the statewide averages. The categories examined included the following:

- Injury rate: 1.49 to 2.42 times national average; (no statewide comparisons)

- Persons injured rate: 1.49 to 2.45 times the national average; 1.21 times higher than the statewide average.

- Fatality rate: 3.6 to 5.7 times the national average; 1.90 times higher than the statewide average.

FDOT annual accident detail reports were reviewed to pinpoint accident "hot spots." The five-year accident history for the 22nd Street/Causeway Boulevard corridor is presented in Table 2-4. As the corridor nears capacity and traffic congestion builds, the number of vehicular accidents is expected to increase. The lack of bicycle facilities and deficiency of pedestrian provisions may also contribute to an increase in accident totals as added non-motorized traffic increases accident potential.

The structural condition of the existing pavement, as noted in the Preliminary Engineering Report (1993), is poor. With the increased traffic volumes forecasted, the pavement will deteriorate at an increasing rate. Pavement that is in poor condition will increase both accident potential and vehicle maintenance costs to motorists.

The proposed construction of additional travel lanes, as well as the proposed interchange at U.S. 41, is expected to reduce both the frequency and severity of traffic accidents. The widened roadway will include a six-lane divided roadway, which will reduce conflicts at intersections and lower the rate of head-on collisions. A safer system can further be achieved by improving intersections and providing pedestrians and bicyclists with adequate facilities.

TABLE 2-4
High Accident Frequency Locations
(Locations with more than 10 accidents)

Intersection	Mile Post	# Total Accidents					Total	Avg. Per Year
		1985	1986	1987	1988	1989		
U.S. 301	0.000	28	-	14	-	3	45	9
Clifford-Sample Dr.	0.758	3	6	-	-	3	12	2.4
78th Street	1.153	5	11	14	10	6	46	9.2
70th Street	1.664	4	2	3	2	4	15	3.0
Maydell Drive	2.158	7	4	5	4	6	26	5.2
CSX R.R.	2.925	2	-	3	3	3	11	2.2
U.S. 41	3.189	16	6	8	8	7	45	9.0
Maritime Blvd.	5.582	4	3	5	5	4	21	4.2
Durham Street	6.515	6	4	-	-	-	10	2.0
S.R. 60	6.845	6	2	-	-	2	10	2.0

Source: Final Technical Memorandum Traffic Memorandum, 22nd Street/Causeway Boulevard Project Development and Environment Study; July 1992; 3.2.

2.8 NAVIGATION

There are four existing bridges within the project limits. Two of these bridges span McKay Bay in parallel while the other two structures are located at separate Delaney Creek crossings. The existing Bridge Condition Report prepared in 1991 documents the existing condition of each bridge, their inventory rating, remaining life span and suitability for improvement. The following subsections provide a detailed description of the existing structures and their deficiencies.

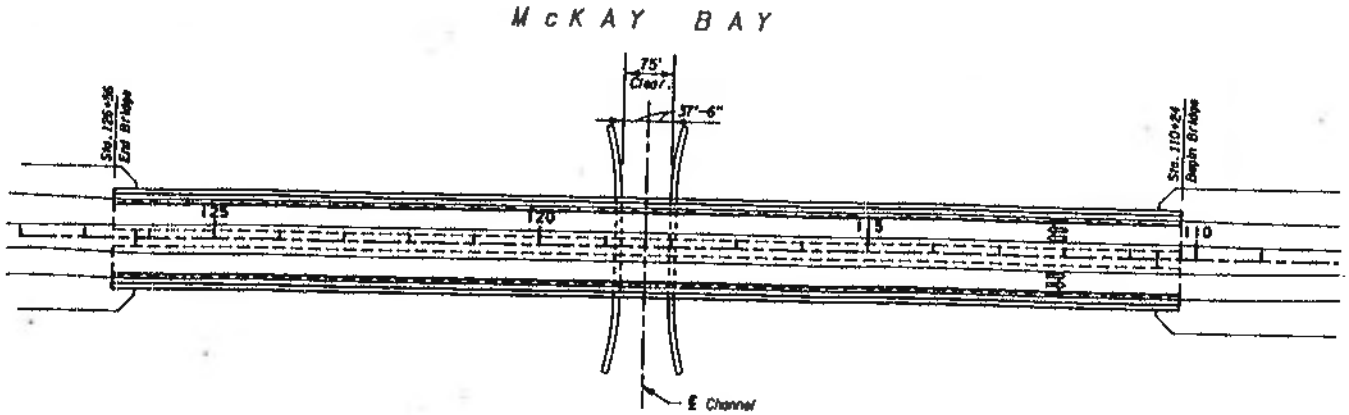
2.8.1 22nd Street Causeway (Licata) Bridges: Nos. 100338 and 100299

The existing twin, two lane bridges that carry 22nd Street traffic over McKay Bay were constructed in 1976. These bridges are virtually identical prestressed concrete structures which have an estimated remaining life of 38 years and satisfy the HS-20 inventory rating according to the 1991 bridge inspection reports. The bridge inspection reports indicate that the bridges are in good structural condition and require only minor cosmetic and maintenance repairs.

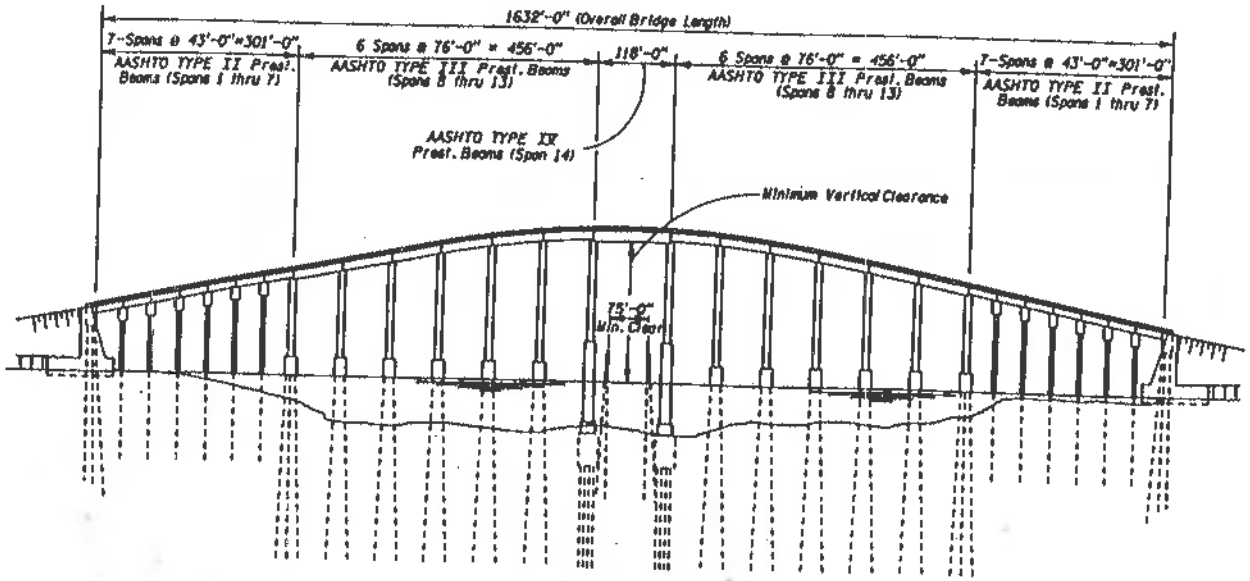
Maintenance records indicate that no major improvements have been made to the bridges since the time of their construction, and that the structures are on the Bridge Repair and Rehabilitation Program (BRRP) in 92/93 (W.P.I. 711758) for fender replacement and protective coating.

The plan view and elevation of McKay Bridge is illustrated in Figure 2-8. As shown, the vertical clearance of the 22nd Street Causeway bridges is 40.06' MHW at the centerline of the channel with a span clearance is 110'-0". The total length of the bridge is 1632 feet.

The existing bridge inspection report states that initial investigations indicate the increased traffic volume may result in the need for three lanes to be provided on the 22nd Street Bridge.



PLAN



ELEVATION

McKAY BAY BRIDGE EXISTING PLAN AND EVALUATION

FIGURE 2-8

The report identifies two possible alternatives:

1. Widening to both the inside and outside of the existing structures.

2. Widening to the outside of the existing structures.

An investigation of the two alternatives indicates that widening to the outside along with a replacement of the nonstandard traffic railing on the inside (to comply with federal funding requirements) is the most beneficial alternative. Widening to the outside is a more economical alternative because it requires less substructure and foundation improvements to accomplish; however, it results in a reduction of the existing vertical clearance by approximately six inches.

The existing channel has a depth of 7 to 11 feet, which is suitable for recreational and fishing boats only. Although ships do not pass beneath these bridges, Port of Tampa operations sometimes result in large ships operating near the bridge structure.

Several waterway related businesses are located in the vicinity of the project including the Tampa Shrimp Docks, the General Cargo Complex, the Holland America Cruise Ship Terminal and the Tampa Barge Service. These businesses use the East Bay Channel and Turning Basin and do not pass close to the bridges to avoid running aground. None of these businesses use the channel beneath the 22nd Street Bridges. Therefore, the impacts to navigation due to bridge widening are expected to be minimal.

As indicated in Section 2.2.2, the existing LOS on McKay Bay Bridge and the Causeway is LOS "A." However, projected traffic volumes for design year 2015 indicate that McKay Bridge/Causeway will require six to eight lanes of travel, depending on the volumes and capacities north of the Maritime Boulevard in order to achieve a LOS "D."

The proposed improvements include the addition of one lane per direction to the existing bridge structures. The existing fender system will be extended the additional length necessitated by the bridge widening. As stated previously, widening to the outside has proven to be a more economical alternative. This widening has been determined to be feasible due to the current condition of these bridges and their remaining life. The costs to widen the bridges over McKay Bay are estimated to be $4,032,000.

The U.S. Coast Guard is a cooperating agency on this project because of the need to obtain bridge permits for the 22nd Street Causeway Bridges (refer to Exhibit 1, Appendix B).

2.8.2 S.R. 676 Bridges Over Delaney Creek (Bridge Nos. 100065 and 100066)

These low-level bridges were built in 1928 to carry one lane of traffic in each direction. The Structural Inventory and Appraisal forms dated October 9, 1990 gave the structures an inventory rating of HS-20 and useful lives of 11 years (Bridge #100066) and 13 years (Bridge #100065). Increased traffic volume results in the need for additional lanes on the bridges. It was recommended that this task be accomplished by replacing the existing structures with new structures.

At present, the existing Delaney Creek bridges require numerous repairs. An examination of the Bridge Inspection Reports (1991) indicates that the bridges have deteriorated substantially and that continued deterioration can be expected. The cost associated with the continued maintenance and repair of the existing structures is further justification for their replacement.

The Bridge Inspection reports also indicate that there might be a potential problem due to scour and aggregation along the channel bottom. This has resulted in the recommendation that rechannelization be conducted at Bridge #100065. These problems

as well as others related to hydraulics of the site could be resolved with the replacement of the existing structures.

The existing plans for the Delaney Creek and tributary bridges are not in FDOT records (bridges built in 1928). Therefore, plan and elevation view cannot be provided at these locations. Bridge #100065 is 38.3 feet wide; Bridge #100066 is 38.6 feet wide.

As indicated in Section 2.2.2., the existing LOS from Causeway Boulevard to U.S. 301 ranges from LOS "B" to "D." Projected traffic volumes for design year 2015 indicate that Causeway Boulevard, east of U.S. 41, will require six lanes in order to achieve a LOS "D" by year 2015.

The potential long-term cost savings as well as the benefits associated with new bridges meeting present standards and satisfying the present conditions of the sites provides the justification for the proposed bridge replacement.

Delaney Creek and its tributary, at which these bridges cross, are not navigable waterways. Therefore, no bridge permits will be required for their replacement (see U.S. Coast Guard correspondence, Appendix B).

SECTION 3
ALTERNATIVES CONSIDERED

The alternatives considered for this project include the "No-Build" Alternative, the Transportation System Management alternatives, multi-modal alternatives, and multiple build alternatives. All build alternatives are consistent with the City of Tampa and Hillsborough County Comprehensive Plans.

3.1 "NO-BUILD" ALTERNATIVE

The "No-Build" Alternative is included to provide a basis of comparison to "build" alternatives, as well as to evaluate the effect of not widening the 22nd Street Causeway/Causeway Boulevard corridor.

If the existing roadway corridor is not widened, the advantages will include:

- No construction costs
- No right-of-way acquisition
- No business or residential relocation
- No construction-related inconvenience to existing land uses
- No new environmental impacts
- No impacts to the Palmetto Beach area, including the proposed historic district

The disadvantages of not adding additional lanes to the project corridor include:

- Unacceptable levels-of-service on the existing roadway network
- Decreased economic development, including impacts to the Port of Tampa
- Increased road user costs from increased traffic congestion
- Deterioration of existing air quality
- No enhancement in emergency service response time

The "No-Build" Alternative will remain a viable alternative throughout the study process and will be presented as a viable alternative at the public hearing.

3.2 TRANSPORTATION SYSTEM MANAGEMENT

The Transportation Systems Management (TSM) alternative includes those types of activities intended to maximize the utilization and efficiency of the 22nd Street Causeway/Causeway Boulevard roadway. Specific options in the TSM alternative include: fringe parking, ride-sharing, traffic signal timing optimization and high-occupancy vehicle (HOV) lanes.

Due to the suburban nature of development along the roadway and to the diverse nature of commercial activity in the area, fringe parking and ride-sharing options would not be effective in improving the person moving capabilities of the corridor.

Traffic signal optimization can increase the capacity of most urban roadways. However, the existing roadway has an average of only one signalized intersection per mile. Since the corridor is not heavily signalized, the existing lanes would not benefit from signal timing optimization to produce an acceptable LOS. Signal optimization will, however, be a part of the overall improvements.

HOV lanes can increase the person moving capabilities of urban expressway systems and some urban arterials when large numbers of commuters use these facilities, such as when they connect large residential areas with large commercial centers. Land use along 22nd Street and Causeway Boulevard is a nearly homogenous mixture of small commercial and residential activity throughout the corridor. Therefore, it is not likely that the addition of HOV lanes to the corridor, instead of general use lanes, would provide the necessary transportation improvement.

3.3 MULTI-MODAL ALTERNATIVES

The 22nd Street Causeway/Causeway Boulevard corridor provides direct access to the Port of Tampa which, in turn, provides multi-modal linkages between truck, rail and water-based transport. The Port of Tampa is a major employer and contributes significantly to the local economy through shipping and distribution of goods and services. The Port recently completed a Master Plan which calls for expansion of both their shipping and cruise ship operations. Good surface transportation access is critical to successful operation of the Port of Tampa.

The project area is currently served by two local bus routes: No. 9 and No. 37. The buses are operated by the Hillsborough Area Regional Transit Authority (HART). Route No. 9 originates at Hookers Point and runs up 22nd Street. Once beyond the project limits it turns north along 15th Street and Nebraska Avenue, stopping at University Square Mall and terminating at the intersection of Bearss Avenue and Florida Avenue. Route No. 37 originates in downtown Tampa, proceeds through Ybor City then down 22nd Street and along Causeway Boulevard to Brandon. Headways for both routes are between 45 minutes and one hour. These two routes accommodate residents throughout the project limits.

The MPO is studying the feasibility of implementing a fixed rail guideway transit system in the Tampa urban area. While there are no plans to run the system along the project corridor, S.R. 60 has been identified as a tentative location for the Eastern Corridor of this system. The system would extend from the Westshore area in Tampa to Brandon. Buses could be used on 22nd Street Causeway/Causeway Boulevard to provide access to this system, with transit stations at selected locations along S.R. 60. While this system could reduce the traffic demand on the subject corridor, its conceptual status does not allow for an accurate qualification of its impact on the surrounding transportation network.

3.4 BUILD ALTERNATIVES

3.4.1 Corridor Analysis

An analysis was performed on possible alternatives to the existing 22nd Street Causeway/Causeway Boulevard corridor (refer to Figure 1-1, Project Location Map). There are no viable corridor alternatives south/east of Maritime Boulevard. North of Maritime, use of 20th Street provides an alternative roadway corridor.

The corridors considered are:

- six-lane divided roadway along 22nd Street Causeway/Causeway Boulevard
- six-lane divided roadway along 20th Street north of Maritime Boulevard, transition to meet existing 22nd Street Causeway bridges over McKay Bay
- three-lane one-way pair using 20th Street and 22nd Street north of Maritime Boulevard, and 22nd Street south of Maritime (six-lane divided roadway)

3.4.2 Project Segmentation

Several factors, including the physical layout of the project corridor, allow for segmenting the project into Northern and Eastern sections (see Figures 3-1, 3-2, and 3-3). The North Section lies between S.R. 60 and the north end of the 22nd Street Causeway bridge over McKay Bay, with traffic running in a north-south direction. The area between the McKay Bay bridge and U.S. 301 will be referred to as the East Section throughout the remainder of this document.

The project is further subdivided for ease of analysis. The North Section is divided into two segments as follows:

Segment 1 - S.R. 60 to Durham Street (0.47 mi.)
Segment 2 - Durham Street to north side of McKay Bay Bridge (1.15 mi.)

Segment 1 is common to all alignment alternatives. Segment 2 offers three different options with a common terminus at the intersection of Durham and 22nd Streets.

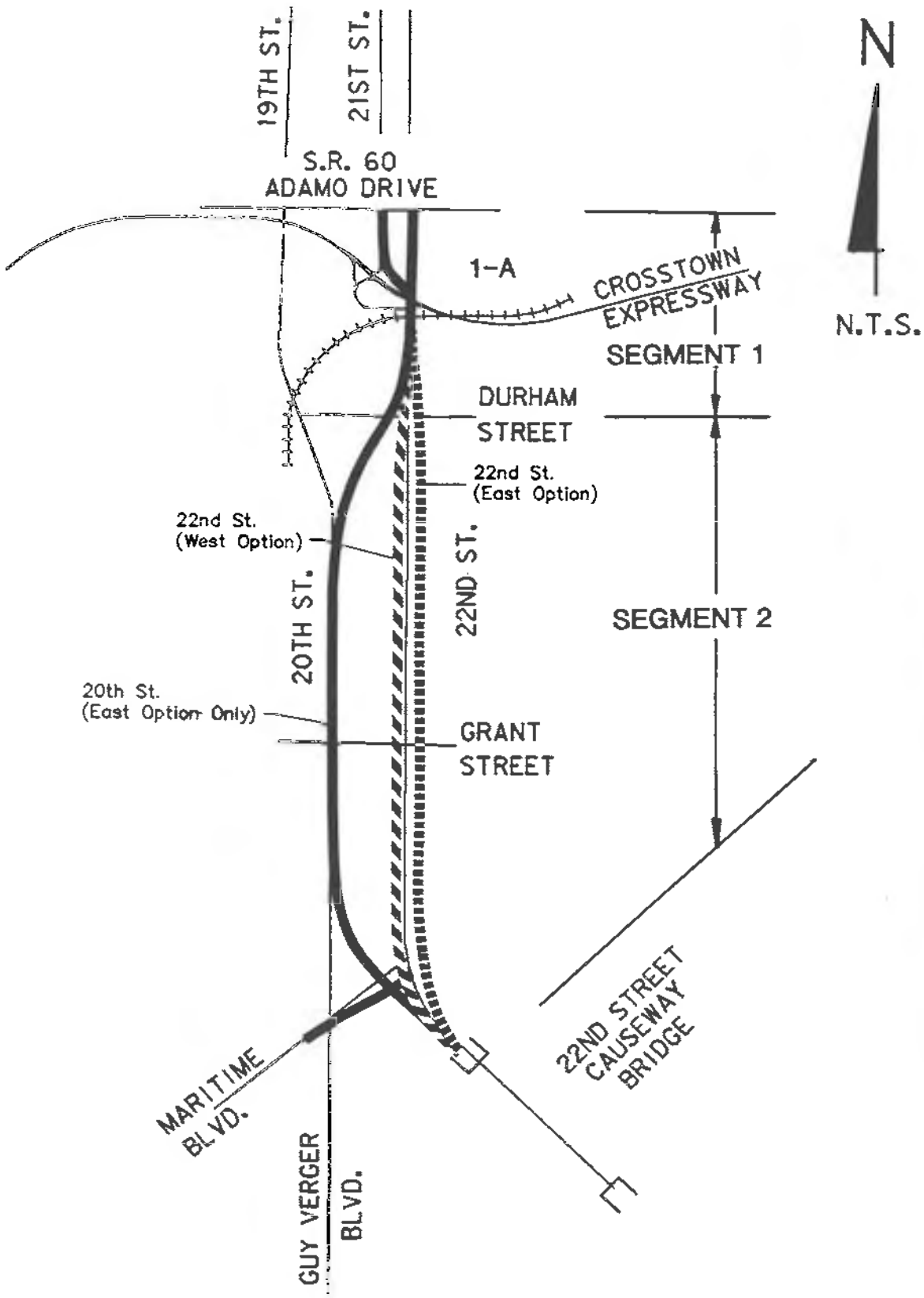
The East Section is subdivided according to geographic features and the levels of development on adjacent properties. The East Section is divided into the following segments:

Segment 1 - McKay Bay Bridge to 45th Street (1.77 mi.)
Segment 2 - 45th Street to 54th Street (0.90 mi.)
Segment 3 - 54th Street to Maydell Drive (0.53 mi.)
Segment 4 - Maydell Drive to U.S. 301 (2.14 mi.)

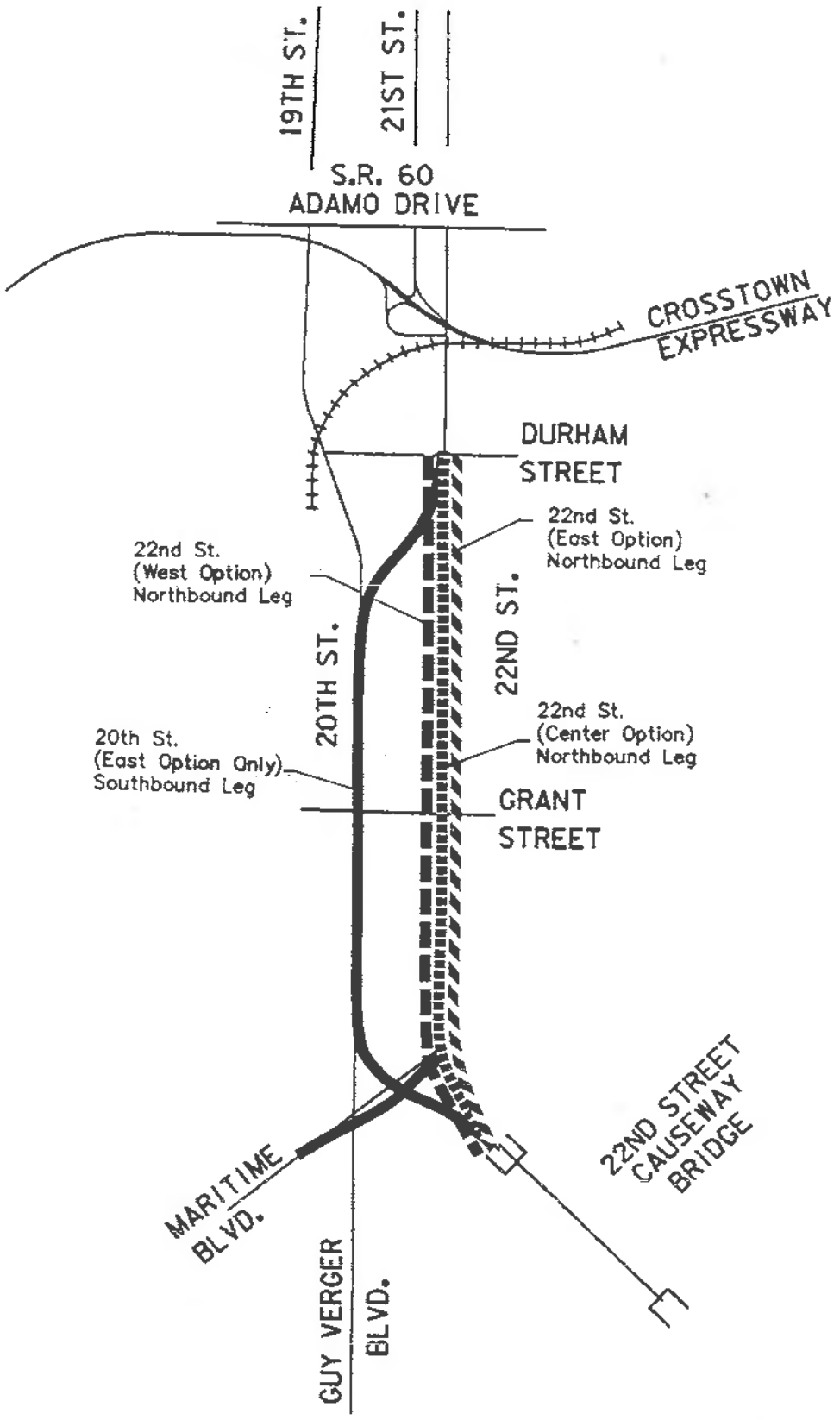
Segment 1 requires no additional right-of-way. Segment 2 is located within a highly constrained corridor centered about U.S. 41. Segments 3 and 4 are located in a less constrained areas with varying intensities of development.

3.4.3 Design Speed

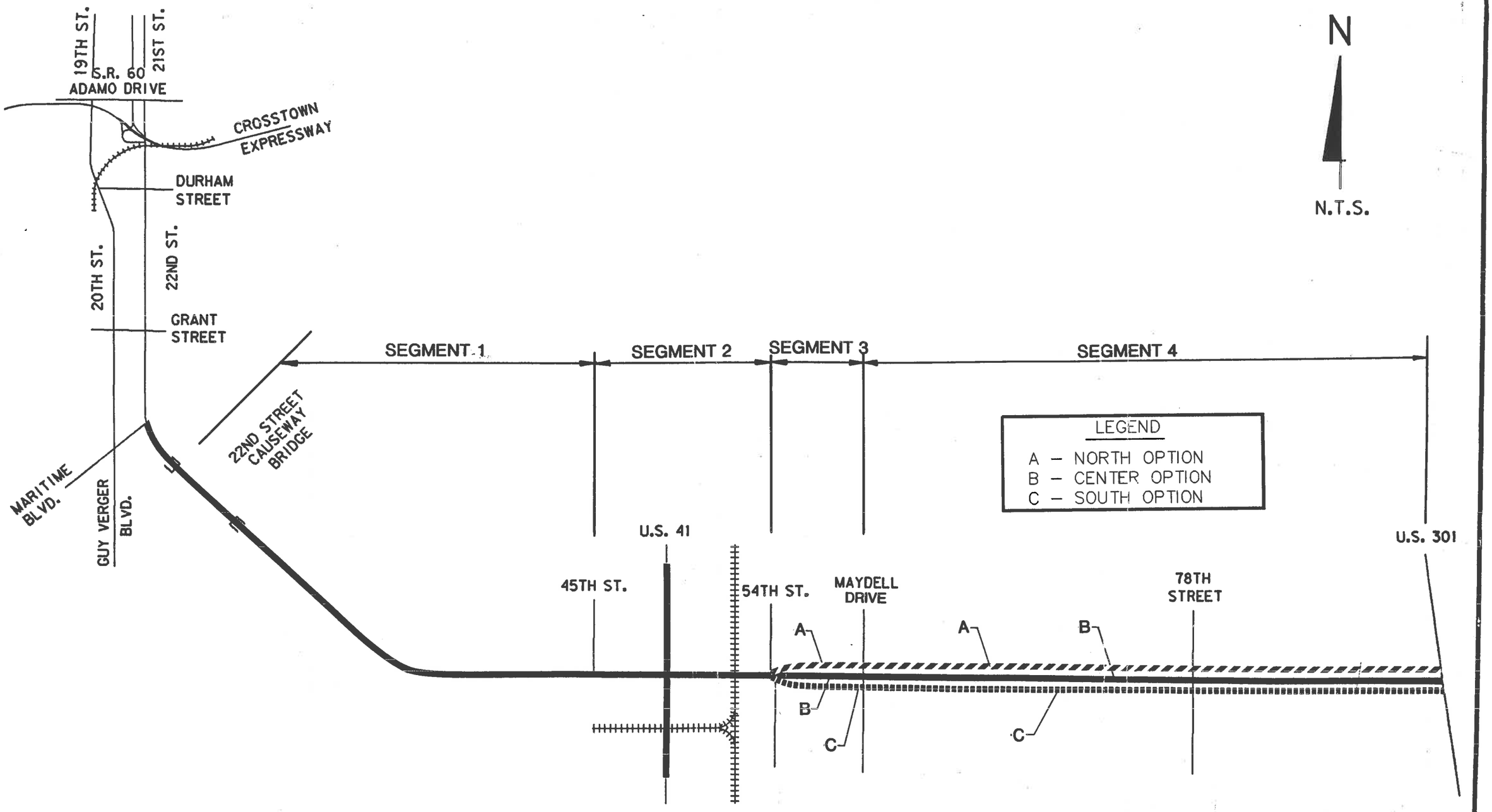
Design speed is the maximum safe speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern. The North Section of the project is highly urbanized with a very narrow right-of-way width. The building setback distance (from right-of-way line to face of structure) is often under 10 feet and sometimes down to 0. A design speed of 40 mph has been established for this section of the project. The eastern section of the project is less developed and has more available right-of-way. A design speed of 45 mph has been established for this section of the project, the maximum for urban design. The higher design speed is consistent with driver expectation.



PROJECT		FIGURE NO.
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD (S.R. 676) PD&E STUDY	ALTERNATIVE ALIGNMENTS NORTH SECTION 6-LANE DIVIDED	3-1



PROJECT 22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD (S.R. 676) PD&E STUDY	ALTERNATIVE ALIGNMENTS NORTH SECTION 3-LANE 1-WAY PAIRS	FIGURE NO. 3-2



PROJECT 22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD (S.R. 676) PD&E STUDY	ALTERNATIVE ALIGNMENTS EAST SECTION 6-LANE DIVIDED	FIGURE NO. 3-3

3.4.4 Alternative Typical Sections

The primary considerations used in developing proposed typical section alternatives for 22nd Street Causeway/Causeway Boulevard were:

- existing typical section features
- existing right-of-way and land use types
- adherence to acceptable design standards and laneage provisions to meet future demands.
- minimizing right-of-way impacts
- accommodations for bicyclists and pedestrians.

Alternative typical sections were developed for each of the two project study sections. The FDOT design standards for all typical sections presented meet or exceed AASHTO standards. Refinements to these typical sections may be required for the construction of the project. These areas will be determined during the final design phase as variations in topography necessitate the acquisition of additional land to provide embankment slopes to meet the existing ground.

North Section

Although the roadway cross-section beneath the Crosstown Expressway is atypical, it must be addressed to prove the sufficiency of the existing Expressway bridge over 22nd Street.

The useable width from pier to pier (inside face) is approximately 119 feet. Future traffic demands have indicated that four lanes in each direction, some of which may be exclusive turn lanes, are required from the Crosstown Expressway to S.R. 60. As seen in Figure 3-4, the three inside lanes in both directions have been reduced in width to 11 feet each to reduce the overall section width. Due to the proximity of existing bridge piers, a barrier wall would be provided at the base of sidewalk/face to pier.

South of the Crosstown Expressway, two basic typical section options have been developed in the North Section of the project: a six-lane divided roadway and a three-lane one-way pair. The one-way pair concept has been developed in an effort to minimize right-of-way requirements along a very narrow corridor.

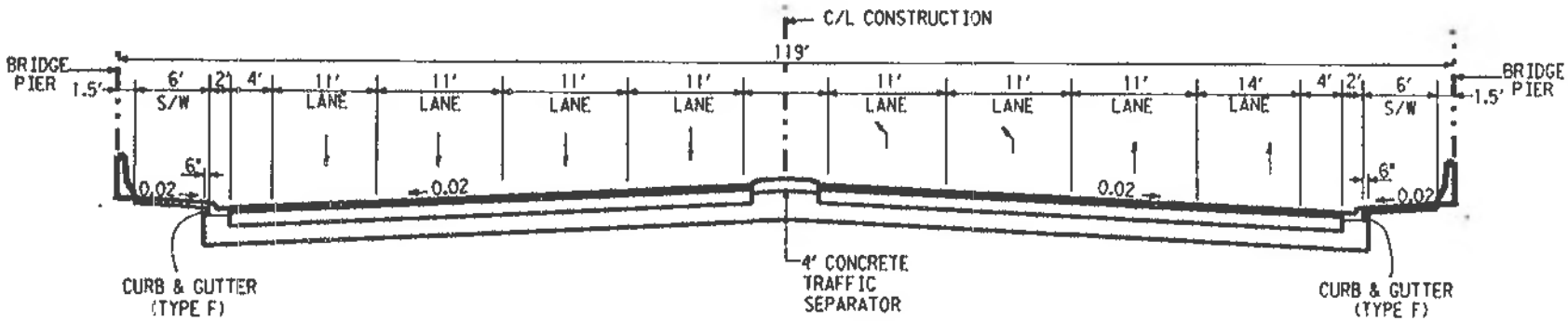
The three-lane one-way pair option (as shown in Figure 3-5) consisted of two standard 12 foot wide lanes and a 14 foot wide outside lane to accommodate bicycle traffic. Six foot wide sidewalks are adjacent to the two foot wide curb and gutter, a common design for urban settings. A two foot wide utility and grading strip is provided behind the sidewalk, bringing the total right-of-way width to 58 feet.

The six-lane divided typical section alternative (see Figure 3-5) retains most of the elements developed for the one-way pair options. The six-lane option utilizes a 22-foot wide raised median between three-lane roadway sections. In areas where dual left turn lanes are required, the median width will have to be increased to at least 28 foot wide to allow for two lanes plus a traffic separator.

East Section

The East Section typical sections include three-foot wide grass strips between the curb and sidewalk. This strip provides additional clearance protection for pedestrians from vehicles traveling at higher speeds. It also provides an expanded area for utility construction and relocation. Median widths vary and sidewalk widths are five feet, the FDOT standard when the sidewalk is not adjacent to the curb.

The typical section for the East Section of the project is shown in Figure 3-6.

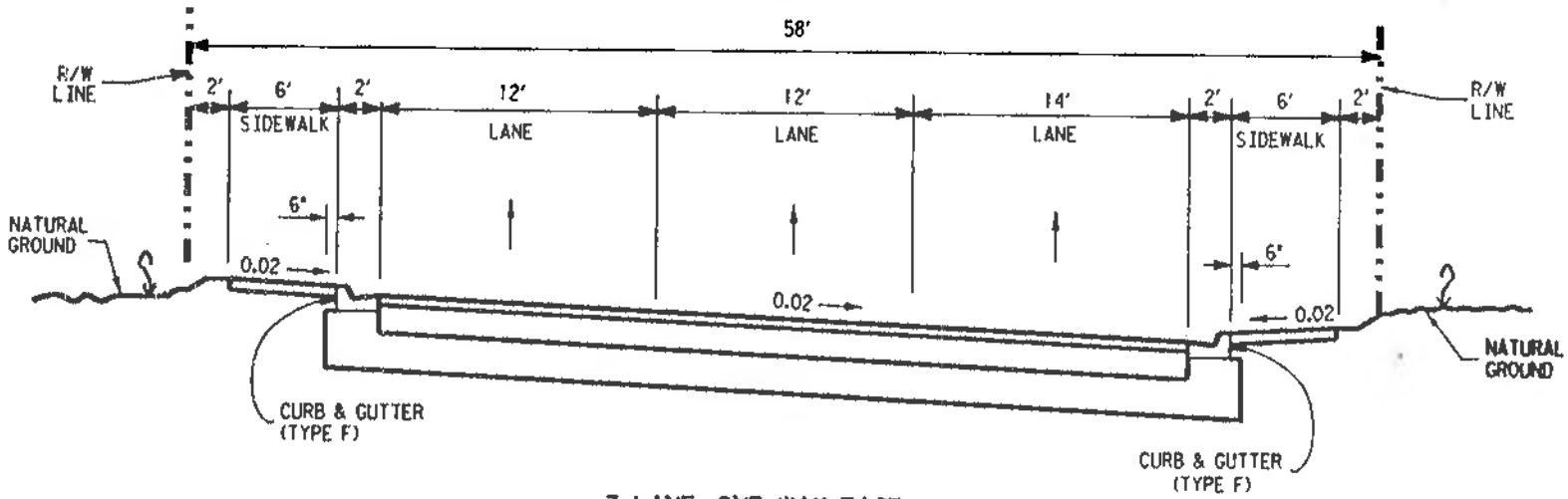


TYPICAL SECTION @ CROSSTOWN EXPRESSWAY

6-LANE DIVIDED

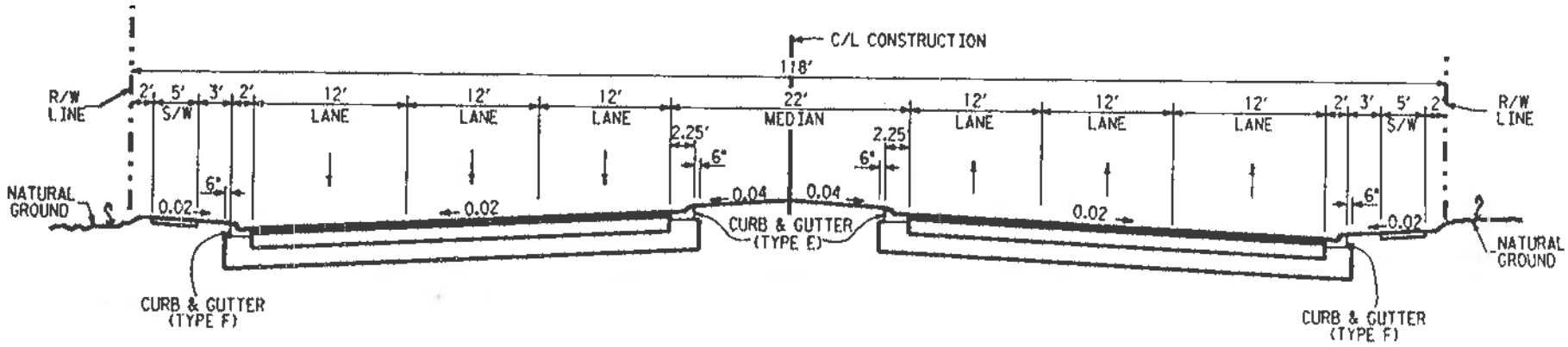
N.T.S.

PROJECT		FIGURE NO.
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD (S.R. 676) PD&E STUDY	TYPICAL SECTION - CROSSTOWN EXPRESSWAY	3-4



3-LANE, ONE-WAY PAIR

N.T.S.

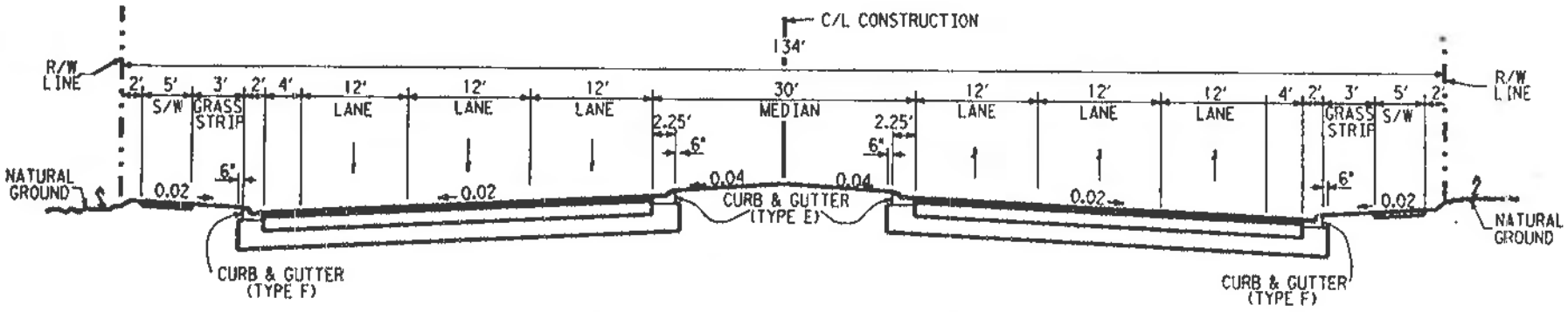


6-LANE DIVIDED OPTION

N.T.S.

*NOTE: BICYCLE LANES PROVIDED ON PARALLEL FACILITY (22ND ST.)

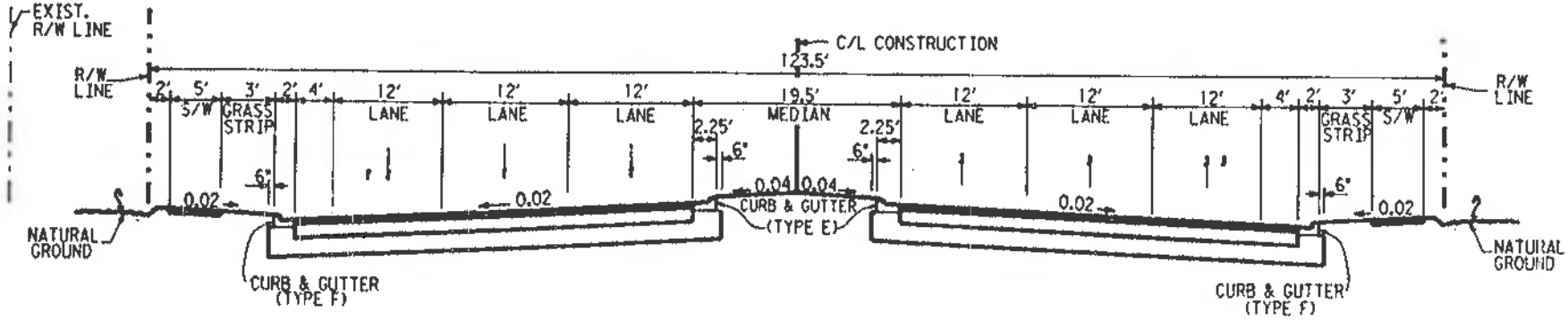
PROJECT		FIGURE NO.
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD (S.R. 676) PD&E STUDY	TYPICAL SECTIONS S.R. 60 TO MARITIME BOULEVARD	3-5



22ND ST. BRIDGE TO U.S. 301

6-LANE DIVIDED
N.T.S.

EXCEPTIONS: 1. CAUSEWAY SECTION
2. 45TH ST. TO 54TH ST.



CAUSEWAY, SOUTH OF 22ND STREET BRIDGE (WETLAND CONSTRAINED)
45TH ST. TO 54TH ST.

6-LANE DIVIDED
N.T.S.

PROJECT
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
(S.R. 676)
PD&E STUDY

TYPICAL SECTIONS - EAST SECTION

FIGURE NO.
3-6

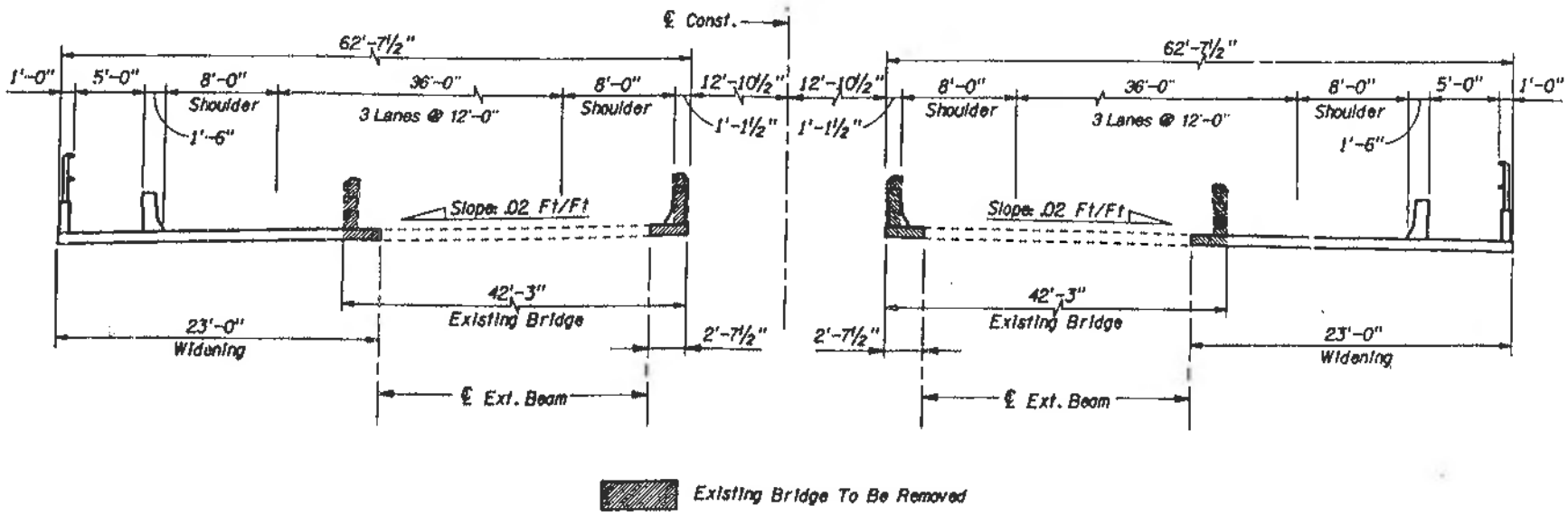
McKay Bay Bridge:

The Existing Conditions Bridge Report (1991) established the suitability for widening of the 22nd Street Causeway Bridge over McKay Bay. The proposed bridge typical section for each of the twin spans consists of 38 feet wide of travel lanes with 8 foot wide shoulders on each side for disabled vehicles. Beyond the outside shoulder, roadway elements shall include a single-sided barrier wall, a five-feet wide sidewalk and a barrier with pedestrian handrail (see Figure 3-7).

A six-lane divided section continues south of the existing bridge. Approximately 3/4 mile of roadway lies on a narrow strip of fill, surrounded on both sides by McKay Bay, with wetlands along the shorelines. The proposed typical section has been constrained in this area to minimize wetland impacts (see Figure 3-6). This width reduction has been facilitated by using a 19.5 foot median. Other features include 4 foot wide bicycle lanes, a three foot wide grass strip between curb and the five foot wide sidewalk as well as a 2 foot grass strip behind the sidewalk. The total right-of-way width is 123.5 feet, and the typical is intended for use in areas where wetlands are impacted. Additional land may be needed to accommodate special design features, including retaining wall and/or the inclusion of rip-rap for shoreline stabilization.

The width of the cross-sectional elements described in the preceding paragraph could be reduced slightly. Six feet of width could be deleted by using 11 foot wide travel lanes. However, due to heavy truck traffic along 22nd Street Causeway/Causeway Boulevard, the use of 12 foot wide lanes is recommended.

The 19-foot, 6-inch wide median represents the minimum width for an urban section with a design speed of 45 to 50 miles per hour. Reducing this width would be inconsistent with the selected design speed and travel characteristics of vehicles using the facility.



TYPICAL SECTION

PROJECT		FIGURE NO.
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD (S.R. 676) PD&E STUDY	22nd STREET CAUSEWAY OVER McKAY BAY	3-7

Major environmental considerations included relative impacts to:

- Wetlands
- Floodplains
- Wildlife/Threatened and Endangered Species
- Natural and Cultural Features, including Historical Areas
- Community Services
- Farmlands
- Potential Contamination Sites
- Air Quality
- Noise Impacts
- Water Quality

Engineering issues of importance include:

- Highway Design Geometric Criteria
- Drainage and Stormwater Management
- Access Management
- Interchange Types and Locations
- Maintenance of Traffic and Constructability
- Geotechnical Considerations

Socioeconomic Considerations included:

- Business and residential impacts, including relocations
- Construction Costs
- Right-of-Way Costs
- Sensitivity to Utility Relocation Costs

The following three alternatives have been developed for the North Section of the project:

1. A three-lane one-way pair on 20th and 22nd Streets
2. A six-lane divided roadway on 22nd Street
3. A six-lane divided roadway on 20th Street

These three alternatives have been further subdivided by evaluating east, center and west options. The east option, for example would acquire all right-of-way along the east side of the corridor only. East and west options are typically evaluated to minimize the per parcel legal costs associated with right-of-way acquisition. This is especially applicable in a high density area such as Palmetto Beach, where individual lot widths result in a large number of affected parcels. The center option also merits investigation in most instances as it may substantially reduce the number of relocations and/or the amount of business damages.

The East Section of the project has only one typical section, the six lane divided roadway. Existing right-of-way is adequate to accommodate six lanes from the bridge to 45th Street. Beyond that point, existing right-of-way is typically 100 feet wide. Therefore, north, center and south alignments have been analyzed to optimize the location of right-of-way acquisition.

At present, Causeway Boulevard intersects US 41 at grade. Due to heavy traffic volumes on both roadways, US 41 will overpass Causeway Boulevard when the proposed improvements are constructed. The proposed bridge will carry 3 lanes of US 41 traffic in each direction, with a median barrier wall separating opposing traffic.

3.4.6 Evaluation and Reduction of Preliminary Alignment Alternatives

An analysis of the first-cut preliminary alignments was conducted to determine if any of these initial alternatives exhibited characteristics that would eliminate them from further consideration. The level of detail applied was that of a "fatal flaw analysis," which involves a review of existing data to identify any major alignment characteristics or parameters that do not meet acceptable criteria. The alignments for each design scenario were examined for major deficiencies. This analysis resulted in the elimination of alignments in each of the three sections of the project. A summary of these deletions follows.

different criteria in accordance with this Act. A relocatee, by definition, is any person or persons who because of the right-of-way acquisition, is unable to remain.

3.4.7.4 Number of Affected Property Owners

This element indicates the number of property owners that will require compensation for a parcel of land. The minimum cost expenditure per parcel was estimated to be greater than $20,000, exclusive of right-of-way taking. This cost is included in the right-of-way cost column.

3.4.7.5 Wetland and Floodplain Impacts

The total acreage of wetlands and the total estimated length (miles) of floodplain encroachment that falls within the right-of-way limits of each alignment alternative was determined and provided in the matrix.

3.4.7.6 Section 4(f) Impacts

The only potential 4(f) involvement on this project concerns involvement with structures that may be historically significant. The number of individual structures and structures contributing to a Historic District, associated with the alternative alignments, was quantified.

3.4.7.7 Air Impact Sites

The FDOT Screening Test and CALINE computer model were used to analyze air quality project alternatives. State and federal standards will be applied with the results in the form of "yes" or "no". A "yes" response constitutes non-compliance.

3.4.7.8 Noise Sensitive Sites

This element indicates the number of sites where noise levels would exceed 65 dB and 67 dB or increase by 15 dB in the year 2015. Values are derived using the STAMINA noise model. While several sites have been identified as noise sensitive, analysis has indicated that no reasonable abatement solution exists to mitigate these impacts. A detailed analyses is found in the "Noise Study Report" for 22nd Street/Causeway Boulevard.

3.4.7.9 Wildlife Impacts

This item provides an indication of the potential impact to listed wildlife species within an alignment right-of-way. These would include threatened, endangered, or species of special concern. A rating of low, moderate, or high was assigned.

3.4.7.10 Cultural Impacts

This element identifies the amount of impacts to cultural aspects in the project area, including ethnic groups and/or minorities as well as the overall community cohesion. Impacts are tabulated as low, moderate, or high.

3.4.7.11 Contamination

This item provides an indication of the potential for hazardous materials and/or petroleum products to occur within an alignment right-of-way. A rating of low, medium, or high was assigned. Avoidance of such sites minimizes efforts to clean-up the sites prior to construction of the project, protect the health of construction workers in the vicinity of these sites, and dispose of disturbed soil.

3.4.8 Selection of Preferred Alternative

Based upon analysis of impacts, comments received at the public information workshop and comments received on the draft environmental document, the alternative described below has been selected as the preferred alternative. This alternative was resented at the 22nd Street Causeway/Causeway Boulevard public hearing to be held in December, 1993.

General

A six-lane urban arterial is the preferred typical section from Durham Street to U.S. 301. The median width is generally 30 feet, with the causeway section median constrained to 19 feet, 6 inches wide to minimize environmental impacts. Continuous sidewalks along both sides of the road will facilitate safe pedestrian movement, while dedicated four-feet wide bicycle lanes along both sides of the pavement will accommodate bicyclists.

1. From S.R. 60 to Durham Street

   A divided urban roadway providing four-lanes in each direction (including turn lanes) is the preferred typical section. Retaining the existing bridge carrying Crosstown Expressway traffic over 20th and 22nd Streets requires the use of 11-foot lanes (with four-feet wide dedicated bicycle lanes also provided).

2. From Durham Street to North Side of McKay Bay Bridge

   A six-lane divided urban roadway along 20th Street, within a 118-foot wide right-of-way corridor, is the preferred typical section. No bicycle lanes are required, since bicycle traffic is expected to be diverted to 22nd Street.

   The facility will be rerouted from 22nd Street to 20th Street south of the Crosstown Expressway. At Maritime Boulevard, the alignment curves to match the existing McKay

Bay Bridge approach. Additional right-of-way required for the six-lane facility will be acquired from the east side of the 20th Street corridor. Bicycle lanes will commence at Maritime Boulevard, and run throughout the remainder of the project to the terminus at U.S. 301.

The cultural resources surveys conducted as part of the 22nd Street Causeway PD&E study resulted in the State Historic Preservation Office designating an area along 22nd Street a historic district. Any alternative that required expansion of the existing 22nd Street pavement impacted structures that contributed to the historic district. In consultation with FHWA and the SHPO it was determined an alternative along 22nd Street would cause an adverse effect under Section 106 of the NHPA. The rerouting of 22nd Street along the current 20th Street corridor provided an acceptable and preferred alternative.

3. McKay Bay Bridge

The existing parallel bridges each carry two lanes of traffic across McKay Bay. These structures are in good condition, and suitable for widening. Each bridge will be widened to the outside, with the resultant width sufficient for three 12-feet wide lanes, sidewalk, and shoulders. Bicyclists will be accommodated on the (8-feet wide) bridge shoulders.

4. From McKay Bay Bridge to Maydell Drive

A six-lane divided urban roadway following the existing right-of-way centerline is the preferred alternative. Where required, right-of-way will be acquired from both sides of the existing roadway corridor. The decision to follow the centerline of the existing right-of-way was based upon initial comparative analyses that showed reduced social and environmental impacts when compared to acquisition along only one side of the road. The preferred alignment was the only presented at the public information workshop.

The only variable in the typical section between the McKay Bay bridge and Maydell Drive is the median width. The causeway section incorporates a 19-feet, 6-inch raised median into the 123-feet, 6-inch wide corridor to minimize environmental impacts. East of the causeway, the median reverts to a 30-feet width, resulting in a 134-feet wide right-of-way. Sidewalks and bike lanes will be constructed along both sides of the facility thereby accommodating movement of pedestrians and bicyclists. Between 45th Street and 54th Street, the typical section is again constrained to reduce impacts. A median width of 19-feet, 6-inches is used, resulting in a typical section width of 123-feet, 6-inches. East of 54th Street, a median width of 30-feet will be used, expanding the typical section to 134-feet in width.

5. From Maydell Drive to U.S. 301

A six-lane divided urban roadway that includes sidewalks and dedicated bicycle lanes is the preferred typical section. Bridges will be constructed to carry the new facility over Delaney Creek and Delaney Creek Tributary "A." The typical cross-section width will be 134 feet.

Comparative analysis of the alignment alternative showed that locating the improved facility to acquire all necessary additional right-of-way from the north side of Causeway Boulevard minimized environmental, social and economic impacts. Therefore, the northern alignment option, wherein the existing southerly right-of-way line is held and corridor expansion pushed to the north, is preferred facility location.

SECTION 4
IMPACTS

SOCIOECONOMIC

The proposed roadway improvements are expected to facilitate future expansion of facilities for several major traffic, revenue, and employment generators located on or near the 22nd Street Causeway/Causeway Boulevard corridor such as the Port of Tampa. Maintaining access to project corridor facilities, as well as increasing the traffic carrying capacity of the roadway, will further enhance the economic and community development of the area.

4.1 COMMUNITY SERVICES

Community service facilities located near the project corridor include two schools, one school board warehouse facility, eleven churches, one medical clinic, two police and two fire stations, one union hall, and one City park. Figure 4-1 shows the location of these facilities in relation to the project.

The six-lane divided option has been selected as the preferred alternative in the North Section of the project. Beginning at S.R. 60, the six-lane divided roadway follows the existing 22nd Street alignment beneath the Crosstown Expressway to Durham Street. South of Durham Street, the selected alternative crosses over to 20th Street and follows the east side of 20th Street until its reconnection with 22nd Street in the vicinity of Maritime Boulevard. This segment will impact the Hillsborough County School Board warehouse/ storage facility which is located at the intersection of 20th Street and Chapin Street.

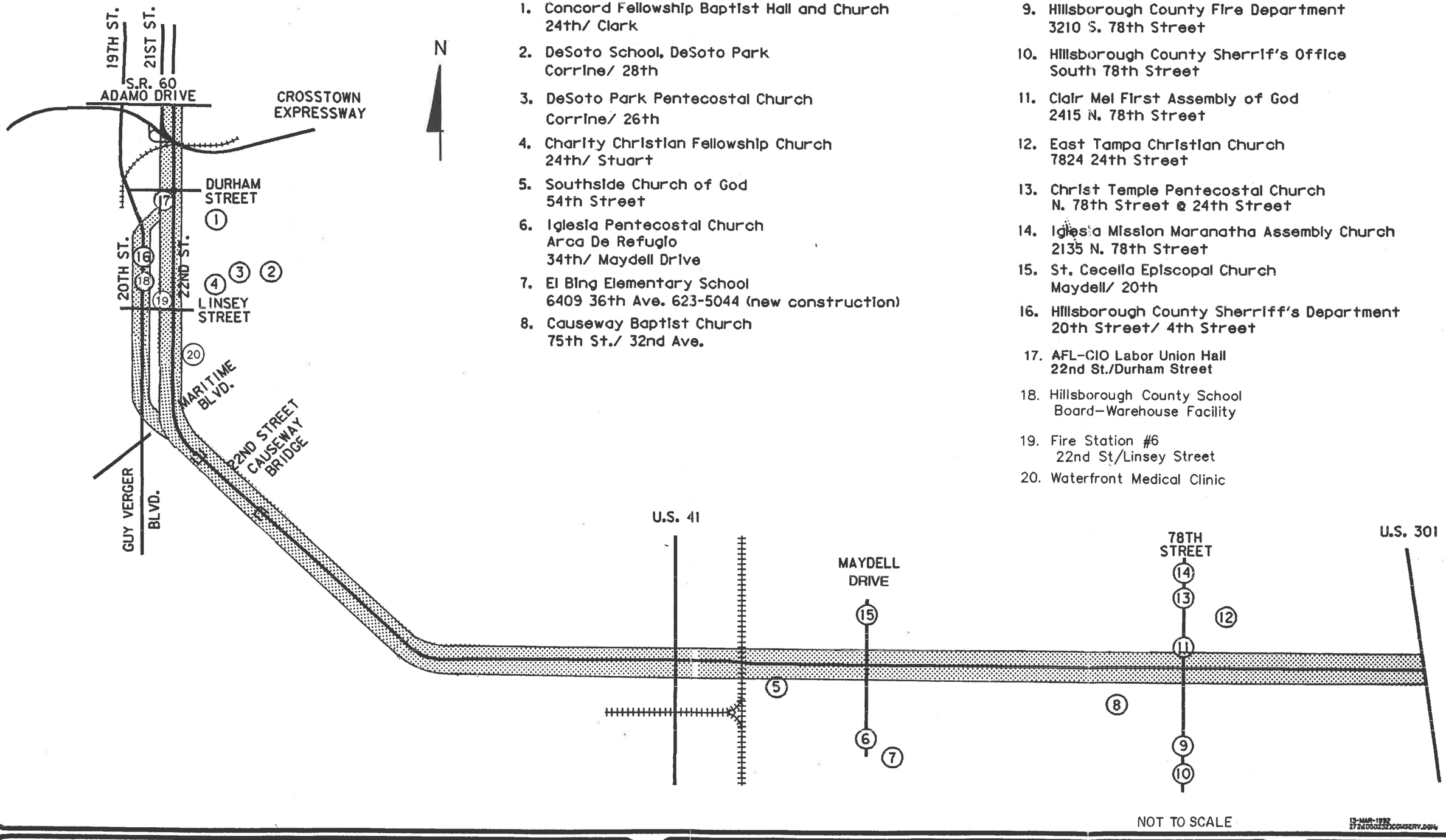
The remaining community service facilities within the preferred alternative alignments will not be adversely affected by the project. Police and fire protection services will not be disrupted by the project as access to and from all residences, businesses, and community organizations will

be maintained both during and after construction. Improvements to the 22nd Street Causeway/Causeway Boulevard will contribute to the overall mobility and accessibility to these facilities by improving substandard arterial roadways or congested areas which presently serve these areas.

4.2 COMMUNITY COHESION

The proposed improvements generally follow the existing alignments of 20th Street and 22nd Street. The preferred alternative (in the North Section of the project) bisects the extreme northwest portion of the Palmetto Beach residential area between 20th Street and 22nd Street. However, this alternative will not result in the isolation or separation of any houses from the remainder of the neighborhood. Since the remaining improvements take place on, or adjacent to, the existing 22nd Street/Causeway Boulevard alignment, there is no potential for the project to adversely affect the community by splitting neighborhoods. In the same manner, there is no potential for the isolation of an ethnic group or neighborhood. Side street access to the new facility will be provided. Southbound 22nd Street will be a cul-de-sac, with provision made for bicycle traffic. Removing bicyclists from the mainline should enhance user safety. There will be no other street closings.

There is the potential for the roadway improvements to facilitate new development along the entire length of the project. Existing land use in the North Section transitions from community commercial/established residential in the Palmetto Beach area to light-heavy industrial along Maritime Boulevard. A combination of community commercial, vacant and residential use exists in the East Section, between 54th Street and U.S. 301. These land use transitions, occurring adjacent to the improved urban arterial roadway, will likely lead to increased property values and other urban renewal benefits, particularly within the Port of Tampa/City of Tampa limits.



1. Concord Fellowship Baptist Hall and Church
   24th/ Clark
2. DeSoto School, DeSoto Park
   Corrine/ 28th
3. DeSoto Park Pentecostal Church
   Corrine/ 26th
4. Charity Christian Fellowship Church
   24th/ Stuart
5. Southside Church of God
   54th Street
6. Iglesia Pentecostal Church
   Arca De Refugio
   34th/ Maydell Drive
7. El Bing Elementary School
   6409 36th Ave. 623-5044 (new construction)
8. Causeway Baptist Church
   75th St./ 32nd Ave.
9. Hillsborough County Fire Department
   3210 S. 78th Street
10. Hillsborough County Sherrif's Office
    South 78th Street
11. Clair Mel First Assembly of God
    2415 N. 78th Street
12. East Tampa Christian Church
    7824 24th Street
13. Christ Temple Pentecostal Church
    N. 78th Street @ 24th Street
14. Iglesia Mission Maranatha Assembly Church
    2135 N. 78th Street
15. St. Cecelia Episcopal Church
    Maydell/ 20th
16. Hillsborough County Sherriff's Department
    20th Street/ 4th Street
17. AFL-CIO Labor Union Hall
    22nd St./Durham Street
18. Hillsborough County School
    Board-Warehouse Facility
19. Fire Station #6
    22nd St/Linsey Street
20. Waterfront Medical Clinic

NOT TO SCALE

13-MAR-1998
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PROJECT
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
(S.R. 676)
PD&E STUDY

COMMUNITY SERVICES

FIGURE NO.
4-1

The roadway improvements will also result in increased neighborhood and community access and quality of life throughout the project corridor. There is no potential for the separation of residences from community facilities as a result of this project. Travel patterns of the community residents will possibly be altered due to the roadway improvements, but pedestrian and motorized traffic will continue to gain access through the neighborhood and to community facilities.

The preferred alternative north of Maritime Boulevard will result in through traffic being re-routed off of 22nd Street between Durham and Maritime. The businesses in this area include: a labor union hall, a fire station, 2 sign companies, 3 auto repair shops, 3 grocery stores, a video rental store, a printing shop, an adhesives company, a sandpaper company, a machine tool business, a petroleum wholesaler, 2 liquor store/lounges, 2 restaurants, 3 convenience store/gas stations and a laundromat. Some of the business operators have expressed concern over the required rerouting of through traffic onto 20th Street because of concerns over drive by traffic volumes. Due to the nature of these businesses and/or their local clientele, the shifting of the traffic will not adversely affect these businesses. The selection of the 20th Street alignment was to avoid impacts to the historic district and to avoid a dramatic increase in business damages and relocations. The possible affects of reduced through traffic volumes on 22nd Street are expected to be more than offset by the reduction in both costs and community impacts associated with using the 20th Street corridor instead of widening within the 22nd Street corridor.

No adverse impact on the identifiable groups of handicapped persons, non-drivers or transit-dependent group is expected as a result of this project.

Table 4-1 provides a demographic breakdown by race, color, and national origin of the project area (by census tract) using 1990 Census data (U.S. Bureau of the Census). The most notable result in terms of minority composition occurs in census tract numbers 38, 39, and 53. Census data reveals that census tracts 38 and 39, which are located in the City of Tampa, report that more than 77% of the total population is black, while census tract 53, located in Ybor City, reports 51.2% of its total population is of hispanic origin.

TABLE 4-1

1990 CENSUS DATA - DEMOGRAPHIC DESCRIPTION

Census Tract	Total Pop.	White	Percentage	Black	Percentage	Hispanic	Percentage
38	1370	286	20.9%	1058	77.2%	91	6.6%
39	1842	365	19.9%	1419	77.0%	383	20.8%
53	2297	1939	84.4%	98	4.3%	1177	51.2%
135.01	2805	1734	61.8%	973	34.7%	278	9.9%
135.02	9897	6703	67.7%	2650	26.8%	1758	17.8%
136	3011	2795	92.8%	83	2.8%	323	10.7%
137	5810	2454	42.2%	3220	55.4%	279	4.8%

U.S. Bureau of the Census, 1990.

The percentage of elderly (65 years or older) which occurs within the neighborhood study area (census tracts 38, 39, 53, 135.1, 135.2, 136 and 137) ranges from 8.3% to 20.3% of the total population (1990 census data). Again, the most notable result in terms of elderly composition occurs in census tracts 38 and 39, located in the City of Tampa, which reveals that 19.5% and 20.3% of the total population, respectively, are comprised of elderly persons. Census tract 53, located in Ybor City, also indicates that 17.2% of its total population is elderly.

The greatest number of residential relocations (26) for the proposed improvements occurs within the northern section of the project in which these census tracts exist. One residence will be impacted in the East Section of the project where right-of-way acquisition will occur on the north side of Causeway Boulevard (S.R. 676). A total of five (5) businesses will be displaced by the six-lane 20th Street alternative in the North Section of the project. Ten (10) businesses (all at the U.S. 41 intersection) will be impacted by the six-lane 22nd Street alternative in the East Section of the project. It is unknown how many of the said businesses are minority-owned.

Thus, it is expected that there is a moderate potential for adverse impacts on minorities and elderly persons on an individual basis due to the relocations necessary by the roadway improvements. There is no evidence which indicates that the proposed project will result in substantial or significant adverse impacts to minorities as a group.

Measures that will be taken to mitigate these potential impacts on an individual basis are discussed in detail in the "Relocations" subsection of this report. At the current time sufficient resources are available to accommodate all relocations associated with this project. Commercial, single-family and mobile home residential resources are abundant and available for purchase by those displacees who would be able to or want to purchase a home. Thus, additional opportunities exist for displaced owners to relocate.

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968.

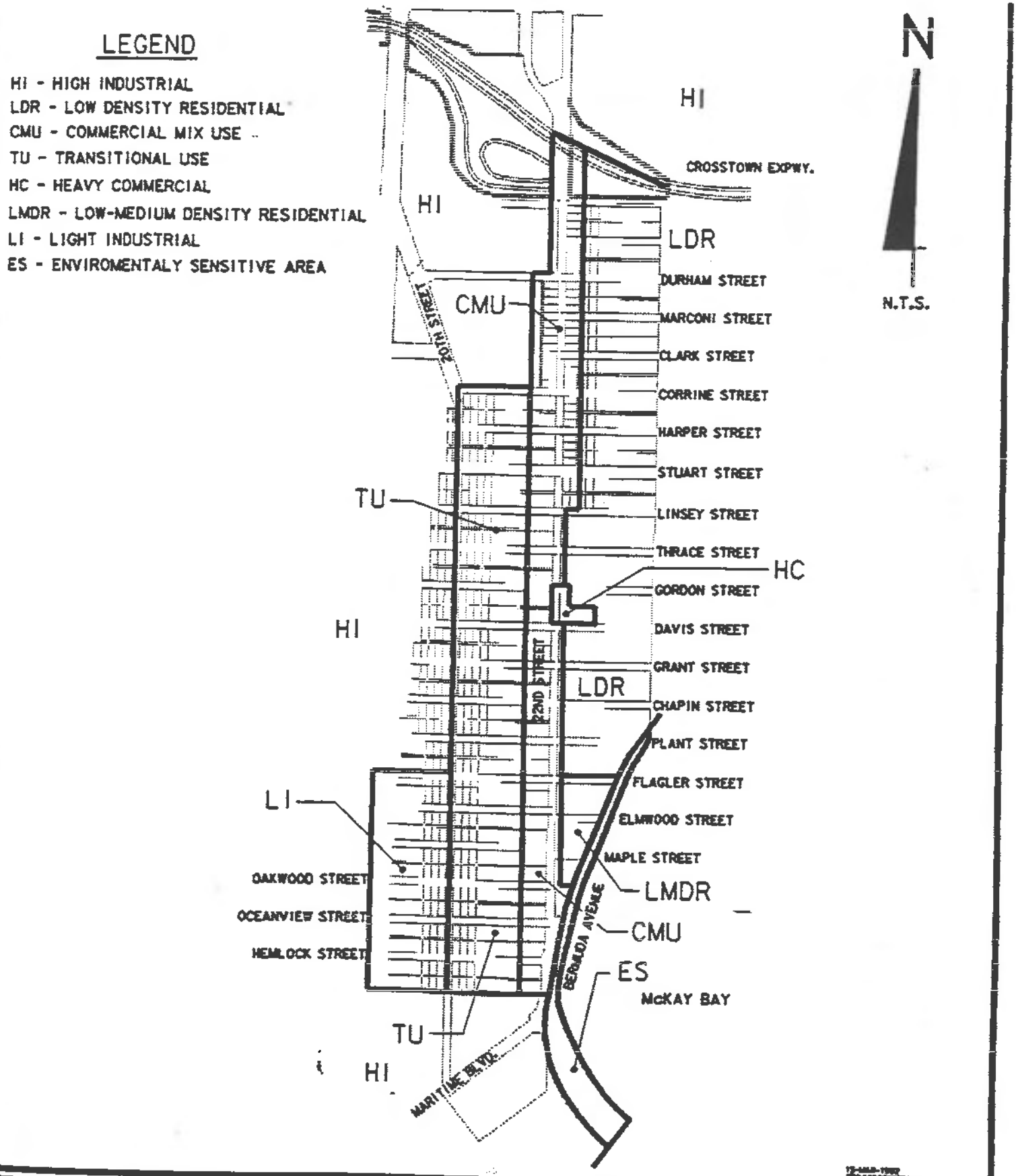
4.3 LAND USE

4.3.1 Existing Land Use

Existing land use adjacent to 22nd Street Causeway/Causeway Boulevard (from S.R. 60 to U.S. 301) has developed in response to the varying social and economic character within the project corridor. Figures 4-2 and 4-3 show corridor existing land use.

Existing land use adjacent in the North Section, from S.R. 60 to McKay Bridge, transitions from community commercial/established residential in the Palmetto Beach area to light-heavy industrial land use along Maritime Boulevard. Environmentally sensitive lands are located adjacent to the east side of 22nd Street, along Bermuda Boulevard and south along the 22nd Street Causeway.

Land use adjacent to 19th/20th Street, from S.R. 60 to Harper Street, consists of heavy industrial land use. From Harper Street to Maritime Boulevard, 20th Street is bounded on the west by light-heavy industrial uses and on the east by a transitional area of industrial, commercial and established residential. South of Maritime Boulevard to 22nd Street Causeway, heavy industrial land uses predominate.



PROJECT
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
(S.R. 676)
PD&E STUDY

EXISTING LAND USE MAP
S.R. 60 TO MARITIME BLVD.

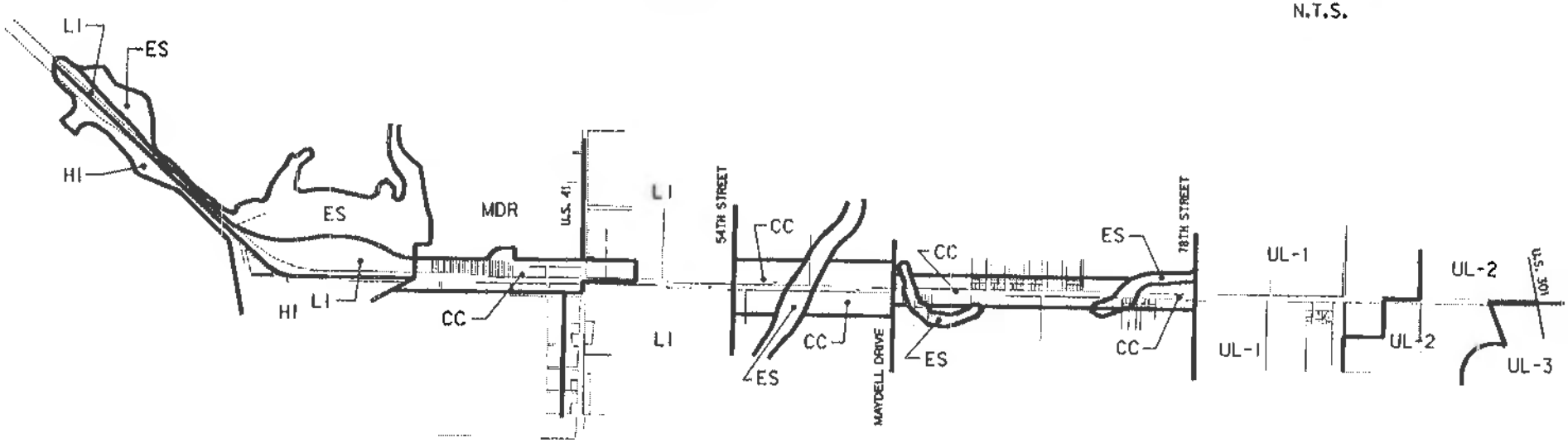
FIGURE NO.
4-2

LEGEND

LI - LIGHT INDUSTRIAL
ES - ENVIROMENTALY SENSITIVE AREA
HI - HEAVY INDUSTRIAL
MDR - MEDIUM DENSITY RESIDENTIAL
CC - COMMUNITY COMMERCIAL
UL-1 - URBAN LAND USE TYPE 1
UL-2 - URBAN LAND USE TYPE 2
UL-3 - URBAN LAND USE TYPE 3

N

N.T.S.



PROJECT
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
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PD&E STUDY

EXISTING LAND USE MAP
MARITIME BOULEVARD TO U.S. 301

FIGURE NO.
4-3

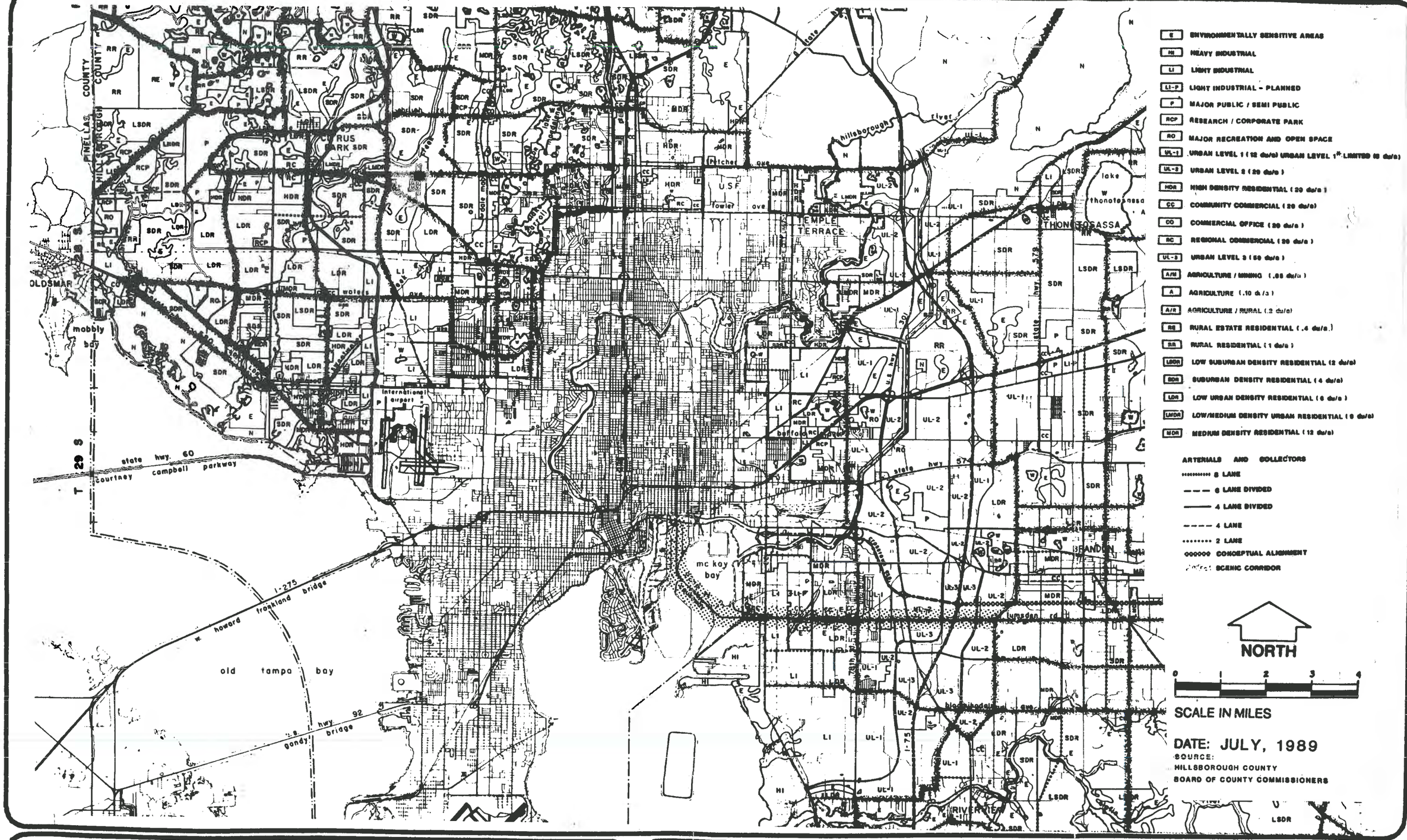
A combination of community commercial, vacant and residential use exists in the East Section, between 54th Street and U.S. 301. Environmentally sensitive lands are located between 54th Street and 86th Street where Delaney Creek traverses Causeway Boulevard.

4.3.2 Future Land Use

Future land use, as identified by the adopted City of Tampa and Hillsborough County Comprehensive Plans, generally mirrors the existing land uses throughout the corridor. Future land use patterns are illustrated in Figures 4-4 and 4-5. The future plan indicates a continuing trend of community mixed use, light-heavy industrial use and low-to-medium residential use along the 20th/22nd Street corridor from S.R. 60 to approximately the U.S. 41 interchange. Environmentally sensitive lands are designated on the east side of the 22nd Street Causeway, and in areas surrounding Delaney Creek (as they exist today). The East Section of the project corridor also indicates a combination of community commercial, residential land use to the U.S. 301 interchange. This is compatible with existing uses in the area.

4.3.3 Consistency with Land Use Planning

Primary and secondary impact effects of the project will be beneficial to the development patterns of existing communities by reinforcing existing and future land use patterns throughout the study corridor. These improvements will provide more efficient operating conditions and accessibility to commercial, light-heavy industrial and residential uses. Local government Comprehensive Plans and the Hillsborough County Metropolitan Planning Organization's (MPO's) 2010 Needs Plan have highlighted the significant growth in land use and employment expected within the 22nd Street Causeway/Causeway Boulevard corridor through the design year 2015. The proposed improvements are consistent with the adopted City of Tampa and Hillsborough County Comprehensive Plans, and the Hillsborough County MPO Long Range Transportation Plan. The "No-Build" alternative is inconsistent with these plans.



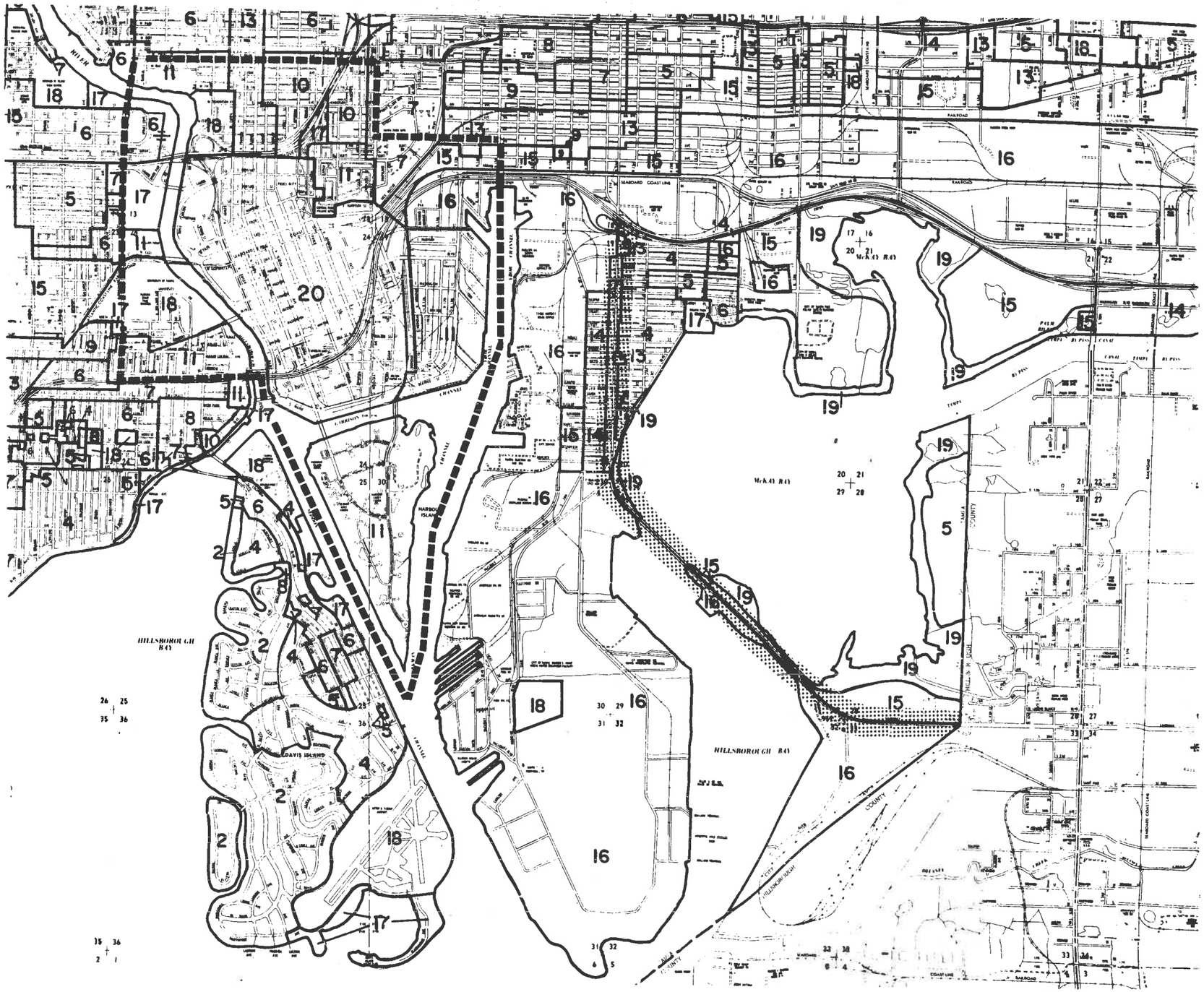
PROJECT

22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
(S.R. 676)
PD&E STUDY

FUTURE LAND USE MAP

FIGURE NO.

4-4



LEGEND

1	LSDR-LOW SUBURBAN DENSITY RESIDENTIAL (3 DU/GA) (.35 FAR)
2	SDR-SUBURBAN DENSITY, RESIDETIAL (6 DU/GA) (.35 FAR)
3	SMU-SUBURBAN MIXED USE (*6 DU/GA) (.5 FAR)
4	LDR-LOW DENSITY RESIDENTIAL (9-*10 DU/GA) (.35 FAR)
5	LMDR-LOW MEDIUM DENSITY RESIDENTIAL (18-* 20 DU/GA) (.5 FAR)
6	MDR-MEDIUM DENSITY RESIDENTIAL (30-*35 DU/GA) (.5 FAR)
7	CMU-COMMUNITY MIXED USE (30-*35 DU/GA) (1.5 FAR)
8	MHDR-MEDIUM HIGH DENSITY RESIDENTIAL (40-*50 DU/GA) (1.0 FAR)
9	UMU-URBAN MIXED USE (50-*60 DU/GA) (2.5 FAR)
10	HDR-HIGH DENSITY RESIDENTIAL (75-*83 DU/GA) (.5 FAR)
11	RMU-REGIONAL MIXED (75-*100 DU/GA) (3.5 FAR)
12	AIRPORT COMPATIBILITY (M-AP)
13	HC-HEAVY COMMERCIAL (24 DU/GA) (1.5 FAR)
14	TU-TRANSITIONAL USE (24 DU/GA) (1.5 FAR)
15	LI-LIGHT INDUSTRIAL (1.5 FAR)
16	HI-HEAVY INDUSTRIAL (1.5 FAR)
17	R/OS-RECREATION SPACE
18	P/SP-PUBLIC / SEMI PUBLIC
19	ES-ENVIRONMENTALLY SENSITIVE AREAS
20	CBD-CENTRAL BUSINESS DISTRIC CBD PERIPHERY
	ACCIDENT POTENTIAL ZONE

NORTH

0' 2,400' 4,800'

SCALE IN FEET

PROJECT

22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
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PD&E STUDY

FUTURE LAND USE MAP

FIGURE NO.

4-5

4.4 UTILITIES AND RAILROADS

All utility relocations required by the proposed improvements which are located within the existing rights-of-way are the responsibility of the utility companies. These utilities include 138 KV and larger transmission lines (TECO), various underground petroleum and natural gas lines, various fiber optic cables, and a 36-inch water main. During the conceptual design phase, it was determined that the major electric transmission poles along the Causeway Boulevard corridor could be avoided without additional right-of-way takings. The existing storm sewer will be replaced. The 36-inch water main is buried deep and thus will minimize potential conflicts or impacts. Impacts caused by utility adjustments necessary for the project are therefore expected to be minimal.

There are two locations within the project limits with a significant number of daily at-grade railroad crossings. One crossing is on U.S. 41, ¼ mile south of Causeway Boulevard. The other crossing is ¼ mile east of U.S. 41 on Causeway Boulevard. Benefit/cost analyses were performed at both locations, using train frequency/length information provided by CSX Transportation. A grade separation is not cost feasible on Causeway Boulevard east of U.S. 41 due to a benefit/cost ratio of 0.6. The location along U.S. 41 will be grade separated, based upon a computed benefit/cost ratio of 2.8.

4.5 RELOCATIONS

The following provides a summary of relocation activities generated by the proposed project as determined in the Conceptual Stage Relocation Plan (1992) prepared for this PD&E Study.

Table 4-2 is a summary of the right-of-way and relocations required for the preferred alternative alignment. The preferred alternative in the North Section of the project is a six-lane divided option which follows along 20th Street south of Durham Street and then reconnects with 22nd St./Causeway Boulevard near Maritime Boulevard. This option will impact 26 residences, 5

businesses, 3 signs and 1 non-profit organization (the Hillsborough County School Board warehouse/storage facility).

The U.S. 41 interchange will require the relocation of ten (10) businesses with the alignment centered on the existing right-of-way. The ten relocations are a function of the area required to construct the interchange and associated frontage roads. The use of retaining walls reduce the land area required, but the number of relocations would not be reduced. At the same time, construction costs would not justify the use of retaining walls along the U.S. 41 through lanes.

In addition, two (2) mobile homes and 14 trade signs are potentially eligible for relocation benefits at this intersection.

Relocations along the north side of the Causeway Boulevard (S.R. 676), the preferred alternative in the East Section of the project, include one residence and seven trade signs.

Data was collected during the survey phase and analyzed to determine the resource needs of each potential displacee. An inventory of displacee needs was compiled to determine the type and quantity of housing that would be necessary to accomplish a successful relocation of all displacees. The market was searched for the availability of sufficient resources to accomplish this purpose. At the current time, both commercial and single-family and mobile home residential resources are abundant.

- A sufficient amount of commercial space is available for relocated business tenants. Currently, 19.7 million square feet of leasable space is available in Hillsborough County.

- The I-75 Parkway has approximately 1.40 million square feet of leasable space, with 247,300 square feet available for rent. This area exhibits a 17.7 percent vacancy rate.

- For displaced business owners wishing to purchase again, a limited amount of commercial space for sale exists, as well as sufficient vacant land for construction and older residential units that could potentially be converted to commercial usage with a change

in zoning. This would enable displacees to remain within the area and renovate the property, thereby upgrading the neighborhood. According to the Tampa Zoning Department, this process takes at least 3 to 6 months. Displacees should be informed about this process before entering into such contracts.

TABLE 4-2
Summary of Right-of-Way and Relocations Required by the Preferred Alternative Alignment

Alignment Alternative	Required Right-of-Way			Number of Required Relocations			
	Length (Mi.)	Acres	Drainage/ Mitigation (Acres)	Residences	Businesses	Non-Profit	Total
NORTHERN SECTION:							
S.R. 60 to Durham Street: 8-lanes total on 21st/22nd St.	0.47	1.22	Incl. Below	0	0	0	0
Durham St. to North End of McKay Bay Bridge:							
6-lane divided on 20th Street, Eastern Option	1.22	12.98	6.86	26	5	1	32
EASTERN SECTION:							
McKay Bridge to 45th St.: 6-lane divided, center option	1.77	27.69	8.63	0	0	0	0
45th St. to 54th St.; including U.S. 41 Interchange	0.90	2.87	0.83	2	10	0	12
54th Street to U.S. 301	2.67	8.96	8.64	1	0	0	1
TOTALS	**7.03**	**53.95**	**24.96**	**29**	**15**	**1**	**45**

- Single-family dwellings are available for purchase by those displacees who would be able or want to purchase a home. The Multiple Listing Service (MLS) listed over 280 homes for sale in May 1992 for the areas in which the proposed relocations would occur. The actual number of homes for sale, however, is actually higher since this figure does not include unlisted homes for sale by owner. The price range of single-family homes for purchase (one to five bedroom homes) is from $35,000 to $125,000. Thus, additional opportunities exist for displaced owners to relocate.

- Rental units are also abundant in the area. The Bay Area Apartment Association listed over 800 multi-family units available in the area, ranging from efficiencies and one bedroom/one bath units to three bedroom/two bath units. The vacancy rate ranged from 4.2 to 9.1 percent with average rents ranging from $320 to $600 per month. The Area Mobile Home Park Managers also reported that over 25 mobile homes are available for rent (1, 2 and 3 bedrooms) with average rents of $300 to $530 per month.

Homes which are for sale by owner, as well as homes listed outside the immediate area, provide an abundance of dwellings for relocatees to purchase. Sufficient amounts of multi-family units are also available to rent if owner or tenant relocatees choose to rent. Additional single-family dwellings may become available for rent since owners generally rent and lease their homes when the housing market is slow.

As of October 1991, Hillsborough County had 55,105 total available multi-family units, of which 3,772 (6.85 percent) were vacant. Rental property management indicated that this vacancy rate is typical of the resources available and is more than ample to fulfill the resources needed for the area.

Consequently, no last resort housing is anticipated. However, should last resort housing become necessary because of low income and low rental payments, rent supplements and last resort replacement housing payments would be provided to ensure decent, safe and sanitary housing for relocatees. Condominium resources were not examined because no

condominiums are being displaced; however, condominiums are plentiful in Hillsborough County. The resources in this report are considered verified Equal Opportunity Housing; however, no handicapped or disabled relocatees are anticipated.

At some future date, the Needs Assessment Survey will include the results of the door-to-door survey. At that time, an accurate assessment of resources required, specifically the number of rooms in each dwelling, will be available. Based upon the May 1992 MLS list of adjacent single-family dwellings for sale and the Availability Survey compiled for the Apartment Association (1991), there are more than ample resources available.

In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, the FDOT will carry out a right-of-way and relocation program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646).

The FDOT provides advance notification of impending right-of-way acquisition. Before acquiring right-of-way, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights.

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date and no occupant of a residential property will be required to move until decent, safe, and sanitary replacement housing is made available. "Made available" means that the affected person has either by himself obtained and has the right of possession of replacement housing, or that the Florida Department of Transportation has offered the relocatee decent, safe, and sanitary housing which is within his financial means and available for immediate occupancy.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A relocation specialist will contact each

person to be relocated to determine individual needs and desires, and to provide information, answer questions, and give help in finding replacement property. Relocation services and payments are provided without regard to race, color, religion, sex, or national origin.

All tenants and owner-occupant displacees will receive an explanation regarding all options available to them, such as (1) varying methods of claiming reimbursement for moving expenses; (2) rental of replacement housing, either private or publicly subsidized; (3) purchase of replacement housing; (4) moving owner - occupied housing to another location.

Financial assistance is available to the eligible relocatee to:

1. reimburse the relocatee for the actual reasonable costs of moving from homes, businesses, and farm operations acquired for a highway project;

2. make up the difference, if any, between the amount paid for the acquired dwelling and the cost of a comparable decent, safe, and sanitary dwelling available on the private market;

3. provide reimbursement of expenses, such as legal fees and other eligible closing costs incurred in the buying of a replacement dwelling;

4. make payment for eligible increased interest costs resulting from having to get another mortgage at a higher interest rate. Replacement housing payments, increased interest payments, and closing costs are limited to $22,500 combined total.

A displaced tenant may be eligible to receive a payment, not to exceed $5,250, to rent a replacement dwelling or room, or to use as down payment, including closing costs, on the purchase of a replacement dwelling. The brochures which describe in detail the Department's relocation assistance program and right-of-way acquisition program are "Your Relocation" and "Right-of-Way for Transportation - the Real Estate Acquisition Process." Both of these brochures are distributed at all public hearings and are made available upon request to any interested persons.

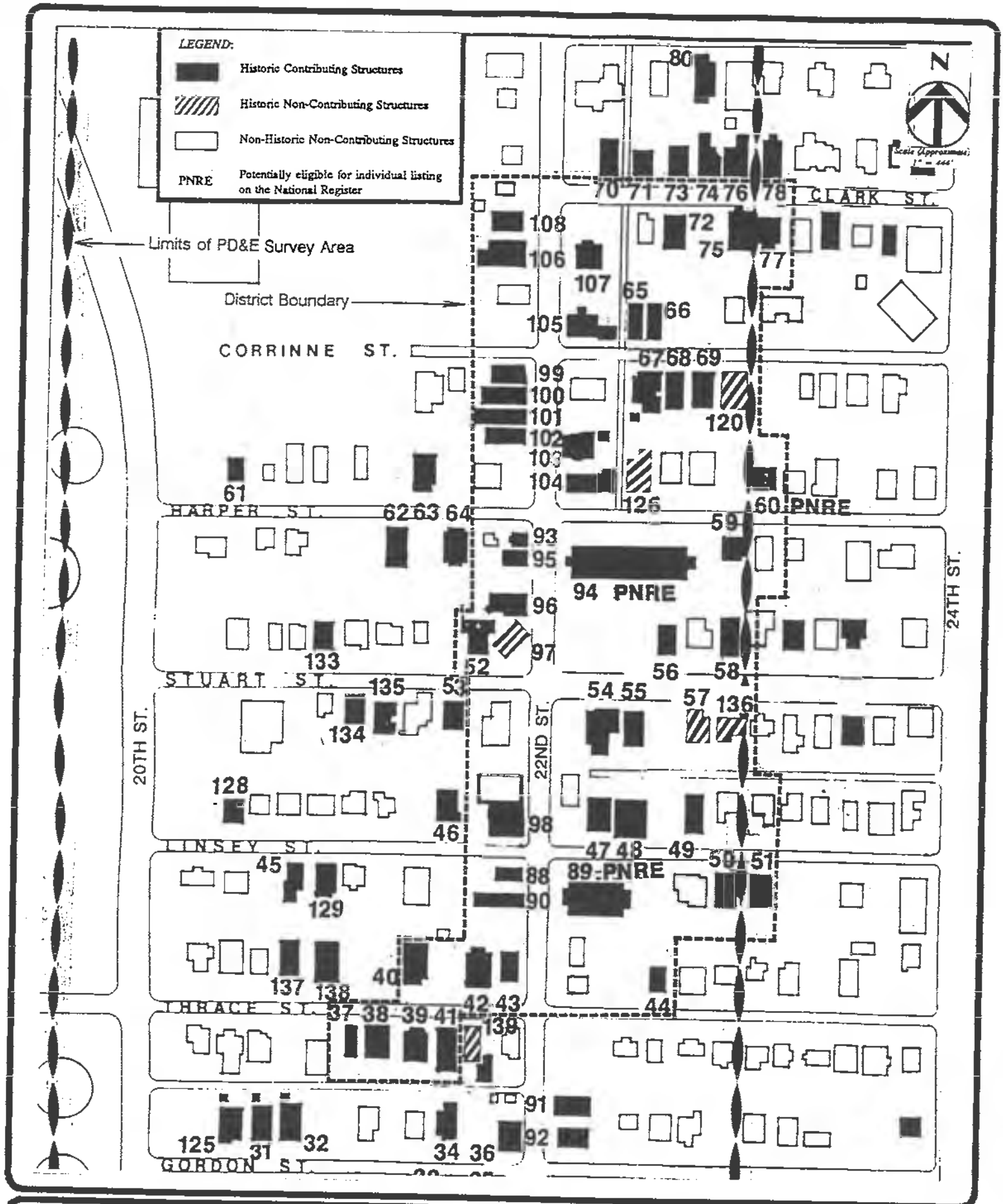
4.6 ARCHAEOLOGICAL AND HISTORICAL

In accordance with the procedures contained in 36 CFR, Part 800, a Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for the project. As a result of this assessment, four individually significant historic structures (8HI605, 8HI965, 8HI2285, and 8HI2294), were identified and later determined eligible for listing on the *National Register of Historic Places* (see Figure 4-6). All are located north of the 22nd Street Causeway and Bridge in the North Section of the project, in the community of Palmetto Beach. Three of the individually eligible structures (8HI605, 8HI965, and 8HI2285) are also located with an eligible historic district (see Figure 4-6).

The preferred alternative, an at-grade six-lane divided roadway on 20th Street, was selected to avoid impacts to the four individually eligible historic structures and one proposed historic district. As a result of the analysis performed and summarized in the Section 106 Case Report (1993), this alternative will have no effect (primary or secondary) on these historic structures and/or the proposed historic district.

The other two alternatives under consideration in the North Section of the project would have directly impacted the proposed historic district and two of the individually significant historic structures through physical encroachment. Thus, only the six-lane divided option on 20th Street provided an acceptable and preferred alternative.

Through the application of the Criteria of Adverse Effect, the Federal Highway Administration, in consultation with the SHPO, determined that the proposed project will not have an effect on cultural resources eligible for listing in the *National Register*, or otherwise of historic or architectural value (see Appendix B).



PROJECT
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PD&E STUDY

HISTORIC DISTRICT MAP

FIGURE NO.
4-6

4.7 RECREATION/PARKLAND RESOURCES

One city park has been identified in the project corridor. However, improvements to the 22nd Street Causeway/Causeway Boulevard will not affect this resource.

NATURAL AND PHYSICAL IMPACTS

4.8 PEDESTRIAN/BICYCLE FACILITIES

The existing roadway does not have continuous facilities for pedestrians, although it does receive moderate pedestrian traffic. Currently, sidewalks are located on the west side of 22nd Street between S.R. 60 and Maritime Boulevard and on the east side of 22nd Street from S.R. 60 to just south of Davis Street. A midblock pedestrian crossing traffic signal is located between Stuart Street and Harper Street. Sidewalks can be found west of 20th Street between Chapin and Flagler Streets. East of the McKay Bay bridge, pedestrian facilities are not provided.

The proposed project provides continuous sidewalks along both sides of project corridor to facilitate safe pedestrian movement. The North Section requires a six-foot wide sidewalk due to its placement adjacent to the curb. The East Section of the project requires a five-foot wide sidewalk with a four-foot wide grass strip between the curb and sidewalk. Pedestrian crosswalks will be located during the design phase of the project.

There are currently no special provisions for bicycle traffic within the project limits. In general, a six-lane urban arterial is the preferred typical section from Durham Street to U.S. 301 with dedicated four-foot wide bicycle lanes along both sides of the pavement to accommodate bicyclists. From Durham Street to McKay Bay Bridge, a six-lane divided urban roadway along 20th Street, within a 118-foot wide right-of-way corridor, is the preferred alternative. No bicycle lanes are required, since bicycle traffic is expected

to be diverted to 22nd Street. Bicycle lanes will commence at Maritime Boulevard and run throughout the remainder of the project to the terminus at U.S. 301.

4.9 AIR

The 22nd Street Causeway/Causeway Boulevard project alternatives were subjected to a graphical Screening Test, which makes various conservative assumptions about meteorology, traffic, and site conditions. The Screening Test uses these assumptions in the MOBILE4 and CALINE3 models to produce a series of curves which can be used to determine the critical distance. The critical distance is the closest distance a receptor can be to a given intersection without any chance of a significant air quality impact.

The Screening Test for urban areas was applied to four intersection locations (S.R. 60, U.S. 41, 78th Street and U.S. 301) for the years 1995 and 2015 under the "Build" and "No-Build" alternatives. The years 1995 and 2015 are the opening and design years, respectively. The areas adjacent to the intersections analyzed contain primarily commercial land uses. The results of the Screening Test for the worst case intersection (78th Street) are shown in Table 4-3. Since the closest receptor (Seven Eleven Convenience Store) is farther away than the critical distance, this project will not have a significant impact on air quality. Therefore, it can be concluded that no significant air quality impacts will occur under either condition.

Construction activities may cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to all State and local regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

Table 4-3

Screening Test Results for Worst Case (78th Street) Intersection

Preferred Alternative	Average Speed (MPH)	Peak Volume/Hr.	Critical Distance (ft)	Closest Receptor (ft)
No-Build	40	3,260	10	100
1995 Build	40	5,195	31	100
2015 Build	40	5,345	13	100

All State and local agencies were provided with an opportunity to comment on this project. There were no adverse comments regarding air quality.

This project is in an area which has been designated as nonattainment for the ozone standards under the criteria provided in the Clean Air Act Amendments of 1990. It is in conformance with the SIP because it will not cause violations of any of the National Ambient Air Quality Standards. This project is included in the urban area's current approved conforming TIP which was signed by the Secretary of the Florida Department of Transportation on September 17, 1993. This project is included in the area's conforming long range plan, and is included in the area's Conformity Determination report which was approved by FHWA/FTA on September 2, 1993.

An FDOT Planning Department memorandum documenting the conformity is included in the project file.

4.10 NOISE

The Federal Highway Administration (FHWA) requires that highway noise impacts be assessed according to Title 23, CFR Part 772 for federally funded highway projects. A noise analysis evaluating the noise impacts of the proposed project and possible abatement measures was conducted in accordance with these guidelines.

The existing noise environment in the vicinity of the Preferred Alternative study area is typical of an urban community. Motor vehicles travelling the urban roadway system are the major intrusive sources of noise.

Existing land uses along the project corridor are primarily community commercial, light-heavy industrial and residential as described previously in Section 4.3. For the purpose of this analysis, the project corridor was analyzed in five separate sections according to existing and future differences in vehicle traffic demand and the resulting noise levels:

1. S.R. 60 to Maritime Boulevard
2. Maritime Boulevard to U.S. 41
3. U.S. 41 - Maydell Street
4. Maydell Street - 78th Street
5. 78th Street - U.S. 301

The FDOT utilizes an initial screening analysis, the FLAMOD computer program, to identify zones or contours where noise levels may exceed state and federal criteria. FHWA Noise Abatement Criteria (NAC), summarized in Table 4-4, establishes guidelines for traffic noise impact assessment with respect to various land uses. Residential uses as well as recreational areas, motels, hotels, churches, libraries and hospitals are included in Category B, with a criteria level of 67 dBA. FDOT considers the term "approach" to mean noise levels within 2 dBA of the FHWA NAC, or a noise level of 65 dBA.

The result of the FLAMOD contour model predicted that the distance from the roadway to the 65 and 67 dBA noise level contour will increase with the Preferred Alternative

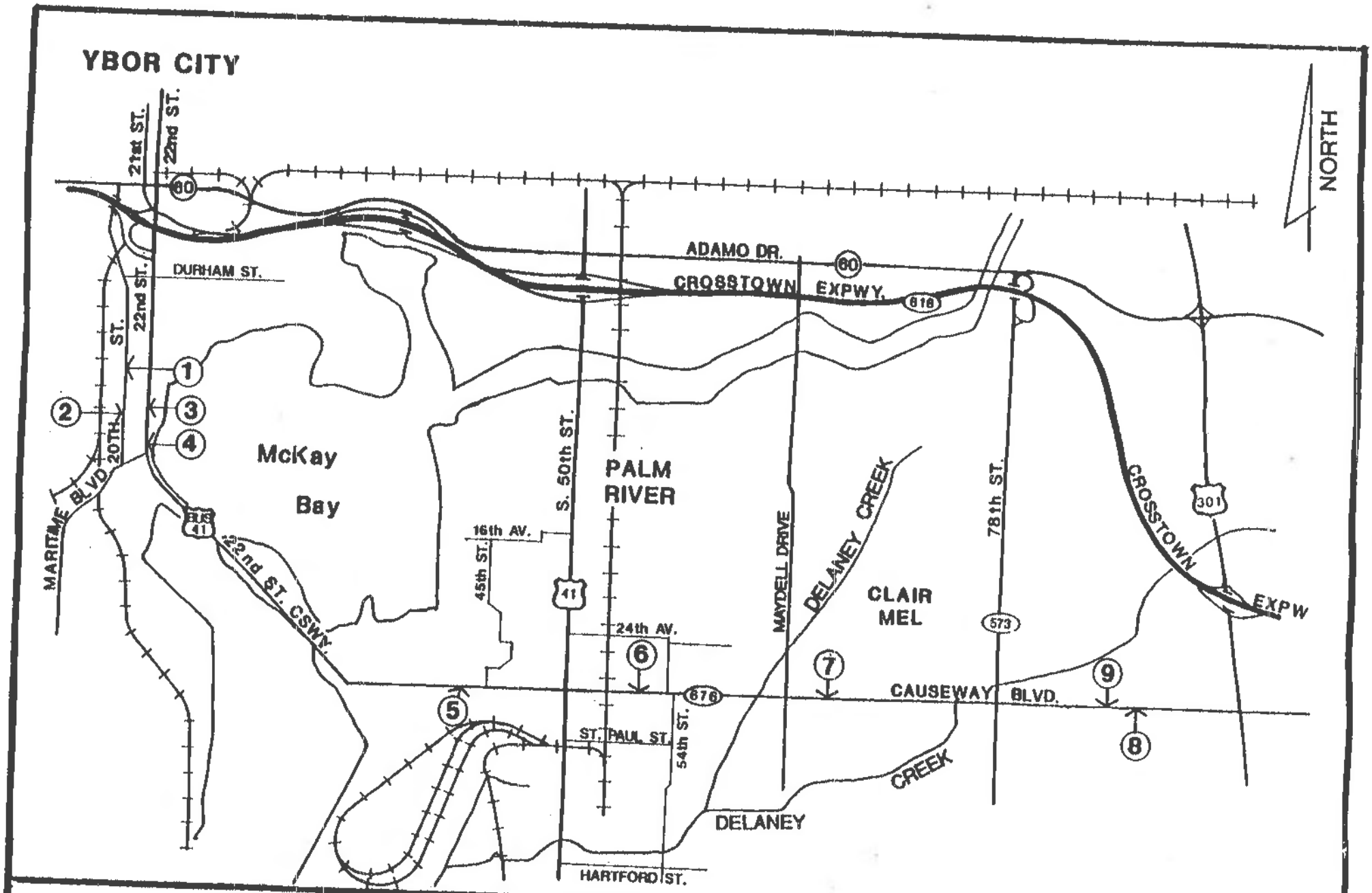
improvements, as shown in Table 4-5. This information can be used by local officials to identify and promote noise-compatible land use development in these areas.

The analysis indicates for the 2015 Build alternative, approximately 162 noise sensitive sites located within the project corridor experience noise levels that approach or exceed FHWA NAC. As shown in Table 4-6, the number of noise sensitive sites within the five areas analyzed ranged from a high of 74 sites in the area between S.R. 60 and Maritime Boulevard to a low of 8 sites in the area between U.S. 41 and Maydell Drive.

Nine representative locations were selected to represent the noise sensitive sites along the project corridor. Each of the nine locations represents a number of dwelling units. Figure 4-7 illustrates the nine noise sensitive sites in the project corridor, representing a total of 49 residential sites directly adjacent to the project. Where more than one sensitive receptor site is clustered together, the site closest to the noise source was identified as representative of the group.

Existing noise levels within the Preferred Alternative study area were evaluated through noise monitoring and modeling. The FHWA noise prediction computer model, STAMINA 2.0, was validated with existing traffic and noise level data gathered during the noise monitoring program by comparing measured values with computer predicted values. Based on this comparison, the STAMINA model was determined to give reliable predictions of traffic-related noise levels.

Results of the STAMINA 2.0 analysis indicate that an average Leq for the nine representative noise locations is as follows: existing levels are 62 dBA; 2010 no-build alternative levels are predicted to be 62 dBA; and, 2010 build alterbative levels are predicted to be 73 dBA. All computer modeled locations exceeded the FHWA NAC. Additional details regarding each site are provided in the Noise Study Report and the PD&E Noise Analysis Technical Appendix prepared for this project. The reports are available at the District VII PD&E office.



22nd ST. CAUSEWAY / CAUSEWAY BOULEVARD (S.R. 676)
NOISE RECEIVER LOCATIONS

FIGURE 4-7

TABLE 4-4

FHWA Noise Abatement Criteria

Activity Category	Description of Activity Category	Leq(h)
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.	57 (Exterior)
B	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.	67 (Exterior)
C	Developed lands, properties, or activities not included in Categories A or B above.	72 (Exterior)
D	Undeveloped lands.	N/A
E	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.	52 (Interior)

Source: Code of Federal Regulations, Title 23, Part 772.
N/A = No Standard for this Activity Category, therefore not applicable.

TABLE 4-5
Noise Isopleths
22nd Street/Causeway Boulevard PD&E Study

Noise Study Area	Limits	Approximate Distance from Center of Near Travel Lane (feet)			
		LEQ (dBA)	1990 Existing	2015 No-Build	2015 Preferred Alternative
1	S.R. 60 to Maritime Boulevard	67 65	42 59	59 64	184 240
2	Maritime Boulevard to U.S. 41	67 65	36 52	40 59	206 271
3	U.S. 41 to Maydell Drive	67 65	51 67	56 73	171 225
4	Maydell Drive to 78th Street	67 65	51 67	56 73	156 206
5	78th Street to U.S. 301	67 65	51 67	56 73	126 164

TABLE 4-6

Noise Impact Summary
22nd Street/Causeway Boulevard PD&E Study

Noise Study Area[a]	Estimated Number of Noise Sensitive Sites[b] 2015 Preferred Alternative
1	74
2	30
3	8
4	21
5	29
	Total 162

[a] Refer to Table 4-5 for the Noise Study Area Limits.
[b] Number of Noise Sensitive Sites within the 65 dBA contour.

In accordance with Title 23, CFR, Part 772, noise abatement measures were evaluated for all impacted noise sensitive areas which approached or exceeded FHWA NAC. The types of abatement measures addressed include: 1) alignment selection, 2) traffic system management, 3) property acquisition, 4) land use controls, and 5) noise barriers.

1). Roadway alignment alternatives for noise abatement consideration involves aligning the roadway a sufficient distance from noise sensitive sites in order to minimize impacts and costs. Alignment considerations in the North Section of the project involved the potential adverse impacts to a designated historic district along the existing 22nd Street alignment. The rerouting of 22nd Street along the current 20th Street corridor provided the only acceptable and preferred alternative. The decision to follow the centerline of the existing right-of-way from McKay Bridge to Maydell Drive was based upon initial comparative analysis that showed reduced social and environmental impacts when compared to acquisition along only one side of the road. From Maydell Drive to U.S. 301, the comparative analysis showed that acquiring additional right-of-way from the north side of the improved facility minimized environmental social and economic impacts. Based on this noise study analysis, further shifts in the Preferred Alignment will not provide a feasible noise abatement measure.

2). Traffic management measures which limit motor vehicle type, travel speed, traffic volume or time of operation are sometimes used as noise abatement measures. However, placing these limitations on the Preferred Alternative is not consistent with the project's goals for providing increased capacity along this corridor.

3). Property acquisition programs to provide noise buffer zones or space for noise barrier construction are not recommended for this project due to high cost and limited availability of land.

4). Proper land use controls can effectively minimize future impacts. Local governmental and planning agencies with land use control can use the noise level isopleths calculated for this project to develop policies that minimize the location of noise sensitive land uses adjacent to the roadway. Proper land use controls can also be used to maintain existing buffer areas. A copy of the final Noise Study Report prepared for this project will be distributed to the appropriate local planning/zoning officials for their use in developing land use controls which require noise compatible land use development adjacent to the roadway.

5). Noise barriers reduce noise levels by blocking the sound path between a roadway and a noise sensitive site. Barriers are most often used on high speed, limited access facilities where noise levels are high and there is adequate space for continuous barriers. Noise barriers should shield a reasonable number of noise sensitive sites and provide an adequate noise level reduction, referred to as insertion loss, of 5-10 dBA.

A noise barrier analysis was conducted using the FHWA's noise barrier simulation model OPTIMA. In accordance with FHWA/FDOT guidelines, this analysis was conducted (1) by developing barriers which would meet minimum noise reduction goals at impacted sites, (2) estimating the cost of the barrier, and (3) determining the cost of the barrier per benefitted receptor. In order for a barrier to be considered feasible and reasonable, it must meet the following FDOT conditions:

1. Provide a minimum insertion loss (noise reduction) of at least 5 to 10 dBA, and
2. Cost no more than $25,000 per benefitted receptor.

Within the northern segment of the study corridor (S.R. 60 to Maritime Boulevard), the close distance of the side streets (230 feet) and the frequency of driveway cuts did not allow for noise barriers of sufficient length or continuity to achieve the minimum insertion

loss. Other considerations which discourage the construction of noise barriers in the northern segment include the possible disruption of community cohesion and the historical integrity of the Palmetto Beach area. Within the segment of the project from McKay Bridge to U.S. 41, noise barriers are not feasible due to the location of driveways and a cross road at the receptor location. The same was found to be the case for the eastern segment from U.S. 41 to Maydell Drive.

In the eastern segment from Maydell Street to 78th Street a noise barrier was considered at a receptor location comprised of two dwelling units. The OPTIMA barrier analysis indicated an insertion loss of 3 dBA for a 16-foot high barrier would be obtained, which is below the criteria for a minimum insertion loss.

The results of the barrier analysis indicated that barriers could reduce noise levels sufficiently while staying within FDOT economic reasonableness criteria. A minimum of 5dBA insertion loss control could not be achieved at a cost of $25,000 or less per receptor.

The noise analysis indicates that the project will result in increased noise levels as an unavoidable consequence of the project. If it is determined that noise abatement is feasible for certain locations during the final design phase, it will be documented in a reevaluation prior to construction advertisement. It is recommended that future noise impacts can be further mitigated through local land use ordinances involving zoning, building setbacks and building construction materials.

4.11 WETLANDS

Lands occurring within the proposed project are highly urbanized, and very few natural communities remain intact. There are, however, wetland communities associated with the shoreline and deepwater habitats of McKay Bay, Delaney Creek and two of its tributaries, as well as a few isolated wetlands and drainageways adjacent to the existing roadway. These wetlands provide habitat for wildlife, flood storage, and contribute to water quality enhancement. The wetlands located along the project corridor are indicated on Figure 4-8.

A complete inventory of wetlands potentially impacted by the project was conducted during February through August 1991. Wetlands were identified using the U.S. Army Corps of Engineers methodology (1987) which considers the characteristics of soils, plant species composition and hydrology as a determinant of wetland and non-wetland status. Each wetland was classified using the U.S. Fish and Wildlife Service's "*Classification of Wetlands and Deepwater Habitats of the United States*" (Cowardin et. al., 1979). The dominant plant species, contiguity characteristics, size, and functional classification, as well as the wetland impacts for the preferred alternative alignment (by segment) are summarized in Table 4-7. More detailed narrative descriptions are provided below:

Wetland Number P1:	System:	Palustrine
	Class:	Forested/Scrub-shrub
	Subclass:	Broad-leaved deciduous
	Water Regime:	Seasonally flooded
	Modifier:	Partially drained/ditched

Wetland site P1 is a small, forested area comprised primarily of willow oak, sabal palm, primrose willow (*Ludwigia peruviana*), cattail (*Typha sp.*), and maidencane (*Panicum hemitomon*). This wetland is an apparent hydric soil inclusion in upland soils. The area is connected on a seasonal basis to Wetland #D1 and has a direct connection to Ybor Channel via culvert connection. Due to its relatively small size, this wetland provides low to moderate wildlife habitat value.

TABLE 4.7: Project Wetlands Descriptions and Impacts of the Preferred Alternative Alignment

WETLAND SITE NO.	WETLAND TYPE*	FUNCTIONAL CLASSIFICATION**	DOMINANT PLANT TYPES	CONTIGUITY	WETLAND ACRES	NORTHERN SECTION		EASTERN SECTION			
						6-lanes 21st/22nd St.	SR 60 to Durham St. 6 Lane Divided 20th St. Eastern	McKay Bay to 45th St. 6 Lane Divided Center	45th St. to 54th St.	54th St. to Maydell Dr.	Maydell to US 301 North
P1	PSS1Cd	Low	Carolina willow, primrose willow, cattail	Isolated from regional drainage system	0.57	---	0.10	---	---	---	---
D1	PAB4Hx	Low-Moderate	pennywort	Well-defined ditch connected to a regional drainage system	0.38	---	0.06	---	---	---	---
E1	E2SS3U	High	red mangrove	Contiguous to McKay Bay	2.71	---	0.00	---	---	---	---
E2	E2SS3U	High	red mangrove, Brazilian pepper	Contiguous to McKay Bay	1.25	---	0.56	---	---	---	---
E3	E2SS3U	High	red mangrove, Brazilian pepper	Contiguous to McKay Bay	9.81	---	---	0.08	---	---	---
E4	E2SS3U	High	red mangrove, Brazilian pepper	Contiguous to McKay Bay	2.30	---	---	0.68	---	---	---
Dd	E1UBLx	Moderate	sea purslane, saltgrass, saltbush	Well defined ditch connected with McKay Bay	3.10	---	---	0.17	---	---	---
P6	PFO1A PSS1C	Moderate	red maple, buttonbush, primrose willow	Joined to Delaney Creek by a distinct natural connection	***	---	---	---	---	0.13	---
P7	PFO1A PSS1C	Moderate	elderberry, water oak, Brazilian pepper	Joined to Delaney Creek by a distinct natural connection	***	---	---	---	---	---	0.53
P8	PFO/SS1Cx	Moderate	primrose willow, Carolina willow	Main channel of Delaney Creek and joined to regional drainage system	***	---	---	---	---	---	0.28
P9	PFO1/2A	Low-moderate	laurel oak, cabbage palm, cypress	Isolated from regional drainage system	0.30	---	---	---	---	---	0.09
D1C	PEM1C	Low-moderate	pickerelweed, cinnamon fern, dogfennel	Well defined ditch connected with Hillsborough/McKay Bay	***	---	---	---	---	---	0.03
				TOTALS	20.42***	0.00	0.76	0.89	0.00	0.13	0.93

TOTAL IMPACT = 2.71

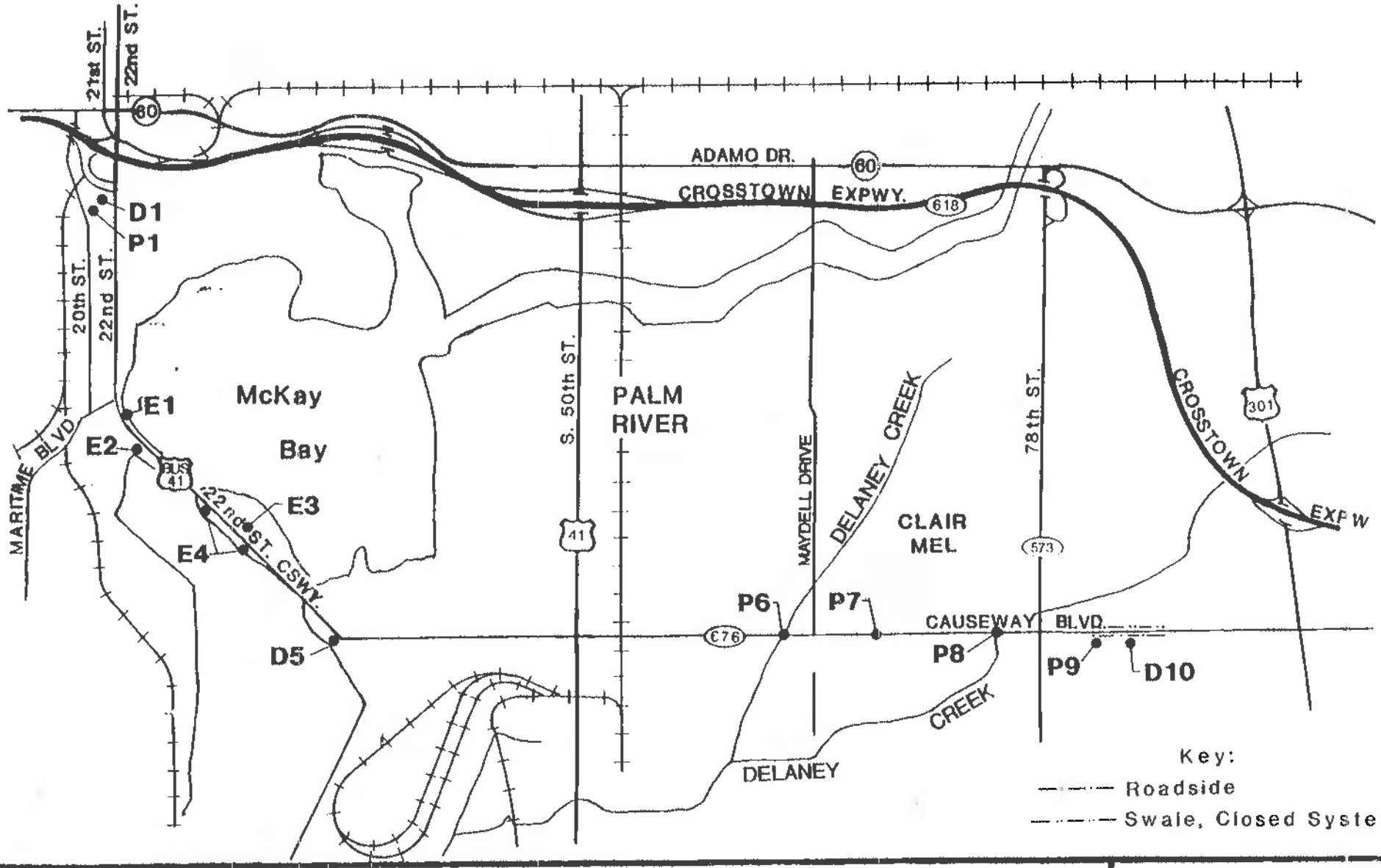
* Wetland types are classified using the US Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States

Each symbol in the classification represents the following:

System:	Subsystem:	Class:	Subclass:	Water Regime:	Modifier:
P = Palustrine	None	EM = Emergent FO = Forested SS = Scrub\Shrub AB = Aquatic Bed	1 = Emergent 1 = Broad Leaved Deciduous 2 = Needle Leaved Deciduous 3 = Broad Leaved Evergreen	A = Temporarily Flooded C = Seasonally Flooded H = Permanently Flooded	d = Partially drained/ditched x = Excavated
E = Estuarine	1 = Subtidal 2 = Intertidal	SS = Scrub/Shrub UB = Unconsolidated Bottom		L = Subtidal U = Unknown	

** Functional classification was derived using WET 2.0 Analysis results. These results assign qualitative probability ratings to wetlands rather than defining the magnitude of many wetland functions and values.

*** Total wetland acres were not estimated due to undetermined wetland limits outside project area.



WETLAND LOCATION MAP

FIGURE
4-8

Wetland Number D1:

System:	Palustine
Class:	Aquatic Bed.
Subclass:	Rooted vascular
Water Regime:	Permanently Flooded
Modifier:	Excavated

This freshwater ditch is extensively maintained (cleared) of erect natural vegetation with marsh pennywort (*Hydrocotyle umbellata*) dominating the rooted vascular plant community. This ditch was excavated from upland soils and drains an urbanized area. Water levels of 1-2 feet were evident during a relatively dry period. This wetland connects to the Ybor Channel via culvert connection. This ditch provides low to moderate wildlife habitat value.

Wetland Numbers E1 through E4:

System:	Estuarine
Subsystem:	Intertidal
Class:	Scrub-shrub
Subclass:	Broad-leaved Evergreen
Dominant Type:	Red mangrove (*Rhizophora mangle*)
Water Regime:	Unknown

These are estuarine wetlands occurring on the shoreline of McKay Bay. The dominant vegetation includes red mangrove, black mangrove (*Avicennia racemosa*), and saltgrass (*Distichlis spicata*). Shoreline mangroves are prevalent along both sides of the 22nd Street Causeway adjoining McKay Bay. Mangrove areas on the west side of the causeway (Wetland numbers E2 and E4) have been considerably reduced as a result of the Port of Tampa development. Here, nuisance species including Brazilian pepper (*Schinus terebinthifolius*) have heavily invaded these areas. The estuarine areas surrounding McKay Bay provide suitable feeding and nursery habitat for a number of wading birds, small mammals and fishes even though they are surrounded by light-heavy industrial activities and adjacent to the 22nd Street Causeway corridor. Wetland Number E2 runs along a man-made ditch and includes a connection with a brackish water marsh.

The central portion of this wetland is comprised of herbaceous vegetation including, but not limited to, bog rushes (*Juncus sp.*), maidencane, pipewort (*Lachnocaulon anceps*), and bluestems (*Andropogon sp.*). Its western edge is buffered by a narrow band of slash pine (*Pinus elliottii*), cabbage palm (*Sabal palmetto*), and saltbush (*Baccharis halimifolia*). This area is seasonally flooded and provides highly suitable habitat for wildlife.

Wetland Number D5:

System:	Estuarine
Subsystem:	Subtidal
Class:	Unconsolidated bottom
Water Regime:	Subtidal
Modifier:	Excavated

This ditch drains directly into McKay Bay and will be classified as waters of the State by the Florida Department of Environmental Regulation (FDER). Vegetation present along the ditch includes saltbush, salt grass, and sea purslane (*Sesuvium sp.*). This ditch begins on the south side of the causeway and then runs parallel with the existing roadway until its termination behind Myrle's Restaurant. This ditch provides low to moderate wildlife habitat value.

Wetland Number P6:

	Top of Bank:	Tributary Stream:
System:	Palustrine	Palustrine
Subsystem:	None	None
Class:	Forested	Scrub-shrub
Subclass:	Broad-leaved deciduous	Broad-leaved deciduous
Dominant Type:	Red maple (*Acer rubrum*)	primrose willow (*Ludwigia peruviana)* buttonbush(*Cephalanthus occidentalis*)
Water Regime:	Temporarily flooded	Seasonally flooded

This wetland is a tributary branch of Delaney Creek. It is located at a bridge crossing east of 58th Street and its limits are restricted to top of bank. There are heavy silt

Wetland P8:

System:	Palustrine
Subsystem:	None
Class:	Forested/Scrub-shrub
Subclass:	Broad-leaved deciduous
Dominant Type:	Primrose willow, and Carolina willow
Water Regime:	Seasonally flooded
Modifier:	Excavated

This wetland is associated with the main channel of Delaney Creek. It is located west of 75th Street and is bordered on both sides by commercial and residential development. This creek has been channelized and species composition is indicative of disturbance. Existing roadside swales drain directly into this wetland. The wetland limits are restricted to the extent of hydrophytic vegetation in the roadside swales. The dominant vegetation is comprised of primrose willow, Carolina willow (*Salix caroliniana*), torpedo grass (*Panicum repens*), and beggar's tick. Top of bank vegetation includes laurel oak and saw palmetto (*Serenoa repens*). Wetland P8 provides moderate to high wildlife value.

Wetland P9:

System:	Palustrine
Subsystem:	None
Class:	Forested
Subclass:	Broad-leaved/Needle-leaved deciduous
Dominant Type:	Laurel oak, cypress, cabbage palm
Water Regime:	Temporary

This small, disturbed mixed hardwood community is underlain by Myakka soil, which is not listed as a hydric soil. However, the canopy includes cypress (*Taxodium distichum*), laurel oak (*Quercus laurifolia*), cabbage palm (*Sabal palmetto*) and camphor tree, and thus, may be an indicator of a lower depressional area that may qualify as a wetland. This remnant system (less than 0.5 acre) is bordered to the west by a dirt parking lot, to the north by Causeway Boulevard, and along its east boundary by a small ditch. Ground cover vegetation has been removed, but has been colonized weedy species such as caesar

weed (*Urena lobata*) and blackberry (*Rubus sp.*). The bordering ditch on the east side of this mixed plant community, is comprised of soft rush (*Juncus sp.*), marsh pennywort, cinnamon fern (*Osmunda cinnamomea*). Wetland P9 provides low to moderate wildlife habitat value.

Wetland D10:

System:	Palustrine
Subsystem:	None
Class:	Emergent
Subclass:	Persistent
Dominant Type:	Pickerelweed, marsh fern, maidencane
Water Regime:	Seasonally flooded
Modifier:	Excavated

This ditch runs parallel with 86th Street and drains roadside swales along 22nd Street. Slope vegetation was either bare or grassy, interspersed with dogfennel (*Eupatorium capillifolium*), shrub verbena (*Lantana sp.*), cinnamon fern, Carolina willow and primrose willow. Within the ditch is a variety of submerged plants including pickerelweed (*Pontederia cordata*), marsh fern (*Blechnum serralatum*), maidencane, and duckweed (*Lemna sp.*). Trees are restricted to the upper bank and include laurel oak, live oak (*Quercus virginiana*) and slash pine. This ditch, through a series of culverted connections offsite will be considered waters of the State by the FDER. Wetland D10 provides moderate wildlife habitat value.

In addition, roadside ditches along 22nd Street Causeway are located on both sides of the roadway, extending from approximately Wetland P9 east to the 86th Street ditch (Wetland site D10) on the south side of the road. Species noted within the ditch on the south side of the road include primrose willow and marsh pennywort, species commonly invading ditches excavated below the water table. The ditch on the north side of the road is occasionally maintained for weed control and is a closed system.

Wetland Evaluation Technique (WET 2.0) Analysis

Wetlands in the project area were evaluated using the WET 2.0 model, Level 1, developed by the U.S. Army Corps of Engineers Waterway Experiment Station (1987). This analysis is provided in a separate report entitled "Wetland Evaluation/Permit Coordination Report" (August, 1993).

The WET 2.0 model interprets results by assigning qualitative probability ratings of HIGH, MODERATE and LOW to certain wetland functions and values. Typically, a wetland will receive a MODERATE rating unless the evaluative interpretation keys find enough predictors to rate a HIGH or LOW probability. Generally, the results of the WET 2.0 analysis were as follows:

The eight (8) wetland types evaluated, representing twelve (12) individual wetlands, include a fairly diverse assemblage of wetlands performing a variety of functions to different degrees. All project wetlands rated LOW in terms of Social Significance for the "Recreation" value due to their size and location. Project wetlands also rated LOW in terms of effectiveness for "Groundwater Recharge/Discharge" functions. All project wetland types rate MODERATE in terms of effectiveness for "Production Export," and with exception to the estuarine wetlands (denoted as E1 through E4 on Figure 4-4), all wetlands rated LOW in terms of Effectiveness for the "Aquatic Diversity/Abundance" functions. The estuarine wetlands rated MODERATE for this function. In terms of Social Significance, however, all wetlands rated MODERATE for "Aquatic Diversity/Abundance" and "Uniqueness/Heritage" values. The eight wetland types evaluated show greater variability in terms of the "Floodflow Alteration," "Sediment Stabilization," "Sediment/Toxicant Retention," "Nutrient Removal" and "Wildlife Diversity/Abundance" functions and values. This should be expected since the eight wetland types represented different watersheds, water regimes, capacities, vegetation types, etc. Differences among individual wetlands are discussed in detail in the WET 2.0 analysis report referenced above.

Wetland Impacts

The potential impacts on wetlands are estimated for the preferred alternative alignment based upon approximate wetland limits established during the field evaluations.

Northern Section:

The six-lane divided option on 20th Street will impact 0.58 acres of Wetland E2. This impact would occur primarily in the central portion of E2 and in the adjacent roadside swale of 22nd Street although it avoids any impacts which may occur to the remnant mangrove wetland associated with E2. In addition, this option will impact approximately 0.28 acres of Wetlands P1 and D1. Both of these wetlands are found in highly urbanized areas of the project corridor and have low to moderate wetland value.

Eastern Section:

The remaining segments of the proposed project contain six-lane divided options south and east of McKay Bay to U.S. 301. The preferred alternative follows the existing right-of-way centerline from McKay Bay Causeway to Maydell Drive. This centered option would affect 0.72 acres of fringe mangrove wetlands along the 22nd Street Causeway. These are designated as Wetlands E3 and E4. In addition, a roadside ditch (D5) which connects into McKay Bay would be minimally affected (0.17 acres). This ditch is occupied by wetland vegetation and is within the jurisdiction of the Florida Department of Environmental Regulation (FDER). Between 54th Street to Maydell Drive, the preferred alternative impacts 0.13 acres of Wetland P6, which is a tributary of Delaney Creek.

East of Maydell Drive, the preferred alternative shifts to the north side of Causeway Boulevard (S.R. 676). This northern alignment impacts 0.81 acres of two other areas traversing Delaney Creek and its tributary (Wetlands P7 and P8) and 0.09 acres of

Wetland P9. The impact on the 86th Street Ditch (denoted as D10) is very minor (0.03 acres). Thus the total wetland impact for the preferred alternative alignment throughout the project corridor is approximately 2.71 acres.

Permit Considerations

Impacts to wetlands resulting from the project will require permits from the U.S. Army Corps of Engineers (USCOE) and the Southwest Florida Water Management District (SWFWMD). Impacts to shoreline wetlands (E1-E4, and D-5) will also require permits from the FDER. Coordination will continue with these agencies throughout the project implementation phases to evaluate jurisdictional limits and necessary mitigation to offset these impacts.

The proposed improvements will also include the design and permitting of stormwater management facilities. Permits for the treatment and attenuation of stormwater will be required from the SWFWMD in accordance with Chapter 40-E F.A.C. (formerly regulated under Chapter 17-25, F.A.C). Treatment within waters of the state will require FDER's review and concurrence of the stormwater treatment facilities.

SWFWMD also reviews and regulates any encroachments on the 100-year floodplain. Proposed encroachments and the mitigation of those encroachments are described in Section 4.18 and quantified in the Location Hydraulics Report.

Permits for the widening of the McKay Bay bridges will be required from the U.S. Coast Guard and the U.S. Army Corps of Engineers.

Mitigation of Impacts

In order to obtain the required permits for construction activities in wetlands, it will be necessary to develop measures to mitigate these impacts. Mitigative actions are defined

by the National Environmental Policy Act as measures to avoid, minimize, rectify over time, or compensate for impacts by substitute resources. The USCOE wetlands permitting policy is currently one of "no net loss" of wetlands and requires compensatory mitigation on at least a one-to-one basis. Permitting guidelines for the SWFWMD contain recommended compensatory mitigation which varies based upon the type of wetland impacted. For forested wetlands a minimum ratio of 2.5 to 1 is recommended. For non-forested wetlands a minimum ratio of 1.5 to 1 has been established. The FDER will also require compensatory mitigation on a case-by-case basis depending on the type of wetland impacted, degree of disturbance, and quality of the wetland. Mitigation requirements are typically determined during the permitting process once it has been found that the project would be rendered unpermittable without such compensation.

In order to meet the current EPA and USCOE "no net loss" policy, wetlands creation at a minimum 1 to 1 ratio will be required for successful permitting of the project. Additional creation or mitigation proposals may be required in order to meet the minimum ratios of the SWFWMD and the FDER.

During preliminary meetings with the staff of the Florida Department of Environmental Regulation, several mitigation options were discussed. The results of these meetings are provided in the Permit Coordination Report (1992). Below are some of the mitigation options proposed and discussed with permitting agencies during the conceptual design phases of the project:

Avoidance and Minimization

One way to mitigate wetland impacts of the expanded facility is to minimize those impacts through avoidance. The alignments were established considering wetland avoidance, with impact minimization considered when avoidance proved impossible. Along the causeway section of the roadway, the preferred alternative typical section width has been reduced to the minimum allowed by accepted safety criteria. The causeway

typical section incorporates a 19-feet, 6-inch wide raised median into a 123-feet, 6-inch wide corridor in order to minimize wetland impacts. This avoids impacting higher quality mangrove wetlands which occur along this section of the improved facility. East of the causeway, the median widths transitions back to a 30-feet width, resulting in a 134-feet wide right-of-way. In addition, the use of 2:1 to 1:1 slopes with rip rap embankments, rather than retaining walls, will be considered during the final design process. The rip rap embankment can provide an area for the eventual regrowth of mangrove stands while also discouraging the growth of invasive species including Brazilian pepper. Final design measures to further minimize impacts such as those described above can also be used in areas south and east of the causeway where wetland encroachments are likely.

Enhancement

Enhancement to the water quality of McKay Bay can be considered a mitigation measure. During the collection and documentation of existing information for the PD&E Study, it was discovered that there is a water quality problem in McKay Bay. The Palmetto Beach Drainage Study completed for the City of Tampa in 1986 concludes that McKay Bay's water quality problem can be attributed to both the land use of the watershed and the construction of causeway land mass across the bay that severely restricts the natural circulation and flushing action of McKay Bay. During discussions with FDER staff it was suggested that the natural circulation of McKay Bay could be somewhat restored through the installation of several box culverts along the causeway section of Causeway Boulevard.

FDER staff encouraged further investigation of the concept and suggested that improvements which encourage the enhancement of water quality of McKay Bay may be eligible for funding through the Southwest Florida Water Management District's Surface Water Improvement and Management (SWIM) program. There may also be funding available through the FDER.

If mitigation ratios can be lowered with the construction of the box culverts, reduced land acquisition costs for wetland creation may justify costs of the box culverts.

Enhancement of wetlands along the causeway can also be accomplished through the removal of invasive species. Higher mitigation ratios (4:1 to 10:1) will typically apply to this form of mitigation.

Wetland Creation

There is no apparent reason why wetlands creation activities cannot be implemented within or adjacent to the existing rights-of-way to meet this criteria. No apparent physical or biological constraints exist for implementing a successful wetlands creation plan in these areas. Much of the adjacent uplands have been converted to agricultural uses or are cleared and show no signs of intended urban use. This factor should allow for wetlands creation to take place without the problem of destroying valuable, natural upland habitat. If wetland creation is used as a mitigation method, a monitoring and management plan will be required. The plan will be included with the permit application during final design.

A separate Conceptual Mitigation Plan will be prepared and submitted to all permit and permit review agencies at the permitting stage of the project. The proposed plan will be consistent with all comments received during the review of the Permit Coordination Package and with all other comments received during the course of the PD&E study.

The functions and values of wetland on alternative alignments have been evaluated using WET 2.0. Wetland mitigation to be implemented for this project will enhance and replace existing functions and values lost due to direct impacts to wetlands. Coordination with permitting review agencies will continue through subsequent design, permitting and construction phases of the project.

4.12 AQUATIC PRESERVES

There are no Aquatic Preserves designated in the project corridor.

4.13 WATER QUALITY

McKay Bay is a component of the Tampa Bay estuarine system. The "*1990 Florida Water Quality Assessment*" prepared by the Florida Department of Environmental Regulation (FDER), Standards and Monitoring Section, identifies the Hillsborough Bay/McKay Bay portion of the system as having the "worst water quality problems" within the estuarine system. The above referenced assessment attributes these water quality problems to: treated sewage wastewater discharge; industrial cooling and process wastewater discharge; vegetative denudation and associated erosion and stormwater runoff; alteration of bay circulation patterns by channels, causeways, and spoil islands; and the attenuation of freshwater inflow for consumptive use.

The 22nd Street Causeway extends about 3,500 feet across McKay Bay from its east side, and is also an important environmental feature of the project area. While the causeway has had a detrimental effect on the water quality of McKay Bay by altering and restricting the bay's circulation patterns, it also has increased the total shoreline length of the bay thereby increasing the estuarine shoreline habitat of the bay. Mitigation efforts involving the installation of several box culverts along the Causeway Section would increase circulation and flushing action of McKay Bay and have been recommended by FDER during preliminary meetings with their staff.

The Delaney Creek drainage basin drains the project area east of McKay Bay to the west, and discharges into the bay about a mile south of the 22nd Street Causeway bridge. The 1990 Florida Water Quality Assessment referenced above indicates that Delaney Creek

has frequent dissolved oxygen violations and nutrient problems associated with surrounding industrial activities, as well as industrial pollutant problems.

The proposed improvements are not expected to have any significant impact on the water resources in the project area. The major concern is for the potentially adverse effects of stormwater runoff due to vehicular-related pollutants possibly associated with highway runoff.

The impacts of stormwater discharge on McKay Bay, Delaney Creek and its associated tributaries have been determined as per the guidelines contained in the FHWA Publications, "*Constituents of Highway Runoff*" (1981), "*Effects of Highway Runoff on Receiving Waters*" (1987), and "*Pollutant Loadings and Impacts from Highway Stormwater Runoff*" (1990). The appropriate stormwater management practices contained in FHWA Publications, "*Management Practices for Mitigation of Highway Stormwater Runoff Pollution*" (1985), and "*Retention, Detention, and Overland Flow for Pollutant Removal from Highway Stormwater Runoff: Interim Guidelines for Management Measures*" (1988) will be used to mitigate stormwater runoff impacts.

Pond siting conducted during the design phase of the project will include economic analysis, considering such factors as right-of-way cost, construction cost and the hydraulic efficiency of the soil. Avoidance will be exercised to the maximum extent possible for threatened and endangered species, cultural resources and hazardous materials/contamination sites.

Short-term adverse impacts on surface water quality will essentially be limited to erosion and water turbidity during construction. These potentially adverse effects of construction are considered temporary and minimal. This project is not expected to have any effect on ground water, recharge areas. or public water supplies. This will be ensured by strict adherence to Chapters 17-3, 17-25 and 40-E, F.A.C. and Section 104 of the Florida

Department of Transportation "*Standard Specifications for Road and Bridge Construction*".

4.14 OUTSTANDING FLORIDA WATERS

There are no Outstanding Florida Waters designated in the project corridor.

4.15 CONTAMINATION

The Florida Department of Transportation (FDOT) has evaluated the proposed right-of-way and has identified potentially contaminated sites for the various proposed alternatives. A separate report, entitled *"Hazardous Waste and Petroleum Contamination Site Assessment Report"* dated October 1991 has been prepared and is available at the FDOT District VII Office. The study revealed that there are 81 potential sites of hazardous materials and/or petroleum impacts. One of these sites, Diversified Marine Tech located at 2531 Causeway Boulevard, has been evaluated as having a "high" rating. A priority pollutant chemical and Resource Conservation and Recovery Act metal investigation has been recommended for this site. Thirty-four of the sites rated "Medium." Thirteen of these sites are Early Detection Incentive sites and Level II soil and groundwater investigations are recommended for these sites. Ten of the sites rated "medium" are suspected to be former gas station sites. Three sites are automobile repair and body shops with apparent poor housekeeping practices. Precautionary hand auger investigations are recommended at these sites. The contamination report includes the location, risk rating and other detailed information about each site. A site assessment will be performed for the preferred alternative to the degree necessary to determine the levels of contamination and, if necessary, options will be evaluated to remediate the contaminated site along with associated costs. Resolution of problems associated with contamination will be

coordinated with appropriate regulatory agencies and, prior to right-of-way acquisition, appropriate action will be taken, where applicable.

4.16 WILD AND SCENIC RIVERS

There are no rivers or water bodies within the project area listed on the National Park Service's Southeastern Rivers Inventory for Wild and Scenic Rivers and, therefore, the coordination requirement for the Wild and Scenic Rivers Act does not apply to this project.

4.17 FLOODPLAINS

A Location Hydraulic Report (March 1992) has been prepared in accordance with Chapter 24 of the Florida Department of Transportation's PD&E Manual and the following description of floodplain involvement summarizes the results of this report.

4.17.1 McKay Bay Bridge

With exception to two small areas, the entire project area along 22nd Street from Adamo Drive south and east of the CSX Railroad is shown within the 100-year floodplain limits on Flood Insurance Rate Maps (Panel Nos. 1201140025, 1201140034, 1201120366, 1201120367, 1201120368), as compiled by the Federal Emergency Management Agency (FEMA).

McKay Bay is not a regulated floodway as per the FEMA flood boundary and floodway maps.

Existing encroachments consist of a residential area of Palmetto Beach adjacent to 22nd Street north of the McKay Bay bridges, the causeway itself, and an area of commercial and industrial development which fronts on 22nd Street east to the CSX Railroad (See Figure 4-9).

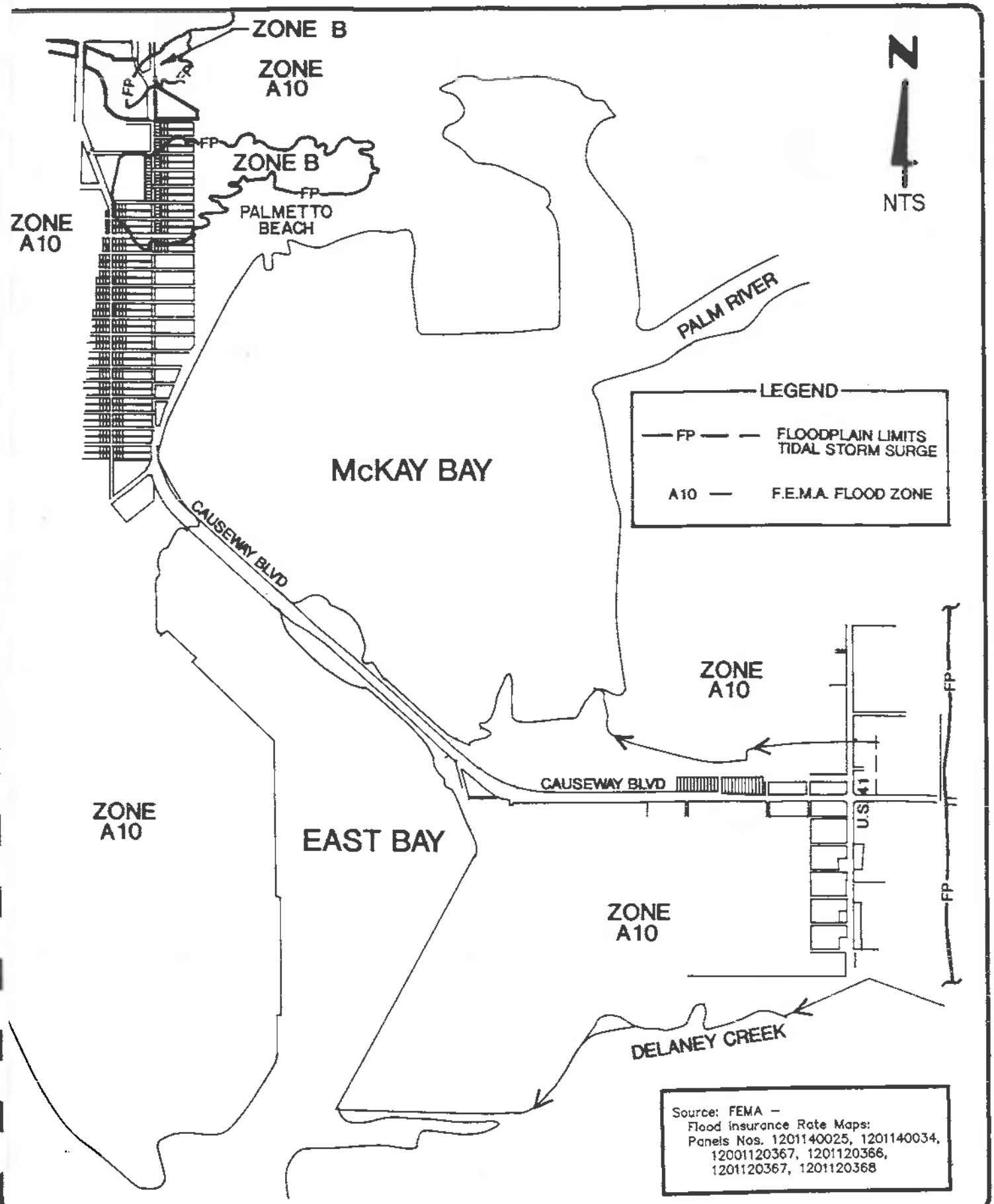
While the areas encompassed by floodplain limits are extensive, the encroachments have no effect on the flood stage elevations. The floodplain limits represent flooding due to a tidal storm surge and is not associated with a rainfall design event.

The preferred alternative alignment from Durham Street south and east of the CSX Railroad fall within the floodplain limits. The crossing at McKay Bay Bridge is characteristic of a Category 3 floodplain encroachment, as defined by the FDOT, in consultation with FHWA.

The proposed project involves improvements to existing facilities and, therefore, does not include significant new encroachments. The proposed widening of McKay Bay Bridge will result in an insignificant change in its capacity to carry floodwater. Due to the tidal nature of the receiving waters and the length of the bridge, the proposed changes will cause no appreciable increase in either the flood stages and flood limits.

There are two natural floodplain values that are impacted by the proposed crossing. They are wetland habitat encroachments and loss of flood storage volume.

Proposed widening of the roadway along the causeway section of the project will impact existing mangrove stands that have populated the causeway area since its original construction. Wetland descriptions, impacts, and avoidance/minimization alternatives are described in Sections 4.12 of this Environmental Assessment.



PROJECT
22ND STREET CAUSEWAY/ CAUSEWAY BOULEVARD
(S.R. 676)
PD&E STUDY

FLOOD PLAIN LIMITS

FIGURE NO.
4-9

Roadway improvements will also include widening the existing bridge facilities. While the proposed grade line may be raised and filled at the McKay Bay bridge approaches, impacts to the floodplain will be limited. The encroachment volume is insignificant when compared to the storage capacity of Tampa Bay and the Gulf of Mexico. This crossing and the associated floodplain encroachments will not measurably change the flood stage.

Steps to be taken to minimize impacts to the natural floodplain values at the McKay Bay crossing may include:

- Avoidance of Wetland Encroachment
- Restoration and Mitigation of Wetland Encroachment
- Best Management Practices During Construction and Maintenance

The modifications to drainage structures included in this project will result in an insignificant change in their capacity to carry floodwater. This change would cause minimal increases in flood heights and flood limits. These minimal changes will not result in any significant adverse impacts on natural or beneficial floodplain values or any significant change in flood risks or damage. There will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

4.17.2 Delaney Creek Channel and Tributary

The floodplains associated with Delaney Creek and Tributary "A" have been crossed in a transverse manner (see Figures 4-10 and 4-11). South and west of the existing crossing, Delaney Creek runs parallel to Causeway Boulevard. This produces a longitudinal crossing. The roadway defines the floodplains northern limit through this area. The existing encroachment includes the embankment fill for Causeway Boulevard (S.R. 676) and a small portion of residential and industrial development along 22nd Street. In the vicinity of the Delaney Creek crossing, expansion to the north would limit new

encroachments. At the transverse crossing at tributary "A", encroachment volumes are not appreciably affected by either north or south expansion. For a detailed discussion and analysis of these crossings please refer to the location hydraulics report.

Delaney Creek and its tributary (Trib "A") are regulated floodways as defined by FEMA. In addition, these areas have a history of flooding based upon correspondence received from Hillsborough County (see page 5-8 of this document). The County and SWFWMD have prepared a study that presents solutions to the flooding problem.

Each of the alternative alignments encroach on the 100-year floodplain at the locations of the existing crossings and each alignment involves a transverse encroachment to the floodplains. However, for the main channel of Delaney Creek, the centered and south alignments would also involve a longitudinal encroachment.

Due to the relatively narrow and transverse crossing of the Delaney Creek Tributary "A," the encroachment volumes do not vary appreciatively for the three alternative alignments. However, because the main channel of Delaney Creek south and west of the existing crossing runs parallel to Causeway Boulevard (S.R. 676), encroachment volumes vary substantially for the alternative alignments.

The crossings at the Delaney Creek Tributary "A" bridge and the Delaney Creek bridge (main channel) are characteristic of a Category 5 floodplain encroachment, as defined in Chapter 24-2.5 of the FDOT PD&E Guidelines. As outlined in the Delaney Creek Stormwater Management Master Plan (April, 1986, prepared by Advanced Engineering Technologies for Hillsborough County), the crossings are not a significant contributor of headwater loss in the creek system.

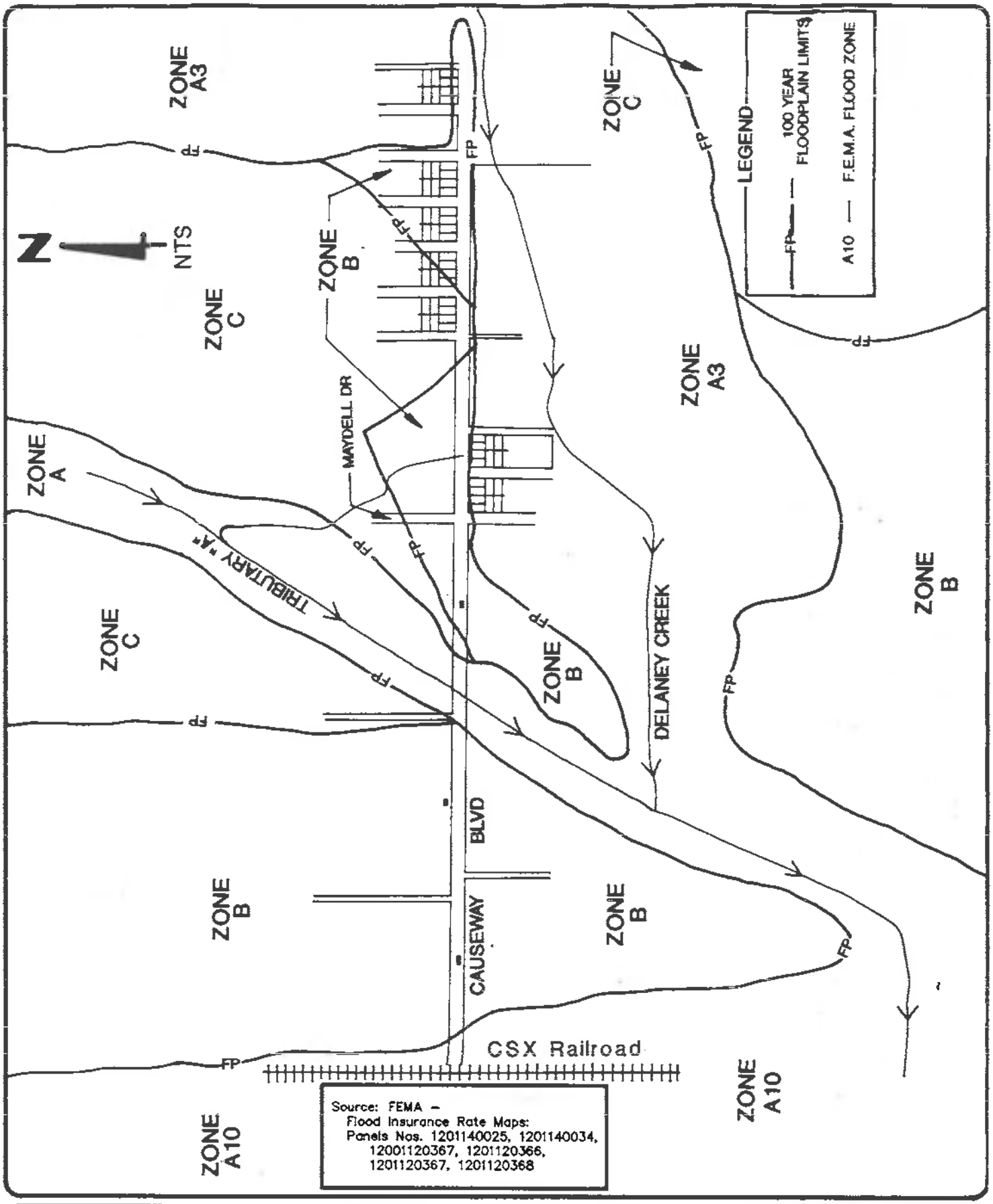
Replacement drainage structures for this project are limited to hydraulically equivalent structures. The limitations to the hydraulic equivalency being proposed are basically due to restrictions imposed by the geometrics of design, existing developments, cost feasibility,

or practicability. An alternative encroachment location is not considered in this category since it defeats the project purpose or is economically infeasible. Since flooding conditions in the project area are inherent in the topography or are a result of other outside contributing sources, and there is no practicable alternative to totally eradicate flood impacts or even reduce them in any significant amount, existing flooding will continue, but will not be increased. The proposed structure will be hydraulically equivalent to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result, the project will not affect existing flood heights within the 100 year floodplain limits. This project will not result in any new or increased adverse environmental impacts. There will be no significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that these encroachments are not significant.

Steps to be taken to minimize impacts to the natural floodplain values at the Delaney Creek and tributary crossings may include:

- Avoidance of Wetland Encroachment
- Restoration and Mitigation of Wetland Encroachment
- Minimization of Floodplain Encroachment
- Restoration of Floodplain Encroachment
- Best Management Practices During Construction and Maintenance

These measures are described in detail in the Location Hydraulic Report (1992).



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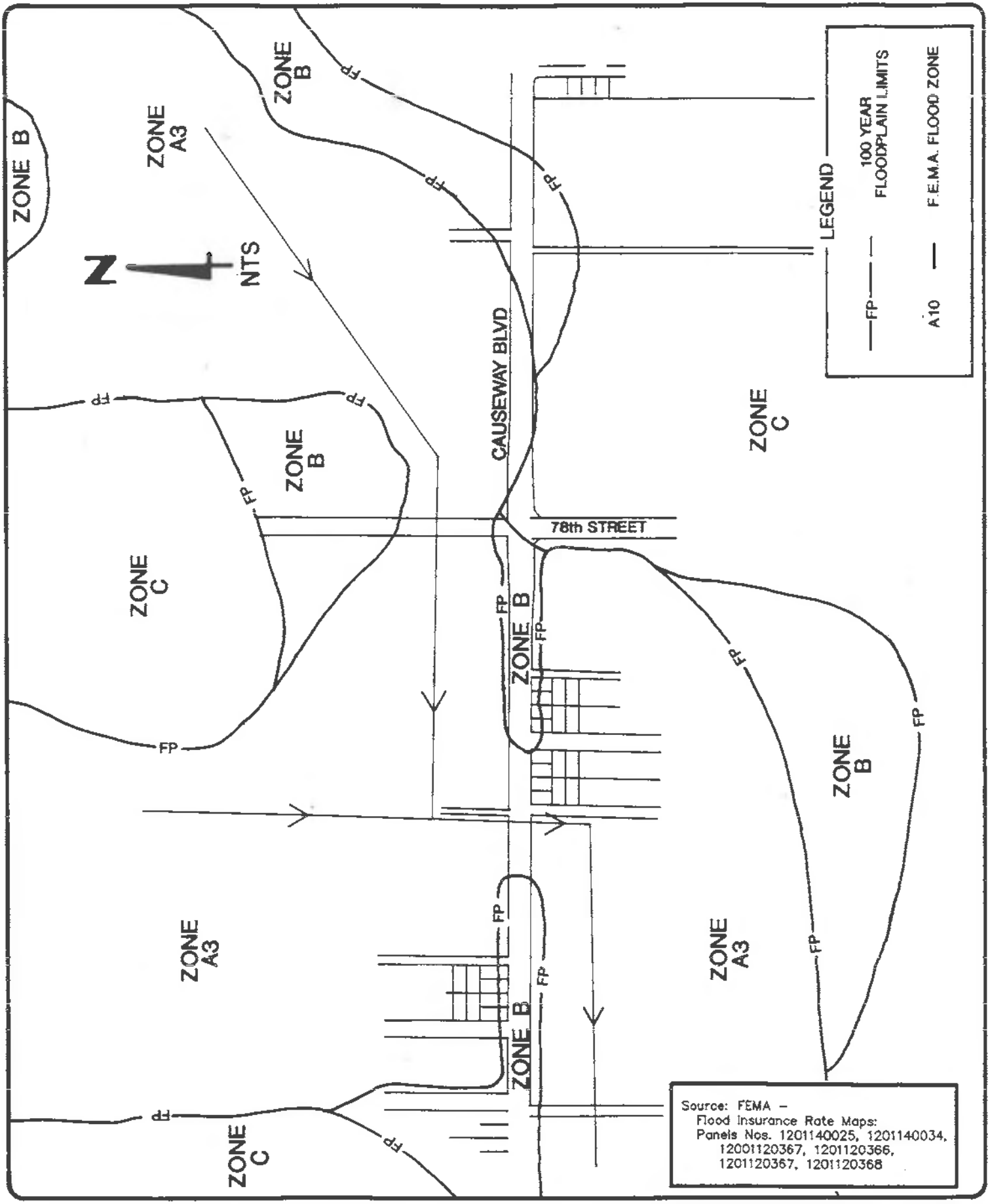
FLOOD PLAIN LIMITS

FIGURE NO.
4-10



PROJECT
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PD&E STUDY

FLOOD PLAIN LIMITS

FIGURE NO.
4-11

4.18 COASTAL ZONE CONSISTENCY

During the Advance Notification stage of this project, the Office of Planning and Budget, Office of the Governor (letter dated March 4, 1991) determined that this project is consistent with the Florida Coastal Management Plan (see Exhibit 3, Appendix B).

4.19 WILDLIFE AND HABITAT VALUES

The 22nd Street Causeway/Causeway Boulevard project has been evaluated for impacts on wildlife and their habitats.

Land-use maps showing the general land-use along the project corridor using the Florida Land Use Cover and Form Classification System (FLUCFCS) were prepared to designate potential habitat sites within the project corridor. The primary land-use along the project corridor is commercial, industrial and residential. Other land-use includes open pasture, vacant lots, and small wooded areas (mixed pine/hardwood). In addition, there is a mangrove fringe along the causeway, a few relatively small freshwater wetland areas and three channelized creek crossings associated with Delaney Creek.

Literature review and correspondence with various agencies (e.g., the Florida Natural Areas Inventory, the Florida Game and Fresh Water Fish Commission, the U.S. Fish and Wildlife Service and FDOT's SPECIES computer listings) resulted in Table 4-8 which describes the state and federally-protected species with the greatest probability of occurrence along the project. State listed protected species are included in this list for informational purposes and because many of these species are being considered for listing. A review of the published literature, agency contacts and field surveys (as described below), and the lack of suitable habitat in the proposed right-of-way (ROW) indicate that no listed species would be affected by the proposed project.

Furthermore, the potential for impacts to critical habitat was assessed as to its relationship to any of the U.S. Fish and Wildlife Service's designated "Critical Habitat" areas and it was determined that there are no designated critical habitats within the project area.

Surveys to determine the existence of any federally-listed plants or animals and/or their preferred habitat were conducted in February 1991, August 1991, August 1992, and February 1993. The 1991 surveys focused on the search for habitat suitable for listed species (see Table 4-8) and included upland and wetland pedestrian transects. The August 1992 survey concentrated on the McKay Bay mangrove fringe wetlands and consisted of a one-day bird survey. In addition, upland areas, such as vacant lots, improved pasture and wooded lots were surveyed in 1992. The February 1993 survey was a three-day, dawn and dusk wetland survey at each estuarine wetland site within the proposed ROW. Each estuarine wetland was surveyed for 30 minutes in the morning and evening noting each species utilizing the proposed ROW areas. In addition, birds and other wildlife in the general area were noted.

There were no federally-listed species observed in the area of the proposed road widening. Avian species observed in the general area of McKay Bay during the surveys include: lesser scaup, American coot, green-winged teal, ruddy duck, western sand-piper, dowitchers, laughing gulls, ring-billed gulls, American widgeon, double crested cormorant, white ibis, great blue heron, brown pelican, snowy egret, and little blue heron (the latter three species are State-Listed Species of Special Concern).

The West Indian manatee (federal and state-listed endangered) has been documented in estuarine habitats around McKay Bay, although they are not expected to occur with any regularity in the project area. Potential impacts to manatees would be limited to the construction phase of the project when boats or barges may be operating for improvements to the existing McKay Bay Bridge. As with all protected species construction activities will be conducted with caution to ensure protection of these species. Protective measures implemented during construction will include special provisions for

manatee and sea turtle protection in the construction contract for work along the causeway.

TABLE 4-8

Federal and State Listed Plants and Animals which may Potentially Occur within the Study Area.

The following species are of potential occurrence in or near the study area, based on known geographic ranges and habitat preferences.

	LEGAL STATUS	
	FEDERAL	STATE
PLANTS:		
Tampa vervain, *Verbena tampensis*	C1	E
slender-leaved false dragonhead, *Physotegia leptophylla*	C2	---
broad-leaved nodding-caps, *Triphora latifora*	C2	T
ANIMALS:		
roseate spoonbill, *Ajaia ajaja*	---	SSC
eastern indigo snake, *Drymarchon corais couperi*	T	T
little blue heron, *Egretta caerulea*	---	SSC
reddish egret, *Egretta rufescens*	C2	SSC
snowy egret, *Egretta thula*	---	SSC
tricolored heron, *Egretta tricolor*	---	SSC
gopher tortoise, *Gopherus polyphemus*	C2	SSC
bald eagle, *Haliaeetus leucocephalus*	E	T
brown pelican, *Pelecanus occidentalis*	---	SSC
wood stork, *Mycteria americana*	E	E
Arctic peregrine falcon, *Falco peregrinus tundrius*	T	T
Piping plover, *Charadrius melodus*	T	T
Southeastern snowy plover, *Charadrius alexandrinus tenuirostris*	C2	T

ANIMALS (continued):	LEGAL STATUS FEDERAL	STATE
least tern, *Sterna antillarum*	---	T
roseate tern, *Sterna dougalli*	T	T
American oystercatcher, *Haematopus palliatus*	---	SSC
short-tailed snake, *Stilosoma extenuatum*	C2	T
American alligator, *Alligator mississippiensis*	T(S/A)	SSC
West Indian manatee, *Trichechus manatus*	E	E
Common snook, *Centropomus undecimalis*	---	SSC
Atlantic loggerhead turtle, *Caretta caretta*	T	T

LEGAL STATUS:

E = Endangered

T = Threatened

C1 =Candidate for listing by U.S. Fish and Wildlife Service; substantial information on biological vulnerability or threats to support listing

C2 = Candidate for listing by the U.S. Fish and Wildlife Service:
evidence of vulnerability, but not enough data to support listing. (note: C1 and C2 species are not protected under the Endangered Species Act: the USFWS "encourages their consideration in environmental planning"

SSC = Species of Special Concern (Florida Game and Fresh Water Fish Commission)

The contractor and subcontractors shall ensure that care is taken to conduct all construction and related activities with caution relative to any endangered or threatened species protected by the Federal Endangered Species Act of 1973, the Florida Manatee Act, and the Federal Marine Mammal Protection Act of 1972, as amended. All construction personnel shall be advised of the potential status, of their federal or state protection, and of the need to refrain from any action which would jeopardize the well-being of these species.

To minimize the potential impacts of the bridge demolition and construction on manatees and sea turtles, a continuous Manatee and Sea Turtle Watch Program (MWP) will be established. The following conditions constitute the MWP and shall be included as special provisions.

1. Seven days prior to the first bridge-related construction event, the contractors will provide the U.S. Fish and Wildlife Service (USFWS) and the Department of Natural Resources (DNR), Office of Protected Species Management a list of the chief and primary observers for the MWP and their qualifications. An outline of the MWP will also be submitted seven days prior to the first such event.

   The outline will include time tables for any blasting, dredging, or construction watercraft activity, tide tables for blasting events indicating slack tides; time tables for the MWP (start times for aerial survey as hereinafter required, and other survey positions), observer positions; a copy of the MWP log sheet; and map to record manatee and sea turtle sightings.

2. A formal MWP coordination meeting will be held at least two days prior to the first bridge-related construction event. Attendees should include the MWP chief and primary observers, construction contractors, demolition subcontractors, FDOT, USFWS, DNR and other interested parties, such as the U.S. Coast Guard. All will be informed about the potential presence of manatees and sea turtles in the area,

and that civil or criminal penalties can result from harassment, molestation, capture, collection, injury and/or death of an endangered species or any part thereof. The construction contractors, demolition subcontractors and primary observer will present the protocol and logistics of bridge-related construction activities and the outline specified in condition No. 1.

3. During any blasting event, the manatees and sea turtle watch will consist of a minimum of six observers, one chief observer and five additional observers. In addition to these observers, there will be one MWP coordinator on site to supervise the watch. Three of the six observers shall have previous experience in observing/spotting manatees and sea turtles and should be documented in the qualifications submitted in Condition No.1. One of these observers shall have previous aerial survey experience and shall be the observer conducting the surveys from the helicopter. The four additional observers shall be trained and informed in the methods of surveying and locating manatees and sea turtles. During all other bridge-related construction events, the watch shall consist of at least one observer posted at locations designated by a DNR manatee and sea turtle specialist.

4. All observers will follow the protocol established for the MWP and will conduct the watch in good faith ad to the best of their ability.

5. Each observer will be equipped with a two-way radio that will be dedicated exclusively to the manatee and sea turtle watch. Observers will also be equipped with polarized sunglasses, binoculars, a red flag for a backup visual communication system, and a manatee and sea turtle sighting log with a map to record sightings at the bridge construction site and vicinity.

6. All blasting events will be scheduled within the period of slack tide to allow for the optimum observing conditions. The chief observer will make the decision on

the presence of optimum observing conditions to initiate the survey for each blast event.

7. A continuous aerial survey will be conducted by helicopter one hour prior to each blasting event in the vicinity of the blast site. In the event a helicopter is not available, DNR and USFWS will be contacted to determine another suitable method of aerial surveying. The aerial survey area and route will be designed in conjunction with a DNR manatee and sea turtle specialist. After detonation, the aerial survey crew shall make a complete survey of the safety and buffer zones before landing. The aerial survey crew shall either remain on ground stand-by in the survey area or continue surveillance of the waterway until the end of the blast period in case the need for aerial tracking of an injured manatee or sea turtle arises.

8. The additional primary observers will be located in various positions around the blast site. These positions will be situated to provide maximum visibility of the blasting safety zone and will have unobstructed views underneath the existing bridge. the exact observer locations will be approved by DNR and USFWS prior to each blast. One observer will conduct a sonar survey starting twenty minutes prior to the blast of a 150 feet radius around pier. The primary observers will begin surveying the blast area one hour (60 minutes) prior to the blast event and continue observing for one-half hour (30 minutes) after the blast event.

9. The blasting safety zone will be clearly marked with highly visible buoys. Using the formula for an uncontrolled blast, the radius in feet of the blasting safety zone = 260w, where w= the weight of the explosives to be used (TNT equivalent in pounds).

10. All of the observers will be in close communication with the blasting subcontractor in order to halt the blast event. The blast event will be halted if a

manatee(s) or sea turtle(s) is spotted within 300 feet of the perimeter of the safety zone or within the safety zone (radius computed above). The blasting event will be immediately halted upon the request of the primary observers. The blast event will not take place until the animal(s) moves away from the area under its own volition. Manatees and sea turtles must not be herded away or harassed into leaving. If the manatee(s) or sea turtle(s) is/are not sighted a second time,m the event will not resume until 30 minutes after the initial sighting. (If manatees or sea turtles are to be guided out of the danger zone, it will done thorough an established protocol developed by the USFWS).

11. Any problems encountered during bridge construction events will be evaluated by the observers and contractors and logistical solutions will be presented to the USFWS and DNR. Corrections to the MWP will be made prior to the next event.

12. If an injured or dead manatee or sea turtle is sighted during construction, an observer will contact the Florida Marine Patrol Tampa Office at (813) 893-2221. In any such case, an observer will also call the USFWS Vero Beach Office at (407) 562-3909. The observer will act according to the situation and will maintain foregoing telephone numbers shall be posted at all on-site telephones.

13. If any injured or dead manatee or sea turtle is rescued/recovered within three miles up or down the waterway from the bridge site during construction or if the injuries/death of any manatee or sea turtle in the vicinity are documented to be caused by construction activity, that activity will be postponed until cause of injury or mortality can be determined by DNR and USFWS. If injuries are substantially documented, all contributing construction activities will be suspended and the principle parties will meet to determine a better way to conduct the activity.

14. Operators of watercraft will be responsible for any collisions with sea turtles or manatees. Vessels associated with the project should operate at slow (no wake)

speed while in shallow water, especially where the draft of the boat provides less than 3 feet of clearance with the bottom. Work boats should load and off-load at the designated sites. Vessels used to transport personnel shall be shallow-draft vessels of the light displacement category, and shall follow routes of deep water to the maximum extent possible where navigational safety permits.

15. When turbidity barriers area used to prevent or minimize degradation of water quality, the barriers shall be of appropriate dimension to restrict the animals' access to the work area and to allow egress of any manatees or sea turtles which may enter the work area. Under such conditions, the barriers should use tangle-resistent or hemp rope when anchoring, or employ surface surveillance will be maintained in order to free animals which may become trapped in silt or turbidity barriers.

16. Construction debris shall not be discarded into the water.

17. Signs will be posted on site warning of the presence of manatees and sea turtles, of their endangered status, and precautions needed.

18. Within two weeks (14 days) after completion of all the bridge-related construction, the chief observer will submit a report to the USFWS and DNR providing the names of the observers and their positions during the event, number and location of manatees and sea turtles seen and what actions were taken.

19. If any one of the aforementioned conditions is not met prior to or during the applicable activity, the chief observer of the MWP will have the authority to terminate the activity. Any liability for a violation of the aforementioned protective measures will be assumed by the construction contractors and the FDOT.

Incorporation of these precautions in the construction contract(s) for the project should prevent any impact from occurring to manatees and sea turtles which may utilize McKay Bay.

Pursuant to the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended and 16 CFR 661 et. seq.) and the Endangered Species Act of 1973, as amended (16 CFR 1531), a biological assessment report was submitted to the U.S. Fish and Wildlife Service to request their written concurrence that the proposed project will have "No Adverse Effect" on any federally protected threatened or endangered species. The U.S. Fish and Wildlife Service (letter dated May 28, 1993) concurred with the findings that the proposed project will not adversely effect the West Indian manatee or other federally listed threatened or endangered species (see Exhibit 9, Appendix B).

4.20 FARMLANDS

Through coordination with the Soil Conservation Service, it has been determined that the project area, which is located in an urbanized area of Tampa, does not meet the definition of farmland, as defined in 7 CFR 658. Therefore, the provisions of the Farmland Protection Policy Act of 1984 does not apply to this project.

4.21 CONSTRUCTION

Construction activities for the proposed 22nd Street Causeway/Causeway Boulevard will have air, noise, water quality, traffic flow, and visual impacts for those residents and travelers within the immediate vicinity of the project.

The air quality impact will be temporary and will primarily be in the form of emissions from diesel-powered construction equipment and dust from embankment and haul road

areas. Air pollution associated with the creation of airborne particles will be effectively controlled through the use of watering or application of calcium chloride in accordance with FDOT's "*Standard Specifications for Road and Bridge Construction*" as directed by the FDOT Project Manager.

Noise and vibrations impacts may occur from heavy equipment movement and construction activities such as pile driving and vibratory compaction of embankments. Noise control measures such as those contained in FDOT's "*Standard Specifications for Road and Bridge Construction*" will be implemented for this project.

To address the construction noise concerns described above the following additional specific methods will be used to control or minimize construction noise related impacts:

To address the construction noise concerns described above the following additional specific methods will be used to control or minimize construction noise related impacts:

1. The contractor will use static rollers for compaction of embankment, subgrade, base, asphalt, etc.

2. Pile Driving Operations will be restricted to the hours of 7:00 a.m. to 9:00 p.m. to avoid interfering with any adjacent noise sensitive land uses or a different foundation design will be considered, i.e., drilled shaft.

3. Pre-formed pile holes will be required where they are in proximity to vibration sensitive land uses to minimize vibration transfer.

4. Back-up alarm noise from heavy equipment and trucks will be minimized by requiring the Contractor to operate in forward passes or a figure eight pattern when dumping, spreading or compacting materials.

5. Restriction of operating hours for lighting the construction areas will be determined and required of the Contractor prior to beginning construction activities requiring lighting.

6. Coordination with the local community and law enforcement agencies will be undertaken prior to commencing construction activities to ensure that construction related impacts are minimized or adequately mitigated when work during non-daylight hours is required.

Water quality impacts resulting from erosion and sedimentation will be controlled in accordance with FDOT's "*Standard Specifications for Road and Bridge Construction*" and through the use of Best Management Practices.

Maintenance of traffic and sequence of construction will be planned and scheduled to minimize traffic delays throughout the project. Signs will be used as appropriate to provide notice of road closures and other pertinent information to the travelling public. Detour ramps will not be required as only the ramp terminals are impacted. Construction will be staged to maintain traffic on existing ramps pavement while new ramp terminals are constructed. The local news media will be notified in advance of road closings and other construction-related activities which could excessively inconvenience the community so that motorists, residents, and business persons can plan travel routes in advance.

A sign providing the name, address, and telephone of a FDOT contact person will be displayed on-site to assist the public in obtaining immediate answers to questions and logging complaints about project activity.

Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling. Present traffic congestion, particularly in the segment between S.R.60 and Maritime Boulevard, may become worse during stages of construction where narrow lanes may be necessary. Traffic delays will be controlled to the extent

possible where many construction operations are in progress at the same time. The contractor will be required to maintain two lanes of traffic in each direction of Causeway Boulevard (S.R. 676) at all times and to comply with the Best Management Practices of FDOT. Also, present interchange movements will be maintained through use of detour ramps. No other locations will require temporary roads or bridges.

For the residents living along the 22nd Street Causeway corridor, some of the materials stored for the project may be displeasing visually; however, this is a temporary condition and should pose no substantial problem in the short term.

Construction of the roadway and bridges requires excavation of unsuitable material (muck), placement of embankments, and use of materials, such as limerock, asphaltic concrete, and portland cement concrete. Demucking is anticipated at most of the wetland sites and will be controlled by Section 120 of the FDOT Standard Specifications. Disposal will be on-site in detention areas or off-site. The removal of structures and debris will be in accordance with local and State regulation agencies permitting this operation. The contractor is responsible for his methods of controlling pollution on haul roads, in borrow pits, other materials pits, and areas used for disposal of waste materials from the project. Temporary erosion control features as specified in the FDOT's Standard Specifications, Section 104, will consist of temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms.

SECTION 5
COMMENTS AND COORDINATION

A Public Involvement Program was developed and carried out as an integral part of this project. The purpose of this program was to establish and maintain communication with the public at large, individuals and agencies concerned with the project and its potential impacts. To ensure open communication and agency and public input, the Department provided an early notification package to state and federal agencies, and other interested parties defining the project and, in cursory items, describing anticipated issues and impacts. In an effort to resolve all issues identified, the Florida Department of Transportation (Department) has conducted an extensive interagency coordination and consultation effort, and public participation process. This section of the document details the Department's program to fully identify, address and resolve all project related issues identified through the public involvement program.

The Florida Department of Transportation, through the Advance Notification Process, informed a number of federal, state and local agencies of the existence of this proposed project.

Advance Notification Packages for this project were sent on December 21, 1990. Responses received subsequent to the notification are included in Appendix B. Recipients of the initial notification package are listed below:

FEDERAL

Federal Highway Administration

National Marine Fisheries Service

U.S. Department of the Interior - U.S. Geological Survey

U.S. Department of the Interior - Bureau of Land Management

U.S. Department of Housing and Urban Development

U.S. Environmental Protection Agency

U.S. Department of the Interior - U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

Federal Railroad Administration

Federal Emergency Management Agency*

National Oceanic and Atmospheric Administration

U.S. Department of Health and Human Services

U.S. Department of the Interior - Bureau of Indian Affairs

Commander (obr) - Seventh Coast Guard District*

U.S. Department of Energy

STATE

Marine Fisheries Commission

Florida Department of Natural Resources - State Lands Management*

Florida Department of Environmental Regulation*

Southwest Florida Water Management District

Office of the Governor, Office of Planning and Budget*

Florida Department of State, Division of Historical Resources*

REGIONAL

Tampa Bay Regional Planning Council

LOCAL

Hillsborough County Board of County Commissioners*

Mayor, City of Tampa*

Tampa Port Authority

Ybor City Historical Society

* Responded to Advance Notification Package

Stated below are the pertinent comments from the agencies which responded to the Advance Notification. The letters of these agencies are contained in Appendix B.

U.S. COAST GUARD

(Appendix B, Exhibit 1)

These comments were taken from the Coast Guard's letter dated January 17, 1991 (see Appendix A, Exhibit 1).

COMMENT: "A Title 23 determination needs to be made by the Federal Highway Administration at the SR 676 bridge across Delaney Creek as soon as possible so that we can address our involvement at the bridge site. The tributary canals of Delaney Creek are non-tidal, therefore, are not considered navigable waters of the United States for bridge permitting purposes."

RESPONSE: The Coast Guard has been designated as a cooperating agency on this study, and as such was furnished a copy of the project's Environmental Assessment for review and comment. The single review comment received was that widening the McKay Bay bridges could impact boat traffic due to a reduction in the vertical clearance. FDOT coordinated with Coast Guard staff on the 6 inch clearance reduction that would result from widening the existing structures; the result of that coordination was that the Coast Guard is no longer concerned that widening the existing bridges will negatively impact boaters.

COMMENT: "A Coast Guard bridge permit will be required for the proposed bridge widening project across McKay Bay. You should plan on navigational clearances no less than those provided by the existing fixed bridge across McKay Bay.

To determine if the reasonable needs of navigation might require greater clearances, we recommend you consult with waterway users early in your design process. This needs analysis should reduce the likelihood of your bridge permit being delayed for navigational considerations.

The Coast Guard decision on navigational adequacy is necessarily part of the permit approval process. We will consider any information you provide, the comments responding to the public notice we issue after receiving your application, and all other available information in making this decision.

Since there are federal funds involved in the proposed bridge replacement/modification project, we wish to be designated a cooperating agency for processing of the environmental documentation unless the Federal Highway Administration determines the project qualifies for a Categorical Exclusion.

Enclosed for your use in applying for a Coast Guard bridge permit is a Bridge Permit Application Guide and an Environmental Assessment Outline."

RESPONSE: The Florida Department of Transportation will work closely with the Coast Guard during project development to ensure that all navigational requirements are met and that the bridge is constructed in a manner that will meet the needs of waterway users.

The Department or their consultants will meet with the Coast Guard during project development to provide in more detail its plans concerning the bridge and to fully accommodate Coast Guard requirements. As a cooperating agency, the Coast Guard was furnished a copy of the Environental assessment, and issued a single comment (the vertical clearance issue discussed previously in this section).

COMMENT: Since there are federal funds involved in the proposed bridge replacement/modification project, we wish to be designated a cooperating agency for processing of the environmental documentation.

RESPONSE: The USCG has been designated a cooperating agency and a copy of the environmental assessment was provided for their review. Their review comment is discussed above.

FEDERAL EMERGENCY MANAGEMENT AGENCY

(Appendix B, Exhibit 2)

COMMENT: Noted that Delaney Creek is a regulatory floodway. Therefore, Section 60.3(d)(3) of the National Flood Insurance Program will apply to this project. "Florida DOT will need to design the Delaney Creek bridge to conform to this "no rise" standard, and will need to develop documentation to this effect certified by a registered engineer. However, a "no-rise" certification is not required for the McKay Bay bridge/causeway section of the project."

RESPONSE: Agree.

OFFICE OF THE GOVERNOR, STATE CLEARINGHOUSE

(Appendix B, Exhibit 3)

COMMENT: None. They have coordinated a review of the project with other state agencies and summarized their comments (which are addressed individually herein). Stated that the proposed action is consistent with the Florida Coastal Management Program at this stage.
RESPONSE: No response necessary.

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

(Appendix B, Exhibit 4)

COMMENT: "Areas of potential impact to State jurisdictional wetlands include bridge reconstruction, fill to accommodate laneage and some reference to regulated floodways. State water quality certification will be required for this activity, and wetland resource permits are required under Chapter 403, F.S.. Permitting considerations are as follows: (1) the project involves impacts to shallow water productive marine habitat. Impacts to these areas must be minimized by the design of the project, (2) impacts to endangered or threatened species or their habitats are of particular concern due to the likelihood of the occurrence of the West Indian manatee in the McKay Bay region and the utilization of the shallow water habitat by several

wading birds on the state and Federal Threatened or Endangered lists, (3) impedance to navigation in the open water areas must be addressed. Further study is necessary to quantify the potential impacts to water quality and marine productivity of the area".

RESPONSE: The Department has been, and will continue to, work closely with the FDER (now FDEP) to resolve any problems related to wetland impacts resulting from bridge reconstruction and filling in jurisdictional wetlands. State water quality certification and wetland resource permits will be obtained prior to project implementation in accordance with all applicable state regulations. Impacts to shallow marine habitats and to state and federally listed species (eg. West Indian manatee and wading bird populations) have been minimized to the furthest extent possible during the conceptual design phase, in consultation with FDER. These measures are described in Section 4.11 of the Environmental Assessment. Further impact minimization measures will be considered at the final design phase and in accordance with a mitigation plan that will be circulated to all regulatory agencies for comment and concurrence prior to project implementation. The Florida Department of Transportation will need to obtain a bridge permit from the U.S. Coast Guard prior to construction. This will ensure that all navigational requirements and concerns are met and that the bridge is constructed in a manner that will meet the needs of all waterway users.

FLORIDA DEPARTMENT OF NATURAL RESOURCES (FDNR)
(Appendix B, Exhibit 5)

COMMENT: "The subject property does not appear to affect uplands where title is vested in the Board of Trustees of the Internal Improvement Trust Fund. Should use of such lands be identified during the more specific permitting process, an easement will be required pursuant to Chapter 18-2, F.A.C."

RESPONSE: All applicable federal and state requirements will be met during the permit application stage. (The FDNR is now the Florida Department of Environmental Protection).

DEPARTMENT OF THE STATE
DIVISION OF HISTORIC RESOURCES

(Appendix B, Exhibit 6)

COMMENT: They noted that "conditioned upon the FDOT undertaking a cultural resource survey, and appropriately avoiding or mitigating project impact to any identified significant archaeological or historic sites, the proposed project will have no effect on any sites listed, or eligible for listing in the National Register. If these conditions are met the project will also be consistent with historic preservation aspects of Florida's coastal program".

RESPONSE: A cultural resource survey has been conducted for this project. As a result of this assessment, four individually eligible significant structures (8HI605, 8HI965, 8HI2285 and 8HI2294) were identified and later determined to be eligible for listing on the National Register. Three of these structures are also located within an eligible historic district.

The preferred alternative, an at-grade six-lane divided roadway on 20th Street, was selected to avoid impacts to the four individually eligible historic structures and proposed historic district. As a result of the analysis performed and summarized in the Section 106 Case Report (1993), this alternative will not have an effect on these historic structures and district.

Through the application of the Criteria of Effect, the Federal Highway Administration, in consultation with the SHPO determined that the project (preferred alternative) will have no effect on cultural resources eligible for listing in the NRHP. Therefore, the conditions of the above comment continue to apply to the proposed action.

HILLSBOROUGH COUNTY
BOARD OF COUNTY COMMISSIONERS

(Appendix B, Exhibit 7)

COMMENT: "Stormwater Design Staff advise that the portion of 22nd Street Causeway located in incorporated Hillsborough County crosses significant stormwater conveyance systems.

Of particular concern is Delaney Creek and the Delaney Creek pop off canal. While these areas have a history of flooding, the County, along with the Southwest Florida Water Management District (SWFWMD), has completed a study that identified problems within the system and offers solutions to alleviate the problems. Staff have also begun a preliminary design phase and initial environmental testing of the downstream reaches in Delaney Creek. This information should be useful to you when this project reaches a design phase.

Please contact Walid Hatoum, P.E., Manager of the Stormwater Design Section, at 272-5912, Ext. 3602, for information regarding the studies. It would also be greatly appreciated if you would coordinate your efforts with Mr. Hatoum to avoid potential conflicts with County stormwater projects."

RESPONSE: Numerous contacts were made to local and state regulatory agencies in order to adequately address stormwater and flooding issues. The specific details of this coordination are summarized in Exhibit 10, Appendix B.

CITY OF TAMPA

(Appendix B, Exhibit 8)

COMMENT: None. They provided a copy of the Palmetto Beach section from the Historic Resources Survey conducted by their office for use in the cultural resources assessment prepared for the project.

RESPONSE: No response necessary.

CSX TRANSPORTATION

CSX Transportation (CSX) has at-grade crossings within the study area at the following locations:

- 22nd Street between the Crosstown Expressway and Long Street.
- Causeway Boulevard approximately 1400 feet east of US 41.
- US 41 approximately 1460 feet south of Causeway Boulevard.

Coordination with CSX included meetings with Mike Kelly and Charles Hutchinson of CSX staff. CSX staff provided information concerning frequency, length and speed of trains at project locations for use in Benefit/Cost computations for grade separations. A grade separation proved to be feasible at the crossing on US 41.

SUBSEQUENT AGENCY COORDINATION

FLORIDA GAME AND FRESH WATER FISH COMMISSION
(Appendix B, Exhibit 11)

COMMENT: Regarding protected species GFC provides a list of species that have the potential to be present in the proposed project area, listed areas of potential habitat and recommended minimizing roadway impacts to potential listed species habitat.

RESPONSE: Protected species surveys for the project were conducted in February 1991, August 1991, August 1992 and February 1993. This project has been developed to minimize roadway impacts to potential listed species habitat.

COMMENT: Consideration for wildlife undercrossings/conveyances should be made in the two Delaney Creek crossing areas. This could be achieved with a small bridge, box culverts, or properly sized oval culverts.

RESPONSE: The two existing crossings of Delaney Creek are being replaced by this project with longer span, higher bridges. The replacement bridge on Delaney Creek will be approximately one foot higher than the existing bridge and it will span approximately 100 feet instead of the existing 61 feet. The replacement bridge over the tributary to Delaney Creek would be slightly higher than the existing bridge and its length has been increased from 41 feet to approximately 77.5 feet.

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
(Appendix B, Exhibit 9)

COMMENT: Nineteen conditions for protecting manatees will be included in any contract issued for work.

RESPONSE: Conditions incorporated into section 4.19 of this document, and as commitment B on page 6-1 of this document.

COMMENT: The proposed project is not likely to adversely affect federally-listed threatened or endangered species.

RESPONSE: No response required.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
(Appendix B, Exhibit 12)

"On Approachways"

COMMENT: Reduce median width of 19'-6" by at least 8 feet.

RESPONSE: Median width for the design speed of 45 miles per hour is 30 feet desirable, 19'-6" minimum. We have already reduced impacts by using the minimum value allowed that maintains safety. No reduction in median width is anticipated.

COMMENT: Eliminate both 3' grass strips.

RESPONSE: The grass strips serve several functions, including a location for utilities and physical separation between the edge of the travelway and the sidewalk. Eliminating the grass strips would require a sidewalk width increase of 1', resulting in a net width decrease of 2' instead of the 3' quoted. The grass strip functions as outlined herein make deletion of the grass strip infeasible.

COMMENT: Realign the roadway to the west, utilizing more of your R/W.

RESPONSE: The alignment was set in harmony with the reduced median width, to minimize impacts, including (but not limited to) wetlands, utility relocations and cost. Revising the alignment would result in utility pole relocations that would not only be expensive but also impacts wet areas. The roadway alignment will not be changed.

"On the Bridge Spans"

COMMENT: Eliminate the 8' shoulder on the inside lanes.

RESPONSE: The shoulder provides a refuge area for disabled vehicles. The need for and width of the shoulder is a FDOT design standard. The shoulder will not be eliminated.

COMMENT: Perform some of the new bridge construction (at least one 12' lane) on the inside (i.e. west side) of the northbound span, to reduce the median/void space between the spans to approximately 14'.

RESPONSE: The space between parallel bridges is based on several factors, including the median width of the approaching roadway and the need for adequate space to allow for bridge inspection equipment to get underneath the bridge from the bridge deck (i.e., inspect bridge girders using a cherry picker). It is not feasible to reduce the proposed space between the parallel bridges as suggested.

COMMENT: Realign the centerline to the west to further reduce impacts to the east side of the causeway segment of the project (this could be achieved by fully constructing the west span first, using the new and old west spans for 2 way traffic flow, while construction is carried out on the eastern span).

RESPONSE: The bridge work is a widening of the existing spans, not construction of completely new structures. The maintenance of traffic will be fleshed-out during the design process. The alignment as established provides minimization of impacts of all evaluative criteria, including wetlands, utility relocations and costs. The roadway alignment will not be changed.

UNITED STATES COAST GUARD
(Appendix B, Exhibit 13)

COMMENT: Widening bridge over McKay Bay will reduce vertical clearance by approximately 6 inches. We will determine whether the proposed bridge clearances are adequate during the permitting process.

RESPONSE: The reduction in the existing 40 feet of vertical clearance is not expected to be problematic.

INTERAGENCY/COORDINATION MEETINGS

A Public Officials Notification Meeting for the project was held at the Hillsborough County Metropolitan Planning Organization's office on January 24, 1991. This was an informal meeting

(no formal presentation) with project staff available to review project exhibits and answer questions. Representatives from Hillsborough County, the City of Tampa, the Tampa Port Authority and the Metropolitan Planning Organization attended.

On January 29, 1991, a coordination meeting was held with members of the Port of Tampa staff at the Port offices in Tampa. The issues discussed were the planned construction of a container facility by the A.R. Savage Company near the Maritime/22nd Street intersection and ingress/egress to the port via Maritime Boulevard. The meeting was conducted as an introduction to the project, so specific concerns were deferred to a later date.

On May 31, 1991, a coordination meeting was held with members of the Port of Tampa staff at the Port offices in Tampa. Meeting attendees also included FDOT staff, MPO staff and a representative of the A.R. Savage Company. The issues discussed were the various intersection alternatives under consideration for the Maritime/22nd Street intersection, ingress/egress to the new container facility constructed by Savage, and possible land swapping to accommodate the widened roadway and expected growth. Savage expressed concern over sufficient space for proposed and existing operations; the alternatives were developed considering usable space for the Savage operation.

On November 27, 1991, a meeting was held at the CSX transportation office in Tampa. FDOT, CSX and PBS&J were represented. The meeting was held to solicit railroad information concerning their feelings on grades separations at their tracks, and to collect information on train frequency and length for use in the grade separation benefit/cost analysis.

On February 12, 1992, a meeting was held at the A.R. Savage Company office in Tampa to update Savage representatives on the proposed alignment development. FDOT staff and PBS&J staff were in attendance. Alignment alternatives were discussed, with no selection until after the project public hearing.

PBS&J staff attended a Chamber of Commerce meeting on August 27, 1992 at the Chamber offices in Tampa. The meeting topic was the Port of Tampa, with no discussion on the 22nd Street study or port ingress/egress.

PUBLIC INVOLVEMENT MEETINGS

A Public Workshop was held for the project on April 9, 1992. This informal workshop was held to provide the general public with information about the project, the various alternatives under consideration, project scheduling, the status of necessary studies and environmental documentation, and solicitation of comments from the general public.

Approximately 175 persons attended the workshop. Written comments were received from 31 individuals/firms. The information below summarizes the comments received at and after the public workshop.

COMMENT: Proposed bridge over railroad east of US 41 will create access problems, visibility problems and will result in significant business damages.

RESPONSE: Additional study was promised. Receipt of additional information concerning train crossings resulted in a benefit/cost ratio too low to justify the interchange. The preferred alternative does not include a bridge at this location.

COMMENT: Raised median will be access problem.

RESPONSE: Median needed for roadway classification. Median openings must conform to FDOT access management requirements. Actual median opening location to be determined during final design phases.

COMMENT: Interchange at US 41 will cause access and business damage problems.

RESPONSE: Projected traffic volumes warrant interchange. Access and business damages will need to be addressed during the final design and right-of-way acquisition phase.

COMMENT: Proposed improvements not needed; against widened roadway.

RESPONSE: The MPO traffic model used to project future year traffic shows sufficient need to justify widening road.

PUBLIC HEARING

The 22nd Street Causeway / Causeway Boulevard PD&E study public hearing was held on December 14, 1993 from 4:00 PM to 7:00 PM at the Holiday Inn Hotel, 2708 North 50th Street, Tampa, Florida. The sign in sheets showed 159 people signed in. The hearing format consisted of an informal period from 4:00 PM to 6:00 PM when the public could view exhibits and have questions answered on a "one on one" basis with representatives from FDOT and PBS&J. Beginning at 6:00 PM, the formal portion of the hearing was opened for public comment. Throughout the evening, a court reporter was available to take public comment.

The information below summarizes the comments received from the general public at and after the public hearing. The sources for public comment summarized herein are the transcript detailing public statements and statements to the court reporter, and completed comment forms. In addition, 71 completed copies of a form letter opposing the closing of 22nd Street between Durham and Maritime were received as a single package.

Form Letter Opposing Closing 22nd Street between Durham and Maritime

The letter has a single paragraph body, stating the following:

The undersigned, in my capacity of area resident, business owner or party interested, hereby express my strongest opposition to the closing of 22nd Street from Durham Street to Maritime Boulevard. Progress can not be attained at the expense and ruin of the businesses and local residences in this area.

Nine of the signatories included a business name on their form, and several responses were from individuals listing addresses outside of the study area.

The response to the concerns expressed in these letters is that the delineation of a potential historic district straddling 22nd Street makes any alternative involving widening along the 22nd Street corridor not feasible due to a feasible corridor along 20th Street. The PD&E study evaluated a one-way pair system using 20th and 22nd, but even a 3 lane one way pair would require widening along 22nd Street to meet current FDOT geometric requirements. Since widening would encroach into the potential historic district, using 22nd Street between Durham and Maritime was not feasible.

The proposed realignment onto the 20th Street corridor requires a horizontal curve near the existing Durham / 22nd Street intersection. It is not feasible to include a continuation of the existing 22nd Street northbound and southbound traffic lanes into the realigned intersection. However, the northbound movement at Maritime is still being accommodated with a free flow lane that exits the realigned roadway and runs northbound along existing pavement. The roadway will dead end just south of Durham; however the anticipation is that through northbound traffic will utilize the new roadway, and that local northbound traffic will be adequately serviced by the proposed laneage and geometry.

A total of 24 comment forms were submitted as part of the public record. Specific questions raised are presented below. The following opinions were expressed:

7 respondents are in favor of the project

7 respondents are against the project

7 respondents requested input into median opening locations

5 respondents requested additional information

The court reporter's official transcript includes 7 statements made directly to the court reporter, and 9 statements made during the formal public hearing. Of those making verbal statements, 2 expressed support for the project and 2 spoke against it.

Presented below are specific issues raised in the ways shown above (ie, written comments, statements to court reporter, statements during hearing) and the FDOT responses.

COMMENT: In lieu of proposed project, extend Hartford Street east and make it a truck route.

RESPONSE: The proposed project addresses the need for additional capacity along the project corridor (see next comment/response). Hartford Street is not a FDOT roadway, and is therefore the responsibility of the controlling local government.

COMMENT: Existing traffic is light; no need to widen roadway.

RESPONSE: The need for this project was based upon the traffic projected by the Hillsborough County Metropolitan Planning Organization (MPO). The MPO traffic model includes forecasted socioeconomic data that projects future development in the Hillsborough County area, and defines the transportation routes to be taken and the number of people expected to use them. Based on the MPO model, the proposed improvements are needed.

COMMENT: Extend 22nd Street to Twiggs either over or under water.

RESPONSE: Neither a new bridge crossing nor a tunnel are under consideration at this time. Neither of these proposals would address the need to be handled by the proposed improvement.

COMMENT: Landscaping, and benches along the Causeway section, should be included in the project.

RESPONSE: These issues can be looked at in more detail during the final design process. Land is typically not acquired by FDOT specifically for landscaping.

COMMENT: 22nd Street was recently resurfaced, why proposing additional work?

RESPONSE: The resurfacing was a maintenance operation intended to maintain the existing roadway surface. The proposed improvement is intended to improve traffic flow by adding capacity. The time frame for initiating construction of the proposed improvement would be a minimum of 4 years, if funding were approved (which it isn't). The proposed improvement does not impact the recently completed resurfacing that was completed out of need to maintain current capacity.

COMMENT: Several comments were raised over specific median openings north of Maritime.

RESPONSE: The median openings shown on the hearing exhibits were called out as conceptual and subject to refinement/relocation during final design. The specific median openings and associated traffic controls is a design issue; copies of the median comments have been forwarded by the FDOT PD&E project manager to the FDOT Access Management department, and to the FDOT final design project manager for their consideration during the design process.

COMMENT: Will noise walls be used?

RESPONSE: A noise study report was prepared specifically for this project. In the section north of Maritime, which is the area where noise walls were questioned, the close spacing of intersections makes noise walls non-functional. Breaks in noise walls to accommodate side streets allows for noise transmission, defeating the intent of the walls.

COMMENT: Rerouting 22nd Street to 20th Street will be harmful to businesses along 22nd Street.

RESPONSE: The identification of a potential historic district along 22nd Street made selection of the 22nd Street corridor as the location for a widened roadway non-feasible. When impacts to a historic area can be avoided, as they can be through the selection of the 20th Street corridor, the historic district must not be impacted. This requirement influenced the selection of 20th Street as the preferred location.

Northbound traffic will still have continuous access along 22nd Street from the area south/east of Maritime. Southbound traffic will be diverted to 20th Street, though opportunities for crossing over to 22nd will be provided with median openings. The reduction in traffic along 22nd Street due to making 20th Street the main corridor is not expected to impact businesses that do not depend on drive-by traffic for their business.

COMMENT: If the 20th Street corridor is used, will there be potential safety concerns due to tank farms?

RESPONSE: Marathon Oil owns a petroleum tank facility along 20th Street. In a meeting with Marathon's terminal manager, it was stated that routing the new roadway in this area is not expected to be a safety problem. A letter has been requested from Marathon addressing the safety issue.

COMMENT: Meeting location poor. Informing public of meeting was poor.

RESPONSE: The meeting location was selected to accommodate the anticipated crowd, and at a location that considered the entire project (not merely the area north of Maritime). The pre-meeting notifications included 2 mailouts of approximately 600 letters per mailout to property owners; letters to public and elected officials; and a 1/4 page advertisement that ran in the Tampa Tribune the week prior to the hearing. Further, the Tampa Tribune ran an article concerning the

project well in advance of the hearing, and included hearing specifics (location, date) in the article. The public notification followed all prescribed notification policies of FDOT, and in fact exceeded them through the second mailout to all property owners with property lying within 300 feet of the preferred alignment centerline.

COMMENT: A grade separation should be provided at the railroad crossing east of US 41.

RESPONSE: This location was studied at length for a bridge. Based upon traffic volumes projected using the MPO traffic model, and train information provided by CSX Railroad, the cost of constructing a bridge outweighs its benefits. The high land and business damage costs associated with a new bridge contribute to the cost/benefit disparity.

The Palmetto Beach Community Association had several specific comments, presented below.
COMMENT: From SR 60 to Durham, acquire right-of-way from west side, not east side.

RESPONSE: The location of proposed right-of-way in this area is greatly dependent on the need to fit the roadway under the existing bridge at the Crosstown Expressway. The roadway geometry necessary to allow that to happen will dictate where land is to be acquired. Reconstructing the bridge is cost prohibitive.

COMMENT: Provide a southbound left turn lane at Long Street; move the Corrine median opening to Stuart, add traffic signal; do not allow access at Hemlock, move Hemlock median break to Oakwood.

RESPONSE: The median openings shown at the public hearing were stated to be conceptual and subject to refinement during the final design process. All median openings requested will be addressed during final design; the FDOT PD&E project manager has forwarded copies of all median opening comments to the FDOT Access Management department, and to the FDOT final design project manager for their consideration during the design process.

COMMENT: Durham should be signed "No Trucks" east of 22nd Street.

RESPONSE: A copy of the letter requesting this will be forwarded to the City of Tampa.

COMMENT: The northbound lane west of McKay Bay that provides local access to 22nd Street should be signed "No Through Trucks".

RESPONSE: A copy of the letter requesting this will be forwarded to the FDOT final design project manager for their consideration during the design process.

COMMENTS AND COORDINATION SUMMARY

In general, the public appears to support the proposed improvements to the 22nd Street Causeway/ Causeway Boulevard corridor. The businesses along 22nd Street are concerned over the diversion of traffic to the 20th Street corridor; right-of-way professionals have evaluated these concerns, and feel that since the majority of potentially impacted businesses do not rely on "drive by" customers, there should not be a significant impact. Another primary concern is the location of median openings for access to businesses and side streets. This is a design issue that must comply with FDOT access management rules that will be incorporated into the final design phase of this project. None of the comments received required revisions to the recommended alternative as presented at the hearing.

The concerns expressed by various agencies are summarized herein, as are the responses. The appendices contain specific correspondence for reference. The issues of access management and environmental permitting are issues the Florida Department of Transportation is committed to continue to work on during the design phase of the project.

SECTION 6

COMMITMENTS AND RECOMMENDATIONS

The PD&E study process objective was to identify the improvements necessary to allow the 22nd Street Causeway / Causeway Boulevard corridor to handle the projected traffic demand in the design year of 2015. The Environmental Assessment has documented the fulfillment of that objective.

6.1 Commitments

During the development of the PD&E study, several issues were raised that will require resolution and/or implementation during the subsequent design and construction phases of the project. These issues are discussed in detail below.

A. Approximately 2.7 acres of wetlands will be impacted due to the construction of the proposed improvements. These impacts will be mitigated through development and implementation of a plan that will include a wetland creation component to assure "no net loss" of wetland areas. Coordination with the affected environmental agencies will be undertaken during the design phase. The roadway typical section shall be compressed to minimum standards across the causeway section to minimize impacts to the wetlands. The possibility of constructing culverts in the causeway section to aid in circulation of water between the north and south sides of the causeway will also be investigated as part of the overall mitigation design.

B. The West Indian Manatee has been documented in the estuarine habitats around McKay Bay. Due to potential impacts to manatees during the construction phase, specific protection measures are to be implemented. These measures are also intended to protect sea turtles. A continuous Manatee and Sea Turtle Watch Program (MWP) is to be implemented for the bridge demolition and construction phase for the crossings of McKay Bay. The 19 components of the MWP are included in section 4.19 of the Environmental Assessment. The MWP will be included in the construction documents as a special provision.

C. The location of traffic signals and median openings was the subject of numerous public hearing inquiries. The location of these components is to be resolved during the design phase in accordance with FDOT Access Management Rules 14-96 and 14-97. The Comments and Coordination section of the Environmental Assessment documents the specific questions raised and the FDOT response. The design phase of the project shall include coordination with the Palmetto Beach Community Association and other impacted property owners prior to the finalization of traffic signal locations and median openings.

D. An initial contamination screening was performed and documented in a report dated October 1991 entitled "Hazardous Waste and Petroleum Contamination Site Assessment Report." This document identified 81 potential sites of hazardous materials and/or petroleum impacts. A Level II soil and groundwater investigation will be performed for recommended sites located along the preferred alternative.

6.2 Recommendations

As a result of the public hearing, environmental studies, and interagency coordination, the alternative recommended for Location/Design Concept Approval is the construction of a 6 lane divided roadway. Between S.R. 60 and Maritime Boulevard, a 6 lane divided facility will be constructed on a combination of the existing 20th Street corridor, and new alignment that provides connections between 20th Street and 22nd Street. (This new alignment avoids a potential historic district that straddles 22nd Street.) From Maritime Boulevard to U.S. 301, a 6 lane facility will be constructed that maximizes the use of the existing right-of-way while acquiring additional right-of-way in the area of least impacts. The typical sections for the recommended alternative are included in section 3 of the Environmental Assessment, and the recommended alignment is shown on conceptual plans that are included as appendix C of the environmental document. The recommended improvements include a diamond interchange at the U.S. 41 / Causeway Boulevard intersection, and a grade separation at the railroad crossing along U.S. 41 south of Causeway Boulevard.

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APPENDIX A

LEVEL OF SERVICE DEFINITIONS

Level of Service for Signalized Intersections

Level of service for signalized intersections is defined in terms of *delay*. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average stopped delay per vehicle for a 15-minute analysis period.

Delay may be measured in the field, or may be estimated using procedures presented later in this chapter. Delay is a complex measure, and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group or approach in question.

Level-of-service A describes operations with very low delay, i.e., less than 5.0 sec per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level-of-service B describes operations with delay in the range of 5.1 to 15.0 sec per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average daily.

Level-of-service C describes operations with delay in the range of 15.1 to 25.0 sec per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level-of-service D describes operations with delay in the range of 25.1 to 40.0 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level-of-service E describes operations with delay in the range of 40.1 to 60.0 sec per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high *v/c* ratios. Individual cycle failures are frequent occurrences.

Level-of-service F describes operations with delay in excess of 60.0 sec per vehicle. This is considered to be unacceptable to most drivers. This condition often occur with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios between 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: 1985 Highway Capacity Manual

APPENDIX B

CORRESPONDENCE

Exhibit 1 - U.S. Coast Guard

Exhibit 2 - Federal Emergency Management Agency

Exhibit 3 - Office of the Governor, State Clearinghouse

Exhibit 4 - Florida Department of Environmental Regulation

Exhibit 5 - Florida Department of Natural Resources

Exhibit 6 - Department of State, Division of Historical Resources

Exhibit 7 - Board of County Commissioners, Hillsborough County

Exhibit 8 - City of Tampa

Exhibit 9 - U.S. Fish and Wildlife Service

Exhibit 10 - Permit Coordination Report Agency Summary

Exhibit 11 - Florida Game and Fresh Water Fish Commission

Exhibit 12 - Florida Department of Environmental Protection

Exhibit 13 - U.S. Coast Guard

Exhibit 14 - Federal Highway Administration

Exhibit 15 - Department of State, Division of Historical Resources

Exhibit 16 - Federal Highway Administration

U.S. Department of Transportation
United States Coast Guard

Commander
Seventh Coast Guard District

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16591/2430
Serial: 0268
17 JAN 1991

Mr. David A. Twiddy, Jr. P.E.
Project Development & Environmental Engineer
Florida Department of Transportation
4950 West Kennedy Boulevard
Tampa, FL 33609

Dear Mr. Twiddy:

This responds to your advance notification package of December 21, 1990 about the proposed widening of the 22nd Street Causeway (SR 676) bridges across McKay Bay and Delaney Creek, Hillsborough County, Florida. (State Project No. 10250-1525).

A Title 23 determination needs to be made by the Federal Highway Administration at the SR 676 bridge across Delaney Creek as soon as possible so that we can address our involvement at the bridge site. The tributary canals of Delaney Creek are non-tidal, therefore, are not considered navigable waters of the United States for bridge permitting purposes.

A Coast Guard bridge permit will be required for the proposed bridge widening project across McKay Bay. You should plan on navigational clearances no less than those provided by the existing fixed bridge across McKay Bay.

To determine if the reasonable needs of navigation might require greater clearances, we recommend you consult with waterway users early in your design process. This needs analysis should reduce the likelihood of your bridge permit being delayed for navigational considerations.

The Coast Guard decision on navigational adequacy is necessarily part of the permit approval process. We will consider any information you provide, the comments responding to the public notice we issue after receiving your application, and all other available information in making this decision.

Since there are federal funds involved in the proposed bridge replacement/modification project, we wish to be designated a cooperating agency for processing of the environmental documentation unlesss the Federal Highway Administration determines the project qualifies for a Categorical Exclusion.

Enclosed for your use in applying for a Coast Guard bridge permit is a Bridge Permit Application Guide and an Environmental Assessment Outline.

EXHIBIT 1

16591/2430
Serial: 0268
17 JAN 1991

If you should have any questions concerning this matter, please contact Mr. Brodie Rich at (305)536-4103.

Sincerely,

J. W. WINSLOW
Chief, Bridge Section
Aids to Navigation Branch
Seventh Coast Guard District
By direction of the District Commander

Encl: (1) Bridge Permit Application Guide
(2) Environmental Assessment Outline

Copy: FDOT Tallahassee, Mr. J. C. Kraft, Manager, Env. Office

Federal Emergency Management Agency
Region IV
1371 Peachtree Street, NE, Suite 700
Atlanta, GA 30309

R4-NT

March 12, 1991

David A. Twiddy, Jr., PE
Project Development & Environmental Engineer
Florida Department of Transportation
4950 W. Kennedy Boulevard
Suite 500
Tampa, Florida 33609

RE: 22ND STREET CAUSEWAY/CAUSEWAY BOULEVARD IMPROVEMENTS
Work Program Item No. 7113839
State Project No. 10250-1525
Federal Aid Project No. M-1802-(1)
Tampa/Hillsborough County

Dear Mr. Twiddy;

This office is in receipt of the "Advance Notification" package prepared by your department and distributed by the Florida State Clearinghouse for the 22nd Street Causeway/Causeway Boulevard improvement program from Tampa, across McKay Bay, and thence eastward to US 301.

As appropriately noted in your report, floodplain areas will be crossed at McKay Bay, and along Delaney Creek and one of its northbank tributaries. These floodplain areas are identified on the following Flood Insurance Rate Maps (FIRMs): City of Tampa - 120114 0034C (9/30/82); Hillsborough County - 120112 0367E and 120112 0386E (both 8/15/89). The floodplain areas along McKay Bay were identified on 6/18/80, and included in the Tampa Flood Insurance Study of 9/30/82. As also noted, a regulatory floodway is in effect on Delaney Creek, per the revised Hillsborough County Flood Insurance Study of August 15, 1989, as illustrated on Flood Boundary & Floodway Map (FBFM) 120112 0386.

Perhaps you are already aware of the requirements of the National Flood Insurance Program (NFIP) which the State of Florida, as a self-insured entity, has agreed to enforce with regard to state projects. When a floodway has been identified, Section 60.3(d)(3) of the NFIP requires a participating community, including the State of Florida, to:

> "Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the regulatory floodway that would result in any increase in flood levels within the community during the occurrence of the base flood discharge."

Project Development District 7 MAR 19 1991

EXHIBIT 2

Florida DOT will need to design the Delaney Creek bridge to conform to this "no-rise" standard, and will need to develop documentation to this effect certified by a registered engineer. However a "no-rise" certification is not required for the McKay Bay bridge/causeway section of the project.

For further information, we have enclosed a copy of the "Procedures for Coordinating Highway Encroachments on Floodplains with FEMA." Moreover, should questions arise during the design/development phase of this project, please feel free to contact our NFIP specialist Bob McBeth (404-853-4408).

Thank you for the opportunity of commenting on this project at such an early stage in its development.

Sincerely,

for Robert E. McBeth

C. Richard Mayson, Chief
Natural Hazards Branch, NTHD

Enclosure

Project Development District ...

File 7113839.20

STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE, FLORIDA 32399-0001

LAWTON CHILES
GOVERNOR

March 4, 1991

Mr. David A. Twiddy, Jr., P.E.
District VII PD&E Administrator
Department of Transportation
4950 West Kennedy Boulevard
Suite 500
Tampa, Florida 33609

RE: State Project 10250-1525 - Work Program Item 7113839 - Advance Notification of 22nd Street Causeway/Causeway Boulevard PD&E Study in Hillsborough County, Florida

SAI: FL9101070882C

Dear Mr. Twiddy:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 83-150, section 216.212, Florida Statutes, the Coastal Zone Management Act Reauthorization Amendments of 1990 and the National Environmental Policy Act, has coordinated a review of the above referenced project.

Pursuant to Presidential Executive Order 12372, the project will be in accord with State plans, programs, procedures and objectives; and approved for submission to the federal funding agency when consideration is given to the enclosed agency comments.

The Department of Environmental Regulation (DER) indicates that permits will be required prior to start of construction. Sound development practices should be maintained during all phases of construction and early coordination with DER's district office in the project area may help to eliminate problems in the permitting process.

The Department of State (DOS) notes that a cultural resource survey will be conducted to identify significant archaeological and/or historic sites. The proposed project will have no effect on this site, if the Department of Transportation avoids or mitigates the impact on sites identified in the survey.

EXHIBIT 3

Based on the comments from our reviewing agencies, funding for the proposed action is consistent with the Florida Coastal Management Program (FCMP) advanced notification stage. Subsequent environmental documents will be reviewed to determine continued consistency with the FCMP as provided for in 15 CFR 930.95. These documents should provide thorough information regarding the location and extent of wetlands dredging and filling, borrow sources, dredging or filling associated with bridge construction and stormwater management. Continued concurrence with this project will be based, in part, on adequate resolution of issues identified during earlier reviews. Any environmental assessments prepared for this project should be submitted to the Florida State Clearinghouse for interagency review.

Pursuant to section 215.195, Florida Statutes, State agencies are required, upon federal grant approval, to deposit the amount of reimbursement of allocable statewide overhead into the State-Federal Relations Trust Fund. The deposits should be placed in SAMAS account code 31 20 269001 31100000 00 0015 00 00. If you have any questions regarding this matter, please contact your OPB budget analyst or Jean Whitten at (904)487-2814.

Please enter the State Application Identifier (SAI) Number, shown above, in box 3a of Standard Form 424 and append a copy of this letter and any enclosures to your application. These actions will assure the federal agency of your compliance with Florida's review requirements, help ensure notification of federal agency action under the Federal Assistance Award Data System (FAADS) and reduce the chance of unnecessary delays in processing your application by the federal agency.

Sincerely,

Estus Whitfield

Estus D. Whitfield, Deputy Director
State Clearinghouse

EDW/rt

Enclosure(s)

cc: Department of Environmental Regulation
Department of State
J. C. Kraft - Department of Transportation

Florida Department of Environmental Regulation
Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347
Lawton Chiles, Governor
Carol M. Browner, Secretary

February 22, 1991

RECEIVED
FEB 26 1991
STATE CLEARINGHOUSE

Director
State Clearinghouse
Office of Planning and Budgeting
Executive Office of the Governor
The Capitol
Tallahassee, FL 32399-0001

RE: SAI #FL9101070882C
22nd Street Causeway/Causeway Blvd. PD & E Study

Dear Sir:

The proposal to upgrade S.R. 60 to U.S. 301 involving potential additional lanes and limited access options has been reviewed by this office. Areas of potential impact to State jurisdictional wetlands include bridge reconstruction, fill to accommodate lanage and some reference to regulated floodways. State water quality certification will be required for this activity, and wetland resource permits are required under Chapter 403, F.S. Permitting considerations are as follows (1) the project involves impacts to shallow water productive marine habitat. Impacts to these areas must be minimized by the design of the project, (2) impacts to endangered or threatened species or their habitats are of particular concern due to the likelihood of the occurrence of the West Indian Manatee in the McKay Bay region and the utilization of the shallow water habitat by several wading birds on the State and Federal Threatened or Endangered lists, (3) impedance to navigation in the open water areas must be addressed. Further study is necessary to quantify the potential impacts to water quality and marine productivity of the area.

Thank you for the opportunity to comment on this proposal. Should you have any additional questions, please contact George Craciun at (813)623-5561 Ext. 332.

Sincerely,

Bob Stetler

Bob Stetler
Environmental Administrator
Water Management

EXHIBIT 4

BS/msb

FLORIDA DEPARTMENT OF STATE
Jim Smith
Secretary of State
DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

January 25, 1991

Mr. Estus Whitfield, Deputy Director
State Planning and Development
Clearinghouse
Office of Planning and Budgeting
The Capitol
Tallahassee, Florida 32399-0001

In Reply Refer To:
Laura A. Kammerer
Historic Sites
Specialist
(904) 487-2333
Project File No. 910188

RE: Cultural Resource Assessment Request
SAI# FL9101070882C
Florida Department of Transportation
SPN: 10250-1525
22nd Street Causeway/Causeway Blvd. PD&E Study
Hillsborough County, Florida

Dear Mr. Whitfield:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the above referenced project(s) for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

We have reviewed the Advanced Notification of Florida Department of Transportation (FDOT) project referenced above. We note that the project will have a cultural resource survey performed. Therefore, conditioned upon the FDOT undertaking a cultural resource survey, and appropriately avoiding or mitigating project impact to any identified significant archaeological or historic sites, the proposed project will have no effect on any sites listed, or eligible for listing in the National Register. If these conditions are met the project will also be consistent with the historic preservation aspects of Florida's coastal zone program.

EXHIBIT 6

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's archaeological and historic resources is appreciated.

Sincerely,

George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/lak
xc: C. Leroy Irwin

BOARD OF COUNTY COMMISSIONERS
HILLSBOROUGH COUNTY, FLORIDA

Office of the County Administrator

Frederick B. Karl
County Administrator
(Interim Appointment)

P.O. Box 1110
Tampa, Florida 33601

January 18, 1991

Mr. David A. Twiddy, Jr., P.E.
Project Development and Environmental Engineer
Florida Department of Transportation
4950 West Kennedy Boulevard, Suite 500
Tampa, Florida 33609

RE: Advance Notification - Work Program Item No. 7113839
State Project No. 10250-1525
Federal-Aid Project No. M-1802-(1)
22nd Street Causeway/Causeway Boulevard PD&E Study
Hillsborough County, Florida
Administrative Referral No. 16841

Dear Mr. Twiddy:

We are in receipt of the subject information sent to Phyllis Busansky, the Chairperson of the Hillsborough County Board of County Commissioners. Stormwater Design Staff advise that the portion of 22nd Street Causeway located in unincorporated Hillsborough County crosses significant stormwater conveyance systems.

Of particular concern is Delaney Creek and the Delaney Creek pop off canal. While these areas have a history of flooding, the County, along with the Southwest Florida Water Management District (SWFWMD), has completed a study that identifies problems within the system and offers solutions to alleviate the problems. Staff have also begun a preliminary design phase and initial environmental testing of the downstream reaches in Delaney Creek. This information should be useful to you when this project reaches a design phase.

Please contact Walid Hatoum, P.E., Manager of the Stormwater Design Section, at 272-5912, Ext. 3602, for information regarding

EXHIBIT 7

the studies. It would also be greatly appreciated if you would coordinate your efforts with Mr. Hatoum to avoid potential conflicts with County stormwater projects.

Sincerely,

Michael B. McCarthy, P.E.
Director, Engineering Services Department

MBM:FD:gms

cc: Commissioner Phyllis Busansky
Frederick B. Karl, County Administrator
James M. Bourey, Assistant County Administrator
Walid M. Hatoum, P.E., Manager, Stormwater Design Section

CITY OF TAMPA

Sandra W. Freedman, Mayor

Barrio Latino Commission

January 11, 1991

Mr. David Twiddy, Jr.
Project Development and Environmental Engineer
Florida Department of Transportation
4950 West Kennedy Boulevard
Suite 500
Tampa, Florida 33609

Dear Mr. Twiddy:

A copy of the Advance Notification for the 22nd Street Causeway/Causeway Boulevard PD & E Study has been forwarded to this office. To assist you in evaluating the need for historic resources survey needs in your project area, I am providing a copy of the Palmetto Beach section from the Historic Resources Survey conducted by this office in 1987. To the best of my knowledge, this is the most up to date information available regarding the historic resources in your project area. Please note that the sites considered eligible for the National Register of Historic Places are listed under the heading "Recommendations".

I look forward to further discussion of the potential impact of this project.

Sincerely,

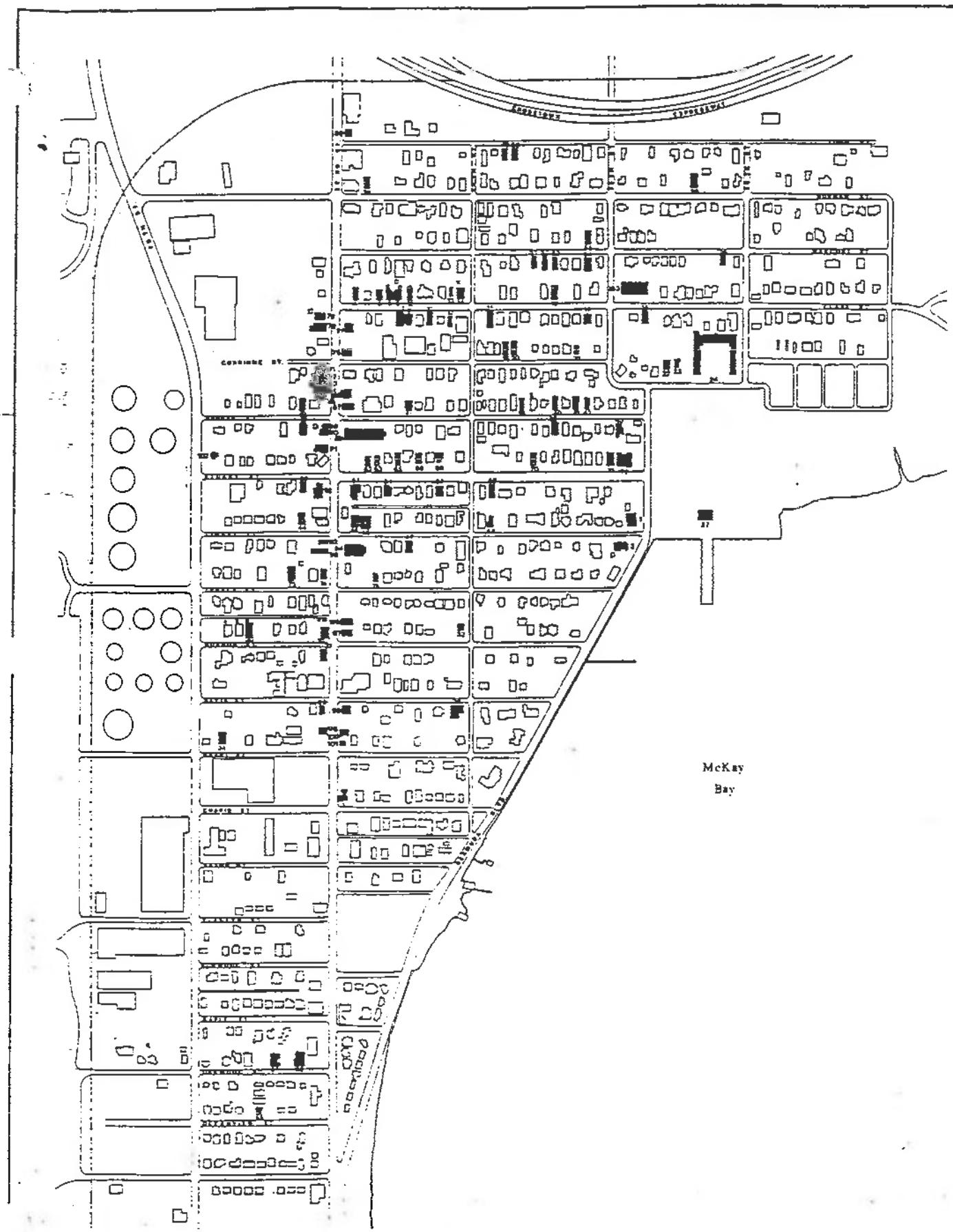
David P. Rigney
Research and Construction Director

enclosure

cc J. C. Kraft, Chief, Environmental Office

/apb

EXHIBIT 8



Tampa/Hillsborough County
Preservation Board, Dept. of State

Coastal Management Grant Program of the
Florida Department of Environmental Regulation

PALMETTO BEACH

Tampa, Florida

Florida Master Site File Property

National Register of Historic Places Property

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. BOX 2676
VERO BEACH, FLORIDA 32961-2676

May 28, 1993

Richard E. Adair
District VII Environmental Administrator
Florida Department of Transportation
11201 N. Malcolm Mckinley Drive, MS 7-500
Tampa, FL 33612-6403

FWS Log No: 4-1-93-318
Dated: April 26, 1993
Applicant: Florida DOT
County: Hillsborough

Dear Mr. Adair:

Reference is made to your letter for Project No. M-1802(1), State Project Number 15250-1525, dated April 26, 1993 to multilane 22nd Street/Causeway Boulevard (SR676), from the Crosstown Expressway to U.S. 301, Hillsborough County. The proposed project includes the replacement of the bridge over McKay Bay. This report is submitted in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)

The Florida Department of Transportation (FDOT) has stated that 19 conditions listed on your attached Special Provisions for Protection of Manatees will be included in any contract issued for the work. Therefore, the FDOT states that the project will have "no effect" on the West Indian manatee. Hillsborough County has a low level of watercraft related manatee mortality. Based on the information, the Service finds the bridge replacement is not likely to adversely affect the West Indian manatee.

In addition, based on our general knowledge of the area, your field surveys of federally-listed threatened or endangered species, the urbanized nature of the road corridor, combined with a check of our GIS database indicate that the proposed project is not likely to adversely affect federally-listed threatened or endangered species.

EXHIBIT 9

Although this does not constitute a Biological Opinion described under Section 7 of the Endangered Species Act, it does fulfill the requirements of the Act, and no further action is required. If modifications are made in the project or if additional information involving potential impacts on listed species becomes available, please notify our office (407-562-3909).

The Service will withhold our comments at this time under the Fish and Wildlife Coordination Act concerning the subject project. When more detailed information is prepared for Department of the Army Corps of Engineer permit applications, our comments will be provided.

Sincerely yours,

Joseph D. Carroll
Acting Field Supervisor

cc:
FWE, Jacksonville, FL
DNR, Tallahassee, FL

9.0 COORDINATION

Preliminary contact in the form of written and verbal correspondence was started early in the process. Agencies with jurisdiction were sent an informational package that included a description of the proposed improvements, the limits of the project, and aerial photography that covered the project limits. The following is a summary of the correspondence in Appendix "A".

Hillsborough County - Contact included meetings with Hillsborough County Stormwater Design Section staff to determine the design requirements for The three Delaney Creek basins. It was determined at a joint meeting with the Southwest Florida Water Management District that improvements to Delaney Creek would be completed before the design and construction of the 22nd Street/ Causeway Boulevard project was completed. It was agreed that there would be no special design requirements in the Delaney Creek basin provided the creek improvements had completed.

City of Tampa - City staff was contacted in reference to the Palmetto Beach Drainage Study. The study describes a nuisance flooding problem at the intersections of 22nd Street and several cross streets in the Palmetto Beach area. 22nd Street has been raised over the years by re-surfacing. Since the cross roads in the area were built originally without a storm water collection system, the difference in elevations causes ponding in the returns. City staff suggested that the improvements to 22nd Street include a side street stormwater collection system.

Florida Department of Transportation - FDOT staff confirmed existing drainage problems along the corridor.

Florida Department of Natural Resources - It was determined through written and verbal communication that FDNR within the area of this projects limits has delegated their jurisdiction to the Port Authority.

U.S. Fish & Wildlife Service - No response has been received to this date.

Florida Game & Fresh Water Fish Commission - Written response from the FG&FWFC included a list of potential endangered, threatened and special concern species. They also expressed a preference for wetland enhancement as compared to wetland creation for wetland mitigation. Specific concerns involving the Delaney Creek crossings were also discussed.

Florida Department of Environmental Regulation - Through written and verbal correspondence it was determined that FDER will not claim areas of Brazilian Peppers as jurisdictional. FDER would also prefer expansion along the causeway to be completed to the southwest to minimize encroachments into the existing stands of mangrove. Mitigation methods were also discussed.

U.S. Corps of Engineers - The U.S. Corps of Engineers will have jurisdiction over all wetlands along the project. Any impacts to McKay Bay will require a permit from the Corps.

U.S. Coast Guard - Improvements to the McKay Bay Bridge will require a permit if the configuration of the bridge is changed. The widening and slight lowering of the bridge during final design may require a permit.

National Marine Fisheries Service - No response has been received to this date.

Port Authority - Please refer to meeting minutes in the revised Preliminary Engineering Report.

FLORIDA GAME AND FRESH WATER FISH COMMISSION

110 43rd Avenue, S. W.
Vero Beach, Florida 32968

January 15, 1992

Mr. Mark A. Isaak, P.E.
Project Drainage Engineer
Post, Buckley, Schuh & Jernigan, Inc.
5300 W. Cypress Street, Suite 300
Tampa, Florida 33607

Re: Request for review of species presence, 22nd Street Causeway, Hillsborough County

Dear Mr. Isaak:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission (GFC) has reviewed your submission of January 6, 1992. Our biologist visited the proposed project areas on January 9, 1991, and offers the following comments.

The following endangered (E), threatened (T), and species of special concern (SSC) animal species are present, or have the potential to be present in the proposed project area: West Indian manatee (E), Sherman's fox squirrel (SSC), wood stork (E), Arctic peregrine falcon (E), piping plover (T), southeastern snowy plover (T), least tern (T), roseate tern (T), bald eagle (T), Atlantic loggerhead sea turtle (T), eastern indigo snake (T), short-tailed snake (T), American oystercatcher (SSC), reddish egret (SSC), snowy egret (SSC), tricolored heron (SSC), little blue heron (SSC), roseate spoonbill (SSC), brown pelican (SSC), gopher tortoise (SSC), American alligator (SSC), and common snook (SSC). Natural resources in this project area identified in the Tampa Bay Environmental Atlas include the documented colonial nesting bird area #21 on MacKay Bay.

Significant areas of known or potential listed species habitat associated with the project include the portion which begins at Bermuda Boulevard, sheet 5/19, to the western edge of the commercial properties on sheet 10/19 for estuarine wetland and shore species; the portion from 54th Street, sheet 12/19, to the east side of Delaney Creek on sheet 13/19 for upland and creek species; the Delaney Creek area on sheet 15/19; and some of the larger undeveloped forested parcels on sheets 13/19 to 17/19.

We recommend that roadway impacts to native habitats be minimized wherever possible, and therefore recommend alignments with the least impact to these

EXHIBIT 11

resources. Any proposed wetland mitigation should include enhancing existing wetlands in preference to creation of new wetlands from native uplands. Any wetland mitigation, enhancement, or creation should at least be at a 1:1 ratio, and of the same type of natural wetland that the impacted site possessed prior to exotic invasion and man-made alterations. One or two large mitigation sites are preferable to numerous, isolated, small wetland areas that are likely to be impacted by future urban expansion. Any created mitigation areas should be protected from future impacts by conservation easement, deed dedication to a management entity, or a similar conservation mechanism.

Consideration for wildlife undercrossings/conveyances should be made in the two Delaney Creek crossing areas. The wildlife conveyances should be designed to provide a 4 to 5-foot ground height clearance, with an open width at least as wide as the road grade from toe of slope to toe of slope, or the limits of the wetland jurisdiction plus Southwest Florida Water Management District (SWFWMD) floodplain buffers. This could be achieved with a small bridge, box culverts, or properly sized oval culverts. The crossing of the creek wetland should be fenced with 5-foot minimum height chain link so as to funnel wildlife into the conveyance. These designs should be included in the permit plans for review by the CFC and the SWFWMD.

If you have any questions with regard to these projects please contact Jim Beaver at SUNCOM 721-7570, (813) 639-3515, at our Punta Gorda office.

Sincerely,

Brian Barnett

Brian S. Barnett
South Florida Section Leader

BSB/JWB/rs
ENV 2-1-1/2

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619
813-744-6100

Virginia B. Wetherell
Secretary

October 11, 1993

TOD MECKLENBORG
FL DEPT. OF TRANSPORTATION
PROJECT DEVELOPMENT & ENVIRONMENTAL
MS 7-500
11201 N. MALCOM MCKINLEY DR.
TAMPA FL 33612-6403

RE: Work Program No. 7113839
State Project No. 10250-1525
Federal Aid No. M-1802(1)
22nd St. Causeway/Causeway Blvd.
S.R. 60 to U.S. 301
Hillsborough County

DER TAMPA OFFICE offers the following comments:

Where roadway improvements are proposed in or near Chapter 403/373 jurisdictional waters, a Binding Wetland Jurisdictional Determination is highly recommended as per the guidelines in 17-312, Florida Administrative Code.

Every efforts should be made to minimize wetland impacts including roadside conveyance ditches, with particular emphasis on avoidance oriented corridor alignments, and the minimization of fill placement via pile bridging and steeper slopes adjacent to wetland systems.

There is a need for further minimization of impacts to the east (i.e. McKay Bay) side of the Causeway.

Measures for reducing these (fill) impacts should include:

a. On Approachways:

1. Reduce median width of 19.5' by at least 8 feet.
2. Eliminate both 3' grass strips
3. Realign the roadway to the west utilizing more of your existing R/W.

EXHIBIT 12

U.S. Department of Transportation
United States Coast Guard

Commander
Seventh Coast Guard District

Brickell Plaza Federal Bldg.
909 S.E. First Avenue
Miami, FL 33131
Staff Symbol: (oan)
Ph: (305) 536-5621

16591/2430
Serial: 0433

12 MAY 1994

Mr. Michael J. Coleman, P.E.
Florida Department of Transportation
PD & E Department, MS 7-500
11201 N. McKinley Drive
Tampa, FL 33612-6403

Dear Mr. Coleman:

We have reviewed the Environmental Assessment with Finding of No Significant Impact which includes a proposed widening of the 22nd Street Causeway fixed bridges across McKay Bay, mile 0.1, in Tampa, Hillsborough County, Florida.

The proposed reduction in vertical navigational clearance of approximately 6 inches is explained in your EA/FONSI. We will determine whether the proposed bridge clearances are adequate during the permitting process.

Please call Mr. Ian MacCartney at (305) 536-4103, if you have any questions.

Sincerely,

J. W. WINSLOW
Chief, Bridge Section
Aids to Navigation and
Waterways Management Branch
Seventh Coast Guard District
By direction of the District Commander

EXHIBIT 13

DS
FILE

GABOR, FYR & F

To: Mr. M. Colman, FDOT, Dist. 7

7113939.17

RECEIVED PD&E
93 SEP 10 AM 10:27 Florida Division Office

U.S. Department of Transportation
Federal Highway Administration

227 N. Bronough St.
Room 2015
Tallahassee, Florida 32301

September 8, 1993

IN REPLY REFER TO: HDA-FL

Mr. George W. Percy
State Historic Preservation Officer
Florida Department of State
The Capitol, MS-8
Tallahassee, Florida 32301

Dear Mr. Percy:

Subject: Florida - Project No. M-1802(1)
State Project No. 10250-1525
Section 106 Consultation Case Report
22nd Street/Causeway Boulevard, SR-60 to US-301
Hillsborough County

The Federal Highway Administration, in cooperation with the Florida Department of Transportation (FDOT), is conducting an environmental study for the subject Project. The proposed improvement provides for the widening of 22nd Street/22nd Street Causeway Boulevard (SR-676) from SR-60 to US-301.

A Cultural Resource Assessment has recently been submitted to you, along with the request for your opinion on the eligibility of four historic buildings that were found to possess the qualities of historical significance as established by the National Register of Historic Places (NHRP). The four buildings are the Salvador Rodriguez Cigar Factory (8HI605); the La Corina Cigar Factory (8HI965); the Jose Escalante House (8HI2285); and the Albert Kreiss House. In addition, a proposed historic district is located along 22nd Street between Marconi and Thrace Street.

A section 106 Consultation Case Report has also been prepared for this Project and is enclosed for your review. The preferred alternative was selected to avoid impacts to the four individually eligible historic structures and the proposed historic district. Based upon the analysis performed in the Case Report, it is the recommendation of this office that the proposed Project will not have an effect on the historic structures and proposed historic district.

-more-

EXHIBIT 14

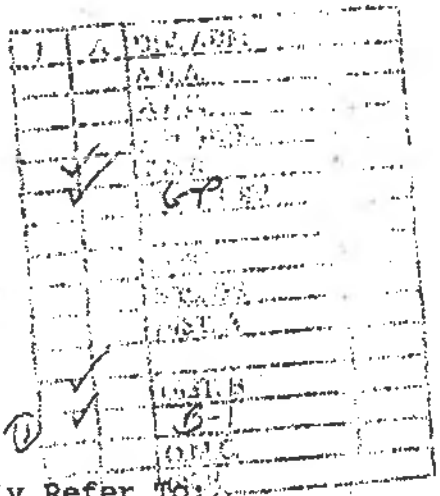
Pursuant to 36 CFR Part 800, we request your opinion and concurrence that this project will have no effect on any historic sites which are eligible for inclusion in the NRHP.

Sincerely yours,

J.R. Skinner

J. R. Skinner
Division Administrator

Enclosure



RECEIVED FHWA
1993 OCT 20 PM 12:40
FLORIDA DIVISION

FLORIDA DEPARTMENT OF STATE
Jim Smith
Secretary of State
DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

October 13, 1993

Mr. J. R. Skinner
Division of Administration
Federal Highways Administration
U.S. Department of Transportation
227 N. Bronough Street, Room 2015
Tallahassee, Florida 32301

In Reply Refer To:
Denise M. Breit
Historic Sites
Specialist
(904) 487-2333
Project File No. 932903

RE: *Section 106 Consultation Case Report and Supporting Documentation for the 22nd Street Causeway/Causeway Boulevard (S.R. 676) PD&E Project Corridor (from U.S. 301 to S.R. 60), Hillsborough County, Florida.* By Post, Buckley, Schuh & Jernigan, Inc., August 1993.
SPN: 10250-1525
WPN: 7113839; FPN: M-1802(1)

Dear Mr. Skinner:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), as well as the provisions contained in Chapter 267.061, Florida Statutes, we have reviewed the referenced Case Report.

We note that an at-grade six-lane divided roadway on 20th Street has been selected to avoid impacts to the Palmetto Beach/22nd Street Historic District and to potentially individually eligible historic structures 8HI965 (the La Corina Cigar Factory), 8HI605 (the Salvador Rodriguez Cigar Factory), 8HI2285 (the Jose Escalante House), and 8HI2294 (the Albert Kreiss House). This office concurs that the project as presently proposed with this alternative will have no effect on significant historic properties.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's archaeological and historic resources is appreciated.

Sincerely,

Laura R. Kammerer Jr.

George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/BdD
xc: C. LeRoy Irwin, FDOT

EXHIBIT 15

111559.17

U.S. Department of Transportation
Federal Highway Administration

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Florida Division Office
227 N. Bronough St.
Room 2015
Tallahassee, Florida 32301

November 5, 1993

IN REPLY REFER TO: HPO-FL

Mr. William H. McDaniel, Jr.
District Secretary
Florida Department of Transportation
11201 N. McKinley Drive
Tampa, Florida 33612

Attention: Mr. Michael Coleman

Dear Mr. McDaniel:

Subject: Florida FAP No. M-1802(1)
State Project No. 10250-1525
Section 106 Consultation Case Report for the
22nd Street Causeway/Causeway Boulevard
Widening Project
Hillsborough County

Please refer to Mr. D. J. Skelton August 16, 1993, letter transmitting a Section 106 Consultation Case Report and requesting a determination of no effect on the four historic structures that exist within the limits of the subject project. The four structures are the Salvador Rodriguez Cigar Factory (8HI605); the La Corina Cigar Fctory (8HI965); the Hose Escalante House (8HI2285); and the Albert Kreiss House (8HI2294).

After Consultation with the State Historical Preservation Officer (SHPO), documented in the enclosed October 13, 1993, letter, we concur with SHPO's determination that this project will have no effect on any historic properties, and it may proceed without SHPO's further involvement.

A copy of this letter should be included in the environmental document for this project.

Sincerely yours,

Melissa A. Anderson

for J. R. Skinner
Division Administrator

Enclosure

EXHIBIT 16

APPENDIX C

CONCEPTUAL PLANS

THE MEDIAN OPENING LOCATIONS FOR THIS PROJECT WILL BE DETERMINED DURING THE DESIGN PHASE OF THIS PROJECT.

LEGEND

- POTENTIAL DISTRICT CONTRIBUTING STRUCTURE
- INDIVIDUALLY ELIGIBLE HISTORIC STRUCTURE
- HISTORIC BOUNDARIES

FLORIDA DEPARTMENT OF TRANSPORTATION

FAP No. M-1802-(1)

WPA No. 7113839

STATE PROJECT No. 10250-1525

22nd STREET CAUSEWAY / CAUSEWAY BLVD (SR. 676) FROM U.S. 301 TO SR. 60

PROJECT DEVELOPMENT & ENVIRONMENTAL STUDY

CORRIDOR ANALYSIS / CONCEPTUAL PLANS

PHOTO DATE: 10/29/90

ORIGINAL
REVISIONS
1
2
3
4
5

DRAWN
DESIGNED
CHECKED
QC

SHEET 1 OF 16

THE MEDIAN OPENING LOCATIONS FOR THIS PROJECT WILL BE DETERMINED DURING THE DESIGN PHASE OF THIS PROJECT.

LEGEND

- POTENTIAL DISTRICT CONTRIBUTING STRUCTURE
- INDIVIDUALLY ELIGIBLE HISTORIC STRUCTURE
- //// HISTORIC BOUNDARIES

FLORIDA DEPARTMENT OF TRANSPORTATION
FAP No. M-1802-(1)
WPA No. 7113839
STATE PROJECT No. 10250-1525

22nd STREET CAUSEWAY / CAUSEWAY BLVD (SR. 676)
FROM U.S. 301 TO SR. 60
PROJECT DEVELOPMENT & ENVIRONMENTAL STUDY

CORRIDOR ANALYSIS / CONCEPTUAL PLANS
PHOTO DATE: 10/29/90

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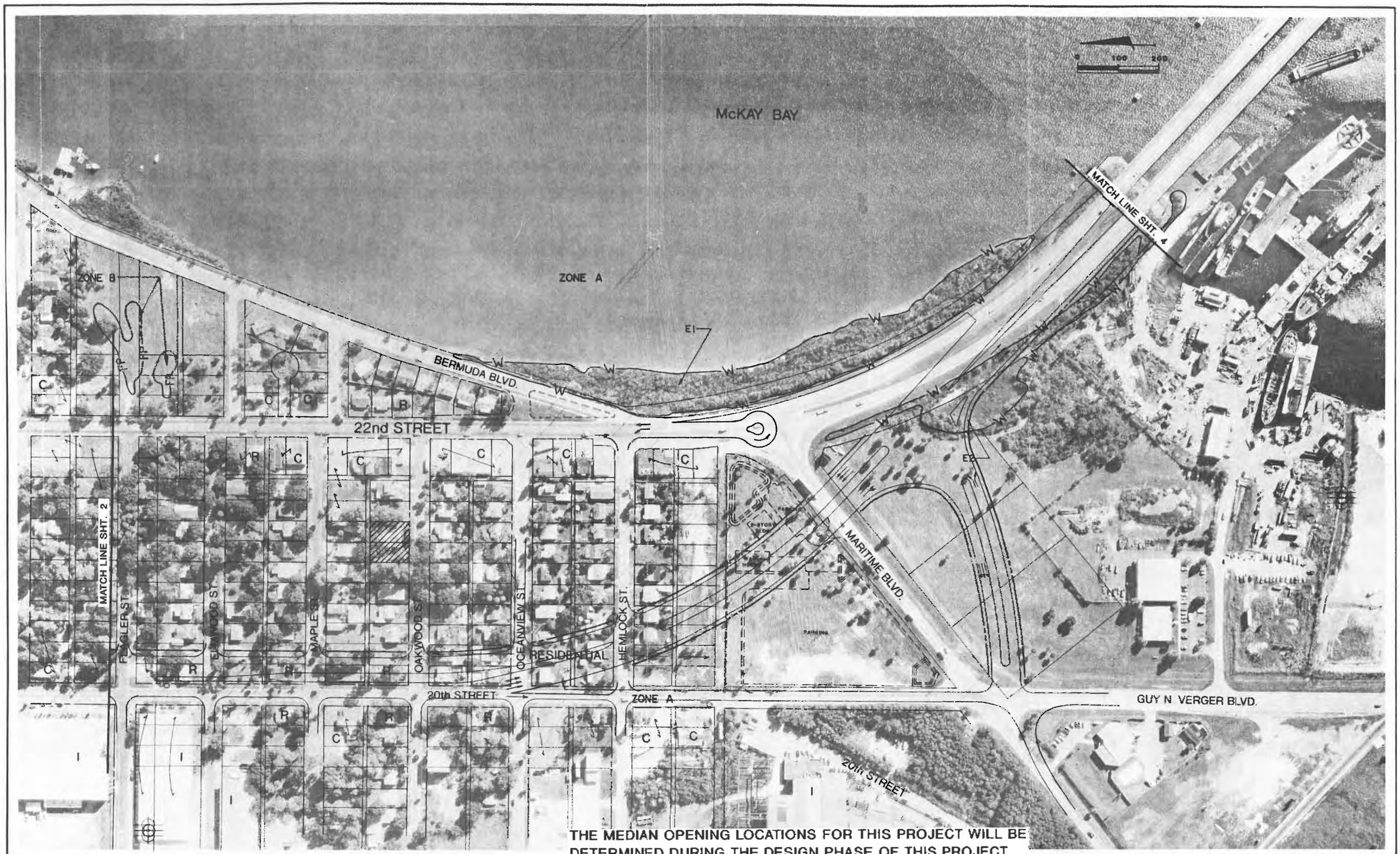

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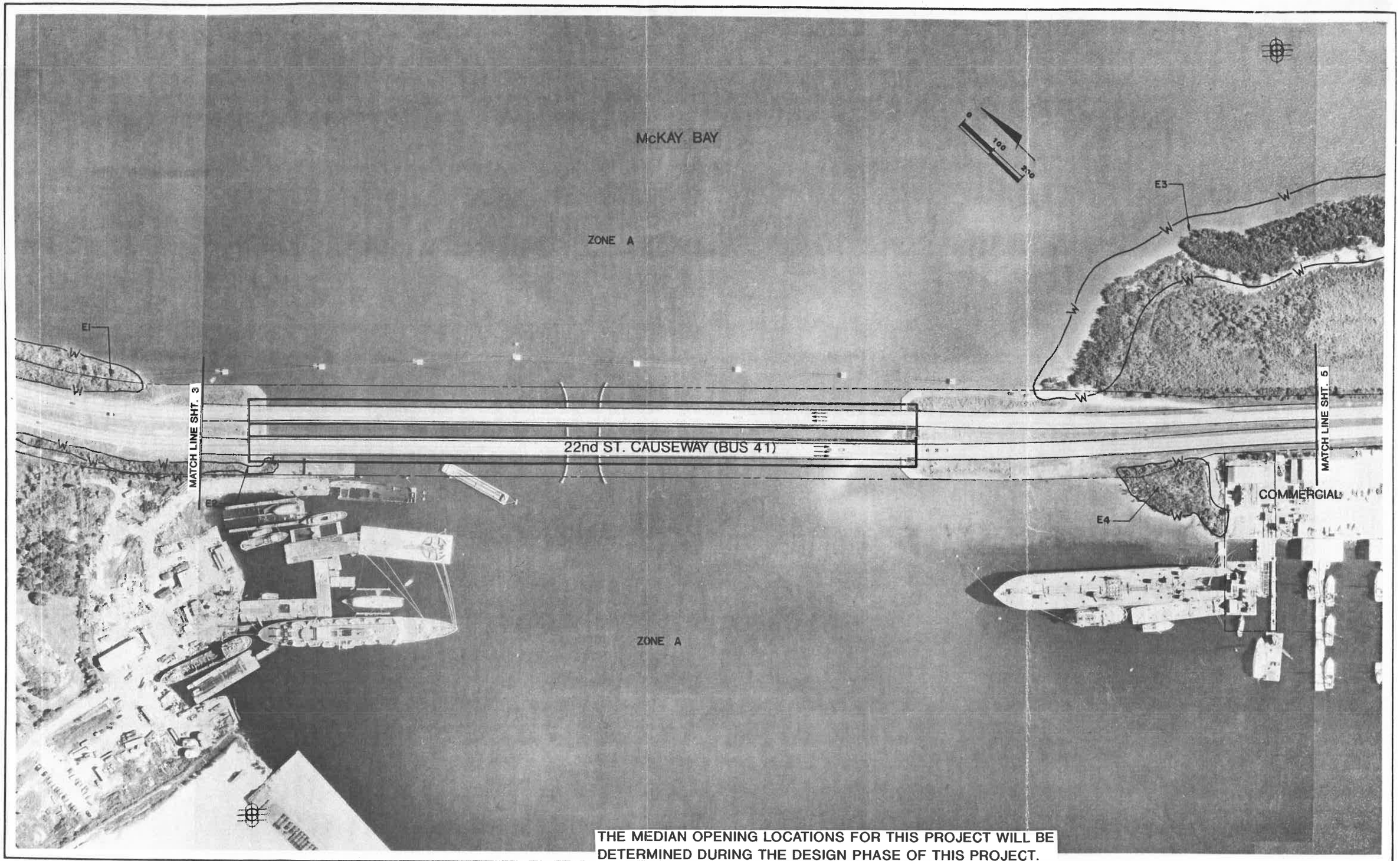
FLORIDA DEPARTMENT OF TRANSPORTATION FAP No. M-1802-(1) WPA No. 7113839 STATE PROJECT No. 10250-1525	22nd STREET CAUSEWAY / CAUSEWAY BLVD (SR. 676) FROM U.S. 301 TO SR. 60 PROJECT DEVELOPMENT & ENVIRONMENTAL STUDY	CORRIDOR ANALYSIS / CONCEPTUAL PLANS PHOTO DATE: 10/29/90	ORIGINAL REVISIONS 1 2 3 4 5		DRAWN DESIGNED CHECKED QC SHEET 3 OF 16



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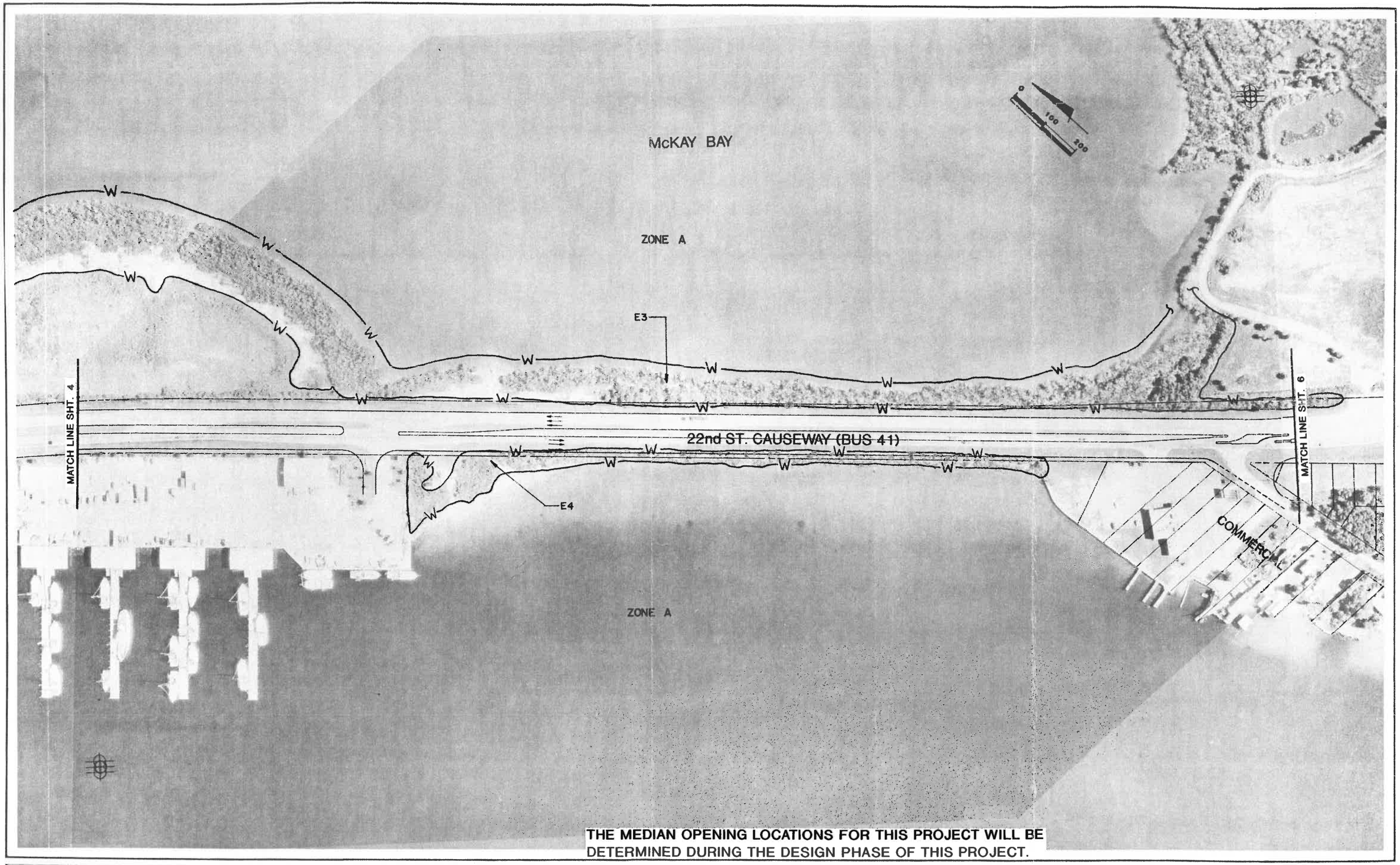

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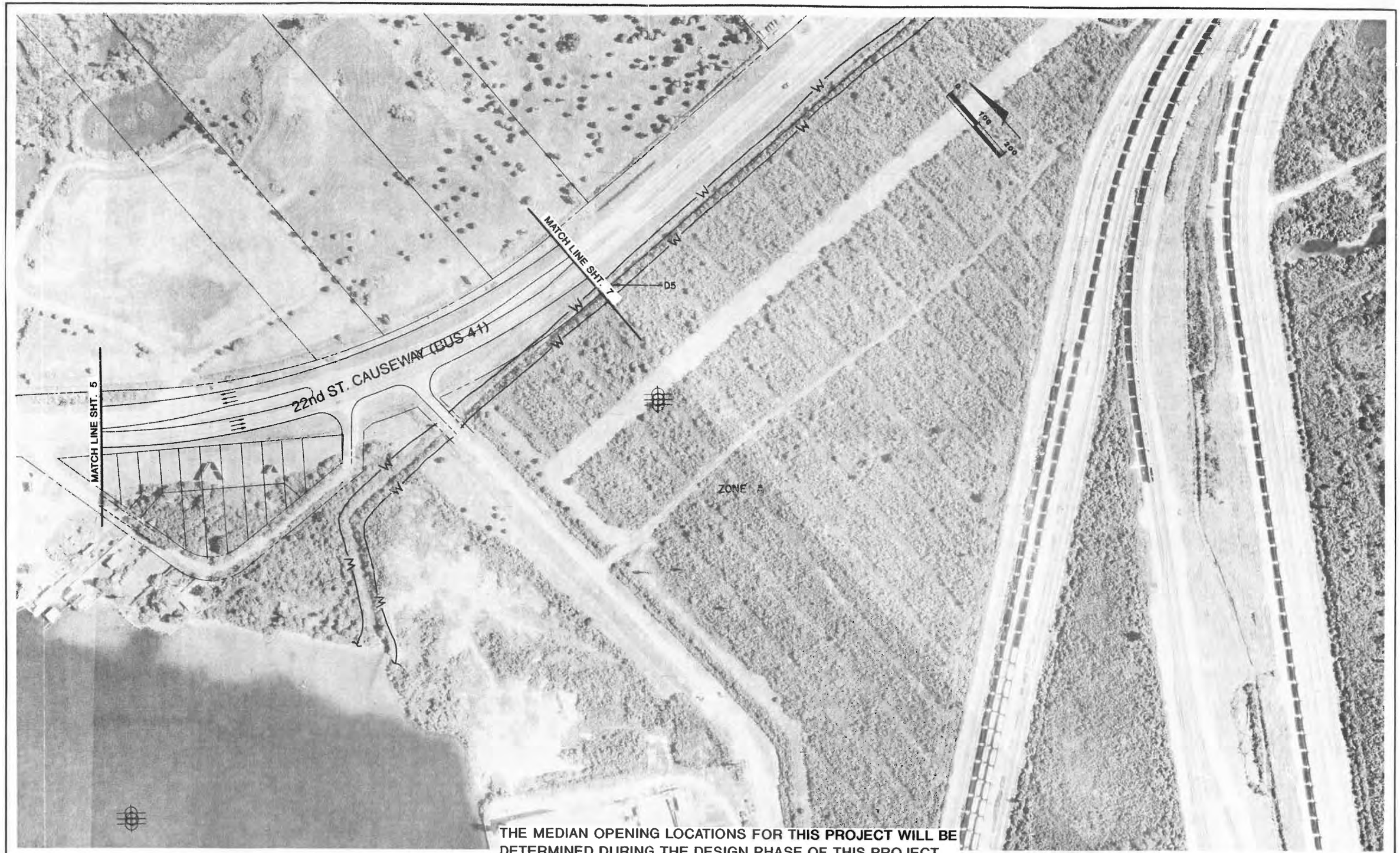

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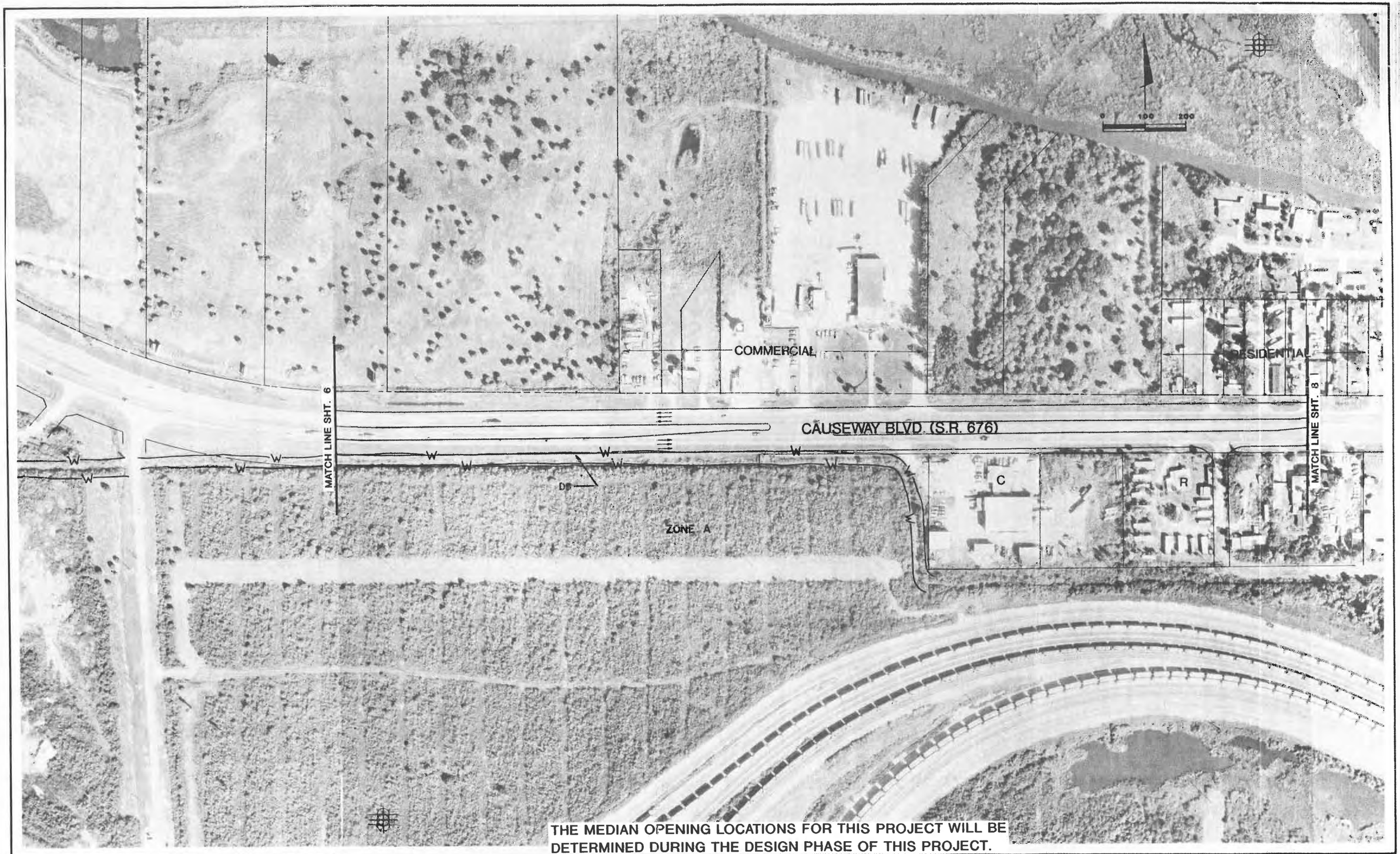

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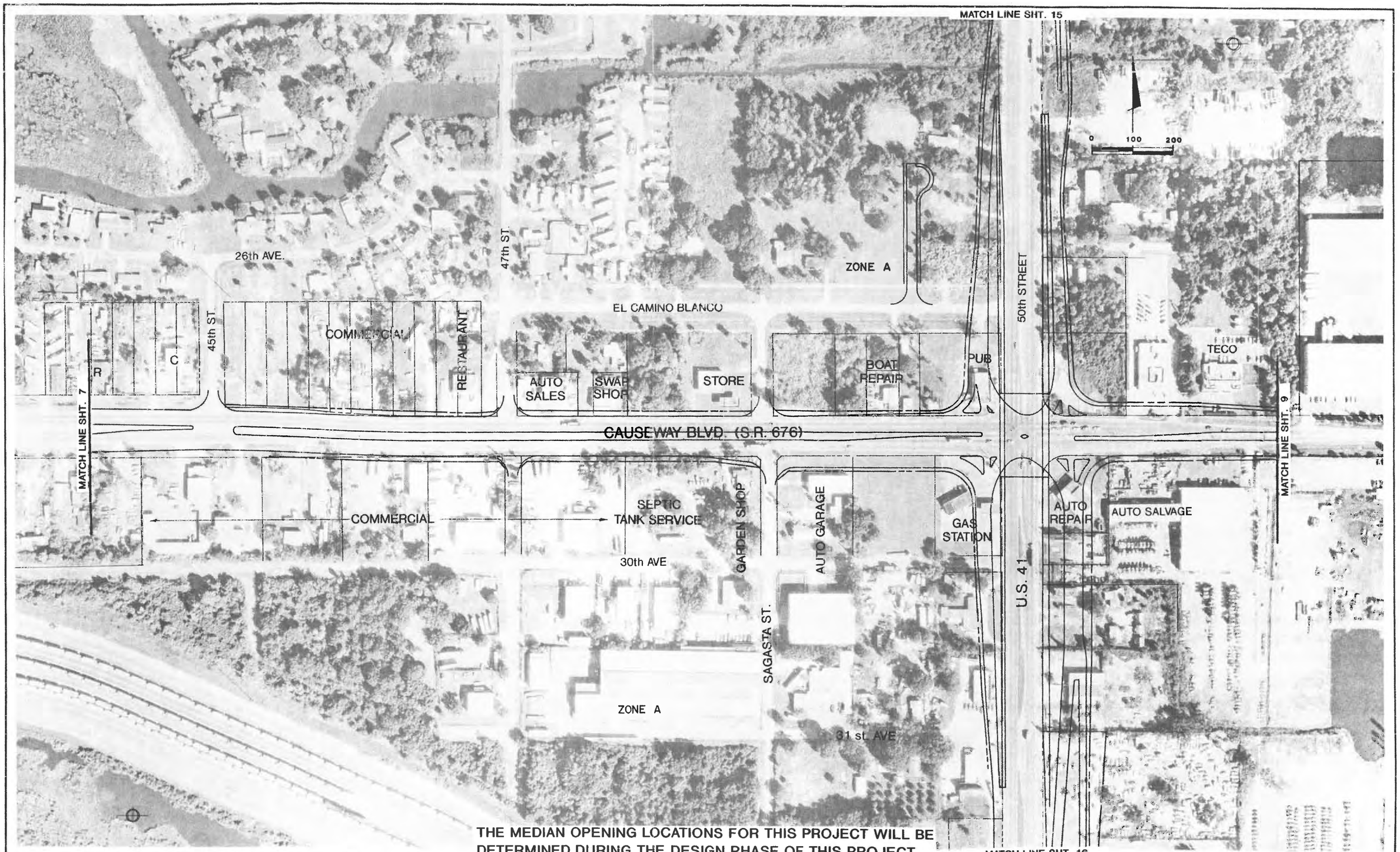

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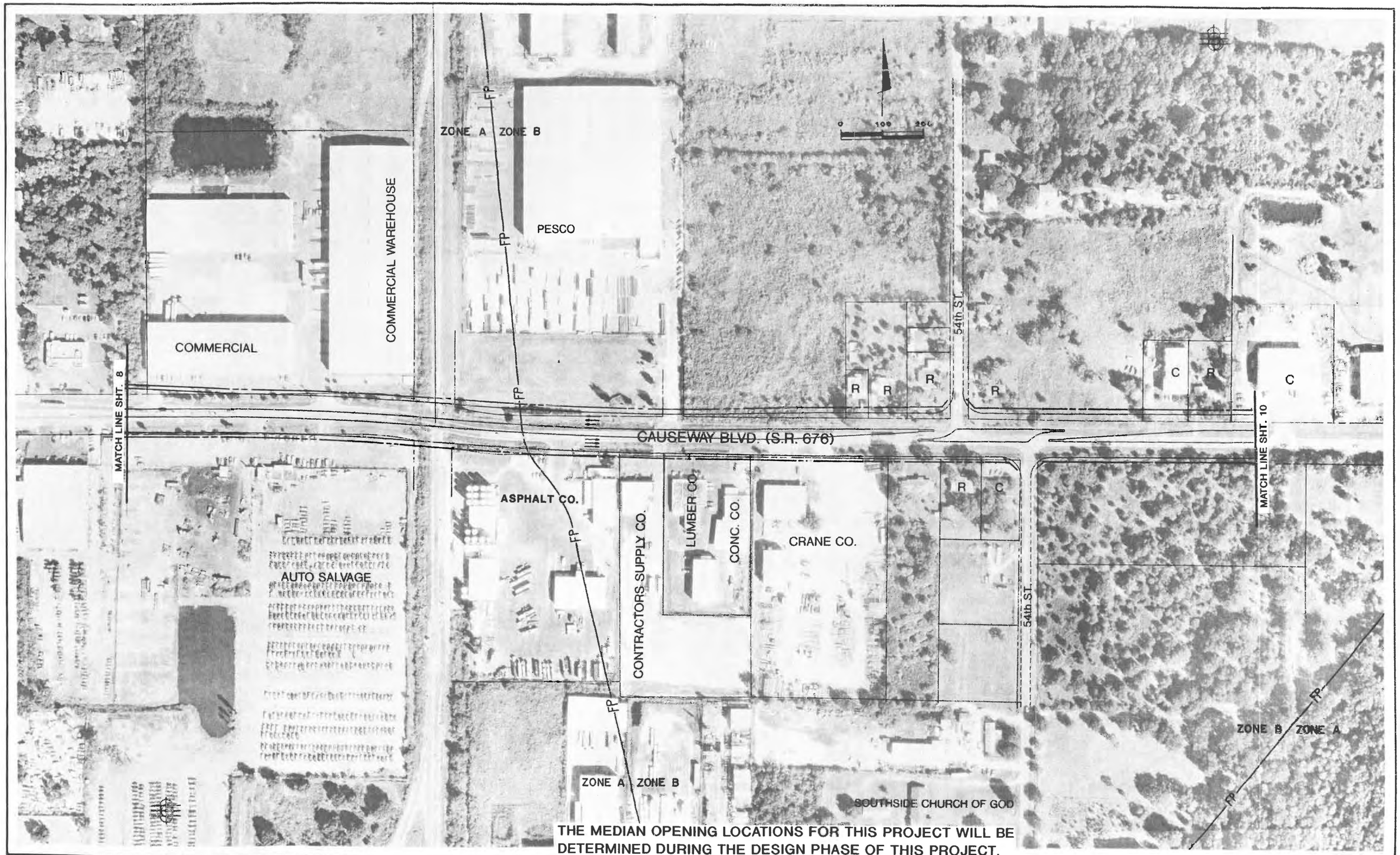
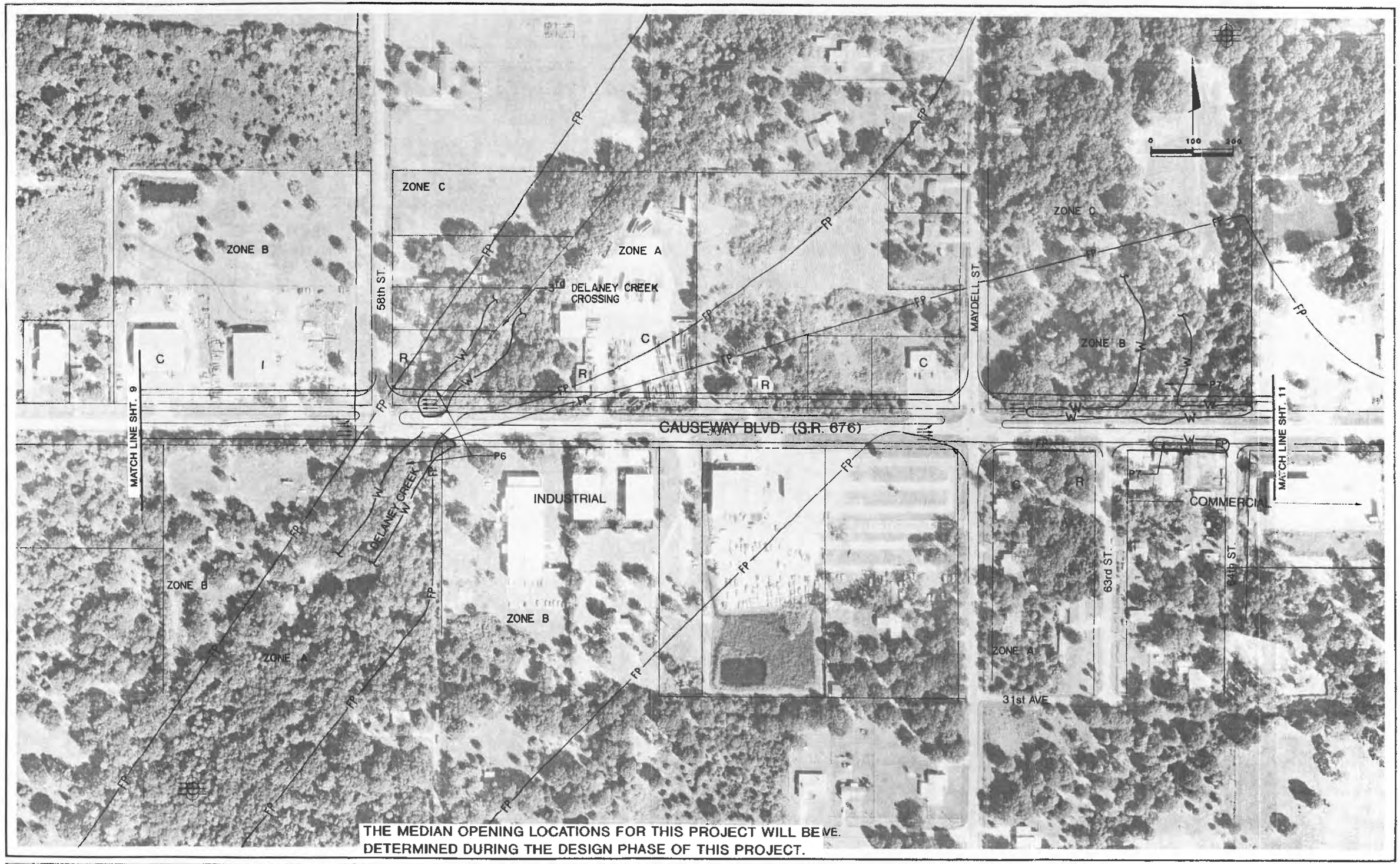


THE MEDIAN OPENING LOCATIONS FOR THIS PROJECT WILL BE DETERMINED DURING THE DESIGN PHASE OF THIS PROJECT.

EAST SECTION US 41 TO US 301	FLORIDA DEPARTMENT OF TRANSPORTATION FAP No. M-1802-(1) WPA No. 7113839 STATE PROJECT No. 10250-1525	22nd STREET CAUSEWAY / CAUSEWAY BLVD (SR. 676) FROM U.S. 301 TO SR. 60 PROJECT DEVELOPMENT & ENVIRONMENTAL STUDY	CORRIDOR ANALYSIS / CONCEPTUAL PLANS PHOTO DATE: 10/29/90	ORIGINAL REVISIONS	SHEET 9 OF 16



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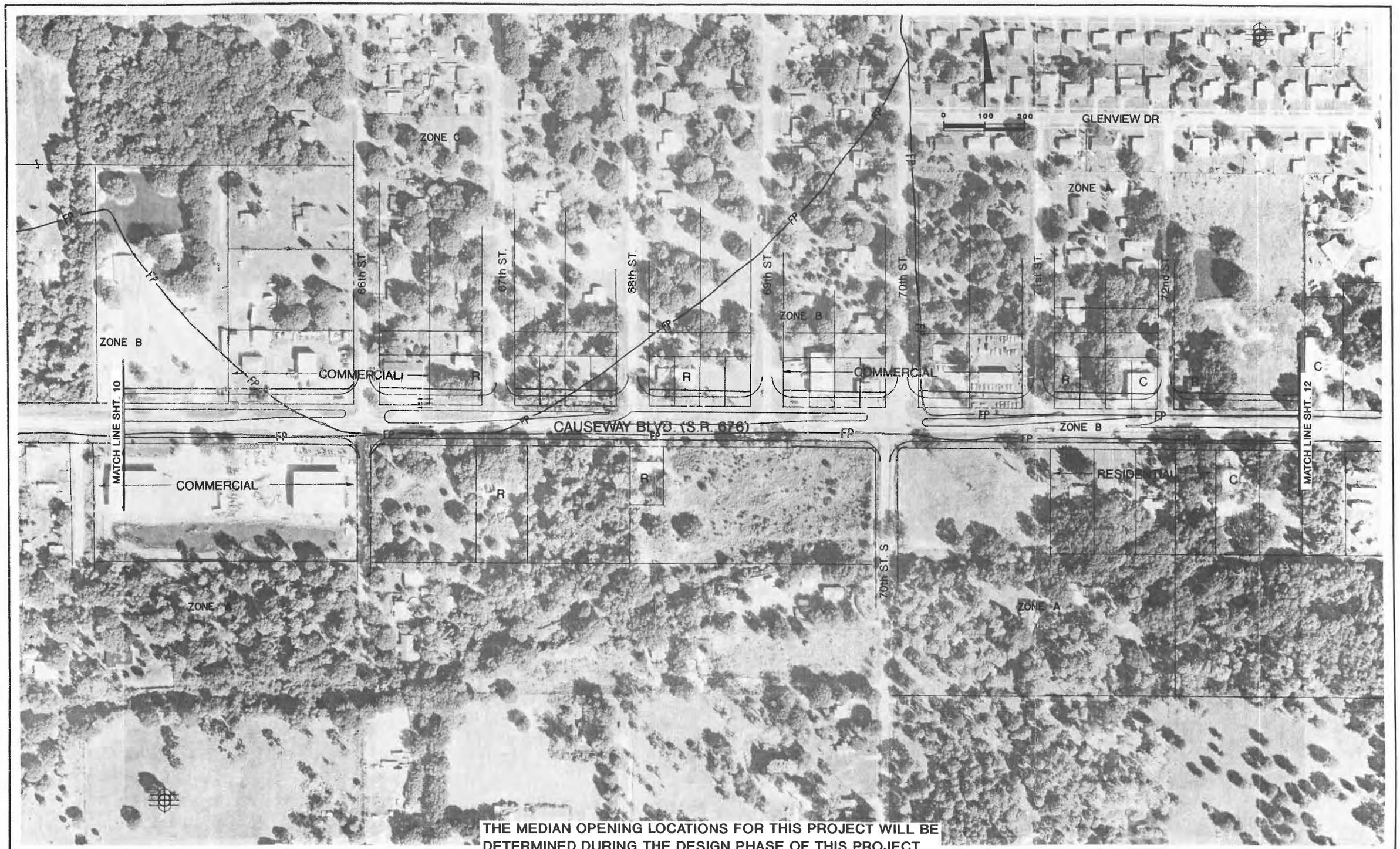

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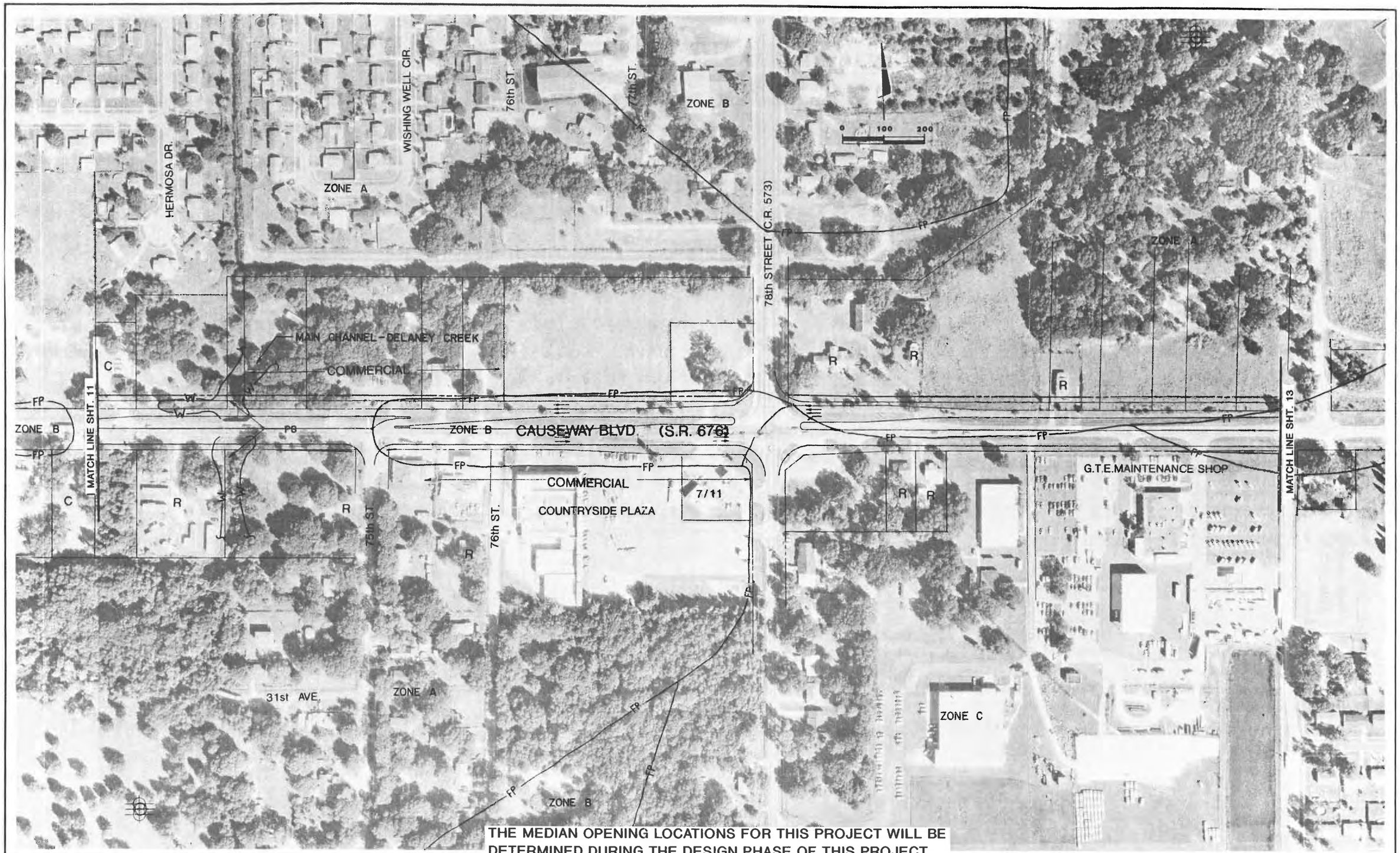
EAST SECTION **U.S. 41 TO U.S. 301**	**FLORIDA DEPARTMENT OF TRANSPORTATION** **FAP No. M-1802-(1)** **WPA No. 7113839** **STATE PROJECT No. 10250-1525**	**22nd STREET CAUSEWAY /** **CAUSEWAY BLVD (SR. 676)** **FROM U.S. 301 TO SR. 60** **PROJECT DEVELOPMENT & ENVIRONMENTAL STUDY**	**CORRIDOR ANALYSIS /** **CONCEPTUAL PLANS** **PHOTO DATE:** 10/29/90	ORIGINAL REVISIONS 1 2 3 4 5	FAP No. (F-620.00 DRAWN DESIGNED CHECKED QC **SHEET 11 OF 16**



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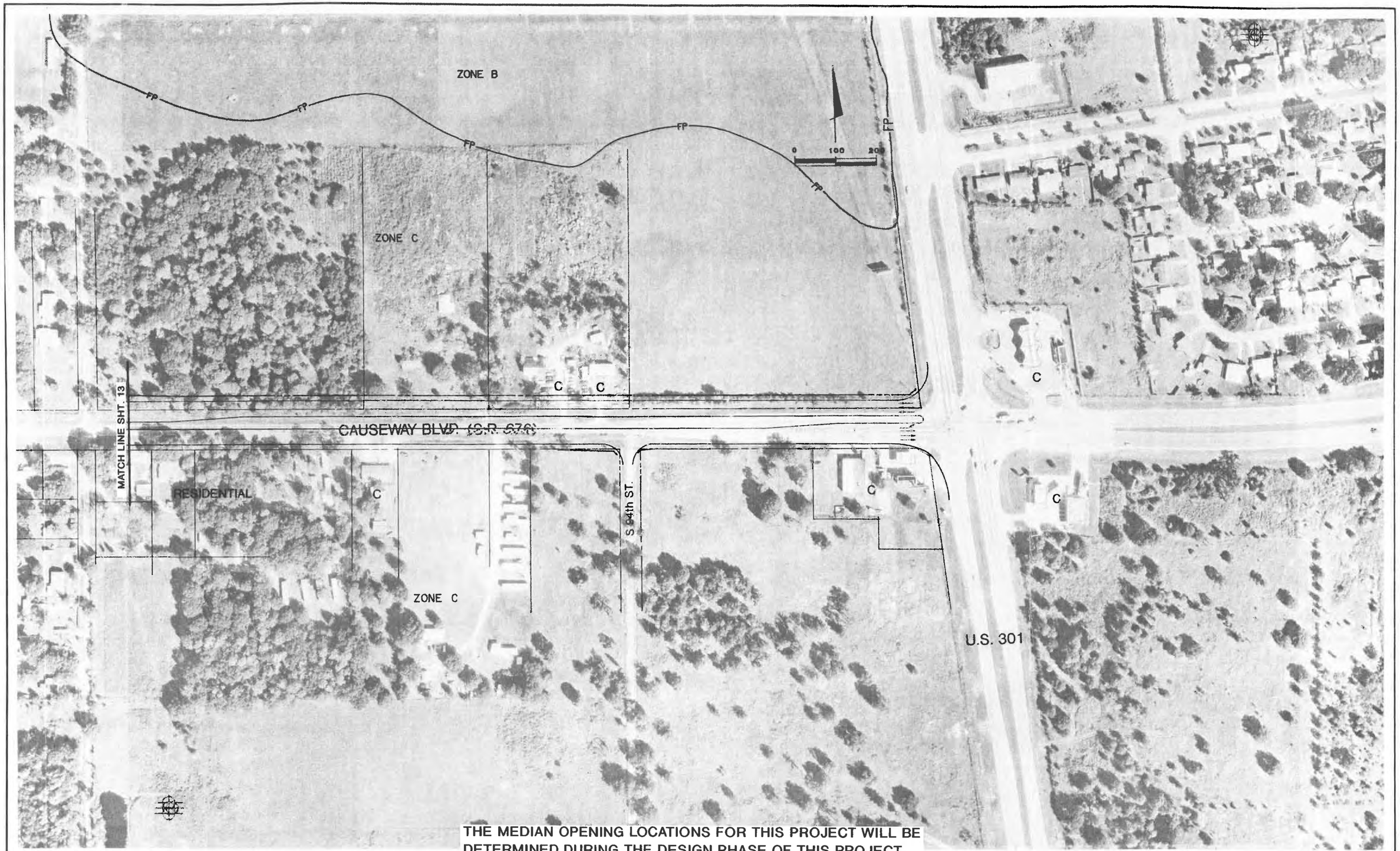

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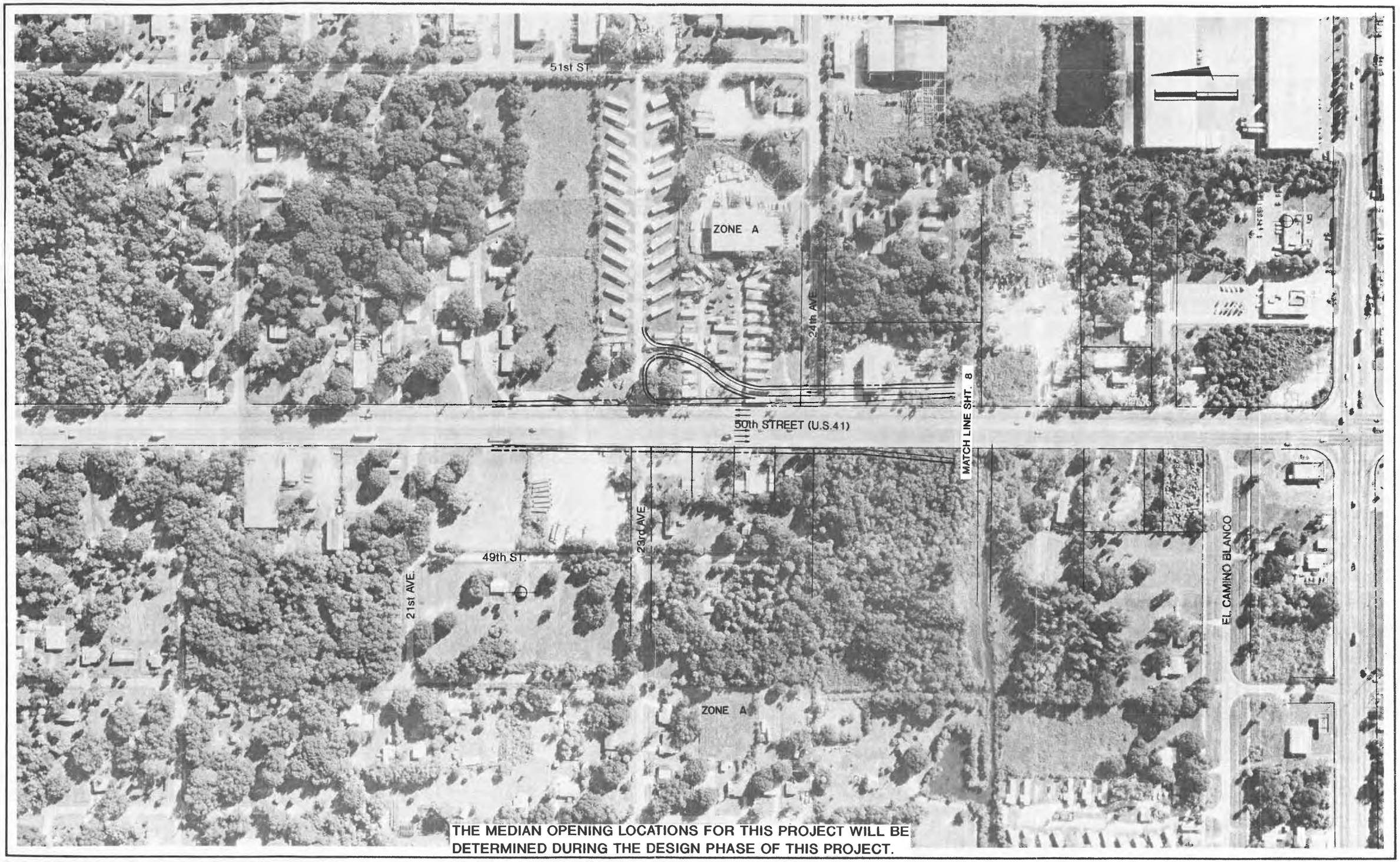

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