

Right-of-Way Utilization Permit

Please complete a separate application for each road

Date:				
City of Clermont/ J. Dennis Westrick, PE	34 / 22S / 26E			
Business / Applicant's Name ("Permittee")	Section Township Range			
3335 Hancock Road	Johns Lake Rd Water Main Replacement			
Applicant's Street Address	Project Road Name			
Clermont, FL 34711				
Applicant's City, State, Zip	Subdivision and/or Site Plan Name (if applicable)			
352.241.0178 jwestrick@clermontfl.org	of 3/2/1 1 Prodition			
Telephone Number Applicant's e-mail address	Paid Date Rec'd By			
Check appropriate box:	,			
■ Underground Utility □ Overhead Utility	□ Wireless Facility □ Other Utilization			
Description of Work: Replace an 8" water main with a 12"	,			
trench from the tie-in at the intersection of Sundurst Ln and	C W Harrell Rd to the tie-in at Friendship Rd north of Johns			
Lake Rd.				
Contractor: n/a Telephone Number: n/a				
Start of Construction Date: Oct 2019	Construction duration: 180 days			
Is proposed work within city limits?	If so, what city? Clermont			
of notification was mailed on 09/04/2018	ion of all existing underground and aerial utilities. A letter to the following utilities & municipalities: I- Fiber Communication Lines, Duke Energy- Electric- Transmission, Duke Energy-			
Secretaria de la constitución de l	("Permittee") declares that he/she has read the attached any and all general and special conditions herein.			
Road # 1/58 To be complete	ted by County Staff			
Permit # <u>8855</u> Permit Fee: \$100.00 Fee Co	de: PWRW			
Checked by:	Date Checked:			
Approved by: Date Approved:				
Special Conditions:	Date Permit Expires:			
For inspection, call the Lake County Public Works Department at 352-253-6019 Submit Permit to: Lake County Public Works, Post Office Box 7800, Tavares, FL 32778				
	3/1/19			
Public Works Department, Right-of-Way Utilization Permit,	2/2/14			

_nent _



Right-of-Way Utilization Permit Requirements

The purpose of a Right-of-Way Utilization permit is to control the use of public rights-of-way and public easements in the interest of the health, safety and welfare of the public. Any work within public rights-of-way and public easements requires an approved right-of-way utilization permit pursuant to Section 14.14.05, Lake County Code/Land Development Regulations. Once approved, a notice of issuance of the permit may be recorded in the Official Records of Lake County, Florida.

- **I.** <u>Application Requirements.</u> Unless otherwise noted, permittee must submit one (1) original completed application and the following supporting documentation:
 - A. A sketch or construction plans drawn to scale, showing the following if applicable to the work:
 - 1. The offset from the centerline of the right-of-way or roadway to the proposed installation, the road right-of-way width and pavement width, the distance from the edge of pavement to the utility, sidewalks, and the location of all other utilities, including traffic signal utilities, within the area of work.
 - 2. One or more typical cross sections to adequately reflect the location of the utility. Please indicate the minimum vertical clearance above or below the pavement or natural ground.
 - 3. The location of the area of work in relation to the nearest road intersection, bridges, railroad crossings, and other physical features. Please include a location or vicinity map showing the general location of the installation.
 - 4. If this project will result in any new above ground structures, poles, or facilities please state where and what is proposed. Applicant may be requested to provide an engineer's certification that roadway clearance and sight distances have been met.
 - B. Projects of significant length and land size may require a complete right-of-way survey.

II. General Conditions.

- A. This permit is a permissive use only and the placing of facilities in public rights-of-way or easements does not create or vest a property right in the permittee.
- B. Permittee agrees that the rights and privileges herein set out are granted only to the extent of the County's right, title and interest in the land to be entered upon and used by the permittee, and the permittee will, at all times, assume all risk of and indemnify, defend and save harmless Lake County, its commissioners and employees from and against any and all loss, damage, cost, or expense arising in any manner on account of the exercise or attempted exercises by said holder of the aforesaid rights and privileges.
- C. Permittee agrees it is the responsibility of the permittee, not the County, to determine if the work completed meets Americans with Disabilities Act (ADA) requirements and accessibility guidelines.
- D. At least fourteen (14) days prior to construction, permittee shall provide the County with proof that written notification has been given by permittee to all adjacent property owners stating the anticipated construction schedule, maintenance of traffic plan, and any impacts to the adjacent properties, if any. The notice must provide the name and telephone number of the permittee or permittee's project manager.
- E. Permittee shall post a copy of the approved permit on site at all times during the work.
- F. Permittee shall notify the County at least twenty-four (24) hours in advance of starting work. Permittee agrees all work shall take place during daylight hours, unless specifically authorized, and discontinued by sunset with proper signage and traffic control devices maintained during off hours.
- G. All work, materials and equipment shall meet all Lake County codes and standards. All right-of-way disturbed by this work shall be restored to its original condition or better and in accordance to applicable County Codes. All disturbed areas must be sodded with sod matching existing grass type. Bahia sod shall be used if no grass is present at time of construction. All work is subject to inspection by the County.
- H. The construction and maintenance shall not interfere with the property and rights of a prior applicant.
- I. Final inspection and acceptance of work by the County must be obtained to document the completion of the work.
- J. If this permit is being received for sealing, painting or surfacing of a driveway apron located in a right-ofway, the permittee acknowledges that the County is not responsible for maintenance or upkeep of the

sealant or paint. If the permittee or permittee's contractor causes damage to the County's property permittee shall be liable for the current cost of repair or replacement. Permittee shall not saw-cut, obstruct, or remove any portion of a sidewalk within a right-of-way without prior approval from the County.

III. Construction Conditions.

- A. Excavation shall not be allowed within five (5) feet from the edge of the pavement, unless prior approval is received from the Lake County Engineer.
- B. A traffic detour or lane closure shall require specific approval by the County. All traffic detours shall be restricted to the limits of right-of-way with necessary flagmen and marking devices. All construction and maintenance shall be performed with proper shoring, barricades, and maintenance of traffic signage in accordance with the FHWA Manual on Uniform Traffic Control Devices (MUTCD), OSHA law and regulations, and the Florida Department of Transportation (FDOT) Highway Safety Plan.
- C. Written approval from the Lake County Engineer shall be required before any alterations to existing traffic signal equipment including, but not limited to: vehicle detection loops and signal timing. If traffic signal vehicle detection loops are rendered inoperable, temporary detection shall be installed within twenty-four (24) hours. All traffic signal utilities disturbed by this work shall be restored to their original condition or better. Traffic signal utilities include but not limited to: vehicle detection loops, conduit, cabling, pull boxes, pedestrian signal equipment, span assemblies, signal heads, cabinet assemblies, cameras and fiber optic infrastructure.
- D. Open cuts of roads will not be allowed unless specifically authorized by Lake County. Underground pneumatic/missile boring is strictly prohibited under Lake County roadways. Only directional bore or jack and bore operations are acceptable. Unless Lake County determines it is impractical, bore operations and excavations shall maintain a five (5) foot minimum clearance from edge of pavement on road crossing each side. Bore depths shall be in accordance with FDOT Utility Accommodation Manual (UAM) unless specifically authorized by Lake County. Minimum bore depth under pavement is thirty-six inches (36") and a minimum bore depth below unpaved ground is thirty inches (30"). Any overhead installations should maintain a minimum of eighteen (18) feet vertical clearance over all roadways and driveways.
- E. Pursuant to Section 337.403(1), Florida Statutes, any utility placed upon, under, over, or along any public road or publicly owned rail corridor that is found by the County to be unreasonably interfering in any way with the convenient, safe, or continuous use, or maintenance, improvement, extension, or expansion of such public road or publicly owned rail corridor shall, upon thirty (30) days written notice, be removed or relocated by permittee at its own expense.
- F. It is agreed that in the event the installation, adjustment or relocation of utilities are scheduled to be done simultaneously with Lake County construction work, the permittee shall coordinate with Lake County before proceeding and shall cooperate with the County's contractor to arrange the sequence of work so as not to delay the work of the County's contractor, defend any legal claims of the County's contractor due to delays caused by the permittee's failure to comply with the approved schedule, and shall comply with all provisions of the law and Lake County's current *Utility Accommodation Manual*.
- G. Permittee shall report all right-of-way utilization activities to Sunshine State One-Call at least seventy-two (72) hours prior to commencement.
- H. If above ground utilities are being replaced, the old utilities and utility appurtenances must be removed from County right-of-way within thirty (30) days after new utilities are installed.

IV. Guarantee and Compliance.

A. A performance bond or irrevocable letter of credit may be required of the applicant in the event the work covered by the right-of-way utilization permit has the potential to significantly damage the right-of-way. The security instrument shall comply with the applicable provisions of the Florida Statutes for public construction bonds and be in a form acceptable to the Lake County Attorney's Office. The security instrument shall be made payable to the Lake County Board of County Commissioners in the amount of one hundred ten percent (110%) of estimated cost to repair such damage, as determined by Lake County, and shall remain in effect until the work covered by the right-of-way utilization permit has been completed and accepted by the County.

- B. In the case of noncompliance with the requirements and conditions of this permit, the facility will be brought into compliance by the permittee or removed from the right-of-way or easement by the permittee at no cost to the County.
- C. The County may issue "Stop Work" order(s) upon any permittee committing or creating an unsafe act which may create a public hazard or who is not complying with this permit or the applicable codes. The order shall remain in effect until such time as these matters are corrected. Permits shall be issued with the understanding that the applicant shall guarantee all work performed under the terms of the permit for a period of one (1) year from the date of final inspection and acceptance of work.
- D. Any failure(s) shall be repaired by the permittee, at no cost to the County, within five (5) days, unless the urgency of the problem requires a quicker reaction time. The permittee shall be responsible for all repair costs incurred due to damages to existing utilities, including, but not limited to, errors in locating existing utilities during construction.
- E. <u>Removal/Relocation:</u> Whenever the County deems necessary and upon the County's request, any or all of the work or appurtenances authorized by this permit shall be immediately removed from the right-of-way, relocated, and the right-of-way returned to original state, as required by the County, at the expense of the permittee, unless reimbursement is specifically authorized. Upon ten (10) days written notice, the permittee shall be required to remove and relocate the improvements placed within the right-of-way at the applicant's sole expense.

V. Wireless Facilities.

- A. Right-of-way may be used for wireless facilities pursuant to Section 337.401, Florida Statutes, Advanced Wireless Infrastructure Deployment Act. Wireless providers are encouraged to collocate.
- B. Prior to installing a small wireless facility and associated wireless equipment, a wireless provider shall apply and obtain a right-of-way utilization permit. An application shall be submitted for each facility location. Within fourteen (14) days of submitting an application, the County may request the proposed location for the facility be moved to another location or negotiate an alternative location.
- C. In addition to the documents required in Section I above, a wireless provider must submit the following: (1) a sketch of the equipment to be used, (2) the registration and permit fee, (3) proof of insurance, (4) a copy of federal or state certification or license authorizing the permittee to provide communications services.
- D. Permittee shall be liable to the County for the costs of any repairs made necessary by any such displacement, damage or destruction of facilities belonging to the County. In the case of an emergency, the County may commence repairs without any prior notice to the registrant.
- E. Removal/Relocation of Wireless Facilities: Whenever the County deems necessary and upon the County's written request, permittee shall remove the wireless facility and associated wireless equipment at the expense of the permittee. If permittee fails to remove after 30 days from the County's request, the County may remove or relocate the facilities at the sole cost and expense of the permittee, without the County incurring liability for damages.
- F. A wireless provider shall provide the County notice upon any assignment or transfer of this permit, and any assignee, buyer, or transferee shall be bound by these permit requirements.

The County shall not be responsible for damages to any structure, facilities, or equipment placed within the right-of-way by permittee, permittee's successors or assigns. All structures shall be properly maintained by permittee, at permittee's expense, and shall be adequately visible or properly delineated to prevent damage due to normal maintenance of the right-of-way.

I have read, understand, and agree to be bound by the above requirements:

Signature

J. Dennis Westrick, P.E.

Print Name

Date

03/07/2019

RECEIPT

LAKE COUNTY BOCC 315 W MAIN ST Tavares , FL 32778 Phone

Transaction Type: Sale

Comment:

Merchant-Defined Data Fields

Merchant-Defined Data Field 1: Right-of-Way Utilization Permit

Department: Public Works

Merchant-Defined Data Field 3: 5056260.341213

Total: 101.00 USD

Cardholder Information

Name Teresa Meeks

Credit Card Type: MasterCard

Credit Card Number: ##########6421

Company: Environment and Infrastructure Solutions, Inc.

Phone: 8636672345

Email: tonya.morris@woodplc.com

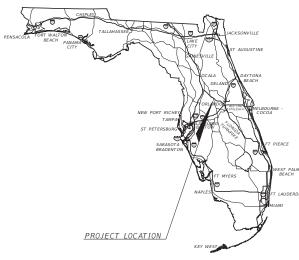
CONSTRUCTION PLANS FOR:

MAIN REPLACEMENT

JOHNS LAKE ROAD WATER

LAKE COUNTY, FLORIDA

WOOD PROJECT NUMBER: 600365.13



wood

ENVIRONMENT &
INFRASTRUCTURE SOLUTIONS, INC.
2000 E Edgewood Drive, Suite 215
Lakeland, FL 33803
Phone: 1.863.667.2345
Fax: 1.863.667.2662
www.woodplc.com

DAVID W. BUTCHER, P.E.
STATE OF FLORIDA
PROFESSIONAL ENGINEER
LICENSE NO. 55431
THIS ITEM HAS BEEN
ELECTRONICALLY SIGNED AND SEALED
BY DAVID W. BUTCHER, P.E.
ON JANUARY 22, 2019
USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS
DOCUMENT ARE NOT CONSIDERED
SIGNED AND SEALED AND THE
SIGNATURE MUST BE VERIFIED ON ANY
ELECTRONIC COPIES.

JOHNS LAKE ROAD WATER MAIN

REPLACEMENT CLERMONT, FL



CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

WOOD PROJECT No: 600365.13

	REVISIONS			
NO.	DATE	BY	APPROVED	
Х	Х	Х	Х	

DESIGNED BY:	DWB
DRAWN BY:	TAC
CHECKED BY:	DWB
APPROVED BY:	DWB
DATE:	1/21/2019

SHEET TITLE:

COVER

SHEET NUMBER: REV. #
C100 ---SHEET 1 OF 25 SHEETS

INDEX OF DRAWINGS

SHEET NUMBER SHEET TITLE

C100	COVER	
C200 - C201	GENERAL NOTES	
C202	SUMMARY OF PAY ITEMS	
C300	KEY SHEET	
C301	PLAN & PROFILE 100+00 TO 101+77	
C302	PLAN & PROFILE 101+77 TO 104+54	
C303	PLAN & PROFILE 104+54 TO 107+30	
C304	PLAN & PROFILE 107+30 TO 110+07	
C305	PLAN & PROFILE 110+07 TO 112+50	
C306	PLAN & PROFILE 200+00 TO 202+48	
C307	PLAN & PROFILE 202+48 TO 205+25	
C308	PLAN & PROFILE 205+25 TO 208+01	
C309	PLAN & PROFILE 208+01 TO 210+78	
C310	PLAN & PROFILE 210+78 TO 213+54	
C311	PLAN & PROFILE 213+54 TO 216+31	
C312	PLAN & PROFILE 216+31 TO 219+07	
C313	PLAN & PROFILE 219+07 TO 221+84	
C314	PLAN & PROFILE 221+84 TO 224+60	
C315	PLAN & PROFILE 224+60 TO 227+25	
C316	PLAN & PROFILE 300+00 TO 302+00	
C400 - C403	UTILITY DETAILS	

Steve's Rd

Constant Williams Rd

Lost Lake Rd

Like Fether

Constant Rd

Like Fether

Like Fether

Constant Rd

Like Fether

Like Feth

SITE LOCATION MAP LAKE COUNTY, FLORIDA SECTION 34, TOWNSHIP 22 SOUTH, RANGE 26 EAST

GOVERNING STANDARD PLANS: FLORIDA DEPARTMENT OF TRANSPORTATION, FY2018-19 STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND APPLICABLE INTERIM REVISIONS (IRS).

STANDARD PLANS FOR ROAD CONSTRUCTION AND ASSOCIATED IRS ARE AVAILABLE AT THE FOLLOWING WEBSITE:

APPLICABLE IRS: IR536-001-01. IR521-001-01

STANDARD PLANS FOR BRIDGE CONSTRUCTION ARE INCLUDED IN THE STRUCTURES PLANS COMPONENT

GOVERNING STANDARD SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION, JULY, 2018 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION AT THE FOLLOWING WEBSITE:
HTTP://WWW.FDDT.GOV/PROGRAMMANAGEMENT/IMPLEMENTED/SPECBOOKS

100% PLANS

DEVICTORS			
Rev	Date	Description	Sheets

01/22/2018

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.



CONTRACTOR IS TO VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

NOTE:
CONSTRUCTION PLANS ARE AVAILABLE IN AUTODESK CIVIL 3D FORMAT ONLY.

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA PRACTICING WITH WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC., 2000 E. EDGEWOOD DRIVE, SUITE 215, LAKELAND, FL 33803, A CORPORATION AUTHORIZED TO OPERATE AS A BUSINESS PROVIDING ENGINEERING CONSULTING SERVICES (CA-5392) BY THE STATE OF FLORIDA DEPARTMENT OF PROFESSIONAL REGULATION, BOARD OF PROFESSIONAL ENGINEERS. I FURTHER CERTIFY THAT I, OR OTHERS UNDER MY DIRECT SUPERVISION, HAVE PREPARED THE ENGINEERING EVALUATIONS, FINDINGS, OPINIONS, CALCULATIONS OR TECHNICAL ADVICE HEREBY REPRESENTED IN THESE PLANS.

EARTHWORK QUANTITIES

GATIONS AND CALCULATIONS AS NECESSARY TO ASSURE THE CONTRACTOR SHALL PERFORM HIS OWN INVESTIGATIONS AND CALCULATIONS AS NECESSARY TO ASSUL HIMSELF OF EARTHWORK QUANTITIES. THERE IS NO IMPLICATION THAT EARTHWORK BALANCES, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY IMPORT FILL NEEDED, OR FOR REMOVAL AND DISPOSAL OF

D) A FILE NAMED COVERSHEET.OWS O) FILE NAMED SITE_PLAN.DWG SHOWING ONLY THE FOLLOWING 5 LAYERS VISIBLE: -LAYER NAMED LOTS -LAYER NAMED LOT NUMBERS -LAYER NAMED ADDRESSES -LAYER NAMED ADDRESSES -LAYER NAMED ROW SHOWING ALL RIGHTS-OF-WAYS -LAYER NAMED FOR SHOWING ALL EDGE OF PAVEMENTS d) A FILE NAMED DWSTERUTILITYPLAN.DWG WITH SITE_PLAN.DWG X-REF AND ONLY THE FOLLOWING 3 LAYERS VISIBLE VALVES V **EROSION CONTROL**

EROSION AND SILTRATION CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THESE MEASURES ARE TO BE INSPECTED BY THE CONTRACTOR ON A REGULAR BASIS AND ARE TO BE MAINTAINED OR REPAIRED ON AN IMMEDIATE BASIS AS REQUIRED. REFER TO WATER DAMAGEMENT DISTRICT PERMIT FOR ADDITIONAL REQUIREMENTS FOR EROSION CONTROL AND SURFACE DRAINAGE. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITH SOD WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION. OTHER MATERIALS SHALL BE REVIEW AND APPROVED BY CITY.

WETLAND PROTECTION

THE LIMITS OF THE ON-SITE WETLANDS HAVE BEEN PROVIDED TO THE CONTRACTOR ON THE CONSTRUCTION PLANS OR ON PERMIT MATERIALS. THE WETLANDS ARE TO BE PROTECTED FROM DISTURBANCE AT ALL TIMES. CONTRACTOR SHALL PROVIDE EROSION, SILTATION, AND DIVERSION MEASURES PRIOR TO DMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN A COPY OF EACH PERMIT RELATING TO WETLANDS AND WATER MANAGEMENT AND ADHERE TO ALL PROVISIONS AND CONDITIONS THERETO.

LIMITS OF DISTURBANCE

AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. REPAIR OR RECONSTRUCTION OF DAMAGED AREAS ON SURROUNDING PROPERTIES SHALL BE PERFORMED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED. GRADING AND/OR CLEARING ON PROPERTIES OTHER THAN

TION TREE REMOVAL

THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHEN ALL WORK IS LAID OUT (SURVEY STAKED), SO THAT A DETERMINATION MAY BE MADE OF SPECIFIC TREES TO BE REMOVED. NO TREES ON THE CONSTRUCTION PLANS AS BEING SAVED SHALL BE REMOVED WITHOUT PERMISSION FROM THE OWNER ENGINEER AND THE CITY OF CLERMONT

CLEARING AND GRUBBING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING FOR SITE CONSTRUCTION INCLUDING CLEARING FOR PAVING, UTILITIES, DRAIMAGE FACILITIES AND BUILDING CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FIELD STAKED AND REVIEWED BY THE OWNER AND ENGINEER PRIOR TO ANY

NO BURN PERMITS (INCLUDING THOSE FOR LAND CLEARING) WILL BE ISSUED IN THE CITY OF CLERMONT WITHOUT PRIOR AUTHORIZATION FROM THE CITY MANAGER

MATERIAL STORAGE/DEBRIS REMOVAL

1) NO COMBUSTIBLE BUILDING MATERIALS MAY BE ACCUMULATED ON THE SITE AND NO CONSTRUCTION ... WORK INVOLVING COMBUSTIBLE MATERIALS MAY REGIN UNTIL INSTALLATION OF ALL REQUIRED WATER MAINS AND FIRE HYDRANTS HAVE BEEN COMPLETED, DEP APPROVAL RECEIVED FOR THE WATER MAINS, AND THE HYDRANTS ARE IN OPERATION. CONSTRUCTION WORK INVOLVING NON-COMBUSTIBLE MATERIALS, SUCH AS CONCRETE, MASONARY AND STEEL MAY BEGIN PRIOR TO THE FIRE HYDRANTS BEING OPERATIONAL

2) ALL MATERIALS EXCAVATED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STOCKPILED AT ON-SITE LOCATIONS AS SPECIFIED BY THE OWNER. MATERIALS SHALL BE STOCKPILED SEPARATELY AS TO USABLE (NONORGANIC) FILL STOCKPILES AND ORGANIC (MUCK) STOCKPILES IF MUCK IS ENCOUNTERED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNSUITABLE FILL MATERIALS FROM THE SITE. ALL CLAY ENCOUNTERED SHALL BE EXCAVATED OUT AND REPLACED WITH CLEAN GRANULAR FILL

FILL MATERIAL

ALL MATERIALS SHALL CONTAIN NO MUCK, STUMPS, ROOTS, BRUSH, VEGATATIVE MATTER, RUBBISH OR OTHER MATERIAL THAT WILL NOT COMPACT INTO A SUITABLE AND ENDURING BACKFILL. FILL SHALL BE CLEAN, NON-ORGANIC, GRANULAR MATERIAL WITH NOT MORE THAN 10% PASSING THE NO. 200 SIEVE.

COMPACTION

FILL MATERIALS PLACED UNDER ROADWAYS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. ALL OTHER FILL AREAS ARE TO BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. FILL MATERIALS SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 12" LIFTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND OWNER WITH ALL (PASSING AND FAILING) TESTING RESULTS. RESULTS SHALL BE PROVIDED ON A TIMELY AND REGULAR BASIS PRIOR TO CONTRACTOR'S PAY REQUEST SUBMITTAL FOR THE AFFECTED WORK.

PAVEMENT AND/OR ROAD AND RIGHT-OF-WAY WORK

OWNER / OPERATOR

THE ENTITY THAT WILL OWN, OPERATE AND MAINTAIN THE ROADWAYS SHOWN ON THESE PLANS IS <u>FDOT</u>, LAKE COUNTY OR THE CITY OF CLERMONT. THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL THE REQUIREMENTS OF THAT ENTITY

SITE ACCESS

ALL ACCESS TO THE JOB SITE FOR CONSTRUCTION AND RELATED ACTIVITIES SHALL BE BY EXISTING

ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY IN THE DIRECTION SHOWN BY THE FLOW ARROWS ON THE PLANS AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS INGRADE. AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. APPROACHES TO INTERSECTIONS AND ENTRANCE AND EXIT AGADES TO INTERSECTIONS WILL HAVE TO BE STAKED IN THE FIELD AT DIFFERENT GRADES THAN THE CENTERLINE GRADES TO ACCOMPLISH THE PURPOSES OUTLINED. IN ADDITION, THE STANDARD CROWN WILL HAVE TO BE NGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTION TO

11

(LBR) 40 COMPACTED TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY OF 98% PER AASHTO T-180, 6" OF LIMEROCK BASE COURSE. (LBR) 100. COMPACTED TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY OF 98% PER AASHTO T-180 AND 2" TYPE S-111 OF RECYCLED ASPHALTIC CONCRETE SURFACE COURSE WITH A MINIMUM STABILITY OF 1500 LBS. SUBGRADE PREPARATION AND PAVEMENT INSTALLATION SHALL

SIDEWALKS

SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREA AS SHOWN ON THE CONSTRUCTION PLANS. THE 5' SIDEWALK SHALL BE CONSTRUCTED OF 4 INCHES OF CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. JOINTS SHALL BE EITHER TOOLED OR SAWCUT AT A DISTANCE OF 5' LENGTHS, HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND BE IN ACCORDANCE WITH STATE REGULATIONS FOR HANDICAP ACCESSIBILITY.

PAVEMENT MARKINGS/SIGNAGE

EMENT MARKINGS AND SIGNAGE SHALL BE PROVIDED AS SHOWN ON THE CONSTRUCTION PLANS AND SHALL MEET THE REQUIREMENTS OF THE OWNER/OPERATOR. SIGNAGE SHALL BE IN CONFORMANCE WITH MUTCD (LATEST EDITION). A 48-HOUR PAVEMENT CURING TIME WILL BE PROVIDED PRIOR TO APPLICATION OF THE PAVEMENT MARKINGS. REFLECTIVE PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NO. 17352.

TRAFFIC CONTROL

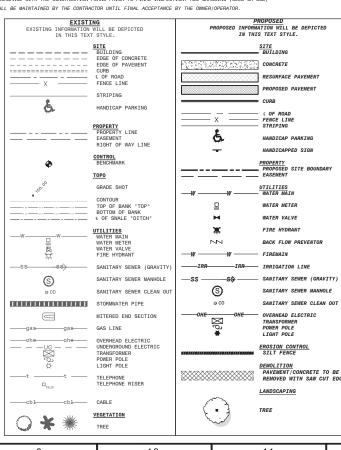
AN MOT PLAN SHALL BE SUBMITTED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK. A MINIMUM OF 2-WAY, ONE LANE TRAFFIC SHALL BE MAINTAINED IN THE WORK SITE AREA, ALL CONSTRUCTION WARNING SIGNAGE SHALL BE IN PLACE PAIOR TO COMMENCEMENT OF CONSTRUCTION AND BE MAINTAINED THROUGHOUT CONSTRUCTION. ACCESS SHALL BE CONTINUOUSLY MAINTAINED FOR ALL PROPERTY OWNERS SURROUNDING THE WORK SITE AREA. LIGHTED WARNING DEVICES ARE TO BE OPERATIONAL PRIOR TO DUST

CURBING

CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE DEPARTMENT OF TRANSPORTATION CLASS "1" CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1991) SECTION 520 AND

R/W RESTORATION

ALL AREAS WITHIN THE RIGHT-OF-WAYS SHALL BE FINISH GRADED WITH A SMOOTH TRANSITION INTO EXISTING GROUND. ALL SWALES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING. ALL DISTURBED AREAS SHALL BE RAKED CLEAN OF ALL LIMEROCK AND ROCKS AND SODDED AFTER FINAL GRADING IN ACCORDANCE WITH THE CONSTRUCTION PLANS PRIOR TO FINAL INSPECTION, ALL GRASSING (SEED OR SOD) SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE OWNER/OPERATOR.



INFRASTRUCTURE SOLUTIONS, INC. 2000 E Edgewood Drive, Suite 215 Lakeland, FL 33803 Phone: 1.863.667.2345 Fax: 1.863.667.2662

DAVID W. BUTCHER, P.E. STATE OF FLORIDA
PROFESSIONAL ENGINEER
LICENSE NO. 55431 THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY DAVID W. BUTCHER, P.E. ON JANUARY 22, 2019 LISING A DIGITAL SIGNATURE PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE

PROJECT: **JOHNS LAKE ROAD WATER** MAIN REPLACEMENT



CLERMONT, FL

CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

> WOOD PROJECT No: 600365.13

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NO.	DATE	BY	APPROVED
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1	DESIGNED BY:	DWB
١	DRAWN BY:	TAC
	CHECKED BY:	DWB
	APPROVED BY:	DWB
ł	DATE:	1/21/2019

GENERAL NOTES

SHEET TITLE:

SHEET NUMBER: REV. # C200 ----SHEET 2 OF 25 SHEETS

- WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COODDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY WITH OTHER CONTRACTOR'S AND UTILITY COMPANIES.
- 9. BACKFILL MATERIAL SHALL BE SOLIDLY TAMPED AND COMPACTED TO A FIRMNESS EQUAL TO THAT O THE SOIL ADJACENT TO THE TRENCH AROUND PIPES IN 6" LAYERS UP TO AN UNDISTURBED LEVEL OF AT LEAST 1' ABOVE THE TOP OF THE PIPE. IN AREAS TO BE PAVED, BACKFILL SHALL BE COMPACTED TO 100% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 3,000 P.S.I. IN 28 DAYS, UNLESS OTHERWISE NOTED, SPECIFIED OR REQUIRED.
- 11. REINFORCING SHALL BE BILLET STEEL BARS CONFORMING TO ASTM A615 GRADE 40 OR BETTER.
- THE CONTRACTOR/SUBCONTRACTOR SHALL PLACE A 1" DEEP CONTRACTION JOINT EVERY 10' IN THE SIDEWALK.
- SIDEWALK CONSTRUCTION SHALL BE FLUSH WITH PAVEMENT WHERE THEY ARE ADJACENT OR MEET, UNLESS OTHERWISE SHOWN.
- MATERIALS AND CONSTRUCTION METHODS FOR STREETS AND STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR RODA AND BRIDGE CONSTRUCTION, 1994, OR LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS THERETO.
- 15. ALL PIPE NOTED ON THE PLANS AS RCP SHALL BE REINFORCED CONCRETE PIPE, CLASS III, WITH
- 16. REPAIR AND REPLACEMENT OF ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION WORK UNESS SPECIFICALLY EXEMPTE BY THE PLANS, ADDITIONAL COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- 17. RECORD DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING INFORMATION ON A SET OF THE APPROVED PLANS CONCURRENTLY WITH CONSTRUCTION PROGRESS. WITHIN TWO WEEKS FOLLOWING FINAL THE CONTRACTOR SHALL SUBMIT ONE SET OF RECORD DRAWINGS TO THE ENGINEER OF RECORD. THE FINAL RECORD DRAWINGS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
- 1. DRAWINGS TO BE LEGIBLY MARKED TO RECORD ACTUAL CONSTRUCTION
- DRAWINGS SHALL SHOW ACTUAL LOCATION OF ALL UTILITIES, AND RELATED APPURTENANCES, BOTH ABOVE AND BELOW GROUND. ALL CHANGES TO PIPTING LOCATION INCLUDING HORIZONITAL & VERTICAL LOCATIONS OF UTILITIES & APPURTENANCES SHALL BE CLEARLY SHOWN AND REFERENCED TO PERMANENT SURFACE IMPROVEMENTS. DRAWINGS SHALL ALSO SHOW ACTUAL INSTALLED PIPE MATERIAL, ETC.
- DRAWINGS SHALL CLEARLY SHOW ALL FIELD CHANGES OF DIMENSION AND DETAIL INCLUDING CHANGES MADE BY FIELD ORDER OR BY CHANGE ORDER.
- DRAWINGS SHALL CLEARLY SHOW ALL DETAILS NOT ON ORIGINAL CONTRACT DRAWINGS BUT CONSTRUCTED IN THE FIELD. ALL EQUIPMENT AND PIPING RELOCATION SHALL BE CLEARLY
- 5. LOCATIONS OF ALL MANHOLES, HYDRANTS, VALVES, & VALVE BOXES SHALL BE SHOWN
- 6. THE CONTRACTOR SHALL PROVIDE CERTIFIED RECORD DRAWINGS, SIGNED AND SEALED BY A THE CONTINUION SHALL PROVIDE CENTIFIED RECORD DENITINGS, STANDED AND SERLED BY A PROFESSIONAL LAND SURVEYOR. THE RECORD DANITINGS SHALL SHOW FIRMS GABLES AND LOCATIONS ON ALL UTILITIES INCLUDING THE SANITARY SEWER, WATER, PRODUCT PIPING, AND STORM WATER COLLECTION SYSTEM (I.E. PIPES, INLETS, AND PONDS). THE CONTRACTOR SHALL PROVIDE TEN COPIES OF THE CERTIFIED RECORD DRAWINGS TO THE ENGINEER.
- 18. CLASS "B" TYPE I BEDDING SHALL BE USED UNLESS INDICATED OTHERWISE ON THE DRAWINGS, OR BY
- SOILS ENGINEER TO SUPPLY THE DESIGN ENGINEER WITH A PHOTOCOPY OF ALL COMPACTION TESTS, ASPHALT RESULTS, AND CONCRETE RESULTS THE SOILS ENGINEER IS TO CERTIFY TO THE DESIGNATION REGULATION WHITING THAT ALL TESTING RECOURSEMENT REQUIRED BY THE LOCAL REGULATION AGENCY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION (FOOD) FOR THE LIMPHOVEMENTS AS REQUIRED BY THE ENGINEERING CONSTRUCTION DAMBHINGS FOR THE ON-SITE HAVE BEEN SATISFIED.
- 20. CONTRACTOR SHALL REVIEW SOIL REPORTS AND BORINGS PRIOR TO BIDDING THE PROJECT AND COMMENCING CONSTRUCTION.
- 21. IRRIGATION SYSTEM SHALL HAVE COLOR CODED PIPING AND LABELING ON THE PIPE TO ENSURE DIFFERENTIATION FROM POTABLE WATER PIPING.
- 22. AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPROPRIATE AGENCIES AND SUPPLY THEM WITH A LL REQUIRED SHOP DRAWINGS, THE CONTRACTOR'S NAME, STATITUS DATE, PROJECTED SCHEDULE, AND OTHER INFORMATION AS REQUIRED. ANY HORK PERFORMED PRIOR TO NOTIFYING THE ENGINEER OR WITHOUT AGENCY INSPECTOR PRESENT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- 23. OWNER SPECIFIC SPECIFICATIONS TO BE PROVIDED TO CONTRACTOR DURING BIDDING
- 24. CONTRACTOR SHALL ADMERE TO THE FOLLOWING DETAILS, STANDARDS, REGULATIONS, AND ORDINANCES: COUNTY HEALTH DEPARTMENT, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, FLORIDA DEPARTMENT OF TRANSPORTATION, WATER MANAGEMENT DISTRICT, CITY STANDARDS.
- 25. ALL SITE WORK SHALL CONFORM TO THE LATEST WATER MANAGEMENT DISTRICT, F.D.O.T., CITY AND COUNTY REGULATIONS, SPECIFICATIONS, AND GUIDELINES.
- 26. ALL EXISTING SURVEY MONUMENTS, GPS MONUMENTS OR PUBLIC LAND CORNERS SHALL BE PROTECTED.

 IF A CORNER OR MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY
 REFERENCED THE CONTRACTORS CONSTRUCTION MANAGER SHALL NOTIFY THE CITY PUBLIC WORKS
 DIRECTOR WITHOUT DELAY BY TELEPHONE.
- 27. PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

SAFETY NOTES

- 1. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, THE CONTRACTOR SHALL COMPLY WITH REGULATIONS. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF ITS PERSONNEL, LABOR SAFETY REGULATIONS SHALL BE AS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF LABOR
- THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION. MAINTENANCE ON THEFT CONTROL AND SHE THE THEOLOGY OF STREET AND INTERNAL OR DISTRICTION, WELLTROPHIC AND UTILITY OPERATIONS SHALL BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE, AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARKING DEVICES, AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKERS FROM HAZARDS WITHIN THE PROJECT LIMITS.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
- WATER
 CITY OF CLERMONT
 UTILITIES DEPARTMENT
 685 WEST MONTROSE STREET CLERMONT, FL 34711 (352) 241-7335
 - SEMEN CITY OF CLERMONT UTILITIES DEPARTMENT 685 WEST MONTROSE STREET CLERMONT, FL 34711 (352) 241-7335 TELEPHONE EMBARQ 260 CITRUS TOWER BLVD. CLERMONT, FL 34711 (800) 672-6242
- CABLE BRIGHT HOUSE NETWORKS 1617 E HIGHWAY 50 CLERMONT, FL 34711 (352) 394-5541

PROGRESS ENERGY P.O. BOX 120069 CLERMONT, FL 34712

(800) 432-4770

3. THE FOLLOWING ARE FILE FORMAT AND LAYER NAME STANDARDS:

f) IF APPLICABLE, A FILE NAMED OFF SITE UTILITIES.DWG

PERMITS AND PERMIT REQUIREMENTS

COUNTY RIGHT-OF-WAY CONSTRUCTION

MAINTENANCE OF TRAFFIC (MOT) TO BE SUPERVISED BY A CERTIFIED PERSON

ALL UTILITIES ARE TO BE FIELD LOCATED PRIOR TO START OF CONSTRUCTION.

ALL DISTURBED AREAS WITHIN COUNTY RIGHT-OF WAY, SHALL BE RESTORED WITH SOD.

AHDS, SPECIFICATIONS FOR NO. MODATION MANUAL, LATEST EDITION

TEST RESULTS ARE REQUIRED UPON REQUEST

STANDARD UTILITY NOTES

) A FOLDER SHALL BE CREATED WITH THE NAMED PROJECT AND PHASE NUM

LAYERS VISIBLE:
-LAYER NAMED WATERLINE SHOWING DIFFERENT PIPE SIZES, WATER METERS, AND HYDRANTS

-LAYER NAMED REUSEWATER AND ALL APPROPRIATE FEATURES
-LAYER NAMED SEWER AND ALL APPROPRIATE FEATURES
0) FILE NAMED GRADING DRAINGE.DNG WITH SITE PLAN.DNG X-REF AND ONLY THE FOLLOWING 2

LAYER NAMED SPOTELEV SHOWING ALL SPOT ELEVATIONS
ANY OTHER LAYERS PERTINENT TO THE GRADING AND DRAINAGE OF THE SITE

THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL REGULATORY AND LOCAL AGENCY PERMITS. CONTRACTOR SHALL BE EXPECTED TO REVIEW AND ABIDE BY ALL THE REQUIREMENTS AND LIMITATIONS SET FORTH IN THE PERMITS. A COPY OF THE PERMIT SHALL BE KEPT ON THE JOB AT ALL TIMES.

WLESS OTHERWISE MOTED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE FOR THE LAYOUT OF ALL THE WORK BE CONSTRUCTED. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR MAKET'S SUMPYCH, ANY DISCREPENCIES BETWEEN FIELD MEASUREMITS AND CONSTRUCTION PLAN INFORMATION HALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

ALL WORK PERFORMED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH FDOT DESIGN STANDARDS, SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION AND THE UTILITY

THE COUNTY MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY LANE CLOSURES OR ANY WORK WITHIN COUNTY RIGHT-OF-WAY.

ENGINEER'S CERTIFICATION TOGETHER WITH AS-BUILT, IF REQUIRED, TO BE SUBMITTED WITH 30 DAYS OF COMPLETION.

CAUTION SHALL BE EXERCISED WHILE RELOCATING EXISTING SIGNS SO AS TO PREVENT DAMAGE TO THE SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY FOOT, THEY SHALL BE REPLACED BY THE CONTRACTOR AT HISHER EXPENSE.

THE PERMITEE IS REQUIRED TO HAVE A FDOT QUALIFIED CONSTRUCTION, ENGINEERING, INSPECTION (DEI) INSPECTOR TO OVERSEE THE DAILY CONSTRUCTION ON THE DEPARTMENT'S RIGHT OF WAY. A CONSTRUCTION BOND WILL BE REQUIRED PRIOR TO ISSUING THE PERMIT. LIABILLITY INSURANCE WILL BE REQUIRED PRIOR TO BEGINNING OF CONSTRUCTION.

CHAPTER 77-153 OF THE FLORIDA STATUTES REQUIRES THAT AN EXCAVATOR NOTIFY ALL GAS UTILITIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATING. MAPS SHOW ONLY THE APPROXIMATE LOCATION OF GAS MAINS AND DO NOT SHOW SERVICE LINES. THE ONLY SAFE AND PROPER WAY TO LOCATE EITHER MAINS OR SERVICE LINES IS BY AN ON-SITE INSPECTION BY THE RESPECTIVE GAS PERSONNEL. THEREFORE, EXCAVATORS ARE INSTRUCTED TO TELEPHONE THE RESPECTIVE GAS COMPANY TWO WORKING DAYS BEFORE ENTERING A CONSTRUCTION AREA.

ALL UNDERGROUND UTILITIES MUST BE IN PLACE, TESTED AND INSPECTED AS REQUIRED PRIOR TO BASE AND SURFACE CONSTRUCTION.

II IS THE COMPAGEOR'S RESPONSIBILITY TO MOTIFY ALL UTILITY COMPANIES TO DISCONMENT OR REMOVE THERE RACLIITIES RHORT OR DEBUNISHING AN PENTING STRUCTURES FROM THE SITE. ALL UTILITIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING SHOULD BE CONTACTED BY THE CONTRACTOR:

3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS MOTICE TO THE VARIOUS UTILITY COMPANIES IN ORDER TO PERMIT MARKING THE LOCATIONS OF EXISTING UNDERSHOUND UTILITIES IN ADVANCE OF CONSTRUCTION, BY CALLING 811. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY 811 "NOW WHAT'S BELOW CALBEFORE VOU DIE" FORTY-EIGHT (48) HOURS PRIOR TO ANY CLEARING OF CONSTRUCTION TO IDENTIFY

INCLUDE ANY OTHER FILES PERTINENT TO THE PROJECT (SURVEY, DETAILS, X-REFS ETC.)

POWER SUMTER ELECTRIC

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GAS LAKE APOPKA NATURAL GAS DISTRICT 676 W. MONTROSE STREET CLERMONT, FL 34711 (352) 394-3480

NOTE: CONSTRUCTION PLANS ARE AVAILABLE IN AUTODESK CIVIL 3D FORMAT ONLY. ANY FILE CONVERSIONS WILL BE AT THE CONTRACTOR'S EXPENSE.

4 P:\PROJECTS-C3D\600365.13 City of Clermont - Johns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont - JLR Water Main Replacement.dwg - C200 GENERAL NOTES 01/21/2019 3:43pm alan.pixler

10 11 POTABLE WATER/FIRE SYSTEMS PIPE INSTALLATION CONTINUED LATERALS CONNECTIONS TO CITY WATER MAINS ALL DOUBLE DETECTOR CHECK VALVE ASSEMBLISE (DODY) INSTALLED TO ISOLATE A PRIVATE FIRE SYSTEM SUPPLYING FIRE YDRANTS FROM THE CITY'S POTABLE WATER SYSTEM SHALL HAVE TAMPER SWITCH DEVICES INSTALLED ON THE DODY ASSEMBLY ALVES WHENEVER ANY AUTOMATIC FIRE SPRINGLER SYSTEM IS INSTALLED BEYOND THE DODY. THESE TAMPER SWITCHES SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM FOR ALL INDIVIDUAL BUILDINGS PROTECTED BY A FIRE SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM FOR ALL INDIVIDUAL BUILDINGS PROTECTED BY A FIRE SHALL BE CONNECTED. ALL SERVICE LATERALS AND FITTINGS SHALL BE A MINIMUM OF 6" IN DIAMETER. WATER MAINS ARE TO BE INSTALLED SO AS TO PROVIDE A MINIMUM VERTICAL CLEARANCE OF 12" OR A 2. ALL LATERALS SHALL TERMINATE WITH A 4" CLEAN-OUT AT THE PROPERTY LINE, AND AT A DEPTH TO OWNER / OPERATOR MINIMUM HORIZONTAL CLEARANCE OF 10' FROM ALL OTHER UTILITIES. IF THE MINIMUM CLEARANCE CAN FINAL GRADE OF 3 FEET. SEE DETAILS FOR LOCATION. HE ENTITY THAT WILL OWN, OPERATE AND MAINTAIN THE WATER SYSTEM SHOWN ON THESE PLANS IS <u>CITY</u> F <u>CLERMONT</u>. THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL THE REQUIREMENTS OF THAT ENTITY, NOT BE ACHIEVED, THEN DUCTILE IRON WATER MAIN SHALL BE SPECIFIED 10 FEET EITHER SIDE OF THE 3. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x2"x2" ABOVE GRADE WOODE CROSSING. HORIZONTAL AND VERTICAL MINIMUM SEPARATION DISTANCE REQUIREMENTS RETWEEN WATER STAKE OR APPROVED MARKER AND CURB MARKED WITH A '5'. FIRE DEPARTMENT CONNECTIONS UNLESS OTHERWISE INDICATED ON PLANS. MAIN AND ALL OTHER UTILITIES SHALL COMPLY WITH 62-555.314 (1), (2), (3), (4) AND (5) FAC. ANY FIRE DEPARTMENT CONNECTION STANSES (FDC) FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS MUST BE WITHIN 100 FEET OF A FIRE HORANT. THE FDC MAY BE INSTALLED DIRECTLY ON THE DOUBLE DETECTOR CHECK VALVE BACK FLOW PREVENTOR AS LONG AS THE REQUIREMENT TO BE WITHIN 100 FEET OF A FIRE HORANT IS COMPLIED WITH. FIRE DEPARTMENT CONNECTIONS SHALL BE IDENTIFIED BY A SIGN THAT STATES, "NO PARKING FIRE DEPARTMENT CONNECTION" AND SHALL BE DESIGNED IN ACCORDANCE WITH FOOT STANDARDS FOR INFORMATION SIGNAGE. THE LOCATION OF ANY FDC MUST BE SHOWN ON THE SITE PLANS UTILITY SHEET. **FORCEMAINS** ALL WATER MAINS SHALL BE INSTALLED WITH RESTRAINED JOINT FITTINGS. NO CONCRETE THRUST BLOCKS LANDSCAPING TO BE USED 1. FORCEMAINS SHALL BE CLASS 350 EPOXY 401 LINED DIP. DIP PIPE SHALL HAVE INTEGRAL BELL PUSH ON TYPE JOINTS CONFORMING TO ASTM 03139 ALL PLUGS, CAPS, TEES, BENDS, FIRE HYDRANTS, VALVES, ETC. SHALL BE PROVIDED WITH MEGALUG PIPE PROVIDE MINIMUM 5' SEPARATION FROM UTILITIES AND TREES WITH INVASIVE ROOT SYSTEMS. RESTRAINTS. FOR RESTRAINT CONSTRUCTION SPECIFICATIONS, REFER TO THE WATER SYSTEM DETAILS 2. ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON WITH 250 PSI MINIMUM PRESSURE RATING. SUITABLE COUPLINGS COMPLYING WITH ASTM SPECIFICATIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIALS. ALL VALVES TO BE RESTRATNED AS DEAD ENDS IN BOTH DIRECTIONS DEDICATED FIRE MAINS PIPE MATERIALS 3. 3" METALLIC LOCATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET. THE POINT SERVICE' FOR ANY FIRE MAIN MUST BE CALLED OUT ON THE UTILITY SHEET OF THE SITE PLANS. THIS IS THE POINT WHERE A WATER LINE BECOMES DEDICATED TO ONLY FIRE PROTECTION, SUCH AS SUPPLYING ONLY A FIRE HORANT OF FIRE SPRINKLER SYSTEM, AND THERE IS NO POTABLE WATER SUPPLY COMING OFF OF THE WATER LINE BEYOND THIS POINT. 2. LABEL DEDICATED FIRE MAINS AT "EL" ON THE SUBMITTED PLANS. 3. FIRE MAINS WILL BE SEPARATELY PERMITTED AND INSPECTED BY THE CITY FIRE DEPARTMENT. PIPE IDENTIFICATION SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL CITY INFRASTRUCTURE TO BE CONSTRUCTED. WATER SYSTEM SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND SHALL MEET CITY SPECIFICATIONS 3" METALLIC LOCATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER 4. ALL MATHS SHALL HAVE A MINIMUM COVER OF THREE (3) EFFT. MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET. POLYVINYL CHLORIDE PLASTIC PIPE (PVC) 4" THROUGH 12" SHALL BE MANUFACTURED IN ACCORDANCE 5. ALL CONNECTIONS TO EXISTING SEWER FORCEMAINS SHALL BE ACCOMPLISHED WITH A WET TAP AND RESTRAINTS NNECTIONS (SPLICES) SHALL BE DONE WITH WIRE NUT AND GREASE FILLED PROTECTIVE CAP WITH ANSI/AWWA C900 (LATEST EDITION) AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI 6. PROVIDE JOINT RESTRAINT AS SHOWN ON THE WATER DETAIL SHEET. AND A DR (DIMENSION RATIO) OF 18. ALL PVC PIPE SHALL BEAR THE NSF LOGO FOR POTABLE WATER. ALL PIPE AND PIPE FITTINGS SHALL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUB- PARAGRAPH IOINTS SHALL BE OF THE PUSH-ON TYPE AND COUPLINGS CONFORMING TO ASTM D3139, DR18 PIP 7. AIR RELEASE AND VACUUM VALVE PRODUCTS SHALL ADHERE TO CITY OF CLERMONT APPROVED PRODUCT LIST 62-555.320(21)(b)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE SHALL DUCTILE IRON PIPE (DIP) SHALL BE STANDARD PRESSURE CLASS 350 IN SIZES 4" THROUGH 12" AND BE SOLID-WALL BLUE PIPE, SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN OR SHALL BE WHITE OR CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE A STANDARD BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL: AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE 1. SERMBE COLLECTION SYSTEM A. ALL GRANITY SEME MAINS REQUIRE LOW PRESSURE AIR TESTING IN ACCORDANCE WITH THE LATEST UNI-BELL STANDARD FOR LOW PRESSURE AIR TESTS. AIR TESTS, AS A MINIMUM, SHALL CONFORM TO THE TEST PROCEEDURES DESRIBED IN ASTM SPECIFICATIONS, ASTM FAIT FOR PLASTIC PIPE. THICKNESS OF CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 PIPE. THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE. AND THAT WILL (LATEST EDITION). REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT B. ALL SEWER MAINS AND LATERALS SHALL BE VIDEO INSPECTED BY A CITY APPROVED VENDOR. ALL PRESSURE PIPE UNDER ROADWAY SHALL BE DIP EXTENDING 5' FROM EDGE OF PAVEMENT C ALL MANHOLES SHALL BE INSPECTED FOR INFLITRATION ALIGNMENT. FLOW CHANNEL CONSTRUCTION AND COAL TAR EPOXY PAINT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE 3" METALLIC LOCATOR TAPE WITH LOCATOR WIRE SHALL BE INSTALLED ON ALL WATER MAINS PER DETAIL WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER. TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS D. HYDRO-STATIC TESTS CONSISTING OF A HYDROSTATIC PRESSURE TEST AND HYDROSTATIC LEAKAGE TEST SHALL BE CONDUCTED ON ALL MEN' INSTALLED SERBER FORCE MAIN SYSTEM PRESSURE PIPES AND APPLICABLE. THE PRESSURE SHALL BE 15D PSI FOR TIMO (2) HOUSE. APPLICABLE. THE PRESSURE SHALL BE 15D PSI FOR TIMO (2) HOUSE. PIPE SIZES GREATER THAN 12" BE SEPARATELY SPECIFIED ON THE PLANS; WITH THICKNESS CLASSES TO SHALL BE PAINTED BLUE OR SHALL BE COLOR CODED OR MARKED LINE UNDERGROUND PIPE.) RHINO TRIVIEW FLEXMARKING POST SHALL BE PLACED ON ALL TRANSMISSION MAINS AT 500 FEET BE SHOWN BASED ON WORKING PRESSURES, PIPE DEPTH AND TRENCH CONDITIONS. FITTINGS FOR DUCTILE E. DEFLECTION TESTS ARE REQUIRED FOR ALL FLEXIBLE PIPE. TESTS SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. IRON PIPE AND PVC C-900 PIPE SHALL BE DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/A21.10 (LATEST EDITION) AND SHALL BE CEMENT LINED IN CONFORMANCE WITH ANSI/AWW DISINFECTION AND TESTING C104/A21.4 (LATEST EDITION). TEMPORARY JUMPER CONNECTION NOTES PVC WATER MAINS SHALL BE INSTALLED; PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C605 AND REQUIREMENTS OF ANSI/ASTM D1248. THE MINIMUM NOMINAL THICKNESS SHALL BE 0.008 IN. (8 MILS). DUCTILE IRON WATER MAINS IN ACCORDANCE WITH AWWA C600, [62-555.320(21)(B) 1 AND 62-555.330 INSTALLATION OF POLY WRAP SHALL BE IN ACCORDANCE WITH AWWA C105. TRANSMISSION MAIN SHALL BE F.A.C]. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED AND MUST CONFORM TO THE DIP RATED FOR 250 PSI. VAI VFS THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, ADEQUATE RESTRAINTS SHALL BE PROVIDED TEMPORARILY. AS REQUIRED. WATER METERS. PRESSURE GAUGES AND OTHER FOULTPMENT. MATERIAL AND FACILITIES REQUIRED FOR ALL GATE VALVES SHALL BE RESILIENT SEAT AND SHALL CONFORM TO ANSI/AWWA C509.87 WITH HANDWHEEL PIPE AND FITTINGS USED FOR CONNECTING THE NEW PIPE TO THE EXISTING PIPE SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH AWAY GOST, 1982 EDITION. THE TAPPING SLEEVE AND THE EXTERIOR OF THE MAIN TO BE TAPPED SHALL BE DISINFECTED BY SPARYING OF MARBBURG PER SECTION 11 OF AWAY GOST 192. HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT THE ENGINEER, OWNER/OPERATOR AND OR WRENCH NUT, EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED (OPERATION NUT TO BE CITY IN WRITTEN FORM, FORTY EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING, THE CONTRACTOR WITHIN 3 FEET OF FINISH GRADE). MANUFACTURER'S CERTIFICATION OF THE VALVES COMPLIANCE WITH FLUSHING OF ALL WATER MAINS SAHLL BE DONE THROUGH THE TIE-IN VALVE UNDER CONTROLLED CONDITIONS BY THE CITY ONLY. FULL BORE FLUSH IS REQUIRED. THE FOLLOWING PROCEEDURES SHALL BE FOLLOWED: APPROVED PRODUCT LIST. THE WATER SYSTEM SHALL BE SOAK TESTED 24 HOURS @150 PSI AND TESTED FOR LEAKAGE AT 150 PSI A. THE TIE-IN VALVES SHALL BE OPERATED ONLY BY THE CITY AND PRESSURE TESTED IN THE PRESENCE OF THE CITY AND ENGINEER TO VERIFY WATER TIGHTNESS PRIOR TO TIE-IN. VALVES WITCH ARE NOT WATERTIGHT SHALL BE REPLACED OR A NEW VALVE INSTALLED UNBEDIATELY ADALENT OF THE LEARNE VALVE. FOR TWO (2) HOURS, WITH ALLOWABLE LEAKAGE IN ACCORDANCE WITH ABOVE STANDARDS POTABLE WATER AND REUSE VALVES CONTRACTOR SHALL OBTAIN A COPY OF THE FDEP WATER SYSTEM PERMIT AND PULL BACTERIOLOGICAL TEST B. THE TEMPORARY JUMPER CONNECTION SHALL BE CONSTRUCTED AS DETAILED. THE JUMPER CONNECTION SHALL BE USED TO FILL THE NEW MATER MAIN, FOR PROVIDING WATER FOR BACTERIOLOGICAL SAMPLING OF THE NEW MAIN AS REQUIRED BY THE FDEP PERMIT AND FOR MAINTAINING HORDINGEN RESIDENUS. IN THE MAINS, IN THE MAINS, IN THE MAINS, IN THE MAINS, IN THE MAIN STATEMENT OF THE FLITTING WATER MAIN. 2. ALL DOWNSTREAM VALVES IN THE MAIN STATEMENT OF THE THE THE THE THE TIES. 3. PROVIDE FOR AND MONITOR THE PRESSURE AT THE TIE-IN POINT. THE PRESSURE IN THE EXISTING MAIN MUST NOT DROP BEFORM 38 PER TOWNSTREAM. ANY VALVE USED IN A POTABLE WATER OR REUSE WATER APPLICATION THAT IS 4° OR LARGER MUST BE A RESILIANT SEAT AND CONFORM TO ALL AWAM SPECIFICATIONS. CONNECTIONS TO EXISTING WATER MAINS BELOW 35 FSI. 4. TIE-IN VALVE SHALL BE OPENED BY THE CITY A FEW TURNS ONLY, ENSURING A PRESSURE DROP ACROSS THE VALVE IS ALMAYS AIR RELEASE VALVES PRIOR TO THE CONNECTION TO ANY EXISTING MAIN, THE PROPOSED WATER MAIN SHALL BE DISINFECTED. HAVE ENGINEER APPROVED PRESSURE TESTING AND HAVE FDEP CLEARANCE. REFER TO FDEP PERMIT FOR AIR RELEASE VALVES SHALL BE PLACED AT HIGH POINTS OF THE TRANSMISSION MAIN TO PERMIT ESCAPE OF TRAPPED AIR. THE VALVE SIZE, LOCATION AND METHOD OF INSTALLATION SHALL BE INDICATED ON THE C. THE TIE-IN VALVE SHALL BE LOCKED CLOSED BY THE CITY UNTIL THE FLUSHING BEGINS. DRAWINGS OR AS DIRECTED BY THE ENGINEER. SEE CITY OF CLERMONT APPROVED PRODUCTS LIST. ASBUILT DRAWINGS D. THE TIE-IN VALVE SHALL BE OPENED ONLY BY THE CITY FOR FLUSHING OF THE NEW MAIN. THE PROCEEDURE SHALL BE DONE BY THE THE CONTRACTOR SHALL PROVIDE VERTICAL AND HORIZONTAL "ASBUILT" INFORMATION RELATIVE TO ALL CONSTRUCTED UTILITIES AND STRUCTURES. THREE SETS SHALL BE PROVIDED FOR REVIEW. ONCE APPROVED VALVE BOXES E. AFTER FLUSHING, THE TIE-IN VALVE SHALL BE CLOSED AND LOCKED IN THE CLOSE POSITION BY THE CITY. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION DEFINED NUTHIN ONE YEAR AT THE TIME OF INSTALLATION, AND IS IN GOOD MORKING ORDER AT THE TIME OF INSTALLATION, AND IS IN GOOD MORKING ORDER AT THE TIME OF INSTALLATION. THE TEST SHALL BE PERFORMED BY A CERTIFICATE BACK FLOW PREVENTION TECHNICIAN AS APPROVED BY THE CITY OF CLERMONT CROSS-CONNECTION CONTROL PROGRAM. A CERTIFICATE IS VALVE BOXES ON BURIED POTABLE WATER MAINS SHALL BE ADJUSTABLE. CAST TRON CONSTRUCTION. WITH BY THE UTILITY, ONE REPRODUCIBLE SET SHALL BE PROVIDED MINIMUM INTERIOR DIAMETER OF 5" WITH COVERS CAST WITH THE INSCRIPTION IN LEGIBLE LETTERING ON TOP: WATER, BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE. AND AS-BUILT INFORMATION FOR THE WATER SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SHALL BE MANUFACTURED BY MUELLER COMPANY, MODEL 10364, OR APPROVED EQUAL. VALVE BOX PADS EXCEPT AS REQUIRED TO FLUSH LINES TIE-IN VALVE SHALL REMAIN CLOSED AND SHALL BE LOCKED IN THE CLOSE POSITION BY THE CITY EXCEPT AS REQUIRED IN TURNS LIBES TIE. IN VALVE STRELL REBAIN CLOSED AND SMALL BE LOCKED. IN THE CLOSE PUSHTION BY THE LITE TIE. IN VALVE SHALL REBAIN COOKER GLOSED UNITT. THE RISK STREET HAS BEEN CLARABLE OFF OR IS FOR FOR AND ALL OTHER ABONCES, THE CONTRACTOR SHALL REBOVE THE TEMPORARY JUMPER CONNECTION. THE COPPORATION STREETS AND E TO BE CONSCIOUND.

SHALL BE 24"x24"x4" THICK CONCRETE WITH #4 REINFORCING BARS. PAD TO BE SET AT FINISHED GRADE WITH BECESSED DETECTOR WIRE COMMITT PORT PER DETAIL. BELISE MAINS TO HAVE SOLIARE TOP VALVE

WATER SERVICES

UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS, CONTRACTOR SHALL CONSTRUCT WATER SERVICE THROUGH THE CURB STOP AND SET METER NOXES TO FINISHED GRADE AS SHOWN ON THE WATER SYSTEM DETAIL SHEET. POLYETHYLENE (PE) PRESSURE PIPE FOR WATER SERVICES 1/2" THROUGH 3" SHALL CONFORM TO AWWA C901.88. MIN. 200 PSI, CTS 5100 (DR-9) ASTM D-2737, 200 PSI. THE SERVICE SHALL BE COMPLETE THROUGH THE CURB STOP AS SHOWN ON THE DETAIL SHEET AND SHALL BE OF THE TYPE REQUIRED FOR COMPATIBILITY WITH THE SERVICE LINES SPECIFIED, UTILITY COMPANY SHALL PROVIDE AND INSTALL IRRIGATION METERS. WHERE SANITARY SEWER NOTES RECLAIM SERVICE IS NOT PROVIDED, CONTRACTOR SHALL CONSTRUCT IRRIGATION SERVICE THROUGH THE CURB STOP AND SET NEW BOXES TO FINISHED GRADE AS SHOWN ON THE WATER SYSTEM DETAIL SHEET.

WATER SERVICES 2.5" AND LARGER

VIDING AND INSTALLING A NEPTUNE R450 METER WITH E-CODER REGISTER, 12795-220S1227 NEPTUNE R450 WALL MIU (CLERMONT SPECIAL) AND 12596-002 PTUNE WALL MIU ADAPTOR F/PIT STYLE REGISTER. THE ASSEMBLY SHALL BE ABOVE GROUND STYLE WITH BYPASS SET UP FOR METER TESTING, A STRAINER SHALL BE INSTALLED PRIOR TO THE METER AND AND SHALL BE FROM THE SAME MANUFACTURER AS THE WATER METER. INCLUDE SPOOL PIECES 5X THE DIAMETER UPSTREAM AND 10X THE DIAMETER DOWNSTREAM MINIMUM LENGTH. ISOLATION VALVES SHALL BE INSTALLED PRIOR TO THE METER AND ANOTHER ONE PAST THE METER TEST PORT AND BEFORE TH E DOWNSTREAM BYPASS CONNECTION. BYPASS PIPING SHALL HAVE A LOCKABLE ISOLATION VALVE UNLESS IT IS UNDERGROUND.

MATERIALS AS REQUIRED BY THE CITY OF CLERMONT

THE CONTRACTOR SHALL CUT A "W" IN THE CURR TOP AT EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT. SEE WATER SYSTEM DETAILS FOR OTHER SERVICE LOCATION AND MARKING REQUIREMENTS.

PTPF TNSTALLATION

PIPE INSTALLATION OF PVC WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST FRITTON)

COMPACTED BACKETLL SHALL BE TO 98% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12" MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12" MAXIMUM LIFT THICKNESS. SEE PIPE

NINIMUM COVER OVER ALL PIPE SHALL BE 36" FROM TOP OF PIPE TO FINISHED GRADE. SEE PLAN AND PROFILE SHEETS FOR REQUIRED DEPTH.

- 1. LOCATION OF ALL VALVES, FITTINGS, HYDRANTS AND SERVICES HORIZONTAL AND VERTICA
- 2. LOCATION OF THE WATER MAIN TIED WITH COORDINATES FOR THE SUBDIVISION
- 4. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION WHICH DEVIATES FROM THE APPROVED

5. UTILITY LOCATES ON SYSTEMS INSTALLED UNDER THIS CONTRACT SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER UNTIL ASBUILT DRAWINGS ARE REVIEWED AND APPROVED BY THE UTILITY

1. ALL PRESSURE PIPE UNDER ROADWAY SHALL BE DIP EXTENDING 5' FROM EDGE OF PAVEMENT

MAINS AND MANHOLES

1. ALL GRAVITY SANITARY SEWER MAINS, LATERALS, AND APPURTENANCES SHALL BE CONSTRUCTED OF

- 2. WHERE REQUIRED. MAINS SHALL BE CLASS 150 DUCTILE IRON PIPE (DIP) MEETING AWWA C150 AND C151 MAINS SHALL BE 60 MIL EPOXY COATED WITH POLYETHYLENE WRAP CONFORMING TO AWWA C105
- 3. ALL PVC PIPE SHALL BEAR THE NSF-DW SEAL.
- D3212 AND ASTM F477. APPLICABLE UNI-BELL PLASTIC PIPE ASSOCIATION STANDARD IS UNI-B-7.
- 5. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE WITH A MINIMUM WALL THICKNESS OF FIVE (5) INCHES FOR INSIDE DIAMETER OF FOUR (4) FEET.
- MANHOLES SHALL MEET ASTM C-478. RING AND COVER SHALL BE TRAFFIC BEARING H-20 CLASS 30 MEETING ASTM A-48
- INTERIOR AND EXTERIOR WALLS OF ALL MANHOLES SHALL HAVE A MINIMUM OF TWO (2) 8 MIL COATS OF AN APPROVED PROTECTIVE COAL TAR EPOXY
- 8. ALL MAINS NOT LOCATED UNDER PAVEMENT SHALL BE MARKED BY A 3" METALLIC LOCATOR TAPE AND PACER WIRE 18" ABOVE THE CENTERLINE OF PIPE. DROP MANHOLE IF INVERT DIFFERENCE IS GREATER THAN OR FOLIAL TO TWO (2) FEET. 3" METALLIC LOCATOR TAPE SHALL BE BURLED IN THE WATER MAIN TRENCH 8" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET.
- WITH FORCE MAIN TIE IN MUST BE LINED. SEE CITY OF CLERMONT APPROVED PRODUCT LIST.

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INFRASTRUCTURE SOLUTIONS, INC. 2000 E Edgewood Drive, Suite 215 Lakeland, FL 33803 Phone: 1.863.667.2345 Fax: 1.863.667.2662

DAVID W. BUTCHER, P.E. PROFESSIONAL ENGINEER LICENSE NO. 55431 THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY DAVID W. BUTCHER, P.E. ON JANUARY 22, 2019 LISING A DIGITAL SIGNATURE PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND TH SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

PROJECT: **JOHNS LAKE ROAD WATER** MAIN REPLACEMENT CLERMONT, FL



CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

> WOOD PROJECT No: 600365.13

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1/21/2019

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER: REV. # C201 ----SHEET 2 OF 25 SHEETS

2 4 P:\PROJECTS-C3D\600365.13 City of Clermont - Johns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont - JLR Water Main Replacement.dwg - C201 GENERAL NOTES 01/21/2019 3: 43pm alan.pixles

FIRE HYDRANTS

ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACK FLOW PREVENTION DEVICE, FITTINGS, VALVES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

WATER METERS SHALL BE PAID FOR AT THE CITY HALL AND SHALL BE DELIVERED TO THE JOB SITE BY THE UTILITIES DEPARTMENT

FIRE HYDRANTS SHALL CONFORM TO THE LATEST EDITION OF AWAY C502.85 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER

FIRE MORANTS SHALL CONFORM TO THE LATEST EDITION OF ANNA CSC2.85 AND SHALL BE FUNNISHED COMPLETE WITH MEMORY AND OTHER PROPRIEST AND THE PROPRIEST OF THE PROPR

1. BLUE PAVEMENT REFLECTORS SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE CLOSEST TO AND DIRECTLY IN

2. A POST-CONSTRUCTION FIRE FLOW TEST SHALL BE CONDUCTED. HYDRANTS SHALL DELIVER THE REQUIRED GRUP PER THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS WITH A RESIDUAL PRESSURE OF 20 PSI. CONTRACTOR SHALL NOTIFY CITY OF CLERMONT BENDERING DEPORTMENT WHEN HYDRANTS ARE READY TO BE FLOW TESTED. FOR THE HYDRANTS LOCATED WITHIN THE CITY OF CLERMONT, CONNECTED TO THE CITY OF CLERMONT FOR PROTECTION AREA, THIS TEST SHALL BE CONDUCTED WITHOUT SHATER SYSTEM, AND/OR LOCATED WITHIN CLERMONT FIRE PROTECTION AREA, THIS TEST SHALL BE CONDUCTED WITHOUT CLERMONT PROSINGLE. THIS THIS SHALL BE CONDUCTED WITHOUT CLERMONT PROSINGLE. THIS THIS SHALL BE WITHERSED BY THE OWNER/OPERATOR IF REQUESTED AT TIME OF ROTHICANTON THE HYDRANTS ARE READY FOR FLOW TEST.

3. IF A PERMIT FOR THE WATER SYSTEM IS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), THE SYSTEM SHALL BE ACCEPTED AND APPROVED BY DEP PRIOR TO BEING PRESSURIZED OFF OF THE CITY SYSTEM AND PRIOR TO

4. FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES SHALL BE KEPT ACCESSIBLE TO THE FIRE DEPARTMENT AT ALL TIMES 4. FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES SHALL BE KEPT ACCESSIBLE TO THE FIRE DEPARTMENT AT ALL TIMES THE FOLLOWING CLERANCES SHALL BE MAINTAINED FOR ALL FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES CLERANCE OF SEVEN AND ONE-HALF FEET (7'-0') IN FRONT OF AND TO THE SIDES OF A FIRE HYDRANT, SIT A FOUR FOOT (4') CLERANMED TO THE REAR OF THE HYDRANT. CLERANCES OF SEVEN AND ONE-HALF FEET (7'-0') IN FRONT OF AND TO THE SIDES OF THE APPLIANCES. NO PERSON SHALL PLACE OR KEEP ANY POST, FENCE, VEHICLE, GROWTH, VEGETATION, TRANS TORNED FOR THE HYDRANT OF THE PROTECTION APPLIANCE SHALL BE STORAGE OF THE PROTECTION APPLIANCE AND THOUGHT OF THE HYDRANT OF FIRE PROTECTION APPLIANCE SHALL BE KEPT READILY VISIBLE AT ALL TIMES.

5. FIRE HYDRAMIS SHALL NOT BE LOCATED CLOSER THAN THREE (3) FEET TO OR MORE THAN THENTY (20) FEET FROM THE EDGE OF A STREET, BRIVE OR OTHER ACCESSIVAY. UNLESS OTHERWISE REQUESTED BY THE FIRE OFFICIAL, THE 4-112" COMMECTION SHALL FACE THE NEAREST ROADWAY, OR IS LOCATED WITHIN A COMPILEY PRANKING AREA, SHALL FOR THE NEAREST TRAFFIC WAY. NO HYDRAMI SHALL BE INSTALLED WHERE PEDESTRIAN OR VEHICULAR TRAFFIC WOULD INTERFERE WITH THE USE OF THE HYDRAMIT. THE STANDARD FIRE HYDRAMI APPROVED FOR USE IN THE CITY IS MUELLER MODEL A-12 THE CITY'S STANDARD FIRE HYDRAMI DETAIL AND NOTES ARE AVAILABLE FROM THE CITY ENGINEEM'S OFFICE AND MUST BE INCLIDED IN THE SITE PLANK. ALL FIRE WYDRAMIS, AND AMINS, INCLIDED THOSE PRIVATELY OWNED, THAT ARE CONNECTED TO THE CITY'S POTABLE WATER SYSTEM, SHALL CONFORM TO CITY STANDARDS.

6. A MINIMUM NUMBER OF FIRE HYDRAWTS SHALL BE PROVIDED AND/OR AVAILABLE TO PROVIDE EQUAL TO OR GREATER THAT THE WEEDED FIRE FLOW FOR ALL BUILDINGS ON THE STIE BASED ON THE FOLLOWING GREDITS: HYDRAWT(S) WITHIN 300 FEET OF THE BUILDING, 1,000 GPM CREDIT; HYDRAWT(S) 301 TO 800 FEET, 670 GPM GREDIT; HYDRAWT(S) 601 TO 1,000

7. FIRE HYDRANTS THAT HAVE NOT BEEN TESTED AND PLACED INTO SERVICE MUST BE CLEARLY MARKED AS 'OUT OF SERVICE' USING INDUSTRY ACCEPTED METHODS (BAGGING, TAGGING, ETC).

BASE BID FOR JOHNS LAKE WATER MAIN REPLACEMENT FDOT SPEC (IF **ESTIMATED** BID ITEM # APPLICABLE) ITEM DESCRIPTION UNIT QUANTITY MOBILIZATION LS 0101-1 MAINTENANCE OF TRAFFIC LS 0102-1 104 SEDIMENT & EROSION CONTROL LS 0110-1-1 CLEARING & GRUBBING AC 1.4 0110-4-10 REMOVAL OF EXISTING CONCRETE SY 11 0160-4 TYPE B STABILIZATION SY 119 0285-704 **OPTIONAL BASE GROUP 04** SY 119 8 0334-1-12 SUPERPAVE ASPHALTIC CONC, TRAFFIC B TN 13 SY 0522-1-137 CONCRETE DRIVEWAYS, 4" 11 10 PERFORMANCE TURF, SOD SY 2987 0570-1-2 11 LF 1291 1050-18-003 UTILITY PIPE, PLUG & OUT OF SERV, 5-7.9" 12 1050-18-004 UTILITY PIPE, PLUG & OUT OF SERV, 8-19.9" LF 2647 UTILITY PIPE & FITTINGS - PVC, F&I, 6" ΙF 13 1050-31-206 12 14 1050-31-212 UTILITY PIPE - PVC, F&I, 12" LF 3841 15 1050-51-206 UTILITY PIPE & FITTINGS - DI, F&I, 6" LF 3 LF 16 1050-51-208 UTILITY PIPE - DI, F&I, 8" 144 LF 170 17 1050-51-212 UTILITY PIPE - DI, F&I, 12" 1055-16 UTIILITY FITTING, REMOVE & DISPOSE EΑ 18 19 1055-31-112 UTILITY FITTINGS, F&I, PVC, ELBOW, 12" EΑ 20 UTILITY FITTINGS, F&I, PVC, TEE, 12" EΑ 9 1055-31-212 21 1055-31-312 UTILITY FITTINGS, F&I, PVC, REDUCER, 12" EΑ UTILITY FITTINGS, F&I, PVC, REDUCER, 16" 22 1055-31-316 EΑ 23 1055-31-508 UTILITY FITTINGS, F&I, PVC, CAP, 8" EΑ 24 1055-31-816 UTILITY FITTINGS, F&I, PVC, CROSS, 16" EΑ 1 25 1055-51-108 EΑ UTILITY FITTINGS, F&I, DI, ELBOW, 8" EΑ 26 1055-51-112 UTILITY FITTINGS, F&I, DI, ELBOW, 12" 27 EΑ 1055-51-212 UTILITY FITTINGS, F&I, DI, TEE, 12" 3 28 1055-51-312 UTILITY FITTINGS, F&I, DI, REDUCER, 12" EΑ 2 29 1055-51-412 UTILITY FITTINGS, F&I, DI, ADAPTER, 12" EΑ 30 1055-51-508 UTILITY FITTINGS, F&I, DI, CAP, 8" EΑ 6 31 1080-21-106 VALVE BOX, F&I, 6" EΑ 32 1080-21-108 VALVE BOX, F&I, 8" EΑ 33 1080-21-112 VALVE BOX, F&I, 12" EΑ 11 34 1080-24-106 EΑ VALVE ASSEMBLY, F&I, 6" EΑ 35 1080-24-108 VALVE ASSEMBLY, F&I, 8" 5 36 1080-24-112 VALVE ASSEMBLY, F&I, 12" EΑ 11 37 1644-113-08 FIRE HYDRANT, F&I, STD, 2 HOSE, 1 PUMP, 6" EΑ 5 38 CITY SPEC F&I 1" WATER SERVICE LF 20 39 CITY SPEC F&I WATER METER AND BOX EΑ

TEST HOLE DATA

Testhole #	Northing	Easting	Utility Elevation (Top)	Size (inches)	Material	Type
TH1	1524226.30	434476.53	159.47	8	PVC	WL
TH2	1524229.41	434117.23	165.81	8	PVC	WL
TH3	1524222.11	434458.30	158.20	2	GREY CONDUIT	BT
TH4	1524227.28	434468.26	159.79	8 (E.W.); 6 (N.S.)	METAL TEE	WL
TH5	1524286.54	434451.74	159.62	0.5	DBC	ВТ
TH6	1524286.52	434452.36	159.35	6	PVC	WL
TH7	1524287.67	434471.85	158.74	0.5	DBC	ВТ
TH8	1524223.37	434117.54	167.64	1	GREY CONDUIT	ВТ
TH9	1524233.21	433895.50	165.08	8	PVC	WL
TH10	1524227.67	433895.58	166.32	1	DBC	ВТ
TH11	1524242.13	432805.96	167.89	8	PVC	WL
TH12	1524236.24	432806.13	168.42	1	DBC	ВТ
TH13	1524246.01	432281.13	173.93	8	PVC	WL
TH14	1524240.90	432280.91	174.89	1	DBC	ВТ
TH15	1524247.16	432159.85	175.46	8	PVC	WL
TH16	1524242.17	432160.01	177.65	1	DBC	ВТ
TH17	1524201.29	431807.06	175.83	6	PVC	WL
TH18	1524199.86	431827.75	176.44	0.5	DBC	ВТ
TH19	1524251.43	431812.47	175.66	6	PVC	WL
TH20	1524248.45	431812.06	176.91	2	GREY CONDUIT	ВТ
TH21	1523769.20	431806.58	178.17	6	PVC	WL
TH22	1523769.93	431826.47	178.19	0.5	DBC	ВТ
TH23	1523346.93	431806.39	176.86	6	PVC	WL
TH24	1523346.74	431825.11	176.82	0.5	DBC	ВТ
TH25	1523146.55	431814.19	171.32	2	METAL	ВТ
TH26	1523042.84	431807.04	170.16	6	PVC	WL
TH27	1523042.89	431805.83	170.66	0.5	DBC	ВТ
TH28	1523044.73	431823.32	170.36	0.5	DBC	ВТ

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DAVID W. BUTCHER, P.E.
STATE OF FLORIDA
PROFESSIONAL ENGINEER
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JOHNS LAKE ROAD WATER MAIN REPLACEMENT

CLERMONT, FL



CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

WOOD PROJECT No: 600365.13

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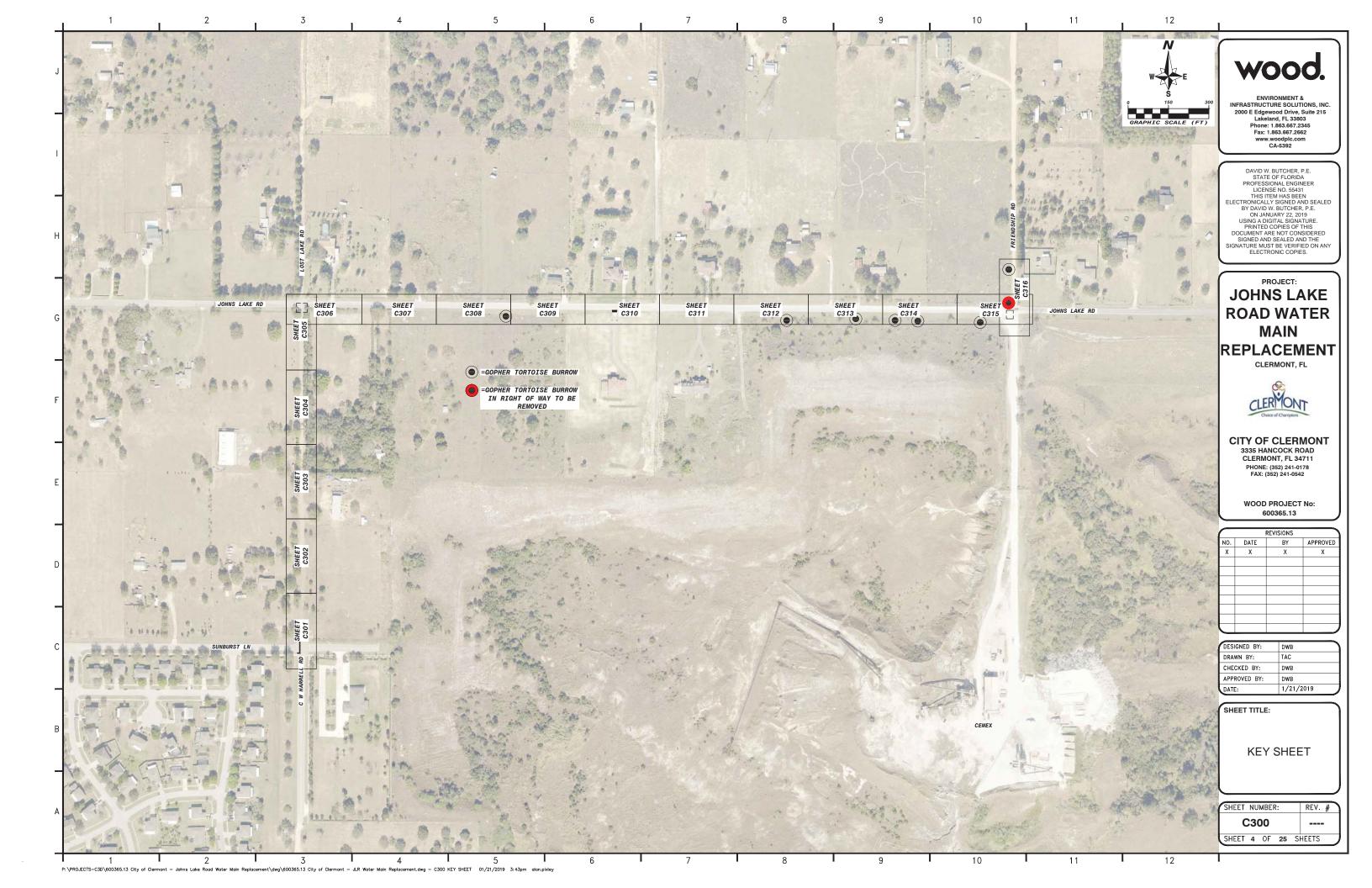
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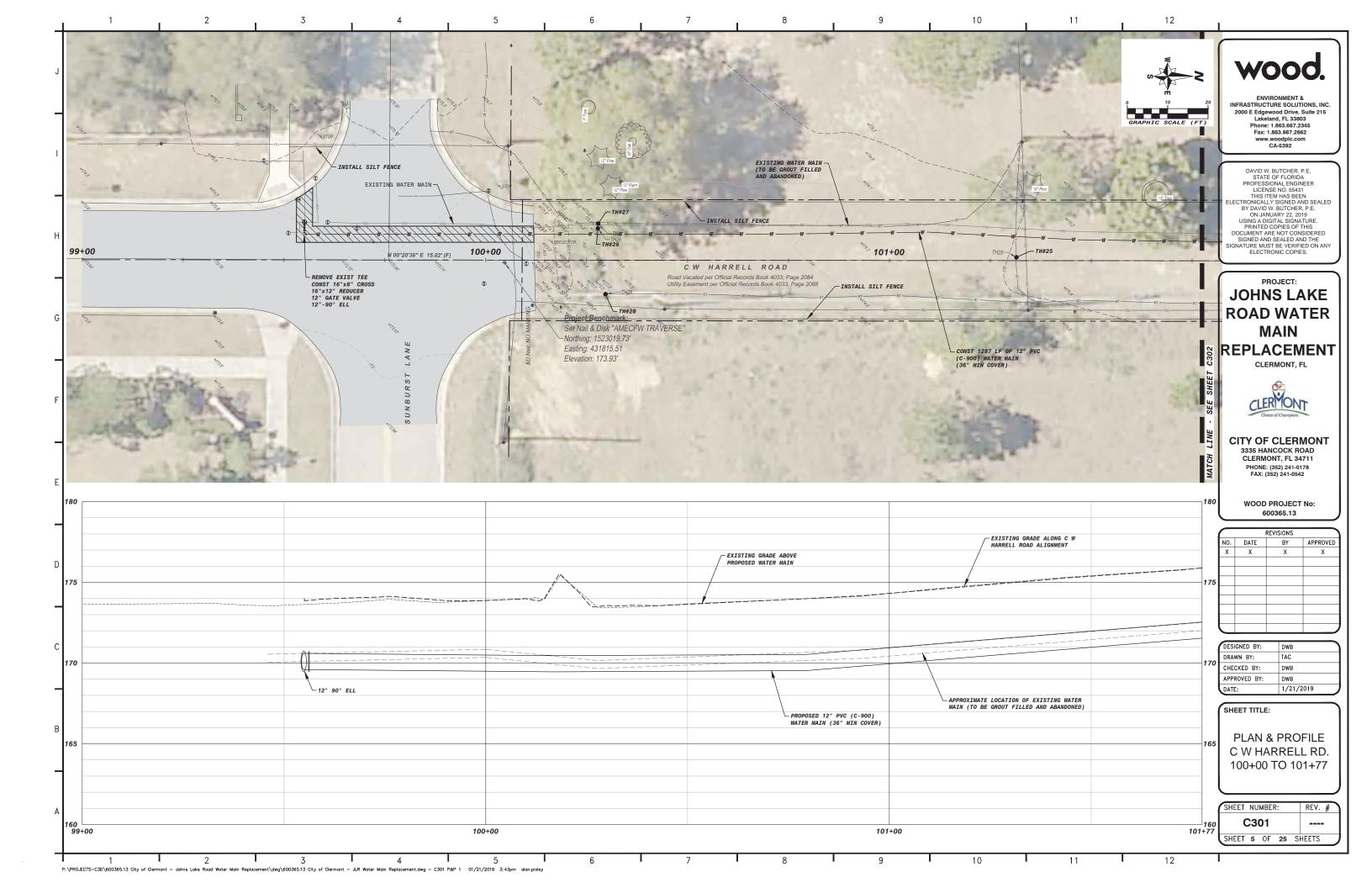
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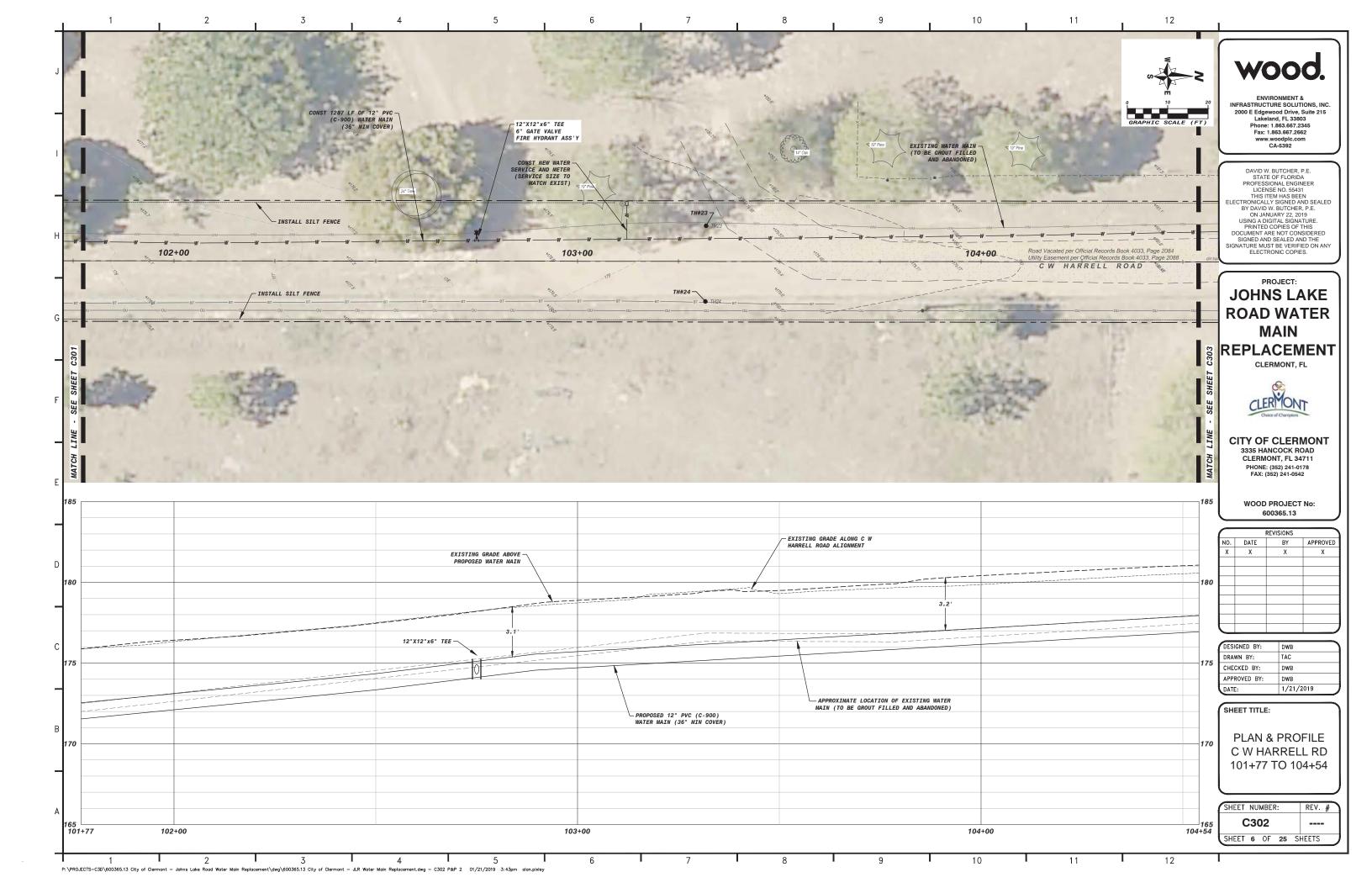
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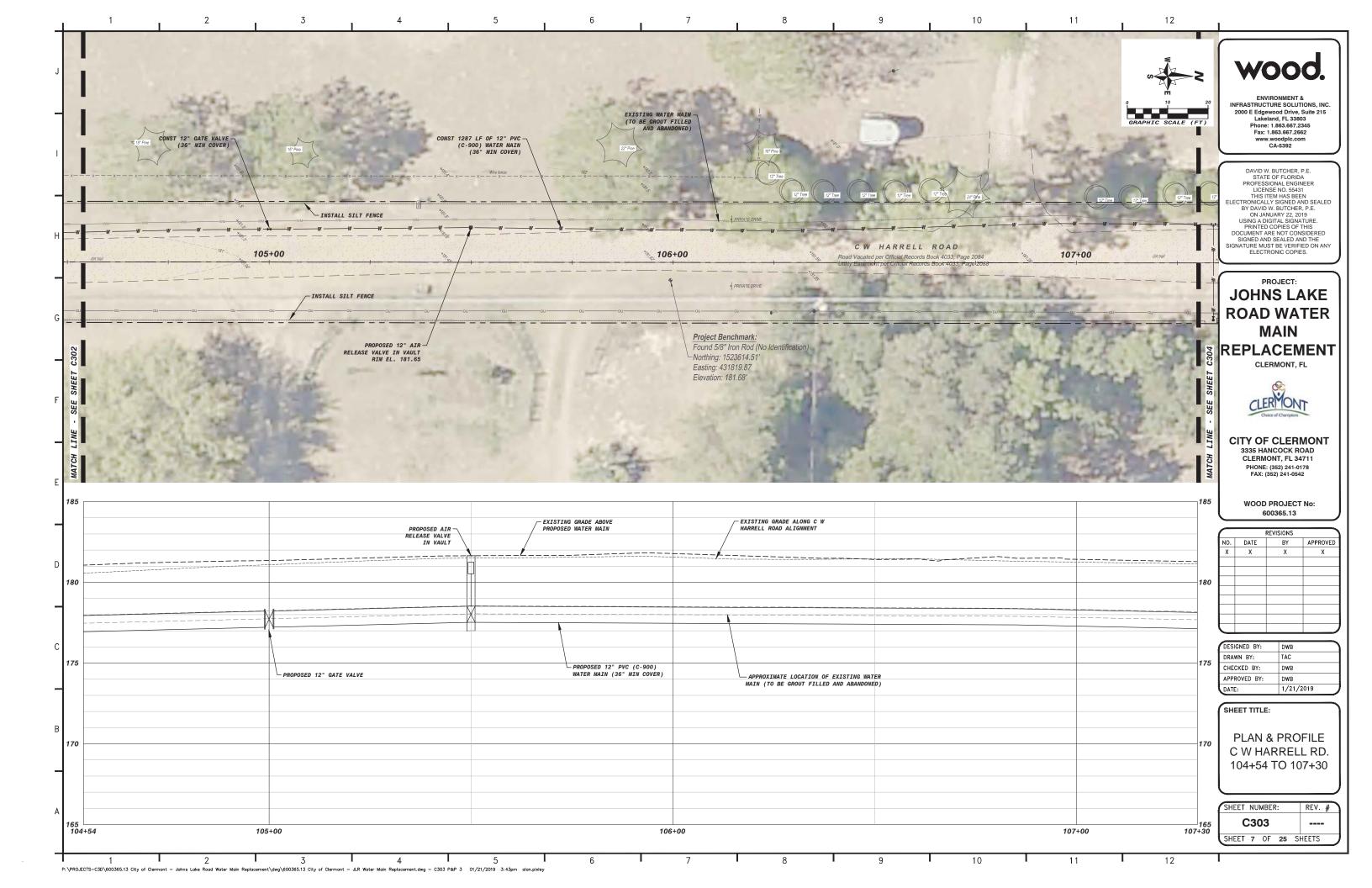
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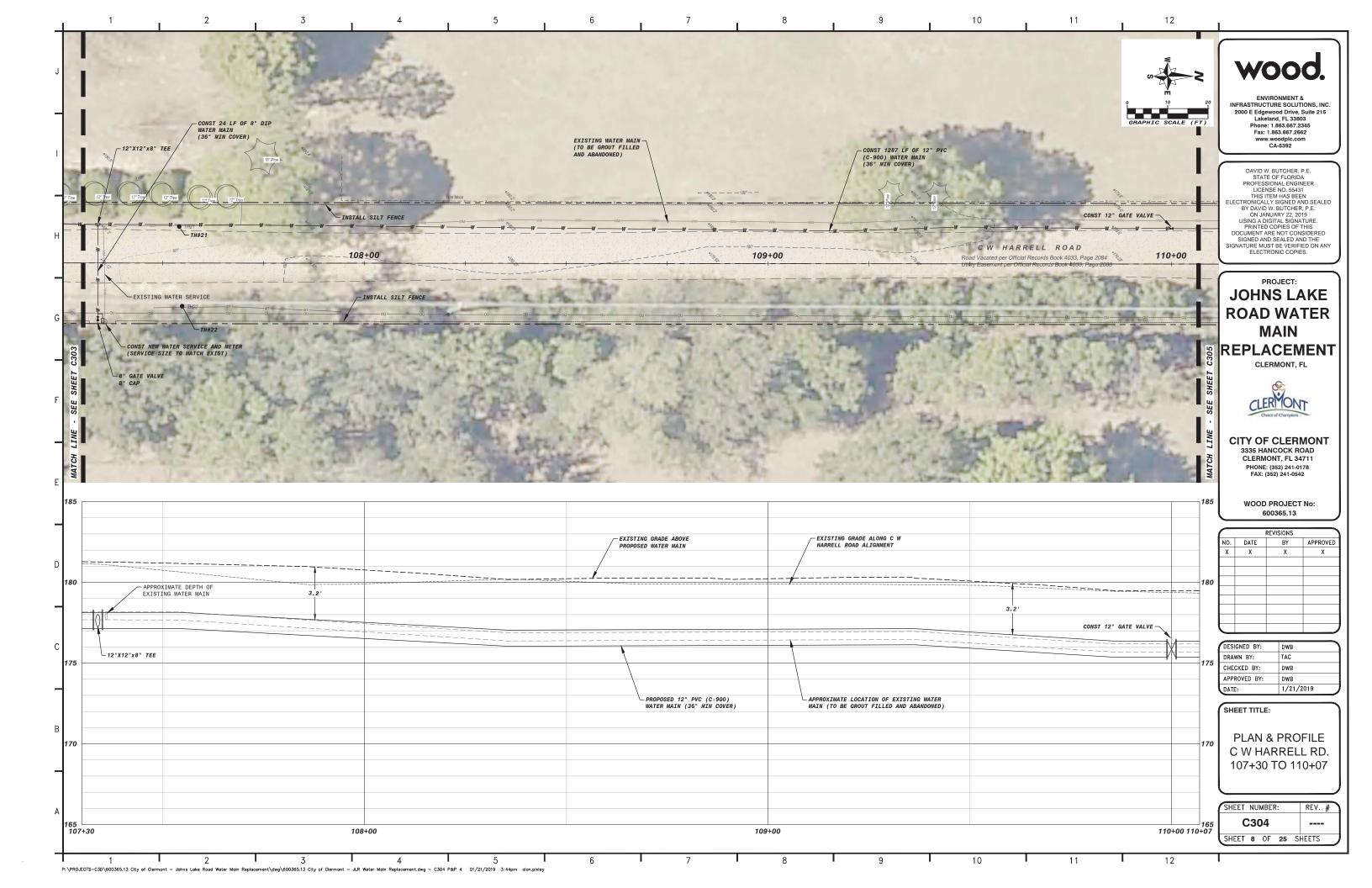
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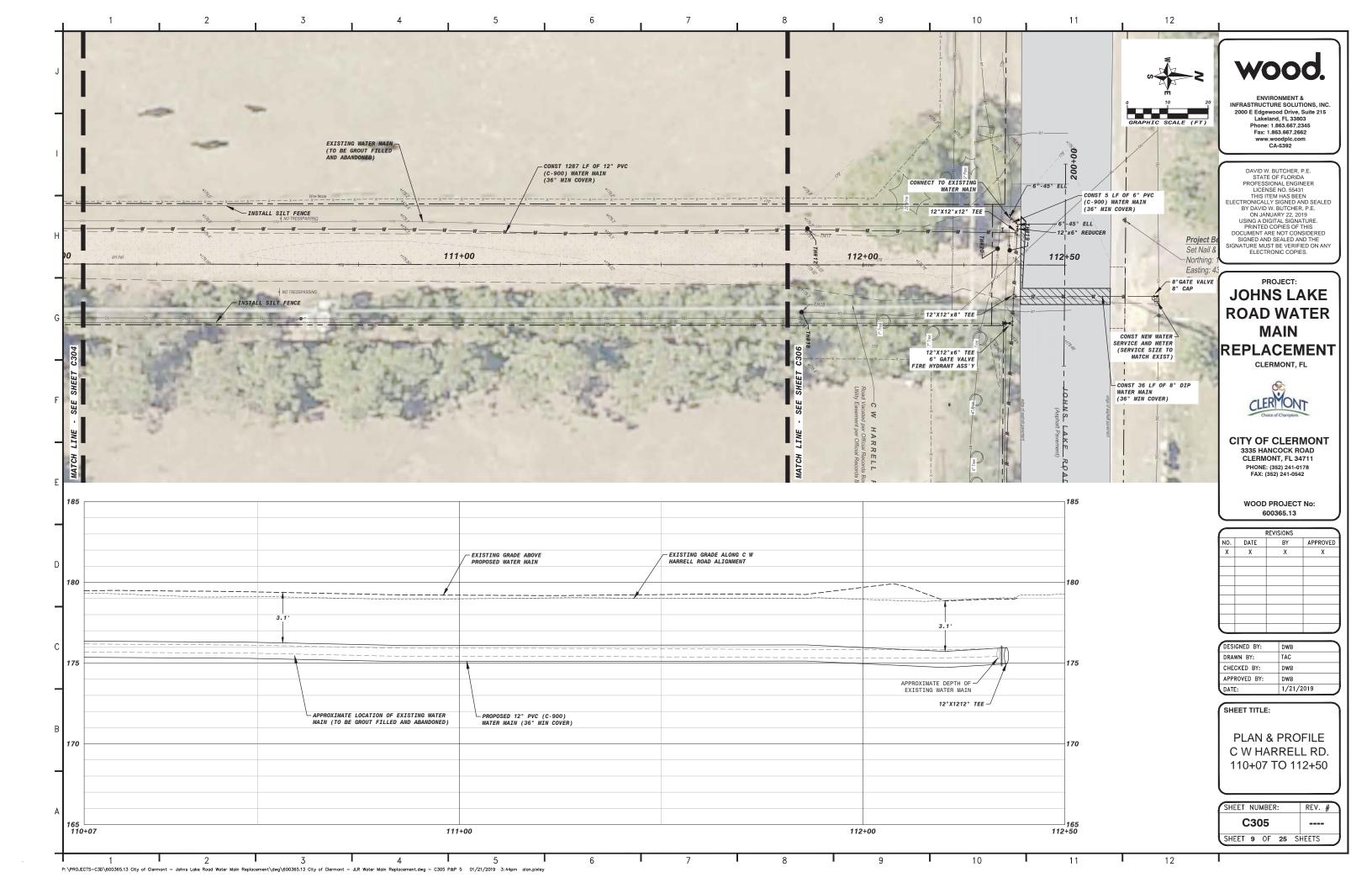


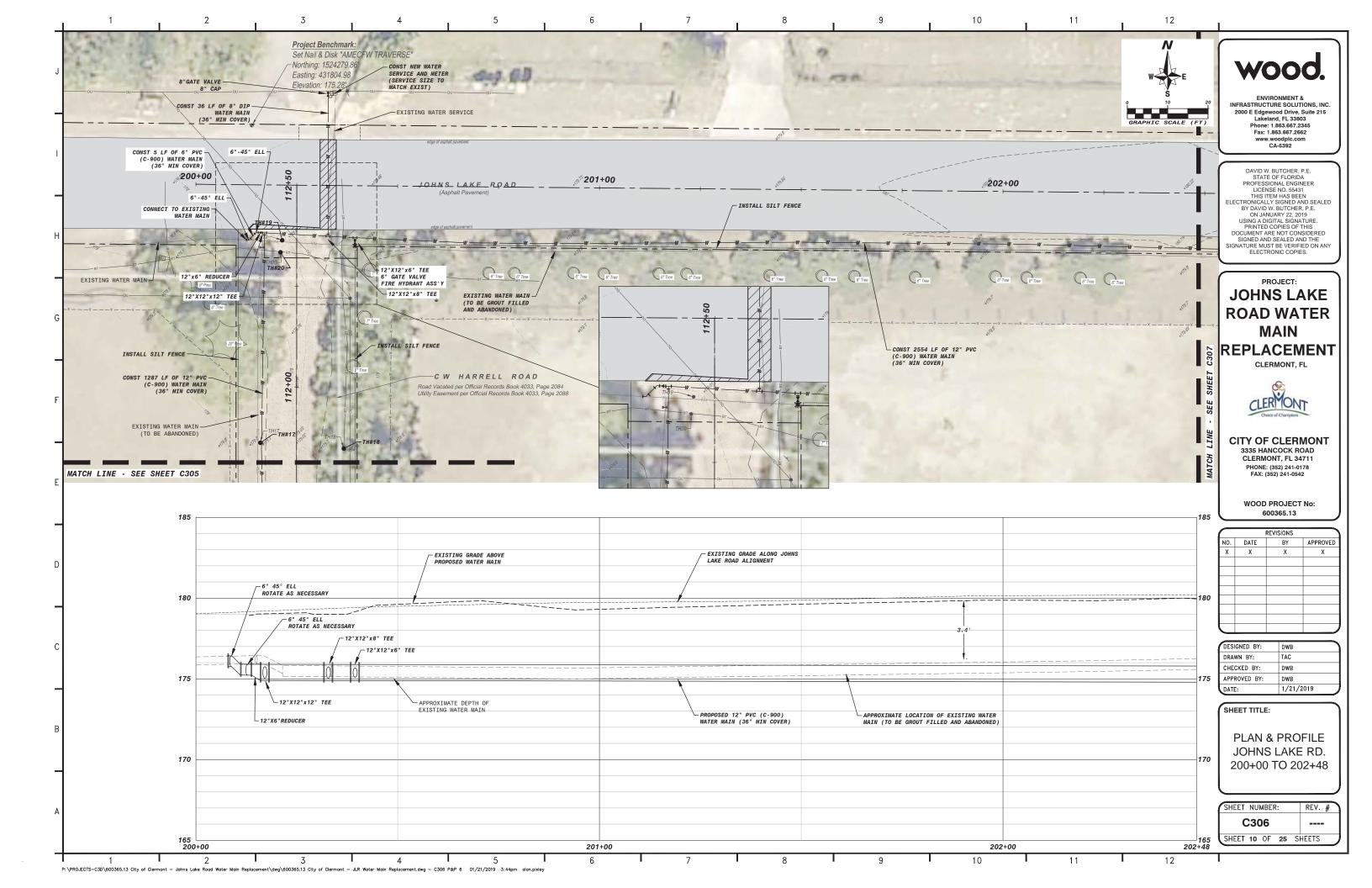


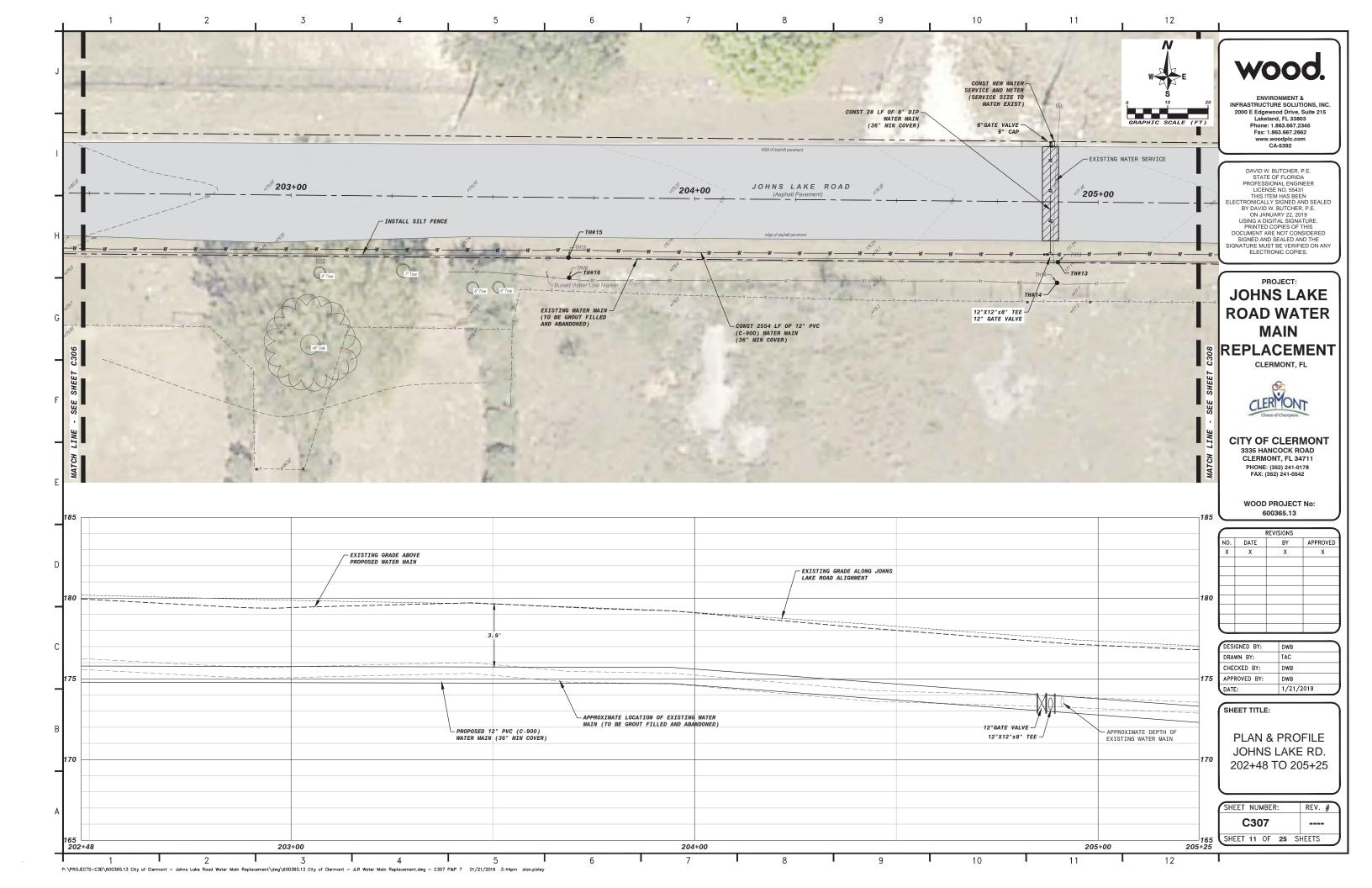


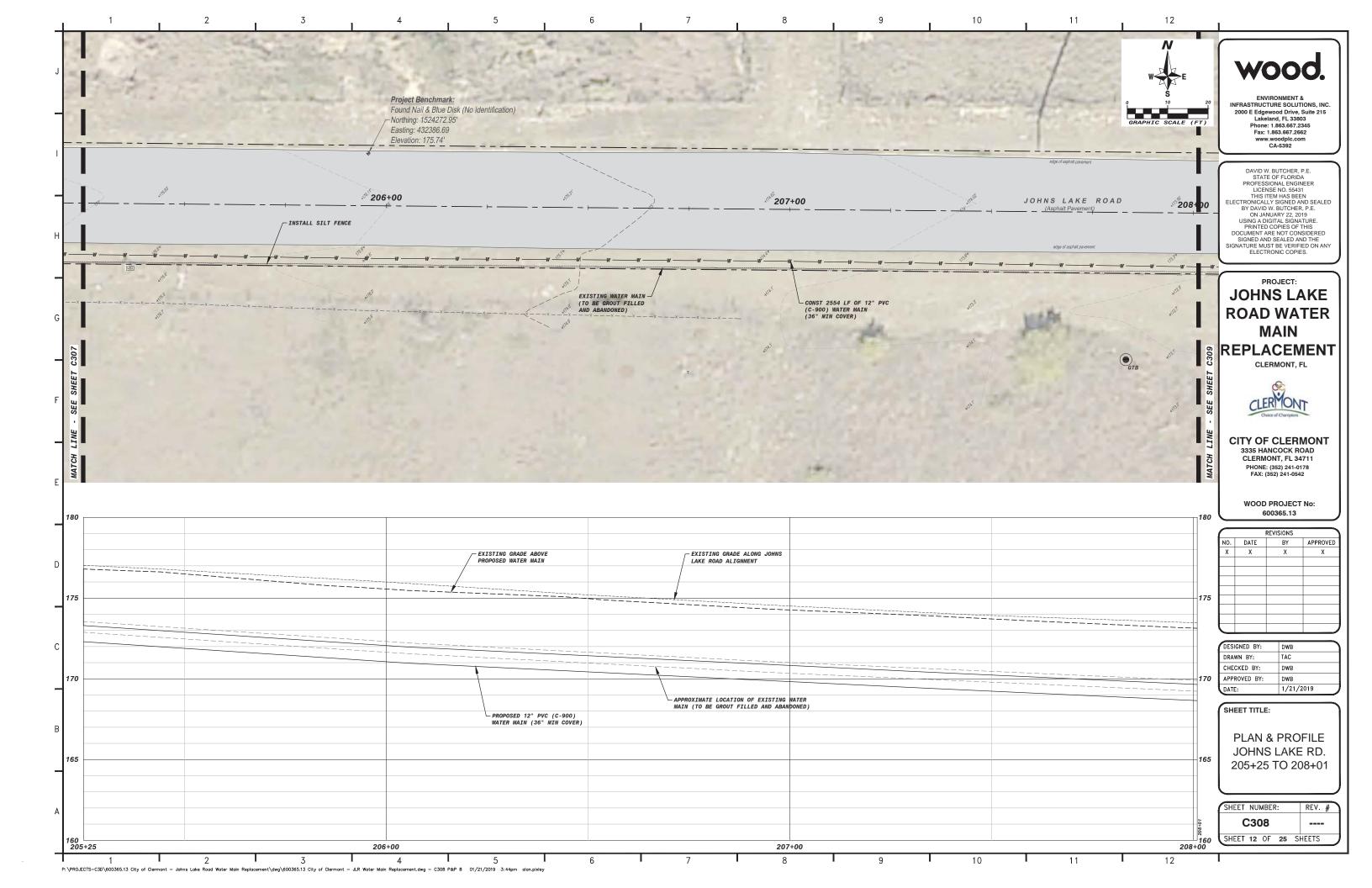


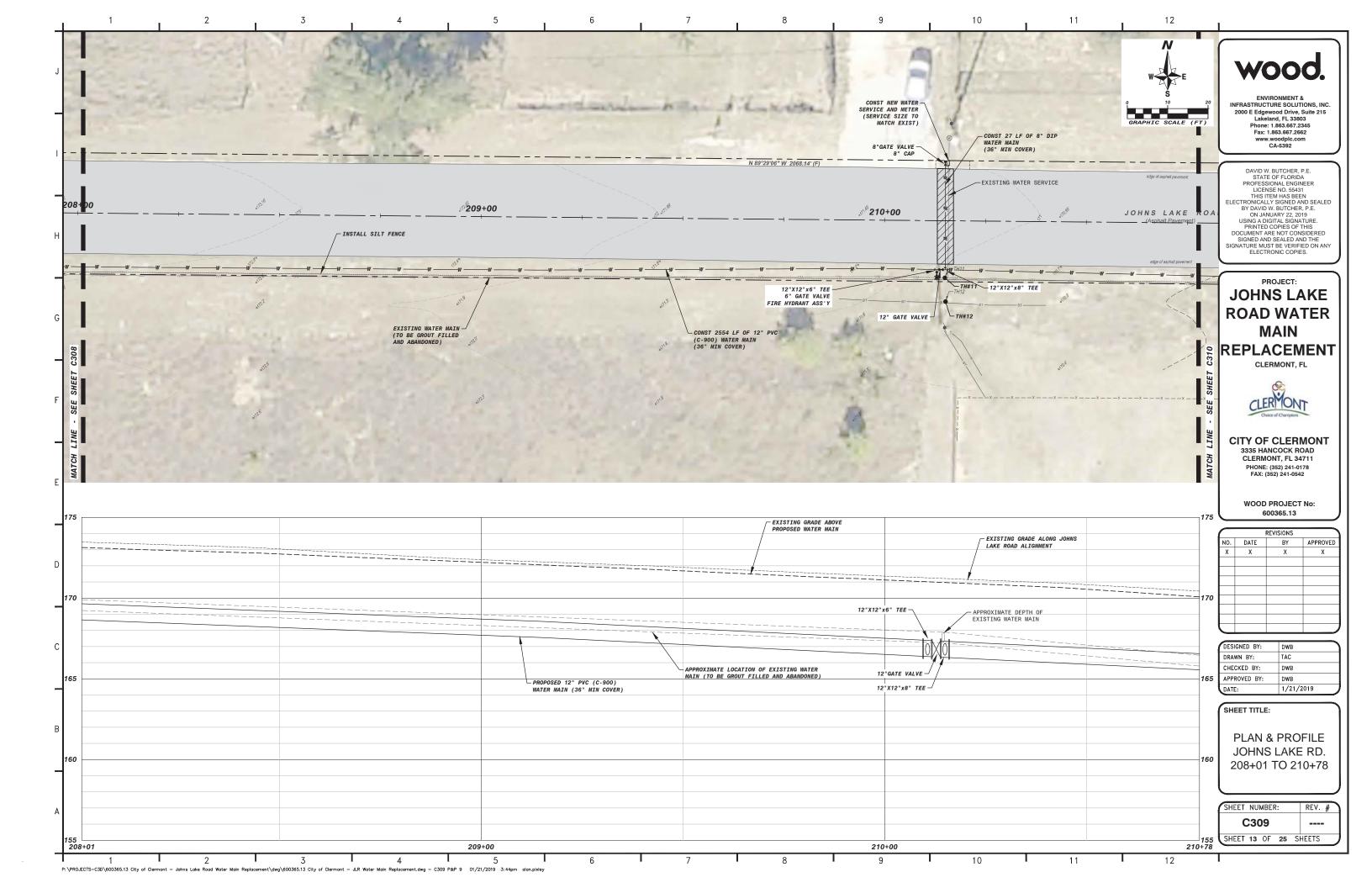


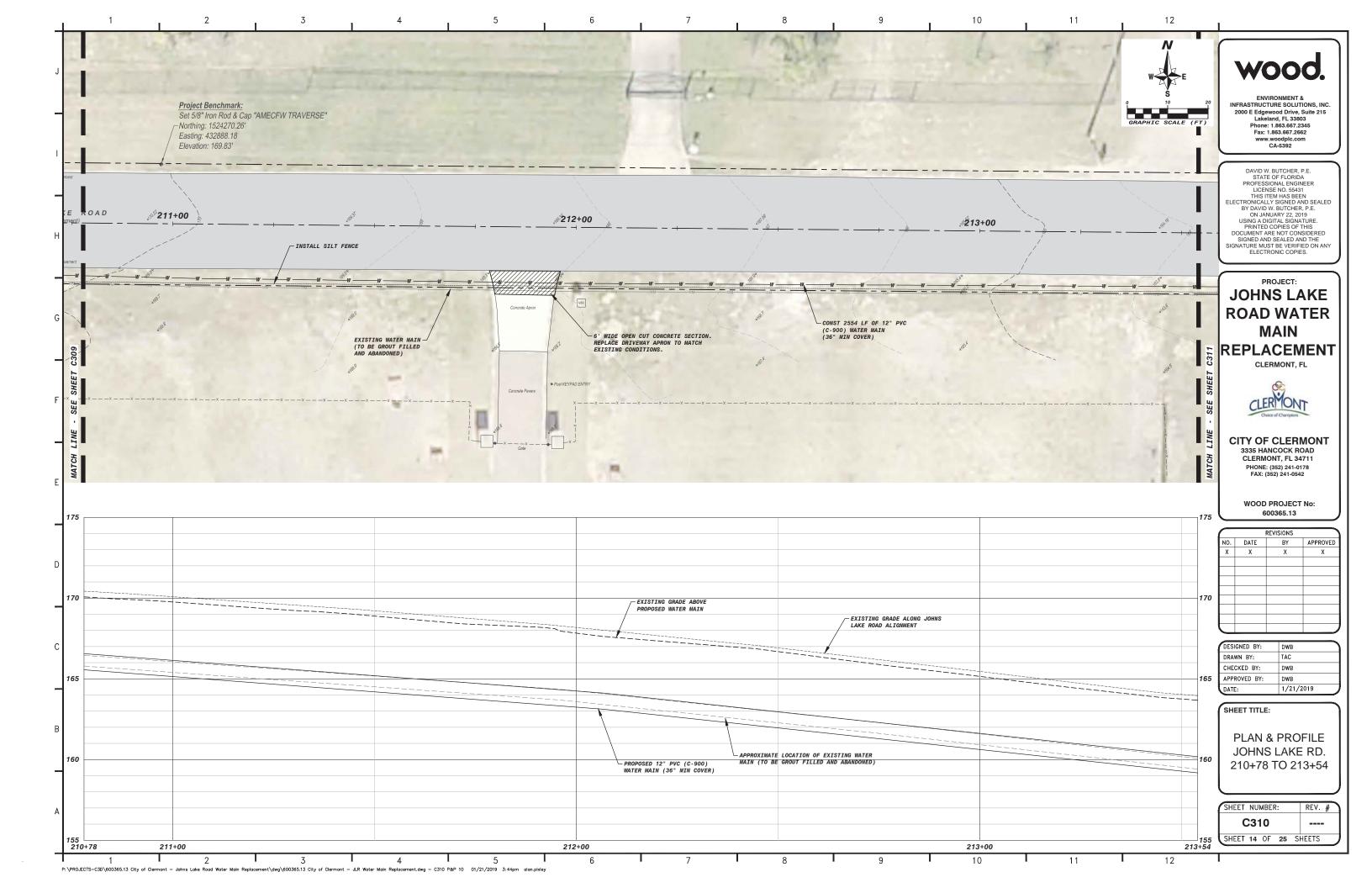


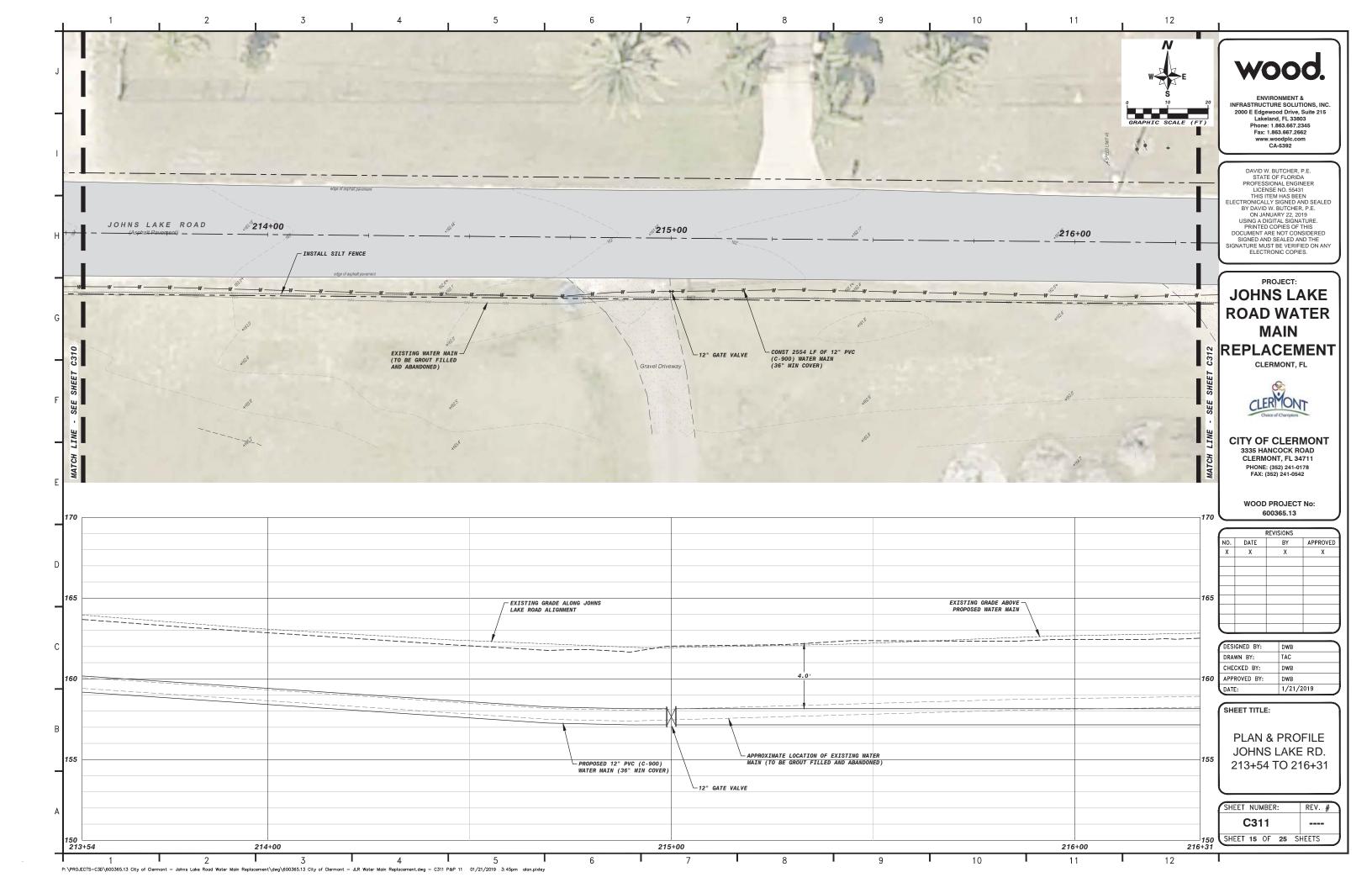


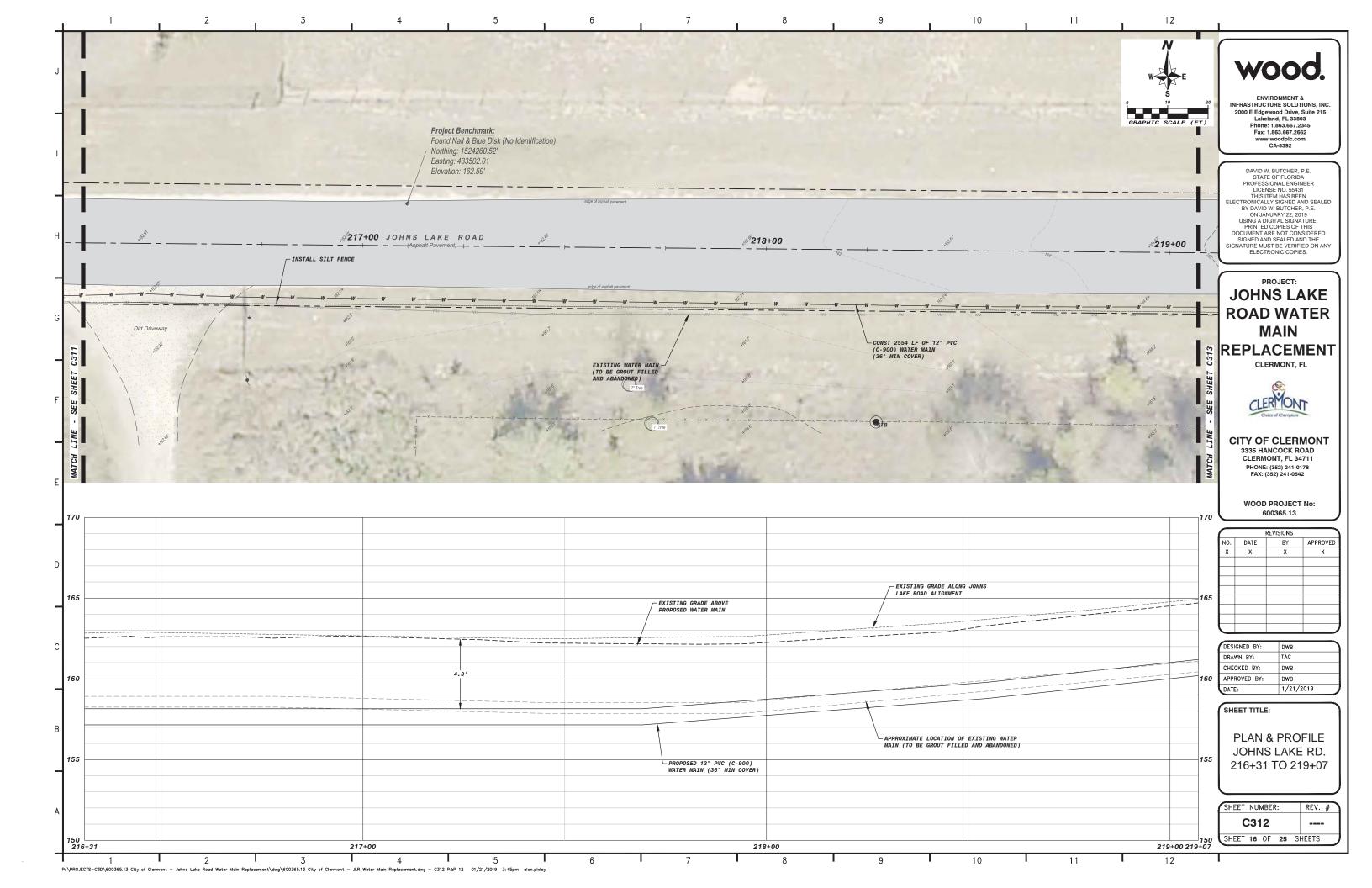


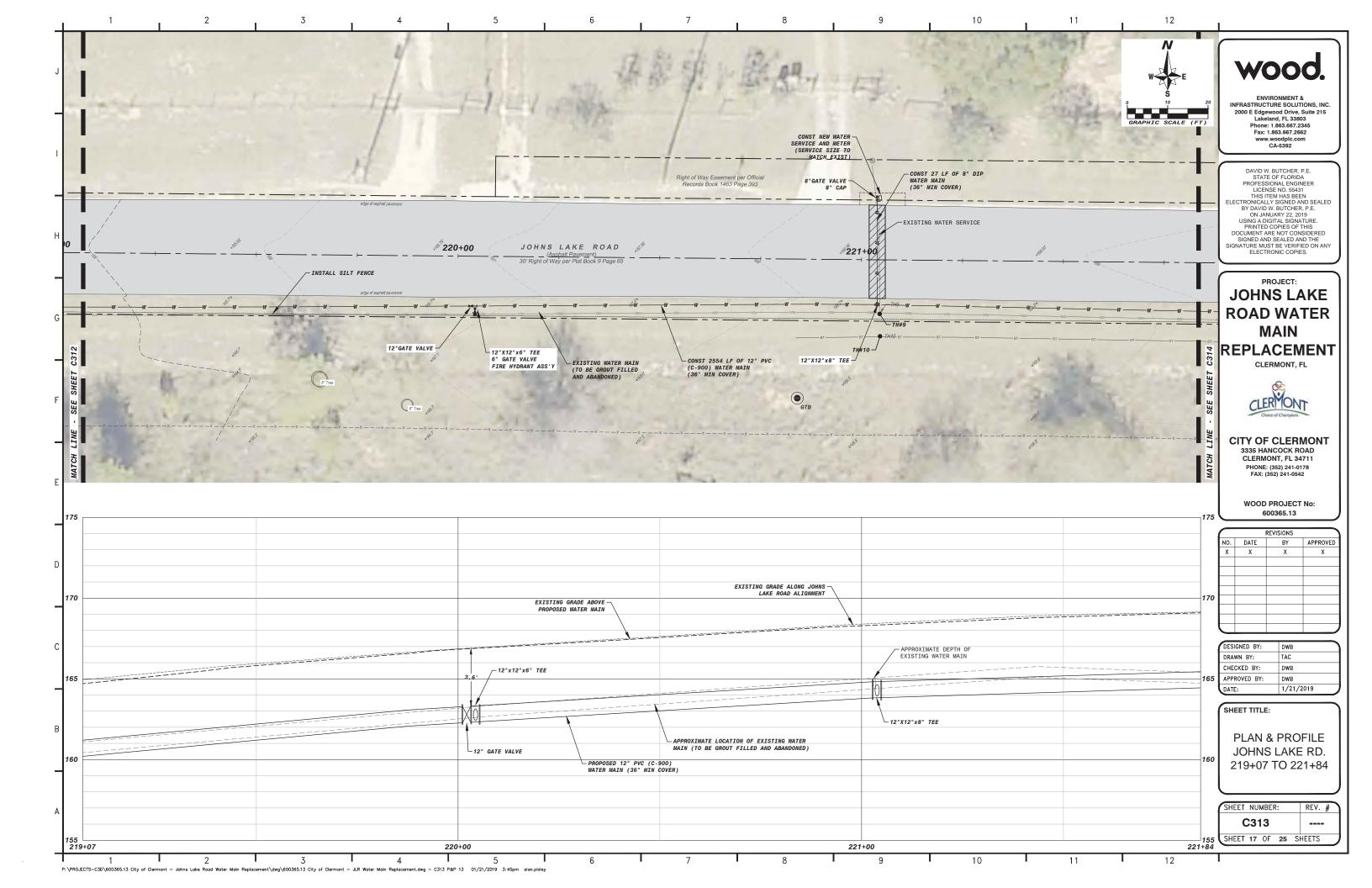


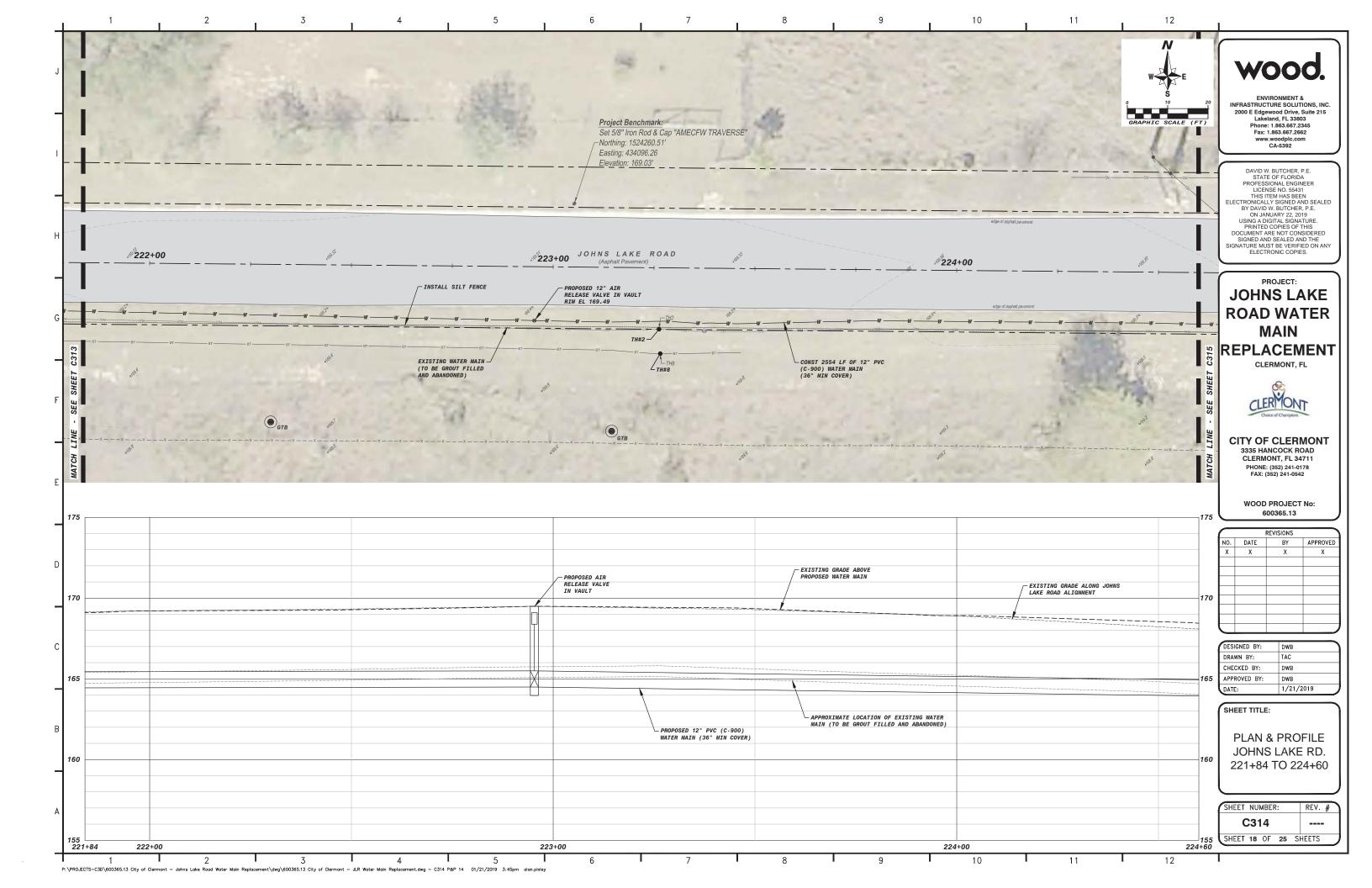


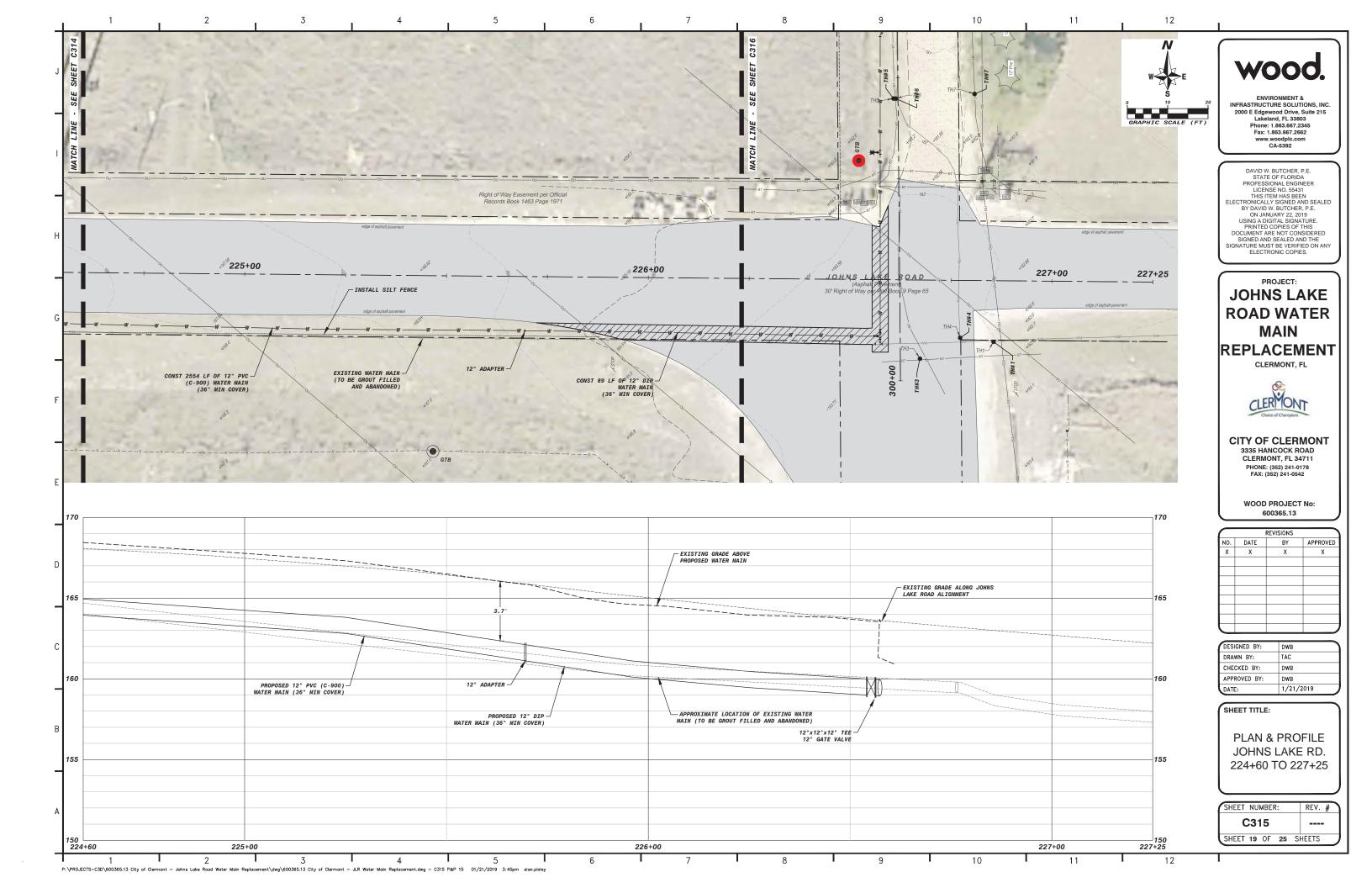


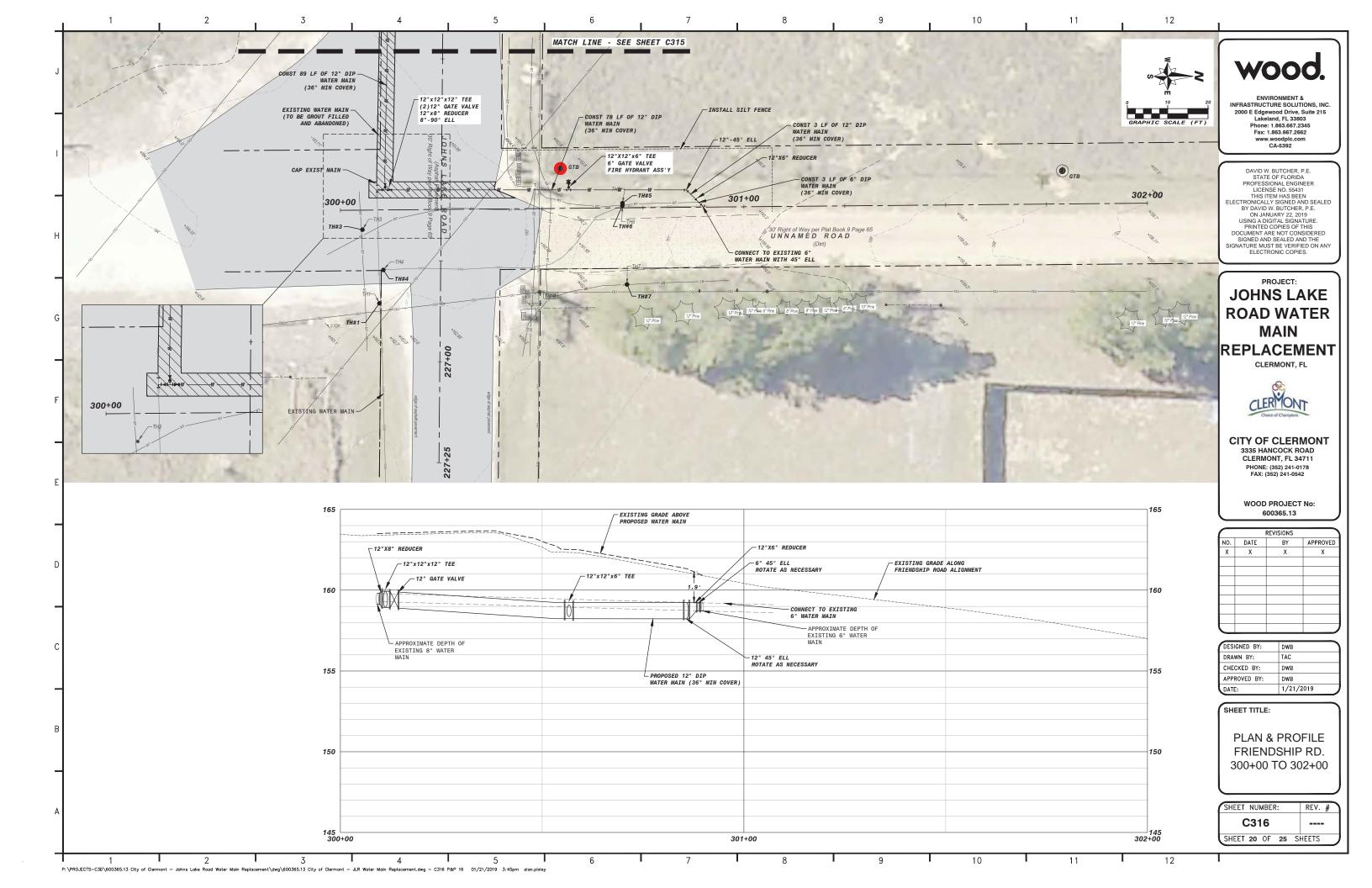


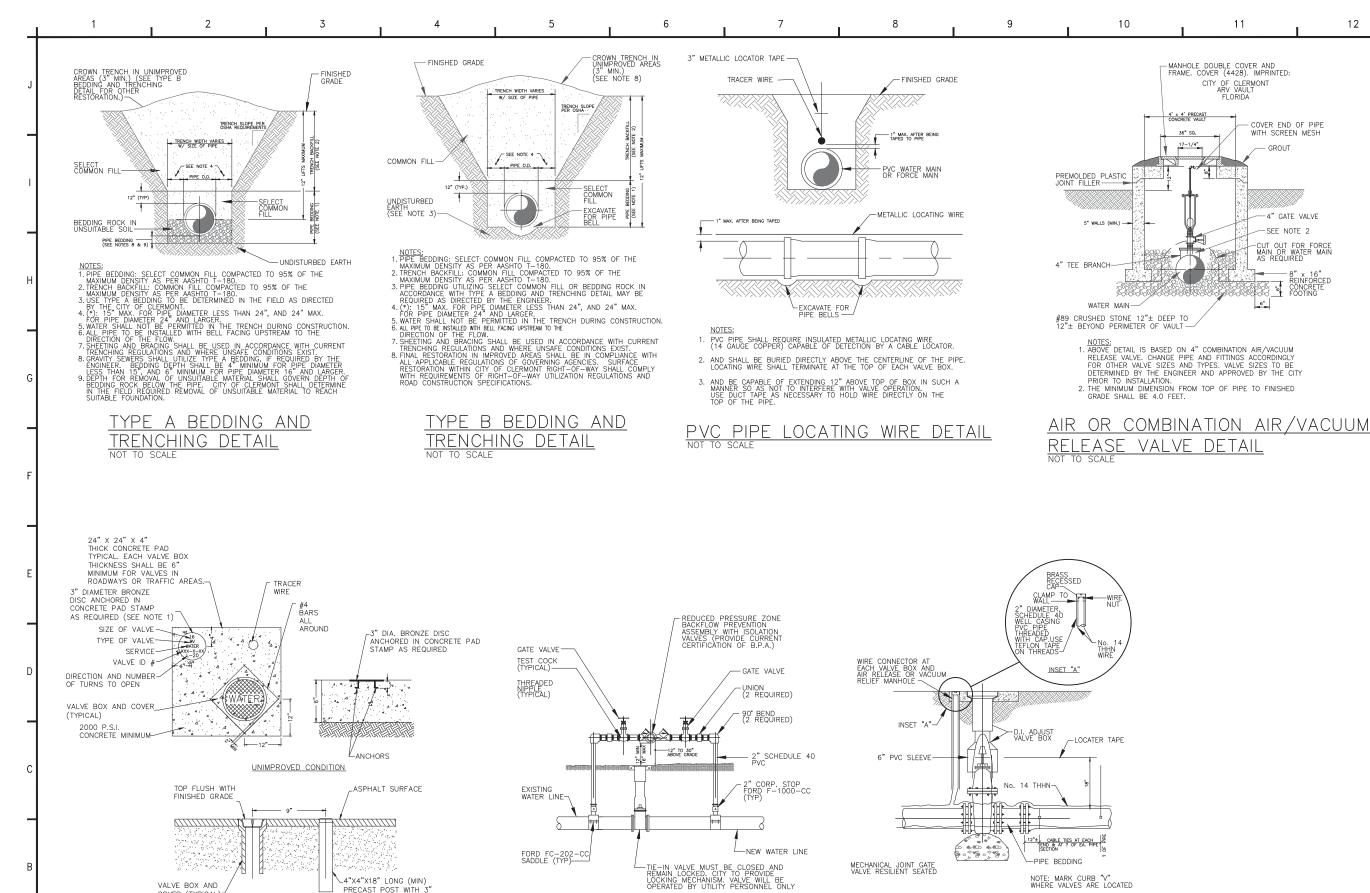












NOTE: LOCATION TO BE DETERMINED AT TIME OF PRECONSTRUCTION CONFERENCE WITH THE CITY.

TEMPORARY JUMPER

CONNECTION DETAIL

-PIPE REDDING MECHANICAL JOINT GATE VALVE RESILIENT SEATED NOTE: MARK CURB "V" WHERE VALVES ARE LOCATED

PIPE DETECTOR WIRE MARKER TAPE INSTALLATION

Wood

12

COVER END OF PIPE

WITH SCREEN MESH

-4" GATE VALVE

SEE NOTE 2

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. 2000 E Edgewood Drive, Suite 215 Lakeland, FL 33803 Phone: 1.863.667.2345 Fax: 1.863.667.2662

DAVID W. BUTCHER, P.E. STATE OF FLORIDA PROFESSIONAL ENGINEER LICENSE NO. 55431 THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY DAVID W. BUTCHER, P.E. ON JANUARY 22, 2019 USING A DIGITAL SIGNATURE.
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PROJECT: **JOHNS LAKE ROAD WATER** MAIN REPLACEMENT

CLERMONT, FL



CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

WOOD PROJECT No: 600365.13

	R	EVISIONS	
NO.	DATE	BY	APPROVED
Х	Х	Х	Х

DESIGNED BY:	DWB
DRAWN BY:	TAC
CHECKED BY:	DWB
APPROVED BY:	DWB
DATE:	1/21/2019

SHEET TITLE:

12

UTILITY DETAILS

SHEET NUMBER: REV. # C400 ----SHEET 21 OF 25 SHEETS

10

4 P:\PROJECTS-C3D\600365.13 City of Clermont - Johns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont - JLR Water Main Replacement.dwg - C400 Util Det 01/21/2019 3:45pm alan.pixley

IMPROVED CONDITION

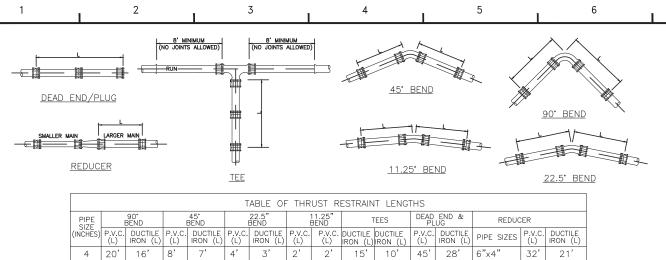
NUIES: 1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES 2. REUSE VALVES TO HAVE SQUARE VALVE BOX TOP

VALVE COLLAR

VALVE BOX AND

-4"X4"X18" LONG (MIN)

PRECAST POST WITH 3"
DIAMETER BRONZE DISC
SET IN GROUT AS SHOWN



6 28' 33' 21' 63' 40' 22' 3' 52' 33' 82' 52' 21' 15' 4' 3' 10 43' 18' 68' 43' 98' 62' 73' 40' 12 50' 85' 53' 21' 10' 4' 116 63' 40' 5' 63' 84' 16"x14" 14 57' 24' 12' 6' 102' 132 63' 16 | 63' | 51' | 26' | 13' 10' 6' 5' 116' 73' 148 93'

THRUST RESTRAINT DESIGN NOTES

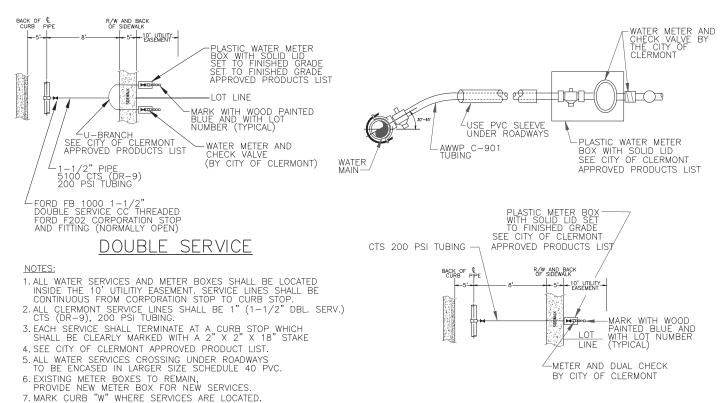
8. PROVIDE TRACER WIRE ALONG SERVICE LINES.

9. SERVICE SADDLES 1" SHALL BE CC THREAD, 1.5" — 2" FIP THREAD.

10. NO LOOPING OR EXCESSIVE BENDING OF POLY TUBING. IF SERVICE NEEDS TO BE SHORTENED, CRIMP THE POLY TUBING AND INSTALL A SS FULL CIRCLE CLAMP AROUND CRIMPED AREA WHEN COMPLETED.

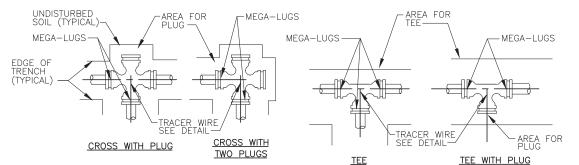
- 1. RESTRAINT JOINTS, FITTINGS AND VALVE REQUIREMENTS CALCULATED BY THE THRUST RESTRAINT DESIGN PROGRAM PROVIDED BY EBAA IRON SALES, INC.
- 2. DATA BASED ON MAXIMUM WATER PRESSURE OF 150 PSI, THE UNIFIED SOILS CLASSIFICATION SYSTEM (SOIL TYPE SP), THE PIPE BEDDED IN NATIVE SOIL WITH A MINIMUM 2.5' COMPACTED FILL OVER THE PIPE, AND USING A SAFETY FACTOR OF 1.5 FOR THE DATA.
- 3. ALL FITTINGS AND VALVES TO BE RESTRAINED WITH "MEGA-LUG" RESTRAINTS, AND ALL BELL AND SPIGOT JOINTS TO BE RESTRAINED WITH A RESTRAINING HARNESS WITHIN THE REQUIRED LENGTH OF RESTRAINED PIPE (L).

THRUST RESTRAINT DETAILS



SINGLE SERVICE

WATER SERVICE CONNECTION DETAILS



NOTES:
USE "MEGA-LUG" FITTINGS AS APPROVED
BY THE PROJECT ENGINEER. "MEGA-LUG"
CALCULATIONS TO BE PROVIDED BY THE
CONTRACTOR AND APPROVED BY THE CITY
ENGINEER PRIOR TO CONSTRUCTION.

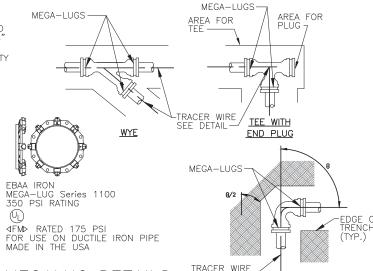


EBAA IRON MEGA-LUG Series 2000 PRESSURE RATINGS FOR ORDINARY WATER WORKS:

 DR14
 200
 PSI
 SDR17
 250
 PSI

 DR18
 150
 PSI
 SDR21
 200
 PSI

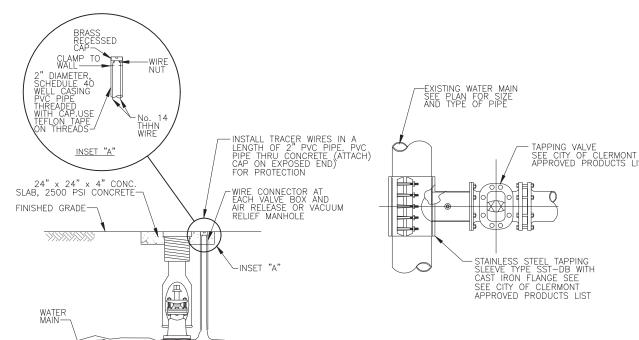
 DR25
 100
 PSI
 SDR26
 160
 PSI



BENDS

10

11



MEGALUG DETAILS

TAPPING SLEEVE DETAIL
ELEVATION VIEW
NOT TO SCALE

TAPPING SLEEVE DETAIL
PLAN VIEW
NOT TO SCALE

wood

ENVIRONMENT &
INFRASTRUCTURE SOLUTIONS, INC.
2000 E Edgewood Drive, Suite 215
Lakeland, FL 33803
Phone: 1.863.667.2345
Fax: 1.863.667.2562
www.woodplc.com
CA-5392

DAVID W. BUTCHER, P.E.
STATE OF FLORIDA
PROFESSIONAL ENGINEER
LICENSE NO. 55431
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BY DAVID W. BUTCHER, P.E.
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JOHNS LAKE ROAD WATER MAIN REPLACEMENT



CLERMONT, FL

CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

WOOD PROJECT No: 600365.13

	R	EVISIONS	
NO.	DATE	BY	APPROVED
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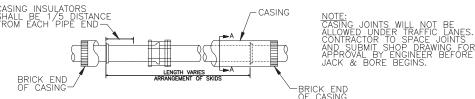
SHEET TITLE:

UTILITY DETAILS

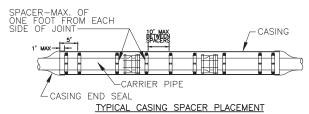
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-	SHEET	22	OF	25	S	HEETS	

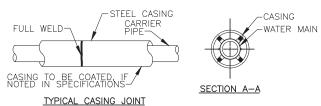
1 2 2 3 4 3 1 4 4 5 5 6 7 7 8 8 9 1 10 1 11 12 P:\PROJECTS=C3D\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake Road Water Main Replacement\dwg\600365.13 City of Clermont – Juhns Lake

General Water Notes Utility Construction Notes (DEP) WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT 62-555 314 Location of Public Water System Mains WATER 3 TS TEM COMMONEY S SHALE BE INSTALLED IN 3 THAT A ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE. 62-505.314 Location of Public water System Mains: For the purpose of this section, the phrase "Water Mains" shall mean Mains, including treatment Plant process piping, conveying either raw, partially treated, or finished drinking water; Fire Hydrant leads; and service lines that are under the control of a Public Water System and that have an inside diameter of three (3") inches or greater. Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers 2. ALL PIPING SHALL BEAR THE "NSF" SEAL FOR POTABLE WATER. Wastewater or Storm water Force Mains, Reclaimed Water Pipelines, and On-site Sewage WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12". PIPES 14" OR LARGER SHALL BE AWWA C-905, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE Wastewater or Storm water Force Mains, Reclaimed Water Pipelines, and On-site Sewage Treatment and Disposal Systems: (a) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) Three Feet between the outside of the WATER MAIN and the outside of any existing or proposed Storm Sewer, Storm water Force Main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C. PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS. under Part III of Chapter 62-610, F.A.C. (b) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) three feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN and the outside of any existing or proposed vacuum-type Sanitary Sewer. (c) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (6) Six Feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN, and the 4. DEPTH OF WATER LINES TO BE 36" MINIMUM COVER FROM FINISH GRADE. 5 WATER MAINS TO BE LOCATED 6.00' FROM BACK OF CURB OR EDGE OF PAVEMENT LINI ESS OTHERWISE NOTED 6. ALL SLEEVES UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE BACK outside of any existing or proposed Gravity- or Pressure-type Sanitary Sewer, Wastewater Force DISINFECTING: FOLLOWING THE PRESSURE TESTING, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM. DISINFECTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF AWWA STANDARD C651 "DISINFECTING WATER MAINS", AND ALL APPROPRIATE AGENCY APPROVAL. Main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610 F.A.C. The Minimum Horizontal Separation distance between WATER MAINS and Gravity-type Sanitary \$ shall be reduced to (3) Three Feet where the BOTTOM of the WATER MAIN is laid at least (6) Six Inch above the Top of the Sewer. (d) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of a least (10) Ten Feet between the outside of the WATER MAIN and all parts of any existing or proposed "On site Sewage Treatment and Disposal System" as defined in Section 381.0065(2), F.S. and Rule ALL HYDROSTATIC TEST SHALL BE IN ACCORDANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND C605/M23 FOR PVC PIPE. 64E-6.002. F.A.C ALL WATER MAINS SHALL BE INSTALLED, PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C600, (62-555.320(21)(b)1 AND 62-555.330, F.A.C. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED (2) Vertical Separation Between Underground WATER MAINS and Sanitary or Storm Sewers, Wastewater or Storm water Force Mains, and Reclaimed or storm sewers, wastewater or storm water Force Mains, and Hecialmed Water Pipelines: (a) New or relocated underground WATER MAINS crossing any existing or proposed gravity-or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the WATER MAIN is at least (6) Six inches, and preferably 12 inches above, or at least 12 Inches below the outside of the other pipeline. However, it is preferable to lay the WATER MAIN 'ABOVE' the other pipeline. AND MUST CONFORM TO THE APPLICABLE AWWA STANDARDS ALL PIPING MATERIALS AND SPECIFICATIONS COVERING PIPES, JOINTS AND PACKING MATERIALS, (b) New or relocated, Underground WATER MAINS crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater Force Main, or Pipeline conveying reclaimed water shall be laid so the outside of the WATER MAIN is at least (12) inches ABOVE or BELOW the INTERNAL COATING AND LININGS FITTINGS SPECIALS INTERNAL COATING AND LININGS, FITTINGS, SPECIALS AND APPUTETNANCES SHALL ALL BE IN ACCOPDANCE WITH THE CORRESPONDING AWWA STANDARDS AND BE CONFORMING TO NSF REQUIREMENTS, AS MAY BE APPLICABLE, WITH EXCEPTIONS ALLOWED ONLY IF DOCUMENTATION AND ASSURANCES ARE PROVIDED INCOME. Outside of the other pipeline. However, it is preferable to lay the WATER Odiside of the durie pipeline. However, it is preferable to lay the WATER MAIN above the other pipeline. (c) At the Utility crossings described in paragraphs (a) & (b) Above, one full length of Water Main Pipe shall be centered above or below the other pipeline so the WATER MAIN Joints will be as far as possible from the other IN COMPLIANCE WITH PARAGRAPHS 62-555.320(3) (d) 62-555.320 (3) (b), AND 62-555.320 (21) (c), F.A.C. THE LEAD USE PROHIBITION IN RULE 62-555.322, F.A.C. pipeline so the WATER MAIN Joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all WATER MAIN Joints are at least (3) Three feet from all joints in Vacuum-type Sanitary Sewers, Storm Sewers, Stormwater Force Mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least (6) Six Feet from all Joints in Gravity- or Pressure-type Sanitary Sewers, Wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. (3) Separation Between WATER MAINS and Sanitary or Storm Sewer Manholes: (a) No WATER MAIN shall speak pass thru or come into contact with any part THE LEAD USE PROHIBITION IN HOLE 82-595, 322, F.A.C. SHALL ALSO APPLY. POLYETHYLENE TUBING SHALL BE PER AWWA C901. UNDERGROUND SERVICE LINES, AND VALVES SHALL BE PER AWWA C800. **COLOR CODING** Separation Between WALEH MAINS and Sanitary of Storm Sewer Mannois (a) No WATER MAIN shall pass thru, or come into contact with any part of a Sanitary Manhole or a Storm Sewer Manhole. Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, reclaimed Water Pipellines, and On-Site Sewage Treatment and Disposal Systems. New or relocated Fire All water main pope, including fittings, installed on or after August 28, 2003, except pipe installed under a construction permit for which the Department received a comple application before August 28, 2003, shall be color coded or marked using blue as a predominate color to differentiate drinking water from reclaimed or other water. Under ground plastic pipe shall be solid-wall blue pipe, shall have a co-extruded blue external Hydrants with underground Drains shall be located so that the drains are at least (3) Three Feet from any existing or proposed storm sewer, Stormwater ground plastic pipe snall be solid-wall blue pipe, snall have a co-extruded blue external skin, or shall be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall; and underground metal or concrete pipe shall have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe shall have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90° intervals around the pipe, and will remain intact during and after installation of the pipe. If tape or reast (b) filled real form any existing or proposed stimm seven, soliminate force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.; at least (3) Three Feet, and preferably (10) Ten Feet, from any existing or proposed gravity- or Pressure-type Sanitary Sew Wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.; and at least (10) Ten Feet from any paint is used to stripe pipe during installation of the pipe, the tape or paint shall be applied in a continuous line that runs parallel to the axis of the pipe and that is located along the existing or proposed "on-site sewage treatment and disposal system" as in a continuous line that runs parallel to the axis of the pipe and that is located along the top of the pipe; for pipes with an internal diameter of 24 inches or greater, tape or paint shall be applied in continuous lines along each side of the pipe as well as along the top of the pipe. Aboveground pipe as drinking water treatment plants shall be color coded and labeled in accordance with subsection 62-555.320(10),F.A.C., and all other aboveground pipe shall be painted blue or shall be color coded or marked like underground pipe. defined in Section 381.0065(2), F.S. and Rule 64E-6.002, F.A.C. (5) Exceptions/Mitigation: Exceptions/Mitigation: Adherence to the above Constraints and Separations in Items 1 through 4 shall be Complied to, "WITHOUT EXCEPTION!". If for some reason where it is not technically feasible or Economically Sensible that Items 1 through 4 cannot be complied with, Contractor will Stop Work and Notify the Engineer of record for the appropriate solution, which will be submitted to "The Department of Environmental Protection" for APPROVAL, prior to work commencement. PROPOSED. PROPOSED WATER MAIN ATER MAIN acuum-Type Sanitary Sewe DETAIL OF ITEM 1.(b) DETAIL OF ITEM 1.(c) DETAIL OF ITEM 1.(a) 12" Minimu 12" MINIMUM 12" Minimun



10





NOTE: USE FUSION COATED STEEL CASING INSULATORS 12" WIDE WITH 2" GLASS REINFORCED RUNNERS FOR PIPE SKIDS.

JACK AND BORE STEEL CASING MINIMUM THICKNESS IN INCHES THICKNES 0.154 42" & GREATER 0.500 MINIMUM THICKNESS FOR PIPE DIAMETERS NOT SHOWN SHALL THE SAME AS REQUIRED FOR FOR THE NEXT LARGER SIZE LISTED ABOVE.

11

STEEL CASINGS ARE TO MEETEN EXCEED FOOT REQUIREMENTS SET FORTH IN THE UTILITY

ACCOMMODATION MANUAL

PAVEMENT CROSSING WITH CASING BORE, TUNNEL OR OPEN CUT



INFRASTRUCTURE SOLUTIONS, INC. 2000 E Edgewood Drive, Suite 215 Lakeland, FL 33803 Phone: 1.863.667.2345 Fax: 1.863.667.2662 www.woodplc.con CA-5392

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PROJECT: JOHNS LAKE **ROAD WATER** MAIN REPLACEMENT

CLERMONT, FL



CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

> WOOD PROJECT No: 600365.13

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SHEET TITLE:

UTILITY DETAILS

-	SHEET NUMBER:				REV. #	1	
	C402						
	SHEET	23	OF	25	S	HEETS	

PIPING CLEARANCES

Water Main

DETAIL OF ITEM 2.(b)

P:\PROJECTS-C3D\600365.13 City of Clermont - June Lake Road Water Main Replacement\dwa\600365.13 City of Clermont - June Water Main Replacement.dwa - C402 Util Det 01/21/2019 3:46pm alan.pixley

Water Main

UTILITY SEPARATIONS

DETAIL OF ITEM 2.(a)

DETAIL OF ITEM 2.(c)

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11

MATERIALS AS REQUIRED BY THE CITY OF CLERMONT

THE CONTRACTOR SHALL CUT A "W" IN THE CURB TOP AT EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT. SEE WATER SYSTEM DETAILS FOR OTHER SERVICE LOCATION AND MARKING REQUIREMENTS

PIPE INSTALLATION

PIPE INSTALLATION OF PVC WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST EDITION). INSTALLATION OF DUCTILE IRON PIPE WATER MAIN SHALL BE IN CONFORMANCE WITH AWWA C600.87.

COMPACTED BACKFILL SHALL BE TO 98% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12" MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12" MAXIMUM LIFT THICKNESS. SEE PIPE TRENCHING DETAILS

MINIMUM COVER OVER ALL PIPE SHALL BE 36" FROM TOP OF PIPE TO FINISHED GRADE. SEE PLAN AND PROFILE SHEETS FOR REQUIRED DEPTH.

WATER MAINS ARE TO BE INSTALLED SO AS TO PROVIDE A MINIMUM VERTICAL CLEARANCE OF 12" OR A MINIMUM HORIZONTAL CLEARANCE OF 10' FROM ALL OTHER UTILITIES. IF THE MINIMUM CLEARANCE CAN NOT BE ACHIEVED, THEN DUCTILE IRON WATER MAIN SHALL BE SPECIFIED 10 FEET EITHER SIDE OF THE CROSSING. HORIZONTAL AND VERTICAL MINIMUM SEPARATION DISTANCE REQUIREMENTS BETWEEN WATER MAIN AND ALL OTHER UTILITIES SHALL COMPLY WITH 62-555.314 (1), (2), (3), (4) AND (5) FAC.

ALL WATER MAINS SHALL BE INSTALLED WITH RESTRAINED JOINT FITTINGS. NO CONCRETE THRUST BLOCKS TO BE LISED.

ALL PLUGS, CAPS, TEES, BENDS, FIRE HYDRANTS, VALVES, ETC. SHALL BE PROVIDED WITH MEGALUG PIPE RESTRAINTS. FOR RESTRAINT CONSTRUCTION SPECIFICATIONS, REFER TO THE WATER SYSTEM DETAILS.

ALL VALVES TO BE RESTRAINED AS DEAD ENDS IN BOTH DIRECTIONS.

PIPE IDENTIFICATION

3" METALLIC LOCATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET. WIRE CONNECTIONS (SPLICES) SHALL BE DONE WITH WIRE NUT AND GREASE FILLED PROTECTIVE CAP.

ALL PIPE AND PIPE FITTINGS SHALL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUB- PARAGRAPH 62-555.320(21)(b)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERCROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVE GROUND PIPE SHALL BE PAINTED BLUE OR SHALL BE CACOLOR CODED OR MARKED LINE UNDERGROUND PIPE.) RHINO TRIVIEW FLEXMARKING POST SHALL BE PLACED ON ALL TRANSMISSION MAINS AT 500 FEET.

DISINFECTION AND TESTING

ALL PIPE SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.86

PVC WATER MAINS SHALL BE INSTALLED; PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C605 AND DUCTILE IRON WATER MAINS IN ACCORDANCE WITH AWWA C600, [62–555.320(21)(B) 1 AND 62–555.330, F.A.C]. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED AND MUST CONFORM TO THE APPLICABLE AWWA STANDARDS.

THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT THE ENGINEER, OWNER/OPERATOR AND CITY IN WRITTEN FORM, FORTY EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.

THE WATER SYSTEM SHALL BE SOAK TESTED 24 HOURS @150 PSI AND TESTED FOR LEAKAGE AT 150 PSI FOR TWO (2) HOURS, WITH ALLOWABLE LEAKAGE IN ACCORDANCE WITH ABOVE STANDARDS.

CONTRACTOR SHALL OBTAIN A COPY OF THE FDEP WATER SYSTEM PERMIT AND PULL BACTERIOLOGICAL TEST SAMPLES FROM THE SAMPLE POINTS SPECIFIED IN THAT PERMIT. CONTINUITY TEST SHALL BE PERFORMED ON WIRE BY CONTRACTOR

CONNECTIONS TO EXISTING WATER MAINS

PRIOR TO THE CONNECTION TO ANY EXISTING MAIN, THE PROPOSED WATER MAIN SHALL BE DISINFECTED, HAVE ENGINEER APPROVED PRESSURE TESTING AND HAVE FDEP CLEARANCE. REFER TO FDEP PERMIT FOR ANY ADDITIONAL REQUIREMENTS.

ASBUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE VERTICAL AND HORIZONTAL "ASBUILT" INFORMATION RELATIVE TO ALL CONSTRUCTED UTILITIES AND STRUCTURES. THREE SETS SHALL BE PROVIDED FOR REVIEW. ONCE APPROVED BY THE UTILITY, ONE REPRODUCIBLE SET SHALL BE PROVIDED.

AS-BUILT INFORMATION FOR THE WATER SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

- 1. LOCATION OF ALL VALVES, FITTINGS, HYDRANTS AND SERVICES HORIZONTAL AND VERTICAL.
- 2. LOCATION OF THE WATER MAIN TIED WITH COORDINATES FOR THE SUBDIVISION.
- 3. CERTIFICATION AS TO THE SYSTEM MEETING THE MINIMUM COVER REQUIREMENTS.
- 4. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION WHICH DEVIATES FROM THE APPROVED ENGINEERING PLANS.
- 5. UTILITY LOCATES ON SYSTEMS INSTALLED UNDER THIS CONTRACT SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER UNTIL ASBUILT DRAWINGS ARE REVIEWED AND APPROVED BY THE UTILITY.

TEMPORARY JUMPER CONNECTION NOTES

A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED NEW WATER MAIN IMPROVEMENTS. THE DETAIL PROVIDED IS TO BE USED FOR FILLING ANY NEW WATER MAIN OF ANY SIZE FROM EXISTING ACTIVE WATER MAINS AND FOR FLUSHING OF NEW MAINS UP TO 8" DIAMETER (2.5 FPS MINIMUM VELOCITY) AND FOR TAKING BACTERIOLOGICAL SAMPLES FROM ANY NEW WATER MAIN OF ANY SIZE. THE JUMPER CONNECTION SHALL BE MAINTAINED UNTIL AFTER FILLING, FLUSHING, TESTING AND DISINFECTING OF THE NEW MAIN HAS BEEN SUCCESSFULLY COMPLETED AND CLEARANCE FOR USE HAS BEEN OBTAINED FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND OTHER PERTINENT AGENCIES HAS BEEN RECEIVED BY THE CITY OF CLERMONT. THIS JUMPER CONNECTION SHALL ALSO BE USED TO MAINTAIN A MINIMUM LEVEL OF DISINFECTION AND UNTIL THE FDEP CLEARANCE LETTER IS OBTAINED AND THE LINES ARE PLACED INTO SERVICE.

ADEQUATE RESTRAINTS SHALL BE PROVIDED TEMPORARILY. AS REQUIRED.

PIPE AND FITTINGS USED FOR CONNECTING THE NEW PIPE TO THE EXISTING PIPE SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH AWWA C651, 1992 EDITION. THE TAPPING SLEEVE AND THE EXTERIOR OF THE MAIN TO BE TAPPED SHALL BE DISINFECTED BY SPRAYING OR SWABBING PER SECTION II OF AWWA C651-92.

FLUSHING OF ALL WATER MAINS SAHLL BE DONE THROUGH THE TIE—IN VALVE UNDER CONTROLLED CONDITIONS BY THE CITY ONLY. FULL BORE FLUSH IS REQUIRED. THE FOLLOWING PROCEEDURES SHALL BE FOIL OWED:

A. THE TIE-IN VALVES SHALL BE OPERATED ONLY BY THE CITY AND PRESSURE TESTED IN THE PRESENCE OF THE CITY AND ENGINEER TO VERIFY WATER TICHTNESS PRIOR TO TIE-IN. VALVES WHICH ARE NOT WATERTIGHT SHALL BE REPLACED OR A NEW VALVE INSTALLED IMMEDIATELY ADJACENT TO THE LEAKING VALVE.

B. THE TEMPORARY JUMPER CONNECTION SHALL BE CONSTRUCTED AS DETAILED. THE JUMPER CONNECTION SHALL BE USED TO FILL THE NEW WATER MAIN, FOR PROVIDING WATER FOR BACTERIOLOGICAL SAMPLING OF THE NEW MAIN AS REQUIRED BY THE FDEP PERMIT AND FOR MAINTAINING CHLORINE RESIDUALS IN THE MAINS.

- 1. FLUSHING SHALL NOT BE ATTEMPTED DURING PEAK DEMAND HOURS OF THE EXISTING WATER MAIN.
 2. ALL DOWNSTREAM VALVES IN THE NEW SYSTEM MUST BE OPEN PRIOR TO THE CITY OPENING THE TIE-IN VALVE.
- 3. PROVIDE FOR AND MONITOR THE PRESSURE AT THE TIE-IN POINT. THE PRESSURE IN THE EXISTING MAIN MUST NOT DROP BELOW 35 PSI.
- 4. TIE-IN VALVE SHALL BE OPENED BY THE CITY A FEW TURNS ONLY, ENSURING A PRESSURE DROP ACROSS THE VALVE IS ALWAYS GREATER THAN 10 PSI.
- C. THE TIE-IN VALVE SHALL BE LOCKED CLOSED BY THE CITY UNTIL THE FLUSHING BEGINS.
- D. THE TIE—IN VALVE SHALL BE OPENED ONLY BY THE CITY FOR FLUSHING OF THE NEW MAIN. THE PROCEEDURE SHALL BE DONE BY THE CITY AND OBSERVED BY THE ENGINEER.

E. AFTER FLUSHING, THE TIE—IN VALVE SHALL BE CLOSED AND LOCKED IN THE CLOSE POSITION BY THE CITY. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION DEMONSTRATING THAT THE RPZ BACK FLOW PREVENTION DEVICE HAS BEEN TESTED WITHIN ONE YEAR AT THE TIME OF INSTALLATION, AND IS IN GOOD WORKING ORDER AT THE TIME OF INSTALLATION. THE TEST SHALL BE PERFORMED BY A CERTIFIED BACK FLOW PREVENTION TECHNICIAN AS APPROVED BY THE CITY OF CLERMONT CROSS—CONNECTION CONTROL PROGRAM. A CERTIFICATE IS REQUIRED BY THE CITY.

EXCEPT AS REQUIRED TO FLUSH LINES TIE—IN VALVE SHALL REMAIN CLOSED AND SHALL BE LOCKED IN THE CLOSE POSITION BY THE CITY. THE TIE—IN VALVE SHALL REMAIN LOCKED CLOSED UNTIL THE NEW SYSTEM HAS BEEN CLEARED FOR USE BY FDEP AND ALL OTHER AGENCIES. UPON RECEIPT OF CLEARANCE FOR USE FROM FDEP AND ALL OTHER AGENCIES, THE CONTRACTOR SHALL REMOVE THE TEMPORARY JUMPER CONNECTION. THE CORPORATION STOPS ARE TO BE CLOSED AND PLUGGED WITH 2" BRASS PLUGS. THERE BE NO LEAKAGE.

ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACK FLOW PREVENTION DEVICE, FITTINGS, VALVES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

WATER METERS SHALL BE PAID FOR AT THE CITY HALL AND SHALL BE DELIVERED TO THE JOB SITE BY THE UTILITIES DEPARTMENT.

FIRE HYDRANTS

FIRE HYDRANTS SHALL CONFORM TO THE LATEST EDITION OF AWWA C502.85 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED. ALL HYDRANTS SHALL BE BREAKAWAY TYPE, WITH THE BREAKAWAY SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO, TWO AND ONE—HALF INCH (2–1/2") HOSE CONNECTIONS, AND ONE, FOUR AND ONE—HALF INCH (4–1/2") STEAMER CONNECTION WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE—QUARTER INCH (5–1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE—HALF INCH (1–1/2") PENTAGON OPERATING NUT. SHALL OPEN COUNTERCLOCKWISE. HYDRANT MUST BE PAINTED IN CONFORMANCE WITH CITY OF CLERMONT REQUIREMENTS (COLORS BASED ON DELIVERED FIRE FLOW). HYDRANTS SHALL BE MUELLER CENTRON (TRAFFIC MODEL A–423) & AMERICAN (B84B–5 TRAFFIC MODEL) OR SEE CLERMONT'S LIST OF APPROVED PRODUCTS VIA THE CITY'S WEBSITE. NO SUBSTITUTE, FIRE HYDRANTS TO BE THE BREAK AWAY TYPE WITH A CAST IRON DUCTILE IRON MECHANICAL JOINT HYDRANT TEE, WITH RESILIENT SEAT AND MECHANICAL JOINT GATE VALVE.

FIRE HYDRANTS CONT.

1. BLUE PAVEMENT REFLECTORS SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE CLOSEST TO AND DIRECTLY IN FRONT OF EACH FIRE HYDRANT.

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2. A POST-CONSTRUCTION FIRE FLOW TEST SHALL BE CONDUCTED. HYDRANTS SHALL DELIVER THE REQUIRED GPM PER THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS WITH A RESIDUAL PRESSURE OF 20 PSI. CONTRACTOR SHALL NOTIFY CITY OF CLERMONT ENGINEERING DEPARTMENT WHEN HYDRANTS ARE READY TO BE FLOW TESTED. FOR FIRE HYDRANTS LOCATED WITHIN THE CITY OF CLERMONT, CONNECTED TO THE CITY OF CLERMONT'S WATER SYSTEM, AND/OR LOCATED WITHIN CLERMONT FIRE DEPARTMENT'S PROTECTION AREA, THIS TEST SHALL BE CONDUCTED BY CITY OF CLERMONT PERSONNEL. THIS TEST SHALL BE PROVIDED BY THE CONTRACTOR FOR LOCATIONS NOT INCLUDED ABOVE. THIS TEST MAY BE WITNESSED BY THE OWNER/OPERATOR IF REQUESTED AT TIME OF NOTIFICATION THAT HYDRANTS ARE READY FOR FLOW TEST.

3. IF A PERMIT FOR THE WATER SYSTEM IS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), THE SYSTEM SHALL BE ACCEPTED AND APPROVED BY DEP PRIOR TO BEING PRESSURIZED OFF OF THE CITY SYSTEM AND PRIOR TO ANY FLOW TESTS BEING CONDUCTED.

4. FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES SHALL BE KEPT ACCESSIBLE TO THE FIRE DEPARTMENT AT ALL TIMES. THE FOLLOWING CLEARANCES SHALL BE MAINTAINED FOR ALL FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES. CLEAR PATH TO FRONT AND A 36" CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS. NO PERSON SHALL PLACE OR KEEP ANY POST, FENCE, VEHICLE, GROWTH, VEGETATION, TRASH OR STORAGE OF OTHER MATERIALS THAT WOULD OBSTRUCT A FIRE HYDRANT OR FIRE PROTECTION APPLIANCE AND HINDER OR PREVENT ITS IMMEDIATE USE BY FIRE DEPARTMENT PERSONNEL. SUCH FIRE HYDRANT OR FIRE PROTECTION APPLIANCE SHALL BE KEPT READILY VISIBLE AT ALL TIMES.

5. FIRE HYDRANTS SHALL NOT BE LOCATED CLOSER THAN THREE (3) FEET TO OR MORE THAN TWENTY (20) FEET FROM THE EDGE OF A STREET, DRIVE OR OTHER ACCESSWAY. UNLESS OTHERWISE REQUESTED BY THE FIRE OFFICIAL, THE 4-1/2" CONNECTION SHALL FACE THE NEAREST ROADWAY, OR IF LOCATED WITHIN A COMPLEX PARKING AREA, SHALL FACE THE NEAREST TRAFFIC WAY. NO HYDRANT SHALL BE INSTALLED WHERE PEDESTRIAN OR VEHICULAR TRAFFIC WOULD INTERFERE WITH THE USE OF THE HYDRANT. THE STANDARD FIRE HYDRANT APPROVED FOR USE IN THE CITY CAN BE FOUND IN THE CITY'S LIST OF APPROVED PRODUCTS VIA THE CITY'S WEBSITE. THE CITY'S STANDARD FIRE HYDRANT DETAIL AND NOTES ARE AVAILABLE FROM THE CITY ENGINEER'S OFFICE AND MUST BE INCLUDED IN THE SITE PLANS. ALL FIRE HYDRANTS AND MAINS, INCLUDING THOSE PRIVATELY OWNED, THAT ARE CONNECTED TO THE CITY'S POTABLE WATER SYSTEM, SHALL CONFORM TO CITY STANDARDS.

6. A MINIMUM NUMBER OF FIRE HYDRANTS SHALL BE PROVIDED AND/OR AVAILABLE TO PROVIDE EQUAL TO OR GREATER THAN THE NEEDED FIRE FLOW FOR ALL BUILDINGS ON THE SITE BASED ON THE FOLLOWING CREDITS: HYDRANT(S) WITHIN 300 FEET OF THE BUILDING, 1,000 GPM CREDIT; HYDRANT(S) 301 TO 600 FEET, 670 GPM CREDIT; HYDRANT(S) 601 TO 1,000 FEET, 250 GPM CREDIT.

7. FIRE HYDRANTS THAT HAVE NOT BEEN TESTED AND PLACED INTO SERVICE MUST BE CLEARLY MARKED AS 'OUT OF SERVICE' USING INDUSTRY ACCEPTED METHODS (BAGGING, TAGGING, ETC).

CONNECTIONS TO CITY WATER MAINS

ALL DOUBLE DETECTOR CHECK VALVE ASSEMBLIES (DDCV) INSTALLED TO ISOLATE A PRIVATE FIRE SYSTEM SUPPLYING FIRE HYDRANTS FROM THE CITY'S POTABLE WATER SYSTEM SHALL HAVE TAMPER SWITCH DEVICES INSTALLED ON THE DDCV ASSEMBLY VALVES WHENEVER ANY AUTOMATIC FIRE SPRINKLER SYSTEM IS INSTALLED BEYOND THE DDCV. THESE TAMPER SWITCHES SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM FOR ALL INDIVIDUAL BUILDINGS PROTECTED BY A FIRE SPRINKLER SYSTEM.

FIRE DEPARTMENT CONNECTIONS

ANY FIRE DEPARTMENT CONNECTION SIAMESE (FDC) FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS MUST BE WITHIN 100 FEET OF A FIRE HYDRANT. THE FDC MAY BE INSTALLED DIRECTLY ON THE DOUBLE DETECTOR CHECK VALVE BACK FLOW PREVENTOR AS LONG AS THE REQUIREMENT TO BE WITHIN 100 FEET OF A FIRE HYDRANT IS COMPLIED WITH. FIRE DEPARTMENT CONNECTIONS SHALL BE IDENTIFIED BY A SIGN THAT STATES, "NO PARKING FIRE DEPARTMENT CONNECTION" AND SHALL BE DESIGNED IN ACCORDANCE WITH FDOT STANDARDS FOR INFORMATION SIGNAGE. THE LOCATION OF ANY FDC MUST BE SHOWN ON THE SITE PLANS UTILITY SHEET. CLERMONT REQUIRES APPROVED LOCKING FDC CAPS.

DEDICATED FIRE MAINS

1. THE "POINT OF SERVICE" FOR ANY FIRE MAIN MUST BE CALLED OUT ON THE UTILITY SHEET OF THE SITE PLANS. THIS IS THE POINT WHERE A WATER LINE BECOMES DEDICATED TO ONLY FIRE PROTECTION, SUCH AS SUPPLYING ONLY A FIRE HYDRANT OR FIRE SPRINKLER SYSTEM, AND THERE IS NO POTABLE WATER SUPPLY COMING OFF OF THE WATER LINE BEYOND THIS POINT.

- 2. LABEL DEDICATED FIRE MAINS AT "FL" ON THE SUBMITTED PLANS.
- 3. FIRE MAINS WILL BE SEPARATELY PERMITTED AND INSPECTED BY THE CITY FIRE DEPARTMENT.



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DAVID W. BUTCHER, P.E.
STATE OF FLORIDA
PROFESSIONAL ENGINEER
LICENSE NO. 55431
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BY DAVID W. BUTCHER, P.E.
ON JANUARY 22, 2019
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CITY OF CLERMONT 3335 HANCOCK ROAD CLERMONT, FL 34711 PHONE: (352) 241-0178 FAX: (352) 241-0542

> WOOD PROJECT No: 600365.13

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NO.	DATE	BY	APPROVED
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DESIGNED BY:	DWB
DRAWN BY:	TAC
CHECKED BY:	DWB
APPROVED BY:	DWB
DATE:	1/21/2019

SHEET TITLE:

UTILITY DETAILS

SHEET NUMBER	: REV. #	
C403		
SHEET 24 OF	25 SHEETS	

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