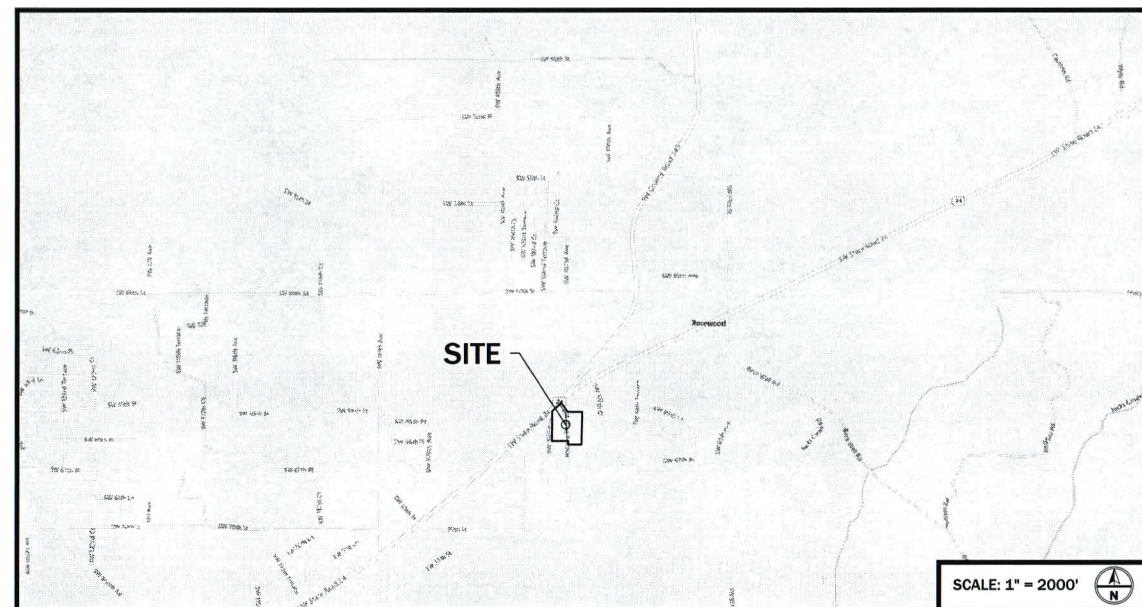
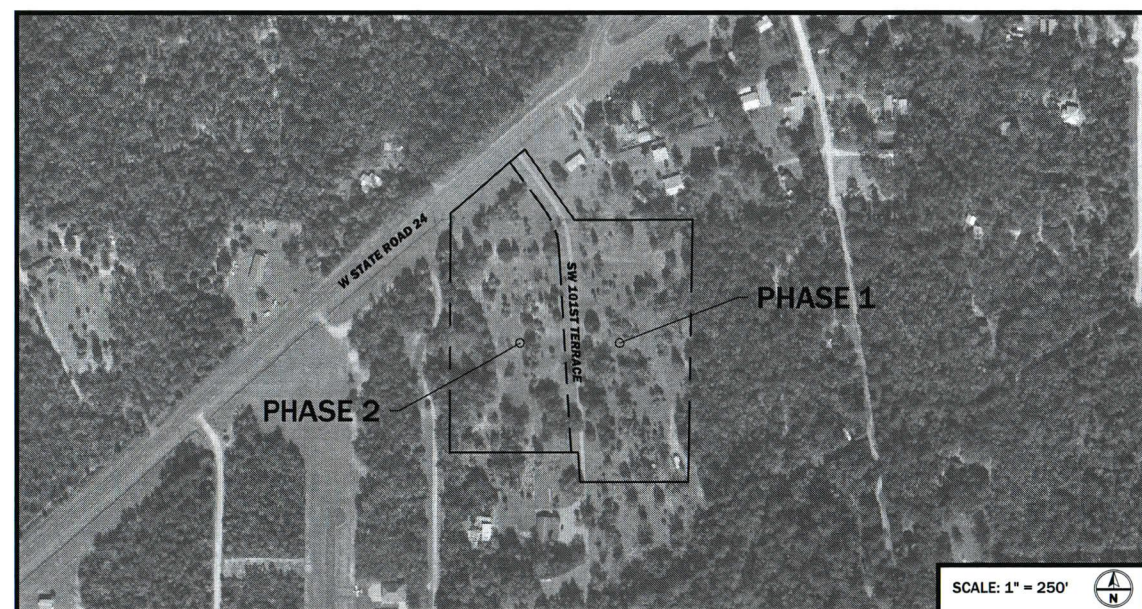


SITE LOCATION



AERIAL MAP



LEGAL DESCRIPTION FROM SURVEY PREPARED BY PARRISH LAND SURVEYING LLC, DATED 05/14/2024

(Official Records Book 1707, Page 58)

(1st part)
Part of Section 30, Township 14 South, Range 14 East, Levy County, Florida, more particularly described as follows:

Beginning at the Northwest Corner of the West 1/2 of the East 1/2 of the SE 1/4 of said Section 30, as marked by a 4"x4" concrete monument #2548, thence N 00°11'14" E, a distance of 19.16 feet to the south right-of-way (R/W) line of State Road 24; thence N 49°37'44" E, along the said R/W line, 132.33 feet to the beginning of a curve concave to the southeast, having a radius of 5679.58 feet and a central angle of 01°30'23"; thence northeasterly along the arc of the said curve and the said R/W line, 149.32 feet; thence S 35°59'44" E, along the west line of the lands described in O.R. Book 73, Page 116, Levy County Records, a distance of 246.88 feet to the north line of the SE 1/4 of said Section 30; thence N 89°56'44" E, along the said north line of the SE 1/4 of said Section 30; thence N 89°56'44" E, along the said north line, 333.75 feet to the east line of the lands described in O.R. Book 579, Page 222, Levy County Records; thence S 00°55'21" W, along the said east line, 719.04 feet; thence S 89°56'44" W, a distance of 308.01 feet; thence N 03°29'59" W, a distance of 59.19 feet; thence S 89°56'44" W, a distance of 373.70 feet to the west line of the East 1/2 of the SE 1/4 of said Section 30; thence N 00°11'14" E, along the said west line, 659.86 feet to the Point-of-Beginning.

(2nd Part)
Part of Section 30, Township 14 South, Range 14 East, Levy County, Florida, more particularly described as follows:

Commence at at the Northwest Corner of the West 1/2 of the East 1/2 of the SE 1/4 of said Section 30, as marked by a 4"x4" concrete monument #2548, thence N 00°11'14" E, a distance of 19.16 feet to the south right-of-way (R/W) line of State Road 24; thence N 49°37'44" E, along the said R/W line, 132.33 feet to the beginning of a curve concave to the southeast, having a radius of 5679.58 feet and a central angle of 01°30'23"; thence northeasterly along the arc of the said curve and the said R/W line, 149.32 feet; thence S 35°59'44" E, along the west line of the lands described in O.R. Book 73, Page 116, Levy County Records, a distance of 246.88 feet to the north line of the SE 1/4 of said Section 30; thence N 89°56'44" E, along the said north line of the SE 1/4 of said Section 30; thence N 89°56'44" E, along the said north line, 333.75 feet to the east line of the lands described in O.R. Book 579, Page 222, Levy County Records; thence S 00°55'21" W, along the said east line, 719.04 feet to the Point of Beginning; thence continue S 00°55'21" W, along said line, 25.00 feet; thence S 89°56'44" W, a distance of 306.08 feet; thence N 03°29'59" W, a distance of 25.04 feet; thence N 89°56'44" E, a distance of 308.01 feet to the Point of Beginning.

RESERVING UNTO THE GRANTOR a non-exclusive easement for ingress, egress and public utilities over and across a 30 foot wide strip of land in Section 30, Township 14 South, Range 14 East, Levy County, Florida, lying 15.00 feet on both sides of the following described centerline:

Commence at the Northwest corner of the West 1/2 of East 1/2 of SE 1/4 of said Section 30, as marked by a 4"x4" concrete monument #2548; thence N 00°11'14" E, a distance of 19.16 feet to the South right of way (R/W) line of State Road 24; thence N 49°37'44" E, along the said R/W line, 132.33 feet to the beginning of a curve concave to the Southeast, having a radius of 5679.58 feet and a central angle of 01°30'23"; thence Northeasterly along the arc of the said curve and the said R/W line, 149.32 feet to the Point of Beginning of the said centerline; thence S 37°18'28" E, a distance of 168.34 feet to the beginning of a curve concave to the Southwest, having a radius of 250.00 feet and a central angle of 33°48'29"; thence Southeasterly along the arc of said curve, 147.52 feet to the point of tangency; thence S 03°29'59" E, a distance of 670.00 feet to the end of said centerline and the 30 foot wide easement.

PROJECT TEAM:

OWNER / APPLICANT

SHANKLAND & ASSOCIATES, LLC
6970 SW 103RD TERRACE
CEDAR KEY, FL 32625
PHONE: (928) 863-6030
EMAIL: AMANDASHANKLAND20@GMAIL.COM

CIVIL ENGINEER

BITTER CIVIL LLC
460 PINEY CROFT LANE
MAITLAND, FL 32751
PHONE: (407) 436-7276
EMAIL: GARTH@BITTERCIVIL.COM

SURVEYOR

PARRISH LAND SURVEYING, LLC
305 S. MAIN STREET
TRENTON, FL 32693
PHONE: (352) 463-2938

CRANE POND RV PARK - PHASE 2

LEVY COUNTY, FL

FINAL ENGINEERING PLANS

PARCEL ID #: 133000400
SECTION 30, TOWNSHIP 14 S, RANGE 14 E

DRAWING INDEX

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ISSUE DATE	FOR REVIEW
12/20/2024	FOR REVIEW
01/01/2025	PER WMD COMMENTS
05/16/2025	PER WMD COMMENTS

DRAFTED:	GPR
DESIGNED:	GPR
REVIEWED:	GPR
PROJECT NUMBER:	24002

SHEET:
C1.0

PREPARED BY:
BITTER CIVIL
ENGINEERING - PLANNING
460 PINEY CROFT LANE MAITLAND, FL 32751
407-436-7276 • WWW.BITTERCIVIL.COM

PREPARED FOR:
SHANKLAND & ASSOCIATES, LLC

COVER SHEET
CRANE POND RV PARK - PHASE 2

GENERAL:

1. THE FOLLOWING NOTES CONTAINED IN THE GENERAL NOTES SHEETS APPLY TO ALL WORK DETAILED IN THIS SET OF CONSTRUCTION DRAWINGS. THIS SET OF CONSTRUCTION DRAWINGS, INCLUDING ANY BELOW REFERENCED BOUNDARY AND TOPOGRAPHIC SURVEYS, GEOTECHNICAL ENGINEERING REPORTS, AND ALL REQUIRED PERMITS ARE HEREBY INCORPORATED AS THE COMPLETE SET OF CIVIL SITE CONSTRUCTION DOCUMENTS, WHICH MAY ALSO BE REFERRED HEREIN AS "CONSTRUCTION DOCUMENTS."

A. EXISTING TOPOGRAPHIC INFORMATION BASED ON THE FOLLOWING:

SURVEYOR: PARRISH LAND SURVEYING, LLC
DRAWING NUMBER: 2024-181
DRAWING DATE: 05/04/2024
LATEST REVISION: 05/04/2024

B. PROJECT BOUNDARY BASED ON THE FOLLOWING:

SURVEYOR: PARRISH LAND SURVEYING, LLC
DRAWING NUMBER: 2024-181
DRAWING DATE: 05/04/2024
LATEST REVISION: 05/04/2024

C. GEOTECHNICAL ENGINEERING DETAILS TAKEN FROM:

GEOTECHNICAL ENGINEER: UNIVERSAL ENGINEERING SCIENCES, LLC
REPORT NUMBER: 2083018
REPORT DATE: 4/25/24
LATEST REVISION:

2. GEOTECHNICAL SERVICES: GEOTECHNICAL DETAILS AND SPECIFICATIONS IF SHOWN IN THESE PLANS ARE PROVIDED FOR REFERENCE ONLY. GEOTECHNICAL RECOMMENDATIONS ARE NOT THE RESPONSIBILITY OF RITTER CIVIL, LLC. RITTER CIVIL HAS RELIED ON THE GEOTECHNICAL REPORT REFERENCED ABOVE IN PREPARATION OF THESE PLANS. ANY CONFLICT BETWEEN INFORMATION SHOWN WITHIN THE GEOTECHNICAL REPORT AND THIS DRAWING SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER IMMEDIATELY UPON DISCOVERY. RITTER CIVIL IS NOT RESPONSIBLE FOR THE COMPLETENESS, CORRECTNESS, OR ACCURACY OF THE GEOTECHNICAL INFORMATION.

3. VERTICAL DATUM: ELEVATIONS SHOWN WITHIN THESE PLANS ARE RELATIVE TO NAVD83 DATUM BASED ON BENCHMARKS SHOWN ON THE TOPOGRAPHIC SURVEY REFERENCED ABOVE. REFER TO TOPOGRAPHIC SURVEY FOR REFERENCED BENCHMARK DETAILS.

4. UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT PUBLICATION OF THE FOLLOWING CODES, STANDARDS, AND SPECIFICATIONS IN ADDITION TO THE LATEST EDITIONS OF ALL OTHER APPLICABLE STANDARDS AND SPECIFICATIONS: LOCAL CITY OR COUNTY WATER MANAGEMENT DISTRICT, FLORIDA BUILDING CODE, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP), FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, AMERICANS WITH DISABILITIES ACT (ADA) BY U.S. DEPARTMENT OF JUSTICE, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA), RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, AND FAIR HOUSING ACT BY U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD).

5. ALL CONSTRUCTION ACTIVITY SHALL BE GOVERNED BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, BUILDING AND SAFETY CODES, AND REQUIRED PERMIT CONDITIONS.

6. ALL STANDARDS AND SPECIFICATIONS SHALL BE OF THE LATEST REVISION. IN THE EVENT THAT ANY STANDARDS OR SPECIFICATIONS AS DESCRIBED HEREIN ARE IN CONFLICT WITH EACH OTHER, OR SHOWN IN CONFLICT ON THE PLANS, THE MORE STRINGENT CRITERIA SHALL USUALLY APPLY. CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE COMMENCING WORK. NO DEVIATIONS OR FIELD CHANGES FROM THE CONSTRUCTION DRAWINGS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND ENGINEER.

7. CONTRACTOR SHALL REVIEW ALL PLANS WITHIN THE CIVIL SITE WORK SCOPE IN THEIR ENTIRETY. ANY ERRORS, OMISSIONS, OR DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS, THE CONSTRUCTION PLANS, OR APPLICABLE SPECIFICATIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO DEVIATIONS OR FIELD CHANGES FROM THE CONSTRUCTION DRAWINGS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND ENGINEER.

8. IF ANY ITEMS APPEARING TO BE HISTORICAL OR ARCHAEOLOGICAL ARTIFACTS ARE DISCOVERED DURING CONSTRUCTION ACTIVITY WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE ENGINEER, AND THE BUREAU OF HISTORICAL PRESERVATION, DIVISION OF HISTORICAL RESOURCES R.A. GRAY BUILDING, 500 S. BROUGH ST., TALLAHASSEE, FLORIDA, 32399-0250.

9. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY, INCLUDING THOSE WHERE NO SPECIFIC IMPROVEMENTS ARE SHOWN, SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION, WITH BAHIA SOD AT A MINIMUM, UNLESS OTHERWISE SPECIFIED.

CONTRACTOR RESPONSIBILITIES:

1. EXISTING CONDITIONS:

A. THE CONTRACTOR SHALL CONDUCT A SITE INVESTIGATION TO THOROUGHLY ANALYZE THE SITE, INCLUDING ALL SURFACE AND SUBSURFACE CONDITIONS, THE CONSTRUCTION DOCUMENTS, AND ALL OTHER CONDITIONS THAT MAY AFFECT THE DESIGN OR SUCCESSFUL COMPLETION OF THE PROJECT PRIOR TO COMMENCEMENT OF WORK.

B. THE LOCATION OF EXISTING UTILITIES, FACILITIES, STRUCTURES, AND OTHER FEATURES SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE BEST INFORMATION AVAILABLE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF THE LOCATION INFORMATION PROVIDED. ANY INACCURACY OR OMISSION IN SUCH INFORMATION SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROTECT EXISTING FEATURES FROM DAMAGE OR UNSCHEDULED INTERRUPTION OF SERVICE. IF DISCREPANCIES ARISE BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS THAT WOULD RESULT IN A NECESSARY CHANGE TO THE CONSTRUCTION DESIGN, THE CONTRACTOR SHALL STOP ALL WORK IN THE AFFECTED AREA AND NOTIFY THE OWNER & ENGINEER IMMEDIATELY. FAILURE TO NOTIFY THE OWNER & ENGINEER, AND CONTINUING CONSTRUCTION SHALL MAKE THE CONTRACTOR LIABLE FOR ALL SUBSEQUENT ERRORS AND NECESSARY CORRECTIONS.

C. THE CONTRACTOR SHALL PROTECT ALL PROPERTIES SURROUNDING THE JOB SITE FROM DAMAGE DUE TO CONSTRUCTION RELATED ACTIVITY OR SEDIMENTATION.

D. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION AND TAKE ALL REASONABLE PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ITEMS INCLUDING, BUT NOT LIMITED TO, PERMANENT REFERENCE MONUMENTS, PERMANENT BENCHMARKS, PROPERTY CORNERS, POINTS OR MARKERS, ANY DAMAGE OR DISTURBANCE TO EXISTING SURVEY MONUMENTATION DURING CONSTRUCTION SHALL BE RESTORED BY A FLORIDA LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

2. PERMITS:

A. THE CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED, WITH HARD COPIES AVAILABLE AT THE JOB SITE PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL REQUIRED PERMIT CONDITIONS. PERMITS INCLUDED (BUT NOT LIMITED TO) ARE:

- WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT (E.R.P.) OR M.S.S.W. (WATER MANAGEMENT DISTRICT CONSUMPTIVE USE WATER USE) FOR CONSTRUCTION DEWATERING (C.U.P.)
- A.C.O.E. NATIONWIDE OR INDIVIDUAL REDDIE AND FILL
- FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION TORTOISE INCIDENTAL TAKE OR RELOCATION
- F.D.E.P. WATER DISTRIBUTION
- F.D.E.P. SANITARY SEWER COLLECTION AND TRANSMISSION
- LOCAL /STATE RIGHT OF WAY USE
- LOCAL /STATE UNDERGROUND UTILITIES
- F.D.E.P. N.P.D.E.S. STORMWATER

B. THE CONTRACTOR SHALL REVIEW ALL PERMITS PRIOR TO CONSTRUCTION FOR ANY CHANGES TO THE DESIGN INCLUDED THEREIN. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY REQUIRED CHANGES PRIOR TO COMMENCING CONSTRUCTION.

3. PRE-CONSTRUCTION:

A. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES, TAKE-OFF MEASUREMENTS, NEEDED MATERIALS AND NECESSARY REMOVAL & REPAIR OF IMPROVEMENTS AT POINTS OF CONNECTION TO EXISTING INFRASTRUCTURE DURING THE BID PROCESS. ALL NECESSARY WORK TO COMPLETE THE PROJECT SHALL BE INCLUDED ON THE CONTRACTOR'S BID. ANY EXCLUSIONS FROM THE BID SHALL BE CLEARLY ITEMIZED AND DESCRIBED ON THE BID.

B. UPON NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE AND ATTEND A REQUIRED PRE-CONSTRUCTION MEETING WITH THE AUTHORITY HAVING JURISDICTION'S STAFF, OWNER, ENGINEER OF RECORD, AND ANY OTHER APPLICABLE PARTIES.

C. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER A CONSTRUCTION SCHEDULE FOR ALL INCLUDED SITE WORK ELEMENTS TO FACILITATE COORDINATION OF PERIODIC SITE VISITS TO ENSURE TIMELY ISSUANCE OF CERTIFICATION OF COMPLETION OR CERTIFICATION OF OCCUPANCY.

4. LABOR & MATERIALS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIALS AND LABOR TO CONSTRUCT THE PROJECT AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DRAWINGS IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCIES, SPECIFICATIONS, AND REQUIREMENTS.

B. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE APPROPRIATE GOVERNING AGENCIES AND ENGINEER FOR REVIEW PRIOR TO MATERIAL PROCUREMENT AND DELIVERY TO JOB SITE. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF MATERIALS, PIPE SIZES AND INVERTS AND ADVISE ENGINEER OF ANY DISCREPANCIES.

C. NO EXISTING MATERIALS SHALL BE USED IN NEW CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER. EXISTING ITEMS CALLED OUT TO BE RELOCATED IN THE PLANS SHALL BE EVALUATED IN THE FIELD BY THE CONTRACTOR TO DETERMINE IF RELOCATION IS FEASIBLE OR IF A SUITABLE REPLACEMENT IS REQUIRED.

D. ALL WORK SHALL BE COMPLETED IN REASONABLE CONFORMANCE WITH THE LINES, GRADES, CROSS SECTIONS, AND DIMENSIONS SPECIFIED IN THE CONSTRUCTION DOCUMENTS. ALL PROVIDED MATERIALS AND THEIR INSTALLATION SHALL MEET THE MOST STRINGENT SPECIFICATIONS AND TESTING REQUIREMENTS OF THE APPROPRIATE GOVERNING AGENCY, FDOT, FDEP, UTILITY PROVIDER, GEOTECHNICAL REPORT, AND/OR OWNER REQUIREMENTS.

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACTIONS OR INACTIONS OF THE CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS, AGENTS OR ANY OTHER PERSONS OR ENTITY PERFORMING WORK ON BEHALF OF THE CONTRACTOR.

F. ANY HAULING OR MOVEMENT OF MATERIALS OR EQUIPMENT TO AND FROM THE JOB SITE SHALL COMPLY WITH ALL LEGAL LOAD RESTRICTIONS ON PUBLIC ROADS. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGE THAT MAY OCCUR FROM HAULING OR MOVING MATERIALS & EQUIPMENT.

G. THE CONTRACTOR SHALL ARRANGE FOR DAILY REMOVAL OF TRASH AND DEBRIS FROM THE SITE OR AT MORE FREQUENT INTERVALS AS NEEDED TO REDUCE ACCUMULATION OF POTENTIAL FIRE & SAFETY HAZARDS OR ENVIRONMENTAL CONCERNS. TRASH AND DEBRIS SHALL BE PLACED IN SEALED CONTAINERS, COVERED OR TIED DOWN AS NECESSARY TO PREVENT LEAVING THE CONSTRUCTION SITE BY WIND, STORMWATER DISCHARGE, OR OTHER MEANS. ALL TRASH AND DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER.

5. CONSTRUCTION LAYOUT:

A. THE CONTRACTOR SHALL HAVE THE DESIGN PLATTING SURVEYOR SET AND/OR VERIFY PROPERTY CORNER AND BENCHMARK LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.

B. ANY SUPPLEMENTAL DIGITAL FILES, INCLUDING BUT NOT LIMITED TO COMPUTER AIDED DRAFTING (CAD) FILES, DESIGN FILES, OR SIMILAR FILES ARE PROVIDED AT THE DISCRETION OF RITTER CIVIL, LLC FOR INFORMATIONAL PURPOSES ONLY. RITTER CIVIL, LLC BEARS NO RESPONSIBILITY FOR THE COMPATIBILITY OF SUPPLEMENTAL DIGITAL FILES WITH THE RECIPIENT'S SOFTWARE OR SYSTEM. THE CONTRACTOR SHALL LAYOUT PROPOSED IMPROVEMENTS BASED ON THE SITE BOUNDARY PROVIDED BY SURVEYOR AND THE DIMENSIONS, NOTES AND OTHER APPLICABLE INFORMATION CONTAINED IN THE SIGNED AND SEALED CONSTRUCTION PLANS.

C. THE CONTRACTOR SHALL COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS SHOWN ON THE CONSTRUCTION PLANS TO ENSURE ADEQUATE HORIZONTAL AND VERTICAL POSITIONINGS PRIOR TO INSTALLING ANY IMPROVEMENT.

D. ANY BUILDING FOOTPRINT SHOWN IS PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR TO VERIFY BUILDING GEOMETRY WITH ARCHITECT AND/OR BUILDING CONTRACTOR PRIOR TO STAKING ANY BUILDING CORNERS PER THIS PLAN. THE CONTRACTOR SHALL VERIFY BUILDING LAYOUT MEETS ALL MINIMUM REQUIRED BUILDING SETBACKS.

6. NOTIFICATIONS & UTILITY COORDINATION:

A. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE GOVERNING AGENCIES, UTILITY SERVICE PROVIDERS, AND CORPORATIONS OWNING OR CONTROLLING ANY ROADWAY, UTILITY, OR STORMWATER INFRASTRUCTURE AND FACILITIES IN CLOSE PROXIMITY TO THE WORK AREA OR OTHERWISE AFFECTED BY CONSTRUCTION ACTIVITIES AT A MINIMUM OF 30 WORKING DAYS UNLESS OTHERWISE REQUIRED BY SUCH ENTITY. CONTRACTOR TO COORDINATE WITH APPROPRIATE ENTITIES TO PROPERLY LOCATE, SUPPORT, AND PROTECT SUCH FACILITIES FROM ANY UNAUTHORIZED DISTURBANCE, INTERRUPTION OF SERVICE, OR DAMAGE. CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE CALL OF FLORIDA, INC. (800-432-4770) PRIOR TO PLANNED EXCAVATION OR DEMOLITION ACTIVITIES.

7. JOB SITE SAFETY & SECURITY:

A. THE CONTRACTOR SHALL ADHERE TO ALL REASONABLE & COMMONLY ACCEPTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, ORDINANCES AND GUIDELINES GOVERNING JOB SAFETY, HEALTH, SAFE USE OF EQUIPMENT AND MATERIAL HANDLING AS PUBLISHED BY THE RESPECTIVE MANUFACTURERS. SUCH REGULATIONS SHALL INCLUDE BUT ARE NOT LIMITED TO: OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, STANDARDS 29 C.F.R., 1926, SUBPART F, EXCAVATION, AND ALL SUBSEQUENT REVISIONS OR UPDATES AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY, AND WITH SECTION 553.62, FLORIDA STATUTES.

B. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, LIGHTS, WARNING SIGNS, AND PAVEMENT MARKINGS FOR HAZARDS AND TRAFFIC CONTROL, THROUGH WORK ZONES IN ACCORDANCE WITH FDOT, LOCAL CITY OR COUNTY OR OTHER AGENCIES HAVING JURISDICTION IN ORDER TO PREVENT ACCIDENT OR INJURY AT ALL LOCATIONS WHERE CONSTRUCTION ACTIVITY CREATES ANY FORM OF HAZARD TO THE PUBLIC OR INTERRUPTS NORMAL TRAFFIC FLOW. WHEN REQUIRED, A MAINTENANCE OF TRAFFIC PLAN SHALL BE PREPARED BY AN FDOT DESIGNER RETAINED BY THE CONTRACTOR AND SUBMITTED BY THE CONTRACTOR TO THE OWNER, ENGINEER AND AUTHORITY HAVING JURISDICTION FOR APPROVAL.

C. WHEN COMBUSTIBLE MATERIALS ARE BROUGHT ON SITE, ACCESS ROADS AND A TEMPORARY OR PERMANENT SUPPLY OF WATER SHALL BE PROVIDED AND MAINTAINED AS REQUIRED BY THE GOVERNING FIRE DEPARTMENT.

D. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SECURITY AND SHALL TAKE EVERY PRECAUTION NECESSARY TO ENSURE THE COMPLETED WORK, EQUIPMENT, AND MATERIALS ARE SECURED & STORED ON-SITE IN SUCH A MANNER TO PREVENT UNAUTHORIZED ACCESS, USE, OR THEFT. SIGNAGE, FENCING AND ANY OTHER APPLICABLE SECURITY MEASURES WILL BE PROVIDED AT CONTRACTOR'S EXPENSE.

E. ANY WORK IN PLACE SUBJECT TO DAMAGE DUE TO ONGOING CONSTRUCTION ACTIVITY SHALL BE COVERED, BOARDED UP OR OTHERWISE SUFFICIENTLY PROTECTED BY THE CONTRACTOR AT THEIR EXPENSE.

8. INSPECTIONS & TESTING:

A. THE OWNER, OWNER'S REPRESENTATIVES, ENGINEER, & INSPECTORS OF APPLICABLE PERMITTING AGENCIES SHALL HAVE ACCESS TO THE JOB SITE AT ALL TIMES TO MONITOR WORK COMPLETED OR WORK IN PROGRESS.

B. THE CONTRACTOR SHALL RETAIN A QUALIFIED GEOTECHNICAL ENGINEER FOR INSPECTIONS, TESTING, REPORTS, AND CERTIFICATIONS.

C. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TESTING AS REQUIRED BY CITY / AND OR COUNTY, FDOT, UTILITY PROVIDER, FDEP, GEOTECHNICAL ENGINEER, AND AS REQUIRED BY THE OWNER / ENGINEER. TEST RESULTS SHALL BE SUPPLIED BY THE CONTRACTOR IN A TIMELY MANNER TO THE OWNER / ENGINEER FOR REVIEW, ACCEPTANCE AND CERTIFICATIONS.

D. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A MINIMUM NOTICE OF TWO BUSINESS DAYS FOR THE FOLLOWING CONSTRUCTION AND OBSERVATION ACTIVITIES:

- SANITARY SEWER VIDEO INSPECTION
- CONNECTION TO EXISTING STORMWATER OR UTILITY SYSTEMS
- STORM AND SANITARY LAMPING
- IN-LET TOP POURS
- WATER, RECLAIM, AND FORCE MAIN PRESSURE TESTS
- BACTERIOLOGICAL SAMPLING
- BASE INSPECTION
- PLACEMENT OF ASPHALT LIFTS
- PRE-FINAL SITE INSPECTIONS
- FINAL SITE INSPECTIONS

E. IF ANY INSPECTIONS OR TEST RESULTS REVEAL DEFECTIVE WORK, THE CONTRACTOR SHALL NOT BE ELIGIBLE FOR ANY PAYMENT ASSOCIATED WITH THE DEFECTIVE WORK UNTIL THE REQUIRED SPECIFICATIONS AND STANDARDS INDICATED IN THE PLANS, THE CONTRACTOR SHALL CORRECT ALL REINSTALLATION, ADDITIONAL TESTING AND ASSOCIATED COSTS AS A RESULT OF REMEDYING THE DEFECTIVE WORK.

F. ALL WORK RESULTING FROM REQUIREMENTS OR RECOMMENDATIONS FROM INSPECTION PERSONNEL MUST BE REPORTED TO THE OWNER / ENGINEER FOR REVIEW AND AUTHORIZATION PRIOR TO COMMENCEMENT. NO COMPENSATION WILL BE GRANTED TO THE CONTRACTOR FOR ADDITIONAL WORK THAT WAS NOT APPROVED BY THE OWNER / ENGINEER.

SEDIMENTATION AND EROSION CONTROL:

1. REFER TO SEDIMENTATION AND EROSION CONTROL PLAN SHEET FOR SEDIMENTATION AND EROSION CONTROL NOTES AND DETAILS.

DEMOLITION AND CLEARING:

1. THE CONTRACTOR SHALL CLEARLY DELINEATE THE LIMITS OF CONSTRUCTION ON SITE PRIOR TO CONSTRUCTION. ALL WORK SHALL REMAIN WITHIN THE LIMITS OF CONSTRUCTION.

2. ALL EXISTING STRUCTURES, SLABS, FENCING, ASPHALT, SIGNS, OR OTHER EXISTING IMPROVEMENTS OR DEBRIS FILES WITHIN THE LIMITS OF PROPOSED IMPROVEMENTS ARE TO BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. CONTRACTOR SHALL PROVIDE FDOT STANDARD BOTTOM 101M, J OR P STRUCTURE BOTTOMS AS NECESSARY TO MEET PIPE SIZE AND ORIENTATION DEPICED ON THE CONSTRUCTION DRAWINGS. ALL STRUCTURE BOTTOMS UTILIZED SHALL BE CLEARLY DETAILED ON THE SHOP DRAWINGS.

3. THE CONTRACTOR SHALL ENSURE THAT ALL INLETS IN PAVEMENT AREAS ARE ALIGNED WITH PAVEMENT FLOW LINES AS APPLICABLE. ANY PONDING AROUND INLETS WILL NOT BE ACCEPTED.

4. ANY SIDEWALKS OR CURBING DISTURBED BY THE WORK SHALL BE RESTORED TO THE CONDITION OF THE ORIGINAL STRUCTURE. SIDEWALK PANELS SHALL BE RESTORED TO FULL PANEL WIDTHS AND LENGTHS (DEFINED BY EDGES OF SIDEWALK AND THE NEAREST CONTROL JOINTS OR EXPANSION JOINTS). PARTIAL PATCHING OF SIDEWALKS SHALL NOT BE ACCEPTABLE. PAVEMENT FINISHES, THICKNESSES AND GRADES SHALL MATCH THE EXISTING SIDEWALK.

5. THE CONTRACTOR SHALL COMPLY WITH ALL TREE PROTECTION REQUIREMENTS BY THE AGENCY HAVING JURISDICTION. THE CONTRACTOR SHALL USE EXTRA CARE WHEN WORKING NEAR EXISTING TREES DESIGNATED TO BE SAVED ON THE PLANS OR OTHERWISE NOTED IN THE FIELD. ALL PRACTICAL AND REASONABLE MEASURES SHALL BE TAKEN TO AVOID UNNECESSARY TREE REMOVAL.

6. TREE PROTECTION FENCING SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL PERMITTING AGENCY REQUIREMENTS.

7. ANY EXISTING TREE DESIGNATED TO REMAIN THAT IS DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. REPLACEMENT TREE TO MEET LOCAL PERMITTING AGENCY REQUIREMENTS.

9. THE CONTRACTOR SHALL STRIP OR OTHERWISE REMOVE ALL EXISTING VEGETATION, RUBBISH OR DELETERIOUS MATERIAL IN AREAS REQUIRING FILL MATERIAL.

PAVING, GRADING AND DRAINAGE NOTES:

1. GENERAL

A. ALL EARTHWORK FILL, STORMWATER SYSTEM, AND PAVEMENT MATERIALS AND THEIR INSTALLATION / PLACEMENT SHALL MEET THE MOST STRINGENT REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LOCAL PERMITTING AGENCIES, OR OTHER RELEVANT RECOMMENDATIONS. IN THE EVENT OF A CONFLICT BETWEEN REQUIREMENTS, CONTRACTOR TO REQUEST CLARIFICATION FROM THE ENGINEER IN WRITING.

B. ALL EXISTING TOPOGRAPHY, VERTICAL CONTROL AND BOUNDARY INFORMATION IS SHOWN AS PROVIDED BY SURVEYOR. CONTRACTOR TO VERIFY ALL EXISTING GRADES PRIOR TO BEGINNING WORK & NOTIFY ENGINEER IMMEDIATELY SHOULD ANY DISCREPANCIES OCCUR BETWEEN THE TOPOGRAPHIC SURVEY AND FIELD CONDITIONS.

C. INFORMATION PROVIDED IN THE GEOTECHNICAL REPORT AND GEOTECHNICAL ENGINEER'S RECOMMENDATIONS WERE RELIED UPON DURING PREPARATION OF THESE CONSTRUCTION DRAWINGS. RITTER CIVIL, LLC ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE GEOTECHNICAL REPORT OR OTHER INFORMATION PROVIDED BY THE GEOTECHNICAL ENGINEER.

D. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL RESTORE AND REGRADE ANY WASHOUTS THAT MAY OCCUR UNTIL ADEQUATE STABILIZATION IS ACHIEVED.

2. GEOTECHNICAL TESTING & INSPECTIONS:

A. THE CONTRACTOR/OWNER SHALL RETAIN A QUALIFIED FLORIDA-REGISTERED GEOTECHNICAL ENGINEER AND TESTING COMPANY FOR INSPECTION, TESTING, LAB REPORTS, AND CERTIFICATIONS.

B. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL TESTING REQUIRED BY THE LOCAL CITY OR COUNTY, FDOT, GEOTECHNICAL ENGINEER OR OWNER.

C. ALL EARTHWORK ACTIVITIES SHALL BE INSPECTED AND TESTED BY THE GEOTECHNICAL ENGINEER OR AGENT UNDER THE GEOTECHNICAL ENGINEER'S SUPERVISION. THE GEOTECHNICAL ENGINEER SHALL INSPECT AND TEST THE EXCAVATION, PLACEMENT, AND COMPACTION OF FILL AREAS, AND THE BACKFILL AND COMPACTION OF ANY STORM/UTILITY TRENCHES.

D. ALL TESTING AND LAB REPORTS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE OWNER / ENGINEER AS THEY ARE GENERATED.

E. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL MONITOR ONGOING CONSTRUCTION CONDITIONS AND PROVIDE RECOMMENDATIONS TO THE OWNER / ENGINEER FOR ROADWAY UNDERDRAINS OR ADDITIONAL ROADWAY UNDERDRAINS AS NECESSARY.

F. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL PROVIDE THE FOLLOWING CERTIFICATIONS TO OWNER / ENGINEER:

- OBSERVATIONS AND TESTS WERE CONDUCTED BY THE GEOTECHNICAL ENGINEER OR AGENT UNDER THEIR SUPERVISION, AND IN THE GEOTECHNICAL ENGINEER'S OPINION, ALL EXCAVATIONS AND EMBANKMENTS WERE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE GEOTECHNICAL REPORT AND THAT ALL EXCAVATIONS AND EMBANKMENTS ARE SUITABLE FOR THEIR INTENDED USE.
- POND BERMS HAVE BEEN CONSTRUCTED BASED ON THE RECOMMENDATIONS OF THE DESIGN GEOTECHNICAL ENGINEER AND CIVIL ENGINEERING PLANS AND SPECIFICATIONS.

G. ANY ROADWAY IMPROVEMENTS THAT HAVE NOT BEEN TESTED BY A FLORIDA-REGISTERED GEOTECHNICAL ENGINEER AND REPORTED TO CONFORM TO THE PROJECT'S SPECIFICATIONS IS SUBJECT TO THE WITHHOLDING AUTHORIZATION OF PAYMENT UNTIL SATISFACTORY TEST RESULTS ARE PROVIDED.

3. EARTHWORK

A. IF PROVIDED, EARTHWORK QUANTITIES DETERMINED BY RITTER CIVIL, LLC ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL CONFIRM REQUIRED EARTHWORK QUANTITIES WITH INDEPENDENT ANALYSIS, FIELD VERIFICATION AND CALCULATIONS AS NECESSARY DURING THE BID PROCESS. ALL REQUIRED EARTHWORK, INCLUDING ANY IMPORTED OR EXPORTED FILL MATERIAL SHALL BE INCLUDED IN THE CONTRACTOR'S BID. UNLESS OTHERWISE SPECIFIED BY THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL IMPORT OR EXPORTED FILL MATERIAL REQUIRED BUT NOT INCLUDED ON THE INITIAL BID.

B. ALL AREAS REQUIRING FILL SHALL BE PREPARED IN ACCORDANCE WITH GEOTECHNICAL REPORT'S SPECIFICATIONS. THE CONTRACTOR SHALL REMOVE ANY MUCK, VEGETATIVE OR DELETERIOUS MATERIAL FROM THE SURFACE OF THE AREA REQUIRING PLACEMENT OF FILL. LOOSE FILL AND ALLUVIAL SOILS SHALL BE REMOVED TO SUITABLE, FIRM NATURAL GROUND.

C. ALL FILL MATERIALS SHALL BE FREE OF UNSUITABLE MATERIALS INCLUDING BUT NOT LIMITED TO MUCK, STUMPS, ROOTS, BRUSH OR VEGETATIVE MATTER.

D. ALL EXCESS FILL MATERIAL SHALL BE HAULED OFF-SITE UNLESS OTHERWISE SHOWN IN THE PLANS TO BE STOCKPILED ON-SITE.

4. GRADING

A. THE CONTRACTOR SHALL GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS, AND AVOID DAMAGE TO ADJOINING PROPERTIES OR WORK RELATED TO CONSTRUCTION ACTIVITY BY THE CONTROL OF SURFACE WATER. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN THE SPOT GRADES, CONTOURS, AND FLOW LINES DEPICED ON THE CONSTRUCTION PLANS.

B. ALL CUT OR FILL SLOPES SHALL BE MAXIMUM 4:1 (HORIZONTAL:VERTICAL) UNLESS OTHERWISE SHOWN ON THE PLANS.

C. ALL ELEVATIONS PROVIDED IN GRASSED AREAS ARE SET AT TOP OF SOO OR SEEDED SURFACE.

D. ALL ELEVATIONS PROVIDED IN PAVED AREAS ARE SET AT EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON THE PLANS.

E. GRADING OF ROADWAY CORRIDORS SHALL INCLUDE ANY ADJACENT UTILITY, DRAINAGE, OR ACCESS EASEMENTS WITHIN FUTURE LOTS. SAID EASEMENTS SHALL BE GRADED TO WITHIN 6 INCHES OF FINAL DESIGN GRADE.

5. DEWATERING

A. THE CONTRACTOR SHALL INCLUDE DEWATERING AS REQUIRED BY THE MORE STRINGENT OF THE GEOTECHNICAL RECOMMENDATIONS OR LOCAL AUTHORITY HAVING JURISDICTION.

B. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR DEWATERING, ADHERE TO SAID PERMIT CONDITIONS AND ALL LOCAL CITY, COUNTY, FDEP, FDOT, WATER MANAGEMENT DISTRICT, OR OTHER ENVIRONMENTAL REGULATIONS.

C. THE CONTRACTOR SHALL COORDINATE DEWATERING WITH OTHER SITE ACTIVITIES.

D. ALL DEWATERING EFFLUENT SHALL BE RETAINED ON SITE, WITHIN TEMPORARY HOLDING CELLS CONSTRUCTED BY THE CONTRACTOR, UNDER NO CIRCUMSTANCES SHALL DEWATERING EFFLUENT BE DISCHARGED TO PROPOSED DRY RETENTION AREAS PLANNED FOR PERMANENT OPERATION WITHOUT ENGINEER'S WRITTEN APPROVAL.

E. IF THE CONTRACTOR PROPOSES TO DISCHARGE DEWATERING EFFLUENT OFF-SITE, HE SHALL DO SO IN ACCORDANCE WITH FDEP'S "GENERIC PERMIT FOR DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-COMMUNICATED SITE ACTIVITY". PERMIT REQUIREMENTS CAN BE OBTAINED FROM FDEP AT (407)894-7955 EXT 3985. THIS PERMIT IS INDEPENDENT OF AND IN ADDITION TO THE WATER MANAGEMENT DISTRICT'S PERMITS FOR CONSTRUCTION DEWATERING.

6. WALLS

A. THE CONTRACTOR / OWNER SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER FOR STRUCTURAL DESIGN OF ANY RETAINING WALLS OR SCREEN WALLS. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW & ACCEPTANCE. ALL NECESSARY PERMITS FOR WALL CONSTRUCTION SHALL BE APPLIED FOR AND OBTAINED BY THE CONTRACTOR.

7. STORMWATER MANAGEMENT SYSTEM

A. ALL DRAINAGE STRUCTURES, WITH THE EXCEPTION OF CONTROL STRUCTURES, ARE IDENTIFIED BY THE TYPE OF STRUCTURE. CONTRACTOR SHALL PROVIDE FDOT STANDARD BOTTOM 101M, J OR P STRUCTURE BOTTOMS AS NECESSARY TO MEET PIPE SIZE AND ORIENTATION DEPICED ON THE CONSTRUCTION DRAWINGS. ALL STRUCTURE BOTTOMS UTILIZED SHALL BE CLEARLY DETAILED ON THE SHOP DRAWINGS.

B. THE CONTRACTOR SHALL ENSURE THAT ALL INLETS IN PAVEMENT AREAS ARE ALIGNED WITH PAVEMENT FLOW LINES AS APPLICABLE. ANY PONDING AROUND INLETS WILL NOT BE ACCEPTED.

C. STORMWATER PIPE LENGTHS CALLED OUT ON THE PLANS ARE MEASURED FROM THE CENTERLINES OF CONNECTED DRAINAGE STRUCTURES AND TO THE INVERTS OF END SECTIONS OR ENDWALLS. CONTRACTOR SHALL ADJUST PIPE LENGTHS ACCORDINGLY DURING THE BID PROCESS.

D. ALL STORMWATER PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC IN ACCORDANCE WITH FDOT SPECIFICATIONS.

E. ONLY RIGID PIPE MATERIAL SHALL BE USED BENEATH PUBLICLY MAINTAINED ROADWAYS UNLESS OTHERWISE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

F. ANY NEW STORMWATER PIPE CONNECTIONS TO EXISTING PIPES SHALL BE AT AN EXISTING FACTORY-MADE JOINT. PARTIAL PIPES TO BE REMOVED AS NECESSARY.

G. ALL ENDWALLS, MITERED END SECTIONS, FLARED END SECTIONS OR SIMILAR DRAINAGE STRUCTURES SHALL BE STABILIZED AND PROTECTED FROM EROSION UNTIL THE BANK SLOPES OF THE RECEIVING WATER BODY HAVE BEEN ADEQUATELY STABILIZED AND ACCEPTED FOR MAINTENANCE.

H. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES AND FILTER SOCKS FOR CURB INLETS FOR THE DURATION OF THE PROJECT. ALL STORMWATER DRAINAGE SYSTEM STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE CLEANED OF SEDIMENT AND DEBRIS AS FREQUENTLY AS REQUIRED BY THE LOCAL PERMITTING AGENCY OR AT THE END OF CONSTRUCTION.

I. MAINTAIN 3" SEPARATION BETWEEN STORM STRUCTURES AND PRESSURE PIPES.

J. INLET STATION AND OFFSET REFERENCES ARE TO THE CENTERLINE PER FDOT STANDARD PLANS.

K. ALL STORM SEWER PIPES SHALL BE TESTED AND INSPECTED BY THE LOCAL CITY / COUNTY OR FDOT REQUIREMENTS, INCLUDING BUT NOT LIMITED TO VIDEO TAPING, CLEANING, AND MANHOLE TESTING.

8. STORMWATER POND CONSTRUCTION

A. THE FOLLOWING CONSTRUCTION PROCEDURES SHALL BE IMPLEMENTED TO AVOID DEGRADATION OF THE STORMWATER POND'S INFILTRATION CAPACITY:

- INITIALLY UNDER-EXCAVATE THE STORMWATER POND BOTTOM AND SIDES TO APPROXIMATELY 12 INCHES ABOVE FINAL GRADE.
- AFTER THE SITE OR DRAINAGE AREAS CONTRIBUTING TO THE STORMWATER POND HAVE ACHIEVED FULL STABILIZATION, EXCAVATE THE STORMWATER POND BOTTOM AND SIDES TO FINAL GRADE. ANY EXCESS SOIL AND UNDESIRABLE MATERIALS SHALL BE CAREFULLY REMOVED FROM THE STORMWATER POND TO ELIMINATE ALL ACCUMULATED SILTS, CLAYS, ORGANICS, AND OTHER FINE SEDIMENTS. DISPOSE OF THE EXCAVATED MATERIAL BEYOND THE LIMITS OF THE DRAINAGE AREA OF THE STORMWATER POND.
- AFTER THE STORMWATER POND HAS BEEN EXCAVATED TO FINAL GRADE, THE POND BOTTOM SHALL BE DEEP-RAKED AND LOOSENEED.

9. PAVEMENT

A. ALL PAVEMENT AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, WITH SMOOTH TRANSITIONS BETWEEN SPOT ELEVATIONS. LOW POINTS, FLOW LINES OR CONTOURS PROVIDED ON THE PLANS, INTERSECTIONS SHALL BE TRANSITIONED APPROPRIATELY TO ACHIEVE A SMOOTH DRIVING SURFACE WHILE MAINTAINING POSITIVE DRAINAGE PER THE GRADING INTENT DEPICED ON THE PLANS. ANY AREAS OF POOR DRAINAGE OBSERVED IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR REVIEW & RECOMMENDATION OF FIELD ADJUSTMENTS PRIOR TO PLACEMENT OF CURB OR PAVEMENT.

B. ALL PROPOSED PAVEMENT AREAS SHALL BE CONSTRUCTED PER THE APPLICABLE TYPICAL SECTIONS PROVIDED ON THE PLANS, AND PER THE RECOMMENDATIONS AND REQUIREMENTS OF THE GEOTECHNICAL ENGINEERING REPORT.

C. ALL SIDEWALKS, CROSSWALKS, AND DESIGNATED ACCESSIBLE ROUTES SHALL NOT HAVE ANY RUNNING SLOPES EXCEEDING 5%, AND CROSS SLOPES EXCEEDING 2%; AND HANDICAPPED PARKING SPACES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION, IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.

D. WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT A MINIMUM OF 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT. MATCH EXISTING PAVEMENT ELEVATION UNLESS OTHERWISE NOTED ON THE PLANS.

E. IF EXISTING PAVEMENT IS CALLED OUT FOR REMOVAL AND REPLACEMENT, THE CONTRACTOR SHALL SAW CUT A MINIMUM OF 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT. MATCH EXISTING PAVEMENT DEPTH AND MATERIALS UNLESS OTHERWISE NOTED ON THE PLANS.

F. THE CONTRACTOR SHALL NOT COMPACT, STABILIZE (WITH THE EXCEPTION OF 1' BEYOND BACK OF CURB) OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDIANS.

G. AFTER ROADWAY SUBGRADE HAS BEEN CONSTRUCTED, IT SHALL BE PROOF-ROLLED TO ENSURE PROPER COMPACTION HAS BEEN ACHIEVED. PROOF ROLLING AND COMPACTION TO BE INSPECTED AND TESTED BY GEOTECH

• DISINFECTION & BACTERIOLOGICAL SAMPLE TESTS: THE CONTRACTOR SHALL FLUSH AND DISINFECT ALL WATER MAINS IN ACCORDANCE WITH AWWA C651. LOCAL JURISDICTION OR UTILITY PROVIDER REQUIREMENTS. ALL WATER SAMPLE LOCATIONS FOR BACTERIOLOGICAL TESTING SHALL BE IN ACCORDANCE WITH FDEP PERMIT REQUIREMENTS.

E. RECLAIM WATER SYSTEM TESTING, AT A MINIMUM, SHALL INCLUDE:
 • PRESSURE AND LEAKAGE TEST: THE CONTRACTOR SHALL PERFORM A HYDROSTATIC PRESSURE AND LEAKAGE TEST OF THE WATER SYSTEM IN ACCORDANCE WITH AWWA STANDARDS C600, C605, OR M23 AS APPLICABLE TO PIPE MATERIAL, LOCAL AND/OR UTILITY PROVIDER REGULATIONS. RECLAIM WATER MAINS SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS, AND MEET AWWA STANDARDS FOR THEIR RESPECTIVE MATERIAL.

F. SANITARY GRAVITY SEWER SYSTEM TESTING AND INSPECTION, AT A MINIMUM, SHALL INCLUDE:
 • LAMPING & VIDEO INSPECTION: THE CONTRACTOR SHALL LAMP AND VIDEO INSPECT EACH MAIN IN ACCORDANCE WITH THE UTILITY PROVIDER REQUIREMENTS, FOR ALIGNMENT, GRADE VARIATIONS, JOINT SEPARATION, LEAKS, DEFLECTION, DAMAGE OR OTHER DEFECTS IN THE PIPE MATERIALS OR THEIR INSTALLATION.
 • DEFLECTION TESTS: AFTER FINAL BACKFILL IS IN PLACE FOR AT LEAST 30 DAYS, THE CONTRACTOR SHALL CONDUCT A DEFLECTION TEST UTILIZING A RIGID BALL OR MANDREL IN NOT LESS THAN 95% OF THE MAINS BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER AS SPECIFIED IN THE ASTM SPECIFICATIONS AND APPENDICES. NO MECHANICAL PULLING DEVICES SHALL BE USED FOR TESTING. ALL PIPES SHALL NOT EXCEED A 9% DEFLECTION.
 • VACUUM TESTING: ALL WASTEWATER MANHOLES SHALL BE VACUUM TESTED PER ASTM C1244 FOR CONCRETE MANHOLES.
 • LEAKAGE TESTS: THE CONTRACTOR SHALL PERFORM LOW-PRESSURE AIR TESTS ON ALL GRAVITY MAINS AND LATERALS IN ACCORDANCE PROCEDURES DESCRIBED WITH ASTM F1417 FOR PLASTIC PIPE. MAINS SHALL BE TESTED BETWEEN MANHOLES WITH TESTING SECTIONS NOT TO EXCEED 400 FEET IN LENGTH.

G. SANITARY FORCE MAIN TESTING, AT A MINIMUM, SHALL INCLUDE:
 • PRESSURE AND LEAKAGE TEST: THE CONTRACTOR SHALL PERFORM A HYDROSTATIC PRESSURE AND LEAKAGE TEST OF THE FORCE MAIN SYSTEM IN ACCORDANCE WITH AWWA STANDARDS C600, C605, OR M23 AS APPLICABLE TO PIPE MATERIAL, FDEP, LOCAL AND/OR UTILITY PROVIDER REGULATIONS. FORCE MAINS SHALL BE TESTED AT 150 PSI FOR A MINIMUM OF 2 HOURS, AND MEET AWWA STANDARDS FOR THEIR RESPECTIVE MATERIAL.

SIGNAGE AND PAVEMENT MARKINGS:

- ALL SIGNAGE AND PAVEMENT MARKING MATERIALS AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, THE FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", AND LOCAL CODE.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED AND APPROVED ON THE PLANS. ALL THERMOPLASTIC AND PAINT MATERIALS SHALL BE CERTIFIED FREE OF LEAD.
- ALL HANDICAP PARKING SPACES SHALL BE DESIGNATED WITH PAVEMENT MARKINGS AND SIGNAGE IN ACCORDANCE WITH ADA REQUIREMENTS.
- ALL REGULATORY TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO FINAL INSPECTION OF ROADWAY IMPROVEMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS DEPICTED ON THE CONSTRUCTION PLANS.
- FIRE HYDRANTS SHALL BE LOCATED WITH BLUE REFLECTIVE PAVEMENT MARKERS, PLACED OPPOSITE FIRE HYDRANTS IN THE CENTER OF THE NEAREST TRAVEL LANE.

AS-BUILTS & CERTIFICATION:

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REQUEST THE MINIMUM AS-BUILT REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCIES AND/OR UTILITY PROVIDER AND BECOME FAMILIAR WITH THESE REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILTS OF INSTALLED IMPROVEMENTS SATISFYING THE MINIMUM SUBMITTAL REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCIES AND/OR UTILITY PROVIDER.
- AS-BUILT DRAWINGS SHALL BE PREPARED AND CERTIFIED AS CORRECT BY A FLORIDA LICENSED LAND SURVEYOR AND PROVIDED TO THE ENGINEER FOR REVIEW.
- IN ADDITION TO THE MINIMUM AS-BUILT REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCIES AND/OR UTILITY PROVIDER, AS-BUILT DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:

A. **SANITARY SEWER SYSTEM**
 • HORIZONTAL LOCATION TOP ELEVATIONS OF EACH MANHOLE/STRUCTURE FRAME AND COVER
 • PIPE SIZE AND MATERIAL (IF ALTERNATE MATERIAL WAS APPROVED)
 • INVERTS OF ALL PIPES ENTERING AND/OR LEAVING EACH MANHOLE/STRUCTURE
 • LENGTHS OF EACH RUN OF MAIN BETWEEN MANHOLES/STRUCTURES, MEASURED CENTER TO CENTER
 • INVERTS OF PIPE CONNECTIONS TO EXISTING MANHOLES/STRUCTURES
 • AS-BUILT SLOPE OF PIPE BETWEEN MANHOLES/STRUCTURES
 • LENGTH OF ALL SERVICE WYES, LOCATION AND DEPTH AT LOT LINE OR INVERT AT CLEAN-OUT LOCATION.
 • LOCATION & ELEVATION OF ALL FITTINGS AND ACCESSORIES NOT VISIBLE TO THE SURFACE.

B. **STORM SEWER SYSTEM**
 • HORIZONTAL LOCATION & TOP ELEVATIONS OF EACH MANHOLE/STRUCTURE FRAME, COVER OR GRATE
 • OUTFALL AND CONTROL STRUCTURE COMPONENTS INCLUDING BUT NOT LIMITED TO WEIR ELEVATIONS, DIMENSIONS, ORIFICE PIPE SIZE AND INVERTS, AND SHIMMER DIMENSIONS
 • PIPE SIZE AND MATERIAL (IF ALTERNATE MATERIAL FROM THE PLANS WAS APPROVED)
 • INVERTS OF ALL PIPES ENTERING AND/OR LEAVING EACH MANHOLE/STRUCTURE, INCLUDING UNDERDRAINS
 • INVERTS OF MITERED END SECTIONS, ENDWALLS, OR INVERT OF PIPE CONNECTIONS TO EXISTING SYSTEMS
 • AS-BUILT GRADE OF PIPE BETWEEN MANHOLES/STRUCTURES
 • LOCATION AND INVERT ELEVATION OF ALL STORM STUB-OUTS
 • UNDERDRAIN LOCATIONS

C. **PRESSURE SYSTEMS (WATER/ RECLAIM /FORCE MAIN)**
 • LOCATION AND TOP ELEVATION OF ALL MAINS, SERVICE LINES AND FIRE APPARATUS
 • LOCATION AND TOP ELEVATION OF ALL VALVES AND FITTINGS
 • PIPE SIZE AND MATERIAL (IF ALTERNATE MATERIAL FROM THE PLANS WAS APPROVED)
 • ALL UTILITY CROSSINGS WITH CLEARANCES MEASURED FROM OUTSIDE OF PIPE, AS-BUILTS SHALL CLEARLY DEMONSTRATE COMPLIANCE WITH MINIMUM SEPARATION DISTANCES.

D. **GRADING & STORMWATER FACILITIES**
 • POND ELEVATIONS INCLUDING TOP OF BANK, GRADE BREAKS, AND POND BOTTOM
 • SWALE / DITCH TOP AND BOTTOM ELEVATIONS
 • ELEVATIONS FOR ALL SPOT GRADES SHOWN IN PROPOSED PAVEMENT AREAS
 • ELEVATIONS ON RESIDENTIAL LOT CORNERS, GRADE BREAKS ON LOT LINES, AND CENTER OF BUILDING PAD
 • TOP AND BOTTOM OF RETAINING WALL ELEVATIONS
 • ALONG ALL PROPOSED ROADWAYS, SPOT GRADES AT EVERY MAJOR STATION AND PVI SHALL BE PROVIDED AT CROWN, EDGE OF PAVEMENT, TOP OF CURB, AND BACK OF SIDEWALK OR RIGHT OF WAY LINE.

- AS-BUILTS FOR ALL UNDERGROUND STORMWATER DRAINAGE AND UTILITY IMPROVEMENTS MUST BE SUBMITTED TO THE ENGINEER AND ACCEPTED PRIOR TO CONSTRUCTION OF PAVING IMPROVEMENTS.
- NO ENGINEER'S CERTIFICATION OF COMPLETION WILL BE ISSUED UNTIL COMPLETE AS-BUILT DRAWINGS HAVE BEEN PROVIDED AND ACCEPTED. PARTIAL AS-BUILTS MAY BE PROVIDED FOR SPECIFIC PURPOSES SUCH AS FDEP CLEARANCES.
- THE ENGINEER RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER, RETEST OR PERFORM ANY NECESSARY ACTION TO CONFIRM THAT ALL IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

REVISIONS:

CLOUDED REVISIONS ARE INTENDED TO AID THE CONTRACTOR, BUT DO NOT RELIEVE THE CONTRACTOR FROM IDENTIFYING ANY ADDITIONAL CHANGES AS A RESULT OF THE CLOUDED REVISIONS. THE CONTRACTOR SHALL REVIEW THE REVISION CHANGES IN RELATION TO THE CONSTRUCTION PLANS IN THEIR ENTIRETY BEFORE PROCEEDING.

MATERIAL SPECIFICATIONS:

1. GENERAL:

A. THE CONTRACTOR SHALL REVIEW THESE MATERIAL SPECIFICATIONS AGAINST THOSE OF THE AUTHORITY HAVING JURISDICTION (AHJ), WHEREVER THE BELOW STANDARDS DIFFER FROM THE REQUIREMENTS OF THE AHJ, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION. TYPICALLY THE AHJ REQUIREMENT SHALL APPLY.

B. MATERIAL FURNISHED UNDER THESE REQUIREMENTS SHALL BE IN NEW CONDITION, FREE OF DEFECTS, AND HIGH GRADE.

2. PAVING AND DRAINAGE:

A. ALL STORM PIPE SHALL BE CLASS III REINFORCED CONCRETE PIPE PER ASTM C-76, UNLESS OTHERWISE SPECIFIED. LIFTING HOLES ARE NOT ACCEPTABLE. PIPES SHALL BE JOINED USING A BELL AND SPIGOT JOINT, WITH COMPRESSION GASKETS MEETING THE REQUIREMENTS OF ASTM C443 AND WRAPPED PER FDOT INDEX 430-001.

B. ALL STORM PIPES SHALL BE INSTALLED, LASER PROFILED AND VIDEOED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS.

C. STORM CLEANOUTS LOCATED IN PAVED AREAS SHALL BE TRAFFIC BEARING. STORM STRUCTURES AND MANHOLES SHALL HAVE TRAFFIC BEARING GRATES OR LIDS. ALL GRATES AND LIDS SHALL BE SET FLUSH WITHOUT MOVEMENT WHEN SUBJECTED TO VEHICLE TRAFFIC.

D. ALL YARD DRAINS SHALL BE IN-LINE DRAINS AND DRAIN BASINS WITH WATER TIGHT ADAPTER CONNECTIONS, OR ENGINEER APPROVED EQUAL. CATCH BASIN RISER (NDS#1216) SHALL BE USED IN SHRUB AREAS. 12" SQUARE FLAT GRATES (NDS#1211) SHALL BE USED IN TURF AREAS. REFER TO LANDSCAPE PLANS FOR GRATE TYPE SUITABLE FOR THE LOCATION.

E. YARD DRAIN PIPING UNDER PAVEMENT AREAS SHALL BE ASTM D3034 SDR 35 PVC OR ENGINEER APPROVED EQUAL. YARD DRAIN PIPING OUTSIDE OF PAVEMENT AREAS SHALL BE ASTM D3034 SDR 35 PVC OR HEAVY DUTY CORRUGATED POLYETHYLENE (HDPE). SELECTED MATERIALS SHALL BE CONSISTENT THROUGHOUT THE PROJECT.

F. ALL TYPE "P" STRUCTURE BOTTOMS SHALL BE ROUND UNLESS OTHERWISE NOTED AND SHALL HAVE A 4 FOOT DIAMETER.

G. ALL UNDERDRAIN SHALL BE ADVANCED DRAINAGE SYSTEMS (ADS) HEAVY-DUTY CORRUGATED POLYETHYLENE PIPE WITH FACTORY INSTALLED FILTER FABRIC, OR APPROVED EQUAL.

H. ALL UNDERDRAIN DISCHARGE PIPE SHALL BE NON-PERFORATED ASTM D3034 SDR 35 PVC WITH ELASTOMERIC JOINTS.

I. AGGREGATE USED FOR ANY EXFILTRATION TRENCH SHALL BE NON-LIMESTONE BASED NATURALLY OCCURRING MATERIAL CRUSHED OR RECYCLED CONCRETE IS NOT PERMITTED FOR USE IN THE EXFILTRATION TRENCH.

J. STORM CLEANOUTS LOCATED IN PAVED AREAS SHALL BE TRAFFIC BEARING. STORM STRUCTURES AND MANHOLES SHALL HAVE TRAFFIC BEARING GRATES OR LIDS. ALL GRATES AND LIDS SHALL BE SET FLUSH WITHOUT MOVEMENT WHEN SUBJECTED TO VEHICLE TRAFFIC.

K. ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE MINIMUM CLASS III UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.

3. POTABLE WATER:

A. WATER MAINS, FITTINGS, VALVES, AND APPURTENANCES SHALL MEET ALL APPLICABLE UTILITY PROVIDER CRITERIA. IF UTILITY PROVIDER CRITERIA DOES NOT APPLY, MINIMUM MATERIAL SPECIFICATIONS SHALL BE AS FOLLOWS:

B. WATER MAINS 1-1/2" TO 3" AND FITTINGS LESS THAN 4" SHALL BE PVC MEETING ASTM D2241 AND ASTM D1784 CLASS 200, SDR 21, AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

C. WATER MAINS 4" TO 12" SHALL BE PVC (UNLESS OTHERWISE CALLED FOR) MEETING THE REQUIREMENTS OF AWWA C900 CLASS 150 DR18 AND ASTM D1784 AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

D. WATER MAINS SHALL BE DUCTILE IRON WHEN CALLED FOR, WITH MIN PRESSURE CLASS 350 PER AWWA C150, WITH INTERIOR LINING OF CEMENT MORTAR AND ASPHALTIC MATERIAL SEAL COAT IN ACCORDANCE WITH ANSI/AWWA C104/A21.4, AND EXTERIOR COATING PER ANSI/AWWA C151/A21.51 OF 1.0 MIL MIN THICKNESS.

E. FITTINGS 4" AND OVER SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C110/A21.10, 250 PSI, WITH CEMENT MORTAR LINING CONFORMING TO ANSI/AWWA C104/A21.4, STANDARD THICKNESS, WITH COMPRESSION TYPE JOINTS/MECHANICAL JOINTS AS RESPECTIVELY SPECIFIED IN ASTM D3139 AND ANSI/AWWA C110/A21.11.

F. VALVES 2" AND SMALLER SHALL BE BRONZE, WEDGE DISC, NON-RISING STEM TYPE, 150 PSI MIN WORKING PRESSURE, WITH WROUGHT STEEL OR CAST IRON HANDWHEELS AND WITH SUITABLE ENDS FOR JOINING TO THE SELECTED PIPE.

G. VALVES 3" TO 12" SHALL BE RESILIENT SEAT GATE VALVES AT 250 PSI RATING, CONFORMING TO ANSI/AWWA C509 OR C515 OPENING COUNTERCLOCKWISE, WITH O-RING STEM SEAL AND OPENING EQUAL TO OR GREATER THAN THE NOMINAL DIAMETER OF THE VALVE.

H. VALVE BOXES SHALL BE ADJUSTABLE, CAST IRON, WITH MINIMUM INTERIOR DIAMETER OF 5 INCHES WITH COVERS LEGIBLY CAST WITH THE INSCRIPTION "WATER" ON THE TOP, AND WITH A HEAVY COATING OF BITUMINOUS PAINT. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE. ALL VALVES SHALL HAVE BOXES.

I. FIRE HYDRANTS SHALL CONFORM TO AWWA C502, PAINTED IN ACCORDANCE WITH AHJ REQUIREMENTS.

J. BACKFLOW PREVENTION DEVICES: SHALL BE REDUCED PRESSURE ZONE TYPE UNLESS OTHERWISE SPECIFIED.

K. DOUBLE DETECTOR CHECK VALVE ASSEMBLY (DDCVA) AND DOUBLE CHECK VALVE ASSEMBLY (DCVA) SHALL CONFORM TO ASSE STANDARD 1015 AND AWWA C510 WATTS 709 SERIES OR ENGINEER APPROVED EQUAL. DEVICES TO INCLUDE OS&Y GATE VALVES AT BOTH ENDS AND EPOXY COATED STRAINER. ALL CAST/DUCTILE IRON PARTS TO BE EPOXY COATED. DDCVA TO INCLUDE METER BYPASS WITH DOUBLE CHECK VALVE (ALSO CONFORMING TO THIS SPECIFICATION).

L. REDUCED PRESSURE BACKFLOW PREVENTION DEVICES SHALL CONFORM TO ASSE STANDARD 1015 AND AWWA C511 HERSEY MODEL 6 CM OR ENGINEER APPROVED EQUAL. DEVICES TO INCLUDE OS&Y GATE VALVES AT BOTH ENDS AND EPOXY COATED STRAINER. ALL CAST/DUCTILE IRON PARTS TO BE EPOXY COATED.

M. ALL WATER SYSTEM COMPONENTS INSTALLED THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AS ADOPTED IN RULE 62-555.335, F.A.C. OR OTHER APPLICABLE STANDARDS, REGULATIONS OR REQUIREMENTS REFERENCED IN PARAGRAPH 62-555.320(3)(B), F.A.C.

N. ALL PIPE, FITTINGS, SOLDER OR FLUX USED IN CONSTRUCTION SHALL CONTAIN NO LEAD.

0. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320(21)(B)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE, WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERIOR DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.)

4. RECLAIMED WATER:

A. RECLAIMED WATER MAINS, FITTINGS, VALVES, AND APPURTENANCES SHALL MEET ALL APPLICABLE UTILITY PROVIDER CRITERIA. IF UTILITY PROVIDER CRITERIA DOES NOT APPLY, MINIMUM MATERIAL SPECIFICATIONS SHALL BE AS FOLLOWS:

B. RECLAIMED WATER MAINS 1-1/2" TO 3" AND FITTINGS LESS THAN 4" SHALL BE PVC MEETING ASTM D2241 AND ASTM D1784 CLASS 200, SDR 21, AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

C. RECLAIMED WATER MAINS 4" TO 12" SHALL BE PVC (UNLESS OTHERWISE CALLED FOR) MEETING THE REQUIREMENTS OF AWWA C900 CLASS 150 DR18 AND ASTM D1784 AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

D. RECLAIMED WATER MAINS SHALL BE DUCTILE IRON WHEN CALLED FOR, WITH MIN PRESSURE CLASS 50 PER AWWA C150, WITH INTERIOR LINING OF CEMENT MORTAR AND ASPHALTIC MATERIAL SEAL COAT IN ACCORDANCE WITH ANSI/AWWA C104/A21.4, AND EXTERIOR COATING PER ANSI/AWWA C151/A21.51 OF 1.0 MIL MIN THICKNESS.

E. FITTINGS 4" AND OVER SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C110/A21.10, 250 PSI, WITH CEMENT MORTAR LINING CONFORMING TO ANSI/AWWA C104/A21.4, STANDARD THICKNESS, WITH COMPRESSION TYPE JOINTS/MECHANICAL JOINTS AS RESPECTIVELY SPECIFIED IN ASTM D3139 AND ANSI/AWWA C110/A21.11.

F. VALVES 2" AND SMALLER SHALL BE BRONZE, WEDGE DISC, NON-RISING STEM TYPE, 150 PSI MIN WORKING PRESSURE, WITH WROUGHT STEEL OR CAST IRON HANDWHEELS AND WITH SUITABLE ENDS FOR JOINING TO THE SELECTED PIPE.

G. VALVES 3" TO 12" SHALL BE RESILIENT SEAT GATE VALVES AT 250 PSI RATING, CONFORMING TO ANSI/AWWA C509 OR C515 OPENING COUNTERCLOCKWISE, WITH O-RING STEM SEAL AND OPENING EQUAL TO OR GREATER THAN THE NOMINAL DIAMETER OF THE VALVE.

H. VALVE BOXES SHALL BE ADJUSTABLE, CAST IRON, WITH MINIMUM INTERIOR DIAMETER OF 5 INCHES WITH COVERS LEGIBLY CAST WITH THE INSCRIPTION "RECLAIMED WATER" ON THE TOP, AND WITH A HEAVY COATING OF BITUMINOUS PAINT. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE. ALL VALVES SHALL HAVE BOXES.

I. ALL PIPING VALVES AND OUTLETS SHALL BE COLOR CODED PANTONE 522C PURPLE AND MARKED PER LOCAL AND STATE CODES TO DIFFERENTIATE RECLAIMED WATER FROM POTABLE WATER OR OTHER WATER SOURCES.

5. WASTEWATER COLLECTION & TRANSMISSION:

A. GRAVITY SEWER LINES AND FITTINGS TO BE PVC SDR 35 PER ASTM D3034 WITH ELASTOMERIC JOINTS PER ASTM D3212.

B. MANHOLES TO MEET ASTM C478 WITH A 5" MINIMUM CONCRETE WALL WITH 4,000 PSI COMPRESSIVE STRENGTH.

C. FORCE MAINS 4" TO 12" SHALL BE PVC DR 18 CLASS 100 PER AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS PER ASTM D3139.

D. FORCE MAIN FITTINGS AND PIPE 1-1/2" TO 3" AND FITTINGS LESS THAN 4" SHALL BE PVC MEETING ASTM D2241 AND ASTM D1784 CLASS 200, SDR 21, AND INCLUDE INTEGRAL BELLS AND ELASTOMERIC JOINTS PER ASTM D3139 AND GASKETS PER ASTM F477.

E. FORCE MAIN FITTINGS 4" AND OVER SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C110/A21.10, 250 PSI, WITH CEMENT MORTAR LINING CONFORMING TO ANSI/AWWA C104/A21.4, STANDARD THICKNESS, WITH COMPRESSION TYPE JOINTS/MECHANICAL JOINTS AS RESPECTIVELY SPECIFIED IN ASTM D3139 AND ANSI/AWWA C110/A21.11.

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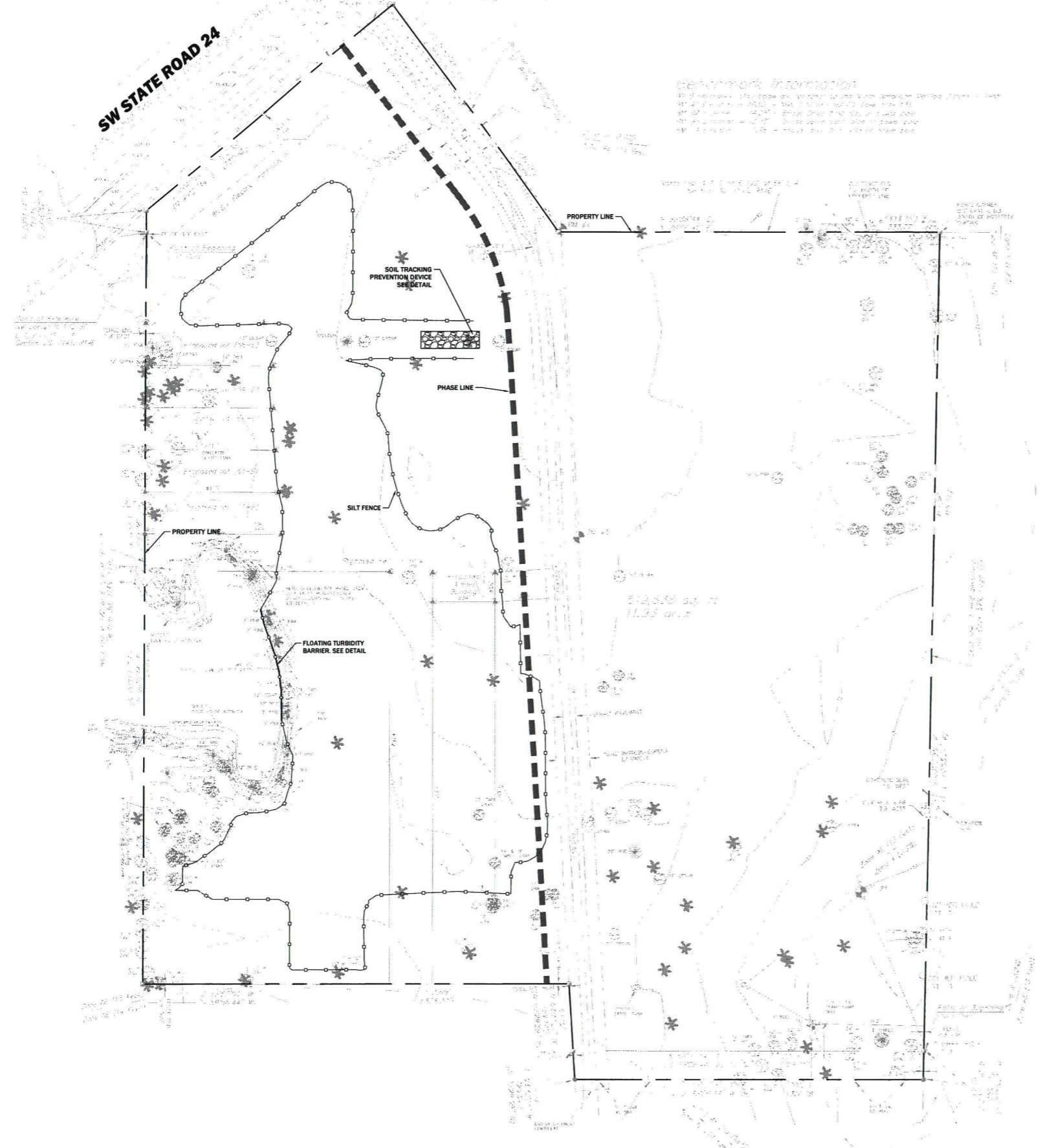
GENERAL NOTES
CRANE POND RV PARK - PHASE 2




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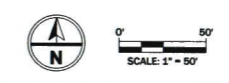
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- LEGEND:**
-  SOIL TRACKING PREVENTION DEVICE. SEE DETAIL.
 -  SCHEMATIC LOCATION OF SILT FENCE. CONTRACTOR TO ADJUST LOCATION TO CONSTRUCTION LIMITS OR EXISTING CONDITIONS AS NECESSARY.
 -  FLOATING TURBIDITY BARRIER. SEE DETAIL.



SEDIMENTATION AND EROSION CONTROL NOTES:

1. THIS SEDIMENTATION AND EROSION CONTROL PLAN AND ASSOCIATED DETAILS ARE PROVIDED AS A GUIDE TO THE CONTRACTOR. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WHICH DEMONSTRATES THE MEANS AND METHODS THAT WILL BE UTILIZED TO PROTECT THE CONSTRUCTION SITE AND SURROUNDING AREAS AND WETLANDS DURING CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS. THE PLAN SHALL INCLUDE AT A MINIMUM, THE LOCATION OF SOIL TRACKING PREVENTION DEVICES, SILT SCREENS AND FENCING, TURBIDITY BARRIERS, TEMPORARY SHEETING, EMERGENCY RESPONSE PRACTICES, AND ALL OTHER NECESSARY MEANS AND METHODS TO PREVENT POLLUTION.
2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL LAWS, AND ALL REGULATIONS PERTAINING TO POLLUTION OF THE ENVIRONMENT.
3. FOR CONSTRUCTION ACTIVITIES THAT DISTURB 1 ACRE OR MORE OF LAND, OR DISTURB LESS THAN ONE ACRE OF LAND BUT ARE PART OF A COMMON PLAN OF DEVELOPMENT OR SALE, THE CONTRACTOR SHALL SUBMIT TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) A "NOTICE OF INTENT TO USE THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES" (NOI) A MINIMUM OF 2 CALENDAR DAYS BEFORE COMMENCEMENT OF CONSTRUCTION BY CLEARING, GRADING, EXCAVATING, DEMOLITION, OR OTHER CONSTRUCTION ACTIVITIES DISTURBING SOIL.
4. PRIOR TO SUBMITTING THE NOI, THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH EPA/FDEP NPDES AS WELL AS THE LOCAL AUTHORITY HAVING JURISDICTION'S MINIMUM EROSION CONTROL REQUIREMENTS.
5. ALL CONTRACTORS AND SUBCONTRACTORS INCLUDED ON THE STORMWATER POLLUTION PREVENTION PLAN SHALL OBTAIN A COPY OF THE SWPPP AND THE NPDES PERMIT AND ABIDE BY THE REQUIREMENTS THEREIN.
6. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP TO LIMIT SEDIMENTATION OUTSIDE OF THE PROJECT LIMITS. SITE CONDITIONS MAY NECESSITATE THE IMPLEMENTATION OF ADDITIONAL BMP'S WHICH SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
7. ALL BMP'S SHALL BE PROVIDED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, LOCAL REQUIREMENTS, MANUAL OF PRACTICE, AND/OR AS DIRECTED BY THE AGENCY HAVING JURISDICTION.
8. ALL BMP'S SHALL BE IN PLACE PRIOR TO CONSTRUCTION ACTIVITY AND MONITORED FOR ADEQUATE FUNCTION AND ANY NEEDED MAINTENANCE UNTIL THE PROJECT OR PHASE OF THE PROJECT IS FULLY COMPLETED AND ACCEPTED.
9. THE SITE SHALL BE INSPECTED BY A QUALIFIED INSPECTOR PROVIDED BY THE CONTRACTOR / OWNER AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN TWENTY-FOUR HOURS OF THE END OF A RAINFALL EVENT 6 INCHES OR GREATER.
10. INSPECTIONS OF THE BMP'S SHALL COVER THE FOLLOWING:
 - ALL STORMWATER DISCHARGES FROM THE SITE TO ENSURE BMP'S ARE NOT CAUSING OR CONTRIBUTING TO VIOLATIONS OF WATER QUALITY STANDARDS OR RESULTING IN OFFSITE SEDIMENTATION
 - THE BMP'S IDENTIFIED IN THE SWPPP ARE INSTALLED, MAINTAINED, AND OPERATING CORRECTLY AND EFFECTIVELY
 - BMP'S ARE BEING USED AND MAINTAINED PROPERLY FOR ALL AREAS USED FOR STORAGE OF MATERIALS EXPOSED TO RAINFALL AND RUNOFF
 - ANY EVIDENCE OF OFFSITE SEDIMENT TRACKING AT ALL LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE. NOTE ANY ACTIONS NEEDED TO REMOVE SEDIMENTS FROM THE ROADWAY AND TO PREVENT IT IN THE FUTURE.
 - ANY VISIBLE SIGNS OF EROSION AND SEDIMENTATION IN ALL DISTURBED AREAS AND DISCHARGE POINTS.
11. ANY CORRECTIVE ACTION TO THE BMP'S SHALL BE FULLY DOCUMENTED. A COPY OF THE APPROVED NOI, ACKNOWLEDGEMENT LETTER, SWPPP, INSPECTION REPORTS, RECORDS AND ALL NOTIFICATIONS FROM FDEP SHALL BE KEPT ON SITE AT ALL TIMES FOR REVIEW BY THE NPDES INSPECTOR, OWNER OR OTHER AUTHORIZED PARTIES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIRT AND DUST ABATEMENT, AND SHALL WATER THE SITE OR USE OTHER APPROPRIATE MEASURES FOR CONTROL. NO USE OF PETROLEUM BASED OR OTHER TOXIC SUBSTANCES SHALL BE PERMITTED FOR DUST ABATEMENT.
13. THE CONTRACTOR SHALL PROVIDE SOIL TRACKING PREVENTION DEVICES AT DESIGNATED CONSTRUCTION ENTRANCES IN ACCORDANCE WITH THE FOOT EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.
14. IF PROVIDED CONSTRUCTION ENTRANCES ARE NOT SUFFICIENT TO REMOVE DIRT AND MUD FROM THE TIRES OF VEHICLES AND EQUIPMENT LEAVING THE CONSTRUCTION SITE, THE TIRES MUST BE WASHED PRIOR TO THE VEHICLES LEAVING THE SITE AND ENTERING A PUBLIC ROAD.
15. ALL WATER USED FOR CLEANING CONCRETE TRUCKS, VEHICLES, EQUIPMENT OR OTHER CLEANING ACTIVITY SHALL BE PROPERLY DETAINED AND TREATED OR DISPOSED OF IN A LEGAL MANNER.
16. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ON TO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED AS SOON AS POSSIBLE.
17. SILT FENCING SHOWN ON THE PLANS IS SCHEMATIC AND MAY NEED TO BE ADJUSTED DUE TO SITE CONDITIONS. CONTRACTOR SHALL PLACE SILT FENCING ALONG THE LIMITS OF CONSTRUCTION BASED ON THE CONSTRUCTION PLANS IN THEIR ENTIRETY.
18. EXISTING CURB AND DITCH INLETS SHALL BE PROTECTED FROM SEDIMENTATION DUE TO SURFACE RUNOFF UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE. FILTER FABRIC SHALL BE PLACED UNDER THE GRATE OF DITCH INLETS, AND FILTER SOCKS SHALL BE PLACED IN FRONT OF THE THROAT OF CURB INLETS.
19. TURBIDITY BARRIERS SHALL BE INSTALLED IN ALL EXISTING WATER BODIES WHERE CONSTRUCTION ACTIVITIES COULD CAUSE THE TRANSFER OF SEDIMENTS AND SUSPENDED SOLIDS. TURBIDITY BARRIERS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITY IS COMPLETE AND THE GROUND IS STABILIZED WITH A DENSE STAND OF VEGETATION.
20. THE CONTRACTOR SHALL REMOVE SEDIMENT IN STORMWATER PONDS AND ANY SEDIMENT THAT MAY HAVE ACCUMULATED IN THE STORMWATER DRAINAGE SYSTEM.
21. ALL RIGHT OF WAY, POND SLOPES, OR SLOPES 5:1 OR GREATER SHALL BE SODDED. ALL SODDED AREAS SHALL BE WATERED, FERTILIZED OR OTHERWISE MAINTAINED BY THE CONTRACTOR AS NECESSARY UNTIL FINAL ACCEPTANCE OF THE PROJECT.
22. IF CONSTRUCTION ACTIVITY HAS CEASED FOR ANY REASON, ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED OR OTHERWISE STABILIZED NO LATER THAN 7 DAYS FROM THE LAST CONSTRUCTION ACTIVITY.

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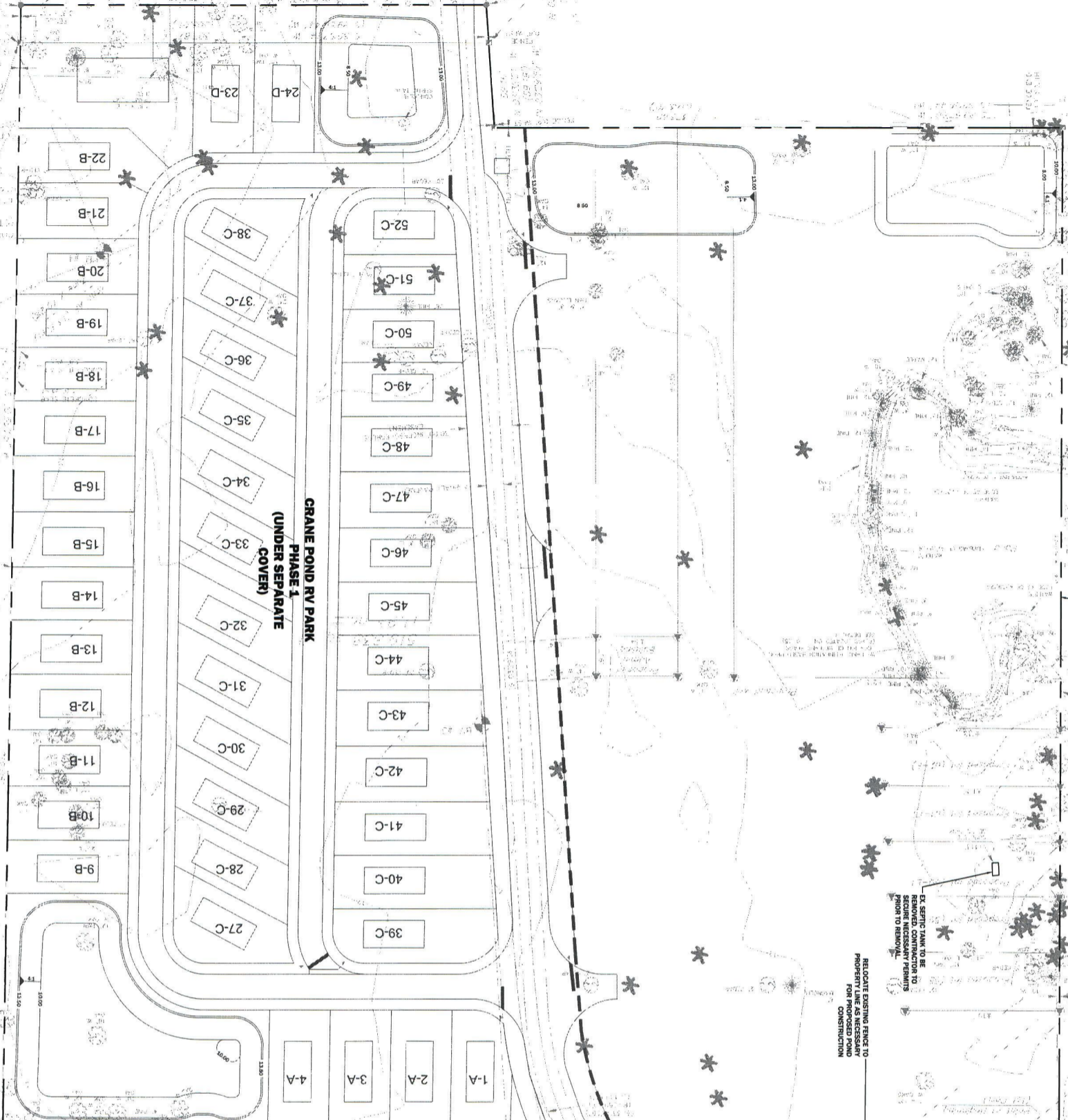
SEDIMENTATION & EROSION CONTROL PLAN
CRANE POND RV PARK - PHASE 2

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CRANE POND RV PARK (UNDER SEPARATE COVER) PHASE 1
 1-A, 2-A, 3-A, 4-A, 9-B, 10-B, 11-B, 12-B, 13-B, 14-B, 15-B, 16-B, 17-B, 18-B, 19-B, 20-B, 21-B, 22-B, 23-D, 24-D, 27-C, 28-C, 29-C, 30-C, 31-C, 32-C, 33-C, 34-C, 35-C, 36-C, 37-C, 38-C, 39-C, 40-C, 41-C, 42-C, 43-C, 44-C, 45-C, 46-C, 47-C, 48-C, 49-C, 50-C, 51-C, 52-C

SW STATE ROAD 24

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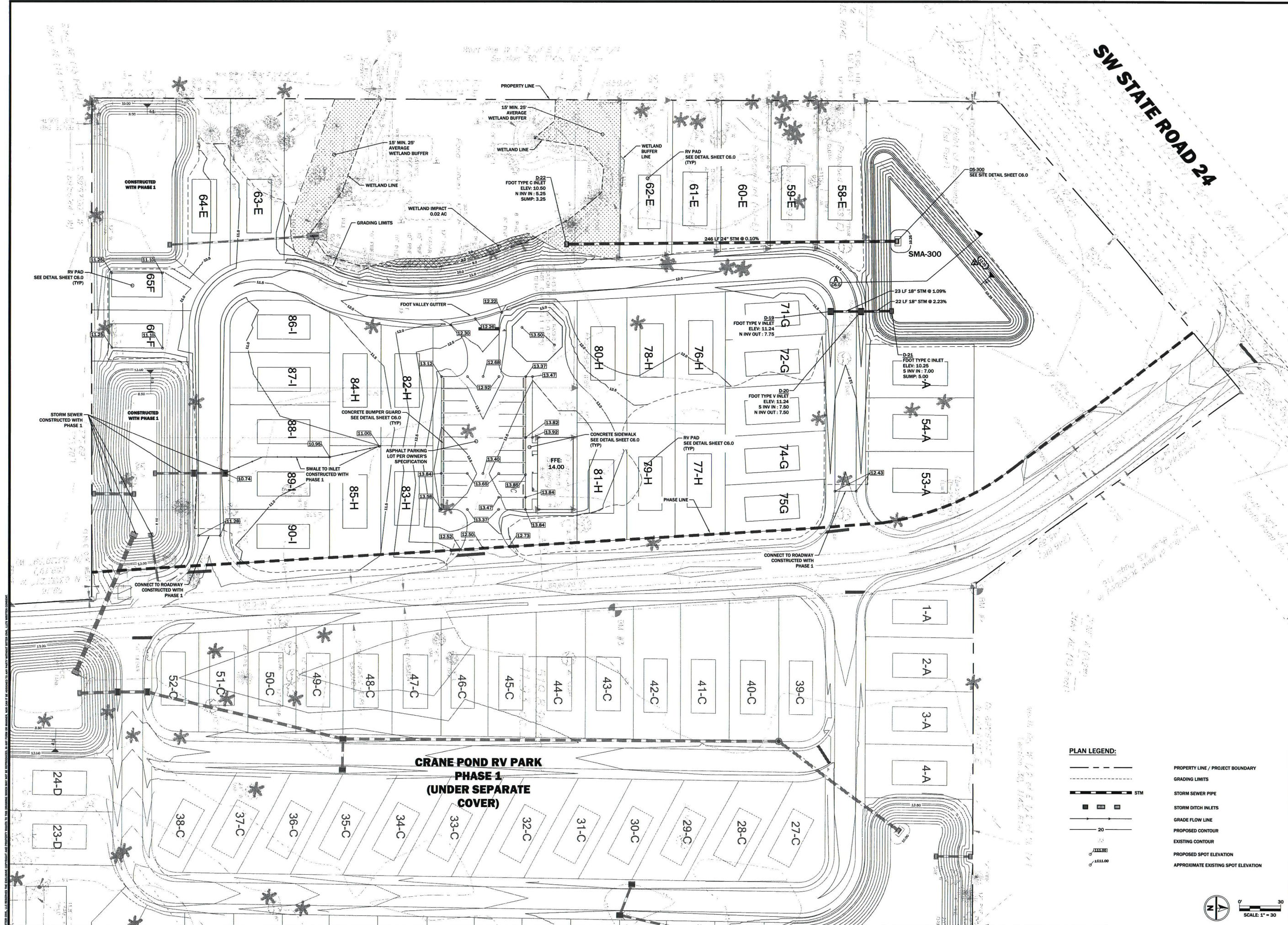
CRANE POND RV PARK - PHASE 2

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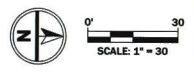
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GRADING & DRAINAGE PLAN
CRANE POND RV PARK - PHASE 2



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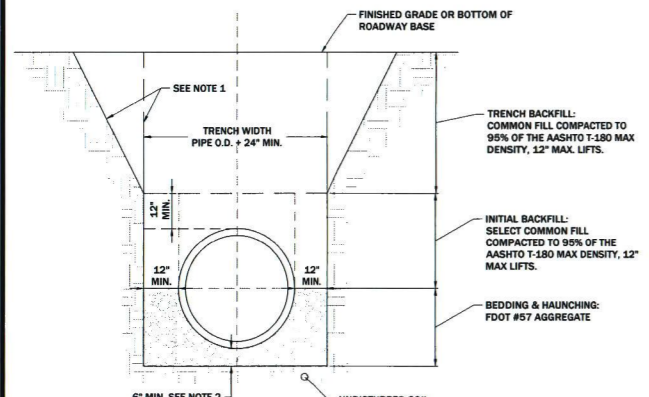
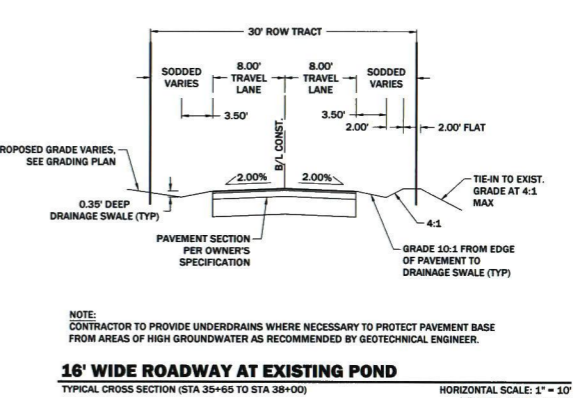
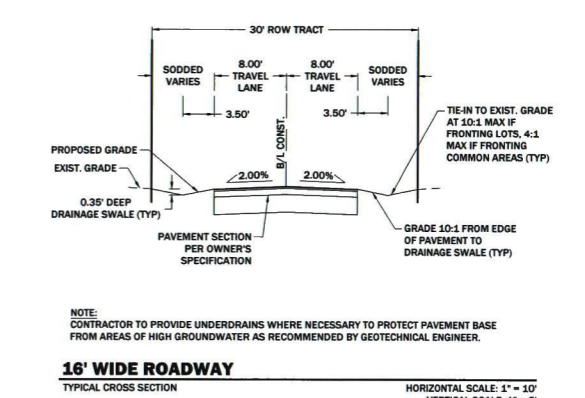
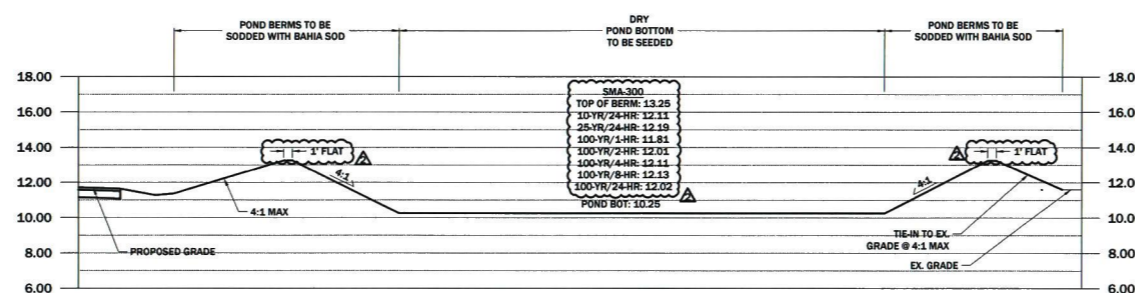
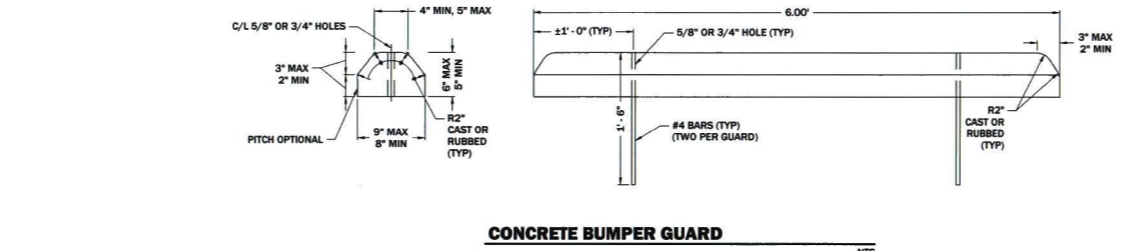
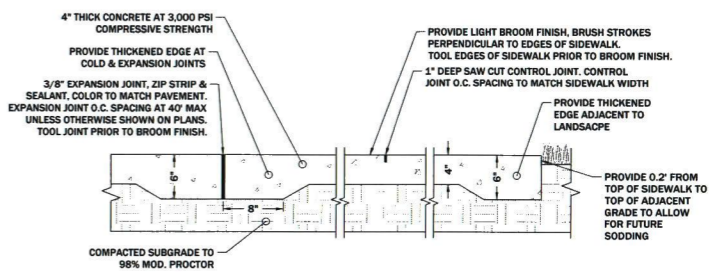
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	STM
	STORM SEWER PIPE
	STORM DITCH INLETS
	GRADE FLOW LINE
	PROPOSED CONTOUR
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	PROPOSED SPOT ELEVATION
	APPROXIMATE EXISTING SPOT ELEVATION



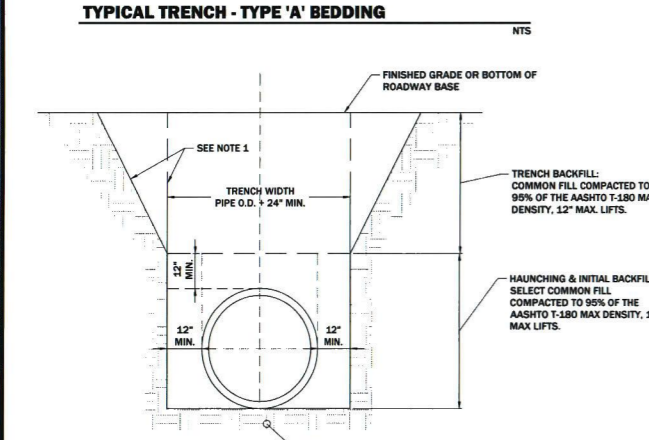
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ISSUE DATE:	12/20/2024 - FOR REVIEW
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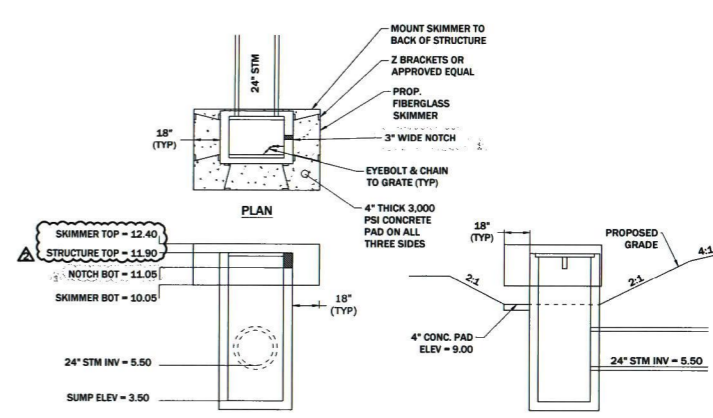
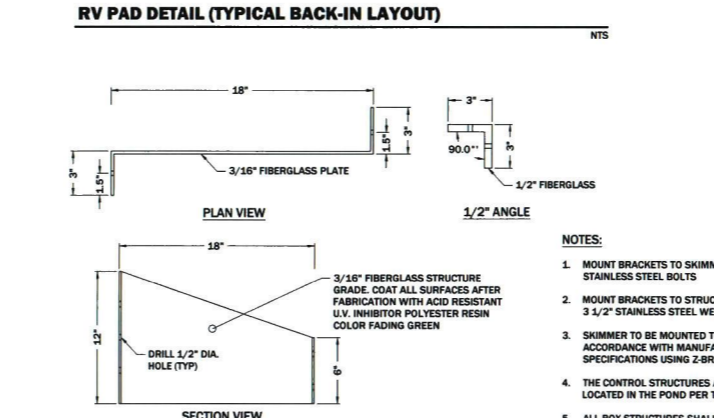
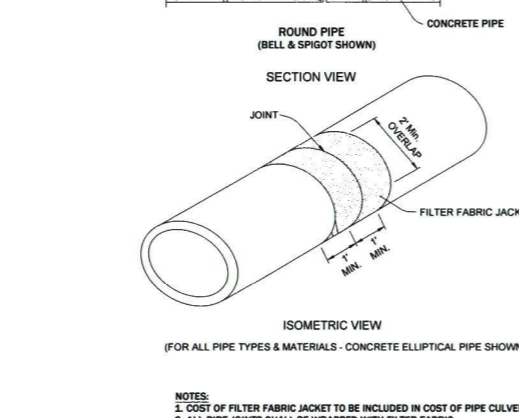
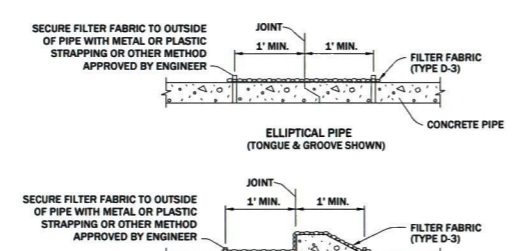
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REVIEWED:	LGB
PROJECT NUMBER:	24002



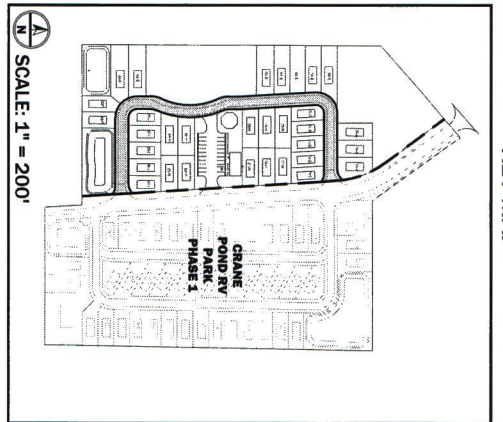
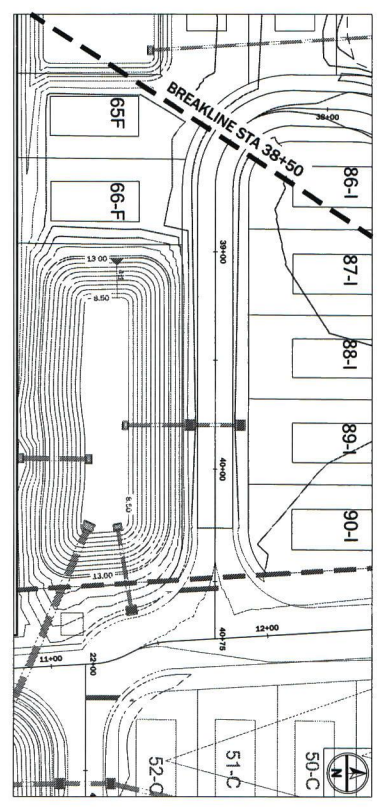
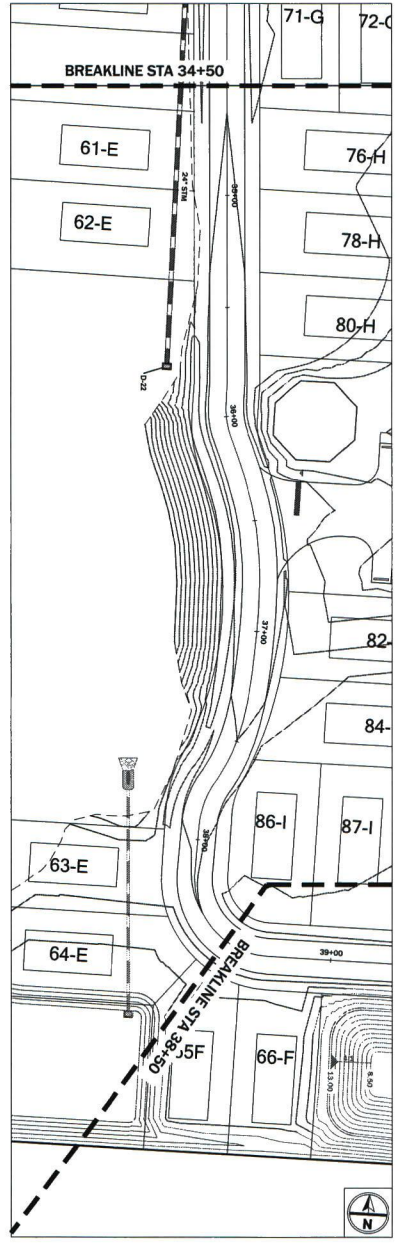
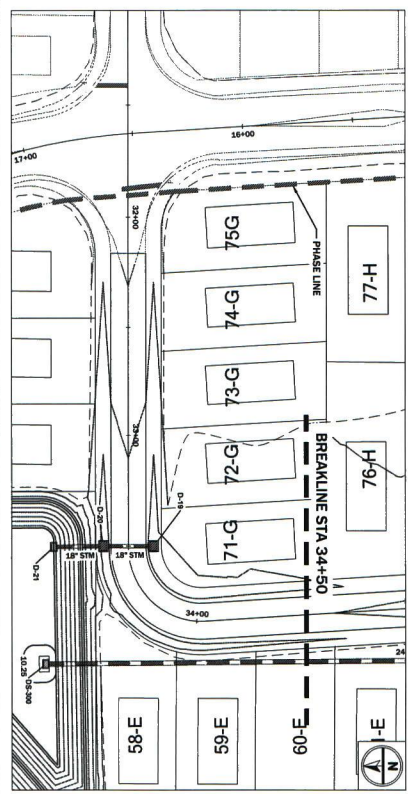
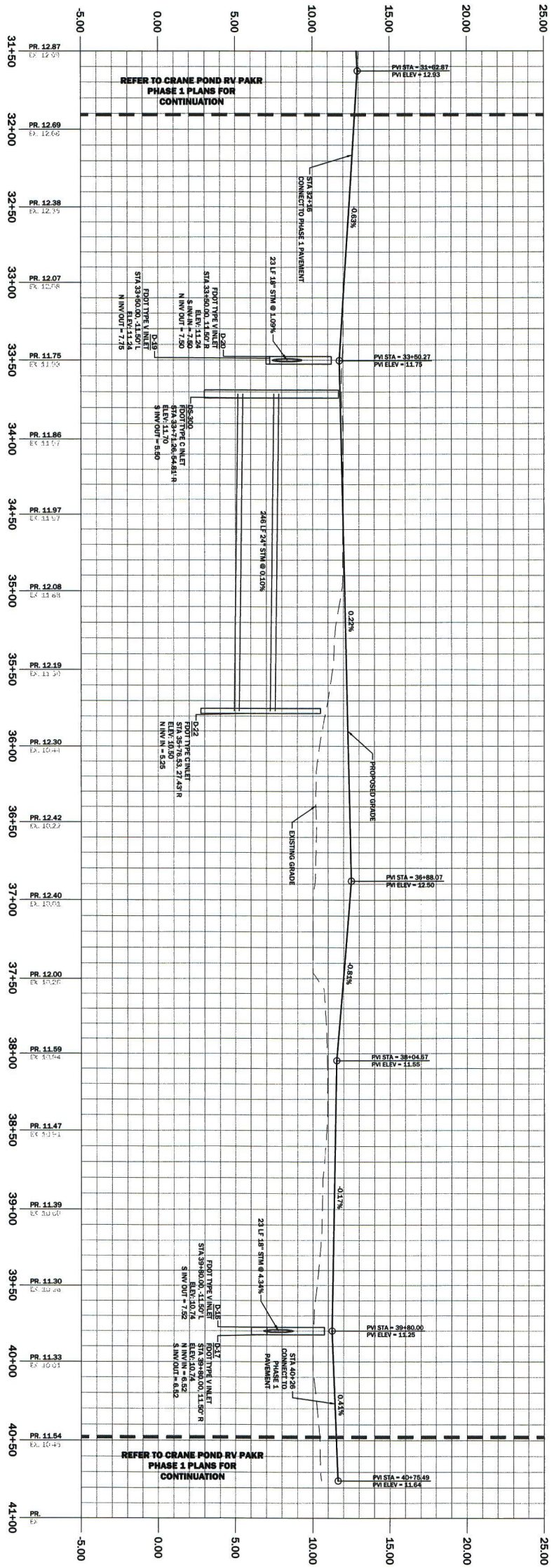
- NOTES:**
- TRENCH WALLS PER OSHA SAFETY REQUIREMENTS. SHORE OR BRACE TRENCH WALLS WHERE SAFE SLOPES WOULD EXCEED BEYOND EASEMENT OR RIGHT OF WAY LIMITS, OR CONFLICT WITH EXISTING IMPROVEMENTS.
 - DEPTH VARIES. REMOVE UNSUITABLE MATERIAL AS NECESSARY TO REACH SUITABLE FOUNDATION.



- NOTES:**
- TRENCH WALLS PER OSHA SAFETY REQUIREMENTS. SHORE OR BRACE TRENCH WALLS WHERE SAFE SLOPES WOULD EXCEED BEYOND EASEMENT OR RIGHT OF WAY LIMITS, OR CONFLICT WITH EXISTING IMPROVEMENTS.



- NOTES:**
- MOUNT BRACKETS TO SKIMMERS W/ 1/4" STAINLESS STEEL BOLTS
 - MOUNT BRACKETS TO STRUCTURES W/ 3/8" X 3 1/2" STAINLESS STEEL WEDGE ANCHORS.
 - SKIMMER TO BE MOUNTED TO INLET IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS USING Z-BRACKETS.
 - THE CONTROL STRUCTURES ARE TO BE LOCATED IN THE POND PER THE PLAN.
 - ALL BOX STRUCTURES SHALL INCLUDE GRATES AND CHAINS.



SCALE:
1" = 40' HORIZONTAL
1" = 4' VERTICAL

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PLAN & PROFILE

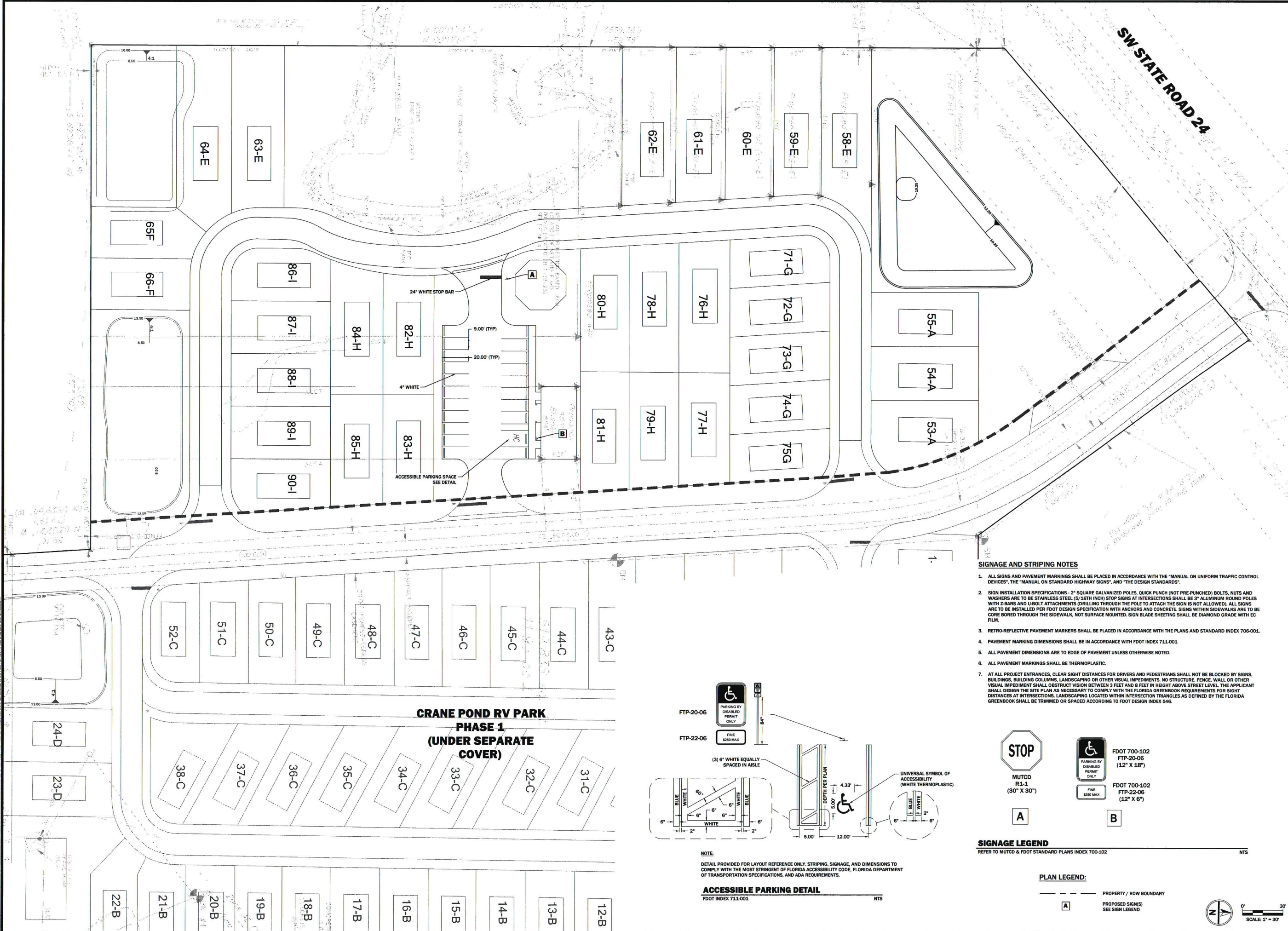
CRANE POND RV PARK - PHASE 2

PREPARED FOR:
SHANKLAND & ASSOCIATES, LLC

PREPARED BY:
BITTER CIVIL
ENGINEERING - PLANNING
460 PINEY CROFT LANE MAITLAND, FL 32751
407-436-7276 ■ WWW.BITTERCIVIL.COM

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- SIGNAGE AND STRIPING NOTES**
- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "MANUAL ON STANDARD HIGHWAY SIGNS", AND "THE DESIGN STANDARDS".
 - SIGN INSTALLATION SPECIFICATIONS - 2" SQUARE GALVANIZED POLES, QUICK PUNCH (NOT PRE-PUNCHED) BOLTS, NUTS AND WASHERS ARE TO BE STAINLESS STEEL (5/16TH INCH) STOP SIGNS AT INTERSECTIONS SHALL BE 3" ALUMINUM ROUND POLES WITH Z-BARS AND U-BOLT ATTACHMENTS (DRILLING THROUGH THE POLE TO ATTACH THE SIGN IS NOT ALLOWED). ALL SIGNS ARE TO BE INSTALLED PER FDOT DESIGN SPECIFICATION WITH ANCHORS AND CONCRETE. SIGNS WITH SIDEWALKS ARE TO BE CORE BORED THROUGH THE SIDEWALK, NOT SURFACE MOUNTED. SIGN BLADE SHEETING SHALL BE DIAMOND GRADE WITH EC FILM.
 - RETRO-REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH THE PLANS AND STANDARD INDEX 706-001.
 - PAVEMENT MARKING DIMENSIONS SHALL BE IN ACCORDANCE WITH FDOT INDEX 711-001.
 - ALL PAVEMENT DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
 - ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
 - AT ALL PROJECT ENTRANCES, CLEAR SIGHT DISTANCES FOR DRIVERS AND PEDESTRIANS SHALL NOT BE BLOCKED BY SIGNS, BUILDINGS, BUILDING COLUMNS, LANDSCAPING OR OTHER VISUAL IMPEDIMENTS. NO STRUCTURE, FENCE, WALL OR OTHER VISUAL IMPEDIMENT SHALL OBSTRUCT VISION BETWEEN 3 FEET AND 6 FEET IN HEIGHT ABOVE STREET LEVEL. THE APPLICANT SHALL DESIGN THE SITE PLAN AS NECESSARY TO COMPLY WITH THE FLORIDA GREENBOOK REQUIREMENTS FOR SIGHT DISTANCES AT INTERSECTIONS. LANDSCAPING LOCATED WITHIN INTERSECTION TRIANGLES AS DEFINED BY THE FLORIDA GREENBOOK SHALL BE TRIMMED OR SPACED ACCORDING TO FDOT DESIGN INDEX 546.

