

# CONSTRUCTION PLANS FOR: NWRP Rapid Infiltration Basins (RIBS) Side Slope Liners Replacement Project

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PLANS PREPARED BY:



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. DIMENSION INFORMATION SHOULD NOT BE OBTAINED BY SCALING THE PLANS. DIMENSION INFORMATION NOT PROVIDED HEREIN CAN BE OBTAINED BY CONTACTING ORANGE COUNTY UTILITIES ENGINEERING DIVISION, AT (407)254-9900

ORANGE COUNTY UTILITIES DEPARTMENT  
ENGINEERING DIVISION  
ORANGE COUNTY, FLORIDA

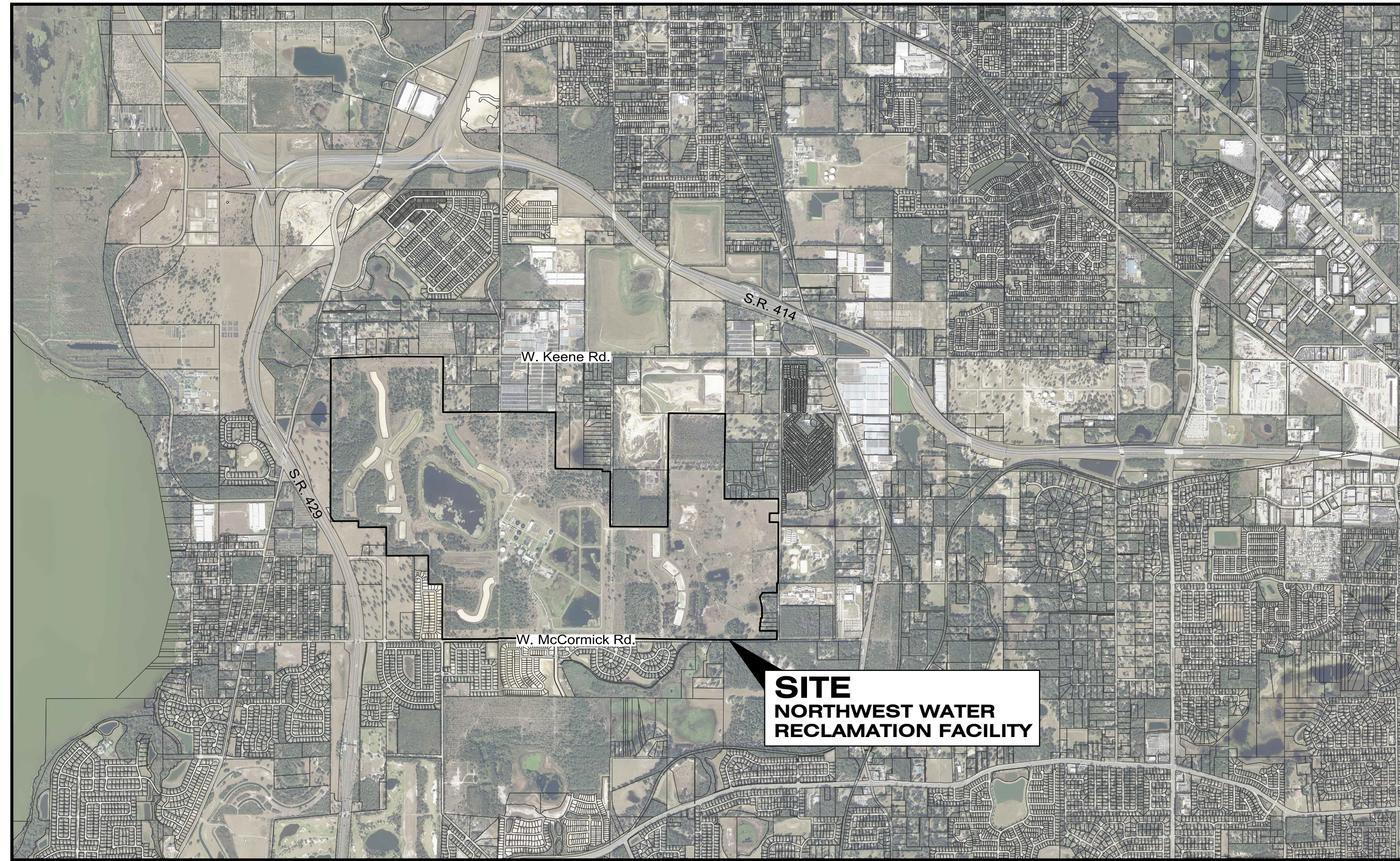
June 2018

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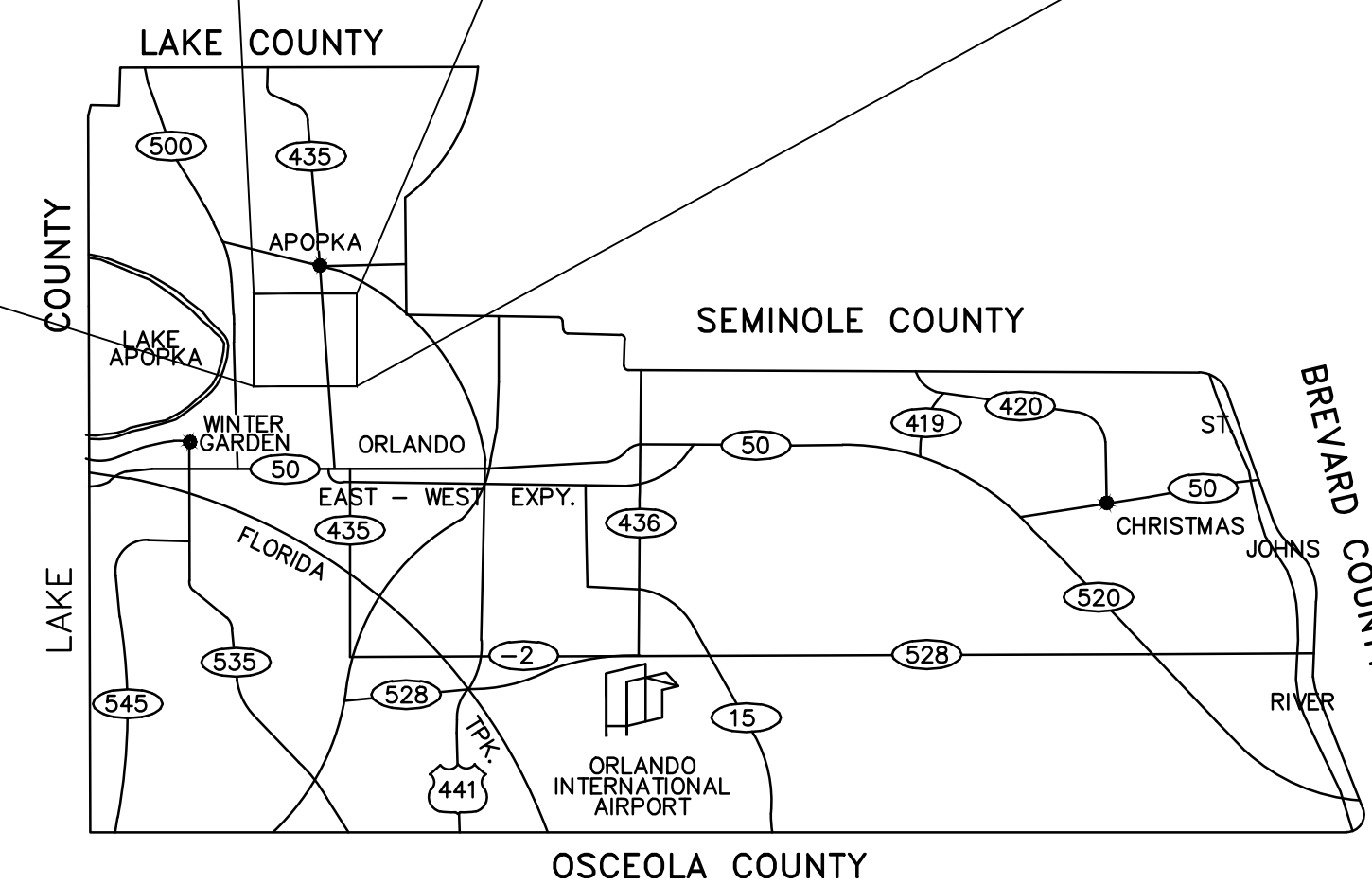
CIP FUNDING CODE:  
• 1435-0012

BID SUBMITTAL

LOCATION MAP



ORANGE COUNTY, FLORIDA  
SCALE: 1" = 2,000'



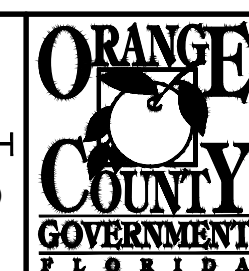
ORANGE COUNTY, FLORIDA  
SCALE: 1" = 50,000'

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REV	DATE	DESCRIPTION

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



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



**A Full Service A & E Firm**  
Licenses:  
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Survey L.B. No. 7143  
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Landscape Lic. No. LC0000298  
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LOCATION MAP AND DRAWING INDEX

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DESIGNED BY: CKJ / ZLT  
DRAWN BY: CKJ  
CHECKED BY: DEM  
CADD FILE: Drawing Index.dwg

SCALE: AS SHOWN  
DRAWING NO.: **G-200**  
SHEET: 2 OF 39

JAMES R. MORRIS, JR.  
PROFESSIONAL ENGINEER  
FLORIDA LICENSE # 62384

**GENERAL NOTES**

ALL WORK AND REQUIREMENTS FROM THE NOTES IN THIS PAGE SHALL BE A REQUIREMENT OF THE CONTRACT AND EXECUTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO ORANGE COUNTY.

- ALL UTILITIES FACILITIES CONSTRUCTION CONNECTING TO THE ORANGE COUNTY PUBLIC UTILITIES SYSTEM SHALL CONFORM TO THE ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL, AND BE ONE OF THE APPROVED PRODUCTS LISTED IN APPENDIX 'D' OF THE MANUAL.
- THE UTILITIES IMPROVEMENTS AND ADJUSTMENT SHOWN ON THESE DRAWINGS ARE INTENDED TO MAINTAIN THE INTEGRITY OF THE ORANGE COUNTY WATER, WASTEWATER, AND RECLAIMED WATER SYSTEMS. THE DRAWINGS DO NOT INCLUDE WORK PERFORMED ON, OR FOR UTILITY SYSTEMS OWNED BY OTHERS, UNLESS STATED OTHERWISE ON THE DRAWINGS.
- COORDINATION AND COMMUNICATIONS WITH ORANGE COUNTY STAFF SHALL BE MADE THROUGH THE ORANGE COUNTY UTILITIES CONSTRUCTION DIVISION INSPECTOR.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ORANGE COUNTY UTILITIES DISPATCH (EMERGENCY ONLY) IN THE EVENT OF UTILITY MAIN BREAK OR DAMAGE AT 407-836-2777.
- THE ORANGE COUNTY UTILITIES CONSTRUCTION DIVISION SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY, OR PRIOR TO ANY ACTIVITY REQUIRING THE PRESENCE OF OR AN ACTION BY UTILITIES STAFF SUCH AS SCHEDULING VALVE OPERATION, PRESSURE TESTING, PIPE CONNECTION, PUMP STATION OPERATIONS OR SHUTDOWNS, ETC.
- WATER, WASTEWATER AND RECLAIMED WATER VALVES, PUMP STATIONS OR OTHER UTILITY INFRASTRUCTURE ARE TO BE OPERATED ONLY BY ORANGE COUNTY UTILITIES PERSONNEL. ALL VALVES BEING INSTALLED ARE TO REMAIN CLOSED DURING CONSTRUCTION.
- ORANGE COUNTY UTILITIES DEPARTMENT TELEPHONE NUMBERS:  
 407-836-2777 ORANGE COUNTY UTILITIES DISPATCH  
 407-254-9798 ORANGE COUNTY UTILITIES CONSTRUCTION DIVISION  
 407-254-9880 ORANGE COUNTY UTILITIES WATER RECLAMATION DIVISION  
 407-254-9850 ORANGE COUNTY UTILITIES WATER DIVISION  
 407-254-9900 ORANGE COUNTY UTILITIES ENGINEERING DIVISION
- SUPPORT AND PROTECT ALL EXISTING UTILITIES. CONTRACTOR SHALL CONTACT UTILITY OWNERS FOR LOCATION OF ALL EXISTING FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY OWNERS AND FOR PROVIDING TEMPORARY SUPPORT FOR THE UTILITY POLES, ANCHOR GUYS, AND ALL OTHER UTILITIES DURING CONSTRUCTION.
- IMMEDIATELY AT ONSET OF CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES CRITICAL TO COMPLETING THE PROJECT (INCLUDING WATER, SEWER, RECLAIMED WATER, POWER, TELEPHONE, GAS, FIBER OPTIC AND CABLE TV) AND SHALL EVALUATE POTENTIAL CONFLICTS IN A WRITTEN REPORT. ANY CONFLICTS SHALL BE REPORTED TO ENGINEER/OWNER IMMEDIATELY UPON DISCOVERY AND DETAILED IN REPORT.
- CONTRACTOR SHALL COORDINATE WITH ALL OTHER UTILITY OWNERS FOR RESOLUTION OF CONFLICTS. CONTRACTOR SHALL HAVE 48 HOURS TO DETERMINE THE RESOLUTION OF ANY UNKNOWN OR UNFORESEEN CONFLICTS. COSTS INCURRED SHALL BE BORNE BY THE UTILITY OWNER AND/OR CONTRACTOR AND NO CLAIMS MAY BE MADE AGAINST ORANGE COUNTY OR THE ENGINEER FOR THESE CONFLICTS. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THE PERIOD OF TIME TO RESOLVE ANY CONFLICTS.
- ALL MAIN REPAIRS TO BE COMPLETED IMMEDIATELY BY THE CONTRACTOR, AT THE CONTRACTOR'S COST. IF THE MAIN IS NOT REPAIRED IN A TIMELY MANNER, AS DETERMINED BY THE ENGINEER, ORANGE COUNTY UTILITIES PERSONNEL MAY REPAIR MAIN AND THE CONTRACTOR WILL BE BACK CHARGED FOR REPAIRS.
- CONTRACTOR SHALL COORDINATE WITH ALL OTHER UTILITY OWNERS FOR RESOLUTION OF CONFLICTS. CONTRACTOR SHALL HAVE 48 HOURS TO DETERMINE THE RESOLUTION OF ANY UNKNOWN OR UNFORESEEN CONFLICTS. COSTS INCURRED SHALL BE BORNE BY THE UTILITY OWNER AND/OR CONTRACTOR AND NO CLAIMS MAY BE MADE AGAINST ORANGE COUNTY OR THE ENGINEER FOR THESE CONFLICTS. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THE PERIOD OF TIME TO RESOLVE ANY CONFLICTS.
- USE EXTREME CAUTION WHEN EXCAVATING OR CONNECTING TO ASBESTOS CEMENT PIPE. THE CONTRACTOR WILL BE REQUIRED TO SUPPLY TRUCKS CAPABLE OF PUMPING OUT THE PUMP STATION UPSTREAM FROM BREAKS OR CONNECTION POINT. WHEN CONNECTING TO ASBESTOS CEMENT WATER MAIN OR FORCE MAIN THE CONTRACTOR IS REQUIRED TO REPLACE ANY DAMAGED LENGTHS OF PIPE. THE AMOUNT OF REPLACED PIPE WILL BE DETERMINED BY THE ORANGE COUNTY UTILITIES INSPECTOR.
- ALL ASBESTOS CEMENT PIPE SHALL BE TAKEN OUT OF SERVICE, GROUTED AND ABANDONED IN PLACE. UNLESS OTHERWISE NOTED ON PLANS.
- ALL EXISTING AND NEW OCU WATER AND SEWER VALVES, VALVE BOXES, AND MANHOLES SHALL BE PROTECTED AND ADJUSTED TO FINISHED GRADE AS SHOWN ON THE DRAWINGS. VALVE AND VALVE BOXES SHALL REMAIN ACCESSIBLE AT ALL TIMES. ANY VALVES THAT MIGHT BE COVERED DURING CONSTRUCTION SHALL BE MARKED WITH A MARKER (GREEN FOR SEWER, BLUE FOR WATER, AND PURPLE FOR RECLAIMED WATER MAIN). A MINIMUM OF FOUR (4) FEET ABOVE GRADE. ALL VALVES UNDER CONSTRUCTION ARE TO REMAIN CLOSED DURING CONSTRUCTION.
- SEE DETAIL SHEET FOR SEPARATION REQUIREMENTS BETWEEN WATER MAINS, SEWER MAINS AND OTHER PIPELINES AND MAINS. NO CONCRETE ENCASEMENT OF PIPES WILL BE PERMITTED.
- ALL PVC WATER AND SEWER MAIN AND RECLAIMED WATER MAIN SHALL CONFORM TO AWWA C900, DR 18, OR C905, DR 25. ALL DUCTILE IRON WATER MAIN PIPE SHALL CONFORM TO ANSI/AWWA A21.51/C151. ALL PVC PRESSURE PIPE SHALL USE DUCTILE IRON FITTINGS.
- PVC PIPE 4-INCH TO 12-INCH SHALL CONFORM TO THE REQUIREMENTS OF AWWA STANDARD C900, DR18. PVC PIPE 16-INCH TO 30-INCH SHALL CONFORM TO THE REQUIREMENTS OF AWWA STANDARD C905, DR18. 36-INCH PVC PIPE SHALL CONFORM TO AWWA STANDARD C905, DR21. ALL PVC PRESSURE PIPE SHALL USE DUCTILE IRON FITTINGS. ALL DUCTILE IRON WATER MAIN SHALL CONFORM TO ANSI/AWWA A25.1/C151. ALL MATERIAL FOR USE IN POTABLE WATER SYSTEMS SHALL BE LISTED AS MEETING NSF-61.
- ALL EXPOSED DUCTILE IRON MECHANICAL JOINT FITTINGS, PIPES, OR PIPE RESTRAINTS WITHIN FORTY (40) FEET OF EXISTING GAS MAINS SHALL BE POLYETHYLENE ENCASED.
- ALL BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180 METHOD 'D' TEST (MODIFIED PROCTOR) IN OPEN AREAS AND TO NOT LESS THAN 98% MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180 METHOD 'D' TEST (MODIFIED PROCTOR) UNDER ASPHALT OR CONCRETE PAVEMENT AND WITHIN 3-FT OF PAVEMENT. ALL SOIL TESTING TO BE CONDUCTED BY THE COUNTY. THE CONTRACTOR SHALL PROVIDE ALL REASONABLE ASSISTANCE DURING SOIL TESTING.
- PIPE LENGTHS SHOWN ON PLANS ARE APPROXIMATE. ACTUAL LENGTHS ARE TO BE DETERMINED DURING CONSTRUCTION.
- PIPE AND MANHOLE LINER LENGTHS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LENGTH OF LINER TO BE INSTALLED.
- ALL NORTHING AND EASTING COORDINATES ARE BASED ON THE STATE PLAIN COORDINATE SYSTEM. STATIONING IS FOR REFERENCE ONLY.
- ALL STATIONS AND OFFSET REFER TO BASELINE OF STATIONING.
- MAINTAIN EMERGENCY VEHICLE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES.
- IN AREAS WHERE CONSTRUCTION ACTIVITIES RESTRICT NORMAL ACCESS TO PROPERTIES, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALTERNATE ACCESS ROUTES WHICH ARE SUBJECT TO APPROVAL BY THE ENGINEER, AS PART OF THE M.O.T. PLAN.

- LOCAL RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES. PROVIDE WRITTEN NOTIFICATION TO RESIDENTS SEVEN (7) DAYS PRIOR TO IMPLEMENTING ANY ROADWAY OR DRIVEWAY CLOSURE.
- ALL EXCAVATIONS SHALL BE BACK FILLED AT THE END OF EACH WORK DAY. ALL FINAL BACK FILL SHALL BE COMPACTED TO 98% OF MAXIMUM MODIFIED PROCTOR.
- ALL MAINS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. A MINIMUM COVER OF 36-INCHES SHALL BE MAINTAINED ON ALL MAINS, WHERE IT IS NOT OTHERWISE SPECIFIED ON PLANS OR DIRECTED BY THE ENGINEER.
- ALL PIPES AND FITTINGS SHALL BE MECHANICALLY RESTRAINED. NO THRUST BLOCKS SHALL BE PERMITTED.
- COMPLETE ALL CONSTRUCTION WITHIN RIGHT OF WAY LIMITS AND EASEMENT LIMITS, UNLESS OTHERWISE NOTED.
- PIPE SIZES SHOWN ON PLANS ARE MINIMUM INSIDE DIAMETER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DE-WATERING REQUIRED DURING CONSTRUCTION AND TO OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR THE TEMPORARY DE-WATERING.
- CONTRACTOR SHALL INSTALL AIR RELEASE VALVES (ARV) AT ALL HIGH POINTS IN THE SYSTEM WHERE AIR CAN ACCUMULATE. AIR RELEASE VALVES AND APPURTENANCES SHALL BE COLOR CODED BLUE FOR WATER, GREEN FOR SEWER, AND PURPLE FOR RECLAIMED. STATIONING FOR AIR RELEASE VALVES IS APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH THE OCU INSPECTOR.
- WHERE SHOWN ON THE PLANS, LINE STOPS WILL BE USED TO ISOLATE PORTIONS OF THE EXISTING MAINS. THE ORANGE COUNTY INSPECTOR SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF LINE STOP INSTALLATION.
- ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE BY THE CONTRACTOR ONLY AFTER THE PROPOSED CONNECTION PROCEDURE AND WORK SCHEDULE HAVE BEEN REVIEWED AND ACCEPTED BY THE OWNER. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE OWNER A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO SCHEDULING ANY CONNECTIONS. THE REQUEST SHALL REFERENCE THE PROFESSIONAL LAND SURVEYOR CERTIFIED COMPLETED AS-BUILT RECORD DRAWINGS PREVIOUSLY SUBMITTED AND SHALL OUTLINE THE FOLLOWING:
  - POINTS OF CONNECTION, FITTINGS TO BE USED, METHODS OF FLUSHING AND DISINFECTION AND VERIFICATION OF RESTRAINT ON EXISTING PIPE.
  - ESTIMATED CONSTRUCTION TIME FOR THE CONNECTIONS.
  - THE OWNER SHALL REVIEW THE SUBMITTAL WITHIN FIVE (5) WORKING DAYS AFTER RECEIVING IT AND INFORM THE CONTRACTOR REGARDING APPROVAL OR DENIAL OF THE REQUEST. IF THE OWNER REJECTS THE REQUEST, THE CONTRACTOR SHALL RESUBMIT THE REQUEST MODIFYING IT IN A MANNER ACCEPTABLE TO THE OWNER. ALL CONNECTIONS SHALL ONLY BE MADE ON THE AGREED UPON DATE AND TIME.
  - SHOULD THE CONTRACTOR NOT INITIATE AND COMPLETE THE CONNECTION WORK IN THE AGREED UPON MANNER, HE SHALL BE REQUIRED TO RESCHEDULE THE CONNECTION BY FOLLOWING THE PROCEDURE OUTLINED ABOVE.
  - THE CONTRACTOR SHALL NOT OPERATE ANY VALVES IN THE SYSTEM.
  - MAINS SHALL NOT BE PLACED IN SERVICE UNTIL CLEARANCE IS RECEIVED FROM FDEP.
  - AS-BUILT DRAWINGS MUST BE COMPLETED AND SUBMITTED PRIOR TO WATER MAIN CHLORINATION.
- PROTECT EXISTING IMPROVEMENTS TO THE MAXIMUM EXTENT POSSIBLE. RESTORE ALL EXISTING IMPROVEMENTS AND DISTURBED AREAS TO ORIGINAL CONDITION. PAVEMENT TO BE RESTORED IN ACCORDANCE WITH THE PAVEMENT RESTORATION DETAILS SHOWN ON THE CONSTRUCTION DETAIL SHEETS. ALL DAMAGED MAILBOXES, IRRIGATION SYSTEMS, FENCING, SIDEWALK, ROADWAY PAVEMENT AND OTHER IMPROVEMENTS SHALL BE RESTORED TO ORIGINAL CONDITION.
- ALL COUNTY ROADS TO BE OPEN CUT SHALL BE APPROVED BY ORANGE COUNTY PUBLIC WORKS PRIOR TO OPEN-CUTS. SUBMIT A MAINTENANCE OF TRAFFIC (MOT) PLAN CONFORMING TO ORANGE COUNTY RIGHT-OF-WAY UTILIZATION REGULATIONS TO ORANGE COUNTY PUBLIC WORKS A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY WORK WITHIN COUNTY RIGHT-OF-WAY. A COPY OF THIS PLAN SHALL ALSO BE SUBMITTED TO THE ENGINEER AND UTILITY COUNTY INSPECTOR. NOTIFY THE COUNTY ENGINEER 48 HOURS PRIOR TO ANY OPEN CUT OF ROADWAYS OR JACK AND BORE OPERATIONS WITHIN THE COUNTY RIGHT-OF-WAY. TWO WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION. MAINTAIN A SET OF COUNTY APPROVED CONSTRUCTION PLANS AND MOT PLANS AT THE CONSTRUCTION SITE AT ALL TIMES WHEN WORKING WITHIN THE COUNTY RIGHT-OF-WAY.
- BENCHMARK LOCATIONS AND ELEVATIONS ARE SHOWN IN THE PLANS AS REPRESENTED BY THE SURVEYOR AT THE TIME OF SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT THE TIME OF CONSTRUCTION AND INSTALL HIS OWN TEMPORARY BENCHMARKS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OCU UTILITIES INSPECTOR.
- NO VALVE BOXES, METERS, PORTIONS OF MANHOLES, OR OTHER APPURTENANCES OF ANY KIND RELATING TO ANY UNDERGROUND UTILITIES SHALL BE LOCATED IN ANY PORTION OF A CURB-AND-GUTTER SECTION. CONTRACTOR SHALL ADVISE ENGINEER IMMEDIATELY UPON DISCOVERY OF A POTENTIAL CONFLICT.
- WHERE REQUIRED, AT NO ADDITIONAL COST TO THE COUNTY, THE CONTRACTOR SHALL USE TEMPORARY SHEETING OR TRENCH BOXES TO MINIMIZE THE SIZE OF EXCAVATIONS AND PROTECT EXISTING ROADWAYS, UTILITIES AND OTHER FACILITIES OR AS NEEDED TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTOR TO COMPLY WITH OSHA TRENCH SAFETY REQUIREMENTS AT ALL TIMES.
- CONTRACTOR TO PROVIDE DETAILED AS-BUILT DRAWINGS OF ALL UTILITIES UNCOVERED IN TRENCHES. THE AS-BUILT SHALL RECORD LOCATION, SIZE, TYPE, ELEVATION AND OWNER OF ALL UTILITY FACILITIES UNCOVERED.
- ALL EXISTING MAINS SHALL REMAIN IN SERVICE UNTIL THE PROPOSED MAIN(S) ARE ACCEPTED FOR SERVICE AND ALL SERVICES ARE TRANSFERRED TO THE MAIN(S).
- CONTRACTOR SHALL APPLY FOR AND SECURE ALL NECESSARY PERMITS FROM STATE, COUNTY, AND LOCAL MUNICIPALITIES. PERMITS SHALL INCLUDE, BUT NOT BE LIMITED TO, RIGHT OF WAY USE, CONSTRUCTION, BUSINESS LICENSE, AND DEWATERING.
- FOR PVC PIPE NO HORIZONTAL/VERTICAL PIPE DEFLECTION WILL BE ALLOWED. CONTRACTOR SHALL USE FITTINGS TO OBTAIN THE REQUIRED CLEARANCES. ON DUCTILE IRON PIPE CONTRACTOR SHALL NOT EXCEED 75% OF THE MANUFACTURES RECOMMENDATION FOR PIPE DEFLECTION. OTHERWISE USE FITTINGS TO OBTAIN REQUIRED CLEARANCES. ALL FITTINGS SHALL BE ADDED TO THE COORDINATE ASSET ATTRIBUTE TABLE.
- UTILITY MAIN MARKERS ARE REQUIRED WHEN UTILITY MAIN IS LOCATED OVER 30 FEET FROM EDGE OF PAVEMENT OR IN AN EASEMENT NOT ADJACENT TO THE RIGHT OF WAY.
- THE DISPOSAL OF ANY EXCESS EARTH WORK MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SALVAGE AND/OR DISPOSAL OF ALL MATERIALS AND EQUIPMENT AS DIRECTED BY THE ORANGE COUNTY UTILITIES INSPECTOR.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP I CONSTRUCTION AND ARE THE MINIMUM REQUIRED. CONTRACTOR SHALL FURNISH ADDITIONAL CONTROLS AS NEEDED AT NO ADDITIONAL COST. MATERIALS FROM WORK ON THIS PROJECT SHALL BE CONTAINED AND NOT ALLOWED TO COLLECT ON ANY OFF PERIMETER AREAS OR IN WATERWAYS. SILK SCREENS, HAY BALES, AND TURBIDITY BARRIERS MUST REMAIN IN PLACE AND IN GOOD CONDITION AT ALL LOCATIONS IN PLANS OR AS REQUIRED UNTIL THE CONTRACT IS COMPLETED AND SOILS ARE STABILIZED AND VEGETATION IS ESTABLISHED. MEASURES SHOWN ON THE PLANS ARE MINIMUM REQUIRED, AND THE CONTRACTOR SHALL ENSURE THAT THERE IS NO DIRECT OR INDIRECT DISCHARGE OF CONSTRUCTION MATERIALS IN TURBID WATERS TO OFF SITE AREAS OR WATERWAYS.
- ALL DISTURBED AREAS OUTSIDE OF RIBS AND LINED SIDE SLOPES SHALL BE RE-SODDED.
- REMOVE AND REPLACE EXISTING BOLLARDS FOLLOWING RIB BOTTOM RESHAPING.
- REMOVE ALL VEGETATION FROM RIB BOTTOMS (TYPICAL ALL RIBS). ALL CLEARED VEGETATION SHALL BE PROPERLY DISPOSED.

**CONSTRUCTION ASSISTANCE REQUEST (C.A.R.) NOTES**

- A CONSTRUCTION ASSISTANCE REQUEST (C.A.R.) WILL BE REQUIRED FOR ALL CONTACT WITH EXISTING PERSONNEL, I.E. TIE IN, SPARE PARTS, TRAINING, ETC.. A 7-DAY NOTICE IS REQUIRED FOR ALL C.A.R.'S
- ALL CONTACT, REQUEST, COORDINATION WITH ALL COUNTY PERSONNEL INCLUDING BUT NOT LIMITED TO NWR'S OPERATION STAFF FOR ANY REASON SHALL BE INITIATED THROUGH OWNERS RESIDENT PROJECT REPRESENTATIVE (R.P.R.) IN WRITING BY THE CONTRACTOR PROCESSING A CONSTRUCTION ASSISTANCE REQUEST (C.A.R.). CONTRACTOR WILL NOT HAVE CONTACT WITH ANY COUNTY PERSONNEL WITH PROCESSING OF A C.A.R. THROUGH THE COUNTY'S R.P.R.

**EROSION AND SEDIMENT CONTROLS**

- AN EROSION CONTROL PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT AS THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY AND CAPACITY OF CHECK WEIRS, SEDIMENT BASINS, SLOPE DRAINS, GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE HAY BALES, SILT BARRIERS, TEMPORARY GRASSING, ETC. AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION. PROVIDE STORM WATER BY-PASS PIPING OF PUMPING TO MAINTAIN DRAINAGE IN ALL LOCATIONS NECESSARY FOR EQUIPMENT STAGING.
  - STOCKPILING MATERIAL**  
NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
  - EXPOSED AREA LIMITATION**  
THE SURFACE AREA OF OPEN, RAW ERODABLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE CONTROLLED, SO THAT THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFFSITE DEPOSIT SEDIMENTS.
  - INLET PROTECTION**  
INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORMWATER RUNOFF UNTIL THE COMPLETION OF THE ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
  - TEMPORARY SEEDING**  
AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY (30) DAYS SHALL BE SEEDDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER, DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED SO AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 POUNDS PER ACRE.
  - TEMPORARY SEEDING AND MULCHING**  
SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN 4 ABOVE, SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY TWO (2) INCHES, LOOSE MEASURE, OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDDED AREA TO A DEPTH OF FOUR (4) INCHES.
  - TEMPORARY GRASSING**  
SEEDDED OR SEEDDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
  - TEMPORARY RE-GRASSING**  
IF, AFTER 14 DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEEDS APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.
  - MAINTENANCE**  
ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENT AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.
- TEMPORARY SILT FENCES AND STAKED SILT BARRIERS, SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATION, SEC. 104.6, 104.7 AND SEC. 985 AND SHALL BE INSTALLED ALONG PROJECT LIMITS.
- ALL DISTURBED AREAS SHALL BE RESTORED WITH SOD (NO SEED AND MULCH) WITH THE SAME TYPE OF SOD UNLESS NOTED OTHERWISE ON PLANS.

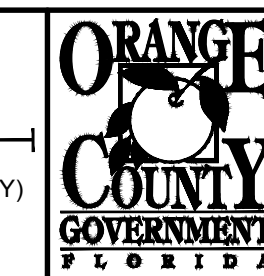
**EMERGENCY NUMBERS**

UTILITIES ORANGE COUNTY DISPATCH ----- 407-836-2777 (24-HR ASSISTANCE)  
 WASTEWATER ORANGE COUNTY UTILITIES (O. C. U.) ----- 407-254-9680

**GENERAL NOTES**

REV	DATE	DESCRIPTION

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



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



**A Full Service A & E Firm**  
 Architects W/E/P  
 Engineers Planners  
 Environmental Surveyors  
 Landscape Architects Traffic/Transportation  
 Licenses:  
 Eng. C.O.A. No. 3215  
 Survey L.B. No. 7143  
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SCALE: AS SHOWN  
 DRAWING NO.: **G-300**  
 SHEET: 3 OF 39

**Line Legend:**

NOT TO SCALE

- 1--- = 1 FOOT CONTOURS
- 5--- = 5 FOOT CONTOURS
- - - - - = ADJOINER PROPERTY LINES
- x-x-x- = BARBED WIRE FENCE
- - - - - = BROKEN LINE
- uc--- = BURIED CABLE
- uctv--- = BURIED CABLE TELEVISION
- ue--- = BURIED ELECTRIC
- ufo--- = BURIED FIBER OPTICS
- ug--- = BURIED GAS
- urw--- = BURIED RECLAIMED WATER LINE
- san--- = BURIED SANITARY LINES
- fm--- = BURIED SANITARY SEWER FORCE MAIN LINE
- tc--- = BURIED TRAFFIC CONTROL
- ut--- = BURIED TELEPHONE LINE
- uw--- = BURIED WATER LINES
- --- = CENTER LINE R/W
- --- = CHAIN LINK FENCE
- --- = EASEMENT LINES (EXISTING)
- --- = EASEMENT LINES (PROPOSED)
- --- = EDGE OF WATER LINES
- --- = EXISTING DRAINAGE PIPES
- --- = EXISTING DRAINAGE PIPES (OUTFALL NOT LOCATED)
- fw--- = FIRE WATER MAIN LINES
- hw--- = HOT WATER SUPPLY LINES
- irr--- = IRRIGATION LINES
- otl--- = OVERHEAD TRAFFIC LINES
- ouh--- = OVERHEAD UTILITY LINES
- --- = RAILROAD TRACKS
- --- = RIGHT-OF-WAY LINES
- --- = SECTION LINES
- --- = STONE WALL LINES
- --- = TOP OF BANK LINES
- --- = TOE OF SLOPE LINES
- --- = TREE LINES
- --- = TRAVERSE LINES
- unk--- = UNKNOWN BURIED LINES
- --- = VINYL FENCE
- --- = WOOD FENCE
- --- = WETLAND LINE
- op--- = ORANGE PAINT LINE
- gp--- = GREEN PAINT LINE
- rp--- = RED PAINT LINE
- wp--- = WHITE PAINT LINE
- pp--- = PURPLE PAINT LINE
- bp--- = BLUE PAINT LINE
- yp--- = YELLOW PAINT LINE

**Symbol Legend:**

NOT TO SCALE

- ARV - AIR RELEASE VALVE
- BHL - BORING HOLE LOCATION
- BPV - BRICK PAVERS
- CTV - CABLE TV RISER
- CA - CLEAN OUT
- CON - CONCRETE
- CLP - CONCRETE LIGHT POLE
- CLP(D) - CONCRETE LIGHT POLE (DUAL)
- CLP(T) - CONCRETE LIGHT POLE (TRIPLE)
- CLP(Q) - CONCRETE LIGHT POLE (QUAD)
- CE - CONCRETE MITERED END SECTION
- CP - CONCRETE PAVERS
- CRP - CONCRETE RIP RAP
- CUP - CONCRETE UTILITY POLE
- CRS - COUNTY ROAD SYMBOL
- CSP - CROSSWALK SIGNAL POLE
- DWA - DETECTABLE WARNING AREA
- DS - DUAL SUPPORT SIGN
- EM - ELECTRICAL MANHOLE
- EMM - ELECTRICAL METER
- EJB - ELECTRICAL JUNCTION BOX
- EO - ELECTRIC OUTLET
- ER - ELECTRIC RISER
- FOM - FIBER OPTIC MARKER
- FH - FIRE HYDRANT
- FL - FLOOD LIGHT
- FCM - FOUND CONCRETE MONUMENT (AS NOTED)
- FIP - FOUND IRON PIPE (AS NOTED)
- FIR - FOUND IRON REBAR (AS NOTED)
- FNS - FOUND/SET NAIL (AS NOTED)
- GC - GARBAGE CAN
- GM - GAS MARKER
- GV - GAS VALVE
- GT - GOPHER TORTOISE HOLE
- GI - GRATE INLET
- GD - GRAVEL/DIRT
- GTM - GREASE TRAP MANHOLE
- GL - GROUND LIGHT
- GA - GUY ANCHOR
- HPS - HANDICAP PARKING SPACE
- IS - INTERSTATE SYMBOL
- ICV - IRRIGATION CONTROL VALVE
- IP - LIGHT POLE
- LP - LIGHT POLE (DUAL)
- LP - LIGHT POLE (TRIPLE)
- LP - LIGHT POLE (QUAD)
- MB - MAILBOX
- MW - MONITOR WELLS
- ND - NAIL & DISC (AS NOTED)
- PS - PARKING SPACES (2)
- PB - PULL BOX (AS NOTED)
- BM - BENCH MARK
- RC - REVISION NUMBER (3)
- RWM - RECLAIMED WATER METER
- RD - RECLAIMED WATER VALVE
- RD - ROOF DRAIN
- SSM - SANITARY SEWER MANHOLE
- SSV - SANITARY SEWER VALVE
- SBI - SCHEDULE B ITEM NUMBER (8)
- SC - SECTION CORNER
- SI - 4" X 4" CM LB #7143
- SI - 5/8" IR&C LB #7143
- SG - SIGN
- SBM - SITE BENCH MARK
- SSM - STORM SEWER MANHOLE
- SSV - STRIPING (DIRECTIONAL)
- TCR - TELEPHONE CABLE RISER
- TM - TELEPHONE MANHOLE
- TJM - TELEPHONE JUNCTION BOX
- TH - TEST HOLE
- TSSB - TRAFFIC SIGNAL BOX
- TSSP - TRAFFIC SIGNAL SUPPORT POLE
- UM - UNKNOWN MANHOLE
- UM - UNKNOWN UTILITY MARKER
- UR - UNKNOWN RISER
- UV - UNKNOWN VALVE
- VENT - VENT (AS NOTED)
- WATER - WATER METER
- WATER - WATER SERVICE
- WATER - WATER SPIGOT
- WATER - WATER SPRINKLER
- WATER - WATER VALVE
- WELL - WELL
- WFL - WETLAND FLAG
- WUP - WOOD UTILITY POLE
- WLM - WATER LINE MARKER
- WH - WIRE HEIGHTS (SEE CHART)

**Abbreviation Legend:**

- (A) - ACTUAL
- A/C - AIR CONDITIONER
- ACSM - AMERICAN CONGRESS ON SURVEYING & MAPPING
- ADA - AMERICANS WITH DISABILITIES ACT
- ALTA - AMERICAN LAND TITLE ASSOCIATION
- APPROX - APPROXIMATE
- ARV - AIR RELEASE VALVE
- AVE - AVENUE
- AVG - AVERAGE
- (BB) - BEARING BASIS
- BFP - BACK FLOW PREVENTER
- BLK - BLOCK
- BLDG - BUILDING
- BLVD - BOULEVARD
- BM - BENCH MARK
- BOC - BACK OF CURB
- BOW - BACK OF WALK
- BSL - BUILDING SETBACK LINE
- BWF - BARBED WIRE FENCE
- C-X - DENOTES SHEET NUMBERING FOR ENGINEERING PLANS
- (C) - CALCULATED
- CHORD - CHORD
- CATV - CABLE TELEVISION RISER
- CB - CHORD BEARING
- CBS - CONCRETE BLOCK STRUCTURE
- C.C.R. - CERTIFIED CORNER RECORD
- CGG - CURB & GUTTER
- CI - CATCH INLET
- C/L - CENTERLINE
- CLF - CHAIN LINK FENCE
- CM - CONCRETE MONUMENT
- CMP - CORRUGATED METAL PIPE
- CO - CLEANOUT
- CONC - CONCRETE
- COR - CORNER
- CRPP - CORRUGATED PLASTIC PIPE
- CUE - COUNTY UTILITY EASEMENT
- CWS - CROSSWALK SIGNAL
- DELTA - DELTA
- (D) - DESCRIPTION
- DEB - DEED BOOK
- DBH - DIAMETER AT BREAST HEIGHT IN INCHES
- DE - DRAINAGE EASEMENT
- DEPT - DEPARTMENT
- DIP - DUCTILE IRON PIPE
- DR - DRIVE
- D/U - DRAINAGE AND UTILITY EASEMENT
- (E) - ENGINEERING PLAN
- EJB - ELECTRIC JUNCTION BOX
- EL - UNDERGROUND ELECTRICAL LINES
- ELEC - ELECTRIC
- ELEV - ELEVATION
- ELLIP - ELLIPTICAL
- EOI - END OF INFORMATION
- EOP - EDGE OF PAVEMENT
- FB - FIELD BOOK
- FDOT - FLORIDA DEPARTMENT OF TRANSPORTATION
- FF - FINISH FLOOR
- FGI - FLAT GRATE INLET
- FGLP - FIBERGLASS LIGHT POLE
- FHYD - FIRE HYDRANT
- FM - FORCE MAIN
- FND - FOUND
- FP&L - FLORIDA POWER AND LIGHT
- FS - FLORIDA STATUTES
- (G) - GRID (STATE PLANE)
- GL - UNDERGROUND GAS LINES
- GOV'T - GOVERNMENT
- GPR - GROUND PENETRATING RADAR
- GTMH - GREASE TRAP MANHOLE
- HDPE - HIGH DENSITY POLYETHYLENE PIPE
- HWF - HOG WIRE FENCE
- ID - IDENTIFICATION
- ICV - IRRIGATION CONTROL VALVE
- INFO - INFORMATION
- INV - INVERT
- IP - IRON PIPE
- IP&C - IRON PIPE & CAP
- IR - IRON ROD
- IR&C - IRON REBAR & CAP
- IRR - IRRIGATION
- L - ARC LENGTH
- LP# - LICENSED BUSINESS NUMBER
- LP - LIGHT POLE
- (M) - MEASURED
- MB - MAP BOOK
- MBX - MAILBOX
- MES - MITERED END SECTION
- MH - MANHOLE
- MLP - METAL LIGHT POLE
- MPH - MILES PER HOUR
- MPP - METAL POWER POLE
- N/A - NOT APPLICABLE
- NAD - NORTH AMERICAN VERTICAL DATUM
- NAD - NORTH AMERICAN DATUM
- NG - NATURAL GROUND
- NGS - NATIONAL GEODETIC SURVEY
- NGVD - NATIONAL GEODETIC VERTICAL DATUM
- N & D - NAIL AND DISK
- NO - NUMBER
- NR - NON-RADIAL
- NSPS - NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
- NT - NON-TANGENT
- NTS - NOT TO SCALE
- OD - OUTSIDE DIAMETER
- ORB - OFFICIAL RECORDS BOOK
- OR - OFFICIAL RECORDS
- OUL - OVERHEAD UTILITY LINES
- OTL - OVERHEAD TRAFFIC LINES
- (P) - PLAT
- PB - PLAT BOOK
- PC - POINT OF CURVATURE
- PCC - POINT OF COMPOUND CURVATURE
- PCP - PERMANENT CONTROL POINT
- PFF - PROPOSED FINISHED FLOOR
- PG - PAGE
- PGS - PAGES
- PJ - POINT OF INTERSECTION
- PIV - POST INDICATOR VALVE
- PK - PARKER KAYLON
- POB - POINT OF BEGINNING
- PQC - POINT OF COMMENCEMENT
- POL - POINT ON LINE
- PP - POWER POLE
- PRC - POINT OF REVERSE CURVATURE
- PRM - PERMANENT REFERENCE MONUMENT
- PSM - PROFESSIONAL SURVEYOR & MAPPER
- PT - POINT OF TANGENCY
- PVC - POLYVINYL CHLORIDE PIPE
- PWMT - PAVEMENT
- R21E - RANGE 21 EAST
- R - RADIUS
- RAD - RADIAL
- RCP - REINFORCED CONCRETE PIPE
- REC - RECOVERED
- REV - REVISION
- RIB - RAPID INFILTRATION BASIN
- RP - RADIUS POINT
- R/W - RIGHT-OF-WAY
- RLS - REGISTERED LAND SURVEYOR
- RP - RADIUS POINT
- RWL - UNDERGROUND RECLAIM WATER LINE
- RWM - RECLAIMED WATER METER
- SE - SPECIAL EASEMENT
- SEC 28 - SECTION 28
- SMH - SANITARY SEWER MANHOLE
- (SP) - STATE PLANE
- SO - SQUARE
- SQ FT - SQUARE FEET
- ST - STREET
- STMH - STORM DRAINAGE MANHOLE
- S/W - SIDEWALK
- TB - TANGENT BEARING
- T28S - TOWNSHIP 28 SOUTH
- TELE - TELEPHONE
- TL - OVERHEAD TRAFFIC SIGNAL LINES
- TOB - TOP OF BANK
- TOS - TOE OF SLOPE
- TR - TELEPHONE RISER
- TRANS - TRANSFORMER
- TSB - TRAFFIC SIGNAL BOX
- TSSP - TRAFFIC SIGNAL SUPPORT POLE
- TYL - UNDERGROUND CABLE TV LINES
- (TYP) - TYPICAL
- UE - UTILITY EASEMENT
- UNK - UNKNOWN
- UTL - UNDERGROUND TELEPHONE LINES
- W/ - WITH
- WL - UNDERGROUND WATER LINE
- WLP - WOOD LIGHT POLE
- WM - WATER METER
- WP - WORK PROGRAM
- WPF - WOOD POST FENCE
- WPP - WOOD POWER POLE
- WV - WATER VALVE

**Sheet Legend:**

NOT TO SCALE

