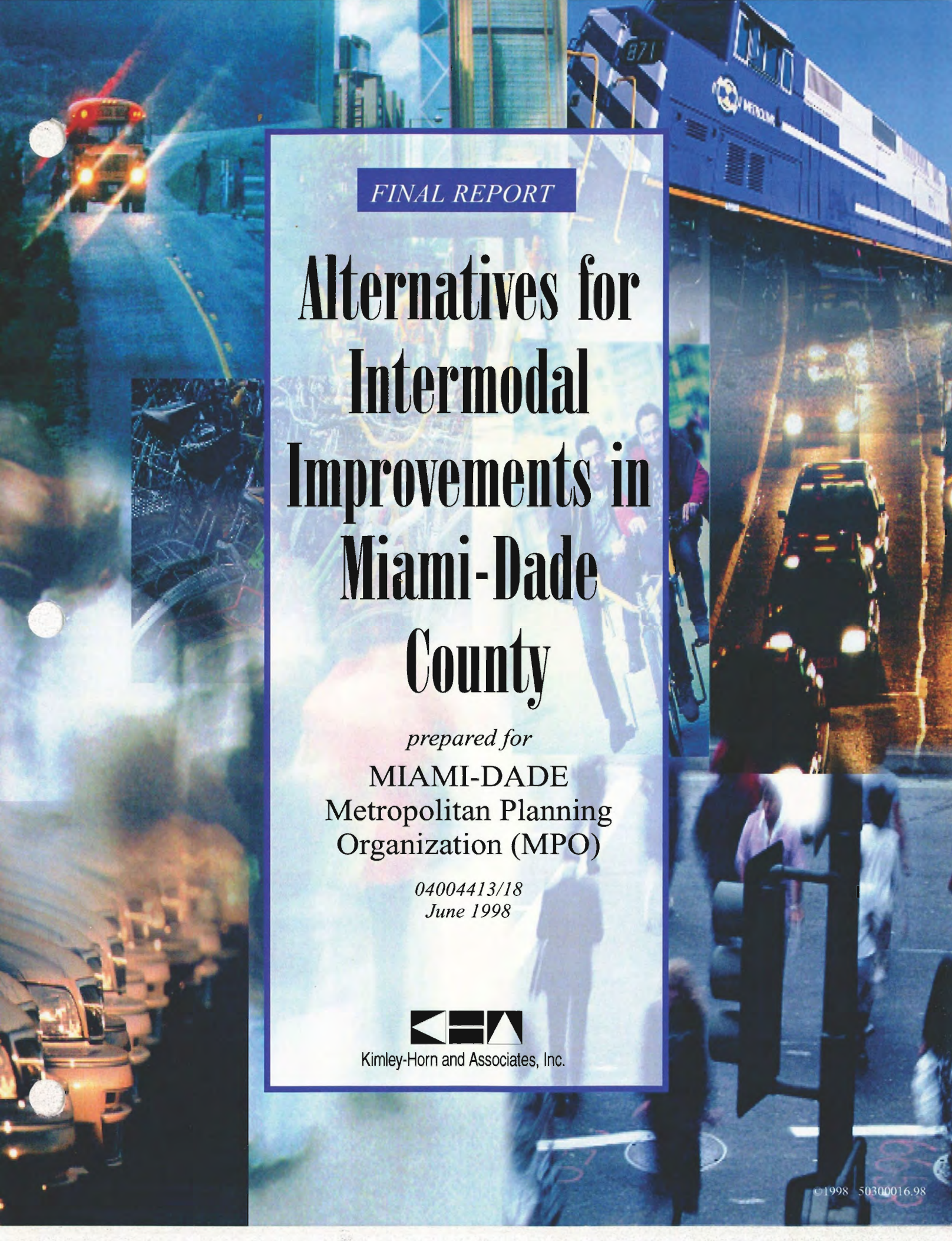




FINAL REPORT

Alternatives for Intermodal Improvements in Miami-Dade County

prepared for
**MIAMI-DADE
Metropolitan Planning
Organization (MPO)**

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Kimley-Horn and Associates, Inc.

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Executive Summary

Mature U.S. cities such as New York, Boston, and Chicago have a long history of implementing and operating multiple modes of transportation. These have included bus, fixed guideway, intercity rail, taxi, and many other variations in providing transportation services. In contrast, the Miami-Dade urban area (which was established as a city just over 100 years ago) has only recently initiated development of an integrated multimodal transportation system, with the first major steps being the opening of Metrorail in the mid-1980s. With the expansion of conventional bus service, addition of shuttle/feeder routes, such as the KAT service, construction of Metrorail and HOV lanes, the downtown Metromover system, the South Miami-Dade Busway, Tri-Rail, and plans for such innovative transportation facilities as the Miami Intermodal Center (MIC), Miami-Dade County has demonstrated its support and commitment to multimodal implementation and development.

However, neither the mature transportation systems of the older cities nor the newer systems such as the one being developed in Miami have yet embraced and implemented advanced intermodal facilities that can smooth transfers from one mode to another. Miami-Dade County is setting the pace by developing a plan for implementation of intermodal facilities on a countywide comprehensive basis. This effort serves the need of enhancing the existing conditions of public transportation locations, where shelters, travel information, and other basic amenities may be absent or sub-standard.

What is an Intermodal Facility?

An intermodal facility is any connection point between two or more transportation modes, with amenities that make the transfer between the modes as direct, convenient, pleasant, and safe as possible.

Study Objectives

This study accomplished four objectives toward realizing an integrated multimodal transportation network. These objectives were:

- to document the perception and acceptance of transfer by users.
- to provide public agencies with a “cookbook” guide to integrating intermodal facilities into their community.
- to select, prioritize, and consider 25 locations for intermodal facilities in Miami-Dade County.
- to develop cost information estimates needed to identify potential grant and/or dedicated funding sources.

Existing Metrorail, Metromover, and Tri-Rail stations were not considered in the initial evaluation of candidate sites because these locations already meet the basic criteria for intermodal facilities.

What will Intermodal Facilities Provide for My Community?

Intermodal facilities provide several benefits for the urban community. These could include, but are not limited to:

- Improve the image of transit in the region: Intermodal facilities should make the transit system more visible, providing a positive image that will increase public awareness of transit, generate regional pride, and provide a model for similar projects. A positive change in the image of transit locations will encourage travel by public transportation as opposed to the private automobile.
- Improve the quality of transit service: Intermodal facilities should provide safe, secure, and attractive passenger waiting areas with pedestrian amenities. In some cases, these intermodal facilities can also serve basic commuter shopping needs through joint

public/private ventures. Amenities could include dry cleaning, ATM machines, or minor grocery items. These amenities would serve to decrease the number of trips required by patrons, and provide added incentive to use public transportation.

- Promote accessibility of the intermodal facility and the modes it serves: An intermodal facility should be easy to access and available to all citizens, including the disabled and elderly.
- Promote economic development for the region: User amenities for intermodal facilities can include public/private joint ventures and multi-use developments. A network of intermodal facilities can provide an appeal for tourists to use the transit system. In addition, intermodal facilities should improve the economic return to bus and rail operators through increased ridership and revenues.

Agency Coordination

An integral part of implementing and operating intermodal facilities involves coordination with various public agencies. In addition, some locations require interface with the private sector as well. Intermodal facility locations must be selected with regional travel demands in mind. The facilities need to support a variety of modes, which may include automobile, bus, rail, and boat. These issues primarily involve the Miami-Dade Metropolitan Planning Organization (MPO), Florida Department of Transportation (FDOT), Miami-Dade Public Works Department, and Miami-Dade Transit Agency (MDTA), among others.

In addition, local groups, citizens, and businesses should be involved in the aesthetic value of the intermodal facility in their community. Each intermodal facility should capture an element of its surrounding culture. Involvement from Art in Public Places, the Transportation Aesthetics Review Committee (TARC), and local citizen input can serve to make intermodal facilities places of local interest.

Study Process

The process of identifying potential sites included a thorough review of three source documents:

- The Mobility Management Process/Congestion Management System (MPO, May 1996)
- The Metro-Dade Bicycle Facilities Plan (MPO, July 1995)
- The 1996 Transit Development Program - TDP (Miami-Dade Transit Agency - MDTA, June 1996)

From these documents, the general criteria for intermodal facilities were established and initial candidate locations for the sites were identified. The 85 locations selected as the universe of potential intermodal facility sites underwent a process of successively narrowing the number of locations by comparing the sites against the established criteria. This review process resulted in a final total of 25 new and existing facilities proposed for further development as intermodal facilities. Implementation of these sites is suggested to occur on a defined timetable to ensure effective and appropriate deployment of the sites on a long-term basis.

Recommendations

The evaluation criteria and methodology presented in this study should become part of a countywide policy for intermodal facility development. Specific steps for implementing these intermodal facilities include programming the first 25 sites through the Transportation Improvement Program (T.I.P.) process. This step will also include preparation of grant applications as potential funding becomes available. Upon funding of various projects, local area design studies should be performed for each site, in order of priority.

As a "big picture" consideration, the MPO may develop a long-range plan and policy to integrate transportation facility development and land use

plans that support transit-oriented development in an effort to create “livable communities” concepts throughout Miami-Dade County.

Transportation Planning Council Review

On May 11, 1998, the recommendations of this report were presented to the Transportation Planning Council (TPC). The council unanimously voted to approve these recommendations.

1.0 Introduction

This study was commissioned by the Metropolitan Planning Organization (MPO) Governing Board in the 1997 *Unified Planning Work Program* under Objective C: Intermodal Transportation Planning. The project was identified as Task 3.09, Alternatives for Intermodal Improvements in Miami-Dade County. The primary objective of this study was to identify physical locations that may be developed as intermodal facilities and to improve transfer conditions between the different transportation modes.

The primary objective was divided into three distinct elements. The first element was documenting transit user behavior with a Perception and Acceptance of Transfers Memorandum (Chapter 4). The second element was a memorandum that would provide any agency with guidelines to developing intermodal facilities (Chapter 5). Finally, the third element was the selection of 25 potential intermodal facility locations in Miami-Dade County.

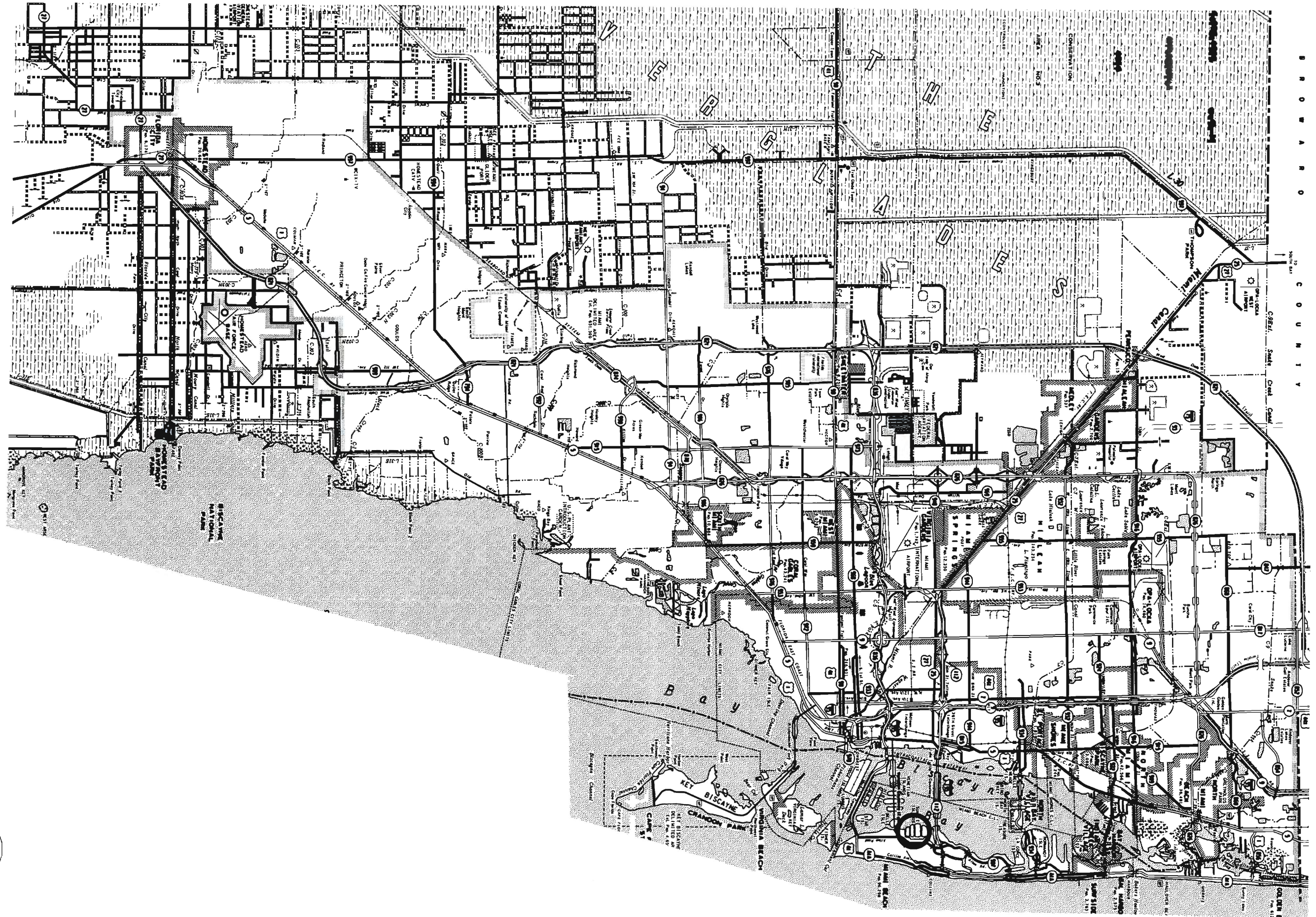
This study has relied upon and cross-referenced recommendations from three major transportation-related documents adopted by Miami-Dade County. When looking at these referenced documents, the study focused its attention on their goals, processes, and results relevant to intermodal facilities. These documents are:

- The Mobility Management Process/Congestion Management System (MPO, May 1996). Among others, its goals were: a) to improve the efficiency of the transportation system; b) to become an integral part of the land use and transportation planning process; c) to improve the mobility of people and goods throughout the county. The primary purpose of this process is to evaluate transportation alternatives along congested corridors before adding highway lanes or implementing any

project that may increase the physical capacity of a roadway.

- The Metro-Dade Bicycle Facilities Plan (MPO, July 1995). Regarded by FHWA as nationwide's "Best Practice" (FHWA, *Bicycle and Pedestrian Planning under ISTEA*; Publication No. FHWA-PD-97-053; July 1997; pages 64-66). Goals of the study were, among others: a) assess the existing conditions for cyclists in Miami-Dade County; b) evaluate specific links for improvement based on the measure of roadway suitability; c) increase awareness about bicycles as a transportation mode in combination with other modes of transportation.
- The 1996 Transit Development Program - TDP (Miami-Dade Transit Agency - MDTA, June 1996). It presented a 5-year Recommended Service Plan (RSP) of proposed transit improvements for the period ending in the year 2001. The purpose of the TDP is to provide decision-makers with a guidance tool for transit system development. The TDP encompasses many sound planning practices to enable decision-makers to achieve local goals and objectives.

The study area includes the entirety of Miami-Dade County served by any mode of public transportation. The study area map is illustrated in Figure 1-1.



Key Study Issues and Assumptions

A number of assumptions were made to provide guidance as the study was developed and a framework for structuring the project deliverables:

- This study was conducted at a general planning level; future implementation actions will need to address specific design and operational issues and include more detailed capital and maintenance cost estimates. However, this study gives local decision-makers the tools they need now to begin planning and programming funds to implement alternatives for intermodal facilities.
- The operational and physical improvements identified as a result of analyses conducted during this study represent concepts that support cost projections and programming of funds. No public or private agencies have made decisions on actually implementing the service or facility changes proposed within this study. Development of final design plans and construction documents will still be required.
- No architectural or aesthetic analysis was conducted for the intermodal facilities beyond considering the spatial arrangements of basic elements. Integrating the proposed facility into the aesthetic, functional, and social fabric of the surrounding land uses and the community is beyond the scope of this study.
- Cost projections for the capital improvements proposed in this study have been estimated using vendor's lists for those proposed items along with experience on other similar projects.
- This study does not make use of any LOS measures as an evaluation criteria for pedestrianways, or roadways.

The basic physical elements proposed for each facility identified in the site portfolios located in the appendix of this study are conceptual layouts only based on visual reviews in the field. No boundary, topographic, or elevation surveys were

performed. Detailed designs were not developed and the elements of traditional architecture such as aesthetics, land planning, and integration with the community were not thoroughly considered as part of this early planning study stage. Street furniture, and other proposed functional elements shown for each facility are a preliminary approach to basic need solving and are not intended to be associated with aesthetic norms and/or architectural design theory. This study acknowledges limitations of scope and seeks only to create a planning tool and policy decision guide for initiating the implementation of intermodal facilities in Miami-Dade County. It recognizes the need for further comprehensive design by both engineering and architectural disciplines during future stages of implementation.

2.0 Coordination

An intermodal facility may be defined as a set of amenities that are provided to make the transfer between or among modes of transportation as direct, convenient, pleasant, and safe as possible. Given the interactive nature of these facilities with surrounding land uses, site characteristics, and the various transportation modes served, the selection, approval, and implementation process usually involves input and cooperation of multiple agencies and operational entities. These may typically include cities, county agencies, Metropolitan Planning Organizations (MPOs), transportation authorities, the State Department of Transportation and others (such as the federal government which may provide partial funding). As a result, this study required coordination with the Miami-Dade MPO, several county agencies, and the Florida Department of Transportation (FDOT).

Participating agencies for this intermodal alternatives study included the following:

- Miami-Dade Metropolitan Planning Organization
- Miami-Dade Transit Agency
- Miami-Dade Seaport Department
- Miami-Dade Aviation Department
- Miami-Dade Department of Public Works
- Florida Department of Transportation - District Six
- Municipalities
 - City of Miami Beach
 - City of Coral Gables

2.1 Project Coordination Process

Coordination among the various agencies included initial contacts to describe the study, provision of written drafts of deliverables, and meetings individually or jointly among some of the critical implementing agencies as needed.

Coordination activities with these agencies are summarized below:

- **Metropolitan Planning Organization.** In addition to producing numerous reports and documents related to this project, the MPO provided constant feedback in addressing the issues relevant to the study. Several meetings and focused workshop sessions were held with MPO staff and the consultant during performance of the study.
- **Miami-Dade Transit Agency.** The MDTA provided information regarding bus routes, transfer and layover locations, existing park-n-ride and kiss-n-ride demand, and Metrorail / Tri-Rail activity.
- **Miami-Dade Seaport Department.** This agency was contacted, but because none of the potential intermodal sites were located near the seaport, coordination with this Department was limited.
- **Miami-Dade Aviation Department.** This agency was contacted, but because none of the potential new intermodal sites were located near the Miami International Airport, coordination with this Department was limited. It is recognized, however, that planning for the Miami Intermodal Center (MIC) is well underway and that this large and unique facility will continue toward implementation under the sponsorship of the Florida Department of Transportation, Miami-Dade County and the federal government. Since this is a well recognized intermodal facility in process of development, it has not been further addressed here.
- **Miami-Dade Department of Public Works.** Coordination with the Department was necessary for developing an appropriate implementation plan.
- **Florida Department of Transportation - District Six.** Coordination with the

Department was necessary for the data collection and conceptual layout of the potential intermodal facilities.

2.2 Other Studies and Reports

In addition to the three major focal studies prepared by the MPO and Miami-Dade County mentioned earlier, a substantial number of other studies contained information relevant to this project. Following is a listing of studies consulted for this project:

- MPO Urban Planning Work Program for Transportation
- MDTA On-Board Survey Analysis
- Miami-Dade Transit Route Map
- MDTA Transit Development Program (TDP)
- MDTA Northeast Miami-Dade Transit Improvement Study
- Flagler Marketplace Master Plan
- Miami-Dade County Public Transit Management System
- Miami-Dade County Congestion Management System
- Miami-Dade County Intermodal Management System
- Miami-Dade County Concurrency Management System
- Miami-Dade County Aerial and Map Atlas (Redi-Map)
- I-95 Multimodal Study Working Papers and Data
- Miami-Dade West Flagler Street Corridor Study
- Bicycle Facilities Plan for Miami-Dade County
- Comprehensive Development Master Plan
- South Miami-Dade Busway
- MPO Mobility Management Process/Congestion Management System

2.3 Transportation Aesthetics Review Committee (TARC) Involvement

The Transportation Aesthetics Review Committee (TARC) is a relative newcomer to the transportation facilities delivery process. However, the role of this group is an important one that will, in due course, result in positive impacts on projects throughout the Miami-Dade County community. As indicated by this excerpt from the TARC mission statement, this committee will endeavor to increase the community's pride in their transportation facilities as befits a city that annually hosts millions of visitors from every corner of the globe.

"The mission of the TARC is to ensure that high visibility transportation projects are reviewed for their aesthetic impact on the community before contracts are finalized." A copy of the entire TARC mission statement is included in Appendix A.

For this study, it was concluded that a review by the TARC group would be premature due to the following: 1) this project's conceptual plans are very preliminary being developed primarily for planning and programming purposes, and 2) the design process has not yet been initiated.

It is strongly suggested, however, that input by the TARC committee be sought at the next stage of this project, not only during design, but also during development of the project scope so that aesthetics, community land use interactions, and localized cultural influences may be appropriately considered in a comprehensive engineering and architectural design uniquely associated with each site and intermodal facility. Examples of unique projects developed in other communities are presented in Figures 2-1 through 2-4.

Figure 2-1



Source: *A Celebration of Community: Dallas Area Rapid Transit Station Art and Design Program*; DART, 1996.

Figure 2-2



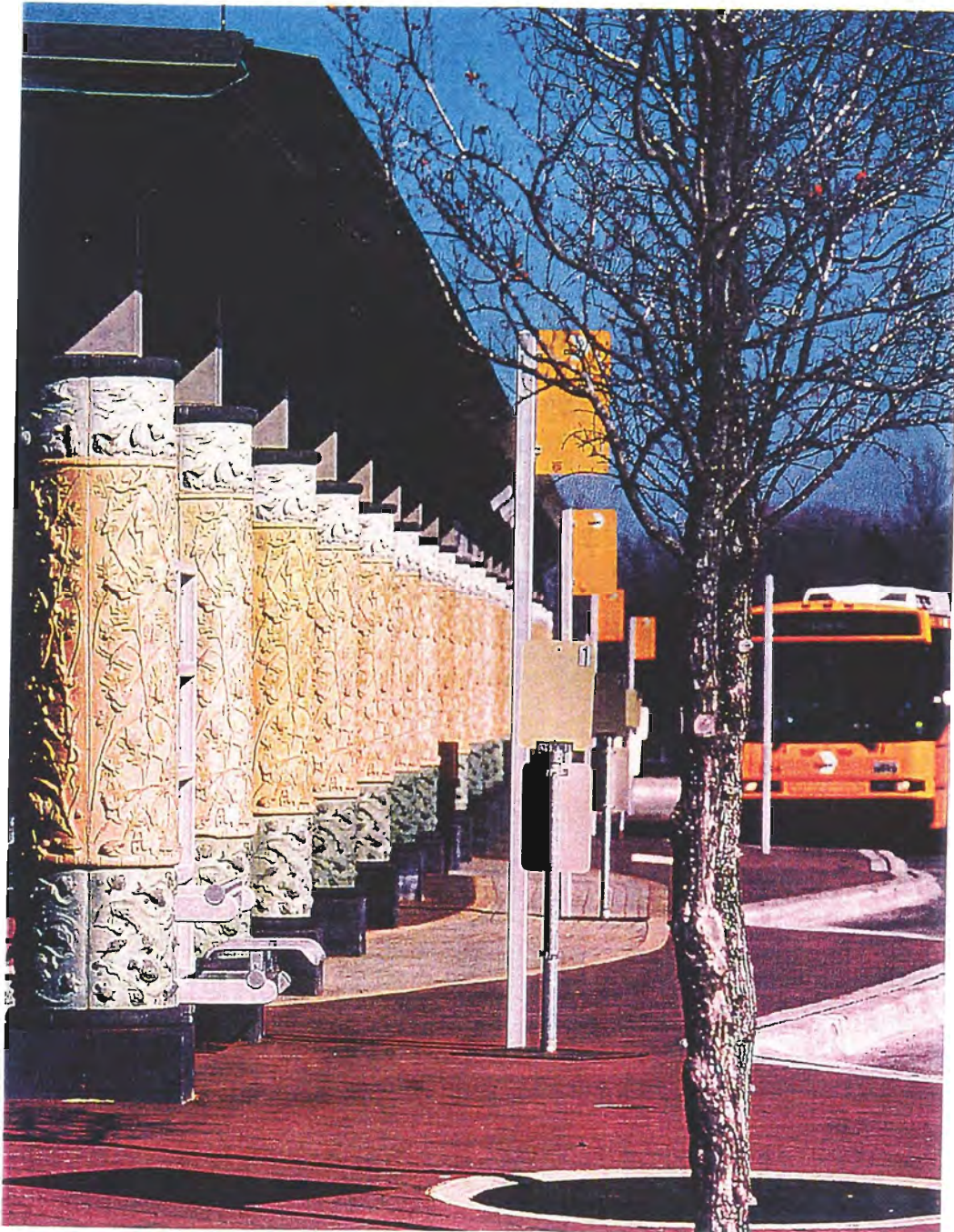
Source: *A Celebration of Community: Dallas Area Rapid Transit Station Art and Design Program*; DART, 1996.

Figure 2-3



Source: *A Celebration of Community: Dallas Area Rapid Transit Station Art and Design Program*; DART, 1996.

Figure 2-4



Source: *A Celebration of Community: Dallas Area Rapid Transit Station Art and Design Program*; DART, 1996.

2.4 FDOT Policy Statement

According to the latest version of the Transportation Design for Livable Communities, *"It is the policy of the Florida Department of Transportation to incorporate Transportation Design for Livable Communities (TDLC) features into the State Highway system where appropriate and feasible."* Appendix A contains the complete text of this policy, in draft at this time, for reference in regard to this study.

3.0 Purpose and Need

3.1 Project Overview/Goals

The purpose of this study was to develop an intermodal plan for Miami-Dade County which identifies the most appropriate locations for new intermodal facilities and improves transfer conditions between existing transportation modes. This study falls under Objective "C," Task 3.09 ("Alternatives for Intermodal Improvements in Miami-Dade County") of the adopted *UPWP for Transportation, 1997* compiled by the MPO.

Study Area Description

The metropolitan urban area of Miami-Dade County is the general framework of this study. It comprises an area of almost 2,000 square miles on the southeast coast of Florida. The study area boundaries are as follows: Broward County to the north; Monroe County to the south and southwest; Collier to the west and northwest; and the Atlantic Ocean to the east.

Metropolitan Miami-Dade County is composed of incorporated and unincorporated areas. As of 1997, the incorporated area comprised 27 municipalities.

Population Characteristics

The predominant unit of analysis used in the Transit Development Program (TDP) is the Traffic Analysis District (TAD), composed of multiple Traffic Analysis Zones (TAZs). There were 88 TADs for Miami-Dade County further disaggregated into 1164 TAZs.

By 1990, Miami-Dade County had a population of 1,901,568. Total projected population by the year 2000 is 2,183,000. This represents a 14.8% increase from 1990 levels (*1996 Transit Development Program*, Metro-Dade Transit Agency, June, 1996). Figure 3-1 presents the year 2000 projected population by TAD. This graphic is a good indicator of the geographic locations of

population densities sufficient to potentially support transit operations.

Transit-Dependent Population

Assuming automobile ownership levels remain constant between 1990 and 2000, an estimated 316,000 residents are projected to be transit-dependent in the year 2000, representing over 14% of the total population (*1996 Transit Development Program*, Metro-Dade Transit Agency, June 1996). The geographic location of transit-dependent populations expected in year 2000 by TAD is presented in Figure 3-2.

More riders use transit for commuting to/from work than for any other trip purpose. It is therefore important in planning transit service and supporting facilities to know where concentrations of employment currently exist and where will they occur in the future. For Miami-Dade County, the geographic concentrations of employment expected to occur by Year 2000 are illustrated by TAD in Figure 3-3.

Another important factor to be considered in the transit facilities and operations planning process is the number and location of transit trip origins and destinations that need to be served. The transit trip mode split for trip origins and destinations is presented graphically by TAD in Figures 3-4 and 3-5.

Most of the locations where intermodal facilities are needed are within the area currently served by existing transit operations. The service areas for Metrobus, Metrorail, and Metromover are shown in Figures 3-6, 3-7, and 3-8, respectively. It was expected that the universe of potential sites for intermodal facilities would be found primarily within the boundaries of these service areas.

Figure 3-1
Year 2000 Projected Population
by Traffic Analysis District (TAD)

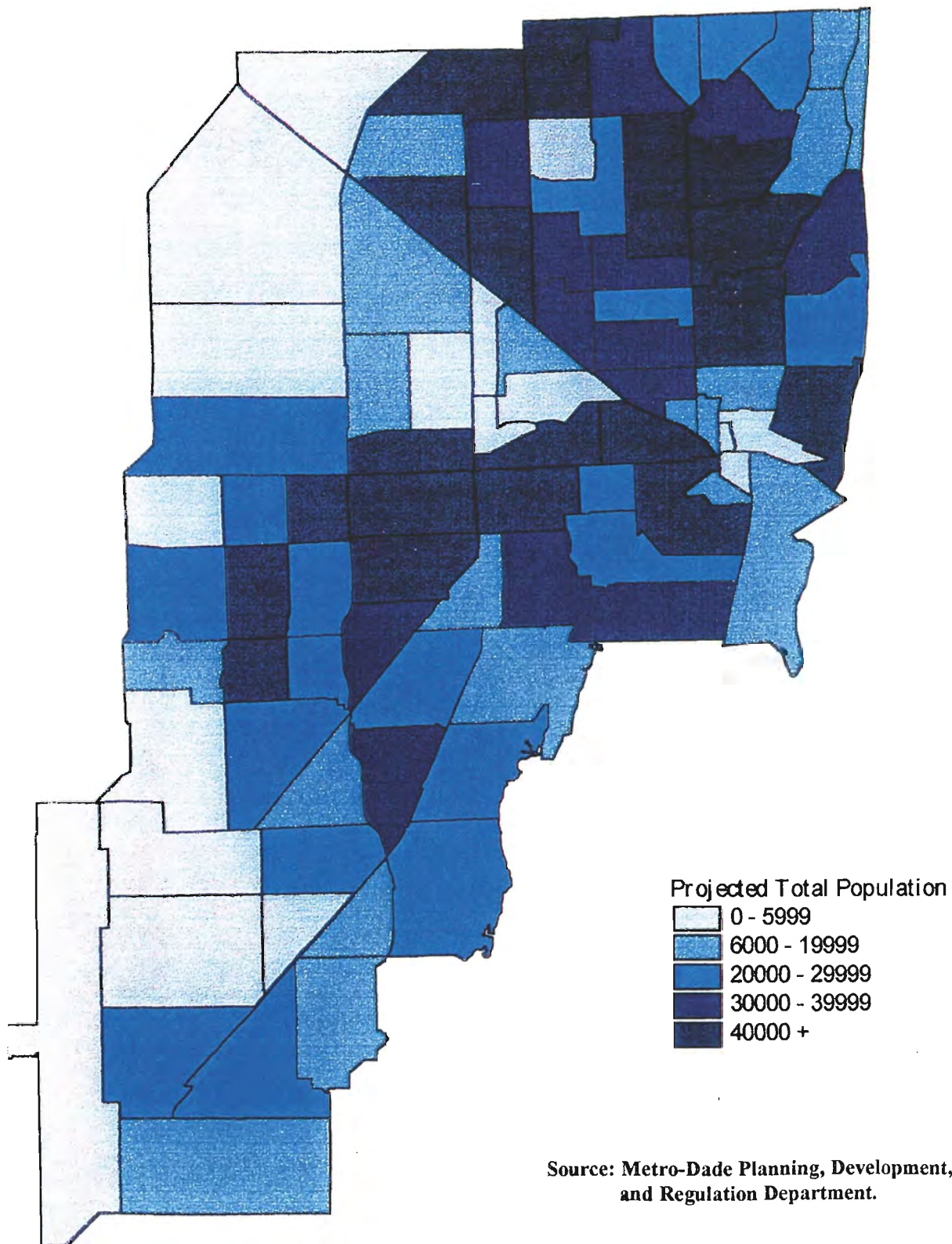


Figure 3-2
Year 2000 Projected Transit Dependent Population
by Traffic Analysis District

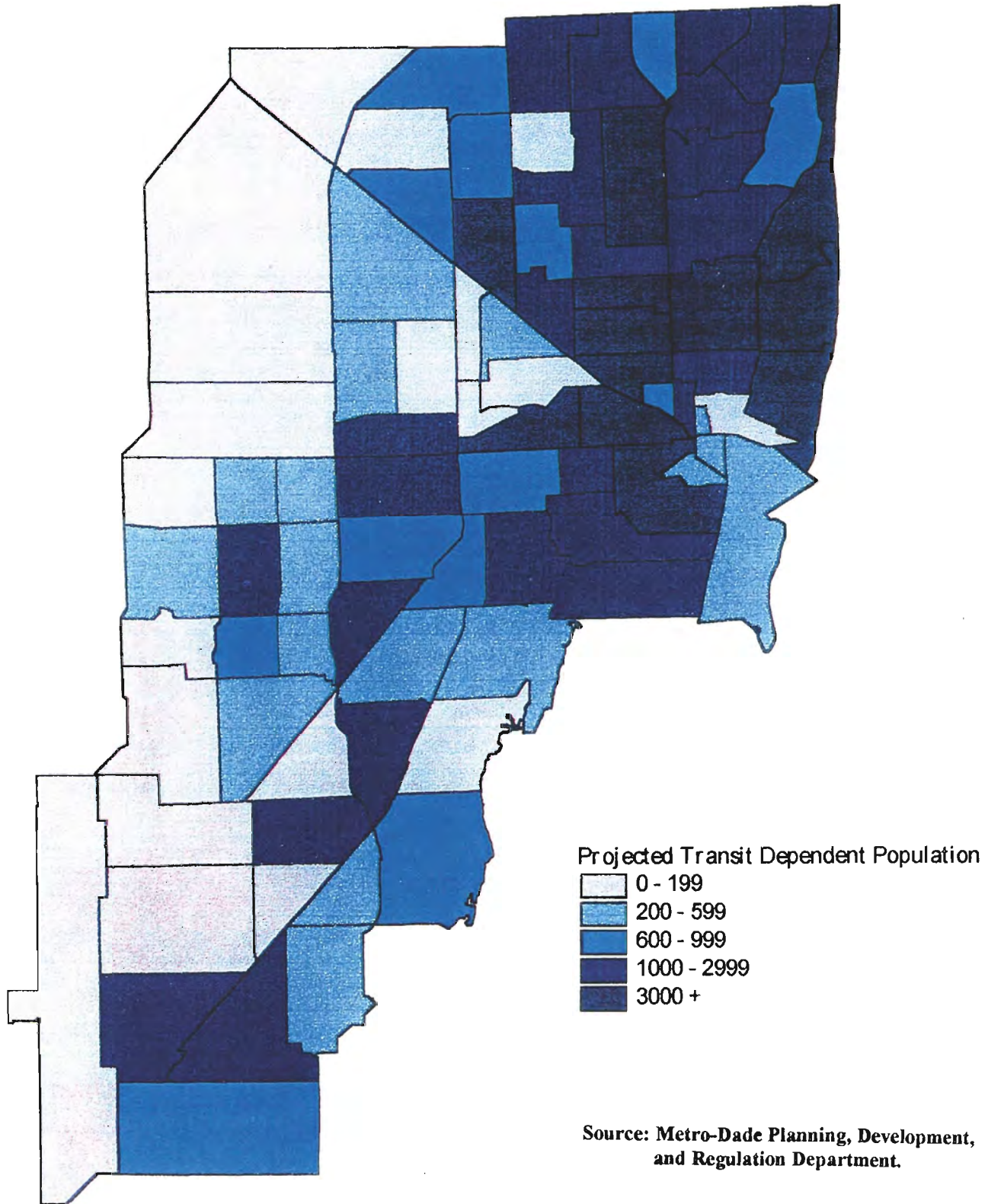


Figure 3-3
Year 2000 Projected Employment
by Traffic Analysis District

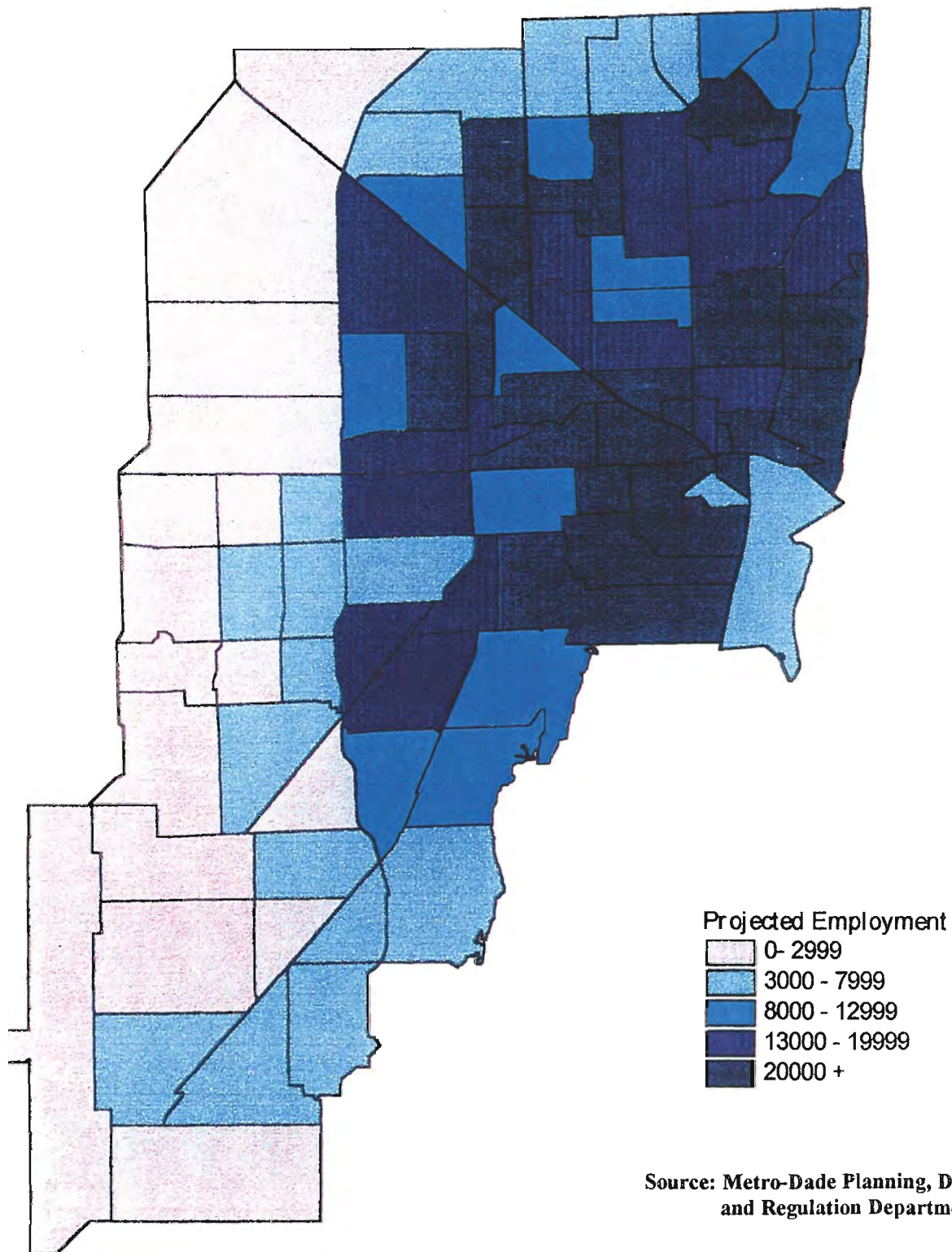


Figure 3-4
Transit Mode Split
by Traffic Analysis District
(Trip Origin)

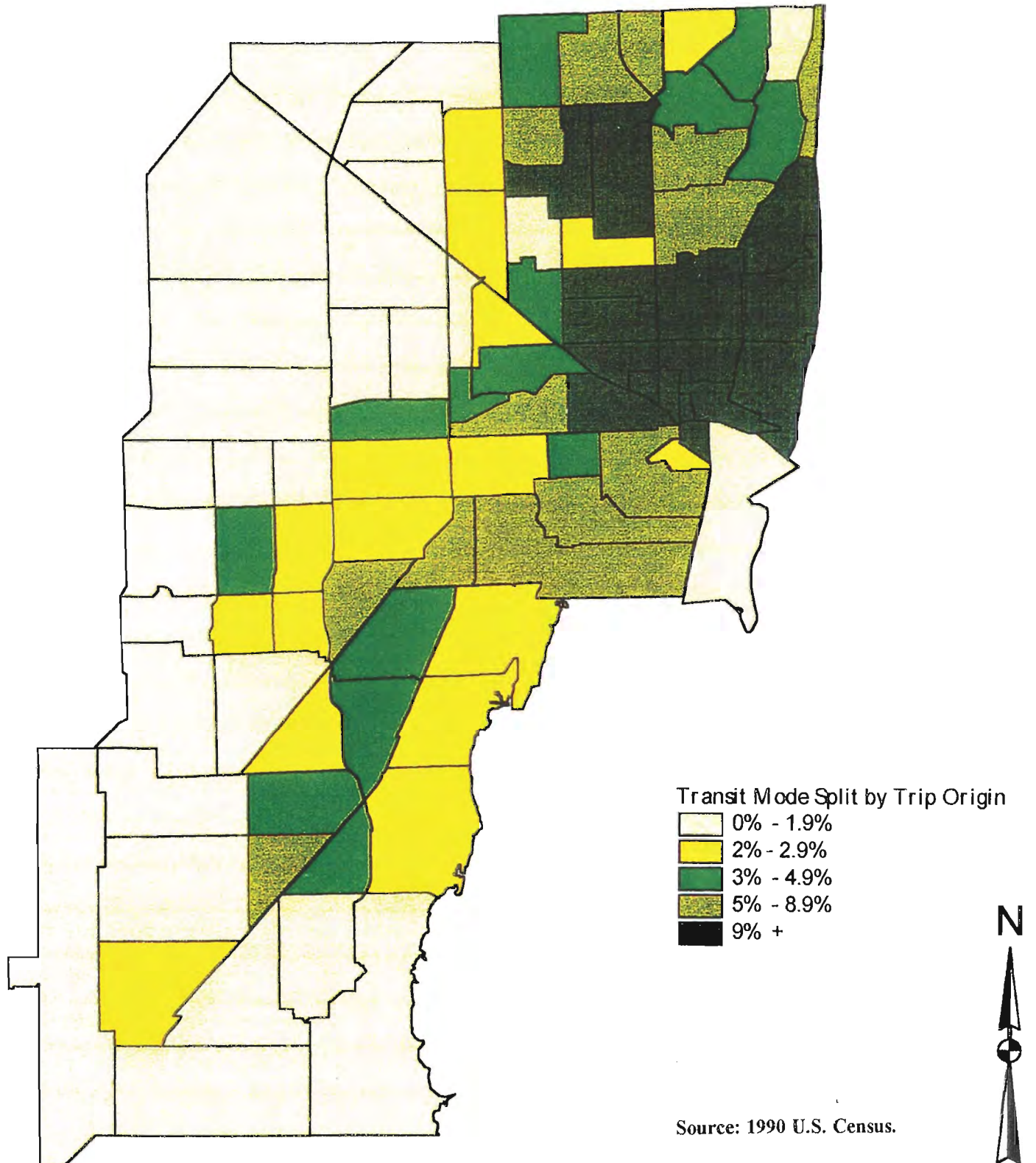


Figure 3-5
Transit Mode Split
by Traffic Analysis District
(Trip Destination)

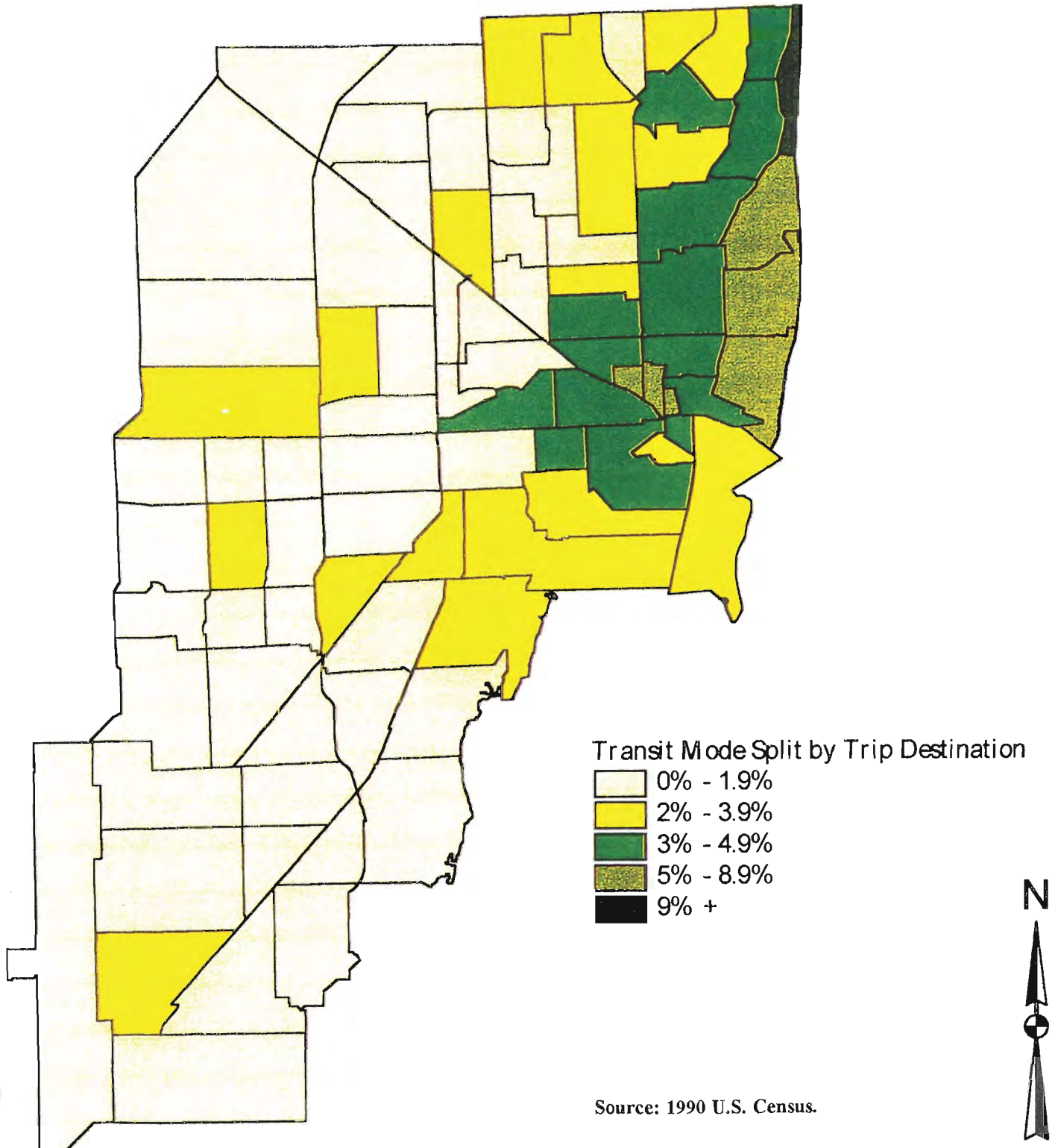
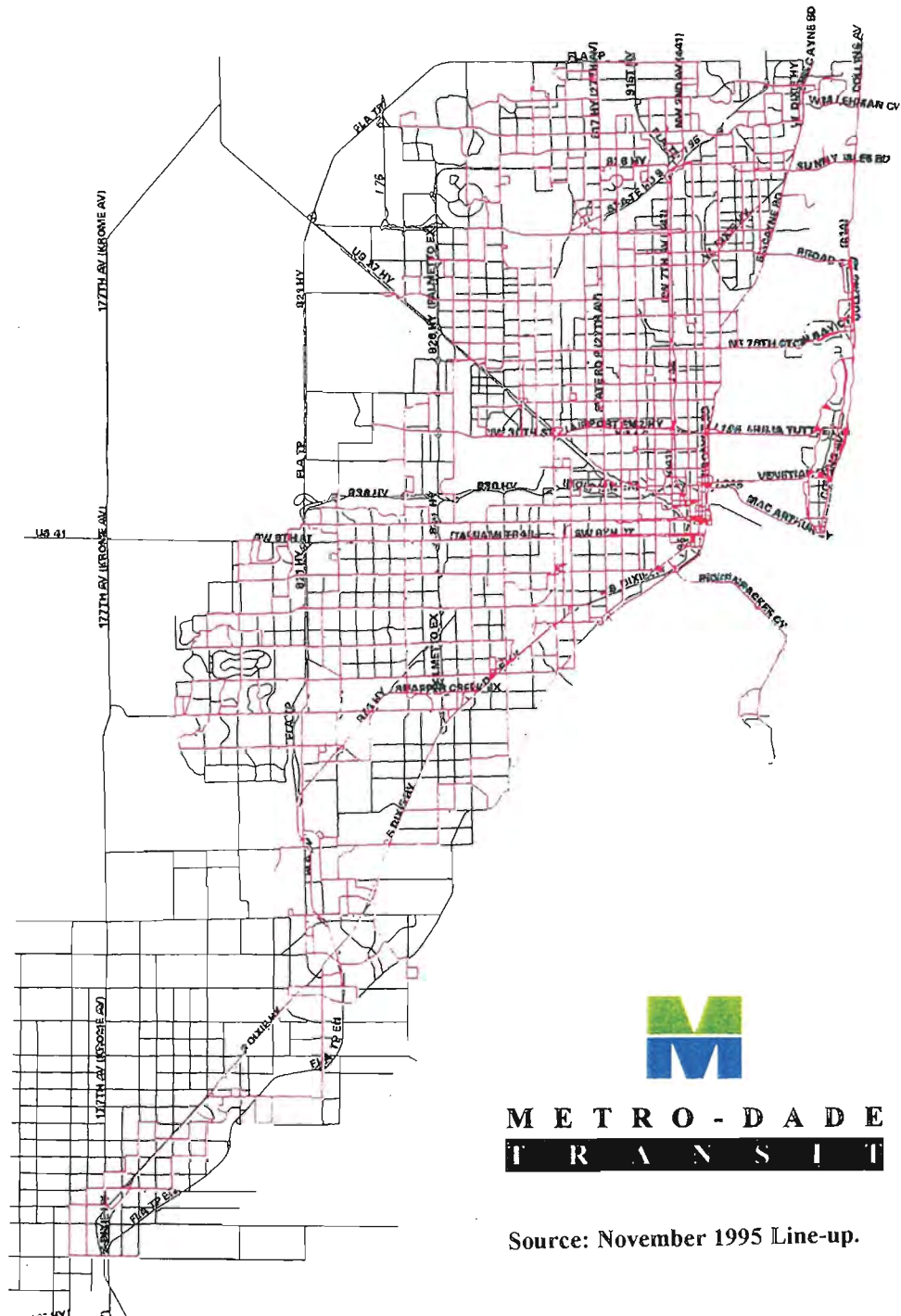


Figure 3-6
METROBUS SYSTEM



Source: November 1995 Line-up.

Figure 3-7
METRORAIL SYSTEM

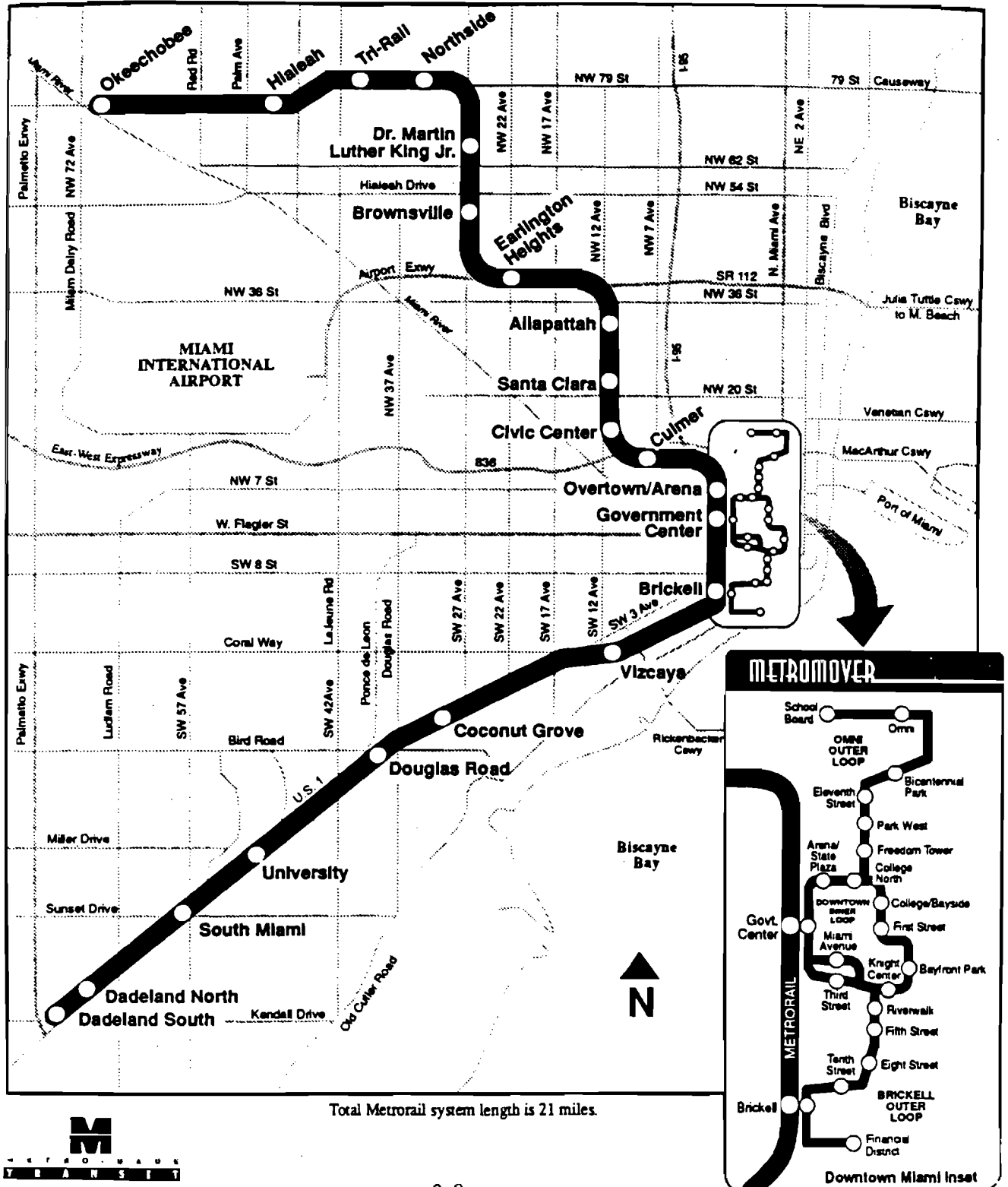
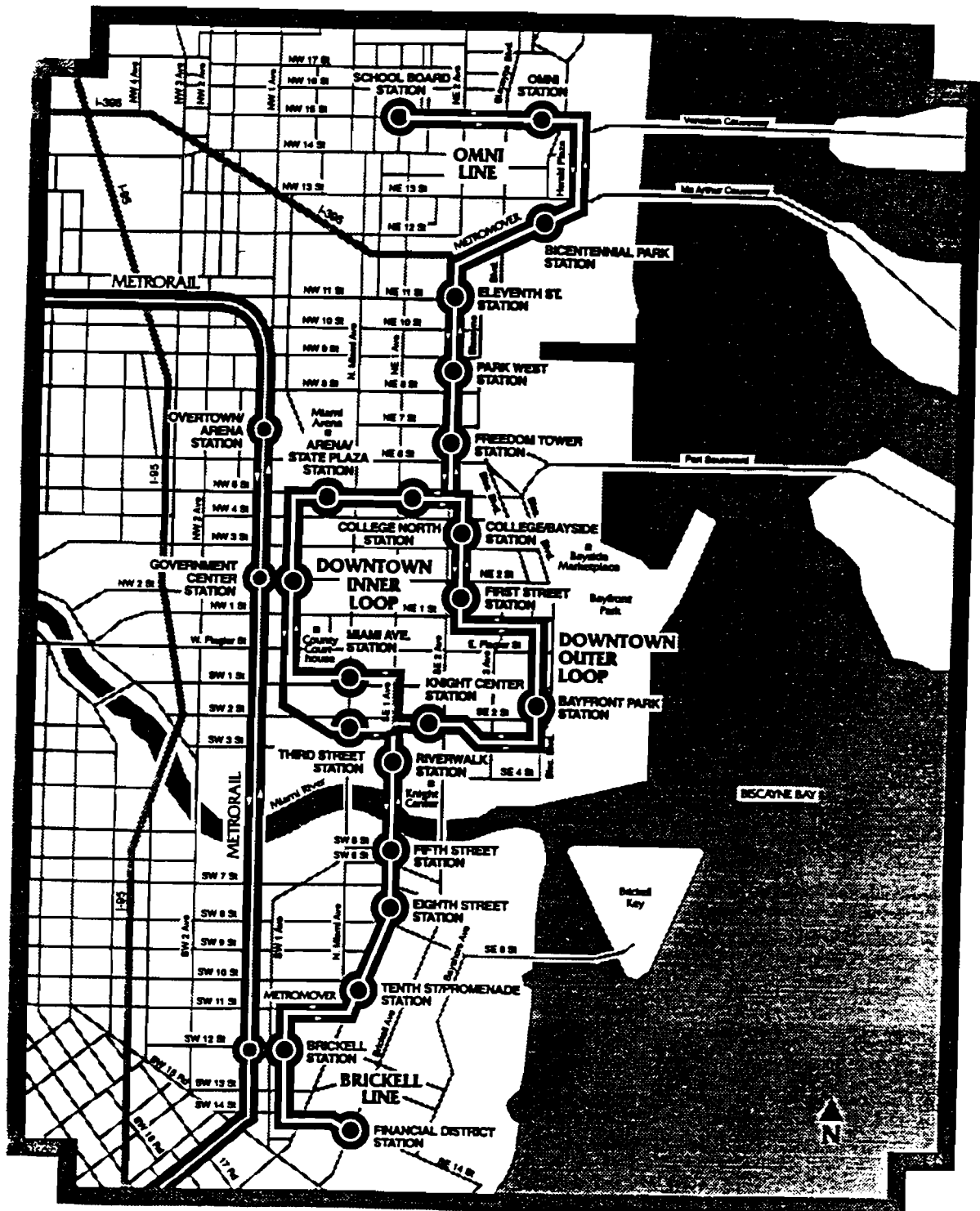


Figure 3-8
METROMOVER SYSTEM



Existing Transit Operations

Existing public transit services in Miami-Dade County are provided, as indicated above, by Metrobus, Metrorail and Metromover. In addition to these fixed route systems, MDTA also operates Special Transportation Services (STS) that are demand responsive and available to disabled and mobility impaired patrons who are not able to use the fixed route systems.

A summary of these services provided by MDTA for each of these four systems is shown in Table 3-1.

Transportation Planning Factors from ISTEA

The 2015 Metro-Dade Transportation Plan Long Range Element (December 1995, pp. IV-9) contains a listing of 15 key factors which the Intermodal Surface Transportation Efficiency Act (ISTEA) considers important in the transportation planning process. The 15 factors are presented in Table 3-2. The factors, or portions thereof, that are shown in bold type are supported by the implementation of quality intermodal facilities. As a result, it is seen that 10 of the 15 transportation planning criteria identified by ISTEA are supported by the addition of intermodal facilities.

Transit Equipment and Facilities

• Park-n-Ride Facilities

The MDTA has approximately 9,889 park-n-ride spaces available, including park-n-ride lots and Metrorail station lots and parking garages. An average of 55% of these spaces are utilized on a given weekday.

Existing Transfer Points (1996 TDP, pp. II-24): Major transit transfer points in metropolitan Miami-Dade are identified in the Transit Development Program as follows:

- Downtown Metrobus Terminal/ Government Center Metrorail Station

- 163rd Street Shopping Center Terminal
- All Metrorail Stations
- Miami International Airport
- Lincoln and Washington Avenues, Miami Beach
- Omni Metromover Station

At these locations, bus schedules are coordinated to facilitate transfers. Passenger amenities, such as benches, public telephones, shelters, etc., are also provided.

3.2 Objectives

The objectives of this study are summarized as follows:

- To define and develop an evaluation procedure to determine possible intermodal and transfer locations that will integrate transportation services provided by both public and private operators.
- Based on the developed procedure, identify locations that may be developed as intermodal facilities to improve transfer conditions between the different transportation modes.
- To develop an action plan to implement the recommended intermodal and/or transfer locations.
- To establish close coordination between state and local agencies, as well as with private transit operators.
- To serve as documentation for a grant request to FDOT and FTA (Federal Transit Agency).

3.3 Assumptions

A potential site with a high ranking from the evaluation procedure may be eliminated based on local or regional policies, substantial existing development, land costs or environmental issues that dictate another use for the site.

Table 3-1**MDTA SERVICES FACT SHEET**

	METROBUS	METRORAIL	METROMOVER	STS
Operating Hours	4:30 A.M. - 2:30 A.M.	5:30 A.M. - 12:00 A.M.	5:30 A.M. - 10:30 P.M.	4:30 A.M. - 2:30 A.M.
Number of Routes	69	1	3	N/A
Number of Stations	N/A	21	21	Door-to-Door Service
Frequency - Peak Hours	7 1/2-70 minutes	5 minutes	3 minutes	(Pick up within 15 minutes before or after scheduled time)
Frequency - Midday	10-70 minutes	15 minutes	5 minutes	
Route Length	1043 miles	21.1 miles	4.4 miles	N/A
Peak Vehicle Requirement	477	80	17	177 Sedans 108 Lift-Equipped Vans

Source: 1996 Transit Development Program (MDTA, June 1996)

**Table 3-2
Transportation Planning Factors Identified by ISTEA**

1.	The preservation of existing transportation facilities and, where practical, ways to meet transportation needs more efficiently;
2.	The consistency of transportation planning with applicable federal, state, and local energy conservation programs, goals, and objectives;
3.	The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
4.	The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with provisions of all applicable short-term and long-term land use and development plans;
5.	The programming of expenditures on transportation enhancements activities as required by federal law;
6.	The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such project are publicly funded;
7.	Any international border crossing and access to ports, airports, intermodal transportation facilities; major freight distribution routes, national parks, recreation areas, monuments and historic sites and military installations;
8.	The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area;
9.	The transportation needs identified through use of the management systems required under the Act;
10.	The preservation of rights-of-way for construction of future transportation projects, including the identification of unused rights-of-way which may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;
11.	Any available methods to enhance the efficient movement of freight;
12.	The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement;
13.	The overall social, economic, energy, and environmental effects of transportation decisions;
14.	Methods to expand and enhance transit services and to increase the use of such services; and;
15.	Capital investments that would result in increased security in transit systems.
Note: Bolded items can be impacted or partially addressed by intermodal facilities.	

4.0 Perception and Acceptance of Transfer by Users

This section will provide a review of general travel and transfer characteristics of transit patrons.

4.1 General Overview

To understand the current travel and transfer characteristics of transit patrons one has to look at the development of urban areas in the United States over the past 30 years. Urban areas have become heavily dependent on the automobile to meet local transportation needs. This is due to a distinct separation of land uses and dispersion of employment, shopping, and residential land uses. Under these conditions, the most effective way of traveling from highly dispersed origins to diverse destinations is by means of an automobile. Increased auto usage is also encouraged by suburban land use patterns that exclusively accommodate the automobile, leaving little opportunity for the use of other travel mode options. Other modes of transportation, such as walking, biking, and mass transportation are often not encouraged due to segregated land uses and low densities.

In order to make alternative modes more feasible, a more balanced approach to planning that includes transportation demand management (TDM) is deemed necessary. Mixed-use land developments place employment and retail activities in closer proximity to living areas and favor non-motorized transportation and transit access. This in turn will reduce the number of automobile trips, road congestion, and urban area vehicle miles of travel.

4.2 Transit-Oriented Development

As an alternative to this multimodal transportation challenge, urban planners and engineers have begun to develop transit-based communities which include pedestrian access to transit stations, retail, office, and residential locations, and bring travel origins and destinations closer to one another. These types of communities are referred to as

transit-oriented developments (TOD). TODs are defined as balanced, mixed-use areas developed within a quarter-mile or five-minute walking radius of a transit station.

Although much of the published literature on TODs guidelines is focused on new developments, accessible urban design concepts have been successfully applied to already partially or totally built-out communities. The benefits of TODs are many; however, the process of their selection and implementation has to be carefully followed so that community needs are met and public satisfaction is achieved. This is a five-step process and is outlined below:

1. Identification of the community needs.
2. Identification of the specific transit service market type.
3. Identification of the type of transit service to be used.
4. Selection of techniques to achieve TODs.
5. Preparation of appropriate plans and implementation tools.

The successful implementation and use of TODs depend a great deal on establishing a close relationship with the community it will serve so that the public's needs are heard and attractive solutions are offered. Understanding current travel behavior and attitudes toward transfers of transit patrons in the U.S. is an important part of identifying individual community needs.

4.3 Travel Patterns and Trends in the U.S.

A compilation of the most common travel trends found in the literature, categorized by type of mode used, is presented below.

Traffic and Auto Travel

- The most practical way to get to a park-n-ride facility is to drive.

- Park-n-ride facilities are often too far from patrons' residences and walking is not an option.
- Bicycling to park-n-ride facilities is often viewed as unsafe.
- Most people regret the fact that nearby-grocery stores are not located within walking distances from transit stations.
- Most U.S. residents feel they are spending more time driving than they did just a few years ago.
- Households owning two cars or more are common and therefore auto-related costs per household have increased.

Transit Service

- A need for increased bus service closer to residential areas is often recognized.
- The idea of more bus traffic on interior residential roadways is not viewed negatively as long as smaller vehicles are used.

Bicycling

- Most Americans own at least one bicycle. However, it is used primarily for recreational purposes.
- There is a general consensus that bicycling throughout the city, outside the residential areas, is unsafe.
- Most agree that bikepaths or safe bike lanes connecting residential areas to other parts of the community and region would be a significant improvement for residents overall.

Walking

- Most enjoy walking as an exercise activity within their living environment.
- Walking outside the residential areas is often viewed as unsafe and especially difficult in inclement weather.

Grid Streets

- Most people agree that grid street encourage more traffic and would make walking less enjoyable.
- There is a general idea that curvilinear streets and the use of cul-de-sacs would encourage walking and bicycling.

General Improvements Needs

- Better access to local bus services is needed.
- Bus services should use small, non-polluting vehicles.
- Bus stops should be equipped with shelters and informational kiosks about bus routes and schedules.
- Pedestrian crossings and access at bus stops need to be improved.
- Bus stops should provide amenities for pedestrians.
- More off-street bike paths should be provided.
- Bike lanes should be provided on all major streets but not on local streets.

These issues and needs are representative of what would be encountered in many of the urban and suburban areas throughout the United States. Again, it is important not to generalize and use these trends as the norm but to look for specific characteristics and needs of a particular development.

4.4 Case Study: Alternatives for Improving Intermodal Facilities in Miami-Dade County, Florida

As a task in the *Unified Planning Work Program* of the Miami-Dade Metropolitan Planning Organization (MPO), an intermodal transportation study has been conducted with the main objective of reviewing and improving 25 transit intermodal facilities throughout Miami-Dade County. As was discussed previously, in order to introduce and enhance intermodalism in a community, a thorough understanding of the existing travel

behaviors of the residents of the area is crucial. For that, the results of an onboard transit passenger survey were used and are the subject of the following section.

Section 4.5 also reports on input from members of the community regarding transfers and needed facilities.

4.5 Travel Behavior and Attitudes Toward Transfers in Southeast Florida Region

An onboard transit passenger survey was conducted during the months of May and June of 1993 by the Center for Urban Transportation Research, University of Florida to determine passenger and travel characteristics. The results of this survey give an indication of the user perception and acceptance of transfers among modes or within the same transit mode in the southeast Florida region (MDTA Onboard Survey Analysis). These trends are summarized below:

Modes of Access

Metrobus

- Two-thirds of Metrobus users surveyed walked to the bus.
- Seventeen percent of the users used Metrobus as a mode of access/egress to other transit facilities.
- Transfers to or from Metrorail accounted for six percent of the users.

This information is graphically presented in Figures 4-1 and 4-2. Figure 4-3 illustrates Metrobus ridership frequency and Figure 4-4 illustrates the transfer frequency of Metrobus riders. Figure 4-5 graphically represents Metrobus riders' attitudes toward transferring among modes.

Metrorail

- Fifty percent of Metrorail users used a mode other than walking to access the rail system.

- Thirty-two percent accessed Metrorail to or from another transit mode.
- Twenty-eight percent used an auto to access or egress the Metrorail system.

This information is graphically presented in Figures 4-6 and 4-7. Figure 4-8 illustrates Metrorail ridership frequency and Figure 4-9 illustrates the transfer frequency of Metrorail riders. Figure 4-10 graphically represents Metrorail riders' attitudes toward transferring among modes.

Metromover

- Over half of Metromover passengers walked to access or egress Metromover.
- Approximately thirty percent of Metromover users transferred to or from Metrorail.

Transfers by Users

- Thirty-seven percent of transit users do not transfer at all.
- Thirty-four percent transfer once.
- Twenty-one percent transfer twice.
- The average rate of transfers for passengers who transfer is 1.6 transfers per trip.

Metrorail Transfer Characteristics

Metrorail users transfer less than users of Metrobus or transit riders in general. The following statistics were gathered from the survey:

- Forty-five percent of Metrorail users do not transfer at all.
- Thirty percent transfer only once.
- Seventeen percent transfer twice.
- Eight percent transfer more than twice.
- The average number of transfers for the users who do transfer is 1.6 transfers per passenger.

Figure 4-1
Metrobus Modes of Access

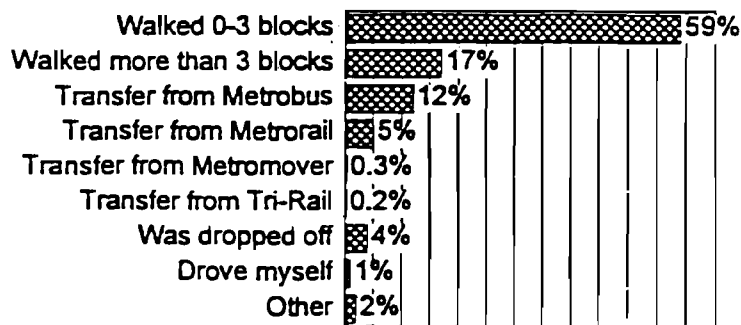
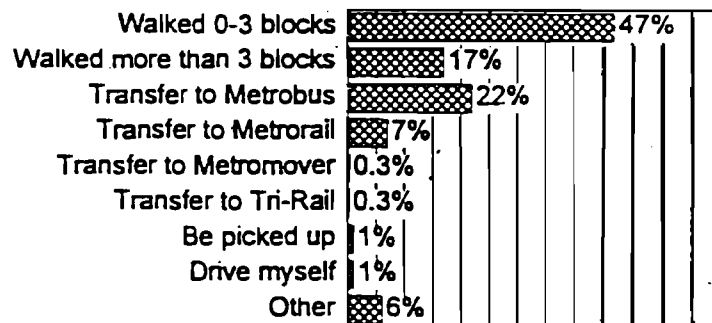


Figure 4-2
Metrobus Modes of Egress



Source: MDTA On-Board Survey Analysis, Draft Report (Center for Urban Transportation Research, University of Florida, 1993)

Figure 4-3
Metrobus Ridership Frequency

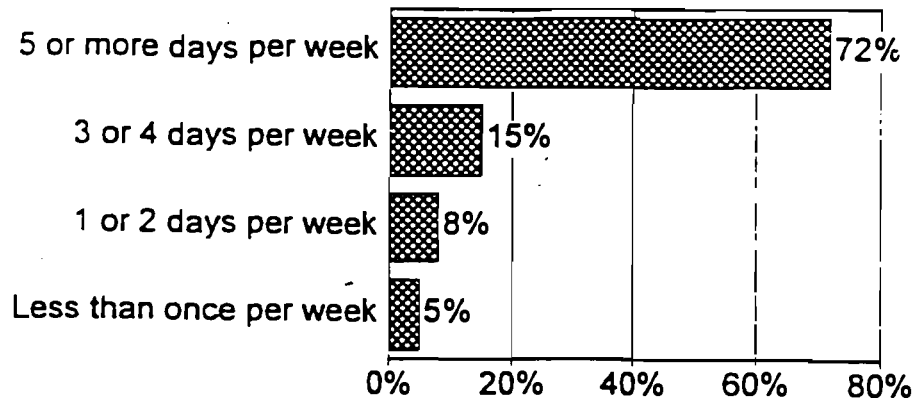
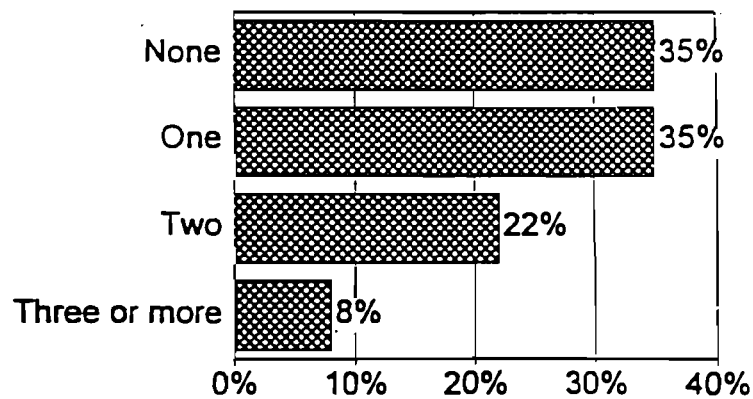
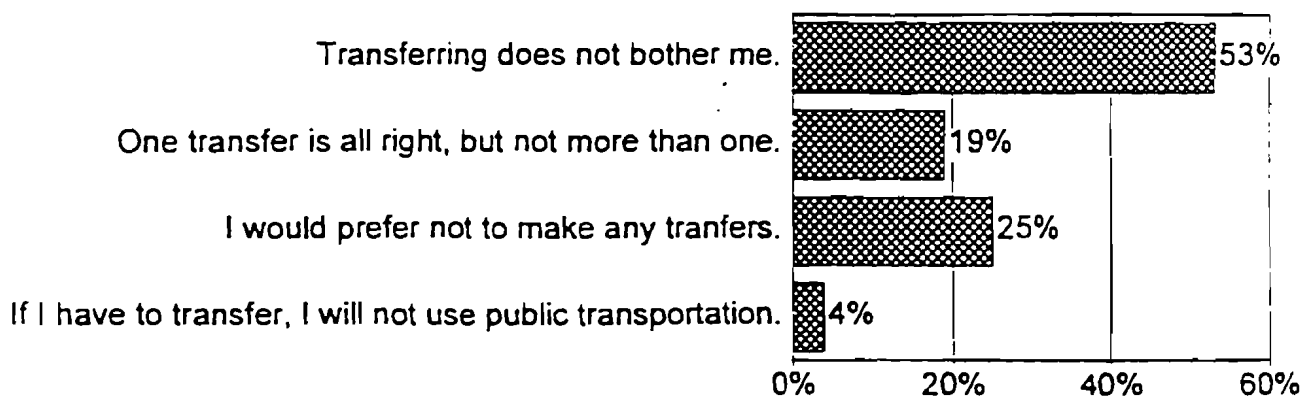


Figure 4-4
Metrobus Number of Transfers



Source: MDTA On-Board Survey Analysis, Draft Report (Center for Urban Transportation Research, University of Florida, 1993)

Figure 4-5
Metrobus Rider Attitudes Toward Transfers



Source: MDTA On-Board Survey Analysis, Draft Report (Center for Urban Transportation Research, University of Florida, 1993)

Figure 4-6
Metrorail Modes of Access

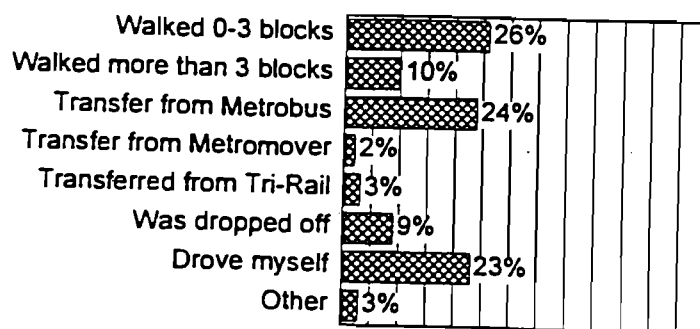
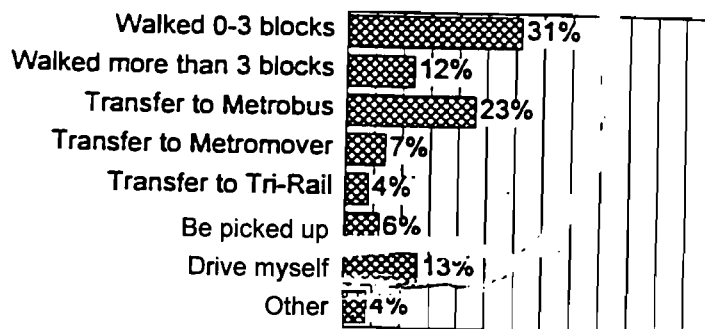


Figure 4-7
Metrorail Modes of Egress



Source: MDTA On-Board Survey Analysis, Draft Report (Center for Urban Transportation Research, University of Florida, 1993)

Figure 4-8
Frequency of Metrorail Use

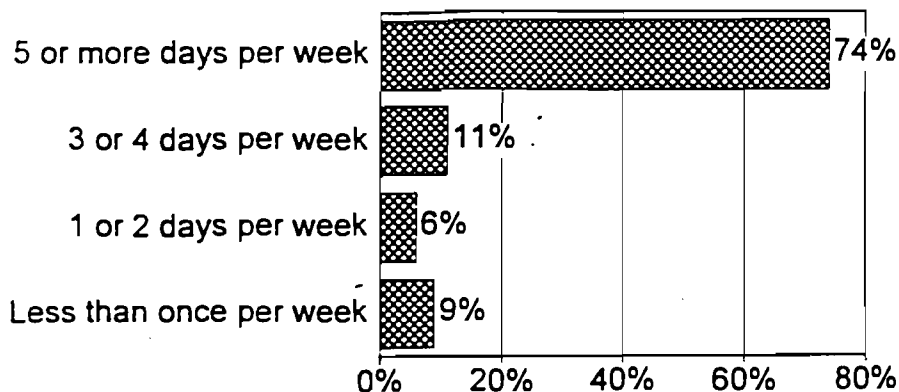
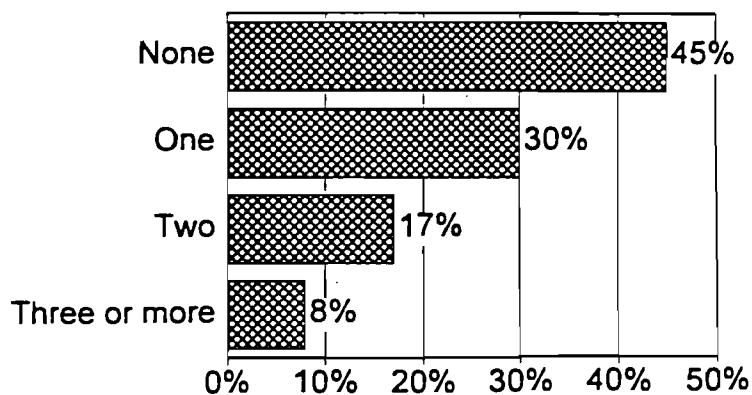
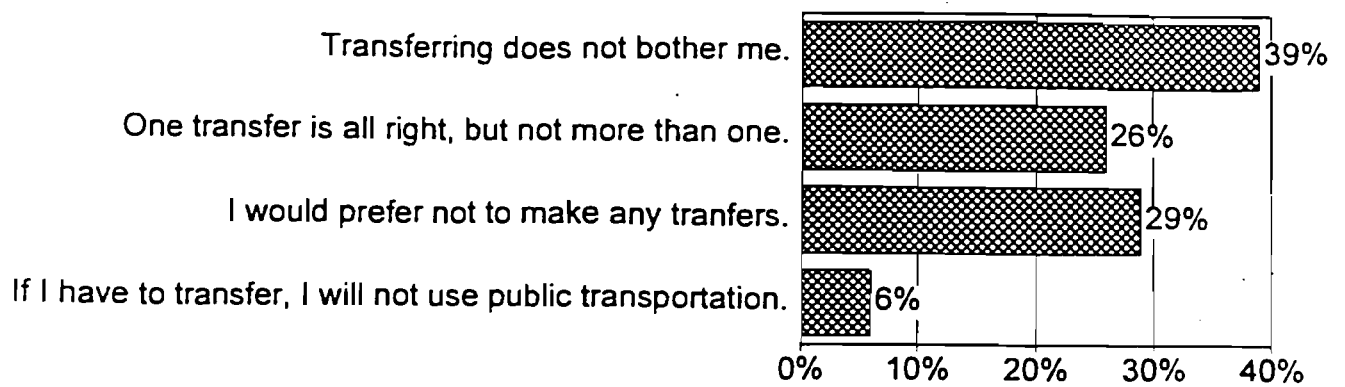


Figure 4-9
Metrorail Transfer Frequency



Source: MDTA On-Board Survey Analysis, Draft Report (Center for Urban Transportation Research, University of Florida, 1993)

Figure 4-10
Metrorail Attitudes Toward Transfers



Source: MDTA On-Board Survey Analysis, Draft Report (Center for Urban Transportation Research, University of Florida, 1993)

Attitudes Toward Transfers

- Over two-thirds of those surveyed were willing to make up to one transfer. Of them, 50% said transferring is not an issue and 20% were willing to make one transfer.
- Twenty-six percent preferred not to make transfers, and
- Four percent refused to use public transportation if they had to transfer.

Metrobus Riders

- Fifty-three percent of users responded that they were not bothered by transfers.
- Nineteen percent felt that no more than one transfer is acceptable.

This data correlated well with the demographics of this transit mode. The average vehicle ownership for Metrobus riders is 0.85 vehicles per household and 44% do not have an automobile.

Metrorail Riders

- Thirty-nine percent of users responded that they were not bothered by transfers.
- Thirty-four percent felt that no more than one transfer is acceptable.

This data correlated well with the demographics of this transit mode. The average vehicle ownership for Metrorail riders is 1.40 vehicles per household and 21% do not have an automobile.

Metromover Riders

Users' attitudes about transferring to/from Metromover were not available.

Survey Conclusions

The conclusions of this survey that were applicable to the study of alternative intermodal improvements are outlined below:

- Miami-Dade Transit Agency operates transit modes that differ widely in travel and transfer characteristics.
- It was found that within a specific transit mode, namely Metrorail, stations differ greatly in mode of access and in number and types of occurring transfers.
- The routes operated by Metrobus and Metrorail should be designed and interconnected to minimize transfer requirements, within service and cost constraints.
- Transfer facilities should be designed based on the requirements and demands for each specific station or transfer area, rather than using a standard for all stations.
- Notwithstanding the above, there may be an opportunity for prototypical designs to include certain elements of continuity for park-n-ride stations, bus access stations, and bus-to-bus transfer areas.

As can be seen, the results of this survey provided crucial information and insights for the successful implementation of the TOD process in the Miami area.

4.6 Public Hearing Input

In addition to the onboard survey information, the Miami community needs were heard by means of a series of public involvement meetings. The minutes from these meetings are documented in Appendix B of the Miami-Dade 1996 Transit Development Program. The most relevant concerns and suggestions pertaining to intermodal transit facilities discussed in these meetings are outlined as follows:

- “There should be better security at stops, on buses and on Metrorail platforms. Communication should be improved for better safety of passengers.”
- “There should be better bus connections. Buses are coming too early or late and passengers are missing their connections.”
- “MDTA should make stations and bus bays more accessible to facilitate easy transfers from one route to the other.”
- “Improve public facilities (rest rooms at stations).”
- When citizens were asked to comment regarding future mobility needs in their area they mentioned the following:
 - i. “Bus shelter locations and requirements for placing them.”
 - ii. “Multi-modal Mt. Sinai status request.”
 - iii. “Buses should truncate at Omni Metromover and not travel Downtown hub.”
 - iv. “Omni Metromover station has insufficient rain protection.”

neighborhoods in the region.

- Overall reduction in personal travel time and vehicle miles traveled through transit use and decreased congestion.
- Decreased auto dependency and gasoline consumption.
- Transportation solutions that utilize existing transportation facilities and infrastructure.

Achieving transit oriented development requires the cooperation and advocacy of regional agencies, local governments, citizens, development interests, and lending institutions. Most important is the encouragement by local governments by means of incorporating TOD into their comprehensive plan, policies, regulations, and design standards.

4.7 Benefits of Implementing Transit-Oriented Development

Many benefits can be derived by implementing TODs and emphasizing transit accessibility. They include:

- The development of highly desirable communities with cultural amenities, easy walking access to services, and the opportunity to live and work in the same area.
- Clustered developments with transit access with improved access to goods and services.
- Stronger intermodal connections for the community with opportunities for pedestrians and bicyclists to link with transit and the regional bike trail system.
- A transportation system with many options for travel within the community and increased accessibility to other communities and

5.0 Guidelines to Developing Intermodal Facilities

5.1 Introduction

This chapter serves as a “cookbook-type” guide to developing a network of intermodal facilities in a given community. Under Objective C, Task 3.09 (*Alternatives for Intermodal Improvements in Miami-Dade County*) of the adopted 1997 Unified Planning Work Program (UPWP) for Transportation prepared by the Miami-Dade MPO, a basic framework methodology is presented to develop intermodal facilities. The following methodology elements, as presented in the Miami-Dade 1997 UPWP, are further developed in this chapter in the form of a generalized procedure (i.e., not limited to Miami-Dade County).

1. Establish close coordination between state and local agencies, as well as with private transit operators.
2. Define and develop an evaluation program to determine possible intermodal and transfer locations that integrate the service provided by public and private transportation carriers. This program shall consider physical, operational and attitudinal aspects of transfers. It should establish measures to evaluate security and attractiveness of the physical facilities; performance standards; service reliability; and determine user’s satisfaction.
3. Based on the established program, determine the data necessary and collect them from the existing available sources.
4. Identify potential transfer locations. This shall consider the different transportation modes, including automobile, that could be integrated in one specific location.
6. Analyze the data collected to determine coordination efforts to be established between public and private operators, physical and operational characteristics of recommended locations, estimated costs, and the priority of the proposed facilities.

8. Develop an action plan to implement the recommended intermodal and/or transfer locations that provides accessibility, convenience, and comfort to the users. This plan shall consider physical and operational improvements, as well as educational measures and procedures to improve connectivity and accessibility between the different transit service providers.

In addition, the benefits of intermodal facilities, transit usage, and user behavior will be discussed.

5.2 Characteristics of Intermodal Facilities

What is an Intermodal Facility?

An intermodal facility is any connection point between two or more transportation modes.

Possible modes include automobile, bus, rail, bicycle, and pedestrian, among others.

Characteristics of intermodal facilities include the following:

- Usually accessible to pedestrians and transfers.
- May or may not require an additional fare.
- Usually located in or near an activity center.
- At least one mode is usually a public transportation operation.
- Usually provides shelter from weather and a seating area.
- May be public/private jointly developed.
- May include various retail activities for passengers.

When a region has a network of intermodal facilities, these centers exhibit elements of continuity. These elements are site facilities, such as street furniture, shelters, pedestrian amenities, signage, and site layout which exhibit uniformity throughout the region. These help patrons identify intermodal facilities and provide a level of consistency between sites.

Following is a brief description of site facilities that could be installed at intermodal facilities:

Shelters. Many intermodal sites will require some type of shelter. This may range from minimal bus stop shelters with benches to more elaborate mini-terminals or even to larger comprehensive intermodal terminals at high activity locations.

Restroom Facilities. Some high-activity locations may warrant restroom facilities on site where these are not available in the vicinity.

Seating. Most intermodal sites will require some type of seating to be provided.

Pedestrian Amenities. At each location, consideration of pedestrian amenities is critical. These amenities include paved walkways, crosswalks, informational and directional signing, lighting, signalized pedestrian phases for signals and other pedestrian-friendly elements.

Parking. In general, parking facilities for park-n-ride purposes should receive less emphasis, except for those sites in outlying, suburban or residential feeder locations. Parking for handicapped persons, bicycles, motorcycles and taxis, however, should be considered with purposeful focus where these apply.

Supplemental Parking. For some outlying suburban locations that may serve as consolidation sites or park-n-ride facilities for residential area developments, it may be appropriate to consider supplemental parking to enhance the attractiveness of transit modes.

Engineering Considerations.

- **Pavements** — Types and strength of required pavements.
- **Drainage** — Existing conditions and needed drainage improvements; elevation of the site.
- **Weather Protection** — From rain, wind, and sun.
- **Storm Design** — Wind loads during storms, hurricanes, and flooding.

- **Geometric Layouts** — Provide sufficient widths, turning radii, and other site dimensions to allow comfortable operation and compliance with standards.

Trash Receptacles. In addition to the need for trash receptacles at most, if not all locations, regular maintenance and trash collection should be considered as well, to ensure the site remains aesthetically pleasing and attractive.

Newspaper Racks. Some of the more heavily traveled locations may warrant installment of various newspaper racks. At some locations these sites may become the generally preferred point for community newspaper distribution as opposed to the local food mart or retail parking lot.

Lighting. Lighting is an important consideration for pedestrian safety, additional night time security, improved transit operations, bicyclist and vehicle driver vision, and enhancement of site landscaping.

Bike Racks. Conveniently located, visible, and lockable bike racks that provide security to the bike should be considered at all appropriate locations.

Wheel and Seat Lockers. At some locations, the volume and security needs for bicycles may warrant installation of wheel and seat lockers in addition to bike racks to further protect bikes from theft or damage.

Bus Bays. Many locations will need bus bays on site or bus bay pull-outs on the adjacent street. These may be useful to school bus and public transit operators.

Kiss-n-Ride. Consideration should be given to the provision of limited, short-term parking and drop-off space for the vehicles of passengers transferring to/from other modes of transportation.

Phones. Public telephones serve a variety of communication needs and can facilitate obtaining

information on routes and schedules, transit vehicle status, and emergency services.

Signage. Basic signage with information on how to access other modes, travel to attractions or other local destinations, and route/schedule information should be provided at all intermodal locations.

Information Kiosks. Basic route and schedule kiosks should be provided at all intermodal sites. These may also include local area maps and information about local area destinations or attractions.

ETA Kiosks. More advanced kiosks that provide a rolling scroll, or static display with updates, of the estimated time of arrival (ETA) for transit vehicles serving each route at the site can be very helpful and much appreciated by patrons. One of the most expressed needs by transit users is to know the status and expected arrival time of the next bus or train.

Interactive Kiosks. A more sophisticated type of kiosk can provide interactive feedback to the traveler regarding location, status, estimated arrival time, load conditions, etc., for trains and buses. Passengers can also access databases or view maps provided through a graphical user interface that provides information on other modes such as air travel, Tri-Rail commuter trains, parking conditions, and traffic conditions on expressways or arterials equipped with intelligent transportation system (ITS) devices.

Private Developments. Privately owned/operated retail business of various types may be located at or adjacent to some of the busiest intermodal sites. These business would typically include convenience operations that support the traveler on the way to work or home, increasing the efficiency of travel and minimizing the number of vehicle trips.

Clock. Most locations will need a clock to assist passengers to stay on schedule, compare current time to scheduled times for transit, or know when routes have been delayed.

Vending Machines. Items available through vending machines have expanded greatly as the equipment has become more reliable, secure and sophisticated. These machines can serve a useful purpose at locations where intermodal passenger volumes may warrant.

Intermodal Facility Identifier. A logo, flag, artwork, sculpture, or other unique visual locator may be used as an element of continuity to mark and identify intermodal sites. These may also help identify the mode types and services provided at each site.

Handicap Access. Access for the transportation disadvantaged should be considered during site selection and implemented during design and construction of facility improvements.

Landscaping. Few elements add as much to both the function and aesthetics of a site as landscaping. This element should be thoughtfully considered at each intermodal location, consistent with the size, operations, and visual range available to the designer.

Drinking Fountains. For locations that serve larger numbers of patrons or where wait time between transfers may warrant, consideration should be given to providing water fountains, especially given the hot environmental conditions that prevail locally.

Security Surveillance. Some locations may warrant varying levels of security surveillance depending on local conditions. The type and level of security to be provided, if any, should be considered during the design development for each site.

Postal Services. Many locations may warrant the installation (or relocation) of a mailbox, express services, or the addition of stamp vending machines.

What will Intermodal Facilities Provide for My Community?

Intermodal facilities can provide several benefits for most urban communities. These could include, but are not limited to:

- ***Improve the image of transit in the region:*** Intermodal facilities should make the transit system more visible, providing a positive image that will increase public awareness of transit, generate regional pride, and provide a model for similar projects. The facilities should provide safe, secure, and attractive passenger waiting areas with pedestrian amenities. A positive change in the image of intermodal facilities will encourage travel by public transportation as opposed to the private automobile.
- ***Integrate transportation modes and improve overall operations:*** Intermodal facilities should integrate and coordinate existing modes of transportation, including bus transit, intercity bus, passenger rail, taxi, airport shuttle, vans/limousines, automobiles, bicycles, and pedestrians. In addition, the promotion of different transit modes will have a positive impact on traffic congestion. The design of an intermodal facility should ensure smooth traffic circulation in and around the site. Finally, intermodal facilities can integrate transportation modes and improve overall operations by providing sufficient parking for future park-n-ride and by accommodating future transportation modes.
- ***Promote accessibility of the intermodal facility and the modes it serves:*** An intermodal facility should be easy to access and available to all citizens, including members of different socio-economic groups, the disabled, and the elderly. The facility should be user-friendly and provide a strong sense of safety and security.

- ***Promote economic development for the region:*** User amenities for intermodal facilities should include public/private joint ventures and multi-use developments. A network of intermodal facilities can provide a more appealing enducement for tourists visiting the region to use the transit system. In addition, intermodal facilities should improve the economic return to bus and rail operators through increased ridership and revenues.
- ***Provide consistency and compatibility with regional and local plans:*** Intermodal facilities can help to ensure consistency and compatibility with planning/development plans for the region.

5.3 Initial Selection of Intermodal Facilities

Determining the Need for Intermodal Facilities

The first step in developing intermodal facilities is assessing the need for improved connectivity between modes of transportation. This can be accomplished by performing an existing conditions analysis of the given study area. This analysis will involve data collection in the following areas:

- ***Demographics:*** Information regarding population, housing units, labor force, motor vehicles, school enrollment, employment, and retail sales for distinct areas (Traffic Analysis Zones, Districts, etc.) will all be useful in determining characteristics for the transit-using public in the region. How many users, where they live, and where they go can all be determined. The Transportation Development Program or Comprehensive Development Master Plan, typically prepared by the local Metropolitan Planning Organization (MPO) should be able to provide these kinds of demographic information.
- ***Roadway Conditions:*** By looking at roadway conditions, major arterials and areas of

congestion can be readily identified. These areas are potential locations where increased connectivity between modes could relieve some of the congestion experienced by the traveling public.

- **Existing Transit Services:** An in-depth look at the existing transit service is critical to determine the need for intermodal facilities in the region. Where do different modes of transportation currently connect? What are the existing conditions of these connection points? Are they easily accessible to multiple modes of transportation? Is transit information such as bus schedules, or transit maps readily available? Are the connection points safe? Are the transit users protected from the elements? Do these connection points contribute to the surrounding land uses?
- **Regional Transportation Plans:** In addition to examining existing conditions, some consideration should also be given to future transportation improvements. These could include additional bus routes, rail lines, corridor improvements, or developments of regional impact.

In order to obtain much of this information, coordination with local bus, rail, MPO, DOT, county, and city agencies is vital. Each of these organizations can contribute to determining the need for intermodal facilities in their region.

Location Selection of Intermodal Facilities

Once the need for intermodal facilities has been determined, potential transfer locations should be selected. The selection of potential locations should be consistent with two basic principles discussed by Horowitz in *Evaluation of Intermodal Passenger Transfer Facilities* (FHWA, 1994):

- To maximize ease of access from modal markets, and
- To maximize potential transfers between modes.

While Horowitz concedes that there are other considerations, such as cost, environmental impact, site availability, opportunity for joint development, and historic preservation among other factors, he states, "*an intermodal facility ultimately will be judged by its ability to serve passengers, and its location is critical to the quality of that service.*"

Site locations should be identified with the following location criteria in mind.

Location Criteria

- **Study Area:** An early step in the study process is a definition of the study area. The study area should be restricted to an area where locations can obey Horowitz' principles.
- **Proximity to city centers/major attractions:** Locations that are close to central business districts or major attractors should be considered.
- **Local Bus Service:** Major connection points are ideal locations for intermodal facilities. Locations should be close to existing service and not cause a significant diversion for existing routes.
- **Operational characteristics:** Operational characteristics of each mode must be considered. Conceptual layouts and site design can then be developed to accommodate each mode.
- **Passenger Rail Service:** Rail lines from Amtrak to local commuter rail systems should be examined to determine if the transfer locations are convenient, accessible, and attractive to the traveling public.
- **Intercity Bus Service:** Regional bus service, such as Greyhound Bus Lines should be readily connected to the rest of the region's transportation network.
- **Street System:** Many of the potential users would access the public transportation network by auto, either as park-n-ride or as drop-off ("kiss-n-ride"). Other modes of transportation including taxis, bicycles, and pedestrians

would also need to interface with the public transportation system. For these reasons, it is important that an intermodal facility be located in proximity to community arterials that connect to regional destinations.

By following these criteria, a universe of potential sites can be identified. Next, a fatal flaws analysis should be performed.

5.4 Fatal Flaws Analysis

Some potential sites should be rejected as potential intermodal facilities due to “fatal flaws” that may not be apparent from the location criteria alone. Such items include local or regional policies dictating another use for the site, substantial existing development or land costs such that an intermodal terminal is not a reasonable use for the property (however, cost alone should not rule out a site until all public/private joint participation opportunities have been explored and exhausted). Other criteria that may rule out a site include environmental problems, or other such valid reason for rejecting a site. Other sites that are dropped from further consideration in this study are those where adequate existing intermodal facilities (such as Metrorail stations) are currently available or for which considerable planning has already been performed or is in process and which are under development or have funding anticipated. Future plans could also make a site infeasible for an intermodal facility.

5.5 Site Data Collection and Field Reviews

After the fatal flaws analysis, specific data should be collected for the remaining sites. Field reviews should be performed at each site. Prior to performing field reviews, a standard procedure should be established to ensure consistency and continuity in data collection. Field reviews can also be used to determine a particular site’s needs or demands. Following is a possible list of information that should be considered in the field:

- *Site Boundaries:* What are the dimensions of the proposed site? What is the existing land use? Is the proposed site easily accessible to different modes of transportation?
- *Preliminary Site Layout:* A preliminary site layout should be envisioned with the highest consideration given to bus flow, access, and parking.
- *Surrounding Traffic Features:* This includes both the existing roadway geometry and traffic operations.
- *Pedestrian Activity:* Are there any noticeable pedestrian patterns? Where are pedestrians coming from? Where are they going? What are the existing pedestrian amenities? What are the existing pedestrian traffic features (such as crosswalks, push-button signals, etc.)?
- *Design Elements:* Are there any major design considerations that can be noticed at this time? Examples include powerlines, existing lighting, or drainage conditions to name a few.
- *Surrounding Land Uses:* What are the destination points around the site? What are the surrounding land uses?
- *Bus Activity:* Which routes use or will use this site? Is this site primarily a transfer location, a destination, a park-n-ride, or a layover location? How many bus patrons are there? What are the patron amenities at the bus stops?
- *List of Elements:* A checklist of elements of continuity should be included in the field review. Which elements should this site have? Which elements does it have? This can easily be accomplished with a site facilities matrix. An example Field Review Data sheet (Figure 5-1) and a Site Facilities Matrix (Figure 5-2) are included on the following pages.

It is important to note that a field review could yield information that will eliminate the site as a potential intermodal facility due to a fatal flaw, as defined in Section 5.4.

Figure 5-1: EXAMPLE FIELD REVIEW DATA SHEET

Field Notes

Site Name: _____ **Location:** _____

Date/Time: _____ **Weather:** _____

Site Dimensions/Borders: _____

Surrounding Land Uses: _____

Description of Surrounding Traffic Features:

Roadway Geometry: _____

Traffic Operations: _____

Intermodal Activity:

Modes Served: _____

Bus Routes: _____

Pedestrian Activity: _____

Design Considerations: _____

Preliminary Layout Sketch/Notes: _____

Figure 5-2

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Need		
	Low	Moderate	High	Low	Moderate	High
Shelters						
Restroom Facilities						
Seating						
Pedestrian Amenities						
Parking						
Supplemental Parking						
Engineering Considerations						
Trash Receptacles						
Newspaper Racks						
Lighting						
Tire and Seat Lockers						
Bus Bays						
Kiss & Ride						
Phones						
Signage						
Information Kiosks						
ETA Kiosks						
Interactive ITS Kiosks						
Private Developments						
Clock						
Vending Machines						
Intermodal Center Identities						
Handicap Access						
Landscaping						
Drinking Fountains						
Security Surveillance						
Postal Services						
Bike Racks						

5.6 Ranking Potential Intermodal Facilities

Once field reviews have been performed, the list of potential intermodal facilities should be ranked in accordance with an evaluation program. This process is performed for a couple of reasons. First, by going through the evaluation program, strengths and shortcomings of each site are examined. Secondly, the sites are ranked and prioritized in an order of preferred implementation. After ranking the sites, an implementation plan can easily be determined that fits in line with agency goals and directives. Following is a description of an evaluation program for potential intermodal facilities.

Evaluation Program

The evaluation program is based on using 11 different evaluation criteria that examine different characteristics of potential intermodal facilities. The procedure uses a sliding points scale to place the proper emphasis on the various criteria for each location. The evaluation criteria were selected based on elements determined in conjunction with Miami-Dade staff. The evaluation criteria are described below, along with the proposed ranking scale and methodology for evaluating candidate sites. If it seems that a particular criteria is not weighted sufficiently for a particular region's needs, the scale for that criteria could easily be altered to better reflect its importance. Following is a description of the evaluation criteria.

Evaluation Criteria

1. Transportation Modes Served

Each site should provide connections among routes on the same transportation mode, as in a bus-to-bus transfer location, or among modes, such as a park-n-ride lot or commuter rail stop. All modes should be considered, including the pedestrian mode and access by bicycle. Access by wheelchair and for other transportation disadvantaged patrons should be considered in

ranking. The measure of satisfying this criterion is based on the number of modes or routes served.

Routes/Modes Served:

- Rail, bus, auto, pedestrian, bicycle, wheelchair 10
- Rail, bus, pedestrian, bicycle, wheelchair 8
- Bus, auto, pedestrian, bicycle 6
- Bus-to-bus and pedestrian 4
- Auto, pedestrian 2

2. Existing Intermodal or Transfer Activity

The locations with the highest priority are those at which existing intermodal or transfer activity is taking place and for which no intermodal facility currently exists. The locations with the highest level of activity are those in which investment in intermodal facilities would provide the greatest benefit.

Existing Transfer Activity:

- High activity without an existing intermodal facility 10
- Moderate activity without an existing intermodal facility, or heavy activity with an existing intermodal facility 6
- Low/no activity, or moderate activity with an existing intermodal facility 2

3. Compatibility with Existing Land Use Patterns and Communities

An intermodal facility should reinforce and complement existing land use patterns, and land use should provide increased demand for transit. Objectives include maximizing private development opportunities, maximizing access to surrounding activities, fostering pedestrian, bicycle, and transit uses, reinforcing existing and planned development, and protecting neighborhood and historic resources. Major activity centers, including retail concentrations, office use, mixed-use developments, and major public facilities such as colleges, and universities,

are examples of land uses that reinforce intermodal facilities. Residential uses alone, particularly single-family residential, are not desirable adjacent to an intermodal facility from either the community or transportation perspective.

Land use compatibility:

- Positive impact 10
(major activity center, college, university or high school)
- Neutral/generally compatible 6
(low density, industrial)
- Negative impact 0
(residential, neighborhood park)

4. Visibility to Users and to the Public

The location should be visible and attractive to users, potential users, and to the general public, including motorists.

Visibility:

- High visibility from streets and sidewalks 6
- Moderate visibility 2
- Low/no visibility 0

5. Accessibility by Transportation Modes

The site should be accessible by a variety of transportation modes, including pedestrian, bicycle and wheelchair. It should provide adequate vehicular access, access to ITS opportunities, pedestrian access, and passenger drop-off.

Accessibility:

- Excellent accessibility by all modes 10
- Adequate accessibility 6
- Poor accessibility 2

6. ADA Compliant

The site should be accessible by handicapped persons, transportation disadvantaged individuals, including the elderly, blind, etc., and meet or be capable of meeting ADA requirements.

- Highly accessible by handicapped 6
- Moderately accessible, some limitations 2
- Difficult access, modifications required for ADA compliance 0

7. Impact on Traffic Operations

The site should improve or maintain traffic operations, maintain or minimize traffic levels of service, and complement adopted transportation plans.

Traffic and transit operations:

- No traffic operations problems 8
- Minor traffic operation issues 4
- Significant operational problem 0

8. Transit Operations

The site should improve or maintain transit operations. It should minimize bus route deviation and complement adopted transportation plans.

Transit operations:

- Little or no route diversion 8
- Minor diversion 4
- Major diversion required (>1/4 mile) 0

9. Service to Existing Transit Routes

Because the result of this study is a list of sites that can be implemented in the short-term planning period (five years or sooner), it is desirable for the selected locations to serve existing transit routes or facilities, rather than activity that depends upon the completion of new facilities.

Serves existing transit routes:

- Existing transit service (3 or more routes) 10
- Existing transit service (1 or 2 routes) 6
- Planned short-term transit service (within 2 years) 2
- No planned transit service, or long-range plan (>2 years) 0

10. Safety and Security

Safety and security for passengers and equipment is extremely important in an area which will encourage pedestrian access and activity. The sites with real or perceived safety problems should not be ranked as highly as those without those conditions.

Security:

- No need for security measures 6
- Minor security issue (fence and gate) 2
- Major security issue 0

11. Site Development Feasibility and Cost

Cost is an important measure of site development feasibility and the relative priority of the facility. While cost is not the only determinant, locations which would require extensive redevelopment or which have very substantial land costs would rank lower than sites which have available undeveloped land or parking lots that could readily be modified.

Site Development Cost:

- Low/no existing facility 10
(on-street, parking lot, vacant land)
- Moderate to low intensity use 6
(warehouse, inexpensive building)
- Highly ranked but expensive sites — 2
consider possibilities for joint
public/private projects
- Substantial existing 0
structures to be acquired
and demolished

Evaluation Methodology

Table 5-1 on the following page illustrates the procedure that can be used to evaluate potential sites. The spreadsheet uses three hypothetical sites for illustrative purposes. In this example, Site A is located near the central business district and serves commuter rail and buses, Site B is a park-n-ride

location serving existing routes, and Site C is a transfer location for several bus routes.

5.7 Implementation

Once the sites are prioritized, a plan for implementation can be established. It is important to note that even though a site could score well based on this quantitative analysis, the order of implementation is ultimately decided qualitatively based on a perceived need in conjunction with funding opportunities.

This guide serves only to describe a process choosing sites and preliminary layout. Once potential locations have been selected and preliminary layouts established, funding opportunities must be identified. The next step in design would include stationary development studies for each site, followed by a final design. At these later stages, artistic concepts should be considered, as well as other elements that will blend the intermodal facility into the existing community.

Table 5-1
Example Site Evaluation Results

EVALUATION CRITERION		SITE		
		A	B	C
1	Connects Modes	10	6	4
2	Existing Activity	10	6	6
3	Land Use/Community Compatibility	10	6	6
4	Visibility	6	6	2
5	Accessibility	10	6	10
6	ADA Compliant	2	2	2
7	Traffic Operations	4	8	8
8	Transit Operations	8	8	8
9	Serves Existing Transit Routes	10	10	10
10	Safety and Security	2	6	2
11	Site Development Cost	6	10	10
	Total Evaluation Score	76	74	68

6.0 Developing Intermodal Facilities in Miami-Dade County

6.1 Background Information

The purpose of this study was to select twenty-five (25) potential locations that could be developed as intermodal facilities in Miami-Dade County. These sites would be selected by a well-documented process, and prioritized into a five-year implementation plan based on an established evaluation program. This chapter details the screening and data collection process that was performed to identify the 25 sites that would be considered for inclusion in the next Transportation Improvement Program (T.I.P.).

The process of identifying the 25 sites was by nature very iterative. Based on coordination with officials at MDTA, Miami-Dade MPO, and FDOT District VI, sites not originally considered were added to the potential site list at various stages of the screening process. Coordination with these agencies during the progressive stages of the process enhanced the quality of the study by directing the project more in line with the needs of the Miami-Dade County traveling public.

6.2 The Universe of Sites

A meeting was held with MDTA officials to determine a candidate list of intermodal facility locations. The meeting served to identify locations that were exhibiting existing intermodal activity. In addition, locations that were identified for future intermodal activity were also chosen based on information provided in the following sources:

- *The Miami-Dade County Congestion Management Plan*
- *The Miami-Dade County Bicycle Plan*
- *The MDTA Transit Development Program (TDP)*

Finally, Metrobus and Metrorail routes and schedules were used to determine key transfer locations and major transit links.

Once the universe of sites was established, each site location was designated an arbitrary number, and each number was plotted on a Miami-Dade County map. This process helped to illustrate the “big picture,” i.e., the geographical distribution of sites became readily apparent. A map illustrating the universe of sites considered in this study is shown in Figure 6-1. While only 25 sites are recommended for implementation, this figure serves to graphically illustrate intermodal activity in Miami-Dade County. Table 6-1 lists the initial 80 potential locations considered.

6.3 Fatal Flaws Analysis

When the universe of sites was established, the list of 80 potential locations was based primarily on demand. No consideration was given to feasibility, scope of project, or existing facilities. Next, a “fatal flaws” analysis was performed. The fatal flaws analysis served as a screening process for identifying sites with rejectable issues which were not apparent from the evaluation procedure alone. Some of the grounds for rejection included the following:

- Local/municipality policies.
- The site was an existing intermodal facility.
- The site was already committed for the design of an intermodal facility.
- The site was in close proximity with another more suitable potential location.
- An obvious lack of intermodal activity in comparison with other sites.

The 80 potential locations were reduced to 49 locations based on this fatal flaws analysis. Table 6-2 lists the sites eliminated, as well as the reasoning behind the exclusion of the site from the potential location listing. They are listed by their respective number presented in Table 6-1.

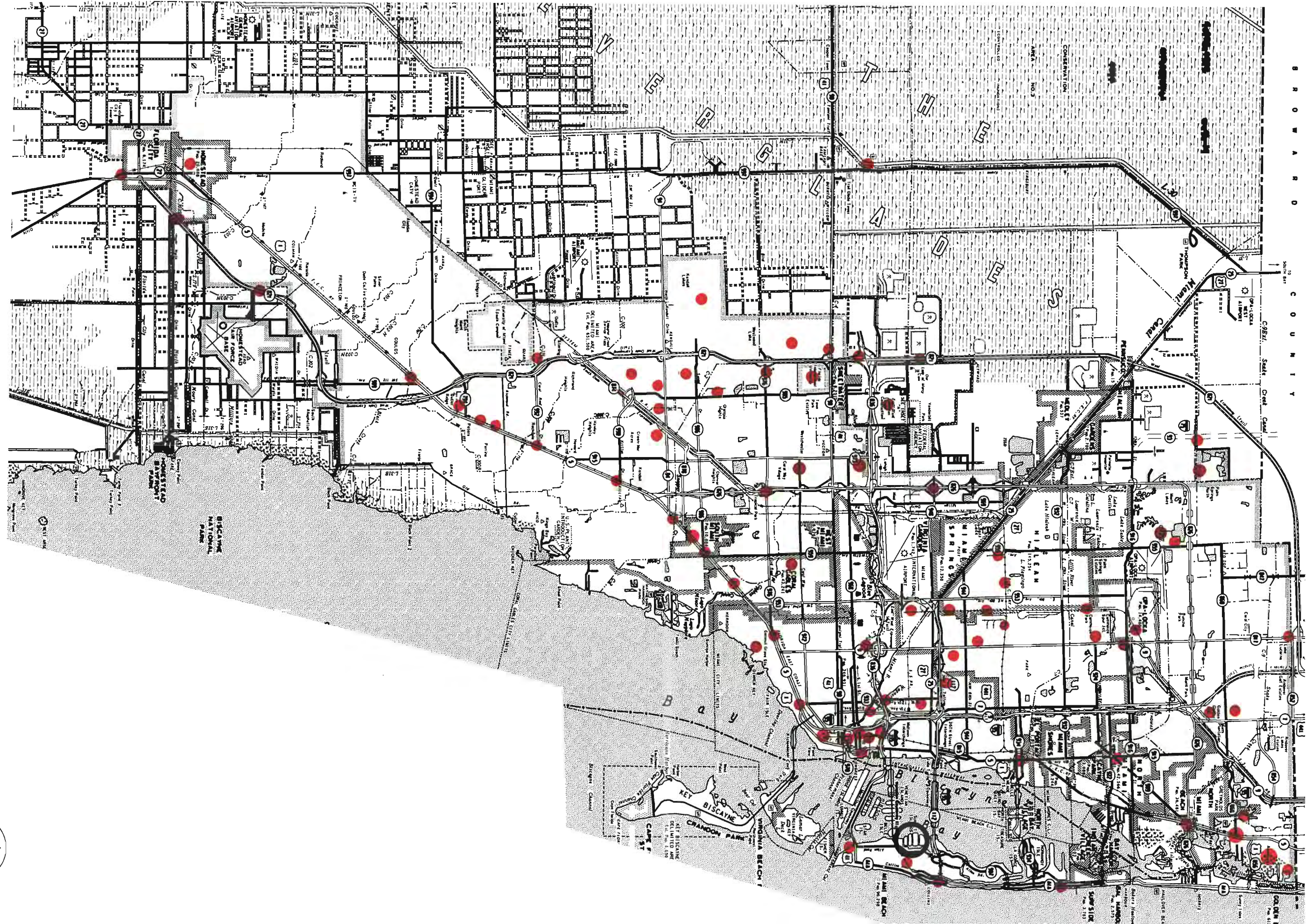


Table 6-1: Original List of the Universe of Sites

Site Locations	
1 US1 / Aventura Mall	41 Vizcaya Metrorail
2 US1 / 163rd Street	42 Coconut Grove Metrorail
3 US1 / 79th Street	43 University Metrorail
4 FIU/ Tamiami Campus	44 South Miami Metrorail
5 International Mall (107th Avenue & W. Flagler)	45 Dadeland North Metrorail
6 Concord Shopping Center (Cmr Bird Rd. & Turnpike)	46 Dadeland South Metrorail
7 Westchester Mall (Coral Way & Galloway Rd)	47 Sunset(SW 88th Avenue)
8 Government Center (downtown Miami)	48 Coral Reef (SW 117th Ave./152nd St.)
9 Opa Locka existing Tri-Rail station	49 Sunset Strip Shop Center (SW 108th Avenue)
10 Miami Lakes (Red Rd & 158th Street)	50 US1 at Caribbean Blvd.
11 Miami Gardens Dr./NW 68th Avenue	51 US1 at Hibiscus St.
12 W. Flagler / 79th Ave.	52 US1 at Martin Rd.
13 Downtown Coral Gables	53 US1 at SW 152nd St.
14 Downtown Coconut Grove (McFarlane Rd)	54 US1 at SW 136th St.
15 Miami Dade Community College (South Campus @ 109th Ct)	55 27th Ave. at 215th St.
16 Diplomat Mall in Broward County	56 27th Ave. at 135th St.
17 Douglas Rd. Metrorail Station	57 Biscayne Blvd. at NE 107th Street
18 Lincoln Rd. between Washington & Collins	58 FIU at HEFT
19 Golden Glades intermodal Terminal-FDOT	59 Bird Road @ SR 826
20 NW 7th Avenue & 183rd Street	60 Miami Beach Convention Center
21 Miami Dade Community College (North Campus @ 113th Street)	61 NW 7th Street at SR 826
22 Kendall area	62 HEFT / NW 41st St.
23 Hammock Town Center	63 SR 826 / NW 36th St.
24 Civic Center Area	64 Collins Ave. at NE 41st St.
25 Miami Beach-Collins / 72nd Street	65 S. Dade Busway Extension at Krome Avenue
26 163rd Street Mall	66 S. Dade Busway Extension at SW 167th Ave.
27 Tri-Rail / Metrorail	67 S. Dade Busway Extension at SW 147th Ave.
28 Miami Airport Tri-Rail	68 Sunset Dr. @ SW 137th Avenue
29 Okeechobee Metrorail	69 N. Kendall Dr. @ SW 107th Avenue
30 Hialeah Metrorail	70 N. Kendall Dr. @ SW 97th Ave.
31 Northside Metrorail	71 SR 236 Ext. @ NW 147th Ave.
32 Dr. Martin Luther King Jr. Metrorail	72 Aventura Blvd. / 29th Ctr. (Publix)
33 Brownsville Metrorail	73 Miami Intermodal Center
34 Earlington Heights Metrorail	74 Miami Lakes Technical Education Center
35 Allapattah Metrorail	75 125th/Dixie Highway/6th NE
36 Santa Clara Metrorail	76 Omni Bus Terminal
37 Culmer Metrorail	77 Plaza de las Americas P&R
38 Overtown/Arena Metrorail	78 Greyhound Terminal Downtown new State Plaza
39 Government Center Metrorail	79 Amtrak terminal
40 Brickell Metrorail	80 Homestead Greyhound

Table 6-2
Potential Locations Excluded Due to Fatal Flaws

Locations	Fatal Flaw
16	Broward County is not under the jurisdiction of the Miami-Dade MPO.
18	The metrorail is no longer planned to connect to Miami Beach.
22, 23	These sites would only function as park-n-rides.
17, 24, 28-44, 46	These sites are existing intermodal facilities.
56	Very close to #9. #9 presents better intermodal opportunities.
58	Very close to #4. #4 presents better intermodal opportunities.
59, 62	Lack of intermodal activity in comparison to other sites.
69	Very close to #15. #15 presents better intermodal opportunities.
71	Lack of intermodal activity in comparison to other sites.
77	Close to #4 & #6. #4 & #6 present better intermodal opportunities.
79	Very close to #27. #27 presents better intermodal opportunities.

6.4 Further Examination of Potential Locations

A meeting was held with the sub-consultant, Barbara Howard and Associates, to further examine the 49 sites and reduce the number of locations. The expertise and local knowledge of our subconsultant contributed to the examination of land use compatibility for each site. Some sites were eliminated based on bus routes, surrounding land uses, and intermodal activity. In addition, some sites were eliminated due to fatal flaws. After this discussion, the number of potential locations was reduced to 31. Table 6-3 lists the 18 sites that were eliminated in this stage of the screening process.

Table 6-3
Eliminated Potential Locations During the Meeting with Barbara Howard & Associates

Locations	Fatal Flaw
11, 57, 61-63	Lack of intermodal activity in comparison to other sites.
27, 45, 68, 76	These sites are existing intermodal facilities.
50-54, 65-67	The busway was considered to have existing intermodal facilities.
72	Very close to #3. #3 presents better intermodal opportunities.

Another meeting was scheduled with MDTA officials. The purpose of the meeting was to discuss each site with MDTA officials prior to the field reviews. The meeting was very useful in determining more specific locations and information for each site. During the meeting, nine sites were eliminated, but five sites were also recommended for consideration by MDTA officials, bringing the number of potential locations to 27. Table 6-4 lists the sites added and eliminated as a result of the meeting with MDTA.

Table 6-4
Potential Locations Added and Removed During the Meeting with MDTA

Added Potential Locations	Eliminated Potential Locations
• Florida City • Cutler Ridge Mall • Golf Club of Miami, NW 186th St. • NW 186th St. at NW 87th Ave. • Mt. Sinai Medical Center	• 9, Opa-Locka Existing Tri-Rail • 10, Miami Lakes (Red Rd/158th St.) • 19, Golden Glades Intermodal Center • 26, 163rd Street Mall • 49, Sunset Strip Shopping Center • 70, N. Kendall Dr./ SW 97th Ave. • 73, Miami Intermodal Center (MIC) • 78, Downtown Greyhound Terminal • 80, Homestead Greyhound

6.5 Evaluation Program, First Iteration

The 27 potential sites were evaluated according to the evaluation program established in Chapter 5, Section 5.6. The purpose of this first iteration was to take a closer look at the 27 remaining potential locations, and eliminate two based on a quantitative procedure. This evaluation was performed prior to the field reviews, and was therefore limited to data collected from other sources. The only purpose of this first iteration was to eliminate two sites and arrive at the final 25 locations. The results of this first iteration are illustrated in Table 6-5.

The first iteration resulted in a list of 25 sites, but one of the potential locations (Mount Sinai Medical Center) was later excluded due to an intermodal facility already being designed at this location. Based on coordination with FDOT District VI, the Golden Glades Intermodal Center was added from the fatal flaws list to become the 25th location. Originally excluded because it was an existing facility, the site was included because funding had not yet been appropriated. In addition, the Coral Gables potential location was changed to W. Flagler Street and SW 42nd Avenue (Le Jeune Rd.). At this point, the 25 potential locations had been selected. Their respective ranking and implementation will be discussed in Chapter 7.

A site portfolio for each of the 25 potential intermodal facilities was compiled and is located in the appendix of this report. These portfolios include data collected in the field in the form of maps, sketches, and photographs.

6.6 Data Collection

Prior to performing field reviews, the following data was collected:

- Information on transit schedules, routes, users, and major transfer locations. These were provided by MDTA (bus and rail), Tri-Rail, Amtrak, and Greyhound/Trailways.
 - Information detailing pedestrian and bicycle activity. Bicycle activity was obtained from the *Bicycle Facilities Plan for Miami-Dade County*, while pedestrian activity patterns were obtained through discussion with local agencies.
 - Surrounding site features such as aerial photographs of each site were obtained from Redi-Maps. These photographs aided in locating a suitable site location by illustrating surrounding land uses and road features.
- Field reviews were performed at each of the 25 locations. Surveillance equipment such as cameras, video cameras, and dictation machines were used to document site inspections. Data collected from each site included the following:
- *Site Boundaries*: The preliminary boundaries were identified and surrounding land uses/attractions were noted. The existing use of the site was detailed.
 - *Preliminary Site Layout*: A preliminary site layout was envisioned and sketched with major considerations given to bus flow, site access by different modes, and parking for automobiles.
 - *Surrounding Traffic Features*: Adjacent traffic operations were noted, especially in regard to their effect on the intermodal facility. For example, if an adjacent street was experiencing congested conditions, then it was noted that it would be difficult for a bus to maneuver through that corridor. Road features such as number of lanes, activity, and signalization were recorded.
 - *Pedestrian Activity*: The amount of pedestrian activity was noted (none, low, medium, high), and pedestrian origins and destinations were recorded if they were evident in the field. In addition, existing pedestrian facilities were examined, such as crosswalks, push-button signals, benches, shelters, trash receptacles, telephones, newspaper bins, and transit information to name a few.

Table 6-5: Ranking of Potential Locations
1st Iteration

#	Location	Evaluation Criteria											Total
		1	2	3	4	5	6	7	8	9	10	11	
1	NW 7th Avenue North of 183rd St.-opposite new Winn Dixie	6	6	10	6	10	6	8	8	10	6	10	86
2	Flagler/ 79th	6	10	10	6	6	2	4	8	10	6	10	78
3	Mt. Sinai Medical Center at Miami Beach	6	10	10	2	6	6	8	8	10	2	10	78
4	Coral Reef (SW 117th Ave./152nd St.)-(e)	4	6	10	6	10	6	4	4	10	6	10	76
5	Miami Dade Community College South Campus @ 109 Crt.	6	6	10	6	10	2	4	4	10	6	10	74
6	Miami Dade Community College N. Campus-terminal on 113 St.	6	6	10	6	10	2	4	4	10	6	10	74
7	Miami Beach Convention Center area-(sr)	6	10	10	6	10	2	8	4	10	6	2	74
8	Miami Lakes Tech Educ. Center	6	6	10	2	6	2	8	8	10	6	10	74
9	125th/Dixie/ 6th NE	6	10	10	6	10	6	4	4	10	6	2	74
10	Westchester Shopping Center	4	10	10	6	6	2	4	4	10	6	10	72
11	International Mall	6	6	10	2	10	2	4	4	10	6	10	70
12	From bet Flagler/ SW 1 to between SW 1 & NW 1	6	10	10	6	6	2	4	4	10	2	10	70
13	Collins Ave. at NE 41st Street-(Int)	4	10	10	6	6	6	4	8	10	6	0	70
14	Cutler Ridge Mall	6	10	10	6	6	2	4	4	10	2	10	70
15	FIU/ Tamiami Campus	6	10	10	6	10	6	4	4	10	0	2	68
16	US 1/ Aventura Mall	6	10	10	2	10	2	4	4	10	6	2	66
17	27th Avenue at NW 215th St -(sr)	6	2	6	2	6	6	8	8	10	2	10	66
18	Florida City-Palmer Dr / FEC ROW	6	2	10	2	10	2	8	4	6	6	10	66
19	87th Avenue at Miami Gardens Dr. (186th)	6	2	10	2	6	2	8	4	10	6	10	66
20	US 1/ 79th Street	4	10	10	6	6	2	4	8	10	2	2	64
21	Miami Beach-Collin/72nd St.-at new library on 72nd Street	4	10	10	6	6	2	4	4	10	6	2	64
22	Golf Club at Miami Gardens Dr.	6	2	0	6	6	2	8	8	10	6	10	64
23	US 1/ 163rd Street	6	6	10	6	6	2	4	4	10	2	6	62
24	Downtown Coral Gables	4	2	6	2	6	2	4	4	10	6	10	56
25	Downtown Coconut Grove	4	10	6	2	6	2	4	4	10	6	2	56
26	Concord Shopping Center	2	6	6	2	6	2	4	4	6	2	2	42
27	Sunset (SW 88th Avenue)	2	2	6	2	6	2	4	8	10	2	10	54

- *Design Elements:* Design elements such as lighting, drainage structures, and power lines were identified.
- *Bus Activity:* The location of existing bus stops was noted including the condition of these existing facilities. Site facility elements were noted. Bus routes that frequent the site or its vicinity were recorded. General bus/patron behavior was also examined. It was noted if the site was a transfer location, a destination, a park-n-ride, or a layover location.
- *List of Elements:* A site facilities matrix (as presented in Section 5.5) was completed for each location. Each element was considered in terms of both suitability and need. This process served to identify the elements of continuity that were appropriate at each particular site.

7.0 Implementation

After the 25 potential locations were selected (see Figure 7-1), several questions still needed to be answered on the planning level. In what order would the intermodal facilities be implemented? How much would these intermodal facilities cost? In coordination with the Miami-Dade MPO, it was decided that the sites would be realized over the course of five years, with five sites being implemented per year. The sites were prioritized and renumbered from first to twenty-fifth.

7.1 Ranking the 25 Locations

The potential locations were each evaluated in accordance with the evaluation program presented in Section 5.6 of this report. This evaluation program ranks potential intermodal facilities by a variety of criteria. While some of the criteria are based on a scale of zero to ten, others are based on a scale of eight or six. While each of the criteria is important, scaling them differently provides some weighting to the criteria that are deemed more critical to the ranking of intermodal facilities.

The ranking was based on information collected during the field reviews, data provided by MDTA, and knowledge of the surrounding transit, traffic, and land use patterns. The maximum score possible was a 94. Table 7-1 presents the ranking of each potential location. The preliminary year of implementation is also included. The evaluation criteria, numbered from 1 to 11, can be found in Section 5.6 of this report.

This ranking is merely based on a quantitative procedure, and should serve as a recommendation of priority for implementation. The final ranking should be determined in conjunction with local MPO, FDOT, and MDTA authorities. A potential site with a high ranking from the evaluation procedure may be eliminated based on local or regional policies, substantial existing development, land costs or environmental issues that dictate another use for the site. Likewise, a

site that ranks low in the evaluation program may be deemed more critical for earlier implementation.

Following is a brief discussion of each potential intermodal facility.

#1 MDCC North Campus: An intermodal facility here would reinforce and complement the existing terminal which has five (5) bus routes. A major activity center in the area, it is also the gateway to Opa Locka. There are pedestrian, bicycle, and transit uses in the existing development. It is also the site of community activities such as seminars and entertainment events. With future tie-in with the NW 27th Avenue Metrorail corridor, this intermodal facility would serve many modes of operation.

#2 MDCC South Campus: A major activity center, the South campus is one of the busiest campuses in the top-rated Miami-Dade Community College system. There is a terminal for four (4) bus routes with an existing park-n-ride lot and substantial pedestrian and bicycle activity. Food and beverage establishments as well as a few retail shops across the street support the college. The area presents a positive impact and an intermodal facility would be compatible with existing land use patterns and the surrounding community.

#3 NW corner of NW 7th Avenue and NW 183rd Street: This is a major activity center with a lot of industrial businesses which provide a great number of employment opportunities. There are several high- and medium-rise office buildings, one of which houses the district office for Miami-Dade Commissioner Betty Ferguson. Retail stores and small restaurants are also located in the area. It is one of the major arteries leading from Carol City east into the North Miami Beach area as well as north into Broward County. Therefore, an intermodal facility would reinforce and complement existing land use patterns.

#4 Miami Lakes Technical Education Center: This educational center has access to four (4) bus routes. A major activity center for students, it is

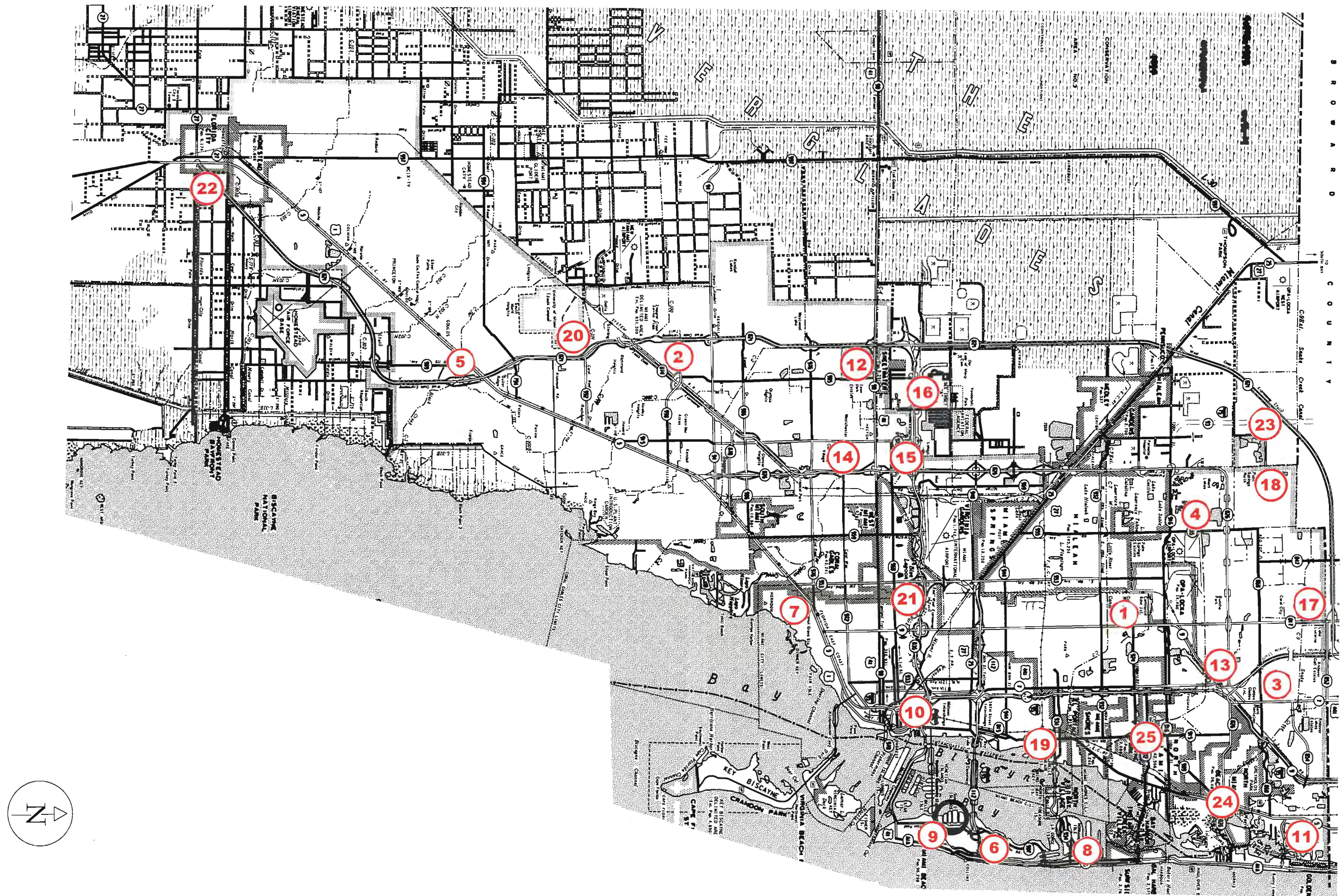


Table 7-1 Ranking and Implementation of Potential Intermodal Centers

Year	#	Location	Evaluation Criteria											Total
			1	2	3	4	5	6	7	8	9	10	11	
1	1	MDCC North Campus	10	6	10	6	10	6	8	8	10	6	10	90
	2	MDCC South Campus	6	6	10	6	10	6	8	8	10	6	10	86
	3	NW corner of NW 7th Avenue and NW 183rd Street	6	10	10	6	10	6	8	8	10	2	10	86
	4	Miami Lakes Technical Education Center	6	10	10	6	10	2	8	8	10	6	10	86
	5	Cutler Ridge Mall	6	10	10	6	10	2	8	8	10	6	10	86
2	6	Collins Avenue at NE 44th Street	6	10	10	6	10	6	4	8	10	6	6	82
	7	Coconut Grove (McFarlane Road)	4	6	10	6	10	6	4	8	10	6	10	80
	8	Miami Beach-Collins Avenue and 72nd Street	6	6	10	6	6	2	8	8	10	6	10	78
	9	Miami Beach Convention Center area	6	6	10	6	10	6	4	8	10	6	6	78
	10	Government Center	10	10	10	6	6	2	8	8	6	2	10	78
3	11	US 1/ Aventura Mall	6	6	10	2	6	2	8	8	10	6	10	74
	12	FIU/ Tamiami Campus	6	10	10	6	6	2	4	4	10	6	10	74
	13	Golden Glades Park and Ride	10	6	10	2	6	2	8	8	10	2	10	74
	14	Westchester Shopping Center	4	6	6	6	10	6	8	8	10	2	6	72
	15	Miami International Mall	6	6	10	2	6	2	8	8	6	6	10	70
4	16	Flagler/ 79th	6	2	10	2	6	2	8	8	10	6	10	70
	17	27th Avenue at NW 207th Street	6	6	6	6	6	2	8	8	10	2	10	70
	18	Golf Club at Miami Gardens Drive	6	2	6	6	10	6	8	8	2	6	10	70
	19	US 1/ 79th Street	6	10	10	2	6	2	4	4	10	0	10	64
	20	Coral Reef (SW 117th Avenue and 152nd Street)	6	2	6	2	10	2	8	8	2	6	10	62
5	21	Flagler/ 42nd Avenue	4	10	6	0	6	2	4	4	10	6	6	58
	22	Florida City-Palmer Dr / FEC ROW	4	2	10	0	6	2	8	8	2	6	10	58
	23	87th Avenue at Miami Gardens Drive (186th Street)	6	2	6	2	6	2	8	4	6	6	10	58
	24	US 1/ 163rd Street	4	6	6	6	6	2	4	4	10	2	6	56
	25	NE 125th Street/Dixie Highway/ NE 6th Avenue	6	6	10	6	6	2	0	4	10	2	2	54
	25a	Alton Road/ 5th Street- Miami Beach	8	10	10	6	6	2	8	8	10	6	10	84

several blocks from downtown Miami Lakes with its upscale shops and eating establishments, including Don Shula's. It is also near the Opa Locka Airport.

#5 Cutler Ridge Mall: This is a major activity center which is surrounded by the South Miami-Dade Government Center to the north, Cutler Ridge Mall to the south, and the Cutler Ridge Police Station to the west. It is also the location of the district office for State Representative Larcenia Bullard as well as for Miami-Dade Commissioner Dennis Moss. There are two (2) bus routes with an existing park-n-ride area.

#6 Collins Avenue at NE 44th Street: This area is attractive to tourists because it connects the mainland to a group of upscale, well-known, and popular hotels, such as the Fountainbleu Hilton and Eden Roc to the north and lesser known, but well-used hotels to the south. There are several bus routes and fairly regular pedestrian traffic. An intermodal facility would complement the existing land use patterns and would be complementary to the neighborhood.

#7 Coconut Grove (McFarlane Road): Another low-density activity center, the downtown Grove area has several bus routes. There is major pedestrian activity in the surrounding shopping area which is frequented by tourists and residents alike. There are some historical sites, including Barnacle Historic Park. A few blocks to the north is the seat of City of Miami lawmaking at City Hall. The area also includes several upscale restaurants and hotels, like the Mayfair and the Grand Bay Hotels. Therefore, an intermodal facility would reinforce and complement existing land use patterns and be sensitive to the community.

#8 Miami Beach-Collins Avenue and 72nd Street: This location is a major activity center with access to the beach, employment areas, shopping, and hotels, as well as the North Shore Community Center. It is near the major intersection of A1A and the North Bay Causeway (J.F. Kennedy Causeway) which is a major artery from the beach into the mainland. An intermodal

facility would certainly be complementary to the existing land use patterns.

#9 Miami Beach Convention Center: An intermodal facility would have a very positive impact on this major activity center located in the heart of Miami Beach. There are six (6) bus routes which give access to City Hall, the Convention Center and the Jackie Gleason Theater of the Performing Arts (TOPA). At any given time, there could be several thousand people utilizing the facilities. There is also significant pedestrian and bicycle traffic from the residents in the surrounding neighborhoods. It also gives access to the Lincoln Road Mall with its upscale shops and restaurants a few blocks south of the Convention Center.

#10 Government Center: Located in downtown Miami, this intermodal facility would give access to the political center of Miami-Dade County, including the Government Center (otherwise known as the Stephen P. Clark) Building, the Federal Building, the main library, the Museum of Science, the Historical Museum of Southern Florida, and the Court House. In addition, access would also be provided for the major downtown shopping areas and major transportation modes (Metrorail, Metromover, and the bus terminal). The location was selected to tie in with the future east-west Metrorail corridor.

#11 US 1 / Aventura Mall: This potential intermodal facility would have a positive impact on the surrounding community, providing centralized access to Aventura Mall, one of the most populated shopping and activity centers in the north end of the county. It would provide access to the six (6) bus lines which in turn provide access to the mall for both employees and shoppers alike. Further, it would be accessible to the staff at the nearby Turnberry Resort and Club, which is located east of Aventura. It may also provide some access for shoppers and employees to Loehmann's Fashion Island, just a few blocks to the south.

#12 FIU / Tamiami Campus: This preferred site would be accessible to hundreds of students

attending Florida International University (FIU), Tamiami Campus. There are four (4) bus lines providing transportation. There is also Tamiami Park, home of the annual youth fair, which draws thousands of visitors as well as a strip mall across from FIU on the east side of SW 107 Avenue. Therefore it provides a highly positive impact on existing land use patterns and is extremely sensitive to the surrounding community.

#13 Golden Glades Park-n-Ride: This location is an existing park-n-ride serving local bus routes and the Tri-Rail. Bus and rail patrons living north and west of the station park their cars to ride into Miami. There is a vast amount of potential for joint public/private developments at this location. Possibilities include a gas station, dry cleaners, ATM machine, and bagel/coffee shop to name a few. This location was originally excluded from the list of potential locations, because an intermodal facility joint development study had already been prepared for FDOT District VI. However, in correspondence with the FDOT, it was determined that the site should be included because funding had not yet been appropriated.

#14 Westchester Shopping Center: This intermodal facility would be located near the intersection of Bird Road and the Florida Turnpike (Homestead Extension). Access would be provided to an extremely heavy shopping district, a large movie complex, and a post office via three (3) bus lines. The center would provide a positive impact to the surrounding community, and would be compatible with existing land use patterns.

#15 Miami International Mall: A major activity center for hundreds of shoppers, this site has two (2) bus lines and access to the Florida Department of Transportation (FDOT), the Florida Highway Patrol headquarters, and several office buildings. An intermodal facility would be very compatible with the existing land use patterns and provide a higher sense of connectivity to the surrounding communities.

#16 Flagler / 79th: One of the busiest shopping areas southwest of the airport that provides shopping for thousands of people, located just

southwest of the intersection of SR 836 (the Dolphin Expressway) and SR 826 (the Palmetto Expressway), is the Mall of the Americas. This major activity center includes banks and at least three (3) bus routes. The existing bus shelter could be augmented with site elements to create a very attractive intermodal location that would benefit the community.

#17 27th Avenue at NW 207th Street: This intermodal facility would be generally compatible, complementing one of the most well known activity centers in the county—Pro Player Stadium and Calder Race Track. While it is surrounded primarily by residential neighborhoods with virtually no retail, office use, mixed-use developments or major public facilities, during the sports seasons (football, baseball, racing) there is significant pedestrian and transit as well as individual vehicle usage. Pro Player Stadium holds a maximum of 75,000 people and often is host to sell-out crowds.

#18 Golf Club at Miami Gardens Drive: This area has a neutral impact on the community because it is almost totally surrounded by residential neighborhoods. The Golf Club of Miami is one of the older country clubs in the county. There is heavy vehicular traffic on Miami Gardens Drive, but only one (1) bus line. However, MDTA predicts long-term transit growth in this region. There is some activity a few blocks away at American High School and the Adult Education Center.

#19 US 1 / 79th Street: This proposed intermodal facility would provide a positive impact to the existing land use patterns and show sensitivity to the community. A large Haitian population travels to the nearby Immigration and Naturalization (INS) center. Five (5) bus lines provide transportation to a low-income transit-dependent population. The 79th Street Mall provides shopping at food and retail shops, including a Smart and Final discount store.

#20 Coral Reef (SW 117th Avenue and 152nd Street): This intermodal facility would be near the Metro-Zoo. There is an existing park-n-ride facility

accommodating a few bus routes that primarily connect people to the Metrorail, downtown, and Miami Arena.

#21 Flagler / 42nd Avenue: This potential intermodal facility is at a major crossroads. W. Flagler Street runs east to west connecting to the central business district (CBD), while Le Jeune Road (NW 42nd Avenue) runs north to south connecting with the Dolphin Expressway (SR 836). Four (4) bus routes would serve this potential location, including the Flagler MAX.

#22 Florida City-Palmer Drive / FEC ROW: This major activity center has access to the Florida City Mall to the north. There is light bus activity which gives service north to the Dadeland South Metrorail station. Pedestrian activity is heavy. Shuttle service will be provided to the developing I-MAX across US 1. There are also bus bays with a pick-up/drop-off and kiss-n-ride area. There will possibly be future development for bike rentals for tourists in the area.

#23 87th Avenue at Miami Gardens Drive (186th Street): This area is surrounded by residential neighborhoods and is just north of I-75. This site could be used in the future to tie in users from North Miami-Dade and Broward County, who take a bus down I-75 and connect to the Miami-Dade system at this potential intermodal facility.

#24 US 1 / 163rd Street: An intermodal facility at this location would be sensitive to the needs of the community and be compatible with the existing land use patterns. This center would provide access to five (5) bus lines traveling north-south on US 1 and connecting to Miami Beach to the east. The Oleta River State Recreation Area is just east of the center, while the North Miami-Dade Justice Center is to the south. A historic site, the Spanish Monastery, is just north at 167th and West Dixie Highway. Also southeast of the center is Florida International University (FIU), North Campus.

#25 NE 125th Street/Dixie Highway / NE 6th Avenue: This activity center has access to five (5) bus routes and is surrounded by low and middle

income residential neighborhoods. It is also in close proximity to North Miami City Hall. A major intersection, it is crossed by 125th Street, which leads into Broad Causeway, the major east/west artery into Bal Harbour, and 6th Avenue, a major artery which leads into North Miami Beach to the north and North Miami to the south.

7.2 Post-Selection Review and Coordination

A draft report was submitted to the Miami-Dade MPO and distributed to the supporting agencies. An additional site was suggested to be added to the list of 25 site locations. This site is located at 5th Street and Alton Road in Miami Beach. The site, which was named Site 25a, was evaluated by the same criteria as the other 25 site locations. Based on the evaluation, this new site would rank 6th in the implementation plan of the 25 site locations. As a result, Site 25 would actually be eliminated from the 5-year implementation plan.

The location was chosen partially on the future potential of a water taxi connecting Miami Beach to the City of Miami. In addition, the new Electrowave bus service runs by this location. Available space for parking also adds to the potential use of the intermodal facility.

A field review of the new site was performed, and a site portfolio was prepared and included in the appendix of this report. The site evaluation is illustrated in Table 7-1, and costing is illustrated in Table 7-2.

7.3 Costing

Each potential intermodal facility was examined to determine a preliminary projection of budgetary programming cost associated with implementing the site. These costs were divided into two categories; site construction and site facilities. Following is a description of both categories.

- *Site / Civil* — Site/Civil costs include engineering design and construction costs for implementing the intermodal facility. Typically, the site/civil costs would include mobilization, maintenance of traffic, construction materials (asphalt, concrete, etc.), drainage facilities,

curbing, sidewalks, traffic control devices, manpower, use of machinery, and any other costs associated with the construction of intermodal facilities.

- *Site facilities* — Site facilities costs include the cost of site elements, such as shelters, landscaping, ETA kiosks, and newspaper bins to name a few. A more complete list of possible site elements is included in Section 5.2.

The materials considered under site facilities included elements of continuity (such as patterned paving stones), while materials for site/civil were related to actual site utility and function (i.e., traffic signing, striping, pavement, asphalt, curb and gutter, etc.).

Because these potential locations are in the preliminary stages of design, construction costs were likewise preliminary estimates provided for the express purpose of appropriating funds to these intermodal facilities. The construction costs were not obtained by a detailed itemization of construction elements; rather they were estimated based on relative construction costs for other known elements. Because these sites are only in the first stage of planning, itemizing construction costs would not have been any more accurate at this early stage when specific quantities are unknown. During a more detailed design process, many changes will be made from the schematic design presented in this study. These changes would severely limit the accuracy of any itemized cost estimate.

On the other hand, site facilities costs were itemized based on the recommended site facilities for each site. By nature, these elements are easier to itemize at the earlier planning stages.

It is important to note that site/civil and facility costs do not provide all-inclusive costs for developing intermodal facilities. Right-of-way acquisition and maintenance/operating costs are not included. It would not be appropriate to project prices for these elements in this stage of the design process.

Table 7-2 summarizes the projected costs for each potential location. Both construction and site facility costs are listed.

7.4 Funding Opportunities

The Miami-Dade County Metropolitan Planning Organization (MPO) is charged by state and federal regulations, along with County ordinances, to cooperate with federal, state, and local officials in the development of both short and long range transportation plans and programs. These regulations also indicate that the transportation planning process must include an analysis of alternative transportation system management and investment strategies to make more efficient uses of existing facilities and must consider all modes of transportation as a prerequisite to the funding of projects.

An excerpt from the MPO's *Prospectus for Transportation Improvements, March 1995 (Fifth Edition)* discusses federal funding opportunities as follows:

"The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 amended Title 23 U.S.C., and the Federal Transit Act (FTA) by revising sections 134 of title 23 and 8 of the FTA. This legislation recognized that the nation's transportation systems are intricately tied to our economy, public health and quality of life. ISTEA dictates intermodal and multimodal approaches to transportation planning to meet mobility needs. This approach includes a significantly enhanced role for the MPO, as the urban area forum for establishing transportation policy and for implementing this policy through the metropolitan Transportation Improvement Program (T.I.P.) and the project selection process. ISTEA calls for the T.I.P. to present a priority list of projects to be carried out and for inclusion of a project only if full funding can be available within the time period contemplated for completion of the project.

ISTEA consists of three major provisions: 1) the ability to transfer funds between categorical funding programs depending on the best strategy, 2) implementation of the Clean Air Act Amendment of 1990 (CAAA), to attain national

Table 7-2: Costing Summary

#	Location	Site/Civil Costs	Site Facilities Costs	Site Total
1	MDCC North Campus	\$100,000	\$684,000	\$784,000
2	MDCC South Campus	\$20,000	\$289,000	\$309,000
3	NW corner of NW 7th Avenue and NW 183rd Street	\$150,000	\$384,000	\$534,000
4	Miami Lakes Technical Education Center	\$50,000	\$310,000	\$360,000
5	Cutler Ridge Mall	\$75,000	\$481,000	\$556,000
6	Collins Avenue at NE 44th Street	\$150,000	\$910,000	\$1,060,000
7	Coconut Grove (McFarlane Road)	\$50,000	\$199,000	\$249,000
8	Miami Beach-Collins Avenue and 72nd Street	\$0	\$133,000	\$133,000
9	Miami Beach Convention Center area	\$50,000	\$97,000	\$147,000
10	Government Center	\$300,000	\$442,000	\$742,000
11	US 1/ Aventura Mall	\$10,000	\$140,000	\$150,000
12	FIU/ Tamiami Campus	\$0	\$170,000	\$170,000
13	Golden Glades Park and Ride	\$50,000	\$341,000	\$391,000
14	Westchester Shopping Center	\$60,000	\$160,000	\$220,000
15	Miami International Mall	\$25,000	\$140,000	\$165,000
16	Flagler/ 79th	\$0	\$178,000	\$178,000
17	27th Avenue at NW 207th Street	\$200,000	\$518,000	\$718,000
18	Golf Club at Miami Gardens Drive	\$250,000	\$537,000	\$787,000
19	US 1/ 79th Street	\$200,000	\$519,000	\$719,000
20	Coral Reef (SW 117th Avenue and 152nd Street)	\$250,000	\$623,000	\$873,000
21	Flagler/ 42nd Avenue	\$100,000	\$429,000	\$529,000
22	Florida City-Palmer Dr / FEC ROW	\$100,000	\$318,000	\$418,000
23	87th Avenue at Miami Gardens Drive (186th Street)	\$450,000	\$505,000	\$955,000
24	US 1/ 163rd Street	\$100,000	\$671,000	\$771,000
25	NE 125th Street/Dixie Highway/ NE 6th Avenue	\$0	\$112,000	\$112,000
25a	5th Street/ Alton Road	\$50,000	\$324,000	\$374,000
	Projected Total Costs for all Intermodal Centers:	\$2,790,000	\$9,502,000	\$12,292,000

ambient air quality standards, and 3) the development of the T.I.P. with public participation from interested individuals and groups.

Federal legislation also authorizes the Secretary of Transportation to make grants or loans to assist states and local public bodies and agencies in financing transportation projects which enhance the effectiveness of public transportation. Planning funds are apportioned to states in accordance with a fair and equitable formula. The formula is approved by the Secretary and considers, but is not necessarily limited to, population, status of planning, and metropolitan area transportation needs. In addition to the guidelines for the distribution of transportation planning funds contained in U.S.C. Title 23, Title 49 of the Code of Federal Regulations details the nature and distribution formulas for transit planning funds as authorized by the Urban Mass Transportation Act of 1964 and the more recent ISTEA."

The ISTEA program, through the Federal Transit Administration (FTA), offers three basic sources of funding. These include:

1. *Formula grants* — These FTA grants are based on a formula that incorporates population, travel demand, local needs, and other criteria.
2. *Discretionary grants* — These funds, often earmarked in the budget approval process at the federal level, are more typically used for longer projects. Obtaining these funds usually requires significant project justification, documentation, needs evaluation, and coordination with both budget and program staff as well as elected representatives.
3. *Flexible funding* — This source allows for use of funds on priority transportation projects as defined by the planning and T.I.P. process, and may result in transfers from one mode, such as highways, to another mode, such as transit.

Specifically, funding for intermodal facilities may come typically from category 1 above, or the state may also participate in special grants for intermodal facilities, based on a review of needs and priorities statewide. Material contained in this

report may be used as the basis for a grant application to the Florida Department of Transportation (FDOT) and to the FTA.

7.5 Closing Recommendations

Mature U.S. cities such as New York, Boston, and Chicago have a long history of implementing and operating multiple modes of transportation. These have included bus, fixed guideway, intercity rail, taxi, jitney and many other variations in providing transportation services. In contrast, the Miami-Dade County urban area (which was only established as a city just over 100 years ago) has just recently initiated development of an integrated multimodal transportation system with the first major steps being the opening of Metrorail in the mid 1980s. With the expansion of conventional bus service, addition of shuttle/feeder routes, such as the KAT service, construction of Metrorail, construction of HOV lanes, the downtown Metromover system, the South Miami-Dade Busway, Tri-Rail, and plans for such innovative transportation facilities as the Miami Intermodal Center (MIC), Miami-Dade County has rapidly raced to the leading edge of multimodal implementation and development in the U.S.

However, neither the mature transportation systems of the older cities nor the newer systems such as the one being developed in Miami have yet embraced and implemented advanced intermodal facilities that can smooth the transfer from one mode to another. Here again, Miami-Dade County is setting the pace by developing a plan for implementation of intermodal facilities on a countywide, comprehensive basis.

The expansion in Miami-Dade County's transit system plus implementation of the Bikeway Plan, has created a need for improved facilities to support transfers and intermodal connections. The recent additions to the system such as Metrorail, Metromover and the South Miami-Dade Busway, have stations and well furnished transfer facilities. However, a significant missing element is the development of intermodal facilities for major transfer locations and other points of modal connection in Miami-Dade County for the non-fixed guideway portions of the system.

In this study, a series of steps were performed to identify and evaluate potential locations for additional intermodal facilities. Results of this study produced a list of twenty-five priority sites that are recommended for implementation over a five (5) year period. However, many valid locations in addition to the 25 top priority locations also warrant installation of intermodal facilities as well. A total of over 50 locations were identified. As a result, it is recommended that an additional 25 locations be considered for programming at the earliest possible time.

Next Steps

Recommended next steps for implementation of intermodal sites include programming of the first 25 sites through the T.I.P. process. This step will also include preparation of applications for grants as potential funding becomes available. Upon funding of the various projects, actions should be taken to perform local area design and development studies for each site, in order of priority. This process will include development of preliminary designs that are compatible with adjacent neighborhoods. These designs would be reviewed by appropriate planning and operating agencies and by appropriate MPO committees, including the Transportation Aesthetics Review Committee (TARC). Final design plans and specifications should then be prepared in anticipation of bidding and letting of construction contracts. It is suggested that an agency such as the Miami-Dade County Department of Public Works or Miami-Dade Transit Agency (MDTA), who deal regularly with construction contracts, be given responsibility for implementing their projects.

As a subsequent "next step," it is suggested that the MPO staff perform the studies and analyses necessary to identify the next 25 intermodal sites. This could be accomplished using the methodology and examples produced by this study. The MPO and other reviewing agencies could then determine priorities for the second set of 25 locations.

As a third "next step," it is suggested that the MPO develop a long-range plan and necessary policies to implement more transit-oriented

developments, thereby creating more livable communities. This plan and associated policies should address land use plans, the comprehensive plan, zoning, development densities, and possibly transit center zoning similar to the Fixed Guideway Rapid Transit System - Development Zone (Ordinance No. 78-74 included in Appendix B) developed by the Miami-Dade County Commission for fixed guideway facilities.

Summary of Recommendations

Following is a brief summary and general statement of the recommendations resulting from this study:

Short Range

- Include 25 priority intermodal sites in the T.I.P.
- Prepare grant applications and obtain funding for the projects.
- Perform individual intermodal facility design and development studies to relate design to each local community.
- Coordinate with TARC committee and other review agencies.
- Implement 25 intermodal facility sites over 5 years.

Intermediate Range

- Identify and document 25 additional intermodal facility sites for implementation during the next 10 years.
- Identify Intelligent Transportation System (ITS) elements that will complement and advance the service provided by intermodal facilities.
- Program, fund, and construct additional sites.

Long Range

- Develop policies and plans to integrate transportation facility development and land use plans to support transit-oriented development within designated zones. Use these tools to create "livable communities" concepts throughout Miami-Dade County.

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Appendix A

TRANSPORTATION AESTHETIC REVIEW COMMITTEE

DESIGN MISSION STATEMENT

The Transportation Aesthetics Review Committee believes that public transportation and infrastructure should be an asset to the community it serves not only as a means of moving large numbers of people with speed and efficiency but as well as a source of community pride through excellent, meaningful design.

Bridges must span rivers and stir the imagination; highways must connect people and have visual interest; transit systems must be state of the art and artistically challenging. Infrastructure must be safe and practical and beautiful, dynamic and playful.

As Dade County begins planning for infrastructure and transportation projects for the next millennium, the Transportation Aesthetics Review Committee wishes to set a new standard of design excellence which will be put into effect from the planning phase through build-out of these significant projects.

Because infrastructure is more than utility, these projects must also be instrumental in creating a sense of place; they are the cultural systems that connect communities together. Creative problem solving through innovative collaborations can help create places of magic that nurture our culture, manifesting the image of the city. Projects must seek a design continuity that relates to and harmonizes with the built and natural landscape. Preservation of the environment, preservation of the heritage of Dade County and humanization of the transportation system should be seen as major goals of the design team.

Major infrastructure projects offer the opportunity to shape landscape and cities. The challenge is to create memorable images that transform the commonplace to the extraordinary by applying unconventional approaches to design solutions that broaden the palette of traditional responses to infrastructure form and function. A value added approach to transportation and infrastructure projects is the objective which in turn creates places whose value to the community increases over time.

A collaborative process which involves the thinking of artists, landscape architects, historians, urban designers as well as engineers and architects in a team approach can enlarge, enhance and enlighten the design process. Artists should push the standard parameters of materials and site becoming a catalyst for creativity and innovative problem solving; landscape architects should interpret their task as an opportunity to treat vegetation in the sub-tropics not as accessory but as an intrinsic part of the overall design recognizing the environmental and climatic uniqueness of South Florida; historians should interpret the built and cultural heritage in a sympathetic and genuine design response which does not simply mimic existing structures but which instead carries its own design integrity.

Major infrastructure projects offer a singular, unique opportunity to shape (re-shape) and interpret large areas of our community; they offer the convenience of efficient transportation, they should also offer the opportunity to dream in concrete, draw in steel and paint in stucco to make a statement about who we are, and what we are in a positive way that says to residents and visitors we are like no other place.

RESOLUTION ADOPTING AN AESTHETIC MISSION STATEMENT ESTABLISHING A SET OF VALUES AND DIRECTION TO BE APPLIED TO ALL TRANSPORTATION INFRASTRUCTURE PROJECTS WHICH TARC REVIEWS, AND PROVIDING FOR AN ACCOMPANYING LIST OF PRINCIPLES TO BE ADOPTED

WHEREAS, the Metropolitan Planning Organization has established the Transportation Aesthetic Review Committee (TARC) to ensure that development of major transportation projects in Dade County incorporates quality aesthetic criteria and professional standards of design, and

WHEREAS, the TARC perceives a need to address the design of transportation infrastructure projects in new and innovative ways, and

WHEREAS, the TARC views adoption of a mission statement as a crucial step in establishing its philosophy and direction, along with a set of values, and

WHEREAS, the TARC intends to apply the mission statement, and a subsequently adopted list of principles, to transportation infrastructure projects, which TARC reviews, and

WHEREAS, the TARC intends to set this new standard of design excellence to be put into effect from the planning phase through buildout of these significant projects.

NOW, THEREFORE, BE IT RESOLVED BY THE TRANSPORTATION AESTHETIC REVIEW COMMITTEE OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA:

SECTION 1. That attachment A be adopted as the TARC's aesthetic mission statement establishing a set of values and direction to be applied to all transportation infrastructure projects reviewed by TARC, from planning to buildout

SECTION 2. That subsequently a list of principles will be adopted to accompany this mission statement, in order to gauge whether standards of mission statement are met.

The foregoing resolution was offered by Cliff Schulman and seconded by Armando Cazo, and upon being put to vote, the vote was as follows:

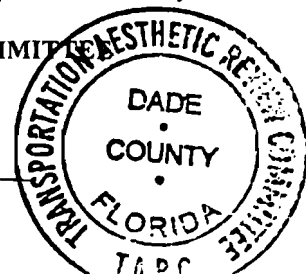
Willy A. Bermello	-	Aye
Winsome Bowen	-	Excused
Margi Buster	-	Excused
Armando Cazo	-	Aye
Ron Frazier	-	Excused
Alvaro Malo	-	Aye
Edgardo O. Meneses	-	Absent
Wissam Naamani	-	Absent
Sharen Parrish	-	Excused (Resigned)
Dan Paul	-	Excused
Albert Perez	-	Aye
Danny Perez-Zarraga	-	Aye
Julio Pestonit	-	Absent
Ricardo D. Ruiz	-	Excused
Clifford A. Schulman	-	Aye

The Chairperson thereupon declared the resolution duly passed and adopted this 11th day of October 1995.

TRANSPORTATION AESTHETIC REVIEW COMMITTEE
(TARC)

By

Susan Schreiber
Susan Schreiber
TARC Secretariat



TRANSPORTATION AESTHETIC REVIEW COMMITTEE (TARC)
Principles to Accompany Mission Statement

All projects, in their presentation to TARC, shall address the following principles:

- Set a new standard of design excellence.
- Create a sense of place.
- Manifest the image of the City.
- Create public places whose value to the community increases over time.
- Provide a source of community pride.
- Make transportation projects friendly to commuters and communities.
- Using good design and art, improve the appearance and safety of a facility, give vibrancy to public spaces, and make patrons feel welcome.
- Utilize a true collaborative process in a team approach where artists, landscape architects, planners, historians, urban designers, local community representatives, as well as architects and engineers, can enlarge, enhance and enlighten the design process.
- Humanize transportation projects.
- Create projects which have an artistic vision and are practical, dynamic, playful.
- Push standard parameters of materials and site.
- Seek design continuity which relates to and harmonizes with built and natural landscapes.
- Treat vegetation in the subtropics as an intrinsic part of the overall design, not as an accessory.
- Interpret the built and cultural heritage in a sympathetic and genuine design response (without simply mimicking).

TARC # 15-95

**RESOLUTION ADOPTING A SET OF PRINCIPLES TO ACCOMPANY THE
AESTHETIC MISSION STATEMENT ADOPTED BY THE TRANSPORTATION
AESTHETICS REVIEW COMMITTEE**

WHEREAS, the Metropolitan Planning Organization has established the Transportation Aesthetic Review Committee (TARC) to ensure that development of major transportation projects in Dade County incorporates quality aesthetic criteria and professional standards of design, and

WHEREAS, the TARC has adopted a mission statement to be applied to all projects which it reviews, in order to provide guidance and philosophy for development of transportation projects from planning to buildout, and

WHEREAS, the TARC perceived a need to restate the mission statement as a list of principles, to provide easy reference, and to help gauge whether standards of mission statement are met by projects reviewed.

NOW, THEREFORE, BE IT RESOLVED BY THE TRANSPORTATION AESTHETIC REVIEW COMMITTEE OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA:

SECTION 1. That attachment A be adopted as principles to accompany the Aesthetic Mission Statement of the Transportation Aesthetic Review Committee, to be utilized in gauging whether principles of the mission statement are being met in transportation projects reviewed by TARC.

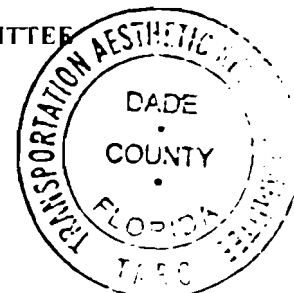
The foregoing resolution was offered by Dan Paul and seconded by Armando Cazo, and upon being put to vote, the vote was as follows:

Willy A. Bermello	-	Excused
Winsome Bowen	-	Aye
Margi Buster	-	Excused
Armando Cazo	-	Aye
Ron Frazier	-	Excused
Alvaro Malo	-	Excused
Edgardo O. Meneses	-	Aye
Wissam Naamani	-	Excused
Sharen Parrish	-	Excused (Resigned)
Dan Paul	-	Aye
Albert Perez	-	Excused
Danny Perez-Zarraga	-	Aye
Julio Pestonit	-	Excused
Ricardo D. Ruiz	-	Excused
Clifford A. Schulman	-	Excused

The Chairperson thereupon declared the resolution duly passed and adopted this 1st day of November 1995.

TRANSPORTATION AESTHETIC REVIEW COMMITTEE
(TARC)

By 
Susan Schreiber
TARC Secretariat



Proposed Policy Statement

Effective: _____, 1997

Responsible Office: Design

Topic No.: 000-XXX-XXX-a

TRANSPORTATION DESIGN FOR LIVABLE COMMUNITIES

It is the policy of the Florida Department of Transportation to incorporate Transportation Design for Livable Communities (TDLC) features into the State Highway System where appropriate and feasible. TDLC features shall be based upon consideration of the following principles:

- ◆ Assure the safety of pedestrians, bicyclists, motorists, and transit users
- ◆ Balance community values and mobility needs
- ◆ Assure the efficient use of energy resources
- ◆ Sustain the quality of the environment
- ◆ Support long-range land use and transportation planning
- ◆ Support local and state land use, roadway development and transportation missions
- ◆ Complement and enhance existing standards, systems, and processes

Further guidance for implementing this policy will be provided by the Assistant Secretary for Transportation Policy.

Secretary

☐ Accepted as submitted

☐ Accepted with changes noted

District Director for Planning and Programming

Date

FLORIDA DEPARTMENT OF TRANSPORTATION TRANSPORTATION DESIGN FOR LIVABLE COMMUNITIES

GUIDING PRINCIPLES

The following principles are offered as a basis for establishing departmental guidelines for Transportation Design for Livable Communities (TDLC), as well as approaches for external interaction. TDLC features should be developed to:

- ◆ Assure safety of pedestrians, bicyclists, motorists, and public transit users
- ◆ Balance community values and mobility needs
- ◆ Assure efficient use of energy resources
- ◆ Sustain protection of the environment
- ◆ Support long-range land use and transportation planning
- ◆ Support local and state land use/policy development/transportation missions
- ◆ Complement and enhance existing standards, systems and processes¹

GENERAL GUIDELINES

These design features are particularly of interest in areas, such as:

- ◆ Designated areas of special development or downtowns (e.g., Transportation Concurrence Areas)
- ◆ School Safety Zones or areas of high pedestrian activity or sensitivity
- ◆ Predominantly residential corridors or transit corridors

By offering these guidelines for TDLC design features, the Department has taken a general approach that supports the established transportation planning, design, operation, and maintenance functions. This approach emphasizes how we can support local treatment-oriented design using limited funds and with minimal disruption to safety and capacity needs.

Examples include Congestion Management Systems, Corridor Planning Processes, Planning and Environmental Management and Office (PLEMO) efforts, Major Investment Studies, Arterial Investment Studies, Scenic Highways Program, Enhancement Program, Highway Beautification Program, FDOT Pedestrian- And Transit-Friendly Design, FDOT Bicycle and Pedestrian Handbook, and Landscaping Guide.

1. All TDLC-type projects must be approved by the District Secretary/or designee.
2. The District Secretary/or designee may choose to form a team to evaluate TDLC projects. See the section on "Team Approach" that follows.
3. Implementation of TDLC projects should be preceded by an engineering study of the application being considered. An evaluation plan should also be used to determine the success of the project.
4. Successful application of these guidelines requires collaboration and cooperation between affected parties. Although procedures and standards may ultimately govern, safety, common sense and logic play a key role when dealing with these features. However, it must be emphasized that capacity is important and may be limited by TDLC design features.²
5. These guidelines were developed to complement existing Department documents, including: Florida Landscape Guide, Florida Bicycle Facilities Planning and Design Manual, Florida Roundabout Guide, and the Median Handbook.
6. Table I offers a menu of options to consider when developing or reviewing a TDLC project. This matrix is not intended to be a checklist that gives the "correct" answer to a particular situation, but offers options that may be appropriate for a given scenario.
7. TDLC projects are often a shared responsibility between the Department and local government. A sample District Maintenance Agreement presented in TABLE II offers suggested language for entering into a fiscal relationship with a local government to provide for maintenance/upkeep of the project once designed and constructed. It should be noted, however, that such agreements should be tailored to the application/community needs and should be approved by both local and district legal counsel.

TEAM APPROACH

For complex and/or controversial TDLC projects, a team approach should be considered to assist in reviewing potential TDLC projects. Depending on the nature of the situation and the district resources available, the task team should include district staff from, at a minimum, Planning, Traffic Operations, Environmental Management, Roadway Design, Public Transportation, Maintenance, and Safety, as well as the Bicycle-Pedestrian Coordinator. Team staff should be appointed by the District Secretary/or designee. A team facilitator versed in consensus building and the general guidelines of this topic is also recommended.

² Refer to the FDOT procedure, Development of the Florida Intrastate Highway System (FIHS), Topic No. 525-030-250, for further information related to FIHS standards and criteria.

OUTLINE OF SELECTED TDLG-TYPE TECHNIQUES AND GENERAL APPLICABILITY BY TYPE OF HIGHWAY SYSTEM

The Transportation Design for Triangular Communities (TDLC) techniques presented in the following four tables are intended to represent a range of options or guides to typical applications. They are not intended to be standards, policies or procedures of the Florida Department of Transportation for specific applications. Therefore, these guides should be accompanied by a study of the circumstances for the application being considered. Prior to implementation, an engineering study and evaluation plan must be completed.

SELECTED TECHNIQUES FOR LIVABLE COMMUNITIES AND GENERAL APPLICABILITY BY TYPE OF HIGHWAY SYSTEM

TABLE 1A - SIMPLE, USER-FRIENDLY TECHNIQUES

TECHNIQUE	FIHS		SHS -URBAN	SHS -RURAL
	Limited Access	Controlled Access		
Improved location, over-sized or redundant directional signs	●	●	●	◐
Use of route markings/signing for historical and cultural resources	●	●	●	●
Increased use of variable message signage	●	●	●	◐
Landscaping	◐	◐	◐	◐
Sidewalks or wider sidewalks	○	◐	●	◐
Street furniture	○	◐	◐	○
Bicycle lanes	○	◐	◐	◐
Bicycle paths	◐	◐	◐	◐
Conversion to one-way street pairs	○	◐	◐	○
Alternative paving materials	○	○	◐	○
Pedestrian signals, mid-block crossings, median refuge areas	○	◐	●	◐
Parking modifications or restoration	○	○	◐	○
Safety and Personal Security Amenities	◐	◐	◐	◐
Street mall	○	○	○	○

- Appropriate for the system or facility indicated
- ◐ May be appropriate for the system or facility indicated.
- Not appropriate for the system or facility indicated.

SELECTED TECHNIQUES FOR LIVABLE COMMUNITIES AND GENERAL APPLICABILITY BY TYPE OF HIGHWAY SYSTEM

TABLE 1B - TECHNIQUES TO REDUCE SPEED OR TRAFFIC VOLUME

TECHNIQUE	FIHS		SHS - URBAN	SHS - RURAL
	Limited Access	Controlled Access		
Lower speed limits	☐	☐	☐	☐
Increased use of stop or multi-way stop signs	☐	☐	☐	☐
Speed humps	☐	☐	☐	☐
On-street parking to serve as a buffer between travel and pedestrian areas	☐	☐	☐	☐
Curb bulb-outs at ends of blocks	☐	☐	☐	☐
Street narrowing or traffic "chokers" oriented to slowing traffic	☐	☐	☐	☐
"Compact" intersections	☐	☒	☒	☒
Traffic roundabouts to facilitate intersection movement	☐	☐	☐	☐
Street curvature (with redesign, chicanes, winding paths, etc.)	☐	☐	☐	☐
Street closing or route relocation	☐	☐	☐	☐

- ☒ Appropriate for the system or facility indicated
- ☐ May be appropriate for the system or facility indicated
- ☐ Not appropriate for the system or facility indicated

SELECTED TECHNIQUES FOR LIVABLE COMMUNITIES AND GENERAL APPLICABILITY BY TYPE OF HIGHWAY SYSTEM

TABLE 1C - TECHNIQUES TO SUPPORT SHIFTS BETWEEN MODES

TECHNIQUE	FIHS		SHS - URBAN	SHS - RURAL
	Limited Access	Controlled Access		
Sidewalks	○	◐	●	◐
"Pedestrian friendly" crosswalk design	○	◐	●	◐
Mid-block pedestrian signals	○	◐	◐	◐
Illuminated pedestrian crossings at intersections	○	◐	◐	◐
Bicycle lanes/Paved shoulders	○	◐	●	●
"Bicycle friendly" design	○	◐	●	●
Transit system amenities	○	◐	●	◐
Transit user amenities	○	◐	●	◐
HOV/Exclusive lanes	●	●	●	◐
Linking modal facilities	●	●	●	●
Lower speed limits	○	○	○	○
Removal of street parking	○	○	◐	◐

- Appropriate for the system or facility indicated.
- ◐ May be appropriate for the system or facility indicated.
- Not appropriate for the system or facility indicated.

TABLE II

SAMPLE DISTRICT MAINTENANCE AGREEMENT*

* Due to length of this document,
it has not been included for this
review.

Appendix B

ORDINANCE NO. 78-74

ORDINANCE RELATING TO FIXED GUIDEWAY RAPID TRANSIT SYSTEM; ENACTING CHAPTER 33C OF THE CODE OF METROPOLITAN DADE COUNTY, FLORIDA, ENTITLED FIXED GUIDEWAY RAPID TRANSIT SYSTEM --DEVELOPMENT ZONE; PROVIDING LEGISLATIVE INTENT, FINDINGS AND PURPOSES; DEFINING AND DESIGNATING A RAPID TRANSIT ZONE; PROVIDING FOR JURISDICTION OVER RAPID TRANSIT ZONE; SPECIFYING USES PERMITTED WITHIN RAPID TRANSIT ZONE; PROVIDING GRANDFATHER PROVISIONS; PROVIDING FOR A RAPID TRANSIT DEVELOPMENT IMPACT ZONE; PROVIDING FOR GUIDEWAY AESTHETIC ZONE AND DEFINING SAME; ENACTING DIVISION 6 (COMMERCIAL SIGNS ON RAPID TRANSIT SYSTEM RIGHT-OF-WAY) OF ARTICLE VI (SIGNS) OF CHAPTER 33 OF THE CODE OF METROPOLITAN DADE COUNTY; PROVIDING DEFINITIONS; PROVIDING APPLICABILITY; PROVIDING FOR PROHIBITION OF SIGNS IN PROTECTED AREAS (WITHIN 300 FEET OF A RAPID TRANSIT SYSTEM RIGHT-OF-WAY); PROVIDING EXCEPTIONS; PROVIDING FOR AMORTIZATION OF NONCONFORMING SIGNS; PROVIDING FOR VARIANCES; PROVIDING PENALTIES; PROVIDING REPEAL CLAUSE; PROVIDING SEVERABILITY; PROVIDING INCLUSION IN THE CODE; AND PROVIDING AN EFFECTIVE DATE

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF
DADE COUNTY, FLORIDA:

Section 1. Chapter 33C of the Code of Metropolitan Dade
County, Florida, is hereby enacted as follows:

CHAPTER 33C

FIXED GUIDEWAY RAPID TRANSIT SYSTEM - DEVELOPMENT ZONE

Sec. 33C-1. Legislative intent, findings and purposes.

The Board of County Commissioners for Metropolitan Dade County, Florida, hereby declares and finds that the uncoordinated use of lands within the county threatens the orderly development and the health, safety, order, convenience, prosperity and welfare of the present and future citizens of this county. Pursuant to Ordinance No. 75-22, the Board adopted and accepted the Comprehensive Development Master Plan for Metropolitan Dade County whereby it specifically declared that it was the continuing policy of Metropolitan Dade County, in cooperation with federal, state, regional and local governments, and other concerned public and private organizations, to use all reasonable means and measures to: a) foster and promote the general welfare; b) to create and maintain conditions under which man and nature can exist in productive harmony; and c) to fill the social, economic and other requirements of the present and future generations of citizens of Metropolitan Dade County, Florida. The Board further found that the

Comprehensive Development Master Plan was enacted to assure for all people of Dade County an attempt to create safe, healthful, productive and aesthetically and culturally pleasing surroundings; to attain the widest range of beneficial uses of the environment without unreasonable degradation, risk to the health or safety, or other undesirable and unintended consequences, to preserve important historic, cultural and natural aspects of our national heritage; to maintain, wherever possible, an environment which supports diversity and variety of individual choice; to achieve a balance between population and resource which will permit the high standards of living and a wide sharing of life's amenities, and to enhance the quality of renewal resources and approach the maximum attainable recycling of depletable resources. In furtherance of these goals and objectives, the Board finds that the coordinated review and analysis of its mass transit facilities is necessary to carry on a central metropolitan government in Dade County, Florida. Coordinated review and analysis of the mass transit system is susceptible to, and would be most effectively carried on under, a uniform plan of regulation applicable to the county as a whole. The planning of major transportation facilities, combined with other plan implementation tools, can be effectively used in meeting social, economic, and environmental needs and in creating a major influence on metropolitan development patterns and life styles. The capability of a transportation network, acting in conjunction with other urban services to establish general development trends, is well recognized. A maximum coordination of transportation and land use policy decisions is therefore essential to optimize the role of transportation as a potent tool for implementing the desired patterns of metropolitan development.

The Board further finds that the Stage I fixed guideway Rapid Transit System has, since 1973, undergone extensive planning, review, analysis, and engineering design efforts. The Stage I system has received design approval from both the Federal and State governments and is in the process of final design, procurement and construction activities. The Stage I system, including proposed improvements in other forms of surface transportation facilities represents a concerted, coordinated effort to improve not only the transportation facilities within Dade County, but the overall quality of life enjoyed by citizens of and visitors to Dade County. Finally, the Stage I system represents one of the largest public works projects ever undertaken in Dade County and the Southeastern United States. As such, the Stage I fixed guideway Rapid Transit System may only be planned, engineered, implemented, and administered on a County-wide basis, in a manner which will: (a) provide maximum opportunities for development to serve as financial assistance to the system, and (b) provide incentives for joint development with the private sector.

Sec. 33C-2. Rapid Transit Zone.

A. Definition: The Rapid Transit Zone consists of all land area, including surface, subsurface, and appurtenant airspace, heretofore or hereafter designated by the Board of County Commissioners as necessary for the construction of the fixed guideway portion of the Stage I Rapid Transit System, including all station sites, parking areas and yard and maintenance shop facilities.

B. Designation of Rapid Transit Zone: The Board of County Commissioners hereby designates all land areas (including surface, subsurface, and appurtenant airspace) shown on Exhibits 1 through 17, certified by the Clerk of this Board as a portion of this ordinance, incorporated hereby by reference, and transmitted to the custody of the Building and Zoning Department, as the Rapid Transit Zone for the Stage I fixed guideway Rapid Transit System. The Director of the Dade County Building and Zoning Department shall submit to each affected municipality an official map or maps designating the Rapid Transit Zone which may from time to time be altered, enlarged, added to, amended or deleted by ordinance, after a public hearing within each municipality affected.

C. Jurisdiction Over Rapid Transit Zone: Jurisdiction for purposes of building and zoning approvals (including, but not limited to, site plan approvals, issuance of building permits, building inspections, compliance with the South Florida Building Code, issuance of certificates of occupancy, zoning applications, special exceptions, variances, district boundary changes, building and/or zoning moratoria, and all other types of functions typically performed by building and/or zoning departments), water and sewer installations, compliance with environmental regulations, street maintenance (including sidewalks where applicable) and utility regulation, all of which relate to the uses specifically delineated in subparagraph D below, shall be and are hereby vested in Metropolitan Dade County regardless of any municipal code, charter, or ordinance provisions to the contrary.

D. Permitted Land Uses in Rapid Transit Zone: The following land uses are permitted within the Rapid Transit Zone and no others:

1. Fixed guideways for the Rapid Transit System.
2. Stations for the Rapid Transit System, including such uses as passenger platforms and waiting areas, ticket and information booths, restrooms, utility rooms, in-station advertising displays, stairs, elevators, walkways, and other similar uses as are necessary for the proper functioning of a Rapid Transit station.
3. Parking lots and parking structures.
4. Bus stops and shelters.
5. Streets and sidewalks.
6. Maintenance facilities for the Rapid Transit System, including yard and shops, and associated tracks and facilities.

7. Landscaping.

8. Bikeways, parks, community gardening, playgrounds, power substations and other uses necessary for the construction, operation and maintenance of the Rapid Transit System.

9. (i) Such other uses, including commercial, office and residential uses, as may be appropriate to and compatible with the operation of the Rapid Transit System and the convenience of the ridership thereof.

(ii) Whenever uses authorized by subsection (i) above are proposed within portions of the Rapid Transit Zone passing through municipalities, the Station Area Design and Development Program process, a joint municipal-county program, shall prepare proposed master plan development standards for such proposed uses. Such proposed master plan development standards shall be submitted to the appropriate municipality for review and adoption as the master land use plan for such uses. Once adopted, said land use plans shall control all public actions involving or affecting land use or development, including action on applications for zoning relief. Amendments to said master land use plans shall be subject to the procedures specified in this subparagraph. It shall be the duty of the Clerk of the Board of County Commissioners to immediately transmit to the relevant municipality a certified copy of the County Commission's action in regard to the uses provided for in this subparagraph. The municipality may seek judicial review of the County Commission's action in accordance with Section 33-316, Dade County Code.

(iii) The uses provided in this subparagraph shall, where applicable, be subject to municipal ordinances relating to occupational license taxes and such taxes be and they are hereby expressly reserved to such municipalities.

E. Existing Land Uses Within the Rapid Transit Zone:
All land areas included by this section within the Rapid Transit Zone upon which uses other than those specified in subsection D of this section were authorized or permitted prior to the effective date of this section may be used as follows:

1. Existing structures. All existing buildings or structures and all uses for which building permits have already been issued prior to the effective date of this article and which have complied with the applicable provisions of the South Florida Building Code, may be continued or constructed in accordance with the approved plans and specifications therefor. Alterations, improvements, or expansions of existing structures shall be subject to the provisions of subsection 2 hereof.

2. All other lands. No applications for site or plan approvals and/or building permits shall be issued for new facilities within the Rapid Transit Zone except in the following circumstances:

(a) the estimated construction cost does not exceed \$10,000 in any consecutive two-year period; or

(b) the Office of Transportation Administration certifies that approval of the application will not have an adverse impact upon a material element of the Stage I system. The Office of Transportation Administration shall, with respect to any application for which certification is refused, provide a detailed written explanation supporting the refusal to certify and specifying the corrective actions, if any, which would lead to certification. The decision of the Office of Transportation Administration may be appealed to the Board of County Commissioners within thirty (30) days from the date of the written explanation by filing a notice of appeal with the Clerk of the Board of County Commissioners. The Board of County Commissioners, after giving public notice as required by Chapter 33 of the Code, shall hear the appeal and either affirm, deny or modify the decision of the Office of Transportation Administration. Appeals from the Board of County Commissioners' action shall be in accordance with Section 33-316 of this Code.

Sec. 33C-3. Rapid Transit Developmental Impact Committee.

There is hereby established a Rapid Transit Developmental Impact Committee composed of the County's Developmental Impact Committee (established by Section 33-303.1, Dade County Code) and two representatives from each of the following municipalities: City of South Miami, City of Coral Gables, City of Miami, and the City of Hialeah. The Rapid Transit Developmental Impact Committee shall, subject to the procedures specified in Section 33-303.1, Dade County Code, perform the duties specified in Section 33C-4 of this ordinance.

Sec. 33C-4. Rapid Transit Developmental Impact Zone.

The Rapid Transit Developmental Impact Zone consists of those lands in such close proximity to the rapid transit system as to have a significant impact thereon. The Station Area Design and Development Program (authorized by Dade County Resolution No. R-829-77), a joint municipal-county program, shall prepare proposed development standards for the Rapid Transit Developmental Impact Zone. Such proposed development standards shall be submitted to the Rapid Transit Developmental Impact Committee established by Section 33C-3 of this ordinance for review, comment and any recommendations. The Rapid Transit Developmental Impact Committee report, including the proposed development standards, shall be submitted to the appropriate municipality or, in the unincorporated areas, to the County for review and adoption as the land use plan for developments within the Rapid Transit Developmental Impact Zone. Once adopted, said land use plans shall control all public actions involving or affecting land use or development, including action on applications for zoning relief, within the Rapid Transit Developmental Impact Zone. Amendments to said land use plans shall be subject to the procedures specified in this section. The County may seek judicial review of any official municipal acts relating to lands within the Rapid Transit Developmental Impact Zone.

Sec. 33C-5. Guideway Aesthetic Zone.

Definition: The Guideway Aesthetic Zone consists of those land areas designated by the Board of County Commissioners which are adjacent to or within the Rapid Transit Developmental Impact Zone. Said lands are within the line of sight of the Rapid Transit System fixed guideways and stations and upon which land developments and/or structures (specifically including billboards) will deleteriously affect the aesthetic impact of the Rapid Transit System.

Sec. 33-121.21. Applicability.

This division shall apply to both the incorporated and unincorporated area. Any municipality may establish and enforce equivalent or more restrictive regulations, as such municipality may deem necessary.

Sec. 33-121.22. Signs prohibited in protected areas.

It shall be unlawful hereafter for any person, firm or corporation, or any other legal entity to erect, permit or maintain any sign in protected areas, except as provided for hereinafter.

Sec. 33-121.23. Exceptions.

Erection of the following signs shall be permitted in protected areas, subject to the conditions and limitations listed herein and further, subject to other applicable regulations where such regulations are more restrictive or more definitive than the provisions of this division and are not inconsistent therewith:

(a) Temporary signs which are located and oriented to serve streets other than a Rapid Transit System, and are located at least one hundred (100) feet from the Rapid Transit System right-of-way, except that such signs may serve and be oriented to a Rapid Transit System if the property concerned abuts the Rapid Transit System right-of-way and is not served by a parallel Rapid Transit System service road or is abutting the Rapid Transit System right-of-way and has direct, permanent legal access to the Rapid Transit System. In no event shall any temporary sign be larger than 120 square feet.

(b) Point of sale signs which are located on and oriented to the frontage on the street which provides actual and direct access to the front or principal entrance of the place of business; however, on corner lots a second detached point of sale sign will be permitted provided that the same is not larger than 40 square feet, is located on and oriented to the street frontage of the street other than the one serving the principal entrance of the place of business. "Oriented", in connection with point of sale signs, shall mean, in the case of detached signs, place at a 90° angle to the street being served; in the case of roof signs, parallel to and fronting such street and within the front 25 per cent of the building concerned; and in the case of pylon signs, within the front 20 per cent of the building concerned. Wall signs within 200 feet of a rapid transit system shall be confined to the wall of the building containing the principal entrance, except that a wall sign may be placed on one other wall of such building and shall be limited to 10 per cent of such other wall area. In no event shall any detached point of sale sign be erected within the protected area which is greater in height than 25 feet above the average grade of the premises concerned, and no point of sale roof sign shall be erected which is greater in height above the roof than 10 feet.

(c) Outdoor advertising signs shall not be erected for the purpose of serving any rapid transit system, and outdoor advertising signs in protected areas shall be erected and oriented to serve only streets other than rapid transit systems, subject to the following conditions:

(1) That in no event shall any outdoor advertising sign be erected or placed closer than three hundred (300) feet to the right-of-way lines of any rapid transit system.

(2) That outdoor advertising signs shall be erected and placed only in business or commercial (not including industrial) zoning districts which permit outdoor advertising under the applicable zoning regulations of the county or municipality having jurisdiction.

(3) That no outdoor advertising sign shall be erected that is larger than 15 feet in width and 50 feet in length, whether single or multiple boards.

(4) That no detached outdoor advertising sign shall be erected which is more than 25 feet above the average existing grade of the site on which such sign is erected, or the flood criteria elevation (if property is filled to such elevation) whichever is the greater; nor shall an outdoor advertising roof sign be erected which is more than 20 feet above the roof.

(5) That no advertising signs shall be erected or placed within 300 feet of another outdoor advertising sign, such distance to be measured in all directions from the outermost edges of such sign.

(6) That no outdoor advertising sign shall be erected or placed within 100 feet of any church, school, cemetery, public park, public reservation, public playground, State or National forest.

(7) That outdoor advertising signs shall be erected and placed at right angles to the street which they are serving and shall be located within the front 70 feet of the lot or tract on which erected.

(8) That no outdoor advertising signs shall be erected or placed on a street dead-ended by the rapid transit system, between the rapid transit system and the first street running parallel to the rapid transit system and on the same side of the dead-end street, even though such distance may be greater than 300 feet.

(9) That outdoor advertising signs shall be erected and placed only on property conforming in size and frontage to the requirements of the zoning district in which located, and detached outdoor advertising signs shall not be erected on property already containing a use or structure.

(10) That detached outdoor advertising sign structures shall be of the so-called cantilever type construction (double-faced sign, both faces of the same size, secured back to back on vertical supports with no supporting bracing).

(d) Any sign which fails to conform with the provisions of this division but is not visible from any rapid transit system due to an intervening obstruction.

Sec. 33-121.24. Nonconforming signs.

(a) Signs which have been erected prior to the effective date of this division may continue to be maintained until January 1, 1984. Thereafter, unless such signs conform to the provisions of this division, they shall be removed. If a nonconforming spacing situation can be eliminated by the removal of one sign, the sign which has been erected for the longest period of time shall have priority.

(b) Any sign legally erected, permitted, or maintained subsequent to the effective date of this division, which is not in violation of this division but upon the opening for public use of a rapid transit system or applicable portion thereof becomes nonconforming, the same may continue to be maintained for a period of three (3) years from the day of such opening provided on or before the expiration of the three (3) year period, the nonconforming sign must be removed; provided any sign which is exempt from the provisions of this division pursuant to subsection (d) of section 33-121.23 hereof, but subsequently becomes nonconforming due to the elimination of the obstruction preventing its visibility from a rapid transit system, must be removed within three (3) years from the time of the elimination of such obstruction; further provided, after the effective date of this amendment any sign erected, permitted or maintained after a future rapid transit system right-of-way has been designated by the recording of a rapid transit system right-of-way map in the public records of Dade County, Florida, which becomes nonconforming due to the completion of such rapid transit system shall be removed within thirty (30) days after such rapid transit system or applicable portion thereof is opened for public use.

Sec. 33-121.25. Variances.

No variances shall be granted through provisions of applicable regulations which will in any way conflict with or vary the provisions of this article.

Sec. 33-121.26. Penalty.

Any person violating any of the provisions of this division shall be punished by a fine not to exceed five hundred dollars (\$500.00) or by imprisonment in the county jail for a period not to exceed sixty (60) days, or by both such fine and imprisonment, in the discretion of the metropolitan court. Any continuing violations of the provisions of this division may be enjoined and restrained by injunctive order of the circuit court in appropriate proceedings instituted for such purpose.

Sec. 33-121.27. Repeal clause.

All county and municipal ordinances, county and municipal resolutions, municipal charters, special laws applying only to Dade County or any municipality in Dade County, or any general laws which the board of county commissioners is authorized by the constitution to supersede, nullify, modify or amend, or any part of such ordinance, resolution, charter or law, in conflict with any provision of this division, is hereby repealed.

Section 4. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 5. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance shall become and be made a part of the Code of Metropolitan Dade County, Florida. The sections of this ordinance may be renumbered or relettered to accomplish such intention, and the word "ordinance" may be changed to "section", "article", or other appropriate word.

Section 6. This ordinance shall become effective ten (10) days after the date of its enactment.

PASSED AND ADOPTED: October 17, 1978

Approved by County Attorney as to
form and legal sufficiency. GLS

Prepared by: RAG

STATE OF FLORIDA)
COUNTY OF DADE)

I, RICHARD P. BRINKER, Clerk of the Circuit Court in and for Dade County, Florida, and Ex-Officio Clerk of the Board of County Commissioners of said County, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of ORDINANCE OR SECTION (s) of CODE of Dade County, Florida, as appears of record.

1. ORDINANCE NO. 78-74, adopted by the said Board of County Commissioners at its meeting held on October 17, 1978.
The effective date of this ORDINANCE is:
October 27, 1978

2. SECTION (s) of CODE of Dade County, Florida.

SAID SECTION (s) are/were in full force and effect as of:

IN WITNESS WHEREOF, I have hereunto set my hand and official seal
on this 19th day of March A.D. 19 79.

RICHARD P. BRINKER, Ex-Officio Clerk
Board of County Commissioners
Dade County, Florida

By Charlotte Miller
Deputy Clerk

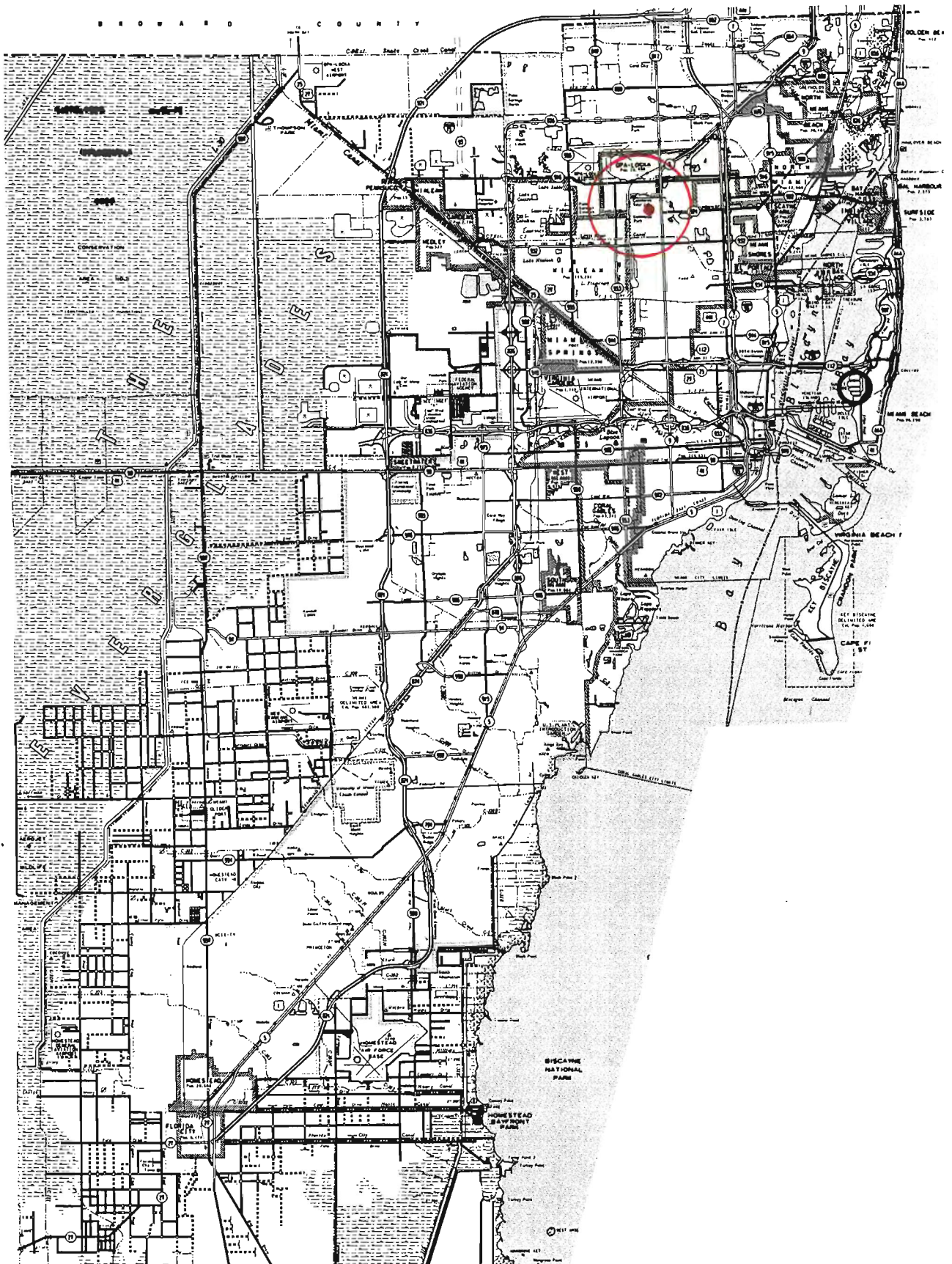


BOARD OF COUNTY COMMISSIONERS
DADE COUNTY, FLORIDA



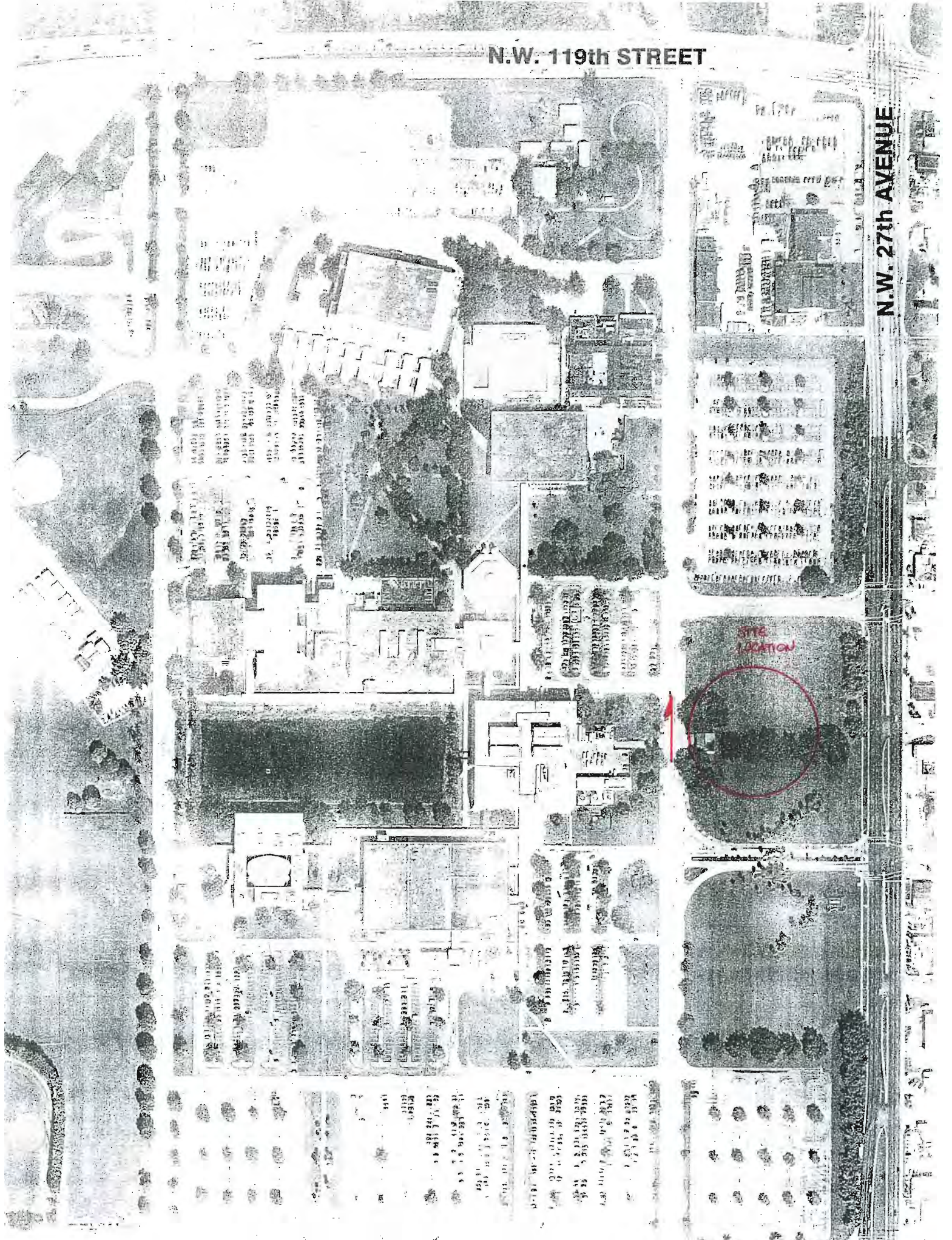
Kimley-Horn
and Associates, Inc.

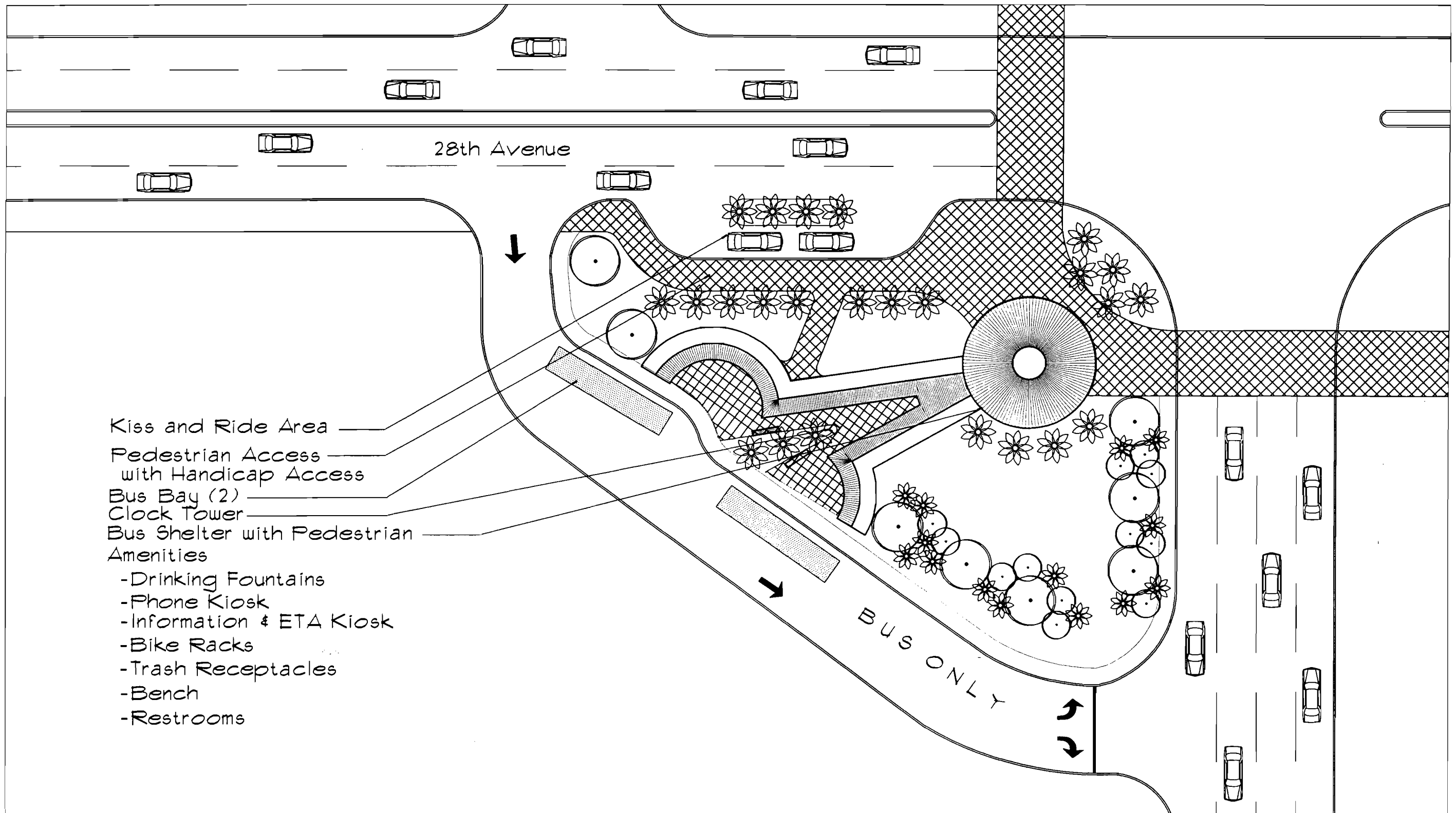
Site Location Map MDCC North Campus



N.W. 119th STREET

N.W. 27th AVENUE





INTERMODAL SITE FACT SHEET

1. **Site Location:** Miami-Dade Community College (MDCC)-North Campus, located on NW 27th Avenue and 119th Parkway
2. **Surrounding Land Uses:** The site is located in the easternmost part of the campus, close to the NW 27th Avenue main entrance.

3. **Costs:** \$784,000

Estimated Site/Civil Costs: \$100,000

Site Facilities Costs: \$684,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: NW 27th Avenue is a 4-lane north-south divided road carrying heavy traffic. Campus roads are generally 2-lane undivided.

Traffic Operations: Traffic calming keeps congestion and speeds low on campus roads.

6. **Intermodal Activity**

Modes Served: Bus, automobile, pedestrian, bicycle, future Metrorail.

Bus Routes: 21 to Downtown Miami,
21 to N. Dade Health Ctr.,
27 to Coconut Grove,
27 to Calder Race Track,
32 to Omni
32 to Landmark Center
75 to Miami Lakes
MAX.

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Heavy

9. **Design Considerations:**

9. **Implementation Considerations:**

11. **Comments / Notes:**

This location was chosen to be in-line with the future NW 27th Avenue Metrorail extension.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities	✓			✓		
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking	✓			✓		
Supplemental Parking	✓			✓		
Engineering Considerations		✓			✓	
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓			✓
Bus Bays			✓			✓
Kiss & Ride		✓			✓	
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			
Private Developments	✓			✓		
Clock			✓			✓
Vending Machines		✓			✓	
Intermodal Center Identities			✓			✓
Handicap Access			✓			✓
Landscaping			✓			✓
Drinking Fountains			✓			✓
Security Surveillance	✓			✓		
Postal Services	✓			✓		
Bike Racks		✓			✓	



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and Associates, Inc.



Southeast view of site location.



Southeast side view of site location.



Kimley-Horn
and Associates, Inc.



Northeast side view of proposed site location.

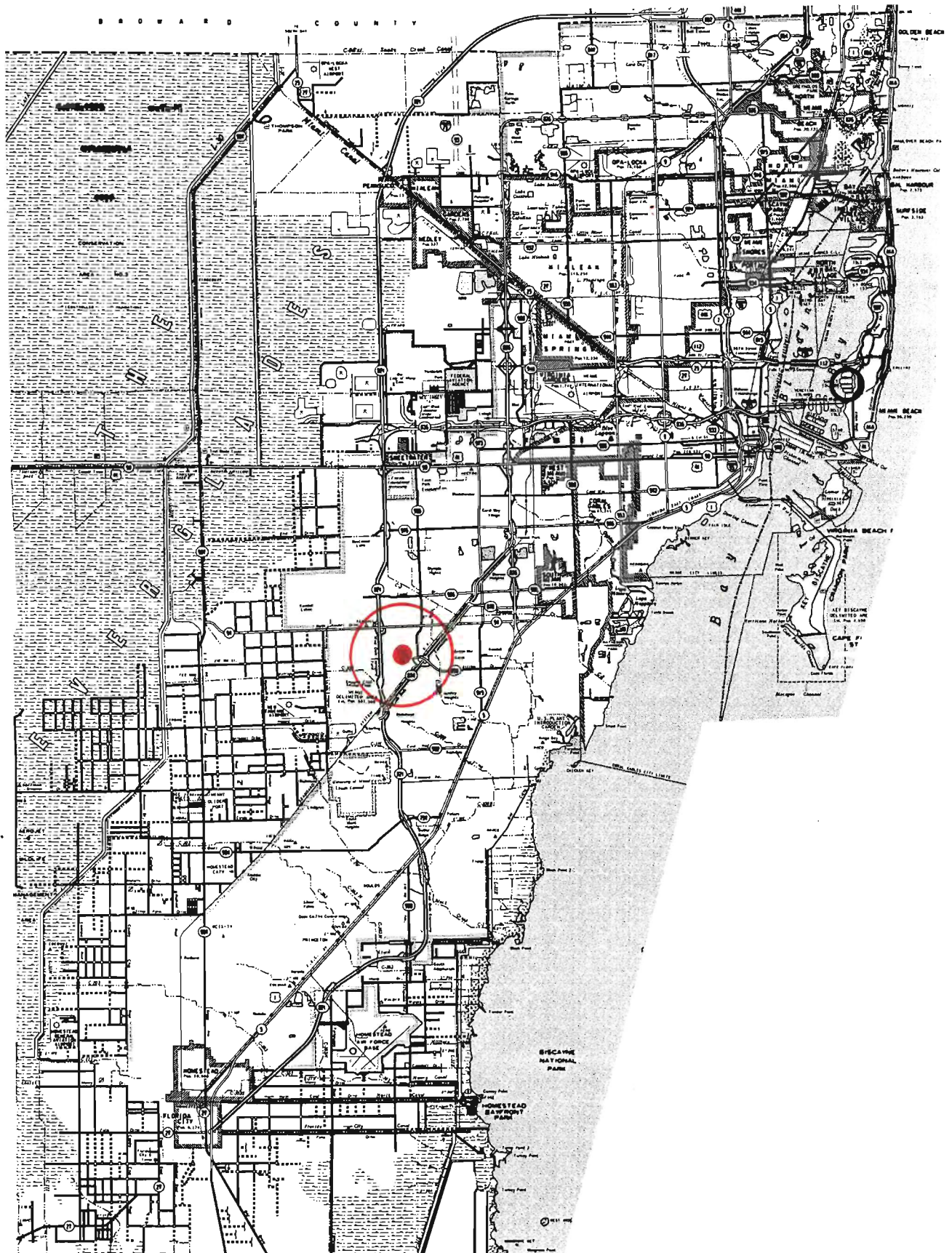


East side view of proposed site location.



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Site Location Map MDCC South Campus



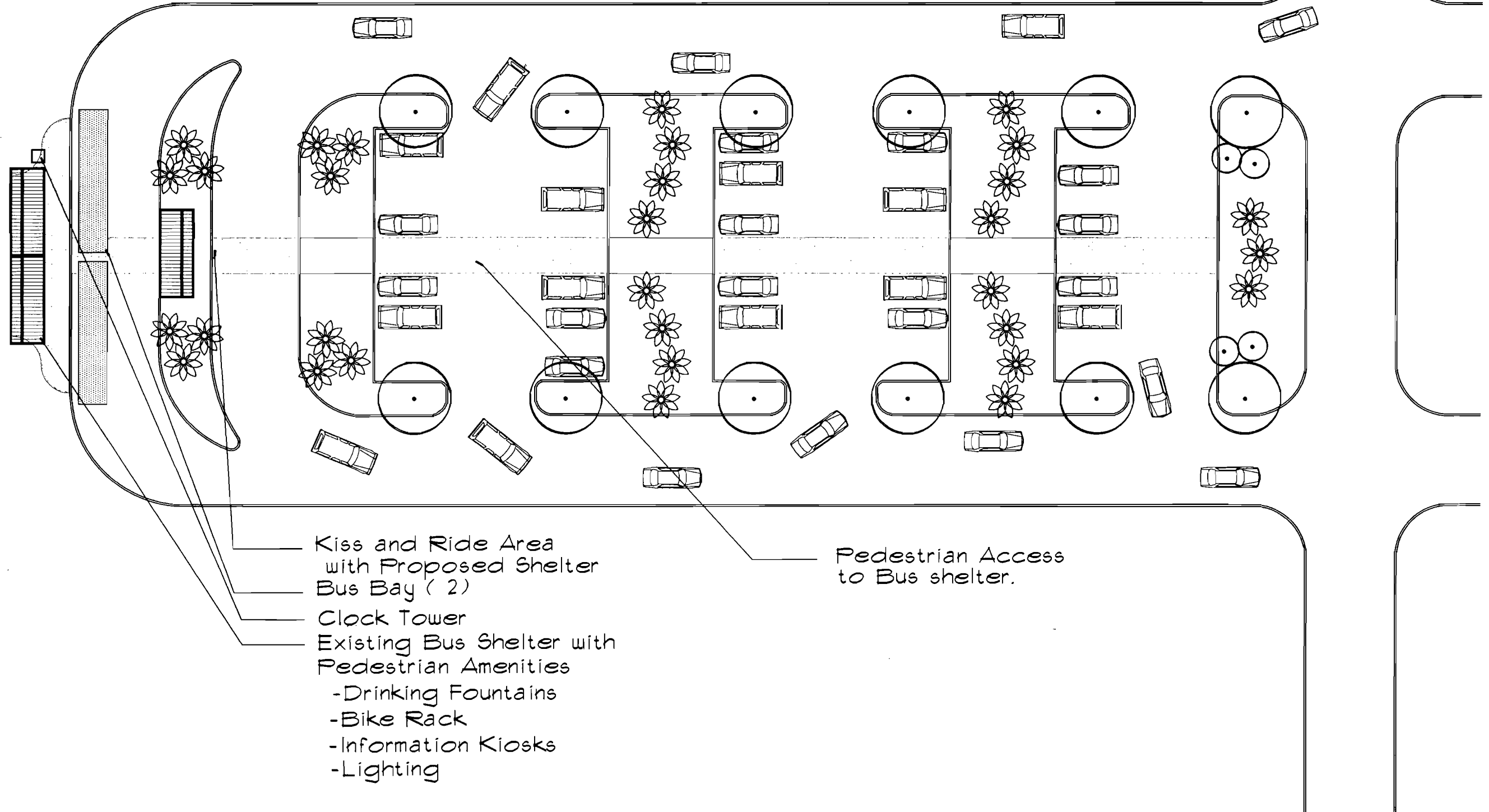
S.W. 112th

S.W. 95th ST

SITE
LOCATION

S.W. 104th ST

Surrounding parcel
is the MDCC campus.



INTERMODAL SITE FACT SHEET

1. **Site Location:** 104th Street and 109th Court (Miami-Dade Community College, MDCC - South Campus)

2. **Surrounding Land Uses:** within the MDCC Campus

3. **Costs:** \$309,000

Estimated Site/Civil Costs: \$20,000

Site Facilities Costs: \$289,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Campus two-lane roads.

Traffic Operations: Traffic calming patterns on campus keep congestion and speed low.

6. **Intermodal Activity**

Modes Served: Bus, pedestrian, bicycle, park-n-ride, kiss-n-ride

Bus Routes: 35, 56, 71, 104 Hammocks, 104 Dadeland North

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Heavy

9. **Design Considerations:**

9. **Implementation Considerations:**

11. **Comments / Notes:**

This existing bus terminal is in need of artistic features that would make it more appealing to the user.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities		✓		✓		
Seating			✓	✓		
Pedestrian Amenities			✓		✓	
Parking	✓					✓
Supplemental Parking	✓					
Engineering Considerations		✓				
Trash Receptacles			✓	✓		
Newspaper Racks			✓	✓		
Lighting			✓		✓	
Tire and Seat Lockers			✓		✓	
Bus Bays			✓		✓	
Kiss & Ride		✓				✓
Phones			✓	✓		
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			
Interactive ITS kiosks			✓			
Private Developments						
Clock			✓			✓
Vending Machines	✓			✓		
Intermodal Center Identities			✓			✓
Handicap Access			✓	✓		
Landscaping			✓	✓		
Drinking Fountains			✓		✓	
Security Surveillance			✓	✓		
Postal Services			✓	✓		
Bike Racks			✓		✓	



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Bus stop (viewed from west).



Bus stop (viewed from south).



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View of parking lot from bus stop.



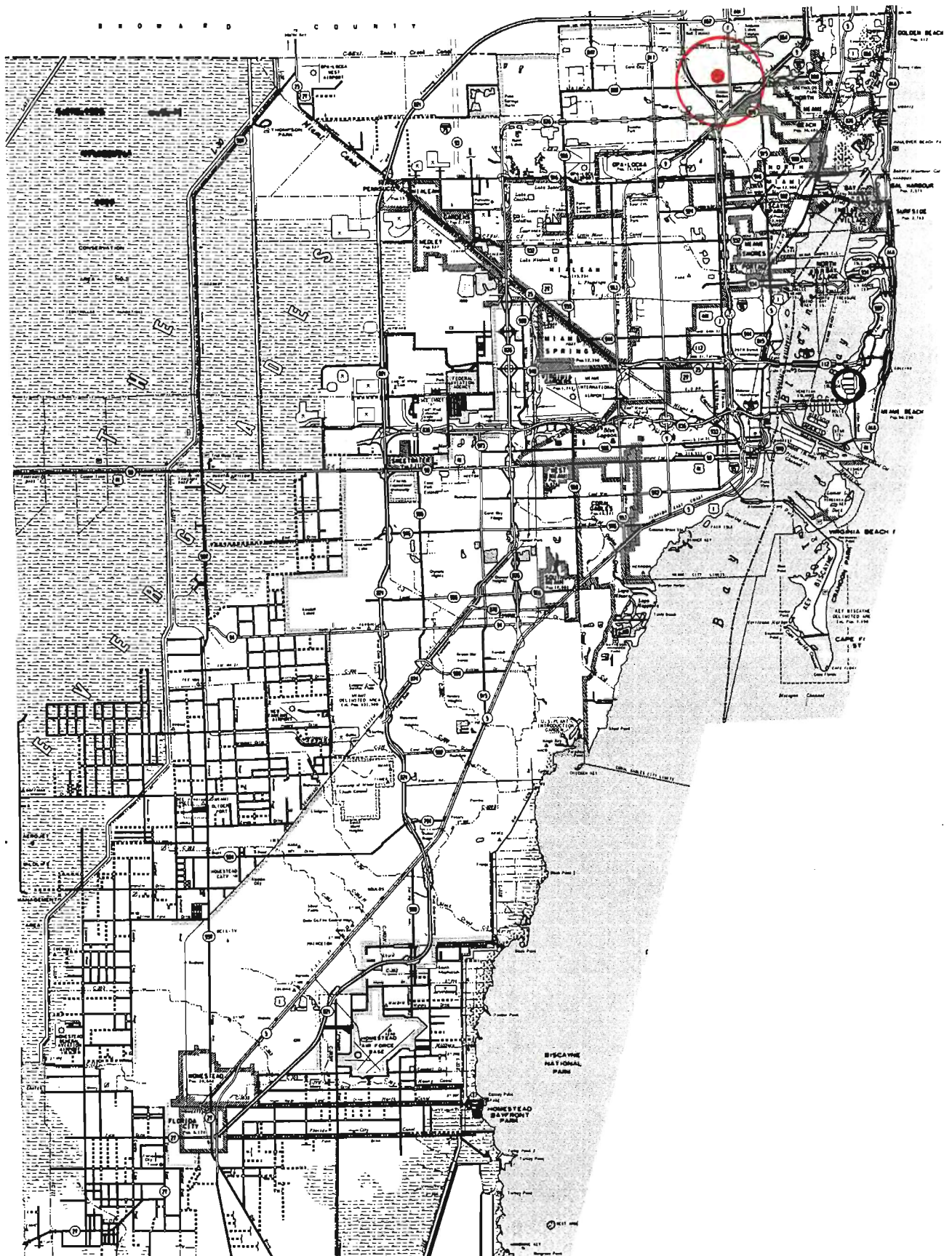
Curb cut ramp (west side of station).



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Site Location Map

Northwest corner of NW 7th Avenue/NW183rd Street



N.W. 12th AVENUE

N.W. 183rd STREET

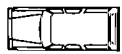
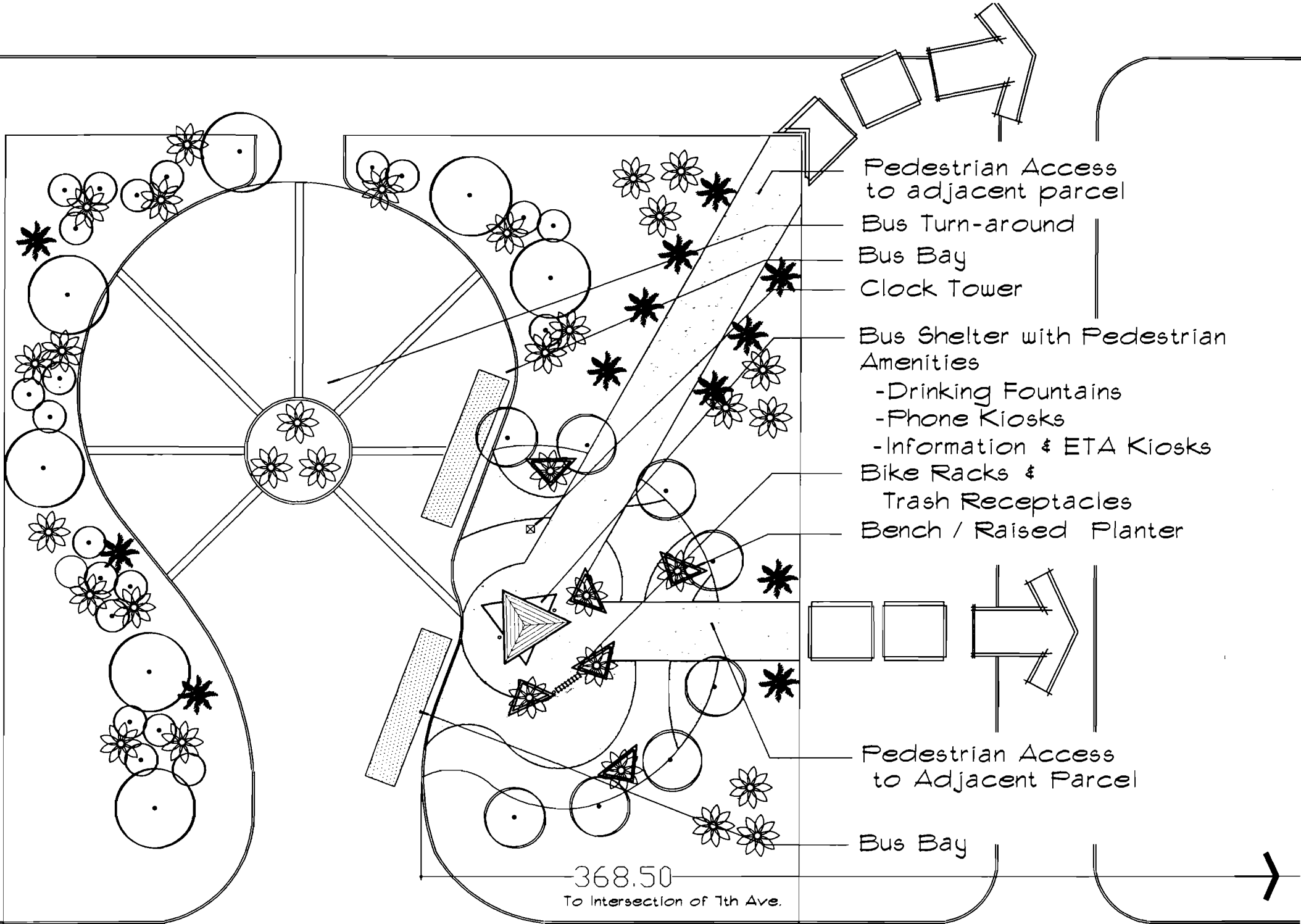
MIAMI GARDENS DRIVE

SITE
LOCATION

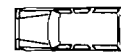
N.W. 7th AVENUE



Surrounding parcel
are open parking
lots adjacent to
Winn Dixie.



Miami Gardens Dr. (NW 183rd St.)



INTERMODAL SITE FACT SHEET

1. **Site Location:** Miami Gardens Drive at N.W. 7th Avenue
2. **Surrounding Land Uses:** Norland High School to the north,
Florida Turnpike to the west,
Golden Glades Toll Plaza to the south, and
Hibiscus Elementary School to the east.
3. **Costs:** \$534,000
Estimated Site/Civil Costs: \$150,000
Site Facilities Costs: \$384,000
4. **Description of Surrounding Traffic Features:**
Roadway Geometry: Miami Gardens Drive is an east-west undivided 4-lane road with bike lanes on both directions.
N.W. 7th Avenue is north-south 2-lane road
Traffic Operations: Traffic at this intersection is somewhat heavy. Layovers take place on N.W. 7th Avenue
6. **Intermodal Activity**
Modes Served: Bus, pedestrian.
Bus Routes: 75, 77, 95, V
7. **Pedestrian Activity:** Moderate
8. **Bicycle Activity:** Light
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

This site is located in an existing parking lot in front of a Winn Dixie. This lot (200'x200') is for sale.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓				✓
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking			✓			✓
Supplemental Parking		✓		✓		
Engineering Considerations			✓		✓	
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓		✓	
Bus Bays			✓			✓
Kiss & Ride		✓			✓	
Phones			✓		✓	
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines		✓			✓	
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓			✓
Drinking Fountains			✓		✓	
Security Surveillance			✓			✓
Postal Services			✓		✓	
Bike Racks			✓		✓	



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View of bus stop on 7th Avenue (northbound) at 183rd Street.



View of bus stop and shelter on 7th Avenue (northbound) at 183rd Street.



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View of the terminal's site from the parking lot at Winn Dixie.



View of the driveway to the terminal's parking lot, 7th Avenue (southbound) at 183rd Street.

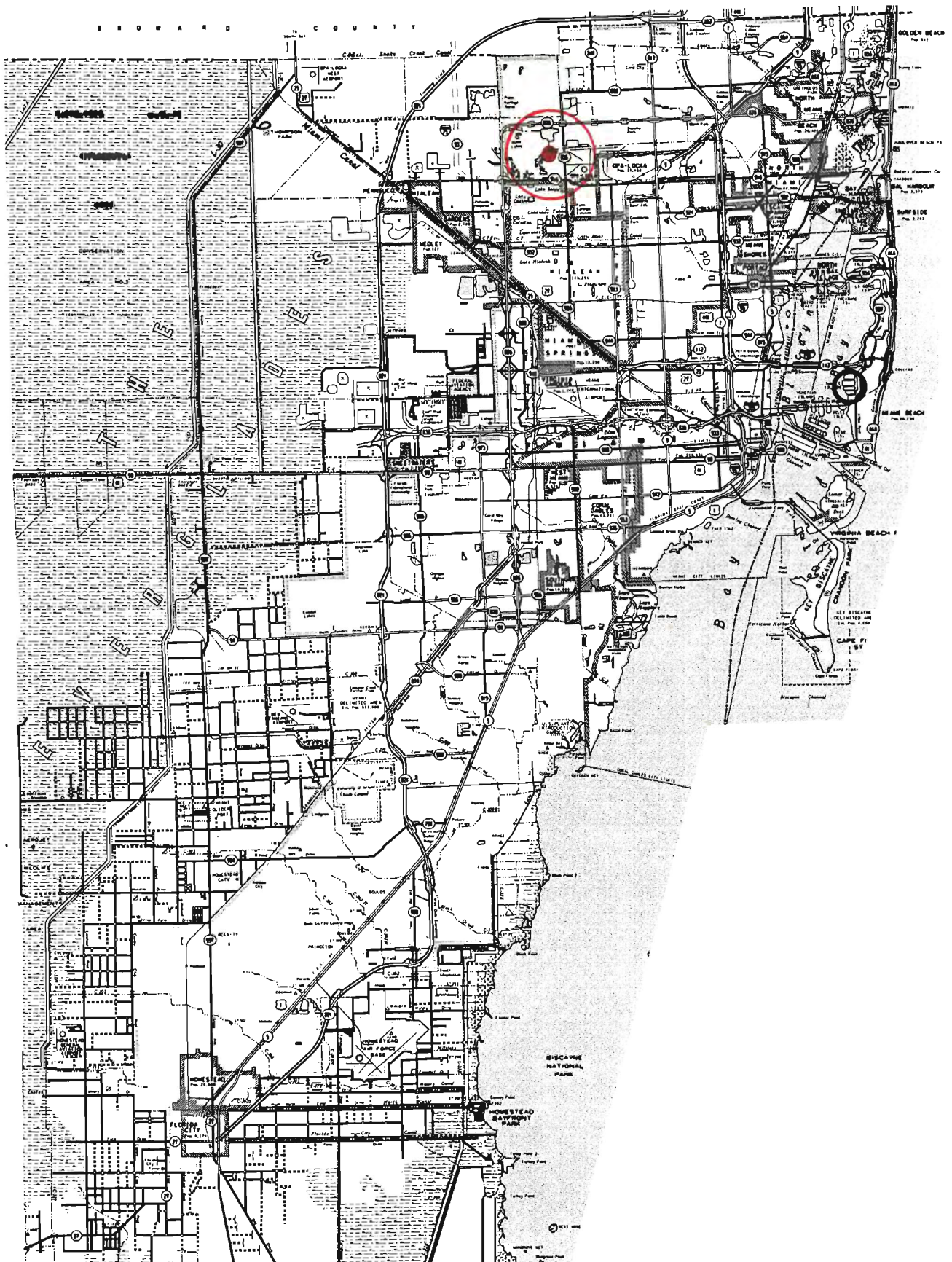


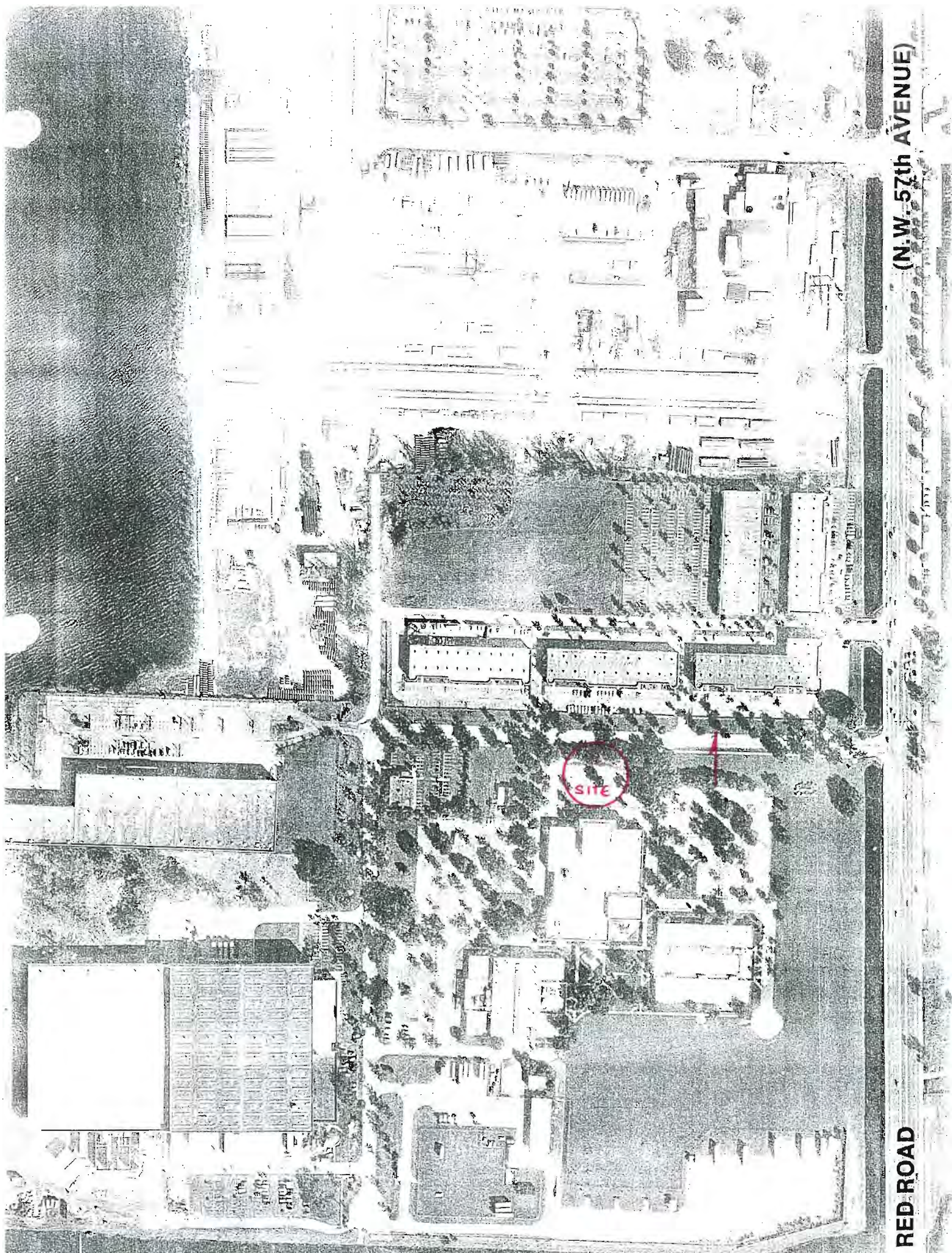
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View of the driveway to the terminal's parking lot from 7th Avenue.

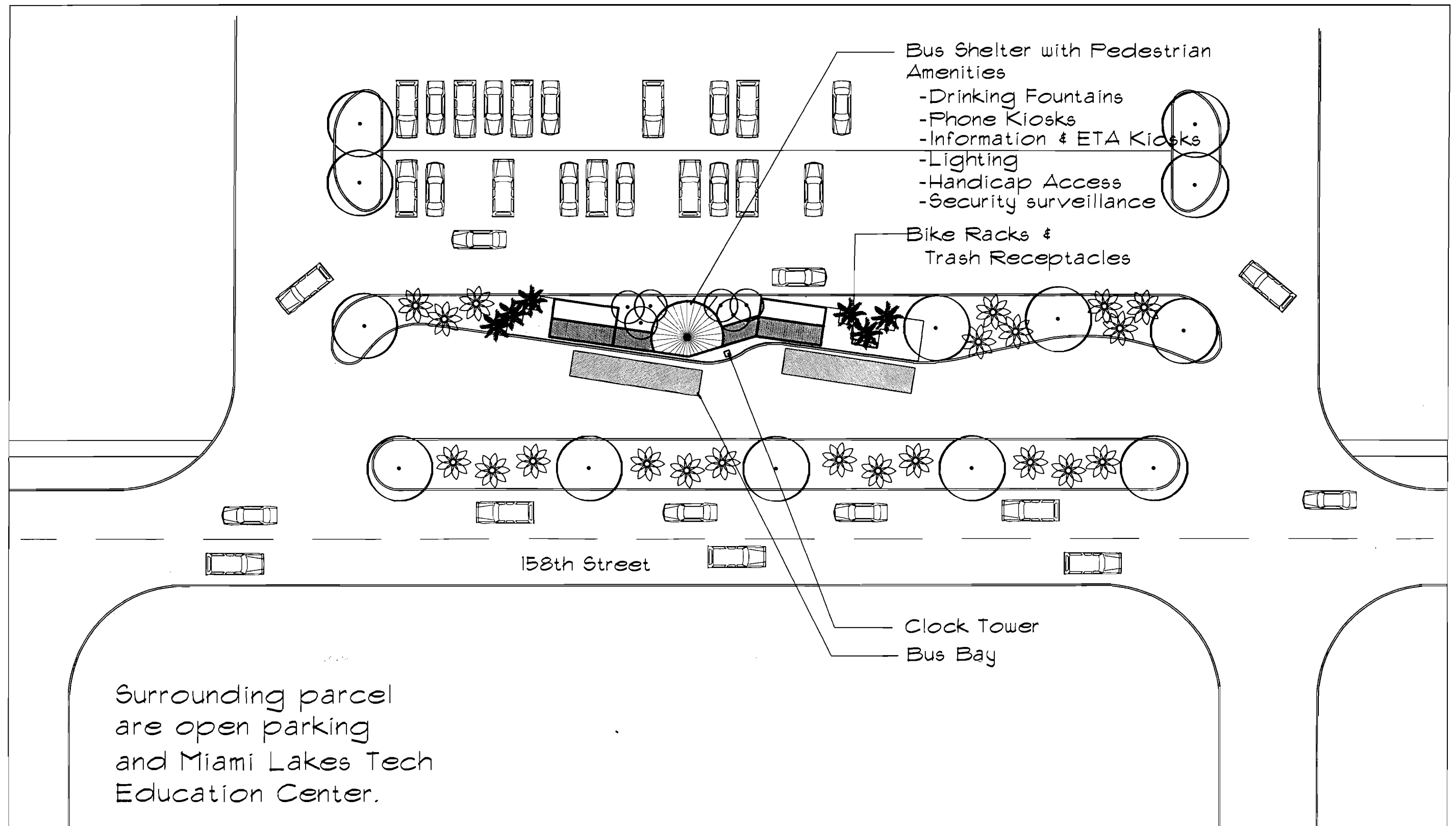
Site Location Map Miami Lakes Technical Education Center





RED ROAD

(N.W. 57th AVENUE)



INTERMODAL SITE FACT SHEET

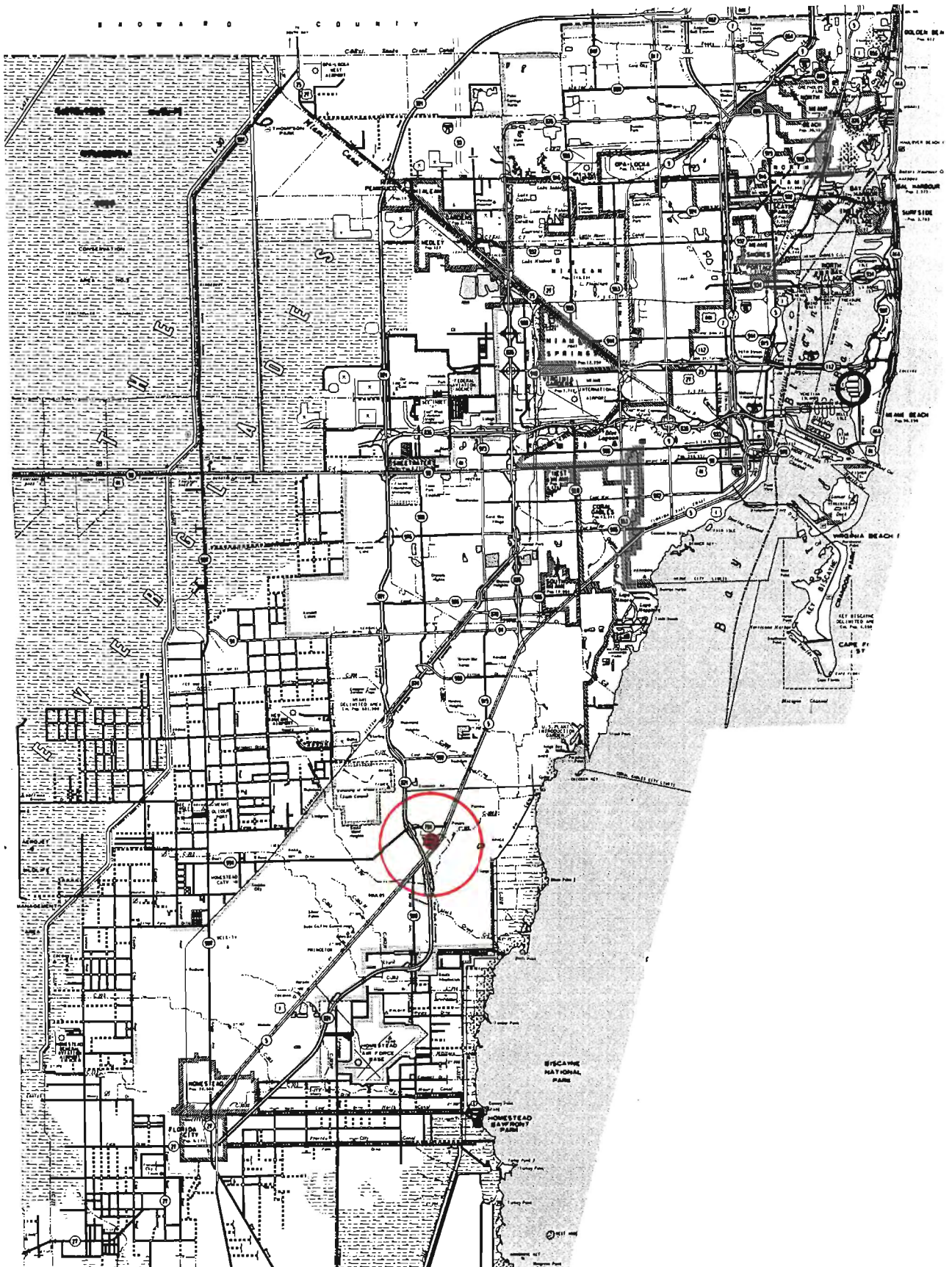
1. **Site Location:** NW 158th Street, west of NW 57th Avenue (Miami Lakes Technical Education Center)
2. **Surrounding Land Uses:** Palmetto Expressway to the north,
Miami Lakes Middle School to the west,
West Memorial Gardens Cemetery to the south, and
Palmetto Lakes Industrial Lakes to the east.
3. **Costs:** \$360,000
Estimated Site/Civil Costs: \$50,000
Site Facilities Costs: \$310,000
4. **Description of Surrounding Traffic Features:**
Roadway Geometry: NW 158th Street is an undivided east-west 2-lane road without curbs nor gutters.
Traffic Operations: Traffic is heavy at peak hours.
6. **Intermodal Activity**
Modes Served: Bus and pedestrian.
Bus Routes: 29
7. **Pedestrian Activity:** Heavy
8. **Bicycle Activity:** Light
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓			✓	
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking		✓			✓	
Supplemental Parking		✓			✓	
Engineering Considerations		✓			✓	
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓			✓
Bus Bays			✓			✓
Kiss & Ride		✓				✓
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines		✓				✓
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓			✓
Drinking Fountains		✓				✓
Security Surveillance			✓			✓
Postal Services		✓				✓
Bike Racks			✓			✓

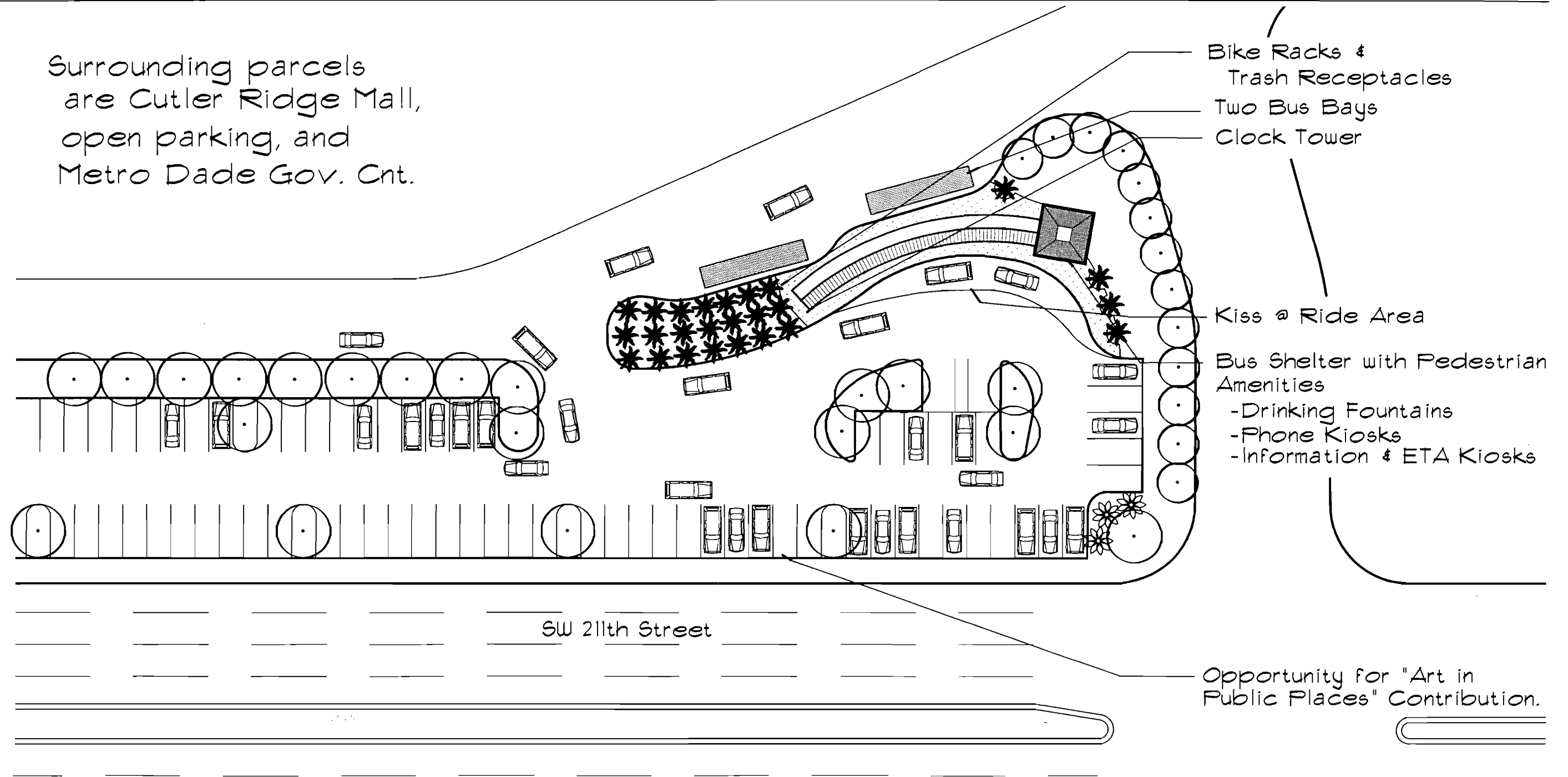


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Site Location Map Cutler Ridge Mall



Surrounding parcels
are Cutler Ridge Mall,
open parking, and
Metro Dade Gov. Cnt.



INTERMODAL SITE FACT SHEET

1. **Site Location:** Park-and-Ride at SE parking lot of Cutler Ridge Mall, adjacent to SW 211th Street
2. **Surrounding Land Uses:** Cutler Ridge Mall, Cutler Ridge Police Station, and Metro-Dade Government Center (across the street to the south)
3. **Costs:** \$556,000

Estimated Site/Civil Costs: \$75,000

Site Facilities Costs: \$481,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: SW 112th Street is a 6-lane divided arterial. The site is accessed by the mall entrance across from the Government Center.

Traffic Operations: Traffic volumes are light during the day, and moderate during the evenings.
5. **Intermodal Activity:**

Modes Served: Automobile (Park-and-Ride, Kiss-and-Ride), Metrobus, Pedestrian

Bus Routes: 1, 35, 52, 70, MAX
6. **Pedestrian Activity:** Moderate
7. **Bicycle Activity:** Low
8. **Design Considerations:** Add crosswalk to government center.
9. **Notes:** Site currently has no information for patrons. Patrons were seen frequently asking bus drivers and each other about different bus routes. We are proposing to eliminate stops on SW 211th Street in favor of a single intermodal center on the easternmost part of the existing park-and-ride lot.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓			✓	
Seating			✓			✓
Pedestrian Amenities			✓		✓	
Parking			✓	✓		
Supplemental Parking			✓	✓		
Engineering Considerations			✓		✓	
Trash Receptacles			✓		✓	
Newspaper Racks			✓		✓	
Lighting			✓	✓		
Tire and Seat Lockers			✓	✓		
Bus Bays			✓			✓
Kiss & Ride			✓		✓	
Phones			✓		✓	
Signage			✓		✓	
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			
Private Developments		✓		✓		
Clock			✓			✓
Vending Machines			✓		✓	
Intermodal Center Identities			✓		✓	
Handicap Access		✓			✓	
Landscaping			✓		✓	
Drinking Fountains			✓		✓	
Security Surveillance			✓	✓		
Postal Services			✓	✓		
Bike Racks			✓		✓	



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Northeast side view of existing Park-n-Ride lot.



East side view of existing/future Park-n-Ride lot.



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North side view of the proposed Intermodal Facility.

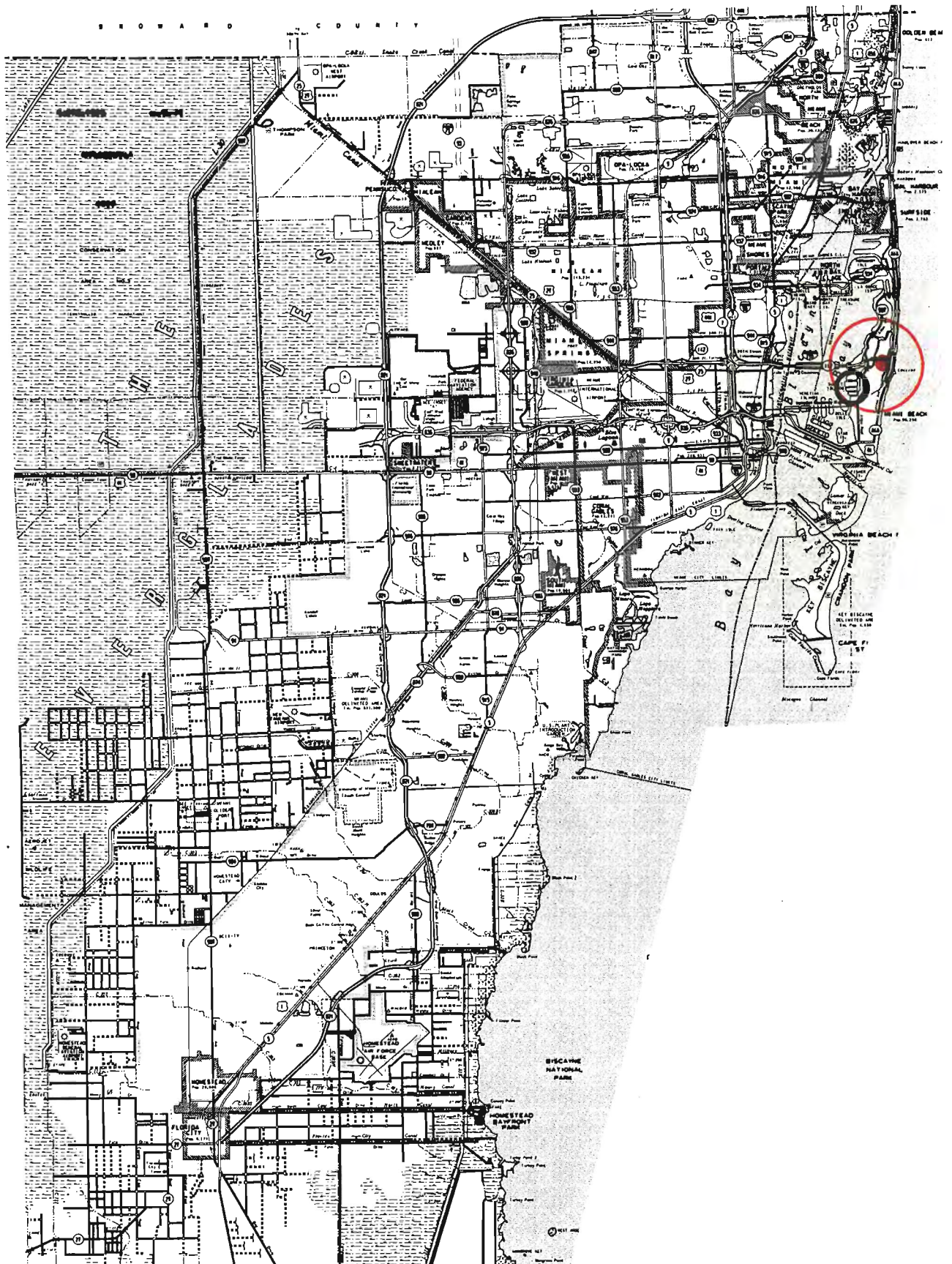


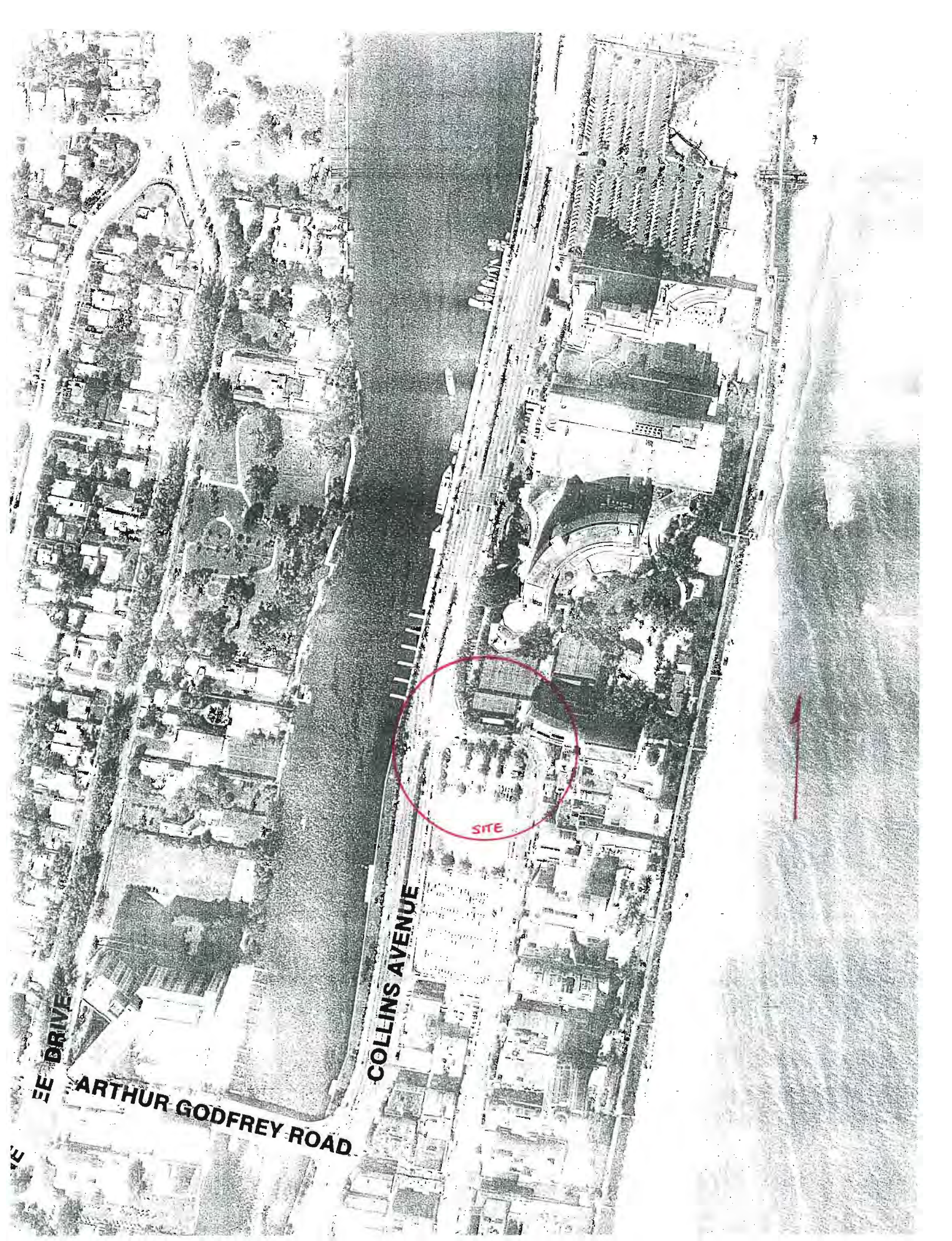
West side view of existing/future Park-n-Ride lot.



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Site Location Map Collins Avenue at NE 44th Street



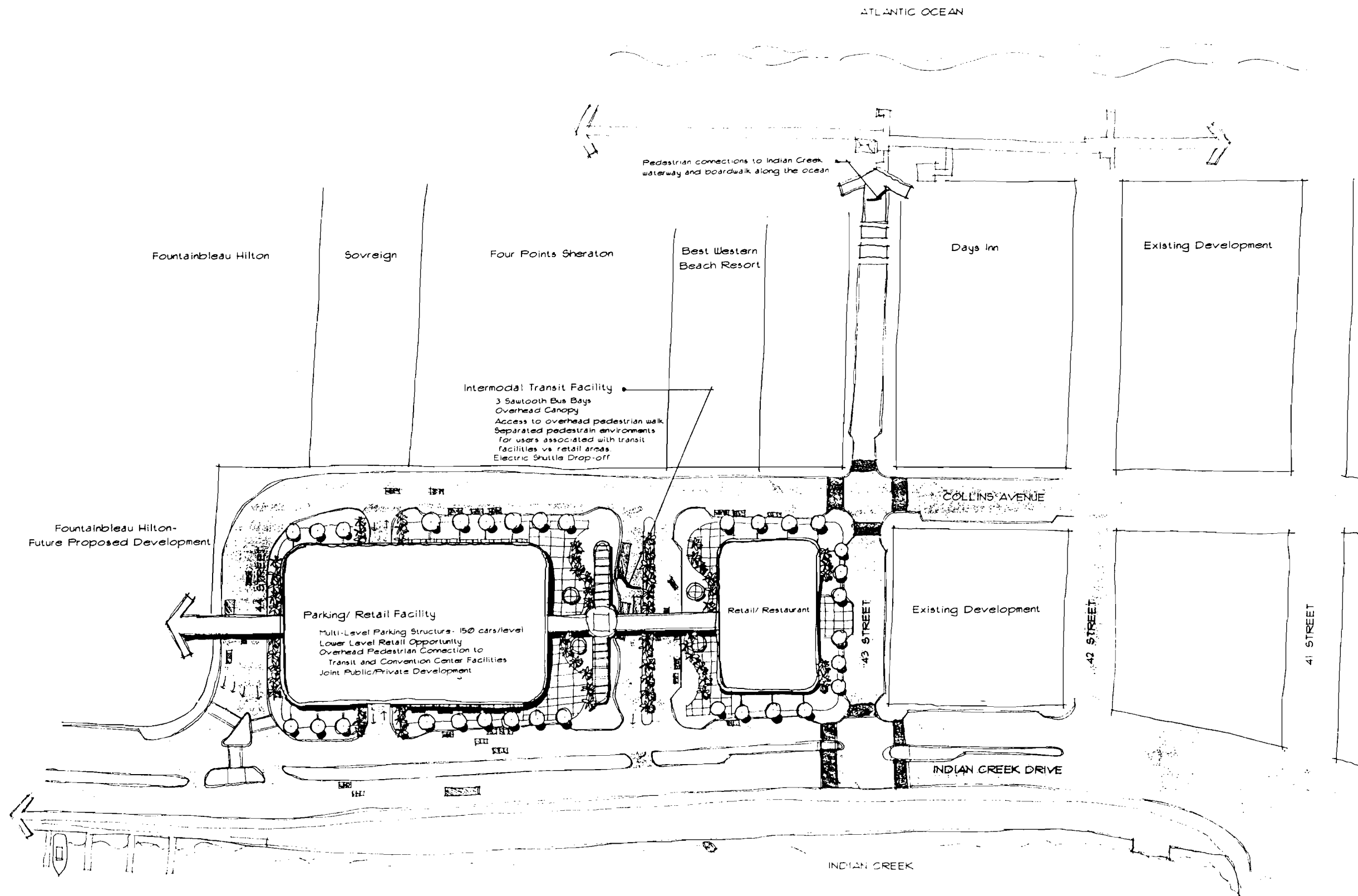


COLLINS AVENUE

SITE

EE DRIVE

ARTHUR GODFREY ROAD



Kimley-Horn and Associates, Inc.

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Miami - Dade MPO
Intermodal Study
Proposed Intermodal Centers 1998



Collins Avenue / NE 44th St.
NOT TO SCALE

INTERMODAL SITE FACT SHEET

1. **Site Location:** Collins Avenue and 44th Street.
2. **Surrounding Land Uses:** Pine Tree Park to the north,
Wofford Park to the west,
Collins Avenue to the south, and
The coast line to the east.
3. **Costs:** \$1,060,000
Estimated Site/Civil Costs: \$150,000
Site Facilities Costs: \$910,000
4. **Description of Surrounding Traffic Features:**
Roadway Geometry: Collins Avenue is a 2-lane one-way north corridor
Traffic Operations: Traffic is steady on Collins Avenue.
6. **Intermodal Activity**
Modes Served: Bus and pedestrian
Bus Routes: L, G, H, T, S, J.
7. **Pedestrian Activity:** Heavy
8. **Bicycle Activity:** Heavy
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓			✓	
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking	✓			✓		
Supplemental Parking	✓			✓		
Engineering Considerations			✓			✓
Trash Receptacles			✓			✓
Newspaper Racks			✓		✓	
Lighting			✓			✓
Tire and Seat Lockers			✓		✓	
Bus Bays						
Kiss & Ride		✓			✓	
Phones			✓		✓	
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓		✓	
Interactive ITS kiosks						
Private Developments	✓			✓		
Clock			✓		✓	
Vending Machines		✓		✓		
Intermodal Center Identities			✓			✓
Handicap Access			✓			✓
Landscaping			✓		✓	
Drinking Fountains		✓			✓	
Security Surveillance		✓		✓		
Postal Services	✓			✓		
Bike Racks			✓			✓



Kimley-Horn
and Associates, Inc.



Parking between Collins Avenue and Indian Creek.



View of parking lot from bus stop on Collins Avenue.



Kimley-Horn
and Associates, Inc.



Bus stop on Collins Avenue/40th Street.

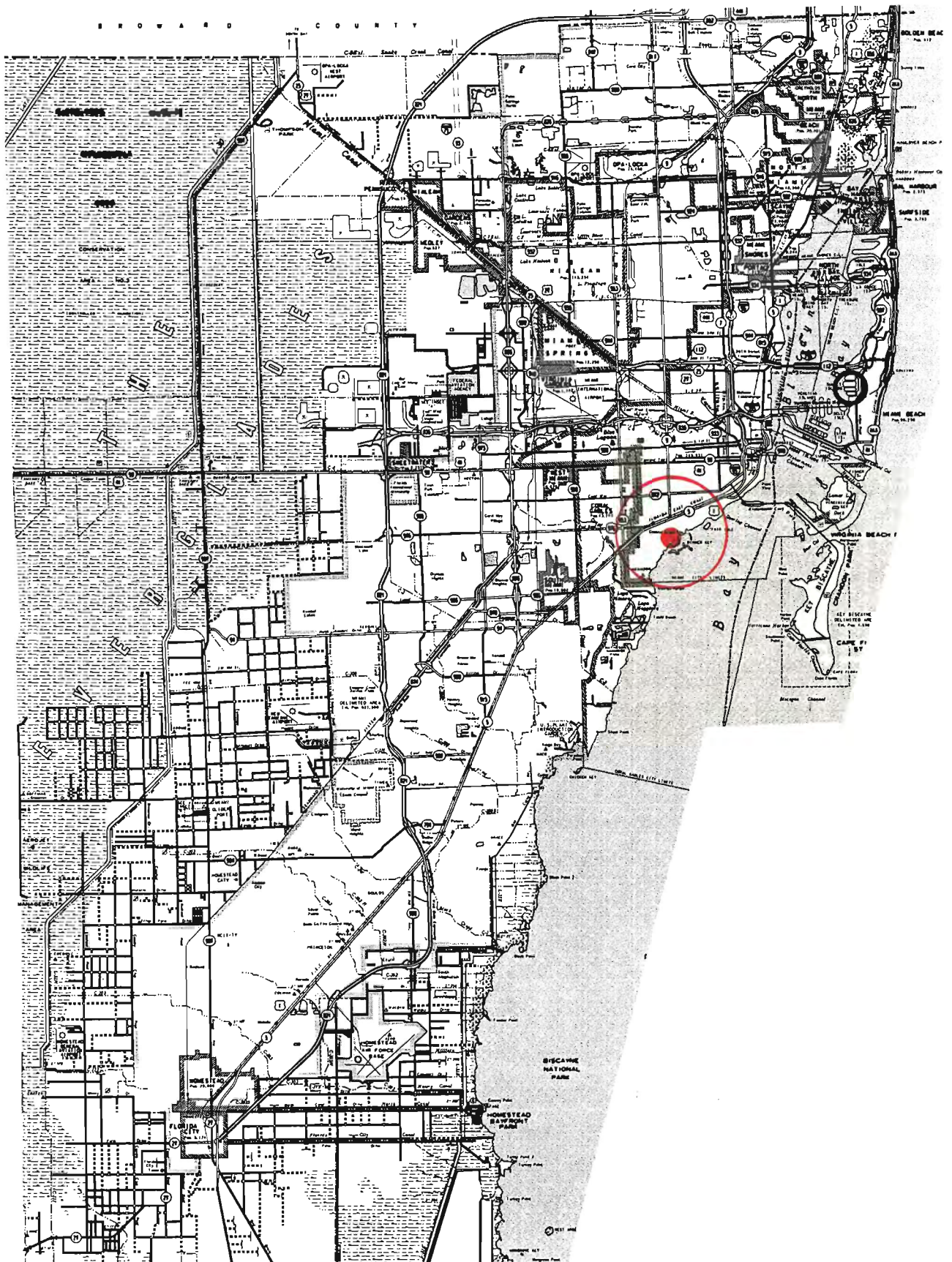


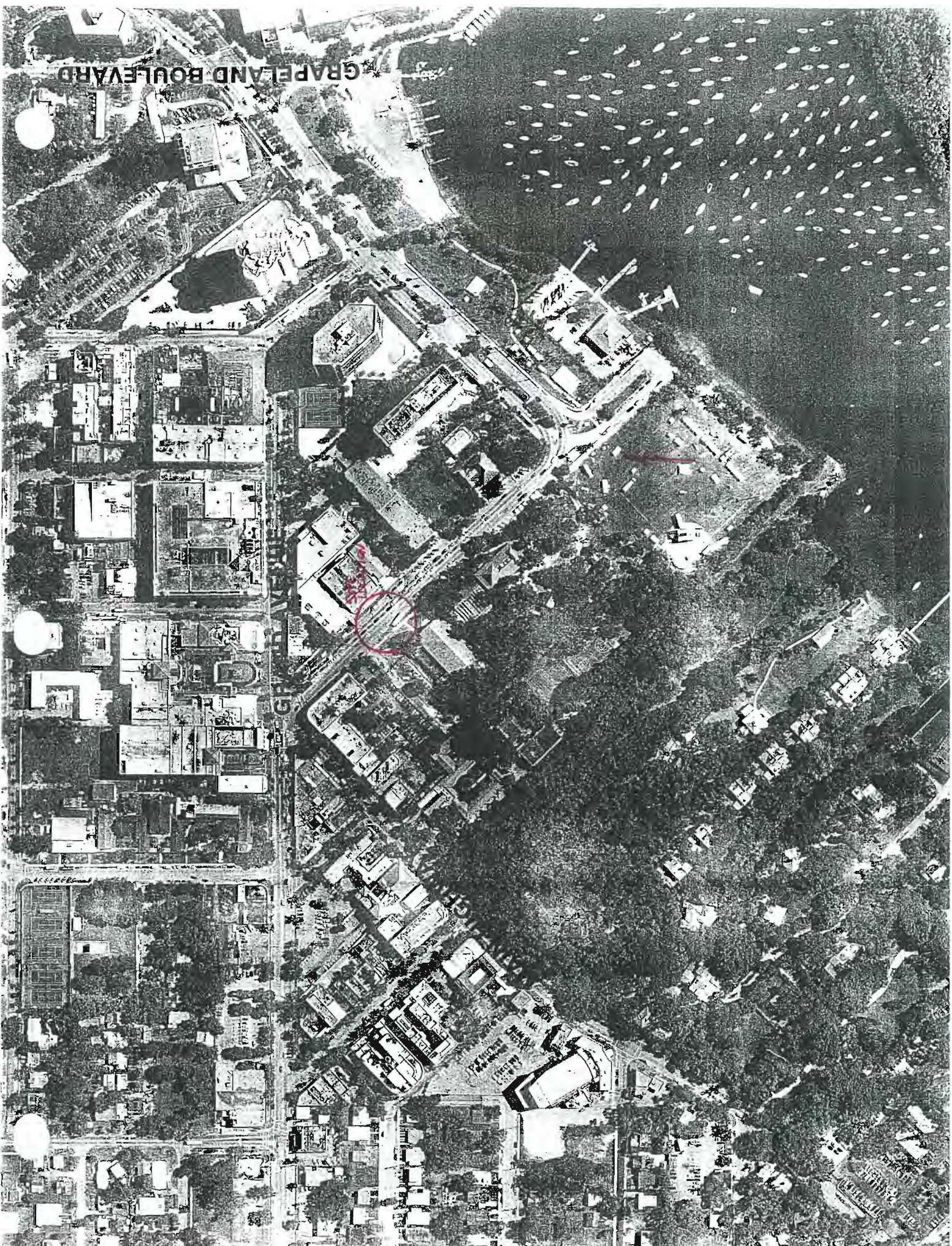
Bus stop on Collins Avenue at 40th Street.



Kimley-Horn
and Associates, Inc.

Site Location Map Coconut Grove (McFarlane Road)

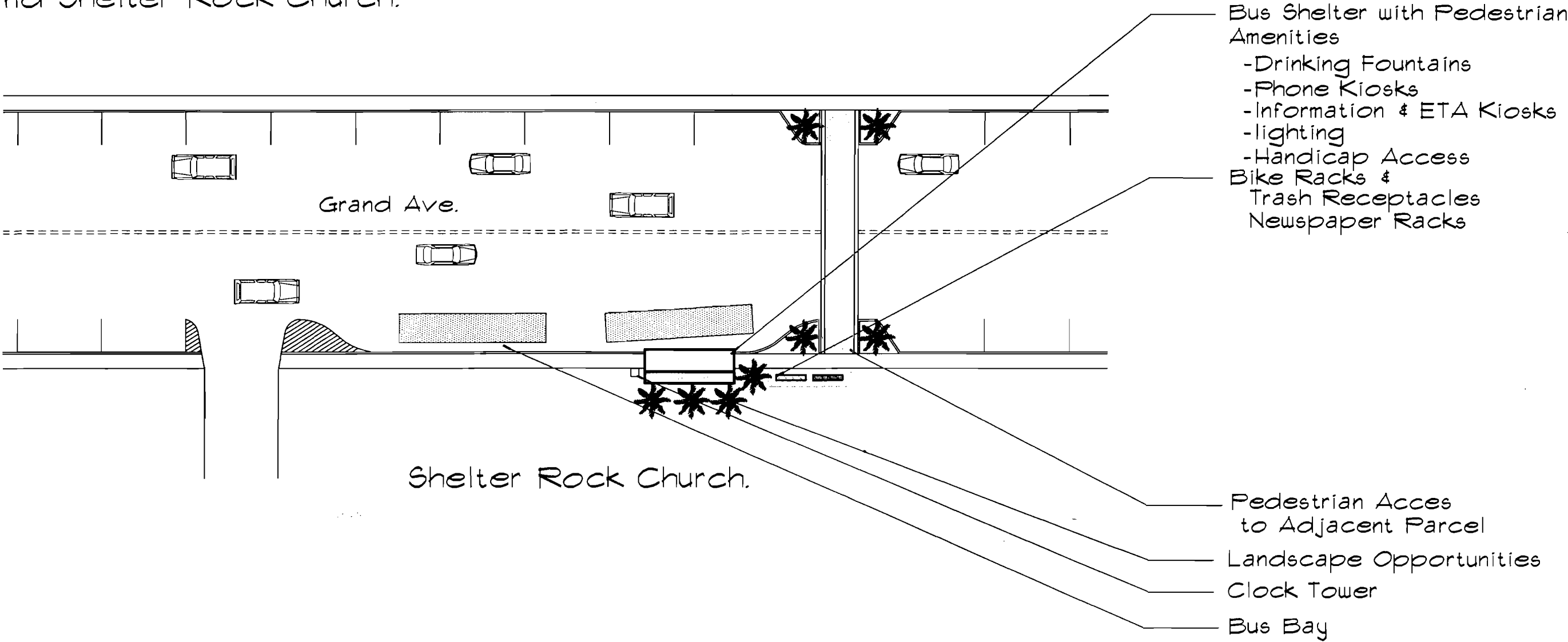




GRAPELAND BOULEVARD

GRAND AVENUE

Surrounding parcels
are CocolWalk, Just for Feet,
and Shelter Rock Church.



INTERMODAL SITE FACT SHEET

1. **Site Location:** McFarlane Road between Grand Avenue and South Bayshore (Coconut Grove area)

2. **Surrounding Land Uses:** Coconut Grove to the north,
Coconut Grove R.O. to the west,
Coconut Grove Library to the south, and
City Hall to the east.

3. **Costs:** \$249,000

Estimated Site/Civil Costs: \$50,000

Site Facilities Costs: \$199,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: McFarlane Road is a 4-lane undivided road.

Traffic Operations: The site is very close to the intersection of Grand Avenue, Maine and McFarlane Rd. and therefore traffic is heavy.

6. **Intermodal Activity**

Modes Served: Bus, pedestrian, bicycle. This is also a layover location for buses.

Bus Routes: 22, 42, 27, 48.

7. **Pedestrian Activity:** Heavy. Jaywalking is high

8. **Bicycle Activity:** Heavy

9. **Design Considerations:**

10. **Implementation Considerations:**

11. **Comments / Notes:**

The sidewalks are in bad conditions.
A midblock crosswalk is warranted

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓		✓		
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking		✓		✓		
Supplemental Parking	✓			✓		
Engineering Considerations		✓			✓	
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓			✓
Bus Bays			✓			✓
Kiss & Ride	✓			✓		
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines		✓		✓		
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓			✓
Drinking Fountains			✓		✓	
Security Surveillance			✓		✓	
Postal Services			✓		✓	
Bike Racks			✓			✓



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Tentative site on McFarlane Road.



Southeast view of tentative site.



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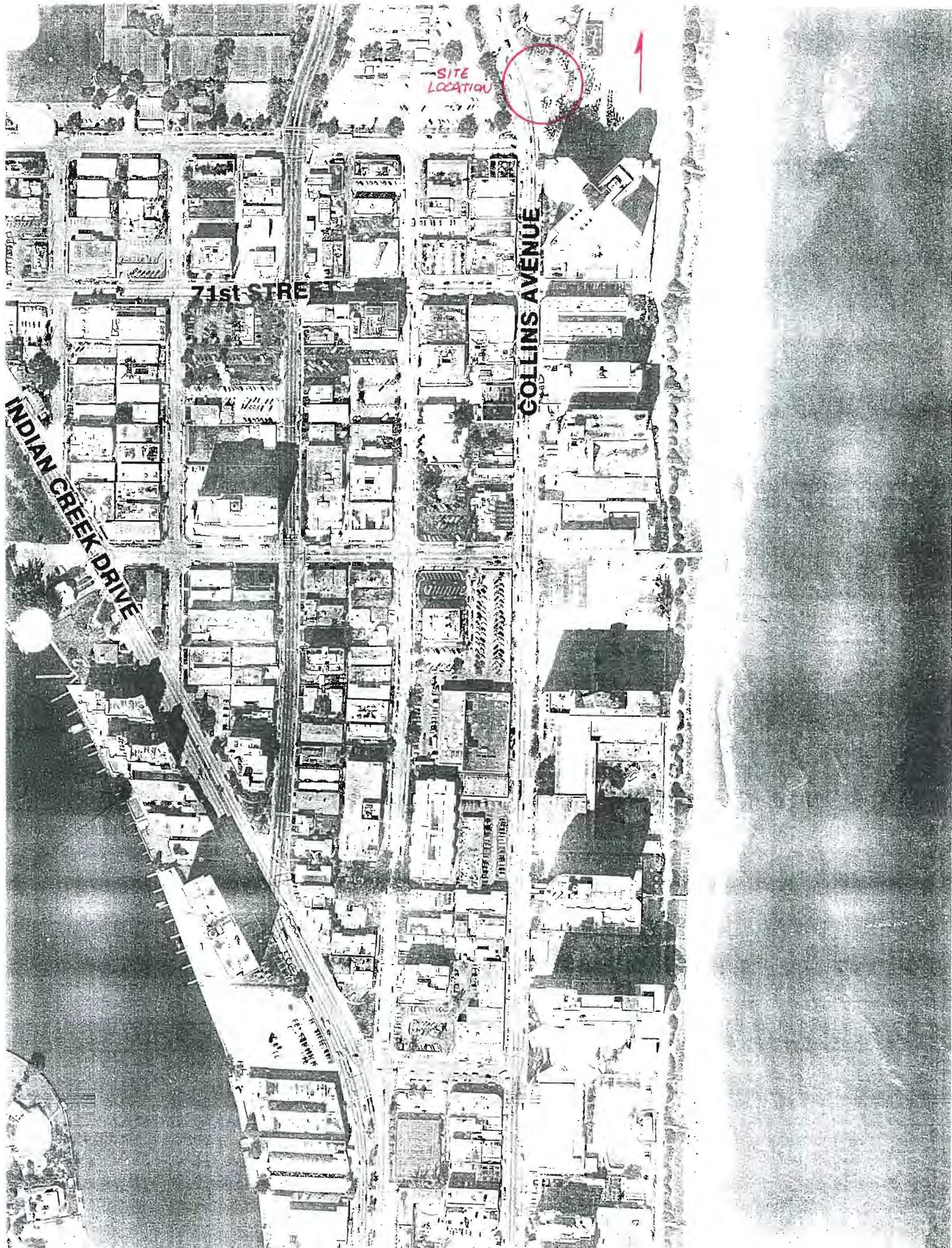
Southeast view of McFarlane Road.

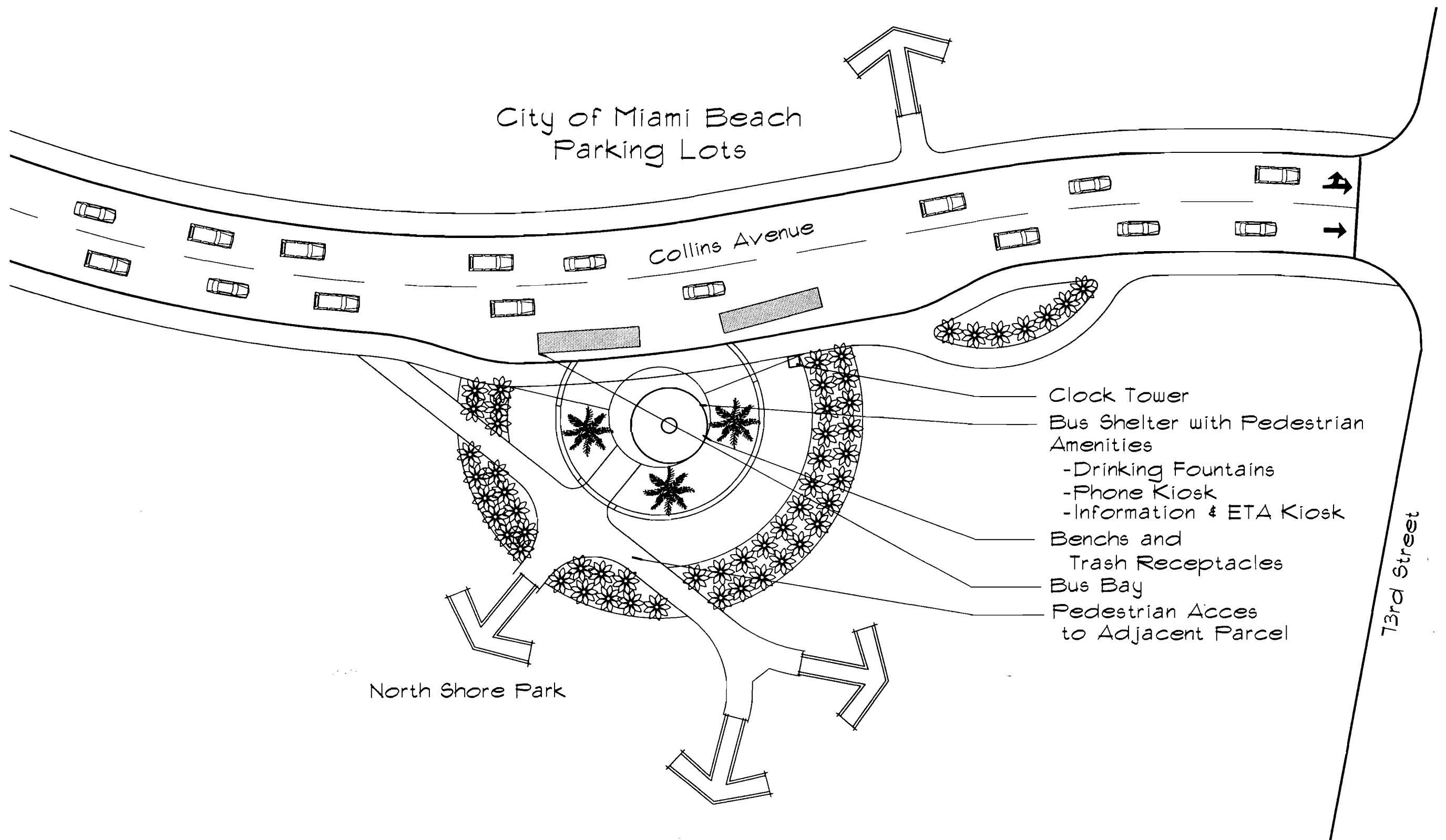


Southeast view of McFarlane Road.

Site Location Map Collins Avenue at 72nd Street







INTERMODAL SITE FACT SHEET

1. **Site Location:** Collins Avenue and 72nd Street. (Miami Beach)

2. **Surrounding Land Uses:** North Shore Library to the north,
Normandy P.O. to the west,
Allison Park to the south, and
North Shore Beach Center to the east.

3. **Costs:** \$133,000

Estimated Site/Civil Costs: \$0

Site Facilities Costs: \$133,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Collins Avenue is a 2-lane one-way north corridor.

Traffic Operations: Traffic is steady on Collins Avenue.

6. **Intermodal Activity**

Modes Served: Bus, pedestrian, park-n-ride.

Bus Routes: G, H, S, T, K

7. **Pedestrian Activity:** Moderate

8. **Bicycle Activity:** Heavy

9. **Design Considerations:**

9. **Implementation Considerations:**

11. **Comments / Notes:**

An intermodal center has just been constructed here. The site facilities will be installed to establish consistency.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities	✓			✓		
Seating			✓	✓		
Pedestrian Amenities		✓			✓	
Parking	✓			✓		
Supplemental Parking	✓			✓		
Engineering Considerations		✓		✓		
Trash Receptacles			✓	✓		
Newspaper Racks			✓		✓	
Lighting			✓		✓	
Tire and Seat Lockers		✓			✓	
Bus Bays			✓	✓		
Kiss & Ride	✓			✓		
Phones			✓		✓	
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			
Private Developments						
Clock			✓			✓
Vending Machines		✓			✓	
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping		✓			✓	
Drinking Fountains			✓	✓		
Security Surveillance			✓		✓	
Postal Services	✓				✓	
Bike Racks		✓			✓	



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Intermodal facility under construction; view from the northwest.

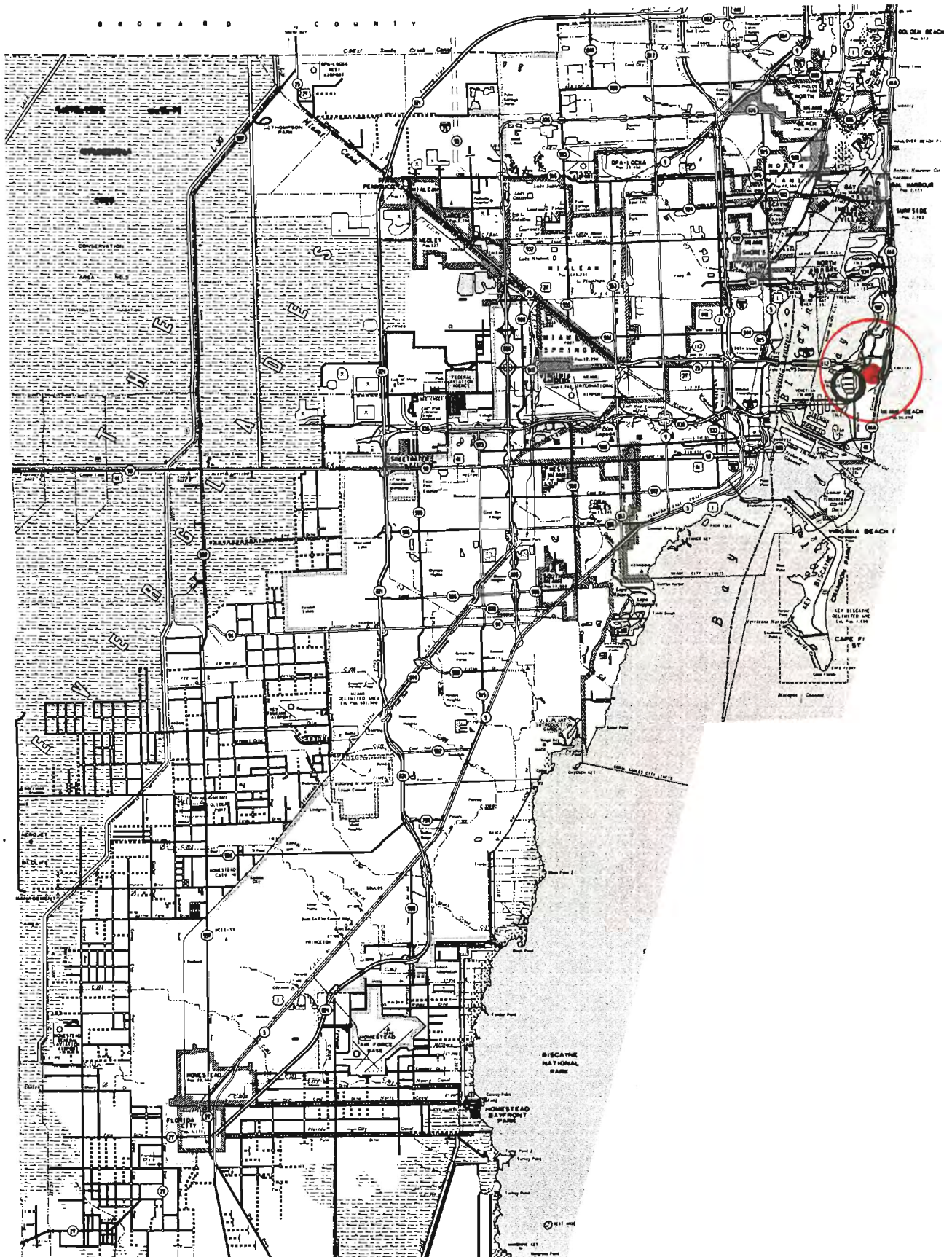


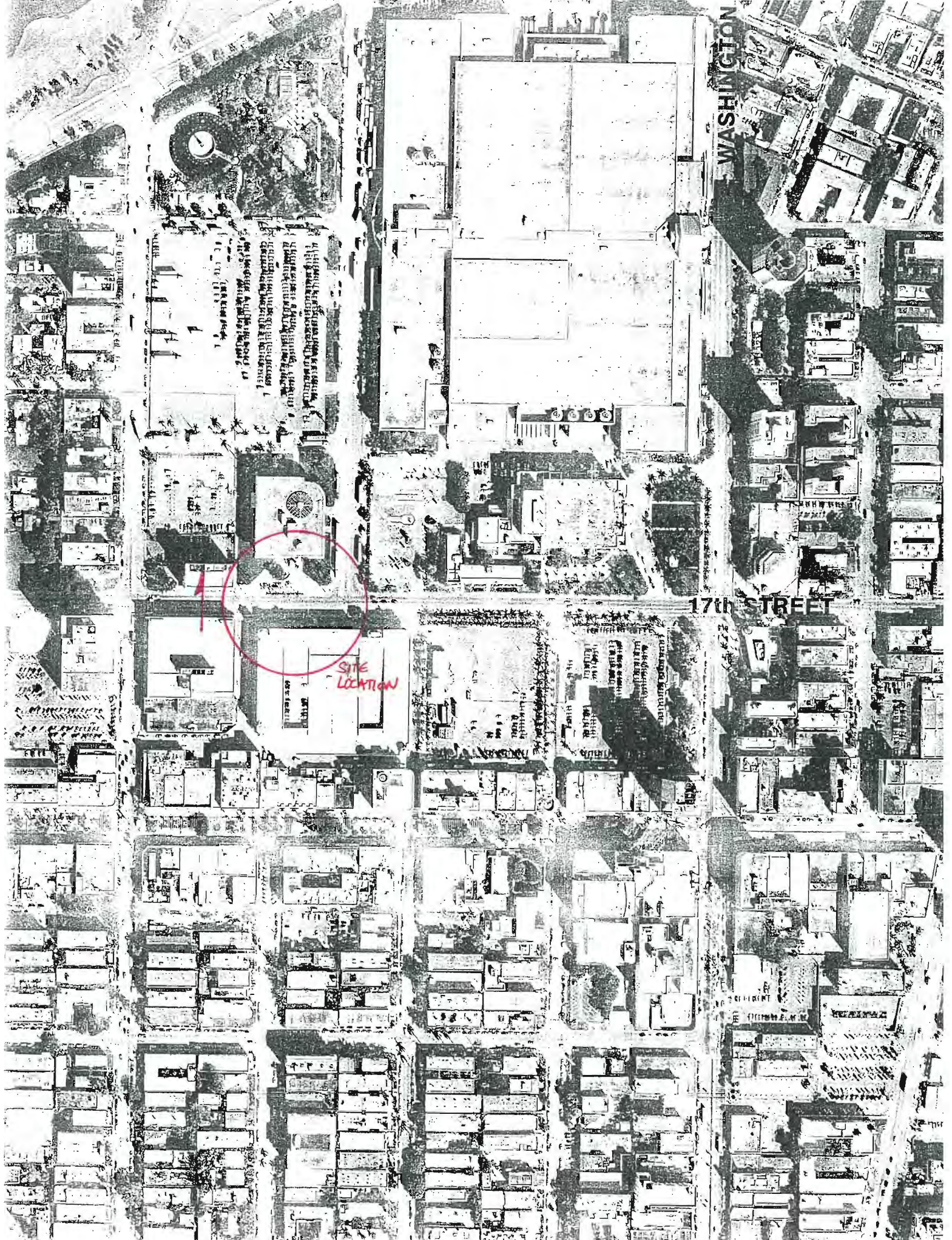
View of future terminal.



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Site Location Map Miami Beach Convention Center





WASHINGTON

17th STREET

SITE
LOCATION

City of Miami Beach
City Hall.

Bus Shelter with Pedestrian
Amenities

- Drinking Fountains
- Phone Kiosks
- Info & ETA Kiosks
- Trash Receptacles
- Seating Benches
- Additional signage

Existing Drop-off

Convention Center Drive

Bus Bay with
Cantilevered shelter
over sidewalk.

17th Street

Existing Parking Garage

Enhance Existing
Landscape



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Miami Beach
Convention Center
Scale: 1" = 30'

INTERMODAL SITE FACT SHEET

1. **Site Location:** Miami Beach, 17th Street, in front of City Hall, Convention Center
2. **Surrounding Land Uses:** City Hall to the north, parking lot and Jackie Gleason theatre to the east, convention center to the south, and the Lincoln Mall to the west
3. **Costs:** \$148,000
Estimated Site/Civil Costs: \$50,000
Site Facilities Costs: \$97,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: 17th Street is a five-lane undivided arterial. City Hall has an existing drop-off area that could be used for bus drop-off.

Traffic Operations: Heavy pedestrian volumes, many cross 17th Street at the designated crosswalks. Traffic is steady.
5. **Intermodal Activity:**

Modes Served: Automobile (kiss-and-ride, park-and-ride), bus, bicycle, pedestrian

Bus Routes: W, R, L, G, S, A, Flager MAX, F/M
6. **Pedestrian Activity:** Heavy
7. **Design Considerations:**
8. **Notes:** There is no need for any additional parking. There is plenty of existing parking, plus this location serves as a destination center. Attractions include the Miami Beach City Hall, the Jackie Gleason Theatre for the Performing Arts, the Miami Beach Convention Center, and the Lincoln Road Mall.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities	✓			✓		
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking	✓			✓		
Supplemental Parking	✓			✓		
Engineering Considerations		✓			✓	
Trash Receptacles			✓			✓
Newspaper Racks		✓			✓	
Lighting			✓	✓		
Tire and Seat Lockers			✓		✓	
Bus Bays			✓			✓
Kiss & Ride			✓	✓		
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments	✓			✓		
Clock			✓		✓	
Vending Machines		✓		✓		
Intermodal Center Identities			✓			✓
Handicap Access			✓	✓		
Landscaping		✓			✓	
Drinking Fountains			✓			✓
Security Surveillance	✓			✓		
Postal Services			✓	✓		
Bike Racks			✓		✓	



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West side view of existing bus stop/proposed bus bay area for the Intermodal Center.



Northeast side view of existing City Hall drop-off area/proposed bus bay area.



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East side view of existing bus stop/proposed Intermodal Center bus bay.



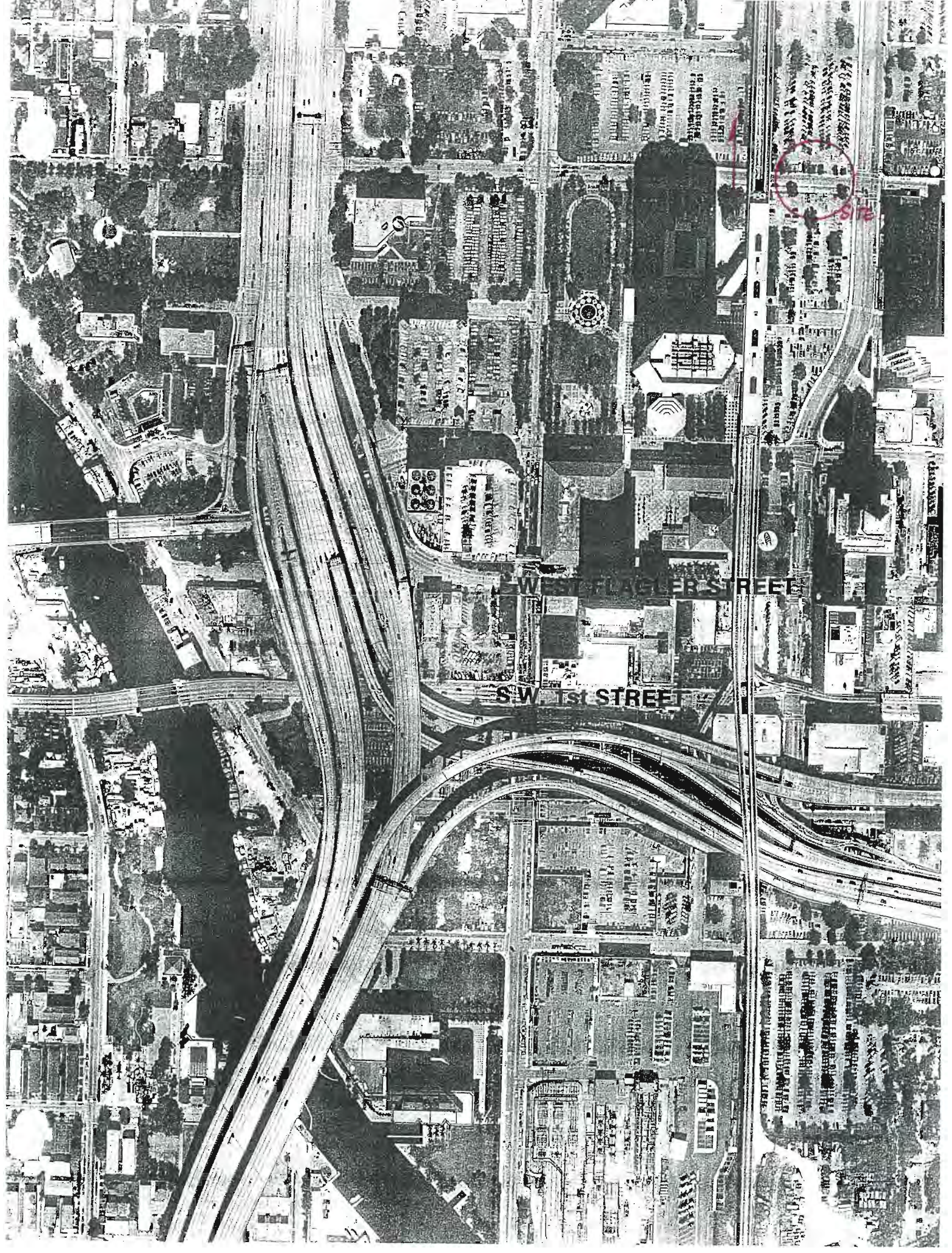
Northwest side view of City Hall drop-off area/proposed Intermodal Center bus bay.

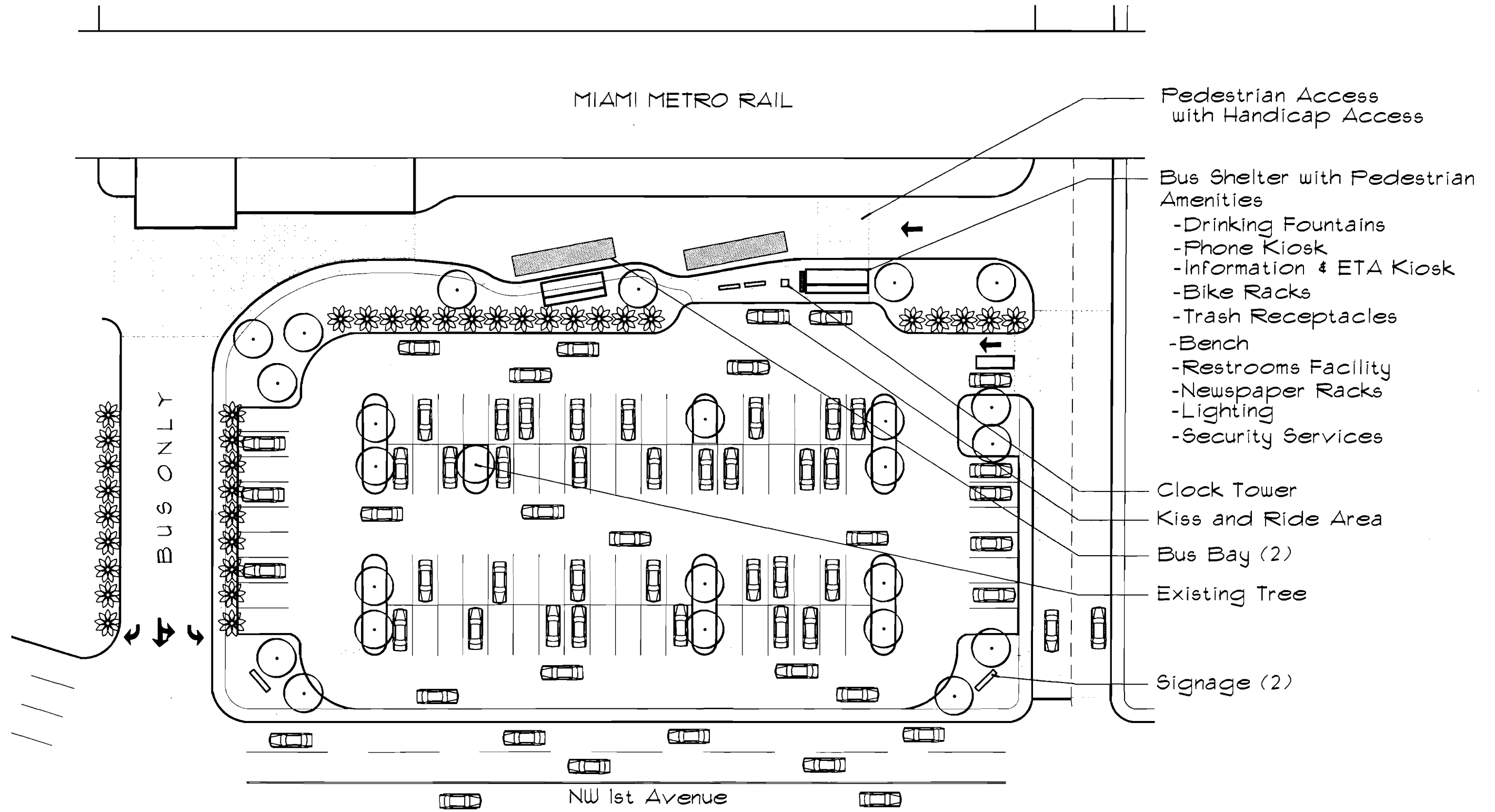


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Site Location Map Government Center







INTERMODAL SITE FACT SHEET

1. **Site Location:** 1st Avenue and 3rd Street (Government Center Station)

2. **Surrounding Land Uses:** Miami Arena to the north,
Stephen P. Clark Center to the west,
Dade County Court House to the south, and
U.S. Court House to the northeast.

3. **Costs:** \$742,000

Estimated Site/Civil Costs: \$300,000

Site Facilities Costs: \$442,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Second Street is an east-west undivided 3-lane road which divides the Government Metrorail / Metromover Station parking lot in two. The east portion ends at the point where it intersects 2nd Avenue. Second Avenue is a north-south undivided 4-lane road.

Traffic Operations: Traffic is heavy and confusing due to the fact that 2nd Street is converted into a one-way (west) street after 2nd Avenue.

6. **Intermodal Activity**

Modes Served: Metrorail, Metromover, bus, pedestrian, park-n-ride, taxi, jitney.

Bus Routes: 8, and 6

7. **Pedestrian Activity:** Heavy. The signalized intersection does not have pedestrian features. Thus, midblock crossing and jaywalking is the norm.

8. **Bicycle Activity:** Light

9. **Design Considerations:** A pedestrian overpass is needed between parking lots

10. **Implementation Considerations:**

11. **Comments / Notes:**

This location is intended to tie-in with the future East-West Metrorail corridor. The site location is very run-down, and an intermodal center could help to revitalize the site.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓				✓
Seating			✓			✓
Pedestrian Amenities		✓				✓
Parking			✓			✓
Supplemental Parking		✓			✓	
Engineering Considerations			✓			✓
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓			✓
Bus Bays		✓				✓
Kiss & Ride			✓		✓	
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments		✓			✓	
Clock			✓			✓
Vending Machines			✓			✓
Intermodal Center Identities			✓			✓
Handicap Access			✓			✓
Landscaping		✓				✓
Drinking Fountains			✓			✓
Security Surveillance			✓			✓
Postal Services		✓				✓
Bike Racks			✓			✓



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West side view of 3rd Street and proposed site location.



West side view of 3rd Street and proposed site location.



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Southwest side view of Metrorail/Metromover parking lot.

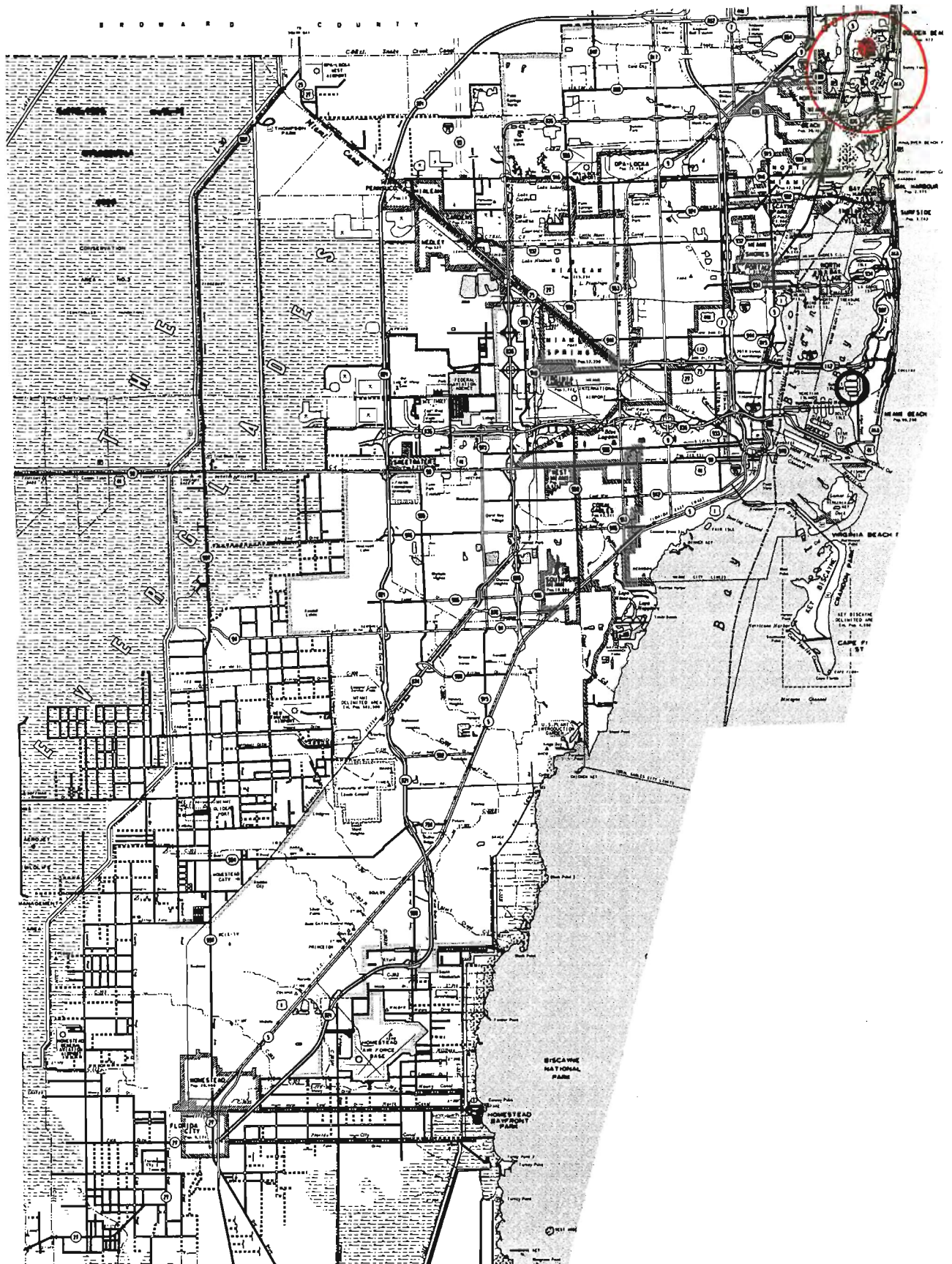


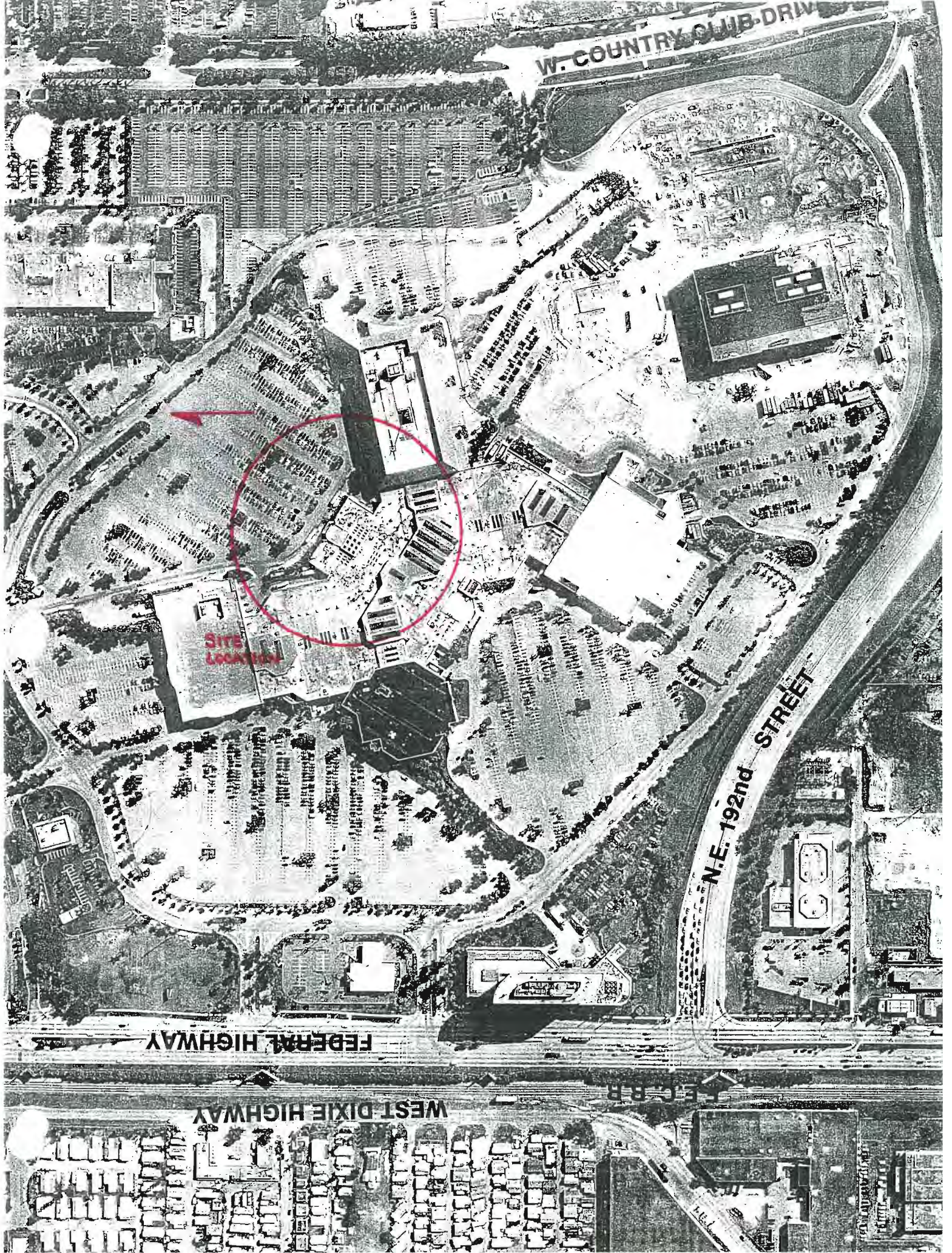
Northwest side view of existing parking lot.



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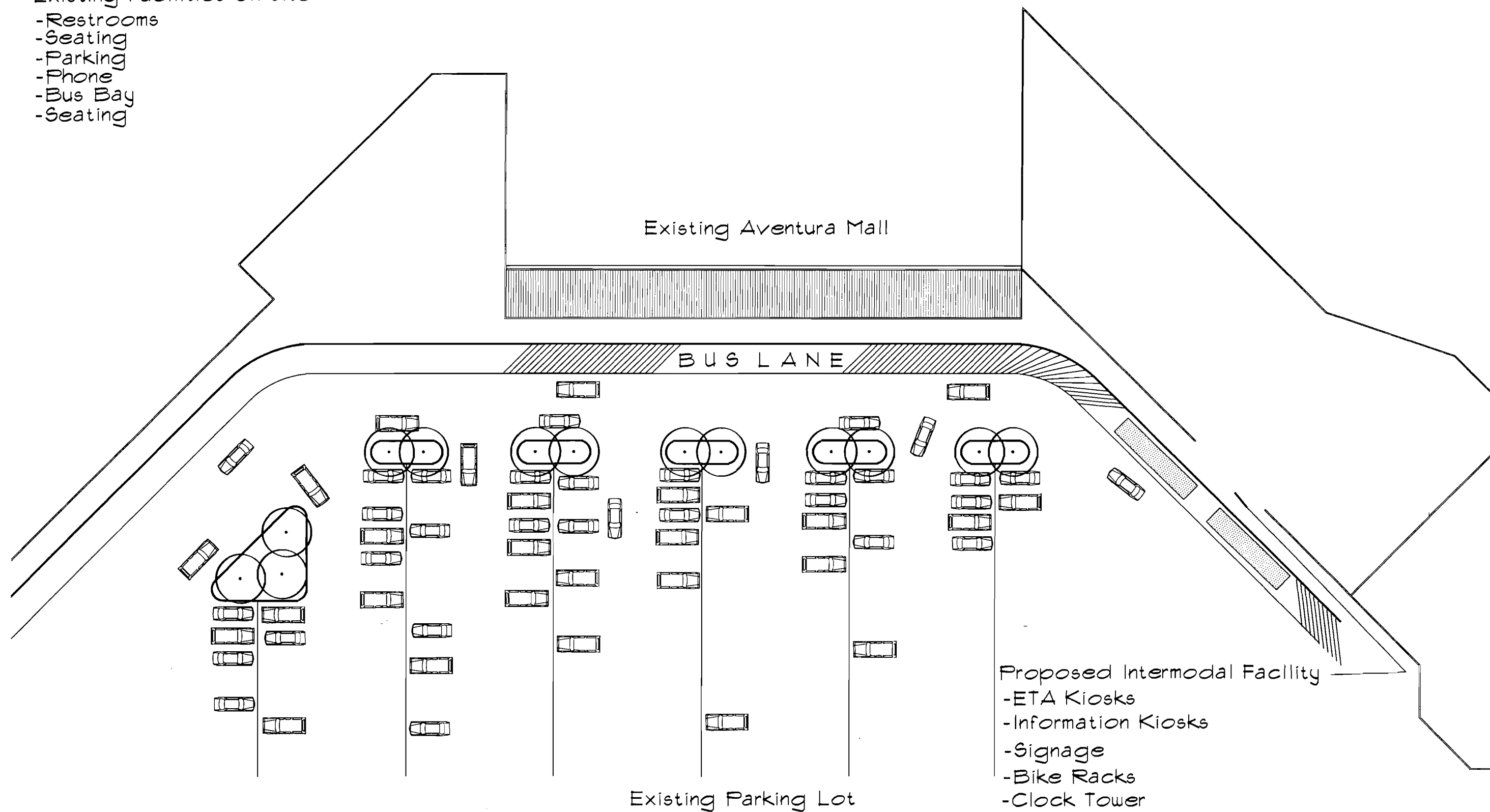
Site Location Map US 1 / Aventura Mall





Existing Facilities on site:

- Restrooms
- Seating
- Parking
- Phone
- Bus Bay
- Seating



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US 1 / Aventura Mall
 Scale: 1" = 30'

INTERMODAL SITE FACT SHEET

1. **Site Location:** Biscayne Boulevard (U.S. 1) at Aventura Boulevard.
2. **Surrounding Land Uses:** North East Broward Library to the north,
Turnberry Resort & Club to the east,
Lochmann's Fashion Island to the south , and
FEC RR to the west.
3. **Costs:** \$150,000

Estimated Site/Civil Costs: \$10,000

Site Facilities Costs: \$140,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: the existing bus stop is being served by a two-lane road connected to the parking lot.

Traffic Operations: Heavy pedestrian volumes.
5. **Intermodal Activity**

Modes Served: Automobile (kiss-and-ride, park-and-ride), bus, pedestrian.

Bus Routes: 3, 9, 95, E, S, MAX
6. **Pedestrian Activity:** Heavy
7. **Bicycle Activity:** Low
8. **Design Considerations:** None. Existing site.
9. **Implementation Considerations:** Coordination with Aventura Mall is essential.
10. **Comments / Notes:**

This site is somewhat hidden from the mall ring road. Proper signing will be essential to direct users properly.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities			✓	✓		
Seating			✓	✓		
Pedestrian Amenities			✓	✓		
Parking			✓	✓		
Supplemental Parking			✓	✓		
Engineering Considerations			✓	✓		
Trash Receptacles			✓	✓		
Newspaper Racks			✓	✓		
Lighting			✓	✓		
Tire and Seat Lockers			✓	✓		
Bus Bays			✓	✓		
Kiss & Ride			✓	✓		
Phones			✓	✓		
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS Kiosks			✓			✓
Private Developments				✓		
Clock			✓			✓
Vending Machines		✓		✓		
Intermodal Center Identities			✓			✓
Handicap Access		✓		✓		
Landscaping			✓	✓		
Drinking Fountains			✓	✓		
Security Surveillance			✓	✓		
Postal Services			✓	✓		
Bike Racks			✓		✓	



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Existing drop-off area (from east).



Northwest side view of existing drop-off area.



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Northwest side view of existing bus stop.

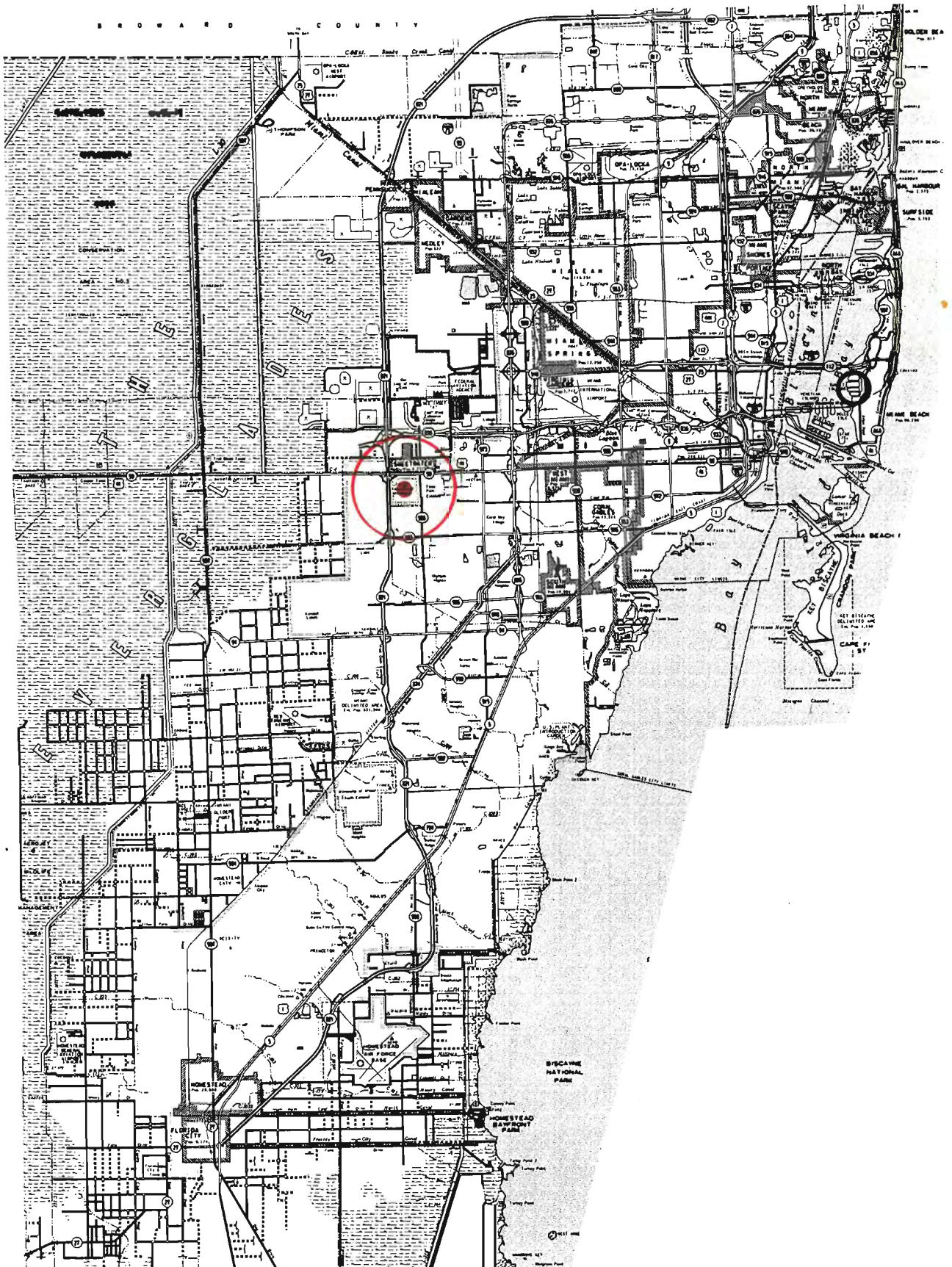


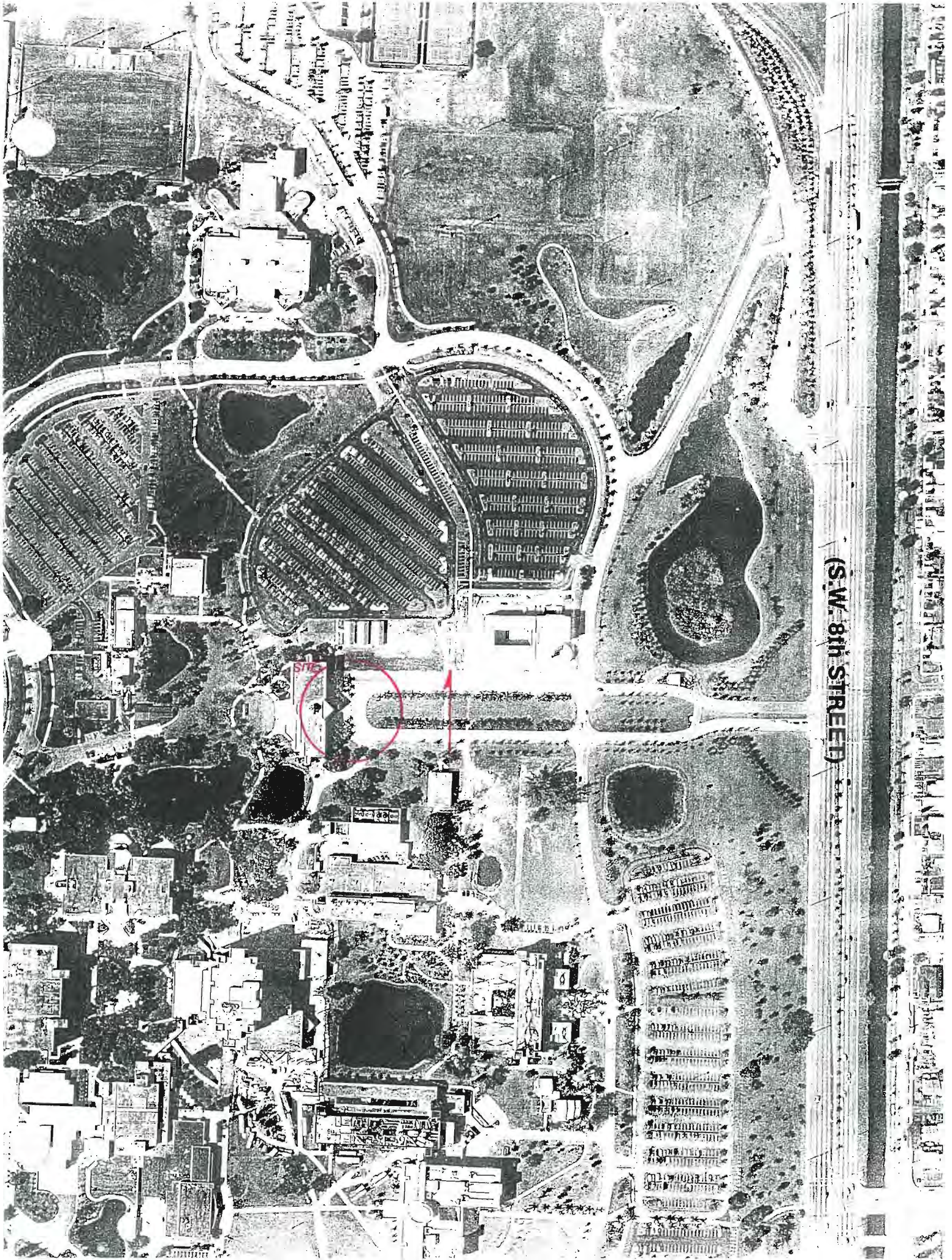
Southeast side view of existing bus stop.



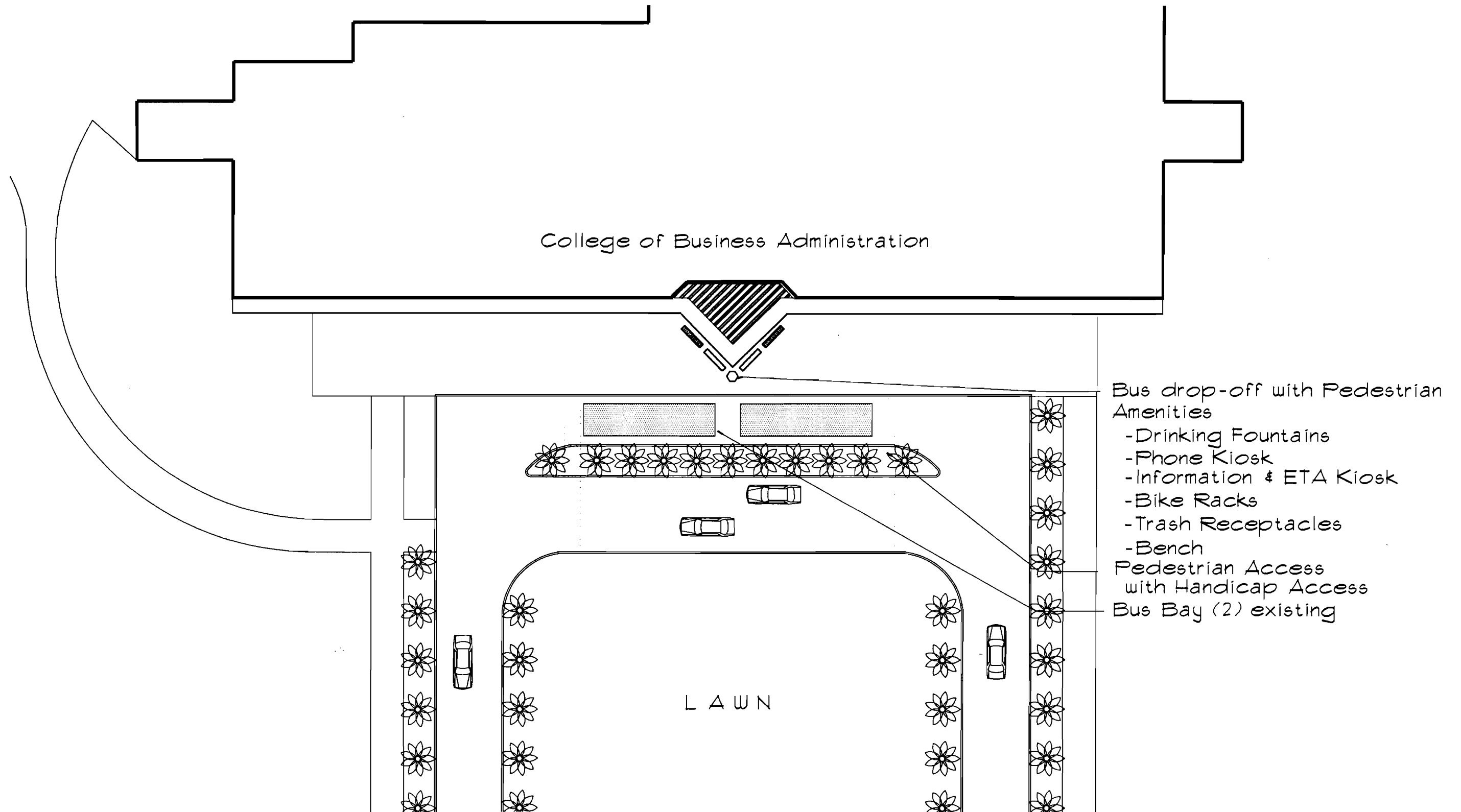
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Site Location Map FIU / Tamiami Campus





(S.W. 8th STREET)



INTERMODAL SITE FACT SHEET

1. **Site Location:** Florida International University (FIU) - Tamiami Campus
2. **Surrounding Land Uses:** Within the FIU Campus.

3. **Costs:** \$170,000

Estimated Site/Civil Costs: \$0

Site Facilities Costs: \$170,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Campus roads are generally 2-lane (narrow) roads.

Traffic Operations: Heavy traffic

6. **Intermodal Activity**

Potential Modes Served: Bus, bicycle, pedestrian, park-n-ride, kiss-n-ride.

Bus Routes: None, but the 8, 11, 24, 71, and Flagler MAX have routes in the vicinity.

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Heavy

9. **Design Considerations:**

10. **Implementation Considerations:**

11. **Comments / Notes:**

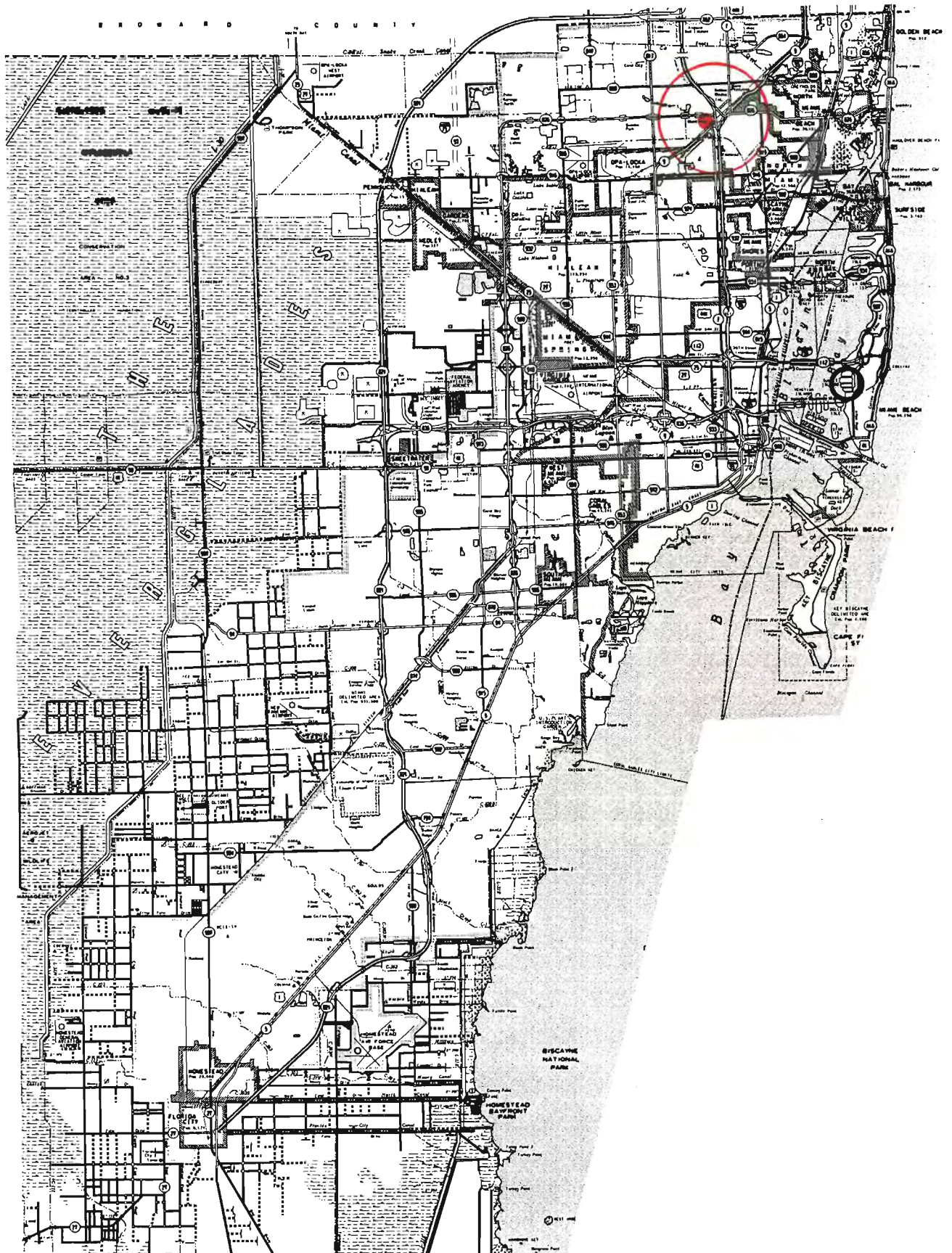
Coordination with FIU will be necessary to determine the aesthetic requirements for the campus.

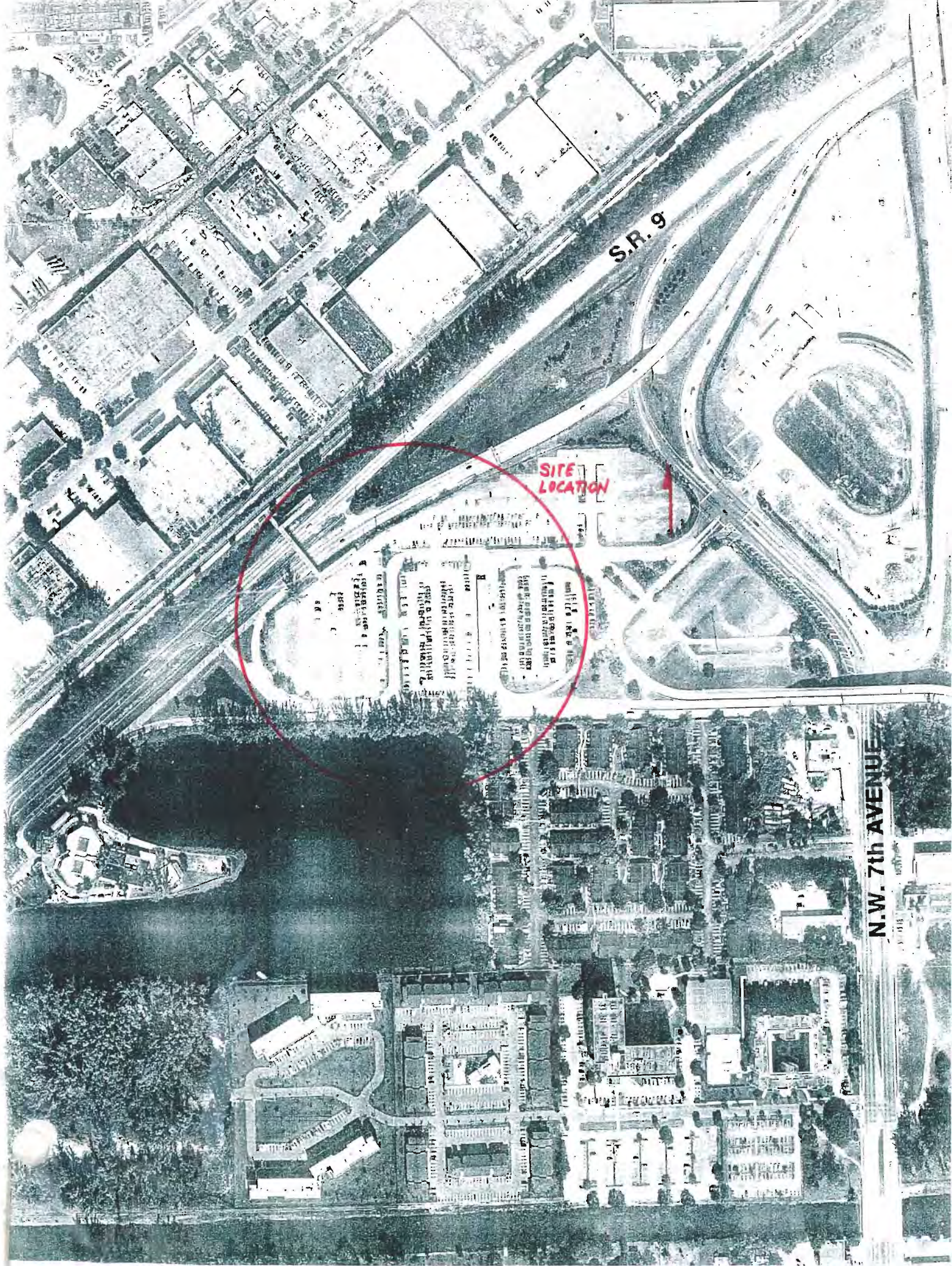
SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities	✓			✓		
Seating			✓		✓	
Pedestrian Amenities	✓				✓	
Parking	✓			✓		
Supplemental Parking	✓			✓		
Engineering Considerations		✓		✓		
Trash Receptacles			✓			✓
Newspaper Racks			✓		✓	
Lighting			✓		✓	
Tire and Seat Lockers			✓			✓
Bus Bays			✓	✓		
Kiss & Ride	✓					✓
Phones			✓		✓	
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓		✓	
Interactive ITS kiosks			✓			✓
Private Developments	✓			✓		
Clock			✓		✓	
Vending Machines	✓			✓		
Intermodal Center Identities			✓			✓
Handicap Access			✓			✓
Landscaping			✓	✓		
Drinking Fountains			✓	✓		
Security Surveillance			✓	✓		
Postal Services			✓	✓		
Bike Racks			✓			✓



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Site Location Map Golden Glades Park-n-Ride

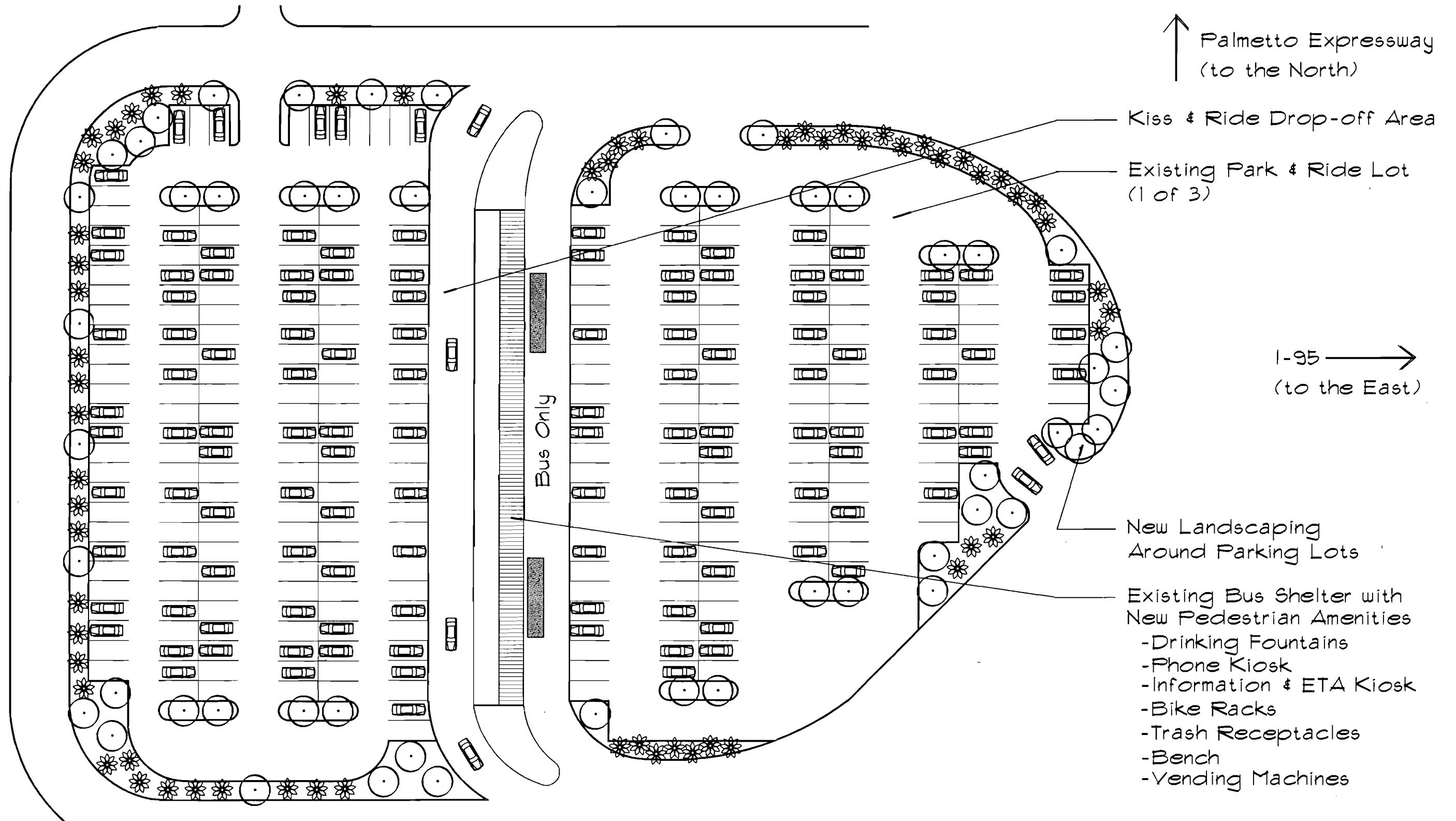




S.R. 9

SITE
LOCATION

N.W. 7th AVENUE



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Golden Glades at I-95
Scale: 1" = 50'

INTERMODAL SITE FACT SHEET

1. Site Location: I-95 at Golden Glades Station.

2. Surrounding Land Uses: Florida Turnpike to the north,
Sunshine State Industrial Park to the west,
Biscayne Park to the east.

3. Costs: \$391,000

Estimated Site/Civil Costs: \$50,000

Site Facilities Costs: \$341,000

4. Description of Surrounding Traffic Features:

Roadway Geometry:

Traffic Operations: This station is surrounded by major arterials, and freeways. Thus, traffic is heavy.

6. Intermodal Activity

Modes Served: Bus, pedestrian, Tri-Rail, park-n-ride, kiss-n-ride.

Bus Routes: 22, 42, 77, 95, E, and V.

7. Pedestrian Activity: Moderate

8. Bicycle Activity: Light

9. Design Considerations:

9. Implementation Considerations:

11. Comments / Notes:

This is an existing park-n-ride facility that has potential for public/private joint development.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities			✓			✓
Seating			✓	✓		
Pedestrian Amenities			✓		✓	
Parking			✓	✓		
Supplemental Parking			✓	✓		
Engineering Considerations			✓	✓		
Trash Receptacles			✓	✓		
Newspaper Racks			✓	✓		
Lighting			✓	✓		
Tire and Seat Lockers			✓	✓		
Bus Bays			✓	✓		
Kiss & Ride			✓	✓		
Phones			✓	✓		
Signage			✓		✓	
Information kiosks			✓		✓	
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines			✓			✓
Intermodal Center Identities			✓			✓
Handicap Access			✓		✓	
Landscaping			✓			✓
Drinking Fountains			✓			✓
Security Surveillance			✓			✓
Postal Services			✓		✓	
Bike Racks			✓		✓	



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Northeast side view of Park-n-Ride lot and pedestrian overpass.



North view of bus terminal.



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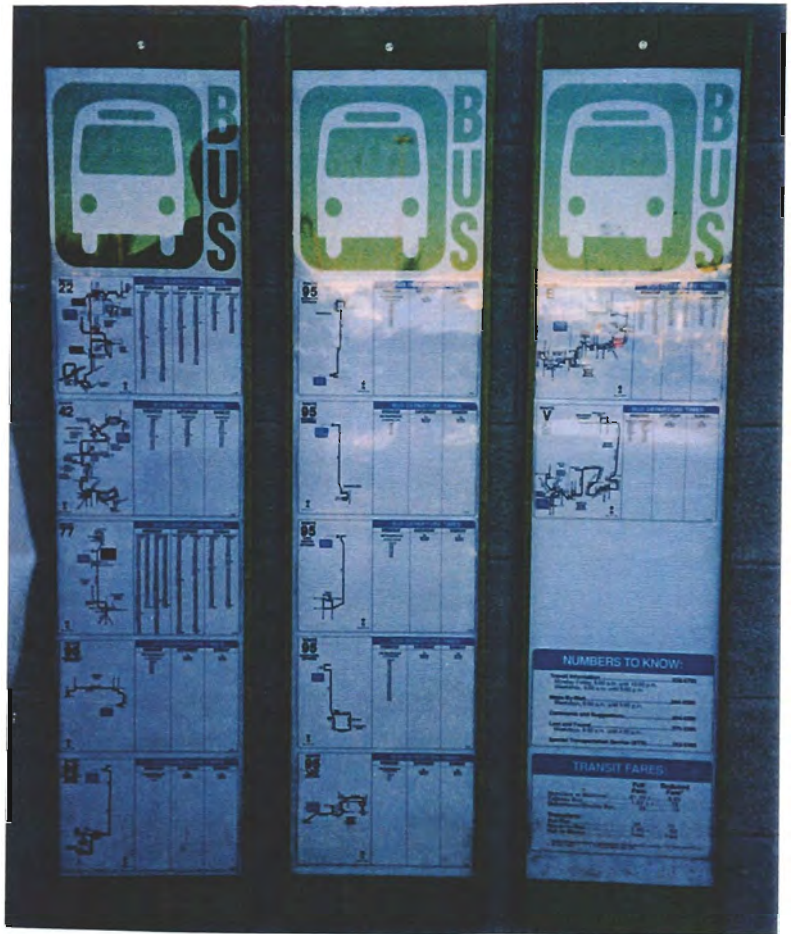
Northeast side view of bus terminal.



Northeast internal side view of bus terminal.



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View of bus route posted information.

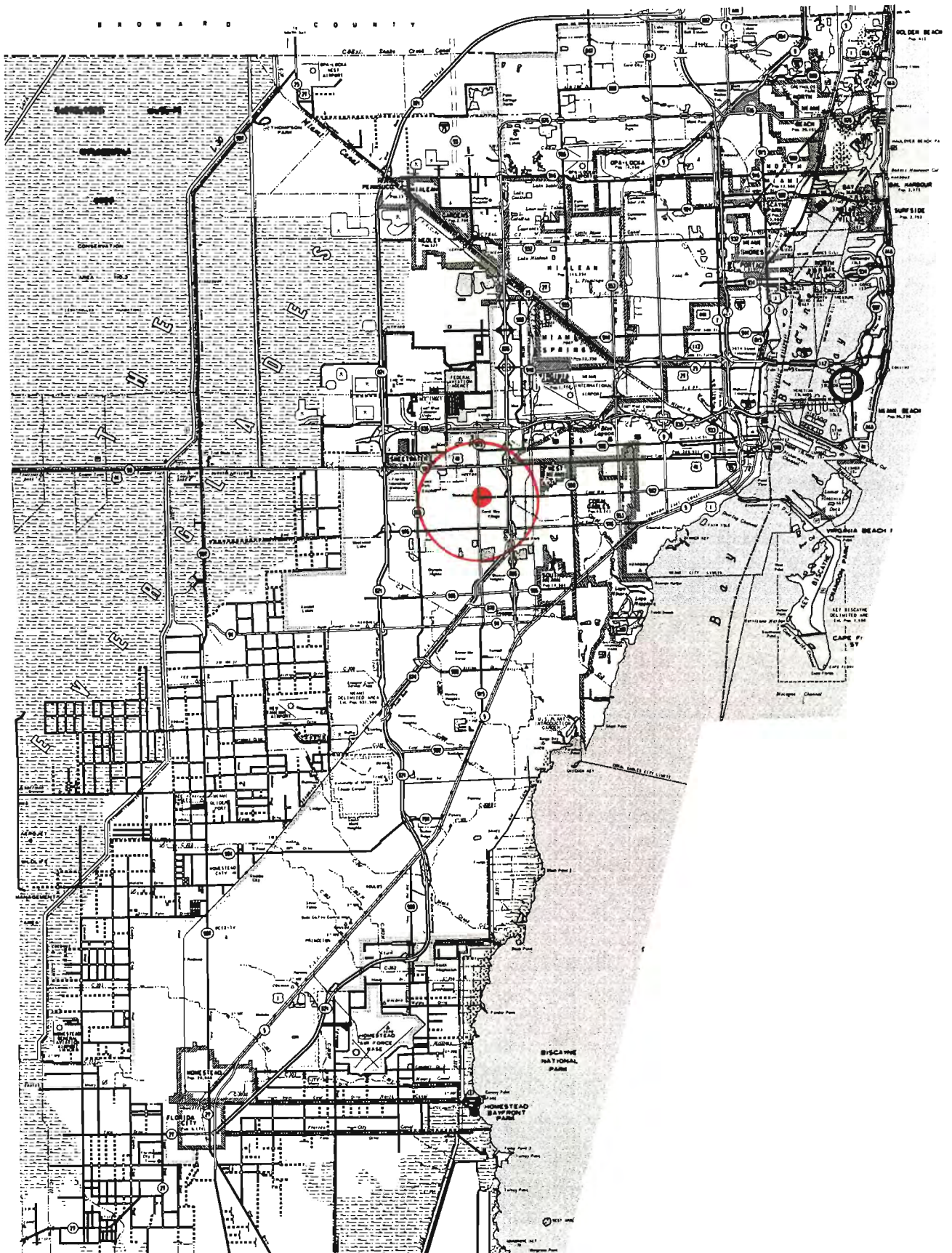


South view of bus terminal.



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Site Location Map Westchester Shopping Center





Surrounding parcels
are open parking
from the mall and
First Union.

- Bus Bay (2)
- Bus Shelter with Pedestrian Amenities
 - Information & ETA Kiosks
 - Trash Receptacles
 - Signage
 - Handicap Access
 - Clock & Phone

Galloway Road

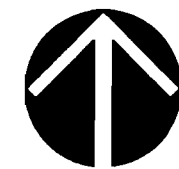
Coral Way (SW 24th Street)

BUS LANE

BUS LANE

MERGE

Mall entrance



INTERMODAL SITE FACT SHEET

1. **Site Location:** 24th Street and 87 Avenue (Westchester Mall)

2. **Surrounding Land Uses:** Westchester Plaza to the north,
Tamiami Park Stadium to the west,
Westchester Mall to the south, and
Palmetto Expressway to the east.

3. **Costs:** \$220,000

Estimated Site/Civil Costs: \$60,000

Site Facilities Costs: \$160,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: 24th Street is a 4-lane divided east-west arterial.

Traffic Operations: Very heavy traffic. Driveways do not follow access management guidelines ; in other words, they are very close together and close to the signalized intersections.

6. **Intermodal Activity**

Modes Served: Bus, pedestrian.

Bus Routes: 8, 24, and 87.

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Light

9. **Design Considerations:**

10. **Implementation Considerations:**

11. **Comments / Notes:**

This site will be on both sides of 24th Street. A bus lane will be added eastbound, and a busbay will be added westbound.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters						✓
Restroom Facilities						✓
Seating						✓
Pedestrian Amenities						✓
Parking				✓		
Supplemental Parking				✓		
Engineering Considerations						✓
Trash Receptacles						✓
Newspaper Racks						✓
Lighting					✓	
Tire and Seat Lockers					✓	
Bus Bays						✓
Kiss & Ride					✓	
Phones						✓
Signage						✓
Information kiosks						✓
ETA kiosks						✓
Interactive ITS kiosks						
Private Developments						✓
Clock						✓
Vending Machines						✓
Intermodal Center Identities						✓
Handicap Access						✓
Landscaping						✓
Drinking Fountains					✓	
Security Surveillance					✓	
Postal Services					✓	
Bike Racks					✓	



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North side view of bus stop on 24th Street (westbound direction).



West side view of bus stop (eastbound direction) on the southeast corner of 24th Street and 87th Avenue.



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Eastbound side view of tentative terminal location, 24th Street (Coral Way).

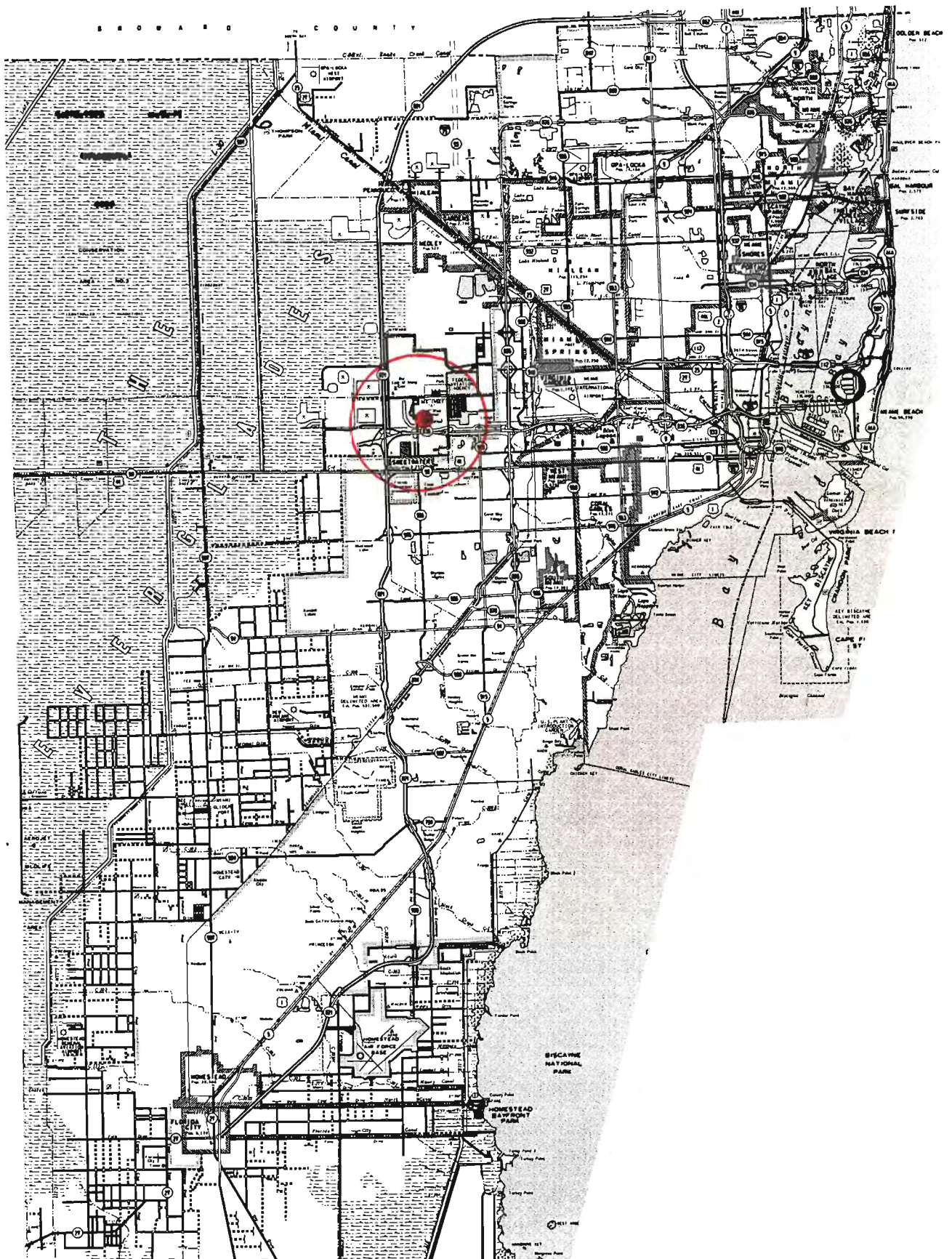


Northwest side view of the tentative bus lane.



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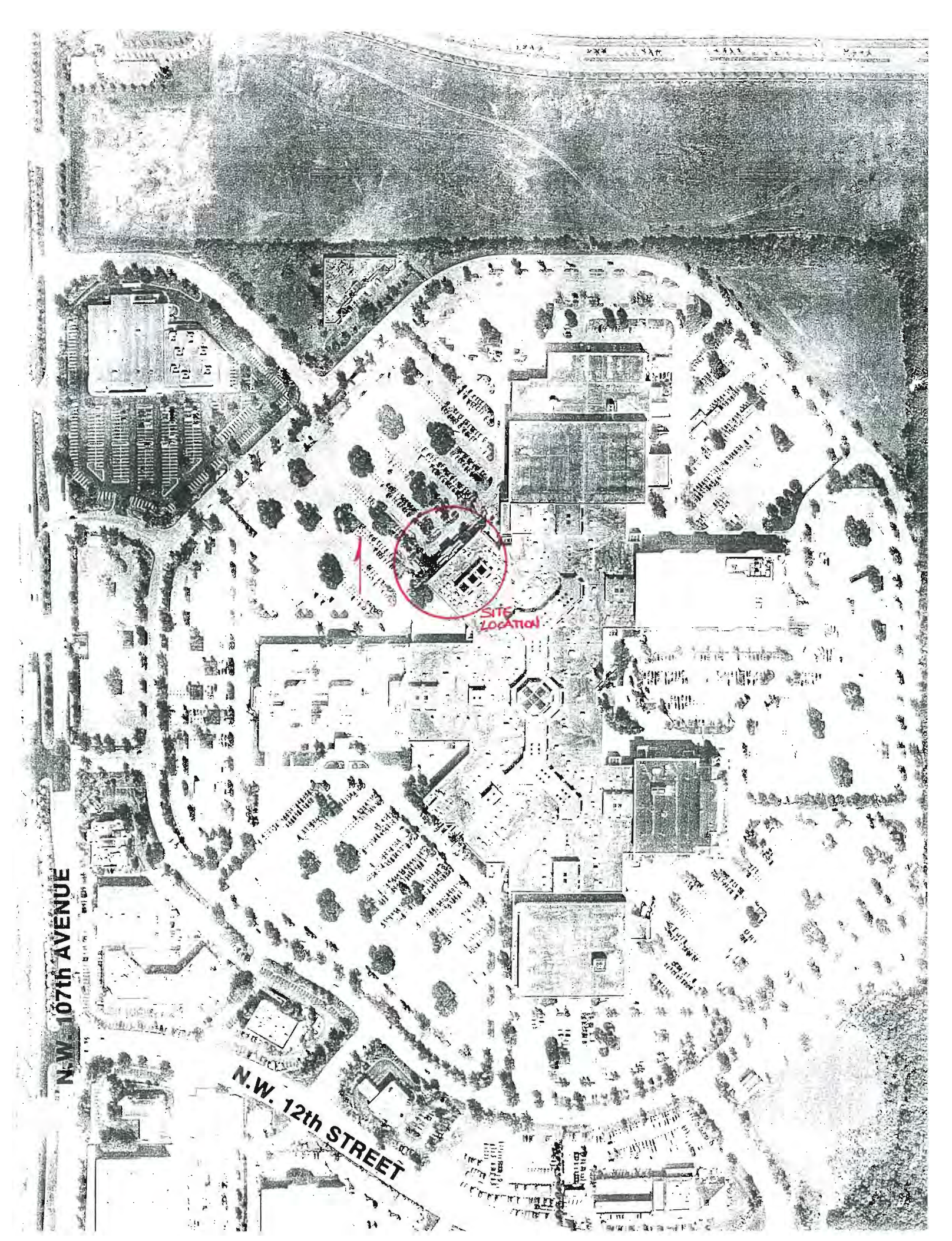
Site Location Map Miami International Mall



N.W. 107th AVENUE

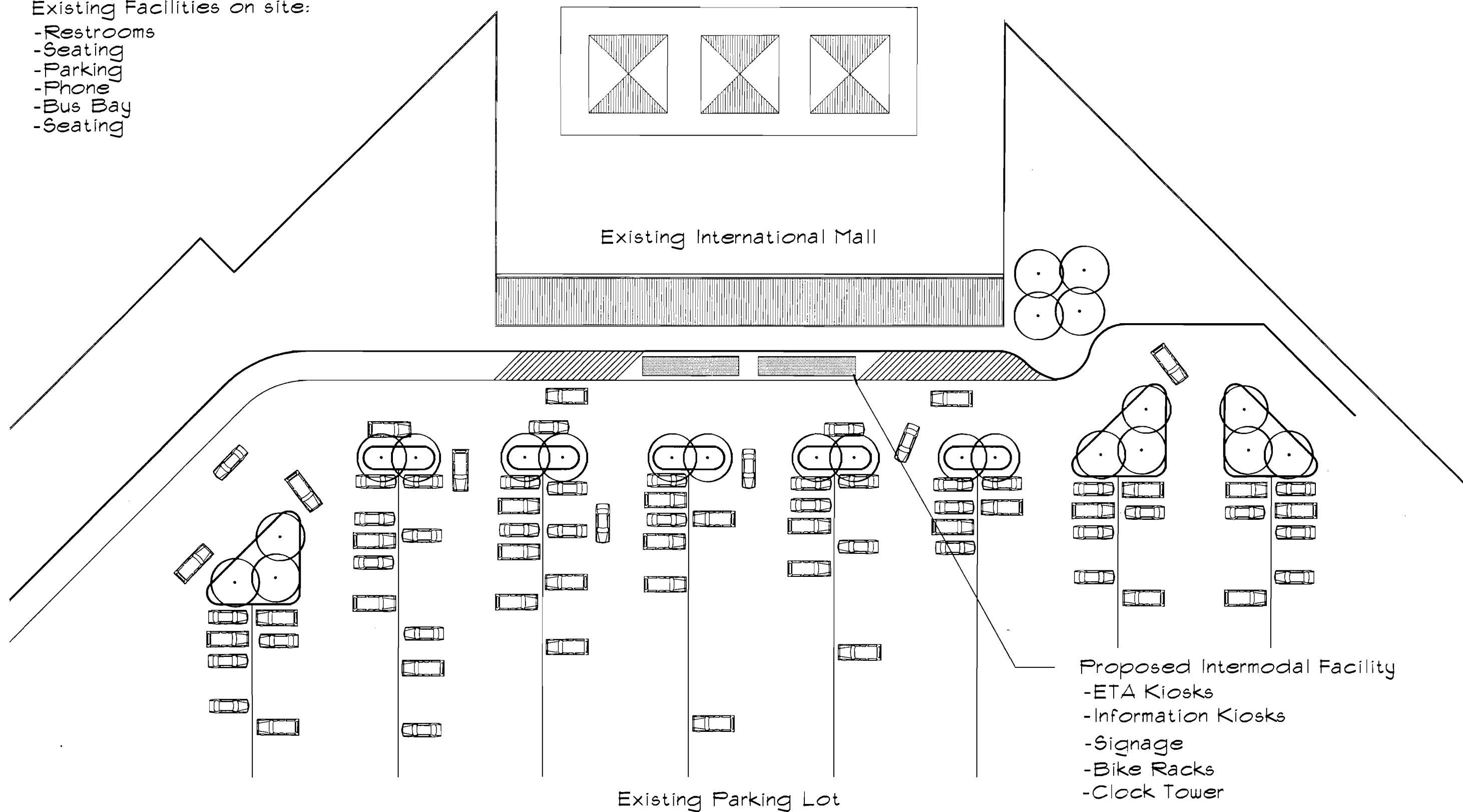
N.W. 12th STREET

SITE
LOCATION



Existing Facilities on site:

- Restrooms
- Seating
- Parking
- Phone
- Bus Bay
- Seating



INTERMODAL SITE FACT SHEET

1. **Site Location:** N.W.107th Avenue and West Flagler Street (Miami International Mall)

2. **Surrounding Land Uses:** Lakeside Memorial Park to the north,
Florida Turnpike to the west,
Sweetwater Park to the south, and
Miami International Commerce Center to the east.

3. **Costs:** \$165,000

Estimated Site/Civil Costs: \$25,000

Site Facilities Costs: \$140,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: The mall ring road is a two-lane stop-sign controlled street.

Traffic Operations: Both 107th Avenue and West Flagler carry heavy traffic.

6. **Intermodal Activity**

Modes Served: Bus, pedestrian, park-n-ride, kiss-n-ride.

Bus Routes: 7.

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Light

9. **Design Considerations:**

10. **Implementation Considerations:**

11. **Comments / Notes:**

The proposed site is at the food court entrance of the mall. This entrance is the closest to 107th Avenue and W. Flagler Street, and it is also the most convenient for pedestrians.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities			✓	✓		
Seating			✓			✓
Pedestrian Amenities			✓		✓	
Parking			✓	✓		
Supplemental Parking			✓	✓		
Engineering Considerations			✓	✓		
Trash Receptacles			✓	✓		
Newspaper Racks			✓	✓		
Lighting			✓		✓	
Tire and Seat Lockers			✓		✓	
Bus Bays			✓	✓		
Kiss & Ride			✓	✓		
Phones			✓	✓		
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines			✓	✓		
Intermodal Center Identities			✓			✓
Handicap Access		✓			✓	
Landscaping		✓			✓	
Drinking Fountains			✓		✓	
Security Surveillance			✓	✓		
Postal Services			✓	✓		
Bike Racks			✓		✓	



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Northeast side view of proposed bus terminal.



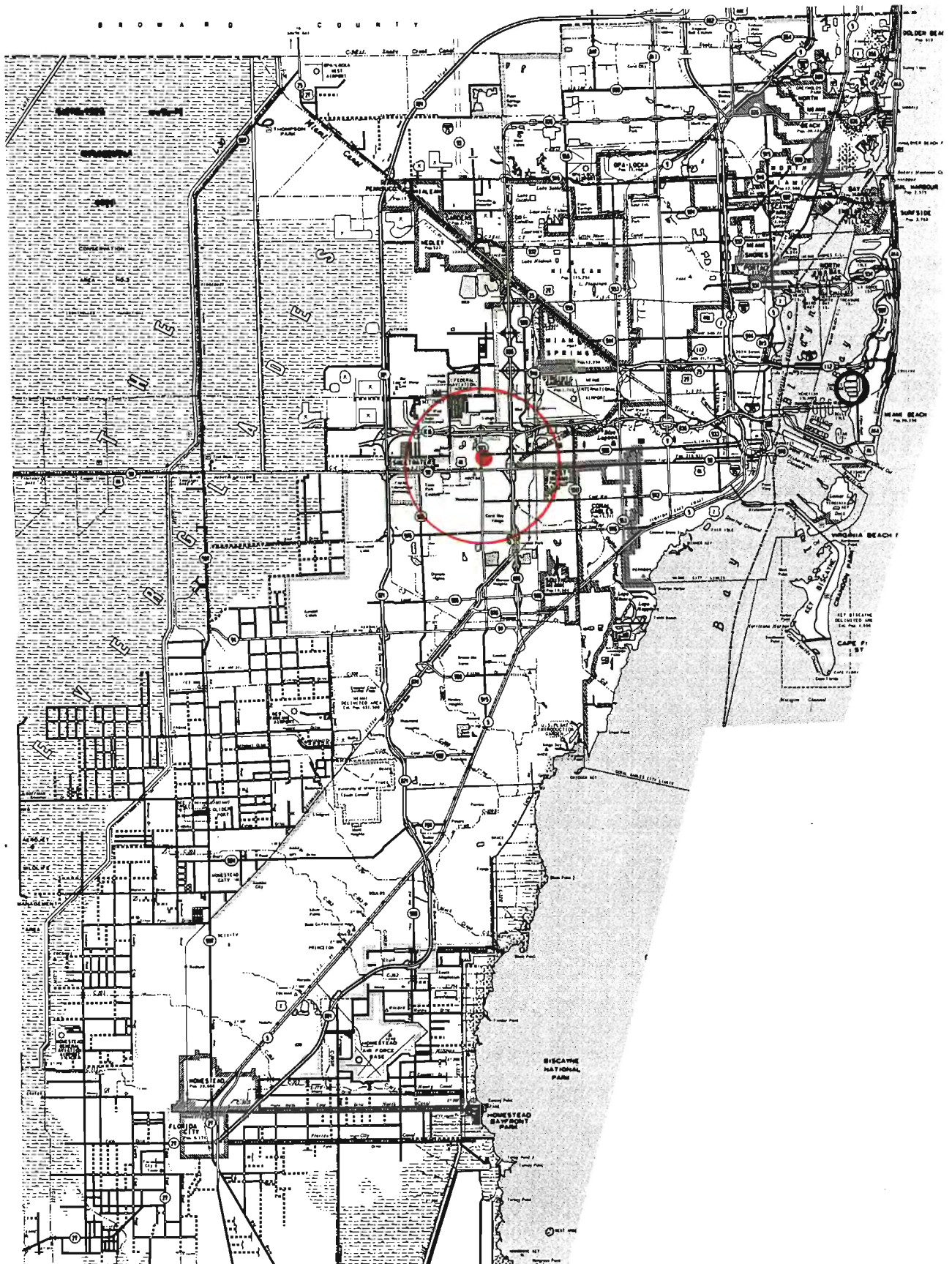
Northeast side view of proposed bus terminal.



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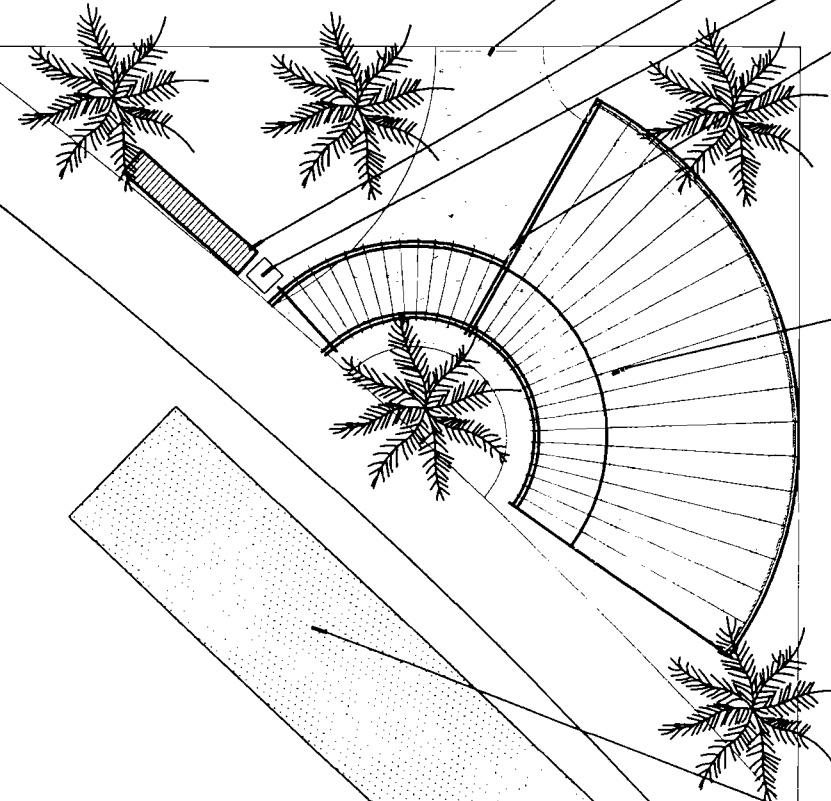
Site Location Map

W. Flagler Street / NW 79th Avenue



Surrounding parcels
are Mall of America,
Open Parking, and Pond

- Pedestrian Access
to adjacent parcel
w/ Handicap Access
- Bike Racks
- Clock Tower
- Bus Shelter with Pedestrian
Amenities
 - Phone
 - Information Kiosks
 - ETA Kiosks
 - lighting
- Benches
- Bus Bay



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Miami - Dade MPO
Intermodal Study
Proposed Intermodal Centers 1998



Flager / 79th Street.
Scale: 1" = 10'

INTERMODAL SITE FACT SHEET

1. **Site Location:** West Flagler and 79th Avenue (Mall of the Americas)
2. **Surrounding Land Uses:** Miami International Commerce Center to the north,
Fountainebleau Golf Course to the west,
Seminole Elementary School to the south, and
Mall of the Americas to the east.
3. **Costs:** \$178,000

Estimated Site/Civil Costs: \$0

Site Facilities Costs: \$178,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: The intermodal center is accessed by a loop road that connects to 79th Ave.

Traffic Operations: Heavy traffic flow
6. **Intermodal Activity**

Modes Served: Bus, pedestrian, park-n-ride, kiss-n-ride.

Bus Routes: 11, 7, and 87.
7. **Pedestrian Activity:** Moderate
8. **Bicycle Activity:** Light
9. **Design Considerations:** Lighting is required.
10. **Implementation Considerations:**
11. **Comments / Notes:**

Existing facility. There are also stops across 79th Ave. Consolidate locations and enhance existing facility with pedestrian amenities and transit information.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓		✓	
Restroom Facilities	✓			✓		
Seating			✓		✓	
Pedestrian Amenities			✓		✓	
Parking		✓		✓		
Supplemental Parking	✓			✓		
Engineering Considerations	✓			✓		
Trash Receptacles			✓	✓		
Newspaper Racks	✓			✓		
Lighting			✓			✓
Tire and Seat Lockers	✓			✓		
Bus Bays	✓			✓		
Kiss & Ride		✓		✓		
Phones		✓			✓	
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks		✓			✓	
Interactive ITS kiosks						
Private Developments	✓			✓		
Clock		✓			✓	
Vending Machines	✓			✓		
Intermodal Center Identities			✓			✓
Handicap Access			✓			✓
Landscaping			✓	✓		
Drinking Fountains	✓			✓		
Security Surveillance	✓			✓		
Postal Services	✓			✓		
Bike Racks		✓			✓	



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Bus stop (from south).



Bus stop (from northwest).



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View of the bus stop (from south).

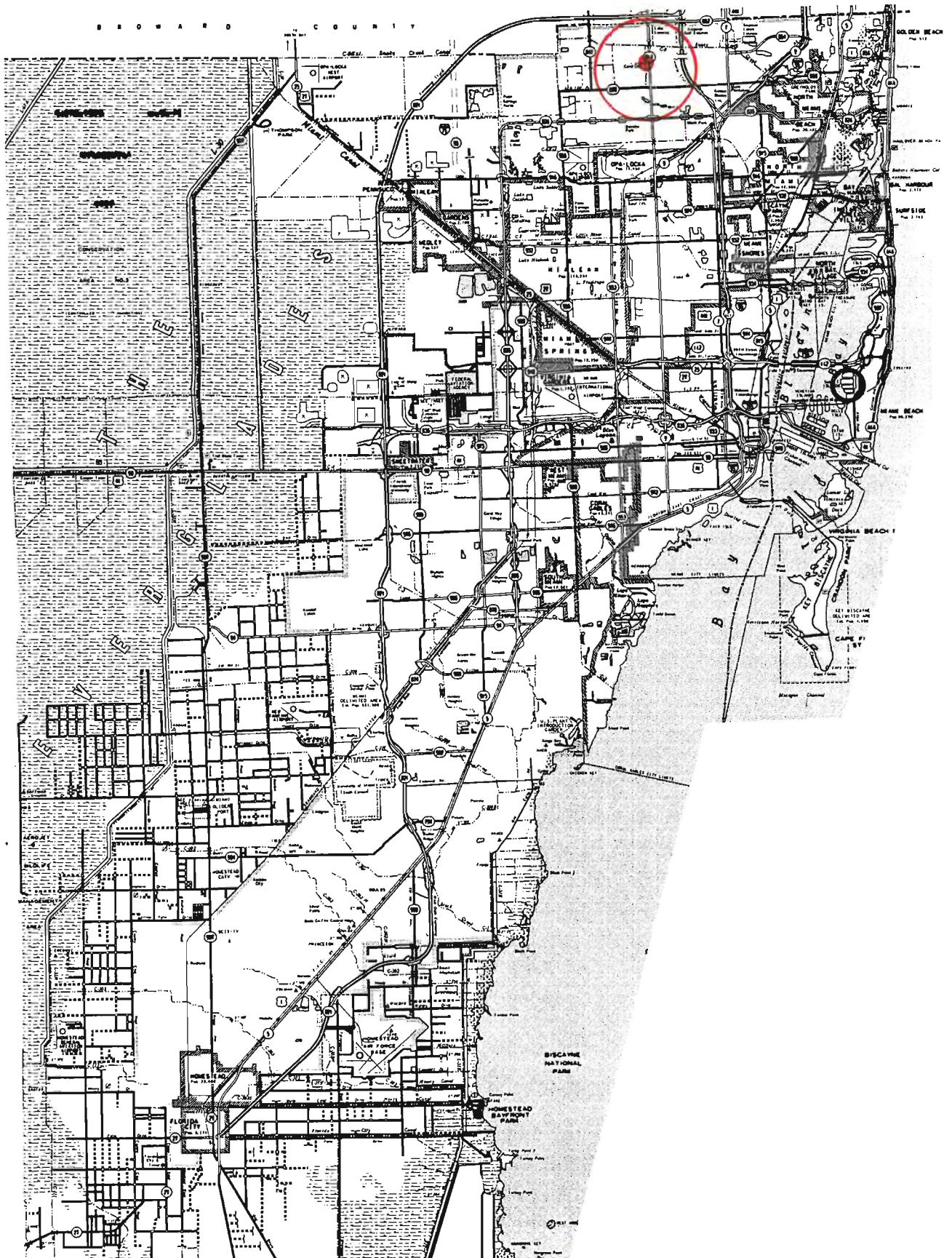


View of the entrance road from 79th Avenue to the bus stop.



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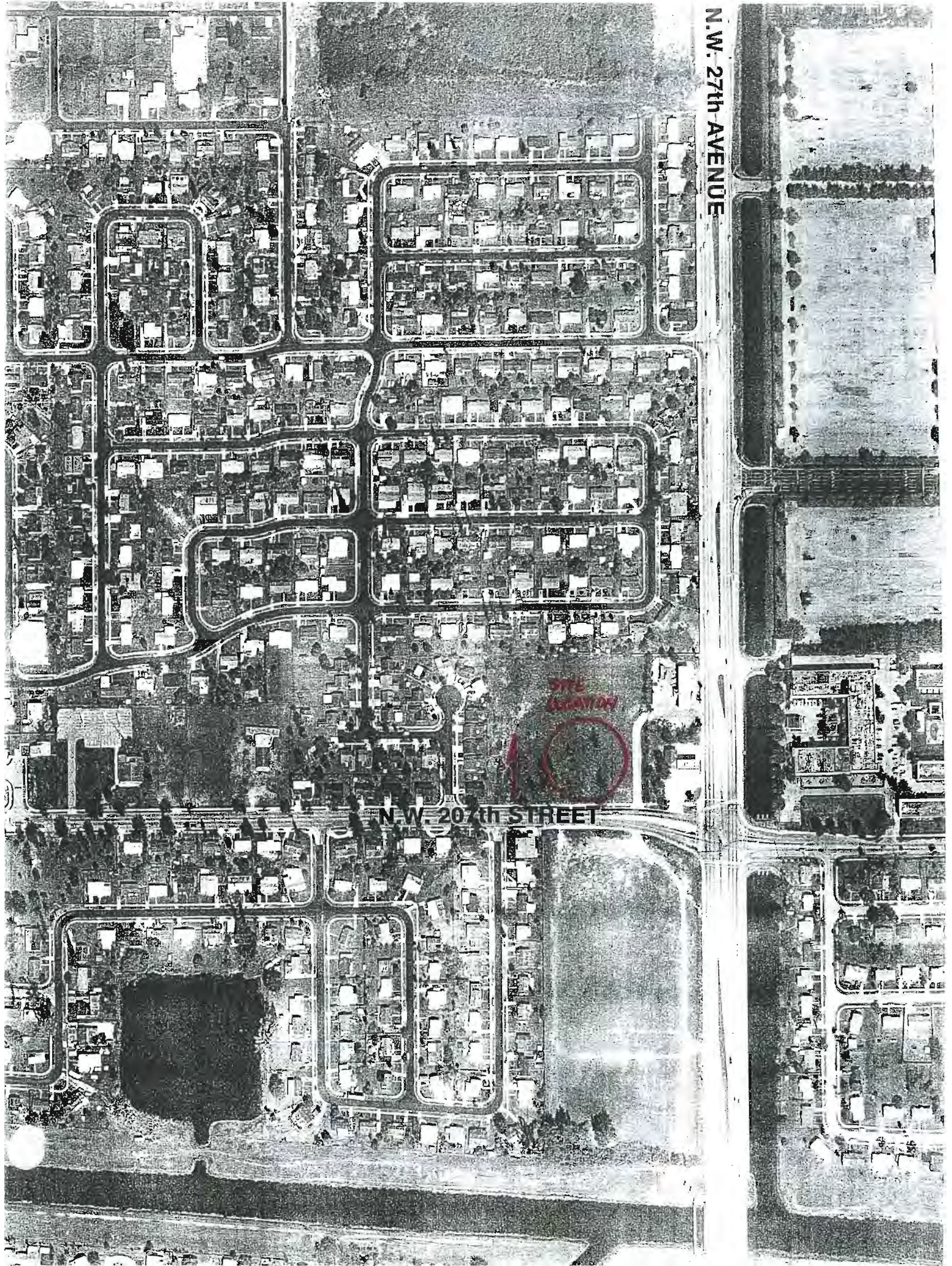
Site Location Map 27th Avenue at NW 207th Street



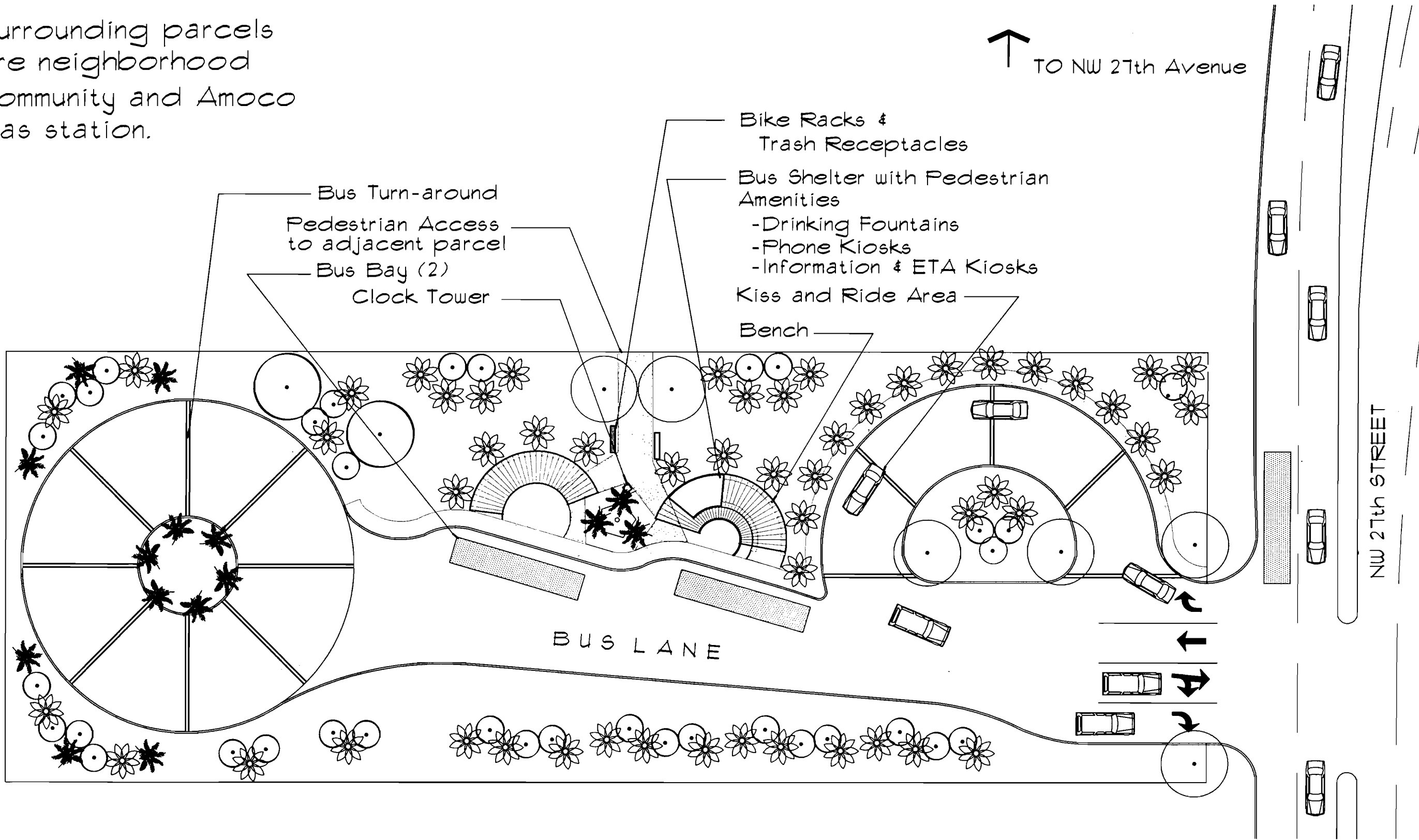
N.W. 27th AVENUE

N.W. 20th STREET

5716
ACADYON



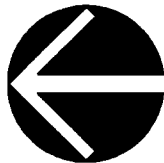
Surrounding parcels
are neighborhood
community and Amoco
gas station.



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Miami - Dade MPO
Intermodal Study
Proposed Intermodal Centers 1998



Pro Player Stadium,
Calder Raceway
NW 27th Ave. / NW 207th St.
Scale: 1" = 30'

INTERMODAL SITE FACT SHEET

1. **Site Location:** 27th Avenue at 207th Street
2. **Surrounding Land Uses:** 215th Street to the north,
Neighborhood community to the west, and
Pro Player Stadium to the southeast.
3. **Costs:** \$718,000

Estimated Site/Civil Costs: \$200,000

Site Facilities Costs: \$518,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry:

Traffic Operations: Traffic is moderate to low at this intersection.
6. **Intermodal Activity**

Modes Served: Bus and pedestrian.

Bus Routes: 27, 27 MAX, 91
7. **Pedestrian Activity:** Light
8. **Bicycle Activity:** Light
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓			✓	
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking		✓		✓		
Supplemental Parking		✓		✓		
Engineering Considerations		✓		✓		
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓	✓		
Bus Bays			✓			✓
Kiss & Ride		✓		✓		
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines		✓			✓	
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓			✓
Drinking Fountains			✓			✓
Security Surveillance			✓			✓
Postal Services			✓		✓	
Bike Racks			✓	✓		



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View of possible terminal site from 215th Street (westbound).



View of vacant lot (possible terminal site) from 215th Street (westbound).



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View of bus stop from 215th Street (westbound).



View of bus stop and terminal location.



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View of bus stop from 215th Street (westbound).

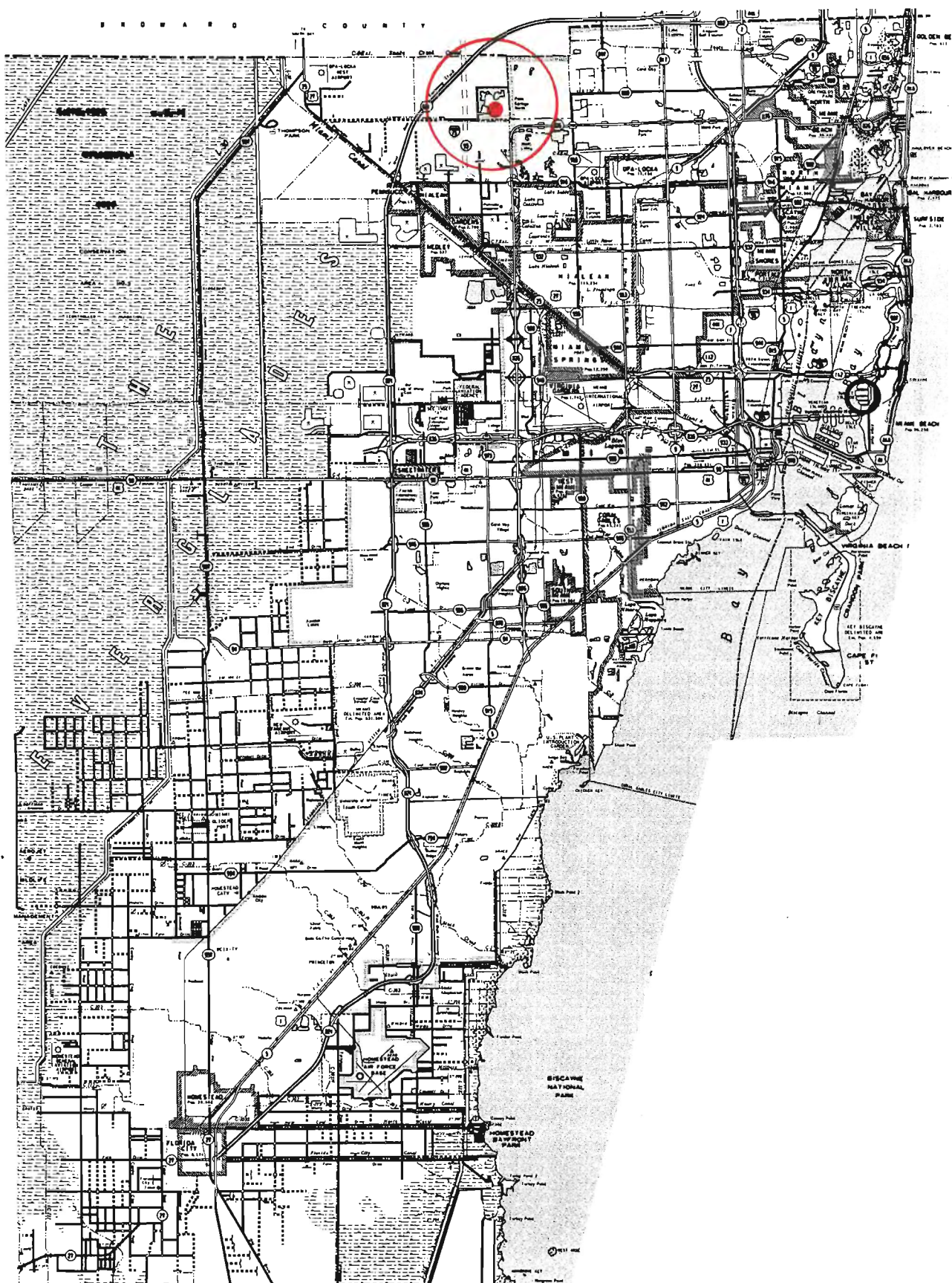


View of bus stop and terminal location.



Site Location Map

Golf Club at Miami Gardens Drive

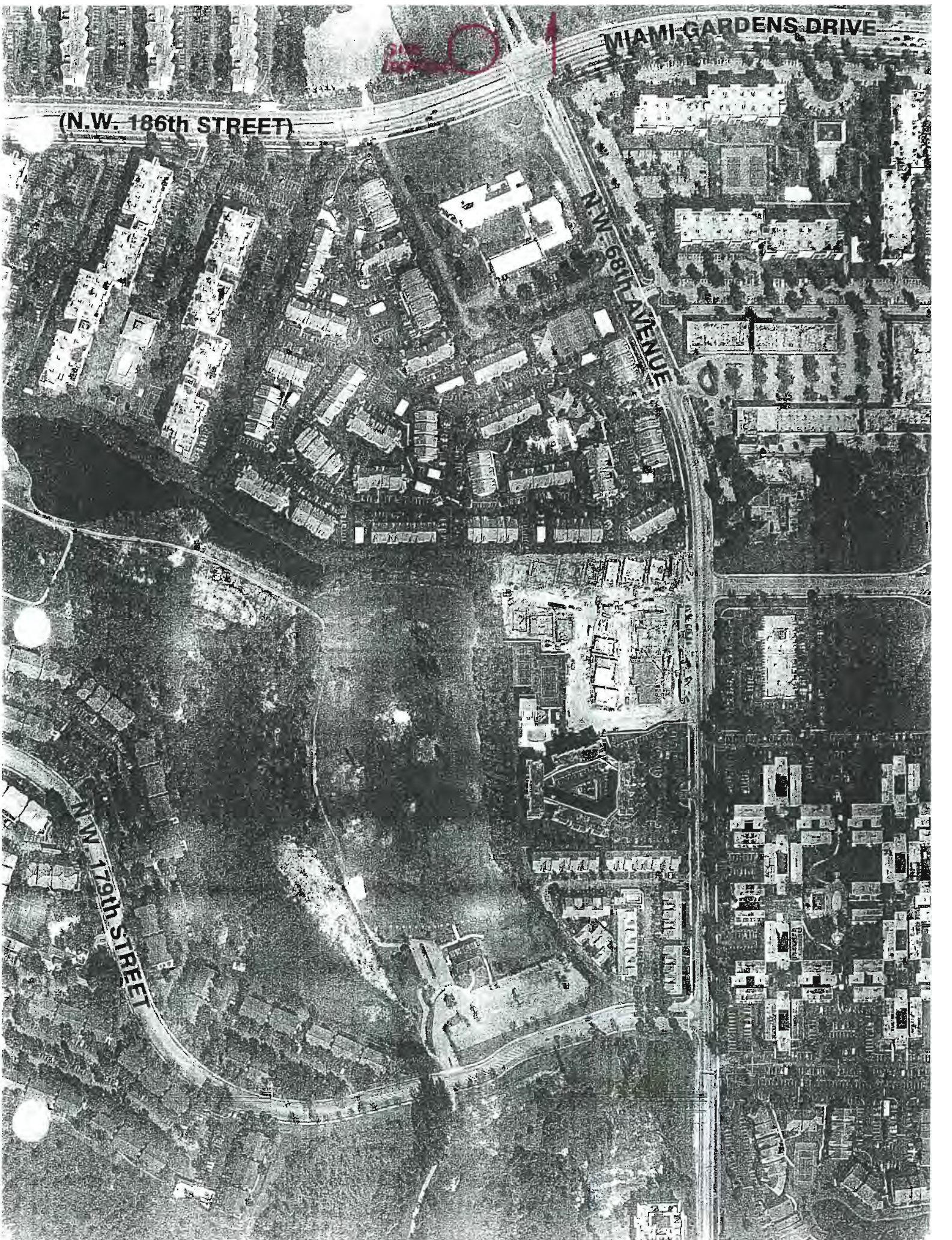


MIAMI GARDENS DRIVE

(N.W. 186th STREET)

N.W. 68th AVENUE

N.W. 179th STREET



MIAMI GARDENS DRIVE

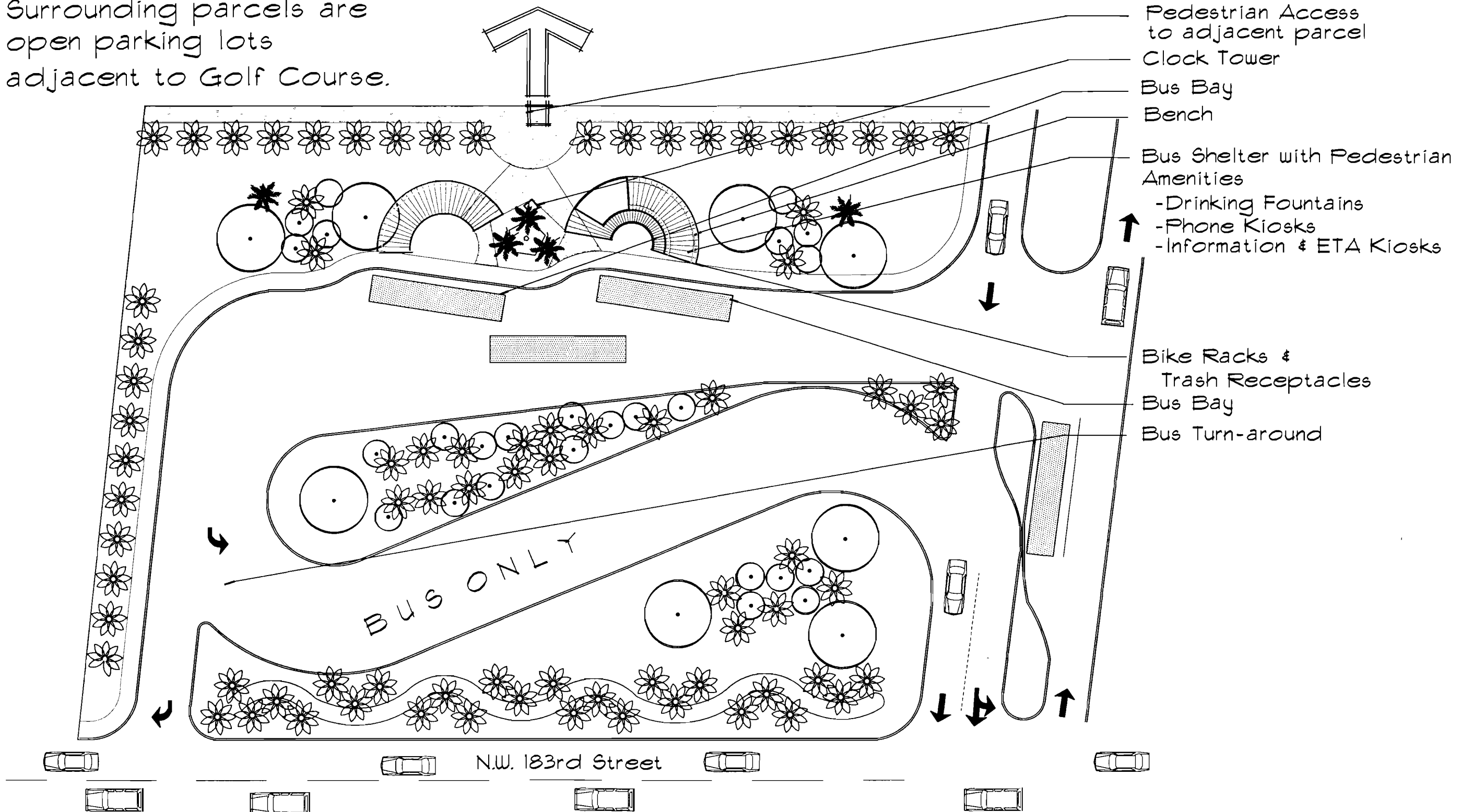
(N.W. 186th STREET)

N.W. 68th AVENUE

N.W. 179th STREET



Surrounding parcels are
open parking lots
adjacent to Golf Course.



INTERMODAL SITE FACT SHEET

1. **Site Location:** NW 183rd Street at Golf Club of Miami
2. **Surrounding Land Uses:** Golf Club of Miami to the north,
American High School to the south, and
GOOD Elementary School to the east.
3. **Costs:** \$787,000

Estimated Site/Civil Costs: \$250,000

Site Facilities Costs: \$537,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: 183rd Street is an east-west 4-lane divided road

Traffic Operations: Traffic is moderate.
6. **Intermodal Activity**

Modes Served: Bus and pedestrian

Bus Routes: 91.
7. **Pedestrian Activity:** Light
8. **Bicycle Activity:** Light
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities	✓				✓	
Seating			✓			✓
Pedestrian Amenities		✓				✓
Parking		✓		✓		
Supplemental Parking		✓		✓		
Engineering Considerations		✓			✓	
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓	✓		
Bus Bays			✓			✓
Kiss & Ride		✓		✓		
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines		✓				✓
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓			✓
Drinking Fountains			✓			✓
Security Surveillance			✓		✓	
Postal Services			✓		✓	
Bike Racks			✓	✓		



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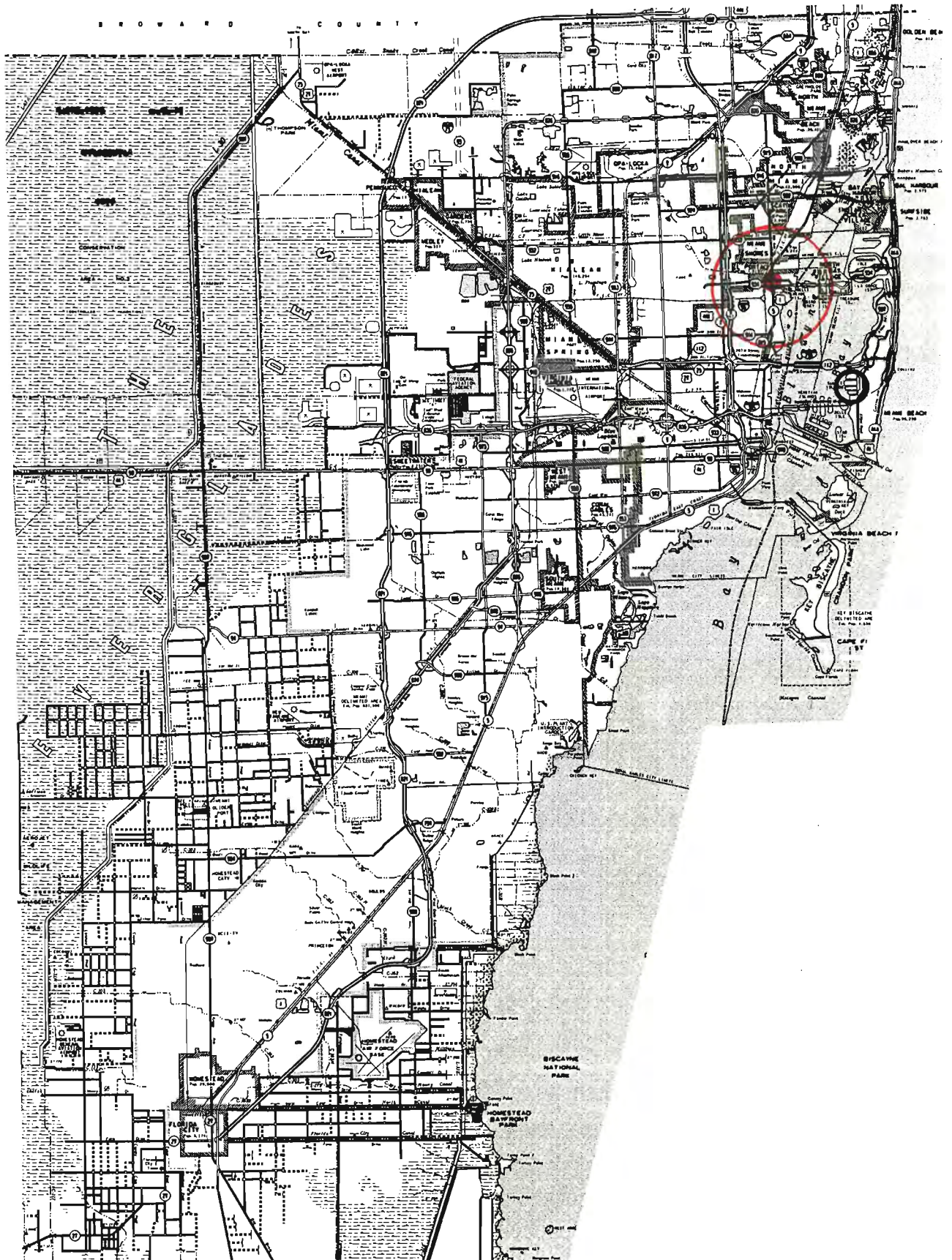


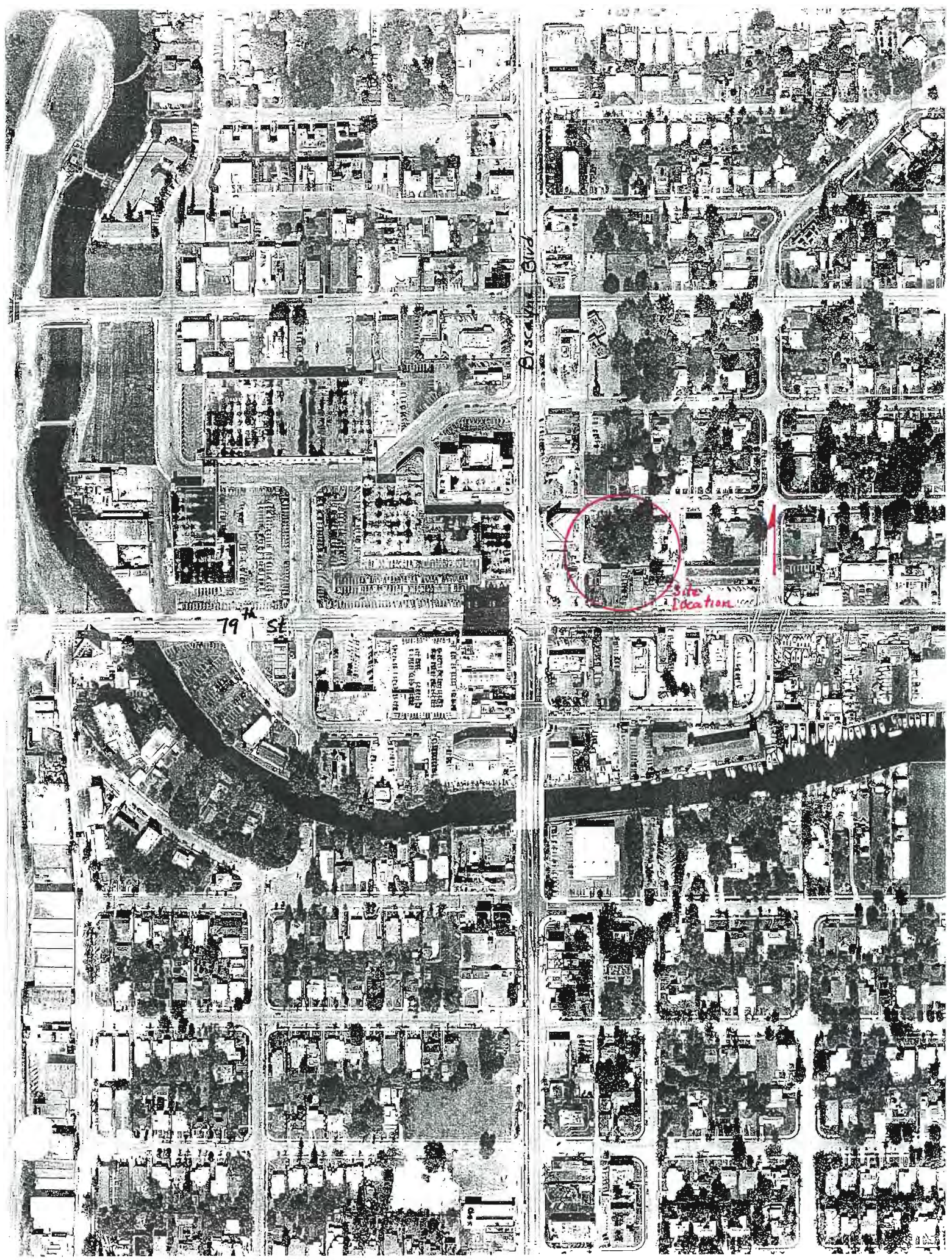
View of bus stop from Gulf Club parking lot.



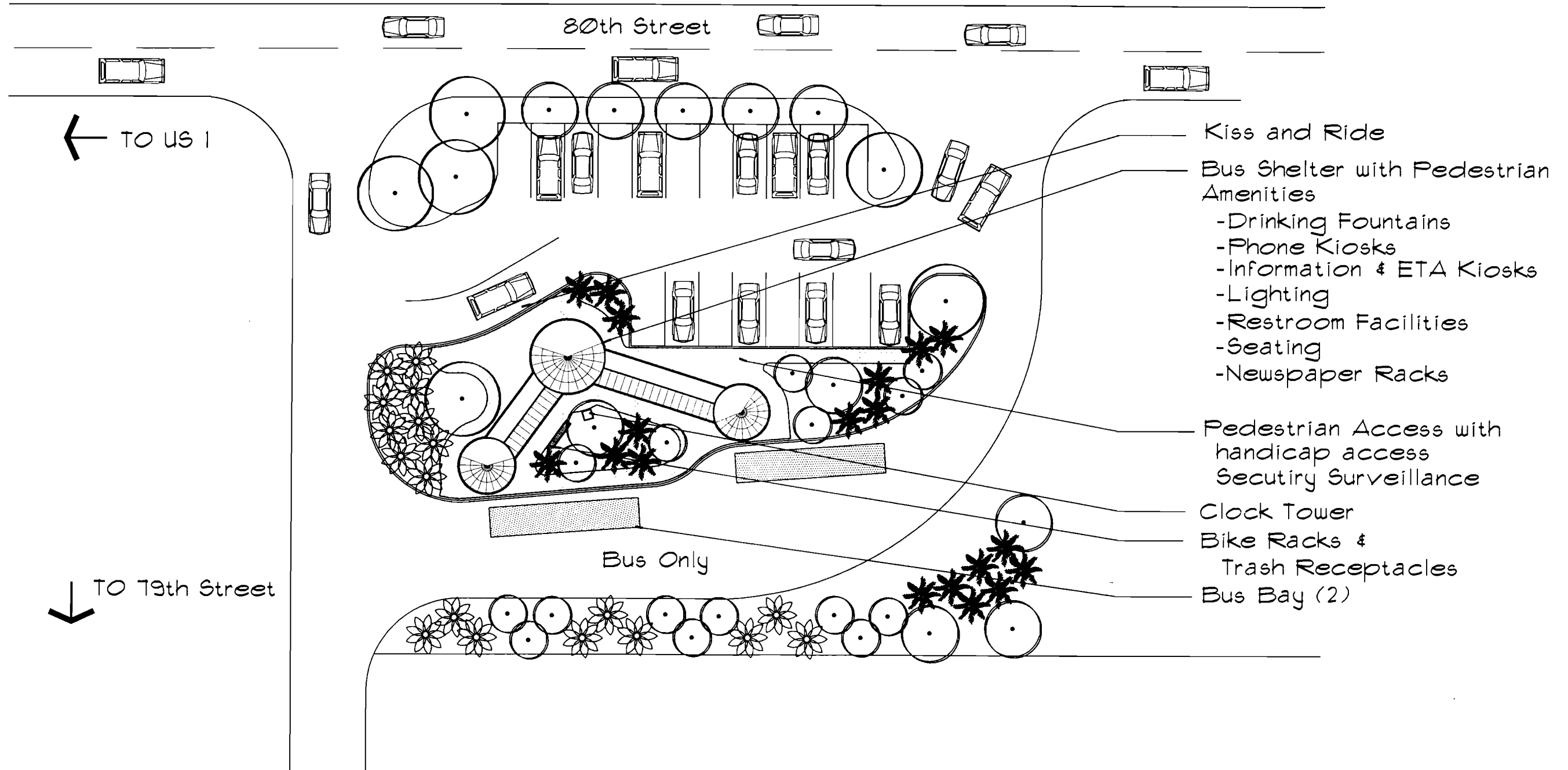
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Site Location Map US 1 / NE 79th Street





Surrounding parcels
are Biscayne Plaza
and fast food
restuarants.



INTERMODAL SITE FACT SHEET

1. **Site Location:** U.S. 1 and 79th Street

2. **Surrounding Land Uses:** Village Mall to the north,
Biscayne Plaza Shopping Center to the west,
Biscayne Boulevard to the south, and
Bayshore Drive to the east.

3. **Costs:** \$719,000

Estimated Site/Civil Costs: \$200,000

Site Facilities Costs: \$519,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: U.S. 1 is a north-south 4-lane undivided arterial. 79th Street is a 4-lane undivided road.

Traffic Operations: Traffic is heavy on both roads.

6. **Intermodal Activity**

Modes Served: Bus, and pedestrian

Bus Routes: Biscayne MAX, 3, L

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Light

9. **Design Considerations:**

10. **Implementation Considerations:** The site will be located on an existing vacant lot which will have to be attained.

11. **Comments / Notes:**

Coordination with surrounding land uses is essential, as right-of-way may have to be required in order to have sufficient access to the site from all directions.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities	✓					✓
Seating			✓			✓
Pedestrian Amenities		✓				✓
Parking		✓		✓		
Supplemental Parking	✓					
Engineering Considerations			✓			✓
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓	✓		
Bus Bays			✓			✓
Kiss & Ride		✓				✓
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			
Private Developments						
Clock			✓			✓
Vending Machines		✓			✓	
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping		✓				✓
Drinking Fountains		✓			✓	
Security Surveillance			✓			✓
Postal Services		✓		✓		
Bike Racks		✓			✓	



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View of the tentative terminal on the northwest side of US 1/79th Street with access to 79th Street.



Tentative site, parcel information, southeast side view of site.



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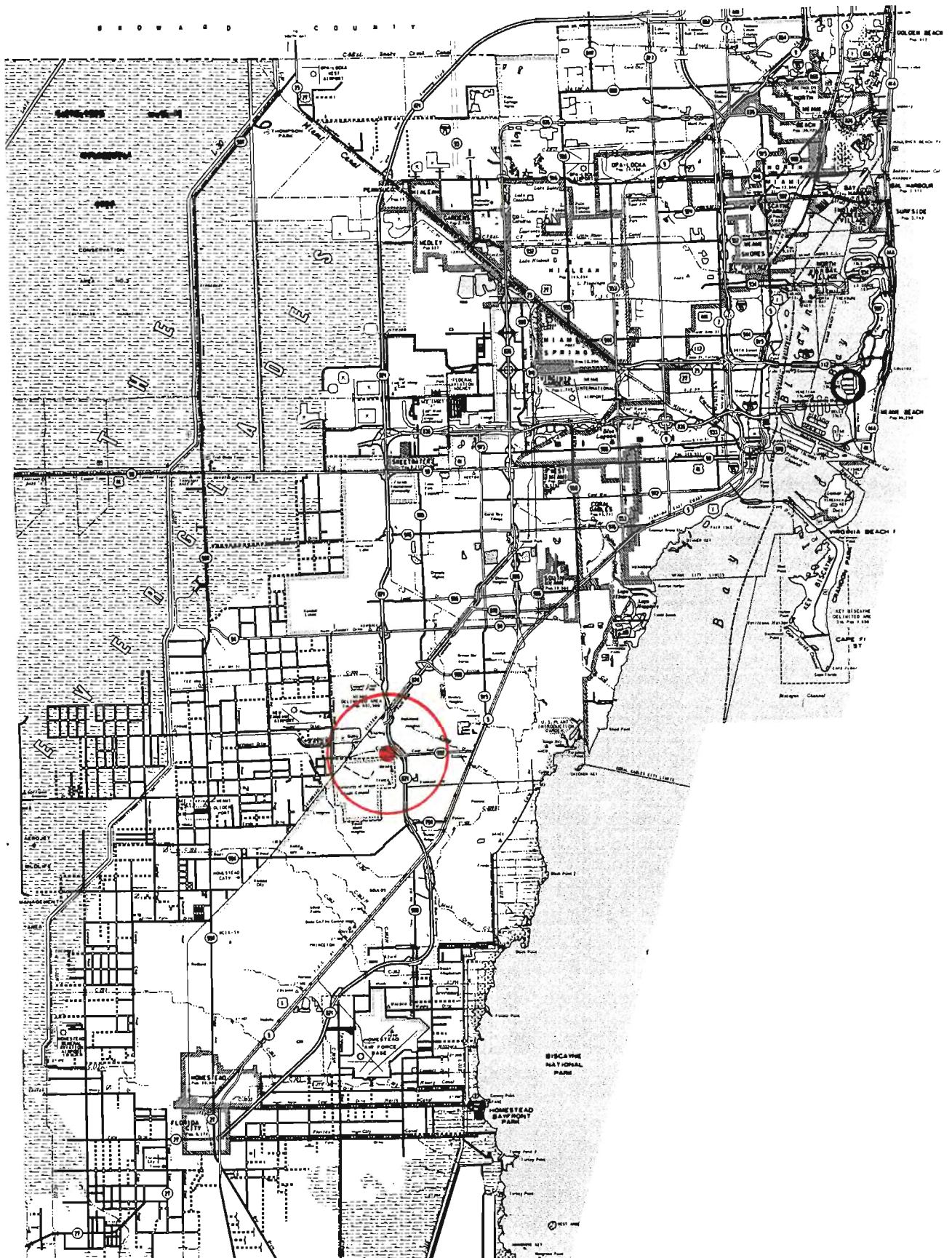
View of tentative terminal from the north.



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Site Location Map

Coral Reef (SW 117th Avenue / 152nd Street)



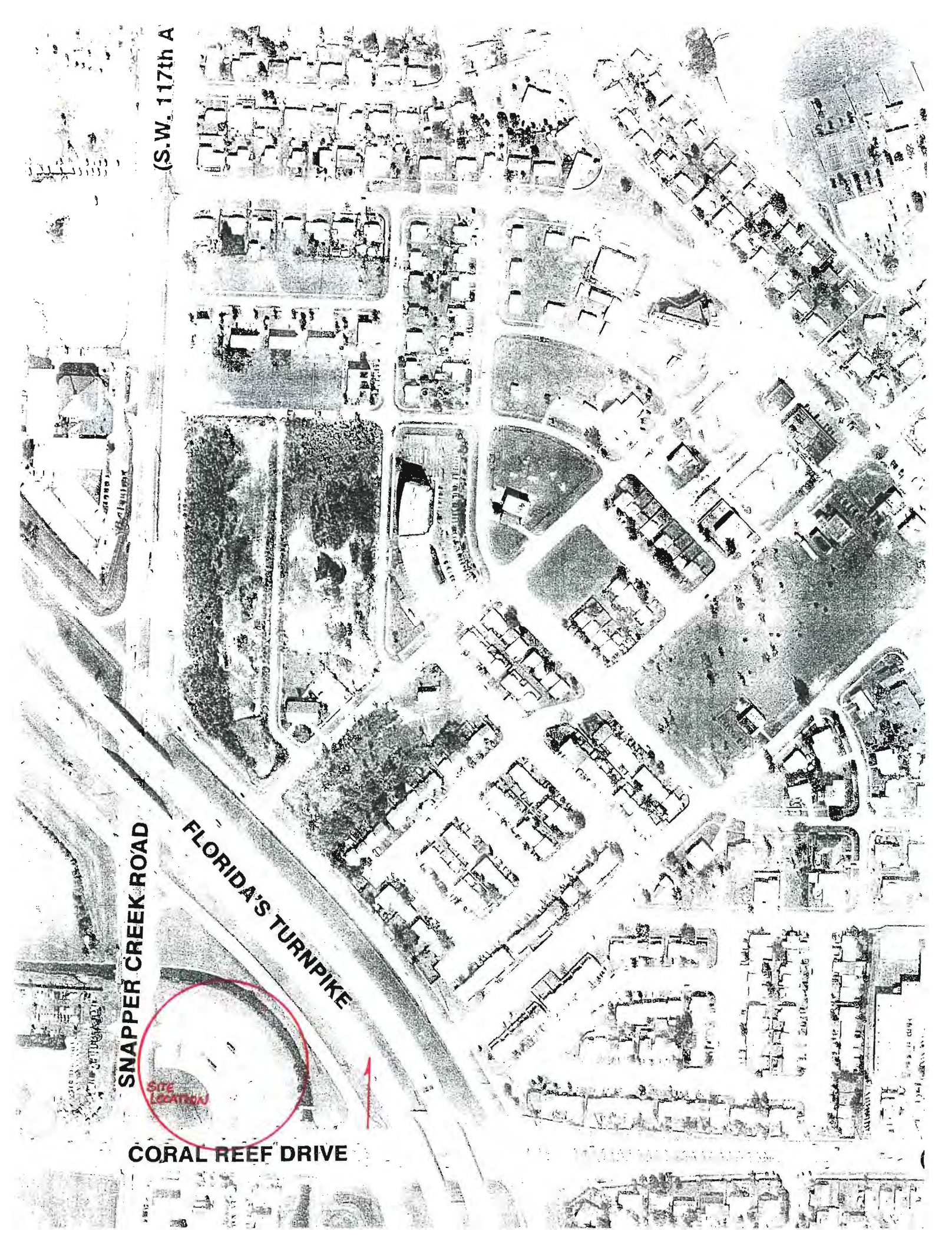
(S.W. 117th A

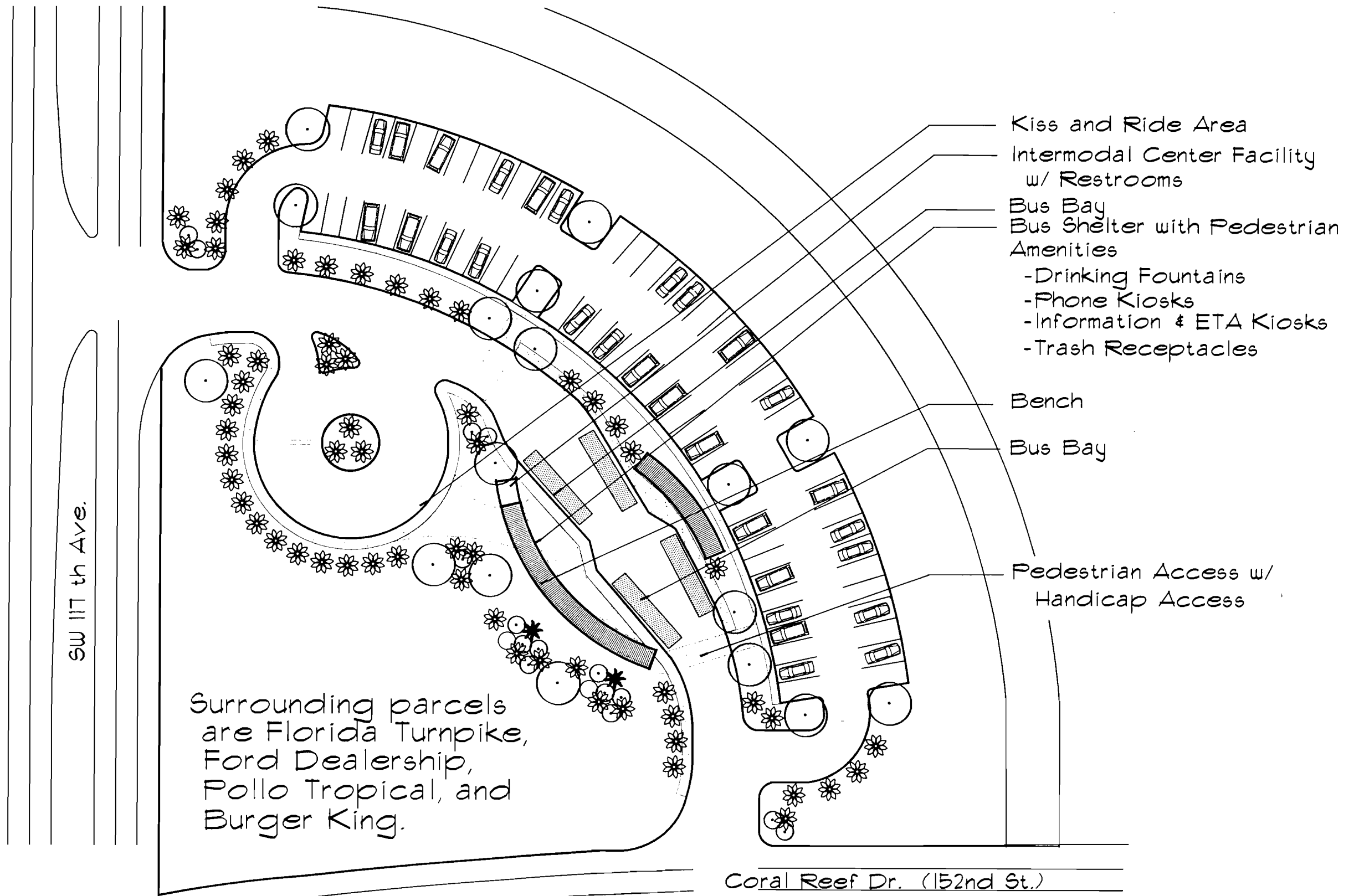
SNAPPER CREEK ROAD

FLORIDA'S TURNPIKE

SITE
LOCATION

CORAL REEF DRIVE





INTERMODAL SITE FACT SHEET

1. **Site Location:** NE corner of Coral Reef Drive (SW 152nd Street) and Snapper Creek Road
2. **Surrounding Land Uses:** Florida Turnpike to the north, Grandprize Chevron, Oldmobile Car Dealership, Amoco, Pollo Tropical, Burger King
3. **Costs:** \$873,000

Estimated Site/Civil Costs: \$250,000

Site Facilities Costs: \$623,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: The mall ring road is a two-lane undivided street that connects to other major arterials at several nodes.

Traffic Operations: SW 152nd Street and SW 112 Avenue is a major intersection. Congested. Site is separated, and should not have a significant impact on the operations of the intersection.
5. **Intermodal Activity:**

Modes Served: bus, automobile (park-and-ride, kiss-and-ride)

Bus Routes: MAX. There are also two bus stops on SW 152nd.
6. **Pedestrian Activity:** Very light
7. **Bicycle Activity:** Low
8. **Design Considerations:**
9. **Notes:** The existing facility is very run-down. The existing concrete shelters look very dismal and plain. There are no trash receptacles on the site, with 9 "No littering" signs. There are no pedestrian amenities. The site needs renovation to draw patrons. An artistic decoration would be very beneficial here.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓	✓		
Restroom Facilities		✓			✓	
Seating			✓	✓		
Pedestrian Amenities			✓			✓
Parking			✓	✓		
Supplemental Parking	✓			✓		
Engineering Considerations		✓		✓		
Trash Receptacles			✓			✓
Newspaper Racks			✓	✓		
Lighting			✓	✓		
Tire and Seat Lockers			✓	✓		
Bus Bays			✓	✓		
Kiss & Ride			✓	✓		
Phones			✓		✓	
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓	✓		
Interactive ITS kiosks			✓	✓		
Private Developments				✓		
Clock			✓	✓		
Vending Machines			✓	✓		
Intermodal Center Identities			✓			✓
Handicap Access			✓			✓
Landscaping			✓			✓
Drinking Fountains			✓	✓		
Security Surveillance			✓		✓	
Postal Services			✓	✓		
Bike Racks			✓	✓		



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Northeast side view of existing bus stop, bay, and Park-n-Ride lot.



Northeast side view of existing bus stop and Park-n-Ride lot.

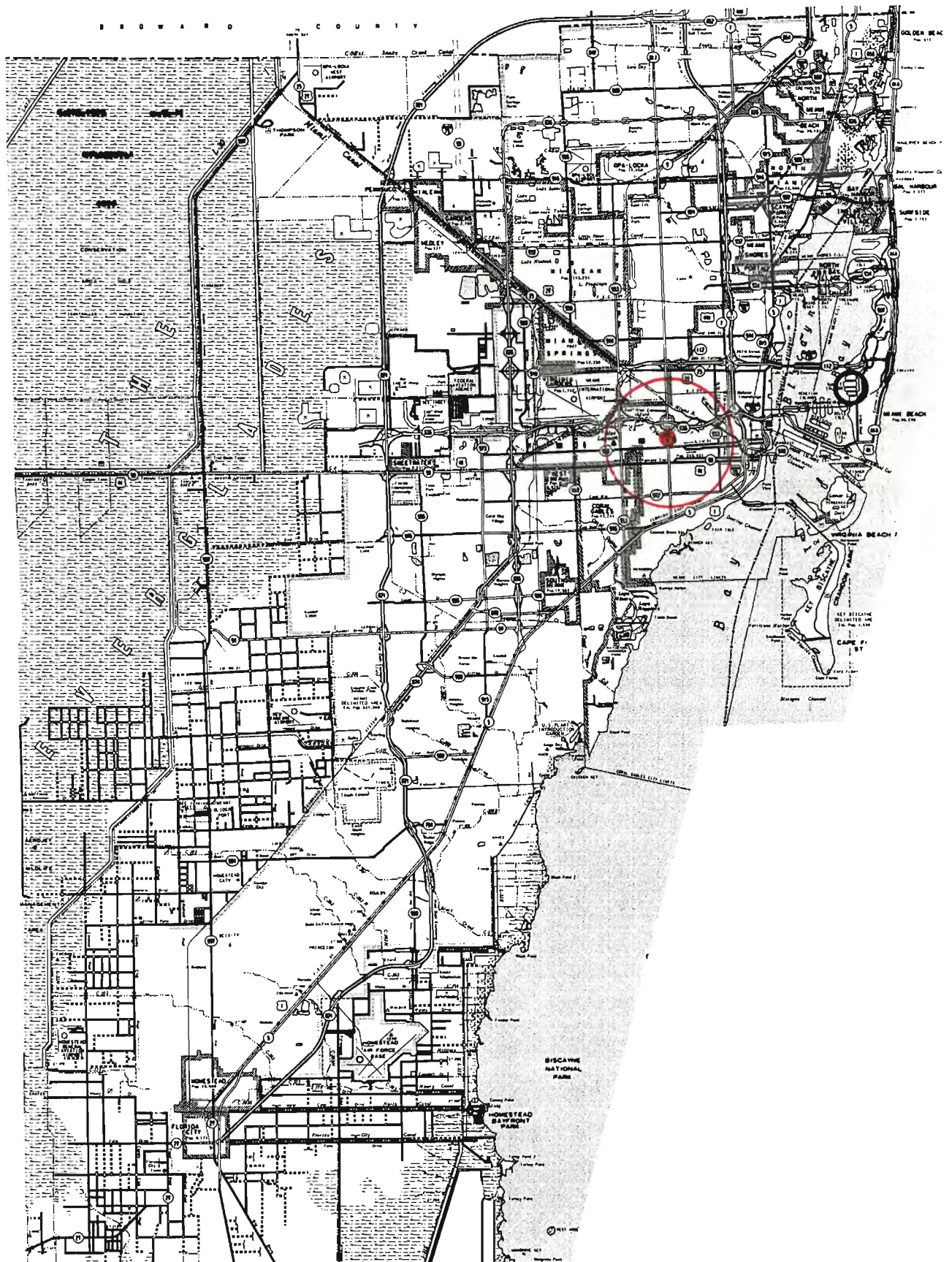


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East side view of existing bus stop.

Site Location Map W. Flagler Street / 42nd Street

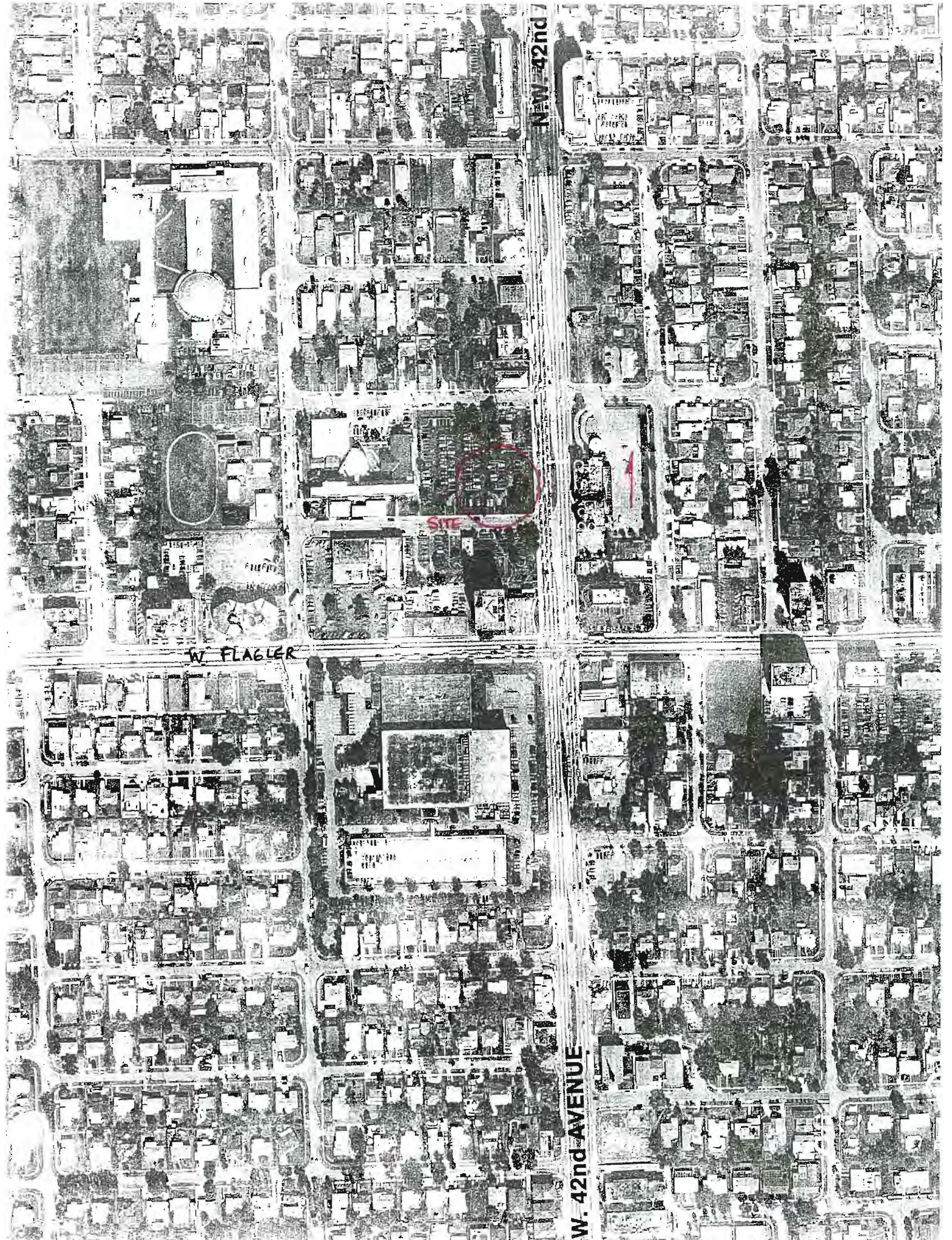


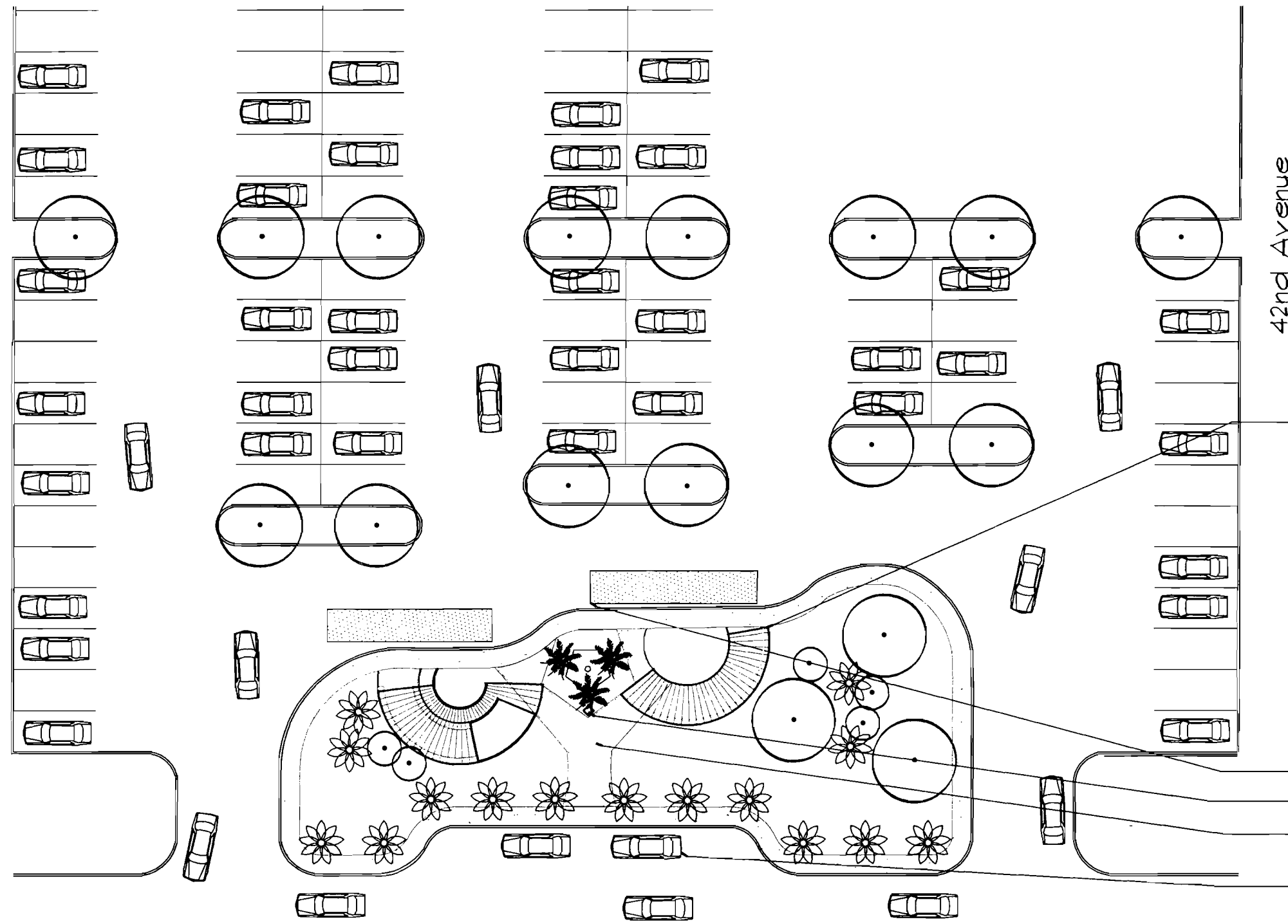


N.W. 42nd

W. FLAGLER

W. 42nd AVENUE





- Bus Shelter with Pedestrian Amenities
 - Drinking Fountains
 - Phone Kiosk
 - Information & ETA Kiosk
 - Bike Racks
 - Trash Receptacles
 - Bench
 - Restrooms Facility
 - Newspaper Racks
 - Lighting
 - Security Services
- Bus Bay (2)
- Clock Tower
- Pedestrian Access with Handicap Access
- Kiss and Ride Area

NW 1st Street

↓ TO FLAGLER



INTERMODAL SITE FACT SHEET

1. **Site Location:** West Flagler at N.W.42nd Avenue

2. **Surrounding Land Uses:** Kinlock Park Middle School to the north,
Flagler Memorial Park to the west,
FPL to the south, and
Dade County Auditorium to the east.

3. **Costs:** \$529,000

Estimated Site/Civil Costs: \$100,000

Site Facilities Costs: \$429,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: NW 42nd Avenue is a six-lane divided arterial. The proposed site is approximately 50 yards north of the intersection of W. Flagler/NW 42nd.

Traffic Operations: Heavy traffic at the intersection of West Flagler and N.W.42nd Avenue.

6. **Intermodal Activity**

Modes Served: Bus, and pedestrian.

Bus Routes: 11, 42, and Flagler MAX.

7. **Pedestrian Activity:** Heavy

8. **Bicycle Activity:** Light

9. **Design Considerations:**

10. **Implementation Considerations:**

11. **Comments / Notes:**

There is an existing parking lot for the adjacent bank. Coordination with this bank will be necessary to implement this site.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters		✓				✓
Restroom Facilities	✓					✓
Seating		✓				✓
Pedestrian Amenities		✓				✓
Parking	✓					✓
Supplemental Parking	✓					✓
Engineering Considerations			✓			✓
Trash Receptacles		✓				✓
Newspaper Racks		✓				✓
Lighting		✓				✓
Tire and Seat Lockers	✓					✓
Bus Bays	✓					✓
Kiss & Ride	✓					✓
Phones		✓				✓
Signage		✓				✓
Information kiosks		✓				✓
ETA kiosks		✓				✓
Interactive ITS kiosks		✓				✓
Private Developments						
Clock			✓			✓
Vending Machines	✓					✓
Intermodal Center Identities		✓				✓
Handicap Access	✓					✓
Landscaping		✓				✓
Drinking Fountains		✓				✓
Security Surveillance			✓			✓
Postal Services	✓					✓
Bike Racks	✓					✓



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East side view of existing bus stop on W. Flagler and 42nd Avenue.



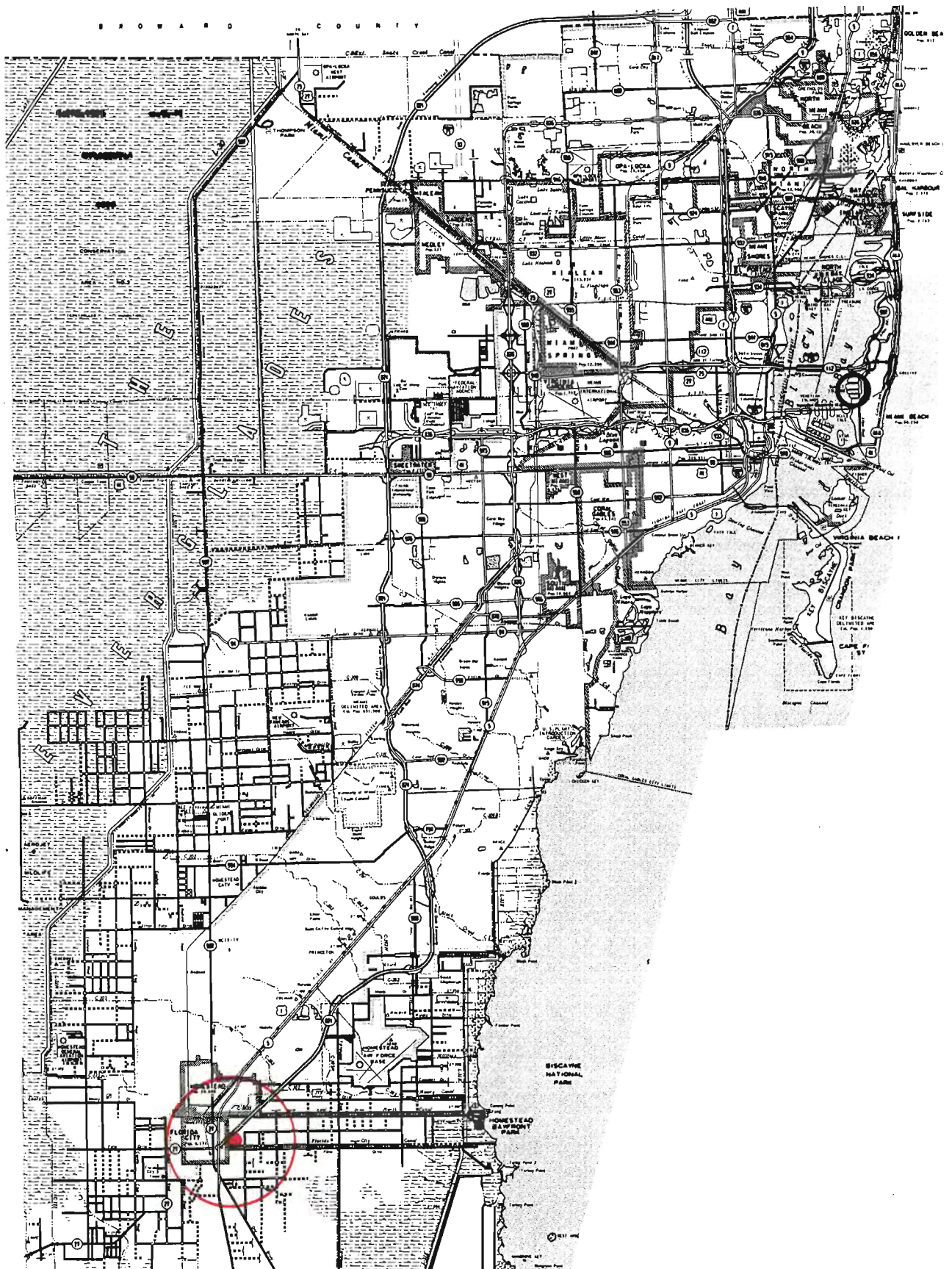
Northwest side view of existing parking and proposed site location.

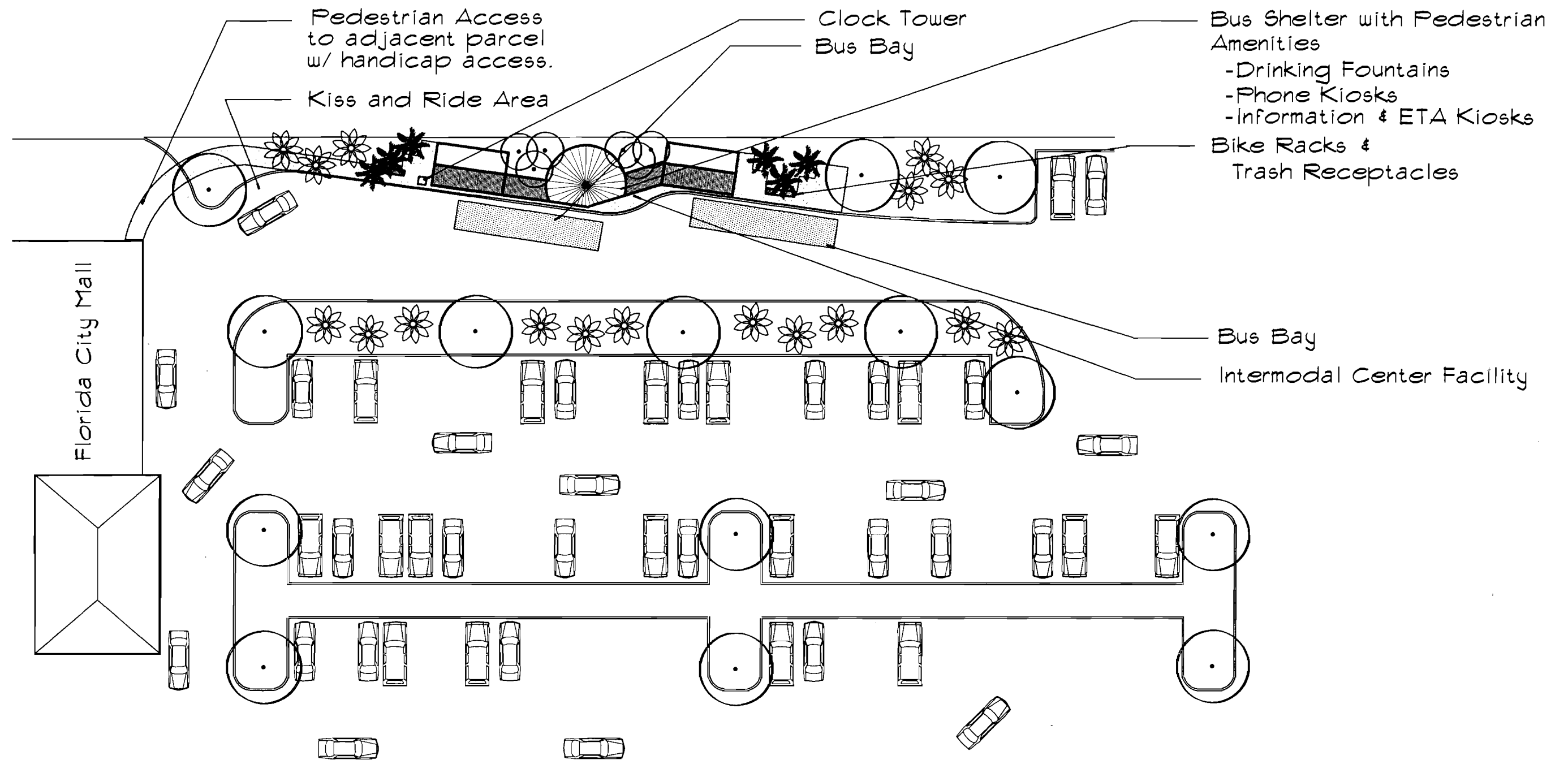


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Site Location Map

Florida City — Palmer Drive / FEC ROW





Surrounding parcels are open parking lots adjacent to the mall and U.S. Highway 1 (S.R. 5)



INTERMODAL SITE FACT SHEET

1. **Site Location:** Palm Drive (SW 344th Street) and U.S. Highway 1 (S.R. 5). Florida Keys Factory Shops, Florida City.
2. **Surrounding Land Uses:** Florida Turnpike to the north,
Florida City P.O. to the west,
Old Card Sound Rd to the south, and
Homestead High School to the east.
3. **Costs:** \$418,000

Estimated Site/Civil Costs: \$100,000

Site Facilities Costs: \$318,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Palm Drive is an east-west 4-lane divided road.

Traffic Operations: Traffic is moderate.
6. **Intermodal Activity**

Modes Served: Bus and pedestrian

Bus Routes: 35, 70, and the Busway MAX
7. **Pedestrian Activity:** Low
8. **Bicycle Activity:** Low
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

Opportunity for bicycle rental facilities to tourists.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities			✓	✓		
Seating			✓			✓
Pedestrian Amenities			✓		✓	
Parking			✓	✓		
Supplemental Parking			✓	✓		
Engineering Considerations			✓	✓		
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓		✓	
Bus Bays			✓		✓	
Kiss & Ride			✓	✓		
Phones			✓	✓		
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments				✓		
Clock			✓			✓
Vending Machines			✓	✓		
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓	✓		
Drinking Fountains			✓		✓	
Security Surveillance			✓		✓	
Postal Services			✓		✓	
Bike Racks			✓		✓	



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View of the main entrance from Palm Drive to the parking lot.



View of tentative site.



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Tentative site, east side of parking lot.



Current bus stop, looking southeast.



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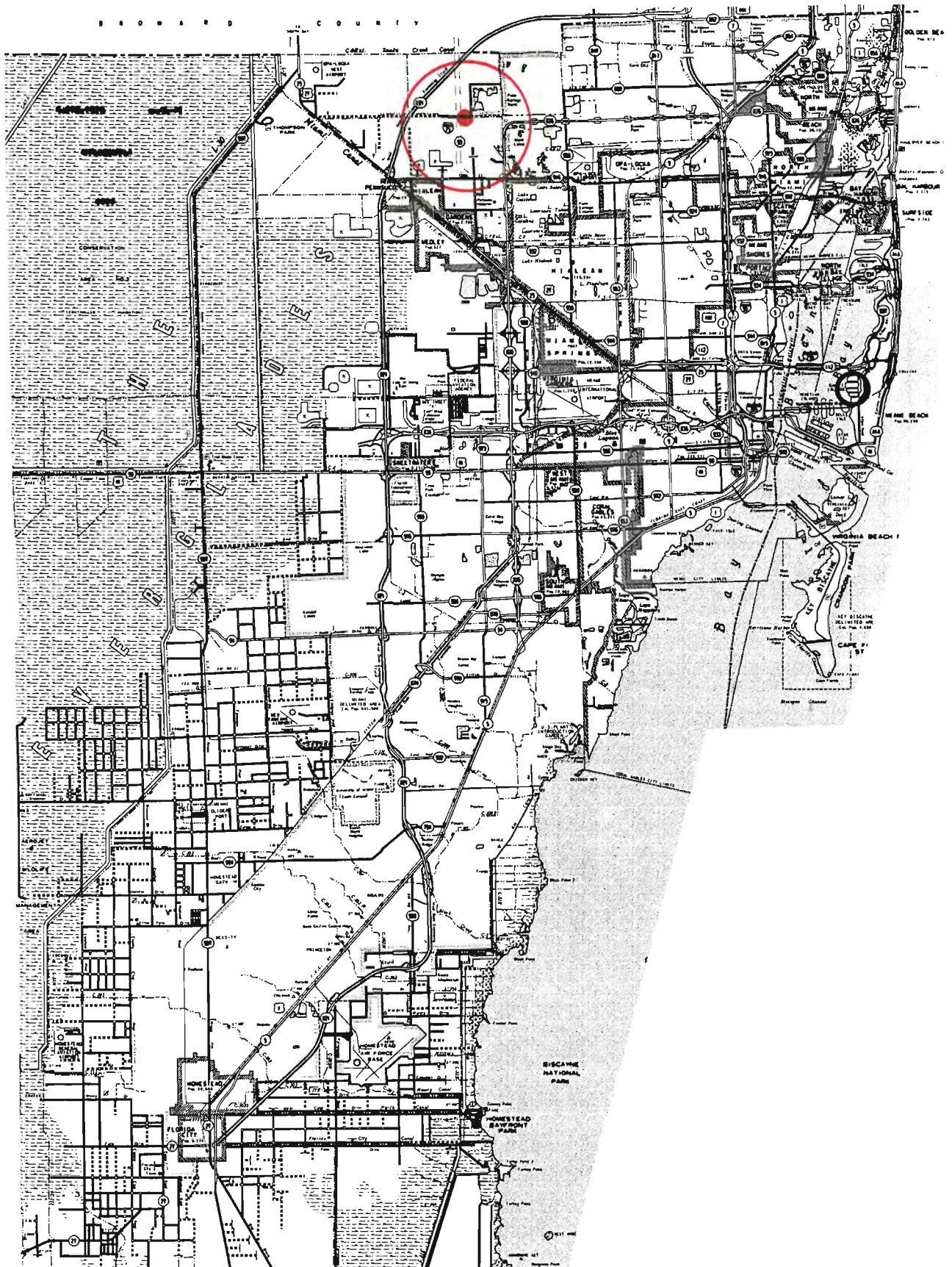
Bus stop, looking west.

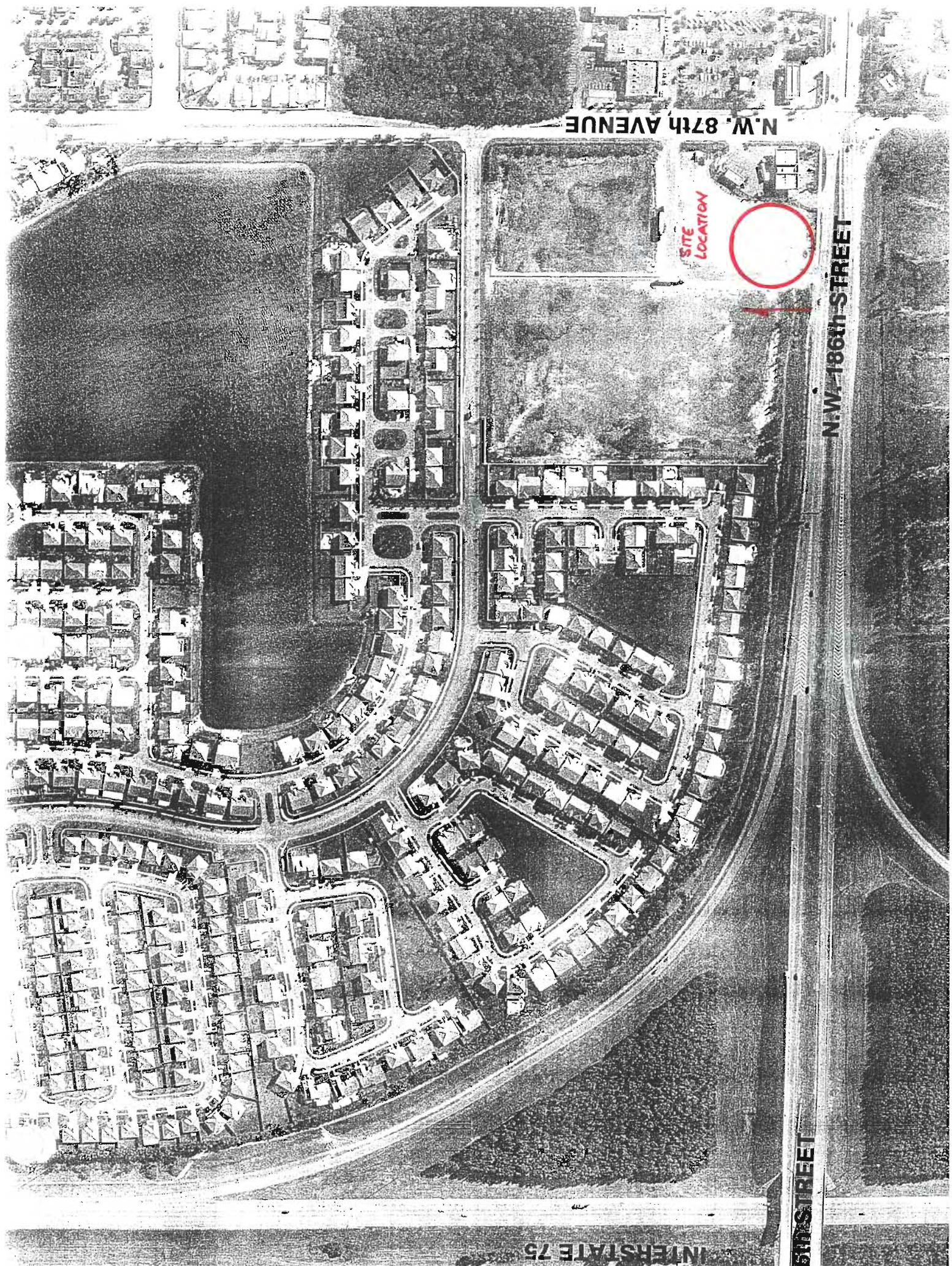


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Site Location Map

87th Avenue at Miami Gardens Drive



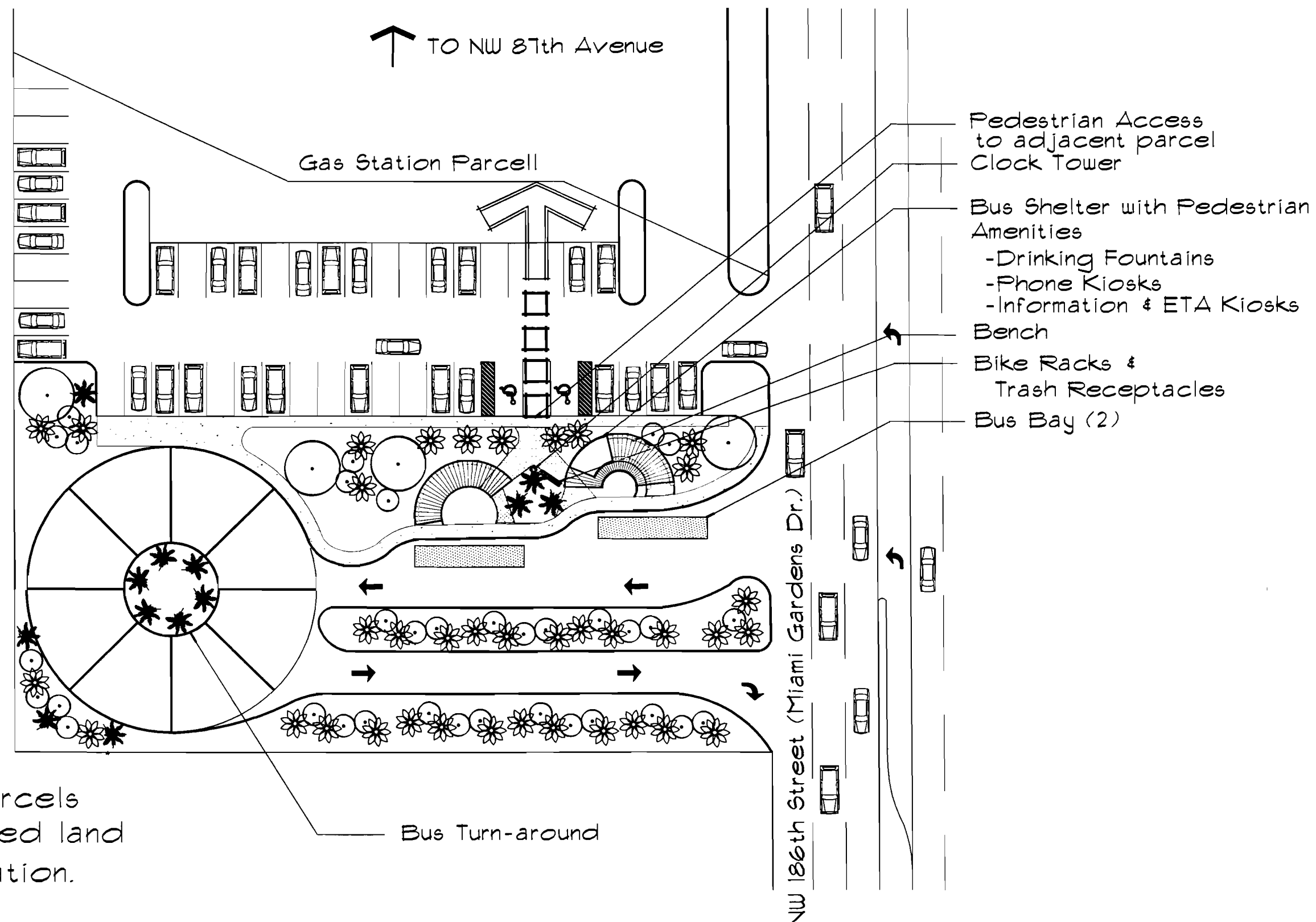


N.W. 87th AVENUE

N.W. 186th STREET

INTERSTATE 75

5th STREET



Surrounding parcels are undeveloped land and Amoco Station.



INTERMODAL SITE FACT SHEET

1. **Site Location:** Miami Gardens Drive and NW 87th Avenue just east of I-75.

2. **Surrounding Land Uses:** Florida Turnpike to the north,
I-75 to the west,
Golf Club of Miami to the east.

3. **Costs:** \$955,000

Estimated Site/Civil Costs: \$450,000

Site Facilities Costs: \$505,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Miami Gardens Dr. is an east-west 4-lane divided road.

Traffic Operations: Traffic is moderate.

6. **Intermodal Activity**

Modes Served: Bus and pedestrian.

Bus Routes: 91.

7. **Pedestrian Activity:** Light

8. **Bicycle Activity:** Light

9. **Design Considerations:**

9. **Implementation Considerations:**

11. **Comments / Notes:**

In the future, bus service from North Dade and Southwest Broward could feed this location via I-75.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities	✓				✓	
Seating			✓		✓	
Pedestrian Amenities			✓			✓
Parking			✓	✓		
Supplemental Parking		✓		✓		
Engineering Considerations			✓	✓		
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers			✓	✓		
Bus Bays			✓			✓
Kiss & Ride			✓	✓		
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines			✓			✓
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping			✓			✓
Drinking Fountains			✓		✓	
Security Surveillance			✓			✓
Postal Services			✓		✓	
Bike Racks			✓	✓		



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Bus stop at 87th Avenue (northbound).



Vacant lot behind Amoco station (at northwest corner of Miami Gardens Drive and 87th Avenue intersection).



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Vacant lot with entrance from 87th Avenue (southbound) behind Amoco station (located at the northwest corner of Miami Gardens Drive and 87th Avenue).

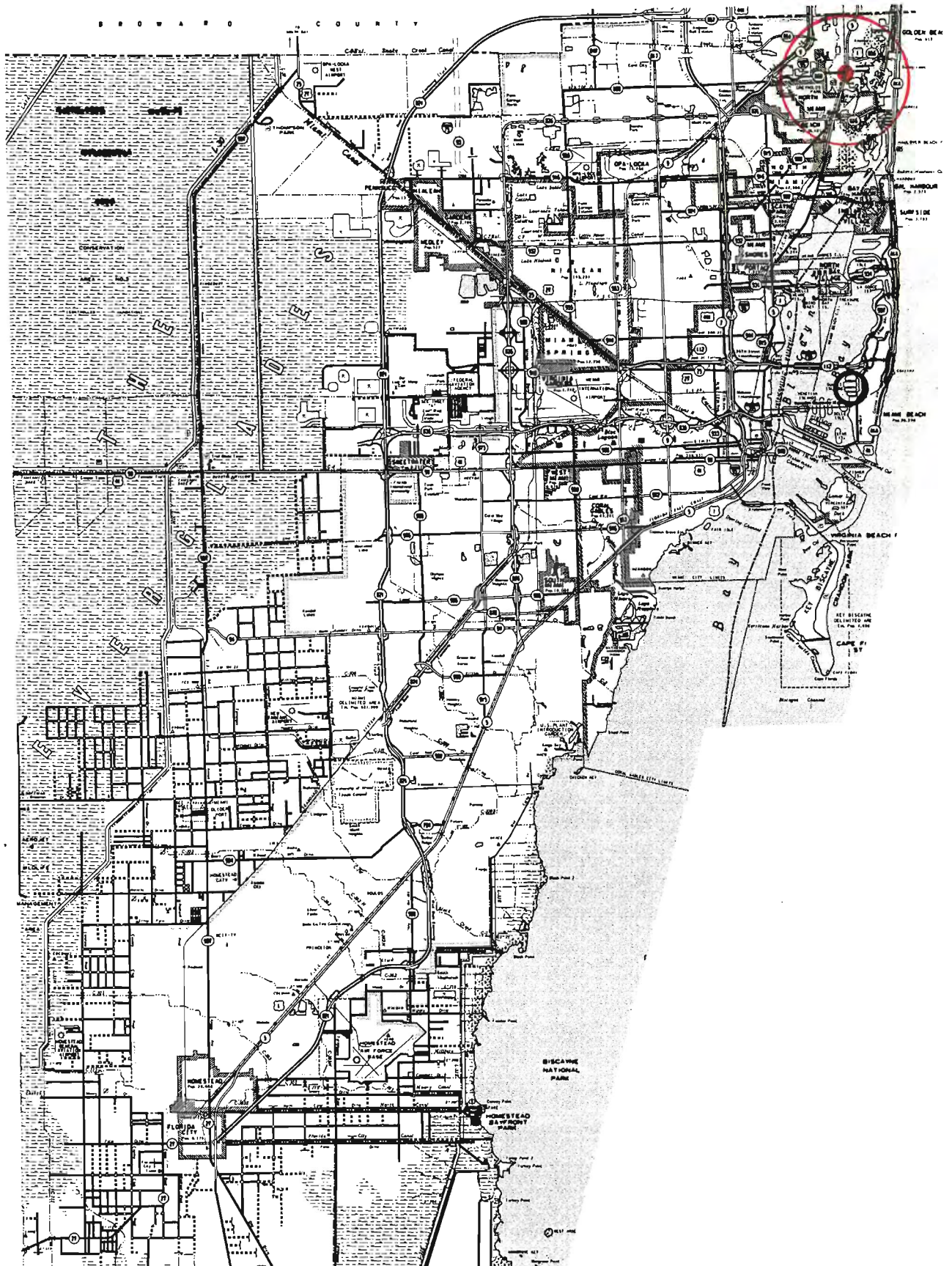


Vacant lot with entrance from Miami Gardens Drive (westbound) behind Amoco station (located at the northwest corner of Miami Gardens Drive and 87th Avenue).



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Site Location Map US 1 / 163rd Street



N.E. 22nd AVE

F.E.C. R.R.

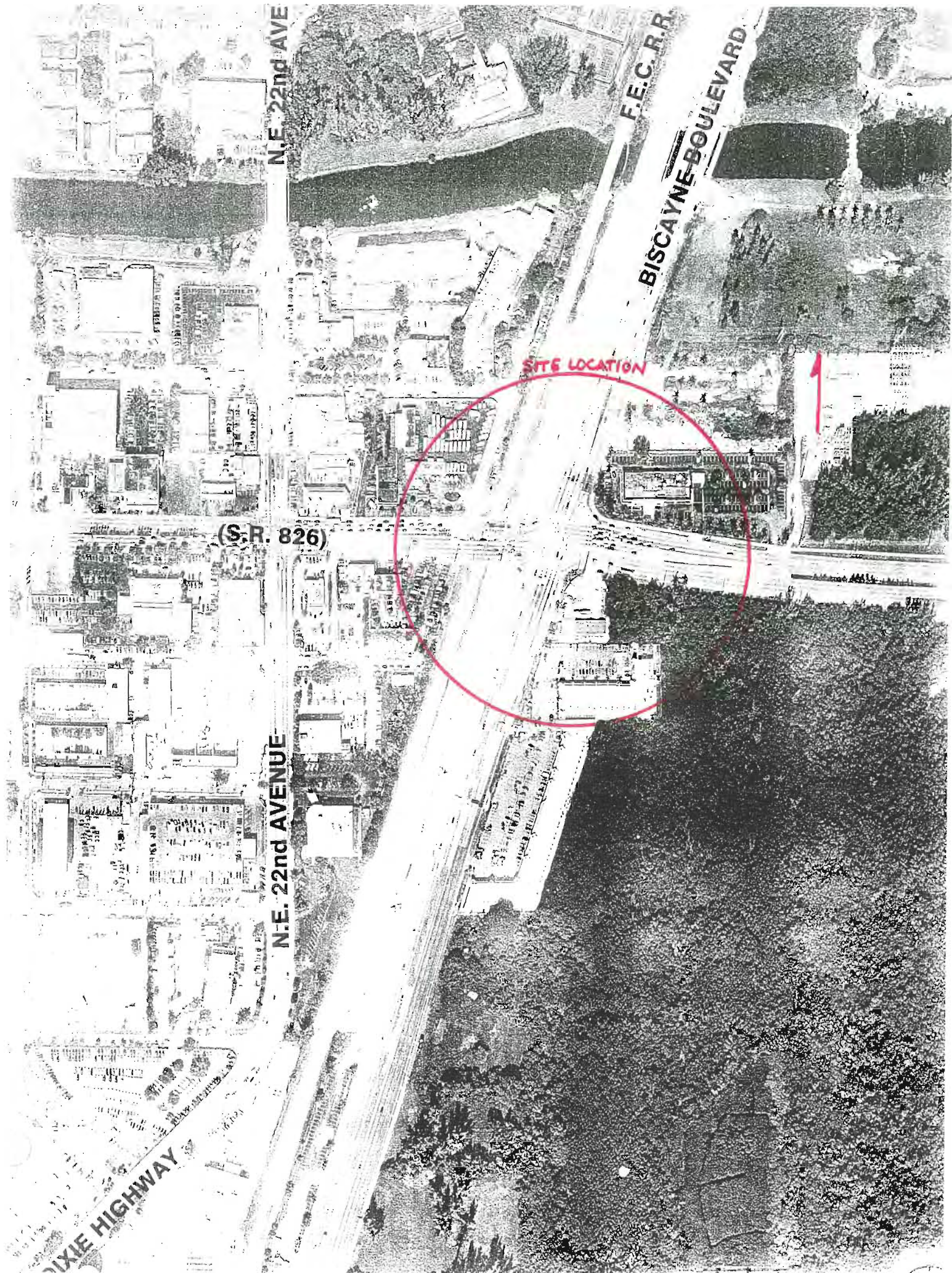
BISCAYNE BOULEVARD

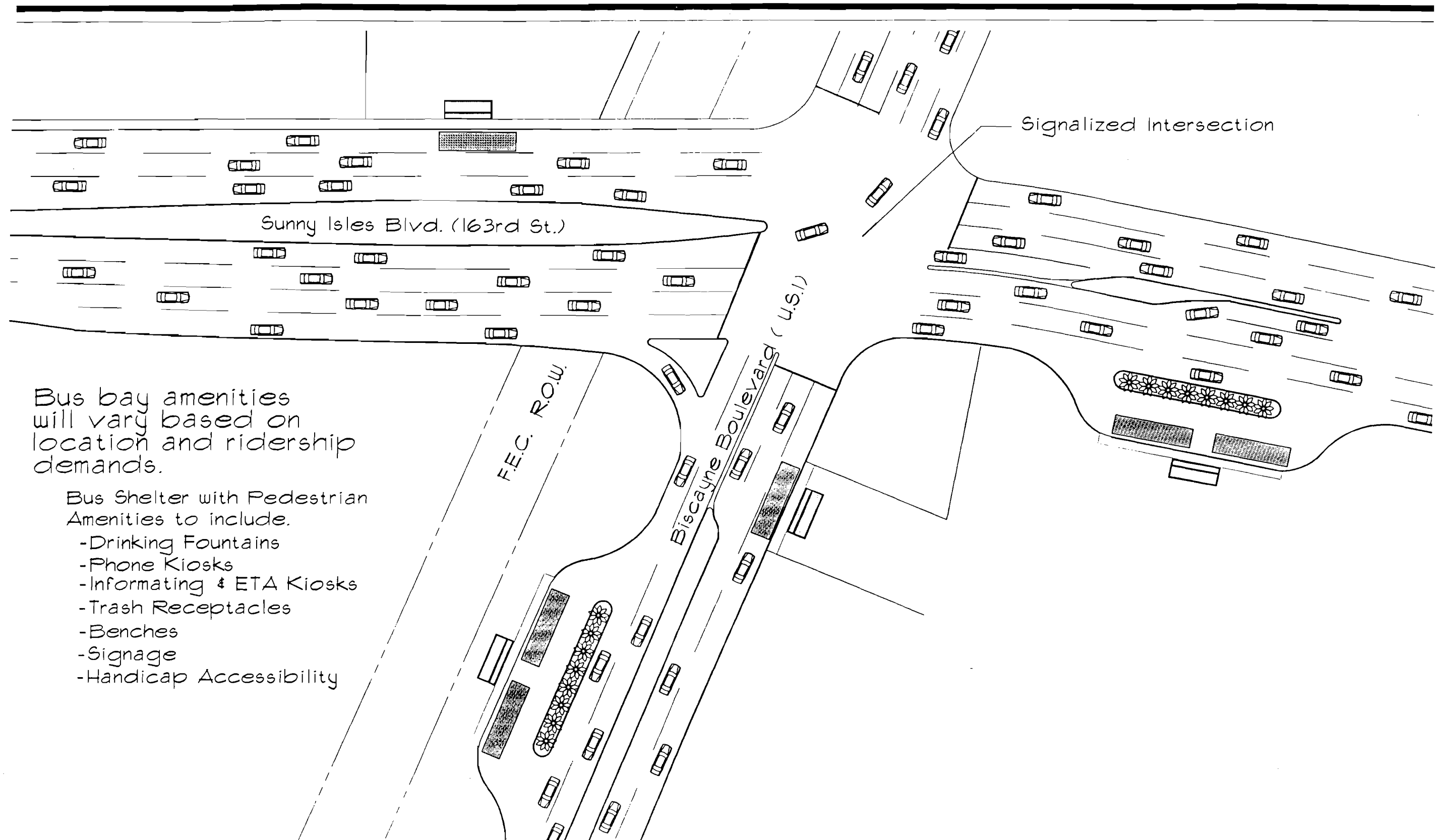
SITE LOCATION

(S.R. 826)

N.E. 22nd AVENUE

DIXIE HIGHWAY





Bus bay amenities
will vary based on
location and ridership
demands.

Bus Shelter with Pedestrian
Amenities to include.

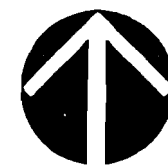
- Drinking Fountains
- Phone Kiosks
- Informing & ETA Kiosks
- Trash Receptacles
- Benches
- Signage
- Handicap Accessibility



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U.S. One / 163rd Street
Scale: 1" = 50'

INTERMODAL SITE FACT SHEET

1. **Site Location:** Biscayne Boulevard (U.S. 1) at 163rd Street.

2. **Surrounding Land Uses:** FEC RR to the north,
the mall at 163rd to the west,
the Oleta River State Recreation Area to the east,
Biscayne Boulevard to the south.

3. **Costs:** \$771,000

Estimated Construction Costs: \$100,000

Site Facilities Costs: \$671,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: 163rd Street is a 6-lane divided east west arterial.
U.S. 1 is a 6-lane divided north south arterial.

Traffic Operations: The intersection of 163rd Street and U.S. 1 is very congested. All approaches operate double left-turn traffic and exclusive right-turn lanes. This makes pedestrian crossings difficult.

5. **Intermodal Activity**

Modes Served: Bus, and pedestrian

Bus Routes: 3, 83, E, H, V

6. **Pedestrian Activity:** Light

7. **Bicycle Activity:** Light

8. **Design Considerations:**

9. **Implementation Considerations:**

10. **Comments / Notes:**

It was desired that the intermodal center location be consistent with the Northeast Dade Transit Improvement Study, where a Passenger Activity Center (PAC) is planned to be located in the FEC/Biscayne Blvd. Corridor. However, bus access/egress would be difficult, so a bus bay layout in-line with US 1 and NE 163rd Street are more desirable.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓		✓		
Seating			✓		✓	
Pedestrian Amenities		✓			✓	
Parking		✓		✓		
Supplemental Parking	✓			✓		
Engineering Considerations						✓
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓		✓	
Tire and Seat Lockers			✓			
Bus Bays		✓				✓
Kiss & Ride		✓		✓		
Phones		✓		✓		
Signage		✓				✓
Information kiosks		✓				✓
ETA kiosks		✓				✓
Interactive ITS kiosks		✓				✓
Private Developments			✓	✓		
Clock		✓				✓
Vending Machines		✓				✓
Intermodal Center Identities		✓				✓
Handicap Access		✓				✓
Landscaping		✓				✓
Drinking Fountains		✓			✓	
Security Surveillance			✓	✓		
Postal Services		✓			✓	
Bike Racks		✓		✓		



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View of bus stop on 163rd Street (NW) and lane configuration.



Tentative terminal site on the southwest corner of US 1/163rd Street.



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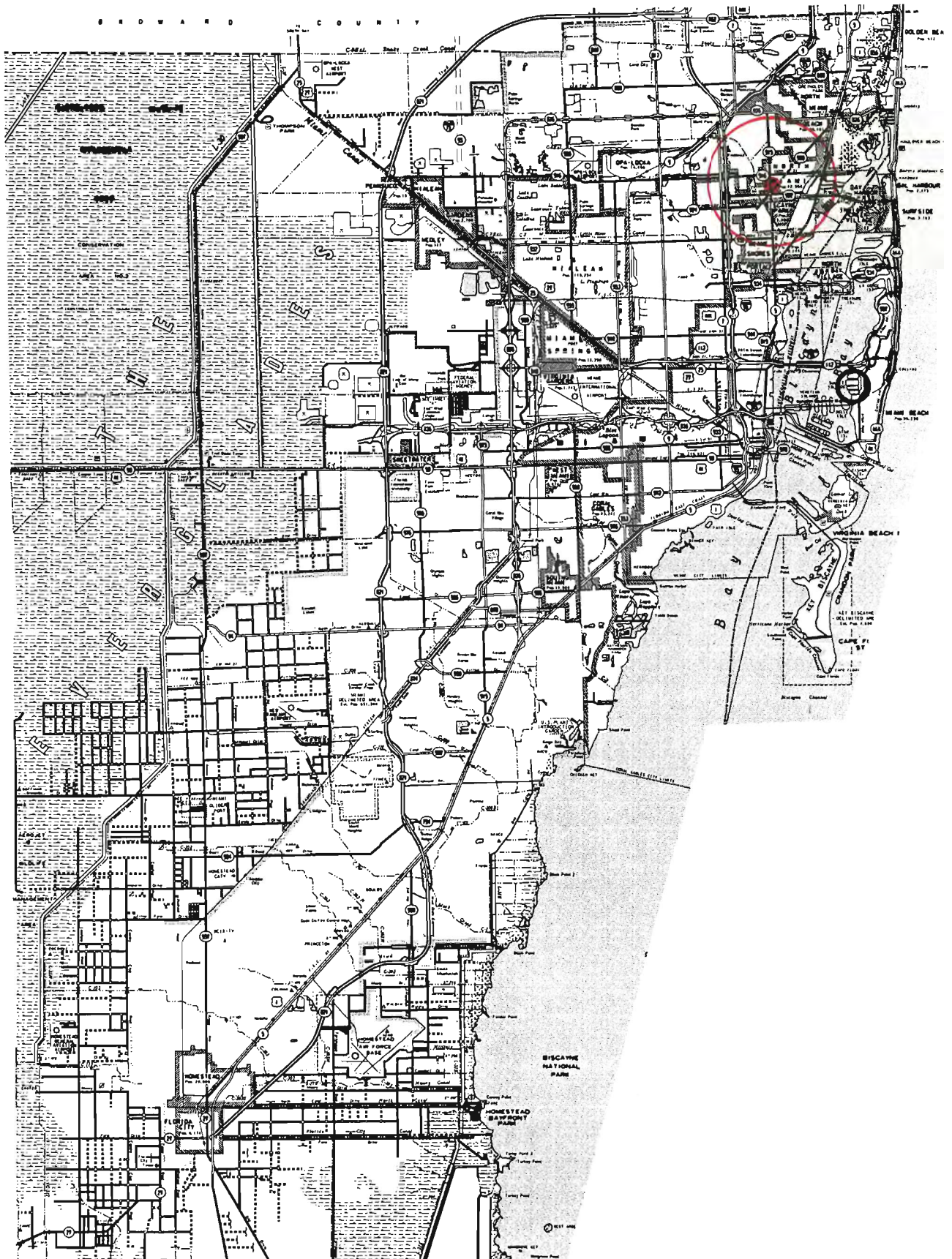
Parking lot on southwest side of US 1/163rd Street.



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Site Location Map

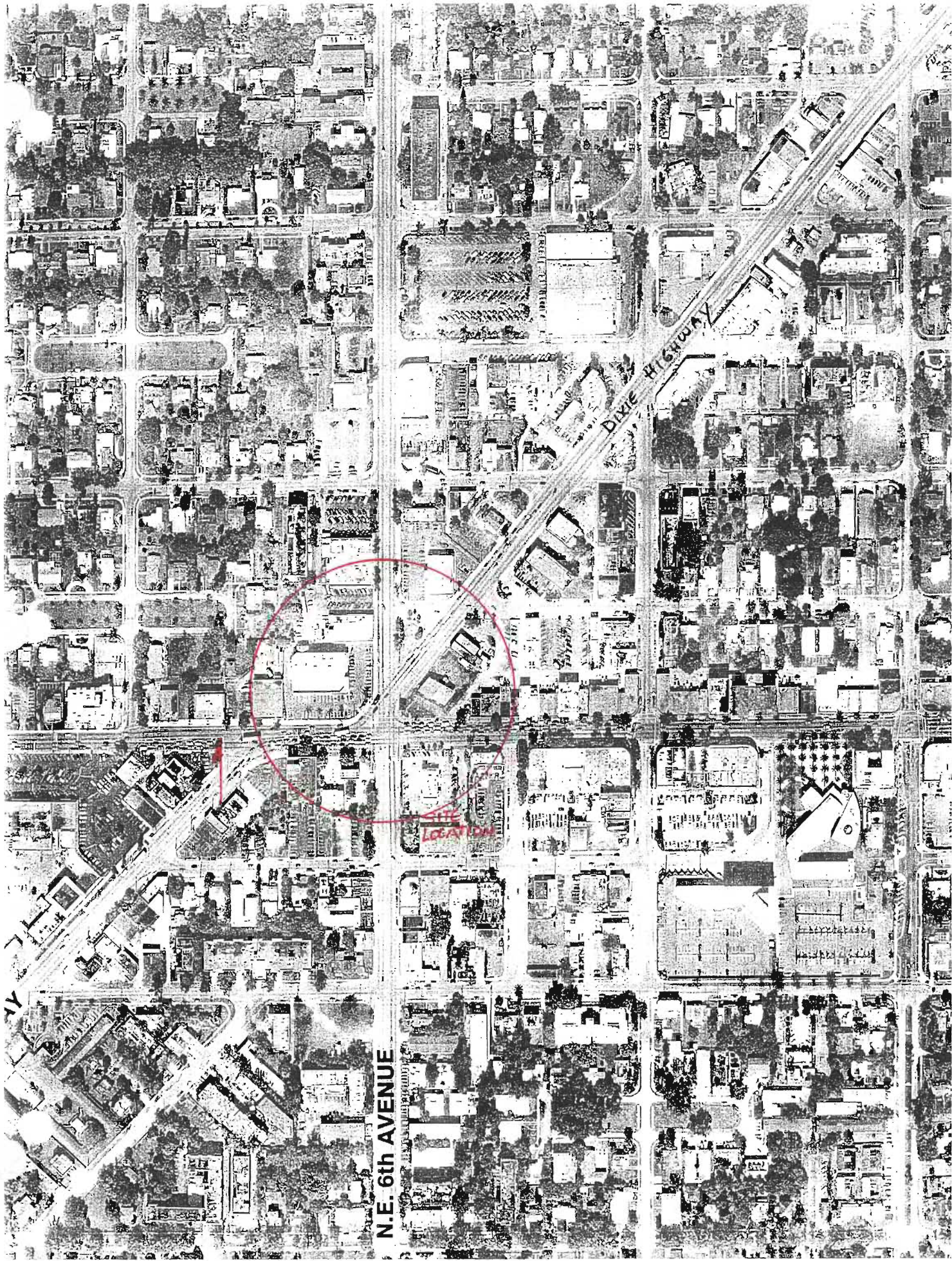
NE 125th Street / Dixie Highway / NE 6th Avenue

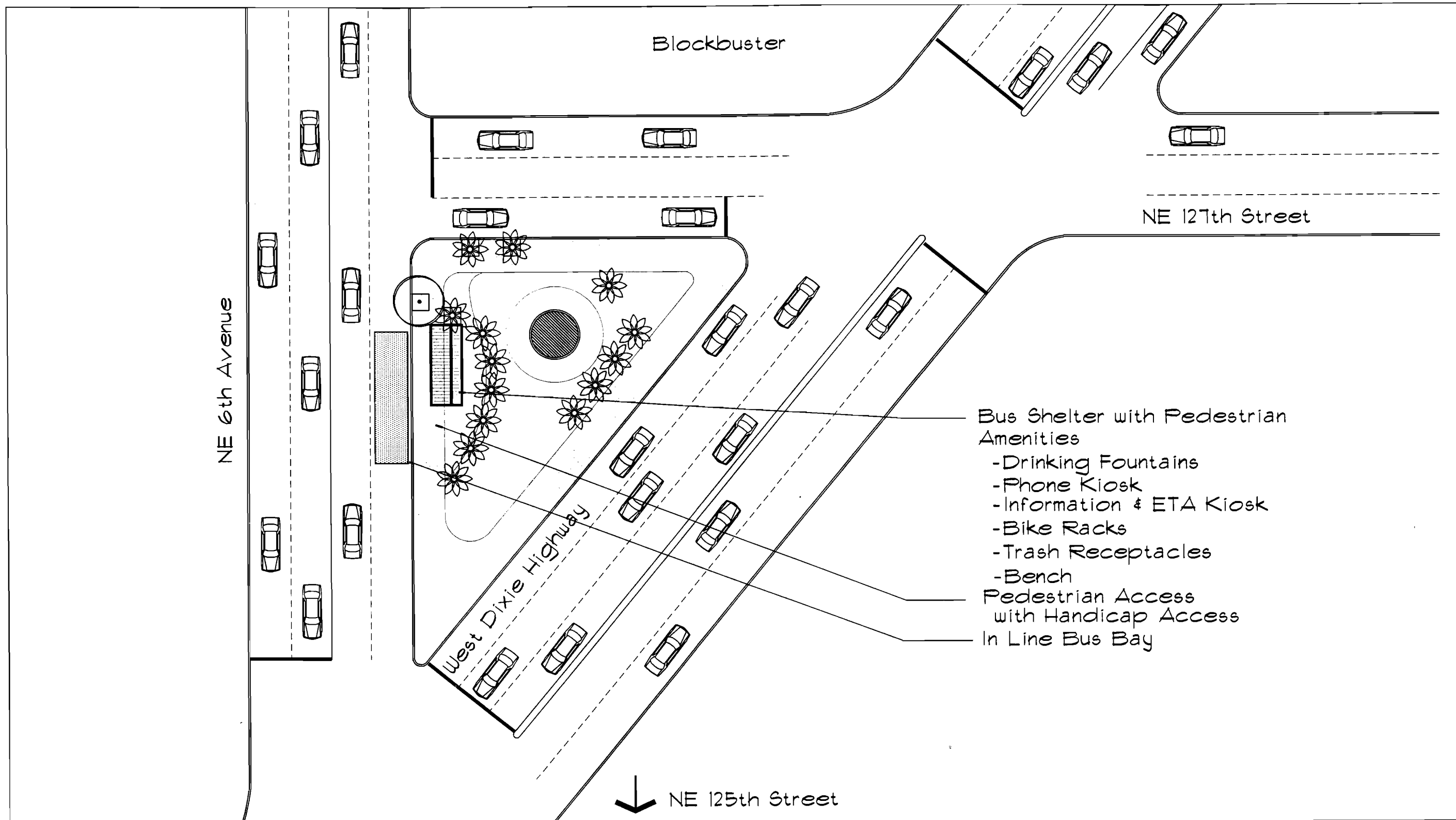


N.E. 6th AVENUE

DIXIE HIGHWAY

THE LOCATION





INTERMODAL SITE FACT SHEET

1. **Site Location:** NW 125th Street at Dixie Highway and NE 6th Avenue
2. **Surrounding Land Uses:** North Miami Middle School to the north,
Memorial Highway Griffing Boulevard to the west,
Biscayne Park to the south, and
City Hall to the east.
3. **Costs:** \$112,000

Estimated Site/Civil Costs: \$0

Site Facilities Costs: \$112,000
4. **Description of Surrounding Traffic Features:**

Roadway Geometry:

Traffic Operations: Very congested area. Heavy traffic volumes throughout the day.
6. **Intermodal Activity**

Modes Served: Bus and pedestrian

Bus Routes: G, 10, 75.
7. **Pedestrian Activity:** Heavy
8. **Bicycle Activity:** Light
9. **Design Considerations:**
9. **Implementation Considerations:**
11. **Comments / Notes:**

This intermodal center will involve enhanced bus shelters and user amenities, because there is no available space for an intermodal site.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters			✓			✓
Restroom Facilities		✓			✓	
Seating			✓			✓
Pedestrian Amenities		✓				✓
Parking	✓				✓	
Supplemental Parking	✓				✓	
Engineering Considerations		✓				✓
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓			✓
Tire and Seat Lockers	✓			✓		
Bus Bays		✓				✓
Kiss & Ride	✓			✓		
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments						
Clock			✓			✓
Vending Machines	✓				✓	
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping	✓				✓	
Drinking Fountains		✓			✓	
Security Surveillance			✓			✓
Postal Services	✓				✓	
Bike Racks	✓			✓		



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Bus stop at Dixie Highway on 6th Avenue.



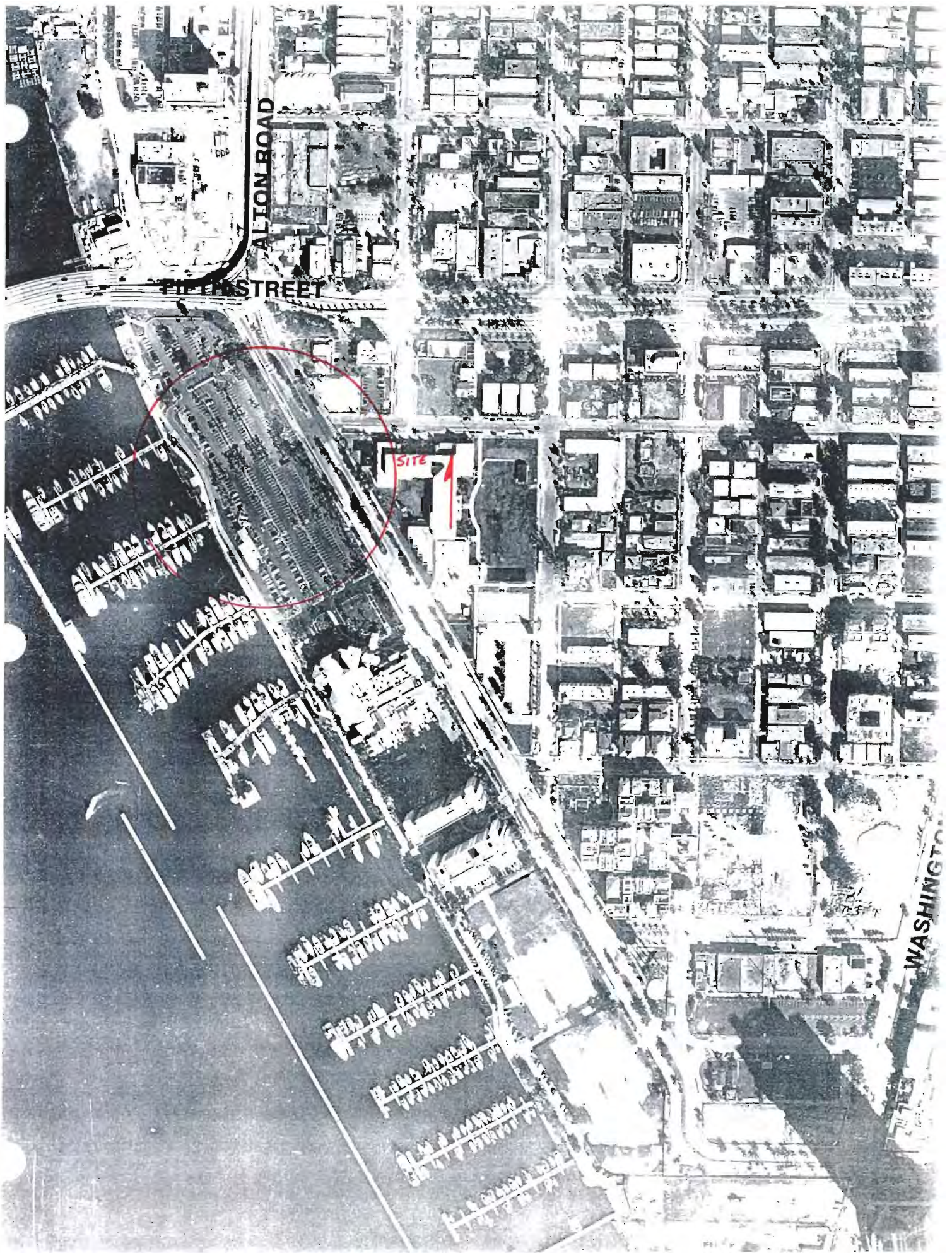
Bus stop at Dixie Highway on 6th Avenue.



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View of northern side of bus stop at Dixie Highway on 6th Avenue.



Bus Bay
 Bus Shelter with Pedestrian
 Amenities

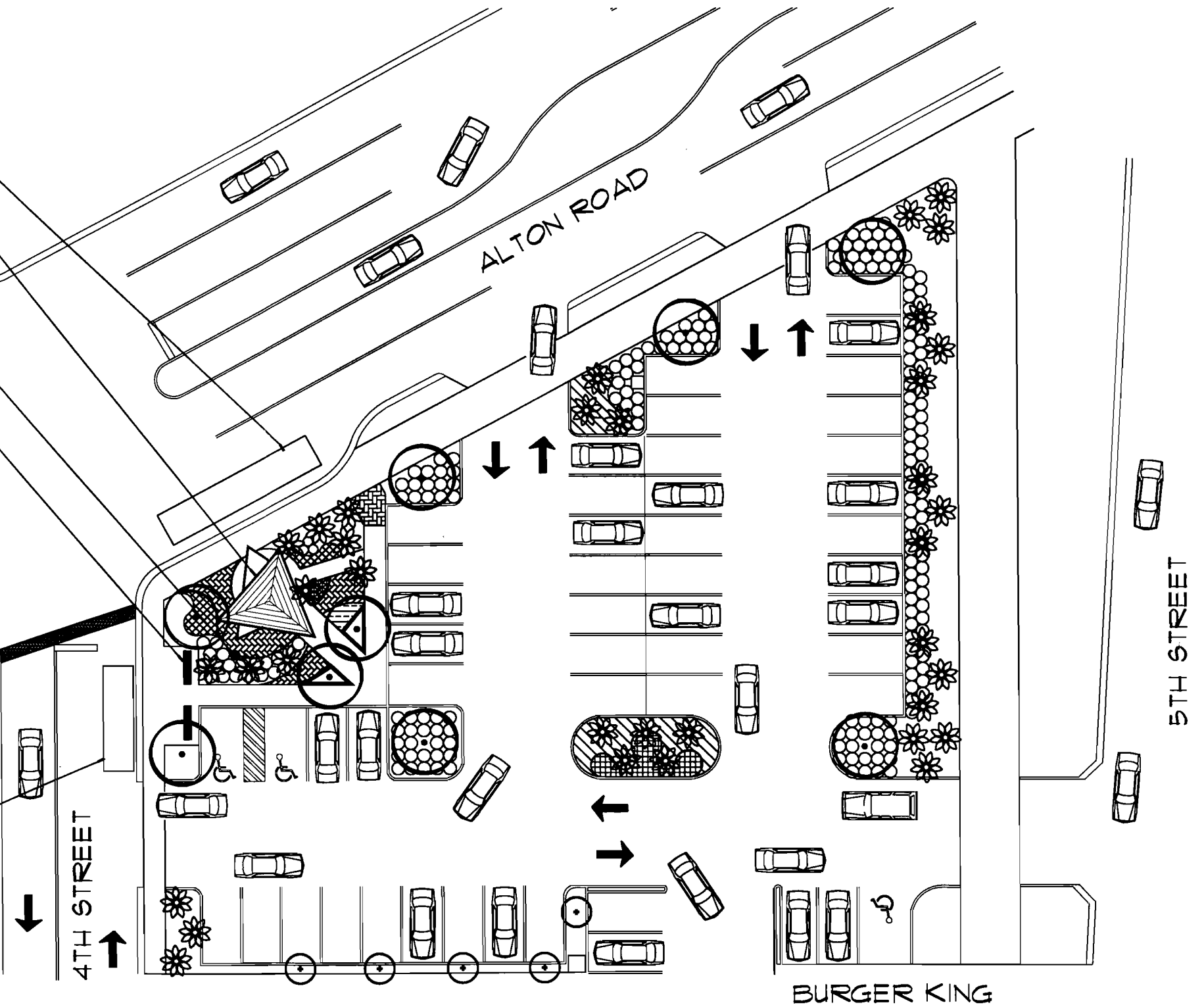
- Drinking Fountains
- Phone Kiosks
- Info & ETA Kiosks

Bike Racks &
 Trash Receptacles
 Bench / Raised Planter

Pedestrian Connection
 to marina and future
 water taxi.

Electric wave
 bus stop.

ELEMENTRY SCHOOL



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5th and Alton Road
 Scale: 1" = 30'-0"

INTERMODAL SITE FACT SHEET

1. **Site Location:** 5th Street & Alton Road, Miami Beach

2. **Surrounding Land Uses:** N- 5th Street
S- Elementary School
E- Burger King
W- Marina

3. **Costs:** \$391,000

Estimated Site/Civil Costs: \$50,000

Site Facilities Costs: \$324,000

4. **Description of Surrounding Traffic Features:**

Roadway Geometry: Alton Road and 5th Street are both 4-lane divided arterials.
4th Street is a 2-lane street.

Traffic Operations: There is a signalized intersection at Alton Road & 5th Street. There is a stop sign at 4th and Alton Road. Traffic is heavy during most of the day.

6. **Intermodal Activity**

Modes Served: Bus, pedestrian, ferry, park-n-ride, kiss-n-ride.

Bus Routes: Electrowave, C, K, S, Flagler Max

7. **Pedestrian Activity:** Moderate

8. **Bicycle Activity:** Moderate

9. **Design Considerations:** A public/private venture with Burger King should be considered to maximize parking capacity.

9. **Implementation Considerations:**

11. **Comments / Notes:**

Provide convenient pedestrian access across Alton Road to the marina for future water taxi service.

SITE FACILITIES MATRIX						
Program and Continuity Elements	Site Suitability			Site Need		
	Low	Moderate	High	Low	Moderate	High
Shelters		✓				✓
Restroom Facilities	✓				✓	
Seating			✓			✓
Pedestrian Amenities			✓			✓
Parking		✓				✓
Supplemental Parking	✓				✓	
Engineering Considerations			✓		✓	
Trash Receptacles			✓			✓
Newspaper Racks			✓			✓
Lighting			✓		✓	
Tire and Seat Lockers			✓			✓
Bus Bays		✓				✓
Kiss & Ride		✓			✓	
Phones			✓			✓
Signage			✓			✓
Information kiosks			✓			✓
ETA kiosks			✓			✓
Interactive ITS kiosks			✓			✓
Private Developments		✓			✓	
Clock			✓			✓
Vending Machines		✓			✓	
Intermodal Center Identities			✓			✓
Handicap Access		✓				✓
Landscaping		✓				✓
Drinking Fountains			✓	✓		
Security Surveillance		✓				✓
Postal Services		✓		✓		
Bike Racks			✓			✓



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Looking east from Alton Road between the two parcels.



Looking east to the site.



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Looking at south edge of site.



Electrowave shuttle.

List of Potential Intermodal Facilities

Site Locations	
1	US1 / Aventura Mall
2	US1 / 163rd Street
3	US1 / 79th Street
4	FIU/ Tamiami Campus
5	International Mall (107th Avenue & W. Flagler)
6	Concord Shopping Center (Cnr Bird Rd. & Turnpike)
7	Westchester Mall (Coral Way & Galloway Rd)
8	Government Center (downtown Miami)
9	Opa Locka existing Tri-Rail station
10	Miami Lakes (Red Rd & 158th Street)
11	Miami Gardens Dr./NW 87th Avenue
12	W. Flagler / 79th Ave.
13	Downtown Coral Gables
14	Downtown Coconut Grove (McFarlane Rd)
15	MDCC (South Campus @ 109th Ct)
16	Diplomat Mall in Broward County
17	Douglas Rd. Metrorail Station
18	Lincoln Rd. between Washington & Collins
19	Golden Glades intermodal Terminal-FDOT
20	NW 7th Avenue & 183rd Street
21	MDCC (North Campus @ 113th Street)
22	Kendall area
23	Hammock Town Center
24	Civic Center Area
25	Miami Beach-Collins / 72nd Street
26	163rd Street Mall
27	Tri-Rail / Metrorail
28	Miami Airport Tri-Rail
29	Okeechobee Metrorail
30	Hialeah Metrorail
31	Northside Metrorail
32	Dr. Martin Luther King Jr. Metrorail
33	Brownsville Metrorail
34	Earlington Heights Metrorail
35	Allapattah Metrorail
36	Santa Clara Metrorail
37	Culmer Metrorail
38	Overtown/Arena Metrorail
39	Government Center Metrorail
40	Brickell Metrorail
41	Vizcaya Metrorail
42	Coconut Grove Metrorail
43	University Metrorail
44	South Miami Metrorail
45	Dadeland North Metrorail
46	Dadeland South Metrorail
47	Sunset(SW 88th Avenue)
48	Coral Reef (SW 117th Ave./152nd St.)
49	Sunset Strip Shop Center (SW 108th Avenue)
50	US1. at Caribbean Blvd.
51	US1 at Hibiscus St.
52	US1 at Marlin Rd.
53	US1 at SW 152nd St.
54	US1 at SW 136th St.
55	27th Ave. at 207th St.
56	27th Ave. at 135th St.
57	Biscayne Blvd. at NE 107th Street
58	FIU at HEFT
59	Bird Road @ SR 826
60	Miami Beach Convention Center
61	NW 7th Street at SR 826
62	HEFT / NW 41st St.
63	SR 826 / NW 36th St.
64	Collins Ave. at NE 44th St.
65	S. Dade Busway Extension at Krome Avenue
66	S. Dade Busway Extension at SW 167th Ave.
67	S. Dade Busway Extension at SW 147th Ave.
68	Sunset Dr. @ SW 137th Avenue
69	N. Kendall Dr. @ SW 107th Avenue
70	N. Kendall Dr.@ SW 97th Ave.
71	SR 236 Ext. @ NW 147th Ave.
72	Aventura Blvd. / 29th Ctr. (Publix)
73	Miami Intermodal Center
74	Miami Lakes Technical Education Center
75	125th/Dixie Highway/6th NE
76	Omni Bus Terminal
77	Plaza de las Americas P&R
78	Greyhound Terminal Downtown new State Plaza
79	Amtrak terminal
80	Homestead Greyhound
81	Cutler Ridge Mall
82	Golf Club of Miami
83	Flagler/ 42nd Avenue
84	Florida City- Palmer Drive
85	5th Street/ Alton Road- Electrowave, Marina

Note:

Bolded entries were selected as the 25 site locations for implementation in accordance with the evaluation program established in Chapter 5 of this report. The selection is solely based on a quantitative procedure, and should serve as a recommendation of priority for implementation. The final ranking should be determined in conjunction with local MPO, FDOT, and MDTA authorities. A graphic illustration of the 85 sites and their location can be found on page 6-2, Figure 6-1, "Universe of Sites Considered."