

This exemption verification is based on the information you provided the Department and the statutes and rules in effect when the information was submitted. This verification may not be valid if site conditions materially change, the project design is modified, or the statutes or rules governing the exempt activity are amended. In the event you need to re-verify the exempt status for the activity, a new request and verification fee will be required. Any substantial modifications to the project design should be submitted to the Department for review, as changes may result in a permit being required.

### **General Conditions for Exemptions**

The following apply when specified in an exemption in Rule 62-330.051, F.A.C.:

1. Activities shall not exceed a permitting threshold in section 1.2 of the applicable Volume II;
2. Construction, alteration, and operation shall not:
  - a. Adversely impound or obstruct existing water flow, cause adverse impacts to existing surface water storage and conveyance capabilities, or otherwise cause adverse water quantity or flooding impacts to receiving water and adjacent lands;
  - b. Cause an adverse impact to the minimum flows and levels established pursuant to Section 373.042, F.S.
  - c. Cause adverse impacts to a Work of the District established pursuant to Section 373.086, F.S.;
  - d. Adversely impede navigation or create a navigational hazard;
  - e. Cause or contribute to a violation of state water quality standards. Turbidity, sedimentation, and erosion shall be controlled during and after construction to prevent violations of state water quality standards, including any antidegradation provisions of paragraphs 62-4.242(1)(a) and (b), subsections 62-4.242(2) and (3) and Rule 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters due to construction-related activities. Erosion and sediment control best management practices shall be installed and maintained in accordance with the guidelines and specifications described in the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual* (Florida Department of Environmental Protection and Florida Department of Transportation, June 2007), incorporated by reference herein (<https://www.flrules.org/Gateway/reference.asp?No=Ref-02530>), and the *Florida Stormwater Erosion and Sedimentation Control Inspector's Manual* (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), incorporated by reference herein (<https://www.flrules.org/Gateway/reference.asp?No=Ref-02531>).
3. When performed in waters accessible to federally- or state-listed aquatic species, such as manatees, marine turtles, smalltooth sawfish, and Gulf sturgeon, all in-water work shall comply with the following.
  - a. All vessels associated with the project shall operate at "Idle Speed/No Wake" at all times while in the work area and where the draft of the vessels provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
  - b. All deployed siltation or turbidity barriers shall be properly secured, monitored, and maintained to prevent entanglement or entrapment of listed species.

- c. All in-water activities, including vessel operation, must be shutdown if a listed species comes within 50 feet of the work area. Activities shall not resume until the animal(s) has moved beyond a 50-foot radius of the in-water work, or until 30 minutes elapses since the last sighting within 50 feet. Animals must not be herded away or harassed into leaving. All on-site project personnel are responsible for observing water-related activities for the presence of listed species.
- d. Any listed species that is killed or injured by work associated with activities performed shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1(888)404-3922 and [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com). Copies of incorporated materials identified above may be obtained from the Agency, as described in subsection 62-330.010(5), F.A.C.

## **2. Proprietary Review- Not required**

The activity does not appear to be located on sovereign submerged lands, and does not require further authorization under chapter 253 of the Florida Statutes, or chapters 18-20 or 18-21 of the Florida Administrative Code.

## **3. Federal Review – SPGP Not Approved**

This permit does not include Federal authorization or imply the presence or limits of Waters of the United States (WOTUS) on the subject property. Activities that may impact WOTUS shall require a separate permit from the Corps. It is recommended that you contact your local Corps office to determine whether your project site contains WOTUS and/or if a Department of the Army permit is needed. A map of local Corps offices and the federal application form (ENG 4345) are available online at the Jacksonville District Regulatory Division website.

## **Additional Information**

Please retain this letter. The activities may be inspected by authorized state personnel in the future to ensure compliance with appropriate statutes and administrative codes. If the activities are not in compliance, you may be subject to penalties under Chapter 373, F.S., and Chapter 18-14, F.A.C.

## **Notice of Rights**

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice.

## **Petition for Administrative Hearing**

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, any email address, any facsimile number, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

#### Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

#### Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

### Mediation

Mediation is not available in this proceeding.

### FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when the order is filed with the Clerk of the Department.

### Judicial Review

Any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



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Leo Angleró  
Engineering Specialist

Enclosures: [Link to Rule 62-330.020, F.A.C](#)  
Exhibit 1 – Orange County Pump Station 3497 Improvements Drawings, 3 pages  
[Oculus Link to 369210 DEP Permitting and Compliance History](#)

### **CERTIFICATE OF SERVICE**

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

Mark Ikeler, Orange County Utilities, Chief Engineer, [Mark.Ikeler@ocfl.net](mailto:Mark.Ikeler@ocfl.net)  
James Warner, P.E., Tetra Tech, [James.Warner@tetrattech.com](mailto:James.Warner@tetrattech.com)  
Orange County, [Neal.Thomas@ocfl.net](mailto:Neal.Thomas@ocfl.net)  
Margie Cook, SJRMWD, [MCook@sjrwmd.com](mailto:MCook@sjrwmd.com)  
John Palmer, ACOE-Cocoa Beach Regulatory Office, [John.Palmer@usace.army.mil](mailto:John.Palmer@usace.army.mil)  
Irene Sadowski, U.S. Army Corps of Engineers, [Irene.Sadowski@usace.army.mil](mailto:Irene.Sadowski@usace.army.mil)  
FDEP: Nathan Hess, Leo Angleró, Nicole Martin, Reggie Phillips



**FILING AND ACKNOWLEDGMENT**

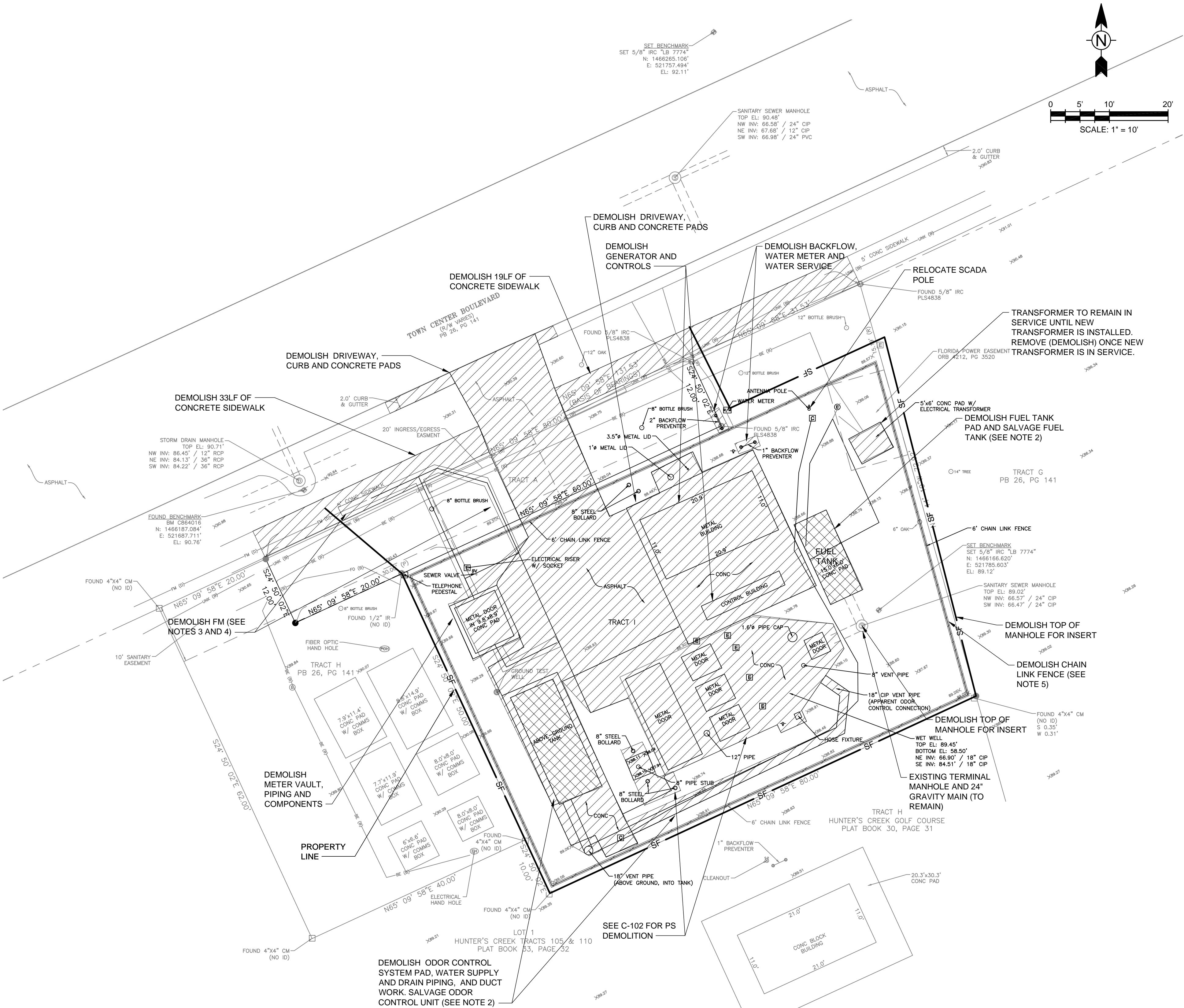
FILED, on this date, pursuant to Section 120.52, F.S., with the designated Department Clerk, receipt of which is hereby acknowledged.

A handwritten signature in cursive script, appearing to read "Dawn M. Lesta", written in black ink.

Clerk

October 24, 2018

Date



DEMOLITION LEGEND AND NOTES

- DEMOLISH AND REMOVE
- SALVAGE AND RETURN TO OWNER

1. THE GENERAL LIMITS OF DEMOLITION ARE SHOWN. LIMITS OF DEMOLITION IS DEFINED AS THE AREA REQUIRED TO COMPLETE THE NEW INSTALLATION. SEE PROPOSED PLANS, SECTIONS AND DETAILS FOR NEW WORK AND POINTS OF CONNECTION.
2. ALL ITEMS TO BE SALVAGED TO THE OWNER WILL BE MARKED BY OCU AND PROTECTED BY THE CONTRACTOR. THE FOLLOWING EQUIPMENT SHALL BE SALVAGED AND RETURNED TO THE OWNER AT SOUTH WRF, 4760 W. SAND LAKE ROAD, ORLANDO, FLORIDA.

A. FUEL TANK

B. SUBMERSIBLE PUMPS

C. ODOR CONTROL UNIT
3. CONTRACTOR SHALL PROVIDE AND MAINTAIN BY-PASS PUMPING EQUIPMENT UNTIL THE UPGRADED PUMP STATION IS DETERMINED BY OCU TO BE OPERATIONAL. BYPASSING SHALL BE AS REQUIRED FOR THE WORK. FOR THE PUMP STATION WORK THE CONTRACTOR SHALL BYPASS FROM THE ON-SITE TERMINAL MANHOLE. THE DISCHARGE MAY BE EITHER TO A POINT IN THE EXISTING FORCE MAIN METER ASSEMBLY OR DIRECTLY INTO THE NEW FORCE MAIN CONNECTION PIPING (UPSTREAM OF THE LINE STOP AND WYE). BYPASS PUMPS SHALL BE LOCATED EITHER ON THE PUMP STATION SITE OR IN THE RIGHT-OF-WAY. SEE SECTION 01516 FOR ADDITIONAL REQUIREMENTS.
4. DEMOLISH THE ENTIRE CHAIN-LINK FENCE AND GATE AS NEEDED FOR CONSTRUCTION. CONTRACTOR TO MAINTAIN PUMP STATION SECURITY AT ALL TIME, INCLUDING THE INSTALLATION AND MAINTENANCE OF TEMPORARY FENCING.
5. CONTRACTOR TO COORDINATE INSTALLATION OF NEW TRANSFORMER AND METER RELOCATION WITH THE ELECTRIC UTILITY.
6. FILL ALL AREAS WITHOUT CONCRETE WITH 4" FDOT #57 STONE WITH 60 MIL GEOTEXTILE LINER UNDER STONE.
7. 6" THICK 3000 PSI CONCRETE WITH 6"x6"xW2.9 WELDED WIRE FABRIC.
8. CONTRACTOR TO PROVIDE AND MAINTAIN SILT FENCE AROUND PERIMETER OF CONSTRUCTION SITE (SEE DETAIL 1/ CD--04).

9/4/2018 5:40:06 PM - P:\JER10034\200-10034-1600\CAD\SHEETFILES\C-101 & 102 PS3497.DWG - MATTHEWS, RUSS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES

AT FULL SIZE

(IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY UTILITIES DEPARTMENT

ENGINEERING DIVISION

9150 CURRY FORD ROAD ORLANDO, FL. 32825

100% SUBMITTAL

TETRA TECH

ENGINEERING BUSINESS NO. 2429

www.tetratech.com

201 EAST PINE STREET, SUITE 1000

ORLANDO, FL 32801

PHONE: (407) 839-3955 FAX: (407) 839-3790

ORANGE COUNTY UTILITIES

TOWN CENTER BOULEVARD 3497 AND SOUTH CENTRAL 3499

MASTER PUMP STATION IMPROVEMENTS

PS3497

DEMOLITION SITE PLAN

OCU FILE NO.: 75985	SCALE: AS-NOTED
DESIGNED BY: RDW	DRAWING NO. :
DRAWN BY: RDW	C-101
CHECKED BY: MBS	SHEET: 07 OF 84
CADD FILE: C-101 & 102 PS3497	

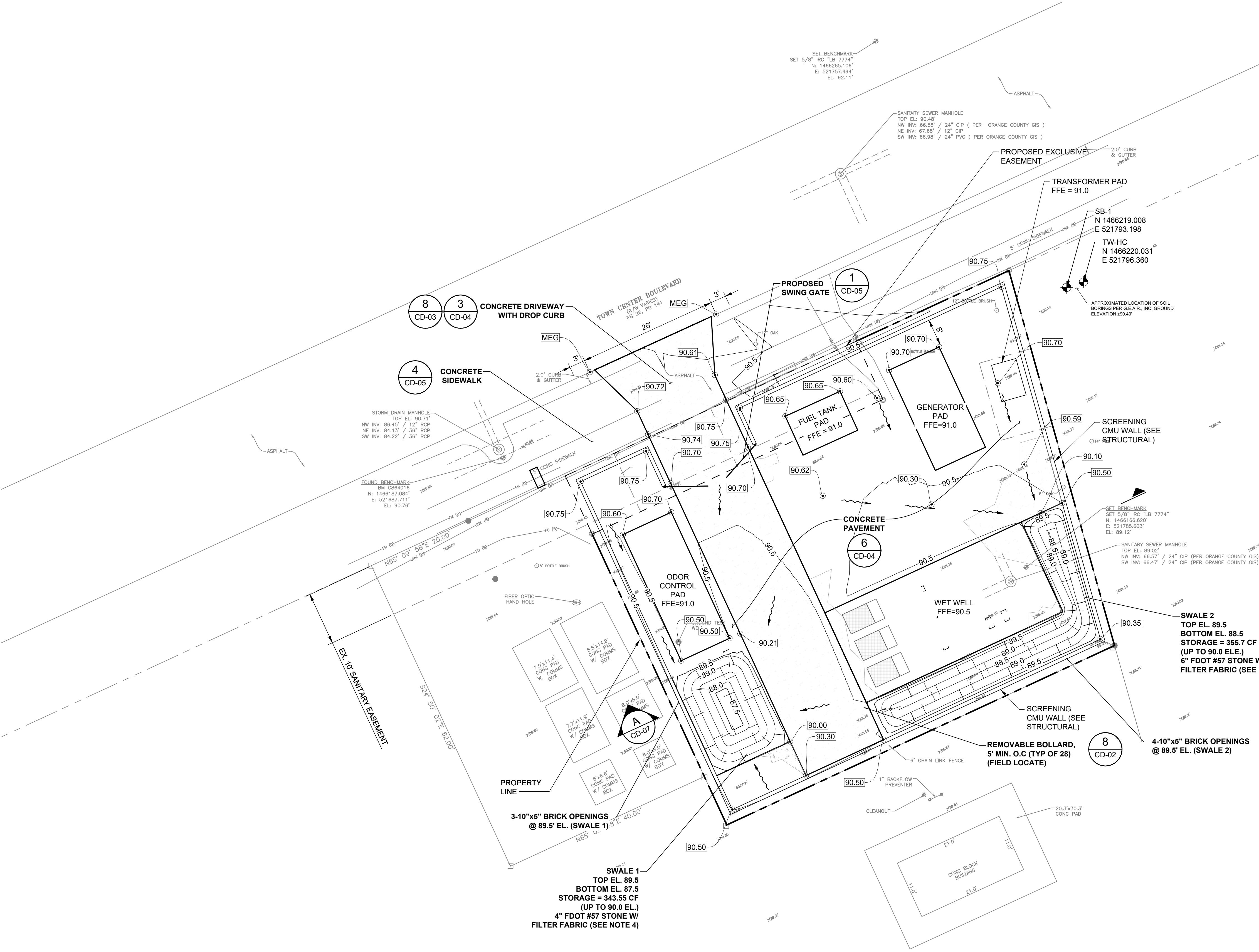
RICHARD D. WILSON, P.E.

PROFESSIONAL ENGINEER

FLORIDA LICENSE # 42807



9/26/2018 9:40:29 AM - I:\T:\LOCAL\PROJECTS\ORLANDO\IER10034\200-10034-16004\CAD\SH\FILES\C-104 PS3497.DWG - ESCAMILLAACERO, ANGELA



STORMWATER NOTES:

1.

EXISTING SWALE VOLUME.....

239.90 CF
2.

STORAGE PROVIDED:

- SWALE 1.....

343.55 CF

- SWALE 2.....

355.70 CF

TOTAL PROVIDED:

699.25 CF
3.

PROPOSED IMPERVIOUS.....

4,841.10 SF
4.

PROPOSED IMPERVIOUS SUBJECT TO VEHICULAR TRAFFIC.....

2,385.50 SF

ITEMS 3 & 4 MEET CONDITIONS REQUIRED ON 62-330.020 (b,c) F.A.C.; "LESS THAN 4,000 SF OF IMPERVIOUS AREA SUBJECT TO VEHICULAR TRAFFIC, AND LESS THAN 9,000 SF OF TOTAL PROJECT IMPERVIOUS AREA"

NOTES:

1. FIELD VERIFY ALL EXISTING UTILITIES
2. SUPPORT AND PROTECT EXISTING UTILITIES AND FACILITIES AGAINST DAMAGE DURING CONSTRUCTION
3. SOD ALL DISTURBED AREAS WITHIN THE LIMITS IDENTIFIED. ALL DISTURBANCES OUTSIDE OF THE IDENTIFIED LIMITS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. FILL ALL AREAS WITHOUT CONCRETE WITH 4" FDOT #57 STONE WITH 60 MIL GEOFABRIC LINER UNDER STONE.
6. 6" THICK 3000 PSI CONCRETE WITH 6"x6"xW2.9 WELDED WIRE FABRIC.
7. CONTRACTOR SHALL PROTECT EXISTING IRRIGATION SYSTEM, OR REMOVE AND REPLACE WITH WITH NEW IRRIGATION SYSTEM, AS REQUIRED FOR CONSTRUCTION.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES

AT FULL SIZE

(IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY

UTILITIES DEPARTMENT

ENGINEERING DIVISION

9150 CURRY FORD ROAD ORLANDO, FL. 32825

100% SUBMITTAL

Tt

TETRA TECH

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ORANGE COUNTY UTILITIES

TOWN CENTER BOULEVARD 3497 AND SOUTH CENTRAL 3499

MASTER PUMP STATION IMPROVEMENTS

PS3497

PAVING AND GRADING

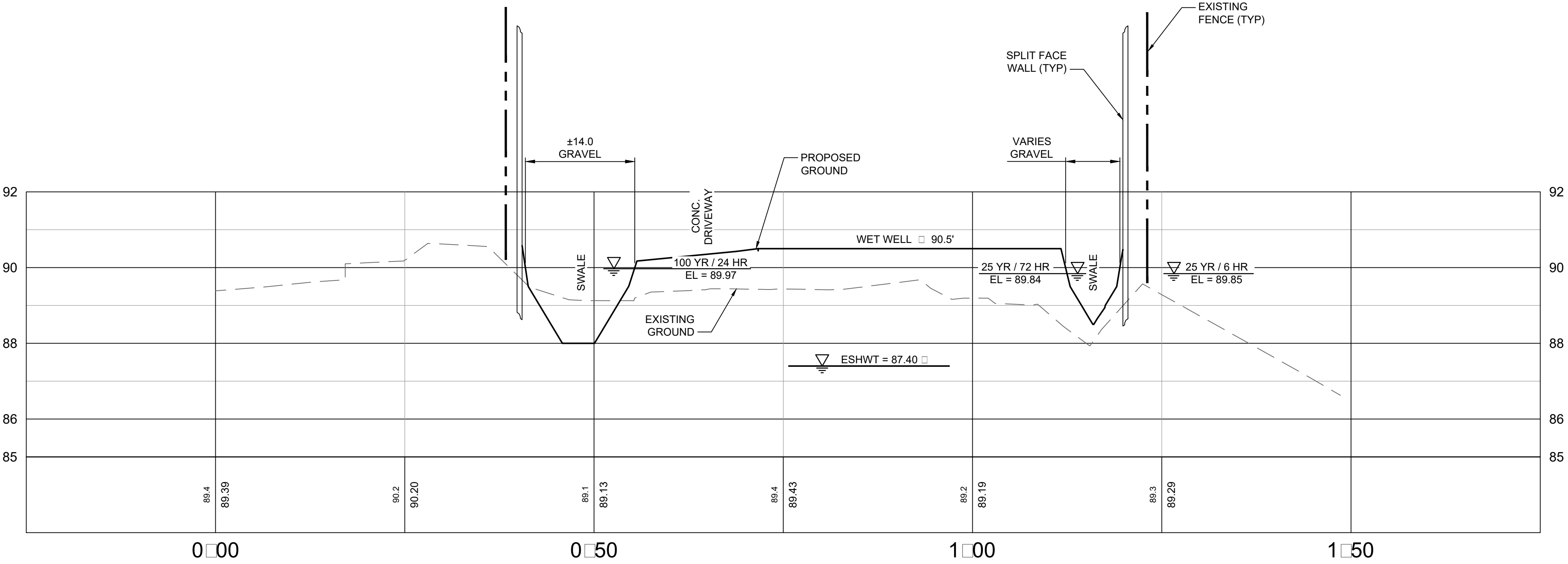
JAMES R. WARNER P.E.

PROFESSIONAL ENGINEER

FLORIDA LICENSE #61871

OCU FILE NO.: 75985
DESIGNED BY: HL
DRAWN BY: RLM
CHECKED BY: MBS
CADD FILE: C-104 PS3497

SCALE: AS-NOTED
DRAWING NO. :
C-104
SHEET: 10 OF 84



**A** PS3497 SECTION  
SCALE: H: 1" = 10'  
V: 1" = 2'

REV	DATE	DESCRIPTION

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY  
UTILITIES DEPARTMENT  
ENGINEERING DIVISION  
9150 CURRY FORD ROAD ORLANDO, FL. 32825

100% SUBMITTAL



TETRA TECH  
ENGINEERING BUSINESS NO. 2429  
www.tetratech.com  
201 EAST PINE STREET, SUITE 1000  
ORLANDO, FL 32801  
PHONE: (407) 839-3955 FAX: (407) 839-3790

ORANGE COUNTY UTILITIES  
TOWN CENTER BOULEVARD 3497 AND SOUTH CENTRAL 3499  
MASTER PUMP STATION IMPROVEMENTS  
SITE CIVIL DETAILS

JAMES R. WARNER P.E.  
PROFESSIONAL ENGINEER  
FLORIDA LICENSE #61871

OCU FILE NO.: 75985
DESIGNED BY: TLM
DRAWN BY: RLM
CHECKED BY: MBS
CADD FILE: CD-501

SCALE: AS-NOTED
DRAWING NO. : <b>CD-07</b>
SHEET: 26 OF 84





## Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Noah Valenstein  
Secretary

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### SELF-CERTIFICATION FOR A STORMWATER MANAGEMENT SYSTEM IN UPLANDS SERVING LESS THAN 10 ACRES OF TOTAL PROJECT AREA AND LESS THAN 2 ACRES OF IMPERVIOUS SURFACES

<b>Owner(s)/Permittee(s):</b>	ORANGE COUNTY UTILITIES DEPT
<b>File No:</b>	0369207001EG
<b>File Name:</b>	PS 3499 UPGRADES
<b>Site Address:</b>	Deerfield Blvd Orlando FL - 32837
<b>County:</b>	Orange
<b>Latitude:</b>	28° 23' 4.7005"
<b>Longitude:</b>	-81° 24' 55.1722"
<b>Total Project Area:</b>	4.1
<b>Total Impervious Surface Area:</b>	0.72
<b>Approximate Date of Commencement of Construction:</b>	12/14/2018
<b>Registered Florida Professional:</b>	James Warner
<b>License No.:</b>	61871
<b>Company:</b>	Tetra Tech

**Date:** October 01, 2018

**James Warner** certified through the Department's Enterprise Self-Service Application portal that the project described above was designed by the above-named Florida registered professional to meet the following requirements:

- (a) The total project area involves less than 10 acres and less than 2 acres of impervious surface;
- (b) Activities will not impact wetlands or other surface waters;
- (c) Activities are not conducted in, on, or over wetlands or other surface waters;
- (d) Drainage facilities will not include pipes having diameters greater than 24 inches, or the hydraulic equivalent, and will not use pumps in any manner;
- (e) The project is not part of a larger common plan, development, or sale; and
- (f) The project does not:
  - 1. Cause adverse water quantity or flooding impacts to receiving water and adjacent lands;

- 2.Cause adverse impacts to existing surface water storage and conveyance capabilities;
- 3.Cause a violation of state water quality standards; or
- 4.Cause an adverse impact to the maintenance of surface or ground water levels or surface water flows established pursuant to s. 373.042 or a work of the district established pursuant to s. 373.086, F.S.

This certification was submitted before initiation of construction of the above project. The system is designed, and will be operated and maintained in accordance with applicable rules adopted pursuant to part IV of chapter 373, F.S. There is a rebuttable presumption that the discharge from such system will comply with state water quality standards. Therefore, construction, alteration, and maintenance of the stormwater management system serving this project is authorized in accordance with s.403.814(12), F.S.

In accordance with s. 373.416(2), F.S., if ownership of the property or the stormwater management system is sold or transferred to another party, continued operation of the system is authorized only if notice is provided to the Department within 30 days of the sale or transfer. This notice can be submitted to:

FDEP Central District  
3319 Maguire Blvd  
Orlando, FL 32803

This certification was submitted along with the following electronic documents:

File Description
plans
drainage calcs
Geotechnical

If you have submitted this certification as a Florida Registered Professional, you may wish to sign and seal this certification, and return a copy to the Department, in accordance with your professional practice act requirements under Florida Statutes.

I, James Warner, License No. 61871, do hereby certify that the above information is true and accurate, based upon my knowledge, information and belief. In the space below, affix signature, date, seal, company name, address and certificate of authorization (if applicable).

This sealed certification may be submitted to the Department, either electronically (as an attachment in Adobe PDF or other secure, digital format) at [Erp.selfcerts@dep.state.fl.us](mailto:Erp.selfcerts@dep.state.fl.us), or as a hardcopy, at the postal address below:

FDEP Central District  
3319 Maguire Blvd  
Orlando, FL 32803



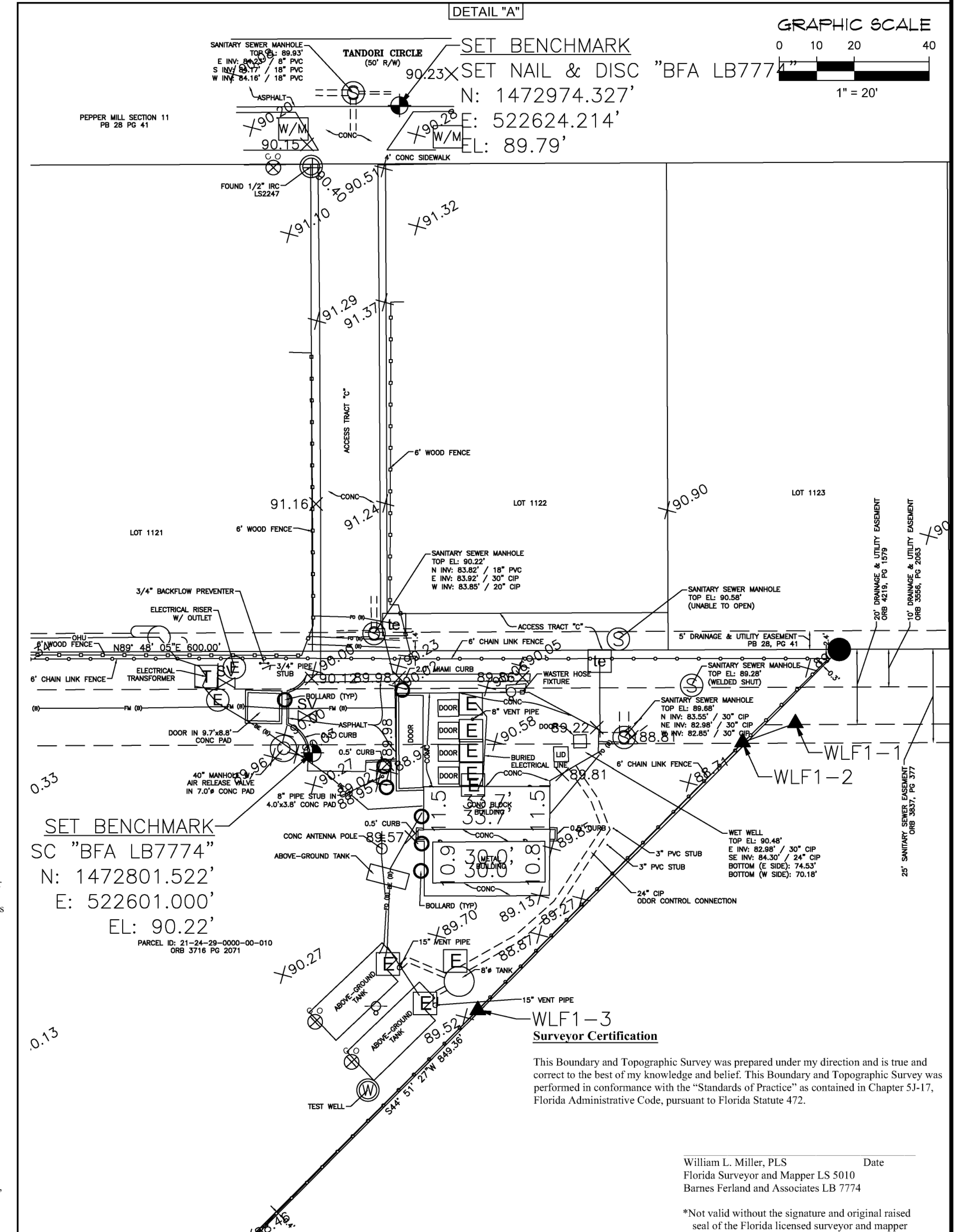
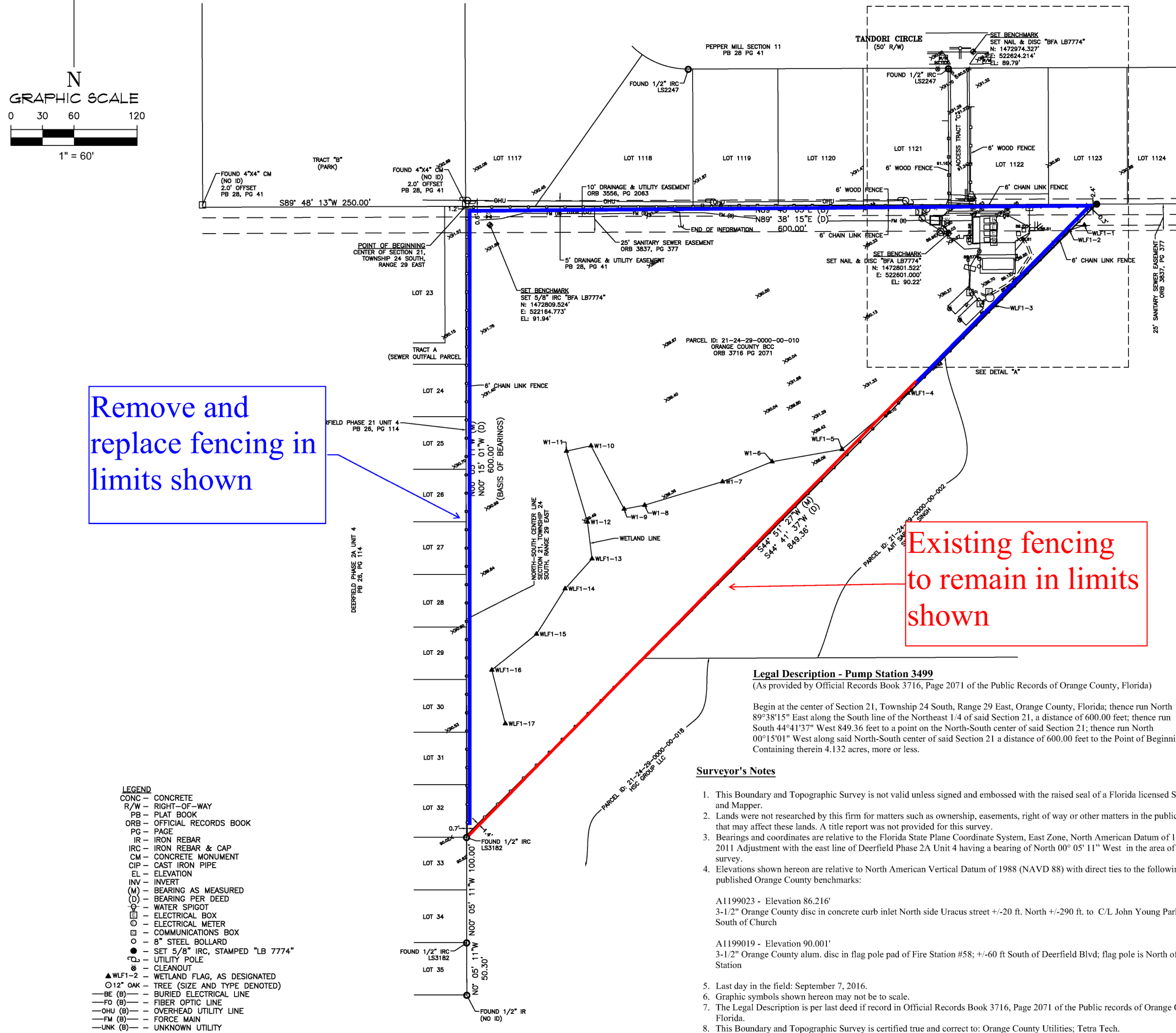


# BOUNDARY & TOPOGRAPHIC SURVEY

## PUMP STATION 3499

### TRACT LYING IN SECTION 21, TOWNSHIP 24 SOUTH, RANGE 29 EAST

#### ORANGE COUNTY, FLORIDA.



Tech: nana.mcmahon  
Pld Date: Dec 20, 2017 7:36am  
Filename: F:\AREA\1003A\200-1003A-1800A\CAD\SheetTitle V-201.dwg

No.	REVISIONS	BY	DATE

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT SCALE ACCORDINGLY)

PREPARED FOR:  
**TETRA TECH WATER, ENVIRONMENT, AND  
INFRASTRUCTURE GROUP**  
201 EAST PINE STREET, SUITE 1000,  
ORLANDO, FL 32801

**BFA** Environmental Consultants  
Barnes, Ferland and Associates, Inc.  
1230 Hillcrest St., Orlando, Florida 32803  
PH: (407) 896-8608 FAX: (407) 896-1822  
CERTIFICATE OF AUTHORIZATION NUMBER: LB 7774

PUMP STATION 3499

## BOUNDARY & TOPOGRAPHIC SURVEY

\* NOT VALID WITHOUT  
SIGNATURE AND  
EMBOSSED SEAL OF A  
FLORIDA LICENSED  
SURVEYOR.

DRAWING INFORMATION	DATE	SHEET NUMBER
PROJECT No.: 2015-10	09/08/2016	V-201
DRAWN BY: CRS	09/08/2016	
CHECKED BY: WM		
FIELD BOOK: 4544-54		
DRAWING FILE: SEE MARGIN	SCALE: 1" = 60'	SHEET: 06 OF 84



FF822

DEMOLITION PLANS  
FOR  
**SOUTH CENTRAL  
W.W.T.F.**

BOARD OF COUNTY COMMISSIONERS

LINDA CHAPIN  
COUNTY CHAIRMAN

BOB FREEMAN  
DISTRICT 1

FRAN PIGNONE  
DISTRICT 4

TOM STALEY  
DISTRICT 2

BILL DONEGAN  
DISTRICT 5

MARY JOHNSON  
DISTRICT 3

MABLE BUTLER  
DISTRICT 6



JEAN C. BENNETT  
COUNTY ADMINISTRATOR  
ALAN B. ISPASS, P.E.  
PUBLIC UTILITIES DIRECTOR

**PUBLIC UTILITIES DIVISION  
ORANGE COUNTY, FLORIDA**

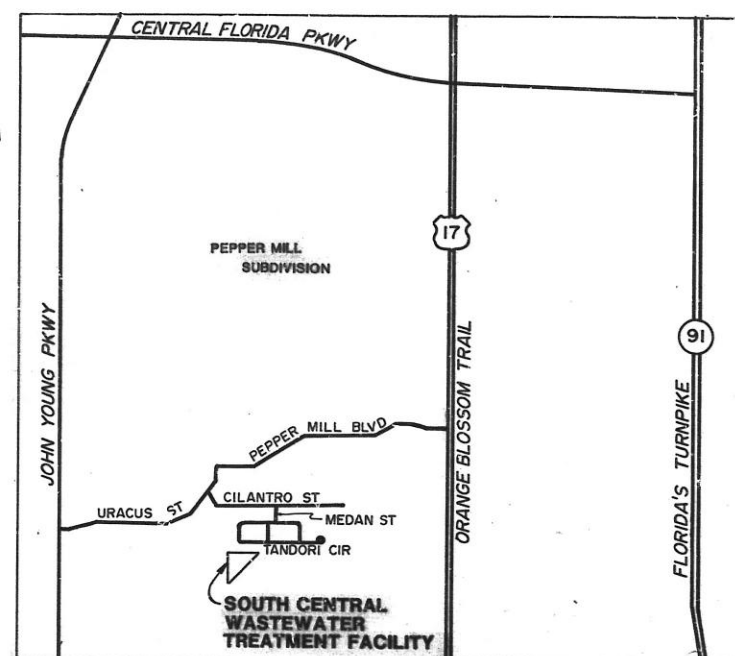
**BOYLE**  
ENGINEERING CORPORATION  
320 EAST SOUTH STREET  
ORLANDO, FLORIDA 32801-3592

Filed 10/20/15  
D.C.  
2



LOCATION MAP

SCALE: NONE



SITE LOCATION

SCALE: NONE

### LEGAL DESCRIPTION

BEGIN AT THE CENTER OF SECTION 21, TOWNSHIP 24 SOUTH, RANGE 29 EAST, ORANGE COUNTY, FLORIDA, RUN SOUTH ALONG THE NORTH/SOUTH CENTERLINE OF SAID SECTION 600 FEET TO A POINT, RUN NORTHEAST 848.5 FEET, MORE OR LESS, TO A POINT ON THE EAST/WEST CENTERLINE OF SAID SECTION 600 FEET EAST OF THE CENTER OF SAID SECTION, RUN WEST 600 FEET TO THE POINT OF BEGINNING.

### SHEET INDEX

SHEET NO.	DESCRIPTION
-	COVER SHEET
G-1	GENERAL INFORMATION
G-2	GENERAL ABBREVIATIONS
G-3	DRAFTING LEGEND
C-1	SITE PLAN
C-2	GRADING PLAN
C-3	DEMOLITION PLAN: STRUCTURE SECTIONS

### GENERAL NOTES

1. THE LOCATIONS OF EXISTING STRUCTURES AND UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS ARE BASED ON "AS-BUILT" DRAWINGS OF PRIOR CONSTRUCTION AND FIELD VERIFICATION OF VISIBLE IMPROVEMENTS. THE ENGINEER DOES NOT PRESENT THIS INFORMATION TO BE ALL INCLUSIVE OR PRECISE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE WHATEVER SITE VISITS AND INVESTIGATIONS AS DEEMED NECESSARY TO DETERMINE THE EXTENT OF THE DEMOLITION WORK REQUIRED TO CLEAR THIS SITE AS REQUIRED BY THE SPECIFICATIONS AND AS NOTED ON THE DRAWINGS.
2. THE CONTRACTOR SHALL LOCATE, ISOLATE AND REMOVE ALL YARD ELECTRICAL CABLES AND DUCTWORK ASSOCIATED WITH SERVICE TO ABANDONED STRUCTURES AND EQUIPMENT TO BE DEMOLISHED OR REMOVED TO A MINIMUM ELEVATION OF 88.0 FT MSL. EXACT LOCATION OF THESE ITEMS IS UNKNOWN AND NO ATTEMPT HAS BEEN MADE TO SHOW YARD ELECTRICAL ON THE DRAWINGS.
3. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF HANDRAILS, LIGHT POLES, PLATES, GRATING, AERIAL WALKWAYS AND OTHER ITEMS ASSOCIATED WITH STRUCTURES NOTED TO BE DEMOLISHED OR REMOVED.
4. THE CONTRACTOR SHALL REMOVE MISCELLANEOUS CONCRETE PADS, SMALL YARD PIPING AND IMPROVEMENTS NOT SHOWN ON THE PLANS OR ASSOCIATED WITH A LARGER STRUCTURE TO A MINIMUM ELEVATION OF 88.0 FT MSL INCLUDING DISCARDED ITEMS LEFT BY THE COUNTY LYING WITHIN THE PROPERTY LIMITS.
5. APPROXIMATE GRADES AND DIMENSIONS SHOWN ON THE STRUCTURE SECTIONS ARE SHOWN FOR REFERENCE. REFER TO THE SITE & GRADING PLANS FOR THE ELEVATIONS.
6. ALL ELEVATIONS SHOWN ON THESE DRAWINGS REFER TO NATIONAL GEODETIC VERTICAL DATUM, ORANGE COUNTY DATUM.
7. UNLESS SHOWN OTHERWISE ON THE DRAWINGS OR SPECIFIED IN THE PROJECT MANUAL, ALL WORK SHALL BE PERFORMED AND ALL MATERIALS SHALL BE FURNISHED IN ACCORDANCE WITH THE ORANGE COUNTY PUBLIC UTILITIES DIVISION "MANUAL OF STANDARDS AND SPECIFICATIONS FOR WASTEWATER AND WATER MAIN CONSTRUCTION" LATEST EDITION AS IT APPLIES TO THIS WORK.
8. CONSTRUCTION ACTIVITY IS LIMITED TO MONDAY THROUGH FRIDAY BETWEEN THE HOURS OF 8:00 A.M. TO 5:00 P.M.

### UTILITIES

TYPE OF SERVICE	UTILITY	TELEPHONE NO.
WATER & SEWER	ORANGE COUNTY PUBLIC UTILITIES DIVISION 109 EAST CHURCH STREET ORLANDO, FLORIDA 32801	(407) 836-7200
POWER	FLORIDA POWER CORPORATION P.O. DRAWER 159 WINTER PARK, FLORIDA 32789	(407) 646-8300 OR (407) 629-1010
TELEPHONE	SOUTHERN BELL 500 NORTH ORANGE AVENUE ORLANDO, FLORIDA 32801	(407) 237-3503 OR (BURIED CABLE) (800) 432-4770 (REPORT DAMAGE) 6-1-1

NOTE:  
THIS LISTING IS PROVIDED AS AN AID TO THE CONTRACTOR. UTILITIES LISTED ARE THOSE WHICH ARE KNOWN TO HAVE FACILITIES WITHIN THE GENERAL LOCATION OF THIS PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY AND ARRANGE FOR FIELD LOCATION OF ALL FACILITIES THAT ARE ENCOUNTERED DURING CONSTRUCTION.

DATE	NO.	REVISIONS	PROJECT MANAGER	BOYLE	GENERAL INFORMATION
DESIGN	JAS	DRAWN	ROBERT B. CADLE, P.E.		
REK			REG. NO. 31086		
DATE			ACCOUNT: OR-003-317-01		
SEPT 93					
ORANGE COUNTY DEMOLITION PLANS FOR SOUTH CENTRAL W.W.T.F.					
DRAWING FILE PEPG-LDGN					
SHEET	DRAWING				
2	G-1				
OF 7					

A AREA/AMP/AIR  
AB ANCHOR BOLT/AGGREGATE BASE  
ABAN ABANDONED  
ABS ACRYLONITRILE-BUTADIENE-STYRENE  
AC ALTERNATING CURRENT/ACTUATED CARBON/  
ACRE ASPHALTIC CONCRETE  
ACP ASBESTOS CEMENT PIPE  
ACSR ALUMINUM CONDUCTOR STEEL REINFORCED  
ADDL ADDITIONAL  
AF AMP FRAME  
AFF ABOVE FINISHED FLOOR  
AFG ABOVE FINISHED GRADE  
AHD AIR HEAD  
AHR AIR HEADER  
AHH ANALOG HANDHOLE  
AICS AMPERE INTERRUPTING CAPACITY SYMMETRICAL  
ALT ALUMINUM/ALUMINUM CONCENTRATED  
ALM ALUMINUM  
ANCH ANCHOR  
ANG ANGLE  
APPROX APPROXIMATE  
ARCH ARCHITECTURE/ARCHITECTURAL  
ARV AIR-RELEASE VALVE  
ARVV AIR-RELEASE VACUUM VALVE  
ASPH ASPHALT  
ASSY ASSEMBLY  
AT AMP TRIP  
ATS AUTOMATIC TRANSFER SWITCH  
AVE AVENUE  
AWG AMERICAN WIRE GAGE

B BC BACK OF CURB/BEGINNING OF CURVE/  
BK BACK CONNECTED/BARE COPPER/BOTTLE CAP  
BL BLIND FLANGE  
BLK BACK/BRAKE/BLACK  
BRK BREAKER  
BL BASE LINE/BLUE  
BLDG BUILDING  
BLK BLOCK  
BLVD BOULEVARD  
BM BENCH MARK/BEAM  
BO BLOW OFF  
BOT BOTTOM  
BRG BEARING  
BUR CBL BURIED CABLE  
BV BUTTERFLY VALVE  
BW BLOCK WALL/BACKWASH

C C CONDUIT  
C&G CURB & GUTTER  
C CONDUCTOR  
C/L CENTER LINE  
CAP CAPACITY  
CB CATCH BASIN/CIRCUIT BREAKER  
C-C CENTER TO CENTER  
CCP CONCRETE CYLINDER PIPE  
CD CROSS DRAIN/CONDENSATION DRAIN/  
CE CORD/CEILING DIFFUSER  
CEM CEMENT  
CFM CUBIC FEET PER MINUTE  
CFS CUBIC FEET PER SECOND  
CHAM CHAMBER  
CHH COMMUNICATIONS HANDHOLE  
CIP CAST IRON PIPE  
CIPL CAST IN PLACE  
CISP CAST IRON SOIL PIPE  
CJ CONSTRUCTION JOINT  
CKT CIRCUIT  
CLD CLASS/CLEARANCE/CHAIN LINK  
CLDI CEMENT LINED DUCTILE IRON  
CLR CLEAR/CLEARANCE  
CLZ CHLORINE  
CM CONCRETE MONUMENT  
CML&C CEMENT MORTAR LINED AND COATED  
(STEEL PIPE)  
CMP CORRUGATED METAL PIPE  
CMPA CORRUGATED METAL PIPE ARCH  
CMU CONCRETE MASONRY UNIT  
CO CLEAN OUT/CONDUIT ONLY/  
CUT OUT/CHANGE ORDER/COUNTY  
COL COLUMN  
COMPL COMPLETE  
CONC CONCRETE  
CONN CONNECTION  
CONSTR CONSTRUCT/CONSTRUCTION  
CONT CONTINUOUS/CONTINUE/CONTROL  
CONTR CONTRACTOR  
COORD COORDINATED  
COR CORNER  
CP CONTROL PANEL  
CPL COUPLING  
CPT CONTROL POWER TRANSFORMER  
CPVC CHLORINATED POLYVINYL CHLORIDE  
CTEL COAT TAR ENAMEL-LINED STEEL  
CTG COATING/CARTRIDGE  
CTR CENTER/COOLING TOWER RETURN  
CTRL CONTROL  
CTV CABLE TELEVISION  
CTVR CABLE TELEVISION RISER  
CTL&C COAL TAR EPOXY-LINED  
AND COATED STEEL PIPE  
CU COPPER/CUBIC  
CULV CULVERT  
CV CHECK VALVE  
CY CUBIC YARD/CYCLE  
CYL CYLINDER

D DBL DEGREE OF CURVATURE  
DCLR DOUBLE  
DEF DEFLECT/DEFLECTIVE  
DEFLANG DEFLECTION ANGLE  
DET DETAIL/DETAIL  
DF DRINKING FOUNTAIN/DEMAND FACTOR  
DI DROP INLET  
DIA DIAMETER  
DIAG DIAGONAL  
DIM DIMENSION  
DIP DUCTILE IRON PIPE  
DISCH DISCHARGE  
DNH DROP MANHOLE  
DN DOWN  
DR DRIVE/DOOR/RAIN  
DRWY DRIVEWAY  
DWL DOWEL/DESIGN WATER LEVEL  
DWY DRAIN/WASTE AND VENT PIPING  
DWY DRIVEWAY

E E/E/ EXTERIOR/EXTERNAL DISTANCE  
EA EASEMENT LINE  
ECC ECCENTRIC  
ED EQUIPMENT DRAIN  
EE EACH END  
EFF EFFLUENT  
EL ELEVATION/EACH LEVEL  
ELC ELECTRIC/ELECTRICAL  
ELIP ELLIPTICAL  
EMB EMBEDMENT  
ENC ENCASEMENT/ENCASED  
ENG ENGINE  
ENGR ENGINEER  
EOP EDGE OF PAVEMENT  
EQ EQUATION  
EQL EQUAL  
EQUIP EQUIPMENT  
ESMT EASEMENT  
EST ESTIMATE/ESTIMATED  
ETM ELAPSED TIME METER  
EW EACH WAY/ENDWALL  
EX EXPLOSION PROOF  
EXCAV EXCAVATION  
EXP EXPANSION JOINT  
EXT EXTERIOR/EXTENSION/EXTERNAL

F&I FURNISH AND INSTALL  
FAB FABRICATE  
FB FUSE BLOCK/FLAT BAR  
FC FLOOR CLEAN OUT  
FCV FLOW CONTROL VALVE  
FD FLOOR DRAIN/FIRE DAMPER  
FDN FOUNDATION  
FF FINISHED FLOOR/FLAT FACE/FAR FACE  
FG FINISHED GRADE  
FH FIRE HYDRANT/FUME HOOD  
FIG FIGURE  
FIT FITTING/FLOW INDICATING TRANSMITTER  
FL FLOOR/FLOW LINE/LIGHT LEVEL  
FLEX FLEXIBLE  
FLG FLANGE  
FM FORCE MAIN/FACTORY MUTUAL  
FMH FLEXIBLE METAL HOSE  
FNSH FINISH  
FOC FACE OF CONCRETE  
FPC FLEXIBLE PIPE COUPLING  
FPM FEET PER MINUTE  
FPS FEET PER SECOND  
FS FLOW SWITCH  
FT FEET/FOOT  
FTG FOOTING/FITTING  
FUT FUTURE  
FV FUEL VENT/FACE VELOCITY  
FW FORWARD  
FXL&SP FUSION BONDED EPOXY-LINED AND  
COATED STEEL PIPE

G GAGE/GAUGE  
GAL GALLON  
GALV GALVANIZED  
GCB GENERATOR CIRCUIT BREAKER  
GDR GUARD RAIL  
GEN GENERATOR  
GFI GROUND FAULT INTERRUPTER  
GLASS GLASS  
GLDI GLASS-LINED DUCTILE IRON (PIPE)  
GLSP GLASS-LINED STEEL  
GM GAS MAIN/GROSS MILE  
GND GROUND  
GND.G GALLONS PER DAY  
GPM GALLONS PER MINUTE  
GR GRADE/GRIT SLURRY  
GROND GROUNDING  
GRTG GRATING  
GSP GALVANIZED STEEL PIPE  
GV GATE VALVE

H HB HOSE BIBB  
HC HEATING COIL/HOLDING COIL  
HD HEAVY DUTY  
HH HANDHOLE  
HGT HEIGHT  
HOA HAND-OFF-AUTOMATIC  
HORIZ HORIZONTAL  
HP HORSEPOWER/HIGH PRESSURE  
HPS HIGH PRESSURE SODIUM  
HR HOUR/HANDRAIL  
HS HIGH STRENGTH  
HSA HEADED STUD ANCHOR  
HV HOSE VALVE/HIGH VOLTAGE  
HVAC HEATING/VENTILATING AND  
AIR CONDITIONING  
HW HEADWALL/HOT WATER(DOMESTIC)  
HWL HIGH WATER LEVEL  
HWY HIGHWAY  
HYD HYDRAULIC  
HZ HERTZ

I ID INTERSECTION ANGLE  
ID INSIDE DIAMETER  
IF INSIDE FACE  
IG ISOLATED GROUND  
IN INCHES  
INF INFLUENT  
INLET INLET  
INS INSULATE/INSULATION  
INSTL INSTALL/INSULATE/INSTALLATION  
INT INTERIOR  
INV INVERT  
IP IRON PIPE/INTERFACE PANEL  
IRR IRRIGATION

J J-BOX JOINT  
JT JOINT

K KVA KILOVOLT-AMPERE  
KCMIL THOUSAND CIRCULAR MILLS  
KV KILOVOLT  
KW KILOWATT  
KWH KILOWATT-HOUR

L LA LENGTH OF CURVE/LEFT/RIGHT/LAMP  
LAM LAMINATE  
LATL LATERAL  
LAV LAVATORY  
LB LBS  
LCP LIGHTING CONTROL PANEL  
LF LINEAR FEET/LOW FREQUENCY  
LG LENGTH/LONG  
LLH LONG LEG HORIZONTAL  
LLV LONG LEG VERTICAL  
LNTEL LINTEL  
LOS LOCKOUT STOP  
LP LIGHT POLE/LIQUID PROPANE/  
LIGHTING PANEL  
LPT LOW POINT  
LS LIFT STATION/LIMIT SWITCH  
LT LEFT/LIGHT  
LTG LIGHTING  
LNG LIGHTNING PROTECTION  
LVR LOWER  
LWL LOW WATER LEVEL  
LWR LOWER

M MATL MATERIAL  
MAX MAXIMUM  
MB MACHINE BOLT/MIXING BOX/  
MOP BASIN/MEGABYTE  
MC METAL CHANNEL/MOMENTARY CONTACT  
MCB MAIN CIRCUIT BREAKER  
MCC MOTOR CONTROL CENTER  
MCP MOTOR CIRCUIT PROTECTION/  
MAIN CONTROL PANEL  
ME MITERED END  
MECH MECHANICAL  
MFR MANUFACTURER  
MGD MILLION GALLONS PER DAY  
MHO MANHOLE/METAL HOSE  
MI MALLEABLE IRON/MILE  
MIN MINIMUM/MINUTE  
MISC MISCELLANEOUS  
MJ MECHANICAL JOINT  
MO MASONRY OPENING/MOTOR OPERATOR  
MOD MODIFY/MODIFIED  
MON MONUMENT  
MPC MINI-POWER CENTER  
MTD MOUNTED  
MTW MOTOR/WEATER  
MTU MASTER TERMINAL UNIT  
MV MERCURY VAPOR  
MW MAINWAY

N N NORTH/NEUTRAL  
N&C NAIL AND CAP  
N/L NIGHT LIGHT  
N/A NOT APPLICABLE/NOT AVAILABLE  
NC NORMALLY CLOSED  
NE NORTHEAST  
NEC NATIONAL ELECTRIC CODE  
NFDS NON-FUSED DISCONNECT SWITCH  
NPPA NATIONAL FIRE PROTECTION  
ASSOCIATION  
NIC NOT IN CONTRACT  
NO NUMBER/NORMALLY OPEN  
NOM NOMINAL  
NPT NATIONAL PIPE THREAD  
NRS NON-RISING STEAM  
NS NEAR SIDE  
NTS NOT TO SCALE  
NW NORTHWEST  
NY NYLON TUBING

O ON/OFF  
OC ON CENTER/OVERCURRENT  
OCA OPEN/CLOSE/AUTO  
OD OUTSIDE DIAMETER/OVERFLOW DRAIN  
OE OR EQUAL  
OF OUTSIDE FACE  
OH OVERHEAD  
OHP OVERHEAD POWER  
OL OVERLOAD  
OPER OPERATOR  
OPEN OPENING  
OPP OPPOSITE/OPPOSED  
OPT OPTIONAL  
OSC OPEN/STOP/CLOSE  
OVFL OVERFLOW  
OVHD OVERHEAD

P P POLE  
P/L PROPERTY LINE  
PB PULL BOX/PANIC BUTTON  
PC POINT OF CURVATURE/  
PROGRAMMABLE CONTROLLER  
PCC POINT OF COMPOUND CURVATURE  
PCCP PRESTRESSED CONCRETE CYLINDER PIPE  
PCM PERMANENT CONTROL MONUMENT  
PE POLYETHYLENE TUBING/PRIMARY EFFLUENT/  
PLAIN END  
PEP POLYETHYLENE PIPE  
PG PRESSURE GAUGE/PROFILE GRADE  
PHH POWER HANDHOLE  
PI POINT OF INTERSECTION/PRESSURE  
INDICATOR/PRIMARY INFLUENT  
PL PLATE/PLUG/PLACE/PLANT  
PLC PROGRAMMABLE LOGIC CONTROLLER  
PLDI POLYETHYLENE-LINED DUCTILE IRON PIPE  
PMD PAD MOUNTED SWITCH  
PML PANEL  
POB POINT OF BEGINNING  
POJ PUSH ON JOINT  
PP POWER POLE/POWER PANEL/  
POLYPROPYLENE  
PPLS POLYPROPYLENE-LINED STEEL  
PAIR  
PRC POINT OF REVERSE CURVATURE  
PRESS PRESSURE  
PRV PRESSURE REDUCING VALVE  
PSF POUNDS PER SQUARE FOOT  
PSI POUNDS PER SQUARE INCH  
PSIA POUNDS PER SQUARE INCH ABSOLUTE  
PT POINT OF TANGENCY/POINT/PART  
POTENTIAL TRANSFORMER  
PV PLUG VALVE  
PVC POLYVINYL CHLORIDE  
PVDF POLYVINYLIDENE FLUORIDE (KYNAR) PIPE  
PVDFLS POLYVINYLIDENE FLUORIDE LINED STEEL PIPE  
PVI POINT OF VERTICAL INTERSECTION  
PVM PAVEMENT  
PW PER WALL  
PWR POWER

Q Q FLOW RATE/PEAK DISCHARGE

R R/R/W RADIUS/RIGHT/RELAY  
RC RIGHT OF WAY  
RCF REINFORCED CONCRETE  
RCP REINFORCED CONCRETE PIPE  
RCPA REINFORCED CONCRETE PIPE ARCH  
RD ROAD/ROOF DRAIN/ROUND  
RDC REDUCER  
RECP RECEPTACLE  
REF REFERENCE  
REINF REINFORCE/REINFORCED  
REM REMOVE/REMOVABLE  
REQ REQUIRED  
REQT REQUIREMENT  
RGS RIGID GALVANIZED STEEL  
RJ RESTRAINED JOINT  
RM ROOM  
RMS ROOT MEAN SQUARE  
RND ROUND  
RP RELAY PANEL  
RPM REVOLUTIONS PER MINUTE  
RPT REINFORCED PLASTIC MORTAR PIPE  
RR RAILROAD  
RR RIGHT  
RTU REMOTE TERMINAL UNIT  
RV RELIEF VALVE  
RVS REVERSE  
RVT RIVETED  
RWL RAIN WATER LEADER  
RWM RECLAIMED WATER MAIN

S S/S SOUTH/SIGN/SLOPE(UNIT/UNIT)  
START/STOP  
SAN SANITARY  
SCHED SCHEDULE  
SE SOUTHEAST/SECONDARY EFFLUENT  
SECT SECTION  
SEWER SEWER  
SF SUPPLY FAN  
SGL SINGLE  
SH SHEET/SHEETING/SHUNT  
SHLD SHIELD/SHIELDED  
SHLDR SHOULDER  
SIG SIGNAL  
SIM SIMILAR  
SLV SLEEVE  
SM SHEET METAL/STATUTE MILE  
SOFFIT SOFFIT  
SOLENOID VALVE  
SPACE/SOL PIPE/STEEL PIPE  
SP SET POINT/STATIC PRESSURE  
SPEC SPECIFICATION  
SPT SUPPORT  
SQ SQUARE  
SS SUSPENDED SOLIDS  
SST SANITARY SEWER/SERVICE SINK/  
STAINLESS STEEL  
ST STREET/SURFACE TREATMENT/  
SHUNT TRIP  
STD STATION (100 FT)  
STANDARD STANDARD  
STK STAKE  
STL STEEL  
STP STEEL PIPE  
STR STRAIGHT/STRENGTH  
STS STORM SEWER  
SURF SURFACE  
SW SOUTHWEST/SURFACE WASH/SWITCH/  
SIDEWALK  
SWB SWITCHBOARD  
SYM SYMMETRICAL

T T/T&B TON/TEE/THERMOSTAT  
TOP & BOTTOM  
T/B TOP OF BEAM  
T/O TOP OF  
T/P TOP OF PIPE  
TAN T-ANGLE  
TB TOP OF BANK/TERMINAL BOARD/  
TERMINAL BOX  
TBM TEMPORARY BENCH MARK  
TC TOP OF CURB/TEMPERATURE CONTROL/  
THERMOCOUPLE/TRIP COIL  
TCB TIE CIRCUIT BREAKER  
TE THERMAL ELEMENT  
TEFC TOTALLY ENCLOSED, FAN COOLED  
TEL TELEPHONE  
TEMP TEMPERATURE/TEMPORARY  
TENV TOTALLY ENCLOSED, NON-VENTILATED  
THD THREAD/THREADED  
THK THICK  
TINN TINNED  
TL TANGENT LENGTH  
TO TURNOUT  
TOF TOP OF FOOTING  
TOS TOP OF STEEL  
TOT TOTAL  
TOW TOP OF WALL  
TPO TELEPHONE POLE  
TR TREAD/TELEPHONE RISER  
TRA TIE ROD ASSEMBLY  
TS TUBE STEEL/THICKENED SLL/GE  
TSP TWISTED SHIELDED PAIR  
TST TWISTED SHIELDED TRIAD  
TYP TYPICAL

U UCTV UNDERGROUND CABLE TELEVISION  
UD UNDERDRAIN  
UGND UNDERGROUND  
UGP UNDERGROUND POWER CABLE/CONDUIT  
UL UNDERWRITERS' LABORATORIES, INC.  
ULT ULTIMATE  
UON UNLESS OTHERWISE NOTED  
UPS UNINTERRUPTIBLE POWER SYSTEM  
UTC UNDERGROUND TELEPHONE CABLE

V V/VAC VENT/VALVE/VOLT  
VAC VACUUM/VOLT/ALTERNATING CURRENT  
VAR VARIES/VARIABLE  
VC VERTICAL CURVE/VITRIFIED CLAY  
VCP VITRIFIED CLAY PIPE  
VEL VELOCITY  
VERT VERTICAL  
VFD VARIABLE FREQUENCY DRIVE  
VPC VERTICAL POINT OF CURVE  
VPI VERTICAL POINT OF INTERSECTION  
VPT VERTICAL POINT OF TANGENCY  
VTR VENT THROUGH ROOF

W W/W/W/O WEST/WIDTH/WATT/WASTE/WIDE/WHITE/WIRE  
WITH  
W/O WITHOUT  
WC WATER COLUMN/WATER CLOSET  
WCO WALL CLEANOUT  
WF WIDE FLANGE  
WG WATER GAUGE  
WHC WELDED HALF COUPLING  
WL WATER LINE  
WM WATER MAIN/WATER METER/WIRE MESH  
WATT METER  
WP WATERPROOF/WEATHER PROOF/WORKING POINT  
WS WATER SURFACE/WEATHER SERVICE  
WSE WATER SURFACE ELEVATION  
WSP WELDED STEEL PIPE/WATER STOP  
WT WEIGHT/WATER TABLE  
WVF WELDED WIRE FABRIC  
WWM WELDED WIRE MESH

X X/XFMR COORDINATE DISTANCE(EAST-WEST)/CROSS  
TRANSFORMER  
XMTR TRANSMITTER  
X-SEC CROSS SECTION

Y Y/YD COORDINATE DISTANCE(NORTH-SOUTH)  
YARD

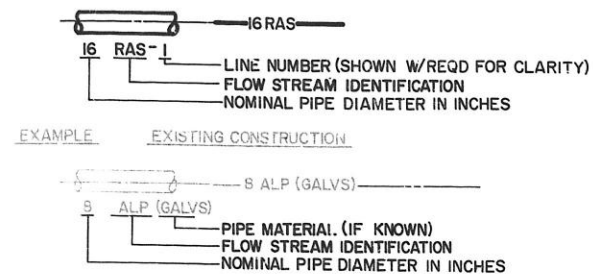
MISCELLANEOUS

DATE: \_\_\_\_\_  
REVISIONS: \_\_\_\_\_  
DESIGN: JAS \_\_\_\_\_  
DRAWN: KEK \_\_\_\_\_  
DATE: SEPT 93  
PROJECT MANAGER: ROBERT B. CADLE, P.E.  
REG. NO. 31066  
ACCOUNT: OR-003-NY-0  
**BOYLE**  
ENGINEERING CORPORATION  
GENERAL ABBREVIATIONS  
ORANGE COUNTY  
DEMOLITION PLANS  
FOR  
SOUTH CENTRAL W.W.T.F.  
DRAWING FILE  
PEPG-2.DGN  
SHEET 3  
OF 7  
DRAWING  
G-2

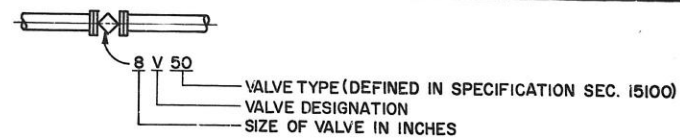


# PLANT CONSTRUCTION

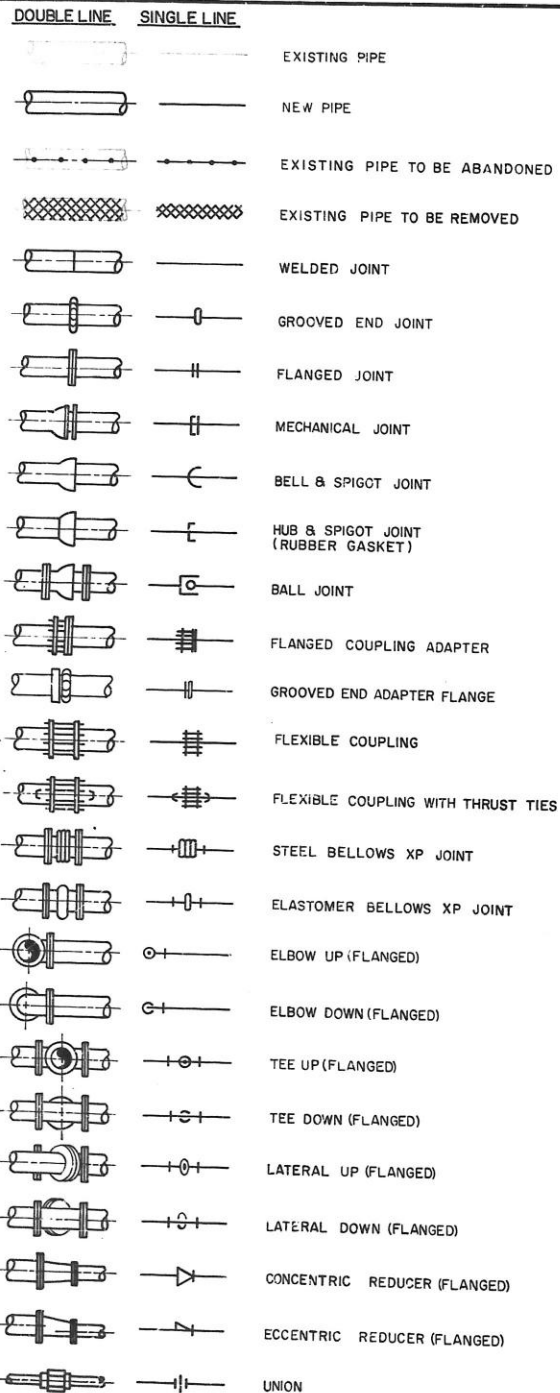
## PIPING DESIGNATIONS



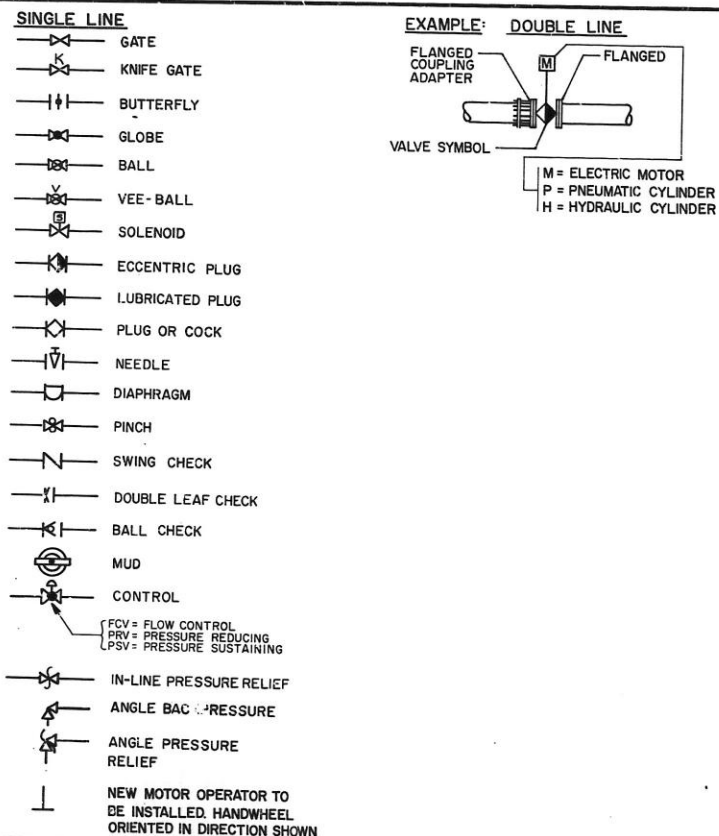
## VALVE DESIGNATIONS



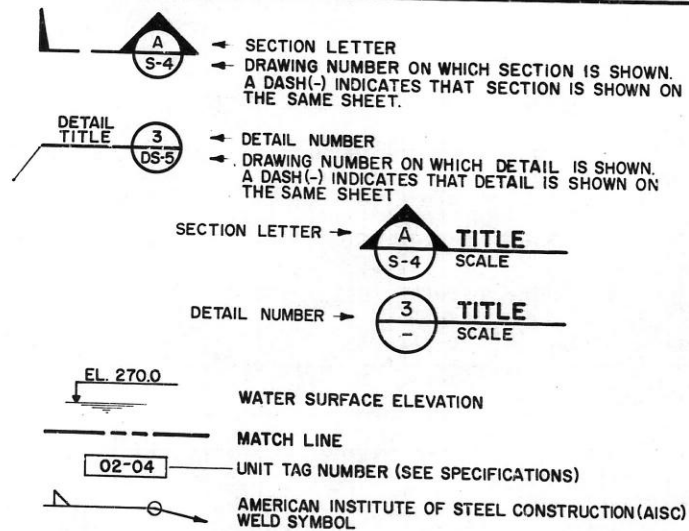
## PIPE AND FITTING SYSTEM



## VALVE SYMBOLS

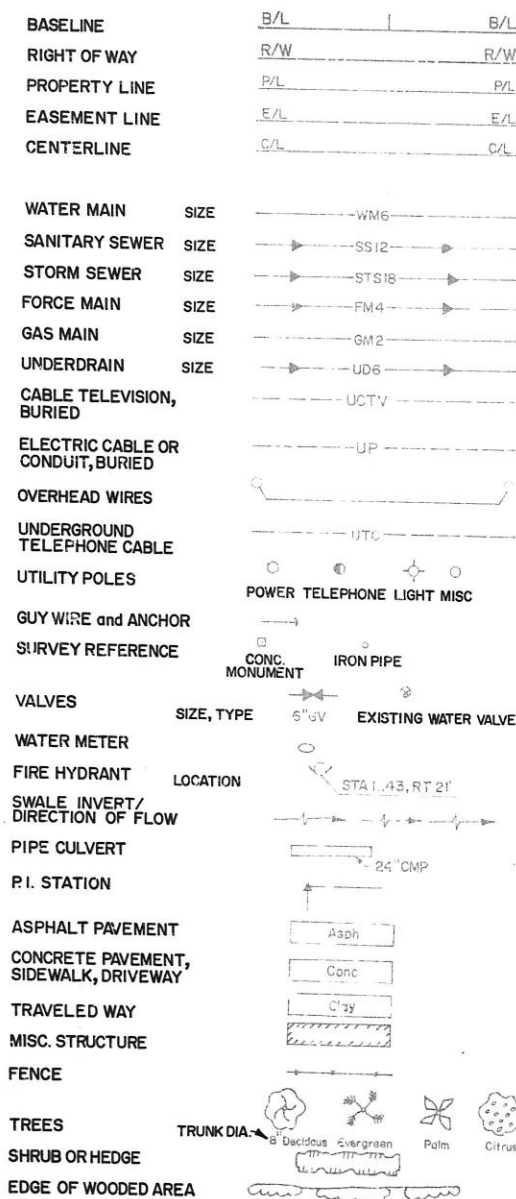


## DRAFTING LEGEND

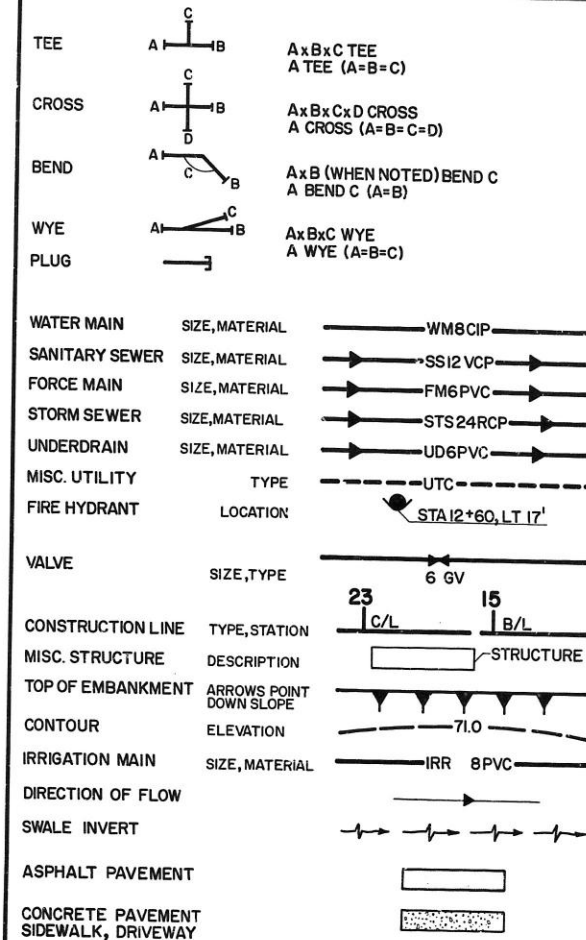


# CIVIL CONSTRUCTION

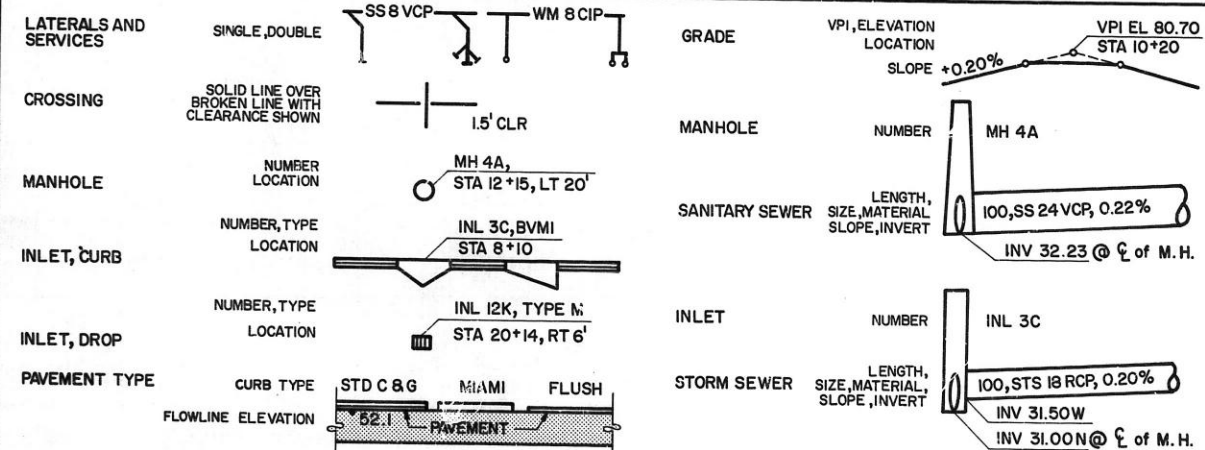
## EXISTING



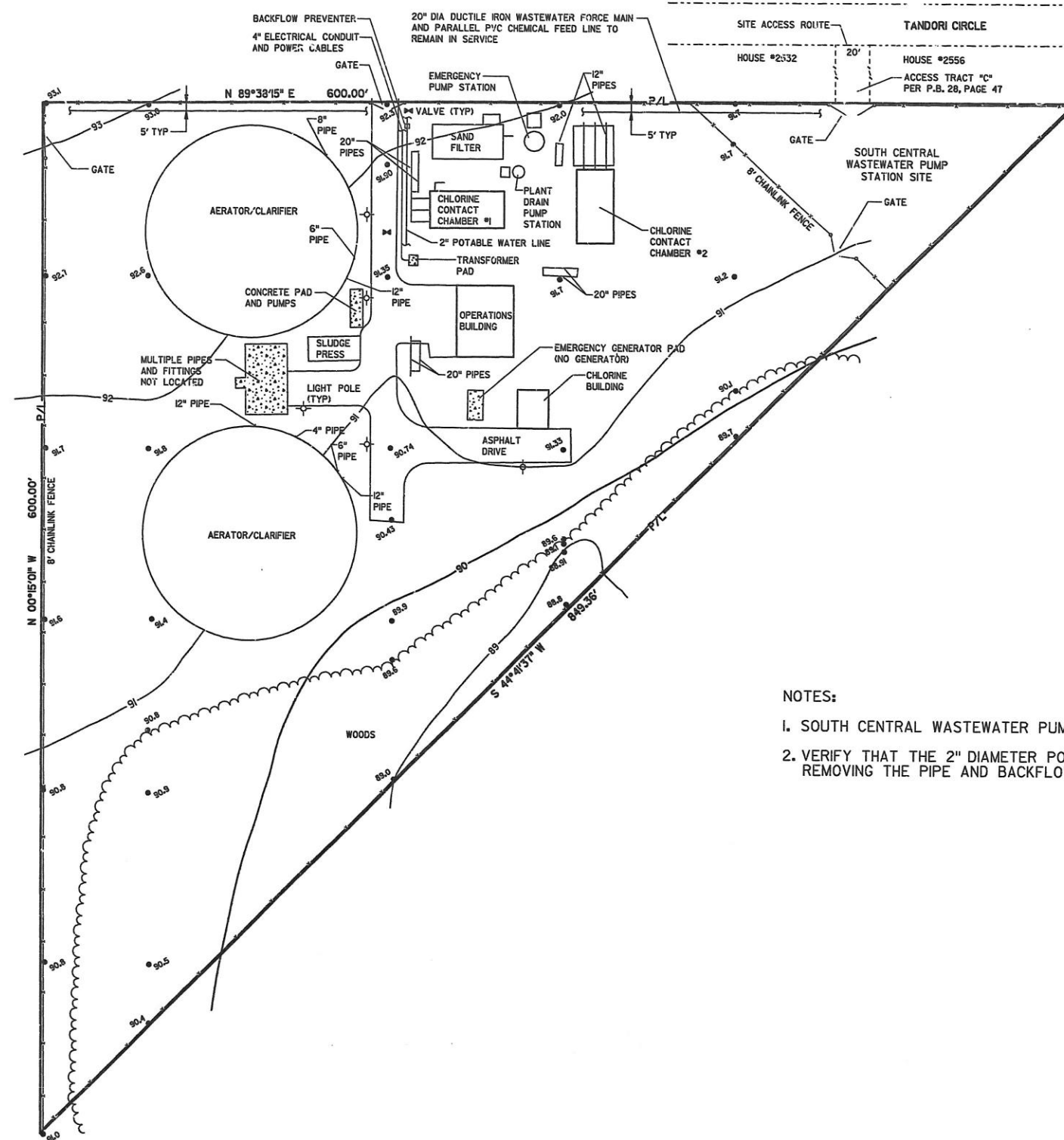
## NEW



## SANITARY AND STORM SEWERS



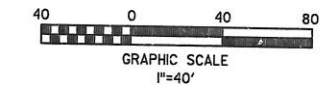
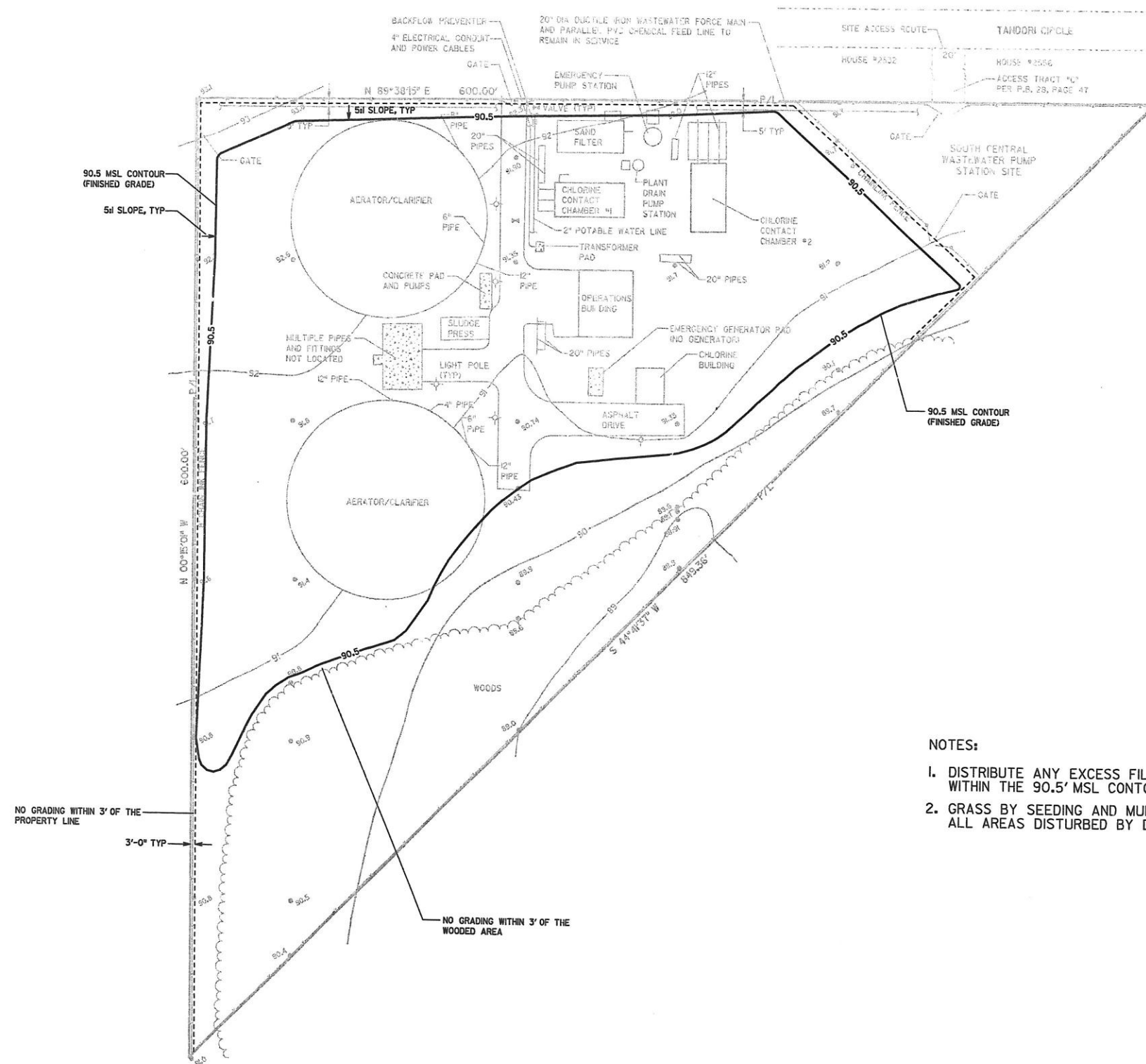
DATE	REVISIONS	NO.	DESIGN	JAS	DRN	CHK	DATE	SEP 93
PROJECT MANAGER ROBERT B. CADLE, P.E. REG. NO. 31068 ACCOUNT: OR-005-SI-CI								
<b>BOYLE</b> ENGINEERING CORPORATION								
DRAFTING LEGEND								
ORANGE COUNTY DEMOLITION PLANS FOR SOUTH CENTRAL W.W.T.F.								
DRAWING FILE PEPO-3.DGN								
SHEET	DRAWING							
4	G-3							
OF 7								



NOTES:

1. SOUTH CENTRAL WASTEWATER PUMP STATION SHALL REMAIN IN SERVICE AT ALL TIMES.
2. VERIFY THAT THE 2" DIAMETER POTABLE WATER LINE IS OUT OF SERVICE BEFORE REMOVING THE PIPE AND BACKFLOW PREVENTER.

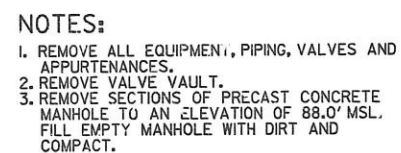
ORANGE COUNTY		DEMOLITION PLANS FOR SOUTH CENTRAL W.W.T.F.																
DRAWING FILE PEPC-LDGN		SHEET 5 OF 7																
DRAWING C-1		SITE PLAN																
PROJECT MANAGER ROBERT B. CADLE, P.E. REG. NO. 31066 ACCOUNT: OR-003-37-01		<table border="1"> <tr> <th>NO.</th> <th>REVISIONS</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		NO.	REVISIONS	DATE												
NO.	REVISIONS	DATE																



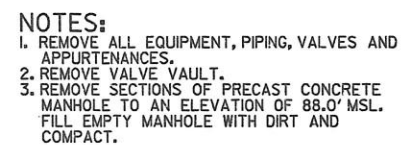
- NOTES:
1. DISTRIBUTE ANY EXCESS FILL MATERIAL UNIFORMLY OVER THE SITE WITHIN THE 90.5' MSL CONTOUR.
  2. GRASS BY SEEDING AND MULCHING THE AREA WITHIN THE 90.5' CONTOUR AND ALL AREAS DISTURBED BY DEMOLITION.

ORANGE COUNTY		DEMOLITION PLANS FOR SOUTH CENTRAL W.W.T.F.	
DRAWING FILE PEPC-2.DGN		SHEET C-2	
PROJECT MANAGER ROBERT B. CADLE, P.E. REG. NO. 31066 ACCOUNT: OR-003-317-QI		DESIGN JAS DRAIN REK DATE SEPT 93	
GRADING PLAN		BOYLE ENGINEERING CORPORATION	
NO. _____		REVISIONS	
DATE _____		DATE _____	

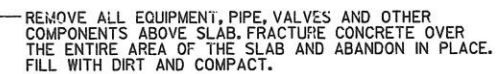




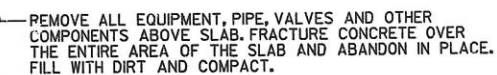
SCALE: NONE



SCALE: NONE



SCALE: NONE



SCALE: NONE

BOYLE

DEMOLITION PLAN: STRUCTURE PROFILES

**ORANGE COUNTY  
DEMOLITION PLANS  
FOR  
SOUTH CENTRAL W.W.T.F.**

DRAWING FILE PEPC-3.DGN	
SHEET 7 OF 7	DRAWING C-3

SQ# 4020

Includes South Central and Hunters Crk PSs RDs

**CONTRACT DOCUMENTS**  
For Construction of the  
**SOUTH SERVICE AREA**  
**WASTEWATER TRANSMISSION SYSTEM**

**PRIORITY 1 PUMP STATIONS**  
**CONTRACT 1B**  
**SOLICITATION NO. Y9-705A-CT**

**VOLUME 2 OF 2**  
**DRAWINGS**



**ORANGE COUNTY PUBLIC UTILITIES DIVISION**  
**Orange County, Florida**

**NOVEMBER 1988**

**RECORD DRAWINGS**  
REVISIONS DRAWN BY PKO DATE 6-21-91  
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AND HEREBY CERTIFIES, BASED UPON THE KNOWLEDGE DERIVED THEREFROM  
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THE WORK PERFORMED.

For information regarding this project, contact:

**GLENN A. RICHTER, P.E.**  
**GAINESVILLE, FL**  
**904/377-2442**

**Project No. GNV22947.C1**



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**Vera Carter**  
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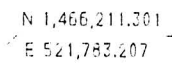
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1"=10' Koblar Constructors & Engineers, Surveyed By W. Watkins OIKCE 3-6-90  
Revised By John Resh OIKCE 3-20-90





DRAWN BY: MUG LANG	KCE PROJ. NO. 5404
--------------------	--------------------

DATE: SEPT. 8, 1990	DESIGN ENGINEER: CH2M HILL
---------------------	-------------------------------

Orange County Florida  
Priority 1 Pump Stations

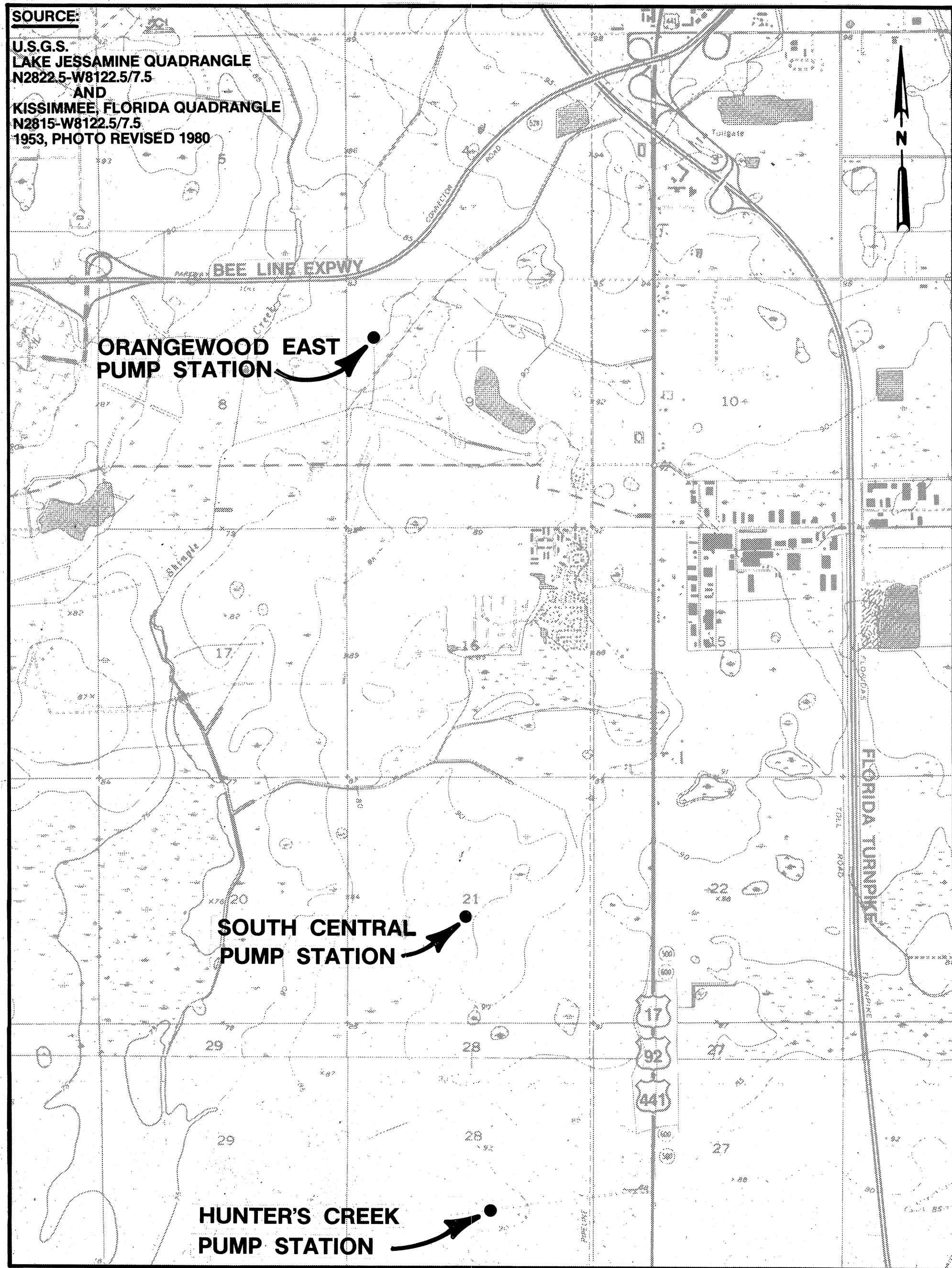
SCALE VERIFICATION  
Scale 1" = 10'

Wm. C. Powell

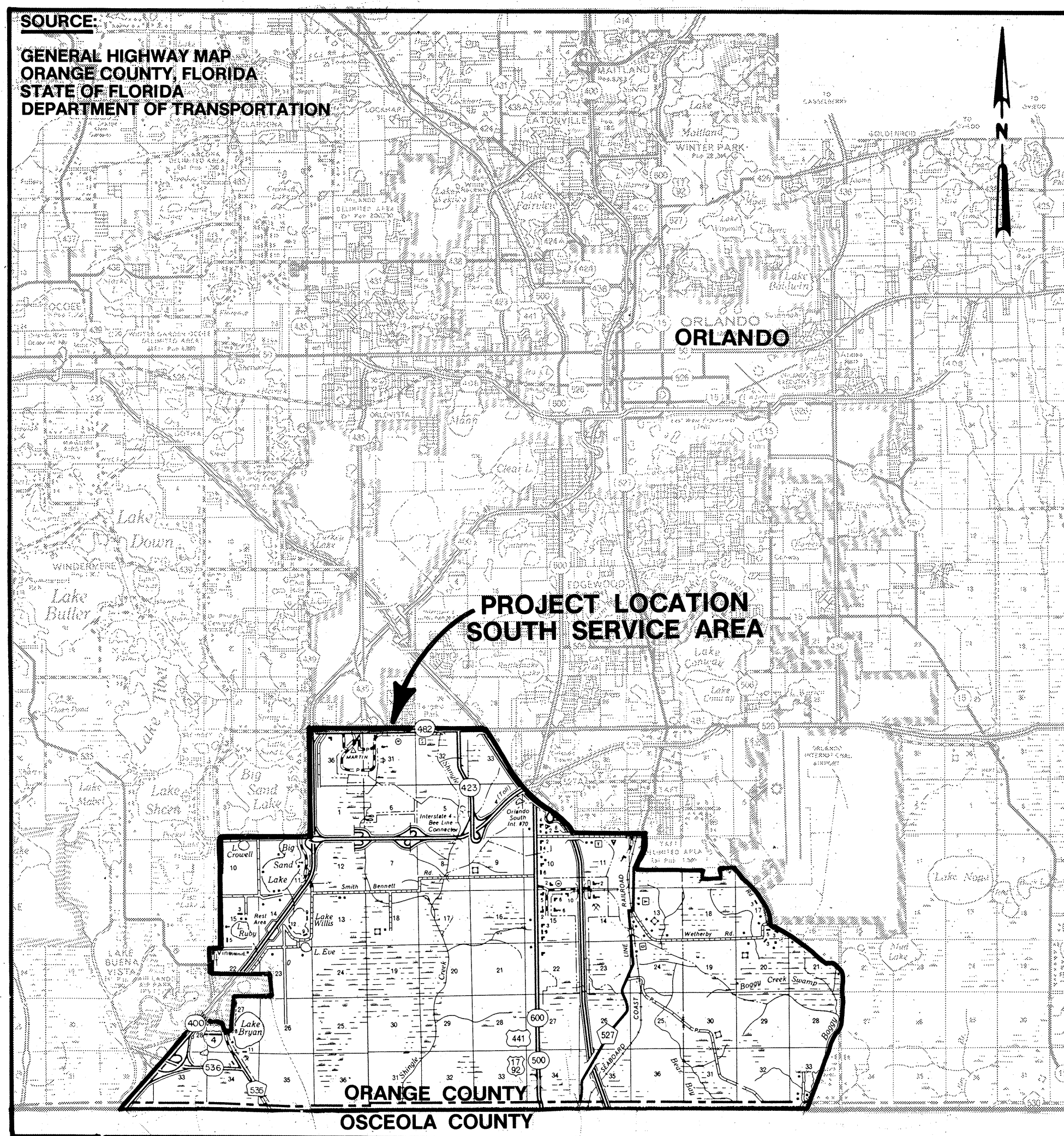

  



L 2

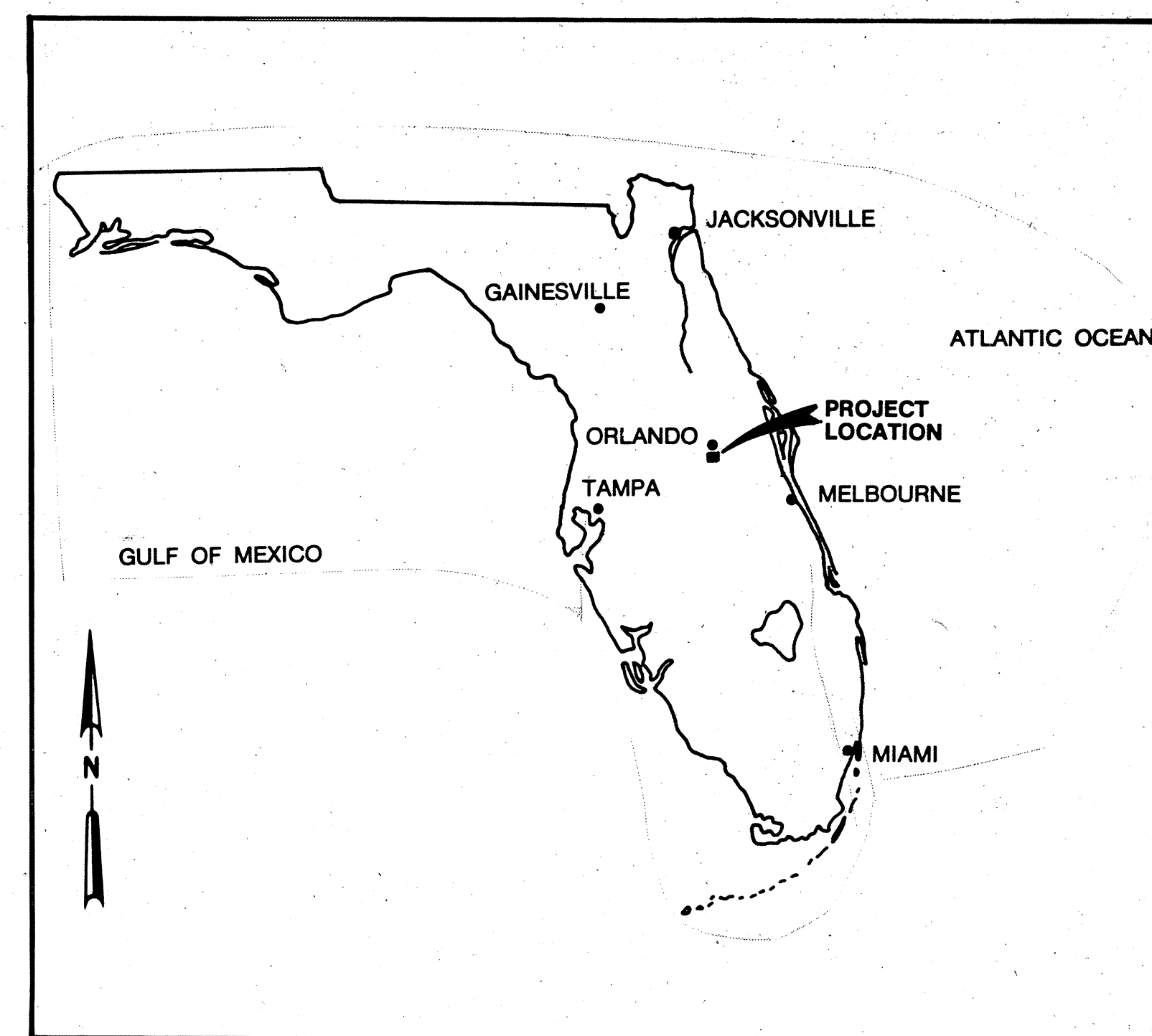




**PRIORITY 1 PUMP STATION LOCATIONS**



**VICINITY MAP**



**PROJECT LOCATION MAP**

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GENERAL		MECHANICAL / STRUCTURAL	
0	COVER	9	MS-6 TOP PLAN, SOUTH CENTRAL PUMP STATION
1	G-1 PROJECT LOCATION & INDEX OF DRAWINGS	10	MS-7 SECTIONS, SOUTH CENTRAL PUMP STATION
2	G-2 ABBREVIATIONS, FLOW STREAM IDENTIFICATION AND GENERAL LEGEND AND NOTES	11	MS-8 FOUNDATION PLAN, ORANGEWOOD EAST PUMP STATION
3	G-3 CIVIL, STRUCTURAL, AND MECHANICAL LEGENDS	12	MS-9 TOP PLAN, ORANGEWOOD EAST PUMP STATION
MECHANICAL / STRUCTURAL		13	MS-10 SECTION, ORANGEWOOD EAST PUMP STATION
4	MS-1 SITE / YARD PIPING PLANS HUNTER'S CREEK PUMP STATION AND ORANGEWOOD EAST PUMP STATION	14	MS-11 MISCELLANEOUS STRUCTURES, FLOW METER BOX, AND FUEL STORAGE TANK
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7	MS-4 SECTION, HUNTER'S CREEK PUMP STATION	17	MS-14 STANDARD DETAILS
8	MS-5 FOUNDATION PLAN, SOUTH CENTRAL PUMP STATION	18	MS-15 STANDARD DETAILS
		19	MS-16 STANDARD DETAILS
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20	E-1 ELECTRICAL LEGEND	28	I-1 I&C LEGEND
21	E-2 SITE PLANS HUNTER'S CREEK AND ORANGEWOOD EAST PUMP STATIONS	29	I-2 HUNTER'S CREEK AND SOUTH CENTRAL PUMP STATION P&ID's
22	E-3 SITE PLAN, SOUTH CENTRAL PUMP STATION AND MISCELLANEOUS DETAILS	30	I-3 ORANGEWOOD EAST PUMP STATION ENGINE GENERATOR & FUEL TANK P&ID's
23	E-4 ONE-LINE DIAGRAM AND MISCELLANEOUS DETAILS		
24	E-5 MCC ELEVATIONS AND CONTROL DIAGRAMS		
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26	E-7 F-2-1 CONTROL DIAGRAM		
27	E-8 F-3-1 CONTROL DIAGRAM		

DSGN **R. BLAISDELL**  
DR **R. BLAISDELL**  
CHK **M. VILARET**  
APVD **G. RICHTER**

NO. DATE REVISION

BY APVD

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BAR IS ONE INCH ON ORIGINAL DRAWING.  
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ORANGE COUNTY PUBLIC UTILITIES DIVISION  
SOUTH SERVICE AREA  
WASTEWATER TRANSMISSION SYSTEM  
PRIORITY 1 PUMP STATIONS

**PROJECT LOCATION INDEX OF DRAWINGS**

SHEET **1**  
DWG NO. **G-1**  
DATE **NOV. 1988**  
PROJ NO. **GN22947.C1**

**RECORD DRAWINGS**  
REVISIONS DRAWN BY **PBO** DATE **10-21-91**  
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AB ANCHOR BOLT  
AC ALTERNATING CURRENT  
AC ASPHALTIC CEMENT  
ACI AMERICAN CONCRETE INSTITUTE  
ADDT'L ADDITIONAL  
AGGR AGGREGATE  
AHR ANCHOR  
AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION  
  
AL (ALUM) ALUMINUM  
ALTN, (ALT) ALTERNATE  
AM AUTO-MANUAL  
ANDZ ANODIZE  
APPROX APPROXIMATE  
APVD APPROVED  
AR ANALOG RELAY  
ATS AUTOMATIC TRANSFER SWITCH  
AUTO AUTOMATIC  
AUX AUXILIARY  
AVG AVERAGE  
@ AT

BF BLIND FLANGE  
BL BASELINE  
BLDG BUILDING  
BLK BLOCK  
BM BEARING  
BM BENCHMARK  
BOT, (BOTT), B/ BOTTOM  
BRG BEARING  
BV BALL VALVE

C CONDUIT  
° DEGREE CELSIUS  
C-C CENTER TO CENTER  
CB CIRCUIT BREAKER  
CC CONTROL CABLE  
CFM CUBIC FEET PER MINUTE  
CFS CUBIC FEET PER SECOND  
CHAN, C CHANNEL (BEAM)  
CJ CONSTRUCTION JOINT  
CKT CIRCUIT  
CL CENTERLINE  
CLDIP CEMENT LINED DUCTILE IRON PIPE  
CLR CLEAR  
CONC CONCRETE  
CONN CONNECTION  
CONT CONTINUOUS, CONTINUATION  
CONST CONSTRUCTION  
CONTR CONTRACTOR  
COORD COORDINATE  
CP-X CONTROL PANEL NO. X  
CPLG COUPLING  
CR CONTROL RELAY  
CTR CENTER  
CTR'D CENTERED  
CU CUBIC  
CU FT CUBIC FOOT  
CU IN CUBIC INCH  
CU YD CUBIC YARD

D DRAIN  
DBL DOUBLE  
DC DIRECT CURRENT  
DEG DEGREE  
DET DETAIL  
DI DUCTILE IRON  
DIA, Ø DIAMETER  
DIAG DIAGONAL  
DIM DIMENSION  
DIP DUCTILE IRON PIPE  
DIR DIRECTION  
DISCH DISCHARGE  
DWG DRAWING  
DWN DOWN

E EAST  
E EMPTY  
EA EACH  
EL, ELEV ELEVATION  
ELB ELBOW  
ELC ELECTRICAL LOAD CENTER  
ELEC ELECTRIC, ELECTRICAL  
ENGR ENGINEER  
EP EDGE OF PAVING  
EP EXPLOSION PROOF  
EQ EQUAL  
EQ SP EQUALLY SPACED  
EQPT, (EQUIP) EQUIPMENT

ETM ELAPSED TIME METER  
EW EACH WAY  
EXP EXPANSION  
EXP EXPOSED  
EXP AB EXPANSION ANCHOR BOLT  
EXP JT EXPANSION JOINT  
EXT EXTERIOR

F DEGREE FAHRENHEIT  
F, FU FUSE  
FC FLEXIBLE CONDUIT  
FCA FLANGED COUPLING ADAPTER  
FCO FLOOR CLEANOUT  
FD FLOOR DRAIN  
FDN FOUNDATION  
FG FINISH GREASE  
FIG FIGURE  
FLG FLANGE  
FLEX FLEXIBLE  
FNH FINISH  
FP FIELD PANEL  
FR FORWARD REVERSE  
FRP FIBERGLASS REINFORCED PLASTIC  
FT FOOT OR FEET  
FTG FOOTING  
FVNR FULL VOLTAGE NON-REVERSING  
FVR FULL VOLTAGE REVERSING  
FWD FORWARD

G, GND GROUND  
GA GAUGE  
GAL GALLON  
GALV GALVANIZED  
GFI GROUND FAULT INTERRUPTER  
GFR GROUND FAULT RELAY  
GPD GALLONS PER DAY  
GPH GALLONS PER HOUR  
GPM GALLONS PER MINUTE  
GVL GRAVEL

H HORN OR HOWLER  
HDR HEADER  
HDW HARDWARE  
HGL HYDRAULIC GRADE LINE  
HGT HEIGHT  
HOA HAND-OFF-AUTO  
HOR HAND-OFF-REMOTE  
HORIZ HORIZONTAL  
HP HIGH POINT  
HR HOSE RACK  
HV HOSE VALVE  
HWL HIGH WATER LEVEL

IC INTERRUPTING CAPACITY  
ID INSIDE DIAMETER  
IE INVERT ELEVATION  
IF INVERT FACE  
IN INCH  
INSTM INSTRUMENT, INSTRUMENTATION  
INSUL INSULATION  
INVT INVERT

J, JB JUNCTION BOX  
JCT JUNCTION  
JT JOINT  
  
K KEY INTERLOCK  
KV KILOVOLTS  
KVA KILOVOLT AMPERES  
KW KILOWATT

L ANGLE, LENGTH  
LA LIGHTNING ARRESTER  
LB POUND  
LB/CU FT POUNDS PER CUBIC FOOT  
LC LIGHTING CONTACTOR  
LF LINEAR FEET  
LG LONG  
LH LEFT HAND  
LHR LEFT HAND REVERSE  
LLH LONG LEG HORIZONTAL  
LLV LONG LEG VERTICAL  
LONG LONGITUDINAL  
LOS LOCK-OUT STOP PUSHBUTTON  
LP LIGHT POLE  
LP LOW POINT  
LR LATCHING RELAY  
LR LOCAL-REMOTE  
LTG LIGHTS OR LIGHTING  
LWL LOW WATER LEVEL

MA MANUAL-AUTO  
MAS MASONRY  
MATL MATERIAL  
MAX MAXIMUM  
MB MACHINE BOLT  
MC MASONRY CLEARANCE  
MC MODULATE-CLOSE  
MCC MOTOR CONTROL CENTER  
MECH MECHANICAL  
MET METAL  
MFD MANUFACTURED  
MFR MANUFACTURER  
MGD MILLION GALLONS PER DAY  
MH MANHOLE  
MIN MINIMUM  
MISC MISCELLANEOUS  
MJ MECHANICAL JOINT  
MMP MECHANICAL MOUNTING PANEL  
MP METAL PANEL  
MPU MULTIPURPOSE UNIT  
MOUNT MOUNTED  
MTS MANUAL TRANSFER SWITCH  
MV MERCURY VAPOR  
MWS MAXIMUM WATER SURFACE

N NORTH  
N/A NOT APPLICABLE  
N/C NORMALLY CLOSED  
N/O NORMALLY OPEN  
N, NEUT NEUTRAL  
NA NON-AUTOMATIC  
NIC NOT IN CONTRACT  
NO, # NUMBER  
NP NON-PROTECTED  
NPT NATIONAL PIPE THREADS  
NS NON-SHRINK  
NTS NOT TO SCALE

O TO O OUT TO OUT  
OA OVERALL  
OC ON CENTER  
OC OPEN-CLOSE  
OCA OPEN-CLOSE-AUTO  
OCR OPEN-CLOSE-REMOTE  
OD OUTSIDE DIAMETER  
OF OUTSIDE FACE  
OL OVERLOAD RELAY  
OO ON-OFF  
OOA ON-OFF-AUTO  
OOR ON-OFF-REMOTE  
OP OPAQUE PANEL  
OPER OPERATOR  
OPNG OPENING  
OSC OPEN-STOP-CLOSE  
OSD OPEN SITE DRAIN  
OZ OUNCE

PB PUSHBUTTON SWITCH  
PJF PREMOULDED JOINT FILLER  
PL PLATE (STEEL OR ALUMINUM)  
PL PROPERTY LINE  
PLAS PLASTIC  
PNL PANEL  
PP POWER POLE  
PPL POLYPROPYLENE LINED  
PRCST PRECAST  
PREFAB PREFABRICATION  
PRES PRESSURE  
PRI PRIMARY  
PRM PERMANENT REFERENCED MARKER  
PROJ PROJECTION  
PROP PROPERTY  
PSF POUNDS PER SQUARE FOOT  
PSI POUNDS PER SQUARE INCH  
PSIG POUNDS PER SQUARE INCH, GAUGE  
PV PLUG VALVE  
PVC POLYVINYL CHLORIDE  
PVMT PAVEMENT

R (RAD) RADIUS  
RC REINFORCED CONCRETE  
RCP REINFORCED CONCRETE PIPE  
RD ROAD  
RED REDUCER  
REF REFER OR REFERENCE  
REFR REFRIGERATE, REFRIGERANT  
REINF REINFORCED, REINFORCING, REINFORCE  
REQD REQUIRED  
REQMTS REQUIREMENTS  
RH RIGHT HAND  
RHR RIGHT HAND REVERSE  
ROW RIGHT OF WAY  
RPM REVOLUTIONS PER MINUTE

RST REINFORCING STEEL  
RTN RETURN  
R/W RIGHT OF WAY

S I-BEAM  
S SLOPE  
S SOUTH  
S SWITCH  
SCH SCHEDULE  
SEC SECONDARY  
SECT SECTION  
SEW SEWAGE  
SF SLOWER-FASTER  
SF SQUARE FEET  
SH (SHT) SHEET  
SIM SIMILAR  
SOLN SOLUTION  
SPA SPACING OR SPACES  
SPEC, SPECS SPECIFICATIONS  
SPLY SUPPLY  
SQ SQUARE  
SQ FT SQUARE FOOT, FEET  
SQ IN SQUARE INCH  
SS START-STOP  
SS, SST STAINLESS STEEL  
STA STATUS  
STD STANDARD  
STIF STIFFENER  
STIRR STIRRUP  
STL STEEL  
ST STRAIGHT  
STRL STRUCTURAL  
STRUCT STRUCTURE  
SUSP SUSPENDED  
SYMM SYMMETRICAL

T&B TOP AND BOTTOM  
T/ TOP OF  
TAN TANGENT  
TB TERMINAL BOARD  
TC TIME TO CLOSE  
TCAE TIME CLOSE AFTER ENERGIZATION  
TDH TOTAL DYNAMIC HEAD  
TDR TIME DELAY RELAY  
TECH TECHNICAL  
TEMP TEMPORARY  
TF TOP FACE  
THD THREAD  
THK THICKNESS  
THRU THROUGH  
TJB TERMINAL JUNCTION BOX  
TO TIME TO OPEN  
TOAD TIME CLOSE AFTER DE-ENERGIZATION  
TOAE TIME OPEN AFTER ENERGIZATION  
TP TURNING POINT  
TYP TYPICAL

U ON UNLESS OTHERWISE NOTED  
UVR UNDER VOLTAGE RELAY  
  
V VALVE  
V VENT  
V VOLT  
V VOLTMETER, VOLTS  
VERT VERTICAL

W WEST  
W/ WITH  
WD WOOD  
WH WATTHOUR METER  
WHD WATTHOUR DEMAND METER  
WP WATERPROOF  
WP WEATHERPROOF  
WS WATER SURFACE  
WS WATERSTOP  
WTR WATER  
WWTP WASTEWATER TREATMENT PLANT

NOTES:

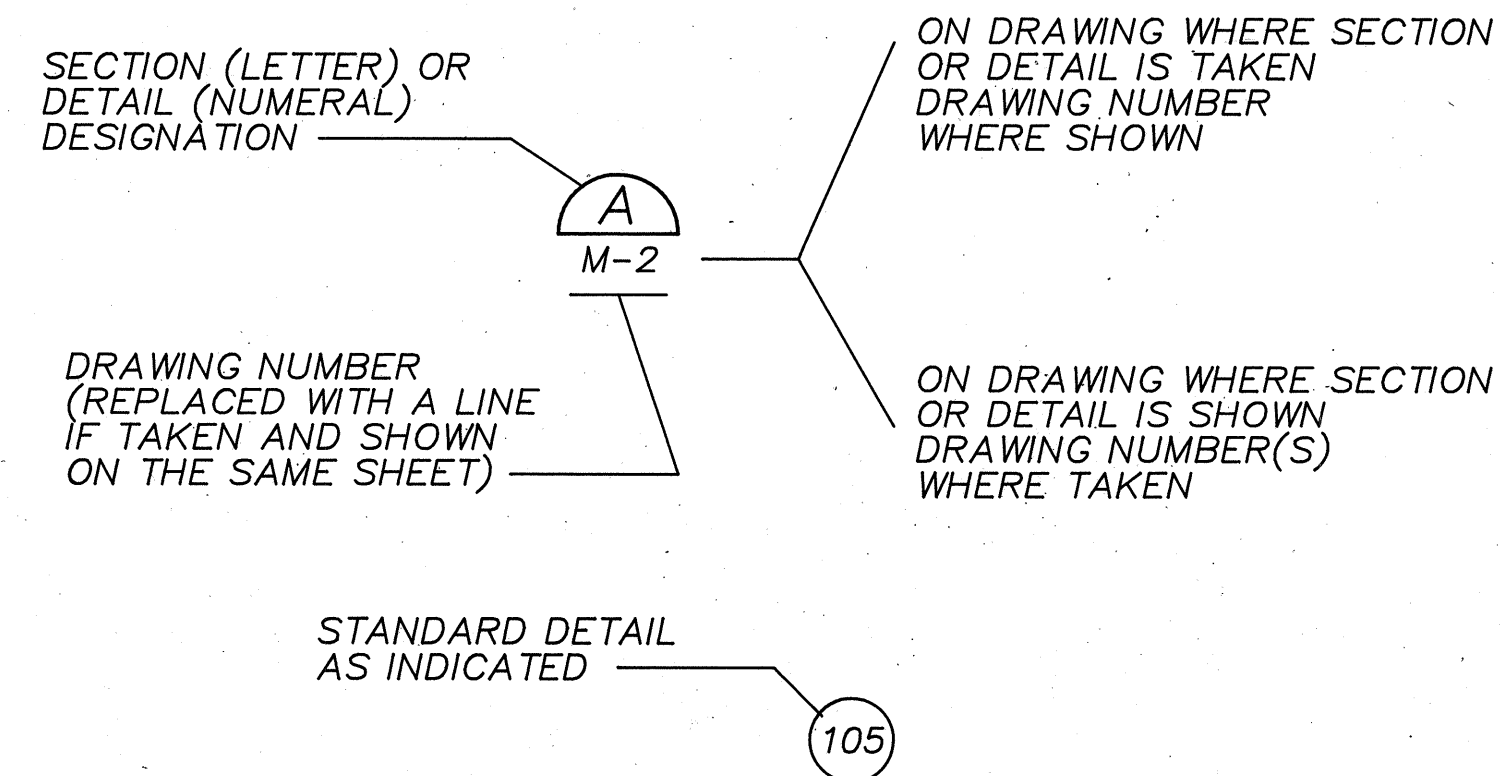
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- SEE MECHANICAL SPECIFICATIONS FOR FLOW STREAM IDENTIFICATIONS.

FLOW STREAM IDENTIFICATION

LEGEND SERVICE

—D— DRAIN  
—FOR— FUEL OIL RETURN  
—FOS— FUEL OIL SUPPLY  
—OF— OVERFLOW  
—RS— RAW SEWAGE  
—V— VENT  
—W1— NO. 1 WATER (POTABLE WATER)  
—W2— NO. 2 WATER (NONPOTABLE WATER)

GENERAL LEGEND



DETAIL AND SECTION DESIGNATION

(200) TO (299) SEE STRUCTURAL AND MECHANICAL  
  
(300) TO (399) SEE ELECTRICAL DRAWINGS

STANDARD DETAIL DESIGNATION

GENERAL NOTES:

- EXISTING FACILITIES ARE SHOWN WITH LIGHT LINES OR ARE SCREENED. NEW FACILITIES ARE SHOWN WITH HEAVY LINES.

RECORD DRAWINGS

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DSGN B.BLAISDELL  
DR L.FINK  
CHK M.VILARET  
APVD G.RICKER

NO.	DATE	REVISION	BY	APVD

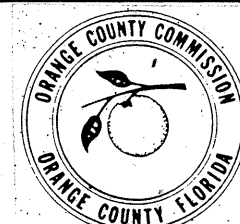
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ORANGE COUNTY PUBLIC UTILITIES DIVISION  
SOUTH SERVICE AREA  
WASTEWATER TRANSMISSION SYSTEM  
  
PRIORITY 1 PUMP STATIONS

ABBREVIATIONS, FLOW STREAM IDENTIFICATION, GENERAL LEGEND AND NOTES

SHEET	2
DWG NO.	G-2
DATE	NOV. 1988
PROJ NO.	GN22947.C1



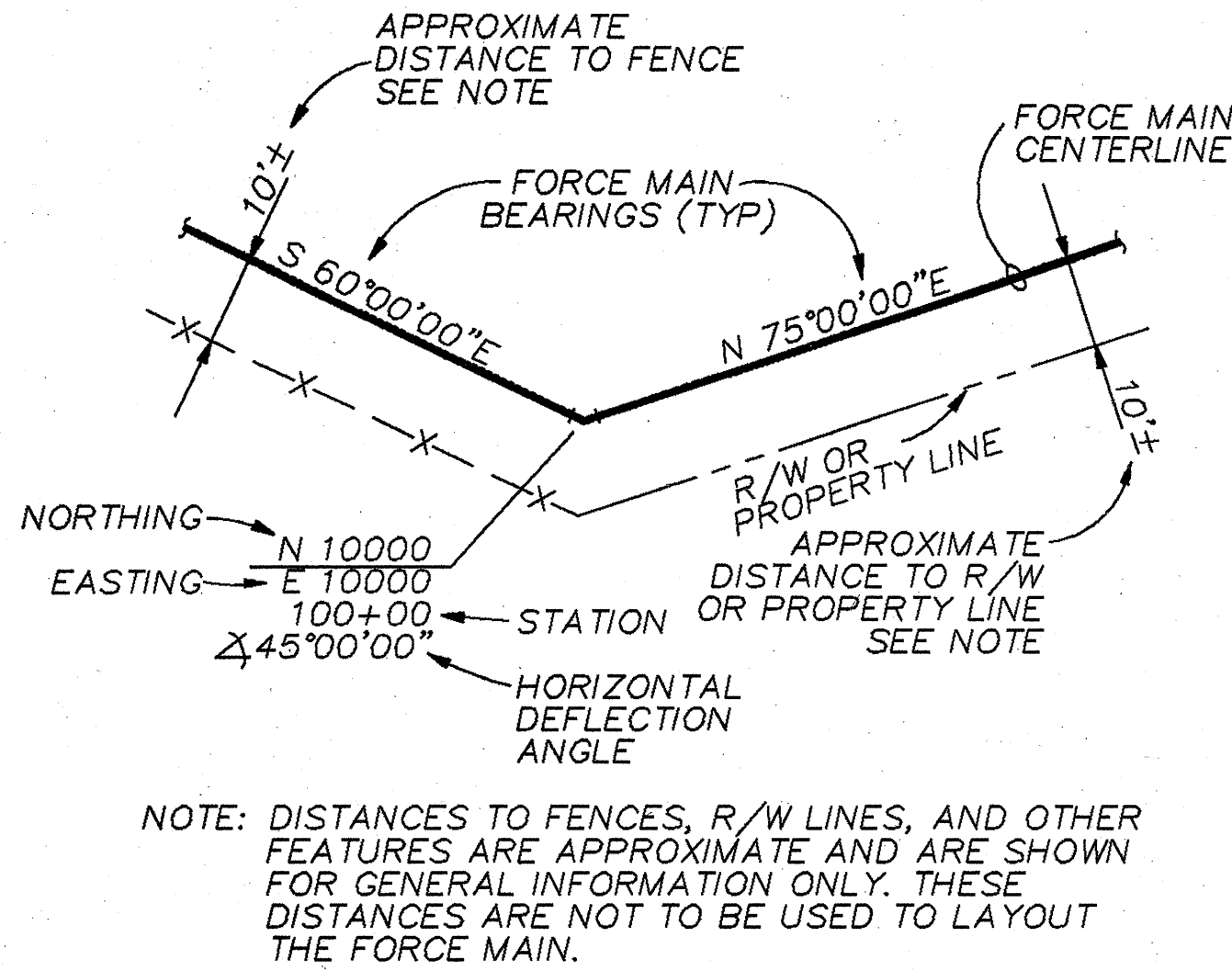
FORCE MAIN LEGEND

SYMBOL	LEGEND
	ASPHALT CONCRETE PAVEMENT
	GRAVEL SURFACE
	BURIED STRUCTURE
250 + 00	NEW FORCE MAIN WITH STATIONING
	AIR RELEASE AND VACUUM VALVE
	MANHOLE
	BLIND FLANGE
	REDUCER
	ECCENTRIC PLUG VALVE
	CATHODIC PROTECTION TEST STATION LOCATION AND TYPE
	PROPERTY LINE
R/W	RIGHT-OF-WAY LINE
	FOOT LIMITED ACCESS RIGHT-OF-WAY
	CENTERLINE
	MATCHLINE
	EASEMENT LINE
	SECTION LINE
	WETLAND JURISDICTIONAL LIMITS
	DITCH SHOWING DIRECTION OF FLOW
	RAILROAD
	CULVERT
	FENCE
15" D	DRAIN PIPE WITH SIZE
E(UG)	UNDERGROUND ELECTRICAL SERVICE
E(OH)	OVERHEAD ELECTRICAL SERVICE
4" G	UNDERGROUND GAS SERVICE WITH SIZE
8" S	SEWER FORCE MAIN WITH SIZE
24" SS	GRAVITY SEWER WITH SIZE
T(UG)	UNDERGROUND TELEPHONE
T(OH)	OVERHEAD TELEPHONE
TV(UG)	UNDERGROUND TELEVISION
TV(OH)	OVERHEAD TELEVISION
12" W	WATER FORCE MAIN WITH SIZE
	DRAIN INLET
	UTILITY POLE
	BENCHMARK
TB-1	TEST BORING NUMBER AND LOCATION
AB-1	AUGER BORING NUMBER AND LOCATION
	REBAR WITH CAP
	4" X 4" CONCRETE MONUMENT

FORCE MAIN LEGEND

SYMBOL	LEGEND
	FLANGED FITTING AND FLANGE INSULATING KIT (IF NOTED ON DRAWINGS)
	FLANGED COUPLING ADAPTER
	FLEXIBLE COUPLING
	MECHANICAL JOINT FITTING OR RESTRAINED JOINT (IF NOTED ON DRAWINGS)

TYPICAL FORCE MAIN ALIGNMENT DESCRIPTION



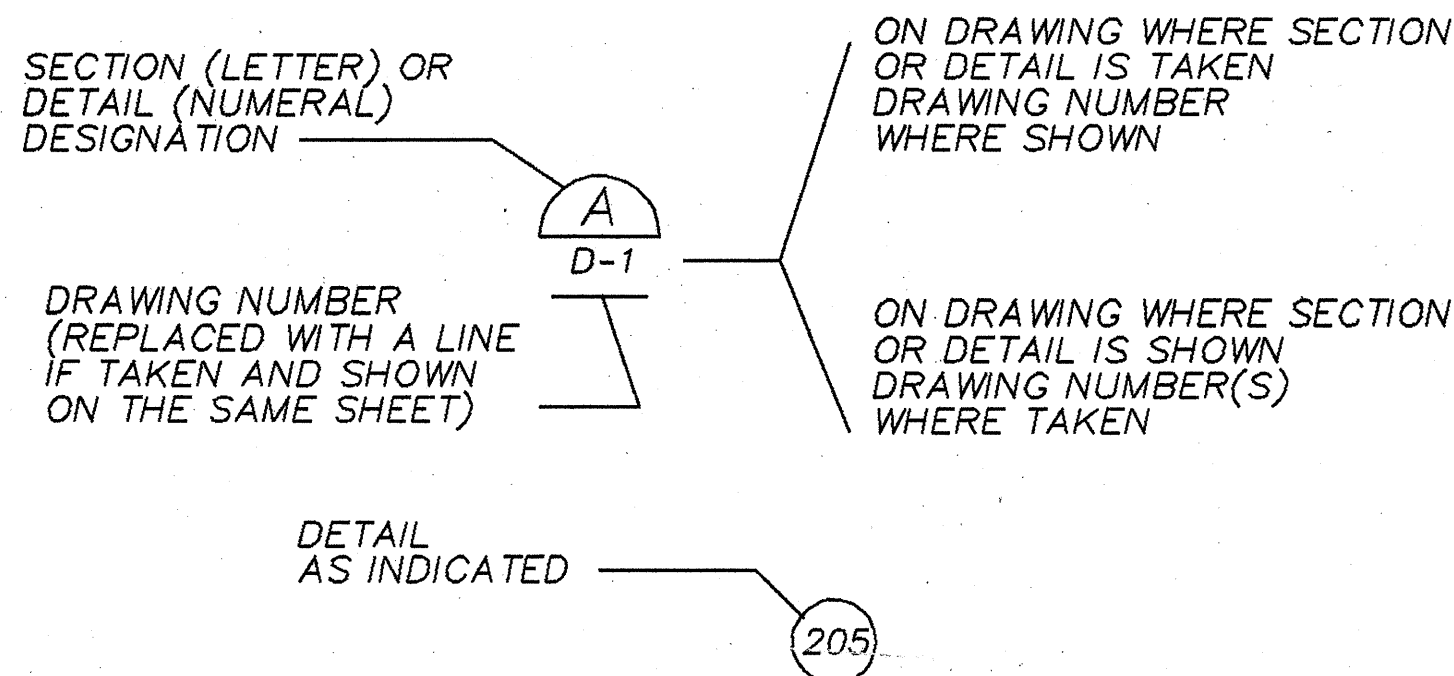
FORCE MAIN TEST PRESSURES

FORCE MAIN	DIA	STA	TO	STA	TEST PRESSURE (PSI)
SOUTH CENTRAL	24	147+00	TO	184+11.2	100
	20	10+00	TO	14+08.7	100
	30	186+50	TO	216+65±	100
JOHN YOUNG PARKWAY/BEELINE EXPRESSWAY	30	243+70	TO	265+27.7	100
	36	268+04.7	TO	387+28±	100
TOWN CENTER PARKWAY	24	9+00	TO	9+42	10
	20	10+00	TO	29+59±	100

STRUCTURAL LEGEND

SYMBOL	LEGEND
	CONCRETE
	STEEL
	GROUND SURFACE
	TAMPED BASE ROCK
	CONTROL JOINT
	EXPANSION JOINT
	GROUT

GENERAL LEGEND

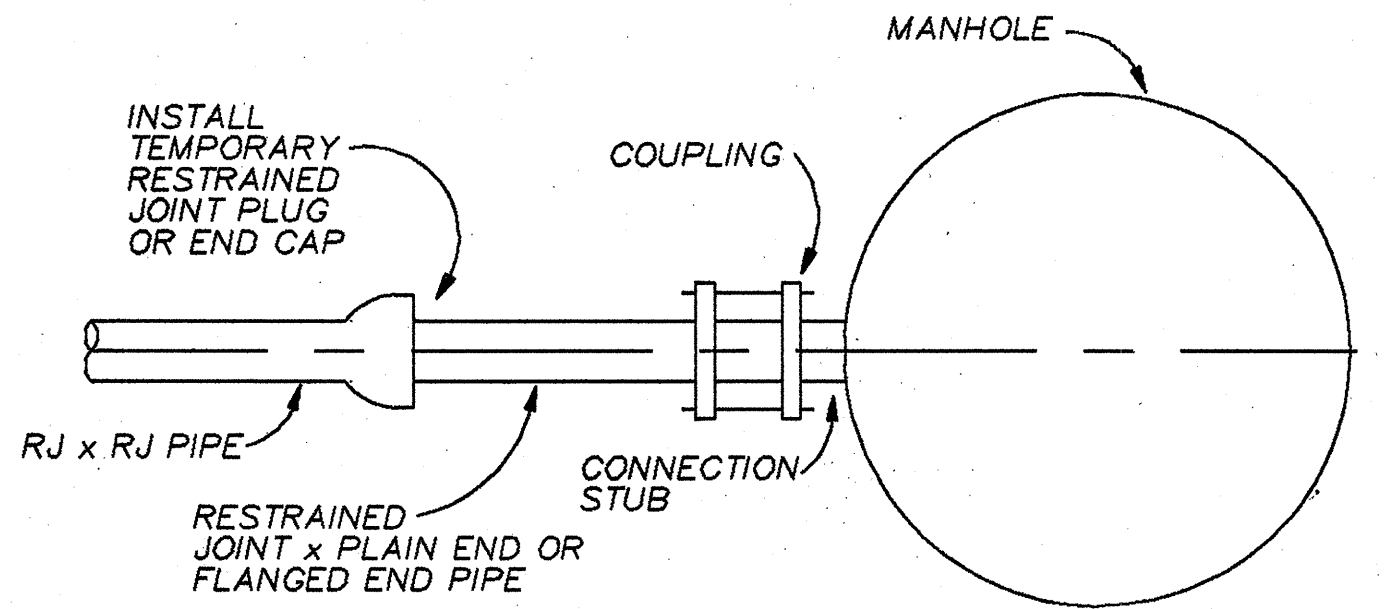


DETAIL AND SECTION DESIGNATION

200	TO	299	SEE CONNECTION DETAILS
300	TO	399	SEE STANDARD DETAILS
400	TO	499	SEE CORROSION CONTROL DETAILS

CONSTRUCTION NOTES

- EXISTING FACILITIES ARE SHOWN WITH LIGHT LINES, DASHED LINES, OR ARE SCREENED. NEW FACILITIES ARE SHOWN WITH HEAVY LINES.
- UNLESS OTHERWISE NOTED, ALL ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE GROUND PROFILE WAS DETERMINED BY FIELD SURVEY METHODS.
- SURVEY INFORMATION IS BASED ON THE ORANGE COUNTY GEOGRAPHIC INFORMATION SYSTEM (GIS).
- ELEVATIONS SHOWN ARE FEET ABOVE MEAN SEA LEVEL AND ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM.
- THE PHOTO IMAGES SHOWN ON THE DRAWINGS COMPLY WITH NATIONAL STANDARDS FOR MAP ACCURACY, BUT MAY NOT SCALE ACCURATELY IN ALL CASES.
- ALL STATIONING AND DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL MEASUREMENTS.
- NOTIFY OFFICES OF ALL THE UTILITIES AFFECTED BY THE CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL COORDINATE SUCH WORK WITH THE OFFICES OF THE AFFECTED UTILITIES. UNDER NO CIRCUMSTANCES EXPOSE ANY UTILITY WITHOUT FIRST OBTAINING PERMISSION FROM THE APPROPRIATE AGENCY.
- EXISTING UTILITIES, PIPELINES, AND STRUCTURES SHOWN ON THE DRAWINGS ARE IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION, SIZE AND TYPE OF ALL EXISTING PIPELINES AND STRUCTURES.



- NOTES:
- INSTALL TEMPORARY RESTRAINED JOINT PLUG OR END CAP ON FIRST SECTION OF RJ x RJ PIPE OUTSIDE OF MANHOLE
  - AFTER HYDROSTATIC TESTING HAS BEEN SUCCESSFULLY COMPLETED AND ACCEPTED BY THE OWNER'S RESIDENT PROJECT REPRESENTATIVE, INSTALL THE FINAL SECTION OF PIPE AND CONNECT TO MANHOLE CONNECTION STUB AS SHOWN IN THE DRAWINGS

TEMPORARY END CAP FOR TESTING

GENERAL NOTES

- These drawings must be used with the specifications to provide the information necessary to construct this Project.

RECORD DRAWINGS

REVISIONS DRAWN BY: PKO DATE: 6-21-91  
THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS, AND MAY NOT REPRESENT THE EXACT LOCATION, TYPE OF COMPONENT, NOR MANNER OF CONSTRUCTION. THE ENGINEER, OR THE ENGINEER'S REPRESENTATIVE, HAS MADE PERIODIC VISITS TO THE SITE TO OBSERVE THE PROGRESS OF THE EXECUTED WORK, AND HEREBY CERTIFIES, BASED UPON THE KNOWLEDGE DERIVED THEREFROM AND IN ACCORDANCE WITH THE DEPARTMENT OF PROFESSIONAL REGULATION RULE 21H-18.011 (4) THAT THESE RECORD DRAWINGS ACCURATELY REFLECT THE WORK PERFORMED.



DSGN B.C. NAKAMURA  
DR E. K. OAKES  
CHK J.P. CASTRONOVO  
APVD S.C. EBE

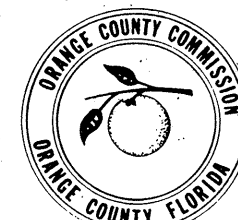
NO. DATE

REVISION

BY APVD

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VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



ORANGE COUNTY PUBLIC UTILITIES DIVISION  
SOUTH SERVICE AREA  
WASTEWATER TRANSMISSION SYSTEM  
PRIORITY 1 FORCE MAINS

LEGENDS AND NOTES

SHEET 2  
DWG NO. G-2  
DATE JAN. 1989  
PROJ NO. GNV22947.D1

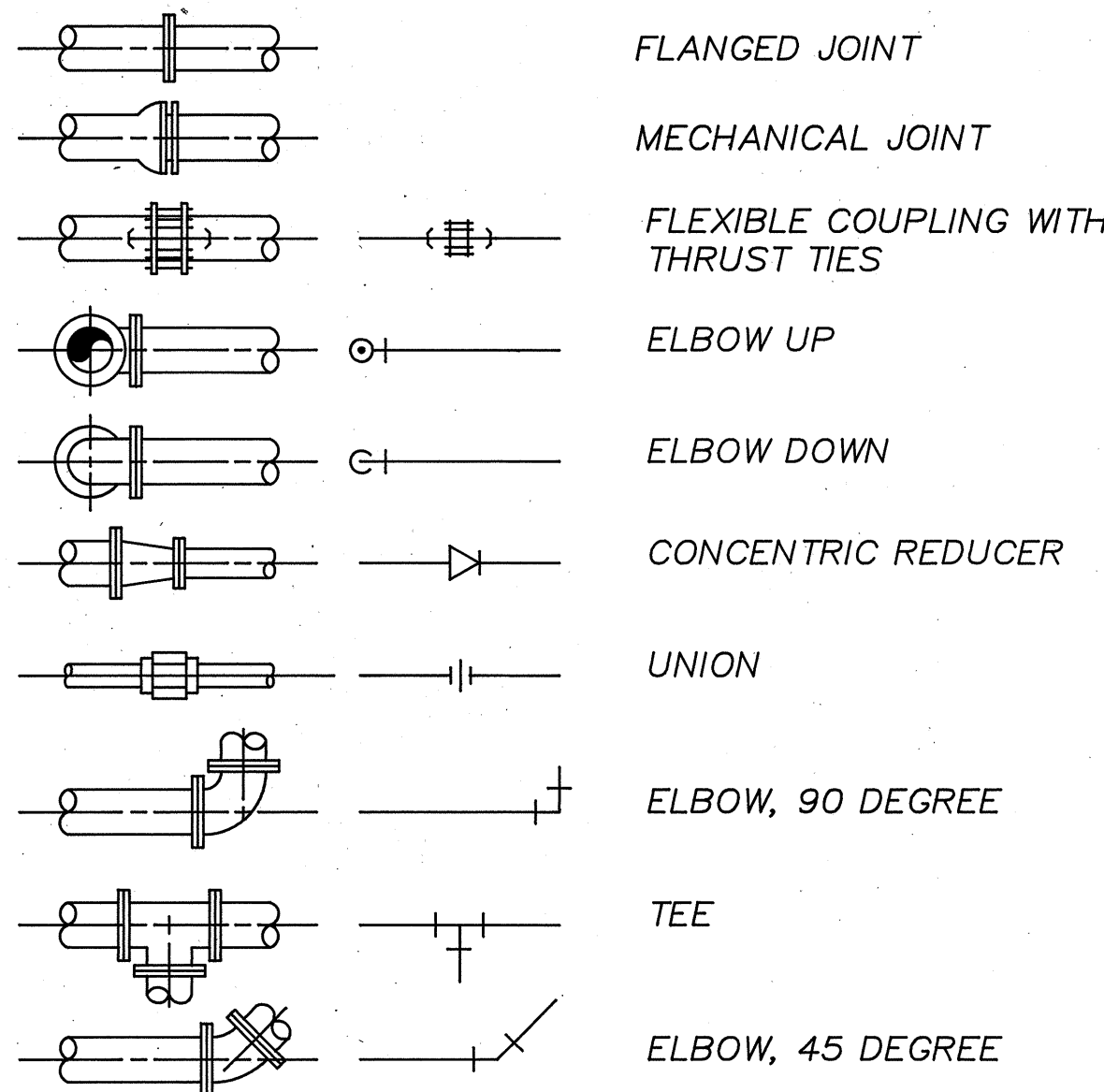
MECHANICAL LEGEND AND NOTES

GENERAL PIPING NOTES

- 1. LAY PIPE AT UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
- 2. FITTING SIZES SHOWN ON THE DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. JOINT TYPE AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- 3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED.
- 4. ALL JOINTS SHALL BE WATERTIGHT. STANDARD WALL PIPE DETAIL SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- 5. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
- 6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. ALL OF THE VARIOUS PIPING APPLICATIONS ARE NOT NECESSARILY USED IN THE PROJECT.
- 7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH CONCRETE THRUST BLOCKS AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED. SEE THRUST DETAILS AND NOTES.

PIPE AND FITTING SYMBOLS

DOUBLE LINE SINGLE LINE



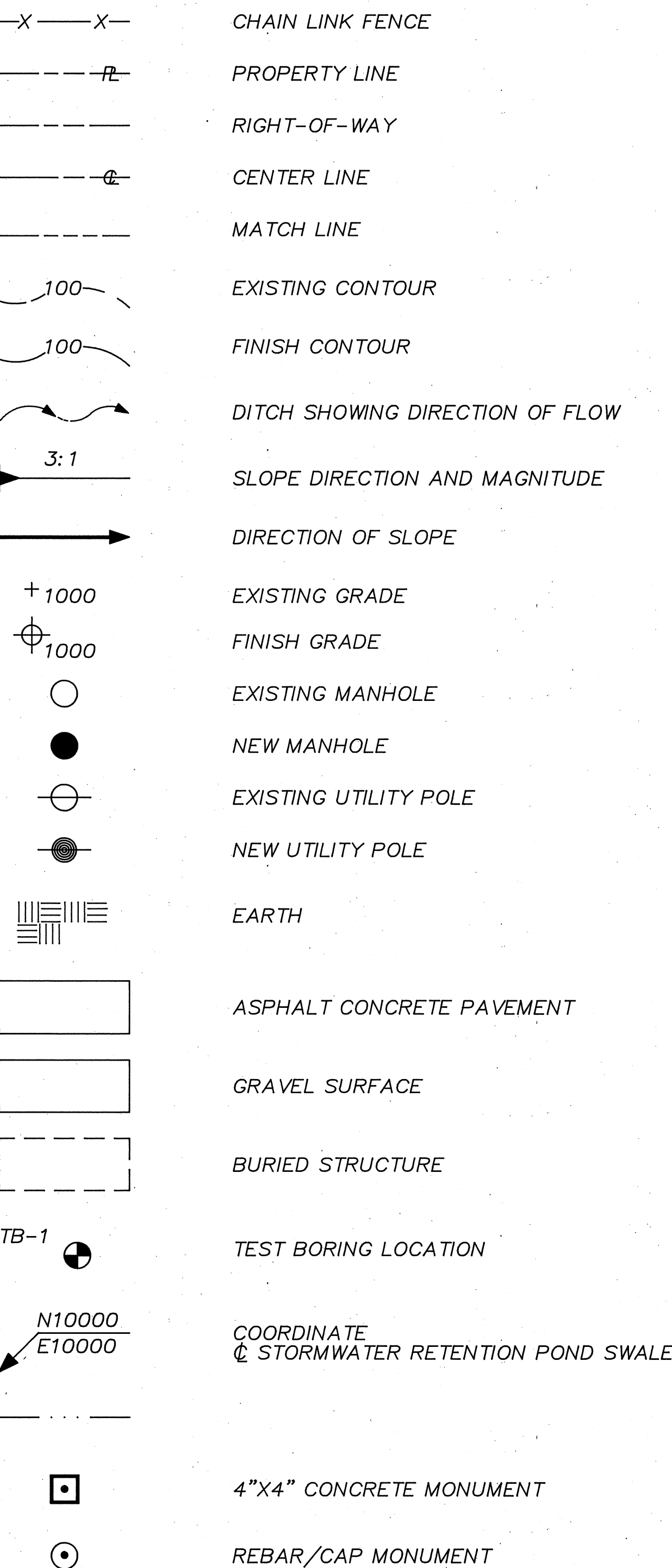
NOTES:

- 1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
- 2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.

CIVIL LEGEND

SYMBOL

LEGEND



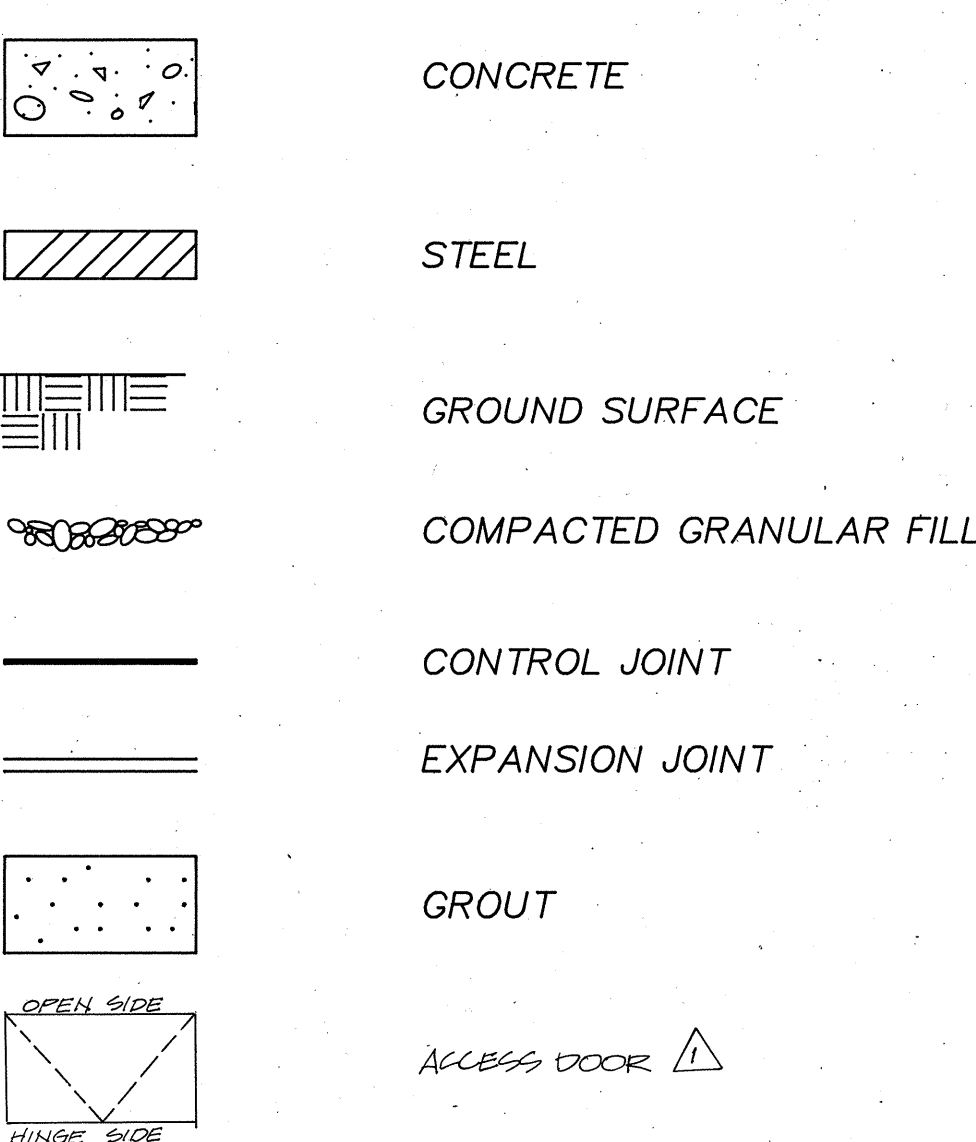
NOTES:

- 1. COORDINATES BASED ON ORANGE COUNTY GEODETIC INFORMATION SYSTEM (G.I.S.)
- 2. ELEVATIONS BASED ON NATIONAL GEODETIC VERTICAL DATUM.
- 3. EXISTING FACILITIES ARE SHOWN WITH LIGHT LINES OR ARE SCREENED. NEW FACILITIES ARE SHOWN WITH HEAVY LINES.

STRUCTURAL LEGEND

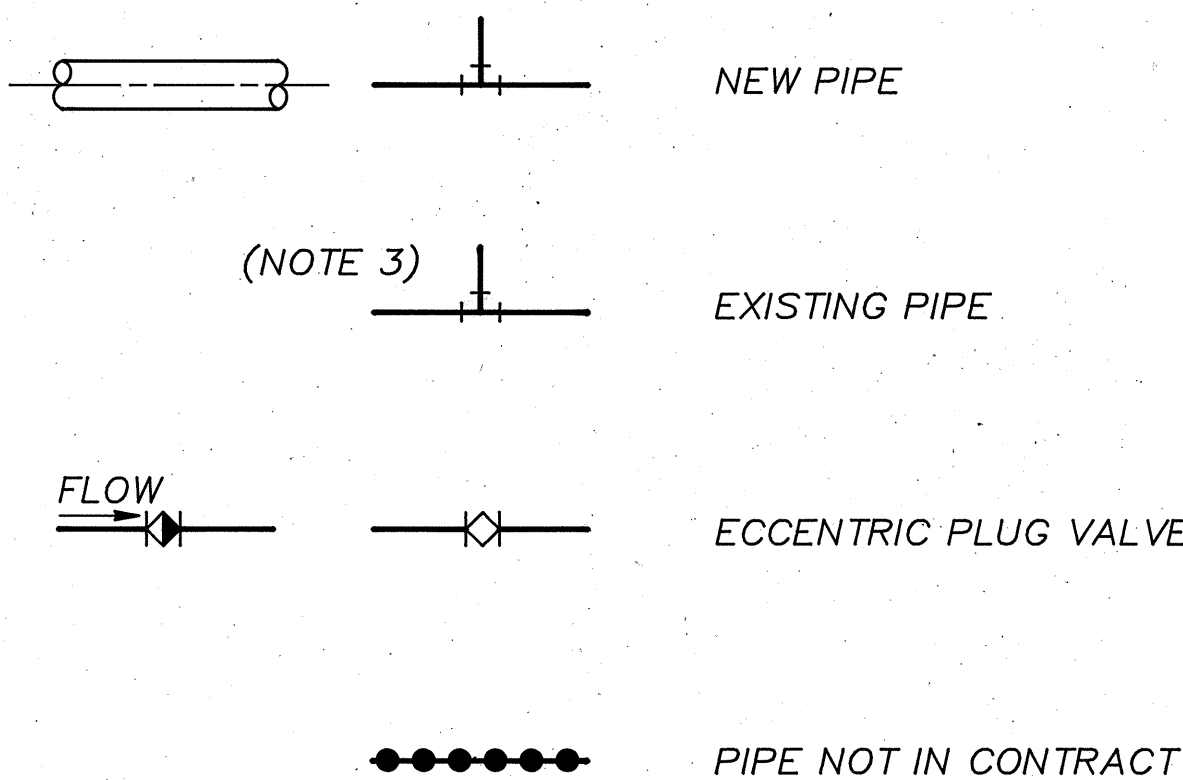
SYMBOL

LEGEND

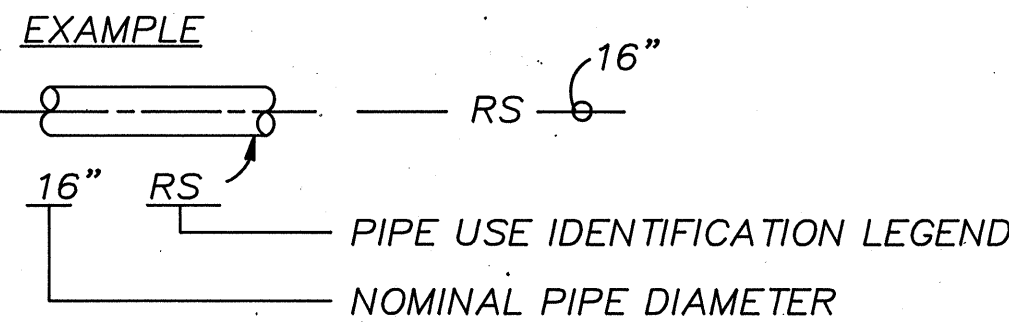


YARD PIPING LEGEND

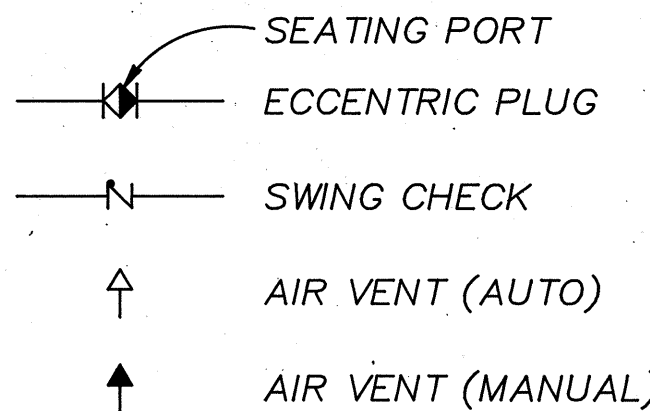
DOUBLE LINE SINGLE LINE



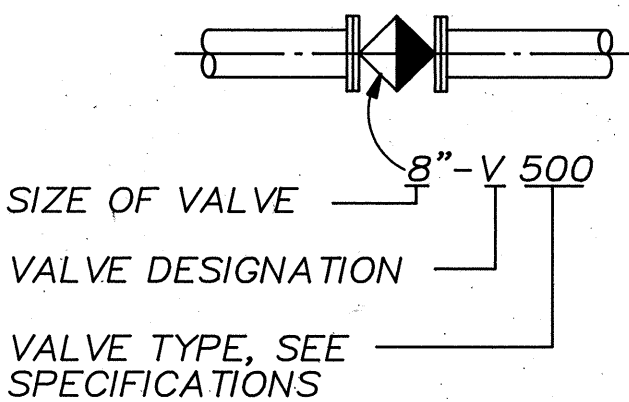
PIPING DESIGNATION



VALVE SYMBOLS



VALVE DESIGNATIONS



DSGN S. SWANSON  
DR L. FINK  
CHK M. VILARET  
APVD G. RICHTER

NO. DATE

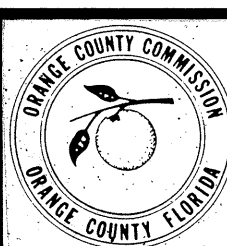
10/3/91  
ADDED SYMBOL FOR ACCESS DOOR AS PER CHANGE ORDER #1

REVISION

BY APVD

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ORANGE COUNTY PUBLIC UTILITIES DIVISION  
SOUTH SERVICE AREA  
WASTEWATER TRANSMISSION SYSTEM  
PRIORITY 1 PUMP STATIONS

CIVIL, STRUCTURAL, AND MECHANICAL LEGENDS

SHEET 3  
DWG NO. G-3  
DATE NOV. 1988  
PROJ NO. GN22947.C

RECORD DRAWINGS  
REVISIONS DRAWN BY Pko DATE 6-21-91  
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