PROPOSED IMPROVEMENTS FOR:

PHASE 3B SEPTIC TO SEWER

59TH AVE & 58TH CT VERO BEACH, FL 32967



DEPARTMENT OF UTILITY SERVICES WATER, WASTEWATER, & RECLAIMED WATER UTILITY CONSTRUCTION STANDARDS

MAY 2019

GENERAL STATEMENT

THE PROPOSED WORK SHALL INCLUDE INSTALLATION OF A GRAVITY SEWER MAIN WITH SERVICE LATERALS TO ALL EXISTING PROPERTIES AND STUB OUTS TO PROPOSED FUTURE LOTS. PROPOSED GRAVITY SEWER WILL DRAIN TO PROPOSED IRCDUS LIFT STATION.

UTILITY AGENCY AND CONTACTS

SANITARY SEWER INDIAN RIVER COUNTY UTILITIES

& 1801 27TH ST.WATER VERO BEACH, FL 32960

CONTACT: ROBERT J. TOBAR, E.I.

PHONE: (772) 226-1801

NATURAL GAS FLORIDA PUBLIC UTILITIES

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TRAFFIC INDIAN RIVER COUNTY TRAFFIC

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CONTACT: ERIK FERGUSON, P.E. PHONE: (772) 226-1568

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1801 27TH ST.

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TELECOMMUNICATION ROAD MOVES-AT&T 3300 OKEECHOBEE RD.

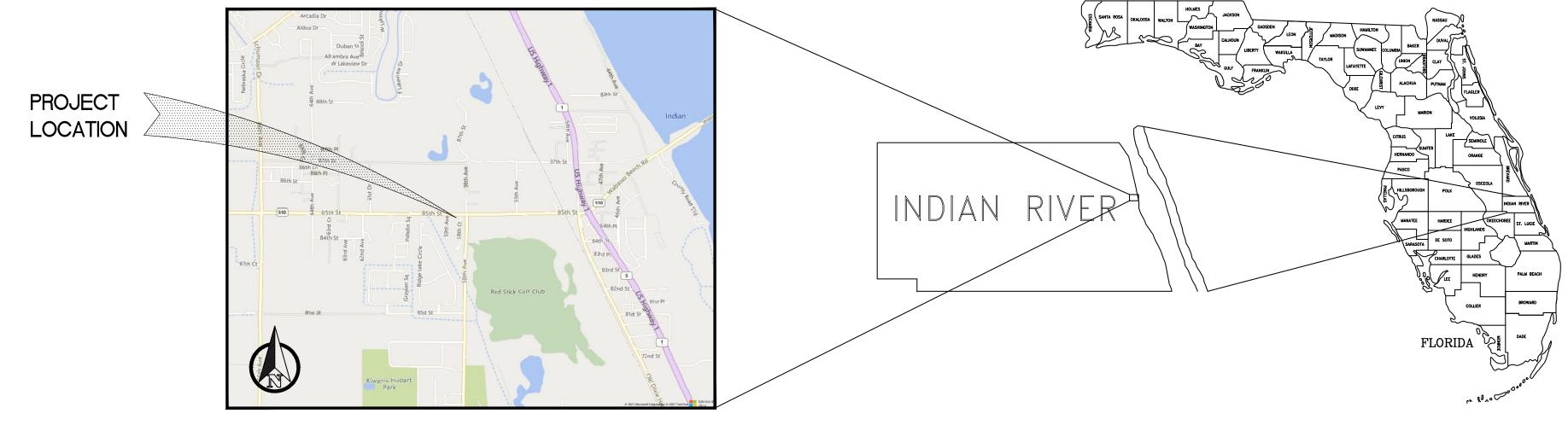
ROOM 237 FORT PIERCE, FL 34947

CONTACT: MARK GUTIERREZ PHONE: (772) 460-4443

DATUM NOTE

ALL ELEVATIONS SHOWN HEREON ARE REFERENCED IN FEET TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

3B: SECTION 32, TOWNSHIP 31 SOUTH, RANGE 39 EAST



SITE LOCATION MAP

DIRECTIONS TO PROJECT SITE

FROM INTERSTATE 95, TAKE EXIT 156 FOR CR-512 (SEBASTIAN BLVD). TURN EAST FOR APPROXIMATELY 2.5 MILES. TURN RIGHT, HEADING SOUTH ON 90TH AVE FOR APPROXIMATELY 1.2 MILES. THE ROAD WILL TURN EAST AND BECOME 85TH ST. SITE IS LOCATED APPROXIMATELY 4 MILES FROM THIS BEND AND LOCATED ON THE RIGHT.

FROM THE INTERSECTION OF US-1 AND CR-510, TURN WEST APPROXIMATELY 3,600 FEET AND THE SITE WILL BE LOCATED ON THE SOUTH SIDE OF THE ROAD.

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PREPARED FOR THE BOARD OF COUNTY COMMISSIONERS
INDIAN RIVER COUNTY, FLORIDA
PETER D. O'BRYAN, CHARIMAN (DISTRICT 4)
JOE EARMAN, VICE-CHARMAN (DISTRICT 3)
COMMISSIONER JOSEPH E. FLESCHER (DISTRICT 2)
COMMISSIONER SUSAN ADAMS (DISTRICT 1)
COMMISSIONER LAURA MOSS (DISTRICT 5)
SEAN LIESKE, - DIRECTOR OF UTILITY SERVICES

LAND SURVEYOR
INFRASTRUCTURE SOLUTIONS
SERVICES, INC.
7175 MURRELL RD,
MELBOURNE, FL 32940

PHONE: (321) 622-4646

CIVIL ENGINEER

BOWMAN CONSULTING

ENGINEER OF RECORD

ZACHARY D. KOMNINOS, P.E.

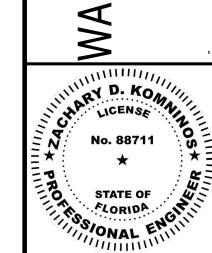
4450 W. EAU GALLIE BLVD., SUITE 144

MELBOURNE, FL - 32934

PHONE: (321) 255-5434



BID SET 05/04/2022



 \Box

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ZACHARY D. KOMNINOS LICENSE NO. 88711

PLAN STATUS

KNOW WHAT 'S BELOW ALWAYS CALL 81' BEFORE YOU DIG It's fast. It's free. It's the law.

www.callsunshine.com

DATE DESCRIPTION

ELF VDP ZDK
DESIGN DRAWN CHKD

SCALE NONE

JOB No.010514-01-004

DATE May, 2022

C0.0

FILE010514-01-004-00-COV-3

GENERAL REQUIREMENTS OF CONTRACTOR

- CONTRACTOR SHALL MAINTAIN A COMPLETE AND ACCURATE RECORD OF ALL CHANGES OF CONSTRUCTION FROM THAT SHOWN IN THESE PLANS AND SPECIFICATIONS FOR THE PURPOSE OF PROVIDING A BASIS FOR AS-BUILT DRAWINGS. NO CHANGES SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER AND THE AGENCY(S) HAVING JURISDICTION. ALL WORK SHALL BE AS-BUILT BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR INCLUDING ALL FINISH FLOORS, SITE GRADING, WATER SYSTEM, SEWER SYSTEM, DRAINAGE SYSTEM, RECLAIMED WATER SYSTEM AND ALL OTHER FACILITIES ASSOCIATED WITH THE
- UPON COMPLETION OF THE PROJECT, THE LICENSED SURVEYOR SHALL DELIVER SIGNED AND SEALED COPIES OF THIS AS-BUILT RECORD OF THE PROJECT TO THE ENGINEER.
- WARNING: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THESE PLANS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
- 2. CONTRACTOR SHALL PROMPTLY NOTIFY, BY TELEPHONE AND IN WRITING, THE ENGINEER AND THE AGENCY HAVING JURISDICTION UPON DISCOVERY OF, AND BEFORE DISTURBING, ANY PHYSICAL CONDITIONS DIFFERING FROM THOSE REPRESENTED BY THE APPROVED PLANS AND SPECIFICATIONS.
- 3. CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM ALL LIABILITY AND CLAIMS, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- 4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR PROTECTION OF PUBLIC AND PRIVATE PROPERTY ON OR IN THE VICINITY OF THE JOB SITE AND FURTHER AGREES TO, AT CONTRACTOR'S EXPENSE, REPAIR OR REPLACE TO ORIGINAL CONDITION ALL EXISTING IMPROVEMENTS WITHIN OR IN THE VICINITY OF THE JOB SITE WHICH ARE NOT DESIGNATED FOR REMOVAL AND WHICH ARE DAMAGED OR REMOVED AS A RESULT OF CONTRACTOR'S OPERATIONS.
- 5. EXISTING BURIED CONDUITS AND STRUCTURES KNOWN TO THE ENGINEER ARE SHOWN ON THESE PLANS. HOWEVER, ALL CONDUITS AND STRUCTURES MAY NOT BE SHOWN AND THE LOCATIONS OF THOSE SHOWN ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE PREPARER OF THE PLANS.
- CONTRACTOR SHALL INDEPENDENTLY VERIFY THE PRESENCE OF BURIED CONDUITS AND STRUCTURES, BOTH ACTIVE AND ABANDONED-IN-PLACE AND, BEFORE COMMENCING WORK, CONTRACTOR SHALL DETERMINE THE EXACT LOCATION INCLUDING DEPTHS OF ALL EXISTING UNDERGROUND UTILITIES, CONDUITS AND STRUCTURES, INCLUDING SERVICE CONNECTIONS, WHICH MAY AFFECT OR BE AFFECTED BY HIS OPERATIONS. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, CONDUITS AND STRUCTURES.
- UPON ENCOUNTERING EXISTING UTILITIES OR STRUCTURES NOT SHOWN OR LOCATED DIFFERENTLY THAN SHOWN ON THE PLANS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE OWNER OF THE CONDUIT OR STRUCTURE BY TELEPHONE AND IN WRITING. IF SUCH CONDUIT OR STRUCTURE AFFECTS OR IS AFFECTED BY THE WORK, CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION AND DIRECTION BEFORE PROCEEDING WITH THE WORK, EXCEPTING THAT IN AN EMERGENCY AFFECTING SAFETY OF LIFE, WORK OR ADJACENT PROPERTY, CONTRACTOR SHALL ACT AT ONCE WITHOUT INSTRUCTIONS TO PREVENT INJURY OR LOSS.
- CONTRACTOR SHALL CONTACT SUNSHINE-811 A MINIMUM OF 48 HOURS IN ADVANCE OF STARTING ANY CONSTRUCTION TO HAVE KNOWN UNDERGROUND FACILITIES LOCATED. NO EXCAVATION SHALL COMMENCE UNLESS THE CONTRACTOR HAS OBTAINED THE INQUIRY IDENTIFICATION NUMBER AND EACH UTILITY OR OTHER OWNER OF SUBSURFACE FACILITIES HAS LOCATED AND PHYSICALLY MARKED THEIR SUBSURFACE FACILITIES IN THE AREA OF WORK.
- 7. BEFORE COMMENCING EXCAVATION, CONTRACTOR SHALL CONTACT THE CITY AND EACH UTILITY COMPANY OR OTHER OWNER OF SUBSURFACE FACILITIES WITHIN THE WORK SITE, SHALL VERIFY WHETHER OR NOT A REPRESENTATIVE WILL BE PRESENT BEFORE AND/OR DURING EXCAVATION, AND SHALL DETERMINE SITE-SPECIFIC REQUIREMENTS FOR EXCAVATION.
- CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD BEFORE START OF ANY CONSTRUCTION AND SCHEDULE THE TIME AND LOCATION OF PRE-CONSTRUCTION CONFERENCE. A PRE-CONSTRUCTION CONFERENCE WITH THE CITY/COUNTY IS REQUIRED PRIOR TO START OF WORK.
- CONTRACTOR IS RESPONSIBLE FOR PRESERVATION AND/OR PERPETUATION OF ALL EXISTING MONUMENTS WHICH CONTROL SUBDIVISIONS, TRACTS, BOUNDARIES, EASEMENTS, STREETS, HIGHWAYS OR OTHER RIGHTS-OF-WAY, OR WHICH PROVIDE SURVEY CONTROL WHICH WILL BE DISTURBED OR REMOVED DUE TO CONTRACTOR'S WORK. PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING MONUMENTS, CONTRACTOR SHALL CONTRACT WITH LICENSED LAND SURVEYOR TO RESET MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE COUNTY SURVEYOR.
- 10. CONTRACTOR SHALL MAKE HIS OWN DEDUCTIONS AND CONCLUSIONS AS TO HOW EXISTING SURFACE AND SUB-SURFACE CONDITIONS WILL AFFECT OR BE AFFECTED BY HIS CONSTRUCTION OPERATIONS, INCLUDING THE NATURE OF MATERIALS TO BE EXCAVATED, THE DEGREE OF DIFFICULTY ASSOCIATED WITH MAKING AND MAINTAINING THE REQUIRED EXCAVATIONS, AND THE DEGREE OF DIFFICULTY WHICH MAY ARISE FROM SUBSURFACE CONDITIONS INCLUDING GROUNDWATER, AND SHALL ACCEPT FULL RESPONSIBILITY THEREFOR.
- 11. IT IS CONTRACTOR'S RESPONSIBILITY TO PROTECT THE INTEGRITY OF EXISTING PAVEMENT ALONG AND BEHIND SAWCUT LINES DURING CONSTRUCTION; IF PAVEMENT IS BROKEN-OFF OR OTHERWISE DAMAGED BEFORE NEW PAVEMENT IS PLACED, CONTRACTOR SHALL SAWCUT A NEW CONFORM LINE PARALLEL WITH, FULL LENGTH OF, AND SUFFICIENT DISTANCE (1-FOOT MINIMUM) BEHIND ORIGINAL SAWCUT SO AS TO REMOVE DAMAGED PAVEMENT AND / OR IRREGULARITY ALONG THE CONFORM LINE, OR AS REQUIRED BY THE AGENCY HAVING JURISDICTION.
- 12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL AS REQUIRED FOR THE WORK IN PROGRESS TO SAFELY HANDLE VEHICULAR, BICYCLE AND PEDESTRIAN TRAFFIC THROUGHOUT THE PROJECT, AND THAT THIS REQUIREMENT SHALL APPLY 24 HOURS PER DAY AND SEVEN DAYS A WEEK FOR THE DURATION OF WORK ON THE PROJECT. CONTRACTOR SHALL IMPLEMENT MAINTENANCE OF TRAFFIC (MOT) IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", SECTION 102 "MAINTENANCE OF TRAFFIC".
- 13. WORK PERFORMED BY THE CONTRACTOR THAT IS REQUIRED TO BE AS-BUILT SHALL BE SURVEYED BY A SURVEYOR REGISTERED IN THE STATE OF FLORIDA. IMPROVEMENTS SHALL BE SURVEYED WHILE THE WORK IS IN PROGRESS (UNCOVERED) SO THAT THE SURVEYOR CAN VISUALLY OBSERVE THE WORK AND SPECIFIC ELEMENT BEING SURVEYED AND CONFIRM WHAT IS BEING LOCATED, INCLUDING TYPE AND SIZE. IF THE WORK IS BURIED, THE CONTRACTOR IS RESPONSIBLE FOR POTHOLING EACH FITTING AND FEATURE OF THE INSTALLATION SO THE SURVEYORS WORK CAN BE PERFORMED. IT IS NOT ACCEPTABLE TO COVER WORK AND USE PIPE EXTENSIONS FOR THE PURPOSE OF AS-BUILTING INSTALLED WORK.

CONSTRUCTION NOTES (SPECIFICATIONS)

GENERAL NOTES:

- 1. UNLESS MODIFIED OR OTHERWISE SPECIFIED BY THE CONSTRUCTION NOTES THAT FOLLOW HEREON INCLUDING THOSE UNDER SEPARATE HEADINGS, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FDOT SPECIFICATIONS, STANDARDS AND STANDARD PLANS, AND THE CITY/COUNTY DESIGN STANDARDS AND STANDARD DETAILS. WHERE DISCREPANCIES IN THE STANDARDS OCCUR THE EOR AND CITY/COUNTY ENGINEER SHALL MAKE THE FINAL DETERMINATION.
- ALL REFERENCED SPECIFICATIONS, CODES, DRAWINGS, AND DETAILS SHALL BE INCORPORATED INTO THESE PLANS AND MADE A PART HEREOF AS IF SPELLED OUT OR DELINEATED IN THEIR ENTIRETY HEREON.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK AND INTERFACING IMPROVEMENTS WITH WORK BY OTHER CONTRACTORS AT THIS JOB SITE AND WITH IMPROVEMENTS REQUIRED BY PLANS BY OTHERS.
- ALL WORK SHALL BE DONE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL ENGINEERING AND GEOLOGICAL REPORTS FOR THIS PROJECT INCLUDING THOSE LISTED BELOW:

NO REPORT, THIS SECTION DOES NOT APPLY.

- THESE REPORTS AND ANY ADDENDA SHALL BE INCORPORATED INTO THESE PLANS AND MADE A PART HEREOF AS IF SPELLED OUT IN THEIR ENTIRETY HEREON. IT IS CONTRACTOR'S RESPONSIBILITY TO REVIEW THE APPLICABLE GEOTECHNICAL AND GEOLOGY REPORTS. CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER TO OBTAIN OR REVIEW COPIES OF THESE REPORTS AND ADDENDA.
- PRIOR TO BIDDING, CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER TO DETERMINE THE LOCATION AND DEPTH OF ALL TEST BORINGS AND EXPLORATORY PITS AND EXCAVATIONS. CONTRACTOR SHALL DETERMINE FROM THE GEOTECHNICAL ENGINEER WHAT REMEDIAL WORK IS RECOMMENDED TO MAKE THESE DISTURBED LOCATIONS SUITABLE FOR THE PROPOSED IMPROVEMENTS. CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS FOR THE RECOMMENDED REMEDIAL WORK AND SHALL ADJUST HIS OPERATIONS TO PROPERLY SEQUENCE THE WORK TO ACCOMMODATE REMEDIAL WORK WITH CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- 4. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS, ORDINANCES, REGULATIONS, RULES, AND STANDARDS INCLUDING ALL FEDERAL AND STATE REQUIREMENTS.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VEHICULAR, BICYCLE, AND PEDESTRIAN TRAFFIC CONTROL AND SAFETY AND SHALL FURNISH, INSTALL, AND MAINTAIN SUCH FENCING, SIGNS, LIGHTS, TRENCH PLATES, BARRICADES, AND/OR OTHER PROTECTION AS IS NECESSARY FOR SAID CONTROL AND SAFETY OR AS REQUIRED BY THE APPLICABLE REGULATORY AGENCY.
- 6. CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN SUCH SHEETING, SHORING, BRACING, AND/OR OTHER PROTECTION AS IS NECESSARY TO PREVENT FAILURE OF TEMPORARY EXCAVATIONS AND EMBANKMENTS AND TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS, TEMPORARY IMPROVEMENTS, AND PARTIALLY COMPLETED PORTIONS OF THE WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SUFFICIENCY OF SUCH SUPPORTS AND/OR OTHER PROTECTION. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA TRENCH AND EXCAVATION SAFETY AND THE FLORIDA TRENCH SAFETY ACT.
- BEFORE BEGINNING WORK, CONTRACTOR SHALL CONFIRM WITH AGENCIES HAVING JURISDICTION THAT ALL REQUIRED PERMITS AND LICENSES HAVE BEEN OBTAINED AND ALL REQUIRED NOTICES GIVEN.
- 8. DURING THE COURSE OF WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR OBSERVATION AND TESTING AS STIPULATED PURSUANT TO ABOVE DETERMINATIONS. ALL TESTING OF MATERIALS AND MATERIALS PLACED SHALL BE BY THE CONTRACTOR, AT HIS SOLE EXPENSE, USING AN INDEPENDENT LABORATORY.
- WORK NOT OBSERVED BY THE EOR AND TESTED WILL BE SUBJECT TO REJECTION.
- ALL UNSUITABLE CONSTRUCTION MATERIALS AND RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE, BE TRANSPORTED TO A SUITABLE LOCATION, AND BE DISPOSED OF IN A PROPER AND LEGAL MANNER AT THE EXPENSE OF THE CONTRACTOR.
- 10. CONTRACTOR SHALL SCHEDULE GRAVITY PIPELINE WORK AHEAD OF OTHER UNDERGROUND CONDUIT CONSTRUCTION.
- 11. STORM DRAIN WORK SHALL BEGIN AT THE LOWEST POINT OF DISCHARGE AND PROCEED UPSTREAM.
- 12. ALL WORK INVOLVING EXCAVATION, INCLUDING THAT FOR WATER, SEWER, STORM DRAIN AND UTILITY CONDUITS AND ALL SERVICE CONNECTIONS AND METER BOXES (NOT PERMITTED IN DRIVEWAYS) SHALL BE COMPLETED AND OBSERVED AND APPROVED BY THE AGENCY HAVING JURISDICTION AND THE STRUCTURAL BACKFILL OBSERVED AND TESTED FOR COMPACTION BEFORE AGGREGATE BASE, PAVING AND OTHER PERMANENT SURFACE CONSTRUCTION MAY COMMENCE.
- 13. BEFORE BEGINNING WORK, CONTRACTOR SHALL DETERMINE OR VERIFY THE LOCATION AND INVERT ELEVATION OF ALL EXISTING WATER, SEWER, AND DRAINAGE STRUCTURES AND/OR CONDUITS TO BE JOINED BY NEW CONSTRUCTION.
- BEFORE BEGINNING WORK, CONTRACTOR SHALL DETERMINE OR VERIFY THE LOCATION AND DEPTH OF ALL EXISTING STRUCTURES AND/OR CONDUITS WHICH CROSS OR OTHERWISE MAY CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR SHALL DETERMINE AND INSTALL FITTINGS, CONNECTORS, AND ADAPTERS REQUIRED TO CONNECT AT NO ADDITIONAL COST.
- 14. GROUNDWATER MAY BE ENCOUNTERED AT OR NEAR THE GROUND SURFACE. CONTRACTOR SHALL INSTALL DEWATERING SYSTEMS AS REQUIRED TO LOWER THE WATER LEVEL TO A MINIMUM OF 3 FEET BELOW THE BOTTOM OF EXCAVATIONS FOR ALL IMPROVEMENTS CONSTRUCTED FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR ALL SITE DEWATERING. CONTRACTOR IS RESPONSIBLE FOR PROPER PERMITTING AND DISPOSAL OF DEWATERING WATER. ALL COSTS, IMPACTS OR FINES TO THE PROJECT FROM DEWATERING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

DEWATERING NOTES

- MAINTAIN ADEQUATE SUPERVISION AND CONTROL TO ENSURE THAT STABILITY OF EXCAVATED AND CONSTRUCTED SLOPES ARE NOT ADVERSELY AFFECTED BY WATER, EROSION IS CONTROLLED, AND FLOODING OF EXCAVATION OR DAMAGE TO STRUCTURES DOES NOT OCCUR.
- 2. THE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE DEWATERING PLAN AND MANAGEMENT DISTRICT FOR CONSUMPTIVE USE OF GROUNDWATER PERMITTING. IF NO PLAN IS PROVIDED THE CONTRACTOR IS RESPONSIBLE FOR THE DEWATERING PLAN AND PERMITTING.
- 3. PROVIDE AN ADEQUATE SYSTEM TO LOWER AND CONTROL GROUNDWATER IN ORDER TO PERMIT EXCAVATION, CONSTRUCTION OF STRUCTURES, AND PLACEMENT OF FILL MATERIALS UNDER DRY CONDITIONS. INSTALL SUFFICIENT DEWATERING EQUIPMENT TO DRAIN WATER-BEARING STRATA ABOVE AND BELOW BOTTOM OF STRUCTURE FOUNDATIONS, DRAINS, SEWERS AND OTHER EXCAVATIONS.
- 4. REDUCE HYDROSTATIC HEAD IN WATER-BEARING STRATA BELOW STRUCTURE FOUNDATIONS, DRAINS, SEWERS AND OTHER EXCAVATIONS TO THE EXTENT THAT WATER LEVEL AND PIEZOMETRIC WATER LEVELS IN CONSTRUCTION AREAS ARE BELOW PREVAILING EXCAVATION SURFACE.
- 5. PRIOR TO EXCAVATION BELOW GROUNDWATER LEVEL, PLACE SYSTEM INTO OPERATION TO LOWER WATER LEVELS AS REQUIRED AND THEN OPERATE IT CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK UNTIL DRAINS, SEWERS, CONDUITS AND STRUCTURES HAVE BEEN CONSTRUCTED, INCLUDING PLACEMENT OF FILL MATERIALS, AND UNTIL DEWATERING IS NO LONGER REQUIRED.
- 6. DISPOSE OF WATER REMOVED FROM EXCAVATIONS IN A MANNER TO AVOID ENDANGERING PUBLIC HEALTH, PROPERTY, AND PORTIONS OF WORK UNDER CONSTRUCTION OR COMPLETED. DISPOSE OF WATER IN A MANNER TO AVOID INCONVENIENCE TO OTHERS. PROVIDE SUMPS, SEDIMENTATION TANKS, AND OTHER FLOW CONTROL DEVICES AS REQUIRED BY GOVERNING AUTHORITIES.
- PROVIDE STANDBY EQUIPMENT ON SITE, INSTALLED AND AVAILABLE, FOR IMMEDIATE OPERATION IF REQUIRED TO MAINTAIN DEWATERING ON A CONTINUOUS BASIS IN ANY EVENT ANY PART OF SYSTEM BECOMES INADEQUATE OR FAILS. IF DEWATERING REQUIREMENTS ARE NOT SATISFIED DUE TO INADEQUACY OR FAILURE OF DEWATERING SYSTEM, PERFORM SUCH WORK AS MAY BE REQUIRED TO RESTORE DAMAGED STRUCTURES AND FOUNDATION SOILS AT NO ADDITIONAL EXPENSE.

GRADING NOTES:

- I. ALL GRADING SHALL BE IN CONFORMANCE WITH THESE PLANS, CITY/COUNTY CONSTRUCTION STANDARDS, THERETO AND WITH THE RECOMMENDATIONS AND REFERENCED STANDARD GRADING SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT(S) REFERENCED IN THE GENERAL NOTES ON THESE PLANS.
- CONTRACTOR SHALL EMPLOY ALL LABOR, EQUIPMENT AND METHODS REQUIRED TO PREVENT HIS OPERATIONS FROM PRODUCING DUST IN AMOUNTS DAMAGING TO PROPERTY, CULTIVATED VEGETATION AND DOMESTIC ANIMALS OR CAUSING A HAZARD TO VEHICULAR TRAFFIC OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS, IN THE VICINITY OF THE JOB SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST RESULTING FROM HIS OPERATIONS. DUST ABATEMENT MEASURES SHALL BE CONTINUED UNTIL RELIEF IS GRANTED BY THE INSPECTOR.
- 3. AREAS TO BE GRADED IN ACCORDANCE WITH THE GRADING AND CLEARING PLANS, THE GRADING, PAVING, AND DRAINAGE PLAN, SITE SHALL BE CLEARED OF ALL VEGETATION (EXCEPT TREES INDICATED TO REMAIN), INCLUDING ROOTS AND ROOT STRUCTURES, OTHER ORGANIC MATERIAL, DEBRIS, NON-COMPLYING FILL, AND OTHER MATERIAL UNSUITABLE FOR SUPPORT OF FILL AND/OR PROPOSED IMPROVEMENTS.
- 4. BEFORE BEGINNING WORK REQUIRING EXPORTING OR IMPORTING OF MATERIALS, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY/COUNTY AND EOR FOR HAUL ROUTES USED AND METHODS PROVIDED TO MINIMIZE THE DEPOSIT OF SOILS ON PUBLIC ROADS. THE CITY SHALL MONITOR THIS REQUIREMENT WITH THE CONTRACTOR. CONTRACTOR SHALL IMMEDIATELY CLEAN UP ALL SPILLS AND TRACKING.
- 5. UNSUITABLE SOILS ENCOUNTERED DURING GRADING SHALL BE EXCAVATED AND REPLACED.
- OVERWET AND/OR PUMPING AREAS ENCOUNTERED DURING GRADING SHALL BE REVIEWED FOR CORRECTIVE MEASURES BY THE CITY AND EOR. CONTRACTOR IS RESPONSIBLE FOR DRYING OR WETTING SOIL AS REQUIRED TO OBTAIN OPTIMUM WATER CONTENT FOR COMPACTION. ALL COST FOR MOISTURE CONDITIONING SOIL SHALL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.

- 6. FILL MATERIAL SHALL BE SPREAD IN LIFTS NOT EXCEEDING 12-INCHES IN LOOSE THICKNESS, BE MOISTENED OR DRIED AS REQUIRED AND BE COMPACTED TO THE MINIMUM RELATIVE COMPACTION. THINNER LIFTS MAY BE NECESSARY TO ACHIEVE THE REQUIRED MINIMUM COMPACTION.
- 7. FILL AND BACKFILL MATERIAL SHALL BE COMPACTED AT LEAST TO THE SPECIFIED RELATIVE COMPACTION BUT IN NO CASE TO LESS THAN 95% OF MAXIMUM DENSITY, DETERMINED IN CONFORMANCE WITH AASHTO T180 AND T 99, LATEST REVISION. SOME AREAS REQUIRE COMPACTION TO GREATER DENSITY AS CALLED FOR ON THESE PLANS OR THE AGENCY HAVING JURISDICTION.
- 8. FINISH CUT SLOPES, FILL SLOPES AND COMBINATION CUT AND FILL SLOPES SHALL NOT EXCEED A GRADE OF 4 HORIZONTAL TO 1 VERTICAL UNLESS SPECIFICALLY CALLED FOR ON THESE PLANS. LOWER POND SLOPES AND DRAINAGE DITCHES CAN BE EXCAVATED TO 2 HORIZONTALS TO 1 VERTICAL, WHERE CALLED FOR ON THE PLANS OR APPROVED IN WRITING IN ADVANCE OF CONSTRUCTION.
- 9. ALL GRADED AREAS SHALL BE PLANTED IN CONFORMANCE WITH THE APPROVED LANDSCAPING PLAN, IF APPLICABLE AND SHALL OTHERWISE BE PLANTED WITH SOD OR PLANTINGS AS APPROVED BY THE CITY AND EOR AND SHALL BE DENSE AND GROWING PRIOR TO FINAL INSPECTION.
- 10. IF NOT DIMENSIONED, LOCATION OF FINISH GRADE ELEVATIONS AND FEATURES SUCH AS SWALES, RIDGE LINES, ETC. SHALL BE DETERMINED BY SCALE FROM KNOWN POINTS SHOWN ON THE PLANS. UNIFORM GRADIENTS OR VERTICAL CURVES, AS APPROPRIATE, SHALL BE ASSUMED BETWEEN CONTROL ELEVATIONS SHOWN ON THE PLANS.
- 11. PLAN ELEVATIONS SHOWN ON SOIL AND LANDSCAPED AREAS ARE FINISH GRADE (FINISH SURFACE) ELEVATIONS INTENDED TO ESTABLISH FINAL SURFACE DRAINAGE CONTROL FOR THESE AREAS. DURING GRADING OPERATIONS, THICKNESSES SPECIFIED BY LANDSCAPE ARCHITECT FOR TURF, WOOD CHIPS, MULCH, ETC. SHALL BE SUBTRACTED FROM THESE ELEVATIONS TO ESTABLISH FINISH SOIL GRADE.
- 12. PLAN ELEVATIONS SHOWN ON WALKWAYS, RAMPS, STEPS AND OTHER HARDSCAPE ARE INTENDED TO ESTABLISH GRADING AND SURFACE DRAINAGE CONTROL FOR THESE IMPROVEMENTS. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO PERFORM DETAILED LAYOUT FOR AND TO CONSTRUCT WALKWAYS, RAMPS, STEPS, AND OTHER HARDSCAPE IN CONFORMANCE WITH ALL BUILDING CODE AND ACCESSIBILITY REQUIREMENTS INCLUDING THOSE FOR DIMENSIONING, SLOPE, CROSS-SLOPE, SURFACE TEXTURE, WARNING CURBS, AND HAND-RAILS.
- 13. SITE FINISH GRADING SHALL BE COMPLETED AND CONFIRMED BY SURVEY TO CONFORM TO APPROVED PLANS AND SPECIFICATIONS BEFORE LANDSCAPING AND IRRIGATION CONSTRUCTION CAN BEGIN.
 - LANDSCAPE CONTRACTOR SHALL REMOVE FROM THE SITE AND PROPERLY DISPOSE OF ALL EARTH SPOIL FROM PLANT HOLES AND PIPE TRENCHES. EXCESS SOIL AND/OR MULCH SHALL NOT BE PLACED OR SPREAD AT THE SITE, BUT REMOVED AND PROPERLY DISPOSED.
- 14. PAVEMENT STRUCTURAL SECTIONS SHALL BE AS SHOWN ON THESE PLANS.
- 15. THE UPPER 12 INCHES OF FILL OR NATIVE SOIL BELOW THE BOTTOM OF BASE OR SUBBASE COURSE (BELOW SUBGRADE) IN PAVEMENT AREAS, AND THE UPPER 6 INCHES OF FILL OR NATIVE SOIL BELOW THE CONCRETE IN WALKWAY AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF MAXIMUM DENSITY.
- 16. BEFORE PLACEMENT OF BASE OR SUBBASE MATERIAL IN PAVEMENT AREAS, THE SUBGRADE SOIL SHALL BE DENSITY TESTED BY THE CONTRACTOR AND REVIEWED BY THE EOR.
- 17. SURFACE SOILS CONTAINING ORGANIC MATERIAL MAY BE STOCKPILED FOR FUTURE USE BY THE LANDSCAPE CONTRACTOR; HOWEVER, THIS OPERATION SHALL BE COORDINATED SO THAT UPON COMPLETION OF THE PROJECT, ALL EXCESS MATERIAL IS REMOVED FROM THE JOB SITE AND FINISH GRADES ARE AS CALLED FOR ON THE PLANS.
- 18. QUALITY REVIEW AND REPORTING REQUIREMENTS
 - A. CONTRACTOR SHALL CONDUCT STRINGLINE TESTING OF SUBGRADE, BASE, AND FINAL ASPHALT IN CONSTRUCTION WITH THE EOR.
- 19. BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES: ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ONSITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOWS, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSE, OR WIND. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS MUST BE MADE TO RETAIN CONCRETE WASTES ONSITE UNTIL THEY CAN BE DISPOSED AS A SOLID WASTE. TRASH AND CONSTRUCTION RELATED SOLID WASTE MUST BE DEPOSITED INTO A COVERED WASTE RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND. SEDIMENTS AND OTHER MATERIAL MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITION MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO MINIMIZE EROSION BY WIND AND WATER.
- 20. CONTRACTOR IS REQUIRED TO REVIEW TOPOGRAPHIC MAPPING AND CONFIRM EXISTING TOPOGRAPHIC MAPPING IS CONSISTENT WITH THE CONDITION OF THE SITE ENCOUNTERED BY THE CONTRACTOR. DISCREPANCIES FOUND WITH THE EXISTING TOPOGRAPHIC MAPPING MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO START OF ANY GRADING. ONCE GRADING COMMENCES, THE CONTRACTOR HAS ACCEPTED THE EXISTING TOPOGRAPHIC MAPPING AS ACCURATE AND REPRESENTATIVE OF THE EXISTING CONDITIONS ASSUMED BY THE CONTRACTOR.

TRENCHING, EXCAVATION, AND BACKFILL NOTES:

- 1. ALL TRENCHING, BEDDING AND BACKFILL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS AND REFERENCED STANDARD SPECIFICATIONS INCLUDING THE PIPE TRENCH DETAIL AND WITH THE APPLICABLE STANDARD REQUIREMENTS OF FDOT.
- 2. WET OR UNSTABLE SOIL ENCOUNTERED IN THE BOTTOM OF THE EXCAVATION INCAPABLE OF PROPERLY SUPPORTING THE PIPE OR STRUCTURE BEING CONSTRUCTED, SHALL BE REMOVED AND THE EXCAVATION BACKFILLED TO THE BOTTOM OF THE PIPE OR STRUCTURE GRADE WITH SUITABLE MATERIAL.
- WATER ENCOUNTERED IN TRENCH OR STRUCTURE EXCAVATION SHALL BE REMOVED BY THE CONTRACTOR TO PROVIDE DRY CONDITIONS DURING CONSTRUCTION OF PIPE OR STRUCTURE.
- 4. BEDDING AND BACKFILL MATERIAL AND THEIR COMPACTED DENSITY SHALL BE TESTED FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS BY THE CONTRACTOR USING AN INDEPENDENT
- 5. BEDDING AND PIPE ZONE BACKFILL MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY.
- TRENCH BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY; THE UPPER 12" BELOW THE BASE OR SUB-BASE COURSE IN PAVED AND OTHER TRAFFIC AREAS AND BELOW THE CONCRETE OR SAND COURSE IN WALKWAY AREAS SHALL BE COMPACTED TO NOT LESS THAN 98% OF MAXIMUM DENSITY.
- BACKFILL COMPACTION SHALL BE TESTED FOR COMPLIANCE WITH THESE REQUIREMENTS IN ACCORDANCE AASHTO T 180 AND T 99, LATEST REVISION AND SUBMITTED TO THE EOR.
- 6. TRENCH BACKFILL SHALL NOT BE PLACED UNTIL BEDDING AND INITIAL (PIPE ZONE) BACKFILL HAVE BEEN OBSERVED, TESTED AND APPROVED.
- 7. COMPACTION BY FLOODING OR JETTING IS NOT PERMITTED.
- 8. ANY ADJUSTMENTS OR REVISIONS TO THESE PLANS DEEMED NECESSARY BECAUSE OF THE LOCATION AND/OR DEPTH OF EXISTING STRUCTURES OR CONDUITS SHALL BE APPROVED IN WRITING BY THE ENGINEER AND THE RELATED GOVERNMENT ENTITY OR UTILITY COMPANY PRIOR TO PROCEEDING WITH CONSTRUCTION.

STORM DRAIN NOTES:

- ALL PUBLIC STORM DRAIN MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, REFERENCED STANDARD SPECIFICATIONS, AND CITY/COUNTY REQUIREMENTS.
- 2. CONCRETE FOR ALL DRAINAGE FACILITIES SHALL BE 3000 PSI.
- 3. REINFORCED CONCRETE PIPE (RCP) MATERIALS AND INSTALLATION SHALL COMPLY WITH THE REFERENCED STANDARD SPECIFICATIONS. RCP STRENGTH CLASS SHALL BE AS CALLED FOR ON THE PLANS AND SHALL BE A.S.T.M. STANDARD C-76 CLASS III MINIMUM.

JOINTS SHALL BE TONGUE AND GROOVE, WITH COMPRESSION TYPE RUBBER GASKET CONFORMING TO A.S.T.M. STANDARD C-443.

RCP SHALL BE INSTALLED TO THE LINES AND GRADES CALLED FOR ON THE PLANS. <u>JOINTS SHALL NOT BE PULLED, DEFLECTED OR LEFT PARTIALLY OPEN</u>. ALL JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.

4. CORRUGATED METAL PIPE (CMP) SHALL BE CONTECH (ARMCO) HEL-COR ALUMINIZED STEEL TYPE 2 PIPE WITH 2-2/3" X 1/2" HELICAL CORRUGATIONS. EACH PIPE END SHALL BE REFORMED TO PROVIDE AT LEAST TWO (2) ANNULAR CORRUGATIONS FOR HUGGER JOINT ASSEMBLY WITH O-RING GASKETS. WALL THICKNESS SHALL BE AS CALLED FOR ON THE PLANS AND SHALL BE 14 GAUGE (0.079") MINIMUM.

CMP INSTALLATION SHALL COMPLY WITH THE REFERENCED STANDARD SPECIFICATIONS AND WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDED PROCEDURES. ALL JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.

PVC PIPE CONNECTIONS TO MANHOLES, CATCH BASINS AND OTHER CONCRETE STRUCTURES SHALL BE CONSTRUCTED WITH WATERSTOP AT MIDPOINT OF STRUCTURE WALL PENETRATION. WATERSTOP SHALL BE PVC CONCRETE MANHOLE ADAPTER (4" THROUGH 12" PIPE) OR LARGE DIAMETER WATERSTOP AS MANUFACTURED BY FERNCO, OR EQUIVALENT APPROVED BY THE ENGINEER.

- 6. HIGH DENSITY POLYPROMLENE (HP) PIPE AND FITTINGS FOR 12" THROUGH 60" SIZE SHALL BE HP-PP (WATERTIGHT) SERIES AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC. (ADS). HP PIPE PLACEMENT SHALL COMPLY WITH THESE DRAWINGS SHALL BE APPROVED BY THE EOR IN WRITING PRIOR TO ORDERING.
- PIPE AND FITTING INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PROCEDURES; CONNECTIONS TO CONCRETE STRUCTURES SHALL BE CONSTRUCTED WATERTIGHT USING MANUFACTURER'S RECOMMENDED MATERIALS AND METHODS. ALL JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
- 7. GRATED INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLAN DETAIL SHOWN HEREON. ALL GRATES AND FRAMES SHALL BE TRAFFIC-WEIGHT FURNISHED WITH LOCK SCREWS TO PREVENT VANDALISM. INLETS SHALL CONFORM TO FDOT STANDARDS
- 8. AS-BUILT DRAWINGS SHOWING THE ACTUAL LOCATION OF ALL PIPES, STRUCTURES, MANHOLES, CLEANOUTS, EASEMENTS, ETC., SHALL BE REVIEWED, APPROVED AND FILED WITH THE ENGINEER BEFORE FINAL ACCEPTANCE OF THE WORK. IN ADDITION, AN ELECTRONIC AUTOCAD THE FORMAT DRAWING RECORDED ON A CD, SHOWING THE ACTUAL LOCATION OF PIPE, STRUCTURES, MANHOLES, CLEANOUT AND APPURTENANT STRUCTURES, INCLUDING INVERT AND RIM ELEVATIONS, SHALL BE SUBMITTED TO THE ENGINEER BEFORE FINAL ACCEPTANCE OF WORK. THE ELECTRONIC DRAWING SHALL BE IN THE FOLLOWING COORDINATE SYSTEM: HORIZONTAL NAD 83 NORTH AMERICA DATUM (STATE PLANE COORDINATE SYSTEM), VERTICAL NAVD 88 NORTH AMERICAN VERTICAL DATUM. SURVEY SHALL BE SIGNED AND SEALED BY A SURVEYOR REGISTERED IN THE STATE OF FLORIDA.
- 12. QUALITY REVIEW AND REPORTING MEASUREMENTS
- A. CONTRACTOR SHALL REQUEST AND FACILITATE INSPECTION BY ENGINEER AFTER INSTALLATION AND ASSEMBLY OF, BUT BEFORE COVERING, STORM DRAINAGE PIPING.
- B. WITHIN TEN (10) WORKING DAYS OF COMPLETION OF THE STORM DRAIN SYSTEM AND BEFORE CONSTRUCTION OF PAVEMENT, WALKWAYS AND OTHER PERMANENT SURFACE IMPROVEMENTS, CONTRACTOR SHALL PROVIDE A CONSTRUCTION RECORD DRAWING OF THE SYSTEM PREPARED BY A FLORIDA REGISTERED LAND SURVEYOR TO INCLUDE TOP OF GRATE OR COVER AND INLET AND OUTLET INVERT ELEVATIONS OF ALL STORM DRAIN STRUCTURES. ELEVATION MEASUREMENTS SHALL BE ACCURATE TO 0.01 FOOT.
- C. SURVEYING, CLEANING OF THE STORM DRAIN SYSTEM SHALL BE AT CONTRACTOR'S EXPENSE. ANY DEVIATION FROM THE APPROVED PLANS AND DESIGN INTENT NOTED BY THE ENGINEER DURING THIS PROCESS SHALL BE CORRECTED BY CONTRACTOR AT CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER PRIOR TO ACCEPTANCE OF THE SYSTEM AND FINAL PAYMENT.

ACCEPTABLE TOLERANCES ARE AS FOLLOWS:

PIPE OR STRUCTURE INVERT: 0.04 FOOT MAXIMUM DEVIATION FROM DESIGN ELEVATION AT ANY LOCATION OR 10 PERCENT OF DESIGN SLOPE OVER ANY REACH, WHICHEVER IS LESS.

TOP-OF-GRATE: 0.04 FOOT MAXIMUM DEVIATION FROM DESIGN ELEVATION IN DIRT OR A.C. PAVEMENT SURFACING

0.02 FOOT MAXIMUM DEVIATION FROM DESIGN ELEVATION IN CONCRETE SURFACING

STREET PAVEMENT AND APPURTENANT CONCRETE NOTES:

- 1. ALL ASPHALT PAVEMENT AND APPURTENANT CONCRETE MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS AND REFERENCED SPECIFICATIONS AND WITH THE FDOT DESIGN STANDARDS AND SPECIFICATIONS
- 2. ASPHALT CONCRETE SHALL BE AS CALLED FOR ON THE PLANS.
- PAVING ASPHALT SHALL BE GRADE SHALL BE AS CALLED FOR ON THE PLANS. PAVING ASPHALT MIXTURE SHALL CONTAIN A MAXIMUM OF 20% RECLAIMED ASPHALT PAVEMENT (RAP).
- 3. BEFORE PAVING A TACK COAT OF ASPHALTIC EMULSION SHALL BE APPLIED TO ALL EXISTING VERTICAL SURFACES AGAINST WHICH PAVING IS TO BE PLACED, ON THE BASE, AND BETWEEN PAVEMENT COURSES CONSTRUCTED MORE THAN 24 HOURS APART.
- 4. BASE MATERIAL SHALL BE AS CALLED FOR ON THE PLANS. WHEN BASE IS USED AS A FINISH SURFACE, IT SHALL BE COQUINA OR CRUSHED CONCRETE ONLY.
- 5. ALL WORK INVOLVING EXCAVATION INCLUDING THAT FOR WATER, SEWER, STORM DRAIN AND UTILITY CONDUITS AND ALL SERVICE CONNECTIONS AND METER BOXES (NOT PERMITTED IN DRIVEWAYS) SHALL BE COMPLETED AND OBSERVED AND APPROVED BY THE AGENCY HAVING JURISDICTION AND THE EOR, AND THE STRUCTURAL BACKFILL OBSERVED AND TESTED FOR COMPACTION AND APPROVED BEFORE BASE, PAVING AND OTHER PERMANENT SURFACE CONSTRUCTION MAY COMMENCE.
- 6. COMPACTION OF FILL, SUBGRADE AND BASE COURSES AS WELL AS ALL TRENCH BEDDING AND BACKFILL SHALL BE OBSERVED AND TESTED BY THE CONTRACTOR AND ACCEPTED BY EOR.
- 7. CONCRETE FOR CURBS, GUTTERS, DRIVEWAYS, AND SIDEWALKS SHALL BE 3,000 PSI. CONCRETE FOR DRAINAGE STRUCTURES SHALL BE 3,000 PSI. CONCRETE PAVEMENT SHALL BE 3,000 PSI. DRIVEWAYS, SIDEWALK, AND CONCRETE PAVEMENT SHALL BE FIBER REINFORCED.
- 8. JOINTS IN CONCRETE PAVEMENT
- A. WEAKENED PLANE CRACK CONTROL (CONTRACTION) JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 10-FEET EACH WAY (LONGITUDINAL AND TRANSVERSE) AND AT ADDITIONAL LOCATIONS AS MAY BE CALLED FOR ON THE PLANS. REINFORCEMENT SHALL BE CONTINUOUS THROUGH JOINTS.

DEPTH OF JOINTS SHALL BE 1/4 SLAB THICKNESS + 1/2-INCH (I.E., 2-INCHES FOR 6-INCH SLAB).

JOINTS SHALL BE CONSTRUCTED BY SAWCUTTING GROOVES AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT RAVELING (USUALLY 4 TO 24 HOURS AFTER PLACEMENT). JOINTS SHALL BE FILLED WITH JOINT SEALANT (SIKAFLEX-2cNS OR EQUIVALENT, COLOR LIMESTONE GRAY) AS SOON AFTER COMPLETION OF THE CURING PERIOD AS IS FEASIBLE AND BEFORE PAVEMENT IS OPENED TO TRAFFIC. JOINTS SHALL BE CLEANED OF ALL FOREIGN MATERIAL, INCLUDING MEMBRANE CURING COMPOUNDS, AND SHALL BE SURFACE-DRY WHEN SEALANT IS INSTALLED.

JOINT LOCATIONS SHALL BE ADJUSTED AS NECESSARY TO ALIGN WITH THOSE ALREADY CONSTRUCTED IN EXISTING ADJACENT (CONTIGUOUS) FEATURES SUCH AS CURBS AND GUTTERS. ALONG CURVES, TRANSVERSE JOINTS SHALL BE RADIAL.

B. **EXPANSION JOINTS** SHALL BE CONSTRUCTED AT LOCATIONS CALLED FOR ON THE PLANS AND AT RANDOM INTERVALS NOT EXCEEDING 100 FEET AT RETURNS AND CHANGES OF DIRECTION. JOINTS SHALL BE CONSTRUCTED PER THE PLAN DETAILS AND THESE NOTES.

JOINTS SHALL BE CONSTRUCTED ½-INCH WIDE USING ONE PIECE OF PREFORMED JOINT FILLER INSTALLED FROM BOTTOM OF SLAB TO WITHIN 1" OF CONCRETE SURFACE. THE RESULTING RESERVOIR SHALL BE FILLED WITH JOINT SEALANT TO WITHIN ¼" OF CONCRETE SURFACE AS SOON AFTER COMPLETION OF THE CURING PERIOD AS IS FEASIBLE AND BEFORE PAVEMENT IS OPENED TO TRAFFIC. JOINTS SHALL BE CLEANED OF ALL FOREIGN MATERIAL, INCLUDING MEMBRANE CURING COMPOUND, AND SHALL BE SURFACE-DRY WHEN SEALANT IS INSTALLED.

JOINT LOCATIONS SHALL BE ADJUSTED AS NECESSARY TO ALIGN WITH THOSE ALREADY CONSTRUCTED IN EXISTING ADJACENT (CONTIGUOUS) FEATURES SUCH AS CURBS AND GUTTERS. ALONG CURVES, TRANSVERSE JOINTS SHALL BE RADIAL.

10. JOINTS IN CURBS, GUTTERS AND WALKS

A. TRANSVERSE WEAKENED PLANE CRACK CONTROL JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 10-FEET, DIRECTLY ABOVE DRAIN PIPES THAT OUTLET THROUGH CURB AND AT ADDITIONAL LOCATIONS AS MAY BE CALLED FOR ON THE PLANS. REINFORCEMENT SHALL BE CONTINUOUS THROUGH JOINTS.

JOINT LOCATIONS SHALL BE ADJUSTED AS NECESSARY TO ALIGN WITH THOSE ALREADY CONSTRUCTED IN EXISTING ADJACENT (CONTIGUOUS) FEATURES. ALONG CURVES AND WALK RETURNS. JOINTS SHALL BE RADIAL.

B. TRANSVERSE EXPANSION JOINTS SHALL BE CONSTRUCTED AT BCR, ECR, AND AT REGULAR INTERVALS NOT EXCEEDING 50-FEET; ALONG EDGES OF DRIVEWAYS, WHEELCHAIR RAMPS, AND FIXED OBJECTS AND STRUCTURES (FIRE HYDRANT, LIGHT STANDARD, UTILITY POLE, DRAIN INLET, MANHOLE OR VALVE COVER, SCREEN/RETAINING WALL, BUILDING WALL, ETC.); AT ADDITIONAL LOCATIONS AS MAY BE CALLED FOR ON THE PLANS. EXPANSION JOINTS SHALL NOT BE CONSTRUCTED IN CROSS OR VALLEY GUTTER WHICH IS SEPARATE FROM CURB.

JOINTS SHALL BE CONSTRUCTED ½-INCH WIDE USING ONE PIECE OF PREFORMED JOINT FILLER INSTALLED FROM BOTTOM OF SLAB TO WITHIN 1-INCH OF CONCRETE SURFACE. THE RESULTING RESERVOIR SHALL BE FILLED WITH JOINT SEALANT TO WITHIN ½-INCH OF CONCRETE SURFACE AS SOON AFTER COMPLETION OF THE CURING PERIOD AS IS POSSIBLE. JOINTS SHALL BE CLEANED OF ALL FOREIGN MATERIAL, INCLUDING MEMBRANE CURING COMPOUNDS, AND SHALL BE SURFACE-DRY WHEN SEALANT IS INSTALLED.

JOINT LOCATIONS SHALL BE ADJUSTED AS NECESSARY TO ALIGN WITH THOSE ALREADY CONSTRUCTED IN EXISTING ADJACENT (CONTIGUOUS) FEATURES. ALONG CURVES AND THROUGH WALK RETURNS, JOINTS SHALL BE RADIAL.

- 11. ALL EXISTING AND PROPOSED VALVE AND UTILITY BOXES AND CLEAN OUTS AND MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO FINISH GRADE.
- 12. WHERE SAWCUT LINE IS CONSTRUCTED ALONG CONFORM LINE WITH EXISTING A.C. PAVEMENT, IT IS CONTRACTOR'S RESPONSIBILITY TO PROTECT THE INTEGRITY OF THE PAVEMENT ALONG AND BEHIND THE SAWCUT LINE DURING CONSTRUCTION; IF THIS PAVEMENT IS BROKEN-OFF OR OTHERWISE DAMAGED BEFORE NEW PAVEMENT IS PLACED, CONTRACTOR SHALL SAWCUT A NEW CONFORM LINE PARALLEL WITH, FULL LENGTH OF, AND SUFFICIENT DISTANCE BEHIND ORIGINAL SAWCUT SO AS TO REMOVE DAMAGED PAVEMENT AND / OR IRREGULARITY ALONG THE CONFORM LINE.

13. <u>SITE DEVELOPMENT FINISH SURFACE GRADING CRITERIA</u>

SURFACE TYPE

IT IS THE DESIGN ENGINEER'S INTENT THAT THE FOLLOWING MINIMUM AND MAXIMUM SLOPES (GRADIENTS) BE MAINTAINED ON CONSTRUCTED FINISH SURFACES. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THESE MINIMUM AND MAXIMUM SLOPES ARE ADHERED TO AND MAINTAINED DURING CONSTRUCTION.

MINIMUM SLOPE

MAXIMUM SLOPE

 CONCRETE WALK, CROSS-SLOPE
 0.5% (200:1)
 2.0% (50:1)

 CONCRETE WALK, LONGITUDINAL SLOPE
 0.5% (200:1)
 *5.0% (20:1)

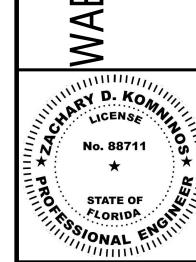
 CONCRETE PAVEMENT
 0.5% (200:1)
 *5.0% (20:1)

 ASPHALT PAVEMENT
 1.0% (100:1)
 *5.0% (20:1)

*ACCESSIBLE RAMPS MAY EXCEED THESE MAXIMUMS BUT MUST COMPLY WITH ADA REQUIREMENTS.

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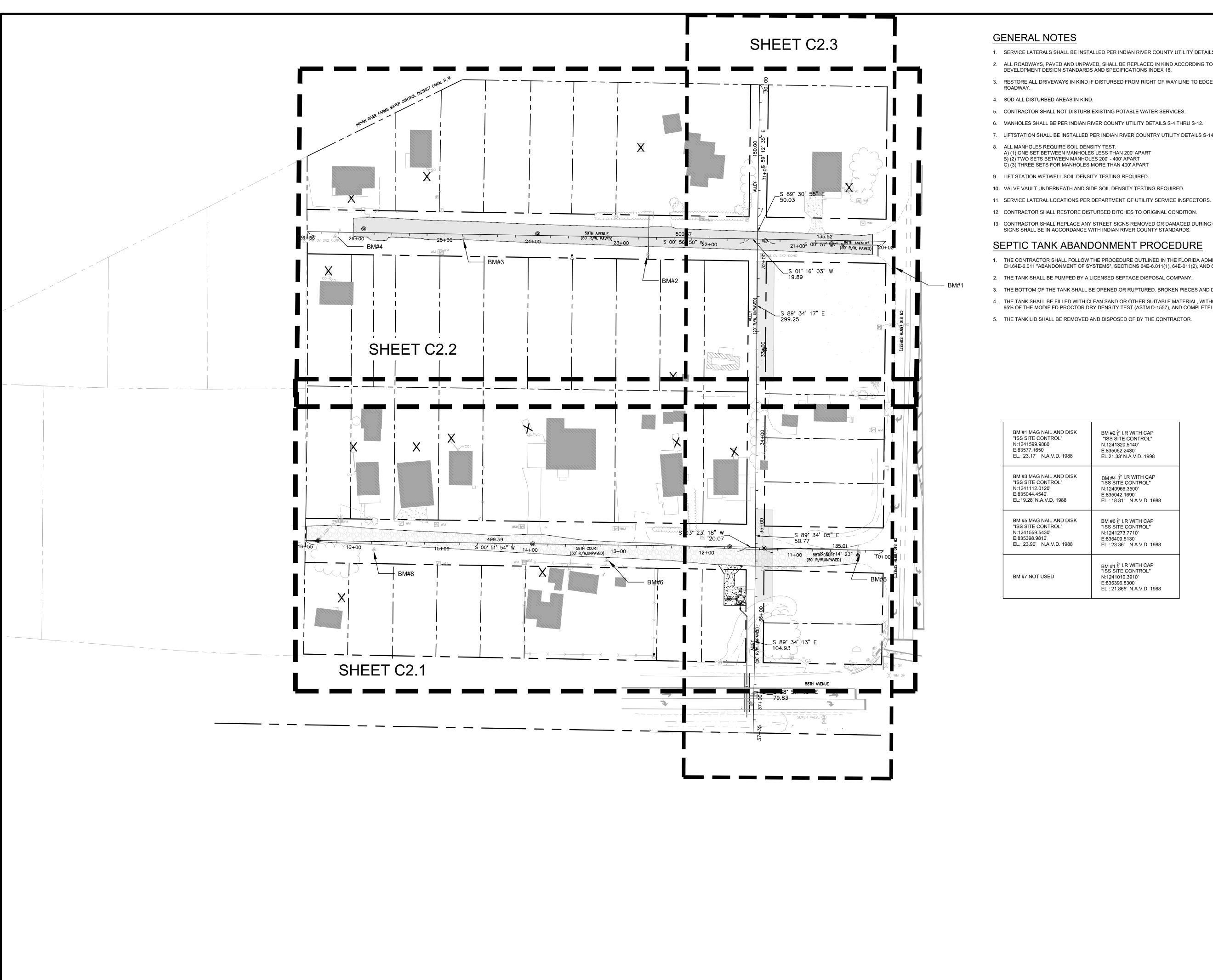
PLAN STATUS

SCALE NONE

JOB No. **010514-01-004**DATE May, 2022

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GENERAL NOTES

- 1. SERVICE LATERALS SHALL BE INSTALLED PER INDIAN RIVER COUNTY UTILITY DETAILS S-1, S-2, S-3, AND S-3A.
- 2. ALL ROADWAYS, PAVED AND UNPAVED, SHALL BE REPLACED IN KIND ACCORDING TO INDIAN RIVER COUNTY LAND DEVELOPMENT DESIGN STANDARDS AND SPECIFICATIONS INDEX 16.
- 3. RESTORE ALL DRIVEWAYS IN KIND IF DISTURBED FROM RIGHT OF WAY LINE TO EDGE OF PAVEMENT OR EDGE OF
- 4. SOD ALL DISTURBED AREAS IN KIND.
- 5. CONTRACTOR SHALL NOT DISTURB EXISTING POTABLE WATER SERVICES.
- 6. MANHOLES SHALL BE PER INDIAN RIVER COUNTY UTILITY DETAILS S-4 THRU S-12.
- 7. LIFTSTATION SHALL BE INSTALLED PER INDIAN RIVER COUNTRY UTILITY DETAILS S-14 THRU S-21
- ALL MANHOLES REQUIRE SOIL DENSITY TEST.
 A) (1) ONE SET BETWEEN MANHOLES LESS THAN 200' APART
- B) (2) TWO SETS BETWEEN MANHOLES 200' 400' APART
- C) (3) THREE SETS FOR MANHOLES MORE THAN 400' APART
- 9. LIFT STATION WETWELL SOIL DENSITY TESTING REQUIRED.
- 10. VALVE VAULT UNDERNEATH AND SIDE SOIL DENSITY TESTING REQUIRED.
- 12. CONTRACTOR SHALL RESTORE DISTURBED DITCHES TO ORIGINAL CONDITION.
- 13. CONTRACTOR SHALL REPLACE ANY STREET SIGNS REMOVED OR DAMAGED DURING CONSTRUCTION. STREET SIGNS SHALL BE IN ACCORDANCE WITH INDIAN RIVER COUNTY STANDARDS.

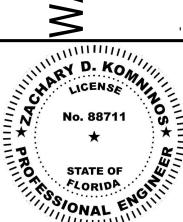
SEPTIC TANK ABANDONMENT PROCEDURE

- 1. THE CONTRACTOR SHALL FOLLOW THE PROCEDURE OUTLINED IN THE FLORIDA ADMINISTRATIVE CODE CH.64E-6.011 "ABANDONMENT OF SYSTEMS", SECTIONS 64E-6.011(1), 64E-011(2), AND 64E-6.011(3).
- 2. THE TANK SHALL BE PUMPED BY A LICENSED SEPTAGE DISPOSAL COMPANY.
- 3. THE BOTTOM OF THE TANK SHALL BE OPENED OR RUPTURED. BROKEN PIECES AND DEBRIS SHALL BE REMOVED.
- 4. THE TANK SHALL BE FILLED WITH CLEAN SAND OR OTHER SUITABLE MATERIAL, WITHOUT VOIDS, COMPACTED TO 95% OF THE MODIFIED PROCTOR DRY DENSITY TEST (ASTM D-1557), AND COMPLETELY COVERED WITH SOIL.
- 5. THE TANK LID SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

BM #1 MAG NAIL AND DISK "ISS SITE CONTROL" N:1241599.9880 E:83577.1650 EL.: 23.17' N.A.V.D. 1988	BM #2 ⁵ " I.R WITH CAP "ISS SITE CONTROL" N:1241320.5140' E:835062.2430' EL:21.33' N.A.V.D. 1998
BM #3 MAG NAIL AND DISK "ISS SITE CONTROL" N:1241112.0120' E:835044.4540' EL:19.28' N.A.V.D. 1988	BM #4 ⁵ / ₈ " I.R WITH CAP "ISS SITE CONTROL" N:1240966.3500' E:835042.1690' EL.: 18.31' N.A.V.D. 1988
BM #5 MAG NAIL AND DISK "ISS SITE CONTROL" N:1241559.5430' E:835398.9810' EL.: 23.90' N.A.V.D. 1988	BM #6 ⁵ " I.R WITH CAP "ISS SITE CONTROL" N:1241273.7710' E:835409.5130' EL.: 23.36' N.A.V.D. 1988
BM #7 NOT USED	BM #1 \(\frac{5}{8}\)" I.R WITH CAP "ISS SITE CONTROL" N:1241010.3910' E:835396.8300' EL.: 21.865' N.A.V.D. 1988



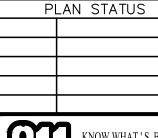
SEP WABASSO



ZACHARY D. KOMNINOS LICENSE NO. 88711

GRAPHIC SCALE

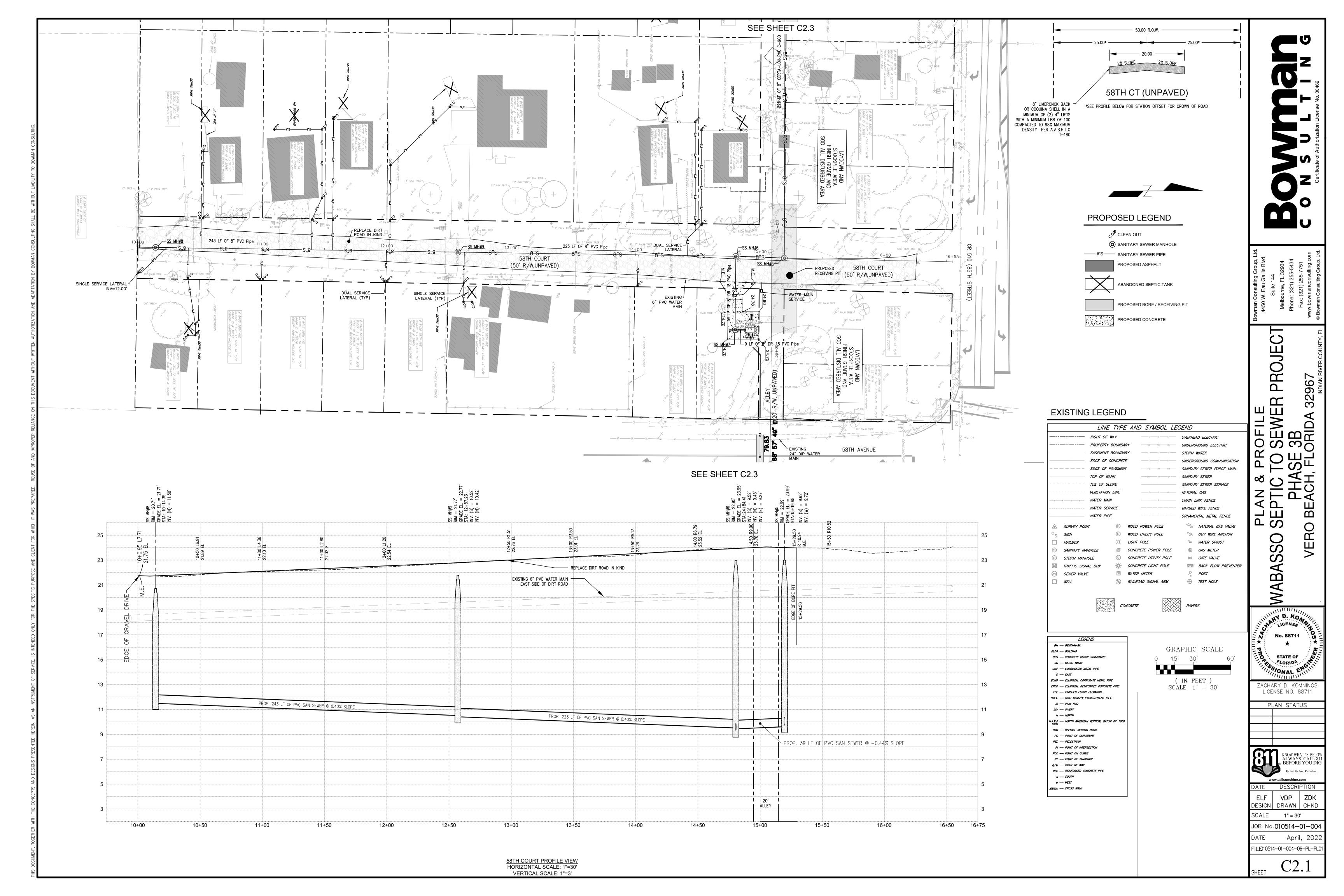
(IN FEET) SCALE: 1" = 50'

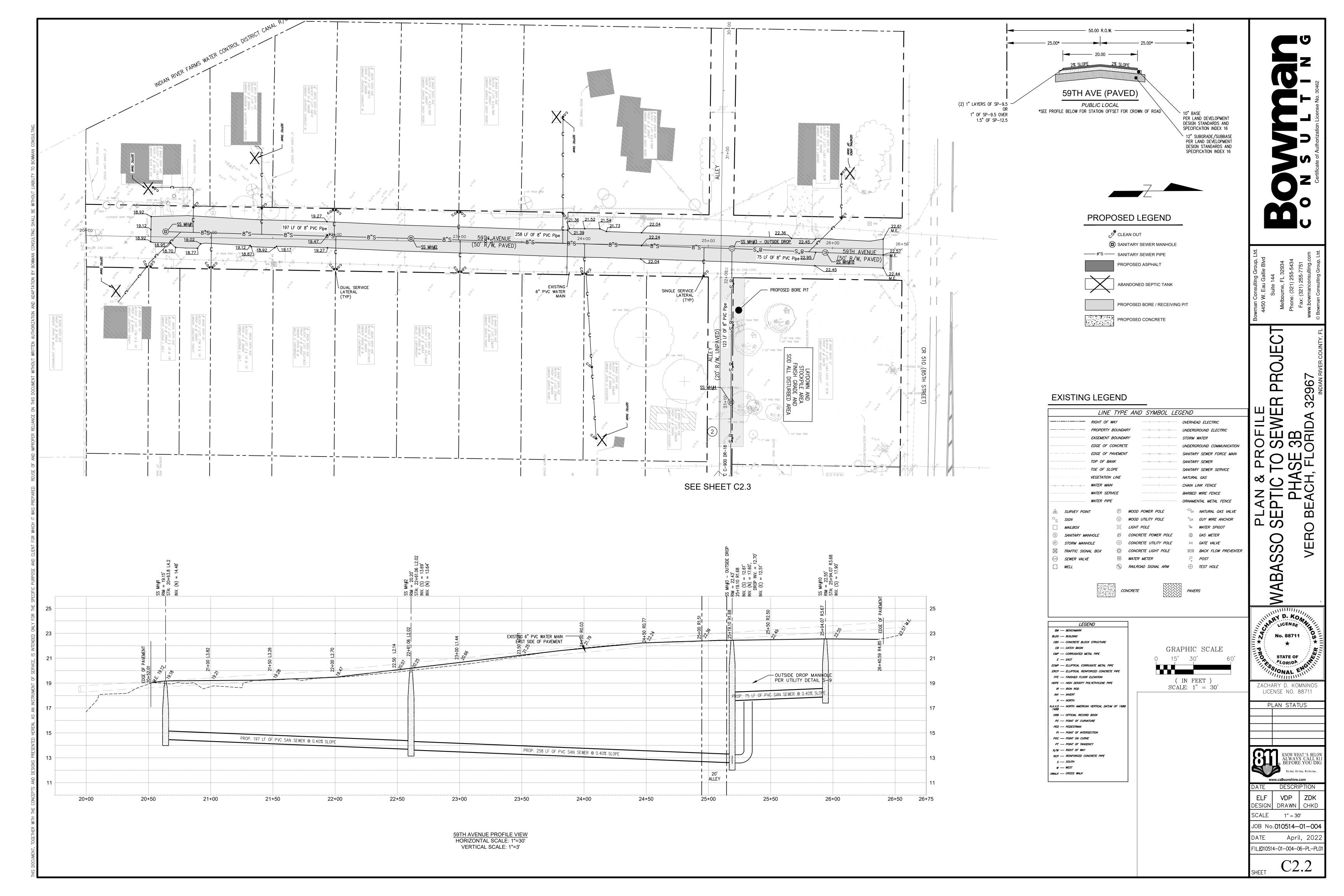


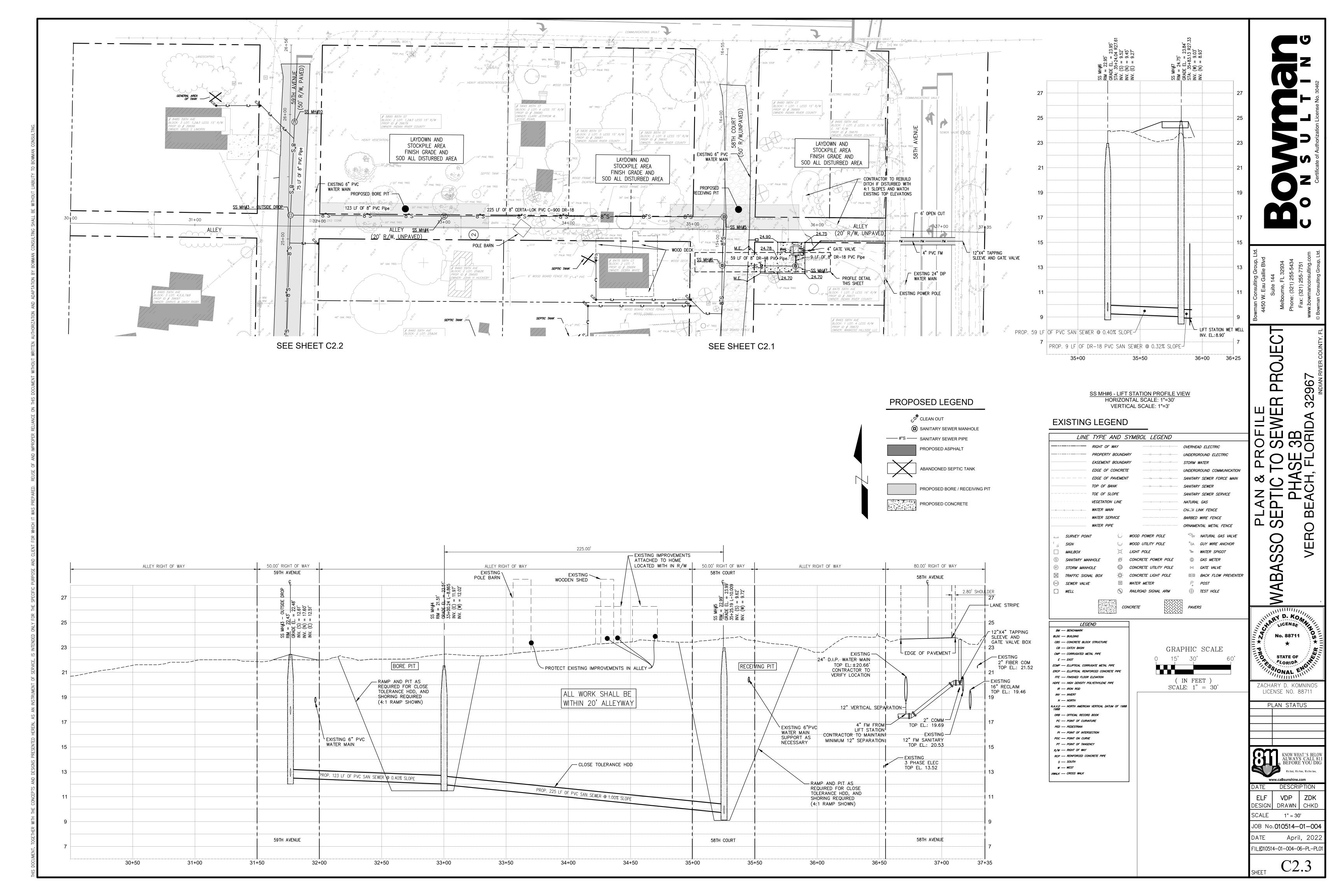


JOB No.010514-01-004 April, 2022

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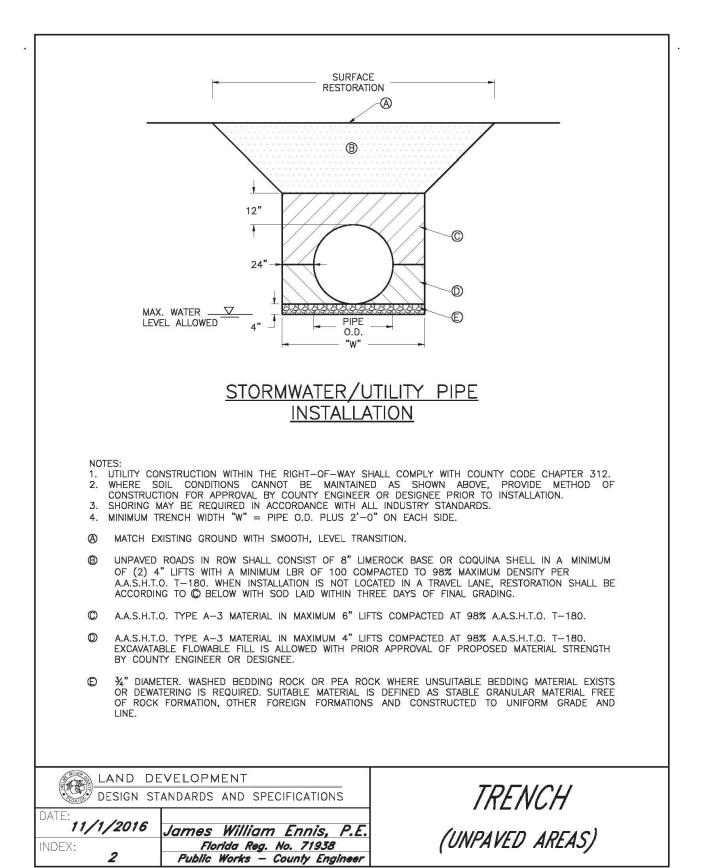


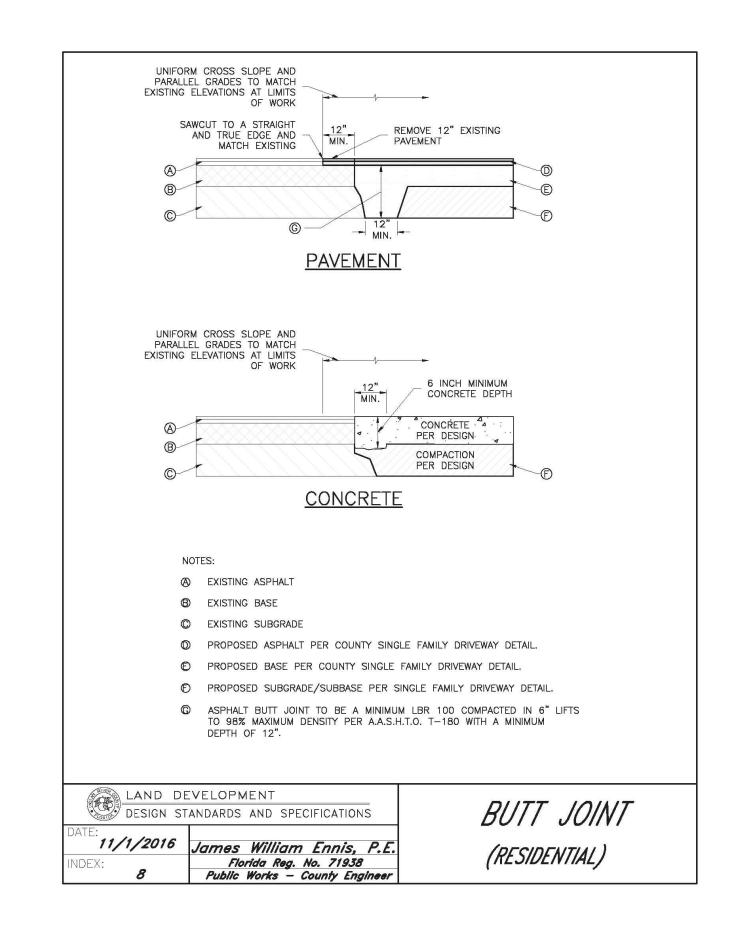
STORMWATER/UTILITY PIPE **INSTALLATION**

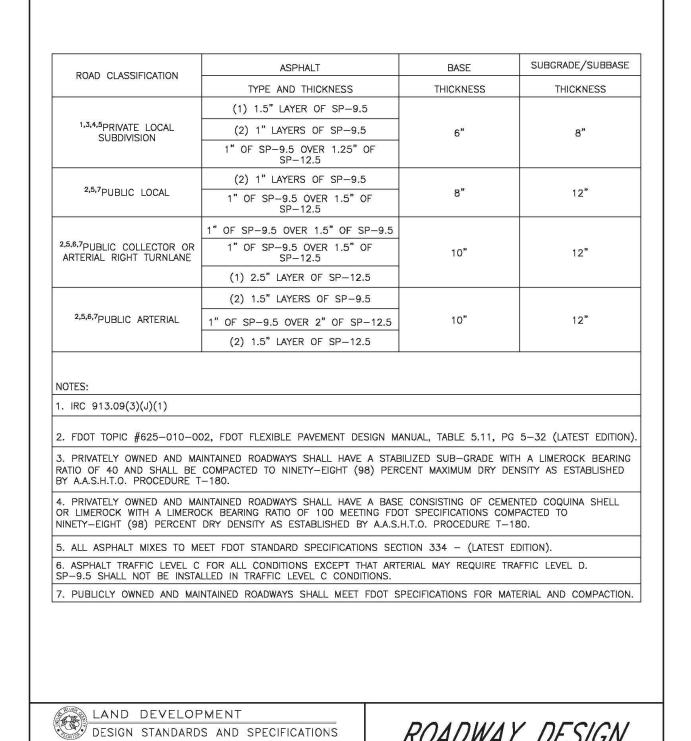
- 1. UTILITY CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH COUNTY CODE CHAPTER 312. 1.1. ALL INSTALLATIONS LESS THAN 12" DIAMETER AND NON GRAVITY UTILITIES SHALL BE BY DIRECTIONAL BORE.
 1.2. PARTIAL LANE CUTS REQUIRE A MINIMUM OF SINGLE LANE RESTORATION.
 2. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF
- CONSTRUCTION FOR APPROVAL BY THE COUNTY ENGINEER OR DESIGNEE PRIOR TO INSTALLATION. SHORING MAY BE REQUIRED IN ACCORDANCE WITH ALL INDUSTRY STANDARDS. 4. NEW SURFACING MATERIALS SHALL BE CONSISTENT OR BETTER THAN EXISTING CONDITIONS AND SHALL HAVE BUTT JOINTS (2.5 INCH MINIMUM THICKNESS). 5. ALL ROADWAY RESTORATION SHALL COMPLY WITH INDIAN RIVER COUNTY PUBLIC WORKS AND FDOT STANDARDS
- (LATEST EDITION). 6. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0" ON EACH SIDE.
- (A) MINIMUM EXISTING PAVEMENT DEPTH OR PER COUNTY ROADWAY DESIGN CRITERIA DETAIL, WHICHEVER IS
- (B) REPLACEMENT LIMEROCK BASE WITH THICKNESS (2T) PER COUNTY ROADWAY DESIGN CRITERIA DETAIL INSTALLED WITH MAXIMUM 6" LIFTS, MINIMUM 12" FINISHED THICKNESS. COMPACTION BY USE OF A 12 TON COMPACTORY
- □ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 6" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.
- A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 4" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.
 EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY THE
- ⑤ ¾" DIAMETER, WASHED BEDDING ROCK OR PEA ROCK WHERE UNSUITABLE BEDDING MATERIAL EXISTS OR IF DEWATERING IS REQUIRED. SUITABLE MATERIAL IS DEFINED AS STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION, OTHER FOREIGN FORMATIONS AND CONSTRUCTED TO UNIFORM GRADE AND LINE.

INDEX:	1A		Florida Reg. No. 71938 Public Works — County Engineer			
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TRENCH (PAVED AREAS) GREATER THAN 10' CUT





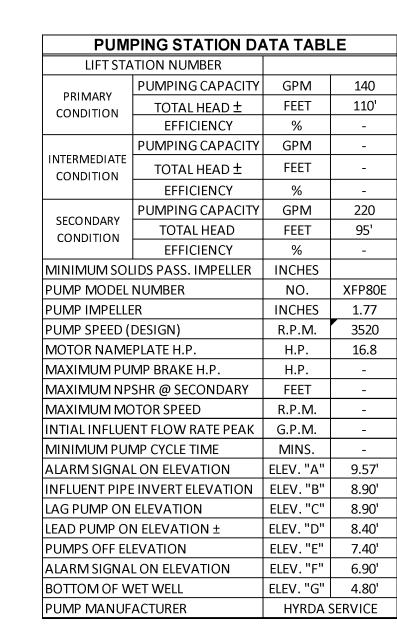


James William Ennis, P.E.

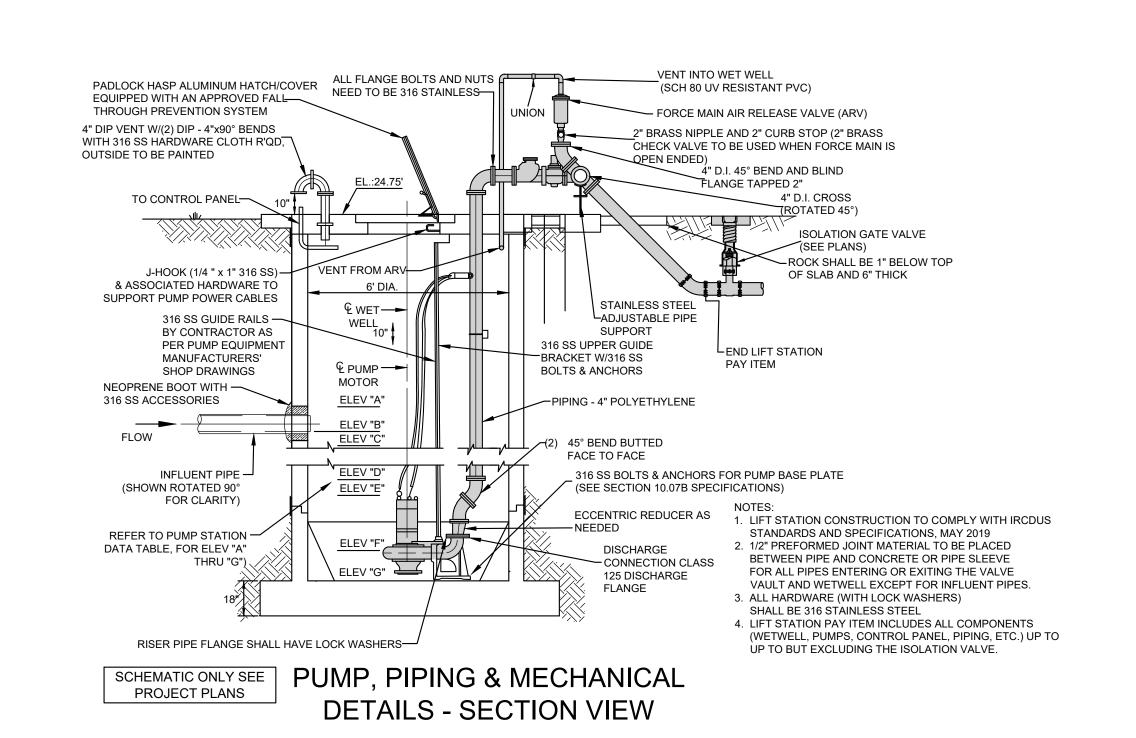
Florida Reg. No. 71938 Public Works — County Engineer

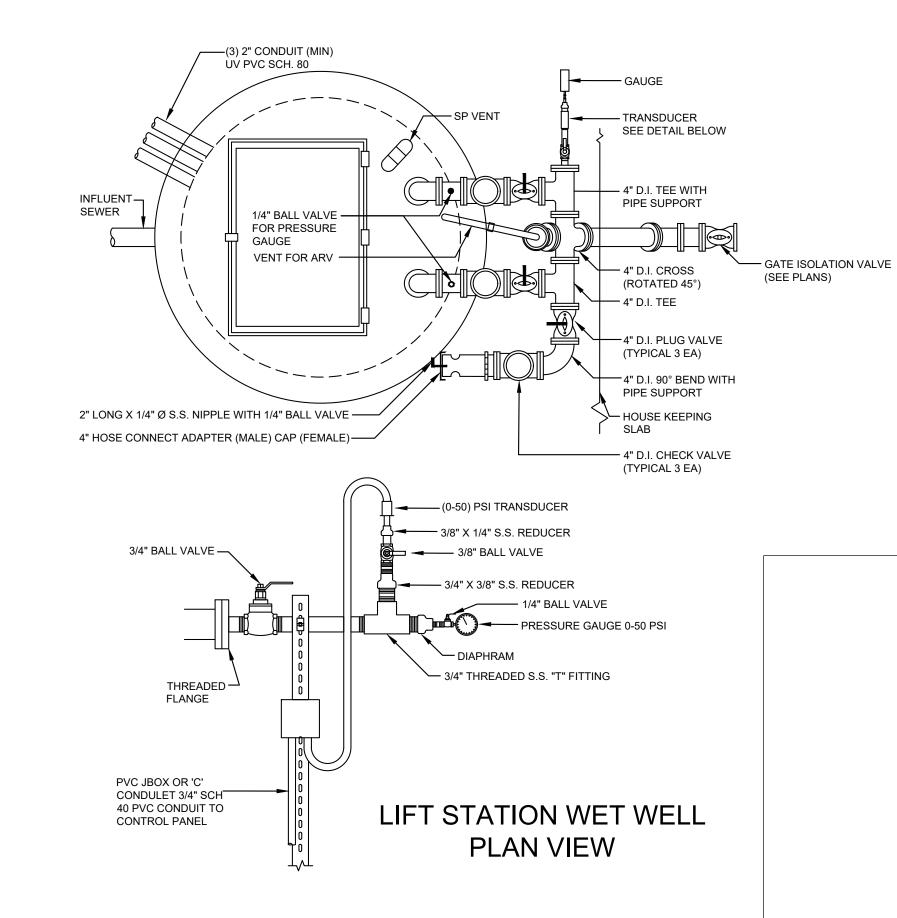
ROADWAY DESIGN

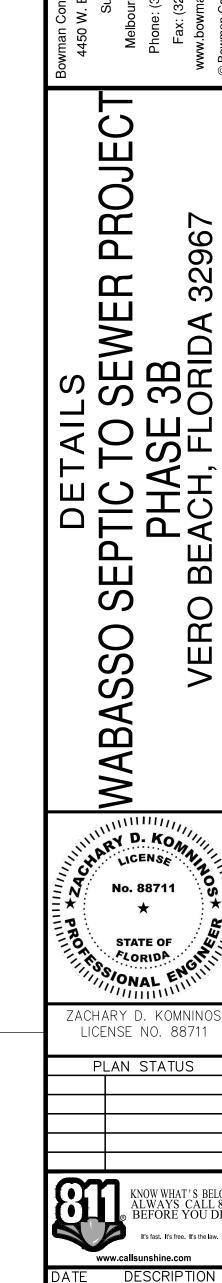
CRITERIA



REFER TO SPECIFICATION SECTION 02635 SUBMERSIBLE WASTEWATER PUMPING STATION







ELF | VDP | ZDK

DESIGN | DRAWN | CHKD

JOB No.**010514-01-00**4

FIL**@**10514-01-004-00-DTL-D0

NONE

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May, 202