

# Environmental Permit Information Manual



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FDOT District IV  
Drainage Section

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## I. Permitting Agencies

### *Federal*

Federal environmental permits are obtained from:

- U.S. Army Corps. of Engineers (ACOE)
- U.S. Coast Guard (USCG)

### *State*

State environmental permits are obtained from:

- Florida Department of Environmental Protection (FDEP)
- South Florida Water Management District (SFWMD)
- St. Johns River Water Management District (SJRWMD)

### *Local*

Local environmental permits are obtained from:

- Broward County Department of Planning & Environmental Protection (BCDPEP)
- Local Drainage Districts
- Local Public Health Departments
- Other local delegated authorities (i.e. Cities)

## II .Permit Types

### *A. Dredge & Fill Permits*

Dredge & Fill Permits are required for dredge & fill activities in, on or over the surface waters and wetlands of Florida.

*NOTE: Surface waters are open water bodies with no wetland vegetation versus wetlands, which are vegetated wet areas.*

Dredge & Fill Permits are regulated by:

#### Federal

- U.S. Army Corps. Of Engineers (ACOE)
  - Wetland Resource Permit

#### State

- Water Management Districts
  - Environmental Resource Permit

Within FDOT -District Four, Environmental Resource Permits (ERP) are issued by:

- South Florida Water Management District  
for Broward, Palm Beach, Martin & St. Lucie Counties
- St Johns River Water Management District  
for Indian River County

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## Local

- Broward County Dept. of Planning & Environmental Protection (BCDPEP)
  - License

## Federal Permit Types -ACOE

- Nationwide Permits (6 months if notification required)
- General Permits (6 months if notification required)
- Individual Permits (12 -14 months)
  - Environmental Resource Permit from SFWMD or SJWMD must be obtained and presented prior to issuance of Individual ACOE.

*NOTE: Type dependent on fill & dredge quantity thresholds, and wetland involvement.*

## State -SFWMD or SJRWMD -Environmental Resource permit (ERP) Types:

- Exemptions (if notification required 30 days)
- No Notice General Permits (if questionable 30 days)
  - --These are issued by SFWMD ONLY
- Noticed General Permits (2 months)
- Standard General Permits (6 months)
- Individual Permits (12 months)

*NOTE: Type dependent on fill & dredge area thresholds, and wetland involvement.*

## Local- BCDPEP -Wetland Resource License Types:

Exemptions (no notification required) .General License (30 days)  
Individual License (9 month)

*NOTE: Type dependent on fill & dredge quantity thresholds, and wetland involvement.*

## **Mitigation**

Mitigation is required for all projects with wetland impacts that require either a Standard General or Individual ERP. Mitigation is tied in with the Dredge & Fill permit process.

## Mitigation Types:

- Creation: Establishment of wetlands in upland area.  
Ratios 1.5:1 to 5:1 (acres created: acres impacted)
- Restoration: Reestablishment of wetlands in a historic wetland area.  
Ratios: 1.5:1 to 5:1 (acres created: acres impacted)
- Enhancements: Improvement of existing wetland systems (i.e. Exotic removal)  
Ratios: 4:1 to 20:1 (acres created: acres impacted)
- Preservation: Acquisition and placement of conservation easement over existing wetland system  
Ratios: 20:1 to 100:1 (acres created: acres impacted)

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### ***B. Drainage Permits***

#### Environmental Resource Permit (ERP)

The surface water (drainage) permits are required for those projects, which add new impervious areas (i.e. new construction, additional lanes, reconstruction, etc.), and for projects with significant drainage modifications. These permits are issued by:

- South Florida Water Management District (SFWMD) regulates these activities in Broward, Palm Beach, Martin, and St. Lucie Counties.
- St. John's River Water Management District (SJWMD) regulates these activities in Indian River County.
- Broward County Department of Planning & Environmental Protection (BCDPEP) regulates these activities in Broward County

#### SFWMD & SJRWMD Environmental Resource Permit Types:

1. Exemption
2. No Notice General Permit (Only issued by SFWMD)
3. Noticed General Permit
4. Stormwater Permit
5. Standard General Permit
6. Individual Permit

#### 1. Exemption:

This determination is made on projects, which do not have a substantial increase of impervious area (i.e. addition of paved shoulders, turn lanes, sidewalks, etc.) and will have no adverse effect on existing drainage conditions or adjacent properties.

**Process Time:** The determination can be made by FDOT permitting staff. However, for projects that are more difficult to determine, a confirmation letter from the District can be requested. The WMD should reply within 30 days.

#### 2. No Notice General Permit (NNGP):

This determination is made on projects, which involve minor additions of new impervious area and minor drainage improvements but stay within specified thresholds as dictated by rule. SJRWMD does not currently issue this type of permit.

**Process Time:** The determination can be made by FDOT permitting staff. If a determination is not straightforward then a confirmation letter from the District should be requested. The WMD should reply within 30 days. The NNGP determination requires no notification to the SFWMD; however, the project design must still meet all SFWMD regulations.

If project meets the requirements of a NNGP, then the following is requested for back up documentation:

- ✓ If projects involves no additional impervious, and meets all other criteria, then project meets the NNGP for Road Grading and Pavement Resurfacing (40E-400.316) and no back up information is required (i.e. milling and resurfacing).

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- ✓ If project involves 0.20 acres of additional impervious or less, and meets other NNGP criteria, and will not adversely effect the drainage rights of adjacent owners or cause adverse flooding, then, no other documentation is required. Consider this incidental activities. Provide water quality for additional impervious if possible if it will not cause unreasonable expense or create unreasonable construction related problems.
- ✓ If project involves between 0.20 acres and 2.00 acres of additional impervious, then the following documentation should be provided for FDOT files:
  - Discussion of existing and proposed drainage facilities.
  - Land Use Breakdown Table
  - Water Quality calculations: Water quality volume required for additional impervious and water quality provided. If this can not be met due to site conditions then a description of the issues preventing such treatment should be provided.
  - Use strategies described below to lower additional impervious acreage and subsequent water quality requirements.
  - Pre vs. Post discharge: In most cases, a written discussion that the water quality provisions will offset the additional discharge generated by the additional impervious will suffice as back up information. However, if the additional impervious is located in areas of known flooding or the rights of others may be adversely impacted, then a pre vs post flood routing comparison is suggested as back up.

### OTHER STRATEGIES:

- ✓ If projects involves more than 2.00 acres of impervious than check the following to see if additional impervious can be lowered.
  - Subtract impervious being removed in the project from the additional impervious.
  - Determine if existing shoulders are stabilized – if they are, this area can be subtracted from the additional impervious area proposed at this location. Check old plans or conduct borings if necessary.
- ✓ Total Project area, as discussed with the SFWMD for NNGP projects, is equal to the additional impervious area, reconstruction area and disturbed area. Milling and resurfacing areas are not included in the project area when determining project size.
- ✓ In some instances, if the additional impervious on a project is scattered throughout the length of the job so that no large concentration of additional impervious occurs in the same basin or drainage area (under 0.20 acres), then use this as a possible justification for not providing treatment (in hardship conditions).
- ✓ Please note: If a project meets the NNGP criteria except that other surface waters are impacted, then SFWMD has been willing to accept the use of a NNGP when the impact to other surface waters meets a NGP permit category.
- ✓ If there is an existing permit for the project area from the SFWMD, but the permit was issued before the mid 1980's, it may be possible to use the NNGP. If water quality was not specifically provided and referred to in the permit, then SFWMD has stated that it may not be necessary to modify it. FDOT to use discretion in this case.

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### 3. Noticed General Permit:

This permit class is used for projects that involve minor dredge & fill activities.

Process Time: 2 months for issuance.

### 4. Stormwater Permit:

The SJRWMD only issues this permit type. A project requires this type of permit to construct or alter a stormwater treatment system. A project qualifies for this permit if it is less than 40 acres and does not include wetland or surface water impacts.

Process Time: 6 months for issuance.

### 5. Standard General Permit:

These permits are issued for roadway projects or activities that have a total project area of less than 100 acres and/or have environmental impacts (wetlands) totaling less than 1 acre.

Process Time: 6 months for issuance.

### 6. Individual Permit:

This permit type is required for roadway projects or activities not qualified for any of the other permit types.

Process Time: 12 months for issuance.

(These permits require WMD Board approval. The Board only meets once a month, therefore, the process time is significantly longer than for General Permits.)

## BCDPEP -Surface Water Management License Types:

1. Exemptions -no notification required
2. General license -4 months
3. Construction/Operation license -9 months

### 1. Exemption:

- Construction, modification, or relocation of facilities in sites of two (2) acres or less, resulting in unchanged or lessened impacts to water quality, quantity, and discharge; AND no net increase in impervious area.
- Road grading resulting in no change in surface elevation .Pavement resurfacing
- Manual removal of vegetation for establishment of surveyor fence line.
- Installation of culverts 24 inches or less.
- Ponds or excavations less that 0.5 acres and 15 feet deep.
- Replacement of drainage structures or pipes up to 800 ft, if replaced in kind.

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### 2. General License:

- For non-residential projects not exceeding one (1) acre, not discharging to sensitive waters, and meets retention/detention requirements.
- Repair, maintenance, or restoration of seawalls no more than one (1) foot waterward of the original position.
- New lake or pond excavations less than two (2) acres, but equal or greater than one (1) acre and connected to other waters via a permitted overflow structure.
- Construction, repair, or maintenance of permitted stormwater control structure.
- Other projects within isolated wetlands that DNRP decides will not significantly degrade the environment
- Placement of natural limerock rip-rap at the waterward face of an existing vertical bulkhead provided the following:
  - ✓ Rip-rap is clean
  - ✓ No seagrasses are covered
  - ✓ Rip-rap is placed no steeper than 2H:IV
  - ✓ Does not interfere with navigation or riparian property rights
- Repair or replacement of existing, functional headwalls, pipes, or culverts provided that they are replaced at the same elevations in the same location.
- Repair of concrete pilings and placement of pile jackets as long as the fill does not exceed 300 cu yds and excavation does not exceed 300 cu yds.
- Maintenance, repair, or replacement of existing drainage facilities.
- Installation of Fences within regulated waters or wetlands provided no dredging or filling occurs, other than that necessary for the posts and that water flow is not impeded.

### 3. Construction/Operation License:

Required if Exemptions or General Permits activities or thresholds are exceeded.

*NOTE: If for some reason the plans have to change, whether that be before, during or after the required permits have been received, please inform the Permit Project Manager to verify if the change will require a permit modification.*

If the actual construction does not match the permitted plans, the agency may cite the FDOT with a violation.

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## ***C. Irrigation Water Use Permits***

An Irrigation Water Use Permit is required for those projects, which plan to provide landscape irrigation through the use of well water or withdrawal of water from a water body (i.e. irrigation of landscaped medians).

Irrigation Use Permits are regulated by:

- South Florida Water Management District (SFWMD) regulates these activities in Broward, Palm Beach, Martin and St. Lucie Counties.
- St John's River Water Management District (SJRWMD) regulates these activities in Indian River County.

Irrigation Water Use Permit Types:

1. General Permit
2. Individual Permit

### 1. General Permit:

SFWMD -This permit class is used for those projects, which propose to draw less than 100,000 gallons per day of water or do not exceed the reduced threshold limit imposed for areas designated as Reduced Threshold Areas. A Reduced Threshold Area is an area established by the District for which the maximum limit of 100,000 GPD separating a General Permit from an Individual Permit has been lowered. These areas have histories of substandard water quality, saline water intrusion, or lack of water availability.

SJRWMD -Within SJRWMD a permit (called a Consumptive Use Permit or CUP) is needed for irrigation only if the well is larger than 6" in diameter, if more than 100,000 GPD is being withdrawn or if the pump is capable of pumping more than 1,000,000 GPD.

Process Time: 6 months for issuance.

### 2. Individual Permit:

This permit class is required for projects that propose to draw more than either 100,000 GPD in SFWMD or 500,000 GPD in SJRWMD of water or exceed the reduced threshold limit imposed in areas designated as Reduced Threshold Areas.

Process Time: 9 months for issuance.

(These permits require WMD Board approval. The Board only meets once a month and therefore, the process time is significantly longer than for General Permits.)

NOTE: Water Use Permits are not to be confused with Well Construction Permits or Dewatering Permits, which are separate permits that are issued to the contractor prior to construction.

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### ***D. Bridge Permits***

A Bridge Permit is required for projects that propose construction of a new bridge or causeway or reconstruction of an existing bridge or causeway across navigable waters of the United States.

The U.S. Coast Guard is responsible for granting bridge permits.

The following information should be included in the permit drawings:

1. Completed location map, vicinity map, plan view(s), cross-sections, and elevations drawn to scale.
2. Identify the name of the waterway.
3. Include the proposed horizontal and vertical clearances in the navigational span/s measured at mean high water.
4. State the amounts of dredge & fill material, if required, in acres and cubic yards.
5. Identify the names and addresses of adjacent property owners.

Bridge Permits from the U.S. Coast Guard require 14 months to process. The 14 month period will start after EMO files the permit (A/E 27203).

Before granting Bridge Permit, the agency will need copies of the permits issued by the Water Management District and the U.S. Army Corps of Engineers.

### ***E. Tree Removal License***

A Tree Removal license is required for projects within Broward County that propose the removal or relocation of trees. The Consultant shall conduct a Tree Survey within the existing right-of-way and proposed right-of-way for limits of construction. To comply with the Broward County Tree Preservation Ordinance 93-10, the Consultant shall include a Certified Arborist to identify the trees. The survey shall be Certified and signed and sealed by a Professional Surveyor. Broward County and the following listed delegated cities and municipalities enforce their own ordinances:

Fort Lauderdale	Pembroke Pines	Sunrise
Dania	Sea Ranch Lakes	Margate
Parkland	Deerfield Beach	Cooper City
Pompano Beach	Coral Springs	Oakland Park
Davie	Plantation	Hallandale
Miramar	Hollywood	

Process Time: 6 months for issuance.

Steps for completion are:

1. Verify tree impacts.
2. Order tree survey.
3. Prepare required site plan and tree index chart.

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Site plan should include:

1. Location map
2. Plan view/s
3. Tree index chart

Index chart should include:

Tag Number	Station	Canopy (SF)
Botanical Name	To Be Relocated	DBH (IN)
Common Name	To Be Removed	Offset
Native	To Remain	

The following are not considered to be trees as per the Broward County Tree Ordinance:

1. Brazilian Pepper
2. Poison Wood
3. Melaleuca
4. Australian Pine
5. Bishopwood
6. Earleaf Acacia
7. Norfolk Island Pine
8. Schefflera

*NOTE: This list varies within the different municipalities.*

As part of the specific conditions of a tree removal license, DOT should comply with the following:

1. Provide tree canopy replacement.
2. Include a pay item to install a protection barrier for trees to be preserved.
3. Include a pay item to remove and relocate trees within the project site when applicable.

Tree canopy replacement is provided within the following procedure:

- If getting a license from Broward County, by the use of a created mitigation bank or by a project landscape compensation.
- If getting a license from any city or municipality, by the use of a project landscape compensation or money.

## **Tree Survey – Scope of Work - Consultant Responsibilities**

### **PURPOSE**

The purpose of this Exhibit is to describe the scope of work and responsibilities of the CONSULTANT and the DEPARTMENT with regards to the preparation of a complete Tree Survey in compliance with Broward County Tree Preservation Ordinance. Occasionally, a Tree Survey with other counties within the Florida Department of Transportation District IV may be required.

### **OBJECTIVE**

The CONSULTANT shall prepare a Tree Survey to be used by the DEPARTMENT as a part of the required information to obtain a Tree Removal Permit with Broward County and/or the municipalities with delegated authority from the county.

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### A. Specific Objective

The CONSULTANT shall prepare the Tree Survey Plans to include the following: Key Sheet, Plan View Sheet(s) and Tree Index Chart Sheet(s). The CONSULTANT shall use the Key Sheet and the Construction Plans provided by the Department's Project Manager via electronic mail as the base for the survey information. The Tree Index Chart must contain twelve columns with the following data: tree number, common name, scientific name, native (yes or no), diameter at breast high (DBH – inches), canopy (square feet), station number, off set, remain, relocate, remove, and comments.

The CONSULTANT shall accomplish the tagging of the existing trees within the project limits. The following note shall be added to the Plan View Sheet(s); "All trees proposed to remain shall have the identification ties and labels removed at the final phase of construction of the project".

The CONSULTANT shall comply with the following work activities:

- a) Data Gathering: The CONSULTANT shall verify which permitting entity or entities encompass the project limits and arrange the information within the Tree Index Chart in an orderly manner by municipality and/or Broward County. The CONSULTANT shall perform a background research including review of previous tree surveys and gathering of any other necessary data with regards to the plan files and survey reference material. For any technical clarification regarding the survey or final product, the CONSULTANT shall contact the individuals referenced within each particular scope.
- b) Survey Activities: The CONSULTANT shall establish the project baseline and survey the location of trees located within the Florida Department of Transportation right-of-way. All surveyed trees shall be tagged with plastic ties and metallic labels including their number for later identification. The plastic ties must be two to three inches loose to allow growing of the tree's trunk or branch until the start of construction.
- c) Tree Identification: The CONSULTANT shall complete the applicable information for each tree survey as required for the Tree Index Chart. Verify if a tree is dead or in poor health condition and note the condition on the comments column; verify if the surveyed specie is listed as "no permit required" in the Tree Preservation Ordinance(s) by the entity or entities that encompass the project jurisdiction (if exempt, the CONSULTANT shall write "exempt by ordinance" on the comments column) and leave the columns blank providing the information to "Remain", "Relocate", and "Remove" for completion by the DEPARTMENT. Once this information is confirmed, the tree/palm status will be provided to the CONSULTANT for further completion of the Tree Index Chart. The CONSULTANT shall plot the surveyed trees and palms within the project limits on the Plan View Sheet(s) utilizing one symbol for trees and another one for palms.
- d) Final Drawings/CADD File: The CONSULTANT shall provide four sets of the Key Sheet, completed Tree Index Chart and applicable Plan View Sheet(s) to the District Grant Coordinator. The CONSULTANT shall forward one extra set of plans and a disk with the Micro Station file to the Department's Project Manager. All sheets shall be signed and sealed by a Registered Landscape Architect or a Professional Engineer.

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### ***F. Coastal Construction Line Permits***

Coastal Construction Line Permits are required for:

- Excavation or construction seaward of the coastal construction line (i.e. activities in coastal, beach areas).

Coastal Construction Line Permits are regulated by:

- Bureau of Beaches & Coastal Systems of the Florida Department of Environmental Protection (DEP).

Coastal Construction Line Permit Types:

- Field Permit (30 days)
- Individual Permit (6 months)

*NOTE: Type dependent on structural activities.*

Individual Permit Requirements:

- Structural Provisions
  - Turtle Provisions
- (No work allowed between May 1 and October 31)

### ***G. Right of Way Occupancy and Drainage Connection Permits***

A Right of Way Occupancy Permit is required for any "use" of another agency's right-of-way (i.e. FDOT bridge crossing an agency's canal). A Drainage Connection Permit is required to discharge waters into an agency's canal system. Often these two permit activities can be obtained under the same permit if requested from a local drainage district. The SFWMD and the SJRWMD handle the Drainage Connection activities with regards to limiting discharge in the Environmental Resource Permit (ERP).

These permits are issued by:

South Florida Water Management District  
Local Drainage Districts

SFWMD -Occupancy Permit Types:

1. Exemption -Usually doesn't apply for FDOT projects
2. Notice General Permits -6 months (See Appendix for more information)
3. Standard Permits -required Board approval- 12 months  
(See Appendix for more information)

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There are a total of 51 local drainage districts within FDOT District 4. Most of these districts issue one standard permit type. Different permitting criteria are specified by each district.

Local Drainage Districts (most common):  
Central Broward Water Control District  
Old Plantation Water Control District  
South Broward Water Control District  
Acme improvement District  
Lake Worth Drainage District  
Northern Palm Beach Water Control District  
North St. Lucie River Water Control District  
Ft. Pierce Farms Water Control District  
Indian River Farms Water Control District  
Other Local Drainage Districts

### III. Storm Water Pollution Prevention Plan Guidelines for Design Engineers

Unlike most permits that are issued for roadway and bridge projects, the Florida Department of Environmental Protection's (FDEP) National Pollutant Discharge Elimination System (NPDES) Storm Water Permit has no permit application review process. The permit and the conditions of the permit are published in Rule 62-621.300(7) (a) of the Florida Administrative Code (F.A.C.). A copy of this permit and other pertinent information can be found at the FDEP website –

<http://www.dep.state.fl.us/water/stormwater/npdes>

The development of a project specific Storm Water Pollution Prevention Plan (SWPPP) is a condition of this permit. The SWPPP is included in the plan set by the Design Engineer and implemented during construction by the Contractor.

Volume II, chapter 28 of the Florida Department of Transportation (FDOT) Plans Preparation Manual (PPM), provides information the designer should reference when developing a SWPPP. Typically, the SWPPP has 5 sections that require specific information. In District 4, a sixth section has been added. This section lists the information that the Contractor has to provide in order for the project to be in compliance with the permit conditions.

In order to provide consistency in the preparation, review and implementation of Storm Water Pollution Prevention Plans (SWPPP) on District IV construction projects, please use the following guidelines in your preparation of the SWPPP. This is more specific than the new language in the PPM but this text will insure that FDOT projects comply with the requirements of the Florida Statute that governs the permit.

The following is additional information that should assist the designer in further developing a SWPPP.

**1.0 Site Description** – The design engineer should include a description of the soil disturbing activities, not just the roadway construction. Examples of soil disturbing activities include drainage installation, mast arm foundation work, sidewalk removal and/or installation, detention pond construction, etc...

### **Stating that the project consists of milling and resurfacing does not meet the requirements of the FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities (Rule 62-621.300(4), F.A.C.)**

**1.a. Sequence of Major Soil Disturbing Activities** – The design engineer should describe the intended sequence of major soil disturbing activities. **The narrative from the Traffic Control Plans works well in this section.**

**1.b. Area Estimates** – The design engineer should provide the **total area of the project in acres** and the **total area to be disturbed in acres.**

**1.c. Runoff Data (Old - should be deleted)**– Unlike the US Environmental Agency’s NPDES SWPPP requirements, **The FDEP permit does not require the documentation of runoff coefficients in the SWPPP. This section should not be included in SWPPP developed after May 1, 2003.**

**New 1.d. Quality of existing stormwater discharge - The information necessary for this section should provide a description of the soil within the project limits and the quality of stormwater discharge from the site prior to construction.** The information from the project’s soil boring data should be used to provide the reader with the soil information. In order to address the quality of the stormwater discharge, simply state whether or not the existing stormwater runoff is being treated prior to being discharged into surface water. This could be treatment as simple as runoff sheet flowing across a vegetated slope to something as complex as pollution control structures in existing drainage structures. The Design Engineer should be using the information about existing conditions to help determine what types of erosion control devices should be called out for use during construction. For instance, if the existing conditions are such that storm water runoff is creating gullies and washouts in slopes along the roadway, the designer should be considering temporary stabilization during construction and permanent stabilization that will alleviate this condition after construction.

**1.e – Site Map** – The information that is supposed to be shown on the site map includes – drainage patterns, approximate slopes after major grading activities, areas of soil disturbance, outline of all area that are not to be disturbed, location of all major structural and non-structural controls, the location of expected stabilization practices, wetlands and surface waters, and locations where stormwater may discharge to a surface water or municipal separate storm sewer systems (MS4s). Direct the reader to where these items can be found in the construction plans. In the event the information is not depicted on the construction plans, a brief written description will suffice.

**New 1.f Outfall Information** – The Design Engineer should provide the following information for each discharge point (a discharge point is an outfall or the location where the Stormwater runoff from the roadway enters a body of water):

- a. Size of area that drains to discharge point.
- b. Description of the existing drainage feature (pond with outfall, swale, French drain with outfall, etc...).
- c. Name of the water body that receives the Stormwater runoff from the drainage area.
- d. Longitude and latitude of the discharge point.

## 2.0 CONTROLS –

**2.a Erosion and Sediment Control** - For this section, The permit states “A detailed description of all controls, Best Management Practices (BMPs) and measures that will be implemented at the construction site for each activity identified in the intended sequence of major soil disturbing activities section. Provide time frames in which the controls will be implemented”. Currently, Section 104 of the Standard Specifications for Roadway and Bridge Construction states that the Contractor shall provide this information. The PPM identifies the Contractor as the responsible party for this information as well. For this section, provide the phasing of construction as per the Traffic Control Plans. In the event the Contractor changes it, the Contractor will be responsible for updating this section as well.

**2.a.1 – Stabilization Practices** – Please see the PPM for suggested language for this section.

There are two types of stabilization practices that should be addressed, temporary and permanent. Temporary stabilization should be used when an area is going to be reworked several times during the life of the construction project. A method of payment for temporary stabilization and an estimated quantity may be needed for bidding purposes.

Permanent stabilization should identify the method that will be used to stabilize all areas within the project limits that were cleared and grubbed at the start of construction.

**2.a.2 Structural Practices** - Please see the PPM for suggested language for this section.

There are two types of structural controls as well. Again, for temporary structural controls, a method of payment and an estimated quantity may be needed for bidding purposes.

Permanent structural controls include all drainage structures that provide treatment to the storm water runoff.

The FDEP Construction Stormwater Pollution Prevention Plan Template found on their website provides a more in depth discussion as to the information required for sections 2.a.1 and 2.a.2.

**2.b Storm Water Management** – Provide a description of the permanent stormwater management system that is being constructed.

## 2.c Other Controls -

**The Contractor shall practice good housekeeping by instituting a clean orderly, construction site. The following controls shall be implemented to further reduce pollution at the project site:**

**2.c.1 Discharge of Materials to Surface Waters** - No construction material shall be discharged to Waters of the State unless authorized by a Section 404 permit and/or the State of Florida Environmental Resource Permit. All construction debris shall be disposed of in an approved upland location. Building material shall not be disposed of in wetlands or buried on-site. (This language was not required when NPDES was a federal permit because NPDES was part of the US Environmental Protection Agency’s Section 404 Clean Water Act. When the permitting was delegated to FDEP, it was added in order to identify the Section 404 permit).

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**2.c.2 Off-Site Vehicle Tracking & Dust Control** - The Contractor shall take measures to insure the cleanup of sediments that have been tracked by vehicles or have been transported by wind or storm water about the site or onto nearby roadways.

Stabilized construction entrances and construction roads, if appropriate, shall be implemented in order to reduce offsite tracking.

Loaded haul trucks shall be covered with tarpaulin. Excess dirt on the road shall be removed daily.

**2.c.3 Waste Disposal** - The Contractor shall demonstrate the proper disposal of all construction waste generated within the project limits. Waste may include, but not be limited to, vegetation from clearing and grubbing activities, packaging materials, scrap building materials, litter from traveling public, sewage from sanitary facilities, herbicides and pesticides and their containers, and hydrocarbon products. Contractor shall designate a waste collection area onsite and delineate the area on the SWPPP Site Map.

Sanitary/Septic Facilities shall be provided and maintained in a neat and sanitary condition, for the use of the contractor's employees as necessary to comply with the requirements and regulations of the State and local boards of health. A licensed Sanitary Waste Management Contractor as required by State Regulations will collect all sanitary waste from portable units.

The contractor will provide litter control and collection within the project limits during construction activities. Contractor will provide an adequate number of litter containers with lids at the staging, stockpile and field office areas. Waste collection will be scheduled so that containers are emptied prior to overflow. Spilled litter containers will be cleaned up immediately.

**2.c.4 Fertilizers and Pesticides** - The application and handling of herbicides and pesticides shall be in compliance with the manufacturer recommended method and in accordance with FDOT Standard Specifications for Road and Bridge Construction.

Herbicide and Pesticides shall be stored onsite in their original containers with product label intact.

**2.c.5 Toxic/Hazardous Material Handling** - Contractor shall provide equipment necessary to contain and clean up spills of hazardous materials, including petroleum products. Spills shall be contained and cleaned up immediately after they occur. Spilled material and the equipment used to clean up the spill shall not come in contact with surface waters or be introduced into storm water. Disposal of surplus product will be done according to manufacturer recommended method.

Contractor shall provide a project specific Hazardous Materials Spill Control Plan in order to address the handling of hydrocarbon and Hazardous Materials.

Petroleum products shall be stored in covered areas with secondary containment surrounding container.

Toxic/Hazardous Materials exposed during construction activities shall be handled as per the FDOT Standard Specifications for Road and Bridge Construction.

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**3.0 Maintenance** - The Contractor shall provide a plan for maintaining all erosion and sediment controls throughout construction. The Maintenance plan shall at a minimum, comply with the following:

(Please see the PPM Exhibit SWP-3 for examples of the language that should be included. List maintenance requirements for the erosion control devices that are proposed for your project.)

**4.0 Inspections** - Qualified personnel shall inspect the following items at least once every seven calendar days and within 24 hours of the end of a storm that produces 0.50 inches or more of rain. Where sites have been permanently stabilized, inspections shall be conducted at least once every month. The contractor shall also inspect that controls installed in the field agree with the latest stormwater pollution prevention plan. The following items will be inspected:

- Points of discharge to waters of the United States.
- Points of discharge to municipal separate storm sewer systems.
- Disturbed areas of the site that have not been finally stabilized.
- Areas used for storage of materials that are exposed to precipitation.
- Structural controls.
- Stormwater Management Systems.
- Locations where vehicles enter or exit the site.

The contractor shall initiate repairs within 24 hours of inspections that indicate items are not in good working order. If inspections indicate that the installed stabilization and structural practices are not sufficient to minimize erosion, retain sediment, and prevent discharging pollutants, the contractor shall provide additional measures, as required by the FDEP permit.

### 5.0 Non-Stormwater Discharges

**The following statement is mandatory:** If contaminated soil or groundwater is encountered during construction, the Contractor is to cease operations in that area. The Contractor shall contact the FDOT Project Engineer who will notify the District Contamination Impact Coordinator, Amy Sirmans, at (954) 777 – 4286.

(Designers – please take a minute to stop and think about construction activities that might generate non-stormwater discharges and develop a statement for this section of the SWPPP that requires the Contractor to provide an erosion control plan to address the activity. Mast arm foundations require slurry that can generate quite a mess if it is not contained. Culvert extensions may require the contractor to maintain flow and this may require the installation of a diversion channel)

**It is the Contractor's responsibility to develop a dewatering system that provides pretreatment of effluent prior to discharge into adjacent surface waters.** The Contractor's dewatering method must meet all Federal, state, and local laws, rules, and regulations concerning this practice including the use of permitted outfall structures. It is the Contractor's responsibility to coordinate and apply for a Dewatering Permit with the appropriate Water Management District.

It is the Contractor's responsibility to designate an area within the project limits for concrete truck washout activities. This area shall provide erosion control devices that prevent contact between concrete washout materials and Stormwater and/or surface waters.

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**6.0 Contractor Submittal (NEW SECTION ADDED BY DISTRICT IV)** - It is the responsibility of the Contractor to develop an Erosion Control Plan that provides a detailed description of all erosion and sediment controls, Best Management Practices, and measures that will be implemented at the construction site for each activity identified in Section 1.b. Sequence of Soil Disturbing Activities. Contractor is responsible for providing timeframes in which the controls will be implemented, maintained and removed. This information shall be kept at the project field office in order for the project to be considered in compliance with the FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Sites

The Contractor is responsible for ensuring the following items are on site:

1. Copy of the Stormwater Pollution Prevention Plan with the original certification signatures.
2. Copy of the Contractor's Erosion Control Plan.
3. Hazardous Spill Control Plan with guidelines on contacting the 24 hour emergency response program for hazardous material spills. This shall include copies of Discharge Notifications that have occurred within the project limits.
4. Completed inspection forms.

The Contractor is responsible for submitting the following items to Florida Department of Environmental Protection in order for the NPDES Permit to be processed:

1. FDEP Form 62-621.300(4)(b) – Notice of Intent to use Generic Permit for Stormwater Discharge from Large and Small Construction Activities. This Notice of Intent shall be signed by the Contractor.
2. The Permitting fee of \$300.00 for projects that clear and grub more than five acres, \$150.00 for projects that clear and grub between 1 and 5 acres.

It is the Contractor's responsibility to submit the NOI to FDEP no less than 48 hours prior to the start of construction. Contractor shall be responsible for providing proof of mail date to the Project Administrator.

## IV. Key Agency Permitting Components

### A. *Dredge & Fill Permit -U.S. Army Corps of Engineers:*

- Coordination with State Historic Preservation Office (SHPO) – Clearance letter(Archeological/Historical issues).
- Coordination with U.S. Fish and Wildlife Service (USFWS) - Clearance letter (protected Species issues), Section 7 Biological Assessments for manatees, etc.
- Coordination with National Marine Fisheries Service (NMFS) - Essential Fish Habitat (EFH) issues, Section 7 Biological Assessments for Johnson seagrass, etc.
- Channel dredging under new bridge to meet horizontal clearance requirements. Conduct Jurisdictional Determinations -submit ACOE data sheets.
- Wetland Rapid Assessment Procedure / Uniform Wetland Mitigation Assessment Method.
- Mitigation: Senate Bill 1986/ Available County mitigation projects.
- Seagrass / Mangrove / Wetland issues.
- Respond to public comments.

## Environmental Permit Information Manual

- Prepare Public Notice for ACOE (if necessary).
- Need Water Quality Certification from Water Management District.
- Agricultural lands / ditches -coordinate with Natural Resource Conservation Service (if necessary)

### **B. Bridge Permit -U.S. Coast Guard:**

- Navigable Waterways as determined by Federal Highway.
- Coordinate w/ USCG to determine the Fixed Bridge Clearance Criteria established for a geographical area (i.e. horizontal, vertical).
- Coordinate with USCG in Miami Offer to draft Public Notice.
- Coordinate with NMFS, USFW and SHPO.
- Need to obtain Water Quality Certification.
- Submit fender system plans I details, staff gauge details, and bridge navigational lighting plan.

### **Environmental Resource Permit (ERP) - SFWMD / SJRWMD:**

- Review FDOT and WMD archives for past permits.
- Determine classification of receiving water body (OFW, Aquatic Preserve, Class I, II, and III).
- Water Quality requirements.
- Floodplain encroachment requirements.
- Drawdown impacts affecting wetlands.
- Water Quantity discharge criteria.
- Submit erosion and turbidity controls.
- Discuss construction methodology.
- Assess Secondary/ cumulative/ Temporary impacts.
- Mitigation: Senate Bill 1986 / Available County mitigation projects.
- SHPO clearance letter
- Coordinate with Florida Fish and Wildlife Conservation Commission (FWC). Seagrass / Mangrove / Wetland issue Coordinate with FDOT for FDEP Submerged Lands Easement / Trustees.
- Internal improvement Trust Fund (TIITF).
- Special Basin Criteria (i.e. C-51 Basin).
- Review offsite inflows. Mixing zones.
- English unit equivalents.
- Datum: 1929 NGVD.

### **Irrigation Water Use Permits -SFWMD / SJRWMD:**

- Contractor responsible for well drilling permit or dewatering permit.
- Review to see if project is located in a Reduced Threshold area.
- Irrigation acreage.
- Crop type.
- Average Daily water use and Maximum Day water use (gallons).
- Proximity to wetlands.
- Proximity to contamination sites.
- Well dimensions.
- Pump specifications.
- Well locations/water source locations.

## Environmental Permit Information Manual

### ***E. Right-of- Way Occupancy -SFWMD:***

- Review SFWMD and FDOT archives for past permits -may only need to modify existing permit.
- Design should include considerations for maintaining maintenance access.
- Staging areas will likely be needed at bridge locations.
- Assess impacts due to permanent/temporary structures (i.e. light/signal poles/conduits, signs, culverts, outfalls, end treatments, guardrails, mast arms, bridges, culvert extensions, etc.).
- 40-foot maintenance berm is required along WMD canals.
- Design should allow maintenance canal dredging under bridges.
- Canal capacity issues will need to be identified and addressed.
- Process waiver requests.
- English unit equivalents.

### ***F. Coastal Construction Line (CCL) -Florida Department of Environmental Protection:***

- Confirm CCL with FDEP; maps located in FDOT. Sea turtles/lighting issues.
- Erosion control.
- May require modifications to the lighting and signalization plan of an existing roadway.
- Coast line vegetation management.

### ***G. ROW Occupancy / Drainage Connection / Construction -Local Drainage Districts:***

- Review drainage maps available at FDOT for jurisdiction.
- Identify and review Drainage District's requirements available at FDOT.
- Assess outfalls into local Drainage District receiving waters.
- Assess/coordinate impacts due to permanent/temporary structures within local Drainage Districts (i.e. light/signal poles/conduits, signs, culverts, outfalls, end treatments, guardrails, mast arms, bridges, culvert extensions, etc.).
- Provide access openings to local Drainage District lands.
- Canal capacity issues.

### ***H. Wetland Resource License -Broward County Department of Planning and Environmental Protection (DPEP):***

- Mitigation: Senate Bill 1986 / Available County mitigation projects.
- Coordinate wetland assessment with DPEP using the Wetlands Benefit Index (WBI).
- Jurisdictional determinations.
- See list under Dredge & Fill Permit -U.S. Army Corps of Engineers and Environmental.
- Resource Permit (ERP) -SFWMD / SJRWMD.

### ***I. Surface Water License -Broward County Department of Planning and Environmental Protection (DPEP):***

- See list under Environmental Resource Permit (ERP) -SFWMD / SJRWMD.

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### ***J. Tree Removal License within Broward County:***

- Verify which permit entity or entities (Broward County and/or Municipality) encompass the project limits.
- Obtain a Certified Tree Survey. All surveyed trees shall be tagged with plastic ties and metallic tags that include their numbers for later identification (the ties embracing a tree branch or a tree trunk shall be loose-fitting allowing for a minimum of 3" of tree trunk diameter growing until the time of construction).
- Include a Certified Arborist to identify the species and determine the health and shape of the tree.
- Prior to the application for a Tree Removal License with the county and/or municipality, schedule a field review with the Tree Permits Coordinator with FDOT -District 4.
- Coordinate with Broward County and/or municipality on their Tree Preservation Ordinance. Coordinate with Tree Permit Coordinator to any meeting involving relocation and/or mitigation of trees.

## **V. RESPONSIBILITIES**

### **Consultant Permitting Responsibilities:**

- Attend scoping meeting.
- Conduct initial permit evaluation.
- Fill out permit involvement form and submit to FDOT for evaluation.
- Set up and conduct agency field reviews and meetings/coordinate with FDOT.
- Prepare and submit preliminary permit package to FDOT for review.
- Prepare and submit final permit package to FDOT for records and for signatures.
- Prepare and submit final permit package to agencies.
- Prepare and submit all requests for additional information to agencies.
- Track and obtain all permits.
- Submit all original permits to FDOT within one month of production date.

### **FDOT'S Permitting Responsibilities on Consultant Projects:**

- Attend scoping meeting.
- Assist initial permit evaluation.
- Review permit involvement form.
- Attend agency field reviews/meetings if necessary.
- Review preliminary permit package.
- Provide permit application fee (LPO or Purchase Order).
- Sign permit applications.
- Provide assistance to consultants during permit process.
- Prepare permit transmittal memorandum with permit attached.

## VI. Environmental Notes and Tips

Depending on the environmental issue, several types of environmental notes and construction methodology tips should be included in the environmental permits and/or design plans to assist the contractor so that environmental impacts can be avoided. The following list of recommended notes or tips which, if appropriate, should be implemented on the project.

### 1. Blasting

- If the contractor elects to blast or use explosive devices, 90 days notice must be given to the District prior to this construction measure. The contractor is required to obtain all necessary permits/approvals from all applicable agencies. The contractor must follow blasting protocol and be responsible for all additional costs associated with this activity. In addition, the contractor shall secure the services of a consultant expert in the area of explosives to review and approve the proposed blasting plan.

### 2. Clearing and Grubbing

Preservation of existing vegetation is one of the best measures of erosion control on a construction site. Preservation of existing native vegetation within the ROW is an FDOT policy. Typical sections usually depict clearing and grubbing from ROW to ROW. In most cases, this is not necessary. General clearing and grubbing within the clear zone is required for safety. If there is more ROW outside of the clear zone, you may want to call out different clearing and grubbing activities on the typical section. The following notes can assist in keeping vegetation for erosion control and provide traffic screening for adjacent property owners.

- Selective clearing and grubbing should be utilized in areas where wetlands or native vegetation is present. Any undesirable vegetation found in wetland areas such as, but not limited to, Brazilian Pepper, Australian Pines and Maleleuca shall be saw cut at grade with hand held equipment and the sawn stump surface treated with an approved herbicide. The herbicide shall be hand brush applied or applied with a low volume spray applicator completely to and including the cambium layer the same day as cutting. The cut trees shall be disposed of off-site in an approved manner per local, State and Federal regulations. Undesirable woody vegetation found in standing or flowing water must be cut 1 foot above the existing or anticipated level of standing or flowing water and treated with an approved aquatic herbicide.
- The Contractor shall remove exotic nuisance vegetation as per the Special Provisions. Native vegetation shall remain in place as will desirable ornamental species. Removal of exotic pest plants shall include the removal of the root system.
- Contractor shall operate equipment in a manner that does not impact the tree canopy within the project limits.

### 3. Turbidity and Erosion Controls

- Turbidity control structures or innovative techniques designed by the contractor shall be used to contain turbidity for all work on, adjacent to or over waterways or wetlands. These items shall be placed in such a manner as to not restrict boat traffic or impede movement of marine animals.

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- A water quality monitoring program shall be implemented by the engineer during construction activities. Mixing zone areas have been located on the permit sketches. The engineer shall monitor water quality and turbidity from these points.
- Existing drainage structures and pipes within the construction limits shall remain in place unless otherwise noted. For the proposed storm water sewer system, the contractor is responsible for keeping inlets clean of milling material, limerock, and debris during construction at no additional cost to the Department.
- The Contractor shall employ construction methods and devices such as turbidity curtains and silt screen where necessary in order to comply with all State and Local Water Quality Standards.
- ✓ **TIP:** Where turbidity could become an issue during construction within a waterway or wetland, it is recommended that mixing zones be requested an average of 100' upstream and downstream of the point of construction. These points are designated on the plans and permit sketches and approved by the environmental agencies as part of the permit approval process. Turbidity monitoring tests would then be taken from these locations instead of near the construction activity.
- ✓ **TIP:** When desilting existing pipes/culverts, turbidity barriers must be placed at the outfall location to prevent turbidity violations. It is recommended that silt be removed landward of the outfall. If silt is pushed out through the outfall, this can result in significant turbidity effects, and seagrass or wetlands could be impacted. All silt that is pushed through an outfall must be removed.
- ✓ **TIP:** Floating turbidity barriers shall not be placed across canals which could effect boating traffic or manatees.

### 4. Pollution Controls

- During construction any generated debris shall be confined to the immediate construction area. Appropriate screens and barriers shall be erected to protect pedestrians, boating, and vehicular traffic. No disposal of debris is allowed within the waterway or wetland area. When working above any waterway or wetland, mechanisms to prevent falling debris from landing in the waterway or wetland must be provided.

### 5. Wetland and Seagrass Avoidance and Minimization

- The Contractor is cautioned regarding the presence of seagrass within the vicinity of the project. It is the responsibility of the contractor to stage, store and move barges and vessels in a manner that does not impact seagrass beds or displace bottom material. The contractor shall be held responsible for any damage to seagrass beds or unauthorized displacement of bottom material.
- No water jetting will be permitted within 15 feet of any seagrass location.
- Construction involving work adjacent to wetlands, or seagrass beds shall be done from the landward side only so as not to encroach into these areas.
- The contractor shall delineate with staked silt fence the boundaries of the wetlands that are to remain undisturbed within FDOT ROW. The staked silt fence shall function as erosion control as well as delineate wetlands. NO construction activities, including clearing and grubbing is permitted in these areas.

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### 6. Threatened and Endangered Species

- The contractor is notified that the West Indian manatee, a federally listed endangered species, is known to be present within the project limits. Turbidity barriers shall be placed in such a manner that will not impede movement of any manatee. The contractor will be required to have a manatee spotter on sight at all times. If a manatee is sighted within 100 yards of the project area, the contractor must ensure protection of the manatee and shall implement all appropriate precautions. Please see attached permit conditions for required manatee activities.
- The Contractor shall provide a minimum of 4 Manatee Awareness signs, post mounted at each quadrant.
- In order to avoid impacts to the sea turtle nesting beach, the contractor shall not use the beach or dune area for staging or stockpile. The Contractor shall not perform night work during Sea Turtle Nesting Season (March – October) to avoid impacts to sea turtle hatchlings.
- ✓ **TIP:** Typically, Manatee provisions are included in the Environmental Resource Permit by the Water Management Districts. If the work in your project is considered maintenance and is exempt from permitting, make sure you include the Special Provision for Subarticle 7-1.4, Endangered Species – Manatees in your Specification package.
- ✓ **TIP:** Gopher Tortoises need to be relocated prior to construction. In the event Gopher Tortoises have been found within your project limits, coordination with Environmental Management needs to occur prior to the start of construction.
- ✓ **TIP: Johnson Sea Grass** – In general, sea grasses can be impacted if no other means of avoidance or minimization can be implemented. However, Johnson Sea grass because of its status as a listed species requires far more coordination than the Environmental Resource Permit application process. Early coordination with District 4 Drainage personnel is necessary.
- ✓ **TIP:** As the design Engineer you need to include a pay item note for Manatee signs.

### 7. Navigable Waterways

- At no time during repairs shall the waterways be closed to navigation without prior notification and approval of the Coast Guard Marine Safety Office in Miami (MSO, Miami). All construction equipment must be marked in accordance with U.S. Coast Guard “navigation Rules (CG-169)” and be well removed from the channel when engaged in construction activities. A copy of the contractor’s plan, schedule and sequence of operations approved by the engineer, shall be submitted to the U.S. Coast Guard for approval 30 days prior to starting any work over or in the waterway.

### 8. Staging Areas

At times the plans do not fully depict the adjacent land features that may limit the Contractor’s Access to the construction location. For example, the Sebastian Inlet Bridge was surrounded by State Park property limiting the Contractor’s ability to stage and store materials within FDOT ROW.

- Dredging, filling or shading wetlands or surface waters for construction access, staging or storing in areas which are not permitted to be impacted are not authorized. It is the contractor’s responsibility to have these areas permitted for impact by all Federal, State and Local agencies with jurisdiction over these areas.

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- The Contractor shall coordinate selection and review of any proposed staging areas associated with this project with the District Construction Environmental Coordinator (DCEC) at 954-777-4325. The Contractor shall be responsible for contacting the DCEC at least 72 hours prior to staging. The staging area shall be restored to its original condition or better at no additional cost to the Department.
- The contractor must submit barge storage locations and barge loading areas, not including temporary work platforms, to the Project Engineer and the District Environmental Office for biological clearance a minimum of two weeks prior to any work activities. If the contractor chooses to use temporary work platforms, it is the responsibility of the contractor to obtain all permits and/or modifications from all applicable regulatory agencies.
- ✓ **TIP:** Using the Florida Geographic Library, a construction plan sheet entitled Environmental Plan Sheet, used an aerial of the bridge and park to show areas of concern for construction purposes. This sheet was also used to include key environmental notes.

### 9. Drainage

- The contractor is responsible to scarify the top 6" layer of soil of the swale areas prior to placement of final sod.
- ✓ **TIP:** The swale areas tend to get compacted during construction. In order to promote percolation in the soil, the top layer should be scarified.

### 10. Dewatering

- If sheeting, shoring or dewatering including wellpoints are necessary and utilized, the cost shall be included in the related bid item for the work being done.
- It is the responsibility of the contractor to obtain all necessary dewatering permits.

### 11. Culvert Extensions/Replacements and Endwalls

The area in front of the structure can be cleared to maintain drainage flows under FDEP maintenance exemption. Make sure there is enough room for the contractor to work from the shoulder. A general note should instruct the contractor that work involved in setting an endwall or constructing culvert extensions shall be done from the shoulder in order to avoid impacts to wetlands.

- In order to avoid impacts to mangroves adjacent to the FDOT ROW, the Contractor shall complete all work from the existing maintained shoulder. Lateral tree trimming of mangrove branches for clearance purposes and equipment maneuvering adjacent to the roadway is allowed.
- Only mangroves directly in front of the endwall shall be removed for drainage maintenance purposes.
- ✓ **TIP:** Provide a pay item note for furnishing, installing and removing temporary crossdrains and diversion ditches. This will also include the cost of providing temporary stabilization of the diversion ditch.
- ✓ **TIP:** It is imperative that the designer coordinate with the agency/owner of the waterway which is crossing under FDOT roadways. The flow of water may need to be maintained during construction. Construction methodology and potential permitting may need to be considered when dealing with culvert extensions or culvert replacements. Notes may be required, stating that flows in the waterway must be maintained at all times.

# **Appendix A**

## **Permit Review Checklists**

# Environmental Permitting Information Manual

## **PRELIMINARY PERMIT REVIEW CHECKLIST (A/E 27201)**

### **DRAINAGE PERMIT REQUIREMENTS:**

1. Construction plans that include the Key Sheet, Typical Sections, Plan & Profile Sheets, Drainage Structure & Detail Sheets, and Cross-Sections. (1-set)
2. Drainage Report that includes a description of the existing and proposed drainage conditions, and all water quality and water quantity calculations as necessary. Please refer to the example outline in the Appendix. (1-set)
3. Drainage Map. (1-set)
4. Aerial Photos,(1-set)

### **DREDGE & FILL PERMIT REQUIREMENTS:**

1. Dredge and Fill sketches on 8.5" x 11" sheets, which depict all permanent and temporary work activities. Sketches should include Plan and Cross Section views, to scale or completely dimensioned drawings, and Dredge and Fill quantities (acres and cy). Please refer to the example sketches in the Appendix. (1-set)

### **BRIDGE PERMIT REQUIREMENTS:**

1. Bridge Sketches showing existing and proposed vertical and horizontal clearances. The sketches should include Plan & Profile and Cross-Sectional views of the bridge. Please refer to the example in the Appendix. (1-set)
2. Aerial Photograph of the project. (1-set)

### **TREE REMOVAL PERMIT REQUIREMENTS:**

1. Site Plan with Location Map and plan views. (1-set)
2. Index Chart including the Tag Number, Botanical and Common Name, Station and offset, DBH, Canopy, Native (yes or no), and label to be Relocated, Removed, or to Remain. Please refer to the examples in the Appendix. (1-set)
3. Landscape Plans (if applicable). (1-set)

### **IRRIGATION WATER USE PERMIT REQUIREMENTS:**

1. Plan Sheets showing the location of wells or water source and the areas to be irrigated. (1-set)
2. Calculations indicating the project area, irrigation area, the projected daily water use, and the maximum day water use. (1-set)
3. Completed copies of Tables A, B, and C as necessary. Please refer to the Tables and Forms in the Appendix. (1-set)

### **COASTAL CONSTRUCTION LINE PERMIT REQUIREMENTS:**

1. Permit drawings indicating the Coastal Construction Line, permanent DEP Monuments, and the work activities (permanent and temporary). (1-set)
2. Construction Plans including Roadway, Drainage, and Structural information. (1-set)

### **RIGHT-OF-WAY OCCUPANCY PERMIT REQUIREMENTS:**

1. Construction Plans pertaining to location if impact to Agency Rights of Way. (1-set)
2. Permit sketches on 8.5" x 11". (1-set)

# Environmental Permitting Information Manual

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## **FINAL PERMIT SUBMITTAL CHECKLIST (A/E 27202)**

### **DRAINAGE PERMIT REQUIREMENTS:**

1. Revised construction plans that include the Key Sheet, Typical Sections, Plan & Profile Sheets, Drainage Structure & Detail Sheets, and Cross-Sections. Submit (1) signed and sealed (each sheet) and 4-copies (6 copies if in Broward County)
2. Revised Drainage Report that includes a description of the existing and proposed drainage conditions, and all water quality and water quantity calculations as necessary. Submit 5 **signed and sealed** (first sheet only, 3 copies if in Broward County).
3. Drainage Map. (5-sets. 8 copies if in Broward County)
4. Aerial Photos (1-set)

### **DREDGE & FILL PERMIT REQUIREMENTS:**

1. Dredge and Fill sketches. Submit **2 signed and sealed** (each sheet) and **4-copies** (6 copies if in Broward County).

### **BRIDGE PERMIT REQUIREMENTS:**

1. Dredge and Fill sketches. (4-sets with one signed and sealed on each sheet)
2. Aerial Photograph of the project. (3-sets)
3. Environmental Document. (2-sets)

### **TREE REMOVAL PERMIT REQUIREMENTS:**

1. Site Plan with Location Map and plan views. (1-set signed and sealed per agency and one copy)
2. Final Index Chart. (1-set signed and sealed per agency and one copy)
3. Landscape Plans (if applicable). (1-set signed and sealed per agency and one copy)

### **IRRIGATION WATER USE PERMIT REQUIREMENTS:**

1. Final Plan Sheets. (5-sets)
2. Final Calculations. (5-sets)
3. Completed Tables A, B, and C as necessary. (5-sets)

### **COASTAL CONSTRUCTION LINE PERMIT REQUIREMENTS:**

1. Completed Permit Drawings. (2-sets signed and sealed and one copy)
2. Construction Plans. (2-sets signed and sealed and one copy)

### **RIGHT-OF-WAY OCCUPANCY PERMIT REQUIREMENTS:**

1. Revised Construction Plans. (5-sets signed and sealed on each sheet and one copy)
2. Drainage Report. (2-sets) needed for local drainage districts only.
3. Permit sketches on 8.5" x 11". (5-sets)

\*\* Submit (1) complete set to FDOT for FDOT records.

# Appendix B

Additional Drainage Permit Information

## SUMMARY OF WATER TABLE AND CONTROL ELEVATIONS

BASIN NUMBER AND/OR POND/DITCH LOCATION	WET SEASON WATER TABLE OR CANAL CONTROL ELEV. (FT)	PROPOSED POND/DITCH BOTTOM ELEVATION (FT)	DISTANCE FROM WATER TABLE TO POND/DITCH BOTTOM (FT)	WATER QUALITY ELEVATION (FT)

B1

# WATER QUALITY SUMMARY TABLE

## ONSITE AREAS ONLY

BASIN NO.	TOTAL AREA (AC)	IMPER. AREA (AC)	INCREASED IMPER. AREA (AC)	% IMPER.	LAKES (AC)	TREATMENT VOL.REQ'D TOTAL AREA (AC-FT)	TREATMENT VOL.REQ'D ADD.PAV'T (AC-FT)	TREATMENT VOLUME PROVIDED (AC-FT)	% TREATMENT PROVIDED TOTAL AREA	% TREATMENT PROVIDED ADD. PAV'T
<b>Total</b>										

B2

# WATER QUALITY SUMMARY TABLE

## OFFSITE AREAS INCLUDED

B3

BASIN NO.	TOTAL AREA (AC)	IMPER. AREA (AC)	INCREASED IMPER. AREA (AC)	% IMPER.	LAKES (AC)	TREATMENT VOL.REQ'D TOTAL AREA (AC-FT)	TREATMENT VOL.REQ'D ADD.PAV'T (AC-FT)	TREATMENT VOLUME PROVIDED (AC-FT)	% TREATMENT PROVIDED TOTAL AREA	% TREATMENT PROVIDED ADD. PAV'T
<b>Total</b>										

# WATER QUANTITY SUMMARY

## OFFSITE AREAS INCLUDED

BASIN NUMBER	EXISTING ROW + OFFSITE AREA (ACRES)	EXISTING ROW + OFFSITE DISCHARGE (CFS)	PROPOSED ROW AREA (ACRES)	DISCHARGE COEFFICIENT	PROPOSED ROW ALLOWABLE DISCHARGE (CFS)	TOTAL ALLOWABLE DISCHARGE (CFS)	POST-DEVELOPMENT DISCHARGE (CFS)
<b>Total</b>							

B4

# CONTROL STRUCTURES TABULATION

BASIN NO.	CONTROL STRUCT. NUMBER	STATION	STRUCT. TYPE	GRATE ELEV. (FT)	WEIR ELEV. (FT)	WEIR LENGTH (FT)	V-NOTCH SIZE (IN)	V-NOTCH INV. ELEV. (FT)	RECEIVING WATER

B5

# 100-YEAR FLOODPLAIN ANALYSIS RESULTS

BASIN NUMBER	WET SEASON WATER TABLE (FT)	100 YEAR PEAK FLOOD STAGE (FT)	EXISTING VOLUME (CY)	POST DEVELOPMENT VOLUME (CY)	CHANGE IN VOLUME (CY)	% INCREASE IN FLOODPLAIN VOLUME
<b>Total</b>						

B6

**GENERAL OUTLINE OF DRAINAGE REPORT  
(TO BE SUBMITTED TO THE SFWM DISTRICT)**

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**I INTRODUCTION**

- a. Project limits and location.
- b. Description of existing conditions.
- c. Description of why the project is being done (ie. safety improvements, traffic congestion etc.).
- d. Proposed project description.

**II CRITERIA GOVERNING THE PROJECT DESIGN**

- a. Criteria established from presubmittal meetings with SFWMD or other agencies involved in the project (include copies of minutes from all referenced meetings as attachments).
- b. Description of governing water quality and water quantity criteria for Water Management Districts and Local Drainage Districts (project specific).
- c. Provide copies of any existing regulatory permits/staff reports which exist within the project limits.

**III BASIN DESCRIPTION**

- a. General description of the limits of each basin (provide drainage map) along with information relative to the design of each basin and ultimate receiving water. Provide a description of how water quality, water quantity, and 100 year floodplain requirements will be met for each basin.
- b. Summary of water table and control elevations: provide wet season water table information for each basin (Table of results showing water table, elevation of bottom of pond/ditch, distance from water table to bottom of pond / ditch (1' separation required)). (see example table)

**IV SUMMARY TABLES (RESULTS)**

- a. Water quality summary table indicating: basin number, land use breakdown, what is required, what is provided, for onsite areas (areas within existing and proposed R-O-W). (See example table)

- b. Water quality summary table indicating same information as above except add offsite areas (areas which drain into our R-O-W which are not owned by FDOT). (see example table).
- c. Water quantity summary table indicating: basin number, existing R-O-W area, existing R-O-W discharge, proposed R-O-W area, discharge coefficient, proposed R-O-W allowable discharge, total allowable discharge, and post development discharge (see example table).
- d. Water quantity summary table as mentioned above except adding the offsite areas (see example table).
- e. Floodplain analysis table indicating: basin number, wet season water table, 100 year peak flood stage, existing volume, post-construction volume, change in volume, and the percent increase in floodplain volume (see example table).
- f. Control structure table for each basin indicating: basin number, control structure number, Control structure type, weir elevation, weir length/dimensions, bleeder type/size, bleeder invert elevation, receiving water.

**V DESCRIPTION OF HARDSHIP CASE (IF NECESSARY)**

- a. Description of other methodologies considered in order to meet District criteria.
- b. Description of why certain requirements could not be met do to conditions beyond our control (proof of hardship) (ie. poor percolation, R-O-W constraints, utility conflicts, adjacent development, existing topography, contamination, etc.).
- c. Describe storage and discharge compensating measures which intend to offset any deficiencies in meeting drainage district requirements.

**VI APPENDIX SHOWING BACK-UP CALCULATIONS**

- a. Calculations for the required water quality volume and the volume provided for each basin (ie. french drain sketch),
- b. Calculations indicating soil storage values and/or CN values for each basin in the pre and post conditions .
- c. Stage vs storage calculations.
- d. Stage vs discharge calculations.

- e. Flood routing results including nodal diagrams.
- f. Pond recovery calculations (percolation or bleeder sizing calculations).
- g. Description of key assumptions (ie. water table elevations, contamination locations).
- h. Percolation/exfiltration test results, soil borings.
- I. Tailwater elevation analysis.
- j. Other pertinent calculations which back-up your results.

# Appendix C

Additional Irrigation Water Use Permit  
Information



Form 0645-W01  
Rev. 03/94

# RC-1W APPLICATION FOR A WATER USE PERMIT

FOR SFWMD USE ONLY

APPLICATION NO. \_\_\_\_\_

## ALL PERMITS: SECTION I - SITE INFORMATION

SFWMD ONLY

N A I M

X						
	A	LOCATION SKETCH IS SUBMITTED AS ITEM I-1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	B	AERIAL PHOTOGRAPH IS SUBMITTED AS ITEM I-2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	C	WETLANDS				
		EXISTING COVER IS SUBMITTED AS ITEM I-3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		PROPOSED PRESERVATION TECHNIQUES ARE SUBMITTED AS ITEM I-4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		WETLAND CONTROL ELEVATION TABLE IS SUBMITTED AS ITEM I-5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ALL PERMITS: SECTION II - PROJECT INFORMATION

	A	GENERAL INFORMATION				
		MAP OF PROJECT IS SUBMITTED AS ITEM II-1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		START DATE OF WATER USE IS: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	B	SURFACE WATER MANAGEMENT				
		THE PROJECT IS PERMITTED, PERMIT NUMBER _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		THE PROJECT IS EXISTING BUT UNPERMITTED. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		A SWM PERMIT IS APPLIED FOR, APPLICATION NUMBER _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		A SWM PERMIT IS NOT REQUIRED. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	C	RIGHT OF WAY OCCUPANCY				
		PROJECT IS PERMITTED FOR RIGHT OF WAY, PERMIT NO. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		RIGHT OF WAY PERMIT IS APPLIED FOR, APPLICATION NO. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		RIGHT OF WAY PERMIT IS NOT REQUIRED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	D	FACILITIES				
		TABLE OF EXISTING AND PROPOSED WELLS IS SUBMITTED AS ITEM II-2A.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		TABLE OF EXISTING AND PROPOSED SURFACE WATER WITHDRAWAL PUMPS IS SUBMITTED AS ITEM II-2B.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		TABLE OF EXISTING AND PROPOSED WITHDRAWAL CULVERTS IS SUBMITTED AS ITEM II-2C.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	E	WATER PROBLEMS				
		EVALUATION OF EXISTING WATER USE PROBLEMS IS SUBMITTED AS ITEM II-3. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		NO EXISTING PROBLEMS. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		EVALUATION OF POTENTIAL IMPACTS ASSOCIATED WITH THE PROPOSED WATER WITHDRAWALS IS SUBMITTED AS ITEM II-4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		PROPOSED MITIGATION IS SUBMITTED AS ITEM II-5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		NO WATER PROBLEMS OR IMPACTS ARE ANTICIPATED. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	F	LOCATION OF POLLUTION SOURCES				
		A MAP SHOWING POLLUTION SOURCES IS SUBMITTED AS ITEM II-6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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# SECTION II - PROJECT INFORMATION (CONTINUED)

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N A I M

X

### G TYPE OF WATER USE

IN ADDITION, PLEASE COMPLETE AT LEAST ONE:

- SECTION III FOR IRRIGATION WATER USE
- SECTION IV FOR PUBLIC WATER SUPPLY WATER USE
- SECTION V FOR MINING/DEWATERING WATER USE
- SECTION VI FOR INDUSTRIAL WATER USE
- SECTION VII FOR GENERAL WATER USE PERMITS

### INDIVIDUAL PERMITS: SECTION III - IRRIGATION WATER USE

#### A OWNERSHIP AND LAND USE

- PROOF OF OWNERSHIP IS SUBMITTED AS ITEM III-1.
- PREVIOUSLY PERMITTED, NO CHANGE IN OWNERSHIP OR PROJECT ACREAGE:  YES
- LAND USE DOCUMENT IS SUBMITTED AS ITEM III-2.
- PREVIOUSLY PERMITTED, NO CHANGE IN LAND USE  YES

#### B CROP TYPE AND IRRIGATION SYSTEM

- TOTAL IRRIGATED (PLANTED) ACREAGE: \_\_\_\_\_ ACRES.
- IRRIGATION FOR PHASED PROJECTS IS SUBMITTED AS ITEM III-3.
- TABLE OF CROP REQUIREMENTS IS SUBMITTED AS ITEM III-4.

#### C WATER USAGE

- QUANTITY OF WATER NEEDED FOR ALL CROPS: \_\_\_\_\_
- BASIS FOR THE WATER REQUESTED IS SUBMITTED AS ITEM III-4A \_\_\_\_\_
- WATER USE ACCOUNTING SYSTEM IS SUBMITTED AS ITEM III-4B \_\_\_\_\_

#### D WATER CONSERVATION PLAN SUBMITTED AS ITEM III-5.

- RECLAIMED WATER USE FEASIBILITY IS SUBMITTED AS ITEM III-6.

#### E FREEZE PROTECTION

- NO FREEZE PROTECTION REQUESTED
- FREEZE PROTECTION IS SUBMITTED AS ITEM III-7.

#### F GOLF COURSE IRRIGATED ACREAGE MAP IS SUBMITTED AS ITEM III-8.

- 

### INDIVIDUAL PERMITS: SECTION IV - PUBLIC WATER SUPPLY WATER USE

#### A POPULATION AND WATER DEMAND ANALYSIS

- WATER USE FOR 12 MONTH PERIOD IS SUBMITTED AS ITEM IV-1.
- PAST WATER USE IS SUBMITTED AS ITEM IV-2.
- PROJECTED WATER USE IS SUBMITTED AS ITEM IV-3.
- PROJECTED WATER DEMAND (PER CAPITA USE GREATER THAN 200 GPD) IS SUBMITTED AS ITEM IV-4.

#### B SERVICE AREA

- SERVICE AREA MAP IS SUBMITTED AS ITEM IV-5.



# SECTION IV - PUBLIC WATER SUPPLY WATER USE (CONTINUED)

SFWM D ONLY

X

	N	A	I	M
INTERCONNECTIONS WITH OTHER SUPPLIERS ARE SUBMITTED AS ITEM IV-6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SERVICE AREA DOCUMENTATION IS SUBMITTED AS ITEM IV-7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>C FACILITIES</b>				
DESCRIPTION OF FACILITIES IS SUBMITTED AS ITEM IV-8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AVERAGE DAILY EFFLUENT PRODUCTION: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISPOSAL POINT OF EFFLUENT: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>D INFORMATION ABOUT RAW WATER QUALITY IS SUBMITTED AS ITEM IV-9.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>E REVERSE OSMOSIS TREATMENT</b>				
NO REVERSE OSMOSIS <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REVERSE OSMOSIS OPERATION DESCRIPTION IS SUBMITTED AS ITEM IV-10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LETTER OF APPROVAL TO DISCHARGE REJECT WATER IS SUBMITTED AS ITEM IV-11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>F WATER CONSERVATION</b>				
WATER CONSERVATION PLAN IS SUBMITTED AS ITEM IV-12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LETTER OF COMPLIANCE WITH THE MANDATORY WATER CONSERVATION ELEMENTS IS SUBMITTED AS ITEM IV-13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>G WELLFIELD PROTECTION</b>				
WELLFIELD WILL BE COVERED BY A WELLFIELD PROTECTION ORDINANCE <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DOCUMENTATION OF APPROVAL FROM APPROPRIATE AGENCY IS SUBMITTED AS ITEM IV-14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WELLFIELD WILL NOT BE COVERED BY A WELLFIELD PROTECTION ORDINANCE <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLAN FOR PROTECTION OF THE WELLFIELD IS SUBMITTED AS ITEM IV-15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## INDIVIDUAL PERMITS: SECTION V - MINING/DEWATERING WATER USE

<b>A OWNERSHIP AND LAND USE</b>				
PROOF OF OWNERSHIP DOCUMENTATION IS SUBMITTED AS ITEM V-1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREVIOUSLY PERMITTED, NO CHANGE IN OWNERSHIP OR PROJECT ACREAGE <input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LAND USE DOCUMENT IS SUBMITTED AS ITEM V-2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREVIOUSLY PERMITTED, NO CHANGE IN LAND USE <input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>B PROJECT DESCRIPTION</b>				
METHOD OF EXCAVATION: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCAVATION AREA DATA ARE SUBMITTED AS ITEM V-3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GROUND WATER WILL BE DRAWN DOWN TO: _____ (FT, NGVD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAXIMUM DEPTH OF PIT WILL BE EXCAVATED TO: _____ FT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPERATION SCHEDULE: _____ HOURS/DAY, _____ DAYS/WEEK, _____ WEEKS/YEAR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REQUESTED ANNUAL ALLOCATION: _____ GALLONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAXIMUM DAY PUMPAGE: _____ GALLONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BASIS FOR THE REQUESTED AMOUNTS: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DURATION OF THE USE OF WATER: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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# SECTION V - MINING/DEWATERING WATER USE (CONTINUED)

SEWMD ONLY

X

N A I M

CONTRACTOR NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

NO CONTRACTOR

**C LOCATION**

SITE MAP IS SUBMITTED AS ITEM V-4.

NOT PHASED PROJECT

SITE MAP FOR PHASED PROJECT IS SUBMITTED AS ITEM V-5.

A TOPOGRAPHIC MAP IS SUBMITTED AS ITEM V-6.

**D INFORMATION ON WATER QUALITY IS SUBMITTED AS ITEM V-7.**

**E HISTORICAL WATER USE**

NOT APPLICABLE  YES

PUMPAGE RECORDS ARE SUBMITTED AS ITEM V-8.

**F WATER TABLE AND GEOLOGIC DATA**

WATER TABLE ELEVATIONS

WET SEASON: \_\_\_\_\_ FT (NGVD)  DRY SEASON: \_\_\_\_\_ FT (NGVD)

LITHOLOGIC LOGS ARE SUBMITTED AS ITEM V-9.

GEOPHYSICAL LOGS ARE SUBMITTED AS ITEM V-10.

LITHOLOGIC LOGS ARE NOT AVAILABLE

**G DRAINAGE SYSTEM AND STRUCTURAL STABILITY**

PLAN FOR ROUTING OF STORMWATER IS SUBMITTED AS ITEM V-11.

PLAN FOR ON-SITE WATER RETENTION SYSTEM FACILITIES IS SUBMITTED AS ITEM V-12.

STRUCTURAL STABILITY INFORMATION IS SUBMITTED AS ITEM V-13.

**H DEWATERING IN CONJUNCTION WITH LANDFILL OPERATIONS**

LANDFILL DEWATERING NOT APPLICABLE

LANDFILL INFORMATION IS SUBMITTED AS ITEM V-14.

## INDIVIDUAL PERMITS: SECTION VI - INDUSTRIAL WATER USE

**A OWNERSHIP AND LAND USE**

PROOF OF OWNERSHIP DOCUMENTATION IS SUBMITTED AS ITEM VI-1.

PREVIOUSLY PERMITTED, NO CHANGE IN OWNERSHIP OR PROJECT ACREAGE  YES

LAND USE DOCUMENT IS SUBMITTED AS ITEM VI-2.

PREVIOUSLY PERMITTED, NO CHANGE IN LAND USE  YES

**B WATER DEMAND ANALYSIS**

REQUESTED ANNUAL ALLOCATION: \_\_\_\_\_ GALLONS

MAXIMUM DAY PUMPAGE: \_\_\_\_\_ GALLONS

MAXIMUM DAY TO AVERAGE DAY DEMAND RATIO: \_\_\_\_\_

EXPLAIN BRIEFLY THE BASIS FOR USING THIS NUMBER: \_\_\_\_\_

\_\_\_\_\_

FUTURE YEAR FOR WHICH WATER USE IS PROJECTED: \_\_\_\_\_

EXISTING WATER USE, WATER USE FOR 12 MONTH PERIOD IS SUBMITTED AS ITEM VI-3.

WATER USE IS NOT NOW EXISTING, SO ITEM VI-3 NOT APPLICABLE

APPROVED REMEDIAL ACTION PLAN IS SUBMITTED AS ITEM VI-4.



### SECTION VI - INDUSTRIAL WATER USE (CONTINUED)

SFWMD  
ONLY

N A M I



B

#### FACILITIES

WATER TREATMENT PLANT CAPACITY: _____ GALLONS.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
TREATED WATER STORAGE CAPACITY: _____ GALLONS.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
IN-PLANT LOSSES: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
FIRE-FLOW CAPABILITY: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
STAND-BY CAPACITY: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
PUMP/WELLFIELD OPERATION SCHEDULE IS SUBMITTED AS ITEM VI-2.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

C

DESCRIPTION OF THE INDUSTRIAL PROCESS, WATER CHANGES DUE TO THE PROCESS, AND DISPOSAL OF WASTEWATER, IS SUBMITTED AS ITEM VI-3.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
---	---

D

DESCRIPTION OF WATER CONSERVATION TECHNIQUES OR METHODS OF WATER USE OPTIMIZATION, IS SUBMITTED AS ITEM VI-4.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
---	---

### SECTION VII - GENERAL WATER USE PERMITS

A

#### GENERAL INFORMATION

<input type="checkbox"/> PROPOSED PROJECT. <input type="checkbox"/> EXISTING. HOW LONG: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
ESTIMATED AVERAGE DAILY WATER USE: _____ GALLONS.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
ESTIMATED MAXIMUM DAY WATER USE: _____ GALLONS.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
NAME OF WELL DRILLER (IF APPLICABLE) _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

B

#### TYPE OF WATER USE

IRRIGATION	
CROP TYPE: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
IRRIGATED ACREAGE: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
IRRIGATION FOR PHASED PROJECTS IS SUBMITTED AS ITEM VII-1.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
PUBLIC WATER SUPPLY	
TREATMENT PLANT CAPACITY: _____ GALLONS.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
POPULATION SERVED: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
NUMBER OF UNITS SERVED: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
AQUIFER REHABILITATION	
ESTIMATED DATE OF COMPLETION _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

### SECTION VIII - WORKS OF THE DISTRICT SURFACE WATER IMPROVEMENT AND MANAGEMENT (SWIM)

A

PROJECT IS PERMITTED FOR WORKS OF THE DISTRICT (SWIM). PERMIT NO.: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
--	---

B

WORKS OF THE DISTRICT (SWIM) PERMIT IS APPLIED FOR, APPLICATION NO.: _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
--	---

C

WORKS OF THE DISTRICT (SWIM) PERMIT IS NOT REQUIRED. <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
---	---



### TABLE A DESCRIPTION OF WELLS

WELL NUMBER				
MAP DESIGNATION				
EXISTING OR PROPOSED				
DIAMETER (INCHES)				
TOTAL DEPTH				
CASED DEPTH				
SCREENED INTERVAL				
PUMPED OR FLOWING				
WORKING VALVE, IF ARTESIAN (YES OR NO)				
PUMP TYPE (CENTRIFUGAL, JET, DEEP JET, TURBINE, ETC.)				
PUMP INTAKE ELEVATION _____ FT BELOW GROUND				
PUMP OR FLOW CAPACITY (GPM AT _____ FT OF HEAD AT _____ PSI)				
STATUS (PRIMARY, SECONDARY, OR STANDBY)				
YEAR DRILLED				
PLANAR COORDINATES				



**TABLE B  
DESCRIPTION OF SURFACE WATER PUMPS**

DRAINAGE DISTRICT				
PUMP NUMBER				
MAP DESIGNATION				
SURFACE WATER BODY				
EXISTING OR PROPOSED				
PUMP MANUFACTURER AND MODEL NUMBER				
PUMP TYPE				
PUMP CAPACITY (GPM)				
PUMP HORSEPOWER				
PUMP DIAMETER				
ELEVATION OF INTAKE (NGVD)*				
IS PUMP A TWO WAY PUMP?				

**TABLE C  
DESCRIPTION OF IRRIGATION CULVERTS**

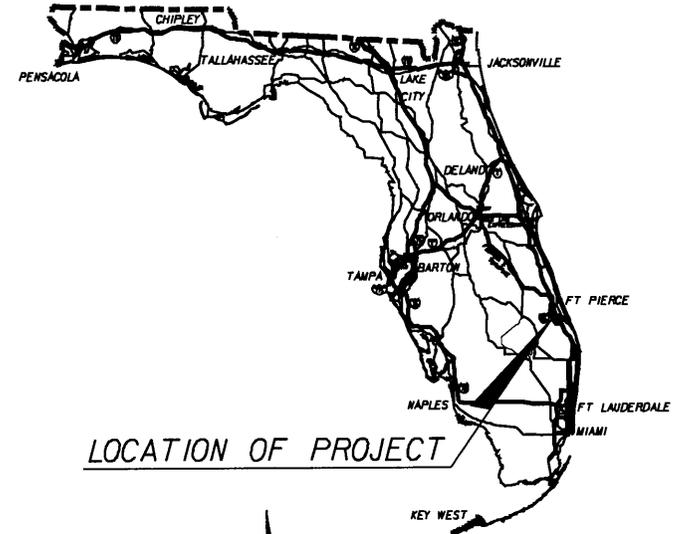
CULVERT NUMBER				
MAP DESIGNATION				
WATER BODY				
EXISTING OR PROPOSED				
DIAMETER **				
HEIGHT ***				
WIDTH ***				
TYPE OF CULVERT ****				
CULVERT LENGTH				
INVERT ELEVATION (NGVD) *				
TYPE OF CONTROL DEVICE				

- \* NGVD IS APROXIMATELY EQUAL TO MEAN SEA LEVEL
- \*\* FOR CIRCULAR CULVERTS
- \*\*\* FOR ELLIPTICAL CULVERTS
- \*\*\*\* CORRUGATED METAL, REINFORCED CONCRETE, ETC.

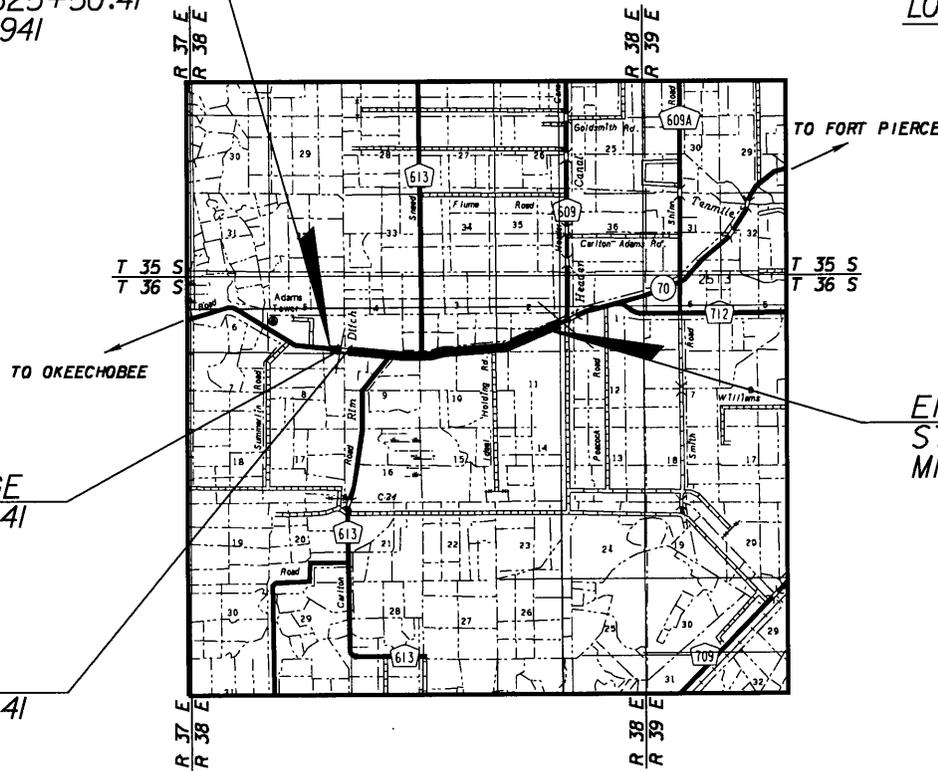
# Appendix D

Example Right-of-Way Occupancy Permit  
Sketches

# PROJECT LOCATION MAP SR 70 (OKEECHOBEE ROAD)



BEGIN PROJECT  
STA 625+50.41  
MP 9.941



LOCATION OF PROJECT

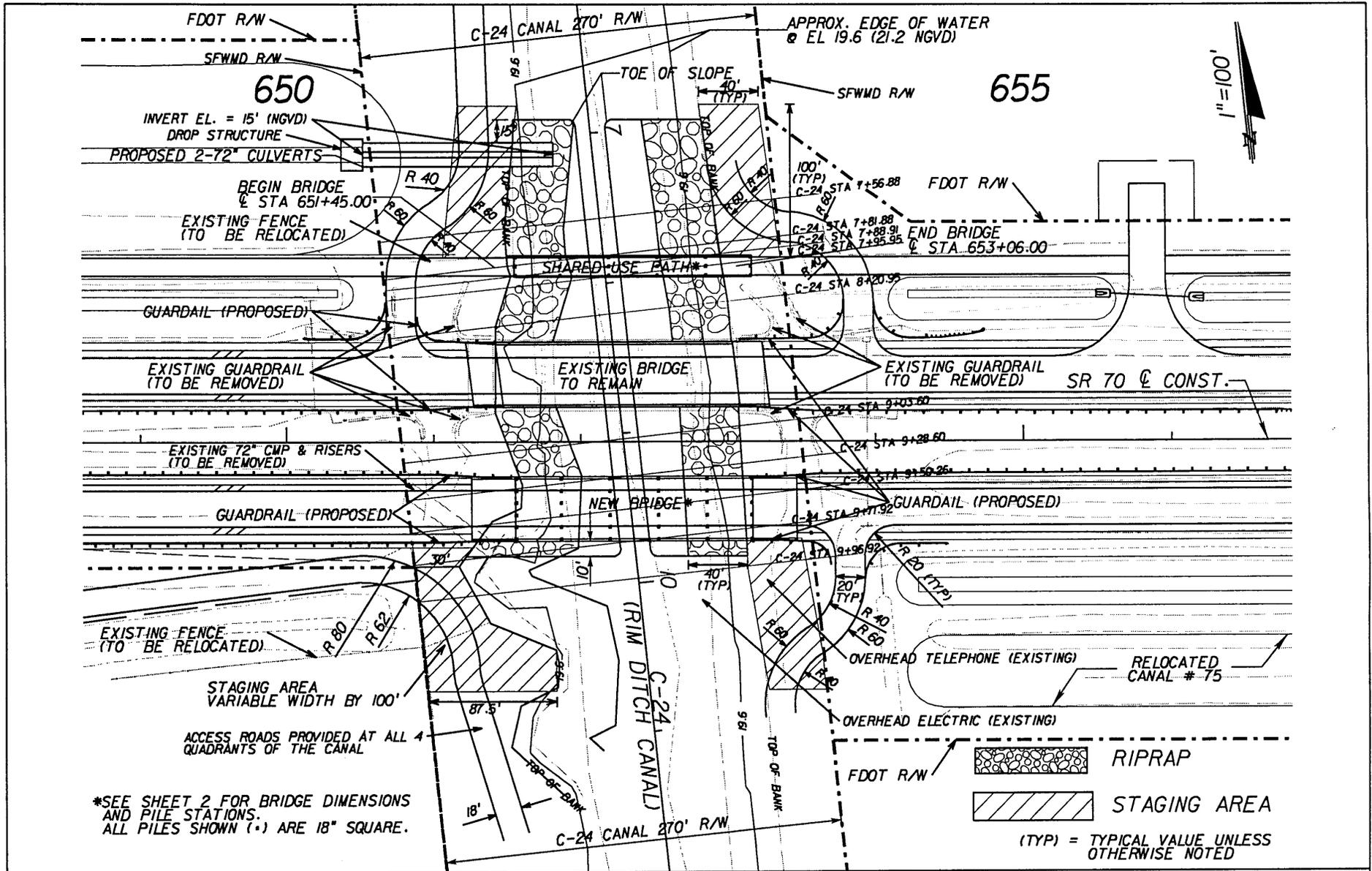
END PROJECT  
STA 803+97.34  
MP 13.322

BEGIN BRIDGE  
STA 651+55.41  
MP 10.435

END BRIDGE  
STA 653+16.41  
MP 10.465

D1

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION	FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO.		
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL			FM NO. 230262 - 4 -52-01		
TWP: 36 S	RNG: 38 E	NAME: SCOTT PETERSON, PE	3400 W. COMMERCIAL BLVD		
SEC 4 - 5, 8 - 9		SIGNATURE _____	FT. LAUDERDALE, FL 33309		
		CERTIFICATE NO. 52740	DER	CG	SHEET 1 OF 45
		DATE: 9/23/03	COE	WMD	DATE



D2

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION  
 R/W OCCUPANCY PERMIT SKETCH (SR70 BRIDGES OVER THE C24 CANAL)  
 TWP: 36 S                      RNG: 38 E  
 SEC 4 - 5, 8 - 9

**FLORIDA DEPARTMENT OF TRANSPORTATION**

NAME: SCOTT PETERSON, PE  
 SIGNATURE \_\_\_\_\_  
 CERTIFICATE NO. 52740

3400 W. COMMERCIAL BLVD  
 FT. LAUDERDALE, FL 33309  
 DATE: 9/23/03

STATE PROJECT NO.  
 FM NO. 230262 - 4 - 52-01  
 COUNTY ST. LUCIE

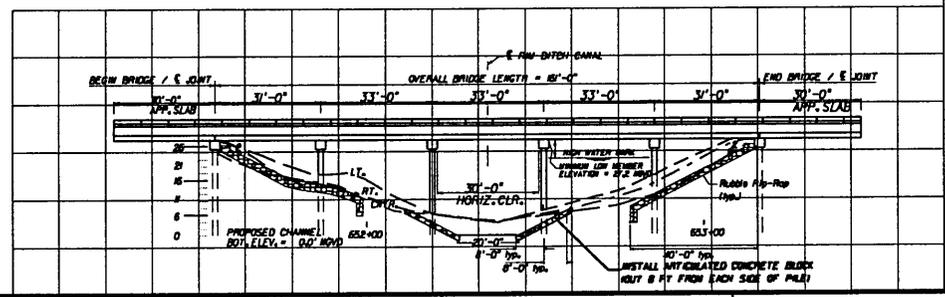
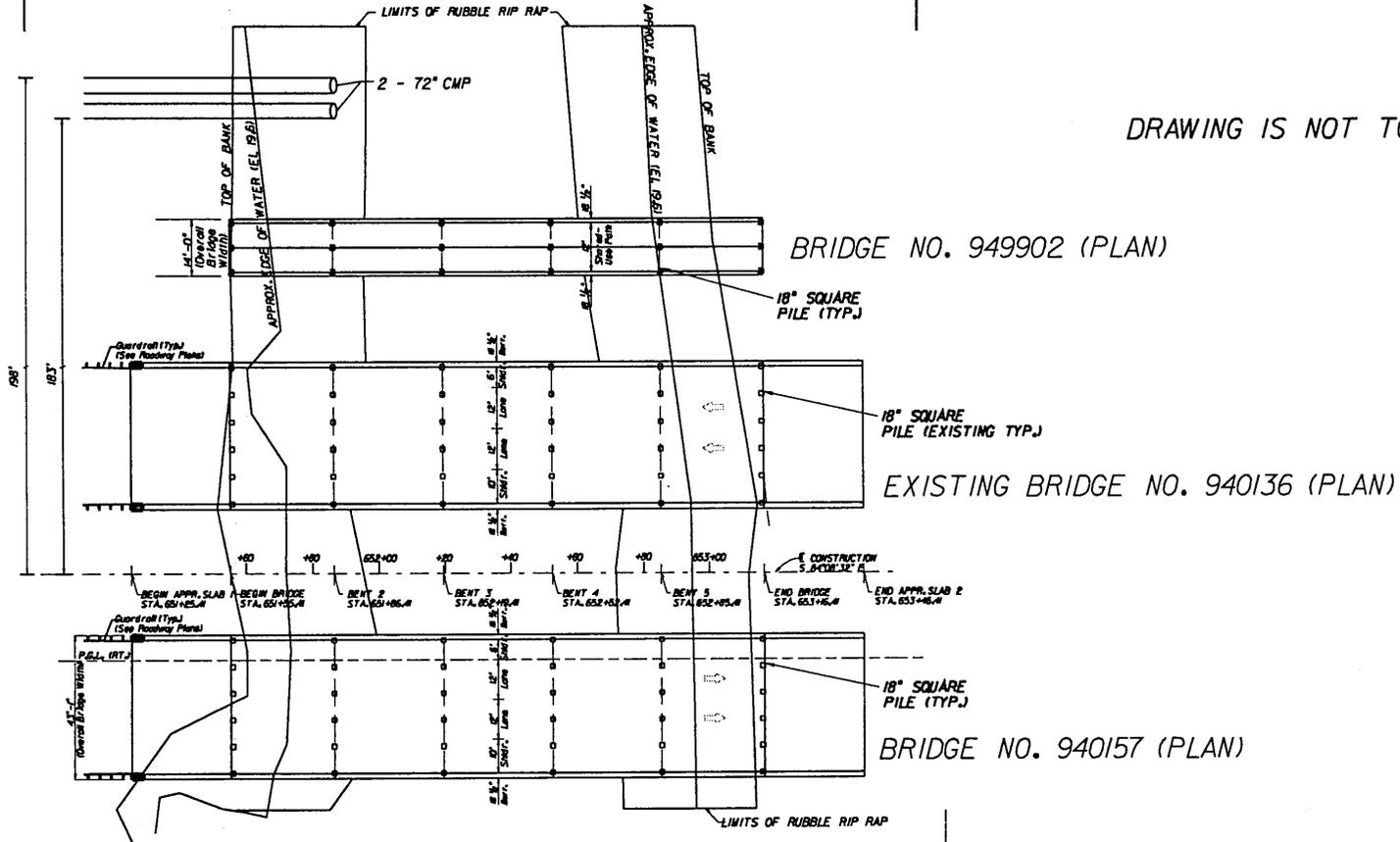
DER	CG	SHEET 2 OF 8
COE	WMD	DATE

DC

SFWMD R/W = 270' (TYP)  
REFER TO PREVIOUS DIAGRAM FOR R/W LOCATIONS



DRAWING IS NOT TO SCALE



NOTES:

EDGE OF WATER, TOP OF BANK AND LIMITS OF RIP-RAP SHOWN ARE APPROXIMATE. SEE PREVIOUS SKETCH FOR EXACT LOCATIONS.

RIP-RAP EXTENDS 40FT FROM TOP OF BANK (TYP)

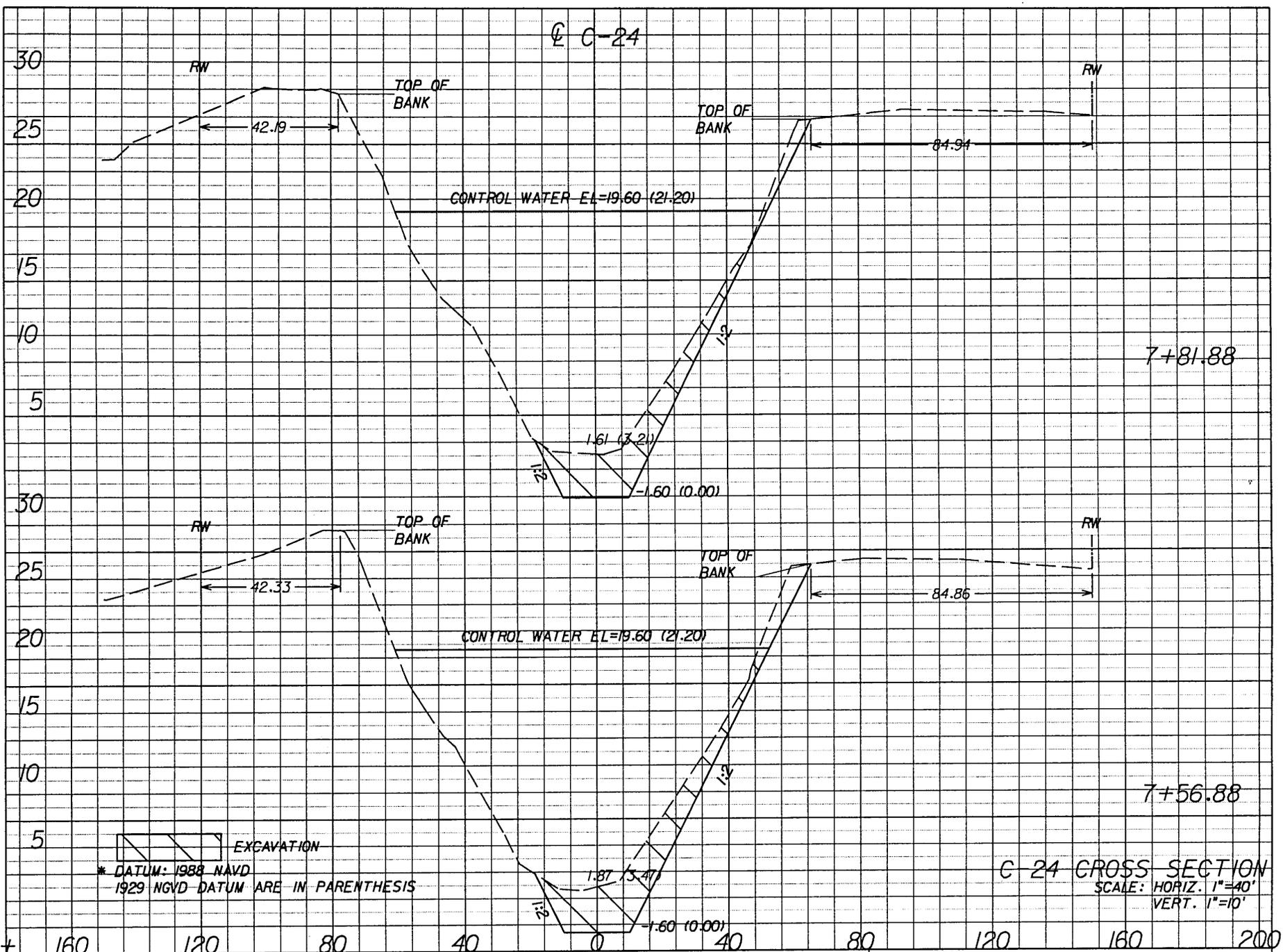
BRIDGE PROFILE VIEW

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

STATE OF FLORIDA		
DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
70	ST. LUCIE	230262-4-52-01

OCCUPANCY PERMIT SKETCH		SHEET NO. 3 OF 8
C-21 CANAL AT SR70		

D4

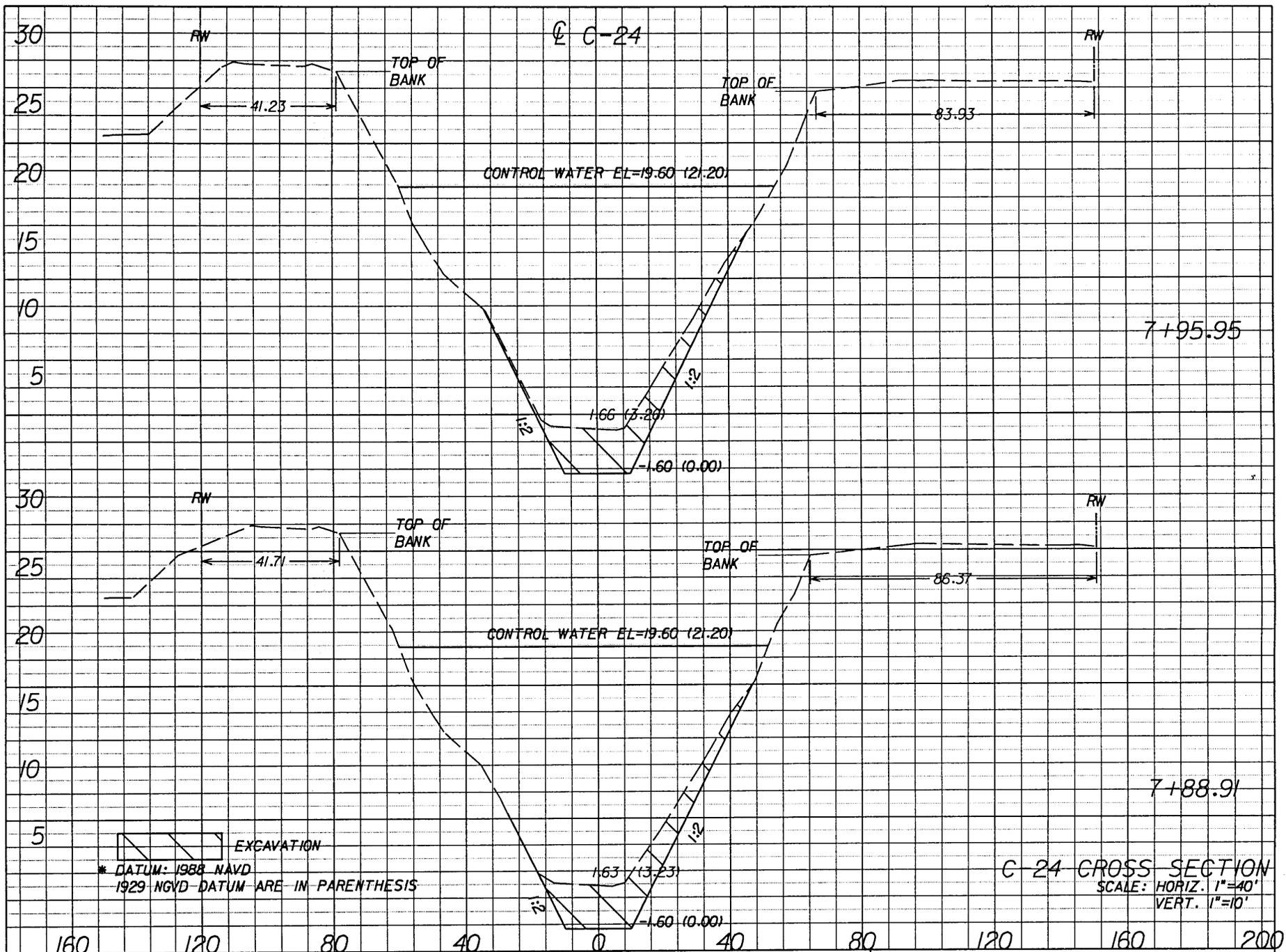


PROJECT DESCRIPTION OREECHOBEE ROAD-MAJOR RECONSTRUCTION  
 FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL  
 TWP: 36 S                      RNG: 38 E  
 SEC 4 - 5, 8 - 9

**FLORIDA DEPARTMENT OF TRANSPORTATION**  
 NAME: SCOTT PETERSON, PE  
 SIGNATURE \_\_\_\_\_  
 CERTIFICATE NO. 52740  
 3400 W. COMMERCIAL BLVD  
 FT. LAUDERDALE, FL 33309  
 DATE: 4/8/03

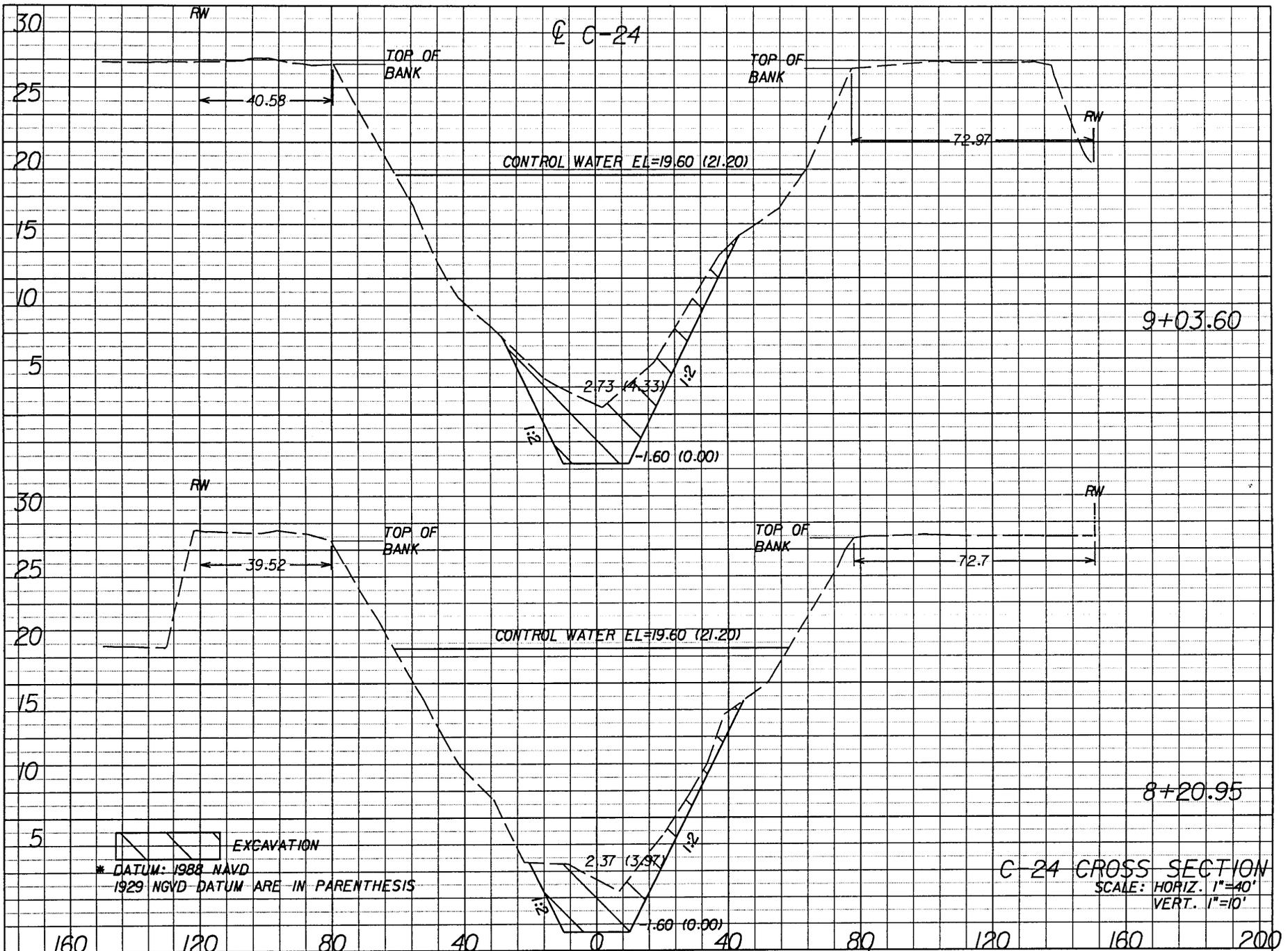
STATE PROJECT NO. ---  
 FM NO. 230262 - 4 - 52-01  
 COUNTY ST. LUCIE  
 DER \_\_\_\_\_ CG \_\_\_\_\_ SHEET 4 OF 8  
 COE \_\_\_\_\_ WMD \_\_\_\_\_ DATE \_\_\_\_\_

DS



C-24 CROSS SECTION  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=10'

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO. --- FM NO. 230262--4--52-01	
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL		NAME: SCOTT PETERSON, PE		COUNTY ST. LUCIE	
TWP: 36 S		SIGNATURE _____		DER	
SEC 4 - 5; 8 - 9		CERTIFICATE NO. 52740		CG	
RING: 38 E		DATE: 4/8/03		SHEET 5 OF 8	
				COE	
				WMD	
				DATE	



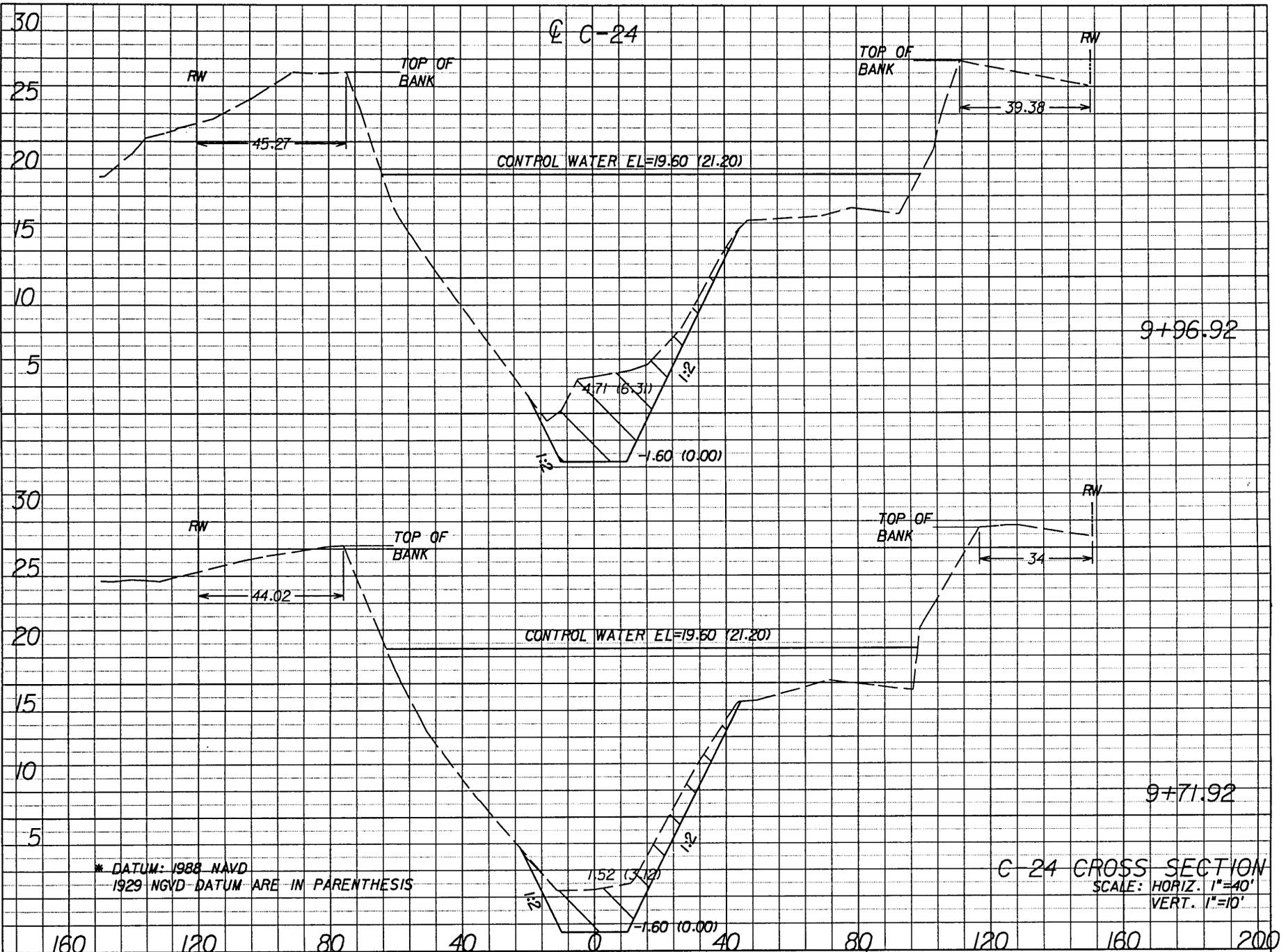
D6

**C-24 CROSS SECTION**  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=10'

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		<b>FLORIDA DEPARTMENT OF TRANSPORTATION</b>		STATE PROJECT NO. ---	
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL				FM NO. 23Q292--4--52-01	
TWP: 36 S	RNG: 38 E	NAME: SCOTT PETERSON, PE	3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309	COUNTY ST. LUCIE	DER
SEC 4 - 5; 8 - 9		SIGNATURE _____	DATE: 4/8/03		CG
		CERTIFICATE NO. 52740			COE
					WMD
					SHEET 6 OF 8
					DATE



D 8



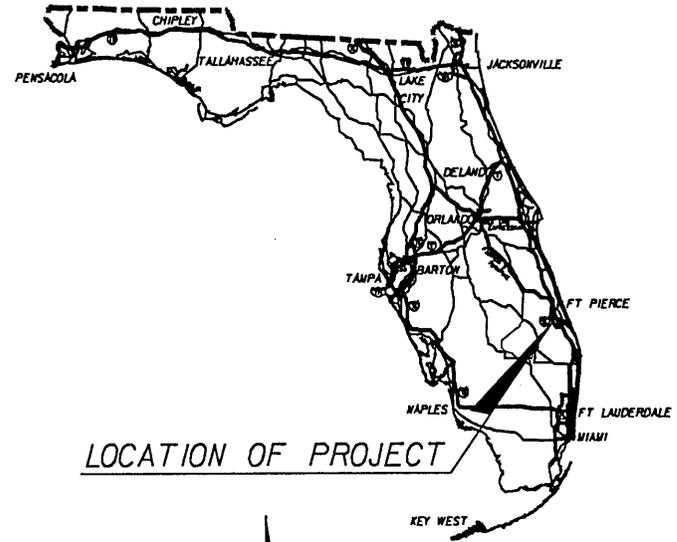
\* DATUM: 1988 NAVD  
1929 NGVD DATUM ARE IN PARENTHESIS

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL TWP: 36 S                      RNG: 38 E SEC 4 - 5, 8 - 9	<b>FLORIDA DEPARTMENT OF TRANSPORTATION</b> NAME: SCOTT PETERSON, PE SIGNATURE _____ CERTIFICATE NO. 52740	STATE PROJECT NO. ____ FM NO. 230262--4--52-01 COUNTY ST. LUCIE 3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309 DATE: 4/8/03
	DER _____ COE _____	CG _____ WMD _____ SHEET 8 OF 8 DATE _____

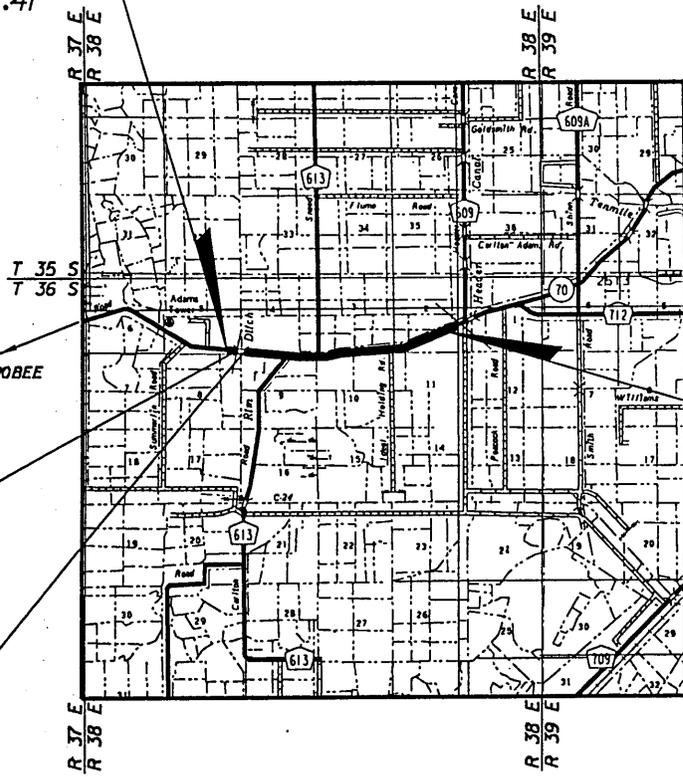
# Appendix E

Example of Dredge & Fill Permit Sketches

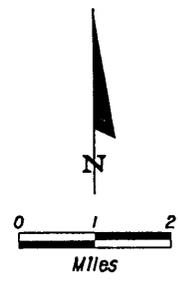
# PROJECT LOCATION MAP SR 70 (OKEECHOBEE ROAD)



**BEGIN PROJECT**  
STA 625+50.41  
MP 9.941



LOCATION OF PROJECT



**END PROJECT**  
STA 803+97.34  
MP 13.322

**BEGIN BRIDGE**  
STA 651+55.41  
MP 10.435

**END BRIDGE**  
STA 653+16.41  
MP 10.465

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION

FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL

TWP: 36 S

RNG: 38 E

SEC 4 - 5; 8 - 9

## FLORIDA DEPARTMENT OF TRANSPORTATION

NAME: SCOTT PETERSON, PE

3400 W. COMMERCIAL BLVD  
FT. LAUDERDALE, FL 33309

SIGNATURE \_\_\_\_\_

CERTIFICATE NO. 52740

DATE: 9/23/03

STATE PROJECT NO.  
FM NO. 230262 - 4 -52-01  
COUNTY ST. LUCIE

DER

CG

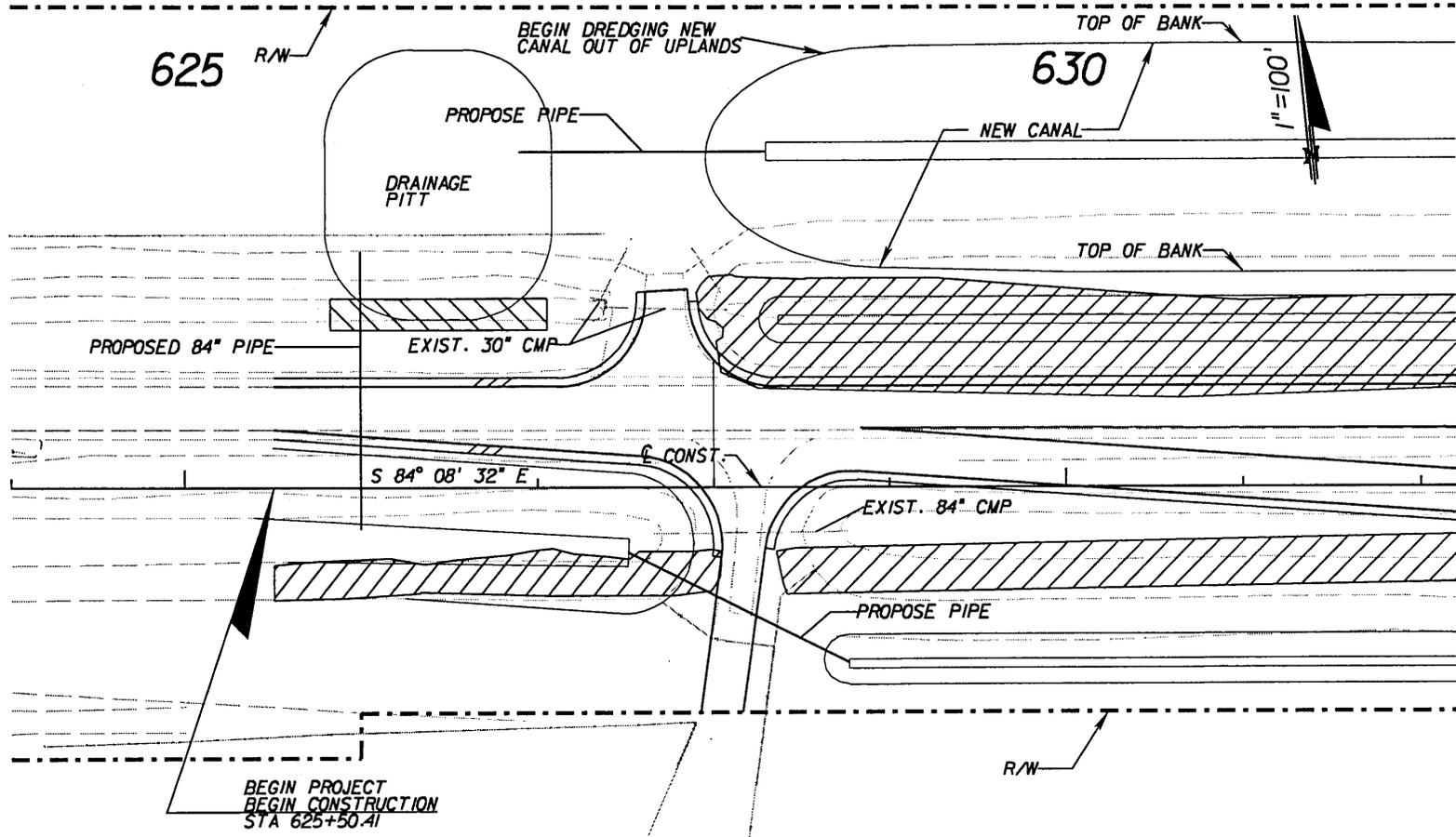
SHEET 1 OF 45

COE

WMD

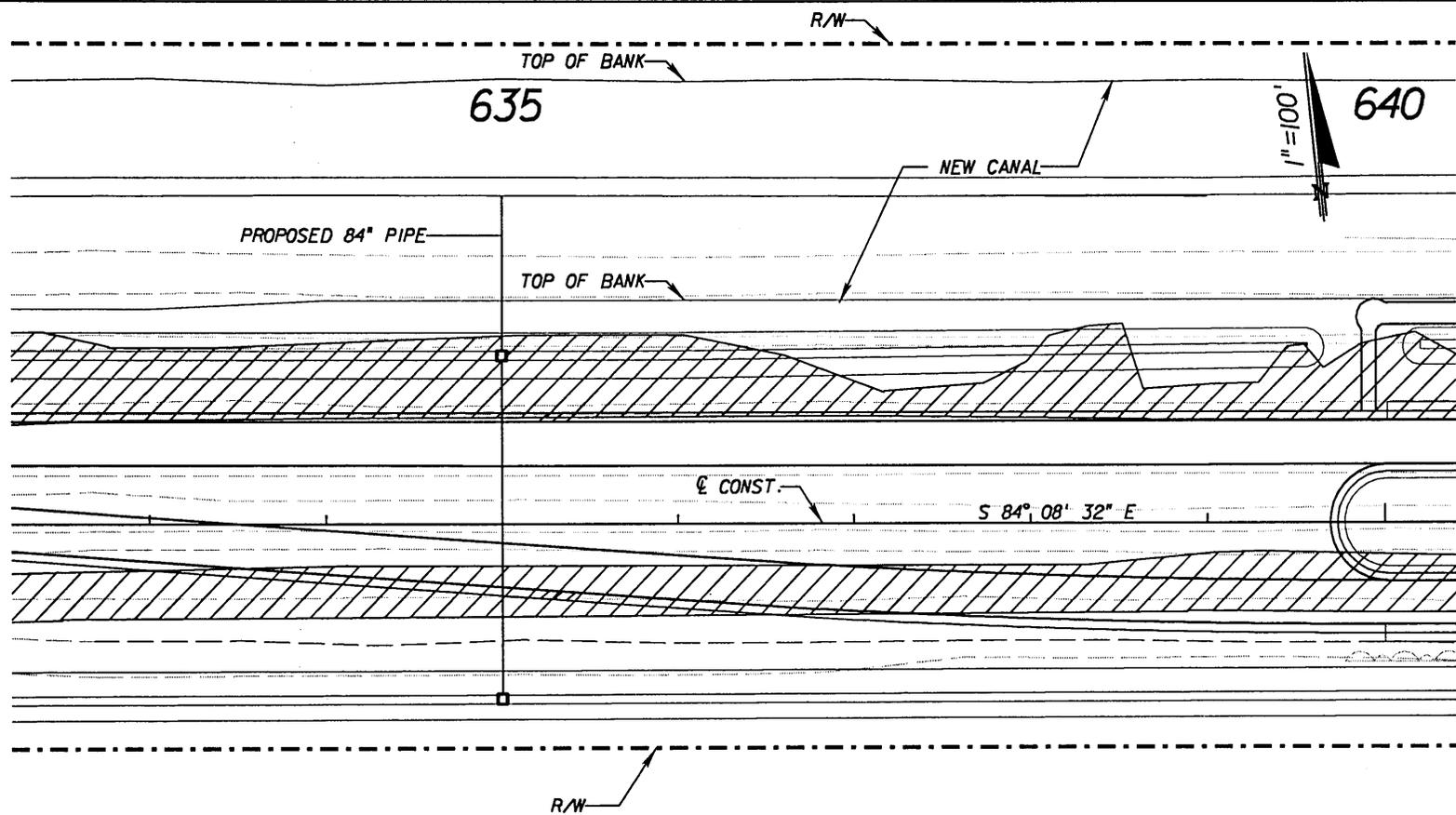
DATE

ER



PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO.		
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL				FM NO. 230262 - 4 -52-01		
TWP: 36 S	RNG: 38 E	NAME: SCOTT PETERSON, PE	3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309		COUNTY ST. LUCIE	
SEC 4 - 5, 8 - 9		SIGNATURE _____	DER	CG	SHEET 2 OF 45	
		CERTIFICATE NO. 52740	COE	WMD	DATE	
		DATE: 9/23/03				

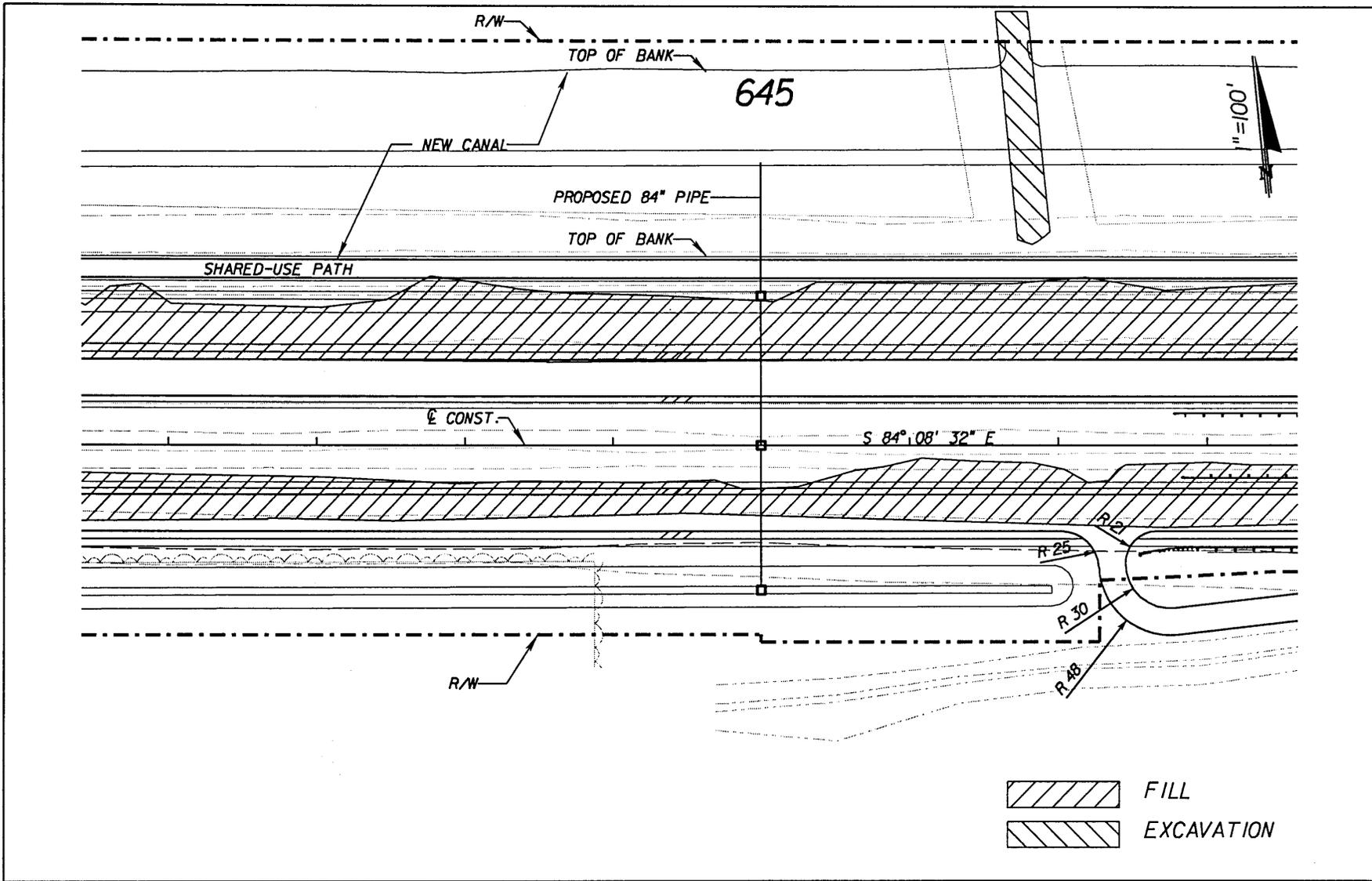
E 3



 FILL  
 EXCAVATION

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		<b>FLORIDA DEPARTMENT OF TRANSPORTATION</b> 3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309		STATE PROJECT NO.		
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL				FM NO. 230262 - 4 -52-01		COUNTY ST. LUCIE
TWP: 36 S	RNG: 38 E	NAME: SCOTT PETERSON, PE	SIGNATURE _____	DER	CG	SHEET 3 OF 45
SEC 4 - 5 - 8 - 9		CERTIFICATE NO. 52740	DATE: 9/23/03	COE	WMD	DATE

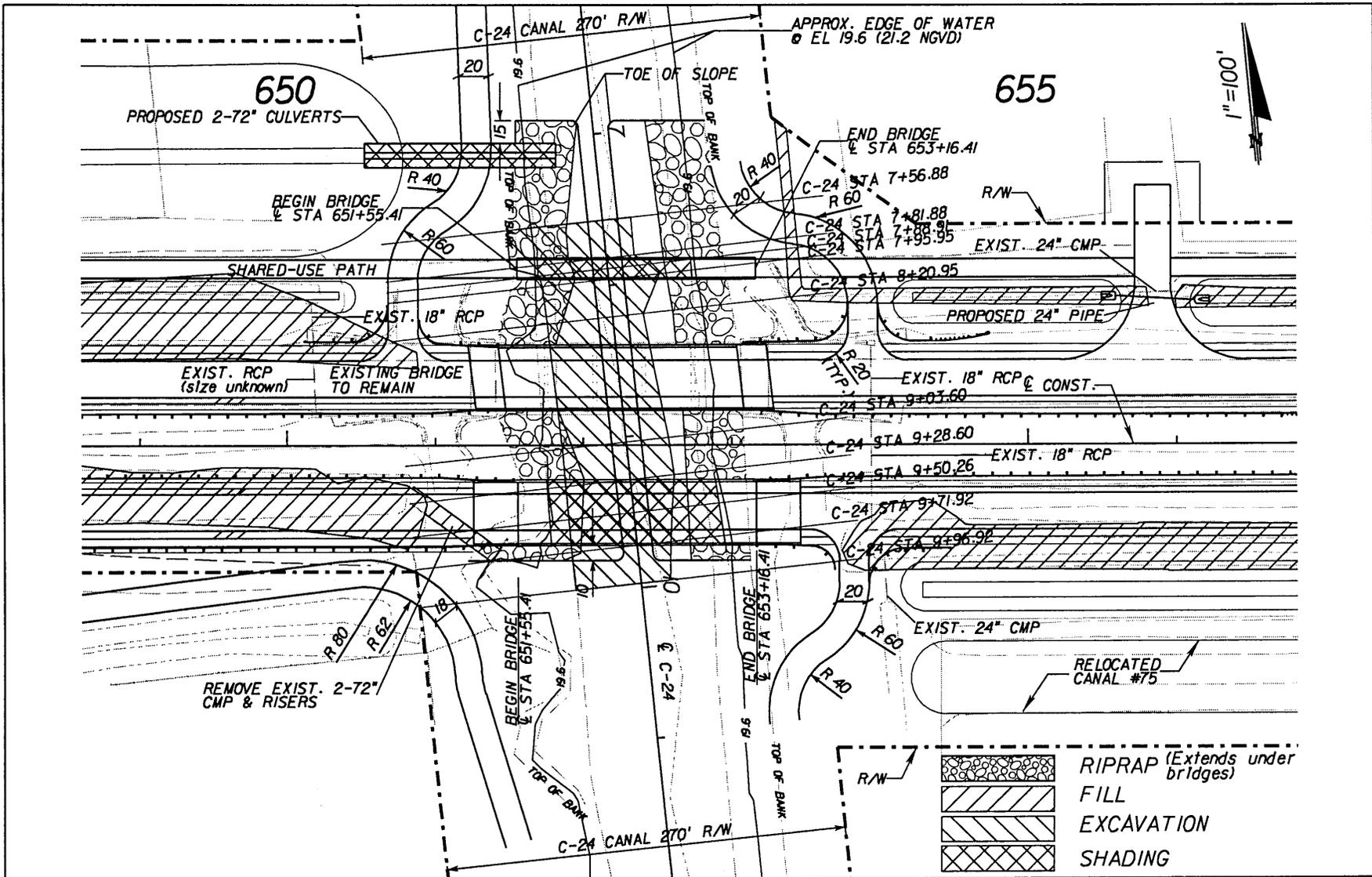
E4



 FILL  
 EXCAVATION

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO.	
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL		NAME: SCOTT PETERSON, PE		FM NO. 230262 - 4 -52-01	
TWP: 36 S		3400 W. COMMERCIAL BLVD		DER	CG
RING: 38 E		FT. LAUDERDALE, FL 33309		SHEET 4 OF 45	
SEC 4 - 5, 8 - 9		SIGNATURE _____		COE	WMD
		CERTIFICATE NO. 32740		DATE	
		DATE: 9/23/03			

ES



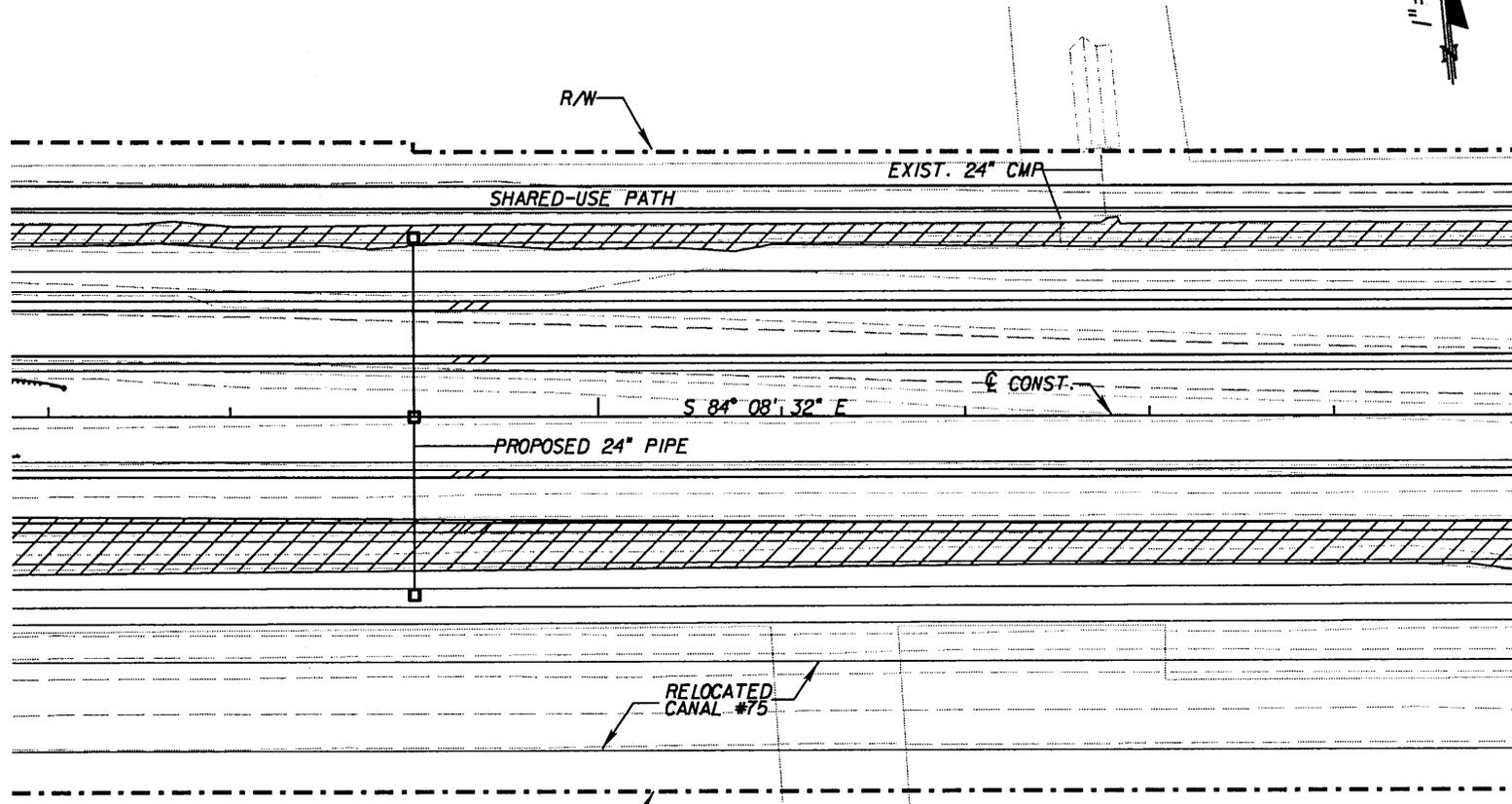
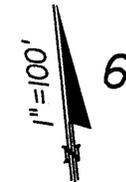
PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION	
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL	
TWP: 36 S	RNG: 38 E
SEC 4 - 5, 8 - 9	

<b>FLORIDA DEPARTMENT OF TRANSPORTATION</b>	
NAME: SCOTT PETERSON, PE	3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309
SIGNATURE _____	DATE: 9/23/03
CERTIFICATE NO. 52740	

STATE PROJECT NO. FM NO. 230262 - 4 -52-01		
COUNTY ST. LUCIE		
DER	CG	SHEET 5 OF 45
COE	WMD	DATE

	RIPRAP (Extends under bridges)
	FILL
	EXCAVATION
	SHADING

660



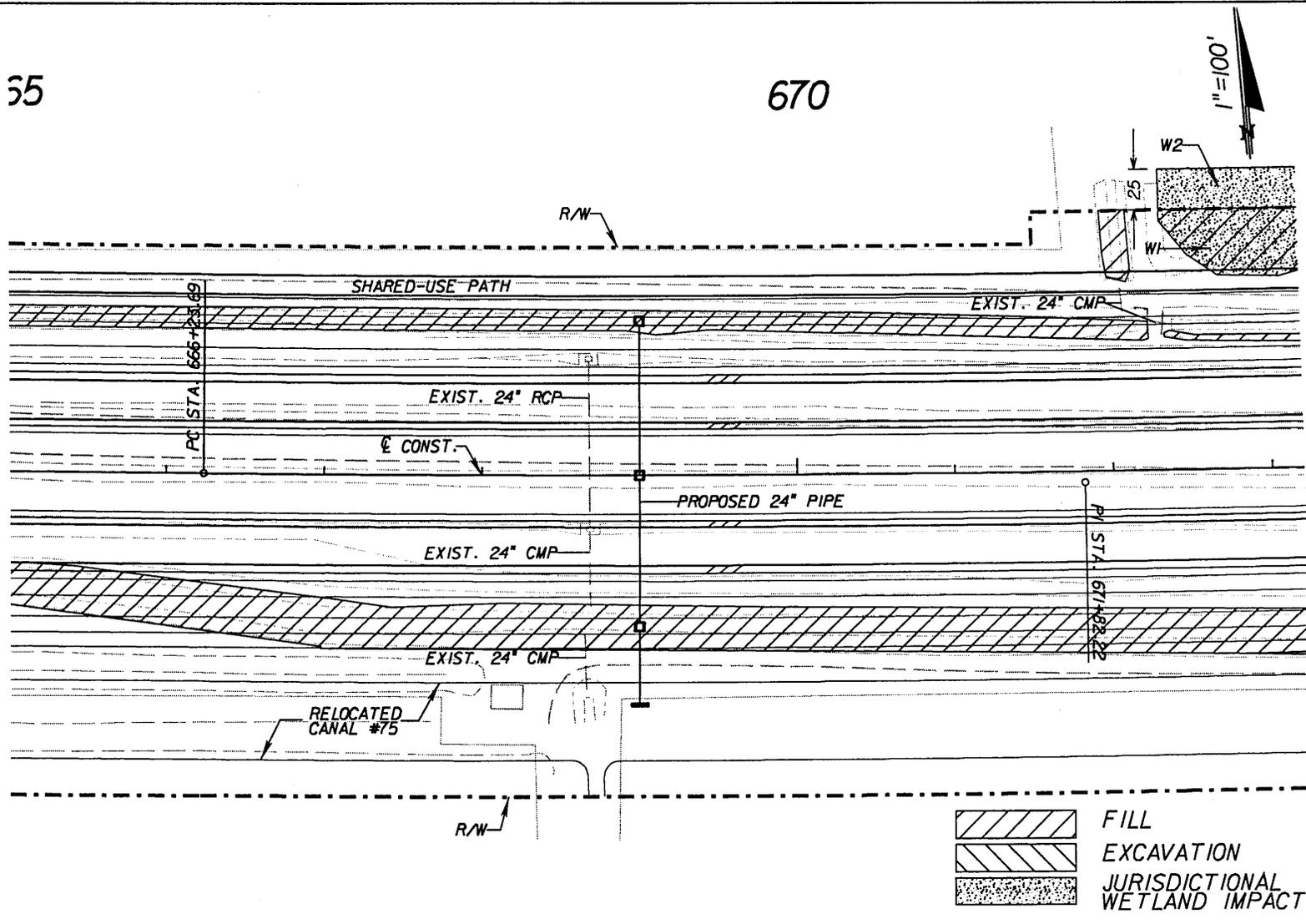
 FILL  
 EXCAVATION

66

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO.		
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL				FM NO. 230262 - 4 -52-01		
TWP: 36 S	RNG: 38 E	NAME: SCOTT PETERSON, PE	3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309		COUNTY ST. LUCIE	
SEC 4 - 5, 8 - 9		SIGNATURE _____	DATE: 9/23/03	DER	CG	
		CERTIFICATE NO. 32740		COE	WMD	
					SHEET 6 OF 45	
					DATE	

55

670



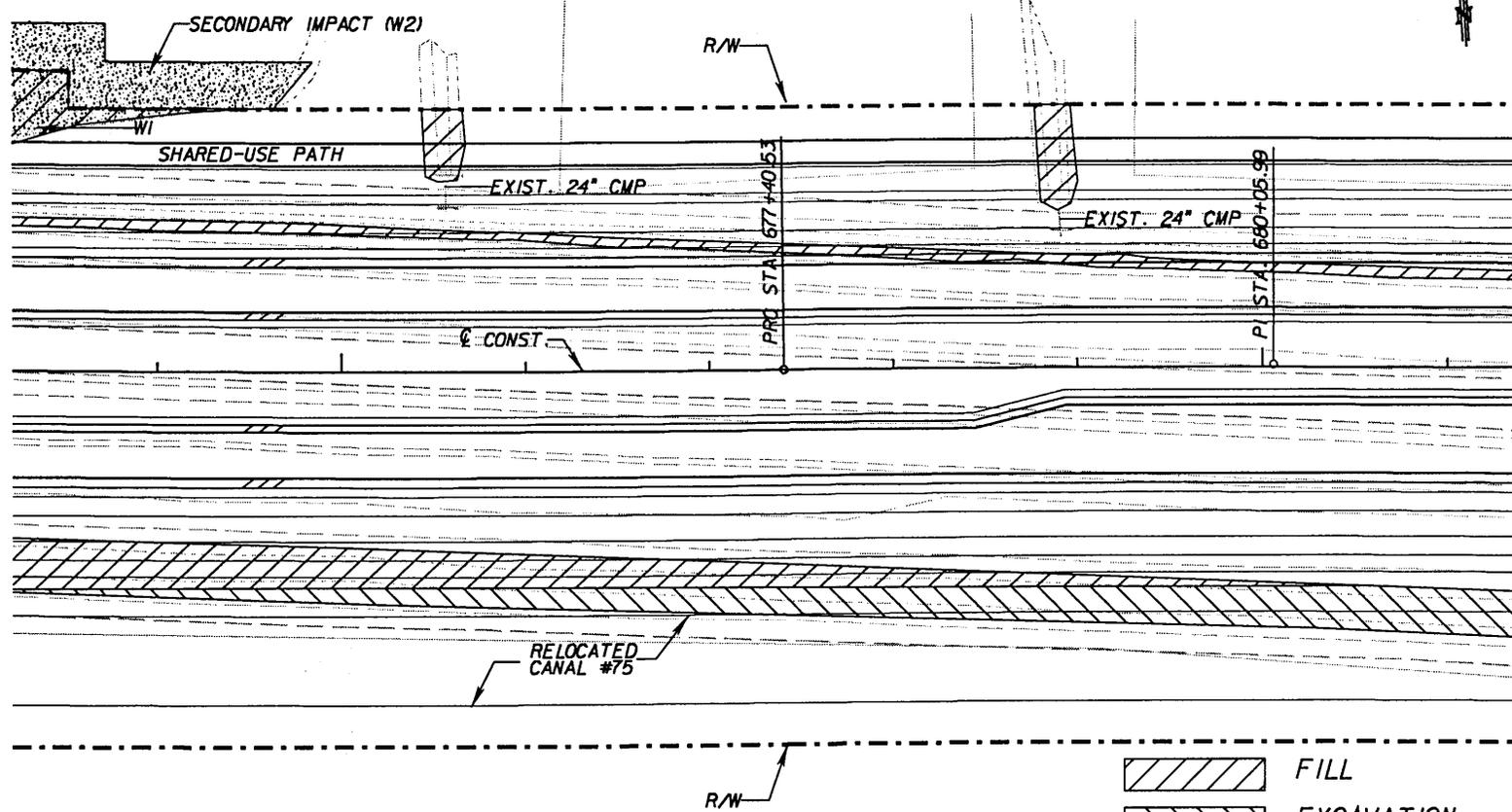
E7

	FILL
	EXCAVATION
	JURISDICTIONAL WETLAND IMPACT

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO.		
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL				FM NO. 230262 - 4 -52-01		
TWP: 36 S	RNG: 38 E	NAME: SCOTT PETERSON, PE	3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309	DER	CG	SHEET 7 OF 45
SEC 4 - 5, 8 - 9		SIGNATURE _____	DATE: 9/23/03	COE	WMD	DATE
		CERTIFICATE NO. 52740				

675

680



	FILL
	EXCAVATION
	JURISDICTIONAL WETLAND IMPAC

8

PROJECT DESCRIPTION OKEECHOBEE ROAD-MAJOR RECONSTRUCTION		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO. FM NO. 230262 - 4 -52-01	
FROM WEST OF RIM DITCH CANAL TO WEST OF HEADER CANAL		NAME: SCOTT PETERSON, PE		3400 W. COMMERCIAL BLVD FT. LAUDERDALE, FL 33309	
TWP: 36 S	RNG: 38 E	SIGNATURE _____		DER	CG
SEC 4 - 5, 8 - 9		CERTIFICATE NO. 52740		DATE: 9/23/03	COE
				WMD	SHEET 8 OF 45
				DATE	

# Appendix F

Example of U.S.C.G. Bridge  
Permit Sketches

**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

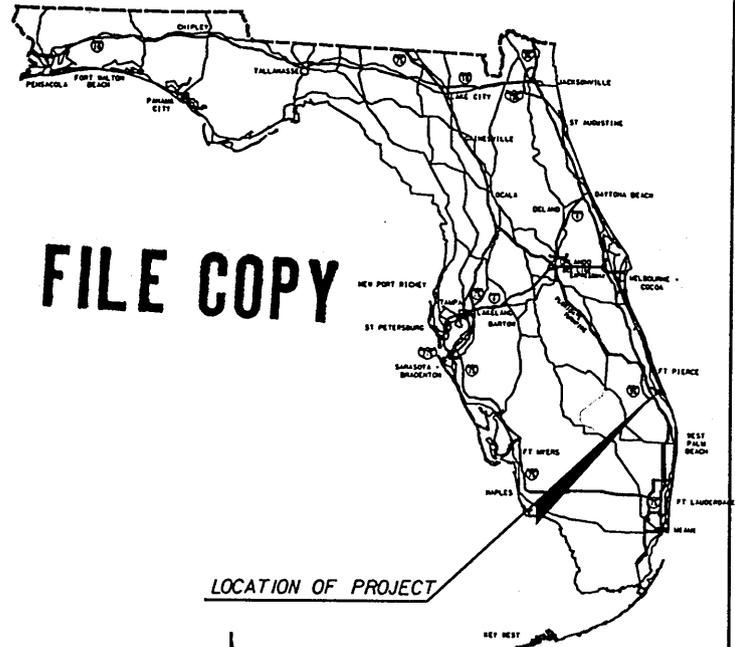
**PLANS OF PROPOSED**  
**STATE HIGHWAY**

FINANCIAL PROJECT NO. 228758-1-52-01  
 STATE PROJECT NO. 89030-3535  
 (FEDERAL FUNDS)

MARTIN COUNTY

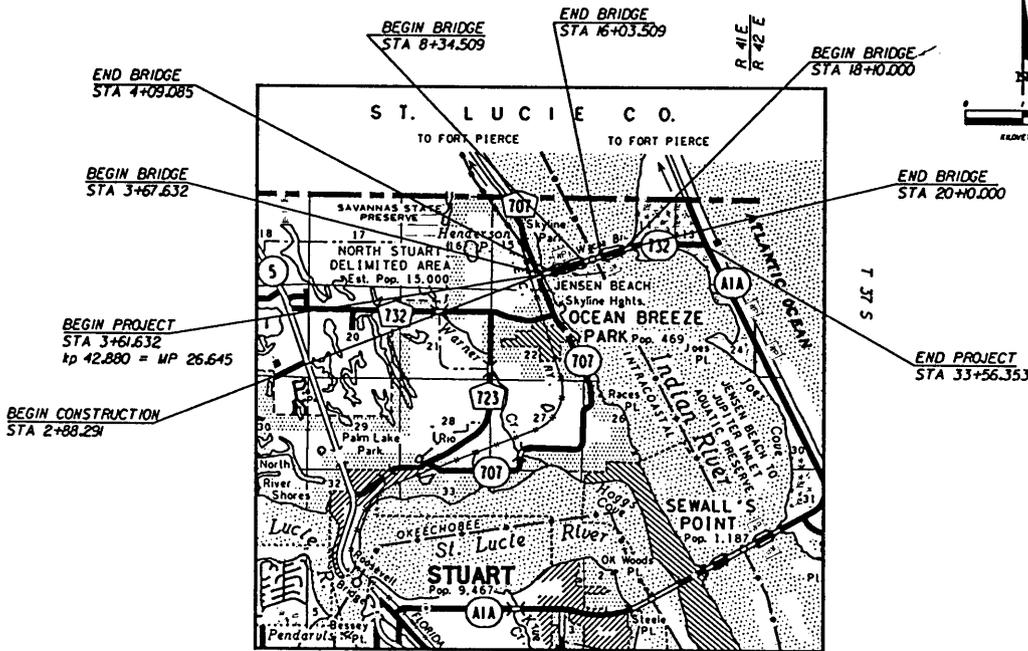
STATE ROAD NO. 732 JENSEN BEACH CAUSEWAY

U.S. COAST GUARD PERMIT SKETCHES  
 FRANK A. WACHA BRIDGE



**FILE COPY**

LOCATION OF PROJECT



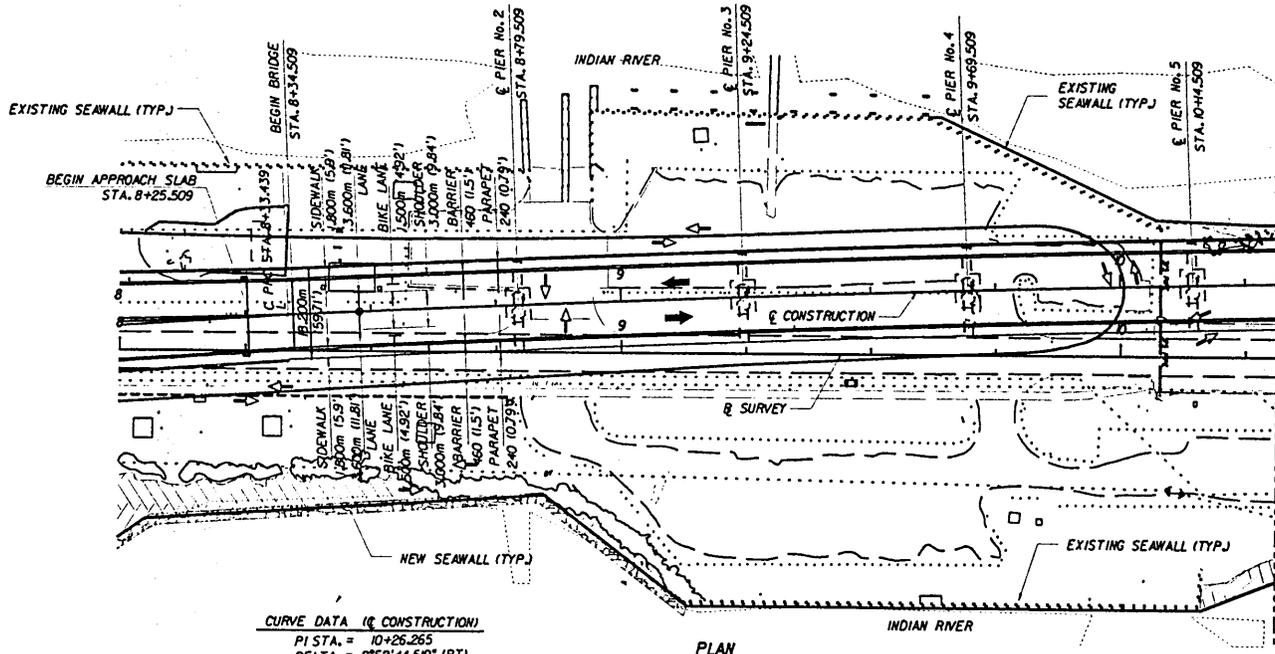
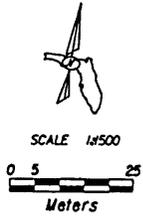
NOTE: THIS IS A METRIC UNIT PROJECT

LENGTH OF PROJECT	
	METERS
ROADWAY	2 057.609
BRIDGES	1 00.453
NET LENGTH OF PROJ.	3 098.062
EXCEPTIONS	
GROSS LENGTH OF PROJ.	3 098.062

GOVERNING SPECIFICATIONS: STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, DATED 1999, SUPPLEMENTS AND SPECIAL PROVISIONS THERETO IF NOTED IN THE CONTRACT SPECIFICATIONS FOR THIS PROJECT.

FDOT PROJECT MANAGER : JOSEPH BORELLO  
 PROJECT ENGINEER: BETSY JEFFERS, P.E.

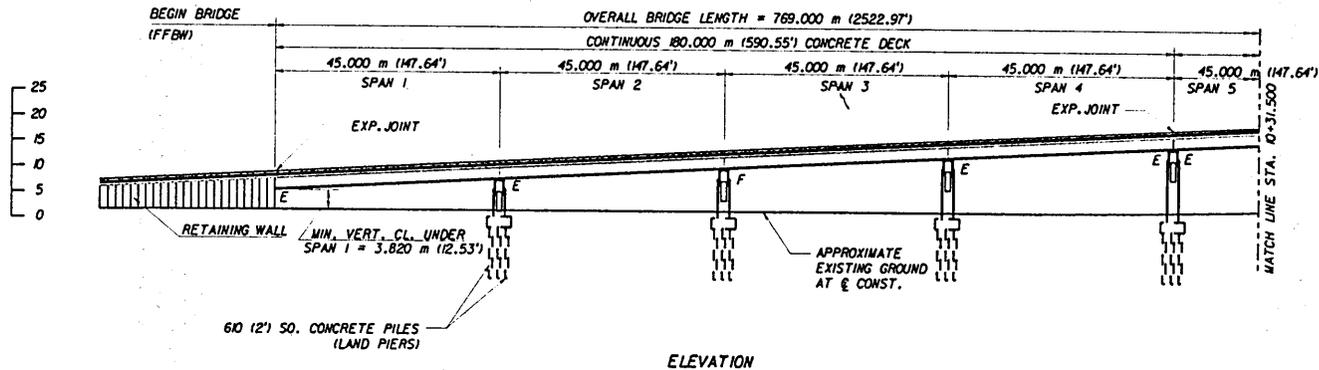
*Betsy Jeffers*  
 9-22-99



**CURVE DATA (CONSTRUCTION)**  
 PI STA. = 10+26.265  
 DELTA = 2°52'44.519" (RT)  
 T = 192.826  
 L = 385.570  
 R = 7,673.245  
 PC STA. = 8+33.439  
 PT STA. = 12+19.009

PLAN

F 2

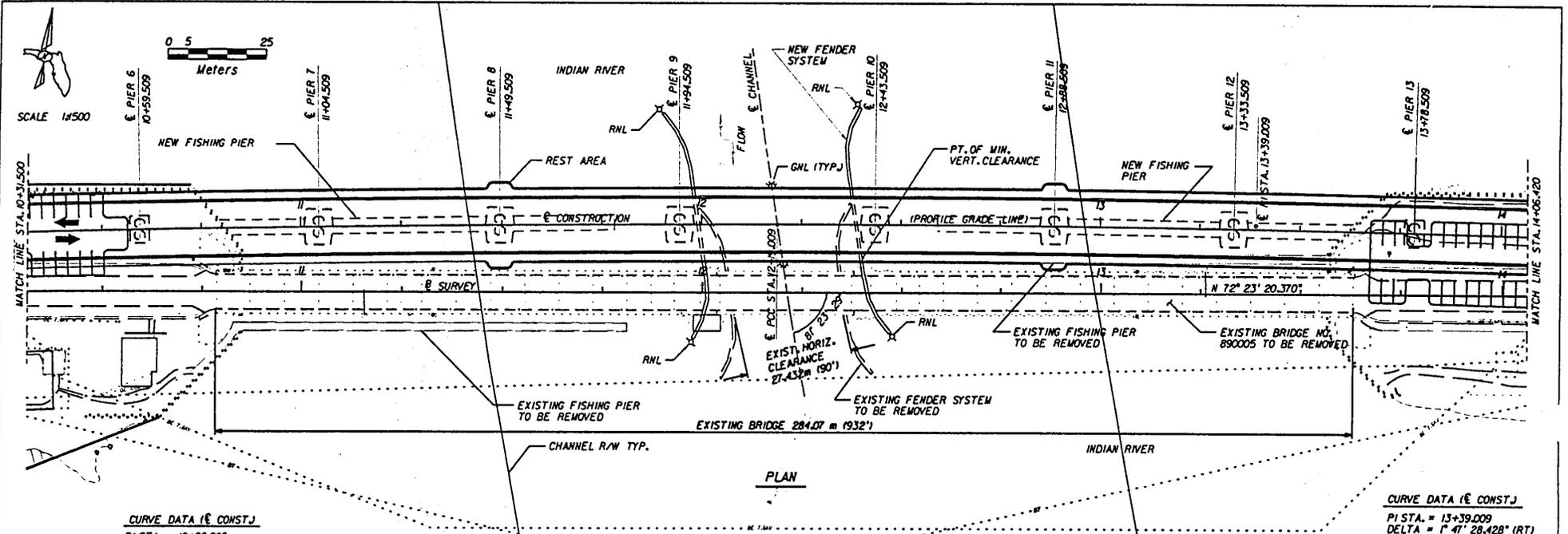


ELEVATION

FRANK A. WACHA BRIDGE  
 (BRIDGE NO. 890145)  
 PLAN & ELEVATION (1 OF 3)

ALL ELEVATION INFORMATION IS BASED UPON NGVD 1988

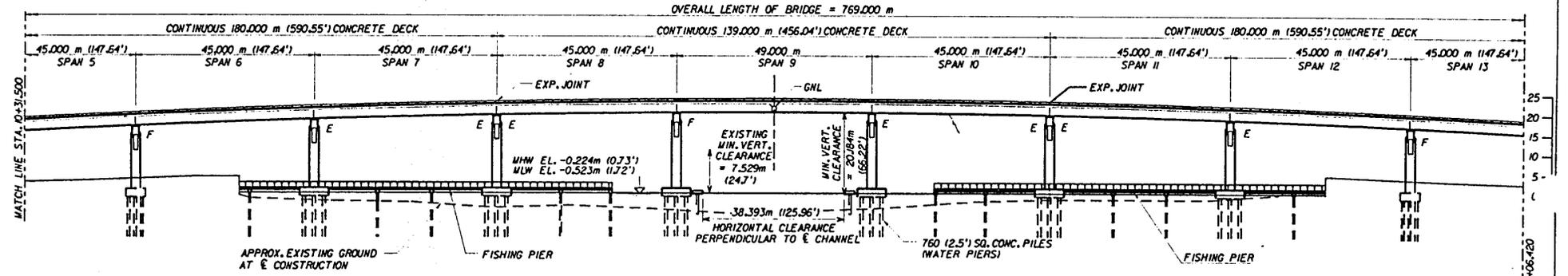
PROJECT DESCRIPTION <b>FRANK A. WACHA BRIDGE</b>		FLORIDA DEPARTMENT OF TRANSPORTATION		STATE PROJECT NO. 89030-1535	
BRIDGE REPLACEMENT AT JENSEN BEACH CAUSEWAY				FINANCIAL PROJECT NO.: 228758 152 01	
TWP: 37 S	RNG: 41 E	NAME: <u>BETSY JEFFERS</u>		COUNTY <b>MARTIN</b>	
SEC		SIGNATURE <u>Betsy Jeffers</u>		DER	CG
		CERTIFICATE NO. <u>50745</u>		COE	WMD
		DATE: <u>9-22-99</u>		SHEET 2 OF 6	
				DATE	



**CURVE DATA (E CONST.)**  
 PI STA. = 10+26.265  
 DELTA = 2° 52' 44.519" (RT)  
 T = 192.826  
 L = 385.570  
 R = 7673.245  
 PC STA. = 8+33.439  
 PT STA. = 12+49.009

**CURVE DATA (E CONST.)**  
 PI STA. = 13+39.009  
 DELTA = 1° 47' 28.428" (RT)  
 T = 120.000  
 L = 239.980  
 R = 7676.215  
 PC STA. = 12+49.009  
 PT STA. = 14+58.989

F 3

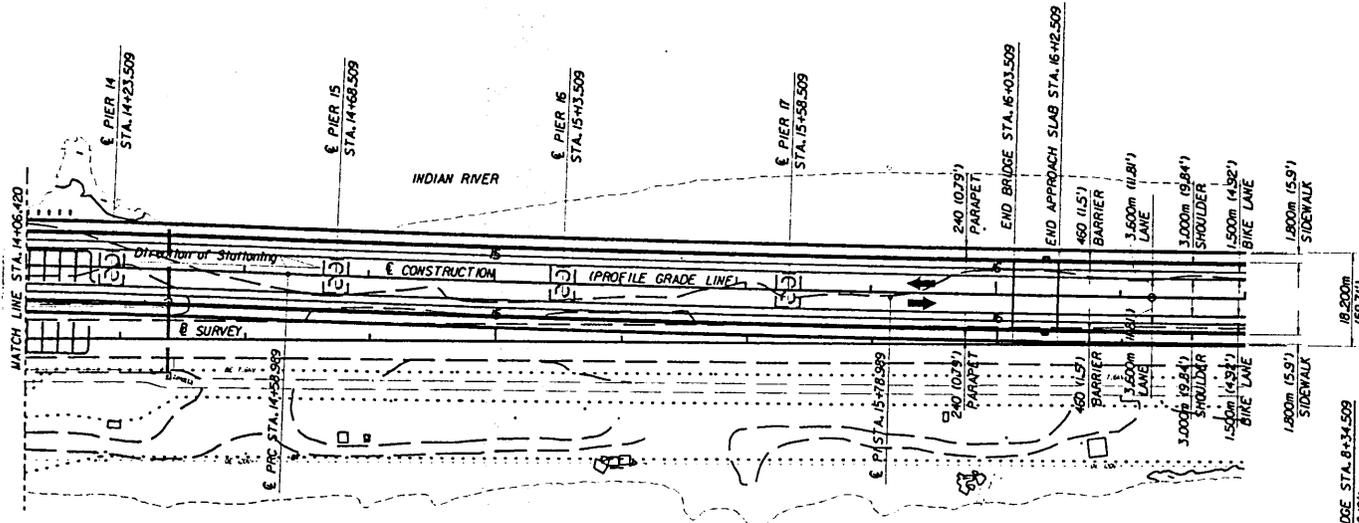


**ELEVATION**

**FRANK A. WACHA BRIDGE**  
 (BRIDGE NO. 890145)  
 PLAN & ELEVATION (2 OF 3)

ALL ELEVATION INFORMATION IS BASED UPON NGVD 1988

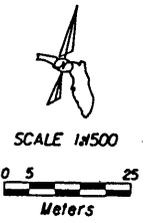
PROJECT DESCRIPTION <b>FRANK A. WACHA BRIDGE</b>		<b>FLORIDA DEPARTMENT OF TRANSPORTATION</b>		STATE PROJECT NO. 89030-1535	
BRIDGE REPLACEMENT AT JENSEN BEACH CAUSEWAY				FINANCIAL PROJECT NO. 228758 152 01	
TWP: 37 S	RNG: 41 E	NAME: <u>BETSY JEFFERS</u>		DER	CG
SEC		SIGNATURE <i>Betsy Jeffers</i>		COE	WMD
		CERTIFICATE NO. <u>50745</u>		DATE: <u>9-22-99</u>	
				COUNTY <b>MARTIN</b>	
				SHEET 3 OF 6	
				DATE	



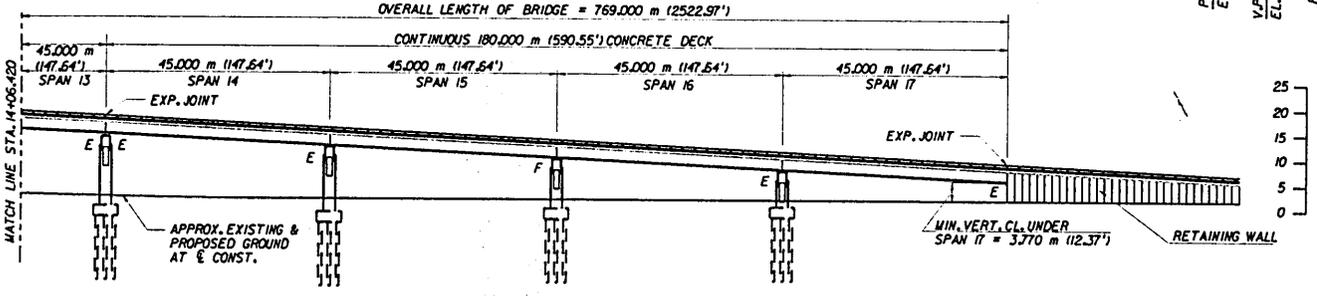
**CURVE DATA (E CONSTRUCTION)**

PI STA. = 15+78.989  
 DELTA = 7° 28' 42.8" (LT)  
 T = 120.000  
 L = 239.980  
 R = 7676.215  
 PC STA. = 14+58.989  
 PT STA. = 16+98.970

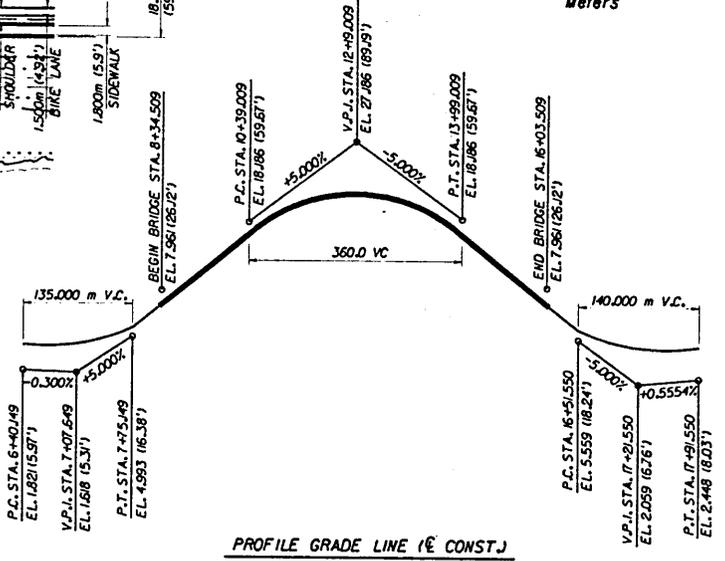
**PLAN**



F4



**ELEVATION**



**PROFILE GRADE LINE (E CONST.)**

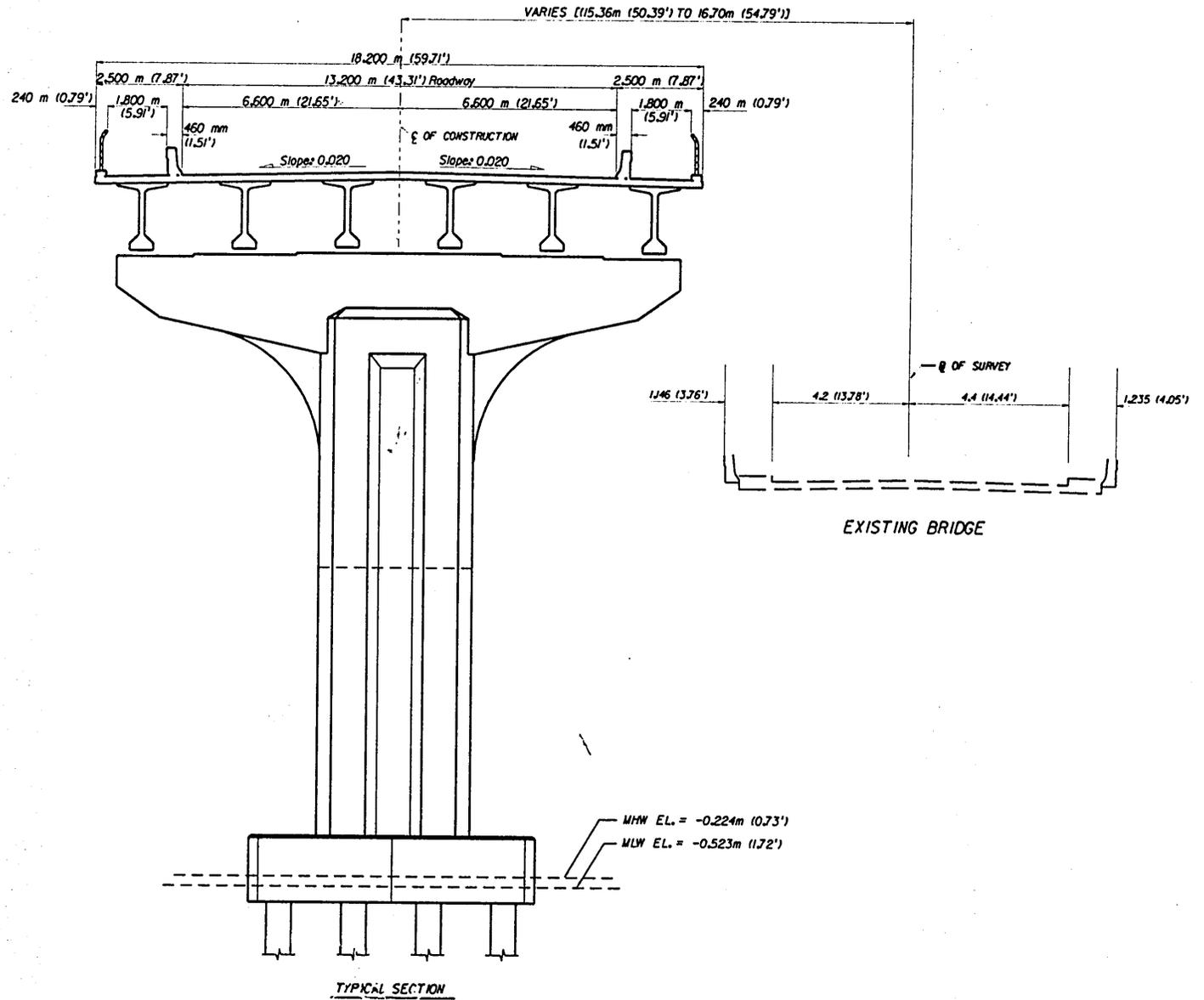
CURRENT YEAR EST. 1995 A.A.D.T. = 11,400  
 DESIGN YEAR EST. 2020 A.A.D.T. = 18,900  
 K=11.5% D=56.0% T=4.5% (24 HOUR)  
 DESIGN SPEED = 80 km/h

**S.R.732 TRAFFIC DATA**

**FRANK A. WACHA BRIDGE  
 (BRIDGE NO. 890145)  
 PLAN & ELEVATION (3 OF 3)**

ALL ELEVATION INFORMATION IS BASED UPON NGVD 1988

PROJECT DESCRIPTION <b>FRANK A. WACHA BRIDGE</b>		<b>FLORIDA DEPARTMENT OF TRANSPORTATION</b>		STATE PROJECT NO. 89030-1535	
BRIDGE REPLACEMENT AT JENSEN BEACH CAUSEWAY				FINANCIAL PROJECT NO. 228758 152 01	
TWP: 37S	RNG: 41 E	NAME: BETSY JEFFERS		COUNTY MARTIN	
SEC		SIGNATURE <i>Betsy Jeffers</i>		DER	CG
		CERTIFICATE NO. 50745		COE	WMD
		DATE: 9-22-99		SHEET 4 OF 6	
				DATE	



FS

NTS

PROJECT DESCRIPTION FRANK A. WACHA BRIDGE

BRIDGE REPLACEMENT AT JENSEN BEACH CAUSEWAY

TWP: 37S                      RNG: 41E

SEC

FLORIDA DEPARTMENT OF TRANSPORTATION

NAME: BEISY JEFFERS

SIGNATURE *Beisy Jeffers*

CERTIFICATE NO. 50745

DATE: 9-22-99

STATE PROJECT NO. 89030-1535  
 FINANCIAL PROJECT NO. 228758-1-52-01  
 COUNTY MARTIN

DER	CG	SHEET 5 OF 6
COE	WMD	DATE

**DREDGE, FILL AND SHADING SUMMARY TABLE**

	Main Bridge		West Bridge		East Bridge		Fishing Pier		West Island		East Island		Total	
	Area sq m (acres)	Volume cu m (cu yds)												
	FILL	41.6 (0.010)	835.9 (1093.3)	1.0 (0.000)	7.7 (10.1)	44.7 (0.011)	1223.4 (1600.1)	4.5 (0.001)	45.4 (59.4)	3539.3 (0.875)	1284.1 (1679.5)	383.7 (0.095)	324.4 (424.3)	4014.8 (0.992)
DREDGE														
SHADING EXIST.	3050 (0.754)		677 (0.161)		2382 (0.589)		434 (0.107)							6543 (1.617)
PROP.	5277 (1.30)		760 (0.188)		3400 (0.840)		0							9437 (2.332)

96

	Seagrass Impacts Area sq m (acres)	Mangrove Impacts Area sq m (acres)
Temporary	2157.0 (0.533)	11.27 (0.003)
Permanent	2017.2 (0.498)	15541.1 (3.840)
Total	4174.2 (1.031)	15552.4 (3.843)

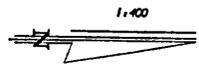
PROJECT DESCRIPTION	ALL BRIDGES	FLORIDA DEPARTMENT OF TRANSPORTATION	STATE PROJECT NO. 89030-1535		
	BRIDGE REPLACEMENT AT JENSEN BEACH CAUSEWAY		FINANCIAL PROJECT NO.: 228758 1 52 01		
TWP: 37 S	RNG: 41 E	NAME: BETSY JEFFERS	COUNTY MARTIN		
SEC		SIGNATURE <i>Betsy Jeffers</i>	DER	CG	SHEET 6 OF 6
		CERTIFICATE NO. 50745	COE	WMD	DATE
		DATE: 9-22-99			

# Appendix G

Example of Tree Permit Plans  
& Index Charts

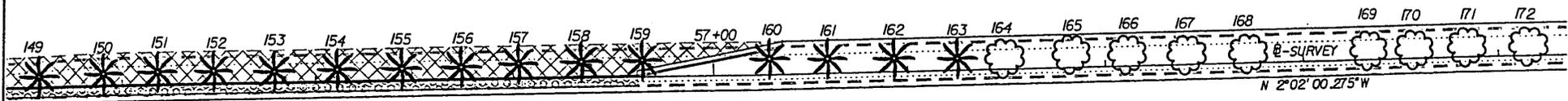


FINANCIAL PROJECT ID	STATE PROJ. NO.	SHEET NO.
228078-1-31-01	86220-3514	19



RAW LINE

SR 817 (UNIV. DR.)



G2

RAW LINE

-  DENOTES REM. OF FLEX. PAVT.
-  DENOTES WIDENING
-  DENOTES BRICK PAVERS

ALL TREE TAGS SHALL BE REMOVED FROM THE TREES WHEN CONSTRUCTION OF THE PROJECT IS COMPLETED.

REVISIONS

DATE		BY		DESCRIPTION	



STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

# TREE PLAN

TAG	BOTANICAL NAME	COMMON NAME	NATIVE	DIA. (IN)	CANOPY (SQ. FT.)	STATION BL SURVEY	OFFSET (IN)	TO REMAIN	TO BE RELOCATED	TO BE REMOVED
1	Cocos nucifera	COCONUT PALM	NO	10	153.9	31+46.503	24.80LT	X		
2	Cocos nucifera	COCONUT PALM	NO	9	51.5	31+49.918	24.94LT	X		
3	Cocos nucifera	COCONUT PALM	NO	9	153.9	31+53.126	24.703LT	X		
4	Cocos nucifera	COCONUT PALM	NO	9	153.9	31+56.500	24.953LT	X		
5	Cocos nucifera	COCONUT PALM	NO	10	113.1	31+58.789	24.840LT	X		
6	Phycosparton elegans	ALEXANDER PALM	NO	4.5	58.1	33+77.086	00.885RT			X
7	Bismarckia sp.	BISMARCK PALM	NO	5.9	55.4	33+82.40	1.061LT			X
8	Swietenia mahagoni	MAHOGANY	YES	15.6	669.6	33+93.523	00.582LT			X
9	Acacia curlauiiformis	EARLEAF ACACIA	NO	7	132.7	34+93.00	23.38 LT	X		
10	Acacia curlauiiformis	EARLEAF ACACIA	NO	3	102.1	34+93.36	19.96 LT	X		
11	Acacia curlauiiformis	EARLEAF ACACIA	NO	4.8	98.5	34+96.70	19.53 LT	X		
12	Quercus virginiana	LIVE OAK	YES	3.1	19.5	35+05.441	0.728 LT	X		
13	Acacia curlauiiformis	EARLEAF ACACIA	NO	2.8	88.2	35+20.65	19.28 LT	X		
14	Acacia curlauiiformis	EARLEAF ACACIA	NO	2.8	-	35+23.18	19.46 LT	X		
15	Acacia curlauiiformis	EARLEAF ACACIA	NO	2.8	-	35+23.33	18.94LT	X		
16	Acacia curlauiiformis	EARLEAF ACACIA	NO	3	132.7	35+23.12	19.78 LT	X		
17	Pinus elliotii	SLASH PINE	YES	37	1252.2	35+24.674	19.579 LT	X		
18	Swietenia mahagoni	MAHOGANY	YES	11.9	665.7	35+25.48	0.889 LT			X
19	Quercus virginiana	LIVE OAK	YES	35	19.5	35+35.40	0.813 LT	X		
20	Swietenia mahagoni	MAHOGANY	YES	7.1	532.9	35+44.77	0.942 LT			X
21	Swietenia mahagoni	MAHOGANY	YES	10.5	394.1	35+52.76	0.724 LT			X
22	Quercus virginiana	LIVE OAK	YES	31	12.4	35+60.18	0.727 LT	X		
23	Pinus elliotii	SLASH PINE	YES	23	562.6	35+65.67	20.02 LT	X		
24	Swietenia mahagoni	MAHOGANY	YES	9.9	216.4	35+68.50	0.500 LT			X
25	Pinus elliotii	SLASH PINE	YES	24	706.2	35+74.329	17.46 LT	X		
26	Acacia curlauiiformis	EARLEAF ACACIA	NO	6.8	415.5	35+75.82	18.89 LT	X		
27	Swietenia mahagoni	MAHOGANY	YES	16.7	58.1	35+75.90	0.795 LT			X
28	Pinus elliotii	SLASH PINE	YES	24	0.1	35+90.025	21.33 LT	X		
29	Acacia curlauiiformis	EARLEAF ACACIA	NO	7.8	84.3	35+97.19	21.90 LT	X		
30	Buella buceras	BLACK OLIVE	NO	16.1	615.7	35+97.70	0.636 LT			X
31	Quercus virginiana	LIVE OAK	YES	7	176.6	35+05.72	0.607 LT	X		
33	Buella buceras	BLACK OLIVE	NO	10.2	483.0	36+22.733	0.853 LT			X
34	Buella buceras	BLACK OLIVE	NO	8.9	539.1	36+31.46	0.560 LT			X
35	Quercus virginiana	LIVE OAK	YES	4	29.0	36+66.409	1.018 LT			X
36	Conocarpus erectus v. sericeus	SILVER BUTTWOOD	YES	3.8	38.5	36+73.875	1.343 LT			X
37	Quercus virginiana	LIVE OAK	YES	6	176.6	37+41.649	19.377 LT	X		
38	Quercus virginiana	LIVE OAK	YES	5	78.1	37+50.421	19.430LT	X		
39	Swietenia mahagoni	MAHOGANY	YES	10.5	492.9	37+53.442	0.894 LT			X
40	Quercus virginiana	LIVE OAK	YES	6	176.6	37+54.954	19.512LT	X		
41	Quercus virginiana	LIVE OAK	YES	6	202.5	37+59.465	19.404 LT	X		
42	Buella buceras	BLACK OLIVE	NO	3.2	81.7	37+59.414	0.688LT			X
43	Quercus virginiana	LIVE OAK	YES	6	202.5	37+63.949	19.620 LT	X		
44	Buella buceras	BLACK OLIVE	NO	7.7	457.6	37+65.709	0.764 LT			X
45	Quercus virginiana	LIVE OAK	YES	8	78.1	37+68.984	19.363LT	X		
46	Quercus virginiana	LIVE OAK	YES	5	112.6	37+74.841	19.437LT	X		
47	Buella buceras	BLACK OLIVE	NO	7.0	271.7	37+78.427	0.698 LT			X
48	Quercus virginiana	LIVE OAK	YES	5	78.1	37+80.829	19.25 LT	X		
49	Quercus virginiana	LIVE OAK	YES	6	176.6	37+85.524	19.346 LT	X		
50	Buella buceras	BLACK OLIVE	NO	6.3	359.7	37+86.396	0.570LT			X

TAG	BOTANICAL NAME	COMMON NAME	NATIVE	DIA. (IN)	CANOPY (SQ. FT.)	STATION BL SURVEY	OFFSET (IN)	TO REMAIN	TO BE RELOCATED	TO BE REMOVED
51	Acacia curlauiiformis	EARLEAF ACACIA	NO	21.5	1158.1	37+63.666	15.606RT	X		
52	Acacia curlauiiformis	EARLEAF ACACIA	NO	12	253.9	37+90.587	16.016RT	X		
53	Buella buceras	BLACK OLIVE	NO	7.1	271.7	37+93.599	0.551LT			X
54	Quercus virginiana	LIVE OAK	YES	3.1	19.5	38+01.006	0.569 LT			X
55	Tamarindus Indica	INDIAN TAMARIND	NO	10	313.5	38+06.112	17.926LT	X		
56	Tabebuia caraliba	SILVER TRUMPET	NO	6	78.1	38+12.982	19.155 LT	X		
57	Tabebuia caraliba	SILVER TRUMPET	NO	7	78.1	38+16.882	23.200LT	X		
58	Buella buceras	BLACK OLIVE	NO	11.4	1372.2	38+29.136	0.586 LT			X
59	Quercus virginiana	LIVE OAK	YES	4.1	88.2	38+16.851	0.503 LT			X
60	Quercus virginiana	LIVE OAK	YES	3.2	43.0	38+25.239	0.559 LT			X
61	Buella buceras	BLACK OLIVE	NO	7.2	459.9	38+35.156	0.594 LT			X
62	Acacia curlauiiformis	EARLEAF ACACIA	NO	8	176.6	38+27.216	22.680LT	X		
63	Tabebuia caraliba	SILVER TRUMPET	NO	4	28.3	38+28.683	21.0849LT	X		
64	Tabebuia caraliba	SILVER TRUMPET	NO	7	113.1	38+40.856	22.289LT	X		
65	Sabal palmetto	CABBAGE PALM	YES	7.6	47.8	38+59.40	17.718LT	X		
66	Quercus virginiana	LIVE OAK	YES	6	78.1	39+18.816	19.639LT	X		
67	Tabebuia heterophylla	PINK TAB	NO	4	28.3	39+41.041	18.452 LT	X		
68	Livistana sabicu	CUBAN TAMARIND	NO	9	313.5	39+48.870	17.456LT	X		
69	Buella buceras	BLACK OLIVE	NO	13	17.5	39+58.290	17.612LT	X		
70	Tabebuia heterophylla	PINK TAB	NO	3.3	47.8	39+71.061	18.718LT	X		
71	Livistana sabicu	CUBAN TAMARIND	NO	17	579.5	39+84.651	17.239 LT	X		
72	Livistana sabicu	CUBAN TAMARIND	NO	10	176.6	39+86.405	17.241LT	X		
73	Buella buceras	BLACK OLIVE	NO	13	960.6	40+05.503	17.410LT	X		
74	Quercus virginiana	LIVE OAK	YES	4	28.3	43+30.439	1.056 LT	X		
75	Quercus virginiana	LIVE OAK	YES	4	63.5	43+40.572	0.830 LT	X		
76	Quercus virginiana	LIVE OAK	YES	4	12.6	43+54.351	0.751LT	X		
77	Quercus virginiana	LIVE OAK	YES	3	19.6	43+63.835	1.000 LT	X		
78	Quercus virginiana	LIVE OAK	YES	4	63.5	43+74.897	0.506 LT	X		
79	Quercus virginiana	LIVE OAK	YES	3	19.6	44+11.061	0.869 LT	X		
80	Quercus virginiana	LIVE OAK	YES	3	19.6	44+24.315	0.884 LT	X		
81	Quercus virginiana	LIVE OAK	YES	3	19.5	44+35.856	1.222 LT	X		
82	Quercus virginiana	LIVE OAK	YES	4	12.6	45+26.594	1.017 LT	X		
83	Quercus virginiana	LIVE OAK	YES	3	19.6	45+35.796	0.918 LT	X		
84	Quercus virginiana	LIVE OAK	YES	3	28.3	45+51.089	0.933 LT	X		
85	Quercus virginiana	LIVE OAK	YES	3	12.6	45+63.385	0.846 LT	X		
86	Syagrus romanzoffia	QUEEN PALM	NO	6	176.6	41+05.829	24.782RT	X		
87	Syagrus romanzoffia	QUEEN PALM	NO	12	346.3	41+07.471	25.681RT	X		
88	Buella buceras	BLACK OLIVE	NO	11	490.9	47+51.938	28.02 LT	X		
89	Buella buceras	BLACK OLIVE	NO	9	530.3	47+63.465	28.206LT	X		
90	Buella buceras	BLACK OLIVE	NO	11	490.9	47+71.067	27.50 LT	X		
91	Buella buceras	BLACK OLIVE	NO	8	253.9	47+78.67	26.991LT	X		
92	Buella buceras	BLACK OLIVE	NO	11	572.6	47+84.470	27.563LT	X		
93	Buella buceras	BLACK OLIVE	NO	12.4	356.4	47+92.59	27.208LT	X		
94	Buella buceras	BLACK OLIVE	NO	15	803.6	48+06.082	27.489LT	X		
95	Bischofia javanica	JAYA BISHOPWOOD	NO	24	950.6	48+41.860	26.01 LT	X		
96	Syagrus romanzoffiana	QUEEN PALM	NO	9	176.6	48+82.909	26.348LT	X		
97	Syagrus romanzoffiana	QUEEN PALM	NO	10	346.3	48+85.818	24.813LT	X		
98	Buella buceras	BLACK OLIVE	NO	12	706.2	48+92.431	28.609LT	X		
99	Buella buceras	BLACK OLIVE	NO	9.3	277.6	47+86.459	1.252 LT			X
100	Quercus virginiana	LIVE OAK	YES	4.0	38.5	47+93.079	1.247 LT			X

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REVISIONS

REVISIONS			
DATE	BY	DESCRIPTION	DATE



STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

# TREE STATUS CHART