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SR 574 BLVD
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Project Development and Environment (PD&E) Study

Final Wetland Evaluation Report

S.R. 574 (Martin Luther King Jr. Boulevard) from C.R. 579 to McIntosh Road Hillsborough County, Florida

WPI Segment No. 255893 1
FAP No. 2081-018P

Florida Department of Transportation - District 7
Tampa, Florida

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Submitted to:

Florida Department of Transportation - District 7
Tampa, Florida

Submitted by:

PB 100 YEARS

In Association with:

AYRES ASSOCIATES

August 2002

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EXECUTIVE SUMMARY

This Wetland Evaluation Report has been prepared for a 3.6-mile segment of S.R. 574 (Martin Luther King Jr. Boulevard), from C.R. 579 (Mango Road) to east of McIntosh Road in Hillsborough County, Florida. The Florida Department of Transportation (FDOT) has conducted a Project Development and Environment (PD&E) Study to aid in determining the type, design and location of improvements to the existing facility, and to evaluate the impacts, if any, associated with the alternatives for the proposed improvements. The objective of the PD&E Study is to provide documented environmental and engineering information as well as analyses necessary for the FDOT and the Federal Highway Administration to reach a decision regarding the type, conceptual design and location of the improvements along the S.R. 574 corridor.

Wetlands within the project limits were initially identified through the review of mapping resources, including the Natural Resources Conservation Service's (formerly the Soil Conservation Service) Soil Survey of Hillsborough County, Florida (1989), National Wetland Inventory mapping, and 1 inch = 200 feet scale project aerial photography. Wetlands were identified in the field utilizing the United States Army Corps of Engineers Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987). The wetlands were classified according to the United States Fish and Wildlife Service methodology (Cowardin, et al., 1979). Sizes of potential wetland impacts were determined graphically from project aerial photographs and project concept plans. Wetlands that may be potentially affected were assessed for functional significance using the Wetland Rapid Assessment Procedure as developed by the South Florida Water Management District and utilized by the United States Army Corps of Engineers.

Eight wetlands and natural surface waters and 30 other surface waters were identified within and along the project limits. Wetland Rapid Assessment Procedure analyses were conducted for the eight wetland and natural surface waters. These areas consisted primarily of scrub-shrub palustrine systems, palustrine systems with emergent vegetation, and palustrine systems with an unconsolidated bottom. The highest rated wetland, a palustrine scrub/shrub system, received a Wetland Rapid Assessment Procedure score of 0.58.

Potential impacts to existing man-made and natural wetlands associated with the proposed build project alternative were determined. Potential impacts would result from the placement of fill and removal of vegetation, or the temporary impacts to wetland vegetation from construction activities. The proposed Build Alternative would impact 2.69 acres of wetlands and natural surface waters, and 1.42 acres of other surface waters.

Mitigation for wetland impacts that will result from the construction of this project will be provided pursuant to Part IV Chapter 373, F.S. and 33 USC.s. 1344.

1.0 INTRODUCTION

FDOT is conducting a PD&E Study to document the preliminary engineering concept of S.R. 574 (Martin Luther King Jr. Boulevard) from C.R. 579 (Mango Road) to east of McIntosh Road in central Hillsborough County for the multi-laning of the existing roadway facility. The total length of the study corridor is approximately 3.6 miles. The purpose of the PD&E Study is to provide documented environmental and engineering information as well as analyses necessary for the FDOT and the Federal Highway Administration (FHWA) to reach a decision regarding the type, design and location of the necessary improvements along the S.R. 574 corridor; and the impacts, if any, associated with the recommended alternative.

2.0 PROJECT DESCRIPTION

The S.R. 574 corridor is an east/west urban minor arterial facility. The limits of the Study corridor are from C.R. 579 (Mango Road) eastward to McIntosh Road, a distance of approximately 3.6 miles. The project is located in central Hillsborough County and extends through the communities of Mango, Seffner and Dover (Sections 1, 2, 3, 10 and 11 of Township 29 South, Range 20 East; and Section 6 of Township 29 South, Range 21 East). A project location map is shown in Figure 2-1.

The existing land use adjacent to the S.R. 574 corridor transitions through two areas of generalized land use characteristics. In general, from the western terminus eastward, the land uses transition from dense development (medium scale shopping centers, office/professional office, medical facilities, service stations, restaurants and community facilities) to low density development (mixture of agricultural, commercial, and planned and residential developments). Although vacant land exists within the Study corridor, future developments are planned for most of this area.

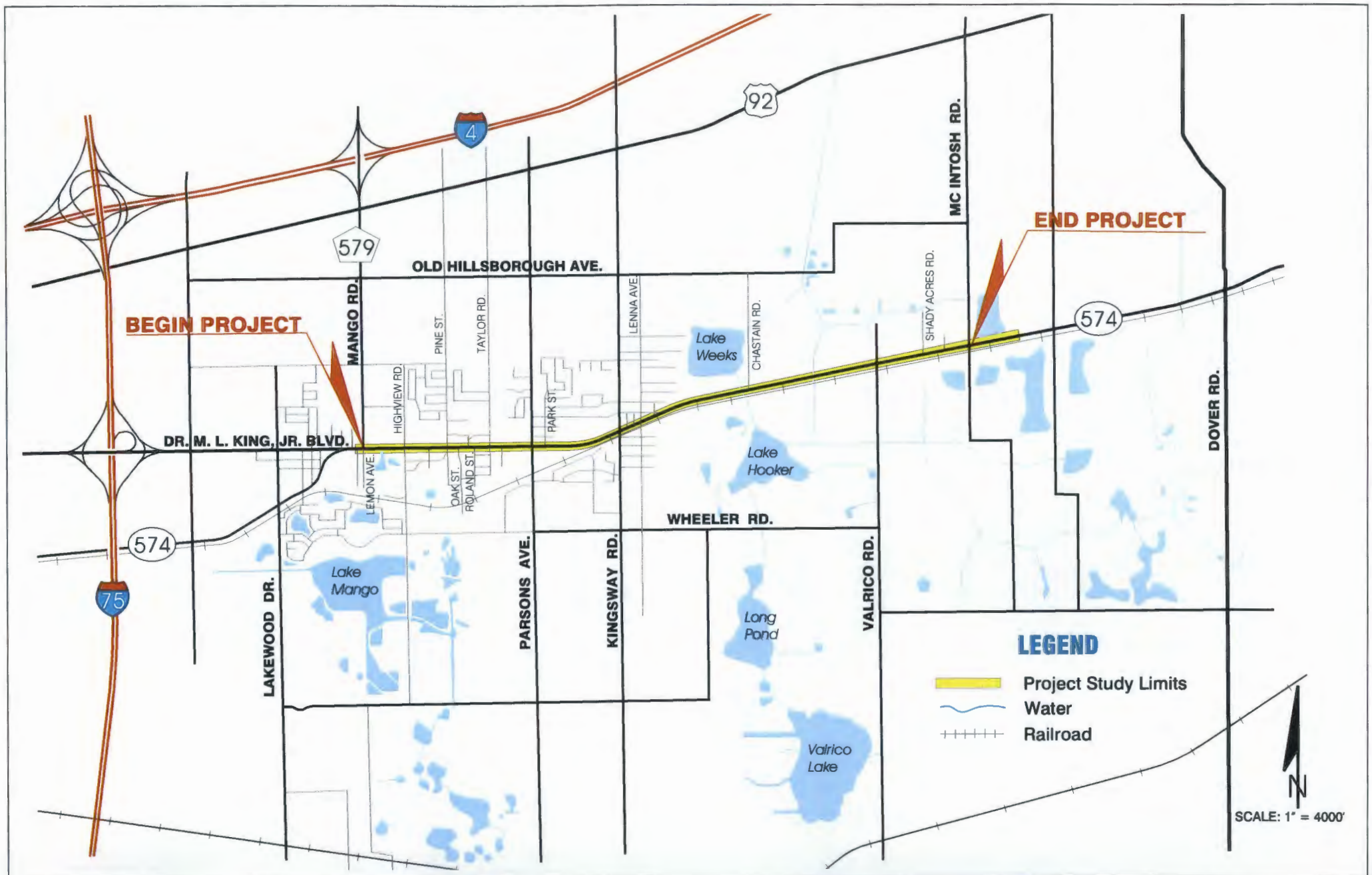
S.R. 574 is currently a six-lane urban section west of C.R. 579, which transitions to a three-lane rural section (with a two-way left-turn lane) east of Highview Road. The three-lane section is retained until Kingsway Road, where the roadway transitions to a two-lane section that proceeds to McIntosh Road. The existing posted speed limits along S.R. 574 are 45 mph and 50 mph.

The recommended alternative for the multi-laning of S.R. 574 from C.R. 579 to east of McIntosh Road consists of three different typical sections. The portion of the project between C.R. 579 and Parsons Avenue is recommended to be widened to a 5-lane urban typical section (40 mph design speed) that contains a two-way left turn lane. A 4-lane suburban typical section (45 mph design speed) is recommended to be utilized in the portion of the project from east of Parsons Avenue to east of Kingsway Avenue. The remaining portion of the project from east of Kingsway Road to east of McIntosh Road is recommended to contain a 4-lane suburban typical section (60 mph design speed). Both 4-lane suburban typical sections can be expanded to 6-lanes, and the right-of-way requirements are 123.5 ft. and 131.5 ft. for the 45 mph and 60 mph design speeds, respectively. The recommended alignment generally follows the existing centerline of the roadway with several shifts to reduce impacts to established commercial properties and to avoid a historical cemetery in the western portion of the project. The recommended alignment for the eastern portion of the project was controlled by a twenty-five foot offset from the proposed right-of-way line to the centerline of the existing, active CSX railroad

tracks, which is the minimum dimension that has been acceptable to CSX in previous District Seven projects.

There is a box culvert at Lake Weeks Creek and a bridge (FDOT Bridge No. 100033) over Baker Canal within the eastern portion of the project, which would require modifications to accommodate the multi-laning of S.R. 574 by constructing a longer culvert at Lake Weeks Creek and a new bridge or bridge culvert at Baker Canal.

It is anticipated that minor modifications will be required along the sidestreets to accommodate the additional lanes on S.R. 574. Right-of-way acquisition is anticipated for various locations within the project corridor, and stormwater management will be accomplished with the construction of five off-site combined attenuation and treatment ponds.



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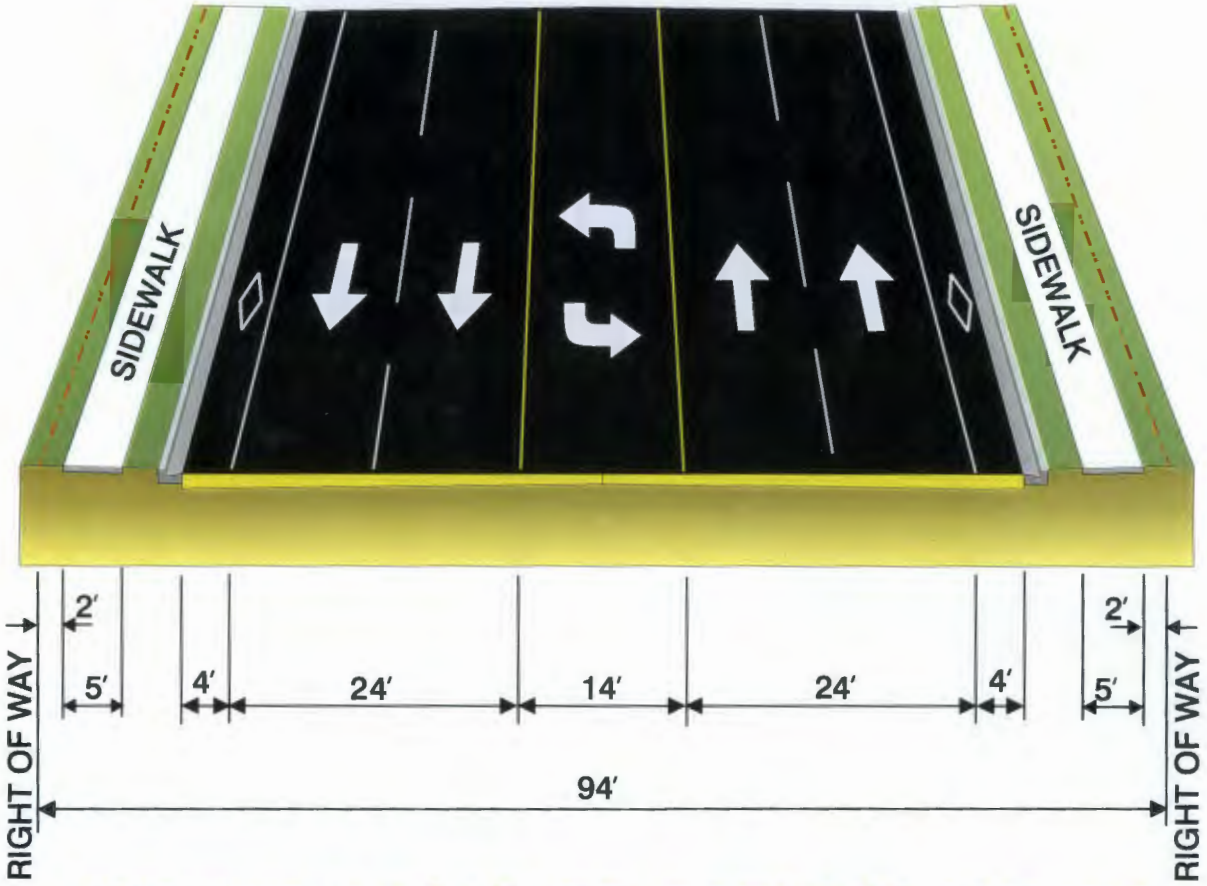
GENERAL PROJECT LOCATION MAP

Figure 2-1



HIGHVIEW ROAD TO PARSONS AVENUE

(40 MPH DESIGN SPEED)

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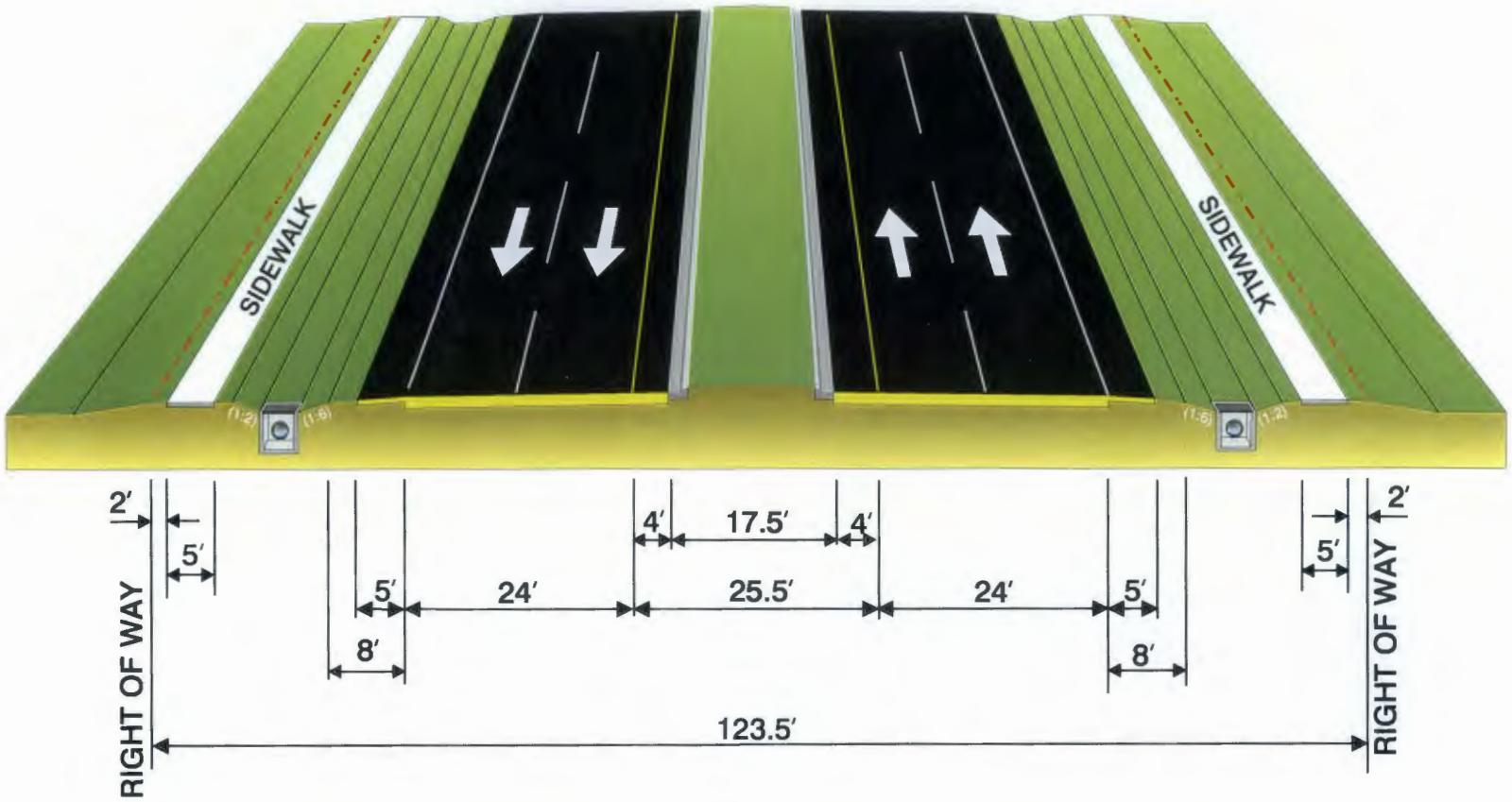
RECOMMENDED ALTERNATIVE
5 - LANE URBAN ROADWAY
TYPICAL SECTION

Figure 2-2



PARSONS AVENUE TO KINGSWAY ROAD

(45 MPH DESIGN SPEED)

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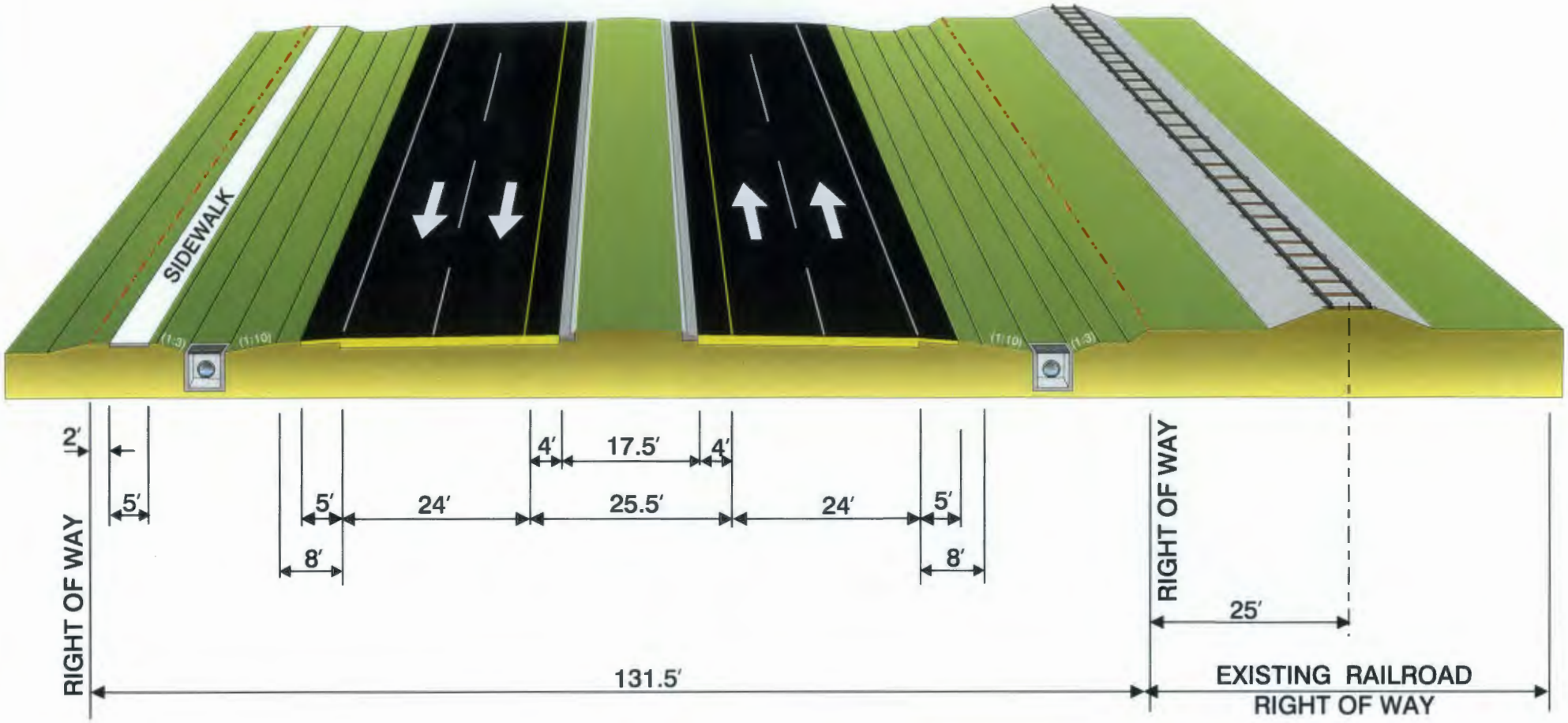
RECOMMENDED ALTERNATIVE
4 - LANE SUBURBAN ROADWAY
TYPICAL SECTION

Figure 2-3



KINGSWAY ROAD TO McINTOSH ROAD

(60 MPH DESIGN SPEED)

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RECOMMENDED ALTERNATIVE
4 - LANE SUBURBAN ROADWAY
TYPICAL SECTION

Figure 2-4

The recommended alignment for the eastern portion of the project was controlled by a twenty-five foot offset from the proposed right-of-way line to the centerline of the existing, active CSX railroad tracks, which is the minimum dimension that has been acceptable to CSX in previous District Seven projects.

There is a box culvert at Lake Weeks Creek and a bridge (FDOT Bridge No. 100033) over Baker Canal within the eastern portion of the project, which would require modifications to accommodate the multi-laning of S.R. 574 by constructing a longer culvert at Lake Weeks Creek and a new bridge or bridge culvert at Baker Canal.

It is anticipated that minor modifications will be required along the sidestreets to accommodate the additional lanes on S.R. 574. Right-of-way acquisition is anticipated for various locations within the project corridor, and stormwater management will be accomplished with the construction of five off-site combined attenuation and treatment ponds.

3.0 EXISTING ENVIRONMENTAL CHARACTERISTICS

This section presents the existing land use characteristics as well as the existing natural and biological features, such as upland plant communities, listed species, and soils.

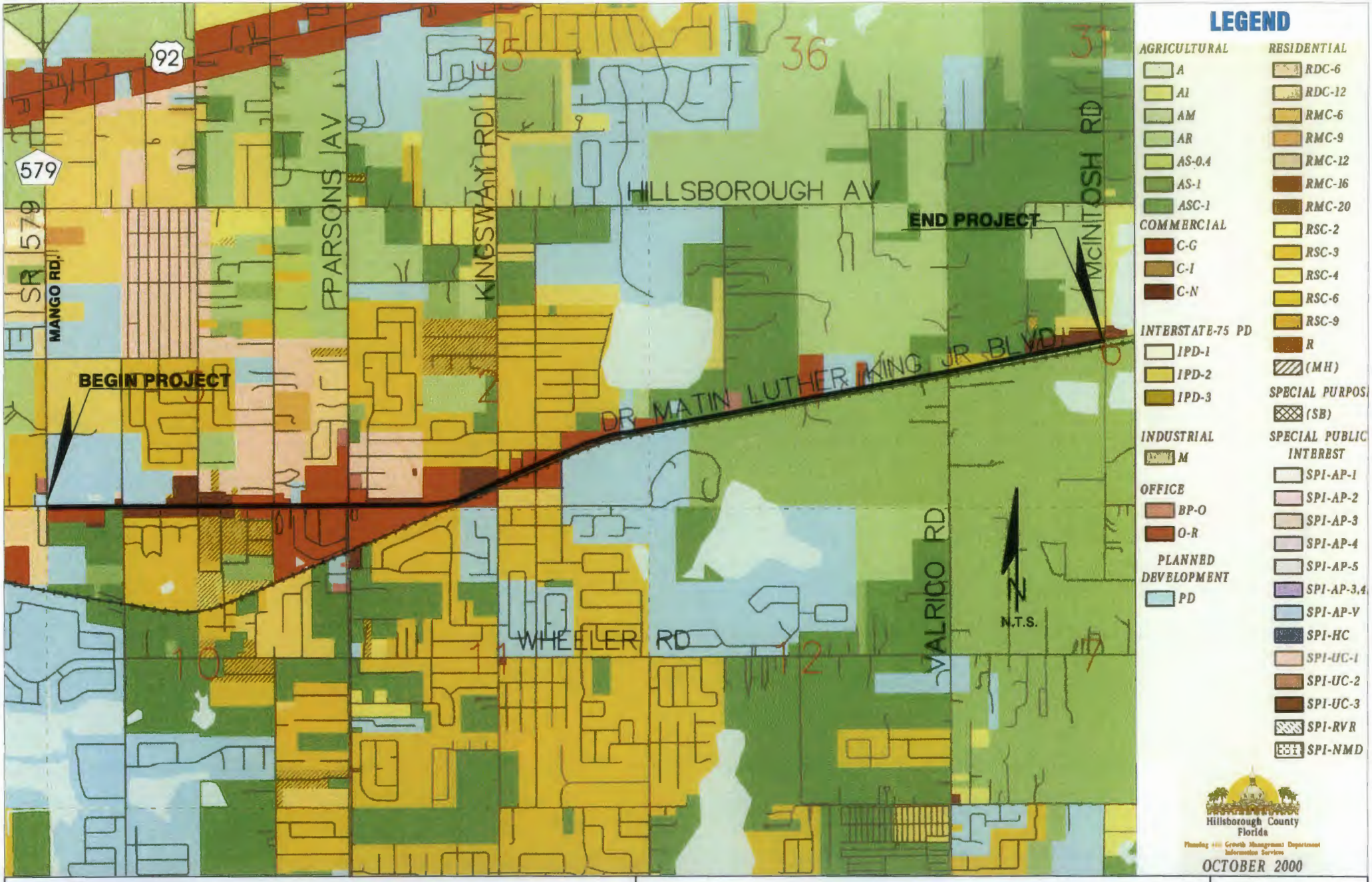
3.1 Land Use

Existing Land Use

The existing land use adjacent to the S.R. 574 corridor transitions through two areas of generalized land use characteristics. In general, from the western terminus eastward, the land uses transition from dense development to low density development. Although vacant land exists within the study corridor, developments are planned for most of this area. Figure 3-1 depicts the existing land use within the study corridor.

The predominant land use adjacent to S.R. 574, from C.R. 579 to east of Kingsway Road, is characterized by commercial development such as medium scale shopping centers, office/professional office, medical facilities, service stations, restaurants and community facilities. Other land uses in this section of the project consist of isolated planned developments and residential sites.

The eastern portion of the project, from east of Kingsway Road to McIntosh Road, becomes more rural with low density development. The existing land use consists primarily of a mixture of agricultural, commercial, and planned and residential developments. The development on the south side of S.R. 574 from Kingsway Road to McIntosh Road is isolated from S.R. 574 by the CSX railroad.



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EXISTING LAND USE

Figure 3-1

Future Land Use

Figure 3-2 presents the future land use information for S.R. 574 for 2015. The information presented in this figure is important because it identifies how the existing vacant parcels as well as parcels with low densities are expected to be developed in the future. Office-commercial development as well as residential development characterize the future land use for the western portion of the study area. The eastern portion of the study area is characterized almost exclusively by residential development except for two areas with the industrial land use designation. (The study area is located in unincorporated Hillsborough County.)

3.2 Natural and Biological Features

Listed Fauna Species

Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended, the study area was evaluated for the potential occurrence of threatened and endangered species. Literature reviews were conducted and data were requested from the Florida Fish and Wildlife Conservation Commission (FFWCC) and the Florida Natural Areas Inventory (FNAI). The FNAI data were obtained from their internet web site (County Occurrence Data). Additionally, data were obtained from the Florida Geographic Data Library (FGDL) Geographical Information Systems (GIS) database, as well as the FFWCC WILDOBS database.

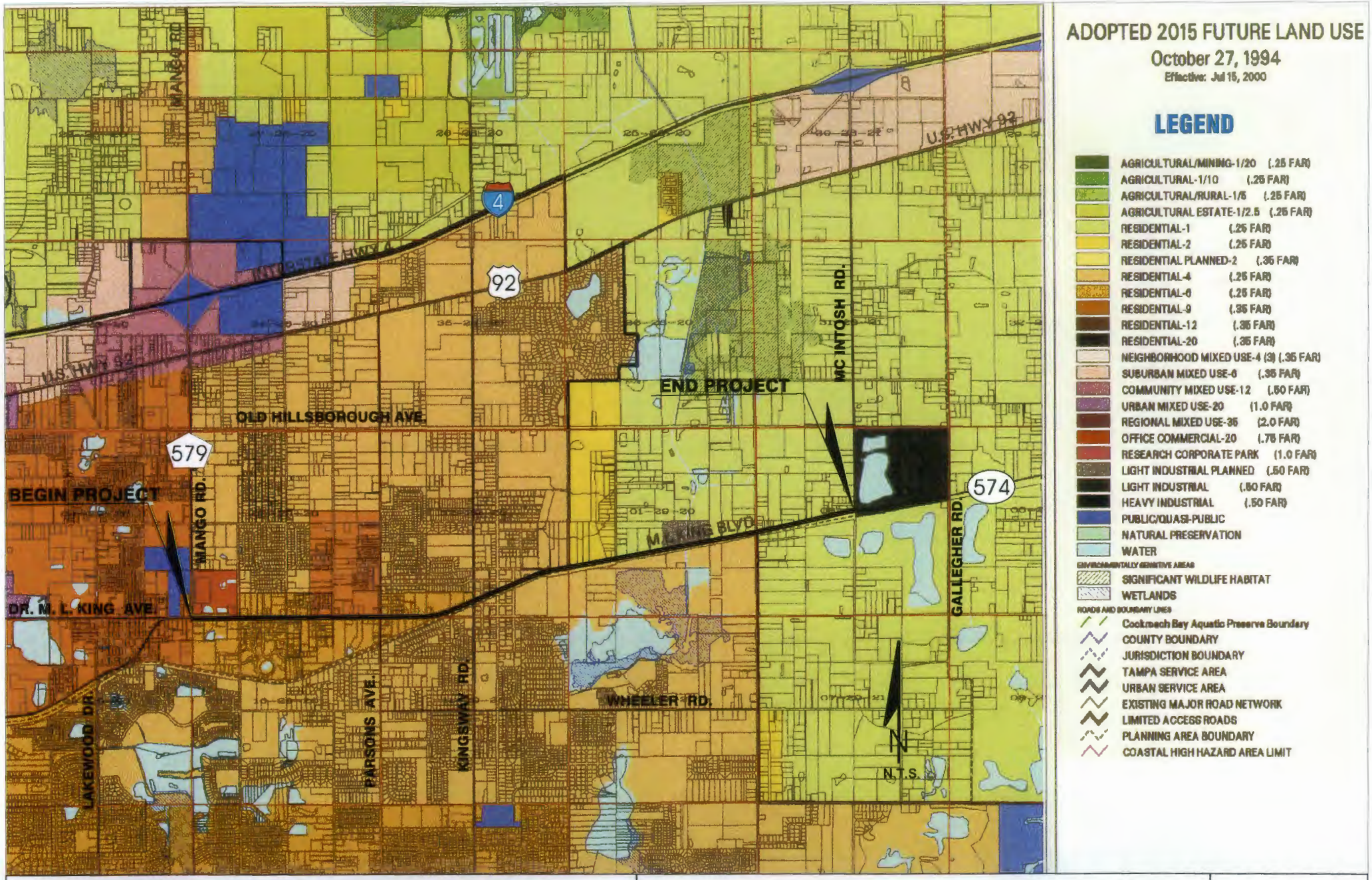
A general qualitative survey was conducted on July 12, 2000, January 21, 2001, and December 17, 2001 to determine if adequate habitat existed for those species listed by the FNAI.

Three avian species listed as a Species of Special Concern by the FFWCC were observed: the brown pelican (*Pelecanus occidentalis*), the little blue heron (*Egretta caerulea*) and a snowy egret (*Egretta thula*). Additionally, the wood stork (*Mycteria americana*) and the white pelican (*Pelecanus erythrorhychos*) were observed. The wood stork is listed as Endangered by both the United States Fish and Wildlife Service (USFWS) and FFWCC. The white pelican, like other migratory birds, are afforded protection under the Migratory Bird Treaty Act (1918), as amended.

Detailed information regarding listed species is contained in the Endangered Species Evaluation Memorandum prepared for this project under separate cover. In a letter dated July 12, 2002, the FDOT on behalf of the FHWA asked for concurrence that the proposed actions will have "no effect" with any federally protected threatened or endangered species. The USFWS concurred on August 14, 2002 that "The proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973, as amended."

Upland Plant Communities

The upland plant communities in the S.R. 574 study area consist of cropland and pastureland (cattle pasture), and areas of mixed hardwoods dominated in some areas by live oak (*Quercus virginiana*), pine stands (*Pinus elliotii*) and an understory of saw palmetto (*Serenoa repens*).



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FUTURE LAND USE

Figure 3-2

Generalized Soil Data

According to the Natural Resources Conservation Service (formerly the Soil Conservation Service), Soil Survey of Hillsborough County, Florida (1989), Candler fine sand (0-5 percent slopes) and Lake fine sand (0-5 percent slopes) are the most common soil types in the study area. The remaining area consists of Adamsville fine sand, Arents, Basinger-Holopaw-Samsula (depressional), Kendrick sands, Myakka fine sand, Ona fine sand, Orsino fine sand (0-5 percent slopes), Seffner fine sand, St. Johns fine sand, and Zolfo fine sand. Of these, Basinger-Holopaw-Samula (depressional) is the only soil complex within the project study area listed as hydric. Hydric inclusions, however, may be found in the other soil types.

4.0 WETLANDS

This section presents information regarding wetlands in the study area.

4.1 Study Methodology

All wetlands, natural surface waters, and other surface waters within the project limits were initially identified through review of mapping resources including the Soil Survey of Hillsborough County, Florida (1989), National Wetlands Inventory mapping, and 1 inch = 200 feet scale project aerial photography. These areas were identified in the field utilizing United States Army Corps of Engineers (USACOE) Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987). The dominant floral species, spatial area, hydrological contiguity, proposed effects, and related observations are contained in the following sections.

The wetlands and natural surface waters were classified according to the USFWS methodology (Cowardin, et al., 1979) and with Florida Land Use Cover and Forms Classification System (FLUCFCS) codes. Wetlands and natural surface waters that may be potentially affected by the project were assessed for functional significance using the Wetland Rapid Assessment Procedure (WRAP) as developed by the South Florida Water Management District (SFWMD) and utilized by the USACOE. Sizes of all wetlands, natural surface waters, and other surface waters and areas of potential impact were determined graphically from project aerial photographs and the concept plans for the Preferred Alternative. Maps indicating the approximate locations of the identified areas within the project area are included in Appendix A.

4.2 Wetlands Within the Project Limits

The project wetlands have been categorized into wetlands and natural surface waters and other surface waters. A discussion of the characteristics of the wetlands in each category is presented below and includes the USFWS Classification, location, size, vegetation, hydrology, soils, and relative quality.

The surface water systems within the S.R. 574 right-of-way are incised urban creeks that were natural in origin. However, they have been altered to function primarily for flood control. Representative photos for wetlands, surface waters, and other surface waters are shown in Appendix B.

Wetlands

Eight wetlands were identified within the study area. Table 1 lists the wetlands and their characteristics. The wetlands are within or adjacent to the project right-of-way. A discussion of the characteristics of the wetlands in each category is presented below and includes the USFWS classification, location, size, vegetation, hydrology, and relative quality.

Table 1 Wetlands

Wetland	FLUCFCS Code	USFWS Classification	WRAP SCORE	Total Area acres	Area of Impact acres
1	641	$PEM1F_X$	0.38	2.69*	0
2	617	$PSS1C_h$	0.40	2.33	2.20
3	641	$PEM1F_X$	0.44	0.65*	0.009
4	617	PSS1C	0.58	8.86	0.00
5	617	$PSS1C_X$;	0.25	0.02	0.02
6	533	$PUBH_X$	0.55	22.23	0
7	617	$PSS3C_X$	0.32	0.36	0.36
8	617	PFO1C	0.21	3.12*	0.06

Note: * Wetland extends beyond the study area. This value represents the area within the project study area.

Wetland 1 is classified as palustrine, persistent semi-permanently flooded, and excavated with emergent vegetation ($PEM1F_X$; FLUCFCS 641). This area is located southeast of the intersection of S.R. 574 and C.R. 579 (Mango Road). The dominant vegetation consists of primrose willow (*Ludwigia peruviana*), torpedo grass (*Panicum repens*) and fireflag (*Thalia geniculata*). Most of the littoral shelf immediately south of the right-of-way was devoid of vegetation during primary field reviews. No wildlife was observed utilizing this wetland. However, a snowy egret (*Egretta thula*) and white ibises (*Eudocimus albus*) were observed flying over this wetland. Hydrology is controlled by two stormwater culverts that originate from two wet detention ponds located north of the right-of-way and across the street from this wetland. This wetland is under a perpetual conservation easement granted to the Florida Department of Environmental Protection (FDEP) and is a mitigation site from previous improvements to S.R. 574.

Wetland 2 is situated west of the intersection of S.R. 574 and McIntosh Roads at the eastern end of the study corridor. It is located south of the S.R. 574 right-of-way and north of the adjacent railroad right-of-way. This wetland is classified as palustrine, seasonally flooded, and impounded with scrub-shrub broad-leaved deciduous vegetation ($PSS1C_h$; FLUCFCS 617). Dominant wetland vegetation observed in the wetland canopy and shrub layer consists of water oak (*Quercus nigra*), Carolina willow (*Salix caroliniana*), red maple (*Acer rubrum*), wax myrtle (*Myrica cerifera*), laurel oak (*Quercus laurifolia*), elderberry (*Sambucus canadensis*), and Brazilian pepper (*Schinus terebinthifolius*). The herbaceous stratum contained primrose willow, shield ferns (*Thelypteris* spp.) and softrush (*Juncus effusus*). Additionally, duckweed (*Lemna* spp.) is found within more open water portions of this wetland. This wetland is hydrologically connected through a culvert from north of the right-of-way; however, both S.R. 574 and the railroad track to the south impound this wetland.

Wetland 3 (Lake Weeks Creek) is an incised creek/flow way located between Lenna Avenue and Valrico Road. This area is palustrine, persistent, semi-permanently flooded and excavated with emergent broad-leaf deciduous vegetation ($PEM1F_X$; FLUCFCS 641). Dominant vegetation includes maidencane (*Panicum hemitomon*), primrose willow, shield ferns, cabbage palm (*Sabal palmetto*), elderberry, and bamboo (*Bambusa* spp.). This creek connects Lake Weeks and Lake Hooker and was completely inundated at the time of inspection.

Wetland 4 is located immediately east of Baker Creek and south of the CSX Railroad Line. This area is described as palustrine, scrub-shrub, seasonally flooded, with broad-leaf deciduous vegetation (PSS1C; FLUCFCS 617). Dominant vegetation within this wetland consists of Carolina willow, elderberry, red maple, and pickerelweed (*Pontederia cordata*). This wetland is hydrologically connected to Baker Creek and receives runoff from the CSX railroad. Hydrology may also be affected by seasonal rainfall.

Wetland 5 is located immediately south of W.W. Trucking Company and east of the intersection of S.R. 574 and McIntosh Road. This area is considered palustrine scrub-shrub seasonally flooded, and excavated with broad-leaf deciduous vegetation ($PSS1C_X$; FLUCFCS 617). Dominant vegetation within this wetland consists of red maple, Carolina willow, saltbush (*Baccharis glomeruliflora*), elderberry, dayflower (*Commelina diffusa*), and softrush. Hydrology is controlled by stormwater runoff from Martin Luther King Jr. Boulevard and seasonal rainfall. A culvert is located north of Martin Luther King Jr. Boulevard and south of W.W. Trucking

Wetland 6 is a borrow pit/lake located just north of the intersection of McIntosh Road and S.R. 574, and just west of W.W. Trucking Company. This area is classified as an excavated permanently flooded palustrine wetland with an unconsolidated bottom ($PUBH_x$; FLUCFCS 533). Dominant wetland vegetation consists of wax myrtle, cattail (*Typha* spp.), softrush, maidencane (*Panicum hemitomon*) and pennywort (*Hydrocotyle umbellata*). This wetland is controlled hydrologically by seasonal rainfall and a small amount of runoff from adjacent uplands. A brown pelican, Neotropic cormorant (*Phalacrocorax brasilianus*), a great blue heron (*Ardea herodias*), white pelicans, wood storks, and snowy egrets were observed utilizing this wetland. Many of the snowy egrets were observed roosting on shrubs and small trees outside of the project area in the northeast corner of the lake.

Wetland 7 is located east of the McIntosh Road intersection on the south side of S.R. 574 along side the CSX railroad. It is classified as palustrine scrub-shrub, seasonally flooded, and excavated with broad-leaf evergreen vegetation ($PSS3C_X$; FLUCFCS 617). Dominant canopy vegetation includes saltbush, elderberry, shield fern, Carolina willow, wax myrtle, Japanese climbing fern (*Lygodium japonicum*), Mexican primrose willow (*Ludwigia octovalvis*), and cattail. Seasonal rainfall and runoff from the railroad may be the primary hydrological influences.

Wetland 8 (Baker Canal) is an incised natural creek. It flows from south to north and discharges into Pemberton Creek which outfalls into Lake Thonotosassa and is part of the 100-year floodplain. This area is classified as palustrine, forested, seasonally flooded with broad-leaf deciduous vegetation surrounding the creek (PFO1C; FLUCFCS 617). Vegetation observed within the creek bed and banks consists of sweet gum (*Liquidambar styraciflua*) in the forest canopy with wild taro (*Colocasia esculenta*), torpedo grass,

paragrass (*Brachiaria mutica*), dog fennel (*Eupatorium capillifolium*), primrose willow, and sesbans (*Sesbania* spp.) in the herbaceous stratum.

Other Surface Waters

A total of 30 other surface waters were identified within the study area. Table 2 lists the other surface waters, the total area, and the affected area. These other surface waters are generally facilities, such as grassy swales, retention ponds and detention ponds, which are used for the attenuation and treatment of stormwater runoff from S.R. 574 or other impervious areas within the project study area. The other surface waters are within or adjacent to the S.R. 574 right-of-way.

Table 2 Other Surface Waters

Other Surface Waters	Total Area acres	Area of Impact acres
1	0.01	0.01
1A	1.67	0
1B	2.19	0
1C	0.14	0.05
1D	0.05	0
1E	0.08	0
1F	0.06	0
1G	0.04	0
1H	0.07	0
1J	0.35	0.003
2	0.01	0.01
3	0.009	0.009
4	0.006	0.006
5	0.009	0.009
6	0.10	0
7	0.30	0.19
8	0.36	0.32
9	0.53	0.42
10	0.01	0.01
11	0.007	0.007
12	0.01	0.01
13	0.01	0.01
14	0.02	0.02
15	0.04	0.04
16	0.02	0.02
17	0.34	0.19
18	0.08	0.05
19	0.006	0.006
20	0.02	0.02
21	0.01	0.01

4.3 Results of Wetland Rapid Assessment Procedure (WRAP)

WRAP analyses were conducted to assess wetland function and values for wetlands within the study area. WRAP incorporates concepts from the USFWS's "Habitat Evaluation Procedures" (HEP, 1980) and the SFWMD's Save Our Rivers Project Evaluation Matrix (SOR, 1992). The WRAP assessment utilizes a holistic approach to evaluate ecological communities based on the following variables: wildlife utilization, wetland overstory/shrub canopy of desirable species, wetland vegetative groundcover of desirable species, adjacent upland/wetland buffer, field indicators of wetland hydrology, and water quality input and treatment systems. Representative WRAP data sheets are located in Appendix C and the results are summarized in Table 1.

Eight wetlands and natural surface waters were identified within the project study area. Because of the similarities between many identified areas, WRAP analysis was conducted for four types: freshwater marshes, creeks, scrub-shrub wetlands, and borrow pits.

Of the wetlands with the highest scores, approximately 5 to 10 percent of their total area lies within the project's right-of-way. The highest rated wetland is Wetland 4. Wetland 4 received a score of 0.58 primarily due to the adjacent buffer available and connection to Baker Creek, i.e. enhanced hydrology. Wetland 6 received a score of 0.55. The adjacent habitat buffer, along with wildlife utilization contributed to the high score of this wetland.

4.4 Analysis of Potential Wetland Impacts

Potential impacts to existing man-made and natural wetlands associated with the proposed Build Alternative were determined. Potential impacts would result from the placement of fill and removal of vegetation, and/or the temporary impacts to wetland vegetation from construction activities.

Impact analyses were performed for the two alternatives of this project. A preferred alignment for the Build Alternative was identified in the Preliminary Engineering Report that will have the least impact while providing the necessary improvements. This Build Alternative along with the No-Build Alternative were analyzed in this report.

The No-Build Alternative would not impact wetlands within the project study limits. The Build Alternative would impact 2.649 acres of wetlands and 1.42 acres of other surface waters. Potential impacts for each wetland or other surface water range from less than 0.01 acres to 2.2 acres.

5.0 CONCEPTUAL MITIGATION ALTERNATIVES

The USACOE, FDEP, and the water management districts have established mitigation policies. Options for mitigating the loss of wetlands include mitigation banking, upland and/or wetland preservation, wetland restoration, enhancement, and creation. Mitigation in the form of a transfer of $82,281 (FY 2001/2002) per acre of impact to the FDEP is also available. These funds are used to finance mitigation programs managed by the water management districts.

Under current Environmental Resource Permit Regulations, mitigation for wetland impacts may be accomplished through preservation of upland or wetland habitats. A maximum ratio

of 60:1 (acreage preserved: acreage impacted) may be imposed (Basis of Review–SWFWMD). The amount of preservation required by the permitting agencies is dependent upon the quality of the system being impacted, versus the quality of the area being preserved. This measure would require purchase of a parcel of land by the FDOT and placement of the parcel into a perpetual conservation easement.

Mitigation for wetland impacts that will result from the construction of this project will be mitigated pursuant to Part IV Chapter 373, F.S. and 33 USC.s. 1344.

6.0 PERMITTING REQUIREMENTS AND COORDINATION

The USACOE, SWFWMD, and Hillsborough County regulate wetlands within the project study area. Other agencies including the USFWS, the United States Environmental Protection Agency (EPA), and FFWCC, review and comment on wetland permitting. It is anticipated that the following permits or authorizations will be required for this project:

Environmental Resource Permit (ERP), SWFWMD

Section 404 Dredge and Fill Permit, USACOE

National Pollutant Discharge Elimination System Permit (NPDES), FDEP

Hillsborough County Environmental Protection Commission Permit Review/ Authorization

7.0 CONCLUSIONS AND RECOMMENDATIONS

During the course of the PD&E Study, extensive assessments of wetland and environmental resources within the project corridor have been conducted. The primary goal of these tasks was to identify resources that occur within the proposed project limits. This information has aided project engineers in refining the proposed Build Alternative that will minimize environmental impacts within the project corridor. As a part of the PD&E Study, eight wetlands and 30 other surface waters have been identified, classified, and characterized within the study corridor.

The proposed Build Alternative would impact 2.649 acres of wetlands and natural surface waters, and 1.42 acres of other surface waters. The proposed Build Alternative includes all practicable measures to minimize impacts to the wetlands that may result from the project.

Mitigation for wetland impacts that will result from the construction of this project will be provided pursuant to Part IV Chapter 373, F.S. and 33 USC.s. 1344.

REFERENCES

- Carlisle, V.W. et. al 1995. Hydric Soils of Florida Handbook. Florida Association of Environmental Soil Scientists, Gainesville, Florida.

- Cowardin, L.M., V. Cater, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. US Department of the Interior, Fish and Wildlife Service, Office of Biological Services. Technical Publication FWS/OBS-79/31. 131pp.

- Environmental Laboratory. 1987. US Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. US Army Engineer Waterways Experiment Station, Vicksburg, MS.

- Federal Interagency Committee for Wetland Delineation. 1987. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. US Army Corps of Engineers, US Environmental Protection Agency, US Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Cooperative Technical Publication. 76pp.

- Florida Department of Transportation. 1999. Florida Land Use, Cover and Forms Classification System, Third Edition. 91 pp.

- Florida Natural Areas Inventory. 1997. Matrix of Habitats and Distribution by County of Rare/Endangered Species in Florida. 97pp.

- Miller, R.E., Jr., B. Gunsalus. 1997. Wetland Rapid Assessment Procedure (WRAP). South Florida Water Management District Technical Publication REG-001. 36pp.

- US Code of Federal Regulations, Title 50, Parts 17.11 and 17.12. October 1, 1997. Endangered and Threatened Wildlife and Plants. 37pp.

- US Department of Agriculture. 1989. Soil Survey of Hillsborough County, Florida. Soil Conservation Service, US Government Printing Office. 168 pp.

- Wunderlin, R.P. 1982. Guide to the Vascular Plants of Central Florida. University Presses of Florida, Tampa, Florida. 472pp.

Appendix A Wetland Location Maps

Appendix B Representative Wetland and Other Surface Water Photographs

Wetland 1
Facing South

Wetland 2
Facing South

Wetland 4
Facing Southeast

Wetland 6 Facing North

Wetland 8
Facing South

Other Surface
Water 1A
Facing Southeast

Other Surface
Water 1D
Facing north

Other Surface
Water 1H
Facing East

Appendix C Representative WRAP Data Sheets

Wetland No 1
South of Publix

Wetland Rapid Assessment Procedure

☑ Existing Conditions ☐ Proposed Conditions (Check one) (WRAP)

Application Number	Project Name	Date	Evaluator	Wetland Type
	MLK-574 to McI	1/12/00	Young	PEM1Fx

Land Use	FLUCCS Code	Wetland Acreage
Commercial/Road	641 Description: Freshwater Marsh	

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
1.5	N/A	0.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
1.0	2.05

* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2

Habitat Support / Buffer

Buffer type	(Score)	X (% of area)	=Sub Totals
Commercial	0.5	70	0.35
Wetland	1.5	20	0.3
Road	0	10	0
		TOTAL	0.65

Land use Category (LU)

Land use Category	(Score)	X (% of area)	=Sub Totals
Wetland	2.5	20	0.5
MD Comm	1.5	70	1.05
Road	1.0	10	0.1
		(LU) TOTAL	1.65

Pretreatment Category (PT)

Pretreatment Category	(Score)	X (% of area)	=Sub Totals
Wet detention	2.5	100	2.5
		(PT) TOTAL	2.5

WRAP Score
0.382

Field Notes:

Wildlife Utilization (WU)

glaucous (Quiscalus quiscula)
snowy egret (Egretta thula)
white ibises (Eudocimus albus)
} all observed flying over site, none landed in wetland

Wetland Canopy (O/S)

none – completely emergent and open water

Wetland Ground Cover (GC)

Ludwigia peruviana
Panicum repens
Thalia geniculata (outside study area)

Habitat Support / Buffer

buffered by commercial businesses (A-OK Insurance + CJ Auto Sales) as well as conservation easement area

Field Hydrology (HYD)

controlled by stormwater ponds from north (2 culverts) and skimmer elevation

Input & Treatment (WQ)

wet detention and wetland treatment (offsite)

etland 2
est of MacTotab)

Wetland Rapid Assessment Procedure

☑ Existing Conditions ☐ Proposed Conditions (Check one)

(WRAP)

Application Number	Project Name	Date	Evaluator	Wetland Type
	MLV - 18574 to MacI	7/12/00	Yoonie	PSS3Ch

Land Use	FLUCCS Code	Wetland Acreage
Commercial / Road	617 Description: Mixed wetland hardwoods	

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
1.0	1.5	1.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.0	1.2

* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2

Habitat Support / Buffer

Buffer type	(Score)	X (% of area)	=Sub Totals
RR	0	50	0
Road	0	50	0
		TOTAL	0.0

Land use Category (LU)

Land use Category	(Score)	X (% of area)	=Sub Totals
Road	1.0	50	0.5
Railroad	1.0	50	0.5
		(LU) TOTAL	1.0

Pretreatment Category (PT)

Pretreatment Category	(Score)	X (% of area)	=Sub Totals
Int Treat	1.5	80	1.2
Grass Swale	1.0	20	0.2
		(PT) TOTAL	1.4

WRAP Score

0.40

Field Notes:

Wildlife Utilization (WU)

potential habitat for some birds, but very urban, with little open space; but no wildlife observed...

Wetland Canopy (O/S)

Quercus nigra
Salix caroliniana
Acer rubrum
Myrica cerifera
Quercus laurifolia
Sambucus canadensis
Schinus terebinthifolius

Wetland Ground Cover (GC)

Ludwigia peruviana
Thelypteris sp.
Juncus effusus

Habitat Support / Buffer

wetland surrounded by RR tracks + MLK Blvd.

ld Hydrology (HYD)

Lemna sp.
culvert connection from north

nput & Treatment (WQ)

wetland treatment / grass swale

Wetland 4

Wetland Rapid Assessment Procedure (WRAP)

☑ Existing Conditions ☐ Proposed Conditions (Check one)

Application Number	Project Name	Date	Evaluator	Wetland Type
	MLK - PP&E Study	12/29/00	Young	PSS1C

Land Use	FLUCCS Code	Description	Wetland Acreage
Natural / Railroad ??	617	Mixed hardwood forest	

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
2.0	1.5	2.0

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.0	1.55

* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2

Habitat Support / Buffer

Buffer type	(Score)	X (% of area)	=Sub Totals
CSX RR	0	20	0
Nat	2.0	60	1.2
Pasture	1.0	20	0.2
		TOTAL	1.4

Land use Category (LU)

Land use Category	(Score)	X (% of area)	=Sub Totals
CSX RR	1.0	20	0
Natural	3.0	60	1.8
Pasture	1.5	20	0.3
		(LU) TOTAL	2.1

Pretreatment Category (PT)

Pretreatment Category	(Score)	X (% of area)	=Sub Totals
Grassy Swale	1.0	100	1.0
		(PT) TOTAL	1.0

WRAP Score 0.58

Field Notes:

Wildlife Utilization (WU)

Raccoon and deer tracks were observed within wetland. No individual species were observed.

Wetland Canopy (O/S)

Salix caroliniana Acer rubrum
Sambucus canadensis

Wetland Ground Cover (GC)

Pontederia cordata

Habitat Support / Buffer

Railroad adj to north boundary of wetland
Baker Creek to the west; rangeland to the south / east

Hydrology (HYD)

Appears to be seasonally inundated; no standing water was observed

Input & Treatment (WQ)

grassy swales

Wetland Rapid Assessment Procedure

☑ Existing Conditions ☐ Proposed Conditions (WRAP)

Wetland 6

Application Number	Project Name	Date	Evaluator	Wetland Type
	MLK-574 & MacI	1/21/99	YOUNG	PUBHx

Land Use	FLUCCS Code	Wetland Acreage
Ag/Commercial	530 Description: Reservoirs	

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
2.0	N/A	0.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.5	2.35

* The value of WQ is obtained by adding the TOTAL scores of Land use Category and Pretreatment category then dividing by 2

Habitat Support / Buffer

Buffer type	(Score)	X (% of area)	=Sub Totals
Comm	0	20	0
Road	0	20	0
Ag	1.5	60	0.9
			TOTAL
			0.9

Land use Category (LU)

Land use Category	(Score)	X (% of area)	=Sub Totals
Comm	1.0	20	0.2
Road	1.0	20	0.2
Pasture	3.0	60	1.8
		(LU) TOTAL	2.2

Pretreatment Category (PT)

Pretreatment Category	(Score)	X (% of area)	=Sub Totals
Wet detention	2.5	100	2.5
		(PT) TOTAL	2.5

WRAP Score 0.55

Field Notes:

Wildlife Utilization (WU)

Brown pelican — Great Blue Heron
Cormorants — Snowy egrets (roosting or neg to east) outside study area

Wetland Canopy (O/S)

Myrica cerifera

tland Ground Cover (GC)

ypha spp. — Panicum hemitomon
uncus effusus — Hydrocotyle umbellata

t Support / Buffer

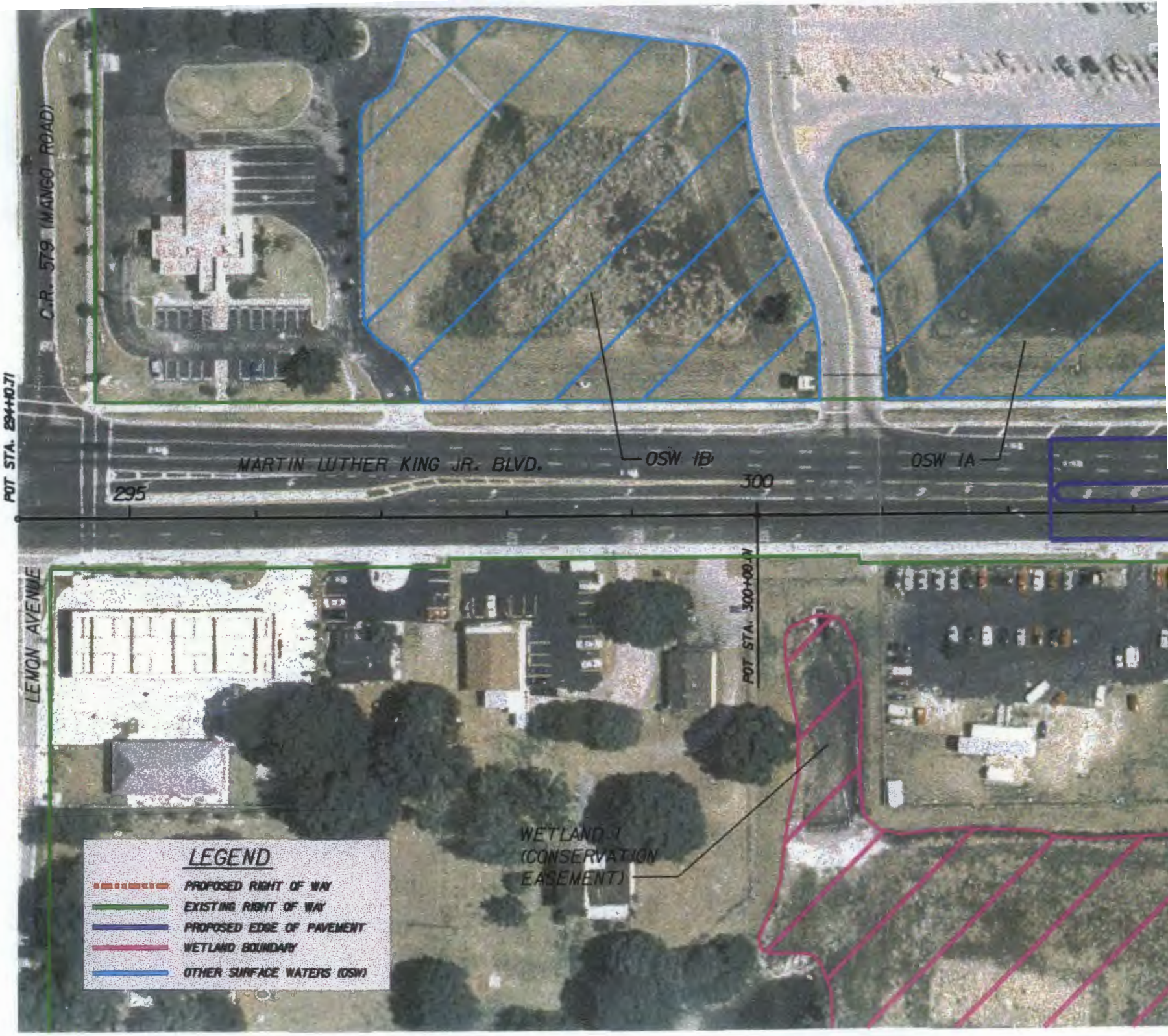
W Trucking to east
ture to north + surrounding borrow pit
d to south and west

rology (HYD)

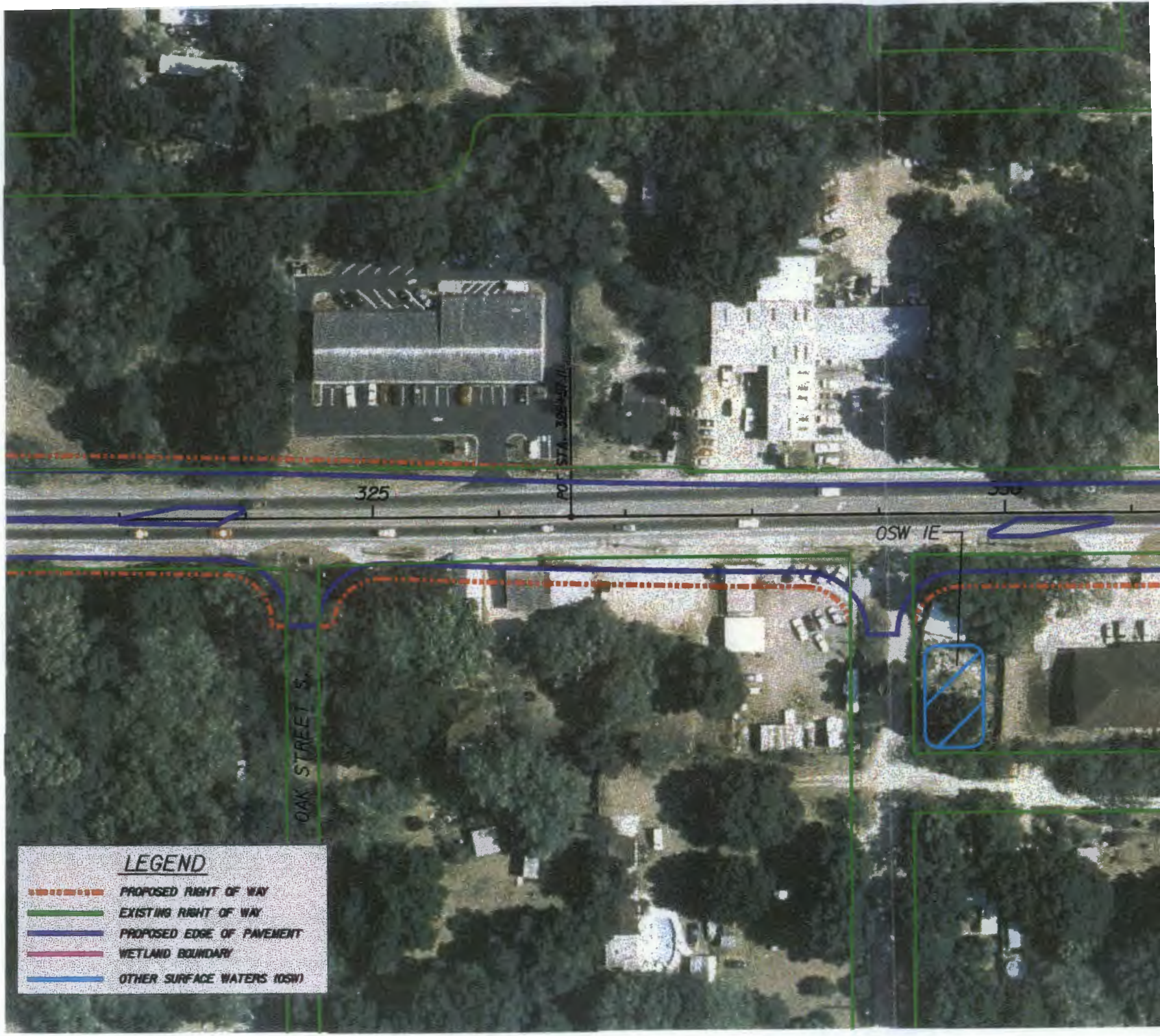
ow pit → completely inundated

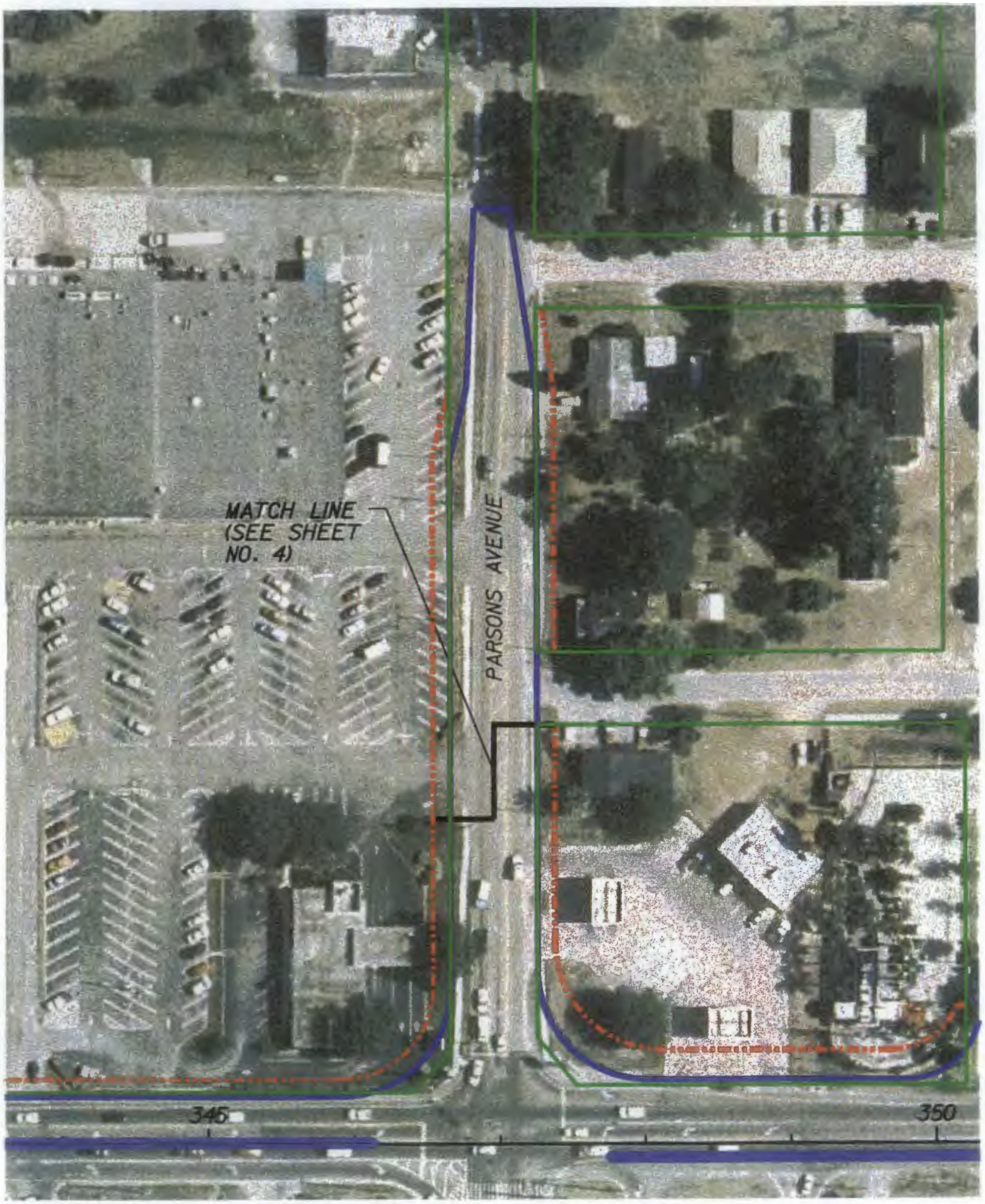
Treatment (WQ)

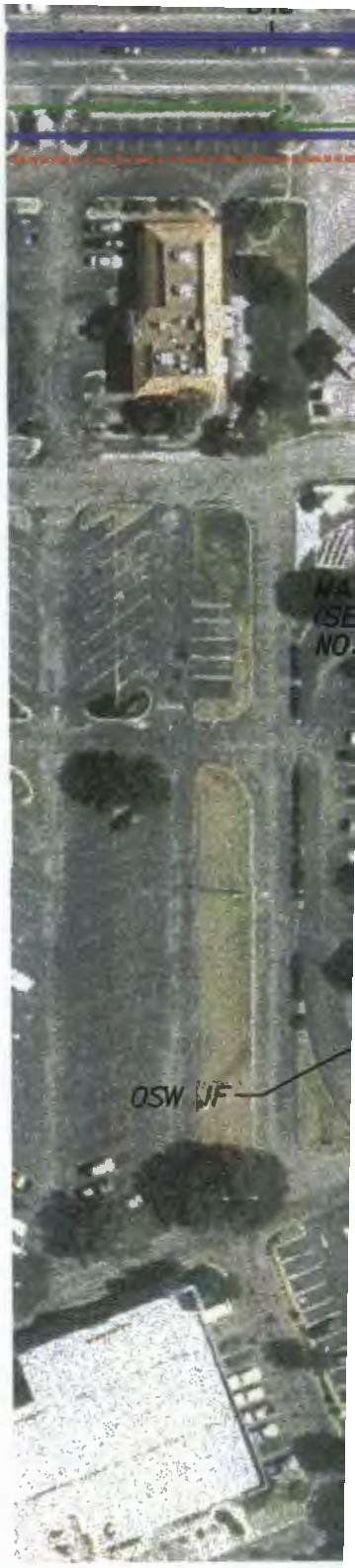
t detention

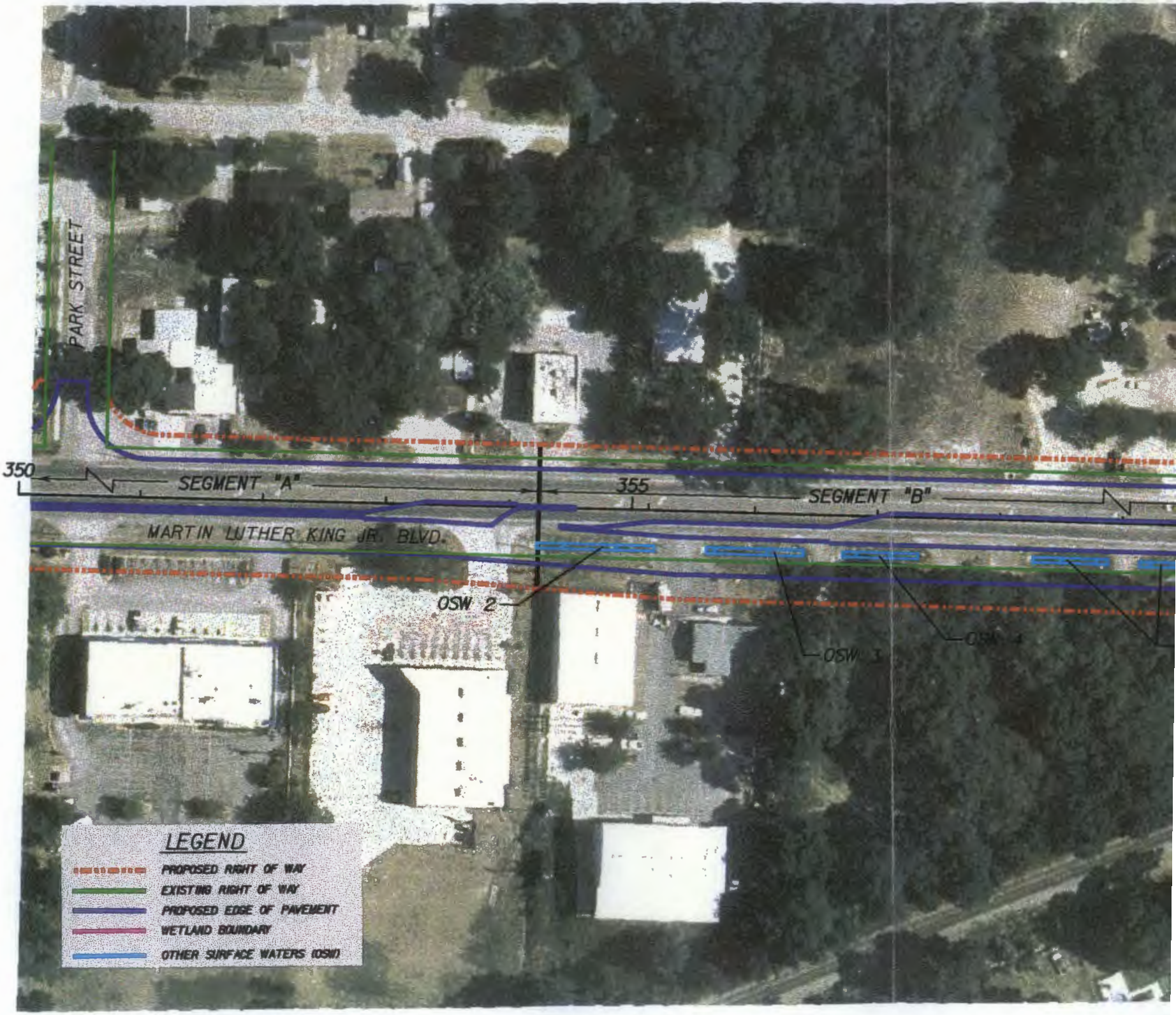

C.R. 579 (MANGO ROAD)
POT STA. 294+10.71
MARTIN LUTHER KING JR. BLVD.
295
300
OSW 1B
OSW 1A
LEMON AVENUE
POT STA. 300+08.N
WETLAND 1
(CONSERVATION
EASEMENT)
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)


OSW 1C
310
315
LAKE DRIVE
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)

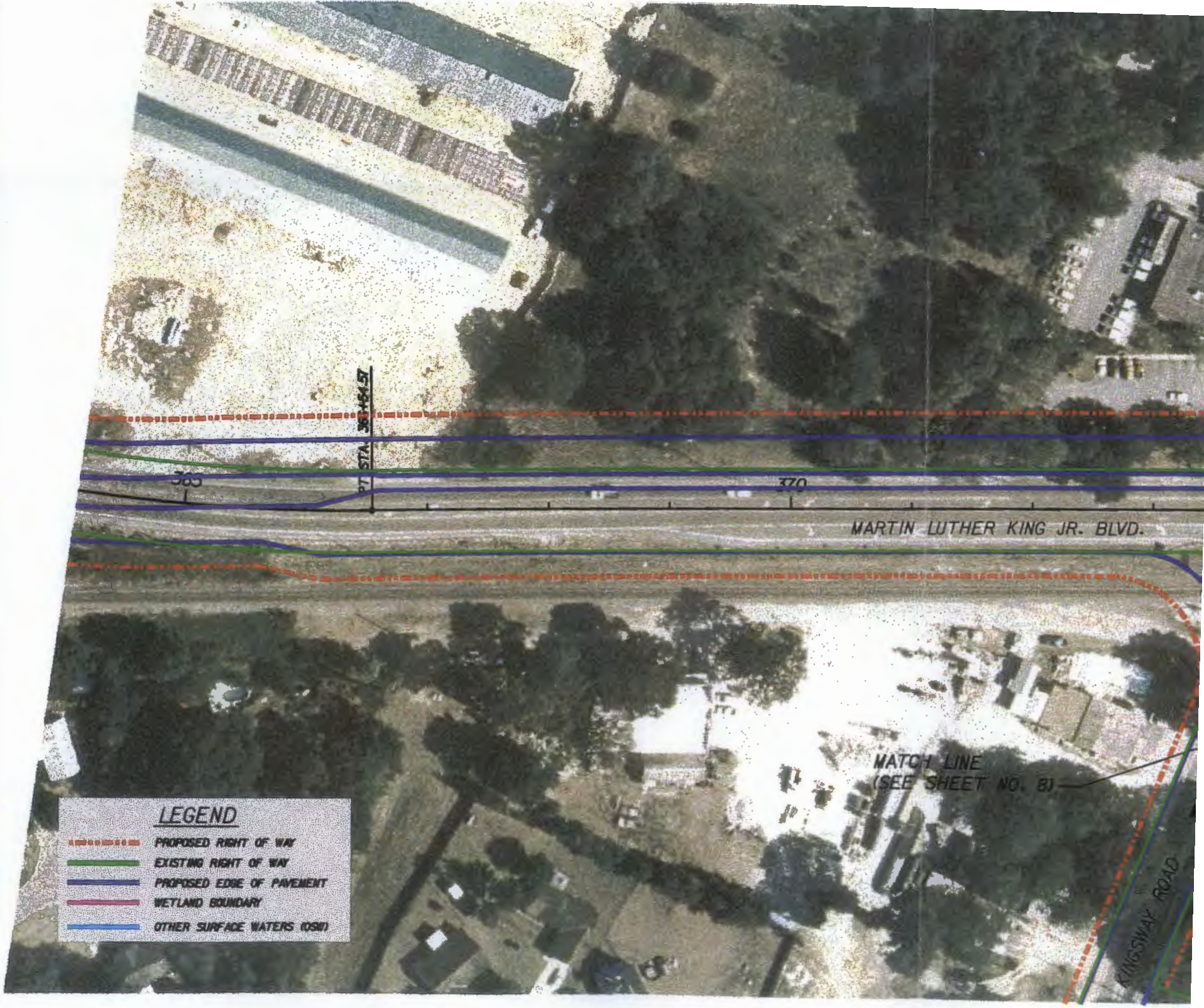

325
OSW 1E
OAK STREET S.
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)

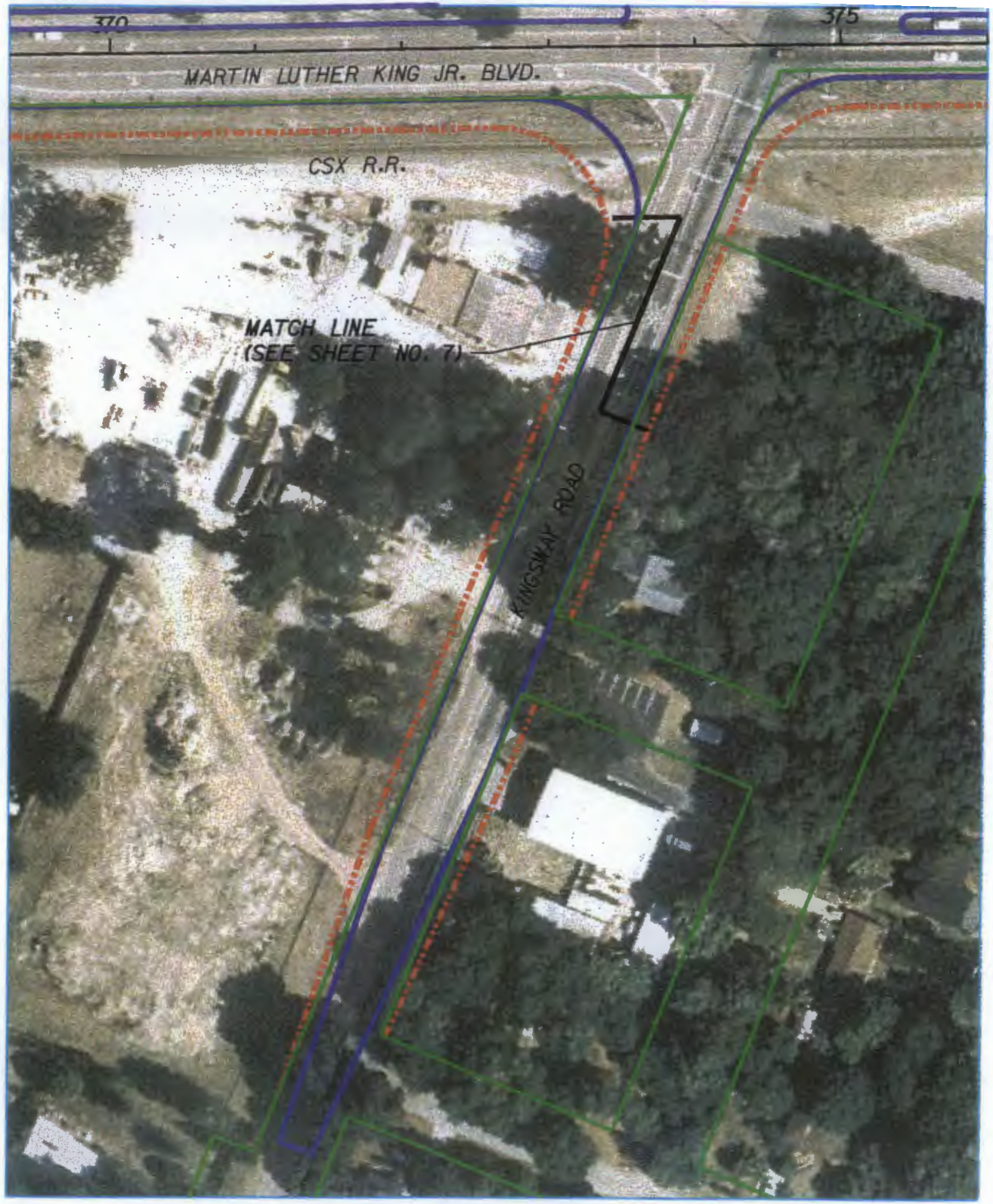

MATCH LINE
(SEE SHEET
NO. 4)
PARSONS AVENUE
346
350


OSW

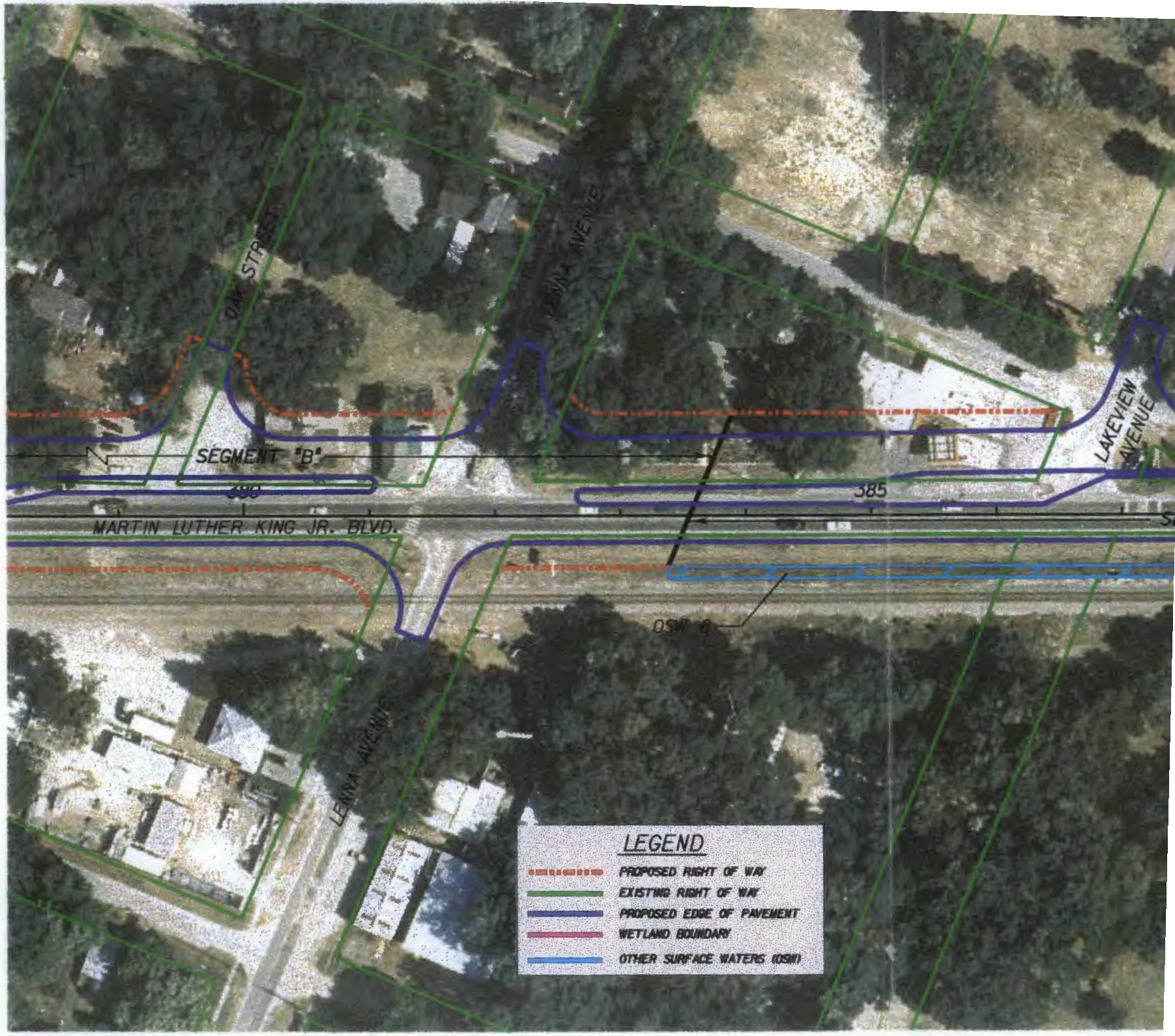

PARK STREET
350
SEGMENT "A"
355
SEGMENT "B"
MARTIN LUTHER KING JR. BLVD.
OSW 2
OSW 3
OSW 4
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)

5-LANE

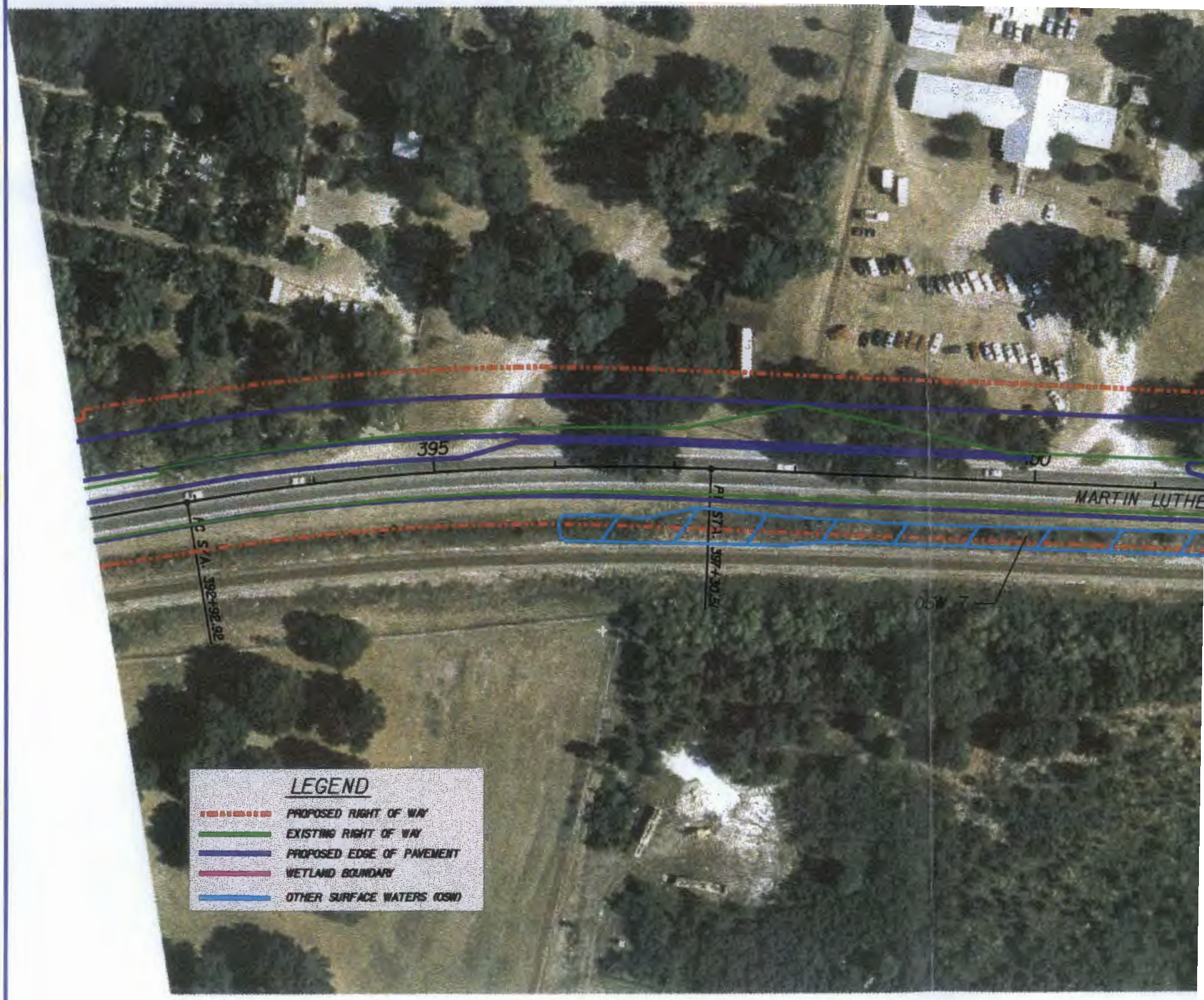

PT STA. 363+84.57
365
370
MARTIN LUTHER KING JR. BLVD.
MATCH LINE
(SEE SHEET NO. 8)
KINGSWAY ROAD
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)

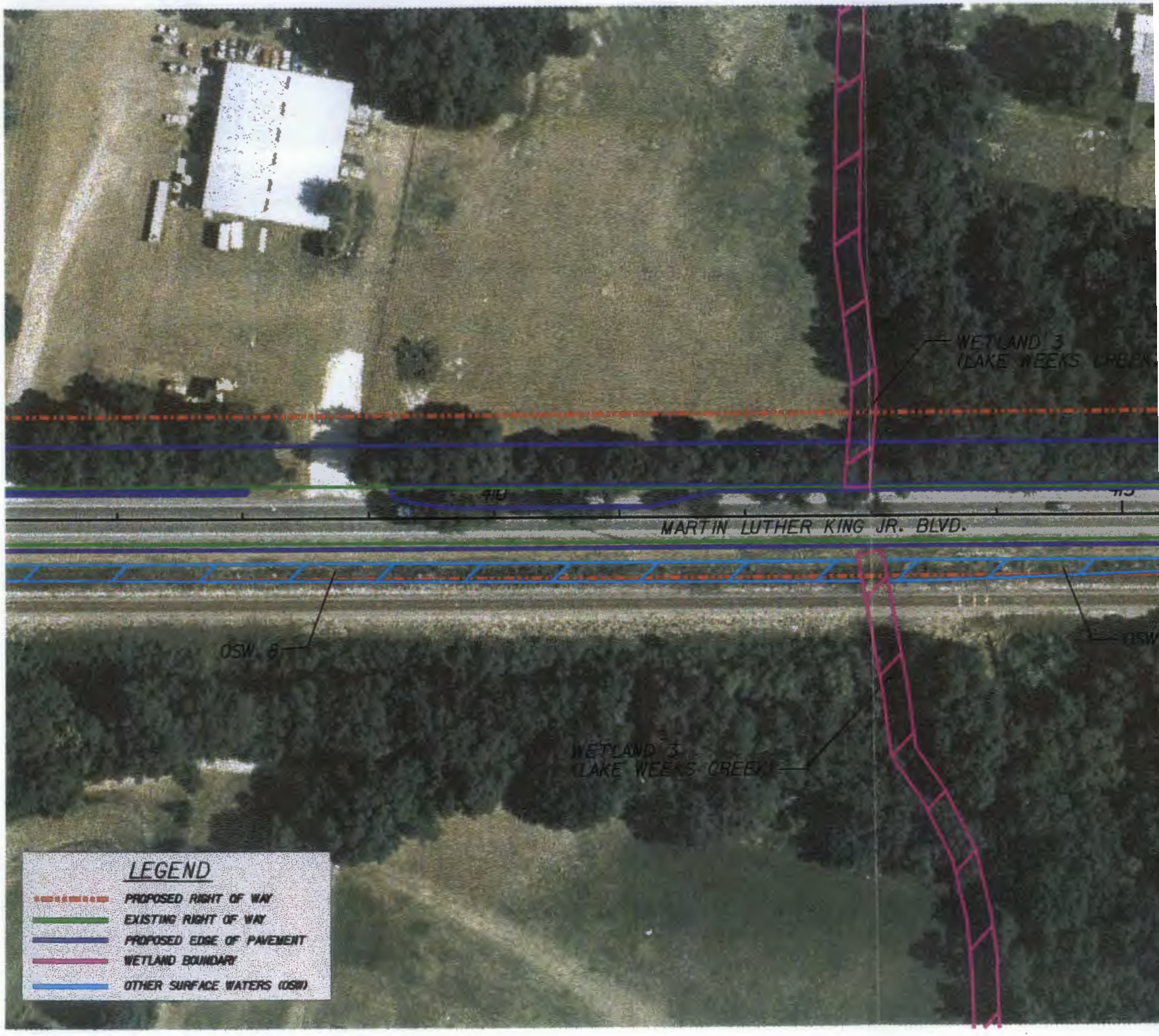

370
375
MARTIN LUTHER KING JR. BLVD.
CSX R.R.
MATCH LINE
(SEE SHEET NO. 7)
KINGSWAY ROAD


MATCH LINE
(SEE SHEET NO. 7)
MARTIN LUTH

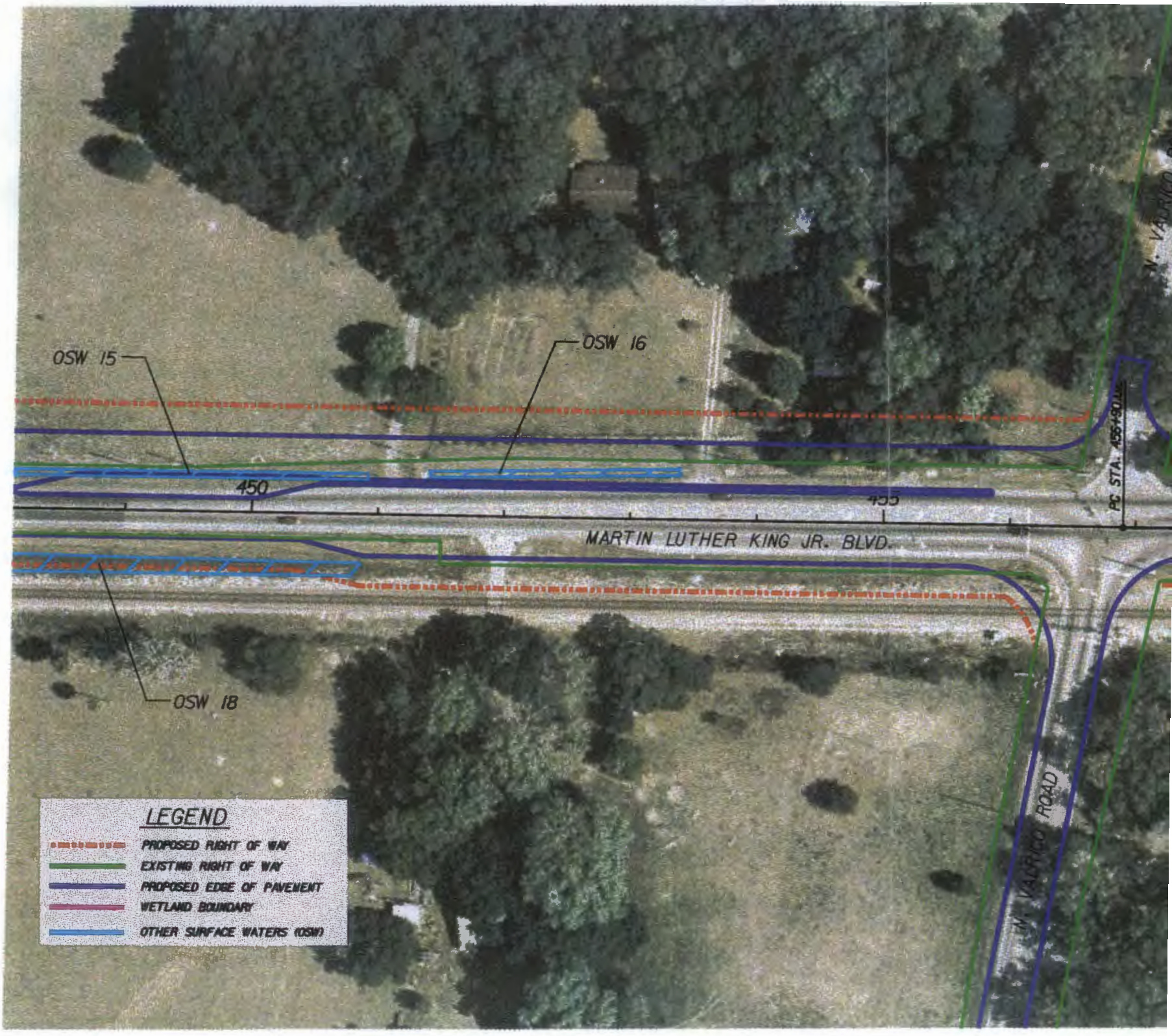


4-LANE SUBURBA


395
MARTIN LUTHE
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)


WETLAND 3
(LAKE WEEKS CREEK)
MARTIN LUTHER KING JR. BLVD.
OSW. 8
WETLAND 3
(LAKE WEEKS CREEK)
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)


WETLAND 8
(BAKER CANAL)
OSW 11
OSW 12
435
440
WETLAND 8
WETLAND 8
(BAKER CANAL)


OSW 15
OSW 16
OSW 18
450
455
MARTIN LUTHER KING JR. BLVD.
PC STA. 455+90
N. VALRICO ROAD
LEGEND
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED EDGE OF PAVEMENT
WETLAND BOUNDARY
OTHER SURFACE WATERS (OSW)


WETLAND 6
WETLAND 5
490
MARTIN LUTHER KING JR. BLVD.
495
WETLAND 5
WETLAND 7