

CIVIL AND LANDSCAPE PERMIT PLANS

FOR

GUSTAFSON PARK

COUNTY ROAD 15A, GREEN COVE SPRINGS 32043
CLAY COUNTY, FL

PREPARED FOR:

CITY OF GREEN COVE SPRINGS
321 WALNUT STREET
GREEN COVE SPRINGS, FL
32043

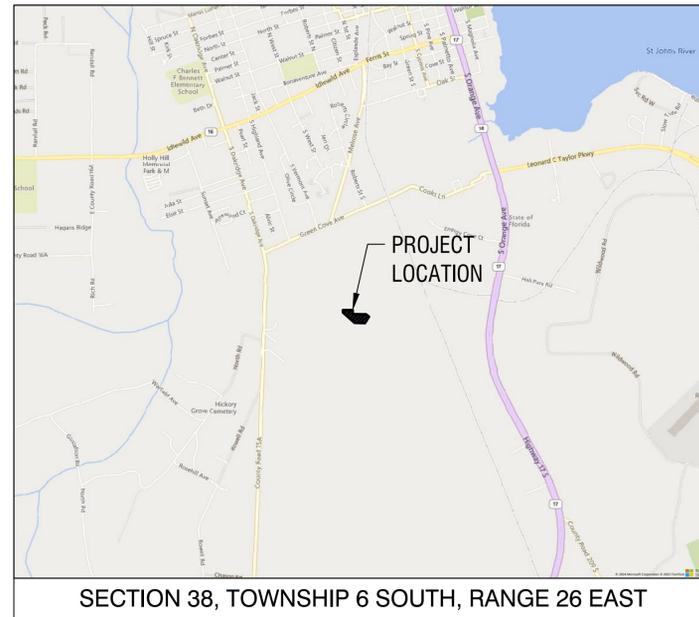
DEVELOPER:

DR. HORTON, INC.
4220 RACE TRACK ROAD
ST. JOHNS COUNTY, FL 32259

ENGINEER AND LANDSCAPE ARCHITECT:



9995 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380FL LC 26000645



VICINITY MAP
1" = 2000'

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
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PROJECT NAME

GUSTAFSON PARK

PREPARED FOR

CITY OF GREEN COVE SPRINGS



9995 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
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REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

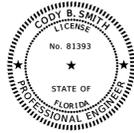
PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: NTD
CHECKED BY: CBS
SCALE: N/A

COVER SHEET

C-000

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY CODY B. SMITH ON THE DATE ADJACENT TO THE SEAL.
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CODY B SMITH

Digitally signed by CODY B SMITH
 Date: 2024.02.14 13:20:59 -05'00'

HALFF ASSOCIATES, INC.
 9995 GATE PARKWAY N., SUITE 200
 JACKSONVILLE, FL 32246
 CERTIFICATE OF AUTHORIZATION: 33380
 CODY B. SMITH, FL P.E. NO. 81393

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C-002	GENERAL NOTES
C-003	GENERAL NOTES
C-004	EXISTING CONDITIONS & DEMOLITION PLAN
C-005	EROSION & SEDIMENTATION CONTROL PLAN
C-100	OVERALL SITE PLAN
C-101	SITE PLAN
C-102	SITE STANDARD DETAILS
C-103	SITE STANDARD DETAILS
C-200	GRADING & DRAINAGE PLAN
C-201	GRADING & DRAINAGE PLAN
C-202	STORM DRAINAGE STANDARD DETAILS
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C-301	WATER AND SEWER GENERAL NOTES
C-302	WATER AND SEWER STANDARD DETAILS
C-400	E&SC GENERAL NOTES AND DETAILS
C-401	SWPPP GENERAL CONDITIONS
C-402	SWPPP FORMS

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:



Jordan P Limburg

Digitally signed by Jordan P Limburg
 Date: 2024.02.14 13:51:15 -05'00'

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HALFF ASSOCIATES, INC.
 9995 GATE PARKWAY N., SUITE 200
 JACKSONVILLE, FL 32246
 JORDAN P. LIMBURG, RLA FL LA-6667021

THE ABOVE NAMED REGISTERED LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G10-11.011, F.A.C.

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
TM-100	TREE MITIGATION PLAN
TM-101	TREE MITIGATION CALCULATIONS
LS-200	LANDSCAPE PLAN
LS-201	LANDSCAPE CODE REQUIREMENTS
LS-202	LANDSCAPE NOTES AND SPECIFICATIONS

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS



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 FL CA 33380 FL LC 28000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL
 CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
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 DRAWN BY: NTD
 CHECKED BY: CBS
 SCALE: N/A

SIGNATURE SHEET

C-001

GENERAL CONSTRUCTION NOTES

- A. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES, THE ENGINEER, AND THE ARCHITECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
- B. CONTRACTOR IS RESPONSIBLE FOR PREPARING AND PERMITTING ANY REQUIRED DEWATERING PLAN.
- C. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO IN THESE PLANS SHALL BE OF THE LATEST REVISION.
- D. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK. ALL CONSTRUCTION, MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE STRICTER OF CITY OF GREEN COVE SPRINGS AND FOOT SPECIFICATIONS (LATEST EDITION).
- E. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRE-CAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL. PRIOR TO SUBMITTING SHOP DRAWINGS FOR APPROVAL, THE CONTRACTOR SHALL CONFIRM THAT THE MOST CURRENT PLANS WERE USED TO PREPARE THE SHOP DRAWINGS AND REVIEW THE SHOP DRAWINGS TO CONFIRM DIMENSIONS, ELEVATIONS, CONNECTIONS, AND MATERIALS. FAILURE TO OBTAIN APPROVAL BEFORE FABRICATION AND/OR INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.
- F. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES (INCLUDE LIGHTING, POWER, TELEPHONE, CABLE, GAS, IRRIGATION, ETC.).
- G. THE WATER, SANITARY SEWER, AND STORM DRAINAGE FACILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF APPLICABLE AGENCIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY ADDITIONALLY REQUIRED PERMITS IN ORDER TO PERFORM THE PROPOSED WORK.
- H. IT WILL BE NECESSARY TO EXAMINE, COORDINATE AND ADJUST ACCORDINGLY THE PROPOSED LOCATIONS OF THE VARIOUS COMPONENTS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT COORDINATION DRAWINGS (SHOP DRAWINGS) SHOWING PIPE SIZES, STRUCTURES, AND ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING AND COORDINATION OF THE UNDERGROUND WORK ASSOCIATED WITH THIS PROJECT.
- I. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY ENVIRONMENTAL PROTECTION AGENCY (EPA) PERMITTING WHERE REQUIRED. THIS INCLUDES FILING A NPDES NOTICE OF INTENT OR NOTICE OF TERMINATION, IF REQUIRED.
- J. ALL CONSTRUCTION SHALL CONFORM TO CURRENT ZONING REQUIREMENTS. CONTRACTOR MAY REQUEST A COPY OF THESE CONDITIONS FROM THE OWNER OR ENGINEER OF RECORD.
- K. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, EITHER ABOVE OR BELOW GROUND, WHICH MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR.
- L. ALL UNDERGROUND STORMWATER INFRASTRUCTURE AND UTILITIES (INCLUDING CONDUIT & SLEEVES) MUST BE IN PLACE, TESTED, AND AS-BUILT PRIOR TO BASE AND PAVEMENT CONSTRUCTION. CONTRACTOR SHALL PROVIDE SAID AS-BUILTS TO THE ENGINEER OF RECORD FOR PRELIMINARY REVIEW PRIOR TO PAVING. FAILURE TO FOLLOW THIS PROCEDURE MAY RESULT IN REMOVAL AND REPLACEMENT OF BASE AND/OR PAVEMENT AT THE CONTRACTOR'S EXPENSE.
- M. CONTRACTOR SHALL COORDINATE PRE-CONSTRUCTION CONFERENCE WITH AGENCIES HAVING JURISDICTION (AHJ) OVER WORK TO BE PERFORMED.
- N. CONSTRUCTION SHALL ADHERE TO THE APPLICABLE GOVERNMENT AGENCY CRITERIA, PERMIT CONDITIONS, APPROVED PLANS, AND SUPPLEMENTAL SPECIFICATIONS PROVIDED BY OWNER. IN THE CASE OF CONFLICTS THE STRICTER REQUIREMENT WILL PREVAIL.
- O. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER AND ENGINEER OF RECORD CONCERNING LIMITS OF CONSTRUCTION, TRANSITIONS, ETC. WHICH MAY NOT BE SHOWN ON THESE PLANS.
- P. ANY PUBLIC LAND CORNER OR BENCH MARK WITHIN THE LIMITS OF CONSTRUCTION TO BE PROTECTED.
- Q. EXISTING VERTICAL AND HORIZONTAL GEOMETRY, SUPERELEVATION RATES, TAPERS, AND TRANSITION RATES ASSOCIATED WITH EXISTING ROADWAYS SHALL BE MAINTAINED UNLESS OTHERWISE SHOWN ON THE PLANS.
- R. ANY ON-SITE WELLS NOT PROPOSED TO REMAIN ARE TO BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH 40D-3.517.
- S. ALL PRACTICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL TO INLETS, SURFACE DRAINS, WETLANDS AND LAKE AREAS. CONTRACTOR IS RESPONSIBLE FOR PREPARING, IMPLEMENTING, AND MAINTAINING A STORMWATER POLLUTION PREVENTION PLAN MEETING ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
- T. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
- U. SEE FDOT DESIGN STANDARDS INDEX 001 FOR STANDARD ABBREVIATIONS DENOTED IN THIS PLAN SET.
- V. CONTRACTOR SHALL CALL SUNSHINE 811 48 HOURS BEFORE BEGINNING EXCAVATION.
- W. CONTRACTOR SHALL NOT STORE CONSTRUCTION MATERIALS, VEHICLES, OR HEAVY EQUIPMENT NEAR WETLAND AREAS OR TREES PROPOSED TO REMAIN.
- X. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION CERTIFIED BY A REGISTERED LAND SURVEYOR. UPON COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH A COMPACT DISK CONTAINING THE ELECTRONIC COPY OF THE AUTOCAD DRAWING FILE OF EACH SHEET AND FIVE SETS OF SIGNED AND SEALED PRINTS. THE ELECTRONIC FILES SHALL BE GEO-REFERENCED (STATE PLANE COORDINATE SYSTEM) AND INCLUDE TIES TO AN ESTABLISHED LOCAL BENCHMARK. THE "AS-BUILT" SURVEY INFORMATION SHALL BE SUPPLEMENTED BY THE CONTRACTOR AS NECESSARY TO CLEARLY AND ACCURATELY REPRESENT ALL CONSTRUCTION ITEMS INCLUDING, BUT NOT LIMITED TO:
 - X.1. **WATER/WASTEWATER/RECLAIMED WATER AND OTHER PRESSURE PIPES:**
 - OFFSETS FROM EDGE OF PAVEMENT AND R.O.W TO PIPE LINES SHALL BE SHOWN AT NOT GREATER THAN 100 FEET INTERVALS.
 - LOCATION OF CASING PIPE, CONCRETE ENCASMENT, AND SHEETING BY STATION AND ELEVATION. INCLUDE SIZE, LENGTH, MATERIAL TYPE AND WALL THICKNESS OF CASING.
 - ELEVATIONS AT ALL CHANGES IN VERTICAL OR HORIZONTAL DIRECTION. ELEVATIONS AT ALL VALVES, BENDS AND CHANGES TO FINISHED GRADE OVER PIPE.
 - ELEVATION FOR TOP OF PIPE AND GRADE SHALL OCCUR AT A MINIMUM OF 200 FEET FOR STRAIGHT RUNS OF PIPE AND AT SUFFICIENT INTERVALS TO ESTABLISH CURVATURE FOR ANY PIPE DEFLECTIONS IN A CURVED ALIGNMENT.
 - ANY CHANGES IN ALIGNMENT OR ELEVATION OF OTHER UTILITIES DUE TO CONSTRUCTION.
 - LOCATION OF ANY FOUND UTILITIES.
 - INSTALLED PIPE DIAMETER, MATERIAL TYPE, AND AWWA/ASTM/ANSI CLASSIFICATION.
 - MATERIAL TYPE AND SERIAL NUMBERS OF ALL VALVES, METERS, ASSEMBLIES.
 - IF ABANDONMENT OF EXISTING FACILITIES IS INCLUDED IN PROJECT, PROVIDE SIZE, TYPE, DEPTH, LOCATION, AND LIMITS OF ANY ABANDONED PIPE. ALSO INCLUDE THE METHOD OF ABANDONMENT (I.E., MORTAR FILLED, ETC.).
 - ANY VERTICAL IMPROVEMENTS WITHIN EXISTING RIGHTS-OF-WAY THAT ARE IN IMMEDIATE PROXIMITY OF THE UTILITY SYSTEM (I.E. MONUMENT SIGNS, WALLS AND BRIDGES).
 - CROSS-SECTIONAL DETAILS SHALL BE PROVIDED WHERE UTILITIES CROSS.
 - HORIZONTAL AND VERTICAL LOCATION AND TYPE OF ALL FITTINGS, BENDS, REDUCERS, SLEEVES, PLUGS, CAPS, TEES, CROSSES, TAPS, RESTRAINED JOINTS, VALVES, BLOW-OFFS, HYDRANTS, HIGH AND LOW POINTS, ETC.
 - STATION ALL CONNECTIONS WHEN THEY ARE NOT ON PROPERTY LINES.
 - X.1. **GRAVITY SEWER LINES:**
 - LOCATION AND ELEVATIONS OF ALL SANITARY SEWER STRUCTURES, TO INCLUDE TOP ELEVATIONS, BOTTOM ELEVATIONS, AND INVERTS, INCLUDING FIELD MEASURED PIPE LENGTHS, PIPE TYPES, SIZES AND PIPE SIZES.
 - SHOW LOCATION OF LATERAL SERVICE CONNECTIONS BY STATION AND INCLUDE DEPTH OF COVER AT LOT LINES (CLEANOUT)
 - SHOW SIZE, LENGTH INVERT ELEVATION AND GRADE OF STUB-OUTS FOR FUTURE CONNECTIONS.
 - X.1. **STORMWATER SYSTEM:**
 - LOCATION AND ELEVATIONS OF ALL STORM SEWER OUTFALL STRUCTURES (AKA CONTROL STRUCTURES), TO INCLUDE ELEVATIONS, DIMENSIONS, SKIMMERS, INVERTS, WEIRS DIMENSIONS AND INVERTS, PIPE SIZES, PIPE TYPES, OPENING DIMENSIONS AND SLABS.
 - LOCATION AND ELEVATIONS OF ALL STORM STRUCTURES, PIPES, CONDUITS, SLEEVES, ETC. INCLUDING CALCULATED SLOPE SIZE AND MATERIAL TYPE OF ALL PIPES.
 - HORIZONTAL AND VERTICAL CONTROL OF ALL TOP OF BANKS, TOE OF SLOPES LITTORAL ZONES, DITCHES, PAVEMENT, CURB AND ALL GRADE BREAKS.
 - X.1. **PUMPLIFT STATIONS:**
 - HORIZONTAL AND VERTICAL CONTROL ELEVATIONS OF ALL ELEMENTS OF PUMPLIFT STATIONS INCLUDING TOP AND BOTTOM ELEVATIONS, PIPE INVERTS, PIPE SIZES AND PIPE TYPES.
 - LOCATION AND ELEVATION OF ANY PAVEMENT MATERIALS ASSOCIATED WITH THE STATION.
 - LOCATION AND TYPE OF ANY VERTICAL ELEMENTS ASSOCIATED WITH THE STATION, TO INCLUDE, PANELS, LIGHT POLES, FENCING, BACK FLOW ASSEMBLIES, METERS, ALL VALVES AND ASSOCIATED APPURTENANCES.
 - ELEVATIONS AT WHICH THE FLOAT SWITCHES ENGAGE.
 - X.1. **BUILDING AND OTHER VERTICAL STRUCTURES:**
 - LOCATION OF ALL CORNERS AND FINISHED FLOOR ELEVATIONS
 - OVERHANG LOCATIONS
- W. NO ENGINEER'S CERTIFICATIONS CAN BE SUBMITTED TO OBTAIN A CERTIFICATE OF OCCUPANCY UNTIL THE "AS-BUILT" INFORMATION IS RECEIVED, REVIEWED, AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ALLOW THE ENGINEER A MINIMUM OF FOUR WEEKS TO COMPLETE THE REVIEW OF THE "AS-BUILT" INFORMATION UPON RECEIPT, PRIOR TO SUBMITTAL TO APPLICABLE AGENCIES.

ROADWAY LIGHTING NOTES

- A. ROADWAY LIGHTING SHALL CONFORM TO ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA), FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), NATIONAL ELECTRICAL CODE (NEC) AND COUNTY STANDARDS FOR ALL AREAS. THIS INCLUDES CROSSWALKS, INTERSECTIONS AND THOROUGHFARES.
- B. ROADWAY LIGHTING FIXTURES, POLES, MOUNTING HEIGHT AND SPACING (LOCATION) TO BE DETERMINED UPON SELECTION OF FIXTURE.
- C. DRAWINGS AND PRODUCT SAMPLE SHALL BE SUBMITTED TO OWNER AND OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLATION.

ON-SITE FIRE PROTECTION NOTES

- A. ALL NEW PRIVATE SERVICE MAINS SHALL BE TESTED HYDROSTATICALLY AT NOT LESS THAN 200 PSI (13.8 BARS) PRESSURE FOR TWO HOURS, OR AT 50 PSI (3.4 BARS) IN EXCESS OF THE MAXIMUM STATIC PRESSURE (WHICHEVER IS GREATER), (NFPA 24)
- B. FIRE PUMP ROOM (IF APPLICABLE) SHALL CONTAIN APPROVED BACKFLOW PREVENTION DEVICE TO PREVENT RE-CIRCULATION WHEN FDC IS PRESSURIZED USING ON-SITE HYDRANT.

TESTING SCHEDULE

ITEM	TEST	TEST FREQUENCY
EMBANKMENT	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T99-57(METHOD C) NO TOLERANCE	ONE PER 500' HORIZONTALLY, IN ONE (1) FOOT LIFTS
	GRADATION 1-T027	1/500' SECTION PER LIFT
	PROCTOR 1-T180	PER MATERIAL TYPE
	PROCTOR 5-525	PER MATERIAL TYPE
UTILITY TRENCH BACKFILL-OVER PIPELINES AND AROUND STRUCTURES FROM R.O.W. LINE TO R.O.W. LINE	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T99-57(METHOD C) NO TOLERANCE	REFER TO NOTE A & NOTE B
UTILITY TRENCH BACKFILL-OVER PIPELINES AND AROUND STRUCTURES OUTSIDE R.O.W. LINE	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T99-57(METHOD C) NO TOLERANCE	REFER TO NOTE A
STABILIZED SUBGRADE	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	MINIMUM 40 LBR	PER MATERIAL TYPE REFER TO NOTE D
	MINIMUM 20 LBR (FOR SOIL CEMENT ONLY)	SAME AS FOR 40 LBR. REFER TO NOTE D
BASE (OTHER THAN SOIL CEMENT OR CRUSHED CONCRETE)	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER SOIL TYPE
	MINIMUM 100 LBR	PER SOURCE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70) NO TOLERANCE	REFER TO NOTE C
	GRADATION, ATTERBERG LIMITS	PER SOURCE
SOIL CEMENT BASE	MIX DESIGN	PER MATERIAL TYPE
	OPTIMUM MOISTURE/MAXIMUM DENSITY	PER MATERIAL TYPE DAILY
	PROCTOR 1-T180	PER MATERIAL TYPE
	COMPRESSIVE STRENGTH SPECIMENS	ONE SET OF THREE (3) PER MATERIAL TYPE DAILY
	TEST CORES-THICKNESS	REFER TO NOTE C
CONCRETE	SLUMP TEST	ONE PER SET OF CYLINDERS
	COMPRESSIVE STRENGTH CYLINDERS	ONE SET OF THREE(3) CYLINDERS FOR 100 CUBIC YARDS OF FRACTION THEREOF
	AIR CONTENT	ONE PER SET OF CYLINDERS
	MINIMUM LBR 130	3/STREET TO OBTAIN AN AVERAGE OF 150
CRUSHED CONCRETE BASE	LIQUID LIMIT (AS DETERMINED BY AASHTO T80) (LESS THAN 25)	PER MATERIAL TYPE
	PLASTICITY INDEX (AS DETERMINED BY AASHTO T90) (LESS THAN 4)	PER MATERIAL TYPE
SUPERPAVE ASPHALT	ABRASION	PER LOS ANGELES ABRASION (FM-1090) (50 MIN) PER MATERIAL TYPE
	DENSITY 100% OF MAXIMUM DENSITY (AS DETERMINED BY AASHTO T-180)	PER MATERIAL TYPE
	AGGREGATE ANALYSIS	PER FDOT
	DESIGN MIX	ONE PER FDOT APPROVED TYPE
	BITUMEN CONTENT	PER FDOT
CONCRETE	THICKNESS	REFER TO NOTE C
	MAXIMUM SPECIFIC GRAVITY (Gmm)	PER FDOT
	90% OF LAB DENSITY FOR LOCAL ON-SITE ROADWAYS (REMOVE AND REPLACE IF NOT MET)	REFER TO NOTE C
	92% OF LAB DENSITY FOR COLLECTORS AND ARTERIALS (REMOVE AND REPLACE IF NOT MET)	REFER TO NOTE C

NOTES

- A) TESTS SHALL BE LOCATED NO MORE THAN 500FT APART. TESTS SHALL BE PERFORMED ON EACH LIFT. EXCEPT THAT TESTS SHALL NOT BE FURTHER APART THAN ONE FOOT VERTICALLY. FIELD DENSITIES SHALL BE TAKEN OVER ALL ROAD CROSSINGS. FIELD DENSITIES FOR SANITARY LINES SHALL BE STAGGERED TO INCLUDE RESULTS OVER SEVERE LATERALS. THERE SHALL BE A MINIMUM OF ONE TEST SERIES FOR EACH ONE FOOT OF LIFT OVER PIPELINE BETWEEN MANHOLES. TESTS AROUND STRUCTURES SHALL BE SPIRALLED IN ONE FOOT LIFTS. FOR ALL TYPE PIPE, FILL TO BE COMPACTED BENEATH THE HAUNCHES USING SUITABLE TAMPERS. FOR PIPE LESS THAN 24 INCHES IN DIAMETER, BACKFILL IN APPROPRIATE LIFTS AND TEST FROM THE TOP OF THE PIPE AND EVERY ONE FOOT VERTICALLY THEREAFTER. FOR PIPE 24 INCHES TO 72 INCHES IN DIAMETER, BACKFILL IN APPROPRIATE LIFTS AND TEST FROM THE SPRINGLINE AND EVERY ONE FOOT VERTICALLY THEREAFTER. FOR PIPE LARGER THAN 72 INCHES, TESTS SHALL BEGIN ONE FOOT ABOVE THE BASE OF THE TRENCH.
- B) FOR FLEXIBLE PIPE (CORRUGATED STEEL OR ALUMINUM), 95% OF MAXIMUM DENSITY (AASHTO-T99) PER FOOT SPECIFICATIONS SUBARTICLE 125-9.2.1
- C) TESTS SHALL BE LOCATED NO MORE THAN 500 FEET APART. THERE SHALL BE NO LESS THAN ONE TEST PER STREET. NO CORE SHALL BE LESS THAN SPECIFIED MINIMUM THICKNESS.
- D) TESTING FOR THE SUBGRADE BEARING CAPACITY AND COMPACTION SHALL BE LOCATED NO MORE 500 FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND ON THE CENTERLINE OF THE ROADWAY. THERE SHALL BE NO LESS THAN THREE TESTS PER STREET TO OBTAIN AN AVERAGE LBR 40 VALLE. THE AUTHORITY HAVING JURISDICTION (AHJ) MAY RESERVE THE RIGHT TO SAMPLE AND TEST ANY MATERIAL UTILIZED IN THE CONSTRUCTION OF THE SUBGRADE. TESTING SHALL BE IN ACCORDANCE WITH THE TESTING SCHEDULE OF THE AHJ AND APPLICABLE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION (EXCEPT FOR THE REQUIREMENTS OF COC). IN THE EVENT OF A CONFLICT BETWEEN SPECIFICATIONS, THE MOST STRINGENT SHALL PREVAIL. INSPECTION OF THE SUBGRADE SHALL BE CONDUCTED BY THE ENGINEER OF RECORD, THE AHJ INSPECTOR, AND SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO BASE CONSTRUCTION.

ADDITIONAL NOTE: THE AHJ RESERVES THE RIGHT TO SAMPLE AND TEST ANY MATERIAL DURING CONSTRUCTION

DEMOLITION NOTES

- A. CONTRACTOR TO REMOVE AND DISPOSE OF ALL EXISTING OCCUPATION AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
- B. CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO DEMOLITION.
- C. THE CONTRACTOR SHALL INSTALL EROSION CONTROL PRIOR TO DEMOLITION AND MAINTAIN DURING CONSTRUCTION, REFER TO GENERAL CONSTRUCTION NOTES.
- D. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIAL GENERATED FROM THE SITE CLEARING / DEMOLITION PROCESS, INCLUDING BUT NOT LIMITED TO: TREES, STUMPS, TRASH, VEGETATION, ASPHALT AND CONCRETE PAVEMENT, REINFORCED CONCRETE PAVEMENT, SITE STRUCTURES AND WALLS, PVC AND DIP PIPE. THIS MATERIAL SHALL BE DISPOSED OF OFF-SITE AT A PERMITTED SITE SELECTED BY THE CONTRACTOR. BURYING OF THESE MATERIALS ON-SITE SHALL NOT BE PERMITTED. BURNING OF VEGETATION IS ACCEPTABLE PROVIDED THE CONTRACTOR OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS.
- E. INFORMATION TAKEN FROM SURVEY(S) PREPARED BY PROJECT SURVEYOR (SEE SURVEY NOTES).
- F. UTILITIES TO BE PLUGGED SHALL BE FILLED WITH A MINIMUM 1.0 CUBIC FT. OF NON SHRINK GROUT OR AS OTHERWISE APPROVED BY ENGINEER. PRESSURE MAINS SHOULD BE CAPPED OR PLUGGED AND RESTRAINED WITH A REVERSE DEADMAN. RCP SHOULD RECEIVE A BRICK AND MORTAR PLUG.
- G. TREES SHOWN TO REMAIN SHALL MAINTAIN PROTECTIVE BARRIERS AT ALL TIMES. THESE BARRIERS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF GREEN COVE SPRINGS STANDARDS.
- H. ALL TREE ROOTS EXISTING WITHIN APPROVED IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE, SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA WHERE INDICATED. ROOT PRUNING TO BE CONDUCTED BY LICENSED ARBORIST IN ACCORDANCE WITH ANSI A300 STANDARDS.
- I. THE CONTRACTOR SHALL COORDINATE THE REMOVAL/RELOCATION OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.
- J. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.
- K. THE CONTRACTOR SHALL BARRICADE THE SITE AND CONTROL TRAFFIC PER CURRENT FDOT TRAFFIC CONTROL STANDARDS.
- L. ALL ABOVE GROUND IMPROVEMENTS (IE: PAVEMENT, CURBING, BUILDINGS, SIGNAGE, CONCRETE WALKS, POLES, INLETS, ETC.) AND BELOW GROUND IMPROVEMENTS (IE: SANITARY, STORM, WATER, CABLE, ELECTRIC, PHONE, ETC.) SHALL REMAIN UNLESS OTHERWISE NOTED.
- M. UNSUITABLE MATERIAL IS TO BE REMOVED FROM LANDSCAPE AREAS. (SEE LANDSCAPE PLANS FOR PLANTING SOIL REQUIREMENTS).
- N. THE OWNER RESERVES THE RIGHT TO RETAIN ANY ITEM FROM THE DEMOLITION OF THE SITE DEEMED VALUABLE.
- O. ALL EXISTING CONCRETE/ASPHALT OCCUPATION DESIGNATED TO BE REMOVED IS TO BE SAWCUT ALONG THE LIMITS OF DEMOLITION.

SIGNING AND PAVEMENT MARKING NOTES

- A. ALL SIGNS AND PAVEMENT MARKING SHALL CONFORM TO THE U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' 2009 EDITION INCLUDING REVISION DATED MAY 2012 AND THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM (DATED 2017-2018).
- B. ALL FLORIDA ROUTE MARKERS MUST CONFORM TO FDOT DESIGN STANDARDS INDEX NO. 700-102.
- C. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LENGTH OF COLUMN (POST) SUPPORTS IN THE FIELD PRIOR TO FABRICATION. COLUMN HEIGHTS AND DIMENSION SHALL CONFORM TO FDOT STANDARDS.
- D. REFER TO FDOT DESIGN STANDARDS INDEX NO. 17352 FOR RETRO-REFLECTIVE PAVEMENT MARKER PLACEMENT DETAILS.
- E. PAINT ALL MEDIAN NOSES AND RAISED ISLAND NOSES REFLECTIVE WHITE OR REFLECTIVE YELLOW. COLOR IS AS INDICATED IN THE PLANS. ABSENCE OF A CALLOUT RELATED TO THIS DETAIL DOES NOT ELIMINATE THIS REQUIREMENT.
- F. CAUTION MUST BE EXERCISED WHILE RELOCATING EXISTING SIGNS SO AS TO PREVENT DAMAGE TO THE SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER OR AUTHORITY HAVING JURISDICTION THEN THEY SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. IF SIGNS ARE IN POOR CONDITION PRIOR TO REMOVAL, THE ENGINEER OF RECORD AND OWNER SHALL BE NOTIFIED IN WRITING AND ADVISED OF ANY POTENTIAL CHANGE ORDER.
- G. ANY EXISTING SIGN TO REMAIN THAT ARE DISTURBED DURING CONSTRUCTION OR RELOCATED SHALL BE RESET TO CURRENT FDOT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION. IF THE EXISTING SIGN CANNOT BE RELOCATED DURING THE CONSTRUCTION IMPROVEMENTS, THE CONTRACTOR SHOULD TAKE CAREFUL PRECAUTION TO STORE AND PROTECT THE EXISTING SIGN UNTIL THE SIGN CAN BE INSTALLED AT ITS FINAL LOCATION. COST OF THIS WORK SHALL BE REFLECTED IN THE BID ITEM OR RELATED WORK.
- H. THE SIGN LOCATIONS SHOWN ARE APPROXIMATE AND SHOULD BE INSTALLED IN ACCORDANCE WITH MUTCD PLACEMENT CRITERIA, AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY THE LOCAL GOVERNMENT AGENCY OR BY THE ENGINEER OF RECORD.
- I. ALL ROUTE MARKER AUXILIARIES SHALL MATCH THE COLOR COMBINATION OF THE RESPECTIVE MARKER WHICH THEY SUPPLEMENT.
- J. CONTRACTOR SHALL USE W-SHAPE STEEL POSTS FOR MULTI-POST SIGNS AND ALUMINUM ROUND TUBES FOR SINGLE COLUMN / POSTS (UNLESS OTHERWISE NOTED IN THE PLANS OR REQUIRED BY THE LOCAL JURISDICTION).
- K. ANY EXISTING SIGNS LOCATED WITHIN PUBLIC RIGHT-OF-WAY (WITHIN PROJECT LIMITS SHALL) SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS.
- L. ALL SINGLE COLUMN SIGNS WITHIN THE LIMITS OF CLEARING AND GRUBBING SHALL BE REMOVED UNLESS OTHERWISE NOTED IN THE PLANS.
- B. PAVEMENT MARKINGS SHALL BE PLACED AS SHOWN IN THE PLANS AND THE APPROPRIATE FDOT DESIGN STANDARDS INDEX. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD IN WRITING.
- C. THE CONTRACTOR SHALL APPLY THERMOPLASTIC AS THE FINAL TRAFFIC STRIPES AND MARKINGS A MINIMUM OF 14 DAYS AFTER THE FIRST APPLICATION OF PAINT BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. THERMOPLASTIC SHALL BE LEAD-FREE, NON-SOLVENT BASED, COMPLIANT WITH SECTION 711 OF THE STANDARD SPECIFICATIONS, AND LISTED ON QPL.
- D. ON CONCRETE SURFACE, INCLUDING BRIDGE DECKS, ALL SKIP STRIPE PAVEMENT MARKINGS SHALL BE ALTERNATE WHITE (THERMOPLASTIC) AND BLACK (PAINT) (10' WHITE/10' BLACK/20' SKIP).
- E. IN PARKING LOTS STRIPING AND SIGNAGE SHALL CONFORM TO FDOT STANDARDS. PAINTED OR THERMOPLASTIC STRIPING SHALL BE USED AS DESIGNATED ON THE PLANS. WHEN STRIPING WITH WHITE ON CONCRETE SURFACES THE CONTRACTOR SHALL APPLY BLACK PAINT FIRST ON THE PAVEMENT PRIOR TO PAINTING WHITE STRIPING.
- F. PAINTED PAVEMENT MARKINGS SHALL COMPLY WITH SECTION 710 OF THE STANDARD SPECIFICATIONS AND BE LISTED ON QPL. (TWO COATS APPLIED 14 DAYS APART).
- G. ACCESSIBLE PARKING SPACES SHALL BE MARKED AND SIGNED IN ACCORDANCE WITH FDOT INDEX 711-001 (UNLESS OTHERWISE NOTED).
- H. ALL PAVEMENT MARKING TO BE REMOVED SHALL BE PERFORMED BY HYDROBLASTING (UNLESS PROHIBITED BY THE AHJ).

SAFETY NOTES

- A. DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
- B. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS.
- C. NEITHER THE ENGINEER OF RECORD NOR OWNER ARE RESPONSIBLE FOR PROJECT SAFETY.
- D. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC (MOT) PLAN MUST BE PREPARED BY A PROFESSIONAL WITH FDOT ADVANCED MOT CERTIFICATION. THE PLAN MUST THEN BE SUBMITTED AND APPROVED BY APPLICABLE GOVERNING AGENCIES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WITHIN OR IMMEDIATELY ADJACENT TO THE EXISTING RIGHT-OF-WAY.
- E. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
- F. CONTRACTOR SHALL PROVIDE AND MAINTAIN ITS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH ITS HEALTH & SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB-CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUB-CONTRACTORS AND SUB-CONTRACTORS EMPLOYEES COMPLY WITH ALL APPLICABLE SAFETY CODE REQUIREMENTS.
- G. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS AND FLORIDA TRENCH SAFETY ACT.
- H. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.
- I. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS CONTAINING BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. CALL SUNSHINE STATE ONE CALL AT SUNSHINE 811 BEFORE YOU DIG.
- J. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.

TRAFFIC CONTROL GENERAL NOTES

- A. THE MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) LATEST EDITION' AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS (CURRENT STANDARDS).
- B. THE MINIMUM TEMPORARY LANE WIDTH ALLOWED WILL BE 10 FEET. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AND THE ENGINEER OF RECORD ALONG WITH ALL LOCAL LAW ENFORCEMENT AND EMERGENCY/RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY A MINIMUM OF 24 HOURS IN ADVANCE OF ANY PROPOSED LANE CLOSURES AND/OR DETOURS.
- C. TEMPORARY REFLECTIVE PAVEMENT MARKERS SHALL BE PROVIDED ON ALL TEMPORARY LANE LINES AND MEDIAN EDGE LINES IN ACCORDANCE WITH FDOT INDEXES.
- D. ALL TRAFFIC LANES MUST REMAIN OPEN FOR TRAFFIC DURING AN EVACUATION NOTICE FROM HURRICANES OR OTHER CATASTROPHIC EVENTS AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE ENGINEER OF RECORD OR LOCAL JURISDICTION.
- E. THE CONTRACTOR SHALL MAINTAIN AND KEEP STREET NAME IDENTIFICATION VISIBLE DURING CONSTRUCTION OPERATIONS IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.
- F. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICES TO ALL PROPERTY OWNERS NOT LESS THAN THREE (3) DAYS IF DRIVEWAYS ARE TO BE CLOSE OR REMOVED AS PART OF THE PROJECT IMPROVEMENTS.

SITE PLAN AND COORDINATE GEOMETRY NOTES

- A. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
- B. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.
- C. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.
- D. DIGITAL OR ELECTRONIC REPRESENTATION OF THESE CONSTRUCTION PLANS DOES NOT CONSTITUTE A COORDINATE CONTROL MAP OR MATHEMATICALLY CONTROLLED INFORMATION FOR THE USE OF CONSTRUCTION STAKEOUT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE CONTRACTOR'S SURVEYOR TO ENSURE THAT ANY DIGITAL OR ELECTRONIC REPRESENTATION OF THESE PLANS IS IN COMPLETE CONFORMANCE WITH ALL OF THE NOTATIONS, SPECIFICATIONS, DETAILS AND OTHER DATA APPEARING ON OR AS MAY BE DERIVED FROM THESE CONSTRUCTION PLANS.
- E. ALL DIMENSIONS SHOWN ON PLAN ARE TO FACE OF BUILDING, EDGE OF PAVEMENT, FACE OF CURB OR CENTERLINE OF STRUCTURE, UNLESS NOTED OTHERWISE.

NOTE: CONTRACTOR TO REFER TO FDOT DESIGN STANDARDS FOR ADDITIONAL INDEX INFORMATION NOT SHOWN ON THESE PLANS



PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

9885 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
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NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: NTD
CHECKED BY: CBS
SCALE: N/A

GENERAL NOTES

C-002

PAVING AND GRADING NOTES

- ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNER'S ENGINEER, OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS TO BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
- ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOIL TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS OR THE REFERENCED SOILS REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES, WHICH INCLUDE BUT ARE NOT LIMITED TO EARTHWORK ACTIVITIES, SUB GRADE PREPARATION, ETC., CONFORM WITH THE GEOTECHNICAL REPORT.
- PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
- CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
- CURBING WILL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THE PLANS.
- REFER TO THE LATEST IMPERIAL EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURBING AND GUTTERS CALLED FOR IN THESE PLANS.
- CONTRACTOR TO PROVIDE A 12" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIAL. CONTRACTOR TO PROVIDE A 1"(W) RIBBON CURB AT THE ABUTMENT OF SPECIALTY PAVEMENT AND ASPHALT; REFER TO PLANS.
- CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
- IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
- CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD OR OTHER APPROVED MATERIALS AS REQUIRED ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE SOILS TESTING AND SUBMITTING TESTING TO OWNER'S ENGINEER ON A WEEKLY BASIS. TESTS WILL BE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS WORK. UPON THE COMPLETION OF THIS WORK, SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
- A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE PLANS AND THE VARIOUS AGENCIES. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.
- MIXING IN PLACE OF SOIL CEMENT WILL NOT BE ALLOWED.
- CONTRACTOR TO FINISH ALL EXPOSED BACK OF CURB.
- COMPACTED SUB-GRADE SHALL BE MECHANICALLY MIXED TO THE SPECIFIED DEPTH PRIOR TO GRADING, COMPACTION AND TESTING.
- DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

DRAINAGE NOTES

- STANDARD INDEXES REFER TO THE LATEST EDITION OF FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS" aka "DESIGN STANDARDS" AND/OR "FDOT INDEX". REFER TO THIS MANUAL FOR ADDITIONAL DETAILS AND INFORMATION NOT SHOWN OR REFERENCED ON THESE PLANS.
- ALL STORM SEWER PIPE SHALL BE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS.
- ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH FDOT INDEX UNLESS OTHERWISE NOTED ON PLANS. STRUCTURE BOTTOMS SHALL BE ADJUSTED OR MODIFIED PER FDOT INDEX WHEN LARGER PIPES ARE INDICATED.
- ALTERNATIVE DRAINAGE PIPE MATERIALS AND SUBSTITUTIONS MUST BE LISTED AS A BID ALTERNATE MATERIAL DURING THE INITIAL BIDDING PHASE FOR CONSIDERATION. SUBSTITUTION OF PIPE MATERIALS DURING THE CONSTRUCTION PHASE IS NOT PERMISSIBLE WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ENGINEER OF RECORD AND OWNER. THE USE OF PLASTIC STORMWATER PIPE MATERIALS (PVC, HDPE, ETC) SHALL REQUIRE THE USE OF WATERIGHT BOOTED CONNECTIONS AT ALL STORMWATER STRUCTURES. NO GROUING OF STRUCTURE OPENINGS WILL BE PERMITTED WHEN USING FLEXIBLE PIPE MATERIALS.
- PIPE LENGTHS SHOWN ARE APPROXIMATE AND MEASURED TO CENTER OF DRAINAGE STRUCTURE WITH THE EXCEPTION OF MITERED END SECTION (MES) AND FLARED END SECTION (FES) WHICH ARE NOT INCLUDED IN LENGTHS. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AS SHOWN ON THE PLANS OR BID SCHEDULE (IF PROVIDED BY OWNER) PRIOR TO FINALIZING THEIR SUBMITTAL OF BIDS/PROPOSAL, AND INFORM THE ENGINEER OF ANY DISCREPANCIES.
- ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER OR ENGINEER'S REPRESENTATIVE PRIOR TO THE PLACEMENT OF BACK FILL.
- THE CONTRACTOR MUST PROVIDE CCTV VIDEO (IN DVD FORMAT) OF THE NEWLY CONSTRUCTED STORMWATER PIPELINE FOR REVIEW AND ACCEPTANCE. THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTIFICATION TO THE ENGINEER AND TO THE APPLICABLE AGENCIES TO SCHEDULE INSPECTIONS. PRIOR TO SUBMITTING VIDEOS TO THE ENGINEER FOR REVIEW, THE CONTRACTOR SHALL REVIEW THE VIDEOS FIRST FOR DISCREPANCIES AND FOR COMPLETENESS TO MAKE SURE THAT ALL PIPELINE SECTIONS ARE INCLUDED.
- THE CONTRACTOR SHALL PROVIDE EROSION CONTROL TO MAINTAIN AND PROTECT THE STORM DRAINAGE SYSTEM FROM MUD, DIRT, DEBRIS, ETC. THE SYSTEM SHALL BE PROTECTED UNTIL THE ADJACENT LAND AREAS ARE DEEMED STABLE AND WRITTEN FINAL ACCEPTANCE OF THE PROJECT HAS BEEN PROVIDED. THE CONTRACTOR MAY BE REQUIRED TO PRESSURE CLEAN PIPES AND INLETS FOR THESE PURPOSES.
- ALL FDOT DITCH BOTTOM INLETS IN THE PROPOSED PAVEMENT AREAS AND WITHIN THE DESIGNATED EASEMENTS OR PUBLIC ROW SHALL BE MODIFIED FOR TRAFFIC BEARING WITH HOT DIPPED GALVANIZED STEEL GRATES AND METAL ANGLE FRAMES SUPPORT FOR GRATES. ANGLE FRAME SHALL BE PART OF THE PRECAST CONCRETE STRUCTURES, INDICATED ON THE SHOP DRAWINGS AND THE PRECAST SHALL BE ACCORDANCE WITH FDOT SPECIFICATIONS.
- ALL DRAINAGE STRUCTURE STEEL GRATES AND COVERS TO BE TRAFFIC RATED FOR A MINIMUM H-20 LOADING.
- ALL MITERED END SECTIONS FOR SIDE DRAIN PIPES AT DRIVEWAY ENTRANCES ON COUNTY OR FDOT ROADWAYS MUST BE CONSTRUCTED WITH A CONCRETE TOE FOUNDATION IN ACCORDANCE WITH FDOT INDEX 273.
- NO POND/LAKE EXCAVATION (FOR ANY PURPOSE) SHALL EXTEND BEYOND OR BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS. NO LOWER SEMI-CONFINING UNIT CLAYEY MATERIALS AND NO WEATHERED LIMESTONE MATERIALS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED WITHIN THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS SHOWN ON THE PLANS. TEMPORARY DEWATERING DITCHES OR SUMPS (FOR POND/LAKE EXCAVATION) SHALL NOT EXTEND BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS. IF ANY LOWER SEMI-CONFINING UNIT CLAYEY MATERIALS OR WEATHERED LIMESTONE MATERIALS ARE ENCOUNTERED ABOVE THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS, THEN EXCAVATION OPERATIONS IN THAT POND/LAKE AREA SHALL IMMEDIATELY CEASE IN THE GENERAL AREA, AND THE GEOTECHNICAL CONSULTANT AND ENGINEER OF RECORD SHALL BE NOTIFIED TO PROVIDE SUBSEQUENT EVALUATIONS / RECOMMENDATIONS, AS APPROPRIATE, WHICH SHALL BE IMPLEMENTED BY THE CONTRACTOR. EPC (OR FDP) MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF CLAYS OR EXCEEDING THE PERMITTED EXCAVATION DEPTH.

EROSION/TURBIDITY CONTROL NOTES

- THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
- THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORM WATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
- THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
- THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
- ALL GREEN AND/OR DISTURBED AREAS TO BE SODDED/RESODDED WITH LIKE SOD.
- ANY SOD PLACED ON SLOPES EXCEEDING 3:1 TO BE ANCHORED BY STAKES, NETS, AND/OR ENGINEER'S APPROVED METHOD.
- REQUIRED TREE BARRICADES AND EROSION CONTROL MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION AS PROVIDED BY LOCAL JURISDICTION.
- ROOT PRUNING SHALL BE CONDUCTED AFTER STAKING FOR, AND PRIOR TO INSTALLATION OF SILT FENCE. A CERTIFIED ARBORIST, INTERNATIONAL SOCIETY OF ARBORICULTURE-CERTIFIED, SHALL CONDUCT OR OVERSEE ROOT PRUNING ACTIVITIES. THE CERTIFIED ARBORIST SHALL DETERMINE SPECIFIC EQUIPMENT AND METHODS TO BE USED. THE CERTIFIED ARBORIST SHALL REVIEW ROOT PRUNING SHOWN ON THE PLANS, AND SHALL VERIFY OR MODIFY AS NEEDED THE LIMITS AND LOCATIONS OF ROOT PRUNING TO MINIMIZE IMPACTS TO AFFECTED TREES. THE CERTIFIED ARBORIST SHALL RECOMMEND ANY ASSOCIATED TREATMENTS SUCH AS FERTILIZERS, FUNGICIDES, PESTICIDES, ETC. TO THE OWNER FOR REVIEW AND APPROVAL.

UTILITY NOTES

- ALL UTILITY WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CCUA WATER & WASTEWATER STANDARDS MANUAL, ALL STATE AND FEDERAL REGULATIONS, OR THOSE AGENCIES HAVING JURISDICTION.
- ALL WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 OF THE FLORIDA STATUTES.
- ALL NEW PIPE SHALL HAVE A MINIMUM DEPTH OF COVER OF 36 INCHES MEASURED FROM THE TOP OF THE PIPE TO THE PROPOSED FINISHED GROUND SURFACE, EXCEPT AS OTHERWISE NOTED ON THE DRAWINGS. VERTICAL AND HORIZONTAL ALIGNMENT MAY BE ADJUSTED TO MEET ADEQUATE FIELD CONDITIONS UPON APPROVAL BY THE ENGINEER AND LOCAL REGULATORY AGENCY.
- ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO FINAL PREPARATION OF SUBGRADE FOR PAVEMENT.
- ALL BEDDING SHALL BE CLASS B, TYPE I BEDDING UNLESS INDICATED OTHERWISE ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

WASTEWATER NOTES

- SANITARY SEWERS, FORCE MAINS AND STORM SEWERS SHOULD ALWAYS CROSS UNDER WATER MAINS. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE. WHERE SANITARY SEWERS, FORCE MAINS AND STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE LEAK FREE AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING), WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.
- SANITARY SEWER SERVICE CONNECTION LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. SANITARY SEWER SHOULD BE CONSTRUCTED FIRST AND PROPOSED WATER SERVICES AND STORMWATER SHOULD BE ADJUSTED AROUND THE SANITARY LATERALS AND/OR BUILDING CLEANOUTS.
- PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW SANITARY SEWER LINES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES NEAR THE POINT OF CONNECTION AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITH DESIGN INFORMATION SHOWN IN THESE PLANS.
- CONTRACTOR SHALL NOTIFY ENGINEER AND THE APPLICABLE AGENCIES AT LEAST 48 HOURS IN ADVANCE OF SCHEDULED WORK.
- AT LEAST 3 WEEKS PRIOR TO CONNECTION TO THE EXISTING SANITARY FORCE MAIN, CONTRACTOR SHALL NOTIFY THE OWNER'S ENGINEER AND THE APPLICABLE AGENCIES AND SUPPLY THEM WITH THE CONNECTION DETAIL, THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE AND OTHER INFORMATION AS REQUIRED. THEY SHALL ALSO BE CONTACTED 5 DAYS PRIOR TO CONSTRUCTION TO ENSURE AVAILABILITY OF INSPECTION PERSONNEL. ANY WORK PERFORMED PRIOR TO NOTIFYING FIELD ENGINEERING OR WITHOUT A DEPARTMENT INSPECTOR PRESENT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT.
- THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL FORCE MAINS (AS APPLICABLE) IN ACCORDANCE TO APPLICABLE AGENCIES REGULATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE APPLICABLE AGENCIES FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION TO ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- ONE OR MORE OF THE FOLLOWING CERTIFICATES/SHOP DRAWINGS, DEPENDING ON THE TYPE OF CONNECTION, WILL BE REQUIRED. THIS SHOULD BE REVIEWED WITH THE DESIGN DIVISION PRIOR TO APPROVAL FOR CONSTRUCTION.
 - DIP/PVC CERTIFICATE OF MANUFACTURE.
 - JACKING PIT DETAIL.
 - MANHOLE SHOP DRAWINGS AND STRENGTH REPORT.
 - CRUSHED STONE SUBMITTAL.
 - FRAME AND COVER SHOP DRAWINGS.
 - VALVE SHOP DRAWING.
 - FLEXIBLE COUPLING SHOP DRAWINGS.
 - MANHOLE DROP.
 - CASING PIPE CERTIFICATE.
 - CONNECTION DETAIL.
- THE CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE FOLLOWING HAS BEEN COMPLETED:
 - FINAL INSPECTION IN CONJUNCTION WITH DEPARTMENT PERSONNEL COMPLETED.
 - AS-BUILTS HAVE BEEN SUBMITTED AND ACCEPTED.
 - ALL NECESSARY TESTING COMPLETED AND CERTIFIED.
 - PAYMENT OF ALL CAPACITY FEES.
- THE CONTRACTOR SHALL PERFORM AT HIS OWN EXPENSE AN INFILTRATION OR EXFILTRATION TEST, A TELEVISION INSPECTION (CCTV), AND A MANDREL (GO, NO GO) TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE ENGINEER OF RECORD'S REQUIREMENTS AND/OR THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE WITNESSED AND CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION OF TESTING AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- ALL SANITARY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACK FILL. CONTRACTOR TO NOTIFY THE ENGINEER AND APPLICABLE AGENCIES 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS.
- THE SANITARY SEWER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL APPROVAL FOR CONNECTION IS OBTAINED FROM CCUA. THE CONTRACTOR SHALL SUBMIT TO THE OWNER'S ENGINEER SANITARY SEWER SYSTEM AS-BUILT DRAWINGS INFORMATION AT LEAST SIX WEEKS PRIOR TO ANTICIPATED DATE OF CERTIFICATE OF COMPLETION APPLICATION. FAILURE TO OBTAIN EPC APPROVAL PRIOR TO PLACING THE SYSTEM IN OPERATION MAY RESULT IN SUBSTANTIAL FINES.
- THREE (3) FEET FROM JOINTS IN VACUUM TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPE LINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 FAC.
- SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAINS OR PIPE LINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-610 FAC.
- ALL 4 INCH GRAVITY SANITARY SEWER LINES SHALL BE SCHEDULE SDR-26 PVC AND ALL SANITARY SEWER LINES 6 INCHES AND LARGER SHALL BE SDR-26 PVC.
- SEWER LINES ARE DESIGNED TO FINISHED GRADE AND SHALL BE PROTECTED FROM DAMAGE UNTIL ALL WORK IS COMPLETE.
- AT A MINIMUM, ALL SANITARY SEWER LINES 8 INCHES AND LARGER SHALL BE INSPECTED BY REMOTE VIDEO RECORDING SYSTEM AND COPIES OF THE VIDEO SHALL BE PROVIDED TO THE ENGINEER FOR THEIR REVIEW AND APPROVAL. THE STATE AND /OR LOCAL REGULATORY AGENCY REGULATING THE CONSTRUCTION OF THE SYSTEM MA REQUIRE ADDITIONAL TESTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL TESTING REQUIRED TO THE ENGINEER FOR FINAL APPROVAL BY REGULATORY AGENCIES.
- ALL SANITARY SEWER FORCE MAINS SHALL BE DR 18 PVC.
- THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL AIR RELEASE VALVES ON FORCE MAINS AT CHANGES IN ELEVATION OF 2 FEET DUE TO ACTUAL FIELD CONDITIONS OR CONFLICTS NOT IDENTIFIED ON THESE PLANS.
- A 4 INCH PUMP-OUT MEETING LOCAL REGULATORY STANDARDS SHALL BE PROVIDED ON ALL FORCE MAINS LOCATED ADJACENT TO RIGHT-OF-WAYS ON PRIVATE PROPERTY. PUMP-OUT MUST BE ACCESSIBLE BY LOCAL UTILITY FORCES FROM ADJACENT PUBLIC STREET OR RIGHT-OF-WAY.
- CONTRACTOR SHALL GROUT FLOW CHANNELS IN ALL SANITARY SEWER MANHOLES.
- CONTRACTOR SHALL GROUT FLOW CHANNELS IN ALL SANITARY SEWER MANHOLES.
- CONTRACTOR SHALL PERFORM THE ON-SITE PRESSURE TEST AT THE POINT OF CONNECTION FOR MANIFOLD FORCE MAINS. THIS PRESSURE SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR VERIFICATION PURPOSES, PRIOR TO THE SHOP DRAWING SUBMITTAL FOR THE PUMP EQUIPMENT. DVR

POTABLE WATER NOTES

- WHERE WATER MAIN IS LAID UNDER DITCHES, CULVERTS OR OTHER PIPELINES WITHOUT FITTINGS, THE MAXIMUM DEFLECTION AT ANY JOINT SHALL NOT EXCEED 50% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER OF THE PIPE FURNISHED.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE:
 - A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE ON ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.;
 - A HORIZONTAL DISTANCE OF AT LEAST SIX (6) 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 (3) 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 WILL BE LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER;
 - A HORIZONTAL DISTANCE OF AT LEAST SIX (6) 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 (10) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."
- CROSSINGS:
 - WATER MAINS THAT 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 6 INCHES BELOW THE OTHER PIPE LINE.
 - WATER MAINS THAT CROSS ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPE LINE.
- DISINFECTION OF THE POTABLE WATER AND FIRE MAINS SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C651.
- ALL WATER MAINS SHALL BE PRESSURE TESTED AT 150 PSI FOR 2 HOURS AND FORCE MAINS SHALL BE TESTED AT 150 PSI FOR 2 HOURS IN ACCORDANCE WITH SECTION 'A' OF AWWA STANDARD G600 WITH LEAKAGE LIMITED TO THAT DETERMINED BY THE APPROPRIATE FORMULA. ALL PRESSURE TESTING SHALL BE SCHEDULED WITH THE LOCAL REGULATORY AGENCY AND ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE.
- ALL D.I. FITTINGS FOR WATER MAINS SHALL BE THIN CEMENT LINED. THE LINING SHALL COMPLY WITH ANSI STANDARD A21.4 (AWWA C104, LATEST) CEMENT-MORTAR LINING FOR DUCTILE IRON PIPE AND FITTINGS FOR WATER. ALL BOLTS, NUTS, STUDS AND OTHER UNCOATED PARTS OF JOINTS FOR UNDERGROUND INSTALLATION SHALL BE COATED WITH ASPHALT OR COAL-TAR PRIOR TO BACKFILLING.
- THE CONTRACTOR SHALL FOLLOW THE PROVISIONS OF FLORIDA STATUTE 386 IF ANY WATER LINE IS BROKEN OR JOINT SYSTEM IS SHUT OFF DURING CONSTRUCTION. FLORIDA STATUTE 386 STATES THAT THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) OR THE LOCAL REGULATORY AGENCY DESIGNATED AUTHORITY BY DEP, SHALL ISSUE A BOIL WATER / BOTTLED WATER NOTICE FOR ALL AFFECTED CUSTOMERS OF A PUBLIC WATER SUPPLY SYSTEM WHEN AN INTERRUPTION IN SERVICE OCCURS WHICH RESULTS IN A COMPROMISE OF THE SYSTEM INTEGRITY. WHEN THE HEALTH OR LIFE OF AN INDIVIDUAL OR THE HEALTH OF LIVES OF INDIVIDUALS MAY BE THREATENED OR IMPAIRED OR BY WHICH DISEASE MAY BE CAUSED OR WHEN A HISTORY OF UNSATISFACTORY BACTERIOLOGICAL SAMPLES RESULT OR WHEN THE SYSTEM PRESSURE DROPS BELOW 20 PSI. THIS BOIL WATER / BOTTLED WATER NOTICE WILL BE LIFTED BY THE DESIGNATED REGULATORY AGENCY WHEN THE SYSTEM PRESSURE AND MICROBIOLOGICALS ARE DOCUMENTED THROUGH CERTIFIED DRINKING WATER LABORATORY ANALYSIS RESULTS. IN THE CASE WHERE THE SUPPLIER OF WATER ISSUES THE BOIL WATER / BOTTLED WATER NOTICE, LOCAL HEALTH DEPARTMENT SHALL BE NOTIFIED AS SOON AS POSSIBLE AND PREFERABLY IN ADVANCE OF THE EVENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUPPLY BOTTLED WATER INDIVIDUALS AND BUSINESS AFFECTED AT THE CONTRACTOR'S COST.
- ALL BACKFLOW PREVENTERS SHALL BE LOCATED ADJACENT TO RIGHT-OF-WAY ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED BY THE LOCAL REGULATORY AGENCY AND THE ENGINEER.
- AT THE TIME OF OR PRIOR TO FINAL APPROVAL, A DETECTOR CHECK AFFIDAVIT SHALL BE PROVIDED TO THE LOCAL REGULATORY AGENCY AND THE ENGINEER.
- AT ALL UTILITY CROSSINGS REGARDLESS OF VERTICAL SEPARATION ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPE LINE SO THE WATER MAIN JOINTS ARE AS FAR AS POSSIBLE FROM THE OTHER PIPE LINE OR PIPES SHALL BE ARRANGED SO ALL WATER MAIN JOINTS ARE AT LEAST:
 - THE WATER TAPS DEPICTED ON THESE DESIGN PLANS SHALL BE CONSTRUCTED AS FOLLOWS: ALL POTABLE AND IRRIGATION WATER TAPS, FIRE LINE SERVICES AND FIRE HYDRANT INSTALLATIONS SHALL BE PERFORMED BY A LICENSED MASTER PLUMBER OR LICENSED UNDERGROUND UTILITY CONTRACTOR UNDER THE FOLLOWING SPECIAL CONDITIONS:
 - THE TAPS ARE TO BE SCHEDULED 48 HOURS IN ADVANCE BY THE CONTRACTOR WITH THE LOCAL REGULATORY AGENCY AND ENGINEER.
 - TAPS REQUIRING METER INSTALLATIONS OF SIZE 2 INCHES AND BELOW MUST INCLUDE THE SERVICE PIPE, METER BOX, CORPORATION STOP SIZED READY TO ACCEPT THE METER INSTALLATION BY THE LOCAL UTILITY COMPANY.
 - LOCAL UTILITY FORCES WILL INSTALL THE METER UPON APPLICATION AND PAYMENT BY LICENSED MASTER PLUMBER OR LICENSED UTILITY CONTRACTOR.
 - ALL TAPS REQUIRING METER INSTALLATIONS OF SIZE 3 INCHES AND ABOVE SHALL TERMINATE SIZED READY FOR VAULT, METER AND BYPASS INSTALLATION BY LOCAL UTILITY COMPANY.
 - ALL PIPELINE AND APPURTENANCE MATERIAL IN CONTACT WITH POTABLE WATER MUST BE NSF-61 CERTIFIED
 - HYDRANTS SHALL BE LOCATED WITHIN ONE FOOT OF THE SIDE LOT LINES, BETWEEN ADJACENT PROPERTIES. HYDRANTS SHALL NOT BE LOCATED WITHIN ONE PIPE LENGTH (20 FEET) FROM AN INTERSECTION CORNER.
 - HYDRANTS SHALL BE A MINIMUM OF 5'-20" FROM BACK OF CURB. THE PUMPER DISCHARGE WILL FACE THE NEAREST ROADWAY.
 - PER NFPA 1, CLEARANCES OF SEVEN AND ONE HALF FEET (7-1/2 FT.) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT, AND FOUR FEET (4 FT.) TO THE REAR OF THE HYDRANT MUST BE MAINTAINED.
 - HYDRANTS SHALL BE A MINIMUM OF 4 FEET FROM BACK OF VALLEY GUTTER (MIAMI CURB) AND 2 FEET FROM BACK OF UPRIGHT CURB. FOR RURAL SECTIONS, FOOT INDEX 700 CLEAR ZONE CRITERIA SHALL BE MET. HYDRANTS SHALL BE A MINIMUM OF 10 FEET FROM EDGE OF PAVEMENT.
 - HYDRANTS ADJACENT TO PARKING AREAS WHERE THE NOZZLE CAP IS 5'-20 FEET FROM BACK OF CURB, THE EDGE OF PAVEMENT SHALL BE PROTECTED BY BOLLARDS OF 4-INCH (MIN) STEEL PIPE THREE FEET ABOVE AND BELOW GRADE FILLED WITH CONCRETE AND SET IN A CURB YARD OF CONCRETE, PLACED AS REQUIRED. BOLLARDS SHALL BE PAINTED OSHA SAFETY YELLOW. BOLLARDS SHALL NOT BLOCK ACCESS TO THE FIRE HYDRANT.
 - THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL UTILITY CONNECTIONS PRIOR TO ORDERING MATERIALS OR PRE-CASTING STRUCTURES. VARIATIONS AFFECTING THE DESIGN OF THE SYSTEM SHOULD BE REPORTED TO THE ENGINEER OF RECORD IMMEDIATELY. FAILURE TO PROVIDE DUE DILIGENCE FOR FIELD INVESTIGATION OF TIE-IN CONNECTIONS COULD RESULT IN REJECTION OF WORK AND NON PAYMENT.
 - UTILITY CONFLICTS: CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY.
 - CONTRACTOR IS HEREBY ADVISED THAT THE WATER CERTIFICATION AND CLEARANCE PROCESS MUST BE COMPLETED PRIOR TO ANY TEMPORARY OR PERMANENT BUILDING CERTIFICATE OF OCCUPANCY. THIS PROCESS TYPICALLY REQUIRES A MINIMUM OF 30 DAYS FROM ACCEPTANCE BY THE ENGINEER OF RECORD OF ALL REQUIRED INFORMATION. IN SOME CASES THIS PROCESS CAN TAKE SIGNIFICANTLY LONGER IF AS-BUILT OR TESTING INFORMATION IS INACCURATE OR MISSING OR IF ITEMS ARE NOT CONSTRUCTED PER THE APPROVED PLANS. THIS DELAY MAY RESULT IN A NEED TO RE-TEST THE SYSTEM AT THE CONTRACTOR'S EXPENSE.

ADA/ACCESSIBILITY NOTES

- ALL SIDEWALKS, CURB RAMPS, ACCESSIBLE PARKING SPACES AND ACCESS AISLES, AND ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE FLORIDA BUILDING CODE ACCESSIBILITY, LATEST EDITIONS.
- ALL SIDEWALK SLOPES SHALL CONFORM TO THE FOLLOWING CRITERIA:
 - CROSS SLOPE SHALL NOT EXCEED 1V:48H PERPENDICULAR TO THE DIRECTION OF TRAVEL
 - LONGITUDINAL SLOPE SHALL NOT EXCEED 1V:20H IN THE DIRECTION OF TRAVEL OR HANDRAIL SHALL BE INSTALLED, EXCEPT FOR CURB RAMPS.
 - CURB RAMP SLOPES SHALL NOT EXCEED 1V:12H
 - ALL CURB RAMPS SHALL INCLUDE LANDINGS AT THE TOP OF THE CURB RAMPS, WITH MINIMUM LENGTH OF 3 FT AND MINIMUM WIDTH EQUAL TO THE WIDTH OF THE CURB RAMP, WITH SLOPES NOT TO EXCEED 2% IN ANY DIRECTION

GUSTAFSON PARK
 PROJECT NAME
 PREPARED FOR
CITY OF GREEN COVE SPRINGS



REVISIONS		DESCRIPTION	
NO.	DATE		

SEAL

 CODY B. SMITH, P.E #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
 ISSUED: 2/14/2024
 DRAWN BY: NTD
 CHECKED BY: CBS
 SCALE: N/A

GENERAL NOTES

C-003



LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- SILT FENCE
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)

- NOTES**
- SEE SHEET C-005 FOR EROSION AND SEDIMENTATION CONTROL PLAN.
 - CONTRACTOR SHALL INSTALL AND MAINTAIN PERIMETER SILT FENCE DURING CONSTRUCTION ACTIVITIES UNTIL SITE FINAL STABILIZATION IS ACHIEVED.
 - EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK SURVEY PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

GUSTAFSON PARK

PROJECT NAME

CITY OF GREEN COVE SPRINGS

PREPARED FOR

9985 GATE PARKWAY N. SUITE 200
 JACKSONVILLE, FLORIDA USA 32246
 PHONE 904.730.8360 WWW.HALFF.COM
 FL CA 33380 FL LC 26000645

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
 ISSUED: 2/14/2024
 DRAWN BY: NTD
 CHECKED BY: CBS
 SCALE: 1" = 80'

EXISTING CONDITIONS & DEMOLITION PLAN

C-004

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LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- SF - SILT FENCE
- FTB - FLOATING TURBIDITY BARRIER
- ST - PROPOSED STORM SEWER PIPE
- EXISTING STORM SEWER PIPE
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)

- NOTES**
- SEE SHEET C-002 - C-003 FOR GENERAL NOTES.
 - SEE SHEETS C-400 THROUGH C-402 FOR EROSION AND SEDIMENTATION CONTROL AND SWPPP DETAILS.
 - CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN PLACE PRIOR TO COMMENCEMENT OF ANY EARTHWORK AND SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION IS ACHIEVED.
 - ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED AND MULCH AFTER FINAL GRADING
 - EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

halff

9985 GATE PARKWAY N. SUITE 200
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SEAL

CODY B. SMITH, P.E. #81393

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PROJECT NO.: 037756.094
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SCALE: 1" = 80'

EROSION & SEDIMENTATION CONTROL PLAN

C-005

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LEGEND	
	SITE BOUNDARY
	WETLAND LINE
	UPLAND BUFFER LINE

NOTES

1. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

PROJECT NAME
GUSTAFSON PARK

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JACKSONVILLE, FLORIDA USA 32246
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FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

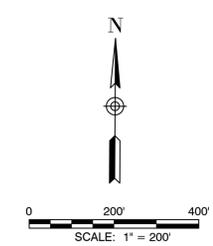
CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
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SCALE: 1" = 200'

OVERALL SITE PLAN

C-100



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CENTERLINE SEGMENT TABLE			
LINE/CURVE #	LENGTH	BEARING/DELTA	RADIUS
L2	14.18	N51° 39' 02.47"W	
C1	46.98	6.73	400.00
L1	150.81	N38° 20' 57.53"E	
L4	42.42	N38° 20' 57.53"E	
L3	37.00	N51° 39' 02.47"W	

SITE PARKING DATA TABLE			
PROPOSED USE	PUBLIC PARK		
ZONING	RECREATION		
PROPOSED BUILDING AREA	±344 S.F. (0.008 AC)		
PROPOSED COURTS	2		
PARKING	REQUIRED	MAXIMUM	PROVIDED
TOTAL VEHICLE	4	-	19
STANDARD	3	-	17
ADA	1	-	2
MOTORCYCLE	0	-	0
BICYCLE	0	-	0

NOTES:
1. REQUIRED VEHICLE PARKING RATES PER GREEN COVE SPRINGS LDC: TENNIS, HANDBALL, AND RACQUETBALL FACILITIES: 2 SPACES/COURT

SITE DATA TABLE		
OVERALL SITE AREA (PARCEL AREA)	± 953,528 Sq. Ft. (21.89 AC)	
PARCEL NUMBER	38-06-26-016515-008-01	
SITE AREA (DISTURBED AREA)	± 119,799 Sq. Ft. (2.75 AC)	
OFF SITE AREA (DISTURBED AREA)	± 26,066 Sq. Ft. (0.60 AC)	
BUILDING AREA	± 344 Sq. Ft. (0.008 AC)	
IMPERVIOUS AREA	± 27,043 Sq. Ft. (0.62 AC)	
PERVIOUS AREA	± 118,822 Sq. Ft. (2.73 AC)	

YARD REQUIREMENTS	REQUIRED	PROVIDED
MINIMUM FRONT	NMR	± 169'
MINIMUM SIDE	NMR	± 145'
MINIMUM REAR	NMR	± 1,366'
SIGN SETBACK	NMR	

LOT REQUIREMENTS	MAXIMUM	PROVIDED
FLOOR AREA RATIO (FAR)	20%	0.2%
IMPERVIOUS SURFACE RATIO (ISR)	70%	2.8%

NOTES:
1. NMR - NO MINIMUM REQUIRED

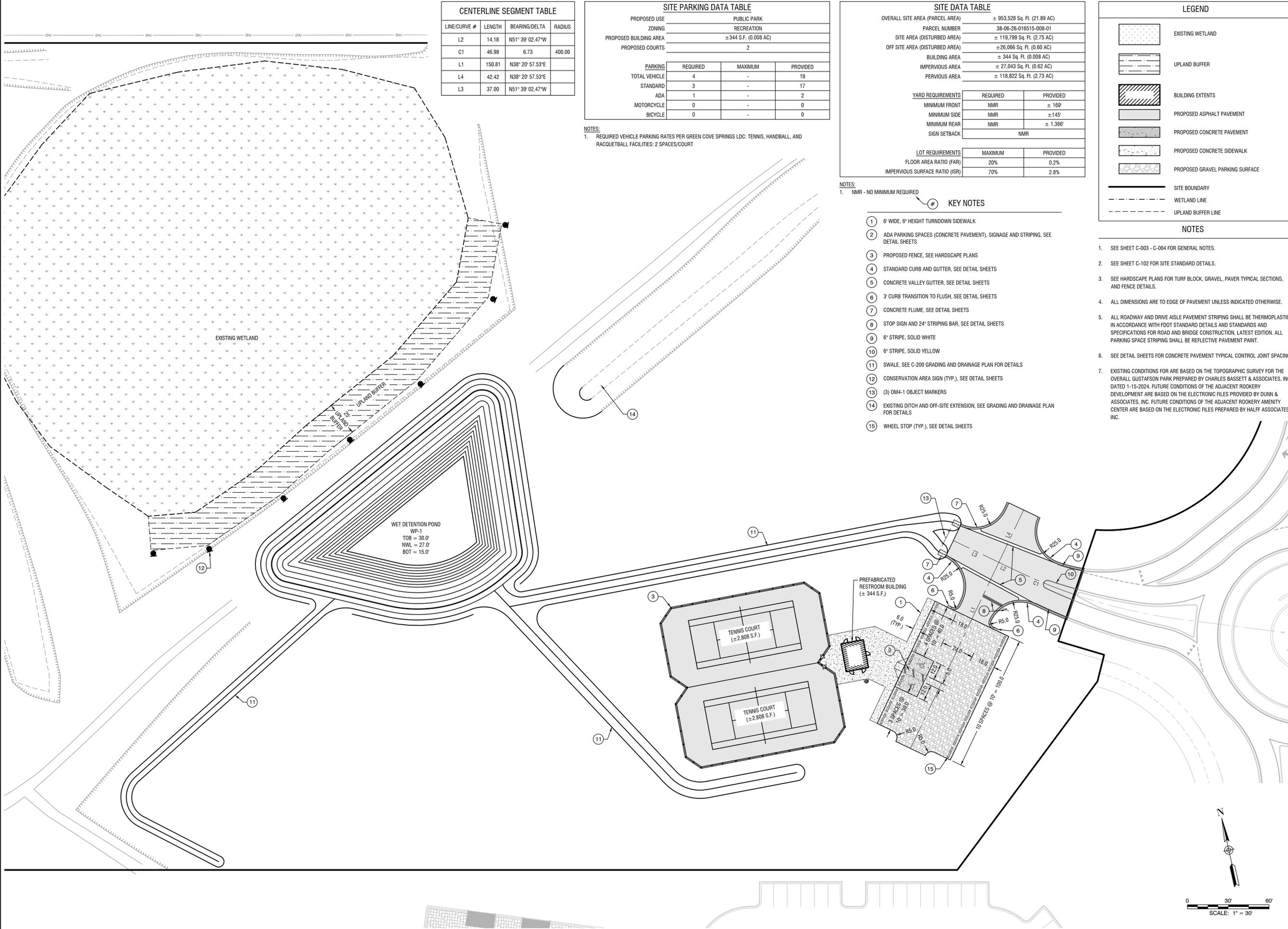
KEY NOTES

- 1 6" WIDE, 6" HEIGHT TURNDOWN SIDEWALK
- 2 ADA PARKING SPACES (CONCRETE PAVEMENT), SIGNAGE AND STRIPING, SEE DETAIL SHEETS
- 3 PROPOSED FENCE, SEE HARDSCAPE PLANS
- 4 STANDARD CURB AND GUTTER, SEE DETAIL SHEETS
- 5 CONCRETE VALLEY GUTTER, SEE DETAIL SHEETS
- 6 3" CURB TRANSITION TO FLUSH, SEE DETAIL SHEETS
- 7 CONCRETE FLUME, SEE DETAIL SHEETS
- 8 STOP SIGN AND 24" STRIPING BAR, SEE DETAIL SHEETS
- 9 6" STRIPE, SOLID WHITE
- 10 6" STRIPE, SOLID YELLOW
- 11 SWALE, SEE C-200 GRADING AND DRAINAGE PLAN FOR DETAILS
- 12 CONSERVATION AREA SIGN (TYP.), SEE DETAIL SHEETS
- 13 (3) OM4-1 OBJECT MARKERS
- 14 EXISTING DITCH AND OFF-SITE EXTENSION, SEE GRADING AND DRAINAGE PLAN FOR DETAILS
- 15 WHEEL STOP (TYP.), SEE DETAIL SHEETS

LEGEND	
	EXISTING WETLAND
	UPLAND BUFFER
	BUILDING EXTENTS
	PROPOSED ASPHALT PAVEMENT
	PROPOSED CONCRETE PAVEMENT
	PROPOSED CONCRETE SIDEWALK
	PROPOSED GRAVEL PARKING SURFACE
	SITE BOUNDARY
	WETLAND LINE
	UPLAND BUFFER LINE

NOTES

- 1. SEE SHEET C-003 - C-004 FOR GENERAL NOTES.
- 2. SEE SHEET C-102 FOR SITE STANDARD DETAILS.
- 3. SEE HARDSCAPE PLANS FOR TURF BLOCK, GRAVEL, PAVER TYPICAL SECTIONS, AND FENCE DETAILS.
- 4. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS INDICATED OTHERWISE.
- 5. ALL ROADWAY AND DRIVE AISLE PAVEMENT STRIPING SHALL BE THERMOPLASTIC, IN ACCORDANCE WITH FDOT STANDARD DETAILS AND STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. ALL PARKING SPACE STRIPING SHALL BE REFLECTIVE PAVEMENT PAINT.
- 6. SEE DETAIL SHEETS FOR CONCRETE PAVEMENT TYPICAL CONTROL JOINT SPACING
- 7. EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.



PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

9985 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

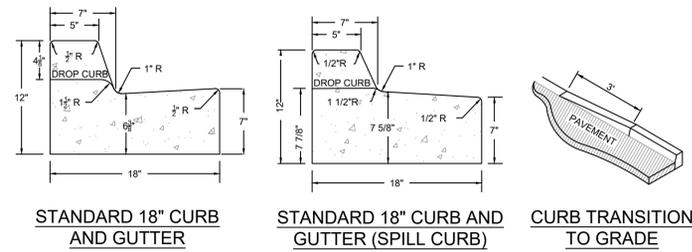
PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: NTD
CHECKED BY: CBS
SCALE: 1" = 30'

SITE PLAN

C-101

2/14/2024 10:38:54 AM Tyler Kessler A:\37706\037756094\ALDC\DD\Sheet\C-100_Geocmg ax Civil - Full Weight.dwg



STANDARD 18" CURB AND GUTTER

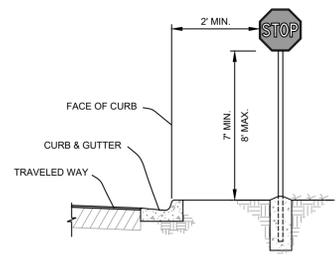
STANDARD 18" CURB AND GUTTER (SPILL CURB)

CURB TRANSITION TO GRADE

- NOTES:
1. WHEN USED ON HIGH SIDE OF ROADWAYS SPILL CURB SHALL BE USED. THE GROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT.
 2. ALL CURB AND GUTTER SHALL BE 3,000 PSI CONCRETE.
 3. SUBGRADE SHALL BE PREPARED AS DESCRIBED IN THE TYPICAL PAVEMENT SECTION.
 4. CONTRACTION JOINTS SHALL BE SPACED AT INTERVALS OF 10 FT. WHERE CLOSER JOINT SPACING IS NECESSARY THE MINIMUM INTERVAL SHALL BE 4 FT.
 5. EXPANSION JOINTS SHALL BE USED ADJACENT TO STRUCTURES AND EVERY 500 FT MAXIMUM.

TYPICAL CURB DETAILS

(NTS)



TYPICAL SITE SIGN INSTALLATION



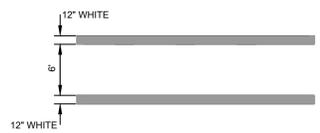
MUTCD No. R1-1
SIZE: 30" x 30"

STOP SIGN

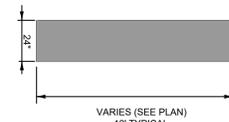
- NOTES:
1. ALL SIGNS SHOULD BE SHEETED WITH DIAMOND GRADE HIGH REFLECTIVITY MATERIAL.
 2. ALL SIGNS SHALL BE IN ACCORDANCE WITH CURRENT MUTCD GUIDELINES.
 3. ALL SIGNS SHALL BE DOUBLE BOLTED TO POST W/STAINLESS STEEL HARDWARE.

TYPICAL SIGNAGE DETAILS

(NTS)



DRIVEWAY CROSSWALK STRIPING

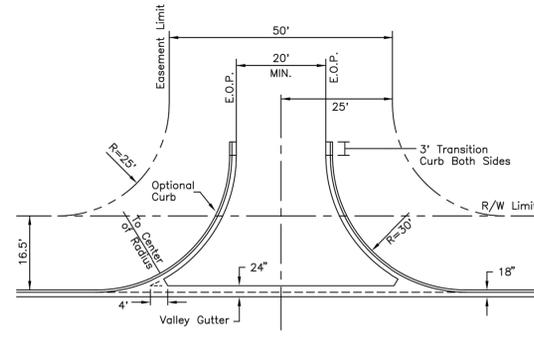


STOP BAR

- NOTES:
1. ALL ON-SITE STRIPING SHALL BE REFLECTIVE WHITE UNLESS INDICATED OTHERWISE.
 2. ALL STRIPING IN THE ROW SHALL BE THERMOPLASTIC AND CONFORM TO FDOT STANDARD PLANS AND SPECIFICATIONS, LATEST EDITIONS.

TYPICAL STRIPING DETAILS

(NTS)



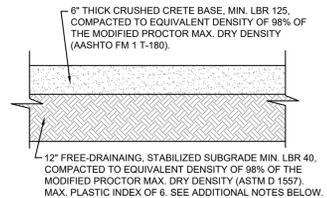
TYPICAL CONC. VALLEY
(MIN. 3500 PSI CONC.)

NOTE:

THAT PORTION OF DRIVEWAY THAT EXTENDS INTO PUBLIC R/W SHALL HAVE 1 1/4" ASPHALTIC CONCRETE ON 6" LIMEROCK BASE / 12" STABILIZED SUBGRADE OR 12" LIMEROCK BASE ON COMPACTED SUBGRADE.

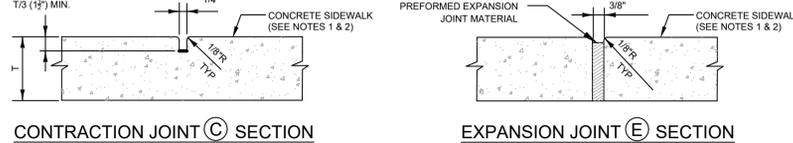
TYPICAL CONCRETE VALLEY DETAILS

(NTS)



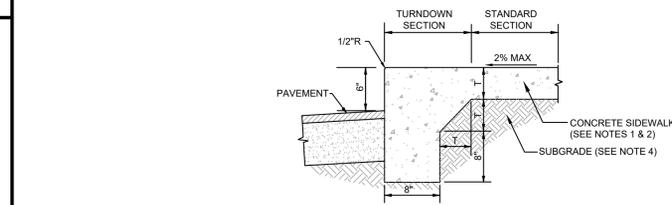
TYPICAL GRAVEL PAVEMENT SECTION

- NOTES:
1. UNIFIED SOIL CLASSIFICATION SYSTEM CLASSIFICATION OF SP OR SP-SM (WITH LESS THAN 10% FINES) IS CONSIDERED FREE DRAINING.
 2. STABILIZED SUBGRADE SHALL EXTEND 12" PAST EDGE OF PAVEMENT. BASE SHALL EXTEND 6" PAST EDGE OF PAVEMENT (OR PAST BACK OF CURB IF CURBING IS INSTALLED ADJACENT TO PAVEMENT).
 3. IF EXISTING SUBGRADE CANNOT OBTAIN LBR 40, MIXING MAY BE REQUIRED. MODIFICATIONS TO THE PAVEMENT SECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 4. STABILIZED SUBGRADE AND BASE SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 5. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 6. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT REQUIREMENTS.

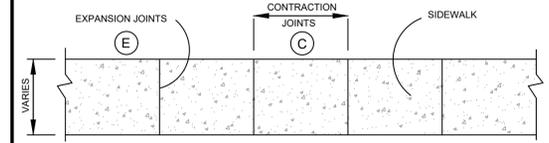


CONTRACTION JOINT (C) SECTION

EXPANSION JOINT (E) SECTION



6" TURNDOWN SIDEWALK SECTION AT PAVEMENT



TYPICAL JOINT LAYOUT

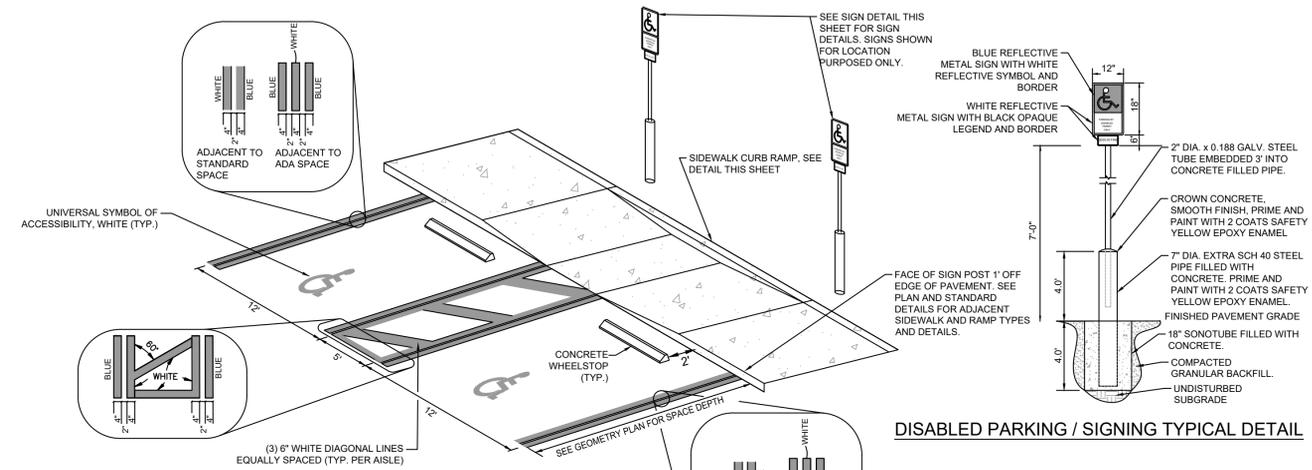
JOINT SPACING (ON CENTER)	
SIDEWALK WIDTH	4' 5' 6' 8' 10'
CONTRACTION JT	4' 5' 6' 8' 10'
EXPANSION JOINT	48' 50' 60' 64' 80'

SIDEWALK AND CONCRETE ISLAND NOSING NOTES:

1. SIDEWALK AND CONCRETE ISLAND NOSING SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE, CLASS I, 3,000 PSI, W/FIBER MESH ADDITIVE (MIN. 5 LBS PER CUBIC YARD). MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. SIDEWALK AND CONCRETE ISLAND NOSING STANDARD THICKNESS (T) SHALL BE FOUR (4) INCHES.
3. EXPANSION JOINTS SHALL BE USED BETWEEN SIDEWALK/CONCRETE ISLAND NOSING AND CURBING, DRIVEWAYS, STRUCTURES AND ALL FIXED OBJECTS, AND TO SEPARATE THE NEW CONCRETE SIDEWALK FROM OTHER NEW OR EXISTING CONSTRUCTION.
4. SUBGRADE SHALL BE 12" STABILIZED SUBGRADE MIN LBR 40, COMPACTED TO EQUIVALENT DENSITY OF 98% OF THE MODIFIED PROCTOR MAX. DRY DENSITY (ASTM-D1557) AND SHALL EXTEND (1) FOOT PAST THE EDGE OF SIDEWALK/CONCRETE ISLAND NOSING.

TYPICAL CONCRETE SIDEWALK DETAILS

(NTS)

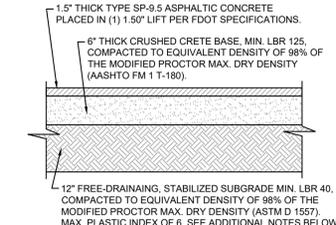


TYPICAL ADA PARKING SPACE DETAIL

TYPICAL ADA PARKING SPACE DETAILS

(NTS)

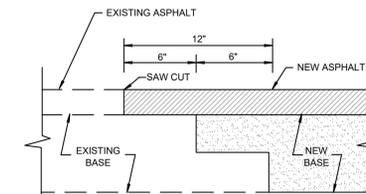
- NOTES:
1. DIMENSIONS ARE TO THE CENTERLINE OF WHITE MARKINGS.
 2. THIS DETAIL IS FOR PAVEMENT MARKING AND SIGNAGE ONLY. NOT ADA CURB RAMP. REFER TO GEOMETRY PLAN FOR ADA CURB RAMP TYPES AND LOCATIONS.
 3. TINT BLUE PAVEMENT MARKINGS TO MATCH COLOR 15180 OF FEDERAL STANDARDS 595a.
 4. REFER TO FDOT INDEX NO. 711-001 FOR ADDITIONAL DETAILS.
 5. PAVEMENT SLOPES SHALL BE LESS THAN OR EQUAL TO 2% IN ANY DIRECTION IN THE EXTENT OF THE ADA PARKING SPACE AND ACCESS AISLE.



TYPICAL ASPHALT PAVEMENT SECTION

NOTES:

1. UNIFIED SOIL CLASSIFICATION SYSTEM CLASSIFICATION OF SP OR SP-SM (WITH LESS THAN 10% FINES) IS CONSIDERED FREE DRAINING.
2. STABILIZED SUBGRADE SHALL EXTEND 12" PAST EDGE OF PAVEMENT. BASE SHALL EXTEND 6" PAST EDGE OF PAVEMENT (OR PAST BACK OF CURB IF CURBING IS INSTALLED ADJACENT TO PAVEMENT).
3. CONCRETE PAVEMENT MAY BE SUBSTITUTED FOR ASPHALT AT THE OWNER'S DISCRETION. CONSULT ENGINEER FOR REQUIRED CONCRETE PAVEMENT SECTION.
4. IF EXISTING SUBGRADE CANNOT OBTAIN LBR 40, MIXING MAY BE REQUIRED.
5. MODIFICATIONS TO THE PAVEMENT SECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
6. STABILIZED SUBGRADE AND BASE SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
7. ASPHALT MIX DESIGN SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
8. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT REQUIREMENTS.



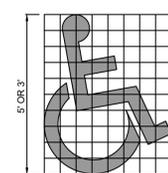
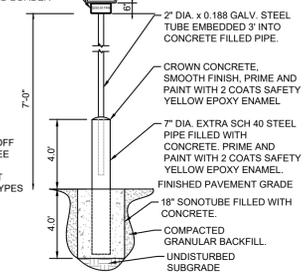
TYPICAL ASPHALT PAVEMENT JOINT

TYPICAL ASPHALT PAVEMENT DETAILS

(NTS)

NOTE:
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

DISABLED PARKING / SIGNING TYPICAL DETAIL



UNIVERSAL SYMBOL OF ACCESSIBILITY

NOTE:
SYMBOL SHALL BE 3' OR 5' HIGH AND WHITE IN COLOR.

GUSTAFSON PARK
CITY OF GREEN COVE SPRINGS

half
9985 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.8360 WWW.HALFF.COM
FL CA 33380 FL CA 33380

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094

ISSUED: 2/14/2024

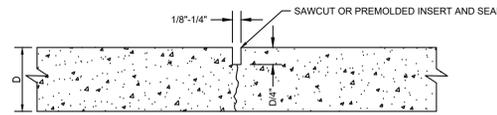
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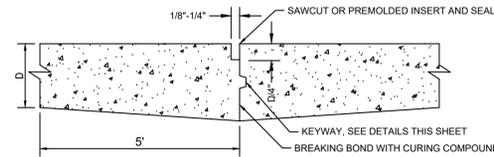
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SITE STANDARD DETAILS

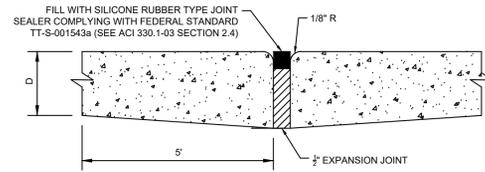
C-102



CONTRACTION JOINT (C) SECTION
 TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR PRE-MOLDED, TYPICAL SPACING 12 FEET, MAXIMUM 15 FEET, EACH WAY.



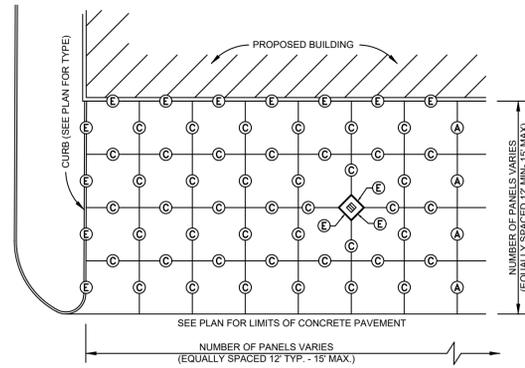
CONSTRUCTION JOINT (A) SECTION



EXPANSION JOINT (E) SECTION

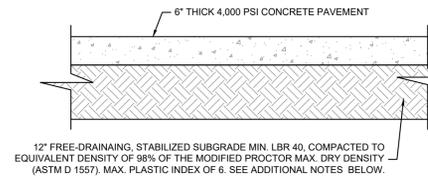


HALF ROUND KEYWAY TRAPEZOIDAL KEYWAY



TYPICAL CONCRETE PAVEMENT JOINTING DETAILS
 (NTS)

- NOTES:**
1. LOCATION OF JOINTS ARE PROVIDED AS A GUIDE TO THE CONTRACTOR. CONTRACTOR IS TO LOCATE JOINTS TO ASSURE THEY DO NOT ALIGN WITH BUILDING DOWNSPOUTS.
 2. CONTRACTOR TO PREVENT TRAFFIC (INCLUDING CONCRETE DELIVERY TRUCKS) FROM RUTTING AND SOFTENING FINISHED COMPACTED SUB-BASE PRIOR TO CONCRETE PLACEMENT.
 3. ALL CONTRACTION JOINTS SHALL BE EQUALLY SPACED, 12 FEET TYPICAL AND 15 FEET MAXIMUM EACH WAY.
 4. ALL COLD CONSTRUCTION JOINTS TO UTILIZE TYPE 'A' CONSTRUCTION JOINT WITH KEYWAY.
 5. ACUTE ANGLES OF LESS THAN 45° BETWEEN INTERSECTING JOINTS SHALL BE PROHIBITED.
 6. APPLY CURING COMPOUND IN ACCORDANCE WITH ASTM C 309, TYPE 2, CLASS A (SEE ACI 330.1-03 SECTION 2.3).
 7. EXPANSION MATERIAL INSTALLED BETWEEN EXISTING OR PROPOSED STRUCTURES AND THE NEW POUR.



CONCRETE PAVEMENT SECTION

- NOTES:**
1. UNIFIED SOIL CLASSIFICATION SYSTEM CLASSIFICATION OF SP OR SP-SM (WITH LESS THAN 10% FINES) IS CONSIDERED FREE DRAINING.
 2. STABILIZED SUBGRADE SHALL EXTEND 12" PAST EDGE OF PAVEMENT. BASE SHALL EXTEND 6" PAST EDGE OF PAVEMENT (OR PAST BACK OF CURB IF CURBING IS INSTALLED ADJACENT TO PAVEMENT)
 3. IF EXISTING SUBGRADE CANNOT OBTAIN CBR 30, MIXING MAY BE REQUIRED.
 4. MODIFICATIONS TO THE PAVEMENT SECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 5. STABILIZED SUBGRADE AND BASE SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 6. CONCRETE MIX DESIGN SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 7. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL PAVEMENT REQUIREMENTS.

TYPICAL CONCRETE PAVEMENT DETAILS
 (NTS)

PROJECT NAME

GUSTAFSON PARK

PREPARED FOR

CITY OF GREEN COVE SPRINGS



9985 GATE PARKWAY N. SUITE 200
 JACKSONVILLE, FLORIDA USA 32246
 PHONE 904.730.8980 WWW.HALFF.COM
 FL CA 33380 FL LC 26000645

REVISIONS NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
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 CHECKED BY: CBS
 SCALE: N/A

SITE STANDARD DETAILS

C-103

POND SUMMARY									
Pond	Pond Type	Bottom (ft)	Top of Bank (ft)	Normal Water Level (ft)	Weir (ft)	Peak Stage			
						25-yr 24-hr (ft)	25-yr 24-hr (ft)	5-yr 24-hr (ft)	Mean Annual (ft)
WP-1	Wet Det.	15.00	30.00	27.00	27.60	N/A	28.80	28.40	28.09

PRE VS POST DISCHARGE RATES						
Outfall Location	25-yr 24-hr (cfs)		5-yr 24-hr (cfs)		Mean Annual (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Outfall	29.55	26.68	N/A	N/A	N/A	N/A

LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- PROPOSED BUILDING EXTENTS
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- PROPOSED STORM SEWER PIPE
- EXISTING STORM SEWER PIPE
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- PROPOSED CONTOUR (MAJOR)
- PROPOSED CONTOUR (MINOR)
- PROPOSED ELEVATION
- PROPOSED ELEVATION (MEET EXISTING)
- PROPOSED ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
- EXISTING ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
- PROPOSED GRADE DIRECTION AND SLOPE

- NOTES**
- SEE SHEET C-002 AND C-003 FOR GENERAL NOTES.
 - SEE SHEET C-201 FOR STORM DRAINAGE STANDARD DETAILS.
 - EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.



GUSTAFSON PARK
 CITY OF GREEN COVE SPRINGS

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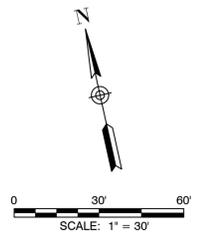
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GRADING & DRAINAGE PLAN
 C-200

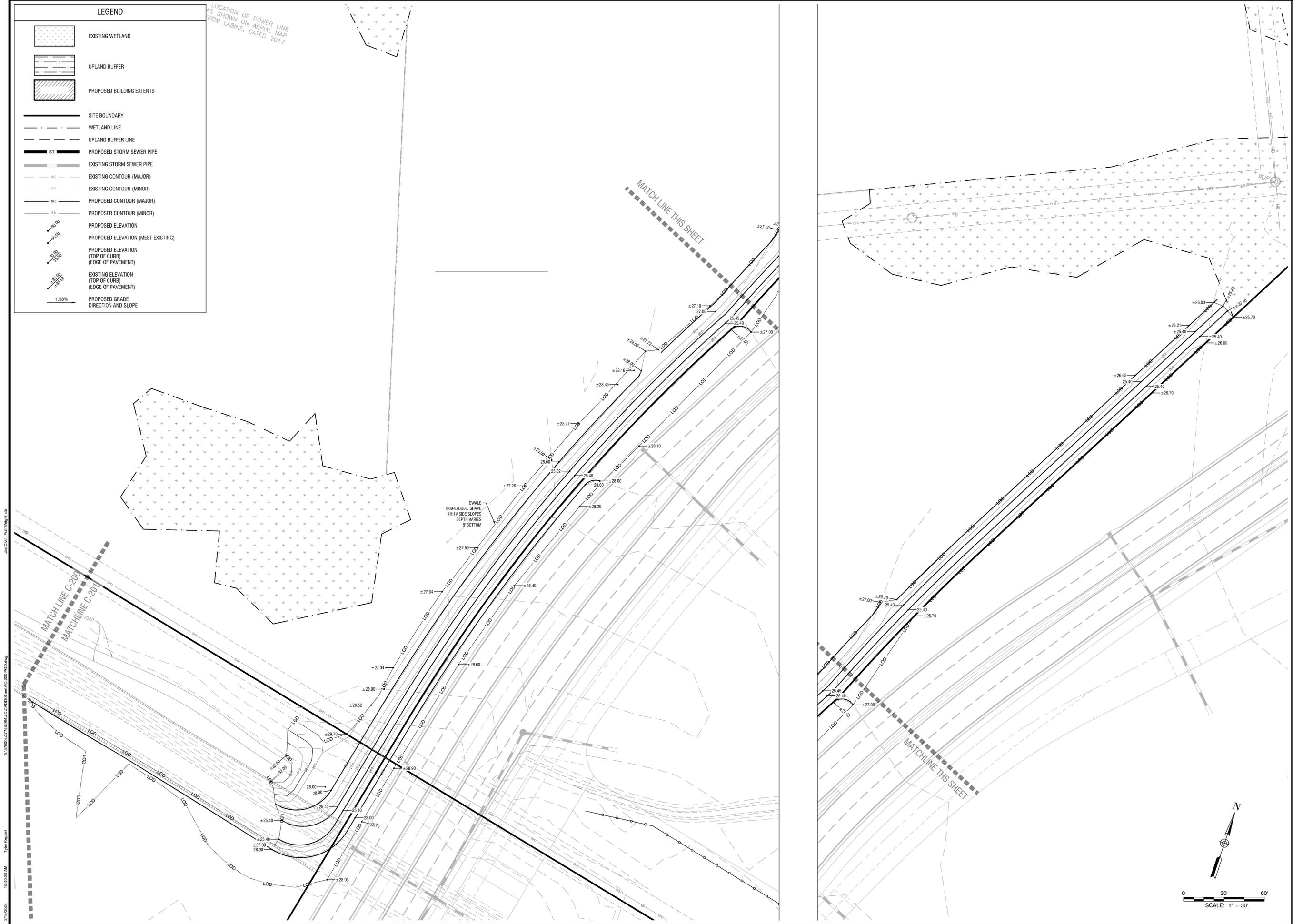


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LEGEND

-  EXISTING WETLAND
-  UPLAND BUFFER
-  PROPOSED BUILDING EXTENTS
-  SITE BOUNDARY
-  WETLAND LINE
-  UPLAND BUFFER LINE
-  PROPOSED STORM SEWER PIPE
-  EXISTING STORM SEWER PIPE
-  EXISTING CONTOUR (MAJOR)
-  EXISTING CONTOUR (MINOR)
-  PROPOSED CONTOUR (MAJOR)
-  PROPOSED CONTOUR (MINOR)
-  PROPOSED ELEVATION
-  PROPOSED ELEVATION (MEET EXISTING)
-  PROPOSED ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
-  EXISTING ELEVATION (TOP OF CURB) (EDGE OF PAVEMENT)
-  PROPOSED GRADE DIRECTION AND SLOPE

LOCATION OF POWER LINE AS SHOWN ON AERIAL MAP FROM LABINS, DATED 2017



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PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS



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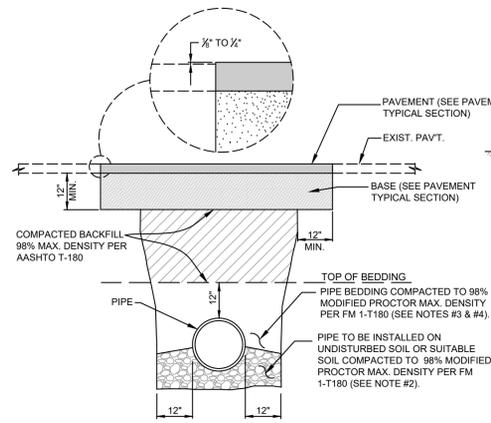
CODY B. SMITH, P.E. #81393

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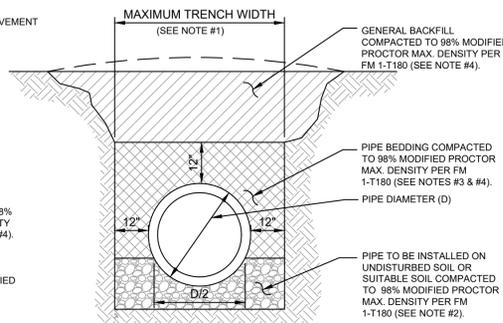
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GRADING & DRAINAGE PLAN

C-201



IN IMPERVIOUS AREA

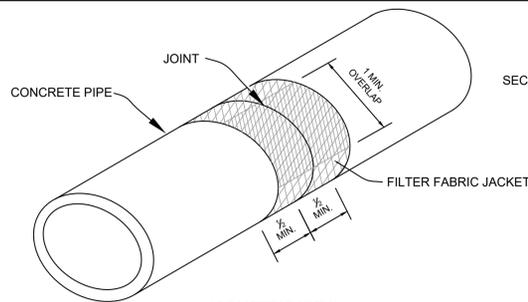


IN NON-IMPERVIOUS AREA

TYPICAL PIPE BEDDING DETAILS

(NTS)

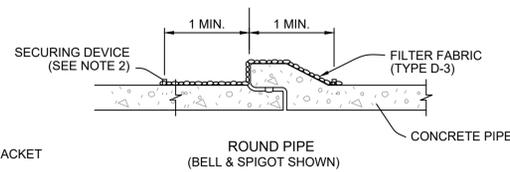
- NOTES:
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE. OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS.
 - BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
 - PIPE BEDDING MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
 - PIPE BEDDING MATERIAL AND GENERAL BACKFILL MATERIAL OVER THE PIPE OR UNDER STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF ITS MODIFIED PROCTOR MAXIMUM DENSITY AS DETERMINED BY FM 1-1180.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 - ALL PIPE TO BE INSTALLED WITH THE BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
 - SEE SITE GEOTECH REPORT FOR ADDITIONAL DETAILS.



ISOMETRIC VIEW

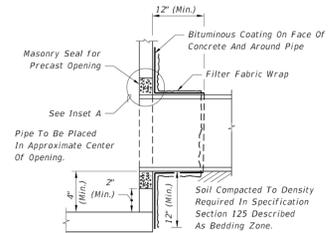
TYPICAL STORM PIPE FILTER FABRIC JACKET DETAIL

(NTS)

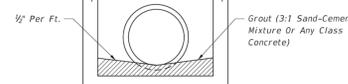


ROUND PIPE (BELL & SPIGOT SHOWN)

SECTION VIEW



FILTER FABRIC WRAP ON GROUTED PIPE TO STRUCTURE JOINT

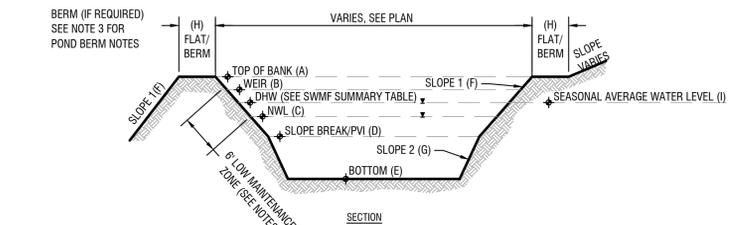


INSET A

TYPICAL STORM STRUCTURE PIPE INSTALLATION DETAILS

(NTS)

POND SUMMARY									
Pond	Pond Type	Bottom (ft)	Top of Bank (ft)	Normal Water Level (ft)	Weir (ft)	Peak Stage			
						25-yr 24-hr (ft)	25-yr 24-hr (ft)	5-yr 24-hr (ft)	Mean Annual (ft)
WP-1	Wet Det.	15.00	30.00	27.00	27.60	N/A	28.80	28.40	28.09



SECTION

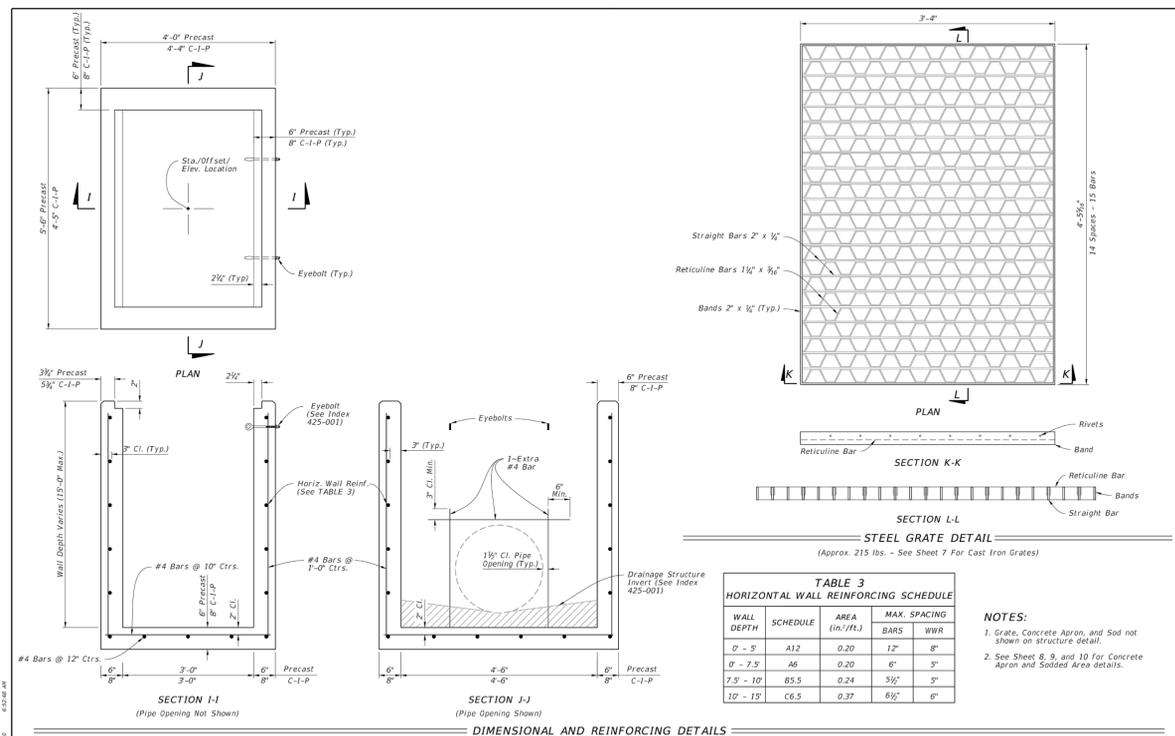
- SIDE SLOPE & FILL MATERIAL NOTES:
- SIDE SLOPES NOT TO EXCEED 4:1 UNTIL SLOPE BREAK AT A MINIMUM 2' BELOW NWL.
 - FILL MATERIAL TO BE TESTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT TO VERIFY MEETING FILL MATERIAL SPECIFICATIONS.
 - SEE SITE-SPECIFIC GEOTECHNICAL REPORT FOR ADDITIONAL EARTHWORK REQUIREMENTS.

- BANK STABILIZATION & LOW MAINTENANCE ZONE NOTES:
- ALL POND BANKS SHALL BE STABILIZED WITH VEGETATIVE COVER FROM NWL TO TOP OF BANK.
 - BANHA GRASS TO BE PLANTED AND MANAGED TO MINIMIZE THE NEED FOR FERTILIZATION, WATERING, MOWING, ETC.
 - NO MOWED OR CUT VEGETATIVE MATERIAL SHALL BE DEPOSITED OR LEFT REMAINING IN THE LOW MAINTENANCE ZONE OR WATER.
 - CARE SHOULD BE TAKEN TO PREVENT THE OVER-SPRAY OF AQUATIC WEED PRODUCTS INTO THE LOW MAINTENANCE ZONE.

POND SECTION DATA									
POND	(A) FT. EL.	(B) FT. EL.	(C) FT. EL.	(D) FT. EL.	(E) FT. EL.	(F) H:V	(G) H:V	(H) FT.	(I) FT. EL.
WP-1	30.00	27.60	27.00	23.00	15.00	4H:1V	2H:1V	10.00	27.00

TYPICAL WET POND SECTION DETAILS

(NTS)



TYPE E - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS

STANDARD PLANS DITCH BOTTOM INLET TYPE C, D, E, AND H

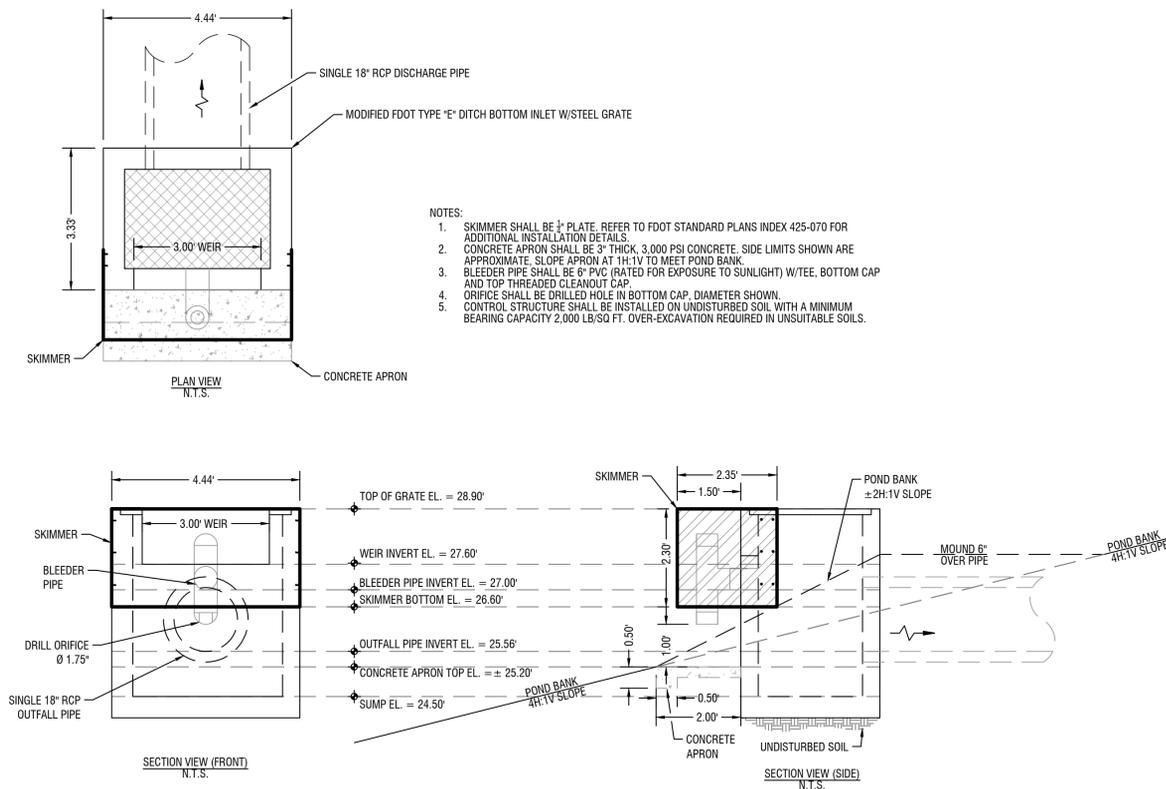
WALL DEPTH	SCHEDULE	AREA (in ² /ft.)	MAX. SPACING BARS	WWR
0' - 5'	A32	0.20	12"	6"
6' - 7.5'	A6	0.20	6"	5"
7.5' - 10'	B5.5	0.24	5 1/2"	5"
10' - 15'	C6.5	0.37	6 1/2"	6"

- NOTES:
- Grate, Concrete Apron, and Sod not shown on structure detail.
 - See Sheet 8, 9, and 10 for Concrete Apron and Sodded Area details.

LAST REVISION	DESCRIPTION
11/01/20	

FDOT FY 2021-22 STANDARD PLANS

INDEX SHEET 425-052 4 of 14



- NOTES:
- SKIMMER SHALL BE 1/2" PLATE. REFER TO FDOT STANDARD PLANS INDEX 425-070 FOR ADDITIONAL INSTALLATION DETAILS.
 - CONCRETE APRON SHALL BE 9" THICK, 3,000 PSI CONCRETE. SIDE LIMITS SHOWN ARE APPROXIMATE. SLOPE APRON AT 1H:1V TO MEET POND BANK.
 - BLEEDER PIPE SHALL BE 6" PVC (RATED FOR EXPOSURE TO SUNLIGHT) W/TEE. BOTTOM CAP AND TOP THREADED CLEANOUT CAP.
 - ORIFICE SHALL BE DRILLED HOLE IN BOTTOM CAP. DIAMETER SHOWN.
 - CONTROL STRUCTURE SHALL BE INSTALLED ON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY 2,000 LB/SQ FT. OVER-EXCAVATION REQUIRED IN UNSUITABLE SOILS.

TYPICAL POND CONTROL STRUCTURE DETAILS

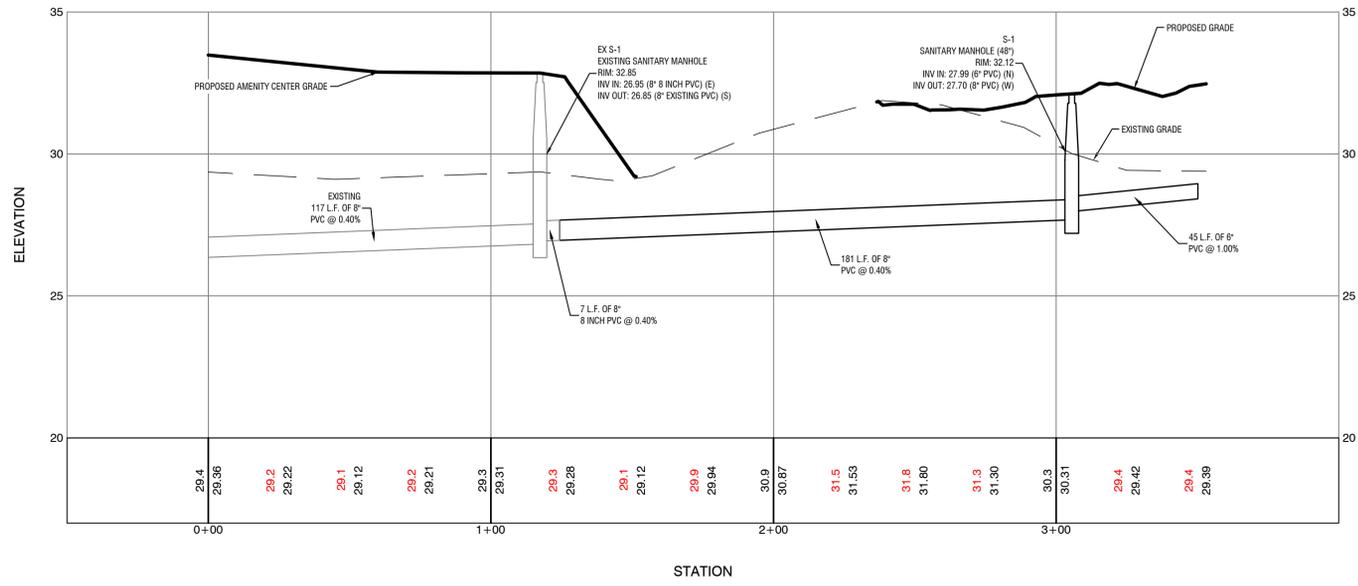
(NTS)

PROJECT NAME: GUSTAFSON PARK
 PREPARED FOR: CITY OF GREEN COVE SPRINGS
 halff logo
 9885 GATE PARKWAY N, SUITE 200
 JACKSONVILLE, FLORIDA USA 32246
 PHONE 904.730.8360 WWW.HALFF.COM
 FL CA 33380 FL LC 26000645

NO.	DATE	DESCRIPTION

SEAL
 CODY B. SMITH, P.E. #81393
 PRELIMINARY - NOT FOR CONSTRUCTION
 PROJECT NO.: 037756.094
 ISSUED: 2/14/2024
 DRAWN BY: NTD
 CHECKED BY: CBS
 SCALE: N/A

STORM DRAINAGE STANDARD DETAILS
 C-202

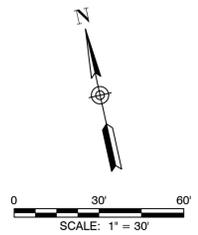
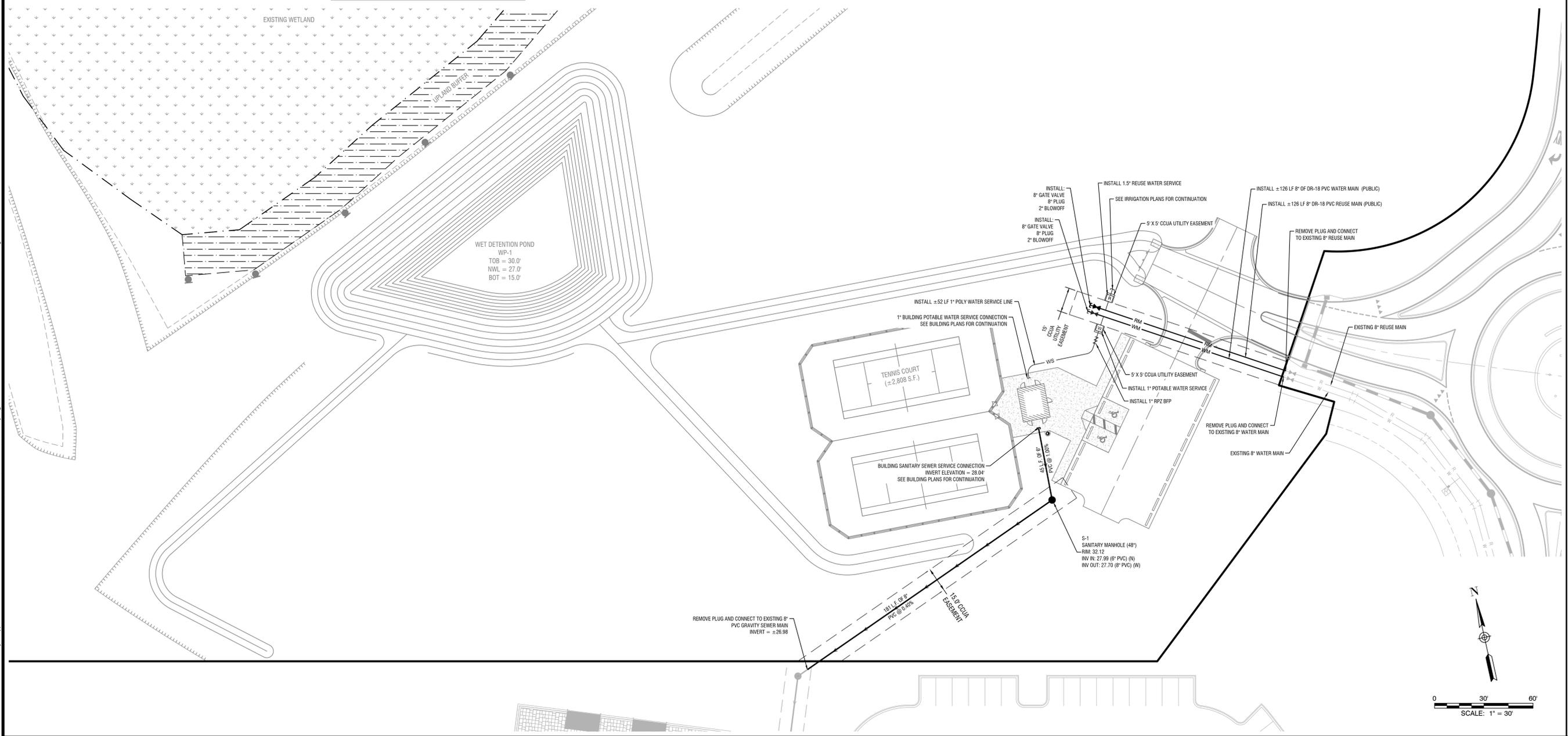


PROPOSED GRAVITY SEWER PROFILE

- NOTES**
- SEE SHEET C-002 AND C-003 FOR GENERAL NOTES.
 - SEE SHEET C-301 AND C-302 FOR UTILITIES STANDARD NOTES AND DETAILS.
 - ALL SANITARY SEWER PVC PIPE AND FITTINGS SHALL BE SDR-26 PVC, GREEN IN COLOR.
 - ALL RECLAIMED WATER MAIN LINES SHALL BE DR-18 PVC (AWWA C900, 235 PSI), PURPLE IN COLOR.
 - ALL POTABLE WATER MAIN LINES SHALL BE DR-18 PVC (AWWA C-900, 235 PSI), BLUE IN COLOR.
 - ALL POTABLE WATER SERVICE LINES SHALL BE SDR-9 HDPE (AWWA C901, 250 PSI), BLUE IN COLOR.
 - ALL RECLAIMED WATER SERVICE LINES SHALL BE SDR-9 HDPE (AWWA C901, 250 PSI), PURPLE IN COLOR.
 - REFER TO THE BUILDING PLANS FOR ADDITIONAL DETAILS AND EXACT LOCATIONS OF BUILDING SERVICE CONNECTIONS.
 - ALL WATER AND SEWER CONSTRUCTION SHALL COMPLY WITH THE LATEST CLAY COUNTY UTILITY AUTHORITY CONSTRUCTION STANDARDS AND SPECIFICATIONS.
 - ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
 - EXISTING CONDITIONS FOR ARE BASED ON THE TOPOGRAPHIC SURVEY FOR THE OVERALL GUSTAFSON PARK PREPARED BY CHARLES BASSETT & ASSOCIATES, INC. DATED 1-15-2024. FUTURE CONDITIONS OF THE ADJACENT ROOKERY DEVELOPMENT ARE BASED ON THE ELECTRONIC FILES PROVIDED BY DUNN & ASSOCIATES, INC. FUTURE CONDITIONS OF THE ADJACENT ROOKERY AMENITY CENTER ARE BASED ON THE ELECTRONIC FILES PREPARED BY HALFF ASSOCIATES, INC.

LEGEND

- EXISTING WETLAND
- UPLAND BUFFER
- PROPOSED BUILDING EXTENTS
- SITE BOUNDARY
- WETLAND LINE
- UPLAND BUFFER LINE
- EXISTING WATER MAIN (W)
- PROPOSED WATER MAIN (WM)
- PROPOSED WATER SERVICE LINE (WS)
- EXISTING RECLAIMED WATER MAIN (R)
- PROPOSED RECLAIMED WATER MAIN (RM)
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER



PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

9985 GATE PARKWAY N, SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.8360 WWW.HALFF.COM
FL CA 33380 FL CA 33380

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: NTD
CHECKED BY: CBS
SCALE: 1" = 30'

UTILITY PLAN

C-300

2/14/2024 10:41:47 AM Tyler Kessler A:\37706\037756\037756\HALFF\LOCADD\SheetC-300 Utility.dwg jax Civil - Full Weight.cb

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF SEWAGE COLLECTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new sewerage system, complete, in accordance with the plans, specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and in accordance with Clay County Utility Authority Approved Materials Manual and City/County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above, whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be of those listed in the CCUA Approved Materials Manual. The installation shall be warranted by the Contractor as to materials, workmanship and accuracy of the As-Built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality, i.e., sewers shall be laid true to line and grade, fittings shall be properly installed and restrained, trenches shall be properly excavated and backfilled, manholes shall be installed at locations and to elevations shown on the plans.

02.1 Contractor LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State Of Florida Underground Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted in lifts, the first of which shall be to the spring line of the pipe by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 98% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

05. MANHOLES. Manhole bases, sections, and covers shall conform to the requirements of ASTM C478, Specifications for Precast Reinforced Concrete Manhole Sections. Cement shall meet the requirements of ASTM C150, Specifications for Portland Cement. Type II. Concrete shall meet the minimum requirements for Class "A" concrete. Minimum wall thickness shall be 11/2 inches in diameter in inches plus one (1) inch. Bases for manholes shall be cast integrally with the bottom manhole section. Joint contact surfaces shall be formed with machined castings they shall be at least 1 degree slope and nominal 1/16 inch clearance with the adjacent manhole section for a proper recess for the installation of an O-ring rubber gasket, conforming to ASTM C443, Joints for circular Concrete sewer and Culvert pipe using Rubber gasket, or RAM-NEK premolded Plastic Joint Sealer with joints Manhole adjustment materials shall be sound, hard, and pre-primed. Precast concrete adjustment rings as manufactured by Taylor Precast Co. (or equal) may be utilized in lieu of brick adjustment. Field mortar for brick shall be composed of portland cement, Type II, sand and clean water. Mortar shall be one part cement by weight and two parts sand by volume. The outside faces of brick masonry shall be plastered with mortar from 1/4" to 3/8" thick. Precast manhole walls shall not be coated unless otherwise noted. Cement grout for manhole bottoms shall be a stiff rich mix of Type II Portland Cement and clean sand. Concrete shall contain chloride may be added (maximum of 2%) to aid in obtaining a faster set. All permanent pump station locations, the first upstream manhole from the station shall be lined with a polyethylene liner as manufactured and installed by Taylor Precast Co., or approved equal.

05.1 CAST IRON MANHOLE FRAMES AND COVERS. Cast iron manhole frames and covers shall be as detailed on drawings. Castings shall meet the requirements of ASTM A48, Specifications for Gray Iron Castings, Class No. 30, or Grade 65-45-12, Ductile iron meeting the requirements of ASTM A536, Standard Specification for Ductile Iron Castings. In either case, manhole frame and cover shall be designed to withstand an HS20-44 loading defined in the AASHTO Specifications. Frames and covers shall be machined or ground at touching surfaces so as to seat freely and prevent cracking.

05.2 FLEXIBLE MANHOLE CONNECTOR. All connections between sewer pipe and pre-cast concrete manholes shall be accomplished by a Flexible Connector, "Kor-N-Seal", as manufactured by National Pollution Control Systems, Inc., or approved equal.

05.3 FLOW CHANNELS. Flow channels in manhole base shall be formed of D.O.T. Class I Type II cement grout with brick and trowel to a smooth surface finish. Grout surface shall be 1" min. thickness over brick or rubble. While the manholes are under construction, cut pipes of inside pipe of the manhole and construct the invert to the shape and sizes of pipe indicated. All inverts shall provide a consistent gradient from influent pipe to effluent pipe through manhole. Changes in direction of the sewer and entering branches shall be laid out in smooth curves of the largest possible radius which is tangent to the center lines of the adjoining pipelines.

05.4 DROP INLETS. Where shown on the drawings, drop inlets to manholes shall be constructed as shown on the drawings and specified herein.

06. POLYVINYL CHLORIDE PIPE. Polyvinyl Chloride Sewer Pipe shall conform to the requirements of ASTM D-3034, SDR 26. The PVC compound conforming to ASTM D-1784. Pipe shall be easily marked in 5 ft. intervals or less, indicating Manufacturer name, nominal size, cell classification and legend. Joints shall be push-on rubber gasketed, conforming to ASTM 3212. Pipe and fittings shall be installed in accordance with recommended practice ASTM D-2121. All pipe and sewer fittings shall be heavy wall, installed up to a depth of 15' from finish grade to Invert of pipe. Maximum depth of design sewer without prior approval shall be 13 feet. Sewer pipe and fittings up to 15' in depth shall be DR-18 P.V.C. Gravity sewer installation over 15' in depth shall have CCUA's prior approval.

07. PIPE BETWEEN MANHOLES. All piping installed between manholes shall be the same material and class. No dissimilar pipe materials will be allowed anywhere within a single run of pipe.

08. SANITARY SEWER LATERALS. Sanitary sewer laterals shall be Polyvinyl Chloride Pipe conforming to the requirements of ASTM D-3034, SDR 26 where cover over top of pipe is 36 inches or greater. Where cover over top of pipe is less than 36 inches, specific construction conditions shall be directed by the City/County Utility Authority. All sanitary sewer laterals shall be a minimum of 4" depth at the right-of-way line to the top of pipe. Any sanitary sewer lateral which must be more than 6" depth shall not be installed prior to obtaining permission from the CCUA Engineering Department. All sanitary sewer laterals shall be 6-inch diameter from the man to the right-of-way line with a minimum slope of 0.60% (0.6 feet per hundred feet). In single family residential developments, services shall reduce to 4" in size at the property utilizing the proper fittings for the type of pipe specified. All sewer service laterals over 12' deep shall be constructed of DR-18 PVC pipe, and DR-18 PVC fittings, per CCUA standard sewer system details.

09. FORCE MAINS. Force mains shall be C900 DR-18 PVC and conform to the requirements of ASTM D-1784, D-2241, D-3139 and F-477. Pipe shall be color coded and marked "FORCE MAIN" on at least two sides and at every 12" along the pipe. Ductile iron pipe for force main services shall be installed in accordance with the following: Ductile iron pipe shall be installed in accordance with the following: Ductile iron pipe shall not be used without prior approval of the City/County Utility Authority. Fittings shall be C110 gray iron and shall be polylined. Force mains less than 3" shall be SCH80 PVC. All force mains shall be installed with tracers per approved CCUA standard location wire details. All force mains should be installed 5 feet to top of pipe, unless approved by CCUA.

09.1 LIFT STATION VALVES. See CCUA Approved Materials Manual for acceptable plug valves and check valves.

09.2 FORCE MAIN VALVE. Gate valve, resilient seated, same as specified in Water Distribution System Specifications Section 11 at right. Except valve bodies shall be gray iron. Valve box shall have the word "SEWER" cast into the cover.

09.3 FORCE MAIN JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all force main tees, crosses, valves and bends. See CCUA Approved Materials Manual for acceptable restrainers. (SEE RESTRAINED JOINT SCHEDULE)

09.4 FORCE MAIN PIPE FLUSHING. All force main piping shall be flushed with clean water utilizing full pipe diameter. In cases where the water supply is inadequate to flush the full pipe diameter, flushing shall occur to the extent of the water supply that is available.

10. INSTALLATION. All sewer lines, manholes, and appurtenances shall be constructed to the dimensions and elevations indicated on the drawings. Trenches shall be excavated to a width approximately twice inches greater than the outside diameter of the pipe. Machine excavation shall be to a depth one-fourth pipe diameter above proposed pipe grade. The remaining depth shall be hand excavated and shaped to give full support to the lower one-fourth of each pipe. Each section of pipe shall be inspected for defects prior to being lowered into the trench. The inside of each bell and the outside of each spigot shall be thoroughly cleaned of all foreign matter prior to making the joint. All sewer lines shall be constructed with the spigot ends pointing in the direction of the flow. Both the bell and the spigot of each joint shall be lubricated with the lubricant recommended by the pipe Manufacturer. All sewer lines shall be cleared of foreign matter as construction progresses, and shall be in a clean condition upon completion of construction operations. Pipe materials shall remain the same on runs between manholes and other structures.

11. INSPECTIONS. Each section of the completed sewer system shall be inspected for proper alignment. Any section of the sewer system which does not display true, concentric alignment shall be reinstated at no additional expense to the Owner. A written report of inspection shall be kept indicating location of test, potential problems in sewer, dips and depth of water, service locations, and other irregularities in the pipe lines. An image in DVD format shall be made of the television inspection and submitted to the Engineer and the Clay County Utility Authority. Copies of inspection and test reports from a licensed testing agency shall be made available to CCUA if requested.

11.1 TELEVISION INSPECTIONS Television inspection will be required on all new gravity sewers constructed. This service shall be provided by the Contractor as a part of this Contract. The newly constructed sewer shall be inspected in the presence of the Engineer or City/County Utility Authority. A full report as to the condition of pipe, type, depth, location of services, length, joint and distance between manholes, etc., shall be furnished to the CCUA inspector prior to the final acceptance of the system. Any pipe found to be cracked, leaking or otherwise defective shall be removed and replaced with new pipe at an additional costs to the Owner. Deflection testing with 5% mandrel also required. Any section not passing the mandrel test shall be corrected. Sewer mains shall be cleaned after curb and line are in place. The Contractor shall furnish and install all necessary materials, equipments, shall be properly enforcing the gravity sewer. Limerock pitting and paving operations shall not take place until the CCUA inspector has reviewed the limerock recorded DVD and approved the gravity sewer system. This will be strictly enforced. All gravity sewer shall be installed in accordance with the CCUA Approved Materials Manual. The only subcontract CCUA will require for each item of materials with the following exception: any alternate materials must be approved by the Engineer and CCUA materials Manual and all materials associated with pumping stations and plant installations. Those exceptions shall have an individual shop drawing submitted to CCUA in writing and approved prior to any installation of said materials. This is CCUA's procedure and it does not preclude the Design Engineer from requesting additional submittals and shop drawings as he deems necessary for the project.

11.2 INFILTRATION TEST. After completion of the sewers or sections thereof, shall be tested and gauged for infiltration. To check the amount of infiltration, the Contractor, to be added compensation over the contract price for the sewers, shall furnish, and install and maintain a V-notch sharp crested weir in a wood frame on the main sewers as directed by the Engineer. Maximum allowable infiltration shall be 50 gallons per mile, per inch of dia. of sewer per 24 hour day, at any time.

11.3 EXFILTRATION TEST. In areas where ground water is not encountered in sewer construction, or it is desired to run infiltration tests, the Contractor shall furnish and install all necessary materials, equipments, shall be properly enforcing the gravity sewer. Limerock pitting and paving operations shall not take place until the CCUA inspector has reviewed the limerock recorded DVD and approved the gravity sewer system. This will be strictly enforced. All gravity sewer shall be installed in accordance with the CCUA Approved Materials Manual. The only subcontract CCUA will require for each item of materials with the following exception: any alternate materials must be approved by the Engineer and CCUA materials Manual and all materials associated with pumping stations and plant installations. Those exceptions shall have an individual shop drawing submitted to CCUA in writing and approved prior to any installation of said materials. This is CCUA's procedure and it does not preclude the Design Engineer from requesting additional submittals and shop drawings as he deems necessary for the project.

11.4 INFORMATION SHOWN ON THE DRAWINGS as to the location of existing utilities has been prepared from the most reliable data available to the Utility Authority. The Contractor shall be responsible for requesting underground utility locates and shall assist the utility companies by every means possible to determine said locations and the locations of recent additions to the systems not shown. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from Contractor's activities. The locations of all overhead utilities shall also be verified by the Contractor. The Engineer shall be notified of any conflict that may occur. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

12. CCUA details and specifications (latest available copy) shall be included in all plans submitted for work within the CCUA utility system. No person shall modify, change, omit, or replace any portion of those details and specifications without the express written consent of CCUA. In any instance where the Design Engineer has included his written specifications or details in the plans then the more stringent of the two shall govern.

13. All materials to be used for any project within CCUA's utility system shall conform to those materials listed in the CCUA approved material manual in effect at the time final plans for that project are approved by CCUA.

PIPE SIZE	WATER HEADLOSS DEPTH (INCHES)	
	MINIMUM	MAXIMUM
8"-10" INCH	1.00	1.50
12"-15" INCH	.75	1.50
18"-21" INCH	1.00	2.00
24" INCH AND GREATER	1.25	2.50

12.1 Demarcation box shall be used as an isolation point between the wet well and the motor control center panel. All wiring between the motor control center and wet well shall be interconnected at this point. Install intermetallic seal between the CCUA demarcation box and MCC. All internal hardware including terminal strips, blocks and backplane shall be stainless steel.

12.2 Demarcation box shall be 24" wide, 24" tall and 12" deep nema 4x enclosure manufactured of 316 stainless steel. Enclosure shall have a hinged cover and removable backplane for terminal blocks. The box shall be mounted so that the cover faces away from the wet well.

12.3 Terminal blocks will need to be mounted for each wire passing through the demarcation box. Terminal strips will be rated at 600 volts, sized according to the load present. Antioxidant compound shall be used on all terminal connections. Labels or equal. Nameplates as specified on the electrical standards sheet shall be provided at the terminal blocks to identify each wire.

12.4 All wires including spades shall be identified with heat shrink labels. All control wires shall have spade lugs. Wires shall be 600 volt rated thin/thin/thin.

12.5 DENITRIFICATION. The Contractor shall at all times during construction provide ample means and equipment with which to promptly remove and dispose of all water entering the trench and structure excavations and shall keep said excavations at the minimum depth until the piping and/or structure is fully completed. All water pumped or drained from the work area shall be disposed of in a manner as to not damage sewer, water, electrical or any other piping, structures or property. No pipe shall be laid in water and no water shall be allowed to rise above the bottom of any pipe while it is being piped, except as may be approved in writing by the CCUA.

12.6 HYDROSTATIC TESTING. After all pressure pipes (water mains, services, and force mains) are laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a hydrostatic test of 150 p.s.i. for a period of at least two hours. The engineer and the City/County Utility Authority must be notified 48 hours before a test is to be performed. Test shall be set forth in AWWA standard C900. Any leaks detected shall be corrected and the section of pipeline retested. The two hour test period shall begin when all joints have been determined to be water tight. Leakage shall be limited to that allowance set forth in Section 4 of AWWA Standard C900-87. Hydrostatic and leakage test and blow-down (zeroing of gauges) must occur before sampling for bacteriological test. The maximum allowable pressure loss is 5 p.s.i. regardless of the length of pipe.

12.7 EXTERNAL AND INTERNAL BEADS shall only be removed when required by CCUA. The internal bead shall be removed from all fused joints of a pipe that is to be used as a gravity sewer line, or as a sewer force main line as a sleeve or host pipe which will have another pipe installed inside it. The external bead shall be removed from all fused joints of a pipe which will be installed inside of a sleeve or host pipe and the external bead shall be removed from all fused joints of a pipe to be pulled through a reamed horizontal Directional Drill hole which may have a possible pinch point such as extreme rocky ground conditions or other hazards. The Contractor shall be required to follow the requirements and recommendations of the pipe Manufacturer and Clay County Utility Authority.

12.8 CONCRETE. All Portland Cement concrete shall be of Type II Portland Cement, 2,500 p.s.i. minimum, ready mixed. All concrete shall be placed before the initial set has taken place. Stake or rebarbed concrete shall not be used.

12.9 GATE VALVES AND BOXES. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type material which is installed. Valves 2" and 3" shall be iron boxes, 4" and larger shall be iron body, bronze fitted with resilient seat. The word "WATER" on water boxes and "SEWER" on force main boxes shall be cast in the covers.

12.10 DENWATERING. The Contractor shall at all times during construction provide ample means and equipment with which to promptly remove and dispose of all water entering the trench and structure excavations and shall keep said excavations at the minimum depth until the piping and/or structure is fully completed. All water pumped or drained from the work area shall be disposed of in a manner as to not damage sewer, water, electrical or any other piping, structures or property. No pipe shall be laid in water and no water shall be allowed to rise above the bottom of any pipe while it is being piped, except as may be approved in writing by the CCUA.

12.11 CONCRETE. All Portland Cement concrete shall be of Type II Portland Cement, 2,500 p.s.i. minimum, ready mixed. All concrete shall be placed before the initial set has taken place. Stake or rebarbed concrete shall not be used.

12.12 GATE VALVES AND BOXES. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type material which is installed. Valves 2" and 3" shall be iron boxes, 4" and larger shall be iron body, bronze fitted with resilient seat. The word "WATER" on water boxes and "SEWER" on force main boxes shall be cast in the covers.

12.13 SEPARATION OF WATER AND SEWER MAINS. Horizontal and vertical separation between potable water system mains and appurtenances and sanitary or storm sewers, wastewater or storm water force mains, and reclaimed water shall be in accordance with Rules 62-055.314 F.A.C.

12.14 NEW CONNECTION TO EXISTING MAIN. New connection to existing main in service shall be accomplished by the "wet tap" method utilizing full orifice stainless steel tapping sleeve and mechanical joint tapping valve. Tapping sleeve shall be rated at 200 p.s.i., non-shock working pressure conforming to AWWA Standard C110, latest revision. Stainless steel tapping sleeves shall be those listed in CCUA approved materials manual in effect at the time final plans for that project are approved by CCUA. Valves shall conform to Section 9.2 of these specifications.

12.15 JOBSITE SAFETY. While on the job site, the Contractor shall at all times observe all Federal, State and local safety rules, regulations and laws. This includes, but is not limited to, confined spaces and excavation protection systems as per O.S.H.A. standards.

12.16 CCUA SHOP DRAWING AND SUBMITTAL PROCESS. A signed acknowledgment by the Contractor and the Material Supplier, on that Shop Drawings and CCUA's Approved Materials List Form, that all materials will be installed in accordance with the CCUA Approved Materials Manual, is the only subcontract CCUA will require for each item of materials with the following exception: any alternate materials must be approved by the Engineer and CCUA materials Manual and all materials associated with pumping stations and plant installations. Those exceptions shall have an individual shop drawing submitted to CCUA in writing and approved prior to any installation of said materials. This is CCUA's procedure and it does not preclude the Design Engineer from requesting additional submittals and shop drawings as he deems necessary for the project.

12.17 PUMP STATIONS (TEMPORARY OR PERMANENT). All pump stations shall be constructed in accordance with CCUA standards, rules and regulations and be approved by CCUA and all materials shall meet the requirements of CCUA Standard Pump Station Details and Specifications or the plans, details and specifications for that specific pump station. A driveway shall be provided from the street (roadway) to within 2 feet of the pump station wall. Minimum 10 feet wide x 6 inches thick 3,500 p.s.i. concrete. Submersible pump stations shall be fenced completely about the perimeter of the pump station site location of the pump station site as noted on the plans, including gates and all other items required to make a completely fenced installation. The entire pump station site within the fenced area shall be covered with #57 stone, 6 inch thick minimum, placed over silt cloth.

12.18 INFORMATION SHOWN ON THE DRAWINGS as to the location of existing utilities has been prepared from the most reliable data available to the Utility Authority. The Contractor shall be responsible for requesting underground utility locates and shall assist the utility companies by every means possible to determine said locations and the locations of recent additions to the systems not shown. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from Contractor's activities. The locations of all overhead utilities shall also be verified by the Contractor. The Engineer shall be notified of any conflict that may occur. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

12.19 CCUA details and specifications (latest available copy) shall be included in all plans submitted for work within the CCUA utility system. No person shall modify, change, omit, or replace any portion of those details and specifications without the express written consent of CCUA. In any instance where the Design Engineer has included his written specifications or details in the plans then the more stringent of the two shall govern.

13. All materials to be used for any project within CCUA's utility system shall conform to those materials listed in the CCUA approved material manual in effect at the time final plans for that project are approved by CCUA.

14. Under no circumstance shall any trees be planted within a CCUA utility project except:

- a. CCUA approving landscape and irrigation plans.
- b. CCUA inspecting the installation of root barrier material (required at all trees which are closer than 7.5' to any CCUA utility line) as shown in CCUA approved material manual and CCUA approved shop section details, whether or not shown on the plans.

15. At all Jack & Bore locations a CCUA inspector shall inspect the casing spacers to verify they are the correct size and have been installed correctly on the pipe prior to the pipe being installed into the pipe casing. The pipe casing shall be clean and free of all dirt, and shall be cleaned with a Vac-Con if necessary. A CCUA inspector shall be present at all time during the work. Contractor shall be responsible to establish the correct elevation of the Jack and Bore carrier pipe and pipe casing. Contractor shall compact the bottom of the excavation to assure the density of earth is adequate to prevent any settlement of equipment used to perform the Jack and Bore operation.

Contractor shall, at all Jack and Bore pits, provide and utilize the necessary de-watering equipment to keep the excavation dry and free from water in accordance with Paragraph 7 of the General Notes. Contractor shall, at all Jack and Bore excavations, provide a rock bed of #57 stone (a minimum of 6 inches thick) to support the track and rail system of the Jack and Bore equipment. This shall be inspected by a CCUA inspector and approved by the inspector prior to beginning the placement of the pipe casing. Contractor shall replace, at his/her expense, any Jack and Bore installed which CCUA refuses to accept for ownership and which does not meet the requirements of CCUA, due to incorrect grading, damaged or faulty equipment, workmanship or failure in anything that CCUA deems as inadequate to perform its intended use.

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF WATER DISTRIBUTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new water distribution system, complete, in accordance with the plans and specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and Approved Materials Manual and Clay County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above, whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be in conformance to National Sanitation Foundation (NSF) 61 and those listed in the CCUA Approved Materials Manual. Materials shall be warranted by the Contractor as to materials, workmanship and accuracy of As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality, i.e., mains shall be laid in a uniform alignment, fittings shall be properly restrained, trenches shall be properly excavated and backfilled, fire hydrants and valve boxes shall be installed as specified. All water mains shall be installed with tracer wire per CCUA standard location wire details.

02.1 CONTRACTOR LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State Of Florida Undergrround Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 98% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

05. JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all water main tees, crosses, valves and bends. See CCUA Approved Materials Manual for acceptable restrainers. (SEE RESTRAINED JOINT SCHEDULE)

06. DUCTILE IRON PIPE. Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C150) latest, "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure of 250 p.s.i. for an 8-foot depth of cover, Class 51 minimum and shall be ANSI A21.51 (AWWA C151), latest centrifugally cast pipe. Laying lengths shall be 20 feet or less in length, and shall be clearly marked with pressure rating, thickness, class, height of pipe without lining, and Manufacturer. Ductile iron pipe for water service shall be furnished with cement lining per AWWA C110, C115 and C151. The pipe shall have design values of 60,000 p.s.i. minimum tensile strength, and 42,000 p.s.i. minimum yield strength. Ductile iron pipe for water or service lines shall be used in any assessment, right-of-way, between, and at any instance where a building foundation or other permanent appurtenance is within 10' of the water main or a service line smaller than 3".

07. DUCTILE IRON FITTINGS shall be C153 cement lined and suitable for the type and class of pipe to which connected. Gaskets shall be suitable for potable, domestic water service. Minimum working pressure shall be 150 p.s.i.

08. POLYETHYLENE CHLORIDE PIPE. Polyvinyl chloride pipe for water mains 4 inch through 24 inches in diameter shall be DR15 (C900) Pressure Class 235 per PVC 1120; water distribution mains above 24 inches in diameter shall be DR15 (C900) PVC 1120; Pressure Class 165 psi, conforming to ASTM D-1784, D-2241, D-3139 and F-477, latest, or P.V.C. C900, Class 165, DR-25, conforming to ASTM D-1784, Cell Class 2454, ASTM F-477, ASTM 3-319, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be color coded and marked "WATER" every 12" along the length of the pipe, with lettering facing up. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122, DR-18 shall be used for fire mains.

09. STEEL CASING PIPE. Steel casing pipe shall be of size indicated on the drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.

10. FITTINGS shall be suitable for type of pipe, schedule required. All piping smaller than 4" shall be Schedule 80 PVC.

11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem, flange and seat and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, stamped or screwed. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type of main on which installed. Valves 2" and larger shall be iron body, bronze fitted with resilient seat. Boxes shall be cast iron construction, 7/32" minimum wall thickness and shall be noncast-iron enamel coated. The word "WATER" shall be cast in the cover. Other gate valves smaller than 3" shall be heavy-duty brass ball valves. See CCUA Approved Materials Manual for acceptable valves.

12. WATER METER BOXES. Developer shall be responsible for installation of meter boxes on all water services as part of the water main installation. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the water meter. The Contractor shall be required to open all boxes for the Authority's inspector at the final inspection of the finished project marker shall be painted blue for identification. Meter boxes shall not be placed in any sidewalk or driveway without the approval of CCUA.

13. CURB STOPS. Curb stops shall be cast bronze, inverted key stop, working with check, lock wing type, for locking in the closed position. See CCUA Approved Materials Manual for acceptable curb stops.

14. FIRE HYDRANTS. Fire hydrants shall be traffic type, 150 pound working pressure, AWWA Standard C502, latest revisions, with two 1/2" NPT 6" male iron pipe (MIP) 5" main water. Fire hydrant shall be compression type, break a part, lacquoting and bolts. Pipe shall be installed in accordance with the following: Fire hydrants shall be painted silver, BP Mobile Plastics, Liquid Aluminum, 1151 alloy weight 56.6% x volume 41.2% VOC 3.76 lb per gallon with 1/2" ports, opening to the pipe (CCUA Approved). (Reference Manual for acceptable fire hydrants.)

15. INSTALLATION. The minimum cover over top of potable water main shall be 36". All water lines and appurtenances shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept during laying operations by means of pumps or other approved methods. All pipe shall be checked for defects before being lowered into the trench. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

16. DEFLECTION OF all pipe regardless of the type or size shall be installed in accordance with the Manufacturer's specifications or recommended criteria for the pipe being installed. No pipe shall be installed with the joints over-assembled or over-tensioned. The reference mark (home-line) shall not be installed into the bell beyond the Manufacturer's recommendation. The Contractor shall be responsible to mark any pipe cut to length with a reference mark (home-line) placed at the correct location on the pipe according to the type and size pipe being installed. CCUA will not permit any pipe joint to be laid in place if the joint is over-tensioned. It shall be the Contractor's responsibility to obtain the information pertaining to installation of pipe to be installed from the Supplying Manufacturer and to install the pipe accordingly.

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19. Any utility pipe regardless of the type or size which has been abandoned, or taken out of service or out of use for any reason, shall either be removed from the ground for its entire length and disposed of in a legal manner, or shall be ground filled in place for its entire length. A CCUA inspector shall be present and witness the ground filling of the pipe from the first inspection of the pipe to the final inspection of the pipe. The Contractor shall be responsible to obtain the information pertaining to installation of pipe to be installed from the Supplying Manufacturer and to install the pipe accordingly.

20. Disinfection Notes: a. Only CCUA staff is authorized to change or adjust existing CCUA valves. b. The General Superintendent of the Distribution and Collection System must be informed of any changes to existing CCUA valves. c. The scheduling of the disinfection process for new developments installing water mains must be coordinated with CCUA staff. d. CCUA inspectors must be present to observe and monitor the disinfection process.

21. CLOSE OUT/COMPLETION. Minimum items required for Close Out/Completion for submittal to the Clay County Utility Authority will include: a. Construction Warranty from Developer in the form of a Bond, Letter of Credit or Cashier's Check for a two-year period. b. Warranty Certificate for a two-year warranty from the Contractor to the Developer and assignment of same to the Clay County Utility Authority (CCUA). c. Developer's Affidavit certifying there is no outstanding debt against utility assets to be devoted to CCUA. d. Value of Acceptance Report showing values of assets to be devoted to the CCUA. e. Bill of Sale to CCUA. f. Bacteriological Tests. g. Pressure Tests. h. Television Reports and Recorded DVDs. i. Locate Reports. j. Locate Wire test. k. Final As-Built Drawings and disks.

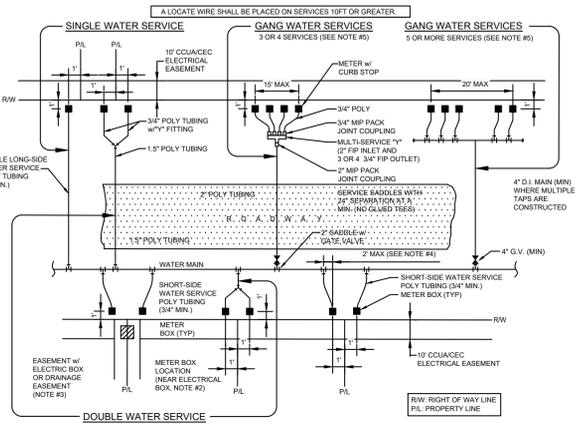
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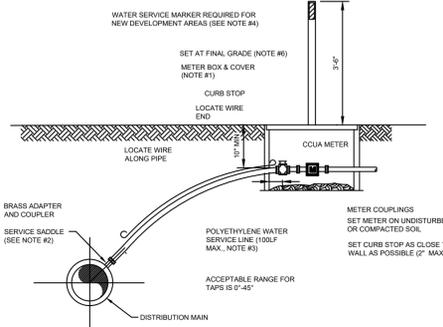
26. TESTS. After the pipe is laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a Hydrostatic and Leakage test of 150 pounds per square inch for a period of at least two hours. During this period, all joints shall be inspected to determine water tightness of the system. Any leaks detected shall be corrected. Tests shall



- NOTES**
- THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1' OFF OF THE ROW LINE.
 - UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BROWARD), THE METER BOX SHALL BE LOCATED 1' OFF OF THE ROW LINE AND 1' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONDUIT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX) INSIDE PROPERTY LINES (IN LIEU OF 1' FEET). UNLESS APPROVED OTHERWISE BY CCUA, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS NOT IN SIDEWALKS OR DRIVEWAYS. IF AN UNAPPROVED METER BOX IS IDENTIFIED BY CCUA, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. CCUA SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
 - IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
 - FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM FOR DOUBLE 3/4" SERVICES. THE 1" POLY MAIN SHALL BE LOCATED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 1" OR GREATER IN LENGTH. IF LOCATE WIRE IS REQUIRED, THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 2 INCHES OF INSULATION WIRE AS LONG AS ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
 - GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. TAPS SHALL EXTEND FROM THE WATER MAIN FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED. THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR RESIDENTIAL CUSTOMERS. UTILIZING 4" C.V. 4" PIPING, 4" X 1" SADDLES AND 1" CURB STOPS (NO GLEUED TIE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.
 - RECLAIMED WATER METER BOXES OR SERVICES SHALL BE CONSTRUCTED SIMILAR TO THE ABOVE AND SHALL BE LOCATED AT A MIN. OF 10' FROM THE POTABLE WATER SERVICE AND/OR BOX, AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY CCUA.

POLYETHYLENE WATER SERVICE DETAILS (NTS)

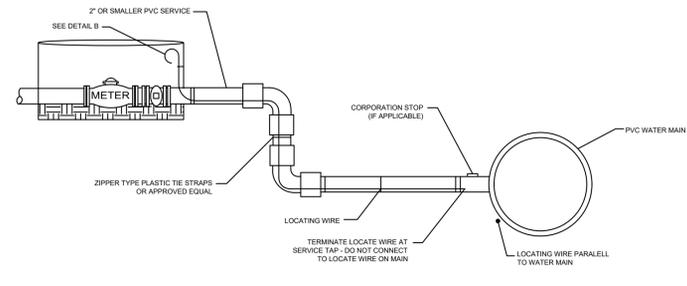
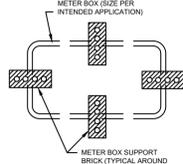
CLAY COUNTY UTILITY AUTHORITY STANDARD DETAILS WATER



- NOTES**
- SEE CCUA-APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.
 - SINGLE BAND SADDLES MAY BE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 1" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 1 1/2" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.
 - NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT POLY LINE WITH 50' MIN. COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100' UNLESS OTHERWISE APPROVED BY CCUA.
 - INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS NOT IN USE (I.E. IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6" P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (H6X ON BARREL TYPE).
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
 - METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E. NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
 - LOCATE WIRING REQUIRED ON ALL SERVICES 1" OR GREATER IN LENGTH / OFFSET GREATER THAN 2'.

WATER SERVICE DETAIL - 2" AND SMALLER METER

METER BOX SUPPORT DETAIL



CONNECTION TO PVC MAINS

DETAIL - A

LOCATE WIRE

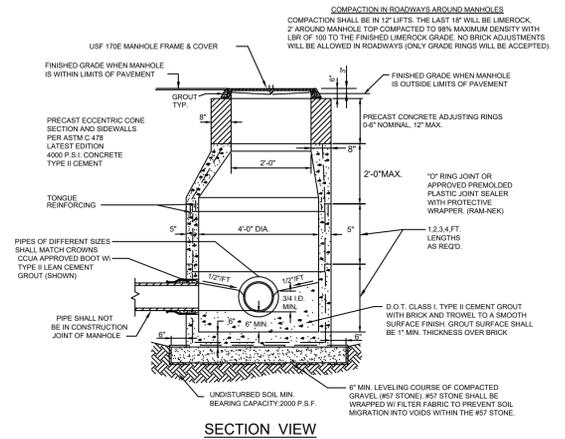
LOCATE WIRE TESTING REQUIREMENTS
 Installed locate wiring shall be tested by the contractor as part of the final inspection procedure, using a certified tester and approved testing equipment. The Contractor shall notify CCUA at least 48 hours in advance of the testing period. At this time the Contractor shall tell CCUA the number of locate personnel to be used for the wire testing, so that CCUA can assign an inspector to work with each locate wire tester. If CCUA has not been notified of the correct number of testing personnel to be used, then the only testers allowed to test the wire shall be those who have a CCUA assigned inspector to work with them. The CCUA Inspector shall have the plans on-site, as shall the testing personnel, for the purpose of recording the required test information (ie passed and failed sections) and for as-built preparation. The CCUA field representative or inspector shall be present during the testing period, and have the authority to request tester to retest sections if inspector suspects any problems within that section. The contractor shall provide the Certified Tester a copy of the project site drawings (as-builts preferred). A tone shall be put on the locate wire. The technician shall trace the entire length of the installed wire and spot paint the location at least at 100-foot intervals along the route. The depth shall be tested at 100-foot intervals and tester shall record the depth of pipe/wire on the report at each 100' interval. The certified tester shall report (show on drawings) where the pipe/wire has less than the allowable minimum cover (36 inches) or more than the maximum allowable cover (60 inches) unless called for on the plans or requested and approved by CCUA during the installation of said piping. All lateral stub-outs shall be marked with pain and the depth recorded. A final Locate Wire Report (statement by the certified tester), shall be submitted to CCUA for review and approval. The report shall include a signed statement from the certified tester which certifies that all installed wire (where shown on the drawing), was successfully (sounded), traced with no open breaks. The report shall also include a copy of the project site drawings which indicate all field notes, breaks found/required, depths (if installed outside the acceptable cover limits), and other applicable field remarks by the certified tester. A Certified copy of the report and marked-up drawings shall be furnished to CCUA prior to final acceptance of the project or as approved otherwise by CCUA.

LOCATE WIRE INSTALLATION
 Contractor shall furnish and install locate wiring on all water mains, sewer force mains, and reclaimed water mains (both PVC and ductile 11" and greater). Locate wire must be attached to mains and services with duct tape or approved iron) and on all service mains 1 1/2" plastic zipper ties, (pulled tight to keep wire from rotating out of location), at each side of bell joint or fitting and at 10 foot intervals along pipeline (at a minimum). Locate wire shall be brought to grade within a valve box or locating station box, as required, at 475 foot intervals (see note # 2 this page). Locate wire shall be installed in box and along pipeline as detailed in the CCUA Standard Details. Locate wire shall be installed beneath the pipe line at the 5:00 to 7:00 o'clock position on the pipe. Connection or splices underground which are not inside a locate box (or valve box), shall be prohibited unless approved otherwise by CCUA. The request to make an underground connection or wire splice shall be done in writing to CCUA. The request shall contain the complete job name, name of street, station number as shown on plans and scaled as close as possible to the location of splice or connection, and the reason for request. CCUA shall have at least 48 hrs. to respond verbally and 5 working days to respond in writing. If an underground connection is unavoidable and approved by CCUA, then the wire shall be first tied in a knot (to minimize future separation), then the wire ends shall be connected utilizing an electric wire nut, then make the connection water tight by using either vinyl mastic tape (4" wide X 0.05" thick by 3M-Scotch 2210), or plastic enclosure (Snaploot Model LV 9500951-4 large by TRH) or CCUA approved equipment.

LOCATE WIRE BOX INSTALLATION
 Where utility mains are to be installed beneath sidewalks, valve boxes shall be installed instead of locate wire boxes. The valve box lids shall indicate the type of line (i.e. water, sewer, or reclaimed water). The valve box shall be adjusted so the top of valve box is flush with the finished sidewalk grade. If for any reason a locate wire box must be offset from the C.I. of pipeline, then the contractor shall have installed an adequate length of wire to avoid splices and the exact location of the locate box including the amount of the offset distance shall be recorded on the As-builts.

AS-BUILT DRAWINGS
 Shall comply to the guidance set forth in CCUA's 'As-built Specifications Standards Manual', which can be obtained from CCUA's website (www.ccuacity.org).

Definitions:
 Approved Testing Equipment shall include variable frequency controls, digital depth read-out and tone continuity. The following is a list of approved equipment - Dynatel (3M)-2273 Cable/Fault Locator, Metrotech 9800XT, Ditch Witch 950 R/T or CCUA pre-approved equal.
 Certified Tester - A person or company that has been certified by the Manufacturer of the approved testing equipment as proficient in the use of the equipment has 8 months experience in the use of the equipment including documented proof of past performance.
 CCUA Approval: Clay County Utility Authority shall have the authority to approve Certified Tester, or deny the approval of Certified Tester to work on Utility's System. CCUA shall have the authority to remove any previously Certified Tester from its approved list of Certified Testers as CCUA deems necessary.

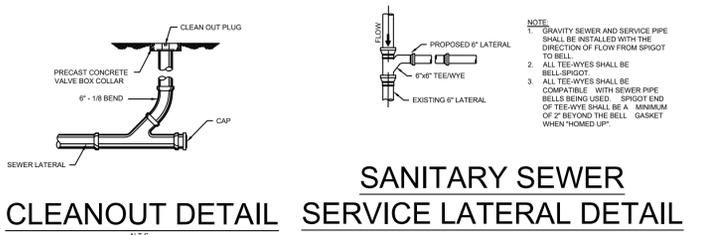


SANITARY SEWER MANHOLE

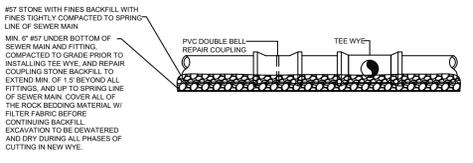
NOTE: THIS DETAIL IS SHOWN FOR CONNECTION AND BENCHING DETAILS ASSOCIATED WITH CORING OF EXISTING MANHOLE AND INSTALLATION OF NEW 6" SERVICE LATERAL INTO MANHOLE.

ELEVATION DIFFERENCE ACROSS MANHOLE

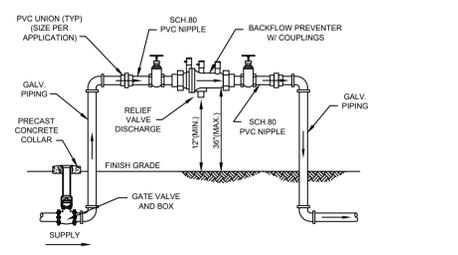
MANHOLE INVERTS DESIGN CRITERIA
 FALL ACROSS MANHOLE FROM INFLUENT TO EFFLUENT OF IN-LINE PIPES SHALL BE 0.05 FT. MIN. INFLUENT TO EFFLUENT PIPES THAT ARE AT AN ANGLE SHALL BE 10 SEE "ELEVATION DIFFERENCE ACROSS MANHOLE" THIS SHEET.



CLEANOUT DETAIL SERVICE LATERAL DETAIL



CUTTING IN SERVICE LATERAL TO EXISTING SERVICE LATERAL



REDUCED PRESSURE BACKFLOW PREVENTER 2" DIAMETER AND SMALLER (NTS)

BACKFLOW PREVENTER NOTE:
 DESIGNS SHOWN FOR BACKFLOW PREVENTER INSTALLATIONS ARE REQUIRED FOR CCUA OWNED INSTALLATIONS - SEE CCUA APPROVED MATERIALS MANUAL. THE BOTTOM OF THE BACKFLOW PREVENTER VALVE IS TO BE NO LESS THAN 12" OR MORE THAN 36" ABOVE THE NATURAL FLOOD GRADE. (SEE CCUA PUMP STATION DETAIL SHEETS) (ALL) FOR BACKFLOW PREVENTERS AT PUMP STATIONS.

CLAY COUNTY UTILITY AUTHORITY STANDARD DETAILS SEWER

PRIVATE SEWER LATERAL STANDARD DETAILS

GUSTAFSON PARK

CITY OF GREEN COVE SPRINGS

PROJECT NAME

PREPARED FOR

half

9885 GATE PARKWAY N. SUITE 200
 JACKSONVILLE, FLORIDA USA 32246
 PHONE 904.730.9360 WWW.HALFF.COM
 FL LC 26000645
 FL LC 33380

NO.	DATE	DESCRIPTION

SEAL	CODY B. SMITH, P.E. #81393
PRELIMINARY - NOT FOR CONSTRUCTION	
PROJECT NO.:	037756.094
ISSUED:	2/14/2024
DRAWN BY:	NTD
CHECKED BY:	CBS
SCALE:	N/A

WATER AND SEWER STANDARD DETAILS

C-302

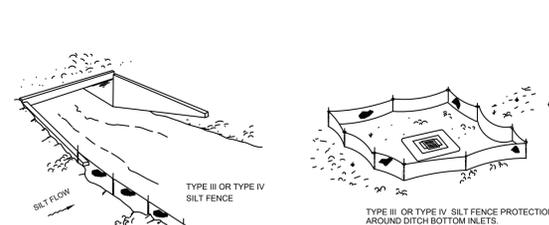
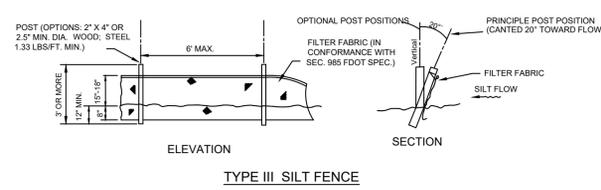
2/14/2024 10:42:01 AM Tyler Kessler A:\37006\977606\HALF\LOCADD\SheetC-300 Notes and Detail Sheet.dwg

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

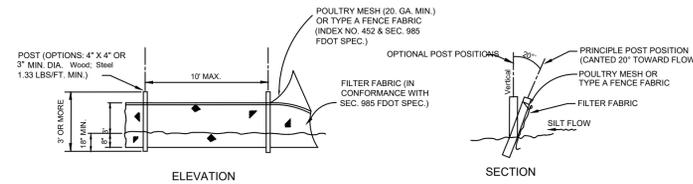
EROSION AND SEDIMENT CONTROL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
- ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
- CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
- WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
- FOOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED IN D-903. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
- IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.R.) CHAPTER 6.
- EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
- SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
- ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
- DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- ALL DISTURBED AREAS ARE TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
- ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
- THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
- THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER DEP. INQUIRIES, RELATIVE TO COMPLIANCE OF DEP FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.

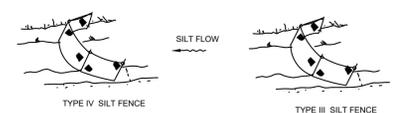
NOTE:
WHERE FOOT SPECS AND INDEX ARE REFERENCED, PLEASE REFER TO FDOT ROADWAY & TRAFFIC DESIGN STANDARDS, AND FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.



DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.



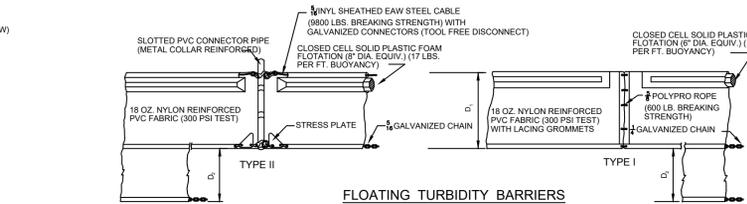
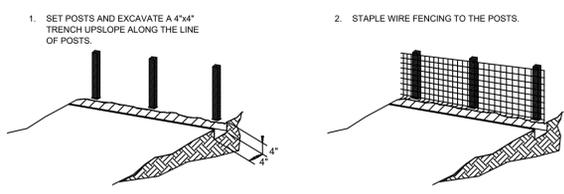
NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT LUMP SUM PRICE FOR EROSION AND SEDIMENT CONTROL.



NOTE: SPACING FOR TYPE III & TYPE IV FENCE TO BE IN ACCORDANCE WITH CHART 1, SHEET 1 OF 3, FDOT INDEX NO. 102 AND DITCH INSTALLATIONS AT DRAINAGE STRUCTURES SHEET 2 OF 3, FDOT INDEX NO. 102.

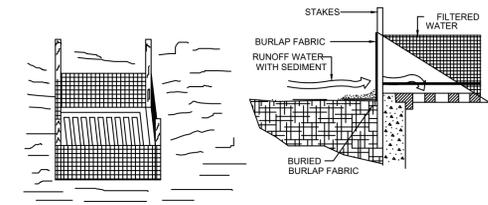
SILT FENCE APPLICATIONS

SILT FENCE TYPE III & IV



- NOTES:
- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
 - NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
 - DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
 - NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
 - FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS.

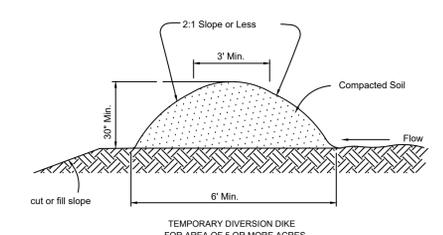
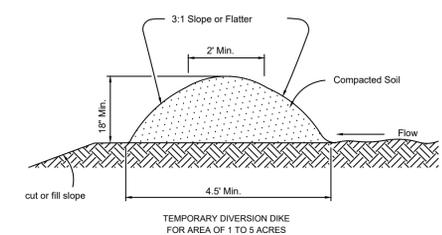
TURBIDITY BARRIERS



SPECIFIC APPLICATION

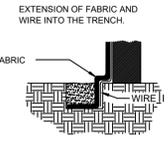
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

DROP INLET SEDIMENT TRAP



DIVERSION DIKE

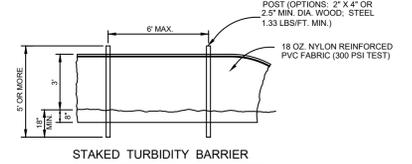
N.T.S.



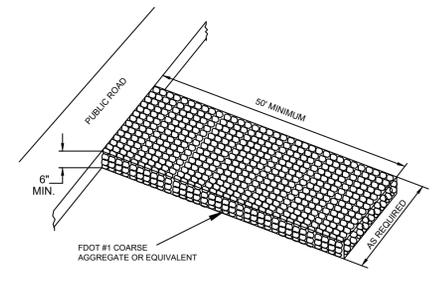
NOTE: SEE EROSION AND SEDIMENTATION CONTROL PLANS FOR LOCATION OF ALL SILT FENCE.

SILT FENCE CONSTRUCTION DETAILS

N.T.S.



NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. HOWEVER, PAYMENT WILL BE UNDER THE CONTRACT LUMP SUM PRICE ESTABLISHED IN THE BID PROPOSAL FOR EROSION AND SEDIMENT CONTROL. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



N.T.S.

PROJECT NAME
GUSTAFSON PARK

PREPARED FOR
CITY OF GREEN COVE SPRINGS

half

9985 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.9360 WWW.HALFF.COM
FL CA 33380 FL LC 26000645

NO.	DATE	DESCRIPTION

SEAL

CODY B. SMITH, P.E. #81393

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: NTD
CHECKED BY: CBS
SCALE: N/A

E&SC GENERAL NOTES AND DETAILS

C-400

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

OWNER'S REQUIREMENTS	CONTRACTOR'S REQUIREMENTS																															
SITE DESCRIPTION	GENERAL	CONTROLS CONT'D.	OTHER CONTROLS	SPILL PREVENTION CONT'D.	MAINT./INSP. PROCEDURES CONT'D.																											
<p>PROJECT NAME AND LOCATION: GUSTAFSON PARK COUNTY ROAD 15A, GREEN COVE SPRINGS 32043 CLAY COUNTY</p> <p>OWNER NAME AND ADDRESS: CITY OF GREEN COVE SPRINGS 4200 RACE TRACK ROAD ST. JOHNS COUNTY, FL 32059</p> <p>DESCRIPTION: PROPOSED PUBLIC PARK WITH A RESTROOM, TWO TENNIS COURTS, PARKING LOT AND ASSOCIATED INFRASTRUCTURE.</p> <p>SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING, EXCAVATION, EARTHWORK, PAVEMENT INSTALLATION AND GRADING.</p> <p>RUNOFF CURVE NUMBERS: 1. PRE-CONSTRUCTION = # 80 2. DURING CONSTRUCTION = # 87.1 3. POST-CONSTRUCTION = # 87.1</p> <p>SOILS: SEE MASTER DEVELOPMENT GEOTECHNICAL REPORT FOR SOILS DATA</p> <p>SITE MAPS: SEE EROSION AND SEDIMENTATION CONTROL PLAN IN THIS PLAN SET FOR LIMITS OF CONSTRUCTION AND LOCATION OF EROSION CONTROL MEASURES.</p> <p>SEE ESOCP GENERAL NOTES AND DETAILS FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.</p> <p>SITE AREA: 1. TOTAL AREA OF SITE = # 21.89 ACRES 2. TOTAL AREA TO BE DISTURBED = # 2.57 ACRES</p> <p>NAME OF RECEIVING WATERS: ST. JOHNS RIVER</p> <p>1. ANTICIPATED START DATE OF CONSTRUCTION: 2. ANTICIPATED END DATE OF CONSTRUCTION: (CONSTRUCTION DATES ARE TO BE FILLED IN BY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION)</p>	<p>THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.</p> <p>SEQUENCE OF MAJOR ACTIVITIES:</p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <table border="0" style="width:100%;"> <tr> <td>1. INSTALL STABILIZED CONSTRUCTION ENTRANCE</td> <td>9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.</td> </tr> <tr> <td>2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED</td> <td>10. APPLY BASE TO PROJECT</td> </tr> <tr> <td>3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN</td> <td>11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING</td> </tr> <tr> <td>4. CONSTRUCT SEDIMENTATION BASIN</td> <td>12. COMPLETE FINAL PAVING</td> </tr> <tr> <td>5. CONTINUE CLEARING AND GRUBBING</td> <td>13. REMOVE ACCUMULATED SEDIMENT FROM BASINS</td> </tr> <tr> <td>6. STOCK PILE TOP SOIL IF REQUIRED</td> <td>14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED</td> </tr> </table> <p>TIMING OF CONTROLS/MEASURES</p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKES/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION & TURBIDITY CONTROL PLAN.</p> <p>CONTROLS</p> <p>IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.</p> <p>EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES</p> <ol style="list-style-type: none"> 1. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES. REFER TO CITY STANDARD DETAIL D-910 FOR PROPER CONSTRUCTION OF THE FILTER FABRIC BARRIER. 2. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE. 3. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE. LEVEL SPREADER SHALL BE CONSTRUCTED IN ACCORDANCE TO CITY STANDARD DETAIL D-914. <p>NOTE: THE 3,000 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.</p>	1. INSTALL STABILIZED CONSTRUCTION ENTRANCE	9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.	2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED	10. APPLY BASE TO PROJECT	3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN	11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING	4. CONSTRUCT SEDIMENTATION BASIN	12. COMPLETE FINAL PAVING	5. CONTINUE CLEARING AND GRUBBING	13. REMOVE ACCUMULATED SEDIMENT FROM BASINS	6. STOCK PILE TOP SOIL IF REQUIRED	14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED	<ol style="list-style-type: none"> 5. STOCKPIILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY. 6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED TO ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS. 7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET. 8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING. 9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH. 10. TEMPORARY GRASSING: THE SEEDDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS. 11. TEMPORARY REGRASSING: IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSSED AREAS HAVE NOT ATTAINED A MINIMUM OF 85 PERCENT UNIFORM GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER. 12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED. 13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES. 14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDDED AND MULCHED OR SODDED. <p>STRUCTURAL PRACTICES</p> <ol style="list-style-type: none"> 1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY, AND IT SHALL BE CONSTRUCTED IN ACCORDANCE TO D-914. 2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA. THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE: <ol style="list-style-type: none"> A. BLOCK & GRAVEL SEDIMENT FILTER: THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. REFER TO D-902 FOR CONSTRUCTION OF A CURB INLET SEDIMENT FILTER, AND D-904 FOR CONSTRUCTION OF A DROP INLET SEDIMENT FILTER. B. GRAVEL SEDIMENT TRAP: THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES IN UNPROTECTED AREAS. REFER TO D-903 FOR CONSTRUCTION OF CURB INLET & DROP SEDIMENT TRAP. C. DROP INLET SEDIMENT TRAP: THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S < 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q < 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS. REFER TO D-905 FOR CONSTRUCTION OF HAY BALE & FABRIC SEDIMENT FILTER. 3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION & SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES & HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL. 4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME. THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,000 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. <p>NOTE: THE 3,000 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.</p>	<p>WASTE DISPOSAL</p> <p>ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p>HAZARDOUS WASTE</p> <p>ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p>SANITARY WASTE</p> <p>ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSITED IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p>OFFSITE VEHICLE TRACKING</p> <p>A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP/AULIN.</p>	<p>PRODUCT SPECIFIC PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:</p> <p>PETROLEUM PRODUCTS</p> <p>ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>FERTILIZERS</p> <p>FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPLILLS.</p> <p>PAINTS</p> <p>ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.</p> <p>CONCRETE TRUCKS</p> <p>WASHING OF VEHICLES SHOULD BE CONDUCTED USING PRACTICES THAT WILL PREVENT DIRECT, UNTREATED DISCHARGES OF WASTEWATER AND HAZARDOUS WASTES TO SURFACE AND GROUND WATERS. A DESIGNATED AREA MUST BE CREATED SPECIFICALLY FOR WASHING VEHICLES THAT WILL BE LAID WITH FILTER FABRIC, CRUSHED STONE (DOT GRAVEL #2 AND UP) AND COVERED WITH LINED BERM.</p> <p>SPILL CONTROL PRACTICES</p> <p>IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:</p> <p>MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.</p> <p>MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, JUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.</p> <p>ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.</p> <p>THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p> <p>SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.</p> <p>THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP PROCEDURES WILL ALSO BE INCLUDED.</p> <p>THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.</p>	<p>* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.</p> <p>* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.</p> <p>* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED. THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.</p> <p>* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.</p> <p>* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.</p> <p>NON-STORM WATER DISCHARGES</p> <p>IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:</p> <p>* WATER FROM WATER LINE FLUSHING</p> <p>* PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).</p> <p>* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).</p> <p>ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.</p>															
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE	9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.																															
2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED	10. APPLY BASE TO PROJECT																															
3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN	11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING																															
4. CONSTRUCT SEDIMENTATION BASIN	12. COMPLETE FINAL PAVING																															
5. CONTINUE CLEARING AND GRUBBING	13. REMOVE ACCUMULATED SEDIMENT FROM BASINS																															
6. STOCK PILE TOP SOIL IF REQUIRED	14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED																															
CONTROLS	INVENTORY FOR POLLUTION PREVENTION PLAN																															
<p>THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTOR'S RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.</p> <p>STORM WATER MANAGEMENT</p> <p>STORM WATER DRAINAGE WILL BE PROVIDED BY (DESCRIPTION:) THE PROJECT WILL CONSTRUCT A STORMWATER CONVEYANCE SYSTEM THAT WILL ULTIMATELY CONNECT TO A STORMWATER POND LOCATED ON SITE.</p> <p>WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN. THE WET DETENTION SYSTEM IS DESIGNED WITH A TWO DAY MINIMUM RESIDENCE VOLUME. THIS IS IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT FOR THIS TYPE OF DEVELOPMENT AT THE TIME OF PERMITTING.</p>	<p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:</p> <table border="0" style="width:100%;"> <tr> <td><input checked="" type="checkbox"/> Concrete</td> <td><input checked="" type="checkbox"/> Fertilizers</td> <td><input checked="" type="checkbox"/> Wood</td> </tr> <tr> <td><input checked="" type="checkbox"/> Asphalt</td> <td><input checked="" type="checkbox"/> Petroleum Based Products</td> <td><input checked="" type="checkbox"/> Masonry Blocks</td> </tr> <tr> <td><input type="checkbox"/> Tar</td> <td><input checked="" type="checkbox"/> Cleaning Solvents</td> <td><input checked="" type="checkbox"/> Roofing Materials</td> </tr> <tr> <td><input type="checkbox"/> Detergents</td> <td><input checked="" type="checkbox"/> Paints</td> <td><input checked="" type="checkbox"/> Metal Studs</td> </tr> <tr> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> </tr> </table> <p>SPILL PREVENTION</p> <p>MATERIAL MANAGEMENT PRACTICES</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISKS OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF:</p> <p>GOOD HOUSEKEEPING</p> <p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT:</p> <ul style="list-style-type: none"> * AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. * ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. * PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL. * SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. * WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER. * MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. * THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL. <p>HAZARDOUS PRODUCTS</p> <p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.</p> <ul style="list-style-type: none"> * PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. * ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED. THEY CONTAIN IMPORTANT PRODUCT INFORMATION. * IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED. 					<input checked="" type="checkbox"/> Concrete	<input checked="" type="checkbox"/> Fertilizers	<input checked="" type="checkbox"/> Wood	<input checked="" type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Petroleum Based Products	<input checked="" type="checkbox"/> Masonry Blocks	<input type="checkbox"/> Tar	<input checked="" type="checkbox"/> Cleaning Solvents	<input checked="" type="checkbox"/> Roofing Materials	<input type="checkbox"/> Detergents	<input checked="" type="checkbox"/> Paints	<input checked="" type="checkbox"/> Metal Studs	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____												
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TIMING OF CONTROLS/MEASURES	CONTRACTOR'S CERTIFICATION																															
<p>REFER TO "CONTRACTOR'S REQUIREMENTS" FOR THE TIMING OF CONTROL MEASURES.</p> <p>CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS</p> <p>IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS RELATED TO STORM WATER MANAGEMENT AND EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED (TO BE FILLED IN BY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION):</p> <p>D.E.R. DREDGE/FILL PERMIT # _____</p> <p>C.O.E. DREDGE/FILL PERMIT # _____</p> <p>S.J.R.W.M.D. M.S.S.W. PERMIT # _____</p> <p>N.P.D.E.S. PERMIT # _____</p>	<p>I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND AND SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THERE UNDER.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">NO.</th> <th rowspan="2">DATE</th> <th rowspan="2">DESCRIPTION</th> <th colspan="6">RESPONSIBLE FOR DUES</th> </tr> <tr> <th>GENERAL CONTRACTOR</th> <th>SUB-CONTRACTOR</th> <th>SUB-CONTRACTOR</th> <th>SUB-CONTRACTOR</th> <th>SUB-CONTRACTOR</th> <th>SUB-CONTRACTOR</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.</p> <p>MAINTENANCE/INSPECTION PROCEDURES</p> <p>EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.</p> <ul style="list-style-type: none"> * NO MORE THAN 10 ACRES OF THE SITE WILL BE DEMOLISHED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. * ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER. * ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF THE TIME. * BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE. * SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. * DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED. 					NO.	DATE	DESCRIPTION	RESPONSIBLE FOR DUES						GENERAL CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR												
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<p>I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.</p> <p>SIGNED: _____ OWNER/OPERATOR OR CONTRACTOR</p> <p>DATED: _____</p>	<p>CODY B. SMITH, P.E. #81393</p> <p>PRELIMINARY - NOT FOR CONSTRUCTION</p> <p>PROJECT NO.: 037756.094 ISSUED: 2/14/2024 DRAWN BY: NTD CHECKED BY: CBS SCALE: N/A</p>																															
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PROJECT NAME: GUSTAFSON PARK

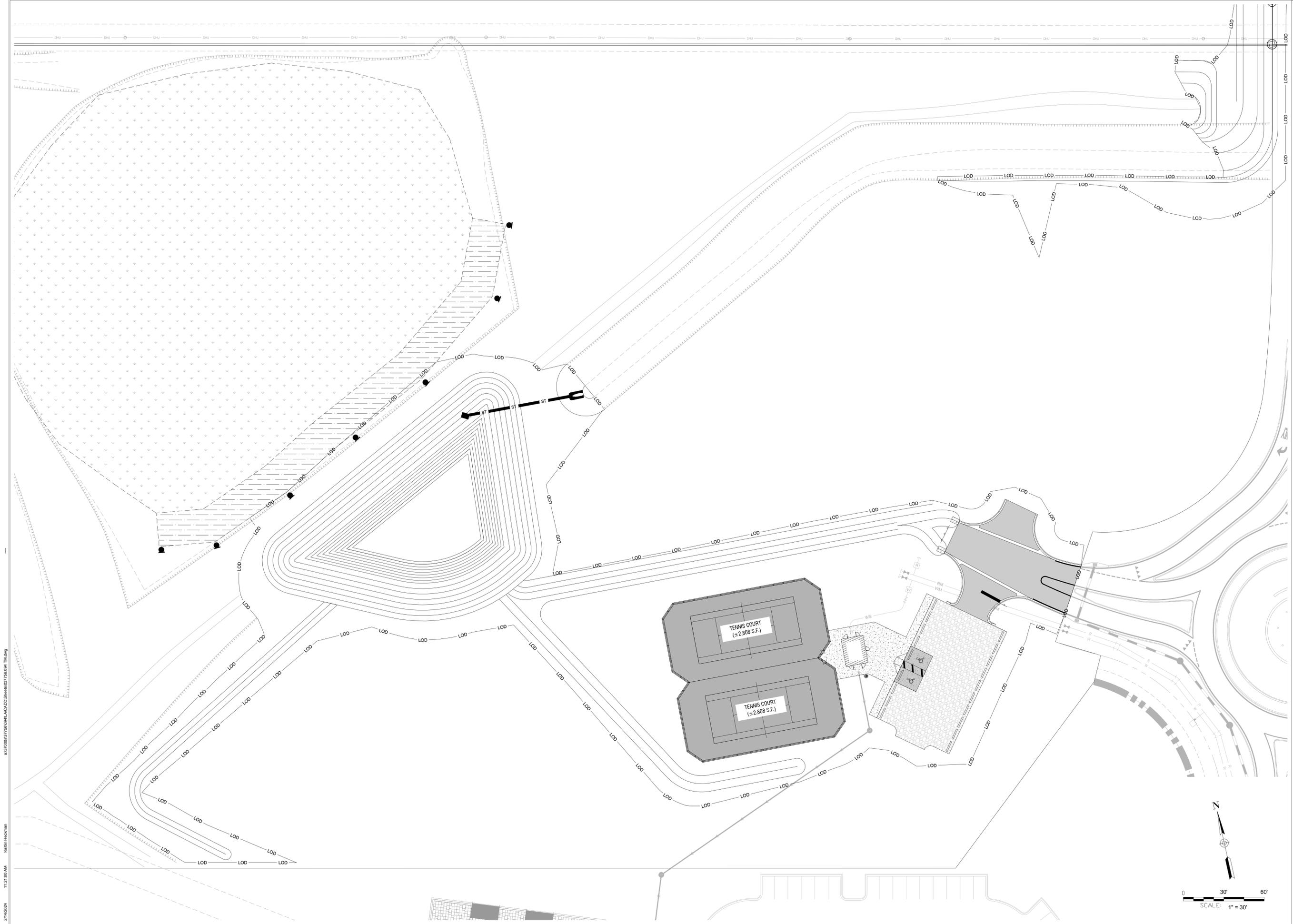
PREPARED FOR: CITY OF GREEN COVE SPRINGS

9985 GATE PARKWAY N. SUITE 200 JACKSONVILLE, FLORIDA USA 32246 PHONE 904.730.9360 WWW.HALFF.COM FL LC 26000645

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
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9885 GATE PARKWAY N. SUITE 200
 JACKSONVILLE, FLORIDA USA 32246
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 FL CA 33380 FL LC 28000645

REVISIONS NO.	DATE	DESCRIPTION

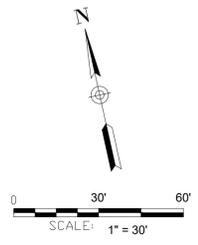
SEAL

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
 ISSUED: 2/14/2024
 DRAWN BY: KH
 CHECKED BY: JL
 SCALE: 1" = 30'

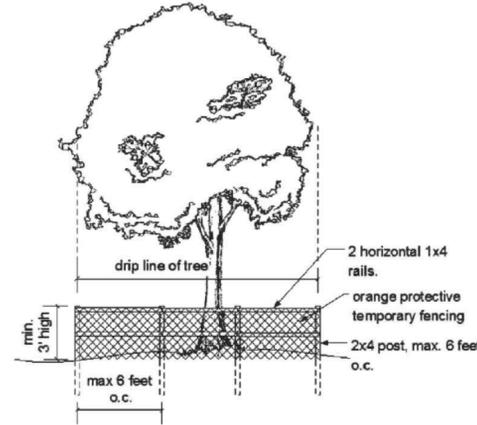
TREE MITIGATION PLAN

TM-100



CITY OF GREEN COVE SPRINGS TREE PRESERVATION DURING DEVELOPMENT AND CONSTRUCTION (SECTION 113-248)

- (A) PROTECTIVE BARRIERS
- (1) DURING CONSTRUCTION, PROTECTIVE BARRIERS SHALL BE PLACED, AS NECESSARY AND/OR AS DIRECTED BY THE DEVELOPMENT SERVICES DIRECTOR, TO PREVENT THE DESTRUCTION OR DAMAGING OF TREES.
 - (2) TREES DESTROYED OR RECEIVING MAJOR DAMAGE MUST BE REPLACED BEFORE OCCUPANCY OR USE UNLESS APPROVAL FOR THEIR REMOVAL HAS BEEN GRANTED DURING THE SITE PLAN APPROVAL PROCESS.
 - (3) ALL TREES NOT DESIGNATED FOR REMOVAL MAY BE REQUIRED TO BE PROTECTED BY BARRIER ZONES ERRECTED PRIOR TO CONSTRUCTION OF ANY STRUCTURES, ROADS, UTILITY SERVICE, OR OTHER IMPROVEMENTS.
- (B) THE PROTECTIVE BARRIER SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
- (1) THE PROTECTIVE BARRIER SHALL BE CONSTRUCTED OUTSIDE THE DRIP LINE OF THE TREE, WHEN POSSIBLE (SEE FIGURE A). THE PROTECTIVE BARRIER SHALL HAVE A MINIMUM OF A SIX-INCH RADIUS, PLUS ONE INCH FOR EACH ONE INCH OF CALIPER.
 - (2) THE PROTECTIVE BARRIER SHALL BE A MINIMUM OF THREE FEET HIGH.
 - (3) PROTECTIVE BARRIER POSTS SHALL BE TWO INCHES BY FOUR INCHES OR LARGER AND SHALL BE NO MORE THAN SIX FEET APART.
 - (4) THE BARRIER SHALL HAVE TWO ONE-BY-FOUR-INCH HORIZONTAL RAILINGS AFFIXED SECURELY TO THE POSTS.
 - (5) THE ENTIRE PROTECTIVE ZONE SHALL BE WRAPPED IN ORANGE SAFETY FENCING MATERIAL, A MINIMUM OF THREE FEET IN HEIGHT.
 - (6) THE PROTECTIVE BARRIERS SHALL BE INSPECTED BY THE DEPARTMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- (A) NO GRADE CHANGES SHALL BE MADE WITHIN THE PROTECTIVE BARRIER ZONES WITHOUT PRIOR APPROVAL OF THE CITY DEVELOPMENT SERVICES DIRECTOR.
- (D) WHERE ROOTS GREATER THAN ONE-INCH DIAMETER ARE EXPOSED, THEY SHALL BE CUT CLEANLY.
- (E) PROTECTIVE BARRIER ZONES SHALL REMAIN IN PLACE AND INTACT UNTIL SUCH TIME AS LANDSCAPE OPERATIONS BEGIN OR CONSTRUCTION IS COMPLETE, WHICHEVER OCCURS FIRST.
- (F) THE DEVELOPMENT SERVICES DIRECTOR MAY CONDUCT PERIODIC INSPECTIONS OF THE SITE BEFORE WORK BEGINS AND DURING CLEARING, CONSTRUCTION AND POST-CONSTRUCTION PHASES OF DEVELOPMENT IN ORDER TO ENSURE COMPLIANCE.
- (G) NO BUILDING MATERIALS, MACHINERY OR TEMPORARY SOIL DEPOSITS SHALL BE PLACED WITHIN PROTECTIVE BARRIER ZONES DEFINED ABOVE.
- (H) NO ATTACHMENTS OR WIRES OTHER THAN THOSE OF A PROTECTIVE OR NON-DAMAGING NATURE SHALL BE ATTACHED TO ANY TREE.



1 TREE PROTECTION DETAIL
KS-1 N.T.S.

PHASE 2B MITIGATION CALCULATIONS FOR ARBORISTS

SAMPLE TREE SURVEY (PH. 1) TO DETERMINE BASIS

Factors		
Phase 1 Survey Results		
Acres	Tree In.	In/ac.
64.94	5135	79
Planted Pine Canopy Sample		
Acres	Plot In	In/ac.
4	29	7
Hammock Canopy Sample		
Acres	Plot In	In/ac.
1	172	172

Gustafson Park Estimates		
Shrub Dominated Area*		
Acres	In/Ac	Total In.
2.57**	79	203

* PROPOSED PARK IMPROVEMENTS ARE IN A SHRUB DOMINATED AREA
** ACRES DETERMINED BY LIMITS OF DISTURBANCE (LOD); SEE TREE MITIGATION PLAN FOR DEMARCATION

Note* ATV and drone surveys found no protected trees 35 inches or greater DBH within Gustafson Parcel.



REQUIRED REPLACEMENT INCHES CALCULATIONS

TREES INCHES IN SHRUB DOMINATED AREA (ESTIMATES BASED ON PHASE 1)*	203*
PERCENTAGE OF LIVE OAKS BASED ON INTERIOR PHASE 1 (203 X 11%)	23
REMAINING TREES THAT ARE NOT LIVE OAKS IN SHRUB DOMINATED AREA (203-23)	180
REPLACEMENT INCHES REQUIRED FOR LIVE OAKS (1 TO 1)	23
REPLACEMENT INCHES REQUIRED FOR ALL OTHER PROTECTED TREES (1 TO 3)	60 (180 / 3)
TOTAL REPLACEMENT INCHES REQUIRED	83 (23 + 60)

* SEE ESTIMATES BY ARBORIST TO THE LEFT OF THIS CHART

PROJECT NAME

GUSTAFSON PARK

PREPARED FOR

CITY OF GREEN COVE SPRINGS



9985 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.8360 WWW.HALFF.COM
FL CA 33380 LLC 26000645

DESCRIPTION

REVISIONS
NO. DATE

SEAL

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: KH
CHECKED BY: JL
SCALE: 1" = 30'

TREE MITIGATION CALCULATIONS

TM-101

CALL 48 HOURS BEFORE YOU DIG
It's the Law!
1-800-432-4770



SUNSHINE STATE ONE CALL OF FLORIDA, INC.



PLANT SCHEDULE

SYMBOL	CODE	COMMON NAME
TREES		
	TD	Bald Cypress
	SP	Cabbage Palmetto
	QV	High Rise Live Oak
	LI	Muskogee Crape Myrtle
SHRUBS		
	PMP	Dwarf Podocarpus
	MC	Pink Muhly
GROUND COVERS		
	TA	Asiatic Jasmine
	JBP	Blue Pacific Juniper
	RM	Coral Drift Rose
	AA	Lily of the Nile

PROJECT NAME
GUSTAFSON PARK
 PREPARED FOR
CITY OF GREEN COVE SPRINGS



REVISIONS NO.	DATE	DESCRIPTION

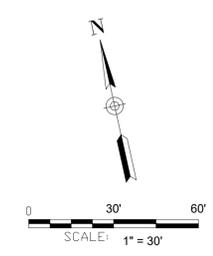
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LANDSCAPE PLAN

LS-200



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LANDSCAPE CODE REQUIREMENTS (CGCS)

LANDSCAPE BUFFER AREA (SECTION 113-244(d)(3))

TYPE	REQUIRED	PROVIDED
A MINIMUM 10 FT. STRIP ALONG R.O.W.	YES	YES
A MINIMUM OF ONE ROW OF CANOPY TREES WITH A MINIMUM OF A 2.5 DBH PLANTED 50 FT. O.C. (STAGGERED)	YES	YES

REQUIRED LANDSCAPING (SECTION 113-244(b))

TYPE	REQUIRED	PROVIDED
PERIMETER LANDSCAPING : ONE SHADE TREE FOR EACH 50 LF OF PERIMETER OF SITE		
NORTHERN PERIMETER	N/A	N/A
EASTERN PERIMETER	N/A	N/A
SOUTHERN PERIMETER	N/A	N/A
WESTERN PERIMETER	N/A	N/A

INTERIOR LANDSCAPING: ONE TREE PER EVERY 1,500 SF FOR THE FIRST 10,500 SF OF PROJECT, THEN ONE TREE PER EVERY 4,000 SF OF THE REMAINDER OF THE PROJECT

145,865 SF; 10,500 / 1,500 = 7 TREES; 145,865 - 10,500 = 135,365 / 4,000 = 25 TREES; 34 TOTAL TREES REQUIRED

BUFFER ZONES FOR INCOMPATIBLE LAND USES (SECTION 113-246(5))

TYPE	REQUIRED	PROVIDED	COMMENTS
BUFFER TO SCREEN PERIMETER FROM AN INCOMPATIBLE LAND USE	N/A	N/A	N/A

PARKING AREA LANDSCAPE REQUIREMENTS (113-246)

TYPE	REQUIRED	PROVIDED	COMMENTS
LANDSCAPE AREA FOR PARKING AREA SHALL COVER TEN PERCENT OF THE PARKING AREA.	611 SF	611+ SF	6,113 SF x 10% = 611 SF REQUIRED
A LANDSCAPE AREA SHALL BE PROVIDED AT EACH END OF ALL ROWS OF PARKING.	YES	YES	
EACH LANDSCAPE AREA WILL BE A MINIMUM OF 5 FT. WIDE INSIDE CURB.	YES	YES	
AT LEAST ONE CANOPY TREE OR TWO SUB CANOPY TREES WILL BE REQUIRED IN EACH LANDSCAPE AREA FOR THE ROW OF PARKING.	YES	YES	
EACH LANDSCAPE AREA WILL HAVE FIVE SHRUBS PER EACH REQUIRED TREE.	YES	YES	

FLORIDA NO. 1 QUALITY REQUIREMENT:

ALL REQUIRED PLANT MATERIALS, INCLUDING, BUT NOT LIMITED TO, TREES AND SHRUBS, SHALL EQUAL OR EXCEED THE STANDARDS FOR FLORIDA NO. 1 AS ESTABLISHED AND REVISED BY THE STATE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.

CGCS LANDSCAPE DESIGN AND MATERIALS:

ALL LANDSCAPING G SHALL COMPLY WITH SECTION 113-247 OF THE CITY CODE.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	NATIVE	TREE INCHES	REMARKS
TREES									
	LI	7	Lagerstroemia x 'Muskogee'	Muskogee Crape Myrtle	45G	3"		21"	10-12' Ht., 5-6' Spd., 6" Cal., Min. of 3 Stems, 2" Min. Per Stem, F.L.S.
	QV	5	Quercus virginiana 'High Rise'	High Rise Live Oak	65G	4"	Native	20"	12-14' Ht., 6-7' spd., 4" Cal., F.L.S.
	SP	15	Sabal palmetto	Cabbage Palmetto	B&B	3"	Native	45"	C.T. Noted on Plan, Florida #1, F.L.S.
	TD	7	Taxodium distichum	Bald Cypress	65G	4"	Native	20"	12-14' Ht., 6-8' Sprd., 4" Cal., F.L.S.
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	FIELD2	NATIVE	PLANTING AREA - SF	PLANTING AREA - SF
SHRUBS									
	MC	347	Muhlenbergia capillaris	Pink Muhly	3G		Native	1,856 SF	24-30" ht., 18-24" spd., 30" O.C.
	PMP	62	Podocarpus macrophyllus 'Pringles'	Dwarf Podocarpus	3G			388 SF	18-24" ht., 18-24" spd., 30" O.C.
GROUND COVERS									
	AA	468	Agapanthus africanus	Lily of the Nile	1G			1,053 SF	12-15" ht., 12-15" spd., 10-12 bibs, 18" O.C.
	JBP	203	Juniperus conferta 'Blue Pacific'	Blue Pacific Juniper	3G			812 SF	6-8" ht., 15-18" spd., 2' O.C.
	RM	374	Rosa x 'Meidrifora'	Coral Drift Rose	3G			1,816 SF	8-10" HT., 12-15" spd., 2' O.C.
	TA	508	Trachelospermum asiaticum	Asiatic Jasmine	1G			508 SF	4-6" ht., 6-8" spd., 12" O.C.

PROJECT NAME

GUSTAFSON PARK
CITY OF GREEN COVE SPRINGS

PREPARED FOR



9885 GATE PARKWAY N. SUITE 200
JACKSONVILLE, FLORIDA USA 32246
PHONE 904.730.8360 WWW.HALFF.COM
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LANDSCAPE CODE REQUIREMENTS

LS-201

LANDSCAPE SPECIFICATIONS

MATERIALS:

- PLANTING SOIL BACKFILL MIX: TREE PITS, SHRUBS AND GROUNDCOVERS: MIX 50% EXISTING TOPSOIL TO 50% SOIL ADMIXTURE COMPRISED OF 1/3 PARTS DECOMPOSED PINE BARK OR PEAT MOSS, 1/3 PARTS COW MANURE, AND 1/3 PARTS IMPORTED TOPSOIL AND SOIL AMENDMENTS AS REQUIRED TO BRING THE pH TO BETWEEN 5.5 TO 6.5. ALTERNATE PLANTING SOIL BACKFILL MIXTURE: MIX 50% EXISTING TOPSOIL AND 50% FLORIDA MUCK AND SOIL AMENDMENT AS REQUIRED TO BRING pH TO BETWEEN 5.5 AND 6.5.
- TOP SOIL SHALL BE DEFINED AS THE UPPER 4" TO 6" OF NATURALLY OCCURRING SOILS SUITABLE FOR AGRICULTURAL PRODUCTION AND ARE WITHOUT DRAINAGE LIMITATIONS. IMPORT TOPSOIL FROM OFF-SITE SOURCES, IF REQUIRED. OBTAIN TOPSOIL FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. UNDER NO CIRCUMSTANCES SHOULD TOPSOIL BE OBTAINED FROM BOGS OR MARSHES.
- PLANTING BED AND TREE MULCH: MINI PINE NUGGETS TO MATCH COMMUNITY LANDSCAPE PLAN REQUIREMENTS. PROVIDE FOR 3" LAYER, AFTER SETTLING.
- SOD: SEE PLANT SCHEDULE
- SEEDING: QUICK GROWING / TEMPORARY COVER
MARCH-APRIL PLANTING: ANNUAL RYEGRASS
MAY PLANTING: BROWN TOP MILLET
JUNE-AUGUST PLANTING: MIX 50% RYE GRAIN AND 50% WINTER WHEAT
SEPTEMBER-OCTOBER PLANTING: ANNUAL RYEGRASS
- FERTILIZER: FOR PLANT BEDS USE 8-8-8 RATIO, AND FOR LAWN AREAS USE 16-4-8 RATIO, EACH WITH AT LEAST 25% OF THE NITROGEN IN A WATER INSOLUBLE ORGANIC FORM.
- TREE GUYING: STRAPS SHALL BE MINIMUM 1" WIDE NYLON OR POLYPROPYLENE. ALL WOOD STAKES SHALL BE LOCATED BEYOND THE EDGE OF THE ROOT BALL.

SUBMITTALS:

- SOD CERTIFICATE FROM GROWER.
- SAMPLE OF PREPARED SOIL BACKFILL MIX (1/2 CU. FOOT).
- SOIL TEST REPORT FOR pH WITH RECOMMENDATIONS FOR pH ADJUSTMENT (ALL LANDSCAPE PLANTING AREAS AND PLANTING BACKFILL MIX)
- WRITTEN PLANT GUARANTEE.
- SUBMIT MANUFACTURER DATA WITH INSTRUCTIONS FOR APPLICATIONS FOR ALL HERBICIDES.
- PLANTING AREA / BED PREP HERBICIDES
A. FOR GRASS AND WEEK KILL PRIOR TO TILLING, TOP DRESSING OR MULCHING: ROUNDUP BY MONSANTO
- FALL FERTILIZER
A. BALANCE OF NITROGEN (N), POTASH (P), POTASSIUM (K), AND MAGNESIUM (Mg), IN A 2N-1P-3K-1Mg RATIO, AND ALSO CONTAINING 1-2% MANGANESE (Mn), 1-2% IRON (Fe), SULFUR (S), AND TRACE AMOUNTS OF ZINC (Zn), COPPER (Cu) AND BORON (B). PROVIDE 100% OF N, K AND Mg IN CONTROLLED-RELEASE FORM (RESIN OR SULFUR COATED).
- FUNGICIDE
A. FOR ROT AND WILT DISEASES: BROAD SPECTRUM SYSTEMIC FUNGICIDE THAT IS ALSO LABELED FOR THE CONTROL OF PHYTOPHTHORA BUD ROT. B. FOR GRAPHIOLA LEAF SPOT: MANEB, MANCOZEB OR BROAD SPECTRUM COPPER FUNGICIDE SUCH AS KOCIDE 101, COPPER (Cu) AND BORON (B). PROVIDE 100% OF N, K AND Mg IN CONTROLLED-RELEASE FORM (RESIN OR SULFUR COATED).
- INSECTICIDE
A. SYSTEMIC INSECTICIDE SUCH AS LINDANE OR SEVIN.

EXECUTION:

- PERFORM ALL WORK AS SHOWN AND IN STRICT ACCORDANCE WITH SOUND HORTICULTURAL PRACTICE.
- PLANTING PREPARATION:
A. INCORPORATE BACKFILL MIX AS SPECIFIED AND AS SHOWN ON DETAILS AND DRAWINGS.
B. ADJUST SOIL AND BACKFILL pH TO 5.5 AND 6.5.
C. ADJUST SOIL pH TO 5.5-6.5 AS RECOMMENDED BY THE SOIL TEST. USE ALUMINUM SULFATE OR IRON SULFATE TO LOWER THE pH AND USE HYDRATED LIME OR DOLOMITE TO RAISE THE pH.
- PLACE ALL PLANT MATERIALS WHERE SHOWN ON DESIGN PLANS.
- AFTER PLANTS ARE INSTALLED EACH TREE SHALL HAVE 1/4 LBS. OF 8-8-8 FERTILIZER APPLIED PER CALIPER INCH.
- ALL TREES SHALL BE STAKED AND GUYED AS SHOWN TO MAINTAIN VERTICAL ALIGNMENT.
- APPLY 2-1/2 INCHES OF MULCH (AFTER SETTLING) TO ALL TREES, SHRUB AND GROUNDCOVER BEDS. REDUCE MULCHING TO 1-1/2" DEPTH IN ANNUAL PLANTING AREAS.
- ALL TREES PLACED IN LAWN AREAS SHALL UTILIZE A 3-FOOT DIAMETER CIRCLE OF LANDSCAPE MULCH BENEATH-SOD SHALL BE REMOVED.

GRASSING:

- SOIL PREPARATION:
A. REMOVE STONES OVER 1-1/2" IN DIAMETER, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEOUS MATTER FROM ALL LAWN AREAS.
B. ADJUST SOIL pH AS RECOMMENDED BY THE SOIL TEST FOR GRASS SPECIFIED.
C. ROTO-TILL SOIL 4" DEEP AND RAKE LAWN AREAS TO A SMOOTH EVEN SURFACE. IN AREAS TO BE SODDED, ALLOW FOR SOD THICKNESS, PROVIDING A FINISH GRADE 2" BELOW ADJACENT PAVEMENTS.
D. MOISTEN PREPARED LAWN AREAS PRIOR TO PLANTING IF DRY.
- SEEDING:
A. ALL DISTURBED AREAS OF THE PROJECT SITE THAT ARE NOT IDENTIFIED TO BE SODDED SHALL BE SEEDDED.
B. APPLY QUICK GROWING / TEMPORARY SEED UNIFORMLY AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET.
C. RAKE SOIL LIGHTLY TO LOOSEN SURFACE PRIOR TO SEED APPLICATION. COVER SEEDED AREAS WITH THIN LAYER OF OAT OR WHEAT STRAW AND ROLL LIGHTLY. WATER THOROUGHLY WITH A FINE SPRAY TO ESTABLISH SOIL MOISTURE TO 4" DEPTH. MAINTAIN APPROPRIATE SOIL MOISTURE LEVEL TO OPTIMIZE SEED ESTABLISHMENT.
- SODDING:
A. INSTALL SOD WHERE SHOWN ON DESIGN PLANS.
B. APPLY FERTILIZER OVER PREPARED SOIL IN ALL AREAS TO BE SODDED, EXCEPT SLOPES ADJACENT TO WATER'S EDGE. APPLY MATERIAL AT A RATE OF 6 LBS. PER 1,000 SQUARE FEET. SECOND APPLICATION-AS SPECIFIED UNDER LAWN MAINTENANCE AND WARRANTY.
C. LAY SOD WITHIN 36 HOURS OF HARVESTING TIME.
D. LAY SOD IN STRAIGHT, (NOT CURVED) PARALLEL ROWS TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS, WITHOUT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS. WORK TOPSOIL INTO MINOR CRACKS.
E. ROLL ENTIRE SODDED AREA WITH A 200 LB. ROLLER.
F. WATER SOD IMMEDIATELY AFTER ROLLING, THEREAFTER WATER SUFFICIENTLY TO KEEP SOIL MOIST TO A DEPTH OF 4" UNTIL ESTABLISHED.

CLEANUP:

- AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS RESULTING FROM THE WORK. CLEAN PAVED SURFACES AND BARRICADE ALL HAZARDS.
- RESTORE ANY DAMAGED AREAS CAUSED BY THE WORK.

INITIAL INSPECTION AND ACCEPTANCE:

- THE WARRANTY SHALL BEGIN AFTER INITIAL LANDSCAPE INSPECTION AND ACCEPTANCE.
- INSPECTION SHALL BE MADE BY THE OWNER OR OWNER'S REPRESENTATIVE WITHIN ONE WEEK OF WRITTEN NOTIFICATION FROM THE LANDSCAPE CONTRACTOR THAT INSTALLATION IS COMPLETE. PLANTS ARE SUBJECT TO INSPECTION AT ANY TIME.

PLANT GUARANTEE:

- ALL TREES, SHRUBS AND GROUNDCOVERS SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR TO BE HEALTHY, AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR A PERIOD OF (1) ONE YEAR FROM INITIAL INSPECTION AND ACCEPTANCE. SOD SHALL BE GUARANTEED TO BE HEALTHY, FREE OF NOXIOUS WEEDS, DISEASE AND INSECT INFESTATION FOR A PERIOD OF SIXTY (60) DAYS FROM THE DATE OF INITIAL ACCEPTANCE.

MAINTENANCE AND WARRANTY:

- BEGIN MAINTENANCE OF LANDSCAPE WORK IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE FOR THE MAINTENANCE PERIOD SPECIFIED.
- PLANT MAINTENANCE AND WARRANTY:
A. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING PLANT MATERIAL FOR THE DURATION OF THE ESTABLISHMENT PERIOD.
B. THE ESTABLISHMENT PERIOD FOR PLANT MAINTENANCE AND WARRANTY SHALL BE 365 DAYS AFTER INITIAL ACCEPTANCE.
C. INSPECTIONS WILL BE CONDUCTED ON 90 DAY INTERVALS THROUGHOUT THE ESTABLISHMENT PERIOD TO ASSURE ALL PLANTINGS ARE BEING MAINTAINED IN A CONDITION OF GOOD HEALTH AND ACTIVE GROWTH. ANY DEAD OR DYING PLANTS SHALL BE PROMPTLY REMOVED AND REPLACED WITHIN 2 WEEKS FOLLOWING THE DATE OF INSPECTION. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION AND TIGHTEN OR REPAIR GUYS AND STAKES AS NECESSARY. RE-MULCH TREES, SHRUBS AND GROUNDCOVER BEDS AS NECESSARY TO MAINTAIN THE SPECIFIED MULCH LAYER THROUGHOUT THE ESTABLISHMENT PERIOD.
D. ONE MONTH PRIOR TO THE END OF THE 365 DAY ESTABLISHMENT PERIOD, THE CONTRACTOR SHALL NOTIFY THE OWNER TO COORDINATE A DATE FOR FINAL INSPECTION OF ALL PLANTINGS AS BASIS FOR FINAL ACCEPTANCE.
- LAWN MAINTENANCE AND WARRANTY:
A. MAINTAIN LAWNS FOR A MINIMUM PERIOD OF 60 DAYS AFTER INITIAL ACCEPTANCE.
B. WATER LAWN SUFFICIENTLY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES UNTIL FINAL ACCEPTANCE.
C. MOW LAWNS WHEN SOD IS FIRMLY ROOTED AND TOP GROWTH EXCEEDS 4 INCHES. MOW TO A HEIGHT OF NO LESS THAN 2-1/2 INCHES.
D. FERTILIZE LAWNS 6 WEEKS AFTER PLANTING WITH 16-4-8 AT A RATE OF 5 LBS. PER 1000 SQUARE FEET.

REPLACEMENTS AND CONDITIONS:

- REPLACEMENTS FOR TREES, SHRUBS, AND GROUNDCOVERS SHALL BE MADE WITHIN 2 WEEKS FOLLOWING EACH 90 DAY ESTABLISHMENT PERIOD INSPECTION, INCLUDING THE FINAL INSPECTION.
- A REPLACEMENT WILL BE OF THE SAME SIZE AS THE ORIGINAL WITH NO ADDITIONAL SOIL ADDITIVES TO BE USED.

- AFTER INITIAL INSPECTION THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, THEFT, RELOCATION OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.

- THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT LOSSES DUE TO ABNORMAL WEATHER CONDITIONS SUCH AS FLOODS, EXCESSIVE WIND DAMAGE OR SEVERE FREEZING.

FINAL INSPECTION AND ACCEPTANCE:

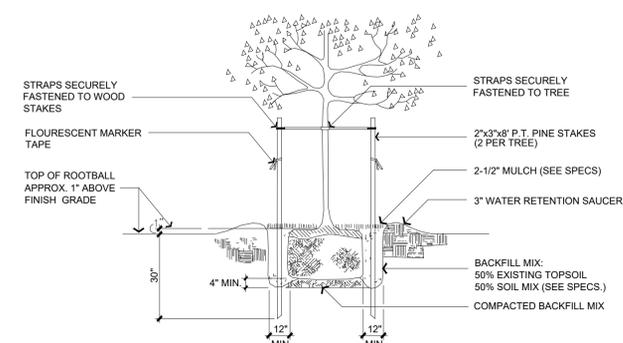
- FINAL INSPECTION: THE LANDSCAPE CONTRACTOR WILL CONDUCT A FINAL INSPECTION WITH THE OWNER OR OWNER'S REPRESENTATIVE AT THE END OF THE ESTABLISHMENT PERIOD FOR LAWNS AND PLANT MATERIALS.
- PLANT MATERIALS:
A. REPLACE ANY MATERIAL NOT IN HEALTHY CONDITION OR WHICH FAILS TO MEET SPECIFICATIONS.
B. DECIDUOUS MATERIAL WILL BE GUARANTEED TO BREAK DORMANCY IF PLANTED IN DORMANT SEASON.
- LAWNS:
A. AT THE TIME OF FINAL INSPECTION, SODDED LAWNS WILL BE ACCEPTABLE PROVIDED A HEALTHY, WELL-ROOTED, EVEN-COLORED, LAWN IS ESTABLISHED, FREE OF WEEDS, DISEASE AND INSECT INFESTATION. THERE SHALL BE NO OPEN JOINTS OR BARE AREAS.
B. SEEDDED AREAS SHALL EXHIBIT NO LESS THAN 85% COVERAGE, UNIFORMLY THROUGHOUT. GRASS STANDS SHALL BE WELL ROOTED, EVEN-COLORED AND FREE OF WEEDS, DISEASE AND INSECT INFESTATION.

PLANT INSTALLATION NOTES

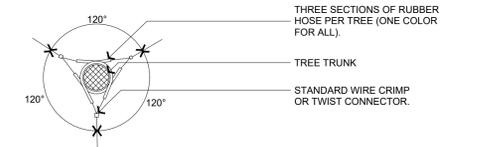
- CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES, EXISTING TREES AND VEGETATION PRIOR TO COMMENCEMENT OF THE PLANT INSTALLATION.
- CONTRACTOR SHALL ANTICIPATE THE POSSIBILITY OF THE LANDSCAPE ARCHITECT ADJUSTING THE LOCATIONS OF CERTAIN PLANTS AND TREES IN THE FIELD.
- ALL TREES AND SHRUBS SHALL BE OF THE SIZES AS CALLED FOR IN THE PLANT MATERIALS SCHEDULE. ANY PLANT MATERIALS AS DETERMINED BY THE LANDSCAPE ARCHITECT AS NOT MEETING THE SIZES AND QUALITY AS CALLED FOR SHALL BE REMOVED FROM THE SITE.
- ALL PLANT MATERIALS SHALL BE EQUIVALENT TO FLORIDA #1 OR BETTER AS OUTLINED BY GRADES AND STANDARDS FOR NURSERY PLANTS, DIVISION OF PLANT INDUSTRY, FLORIDA DEPT. OF AGRICULTURE AND CONSUMER SERVICES.
- IF QUANTITIES DIFFER BETWEEN THE PLAN AND SCHEDULE, THOSE ON THE SCHEDULE SHALL GOVERN. THE CONTRACTOR SHALL VERIFY THAT THE QUANTITIES INDICATED WILL PROVIDE THE COVERAGE AS SPECIFIED AND REPORT ANY DISCREPANCIES AT THE TIME OF BIDDING TO THE LANDSCAPE ARCHITECT.
- ALL SHRUB MATERIAL SHALL BE PLANTED IN STAGGERED ROWS, SPACED ON CENTER (O.C.) AS SPECIFIED, UNLESS OTHERWISE SHOWN ON DESIGN PLANS.
- THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONDITIONS THAT MAY ADVERSELY AFFECT PLANTING OPERATIONS IMMEDIATELY UPON SUCH FINDINGS.

IRRIGATION NOTES

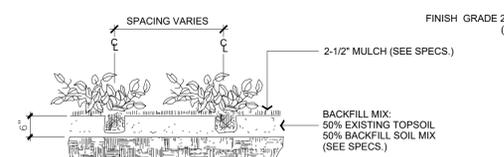
- AN AUTOMATIC IRRIGATION SYSTEM WILL BE INSTALLED PROVIDING 100% COVERAGE FOR ALL NEWLY INSTALLED PLANT MATERIAL. BUBBLERS WILL BE USED ON ALL NEWLY PLANTED TREES IN THE COMMON AREAS (LOW VOLUME IRRIGATION), BAHIA GRASS WILL BE USED IN ALL LOW PROFILE COMMON AREAS AND WON'T BE IRRIGATED. HIGH VOLUME IRRIGATION WILL BE LIMITED TO HIGH PROFILE COMMON AREAS (I.E. AMENITY CENTER) WHERE THE USE OF ST. AUGUSTINE GRASS WILL BE USED. THE HIGH PROFILE AREAS WILL BE LIMITED TO NO MORE THAN 50% OF THE OVERALL COMMON AREA.



1 LS-202 1" - 3 1/2" Caliper Tree Planting N.T.S.

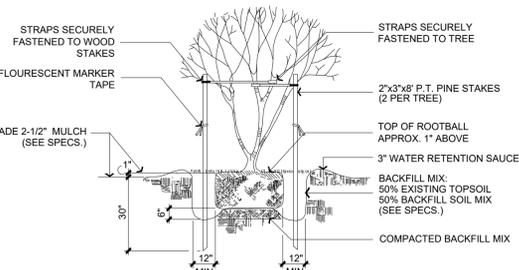


2 LS-202 TYPICAL SHRUB PLANTING N.T.S.

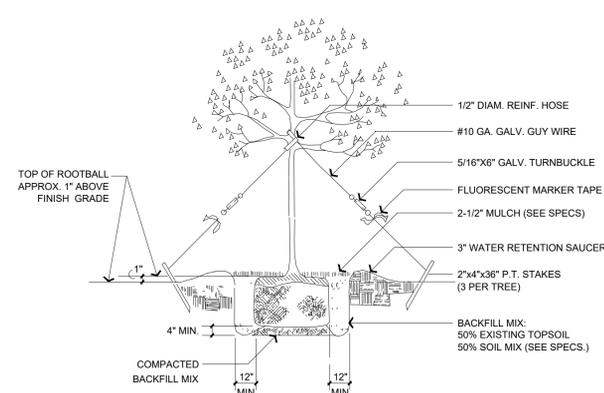


3 LS-202 TYPICAL GROUNDCOVER PLANTING N.T.S.

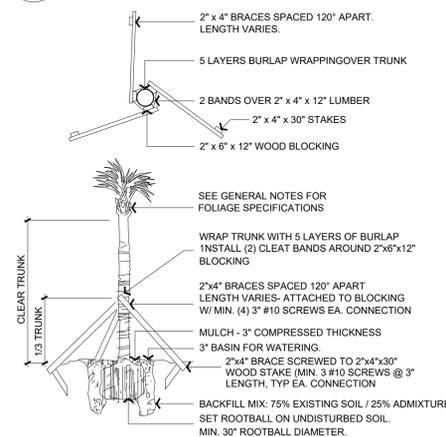
NOTE:
CONTRACTOR MUST CHECK STRAP TENSION 2-4 WEEKS AFTER INSTALLATION. STRAPPING SHOULD BE RETIGHTENED IF LOOSE. CONTRACTOR MUST PERIODICALLY CHECK STRAP TENSION FOR TWELVE MONTHS FOLLOWING INSTALLATION. ROOTBALL SYSTEM PROVIDES PROTECTION FROM HIGH WIND EVENTS, PROVIDED PROPER STRAP TENSION IS MAINTAINED. ROOTBALL SYSTEM SHOULD NOT BE REMOVED; IT DETERIORATES OVER TIME AND IS CONCEALED FROM VIEW BY MULCH.



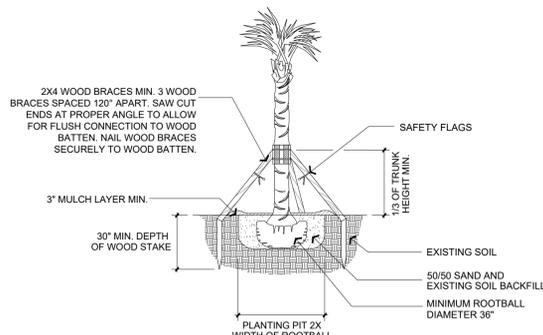
4 LS-202 TREE PLANTING (MULTI-TRUNK) N.T.S.



5 LS-202 TYPICAL TREE PLANTING AND GUYING N.T.S. Trees 4" and Greater



6 LS-202 'REGENERATED ROOTS' SABAL PALM PLANTING DETAIL N.T.S.



7 LS-202 TYPICAL WASHINGTONIA PALM DETAIL N.T.S.

GUSTAFSON PARK
CITY OF GREEN COVE SPRINGS

PROJECT NAME
PREPARED FOR
CITY OF GREEN COVE SPRINGS

REVISIONS NO.	DATE	DESCRIPTION

SEAL

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 037756.094
ISSUED: 2/14/2024
DRAWN BY: KH
CHECKED BY: JL
SCALE: 1" = 30'

LANDSCAPE NOTES AND SPECIFICATIONS

LS-202

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SUNSHINE STATE ONE CALL OF FLORIDA, INC.