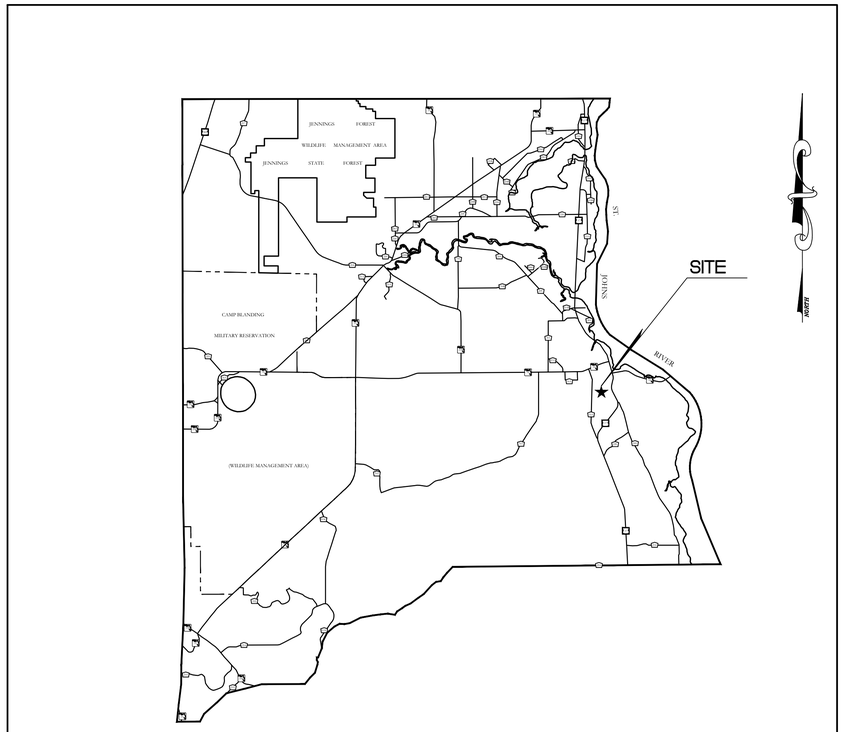
SITE ENGINEERING PLANS

THE ROOKERY - PHASE 1

Developed By:

D.R. HORTON, INC. - JACKSONVILLE

Project No. :2008-499



VICINITY MAP - CLAY COUNTY

SUBMITTAL SCHEDULE

SUBMITTAL No.	DATE	MUNICIPALITY
1st	5-12-22	GCS
1st	5-16-22	CCUA
1st	5-17-22	SJRWMD
1st	8-2-22	Clay County
2nd	12-8-22	GCS/SJRWMD
2nd	1-6-23	CCUA
2nd	2-15-23	Clay County
3rd	4-18-23	SJRWMD
3rd	4-19-23	GCS

Vincent J Dunn

Digitally signed by Vincent J Dunn
Date: 2023.04.19 14:39:34 -04'00'

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VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

THE ROOKERY - PHASE 1

P:\2008-499 AYRSHIRE\ENG PLANS\499 INDEX.DWG4/19/2023 7:57 AMMike Reilly

CITY OF GREEN COVE SPRINGS GENERAL NOTES

GENERAL

1. CITY OF GREEN COVE SPRINGS DEPARTMENT OF ENGINEERING REQUIRES TWENTY-FOUR HOURS(24-HR) NOTICE ON ALL MEETINGS AND
OR TESTING PROCEDURES.

2. CONSTRUCTION WARNING SIGNS ARE TO BE POST MOUNTED AND ERECTED BEFORE CONSTRUCTION CAN COMMENCE. THESE AND ALL TRAFFIC CONTROL DEVICES SHALL FOLLOW THE STANDARDS SET FORTH BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DETAILS.

3. ALL CONSTRUCTION PROJECTS 1 ACRE OR MORE IN SIZE SHALL BE REQUIRED TO ABIDE BY THE PROVISIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION (NPDES) PERMIT. THE OWNER OR CONTRACTOR IS RESPONSIBLE FOR PREPARING THE STORMWATER POLLUTION PREVENTION PLAN (SWPP) AND SUBMITTING THE NPDES "NOTICE OF INTENT" (NOI) AND "NOTICE OF TERMINATION" (NOT) TO THE EPA OR LOCAL STATE AGENCY HAVING JURISDICTION OVER THE NPDES PROGRAM. THE CONTRACTOR SHALL KEEP ONSITE COPIES OF THE SWPP, NOI, AND WATER MANAGEMENT DISTRICT PERMITS.

4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO RECOGNIZE AND ABIDE BY ALL OSHA SAFETY STANDARDS.

5. ALL DISTURBED CITY OF GREEN COVE SPRINGS RIGHTS-OF-WAY SHALL BE SODDED TO THE DISCRETION AND APPROVAL OF THE CLAY
COUNTY ENGINEERING DIVISION.

6. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO EXCAVATION AND TAKE ALL MEASURES NECESSARY TO PROTECT UTILITIES DURING CONSTRUCTION. SHOULD ANY UTILITY LINE OR COMPONENT BECOME DAMAGED OR REQUIRE RELOCATION THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RESPONSIBLE UTILITY COMPANY, THE ENGINEER, AND THE COUNTY.

CALL BEFORE YOU DIG
1-800-432-4770
&
904-269-6359

- CALL 800-432-4770 TWO FULL BUSINESS DAYS BEFORE DIGGING. CALL 10 DAYS BEFORE DIGGING WHEN DIGGING UNDER WATER.
- CALL 904-269-6359 (CITY OF GREEN COVE SPRINGS SIGNAL & MAINTENANCE DIVISION) TWO FULL DAYS BEFORE DIGGING.
- WAIT THE REQUIRED TIME FOR BURIED UTILITIES TO BE LOCATED AND MARKED.
- PROTECT THE MARKS DURING YOUR PROJECT. IF MARKS ARE DESTROYED, CALL AGAIN.
- DIG SAFELY, USING EXTREME CAUTION WHEN DIGGING WITHIN 24 INCHES ON EITHER SIDE OF THE MARKS TO AVOID HITTING THE BURIED UTILITY LINES.

7. BEFORE WORKING IN EXISTING COUNTY RIGHTS-OF-WAY, THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN A RIGHT-OF-WAY PERMIT. THE PERMIT CAN BE OBTAINED AT THE CITY OF GREEN COVE SPRINGS ENGINEERING DIVISION, 477 HOUSTON STREET, 3RD FLOOR, GREEN COVE SPRINGS, FLORIDA.

8. ALL SWALE SECTIONS AND PONDS ARE TO BE SODDED WITHIN 15 DAYS OF THEIR FINAL GRADING.

9. ANY OFFSITE SWALES OR DITCHES IMPACTED BY THE DEVELOPMENT, THE CONTRACTOR SHALL RE-GRADE AND RESTORE, TO OBTAIN POSITIVE DRAINAGE.

10. A COPY OF THE CONTRACTORS GENERAL LICENSE AND OR UNDER GROUND UTILITY LICENSE SHALL BE PROVIDED AT THE TIME OF THE PRE-CONSTRUCTION CONFERENCE.

11. ANY APPLICABLE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD), FDEP (GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES, ARMY CORP OF ENGINEERS, AND A FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) PERMITS SHALL BE PROVIDED TO THE COUNTY BY THE PRE-CONSTRUCTION CONFERENCE. NO WORK SHALL BEGIN WITHOUT ALL APPLICABLE PERMITS ON FILE.

12. THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD) BEFORE THE COUNTY WILL ACCEPT THE PROJECT.

13. ALL STORM PIPES SHALL BE VIDEOED PRIOR TO FINAL INSPECTION AND ALL DATA SHALL BE RECORDED IN HIGH QUALITY DVD FORMAT WITH SOUND OR ANY EQUIPMENT APPROVED BY THE ENGINEERING DIVISION (REF. FDOT SSRBC LATEST EDITION).

14. THERE SHALL BE A MINIMUM FIVE (5) DAYS NOTICE GIVEN FOR SCHEDULING THE FINAL INSPECTION.

15. AT THE FINAL INSPECTION A LETTER OF COMPLIANCE WILL NEED TO BE FILLED OUT AND SIGNED BY THE STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER OF RECORD FOR THE PROJECT. THE LETTER SHALL STATE THAT THE PROJECT HAS BEEN BUILT IN ACCORDANCE OF THE APPROVED DESIGN PLANS AND OTHER AGENCY PERMITS.

16. ALL SOIL AND DEBRIS TRACKED OUT OF THE PROJECT SHALL BE CLEANED IN ACCORDANCE WITH THE APPROVED SWPPP OR AT THE DISCRETION OF THE CITY OF GREEN COVE SPRINGS ENGINEERING DIVISION.

17. PRIOR TO ANY INSPECTION OR TESTING, ALL PIPE LINE, STRUCTURES, ROADWAY, ETC. SHALL BE CLEANED.

EROSION CONTROL:

18. PURSUANT TO COMPREHENSIVE PLAN POLICY 9: 1 OF THE CONSERVATION ELEMENT, THE USE OF ONE OR MORE EROSION CONTROL MEASURES AS REQUESTED BY THE CITY OF GREEN COVE SPRINGS ENGINEERING DIVISION, SHALL BE USED DURING CONSTRUCTION. THESE WILL BE, BUT NOT LIMITED TO, ITEMS SUCH AS TEMPORARY GRASS COVER, SEDIMENT BASINS OR PONDS, MULCHING, TEMPORARY FENCES, DIVERSION CHANNELS, AND HAY BALES.

19. PURSUANT TO COMPREHENSIVE PLAN POLICY 9: 1 OF THE CONSERVATION ELEMENT, SCHEDULING OF CONSTRUCTION SHALL BE GIVEN SPECIAL CONSIDERATION TO MINIMIZE EXPOSURE OF BARE SOIL. THE CONTRACT WILL FORMULATE ACONSTRUCTION SCHEDULE TO BE GIVEN TO THE COUNTY REPRESENTATIVE.

20. THE GOVERNING PUBLICATIONS FOR EROSION CONTROL ARE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 100-105, CURRENT FDOT STD. SPEC. FOR ROADWAY & BRIDGE CONST., SECTION 104, AND NPDES STORMWATER AND EROSION CONTROL MANUAL LATEST EDITION.

21. THE CONTRACTOR SHALL CHECK EACH DAY TO INSURE THAT ALL EROSION CONTROL DEVICES ARE IN PLACE AND WORKING PROPERLY.

22. ALL EROSION CONTROL MEASURES SHALL BE IN COMPLIANCE WITH THE RULES, REGULATIONS AND STANDARDS OF THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT, THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND THE UNITED STATES ARMY CORP OF ENGINEERS AND CITY OF GREEN COVE SPRINGS REGULATIONS AND ORDINANCES.

23. THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PREVENT THE EROSION OF SOIL AND DEPOSITION OF SEDIMENT ON ADJACENT AND DOWNSTREAM PROPERTIES.

24. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEDIMENT CONTROL CONSISTS OF SILT FENCING, HAY BALES, AND FLOATING TURBIDITY BARRIERS PER FDOT INDEX NO. 102 & 103. EROSION CONTROL CONSISTS OF SEEDING AND MULCHING, SODDING, WETTING SURFACES, PLACEMENT OF COARSE AGGREGATE, TEMPORARY PAVING.

25. THE CONTRACTOR SHALL RESPOND TO EROSION AND SEDIMENT CONTROL MAINTENANCE WITHIN 24-HOURS OF BEING INFORMED BY CITY OF GREEN COVE SPRINGS, UNLESS THE SITUATION REQUIRES AN IMMEDIATE RESPONSE. THE CONTRACTOR WILL
THEN RESPOND IMMEDIATELY AFTER NOTIFICATION BY THE COUNTY . THE CONTRACTORS EROSION INSPECTOR SHALL BE A QUALIFIED STORMWATER MANAGEMENT INSPECTOR BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

26. THE CONTRACTOR SHALL BE REQUIRED TO INCORPORATE PERMANENT EROSION CONTROL MEASURES AT THE EARLIEST PRACTICAL TIME SO AS TO MINIMIZE THE NEED FOR TEMPORARY CONTROLS.

27. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS DETERMINED BY THE COUNTY OR THE CONTRACTOR TO INSURE QUALITY CONTROL.

28. ALL DISTURBED AREAS SHALL BE GRASSED WITHIN 7 DAYS OF THE INITIAL DISTURBANCE. TYPES OF GRASSING SHALL BE AS FOLLOWS: SODDING IS REQUIRED FOR AROUND ALL DRAINAGE STRUCTURES, RETENTION/DETENTION AREAS, SWALES, DITCHES, AND WHERE 4:1 SLOPES ARE EXCEEDED. SEED AND MULCH MAY BE USED AT ALL OTHER LOCATIONS UNLESS SPECIFICALLY CALLED OUT FOR ON THESE DRAWINGS. THERE SHALL BE A STANDING ROW OF GRASS AT THE TIME OF FINAL ACCEPTANCE. IF SEED AND MULCH HAS BEEN USED AND HAS NOT TAKEN TO, SOD WILL BE REQUIRED FOR ESTABLISHED GRASS.

29. THE CONTRACTOR SHALL INSPECT AND REPORT EROSION AND SEDIMENT CONTROL METHODS EVERY WEEK AND AFTER ½ INCH OF RAIN DURING CONSTRUCTION. THE CONTRACTOR SHALL REMOVE ANY SEDIMENT BUILD UP, REPAIR OR REINSTALL ANY CONTROL MEASURES.

DRAINAGE STRUCTURES & PIPE INSTALLATION

30. THE COUNTY REQUIRES BACKGROUND TESTING OF LOCAL WATERWAYS AND ADDITIONAL PERIODIC TESTING DURING CONSTRUCTION FOR WATER QUALITY AND CONFORMITY WITH CITY OF GREEN COVE SPRINGS STANDARDS.

31. THE GOVERNING PUBLICATIONS FOR PIPE ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 205 AND THE CURRENT FDOT STD. SPEC. FOR ROADWAY & BRIDGE CONST. SECTION 430.

32. THE GOVERNING PUBLICATIONS FOR INLETS, JUNCTION BOXES AND MANHOLES ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 201, 209, 215 AND THE CURRENT FDOT STD. SPEC. FOR ROADWAY & BRIDGE CONST. SECTION 425.

33. ALL JOINTS OF PIPE REGARDLESS OF MATERIAL TYPE SHALL BE WRAPPED WITH FABRIC FILTER CLOTH PER FLORIDA DEPARTMENT OF TRANSPORTATION INDEX NUMBER 199, TYPE D-3, A.O.S. 70-100. THE FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NUMBER 280. THE CONTRACTOR WILL PROVIDE A MINIMUM 12" OVERLAP IN THE FABRIC.

34. ALL STORM SEWER PIPES ARE TO BE STEEL REINFORCED CONCRETE PIPE (SRCP) UNLESS OTHERWISE NOTED ON THESE DRAWINGS. ROUND CONCRETE PIPE SHALL COMPLY WITH ASTM C76. ELLIPTICAL PIPE SHALL COMPLY WITH ASTM C507. PIPE JOINTS AND O RING GASKETS SHALL COMPLY WITH ASTM C443.

35. ALL STORM SEWER PIPES SHALL BE SUBJECTED TO LEAKAGE TESTING AND SHALL BE VIDEOED/ TV AFTER LIMEROCK HAS BEEN COMPACTED AND PRIOR TO THE FINAL INSPECTION.

36. ALL STORM SEWER PIPES SHALL BE CUT FLUSH WITH THE INTERIOR WALL OF ANY TYPE MANHOLE OR CURB AND DITCH BOTTOM INLETS.

37. IF THE APPROVED DESIGN REQUIRES THE INLET OR STORM RUN BE SURCHARGED, ALL INLETS SHALL BE INSPECTED BEFORE BEING EXPOSED TO THE SYSTEM.

38. MITERED END SECTIONS SHALL MEET THE REQUIREMENTS UNDER THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 272 & 273.

39. NO MANHOLE SHALL BE PLACED WITHIN 2.5' OF THE CURB.

40. NO BRICK ADJUSTMENT SHALL BE ALLOWED FOR MANHOLES UNDERNEATH THE PAVEMENT.

41. THE MAXIMUM THRESHOLD FOR MANHOLE ADJUSTMENT UNDERNEATH THE ROADWAY SHALL BE BETWEEN 0 TO 4".

42. FINAL PIPE INSPECTION IN THE RIGHT-OF-WAY OR COUNTY'S EASEMENT: AFTER THE FINAL BASE COURSE OPERATION, THE CONTRACTOR SHALL DEWATER AND VIDEO THE PIPE/CULVERT; THE COUNTY WILL ONLY REVIEW THE VIDEO DATA POST BASE COMPACTION AND SUPPLIED BY THE CONTRACTOR/DEVELOPER, AND THE TESTS AND DVD MUST MEET SECTION 430 OF THE LATEST EDITION OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

SIGNAGE & PAVEMENT MARKINGS

43. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH MANUEL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE LATEST IMPLEMENTED ADDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARDS INDEX NUMBERS: 9535, 11860, 11862, 11865, 17302, 17346 AND 17349.

44. ALL FINAL PAVEMENT MARKINGS WITHIN THE RIGHTS-OF-WAY SHALL BE THERMOPLASTIC.

45. ALL SIGNS SHALL BE ON A TEN-FOOT (10') POLE A MINIMUM SEVEN FEET (7') FROM THE GROUND.

46. STREET SIGNS SHALL BE MOUNTED WITH TEE CAPS.

47. STREET SIGNS SHALL BE A SIX INCH (6") WIDE WITH GREEN BACKINGS AND WHITE LETTERS AND BORDERING.

48. STOP SIGNS SHALL MEET THE MINIMUM SIZE REQUIREMENTS OF THE MUTCD.

49. STOP SIGNS ARE TO BE PLACED FOUR FEET (4') FROM BACK OF CURB, FOUR FEET (4') BEHIND CROSSWALKS AND IN THE RIGHT HAND SIDE OF THE ROAD.

50. ALL REGULATORY SIGNS SHALL BE BLACK AND WHITE. ALL CONSTRUCTION WARNING SIGNS SHALL BE ORANGE AND BLACK. ALL WARNING SIGNS SHALL BE YELLOW AND BLACK. ALL NO PARKING AND STOP SIGNS SHALL BE RED AND WHITE.

51. STOP BARS SHALL BE TWENTY-FOUR INCHES (24") WIDE AND LANE WIDTH. ALL STOP BARS SHALL BE THERMOPLASTIC.

52. ALL SIGNS MUST MEET FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARDS FOR ENGINEERING GRADE SIGN FACES IN REFLECTIVITY.

53. FOR COUNTY MAINTAINED ROADS, STREET SIGNS SHALL BE COLORED WITH A GREEN BACKGROUND AND WHITE LETTERING. FOR PRIVATE ROADS, THE SIGN SHALL BE A WHITE BACKGROUND WITH GREEN LETTERING.

54. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL BY CITY OF GREEN COVE SPRINGS.

SIDEWALKS

55. THE GOVERNING PUBLICATIONS FOR SIDEWALK ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 304-310 AND THE CURRENT FDOT STD. SPEC. FOR ROADWAY & BRIDGE CONST. SECTION 522.

56. SIDEWALKS ARE A MINIMUM OF 5' IN WIDTH FOR A LOCAL ROAD AND 6' IN WIDTH FOR A RESIDENTIAL COLLECTOR. ALL OTHER ROADWAY CLASSIFICATIONS SHALL REFER TO THE DETAILS HEREIN. IN NO CASE SHALL THE SIDEWALK BE LESS THAN 5' WITHOUT WRITTEN APPROVAL FROM THE ENGINEERING DIVISION.

57. ALL SIDEWALKS THAT ARE NOT IN FRONT OF A BUILD ABLE LOT, SHALL BE INSTALLED PRIOR TO THE FINAL INSPECTION.

58. PEDESTRIAN CROSSING/HANDICAP RAMPS SHALL BE INSTALLED WHEREVER THE SIDEWALK MEETS THE CURB. THE RAMPS SHALL BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD INDEX NUMBER 304. ALL ADA RAMPS SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE UNLESS OTHERWISE APPROVED BY THE ENGINEERING DIVISION.

59. WHETHER DEPICTED ON THE PLANS OR NOT, A SIDEWALK IS TO BE INSTALLED AT THE SUBDIVISION ENTRANCE RUNNING

60. PARALLEL TO THE RIGHT OF WAY FOR THE EXTENT OF THE PROPERTY.

61. SIDEWALKS ARE TO BE PLACED, AT A MINIMUM, 3' FROM THE PROPERTY LINE OR AS OTHERWISE APPROVED BY THE ENGINEERING DIVISION.

MAINTENANCE OF TRAFFIC

62. THE GOVERNING PUBLICATIONS FOR MAINTENANCE OF TRAFFIC ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 600 AND THE CURRENT FDO STD. SPEC. FOR ROADWAY & BRIDGE CONST., SECTION 102, AND THE LATEST EDITION OF THE MUTCD.

63. WHEN FDOT STANDARD INDEXES DO NOT APPLY AND HAULING IS NECESSARY FOR THE CONSTRUCTION OF THE SITE, ADDITIONAL MOT MAYBE NECESSARY. INSTALLATION OF "TRUCKS ENTERING AND LEAVING HIGHWAY" SIGNS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE LIMITS OF THE CONSTRUCTION SCHEDULE.

AS-BUILT REQUIREMENTS FOR PAVING AND DRAINAGE

GENERAL

SUBMIT TWO (2) SIGNED AND SEALED SETS OF PRINTS AND ONE DIGITAL COPY (AUTOCAD FORMAT; **PLEASE DO NOT USE REFERENCE FILES**) WITH THE DESIGN INFORMATION (ELEVATIONS, PIPE LENGTHS, STATIONING, ETC.) LINED THROUGH (~~28.48~~) AND THE AS-BUILT INFORMATION PLACED ADJACENT TO IT.

THE FIRM OR LICENSED SURVEYOR SHALL USE THE ORIGINAL PAVING AND DRAINAGE SHEET(S)) SPECIFICALLY FOR AS-BUILT INFORMATION. THE DRAWING(S) ARE TO BE ON 24" X 36" SHEET(S) AND CONTAIN THE FOLLOWING IN ADDITION TO THE AS-BUILT INFORMATION:

- PROJECT NAME AS IT APPEARS ON THE PLAT
- PROJECT/DEVELOPMENT NUMBER
- STREET NAMES
- ALL COMMERCIAL SITES SHALL SHOW THE SITE PHYSICAL ADDRESS IN THE TITLE BLOCK
- DESIGN INFORMATION FOR ALL AS-BUILT INFORMATION PROVIDED LINED THROUGH
- NORTH ARROW
- SCALE
- SHOW AND LABEL ALL SURVEY-LINES USED FOR LOCATIONS
- THE WORDS "AS-BUILT" IN AT LEAST ONE-INCH HIGH LETTERS
- MATERIALS CERTIFICATION STATEMENT SIGNED BY THE CONTRACTOR
- SIGNED ENGINEER'S CERTIFICATION STATEMENT
- INFORMATION PERTAINING TO BENCHMARK(S) (LOCATION, ELEVATION, AND REFERENCE TYPE)
- SHOW **STATE PLANE COORDINATE (NAD. 83)**
- REFERENCES ON AT LEAST FOUR (4) BOUNDARY CORNERS AND ON ALL PRM(S) (ONE POSITION, TO BE KNOWN AS THE "NORTHING," SHALL GIVE THE POSITION IN A NORTH AND SOUTH DIRECTION; THE OTHER, TO BE KNOWN AS THE "EASTING," SHALL GIVE THE POSITION IN AN EAST AND WEST DIRECTION, REF. F.S CH. 177.151) FOR PLATS AND AS-BUILTS.

BENCHMARKS

PERMANENT BENCHMARKS ARE TO BE SITUATED AS TO **FACILITATE LOT GRADING** (I.E. TOP OF METAL CURB HOODS, MANHOLE RIMS, ETC.).

AT LEAST TWO (2) PERMANENT BENCHMARKS SHALL BE ESTABLISHED WITHIN A SUBDIVISION OR IN EACH PHASE OF A SUBDIVISION AND LOCATED SO THAT NO LOT IS MORE THAN ONE THOUSAND FEET (1,000') FROM A BENCHMARK. **PLEASE REFERENCE EACH BENCHMARK BY STATION.**

PAVING

STATIONS, OFFSETS, AND ELEVATIONS ON:

- CENTER-LINE OR PROFILE GRADE LINE
- TOP OF CURB
- GUTTER OR EDGE OF PAVEMENT (SPECIFY WHICH)
- BACK OF SIDEWALKS
- A MINIMUM OF EVERY 100 FEET AND AT THE FOLLOWING CHANGES IN VERTICAL AND HORIZONTAL ALIGNMENT:
- PVC, PC AND PVT
- LOW AND HIGH POINTS
- CURB RETURNS
- CENTERLINE INTERSECTIONS
- BEGIN AND END VALLEY GUTTER
- BEGIN AND END SUPERELEVATION TRANSITION
- BEGIN AND END FULL SUPERELEVATION
- BEGIN AND END ROADWAY TRANSITION
- GUTTER LINE (**CUL-DE-SAC EVERY 25'**)

DRAINAGE

LOCATION OF ALL DRAINAGE STRUCTURES. LOCATION SHOULD BE BY STATION AND OFFSET WHENEVER POSSIBLE, OTHERWISE STRUCTURES MUST BE TIED DOWN FROM AT LEAST TWO DIRECTIONS.

SIZES, LENGTHS, AND TYPES OF DRAINAGE PIPES INCLUDING UNDERDRAIN.

INFORMATION FOR ALL STRUCTURES TO INCLUDE:

- PIPE INVERT ELEVATIONS INCLUDING UNDERDRAIN
- TOP OR GRATE ELEVATIONS (SPECIFY WHICH)
- WEIR OR SLOT ELEVATIONS AND SIZES
- CROSS SECTIONS THROUGH ALL SWALE AND DITCH CONSTRUCTION A MINIMUM OF EVERY 25 FEET TO INCLUDE **ELEVATIONS** AND **LOCATIONS** OF THE CENTERLINE OR TOES OF SLOPE (SPECIFY WHICH) AND THE TOPS OF BANK.

INFORMATION FOR RETENTION / DETENTION BASINS TO INCLUDE:

- ELEVATIONS AND LOCATIONS ALONG THE TOP OF BANK A MINIMUM OF EVERY 100 FEET
- DATED ELEVATION OF THE WATER STAGE AT THE TIME OF AS-BUILT
- TIES FROM THE TOP OF BANK TO THE WATERS EDGE A MINIMUM OF EVERY 100 FEET
- ELEVATIONS ALONG THE BOTTOM OF BASIN (2 SHOTS PER AVERAGE POND ACREAGE)

INFORMATION FOR CONTROL STRUCTURE TO INCLUDE:

- LOCATION
- TOP ELEVATION
- WEIR OR SLOT ELEVATION AND SIZE
- ELEVATION AND SIZE OF DRAWDOWN ORIFICE
- LENGTH, SIZE, AND INVERTS (AT HIGH AND LOW POINTS) OF FILTER DRAIN
- INVERT OF OUTFALL PIPE

SHOW ALL DRAINAGE EASEMENTS, ENCROACHMENTS WITHIN THE EASEMENTS, AND ANY ENCROACHMENTS OF DRAINAGE OUTSIDE OF EASEMENTS.

SIGNAGE

THE LOCATION OF ALL STREET SIGNS SHALL BE SHOWN BY STATION AND OFFSET WHENEVER POSSIBLE, OTHERWISE, THE SIGNS MUST BE TIED DOWN FROM AT LEAST TWO DIRECTIONS.

ADDITIONAL NOTES

ALL PROPOSED ELEVATIONS SHALL BE CHECKED FOR APPROVAL; ADDITIONAL ELEVATIONS MAY BE REQUIRED TO CHECK FOR POSITIVE DRAINAGE.

ALL CUL-DE-SAC CURBING SHALL BE SURVEYED EVERY 25'.

SUBMIT THE BLUE-LINE OR BLACK-LINE (**THE FINAL SET MUST BE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR, LICENSED BY THE STATE OF FLORIDA**) WITH THE CAD DISK FIVE (5) DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.

WATER MANAGEMENT APPROVALS ARE REQUIRED PRIOR TO FINAL ACCEPTANCE.

AS-BUILTS SHALL BE SIGNED IN, IF REVISIONS ARE REQUIRED, THE COMPANY WILL BE NOTIFIED TO PICK THEM UP AND SIGN THEM OUT. ONCE REVISIONS HAVE BEEN MADE, THE DOCUMENTS SHALL BE SIGNED BACK IN. **THE FILES ON THE CAD DISK SHOULD REFLECT THE SITE WITHOUT ADDITIONAL EDITING.**

REVISED - 12/9/15

CITY OF GREEN COVE SPRINGS SPECIFICATIONS

PROJECT DATUM ELEVATION

1. PROJECT DESIGN IS BASED ON XXXX DATUM SEE PLANS FOR BENCH MARK ELEVATION & LOCATION(S)

CONSTRUCTION ENTRANCE

2. A STABILIZED CONSTRUCTION ENTRANCE IS REQUIRED WITH ALL DEVELOPMENTS. WHERE THE DEVELOPMENT IS BUILT IN PHASES, A SECONDARY CONSTRUCTION ENTRANCE WILL BE REQUIRED THAT DOES NOT ALLOW CONSTRUCTION EQUIPMENT TO ACCESS THROUGH THE EXISTING DEVELOPMENT IF POSSIBLE.

PUBLIC SAFETY NOTES

3. A BLUE, ALL-DIRECTIONAL HIGHWAY-STYLE REFLECTIVE MARKERS SHALL BE PROVIDED ON ALL ROADWAYS, ALLEYS, ACCESS ROADS, AND ALL PAVED AREA IN FRONT OF EACH HYDRANT. SAID MARKERS SHALL BE LOCATED IN THE CENTER OF TRAVEL LANE ON THE SAME SIDE AS THE HYDRANT. THESE MARKERS SHALL BE IN PLACE AT THE TIME OF THE FINAL INSPECTION OR APPROVAL.

4. A DISK SHALL BE PROVIDED TO THE PUBLIC SAFETY DEPARTMENT, IN AUTOCAD FORMAT, SHOWING THE LOCATION OF ALL FIRE HYDRANTS BEFORE FINAL APPROVAL.

EXCAVATION & EMABANKMENTS NOTES

5. THE GOVERNING PUBLICATIONS FOR ROADWAY EXCAVATION AND EMBANKMENT ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEXES 500-505 AND SECTION 120 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION. ALL SOILS SHALL BE CLASSIFIED PER ASSHTO SOIL CLASSIFICATION SYSTEM.

6. THE CONTRACTOR IS TO ROUGH EXCAVATE AND GRADE ANY PROPOSED PONDS AT THE START OF THE SITE GRADING. THE CONTRACTOR WILL DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS. THESE PONDS WILL NOT BE ALLOWED TO DISCHARGE PRIOR TO THE GRASSING AND INSPECTION TO MAKE SURE THE WATER QUALITY IS ACCEPTABLE.

7. CONTRACTOR SHALL PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS..

8. SIDEWALKS, ROADS, STREETS, OR ANY OTHER TYPE OF PEDESTRIAN OR VEHICULAR PATHWAYS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS OR THE EXCAVATED TRENCH UNLESS APPROVED BY CITY OF GREEN COVE SPRINGS.

9. ALL UNSUITABLE MATERIAL SHALL BE REMOVED THREE FEET (3') BEYOND THE BACK OF THE CURB AND TWO FEET (2') BELOW THE BOTTOM OF THE 12" STABILIZED SUBGRADE. IT SHALL BE THE DETERMINATION OF CITY OF GREEN COVE SPRINGS IF MORE EXCAVATION SHALL BE REQUIRED DUE TO SOIL CONDITION EVALUATED IN THE FIELD.

TYPE "B" STABILIZED SUBGRADE

10. THE GOVERNING PUBLICATIONS FOR SUB-GRADE ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 505 AND THE CURRENT FDOT STD. SPEC. FOR ROADWAY & BRIDGE CONST. SECTION 160 AND SECTION 914.

11. LIMEROCK BEARING RATIOS FOR SUBGRADE SHALL BE A MINIMUM OF 40 WITH NO UNDER TOLERANCE.

12. ALL STABILIZED SUB-GRADE SHALL MEET FDOT TYPE "B" STABILIZATION AS DEFINED BY THE STANDARD SPECIFICATIONS.

BASE COURSE

13. THE GOVERNING PUBLICATIONS FOR BASE MATERIALS ARE THE CURRENT FDOT STD. SPEC. FOR ROADWAY & BRIDGE CONST.

14. THE LIMEROCK BEARING RATIO FOR BASE COURSE IS A MINIMUM OF 100 WITH NO UNDER TOLERANCE.

15. ALL LIMEROCK BASE COURSES SHALL BE PRIMED BEFORE PAVING. IF THE LIMEROCK IS NOT PAVED WITHIN ONE (1) DAY OF THE PRIMING, THE BASE SHALL BE REQUIRED TO BE COVERED WITH SAND.

16. ANY CONTAMINATED BASE MATERIAL SHALL BE REMOVED. ALL BASE MATERIAL SHALL BE IN ITS VIRGIN STATE.

ASPHALT

17. THE GOVERNING PUBLICATIONS FOR ASPHALT ARE FDOT 2002 ROADWAY AND TRAFFIC DESIGN STANDARDS OR THE CURRENT EDITION, INDEX 513 AND FDOT 2000 STD. SPEC. FOR ROADWAY & BRIDGE CONST OR CURRENT EDITION. SECTION 330, 331, AND 333.

18. THE MINIMUM ASPHALT THICKNESS FOR A LOCAL ROAD IS 1 ½"WITH NO UNDER TOLERANCE.

19. THE MINIMUM ASPHALT THICKNESS FOR A RESIDENTIAL COLLECTOR IS 2" WITH NO UNDER TOLERANCE.

20. THE ASPHALT SHALL BE CORED FOR THICKNESS. . IF HOWEVER THE COUNTY'S REPRESENTATIVE IS PRESENT AT POUR AND FEELS COMFORTABLE WITH THE REQUIREMENTS THEN HE OR SHE MAY WAVE THIS POLICY WITH THE DIRECTION OF THE CONSTRUCTION PROJECT MANAGER.

21. THE MAXIMUM RECYCLED RAP ALLOWED IN ASPHALT MIXES IS 20%.

UNDERDRAIN

22. THE GOVERNING PUBLICATIONS FOR UNDERDRAIN ARE THE CURRENT FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 286 AND THE CURRENT FDOT STD., SPEC. FOR ROADWAY & BRIDGE CONST. SECTION 440.

23. ALL UNDERDRAIN LINES SHALL HAVE A FORTY-FIVE DEGREE CLEAN OUT AT TWO HUNDRED FEET INTERVALS AND AT THE END OF THE PIPE RUN. THE CURB SHALL BE MARKED WITH TEAL OR HUNTER GREEN PAINT AS TO THE LOCATION OF THE CLEAN OUT.

24. ALL UNDERDRAIN FILTER MATERIAL SHALL BE FULLY WRAPPED WITH FILTER CLOTH. THE COUNTY WILL NOT PERMIT ANY ½ OR ¾ WRAPPED PIPING.

25. UNDERDRAIN SHALL BE PLACED, AT A MINIMUM, 2' FROM BACK OFF CURBING.

26. A 20' STUB OUT IS REQUIRED FOR ALL DRAINAGE STRUCTURES. ALL STUB OUTS SHALL BE CAPPED WITH AN UNDERDRAIN CLEAN OUT.

27. NO TREE ROOT BARRIER OR ROOTS SHALL BE PLACED WITHIN A HORIZONTAL DISTANCE OF 2' FROM THE UNDERDRAIN.

28. IF UNSUITABLE MATERIAL IS FOUND WITHIN THE LIMITS OF THE ROAD OR IF MATERIAL IS HAULED IN FOR ROADWAY FILL AT A DEPTH GRATER THAN ONE-FOOT (1') THEN THE ENTIRE ROADWAY SHALL BE UNDERDRAINED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND INSTALLED PER THE APPROVED CITY OF GREEN COVE SPRINGS DETAIL.

CURB & MISCELLANEOUS CONCRETE

29. THE GOVERNING PUBLICATIONS FOR CURB ARE FDOT 2004 ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 300-304 AND FDOT 2004 STD. SPEC. FOR ROADWAY & BRIDGE CONST. SECTION 520.

30. THE CURB SHALL BE CHECKED FOR FLOW AT ANY STAGE OF THE PROJECT. A WATER TRUCK IS TO BE PROVIDED AT THE PRE- FINAL INSPECTION IN ORDER TO CHECK FLOW FOR PROPER DRAINAGE.

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY:
–	–	–	–

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N/A
DATE:	4/19/2023
PROJ. NO.:	2008-499

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THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
INDEX – CLAY COUNTY NOTES

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452
DAVID M. TAYLOR ENGINEER NO. 44164
GLEN R. WIEGER ENGINEER NO. 81419

I-1
DWG. NO.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
A	ARC
AC	ACRE
B&C	BOX AND COVER
B.O.C.	BACK OF CURB
BFP	BACK FLOW PREVENTER
BLDG	BUILDING
BM	BENCHMARK
BOT.	BOTTOM
℄	CENTERLINE
C&G	CURB AND GUTTER
C.I.	CURB INLET
C.O.	CLEAN OUT
CB	CHORD BEARING
CH	CHORD
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CONN.	CONNECT
CONST	CONSTRUCT
CONT.	CONTINUATION
COORD.	COORDINATE
DBL C.I.	DOUBLE CURB INLET
D.E.	DRAINAGE EASEMENT
DHW	DESIGN HIGH WATER
D.I.P.	DUCTILE IRON PIPE
△	DELTA
E	EAST
E.O.P.	EDGE OF PAVEMENT
EL.	ELEVATION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EXIST	EXISTING
FDAE	FIRE DEPARTMENT ACCESS EASEMENT
F.F.	FINISHED FLOOR
FH	FIRE HYDRANT
FH-LS	LIMITED SPACE FIRE HYDRANT
F-L	FLOW LINE
FM	FORCE MAIN
F.P.	FIRE PROTECTION MAIN
FV	FLUSHING VALVE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HWL	HIGH WATER LEVEL
INV.	INVERT
L	LENGTH
LF	LINEAR FEET
M.E.S.	MITERED END SECTION
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NWL	NORMAL WATER LEVEL
ℙ	PROPERTY LINE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
P.I.P.	POUR IN PLACE
POB	POINT OF BEGINNING
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
P.U.D.E.	PRIVATE UNOBSTRUCTED DRAINAGE EASEMENT
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INFLECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
R.P.	RADIUS POINT
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RED.	REDUCER
RPZBFP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SOUTH
SAN.	SANITARY
SEP	SEPARATION
SL	SLOPE
S.P.	SAMPLE POINT
SHT	SHEET
STA	STATION
STB	STAKED TURBIDITY BARRIER
SWMF	STORM WATER MANAGEMENT FACILITY
T.O.B.	TOP OF BANK
SWR	SEWER
T.O.C.	TOP OF CURB
TRI C.I.	TRIPLE CURB INLET
TYP.	TYPICAL
U.A.D.E.	UNOBSTRUCTED ACCESS & DRAINAGE EASEMENT
U.D.E.	UNOBSTRUCTED DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
V.C.	VERTICAL CURVE
W	WEST
WM	WATER MAIN

GEOMETRY LEGEND

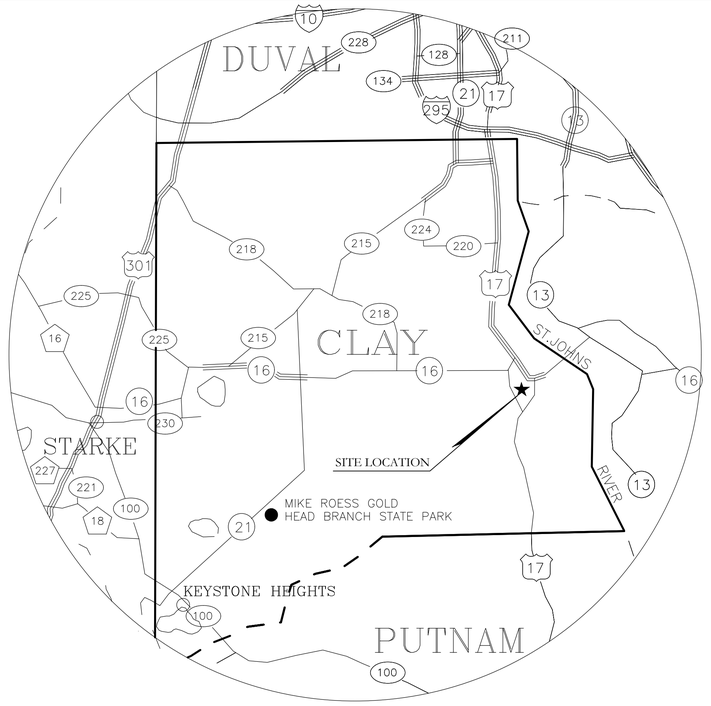
DESCRIPTION	SYMBOL
LINE NUMBER	L1
CURVE NUMBER	C1
BASELINE	ℙ
STATION NUMBER	12+00
LOT NUMBER	58
BUILDING NUMBER	2
NUMBER OF PARKING SPACES	5

PAVING AND DRAINAGE LEGEND

DESCRIPTION	SYMBOL
STORM PIPE	
UNDER DRAIN	UD
STORM WATER INLET	
CURB INLET	
MITERED END SECTION	
HEADWALL	
STORM SEWER MANHOLE	
STORM WATER STRUCTURE NUMBER	S-500
EXISTING SPOT ELEVATION	(28.5)
PROPOSED SPOT ELEVATION	28.7
EXISTING CONTOUR ELEVATION	21
PROPOSED CONTOUR ELEVATION	12
DRAINAGE DIVIDE	
DRAINAGE AREA (ACRES)	DA = 0.56 Ac
DRAINAGE FLOW DIRECTION	
SWALE FLOW DIRECTION	
ROAD SLOPE	0.3%
SILT FENCE	
STAKED TURBIDITY BARRIER	
BENCH MARK ELEVATION	BM23.75
PROPOSED ROADWAY ELEVATION	10.00

WATER AND SEWER LEGEND

DESCRIPTION	SYMBOL
PROPOSED WATER MAIN W/SIZE	W
EXISTING WATER MAIN W/SIZE	W
PROPOSED GATE VALVE W/BOX & COVER	
EXISTING GATE VALVE W/BOX & COVER	
PROPOSED REDUCER/INCREASER	
PROPOSED FIRE HYDRANT W/VALVE, BOX COVER	
PROPOSED LIMITED SPACE FIRE HYDRANT W/VALVE, BOX COVER	
SINGLE WATER SERVICE	
FLUSHING VALVE	
PROPOSED SANITARY SEWER MAIN	S
EXISTING SANITARY SEWER MAIN	S
PROPOSED SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER MANHOLE	
SANITARY SEWER CLEAN OUT	C.O.
SANITARY SEWER SERVICE LATERAL	
SANITARY SEWER MANHOLE NUMBER	1
PROPOSED SANITARY SEWER FORCE MAIN	FM
EXISTING SANITARY SEWER FORCE MAIN	FM
EXIST. FIRE HYDRANT	
PROPOSED FIRE PROTECTION MAIN	FP
EXISTING FIRE PROTECTION MAIN	FP
REDUCED PRESSURE ZONE BACK FLOW PREVENTER W/BY-PASS METER	
REDUCED PRESSURE ZONE BACK FLOW PREVENTER	
WATER MAIN CROSSING TYPE	B
SAMPLE POINT(S.P.)	S.P.
END OF WATER MAIN PLUG	
DUAL WATER SERVICE	



VICINITY MAP

LOCATION MAP

INDEX OF SHEETS

ADDITIONAL PLANS

1 - 9	N/A	PUD BOUNDARY SURVEY AND LEGAL
1	KS-1	KEY SHEET
1-13	TM-1 - TM-13	TREE MITIGATION PLANS
1-13	LS-1 - LS-13	LANDSCAPE PLANS
		IRRIGATION PLANS

THE ROOKERY – PHASE 1

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P:\2008-499 AYRSHIRE\ENG PLANS\499 INDEX.DWG 4/19/2023 7:57 AM Mike Reilly

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CLAY COUNTY, FLORIDA

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Sheet No. 3 of 88

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DWG. NO.

PROJECT SPECIFIC NOTES

GEOMETRY NOTES

1. BOUNDARY, TOPOGRAPHIC AND RIGHT OF WAY INFORMATION OBTAINED FROM SURVEY SUPPLIED BY OWNER
2. STATIONING REFERS TO CENTERLINE OF PAVEMENT.
3. ALL DIMENSIONING REFERS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. ALL WORK WITHIN RIGHT OF WAY SHALL COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING STRUCTURES, IMPROVEMENTS, UTILITIES, PROPERTY LINES AND SETBACKS AND CONFIRM ALL PROPOSED DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION ORDERING OF MATERIALS.
6. GEOMETRY INFORMATION SHOWN IS FOR REFERENCE ONLY. CONTRACTORS SURVEYOR SHALL RE-COMPUTE/CONFIRM GEOMETRIC INFORMATION SHOWN PRIOR TO FIELD STAKING.DISCREPANCIES, IF ANY, WITH THESE PLANS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION.

PAVING AND DRAINAGE NOTES

1. ALL GRADING AND PLACEMENT OF COMPACTED FILL SHALL BE IN ACCORDANCE WITH THE LATEST CLAY COUNTY SPECIFICATIONS.
2. ALL AREAS WITHIN THE PROPERTY SHALL BE CLEARED & GRUBBED TO REMOVE ALL ROOTS & MISCELLANEOUS VEGETATION EXCEPTING SPECIFIC TREES OR CLUSTERS OF TREES WHICH WILL BE FLAGGED BY THE OWNER & SHALL BE PROTECTED FROM DAMAGE.
3. ALL PIPE LENGTHS ARE APPROXIMATE DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH TYPICAL SECTIONS & DETAILS AS SHOWN ON THE PAVING & DRAINAGE DETAIL SHEETS & IN ACCORDANCE WITH THE LATEST CLAY COUNTY SPECIFICATIONS.
4. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF PAVING & DRAINAGE WITH ALL OTHER CONSTRUCTION. FOR WATER & SEWER FACILITIES, SEE WATER & SEWER PLAN DRAWINGS.
5. LOCATION, EXISTENCE OR NONEXISTENCE OF ANY UTILITY DOES NOT CONSTITUTE RESPONSIBILITY OF THE ENGINEER.
6. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION FOR VERIFICATION & LOCATION OF ANY UTILITY.
7. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
8. GRADES SHOWN ON PLANS ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.
9. CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR ALL WATER & SEWER PIPES, FITTINGS, VALVES, MANHOLES, ETC,.
10. CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
11. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE GRASSED & MULCHED IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS.
12. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE PLANS & SPECIFICATIONS.
13. CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF SEDIMENT-LADEN RUNOFF RESULTING FROM STORM EVENTS DURING THE CONSTRICTION PHASE. EROSION CONTROL FACILITIES SHOULD BE INSTALLED EARLY DURING THE CONSTRUCTION PERIOD SO AS TO PREVENT THE TRANSPORT OF SEDIMENT INTO SURFACE WATERS. REVEGETATION & STABILIZATION OF DISTURBED AREAS SHOULD BE ACCOMPLISHED AS SOON AS POSSIBLE TO REDUCE THE POTENTIAL FOR FUTURE SOIL EROSION.
14. IN THE EVENT THAT UNSUITABLE MATERIAL IS ENCOUNTERED DURING ROADWAY EXCAVATION, THIS MATERIAL SHALL BE REMOVED AND REPLACED WITH PROPER ALLOWANCE FOR SUBSEQUENT COMPACTION. ALL SUBMERGE STUMPS ROOTS, MUCK, OR THERE PERISHABLE MATTER ENCOUNTERED IN THE PREPARATION OF THE SUBGRADE SHALL BE REMOVED TO A DEPTH OF AT LEAST THREE FEET BELOW FINISHED SUBGRADE AND 3' BEYOND PAVEMENT.
15. TWO SETS OF SIGNED AND SEALED AS-BUILTS ARE TO BE SUBMITTED FIVE (5) DAYS PRIOR TO THE FINAL INSPECTION WITH A COPY PROVIDED ON DISK IN AUTOCAD FORMAT.
16. CONSTRUCTION WARNING SIGNS ARE TO BE POST-MOUNTED AND ERECTED BEFORE CONSTRUCTION CAN COMMENCE THEY WILL FOLLOW THE STANDARDS SET FORTH BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
17. BENCH MARK DATUM (PROVIDED BY OWNERS SURVEYOR) INFORMATION FOR THIS PROJECT IS SHOWN UNDER THE "PROJECT DATUM ELEVATION" HEADING ON THIS SHEET. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY BENCHMARK ELEVATIONS SHOWN ON PLANS PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN ELEVATION PRIOR TO ANY CONSTRUCTION.
18. CLAY COUNTY REQUIRES 24-HR NOTICE ON ALL TESTING OR MEETINGS.
19. DENSITIES FOR ALL CROSSINGS ARE TO BE TAKEN AT 1' LIFTS.
20. THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION UNTIL ALL APPLICABLE PERMITS ARE OBTAINED.
21. THE CONTRACTORS SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC., AT 811 OR 1-800-432-4770, 48 HOURS PRIOR TO ANY EXCAVATION IN ANY ESTABLISHED / EXISTING RIGHT-OF-WAY OR EASEMENT.
22. THE CONTRACTOR SHALL PROVIDE 20LF OF 6" UNDERDRAIN STUBOUT EACH SIDE OF CURB INLET. UNLESS OTHERWISE NOTED ON PLANS.
23. UNDERDRAIN CLEANOUTS (C.O.) TO BE LOCATED AT THE UPSTREAM END, AT EACH 90° BEND AND EVERY 300LF ALONG UNDERDRAIN.
24. ALL UNSUITABLE MATERIAL SHALL BE REMOVED TWO FEET (2') BEYOND THE BACK OF THE CURB AND TWO FEET (2') BELOW FINISHED GRADE.
25. IF UNSUITABLE MATERIALS IS FOUND WITHIN THE LIMITS OF THE ROAD OR IF MATERIAL IS HAULED IN FOR ROADWAY FILL AT A DEPTH GREATER THAN ONE-FOOT (1') THEN THE ENTIRE ROADWAY SHALL BE UNDER DRAINED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND INSTALLED PER THE APPROVED CLAY COUNTY DETAIL.
26. ALL STORM SEWER PIPES SHALL BE CUT FLUSH WITH THE INTERIOR WALL OF ANY TYPE MANHOLE OR CURB AND DITCH BOTTOM INLETS.
27. COMPACTION DENSITY TEST FOR ALL STORM SEWER PIPE SHALL START AT THE SPRING LINE OF THE PIPE.
28. IF THE APPROVAL DESIGN REQUIRES THE INLET OR STORM RUN BE SURCHARGED ALL INLETS SHALL BE INSPECTED BEFORE BEING EXPOSED TO THE SYSTEM.
29. TEST CYLINDERS SHALL BE RUN FOR ALL CONCRETE STRUCTURES. THERE WILL BE THREE (3) TESTS PER EACH DAY POUR WITH A ONE (1) SEVEN (7) DAYBREAK AND TWO (2) TWENTY-EIGHT (28) DAYS BREAKS.
30. THE ASPHALT SHALL BE CORED FOR THICKNESS AND WILL BE GIVEN A ONE-QUARTER INCH ($\frac{1}{4}$") TOLERANCE. IF HOWEVER THE COUNTY'S REPRESENTATIVE IS PRESENT AT POUR AND FEELS COMFORTABLE WITH REQUIREMENTS THEN HE OR SHE MAY WAVE THIS POLICY.
31. LIMEROCK BEARING RATIOS FOR SUBGRADE AT FORTY (40) AND LIMEROCK OR ALTERNATIVE BASE COURSE AT ONE HUNDRED (100) THERE WILL BE NO UNDER TOLERANCE.

POND BANK COMPACTION/CONSTRUCTION NOTES

1. CONTRACTOR SHALL COMPACT ALL POND BANKS.
2. POND BANK FILL SHOULD CONSIST OF "CLEAN" FINE SAND WITH LESS THAN 5% SOIL FINES.
3. CONTRACTOR MAY USE FILL MATERIALS WITH SOIL FINES BETWEEN 5% & 12%, BUT STRICT MOISTURE CONTROL MAY BE REQUIRED.
4. TOP 2' OF SOIL UNDER BERM SHALL BE COMPACTED TO A MIN DENSITY OF 95% OF MODIFIED PROCTOR MAX. DENSITY
5. PLACE FILL IN UNIFORM 10"-12" LOOSE LIFTS AND COMPACT EACH LIFT TO A MIN. DENSITY OF 95% OF MODIFIED PROCTOR MAXIMUM DENSITY.
6. PERFORM COMPLIANCE TESTS WITHIN THE FILL AT THE FREQUENCY OF NOT LESS THAN ONE TEST PER 300 LF OF POND BANK, OR A MIN. OF 2 TESTS IN ANY AREA LESS THAN 300' IN LENGTH.

WATER AND SEWER NOTES

1. ALL ELEVATIONS ARE SHOWN IN FEET.
2. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID ALL UTILITIES, STRUCTURES AND OBSTRUCTIONS, BOTH NEW AND EXISTING, ABOVE AND BELOW THE GROUND SURFACE. ALL DAMAGES RESULTING FROM THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL CONTACT ENGINEER IF CONFLICT OCCURS PRIOR TO INSTALLATION OF NEW UTILITIES.
3. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES IN THE AREA OF THIS PROJECT NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF WATER AND SEWER FACILITIES.
4. WHERE WATER MAIN IS LAID UNDER DITCHES, CULVERTS OR OTHER PIPELINES WITHOUT FITTINGS, THE MAXIMUM DEFLECTION SHALL NOT EXCEED 50% OF THE MAXIMUM DEFLECTION RECOMMEND BY THE MANUFACTURER OF THE PIPE FURNISHED, UNLESS OTHERWISE SHOWN ON DRAWINGS.
5. THE CONTRACTOR SHALL NOT PROVIDE LESS THAN A 1.5' FT. VERTICAL CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE DIRECTED. NO SPECIAL PAYMENT ALLOWED.
6. EXISTING TOPOGRAPHIC FEATURES AND UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE TAKEN FROM EXISTING RECORDS AND ARE TO BE USED FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL VERIFY PRIOR T CONSTRUCTION.
7. ALL NEW WATER PIPE SHALL HAVE A MINIMUM DEPTH OF COVER OF 36" IN PAVED AREAS AND 36" IN UNPAVED AREAS, MEASURED FROM THE TOP OF THE PIPE TO GROUND SURFACE, EXCEPT AS OTHERWISE NOTED ON DRAWINGS. VERTICAL AND HORIZONTAL ALIGNMENT MAY BE ADJUSTED TO MEET ADVERSE FIELD CONDITIONS UPON APPROVAL BY THE ENGINEER. ALL NEW REUSE MAIN SHALL HAVE A MINIMUM DEPTH OF 48". ALL NEW FORCE MAIN SHALL HAVE A MINIMUM DEPTH OF 60".
8. CLASS V, TYPE I BEDDING SHALL BE USED FOR THIS PROJECT UNLESS EXISTING SOILS ARE UNSUITABLE FOR USE A BEDDING, IN WHICH CASE CLASS B, TYPE II BEDDING WILL BE USED.
9. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF WATER AND SEWER FACILITIES WITH ALL OTHER CONSTRUCTION AND PAVING AND DRAINAGE CONSTRUCTION, SEE DRAWINGS.
10. ALL SANITARY SEWER LINES TO MAINTAIN A MINIMUM OF 10' OFFSET FROM WATERMAINS AND TREES UNLESS OTHERWISE NOTED ON DRAWINGS OR UNLESS DIRECTED BY ENGINEER.
11. CLAY COUNTY UTILITY AUTHORITY STANDARD JOINT RESTRAINTS ARE REQUIRED AT ALL FITTINGS AND TERMINATION POINTS (SEE RESTRAINT SCHEDULE DWG NO. WD-3).
12. FOR WATER, RECLAIMED AND SEWER DETAILS SEE WD, RD, AND SD SHEETS.
13. SEWER LINES ARE DESIGNED TO FINISHED GRADE AND SHALL BE PROTECTED FROM DAMAGE UNTIL FINISH WORK IS COMPLETED.
14. AS-BUILT DRAWINGS SHALL BE FURNISHED TO THE CLAY COUNTY UTILITY AUTHORITY AND TO THE ENGINEER IN ACCORDANCE WITH THE LATEST CLAY COUNTY UTILITY AUTHORITY SPECIFICATIONS.
15. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AT THE SITE PRIOR TO CONSTRUCTION.
16. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE PROPERTY LINES AND RIGHT-OF-WAY LINES PRIOR TO CONSTRUCTION.
17. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER ADD TO CLAY COUNTY UTILITY AUTHORITY PRIOR TO CONSTRUCTION OF WATER AND SEWER FACILITIES.
18. ENDS OF ALL SEWER CONNECTIONS TO BE NOTED ON "AS-BUILT" DRAWING.
19. WATER TO BE FLUSHED AND PRESSURE TESTED IN ACCORDANCE WITH THE CLAY COUNTY UTILITY AUTHORITY STANDARDS AND SPECIFICATIONS.
20. WATER MAIN TO BE MARKED ON PIPE IN ACCORDANCE WITH CLAY COUNTY UTILITY AUTHORITY STANDARDS AND SPECIFICATIONS.
21. SHOP DRAWINGS ON ALL BACKFLOW PREVENTERS SHALL BE SUBMITTED TO CLAY COUNTY UTILITY AUTHORITY DEPARTMENT PRIOR TO INSTALLATION.
22. ALL WATER AND SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUES.
23. THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION UNTIL ALL APPLICABLE PERMITS ARE OBTAINED
24. THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC., AT 1-800-432-4770, 48 HOURS PRIOR TO ANY EXCAVATION IN ANY ESTABLISHED / EXISTING RIGHT-OF-WAY OR EASEMENT.
25. COMPACTION DENSITY TESTS FOR ALL WATER AND SEWER CROSSINGS SHALL BE IN ACCORDANCE WITH CCUA SPECIFICATIONS.

PROJECT DATUM ELEVATION

1. PROJECT DESIGN IS BASED ON NAVD 88 DATUM SEE PLANS FOR BENCH MARK ELEVATION & LOCATION(S)

MAINTENANCE OF TRAFFIC

1. MAINTENANCE OF TRAFFIC FOR SANITARY SEWER & DRIVEWAY CONNECTION CONSTRUCTION WORK AREAS TO BE IN ACCORDANCE WITH THE LATEST F.D.O.T. DESIGN STANDARD INDEX NO. 601, INDEX NO. 603 (SHEET 1 OF 3) AND ALL APPLICABLE SECTIONS OF INDEX NO. 600.

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

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Sheet No. 4 of 88

I–3

DWG. NO.

EXISTING CONDITIONS NOTE:

1. THE EXISTING CONDITIONS PLAN IS A COMPOSITE MAP MADE UP OF SITE SURVEY, AERIAL MAPS AND SITE VISIT INFORMATION. THE INTENT OF THE PLAN IS TO DEPICT, AS ACCURATELY AS POSSIBLE, BELOW GRADE, AT GRADE AND ABOVE GRADE SITE FEATURES. ADDITIONAL SITE FEATURES MAY BE PRESENT AND NOT SHOWN ON PLANS.

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND

= TO BE REMOVED

= LIMITS OF CLEARING (SEE NOTE 6)

WELL (SEE NOTE 5)
REMOVE 503±LF BW FENCE
REMOVE ~11,260 SF CONC.
REMOVE 710±LF 24"PVC & 2 CATCH BASINS
REMOVE 34±LF 24"CMP
LIMITS OF CLEARING (SEE NOTE 6)
REMOVE ~128,942 SF BLDG
REMOVE ~18,270 SF CONC.
REMOVE 22±LF 12"CMP
REMOVE 39±LF 12"CMP
REMOVE ELECTRIC BOXES
REMOVE ~77,000 SF BLDG
FOR OFFSITE LIMITS OF CLEARING AND DEMOLITION ALONG UTILITY ROUTE SEE DWG NO. OUP-1&2
POWER POLE (TYP)(SEE NOTE 4)
LIMITS OF CLEARING (SEE NOTE 6)
REMOVE 100±LF 24"CMP
WELL (SEE NOTE 5)
REMOVE 233±LF 12"PVC & 4 CATCH BASINS
REMOVE ~17,136 SF BLDG
REMOVE DRAINAGE STRUCTURE
GUSTAFSON FARM ROAD
WELL (SEE NOTE 5)
POWER POLE (TYP)(SEE NOTE 4)
REMOVE 295±LF BLOCK WALL
REMOVE ~17,136 SF BLDG & SHED
REMOVE ~15,683 SF PVMT & SHED
REMOVE WEIGH SCALE
WELL (SEE NOTE 5)
REMOVE ELECTRIC BOXES
WELL (SEE NOTE 5)
REMOVE WOOD PIER
POWER POLE (TYP)(SEE NOTE 4)
REMOVE 57±LF 24"CMP
REMOVE ELECTRIC BOXES
REMOVE ~109,873 SF BLDG
REMOVE ~18,270 SF CONC.
REMOVE 92±LF 12"PVC
REMOVE 5,725±LF BW FENCE
REMOVE WATER TANK
REMOVE 40±LF 16"CMP 22±LF 8"CPP
REMOVE ~971 SF CONC.
REMOVE 4,365±LF BW FENCE
WELL (SEE NOTE 5)
REMOVE SHED
REMOVE ~335,223 SF CONC.
REMOVE 20±LF 24"CMP 94±LF 16"CMP 60±LF 12"CMP
COORDINATE WITH UTILITY PROVIDER TO RELOCATE GUY WIRE
WELL (SEE NOTE 5)
POWER POLE (TYP)(SEE NOTE 4)
REMOVE SHED & PUMP EQUIPMENT
REMOVE 90±LF 24"CMP 60±LF 10"CPP
POWER POLE (TYP)(SEE NOTE 4)
REMOVE 92±LF 24"CMP
REMOVE ~18,848 SF BLDG & SHED
LIMITS OF CLEARING (SEE NOTE 6)
C.R. 15A (S. OAKRIDGE AVE)
FOR OFFSITE DEMOLITION AROUND SWMF J1 SEE DWG NO. J1-1&2
LIMITS OF CLEARING (SEE NOTE 6)
JERSEY AVE

DEMOLITION NOTES:

1. THE SURVEY INCLUDED IN THE CONSTRUCTION PLANS IS FOR **REFERENCE ONLY**. ADDITIONAL SITE FEATURES MAY BE PRESENT THAT ARE NOT SHOWN ON THE SURVEY.
2. SEE DWG NO. OSP-1 FOR PROPOSED OVERALL SITE PLAN
3. SEE DWG NO RI-1 THRU RI-5 FOR DEMOLITION ALONG CR 15A.
4. POWER POLE: CONTRACTOR TO COORDINATE WITH UTILITY COMPANY TO REMOVE POLE, CONNECTED OVERHEAD OR UNDERGROUND POWER LINES AND ANY GUY WIRES THAT MAY BE PRESENT.
5. WELL: CONTRACTOR TO VERIFY WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) THE MONITORING STATUS OF ALL WELLS AND MONITORING WELLS BEFORE ABANDONMENT PROCEEDS. ALL WELLS SHALL BE PROPERLY AND LEGALLY ABANDONED VIA FILLING AND PLUGGING. CUT ALL WELL TOPS TO MINIMUM 4' BELOW GRADE. THE WORK MUST BE PERMITTED AND COMPLETED BY A PROPERLY LICENCED WATER WELL CONTRACTOR. THE WATER WELL CONTRACTOR MUST ADHERE TO THE STATE OF FLORIDA AND WATER MANAGEMENT DISTRICT GUIDELINES REGARDING ABANDONMENT PERMITTING AND SAFE PRACTICES.
6. LIMITS OF CLEARING: LIMITS OF CLEARING SHALL BE DELINEATED WITH EROSION CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION/DEMOLITION. **STAKED TURBIDITY BARRIER SHALL BE USED ABUTTING WETLAND AREAS**. SEE EROSION CONTROL NOTES DWG NO I-1 AND DETAILS DWG NO SPP-1&2.
7. ANY BUILDINGS, CONCRETE, FENCEING,OR OTHER ITEMS SHOWN TO BE DEMOLISHED OUTSIDE OF LIMITS OF CLEARING SHALL BE DONE WITH MINIMAL DAMAGE TO SURROUNDING VEGETATION.
8. LENGTHS, DIMENSIONS, SIZES AND AREAS TO BE DEMOLISHED AND/OR FILLED ARE APPROXIMATE. ADDITIONAL SITE FEATURES NOT SHOWN ON PLANS MAY BE REQUIRED TO BE DEMOLISHED OR REMOVED. THE CONTRACTOR TO FIELD VERIFY ALL ON SITE FEATURE QUANTITIES TO BE DEMOLISHED, REMOVED OR FILLED.
9. ALL MATERIALS IN, ON OR CREATED BY THE DEMOLITION OF ITEMS QUANTIFIED IN THIS PLAN SHALL BE DISPOSED OF IN AN APPROVED LANDFILL OR RECYCLED AS ALLOWED.

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THE ROOKERY – PHASE 1

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CHECKED BY:	VJD
SCALE:	1" = 300'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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Jacksonville, Florida 32256
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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

EXISTING CONDITIONS AND DEMOLITION PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452
DAVID M. TAYLOR ENGINEER NO. 44164
GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 5 of 88

ECD-1

DWG. NO.

EXISTING CONDITIONS NOTE:

1. THE EXISTING CONDITIONS PLAN IS A COMPOSITE MAP MADE UP OF SITE SURVEY, AERIAL MAPS AND SITE VISIT INFORMATION. THE INTENT OF THE PLAN IS TO DEPICT, AS ACCURATELY AS POSSIBLE, BELOW GRADE, AT GRADE AND ABOVE GRADE SITE FEATURES. ADDITIONAL SITE FEATURES MAY BE PRESENT AND NOT SHOWN ON PLANS.

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)

= WETLAND IMPACTS

= POND/SWALE FILL (SEE NOTE 4)

= LIMITS OF CLEARING (SEE NOTE 6)

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

2.30 Ac WETLAND IMPACT

EXISTING SWALE TO REMAIN (TYP) (SEE NOTE 5)

SURCHARGE AREA (SEE NOTE 7)

LIMITS OF CLEARING (SEE NOTE 6)

PROPERTY LINE

LIMITS OF CLEARING (SEE NOTE 6)

.03Ac WETLAND IMPACT

PROPERTY LINE

EXISTING SWALE TO REMAIN (TYP) (SEE NOTE 5)

JERSEY AVE

0.65 Ac WETLAND IMPACT

LIMITS OF CLEARING (SEE NOTE 6)

0.86 Ac WETLAND IMPACT

406,495±SF TOTAL AREA OF POND/SWALE FILL (SEE NOTE 4)

SURCHARGE AREA (SEE NOTE 7)

CUSTAFSON FARM ROAD

PROPERTY LINE

C.R. 15A (S. OAKRIDGE AVE)

LIMITS OF CLEARING (SEE NOTE 6)

DEMOLITION NOTES:

1. THE SURVEY INCLUDED IN THE CONSTRUCTION PLANS IS FOR **REFERENCE ONLY**. ADDITIONAL SITE FEATURES MAY BE PRESENT THAT ARE NOT SHOWN ON THE SURVEY.
2. SEE DWG NO. OSP-1 FOR PROPOSED OVERALL SITE PLAN
3. SEE DWG NO RI-1 THRU RI-5 FOR DEMOLITION ALONG CR 15A.
4. POND/SWALE FILL: EXISTING LAKES SWALES AND OTHER AREAS TO BE FILLED SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS.
5. SWALE TO REMAIN: EXISTING SWALES OUTSIDE THE LIMITS OF CLEARING WITHIN THE PROPERTY LINES SHALL BE CLEANED OF ALL VEGETATION AND GRADED TO MAINTAIN EXISTING FLOW PATTERNS.
6. LIMITS OF CLEARING: LIMITS OF CLEARING SHALL BE DELINEATED WITH EROSION CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION/DEMOLITION. **STAKED TURBIDITY BARRIER SHALL BE USED ABUTTING WETLAND AREAS**. SEE EROSION CONTROL NOTES DWG NO I-1 AND DETAILS DWG NO SPP-1&2.
7. SURCHARGE AREA: AREA TO BE SURCHARGED PER RECOMMENDATIONS IN GEOTECHNICAL ENGINEERING REPORT BY ECS FLORIDA, LLC.
8. LENGTHS, DIMENSIONS, SIZES AND AREAS TO BE DEMOLISHED AND/OR FILLED ARE APPROXIMATE. ADDITIONAL SITE FEATURES NOT SHOWN ON PLANS MAY BE REQUIRED TO BE DEMOLISHED OR REMOVED. THE CONTRACTOR TO FIELD VERIFY ALL ON SITE FEATURE QUANTITIES TO BE DEMOLISHED, REMOVED OR FILLED.
9. ALL MATERIALS IN, ON OR CREATED BY THE DEMOLITION OF ITEMS QUANTIFIED IN THIS PLAN SHALL BE DISPOSED OF IN AN APPROVED LANDFILL OR RECYCLED AS ALLOWED.

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

EXISTING CONDITIONS AND DEMOLITION PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 6 of 88

ECD-2

DWG. NO.

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WETLAND FLAG PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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WFP–1
DWG. NO.

GRAPHIC SCALE

100 0 50 100 200 400

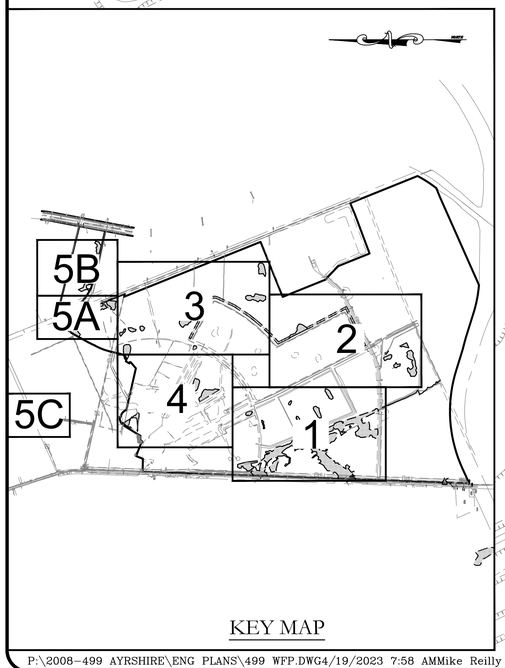
(IN FEET)
1 inch = 100 ft.

NORTH

LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)



KEY MAP

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THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

WETLAND FLAG PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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WFP-2

DWG. NO.

THE ROOKERY - PHASE 1

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GRAPHIC SCALE

100 0 50 100 200 400

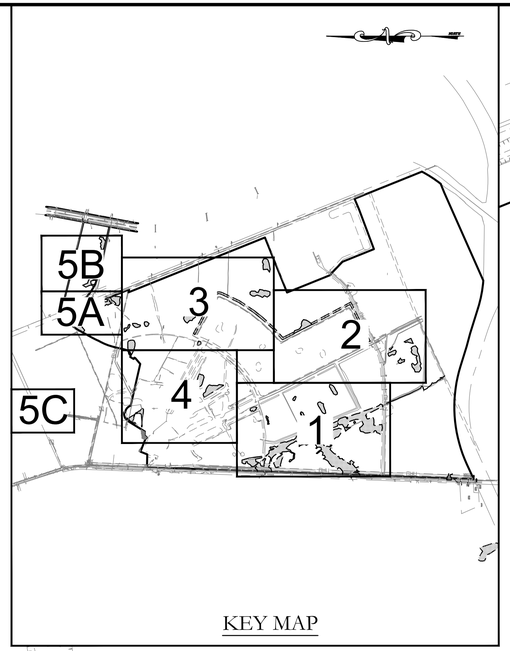
(IN FEET)
1 inch = 100 ft.

NORTH

LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)



KEY MAP

FLOOD ZONE A

TRAILROAD

TOE DITCH

DITCH

ROAD

POND

24" CMP INV = 33.50

12" CPP INV = 33.60

18" CPP INV = 26.31

28" CPP INV = 26.35

24" CPP INV = 26.72

12" CPP INV = 31.21

RAMAD PER MONITORING WELL

ELECTRIC BOXES

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D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WETLAND FLAG PLAN

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Sheet No. 9 of 88

WFP–3

DWG. NO.

GRAPHIC SCALE

100 0 50 100 200 400

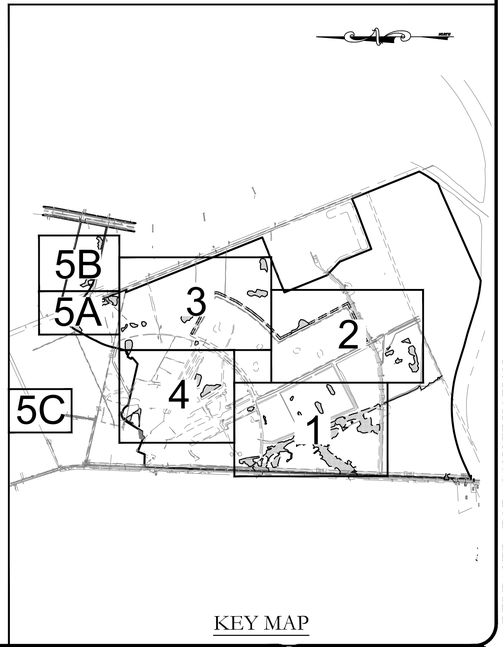
(IN FEET)
1 inch = 100 ft.

NORTH

LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)



KEY MAP

THE ROOKERY – PHASE 1

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CLAY COUNTY, FLORIDA

WETLAND FLAG PLAN

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WFP-4

DWG. NO.

GRAPHIC SCALE

100 0 50 100 200 400

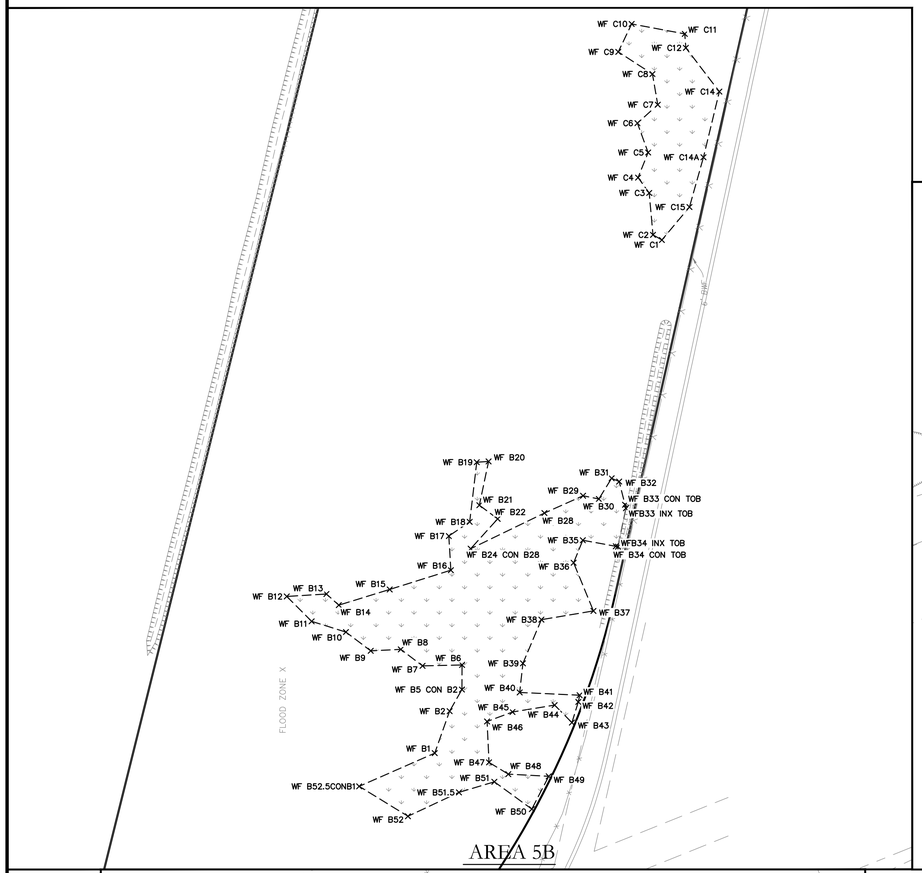
(IN FEET)
1 inch = 100 ft.

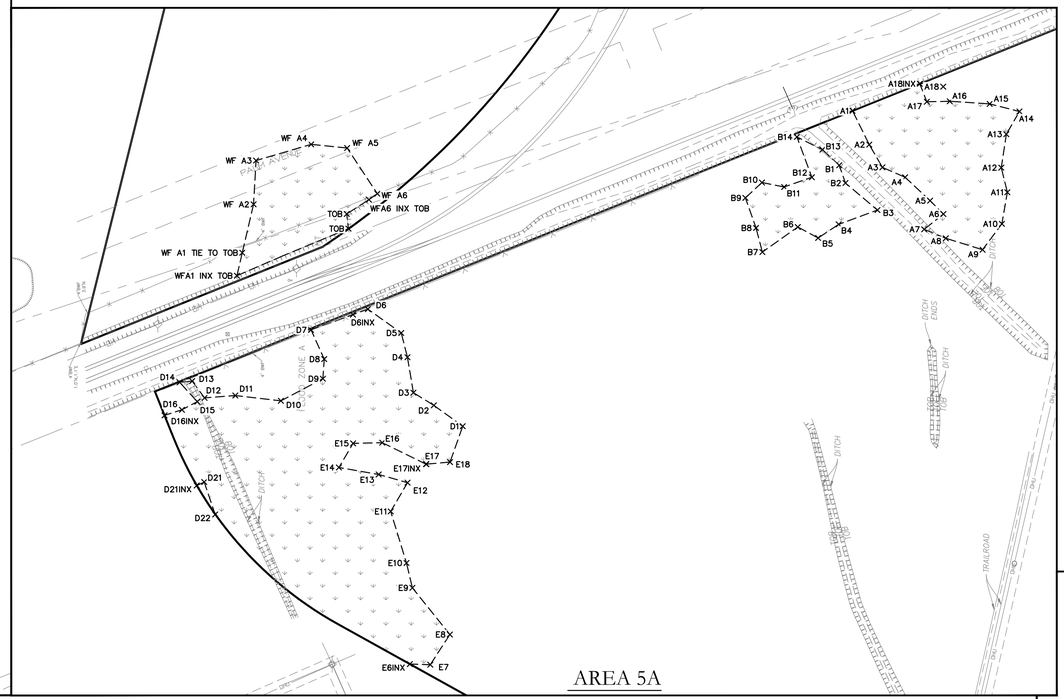
NORTH

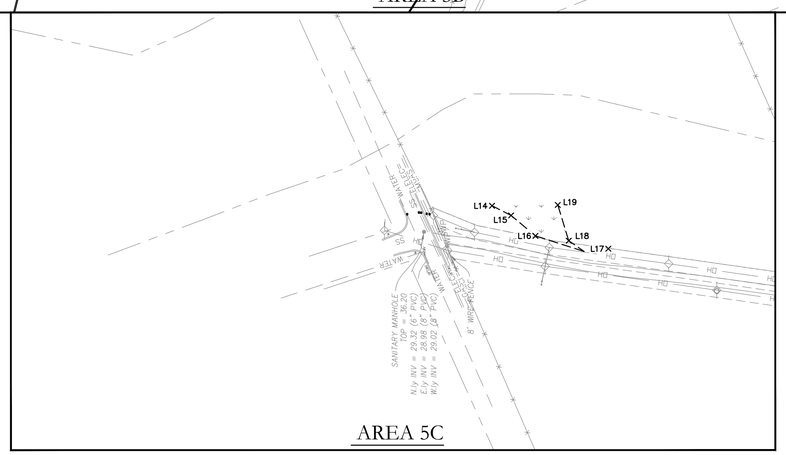
LEGEND

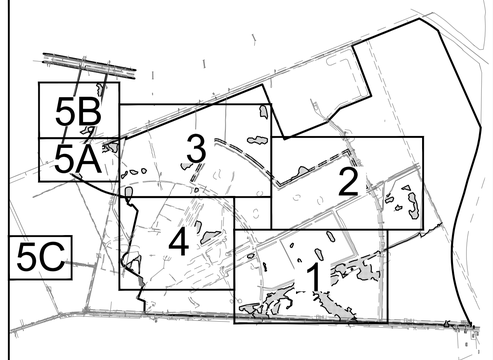
= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)









KEY MAP

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WETLAND FLAG PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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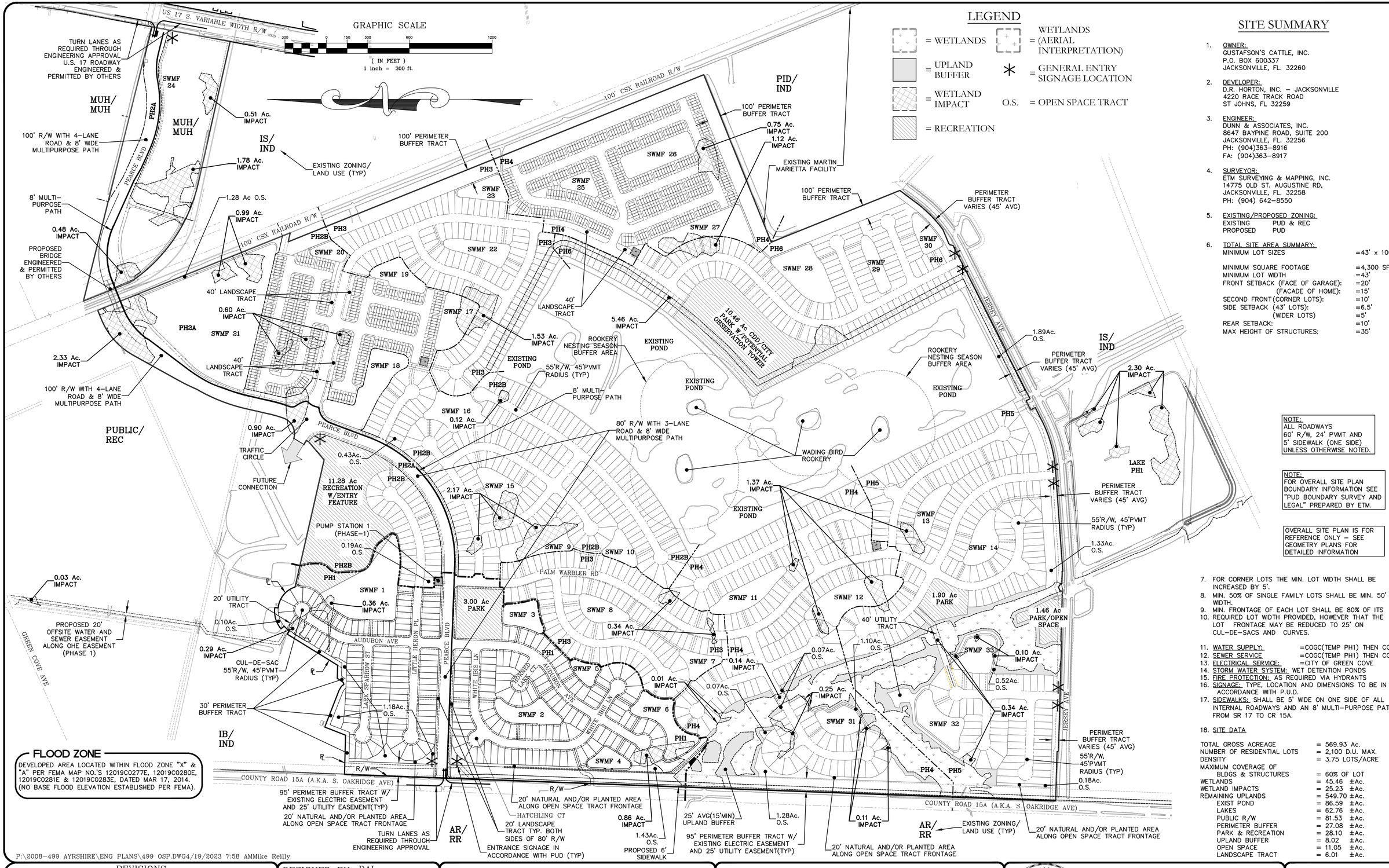
Sheet No. 11 of 88

WFP-5

DWG. NO.



SITE SUMMARY

1. OWNER:
GUSTAFSON'S CATTLE, INC.
P.O. BOX 600337
JACKSONVILLE, FL. 32260

2. DEVELOPER:
D.R. HORTON, INC. - JACKSONVILLE
4220 RACE TRACK ROAD
ST JOHNS, FL 32259

3. ENGINEER:
DUNN & ASSOCIATES, INC.
8647 BAYPINE ROAD, SUITE 200
JACKSONVILLE, FL. 32256
PH: (904)363-8916
FA: (904)363-8917

4. SURVEYOR:
ETM SURVEYING & MAPPING, INC.
14775 OLD ST. AUGUSTINE RD,
JACKSONVILLE, FL. 32258
PH: (904) 642-8550

5. EXISTING/PROPOSED ZONING:
EXISTING PUD & REC
PROPOSED PUD

6. TOTAL SITE AREA SUMMARY:

MINIMUM LOT SIZES	=43' x 100'
MINIMUM SQUARE FOOTAGE	=4,300 SF
MINIMUM LOT WIDTH	=43'
FRONT SETBACK (FACE OF GARAGE):	=20'
(FACADE OF HOME):	=15'
SECOND FRONT (CORNER LOTS):	=10'
SIDE SETBACK (43' LOTS):	=6.5'
(WIDER LOTS)	=5'
REAR SETBACK:	=10'
MAX HEIGHT OF STRUCTURES:	=35'

7. FOR CORNER LOTS THE MIN. LOT WIDTH SHALL BE INCREASED BY 5'.
8. MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.
9. MIN. FRONTAGE OF EACH LOT SHALL BE 80% OF ITS REQUIRED LOT WIDTH PROVIDED, HOWEVER THAT THE LOT FRONTAGE MAY BE REDUCED TO 25' ON CUL-DE-SACS AND CURVES.
11. WATER SUPPLY: =COGC(TEMP PH1) THEN CCUA
12. SEWER SERVICE =COGC(TEMP PH1) THEN CCUA
13. ELECTRICAL SERVICE: =CITY OF GREEN COVE
14. STORM WATER SYSTEM: WET DETENTION PONDS
15. FIRE PROTECTION: AS REQUIRED VIA HYDRANTS
16. SIGNAGE: TYPE, LOCATION AND DIMENSIONS TO BE IN ACCORDANCE WITH P.U.D.
17. SIDEWALKS: SHALL BE 5' WIDE ON ONE SIDE OF ALL INTERNAL ROADWAYS AND AN 8' MULTI-PURPOSE PATH FROM SR 17 TO CR 15A.
18. SITE DATA

TOTAL GROSS ACREAGE	= 569.93 Ac.
NUMBER OF RESIDENTIAL LOTS	= 2,100 D.U. MAX.
DENSITY	= 3.75 LOTS/ACRE
MAXIMUM COVERAGE OF BLDGS & STRUCTURES	= 60% OF LOT
WETLANDS	= 45.46 ±Ac.
WETLAND IMPACTS	= 25.23 ±Ac.
REMAINING UPLANDS	= 549.70 ±Ac.
EXIST POND	= 86.59 ±Ac.
LAKES	= 62.76 ±Ac.
PUBLIC R/W	= 81.53 ±Ac.
PERIMETER BUFFER	= 27.08 ±Ac.
PARK & RECREATION	= 28.10 ±Ac.
UPLAND BUFFER	= 8.02 ±Ac.
OPEN SPACE	= 11.05 ±Ac.
LANDSCAPE TRACT	= 6.01 ±Ac.

FLOOD ZONE

DEVELOPED AREA LOCATED WITHIN FLOOD ZONE "X" & "A" PER FEMA MAP NO.'S 12019C0277E, 12019C0280E, 12019C0281E & 12019C0283E, DATED MAR 17, 2014. (NO BASE FLOOD ELEVATION ESTABLISHED PER FEMA).

THE ROOKERY - PHASE 1

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THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

OVERALL SITE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 12 of 88

OSP-1

DWG. NO.

OPEN SPACE NOTE:
THE WESTERNMOST 20' OF OPEN SPACE TRACTS FRONTING PROPOSED 95' BUFFER @ CR15A RIGHT-OF-WAY SHALL BE NATURAL AND/OR PLANTED AREA

ROADWAY IMPROVEMENTS NOTES:
- SEE DWG NO. RI-2 FOR S OAKRIDGE AVE (CR 15A) IMPROVEMENTS
- SEE DWG NO. G-7 FOR ENTRANCE DETAILS

LOT WIDTHS:
MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.

PH1 LOTS 1,8,9,35,36,56,69,100,115 & 116-231 ARE 50' OR GREATER

PHASE #	1
<50' LOTS	106
50'+ LOTS	125
TOTAL LOTS	231

NOTES:

SIDEWALK: COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

DRIVEWAY:
ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.

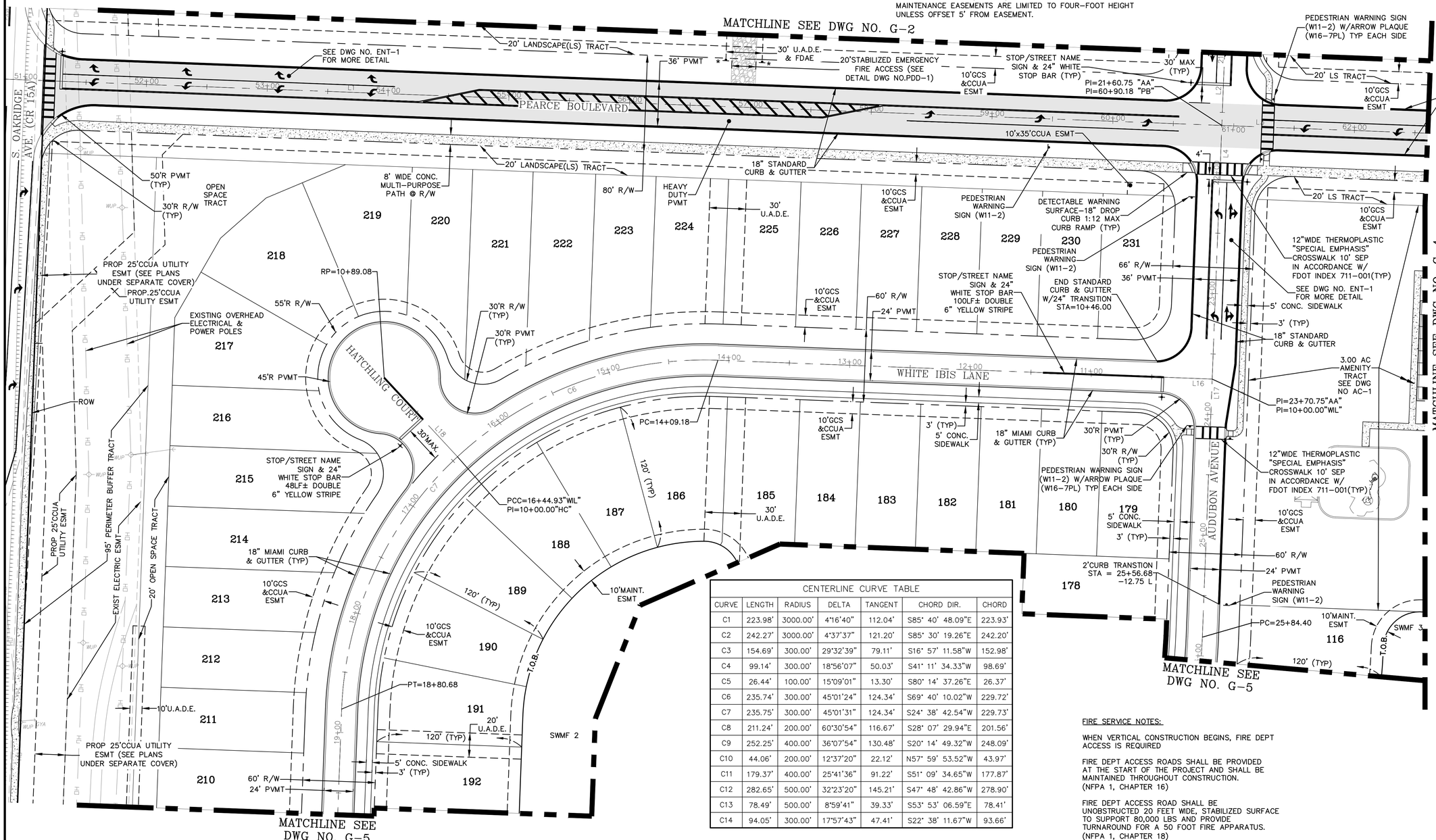
BOUNDARY:
FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

FENCING:
REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.

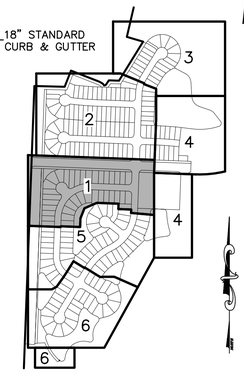
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND
= WETLANDS
= UPLAND BUFFER
= WETLAND IMPACT
= COMMON AREA SIDEWALK (SEE NOTE)
* = "FIRE LANE NO PARKING" SIGN LOCATION

THE ROOKERY - PHASE 1



KEYMAP
NTS



CENTERLINE LINE TABLE

LINE	LENGTH	BEARING
L1	1011.55'	S87°49'08"E
L2	230.00'	S02°10'52"W
L3	450.00'	S87°49'08"E
L4	210.00'	S02°10'52"W
L6	61.00'	S87°49'08"E
L7	652.65'	S87°49'09"E
L8	340.00'	S02°10'52"W
L9	175.94'	S87°49'08"E
L10	5.85'	S72°40'07"E
L11	376.80'	S87°49'10"E
L12	105.29'	S02°10'52"W
L13	159.61'	S31°43'31"W
L14	72.01'	S50°39'38"W
L15	66.18'	S83°11'31"E
L16	409.18'	N87°49'08"W
L17	213.65'	S02°10'52"W
L19	361.13'	S02°07'57"W
L20	134.85'	S58°22'57"E
L21	150.92'	N51°41'13"W
L22	34.46'	N64°18'34"W
L23	161.20'	S31°37'03"W
L24	162.35'	S58°22'57"E
L25	273.46'	S31°37'03"W
L26	65.00'	S49°23'16"E
L27	53.51'	S13°39'20"W
L28	210.00'	S02°10'52"W
L29	155.00'	S02°10'52"W

CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD DIR.	CHORD
C1	223.98'	3000.00'	4°16'40"	112.04'	S85° 40' 48.09"E	223.93'
C2	242.27'	3000.00'	4°37'37"	121.20'	S85° 30' 19.26"E	242.20'
C3	154.69'	300.00'	29°32'39"	79.11'	S16° 57' 11.58"W	152.98'
C4	99.14'	300.00'	18°56'07"	50.03'	S41° 11' 34.33"W	98.69'
C5	26.44'	100.00'	15°09'01"	13.30'	S80° 14' 37.26"E	26.37'
C6	235.74'	300.00'	45°01'24"	124.34'	S69° 40' 10.02"W	229.72'
C7	235.75'	300.00'	45°01'31"	124.34'	S24° 38' 42.54"W	229.73'
C8	211.24'	200.00'	60°30'54"	116.67'	S28° 07' 29.94"E	201.56'
C9	252.25'	400.00'	36°07'54"	130.48'	S20° 14' 49.32"W	248.09'
C10	44.06'	200.00'	12°37'20"	22.12'	N57° 59' 53.52"W	43.97'
C11	179.37'	400.00'	25°41'36"	91.22'	S51° 09' 34.65"W	177.87'
C12	282.65'	500.00'	32°23'20"	145.21'	S47° 48' 42.86"W	278.90'
C13	78.49'	500.00'	8°59'41"	39.33'	S53° 53' 06.59"E	78.41'
C14	94.05'	300.00'	17°57'43"	47.41'	S22° 38' 11.67"W	93.66'

FIRE SERVICE NOTES:

WHEN VERTICAL CONSTRUCTION BEGINS, FIRE DEPT ACCESS IS REQUIRED

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FIRE DEPT ACCESS ROAD SHALL BE UNOBSTRUCTED 20 FEET WIDE, STABILIZED SURFACE TO SUPPORT 80,000 LBS AND PROVIDE TURNAROUND FOR A 50 FOOT FIRE APPARATUS. (NFPA 1, CHAPTER 18)

P:\2008-499 AYRSHIRE\ENG PLANS\499 GEO.DWG4/19/2023 7:59 AMMike Reilly

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THE ROOKERY - PHASE 1
FOR:
D.R. HORTON, INC. - JACKSONVILLE
CLAY COUNTY, FLORIDA
GEOMETRY PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 13 of 88

G-1
DWG. NO.

RELEASED FOR CONSTRUCTION

OPEN SPACE NOTE:
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30'PERIMETER BUFFER TRACT
OPEN SPACE TRACT
30'PERIMETER BUFFER TRACT/U.A.D.E.
MATCHLINE SEE DWG NO. G-3
LARK SPARROW STREET
LITTLE HERON PLACE
AUDUBON AVENUE
MATCHLINE SEE DWG NO. G-4
MATCHLINE SEE DWG NO. G-1
55'R R/W
45'R PVMT
30'R R/W (TYP)
30'R PVMT (TYP)
60' R/W
24' PVMT
PC=3+80.93
PT=6+23.20
RP=3+14.75
PT=3+47.35
RP=3+15.06
PC=3+20.90
PT=14+85.46
PI=15+90.75"AA"
PI=10+00.00"LSS"
PI=10+00.00 "LHP"
PI=19+30.75 "AA"
20'
10'GCS &CCUA ESMT
5' CONC. SIDEWALK
3' (TYP)
4' (TYP)
12" SOLID WHITE THERMOPLASTIC CROSSWALK 6' SEP (TYP)
DETECTABLE WARNING SURFACE-18" DROP CURB 1:12 MAX CURB RAMP (TYP)
18" MIAMI CURB & GUTTER (TYP)
STOP/STREET NAME SIGN & 24" WHITE STOP BAR & 100LF DOUBLE 6" YELLOW STRIPE (TYP)
STOP SIGN & 24"WHITE STOP BAR
END STANDARD CURB & GUTTER W/24" TRANSITION STA=9+54.00
END STANDARD CURB & GUTTER @ ADA RAMP(TYP)
20'STABILIZED EMERGENCY FIRE ACCESS (SEE DETAIL DWG NO.PDD-1)
30' U.A.D.E. & FDAE
36' PVMT
66' R/W
18" STANDARD CURB & GUTTER
SEE DWG NO. ENT-1 FOR MORE DETAIL
EXISTING OVERHEAD ELECTRICAL & POWER POLES
PROP 25'CCUA UTILITY ESMT (SEE PLANS UNDER SEPARATE COVER)
PROP 25'CCUA UTILITY ESMT
EXIST ELECTRIC ESMT
95' PERIMETER BUFFER TRACT
PROJECT SIGNAGE
MONITORING WELL
SWMF 1
T.O.B.
25' U.A.D.E.
10'MAINT. ESMT
5'CCUA ESMT
120' (TYP)
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 C1 C2 C3 C4 C5
14+00 15+00 16+00 17+00 18+00 19+00 20+00
4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00

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NORTH

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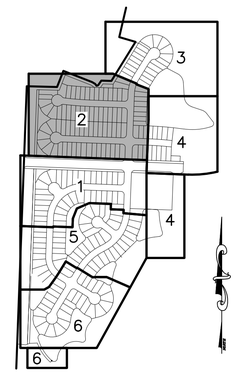

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THE ROOKERY - PHASE 1

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CLAY COUNTY, FLORIDA

GEOMETRY PLAN

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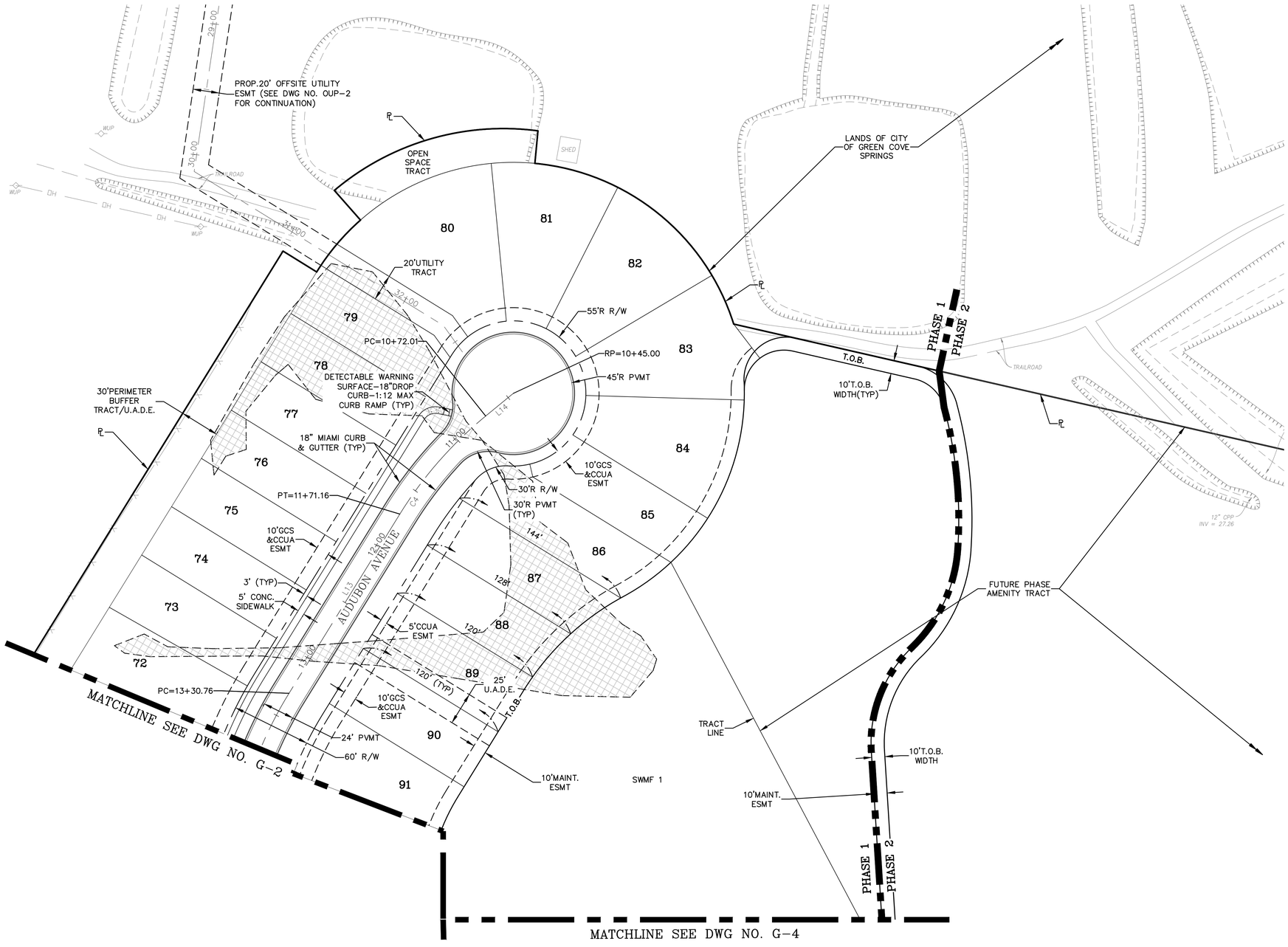

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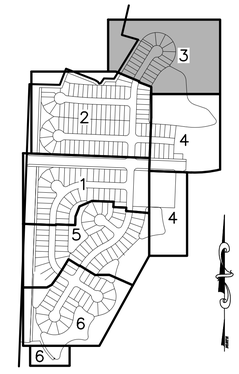

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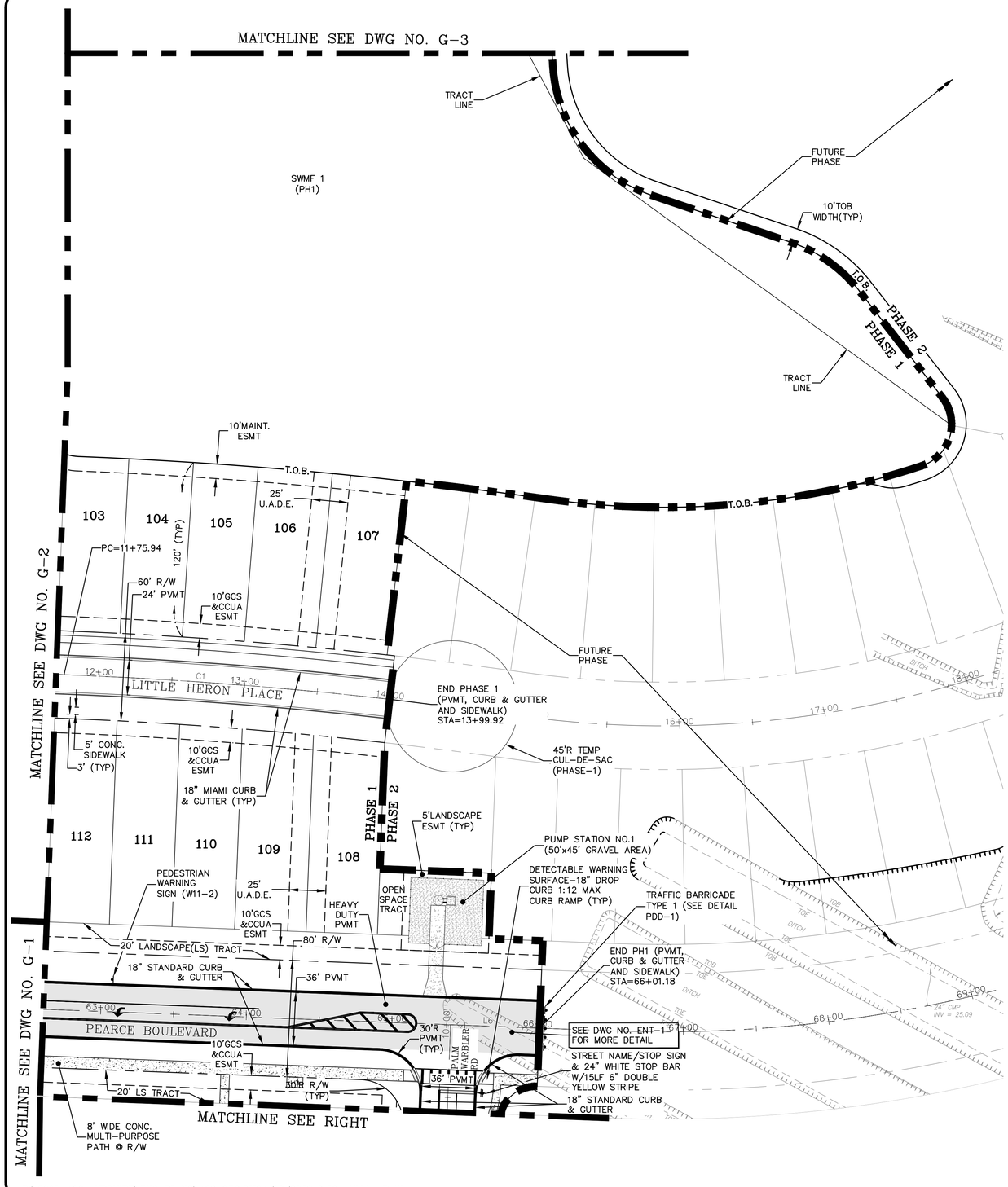
Sheet No. 15 of 88

G-3

DWG. NO.



LEGEND

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G-4

DWG. NO.

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MATCHLINE SEE DWG NO. G-1

MATCHLINE SEE DWG NO. G-4

MATCHLINE SEE DWG NO. G-6

HORNED LARK COURT

AUDUBON AVENUE

WHITE IBIS LANE

PHASE 1

PHASE 3

FUTURE PHASE

SWMF 2

SWMF 3

SWMF 4

SWMF 5

PROP 25'CCUA UTILITY ESMT (SEE PLANS UNDER SEPARATE COVER)

EXISTING OVERHEAD ELECTRICAL & POWER POLES

PROP 25'CCUA UTILITY ESMT

95' PERIMETER BUFFER TRACT

20' OPEN SPACE TRACT

EXIST ELECTRIC ESMT

20'STABILIZED EMERGENCY FIRE ACCESS (SEE DETAIL DWG NO.PDD-1)

25'FDAE

25' U.A.D.E. & FDAE

10'MAINT. ESMT

10'U.A.D.E.

10'TOB WIDTH(TYP)

10'GCS &CCUA ESMT

10'TOB WIDTH(TYP)

RP=12+29.44

PC=11+50.92

PT=11+94.98

PRC=30+16.02

PC=22+41.81

PT=32+98.67

100LF DOUBLE 6" YELLOW STRIPE

12" SOLID WHITE THERMOPLASTIC CROSSWALK 6' SEP (TYP)

PCC=28+36.65 "AA"
PI=10+00.00 "HLC"

STOP/STREET NAME SIGN & 24" WHITE STOP BAR

DETECTABLE WARNING SURFACE-18" DROP CURB 1:12 MAX CURB RAMP (TYP)

18" MIAMI CURB & GUTTER (TYP)

5' CONC. SIDEWALK

3' (TYP)

CONC. 5' SIDEWALK

PEDESTRIAN WARNING SIGN(W11-2)

55'R R/W

45'R PVMT

30'R R/W (TYP)

30'R PVMT (TYP)

24' PVMT

60' R/W

120' (TYP)

25' U.A.D.E.

20' U.A.D.E.

30' MAX

T.O.B.

POND

BERM

DITCH

SEE TYP.

209 208 207 206 205 204 203 202 201 200 199 198 197 196 195 194 193

172 173 174 171 170 169 168 167 166 165 164 163 162 161 160 129 128 127 126 125 124 123 122 121 120 119 118 117 177 176 175

NOTES:

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Sheet No. 17 of 88

G-5

DWG. NO.

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= UPLAND BUFFER

= WETLAND IMPACT

= COMMON AREA SIDEWALK (SEE NOTE)

* = "FIRE LANE NO PARKING" SIGN LOCATION

NOTES:

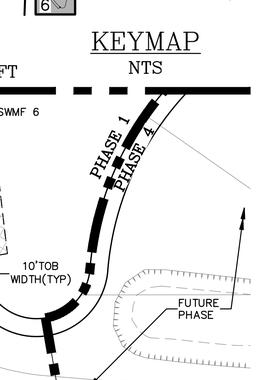
SIDEWALK: COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

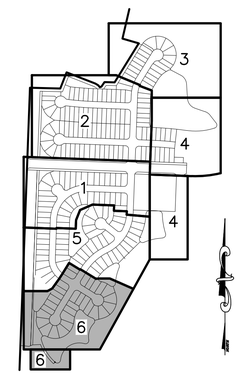
DRIVEWAY:
ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.

BOUNDARY:
FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

FENCING:
REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.

KEYMAP
NTS





RELEASED FOR CONSTRUCTION

P:\2008-499 AYRSHIRE\ENG PLANS\499 GEO.DWG4/19/2023 8:00 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
–	–	–	–

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 40'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

GEOMETRY PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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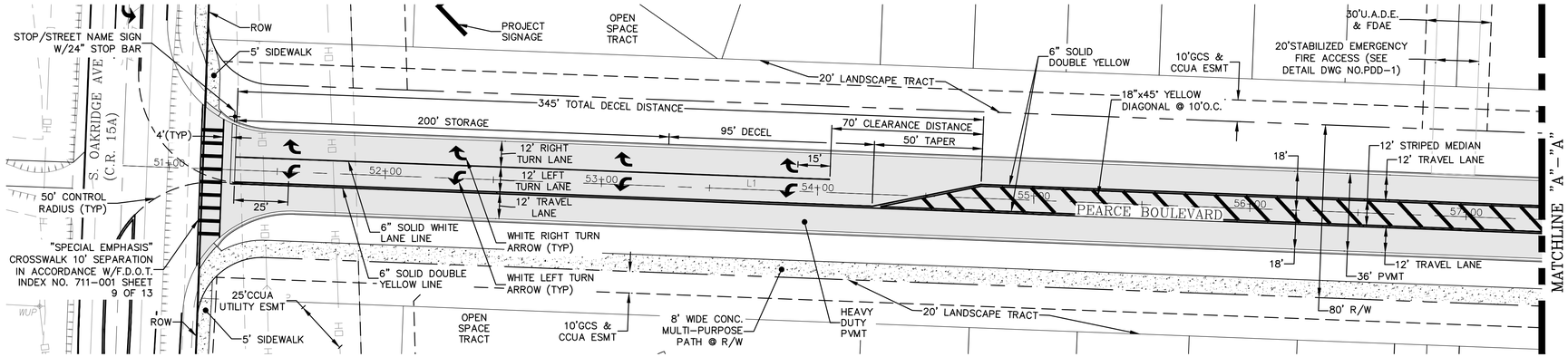


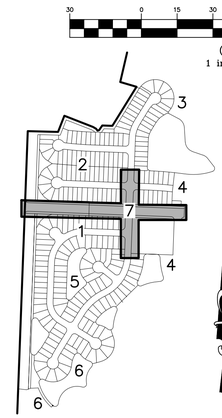
PEARCE BOULEVARD

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



LEGEND

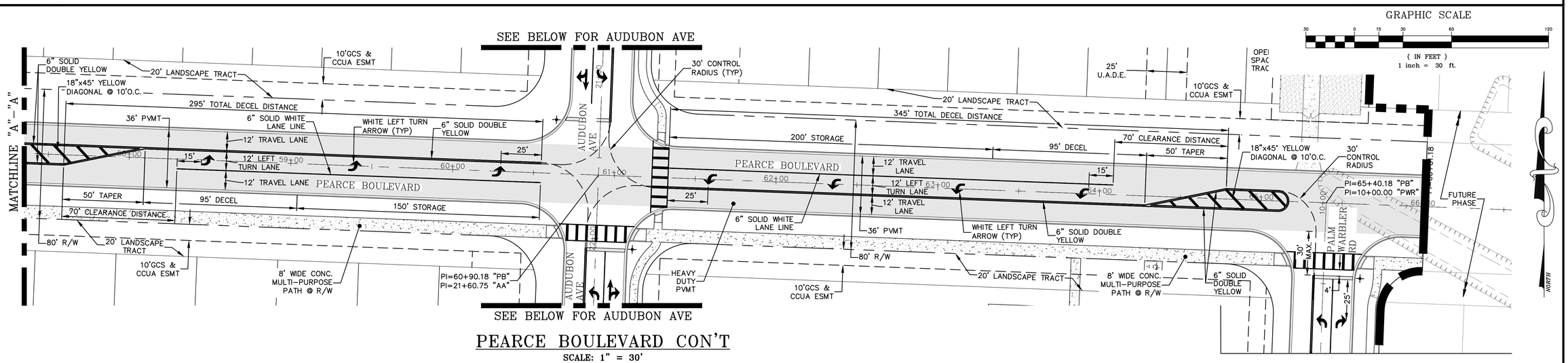
= COMMON AREA SIDEWALK (SEE NOTE)

SIDEWALK NOTE:
COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR).

ROADWAY IMPROVEMENTS NOTE:
SEE DWG NO. RI-2 FOR S OAKRIDGE AVE (CR 15A) IMPROVEMENTS

KEYMAP

NTS



PEARCE BOULEVARD CON'T

SCALE: 1" = 30'

GRAPHIC SCALE

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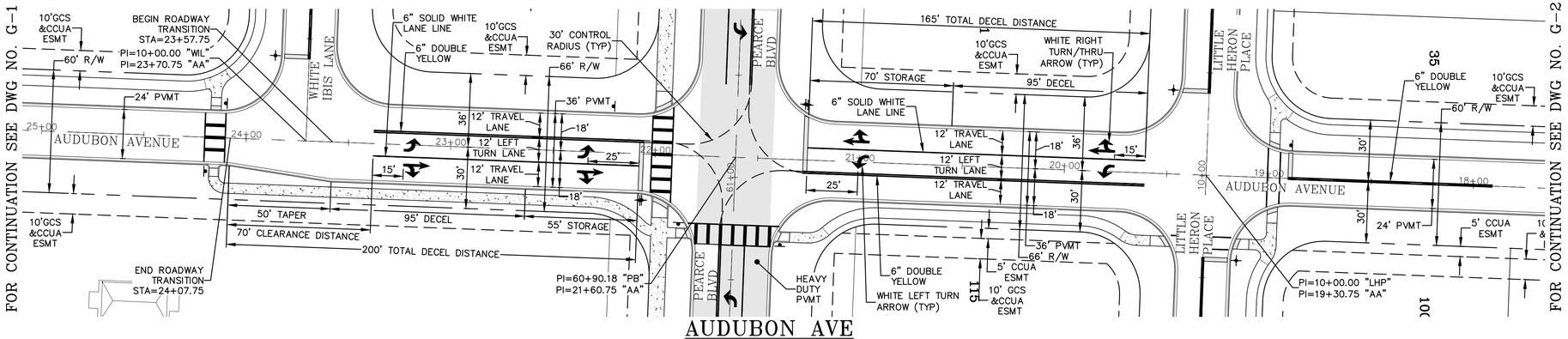
(IN FEET)
1 inch = 30 ft.



AUDUBON AVE

SCALE: 1" = 30'

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REVISIONS			
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-	-	-	-

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THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

GEOMETRY PLAN - ENTRANCE ROAD & TURN LANES

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 19 of 88

ENT-1

DWG. NO.

THE ROOKERY - PHASE 1

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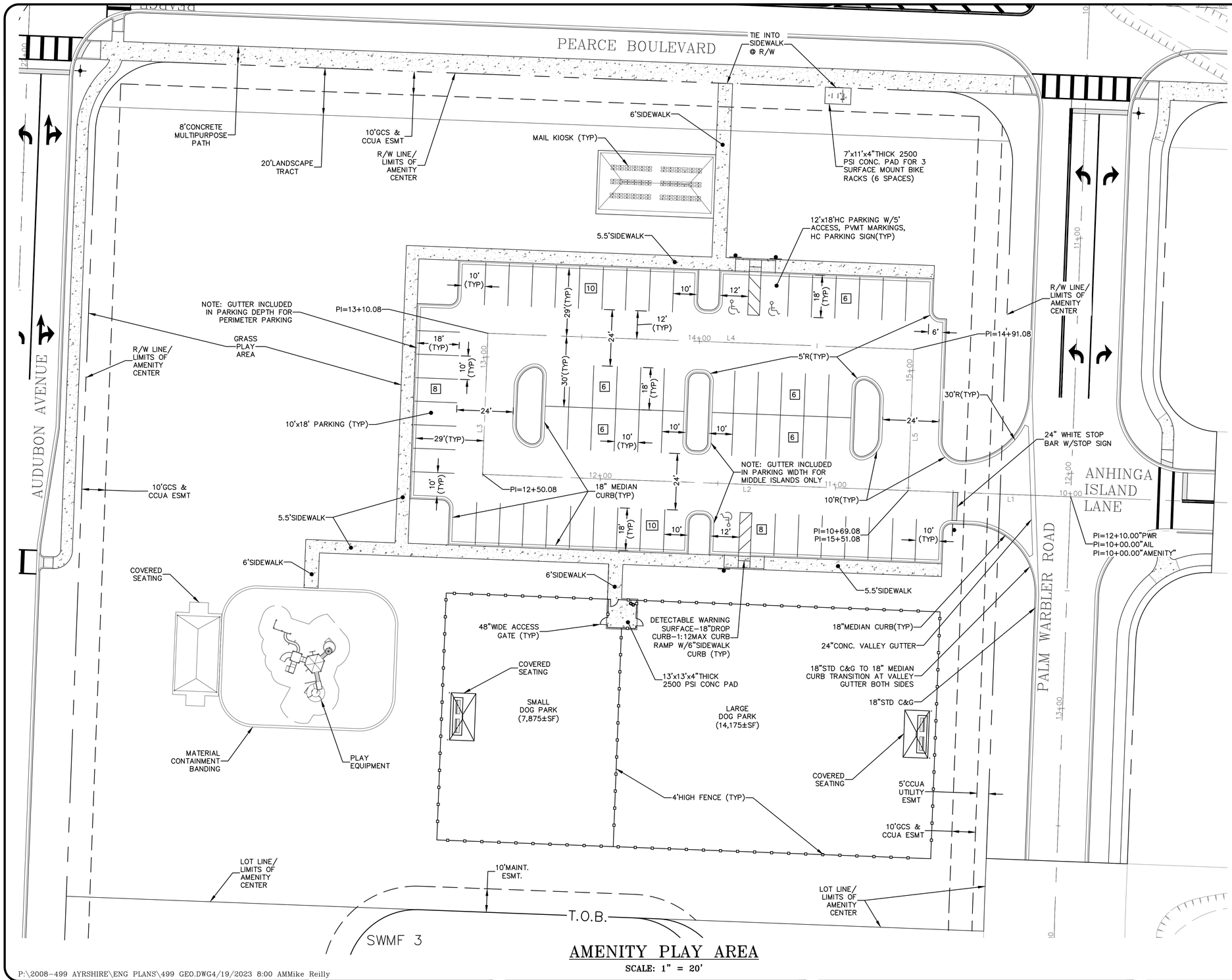


AMENITY PLAY AREA

SCALE: 1" = 20'

GRAPHIC SCALE

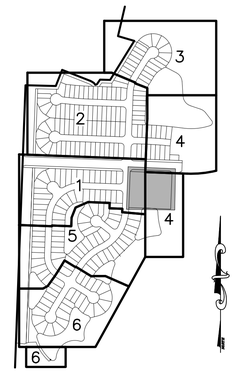
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

▭ = COMMON AREA SIDEWALK (SEE NOTE)

SIDEWALK NOTE:
COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR).



KEYMAP

NTS

AMENITY CENTER NOTES:

1. FOR AMENITY CENTER COVERED STRUCTURES, PLAY AREA EQUIPMENT & ASSOCIATED SURFACE MATERIAL, MAIL KIOSK AND SAFETY/SECURITY FENCING SEE ARCHITECTURAL PLANS DESIGNED AND PERMITTED BY OTHERS
2. SIDEWALKS TO MAINTAIN 2% MAX CROSS SLOPE AND 5% MAX LONGITUDINAL SLOPE

PARKING SUMMARY:

PROVIDED: 70 STANDARD SPACES
3 HC SPACES (3 REQUIRED)
73 TOTAL SPACES

BICYCLE PARKING SUMMARY:

PROVIDED: 6 BICYCLE SPACES

CENTERLINE LINE TABLE

LINE	LENGTH	BEARING
L1	69.08'	N87°49'08"W
L2	181.00'	N87°49'08"W
L3	60.00'	N02°10'52"E
L4	181.00'	S87°49'08"E
L5	60.00'	S02°10'52"W

THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

GEOMETRY PLAN – AMENITY PLAY AREA

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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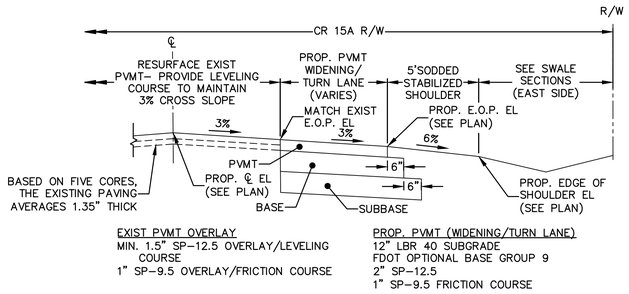
Sheet No. 20 of 88

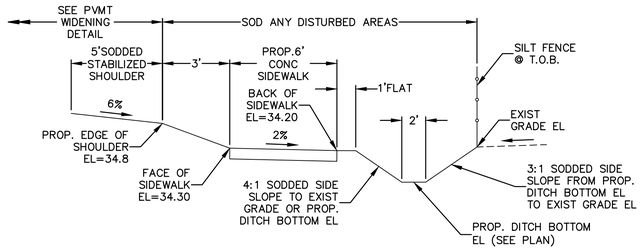
AC-1

DWG. NO.



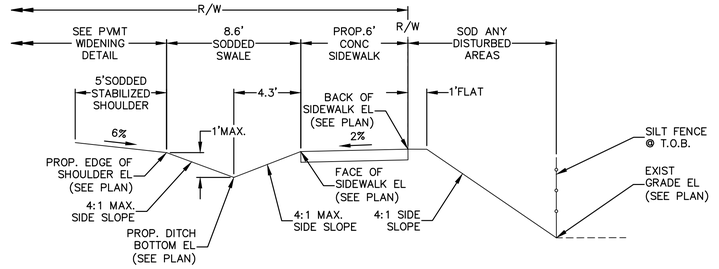
ROADWAY PAVEMENT WIDENING DETAIL

N.T.S.



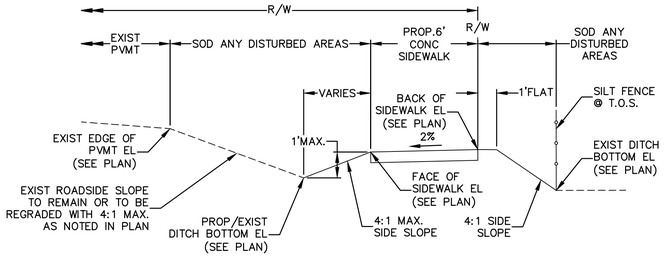
SWALE SECTION B–B

N.T.S.



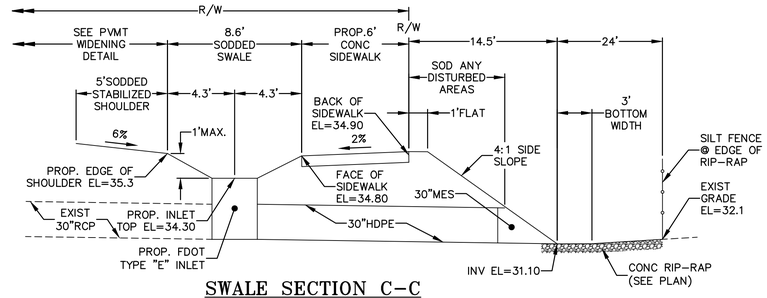
SWALE SECTION D–D

N.T.S.



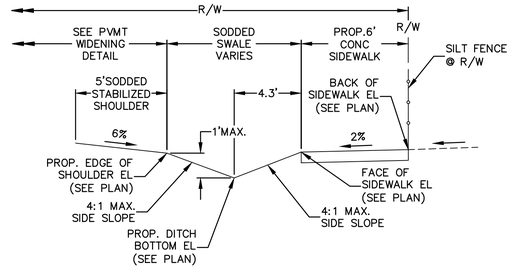
SWALE SECTION A–A

N.T.S.



SWALE SECTION C–C

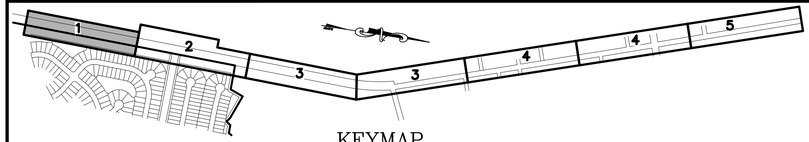
N.T.S.



SWALE SECTION E–E

N.T.S.

ROADWAY IMPROVEMENT SECTIONS

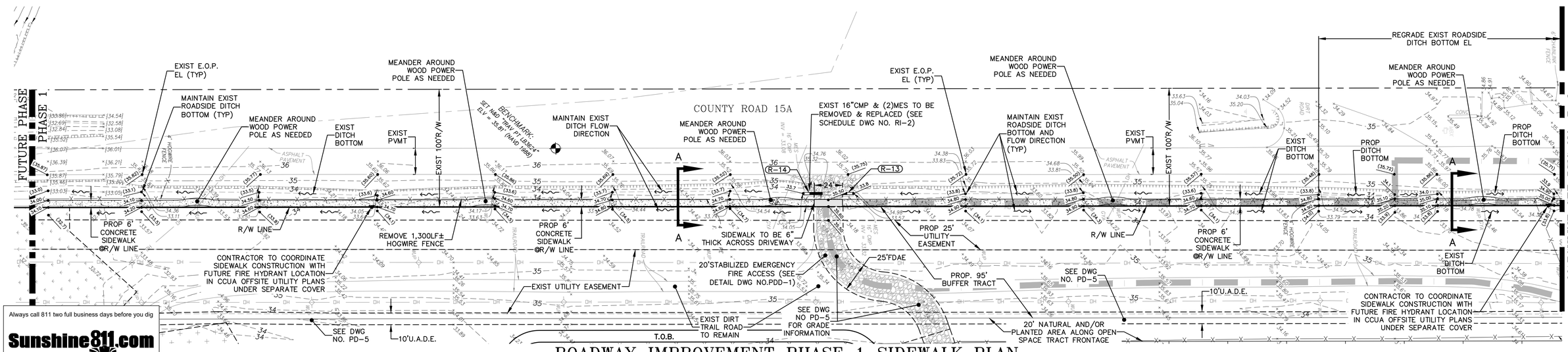


KEYMAP
NTS

EROSION CONTROL NOTE:
CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34–23.

SIDEWALK NOTES:
1. SIDEWALK TO BE 6'WIDEx4"THICK 2500 PSI CONCRETE WITH JOINTS AND SUBGRADE IN ACCORDANCE WITH FDOT INDEX 522–001.
2. LONGITUDINAL SLOPE NOT TO EXCEED 5%.
3. CROSS SLOPE NOT TO EXCEED 2%.
4. IN AREAS WHERE SIDEWALK MUST MEANDER AT POWER POLES, TREES, ETC AND 6'WIDTH IS NOT POSSIBLE MAINTAIN MINIMUM 36" WIDTH.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.
NORTH



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ROADWAY IMPROVEMENT PHASE 1 SIDEWALK PLAN

SCALE: 1" = 40'

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NO.	DATE	DESCRIPTION	BY:
–	–	–	–

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CHECKED BY:	VJD
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DATE:	4/19/2023
PROJ. NO.:	2008–499

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THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
ROADWAY IMPROVEMENT PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 21 of 88

RI–1
DWG. NO.

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

ROADWAY IMPROVEMENT BASELINE NOTES:
1. BASELINE IS NOT A SURVEYED LINE.
2. BASELINE POINTS "A" AND "B" ESTABLISHED AT THE MIDPOINT OF THE EXISTING PAVEMENT AT THAT LOCATION.
3. ROADWAY IMPROVEMENT BASELINE PROVIDED FROM BASELINE POINT "A" TO BASELINE POINT "B".

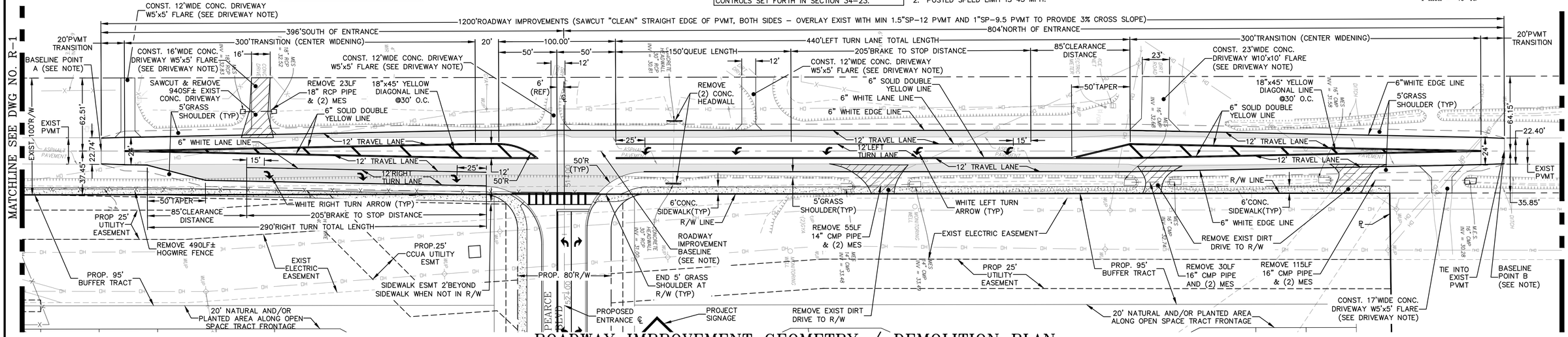
DRIVEWAY NOTE:
DRIVEWAY TO BE 3000 PSI CONCRETE x 6" THICK FROM EDGE OF PROPOSED PVMT TO RIGHT-OF-WAY LINE - TIE INTO EXIST DRIVEWAY LOCATION AT R/W LINE

LEGEND
PROPOSED = ADDITIONAL PAVEMENT

EROSION CONTROL NOTE:
CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34-23.

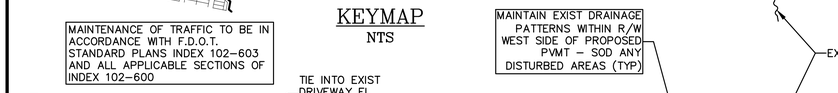
NOTE:
1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL AND SHALL BE IN ACCORDANCE WITH FDOT INDEX 711-01.
2. POSTED SPEED LIMIT IS 45 MPH.

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.



ROADWAY IMPROVEMENT GEOMETRY / DEMOLITION PLAN

SCALE: 1" = 40'



KEYMAP
NTS

MAINTENANCE OF TRAFFIC TO BE IN ACCORDANCE WITH F.D.O.T. STANDARD PLANS INDEX 102-603 AND ALL APPLICABLE SECTIONS OF INDEX 102-600

MAINTAIN EXIST DRAINAGE PATTERNS WITHIN R/W WEST SIDE OF PROPOSED PVMT - SOD ANY DISTURBED AREAS (TYP)

LEGEND
PROPOSED = ADDITIONAL PAVEMENT

DRAINAGE STRUCTURE SCHEDULE

STR NO.	STRUCT. TYPE	TOP EL.	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
R-3A	* TYPE "E"	34.30	31.00 (E)	
R-5	* TYPE "C"	32.60		30.40 (N)

* TRAVERSABLE INLET IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 425-052, SHEETS 1 OF 14, 4 OF 14, 7 OF 14 AND 10 OF 14

MES & HEADWALL SCHEDULE

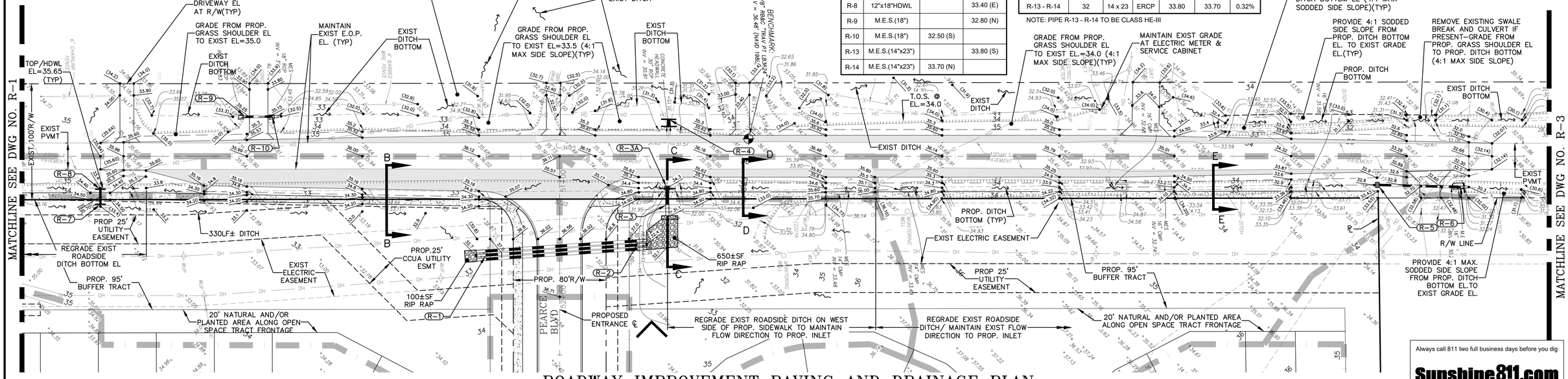
STR NO.	STRUCT. TYPE	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
R-1	TPL M.E.S.(24")		32.70 (N)
R-2	TRL M.E.S.(24")	32.40 (S)	
R-3	M.E.S.(30")		31.10 (W)
R-4	30"HDWL	30.79 (E)	
R-6	M.E.S.(18")	30.30 (S)	
R-7	12"x18"HDWL	33.40 (W)	
R-8	12"x18"HDWL		33.40 (E)
R-9	M.E.S.(18")		32.80 (N)
R-10	M.E.S.(18")	32.50 (S)	
R-13	M.E.S.(14"x23")		33.80 (S)
R-14	M.E.S.(14"x23")	33.70 (N)	

PIPE SCHEDULE

STRUCT. NO. TO STRUCT. NO.	LENGTH FT.	SIZE IN.	TYPE	UP STREAM EL.	DOWN STREAM EL.	SLOPE
EXIST - R-4	6	30	RCP	30.81	30.79	0.35%
R-1 - R-2	130	(3)24	RCP	32.70	32.40	0.23%
R-3 - R-3A	14	30	RCP	31.10	31.00	0.69%
R-5 - R-6	72	18	RCP	30.40	30.30	0.14%
R-8 - R-7	13	12 x 18	ERCP	33.40	33.40	0.00%
R-9 - R-10	23	18	RCP	32.80	32.50	1.32%
R-13 - R-14	32	14 x 23	ERCP	33.80	33.70	0.32%

NOTE: PIPE R-13 - R-14 TO BE CLASS HE-III

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.



ROADWAY IMPROVEMENT PAVING AND DRAINAGE PLAN

SCALE: 1" = 40'

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THE ROOKERY - PHASE 1
FOR:
D.R. HORTON, INC. - JACKSONVILLE
CLAY COUNTY, FLORIDA
ROADWAY IMPROVEMENT PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 22 of 88

RI-2
DWG. NO.

THE ROOKERY - PHASE 1

RELEASED FOR CONSTRUCTION

SIDEWALK NOTES:
1. SIDEWALK TO BE 6'WIDEx4"THICK 2500 PSI CONCRETE WITH JOINTS AND SUBGRADE IN ACCORDANCE WITH FDOT INDEX 522–001.
2. FINISH GRADE TO MATCH EXISTING GRADE AS CLOSELY AS POSSIBLE.
3. LONGITUDINAL SLOPE NOT TO EXCEED 5%.
4. CROSS SLOPE NOT TO EXCEED 2%.
5. IN AREAS WHERE SIDEWALK MUST MEANDER AT POWER POLES, TREES, ETC AND 6'WIDTH IS NOT POSSIBLE MAINTAIN MINIMUM 36" WIDTH.
6. IN AREAS WHERE SIDEWALK/ PEDESTRIAN ROUTE CROSSES EXISTING DRIVEWAYS THE 2% MAXIMUM CROSS SLOPE SHALL BE MAINTAINED. NOTIFY ENGINEER OF ANY DISCREPANCIES.

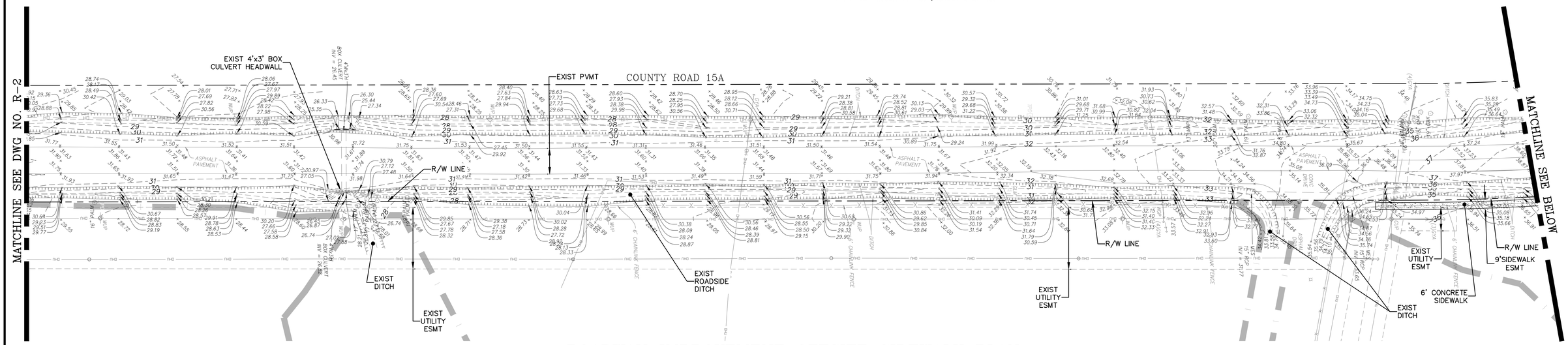
SIGNAGE NOTE:
1. ALL ROADWAY SIGNING SHALL HAVE DIAMOND GRADE HIGH REFLECTIVITY SHEETING.

PAVEMENT MARKINGS NOTE:
ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL AND SHALL BE IN ACCORDANCE WITH FDOT INDEX 711–01

CROSSWALK NOTE:
ALL PEDESTRIAN CROSSWALKS ACROSS ROADWAYS SHALL BE MARKED/STRIPED UTILIZING "SPECIAL EMPHASIS" CROSSWALK MARKINGS IN ACCORDANCE WITH FDOT INDEX 711–001, SHEET 9 OF 13.

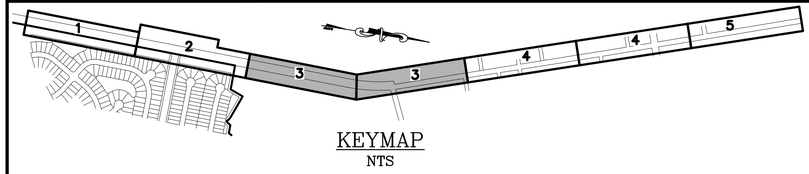
EROSION CONTROL NOTE:
CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34–23.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.
NORTH



ROADWAY IMPROVEMENT OFFSITE SIDEWALK PLAN

SCALE: 1" = 40'



KEYMAP
NTS

SIDEWALK NOTES:
1. SIDEWALK TO BE 6'WIDEx4"THICK 2500 PSI CONCRETE WITH JOINTS AND SUBGRADE IN ACCORDANCE WITH FDOT INDEX 522–001.
2. FINISH GRADE TO MATCH EXISTING GRADE AS CLOSELY AS POSSIBLE.
3. LONGITUDINAL SLOPE NOT TO EXCEED 5%.
4. CROSS SLOPE NOT TO EXCEED 2%.
5. IN AREAS WHERE SIDEWALK MUST MEANDER AT POWER POLES, TREES, ETC AND 6'WIDTH IS NOT POSSIBLE MAINTAIN MINIMUM 36" WIDTH.
6. IN AREAS WHERE SIDEWALK/ PEDESTRIAN ROUTE CROSSES EXISTING DRIVEWAYS THE 2% MAXIMUM CROSS SLOPE SHALL BE MAINTAINED. NOTIFY ENGINEER OF ANY DISCREPANCIES.

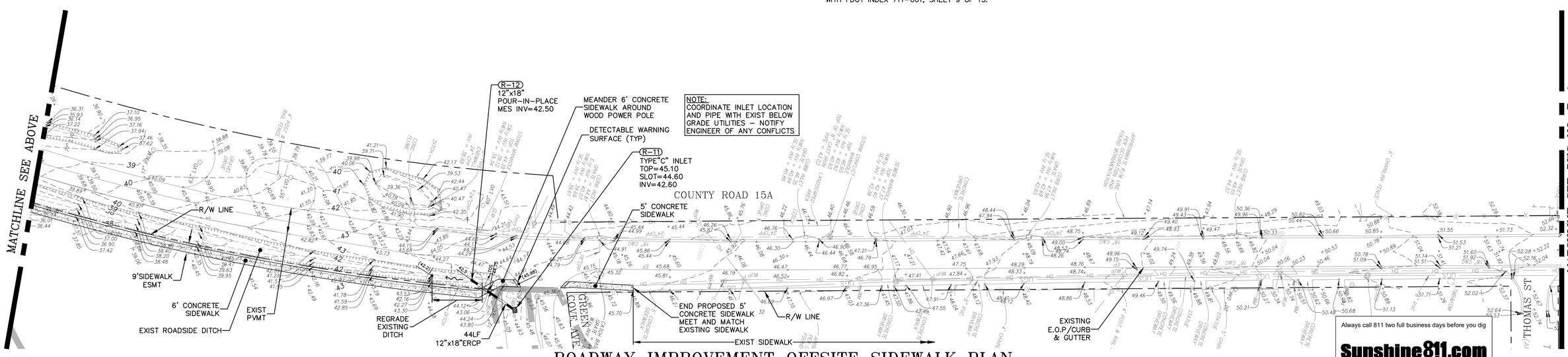
SIGNAGE NOTE:
1. ALL ROADWAY SIGNING SHALL HAVE DIAMOND GRADE HIGH REFLECTIVITY SHEETING.

PAVEMENT MARKINGS NOTE:
ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL AND SHALL BE IN ACCORDANCE WITH FDOT INDEX 711–01

CROSSWALK NOTE:
ALL PEDESTRIAN CROSSWALKS ACROSS ROADWAYS SHALL BE MARKED/STRIPED UTILIZING "SPECIAL EMPHASIS" CROSSWALK MARKINGS IN ACCORDANCE WITH FDOT INDEX 711–001, SHEET 9 OF 13.

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.



ROADWAY IMPROVEMENT OFFSITE SIDEWALK PLAN

SCALE: 1" = 40'

RELEASED FOR CONSTRUCTION

Always call 811 two full business days before you dig
Sunshine811.com

P:\2008–499 AYRSHIRE\ENG PLANS\499 RI.DWG4/19/2023 8:02 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
–	–	–	–

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 40'
DATE:	4/19/2023
PROJ. NO.:	2008–499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363–8916 Fax: (904)363–8917
www.dunneng.com

THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
ROADWAY IMPROVEMENT PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

EROSION CONTROL NOTE:
CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34-23.

SIDEWALK NOTES:
1. SIDEWALK TO BE 6'WIDEx4"THICK 2500 PSI CONCRETE WITH JOINTS AND SUBGRADE IN ACCORDANCE WITH FDOT INDEX 522-001.
2. FINISH GRADE TO MATCH EXISTING GRADE AS CLOSELY AS POSSIBLE.
3. LONGITUDINAL SLOPE NOT TO EXCEED 5%.
4. CROSS SLOPE NOT TO EXCEED 2%.
5. IN AREAS WHERE SIDEWALK MUST MEANDER AT POWER POLES, TREES, ETC AND 6'WIDTH IS NOT POSSIBLE MAINTAIN MINIMUM 36" WIDTH.
6. IN AREAS WHERE SIDEWALK/ PEDESTRIAN ROUTE CROSSES EXISTING DRIVEWAYS THE 2% MAXIMUM CROSS SLOPE SHALL BE MAINTAINED. NOTIFY ENGINEER OF ANY DISCREPANCIES.

SIGNAGE NOTE:
1. ALL ROADWAY SIGNING SHALL HAVE DIAMOND GRADE HIGH REFLECTIVITY SHEETING.

PAVEMENT MARKINGS NOTE:
ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL AND SHALL BE IN ACCORDANCE WITH FDOT INDEX 711-01.

CROSSWALK NOTE:
ALL PEDESTRIAN CROSSWALKS ACROSS ROADWAYS SHALL BE MARKED/STRIPED UTILIZING "SPECIAL EMPHASIS" CROSSWALK MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001, SHEET 9 OF 13.

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

CURB RAMP NOTES:
1. SAWCUT AND REMOVE EXISTING CURB AND GUTTER FROM FULL WIDTH OF PROPOSED RAMP AND TO EXISTING CURB @ CR15A.
2. CONSTRUCT 1:12 MAX A.D.A. CURB RAMP WITH DETECTABLE WARNING SURFACE AND 18" DROP CURB. (SEE DETAIL DWG NO R-5)
3. CONSTRUCT 18" STANDARD CURB AND GUTTER FROM RAMP TO TIE INTO EXISTING CURB @ CR15A.

MATCHLINE SEE DWG NO. R-3

PINEWOOD CT · WAYNE ST · ELSIE ST · COUNTY ROAD 15A · JULIA ST

FDOT CR-E CURB RAMP (SEE DETAIL DWG R-5) · MEANDER 6' CONCRETE SIDEWALK AROUND 38" OAK - MAINTAIN MIN 3' SEPARATION · PEDESTRIAN WARNING SIGN (W11-2) W/SOLAR POWERED AMBER LED ILLUMINATION PER MUTCD SECTION 2A.07. STOP HERE FOR PEDESTRIANS SIGN (R1-5C) (TYP BOTH SIDES) · WHITE THERMOPLASTIC CROSSWALK-10' SEPARATION (SEE CROSSWALK NOTE) · REMOVE EXIST CURB & GUTTER(TYP) · TIE 6'CONCRETE SIDEWALK FLUSH WITH EDGE OF CONCRETE DRIVEWAY (BOTH SIDES) · PEDESTRIAN WARNING SIGN (W11-2) · MEANDER FULL 6' CONCRETE SIDEWALK AROUND WOOD POWER POLE & 36"LO · WHITE THERMOPLASTIC CROSSWALK-6' SEPARATION (SEE CROSSWALK NOTE) · 24" WHITE THERMOPLASTIC STOP BAR w/STOP SIGN · WHITE THERMOPLASTIC CROSSWALK-6' SEPARATION (SEE CROSSWALK NOTE) · FDOT CR-F CURB RAMP (TYP)(SEE DETAIL DWG R-5) · EXISTING LIGHT POLE · REMOVE AND REPLACE GAS MARKER WITH PERMANENT PVMT STYLE MARKER

TIE TO EXIST STD CURB AND GUTTER · R/W LINE · PEDESTRIAN WARNING SIGN (W11-2) · COORDINATE WITH UTILITY COMPANY AT GUY WIRE · TIE TO EXIST STD CURB AND GUTTER (TYP) · REMOVE 23"LVO · TIE TO EXIST STD CURB AND GUTTER (TYP) · EXISTING FH

5.0' · 0.5' · 12' · 3.0' · 4.0' · 7.0'

EXIST E.O.P./ CURB & GUTTER · REMOVE OR RELOCATE SMALL SAGO PALM · REMOVE AND REPLACE GAS MARKER WITH PERMANENT PVMT STYLE MARKER · SEE CURB RAMP NOTES · RELOCATE NO DUMPING SIGN

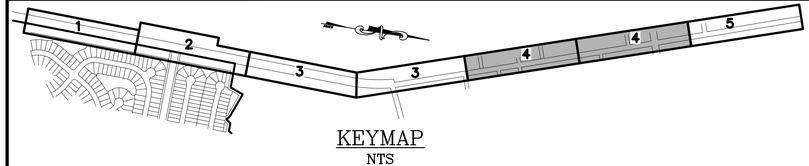
EXIST SIDEWALK · SEE CURB RAMP NOTES · TIE TO EXIST STD C&G (TYP BOTH SIDES OF BOTH RAMPS) · FDOT CR-E CURB RAMP(TYP)(SEE DETAIL DWG R-5) · TIE RAMP TO EXISTING SIDEWALK W/5 LF OF 6' CONCRETE SIDEWALK · SIDEWALK TO BE 6" THICK ACROSS DRIVEWAY · CONSTRUCT 6" RAISED SIDEWALK CURB TO RETAIN SOIL AROUND 26"LO TREE - MAINTAIN MIN 36" CLEAR ZONE WIDTH IN SIDEWALK. TRANSITION FROM 6" CURB HEIGHT TO 0" CURB HEIGHT IN 24" (EACH END) · EXIST FH · RELOCATE STOP/STREET SIGN · MEANDER CONCRETE SIDEWALK BETWEEN WOOD POWER POLE AND 25" MAG TREE - REDUCE WIDTH AS NEEDED - MAINTAIN MIN 36" CLEAR ZONE WIDTH IN SIDEWALK · REMOVE 16"OAK · REMOVE AND REPLACE GAS MARKER WITH PERMANENT PVMT STYLE MARKER · SEE CURB RAMP NOTES · MEANDER CONCRETE SIDEWALK AROUND WOOD POWER POLES AND SWG TREES - REDUCE WIDTH AS NEEDED - MAINTAIN MIN 36" CLEAR ZONE WIDTH IN SIDEWALK

MATCHLINE SEE BELOW

THE ROOKERY - PHASE 1

ROADWAY IMPROVEMENT OFFSITE SIDEWALK PLAN

SCALE: 1" = 40'



KEYMAP
NTS

SIDEWALK NOTES:
1. SIDEWALK TO BE 6'WIDEx4"THICK 2500 PSI CONCRETE WITH JOINTS AND SUBGRADE IN ACCORDANCE WITH FDOT INDEX 522-001.
2. FINISH GRADE TO MATCH EXISTING GRADE AS CLOSELY AS POSSIBLE.
3. LONGITUDINAL SLOPE NOT TO EXCEED 5%.
4. CROSS SLOPE NOT TO EXCEED 2%.
5. IN AREAS WHERE SIDEWALK MUST MEANDER AT POWER POLES, TREES, ETC AND 6'WIDTH IS NOT POSSIBLE MAINTAIN MINIMUM 36" WIDTH.
6. IN AREAS WHERE SIDEWALK/ PEDESTRIAN ROUTE CROSSES EXISTING DRIVEWAYS THE 2% MAXIMUM CROSS SLOPE SHALL BE MAINTAINED. NOTIFY ENGINEER OF ANY DISCREPANCIES.

SIGNAGE NOTE:
1. ALL ROADWAY SIGNING SHALL HAVE DIAMOND GRADE HIGH REFLECTIVITY SHEETING.

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ALL PEDESTRIAN CROSSWALKS ACROSS ROADWAYS SHALL BE MARKED/STRIPED UTILIZING "SPECIAL EMPHASIS" CROSSWALK MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001, SHEET 9 OF 13.

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

CURB RAMP NOTES:
1. SAWCUT AND REMOVE EXISTING CURB AND GUTTER FROM FULL WIDTH OF PROPOSED RAMP AND TO EXISTING CURB @ CR15A.
2. CONSTRUCT 1:12 MAX A.D.A. CURB RAMP WITH DETECTABLE WARNING SURFACE AND 18" DROP CURB. (SEE DETAIL DWG NO R-5)
3. CONSTRUCT 18" STANDARD CURB AND GUTTER FROM RAMP TO TIE INTO EXISTING CURB @ CR15A.

MATCHLINE SEE ABOVE

TIE 6'CONCRETE SIDEWALK FLUSH WITH EDGE OF CONCRETE DRIVEWAY (BOTH SIDES) · MEANDER FULL 6' CONCRETE SIDEWALK AROUND 50"LVO - MAINTAIN 3' MIN SEPARATION · MEANDER FULL 6' CONCRETE SIDEWALK AROUND WOOD POWER POLE, 24"MAG & 36"MAG - MAINTAIN 3' MIN SEPARATION · WHITE THERMOPLASTIC CROSSWALK-6' SEPARATION (SEE CROSSWALK NOTE) · 24" WHITE THERMOPLASTIC STOP BAR w/STOP SIGN · TIE TO EXIST MIAMI CURB AND GUTTER (TYP) · FDOT CR-F CURB RAMP (TYP)(SEE DETAIL DWG R-5) · FDOT CR-F CURB RAMP (TYP)(SEE DETAIL DWG R-5) · TIE TO EXIST RIBBON CURB (TYP) · TIE 6' CONCRETE SIDEWALK FLUSH WITH INLET ACCESS CONCRETE SURROUND · SEE CURB RAMP NOTES · TIE IN TO EXISTING CURB RAMP · ALLOW MIN 36" CLEAR ZONE WIDTH IN SIDEWALK · SIDEWALK TO BE 6" THICK ACROSS DRIVEWAY · MAINTAIN MIN 36" CLEAR ZONE WIDTH IN SIDEWALK AROUND WOOD POWER POLE

R/W LINE · 5.0' · 6.0' · 12' · 21' · 0.5' · COUNTY ROAD 15A · LUCAS AVE · SR 16 · EXISTING FH · EXISTING PAVED DRIVEWAY · 24'

SIDEWALK TO BE 6" THICK ACROSS DRIVEWAY · EXIST E.O.P./ CURB & GUTTER · MEANDER FULL 6' CONCRETE SIDEWALK AROUND 16"OAK, 13"CHERRY & 19"OAK - MAINTAIN MIN 3' SEPARATION · SEE CURB RAMP NOTES · CONSTRUCT 18"STD CURB FROM RAMP TO RAMP · REMOVE AND REPLACE GAS MARKER WITH PERMANENT PVMT STYLE MARKER · SEE CURB RAMP NOTES · EXISTING FIRE STATION SIGN TO REMAIN · TIE 6'CONCRETE SIDEWALK FLUSH WITH EDGE OF CONCRETE DRIVEWAY (BOTH SIDES) · SEE CURB RAMP NOTES · CONSTRUCT 6" SIDEWALK CURB AROUND EXIST LIGHT POLE - CONNECT TO EXISTING SIDEWALK RAMP CURB · CONSTRUCT 6" THICK CONCRETE DRIVEWAY W/FLARE FROM BACK OF SIDEWALK TO BACK OF ROADWAY CURB · EXISTING LIGHT POLE · TIE 6'CONCRETE SIDEWALK FLUSH WITH EDGE OF PAVED DRIVEWAY (BOTH SIDES) · EXISTING FH · EXIST E.O.P.

ANDERSON ST · OAKRIDGE AVE N

MATCHLINE SEE DWG NO. R-5

RELEASED FOR CONSTRUCTION

ROADWAY IMPROVEMENT OFFSITE SIDEWALK PLAN

SCALE: 1" = 40'

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P:\2008-499 AYRSHIRE\ENG PLANS\499 RI.DWG4/19/2023 8:03 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
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THE ROOKERY - PHASE 1
FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

ROADWAY IMPROVEMENT PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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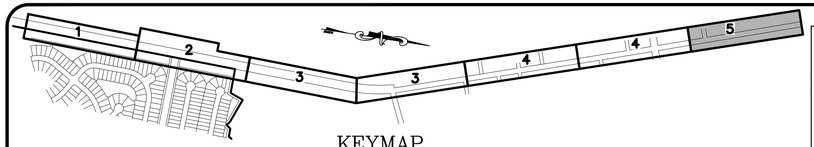
VINCENT J. DUNN ENGINEER NO. 39452 · DAVID M. TAYLOR ENGINEER NO. 44164 · GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 24 of 88

RI-4
DWG. NO.



KEYMAP
NTS

SIDEWALK NOTES:
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GRAPHIC SCALE
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(IN FEET)
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NORTH

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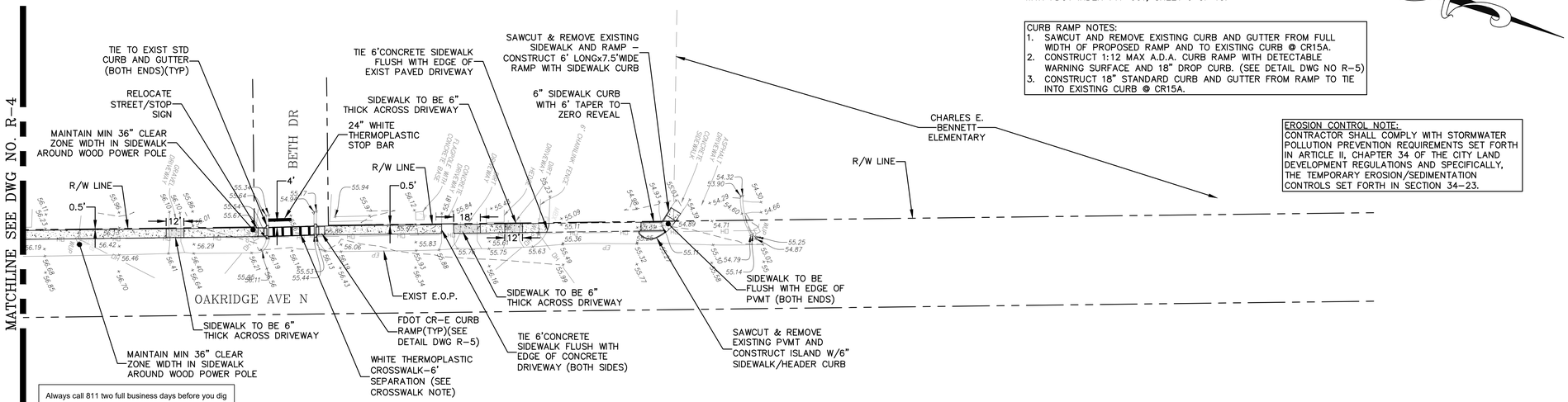

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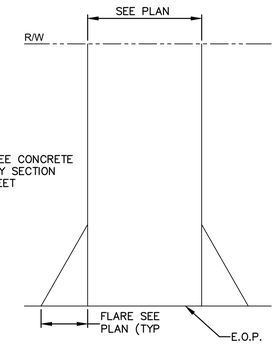
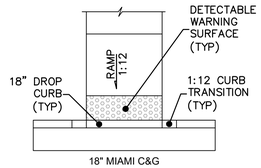
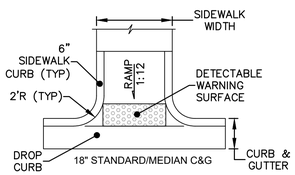
ROADWAY IMPROVEMENT OFFSITE SIDEWALK PLAN
SCALE: 1" = 40'



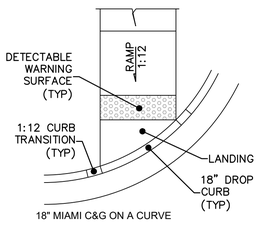
CONCRETE DRIVEWAY
N.T.S.

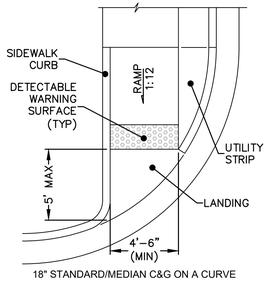
NOTES:
1. SEE PLANS FOR SIDEWALK WIDTH AND LOCATION.
2. SEE STANDARD CURB TEMPLATE DETAILS FOR ADDITIONAL INFORMATION.
3. ADA RAMP TO BE 1:12 MAXIMUM SLOPE.
4. DETECTABLE WARNING SURFACE TO BE FULL WIDTH OF RAMP OR LANDING AND A DEPTH OF 2'.
5. DETECTABLE WARNING SURFACE SHALL NOT BE "STAMPED" OR "CAST" IN THE CONCRETE.
6. FOR ADDITIONAL ADA RAMP AND DETECTABLE WARNING SURFACE INFORMATION SEE THE LATEST FDOT STANDARDS.





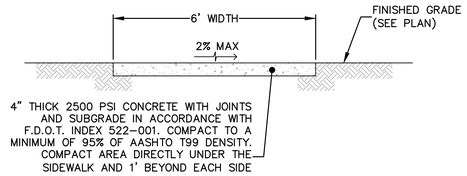
CR-E





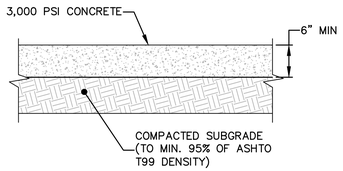
CR-F

SIDEWALK A.D.A. RAMP DETAILS
N.T.S.

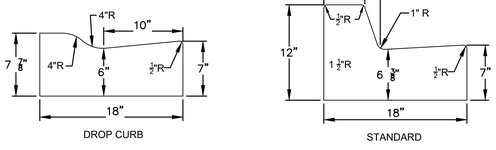


NOTE: 6" THICK AT DIRT/GRAVEL DRIVEWAY CROSSINGS (SEE PLAN FOR LOCATION)

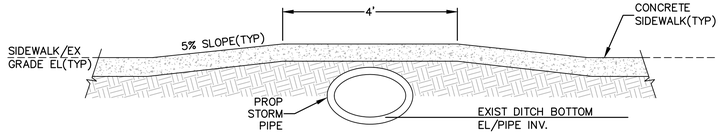
CONCRETE SIDEWALK
N.T.S.



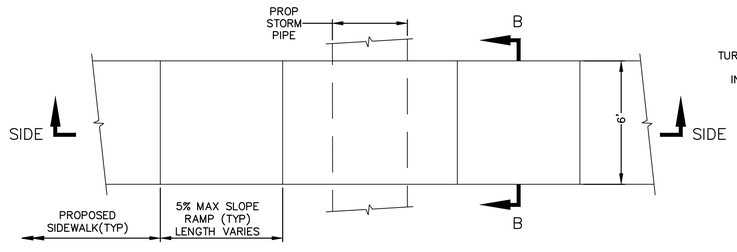
CONCRETE DRIVEWAY SECTION
N.T.S.



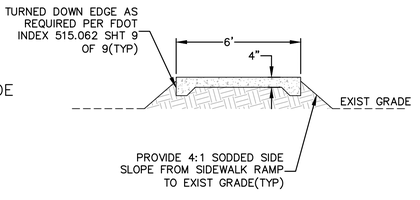
CONCRETE CURB & GUTTER
N.T.S.



SIDE SECTION



PLAN



SECTION B–B

SIDEWALK CULVERT DETAIL
N.T.S.

P:\2008–499 AYRSHIRE\ENG PLANS\499 RI.DWG4/19/2023 8:03 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
–	–	–	–

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 40'
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VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 25 of 88

RI–5
DWG. NO.

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

PIPE SCHEDULE						
STRUCT. NO. TO STRUCT. NO.	LENGTH FT.	SIZE IN.	TYPE	UP STREAM EL.	DOWN STREAM EL.	SLOPE
S-J1 - S-J2	65	15	HDPE	26.00	25.80	0.31%
S-J3 - S-J4	41	15	HDPE	26.00	25.80	0.49%
S-J5 - S-J6	54	15	HDPE	28.00	27.85	0.28%
S-J7 - S-J6	37	15	HDPE	27.85	27.65	0.55%
S-J8 - S-J9	30	15	HDPE	28.60	28.50	0.34%
S-J10 - S-J11	21	30	HDPE	28.00	28.00	0.00%

DRAINAGE STRUCTURE SCHEDULE				
STR NO.	STRUCT. TYPE	TOP EL.	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-J1	MH	32.53	29.57 (N)	26.00 (S)
S-J3	MH	32.00	28.98 (N)	26.00 (S)
S-J6	MH	32.00	27.65 (S) 27.85 (W) 28.96 (N)	

MH = MANHOLE

NOTE 1: SEE DWG NO. PDD-5 FOR HDPE ANCHOR DETAIL
NOTE 2: SEE DWG NO. PDD-6 FOR CONTROL STRUCTURE DETAILS (S-J9)

MITERED END SECTION SCHEDULE			
STR NO.	STRUCT. TYPE	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-J2	M.E.S.(15")	25.80 (N)	
S-J4	M.E.S.(15")	25.80 (N)	
S-J5	M.E.S.(15")		28.00 (E)
S-J7	M.E.S.(15")		27.85 (N)
S-J9	M.E.S.(15")	28.50 (W)	
S-J10	M.E.S.(30")		28.00 (SE)
S-J11	M.E.S.(30")	28.00 (NW)	

NOTE 3: MITERED END SECTIONS GREATER THAN 36" ARE TO BE POUR-IN-PLACE (INCLUDING ERCP)

CONTRACTOR NOTES:

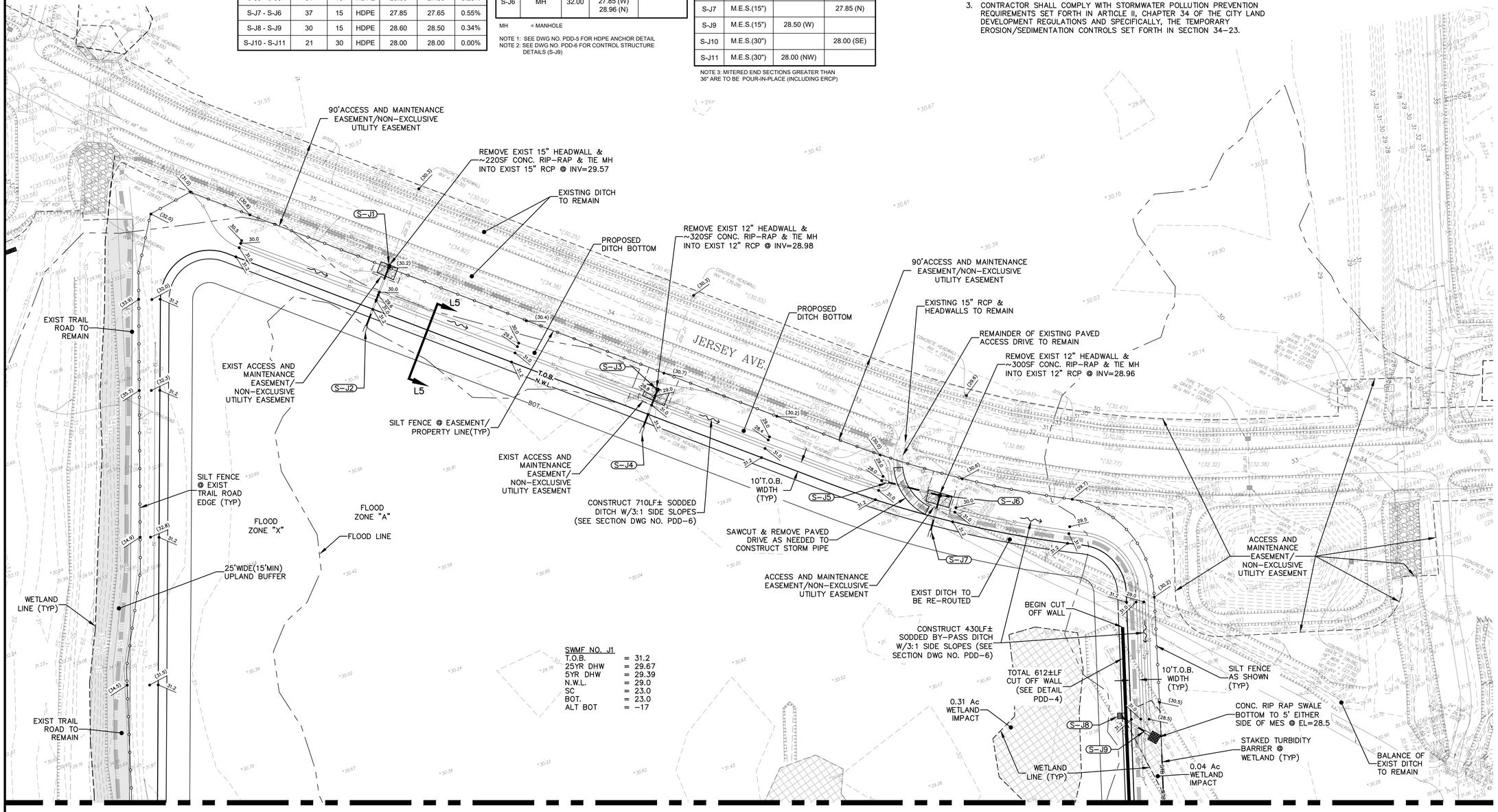
1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.
3. CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34-23.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

NORTH



SWMF NO. J1

T.O.B.	= 31.2
25YR DHW	= 29.67
5YR DHW	= 29.39
N.W.L.	= 29.0
SC	= 23.0
BOT.	= 23.0
ALT BOT	= -17

LEGEND

- = WETLANDS
- = UPLAND BUFFER
- = WETLAND IMPACT
- 30.5 = PROPOSED GRADE EL.

MATCHLINE SEE DWG NO J1-2

THE ROOKERY - PHASE 1

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REVISIONS			
NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 50'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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8647 Baypine Road, Suite 200
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Phone: (904)363-8916 Fax: (904)363-8917
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THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

SWMF J1 - CONSTRUCTION PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

CONTRACTOR NOTES:

1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.
3. CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34-23.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

NORTH

MATCHLINE SEE DWG NO J1-1

SILT FENCE @ EXIST TRAIL ROAD EDGE (TYP)
25'WIDE(15'MIN) UPLAND BUFFER
WETLAND LINE (TYP)
EXIST TRAIL ROAD TO REMAIN
EXIST STORMWATER CONVEYANCE PIPE TO BE REMOVED AND REPLACED IN NEW LOCATION
S-J10
S-J11
FLOOD ZONE X
FLOOD ZONE "A"
FLOOD LINE
FLOOD ZONE "X"
SWMF NO. J1
T.O.B. = 31.2
25YR DHW = 29.67
5YR DHW = 29.39
N.W.L. = 29.0
SC = 23.0
BOT. = 23.0
ALT BOT = -17
0.21 Ac WETLAND IMPACT
1.50 Ac WETLAND IMPACT
0.24 Ac WETLAND IMPACT
SILT FENCE AS SHOWN (TYP)
10'WIDTH @ EL. 32.0 (TYP)
L4
EXIST TRAIL ROAD TO REMAIN
FLOOD ZONE "X"
FLOOD LINE
FLOOD ZONE "A"
SILT FENCE @ T.O.B. (TYP)
CONSTRUCT 1,275LF± SODDED DITCH W/20' BOTTOM WIDTH & 3:1 SIDE SLOPES
BOT.
N.W.L.
T.O.B.
25'WIDE(15'MIN) UPLAND BUFFER (MEASURED FROM OFFSITE WETLAND LINE)
EXISTING 50'JEA GAS PIPELINE EASEMENT
SILT FENCE AS SHOWN (TYP)
STAKED TURBIDITY BARRIER ACROSS DITCH
BALANCE OF EXIST DITCH TO REMAIN
EXISTING 50'JEA GAS PIPELINE EASEMENT
STAKED TURBIDITY BARRIER @ WETLAND(TYP)
SHWL EL=28.93
SHWL EL=28.98
TOTAL 612±LF CUT OFF WALL (SEE DETAIL PDD-4)
SILT FENCE AS SHOWN (TYP)
L1
10'T.O.B. WIDTH (TYP)
STAKED TURBIDITY BARRIER @ WETLAND(TYP)
END CUT OFF WALL
SILT FENCE AS SHOWN (TYP)
10'WIDTH @ EL. 32.0 (TYP)

LEGEND

- = WETLANDS
- = UPLAND BUFFER
- = WETLAND IMPACT
- 30.5 = PROPOSED GRADE EL.

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THE ROOKERY - PHASE 1

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REVISIONS			
NO.	DATE	DESCRIPTION	BY:
–	–	–	–

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CHECKED BY:	VJD
SCALE:	1" = 50'
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PROJ. NO.:	2008-499

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THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

SWMF J1 - CONSTRUCTION PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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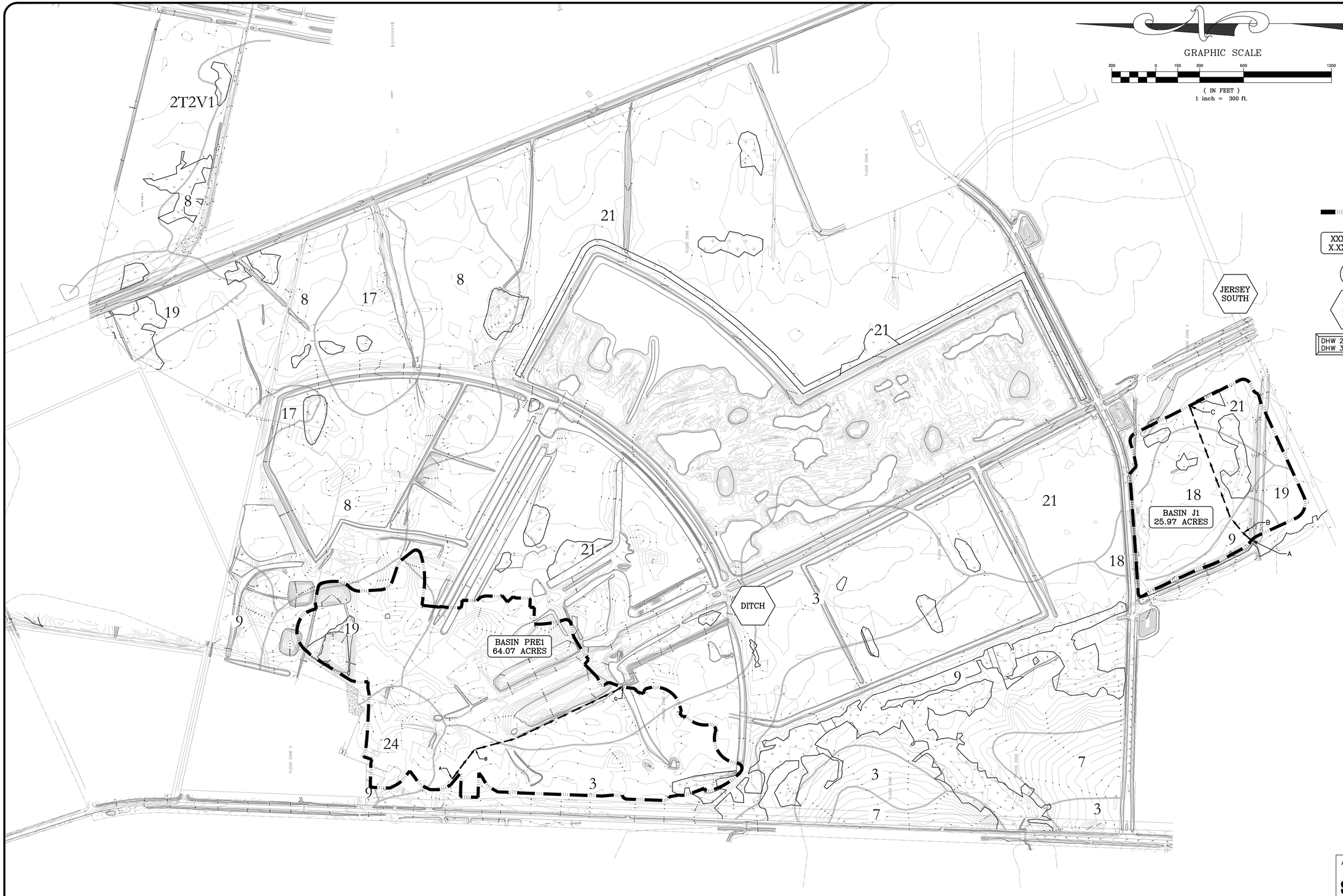
VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 27 of 88

J1-2

DWG. NO.



GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND

- = WETLANDS
- 11 = SOIL I.D. NUMBER
- = SOIL BOUNDARY
- = FLOW DIRECTION
- = Tc PATH
- = BASIN BOUNDARY
- XXXBASINX X.XX ACRES = BASIN I.D. & SIZE
- XXXX XXXX = NODE
- XXXX XXXX = BOUNDARY CONDITION
- DHW 25yr = XX.XX DHW 3yr = XX.XX = TAILWATER EL.

THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

PRE-DEVELOPMENT DRAINAGE PLAN – PHASE 1

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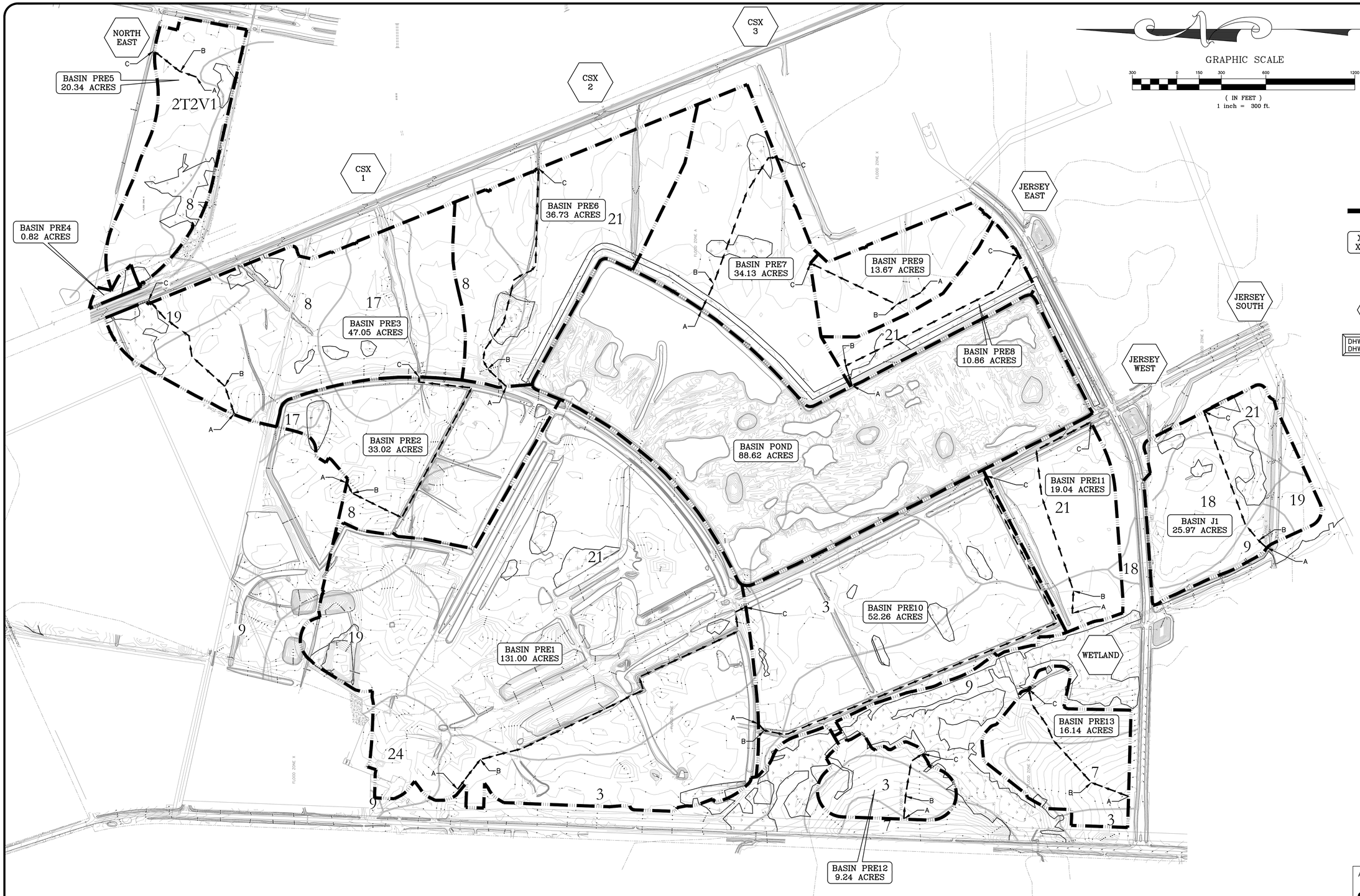

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND

- = WETLANDS
- 11 = SOIL I.D. NUMBER
- = SOIL BOUNDARY
- = FLOW DIRECTION
- = Tc PATH
- = BASIN BOUNDARY
- XXXBASINX X.XX ACRES = BASIN I.D. & SIZE
- XXXX XXXX = NODE
- XXXX XXXX = BOUNDARY CONDITION
- DHW 25yr = XX.XX DHW 3yr = XX.XX = TAILWATER EL.

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

PRE-DEVELOPMENT DRAINAGE PLAN – OVERALL

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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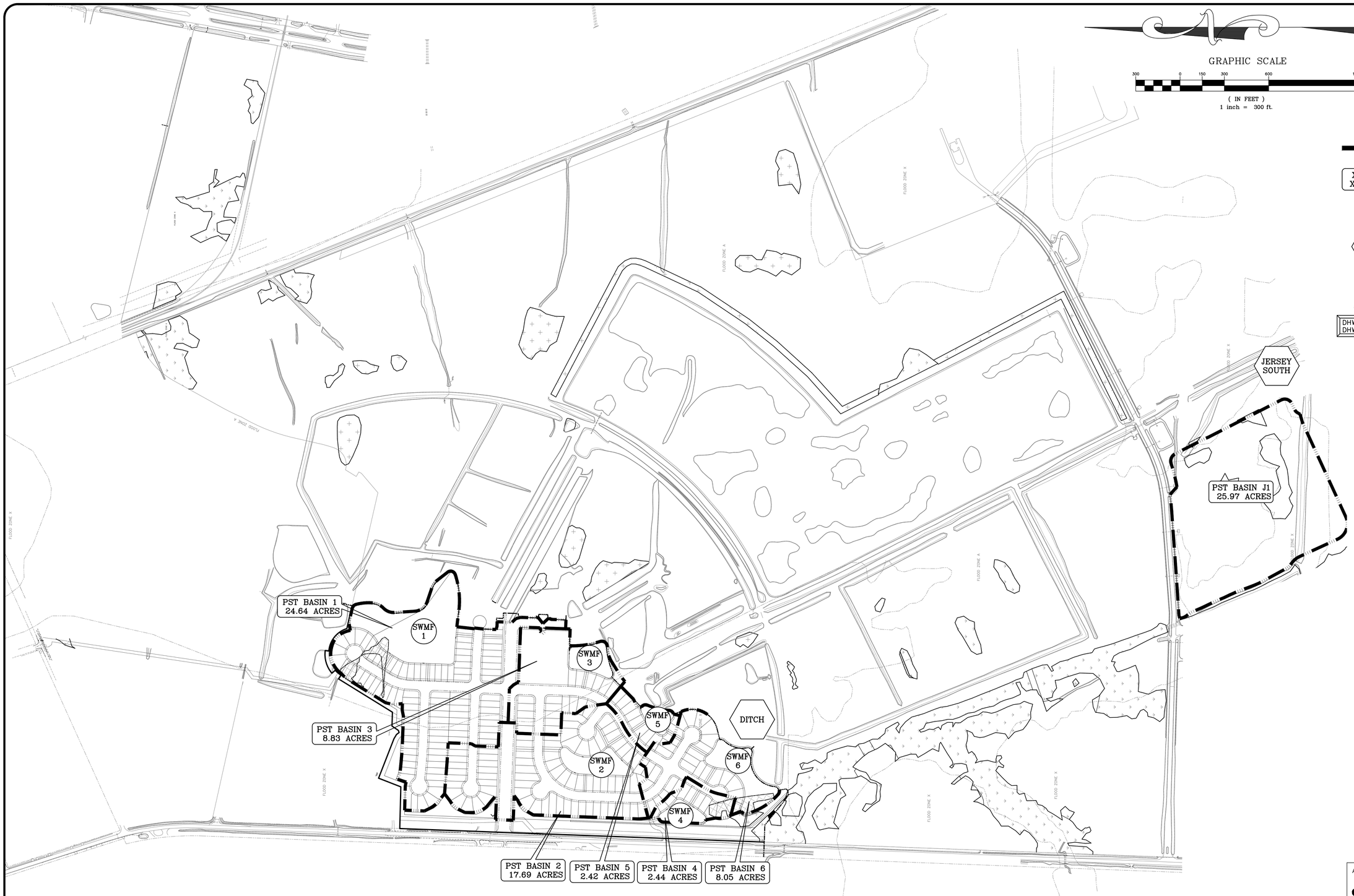

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

POST DEVELOPMENT DRAINAGE PLAN – PHASE 1

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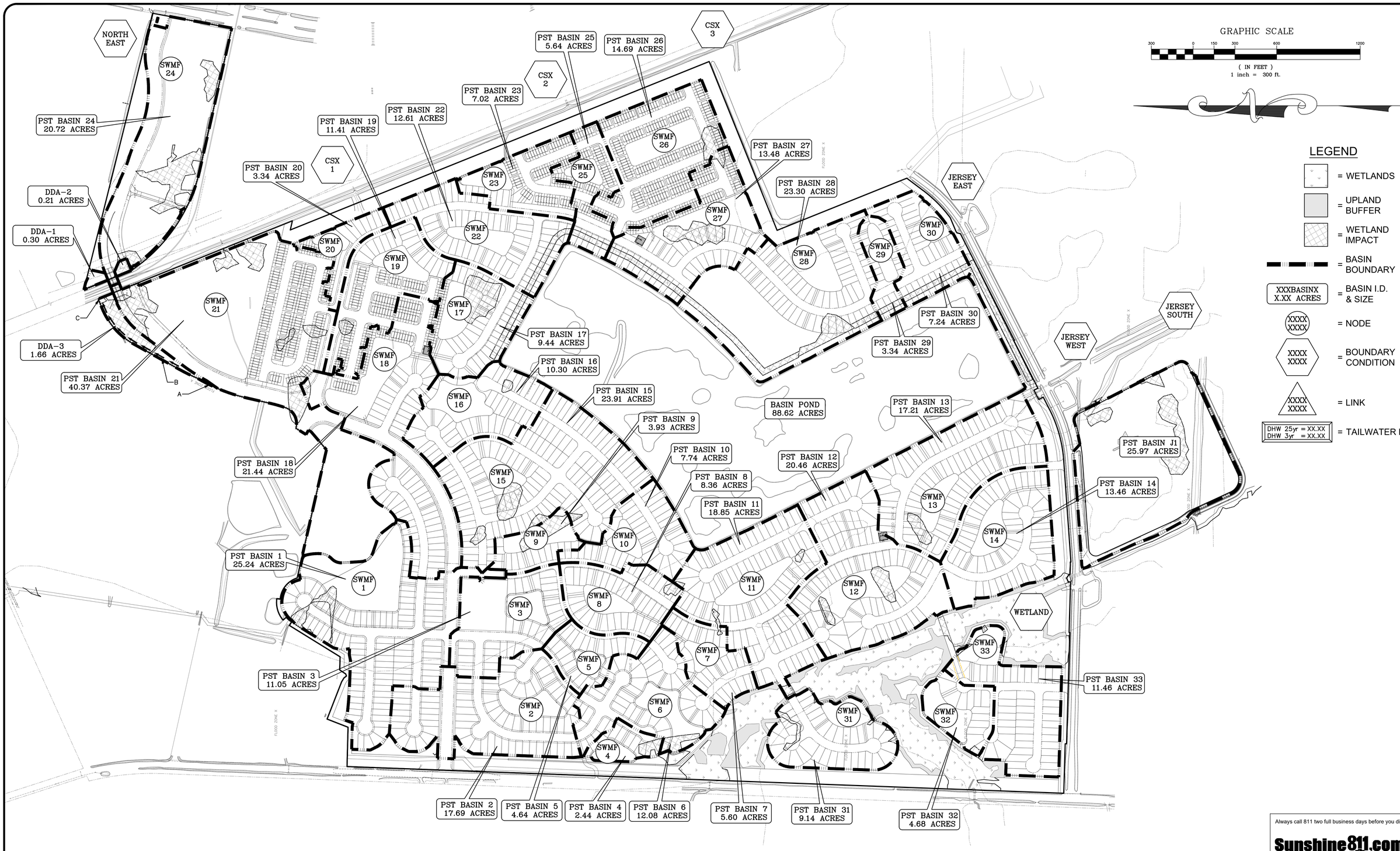
PST–1

DWG. NO.



GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND

- = WETLANDS
- = UPLAND BUFFER
- = WETLAND IMPACT
- = BASIN BOUNDARY
- XXXBASINX X.XX ACRES = BASIN I.D. & SIZE
- XXXX XXXX = NODE
- XXXX XXXX = BOUNDARY CONDITION
- XXXX XXXX = LINK
- DHW 25yr = XX.XX DHW 3yr = XX.XX = TAILWATER EL.

THE ROOKERY – PHASE 1

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CHECKED BY:	VJD
SCALE:	1" = 300'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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Jacksonville, Florida 32256
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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

POST DEVELOPMENT DRAINAGE PLAN – OVERALL

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 31 of 88

PST-2

DWG. NO.

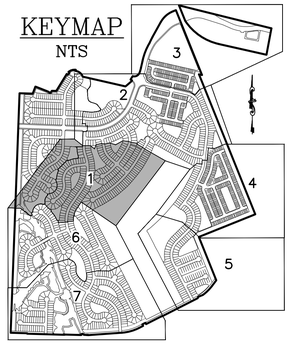
THE ROOKERY – PHASE 1

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

KEYMAP
NTS



LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)

= 25'AVG (10'MIN) UPLAND BUFFER

= WETLAND IMPACT

0.00 = PROPOSED ROAD GRADE EL

30.5 = PROPOSED GRADE EL.

* = UPLAND BUFFER SIGNAGE (SEE DETAIL)

POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0

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REVISIONS

NO.	DATE	DESCRIPTION	BY:

DESIGNED BY:	DAI
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SCALE:	1" = 100'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

MASTER GRADING PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 32 of 88

MGP-1

DWG. NO.

POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

MATCHLINE SEE DWG NO. MGP-3

MATCHLINE SEE DWG NO. MGP-1

MATCHLINE SEE DWG NO. MGP-4

SILT FENCE @ ℄ (TYP)

SILT FENCE @ T.O.S. (TYP)

PHASE 1 SEE DWG NO'S PD-3 & PD-4

24"RCP E.ly INV=21.07' W.ly INV=21.21'

RAILROAD TRACKS

EXIST POND

SWMF 1

SWMF 9

SWMF 15

SWMF 16

SWMF 17

SWMF 18

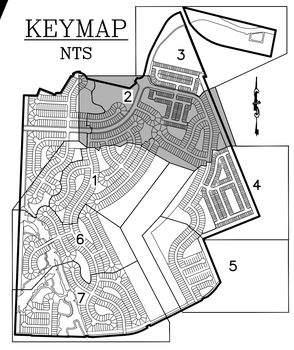
SWMF 19

SWMF 22

SWMF 23

KEYMAP

NTS



LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)

= 25'AVG (10'MIN) UPLAND BUFFER

= WETLAND IMPACT

0.00 = PROPOSED ROAD GRADE EL

30.5 = PROPOSED GRADE EL.

* = UPLAND BUFFER SIGNAGE (SEE DETAIL)

NORTH

P:\2008-499 AYRSHIRE\ENG PLANS\499 MGP.DWG4/19/2023 8:07 AMMike Reilly

REVISIONS

NO.	DATE	DESCRIPTION	BY:

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 100'
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.

CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

MASTER GRADING PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 33 of 88

MGP-2

DWG. NO.

THE ROOKERY - PHASE 1

RELEASED FOR CONSTRUCTION

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

NORTH

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

SWMF 24

SWMF 21

SWMF 20

CUT OFF WALL (SEE DETAIL PDD–4)

CUT OFF WALL (SEE DETAIL PDD–4)

SILT FENCE @ ℄ (TYP)

SILT FENCE @ T.O.S. (TYP)

SILT FENCE @ T.O.S. (TYP)

SILT FENCE @ T.O.S. (TYP)

SILT FENCE @ T.O.S. (TYP)

TOP OF RAIL (HIGH POINT) ELV = 28.99

TOP OF WATER EL=22.78

61.00

28.42

29.25

29.06

30.32

30.01

30.30

30.43

29.25

28.61

28.59

29.13

26.94

26.77

26.83

27.86

27.63

24.49

25.78

32"X49"ECMP
E.ly INV=21.45'
W.ly INV=20.95'

SHWL EL=23.03

SHWL EL=23.05

SHWL EL=23.09

SHWL EL=22.59

SHWL EL=22.80

SHWL EL=22.12

SHWL EL=23.13

SHWL EL=23.16

SHWL EL=23.26

SHWL EL=18.97

TOP OF WATER EL=18.21

SHWL EL=18.77

SHWL EL=18.72

BOTTOM OF DITCH ELEVATION=22.13 (NO WATER IN DITCH)

BOTTOM OF DITCH ELEVATION=22.37 (NO WATER IN DITCH)

CSX RAILROAD

RAILROAD TRACKS

SIAM ROAD No. 15 (70' R/W) (VARIABLE WIDTH R/W)

VH #7

VH #8

MATCHLINE SEE DWG NO. MGP–2

LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)

= 25'AVG (10'MIN) UPLAND BUFFER

= WETLAND IMPACT

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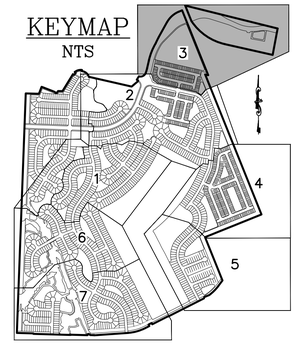
* = UPLAND BUFFER SIGNAGE (SEE DETAIL)

KEYMAP

NTS



POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0

P:\2008-499 AYRSHIRE\ENG PLANS\499 MGP.DWG4/19/2023 8:07 AMMike Reilly

REVISIONS			
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DESIGNED BY:	DAI
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CHECKED BY:	VJD
SCALE:	1" = 100'
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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

MASTER GRADING PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452
DAVID M. TAYLOR ENGINEER NO. 44164
GLEN R. WIEGER ENGINEER NO. 81419

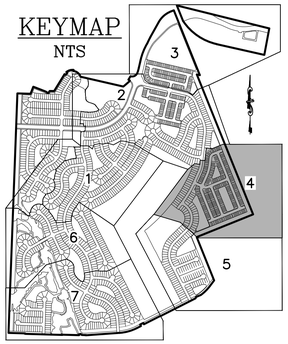
Sheet No. 34 of 88

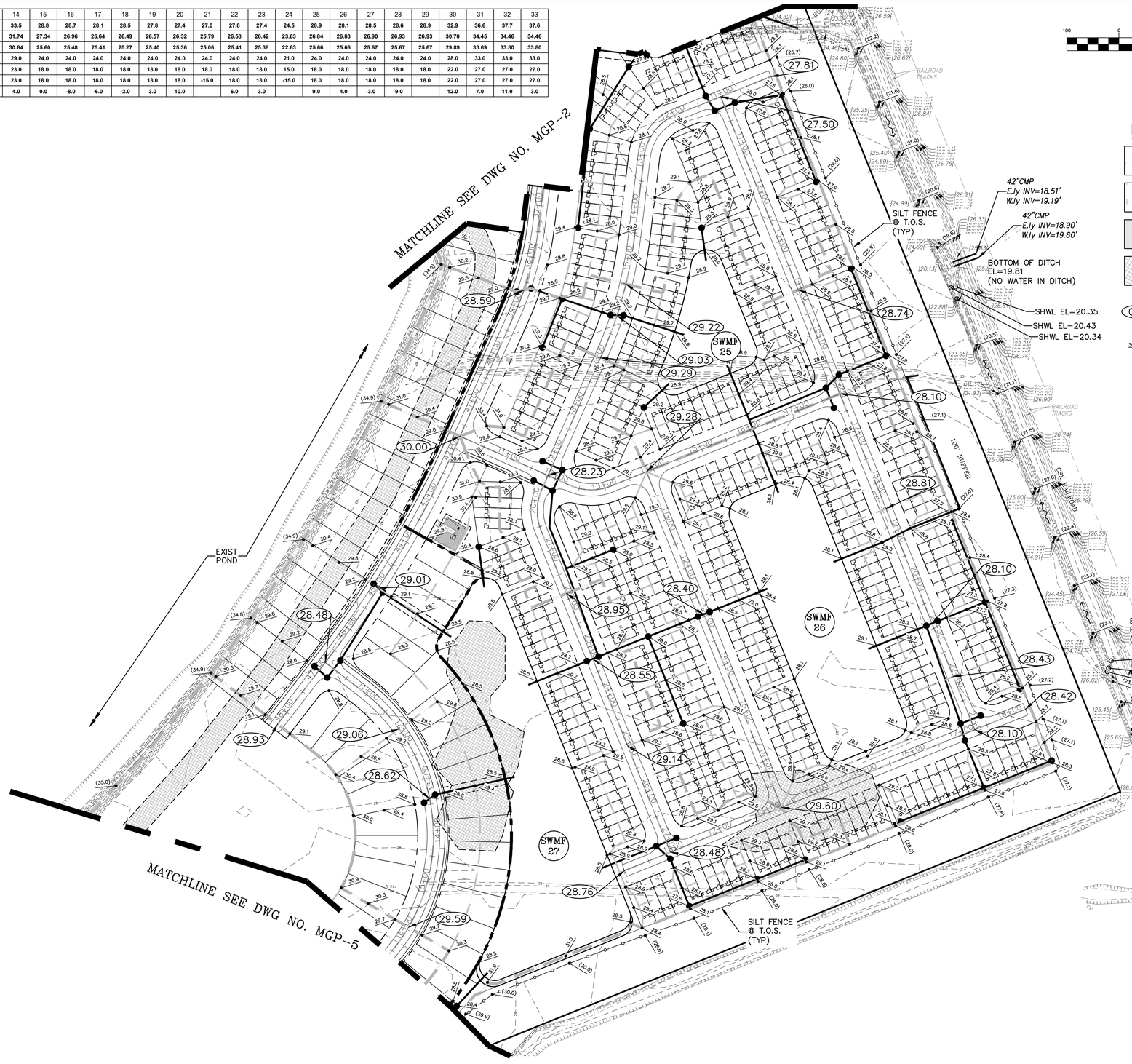
MGP–3

DWG. NO.

POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0

KEYMAP
NTS





GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

LEGEND

- = WETLANDS (FLAGGED)
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NORTH

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

P:\2008-499 AYRSHIRE\ENG PLANS\499 MGP.DWG4/19/2023 8:07 AMMike Reilly

REVISIONS

NO.	DATE	DESCRIPTION	BY:

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 100'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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CLAY COUNTY, FLORIDA

MASTER GRADING PLAN

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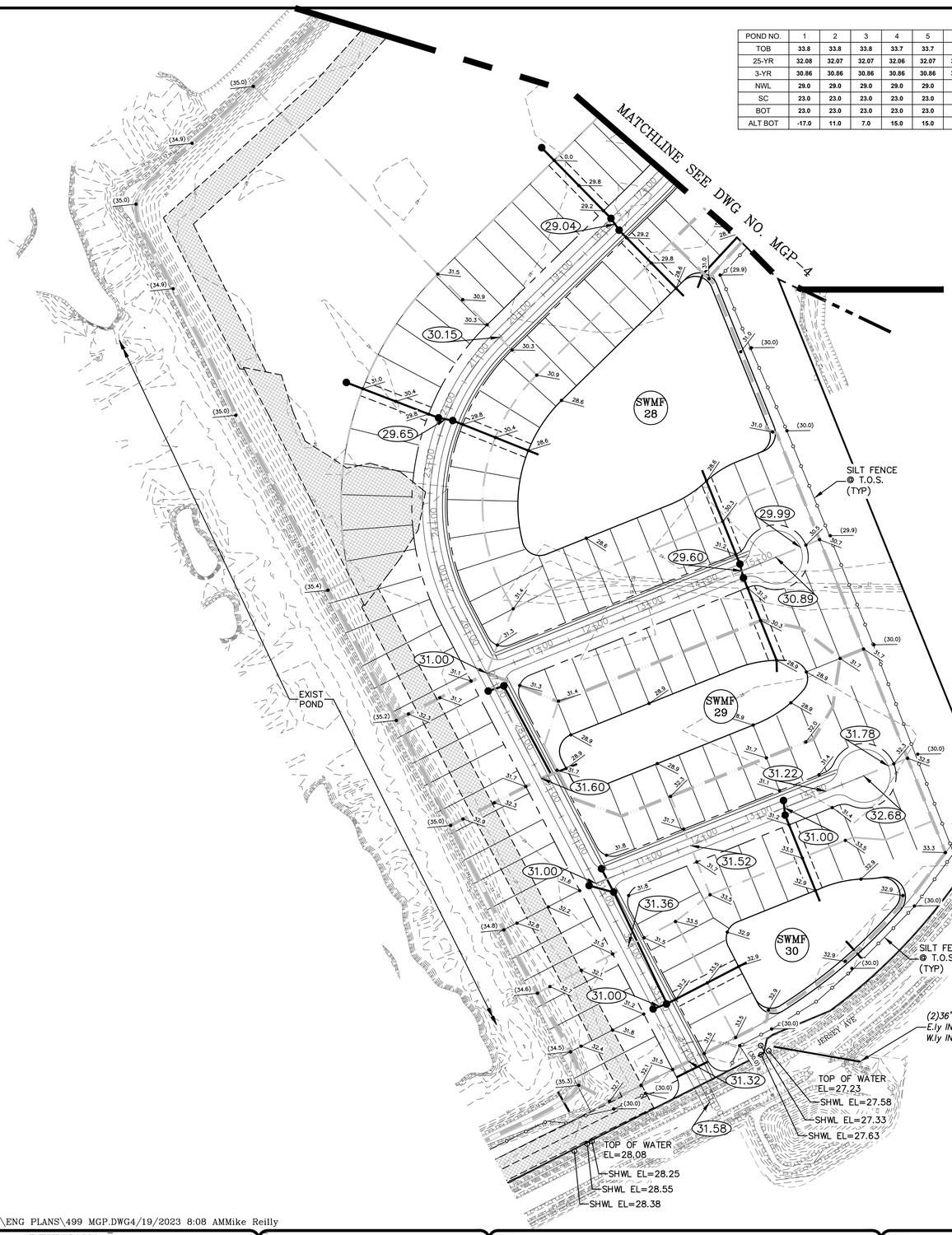
Sheet No. 35 of 88

MGP-4

DWG. NO.

POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

NORTH

LEGEND

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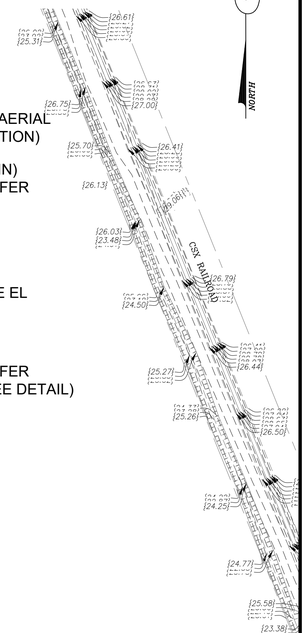
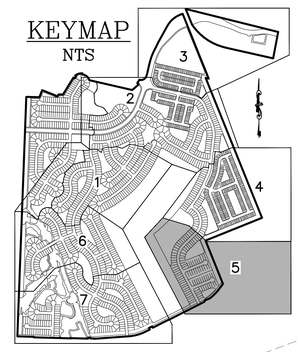


KEYMAP
NTS



THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

P:\2008-499 AYRSHIRE\ENG PLANS\499 MGP.DWG4/19/2023 8:08 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:

DESIGNED BY:	DAI
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Sheet No. 36 of 88

MGP-5

DWG. NO.

KEYMAP
NTS

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LEGEND

- = WETLANDS (FLAGGED)
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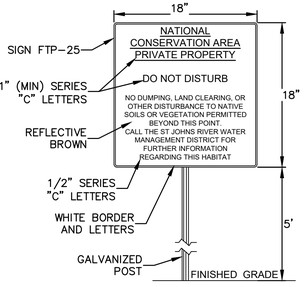
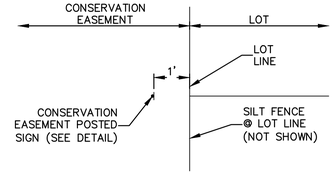
NORTH



SIGN NOTE:

1. SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUTES.



CONSERVATION EASEMENT POSTED SIGN AND PLACEMENT DETAIL

POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0

P:\2008-499 AYRSHIRE\ENG PLANS\499 MGP.DWG4/19/2023 8:08 AMMike Reilly

RELEASED FOR CONSTRUCTION

THE ROOKERY - PHASE 1

REVISIONS

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CHECKED BY:	VJD
SCALE:	1" = 100'
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY - PHASE 1
FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

MASTER GRADING PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452
DAVID M. TAYLOR ENGINEER NO. 44164
GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 37 of 88

MGP-6

DWG. NO.

POND NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
TOB	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7	33.3	33.6	33.7	33.6	33.5	28.8	28.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	28.9	28.1	28.5	28.6	28.9	32.9	36.6	37.7	37.6
25-YR	32.08	32.07	32.07	32.06	32.07	32.06	32.06	32.07	32.07	32.06	32.04	31.98	31.87	31.74	27.34	26.96	26.64	26.49	26.57	26.32	25.79	26.58	26.42	23.63	26.84	26.83	26.90	26.93	26.93	30.70	34.45	34.46	34.46
3-YR	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.85	30.80	30.74	30.64	25.60	25.48	25.41	25.27	25.40	25.36	25.06	25.41	25.38	22.63	25.66	25.66	25.67	25.67	25.67	29.89	33.69	33.80	33.80
NWL	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	24.0	24.0	24.0	24.0	24.0	28.0	33.0	33.0	33.0
SC	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
BOT	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	-15.0	18.0	18.0	-15.0	18.0	18.0	18.0	18.0	18.0	22.0	27.0	27.0	27.0
ALT BOT	-17.0	11.0	7.0	15.0	15.0	12.0	13.0	9.0	5.0	10.0	11.0	4.0	16.0	4.0	0.0	-8.0	-6.0	-2.0	3.0	10.0		6.0	3.0		9.0	4.0	-3.0	-9.0		12.0	7.0	11.0	3.0

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = 25'AVG (10'MIN) UPLAND BUFFER
- = WETLAND IMPACT
- 0.00 = PROPOSED ROAD GRADE EL
- 30.5 = PROPOSED GRADE EL.
- * = UPLAND BUFFER SIGNAGE (SEE DETAIL)

MATCHLINE SEE DWG NO. MGP-6

CUT OFF WALL (SEE DETAIL PDD-4)

SILT FENCE @ BUFFER LINE (TYP)

STB @ WETLANDS

SWMF 32

SWMF 33

SWMF 13

SWMF 14

TOP OF WATER EL=30.17

SHWL EL=30.70

SHWL EL=30.82

SHWL EL=30.53

SILT FENCE @ T.O.S. (TYP)

EXIST POND

SHWL EL=28.67

SHWL EL=28.46

(2)54"RCP N.Iy INV=26.81' S.Iy INV=26.83'

(4)48"RCP N.Iy INV=28.55' S.Iy INV=26.62'

PHASE 1 SEE DWG NO'S J1-1 & J1-2

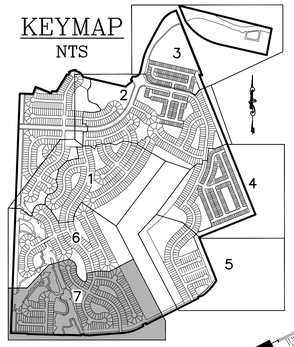
SOUTH OAKRIDGE AVE (C.R. 15A)

JERSEY AVE

P:\2008-499 AYRSHIRE\ENG PLANS\499 MGP.DWG4/19/2023 8:09 AMMike Reilly

KEYMAP

NTS

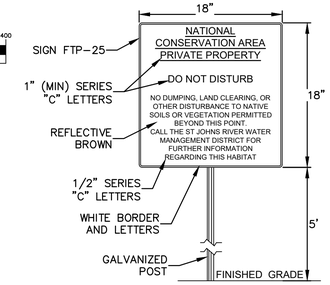


GRAPHIC SCALE

100 0 50 100 200 400

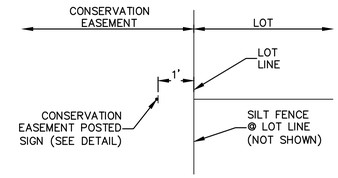
(IN FEET)
1 inch = 100 ft.

NORTH



SIGN NOTE:

1. SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUTES.



CONSERVATION EASEMENT POSTED SIGN AND PLACEMENT DETAIL

RELEASED FOR CONSTRUCTION

THE ROOKERY - PHASE 1

REVISIONS			
NO.	DATE	DESCRIPTION	BY:

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
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Sheet No. 38 of 88

MGP-7

DWG. NO.

CONTRACTOR NOTES:

1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.
3. CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34-23.

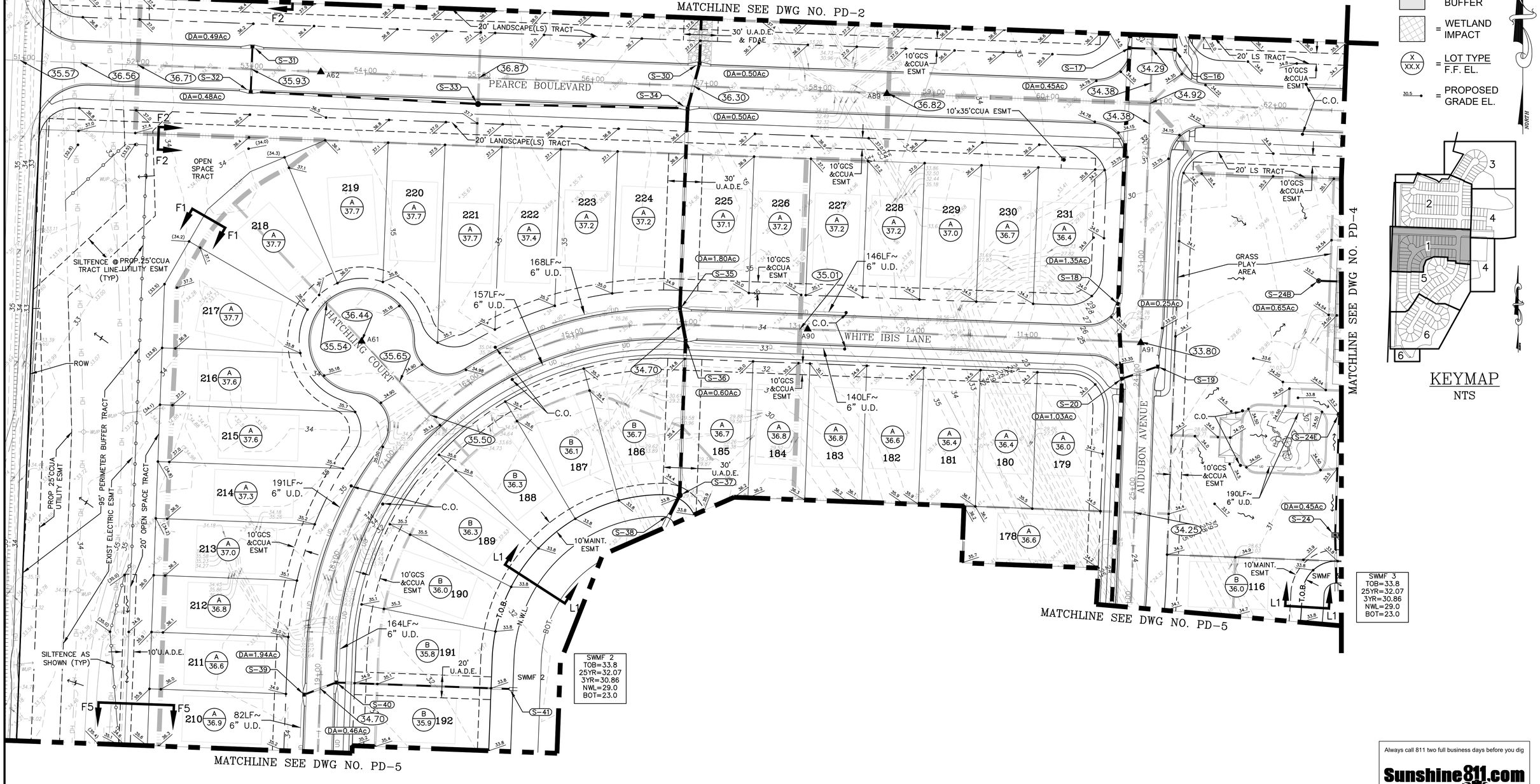
GRAPHIC SCALE

40 0 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)
= UPLAND BUFFER
= WETLAND IMPACT
X XX.X = LOT TYPE F.F. EL.
30.5 = PROPOSED GRADE EL.



KEYMAP
NTS

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THE ROOKERY – PHASE 1
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CLAY COUNTY, FLORIDA
PAVING AND DRAINAGE PLAN

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Sheet No. 39 of 88

PD-1
DWG. NO.

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

- = WETLANDS (FLAGGED)
- = UPLAND BUFFER
- = WETLAND IMPACT
- (X / XX.X) = LOT TYPE / F.F. EL.
- 30.5 = PROPOSED GRADE EL.

NORTH

THE ROOKERY – PHASE 1

MATCHLINE SEE DWG. NO. PD-3

30'PERIMETER BUFFER TRACT

SILTFENCE @ ℄ (TYP)

OPEN SPACE TRACT

BENCHMARK:
SET N&D "BENCHMARK LB3624"
ELV = 33.86' (NAVD 1988)

30'PERIMETER BUFFER TRACT/U.A.D.E.

LARK SPARROW STREET

373LF~ 6" U.D.

380LF~ 6" U.D.

358LF~ 6" U.D.

350LF~ 6" U.D.

363LF~ 6" U.D.

376LF~ 6" U.D.

20LF~ 6" U.D.

79LF~ 6" U.D.

56LF~ 6" U.D.

50LF~ 6" U.D.

76LF~ 6" U.D.

46LF~ 6" U.D.

10'GCS &CCUA ESMT

C.O.

DA=1.89Ac

DA=0.66Ac

DA=2.45Ac

DA=1.64Ac

DA=1.49Ac

DA=1.70Ac

DA=1.41Ac

DA=0.75Ac

DA=0.35Ac

DA=0.19Ac

S-10 S-9 S-11 S-12 S-13 S-8 S-7 S-28 S-14 S-29 S-15

PROP 25'CCUA UTILITY ESMT

EXIST ELECTRIC ESMT

95' PERIMETER BUFFER TRACT

AUDUBON AVENUE

LITTLE HERON PLACE

MATCHLINE SEE DWG NO. PD-4

MATCHLINE SEE DWG NO. PD-1

30' U.A.D.E. & FDAE

25' U.A.D.E.

10'MAINT. ESMT

5'CCUA ESMT

SWMF 1

SWMF 1
TOB=33.8
25YR=32.08
3YR=30.86
NWL=29.0
BOT=23.0

T.O.B.

4:1 MIN. SIDE SLOPES FROM PROPOSED SIGN GRADES TO SURROUNDING EXIST GRADES

KEYMAP
NTS

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CLAY COUNTY, FLORIDA

PAVING AND DRAINAGE PLAN

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Sheet No. 40 of 88

PD–2

DWG. NO.

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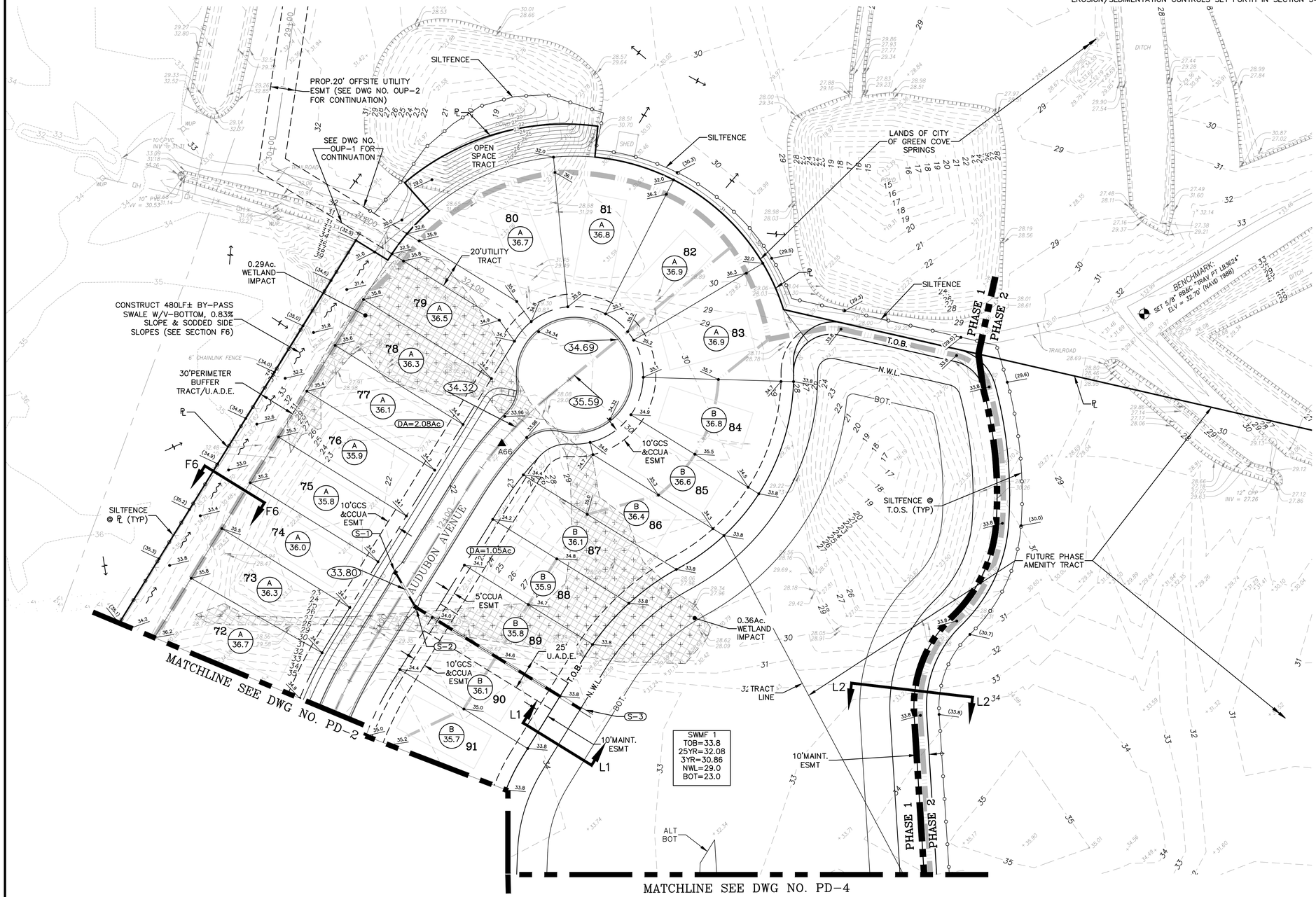


GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)

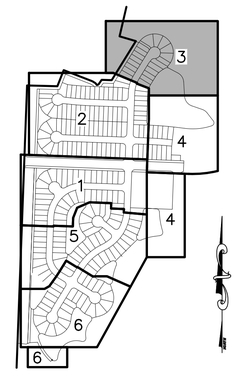
= UPLAND BUFFER

= WETLAND IMPACT

X / XX.X = LOT TYPE / F.F. EL.

30.5 = PROPOSED GRADE EL.

NORTH



KEYMAP
NTS

THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

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PAVING AND DRAINAGE PLAN

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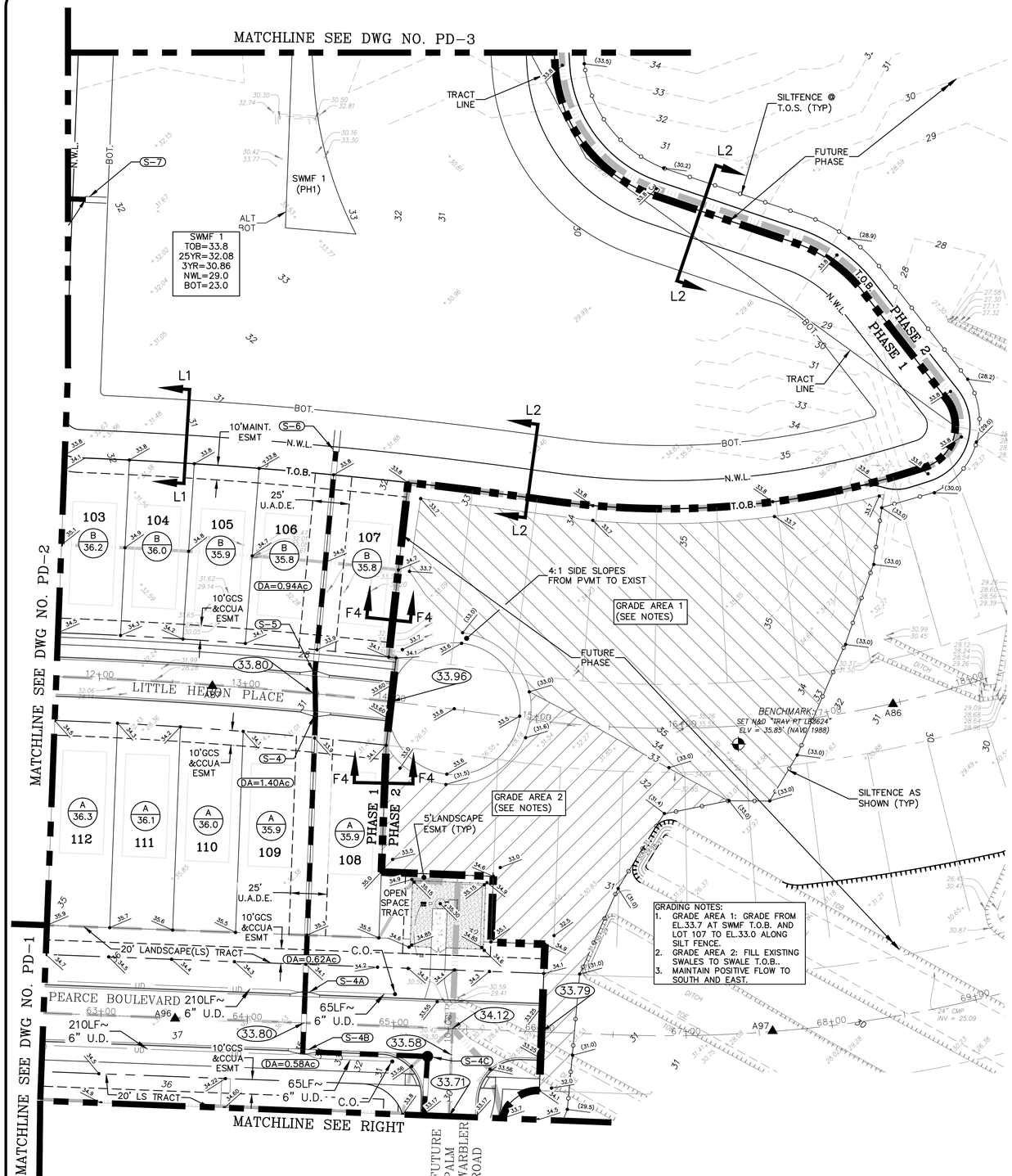
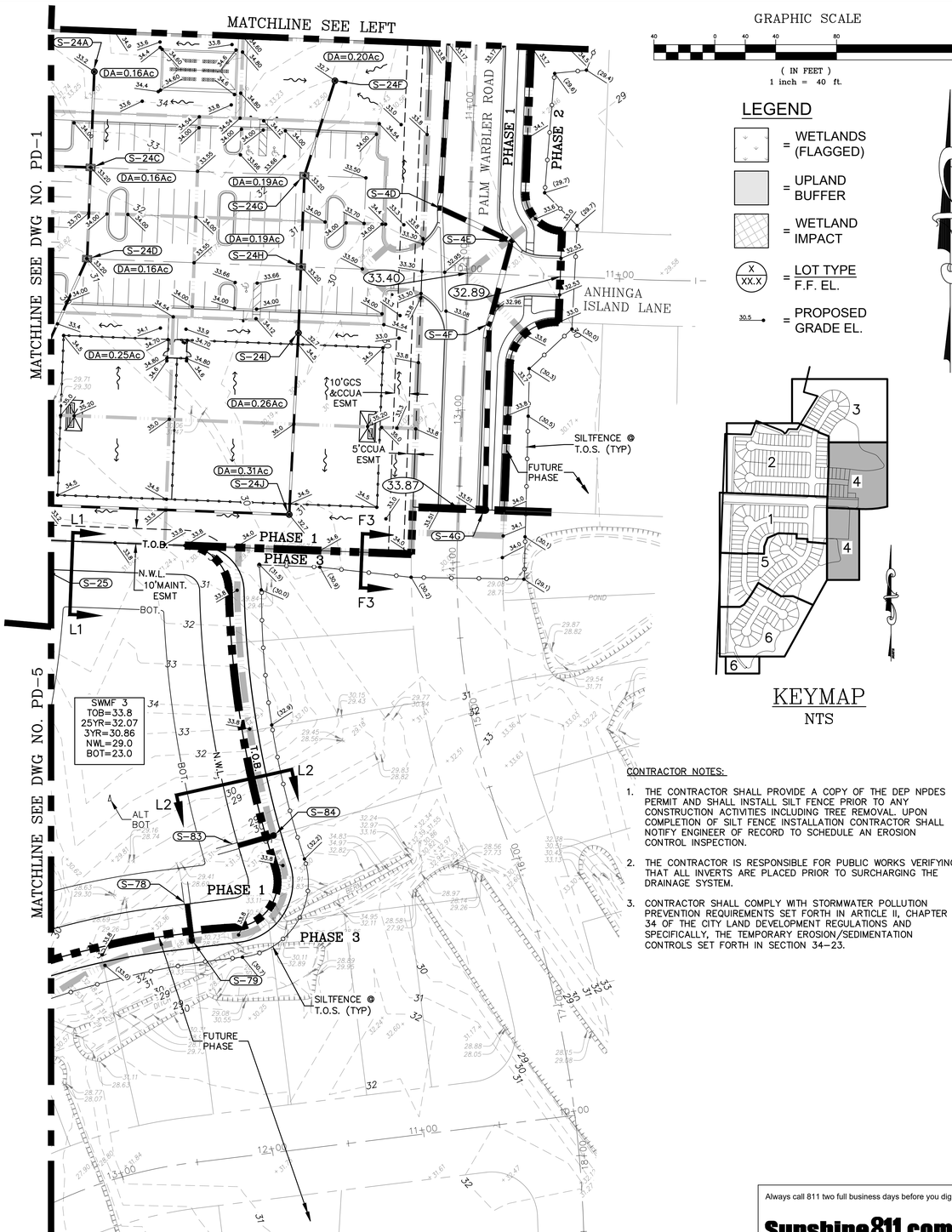
Sheet No. 41 of 88

PD-3

DWG. NO.





GRAPHIC SCALE

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(IN FEET)
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LEGEND

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- = UPLAND BUFFER
- = WETLAND IMPACT
- X / XX.X = LOT TYPE / F.F. EL.
- 30.5 = PROPOSED GRADE EL.

KEYMAP
NTS

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THE ROOKERY - PHASE 1

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Sheet No. 42 of 88

PD-4

DWG. NO.

GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
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LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

= LOT TYPE / F.F. EL.

= PROPOSED GRADE EL.

NORTH

THE ROOKERY – PHASE 1

MATCHLINE SEE DWG NO. PD–1

MATCHLINE SEE DWG NO. PD–4

MATCHLINE SEE DWG NO. PD–6

HORNED LARK COURT

AUDUBON AVENUE

WHITE IBIS LANE

PHASE 1

PHASE 3

FUTURE PHASE

SWMF 2
TOB=33.8
25YR=32.07
3YR=30.86
NWL=29.0
BOT=23.0

SWMF 3
TOB=33.8
25YR=32.07
3YR=30.86
NWL=29.0
BOT=23.0

SWMF 4
TOB=33.7(MIN)
25YR=32.06
3YR=30.86
NWL=29.0
BOT=23.0

SWMF 5
TOB=33.7
25YR=32.07
3YR=30.86
NWL=29.0
BOT=23.0

BENCHMARK:
SET N&D "TRAV PT LB3624"
ELV = 35.81' (NAVD 1988)

SILTFENCE @ ESMT LINE (TYP)

SILTFENCE @ T.O.S. (TYP)

SILTFENCE AS SHOWN

FILL AREA TO DRAIN TO POND

CONSTRUCT 1,215LF± BY-PASS SWALE W/V-BOTTOM, 0.24% SLOPE & SODDED SIDE SLOPES (SEE SECTION F5&L3)

PROP 25'CCUA UTILITY ESMT

95' PERIMETER BUFFER TRACT

20' OPEN SPACE TRACT

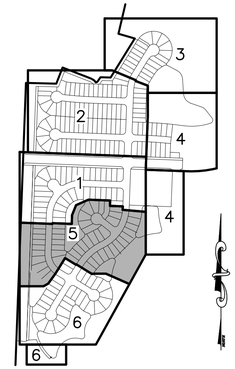
EXIST ELECTRIC ESMT

98LF± 6" U.D.

C.O.

CUT OFF WALL

KEYMAP
NTS



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PAVING AND DRAINAGE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 43 of 88

PD–5

DWG. NO.

CONTRACTOR NOTES:

1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.
3. CONTRACTOR SHALL COMPLY WITH STORMWATER POLLUTION PREVENTION REQUIREMENTS SET FORTH IN ARTICLE II, CHAPTER 34 OF THE CITY LAND DEVELOPMENT REGULATIONS AND SPECIFICALLY, THE TEMPORARY EROSION/SEDIMENTATION CONTROLS SET FORTH IN SECTION 34-23.

GRAPHIC SCALE

40 0 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)
= UPLAND BUFFER
= WETLAND IMPACT
= WETLANDS (AERIAL INTERPRETATION)
X / XX.X = LOT TYPE / F.F. EL.
30.5 = PROPOSED GRADE EL.

NORTH

KEYMAP
NTS

MATCHLINE SEE DWG NO. PD-5

SWMF 5
TOB=33.7
25YR=32.07
3YR=30.86
NWL=29.0
BOT=23.0

SWMF 4
TOB=33.7(MIN)
25YR=32.06
3YR=30.86
NWL=29.0
BOT=23.0

SWMF 6
TOB=33.7(MIN)
25YR=32.06
3YR=30.86
NWL=29.0
BOT=23.0

WHITE IBIS LANE

AUDUBON AVENUE

PHASE 1
PHASE 4

PHASE 1
PHASE 3

FUTURE PHASE

SILTFENCE @ T.O.S. (TYP)

SILTFENCE @ ESMT LINE (TYP)

CUT OFF WALL

ALT BOT

10'GCS &CCUA ESMT

25' U.A.D.E.

10'MAINT. ESMT

10'U.A.D.E.

PROP 25'CCUA UTILITY ESMT

EXIST ELECTRIC ESMT

95' PERIMETER BUFFER TRACT

OPEN SPACE TRACT

0.86Ac. WETLAND IMPACT

S.T.B. @ WETLAND

CONSTRUCT 340LF± BY-PASS SWALE W/V-BOTTOM, 0.18% SLOPE & SODDED SIDE SLOPES (SEE SECTION S1)

FOR CONTINUATION SEE DWG NO PD-7

MATCHLINE SEE RIGHT

MATCHLINE SEE LEFT

Always call 811 two full business days before you dig

Sunshine811.com

RELEASED FOR CONSTRUCTION

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REVISIONS			
NO.	DATE	DESCRIPTION	BY:
–	–	–	–

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 40'
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

PAVING AND DRAINAGE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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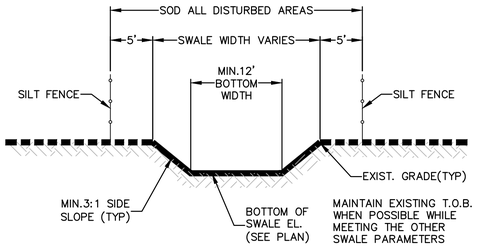
Sheet No. 44 of 88

PD-6

DWG. NO.

THE ROOKERY – PHASE 1



SWALE SECTION

EXISTING SWALE CLEAN AND REGRADE
N.T.S.

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GRAPHIC SCALE

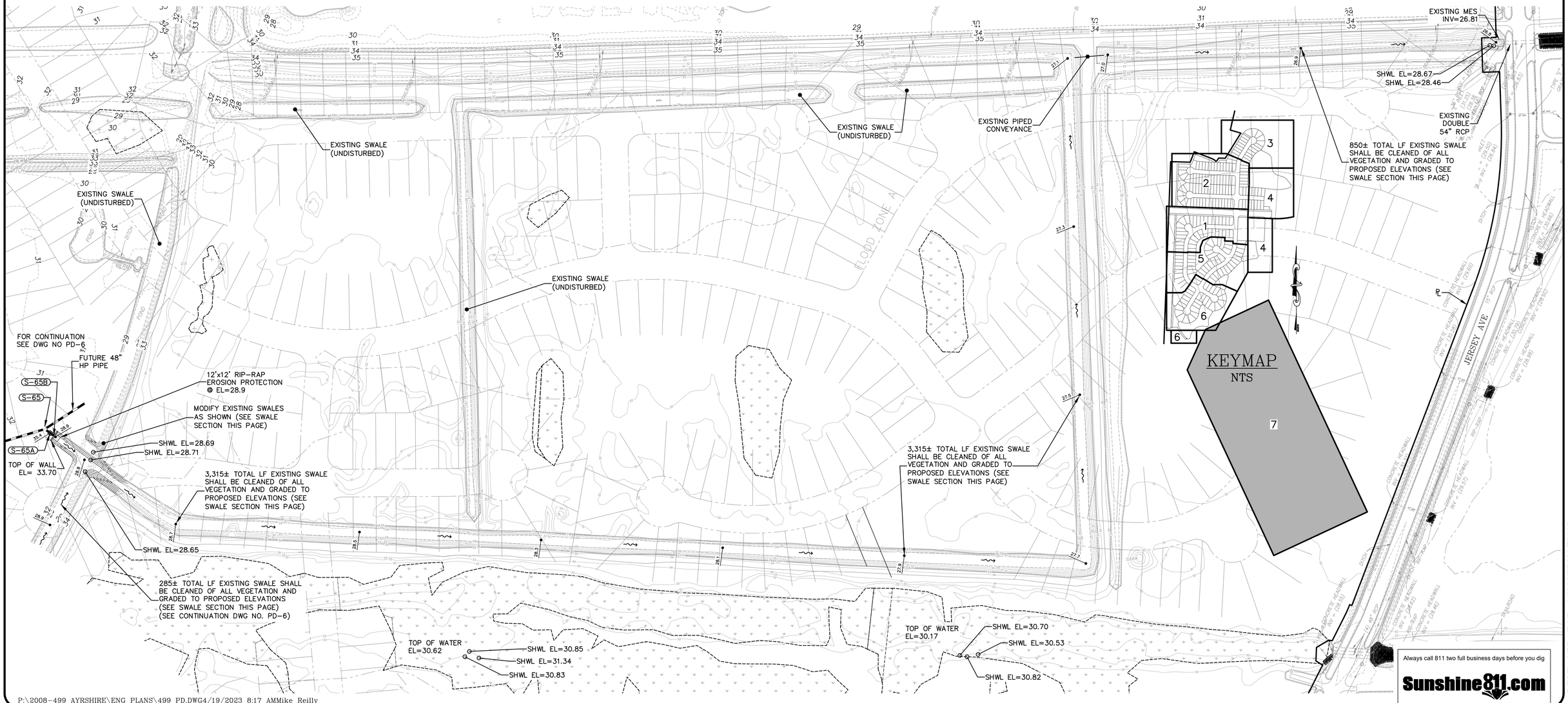
100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LEGEND

= WETLANDS (FLAGGED)

30.5 = PROPOSED GRADE EL.



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Sheet No. 45 of 88

PD-7

DWG. NO.

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

DRAINAGE STRUCTURE SCHEDULE				
STR NO.	STRUCT. TYPE	TOP EL.	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-1	D.C.I.	33.44		30.40 (SE)
S-2	C.I.	33.44	30.30 (NW)	27.50 (SE)
S-4	D.C.I.	33.44		26.00 (N) 26.00 (S)
S-4A	C.I.	33.26	26.00 (N)	26.00 (S)
S-4B	C.I.	33.26	26.00 (N)	26.00 (E)
S-4C	MH	33.74	26.00 (W)	26.00 (S)
S-4D	C.I.	32.73	26.00 (N)	26.00 (SE)
S-4E	C.I.	32.90	26.00 (NW)	26.00 (S)
S-4F	C.I.	32.90	26.00 (N)	26.00 (S)
S-4G	MH	33.90	26.00 (N)	26.00 (E)
S-5	C.I.	33.44	26.00 (S)	26.00 (N)
S-8	C.I.	34.57	24.50 (W)	24.50 (E)
S-9	C.I.	34.57		31.30 (S)
S-10	D.C.I.	34.96		31.70 (S)
S-11	C.I.	34.96	31.60 (N)	30.85 (E)
S-12	C.I.	34.57	31.20 (N) 30.40 (W)	24.50 (S) 24.50 (E)
S-13	MH	35.20	24.50 (N)	24.50 (S)
S-14	D.C.I.	34.38	24.50 (N)	24.50 (S)
S-15	D.C.I.	34.17	24.50 (N)	24.50 (S)
S-16	C.I.	33.75		30.05 (W)
S-17	C.I.	33.75	29.95 (E) 24.50 (N)	24.50 (S)

DRAINAGE STRUCTURE SCHEDULE				
STR NO.	STRUCT. TYPE	TOP EL.	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-18	D.C.I.	33.29	24.50 (N)	24.50 (S)
S-19	C.I.	33.20		29.00 (W)
S-20	C.I.	33.29	28.90 (E) 24.50 (N)	24.50 (S)
S-21	C.I.	33.41	24.50 (N)	24.50 (SE)
S-22	C.I.	33.41	24.50 (NW)	24.50 (E)
S-24	TYPE "C"	33.20	29.25 (N) 28.80 (E)	28.00 (S)
S-24A	18"x15" INLINE DRAIN	33.20		29.95 (S)
S-24B	18"x15" INLINE DRAIN	33.20		29.95 (E)
S-24C	TYPE "C"	33.20	29.80 (W) 29.80 (N)	29.80 (S)
S-24D	TYPE "C"	33.20	29.65 (N)	29.65 (SW)
S-24E	18"x15" DRAIN BASIN	33.20	29.50 (NE)	29.50 (S)
S-24F	18"x15" INLINE DRAIN	32.70		29.95 (S)
S-24G	TYPE "C"	33.20	29.80 (N)	29.80 (S)
S-24H	TYPE "C"	33.20	29.65 (N)	29.65 (S)
S-24I	18"x15" DRAIN BASIN	32.70	29.50 (N)	29.50 (S)
S-24J	18"x15" DRAIN BASIN	32.70	29.20 (N)	29.20 (W)
S-28	D.C.I.	35.64		33.00 (SW)
S-29	D.C.I.	35.64	32.90 (NE)	32.15 (S)
S-30	C.I.	35.76	31.75 (N)	31.75 (S)
S-31	C.I.	35.39		32.15 (S)
S-32	C.I.	35.39	32.05 (N)	31.80 (E)

DRAINAGE STRUCTURE SCHEDULE				
STR NO.	STRUCT. TYPE	TOP EL.	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-33	MH	37.40	31.20 (W)	31.20 (E)
S-34	C.I.	35.76	31.70 (N) 30.65 (W)	29.65 (S)
S-35	D.C.I.	34.34	29.40 (N)	29.40 (S)
S-36	C.I.	34.34	29.35 (N)	29.35 (S)
S-37	MH	33.90	28.90 (N)	26.60 (SW)
S-39	D.C.I.	34.34		31.55 (E)
S-40	C.I.	34.34	31.45 (W)	28.25 (E)
S-43	C.I.	33.44		29.25 (SW)
S-44	C.I.	33.44	29.15 (NE)	28.90 (SW)
S-45	MH	34.50	28.75 (NE)	28.75 (SW)
S-46	MH	34.00	25.00 (W) 28.50 (NE)	25.00 (SE)
S-47	C.I.	33.44	25.00 (NW)	25.00 (S)
S-48	C.I.	33.44	25.00 (N)	25.00 (SE)
S-53	C.I.	33.34	24.30 (NE) 26.75 (NW)	24.30 (SW)
S-53A	C.I.	33.25		30.05 (NE)
S-53B	C.I.	33.25	29.95 (SW)	29.70 (SE)
S-53C	C.I.	33.25		29.70 (NE)
S-53D	C.I.	33.25	29.60 (SW) 29.60 (NW)	27.00 (SE)
S-54	C.I.	33.34	24.30 (NE)	24.30 (SW)
S-56	C.I.	34.17		31.20 (SW)
S-57	C.I.	34.17	31.10 (NE)	31.10 (W)

DRAINAGE STRUCTURE SCHEDULE				
STR NO.	STRUCT. TYPE	TOP EL.	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-58	MH	35.80	30.70 (E)	28.00 (S)
S-61	C.I.	33.34	24.10 (NW)	24.10 (SE)
S-62	C.I.	33.34	24.10 (NW)	24.10 (SE)
S-65	MH	36.20	25.00 (NW)	25.00 (SE) 25.00 (S)
S-68	MH	33.90	27.55 (SE)	27.55 (NW)
S-71	MH	33.90	27.55 (SE)	27.55 (NW)
S-74	MH	33.90	26.50 (W)	26.50 (E)
S-79	MH	34.00	26.00 (N)	25.00 (S)
S-84	MH	34.00	26.00 (W)	25.00 (E)

C.I. = CURB INLET
D.C.I. = DOUBLE CURB INLET
T.C.I. = TRIPLE CURB INLET
MH = MANHOLE

NOTE 1: SEE DWG NO. PDD-5 FOR HDPE ANCHOR DETAIL
NOTE 2: SEE DWG NO. PDD-6 FOR CONTROL STRUCTURE DETAILS (S-65A AND S-J8)
NOTE 3: USE H-10 PEDESTRIAN RATED LOCKING GRATE ON ALL INLINE DRAINS AND DRAIN BASINS
NOTE 4: STRUCTURE S-65 PROVIDE KNOCKOUT FOR FUTURE 48" HP PIPE @ INV = 25.00 (SE)

MITERED END SECTION & HEADWALL SCHEDULE			
STR NO.	STRUCT. TYPE	INVERT EL. PIPES IN:	INVERT EL. PIPES OUT
S-3	M.E.S.(24")	27.00 (NW)	
S-6	M.E.S.(36")	26.00 (S)	
S-7	M.E.S.(36")	24.50 (W)	
S-23	M.E.S.(36")	24.50 (W)	
S-25	M.E.S.(18")	27.50 (N)	
S-38	M.E.S.(30")	26.50 (NE)	
S-41	M.E.S.(15")	27.75 (W)	
S-42	M.E.S.(48")		25.00 (E)
S-49	M.E.S.(48")	25.00 (NW)	
S-50	M.E.S.(36")		25.00 (SW)
S-51	M.E.S.(36")	25.00 (NE)	
S-52	M.E.S.(36")		24.30 (SW)
S-55	M.E.S.(36")	24.30 (NE)	
S-59	M.E.S.(15")	27.75 (N)	
S-60	M.E.S.(36")		24.10 (SE)
S-63	M.E.S.(36")	24.10 (NW)	
S-64	M.E.S.(48")		25.00 (SE)
S-65B	SAND/CEMENT HEADWALL (48")	28.90 (N)	
S-69	M.E.S.(18")	27.50 (SE)	
S-72	M.E.S.(18")	27.50 (SE)	
S-73	M.E.S.(30")		26.50 (E)
S-78	M.E.S.(36")		26.00 (S)
S-83	M.E.S.(36")		26.00 (E)
S-85	M.E.S.(18")		33.70 (S)
S-86	M.E.S.(18")	33.60 (N)	

NOTE 5: MITERED END SECTIONS GREATER THAN 36" ARE TO BE POUR-IN-PLACE (INCLUDING ERCP)

NOTE 6: PIPE S-85 - S-86 TO BE CLASS HE-III

NOTE 7: FOR STRUCTURES AND PIPES ALONG CR-15A ROADWAY IMPROVEMENTS SEE DWG NO. RI-2

NOTE 8: FOR STRUCTURES AND PIPES AROUND SWMF J1 SEE DWG NO. J1 & J2

PIPE SCHEDULE						
STRUCT. NO. TO STRUCT. NO.	LENGTH FT.	SIZE IN.	TYPE	UP STREAM EL.	DOWN STREAM EL.	SLOPE
S-1 - S-2	32	15	HP	30.40	30.30	0.32%
S-2 - S-3	155	24	HP	27.50	27.00	0.32%
S-4 - S-4A	191	36	HP	26.00	26.00	0.00%
S-4 - S-5	28	36	HP	26.00	26.00	0.00%
S-4A - S-4B	40	36	HP	26.00	26.00	0.00%
S-4B - S-4C	85	36	HP	26.00	26.00	0.00%
S-4C - S-4D	148	36	HP	26.00	26.00	0.00%
S-4D - S-4E	52	36	HP	26.00	26.00	0.00%
S-4E - S-4F	56	36	HP	26.00	26.00	0.00%
S-4F - S-4G	122	36	HP	26.00	26.00	0.00%
S-5 - S-6	152	36	HP	26.00	26.00	0.00%
S-8 - S-7	164	36	HP	24.50	24.50	0.00%
S-9 - S-12	42	15	HP	31.30	31.20	0.24%
S-10 - S-11	28	15	HP	31.70	31.60	0.36%
S-11 - S-12	358	24	HP	30.85	30.40	0.13%
S-12 - S-8	39	36	HP	24.50	24.50	0.00%
S-12 - S-13	31	36	HP	24.50	24.50	0.00%
S-13 - S-14	265	36	HP	24.50	24.50	0.00%
S-14 - S-15	67	36	HP	24.50	24.50	0.00%
S-15 - S-17	140	36	HP	24.50	24.50	0.00%
S-16 - S-17	40	15	HDPE	30.05	29.95	0.25%
S-17 - S-18	225	36	HP	24.50	24.50	0.00%
S-18 - S-20	66	36	HP	24.50	24.50	0.00%
S-19 - S-20	33	15	HDPE	29.00	28.90	0.30%
S-20 - S-21	231	36	HP	24.50	24.50	0.00%
S-21 - S-22	33	36	HP	24.50	24.50	0.00%
S-22 - S-23	152	36	HP	24.50	24.50	0.00%

PIPE SCHEDULE						
STRUCT. NO. TO STRUCT. NO.	LENGTH FT.	SIZE IN.	TYPE	UP STREAM EL.	DOWN STREAM EL.	SLOPE
S-24 - S-25	42	18	HP	28.00	27.50	1.17%
S-24A - S-24C	63	15	HP	29.95	29.80	0.23%
S-24B - S-24C	46	15	HP	29.95	29.80	0.33%
S-24C - S-24D	60	15	HP	29.80	29.65	0.24%
S-24D - S-24E	62	15	HP	29.65	29.50	0.25%
S-24E - S-24	106	15	HP	29.50	29.25	0.24%
S-24F - S-24G	65	15	HP	29.95	29.80	0.23%
S-24G - S-24H	60	15	HP	29.80	29.65	0.25%
S-24H - S-24I	44	15	HP	29.65	29.50	0.34%
S-24I - S-24J	120	15	HP	29.50	29.20	0.25%
S-24J - S-24	162	15	HP	29.20	28.80	0.25%
S-28 - S-29	31	15	HP	33.00	32.90	0.32%
S-29 - S-30	196	24	HP	32.15	31.75	0.20%
S-30 - S-34	41	24	HP	31.75	31.70	0.12%
S-31 - S-32	40	15	HP	32.15	32.05	0.25%
S-32 - S-33	200	18	HP	31.80	31.20	0.30%
S-33 - S-34	184	18	HP	31.20	30.65	0.30%
S-34 - S-35	176	30	HP	29.65	29.40	0.14%
S-35 - S-36	28	30	HP	29.40	29.35	0.18%
S-36 - S-37	136	30	HP	29.35	28.90	0.33%
S-37 - S-38	19	30	HP	26.60	26.50	0.53%
S-39 - S-40	30	15	HP	31.55	31.45	0.33%
S-40 - S-41	152	15	HP	28.25	27.75	0.33%
S-42 - S-46	49	48	HP	25.00	25.00	0.00%
S-43 - S-44	28	15	HP	29.25	29.15	0.36%
S-44 - S-45	65	18	HP	28.90	28.75	0.23%
S-45 - S-46	114	18	HP	28.75	28.50	0.22%

PIPE SCHEDULE						
STRUCT. NO. TO STRUCT. NO.	LENGTH FT.	SIZE IN.	TYPE	UP STREAM EL.	DOWN STREAM EL.	SLOPE
S-46 - S-47	145	48	HP	25.00	25.00	0.00%
S-47 - S-48	29	48	HP	25.00	25.00	0.00%
S-48 - S-49	168	48	HP	25.00	25.00	0.00%
S-50 - S-51	323	36	HP	25.00	25.00	0.00%
S-52 - S-53	163	36	HP	24.30	24.30	0.00%
S-53 - S-54	28	36	HP	24.30	24.30	0.00%
S-53A - S-53B	44	15	HP	30.05	29.95	0.23%
S-53B - S-53D	53	18	HP	29.70	29.60	0.19%
S-53C - S-53D	40	15	HP	29.70	29.60	0.25%
S-53D - S-53	167	24	HP	27.00	26.75	0.15%
S-54 - S-55	179	36	HP	24.30	24.30	0.00%
S-56 - S-57	33	15	HP	31.20	31.10	0.30%
S-57 - S-58	152	15	HP	31.10	30.70	0.26%
S-58 - S-59	82	15	HP	28.00	27.75	0.31%
S-60 - S-61	156	36	HP	24.10	24.10	0.00%
S-61 - S-62	29	36	HP	24.10	24.10	0.00%
S-62 - S-63	165	36	HP	24.10	24.10	0.00%
S-64 - S-65	156	48	HP	25.00	25.00	0.00%
S-65 - S-65A	15	48	HP	25.00	25.00	0.00%
S-65A - S-65B	10	48	HP	28.95	28.90	0.52%
S-68 - S-69	24	18	HP	27.55	27.50	0.21%
S-71 - S-72	24	18	HP	27.55	27.50	0.21%
S-73 - S-74	24	30	HP	26.50	26.50	0.00%
S-78 - S-79	24	36	HP	26.00	26.00	0.00%
S-83 - S-84	24	36	HP	26.00	26.00	0.00%
S-85 - S-86	42	12 x 18	ERCP	33.70	33.60	0.24%

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THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
DRAINAGE STRUCTURE TABLES

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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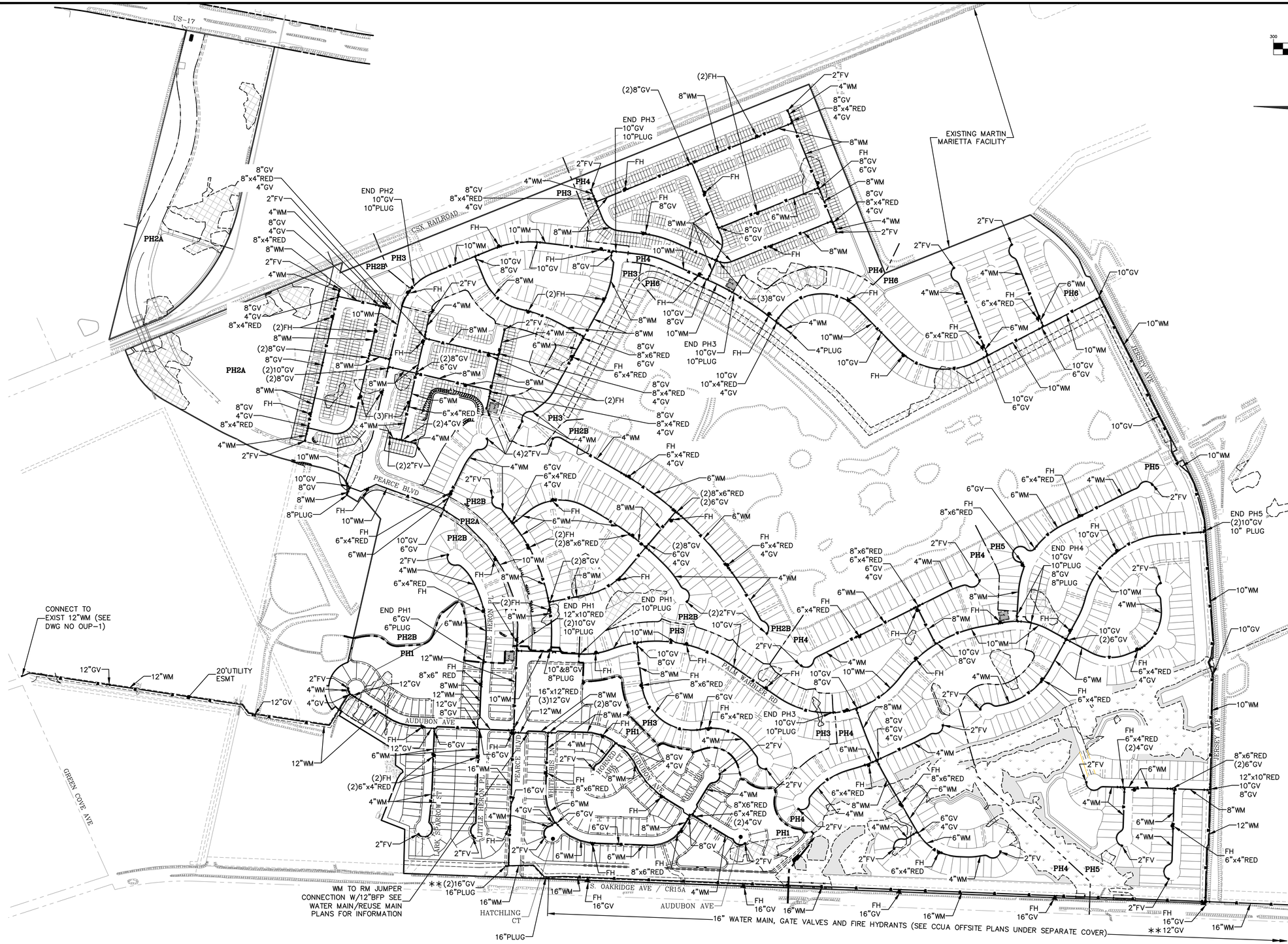
VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 46 of 88

DST-1
DWG. NO.



GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)

1 inch = 300 ft.

LEGEND

= WETLANDS (FLAGGED)

= WETLANDS (AERIAL INTERPRETATION)

= UPLAND BUFFER

= WETLAND IMPACT

FH = FIRE HYDRANT ASSEMBLY

WM = WATER MAIN

GV = GATE VALVE

RED = REDUCER

** NOTE: A PRESSURE REDUCING VALVE WILL BE NEEDED ON WATER MAIN AT THE PROJECT ENTRANCE/ CONNECTION POINTS

MASTER WATER PLAN DEPICTS OVERALL WATER MAIN LOCATION & SIZE, VALVE & FIRE HYDRANT LOCATIONS & GENERAL INFORMATION. FOR PHASE 1 DETAILED INFORMATION SEE WATER AND REUSE PLANS. FUTURE PHASE DETAILED INFORMATION WILL BE PROVIDED AT THE TIME OF SUBMITTAL.

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THE ROOKERY – PHASE 1

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REVISIONS			
NO.	DATE	DESCRIPTION	BY:
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DESIGNED BY:	DAI
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CHECKED BY:	VJD
SCALE:	1" = 300'
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

MASTER WATER PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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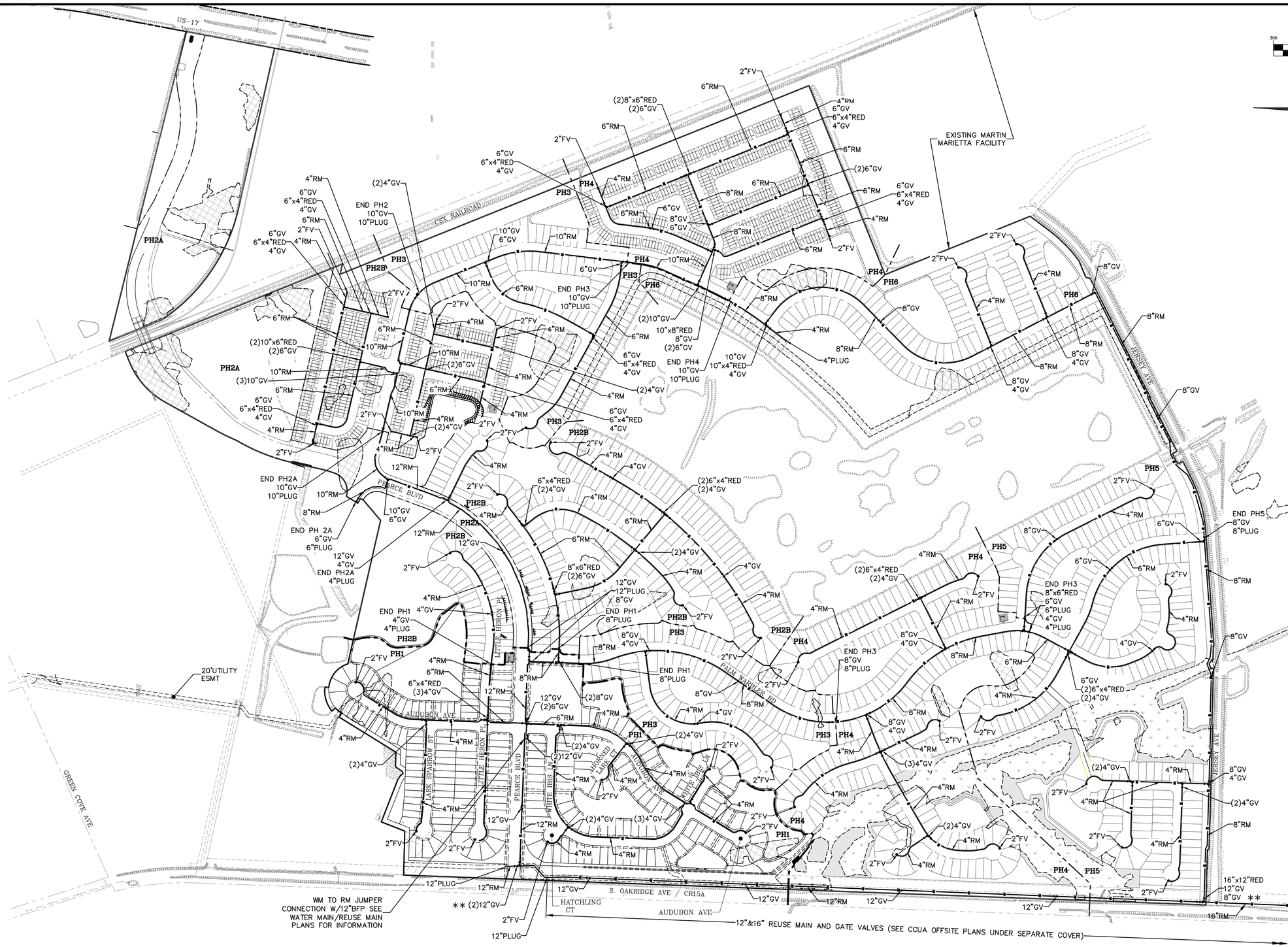
Sheet No. 47 of 88

MWP–1

DWG. NO.



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LEGEND

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- = UPLAND BUFFER
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- GV = GATE VALVE
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** NOTE: A PRESSURE REDUCING VALVE WILL BE NEEDED ON REUSE MAIN AT THE PROJECT ENTRANCE/ CONNECTION POINTS

MASTER REUSE PLAN DEPICTS OVERALL REUSE MAIN LOCATION, PRELIMINARY PIPE SIZE, VALVE LOCATIONS & GENERAL INFORMATION. FOR PHASE 1 DETAILED INFORMATION SEE WATER AND REUSE PLANS. FUTURE PHASE DETAILED INFORMATION WILL BE PROVIDED AT THE TIME OF SUBMITTAL.

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CLAY COUNTY, FLORIDA

MASTER REUSE PLAN

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Sheet No. 48 of 88

MRP–1

DWG. NO.

GRAPHIC SCALE

40 0 40 80 160

(IN FEET)
1 inch = 40 ft.

THE ROOKERY – PHASE 1

LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

SP-1 = SAMPLE POINT

NORTH

MATCHLINE SEE DWG NO. WR-2

MATCHLINE SEE DWG NO. WR-4

MATCHLINE SEE DWG NO. WR-5

MATCHLINE SEE DWG NO. WR-5

PEARCE BOULEVARD

HATCHLING COURT

WHITE IBIS LANE

AUDUBON AVENUE

OPEN SPACE TRACT

PROP. 25'CCUA UTILITY ESMT

95' PERIMETER BUFFER TRACT

EXIST ELECTRIC ESMT

20' OPEN SPACE TRACT

FUTURE 12"RM PRELIMINARY & SUBJECT TO CHANGE (SEE CCUA OFFSITE PLANS UNDER SEPARATE COVER)

FUTURE 16"WM (SEE CCUA OFFSITE PLANS UNDER SEPARATE COVER)

20' LANDSCAPE(LS) TRACT

20' LS TRACT

30' U.A.D.E. & FDAE

30' U.A.D.E.

20' U.A.D.E.

10'MAINT. ESMT

10'GCS &CCUA ESMT

10'x35'CCUA ESMT

SWMF 2

SWMF 3

T.O.B.

3.00 AC AMENITY TRACT

16"PLUG 2"FV(FUTURE USE)

12"PLUG 2"FV(FUTURE USE)

2"SINGLE REUSE SERVICE FOR ROADWAY & SIGNAGE IRRIGATION

16"x16"x16"TEE (2)16"GV W/B&C

16"WM PVC-DR18 (TYP)

12"RM PVC-DR18 (TYP)

12"x12"x12"TEE (2)12"GV W/B&C (2)12"x45"BENDS

16"GV W/B&C

6"FH ASSEMBLY

(4)12"x45"BENDS 12"GV W/B&C

12"WM PVC-DR18 (TYP)

16"x16"x12"TEE 16"x12"RED 12"GV W/B&C

12"x12"x12" TEE (2)12"GV W/B&C

(2)12"x45" BENDS

12"x45" BEND (2)12"x12"x12"TEES (2)12"GV W/B&C 12"BFP 12"x8"RED 12"x90"BEND

8"x45" BEND

(2)12"x12"x6"TEE 12"GV W/B&C (2)6"GV W/B&C (2)12"x45" BENDS

2"SINGLE REUSE SERVICE FOR AMENITY TRACT IRRIGATION

1" SINGLE REUSE SERVICE

(2)6"x45" BENDS

6"RM PVC-DR18 (TYP)

16"x45"BEND

12"x45"BEND

7.0'

PROP.25'CCUA UTILITY ESMT

END PHASE 1 12"x45"BEND 12" PLUG (FUTURE USE)

END PHASE 1 16"x45"BEND 6"FH ASSEMBLY 16"GV W/B&C 16" PLUG(FUTURE USE)

INSTALL LOCATE WIRE ON WATER AND REUSE SERVICES THAT ARE NOT PARALLEL TO LOT LINE(TYP)

2" DBL WATER SERVICE (TYP) SHORT SIDE

2" DBL REUSE SERVICE (TYP) LONG SIDE

2" DBL REUSE SERVICE (TYP) SHORT SIDE

2" DBL WATER SERVICE (TYP) LONG SIDE

2"FV

4"WM PVC-DR18 (TYP)

(5)4"x22.5° BENDS

6"x22.5° BEND 6"x6"x4" TEE 6"GV W/B&C 4"GV W/B&C

6"x11.25° BENDS

6"WM PVC-DR18 (TYP)

(3)6"x11.25° BENDS

1" SINGLE WATER SERVICE

10'GCS &CCUA ESMT

6"FH ASSEMBLY 8"x6"RED

2" DBL WATER SERVICE (TYP) SHORT SIDE

2" DBL REUSE SERVICE (TYP) LONG SIDE

2"SINGLE REUSE SERVICE FOR ROADWAY IRRIGATION

8"WM PVC-DR18 (TYP)

8"x8"x8" TEE (2)8"GV W/B&C

(2)8"x45° BENDS

(4)4"x22.5° BENDS

4"RM PVC-DR18 (TYP)

(2)4"x22.5° BENDS

(4)4"x11.25° BENDS

4"x11.25° BEND 4"x4"x4" TEE (2)4"GV W/B&C

(2)6"x11.25° BENDS

(3)4"x11.25° BENDS

1" SINGLE REUSE SERVICE

(2)8"x45° BENDS

(2)4"x45° BENDS

6"x6"x4" TEE 6"x4" RED (2)4"GV W/B&C

2" DBL REUSE SERVICE(LONG SIDE) TO LOTS 177 & 178

2" DBL WATER SERVICE (LONG SIDE) TO LOTS 116 & 117

2" DBL REUSE SERVICE(LONG SIDE) TO LOTS 209 & 210

2" DBL WATER SERVICE(LONG SIDE) TO LOTS 192 & 193

SP-1 SP-2 SP-3 SP-4

KEYMAP

NTS

UTILITY CROSSING LEGEND

(1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

(2) = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN- MAINTAIN 12" SEPARATION

(A) = CONSTRUCT MAIN 6" ABOVE(MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

(B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

(C) = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA

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NOTE:
NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALKS AS NECESSARY TO AVOID CONFLICTS. FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE W/CCUA. MEANDER SIDEWALKS WITHIN R/W TO AVOID CONFLICTS. SIDEWALK WIDTH AT FIRE HYDRANTS CAN BE REDUCED TO 3'MIN TO AVOID CONFLICTS.

NOTES:

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
7. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
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10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
12. FOR WATER AND REUSE MAINS – A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WATER AND REUSE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 49 of 88

WR-1

DWG. NO.

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NOTE:
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(IN FEET)
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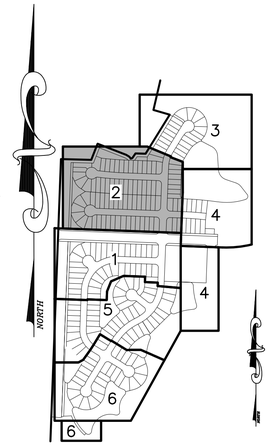
= WETLANDS (FLAGGED)
= UPLAND BUFFER
= WETLAND IMPACT
SP-1 = SAMPLE POINT



KEYMAP
NTS

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1 = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
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NOTES:

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
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16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

MATCHLINE SEE DWG NO. WR-3
MATCHLINE SEE DWG NO. WR-4
MATCHLINE SEE DWG NO. WR-1

LARK SPARROW STREET
LITTLE HERON PLACE
AUDUBON AVENUE

30'PERIMETER BUFFER TRACT
30'PERIMETER BUFFER TRACT/U.A.D.E.
OPEN SPACE TRACT
BENCHMARK:
SET N&D "BENCHMARK LB3624"
ELV = 33.86' (NAVD 1988)
95' PERIMETER BUFFER TRACT
EXIST ELECTRIC ESMT
PROP 25'CCUA UTILITY ESMT
SWMF 1
T.O.B.
30' U.A.D.E. & FDAE
25' U.A.D.E.
MONITORING WELL

THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

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D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WATER AND REUSE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 50 of 88

WR-2

DWG. NO.

THE ROOKERY – PHASE 1

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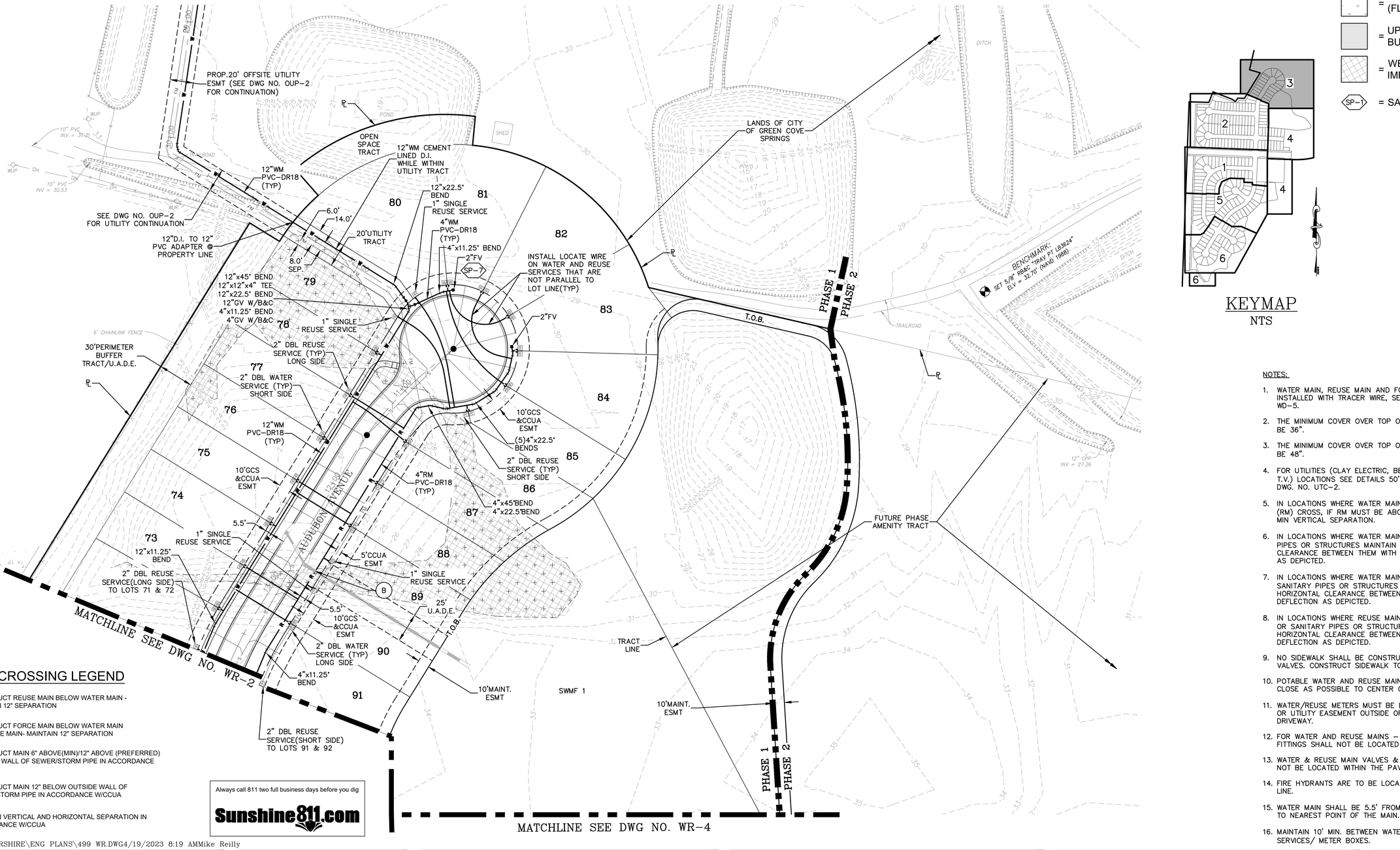

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NORTH

KEYMAP
NTS

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CLAY COUNTY, FLORIDA
WATER AND REUSE PLAN

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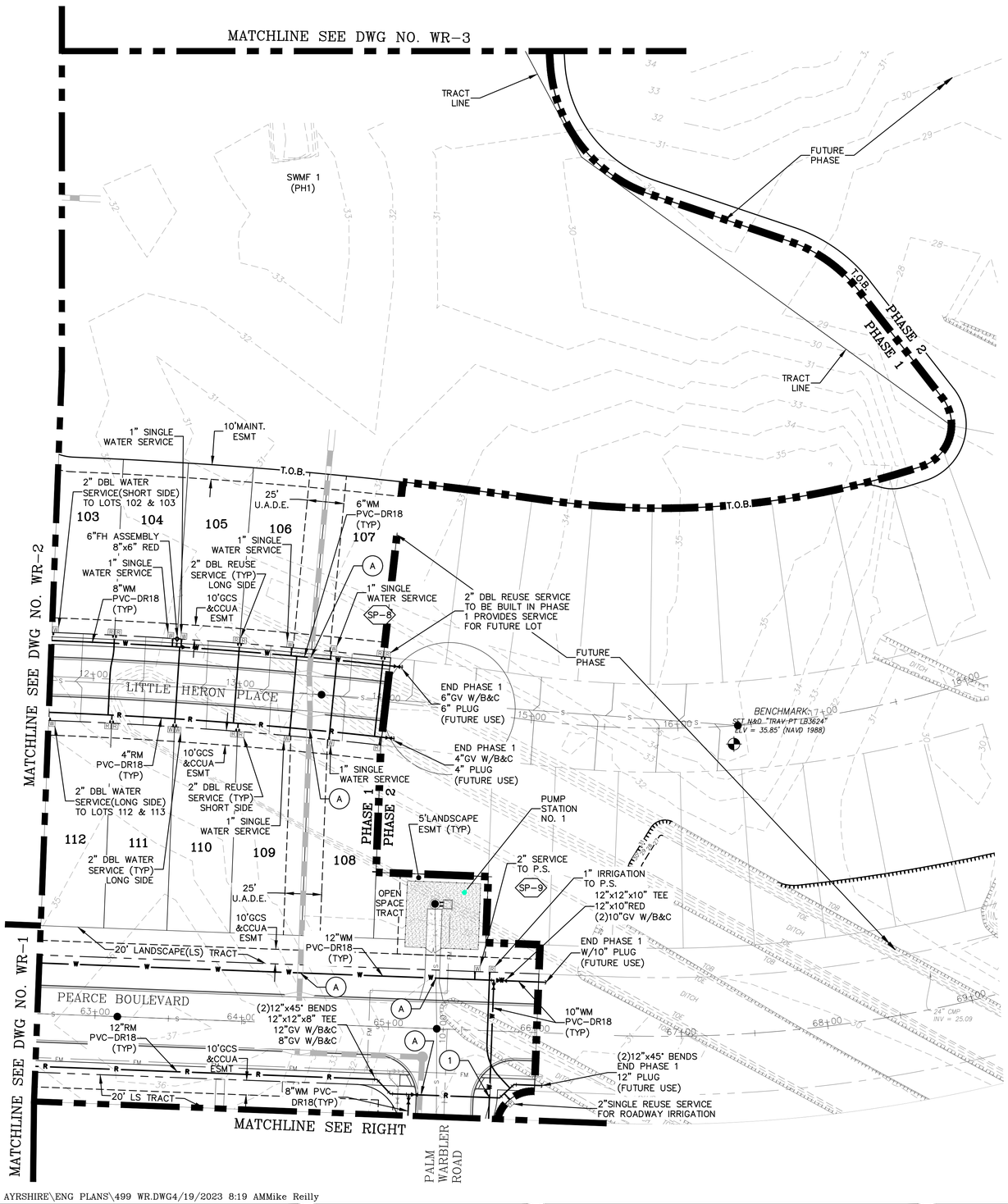
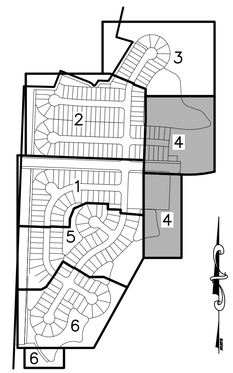
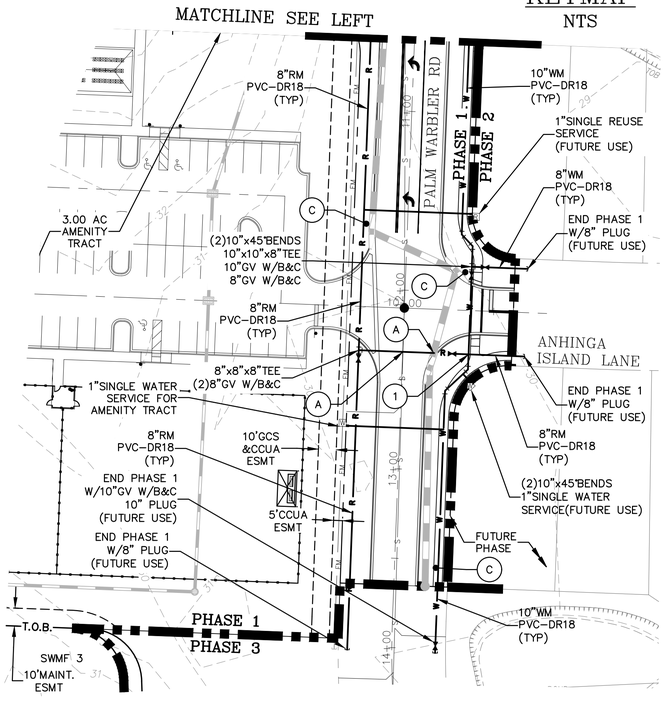
WR-3
DWG. NO.





KEYMAP
NTS



GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

SP-1 = SAMPLE POINT

NORTH

UTILITY CROSSING LEGEND

1 = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

2 = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN- MAINTAIN 12" SEPARATION

A = CONSTRUCT MAIN 6" ABOVE(MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

B = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

C = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA

NOTES:

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
7. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
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9. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
12. FOR WATER AND REUSE MAINS – A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

NOTE:
NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALKS AS NECESSARY TO AVOID CONFLICTS. FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE W/CCUA. MEANDER SIDEWALKS WITHIN R/W TO AVOID CONFLICTS. SIDEWALK WIDTH AT FIRE HYDRANTS CAN BE REDUCED TO 3'MIN TO AVOID CONFLICTS.

THE ROOKERY – PHASE 1

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REVISIONS			
NO.	DATE	DESCRIPTION	BY:
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DESIGNED BY:	DAI
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CHECKED BY:	VJD
SCALE:	1" = 40'
DATE:	4/19/2023
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THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
WATER AND REUSE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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WR-4
DWG. NO.

UTILITY CROSSING LEGEND

(1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

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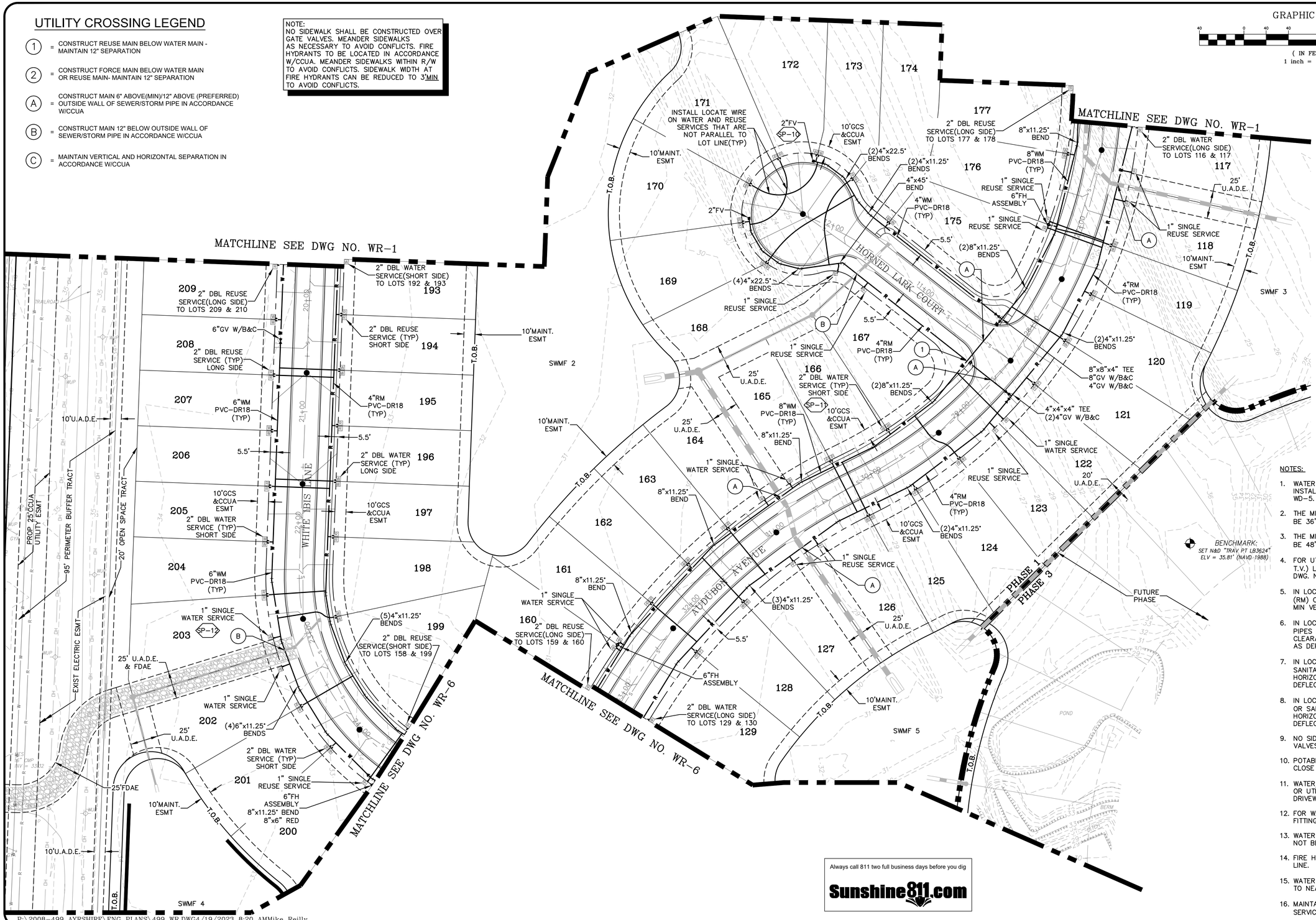
GRAPHIC SCALE
40 0 40 40 80 160
(IN FEET)
1 inch = 40 ft.

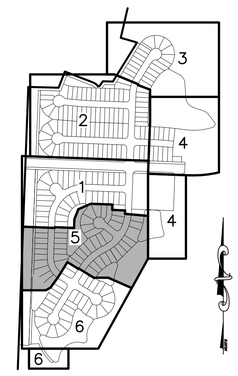
LEGEND

= WETLANDS (FLAGGED)
= UPLAND BUFFER
= WETLAND IMPACT
SP-1 = SAMPLE POINT

THE ROOKERY – PHASE 1

NORTH





KEYMAP
NTS

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BENCHMARK:
SET N&D "TRAV PT LB3624"
ELV = 35.81' (NAVD-1988)

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REVISIONS			
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THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WATER AND REUSE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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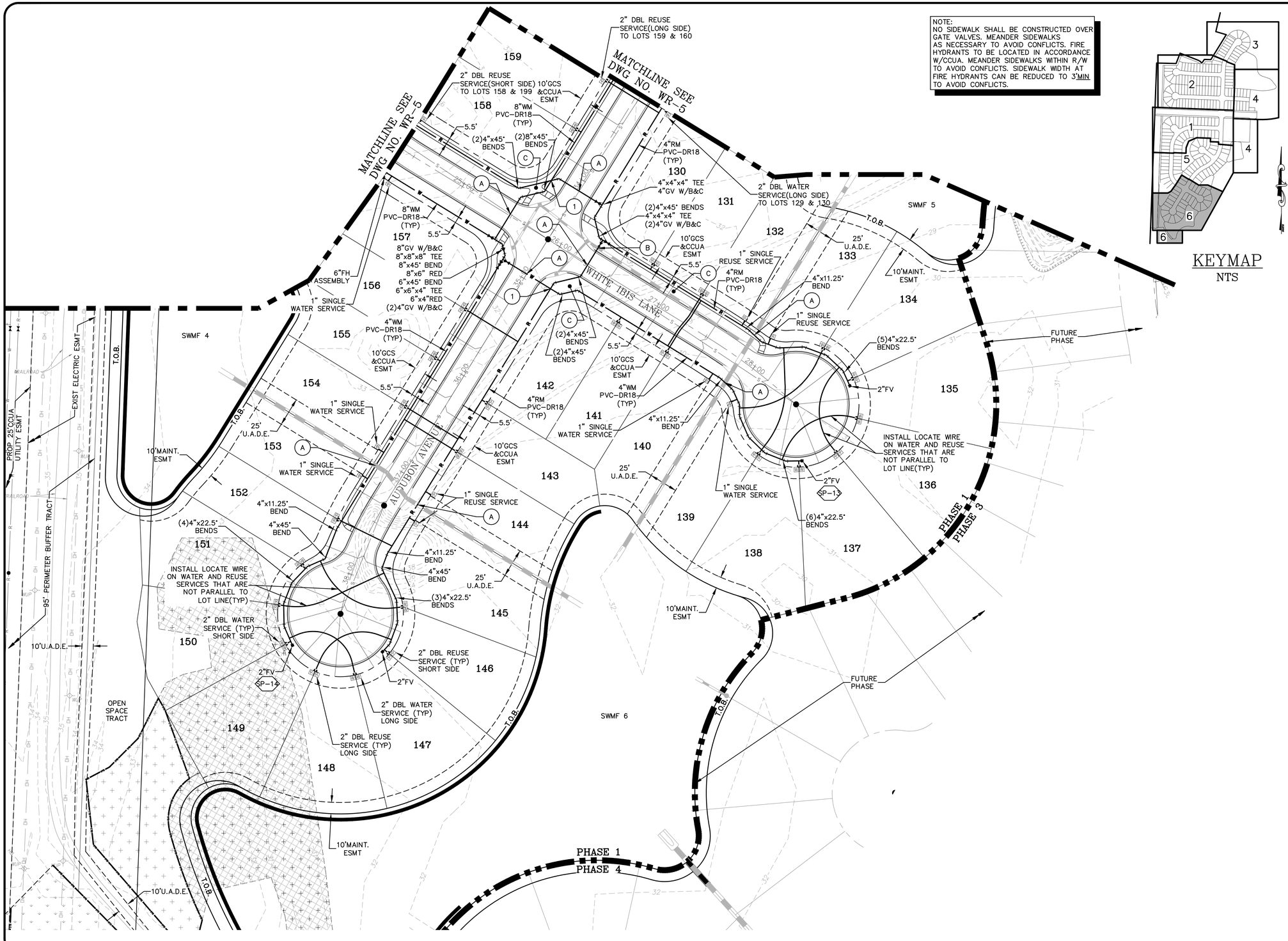
Sheet No. 53 of 88

WR-5
DWG. NO.



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KEYMAP
NTS

GRAPHIC SCALE
40 0 40 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

- = WETLANDS (FLAGGED)
- = UPLAND BUFFER
- = WETLAND IMPACT
- SP-1 = SAMPLE POINT
- = WETLANDS (AERIAL INTERPRETATION)

NORTH

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THE ROOKERY – PHASE 1

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NO.	DATE	DESCRIPTION	BY:
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DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 40'
DATE:	4/19/2023
PROJ. NO.:	2008-499

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

WATER AND REUSE PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 54 of 88

WR-6
DWG. NO.

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = MANHOLE
- = DIRECTION OF FLOW
- —FM— = FORCE MAIN
- —S— = SANITARY SEWER MAIN

NOTES:

1. TERMINAL MANHOLES WITH MORE THAN 1 SERVICE LATERAL SHALL BE 5' DIAMETER.
2. ALL SANITARY SEWER MAINS ARE 8" UNLESS OTHERWISE NOTED.

MASTER SEWER PLAN DEPICTS GRAVITY SEWER & FORCE MAIN LOCATIONS, SIZES, PUMP STATION LOCATION & GENERAL INFORMATION. FOR PHASE 1 DETAILED INFORMATION SEE SANITARY SEWER PLANS. FUTURE PHASES DETAILED INFORMATION WILL BE PROVIDED AT THE TIME OF SUBMITTAL.

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THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

MASTER SEWER PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 55 of 88

MSP–1

DWG. NO.

GRAPHIC SCALE

40 0 40 40 80 160

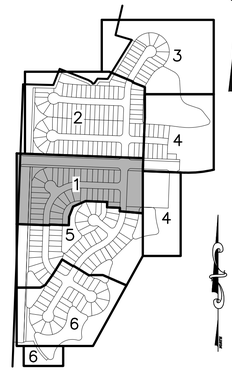
(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT



KEYMAP
NTS

MATCHLINE SEE DWG NO. S-2

MATCHLINE SEE DWG NO. S-4

MATCHLINE SEE DWG NO. S-5

MATCHLINE SEE DWG NO. S-5

PEARCE BOULEVARD

WHITE IBIS LANE

HATCHLING COURT

AUDUBON AVENUE

20' LANDSCAPE(LS) TRACT

30' U.A.D.E. & FDAE

10'GCS &CCUA ESMT

MH-103
TOP EL.=34.9±
INV. IN=18.87(S)
INV. IN=20.19(N)
INV. OUT=18.77(E)

(2)12"x45°BENDS

12"GV W/B&C

6'(TYP)

10'(TYP)

OPEN SPACE TRACT

12"x45°BEND

7.0'(TYP)

5.5'(TYP)

PROP.25'CCUA UTILITY ESMT

MH-120
TOP EL.=36.4±
INV. OUT=30.89(SE)
(3)SER.LAT.INV.=31.06

MH-115
TOP EL.=35.1±
INV. IN=27.94(SW)
INV. OUT=27.84(E)

126LF ~ 8"PVC @ S= 0.40% SDR-26

6"SEWER SERVICE 48"MIN COVER(TYP)

391LF ~ 8"PVC @ S= 1.43% SDR-26

210LF ~ 8"PVC @ S= 0.40% SDR-26

12"FM PVC DR-18(TYP)

10'x35'CCUA ESMT

20' LS TRACT

(2)6"x45°BENDS

225LF ~ 8"PVC @ S= 0.40% SDR-26

12"X12"X6"TEE
12"GV W/B&C
6"GV W/B&C

3.00 AC AMENITY TRACT

MH-104
TOP EL.=33.8±
INV. IN=19.81(S)
INV. IN=21.66(W)
INV. OUT=19.71(N)

12"x45°BEND
12"PLUG

ROW

FUTURE 12"FM (SEE CCUA OFFSITE PLANS UNDER SEPARATE COVER)

PROP 25'CCUA UTILITY ESMT

95' PERIMETER BUFFER TRACT

EXIST ELECTRIC ESMT

20' OPEN SPACE TRACT

89LF ~ 8"PVC @ S= 0.55% SDR-26

MH-117
TOP EL.=35.1±
INV. IN=29.20(S)
INV. OUT=29.10(NE)

MH-116
TOP EL.=35.5±
INV. IN=28.55(SW)
INV. IN=30.40(NW)
INV. OUT=28.45(NE)

MH-114
TOP EL.=34.7±
INV. IN=27.34(W)
INV. OUT=27.24(E)

137LF ~ 8"PVC @ S= 0.40% SDR-26

10'MAINT. ESMT

30' U.A.D.E.

CONST. SEWER SERVICE ABOVE STORM LOT 178

257LF ~ 8"PVC @ S= 0.40% SDR-26

6"SEWER SERVICE TO LOT 177

10'U.A.D.E.

20' U.A.D.E.

MH-118
TOP EL.=34.8±
INV. IN=29.90(S)
INV. OUT=29.75(N)

SWMF 2

T.O.B. 32

UTILITY CROSSING LEGEND

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* = CONSTRUCT 6" SEWER SERVICE ABOVE STORM PIPE.

\# = CONSTRUCT 6" SEWER SERVICE BELOW STORM PIPE.

FORCE MAIN NOTES

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THE ROOKERY – PHASE 1

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REVISIONS			
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–	–	–	–

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	1" = 40'
DATE:	4/19/2023
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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

SANITARY SEWER PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Sheet No. 56 of 88

S-1

DWG. NO.

THE ROOKERY – PHASE 1

GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

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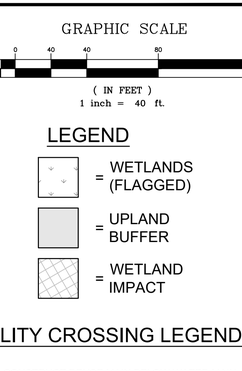

KEYMAP
NTS

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

SANITARY SEWER PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 61419

Sheet No. 57 of 88

S-2

DWG. NO.

GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

UTILITY CROSSING LEGEND

(1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

(2) = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN- MAINTAIN 12" SEPARATION

(A) = CONSTRUCT MAIN 6" ABOVE(MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

(B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

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FORCE MAIN NOTES

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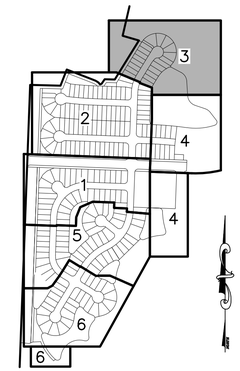

KEYMAP
NTS

NORTH

THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

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CLAY COUNTY, FLORIDA

SANITARY SEWER PLAN

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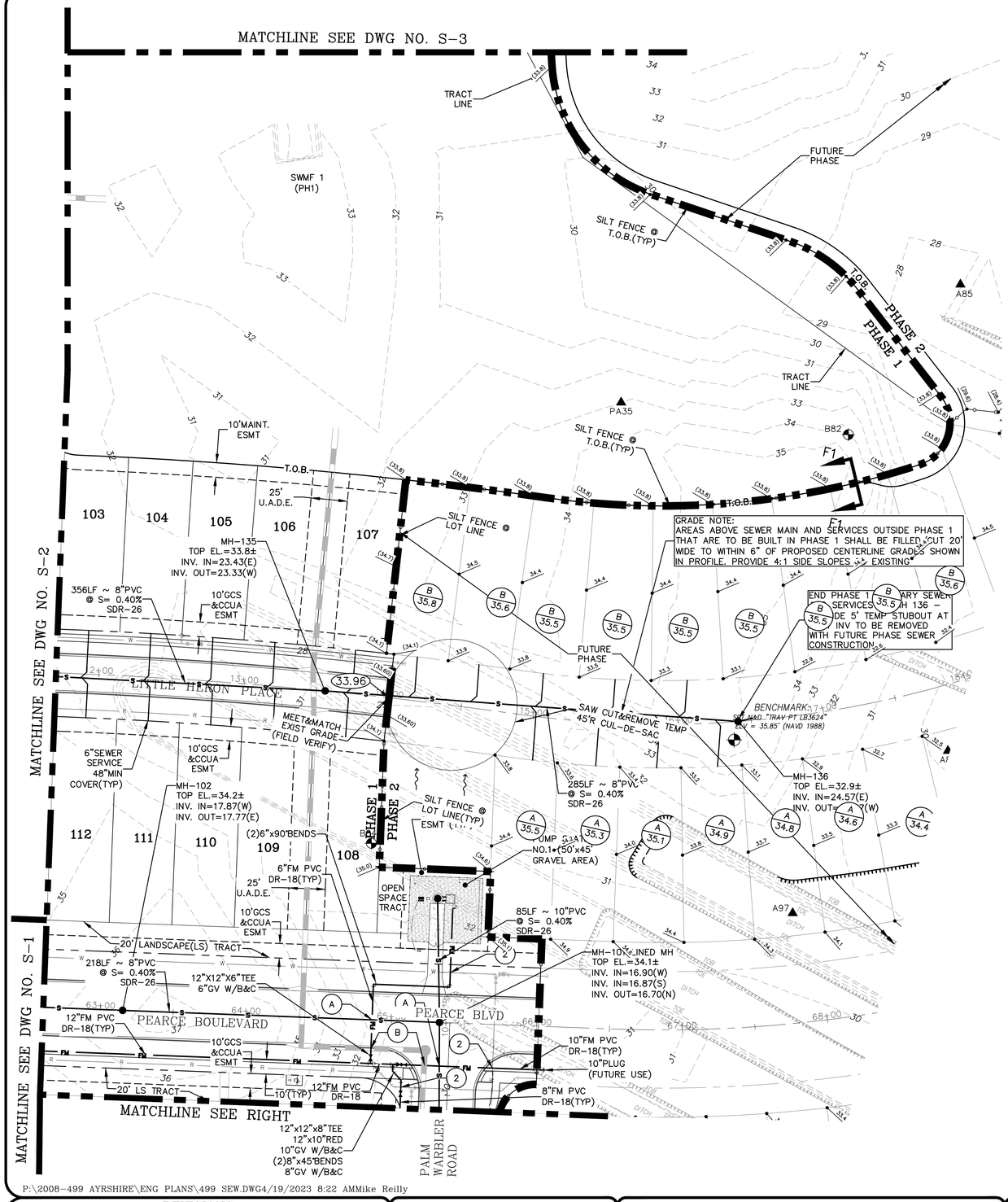
Sheet No. 58 of 88

S-3
DWG. NO.



GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

UTILITY CROSSING LEGEND

(1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

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FORCE MAIN NOTES

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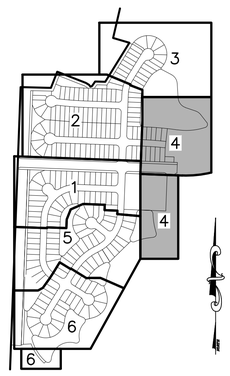

KEYMAP
NTS

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THE ROOKERY – PHASE 1

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

SANITARY SEWER PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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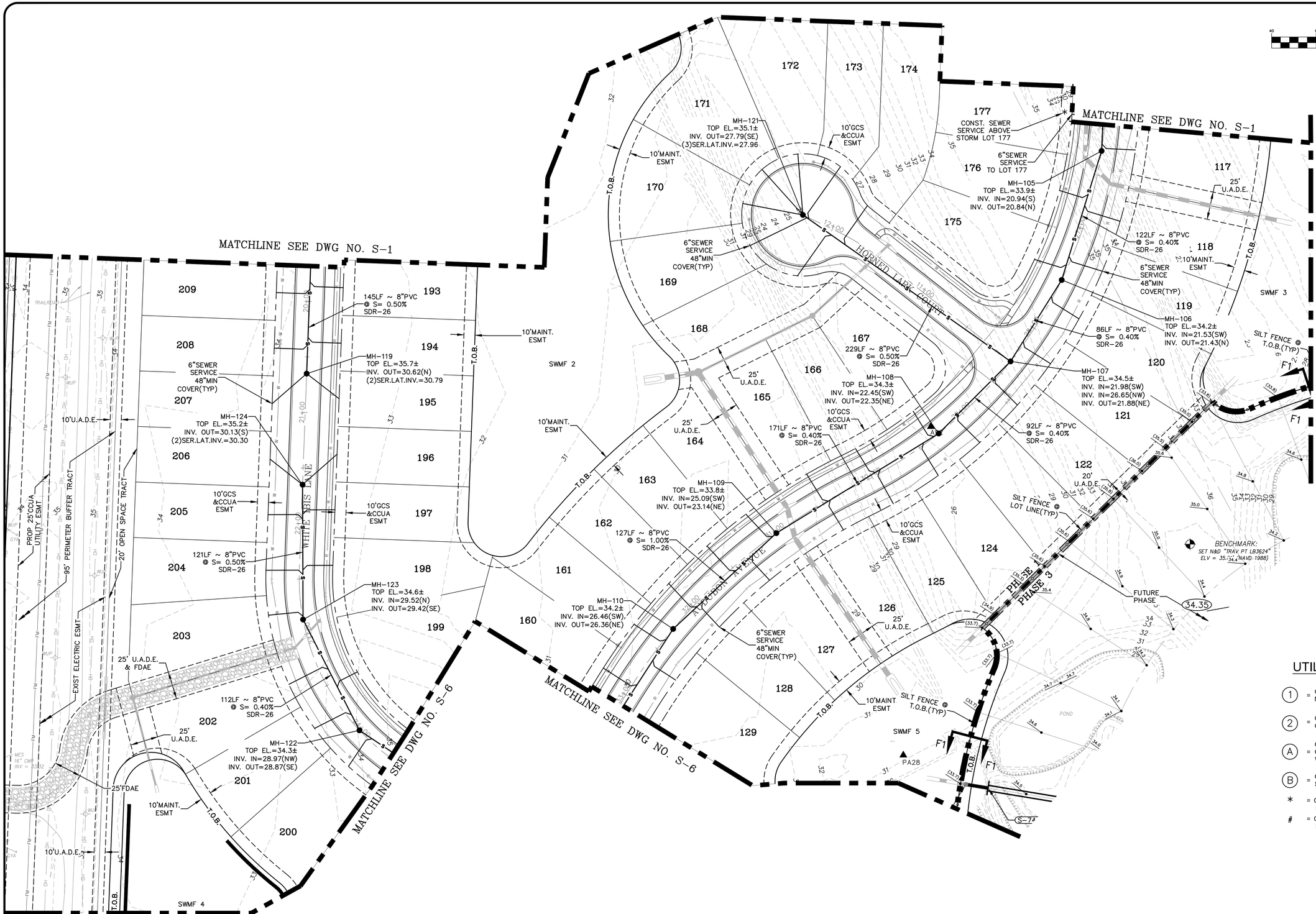
Sheet No. 59 of 88

S-4

DWG. NO.



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CLAY COUNTY, FLORIDA

SANITARY SEWER PLAN

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Sheet No. 60 of 88

S-5

DWG. NO.

GRAPHIC SCALE

40 0 40 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS (AERIAL INTERPRETATION)

= WETLANDS (FLAGGED)

= UPLAND BUFFER

= WETLAND IMPACT

UTILITY CROSSING LEGEND

(1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

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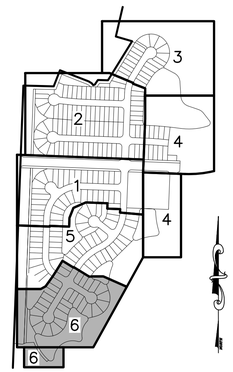

KEYMAP
NTS

THE ROOKERY – PHASE 1

NORTH

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

SANITARY SEWER PLAN

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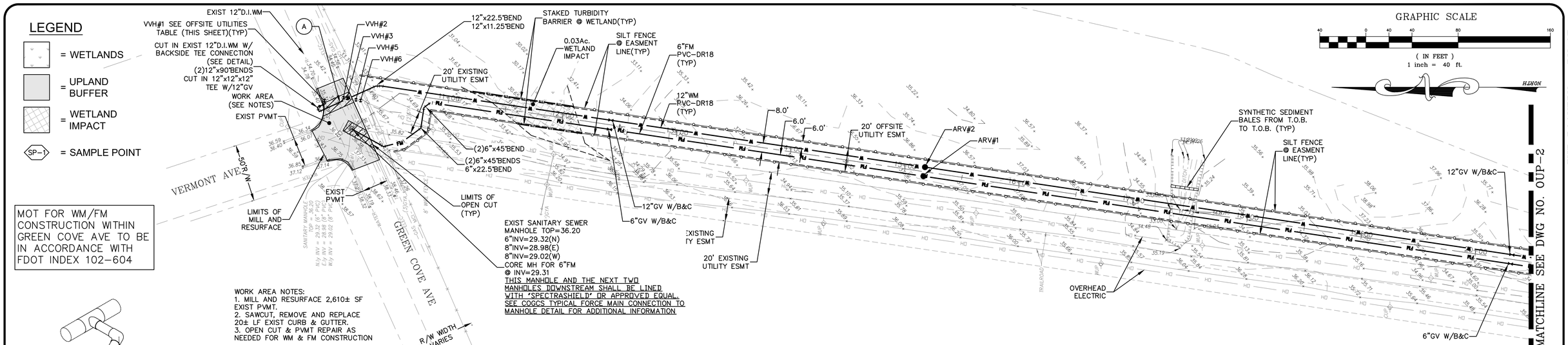
Sheet No. 61 of 88

S-6

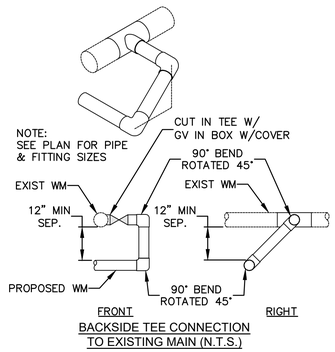
DWG. NO.



MOT FOR WM/FM CONSTRUCTION WITHIN GREEN COVE AVE TO BE IN ACCORDANCE WITH FDOT INDEX 102-604

WORK AREA NOTES:
1. MILL AND RESURFACE 2,610± SF EXIST PVMT.
2. SAWCUT, REMOVE AND REPLACE 20± LF EXIST CURB & GUTTER.
3. OPEN CUT & PVMT REPAIR AS NEEDED FOR WM & FM CONSTRUCTION

SEWER NOTE:
1. EXISTING GRAVITY SEWER LINES FROM THE CONNECTION POINT ON GREEN COVE AVE TO EXISTING LIFT STATION #2 SHALL BE CLEANED PER COGCS SPECIFICATIONS. COORDINATE WITH CITY STAFF AS REQUIRED.



BACKSIDE TEE CONNECTION TO EXISTING MAIN (N.T.S.)

OFFSITE UTILITIES TABLE			
VVH #	TYPE OF UTILITY	TOP OF UTILITY EL.	EX. GROUND EL.
1	12" DI WM	32.32	35.31
2	6" PVC ELEC. CON	32.55	35.49
3	6" PVC ELEC. CON	32.19	35.43
5	GAS (NOT FOUND)	N/A	35.30
6	2.5" PE (MCI)	32.72	35.14

UTILITY CROSSING LEGEND

(1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION

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(B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA

(C) = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA

NOTES:

1. WATER MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
3. THE MINIMUM COVER OVER TOP OF FORCE MAIN SHALL BE 60".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
5. FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
6. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.

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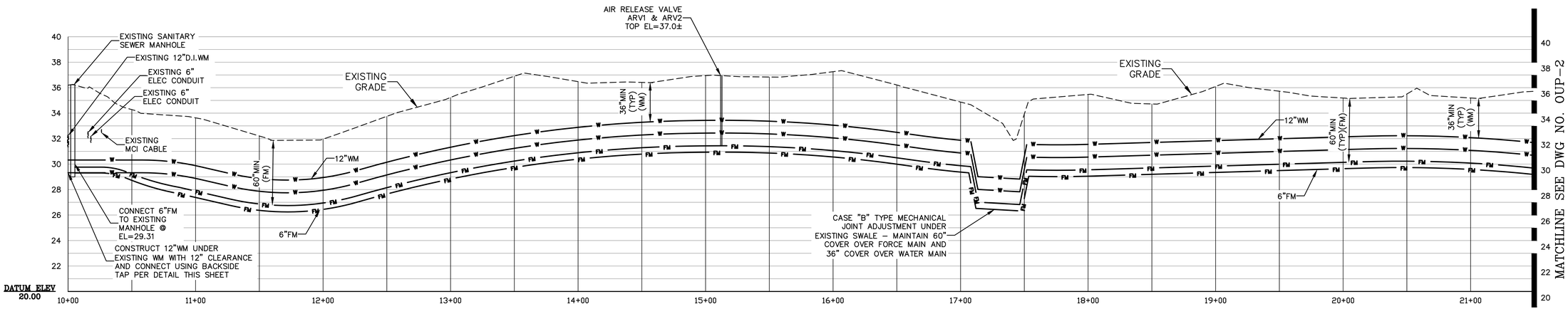

OFFSITE UTILITY EASEMENT

SCALE: 1" = 40' HOR.
1" = 4' VERT.

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THE ROOKERY - PHASE 1

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THE ROOKERY - PHASE 1

FOR:
D.R. HORTON, INC. - JACKSONVILLE

CLAY COUNTY, FLORIDA

OFFSITE UTILITY PLAN AND PROFILE

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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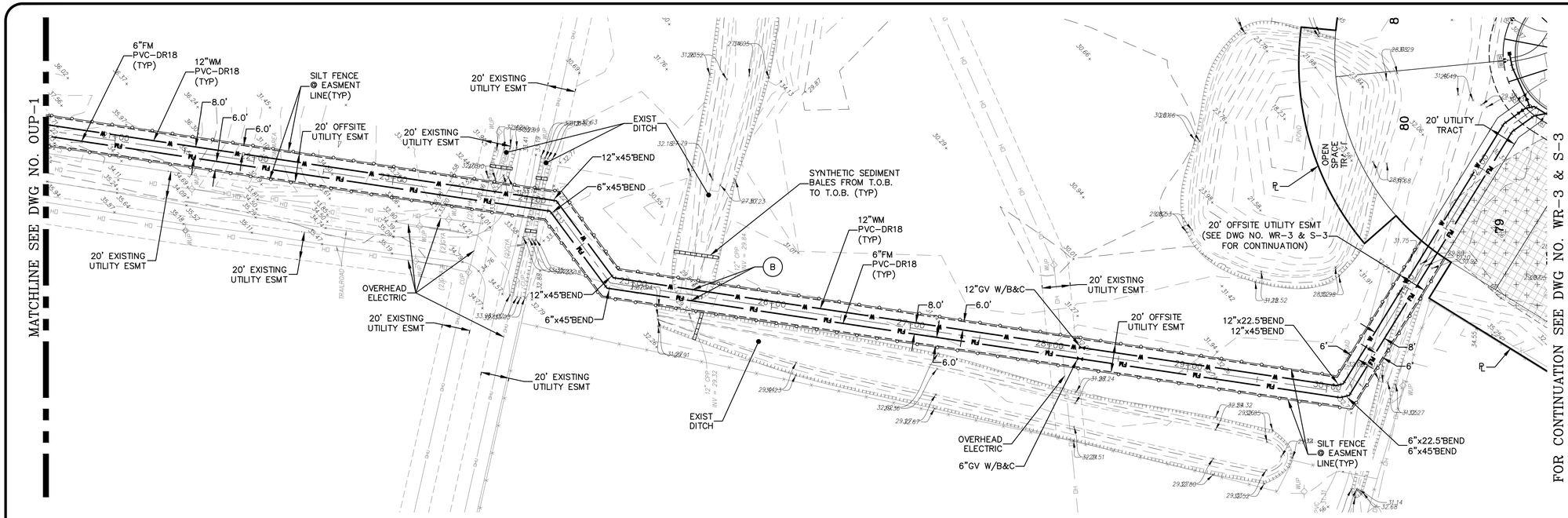
Sheet No. 62 of 88

OUP-1

DWG. NO.



GRAPHIC SCALE

40 0 40 80 160

(IN FEET)
1 inch = 40 ft.

LEGEND

= WETLANDS

= UPLAND BUFFER

= WETLAND IMPACT

SP-1 = SAMPLE POINT

UTILITY CROSSING LEGEND

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C = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA

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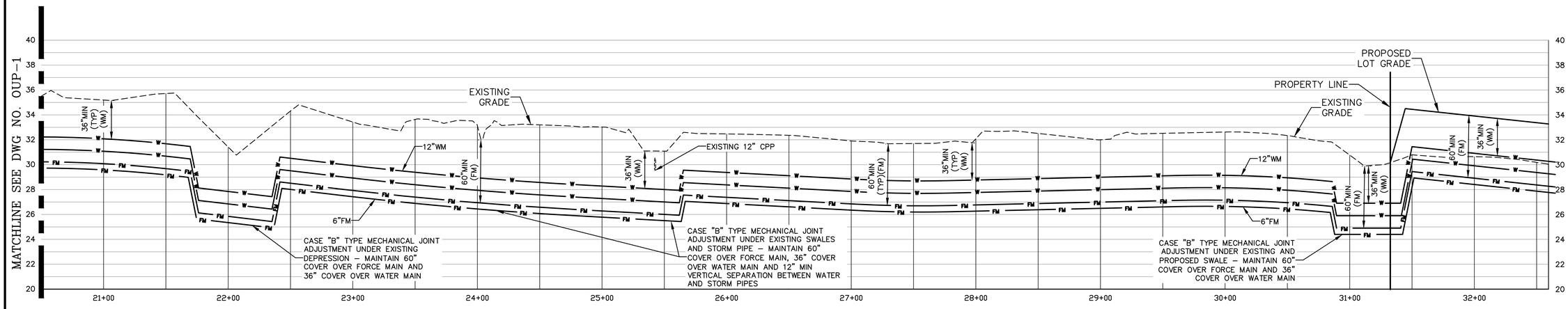

OFFSITE UTILITY EASEMENT

SCALE: 1" = 40' HOR.
1" = 4' VERT.

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CLAY COUNTY, FLORIDA
OFFSITE UTILITY PLAN AND PROFILE

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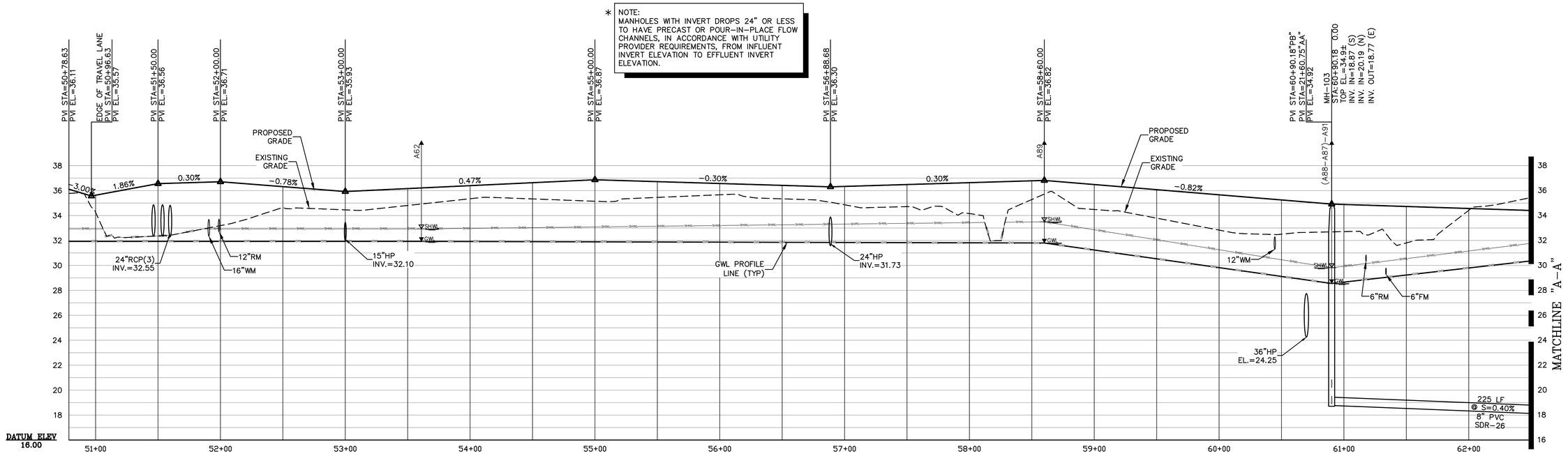
Sheet No. 63 of 88

OUP-2
DWG. NO.



PEARCE BOULEVARD

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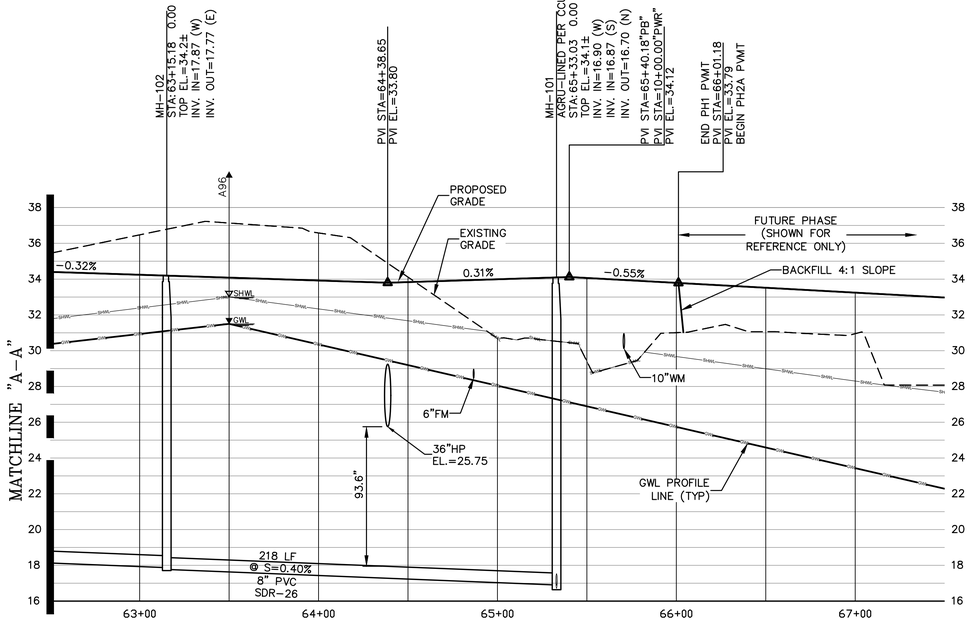
1" = 4' VERT.



PEARCE BOULEVARD

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1" = 4' VERT.

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

ROAD AND SEWER PROFILES

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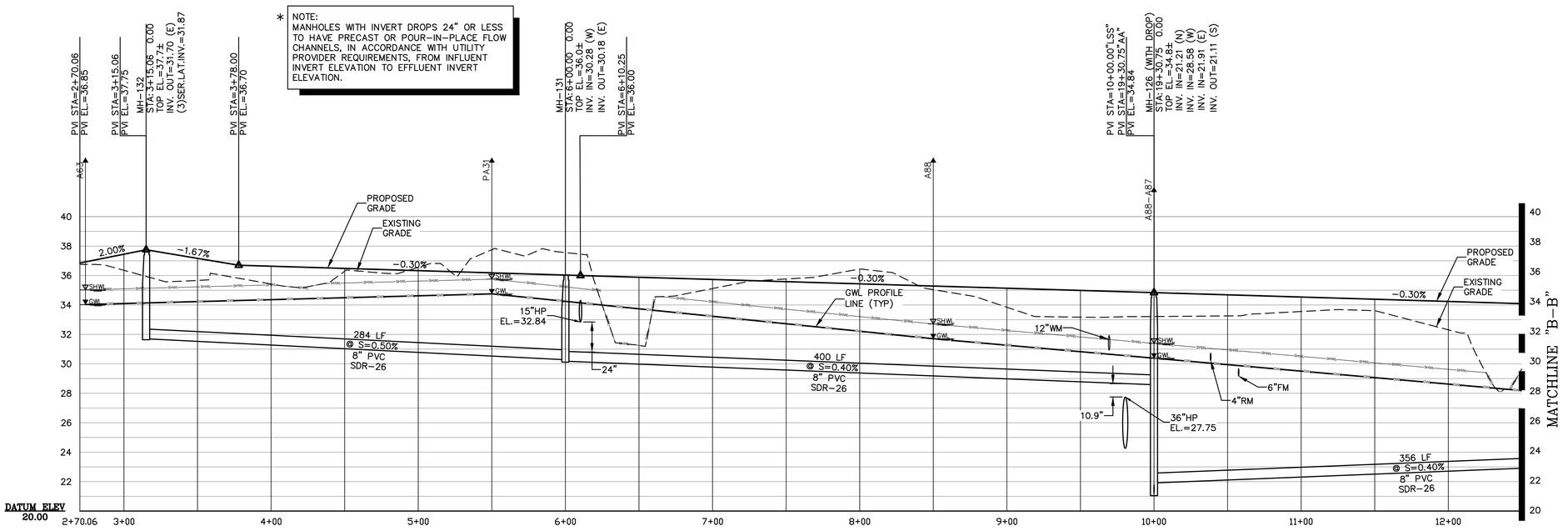
DAVID M. TAYLOR ENGINEER NO. 44164
GLEN R. WIEGER ENGINEER NO. 81419

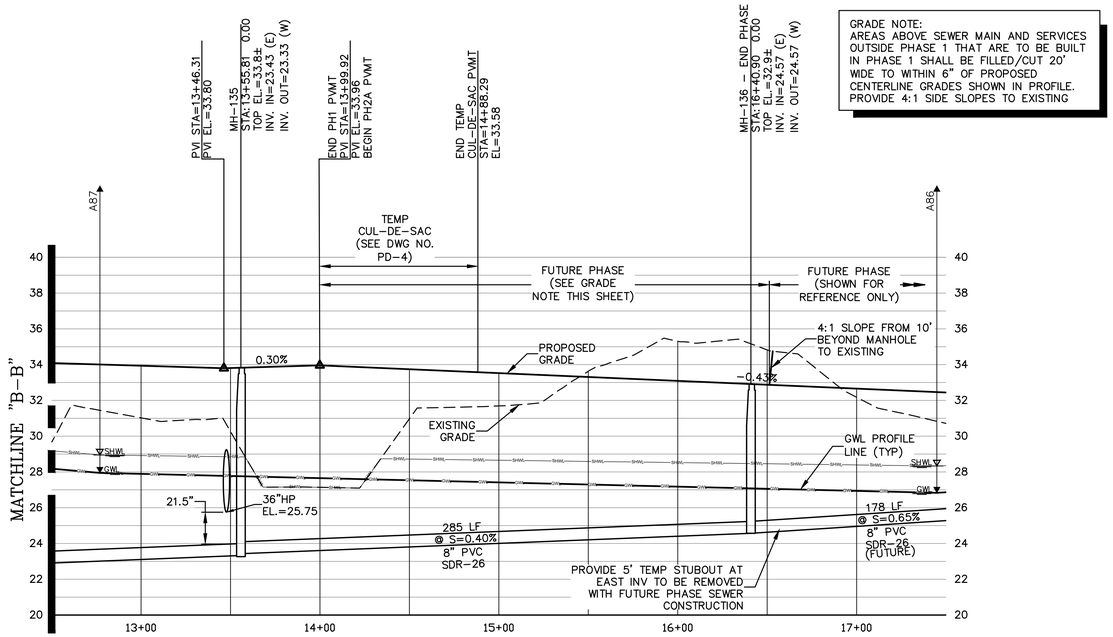
RSP-1

DWG. NO.



LITTLE HERON PLACE

SCALE: 1" = 40' HOR.
1" = 4' VERT.



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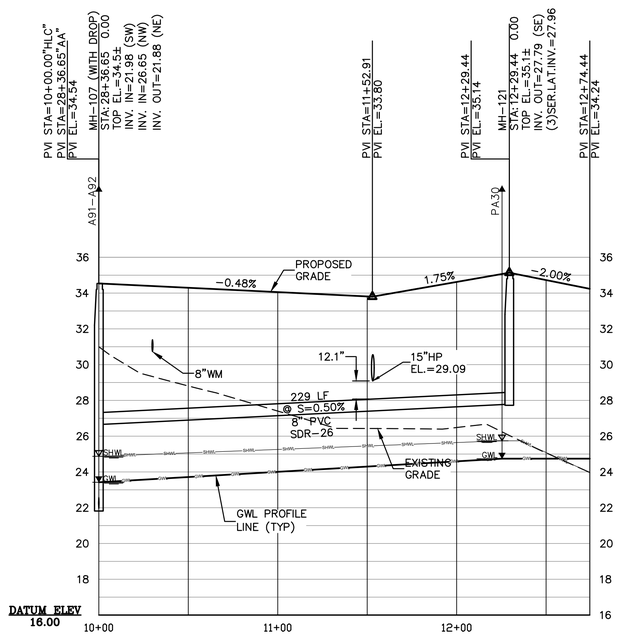

HORNED LARK COURT

SCALE: 1" = 40' HOR.
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FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

ROAD AND SEWER PROFILES

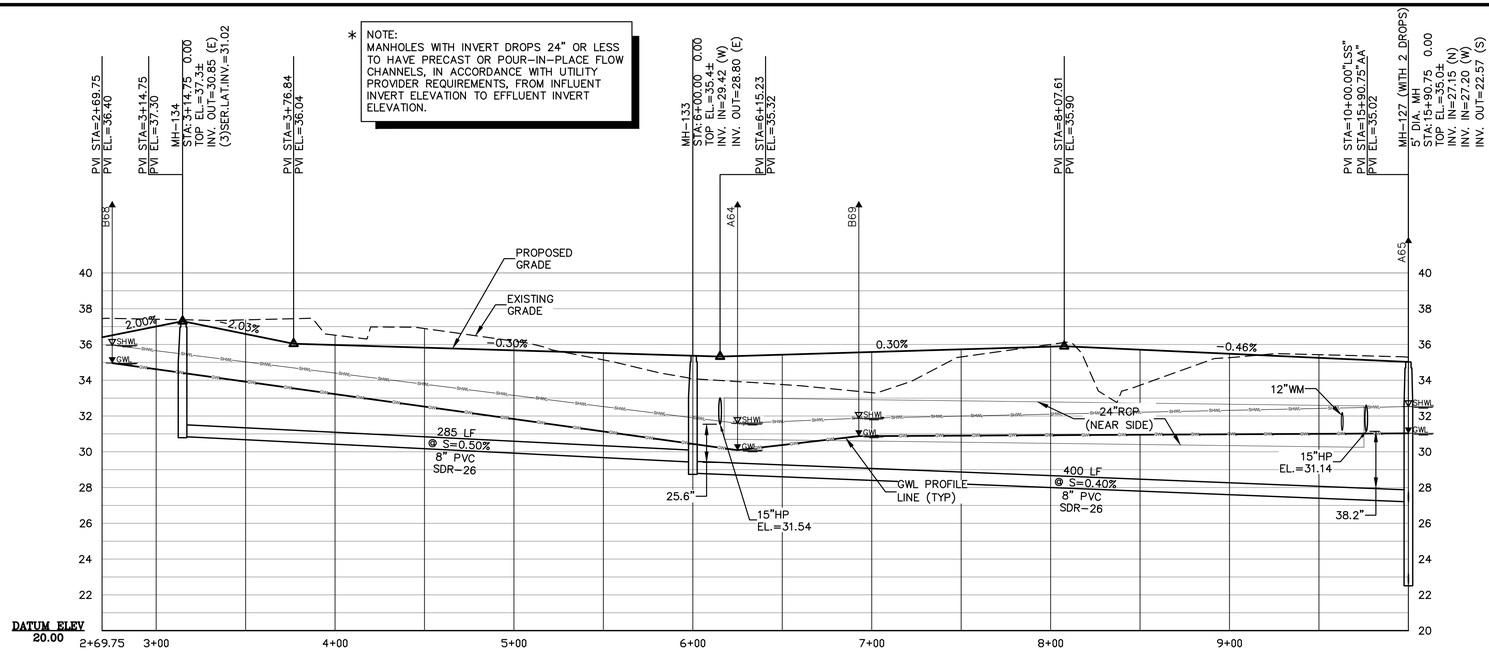
VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

RSP-2

DWG. NO.



P:\2008-499 AYRSHIRE\ENG PLANS\499 RSP.DWG4/19/2023 8:26 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
–	–	–	

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	AS NOTED
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
ROAD AND SEWER PROFILES

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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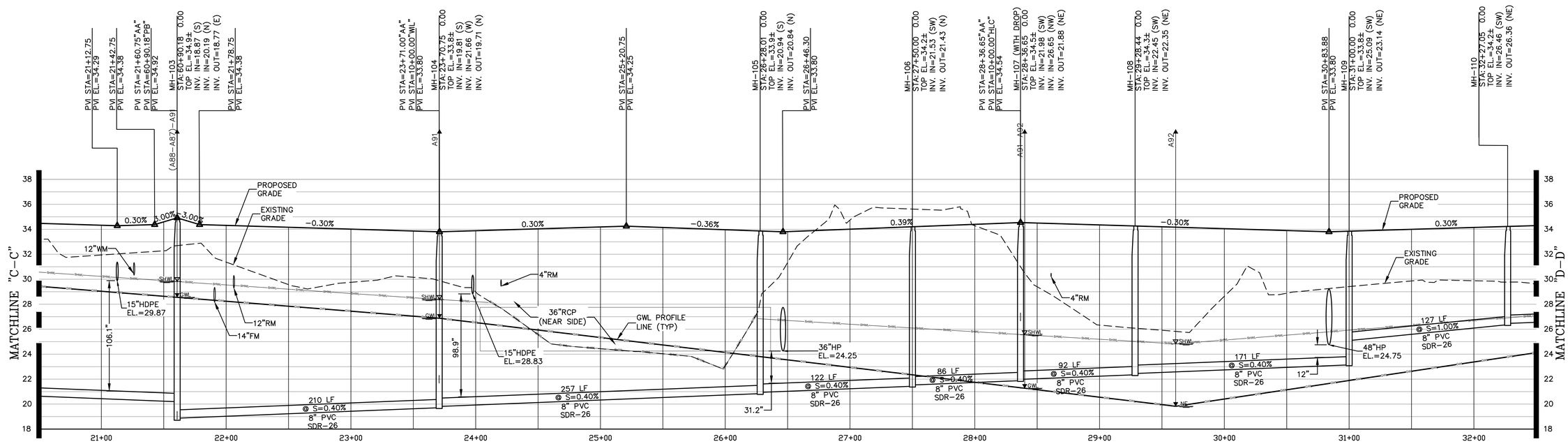
Sheet No. 66 of 88

RSP-3
DWG. NO.

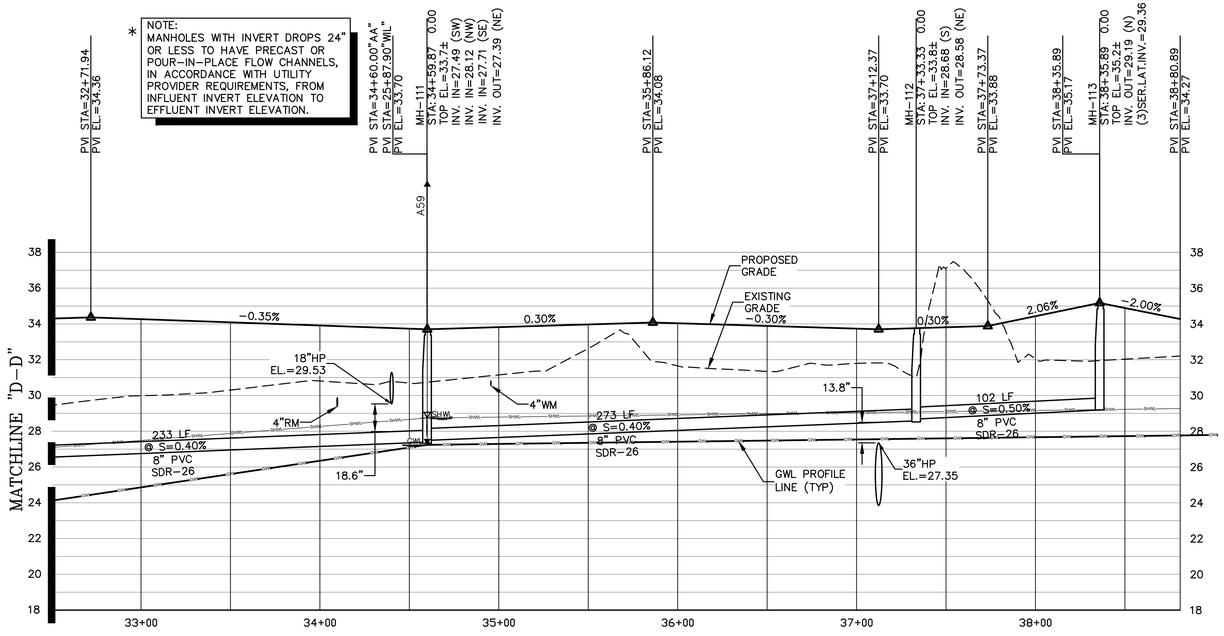
THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION



AUDUBON AVE

SCALE: 1" = 40' HOR.
1" = 4' VERT.



AUDUBON AVE

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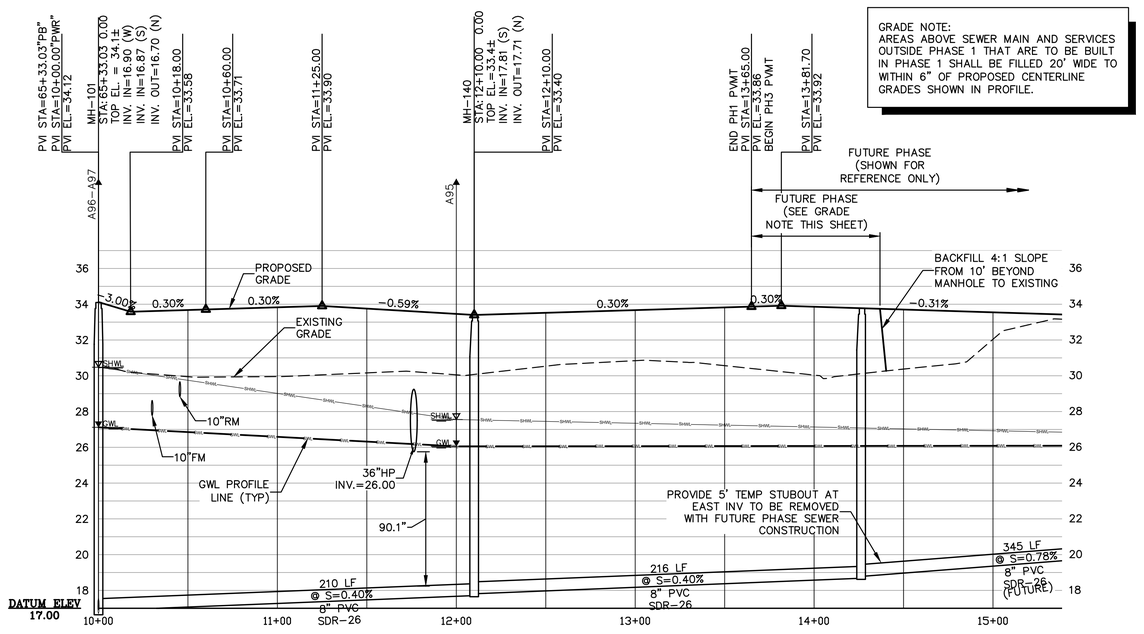
1" = 4' VERT.



PALM WARBLER ROAD

SCALE: 1" = 40' HOR.
1" = 4' VERT.

P:\2008–499 AYRSHIRE\ENG PLANS\499 RSP.DWG4/19/2023 8:27 AMMike Reilly

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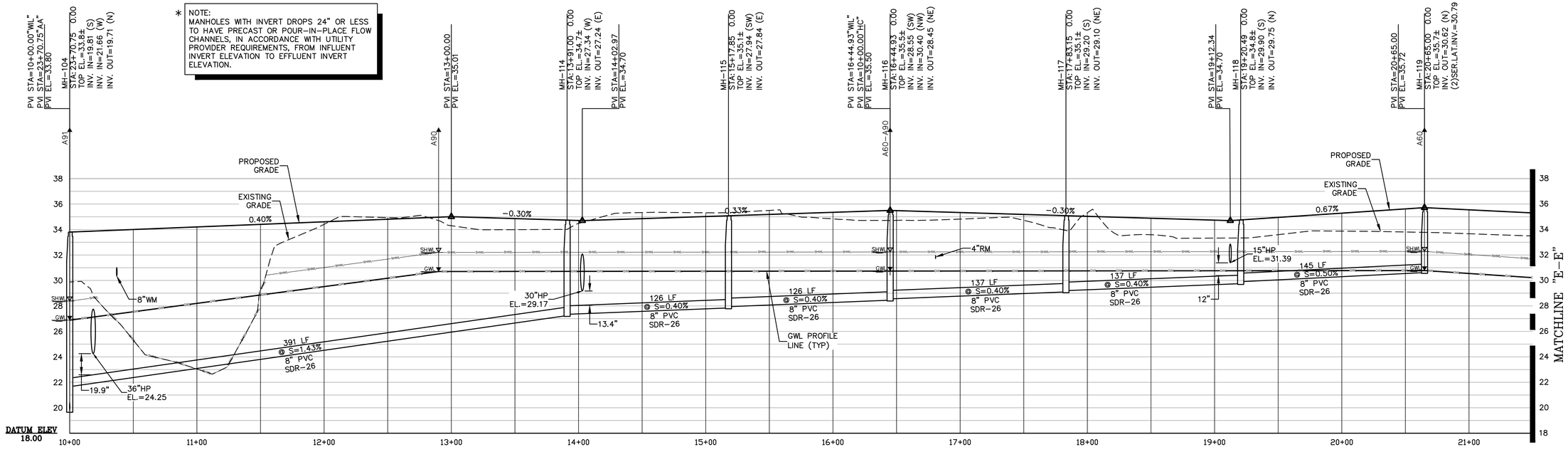
RSP–4

DWG. NO.



WHITE IBIS LANE

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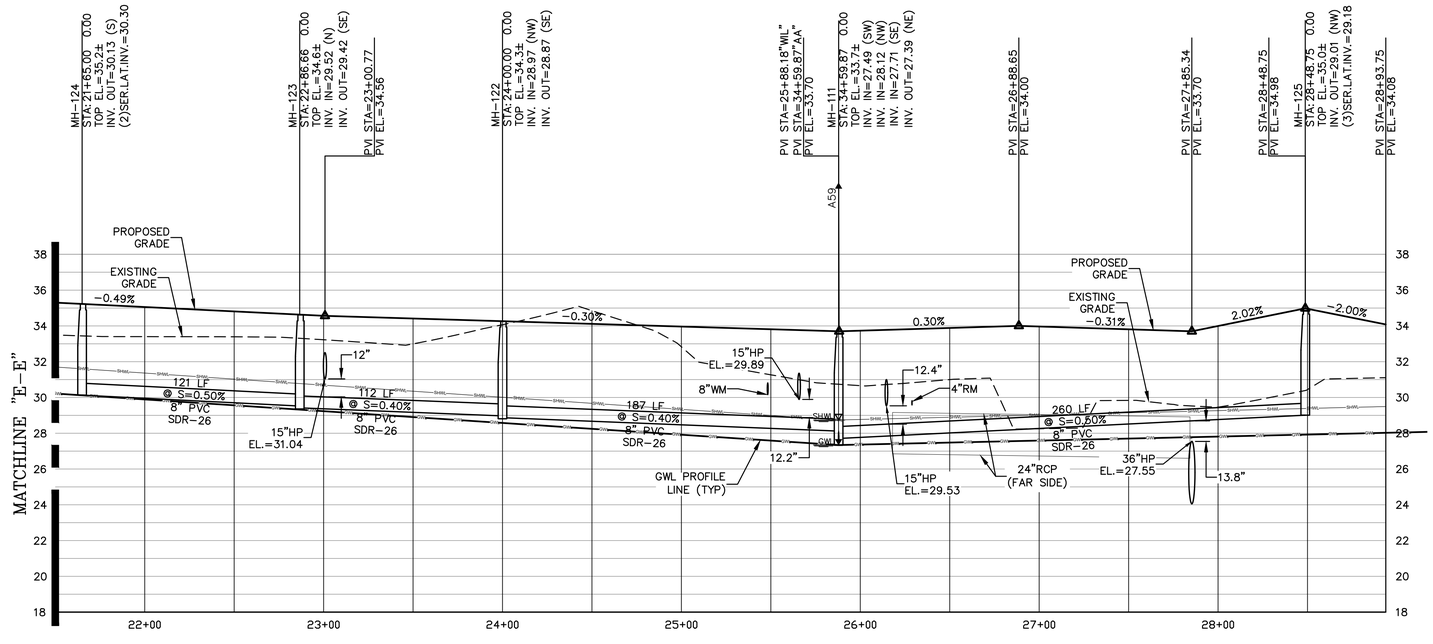

WHITE IBIS LANE

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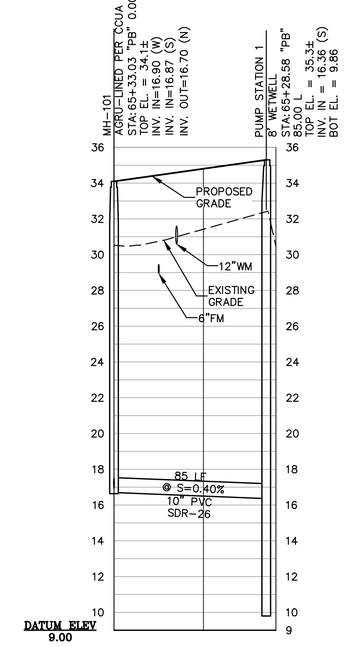

MH101-PS

SCALE: 1" = 40' HOR.
1" = 4' VERT.

RELEASED FOR CONSTRUCTION

THE ROOKERY - PHASE 1

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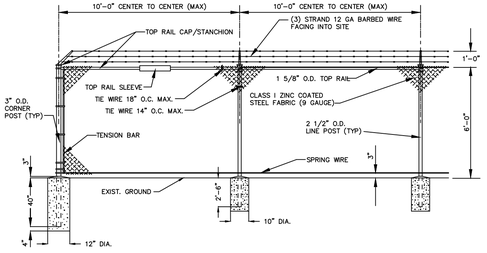
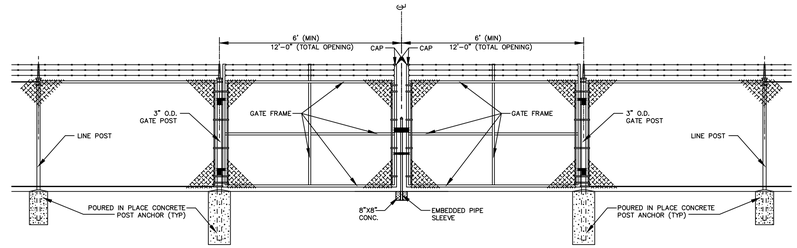
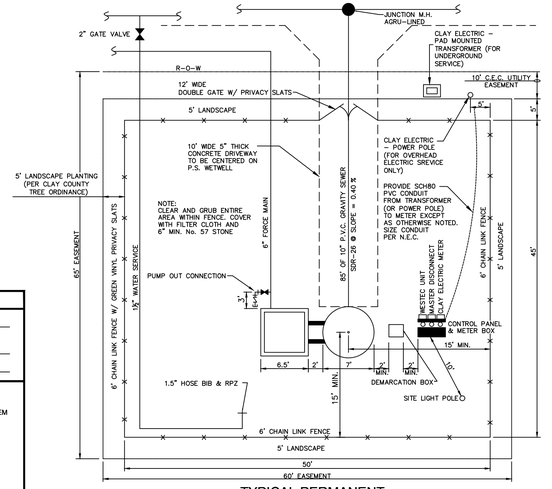


CHAIN LINK FENCE & CORNER POST DETAIL



GATE DETAIL



TYPICAL PERMANENT PUMP STATION SITE PLAN

N.T.S.

AS-BUILT

INFORMATION PROVIDED BY: _____

ADDRESS: _____

PHONE #: _____

I HEREBY CERTIFY THAT THE

____ PAVEMENT	____ WATER MAIN
____ CURB AND GUTTER	____ SANITARY GRAVITY SYSTEM
____ STORMWATER DRAINAGE SYSTEM	____ FORCE MAIN
____ UNDERDRAIN CONNECTIONS	____ LIFT STATION
	____ RECLAIMED WATER

ARE AT THE HORIZONTAL AND VERTICAL LOCATIONS AS SHOWN ON THESE "AS-BUILT" SURVEYS MEET THE STANDARDS OF PRACTICE EFFECTIVE DATE JULY 1, 2014 AS PURSANT TO SECTION 472, FLORIDA STATUTES. UNLESS OTHERWISE DEFINED IN THE CLAY COUNTY UTILITY AUTHORITY SPECIFICATIONS FOR AS-BUILTS, NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

SIGNATURE: _____

FLORIDA PROFESIONAL SURVEYOR & MAPPER #: _____

GENERAL NOTES:

1. PUMPS: TWO (2) TOTALLY SUBMERSIBLE SEWAGE PUMPS WITH 230/460 VOLTS, 3 PHASE 60 HERTZ MOTORS, CAPABLE OF DELIVERING 300 GPM @ 60' TDH W/230MM IMPELLER AND 290 GPM @ 111' TDH W/278MM IMPELLER FULL BUILDOUT SHALL BE ABS CONTRABLOCK, FLYGT OR DAVIS EMU. (VERIFY WITH UTILITY AT THE TIME OF DESIGN).

PUMP MANUFACTURER: FLYGT
PUMP MODEL NUMBER: NP 3153.HT3-462
MOTOR HP: 20
MOTOR RPM: 1755
PUMP RPM: 1755
IMPELLER SIZE: 230 MM (TRIMMED)- PROVIDE EXTRA 276 MM

2. GAUGES: GAUGES SHALL BE FURNISHED WHERE SHOWN MOUNTED BRASS MOVEMENTS, COMPLETELY SEALED UNBREAKABLE PLEXIGLASS CRYSTAL, WITH NOT LESS THAN 90% GLYCERIN-FILLED STAINLESS STEEL CASE. EACH GAUGE SHALL HAVE A RANGE SUCH THAT THE NORMAL OPERATION PRESSURE SHALL BE APPROXIMATELY AT HALF OF THE RANGE. GAUGES SHALL BE EQUIPPED WITH A SAFELY BLOW-OUT PLUG AND DAMPENING SCREW. GAUGES SHALL BE MOUNTED USING ½" (NPT) STEEL PIPE WITH DIAPHRAGM PROTECTORS WITH STAINLESS STEEL DIAPHRAGM AND STOP COCKS BETWEEN DISCHARGE PIPES AND GAUGES. GAUGES SHALL BE EQUAL TO THOSE MANUFACTURED BY THE LENZ COMPANY.

3. TO MAKE A COMPLETE INSTALLATION, FENCING SHALL BE FURNISHED AND INSTALLED. FENCING SHALL COMPLY WITH ASTM A392-68T LATEST SPECIFICATIONS FOR ZINC COATED STEEL CHAIN LINK FENCE FABRIC AND AS DETAILED ON THE DRAWING. FITTINGS SHALL BE MALLEABLE IRON OR PRESSED STEEL FORGINGS. ALL FERROUS MATERIALS SHALL BE THOROUGHLY GALVANIZED BY THE HOT-DIP METHOD.

A. PRIVACY SLATS: SLATS SHALL BE FLAT/TUBULAR IN SHAPE, ± 0.003"). THERMOPLASTIC WITH A WALL THICKNESS P 0.030". LENGTH AND WIDTH OF SLATS SHALL BE AS RECOMMENDED BY THE MANUFACTURER. FENCE FABRIC AS SPECIFIED HEREIN. SLATS SHALL HAVE A HORIZONTAL LOCKING STRIP TO PROVIDE SECURE ATTACHMENT TO CHAIN-LINK. THE FABRIC, AND PROVIDE A PRIVACY FACTOR OF 89%. MINIMUM WIDTH OF SLAT SHALL BE 1-1/2". ACCEPTABLE MANUFACTURER: PATRICIAN PRODUCTS, OR EQUAL

B. PRIVACY SCREENING: ENVIRONMENTAL PRIVACY SCREENING SHALL BE MADE OF HIGH DENSITY 90% POLYETHYLENE UV STABILIZED WITH COLOR GREEN. SCREENING SHALL BE ATTACHED TO THE FENCE FABRIC WITH SUFFICIENT TIES TO SECURE THE SCREEN. ACCEPTABLE SCREEN: PRIVACY PLUS OR EQUAL

4. ALL PRECAST REINFORCED CONCRETE PRODUCTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C478 (LATEST), WITH CLASS A CONCRETE, UNLESS OTHERWISE NOTED. ALL CONCRETE AND REINFORCING SHALL BE CERTIFIED BY AN ENGINEER REGISTERED WITH THE STATE OF FLORIDA.

5. ALL DISCHARGE PIPING FROM THE PUMPS THROUGH TO THE VALVE VAULT SHALL BE 316 GRADE, SCH.40 STAINLESS STEEL. THIS INCLUDES ALL FITTINGS WITHIN THIS PRESCRIBED LIMIT.

6. PIPE FITTINGS 4" AND SMALLER SHALL BE EPOXY LINED OR POLY-LINED (40 MIL THICKNESS) DUCTILE IRON.

7. PUMP STATION SITE SHALL BE COVERED (INSIDE OF FENCED AREA) WITH NO. 57 LIMESTONE 6" THICK WITH 6 MIL VISQUEEN BETWEEN ROCK AND GRADE. DRIVEWAY SHALL BE 5"-2500 PSI CONCRETE.

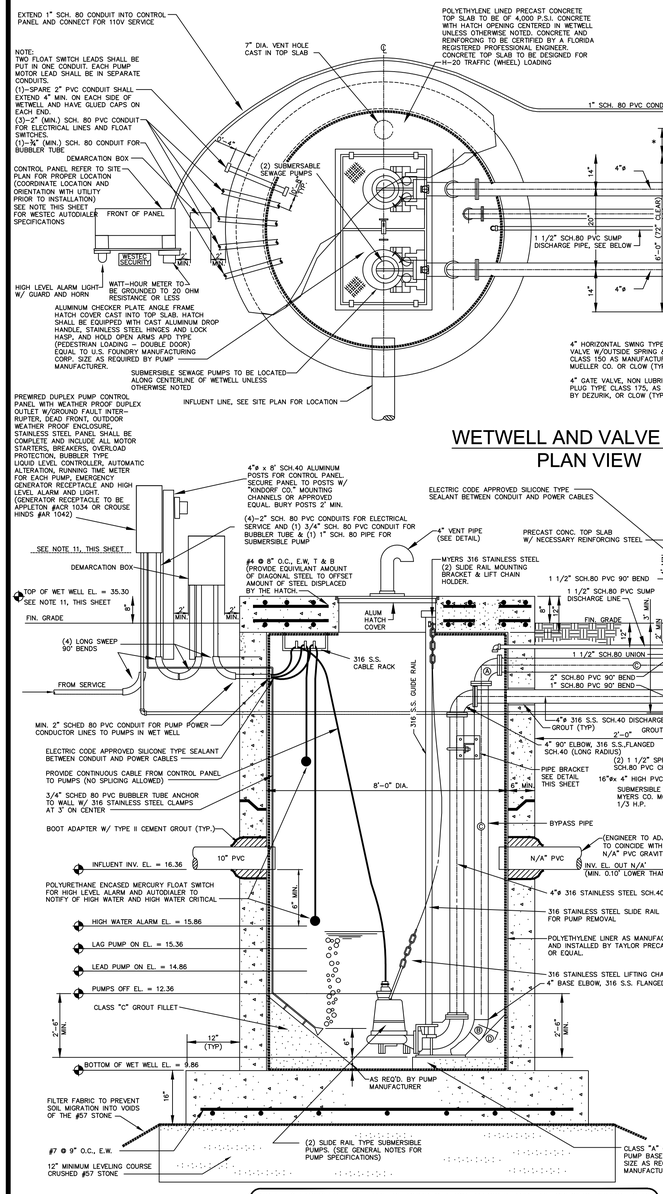
8. ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE HOLIDAY TESTED PRIOR TO INSTALLATION.

9. EXTERIOR COATING OF BITUMINOUS COATING AS SPECIFIED IN A.N.S.I. SPECIFICATIONS A21.51.

10. ALL EXTERIOR JOINTS OF PRECAST CONCRETE WETWELLS SHALL BE SEALED WITH A RUBBERIZED ASPHALT MEMBRANE TAPE, TAPE SHALL BE PERM-A-BARRIER BY W.R. GRACE, ELASTEX BY KARNAK OR EQUAL

11. EACH PUMP STATION SHALL BE EQUIPPED WITH A DSC 1550 MASTER CONTROL PANEL WITH LOCKED METAL ENCLOSURE W/ BOX DIMENSIONS OF 12"x 12"x 4 1/2". A DSC 1550 ACCESS KEYPAD MOUNTED ON THE PANEL ENCLOSURE W/ DIMENSIONS OF 12"x 12"x 4 1/2" x 3.94"x 1" A 12 VOLT, 7 AMP BACK-UP BATTERY; A TRANSFORMER (16.5 VAC) OUTSIDE BOX IN ELECTRICAL OUTLET; PHONE CABLE AND RJ31X PHONE JACK FOR DIALER HOOK-UP INSIDE BOX); ELECTRICAL SURGE PROTECTOR (OUTSIDE BOX IN ELECTRICAL OUTLET); PHONE LINE SURGE PROTECTOR (INSIDE BOX); AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE AND OPERATING SYSTEM.
ALL COMPONENTS LISTED TO BE ENCLOSED IN THE ALARM PANEL BOX WITH EXCEPTION OF THE TRANSFORMER, THE ELECTRICAL SURGE PROTECTOR AND THE CONTROL PANEL KEYPAD (TO BE MOUNTED DIRECTLY ONTO THE ALARM PANEL).

12. ENGINEERS SHALL PROVIDE VERIFICATION THAT THE TOP OF THE WETWELL, BOTTOM OF CONTROL PANELS, GENERATOR RECEPTACLE AND GENERATOR SLAB ARE ALL ABOVE THE 100 YR. FLOOD ELEVATION. THEREFORE, I DO HEREBY CERTIFY THAT THE ABOVE ELEVATIONS HAVE BEEN MET.

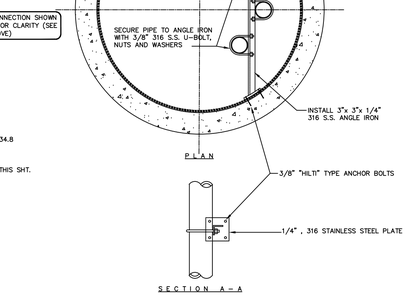


WETWELL AND VALVE VAULT PLAN VIEW

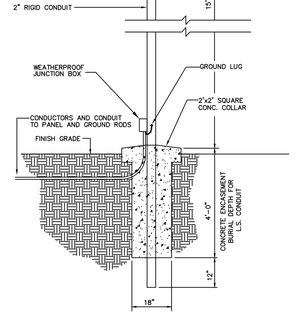
PERMANENT POLYETHYLENE LINED SUBMERSIBLE PUMP STATION WITH VALVE PIT - ELEVATION

(NOTE: PIPE SIZES, WETWELL SIZES AND INSIDE DIMENSIONS OF VALVE PIT TO BE VERIFIED BY ENGINEER AND MODIFIED AS NECESSARY.)

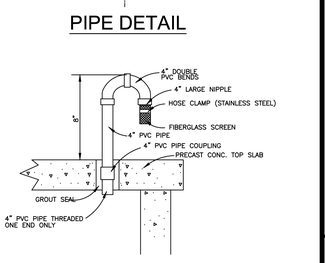
NOTE TO ENGINEER: THE TYPE OF PUMP STATION ALLOWED AND THE SPECIFIC PUMPS TO BE USED WILL BE MUTUALLY AGREED TO BY ENGINEER AND UTILITY AT THE TIME OF DESIGN DEPENDING ON THE SPECIFIC APPLICATION. ALSO PIPE SIZES AND SPACING DIMENSIONS ARE TO BE DETERMINED FOR EACH SPECIFIC PUMP STATION INSTALLATION.



PIPE ATTACHMENT TO WALL DETAIL



SITE LIGHT STANDARD DETAIL



PIPE DETAIL

VENT PIPE DETAIL

WATER SERVICE

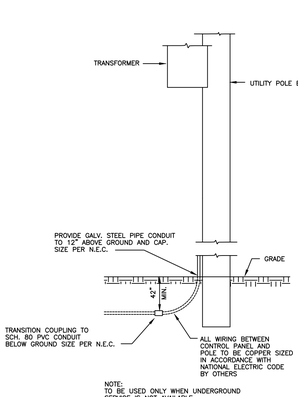
BYPASS PIPE AND FITTINGS SCHEDULE
A. 4" – 90° BEND 316 S.S. (FLANGED)
B. 4" BASE ELBOW (FLANGED)
C. 4" 316 S.S SCH–40 PIPE
D. (1) 316 S.S. ANCHOR STRAP AND ½" 316 S.S. ANCHOR BOLTS AND NUTS

NOTE:
BYPASS PIPE DIAMETER TO MATCH DISCHARGE PIPE SIZE, EXCEPT THAT THE MINIMUM SHALL BE 4 INCHES.

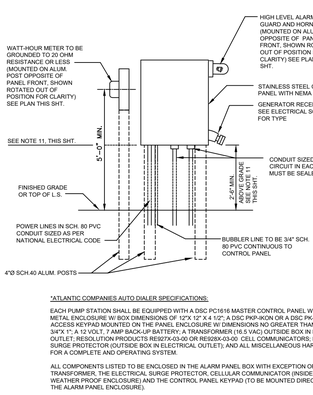
NOTES:
1. ALL FLANGES TO BE FACTORY MADE. RESTRAINED FLANGE ADAPTERS MAY BE USED OUTSIDE OF WETWELL ONLY. USE EBAA CO. "MEGA FLANGE–FLANGE ADAPTOR" NO. 2100 OR UTILITY APPROVED EQUAL. 316 S.S. FASTENERS REQUIRED.

2. ALL FLANGES TO BE FACTORY MADE. RESTRAINED FLANGE ADAPTORS MAY BE USED OUTSIDE OF WETWELL ONLY. USE EBAA CO. "MEGA FLANGE–FLANGE ADAPTOR" NO. 2100 OR UTILITY APPROVED EQUAL. 316 S.S. FASTENERS REQUIRED.

3. MYERS TWO–PUMP GUIDE RAIL SYSTEM ONLY.
- MYERS SRAX–33 FOR 3" SUBMERSIBLE PUMP
- MYERS SRAX–44 FOR 4" SUBMERSIBLE PUMP
- MYERS SRAX–66 FOR 6" SUBMERSIBLE PUMP



POWER RISER DETAIL



*ATLANTIC COMPANIES AUTO DIALER SPECIFICATIONS:

EACH PUMP STATION SHALL BE EQUIPPED WITH A DSC PC1616 MASTER CONTROL PANEL WITH LOCKED METAL ENCLOSURE W/ BOX DIMENSIONS OF 12"X 12"X 4 1/2". A DSC PKP-WGN OR A DSC PK-5501 ACCESS KEYPAD MOUNTED ON THE PANEL ENCLOSURE W/ DIMENSIONS NO GREATER THAN 4 3/4"X 4 3/4"X 1"; A 12 VOLT, 7 AMP BACK-UP BATTERY; A TRANSFORMER (16.5 VAC) OUTSIDE BOX IN ELECTRICAL OUTLET; RESOLUTION PRODUCTS RE927X-03-00 OR RE928X-03-00 CELL COMMUNICATORS; ELECTRICAL SURGE PROTECTOR (OUTSIDE BOX IN ELECTRICAL OUTLET); AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE AND OPERATING SYSTEM.

ALL COMPONENTS LISTED TO BE ENCLOSED IN THE ALARM PANEL BOX WITH EXCEPTION OF THE TRANSFORMER, THE ELECTRICAL SURGE PROTECTOR, CELLULAR COMMUNICATOR (INSIDE THE WEATHER PROOF ENCLOSURE) AND THE CONTROL PANEL KEYPAD (TO BE MOUNTED DIRECTLY ONTO THE ALARM PANEL ENCLOSURE).

LOW PROFILE CONTROL PANEL

NO	DATE	BY	REVISION DESCRIPTION
1	10–04	MRS	REVISIONS TO PUMP STATION SITE PLAN
2	10–05	MRS	REVISED GENERAL NOTES
3	04–06	RHD	REVISED GENERAL NOTES
4	04–07	MRS	GENERAL PLAN & SITE PLAN REVISIONS
5	01–13	RHD	MODIFIED PUMP STATION DETAILS
6	04–16	RHD	ADDED PUMP DATA TO GENERAL NOTES
7	04–17	RHD	MODIFIED GENERAL NOTES (DELETED PLUG TO GATE VALVES AND SITE LIGHT)
8	09–17	RHD	MODIFIED PUMP STATION DETAILS
9	10–19	RHD	REVISED GENERAL NOTES (PUMP DATA)
10	10–19	RHD	REVISED GENERAL NOTES
11	04–17	RHD	MODIFIED PUMP STATION DETAILS
12	04–17	RHD	MODIFIED GENERAL NOTES
13	04–17	RHD	MODIFIED PUMP STATION PLAN
14	04–17	RHD	MODIFIED DETAILS
15	04–17	RHD	ADDED PUMP DATA TO GENERAL NOTES
16	10–19	RHD	REVISED GENERAL NOTES (PUMP DATA)

DESG
DRWN
CHKD
APRV
DATE

PROJECT:
PERMANENT SUBMERSIBLE PUMP STATION
WITH CONCRETE WET WELL

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068–3907
TELEPHONE: (904) 272–5999

SHEET NO.
PS–1

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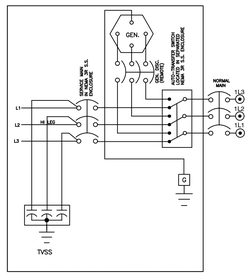
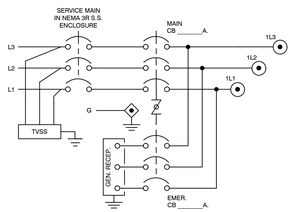
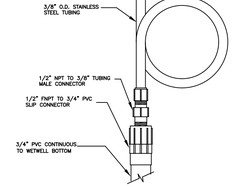


AUTOMATIC TRANSFER SWITCH
TYP. GENERATOR SCHEMATIC



MANUAL TRANSFER SWITCH
TYP. GENERATOR RECEPTACLE SCHEMATIC



BUBBLER TUBE
CONNECTION DETAIL

*WESTEC AUTO DIALER SPECIFICATIONS:
EACH PUMP STATION SHALL BE EQUIPPED WITH A DSC 1550 MASTER CONTROL PANEL WITH LOCKED METAL ENCLOSURE W/ BOX DIMENSIONS OF 12"x 12"x 4 1/2"; A DSC 1550 ACCESS KEYPAD MOUNTED ON THE PANEL ENCLOSURE W/ DIMENSIONS OF 4 3/4"x 4 3/4"x 1"; A 12 VOLT, 7 AMP BACK-UP BATTERY; A TRANSFORMER (16.5 VAC) OUTSIDE BOX IN ELECTRICAL OUTLET; PHONE CABLE AND RJ31X PHONE JACK FOR DIALER HOOK-UP INSIDE BOX); ELECTRICAL SURGE PROTECTOR (OUTSIDE BOX IN ELECTRICAL OUTLET); PHONE LINE SURGE PROTECTOR (INSIDE BOX); AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE AND OPERATING SYSTEM.
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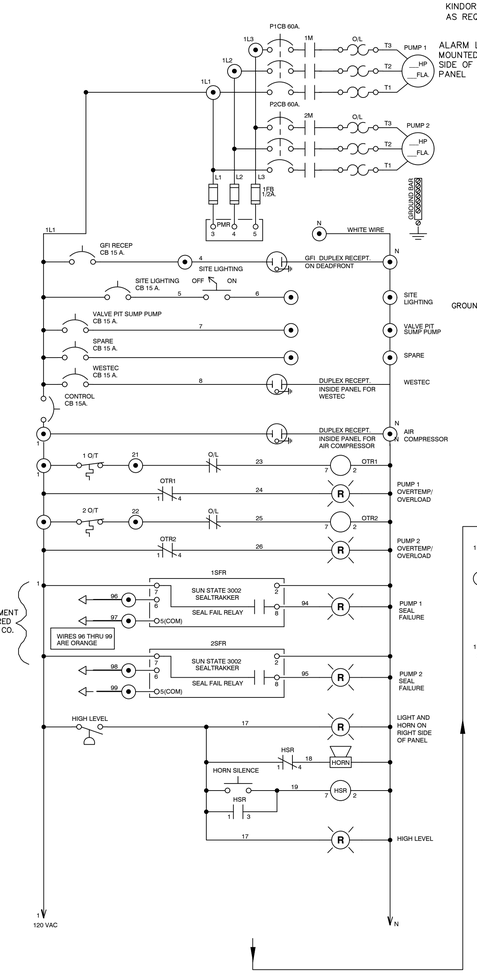
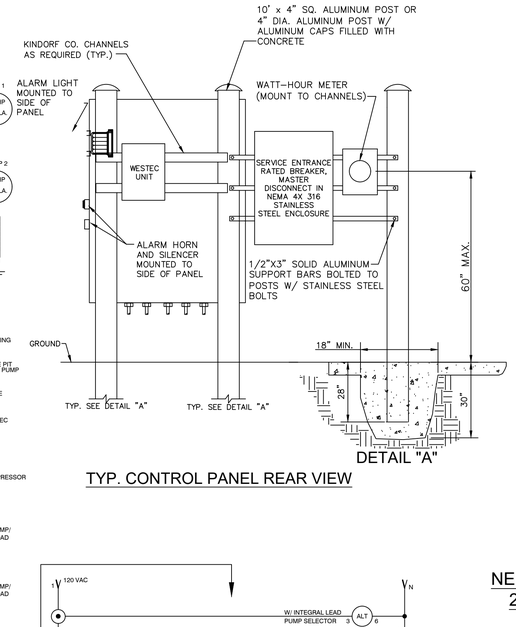
CONTRACTOR SHALL CONTACT CLAY COUNTY UTILITY AUTHORITY D&C SUPERVISOR TO COORDINATE PAYMENT FOR THE DSC 1550 MASTER CONTROL PANEL WHICH WILL BE ORDERED BY CLAY COUNTY UTILITY AUTHORITY. THE COST SHALL BE INCLUDED AS CONTRACTORS RESPONSIBILITY.

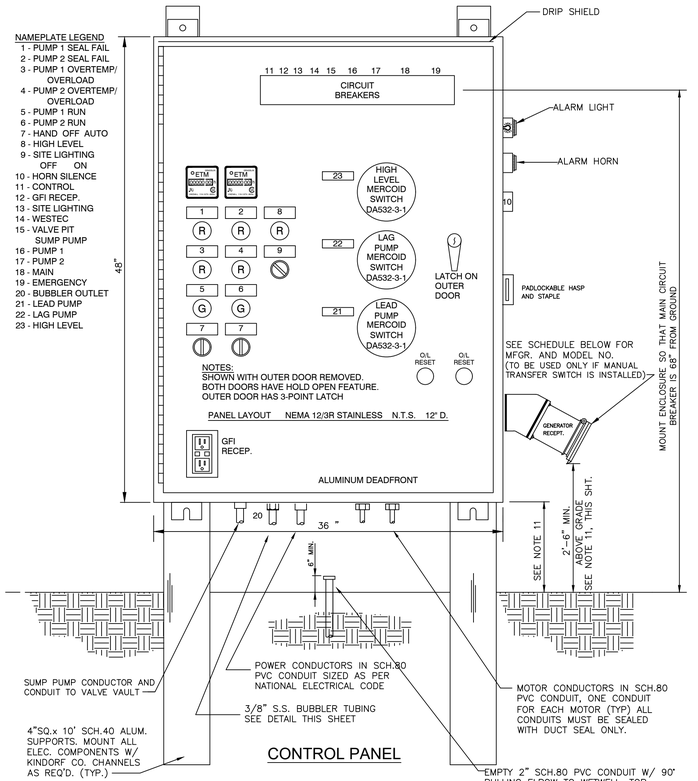


PNEUMATIC DIAGRAM

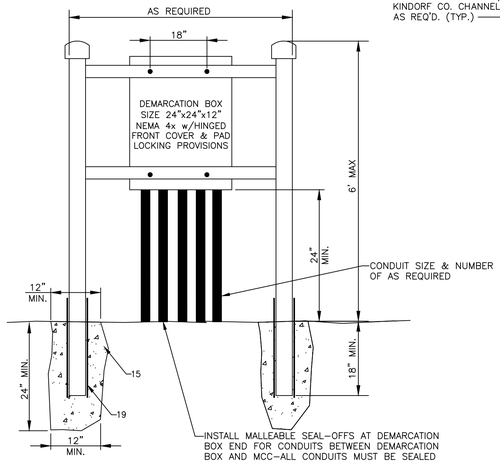


TYP. CONTROL PANEL REAR VIEW

NEMA 4X 316 STAINLESS STEEL
24 X 24 DEMARCATION BOX



CONTROL PANEL



DEMARCATION BOX

NOTE:
ENGINEER IS TO VERIFY ELECTRIC SUPPLY OF SUFFICIENT CAPACITY IS AVAILABLE TO PROJECT PRIOR TO DESIGNING PUMP STATION. FILL IN ALL APPLICABLE BLANKS BELOW. CONTRACTOR SHALL PROVIDE CCUA WITH ALL REQUIRED SHOP DRAWING SUBMITTALS FOR REVIEW AND APPROVAL PRIOR TO ORDERING PUMP STATION MATERIALS.

DESIGN ENGINEER SHALL SELECT THE PROPER AMP RATED GENERATOR RECEPTACLE AND PLACE THE MODEL NUMBER IN GENERATOR RECEPTACLE COLUMN APPLETON #ACR 1034 OR CROUSE-HINDS #AR 1042 = BOTH RATED AT 100 AMPS APPLETON / #AR 20034RS OR CROUSE-HINDS #AR 2042S22 = BOTH RATED AT 200 AMPS.

LOCATION	CONTROL PANEL & MISCELLANEOUS ENCLOSURE TYPES	EMERGENCY MAIN	NORMAL/ SERVICE MAIN	CIRCUIT BREAKER PUMP NO.1	CIRCUIT BREAKER PUMP NO.2	CIRCUIT BREAKER PANEL	CIRCUIT BREAKER RECEPTACLE	CIRCUIT BREAKER GFI DUP RECEPTACLE	CIRCUIT BREAKER SITE LIGHTING	CIRCUIT BREAKER VALVE VAULT SUMP PUMP	CIRCUIT BREAKER SPARE	GENERATOR RECEPTACLE	STARTER SIZE	STARTER TYPE	TVSS	PHASE MONITOR RELAY	PUMP MOTOR NO.1	PUMP MOTOR NO.2	ALARM BEACON	AUTO TRANSFER SWITCH	ELECTRIC SERVICE TYPE & SIZE
PS-1	NEMA 3R TYPE 304 S/S	200 A	200 A	70 A	70 A	25 A	25 A	25 A	25 A	25 A	25 A	CROUSE-HINDS #AR 1042	#4	NEMA	YES	YES	20 HP	20 HP	YES		240, 3 PHASE 4 WIRE, 60 HZ *

LEGEND:

- MSR - MOISTURE SENSING RELAY
- OT - OVER TEMPERATURE
- PMR - PHASE MONITOR RELAY 230V-001-230-118 AS MANUFACTURED BY MOTOR PROTECTION CONTROL
- GFI - GROUND FAULT INTERRUPTER - DUPLEX RECEPT. 15 AMP.
- ETM - ELAPSE TIME METER
- TVSS - TRANSIENT VOLTAGE SURGE SUPPRESSOR
- HOA - HAND,OFF,AUTOMATIC SELECTOR SWITCH
- --- - FIELD WIRING/DEVICES EXTERNAL TO PANEL
- ⊙ - TERMINALS ON TERMINAL STRIP

NOTES:

1. CONTROL PANEL & MISC ENCLOSURE TYPES: NEMA 12 3R TYPE 304 STAINLESS STEEL.
2. BACKPANEL: BAKED ON WHITE ENAMEL.
3. DEADFRONT: FAB FROM 0.125 ALUMINUM
4. LAST WIRE NUMBER USED 42
5. MOUNT ENCLOSURE SO THAT HEIGHT OF CIRCUIT BREAKER HANDLE IS 68" MAXIMUM FROM GROUND.
6. ALL ELECTRICAL ENCLOSURES (CT, REMOTE DISCONNECTS, ETC.) SHALL BE NEMA 4X TYPE 316 STAINLESS STEEL.
7. THE PANEL AND SERVICE SHALL BE GROUNDED PER NEC ARTICLE 250 AND UTILIZE A MINIMUM OF TWO GROUND ELECTRODES AT LEAST 6 FEET APART. THE GROUNDING CONDUCTOR SHALL BE CONTINUOUS FROM THE METER CAN, THROUGH THE GROUNDING ELECTRODE SYSTEM TO THE FENCE.
8. ELECTRICAL CONDUITS TO BE SIZED FOR 40% CAPACITY.
9. ALL CONDUITS SHALL RUN STRAIGHT TO WETWELL. ONE 90° PULLING ELL ALLOWED UNDER THE CONTROL OF PANEL. EACH CONDUIT SHALL ENTER THE BOTTOM OF THE CONTROL PANEL SEPARATELY AS SHOWN ABOVE.
10. SEALL ALL CONDUITS BETWEEN WETWELL AND THE INSIDE OF CONTROL PANEL TO PREVENT GAS IN THE WETWELL FROM ENTERING THE PANEL **WITH DUCT-SEAL ONLY**.
11. ENGINEER SHALL PROVIDE VERIFICATION THAT THE TOP OF WELL, BOTTOM OF CONTROL PANELS, GENERATOR RECEPTACLE AND GENERATOR SLAB ARE ALL ABOVE THE 100 YR. FLOOD ELEVATION.
12. STARTERS SHALL BE A MINIMUM OF 8" ABOVE BOTTOM OF CONTROL PANEL WITH NO OBSTRUCTION TO WIRING.
13. GROUNDING BUSS MUST BE EASILY ACCESSIBLE.
14. PUMP VOLTAGE AND CONTROL PANEL VOLTAGE SHALL MATCH THE SERVICE VOLTAGE.
15. REDUCED VOLTAGE, NON REVERSING SOLID STATE MOTOR STARTERS (SOFT START) SHALL BE USED ON 208 OR 230V ELECTRIC SERVICE FROM PUMP MOTORS 25 HP AND LARGER.
16. ALL CIRCUIT BREAKERS AND SWITCHES SHALL BE SQUARE D OR CUTLER HAMMER ONLY. (VERIFY WITH UTILITY AT TIME OF DESIGN).
17. ALL EXTERIOR FASTENERS, ANCHORS, AND HARDWARE SHALL BE 316 S.S.

* ENGINEER SHALL VERIFTY SERVICE POWER WITH ELECTRIC UTILITY.

208 or 230 V

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO	DATE	BY	REVISION DESCRIPTION
11	MAY. 07	MRS	GENERAL UPDATES AND REVISIONS
10	FEB. 07	MRS	ADDED VOLTAGE/HP REQUIREMENTS FOR SOFT STARTER USE
9	JAN. 06	MRS	ADDED ECO-ENGINEER IS TO VERIFY ELECTRIC SUPPLY NOTE
8	MAY. 05	MRS	ADDED GENERATOR RECEPTACLE NOTE
7	MAR. 05	MRS	MODIFIED GENERATOR RECEPTACLE NOTE

DESG
DRWN
CHKD
APRV
DATE

PROJECT:
208/230 VOLT FOR LESS THAN 25 HP
SUBMERSIBLE PUMP STATION
ELECTRICAL SCHEMATIC AND DETAILS

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME
PUMPELEC.DWG
SHEET NO.
PSD-1

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 with Clay County Utility Authority 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 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 95% (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 cones 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 Work. Minimum wall thickness shall be 1/12 the inside 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 exactly parallel with a 2 degree slope and nominal 1/16 inch clearance with the tongue equipped with 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 mixed mortar for brick shall be composed of portland cement Type II, sand and clean water. Mortar shall be one part cement Type II and two parts sand; lime shall not be used. 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 sharp plaster sand. Calcium chloride may be added (maximum of 2%) to aid in obtaining a faster set. At 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 firmly and prevent crocking.

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 off pipes at inside face of the manhole and construct the invert to the shape and sizes of pipe indicated.
All inverts shall provide a constant gradient from influent pipe to effluent pipe through manhole. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is tangent to the center lines of adjoining pipelines.

05.4 DROP INLETS. Where shown on the drawings, drop inlets to the 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 early marked in 5 ft. intervals or less, indicating Manufacturers 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-2321. All pipe and sewer fittings shall be SDR-26 heavy wall, installed up to a depth of 13' from finish grade to invert of pipe. Maximum depth of gravity sewer without prior approval shall be 13 feet. Sewer pipe and fittings over 13' in depth shall be DR-18 P.V.C. Design of sewer installation over 13' 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 material will be allowed anywhere within a single run of pipe.

08. SANITARY SERVICE LATERALS. Sanitary service 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 Clay County Utility Authority. All sanitary service laterals shall be a minimum of 4'-0" deep at the right-of-way line to top of pipe. Any sanitary service lateral which must be more than 6'-0" deep shall not be installed prior to obtaining permission from the CCUA field inspector or CCUA Engineering Department. All sanitary service laterals shall be 6-inch diameter from the main 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 line utilizing the proper fittings for the type of pipe specified. All sewer service laterals over 13' deep shall be constructed of DR-18 PVC pipe, and DR-18 pipe 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 barrel of the pipe. Ductile iron pipe for force main service shall be polylined. Ductile iron pipe is not to be used without prior approval of the Clay 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 tracer wire per 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 twelve 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 cleaned 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/or 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 reinstalled at no additional expense to the Owner. A written log 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 compaction density 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 sewers shall be televised in the presence of the Inspector of the Clay 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 no 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 televised after curb and lime rock are in place but prior to paving. Curb and limerock shall be installed, finish graded prior to televising the gravity sewer. Limerock priming and paving operations shall not take place until the CCUA inspector has reviewed the television recorded DVD and approves the gravity sewer system. This will be strictly enforced. All gravity sewers must be flushed no sooner than 4 hours prior to any television inspection. Force main lines shall be pressure tested and approved prior to paving, but not prior to subgrade mixing operation and limerock installation, finish graded and compacted. Sewer services shall be viewed by a camera capable of viewing into service lateral connections. Adequate water must be placed within the upstream manhole to flow through the downstream manhole before inspecting with the camera. All work must be accomplished in the presence of the CCUA inspector. Contractor shall provide CCUA with a 48 hr. notice of intent to televise and inspect sewer main. CCUA inspector shall report to job site at the time specified by Contractor at the time of the call-in. CCUA inspectors will wait at the job site no more than one hour for the televising to begin before leaving the job site. Contractor shall reschedule televising giving CCUA 48 hrs. notice if the above occurs. Inspections start at manhole invert.

11.2 INFILTRATION TEST After completion, the sewers or sections thereof, shall be tested and gauged for infiltration. To check the amount of infiltration, the Contractor, at no 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 exfiltration tests, the Contractor shall furnish and install all necessary materials, equipments, shall supply water, etc., and shall run exfiltration tests to determine acceptance of the sewer. The maximum allowable exfiltration shall be 50 gallons per mile per inch of diameter of sewer per 24 hour day at any time based on two foot minimum internal head.

11.4. A “dip” is defined as any water holding depth which is equal or greater than the minimum depth as listed below. There shall not be any more than 1 “dip” per 135 linear feet of sewer pipe installed. The defective pipe sections, or those dip/sections over the allowable limit, shall be removed and replaced (at no cost to CCUA). Each run of pipe, between two manholes, shall be evaluated independently for compliance. Any “dip” which is greater than the “maximum” “dip” depth listed below are not acceptable and shall be removed and replace at no cost to CCUA. Regardless of the number of “dips” in the line section, if, in the option of the CCUA inspector, the number and/or location of the “dips” is believed to create an unacceptable operating condition, then the defective pipe section(s) shall be removed and replaced at no cost to CCUA. Any deviation from these “dip” limitation must be approved by the CCUA Service Availability Manager.

WATER HOLDING DEPTH (INCHES)		
PIPE SIZE	MINIMUM	MAXIMUM
8-10 INCH	.50	1.00
12-15 INCH	.75	1.50
18-21 INCH	1.00	2.00
24 INCH AND GREATER	1.25	2.50

12. 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 malleable seal off conduits at the demarcation box end, in conduits between the demarcation box and the MCC. All internal hardware including terminal strips, blocks and backplane shall be stainless steel.

12.1 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.

12.2 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 served. Antioxidant compound shall be used on all terminal connections, (nolox or equal). Nameplates as specified on the electrical standards sheet shall be provided at the terminal blocks to identify each circuit.

12.3 All wires including spares shall be identified with heat shrink labels. All control wires shall have spade lugs. Wires shall be 600 volt rated thhn/mtw/thhw.

13. SEPARATION OF WATER AND SEWER MAINS. Horizontal and vertical separation between potable water system mains and or appurtenances and sanitary or storm sewers, wastewater or storm water force mains, and reclaimed water mains shall be in accordance with Rule 62-555.314 FAC.
a. New or relocated underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, storm water force main, reclaimed water main regulated under Part III of Chapter 62-610, F.A.C, or proposed vacuum-type sanitary sewer.
b. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.
c. New or relocated underground water mains crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above, or at least 12 inches below, the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline (see Crossing "A" as shown on detail sheet WAT-02).
d. New or relocated underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or storm water force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above or below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.
e. At the utility crossings described in paragraphs (c) and (d) above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, storm water force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

14. NEW CONNECTION TO EXISTING MAIN. New connection to existing main in service shall be accomplished by the "wet tap" method utilizing full circle 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 from those listed in CCUA approved material manual. Tapping valve shall be mechanical joint on one end and standard flanged joint on other end. Valve shall conform to Section 09.2 of these specifications.

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.

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

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 All work and 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 wetwell, 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 filter cloth.

18. Information shown on the Drawings as to the location of existing utilities has been prepared from the most reliable data available to the Engineer. 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.

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.

20. 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

21. Under no circumstance shall any trees be planted within a CCUA utility easement without:
a. CCUA approving landscape and irrigation plans.
b. CCUA being notified prior to the planting of trees and giving approval.
c. 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 roadway cross section details, whether or not shown on the plans.

22. 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 this 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 8-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 materials, poor workmanship, or 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 adjusted to finished grade. 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 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 by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (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, bends and fire hydrants. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per Manufacturer's recommendations and Clay County Utility Authority Details and Specifications (SEE RESTRAINED JOINT SCHEDULE). See CCUA Approved Materials Manual for acceptable restraints.

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, length, 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 easement, right-of-way, between lots, and any instance where a building foundation or other permanent appurtenance is within 10' of the water main or a service line larger 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. POLYVINYL CHLORIDE PIPE. Polyvinyl chloride pipe for water mains 4 inch through 24 inches in diameter, shall be DR18 (C900) Pressure Class 235 psi PVC 1120; water distribution mains above 24 inches in diameter shall be DR25 (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 12454, ASTM F-477, ASTM D-3139, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be color coded and marked "WATER" at every 12" along the barrel 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. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 80) PIPE shall conform to the requirements of ASTM D 1785. Fittings shall be suitable for type of installation required. All piping smaller than 4" shall be Schedule 80 PVC.

11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, flanged 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 3" and larger shall be iron body, bronze fitted with resilient seat. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "WATER" shall be cast in the cover. Other gate valves smaller than 3" shall be heavy-duty bronze 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. A treated 6'-6" fence post 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, roundway, 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 2 1/2" nozzles, one 4 1/2" nozzle and one 5 1/4" main valve. Fire hydrant shall be be compression type with breakable coupling and bolts. Pipe connection shall be mechanical joint. Fire hydrants shall be painted silver, BLP Mobile Paints, Liquid Aluminum, 1151 alkyd weight 56.6% x volume 41.2% VOC 3.76 lb. per gallon with 1 1/2" penta nuts, opening left. See CCUA Approved Materials 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 clean during laying operations by means of plugs or other approved methods. All pipe shall be checked for defects before being lowered into the trench. Defective pipe shall not be used. Pipe found to be defective after installation, shall be removed and replaced with sound pipe at no additional expense to the Owner. The full length of each section of pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate the bells and joints. All pipe that has the grade or joint disturbed after laying shall be taken up and reinstalled. The pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work. All joints shall be cleaned of all foreign matter before making the joint. Fittings at bends in the pipe shall be properly restrained with joint restrainers adequately sized to prevent movement and dislocating or blowing off when the line is under pressure. Service laterals shall terminate at the point noted in the details.

16. 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 be in accordance with the CCUA's requirements and specifications. Water main lines shall be pressure tested and approved prior to paving, but not prior to subgrade mixing operation and limerock installation, finish graded and compacted. If CCUA inspector detects the water main has been damaged during priming or paving, he shall require the Contractor to repair the water main and retest the water main.

17. STERILIZATION. After completion of construction and testing, the water system shall be sterilized with chlorine in accordance with AWWA Standard C651 latest, and State of Florida Department of Environmental Protection requirements before acceptance for domestic operation. The amount of chlorine applied shall be sufficient to provide a dosage of 50 parts per million or more, for a period of at least 24 hours. A CCUA inspector must be present for the below referenced sterilization procedures. After completion of sterilization procedures, the system shall be flushed using chlorinated water from a domestic water source having a chlorine residual of at least 1 part per million. The Contractor shall obtain all bacteriological clearances as required by the Florida Department of Environmental Protection. After bacteriological clearances, the pressure in the main shall not drop below 20 p.s.i. Clearance report to be submitted to the Engineer. The Contractor should be aware that there is a timing maximum related to bacteriological clearance of the main, completion of as-built drawings and Engineer/CCUA completion of Certificate of Completion. In any project where the bacteriological clearances are greater than 30 days old at the time of submittal of Certificate of Completion to FDEP or CCUA, the Contractor may be required to pull more samples and obtain more bacteriological clearances. Prior to introducing the chlorine solution, the lines shall be thoroughly 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. Dechlorination of flushing water may be required to be in compliance with the State of Florida Surface Water Quality Standards (F.A.C. 63-302.530). Dechlorination is necessary if the flushing of highly chlorinated water is to be discharged directly to a surface water or to a storm water system. If the water can be sheet flowed over a large area or discharged to a holding pond, dechlorination may be avoided. See note number 4 of Special Notes below.

18. BACTERIOLOGICAL SAMPLING. Contractor shall ensure the project construction is completely finished prior to any bacteriological sampling and testing.

19. FIRE LINES/MAINS. All fire lines or mains connecting to Clay County Utility Authority owned potable water main shall be installed by a State of Florida Licensed Fire Installation Contractor, and shall meet all requirements of the local Authority, State Fire Marshal, County Fire Marshal, and the National Fire Protection Association. Work performed must meet all requirements of NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances.

19.1 The Fire Marshal shall have the right to deny acceptance or use of any fire line, installed and connected to a Clay County Utility Authority owned and maintained water main until such time that the Contractor installing the fire line can produce proof to the Fire Marshal that all paperwork, fees due, or close out documents have been satisfactorily prepared and approved by Clay County Utility Authority.

20. POLYETHYLENE TUBING SERVICE LINES AND MAINS (2 INCH AND SMALLER): Tubing shall be manufactured of PE 4710, High Density Polyethylene (HDPE), in accordance with AWWA C901, ASTM D1248, ASTM D2239, ASTM D3737 and ASTM D3350. The tubing shall have a minimum working pressure of 250 psi. Polyethylene tubing shall be copper tube size SDR-9 and shall be colored blue. HDPE pipe shall have ultraviolet (UV) inhibitors for protection against direct sunlight for 1 year. Inserts for polyethylene tubing may be utilized, at Contractors options, and, if used, shall be 316 stainless steel. The use of no-lead brass couplings, tees and "Y" fittings are acceptable on poly service tubing, if not located under a roadway. Tubing shall be approved for use with potable water by the National Sanitation Foundation (NSF-14) and shall be continuously marked at intervals of not more than four feet with the following:
Nominal size
Pressure rating
NSF seal
Manufacturer's name or trademark
Standard dimension ratio
ASTM specification

GENERAL NOTES

1. AS-BUILT DRAWINGS AND ASSOCIATED COSTS. All cost records pertaining to the cost of water, reclaim and sewer facilities donated to the utility shall be provided to the Utility by applicant. Prior to acceptance of any extension to the Utility's system that is completed by a licensed underground utility Contractor, the Utility will require that the applicant's Contractor provide the Utility, to retain for its permanent records, all field as-built data which shall be provided in accordance with the Utility's `As-built Specifications Standards Manual`, which can obtained from the Utility's website (www.clayutility.org).

2. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD. Developer's Contractor shall warranty Utility against defects in material and workmanship for the portion of the onsite system to be owned by the Utility for two (2) years. Developer shall secure from its Contractor a written and fully assignable warranty that the system installed will be and remain free from all defects, latent or otherwise, with respect to workmanship. materials, installation, and accuracy of his as-built drawings in accordance with the Utility approved plans and specifications for a period of two years from the date of the system acceptance by the Utility and immediately assign the same and the right to enforce the same to Utility on or before the date of the Utility's acceptance of the system for Ownership and maintenance.

3. CLEAN-UP. All surplus materials of construction shall be removed from the site and disposed of by the Contractor as part of his contract with the Owner.

4. RESTORATION. New Sanitary Sewer and Water Main Construction in earthen areas shall be seeded and mulched in accordance with Section 570 of Standard Specifications of the Florida Dept. of Transportation (latest edition). In locations where existing grassed (sodded) areas are disturbed, sod shall be replaced to preconstruction condition and to limits of construction or where directed by the engineer.

5. PERMITS. The Contractor shall be responsible for obtaining and providing records of all permits required for performing work under this contract, except that the FDEP permits, and wetland permits, if required, will be secured by the Owner or Developer.

6. PIPE BEDDING. In the event unsuitable or unstable bedding material is encountered at or below the limits of the excavation required for installation, such material shall be removed and replaced with suitable compacted backfill material specified by the Design Engineer and approved by the CCUA so as to provide a stable trench bedding surface suitable for proper pipe installation.

6.1. PIPE BEDDING (ROCK BEDDING MATERIAL) Rock material used for pipe bedding shall be #57 stone or crushed concrete (crush-crete) in a #57 size. Rock bedding material shall be completely wrapped in a heavy filter fabric material, overlapped a minimum of one foot. Rock bedding shall be installed to the correct grade and compacted to a density which will prevent any settlement, either by mechanical tamping equipment or by compressing the rock using the bottom of the backhoe bucket. The compaction shall be approved by CCUA inspector. The Contractor shall be required to have submittal approved by Design Engineer and CCUA prior to use of such rock bedding material.

7. DEWATERING. 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 acceptably dry until the piping and / or structures to be built therein are 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 jointed, except as may be approved in writing by the CCUA

8. 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 Clay County Utility Authority must be notified 48 hours before a test is to be performed. Test shall be as set forth in AWWA standard C600. 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 C600-87. Hydrostatic and leakage test and blow-down (zeroing of gage) must occur before sampling for bacteriological test. The maximum allowable pressure loss is 5 p.s.i. regardless of the length of pipe.

9. REPORTS. Reports of hydrostatic and leakage tests and sterilization of the newly completed systems shall be submitted to the Clay County Utility Authority prior to requesting acceptance of the system.

10. DENSITY TESTING. In-place density tests are required at intervals not to exceed 150' along pipelines for every other lift. A minimum of one test between manholes is required for every other lift regardless of the distance between sanitary sewer manholes.

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. Stale or retempered concrete shall not be used.

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 main on which installed. Valves 2" and 3" shall be iron body, bronze fitted. Valves 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.

13. PIPE AND PIPE JOINTING FOR FUSED & HDPE PIPE:
a. Heat Fusion Jointing:
Joints between plain end pipes and pipe fittings shall be made by butt fusion when possible. Electro fusion welding may also be used to complete when the location is not accessible to butt fusion welding equipment. The on-site welder making the joints (butt fusion or electro fusion) shall have received specific training from the Manufacturer of the fittings and/or pipe being welded and shall have written proof of proper training/certification from the associated Manufacturers. Only certified welders who have written training certifications from the fitting and/or pipe Manufacturer will be allowed to perform this work. To weld a fitting or electro fusion coupling in place, the on-site welder (employee) must be trained and certified by the fitting Manufacturer. To butt weld pipe, the on-site welder (employee) must be trained and certified by the pipe Manufacturer. The fusion work shall be accomplished (welding and cool-down/closing times) in accordance with the fitting and pipe Manufacturers' recommendations, at a minimum. CCUA reserves the right to require the Contractor to remove from or not permit an employee to work on the welding or fusing portion of the work if in the opinion of CCUA that person is not properly trained or cannot perform the welding or fusion process in high quality and professional workmanship manner.

b. 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 or 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 catch 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.

SPECIAL NOTES

1. The installation 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-homed. 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 left in place if the joint is over-homed. 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.

2. 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. Any pipe which has been installed and does not meet the above listed criteria shall be removed and replaced with new pipe. All costs of removal and reinstallation of said pipe shall be at the Contractor's expense, with no cost to the Owner, and shall meet all CCUA requirements.

3. 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 grout filled in place for its entire length. A CCUA inspector shall be present and witness the grout filling of the pipe from start to finish of the process. If the abandoned pipe is being removed, a CCUA inspector shall be present or be able to view the open ditch where pipe was removed from prior to backfilling that ditch.

4. 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 at least seven (7) days in advance.
d. CCUA inspectors must be present to observe and monitor the disinfection process.

5. 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 deeded to CCUA
d. Value of Acceptance Report showing value of assets to be deeded to the CCUA
e. Bill of Sale to CCUA
f. Bacteriological Test(s)
g. Pressure Test(s)
h. Television Reports and Recorded DVDs
i. Density Reports
j. Locate Wire test
k. Final As-Built Drawings and disks

FINAL INSPECTION PROCEDURES

PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

1. The sewer line T.V. report, and recorded DVD.
2. All manhole rings and covers have to be adjusted to finish grade.
3. The pressure test and bacteriological clearance analysis report.
4. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
5. Locate Wire test.
6. Not less than 10 business days Prior to Final Inspection, Contractor shall submit as-built drawings showing at least the following:
   a. Location of valves, mains, services, manholes and locate wire boxes.
   b. Elevation of sewer lines in the manhole, and stub-outs.
7. As-built drawings shall have been updated to accommodate the Clay County Utility Authority's comments and the final elevation of the manhole tops must be included (shall comply to the guidance set forth in Utility's As-built Specifications Standards Manual, which can be obtained from the Utility's website www.clayutility.org).
8. The Engineer of Record certification to FDEP. This can be done with completed as-builts.
9. As-builts, must be accepted and approved by the Clay County Utility Authority.
10. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color.
11. All services and valves to be plainly marked with a treated fence post, and electronic locate marker on all sewer lateral and sewer stubs.
12. Pump station start-up report with draw down data for each pump and with both pumps in operation. All electrical components to be completely installed and in proper working condition.

PRIOR TO FINAL ACCEPTANCE FOR OWNERSHIP, THE FOLLOWING MUST BE COMPLETED:

1. A preliminary inspection must be coordinated by the underground utility Contractor and held a minimum of fifteen (15) working days prior to the final inspection/start-up. The preliminary inspection will compare the approved design drawings to the actual site installation, noting any deficiencies.

2. The following must be represented at the preliminary and final inspection:
   a. The Clay County Utility Authority's inspection and distribution and collection departments
   b. The project's Developer and/or general Contractor
   c. The Underground Utility Contractor
   d. All subcontractors associated with the lift station (electrical, pump Manufacturer, control panel Manufacturer, etc.)

3. All manhole rings and covers have to be adjusted to finish grade.
4. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
5. As-built drawings shall have been updated to accommodate the Clay County Utility Authority's comments and the final elevation of the manhole tops must be included (shall comply to the guidance set forth in utility's `as-built specifications standards manual`, which can be obtained from the utility's web site (www.clayutility.org).
6. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color
7. As-builts must be accepted by the Clay County Utility Authority.

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

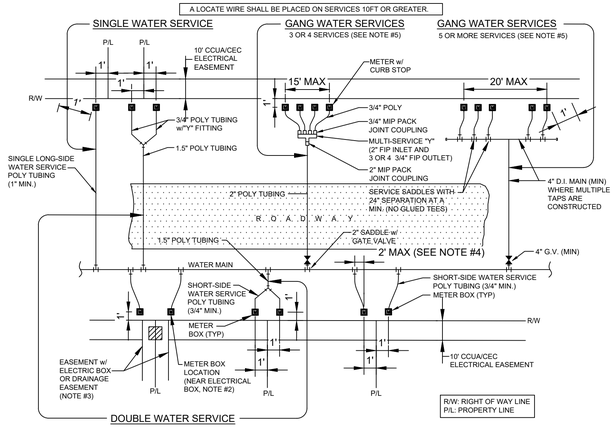
VINCENT JAMES DUNN ★ LICENSE No. 39452 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER

NO	DATE	BY	REVISION DESCRIPTION
24	JUN 17	RHD	UPDATED VARIOUS NOTES
23	JAN 17	RHD	UPDATED WATER OUTLINE NOTE 2.0
22	SEP 15	RHD	UPDATED
21	JUNE 15	RHD	UPDATED
20	APR. 15	RHD	UPDATED
19	FEB. 15	RHD	REVISED 06. SERVICE SERVICE LATERAL NOTES
18	DEC. 14	RHD	REVISED 24. JACK AND BORE REQUIREMENTS
17	DEC. 13	DGJ	REVISED 03. COLLECTION / DIST. & 01 GENERAL NOTE
16	MAY 13	RHD	REVISED PARAGRAPHS 06, 09.4 & 17 OF OUTLINE SPECS
15	MAY 13	RHD	REVISED TO ADD TO PARAGRAPH 05.4 & 08 OF OUTLINE SPECS
14	JAN. 13	RHD	REVISED TO ADD TO PARAGRAPH 08 OF OUTLINE SPECS
13	SEPT. 10	MRS	REVISED PARAGRAPH 06. & 08. SDR-35 PIPE TO SDR-26 PIPE
12	AUG. 09	MRS	ADDED CCUA SPECIAL NOTES
11	OCT. 08	MRS	ADDED CCUA IS HEREINAFTER REFERRED TO AS "UTILITY"
10	APRIL 08	MRS	ADDED RESTRAINED JOINT SCHEDULE
9	MAY 07	DGJ	REVISED INSPECTION NOTES & SPECS NO. 11
8	APRIL 06	MRS	REVISED NOTE 11.1 (SEWER) ADDED NOTE 21 & 22
7	JUNE 05	MRS	REVISED NOTE 12 (WATER)
6	JUNE 05	MRS	REVISED NOTE 9 (SEWER) NOTE 2 (WATER)
5	MAY 05	MRS	ADDED NO. 02.1 (Contractor LICENSE AND APPROVAL)
4	MAR. 05	MRS	MODIFY NO. .06 & .08 (SEWAGE COLLECTION SYSTEM)

STANDARD WATER AND SEWER SYSTEM OUTLINE TECHNICAL SPECIFICATIONS FOR DEVELOPER INITIATED PROJECTS (FOR DEVELOPER INITIATED PROJECTS ONLY)

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME
SPECIF_D.DWG
SHEET NO.
SPD-1



NOTES

1. 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 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BRADFORD), THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' 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.

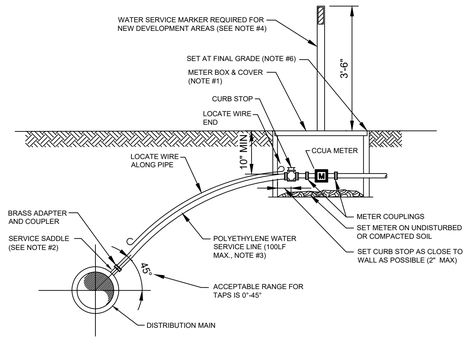
3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN)BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4" SERVICES, THE 1 ½" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' 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 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTICLE 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 STAGGERED AND AT 2 FEET ON CENTER-MIN). 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 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"X1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. 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.

WATER SERVICE INSTALLATIONS
2" AND SMALLER METER



NOTES

1. SEE CCUA APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT POLY LINE WITH 36" (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 100LF UNLESS OTHERWISE APPROVED BY CCUA.

4. 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', 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 (HEX ON BARREL TYPE).

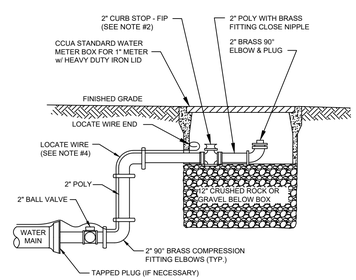
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

6. 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).

7. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH / OFFSET GREATER THAN 2.0'.

WATER SERVICE DETAIL- 2" AND SMALLER METER

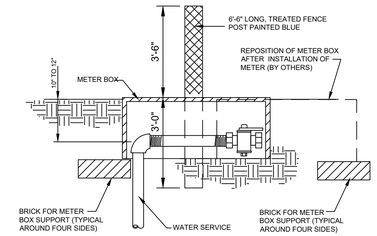
POLYETHYLENE WATER SERVICE DETAILS
(NTS)



NOTES

1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
4. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
5. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE



WATER SERVICE MARKER POST

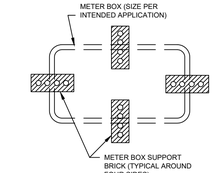
1. ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER (FENCE) POST PAINTED BLUE.

2. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LOCATE WIRE BALL VALVE AT THAT ELEVATION.

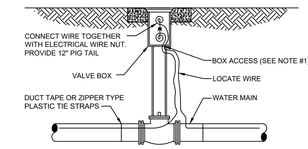
3. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP.

4. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED.

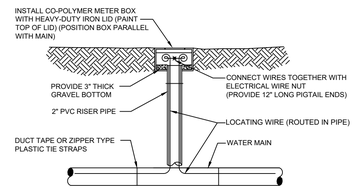
5. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.



METER BOX SUPPORT DETAIL



LOCATE WIRE BOX UTILIZING VALVE BOX

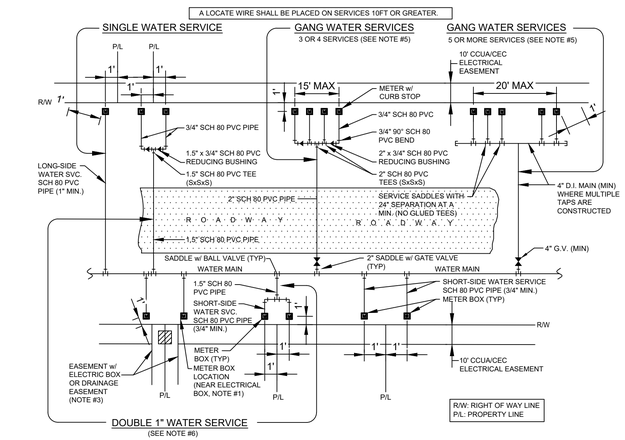


LOCATE WIRE BOX UTILIZING METER BOX

NOTES

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE.

LOCATE WIRE BOX



NOTES

1. 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 LOCATED 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BRADFORD), THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' 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.

3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

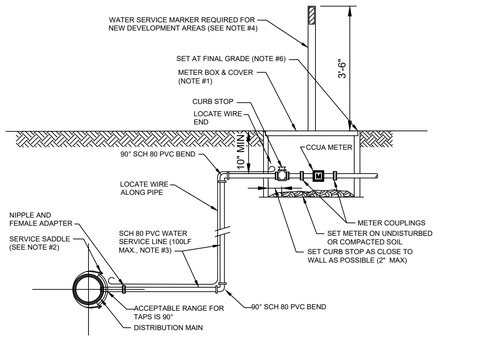
4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN)BETWEEN THE SERVICES SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4" SERVICES, THE 1 ½" SCH 80 PVC MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' OR GREATER 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 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTICLE 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 STAGGERED AND AT 2 FEET ON CENTER-MIN). 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.P CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"X1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. DOUBLE 1" WATER SERVICES IS ALLOWED FOR SHORT SIDE OR LONG SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.

7. 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.

SCH 80 PVC WATER SERVICE INSTALLATIONS
2" AND SMALLER METER



NOTES

1. SEE CCUA APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT SCH 80 PVC LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE SCH 80 PVC WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CCUA.

4. 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', 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 (HEX ON BARREL TYPE).

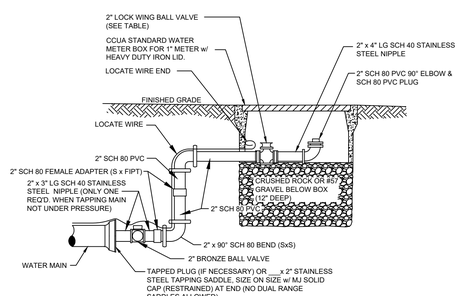
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

6. 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).

7. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH / OFFSET GREATER THAN 2.0".

SCH 80 PVC WATER SERVICE DETAIL
2" AND SMALLER METER

SCH 80 PVC WATER SERVICE DETAILS
(NTS)



NOTES

1. PIPE SHALL BE SCH 80 PVC. FITTINGS SHALL BE SCH 80 PVC.
2. THE 2" BALL VALVE SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
4. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
5. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

2" STANDARD SCH 80 PVC FLUSHING HYDRANT ON DEAD-END LINE

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO	DATE	BY	REVISION DESCRIPTION
4	JUNE 17	RHD	REVISED VARIOUS DETAILS.
3	JUNE 16	RHD	REVISED POLY WATER SERVICE DETAIL.
2	JUNE 15	RHD	ADDED SCH 80 DETAILS.
1	JUNE 15	RHD	NEW DETAIL SHEET DESIGN

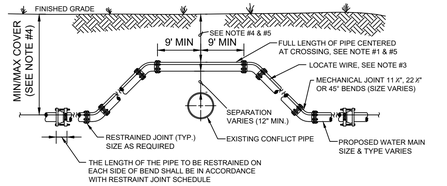
DESG
DRWN
CHKD
APRV
DATE

STANDARD SCH80 AND POLYETHYLENE WATER SERVICE DETAILS

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME

SHEET NO.
WD-1

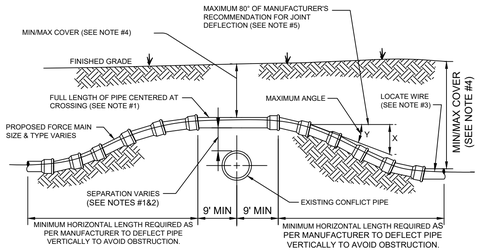


CASE "A" CROSSING

NOTES

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. ALL BENDS TO BE RESTRAINED IN BOTH DIRECTIONS PER CCUA REQUIREMENTS, TO WITHSTAND 150 P.S.I. PRESSURE TEST.
3. LOCATING WIRE REQUIRED.
4. THE COVER FOR PIPING SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY CCUA.
5. IF UTILITY CONFLICT IS LOCATED IN A NON-TRAFFIC AREA (NO TRAFFIC LOADS) AND IF THE NEW PIPE SHALL BE DUCTILE IRON PIPE, THEN THE MINIMUM COVER MAY BE REDUCED TO 24 INCHES (ONLY IN THE AREA OF THE CONFLICT).

ADJUSTMENT OVER EXISTING UTILITIES MECHANICAL RESTRAINTS (NTS)



CASE "A" CROSSING

NOTES

1. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.

2. ALL BENDS TO BE RESTRAINED IN BOTH DIRECTIONS PER CCUA REQUIREMENTS TO WITHSTAND 150 P.S.I. PRESSURE TEST.

3. LOCATING WIRE REQUIRED.

4. THE COVER OVER ALL PIPING SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS OTHERWISE APPROVED BY CCUA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

5. CCUA ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. UNLESS OTHERWISE APPROVED BY CCUA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

PVC PIPE				DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS	PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT	-	-	-	-
4	10	2.4°	480 FT	4	27	6.5°	177 FT
6	10	2.4°	480 FT	6	24	5.7°	200 FT
8	10	2.4°	480 FT	8 - 12	17.5	4.2°	273 FT
10	10	2.4°	480 FT	14 - 16	12	2.9°	400 FT
12	8.5	2°	564 FT	18 - 20	10	2.4°	477 FT
14 - 24	5	1.2°	960 FT	24 - 30	8	1.9°	600 FT
30 - 48	3.25	0.8°	1477 FT	36	7	1.7°	687 FT
				42 - 48	6.7	1.6°	716 FT

ADJUSTMENT OVER EXISTING UTILITIES PIPE JOINT DEFLECTION

WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

1) SEPARATION OF WATER AND SEWER MAINS. HORIZONTAL AND VERTICAL SEPARATION BETWEEN POTABLE WATER SYSTEM MAINS AND OR APPURTENANCES AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH RULE 62-555.314 FAC.

2. NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, RECLAIMED WATER MAIN REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C, OR PROPOSED VACUUM-TYPE SANITARY SEWER.

3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

4. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE, OR AT LEAST 12 INCHES BELOW, THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE (SEE CROSSING "A" AS SHOWN ON DETAIL SHEET WAT-02).

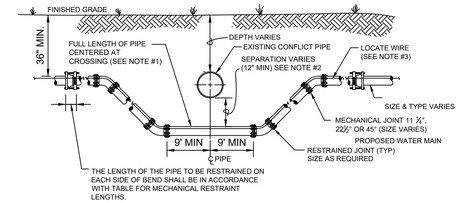
5. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

6. AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (4) AND (5) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

7. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.

8. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS PRIOR TO CONSTRUCTION.

NOTES ON UTILITY SEPARATION REQUIREMENTS

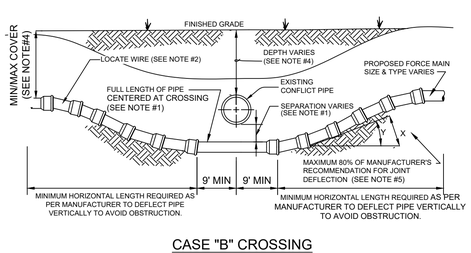


CASE "B" CROSSING

NOTES

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557
2. LOCATING WIRE REQUIRED.
3. ALL BENDS TO BE RESTRAINED IN BOTH DIRECTIONS PER CCUA REQUIREMENTS, TO WITHSTAND 150 P.S.I. PRESSURE TEST.
4. THE COVER FOR ALL PIPING SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY CCUA.

ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS (NTS)



CASE "B" CROSSING

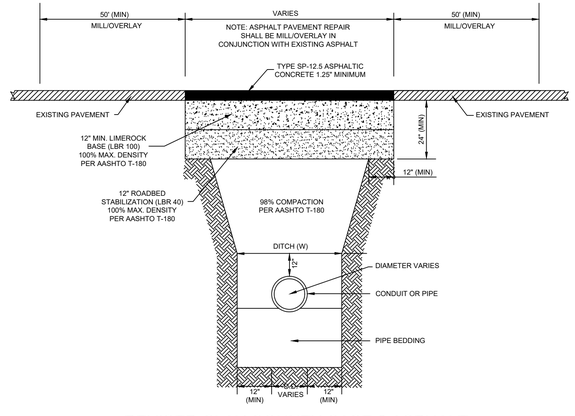
NOTES

1. IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12 INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED UNDER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
2. LOCATING WIRE REQUIRED.
3. THE COVER OVER ALL PIPING SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS OTHERWISE APPROVED BY CCUA. THE SOILS BETYEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
4. CCUA ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. UNLESS OTHERWISE APPROVED BY CCUA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

PVC PIPE				DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS	PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT	-	-	-	-
4	10	2.4°	480 FT	4	27	6.5°	177 FT
6	10	2.4°	480 FT	6	24	5.7°	200 FT
8	10	2.4°	480 FT	8 - 12	17.5	4.2°	273 FT
10	10	2.4°	480 FT	14 - 16	12	2.9°	400 FT
12	8.5	2°	564 FT	18 - 20	10	2.4°	477 FT
14 - 24	5	1.2°	960 FT	24 - 30	8	1.9°	600 FT
30 - 48	3.25	0.8°	1477 FT	36	7	1.7°	687 FT
				42 - 48	6.7	1.6°	716 FT

ADJUSTMENT UNDER EXISTING UTILITIES PIPE JOINT DEFLECTION



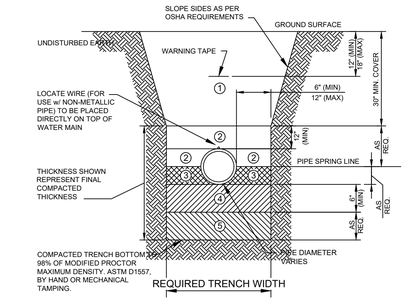
REVISED CLAY COUNTY CASE 2 ASPHALT PAVEMENT REPAIR DETAIL (NTS)

FOR PIPE RESTRAINT JOINT SCHEDULES, SEE STANDARD WATER MISCELLANEOUS DETAILS SHEET

LOCATION OF PUBLIC WATER SYSYEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main — 3 ft. minimum	Water Main — 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum — Water Main
Vacuum Sanitary Sewer	Water Main — 10 ft. preferred 3 ft. minimum	Water Main — 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum — Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main — 10 ft. preferred 6 ft. minimum (3)	Water Main — 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum — Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.
(5) All bells must be offset.



1. FINAL BACKFILL - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. FINAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 95% (UNPAVED) AND 98% (PAVED) MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557.

2. INITIAL BACKFILL - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557. BACKFILL SHALL EXTEND TO THE TOP OF THE PIPE AFTER COMPACTION. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING OR AN APPROVED METHOD OF MECHANICAL TAMPING. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE PIPE.

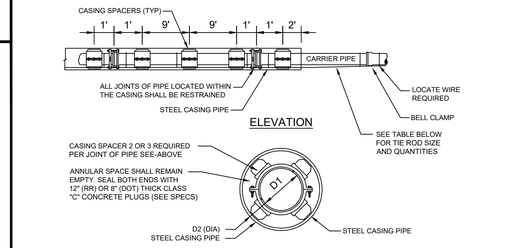
3. HAUNCHING - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. HAUNCHING SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 4 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557, BY HAND TAMPING. HAUNCHING SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE. COMPACT BACKFILL TO MID-PIPE.

4. BEDDING - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. BEDDING SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557, BY HAND TAMPING OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE COMPACTED BEDDING TO PERMIT ASSEMBLY OF THE PIPE. SEE SPECIFICATIONS FOR UNSUITABLE MATERIALS EXCAVATION IF REQUIRED. TRENCH BOTTOM IS AT BOTTOM OF PIPE IF UNSUITABLE MATERIAL IS NOT ENCOUNTERED.

NOTE: NATIVE, UNDISTURBED MATERIAL IN COMPLETELY DEWATERED TRENCHES MEETING THE COMPACTION AND MATERIAL REQUIREMENTS FOR COMPACTED BEDDING MATERIAL NEED NOT BE REPLACED OR REWORKED, EXCEPT FOR SHAPING OF BELL HOLES, AND WHERE REFILL IS REQUIRED.

5. REFILL - REQUIRED WHERE TRENCH HAS BEEN OVER-EXCAVATED. REFILL SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES AND SHALL BE COMPACTED TO 98% OF ASTM D-1557 MAX DRY DENSITY, BY HAND OR MECHANICAL TAMPING.

TYPICAL PIPE TRENCH DETAIL (NTS)



CASING DETAIL

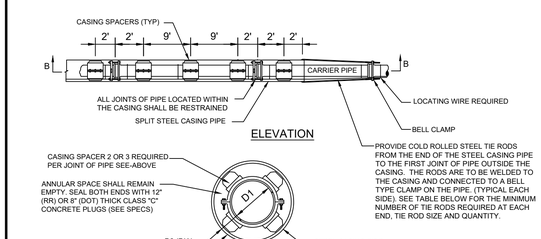
CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES												
CARRIER PIPE NO. DIA. (D1)	4	6	8	10	12	14	16	18	20	24	30	36
CASING PIPE NOM. DIA. (D2)	14	16	20	20	24	30	30	30	36	42	48	54
WALL THICKNESS RAILROAD (CSX)	0.25	0.281	0.375	0.375	0.375	0.469	0.469	0.469	0.562	0.625	0.688	0.781
WALL THICKNESS DOT	0.25	0.25	0.25	0.25	0.25	0.312	0.312	0.312	0.375	0.50	0.50	0.50
NUMBER OF TIE RODS (EACH END)	2	2	2	4	4	6	6	8	8	12	14	14
TIE ROD SIZE (DIA.)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"

CASING SIZE SCHEDULE

NOTES

1. MIN. COVER TO TOP OF CASING; a) FDOT-3.0' b)RAILROAD-5.5' TO BASE OF RAIL, 4.5' FOR SECONDARY OR INDUSTRIAL TRACKS.
2. ALL JOINTS WITHIN CARRIER PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
3. FOR STREET USES WHICH ARE NOT DOT OR RAILROAD, USE DOT CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
4. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8 FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING OR APPROVED BY CCUA.
5. PIPE TO BE USED AS A CASING SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE". WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".

TYPICAL CASING DETAIL - WATER (NTS)

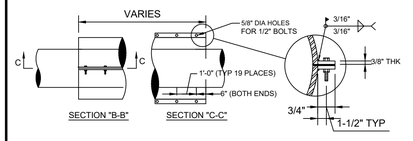


SPLIT CASING DETAIL

CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES														
CARRIER PIPE NO. DIA. (D_1)	4	6	8	10	12	14	16	18	20	24	30	36	42	48
CASING PIPE NOM. DIA. (D_2)	14	16	20	20	24	30	30	30	36	42	48	54	60	66
WALL THICKNESS RAILROAD-(CSX)	0.25	0.281	0.375	0.375	0.375	0.469	0.469	0.469	0.562	0.625	0.688	0.781	0.844	0.938
WALL THICKNESS DOT	0.25	0.25	0.25	0.25	0.25	0.312	0.312	0.312	0.375	0.50	0.50	0.50	0.50	0.50
NUMBER OF TIE RODS (EACH END)	2	2	2	4	4	6	6	8	8	12	14	14	16	16
TIE ROD SIZE (DIA.)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1 1/4"	1 1/4"

NOTES

1. NOT ALLOWED UNDER RAILROADS.
2. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING.
3. ALL JOINTS WITHIN CARRIER PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
4. FOR STREET USES WHICH ARE NOT DOT OR RAILROAD, USE DOT CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
5. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8 FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING OR APPROVED BY CCUA.
6. PIPE TO BE USED AS A CASING SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE". WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".



MATERIAL: PIPE - ATSM A53, GRADE B, ERW, STD WALL, CARBON STEEL
PLATE - STM A36, GRADE B, CARBON STEEL (THICKNESS AS NOTED)
WELDS ALL WELDS SHALL BE PERFORMED BY A CERTIFIED WELDER
LNINGS/COATINGS: INTERIOR - BARE
EXTERIOR - BARE

PIPE MAIN FOR CROSSINGS USING SPLIT CASING PIPE
NOT ALLOWED UNDER RAILROADS

TYPICAL SPLIT CASING DETAIL - WATER (NTS

NO	DATE	BY	REVISION DESCRIPTION
6	JUNE 15	RHD	REVISED SLAT CONCRETE ASPHALT DETAIL
5	JUNE 17	RHD	REVISED NOTES & NOTES DETAILS
4	JAN 17	RHD	REVISED CASING DETAIL, ADDED CASE 2 DETAIL
3	SEPT 16	RHD	ADDED CASE 2 DETAIL
2	JUNE 16	RHD	REVISED RESTRAINT JOINT DETAIL
1	JUNE 15	RHD	NEW DETAIL SHEET DESIGN

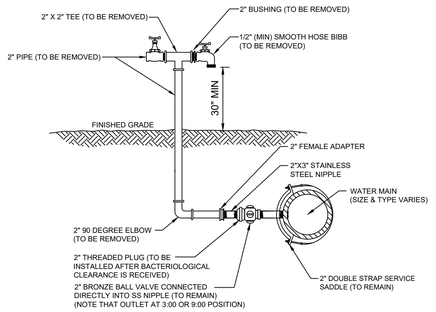
DESG
DRWN
CHKD
APRV
DATE

STANDARD WATER CASING, CROSSING TYPE AND PIPE RESTRAINT DETAILS

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068–3907
TELEPHONE: (904) 272–5999

ACAD FILE NAME

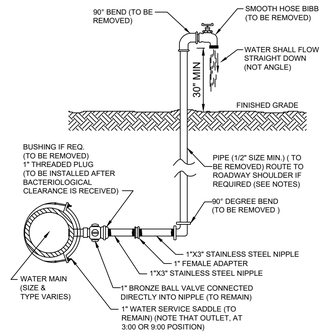
SHEET NO.
WD – 2



NOTES

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
2. ALL PIPE & FITTING SHALL BE GALVANIZED MATERIAL OR SCH 80 PVC.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTING (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CCUA RULES AND POLICES AS OUTLINED BY CCUA'S STANDARD WATER SYSTEM STANDARDS AND OTHER ASSOCIATED CCUA STANDARDS.

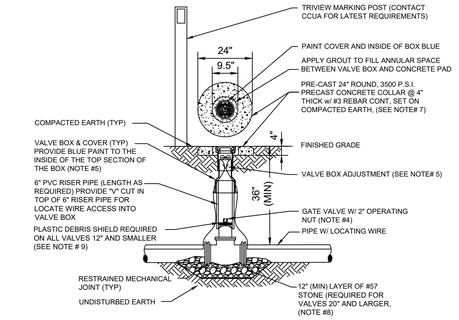
2" TEMPORARY SAMPLE TAP FOR STUB OUT (NTS)



NOTES

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED), AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. PIPE AND FITTINGS SHALL BE PVC SCH 80 OR GALV. MATERIAL.
4. THE USE OF THE ABOVE CONSTRUCTION FOR A TEMPORARY SAMPLE POINT SHALL BE LIMITED TO AREAS WHERE A SAMPLE TAP BY ALTERNATIVE METHODS IS NOT FEASIBLE OR IF DIRECTED OTHERWISE BY CCUA.
5. THE CONTRACTOR SHALL COMPLY WITH ALL CCUA RULES AND POLICIES AS AS OUTLINED BY CCUA'S STANDARD WATER SYSTEM STANDARDS AND OTHER ASSOCIATED CCUA STANDARDS.

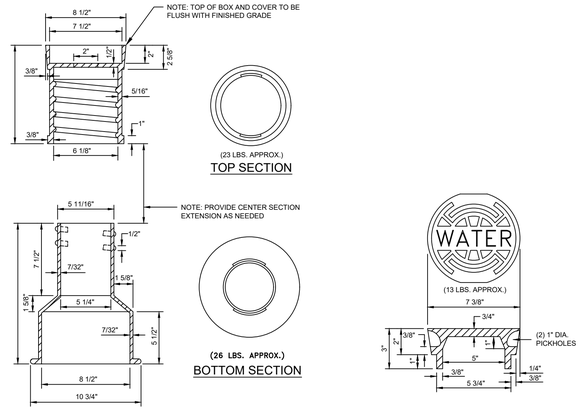
TEMPORARY SAMPLE TAP (NTS)



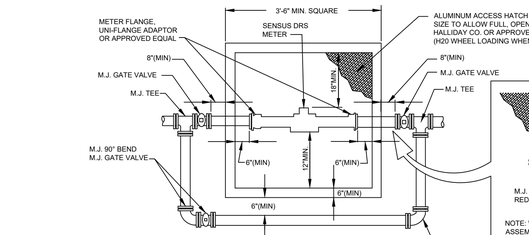
NOTES

1. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
2. LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAILW-44).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 12" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "WATER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/4" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/3 THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.

WATER VALVE INSTALLATION DETAIL



VALVE BOX AND COVER



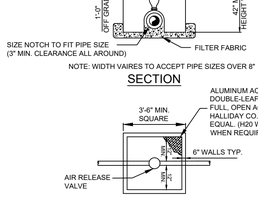
NOTES

1. ALL PIPE TO BE D.I. (MINIMUM 4")
2. ALL VALVES & FITTINGS TO BE DUCTILE IRON. (MINIMUM 4")
3. MINIMUM LENGTH OF 8 DIAMETERS OF STRAIGHT PIPE TO BE INSTALLED ON INLET SIDE OF METER.
4. ALL PIPE AND FITTINGS TO BE SAME SIZE AS METER. (EXCEPT 3" METER SHALL HAVE 4" PIPE AND FITTINGS)
5. CONC. BOX SHALL BE A MINIMUM OF 42" DEEP WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED 36" DEEP, INSTALLED ON 12" OF #57 STONE.
6. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY CCUA.
7. THE COST OF THE METER WILL BE ASSESSED TO DEVELOPER UNDER SEPARATE AGREEMENT. THE METER ONLY WILL BE FURNISHED TO THE CONTRACTOR BY THE CLAY COUNTY UTILITY AUTHORITY AND THE CONTRACTOR SHALL INSTALL THE METER TO COMPLETE THE INSTALLATION SHOWN HEREON.
8. PIPES COMING IN AND GOING OUT OF BOX SHALL BE 36" DEEP. CONTRACTOR SHALL BE RESPONSIBLE TO ADJUST THE ELEVATION OF THESE PIPES, USE OF BENDS ARE PERMITTED TO ACHIEVE THIS.
9. FOR ANY SIZE WATER AND FIRE LINE METERS NOT LISTED, THE CONTRACTOR SHALL SUBMIT ALL NECESSARY SUBMITTALS TO BE APPROVED BY CCUA.

NOTE: WHEN 3" METER IS USED IN ASSEMBLY, A MINIMUM OF 16" OF SPACE SHALL BE REQUIRED BETWEEN REDUCER FITTING AND OUTSIDE FACE OF VAULT BOX, ON BOTH SIDES OF METER VAULT (DETAIL NOT SHOWN TO SCALE).

METER VAULT DIMENSIONS (OVER 8" CONTACT CCUA ENGINEERING DEPARTMENT)			
METER TYPE	3" and 4" VAULT DIMENSIONS	6" VAULT DIMENSIONS	8" VAULT DIMENSIONS
SENSUS TURBINE	4'-0" OUTSIDE 3'-0" INSIDE	4'-6" OUTSIDE 3'-6" INSIDE	4'-6" OUTSIDE 3'-6" INSIDE
SENSUS COMPOUND	4'-0" OUTSIDE 3'-0" INSIDE	4'-6" OUTSIDE 3'-0" INSIDE	4'-6" OUTSIDE 3'-0" INSIDE
SENSUS F2 FIRE LINE	5'-0" OUTSIDE 4'-0" INSIDE	6'-0" OUTSIDE 5'-0" INSIDE	6'-10" OUTSIDE 5'-6" INSIDE
"McCROMETER" PROPELLER	4'-0" OUTSIDE 3'-0" INSIDE	4'-6" OUTSIDE 3'-6" INSIDE	4'-6" OUTSIDE 3'-6" INSIDE

METER VAULT - 3" AND LARGER METERS



NOTE: WIDTH VAIRES TO ACCEPT PIPE SIZES OVER 8"

SECTION

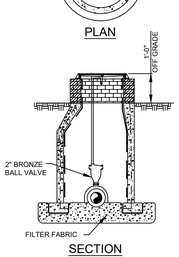
PLAN

NOTES

1. CONCRETE BOX SHALL BE 42" MIN. DEPTH BUT SHALL BE DEEP ENOUGH TO ACCOMMODATE THE SIZE PIPE AND TYPE OF AIR RELEASE VALVE REQUIRED, WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED WITH 36" COVER FROM TOP OF PIPE TO FINISH GRADE, ON 12" OF #57 STONE,WITH FILTER FABRIC ABOVE AND BELOW THE STONE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY CCUA.
3. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF PIPE INSTALLED.

WATER MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 12" OR LARGER



SECTION

NOTES

1. FOR PIPE 10" OR SMALLER A 4' DIAMETER, NOTCHED MANHOLE CAN BE USED FOR AIR RELEASE VALVE.
2. SET MANHOLE ON MIN. OF 4 SOLID CONCRETE BLOCKS SPACED EVENLY AROUND THE MANHOLE W/ A MIN. OF 12" OF #57 STONE WITH FILTER FABRIC ABOVE AND BELOW THE STONE.

WATER MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 10" OR SMALLER

PVC PIPE RESTRAINT NOTES

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THIS SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Li IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT, THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER Lu (FT.)	LOWER Li (FT.)	L (FT.)
4	20	8	4	2	20	3	50
6	28	10	5	2	28	4	20
8	36	14	6	3	36	5	90
10	40	18	8	4	45	6	110
12	50	20	9	4	52	8	120
14	56	23	10	5	60	9	140
16	60	26	11	6	67	10	160
18	69	29	12	6	74	12	180
20	75	32	13	7	80	13	195
24	76	33	15	7	81	14	200
30	88	36	18	9	97	16	235
36	100	40	20	10	110	20	270
42	115	48	23	11	125	24	300
48	125	52	25	12	140	30	340

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	35
8x6	35
8x4	65
10x8	35
10x6	65
12x10	35
12x8	65
16x12	65
16x10	95
20x18	35
20x16	65
20x12	120
24x20	65
24x18	95
24x16	120
30x24	80
30x20	150
36x30	80
36x24	150
42x36	80
42x30	150
48x42	80
48x36	150

TEES SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	6	10
	4 < LESS	F.O.
8	8	30
	6 < LESS	F.O.
10	10	48
	8	14
	6 < LESS	F.O.
12	12	65
	10	35
	8 < LESS	F.O.
16	16	100
	12	40
	10 < LESS	F.O.
20	20	130
	16	80
	12 < LESS	F.O.
24	24	130
	20	90
	16	40
	12 < LESS	F.O.
30	30	140
	24	80
	20	50
	16 < LESS	F.O.
36	36	180
	30	120
	24	50
	20 < LESS	F.O.
42	42	220
	36	160
	30	80
	24	40
	20 < LESS	F.O.
48	48	250
	42	180
	36	90
	30	40
	24 < LESS	F.O.

F.O. = FITTING ONLY

PVC PIPE RESTRAINT JOINT SCHEDULE

DUCTILE IRON PIPE RESTRAINT NOTES

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: DUCTILE IRON PIPE (WITHOUT POLY WRAP), SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE. FOR D.I.P. W/POLY WRAP, USE RESTRAINT JOINT SCHEDULE FOR PVC PIPE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Li IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO D.I.P. TRANSITIONS: THE D.I.P. PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).

LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER Lu (FT.)	LOWER Li (FT.)	L (FT.)
4	18	6	4	2	12	2	30
6	22	10	5	2	17	3	40
8	30	13	6	3	22	4	50
10	35	14	7	4	26	5	64
12	42	16	8	4	31	6	75
14	46	20	9	5	35	7	85
16	53	22	11	5	40	8	95
18	57	24	12	6	44	9	105
20	62	26	13	6	48	10	110
24	64	27	14	6	50	11	111
30	73	30	15	7	57	13	137
36	85	34	18	8	66	17	159
42	93	38	20	9	75	20	176
48	102	43	22	10	82	22	198

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	20
8x6	20
8x4	40
10x8	20
10x6	40
12x10	20
12x8	40
16x12	40
16x10	57
20x18	20
20x16	40
20x12	73
24x20	40
24x18	50
24x16	60
30x24	50
30x20	76
36x30	50
36x24	88
42x36	40
42x30	88
48x42	40
48x36	88

TEE SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	6	8
	4 < LESS	F.O.
8	8	18
	6 < LESS	F.O.
10	10	27
	8	8
	6 < LESS	F.O.
12	12	38
	10	20
	8 < LESS	F.O.
16	16	60
	12	20
	10 < LESS	F.O.
20	20	78
	16	40
	12 < LESS	F.O.
24	24	76
	20	53
	16	20
	12 < LESS	F.O.
30	30	99
	24	60
	20	37
	16 < LESS	F.O.
36	36	118
	30	88
	24	52
	20	37
	16 < LESS	F.O.
42	42	138
	36	110
	30	78
	24	37
	20 < LESS	F.O.
48	48	154
	42	132
	36	99
	30	59
	24 < LESS	F.O.

F.O. = FITTING ONLY

DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE

REVISION DESCRIPTION

NO	DATE	BY
1	JUNE 15	RHD
2	OCT 16	RHD
3	APR 17	RHD
4	REVISED NOTES AND DETAILS MODIFIED VAULT DIMENSION CHART ADDED NOTE TO DETAIL W-3 NEW DETAIL SHEET DESIGN	

DESG
DRWN
CHKD
APRV
DATE

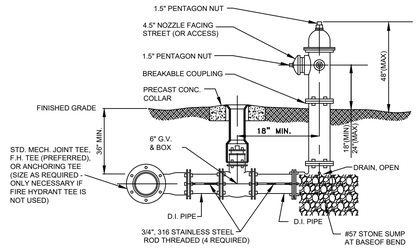
STANDARD WATER MISC DETAILS

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME

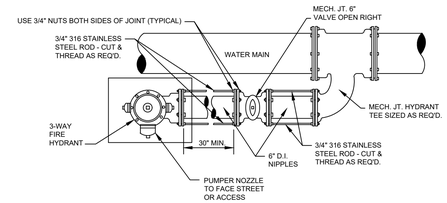
SHEET NO.

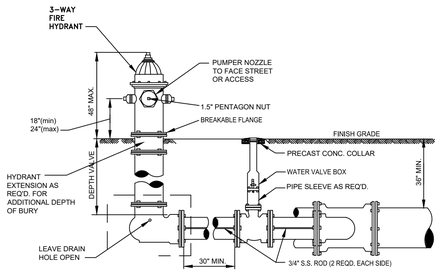
WD-3



FIRE HYDRANT (STANDARD)

SEE CCUA APPROVED MATERIALS MANUAL





FIRE HYDRANT - LIMITED SPACE

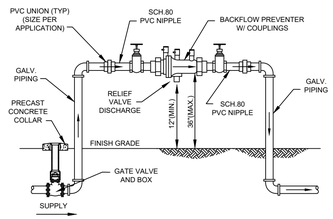
HYDRANT INSTALLATION FOR LIMITED SPACE WITH MECH. JOINT HYDRANT TEE

FIRE HYDRANT CANNOT BE LOCATED LESS THAN 5'-0" FROM BACK OF CURB AND NO MORE THAN 20'-0" BACK OF CURB.

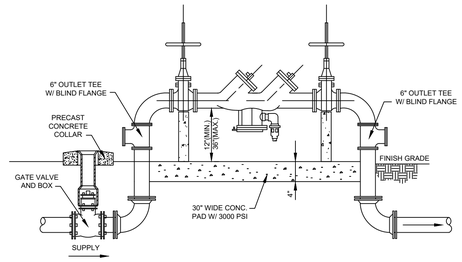
NOTES:

THERE SHALL BE CLEARANCES OF SEVEN AND ONE-HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT, WITH A FOUR FEET (4') CLEARANCE TO THE REAR OF THE HYDRANT. *EXCEPTION: THESE DIMENSIONS MAY BE REDUCED BY THE APPROVAL OF THE FIRE OFFICIAL.*

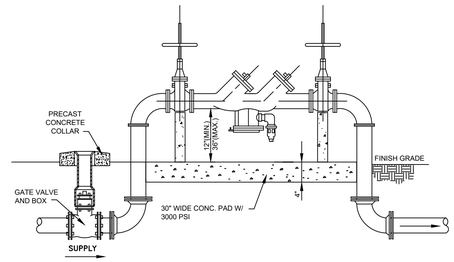
THERE SHALL BE NO OBSTRUCTIONS PLACED IN FRONT OF ANY FIRE HYDRANT ASSEMBLY THAT WOULD PROHIBIT ACCESS.



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



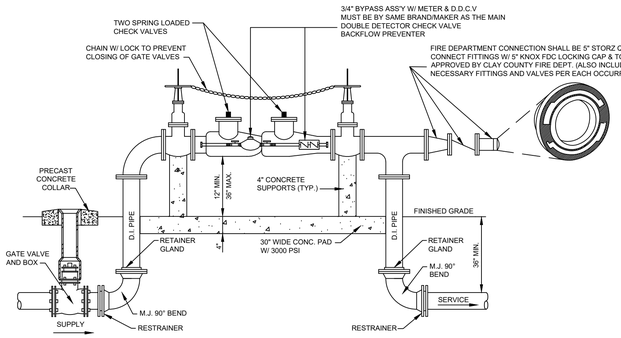
BACKFLOW PREVENTER SIZES 6" & ABOVE WHERE BACKFLOW IS BETWEEN RECLAIMED & POTABLE (NTS)



REDUCED PRESSURE BACKFLOW PREVENTER - SIZES 3" & ABOVE (NTS)

BACKFLOW PREVENTER NOTE:

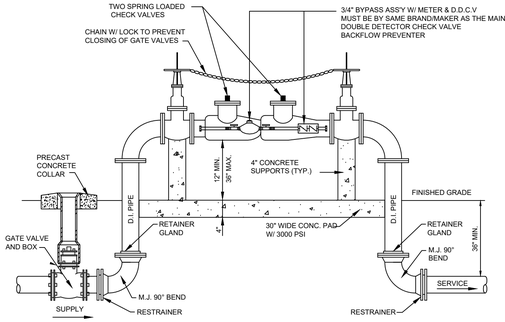
DESIGNS SHOWN FOR BACKFLOW PREVENTER INSTALLATIONS ARE REQUIRED FOR CCUA OWNED INSTALLATIONS - SEE CCUA APPROVED MATERIALS MANUAL. THE BOTTOM OF THE BACKFLOW PREVENTER VALVE IS TO BE NO LESS THAN 12" OR MORE THAN 36" ABOVE THE NATURAL FLOOD GRADE. (SEE CCUA PUMP STATION DETAIL SHEETS (ALL) FOR BACKFLOW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



NOTES

1. DOUBLE DETECTOR CHECK VALVE W/ 3/4" BYPASS METER & 3/4" D.D.C.V ARE REQUIRED ON ALL ON-SITE FIRE SPRINKLER SYSTEMS.
2. PROVIDE FREEZE PROTECTION FOR COMPLETE ASSEMBLY.

DOUBLE DETECTOR CHECK VALVE BACKFLOW PREVENTER WITHOUT ABOVE GROUND ENCLOSURE - 3" AND ABOVE WITH FIRE DEPARTMENT CONNECTION



NOTES

1. DOUBLE DETECTOR CHECK VALVE W/ 3/4" BYPASS METER & 3/4" D.D.C.V ARE REQUIRED ON ALL ON-SITE FIRE SPRINKLER SYSTEMS.
2. PROVIDE FREEZE PROTECTION FOR COMPLETE ASSEMBLY.

DOUBLE DETECTOR CHECK VALVE BACKFLOW PREVENTER WITHOUT ABOVE GROUND ENCLOSURE - 3" & ABOVE WITHOUT FIRE DEPARTMENT CONNECTION

NO	DATE	BY	REVISION DESCRIPTION
2	AUG 17	RHD	ADDED HYDRANT GENERAL NOTES
1	JUNE 15	RHD	NEW DETAIL SHEET DESIGN

DESG
DRWN
CHKD
APRV
DATE

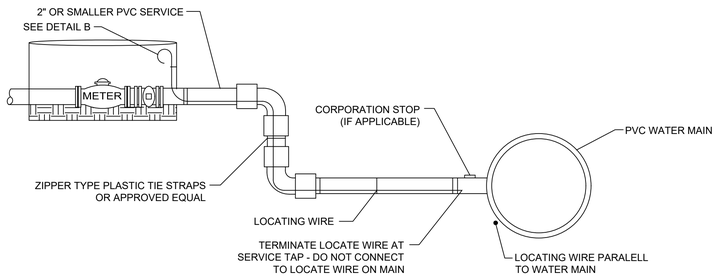
STANDARD FIRE HYDRANT AND D.D.C.V.BACKFLOW PREVENTER DETAILS

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME

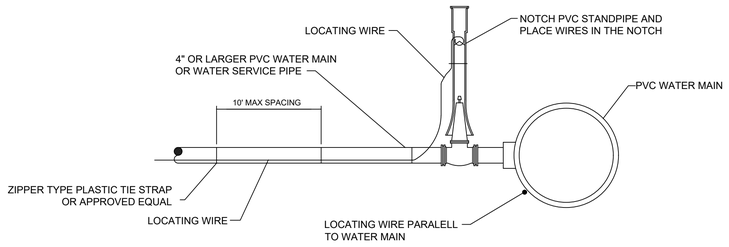
SHEET NO.

WD-4



CONNECTION TO PVC MAINS

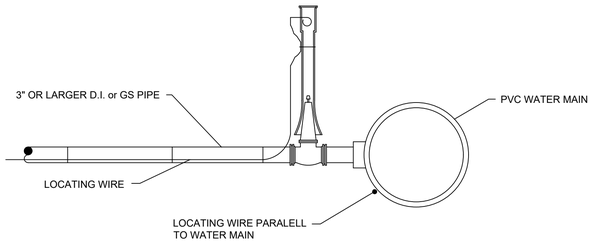
2" OR SMALLER WATER SERVICE
(LONG SERVICES ONLY)



CONNECTION TO PVC MAINS

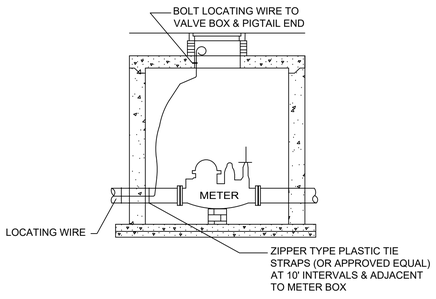
4" OR LARGER PVC WATER MAIN OR WATER SERVICE PIPE

DETAIL - A



CONNECTION TO PVC MAINS

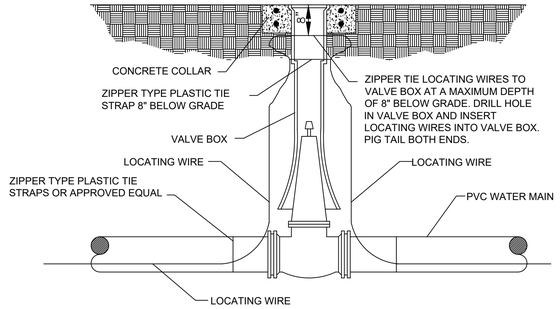
w/3" OR LARGER D.I. OR GS WATER SERVICE OR WATER MAIN



PRECAST METER BOX & COVER
(3" OR LARGER)

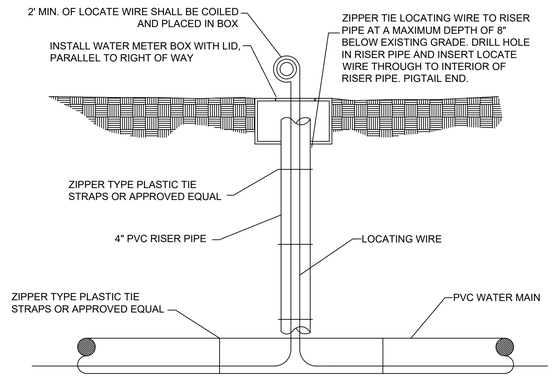
CONNECTION AT METERS BOXES w/ PVC WATER SERVICE

DETAIL - B



IN-LINE LOCATING STATION- PVC PIPE

VALVE BOX WITH VALVE



IN-LINE LOCATING STATION - PVC PIPE

METER BOX

DETAIL - C

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/repaired, 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.

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.

LOCATE WIRE INSTALLATION

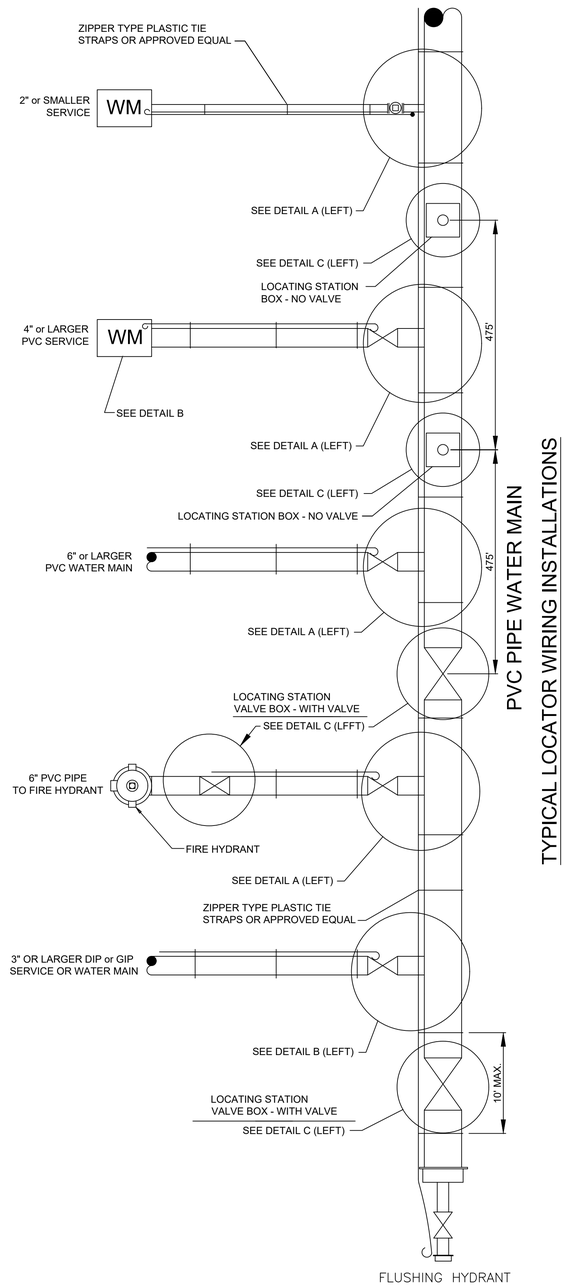
Contractor shall furnish and install locate wiring on all water mains, sewer force mains, and reclaimed water mains (both PVC and ductile 1" inch size and greater. Locate wire must be attached to mains and services with duct tape or approved iron) and on all service mains 1 z plastic zipper ties, (pulled 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 0.09" thick by 3M-Scotch 2210), or plastic enclosure (Snaploo Model LV 9500/951-4 large by TKH) 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 offest from the C/L 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.clayutility.org).



TYPICAL LOCATOR WIRING INSTALLATIONS PVC PIPE WATER MAIN PLAN VIEW

FLUSHING HYDRANT

NOTES:

1. LOCATING WIRE SHALL BE 10 GAUGE, SINGLE STRAND UF RATED (DIRECT BURIAL), COPPER WIRE, OR APPROVED EQUAL.

2) ALL DIRECTIONAL DRILLED PIPES SHALL HAVE 2-8 GUAGE STRAND COPPER-CLAD STEEL CONDUCTORS WITH 45mil HDPE EXTRUDED COATING, AND SHALL BE OF SUFFICIENT LENGTH TO AVOID SPLICING. UNDER NO CIRCUMSTANCES SHALL THE TRACER WIRE BE SPLICED; IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ORDER ROLLS OF WIRE OF THE REQUIRED LENGTH TO AVOID THE NEED FOR SPLICING THE TRACER WIRE.

3. LOCATE BOXES SHALL BE INSTALLED AT THE LOT LINE IN RESIDENTIAL SUBDIVISIONS, OR COMMERCIAL PROPERTIES; BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.

4. WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT, THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO	DATE	BY	REVISION DESCRIPTION
6	JUNE 17	RHD	REVISED NOTES AND DETAILS
5	OCT 2013	RHD	ADDED AS-BUILTS
4	JAN 2013	MRS	REVISED TRACER WIRE DIAGRAM NOTES
3	MAY 07	MRS	GENERAL UPDATES & REVISIONS
2	MARCH 06	MRS	GENERAL UPDATES & REVISIONS
1	JUNE 05	MRS	GENERAL UPDATES & REVISIONS

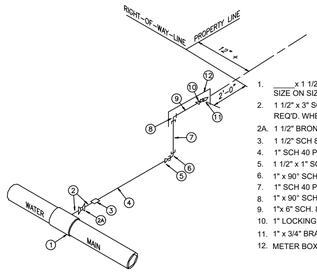
PROJECT:

STANDARD LOCATOR WIRING INSTALLATIONS

CLAY COUNTY
UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

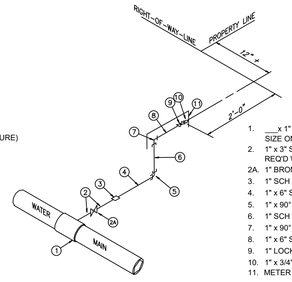
ACAD FILE NAME

WD-5



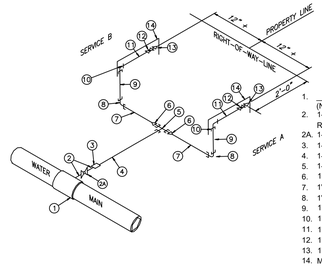
1. ____x 1 1/2" STAINLESS STEEL TAPPING SADDLE, SIZE ON SIZE, (NO DUAL RANGE SADDLES ALLOWED)
2. 1 1/2" x 3" SCH 40 STAINLESS STEEL NIPPLE (ONLY ONE REQ'D. WHEN TAPPING MAIN NOT UNDER PRESSURE)
2A. 1 1/2" BRONZE BALL VALVE (REQ'D. ONLY WHEN TAPPING MAIN UNDER PRESSURE)
3. 1 1/2" SCH 80 FEMALE ADAPTER (SxFIPT)
4. 1" SCH 40 PIPE (PURPLE)
5. 1 1/2" x 1" SCH. 80 RED. BUSHING (SxS)
6. 1" x 90° SCH. 80 BEND (SxS)
7. 1" SCH 40 PIPE (PURPLE)
8. 1" x 90° SCH. 80 BEND (SxT)
9. 1"x 6" SCH. 80 NIPPLE (TxT)
10. 1" LOCKING WING BALL VALVE (SEE TABLE ON WATER DETAILS SHEET)
11. 1" x 3/4" BRASS BUSHING (TxFIPT)
12. METER BOX - SEE CCUA APPROVED MATERIALS MANUAL.

LONG SINGLE RECLAIMED SERVICES



1. ___x 1" STAINLESS STEEL TAPPING SADDLE, SIZE ON SIZE, (NO DUAL RANGE SADDLES ALLOWED)
2. 1" x 3" SCH 40 STAINLESS STEEL NIPPLE (ONLY ONE REQ'D WHEN TAPPING MAIN NOT UNDER PRESSURE)
2A. 1" BRONZE BALL VALVE (REQ'D. ONLY WHEN TAPPING MAIN UNDER PRESSURE)
3. 1" SCH 80 FEMALE ADAPTER (SxFIPT)
4. 1" x 6" SCH 40 PVC PIPE (PURPLE)
5. 1" x 90° SCH 80 PVC ELL. (SxS)
6. 1" SCH 40 PVC PIPE (PURPLE)
7. 1" x 90° SCH 80 PVC ELL. (SxFIPT)
8. 1" x 6" SCH 80 PVC NIPPLE (TxT)
9. 1" LOCKING WING BALL VALVE (SEE TABLE ON WATER DETAILS SHEET)
10. 1" x 3/4" BRASS RED. BUSHING (Tx FIPT)
11. METER BOX - SEE CCUA APPROVED MATERIALS MANUAL

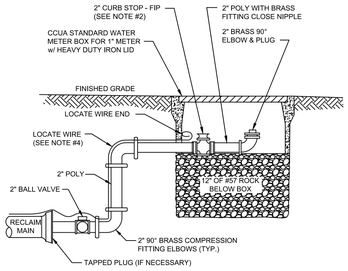
SHORT SINGLE RECLAIMED SERVICES



1. ___X 1-1/2" STAINLESS STEEL TAPPING SADDLE (NO DUAL RANGE SADDLES ALLOWED)
2. 1-1/2" x 3" SCH 40 STAINLESS STEEL NIPPLE (ONLY ONE REQ'D. WHEN TAPPING MAIN NOT UNDER PRESSURE)
2A. 1-1/2" BRONZE BALL VALVE (REQ'D. ONLY WHEN TAPPING MAIN UNDER PRESSURE)
3. 1-1/2" SCH 80 PVC FEMALE ADAPTER
4. 1-1/2" SCH 40 PVC PIPE (PURPLE)
5. 1-1/2" SCH 80 PVC TEE (SxSxS)
6. 1-1/2" x 1" SCH 80 PVC REDUCING BUSHING (SxS), AS REQUIRED
7. 1" x 12" SCH 40 PVC PIPE (PURPLE)
8. 1" x 90° SCH 80 PVC BEND (SxS)
9. 1" SCH 40 PVC PIPE (PURPLE)
10. 1" x 90° SCH 80 PVC BEND (SxT)
11. 1" x 6" SCH 80 PVC NIPPLE (TxT)
12. 1" LOCKING WING BALL VALVE (SEE TABLE ON WATER DETAILS SHEET)
13. 1" x 3/4" BRASS REDUCING BUSHING (Tx FIPT)
14. METER BOX - SEE CCUA APPROVED MATERIALS MANUAL

DOUBLE RECLAIMED SERVICES

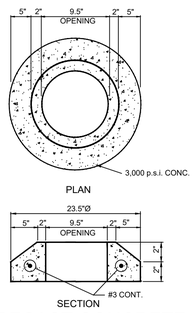
NOTE: ALL RECLAIMED WATER SERVICES ARE TO BE INSTALLED ON ONE LOT LINE AND POTABLE WATER SERVICES ARE TO BE INSTALLED ON THE OTHER. THIS IS TO ALLOW SEPARATION OF THE TWO WATER SERVICES. SEWER SERVICES ARE TO BE INSTALLED AT THE MIDDLE OF THE LOT.



NOTES

1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
4. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
5. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE



PRECAST CONCRETE VALVE BOX COLLAR

FINAL INSPECTION PROCEDURES

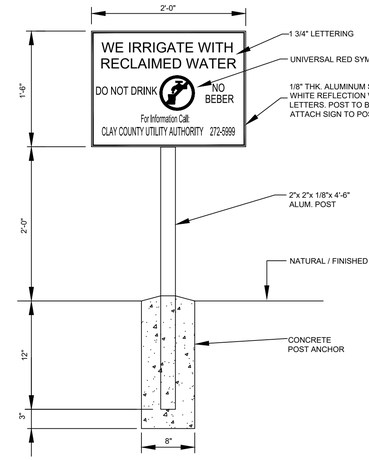
PRIOR TO FINAL INSPECTION, THE Contractor SHALL PROVIDE THE FOLLOWING: 1. The pressure test and flushing report.
2. The Engineer of Record certification to FDEP, this can be done with preliminary as-builts.
3. Preliminary as-builts showing at least the following: location of valves, mains, services and manholes.
4. All services and valves to be plainly marked with a treated fence post.
5. The reclaimed water use warning sign/signs shall be installed.

PRIOR TO FINAL ACCEPTANCE FOR OWNERSHIP, THE FOLLOWING MUST BE COMPLETED:
1. Reclaimed water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves, recast concrete valve box collar must be in place on all gate valves.
2. As-built drawings shall have been updated to accommodate the Clay County Utility Authority's comments (shall comply to the guidance set forth in CCUA's `As-built Specifications Standards Manual', which can be obtained from CCUA's website www.clayutility.org).
3. As-builts must be accepted by the Clay County Utility Authority.
4. All valves and single services should be scribed in curb and painted the correct color for each.

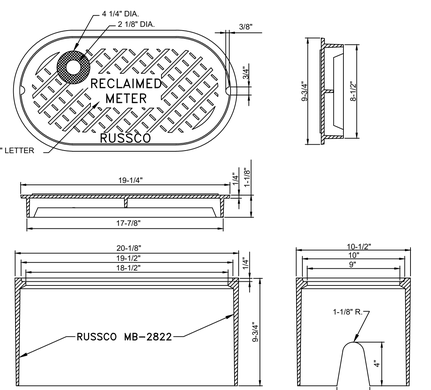
OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF RECLAIMED WATER DISTRIBUTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new reclaimed 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, and valve boxes shall be adjusted to finished grade.
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 by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (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, bends and fire hydrants. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per Manufacturer's recommendations and Clay County Utility Authority Details and Specifications (SEE RESTRAINED JOINT SCHEDULE). See CCUA Approved Materials Manual for acceptable restraints.
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, length, 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. All ductile iron piping shall be wrapped with purple tape and stamped "Reclaimed Water" on at least two sides @ 12" o.c. along pipe barrel. Ductile iron pipe for reclaimed water or service lines shall be used in any easement, right-of-way, between lots, and any instance where a building foundation or other permanent appurtenance is within 10' of the water main or a service line larger 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 reclaimed water service. Minimum working pressure shall be 150 p.s.i.
08. POLYVINYL CHLORIDE PIPE. Polyvinyl chloride pipe for water mains 4 inch through 24 inches in diameter, shall be DR18 (C900) Pressure Class 235 psi PVC 1120; reclaim mains above 24 inches in diameter shall be DR25 (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 12454, ASTM F-477, ASTM D-3139, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be color coded and marked "RECLAIMED WATER" at every 12" along the barrel of the pipe, with lettering facing up. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122.
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. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 40) PIPE shall conform to the requirements of ASTM D 1785. Fittings and threaded nipples shall be Schedule 80 PVC. All piping smaller than 4" shall be Schedule 40 or Schedule 80 as detailed. Schedule 40 PVC pipe shall be Pantone purple 522C and marked "Reclaimed Water".
11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, flanged 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 3" and larger shall be iron body, bronze fitted with resilient seat. Valves shall be of DOMESTIC (American) manufacture and shall be those listed in CCUA Approved Material Manual. Valves 16" and larger shall be AWWA C-515. Valve boxes with screw extensions shall be provided for all gate valves. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "RECLAIMED WATER" shall be cast in the cover. Other gate valves smaller than 2" shall be heavy-duty bronze ball valves. Box covers to be primed and painted Pantone Purple 522C.
12. RECLAIMED 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. A treated 6'-6" fence post marker shall be installed at the side of and centered on the meter box and painted Pantone Purple 522C 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, roundway, with check, lock wing type, for locking in the closed position. See CCUA Approved Materials Manual for acceptable curb stops.
14. PRESSURE REDUCING VALVES (when and where required) The pressure reducing valve shall maintain a constant delivery pressure as part of the service to each residential irrigation system. Pressure reducing valves shall conform with the standard requirements of the ASSE (Std. 1003) and WPOA Uniform Plumbing Code. Approved model: Watts Series USB or equal.
15. INSTALLATION. The minimum cover over top of reclaimed water main shall be 48". All lines and appurtenances shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. All pipe shall be checked for defects before being lowered into the trench. Defective pipe shall not be used. Pipe found to be defective after installation, shall be removed and replaced with sound pipe at no additional expense to the Owner. The full length of each section of pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate the bells and joints. All pipe that has the grade or joint disturbed after laying shall be taken up and reinstalled. The pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work. All joints shall be cleaned of all foreign matter before making the joint. Fittings at bends in the pipe shall be properly restrained with joint restrainers adequately sized to prevent movement and dislocating or blowing off when the line is under pressure. Service laterals shall terminate at the point noted in the details. All reclaimed mains shall be installed with tracer wire per CCUA standard location wire details.
16. SEPARATION OF RECLAIMED WATER MAINS. Maximum separation of reclaimed water lines and potable water lines shall be practiced. A minimum horizontal separation of three feet, outside-to-outside, shall be maintained between reclaimed water mains and either potable water mains or wastewater pipes. Reclaimed water mains crossing under water mains shall be laid to provide a minimum vertical separation of 18 inches between the invert of the upper pipe and the crown of the lower pipe. Where the minimum separation cannot be maintained, the crossing shall be arranged such that the reclaimed water main pipe joints and potable water main joints are equidistant from the point of crossing with no less than ten feet between joints. Alternatively, the reclaimed water main shall be placed in a sleeve to obtain the equivalent of the required ten feet separation. Where there is no alternative to reclaimed water pipes crossing over a water main, the criteria for minimum separation between lines and joints shall be required.
17. PIPE FLUSHING. All reclaimed water system piping shall be flushed with clean water utilizing full pipe diameter flushing. 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. All flushing must be contained.
18. 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 be in accordance with the CCUA's requirements and specifications. Curb and limerock may be installed after construction of the reclaimed water mains, however, limerock priming cannot proceed until such time as the CCUA inspector approves the reclaimed water distribution system pressure test. This will be strictly enforced. If the reclaimed water system is damaged during any of the operations prior to paving, a follow up test may be required by the Clay County Utility Authority.
19. WARNING SIGN. Each development, subdivision, or commercial establishment, regardless of the number of buildings, shall install reclaimed water use warning signs at the entrance or any other street or driveway entering any properties which use reclaimed water. The signs shall meet the requirements of CCUA details and specifications. The signs shall be a requirement whether shown on plans or not. Direction of locating those signs shall be given by the CCUA inspector on site.
20. POLYETHYLENE TUBING SERVICE LINES AND MAINS (2 INCH AND SMALLER):
Tubing shall be manufactured of PE 4710, High Density Polyethylene (HDPE), in accordance with AWWA C901, ASTM D1248, ASTM D2239, ASTM D3737 and ASTM D3350. The tubing shall have a minimum working pressure of 250 psi. Polyethylene tubing shall be copper tube size SDR-9 and shall be colored purple. HDPE pipe shall have ultraviolet (UV) inhibitors for protection against direct sunlight for 1 year. Inserts for polyethylene tubing may be utilized, at Contractors options, and, if used, shall be 316 stainless steel. The use of no-lead brass couplings, tees and "Y" fittings are acceptable on poly service tubing, if not located under a roadway. Tubing shall be approved for use with potable water by the National Sanitation Foundation (NSF-14) and shall be continuously marked at intervals of not more than four feet with the following:
- Nominal size
- Pressure rating
- NSF seal
- Manufacturer's name or trademark
- Standard dimension ratio
- ASTM specification

METER VAULT - 3" AND LARGER METERS

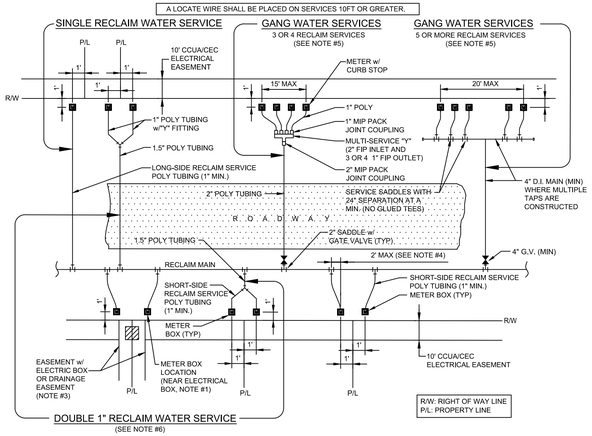


RECLAIMED WATER USE/WARNING SIGN



NOTE:
TOLERANCE SHOULD BE ± 1/16", UNLESS OTHERWISE SPECIFIED.
MATERIAL: CAST IRON ASTM A48 CLASS 25B
COATING: PAINTED
WEIGHT: 46 LBS(SET)

ROME METER BOX & LID W/ TOUCH READ HOLE



NOTES

1. THE SKETCHES ABOVE INDICATE TYPICAL RECLAIM WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL LOCATED 1.0' OFF OF THE R/W LINE.

2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BRADFORD), THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' 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.

3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.

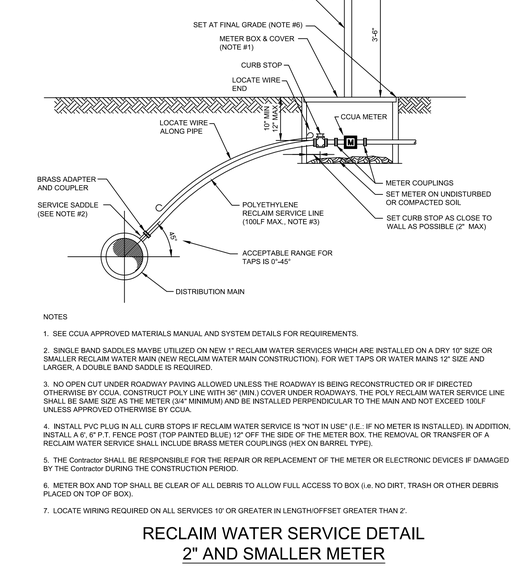
4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN)BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 1" SERVICES, THE 1 ½" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' OR GREATER IN 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 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND), ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.

5. 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 STAGGERED AND AT 2 FEET ON CENTER-MIN). 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.P CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"x1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.

6. DOUBLE 1" RECLAIM WATER SERVICES IS ALLOWED FOR SHORT SIDE OR LONG SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.

7. RECLAIMED WATER METER BOXES OR SERVICES SHALL BE LOCATED AT A MIN. OF 10' FROM THE EXISTING POTABLE WATER SERVICE AND/OR BOX, AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY CCUA.

RECLAIM WATER SERVICE INSTALLATIONS 2" AND SMALLER METER



NOTES

1. SEE CCUA APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.

2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" RECLAIM WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER RECLAIM WATER MAIN (NEW RECLAIM WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.

3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY RECLAIM WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS APPROVED OTHERWISE BY CCUA.

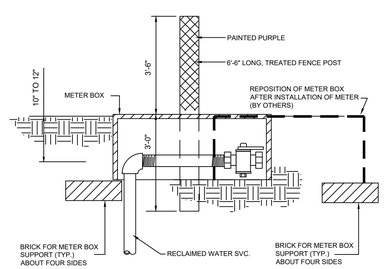
4. INSTALL PVC PLUG IN ALL CURB STOPS IF RECLAIM WATER SERVICE IS 'NOT IN USE' (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6', 6" P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF THE SIDE OF THE METER BOX. THE REMOVAL OR TRANSFER OF A RECLAIM WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).

5. 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.

6. 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).

7. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH/OFFSET GREATER THAN 2'.

RECLAIM WATER SERVICE DETAIL 2" AND SMALLER METER



NOTE:
ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER POST PAINTED PURPLE. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 8" TO 10" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LW BALL VALVE AT THAT ELEVATION. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.

RECLAIMED SERVICE LOCATION POST

NO	DATE	BY	REVISION DESCRIPTION
19	JUNE 17	RHD	REVISED NOTES AND DETAILS
18	SEPT. 16	RHD	REVISED SERVICE SIZES 1" SVC
17	MAR. 16	RHD	REVISED SINGLE LENG SIDE SVC
16	DEC. 15	RHD	REVISED TAPPING SADDLES
15	DATE 01	RHD	REVISED 02. & FINAL INSPECTION NOTES
14	MAY 13	RHD	REVISED PARAGRAPH 17 OF OUTLINE SPECS
13	MAY 13	RHD	REVISED PARAGRAPH 17 OF OUTLINE SPECS
12	APRIL 08	MRS	ADDED RESTRAINED JOINT SCHEDULE
11	APRIL 08	MRS	ADDED RESTRAINED JOINT SCHEDULE
10	JUNE 05	MRS	GENERAL UPDATES AND REVISIONS
9	JUNE 05	DSJ	GENERAL UPDATES AND REVISIONS
8	JUNE 05	MRS	GENERAL UPDATES AND REVISIONS
7	JUNE 04	MRS	GENERAL UPDATES AND REVISIONS
6	JUNE 03	DJR	GENERAL UPDATES AND REVISIONS
5	AUG. 01	CAR	GENERAL UPDATES AND REVISIONS
4	JUNE 01	MRS	GENERAL UPDATES AND REVISIONS

DESG
DRWN
CHKD
APRV
DATE

PROJECT:
RECLAIMED WATER DISTRIBUTION SYSTEM DETAILS AND SPECIFICATIONS

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
PHONE (904) 272-5999

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

ACAD FILE NAME
REUSE1.DWG
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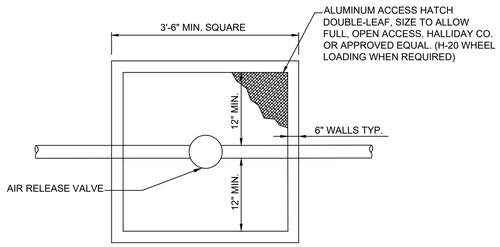
RD-1



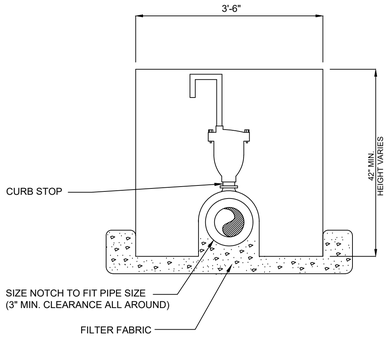
NOTES:

1. CONC. BOX SHALL BE 42" MIN. DEPTH BUT SHALL BE DEEP ENOUGH TO ACCOMMODATE THE SIZE PIPE AND TYPE OF AIR RELEASE VALVE REQUIRED, WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED WITH 36" COVER FROM TOP OF PIPE TO FINISH GRADE, ON 12" OF #57 STONE. WITH FILTER FABRIC ABOVE AND BELOW THE STONE.

2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY C.C.U.A.

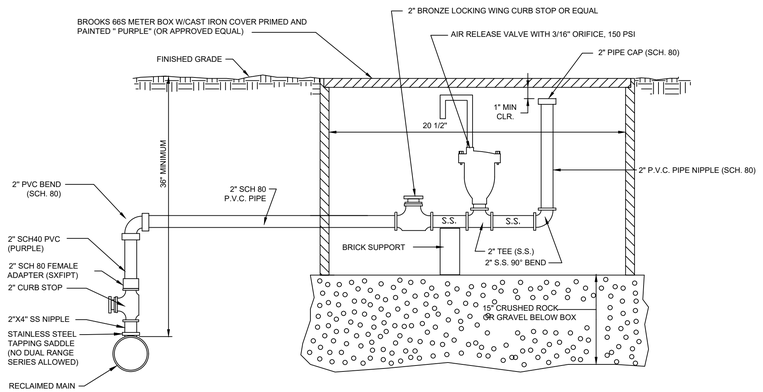
3. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF PIPE INSTALLED

NOTE: WIDTH VAIRES TO ACCEPT PIPE SIZES OVER 8"



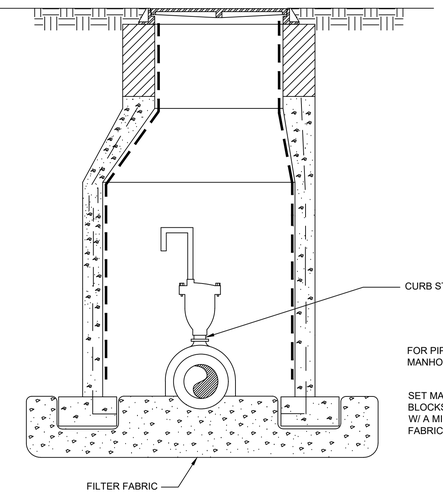
REUSE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 12" OR LARGER



AIR RELEASE VALVE DETAIL

NTS



FOR PIPE 10" OR SMALLER A 4' DIAMETER, NOTCHED MANHOLE CAN BE USED FOR AIR RELEASE VALVE.

SET MANHOLE ON MIN. OF 4 SOLID CONCRETE BLOCKS SPACED EVENLY AROUND THE MANHOLE W/ A MIN. OF 12"#57 STONE WITH FILTER FABRIC ABOVE AND BELOW THE STONE.

REUSE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 12" OR SMALLER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO	DATE	BY	REVISION DESCRIPTION
7	MAY 06	MRS	PRECAST CONCRETE ADJUSTING RINGS
6	SEP 04	DGJ	REUSE MAIN AIR RELEASE VALVE VAULT
5	JUNE 03	CAR	GENERAL UPDATES AND REVISIONS
4	AUG 01	CAR	GENERAL UPDATES AND REVISIONS
3	SEPT.00	CAR	GENERAL UPDATES AND REVISIONS
2	NOV 99	CAR	GENERAL UPDATES AND REVISIONS
1	JULY 98	CAR	GENERAL UPDATES AND REVISIONS

DESG
DRWN
CHKD
APRV
DATE

PROJECT:

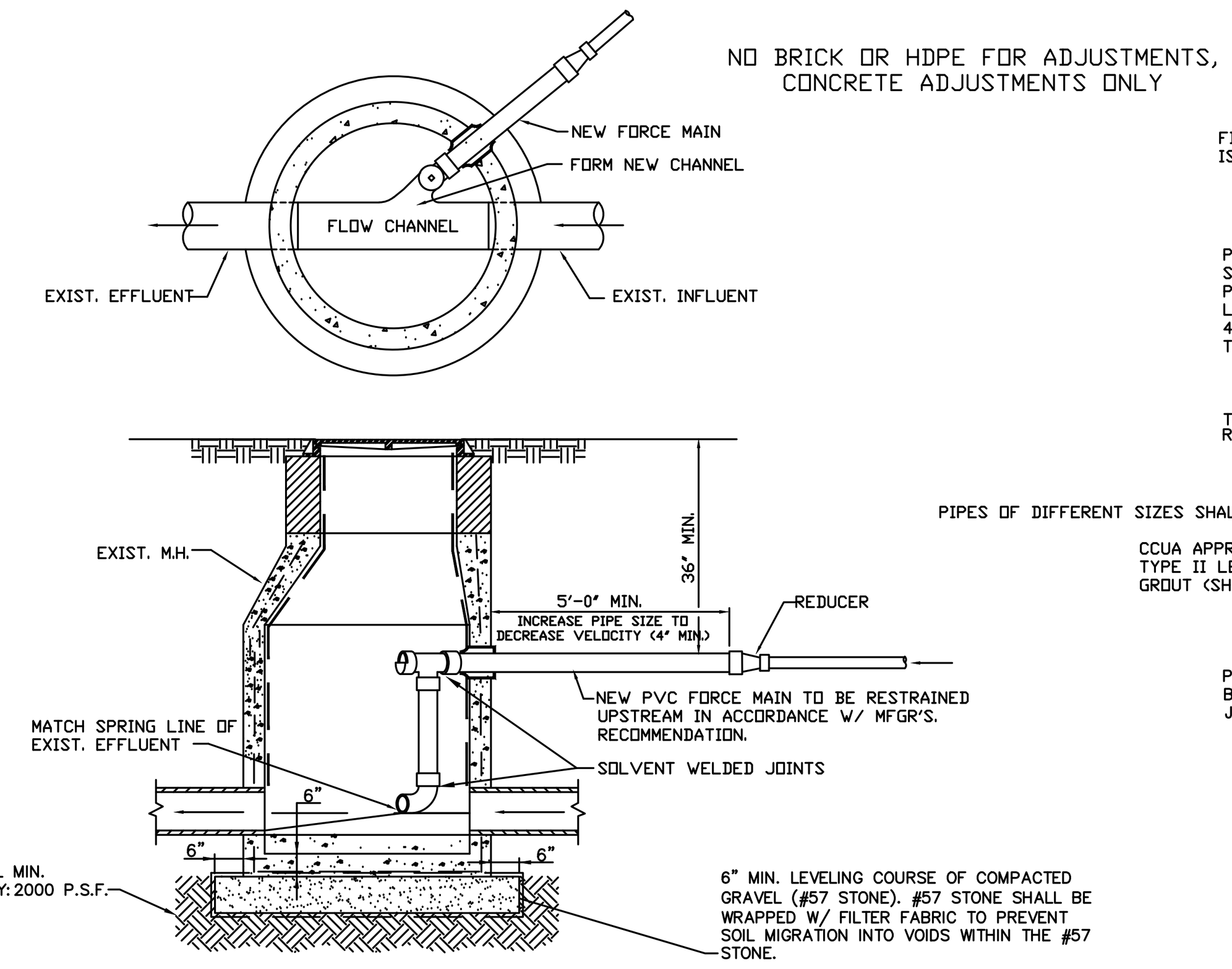
RECLAIMED WATER DISTRIBUTION SYSTEM DETAILS AND SPECIFICATIONS 2

CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
PHONE (904) 272-5999

ACAD FILE NAME

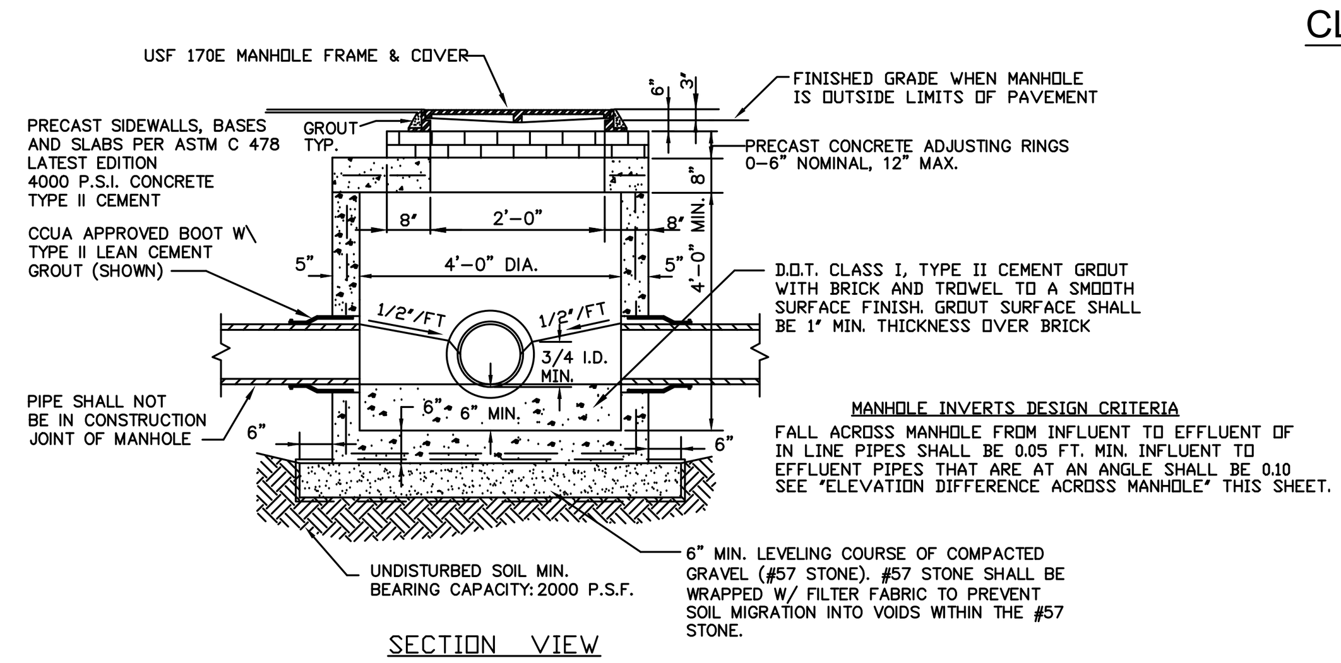
SHEET NO.

RD-2



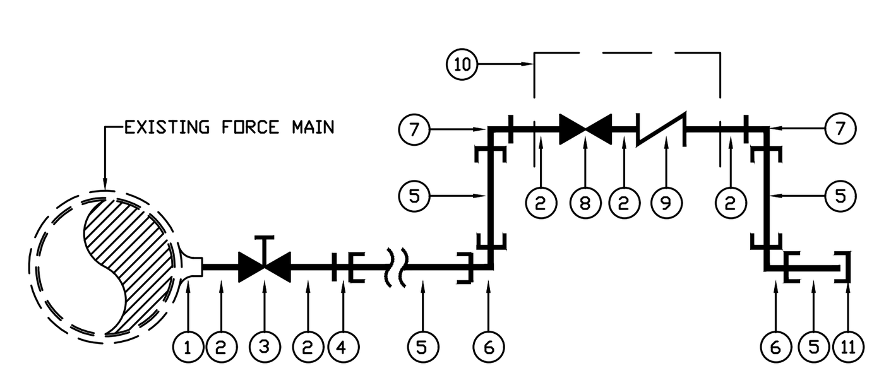
TYPICAL FORCE MAIN CONNECTION TO MANHOLE

NOTE:
1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY STANDARD PRECAST CO. (AGRU SURE GRIP) OR APPROVED EQUAL.
2. IF CONNECTION IS BEING MADE TO AN EXISTING MANHOLE, THAT MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY), SHALL BE LINED WITH 'SPECTRASHIELD' OR APPROVED EQUAL.
3. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SIZE SHALL BE 4'. CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT 'SPLASHOVER' WITHIN THE MANHOLE. 5'-0' MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.



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 0.10 SEE 'ELEVATION DIFFERENCE ACROSS MANHOLE' THIS SHEET.

SHALLOW SANITARY SEWER MANHOLE



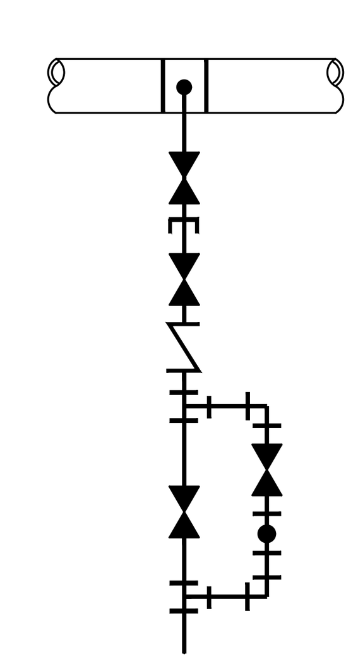
MATERIAL LIST

1. ALL STAINLESS STEEL TAPPING SADDLE
2. 2' x 3' STAINLESS STEEL NIPPLE
3. 2' H.D. BRONZE BALL VALVE (FULL OPENING)
4. 2' SCH.80 FEMALE ADAPTER (S x FIPT)
5. 2' SCH.80 PIPE
6. 2', 90° SCH.80 BEND (S x S)
7. 2', 90° SCH.80 BEND (S x T)
8. 2' BRONZE BALL VALVE W/ LOCKING WING (SEE TABLE ON WATER SHEET)
9. 2' 508 DANFOSS FLOWMATIC CHECK VALVE (PART # 3235)
10. METER/VALVE BOX, DFW 1324C-12-2 w/ 'SEWER' ON LID
11. 2' SCH.40 CAP (S)

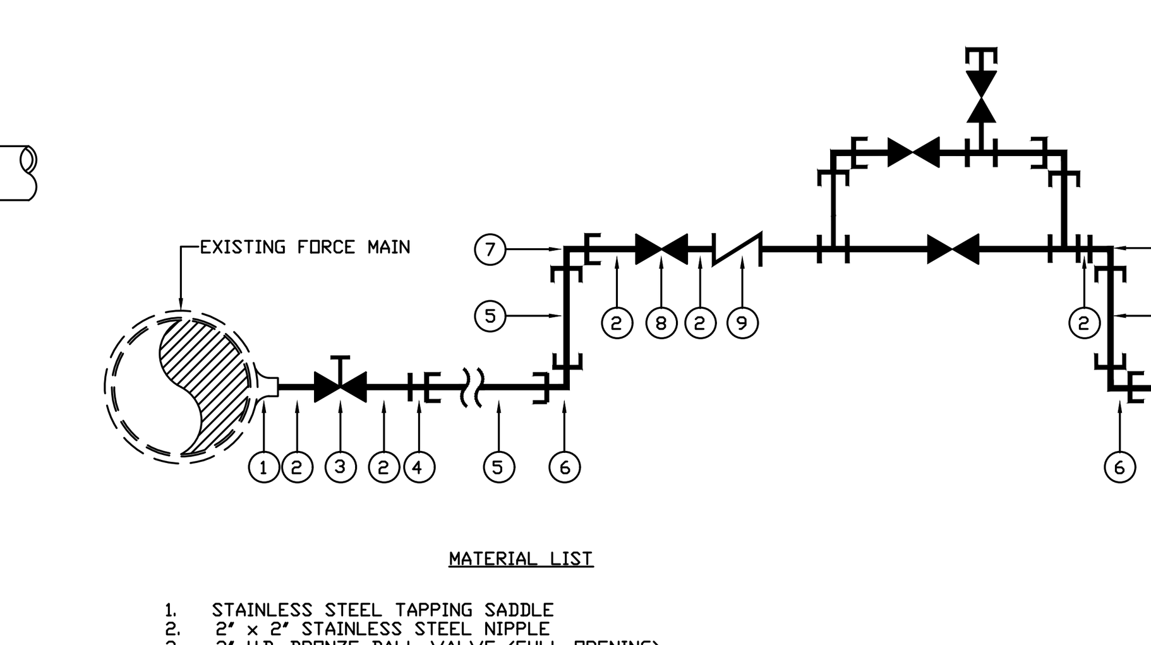
NOTE: ENGINEER TO VERIFY THAT THE SIZE OF SERVICE IS ADEQUATE AND IS TO ADJUST ACCORDING TO HIS FINDING.

2" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION DETAIL

FOR MEDIUM TO HIGH PRESSURE CONNECTION SYSTEMS



TOP VIEW



MATERIAL LIST

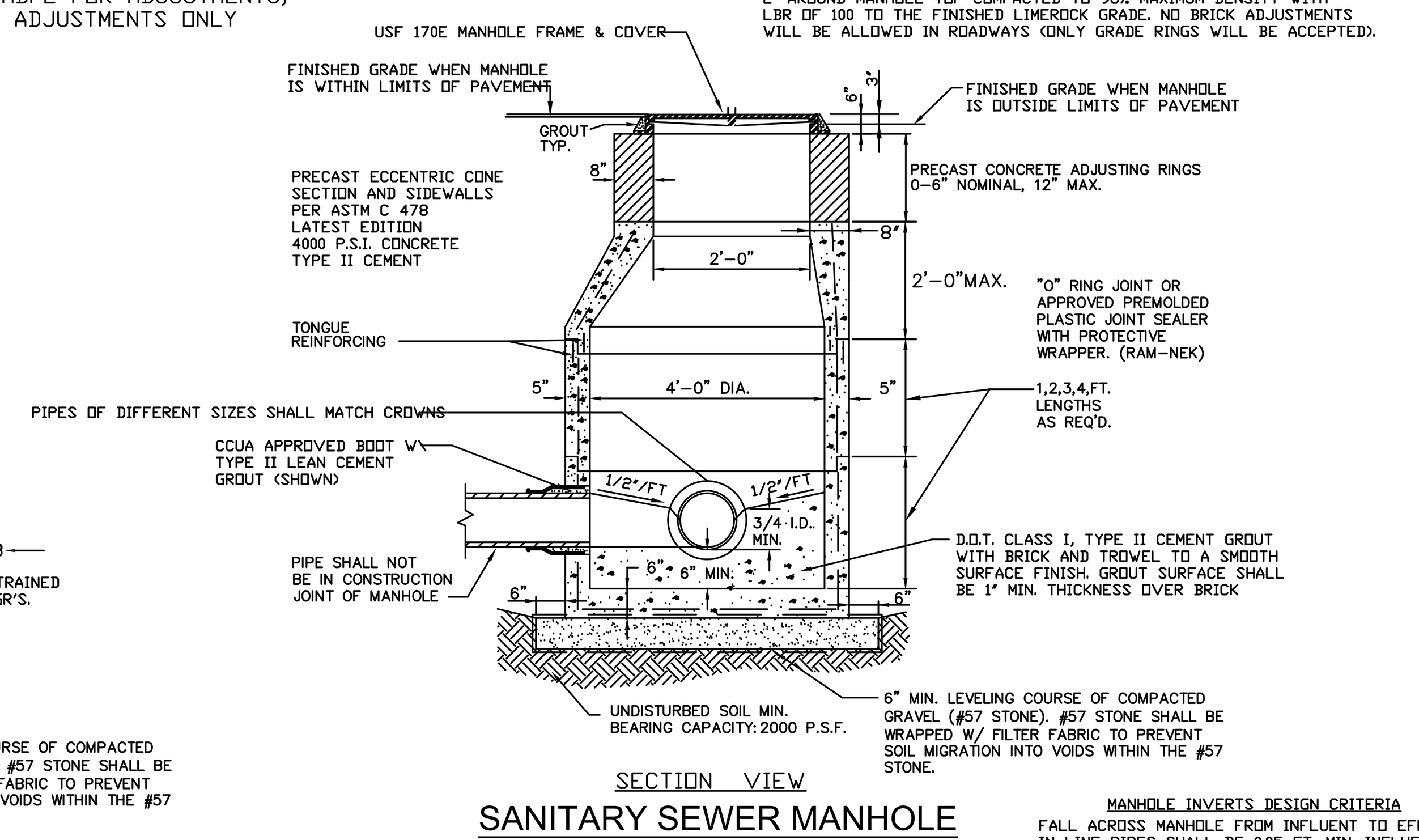
1. STAINLESS STEEL TAPPING SADDLE
2. 2' x 2' STAINLESS STEEL NIPPLE
3. 2' H.D. BRONZE BALL VALVE (FULL OPENING)
4. 2' SCH.80 FEMALE ADAPTER (S x FIPT)
5. 2' SCH.80 PIPE
6. 2', 90° SCH.80 BEND (S x S)
7. 2', 90° SCH.80 BEND (S x T)
8. (3) 2' BRONZE BALL VALVE W/ LOCKING WING (SEE TABLE ON WATER SHEET)
9. 2' 508 DANFOSS FLOWMATIC CHECK VALVE (PART # 3235)
10. METER/VALVE BOX, DFW 1324C-12-2 w/ 'SEWER' ON LID
11. 2' SCH.40 CAP (S)
12. 2' TEE W/ 2 X 1/2' BUSHING
13. 1/2' STAINLESS STEEL NIPPLE W/ BALL VALVE & PLUG

NOTE: ENGINEER TO VERIFY THAT THE SIZE OF SERVICE IS ADEQUATE AND IS TO ADJUST ACCORDING TO HIS FINDING.

SEWAGE FORCE MAIN MANIFOLD

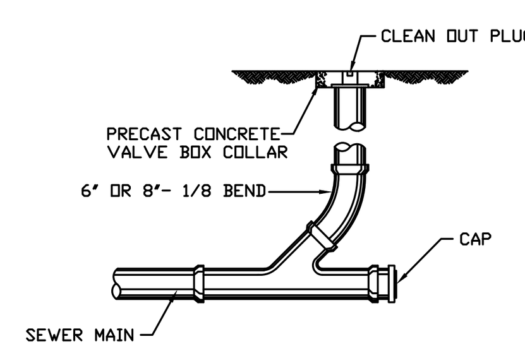
SERVICE CONNECTION (WITH PRESSURE GAUGE FITTING)
FOR LOW PRESSURE RECEIVING SYSTEMS
FOR CREATING ARTIFICIAL HEAD PRESSURE

COMPACTION IN ROADWAYS AROUND MANHOLES
COMPACTION SHALL BE IN 12' LIFTS. THE LAST 18' WILL BE LIMEROCK, 2' AROUND MANHOLE TOP COMPACTED TO 98% MAXIMUM DENSITY WITH LBR OF 100 TO THE FINISHED LIMEROCK GRADE. NO BRICK ADJUSTMENTS WILL BE ALLOWED IN ROADWAYS (ONLY GRADE RINGS WILL BE ACCEPTED).



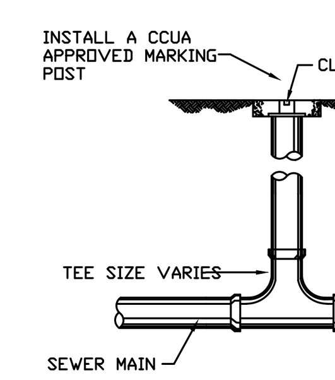
SANITARY SEWER MANHOLE

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 0.10 SEE 'ELEVATION DIFFERENCE ACROSS MANHOLE' THIS SHEET.



CLEANOUT DETAIL

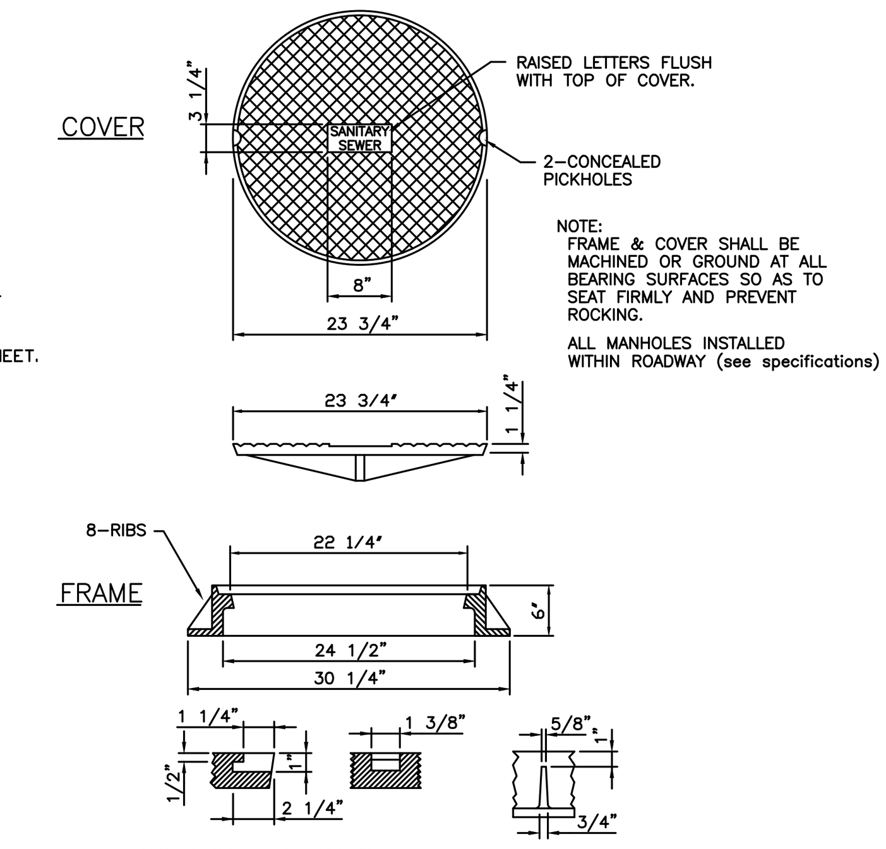
N.T.S.



TO BE INSTALLED AT ALL LOCATIONS CALLING FOR A SEWER STUBOUT REGARDLESS OF DISTANCE FROM MANHOLE. MINIMUM SIZE SHALL BE 6" PIPE AND CLEANOUT PLUG. CORRECT INVERT AND ELEVATIONS SHALL BE INCLUDED W/ THE ASBUILT DRAWING INFORMATION.

STANDARD STUBOUT SURVEY ACCESSIBLE CLEANOUT

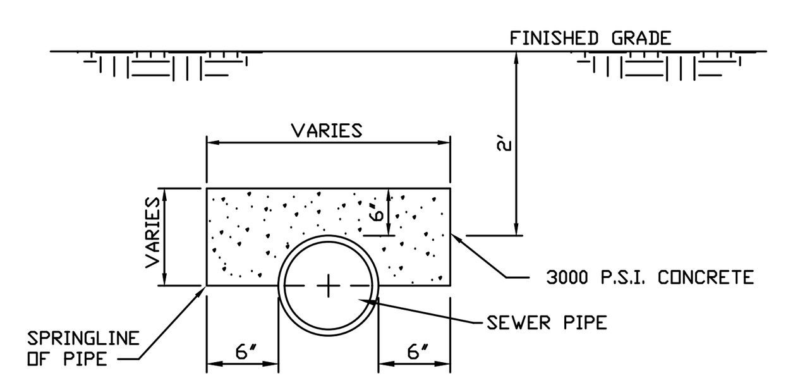
N.T.S.



NOTE:
FRAME & COVER SHALL BE MACHINED OR GROUND AT ALL BEARING SURFACES SO AS TO SEAT FIRMLY AND PREVENT ROCKING.
ALL MANHOLES INSTALLED WITHIN ROADWAY (see specifications)

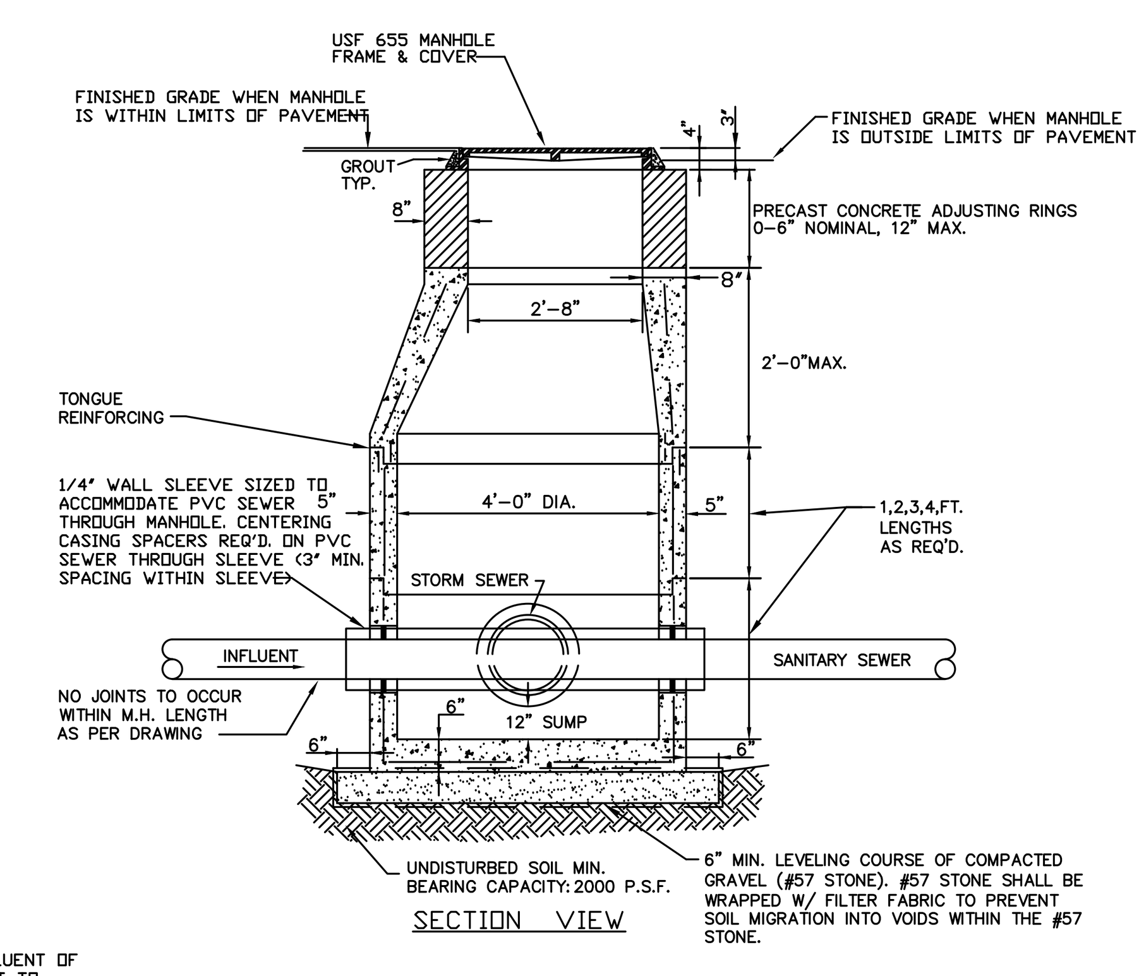
MANHOLE FRAME AND COVER SHALL BE USF CO. MOD. NO. 170E

SANITARY SEWER MANHOLE FRAME & COVER

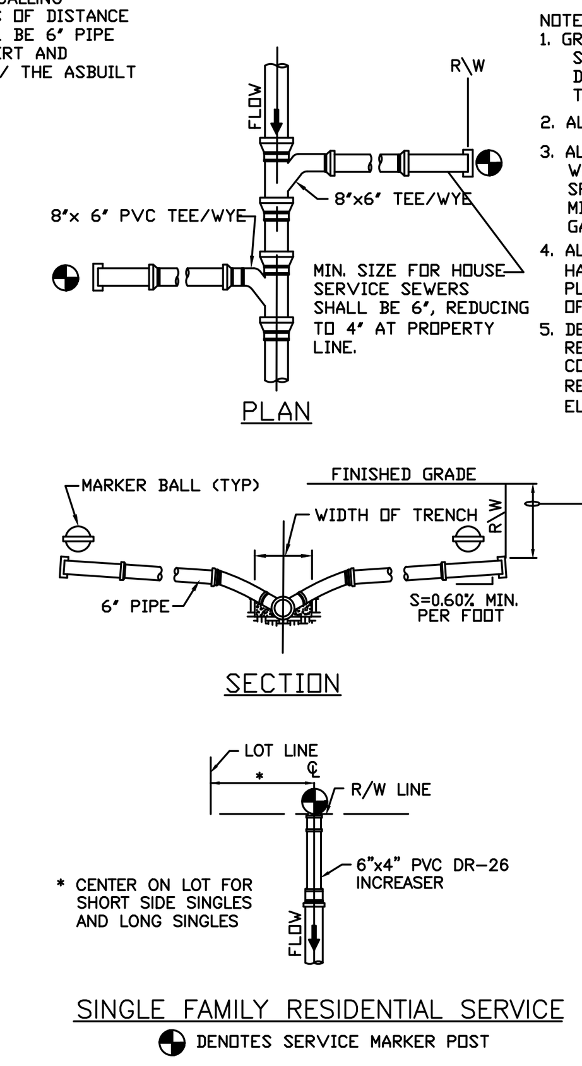


REQUIRED WHERE TOP OF SEWER PIPE IS WITHIN 2' OF FINISHED GRADE UNLESS ALTERNATE DETAIL IS APPROVED BY THE CLAY COUNTY UTILITY AUTHORITY.

CONCRETE CAP FOR SEWER PIPES

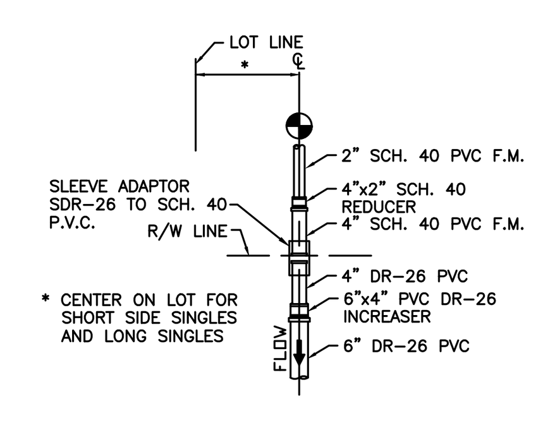


STORM CONFLICT MANHOLE

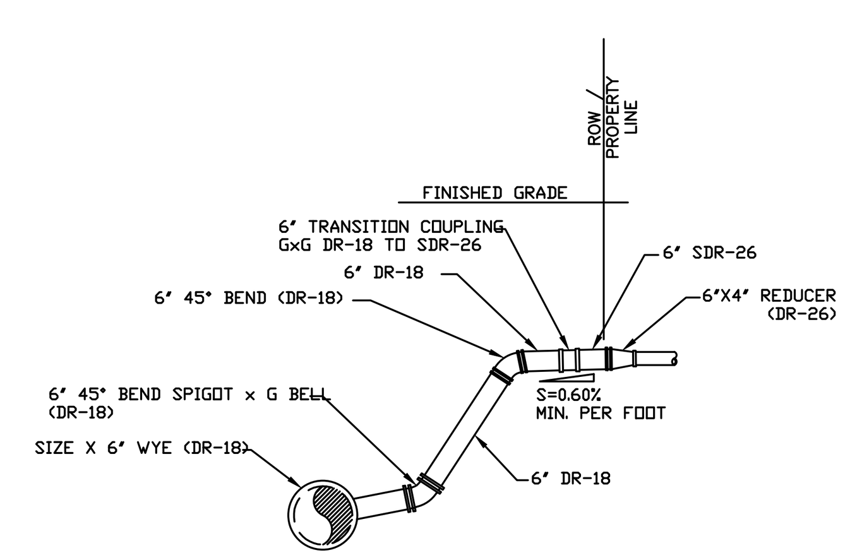


NOTE:
1. GRAVITY SEWER AND SERVICE PIPE SHALL BE INSTALLED WITH THE DIRECTION OF FLOW FROM SPIGOT TO BELL.
2. ALL TEE-WYES SHALL BE BELL-SPIGOT.
3. ALL TEE-WYES SHALL BE COMPATIBLE WITH SEWER PIPE BELLS BEING USED. SPIGOT END OF TEE-WYE SHALL BE A MINIMUM OF 2' BEYOND THE BELL GASKET WHEN 'HOMED UP'.
4. ALL SEWER SERVICE PIPES SHALL HAVE AN ELECTRONIC MARKER (GREEN) PLACED ON TOP OF PIPE AT EACH END OF PIPE.
5. DETAIL SHOWN IS FOR RESIDENTIAL CONNECTION. COMMERCIAL OR OTHER USE REQUIRING A 6' LATERAL CAN ELIMINATE THE 6'X4' REDUCER.

STANDARD SINGLE SEWER SERVICE LATERALS



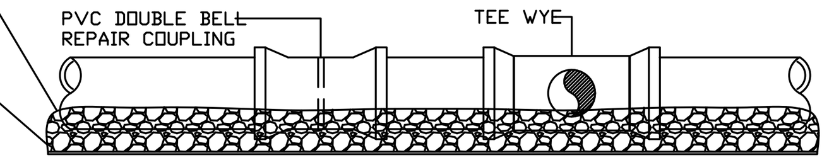
GRINDER PUMP STATION FORCE MAIN CONNECTION TO SINGLE GRAVITY SERVICE



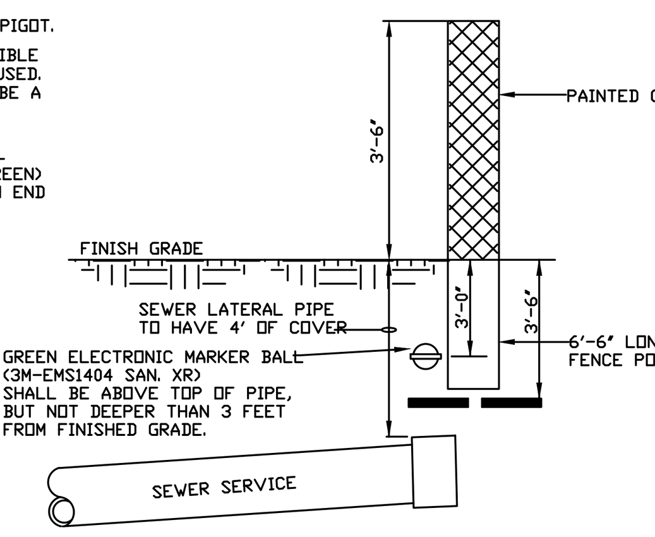
SEWER SERVICE LATERAL ON GRAVITY MAIN 13' OR DEEPER

#57 STONE WITH FINES BACKFILL WITH FINES TIGHTLY COMPACTED TO SPRING LINE OF SEWER MAIN

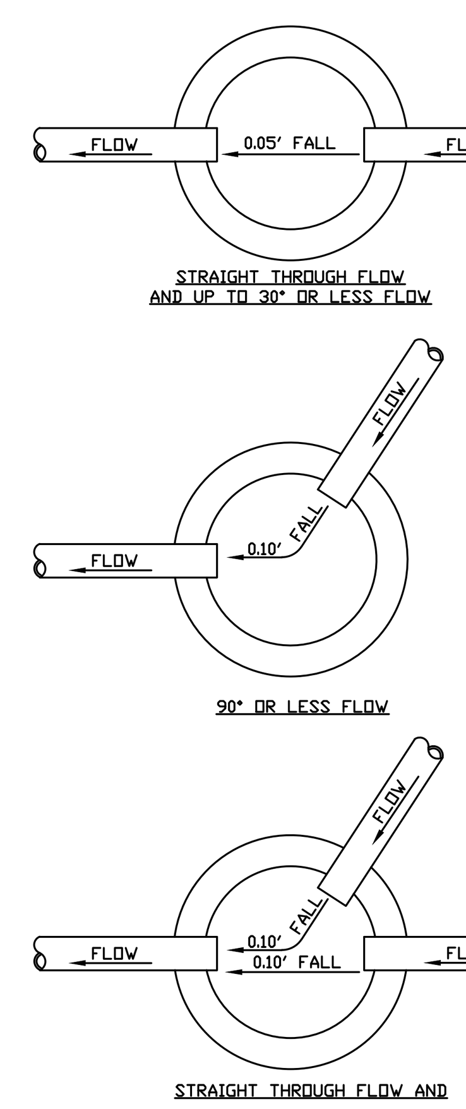
MIN. 6' #57 UNDER BOTTOM OF SEWER MAIN AND FITTING, COMPACTED TO GRADE PRIOR TO INSTALLING TEE WYE, AND REPAIR COUPLING STONE BACKFILL TO EXTEND MIN. OF 1.5' BEYOND ALL FITTINGS, AND UP TO SPRING LINE OF SEWER MAIN. COVER ALL OF THE ROCK BEDDING MATERIAL W/ FILTER FABRIC BEFORE CONTINUING BACKFILL. EXCAVATION TO BE DEWATERED AND DRY DURING ALL PHASES OF CUTTING IN NEW WYE.



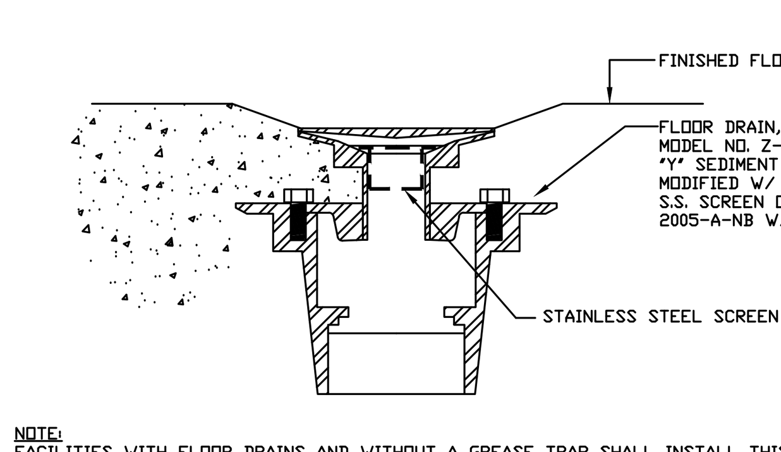
CUTTING IN SERVICE LATERAL TO EXISTING SEWER MAIN



SEWER SERVICE MARKER POST

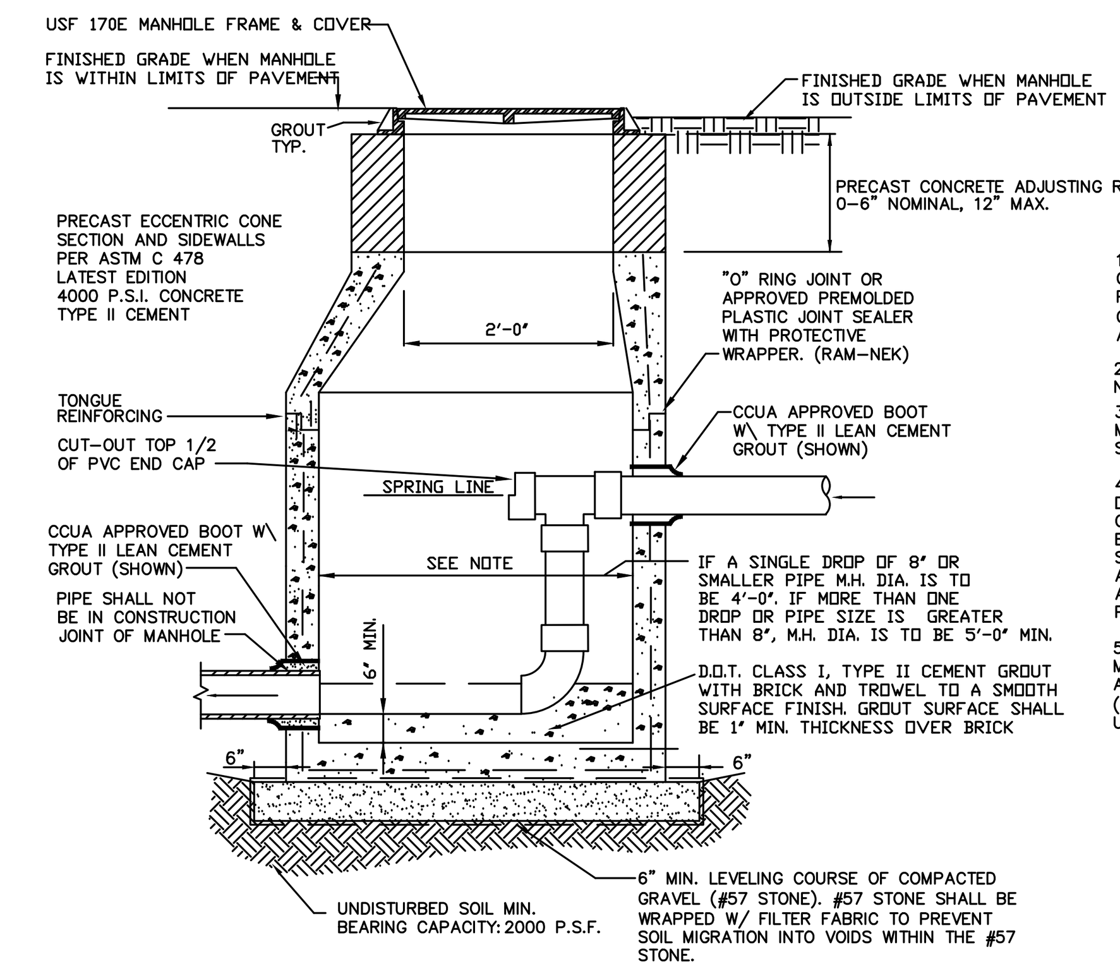


ELEVATION DIFFERENCE ACROSS MANHOLE



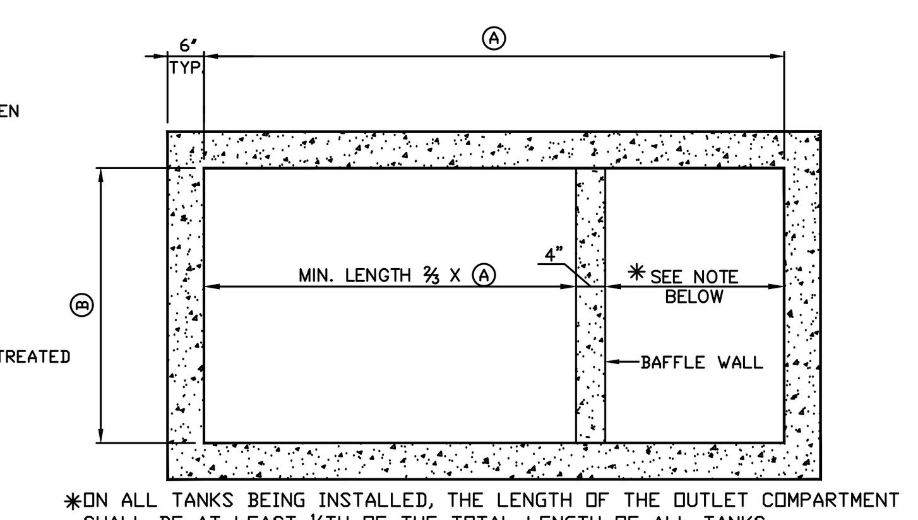
NOTE:
FACILITIES WITH FLOOR DRAINS AND WITHOUT A GREASE TRAP SHALL INSTALL THIS MODEL FLOOR DRAIN AND ONLY WITH PRIOR APPROVAL FROM THE CLAY COUNTY UTILITY AUTHORITY.

FLOOR DRAIN WITH STRAINER DETAIL

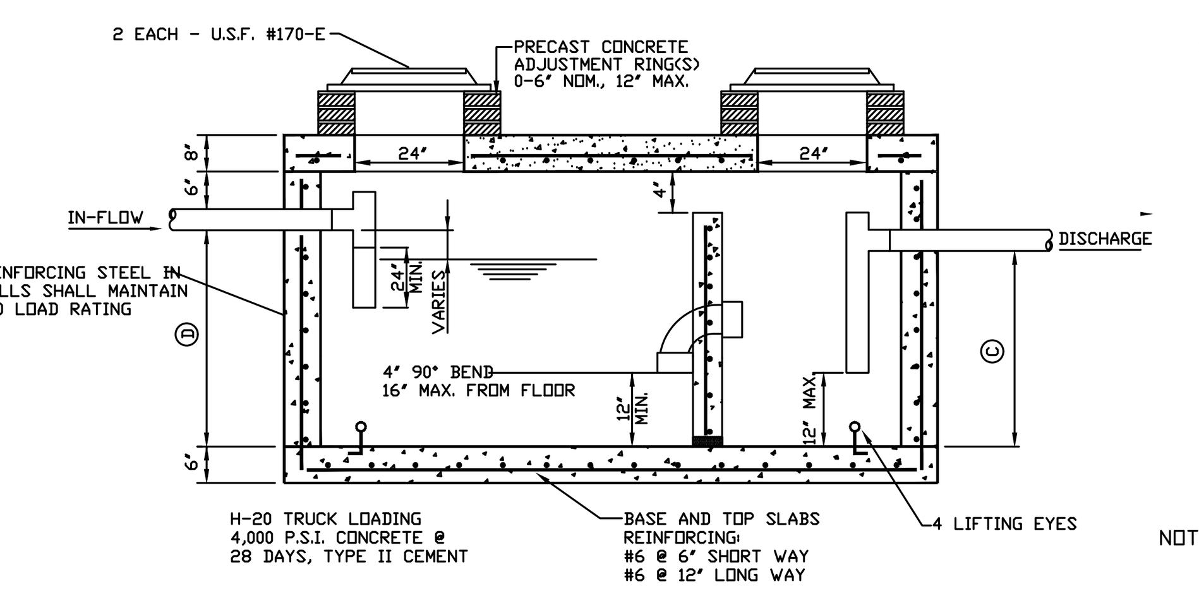


NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE 'SANITARY SEWER MANHOLE' DETAIL THIS SHEET. MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24'. SEE 'ELEVATION DIFFERENCE ACROSS MANHOLE' THIS SHEET.

TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE



*ON ALL TANKS BEING INSTALLED, THE LENGTH OF THE OUTLET COMPARTMENT SHALL BE AT LEAST ⅓TH OF THE TOTAL LENGTH OF ALL TANKS.

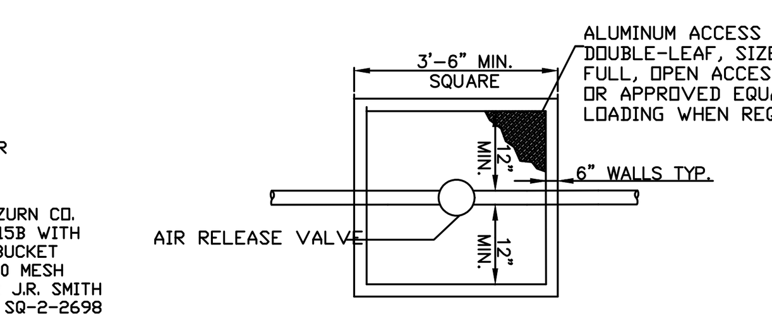


CAPACITY IN GALLONS		
DIM	1,000 MIN.	1,250
A	7.0'	9.60'
B	5.0'	4.0'
C	4.50'	4.50'
D	4.75'	4.75'

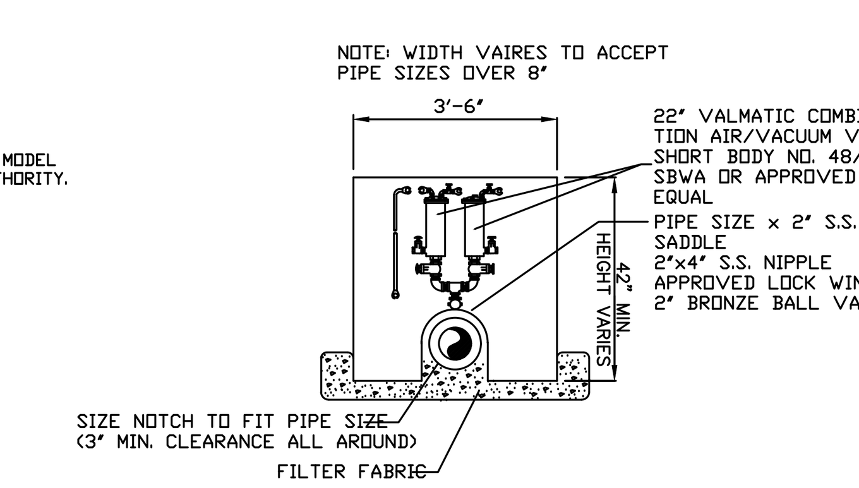
COMPLIES WITH A.S.T.M. C-913, PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES AND A.S.T.M. C-890, MINIMUM STRUCTURAL DESIGN LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES

NOTES:
1. GREASE TRAP SHALL BE SIZED BY THE PROJECT ENGINEER USING THE ANTICIPATED PEAK FLOW OF WATER ENTERING THE GREASE TRAP IN ACCORDANCE WITH THE 2003 STATE OF FLORIDA BUILDING CODE - PLUMBING.
2. ROUND-UP TO MATCH THE CLOSEST CAPACITY IN GALLONS PER THE CHART.

GREASE INTERCEPTOR DETAIL

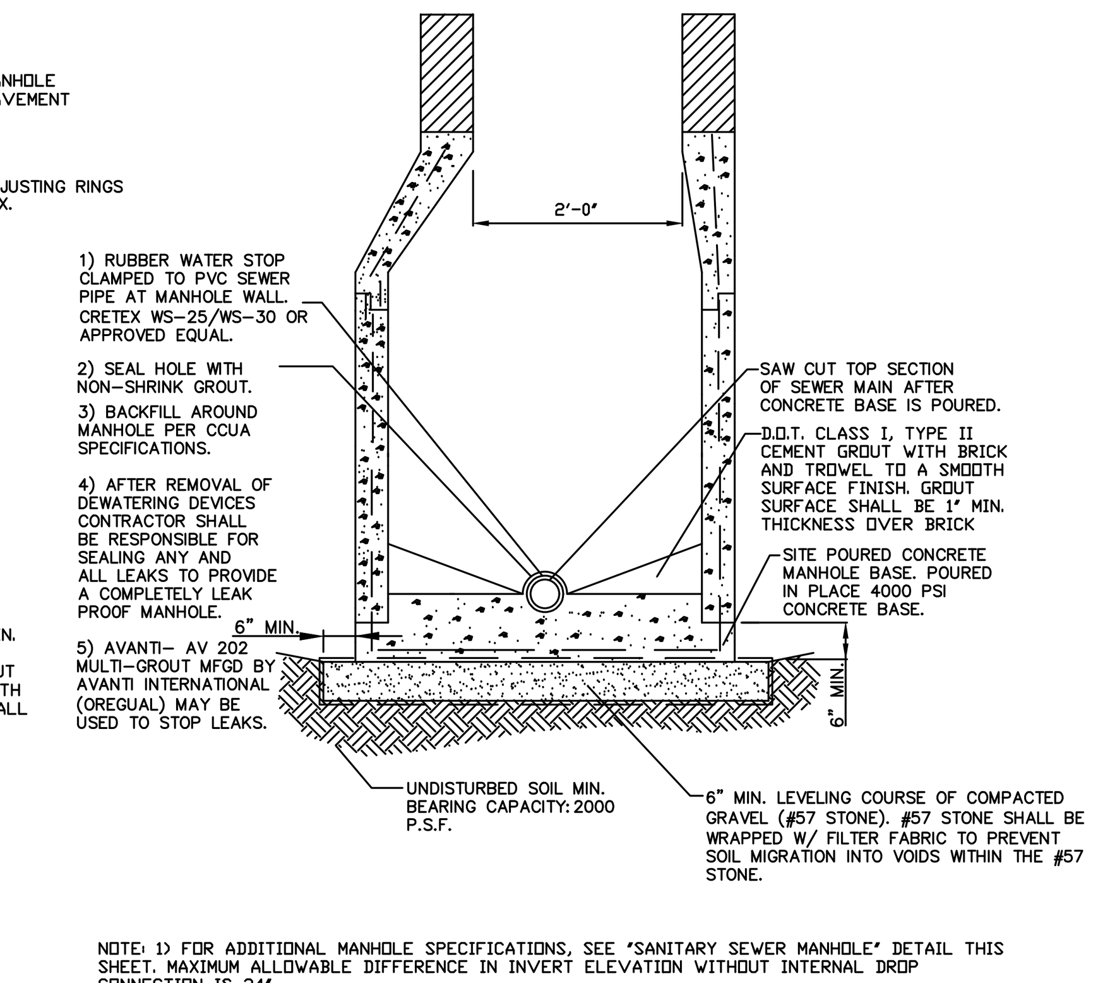


NOTE: WIDTH VAIRES TO ACCEPT PIPE SIZES OVER 8'



SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

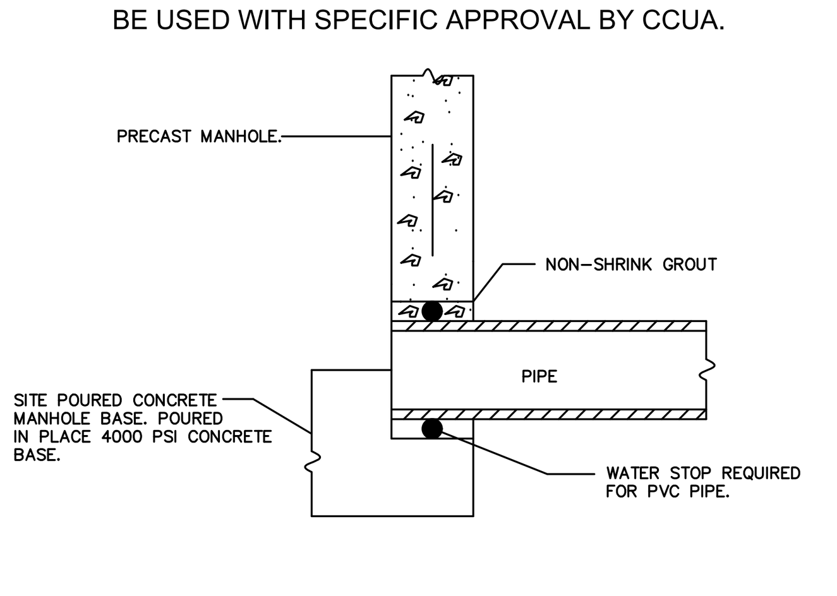
TO BE USED ON ALL PIPES 12" OR LARGER



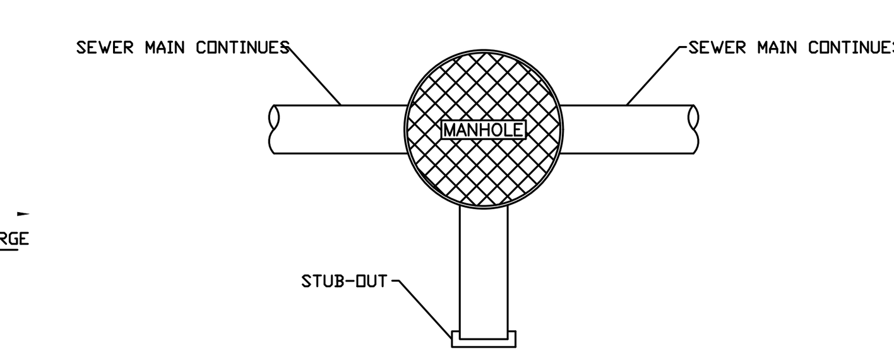
NOTE: 1) FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE 'SANITARY SEWER MANHOLE' DETAIL THIS SHEET. MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24'.

SADDLE MANHOLE DETAIL

THIS DETAIL IS ONLY TO
BE USED WITH SPECIFIC APPROVAL BY CCUA.



SADDLE MANHOLE DETAIL SECTION

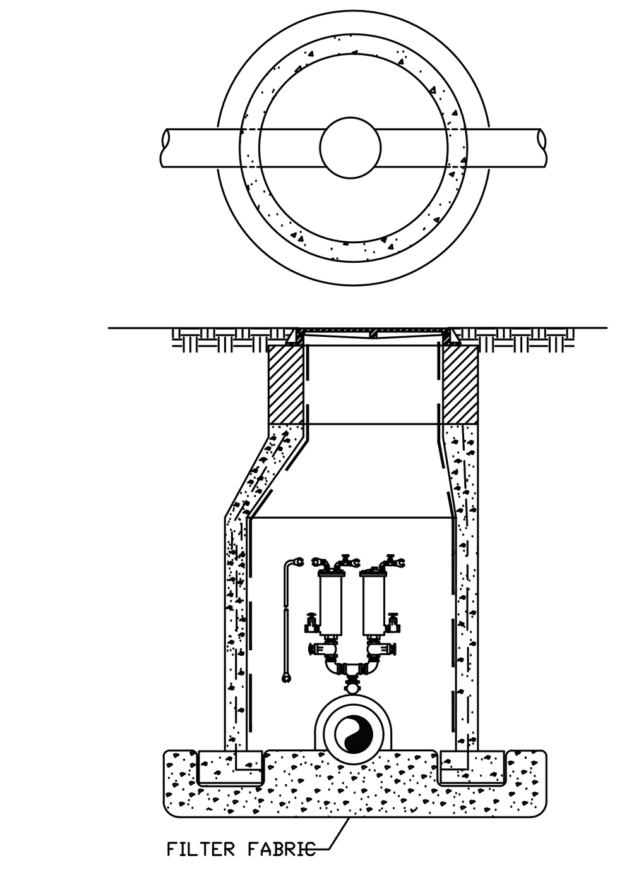


PROCEDURES FOR CONNECTING TO A GRAVITY STUB

NOTE: BEFORE CONNECTING TO ANY GRAVITY STUB, EXCAVATE AND SHOOT THE ELEVATION OF THE STUB INVERT AND THE ELEVATION OF THE INVERT OF THE SAME PIPE COMING OUT OF THE IMMEDIATE DOWNSTREAM MANHOLE. MEASURE THE DISTANCE FROM THE MANHOLE TO THE STUB, CALCULATE THE PIPE GRADE. IF THE GRADE ON THE PIPE IS LESS THAN PLAN DESIGN THEN CONTACT THE CLAY COUNTY UTILITY AUTHORITY AND THE PROJECT ENGINEER BEFORE PROCEEDING FURTHER. THE PROJECT ENGINEER AND THE CLAY COUNTY UTILITY AUTHORITY WILL MAKE THE DECISION ON HOW TO RESOLVE THE DISCREPANCY BEFORE THE CONTRACTOR CAN PROCEED FURTHER.

NO WORK WILL BE ALLOWED ON A GRAVITY LINE UPSTREAM OF THE CONNECTION POINT TO THE CLAY COUNTY UTILITY AUTHORITY'S SYSTEM WITHOUT PRIOR APPROVAL OF THE CLAY COUNTY UTILITY AUTHORITY.

NOTES:
1. CONC. BOX SHALL BE 42' MIN. DEPTH BUT SHALL BE DEEP ENOUGH TO ACCOMMODATE THE SIZE PIPE AND TYPE OF AIR RELEASE VALVE REQUIRED, WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED WITH 36' COVER FROM TOP OF PIPE TO FINISH GRADE, ON 12' OF #57 TONE. WITH FILTER FABRIC ABOVE AND BELOW THE STONE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY C.C.U.A.
3. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF PIPE INSTALLED



FOR PIPE 10' OR SMALLER A 4' DIAMETER, NOTCHED MANHOLE CAN BE USED FOR AIR RELEASE VALVE.

SET MANHOLE ON MIN. OF 4 SOLID CONCRETE BLOCKS SPACED EVENLY AROUND THE MANHOLE W/ A MIN. OF 12'#57 STONE WITH FILTER FABRIC ABOVE AND BELOW THE STONE.

SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

TO BE USED ON ALL PIPES 10" OR SMALLER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT JAMES DUNN ★ LICENSE No. 39452 ★ STATE OF FLORIDA PROFESSIONAL ENGINEER ★

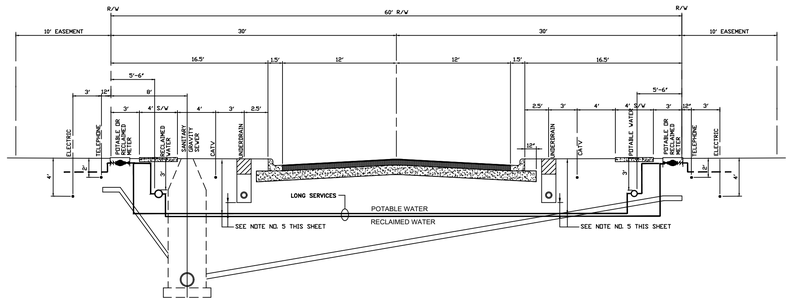
NO	DATE	BY	REVISION DESCRIPTION
21	06-17	RHD	REVISED NOTES AND DETAILS
20	09-14	RHD	REVISED GREASE INTERCEPTOR DETAIL
19	01-14	RHD	REVISED SEWER SERVICE MARKER POST & STANDARD SINGLE SEWER SERVICE LATERAL DETAIL
18	05-13	RHD	REVISED NEW DETAIL (SERVICE LATERAL 13' OR DEEPER)
17	05-13	MRS	NEW DETAIL (SERVICE LATERAL 13' OR DEEPER)
16	02-13	RHD	REVISED DETAILS
15	01-13	RHD	REVISED DETAILS
14	12-11	MRS	REVISED CLEAN-OUT CONCRETE COLLAR
13	09-09	MRS	GREASE INTERCEPTOR DETAIL
12	10-08	MRS	GENERAL UPDATES AND REVISIONS
11	05-08	MRS	FORCE MAIN AIR RELEASE VALVE (TAP SADDLE & FITTINGS)
10	07-07	MRS	GREASE INTERCEPTOR REVISIONS
9	06-06	MRS	GENERAL UPDATES AND REVISIONS
8	04-06	MRS	GENERAL UPDATES AND REVISIONS
7	08-05	MRS	REVISED MANHOLE INVERTS DESIGN CRITERIA NOTE
6	05-05	MRS	FLOW CHANNEL MODIFICATION
5	03-05	MRS	ADDED LEVELING COURSE MATERIAL & MIN. INVERTS FOR MANHOLES

DESG
DRWN
CHKD
APRV
DATE

PROJECT:
STANDARD SEWER SYSTEM DETAILS

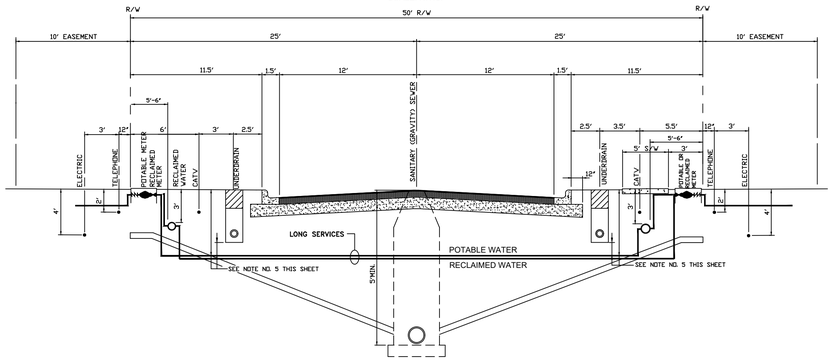
CLAY COUNTY UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

SHEET NO.
SD-1



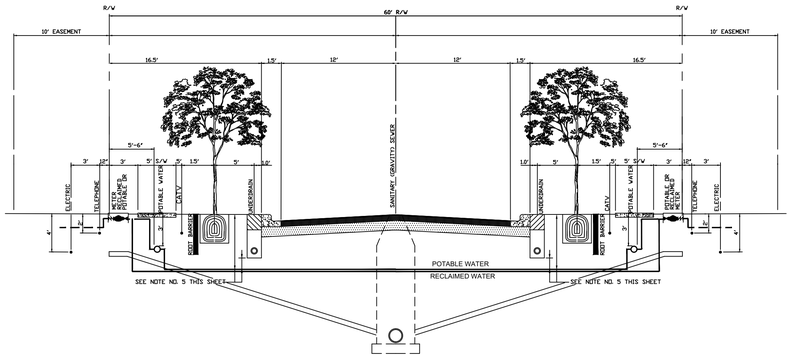
PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH
GRAVITY SEWER BACK OF CURB W/ RECLAIMED WATER

SCALE: N.T.S.



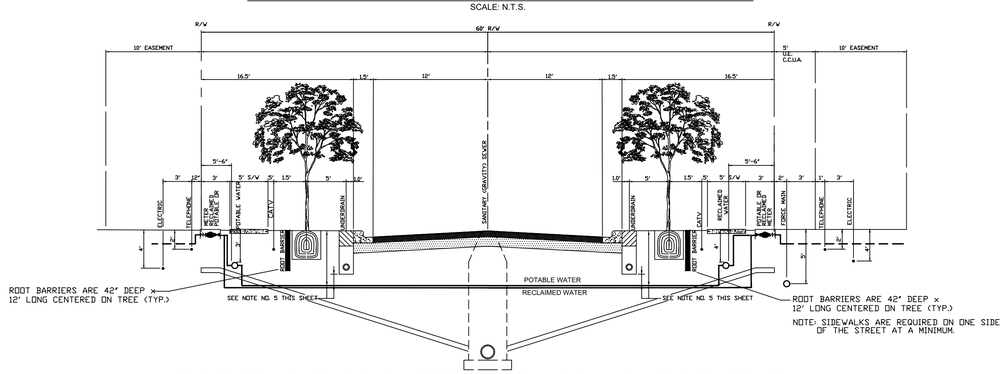
PROPOSED UTILITY TYPICAL SECTION FOR 50' R/W WITH
GRAVITY SEWER IN CENTER OF ROAD W/ RECLAIMED WATER

SCALE: N.T.S.



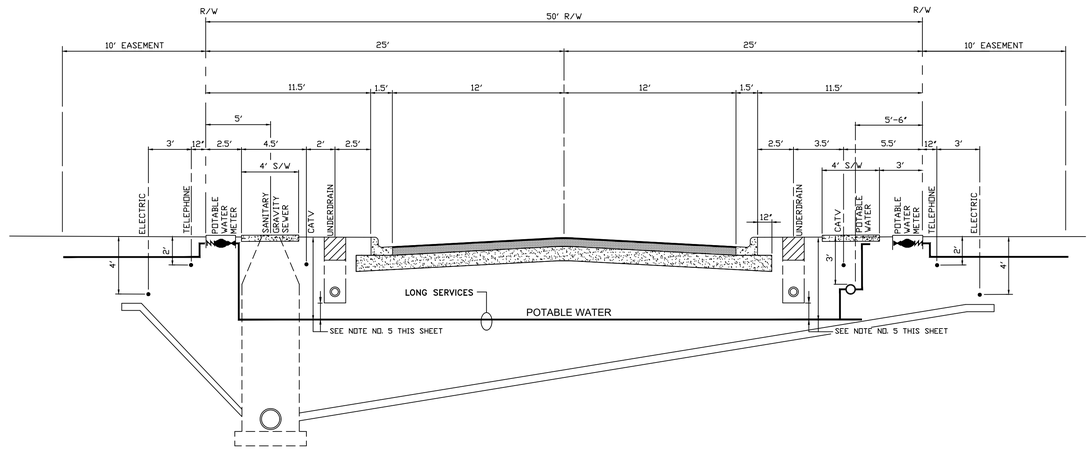
PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH
GRAVITY SEWER IN CENTER OF ROAD W/ RECLAIMED WATER

SCALE: N.T.S.



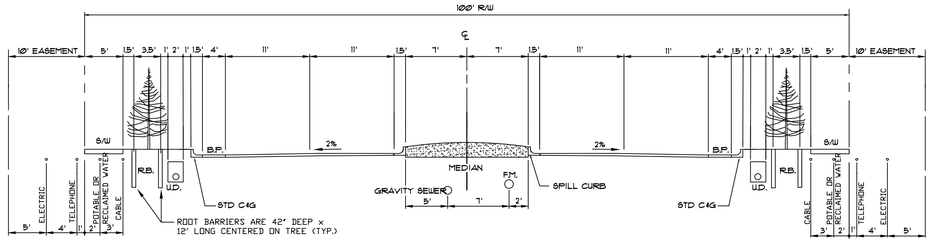
PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH GRAVITY SEWER
IN CENTER OF ROAD W/ FORCE MAIN PARALLEL TO RECLAIMED WATER

SCALE: N.T.S.



PROPOSED UTILITY TYPICAL SECTION FOR 50' R/W WITH
GRAVITY SEWER BACK OF CURB W/O RECLAIMED WATER

SCALE: 1"=5'



ROOT BARRIER SPECIFICATIONS

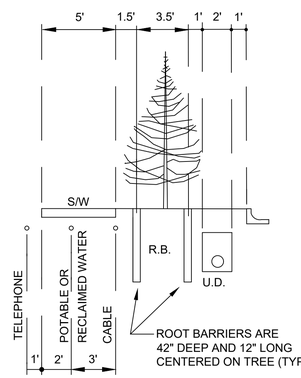
ROOT BARRIER SHALL BE LONG TERM ROOT CONTROL SYSTEM WHICH UTILIZES TIME RELEASE OF AN HERBICIDE TO PREVENT ROOT INTRUSION. EFFECTIVE LIFE OF THE MATERIAL SHALL BE AT LEAST 15 YEARS. SIMILAR AND / OR EQUAL TO "BIOBARRIER" AS MAUNFACTURED BY BBA NONWOVEN / REEMAY, INC., 70 OLD HICKORY BLVD., OLD HICKORY, TN. 37138-3651, (800)284-2780.

SEE CCUA APPROVED MATERIALS MANUAL TO ROOT BARRIER SPECIFICATIONS.

100' CROSS SECTION SHOWN IS FOR INFORMATION PURPOSES ONLY. THIS CROSS SECTION MAY NEED TO BE MODIFIED TO FIT THE PROPOSED ROADWAY DESIGN; REQUIRES CCUA APPROVAL.

PROPOSED UTILITY TYPICAL SECTION FOR 100' R/W WITH
RAISED MEDIAN AND GRAVITY SEWER IN CENTER OF ROAD

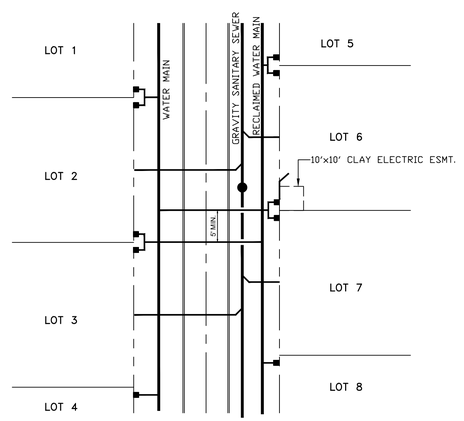
NOT TO SCALE



EXTRUDED SHEETS OR PANELS WITH INTEGRAL MALE/FEMALE SLIDING LOCK CONNECTION ENDS. MATERIAL SHALL BE HDPE WITH A MINIMUM THICKNESS OF 60 MIL, AND SHALL BE RIBBED. ROOT BARRIER SHALL EXTEND TO A MINIMUM DEPTH OF 42" BELOW FINISH GRADE. THE ROOT BARRIER SHALL BE A MINIMUM OF 12" LONG, CENTERED ON THE TREE AND PARALLEL WITH THE UTILITY MAIN OR SERVICE LINE BEING PROTECTED, UNLESS SHOWN OTHERWISE ON THE PLANS. ROOT BARRIER SHALL BE INSTALLED AT ANY TREE PLANTED IN A CCUA UTILITY EASEMENT, OR ANY TREE PLANTED WITHIN 10' OF ALL CCUA UTILITY MAINS OR SERVICES. NO TREES SHALL BE PLANTED IN A CCUA UTILITY EASEMENT EASEMENT WITHOUT THE APPROVAL OF CCUA. NO TREES SHALL BE CLOSER THAN 5' TO ANY CCUA UTILITY LINE OR SERVICES.

ROOT BARRIER DETAIL

SCALE: N.T.S.



TYPICAL WATER AND SEWER SERVICE LOCATION PLAN

1.) ALL WATER AND RECLAIMED DOUBLE SERVICES ON PROPERTY LINE.
2.) ANY SINGLE WATER OR RECLAIMED SERVICE LINES ON LOT LINE.
3.) ALL SEWER SERVICES ARE TO CENTER OF LOTS.
4.) IF FITTINGS ARE REQUIRED TO ACHIEVE 5'-0" SEPARATION BETWEEN THE RECLAIMED AND POTABLE WATER SERVICE LATERALS THEN ASBUILT TIE LOCATIONS WILL BE REQUIRED FOR THE SERVICE FITTINGS. THE OFFSET REQUIRED TO ACHIEVE THE SEPARATION SHALL OCCUR OUTSIDE OF THE PAVED ROADWAY.
5.) POTABLE AND RECLAIMED WATER SERVICE LINES SHALL ONLY BE DEEP ENOUGH TO CLEAR THE BOTTOM OF THE UNDERDRAIN TRENCH. MINIMUM COVER SHALL BE MAINTAINED IN ALL CASES.

NO	DATE	BY	REVISION DESCRIPTION
7	AUG 17	RHD	REVISED TO ADD ROOT BARRIER DETAIL
6	JUL 17	RHD	REVISED TO ADD 15' DISTANCES FROM R/W
5	NOV 15	RHD	REVISED MAIN PLACEMENT DISTANCES FROM R/W
4	APRIL 06	MRS	GENERAL UPDATES AND REVISIONS
3	JUNE 05	MRS	ADDED 50' R/W SECTION DETAILS
2	JUNE 05	MRS	REVISED 60' & 100' R-O-W SECTION DETAILS
1	APRIL 02	GAR	NEW STANDARD DETAIL SHEET

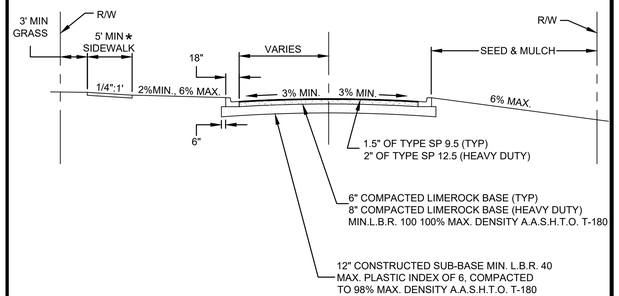
DESG GAR
DRWN GAR
CHKD
APRV
DATE

PROJECT:
WATER, SEWER AND RECLAIMED
WATER UTILITY PLACEMENT IN R/W
27' PAVEMENT WIDTH

CLAY COUNTY
UTILITY AUTHORITY
3176 OLD JENNINGS ROAD
MIDDLEBURG, FLORIDA 32068-3907
TELEPHONE: (904) 272-5999

ACAD FILE NAME

SHEET NO.
UTC-1

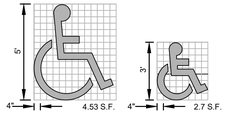


NOTE:

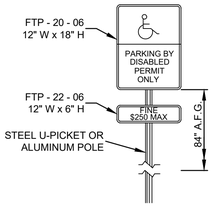
1. HEAVY DUTY PVMT TO BE USED ON PEARCE BLVD (SEE DWG NO.'S G-1, G-4 & ENT-1).
2. SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE SHOWN HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA & MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITIES OF VARIOUS SUBGRADES.
3. ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED. ALL AREAS WHERE SOD HAS BEEN DISTURBED OR REMOVED SHALL BE RESODDED TO SATISFACTION OF OWNER.
4. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR SECTION 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
* 5. OR IN ACCORDANCE WITH APPROVED CONSTRUCTION PLANS. VARIATIONS IN SIDEWALK LOCATION/ MEANDERING DUE TO CONFLICTS SUCH AS TREES, HYDRANTS, UTILITIES, TRAFFIC SIGN, ETC. IS PERMITTED AS PER THE APPROVED PLANS, OR AS OTHERWISE REQUIRED TO BE ADJUSTED IN THE FIELD.

60' & 80' R/W RESIDENTIAL ROADWAY SECTION

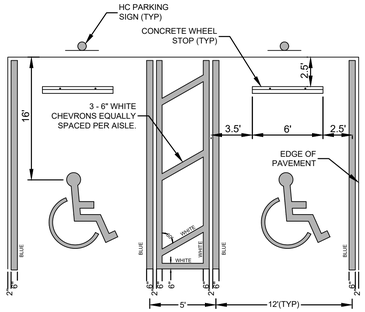
NOTES:
1. DIMENSIONS ARE TO THE CENTERLINE OF MARKINGS.
2. CRITERIA FOR PAVEMENT MARKINGS ONLY, NOT PUBLIC SIDEWALK CURB RAMP LOCATIONS. FOR RAMP LOCATIONS REFER TO PLANS.
3. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARDS 595A.



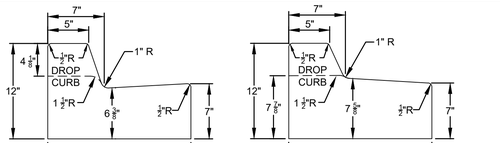
USE OF PAVEMENT SYMBOL IN ACCESSIBLE PARKING SPACES IS OPTIONAL. WHEN USED; THE SYMBOL SHALL BE 3' OR 5' HIGH AND WHITE IN COLOR.



HANDICAP PARKING SIGN



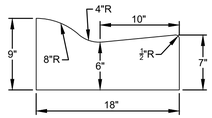
HC PARKING DETAIL



18" STANDARD/DROP CURB & GUTTER

MEDIAN CURB

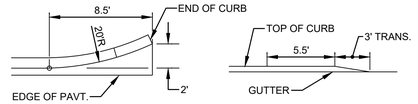
STANDARD CURB .0388889 CU. YD./LIN. FT.
MIAMI CURB .0325926 CU. YD./LIN. FT.



18"MIAMI CURB & GUTTER

TYPICAL STANDARD CURBS
(MIN. 3000 PSI CONC.)

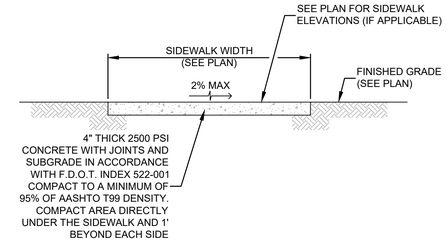
TYPICAL CONC. VALLEY
(MIN. 3500 PSI CONC.)



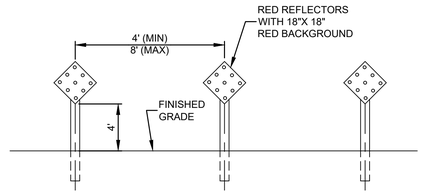
PLAN PROFILE

FLARED END CURB
(MIN. 3000 PSI CONC.)

STANDARD CURB TEMPLATES

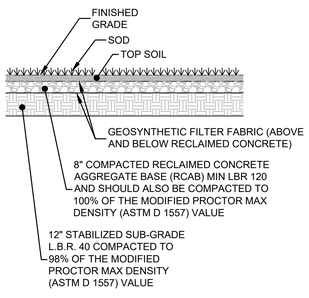


CONCRETE SIDEWALK / MULTI-PURPOSE PATH

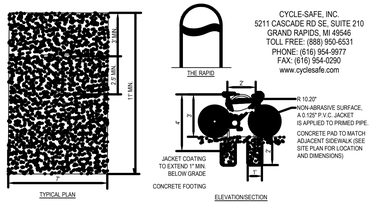


FRONT VIEW

TYPE 1 TRAFFIC BARRICADE

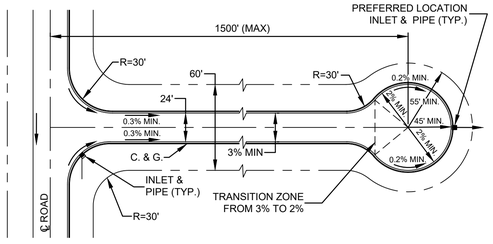


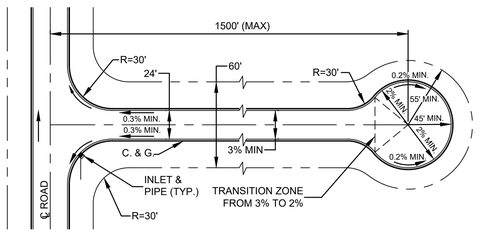
STABILIZED FIRE DEPT ACCESS SECTION



1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

1 LOOP 2 BIKE BICYCLE RACK
BASED ON CYCLE-SAFE, INC (THE RAPID) OR EQUAL

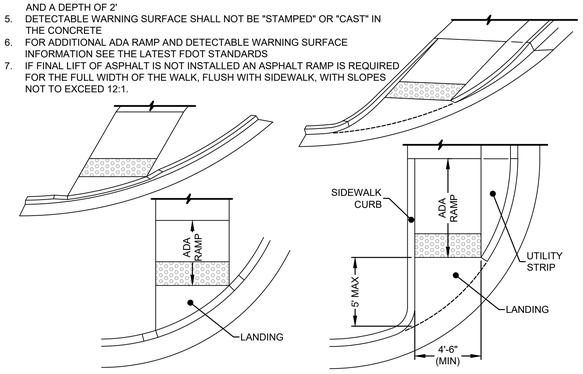




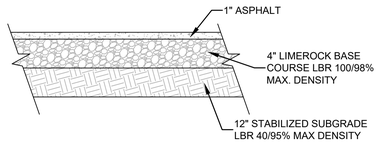
NOTES:
1. CURB & GUTTER ALONG ROAD TO MAINTAIN MIN. SLOPE OF 0.3% IN DIRECTION OF POSITIVE DRAINAGE.
2. CURB & GUTTER AROUND THE CUL-DE-SAC TO MAINTAIN MIN. SLOPE OF 0.2% IN DIRECTION OF POSITIVE DRAINAGE.
3. PAVING SHALL BE CROWNED MIN. OF 3% TO PROVIDE ADEQUATE RUN-OFF OFF PAVEMENT.
4. PAVING SHALL BE CROWNED MIN. OF 2% TO PROVIDE ADEQUATE RUN-OFF OFF CUL-DE-SAC PAVEMENT
5. VALLEY GUTTERS ARE NOT ALLOWED.
6. INLETS & PIPES TO BE LOCATED AS NECESSARY.

STANDARD CUL-DE-SAC W/CURB & GUTTER

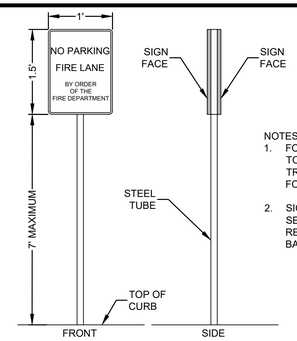
NOTES:
1. SEE GEOMETRY PLAN FOR SIDEWALK WIDTH AND LOCATION
2. SEE CURB TEMPLATE DETAILS FOR ADDITIONAL INFORMATION
3. ADA RAMP TO BE 6' LONG (MAX) AT 1:12 MAXIMUM SLOPE
4. DETECTABLE WARNING SURFACE TO BE FULL WIDTH OF RAMP OR LANDING AND A DEPTH OF 2'
5. DETECTABLE WARNING SURFACE SHALL NOT BE "STAMPED" OR "CAST" IN THE CONCRETE
6. FOR ADDITIONAL ADA RAMP AND DETECTABLE WARNING SURFACE INFORMATION SEE THE LATEST FDOT STANDARDS
7. IF FINAL LIFT OF ASPHALT IS NOT INSTALLED AN ASPHALT RAMP IS REQUIRED FOR THE FULL WIDTH OF THE WALK, FLUSH WITH SIDEWALK, WITH SLOPES NOT TO EXCEED 12:1.



SIDEWALK RAMPS



PAVEMENT SECTION - TEMPORARY CUL-DE-SAC



NOTES:
1. FOR REFERENCE ONLY. REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. SIGN SHALL HAVE 2" HIGH "C" SERIES RED LETTERS ON A REFLECTORIZED WHITE BACKGROUND.

FIRE LANE SIGN DETAIL

P:\2008-499 AYRSHIRE\ENG PLANS\499 PDD.DWG4/19/2023 8:28 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N/A
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

PAVING AND DRAINAGE DETAILS

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

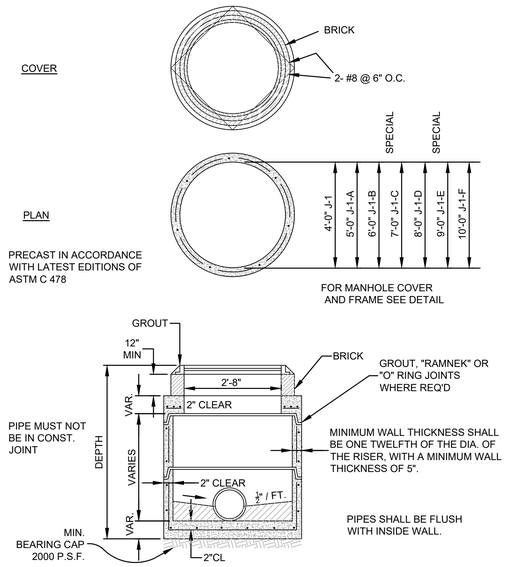
VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 61419

Sheet No. 81 of 88

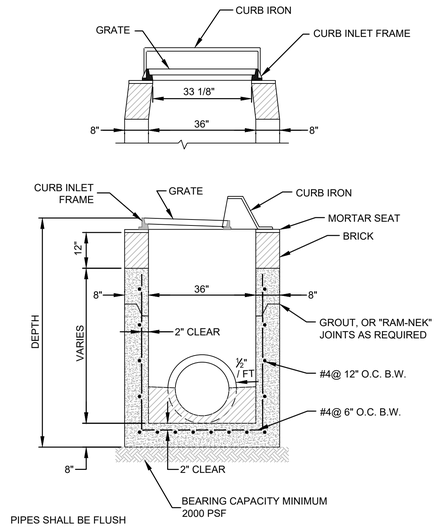
PDD-1

DWG. NO.

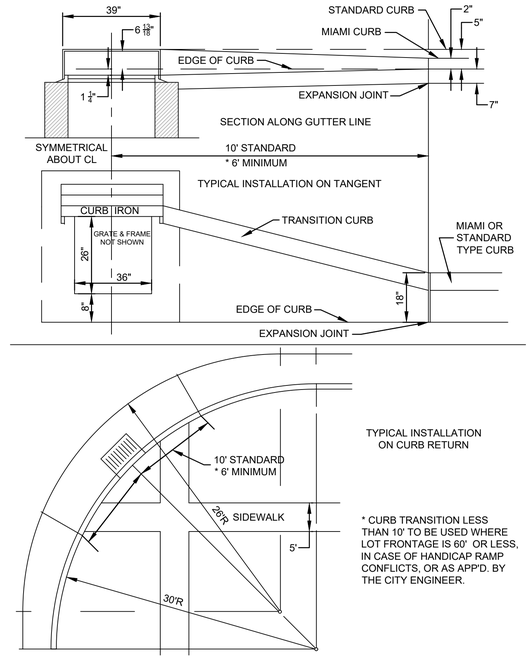
RELEASED FOR CONSTRUCTION



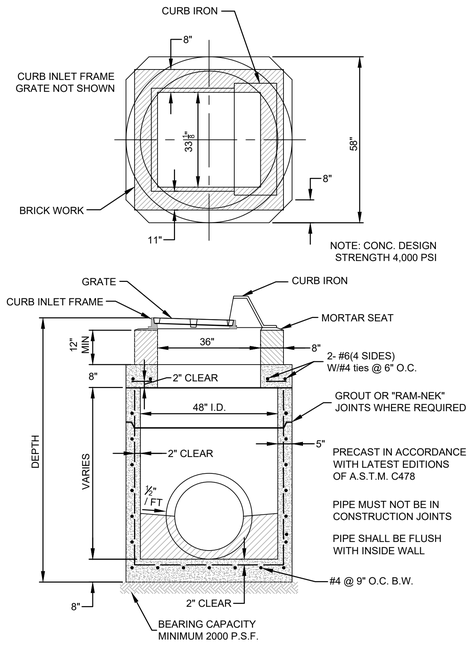
STORM SEWER MANHOLE



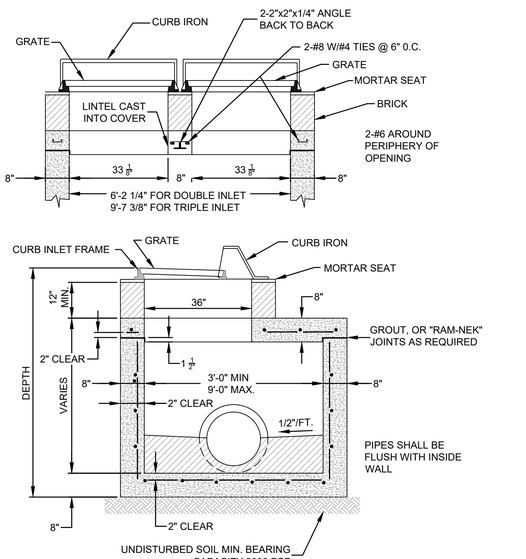
STORM SEWER CURB INLET



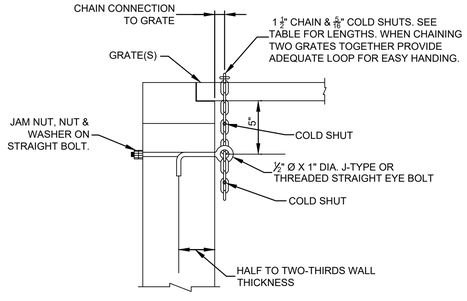
STANDARD CURB INLET INSTALLATION



STORM SEWER 48" CURB INLET



STORM SEWER DOUBLE AND TRIPLE CURB INLET



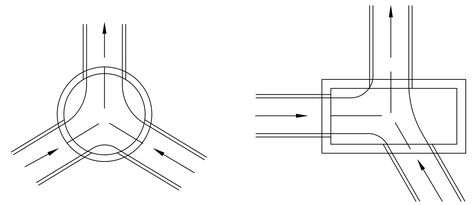
COST OF GALVANIZED EYE BOLT AND CHAIN TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR INLET.

EYE BOLT AND CHAIN REQUIREMENTS

Plate Number	Inlet Type	Eye Bolt	Length Of Chain	Handling & Remarks
207	C	1	2'-6"	Slide & Spin
208	E	2	2@ 2'-6"	Slide & Spin

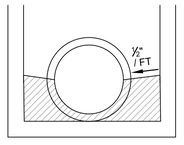
EYE BOLT AND CHAIN FOR LOCKING GRATES TO INLETS

GENERAL NOTE:
MORTAR USED TO SEAL THE PIPE INTO THE WALLS OF PRECAST UNITS WILL BE OF SUCH A MIX THAT SHRINKAGE WILL NOT CAUSE LEAKAGE INTO OR OUT OF THE UNITS. MAXIMUM OPENING FOR PIPE SHALL BE THE O.D. OF THE PIPE REQUIRED PLUS 6".



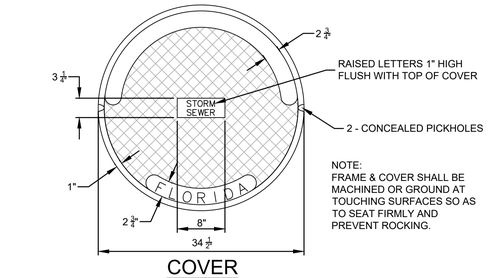
DETAIL OF CHANNELIZATION

NOTE: CHANNELIZATION REQUIRED AT ALL DRAINAGE STRUCTURES



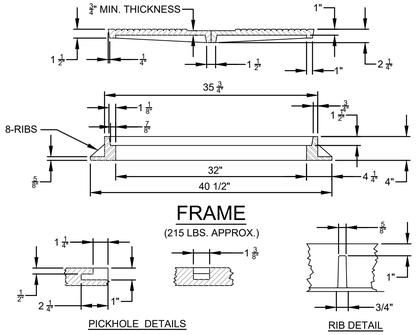
SMOOTH FLOW CHANNELS COMPOSED OF CONCRETE OR BRICK AND MORTAR SHALL BE CONSTRUCTED ON THE BOTTOMS OF ALL STRUCTURES TO A DEPTH EQUAL TO HALF THE DIAMETER OF THE LARGEST PIPE.

STORM SEWER INVERT DETAIL



COVER

(265 LBS.± 5 LBS.)



FRAME

(215 LBS. APPROX.)

PICKHOLE DETAILS

RIB DETAIL

STORM SEWER MANHOLE COVER AND FRAME

RELEASED FOR CONSTRUCTION

P:\2008-499 AYRSHIRE\ENG PLANS\499 PDD.DWG4/19/2023 8:30 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N/A
DATE:	4/19/2023
PROJ. NO.:	2008-499

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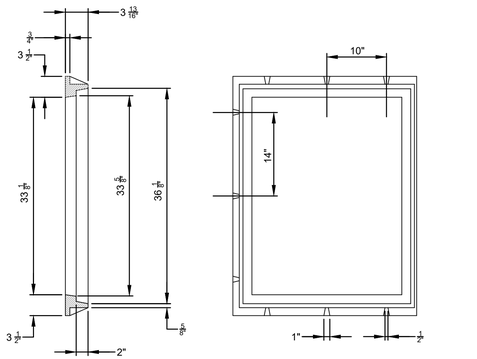
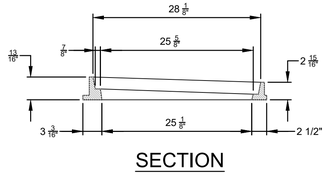
VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419



SECTION

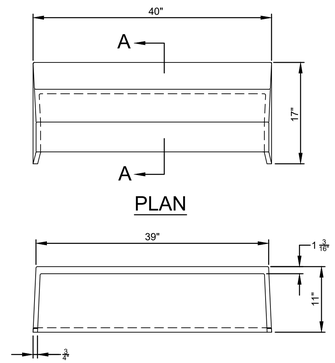
PLAN



SECTION

APPROX. 180 LBS.

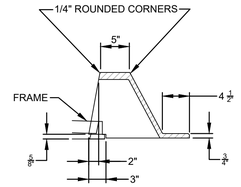
STORM SEWER CURB INLET FRAME



PLAN

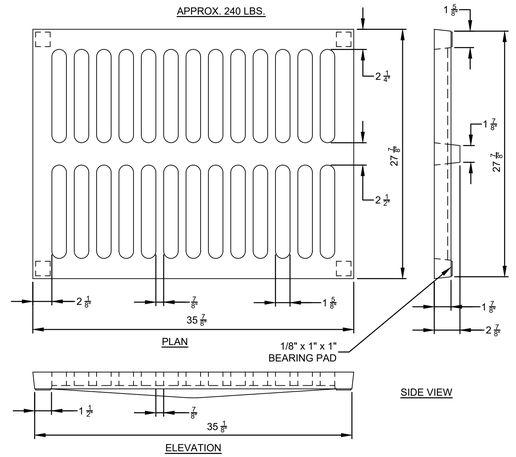
FRONT ELEVATION

APPROXIMATELY 230 LBS.



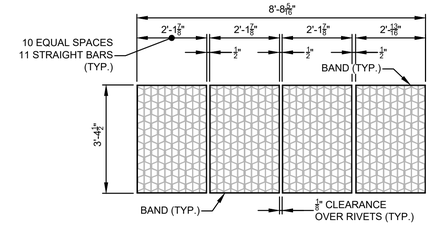
SECTION A-A

STORM SEWER CURB IRON



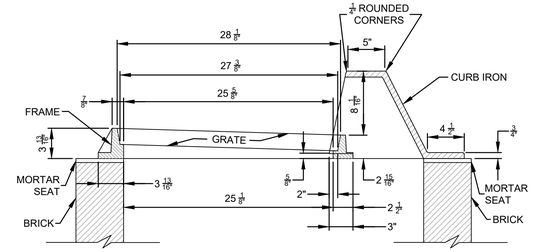
SIDE VIEW

STORM SEWER INLET GRATE

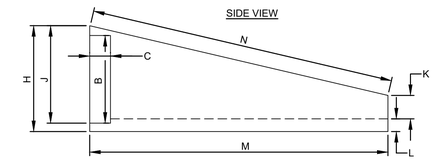


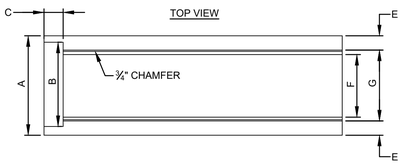
TYPE H (4-GRATE INLET)
STRAIGHT END-BEARING BARS 2" x 1/4"
RETICULINE BARS 1 1/4" x 1/16"
BANDING BARS 2" x 1/16"
APPROX. TOTAL WEIGHT 388 LBS.

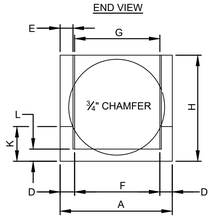
RETICULINE GRATE FOR STORM SEWER
TYPE "H" 4-GRATE INLET



STORM SEWER CURB IRON W/ GRATE AND FRAME







CONCRETE: 4,000 P.S.I.

STEEL: #4 @ 12" E.W., WITH 1 #6 OVER PIPE OPENING. (2" CLEARANCE OVER STEEL, REIN. BARS, 1/2" TOLERANCE).

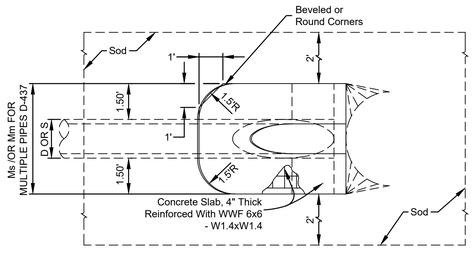
STANDARD MITERED END SECTION

TABLE OF DIMENSIONS

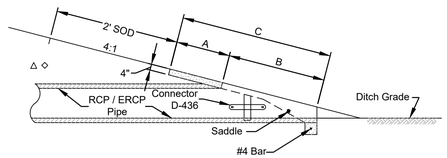
RCP/CMP	A	B	C	D	E	F	G
15" – 18"	2'–7"	2'–1"	6"	6"	6 3/4"	1'–6"	1'–7"
24"	2'–11"	2'–8"	6"	5"	4 1/2"	1'–11"	2'–0"
30"	3'–6"	3'–2"	6"	6"	5 1/2"	2'–5"	2'–6 1/2"
36"	4'–1"	3'–10"	6"	7"	5 1/2"	2'–9"	3'–0"

RCP/CMP	H	J	K	L	M	N
15" – 18"	2'–10"	2'–4"	8"	6"	6'–10"	7'–0"
24"	3'–6"	3'–1"	7 1/2"	5"	10'–0"	10'–3 1/2"
30"	3'–9"	3'–5"	7"	5"	11'–5"	11'–8 1/4"
36"	4'–6"	4'–0"	6"	6"	14'–0"	14'–4 1/2"

STANDARD MITERED END SECTION - TABLE OF DIMENSIONS



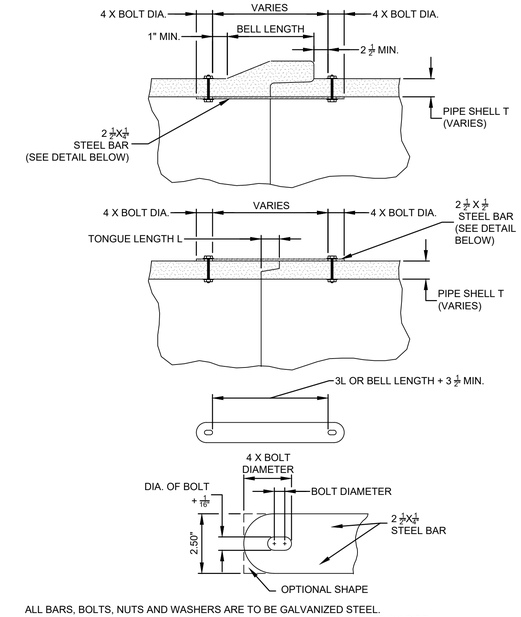
TOP VIEW - SINGLE PIPE



SECTION

- Slope:
  4:1 Miter To ℄ Of Pipe For Pipes 18" & Smaller 2:1 Miter For Pipes 24" & Larger, For RCP. 4:1 Miter To Major Axis For Pipes 24"x 38" & Smaller. 2:1 Miter For Pipes 29"x 45" & Larger, For ERCP.

POURED IN PLACE MITERED END SECTION



ALL BARS, BOLTS, NUTS AND WASHERS ARE TO BE GALVANIZED STEEL.
BOLTS DIAMETER SHALL BE 3/8" FOR 15" TO 36" PIPE AND 5/8" FOR 42" TO 72" PIPE.
TWO CONNECTORS REQUIRED PER JOINT, LOCATED 60° RIGHT AND LEFT OF BOTTOM CENTER OF PIPE.
BOLT HOLES IN PIPE SHELL ARE TO BE DRILLED.

P.I.P. M.E.S. PIPE CONNECTION

RELEASED FOR CONSTRUCTION

THE ROOKERY – PHASE 1

P:\2008-499 AYRSHIRE\ENG PLANS\499 PDD.DWG4/19/2023 8:33 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N/A
DATE:	4/19/2023
PROJ. NO.:	2008-499

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www.dunneng.com

THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
PAVING AND DRAINAGE DETAILS

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 83 of 88

PDD–3
DWG. NO.

DIMENSIONS FOR R.C.P.									
D	X	A	B	C	E	F	G	Ms	N
15"	2.58'	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	1.19'
18"	2.83'	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	1.21'
24"	3.42'	2.53'	7.18' △	9.71'	7.03' △	11'	1.73'	5.50'	1.25'
30"	4.25'	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	1.29'
36"	5.08'	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	6.67'	1.33'
42"	6.00'	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	1.38'
48"	6.75'	3.22'	15.43'	18.65'	15.03'	19'	2.63'	7.83'	1.42'
54"	7.67'	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	1.46'
60"	8.50'	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	1.50'

△ 6.42' △ 6.25' DIMENSIONS PERMITTED TO ALLOW USE OF 8' STANDARD PIPE LENGTHS.

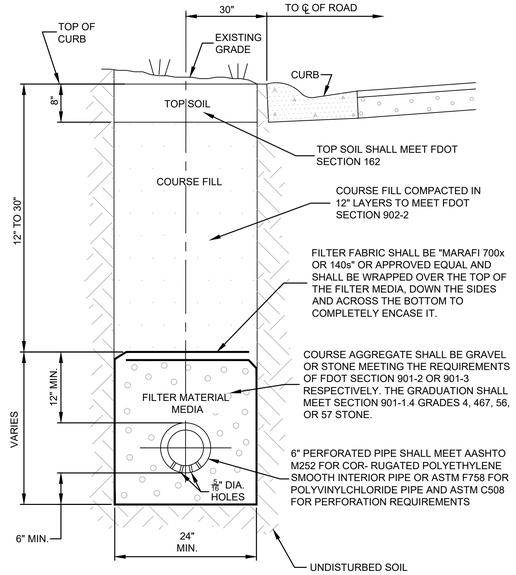
◇ 10.40' ◇ 10.10' DIMENSIONS PERMITTED TO ALLOW USE OF 12' STANDARD PIPE LENGTHS.

△◇ CONCRETE SLAB SHALL BE DEEPENED TO FROM BRIDGE ACROSS CROWN OF PIPE. SEE SECTION.

DIMENSIONS FOR E.R.C.P.										
RISE R	SPAN S	X	A	B	C	E	F	G	Ms	N
12"	18"	2.83'	2.36'	3.06'	5.42'	3.03'	5'	1.50'	4.92'	1.21'
14"	23"	3.33'	2.44'	3.75'	6.19'	3.70'	6'	1.90'	5.38'	1.23'
19"	30"	4.00'	2.62'	5.47'	8.09'	5.36'	8'	2.37'	6.04'	1.27'
24"	38"	5.00'	2.79'	7.18'	9.97'	7.03'	10'	2.85'	6.79'	1.31'
29"	45"	5.92'	3.05'	8.90'	11.95'	8.70'	12'	3.19'	7.50'	1.38'
34"	53"	7.00'	3.22'	10.62'	13.84'	10.36'	13'	3.57'	8.25'	1.42'
38"	60"	7.83'	3.39'	11.99'	15.38'	11.70'	15'	3.95'	8.92'	1.46'
43"	68"	8.92'	3.56'	13.71'	17.27'	13.36'	17'	4.28'	9.67'	1.50'
48"	76"	9.92'	3.73'	15.43'	19.16'	15.03'	19'	4.59'	10.42'	1.54'
* 53"	83"	10.67'	3.91'	17.15'	21.06'	16.70'	20'	4.77'	11.08'	1.58'
58"	91"	11.67'	4.08'	18.87'	22.95'	18.36'	22'	5.01'	11.83'	1.63'

"X"=DISTANCE FROM CENTER OF PIPE TO CENTER OF PIPE.
"Mm"=DIMENSIONS FOR MULTIPLE PIPES.
FORMULA TO DETERMINE "Mm" FOR MULTIPLE PIPES = Ms+X (NO. OF PIPES −1)
FOR "Ms" AND "X" DIMENSIONS, SEE TABLE ABOVE.
* SPECIAL ORDER; NOT STANDARD SIZE

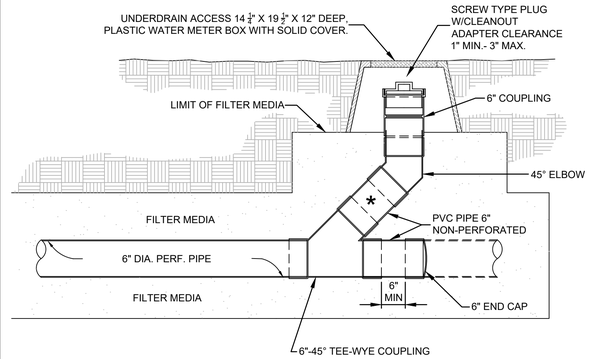
POURED IN PLACE MITERED END SECTION - TABLE OF DIMENSIONS



NOTE: MINIMUM PIPE SLOPE OF 0.30%

TYPE I UNDERDRAIN WITH MARAFI 700x" IS TO BE USED WHERE MODERATE CHEMICAL CLOGGING OF FILTER MATERIAL IS EXPECTED.

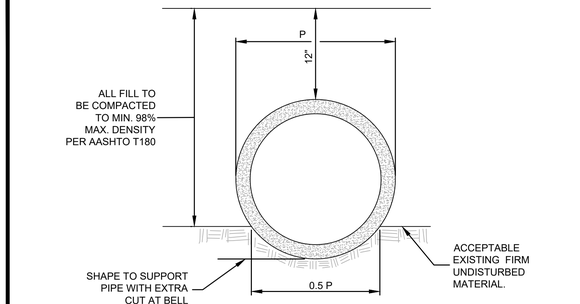
UNDERDRAIN INSTALLATION



NOTES: ALL PIPE AND FITTINGS TO MEET ASTM F758-82 SPECIFICATIONS. 300' MAXIMUM DISTANCE BETWEEN CLEANOUTS

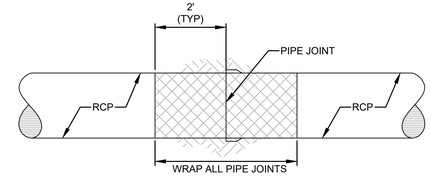
* COUPLING PIPE LENGTH TO BE FIELD ADJUSTED.

UNDERDRAIN CLEANOUT



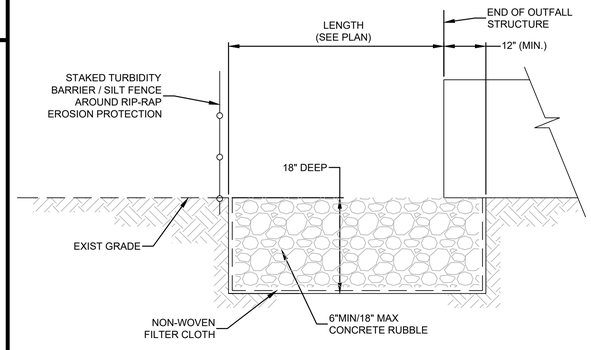
EACH LIFT TO BE COMPLETELY COMPACTED TO REQUIRED DENSITY BEFORE STARTING NEXT LIFT NO LIFT TO EXCEED 6" WHEN COMPACTED.

PIPE BEDDING - RCP

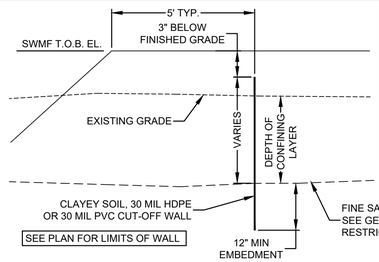


WRAP ALL PIPE JOINTS WITH 4LF OF FILTER FABRIC CENTERED ON PIPE JOINT-PROVIDE 2' OVERLAP AT PIPE JOINT.

RCP PIPE JOINTS



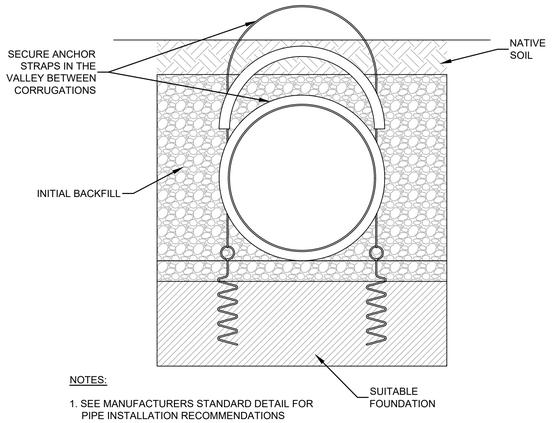
RIP-RAP EROSION PROTECTION



NOTES:

1. RUBBER OR NEOPRENE GASKETS REQUIRED AT ALL PIPE JOINTS.
2. HYDROSTATIC FIELD TESTING IS REQUIRED OR FILTER FABRIC WRAP ALL PIPE JOINTS WITH 4LF OF FABRIC CENTERED ON PIPE JOINT.
3. MAXIMUM PIPE DEFLECTION IS 5%. DEFLECTION SHALL BE TESTED USING A MANDREL.
4. PIPE TERMINATION END SECTION MUST BE FABRICATED FROM APPROVED MATERIAL.

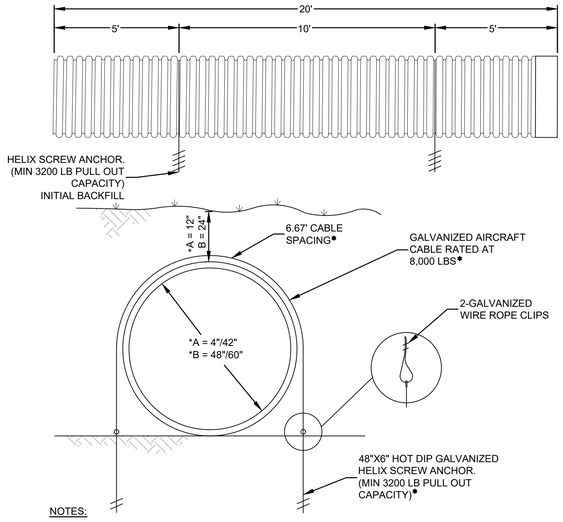
PIPE BEDDING - POLYETHYLENE



NOTES:

1. SEE MANUFACTURERS STANDARD DETAIL FOR PIPE INSTALLATION RECOMMENDATIONS
2. ANCHORS TO BE 10' MAX SPACING, 1 ANCHOR EACH END AND IN MIDDLE OF PIPE. SEE ANCHOR DETAIL BELOW FOR ADDITIONAL INFORMATION.

ANCHOR PLACEMENT



NOTES:

1. SEE MANUFACTURERS STANDARD DETAIL FOR PIPE INSTALLATION RECOMMENDATIONS.
2. SEE ANCHOR PLACEMENT DETAIL.
- *3. FOR MINIMUM STRUCTURAL COVER
- **4. MINIMUM COVER FOR NO FLOTATION DURING CONSTRUCTION. ASSUMES SATURATED SOILS TO GROUND SURFACE.

OPTION:
10' CABLE SPACING.
11,000LB CABLE RATING.
5,500LB PULL OUT CAPACITY.

MIN COVER REQUIRED	
PIPE SIZE	MIN COVER **
15"	11"
18"	13"
24"	17"
30"	22"
36"	25"
42"	29"
48"	33"
60"	40"

PIPE ANCHOR

CUT OFF WALL SCHEDULE		
SWMF NO.	APPROX. LENGTH (LF)	DEPTH OF CONFINING LAYER (FT)
4	590	7
6	980	12
21	1,810	6
31	770	12
32	940	10
33	280	4
J1	615	3

POND CUT-OFF WALL PER GEOTECHNICAL REPORT. CONTRACTOR TO INCLUDE COST TO HAVE A FL. PROFESSIONAL ENGINEER SUBMIT A WRITTEN CERTIFICATION TO THE SJRWMD THAT THE POND CUT-OFF WALL WAS INSTALLED PER THE PLANS AND PER THE MANUFACTURER SPECIFICATIONS INCLUDING SEAL/CONNECTION TO OUTFALL PIPES. CERTIFICATION MUST BE SIGNED AND SEALED. CERTIFICATION TO BE SUBMITTED WITHIN THIRTY DAYS OF COMPLETION OF WALL.

CUT-OFF WALL

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

P:\2008-499 AYRSHIRE\ENG PLANS\499 PDD.DWG4/19/2023 8:34 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N/A
DATE:	4/19/2023
PROJ. NO.:	2008-499

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THE ROOKERY – PHASE 1
FOR:
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CLAY COUNTY, FLORIDA
PAVING AND DRAINAGE DETAILS

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

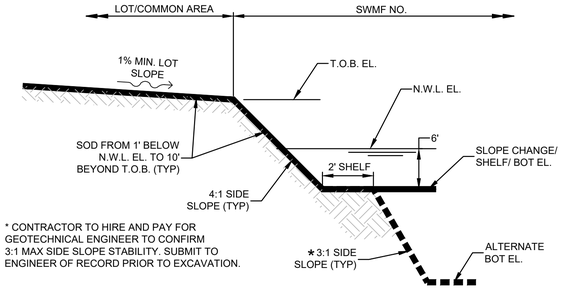
Sheet No. 84 of 88

PDD-4

DWG. NO.

SWMF SCHEDULE

SWMF NO.	1	2	3	4	5	6
T.O.B. EL.	33.8	33.8	33.8	33.7	33.7	33.7
25YR DHW	32.08	32.07	32.07	32.06	32.07	32.06
3YR DHW	30.86	30.86	30.86	30.86	30.86	30.86
N.W.L. EL.	29.0	29.0	29.0	29.0	29.0	29.0
SC/SHELF EL.	23.0	23.0	23.0	23.0	23.0	23.0
BOT. EL.	23.0	23.0	23.0	23.0	23.0	23.0
ALT BOT. EL.	-17.0	11.0	7.0	15.0	15.0	12.0

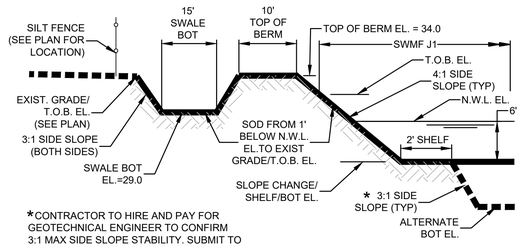


* CONTRACTOR TO HIRE AND PAY FOR GEOTECHNICAL ENGINEER TO CONFIRM 3:1 MAX SIDE SLOPE STABILITY. SUBMIT TO ENGINEER OF RECORD PRIOR TO EXCAVATION.

SECTION L1-L1

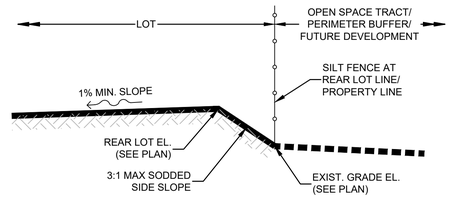
SWMF SCHEDULE

SWMF NO.	J1
T.O.B. EL.	31.2(MIN)
25YR DHW	29.67
3YR DHW	29.39
N.W.L. EL.	29.0
SC/SHELF EL.	23.0
BOT. EL.	23.0
ALT BOT. EL.	-17.0

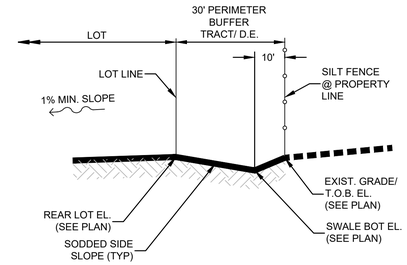


★CONTRACTOR TO HIRE AND PAY FOR GEOTECHNICAL ENGINEER TO CONFIRM 3:1 MAX SIDE SLOPE STABILITY. SUBMIT TO ENGINEER OF RECORD PRIOR TO EXCAVATION.

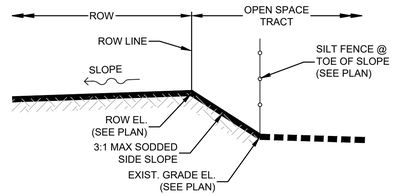
SECTION L4-L4



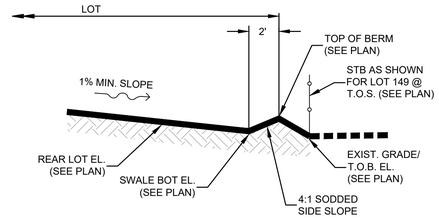
SECTION F1-F1



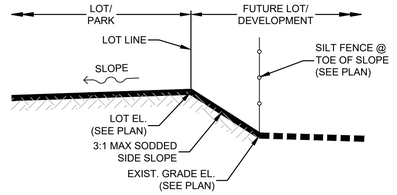
SECTION F6-F6



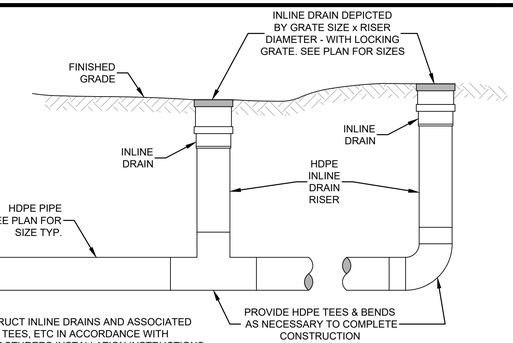
SECTION F2-F2



SECTION F7-F7



SECTION F3-F3

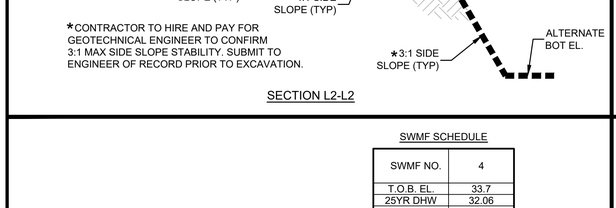


NOTE:
CONSTRUCT INLINE DRAINS AND ASSOCIATED BENDS, TEES, ETC IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.

TYPICAL AREA DRAIN INSTALLATION

SWMF SCHEDULE

SWMF NO.	1	3	4	5	6	J1
T.O.B. EL.	33.8	33.8	33.7	33.7	33.7	31.2(MIN)
25YR DHW	32.08	32.07	32.06	32.07	32.06	29.67
3YR DHW	30.86	30.86	30.86	30.86	30.86	29.39
N.W.L. EL.	29.0	29.0	29.0	29.0	29.0	29.0
SC/SHELF EL.	23.0	23.0	23.0	23.0	23.0	23.0
BOT. EL.	23.0	23.0	23.0	23.0	23.0	23.0
ALT BOT. EL.	-17.0	7.0	15.0	15.0	12.0	-17.0

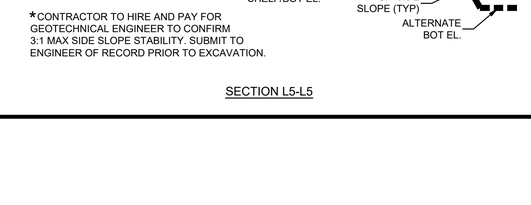


★CONTRACTOR TO HIRE AND PAY FOR GEOTECHNICAL ENGINEER TO CONFIRM 3:1 MAX SIDE SLOPE STABILITY. SUBMIT TO ENGINEER OF RECORD PRIOR TO EXCAVATION.

SECTION L2-L2

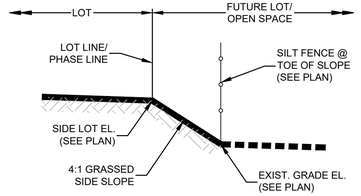
SWMF SCHEDULE

SWMF NO.	J1
T.O.B. EL.	31.2(MIN)
25YR DHW	29.67
3YR DHW	29.39
N.W.L. EL.	29.0
SC/SHELF EL.	23.0
BOT. EL.	23.0
ALT BOT. EL.	-17.0



★CONTRACTOR TO HIRE AND PAY FOR GEOTECHNICAL ENGINEER TO CONFIRM 3:1 MAX SIDE SLOPE STABILITY. SUBMIT TO ENGINEER OF RECORD PRIOR TO EXCAVATION.

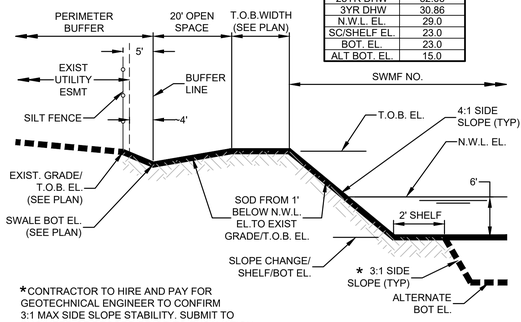
SECTION L5-L5



SECTION F4-F4

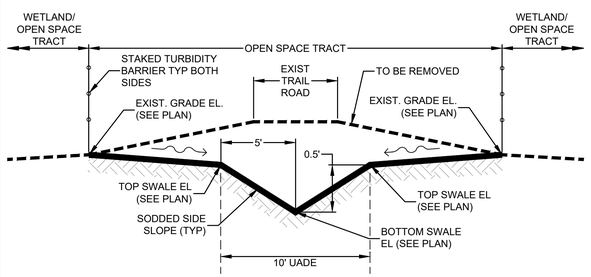
SWMF SCHEDULE

SWMF NO.	4
T.O.B. EL.	33.7
25YR DHW	32.06
3YR DHW	30.86
N.W.L. EL.	29.0
SC/SHELF EL.	23.0
BOT. EL.	23.0
ALT BOT. EL.	15.0

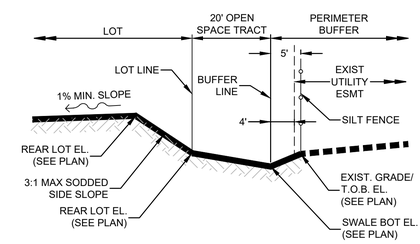


★CONTRACTOR TO HIRE AND PAY FOR GEOTECHNICAL ENGINEER TO CONFIRM 3:1 MAX SIDE SLOPE STABILITY. SUBMIT TO ENGINEER OF RECORD PRIOR TO EXCAVATION.

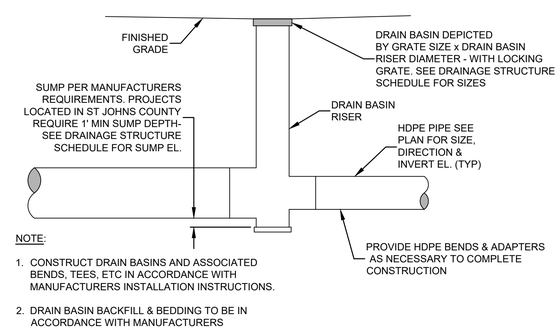
SECTION L3-L3



SECTION S1-S1



SECTION F5-F5



NOTE:
1. CONSTRUCT DRAIN BASINS AND ASSOCIATED BENDS, TEES, ETC IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.
2. DRAIN BASIN BACKFILL & BEDDING TO BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

TYPICAL DRAIN BASIN INSTALLATION

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

P:\2008-499 AYRSHIRE\ENG PLANS\499 PDD.DWG4/19/2023 8:34 AMMike Reilly

REVISIONS

NO.	DATE	DESCRIPTION	BY:
-	-	-	-

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N/A
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

PAVING AND DRAINAGE DETAILS

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

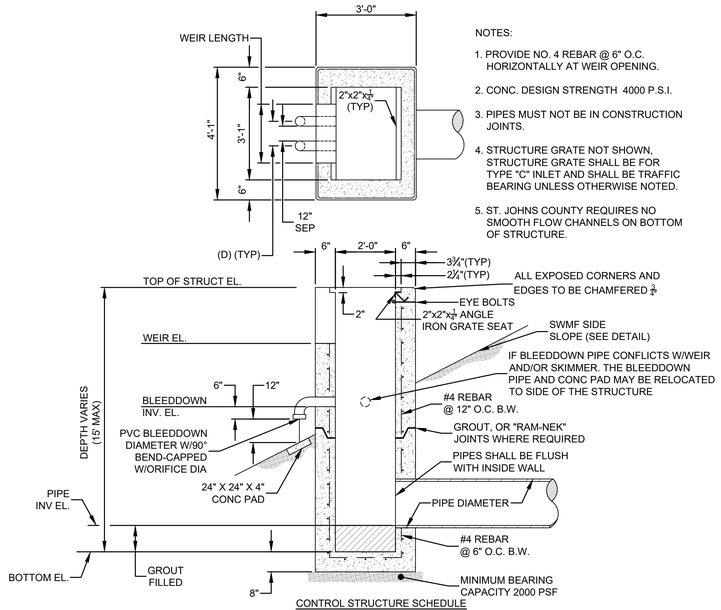
This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 85 of 88

PDD-5

DWG. NO.



NOTES:

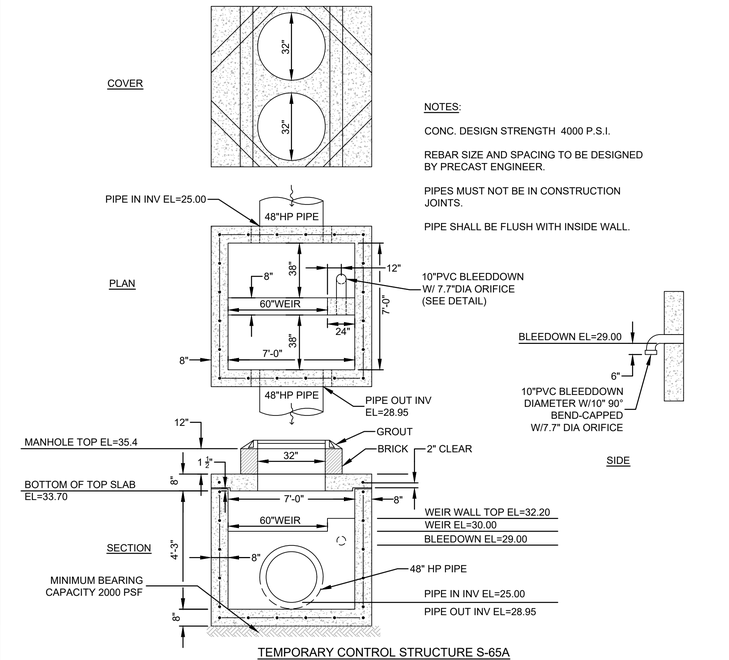
1. PROVIDE NO. 4 REBAR @ 6" O.C. HORIZONTALLY AT WEIR OPENING.
2. CONC. DESIGN STRENGTH 4000 P.S.I.
3. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
4. STRUCTURE GRATE NOT SHOWN. STRUCTURE GRATE SHALL BE FOR TYPE "C" INLET AND SHALL BE TRAFFIC BEARING UNLESS OTHERWISE NOTED.
5. ST. JOHNS COUNTY REQUIRES NO SMOOTH FLOW CHANNELS ON BOTTOM OF STRUCTURE.

CONTROL STRUCTURE SCHEDULE

PHASE	STRUCT NO.	SWMF NO.	TOP OF STRUCT. EL.	PIPE INV. EL.	PIPE DIA.	WEIR EL.	WEIR LENGTH	WEIR LOCATION	BLEEDDOWN INV. EL.	BLEEDDOWN DIA.	ORIFICE DIA.	(D) BLEEDDOWN DISTANCE	BOTTOM EL.
1	S-38	J1	31.20	28.80	24"	29.20	18"	W	29.0	15"	7.3"	27"	25.5

★ ONLY ONE BLEEDDOWN PIPE TO RECEIVE ORIFICE DIAMETER. ADDITIONAL BLEEDDOWN PIPE TO REMAIN CAPPED AND DO NOT GLUE

TYPE "C" CONTROL STRUCTURES



NOTES:

CONC. DESIGN STRENGTH 4000 P.S.I.

REBAR SIZE AND SPACING TO BE DESIGNED BY PRECAST ENGINEER.

PIPES MUST NOT BE IN CONSTRUCTION JOINTS.

PIPE SHALL BE FLUSH WITH INSIDE WALL.

TEMPORARY CONTROL STRUCTURE S-65A

THE ROOKERY – PHASE 1

RELEASED FOR CONSTRUCTION

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THE ROOKERY – PHASE 1

FOR:
D.R. HORTON, INC. – JACKSONVILLE

CLAY COUNTY, FLORIDA

PAVING AND DRAINAGE DETAILS

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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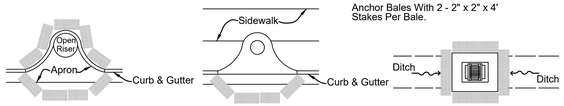
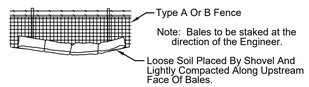
VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

EROSION AND SEDIMENT CONTROL NOTES

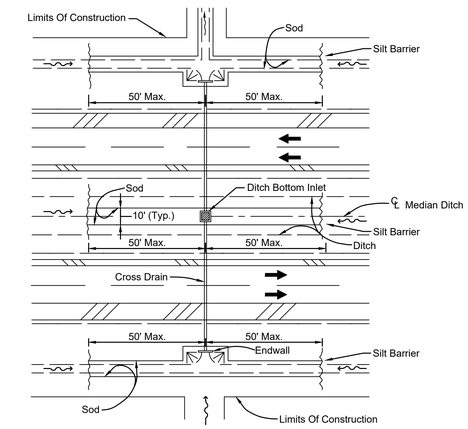
1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. 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.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. 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.
6. FDOT 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.
7. 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.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE SYNTHETIC MATERIAL SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. SYNTHETIC BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SYNTHETIC BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
17. 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.
18. 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.
19. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
20. 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.
21. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
22. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO $\frac{1}{4}$ 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.
23. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
24. 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.
25. 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.
26. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
27. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
28. 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.
29. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
30. ALL DISTURBED AREAS TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, SYNTHETIC BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
31. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
32. 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.
33. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SJRWMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.



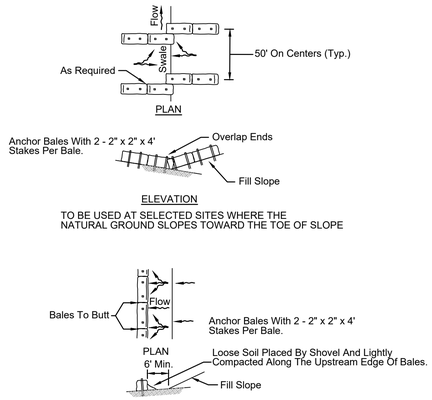
PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



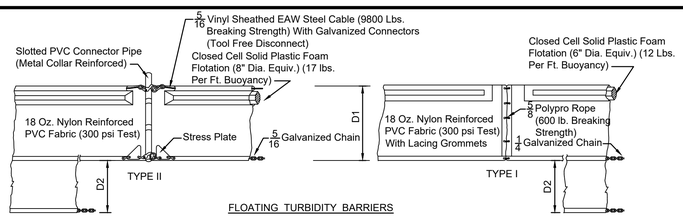
BALES BACKED BY FENCE



DITCH INSTALLATIONS AT DRAINAGE STRUCTURES



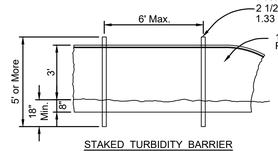
BARRIERS FOR FILL SLOPES



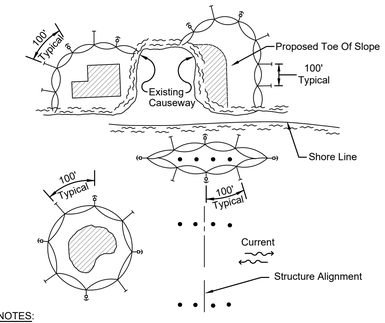
FLOATING TURBIDITY BARRIERS

NOTICE:

COMPONENTS OF TYPES I & TYPE II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



STAKED TURBIDITY BARRIER



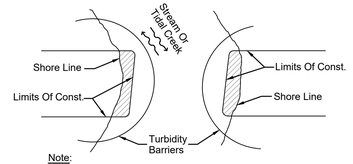
LEGEND

- Pile Locations
- Dredge Or Fill Area
- Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action

NOTES:

1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the FDOT Standard Specifications.

TURBIDITY BARRIER APPLICATIONS

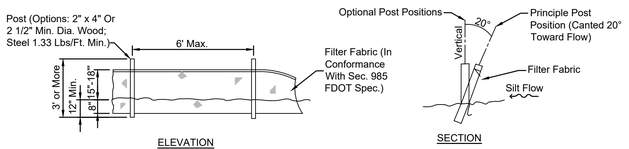


Note:

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 & Sediment Control Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

TURBIDITY BARRIERS
(D-907)
N.T.S.

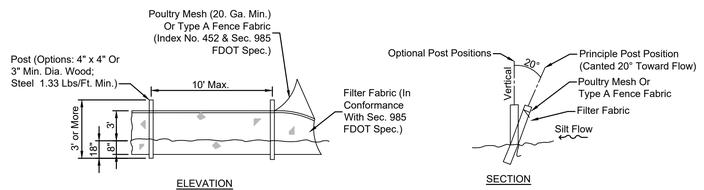
SYNTHETIC BALE LOCATION
(D-901)
N.T.S.



Note:

Silt Fence to be paid for under the contract lump sum price for Erosion and Sediment Control.

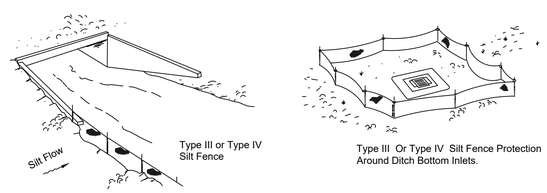
TYPE III SILT FENCE



Note:

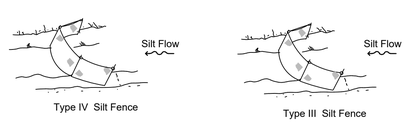
Silt Fence to be paid for under the contract lump sum price for Erosion and Sediment Control.

TYPE IV SILT FENCE



Note:

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.



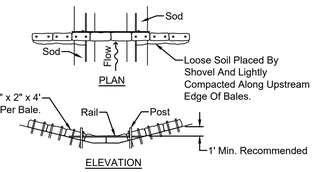
Note:

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

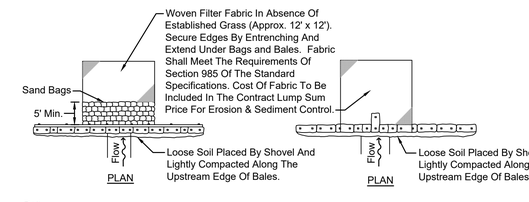
SILT FENCE TYPE III & IV
(D-908)
N.T.S.

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



Spacing: Bale barriers for paved ditches should be spaced in accordance with Chart I, Sheet 1 of 3, Index No. 102

BARRIER FOR PAVED DITCH



Application and Spacing: The use of Types I & II bale barriers should be limited to the conditions outlined in Chart I, Sheet 1 of 3, Index No. 102

BARRIER FOR UNPAVED DITCHES

SYNTHETIC BALE BARRIERS TYPE I & II
(D-912)
N.T.S.

THE ROOKERY – PHASE 1

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REVISIONS			
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THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
STORMWATER POLLUTION PREVENTION PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

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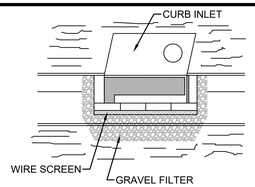
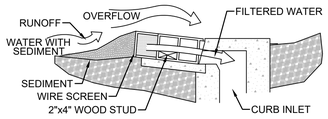
VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 87 of 88

SPP-1
DWG. NO.

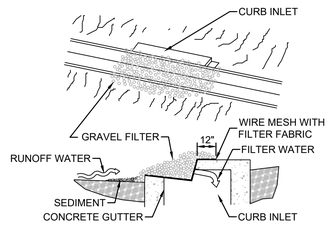




SPECIFIC APPLICATION

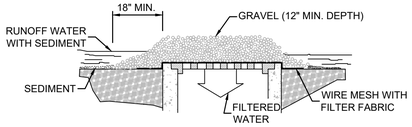
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

BLOCK & GRAVEL CURB
INLET SEDIMENT FILTER
(D-902)
N.T.S.



GRAVEL CURB INLET SEDIMENT FILTER
SPECIFIC APPLICATION

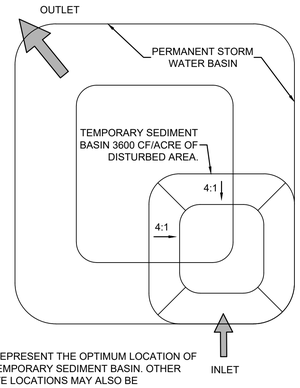
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.



GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER
SPECIFIC APPLICATION

THIS METHOD OF INLET 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 AND UNPROTECTED AREAS.

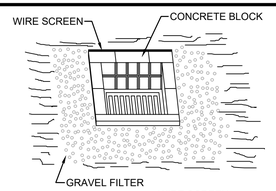
GRAVEL INLET SEDIMENT TRAP
(D-903)
N.T.S.

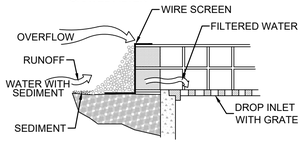


NOTE:

THIS REPRESENT THE OPTIMUM LOCATION OF THE TEMPORARY SEDIMENT BASIN. OTHER ON-SITE LOCATIONS MAY ALSO BE APPROPRIATE.

TEMPORARY SEDIMENT BASIN
N.T.S.

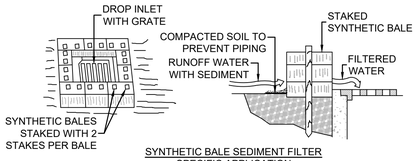




SPECIFIC APPLICATION

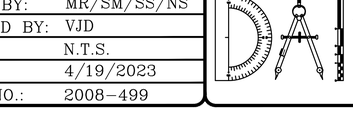
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

BLOCK & GRAVEL DROP
INLET SEDIMENT FILTER
(D-904)
N.T.S.



SYNTHETIC BALE SEDIMENT FILTER
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.



FABRIC SEDIMENT FILTER
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
(D-905)
N.T.S.

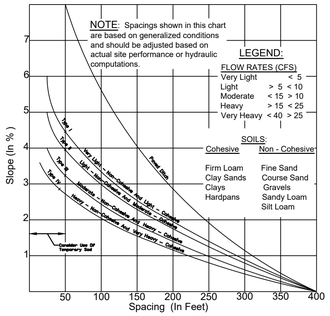
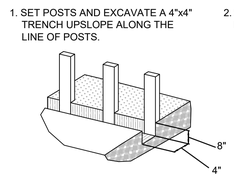
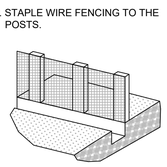


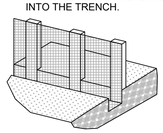
CHART I

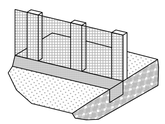
RECOMMENDED SPACING FOR TYPE I AND TYPE II SYNTHETIC BALE BARRIERS, AND TYPE III AND TYPE IV SILT FENCES AND PAVED DITCH SYNTHETIC BALE BARRIERS

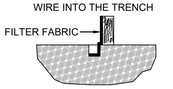
SPACING RECOMMENDATION FOR
SILT FENCES & SYNTHETIC BALES
(D-906)
N.T.S.



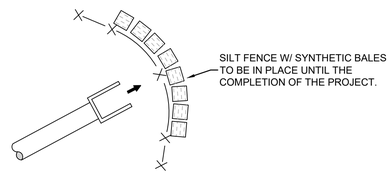




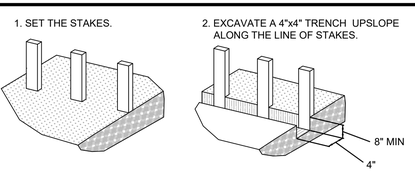




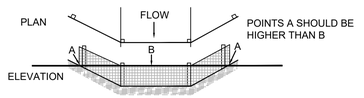
CONSTRUCTION DETAILS FOR SILT FENCES
(D-909)



OUTLET PROTECTION
N.T.S.



CONSTRUCTION OF A FILTER BARRIER

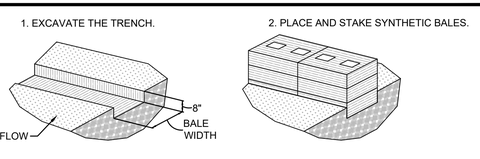


PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY

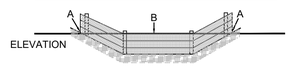
FILTER BARRIER CONSTRUCTION DETAIL
(D-910)
N.T.S.

CROSS-SECTION OF A PROPERLY INSTALLED SYNTHETIC BALE

STAKED SYNTHETIC BALE
(D-911)
N.T.S.



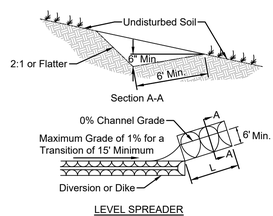
CONSTRUCTION OF A SYNTHETIC BALE BARRIER



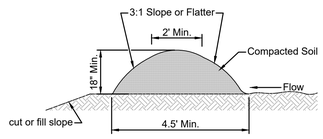
POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF SYNTHETIC BALE BARRIER IN DRAINAGE WAY

SYNTHETIC BALE BARRIER CONSTRUCTION DETAILS
(D-913)
N.T.S.

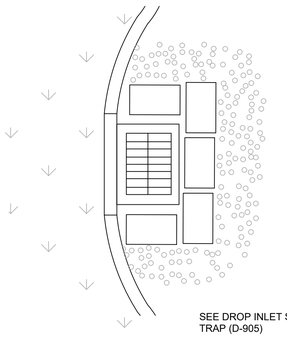


LEVEL SPREADER

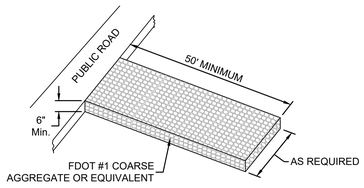


TEMPORARY DIVERSION DIKE

DIVERSION DIKE
(D-914)
N.T.S.



ERECT SEDIMENT BARRIERS AT CATCH BASINS
(TYPICAL)
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

A STABILIZED CONSTRUCTION ENTRANCE TO REDUCE SEDIMENT TRANSPORT IS REQUIRED AT ANY LOCATION WORK VEHICLES ENTER PUBLIC ROADS.

RELEASED FOR CONSTRUCTION

THE ROOKERY – PHASE 1

P:\2008-499 AYRSHIRE\ENG PLANS\499 SPP1-2.DWG4/19/2023 8:34 AMMike Reilly

REVISIONS			
NO.	DATE	DESCRIPTION	BY:

DESIGNED BY:	DAI
DRAWN BY:	MR/SM/SS/NS
CHECKED BY:	VJD
SCALE:	N.T.S.
DATE:	4/19/2023
PROJ. NO.:	2008-499

Dunn & Associates, Inc.
CIVIL ENGINEERS / LAND PLANNERS
8647 Baypine Road, Suite 200
Jacksonville, Florida 32256
Phone: (904)363-8916 Fax: (904)363-8917
www.dunneng.com

THE ROOKERY – PHASE 1
FOR:
D.R. HORTON, INC. – JACKSONVILLE
CLAY COUNTY, FLORIDA
STORMWATER POLLUTION PREVENTION PLAN

VINCENT JAMES DUNN LICENSE No. 39452 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 04/19/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452 | DAVID M. TAYLOR ENGINEER NO. 44164 | GLEN R. WIEGER ENGINEER NO. 61419

Sheet No. 88 of 88

SPP-2
DWG. NO.