

GENERAL NOTES:

- 1. BOUNDARY SURVEY WAS PROVIDED BY MANZIE & DRAKE LAND SURVEYING, FILE No. C-1039, DATED 11/23/2020.
- 2. TOPOGRAPHIC SURVEY, INCLUDING EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY MANZIE & DRAKE LAND SURVEYING, FILE No. C-931-WT, DATED 02/13/2020.
- 3. ALL SITE WORK AND MATERIALS SHALL MEET OR EXCEED NASSAU COUNTY STANDARD SPECIFICATIONS, STANDARD DETAILS, AND MATERIALS MANUAL. (LATEST REVISION)
- 4. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERLY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- 5. FOR BOUNDARY, ROADWAY AND BUILDING LOCATION INFORMATION SEE ENGINEERING SITE PLAN, THE CONTRACTOR SHALL VERIFY THAT THE BUILDING DIMENSIONS SHOWN ON THE ENGINEERING PLAN AGREES WITH THE DIMENSIONS SHOWN ON THE ARCHITECTURAL PLAN. IF ANY DIMENSIONS DO NOT AGREE, THE ARCHITECT, ENGINEER AND OWNER SHALL BE NOTIFIED AND THE DIMENSIONS ADJUSTED PRIOR TO COMMENCING WITH CONSTRUCTION.
- 6. ALL CONSTRUCTION IN THE COUNTY RIGHT-OF-WAY SHALL BE COORDINATED WITH NASSAU COUNTY AND COMPLY WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) AND FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATION ON THE STATE HIGHWAY SYSTEM (LATEST EDITION).
- 7. CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO ENGINEER INDICATING MATERIALS AND MANNER OF INSTALLATION FOR ALL COMPONENTS OF THE PROJECT PRIOR TO ORDERING OR PURCHASE OF MATERIALS AND CONSTRUCTION. SEE AS-BUILT REQUIREMENTS THIS SHEET.
- 8. CONTRACTOR SHALL VERIFY AND PROTECT ALL EXISTING TREES AND NATURAL VEGETATION THAT ARE TO REMAIN UNDISTURBED THE AREAS INDICATED FOR CONSTRUCTION SHALL BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS AND MISCELLANEOUS VEGETATION EXCEPT SPECIFIC TREES THAT SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION WITH THE USE OF TREE BARRIERS.
- 9. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF OSHA SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH OSHA REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
- 10. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. IF THE WORK IS IN THE COUNTY RIGHT-OF-WAY OR EASEMENT, THE CONTRACTORS ONE YEAR WARRANTY SHALL EXTEND TO NASSAU COUNTY. NASSAU COUNTY REQUIRES 26-MONTH MAINTENANCE BOND FOR ANY WORK WITHIN ROW.
- 11. THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH THE COUNTY REQUIREMENT AND THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. THIS SHALL INCLUDE DENSITY TESTING IN ALL FILL TREATMENT AREAS AND BUILDING PADS AND IN THE UTILITY TRENCHES LOCATED IN PAVEMENT AREAS. MOISTURE TESTING AND ALL OTHER MATERIAL TESTING PRIOR TO LIMEROCK PLACEMENT, THE PROJECT GEOTECHNICAL ENGINEER SHALL MAKE RECOMMENDATIONS FOR UNDERDRAIN PLACEMENT.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT, INCLUDING NASSAU COUNTY RIGHT-OF-WAY PERMITS FOR WORK IN THE COUNTY RIGHT-OF-WAY OR EASEMENT.
- 13. THESE PLANS DO NOT STAND BY THEMSELVES. BID DOCUMENTS, JEA WATER AND SEWER STANDARDS DETAILS & MATERIALS, NASSAU COUNTY STANDARD SPECIFICATIONS & DETAILS AND ANY OTHER STANDARDS, LISTED OR REFERENCED, ARE INCLUDED IN THE PROJECT DOCUMENTS.
- 14. ALL SITE WORK SHALL MEET OR EXCEED RECOMMENDATIONS PRESENTED IN THE GEOTECHNICAL REPORT(S) PREPARED BY UNIVERSAL ENGINEERING SCIENCES DATED SEPTEMBER 2, 2020 AND JUNE 10, 2021.
- 15. THE EXISTING UTILITY FACILITIES AND LOCATIONS SHOWN ON THE DRAWINGS ARE TAKEN FROM READILY AVAILABLE INFORMATION, THE ACTUAL LOCATIONS OF THE UTILITY FACILITIES MAY VARY SOMEWHAT FROM THE LOCATIONS SHOWN AND THERE MAY BE UTILITY FACILITIES EXISTING THAT ARE NOT SHOWN OR INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL CONTACT ALL AGENCIES WITH UTILITY FACILITIES IN THE VICINITY OF THE WORK AND SHALL LOCATE ALL UNDERGROUND FACILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL PROTECT ALL UTILITY FACILITIES AND REPAIR ANY DAMAGES RESULTING FROM THEIR WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS AND RELOCATE IF REQUIRED AT NO COST TO THE OWNER.
- 16. ALL DEMOLITION REMOVAL AND DISPOSAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES AND REQUIREMENTS. ALL DEMOLITION MATERIALS AND DEBRIS RESULTING FROM ALL ACTIVITIES BECOME THE PROPERTY OF THE CONTRACTOR AT THE TIME OF NOTICE TO PROCEED AND SHALL BE DISPOSED OF OFF-SITE, UNLESS OTHERWISE NOTED.
- 17. CONCRETE PAVING FOR PARKING AND DRIVEWAYS SHALL BE PERFORMED IN ACCORDANCE WITH ACI 308.1 STANDARD FOR PLAN CONCRETE PARKING LOTS AND ACI 330R-01 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS.
- 18. THE CONTRACTOR SHALL COORDINATE INVOLVEMENT OF THE COUNTY IN THE CONSTRUCTION WORK AS REQUIRED BY THE COUNTY.
- 19. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR PRICING TO VERIFY CONDITIONS AND EXTENT OF THE WORK TO BE PERFORMED.
- 20. THE CONTRACTOR SHALL CONDUCT ADDITIONAL FIELD EXPLORATION AND GEOTECHNICAL INVESTIGATION, AS THEY DEEM APPROPRIATE, TO ESTIMATE THE QUANTITIES OF UNSUITABLE MATERIAL TO REMOVE OR FILL IN PLACE.
- 21. ALL PAVEMENT MARKINGS SHALL BE COORDINATED WITH THE COUNTY.
- 22. CONTRACTOR SHALL REPAIR OR REPLACE ANY IN-KIND DAMAGE THAT OCCURS AS A RESULT OF HIS WORK.
- 23. CONTRACTOR SHALL NOTIFY NASSAU COUNTY A MINIMUM OF 48 HOURS PRIOR TO STARTING CONSTRUCTION.
- 24. CONTRACTOR SHALL NOTIFY ALL WORK WITH OTHER UTILITY INSTALLATIONS NOT COVERED IN THESE PLANS (ELECTRIC, TELEPHONE, GAS, CABLE, ETC) AND ALLOW FOR THEIR OPERATIONS AND CONSTRUCTION TO BE PERFORMED.
- 25. IT IS THE CONTRACTORS RESPONSIBILITY TO STAKE THE PROPERTY LINE AND VERIFY REQUIRED SETBACKS PRIOR TO CONSTRUCTION. IF ANY DIMENSIONS DO NOT AGREE WITH DIMENSIONS SHOWN ON ENGINEERING OR ARCHITECTURAL PLANS, THE ARCHITECT, ENGINEER, AND OWNER SHALL BE NOTIFIED AND THE DIMENSIONS SHALL BE ADJUSTED PRIOR TO COMMENCING CONSTRUCTION.
- 26. IT IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH NASSAU COUNTY STAFF AFTER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE COUNTY AND PRIOR TO STARTING ANY SITE CONSTRUCTION ACTIVITIES. CONTACT NASSAU COUNTY ENGINEERING (904-530-6225) AT LEAST 48 HOURS IN ADVANCE TO SCHEDULE A MEETING.
- 27. SUBMITTAL OF AS-BUILT SITE SURVEY, INCLUDING BENCHMARKS, IS REQUIRED IN COMPLIANCE WITH SECTION 5.3.1 OF THE NASSAU COUNTY LDC AND THE AS-BUILT REQUIREMENT CHECKLIST AT THE TIME OF SCHEDULING FOR FINAL INSPECTION. NASSAU COUNTY ENGINEERING DEPARTMENT SHALL BE CONTACTED 24 HOURS PRIOR TO ALL NECESSARY SITE WORK INSPECTIONS AND 5 DAYS PRIOR TO THE FINAL INSPECTION. CONTACT NASSAU COUNTY ENGINEERING DEPARTMENT (904-530-6225) TO SCHEDULE A MEETING.

GRADING AND DRAINAGE NOTES:

- 1. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AT CONNECTION POINTS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 2. THE CONTRACTOR SHALL COORDINATE THE GRADING AND DRAINAGE CONSTRUCTION WITH ALL OTHER CONSTRUCTION.
- 3. THE CONTRACTOR SHALL STAKE THE STORM SEWER SYSTEM AND THE SANITARY SEWER SYSTEM AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION OF ANY PIPE.
- 4. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
- 5. THE CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIAL AND REPLACE WITH STRUCTURAL FILL WHERE IT OCCURS UNDER CONSTRUCTED IMPROVEMENTS PER THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS. ANY UNSUITABLE MATERIAL ENCOUNTERED SHALL BE

UTILIZED APPROPRIATELY OR REMOVED FROM THE SITE. SEE GEOTECHNICAL REPORT(S).

- 6. THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL SUBGRADE, LIMEROCK AND ASPHALT TESTING AS REQUIRED BY THE PROJECT SPECIFICATIONS.
- 7. SLOPES OF NEW POND SHALL BE SODDED TO TWO FOOT (VERTICAL) BELOW NORMAL WATER LINE OR ACTUAL WATER ELEVATION DURING CONSTRUCTION. ONE ROW OF SOD SHALL BE INSTALLED ALONG ALL EDGES OF PAVEMENT OR ALONG THE BACK OF CURB. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH IMMEDIATELY AFTER GRADING. DISTURBED AREAS WITH 4:1 OR STEEPER SHALL RECEIVE STAKED SOLID SOD. SEE LANDSCAPE PLANS FOR OTHER REQUIREMENTS.
- 8. STORMWATER COLLECTION SYSTEM DESIGN IS BASED ON THE 5-YEAR RETURN FREQUENCY STORM (RATIONAL METHOD). STORMWATER DETENTION POND HAS BEEN DESIGNED TO ATTENUATE PEAK FLOWS FROM THE 29-YEAR RETURN FREQUENCY STORM. (SCS METHOD).
- 9. ALL RCP PIPE SHALL MEET THE REQUIREMENTS OF ASTM C-76 AND SHALL BE CLASS III, WALL B, UNLESS OTHERWISE INDICATED ON THE ENGINEERING PLANS.
- 10. ALL PIPE LENGTHS ARE APPROXIMATE AND MEASURED TO THE STRUCTURE OR MITERED END SECTION. ACTUAL LENGTHS MAY VARY AND NO ADDITIONAL COMPENSATION WILL BE MADE FOR VARIATIONS.
- 11. A QUALIFIED SOILS LABORATORY SHALL BE ON SITE DURING EXCAVATING TO DETERMINE THE SUITABILITY OF THE EXISTING SUB-GRADE AND EXISTING ON-SITE MATERIAL PRIOR TO BEGINNING ANY FILLING OPERATION.
- 12. CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING, OR BY OTHER METHODS AS DIRECTED BY ENGINEER AND/OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
- 13. CUT AND FILL SLOPES ARE NOT TO EXCEED 2:1V UNLESS OTHERWISE NOTED. ALL SLOPES STEEPER THAN 4:1 SHALL BE SODDED TO ESTABLISH VEGETATION.
- 14. FOR ALL TRENCH EXCAVATIONS WHICH EXCEED FIVE FEET THE FOLLOWING MUST BE ADHERED TO:
 - A. CONTRACTOR MUST FOLLOW OSHA STANDARD 29 CFR, SECTION 1926.650 SUBPART P, WHICH IS NOW A PART OF LAWS OF FLORIDA CHAPTER 90-96.
 - B. THE CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE OF COMPLIANCE WITH THIS LAW.
 - C. A SEPARATE PRICE ITEM SHALL BE INCLUDED IN THEIR BASE BID IDENTIFYING THE COST OF COMPLIANCE.
 - D. A TRENCH SAFETY SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR.
- 15. THE CONTRACTOR SHALL COORDINATE CONNECTION WITH SITE PIPING AND BUILDING PIPING.
- 16. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH COUNTY STANDARDS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- 17. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED AND PRESERVED.
- 18. CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
- 19. ALL DRAINAGE PIPE JOINTS ARE TO BE FILTER-WRAPPED.
- 20. ALL INVERTS IN DRAINAGE STRUCTURES TO BE PRECAST OR BRICK WITH LAYER OF MORTAR BETWEEN EACH LAYER OF BRICK, OR REDDI-MIX CONCRETE WITH #57 STONE.
- 21. THE CONTRACTOR SHALL RESTORE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION. THE COST OF THESE ITEMS SHALL BE INCLUDED IN THE PRICE BID FOR FURNISHING AND INSTALLING ANY NEW ITEM CAUSING SUCH DAMAGE.
- 22. CORRUGATED POLYETHYLENE PIPE (CPP), SHALL BE PER AASHTO M252 OR 294 WITH SMOOTH INNER LINING TYPE 9 WITH BELL AND SPIGOT, SILT-TIGHT, RUBBER-GASKETED JOINTS.
- 23. GROUND WATER DISCHARGE PERMITTING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 24. ADS HP STORM PIPE CAN BE USED IN ALL UNPAVED AREAS AND SHALL MEET ALL LDPM SECTION 4.10 CRITERIA.
- 25. INLET GRATE SIZES ARE SHOWN ON PLANS. ALL CONCRETE BOXES TO BE SIZED BY CONTRACTOR TO MEET PIPE DIMENSIONS AND ANGLES.
- 26. FINAL GRADING SHALL BE SMOOTH AND UNIFORM WITH NO VERTICAL DIFFERENCE EXCEEDING 1 INCH AS DETERMINED BY A 12 FOOT STRAIGHTEDGE.
- 27. SPT ELEVATIONS AT CURB AND SIDEWALK ARE EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.
- 28. ALL DRAINAGE STRUCTURES OUTSIDE OF THE PROPOSED STORMWATER PONDS SHALL HAVE TRAFFIC RATED GRATES. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM TO COUNTY STANDARDS AND SHALL BE CONSTRUCTED TO CONFORM TO CURBING, PROPERTY LINES, AND LOW POINTS.
- 29. CONSTRUCTION EQUIPMENT WORKING IN WETLANDS WILL BE LIMITED TO THAT WHICH IS ESSENTIAL FOR CONSTRUCTION. WETLAND BOUNDARIES AND CONSTRUCTION LIMITS WILL BE FLAGGED OR STAKED PRIOR TO CLEARING AND GRADING. CLEARING WITHIN WETLANDS WILL BE KEPT TO THE MINIMUM REQUIRED FOR SAFE PIPELINE CONSTRUCTION. TOPSOIL REMOVAL IN WETLANDS CAN RANGE BETWEEN 12-18 INCHES. TOPSOIL MATERIAL WILL BE REMOVED, SEGREGATED AND STOCKPILED IN AN UPLAND AREA PRIOR TO REMOVAL OF SUBSOIL MATERIAL. AFTER THE PIPE IS INSTALLED, THE TRENCH LINE WOULD BE BACKFILLED AND THE TOPSOIL REPLACED AS THE FINAL LIFT OF MATERIAL OVER THE CONSTRUCTION LIMITS. TOPSOIL REPLACED IN WETLANDS WILL NOT BE RESEDED. BMPs WILL BE INSTALLED ALONG THE CONSTRUCTION PERIMETER TO RETAIN SPILLS ON SITE. ANY MATERIAL THAT ACCUMULATES IN AN INTERMITTENT/EPHEMERAL STREAM WILL BE REMOVED AND ALL DRAINAGES WILL BE RETURNED AS CLOSE AS POSSIBLE TO PRE-CONSTRUCTION FORM. CONSTRUCTION MATS MAY BE REQUIRED ALONG THE EQUIPMENT TRAVEL LANE IN SATURATED WETLANDS TO SUPPORT EQUIPMENT AND PREVENT SOIL COMPACTION.

DEWATERING NOTES:

- 1. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO SJRWMD A DETAILED DEWATERING PLAN THAT SHALL INCLUDE EXCAVATION TECHNIQUES, DISCHARGE POINT, TURBIDITY AND EROSION CONTROL MEASURES, STOCKPILE LOCATION FOR EXCAVATED MATERIAL AND ANY TEMPORARY PONDS.
- 2. A DISTRICT CONSUMPTIVE USE PERMIT MAY BE REQUIRED TO AUTHORIZE DEWATERING DURING CONSTRUCTION. CONTACT CAROLINE SILVERS AT 904-448-2903 TO REQUEST A DISTRICT CONSUMPTIVE USE PERMIT DETERMINATION FROM SJRWMD PRIOR TO ANY CONSTRUCTION. IF NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE PERMIT.
- 3. THE CONTRACTOR SHALL OBTAIN ANY OTHER DEWATERING PERMITS AS REQUIRED BY LOCAL, STATE, OR FEDERAL AGENCIES.

AS-BUILT REQUIREMENTS:

- 1. CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT INFORMATION TO THE PROJECT ENGINEER IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS: 1. AS-BUILT DRAWINGS SHALL BE PREPARED IN AUTOCAD FORMAT BY A REGISTERED LAND SURVEYOR. ONE SET OF SIGNED DRAWINGS AND A SET OF COMPUTER DISKS OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. SIGNED AND SEALED PRINTS SHALL BE PROVIDED TO THE ENGINEER AS REQUESTED.
- 2. PROVIDE BUILDING LOCATIONS, FINISH FLOOR ELEVATIONS, LOT GRADES, PAVEMENT GRADES AND ALL UNDERGROUND FACILITIES.
- 3. PROVIDE PERIMETER DIMENSIONS AT TOP OF BANK, THE NORMAL WATER LINE (NWL) ELEVATION AND AT THE BOTTOM OF POND.
- 4. PROVIDE ELEVATIONS AT TOP OF BANK AND BOTTOM OF POND.
- 5. PROVIDE SPECIAL DETAIL DRAWINGS WHERE INSTALLATIONS WERE NOT AS SHOWN ON CONTRACT DRAWINGS DUE TO FIELD CONDITIONS OR WHERE REQUIRED FOR CLARITY.
- 6. PROVIDE LOCATION, ELEVATION AND DESCRIPTION OF BENCHMARK(S).
- 7. LOCATE AND PROVIDE ELEVATIONS OF ALL STRUCTURES. LOCATION OF ALL STRUCTURES SHALL BE FROM TWO (2) DIRECTIONS.
- 8. LOCATE ALL PIPES AND PROVIDE SIZE, ELEVATION, INVERT ELEVATIONS, LENGTH AND TYPE.
- 9. PROVIDE DIMENSIONS AND ELEVATIONS OF THE POND OUTFALL STRUCTURE(S).
- 10. WATER AS-BUILTS SHALL INDICATE THE LOCATION OF BACTERIOLOGICAL SAMPLE POINTS. SAMPLE POINTS SHALL BE INDICATED IN RED OR PINK.
- 11. THE AS-BUILTS SHALL INCLUDE A DETAIL OF EVERY CROSSING OF THE NEW WATER MAIN WITH GRAVITY SEWERS, FORCE MAINS AND STORM PIPES CLEARLY IDENTIFYING AND INDICATING THE VERTICAL CLEARANCES AT EACH CROSSING. DETAILS SHALL BE FURNISHED FOR PARALLEL

RUNS WHERE THE HORIZONTAL SEPARATION IS LESS THAN 10 FEET.

- 12. THE CENTERING OF UNCUT LENGTHS OF PIPE AT POINTS OF CROSSING SHALL BE DOCUMENTED ON THE AS-BUILTS AND ALL MITIGATING CONSTRUCTION MEASURES CLEARLY DEPICTED IN CASES WHERE A MINIMUM OF 18" OF VERTICAL CLEARANCE BETWEEN THE WATER AND SEWER (INCLUDING STORM) LINES IS NOT POSSIBLE.
- 13. CONTRACTOR SHALL PROVIDE LOCATION OF EACH HANDICAP SPACE AND ACCESSIBLE ROUTE, ALONG WITH PAVEMENT ELEVATIONS FOR EACH CORNER OF THE HANDICAP SPACE AND ACCESS AISLE. ELEVATIONS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF EACH HANDICAP RAMP. ELEVATIONS SHALL BE SUFFICIENT TO DETERMINE SLOPES MEET ALL ADA REQUIREMENTS.
- 14. SUBMITTAL OF AS-BUILT SITE SURVEY, INCLUDING BENCHMARKS, IS REQUIRED IN COMPLIANCE WITH SECTION 5.3.1 OF THE NASSAU COUNTY LAND DEVELOPMENT CODE AND THE AS-BUILT REQUIREMENT CHECKLIST
- 15. NASSAU COUNTY DEVELOPMENT REVIEW INSPECTOR SHALL BE CONTACTED 24 HOURS PRIOR TO ALL NECESSARY SITE WORK INSPECTIONS AND 5 DAYS PRIOR TO THE FINAL INSPECTION.

WATER NOTES:

- 1. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF WATER FACILITIES WITH ALL OTHER CONSTRUCTION.
- 2. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO LATEST JEA STANDARDS AND SPECIFICATIONS AND APPLICABLE AWWA STANDARDS.
- 3. WATER LINES SHALL HAVE A MINIMUM OF 36" COVER FROM FINISHED GRADE. MAXIMUM COVER SHALL BE 60".
- 4. WATER LINES ARE DESIGNED TO FINISHED GRADE AND SHALL BE PROTECTED UNTIL FINISH WORK IS COMPLETE.
- 5. ALL WATER MAINS 3" AND LARGER SHALL BE AWWA C900, DR25 PVC. WATER MAINS 3" AND SMALLER SHALL BE SCH. 40 PVC PIPE WITH SOLVENT JOINTS AND WITH NSF-PW APPROVAL.
- 6. RESTRAINED JOINTS ARE REQUIRED WHERE WATER MAINS ARE TERMINATED AND AT ALL BENDS, IN ACCORDANCE WITH JEA STANDARD DETAILS AND SPECIFICATIONS.
- 7. ALL GATE VALVES 2" AND LARGER SHALL BE NON-RISING STEM TYPE AND SHALL BE SUITABLE FOR 200 PSI NON-SHOCK WORKING PRESSURE. GATE VALVES SHALL BE MECHANICAL JOINT, IRON BODY, RESILIENT SEAT, 2" SQUARE OPERATING NUT, MUELLER OR EQUAL. VALVE BOXES WITH SCREW EXTENSIONS SHALL BE PROVIDED FOR EACH BURIED GATE VALVE. BOXES SHALL BE CAST IRON CONSTRUCTION, 3/8" MINIMUM WALL THICKNESS AND SHALL BE NON-TACKY TAR ENAMEL COATED. THE WORD "WATER" SHALL BE CAST IN COVER. ALL GATE VALVES INSTALLED SHALL OPEN BY TURNING TO THE LEFT (COUNTERCLOCKWISE) WHEN VIEWED FROM THE STEM.
- 8. CLASS B, TYPE I BEDDING SHALL BE USED FOR THIS PROJECT UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR DIRECTED BY THE ENGINEER.
- 9. UNSUITABLE MATERIALS UNDER WATER PIPE SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL PROPERLY COMPACTED. THE MATERIAL SHALL EXHIBIT MOISTURE CONTENT OF 10% TO 12% PERCENT OF THE MODIFIED PROCTOR OPTIMUM MOISTURE CONTENT (ASTM D1557) DURING THE COMPACTION OPERATIONS. COMPACTION SHALL CONTINUE UNTIL DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D 1557) HAVE BEEN ACHIEVED.
- 10. BACKFILLING SHALL BE MADE WITH CLEAN BACKFILL WHICH SHALL BE THOROUGHLY COMPACTED IN 6" LIFTS. COMPACTION SHALL BE A MINIMUM OF 95% OF MAX. DENSITY AT +/- 2.0% OF THE MODIFIED PROCTOR.
- 11. WHERE WATER MAINS ARE LAID UNDER DITCHES, CULVERTS, PIPELINES, OR OBSTRUCTIONS WITHOUT FITTINGS, THE MAXIMUM DEFLECTION OF ANY JOINT SHALL NOT EXCEED 50% OF THE MAXIMUM RECOMMENDED BY THE PIPE MANUFACTURER.
- 12. NO CONNECTION TO EXISTING POTABLE WATER SYSTEM WILL BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN FLUSHED, PRESSURE TESTED, DISINFECTED, AND CLEARED FOR SERVICE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- 13. CONTRACTOR SHALL NOTIFY UTILITY COMPANY A MINIMUM OF TWO DAYS PRIOR TO CONNECTION OF WATER MAINS TO EXISTING LINES. ALL NEW WORK MUST BE INSPECTED BY THE ENGINEER. NO TESTS SHALL BE SCHEDULED FOR WEEKENDS, ANY CHANGE FROM THE TECHNICAL REQUIREMENTS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND OWNER.
- 14. HYDROSTATIC AND LEAKAGE TESTING OF THE WATER MAINS INSTALLED SHALL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARD SPECIFICATIONS. A REPRESENTATIVE OF THE UTILITY COMPANY OR THE ENGINEER MUST BE PRESENT DURING THE TESTS. PRESSURE TESTS SHALL BE CONDUCTED AT 150 PSI FOR 2 HOURS FOR WATER MAINS AND 200 PSI FOR 2 HOURS FOR FIRE MAINS. PRESSURE TEST AFTER LIMEROCK IS INSTALLED.
- 15. THE CONTRACTOR SHALL COORDINATE ALL WATER MAIN FLUSHING WITH JEA UTILITY DEPARTMENT. FLUSHING AND DISINFECTION PROCEDURES SHALL COMPLY WITH AWWA C-651 FOR MAIN DISINFECTION.
- 16. UPON COMPLETION OF WATER MAIN FLUSHING, BACTERIOLOGICAL SAMPLES SHALL BE TAKEN. SAMPLES SHALL BE TAKEN FOR 2 CONSECUTIVE DAYS.
- 17. SAMPLE POINTS FOR BACTERIOLOGICAL SAMPLING SHALL BE LOCATED AS FOLLOWS:
 - EVERY 1000 FEET AND/OR EVERY DEAD END ON A WATER MAIN.
 - POINT OF TIE-IN TO EXISTING WATER SYSTEM.
 - WATER MAIN STUBS MORE THAN 40 FEET IN LENGTH.
- 18. FIRE HYDRANTS SHALL MEET JEA AND NASSAU COUNTY STANDARDS.
- 19. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN IS AT LEAST SIX FEET ABOVE THE TOP OF THE SEWER), A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PORTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM." (FAC 62-555.314(1); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)).
- 20. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS 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 SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE, AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS 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 OTHER PIPELINE. (FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)).
- 21. AT THE UTILITY CROSSINGS DESCRIBED IN PART II.C.1.W. ABOVE, ONE FULL LENGTH OF WATER PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINES SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST 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 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. (FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)).
- 22. ALL WATER AND SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES.
- 23. ALL WATER MAINS SHALL TERMINATE APPROXIMATELY 5 FEET OUTSIDE THE BUILDING UNLESS OTHERWISE NOTED. THE END OF THESE SERVICE LINES SHALL BE TIGHTLY PLUGGED OR CAPPED AND MARKED UNTIL SUCH TIME AS CONNECTION IS MADE INSIDE THE BUILDING.
- 24. THE CONTRACTOR SHALL MAKE APPLICATION TO UTILITY COMPANY FOR THE PROJECT WATER METER AND SHALL PAY FOR ALL METER FEES.
- 25. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE MITIGATING CONSTRUCTION MEASURES IN ALL CASES WHERE A MINIMUM OF 18 INCHES OF VERTICAL CLEARANCE BETWEEN WATER AND SEWER (INCLUDING STORM) LINES IS NOT POSSIBLE.
- 26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER FOR CONSTRUCTION USE

DURING ENTIRE COURSE OF PROJECT IF NECESSARY.

- 27. PRESSURE PIPE AND FITTINGS REQUIRING RESTRAINT SHALL BE BRACED WITH RESTRAINED JOINTS PER JEA STANDARDS.
- 28. DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
- 29. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS, AND SOLVENT RESISTANT GASKET MATERIAL SUCH AS FLUOROCARBON SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. ANY CONTAMINATED SOIL THAT IS EXCAVATED SHALL BE PLACED ON AN IMPERMEABLE MAT AND COVERED WITH A WATERPROOF COVERING. THE PROPER AUTHORITIES SHALL BE NOTIFIED AND THE CONTAMINATED SOIL HELD FOR PROPER DISPOSAL.

SANITARY SEWER NOTES:

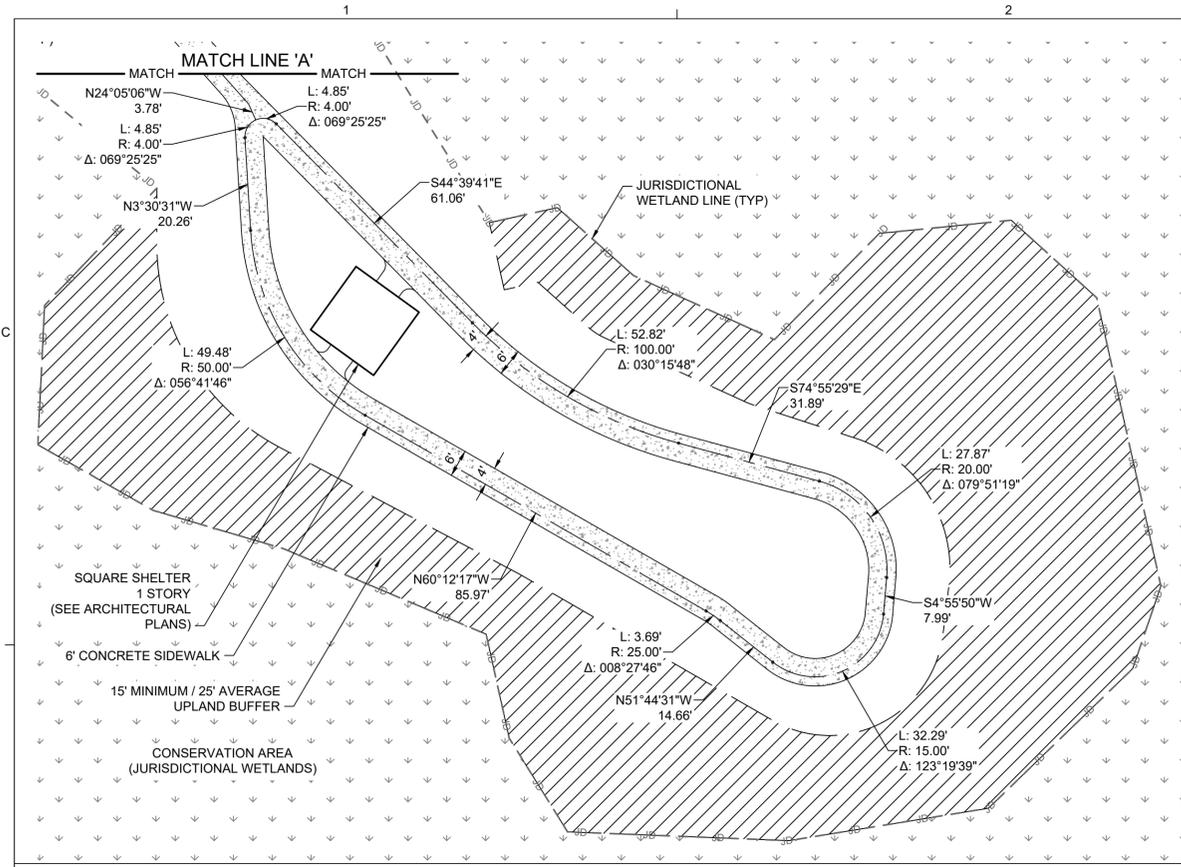
- 1. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF SEWER FACILITIES WITH ALL OTHER CONSTRUCTION.
 - 2. ALL GRAVITY SEWER CONSTRUCTION SHALL CONFORM TO THE LATEST JEA STANDARDS AND SPECIFICATIONS.
 - 3. THE CONTRACTOR SHALL STAKE THE SANITARY SEWER SYSTEM AND THE STORM SEWER SYSTEM AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO INSTALLATION OF ANY PIPE.
 - 4. MANHOLES SHALL BE IN CONFORMANCE WITH JEA STANDARDS.
 - 5. TYPE B BEDDING SHALL BE USED FOR THIS PROJECT UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
 - 6. BACKFILLING SHALL BE MADE WITH CLEAN BACKFILL WHICH SHALL BE THOROUGHLY COMPACTED IN 6" LIFTS. COMPACTION SHALL BE A MINIMUM OF 95% MAX DENSITY AT +/- 2% OF THE MODIFIED PROCTOR OPTIMUM MOISTURE CONTENT.
 - 7. UNSUITABLE MATERIALS UNDER SEWER PIPE SHALL BE REMOVED TO A DEPTH OF 18" BELOW THE BOTTOM OF PIPE AND REPLACED WITH SELECTED BACKFILL PROPERLY COMPACTED IN 6" LIFTS. THE MATERIAL SHALL EXHIBIT MOISTURE CONTENTS WITHIN +/- 2 PERCENT OF THE MODIFIED PROCTOR OPTIMUM MOISTURE CONTENT (ASTM D1557) DURING THE COMPACTION OPERATIONS. COMPACTION SHALL CONTINUE UNTIL DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) HAVE BEEN ACHIEVED.
 - 8. ALL SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER CHAPTER 489 F.S.
 - 9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
 - 10. ALL SANITARY SEWER LATERALS SHALL TERMINATE APPROXIMATELY 5 FEET OUTSIDE THE BUILDING AT A MINIMUM DEPTH OF 3' BELOW GRADE UNLESS OTHERWISE NOTED. THE END OF THESE SERVICE LINES SHALL BE TIGHTLY PLUGGED OR CAPPED AND MARKED UNTIL SUCH TIME AS CONNECTION IS MADE INSIDE THE BUILDING.
 - 11. THE CONTRACTOR SHALL PERFORM A TELEVISION INSPECTION OF THE SEWER SYSTEM, TWO FULL REPORTS, INCLUDING VIDEO TAPE, SHALL INDICATE CONDITIONS OF THE PIPE, LOCATION, TYPE OF PIPE, DIAMETER, LOCATION OF SERVICES, TYPE OF JOINT, DISTANCE BETWEEN MANHOLES AND ANY IRREGULARITIES IN THE PIPELINE. THE TELEVISION INSPECTION SHALL INCLUDE A DEFLECTION TEST WITH A 5% MANDREL. THE SEWER LINES SHALL BE LAMPED AS PART OF THE FINAL INSPECTION.
 - 12. THE CONTRACTOR SHALL COORDINATE THE LOCATION, SIZE AND INVERT ELEVATIONS OF SANITARY SEWER SERVICES WITH THE APPROVED PLUMBING PLANS FOR THE BUILDING.
 - 13. CONTRACTOR SHALL PROVIDE TO THE ENGINEER, A SCHEDULE OF INVERT ELEVATIONS OF ALL SANITARY SERVICES PRIOR TO THE PLACEMENT OF LIMEROCK BASE COURSE. THIS SCHEDULE SHALL BE PROVIDED BY THE REGISTERED LAND SURVEYOR SUBMITTING THE "AS-BUILT" DRAWINGS FOR THIS PROJECT.
 - 14. ALL SEWER MAINS SHALL BE PVC (ASTM-3034) SDR-35 FOR DEPTHS TO 12 FEET, SDR-26 FOR DEPTHS 12 FEET OR DEEPER, OR IN EASEMENTS UNLESS OTHERWISE NOTED.
 - 15. GRAVITY SANITARY SEWER SHALL BE LOW PRESSURE AIR TESTED FOR LEAKAGE MAXIMUM ALLOWABLE LEAKAGE RATE IS 50 GPD PER INCH OF DIAMETER PER MILE. ASTM C-828-86 OR C-924.
 - 16. ALL GRAVITY SEWERS INSTALLED UNDER THIS PROJECT SHALL BE TESTED FOR LEAKAGE BY THE CONTRACTOR TO DEMONSTRATE THAT:
 - a. PERCENT LEAKAGE BY AIR INFLTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
 - 17. EXFILTRATION OR INFILTRATION TESTS SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET; AND
 - 18. AIR TEST, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURES ARE USED PER RSWP. 33.93 33.94 AND 33.95.
- NASSAU COUNTY GENERAL NOTES:**
- STORMWATER DRAINAGE NOTES:**
- 1. ALL STORMWATER DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY AND PAVED AREAS, INCLUDING NASSAU COUNTY RIGHT-OF-WAY, TURN LANS, RESIDENTIAL ROADWAYS, DRIVE AISLES FOR MULTI-FAMILY DEVELOPMENTS, AND MAJOR DRIVE AISLES FOR COMMERCIAL DEVELOPMENTS SHALL BE LASER PROFILED PER FDOT SECTION 430.
 - 2. A BUILDER CANNOT MODIFY THE COUNTY'S STORM WATER MANAGEMENT SYSTEM INCLUDING THE PIPES, INLETS, AREA DRAINS, DITCHES AND RELATED ELEMENTS TYPICALLY WITHIN THE STREET OR WITHIN A DRAINAGE EASEMENT WITHOUT THE PRIOR WRITTEN APPROVAL OF THE COUNTY ENGINEER OR DESIGNER.
 - 3. DRAINAGE EASEMENTS AND DITCHES SHOULD REMAIN FREE OF STOCKPILED SOIL, SEDIMENT, AND OTHER DEBRIS AT ALL TIMES. POSITIVE STORMWATER FLOW MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.
 - 4. THE CONTRACTOR SHALL TEMPORARILY OR PERMANENTLY STABILIZE BARE SOIL AREAS AND SOIL STOCKPILES WHEN THE AREA IS INACTIVE FOR FOURTEEN DAYS OR MORE OR HAS REACHED FINISHED GRADE.
 - 5. PER ORDINANCE 99-17 SECTION 11.11.5.4, ALL GRAVITY FLOW PIPE INSTALLATIONS SHALL HAVE A SOIL TIGHT JOINT PERFORMANCE UNLESS SPECIFIC SITE FACTORS WARRANT WATER TIGHT JOINT PERFORMANCE.
 - 6. PER ORDINANCE 99-17 SECTION 10.6.5.1, IMMEDIATELY INSTALL ADDITIONAL EROSION PROTECTION SEDIMENT CONTROL MEASURES IF SEDIMENT IS LEAVING YOUR SITE. FAILURE TO CONTAIN SEDIMENT TO YOUR SITE MAY RESULT IN DELAYED INSPECTIONS, NOTICES OF VIOLATION, CITATIONS, FINES, PENALTIES, AND/OR STOP WORK ORDERS.
 - 7. PER 99-17 SECTION 10.1.2.A.E. STORMWATER MANAGEMENT FOR A PROJECT SHALL NOT HAVE ADVERSE EFFECTS ON ADJACENT PROPERTIES, DOWNSTREAM STRUCTURES, OR RIGHTS OF OTHER LANDOWNERS.
- PAVING NOTES:**
- 1. PER NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS, ORDINANCE 99-17 SECTION 12.2 AND 12.4, A CONSTRUCTION BOND AND 26-MONTH MAINTENANCE BOND WILL BE REQUIRED FOR ALL WORK WITHIN NASSAU COUNTY RIGHT-OF-WAY.
 - 2. A PRE-PAVE MEETING IS REQUIRED PRIOR TO ANY PAVING OPERATIONS WITHIN NASSAU COUNTY ROW, RESIDENTIAL SUBDIVISIONS, OR MULTI-FAMILY DEVELOPMENTS.
 - 3. APPROVED MIX DESIGNS SHALL BE PROVIDED TO NASSAU COUNTY CONSTRUCTION INSPECTOR 48 HOURS PRIOR TO PRE-PAVE MEETING OR PLACEMENT OF CONCRETE.
 - 4. CONTRACTOR IS REQUIRED TO HAVE A CERTIFIED QC ASPHALT LEVEL II TECHNICIAN DURING ANY ASPHALT OPERATIONS WITHIN NASSAU COUNTY ROW, RESIDENTIAL SUBDIVISION, OR MULTI-FAMILY DEVELOPMENTS.
 - 5. ALL BASES SHALL BE PRIMED IN ACCORDANCE WITH ORDINANCE 99-17 SECTION 11.5.2.3, NASSAU COUNTY STANDARD DETAILS, AND FDOT STANDARD SPECIFICATIONS.
 - 6. SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH NASSAU COUNTY STANDARDS, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND FDOT STANDARD

PLANS.

- 7. MAINTENANCE OF TRAFFIC (MOT) SHALL BE IN COMPLIANCE WITH FDOT STANDARD INDEX 600 SERIES.
- 8. ALL WORK, MATERIALS, AND TESTING PERFORMED WITHIN NASSAU COUNTY RIGHT-OF-WAY AND SINGLE-FAMILY/MULTI-FAMILY DEVELOPMENTS SHALL BE IN ACCORDANCE WITH THE CURRENT REVISION OF NASSAU COUNTY'S ORDINANCE 99-17 AND ALL CURRENT NASSAU COUNTY STANDARD DETAILS.
- 9. PER ORDINANCE 99-17 SECTION 11.9.2, ALL PAVEMENT MARKINGS WITHIN NASSAU COUNTY ROW SHALL BE LEAD FREE THERMOPLASTIC MEETING NASSAU COUNTY AND FDOT STANDARD SPECIFICATION LATEST EDITION.
- 10. REMOVING PAVEMENT MARKINGS WITHIN NASSAU COUNTY ROW SHALL BE:
 - a. GRINDING OR HYDRO-BLASTING ON WEATHERED ASPHALT SURFACES.
 - b. HYDRO-BLASTING ONLY ON NEW ASPHALT SURFACES.
 - c. PAINT BLACKOUT IS PROHIBITED.
- 18. PER ORDINANCE 99-17 SECTION 8.5.5, ANY DAMAGE TO PAVEMENT RESULTING FROM CONSTRUCTION OR PAVEMENT MARKING REMOVAL WITHIN PUBLIC ROW NOT PLANNED AS PART OF THE PROJECT SHALL BE MILLED AND OVERLAD FOR ENTIRE WIDTH OF ROADWAY AND LENGTH OF DAMAGE PLUS 50' IN EACH DIRECTION.
- 19. ALL UNDERGROUND UTILITIES, OR APPROPRIATE CONDUIT SLEEVES, THAT ARE TO BE INSTALLED UNDER PAVEMENT MUST BE INSTALLED PRIOR TO PREPARATION OF THE SUBGRADE FOR PAVEMENT.
- 20. SINGLE VERTICAL JOINTS IN ROADWAY CONSTRUCTION SHALL BE AVOIDED IN NASSAU COUNTY RIGHT-OF-WAY USING NASSAU COUNTY STANDARD DETAIL #26.
- 21. ALL DRAINAGE STRUCTURES SHALL HAVE TRAFFIC BEARING GRATES THAT MEET OR EXCEED THE RATING FOR THE FACILITIES EXPECTED TRAFFIC.
- 22. ALL CONCRETE SHALL BE A MINIMUM OF 3000 PSI WITHIN PUBLIC RIGHT-OF-WAY.

DEVELOPMENT REVIEW GENERAL NOTES:

- 1. ENGINEERING PLANS APPROVAL DOES NOT CONSTITUTE PERMISSION TO VIOLATE ANY ADOPTED FEDERAL, STATE, OR LOCAL LAW, CODE, OR ORDINANCE.
- 2. ALL WORK WITHIN THE PUBLIC STREETS AND RIGHT-OF-WAYS SHALL CONFORM TO NASSAU COUNTY LAND DEVELOPMENT CODES (LDC), FDOT STANDARD INDICES, FLORIDA GREENBOOK, NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS, AND NASSAU COUNTY STANDARD DETAILS AS NECESSARY. FOR ANY DISCREPANCY BETWEEN STANDARDS, THE MOST STRINGENT SHALL PREVAIL.
- 3. PER NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS, ORDINANCE 99-17 SECTION 6.2.4, SITE SHALL BE CONSTRUCTED PER APPROVED CONSTRUCTION DRAWINGS. ANY SUBSTANTIAL DESIGN CHANGES SHALL BE CONCURRENTLY REVIEWED BY ENGINEER OF RECORD AND NASSAU COUNTY DEVELOPMENT REVIEW COMMITTEE PRIOR TO FIELD CHANGES.
- 4. A PRE-CONSTRUCTION MEETING WITH NASSAU COUNTY ENGINEERING SERVICES CONSTRUCTION INSPECTOR IS REQUIRED. ATTENDEES SHALL BE NASSAU COUNTY, ENGINEER OF RECORD, CONTRACTOR, TESTING FIRM, PAVING FIRM, AND UTILITY COMPANIES PER NASSAU COUNTY ORDINANCE 99-17 SECTION 7.2.3. NASSAU COUNTY MAY CANCEL PRE-CONSTRUCTION MEETING IF ATTENDEE LIST IS INADEQUATE. NASSAU COUNTY ENGINEERING SERVICES CAN BE REACHED AT 904-530-6225.
- 5. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL WORK WITH THE APPROPRIATE NASSAU COUNTY CONSTRUCTION INSPECTOR ASSIGNED TO THE PROJECT PER NASSAU COUNTY ORDINANCE 99-17 SECTION 7.2.
- 6. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES TO HIS EMPLOYEES AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT.
- 7. PER NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS, ORDINANCE 99-17 SECTION 11.8.1, ANY DISTURBED AREAS WITHIN NASSAU COUNTY RIGHT-OF-WAY SHALL BE SODDED.
- 8. PER NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS, ORDINANCE 99-17 SECTION 7.4.1, AT THE TIME OF FINAL INSPECTION, GRASSING SHALL BE A MINIMUM OF SEVENTY PERCENT COVERAGE AND FULLY ESTABLISHED AND/OR SODDING TO BE ONE HUNDRED PERCENT COVERAGE AND STABILIZED.
- 9. ENGINEER OF RECORD APPROVED SHOP DRAWINGS SHALL BE PROVIDED TO NASSAU COUNTY CONSTRUCTION INSPECTOR A MINIMUM OF ONE WEEK BEFORE BEGINNING STRUCTURE INSTALLATION.
- 10. PARKING AT MAIL KIOSKS IS REQUIRED PER NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS, ORDINANCE 99-17 SECTION 8.4. MAIL KIOSK LOCATIONS ARE SUBJECT TO USPS POSTMASTER APPROVAL.
- 11. THE DEVELOPER'S CONTRACTOR IS THE SINGLE RESPONSIBLE PARTY FOR THE PROPER IMPLEMENTATION OF AN EROSION PROTECTION SEDIMENT CONTROL (EPCS) WITHIN EACH LOT OR CONSTRUCTION SITE. THIS INCLUDES THE RESPONSIBILITY FOR THE ACTION/INACTIIONS OF EMPLOYEES, SUBCONTRACTORS, AND/OR SUPPLIERS.
- 12. SIDEWALKS TO BE PROVIDED AND BUILT IN ACCORDANCE FLORIDA BUILDING CODE. ALL PROPOSED SIDEWALKS SHALL MEET ADA REQUIREMENTS.
- 13. THE CONTRACTOR SHALL COMPLY WITH CURRENT FLORIDA ACCESSIBILITY STANDARDS FOR ALL WORK ON THIS PROJECT.
- 14. PER ORDINANCE 99-17 SECTION 8.5.1, MINIMUM COVER FOR WATER LINES AND FORCE MAINS UNDER PAVEMENT SHALL 42" AND 36" IN GREEN AREAS.
- 15. ALL WATER, SEWER, AND STORM WATER CONSTRUCTION WITHIN NASSAU COUNTY ROW SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 409 OF THE FLORIDA STATUTES.
- 16. NO WORK SHALL BE PERMITTED BETWEEN THE HOURS OF 7:00 PM - 7:00AM WITHOUT PRIOR APPROVAL FROM NASSAU COUNTY ENGINEERING SERVICES.
- 17. ALL TREES REQUIRED TO BE PROTECTED SHALL BE FLAGGED FOR PROTECTION PRIOR TO CLEARING.
- 18. ALL GRADING AND PLACEMENT OF COMPACTED FILL SHALL BE IN ACCORDANCE WITH THE LATEST NASSAU COUNTY SPECIFICATIONS.
- 19. ANY DAMAGES (SIDEWALK, CURB, ASPHALT, DITCH GRADING, ET CETERA) WITHIN PUBLIC RIGHT-OF-W



SIGN LEGEND:

- STOP R01-01
- ONE WAY R06-02L
- ONE WAY R06-02R
- OM1-1
- SWMF-03

NOTES:

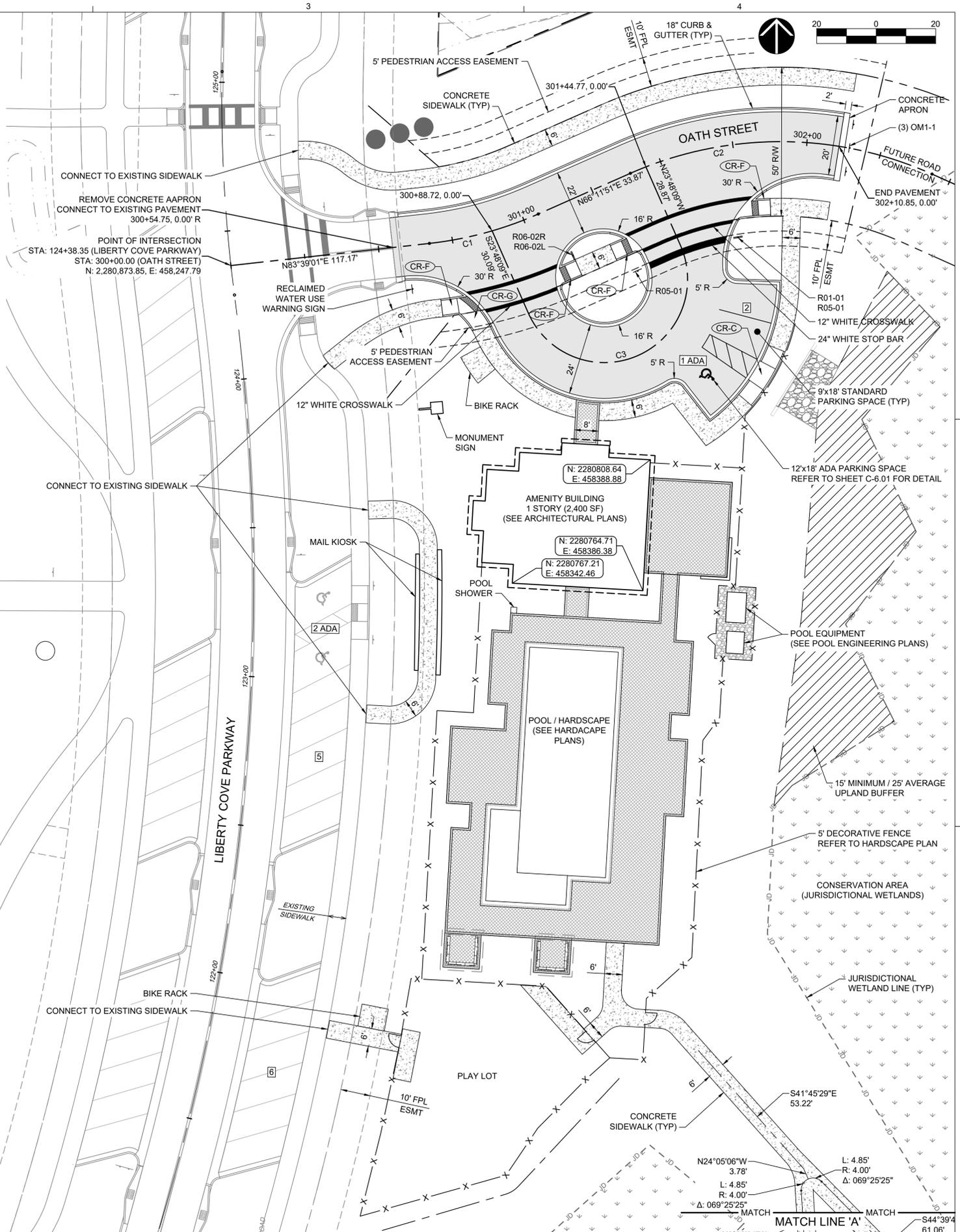
- ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THIS PROJECT IS LOCATED IN FLOOD ZONES 'X', 'AE' AS DETERMINED BY SCALE FROM FEDERAL INSURANCE RATE MAP (FIRM), PANELS 12031C0035J AND 12031C0055J, DATED 2018/11/02.
- FINAL SIGNAGE AND STREET LIGHTING DESIGN/POLE LOCATIONS ARE SUBJECT TO FPL ELECTRICAL DESIGN AND FINAL ENGINEERING. LIGHTING AND SIGNAGE SHALL COMPLY WITH THE WILLIAM BURGESS CONTEXT AND CONNECTIVITY BLUEPRINT (WBCCB), SECTION 4.14, APPENDIX I.
- STORMWATER MANAGEMENT PRACTICES MUST UTILIZE LOW IMPACT DEVELOPMENT (LID) PRACTICES WHICH INCLUDE THOSE IDENTIFIED IN WILLIAMS BURGESS CCB TABLE 4.43.
- STORMWATER MANAGEMENT FACILITIES SWMF-02, SWMF-03, SWMF-04, AND SWMF-05 ARE INTERCONNECTED PONDS TO PROVIDE A SHARED DRAINAGE SYSTEM.
- ALL COMMON AREA SIDEWALKS SHALL HAVE A MINIMUM WIDTH OF 6'.
- BUILDINGS WILL COMPLY WITH SECTIONS 4.6 AND 4.7 GENERAL ARCHITECTURAL STANDARDS FROM THE WILLIAM BURGESS DISTRICT CONTEXT AND CONNECTIVITY BLUEPRINT (WBCCB). BUILDING ELEVATIONS AND/OR ARCHITECTURAL DRAWINGS SHALL BE PROVIDED AS PART OF THE BUILDING PERMIT APPLICATION.
- MECHANICAL EQUIPMENT SHALL BE AT THE SIDE OR REAR OF THE BUILDING AND SCREENED FROM ALL RIGHTS-OF-WAYS, OR PLACED ON A FLAT ROOF, SCREENED BY A PARAPET OR SIMILAR ARCHITECTURAL FEATURE TO SHIELD IT FROM PUBLIC VIEWS, WILLIAM BURGESS DISTRICT CONTEXT AND CONNECTIVITY BLUEPRINT, WBCCB 4.5.2.4(B).

LEGEND

- JURISDICTIONAL WETLAND LINE
- WETLAND
- UPLAND BUFFER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- REFER TO HARDSCAPE PLAN

CENTERLINE GEOMETRY

LINE/CURVE	BEARING/CHORD	LENGTH	RADIUS
C1	N74°55'25.90"E 37.93'	38.08'	125.00'
C2	S84°44'05.33"W 79.48'	80.88'	125.00'
C3	N66°11'51.22"E 56.00'	87.96'	28.00'



**LIBERTY COVE
NASSAU, LLC**

**LIBERTY COVE
AMENITY CENTER**

DATE : 2024-07-12
PROJECT NO : 120093.05
DESIGNED BY : NEB
DRAWN BY : KMDW
SCALE : 1" = 20'

No.	Date	Revision

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SHEET TITLE

SITE LAYOUT PLAN

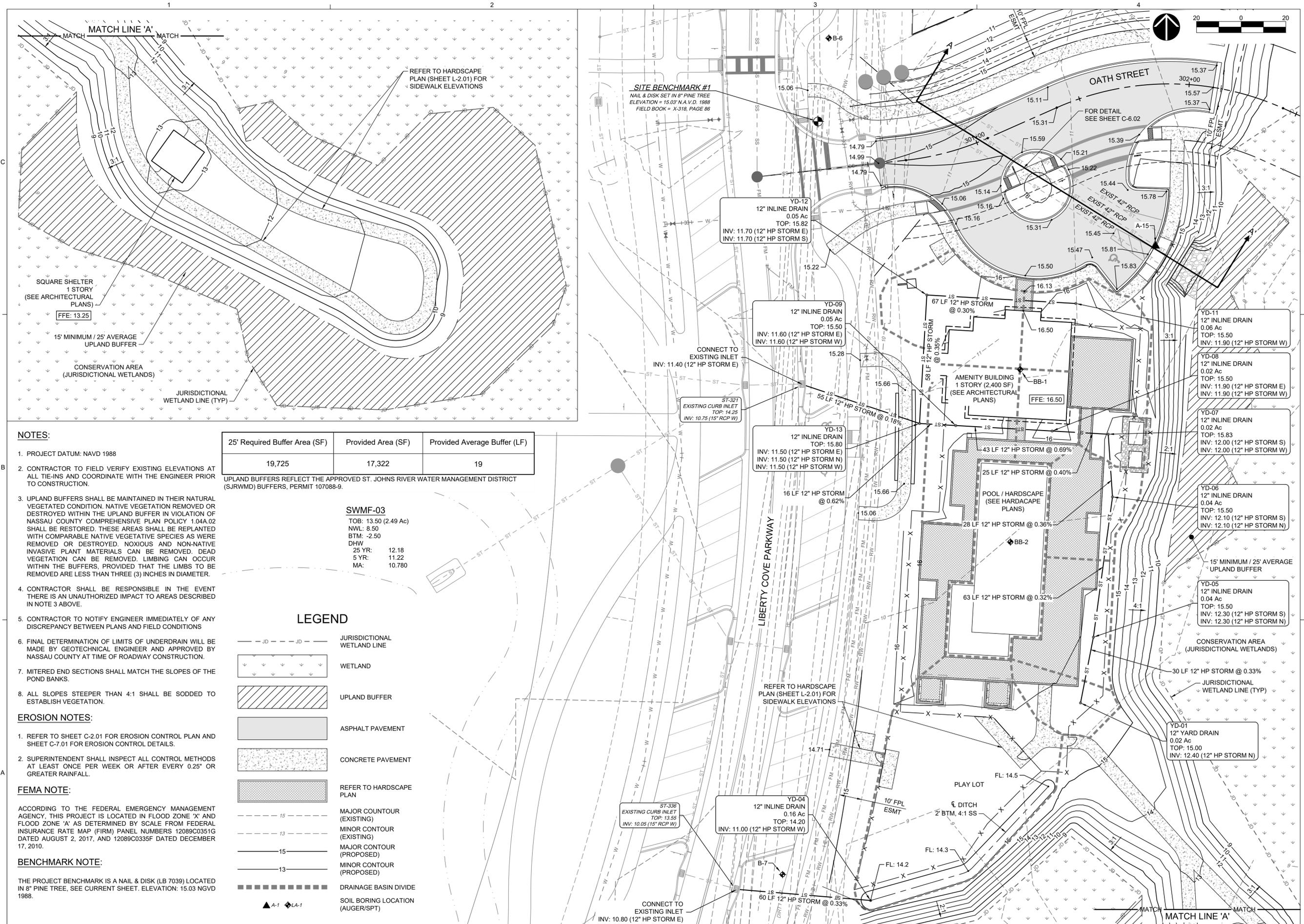
C-3.01

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2023-05-10 prs_plan-ArsD-bld

LIBERTY COVE NASSAU, LLC

LIBERTY COVE AMENITY CENTER



NOTES:

- PROJECT DATUM: NAVD 1988
- CONTRACTOR TO FIELD VERIFY EXISTING ELEVATIONS AT ALL TIE-INS AND COORDINATE WITH THE ENGINEER PRIOR TO CONSTRUCTION.
- UPLAND BUFFERS SHALL BE MAINTAINED IN THEIR NATURAL VEGETATED CONDITION. NATIVE VEGETATION REMOVED OR DESTROYED WITHIN THE UPLAND BUFFER IN VIOLATION OF NASSAU COUNTY COMPREHENSIVE PLAN POLICY 1.04A.02 SHALL BE RESTORED. THESE AREAS SHALL BE REPLANTED WITH COMPARABLE NATIVE VEGETATIVE SPECIES AS WERE REMOVED OR DESTROYED. NOXIOUS AND NON-NATIVE INVASIVE PLANT MATERIALS CAN BE REMOVED. DEAD VEGETATION CAN BE REMOVED. LIMBING CAN OCCUR WITHIN THE BUFFERS, PROVIDED THAT THE LIMBS TO BE REMOVED ARE LESS THAN THREE (3) INCHES IN DIAMETER.
- CONTRACTOR SHALL BE RESPONSIBLE IN THE EVENT THERE IS AN UNAUTHORIZED IMPACT TO AREAS DESCRIBED IN NOTE 3 ABOVE.
- CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCY BETWEEN PLANS AND FIELD CONDITIONS
- FINAL DETERMINATION OF LIMITS OF UNDERDRAIN WILL BE MADE BY GEOTECHNICAL ENGINEER AND APPROVED BY NASSAU COUNTY AT TIME OF ROADWAY CONSTRUCTION.
- MITERED END SECTIONS SHALL MATCH THE SLOPES OF THE POND BANKS.
- ALL SLOPES STEEPER THAN 4:1 SHALL BE SODDED TO ESTABLISH VEGETATION.

EROSION NOTES:

- REFER TO SHEET C-2.01 FOR EROSION CONTROL PLAN AND SHEET C-7.01 FOR EROSION CONTROL DETAILS.
- SUPERINTENDENT SHALL INSPECT ALL CONTROL METHODS AT LEAST ONCE PER WEEK OR AFTER EVERY 0.25" OR GREATER RAINFALL.

FEMA NOTE:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THIS PROJECT IS LOCATED IN FLOOD ZONE 'X' AND FLOOD ZONE 'A' AS DETERMINED BY SCALE FROM FEDERAL INSURANCE RATE MAP (FIRM) PANEL NUMBERS 12089C0351G DATED AUGUST 2, 2017, AND 12089C0335F DATED DECEMBER 17, 2010.

BENCHMARK NOTE:

THE PROJECT BENCHMARK IS A NAIL & DISK (LB 7039) LOCATED IN 8" PINE TREE. SEE CURRENT SHEET. ELEVATION: 15.03 NGVD 1988.

25' Required Buffer Area (SF)	Provided Area (SF)	Provided Average Buffer (LF)
19,725	17,322	19

UPLAND BUFFERS REFLECT THE APPROVED ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD) BUFFERS, PERMIT 107088-9.

SWMF-03

TOB:	13.50 (2.49 Ac)
NWL:	8.50
BTM:	-2.50
DHW:	
25 YR:	12.18
5 YR:	11.22
MA:	10.780

LEGEND

- JURISDICTIONAL WETLAND LINE
- WETLAND
- UPLAND BUFFER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- REFER TO HARDSCAPE PLAN
- MAJOR CONTOUR (EXISTING)
- MINOR CONTOUR (EXISTING)
- MAJOR CONTOUR (PROPOSED)
- MINOR CONTOUR (PROPOSED)
- DRAINAGE BASIN DIVIDE
- SOIL BORING LOCATION (AUGER/SPT)

DATE: 2024-07-12
 PROJECT NO.: 120093.05
 DESIGNED BY: NEB
 DRAWN BY: KMDW
 SCALE: 1" = 20'

No.	Date	Revision

THIS DRAWING NOT RELEASED FOR CONSTRUCTION UNLESS SO NOTED ABOVE

SHEET TITLE

GRADING & DRAINAGE PLAN

C-4.01

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LANDSCAPE SPECIFICATIONS

PART 1- GENERAL

- 1.1 GENERAL NOTES
A. Contractor shall comply with applicable laws, ordinances and codes; obtain required permits, inspections; pay required fees.
B. Prior to preparing and submitting cost proposal, Bidder shall visit and inspect the project site to become familiar with existing conditions.
C. This contract includes providing and installing plant and landscape materials as described within the contract documents.
D. Contractor shall perform fine grading to establish finish grades in landscape areas. Fine grading shall include only minor grading to correct random or infrequent grade irregularities to 1" or less.
E. Grading-Berming labeled on the project plans shall be the responsibility of the landscape contractor to construct. Landscape contractor shall provide fill and grading for these areas and coordinate fill requirements with general contractor prior to bidding.
F. Bidder-Contractor shall verify all plant quantities shown on plans. Notify Landscape Architect-Owner's Representative of discrepancies.
G. Plant size noted in plant schedule shall be the minimum acceptable size. Container gallon size are minimum. Contractor shall provide the plant material in container size needed to meet plant size specified.

- 1.2 DEFINITIONS
A. Finish Grade: Top of surface soil and top of planting bed after plant installation.
B. Topsoil: Native or imported surface soil modified with soil amendments per recommendations from commercial soil-testing laboratory.
C. Compost Mix: Homogeneously blended organic material, see Part 2 - Products.
D. Subgrade: Soil below finish grade and soil below finish grade remaining after completing excavation.
E. Final Acceptance: Shall mean that point in time when requirements of contract documents are completed, including punch-list items, to the satisfaction of the Landscape Architect-Owner's Representative. Contractor will be notified in writing of final acceptance by Landscape Architect-Owner's Representative.
F. Warranty Period: Shall begin after notification of final acceptance, continuing for the duration of the specified period.
G. Final Warranty Inspection: Shall occur near the end of the warranty period.
H. Contract Documents: Project plan set, technical specifications and documentation issued during project bidding, award and installation.

- 1.3 SUBMITTALS
B. Product Data: Each type of product utilized
C. Samples: Pine Bark
D. Product certificates, confirmation letter that the Contractor has procured all plant materials and products to complete the project plans.
E. Planting Schedule: Indicating anticipated installation dates.
F. Maintenance Instructions: Provide prior to final acceptance.
G. Agronomic Soil Tests for Topsoil and Compost Mix: Soil testing and recommendations shall be performed by a commercial soil-testing laboratory. Areas to be installed with plants and lawn areas shall be tested. Tests shall include a fertility test, pH factor, percentage of organic matter and a suitability analysis. The suitability analysis shall include percolation tests and evaluation of soil composition to determine the soil's suitability to sustain the project's plant materials and to bring the soil to a pH rating between 5.5 to 6.5. Submit copy to Landscape Architect-Owner's Representative of soil tests, written recommendations for soil suitability, soil amendments, fertilizer, chemical conditioner application rates for soil preparation, and a maintenance fertilization program.
H. Manufacturer's Data: Include physical characteristics, application, installation instructions and recommendations to be utilized.
a. Fertilizer
b. Each soil amendment to be used
c. Herbicide
d. Super absorbent, if to be utilized
e. Pre-emergent herbicide
f. Materials identified in contract documents
I. Written plant guarantee
J. Prior to purchase and delivery of plants, Contractor shall provide the Landscape Architect-Owner's Representative with photos of proposed plant materials and coordinate nursery visit.

- 1.4 QUALITY ASSURANCE
A. Landscape Contractor Qualifications: The Landscape Contractor (Contractor) shall have previous experience installing projects of equal or greater size to the project plans. The Contractor shall have a full-time supervisor with a minimum of 5 years of experience that is on-site during installation process.
B. Soil Analysis: Contractor shall provide soil analysis of the existing surface soil and compost mix. Agronomic soil testing shall be performed by a commercial soil-testing laboratory.
C. Provide quality, size, genus, species, and variety of plants indicated, complying with "Florida Number 1" or better classes and Standards for Nursery Plants," latest edition, published by Florida Department of Agriculture, Division of Plant Industry, Gainesville, Florida. To evaluate plants not specifically listed in the "Grades and Standards for Nursery Plants," use the appropriate matrix type.
D. Pre-Installation Conference: Prior to beginning plant installations, conduct conference at project site.
E. Substitutions:
1. If a plant material or product is not available, the Contractor shall submit to the Landscape Architect-Owner's Representative for approval, proof of non-availability with a recommendation for an equivalent material. When authorized, adjustment of contract amount may be made. No substitutions will otherwise be allowed.
F. Inspection: Landscape Architect-Owner's Representative may inspect plants at nursery and project site prior to planting, for compliance with plans. The Landscape Architect-Owner's Representative may inspect plants at any time for size and condition of balls, root systems, insects, injuries, latent defects, and reject plant materials at any time during progress of work. Contractor shall remove rejected plants from project site. The Landscape Architect-Owner's Representative's preliminary inspection is not to be construed as acceptance until such time as a written final acceptance inspection is received.

- 1.5 DELIVERY, STORAGE, AND HANDLING
A. Prior to materials being shipped from supplier, Landscape Architect-Owner's Representative may inspect materials on-site or through the submission of photographs. Refer to the plant schedule within the project plan set for specific plants requiring on-site tagging-inspection.
B. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during delivery. Do not drop plant materials.
C. Deliver plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set plants trees in shade, protect from weather and mechanical damage, and keep roots moist.

- 1.6 WARRANTY
Warranty: Contractor shall warrant plants for the warranty period indicated against defects including death and unsatisfactory growth.
1. Warranty Period for Plant Materials: 1 year from date of final acceptance
2. Warranty Period for Sod: 6 months from date of final acceptance

LANDSCAPE SPECIFICATIONS

- 1.7 MAINTENANCE
A. Plant Materials: Maintain until final acceptance by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and supports, resetting plants to proper grades, vertical position, as required to establish healthy, viable plantings. Spray insecticides to keep plants free of insects and disease.
B. Protect plant materials from damage due to landscape operations, operations by other contractors and others. Maintain protection during installation and final acceptance. Treat, repair, and replace damaged plantings at no additional cost to the Owner.
C. Maintenance of sod areas: The Contractor shall maintain until final acceptance by protecting sod areas against traffic or other use by warning signs and barricades, as approved by the Landscape Architect-Owner's Representative. Damaged sod shall be repaired by re-grading, then re-sod. Contractor shall mow, water and otherwise maintain sod areas in a satisfactory condition until final acceptance of the work.
1. Maintain sod areas until final acceptance by watering, weeding, mowing, applications of herbicides, fungicides, insecticides, fertilization and re-seeding until a full, uniform stand of grass free of weeds, undesirable grass species, disease, and insects is achieved and accepted by the Landscape Architect-Owner's Representative.
a. Repair, re-work, and re-sod all areas that have washed out, eroded, or are not a healthy stand of grass.
b. Mow sod areas when top growth reaches a height where no more than a third of the leaf blade will be removed at any single mowing. Repeat mowing to maintain specified height per recommendations of local agricultural extension agency.

- 1.8 REPLACEMENTS AND CONDITIONS
A. Promptly remove and replace plant materials that are dead, unhealthy condition, fallen below acceptable quality. Prior to the end of the warranty period, a final warranty inspection of the work may be made by the Landscape Architect-Owner's Representative. The Contractor shall remove and replace plant materials and sod areas found to not be in compliance with contract requirements. Replacement plant material size and species shall be as noted in the project plans. A new warranty period shall commence on each plant replaced during the warranty period, contractor shall maintain plant warranty log.

- 1.9 FINAL INSPECTION AND ACCEPTANCE
A. Final Inspection: Upon completion of landscape installation, the Contractor shall notify the Landscape Architect-Owner's Representative in writing 10 days prior to requested inspection date. Landscape Architect-Owner's Representative will make an inspection to determine compliance with contract documents. When inspected landscape work does not comply with contract documents, the Contractor shall remove and replace rejected work and continue maintenance. Contractor shall provide 48 hour notice to Landscape Architect-Owner's Representative requesting re-inspection. Plant Materials:
a. Replace plant materials not in healthy condition, fails below quality requirements
b. Lawns:
a. At the time of final warranty inspection, sod areas shall be healthy, well-rooted even colored, lawn is established, weed free without open joints and bare areas.

PART 2 - PRODUCTS

- 2.1 PLANTS
A. Tree and Shrub Material: Provide nursery-grown tree and shrub materials complying with plant quality requirements, Part 1-General. Provide well-shaped, fully branched, healthy, vigorous plants free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
B. Ground Cover: Provide ground cover species indicated, established and well rooted in pots or similar containers, and complying with plant quality requirements, Part 1-General.
C. Annuals: Provide healthy, disease-free plants of species and variety shown or approved, complying with plant quality requirements, Part 1-General. Provide plants acclimated to the conditions they are to be installed on the project and are in bud with few, if any blooms.
D. Perennials: Provide healthy plants from a commercial nursery, of species and variety shown or approved, complying with plant quality requirements, Part 1-General.
E. Sod: Sod shall be species and locations in the project plans. Sod shall be freshly cut in pads (or rolls with prior approval). Sod shall be derived from an area having a soil type similar to the soil on which it is to be laid. Sod shall be healthy, free of weeds and insects including ground pearls and spittle bugs, in naturally green condition, and shall have an abundance of roots contained within a mat of topsoil derived in the harvesting process from the area where grown. Brown, dry, irregularly smooth, and/or un-fresh sod will be rejected.

- 2.2 PLANTING MATERIALS
A. Topsoil: pH range of 5.5 to 6.5, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and extraneous materials harmful to plant growth.
1. Topsoil Source: Amend existing surface soils according to recommendations from soil tests analyzed by commercial soil testing laboratory, see Part-1 General.
B. Soil Amendments: Following are soil amendments that may be utilized to modify existing surface soil according to recommendations from agronomic soil testing analysis.
a. Lime: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10-mesh sieve and not less than 50 percent passes a 100-mesh sieve.
b. Aluminum Sulfate: Commercial grade.
c. Peat Humus: Finely divided peat, completely decomposed and free of fibers to eliminate it's biological identity. Provide in granular form, free of hard lumps and with pH range suitable for intended use or Florida Muck with a texture and pH range suited for the intended use. Florida Muck shall be delivered in a non-muddy state, reasonably free of clay, roots and litter and other extraneous or toxic matter harmful to plant growth. Florida Muck shall be subject to approval by the Owner.
d. Bonemeal: Commercial, raw, finely ground; 4 percent nitrogen and 20 percent phosphoric acid.
e. Superphosphate: Soluble mixture of treated minerals; 20 percent available phosphoric acid.
f. Sand: Clean, washed builder's sand, free of toxic materials, free of salt, weeds, sticks and other debris. Sand shall conform to ASTM C3 for five aggregates.
g. Perlite: Conforming to National Bureau of Standards PS 23.
h. Vermiculite: Horticultural grade, free of toxic substances.
i. Sawdust: Rotted sawdust, free of chips, stones, sticks, soil, or toxic substances and with 7.5 pounds of nitrogen uniformly mixed into each cubic yard of sawdust.
j. Manure: Well rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials and containing no chemicals or ingredients harmful to plants.
k. Mulch: Organic mulch shall be uniform in size, shape, texture, and shall be clean, bright, and free from weeds, moss, sticks, and other debris. Mulch shall be free from deleterious materials and suitable for top dressing of trees, shrubs, or plants.
l. Fertilizer:
1. Fertilizer: Pelletized fertilizer with nitrogen, phosphorous and potassium in 100 percent slow release form, with the following composition:
a. Composition: 8 percent nitrogen, 2 percent phosphorous, 12 percent potassium + 4 percent magnesium and all micro-nutrients

LANDSCAPE SPECIFICATIONS

- 2.3 COMPOST MIX
A. Compost Mix: Manufactured mix that is weed and disease free, pasteurized composed of:
a. 34% Aged Pine Bark
b. 33% Finished Organic Compost
c. 33% Composted Cow Manure
B. Compost mix shall be sent to an approved agronomic soil-testing laboratory to provide the requirements noted Part 1-General.

- D. Seed:
1. Seed: All seed shall be furnished from a certified seed dealer or certified seed grower; meet the requirements of the Florida Department of Agriculture regulations; be labeled in accordance therewith. Seed shall be free of noxious weeds.
E. Sprigging: Sprigs shall be certified to genetic purity, free of pests and disease, delivered in a timely fashion and consist of stems, leaves and stolons. The sprigs shall come from a certified supplier, approved by the Owner's Representative. After being harvested, the sprigs shall be delivered to the planting site within 24 hours. The stock shall contain no weeds, soil, or other debris and shall not be dried out at the time of planting.
Sprigs shall be harvested to facilitate separation and distribution. Sprigs shall average four to six inches in length and carry at least four nodes. Sprigs shall be planted within twenty-four hours after removal from the certified supplier. It shall be the Contractor's responsibility to protect the stolons, keeping them moist and out of the sunlight before and during the planting operation.

PART 3 - EXECUTION

- 3.1 PLANTING
1. Prior to installing plant materials, Contractor shall perform drainage test excavations one per acre of site planting areas or submit plan of locations for Landscape Architect approval, a minimum of 250 ft on center throughout the planting and sod areas. Test excavations shall be a minimum of 12" dia, and 12" deeper than the largest proposed plant rootball. Test excavations shall be filled with water to finish grade, then monitored to verify excavations have completely drained within a 3 hour period. Landscape Contractor shall notify the Landscape Architect-Owner's Representative of any excavations which fail this test, prior to proceeding with plant installations. Corrective actions may be required, such as but not limited to over-excavation to break sub-surface soil conditions which shall be the Contractor's responsibility and may be considered additional work. Contractor shall seek and obtain approval from Owner's Representative prior to proceeding.
2. Unsuitable Soil Conditions: Absolutely no plastic or clayey soil is to be used in landscape areas. If such a condition is found, the area is to be back-filled with material of suitable sandy gradation which is porous and percolates well with reasonable compaction. If any planting or sod area has a plastic or clayey soil condition which prevents proper drainage, then a system of underdraining, turf drain or other means of releasing underground standing water must be incorporated under the direction of the Landscape Architect-Owner's representative.
3. Upon completion of landscape installation the finish grade of planting beds and lawn areas shall be minimum 6 inches below adjacent structures and slope away from existing structures per the Florida Building Code. Verify compliance with Florida Building Code with General Contractor prior to beginning work. Parking lot islands shall slope at 3% from center of island to curb. Finish grade shall be below sidewalks, curbs and walking surfaces to allow for mulch thickness and sod.
4. Upon completion of landscape installation, the Contractor shall notify the Landscape Architect-Owner's Representative in writing 10 days prior to requested inspection date. Landscape Architect-Owner's Representative will make an inspection to determine compliance with Contract Documents.
5. The Contractor shall be responsible for stability and plumb conditions of all plant materials, be legally liable for damage caused by instability of plant materials. Proper staking and guying is the Contractor's responsibility. Contractor shall under their own discretion provide additional staking and guying above and beyond the requirements of the project plans at no additional expense to the Owner.

- A. Plant Material Installation and Planting Bed Preparation:
1. Topsoil shall be modified according to recommendations from agronomic soil-testing laboratory, prior to installation of plants.
2. Spread on top of topsoil a 3 inch layer of compost mix prior to planting. Mix shall be incorporated in planting holes during installation.
3. Do not spread compost mix if topsoil is frozen, muddy, or excessively wet.
4. Planting Pits and Trenches: Excavate circular planting pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
5. Topmost Root: Topmost root-root flare shall be visible prior to planting - Find the topmost root and remove excess soil to expose topmost root-root flare.
6. Root Defects: Inspect root ball for root defects, cut roots at the point where they begin to kink or circle. Root ball shall comply with Florida Grades & Standards.
7. Remove rocks, sticks or other deleterious material greater than 1 inch in any 1 direction prior to backfill process.
8. Set tree, palm and shrubs plumb and in center of tree planting pit or trench with top of root ball 2 inches above finish grade.
a. Container Grown: Carefully remove root ball from container without damaging root ball or plant.
b. Ball and Burlaped Root ball: Do not use plant materials if root ball is cracked or broken before or during planting operation. Do not lift plants by the trunk. Remove rope, synthetic burlap, plastic and materials that will not decompose. Remove top 1/3 of wire basket.
c. Backfill planting excavation incorporating compost mix. Work soil around roots eliminate voids and air pockets. When planting pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill.
d. Repeat watering until no more water is absorbed. After planting, remove excess soil and rake plant beds to a smooth even surface conforming to required finish grades.
e. Upon completion of plant installations, fertilize according to specifications.
f. Tree pits in non-irrigated areas shall be installed with super absorbent, according to manufacturer's recommendations.
9. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
10. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.
11. Finish Grading: Level planting area to a smooth, uniform surface with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grade.
12. Upon completion of plant installations, fertilize according to specifications.
13. Tree and Shrub Pruning: Prune trees and shrubs according to International Society of Arboriculture standards. Contractor shall prune trees and shrubs to comply with Florida Grades and Standards. Prune plants to retain natural character.

- B. Sod:
1. Topsoil shall be modified according to recommendations from agronomic soil-testing laboratory, prior to installation of sod, see Part 1-General.
2. Remove rocks, sticks or other deleterious material greater than 1 inch in any 1 direction prior to sod installation.
3. Finish grade to receive sod shall be uniformly graded and irrigated prior to sod installation. Sod shall be laid end-to-end and side-to-side to form a uniform layer of un-broken, un-gapped turf. All uneven edges shall be squarely trimmed to allow close and firm fitting of each piece. All gaps or spaces shall be filled to a smooth level with topsoil as specified herein. Edges shall be "heeled-in" and finished smoothly without uneven exposure. Place sod with staggered joints closely butted, tamped or rolled to an even surface to the required finished grade. Avoid continuous seam along line of water flow in swales. Place sod in rows at right angles to slope. Peg sod on slopes greater than 3:1.
4. Upon completion of sod installation, sod areas shall be watered to provide a healthy growing condition. Watering shall be monitored and adjusted by the Contractor to prevent over or under watering.

LANDSCAPE SPECIFICATIONS

- C. Seed:
1. Seed: All seed shall be furnished from an established seed dealer or certified seed grower; shall meet the requirements of the Florida Department of Agriculture regulations; and shall be labeled in accordance therewith. Seed shall be free of noxious weeds.
2. Seed Planting: At a minimum the contractor shall test the soil to verify conditions are acceptable for turf growth.

- 2.1 Submit agronomic soil tests for existing soil. Tests shall be performed by an approved agronomic soils testing laboratory and shall include a fertility test with the pH factor and the percentage of organic matter and a suitability analysis. The suitability analysis will include percolation tests and evaluation of soil composition to determine the soil's suitability to sustain healthy turf. Submit written recommendations for soil suitability and all necessary soil amendments, fertilizer and chemical conditioner application rates for soil preparation, and a post maintenance fertilization program. Submit recommendations to bring the soil to a pH rating between 5.5 to 6.5 and to supply necessary nutrients to satisfactory level for planting and sustaining vigorous turf growth. Submit a copy of soil tests with suitability analysis and recommendations to Owner's Representative prior to any planting.
2.2 At a minimum apply 100 lbs/acre of scarified, chemically treated Bahia Seed. Apply by hand, cyclone seeder, drill or hydro-seeding. The final result shall place the seeds 1/2" - 3/4" below the soil.
2.3 At a minimum apply an additional 30 lbs/acre of quick growing rye grass over the entire area.
2.4 Contractor is responsible for utilizing the best application method to prevent erosion of soil during seed growth.
2.5 At a minimum apply mulch (straw, hay, wood, etc.) at a rate of 2.5 tons per acre during seeding.
2.6 At a minimum apply fertilizer during seeding at a rate of 250lbs/acre using a 12-6-8 fertilizer or other ratio recommending by the soil testing. An additive of 4% magnesium is also required and should be varied with soil testing.
2.7 Contractor is responsible for dust control and measure should be taken to minimize movement of dust in addition to seeding and mulching.

- 3. Watering: At a minimum apply 3/4" to 1" of water each week to the newly seeded areas to help germination until the grass is fully established. The contractor is responsible to monitor rainfall quantities and supplement with watering as necessary. The contractor shall record all watering information and furnish to the Owner's Representative when requested.
3.1 During the maintenance period the contractor shall supplement the rain water amount with hand watering as necessary to maintain an average of 1/2" of water weekly. At any time the owner's representative may require an immediate watering of areas they find suffering from a lack of water. The contractor will have 2 days to water these areas.
4. Maintenance: At a minimum the contractor shall be responsible for mowing the new established Bahia grass at four (4) different times throughout the 12 month warranty period. The timing of mowing shall be coordinated and approved by the owner's representative.
4.1 At a minimum the contractor shall implement a fertilization program that will adequately assist the continued health of the turfgrass. This should include a spring, summer, and fall fertilization treatment unless proper soil sample analysis is supplied to the owner's representative that warrants no treatment required. The owner's representative shall make the final decision.
4.2 At the request of the owner's representative, at any given time, any area of the project that has not properly been covered by turfgrass that is undermatured, underwatered, eroded, or in any other way not acceptable to the owner's representative, the contractor will have seven (7) days to fully correct the problem at the contractor's expense.

- D. Fertilization, Pre-Emergent and Mulching:
1. Prior to mulching, apply fertilizer specified in Part 2-Products to tree, palm, shrub, groundcover and sod areas at the rate of 1.5 pounds of actual fertilizer per 100 square feet. Fertilizer application shall be witnessed by Landscape Architect-Owner's Representative.

- E. Mulching and Pre-Emergent Herbicide:
1. Apply pre-emergent herbicide to tree, palm, shrub, and groundcover areas according to manufacturer's recommendations. Pre-emergent application shall be witnessed by Landscape Architect-Owner's Representative.
2. Mulch surfaces of tree, palm, shrub and groundcover areas. Apply 3 inch depth of settled mulch, level with adjacent finish grades, sidewalks, curbs and sod. Mulch over root ball of plants shall be 1 inch maximum.

- F. Plant Protection:
1. Protect plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods, as approved by Landscape Architect-Owner's Representative. Treat, repair, or replace damaged plant materials.

- G. Clean Up:
1. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose off Owner's property.

- H. Sprigging:
1. The Contractor shall carefully coordinate the sprigging operation being careful not to sprig an area too large or move so swiftly that a reasonable watering operation could not follow. Carelessness on the part of the Contractor, as mentioned above, shall result in the Contractor being liable for the cost of additional sprigs and the replanting of same.
2. A successful planting shall be defined as the insertion of 12 live sprigs per square foot.
3. An automatic planting machine shall be used, the machine shall insert live sprigs at 1-1/2 to 2 inch centers and roll the surface smooth on one pass. A minimum rate for sports field shall be 400 bushels per acre and sprigs shall be "cut in" mechanically.
4. After planting, sprigs must be watered to avoid drying out. Watering must be maintained until the sprigs tack down, about 14 days, then reduced to kept the sprigs well irrigated until complete coverage is obtained. Insects such as army worms are the biggest insect threat and can completely destroy a stand of immature sprigs overnight, it is the Contractors responsibility to monitor and treat all infestations as may be required.
5. The sprigs must be properly fertilized until completely grown in (about 12 weeks in optimum season - do not attempt to spray past August 1). Apply 1 lb of nitrogen/1,000 square feet per week, applied in 2, 1/2 lb applications for 12 weeks. The nitrogen source shall be 75% water soluble and 25% water insoluble. Test soil and apply lime as needed to meet, then apply a pre-plant "complete" fertilizer, 10-10-10 at least 2lb/M which needs to be lightly incorporated into the soil prior to sprigging.
6. Contractor shall be responsible for the planting and grow-in of all sprigged areas. The grow-in responsibilities shall include all mowing, fertilization monitoring, watering and any additional activities required to produce a weed-free dense turf. The grow-in and maintenance period shall be considered complete when a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, surface irregularities and no bare areas greater than 2-1/2 square inch/10 square feet, with no bare area greater than 1 sq. in each. Contractor shall notify the Landscape Architect-Owner's Representative in writing requesting an inspection with 48 hours notice to determine final acceptance of all the sprigged areas.



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Florida Certificate of Authorization Number: 00004050

LIBERTY COVE NASSAU, LLC

LIBERTY COVE AMENITY CENTER

DATE : 2024-07-12

PROJECT NO. : 120093.05

DESIGNED BY : PSM

DRAWN BY : CDC

SCALE : AS NOTED

Table with 3 columns: No., Date, Revision. Row 1: 1, 04/20/2023, ISSUED FOR CONSTRUCTION. Row 2: 2, 01/31/2024, PERMIT PLANS REV.

THIS DRAWING NOT RELEASED FOR CONSTRUCTION UNLESS SO NOTED ABOVE

SHEET TITLE

LANDSCAPE SPECIFICATIONS

L-1.03

SHEET

PAUL S. MOSS, JR. FL Lic. No. LA 1165 DATE:

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