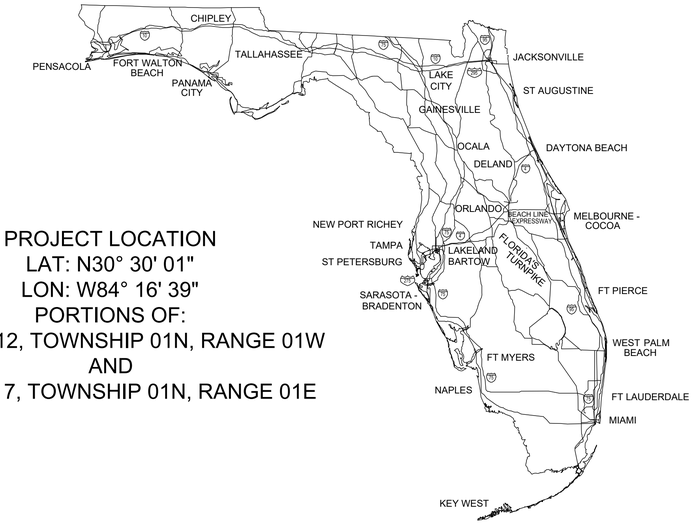
INDEX OF SHEETS

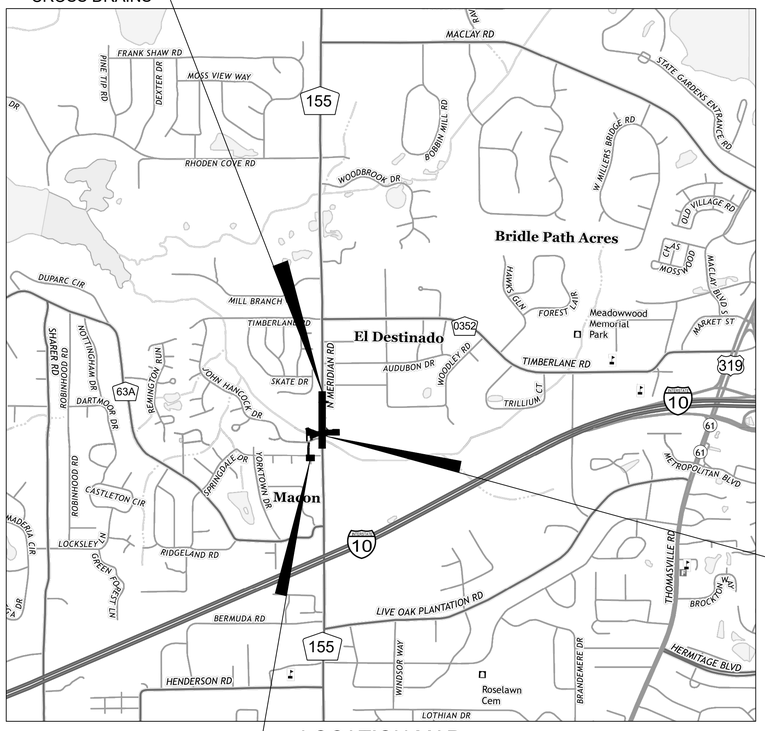
LEON COUNTY
BOARD OF COUNTY COMMISSIONERS
PUBLIC WORKS DEPARTMENT

CR 155 (MERIDIAN ROAD)
DRAINAGE IMPROVEMENTS
CONTRACT PLANS



PROJECT LOCATION
LAT: N30° 30' 01"
LON: W84° 16' 39"
PORTIONS OF:
SECTION 12, TOWNSHIP 01N, RANGE 01W
AND
SECTION 7, TOWNSHIP 01N, RANGE 01E

PROJECT LOCATION
NORTH MERIDIAN
CROSS DRAINS



LOCATION MAP

PROJECT LOCATION
LEXINGTON RD. DRAINAGE
IMPROVEMENTS

PROJECT LOCATION
MERIDIAN ROAD DRAINAGE
IMPROVEMENTS

COMMISSIONERS:

WILLIAM C. PROCTOR, JR
DISTRICT 1

JIMBO JACKSON
DISTRICT 2

RICK MINOR
DISTRICT 3

BRYAN DESLOGE
DISTRICT 4

KRISTIN DOZIER
DISTRICT 5

MARY ANN LINDLEY
AT-LARGE

NICK MADDOX
AT-LARGE

VINCENT S. LONG
COUNTY ADMINISTRATOR

BRENT PELL. P.E.
PUBLIC WORKS DIRECTOR

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TALLAHASSEE, FL 32309
Tel. 850.878.5001
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CHRIS E. BROCKMEIER
LICENSE
No. 56859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

ENGINEER OF RECORD
CHRIS E. BROCKMEIER, P.E.
P.E.No. 56859

NOTE:
THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

GOVERNING DESIGN STANDARDS:
FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD PLANS FOR BRIDGE CONSTRUCTION, 2019 EDITION.

GOVERNING STANDARD SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR BRIDGE CONSTRUCTION, 2019 EDITION.

PROJECT NOTES:

THE LEON COUNTY DEPARTMENT OF PUBLIC WORKS SEEKS TO IMPROVE DRAINAGE PATTERNS WITHIN THE FORD'S ARM SOUTH WATERSHED IN ORDER TO REMEDIATE EXISTING FLOODING CONDITIONS THROUGHOUT THE PROJECT CORRIDOR. THE TRIBUTARY LIES WITHIN THE FORD'S ARM WATERSHED OF THE LAKE JACKSON BASIN. THE PROJECT WILL INCLUDE THE INSTALLATION OF THREE-5 FT X 10 FT CONCRETE BOX CULVERTS AND TWO-24-IN CROSS DRAINAGE CULVERTS UNDER MERIDIAN ROAD. THE CONSTRUCTION OF THE NEW STORM STRUCTURES WILL REQUIRE SEVERAL TREES WITHIN THE CANOPY ROAD PROTECTION ZONE LIMITS TO BE REMOVED TO INSTALL THE NEW STRUCTURES WITH END TREATMENTS, GRADE AREAS ADJACENT TO THE PROPOSED IMPROVEMENTS AND IMPLEMENT SUSTAINABLE LOW IMPACTS SOLUTIONS WITHIN OPEN CHANNEL IMPROVEMENTS. LAND DISTURBANCE OF 1.93 ACRES (AC.) IS EXPECTED TO OCCUR.

PROJECT CONSTRUCTION PHASING

THE PROJECT WILL BE CONSTRUCTED IN MULTIPLE PHASES (ILLUSTRATED ON SHEET G-104);

PHASE A: EAST SUMP IMPROVEMENTS AND DRAINAGE CONVEYANCE SYSTEMS IMPROVEMENTS INTO THE EAST SUMP.

PHASE B: WEST SUMP IMPROVEMENTS, LEXINGTON ROAD DRAINAGE CONVEYANCE SYSTEM, AND JOHN HANCOCK DRAINAGE CONVEYANCE SYSTEM. PHASE WILL INCLUDE ASSOCIATED WATER & SEWER UTILITITY ADJUSTMENTS.

PHASE C1: MERIDIAN ROAD IMPROVEMENTS INCLUDING TWO, 24-IN CROSS DRAIN CULVERTS. PHASE WILL INCLUDE ASSOCIATED WATER UTILITY ADJUSTMENTS AND COORDINATION OF NEW HIGH-PRESSURE GAS MAIN.

PHASE C2: MERIDIAN ROAD IMPROVEMENTS INCLUDING THREE, 5-FT X 10-FT BOX CULVERTS, ASSOCIATED HEADWALLS AND CONNECTIONS TO EAST SUMP RETAINING WALLS. PHASE WILL INCLUDE ASSOCIATED WATER & SEWER UTILITY ADJUSTMENTS AND COORDINATION OF TWO NEW HIGH-PRESSURE GAS MAINS.

PROJECT CONSTRUCTION SCHEDULE

PHASE A SHALL BEGIN UPON NOTICE TO PROCEED AND BE SUBSTANTIALLY COMPLETED BY JUNE 22, 2020.

PHASE B SHALL BEGIN UPON NOTICE TO PROCEED AND SUBSTANTIALLY COMPLETED BY 365 CALENDAR DAYS.

PHASE C1 SHALL BEGIN JUNE 1, 2020 AND INCLUDE MERIDIAN ROAD CLOSURE TO FACILITATE CONSTRUCTION OF TWO, 24-IN CROSS DRAINS, DRAINAGE IMPROVEMENTS AND WATER MAIN INSTALLATION. PHASE C1 SHALL ALSO INCLUDE CONTRACTOR COORDINATION WITH THE CITY OF TALLAHASSEE FOR THE HIGH PRESSURE GAS MAIN RELOCATION. WORK TO BE COMPLETED BY AUGUST 6, 2020.

PHASE C2 SHALL BEGIN AT THE COMPLETION OF PHASE C1 AND INCLUDE MERIDIAN ROAD CLOSURE TO FACILITATE CONSTRUCTION OF THREE, 5-FT BY 10-FT BOX CULVERTS, HEADWALLS, CONNECTIONS TO THE EAST SUMP, AND DRAINAGE IMPROVEMENTS TO THE WEST SUMP AND PROVIDE FOR SUBSTANTIALLY COMPLETION AND THE OPENING OF MERIDIAN ROAD ON AUGUST 6, 2020.

DURING THE CONSTRUCTION OF THE PROJECT IMPROVEMENTS, CONTRACTOR SHALL COORDINATE POTABLE AND SANITARY SEWER SERVICE CONNECTIONS WITH THE GOODWILL DONATION STATION REPRESENTATIVES. ALL SERVICE INTERRUPTIONS TO THE GOODWILL DONATION STATION SHALL BE KEPT TO A MINIMUM. OUTAGES SHALL NOT EXCEED 4 HOUR DURATION DURING WORKING HOURS. IF POSSIBLE, ANY SERVICE INTERRUPTIONS SHALL BE PERFORMED ON THE NON-PEAK, OFF-DUTY HOURS OR WEEKEND HOURS AND COORDINATED WITH THE GOODWILL DONATION STATION REPRESENTATIVES. CONTRACTOR SHALL INCLUDE ALL RELATED COSTS TO PROVIDE TEMPORARY FACILITIES IF NECESSARY. CONTRACTOR SHALL COORDINATE WITH GOODWILL DONATION STATION REPRESENTATIVES TO MAINTAIN INGRESS AND EGRESS AT ALL TIMES DURING CONSTRUCTION. THIS EFFORT SHALL BE INCLUDED IN THE CONTRACTOR'S MAINTENANCE OF TRAFFIC SUBMITTAL.

EXISTING WATERWAYS WILL BE IMPACTED WITHIN THE PROJECT AREA.

CONSTRUCTION ACTIVITIES FOR THE PROJECT INCLUDE BUT ARE NOT LIMITED TO TREE REMOVAL, CLEARING AND GRUBBING, CONSTRUCTION OF REINFORCED CONCRETE BOX CULVERTS, CONSTRUCTION OF STORMWATER CONVEYANCE CHANNELS OFFSITE, CONSTRUCTION OF REINFORCED CONCRETE DRAINAGE PIPE, REMOVAL, DRIVEWAY RECONSTRUCTION, ROADWAY RECONSTRUCTION, AND GUARDRAIL INSTALLATION.

THE SITE LIES AT APPROXIMATELY LATITUDE N30°30'01", LONGITUDE 84°16'39". THE SITE IS WITHIN THE FORD'S ARM WATERSHED IN THE LAKE JACKSON BASIN. THE TOTAL DRAINAGE AREA CONTRIBUTING TO THE SITE IS 1,100 ACRES.

FOR SITE SOIL CONDITIONS REFER TO THE GEOTECHNICAL INVESTIGATION PERFORMED BY ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC. (EGS) DATED JUNE 2018.

RECORD KEEPING

CONTRACTOR SHALL COMPLETE THE NECESSARY RECORD KEEPING TASKS IN A REGULAR AND EXPEDIENT MANNER WHILE CONSTRUCTION ACTIVITIES ARE OCCURRING.

1. CONTRACTOR SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED TO FDEP:
   a) A COPY OF THE NOTICE OF INTENT SUBMITTED TO FDEP.
   b) A COPY OF THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
   c) A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT.
   d) A COPY OF ALL INSPECTION REPORTS GENERATED AS REQUIRED BY THE FDEP NPDES GENERAL PERMIT.
   e) A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED DURING THE COURSE OF THE PROJECT.
   f) DAILY RAINFALL INFORMATION COLLECTED.
2. CONTRACTOR SHALL RECORD THE FOLLOWING DATES:
   a) WHEN MAJOR GRADING ACTIVITIES OCCUR.
   b) WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
   c) WHEN STABILIZATION (I.E. EROSION CONTROL) MEASURES BEGIN.
3. CONTRACTOR IS TO PROVIDE QUALIFIED INSPECTORS WHO HAVE KNOWLEDGE AND EXPERIENCE IN THE PRINCIPLES AND PRACTICE OF SEDIMENT AND EROSION CONTROL AND CAN COMPLETE PROJECT SITE INSPECTIONS.
   a) AT LEAST ONCE EVERY SEVEN (7) DAYS.
   b) WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.50 INCHES (IN.) OR MORE.
   c) CONTRACTOR SHALL PROVIDE A FOREMAN OR SUPERINTENDENT WHO HAS BEEN CERTIFIED UNDER THE FLORIDA STORMWATER, EROSION, AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM. SAID FOREMAN OR SUPERINTENDENT SHALL BE AVAILABLE IN PERSON OR BY TELEPHONE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
4. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE REPORTS AND ALL OTHER RECORDS RESULTING FROM THE NPDES GENERAL PERMIT SHALL BE RETAINED BY THE CONTRACTOR WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THAT THE NOTICE OF TERMINATION IS SUBMITTED. THESE RECORDS SHALL BE MAINTAINED AT THE CONTRACTOR'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATIONS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE SITE.
5. CONTRACTOR SHALL PROVIDE COPIES OF ALL SWPPP RECORDS TO THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE BY THE 10TH DAY OF EACH MONTH FOR THE IMMEDIATELY PRECEDING MONTH.

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FILING A NPDES NOTICE OF INTENT WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AND FOR COMPLIANCE WITH ALL STATE, LOCAL, AND FEDERAL PERMITS RELATED TO THIS PROJECT.
2. THE EROSION CONTROL MEASURES SET FORTH IN THESE PLANS ARE INTENDED AS MINIMUM STANDARDS. ALL EROSION CONTROL REQUIRED SHALL BE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXPOSED AREAS, COST OF WHICH SHALL BE INCIDENTAL TO THE PROJECT.
3. A STORMWATER CONTROL OFFICER WILL BE DESIGNATED IN WRITING BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. A 24-HOUR CONTACT NUMBER IS REQUIRED FOR THE STORMWATER CONTROL OFFICER. PRIOR TO THE REQUIRED PRE-CONSTRUCTION MEETING, CONTRACTOR SHALL PROVIDE IN WRITING THE NAME AND TELEPHONE NUMBER OF THE STORMWATER CONTROL OFFICER TO LEON COUNTY DEVELOPMENT SUPPORT AND ENVIRONMENTAL MANAGEMENT AND THE NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT.
4. THE STORMWATER CONTROL OFFICER SHALL BE RESPONSIBLE FOR CONTINUALLY MONITORING WEATHER CONDITIONS AND EVALUATING THE EFFECTIVENESS OF THE CONTROL MEASURES THROUGHOUT ALL PHASES OF CONSTRUCTION.
5. AS CONSTRUCTION PROGRESSES, THE STORMWATER CONTROL OFFICER SHALL MAKE ADJUSTMENTS AND/OR INSTALL ADDITIONAL MEASURES TO PREVENT DIRECT FLOW OR TRACKING OF SEDIMENTS ONTO ADJACENT PROPERTY, CONSERVATION AREAS, PUBLIC STREETS OR DRAINAGE SYSTEMS.
6. ANY SEDIMENTS, GRAVEL OR MUD SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ADJACENT PROPERTY, ROADWAYS OR INTO STORM DRAINAGE SYSTEMS SHALL BE RECOVERED AND DISPOSED OF PROPERLY.
7. TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PLACED ADJACENT TO ANY WATERWAY OR DRAINAGE FEATURE PRIOR TO CONSTRUCTION AND REMAIN IN PLACE UNTIL CONSTRUCTION OF THE FEATURE IS COMPLETE, AND ALL AREAS ARE SUITABLY STABILIZED.
8. CONTRACTOR SHALL REVISE THE SWPPP WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING AN INSPECTION WHEN ADDITIONS AND/OR MODIFICATIONS TO BEST MANAGEMENT PRACTICES (BMPs) ARE NECESSARY TO CORRECT OBSERVED PROBLEMS. REVISIONS SHALL OCCUR WHENEVER:
   a) A CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE AT THE CONSTRUCTION SITE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE UNITED STATES NOT PREVIOUSLY ADDRESSED IN THE DOCUMENT.
   b) DISCHARGES ARE CAUSING WATER QUALITY EXCEEDANCES, AS DEFINED BY THE EPA, OR THE BMPS ARE INEFFECTIVE IN MINIMIZING POLLUTANTS IN STORMWATER DISCHARGING FROM THE CONSTRUCTION SITE.
9. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AT LOCATIONS SHOWN IN THE PLANS OR AS REQUIRED UNTIL CONSTRUCTION IS COMPLETED, SOILS ARE STABILIZED, AND VEGETATION HAS BEEN ESTABLISHED. ALL EROSION CONTROL MEASURES ARE THEN TO BE REMOVED UPON APPROVAL BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
10. EROSION CONTROL ITEMS ARE ESTIMATED FOR PREVENTION, CONTROL, ABATEMENT OF EROSION, SEDIMENTATION, AND WATER POLLUTION. THESE ITEMS ARE TO BE USED AT LOCATIONS DESCRIBED IN THE APPROVED SWPPP OR AS DIRECTED BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
11. SWEEPING THE PERIMETER ROADS SHALL BE REQUIRED AS NEEDED TO REMOVE ANY DEBRIS OR SEDIMENT AS A RESULT OF PROJECT ACTIVITIES OR AS PER THE LEON COUNTY ENVIRONMENTAL INSPECTOR.
12. ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED DURING ANY PHASE OF DEVELOPMENT AT THE DISCRETION OF THE LEON COUNTY ENVIRONMENTAL INSPECTOR.
13. CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT. SHOULD CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACT WORK, CONTRACTOR SHALL REQUEST, IN WRITING, WRITTEN PERMISSION FROM THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE. CONTRACTOR SHALL PROVIDE THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE. SINCE STATE LAW DOES NOT TREAT PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AND INTENDED FOR EQUIPMENT USE AS A HAZARDOUS MATERIAL, SUCH PRODUCTS DO NOT NEED THE MSDS SUBMITTAL ANY KNOWN OR SUSPECTED HAZARDOUS MATERIAL FOUND ON THE PROJECT BY CONTRACTOR SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE AND WHO SHALL PROTECT THE AREA OF KNOWN OR SUSPECTED CONTAMINATION FROM FURTHER ACCESS. THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE WILL ARRANGE FOR INVESTIGATION, IDENTIFICATION, AND REMEDIATION OF THE HAZARDOUS MATERIAL. CONTRACTOR SHALL NOT RETURN TO THE AREA OF CONTAMINATION UNTIL APPROVAL IS PROVIDED BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE. HOWEVER, CONTRACTOR SHALL RE-LOCATE CONSTRUCTION ACTIVITIES TO ANOTHER AREA OF THE PROJECT UNTIL SUCH APPROVAL IS PROVIDED.
14. ALL DISTURBED AREAS SHALL BE SODDED. ALL SOD MATERIALS SHALL BE SUBJECT TO INSPECTION PRIOR TO PLACEMENT. ANY SOD WITH NOXIOUS WEEDS AND GRASSES SHALL BE REJECTED FOR USE ON THE PROJECT. CONTRACTOR SHALL FURNISH THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE, PRIOR TO INCORPORATION INTO THE PROJECT, A CERTIFICATION FROM THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICE DIVISION OF PLANT INDUSTRY, STATING THAT THE SOD, HAY, STRAW, AND MULCH MATERIALS ARE FREE OF NOXIOUS WEEDS.
15. EQUIPMENT MAINTENANCE AND REPAIR SHALL BE LIMITED TO ONE AREA OF THE PROJECT. AN ADEQUATE NUMBER OF WASTE DISPOSAL RECEPTACLES FOR LIQUID AND SOLID WASTE SHALL BE PROVIDED. WASTE SHALL BE DISPOSED OF PROPERLY OFF-SITE. THE MAINTENANCE AREAS SHALL BE INSPECTED AND CLEANED DAILY. CARE SHALL BE TAKEN THAT ANY OILS, GASOLINE, GREASE, SOLVENTS, AND OTHER POTENTIAL POLLUTANTS SHALL NOT BE WASHED DIRECTLY INTO THE EXISTING STORMWATER CONVEYANCE SYSTEM.
16. A SUFFICIENT NUMBER OF WASTE AND TRASH RECEPTACLES SHALL BE PROVIDED AT ALL TIMES. RECEPTACLES AND OTHER WASTE COLLECTION AREAS SHALL BE KEPT NEAT AND ORDERLY. TRASH CANS AND DUMPSTERS SHALL HAVE COVERS TO PREVENT THE ENTRANCE OF RAINFALL. ALL WASTE MATERIALS SHALL BE COLLECTED WEEKLY AT A MINIMUM AND DISPOSED AT A SUITABLE LANDFILL. TRASH COLLECTION POINTS SHALL BE LOCATED WHERE THEY WILL BE LEAST IMPACTED BY CONCENTRATED STORMWATER RUNOFF.
17. DUST CONTROL TECHNIQUES SHALL BE USED DURING DEMOLITION WHERE LARGE AMOUNTS OF DUST ARE GENERATED. IF WATER OR SLURRY IS USED TO CONTROL DUST, IT SHALL BE RETAINED ON THE SITE AND NOT BE ALLOWED TO ENTER THE STORMWATER CONVEYANCE OR COLLECTION SYSTEM.
18. DUMP TRUCKS, CONCRETE TRUCKS AND OTHER CONSTRUCTION EQUIPMENT SHALL NOT BE WASHED AT LOCATIONS WHERE RUNOFF WILL FLOW DIRECTLY INTO THE STORMWATER CONVEYANCE SYSTEM. AN AREA SHALL BE DESIGNATED BY THE CONTRACTOR FOR WASHING VEHICLES AND WILL BE LOCATED WHERE THE WASH WATER WILL SPREAD OUT AND EVAPORATE OR INFILTRATE DIRECTLY INTO THE GROUND OR WHERE THE RUNOFF CAN BE COLLECTED IN A TEMPORARY HOLDING OR SEEPAGE BASIN. WASH AREAS SHALL HAVE GRAVEL BASES TO MINIMIZE MUD GENERATION.
19. AN ISOLATED AREA SHALL BE DESIGNATED TO STORE CHEMICALS, CEMENTS, SOLVENTS, PAINTS, OR OTHER POTENTIAL WATER POLLUTANTS. THE AREA SHALL BE SO LOCATED AS TO ELIMINATE RUNOFF POLLUTION. TOXIC CHEMICALS AND MATERIALS, SUCH AS PESTICIDES, PAINTS, AND ACIDS SHALL BE STORED ACCORDING TO THE MANUFACTURER'S GUIDELINES. CARE SHALL BE TAKEN IN THE USE OF THESE MATERIALS TO AVOID ACCIDENTAL SPILLS. CONTAINERS OF CONSTRUCTION MATERIALS SHALL NOT BE WASHED IN OR NEAR ADJACENT ROADWAYS OR THE EXISTING STORMWATER CONVEYANCE AND COLLECTION SYSTEM.
20. SANITARY FACILITIES - ADEQUATE SANITARY FACILITIES SHALL BE PROVIDED DURING ALL CONSTRUCTION PHASES FOR WORKERS ACCORDING TO APPLICABLE HEALTH AND SAFETY PRACTICES AND REGULATIONS. SANITARY FACILITIES SHALL BE LOCATED AWAY SO AS TO AVOID ACCIDENTAL SPILLS INTO THE STORMWATER SYSTEM.
21. ELEVATIONS WITHIN THE PROJECT AREA SHOWN ON THESE PLANS ARE BASED ON A FIELD SURVEY FROM NOBLES CONSULTING GROUP, INC. (NCG).
22. ALL ROADWAY AND DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST VERSION
23. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DETERMINE THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND PROVIDE FOR PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. EXCEPT FOR GAS, WATER, AND ELECTRIC, UTILITIES ARE TO BE ADJUSTED BY THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL UTILITY COORDINATION. CONTRACTOR SHALL NOTIFY UTILITY OWNERS THROUGH SUNSHINE STATE ONE CALL OF FLORIDA, INC. (1-800-432-4770 OR UNIVERSAL NUMBER 811) TWO BUSINESS DAY IN ADVANCE OF BEGINNING CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS AT THE TELEPHONE NUMBERS LISTED BELOW TWO BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION.

AGENCY	CONTACT	TELEPHONE NO.
CITY OF TALLAHASSEE WATER UTILITY	JERRY WALDEN	850-891-6107
LEON COUNTY PUBLIC WORKS	BETSY THORPE	850-606-1500
CENTURY LINK	DAVID POOLE	850-599-1542
COMCAST	JASON YAWN	850-251-7846
CITY OF TALLAHASSEE ELECTRIC	TINA ROSE	850-891-5016
CITY OF TALLAHASSEE TRAFFIC	ALLEN SECREST	850-891-8273
CITY OF TALLAHASSEE GAS	SAM AMEEN	850-891-5689
FLORIDA GAS TRANSMISSION (FGT)	DAVID FAULKS	850-491-4975

THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF ANY UTILITIES AS MAY BE NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS, UNLESS OTHERWISE STATED, THE COUNTY OR THE UTILITY OWNER WILL BE RESPONSIBLE FOR THE COST OF SAID RELOCATION.

24. HORIZONTAL AND VERTICAL CONTROL SHALL BE OBTAINED FROM THE PROJECT SURVEYOR, AT THE CONTRACTORS EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LAYOUT COSTS, MAINTAINING THE CONTROLS THROUGHOUT THE DURATION OF CONSTRUCTION, & FOR POST CONSTRUCTION AS-BUILD SURVEY.
25. THE CONTRACTOR SHALL SUBMIT A POST-CONSTRUCTION CERTIFICATION AND REPRODUCIBLE RECORD DRAWINGS (AS-BUILT'S) TO THE ENGINEER PRIOR TO INSPECTION AND ACCEPTANCE. THE RECORD DRAWINGS SHALL BE PREPARED AND CERTIFIED BY A PROFESSIONAL LAND SURVEYOR.
26. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE FOLLOWING PERMITS/APPROVAL OBTAINED FOR THIS PROJECT.
    LEON COUNTY ENVIRONMENTAL MANAGEMENT PERMIT NO. LEM19-00031.
27. THE CONTRACTOR SHALL COMPLY WITH THE PERMITS LISTED ABOVE AS WELL AS ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL ALSO MAINTAIN EROSION CONTROL DEVICES DURING CONSTRUCTION TO PREVENT SEDIMENT FROM LEAVING THE SITE. THE EROSION CONTROL DEVICES SHOWN ON THE DEMOLITION AND EROSION CONTROL PLAN ARE THE MINIMUM REQUIRED AND SHALL BE MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR TO CONTROL SEDIMENTS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL STORMWATER RUNOFF SHALL BE CONTROLLED DURING THE COURSE OF CONSTRUCTION IN SUCH A MANNER AS TO PREVENT DAMAGE OR DETRIMENTAL HARM TO ADJACENT PROPERTY.
28. THE CONTRACTOR SHALL NOT SUBSTITUTE ANY ARTICLE, DEVICE, PRODUCT, MATERIAL OR FIXTURE WITHOUT THE EXPRESSED WRITTEN APPROVAL OF THE COUNTY ENGINEER OR THE COUNTY ENGINEER'S DESIGNATED FIELD REPRESENTATIVE.
29. AT LEAST FOURTEEN CALENDAR DAYS PRIOR TO THE PRECONSTRUCTION CONFERENCE THE CONTRACTOR SHALL SUBMIT A TENTATIVE BASE CONSTRUCTION SCHEDULE, TRAFFIC CONTROL PLAN, AND STAGING AREA PLAN TO THE LEON COUNTY PUBLIC WORKS FOR APPROVAL. NO WORK SHALL BEGIN PRIOR TO APPROVAL OF THE CONSTRUCTION SCHEDULE, MAINTENANCE OF TRAFFIC PLAN, AND STAGING AREA PLAN. IF THE STAGING AREA PLAN REQUIRES OFF-SITE STAGING THE CONTRACTOR WILL BE REQUIRED TO OBTAIN ANY ADDITIONAL PERMITS THAT ARE REQUIRED.
30. THE CONTRACTOR SHALL NOTIFY AFFECTED PROPERTY OWNERS OF THE PROPOSED WORK SCHEDULE IN ADVANCE OF CONSTRUCTION AND PERFORM THE WORK IN A MANNER THAT MINIMIZES DISTURBANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES THAT OCCURS AS A RESULT OF THE ACTIVITIES OF THE CONTRACTOR OR AGENTS THEREOF AT NO ADDITIONAL COST.
31. CONTRACTOR WILL BE RESPONSIBLE FOR PROPERLY DISPOSING OF AN EXCAVATED MATERIAL OR DEBRIS IN ACCORDANCE WITH COUNTY STANDARDS.
32. A DISPOSAL SITE SHALL BE SUBMITTED BY THE CONTRACTOR AT OR PRIOR TO THE PRECONSTRUCTION MEETING, TO BE APPROVED BY THE ENVIRONMENTAL INSPECTOR. NO WORK SHALL BEGIN PRIOR TO APPROVAL OF THE DISPOSAL SITE BY THE COUNTY ENGINEER OR THE COUNTY ENGINEER'S DESIGNATED FIELD REPRESENTATIVE, AND THE ENVIRONMENTAL INSPECTOR.
33. A COPY OF THE PERMIT WILL BE KEPT ON SITE, ALSO AN 8½" BY 11" WEATHER RESISTANT SIGN, INCLUDING THE PERMIT NUMBER SHALL BE PLACED ON THE PROPERTY FACING THE ROAD. THE CONTRACTOR IS REQUIRED TO REVIEW THE COMPLETE PERMIT PRIOR TO CONSTRUCTION COMMENCEMENT.
34. CONTRACTOR SHALL NOT DISTURB PRIVATE PROPERTY OR ANY AREA OUTSIDE OF LEON COUNTY RIGHT-OF-WAY AND DRAINAGE EASEMENTS.
35. CONTRACTOR SHALL PROVIDE A MAINTENANCE OF TRAFFIC PLAN TO BE SUBMITTED TO LEON COUNTY PUBLIC WORKS AND DEVELOPMENT SUPPORT & ENVIRONMENTAL MANAGEMENT PRIOR TO COMMENCING ANY PHASE OF CONSTRUCTION. THE MAINTENANCE OF TRAFFIC PLAN SHALL BE IN ACCORDANCE WITH FDOT INDEX 600, 601, 602, AND 603.
36. MAINTAIN MIN. 10' CLEARANCE FROM OVERHEAD ELECTRIC PRIMARY AND NEUTRAL LINES AS REQUIRED BY CURRENT OSHA STANDARDS, CITY OF TALLAHASSEE OR TALQUIN ELECTRIC WHICHEVER IS GREATER.

BEST MANAGEMENT PRACTICES

THE FOLLOWING BMPS SHALL BE USED TO CONTROL AND MEASURE SEDIMENTATION AND EROSION DURING THE PROJECT:

1. CONSTRUCTION ENTRANCE WILL BE USED FOR THE DURATION OF THE PROJECT TO MINIMIZE THE TRACKING OF SEDIMENTS FROM EITHER THE BORROW OR FILL SITES. CONSTRUCTION ENTRANCES WILL BE PLACED PRIOR TO THE START OF CONSTRUCTION.
2. CROSS DRAIN END SECTION PROTECTION WILL BE USED THROUGHOUT THE PROJECT WHEREVER THERE ARE EXISTING CROSS DRAINS.
3. VEGETATIVE COVERS, BOTH TEMPORARY AND PERMANENT SHALL BE USED TO STABILIZE DISTURBED SOIL THROUGHOUT THE PROJECT.
4. SILT FENCE SHALL BE USED TO DETER MIGRATION OF SEDIMENTS INTO THE ADJACENT ROADWAYS AND THE STORMWATER MANAGEMENT FACILITY.

SPECIFICATIONS

1. SILT FENCE SHALL NOT BE INSTALLED WITHIN THE CPZ OF ANY PROTECTED TREES.
2. EROSION CONTROL DEVICES SHALL BE CONSTRUCTED PRIOR TO CLEARING AND GRUBBING OF ANY AREA NEEDED FOR CONSTRUCTION OF THE PROJECT.
3. VEGETATIVE COVERS SHALL BE USED SO THAT DISTURBED AREAS WILL NOT BE DESTABILIZED FOR MORE THAT SEVEN (7) DAYS. SHOULD AREAS REMAIN DISTURBED FOR MORE THAN SEVEN (7) DAYS, THE AREA SHALL BE TEMPORARILY STABILIZED WITH RYE GRASS, APPLIED AT THE MANUFACTURER'S RECOMMENDATION. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 4,000 POUNDS (LB.) OF STRAW PER AC. IF EXPOSED SLOPES ARE GREATER THAN OR EQUAL TO 5%, THEN AN EROSION BLANKET SUCH AS NORTH AMERICAN GREEN BIONET S75BN SHALL BE UTILIZED UNTIL THE AREA ACHIEVES FINAL STABILIZATION. HYDROMULCH MAY BE USED AS AN ALTERNATIVE.
4. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR ARE TO BE LEFT IDLE FOR MORE THAT 14 DAYS, SHALL BE STABILIZED WITH PERMANENT SEED, SOD OR OTHER PERMANENT STABILIZATION METHODS.

CONSTRUCTION ENTRANCE

1. THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
2. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED SO AS TO INTERCEPT SEDIMENT BEFORE IT IS CARRIED OFF-SITE INTO THE STORMWATER CONVEYANCE OR COLLECTION SYSTEM.
4. IF WASH RACKS ARE USED, THEY SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS.
5. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE SEDIMENT, THEN THE TIRES SHALL BE WASHED BEFORE THE VEHICLE ENTERS A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS SHALL BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE, INTO THE STORMWATER CONVEYANCE OR COLLECTION SYSTEM.
6. THE ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OR MUD ONTO PUBLIC RIGHTS-OF-WAY.
7. TOP DRESS THE ENTRANCE PERIODICALLY WITH 2-IN STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT WHEN VOID SPACES ARE FULL OF SEDIMENT.
8. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
9. SWEEP THE PAVED ROAD DAILY FOR SEDIMENTS AND STONES.

SILT FENCE

1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:
   FILTERING EFFICIENCY: (VTM-51) 75% (MIN.)
   TENSILE STRENGTH AT 20% MAX. ELONGATION: (VTM-52)
      EXTRA STRENGTH 50 LB./LIN. IN. (MIN.)
      STANDARD STRENGTH 30 LB./LIN. IN. (MIN.)
   FLOW RATE: (VTN-51) 0.3 GAL./SQ. FT./MIN. (MIN.)
   SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF O°F TO 120°F.
2. POSTS FOR SILT FENCES SHALL BE EITHER 2 X 4 IN. SQUARE OR 3 IN. DIAMETER WOOD OR 1.33 LB./ LINEAR FT. STEEL WITH A MINIMUM LENGTH OF 5 FT. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
3. WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 36 IN IN HEIGHT. A MINIMUM OF 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 IN.
4. WIRE MESH SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 IN. LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 IN.
5. THE FILTER MATERIAL SHALL BE STAPLED TO THE WOODEN STAKES, AND 8 IN. OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. HEAVY DUTY WIRE STAPLES AT LEAST ½ IN. LONG SHALL BE USED. FILTER MATERIAL SHALL NOT BE STAPLED TO EXISTING TREES.
6. A 4 IN. WIDE TRENCH SHALL BE EXCAVATED AT THE BASE OF THE PROPOSED BARRIER TO MINIMUM DEPTH OF 4 IN. THE FILTER FABRIC SHALL BE LAID THE FULL WIDTH AND DEPTH OF THE TRENCH AND THE EXCAVATED SOIL BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP TO 4 IN. AGAINST THE UPHILL SIDE OF THE BARRIER.
7. IF A BARRIER IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, THE BARRIER SHALL BE OF SUFFICIENT LENGTH TO ELIMINATE END FLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOW WITH THE ENDS-ORIENTED UPSLOPE.
8. THE HEIGHT OF SILT FENCE SHALL NOT EXCEED 36 IN.
9. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 IN. OVERLAP, AND SECURELY SEALED.
10. POSTS SHALL BE SPACED A MAXIMUM OF 10 FT. APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 IN.)
11. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL EVENT OF 1/2/ IN. OR GREATER AND AT LEAST DAILY DURING PROLONGED RAINFALL EVENTS. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
12. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED OR SODDED. INLET PROTECTION SHALL BE INSPECTED, AND GEO-TEXTILE FABRIC SHALL BE CHANGED AS NEEDED TO ALLOW POSITIVE FLOW.
13. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

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Revision By Appd. YY.MM.DD

Issued By Appd. YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

GENERAL NOTES 1

Seal
CHRIS E. BROCKMEIER
No. 56859
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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TEMPORARY SEEDING

1. QUICK GROWING/TEMPORARY SEEDING MIXTURE SHALL BE A MIXTURE OF ANNUAL AND PERENNIAL PLANT SPECIES AS OUTLINED BELOW. SEEDING RATES QUOTED ARE BASED ON PURE LIVE SEED.
2. MARCH-APRIL PLANTING: ANNUAL RYE GRASS AT A RATE OF 10 POUNDS PER 1000 SF.
3. MAY PLANTING: BROWN TOP MILLET AT A RATE OF 10 POUNDS PER 1000 SF.
4. JUNE-AUGUST PLANTING: MIX 50% RYE GRAIN AND 60% WINTER WHEAT AT A RATE OF 10 POUNDS PER 1000 SF.
5. SEPTEMBER-OCTOBER PLANTING: ANNUAL RYE GRASS AT A RATE OF 10 POUNDS PER 1000 SF.
6. VEGETATION SHALL NOT BE ESTABLISHED ON SLOPES THAT ARE UNSUITABLE DUE TO INAPPROPRIATE SOIL TEXTURE, POOR INTERNAL STRUCTURE OR INTERNAL DRAINAGE, VOLUME OF OVERLAND FLOW, OR EXCESSIVE STEEPNESS, UNTIL MEASURES HAVE BEEN TAKEN TO CORRECT THESE PROBLEMS.
7. IF THE AREA HAS BEEN RECENTLY LOOSENED OR DISTURBED, NO FURTHER ROUGHENING IS REQUIRED. WHEN THE AREA IS COMPACTED, CRUSTED, OR HARDENED, THE SOIL SURFACE SHALL BE LOOSENED BY DISCING, RANKING, HARROWING, OR OTHER ACCEPTABLE MEANS.
8. WHERE SOILS ARE KNOWN TO BE HIGHLY ACID (PH 5.5 AND LOWER), LIME SHALL BE APPLIED AT THE RATE OF TWO TONS OF PULVERIZED AGRICULTURAL LIMESTONE PER AC. FERTILIZER SHALL BE APPLIED AS 220 LB./AC. OF 10-10-10- (5 LB./1,000 SF) OR EQUIVALENT. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 IN OF THE SOIL.
9. CERTIFIED SEED SHALL BE USED FOR ALL TEMPORARY SEEDING.
10. APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE ¼ IN.
11. WHEN HYDROSEEDING, IF A MACHINERY BREAKDOWN OF 30 MINUTES TO 2 HOURS OCCURS, 50% MORE SEED SHALL BE ADDED TO THE TANK, BASED ON THE PROPORTION OF THE SLURRY REMAINING IN THE TANKS. BEYOND 2 HOURS, A FULL RATE OF NEW SEED SHALL BE NECESSARY.
12. ALL TEMPORARY SEEDING MUST BE MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION.
13. NEW SEEDLINGS SHALL BE SUPPLIED WITH ADEQUATE MOISTURE. SUPPLY WATER AS NEEDED, ESPECIALLY LATE IN THE SEASON, IN ABNORMALLY HOT OR DRY WEATHER, OR ON ADVERSE SITES. WATER APPLICATION RATES SHALL BE CONTROLLED TO PREVENT RUNOFF.
14. INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.
15. IF VEGETATIVE COVER IS INADEQUATE TO PREVENT RILL EROSION, OVER-SEED AND FERTILIZE IN ACCORDANCE WITH SOIL TEST RESULTS.
16. SEEDLINGS SHALL BE FERTILIZED ONE YEAR AFTER PLANTING TO INSURE PROPER STAND DENSITY.

PERMANENT SEEDING

1. VEGETATION SHALL NOT BE ESTABLISHED ON SLOPES THAT ARE UNSUITABLE DUE TO INAPPROPRIATE SOIL, TEXTURE, POOR INTERNAL STRUCTURE OR INTERNAL DRAINAGE, VOLUME OF OVERLAND FLOW, OR EXCESSIVE STEEPNESS, UNTIL MEASURES HAVE BEEN TAKEN TO CORRECT THESE PROBLEMS.
2. IF THE AREA HAS BEEN RECENTLY LOOSENED OR DISTURBED, NO FURTHER ROUGHENING IS REQUIRED. WHEN THE AREA IS COMPACTED, CRUSTED, OR HARDENED, THE SOIL SURFACE SHALL BE LOOSENED BY DISCING, RAKING, HARROWING, OR OTHER ACCEPTABLE MEANS.
3. LIMING AND FERTILIZATION SHALL BE AS DIRECTED FOR TEMPORARY SEEDING, LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4-6 INCHES OF THE SOIL BY DISCING OR OTHER MEANS. WHEN APPLYING LIME AND FERTILIZER WITH A HYDROSEEDER, APPLY TO A ROUGH, LOOSE SURFACE.
4. CERTIFIED SEED SHALL BE USED FOR ALL PERMANENT SEEDING.
5. PERMANENT SEEDING SHALL UTILIZE PENSACOLA BAHIA SEED AT A RATE OF 10 POUNDS PER 1000 SF.
6. APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE ¼ INCH.
7. WHEN HYDROSEEDING, IF A MACHINERY BREAKDOWN OF 30 MINUTES TO 2 HOURS OCCURS, 50% MORE SEED SHALL BE ADDED TO THE TANK, BASED ON THE PROPORTION OF THE SLURRY REMAINING IN THE TANK. BEYOND 2 HOURS, A FULL RATE OF NEW SEED SHALL BE NECESSARY.
8. ALL PERMANENT SEEDING MUST BE MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION.
9. NEW SEEDLINGS SHALL BE SUPPLIED WITH ADEQUATE MOISTURE. SUPPLY WATER AS NEEDED, ESPECIALLY LATE IN THE SEASON, IN ABNORMALLY HOT OR DRY WEATHER, OR ON ADVERSE SITES. WATER APPLICATION RATES SHALL BE CONTROLLED TO PREVENT RUNOFF.
10. INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.
11. IF VEGETATIVE COVER IS INADEQUATE TO PREVENT EROSION, OVERSEED AND FERTILIZE IN ACCORDANCE WITH SOIL TEST RESULTS.
12. SEEDLINGS SHALL BE FERTILIZED ONE YEAR AFTER PLANTING TO INSURE PROPER STAND DENSITY.

SODDING

1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVAL PLAN. THESE OPERATIONS SHALL LEAVE AS MUCH TOPSOIL AS POSSIBLE OR REPLACE THE TOPSOIL TO A DEPTH OF 4 IN.
2. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. THESE AMENDMENTS SHALL BE SPREAD EVENLY OVER THE AREA TO BE SODDED AND INCORPORATED INTO THE TOP 3 TO 6 IN. OF THE SOIL BY DISCING, HARROWING, OR OTHER ACCEPTABLE MEANS.
3. PRIOR TO LAYING SOD, THE SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS, ROOTS, BRANCHES, STONES, AND CLODS IN EXCESS OF 2 IN. IN LENGTH OR DIAMETER. SOD SHALL NOT BE APPLIED TO GRAVEL OR OTHER NON-SOIL SURFACES.
4. ANY IRREGULARITIES IN THE SOIL SURFACE RESULTING FROM TOPSOIL OR OTHER OPERATIONS SHALL BE FILLED OR LEVELED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
5. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ IN., PLUS OR MINUS ¼ IN., AT THE TIME OF CUTTING. THIS THICKNESS SHALL EXCLUDE SHOOT GROWTH AND THATCH.
6. PIECES OF SOD SHALL BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5% TORN OR UNEVEN PADS SHALL NOT BE ACCEPTABLE.
7. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.
8. SOD SHALL BE NOT CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER.
9. SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
10. IRRIGATE AREAS TO BE SODDED WITH A MINIMUM OF ½ IN. OF WATER UNLESS RECENT RAINS HAVE PROVIDED EQUIVALENT MOISTURE.
11. THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHALL BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS.
12. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH STAGGERED JOINTS AND SECURED BY PEGGING OR OTHER APPROVED METHODS. SOD SHALL BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON THE CONTOUR). BEGIN LAYING SOD AT THE BOTTOM OF THE SLOPE AND WORK UPHILL.
13. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHALL BE ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL.
14. AFTER ROLLING, SOD SHALL BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 IN. BELOW THE SOD IS THOROUGHLY WET.

VEGETATIVE COVERS

1. INSPECT THE VEGETATED AREAS WEEKLY FOR SIGNS OF POOR OR NO GERMINATION AND INDICATIONS OF EROSION.
2. AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATELY TO PREVENT RILL EROSION SHALL BE FILLED IN WITH PROPER TOPSOIL AND RE-SEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.
3. AREAS WHERE SEEDING AND SODDING HAS BEEN ESTABLISHED SHALL BE MOWED A MINIMUM OF EVERY TWO WEEKS.

MAINTENANCE AND INSPECTION

ALL BMPS SHALL BE INSPECTED WEEKLY AT A MINIMUM AND AFTER EVERY RAINFALL EVENT EXCEEDING ½ IN. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY UPON COMPLETION OF THE INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF ANY SEDIMENT FILTER OR BARRIER. SUCH DEPOSITS SHALL BE DISPOSED OF IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
2. IN ORDER TO LIMIT DISTURBANCE TO THE SURROUNDING NEIGHBORHOODS, (WORK BETWEEN LEXINGTON RD. AND JON HANCOCK DR.) CONTRACTOR SHALL BE LIMITED TO CONSTRUCTION BETWEEN THE HOURS OF 7:00 A.M. TO 9:00 P.M WITHOUT PRIOR CONSENT FROM THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
3. THE CONTRACTOR SHALL CHECK PLANS FOR CONFLICTS AND DISCREPANCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE OF ANY CONFLICTS BEFORE PERFORMING WORK IN THE AFFECTED AREA.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, WHICH MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS CONTRACT. SEE FDOT SPECIFICATION 455-1.1 FOR ADDITIONAL INFORMATION REGARDING PROTECTION OF EXISTING STRUCTURES.
5. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE “TRENCH SAFETY ACT”, CHAPTER 553.60 - 552.64, FLORIDA STATUES. THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATION.
6. PRIOR TO INSTALLATION THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRE-CAST MATERIAL AND MANUFACTURED ITEMS TO THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE FOLLOWING IN THE FIELD: RIGHT-OF-WAY LINES, BENCHMARKS (ELEVATIONS). COORDINATES, CENTER LINES AND STATIONING AS MAY BE REQUIRED TO CONSTRUCT THE PROJECT.
8. CONTRACTOR MAY STOCKPILE MATERIALS WITHIN THE LIMITS OF THE CURRENT CONSTRUCTION PHASE. IF STOCKPILING IS NECESSARY, CONTRACTOR SHALL SITE THE LOCATION AT HIS DISCRETION, USING THE APPROPRIATE EROSION AND SEDIMENTATION CONTROL BMPS.
9. ALL BASIN SIDE SLOPES AND BOTTOM AREAS MUST BE FULLY VEGETATED AS THE PROJECT SITE IS LOCATED WITHIN A SENSITIVE KARST AREA.
10. IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, STONE TOOLS, METAL IMPLEMENTS, DUGOUT CANOES OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT SITE AREA, THE PERMITTED PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE PERMITTEE OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, REVIEW AND COMPLIANCE SECTION, AT (850) 245-6333 OR (800) 8847-7278, AS WELL AS THE APPROPRIATE PERMITTING AGENCY OFFICE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION FROM THE DIVISION OF HISTORICAL RESOURCES. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY, AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.

SURVEY NOTES:

1. ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. HORIZONTAL DATUM REFERS TO THE NORTH AMERICAN DATUM OF 1983 (NAD 823).
3. GRADES SHOWN ARE FINISHED GRADES.
4. ANY PUBLIC LAND CORNER OR BENCH MARK WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED. THE CONTRACTOR SHALL NOTIFY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE IMMEDIATELY. ANY MONUMENT OTHERWISE DESTROYED BY THE CONTRACTOR SHALL BE RESET BY A FLORIDA PROFESSIONAL SURVEYOR AND MAPPER AT THE CONTRACTOR'S EXPENSE.

5. IF ANY GEODETIC MONUMENT WITHIN THE LIMITS OF CONSTRUCTION ARE DISTURBED, THE CONTRACTOR SHALL NOTIFY:

   DAVID NEWCOMER
   GEODETIC REGIONAL COORDINATOR
   NATIONAL OCEAN SERVICE
   1881 CAPITAL CIRCLE, NE
   TALLAHASSEE, FL 32308
   800.245.2610
   DAVID.NEWCOMER@NOAA.GOV

6. THE CONTRACTOR SHALL PROVIDE SIX (6) COPIES OF SIGNED AND SEALED AS-BUILT SURVEYS TO THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE FOR FINAL CERTIFICATION OF THE ENVIRONMENTAL PERMITS. THE AS-BUILT SURVEY SHALL BE PREPARED AND CERTIFIED BY A PROFESSIONAL SURVEY AND MAPPER LICENSED IN FLORIDA PURSUANT TO CHAPTER 472 F.S.

SITEWORK NOTES:

1. THE CONTRACTOR SHALL SURVEY AND STAKE THE CLEARING LIMITS AS INDICATED BY THE PLANS AND RECEIVE APPROVAL FROM THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE PRIOR TO COMMENCING WITH THE CLEARING AND GRUBBING OPERATION. (REFER TO TREE PROTECTION DETAILS AND NOTES.)
2. BURNING OF MATERIALS AND/OR DEBRIS AS A MEANS OF DISPOSAL IS PROHIBITED WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL DISPOSE OF ALL CLEARED AND GRUBBED MATERIAL OFF-SITE.
3. IF A MONITORING WELL IS ENCOUNTERED WITHIN OR ADJACENT TO THE PROJECT CORRIDOR, AND IS NOT SHOWN IN THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
4. GEOTECHNICAL ENGINEERING SERVICES INCLUDING SOIL BORINGS HAVE BEEN PROVIDED BY ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC. THE CONTRACTOR CAN OBTAIN A COPY OF THE REPORTS FROM THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
5. CLEARING AND GRUBBING INCLUDES THE REMOVAL OF ALL INCIDENTAL ITEMS INCLUDING BUT NOT LIMITED TO STRUCTURES, CONCRETE, ASPHALT, GRAVEL, FENCING AND ANY OTHER IMPROVEMENTS TO BE REMOVED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF SUCH ITEMS OFF SITE.
6. ALL ROCKS OR STONES LARGER THAN 6” IN DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN 1-FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN 2” IN DIAMETER.
7. ANY DAMAGE TO EXISTING TOPOGRAPHIC FEATURES NOT SPECIFICALLY RELATED TO THE SCOPE OF WORK, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. THE CONTRACTOR IS RESPONSIBLE FOR VIDEO INSPECTION OF ALL STORMWATER PIPES AND STRUCTURES PER LEON COUNTY PUBLIC WORKS STANDARDS PRIOR TO THE START OF CONSTRUCTION. A COPY OF THE VIDEO INSPECTION REPORT INCLUDING THE VIDEO INSPECTION SHALL BE PROVIDED TO THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STORMWATER SYSTEM UNTIL ACCEPTED BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.

TREE PROTECTION NOTES

1. PRIOR TO ANY SITE CLEARING, ALL TREES SHOWN TO REMAIN AS INDICATED ON THE PLANS SHALL BE PROTECTED IN ACCORDANCE WITH THE LEON COUNTY TREE ORDINANCES AND DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. NO TREE SHOWN TO REMAIN SHALL BE REMOVED WITHOUT APPROVAL FROM THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
2. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES PRIOR TO SITE CLEARING, AND SHALL REMAIN IN PLACE UNTIL LAND ALTERATION, SITE CLEARING, AND CONSTRUCTION ACTIVITIES ARE COMPLETE. THE BARRICADE SHALL BE CONSTRUCTED TO PREVENT THE ENCROACHMENT OF EQUIPMENT OR VEHICLES, THE REMOVAL OF EXISTING GROUNDCOVER, THE DISTURBANCE OR COMPACTION OF SOIL, OR THE SCARRING OF ROOTS WITHIN THE CRITICAL PROTECTION ZONE (CPZ). THERE SHALL BE NO STORAGE OF MATERIALS OR EQUIPMENT OF ANY KIND WITHIN THIS ZONE.
3. REQUIRED TREE BARRICADES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION, ENCROACHMENT INTO OR FAILURE TO MAINTAIN TREE BARRICADES WILL RESULT IN ENFORCEMENT ACTION.
4. THE CONTRACTOR IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN. DAMAGE TO PROTECTED TREES WILL NOT BE TOLERATED. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGE TO TREES THAT ARE DESIGNATED TO BE SAVED DURING CONSTRUCTION.
5. SHOULD TRIMMING OF PROTECTED TREES BE NECESSARY, THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A CERTIFIED ARBORIST. ALL TRIMMING OF PROTECTED TREES SHALL BE DONE BY A QUALIFIED, LICENSED ARBORIST AND SHALL BE PRUNED IN ACCORDANCE WITH THE NATIONAL ARBORIST ASSOCIATION (NAA) PRUNING STANDARDS.
6. ALL FINES AND MITIGATION ASSOCIATED WITH ANY VIOLATION NOT ADHERING TO THE TREE PROTECTION PLAN AS INDICATED IN THE LEON COUNTY ENVIRONMENTAL MANAGEMENT PERMIT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. PER THE LEON COUNTY LAND DEVELOPMENT CODE, IF PROTECTED TREES ARE REMOVED WITHOUT A PERMIT OR OTHERWISE IN VIOLATION OF THE PERMITTED REQUIREMENTS, THE NUMBER OF REPLACEMENT TREES SHALL BE UP TO FIVE TIMES THE AMOUNT WHICH WOULD HAVE BEEN REQUIRED FOR REMOVAL, AND THE CONTRACTOR SHALL BE CHARGED TWICE THE NORMAL APPLICATION FEE.
8. ALL INVASIVE EXOTIC TREE SPECIES OF ANY SIZE SHALL BE GRUBBED AND REMOVED FROM THE PROJECT SITE. OFF-SITE INCINERATION OR OTHER MEANS TO DESTROY THE REMOVED TREES AND SEEDS IS RECOMMENDED. CHIPPING OF THE REMOVED INVASIVE SPECIES IS FORBIDDEN DUE TO THE PROPAGATION POTENTIAL FROM THE CHIPPED PRODUCT.

TREE MITIGATION

1. PRUNING SHALL ONLY BE DONE UNDER THE DIRECTION OF A CERTIFIED ARBORIST TO PROVIDE ADEQUATE CLEARANCE FOR EQUIPMENT INGRESS, EGRESS AND/OR CONSTRUCTION.
2. DURING CONSTRUCTION, THE CONTRACTOR SHALL EXERCISE GREAT CARE WHILE EQUIPMENT AND VEHICLES ENTER AND EXIT THE WORK AREA. THE CONTRACTOR SHALL UTILIZE ALL RESOURCES AVAILABLE TO ENSURE EQUIPMENT, VEHICLES, MATERIALS, AND SUPPLIES ARE KEPT AS FAR AWAY AS POSSIBLE FROM THE BASES OF EXISTING TREES TO REMAIN AND AWAY FROM EXPOSED OR 'SCAFFOLD' ROOTS, EQUIPMENT, VEHICLES, SUPPLIES, MATERIALS AND PERSONNEL SHALL BE KEPT AWAY FROM AND OFF OF THE ROOT FLARE OF EXISTING TREES TO REMAIN AT ALL TIMES.
3. NO MECHANICAL TRENCHING OF ANY KIND WILL TAKE PLACE WITHIN THE CPZ/DRIP-LINE OF TREES THAT ARE TO REMAIN.
4. THE CONTRACTOR SHALL NOT STORE EQUIPMENT, VEHICLES, AND SUPPLIES OR STOCKPILE ANY MATERIALS WITH IN THE CPZ/DRIP-LINE OF EXISTING TREES TO REMAIN. INGRESS OR EGRESS AREAS SHALL NOT ENCROACH UPON THE CPZ/DRIPLINE OF EXISTING TREES TO REMAIN AT ANY TIME, FOR THE DURATION OF THE PROJECT.
5. ALL WORK ASSOCIATED WITH TREE PRESERVATION ACTIVITIES ON THE SITE AND FOR THE DURATION OF THE PROJECT SHALL INCLUDE SAFETY STANDARDS AS OUTLINED IN ANSI Z133, “SAFETY REQUIREMENTS FOR TREE CARE OPERATIONS”. SAFE WORKING CONDITIONS AND THE SAFETY OF THE PUBLIC AND VISITORS TO THE PARK ARE OF THE UTMOST IMPORTANCE. UNSAFE WORK PRACTICES SHALL NOT BE TOLERATED ON THE JOB SITE.

TRAFFIC CONTROL NOTES

1. THE PURPOSE OF THESE DRAWINGS ARE TO PROVIDE GUIDANCE TO THE CONTRACTOR IN DEVELOPING A TRAFFIC CONTROL PLAN THAT ADEQUATELY ASSURES THE SAFETY OF MOTORIST, PEDESTRIANS, CONSTRUCTION WORKS AND IS SPECIFIC TO THE MEANS AND METHODS OF CONSTRUCTION TO BE EMPLOYED AND THE SCHEDULE FOR PERFORMING THE WORK. THE CONTRACTOR SHALL PREPARE HIS OWN TRAFFIC CONTROL PLAN AND OBTAIN A MAINTENANCE OF TRAFFIC PERMIT FROM CITY OF TALLAHASSEE PUBLIC WORKS AND LEON COUNTY PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.
2. THE MAINTENANCE OF TRAFFIC PLANS MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA OR A PERSON POSSESSING A VALID ADVANCED MOT CERTIFICATE ISSUED BY FDOT.
3. TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE FLORIDA D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARD INDEX (SERIES 600), THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AS MINIMUM CRITERIA.
4. OUTSIDE OF THE MERIDIAN ROAD CLOSURE PERIOD (JUNE 1, 2020 THRU AUGUST 7, 2020) NO CONSTRUCTION OPERATIONS ARE TO BE SCHEDULED ON SATURDAYS OR SUNDAYS IF CONSTRUCTION WOULD CAUSE AN INTERRUPTION TO WATER, SEWER, GAS, OR ELECTRIC SERVICES. THE CITY AND COUNTY RESERVE THE RIGHT TO LIMIT THE CONTRACTOR'S WORK AND/OR LANE CLOSURE HOURS AT ANY TIME DURING THE PROJECT DURATION FROM THOSE HOURS IDENTIFIED WITHIN THESE DOCUMENTS. THE CONTRACTOR AGREES TO MAKE NO CLAIM FOR ADDITIONAL COMPENSATION AS A RESULT OF THIS DECISION BY THE CITY OR COUNTY. HOWEVER, THE CONTRACTOR MAY BE ENTITLED TO AN EXTENSION OF TIME FOR SUCH ACTS BY THE CITY OR COUNTY, ONLY FOR THE NUMBER OF DAYS WHICH THE CITY OR COUNTY DETERMINES TO BE DUE TO SUCH ACTS.
5. AT THE DISCRETION OF THE CITY OF TALLAHASSEE OR LEON COUNTY, IF A LANE CLOSING CAUSES EXTENDED CONGESTION, THE CONTRACTOR SHALL BE DIRECTED TO RE-OPEN THE CLOSED LANE(S) UNTIL SUCH TIME AS TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL. ANY COSTS FOR DELAY OR ADDITIONAL MAINTENANCE OF TRAFFIC DUE TO THIS SHALL BE INCIDENTAL AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED.
6. PROVISIONS FOR TRAFFIC DISRUPTIONS THAT ARE NOT ANTICIPATED IN THE TRAFFIC CONTROL PLAN, BUT ARE NECESSARY TO CONSTRUCT THE PROJECT SHALL BE SUBMITTED IN WRITING TO CITY OF TALLAHASSEE FOR APPROVAL 72 HOURS BEFORE THE START OF ANY WORK. SUBMITTAL MATERIAL SHALL INCLUDE SKETCHES, CALCULATIONS, AND OTHER REQUIRED DATA. A REQUEST TO LEON COUNTY MUST BE MADE 14 DAYS PRIOR TO ROAD CLOSURE.
7. FOR FULL ROAD CLOSURES EQUAL TO OR GREATER THAN 24 HOURS, A ROAD CLOSURE APPLICATION MUST BE SUBMITTED TO LEON COUNTY PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL 21 CALENDAR DAYS PRIOR TO THE PROPOSED CLOSURE.
8. THE TRAFFIC AND TRAVEL WAYS SHALL NOT BE ALTERED TO CREATE A WORK ZONE UNTIL ALL LABOR AND MATERIAL ARE AVAILABLE FOR THE CONSTRUCTION IN THAT AREA.
9. THE CONTRACTOR SHALL REMOVE ANY EXISTING SIGNS OR PAVEMENT MARKINGS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS. WHEN THE CONFLICT NO LONGER EXISTS THE CONTRACTOR SHALL RESTORE THE SIGNS OR PAVEMENT MARKINGS TO THEIR ORIGINAL POSITION. EXISTING AND/OR TEMPORARY PAVEMENT MARKINGS WHICH HAVE TO BE REMOVED MAY BE REMOVED BY ANY METHOD THAT PRODUCES THE SAME RESULT IN THE SAME MANNER AS HYDROBLASTING.
10. CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE BEGINNING OF THE PROJECT, USED DURING HOURS OF CONSTRUCTION, AND SHALL DISPLAY THE MESSAGE DETERMINED IN THE PRE-CONSTRUCTUON MEETING.
11. CHANGEABLE MESSAGE SIGNS SHALL BE INSTALLED A MINIMUM OF SEVEN DAYS IN ADVANCE OF THE TRAFFIC PATTERN CHANGE.
12. EXISTING SIGNS THAT CONFLICT WITH THE PROPOSED MOT PLAN MUST BE REMOVED OR COVERED DURING THE MOT OPERATION IN ACCORDANCE WITH FDOT SPECIFICATIONS.
13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CLEAR ZONE REQUIREMENTS FOR EQUIPMENT AND MATERIALS STORAGE AND WORK ZONE PROTECTION AS SPECIFIED IN FDOT STANDARD INDEX 600.
14. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL OFFICER DURING ROADWAY CLOSURE OPERATIONS FOR THE FIRST 7 DAYS OF CLOSURE BETWEEN THE HOURS OF 6:00 AM AD 6:00 PM EST. THE COST TO FURNISH ALL LABOR AND SERVICES RELATED TO THE MAINTENANCE OF TRAFFIC SUPERVISOR SHALL BE INCLUDED IN THE COST OF THE MAINTENANCE OF TRAFFIC PAY ITEMS.
15. UNLESS OTHERWISE NOTED IN THE PLANS, THE EXISTING SPEED LIMITS ON ALL ROADWAYS SHALL BE MAINTAINED DURING CONSTRUCTION.
16. STREETS USED AS TEMPORARY DETOUR ROUTES AND HAUL ROUTES WILL BE MAINTAINED IN GOOD CONDITION AND BE KEPT FREE OF SILT AND DEBRIS BY THE CONTRACTOR AS DIRECTED BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE.
17. NEIGHBORHOOD STREETS SHALL NOT BE UTILIZED AS HAUL ROUTES OR CONSTRUCTION TRAFFIC.
18. ACCESS TO THE GOODWILL DONATION STATION SHALL REMAIN OPEN DURING ROADWAY CLOSURES (PHASES C1 & C2).

UTILITY NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO UTILITIES TO REMAIN SHALL BE PAID FOR BY THE CONTRACTOR AT THEIR EXPENSE.
2. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE NOTED.

CONSTRUCTION SEQUENCE

1. CONTRACTOR SHALL CONDUCT A PRECONSTRUCTION MEETING PRIOR TO INITIATING ANY SITE WORK. SECURE APPROVAL TO COMMENCE CONSTRUCTION FROM LEON COUNTY DEPARTMENT OF DEVELOPMENT SUPPORT AND ENVIRONMENTAL MANAGEMENT, ENVIRONMENTAL INSPECTION DIVISION.
2. CONTRACTOR SHALL DESIGNATE A STORMWATER MANAGEMENT CONTROL OFFICER AT THE PRE-CONSTRUCTION MEETING.
3. POST ALL APPLICABLE PERMIT PLACARDS. THE PERMIT PLACARDS SHALL NOT BE NAILED TO TREES.
4. FLAG OR STAKE THE PROPOSED LIMITS OF CLEARING PRIOR TO INITIATING CLEARING.
5. CONSTRUCT TREE BARRICADES OR FENCES AROUND PROTECTED TREES. CONSTRUCT SEDIMENTATION CONTROL DEVICES.
6. DESIGNATE VEHICULAR PATHWAYS WITHIN THE LIMITS OF THE SITE.
7. DESIGNATE EMPLOYEE PARKING AREAS, MATERIALS STORAGE AREAS, AND TOPSOIL STORAGE AREAS.
8. DESIGNATE REFUELING AREAS AWAY FROM THE WATER BODIES OR WATERCOURSES ONSITE.
9. CONSTRUCT DRAINAGE IMPROVEMENTS AS OUTLINED IN PHASING.
10. FINAL GRADE, SOD ALL DISTURBED AREAS .
11. APPROXIMATELY TWO WEEKS PRIOR TO REQUESTING THE FINAL ENVIRONMENTAL INSPECTION, THE FOLLOWING RECORD DRAWINGS MUST BE SUBMITTED TO THE LEON COUNTY ENVIRONMENTAL INSPECTOR FOR REVIEW:

BUILDING PERMITS

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BUILDING PERMITS. CONTRACTOR SHALL COORDINATE PROCESSING, PAYMENT AND POSTING PERMIT ON-SITE.

Stantec

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The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.

Revision	By	Appd.	YY.MM.DD

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS

TALLAHASSEE, FL

GENERAL NOTES 2

Seal

CHRIS E. BROCKMEIER
LICENSE No. 56859

1/6/2020

Project Number: 215613796

File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. G-102

Revision 0

Sheet of

ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
ALT	ALTERNATE
APPROX	APPROXIMATE
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLT	BUILT
BRK	BRICK
BRKR	BREAKER
BSMT	BASEMENT
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMP	CORRUGATE METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
CONC	CONCRETE
CU	COPPER
CU FT	CUBIC FOOT
CU IN	CUBIC INCH
CU YD	CUBIC YARD
DIA/Ø	DIAMETER
DBL	DOUBLE
DBT	DRY-BULB TEMPERATURE
DEG	DEGREE
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DISC	DISCONNECT
DIP	DUCTILE IRON PIPE
DL	DEAD LOAD
DN	DOWN
DS	DOWN SPOUT DOWN STREAM
DWG	DRAWING
EF	EXHAUST FAN
FFE	FINISH FLOOR ELEVATION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
EX	EXISTING
EXH	EXHAUST
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
FH	FIRE HYDRANT
FIN	FINISH
FL	FLOOR
FLUOR	FLUORESCENT
FP	FIREPLACE
FR	FIRE RATING
FT	FOOT/FEET
FTG	FOOTING
GALV	GALVANIZED
GB	GRADE BREAK
GFI	GROUND FAULT CIRCUIT INTERRUPT
GOV'T	GOVERNMENT
GRFL	GROUND FLOOR
GV	GATE VALVE
GYP	GYPSUM
HC	HOLLOW CORE
HDG	HOT DIPPED GALVANIZED
HDPE	HIGH DENSITY POLYETHELYNE
HDR	HEADER
HDWR	HARDWARE
HOR, H	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWY	HIGHWAY
ID	INSIDE DIAMETER
IN	INCH
INCAND	INCANDESCENT
INCL	INCLUDED
INSUL	INSULATION
INT	INTERIOR
INV EL	INVERT ELEVATION
JST	JOIST
KD	KILN DRIED
KW	KILOWATT
KWH	KILOWATT HOUR
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LTG	LIGHTING
LGTH	LENGTH
LIN	LINEAR
LL	LIVE LOAD
LNDG	LANDING
MANUF	MANUFACTURE
MAX	MAXIMUM
MEG	MEET EXISTING GRADE
MES	MITERED END SECTION
MF	MILL FINISH
MIN	MINIMUM
MJ	MECHANICAL JOINT
MLDG	MOLDING
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
MSL	MEAN SEA LEVEL
MOD	MODIFICATION
NTS	NOT TO SCALE
NO./#	NUMBER
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFC	OFFICE
O/H	OVER HEAD
OPP	OPPOSITE
PARTN	PARTITION
PC	PORTLAND CEMENT
PCF	POUNDS PER CUBIC FOOT
PE	PROFESSIONAL ENGINEER
PERF	PERFORATE
PERP	PERPENDICULAR
PL	PLATE
PLG	PILING
PLYWD	PLYWOOD
PNL	PANEL
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE
QS	QUARTER SAWN
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPT	RECEPTACLE
REBAR	REINFORCING BAR
REFRIG	REFRIGERATION
REINF	REINFORCING
RFG	ROOFING
RGH	ROUGH
RM	ROOM
RO	ROUGH OPENING
RS	ROUGH SAWN
SC	SOLID CORE
SCH	SCHEDULE
SDG	SIDING
SECT	SECTION
SFTWD	SOFTWOOD
SGD	SLIDING GLASS DOOR
SH	SHINGLES
SPEC	SPECIFICATION
SPR	SPRUCE
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SS	STAINLESS STEEL
STL	STEEL
SUB FL	SUBFLOOR
SUP	SUPPLY
SW	SWITCH
SYM	SYMMETRICAL
SYP	SOUTHERN YELLOW PINE
SYS	SYSTEM
S4S	SURFACED FOUR SIDES
TBM	TEMPORARY BENCHMARK
TCP	TERRA COTTA PIPE
TEL	TELEPHONE
THK	THICK, THICKNESS
TOB	TOP OF BANK
TOC	TOP OF CURB
TOS	TOE OF SLOPE
TYP	TYPICAL
T&G	TONGUE-AND-GROOVE
UE	UNDERGROUND ELECTRIC
UG	UNDER GROUND
UL	UNDERWRITERS LABORATORIES, INC
US	UPSTREAM
V	VOLT
VB	VALVE BOX
VCP	VITRIFIED CLAY PIPE
VENT	VENTILATOR
VERT, V	VERTICAL
VIF	VERIFY IN FIELD
VOL	VOLUME
VP	VENT PIPE
VTR	VENT THRU ROOF
W	WATER
WBT	WET BULB TEMPERATURE
WC	WATER CLOSET
WD	WOOD
WM	WATER METER
WP	WATERPROOF
WWF	WELDED WIRE FABRIC
XRMR	TRANSFORMER
YD	YARD

LEGEND

TOPOGRAPHY

- CONTOUR (EXISTING GRADE) — (17)
- CONTOUR (FINISH GRADE) — 185
- DIRECTION OF FLOW
- EXISTING SPOT ELEVATION — ⊕ 15.2
- NEW SPOT ELEVATION — 123.45
- TOP OF CURB ELEVATION — TOC 123.45
- EDGE OF PAVEMENT ELEVATION — EOP 123.45

DEMOLITION

- LIMITS OF CONSTRUCTION
- DEMOLITION (ITEM) — X
- DEMOLITION (LINEAR)
- DEMOLITION (AREA)

EROSION & SEDIMENT CONTROL

- SILT FENCE
- TURBIDITY BARRIER
- TREE PROTECTION
- INLET PROTECTION

PAVING

- NEW ASPHALT PAVEMENT
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT
- NEW CONCRETE PAVEMENT
- GRAVEL PAVEMENT
- DETECTABLE WARNINGS
- CONTROL JOINT — CJ
- EXPANSION JOINT — EJ

DRAINAGE

- NEW STORM MANHOLE — (D)
- NEW STORM INLET
- NEW STORM DRAIN PIPE — SD SD SD
- NEW STORM DRAIN CLEANOUT
- NEW YARD DRAIN
- NEW SWALE
- NEW MES
- NEW RIP-RAP

UTILITIES

- NEW SANITARY SEWER MANHOLE — (S)
- EXISTING SANITARY MANHOLE — MX-EX-#
- EXISTING SANITARY SEWER LINE
- NEW SANITARY SEWER LINE — SS SS SS
- NEW FIRE WATER MAIN — F F F
- EXISTING WATER MAIN — W_X W_X
- NEW WATER MAIN — W W W
- BACKFLOW PREVENTER (BFP) — BFP
- FIRE DEPARTMENT CONNECTION (FDC)
- NEW FIRE HYDRANT
- POST INDICATOR VALVE — PIV
- WATER VALVE
- CONNECTION POINT TO EXISTING UTILITY

CALL 2 BUSINESS DAYS BEFORE YOU DIG
IT'S THE LAW!
DIAL 811

811 Know what's **below.** **Call** before you dig.

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LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

LEGEND & ABBREVIATIONS

Seal

CHRISTIE E. BROCKMEIER — LICENSE — No. 58859 — STATE OF FLORIDA — PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

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Drawing No. G-103
Revision 0
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Attachment I

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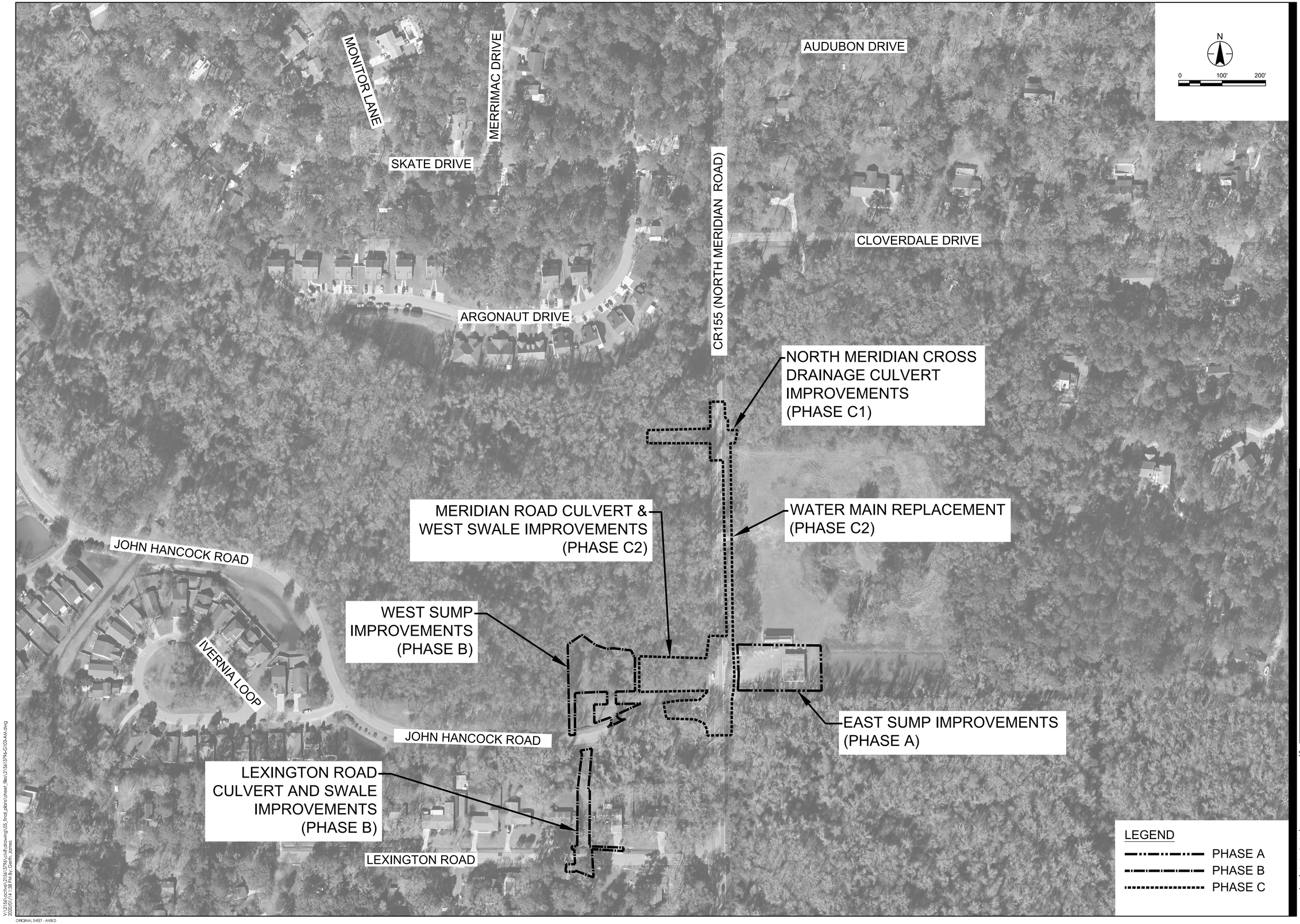

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

AERIAL MAP

Seal

CHARLES E. BROCKMEIER
LICENSE
No. 58859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613769
File Name: 215613796-G103-AM

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Drawing No. G-104
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VICINITY MAP
(NOT TO SCALE)

LEGEND OF SYMBOLS

B.M.	= BENCH MARK
B.O.S.:	= BEGINNING OF SURVEY
℄	= CENTERLINE
(C)	= CALCULATED MEASUREMENT
CH:	= CHORD
CHB:	= CHORD BEARING
CM	= CRAPE MYRTLE
(D)	= DEED MEASUREMENT
D	= DELTA or CENTRAL ANGLE
DBH	= DIAMETER BREAST HEIGHT
EL.	= ELEVATION
ELLIP.	= ELLIPTICAL
E.O.S.	= END OF STATIONS
F.D.O.T.	= FLORIDA DEPARTMENT OF TRANSPORTATION
(F)	= FIELD MEASUREMENT
FCM □	= FOUND CONCRETE MONUMENT
FIRC ◎	= FOUND IRON ROD AND CAP
FND ⊙	= FOUND NAIL AND DISK
ID.	= INDENTIFICATION
INV.	= INVERT
LO	= LIVE OAK
LS#	= SURVEYOR REGISTRATION NUMBER
M.E.S.	= MITERED END SECTION
NAVD88	= NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD29	= NATIONAL GEODETIC VERTICAL DATUM OF 1929
No.	= NUMBER
OP	= ORNAMENTAL PLANT
O.R.	= OFFICIAL RECORD BOOK
P.G.	= PAGE
(P)	= PLAT MEASUREMENT
P.B.	= PLAT BOOK
P.C.	= POINT OF CURVATURE
P.I.	= POINT OF INTERSECTION
P.O.T.	= POINT ON TANGENT
P.T.	= POINT OF TANGENCY
R:	= RADIUS
RCP	= REINFORCED CONCRETE PIPE
RP	= RESERVED PARKING
S.D.I.	= STORM DRAIN INLET
SIRC ●	= SET IRON ROD AND CAP LB #3293
SND	= SET NAIL AND DISK LB #3293
STA.	= STATION ON BASELINE OF SURVEY
TC	= TERRA COTTA
TBM	= TEMPORARY BENCH MARK
WLF	= WETLAND FLAG
AC	= AIR CONDITIONER
⊸	= BACKFLOW PREVENTER
⊡	= CLEANOUT
Ⓣ	= COMMUNICATION MANHOLE
▼	= ELECTRIC TRANSFORMER
Ⓔ	= ELECTRIC OUTLET
⚑	= FLAG POLE
○	= FLOOD LIGHT
○	= FIRE HYDRANT
G	= GAS METER
Ⓖ	= GAS VALVE COVER
GEN	= GENERATOR
⬡	= GUY WIRE ANCHOR
♿	= HANDICAP PARKING
Ⓦ	= HOSE BIB
Ⓘ	= IRRIGATION CONTROL VALVE
☼	= LIGHT POLE
Ⓜ	= MANHOLE
⑤	= PARKING COUNT
◎	= POWER POLE
∅	= POWER POLE WITH LIGHT
Ⓢ	= SANITARY SEWER MANHOLE
⊠	= SIGNAL CONTROLLER
⊏	= SIGNAL SPAN POLE
—•—	= SINGLE SUPPORT SIGN
130.1 ×	= SPOT ELEVATION
▣	= STAND PIPE
⊖	= STORM DRAIN INLET
Ⓓ	= STORM DRAIN MANHOLE
T	= TELEPHONE PEDESTAL
◇	= UTILITY POLE
W	= WATER METER
Ⓦ	= WATER VALVE COVER
WP	= WIRE PULL BOX
— — —	= CONTOUR (ONE-FOOT INTERVAL)
—X—X—	= CHAIN LINK FENCE
—□—□—	= WOOD BOARD FENCE
— OHW —	= OVERHEAD UTILITY LINES
▬ ▬ ▬	= RIGHT-OF-WAY LINE (APPROXIMATE)
— WM —	= WATER LINE

STATION 29+00
NORTHING: 546339.9021'
EASTING: 2038616.9130'
LATITUDE: N30°30'07.50"
LONGITUDE: W84°16'38.51"

SITE BENCHMARK 1164–20–2
SET PK NAIL AND DISK (LB#3293)
NORTHING: 545503.2767'
EASTING: 2038308.4450'
LATITUDE: N30°29'59.22"
LONGITUDE: W84°16'42.05"
ELEVATION: 106.57'(NAVD88)

BENCH MARK 1164–19–01
SET PK NAIL & DISK (LB#3293)
NORTHING: 545637.2211'
EASTING: 2038737.0110'
LATITUDE: N30°30'00.54"
LONGITUDE: W84°16'37.15"
ELEVATION: 111.13' (NAVD88)

STATION 20+00
NORTHING: 545439.9196'
EASTING: 2038620.5961'
LATITUDE: N30°29'58.59"
LONGITUDE: W84°16'38.49"

SITE BENCHMARK 1164–20–2
SET 5/8" REBAR W/ CAP (LB#3293)
NORTHING: 545231.8996'
EASTING: 2038304.5354'
LATITUDE: N30°29'56.54"
LONGITUDE: W84°16'42.10"
ELEVATION: 110.68'(NAVD88)

TEST HOLE DATA

TEST HOLE #	DESCRIPTION	STATION/OFFSET	GROUND ELEV.	UTILITY DEPTH	UTILITY ELEV.
TH-1	24" STEEL GAS MAIN	21+44.88 LT. 331.19	105.07	5.41	99.66
TH-2	24" STEEL GAS MAIN	21+45.30 LT. 239.05	104.81	4.96	99.85
TH-3	24" STEEL GAS MAIN (30" STEEL CASING)	21+50.39 RT. 54.45	108.90	5.58	103.32
TH-4	24" STEEL GAS MAIN	21+48.89 LT. 40.45	107.84	4.93	102.91
TH-5	2.5" BURIED ELEC. (STEEL CASING)	21+50.89 LT. 38.38	107.88	3.31	104.57
TH-6	2.5" BURIED ELEC. (STEEL CASING)	21+50.86 LT. 38.83	107.83	3.24	104.59
TH-7	1/2" PVC IRRIGATION (4.5" STEEL CASING)	21+48.80 LT. 38.68	107.72	1.66	106.06
TH-8	3.5" STEEL GAS MAIN	21+55.95 LT. 34.79	107.96	2.42	105.54
TH-9	6" STEEL GAS MAIN	21+41.83 LT. 75.05	107.16	4.03	103.13
TH-10	6" PVC FORCE MAIN	21+41.08 LT. 90.11	107.03	3.21	103.82
TH-11	BURIED TELEPHONE (CENTURY LINK) **	21+42.23 LT. 63.10	107.22	5.08	102.14
TH-12	BURIED TELEPHONE (CENTURY LINK) **	21+62.70 LT. 31.53	107.81	6.93	100.88
TH-13	8" SANITARY (DIP)	21+63.15 RT. 13.77	108.58	2.70	105.88
TH-14	6" GAS MAIN (HIGH DENSITY POLYETHYLENE PIPE)	21+63.15 RT. 13.63	108.58	4.52	104.06
TH-15	10" TRANSITE PIPE WATER MAIN	21+60.59 RT. 24.28	107.09	1.64	105.45
TH-16	BURIED GAS MAIN 6" HDPE	27+83.18 RT. 10.65	109.50	3.60	105.90
TH-17	10" TRANSITE PIPE WATER MAIN	23+48.90 RT. 21.82	104.41	1.58	102.83
TH-18	10" TRANSITE PIPE WATER MAIN	27+82.68 RT. 13.72	109.09	2.60	106.49
TH-19	BURIED TELEPHONE 2" POLYETHYLENE PIPE	27+82.45 LT. 14.39	109.68	3.82	105.86
TH-20	BURIED FIBER OPTIC CABLE (CENTURY LINK) **	27+84.30 LT. 20.20	108.68	7.91	100.77

** = UNABLE TO VISUALLY VERIFY

SURVEYOR'S NOTES

1. BEARINGS ARE GRID, BASED ON THE FLORIDA NORTH, STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983, NAD83 (2011). COORDINATE DATA IS BASED ON A RTK GPS OBSERVATIONS REFERENCED TO FLORIDA PERMANENT REFERENCE NETWORK (FPRN) STATIONS "TALH", "GABY", "PRRY", "THOMASVILLE".

2. ELEVATION DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). ELEVATIONS WERE ESTABLISHED ON THE SURVEY CONTROL POINTS BY A DIFFERENTIAL LEVEL LOOP INCORPORATING N.G.S. BENCHMARK BE1817 " LEO 24 1979" AND "AT220" FROM FDOT PROJECT NO. 222589. ELEVATIONS ARE SHOWN IN U.S. SURVEY FEET AND DECIMAL PARTS.

3. ALL DISTANCES AND ELEVATIONS ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE SHOWN.

4. CONTOURS SHOWN AT 1 FOOT INTERVALS.

5. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN FACT IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE UNDERGROUND UTILITIES SHOWN WERE LOCATED BY CARDNO.

6. THE PROPERTY SURVEYED AND SHOWN HEREON APPEARS TO LIE IN FLOOD ZONE "AE" (FLOODWAY), AE (100 YR, EL.:110), "A" (100 YR), "X5" (500 YR), AND "X" AS INDICATED BY THE FLOOD INSURANCE RATE MAPS FOR LEON COUNTY, FLORIDA, AND INCORPORATED AREAS, DATED AUGUST 18, 2009. PANEL 282 & 119 OF 490. COMMUNITY PANEL NUMBER 12073C0282F AND 12073C0119F. FLOOD ZONES SHOWN ON SURVEY ARE APPROXIMATE AND HAVE BEEN SCALED FROM SAID FLOOD INSURANCE RATE MAPS.

7. ALL TREE CANOPIES ARE BASED ON A FACTOR OF 1" DIAMETER AT BREAST HEIGHT (DBH) = 1' OF CANOPY.

8. THIS IS NOT A BOUNDARY SURVEY.

(FIELD SURVEY DATE: 10/10/2017 FIELD BOOK: 1148 & 1167B)

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS IN CHAPTER 5J–17.051 FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

Chad M. Thurner, PSM
Florida Professional Surveyor & Mapper
Certificate No. 6483

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

GENERAL NOTES

Project Number:
File Name: 5668-003-TOPO-REV1

DMW	CMT		17/10/17
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. V101
Revision Sheet
1 of 8

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ORIGINAL SHEET - ANSI D

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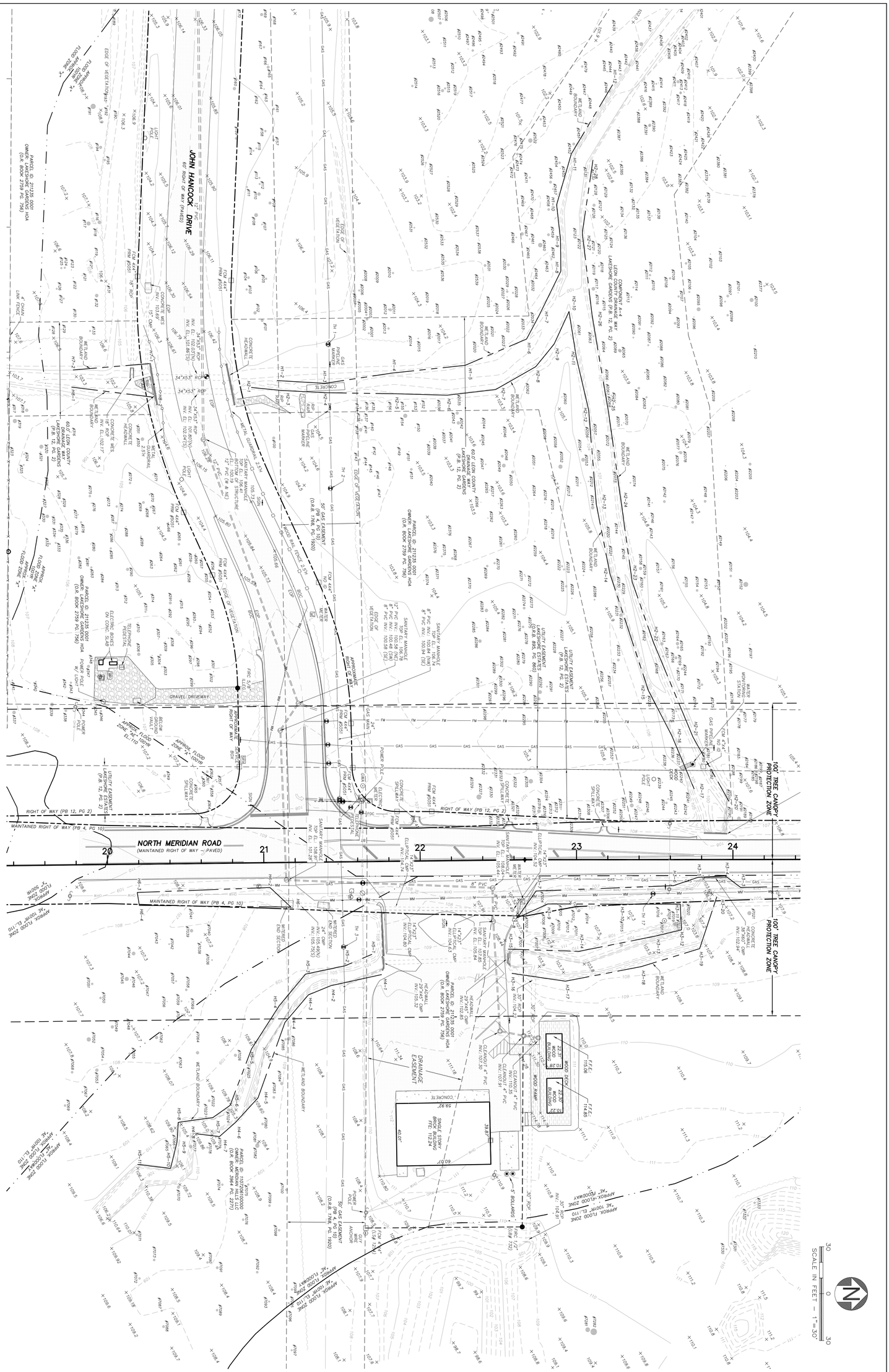

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PUBLIC WORKS DEPARTMENT

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DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

GENERAL NOTES

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Project Number:
File Name: 5668-003-TOPO-REV1

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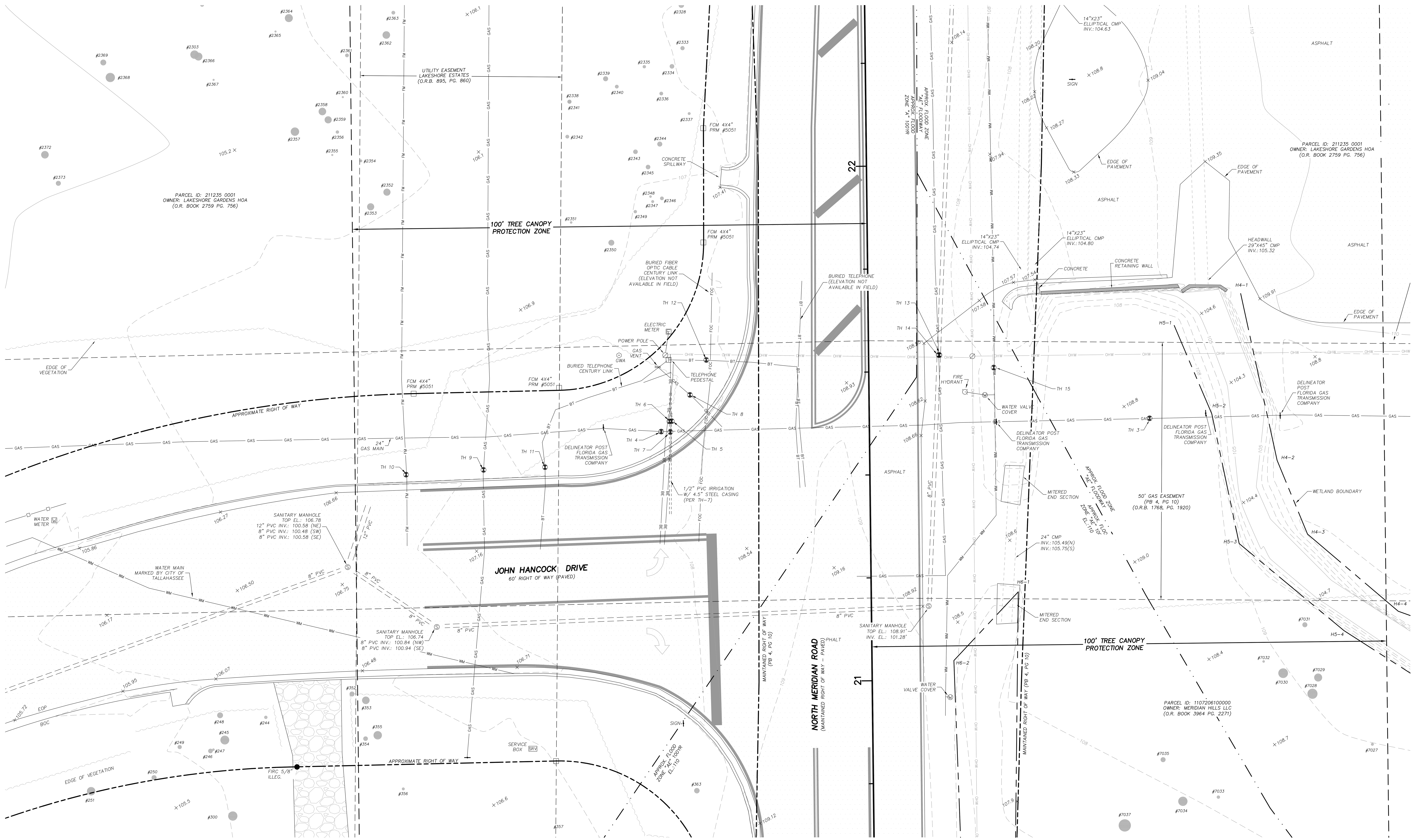
Dsgn	Chkd	Dapp	YY.MM.DD

Drawing No. V102
Revision
Sheet 2 of 8

Attachment I

SCALE IN FEET: 1"=10'



Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL
GENERAL NOTES

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Drawing No. V103

Revision Sheet

3 of 8

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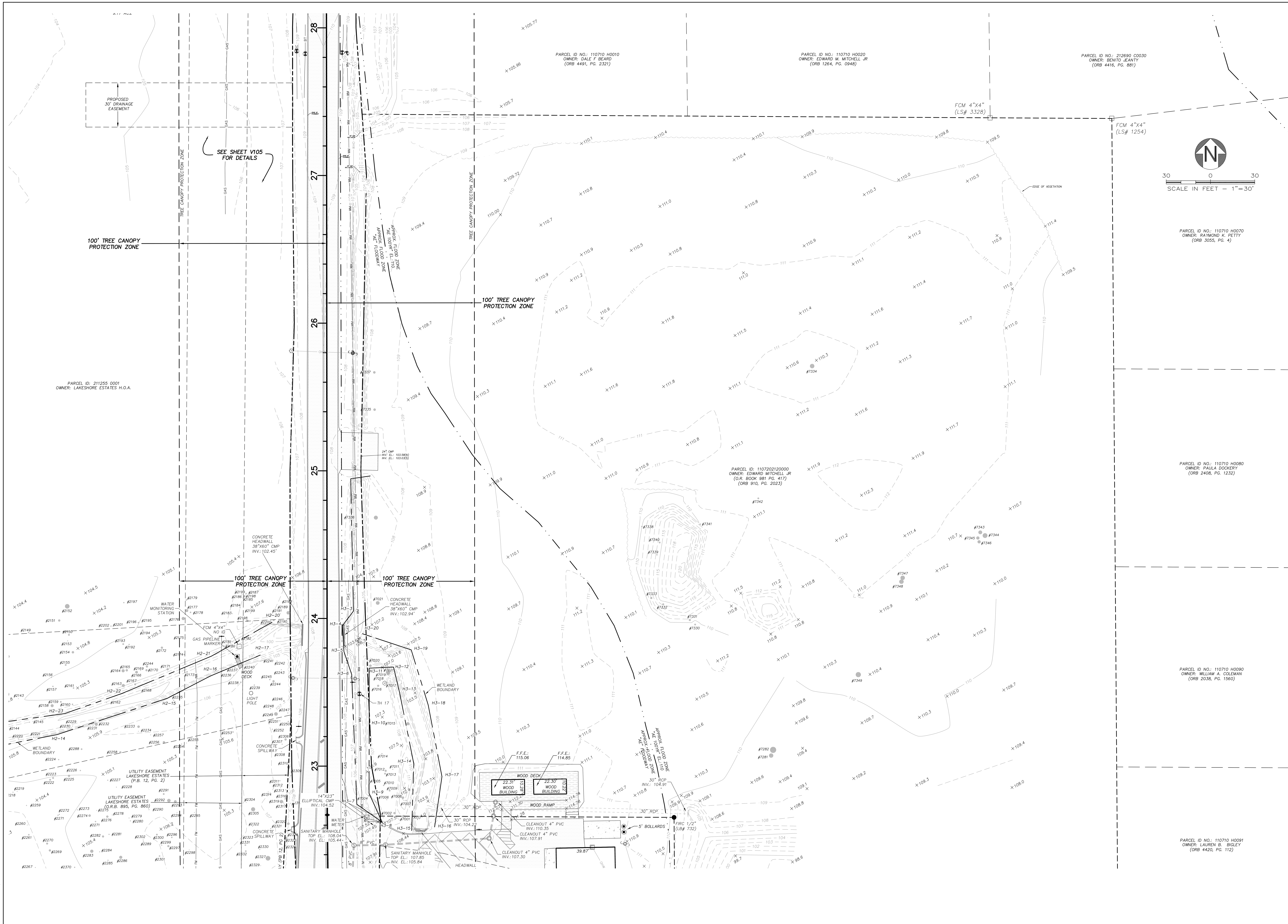

PARCEL ID NO.: 110710 H0010
OWNER: DALE F BEARD
(ORB 4491, PG. 2321)
PARCEL ID NO.: 110710 H0020
OWNER: EDWARD M. MITCHELL JR
(ORB 1264, PG. 0948)
PARCEL ID NO.: 212690 C0030
OWNER: BENITO JEANTY
(ORB 4416, PG. 881)
FCM 4"X4"
(LS# 3328)
FCM 4"X4"
(LS# 1254)
SCALE IN FEET - 1"=30'
PROPOSED
30' DRAINAGE
EASEMENT
SEE SHEET V105
FOR DETAILS
TREE CANOPY PROTECTION ZONE
100' TREE CANOPY
PROTECTION ZONE
EDGE OF VEGETATION
PARCEL ID NO.: 110710 H0070
OWNER: RAYMOND K. PETTY
(ORB 3055, PG. 4)
PARCEL ID: 211255 0001
OWNER: LAKESHORE ESTATES H.O.A.
PARCEL ID: 1107202120000
OWNER: EDWARD MITCHELL JR
(O.R. BOOK 981 PG. 417)
(ORB 910, PG. 2023)
PARCEL ID NO.: 110710 H0080
OWNER: PAULA DOCKERY
(ORB 2408, PG. 1232)
PARCEL ID NO.: 110710 H0090
OWNER: WILLIAM A. COLEMAN
(ORB 2038, PG. 1560)
PARCEL ID NO.: 110710 H0091
OWNER: LAUREN B. BIGLEY
(ORB 4420, PG. 112)
CONCRETE
HEADWALL
38"X60" CMP
INV.:102.45'
CONCRETE
HEADWALL
38"X60" CMP
INV.:102.94'
WATER
MONITORING
STATION
GAS PIPELINE
MARKER
WOOD
DECK
LIGHT
POLE
WETLAND
BOUNDARY
CONCRETE
SPILLWAY
UTILITY EASEMENT
LAKESHORE ESTATES
(P.B. 12, PG. 2)
UTILITY EASEMENT
LAKESHORE ESTATES
(O.R.B. 895, PG. 860)
14"X23"
ELLIPTICAL CMP
INV.:104.52
SANITARY MANHOLE
TOP EL.: 108.04
INV. EL.: 105.44
SANITARY MANHOLE
TOP EL.: 107.85
INV. EL.: 105.84
WATER
METER
30" RCP
INV.:104.22
30" RCP
INV.: 104.91
F.F.E.:
115.06
F.F.E.:
114.85
WOOD DECK
WOOD
BUILDING
WOOD RAMP
CLEANOUT 4" PVC
INV.:110.35
CLEANOUT 4" PVC
INV.:107.91
CLEANOUT 4" PVC
INV.:107.30
5' BOLLARDS
FIRC 1/2"
(LB# 732)
HEADWALL

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

GENERAL NOTES

Permit-Seal

Project Number:
File Name: 5668-003-TOPO-REV1

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Drawing No. V104

Revision Sheet

4 of 8

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TALLAHASSEE, FL

GENERAL NOTES

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Project Number:
File Name: 5668-003-TOPO-REV1

Dwn.	Chkd.	Dsgn.	YY.MM.DD
DMW	CMT		17/10/17

Drawing No. V105

Revision Sheet

5 of 8

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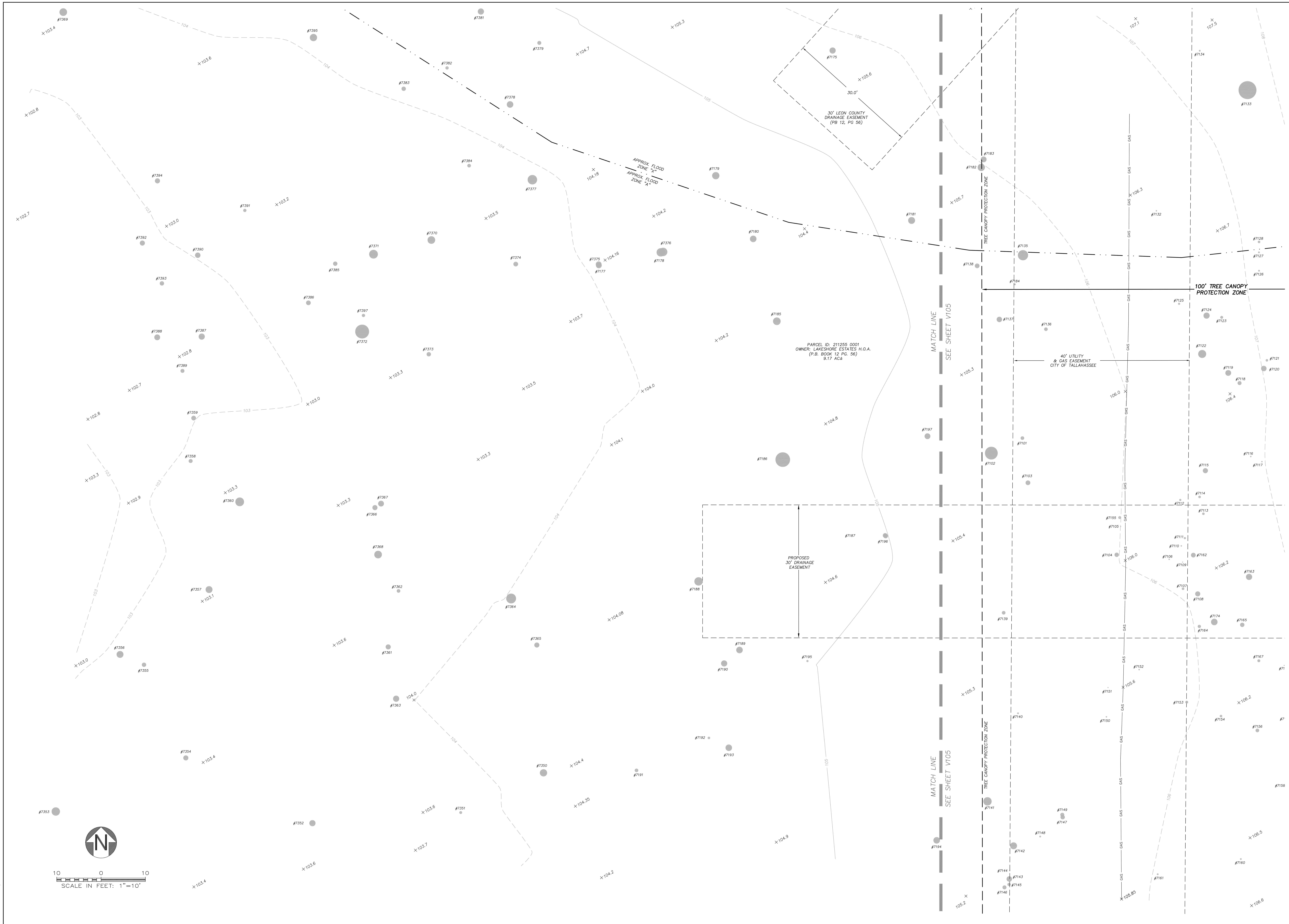

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MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

GENERAL NOTES

Permit-Seal

Project Number:
File Name: 5668-003-TOPO-REV1

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Drawing No. V106
Revision Sheet
6 of 8

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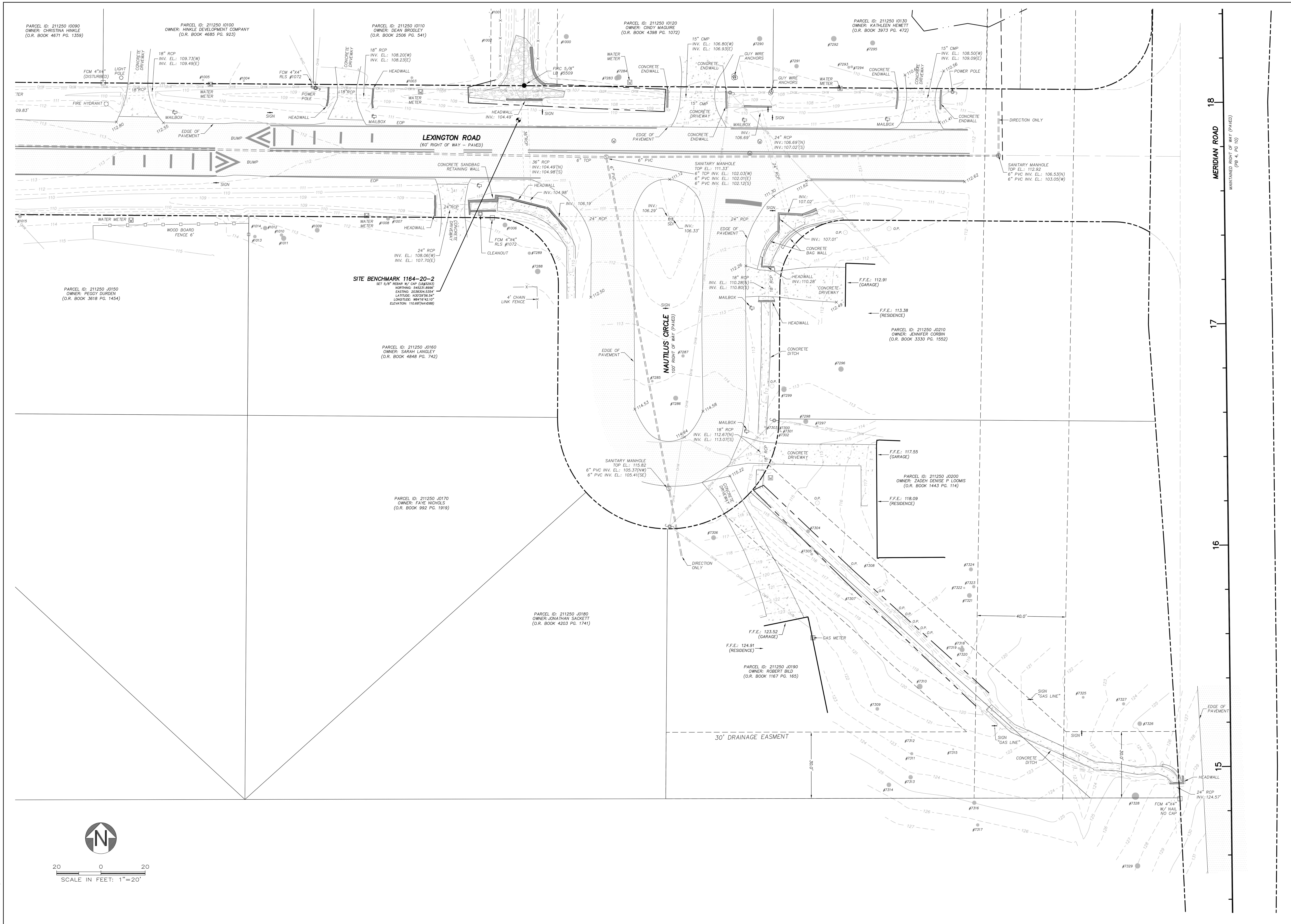

PARCEL ID: 211250 I0090 OWNER: CHRISTINA HINKLE (O.R. BOOK 4671 PG. 1359)
PARCEL ID: 211250 I0100 OWNER: HINKLE DEVELOPMENT COMPANY (O.R. BOOK 4685 PG. 923)
PARCEL ID: 211250 I0110 OWNER: DEAN BRODLEY (O.R. BOOK 2506 PG. 541)
PARCEL ID: 211250 I0120 OWNER: CINDY MAGUIRE (O.R. BOOK 4398 PG. 1072)
PARCEL ID: 211250 I0130 OWNER: KATHLEEN HEWETT (O.R. BOOK 3973 PG. 472)
LEXINGTON ROAD
(60' RIGHT OF WAY - PAVED)
SITE BENCHMARK 1164-20-2
PARCEL ID: 211250 J0150 OWNER: PEGGY DURDEN (O.R. BOOK 3618 PG. 1454)
PARCEL ID: 211250 J0160 OWNER: SARAH LANGLEY (O.R. BOOK 4848 PG. 742)
NAUTILUS CIRCLE
100' RIGHT OF WAY (PAVED)
PARCEL ID: 211250 J0210 OWNER: JENNIFER CORBIN (O.R. BOOK 3330 PG. 1552)
PARCEL ID: 211250 J0170 OWNER: FAYE NICHOLS (O.R. BOOK 992 PG. 1919)
PARCEL ID: 211250 J0200 OWNER: ZADEH DENISE P LOOMIS (O.R. BOOK 1443 PG. 114)
PARCEL ID: 211250 J0180 OWNER: JONATHAN SACKETT (O.R. BOOK 4203 PG. 1741)
PARCEL ID: 211250 J0190 OWNER: ROBERT BILD (O.R. BOOK 1167 PG. 165)
30' DRAINAGE EASMENT
MERIDIAN ROAD
MAINTAINED RIGHT OF WAY (PAVED)
20 0 20
SCALE IN FEET: 1"=20'

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL
GENERAL NOTES

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Project Number:
File Name: 5668-003-TOPO-REV1

DMW	CMT		17/10/17
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. V107
Revision Sheet

Attachment I

TREE TABLE

TREE #	DBH (IN)	DESCRIPTION
100	20	SWEETGUM
101	19	WATER OAK
102	22	WATER OAK
103	14	SWEETGUM
104	17	WATER OAK
105	14	SWEETGUM
106	12	WATER OAK
107	10	WATER OAK
108	26	WATER OAK
109	20	SWEETGUM
110	23	WATER OAK
111	12	SWEETGUM
112	13	SWEETGUM
113	13	SWEETGUM
114	12	WATER OAK
115	11	SWEETGUM
116	25	WATER OAK
117	28	SWEETGUM
118	4	BAY
119	10	HICKORY
120	7	WATER OAK
121	5	MAPLE
122	6	WATER OAK
123	6	SWEETGUM
124	14	SWEETGUM
125	14	SWEETGUM
126	13	WATER OAK
127	12	WATER OAK
128	10	CAMPHOR
129	5	CAMPHOR
130	5	CAMPHOR
131	9	MIMOSA
132	24	SWEETGUM
133	13	MIMOSA*
134	14	SWEETGUM
135	7	WATER OAK
136	7	WATER OAK
137	5	WATER OAK
138	15	SWEETGUM
139	24	SWEETGUM
140	6	WATER OAK
141	6	WATER OAK
142	6	WATER OAK
143	14	SWEETGUM
144	6	MAPLE
145	8	WATER OAK
146	9	SWEETGUM
147	6	WATER OAK
148	6	WATER OAK
149	6	WATER OAK
150	6	WATER OAK
151	7	WATER OAK
151	17	SWEETGUM
152	6	WATER OAK
153	13	SWEETGUM
154	29	SWEETGUM
155	9	MAPLE
156	6	WATER OAK
157	17	SWEETGUM
158	15	WATER OAK
159	17	WATER OAK
160	22	WATER OAK
161	17	WATER OAK
162	7	WATER OAK
163	7	MAPLE
164	9	WATER OAK
165	20	WATER OAK
166	6	SWAMP CHESNUT
167	15	WATER OAK
190	5	MULBERRY
191	37	SWEETGUM
192	12	MULBERRY
193	7	MIMOSA
194	21	SWEETGUM
195	16	WATER OAK
244	7	IRON WOOD
245	20	SWEETGUM
246	10	WATER OAK
247	5	MAGNOLIA
248	13	WATER OAK
249	9	WATER OAK
250	11	SWEETGUM
251	19	WATER OAK
252	11	SWEETGUM
253	6	SWEETGUM
254	8	SWEETGUM
255	19	SWEETGUM
256	13	WATER OAK
257	10	WATER OAK
258	14	SWEETGUM
259	7	SWEETGUM
260	9	WATER OAK
261	5	IRON WOOD
262	4	WATER OAK
263	6	IRON WOOD
264	6	UNKNOWN
265	17	SWEETGUM*
266	9	IRON WOOD
267	14	WATER OAK
268	4	SWEETGUM
269	18	SWEETGUM
270	10	WATER OAK
271	6	IRON WOOD
272	16	SWEETGUM
273	6	WATER OAK
274	15	SWEETGUM*
275	16	SWEETGUM*
276	6	CHERRY
277	8	SWEETGUM
278	14	SWEETGUM
279	5	WATER OAK
280	5	WATER OAK
281	9	HICKORY
282	21	SWEETGUM
283	14	SWEETGUM
284	4	WATER OAK
285	14	SWEETGUM
286	7	WATER OAK
287	16	SWEETGUM
288	4	HICKORY
289	9	SWEETGUM
290	21	SWEETGUM
291	20	SWEETGUM
292	5	IRON WOOD
293	9	SWEETGUM
294	5	HICKORY
295	11	SWEETGUM
296	8	WATER OAK
297	8	IRON WOOD
298	8	HICKORY
299	8	MAGNOLIA
300	21	WATER OAK
301	6	LIVE OAK
302	6	BEECH
303	7	IRON WOOD
304	15	WATER OAK
305	5	BEECH
306	23	SWEETGUM
307	6	SWEETGUM
308	8	WATER OAK
309	6	IRON WOOD
310	6	BEECH
311	1	SWEETGUM*
312	4	IRON WOOD
313	4	HICKORY
314	4	IRON WOOD
315	6	IRON WOOD
316	6	UNKNOWN
318	22	WATER OAK
320	28	SWEETGUM
321	9	WATER OAK
324	10	WATER OAK
325	11	WATER OAK
326	6	WATER OAK
327	8	WATER OAK
328	5	WATER OAK
329	8	SWEETGUM
330	23	SWEETGUM
331	5	WATER OAK
332	13	SWEETGUM
333	12	SWEETGUM
334	5	CHERRY
335	12	SWEETGUM
336	13	SWEETGUM
338	18	WATER OAK
339	25	SWEETGUM
340	10	WATER OAK
342	4	BEECH
343	14	WATER OAK
344	4	IRON WOOD
345	8	HICKORY
346	16	WATER OAK
347	21	SWEETGUM*
348	8	IRON WOOD
349	20	SWEETGUM*
350	24	SWEETGUM
351	7	MIMOSA
352	11	WATER OAK
353	17	SWEETGUM
354	10	WATER OAK
355	19	WATER OAK
356	6	SWEETGUM
357	8	SWEETGUM
358	18	WATER OAK
365	15	WATER OAK
360	13	WATER OAK
361	16	SWEETGUM
362	17	WATER OAK
363	12	SWEETGUM
364	15	SWEETGUM
2001	13	SWEETGUM
2002	17	SWEETGUM
2003	6	WATER OAK
2004	14	SWEETGUM
2005	10	WATER OAK
2006	13	SWEETGUM
2007	19	SWEETGUM
2008	9	WATER OAK
2009	5	WATER OAK
2010	14	SWEETGUM
2011	20	SWEETGUM
2012	11	SWEETGUM*
2013	15	SWEETGUM
2014	5	CAMPHOR
2015	9	MAPLE
2016	6	CAMPHOR
2017	8	CAMPHOR
2018	7	WATER OAK
2019	4	LIVE OAK
2020	5	SWEETGUM
2021	7	MIMOSA
2022	7	MIMOSA
2023	6	SWEETGUM
2024	8	SWEETGUM
2025	6	CAMPHOR
2026	6	WATER OAK
2027	16	SWEETGUM
2028	13	SWEETGUM
2029	7	SWEETGUM
2030	18	SWEETGUM
2031	18	WATER OAK
2032	6	MIMOSA
2033	4	WATER OAK
2034	6	SWEETGUM
2035	4	WATER OAK
2036	7	WATER OAK
2037	8	WATER OAK
2038	5	WATER OAK
2039	9	WATER OAK
2040	8	SWEETGUM
2041	7	SWEETGUM
2042	23	SWEETGUM
2043	21	SWEETGUM
2044	4	CHERRY
2045	13	WATER OAK
2046	5	CHERRY
2047	9	MAPLE
2048	18	SWEETGUM
2049	26	SWEETGUM
2050	20	SWEETGUM
2051	7	CHERRY
2052	29	SWEETGUM
2053	26	WATER OAK
2054	6	HICKORY
2055	6	MAGNOLIA
2056	6	SWEETGUM
2057	6	SWEETGUM
2058	7	MAGNOLIA
2059	5	CHERRY
2060	6	MAGNOLIA
2061	8	IRON WOOD
2062	4	CAMPHOR
2063	12	SWEETGUM
2064	4	HICKORY
2065	21	WATER OAK
2066	4	WATER OAK
2067	4	WATER OAK
2068	8	WATER OAK
2069	8	MAGNOLIA
2070	6	WATER OAK
2071	8	SWEETGUM
2072	11	SWEETGUM
2073	6	BEECH
2074	10	SWEETGUM
2075	9	SWEETGUM
2076	6	SWEETGUM
2077	5	SWEETGUM
2078	21	CHERRY
2079	9	SWEETGUM
2080	19	SWEETGUM
2081	6	HICKORY
2082	8	SWAMP CHESNUT
2083	13	SWEETGUM
2084	17	SWEETGUM
2085	9	MAGNOLIA
2086	10	SWEETGUM
2087	13	SWEETGUM
2088	7	SWAMP CHESNUT
2089	21	WATER OAK
2090	11	SWEETGUM
2091	15	WATER OAK
2092	10	SWEETGUM
2093	18	SWEETGUM
2094	6	BEECH
2095	27	SWEETGUM
2096	6	SWEETGUM
2097	18	SWAMP CHESNUT
2098	11	SWEETGUM
2099	15	SWEETGUM
2101	7	IRON WOOD
2100	28	SWEETGUM
2102	6	BEECH
2103	7	WATER OAK
2104	13	SWEETGUM
2105	16	SWEETGUM
2106	13	SWEETGUM
2107	14	SWEETGUM
2108	6	SWAMP CHESNUT
2109	14	WATER OAK
2110	7	IRON WOOD
2111	5	IRON WOOD
2112	15	SWEETGUM
2113	10	WATER OAK
2114	12	WATER OAK
2115	9	SWEETGUM
2116	6	SWEETGUM
2117	25	WATER OAK
2118	12	SWEETGUM
2119	6	IRON WOOD
2120	7	SWEETGUM*
2121	10	SWEETGUM
2122	11	SWEETGUM
2123	5	IRON WOOD
2124	4	IRON WOOD
2125	6	IRON WOOD
2126	21	SWEETGUM
2127	5	IRON WOOD
2128	7	IRON WOOD
2129	6	IRON WOOD
2130	5	IRON WOOD
2131	9	SWEETGUM
2132	7	IRON WOOD
2133	8	SWEETGUM
2134	6	SWEETGUM
2135	5	BEECH
2136	6	IRON WOOD
2137	8	BEECH
2138	4	BEECH
2139	7	SWEETGUM
2140	6	SWEETGUM
2141	8	SWEETGUM
2142	18	SWEETGUM
2143	4	CHERRY
2144	5	SWEETGUM
2145	6	SWEETGUM
2146	4	HICKORY
2147	18	SWEETGUM
2148	18	SWEETGUM
2149	9	HICKORY
2150	13	SWEETGUM
2151	16	SWEETGUM
2152	35	SLASH PINE
2153	5	IRON WOOD
2154	17	SWEETGUM
2155	12	SWEETGUM*
2156	7	SWEETGUM
2157	9	WATER OAK
2158	22	WATER OAK
2159	12	SWEETGUM
2160	10	CHERRY
2161	10	WATER OAK
2162	6	IRON WOOD
2163	23	WATER OAK
2164	23	WATER OAK
2165	17	WATER OAK
2166	20	SWEETGUM
2167	14	WATER OAK
2168	4	MAGNOLIA
2169	5	HICKORY
2170	15	WATER OAK
2171	16	SWEETGUM
2172	16	WATER OAK
2173	10	SWEETGUM
2174	9	SWEETGUM
2175	4	IRON WOOD
2176	24	WATER OAK
2177	22	SWEETGUM
2178	10	LIVE OAK
2179	10	WATER OAK
2180	5	SWEETGUM
2181	5	SWEETGUM
2182	10	SWEETGUM
2183	6	SWEETGUM
2184	8	SWEETGUM
2185	13	CHERRY
2186	5	SWEETGUM
2187	7	HICKORY
2188	12	WATER OAK
2189	26	SWEETGUM
2190	12	MAPLE
2191	5	HICKORY
2192	8	SWEETGUM
2193	12	SWEETGUM
2194	10	SWEETGUM
2195	4	SWEETGUM
2196	10	SWEETGUM
2197	8	CHERRY
2198	13	CHERRY
2199	7	HICKORY
2200	16	WATER OAK
2201	6	WATER OAK
2202	11	WATER OAK
2201	5	SWEETGUM
2203	6	SWEETGUM
2203	5	CAMPHOR
2204	6	CAMPHOR
2205	19	SWEETGUM
2206	6	MAGNOLIA
2207	12	SWEETGUM
2208	8	SWEETGUM
2209	4	HAWTHORN
2210	7	MAGNOLIA
2211	6	BEECH
2212	9	CAMPHOR
2213	10	WATER OAK
2214	24	WATER OAK
2215	6	CHERRY
2216	6	SWAMP CHESNUT
2217	4	WATER OAK
2218	6	WATER OAK
2219	4	HICKORY
2220	6	SWEETGUM
2221	7	HICKORY
2222	13	SWEETGUM
2223	13	SWEETGUM
2224	8	MAGNOLIA
2225	16	SWEETGUM
2226	8	HICKORY
2227	7	IRON WOOD
2228	5	IRON WOOD
2229	4	CHERRY
2230	5	CHERRY
2231	6	CHERRY
2232	23	WATER OAK
2233	18	SWEETGUM
2234	4	HICKORY
2235	7	CHERRY
2236	8	WATER OAK
2237	9	SWAMP CHESNUT
2238	9	HICKORY
2239	8	HICKORY
2240	4	SWEETGUM
2241	5	IRON WOOD
2242	5	LIVE OAK
2243	6	LIVE OAK
2244	16	HICKORY
2244	16	HICKORY
2245	9	HICKORY
2246	12	IRON WOOD
2247	7	IRON WOOD
2248	7	IRON WOOD*
2249	27	SWEETGUM
2250	9	SWEETGUM
2251	7	IRON WOOD
2252	7	IRON WOOD
2253	10	SWAMP CHESNUT
2254	6	MAGNOLIA
2255	4	IRON WOOD
2256	17	SWEETGUM
2257	4	IRON WOOD
2258	16	SWEETGUM
2259	6	WATER OAK
2260	4	WATER OAK
2261	10	WATER OAK
2262	6	WATER OAK
2263	5	HICKORY
2264	4	WATER OAK
2265	5	HICKORY
2266	4	WATER OAK
2267	5	WATER OAK
2268	17	SWEETGUM
2269	16	SWEETGUM
2270	14	SWEETGUM
2271	8	WATER OAK
2272	7	SWEETGUM
2273	6	WATER OAK
2274	18	SWEETGUM
2275	4	IRON WOOD
2276	16	SWEETGUM
2271	9	SWEETGUM
2278	5	SWEETGUM
2279	5	IRON WOOD
2280	6	SWEETGUM
2281	7	IRON WOOD
2282	15	SWEETGUM
2283	24	SWEETGUM
2284	6	MAGNOLIA
2285	7	WATER OAK
2286	23	SWEETGUM
2287	8	IRON WOOD
2288	11	SWEETGUM
2289	6	SWEETGUM
2290	6	WATER OAK
2291	12	WATER OAK
2292	26	WATER OAK
2293	20	WATER OAK
2294	4	IRON WOOD
2295	4	HICKORY
2296	10	HICKORY
2297	15	SWEETGUM
2298	4	HICKORY
2299	6	SWEETGUM
2300	12	SWEETGUM
2301	10	HICKORY
2302	5	SWEETGUM
2303	19	WATER OAK
2304	4	IRON WOOD
2305	31	LIVE OAK
2306	16	SWEETGUM
2307	6	IRON WOOD
2308	6	IRON WOOD
2309	6	IRON WOOD
2310	23	SWEETGUM
2311	8	SWEETGUM
2312	5	IRON WOOD
2313	7	IRON WOOD
2314	5	IRON WOOD
2315	5	IRON WOOD
2316	12	SWEETGUM
2317	8	SWEETGUM
2319	26	LIVE OAK
2320	18	WATER OAK
2321	6	HICKORY
2322	5	IRON WOOD
2323	5	HICKORY
2324	8	IRON WOOD
2325	24	WATER OAK
2326	10	SWEETGUM
2327	36	HICKORY
2328	12	SWEETGUM
2329	4	HICKORY
2330	6	IRON WOOD
2331	11	SWEETGUM
2332	11	SWEETGUM
2333	9	WATER OAK
2334	10	SWEETGUM
2335	7	SWEETGUM
2336	8	SWEETGUM
2337	6	IRON WOOD
2338	7	SWEETGUM
2339	11	SWEETGUM
2340	8	WATER OAK
2341	9	SWEETGUM
2342	8	IRON WOOD
2343	10	IRON WOOD
2344	11	SWEETGUM
2345	10	SWEETGUM
2346	8	WATER OAK
2347	6	WATER OAK
2348	5	WATER OAK
2349	7	WATER OAK
2350	13	SWEETGUM
2351	5	SWEETGUM
2352	16	SWEETGUM
2353	16	SWEETGUM
2354	6	WATER OAK
2355	4	BEECH
2356	7	SWEETGUM
2357	19	HICKORY
2358	17	SWEETGUM
2359	16	SWEETGUM
2360	4	BEECH
2361	8	SWEETGUM
2362	17	SWEETGUM
2363	8	HICKORY
2364	18	SWEETGUM
2365	4	HICKORY
2366	18	SWEETGUM
2367	4	LIVE OAK
2368	21	HICKORY
2369	13	HICKORY
2370	8	WATER OAK
2371	8	WATER OAK
2372	17	SWEETGUM
2373	11	SWEETGUM
2374	6	LIVE OAK*
2375	12	SWEETGUM
2376	5	WATER OAK
2376	5	CHERRY
2377	12	SWEETGUM
2378	5	SWEETGUM
2379	9	SWEETGUM
2380	8	SWEETGUM
2381	4	WATER OAK
2382	5	CHERRY
2383	5	CHERRY
2384	5	LIGUSTRUM
2385	9	IRON WOOD
2386	6	IRON WOOD
2387	4	PRIVET
2388	8	SWAMP CHESNUT
2389	8	IRON WOOD
2390	21	SWEETGUM
2391	13	SWEETGUM
2392	7	SWEETGUM
2398	11	SWEETGUM
2399	5	IRON WOOD
2400	5	SWEETGUM
2404	5	BEECH
2405	5	CHERRY
2406	16	SWEETGUM
2407	5	WATER OAK
2408	7	WATER OAK
2409	10	WATER OAK
2410	4	CHERRY
2411	21	SWEETGUM
2412	4	SWEETGUM
2413	15	SWEETGUM
2414	4	CHERRY
2415	11	SWEETGUM
2416	5	WATER OAK
2417	16	SWEETGUM
2418	4	SWEETGUM
2419	6	WATER OAK
2420	6	SWEETGUM
2421	9	SWEETGUM
2422	5	IRON WOOD
2423	5	IRON WOOD
2424	4	SWAMP CHESNUT
2425	9	SWEETGUM
2426	5	IRON WOOD
2438	27	SWEETGUM
2440	5	WATER OAK
2441	10	SWEETGUM
2442	17	SWEETGUM
2443	12	WATER OAK
2444	5	IRON WOOD
2445	7	IRON WOOD
2446	17	SWEETGUM
2447	4	IRON WOOD
2448	7	IRON WOOD
2449	11	WATER OAK
2450	7	IRON WOOD
2451	6	IRON WOOD
2452	19	SWEETGUM
2453	15	SWEETGUM
2454	16	SWEETGUM
2455	5	IRON WOOD
2456	19	WATER OAK
2457	10	SWEETGUM
2458	17	WATER OAK
2459	19	SWEETGUM
2460	31	WATER OAK
2461	10	WATER OAK
2462	10	CHERRY
2463	4	SWAMP CHESNUT
2464	6	MIMOSA
2465	5	CHERRY
2466	9	SWEETGUM
2467	23	WATER OAK
2468	5	CHERRY
2469	7	IRON WOOD
2470	7	SWAMP CHESNUT
2471	12	SWEETGUM
2472	10	SWAMP CHESNUT
2473	4	SWAMP CHESNUT
2474	17	SWEETGUM
2475	7	IRON WOOD
2476	6	IRON WOOD
2477	12	SWEETGUM
2478	7	SWAMP CHESNUT
2479	15	SWEETGUM
2480	4	SWAMP CHESNUT
2492	9	WATER OAK
2493	5	IRON WOOD
2494	6	SWEETGUM
2495	8	WATER OAK
2496	16	SWEETGUM
2497	4	IRON WOOD
2511	6	WATER OAK
2512	9	WATER OAK
2513	13	WATER OAK
2514	15	WATER OAK
2515	14	SWEETGUM
2516	21	SWEETGUM
2517	12	SWEETGUM
2518	5	BEECH
2519	6	IRON WOOD
2520	6	SWEETGUM
2521	12	WATER OAK
2522	31	SWAMP CHESNUT
2523	7	SWAMP CHESNUT
2524	8	IRON WOOD
2525	4	WATER OAK
2526	11	MAPLE
2527	4	WATER OAK
2528	6	WATER OAK
2529	6	SWAMP CHESNUT
2530	19	SWEETGUM
2531	11	SWEETGUM
2532	6	WATER OAK
2533	6	WATER OAK
2534	4	WATER OAK
2535	7	WATER OAK
2536	5	WATER OAK
2537	4	IRON WOOD
2538	4	IRON WOOD
2539	4	WATER OAK
7001	16	WATER OAK
7002	16	WATER OAK
7004	13	SWEETGUM
7005	5	SWEETGUM
7006	6	WATER OAK
7007	9	WATER OAK
7008	18	WATER OAK
7009	13	WATER OAK
7010	9	SWEETGUM
7011	6	SWEETGUM
7012	15	UNKNOWN
7013	13	UNKNOWN
7014	7	SWEETGUM
7015	24	WATER OAK
7016	15	WATER OAK
7017	13	WATER OAK
7018	12	WATER OAK
7019	23	SWEETGUM
7020	19	SWEETGUM
7021	32	SWEETGUM
7021	28	WATER OAK
7022	18	SWEETGUM
7023	16	SWEETGUM
7024	20	SWEETGUM
7025	13	SWEETGUM
7026	21	SWEETGUM
7027	6	SWEETGUM
7028	23	SWEETGUM
7029	18	WATER OAK
7030	22	SWEETGUM
7031	11	TULIP POPLAR
7032	5	MAGNOLIA
7033	7	WATER OAK
7034	21	SWEETGUM
7035	11	SWEETGUM
7036	10	SWEETGUM
7037	28	SWEETGUM
7038	10	MAPLE
7039	23	SWEETGUM
7040	7	HICKORY
7041	7	SWEETGUM
7042	11	SWEETGUM
7043	4	HICKORY
7044	26	SWEETGUM
7045	29	SWEETGUM
7046	6	WATER OAK
7047	3	WATER OAK
7048	13	SWEETGUM
7049	22	SWEETGUM
7050	16	SWEETGUM
7051	16	SWEETGUM
7052	30	SWEETGUM
7053	23	SWEETGUM
7054	14	SWEETGUM
7055	16	SWEETGUM
7056	6	WATER OAK
7057	12	SWEETGUM
7058	16	SWEETGUM
7059	12	SWEETGUM
7060	4	WATER OAK
7061	5	WATER OAK
7062	22	SWEETGUM
7063	13	SWEETGUM
7064	22	SWEETGUM
7065	14	MAPLE
7066	18	SWEETGUM
7067	12	SWEETGUM
7068	17	SWEETGUM
7069	16	SWEETGUM
7070	22	SWEETGUM
7071	17	SWEETGUM
7072	15	SWEETGUM
7073	17	SWEETGUM
7074	15	SWEETGUM
7075	15	SWEETGUM
7076	16	SWEETGUM
7077	23	SWEETGUM
7078	12	SWEETGUM
7079	12	SWEETGUM
7080	17	SWEETGUM
7081	18	SWEETGUM
7082	30	SWEETGUM
7083	18	SWEETGUM
7084	22	SWEETGUM
7085	15	TULIP POPLAR
7086	26	TULIP POPLAR
7087	14	SWEETGUM
7088	18	SWEETGUM
7089	16	SWEETGUM
7090	15	SWEETGUM
7091	19	SWEETGUM
7092	17	SWEETGUM
7093	12	MAGNOLIA
7094	15	SWEETGUM
7095	13	SWEETGUM
7096	13	WATER OAK
7097	13	SWEETGUM
7098	16	SWEETGUM
7099	17	SWEETGUM
7100	18	SWEETGUM
7101	9	WATER OAK
7102	34	SWEETGUM
7103	12	WATER OAK
7104	11	HACKBERRY
7105	2	HACKBERRY
7106	3	WATER OAK
7107	6	SWEETGUM
7108	13	SWEETGUM
7109	2	WATER OAK
7110	3	HACKBERRY
7111	5	SWEETGUM
7112	5	SWEETGUM
7113	6	SWEETGUM
7114	6	SWEETGUM
7115	13	LIVE OAK
7116	3	HICKORY
7117	3	WATER OAK
7118	10	MAGNOLIA
7119	15	HICKORY
7120	14	HICKORY
7121	6	HICKORY
7122	21	WATER OAK
7123	7	WATER OAK
7124	16	HICKORY
7125	5	CHERRY
7126	4	CHERRY
7127	4	HICKORY
7128	6	HICKORY
7129	4	WATER OAK
7130	4	WATER OAK
7131	6	WATER OAK
7132	3	HACKBERRY
7133	48	LIVE OAK
7134	4	CHERRY
7135	27	SWEETGUM
7136	9	WATER OAK
7137	14	SWEETGUM
7138	12	HICKORY
7139	9	CHERRY
7140	4	MAGNOLIA
7141	22	SWEETGUM
7142	18	SWEETGUM
7143	14	SWEETGUM
7144	3	WATER OAK
7145	8	SWEETGUM
7146	10	SWEETGUM
7147	11	WATER OAK
7148	4	WATER OAK
7149	10	WATER OAK
7150	3	WATER OAK
7151	2	WATER OAK
7152	3	HACKBERRY
7153	7	SWEETGUM
7154	6	HICKORY
7155	7	WATER OAK
7156	9	SWEETGUM
7157	5	WATER OAK
7158	14	WATER OAK
7159	5	WATER OAK
7160	4	HACKBERRY
7161	4	WATER OAK
7162	12	SWEETGUM
7163	16	SWEETGUM
7164	8	HACKBERRY
7165	11	CHERRY
7167	7	HICKORY
7168	2	WATER OAK
7166	5	WATER OAK
7170	19	SWEETGUM
7171	5	HACKBERRY
7172	4	HACKBERRY
7174	17	SWEETGUM
7175	16	SWEETGUM
7176	25	WATER OAK
7177	15	SWEETGUM
7178	22	WATER OAK
7179	19	SWEETGUM
7180	17	SWEETGUM
7181	18	SWEETGUM
7182	19	SWEETGUM
7183	15	SWEETGUM
7184	4	WATER OAK
7185	20	LAUREL OAK
7186	39	UNKNOWN
7187	12	WATER OAK
7188	22	WATER OAK
7189	17	SWEETGUM
7190	16	WATER OAK
7191	9	MAGNOLIA
7192	6	MAGNOLIA
7193	17	WATER OAK
7194	17	WATER OAK
7195	5	MAGNOLIA
7196	12	WATER OAK
7197	15	WATER OAK
7198	10	MAPLE
7199	27	SWEETGUM
7200	7	MAPLE
7201	10	MAPLE
7202	4	MAPLE
7203	4	MAPLE
7204	7	SWEETGUM
7205	3	WATER OAK
7206	3	WATER OAK
7207	3	WATER OAK
7208	9	SWEETGUM
7209	10	SWEETGUM
7210	10	SWEETGUM
7211	3	SWEETGUM
7212	8	SWEETGUM
7213	4	WATER OAK
7214	5	SWEETGUM
7215	3	SWEETGUM
7216	3	SWEETGUM
7217	10	MAPLE
7218	9	MAPLE
7219	18	MAPLE
7220	3	MAPLE
7221	11	SWEETGUM
7222	31	SWEETGUM
7223	14	SWEETGUM
7224	11	SWEETGUM
7225	11	SWEETGUM
7226	4	MAPLE
7227	24	SWEETGUM
7228	9	MAPLE
7229	23	SWEETGUM
7230	19	SWEETGUM
7231	5	SWEETGUM
7232	4	MAPLE
7233	6	MAPLE
7234	4	MAPLE
7235	7	SWEETGUM
7236	27	SWEETGUM
7237	14	SWEETGUM
7238	7	MAPLE
7239	32	SWEETGUM
7240	7	SWEETGUM
7241	22	SWEETGUM
7242	20	SWEETGUM
7243	9	CAMPHOR
7244	8	CAMPHOR
7245	5	WATER OAK
7246	4	CHERRY
7247	4	CHERRY
7248	4	WATER OAK
7249	3	WATER OAK
7250	2	WATER OAK
7251	3	HICKORY
7252	21	SWEETGUM
7253	4	WATER OAK
7254	3	WATER OAK
7255	22	SWEETGUM
7056	17	SWEETGUM
7257	2	WATER OAK
7258	3	WATER OAK
7259	7	WATER OAK
7260	10	IRON WOOD
7261	19	SWEETGUM
7262	5	SWEETGUM
7263	7	SWEETGUM
7264	5	SWEETGUM
7265	3	IRON WOOD
7266	19	SWEETGUM
7267	15	SWEETGUM
7268	4	WATER OAK
7269	4	WATER OAK
7270	12	CAMPHOR
7271	11	MAPLE
7272	4	SWEETGUM
7273	4	SWEETGUM
7274	3	SWEETGUM
7275	3	SWEETGUM
7276	4	SWEETGUM
7277	4	SWEETGUM
7278	13	SWEETGUM
7279	18	SWEETGUM
7280	8	SWEETGUM
7281	33	LIVE OAK
7282	48	LIVE OAK
7283	24	PALM
7284	29	WATER OAK
7285	12	IRON WOOD
7286	25	LIVE OAK
7287	16	SYCAMORE
7288	28	SWEETGUM
7289	16	SHORTLEAF PINE
7290	26	WATER OAK
7291	22	SWEETGUM
7292	28	SWEETGUM
7293	14	SWEETGUM
7294	13	SWEETGUM
7295	25	SWEETGUM
7296	27	SWEETGUM
7297	9	CAMPHOR
7298	25	SLASH PINE
7299	27	SLASH PINE
7300	7	DOGWOOD
7301	6	DOGWOOD
7302	6	DOGWOOD
7303	10	LAUREL OAK
7304	19	WATER OAK
7305	13	MAPLE
7306	24	SLASH PINE
7307	8	SWEETGUM
7308	4	CEDAR
7309	18	HICKORY
7310	28	HICKORY
7311	15	MAGNOLIA
7312	5	MAGNOLIA
7313	22	LIVE OAK
7314	23	RED OAK
7315	8	MAGNOLIA
7316	21	LIVE OAK
7317	16	SWEETGUM
7318	12	CAMPHOR
7319	12	CAMPHOR
7320	25	CAMPHOR
7321	24	SWEETGUM
7322	9	WATER OAK
7323	16	SWEETGUM
7324	20	SWEETGUM
7325	13	CHINESE TALLOW
7326	23	HICKORY
7327	15	CHERRY *
7328	38	LIVE OAK
7329	27	SWEETGUM
7330	12	CHINESE TALLOW
7331	15	CHINESE TALLOW
7332	13	MIMOSA
7333	15	MIMOSA
7334	34	LIVE OAK
7335	18	WATER OAK
7336	30	WATER OAK
7337	18	WATER OAK
7338	9	MIMOSA
7339	8	MIMOSA
7340	12	MIMOSA
7341	10	MIMOSA
7342	12	CHINESE TALLOW
7343	29	LIVE OAK
7344	37	LIVE OAK
7345	24	LIVE OAK
7346	24	LIVE OAK
7347	34	LIVE OAK
7348	34	LIVE OAK
7349	40	LIVE OAK
7350	19	SWEETGUM
7351	7	MAGNOLIA
7352	16	SWEETGUM
7353	22	SWEETGUM
7354	13	SWEETGUM
7355	11	SWEETGUM
7356	18	SWEETGUM
7357	18	SWEETGUM
7358	10	SWEETGUM
7359	12	SWEETGUM
7360	23	SWEETGUM
7361	13	SWEETGUM
7362	9	SWEETGUM
7363	16	WATER OAK
7364	26	TULIP POPLAR
7365	13	SWEETGUM
7366	13	SWEETGUM
7367	15	SWEETGUM
7368	20	SWEETGUM
7369	20	SWEETGUM
7370	20	SWEETGUM
7371	23	UNKNOWN
7372	37	UNKNOWN
7373	11	SWEETGUM
7374	12	SWEETGUM
7375	15	SWEETGUM
7376	22	WATER OAK
7377	25	UNKNOWN
7378	17	SWEETGUM
7379	10	HICKORY
7380	35	WATER OAK
7381	16	SWEETGUM
7382	8	MAGNOLIA
7383	11	SWEETGUM
7384	9	SWEETGUM
7385	11	SWEETGUM
7386	12	SWEETGUM
7387	16	SWEETGUM
7388	15	SWEETGUM
7389	10	SWEETGUM
7390	14	SWEETGUM
7391	8	SWEETGUM
7392	13	SWEETGUM
7393	11	SWEETGUM
7394	13	SWEETGUM
7395	19	SWEETGUM
7396	12	SWEETGUM
7397	8	WATER OAK

* INDICATES POOR CONDITION

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NOBLES CONSULTING GROUP, INC.

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Revision	By	Appd.	YY.MM.DD

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

GENERAL NOTES

Permit-Seal

Project Number:
File Name: 5668-003-TOPO-REV1

DMW	CMT		17/10/17
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. V108

Revision Sheet

8 of 8

J:\5668-003 Meridian Road Additional Work\Survey\Drawing\AutoCAD\5668-003-TOPO-REV1.dwg
2017/11/06 11:30 AM By: DMW

ORIGINAL SHEET - ANSI D

Attachment I

SH C-101
SH C-201
SH C-202

SH C-103
SH C-104
SH C-206
SH C-207
SH C-208
SH C-209

SH C-105

SH C-106
SH C-210
SH C-211
SH C-212

SH C-102
SH C-203
SH C-204
SH C-205

N

0 60' 120'

NORTH MERIDIAN ROAD

JOHN HANCOCK DRIVE

LEXINGTON ROAD

28+00
27+00
26+00
25+00
24+00
23+00
22+00
21+00
20+00
19+00
18+00
17+00

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

KEY SHEET

Seal

CHRIS C. BROCKMEIER LICENSE 68859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	215613796-KEY

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-001

Revision 0 Sheet of

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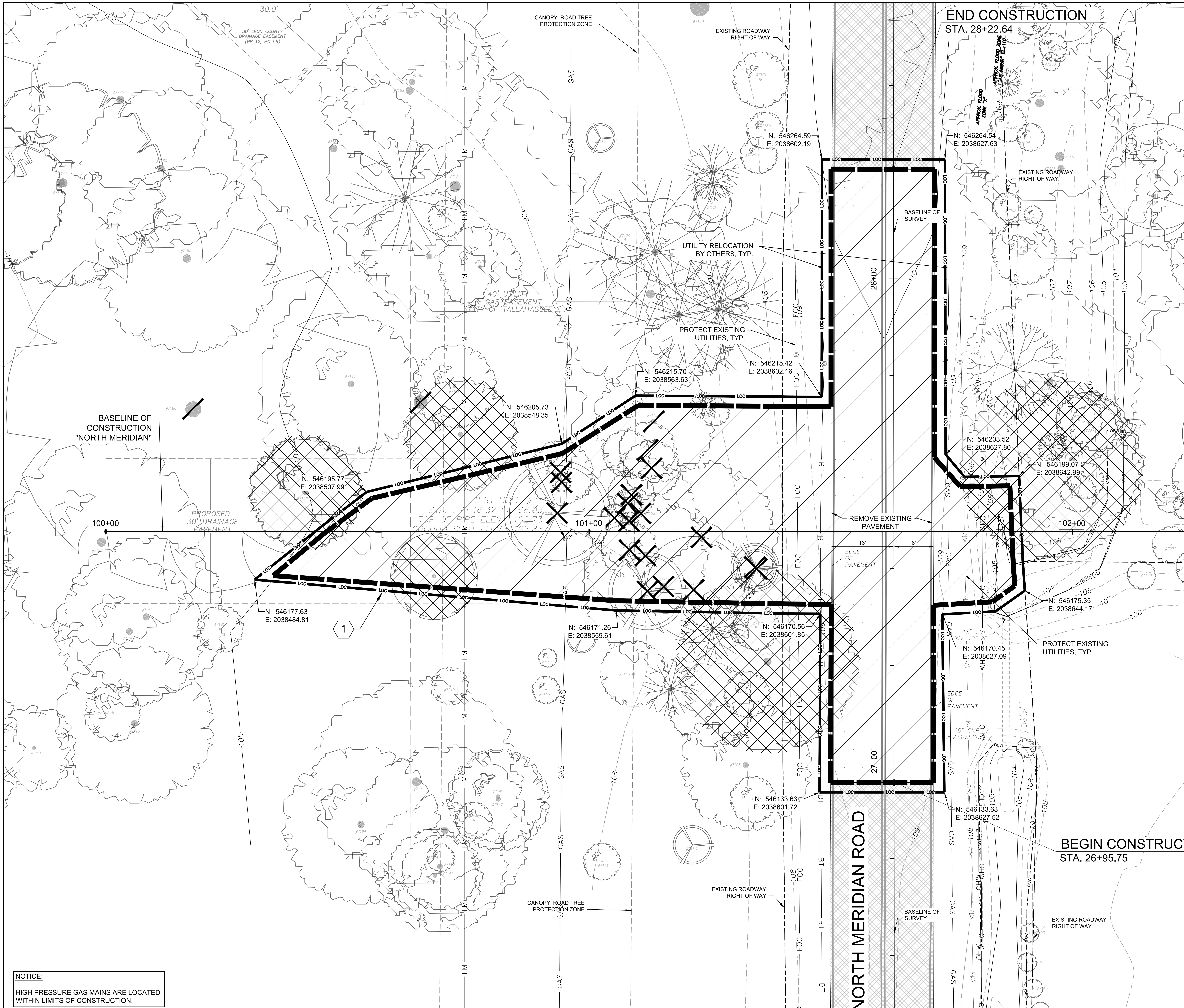
2020/01/14 1:38 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

Attachment I



LEGEND

- TREE TO BE REMOVED
- EXISTING TREE MISSING OR DEAD
- AREA TO BE CLEARED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING TREE TO BE MITTIGATED
- DEMOLITION (AREA)
- LIMITS OF CLEARING AND EROSION CONTROL SILT FENCE/ SEDIMENT CONTROL LOG WHEN WITHIN MITIGATED TREE CPZ.
- OTHER SURFACE WATER LIMITS/BOUNDARY

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH LEON COUNTY PUBLIC WORKS DEPARTMENT. VERIFY ALL UTILITIES NOTED FOR DEMOLITION HAVE BEEN SHUT OFF AND ABANDONED PRIOR TO ANY WORK
2. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. COORDINATE WITH LEON COUNTY AND UTILITY CONTACTS AND NOTIFY IMMEDIATELY OF ANY DISCREPANCY WITH UTILITY LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES CAUSED BY THEIR CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL PROVIDE A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY LEON COUNTY.

NOTICE:

HIGH PRESSURE GAS MAINS ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DEMOLITION & EROSION CONTROL PLAN FOR MERIDIAN ROAD

Seal

CHRIS E. BROCKMEIER LICENSE No. 56859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	215613796-C102-Demo

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-101

Revision 0 Sheet of

ORIGINAL SHEET - ANSI D

Attachment I

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH LEON COUNTY PUBLIC WORKS DEPARTMENT AND ADJACENT PROPERTY OWNERS. VERIFY ALL UTILITIES NOTED FOR DEMOLITION HAVE BEEN SHUT OFF AND ABANDONED PRIOR TO ANY WORK
2. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. COORDINATE WITH LEON COUNTY AND UTILITY CONTACTS, AND NOTIFY IMMEDIATELY OF ANY DISCREPANCY WITH UTILITY LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES CAUSED BY CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL PROVIDE A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY LEON COUNTY. SEE SHEET G-102.

LEGEND

- TREE TO BE REMOVED
- EXISTING TREE MISSING OR DEAD
- AREA TO BE CLEARED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING TREE TO BE MITIGATED
- DEMOLITION (AREA)
- LOC — LIMITS OF CLEARING AND EROSION CONTROL SILT FENCE/ SEDIMENT CONTROL LOG WHEN WITHIN MITIGATED TREE CPZ.
- OSW — OTHER SURFACE WATER LIMITS/BOUNDARY
- REMOVE AND DISPOSE OF 6" THICK CONCRETE PARKING AREA

N

0 10' 20'

BASELINE OF SURVEY
END CONSTRUCTION STA. 22+87.00
EXISTING PAVEMENT MARKINGS
EXISTING ROADWAY RIGHT OF WAY
CANOPY ROAD TREE PROTECTION ZONE
N: 545728.88 E: 2038597.99
N: 545728.91 E: 2038628.10
MATCHLINE (SHEET C-103)
BASELINE OF CONSTRUCTION "WB"
REMOVE EXISTING CURB AND GUTTER
REMOVE EXISTING PAVEMENT
BASELINE OF SURVEY
NORTH MERIDIAN ROAD
WOOD DECK
22.31' F.F.E.: 115.06 WOOD BUILDING
22.30' F.F.E.: 114.85 WOOD BUILDING
14"X23" ELLIPTICAL CMP INV.: 104.52
30" RCP
N: 545707.65 E: 2038733.69
N: 545707.16 E: 2038854.44
N: 545703.96 E: 2038644.45
N: 545695.52 E: 2038674.82
30" RCP INV.: 104.22
N: 545698.95 E: 2038733.43
DRAINAGE EASEMENT (O.R.B. 5086, PG. 1346)
PROTECT EXISTING MANHOLES
PROTECT EXISTING UTILITIES, TYP.
PROTECT EXISTING MANHOLES
14"X23" ELLIPTICAL CMP INV.: 104.63
HEADWALL 29"X45" CMP INV.: 102.85
ASPHALT
REMOVE EXISTING 14"x23" ERCP (DUAL)
REMOVE EXISTING 29"x45" ERCP
204+00
205+00
206+00
206+25
22+00
BASELINE OF CONSTRUCTION "WB" (FOR HORIZONTAL CONTROL INFORMATION REFER PLAN SHEET TO C-206)
14"X23" ELLIPTICAL CMP INV.: 104.80
REMOVE EXISTING RETAINING WALL
HEADWALL 29"X45" CMP INV.: 105.32
14"X23" ELLIPTICAL CMP INV.: 104.74
CONCRETE RETAINING WALL
CONCRETE
CONTRACTOR SHALL PROVIDE PASSAGE OF STORMWATER RUNOFF / FLOW THROUGH THE SITE DURING CONSTRUCTION ACTIVITIES AND PROVIDE APPROPRIATE EROSION CONTROL MEASURES.
N: 545601.97 E: 2038649.48
N: 545597.36 E: 2038647.25
MITERED END SECTION
EXISTING ROADWAY RIGHT OF WAY
50' GAS EASEMENT (PB 4, PG 10) (O.R.B. 1768, PG. 1920)
CANOPY ROAD TREE PROTECTION ZONE
50' FGT GAS EASEMENT
REMOVE AND DISPOSE OF 6" THICK CONCRETE SLAB (UNDER EXISTING SOIL SURFACE) FROM MERIDIAN ROAD EDGE OF PAVEMENT STA. 204+26.63 TO STA. 205+65.31 (FULL WIDTH OF LOC)
℄ GAS EASEMENT
N: 545601.81 E: 2038856.44
POWER POLE
GUY WIRE ANCHOR
1/2" PVC IRRIGATION W/ 4.5" STEEL CASING (PER TH-7)
N: 545574.21 E: 2038603.00
N: 545574.25 E: 2038647.25
BEGIN CONSTRUCTION STA. 21+36.33

NOTICE:
HIGH PRESSURE GAS MAINS ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DEMOLITION & EROSION CONTROL PLAN FOR EAST BASIN

Seal

CHRIS E. BROCKMEIER LICENSE 58859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 215613796-C102-Demo

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-102
Revision 0 Sheet of

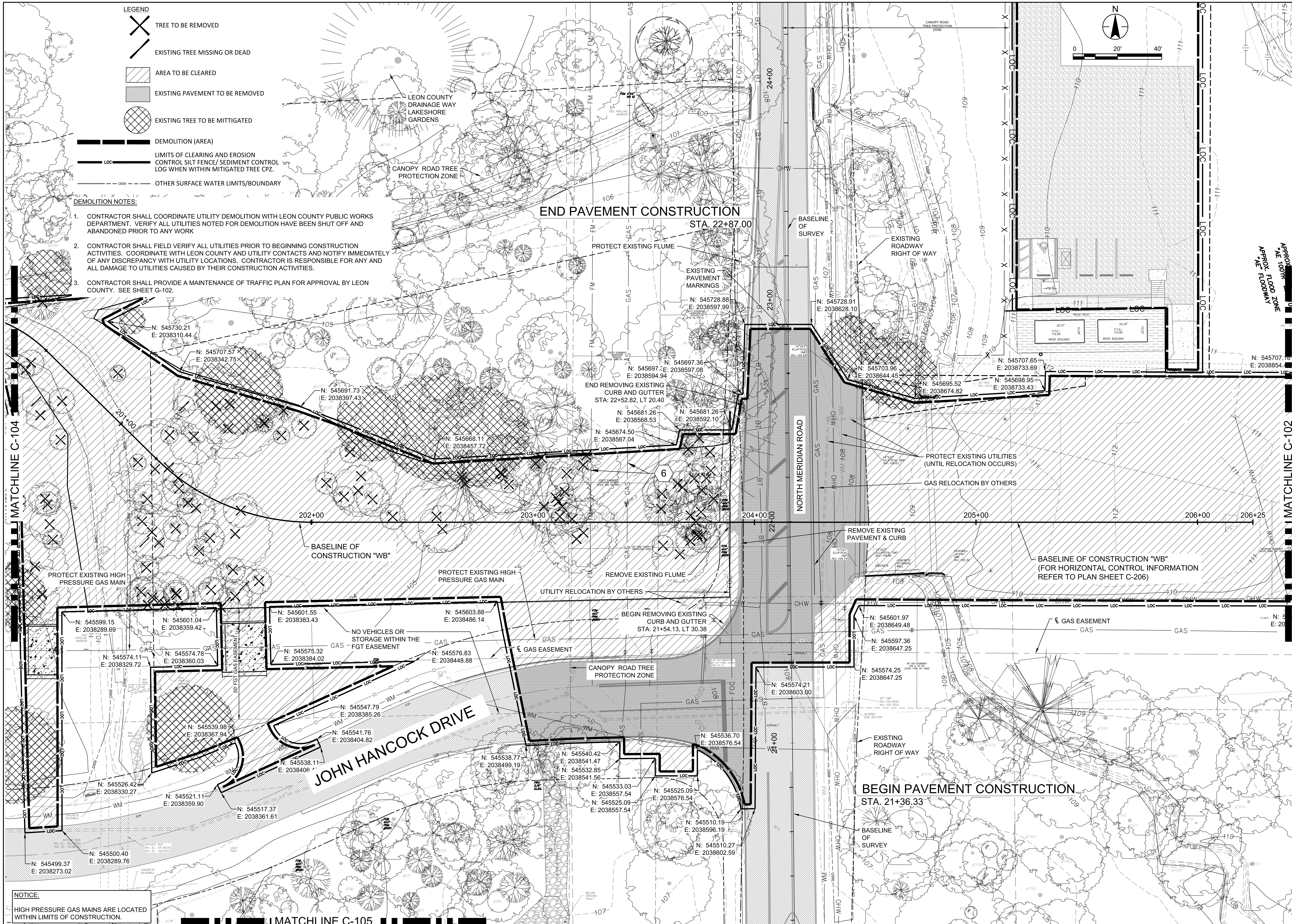
Attachment I

LEGEND

- TREE TO BE REMOVED
- EXISTING TREE MISSING OR DEAD
- AREA TO BE CLEARED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING TREE TO BE MITTIGATED
- DEMOLITION (AREA)
- LOC — LIMITS OF CLEARING AND EROSION CONTROL SILT FENCE/ SEDIMENT CONTROL LOG WHEN WITHIN MITIGATED TREE CPZ.
- OSW — OTHER SURFACE WATER LIMITS/BOUNDARY

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH LEON COUNTY PUBLIC WORKS DEPARTMENT. VERIFY ALL UTILITIES NOTED FOR DEMOLITION HAVE BEEN SHUT OFF AND ABANDONED PRIOR TO ANY WORK
2. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. COORDINATE WITH LEON COUNTY AND UTILITY CONTACTS AND NOTIFY IMMEDIATELY OF ANY DISCREPANCY WITH UTILITY LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES CAUSED BY THEIR CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL PROVIDE A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY LEON COUNTY. SEE SHEET G-102.



NOTICE:

HIGH PRESSURE GAS MAINS ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DEMOLITION & EROSION CONTROL PLAN FOR WEST BASIN

Seal

Project Number: 215613796
File Name: 215613796-C102-Demo

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-103

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Attachment I

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LEGEND

- TREE TO BE REMOVED
- EXISTING TREE MISSING OR DEAD
- AREA TO BE CLEARED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING TREE TO BE MITTIGATED
- DEMOLITION (AREA)
- LOC — LIMITS OF CLEARING AND EROSION CONTROL SILT FENCE/ SEDIMENT CONTROL LOG WHEN WITHIN MITIGATED TREE CPZ.
- OSW — OTHER SURFACE WATER LIMITS/BOUNDARY

N

0 10' 20'

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH LEON COUNTY PUBLIC WORKS DEPARTMENT. VERIFY ALL UTILITIES NOTED FOR DEMOLITION HAVE BEEN SHUT OFF AND ABANDONED PRIOR TO ANY WORK
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3. CONTRACTOR SHALL PROVIDE A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY LEON COUNTY.

N: 545738.38
E: 2038230.34

200+00

N: 545727.77
E: 2038231.50

N: 545719.87
E: 2038258.14

N: 545674.09
E: 2038268.69

N: 545742.46
E: 2038297.04

N: 545750.76
E: 2038335.72

N: 545744.54
E: 2038338.16

N: 545730.21
E: 2038310.44

LEON COUNTY DRAINAGE WAY

BASELINE OF CONSTRUCTION "WB"

201+00

N: 545707.57
E: 2038342.75

N: 545691.73
E: 2038397.43

N: 545668.11
E: 2038457.72

202+00

MATCHLINE C-103

BASELINE OF CONSTRUCTION "WB" (FOR HORIZONTAL CONTROL INFORMATION REFER TO PLAN SHEET C-206)

CONSTRUCTION TRAFFIC RESTRICTED TO CROSSING GAS MAIN AT THIS LOCATION (2 OF 2). CONSTRUCT MAINTENANCE CONCRETE ACCESS APPROACH PRIOR TO BEGINNING DEMOLITION ACTIVITIES. FOR DETAILS SEE SHEET C-501 DETAIL 9.

CONSTRUCTION TRAFFIC RESTRICTED TO CROSSING GAS MAIN AT THIS LOCATION (1 OF 2). CONSTRUCT MAINTENANCE CONCRETE ACCESS APPROACH PRIOR TO BEGINNING DEMOLITION ACTIVITIES. FOR DETAILS SEE SHEET C-501 DETAIL 9.

EXISTING 50' GAS EASEMENT

EDGE OF VEGETATION

NO VEHICLES OR STORAGE WITHIN FGT EASEMENT

PROTECT HIGH PRESSURE GAS MAIN

NO VEHICLES OR STORAGE WITHIN FGT EASEMENT

N: 545599.15
E: 2038289.69

N: 545574.11
E: 2038329.72

N: 545601.04
E: 2038359.42

N: 545574.78
E: 2038360.03

N: 545575.32
E: 2038384.02

N: 545601.55
E: 2038383.43

N: 545603.88
E: 2038486.14

N: 545576.83
E: 2038448.88

50' FGT GAS EASEMENT

℄ GAS EASEMENT

NOTICE:

HIGH PRESSURE GAS MAINS ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

JOHN HANCOCK DRIVE

MATCHLINE C-105

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DEMOLITION & EROSION CONTROL PLAN
FOR WEST BASIN

Seal

CHRIS E. BROCKMEIER
LICENSE
No. 68659
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	215613796-C102-Demo

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-104

Revision 0 Sheet of

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ORIGINAL SHEET - ANSI D

Attachment I

MATCHLINE C-104

MATCHLINE C-103

MATCHLINE C-106

JOHN HANCOCK DRIVE

℄ JOHN HANCOCK DRIVE

EXISTING ROADWAY RIGHT OF WAY

REMOVE 20 LF OF WOODEN FENCE

N: 545547.79
E: 2038385.26

N: 545539.98
E: 2038367.94

N: 545541.76
E: 2038404.82

N: 545538.11
E: 2038406.46

N: 545538.77
E: 2038499.19

N: 545540.42
E: 2038541.47

N: 545532.85
E: 2038541.56

N: 545526.42
E: 2038330.27

N: 545521.11
E: 2038359.90

N: 545517.37
E: 2038361.61

N: 545500.40
E: 2038289.76

N: 545499.37
E: 2038273.02

PROTECT EXISTING UTILITIES, TYP.

PROTECT GUARDRAIL

N: 545455.71
E: 2038301.99

END CONSTRUCTION
STA. 303+14

N: 545456.36
E: 2038326.70

303+00

BASELINE OF CONSTRUCTION "L" (HORIZONTAL CONTROL INFORMATION, REFER TO PLAN SHEET C-209)

EXISTING DRAINAGE EASEMENT

EXISTING DRAINAGE EASEMENT

50' FGT GAS EASEMENT

GAS PIPELINE MARKER

RIP RAP

CONCRETE HEADWALL

34"X53" RCP
INV. EL: 102.03'(N)
INV. EL: 101.86'(S)

34"X53" RCP
INV. EL: 101.80'(N)
INV. EL: 102.04'(S)

CONCRETE MES
INV.: 103.69'

15" CMP

18" RCP

CONCRETE MES
18" RCP
INV. EL: 102.17'

LIGHT POLE

WATER MAIN MARKED BY CITY OF TALLAHASSEE

FIRC 5/8" ILLEG.

FCM 4X4" PRM #5051

BELOW GROUND VAULT

TELEPHONE PEDESTAL

ELECTRIC BOXES ON CONC. SLAB

60.0' LEON COUNTY DRAINAGE EASEMENT LAKESHORE DRIVE (P.B. 12, P. 29)

REMOVE AND STORE FENCE (REPLACE AT END OF CONSTRUCTION)

REMOVE AND STORE FENCE (REPLACE AT END OF CONSTRUCTION)

NOTICE:

HIGH PRESSURE GAS MAINS ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

N

0 10' 20'

LEGEND

- TREE TO BE REMOVED
- EXISTING TREE MISSING OR DEAD
- AREA TO BE CLEARED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING TREE TO BE MITTIGATED
- DEMOLITION (AREA)
- LOC — LIMITS OF CLEARING AND EROSION CONTROL SILT FENCE/ SEDIMENT CONTROL LOG WHEN WITHIN MITIGATED TREE CPZ.
- OSW — OTHER SURFACE WATER LIMITS/BOUNDARY

DEMOLITION NOTES:

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Revision	By	Appd.	YY.MM.DD

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DEMOLITION & EROSION CONTROL PLAN AT JOHN HANCOCK DRIVE

Seal

CHRIS E. BROCKMEIER
LICENSE
No. 58859
STATE OF FLORIDA
PROFESSIONAL ENGINEER

1/6/2020

Project Number: 215613796
File Name: 215613796-C102-Demo

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-105

Revision 0 Sheet of

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2020/01/14 1:40 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

Attachment I

MATCHLINE C-105

END REMOVAL OF EXISTING CHAIN LINK FENCE

END RELOCATION OF WOOD PRIVACY FENCE

END REMOVAL OF EXISTING CHAIN LINK FENCE

30.0' DRAINAGE EASEMENT LAKESHORE ESTATES (P.B. 7, PG. 32)

BASELINE OF CONSTRUCTION "L"

302+00

BEGIN RELOCATION OF WOOD PRIVACY FENCE

CONTRACTOR SHALL SECURE PERMIT AND RELOCATE EXISTING SHED TO BACKYARD PER OWNER'S DIRECTION.

RELOCATE EXISTING PLANTINGS. CONTRACTOR TO COORDINATE WITH OWNER

BEGIN REMOVAL OF EXISTING CHAIN LINK FENCE

BEGIN REMOVAL OF EXISTING CHAIN LINK FENCE

18" RCP
INV. EL.: 108.20(W)
INV. EL.: 108.23(E)

PROTECT EXISTING UTILITIES, TYP.

N: 545247.80
E: 2038291.69

5/8" #3509

N: 545248.04
E: 2038321.77

REMOVE EXISTING 15" RCP, HEADWALLS AND EXISTING CONCRETE DRIVEWAY

REMOVE EXISTING HEADWALL

REMOVE EXISTING HEADWALL

REMOVE AND RESET EXISTING SIGN

4"X4" #1072

N: 545247.47
E: 2038278.39

N: 545241.09
E: 2038278.80

REMOVE EXISTING HEADWALL

15" CMP
INV. EL.: 106.30(W)
INV. EL.: 106.33(E)

N: 545245.16
E: 2038451.33

N: 545230.70
E: 2038255.00

N: 545226.98
E: 2038451.80

PROTECT EXISTING UTILITIES, TYP.

TEST HOLE #21
L STA. 17+94.85, Lt. 304.73
TOP OF PIPE ELEV.: 108.19
GROUND SHOT ELEV.: 110.68

600+00

601+00

602+00

N: 545226.75
E: 2038359.46

REMOVE EXISTING PAVEMENT

REMOVE AND RESET EXISTING MAILBOX, SINGLE

LEXINGTON ROAD

BEGIN PAVEMENT CONSTRUCTION
STA. 600+00.00

END PAVEMENT CONSTRUCTION
STA. 601+00.48

N: 545204.63
E: 2038254.83

REMOVE EXISTING 36" RCP

BASELINE OF CONSTRUCTION "X"

REMOVE EXISTING CONCRETE DRIVEWAY

N: 545194.47
E: 2038264.54

N: 545187.97
E: 2038264.60

N: 545187.26
E: 2038288.99

N: 545175.92
E: 2038937.30

REMOVE EXISTING HEADWALLS

NAUTILUS CIRCLE

NAUTILUS CIRCLE

NOTICE:

HIGH PRESSURE GAS MAINS ARE LOCATED WITHIN LIMITS OF CONSTRUCTION.

N

0 10' 20'

LEGEND

- TREE TO BE REMOVED
- EXISTING TREE MISSING OR DEAD
- AREA TO BE CLEARED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING TREE TO BE MITTIGATED
- DEMOLITION (AREA)
- LOC — LIMITS OF CLEARING AND EROSION CONTROL SILT FENCE/ SEDIMENT CONTROL LOG WHEN WITHIN MITIGATED TREE CPZ.
- OSW — OTHER SURFACE WATER LIMITS/BOUNDARY

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH LEON COUNTY PUBLIC WORKS DEPARTMENT. VERIFY ALL UTILITIES NOTED FOR DEMOLITION HAVE BEEN SHUT OFF AND ABANDONED PRIOR TO ANY WORK
2. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. COORDINATE WITH LEON COUNTY AND UTILITY CONTACTS AND NOTIFY IMMEDIATELY OF ANY DISCREPANCY WITH UTILITY LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES CAUSED BY THEIR CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL PROVIDE A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY LEON COUNTY.
4. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL COMMERCIAL AND PRIVATE APPROACHES DURING CONSTRUCTION.
5. FOR DRAINAGE CONVEYANCE DITCH BASELINE OF CONSTRUCTION "L" HORIZONTAL CONTROL DATA, REFER TO C-209.
6. FOR LEXINGTON ROAD BENCHMARK INFORMATION REFER TO SURVEY SHEET V107.
7. FOR DRAINAGE CONVEYANCE DITCH BASELINE OF CONSTRUCTION "L" HORIZONTAL CONTROL DATA REFER TO C-209.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DEMOLITION & EROSION CONTROL PLAN
AT LEXINGTON ROAD

Seal

CHRIS S. BROCKMEIER
LICENSE
56859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 215613796-C102-Demo

Dwn.	Chkd.	Dsgn.	YY.MM.DD
JG	CB	AM	20.01.06

Drawing No. C-106
Revision 0
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2020.01.14 1:40 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

Attachment I

END PAVEMENT CONSTRUCTION
STA. 28+22.64
ELEV.=110.35

N

0 10' 20'

BASELINE OF SURVEY

ROADWAY RIGHT OF WAY LINE

6' LATERAL OFFSET (TYP.)

28+00

CANOPY ROAD TREE PROTECTION ZONE

GAS EASEMENT

ROADWAY RIGHT OF WAY LINE

ABANDONED FORCE MAIN

20' PROPOSED GAS EASEMENT

6" GAS (STEEL)

PROPOSED HEADWALL PER FDOT INDEX 430-030 STA. 27+46.50 - 22.00 LT TOP 108.25 INV. = 105.00

STA: 101+63.04
INSERSECTION OF BASELINE OF CONSTRUCTION (NORTH MERIDIAN) WITH BASELINE OF SURVEY

BASELINE OF CONSTRUCTION (NORTH MERIDIAN)

13' 9'

3.02'

PROPOSED MITERED END SECTION PER FDOT INDEX 430-021 STA. 27+46.50 - 21.75 RT INV. = 105.50

BASELINE OF CONSTRUCTION (NORTH MERIDIAN)

100+00 101+00 102+00 102+63

30' DRAINAGE EASEMENT

TIE INTO EXISTING GRADE

16' L16 8'

PROPOSED 12" GROUTED RIP-RAP

PROPOSED 12" GROUTED RIP-RAP

3.54' 14'

PROPOSED 44 LF OF 2 - 24" RCP

140' DRAINAGE EASEMENT

REPLACE ASPHALT IN ACCORDANCE WITH DESIGN SPECIFICATIONS AND DETAILS

10" WM (ACP)

TL-3 GUARDRAIL (CORTEN FINISH)

NORTH MERIDIAN ROAD

BASELINE OF SURVEY

ROADWAY RIGHT OF WAY LINE

CANOPY ROAD TREE PROTECTION ZONE

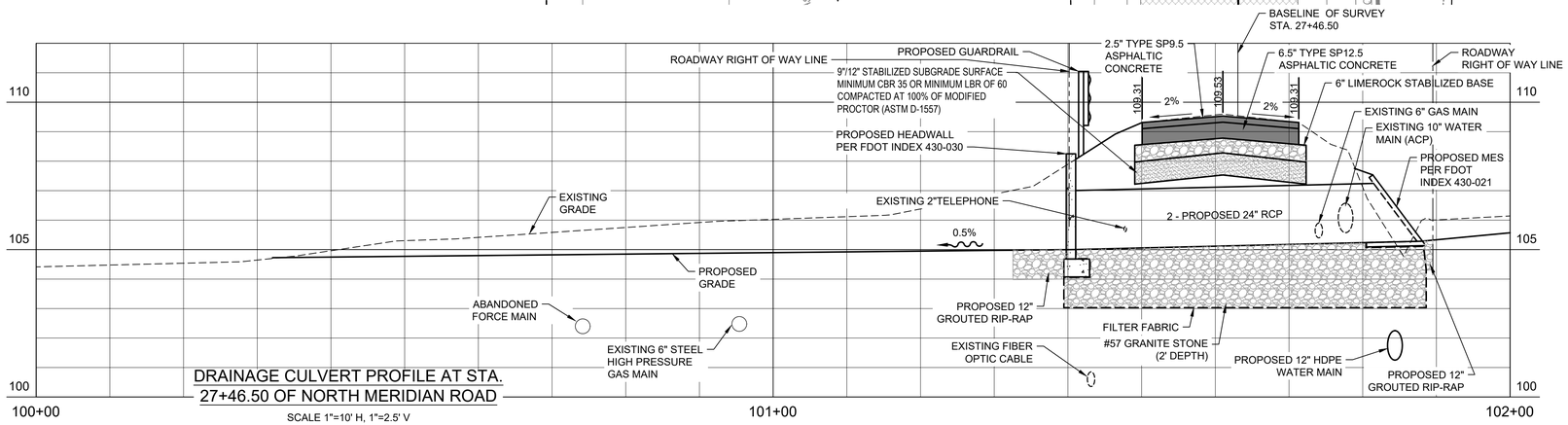
27+00

GAS EASEMENT

ROADWAY RIGHT OF WAY LINE

BEGIN PAVEMENT CONSTRUCTION
STA. 26+95.75
ELEV.=109.16

BASELINE OF CONSTRUCTION "NORTH MERIDIAN"				
LINE	LENGTH	BEARING	START POINT (N, E)	END POINT (N, E)
L16	263.041	N90°00'00"E	546187.59, 2038454.03 STA. 100+00.00	546187.59, 2038717.07 STA. 102+63.00



DRAINAGE CULVERT PROFILE AT STA. 27+46.50 OF NORTH MERIDIAN ROAD

SCALE 1"=10' H, 1"=2.5' V

LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- MISCELLANEOUS ASPHALT PAVEMENT
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELECTRIC
- RIGHT-OF-WAY
- EASEMENT

NOTES:

1. FOR GUARDRAIL AND PAVEMENT MARKING INFORMATION SEE PAVEMENT MARKING PLANS.
2. REFER TO C-501 FOR ASPHALT TYPICAL SECTION DETAIL.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DRAINAGE CULVERT PLAN AND PROFILE AT MERIDIAN ROAD STA. 27+46.50

Seal

CHRIS E. BROCKMEIER LICENSE NO. 56859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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Drawing No. C-201
Revision 0
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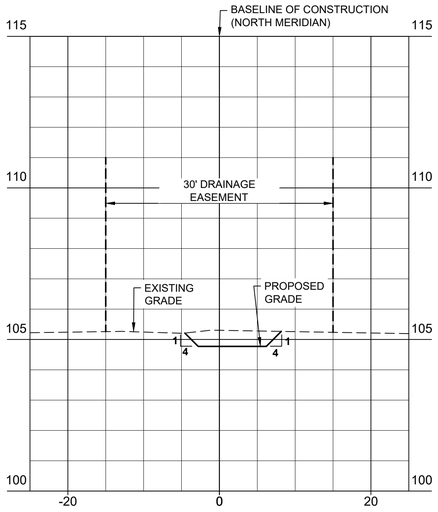

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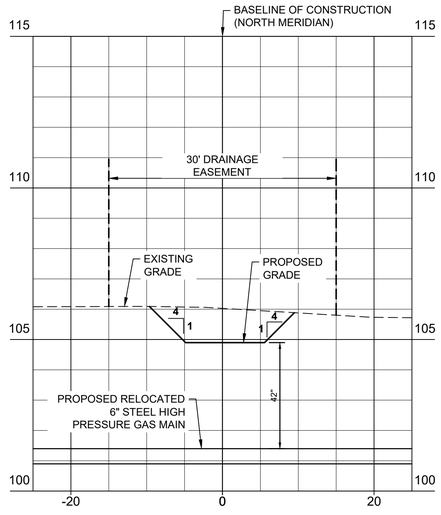
SCALE 1"=10' H, 1"=2.5' V



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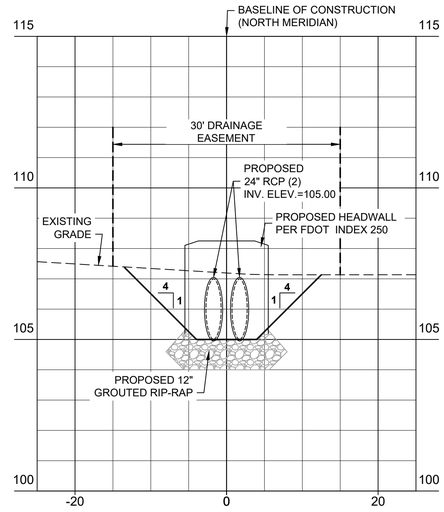
SCALE 1"=10' H, 1"=2.5' V



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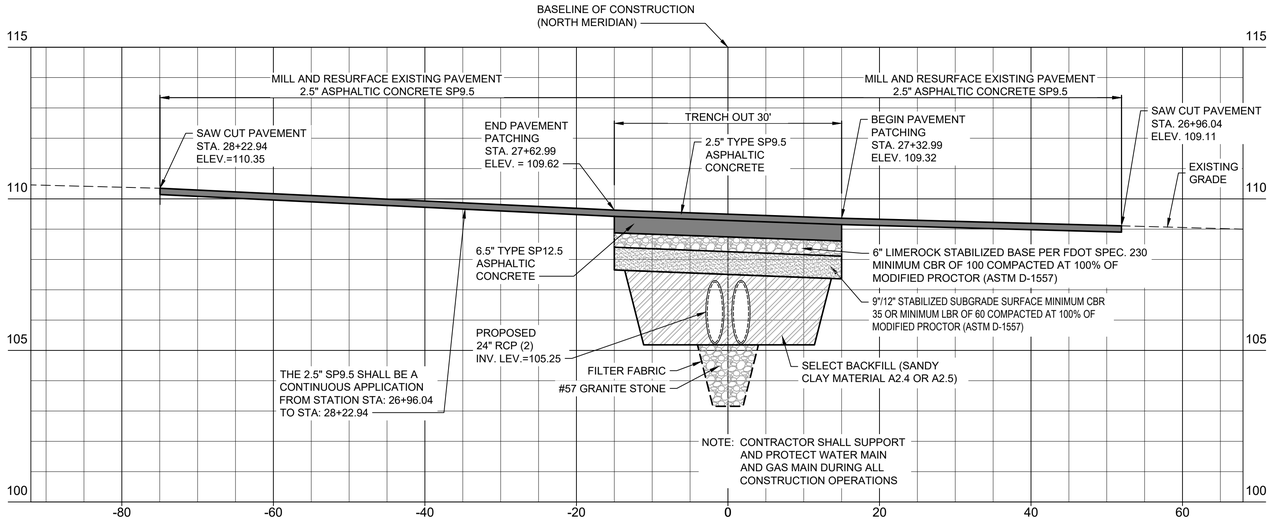

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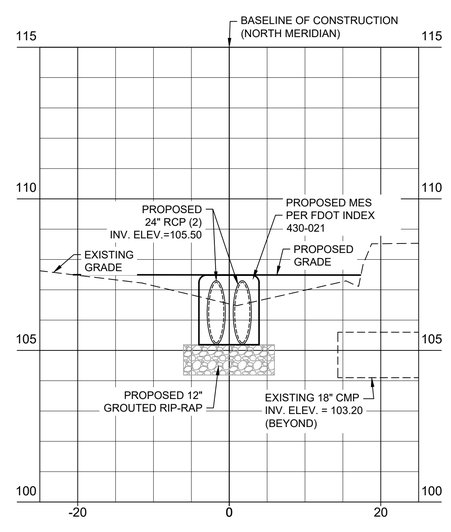

SECTION @ STA: 101+81 (C-201)

SCALE 1"=10' H, 1"=2.5' V

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DRAINAGE CULVERT SECTIONS AT
MERIDIAN ROAD STA. 27+46.50

Seal

CHRIS E. BROCKMEIER
LICENSE
NO. 86859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

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Drawing No. C-202

Revision 0 Sheet of

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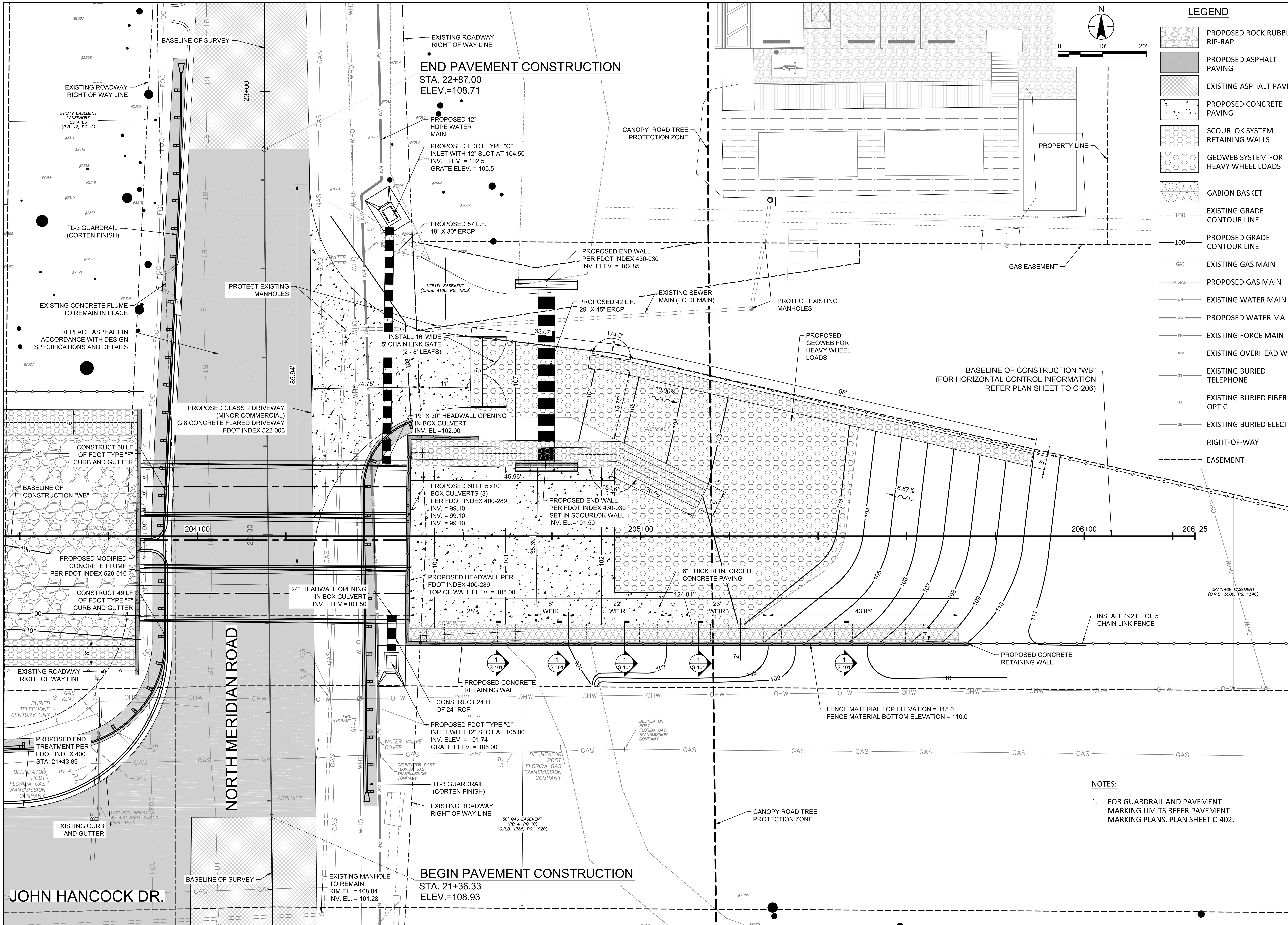
ORIGINAL SHEET - ANSI D

Attachment I

Attachment I



END PAVEMENT CONSTRUCTION
STA. 22+87.00
ELEV.=108.71
BEGIN PAVEMENT CONSTRUCTION
STA. 21+36.33
ELEV.=108.93
NORTH MERIDIAN ROAD
JOHN HANCOCK DR.
BASELINE OF SURVEY
EXISTING ROADWAY RIGHT OF WAY LINE
UTILITY EASEMENT LAKESHORE ESTATES (P.B. 12, PG. 2)
TL-3 GUARDRAIL (CORTEN FINISH)
EXISTING CONCRETE FLUME TO REMAIN IN PLACE
REPLACE ASPHALT IN ACCORDANCE WITH DESIGN SPECIFICATIONS AND DETAILS
PROPOSED CLASS 2 DRIVEWAY (MINOR COMMERCIAL) G 8 CONCRETE FLARED DRIVEWAY FDOT INDEX 522-003
CONSTRUCT 58 LF OF FDOT TYPE "F" CURB AND GUTTER
BASELINE OF CONSTRUCTION "WB"
PROPOSED MODIFIED CONCRETE FLUME PER FDOT INDEX 520-010
CONSTRUCT 49 LF OF FDOT TYPE "F" CURB AND GUTTER
PROPOSED END TREATMENT PER FDOT INDEX 400 STA: 21+43.89
EXISTING CURB AND GUTTER
PROPOSED 12" HDPE WATER MAIN
PROPOSED FDOT TYPE "C" INLET WITH 12" SLOT AT 104.50 INV. ELEV. = 102.5 GRATE ELEV. = 105.5
PROPOSED 57 L.F. 19" X 30" ERCP
PROTECT EXISTING MANHOLES
INSTALL 16' WIDE 5' CHAIN LINK GATE (2 - 8' LEAFS)
19" X 30" HEADWALL OPENING IN BOX CULVERT INV. EL.=102.00
PROPOSED END WALL PER FDOT INDEX 430-030 INV. ELEV. = 102.85
PROPOSED 42 L.F. 29" X 45" ERCP
EXISTING SEWER MAIN (TO REMAIN)
UTILITY EASEMENT (O.R.B. 4100, PG. 1859)
CANOPY ROAD TREE PROTECTION ZONE
PROPERTY LINE
GAS EASEMENT
PROPOSED GEOWEB FOR HEAVY WHEEL LOADS
BASELINE OF CONSTRUCTION "WB" (FOR HORIZONTAL CONTROL INFORMATION REFER PLAN SHEET TO C-206)
PROPOSED 60 LF 5'x10' BOX CULVERTS (3) PER FDOT INDEX 400-289 INV. = 99.10 INV. = 99.10 INV. = 99.10
PROPOSED END WALL PER FDOT INDEX 430-030 SET IN SCOURLOK WALL INV. EL.=101.50
PROPOSED HEADWALL PER FDOT INDEX 400-289 TOP OF WALL ELEV. = 108.00
24" HEADWALL OPENING IN BOX CULVERT INV. ELEV.=101.50
6" THICK REINFORCED CONCRETE PAVING
8' WEIR
22' WEIR
23' WEIR
INSTALL 492 LF OF 5' CHAIN LINK FENCE
PROPOSED CONCRETE RETAINING WALL
DRAINAGE EASEMENT (O.R.B. 5086, PG. 1346)
CONSTRUCT 24 LF OF 24" RCP
PROPOSED FDOT TYPE "C" INLET WITH 12" SLOT AT 105.00 INV. ELEV. = 101.74 GRATE ELEV. = 106.00
FENCE MATERIAL TOP ELEVATION = 115.0
FENCE MATERIAL BOTTOM ELEVATION = 110.0
50' GAS EASEMENT (PB 4, PG 10) (O.R.B. 1768, PG. 1920)
EXISTING MANHOLE TO REMAIN RIM EL. = 108.84 INV. EL. = 101.28
DELINEATOR POST FLORIDA GAS TRANSMISSION COMPANY
BURIED TELEPHONE CENTURY LINK
FIRE HYDRANT
WATER VALVE COVER
ASPHALT
204+00
205+00
206+00
206+25
23+00
22+00
LEGEND
PROPOSED ROCK RUBBLE RIP-RAP
PROPOSED ASPHALT PAVING
EXISTING ASPHALT PAVING
PROPOSED CONCRETE PAVING
SCOURLOK SYSTEM RETAINING WALLS
GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
GABION BASKET
EXISTING GRADE CONTOUR LINE
PROPOSED GRADE CONTOUR LINE
EXISTING GAS MAIN
PROPOSED GAS MAIN
EXISTING WATER MAIN
PROPOSED WATER MAIN
EXISTING FORCE MAIN
EXISTING OVERHEAD WIRE
EXISTING BURIED TELEPHONE
EXISTING BURIED FIBER OPTIC
EXISTING BURIED ELECTRIC
RIGHT-OF-WAY
EASEMENT

NOTES:

1. FOR GUARDRAIL AND PAVEMENT MARKING LIMITS REFER PAVEMENT MARKING PLANS, PLAN SHEET C-402.

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

EAST BASIN SITE PLAN

Seal

CHRIS E. BROCKMEIER LICENSE 56859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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Drawing No. C-203

Revision 0 Sheet of

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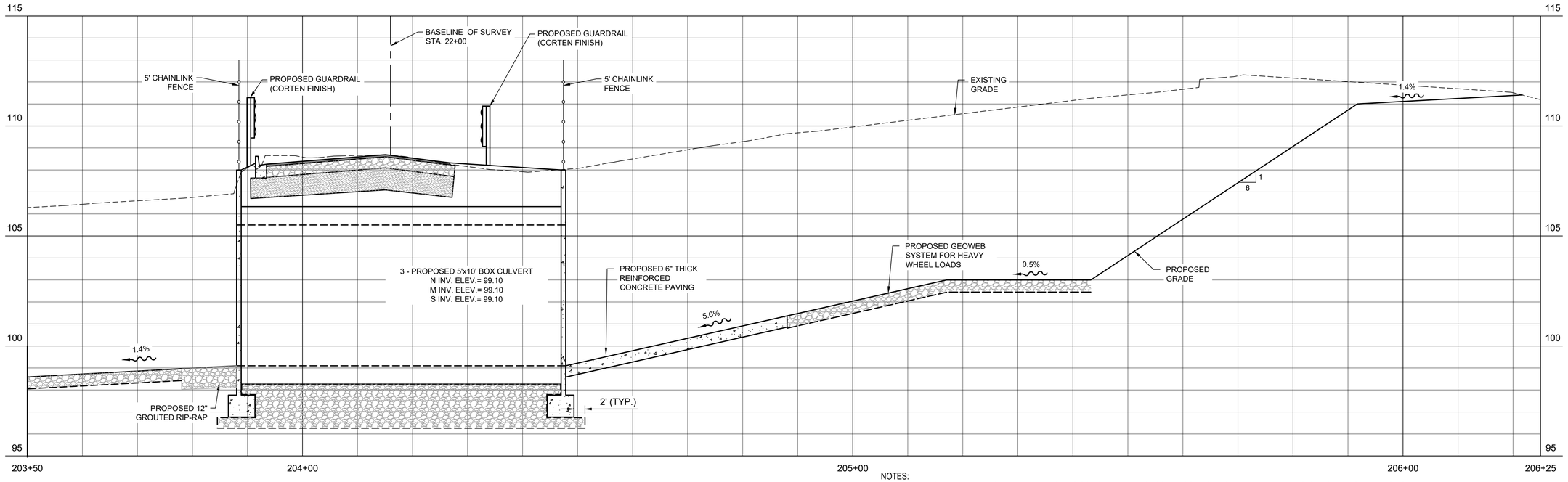
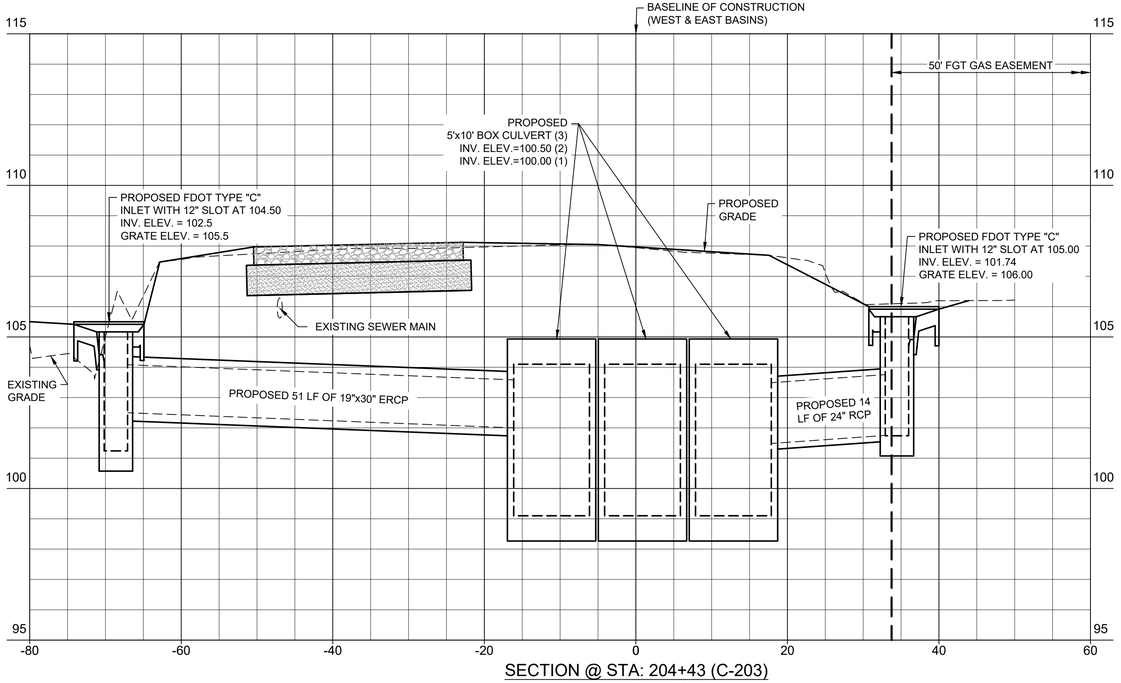


EAST BASIN PROFILE

SCALE 1"=10' H, 1"=2.5' V

NOTES:

1. CONTRACTOR SHALL EXCAVATE THE EXISTING SOILS AT THE PROPOSED LOCATION FOR THE THREE 5' X 10' CONCRETE CULVERTS TO A MINIMUM DEPTH OF TWO (2) FEET BELOW THE CULVERT BEARING SURFACE. THE EXCAVATION SHALL EXTEND TO AT LEAST TWO (2) FEET BEYOND THE LIMITS OF THE PROPOSED HEADWALL LOCATION IN EACH DIRECTION.
2. CONTRACTOR SHALL BACKFILL AND COMPACT THE CULVERT BEDDING IN ACCORDANCE TO FDOT STANDARD SPECIFICATION 125.
3. WEST BASIN EXCAVATION REQUIREMENTS:
   a. EXCAVATE TO A MINIMUM DEPTH OF TWO (2) FEET BELOW THE BOTTOM OF THE SUMP.
   b. INSTALL A TYPE D-5 GEOTEXTILE (SEPARATION FABRIC) IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION 514.
   c. BACKFILL WITH CLEAN SAND HAVING A FINES CONTENT (% PASSING -200 SIEVE) LESS THAN 15% FREE OF ORGANICS AND DEBRIS.
   d. PLACE BACKFILL IN 12-INCHES OF LOOSE SOIL OR LESS AND COMPACT MAKING AT LEAST FOUR (4) PASSES WITH A 5-TON ROLLER USING NO VIBRATORY ACTION.



SECTION @ STA: 204+43 (C-203)

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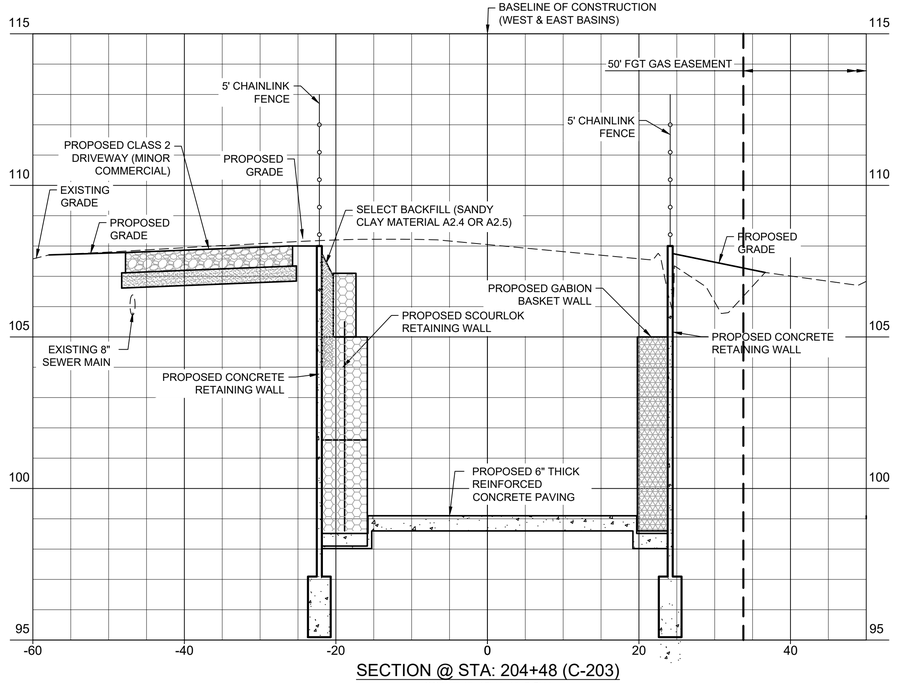

SECTION @ STA: 204+48 (C-203)

SCALE 1"=10' H, 1"=2.5' V

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

EAST BASIN PROFILE AND SECTIONS

Seal

CHRIS E. BROCKMEIER
LICENSE
No. 86859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

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Drawing No. C-204

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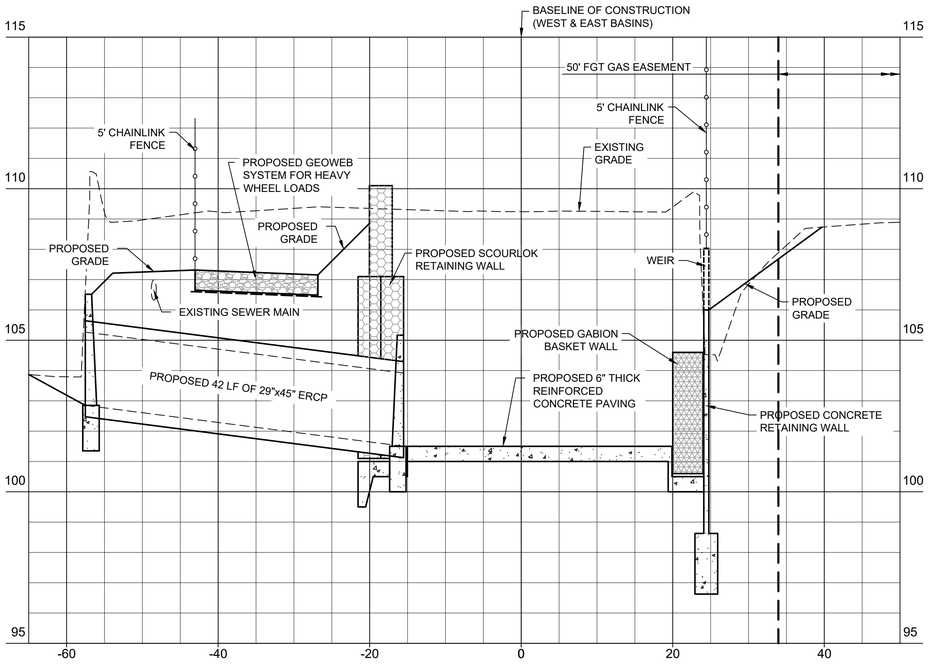

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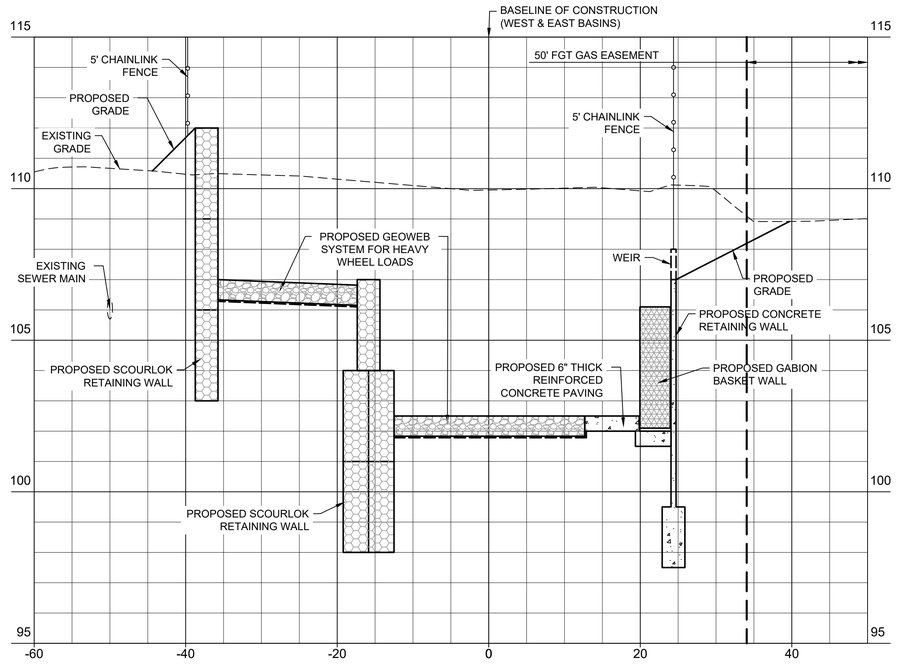

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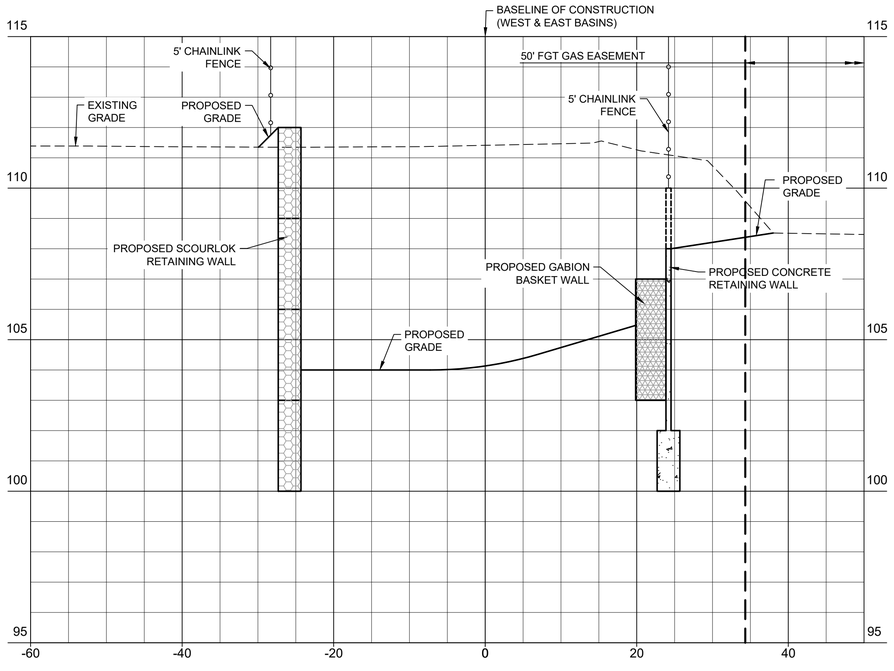

SECTION @ STA: 205+50 (C-203)

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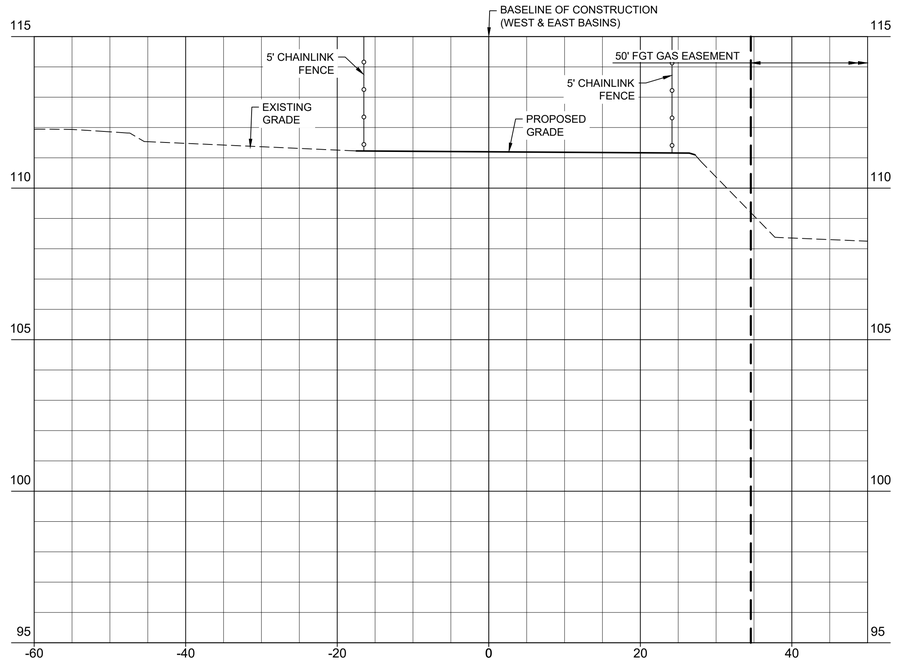

SECTION @ STA: 206+00 (C-203)

SCALE 1"=10' H, 1"=2.5' V

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Attachment I

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

EAST BASIN SECTIONS

Seal

CHRIS E. BROCKMEIER
LICENSE
No. 38859
STATE OF FLORIDA
PROFESSIONAL ENGINEER

1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

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Drawing No. C-205

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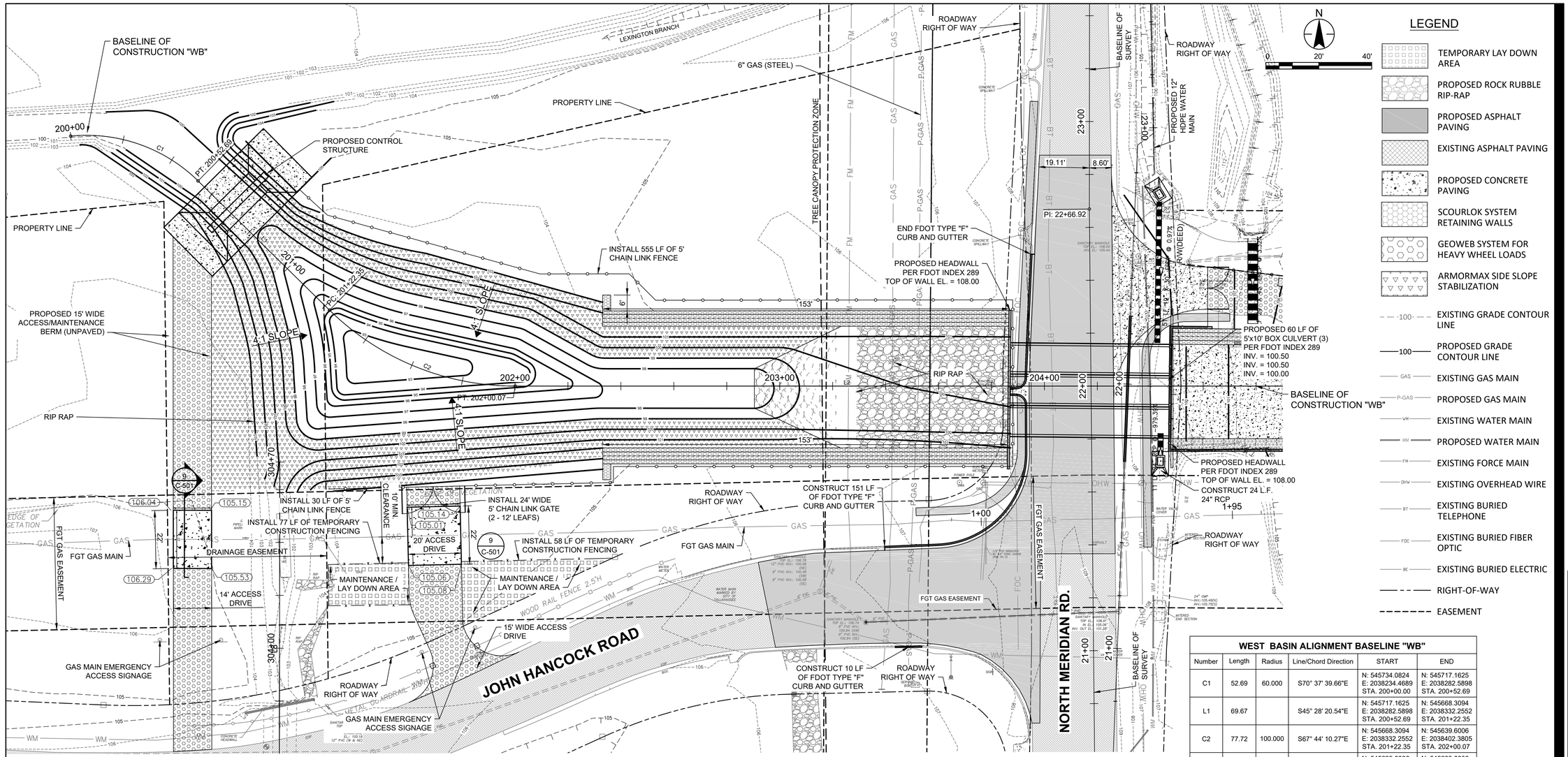
2020/01/14 1:42 PM By: Gerth, James

ORIGINAL SHEET - ANSI D



LEGEND

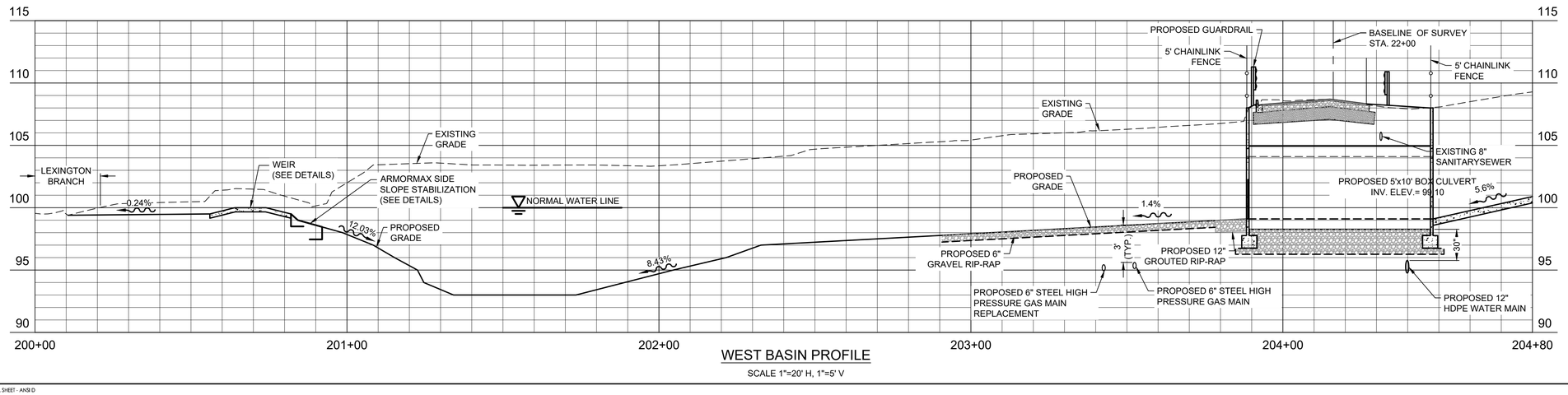
- TEMPORARY LAY DOWN AREA
- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- ARMORMAX SIDE SLOPE STABILIZATION
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELECTRIC
- RIGHT-OF-WAY
- EASEMENT

WEST BASIN ALIGNMENT BASELINE "WB"

Number	Length	Radius	Line/Chord Direction	START	END
C1	52.69	60.000	S70° 37' 39.66"E	N: 545734.0824 E: 2038234.4689 STA. 200+00.00	N: 545717.1625 E: 2038282.5898 STA. 200+52.69
L1	69.67		S45° 28' 20.54"E	N: 545717.1625 E: 2038282.5898 STA. 200+52.69	N: 545668.3094 E: 2038332.2552 STA. 201+22.35
C2	77.72	100.000	S67° 44' 10.27"E	N: 545668.3094 E: 2038332.2552 STA. 201+22.35	N: 545639.6006 E: 2038402.3805 STA. 202+00.07
L2	457.41		N90° 00' 00.00"E	N: 545639.6006 E: 2038402.3805 STA. 202+00.07	N: 545639.6006 E: 2038859.7885 STA. 206+25.00

WEST BASIN PLAN

SCALE 1"=20'



WEST BASIN PROFILE

SCALE 1"=20' H, 1"=5' V

NOTES:

1. FOR GUARDRAIL AND PAVEMENT MARKING LIMITS REFER PAVEMENT MARKING PLANS, PLAN SHEET C-402.

Attachment I

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE, FL 32309
www.stantec.com C.A. No. 27013

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

WEST BASIN PLAN AND PROFILE

Seal

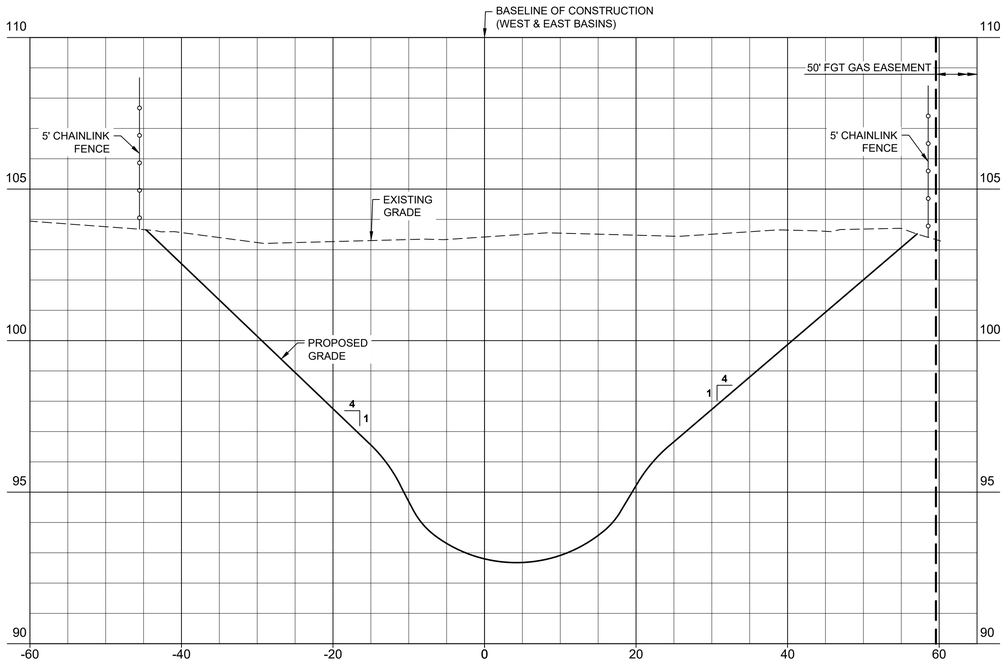
CHRIS E. BROCKMEIER
LICENSE
36859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

Dwn.	Chkd.	Dsgn.	YY.MM.DD
JG	CB	AM	20.01.06

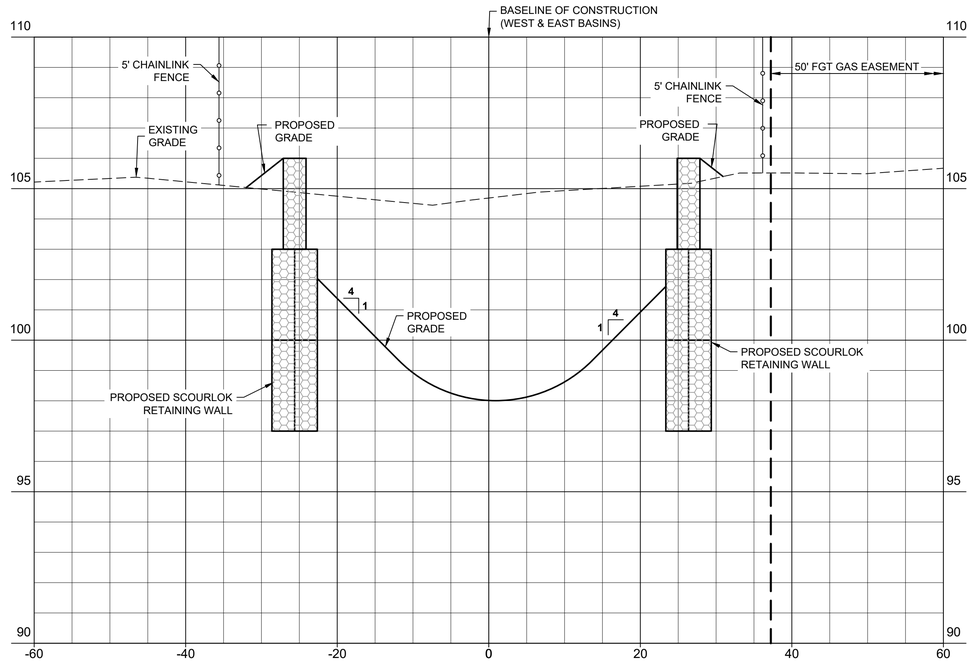
Drawing No. C-206

Revision 0 Sheet of



SECTION @ STA: 201+50 (C-206)

SCALE 1"=10' H, 1"=2.5' V



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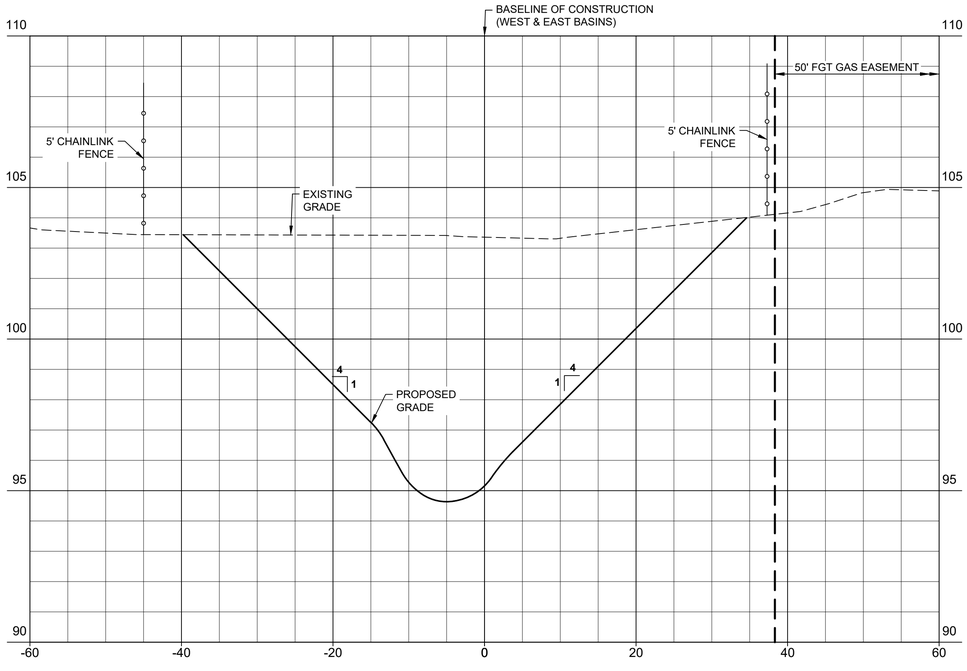

SECTION @ STA: 202+00 (C-206)

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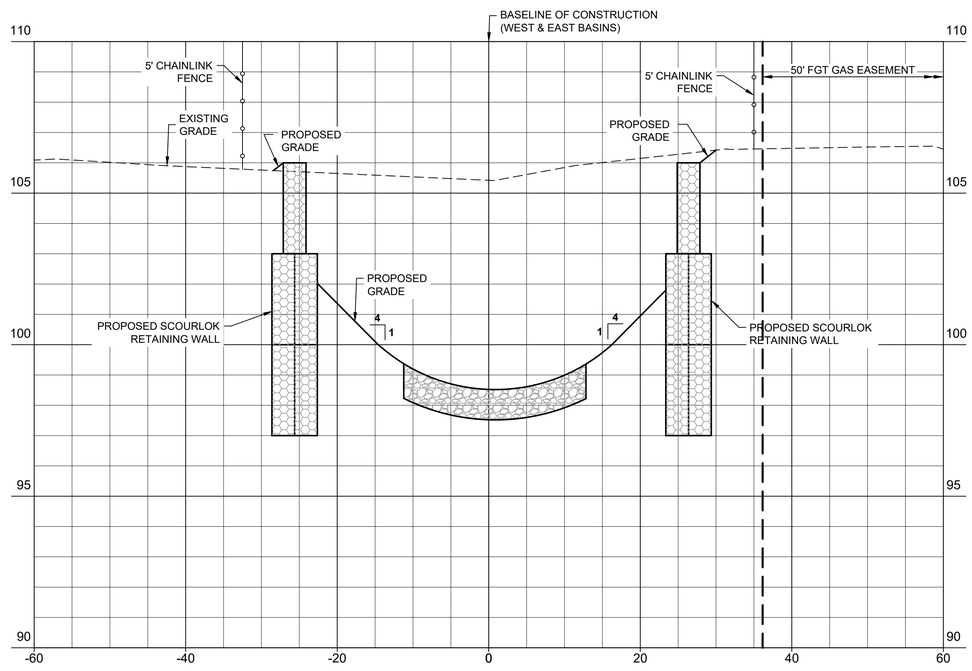

SECTION @ STA: 203+00 (C-206)

SCALE 1"=10' H, 1"=2.5' V

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

WEST BASIN SECTIONS

Seal

CARRIE E. BROCKMEIER
LICENSE
No. 68859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-207

Revision 0 Sheet of

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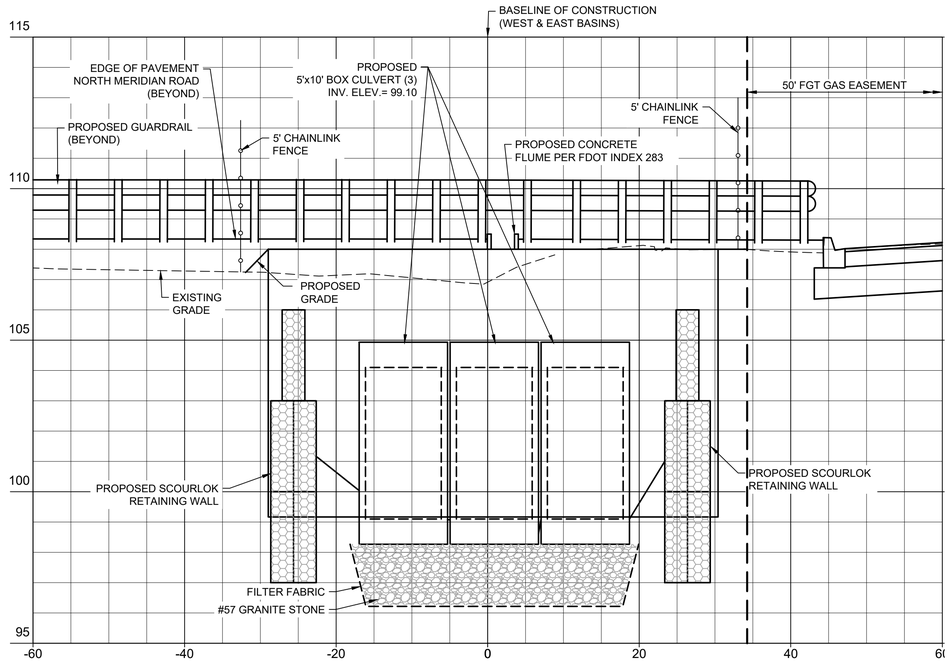
2020/01/14 1:42 PM By: Gerth, James

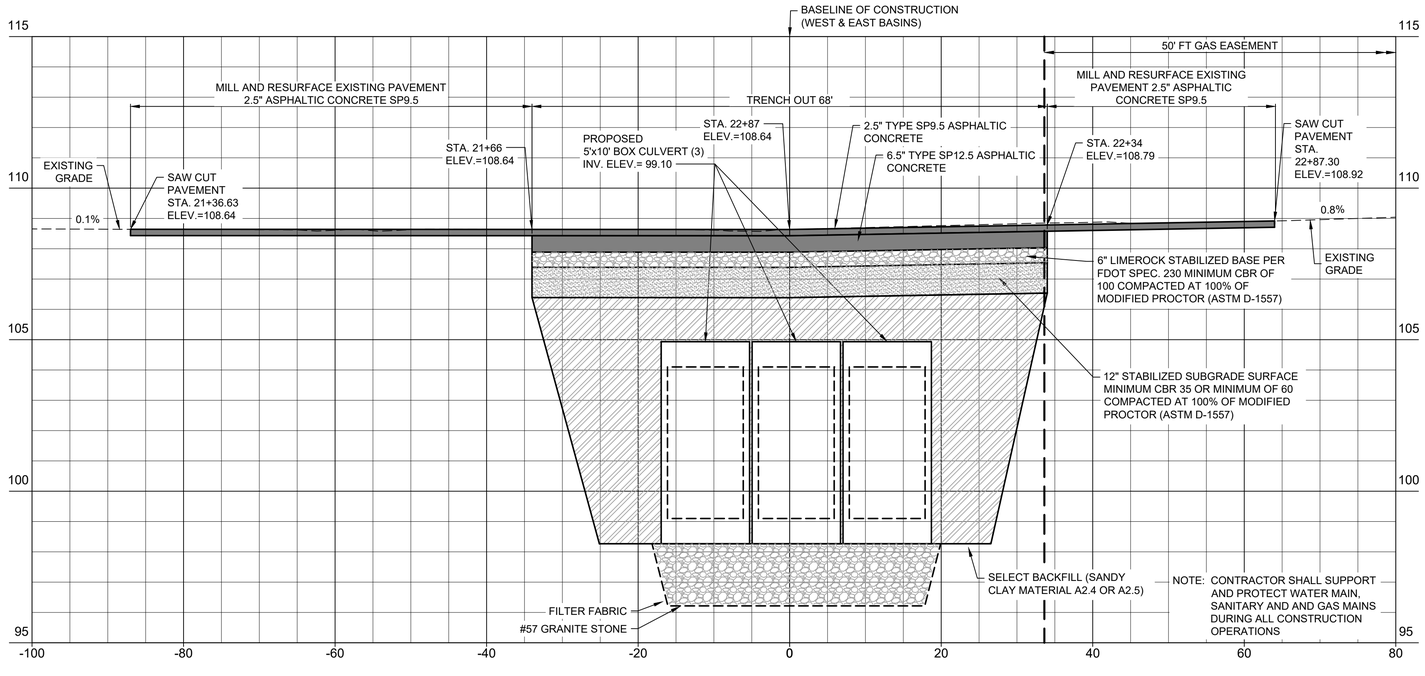
ORIGINAL SHEET - ANSI D

Attachment I



SECTION @ STA: 203+87 (C-206)

SCALE 1"=10' H, 1"=2.5' V



SECTION @ STA: 204+17 (C-206)

SCALE 1"=10' H, 1"=2.5' V

ORIGINAL SHEET - ANSI D

Attachment I

Stantec
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No.	Revision	By	Appd.	YY.MM.DD

No.	Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

WEST BASIN SECTIONS

Seal

CHRIS E. BROCKMEIER
LICENSE
56859
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-208

Revision 0

Sheet of

Attachment I

LEXINGTON CONVEYANCE DITCH BASELINE "L"				
LINE	LENGTH	BEARING	START POINT (N, E)	END POINT (N, E)
L6	236.632	N00°22'46"E	545140.69, 2038306.27 STA. 300+00.00	545377.31, 2038307.83 STA. 302+36.63
L7	92.646	N03°21'36"E	545377.31, 2038307.83 STA. 302+36.63	545469.80, 2038313.26 STA. 303+29.28
L8	141.097	N00°04'52"E	545469.80, 2038313.26 STA. 303+29.28	545610.90, 2038313.46 STA. 304+70.00

N

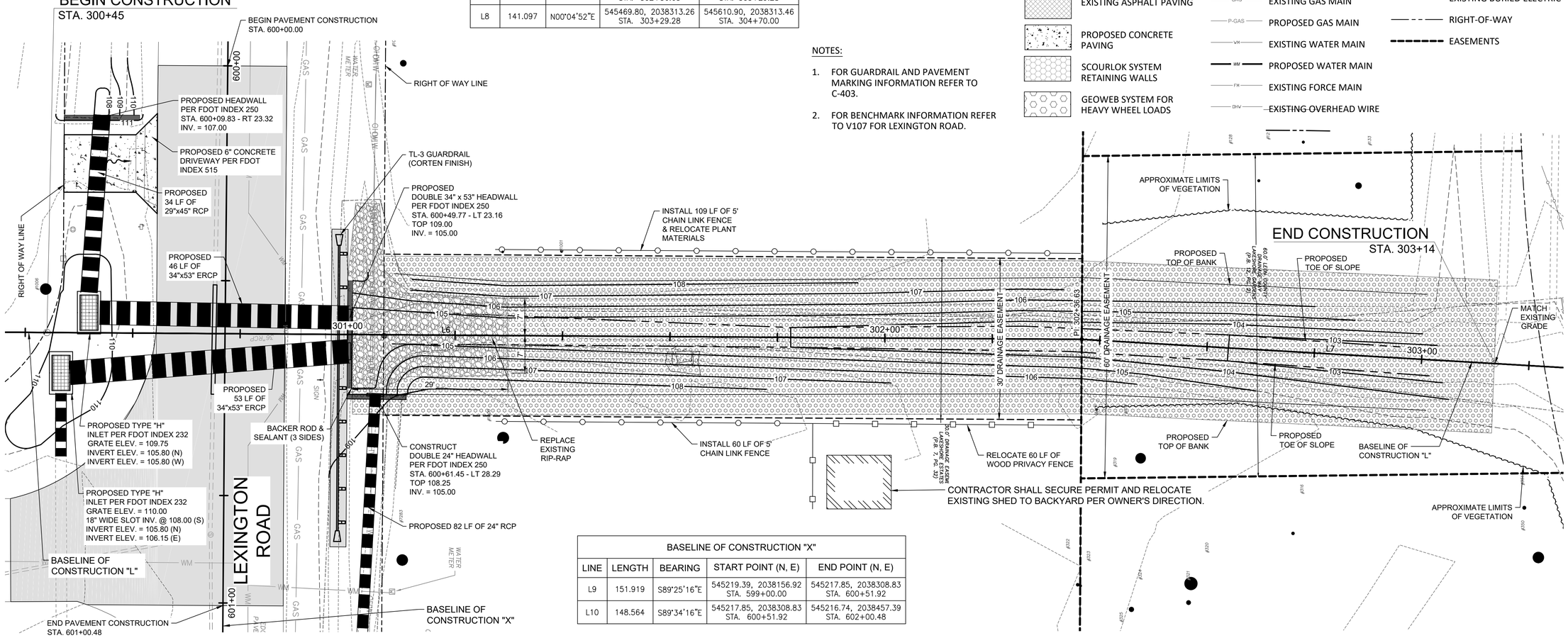
0 10' 20'

LEGEND

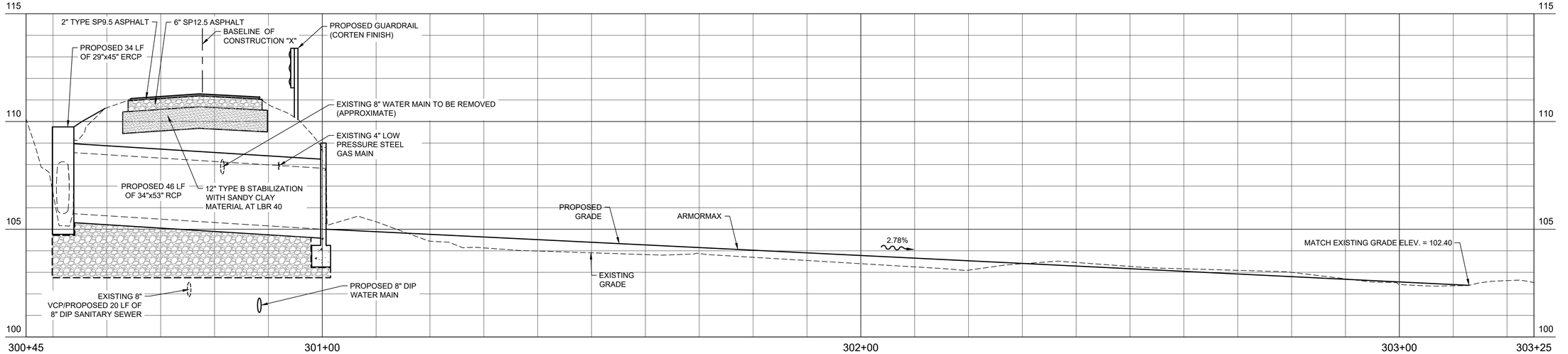
- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELECTRIC
- RIGHT-OF-WAY
- EASEMENTS

NOTES:

1. FOR GUARDRAIL AND PAVEMENT MARKING INFORMATION REFER TO C-403.
2. FOR BENCHMARK INFORMATION REFER TO V107 FOR LEXINGTON ROAD.



BASELINE OF CONSTRUCTION "X"				
LINE	LENGTH	BEARING	START POINT (N, E)	END POINT (N, E)
L9	151.919	S89°25'16"E	545219.39, 2038156.92 STA. 599+00.00	545217.85, 2038308.83 STA. 600+51.92
L10	148.564	S89°34'16"E	545217.85, 2038308.83 STA. 600+51.92	545216.74, 2038457.39 STA. 602+00.48



LEXINGTON ROAD DRAINAGE CULVERT PROFILE

SCALE 1"=10' H, 1"=2.5'V

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

LEXINGTON ROAD DRAINAGE CULVERT
PLAN AND PROFILE

Seal

CHRIS E. BROCKMEYER
LICENSE
56859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-209

Revision 0 Sheet of

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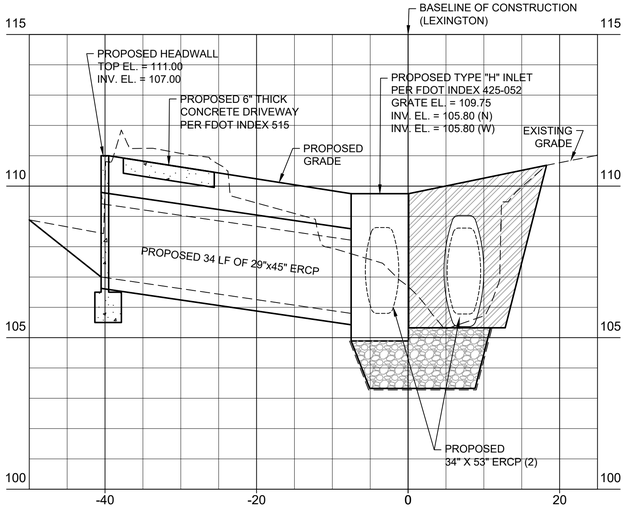
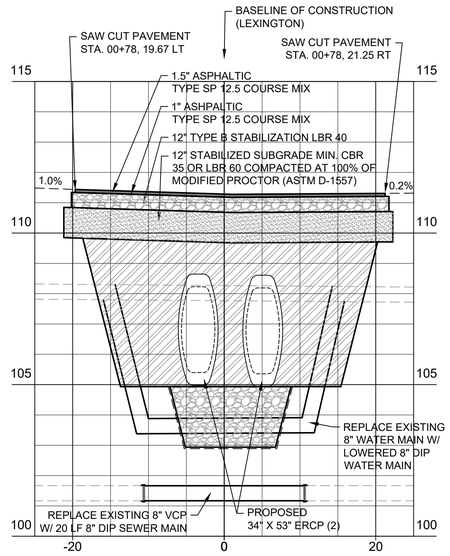
2020/01/14 1:43 PM By: Gerth, James

ORIGINAL SHEET - ANSI D



SECTION @ STA: 300+50 (C-209)

SCALE 1"=10' H, 1"=2.5' V



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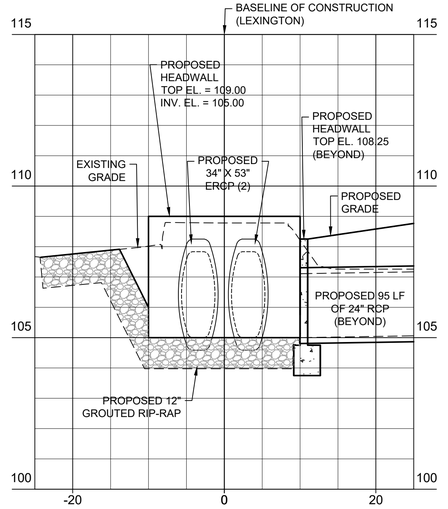
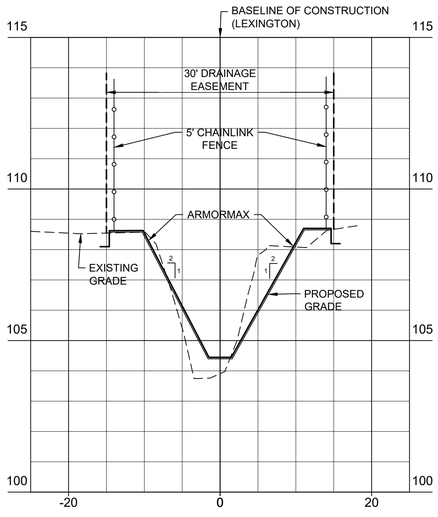


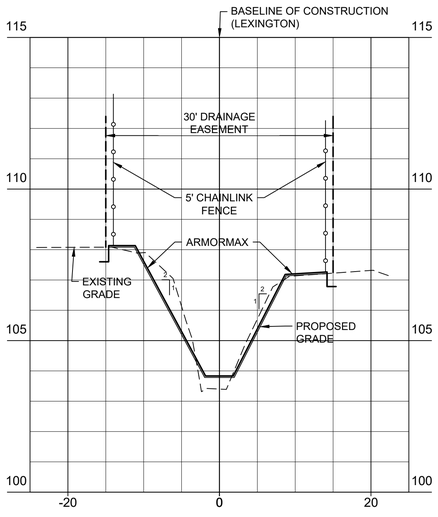
SECTION @ STA: 301+00 (C-209)

SCALE 1"=10' H, 1"=2.5' V



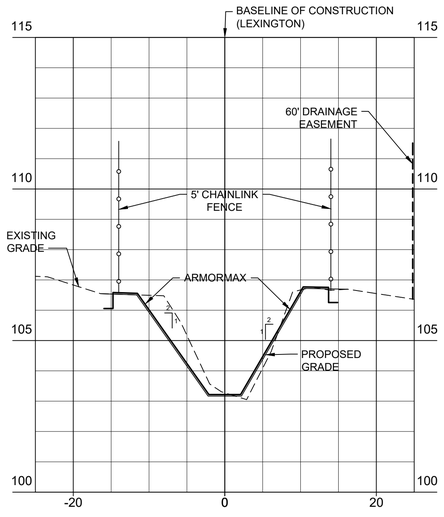
SECTION @ STA: 301+50 (C-209)

SCALE 1"=10' H, 1"=2.5' V



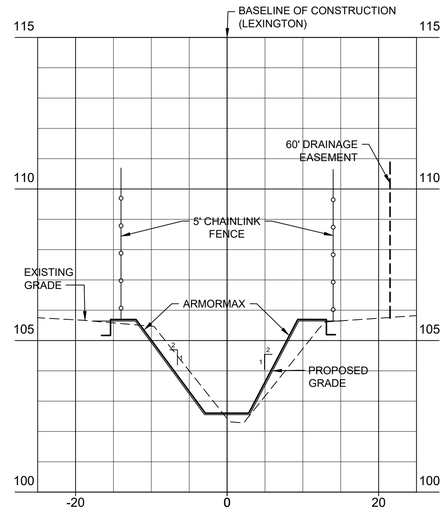
SECTION @ STA: 302+00 (C-209)

SCALE 1"=10' H, 1"=2.5' V



SECTION @ STA: 302+50 (C-209)

SCALE 1"=10' H, 1"=2.5' V



SECTION @ STA: 303+00 (C-209)

SCALE 1"=10' H, 1"=2.5' V

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Attachment I

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

LEXINGTON SECTIONS

Seal

CHRIS E. BROCKMEIER
LICENSE
No. 58859
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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Drawing No. C-210

Revision 0 Sheet of

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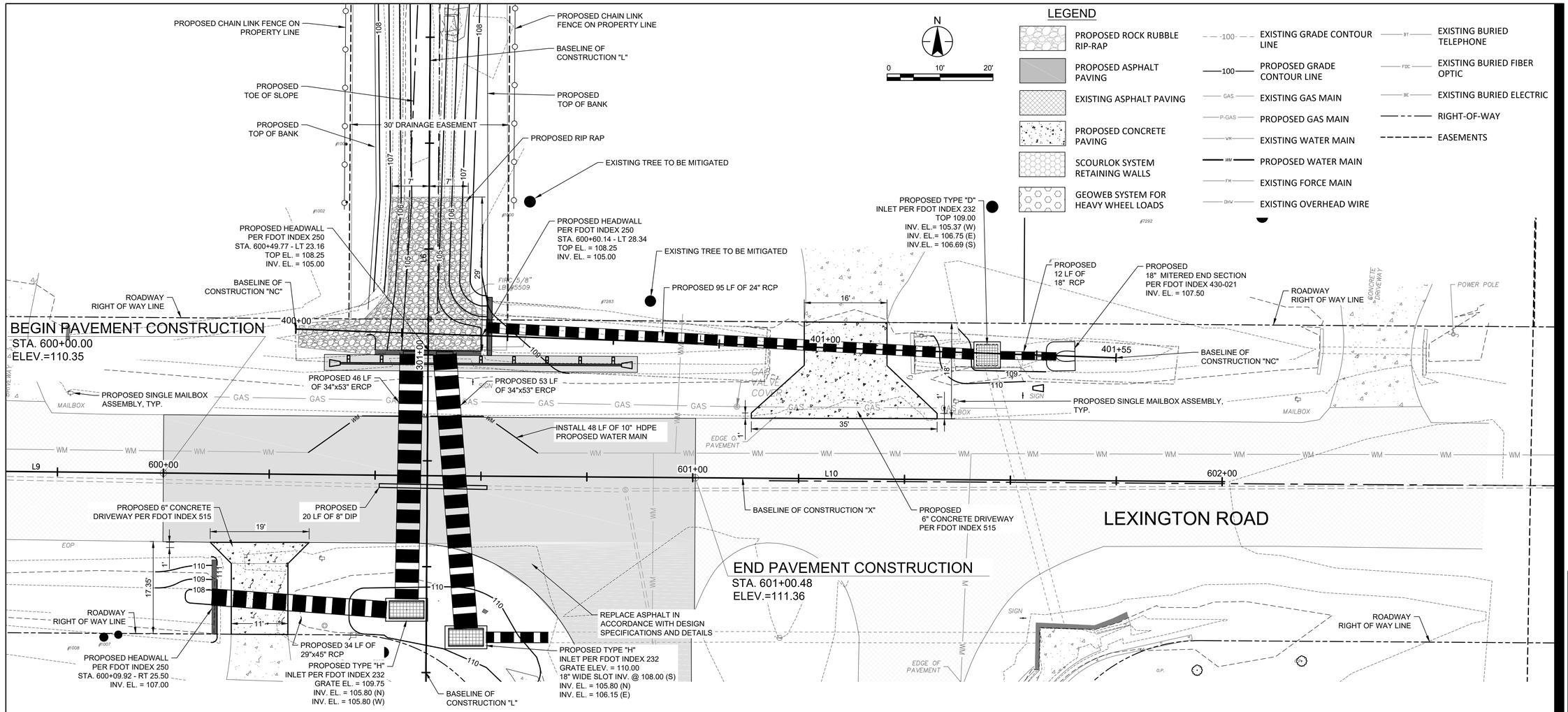
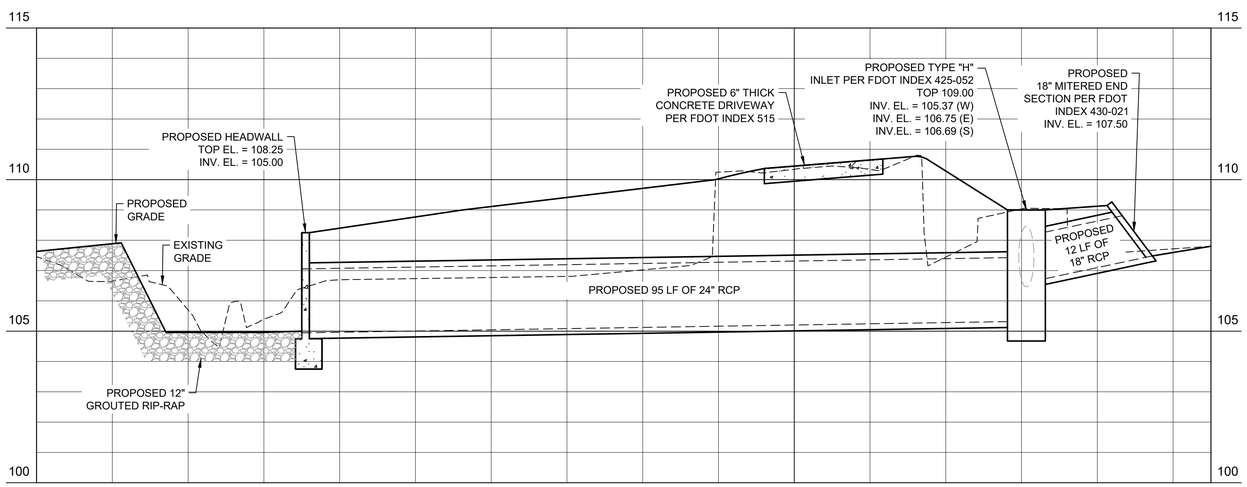
ORIGINAL SHEET - ANSI D



LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELECTRIC
- RIGHT-OF-WAY
- EASEMENTS



LEXINGTON ROAD NORTH CULVERT PROFILE

SCALE 1"=10' H, 1"=2.5'V

NOTES:

1. FOR GUARDRAIL AND PAVEMENT MARKING INFORMATION REFER TO C-403.
2. FOR BENCHMARK INFORMATION REFER TO V107 FOR LEXINGTON ROAD.
3. FOR BASELINE/CENTERLINE "L" HORIZONTAL CONTROL DATA, REFER TO C-209.

BASELINE OF CONSTRUCTION "X"				
LINE	LENGTH	BEARING	START POINT (N, E)	END POINT (N, E)
L9	151.919	S89°25'16"E	545219.39, 2038156.92 STA. 599+00.00	545217.85, 2038308.83 STA. 600+51.92
L10	148.564	S89°34'16"E	545217.85, 2038308.83 STA. 600+51.92	545216.74, 2038457.39 STA. 602+00.48

BASELINE OF CONSTRUCTION "NC"				
LINE	LENGTH	BEARING	START POINT (N, E)	END POINT (N, E)
L15	155.000	S87°59'48"E	545245.56, 2038281.97 STA. 400+00.00	545240.14, 2038436.87 STA. 401+55.00

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

LEXINGTON ROAD NORTH CULVERT
PLAN & PROFILE

Seal

1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-211
Revision 0
Sheet of

Attachment I

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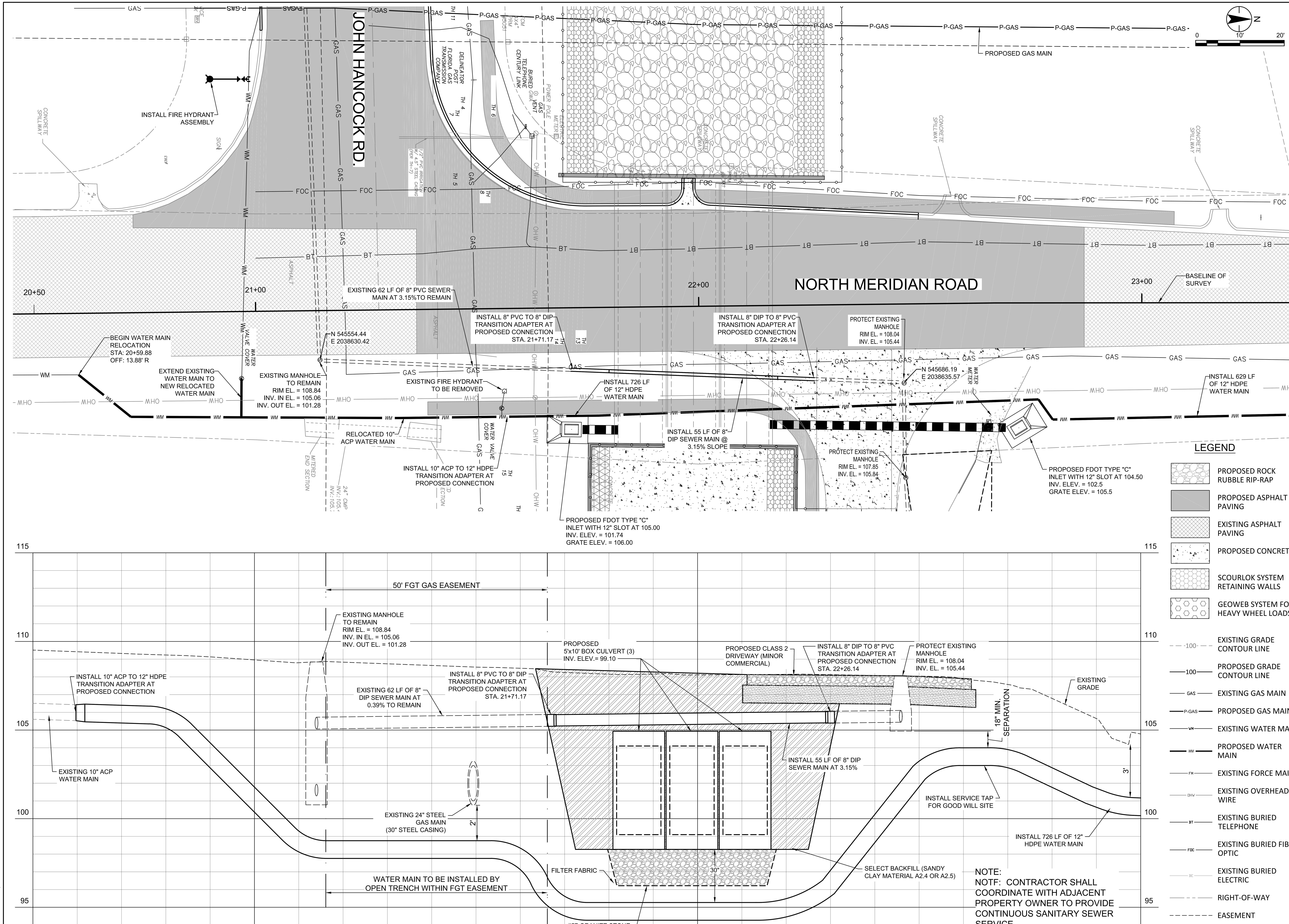
2020/01/14 1:44 PM By: Gerth, James

ORIGINAL SHEET - ANSI D



JOHN HANCOCK RD.
NORTH MERIDIAN ROAD
20+50
21+00
22+00
23+00
BASELINE OF SURVEY
PROPOSED GAS MAIN
INSTALL FIRE HYDRANT ASSEMBLY
DELINEATOR POST FLORIDA GAS TRANSMISSION COMPANY
BURIED TELEPHONE CENTURY LINK
GAS VENT
POWER POLE
CONCRETE SPILLWAY
EXISTING 62 LF OF 8" PVC SEWER MAIN AT 3.15%TO REMAIN
INSTALL 8" PVC TO 8" DIP TRANSITION ADAPTER AT PROPOSED CONNECTION STA. 21+71.17
INSTALL 8" DIP TO 8" PVC TRANSITION ADAPTER AT PROPOSED CONNECTION STA. 22+26.14
PROTECT EXISTING MANHOLE RIM EL. = 108.04 INV. EL. = 105.44
BEGIN WATER MAIN RELOCATION STA: 20+59.88 OFF: 13.88' R
N 545554.44 E 2038630.42
EXTEND EXISTING WATER MAIN TO NEW RELOCATED WATER MAIN
EXISTING MANHOLE TO REMAIN RIM EL. = 108.84 INV. IN EL. = 105.06 INV. OUT EL. = 101.28
EXISTING FIRE HYDRANT TO BE REMOVED
INSTALL 726 LF OF 12" HDPE WATER MAIN
N 545686.19 E 2038635.57
WATER METER
INSTALL 629 LF OF 12" HDPE WATER MAIN
RELOCATED 10" ACP WATER MAIN
INSTALL 55 LF OF 8" DIP SEWER MAIN @ 3.15% SLOPE
PROTECT EXISTING MANHOLE RIM EL. = 107.85 INV. EL. = 105.84
INSTALL 10" ACP TO 12" HDPE TRANSITION ADAPTER AT PROPOSED CONNECTION
PROPOSED FDOT TYPE "C" INLET WITH 12" SLOT AT 105.00 INV. ELEV. = 101.74 GRATE ELEV. = 106.00
PROPOSED FDOT TYPE "C" INLET WITH 12" SLOT AT 104.50 INV. ELEV. = 102.5 GRATE ELEV. = 105.5
MITERED END SECTION
WATER VALVE COVER
LEGEND
PROPOSED ROCK RUBBLE RIP-RAP
PROPOSED ASPHALT PAVING
EXISTING ASPHALT PAVING
PROPOSED CONCRETE
SCOURLOK SYSTEM RETAINING WALLS
GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
EXISTING GRADE CONTOUR LINE
PROPOSED GRADE CONTOUR LINE
EXISTING GAS MAIN
PROPOSED GAS MAIN
EXISTING WATER MAIN
PROPOSED WATER MAIN
EXISTING FORCE MAIN
EXISTING OVERHEAD WIRE
EXISTING BURIED TELEPHONE
EXISTING BURIED FIBER OPTIC
EXISTING BURIED ELECTRIC
RIGHT-OF-WAY
EASEMENT
115
110
105
100
95
50' FGT GAS EASEMENT
EXISTING MANHOLE TO REMAIN RIM EL. = 108.84 INV. IN EL. = 105.06 INV. OUT EL. = 101.28
PROPOSED 5'x10' BOX CULVERT (3) INV. ELEV.= 99.10
PROPOSED CLASS 2 DRIVEWAY (MINOR COMMERCIAL)
INSTALL 8" DIP TO 8" PVC TRANSITION ADAPTER AT PROPOSED CONNECTION STA. 22+26.14
PROTECT EXISTING MANHOLE RIM EL. = 108.04 INV. EL. = 105.44
INSTALL 10" ACP TO 12" HDPE TRANSITION ADAPTER AT PROPOSED CONNECTION
INSTALL 8" PVC TO 8" DIP TRANSITION ADAPTER AT PROPOSED CONNECTION STA. 21+71.17
EXISTING 62 LF OF 8" DIP SEWER MAIN AT 0.39% TO REMAIN
EXISTING GRADE
18" MIN. SEPARATION
INSTALL 55 LF OF 8" DIP SEWER MAIN AT 3.15%
EXISTING 10" ACP WATER MAIN
INSTALL SERVICE TAP FOR GOOD WILL SITE
EXISTING 24" STEEL GAS MAIN (30" STEEL CASING)
INSTALL 726 LF OF 12" HDPE WATER MAIN
FILTER FABRIC
SELECT BACKFILL (SANDY CLAY MATERIAL A2.4 OR A2.5)
WATER MAIN TO BE INSTALLED BY OPEN TRENCH WITHIN FGT EASEMENT
#57 GRANITE STONE
30"
3'
2'

NOTE:
NOTF: CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER TO PROVIDE CONTINUOUS SANITARY SEWER SERVICE.

Attachment I

Stantec
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Revision	By	Appd.	YY.MM.DD

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

UTILITY ADJUSTMENT STA 20+50 TO 23+30

Seal
CHRIS E. BROCKMEIER LICENSE 56859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-301
Revision 0 Sheet of

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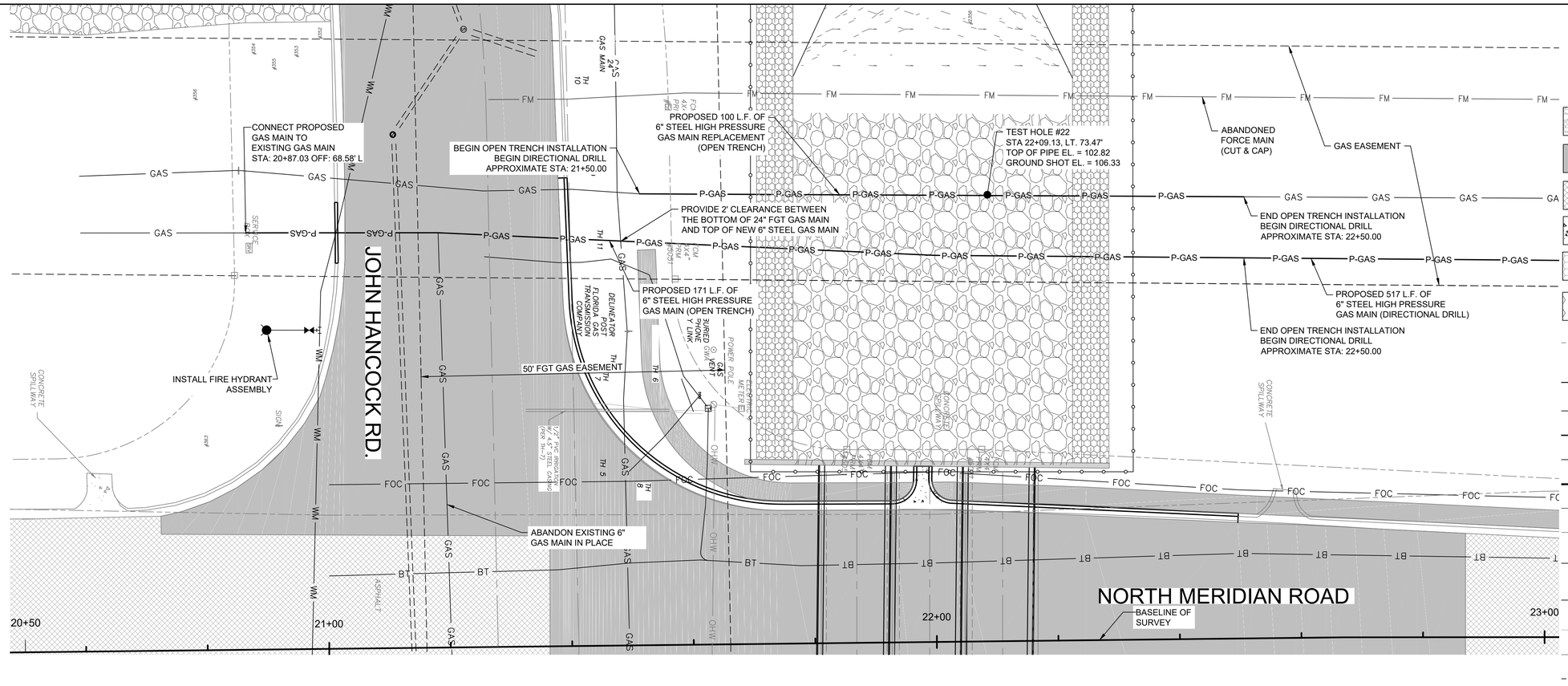
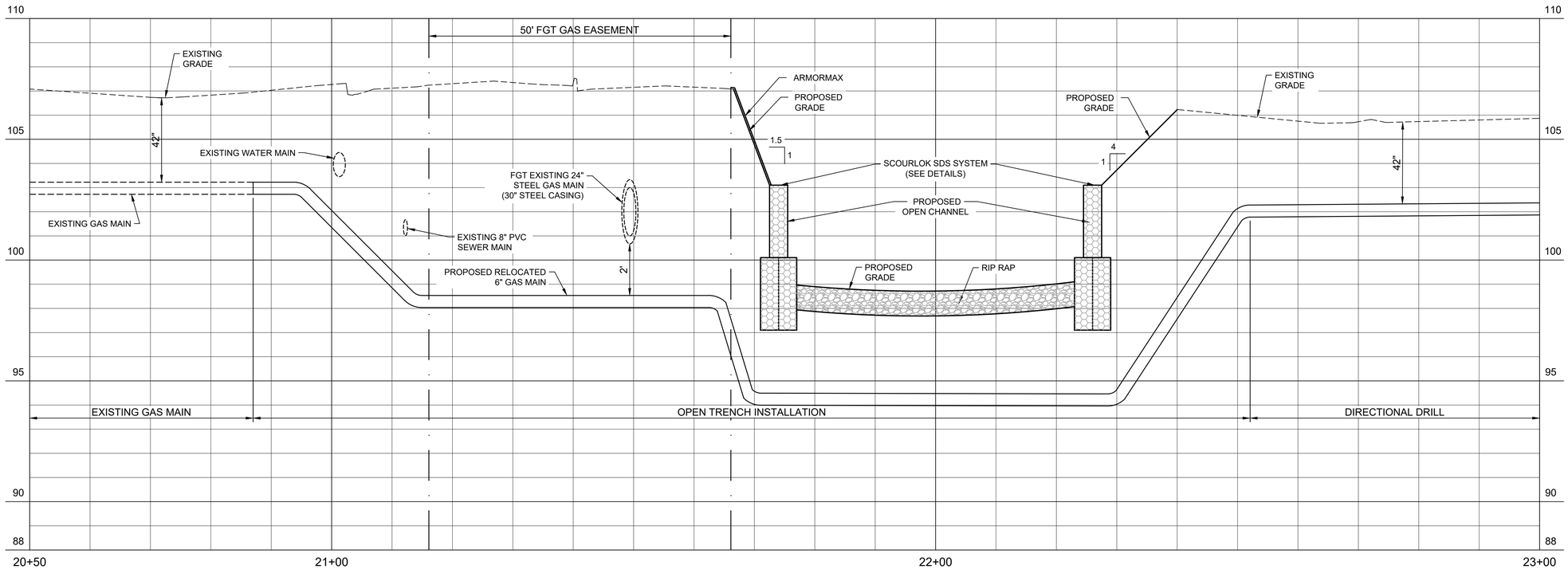
Attachment I





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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

UTILITY ADJUSTMENT STA 20+50 TO 23+00

Seal

CHRIS E. BROCKMEIER LICENSE No. 69859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

Dwn.	Chkd.	Dsgn.	YY.MM.DD
JG	CB	AM	20.01.06

Drawing No. C-302
Revision 0
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2020.01.14 1:43 PM By: Gerth, James

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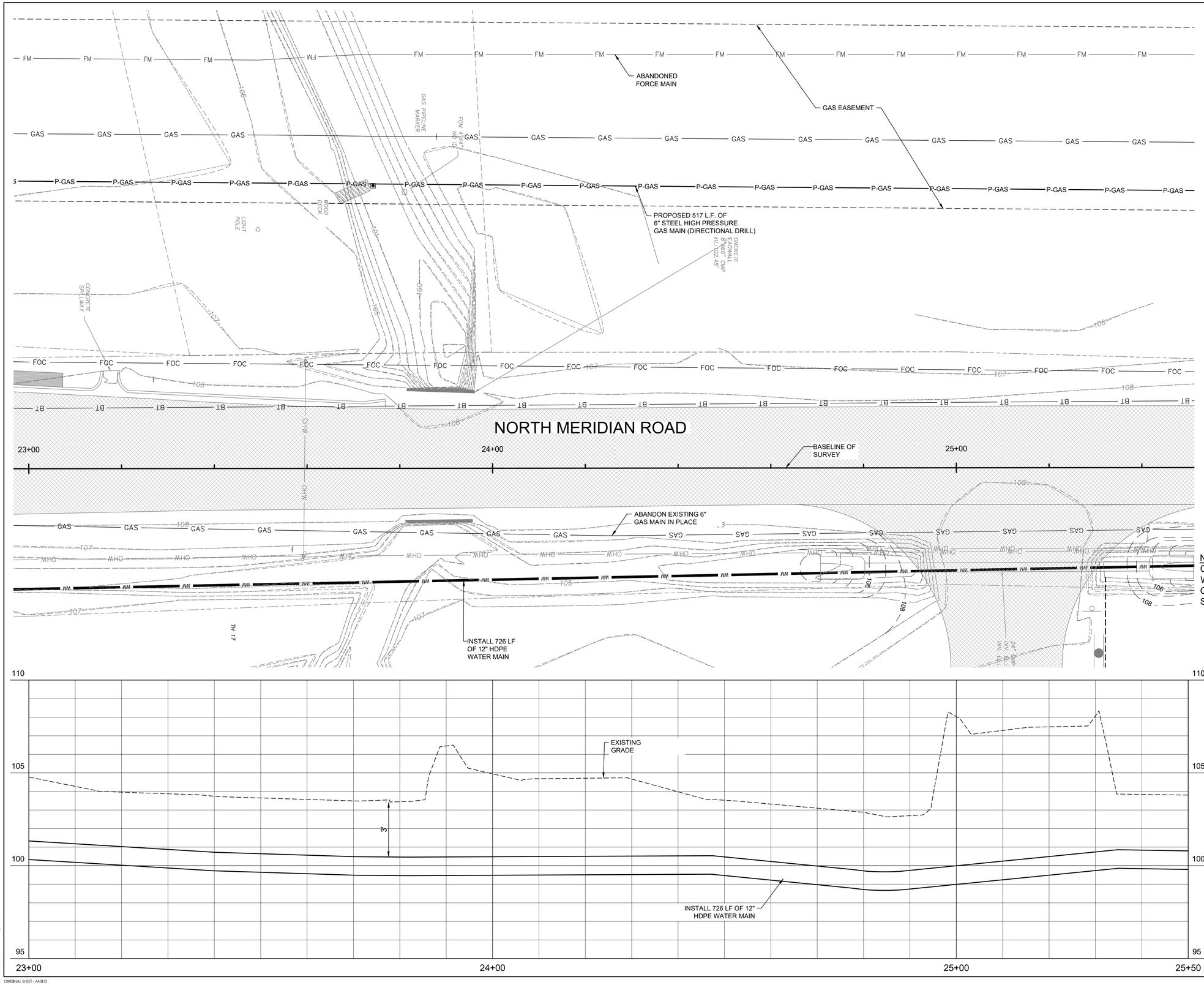

0 10' 20'

LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELECTRIC
- RIGHT-OF-WAY
- EASEMENT

NOTE:
CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER TO PROVIDE CONTINUOUS SANITARY SEWER SERVICE.

Attachment I

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LEON COUNTY
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MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

UTILITY ADJUSTMENT STA 23+30 TO 25+50

Seal

CHRISTOPHER E. BROOKMEIER LICENSE NO. 56859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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Drawing No. C-303
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Attachment I

ABANDONED FORCE MAIN

GAS EASEMENT

PROPOSED 517 L.F. OF 6" STEEL HIGH PRESSURE GAS MAIN (DIRECTIONAL DRILL)

TEST HOLE #23
STA. 27+46.32 L.T. 68.03
TOP OF PIPE ELEV.: 102.73
GROUND SHOT ELEV.: 105.83

END DIRECTIONAL DRILL INSTALLATION
BEGIN OPEN TRENCH
APPROXIMATE STA: 27+73.00

20' PROPOSED GAS EASEMENT

PROPOSED 73 L.F. OF 6" STEEL HIGH PRESSURE GAS MAIN (OPEN TRENCH)

NORTH MERIDIAN ROAD

BASELINE OF SURVEY

26+00

27+00

28+00

EDGE OF PAVEMENT

ABANDON EXISTING 6" GAS MAIN IN PLACE

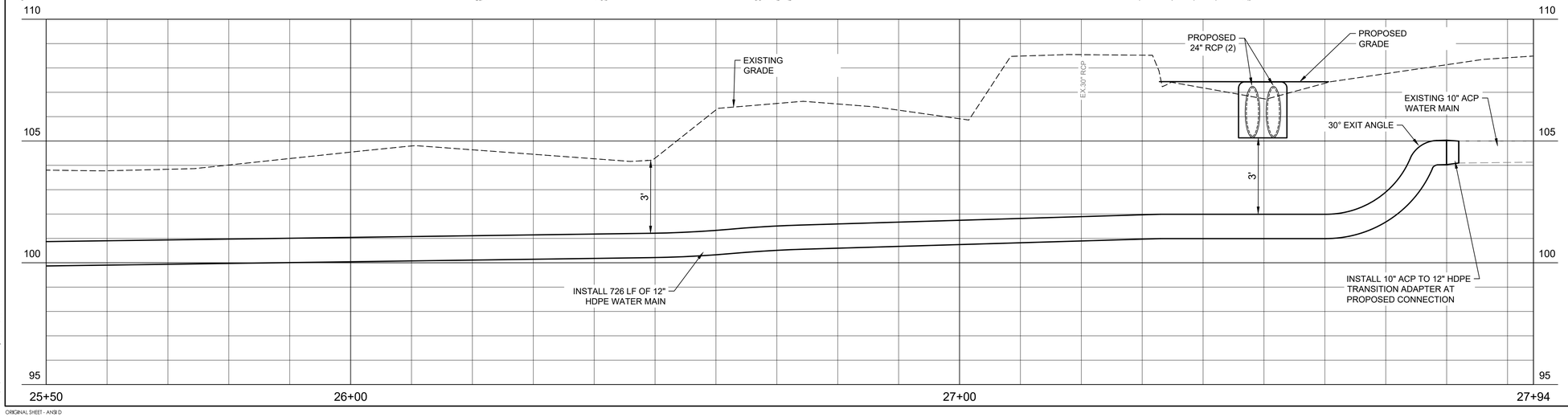
END OPEN TRENCH
CONNECT PROPOSED 6" STEEL HIGH PRESSURE GAS MAIN TO EXISTING GAS MAIN

INSTALL 726 LF OF 12" HDPE WATER MAIN

END WATER MAIN RELOCATION
STA: 27+80.12 OFF: 14.01' R
INSTALL 10" ACP TO 12" HDPE TRANSISTION ADAPTER AT PROPOSED CONNECTION

EXISTING 10" ACP WATER MAIN

NOTE: CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER TO PROVIDE CONTINUOUS SANITARY SEWER SERVICE.



LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING BURIED TELEPHONE
- EXISTING BURIED FIBER OPTIC
- EXISTING BURIED ELECTRIC
- RIGHT-OF-WAY
- EASEMENT

0 10' 20'

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TALLAHASSEE, FL

UTILITY ADJUSTMENT STA 25+50 TO 27+94

Seal

CHRISTIE BROCKMEIER LICENSE NO. 86859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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ORIGINAL SHEET - ANSI D

Attachment I

PROPOSED CHAIN LINK FENCE ON PROPERTY LINE

PROPOSED CHAIN LINK FENCE ON PROPERTY LINE

BASELINE OF CONSTRUCTION "L"

30' DRAINAGE EASEMENT

ROADWAY RIGHT OF WAY LINE

WATER METER

FIRC 5/8" LB# 5509

INSTALL 48 LF OF 10" HDPE PROPOSED WATER MAIN

GAS VALVE COVER

15" CMP
INV. EL.: 106.80(W)
INV. EL.: 106.93(E)

CONCRETE ENDWALL

GUY WIRE ANCHORS

CONCRETE DRIVEWAY

POWER POLE

MAILBOX

SIGN

EOP

EDGE OF PAVEMENT

TEST HOLE #21
STA. 17+94.85, Lt. 304.73
TOP OF PIPE ELEV.: 108.19
GROUND SHOT ELEV.: 110.68

PROPOSED 20 LF OF 8" DIP

BASELINE OF CONSTRUCTION "X"

NAUTILUS CIR.

LEXINGTON ROAD

BASELINE OF CONSTRUCTION "L"

L6 L9 L10

600+00 601+00 602+00 301+00

N

0 10' 20'

LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- EXISTING GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE
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LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

UTILITY ADJUSTMENT LEXINGTON ROAD

Seal

CHRIS E. BROCKMEIER
LICENSE
No. 68859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
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Drawing No. C-305

Revision 0 Sheet of

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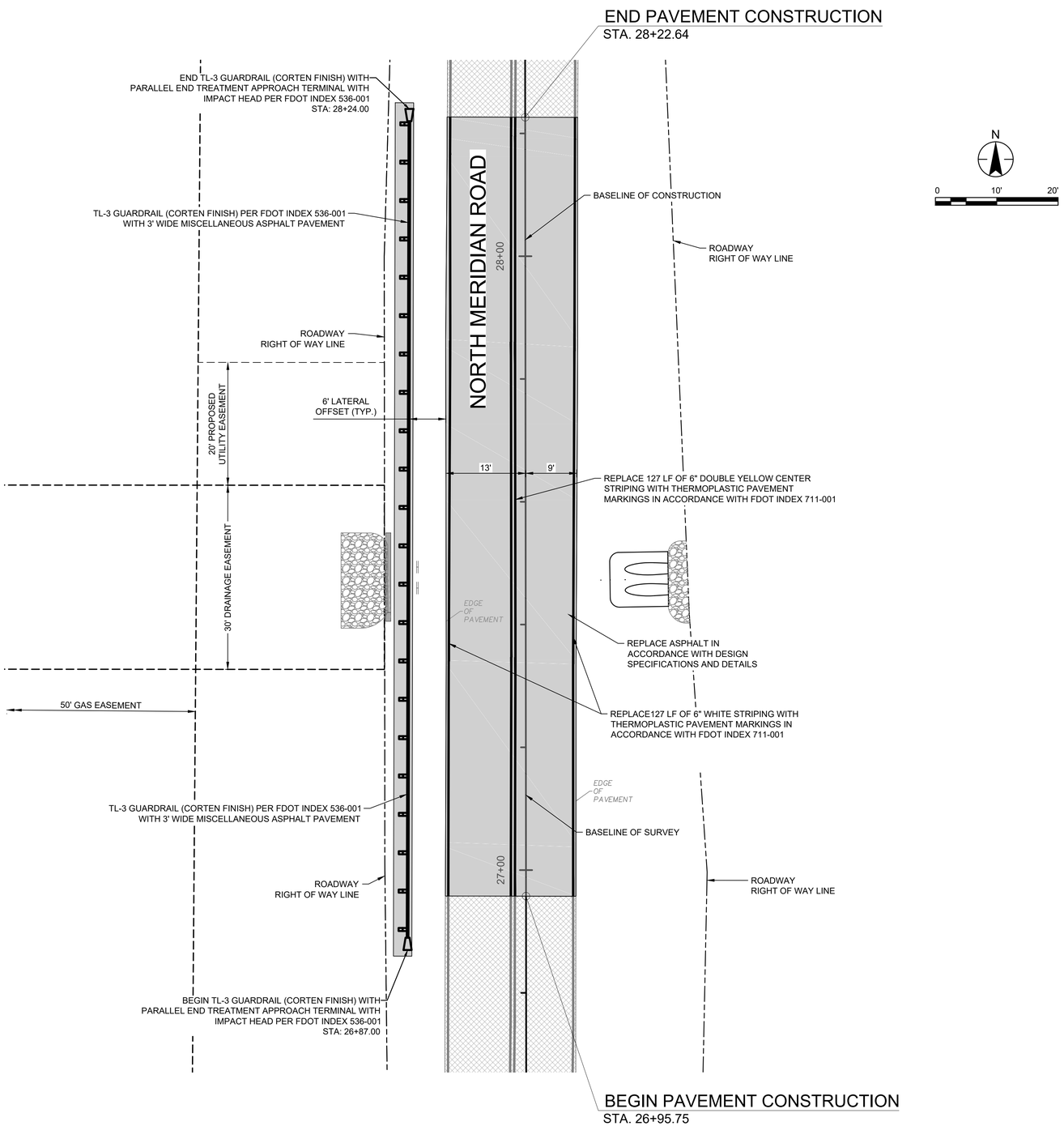

NOTES:

1. AT LOCATIONS WHERE THE PROJECT CONSTRUCTION OPERATIONS ARE WITHIN THE AREA OF INFLUENCE OF A UTILITY, THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE THE EXISTING UTILITY DURING GUARDRAIL INSTALLATION ACTIVITIES.
2. FOR ANY GUARDRAIL POST LOCATED WITHIN A UTILITY EASEMENT NORTH/EAST/WEST/ OR SOUTH SIDE OF N. MERIDIAN ROAD DRAINAGE IMPROVEMENTS THE CONTRACTOR SHALL INSTALL GUARDRAIL USING A STATIC -MANUAL OR SIMILAR EQUIPMENT THAT WILL NOT USE VIBRATION OR IMPACT AS A MEANS OF FOR THE ROADSIDE BARRIER POST INSTALLATION METHOD.
3. DAMAGES SUFFERED TO THE EXISTING GAS MAIN, SCHEDULE DELAYS, AND ADDITIONAL COSTS INCURRED BY THE CONTRACTOR, AS A RESULT OF THE FAILURE TO CONFORM TO THE REQUIREMENTS OF THIS SECTION, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. GUARDRAIL SHALL HAVE A 3' WIDE MISCELLANEOUS ASPHALT PAVEMENT, SEE FDOT GUARDRAIL DETAILS.

LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- RIGHT-OF-WAY
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Attachment I

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MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

NORTH MERIDIAN ROAD
PAVEMENT MARKING AND
GUARDRAIL PLAN

Seal

CHRISTIE E. BROCKMEIER
LICENSE
No. 68859
STATE OF FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
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Drawing No. C-401
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ORIGINAL SHEET - ANSI D

Attachment I

END PAVEMENT CONSTRUCTION
STA. 22+87.00

BEGIN PAVEMENT CONSTRUCTION
STA. 21+36.33

END TL-3 GUARDRAIL (CORTEN FINISH) WITH PARALLEL END TREATMENT APPROACH TERMINAL WITH IMPACT HEAD PER FDOT INDEX 536-001 STA: 23+06.30

TL-3 GUARDRAIL (CORTEN FINISH) PER FDOT INDEX 536-001 WITH 3' WIDE MISCELLANEOUS ASPHALT PAVEMENT

REPLACE 200 LF OF 6" WHITE STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

EXISTING ROADWAY RIGHT OF WAY LINE

GAS EASEMENT

REPLACE ASPHALT IN ACCORDANCE WITH DESIGN SPECIFICATIONS AND DETAILS

REPLACE (5) 18" YELLOW GORE STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

BASELINE OF CONSTRUCTION "WB" (FOR HORIZONTAL CONTROL INFORMATION REFER PLAN SHEET TO C-206)

BEGIN 24' RADIUS TL-3 GUARDRAIL (CORTEN FINISH) CRT SYSTEM PER FDOT INDEX 536-001 STA: 21+52.46

PROPOSED PARALLEL END TREATMENT APPROACH TERMINAL PER FDOT INDEX 536-001 STA: 21+52.69

REPLACE 55 LF OF 6" DOUBLE YELLOW STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

REPLACE 55 LF OF 6" WHITE STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

REPLACE 80 LF OF 6" WHITE STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

JOHN HANCOCK DR.

50' FGT GAS EASEMENT

12' MAX. LATERAL OFFSET

SEE NOTE 3 FOR GUARDRAIL WITHIN FGT GAS EASEMENT

EXISTING ROADWAY RIGHT OF WAY LINE

BASELINE OF SURVEY

REPLACE LEFT DIRECTIONAL ARROW WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

REPLACE 38 LF OF 24" WHITE STOP BAR WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

REPLACE RIGHT DIRECTIONAL ARROW WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

NORTH MERIDIAN ROAD

23+00

22+00

203+00

204+00

205+00

+00

BASELINE OF SURVEY

REPLACE 282 LF OF 6" DOUBLE YELLOW STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

REPLACE 151 LF OF 6" WHITE STRIPING WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT INDEX 711-001

EXISTING ROADWAY RIGHT OF WAY LINE

PROPOSED PARALLEL END TREATMENT APPROACH TERMINAL PER FDOT INDEX 536-001 STA: 22+25.38

END TL-3 GUARDRAIL (CORTEN FINISH) BEGIN 16' RADIUS TL-3 GUARDRAIL (CORTEN FINISH) CRT SYSTEM PER FDOT INDEX 536-001 STA: 22+10.09

TL-3 GUARDRAIL (CORTEN FINISH) PER FDOT INDEX 536-001 WITH 3' WIDE MISCELLANEOUS ASPHALT PAVEMENT

12' LATERAL OFFSET (TYP.)

SEE NOTE 3 FOR GUARDRAIL WITHIN FGT GAS EASEMENT

EXISTING ROADWAY RIGHT OF WAY LINE

BEGIN TL-3 GUARDRAIL (CORTEN FINISH) WITH PARALLEL END TREATMENT APPROACH TERMINAL WITH IMPACT HEAD PER FDOT INDEX 536-001 STA: 21+39.60

N

0 10' 20'

NOTES:

1. AT LOCATIONS WHERE THE PROJECT CONSTRUCTION OPERATIONS ARE WITHIN THE AREA OF INFLUENCE OF A UTILITY, THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE THE EXISTING UTILITY DURING GUARDRAIL INSTALLATION ACTIVITIES.
2. FOR ANY GUARDRAIL POST LOCATED WITHIN A UTILITY EASEMENT NORTH/EAST/WEST/ OR SOUTH SIDE OF N. MERIDIAN ROAD DRAINAGE IMPROVEMENTS THE CONTRACTOR SHALL INSTALL GUARDRAIL USING A STATIC -MANUAL OR SIMILAR EQUIPMENT THAT WILL NOT USE VIBRATION OR IMPACT AS A MEANS OF FOR THE ROADSIDE BARRIER POST INSTALLATION METHOD.
3. GUARDRAIL POSTS LOCATED WITHIN THE FGT GAS EASEMENT SHALL BE INSTALLED PER FDOT INDEX FOR "ENCASED POST FOR SHALLOW MOUNT" DETAIL, SEE SHEET C-525 (FDOT INDEX 536-001 SHEET 21 OF 22). GUARDRAIL POSTS SHALL BE ENCASED IN PCC AS SPECIFIED ON THE FDOT STANDARD INDEX DETAIL.
4. DAMAGES SUFFERED TO THE EXISTING GAS MAIN, SCHEDULE DELAYS, AND ADDITIONAL COSTS INCURRED BY THE CONTRACTOR, AS A RESULT OF THE FAILURE TO CONFORM TO THE REQUIREMENTS OF THIS SECTION, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. GUARDRAIL SHALL HAVE A CORTEN FINISH.
6. GUARDRAIL SHALL HAVE A 3' WIDE MISCELLANEOUS ASPHALT PAVEMENT, SEE FDOT GUARDRAIL DETAILS.

LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
- GEOWEB SYSTEM FOR HEAVY WHEEL LOADS
- RIGHT-OF-WAY
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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

SOUTH MERIDIAN ROAD
PAVEMENT MARKING AND
GUARDRAIL PLAN

Seal

CHRIS E. BROCKMEIER LICENSE 66859 STATE OF FLORIDA PROFESSIONAL ENGINEER

1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

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Drawing No. C-402

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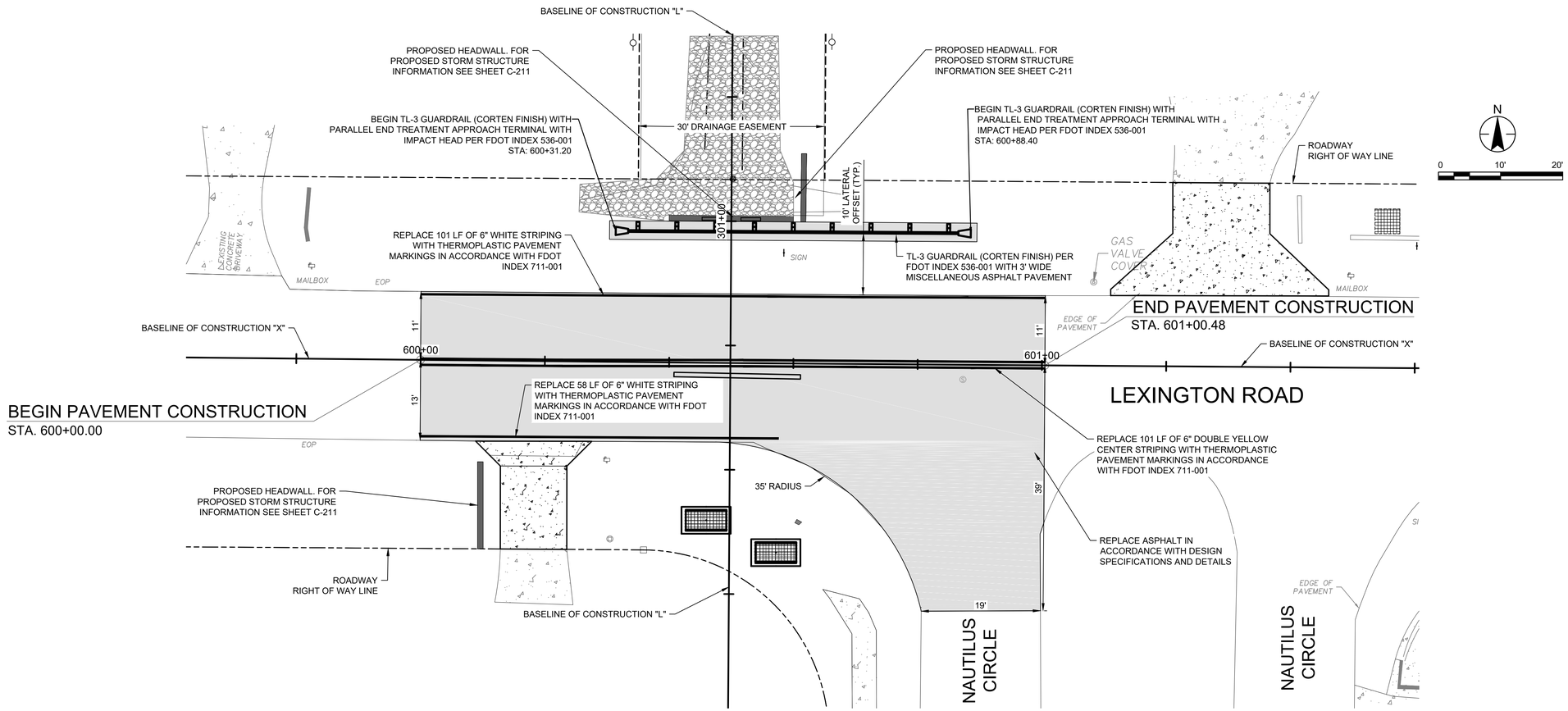

NOTES:

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2. DAMAGES SUFFERED TO ADJACENT EXISTING UTILITIES OR OBJECTS, SCHEDULE DELAYS, AND ADDITIONAL COSTS INCURRED BY THE CONTRACTOR, AS A RESULT OF THE FAILURE TO PROTECT EXISTING TOPOGRAPHY TO REMAIN IN PLACE, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. GUARDRAIL SHALL HAVE A CORTEN FINISH.
4. GUARDRAIL SHALL HAVE A 3' WIDE MISCELLANEOUS ASPHALT PAVEMENT, SEE FDOT GUARDRAIL DETAILS.
5. FOR LEXINGTON ROAD BENCHMARK INFORMATION REFER TO SURVEY SHEET V107.
6. FOR DRAINAGE CONVEYANCE DITCH BASELINE OF CONSTRUCTION "L" HORIZONTAL CONTROL DATA, REFER TO C-209.

LEGEND

- PROPOSED ROCK RUBBLE RIP-RAP
- PROPOSED ASPHALT PAVING
- EXISTING ASPHALT PAVING
- PROPOSED CONCRETE PAVING
- SCOURLOK SYSTEM RETAINING WALLS
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- EXISTING CONCRETE PAVING
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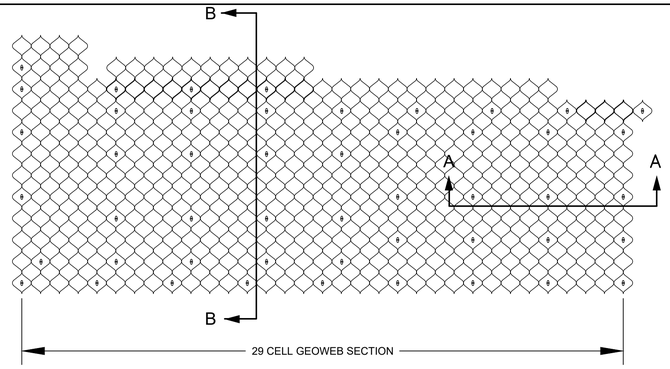

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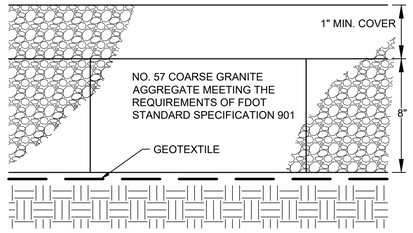
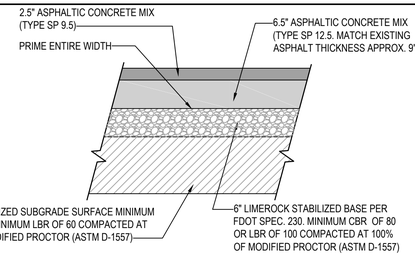


1 GEOWEB SYSTEM FOR HEAVY WHEEL LOADS SECTION

NTS

NOTES:

1. REMOVE ALL VEGETATION TO AT LEAST FIVE (5) FEET BEYOND THE EXTENT OF THE WORK EFFORT.
2. FINAL GRADE AND SMOOTH THE EXCAVATED SURFACE, REMOVING ALL ROOTS GREATER THAN ONE (1) INCH IN DIAMETER.
3. PROOF ROLL THE AREA USING A NON-VIBRATING 5-TON ROLLER UNTIL THE SUBGRADE IS FIRM AND UNYEILDING, AS APPROVED BY THE ENGINEER.
4. PLACE A WOVEN GEOTEXTILE FABRIC (ACF HSP4-4800 lb. OR APPROVED EQUIVALENT) TO THE EXTENT OF THE AREA. OVERLAP MATERIAL AND EDGES BY AT LEAST THREE (3) FEET.
5. PLACE A GEOWEB (PRESTO GW20V 8-INCH OR APPROVED EQUIVALENT) OVER THE GEOTEXTILE AND SECURE THE SECTIONS TOGETHER USING ATRA KEYS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
6. AFTER THE GEOWEB HAS BEEN PLACED AND SECURED, BACKFILL THE GEOWEB USING A NO. 57 COARSE GRANITE AGGREGATE MEETING THE REQUIREMENTS OF FDOT STANDARD SPECIFICATION 901.
7. THE COARSE AGGREGATE SHALL EXTEND ABOVE THE GEOWEB A MINIMUM OF ONE (1) INCHES.
8. WHEN ATRA ANCHORS ARE USED FOR ANCHORAGE, ENSURE ANCHOR BEARS AGAINST CELL WALL AND ARM IS ENGAGED THOUGH THE I-SLOT.
9. ADDITIONAL GEOTECH INFORMATION CAN BE FOUND IN THE GEOTECHNICAL INVESTIGATION (EGS, JUNE 2018)

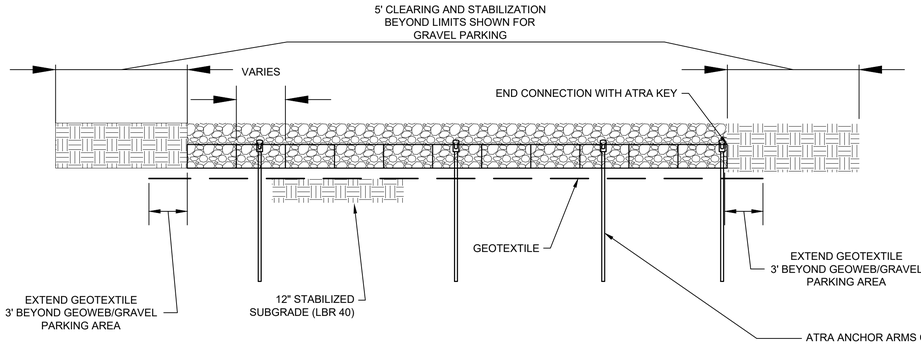


NOTES:

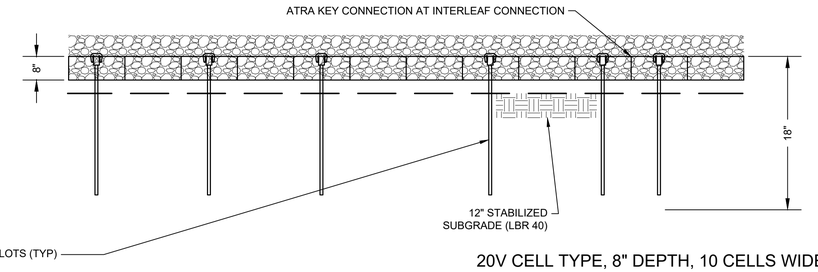
1. A TACK COAT WILL BE REQUIRED FOR ASPHALT PAVEMENT BETWEEN EXISTING PAVEMENT SURFACES, LAYERS OF LIFT OR HOT MIX ASPHALT OR NEW ASPHALT PLACED AGAINST CURBS, GUTTERS AND CONSTRUCTION JOINTS.
2. A TACK COAT SHALL BE APPLIED TO THE STABILIZED LIMEROCK BASE.

2 ASPHALT PAVEMENT SECTION FOR MERIDIAN MAINLINE PAVEMENT

NTS



SECTION A-A



SECTION B-B

20V CELL TYPE, 8" DEPTH, 10 CELLS WIDE, 29 CELLS LONG, PERFORATED STRIP w/ INTEGRAL I-SLOT.

3 TYPICAL ATRA ANCHOR SYSTEM

NTS

	NOMINAL CELL AREA IN ^{2}(CM $)^2$	CELL EXPANSION RANGE MINIMUM LENGTH IN (CM)	MINIMUM WIDTH IN (CM)	MAXIMUM LENGTH IN (CM)	MAXIMUM WIDTH IN (CM)
CELL LENGTH / CELL WIDTH — 20V	44.8 (289)	8.02 (204)	9.2 (234)	9.65 (245)	11.07 (281)

NOTE: ALL DIMENSIONS ARE NOMINAL AND ARE WITHIN MANUFACTURING TOLERANCES

4 GEOWEB CELL SIZE (GW 20V)

(OR APPROVED EQUAL, SUBMIT PRODUCT DATA WITH BID SUBMITTAL)

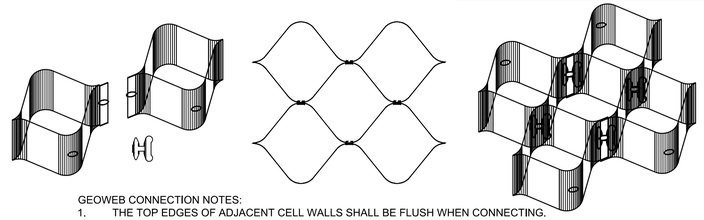
GW20V - 10 CELLS WIDE

CELLS LONG	MIN EXPANSION LENGTH ft	m	WIDTH ft	m	MAX EXPANSION LENGTH ft	m	WIDTH ft	m	NOMINAL AREA ft ^{2}	m^2
18	12.0	3.7	9.2	2.8	14.5	4.4	7.7	2.3	112	10.4
21	14.0	4.3			16.9	5.1			131	12.1
25	16.7	5.1			20.1	6.1			156	14.5
29	19.4	5.9			23.3	7.1			181	16.8
34	22.7	6.9			27.3	8.3			212	19.7

5 GEOWEB SECTION SIZES

NTS

GEOWEB® PRODUCT CODE FORMAT

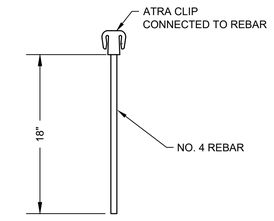


GEOWEB CONNECTION NOTES:

1. THE TOP EDGES OF ADJACENT CELL WALLS SHALL BE FLUSH WHEN CONNECTING.
2. ALIGN THE I-SLOTS FOR INTERLEAF AND END TO END CONNECTIONS.
3. THE GEOWEB PANELS SHALL BE CONNECTED WITH ATRA KEYS AT EACH INTERLEAF AND END TO END CONNECTION.

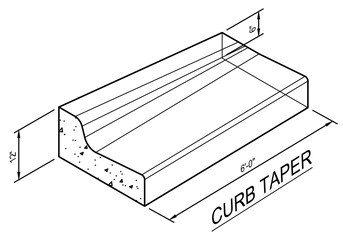
6 ATRA KEY CONNECTION DETAILS

NTS



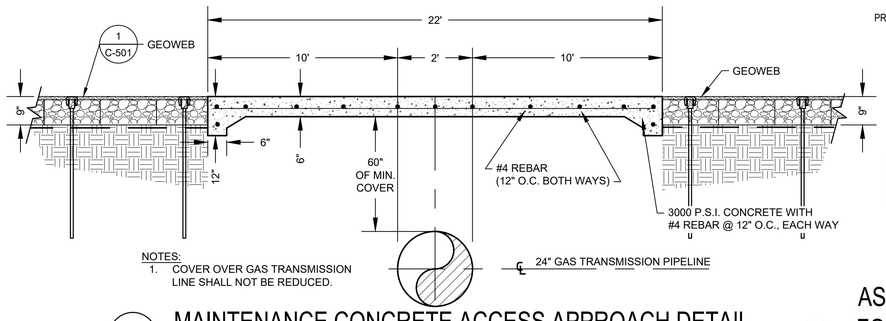
7 ATRA ANCHOR DETAIL

NTS



8 CONCRETE CURB TAPER

NTS

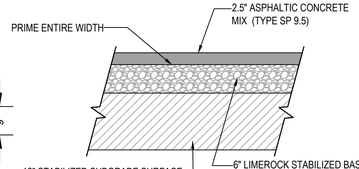


NOTES:

1. COVER OVER GAS TRANSMISSION LINE SHALL NOT BE REDUCED.

9 MAINTENANCE CONCRETE ACCESS APPROACH DETAIL

NTS

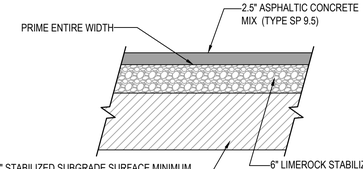


NOTES:

1. A TACK COAT WILL BE REQUIRED FOR ASPHALT PAVEMENT BETWEEN PAVEMENT SURFACES

10 ASPHALT PAVEMENT SECTION FOR LEXINGTON ROAD

NTS



NOTES:

1. A TACK COAT WILL BE REQUIRED FOR ASPHALT PAVEMENT BETWEEN PAVEMENT SURFACES.

11 ASPHALT PAVEMENT SECTION FOR JOHN HANCOCK DRIVE

NTS

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Attachment I

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

CIVIL DETAILS

Seal

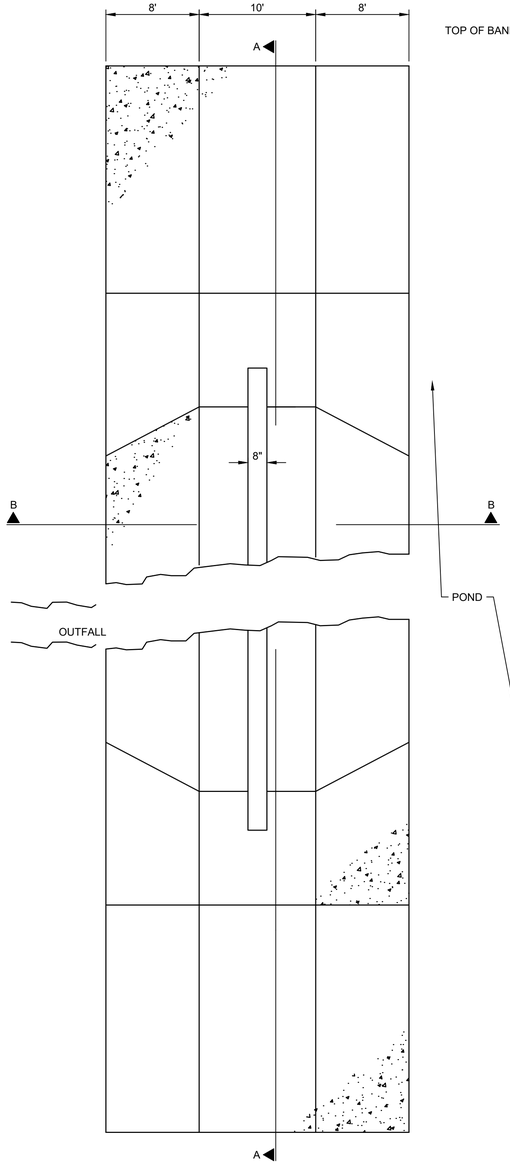
Project Number: 215613796
File Name: 13796-TITLE BLOCK

Dwn.	Chkd.	Dsgn.	YY.MM.DD
JG	CB	AM	20.01.06

Drawing No. C-501

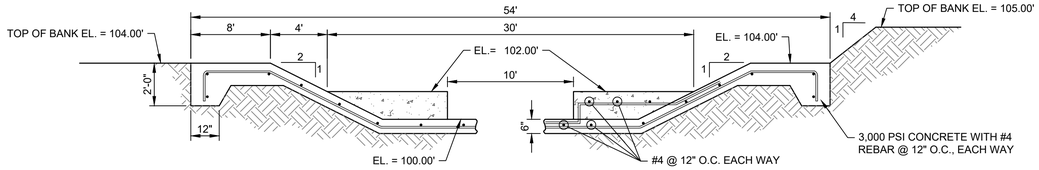
Revision 0 Sheet of

ORIGINAL SHEET - ANSI D

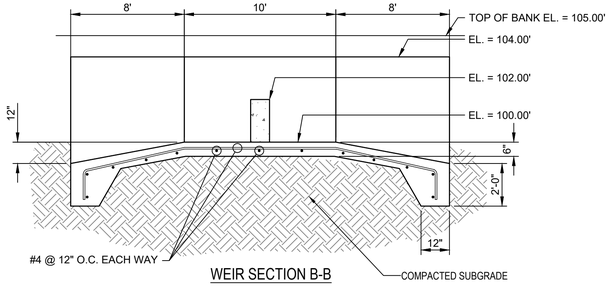


WEIR PLAN

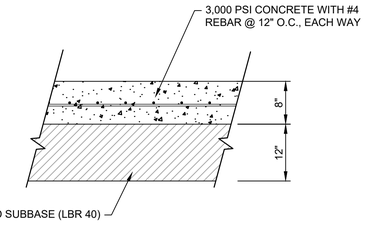
1 OUTFALL WEIR DETAIL
NTS



WEIR SECTION A-A



WEIR SECTION B-B



NOTE:
CONTRACTOR TO SUBMIT JOINT PLAN LAYOUT WITH CONCRETE SUBMITTAL (ACI REQUIREMENTS)

2 CONCRETE DRIVEWAY EAST SUMP
NTS

Attachment I

Stantec
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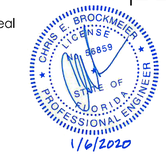
Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

DRAINAGE STRUCTURE
DETAILS & CIVIL DETAILS

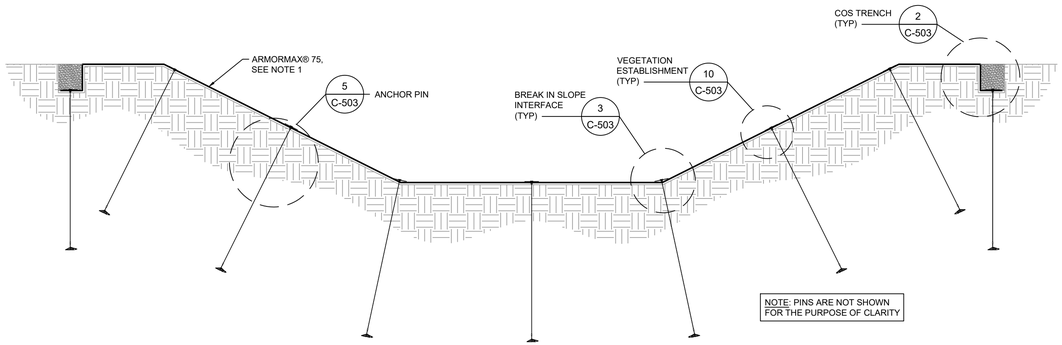
Seal



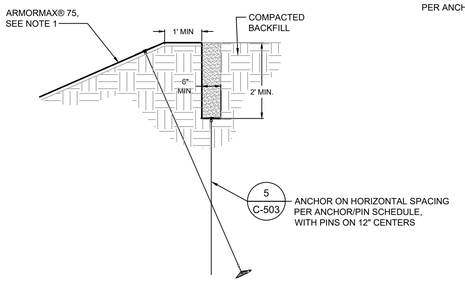
Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

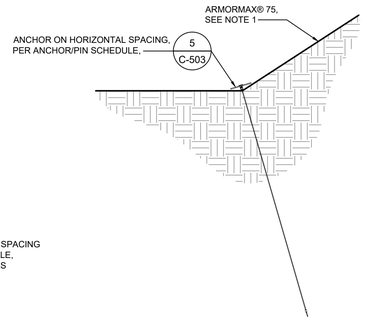
Drawing No. C-502
Revision 0
Sheet of



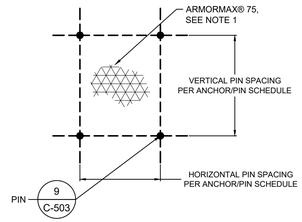
1 PERPENDICULAR INSTALLATION OF ARMORMAX 75 IN A CHANNEL
NTS



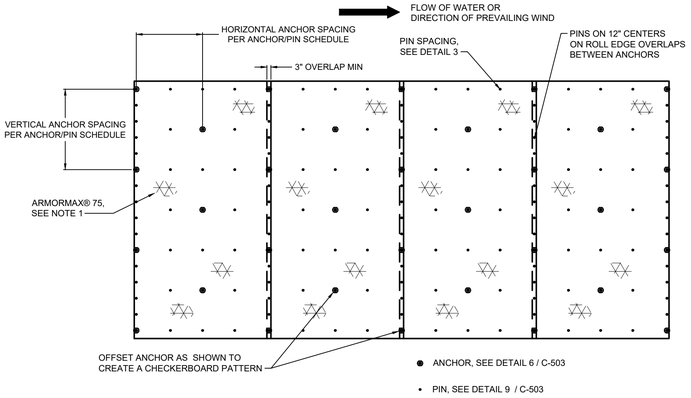
2 CREST OF SLOPE (COS TRENCH)
NTS



3 BREAK IN SLOPE INTERFACE
NTS



4 PIN PATTERN
NTS



5 ANCHOR / PIN PATTERN
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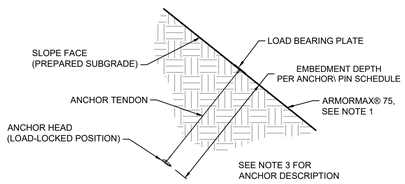

6 ENGINEERED EARTH ANCHOR
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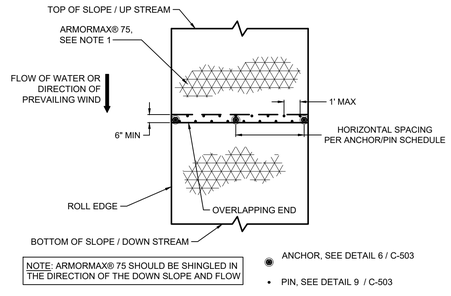
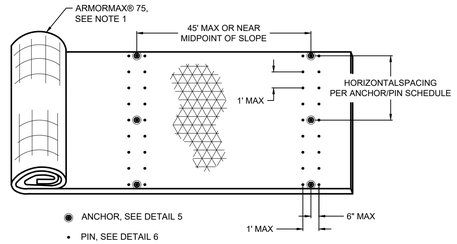
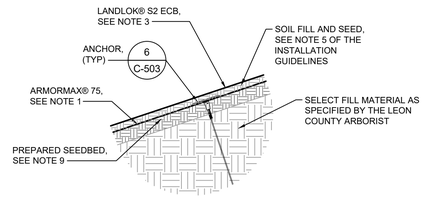


7 OVERLAP AT ROLL END DETAIL
NTS

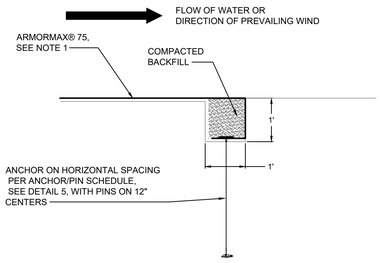


8 SIMULATED CHECK SLOT DETAIL
NTS

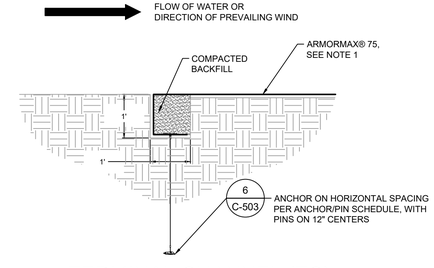
9 PIN
NTS



10 VEGETATION ESTABLISHMENT
NTS



11 INITIAL CHANNEL (IC) TRENCH (DOWNSTREAM)
NTS



12 TERMINAL CHANNEL (TC) TRENCH (UPSTREAM)
NTS

SLOPE STABILIZATION SYSTEM GENERAL INSTALLATION GUIDELINES / NOTES

1. Contractor shall provide ARMORMAX® 75, or approved equal for permanent erosion protection and surficial slope stability in vegetated and unvegetated applications. It is composed of two components: PYRAMAT® 75 High Performance Turf Reinforcement Mat (HPTRM) and Engineered Earth Anchors. ARMORMAX® 75 shall be provided in green (match color). Contractor shall submit shop drawings of all or-equal products as part of the bid submittal.
2. Contractor shall provide PYRAMAT 75 HPTRM, or approved equal in green for erosion control applications on steep slopes and vegetated waterways.
3. The Type B2 anchor model, or approved equal is used for surficial slope stability applications and has a working load of up to 1,500 lbs. The Type B2 anchor consists of a die cast aluminum anchor head, zinc-aluminum coated carbon steel cable, a die cast zinc load-locking mechanism with a ceramic roller, and two aluminum ferrules. The Type B2 anchor is also designed with a recessed cavity so the top of the cable can be cut below the surface being protected.
4. The 12", 18", and 24" Securing Pins are composed of a wire, mushroomed at the top. These Pins shall conform to industry standards for erosion control pins with washers.
5. Contractor shall provide LANDLOK® S2 Erosion Control Blankets, or approved equal which contain 100% wheat straw mechanically bound and covered on both sides by netting. The straw shall be homogeneously blended and evenly distributed throughout the blanket. The netting shall be photodegradable polypropylene with mesh openings of approximately 3/8 in. by 3/8 in. The blanket shall be sewn on approximately 2 in. centers with photodegradable polypropylene thread.
6. Prepare seedbed by loosening 2 to 3 in of soil above final grade. Apply seed in an amount equivalent to 60% of the total mixture required to be installed on the soil surface, to scarified surface prior to installation of the ARMORMAX 75. Select and apply soil amendments and fertilizer, to scarified surface prior to installation of the ARMORMAX 75. A site specific soil test should be performed to help determine what soil amendments, such as lime and fertilizer, need to be incorporated into the soil to promote native vegetation.
7. Once installed, ARMORMAX 75 shall be soil filled and seeded with the remaining 40% of the seed mixture. Do not place excessive soil above material. Once soil fill and additional seed is in place, surficial protection should be accomplished by installing LANDLOK S2 Erosion Control Blanket atop the seed layer. LANDLOK S2 is to be secured using 6" U-shaped staples with a frequency of 2.0 staples per square meter (1.7 staples per square yard).
8. Irrigate to establish and maintain vegetation. Frequent, light irrigation will need to be applied to seeded areas if natural rain events have not occurred within two weeks of seeding. When watering seeded areas, use a fine spray to prevent erosion of seeds or soil. Do not over irrigate.

ANCHOR / B2 SPACING	
SECURING DEVICE	ANCHOR
HORIZONTAL ANCHOR SPACING	4.0 FT.
VERTICAL ANCHOR SPACING	3.0 FT.
EMBEDMENT LENGTH	6.0 FT.
PULLOUT STRENGTH	1,000 lbs

NOTE:

PRIOR TO FINAL ACCEPTANCE, ANCHOR TESTING SHALL BE PERFORMED BY THE CONTRACTOR TO CONFIRM THE PULLOUT STRENGTH OF THE ANCHORS IS APPROPRIATE AND COMPLIES WITH MANUFACTURER RECOMMENDATIONS. ADDITIONAL ANCHORS LENGTHS OR SIZES MAY BE NEEDED TO ACHIEVE THE REQUIRED PULLOUT STRENGTH,

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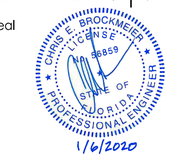
ARMORMAX DETAILS

Seal



Project Number: 215613796
File Name: 13796-TITLE BLOCK

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Drawing No. C-503
Revision 0
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2020.01.14 1:47 PM By: Gerth, James

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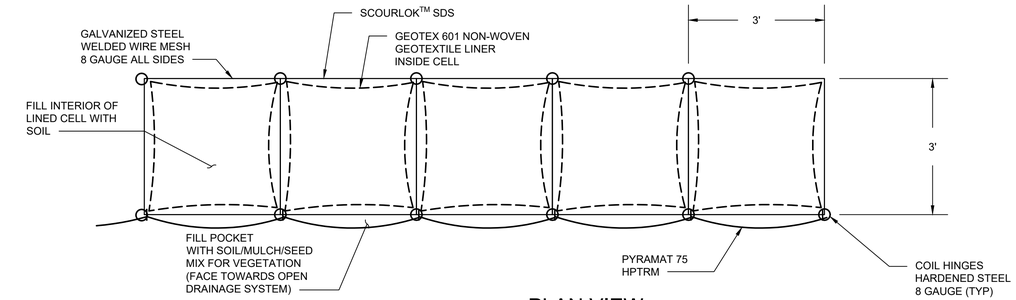
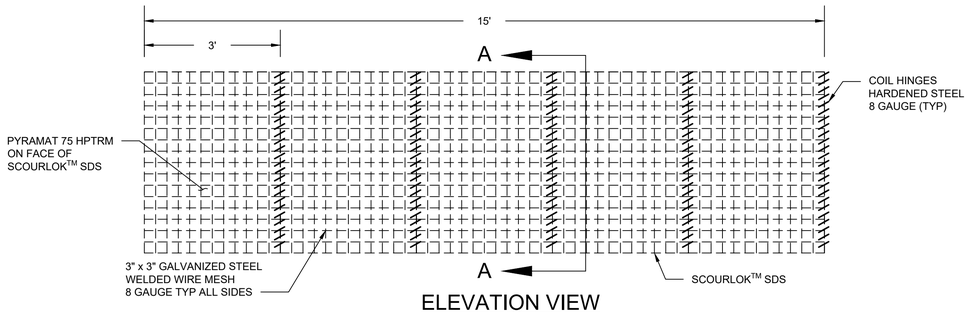
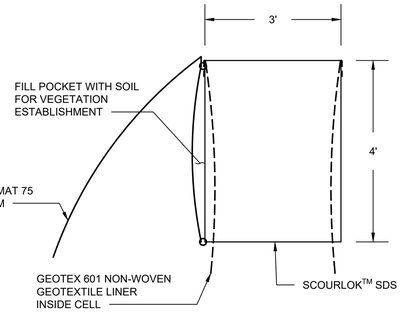


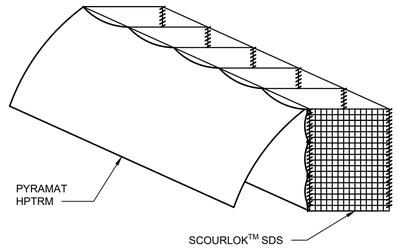
PLAN VIEW



ELEVATION VIEW

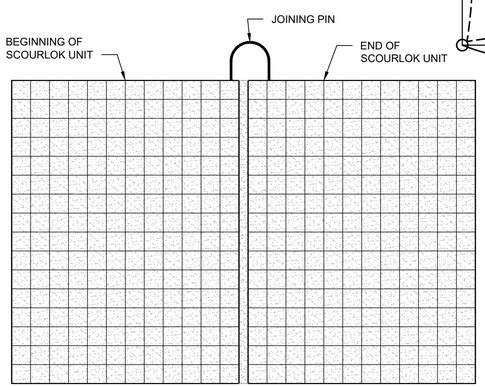


SECTION A-A

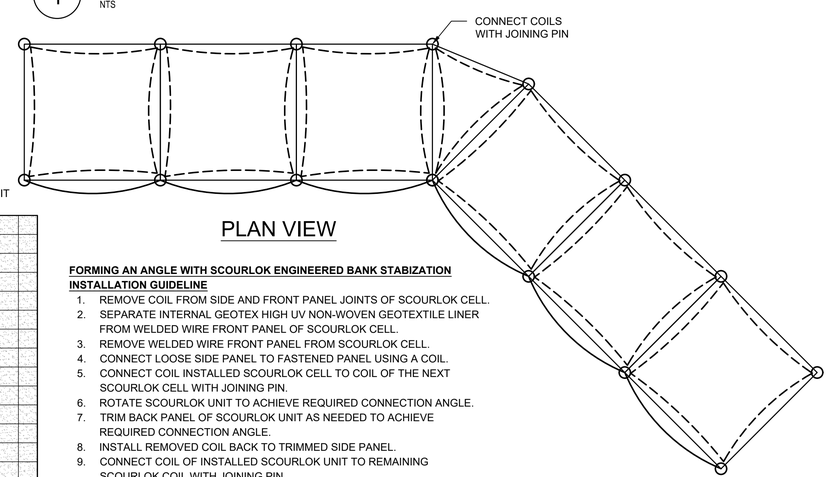


ISOMETRIC VIEW

1 SCOURLOK SDS
NTS



ELEVATION VIEW

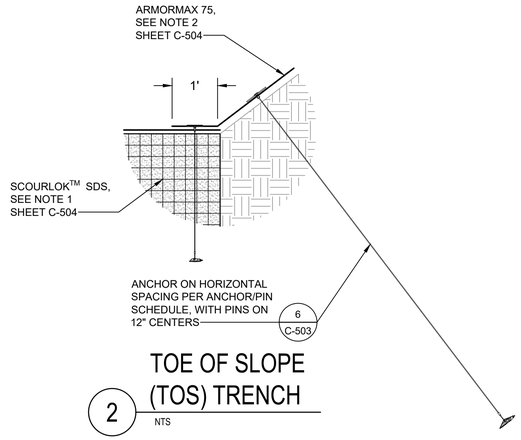


PLAN VIEW

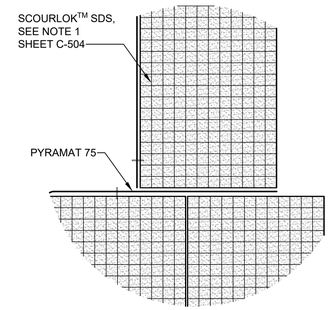
FORMING AN ANGLE WITH SCOURLOK ENGINEERED BANK STABIZATION INSTALLATION GUIDELINE

1. REMOVE COIL FROM SIDE AND FRONT PANEL JOINTS OF SCOURLOK CELL.
2. SEPARATE INTERNAL GEOTEX HIGH UV NON-WOVEN GEOTEXTILE LINER FROM WELDED WIRE FRONT PANEL OF SCOURLOK CELL.
3. REMOVE WELDED WIRE FRONT PANEL FROM SCOURLOK CELL.
4. CONNECT LOOSE SIDE PANEL TO FASTENED PANEL USING A COIL.
5. CONNECT COIL INSTALLED SCOURLOK CELL TO COIL OF THE NEXT SCOURLOK CELL WITH JOINING PIN.
6. ROTATE SCOURLOK UNIT TO ACHIEVE REQUIRED CONNECTION ANGLE.
7. TRIM BACK PANEL OF SCOURLOK UNIT AS NEEDED TO ACHIEVE REQUIRED CONNECTION ANGLE.
8. INSTALL REMOVED COIL BACK TO TRIMMED SIDE PANEL.
9. CONNECT COIL OF INSTALLED SCOURLOK UNIT TO REMAINING SCOURLOK COIL WITH JOINING PIN.

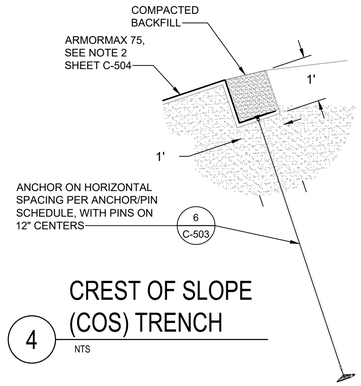
6 CONNECTION SCOURLOK UNITS
NTS



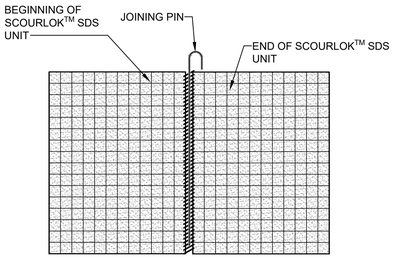
2 TOE OF SLOPE (TOS) TRENCH
NTS



3 SCOURLOCK (SDS) STACKING
NTS



4 CREST OF SLOPE (COS) TRENCH
NTS



5 CONNECTING SCOURLOCK SDS UNITS
NTS

SCOURLOK™ SHORELINE DEFENSE SYSTEM(SDS) GENERAL INSTALLATION GUIDELINES / NOTES

1. CONTRACTOR SHALL PROVIDE SCOURLOK™ SHORELINE DEFENSE SYSTEM (SDS), OR APPROVED EQUAL. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL OR-EQUAL PRODUCTS AS PART OF THE BID SUBMITTAL.
2. CONTRACTOR SHALL PROVIDE ARMORMAX 75, OR APPROVED EQUAL FOR PERMANENT EROSION PROTECTION AND SURFICIAL SLOPE STABILITY. ARMORMAX 75 SHALL BE GREEN IN COLOR.
3. CONTRACTOR SHALL PROVIDE PYRAMAT 75 HPTRM, OR APPROVED EQUAL IN GREEN FOR EROSION CONTROL APPLICATIONS ON STEEP SLOPES AND VEGETATED WATERWAYS.
4. THE TYPE B2 ANCHOR MODEL, OR APPROVED EQUAL IS USED FOR SURFICIAL SLOPE STABILITY APPLICATIONS AND HAS A WORKING LOAD OF UP TO 1,500 LBS. THE TYPE B2 ANCHOR CONSISTS OF A DIE CAST ALUMINUM ANCHOR HEAD, ZINC-ALUMINUM COATED CARBON STEEL CABLE, A DIE CAST ZINC LOAD-LOCKING MECHANISM WITH A CERAMIC ROLLER, AND TWO ALUMINUM FERRULES. THE TYPE B2 ANCHOR IS ALSO DESIGNED WITH A RECESSED CAVITY SO THE TOP OF THE CABLE CAN BE CUT BELOW THE SURFACE BEING PROTECTED.
5. THE 12", 18", AND 24" SECURING PINS ARE COMPOSED OF A WIRE, MUSHROOMED AT THE TOP. THESE PINS SHALL CONFORM TO INDUSTRY STANDARDS FOR EROSION CONTROL PINS WITH WASHERS.
6. HOG RING TO BE 16 GAUGE STAINLESS STEEL, OR APPROVED EQUAL TO BE INSTALLED AT 2' MAXIMUM LONGITUDINAL SPACING.
7. SECURING BOLT TO BE 5" LONG, 3/4" DIAMETER GALVANIZED STEEL BOLT OR APPROVED EQUIVALENT TO BE EMBEDDED 3" MINIMUM INTO CONCRETE STRUCTURE AT 2' MINIMUM LONGITUDINAL SPACING FOR ATTACHMENT OF ARMORMAX 75, OR APPROVED EQUAL BY GALVANIZED NUT AND 1.5" DIAMETER MINIMUM WASHER.
8. PREPARE SEEDBED BY LOOSENING 2 TO 3 IN OF SOIL ABOVE FINAL GRADE. APPLY SEED IN AN AMOUNT EQUIVALENT TO 60% OF THE TOTAL MIXTURE REQUIRED TO BE INSTALLED ON THE SOIL SURFACE, TO SCARIFIED SURFACE PRIOR TO INSTALLATION OF THE ARMORMAX 75. SELECT AND APPLY SOIL AMENDMENTS AND FERTILIZER, TO SCARIFIED SURFACE PRIOR TO INSTALLATION OF THE ARMORMAX 75. A SITE SPECIFIC SOIL TEST SHOULD BE PERFORMED TO HELP DETERMINE WHAT SOIL AMENDMENTS, SUCH AS LIME AND FERTILIZER, NEED TO BE INCORPORATED INTO THE SOIL TO PROMOTE NATIVE VEGETATION.
9. ONCE INSTALLED, ARMORMAX 75 SHALL BE SOIL FILLED AND SEEDED WITH THE REMAINING 40% OF THE SEED MIXTURE. DO NOT PLACE EXCESSIVE SOIL ABOVE MATERIAL. ONCE SOIL FILL AND ADDITIONAL SEED IS IN PLACE, SURFICIAL PROTECTION SHOULD BE ACCOMPLISHED BY INSTALLING LANDLOK S2 EROSION CONTROL BLANKET ATOP THE SEED LAYER. LANDLOK S2 IS TO BE SECURED USING 6" U-SHAPED STAPLES WITH A FREQUENCY OF 2.0 STAPLES PER SQUARE METER (1.7 STAPLES PER SQUARE YARD).
10. IRRIGATE TO ESTABLISH AND MAINTAIN VEGETATION. FREQUENT, LIGHT IRRIGATION WILL NEED TO BE APPLIED TO SEEDED AREAS IF NATURAL RAIN EVENTS HAVE NOT OCCURRED WITHIN TWO WEEKS OF SEEDING. WHEN WATERING SEEDED AREAS, USE A FINE SPRAY TO PREVENT EROSION OF SEEDS OR SOIL. DO NOT OVER IRRIGATE.
11. SEE LANDSCAPING PLANS FOR PLANTING MATERIALS INSIDE SCOURLOCK UNITS.
12. LEVELING COURSE MATERIAL TO BE GRANULAR AND LARGER THAN NO. 4 US SIEVE AND BE A UNIT WEIGHT OF 130 LB/FT^3, PER FDOT STANDARD SPECIFICATIONS.
13. THE BASE ROW OF SCOURLOK SHALL BE PLACED ON A ROCK LEVELING COURSE WITH A MINIMUM THICKNESS OF 1 FT. FREE DRAINING, GRANULAR, SELF-CONSOLIDATING FILL SHALL BE USED TO FILL THE BASE ROW OF SCOURLOK AND TO BACKFILL BEHIND THE FIRST ROW TO ENSURE ADEQUATE DRAINAGE CONDITIONS. THE LEVELING COURSE AND BACKFILL SHALL BE SEPARATED FROM THE EXISTING SOIL WITH THE USE OF NONWOVEN GEOTEXTILE FABRIC. THE UPPER ROWS OF SCOURLOK ARE SPECIFIED TO BE FILLED WITH APPROVED EXCAVATED ONSITE MATERIAL. THE SCOURLOK FILL MATERIAL SHALL VARY DEPENDING ON PROJECT SPECIFIC DESIGN PER SPECIFIC DETAILS. FILL SHALL BE FREE OF LARGE ROCKS, BOULDERS, SOIL CLODS, VEGETATION, AND OTHER SHARP OBJECTS.
14. FILL MATERIAL PLACED INSIDE UPPER ROW OF SCOURLOK AND BEHIND SCOURLOK TO BE ONSITE SOILS COMPACTED TO A MINIMUM OF 90% STANDARD PROCTOR AND FREE OF ORGANIC MATERIAL.
15. SCOURLOK POCKETS TO CONTAIN PLANTINGS SHALL BE FILLED WITH A GROWTH MEDIUM (SOIL, MULCH, ETC.) AND NOTED PLANTINGS.

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2020/01/14 1:47 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

Attachment I

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TALLAHASSEE, FL

SCOURLOK DETAILS A

Seal

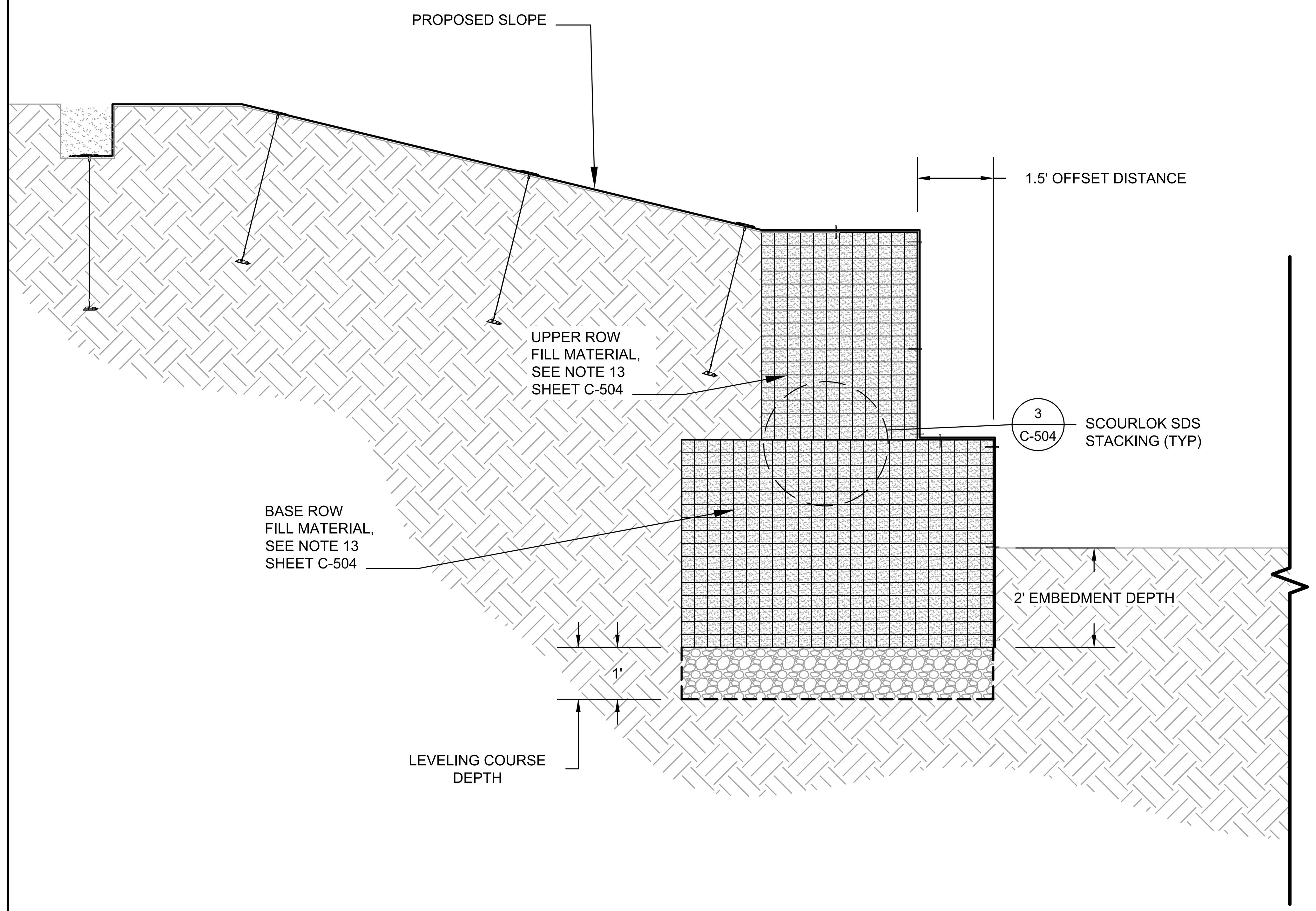
CHRIS E. BROCKMEYER LICENSE No. 68859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

Dwn.	Chkd.	Dsgn.	YY.MM.DD
JG	CB	AM	20.01.06

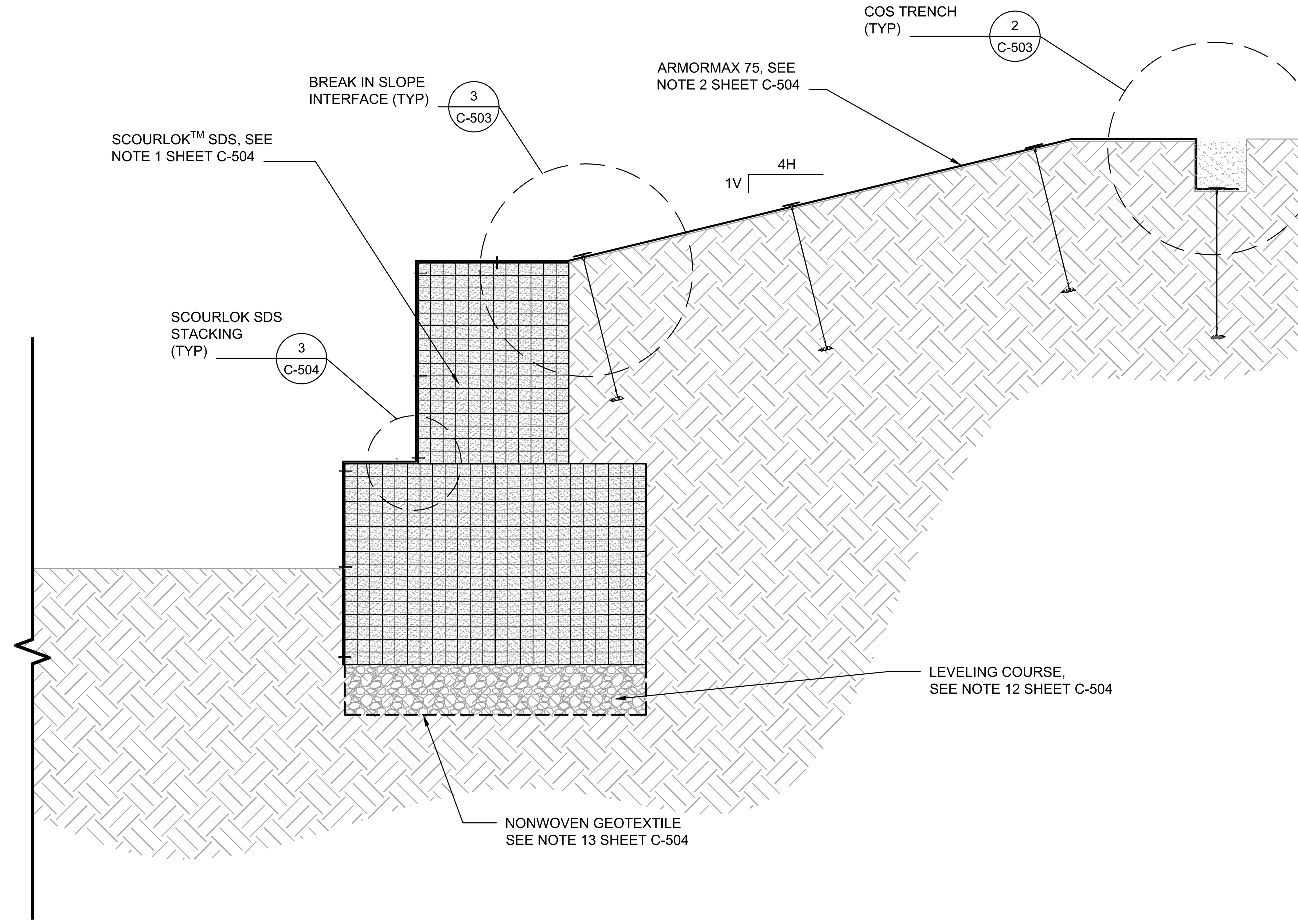
Drawing No. C-504
Revision 0
Sheet of

Attachment I



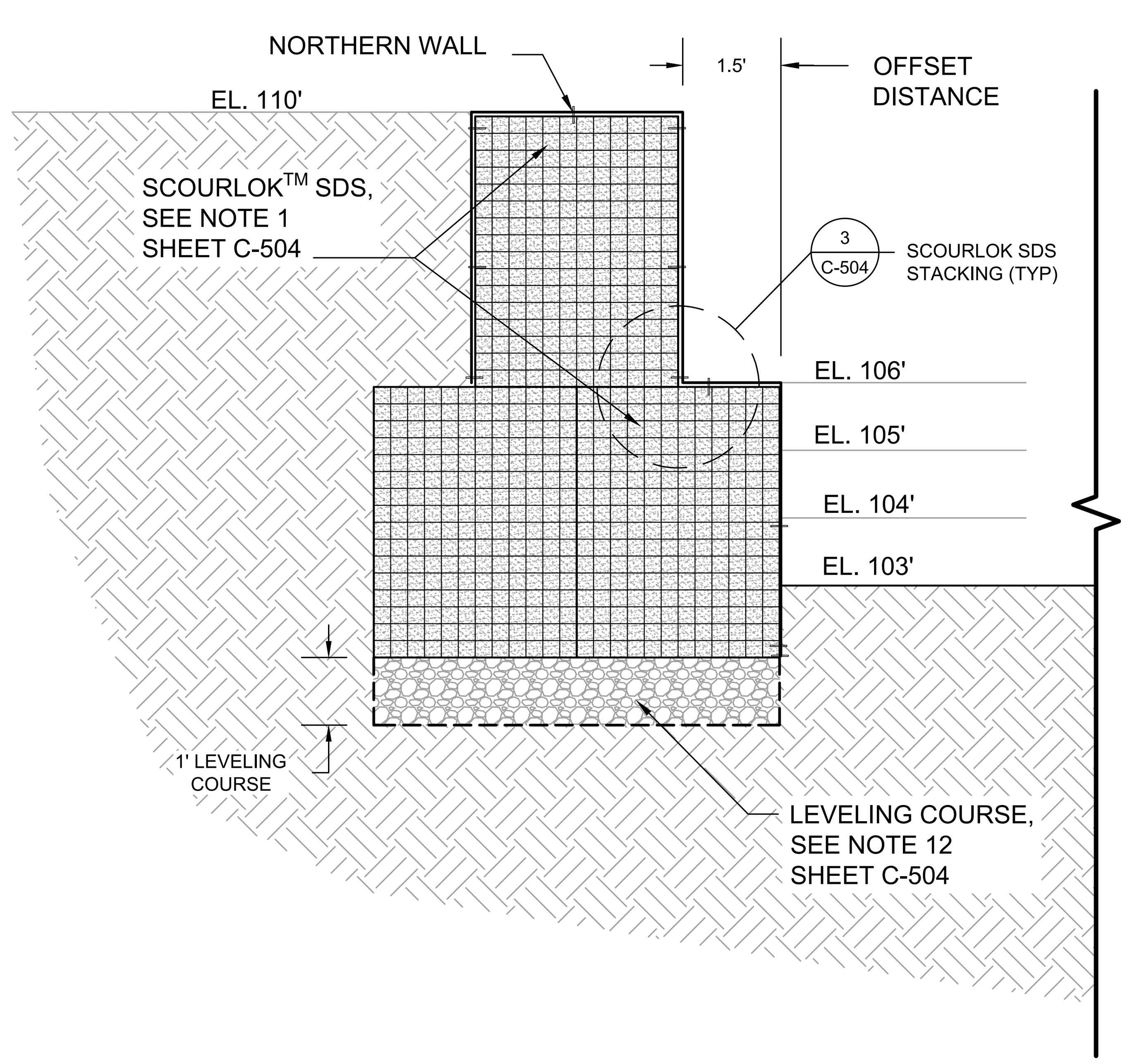
1 WEST BASIN INSTALLATION OF SCOURLOCK

1" = 2'



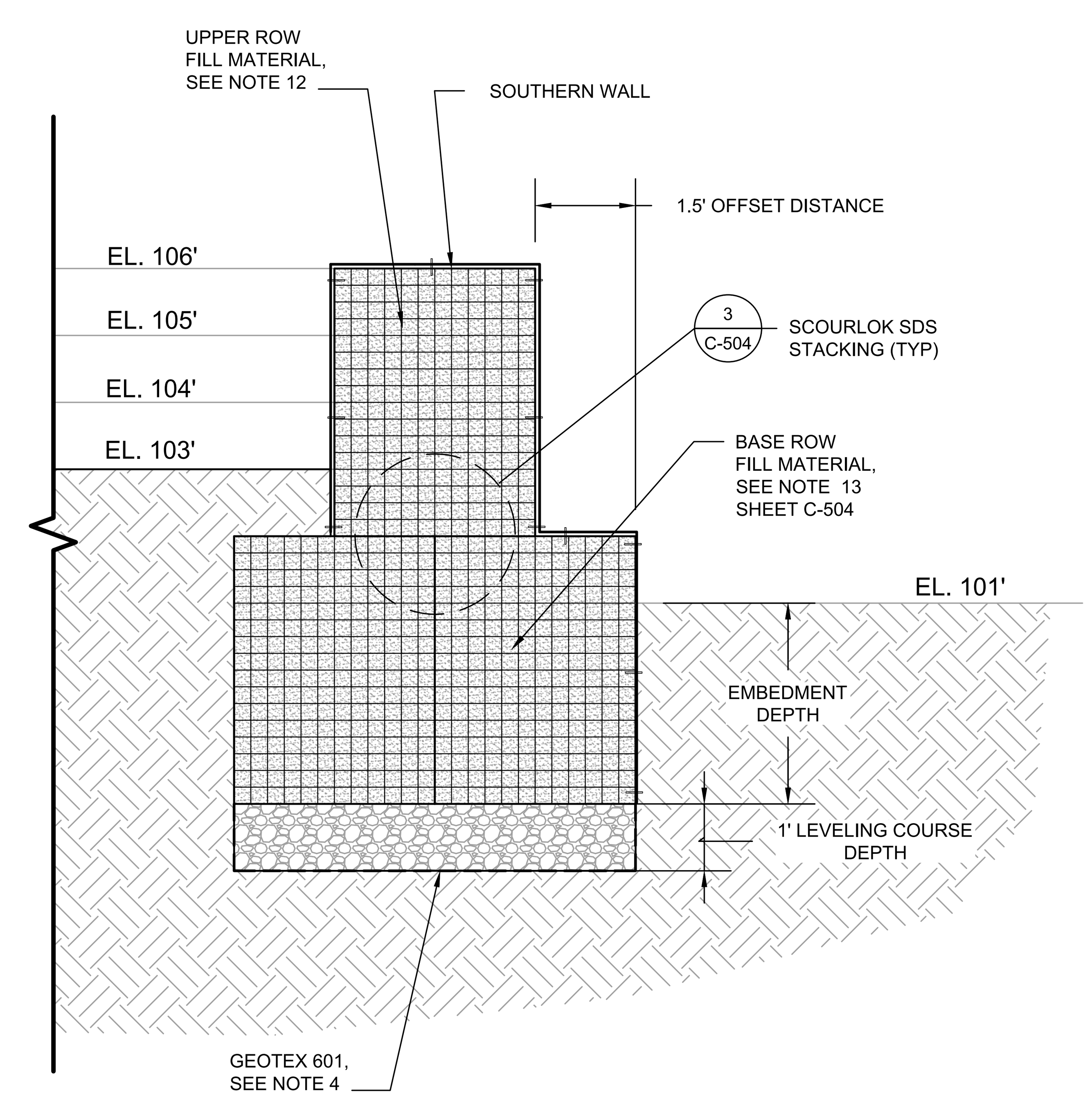
2 WEST BASIN INSTALLATION OF SCOURLOCK

1" = 2'



3 EAST BASIN INSTALLATION OF SCOURLOCK

1" = 2'



4 EAST BASIN INSTALLATION OF SCOURLOCK

1" = 2'

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TALLAHASSEE, FL

SCOURLOK DETAILS B

Seal

CHRIS E. BROCKMEIER LICENSE No. 58859 STATE OF FLORIDA PROFESSIONAL ENGINEER

1/6/2020

Project Number: 215613796

File Name: 13796-TITLE BLOCK

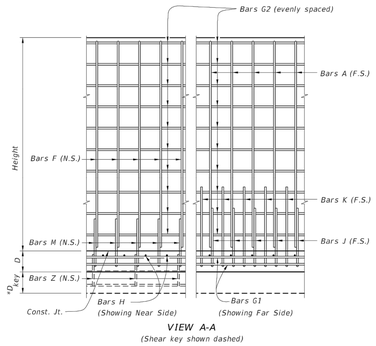
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-505

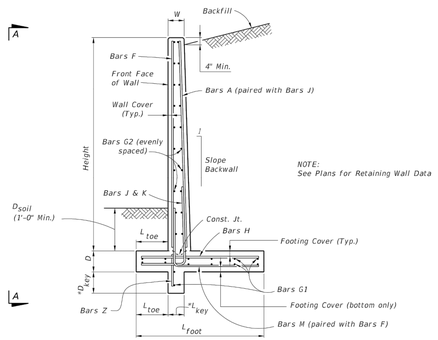
Revision 0

Sheet of

ORIGINAL SHEET - ANSI D



VIEW A-A
(Shear key shown dashed)



NOTE:
See Plans for Retaining Wall Data

* Shear Key is required only when specified in the Plans.

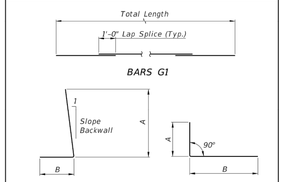
TYPICAL SECTION

NOTES

TRAFFIC RAILINGS OR PARAPETS:
If there is a Traffic Railing or Parapet on the wall, align Wall Joints with V-Grooves, and Wall Expansion Joints with Barrier Open Joints.

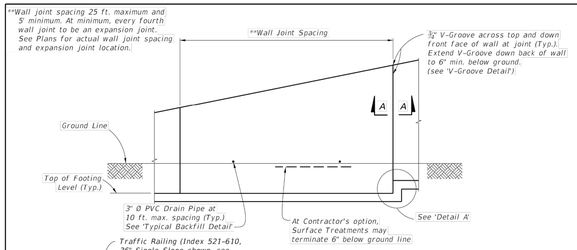
FOUNDATION: Prepare the soil below the footing in accordance with the requirements for spread footings in Specification Section 455.

REINFORCING STEEL BENDING DIAGRAMS

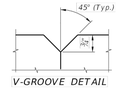


NOTE:
All bar dimensions are out-to-out

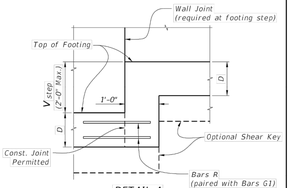
LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CANTILEVER RETAINING WALL (C-I-P)	INDEX 400-010	SHEET 1 of 2



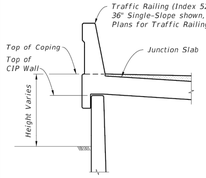
FRONT ELEVATION



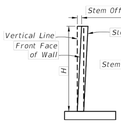
V-GROOVE DETAIL



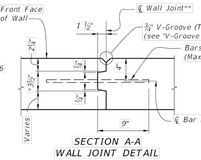
DETAIL A



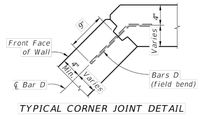
TRAFFIC RAILING/JUNCTION SLAB DETAIL
(36" Single-Slope shown, other Traffic Railings similar)



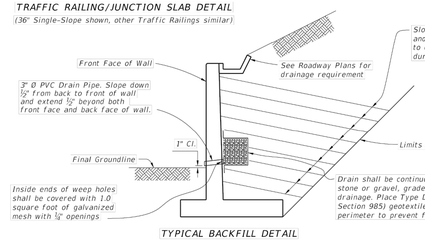
STEM OFFSET VALUES
(for H < 20 Ft.)



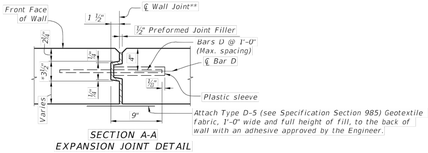
SECTION A-A
WALL JOINT DETAIL



TYPICAL CORNER JOINT DETAIL



TYPICAL BACKFILL DETAIL



SECTION A-A
EXPANSION JOINT DETAIL

* Key to stop at top of footing and 6" from top of wall. Joint across footing and top of wall to be a straight line.

** Stay-In-Place Plastic Preformed Bond Beakers are permitted to form joints.

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CANTILEVER RETAINING WALL (C-I-P)	INDEX 400-010	SHEET 2 of 2

Attachment I

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TALLAHASSEE, FL

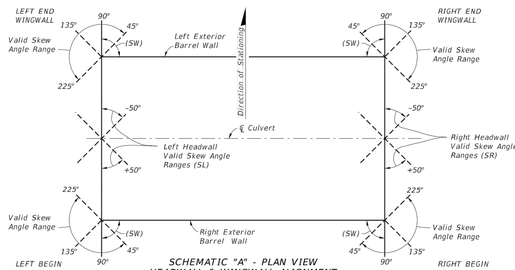
FDOT CIP RETAINING WALL

Seal

Project Number:	215613796		
File Name:	13796-TITLE BLOCK		
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

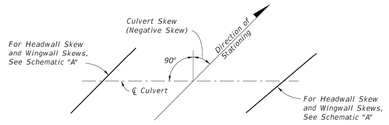
Drawing No. C-506

Revision 0 Sheet of



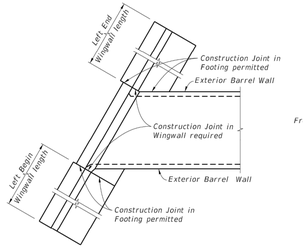
SCHEMATIC "A" - PLAN VIEW
HEADWALL & WINGWALL ALIGNMENT

NOTE: All headwall and culvert skew angles are measured in degrees from a line perpendicular to the centerline of culvert (counter-clockwise positive), see Schematic "B".



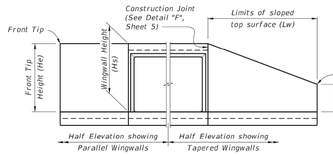
SCHEMATIC "B" - PLAN VIEW
CULVERT ALIGNMENT

NOTE: For Culvert Skew see Contract Plans.



PART PLAN SHOWING PARALLEL WINGWALLS
AND LOCATION OF CONSTRUCTION JOINTS

NOTE:
Construction joints in wingwalls and footings are located as follows: For non-skewed wingwalls they are located adjacent to the exterior face of the exterior barrel wall; when the ℄ of wingwall and ℄ of exterior barrel wall results in an acute angle see Left End Wingwall above, and when the angle is obtuse see Left Begin Wingwall above and Detail C (Sheet 5).



END ELEVATION
OF CULVERT

GENERAL NOTES:

LIVE LOAD: HL-93.

CONSTRUCTION LOADING: It is the construction Contractor's responsibility to provide for supporting construction loads that exceed AASHTO HL-93, and any construction load applied prior to 2 feet of compacted fill placed above the top slab.

SURFACE FINISH: All concrete surfaces shall receive a general surface finish.

SKEWED CONSTRUCTION JOINTS: Construction joints in barrels of culverts with skewed wingwalls may be placed parallel to the headwalls and the reinforcing steel, and the slabs may be cut provided that the cut reinforcing steel extends beyond the construction joint enough for splices to be made in accordance with Table 1 on this sheet. The cost of construction joints and additional reinforcing shall be at the expense of the Contractor.

CULVERT EXTENSIONS: For cut backs and ties into existing concrete box culverts see Sheet 6 of 8.

REINFORCING STEEL: See the "Box Culvert Data Tables" in the Contract Plans for grade and bar spacing. See the Reinforcing Bar List in the Contract Plans for bar sizes and bar bending details.

TABLE 1 - MINIMUM BAR SPLICE LENGTHS FOR LONGITUDINAL REINFORCING

BAR SIZE	SPLICE (CLASS B) CLASS II (3400 psi)	SPLICE (CLASS B) CLASS IV (5500 psi)	BAR SIZE	SPLICE (CLASS B) CLASS II (3400 psi)	SPLICE (CLASS B) CLASS IV (5500 psi)
#3	1'-4"	1'-0"	#8	3'-5"	2'-8"
#4	1'-9"	1'-4"	#9	4'-3"	3'-4"
#5	2'-2"	1'-8"			
#6	2'-7"	2'-0"			
#7	3'-0"	2'-4"			

TABLE 1 NOTE: Splice lengths are based on an AASHTO Class B tension lap splice for the Specification Section 346 concrete class shown.

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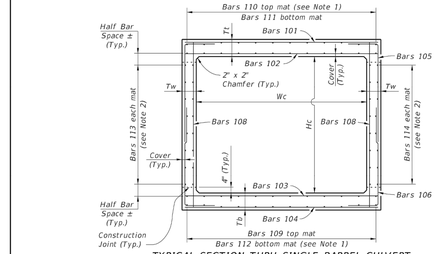
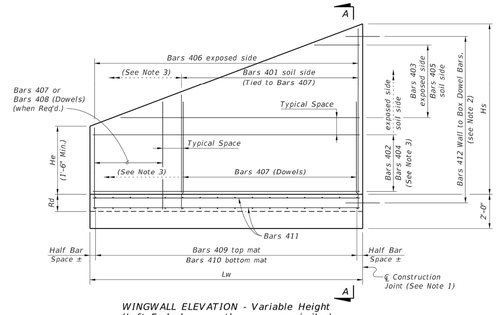
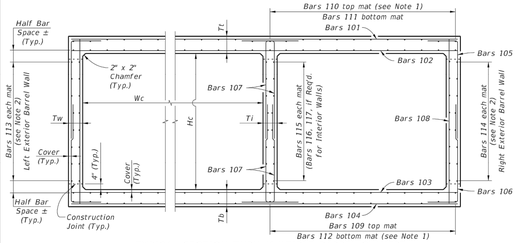


TYPICAL SECTION THRU SINGLE BARREL CULVERT

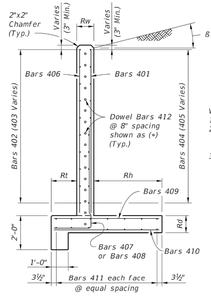
CULVERT BARREL NOTES:
1. Space Bars 110 and 112 with a bar in each corner, and at the ℄ of interior walls (for multiple barrel culverts only), and the remaining bars placed at equal spacing shown in the Contract Plans. Adjust last bar spacing when required.
2. Place Bars 113 and 114 at spacing shown in the Contract Plans evenly between Bars 109 and 111.
3. Locate the first transverse bar from the ends of the culvert at one half the bar spacing, but provide the minimum reinforcement cover and not greater than 4" clear.



WINGWALL ELEVATION - Variable Height
(Left End shown - other corners similar)



TYPICAL SECTION THRU MULTIPLE BARREL CULVERT



WINGWALL SECTION A-A

WINGWALL NOTES:
1. Align construction joint perpendicular to wingwall.
2. In the vicinity of the construction joint, field bend reinforcement as necessary to maintain minimum reinforcement cover.
3. For constant height wingwalls, variable length Bars 403, 405 & 408 are not required, and as such the limits of Bars 401 & 407 extend the full length of the wingwall, and the limits of Bars 402 & 404 extend to the full height of the wingwall.

LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	CONCRETE BOX CULVERT DETAILS	INDEX	SHEET
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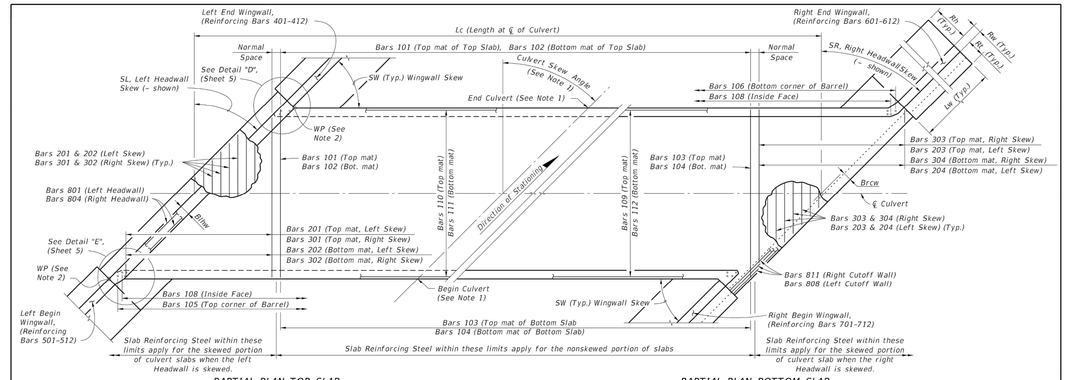
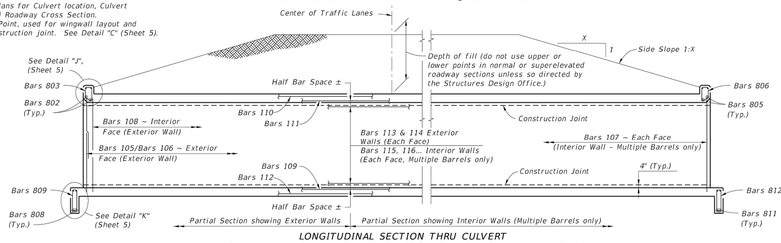


PARTIAL PLAN TOP SLAB
(Left Side, Left Skew)

SINGLE BARREL BOX CULVERT
(Skewed Culvert With Parallel Wingwalls Shown)

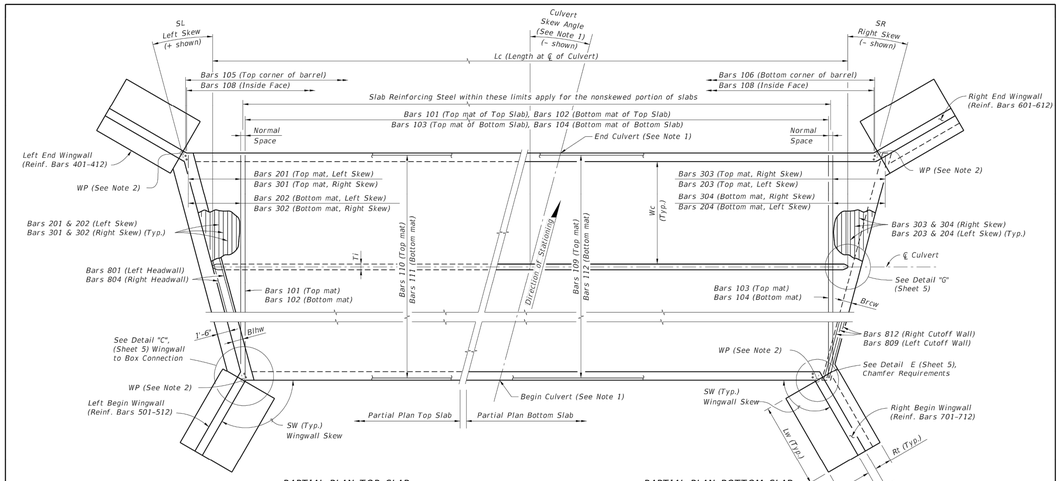
PARTIAL PLAN BOTTOM SLAB
(Right Side, Right Skew)

NOTES:
1. See Contract Plans for Culvert location, Culvert Skew Angle and Roadway Cross Section.
2. WP = Working Point, used for wingwall layout and location of construction joint. See Detail "C" (Sheet 5).



LONGITUDINAL SECTION THRU CULVERT
(Transverse Top & Bottom Slab Reinforcing Not Shown For Clarity)

LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	CONCRETE BOX CULVERT DETAILS	INDEX	SHEET
01/01/07					400-289	3 of 8



PARTIAL PLAN TOP SLAB
(Left Side, Left Skew)

MULTIPLE BARREL BOX CULVERT
(Skewed Culvert With Skewed Wingwalls Shown)

PARTIAL PLAN BOTTOM SLAB
(Right Side, Right Skew)

NOTES:
1. See Contract Plans for Culvert Location, Culvert Skew Angle and Roadway Cross Section.
2. WP = Working Point, used for wingwall layout and location of construction joint. See Detail C (Sheet 5).

LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	CONCRETE BOX CULVERT DETAILS	INDEX	SHEET
01/01/07					400-289	4 of 8

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TALLAHASSEE, FL
FDOT BOX CULVERT
DETAILS

Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

Dwn.	Chkd.	Dsgn.	20.01.06 YY.MM.DD
JG	CB	AM	

Drawing No. C-507

Revision 0 Sheet of

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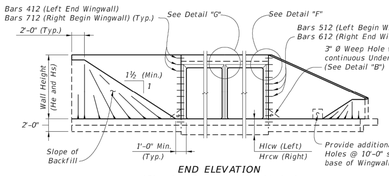
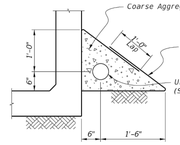
2020/01/14 1:47 PM By: Gerth, James

ORIGINAL SHEET - ANSI D



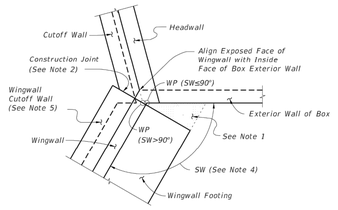
END ELEVATION
(Showing Constant Height And Variable Height Wingwalls)



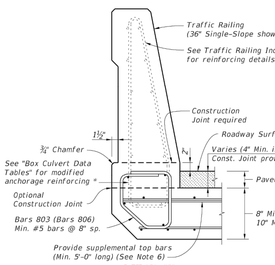
DETAIL "B"
UNDERDRAIN DETAIL
(Similar to Type II ~ Index 440-001)

NOTES:
1. For small angles, the Contractor may elect to fill the area between the box and the wingwall footing with unreinforced concrete. For wingwall skew angles less then 90 degrees, field bend wingwall reinforcement as necessary while maintaining cover. No additional payment will be made for this work.
2. Location of Construction Joint determined by WP at theoretical intersection of:
   – Soil side face of Headwall and outside face of Box Exterior Wall, for SW=90°;
   – Outside face of Wingwall and outside face of Box Exterior Wall, for SW>90°.
3. Provide 6" chamfer when angle 'A' is greater than 45°. Maintain minimum wall thickness. Field adjust reinforcing to maintain cover.
4. Wingwall Skew Angles (SW) are measured from the adjacent box exterior wall to the wingwall.
5. Turn or extend Wingwall Cutoff Wall as necessary to meet Box Cutoff Wall.
6. Provide additional reinforcement in the top of the top slab below traffic railings to ensure a minimum area of 0.80 sq. in./ft. transverse reinforcing.

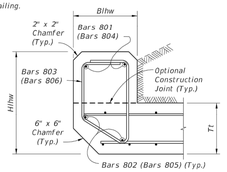
* Included in the cost of the Traffic Railing.



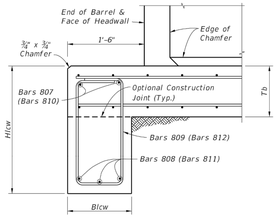
DETAIL "C" - PLAN VIEW
WINGWALL TO BOX CONNECTION
(Left Begin Corner Shown, Other Corners Similar)



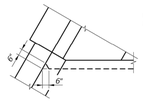
DETAIL "I"
TRAFFIC RAILING ATTACHMENT TO HEADWALL



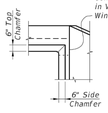
DETAIL "J"
LEFT HEADWALL SECTION
(Right Headwall similar)



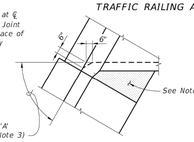
DETAIL "K"
LEFT CUTOFF WALL SECTION
(Right Cutoff Wall similar)



DETAIL "D"

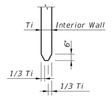


DETAIL "F"



DETAIL "E"

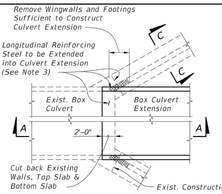
DETAIL "G"



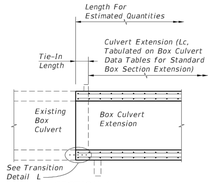
SECTION H-H

CROSS REFERENCE:
See Sheet 3 for locations of Details "D", "E", "J" & "K".
See Sheet 4 for locations of Detail "C".

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CONCRETE BOX CULVERT DETAILS	INDEX 400-289	SHEET 5 of 8

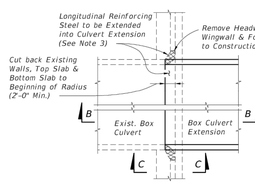


OUTSIDE WALLS OF BOXES

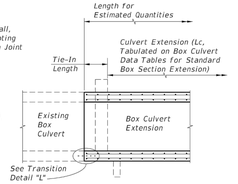


SECTION A-A

FLARED WINGWALL

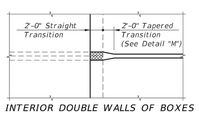


OUTSIDE WALLS OF BOXES

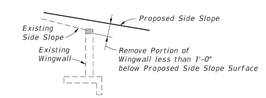


SECTION B-B

STRAIGHT WINGWALL

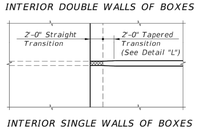


INTERIOR DOUBLE WALLS OF BOXES



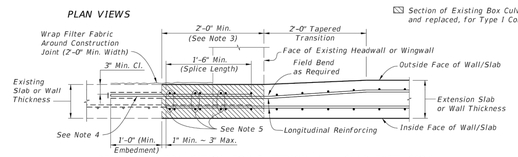
SECTION C-C

NOTES:
1. The Box Culvert Data Tables and Reinforcing Bar List do not include the additional quantities needed for dowel connections or transitions from double walls of existing concrete box culverts; the cost for additional reinforcement and the thickened concrete wall in the transitional area shall be included in the costs for concrete and steel in the culvert extension.
2. Cost for removal and disposal of material from existing headwalls, wingwalls and box, and cost of cleaning, straightening and extending or doweling longitudinal reinforcing steel shall be included in the cost for concrete and steel of the culvert extension.
3. Remove existing concrete while avoiding damage to existing reinforcement. Clean and straighten existing reinforcement, lap and tie onto extension reinforcement.
4. Dowel in #4 Bars @ 1'-0" max. spacing into wall/slab when there is a single mat of existing reinforcing steel, otherwise splice 1'-6" as shown for inside reinforcement. Use an Adhesive Bonding Material System in accordance with Specifications Section 416 & 937.
5. Provide additional transverse bars for top and bottom slab, parallel and full width of any skewed joint connection when shown in the Plans.
6. See Box Culvert Data Table notes in Plans for Connection Types allowed.



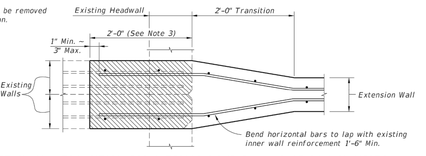
INTERIOR SINGLE WALLS OF BOXES

PLAN VIEWS



DETAIL "L" - TRANSITION FOR EXTERIOR WALL/SLAB EXTENSION
(Interior Single Walls Similar)

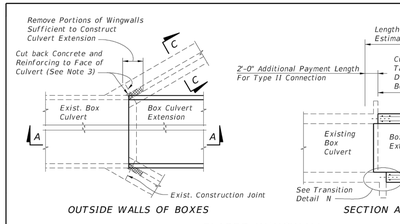
Section of Existing Box Culvert to be removed and replaced, for Type I Connection.



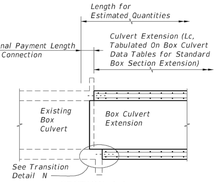
DETAIL "M" - TRANSITION FOR INTERIOR DOUBLE WALLS OF BOX CULVERTS

TYPE I CONNECTION DETAILS FOR CONCRETE BOX CULVERT EXTENSIONS
(CUT BACK EXISTING CONCRETE)

LAST REVISION 01/01/12	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CONCRETE BOX CULVERT DETAILS	INDEX 400-289	SHEET 6 of 8

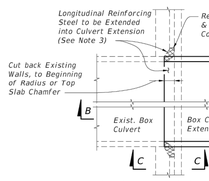


OUTSIDE WALLS OF BOXES

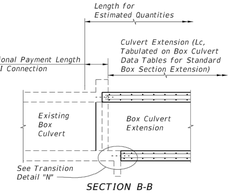


SECTION A-A

FLARED WINGWALL

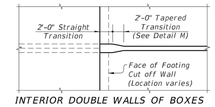


OUTSIDE WALLS OF BOXES

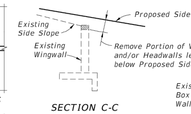


SECTION B-B

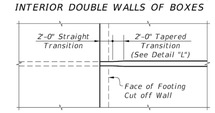
STRAIGHT WINGWALL



INTERIOR DOUBLE WALLS OF BOXES

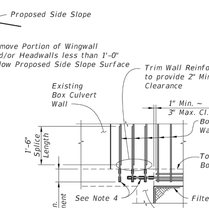


SECTION C-C

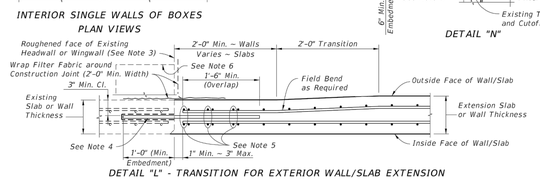


INTERIOR SINGLE WALLS OF BOXES

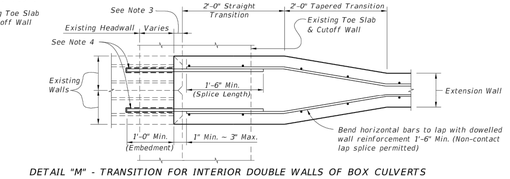
PLAN VIEWS



DETAIL "N"



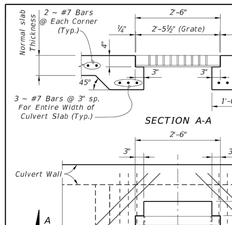
DETAIL "L" - TRANSITION FOR EXTERIOR WALL/SLAB EXTENSION
(Interior Single Walls Similar)



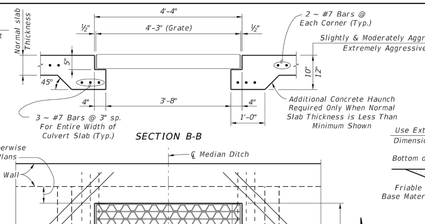
DETAIL "M" - TRANSITION FOR INTERIOR DOUBLE WALLS OF BOX CULVERTS

TYPE II CONNECTION DETAILS FOR CONCRETE BOX CULVERT EXTENSIONS
(ADHESIVE DOWEL TO EXISTING CONCRETE)

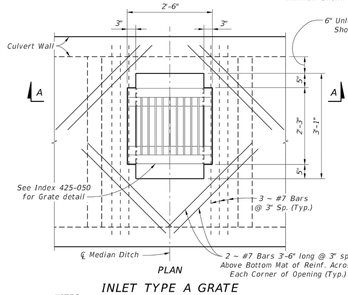
LAST REVISION 07/01/14	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	CONCRETE BOX CULVERT DETAILS	INDEX 400-289	SHEET 7 of 8



SECTION A-A



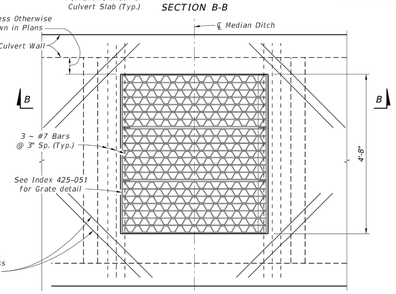
SECTION B-B



PLAN

INLET TYPE A GRATE

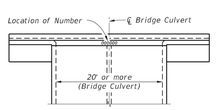
NOTES:
1. Cost of Steel Grating to be included in cost of Box Culvert.
2. All reinforcing shall be 2" clear for Slightly and Moderately Aggressive Environments, and 3" clear for Extremely Aggressive Environments.



PLAN

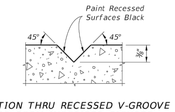
INLET TYPE B GRATE

INLET IN TOP OF BOX CULVERT



The number is to be placed in the center of the top surface of all bridge culvert headwalls. For Bridge Number see Plan-Profile sheet(s).

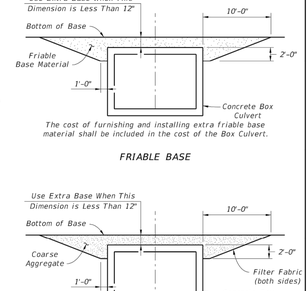
TOP VIEW OF HEADWALL



SECTION THRU RECESSED V-GROOVE TO FORM INSCRIBED FIGURES

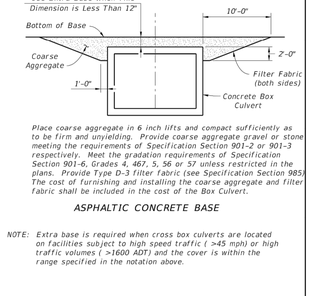
Black Plastic Figures 3" in height as approved by the Engineer may be used in lieu of numbers formed by ¾" V-Grooves. V-Grooves shall be formed by preformed figures.

BRIDGE CULVERT NUMBER LOCATION



The cost of furnishing and installing extra friable base material shall be included in the cost of the Box Culvert.

FRIABLE BASE



Place coarse aggregate in 6 inch lifts and compact sufficiently as to be firm and unyielding. Provide coarse aggregate gravel or stone meeting the requirements of Specification Section 901-2 or 901-3 respectively. Meet the gradation requirements of Specification Section 901-6, Grades 4, 467, 5, 56 or 57 unless restricted in the plans. Provide Type D-3 filter fabric (see Specification Section 985). The cost of furnishing and installing the coarse aggregate and filter fabric shall be included in the cost of the Box Culvert.

ASPHALTIC CONCRETE BASE

NOTE: Extra base is required when cross box culverts are located on facilities subject to high speed traffic (>45 mph) or high traffic volumes (>1600 ADT) and the cover is within the range specified in the notation above.

EXTRA BASE FOR BOX CULVERTS
CROSSING UNDER FLEXIBLE PAVEMENT

Attachment I

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE FL 32309
www.stantec.com C.A. No. 27013

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT BOX CULVERT DETAILS

Seal

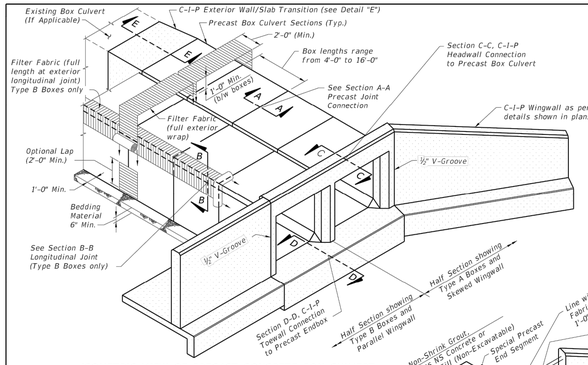
Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

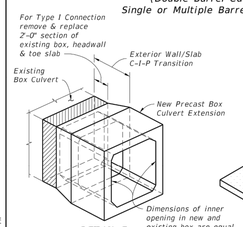
Drawing No. C-508

Revision 0 Sheet of

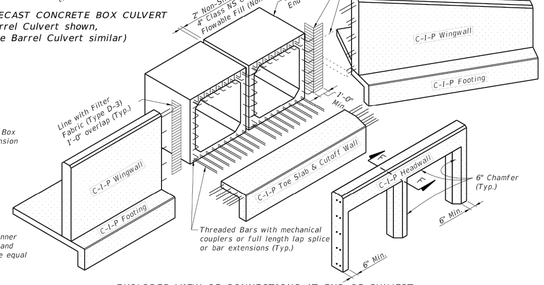
V:\215\active\215613796\civil\drawing\05_final_plans\sheet_files\215613796-C508-box_culverts.dwg
2020/01/14 1:48 PM By: Gerth, James
ORIGINAL SHEET - ANSI D



ISOMETRIC VIEW OF PRECAST CONCRETE BOX CULVERT
(Double Barrel Culvert shown, Single or Multiple Barrel Culvert similar)



DETAIL E
PICTORIAL VIEW OF EXTERIOR WALL/SLAB TRANSITION



EXPLODED VIEW OF CONNECTIONS AT END OF CULVERT
(Double Barrel Culvert shown, Single or Multiple Barrel Culvert similar)

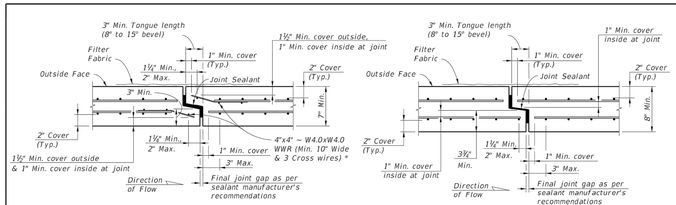
PERMITTED PRECAST ALTERNATE BOX SECTIONS

TYPE	DESCRIPTION	SINGLE BARREL	MULTIPLE BARRELS	DESIGN NOTES
A	Single Cell Monolithic (Four Sided)			Index 400-292 or Contractor Design
B	Single Cell Two-Piece (Four Sided)	Three sided bottom section; Top slab section		Contractor Design
C	Multicell Monolithic	Not Applicable		Contractor Design

GENERAL NOTES:

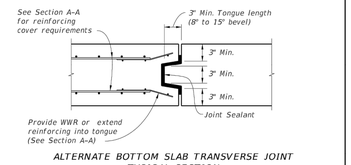
1. Specifications:
   General:
   FDOT Standard Specifications for Road and Bridge Construction, Section 410 (current edition, and supplements thereto).
   Concrete (Precast):
   Class III or Class II Modified (5,000 psi) for slightly aggressive environments.
   Class IV (5,500 psi) for moderately to extremely aggressive environments.
   Concrete (Cast-In-Place):
   Class II (3,400 psi) for slightly aggressive environments.
   Class IV (5,500 psi) for moderately to extremely aggressive environments.
   Reinforcing Steel:
   Maintain minimum clearance of 2" for slightly and moderately aggressive environments or 3" for extremely aggressive environments, unless otherwise shown. Equal area substitution of welded wire (WWR) reinforcement is permitted.
2. Work this Index with the Cast-In-Place Concrete Box Culvert Details and Data Tables shown in the plans, Index 400-289 and the Precast Concrete Box Culverts shown in the shop drawings.
3. All joints between precast sections must be tongue & groove with joint sealant. Joints between cast-in-place & precast sections shall have longitudinal reinforcing extending from top, bottom & both side slabs of the precast box tied to the cast-in-place reinforcement. Single barrel culverts may have precast headwalls cast integrally with the end segment when approved by the Engineer.
4. Extension of existing multiple barrel box culverts with multiple single cell precast box culverts is not permitted unless approved by the District Structures Engineer. Full transition details must be shown in the shop drawings when approved.
5. Culverts larger than the specified size may be substituted with no additional payment to the Contractor. Substitution must be approved by the Engineer, minimum earth cover and invert elevations shown in the Contract Documents must be maintained.

LAST REVISION 01/01/11	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	PRECAST CONCRETE BOX CULVERTS - SUPPLEMENTAL DETAILS	INDEX 400-291	SHEET 1 of 5

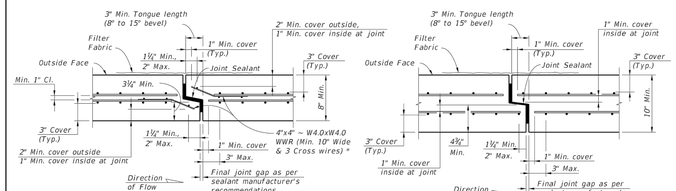


SECTION A-A
(2" Cover - Thin Wall Detail)

SECTION A-A
(2" Cover - Thick Wall Detail)



ALTERNATE BOTTOM SLAB TRANSVERSE JOINT
TYPICAL SECTION
(DOUBLE-SIDED TONGUE & GROOVE JOINT)
(All reinforcing not shown for clarity)

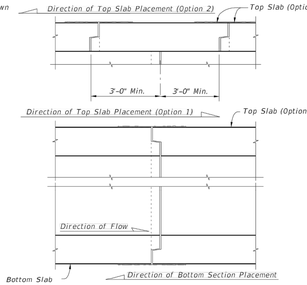


SECTION A-A
(3" Cover - Thin Wall Detail)

* At the Contractor's option when the box culvert reinforcing utilizes WWR, extend wall and slab reinforcing into the joint and bend to maintain cover in lieu of 4"x4" ~ W4.0xW4.0 WWR at joint. Transverse wire in tongue may be cut at corners of box to allow bending of the WWR.

SECTION A-A
(3" Cover - Thick Wall Detail)

NOTE:
Bottom Slab Joints in Type B Boxes may be single tongue & groove joints as shown in Section A-A when the Top Slab Joints are oriented as shown in Schematic "A".

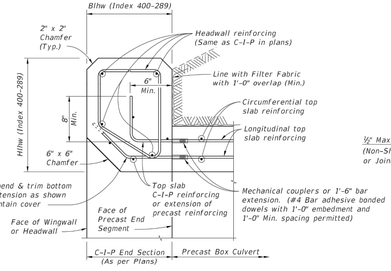


SCHEMATIC "A"
TYPE B BOX SECTION PLACEMENT
FOR SINGLE TONGUE & GROOVE JOINTS

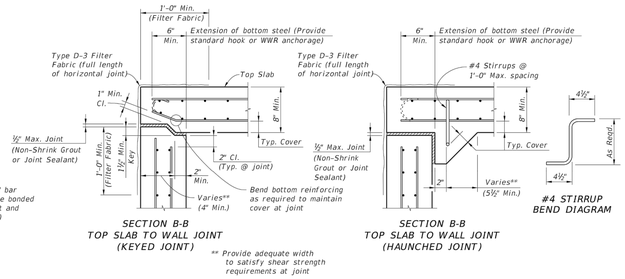
PRECAST SEGMENT TO SEGMENT TONGUE & GROOVE TRANSVERSE JOINTS

TWO-PIECE PRECAST SEGMENT
ADDITIONAL JOINT DETAILS
(TYPE B BOX)

LAST REVISION 07/01/15	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	PRECAST CONCRETE BOX CULVERTS - SUPPLEMENTAL DETAILS	INDEX 400-291	SHEET 2 of 5



SECTION C-C
C-I-P HEADWALL DETAILS AND CONNECTION TO PRECAST BOX



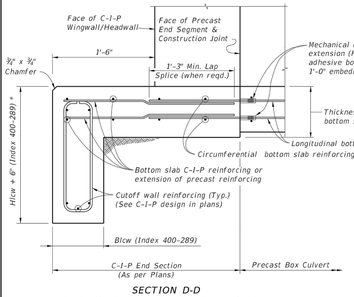
SECTION B-B
TOP SLAB TO WALL JOINT
(KEYED JOINT)

** Provide adequate width to satisfy shear strength requirements at joint

SECTION B-B
TOP SLAB TO WALL JOINT
(HAUNCHED JOINT)

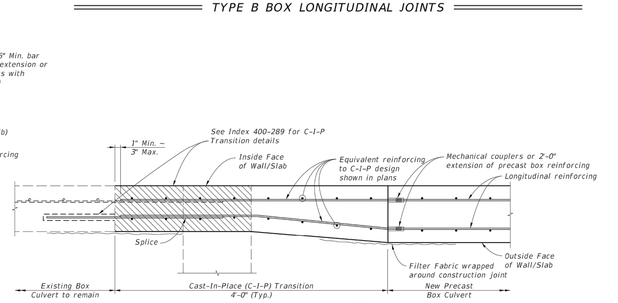
#4 STIRRUP BEND DIAGRAM

TYPE B BOX LONGITUDINAL JOINTS



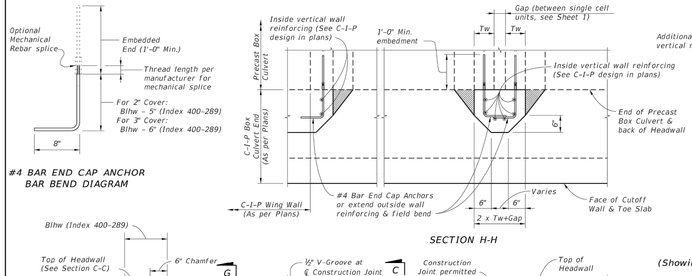
SECTION D-D
C-I-P TOE SLAB & CUTOFF WALL DETAILS
AND CONNECTION TO PRECAST BOX

* Provide additional 6" depth of cutoff wall at no additional cost.



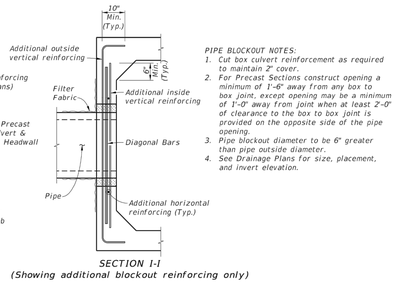
SECTION E-E
EXTERIOR WALL/SLAB TRANSITION DETAIL FOR PRECAST EXTENSION
(Type I Connection shown, Type II Connection similar)

LAST REVISION 01/01/12	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	PRECAST CONCRETE BOX CULVERTS - SUPPLEMENTAL DETAILS	INDEX 400-291	SHEET 3 of 5



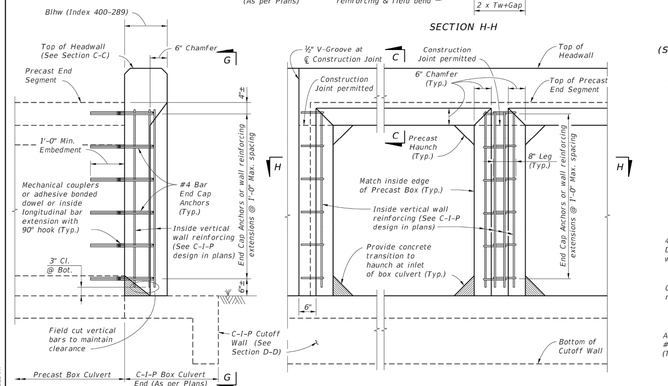
#4 BAR END CAP ANCHOR BAR BEND DIAGRAM

SECTION H-H



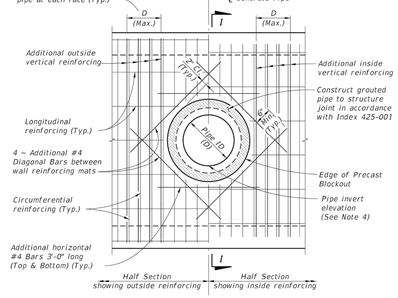
PIPE BLOCKOUT NOTES:
1. Cut box culvert reinforcement as required to maintain 2" cover.
2. For Precast Sections construct opening a minimum of 1'-6" away from any box to box joint, except opening may be a minimum of 1'-0" away from joint when at least 2'-0" of clearance to the box to box joint is provided on the opposite side of the pipe opening.
3. Pipe blockout diameter to be 6" greater than pipe outside diameter.
4. See Drainage Plans for size, placement, and invert elevation.

SECTION I-I
(Showing additional blockout reinforcing only)



SECTION F-F

VIEW G-G
(Headwall, Toe Slab and Cutoff Wall Reinforcing not shown for clarity)



ELEVATION VIEW
PIPE BLOCKOUT DETAILS

C-I-P END CAP DETAILS AND CONNECTION TO PRECAST BOX

LAST REVISION 07/01/07	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	PRECAST CONCRETE BOX CULVERTS - SUPPLEMENTAL DETAILS	INDEX 400-291	SHEET 4 of 5

Attachment I

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Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL
FDOT BOX CULVERT
DETAILS

Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-509

Revision 0 Sheet of

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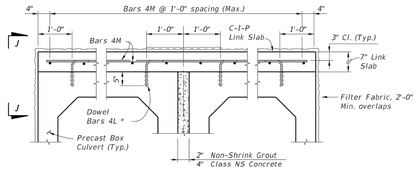


LINK SLAB TYPICAL SECTION
(Multiple Barrel Culvert shown, Single Barrel Culvert similar)

* Install dowels with an Adhesive Bonding Material System in accordance with Specification Section 416. The Contractor may substitute mechanical couplers in lieu of adhesive bonded dowels. Shift dowels to clear box culvert reinforcing.

LINK SLAB NOTES:

1. Provide a Cast-In-Place Link Slab to ensure uniform joint opening of precast box culverts when the differential settlement shown in the plans exceeds the following limits, except that a Link Slab is not required for differential settlements less than ½".

$$\Delta Y \leq \frac{(L)^2}{760 \times R \times W}$$

Where:
ΔY = Maximum Long-Term Differential Settlement (ft.)
R = Exterior height of Box Culvert (ft.)
W = Length of Box Culvert Segments (ft.)
L = Effective length for single curvature deflection (ft.)

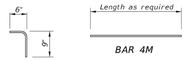
2. Extend Link Slab to back face of headwalls and to limits of existing box culverts for extensions.

ESTIMATED LINK SLAB QUANTITIES		
ITEM	UNIT	QUANTITY
Class II or IV Concrete (Culvert)	CY/SF	0.0216
Reinforcing Steel (Roadway)	Lb./SF	1.52

NOTE: Estimated quantities are based the plan area of precast box slabs, and are provided for information only. No additional payment will be made for Link Slabs where these are required for the precast box culverts.

BILL OF REINFORCING STEEL			
MARK	SIZE	NO. REQ'D	LENGTH
L	4	2 per Barrel/Ft.	1'-3"
M	4	As Reqd.	As Reqd.

REINFORCING STEEL BENDING DIAGRAMS



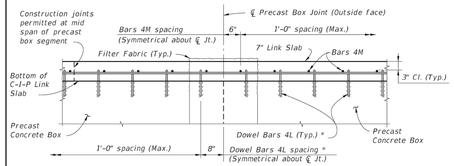
DOWEL BARS 4L

BAR 4M

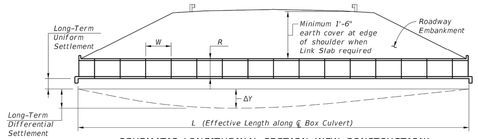
NOTES:
1. All bar dimensions are out to out.
2. Lap splice length for Bars 4M is 1'-4" minimum.

DESIGN NOTE:

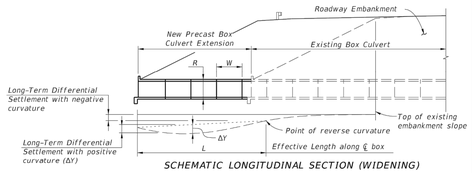
1. Link Slab required when joint openings from differential settlement exceed ½" as determined in Link Slab Note 1.



VIEW J-J



SCHEMATIC LONGITUDINAL SECTION (NEW CONSTRUCTION)



SCHEMATIC LONGITUDINAL SECTION (WIDENING)

DIFFERENTIAL SETTLEMENT COUNTERMEASURES FOR PRECAST BOX CULVERTS

LAST REVISION	DESCRIPTION:				
01/01/09	REVISION	FDOT FY 2019-20 STANDARD PLANS	PRECAST CONCRETE BOX CULVERTS - SUPPLEMENTAL DETAILS	INDEX 400-291	SHEET 5 of 5

Attachment I

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TALLAHASSEE, FL

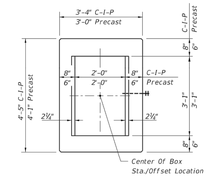
FDOT BOX CULVERT
DETAILS

Seal

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-510
Revision 0
Sheet of



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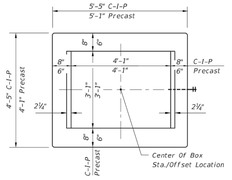

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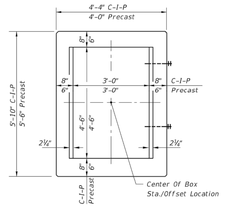

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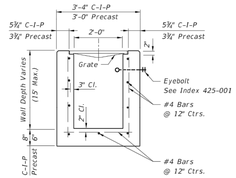

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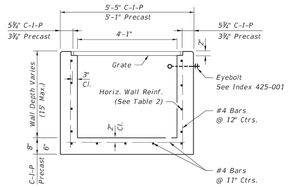

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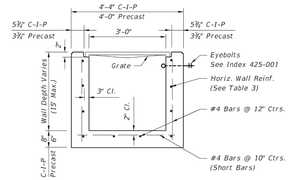

SECTION

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 1)

WALL DEPTH	SCHEDULE	AREA (in²/ft.)	MAX. SPACING	
			BARS	WWF
0'-15'	A12	0.20	12"	8"

TYPE C

Recommended Maximum Pipe Size:

2'-0" Wall – 18" Pipe
3'-1" Wall – 24" Pipe (18" where an 18" pipe enters a 2'-0" wall)

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 2)

WALL DEPTH	SCHEDULE	AREA (in²/ft.)	MAX. SPACING	
			BARS	WWF
0'-6'	A12	0.20	12"	8"
6'-10'	A6	0.20	6"	5"
10'-13'	A4	0.20	4"	3"
10'-15'	B5.5	0.24	5½"	5"

TYPE D

Recommended Maximum Pipe Size:

3'-1" Wall – 24" Pipe
4'-1" Wall – 36" Pipe

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 3)

WALL DEPTH	SCHEDULE	AREA (in²/ft.)	MAX. SPACING	
			BARS	WWF
0'-5'	A12	0.20	12"	8"
0'-7.5'	A6	0.20	6"	5"
7.5'-10'	B5.5	0.24	5½"	5"
10'-15'	C6.5	0.37	6½"	6"

TYPE E

Recommended Maximum Pipe Size:

3'-0" Wall – 24" Pipe
4'-6" Wall – 36" Pipe

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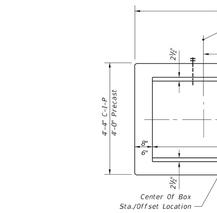
LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX 425-052	SHEET 1 of 7



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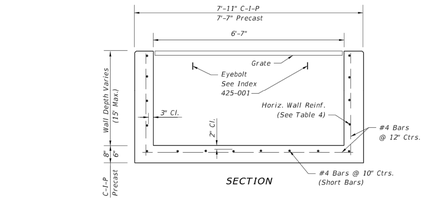


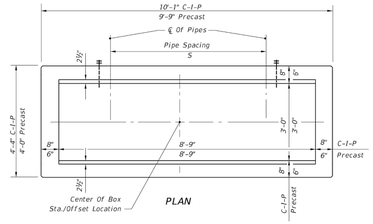
SECTION

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 4)

WALL DEPTH	SCHEDULE	AREA (in²/ft.)	MAX. SPACING	
			BARS	WWF
0'-5'	B5.5	0.24	5½"	5"
5'-7'	C6.5	0.37	6½"	6"
7'-15'	D4.5	0.53	4½"	4"

TYPE H (2 & 3-GRATE INLET)

Recommended Maximum Pipe Size:
3'-0" Wall – 24" Pipe
6'-7" Wall – 1-60" Pipe
Or 2-24" Pipe (S=3'-5")



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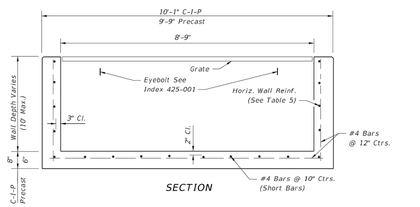

SECTION

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 5)

WALL DEPTH	SCHEDULE	AREA (in²/ft.)	MAX. SPACING	
			BARS	WWF
0'-5'	C3.5	0.37	3½"	3"
5'-10'	D4.5	0.53	4½"	4"

TYPE H (4-GRATE INLET)

Recommended Maximum Pipe Size:
3'-0" Wall – 24" Pipe
8'-9" Wall – 1-78" Pipe
Or 2-30" Pipe (S=4'-3")

GENERAL NOTES
See Sheet 3 of 7.

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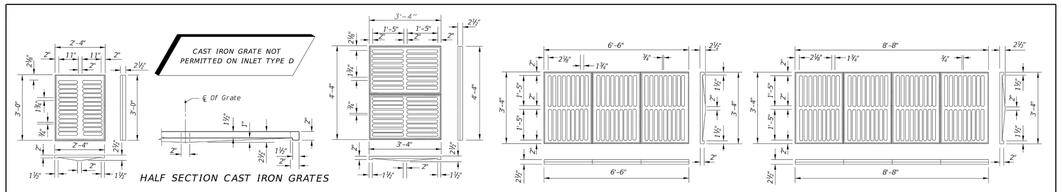
LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX 425-052	SHEET 2 of 7



HALF SECTION CAST IRON GRATES

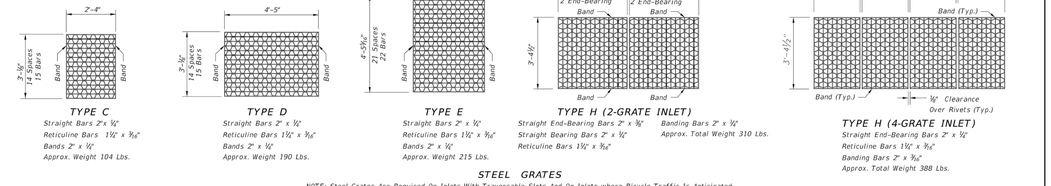
TYPE C
Approx. Weight 235 Lbs.

TYPE E
Approx. Weight 465 Lbs.

TYPE H (3-GRATE INLET)
Approx. Weight 725 Lbs.

TYPE H (4-GRATE INLET)
Approx. Weight 967 Lbs.

CAST IRON GRATES



TYPE C
Straight Bars 2" x ¼"
Reticuline Bars 1½" x ⅜₁₆"
Bands 2" x ¼"
Approx. Weight 104 Lbs.

TYPE D
Straight Bars 2" x ¼"
Reticuline Bars 1½" x ⅜₁₆"
Bands 2" x ¼"
Approx. Weight 190 Lbs.

TYPE E
Straight Bars 2" x ½"
Reticuline Bars 1½" x ⅜₁₆"
Bands 2" x ½"
Approx. Weight 215 Lbs.

TYPE H (2-GRATE INLET)
Straight End-Bearing Bars 2" x ⅜"
Straight Bearing Bars 2" x ½"
Reticuline Bars 1½" x ⅜₁₆"
Banding Bars 2" x ½"
Approx. Total Weight 310 Lbs.

TYPE H (4-GRATE INLET)
Straight End-Bearing Bars 2" x ½"
Reticuline Bars 1½" x ⅜₁₆"
Banding Bars 2" x ⅜₁₆"
Approx. Total Weight 388 Lbs.

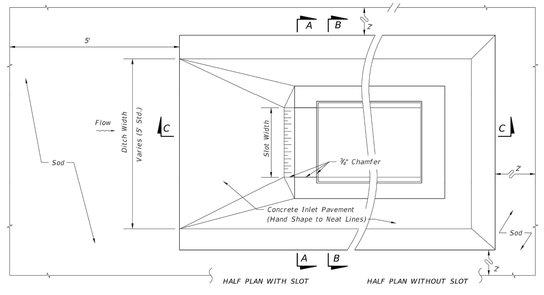
STEEL GRATES

NOTE: Steel Grates Are Required On Inlets With Traversable Slots And On Inlets where Bicycle Traffic Is Anticipated.

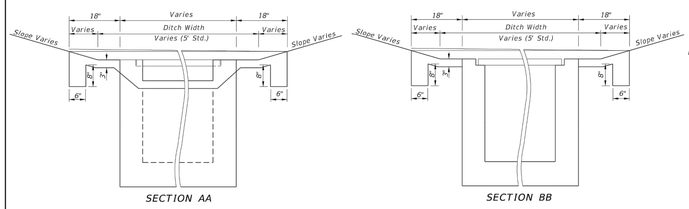
GENERAL NOTES

1. These inlets are suitable for bicycle traffic and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads. These inlets may be placed in areas subject to occasional pedestrian traffic such as landscaped areas and pavement areas where pedestrians can walk around the inlet.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and areas subject to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to Inlet Type H. Slots may be constructed at either or both ends as shown on plans. Traversable slots shall not be used in areas subject to occasional bicycle traffic.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dip galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Size for other types of pipe must be checked for fit.
5. All exposed edges and corners shall be ¾" chamfer or tooled to ½" radius.
6. Concrete inlet pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial. For conversion work and method of payment see 'TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS'.
8. Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Performance Turf, SY.
9. For supplementary details see Index 425-001.
10. All reinforcing is Grade 60 bars with 2" min. cover unless otherwise noted. Bars to be cut or bent for 1½" clearance around pipe opening. Provide one additional #4 bar above and at each side of pipe opening.

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX 425-052	SHEET 3 of 7



PLAN VIEW



PAVEMENT AND SODDING QUANTITIES FOR TRAVERSABLE SLOTS

Inlet	Pavement				Sod	
	Single Slot		Double Slot		Single Slot	Double Slot
	SY	CY	SY	CY	SY	SY
C	4.87	0.77	6.16	0.93	12	16
D	5.99	0.91	7.70	1.10	14	19
E	5.88	0.91	7.37	1.08	14	18

TRAVERSABLE SLOTS

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX 425-052	SHEET 4 of 7

Attachment I

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Client/Project
LEON COUNTY
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MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-511

Revision 0 Sheet of

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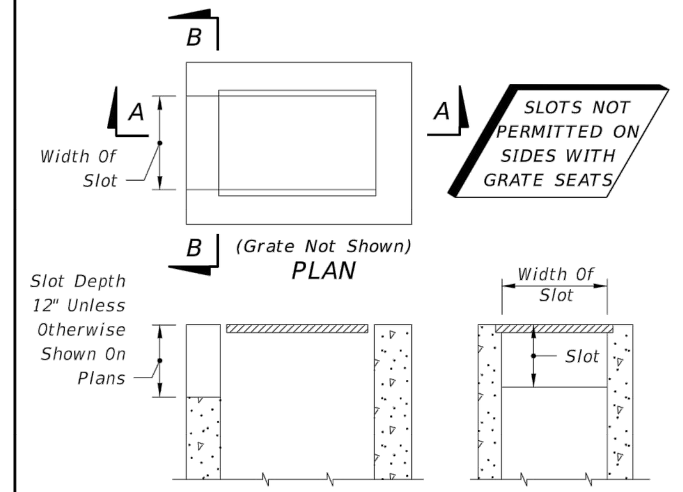
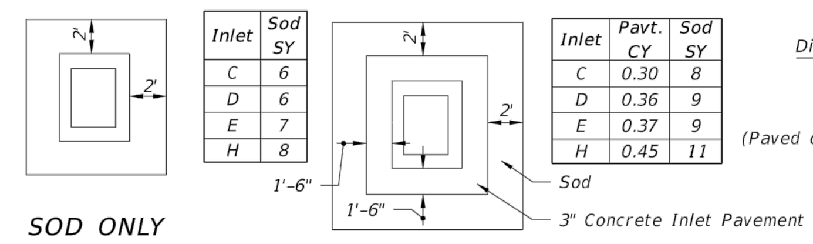
ORIGINAL SHEET - ANSI D



SECTION AA SECTION BB

NON-TRAVERSABLE SLOTS



SOD ONLY

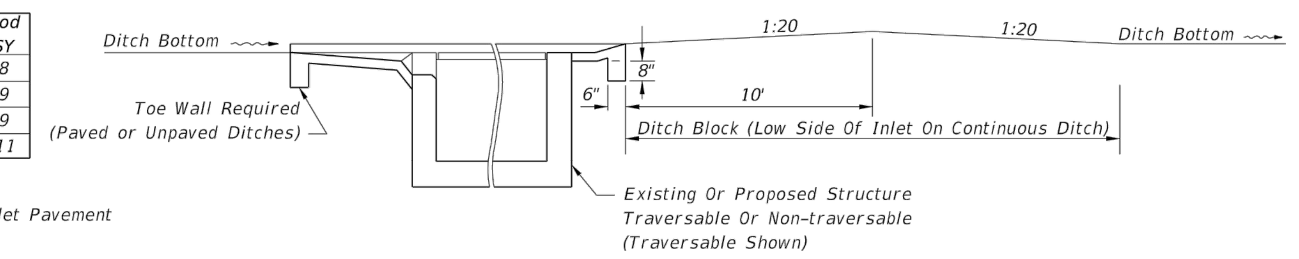
Inlet	Sod SY
C	6
D	6
E	7
H	8

PAVT. AND SOD

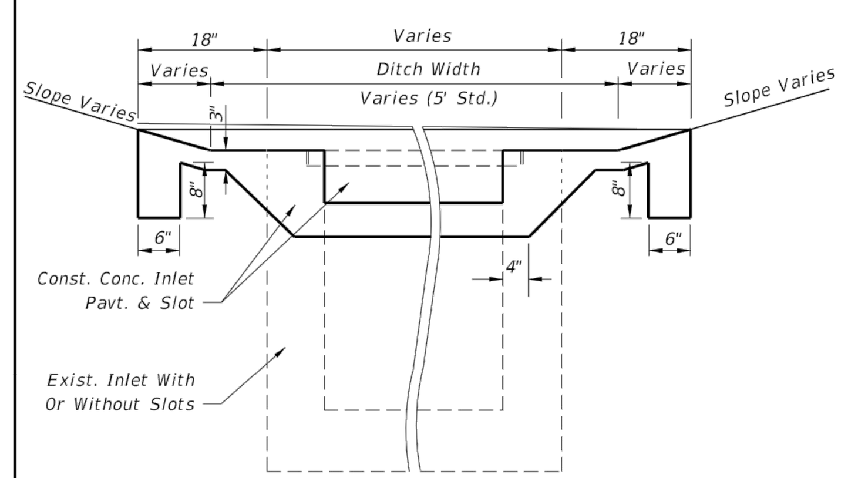
Inlet	Pavt. CY	Sod SY
C	0.30	8
D	0.36	9
E	0.37	9
H	0.45	11

NOTE: See General Notes Nos. 6 and 7, Sheet 3 of 7.

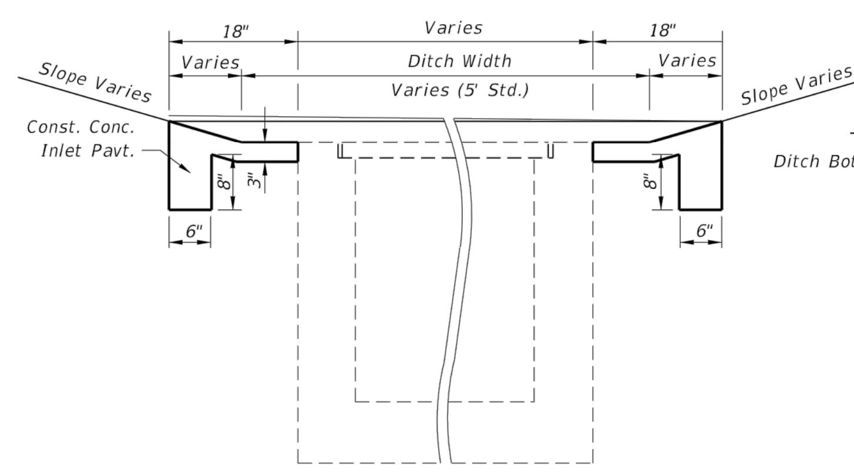
SODDING AND PAVEMENT FOR INLETS WITHOUT SLOTS AND INLETS WITH NON-TRAVERSABLE SLOTS



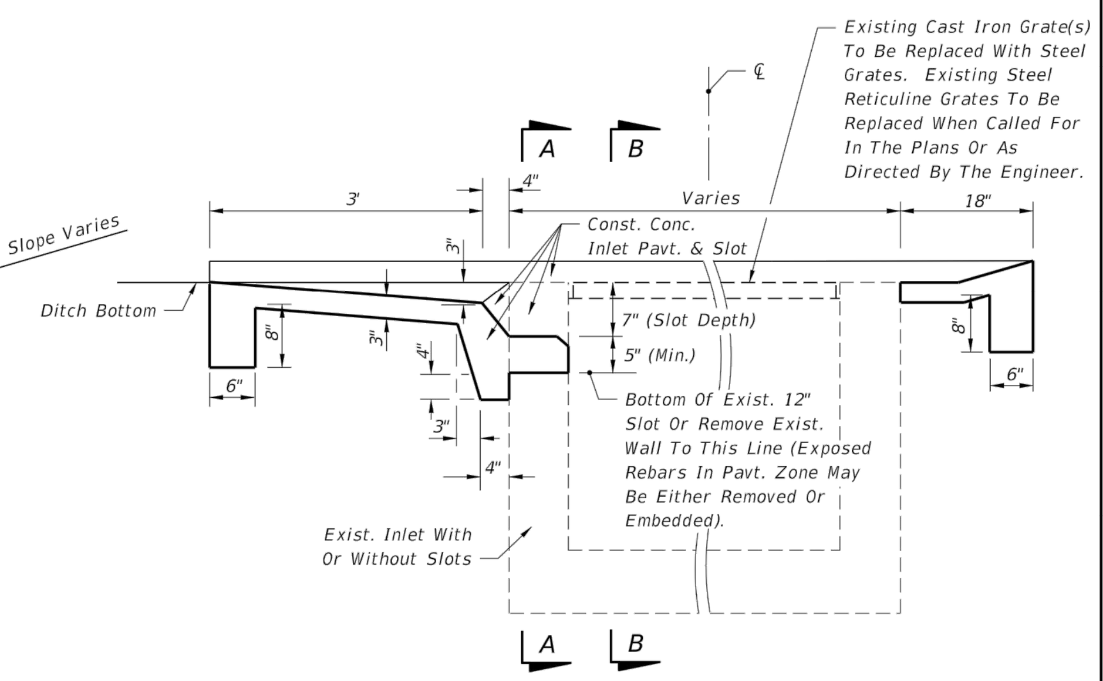
DITCH BLOCK FOR INLETS WITH OR WITHOUT SLOTS



SECTION AA



SECTION BB



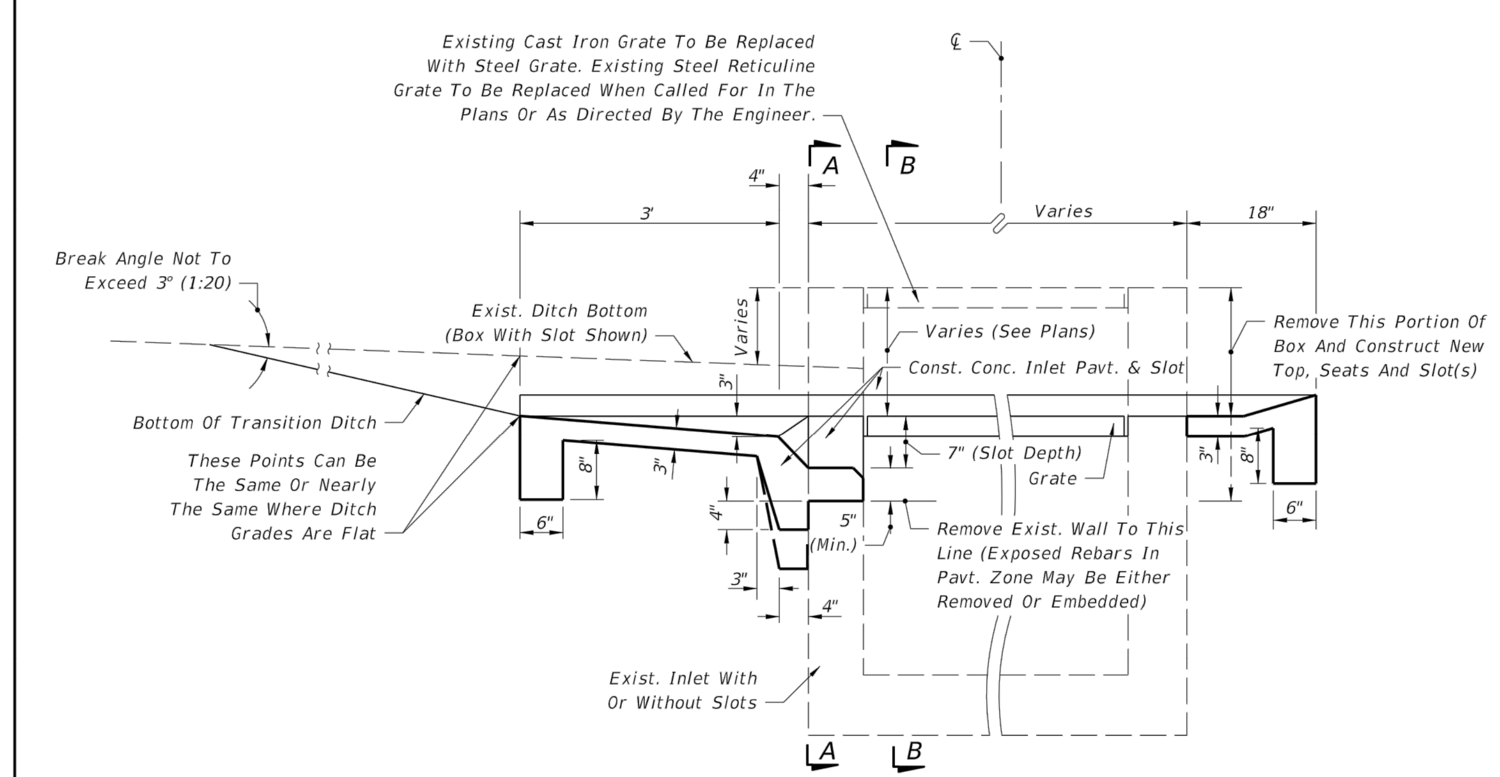
SINGLE SLOT SHOWN (DOUBLE SLOTS SYMMETRICAL ABOUT CENTERLINE)

SECTION CC (CASE 1)

PAVEMENT AND SODDING QUANTITIES FOR TRAVERSABLE SLOTS						
Inlet	Pavement				Sod	
	Single Slot		Double Slot		Single Slot	Double Slot
	SY	CY	SY	CY	SY	SY
C	4.87	0.83	6.16	1.05	12	16
D	5.99	1.01	7.70	1.30	14	19
E	5.88	0.99	7.37	1.24	14	18

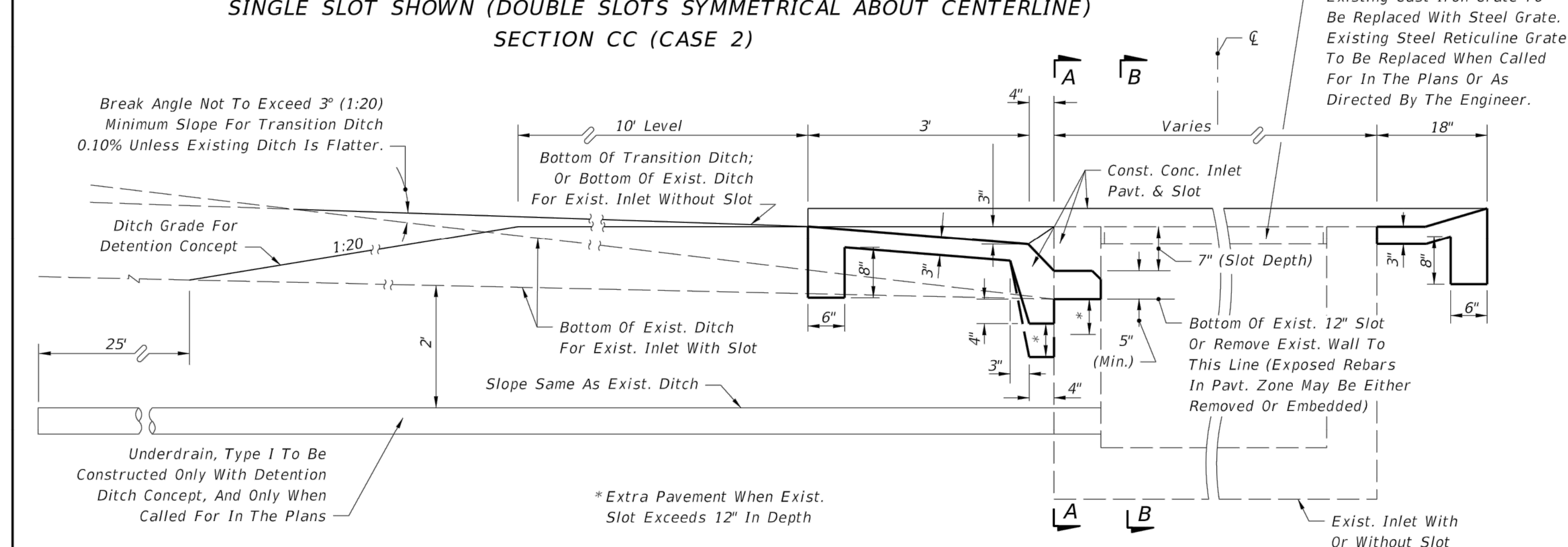
NOTE: For plan view and additional details see Sheet 4 of 7.
For payment see General Notes Nos. 6 and 7, Sheet 3 of 7.

TRAVERSABLE SLOTS FOR EXISTING INLETS



SINGLE SLOT SHOWN (DOUBLE SLOTS SYMMETRICAL ABOUT CENTERLINE)

SECTION CC (CASE 2)



SINGLE SLOT SHOWN (DOUBLE SLOTS SYMMETRICAL ABOUT CENTERLINE)

SECTION CC (CASE 3)

TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS

DESIGN NOTES FOR TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS

1. The general purpose of these conversions is to remove the hazard of the protruding inlet top, while not creating a hazard by depressing the top too deeply.

2. The corrective procedure depends on the approach ditch grade and hydraulic requirements of the site. The selection of the appropriate case depends on the relationship between inlet top and ditch elevation, and, on the vertical clearance between the top of the uppermost pipe(s) and the grate. The purpose for the Case 1 conversion is to add the traversable slot to an existing inlet where top removal, change in grate elevation and ditch transitions are not required. Case 2 will normally be applicable to ditches with flatter grades adjoining the inlet. Case 3 will normally be applicable to ditches with steeper grades adjoining the inlet where build up of the existing ditch is acceptable.

3. The designer shall stipulate in the plans which case is to be constructed at each individual inlet location.

   Where the existing inlet top is above the existing ditch (Case 2) but borrow material will be required to adjust the ditch (Case 3), and vertical clearance or other conditions do not prevent removal of the inlet top, the designer should call for Case 2. The designer shall determine if ditch reconstruction is required more than 35 feet beyond any traversable slot side and shall include separate pay items in the plans to cover the cost for that portion of required ditch reconstruction exceeding the 35 foot limit. The designer shall also determine whether ditch pavement is required for ditch restoration within the 35 foot limit and include that pavement under a pay item separate from the inlets partial.

   When the detention ditch concept is to be used with Case 3, the designer shall stipulate 'Case 3 (Detention)' in the plans.

   The designer shall determine whether tight soil or other conditions at each individual inlet indicates the need for underdrain in Case 3 conversions and shall call for Underdrain, Type I in the plans.

METHOD OF PAYMENT FOR TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS

1. Existing inlets converted to traversable slot tops under Cases 1, 2 and 3 shall be paid for as inlets partial, each. Case shall not be included in the pay item description.

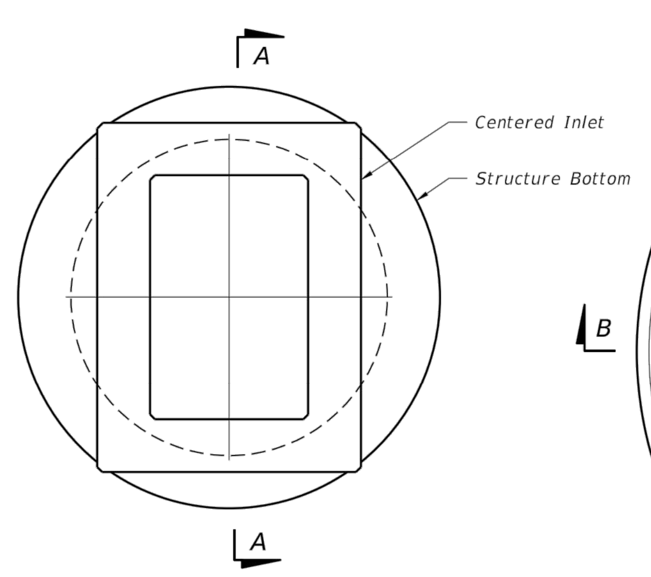
2. All ditch reconstruction work within 35 feet of each traversable slot conversion, whether required by these details or as a direct result of the conversion, shall be included as a part of the partial cost. Reconstruction work shall include excavation and removal of surplus materials or borrow materials in place, grading, compaction, shaping and restoration of disturbed turf. Sodding, ditch pavement and underdrain are not included as part of the inlet partial cost and are to be paid for separately.

3. Concrete inlet pavement and sodding shall be in accordance with the sections on this detail and with the Plan on Sheet 4 and Sections AA, BB and CC (as Case 1) and tabular quantities on Sheet 5.

4. Unit price and payment shall constitute full compensation for inlet conversion (including concrete inlet paving and replacement grate(s)), ditch reconstruction, restoration of disturbed turf, and shall be paid for under the contract price for Inlets (DT Bot) (Type __) (Partial), each.

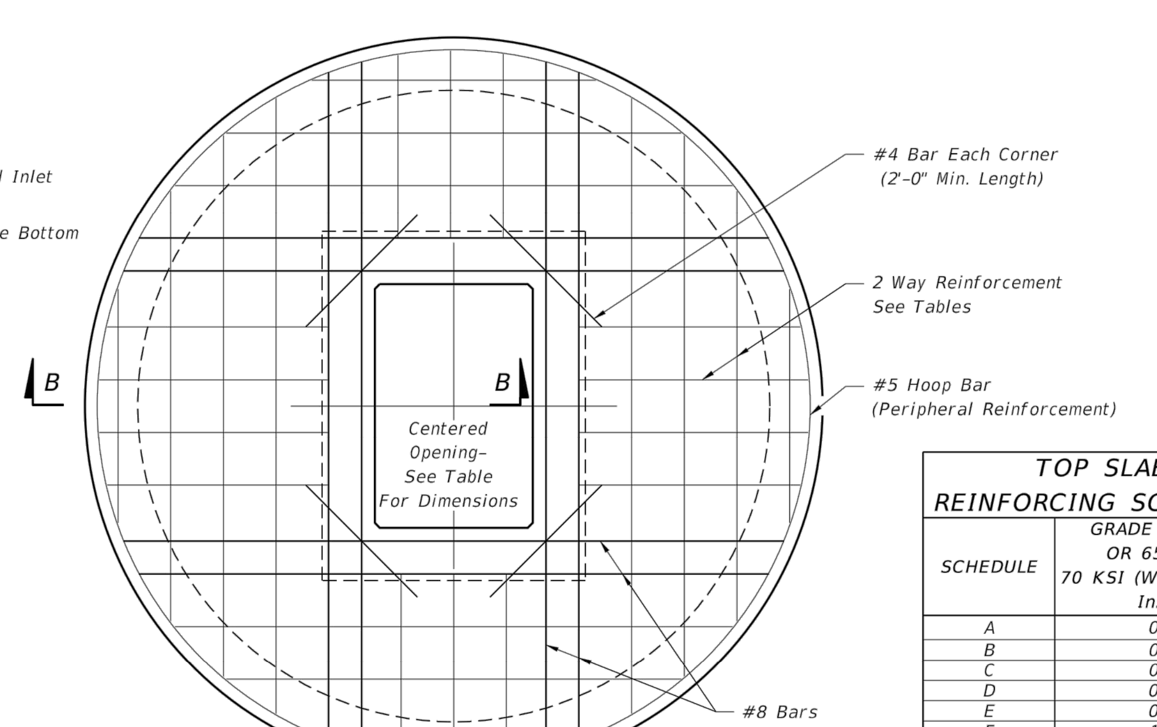
   Sodding shall be paid for under the contract unit price for Performance Turf, SY.

   Ditch pavement shall be paid for separate from the inlet by pavement type(s) and unit(s) as called for in the plans.



TOP VIEW

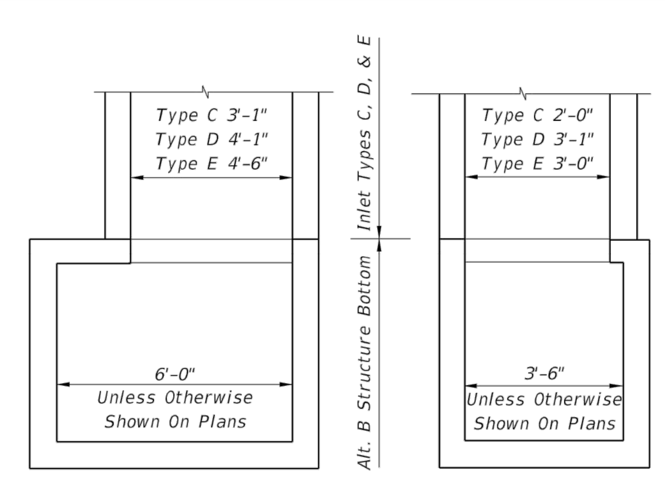
TOP SLAB OPENINGS		
DIAMETER	OPENING SIZE	
	MIN.	MAX.
4'-0"	2'-0" x 3'-1"	2'-0" x 3'-1"
5'-0"	2'-0" x 3'-1"	3'-1" x 4'-1"
6'-0"	2'-0" x 3'-1"	3'-0" x 4'-6"
8'-0"	2'-0" x 3'-1"	3'-0" x 4'-6"



TOP SLAB REINFORCING DIAGRAM

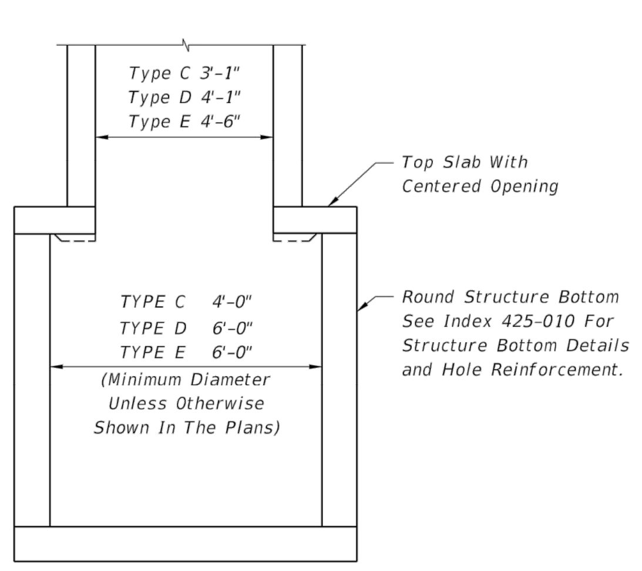
TOP SLAB REINFORCING SCHEDULE	
SCHEDULE	GRADE 60 (BAR) OR 65 KSI & 70 KSI (WIRE FABRIC) In.²/ft.
A	0.20
B	0.24
C	0.37
D	0.53
E	0.73
F	1.06
G	1.45

TOP SLAB WITH CENTERED OPENING		
SLAB DEPTH	SLAB THICKNESS	REINFORCING (2 WAYS) SCHEDULE
SIZE: 4'-0"		
≥0.5'-40'	9½"	C
SIZE: 5'-0"		
≥0.5' < 30'	9½"	C
30'-40'	9½"	D
SIZE: 6'-0"		
0.5' < 8'	9½"	B
8' < 18'	9½"	C
18' < 30'	9½"	D
30' < 37'	9½"	E
37'-40'	9½"	G
SIZE: 8'-0"		
≥0.5' < 9'	11½"	C
9' < 15'	11½"	D
15' < 23'	11½"	E
23' < 33'	11½"	E
33'-40'	11½"	G

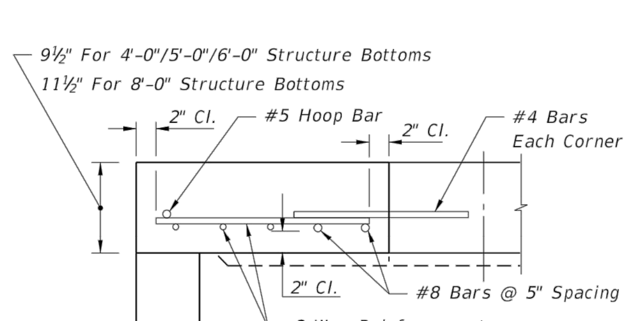


See Index 425-010 for structure bottom details and hole reinforcement.

ALT. B STRUCTURE BOTTOM FOR INLETS TYPE C, D & E



SECTION AA



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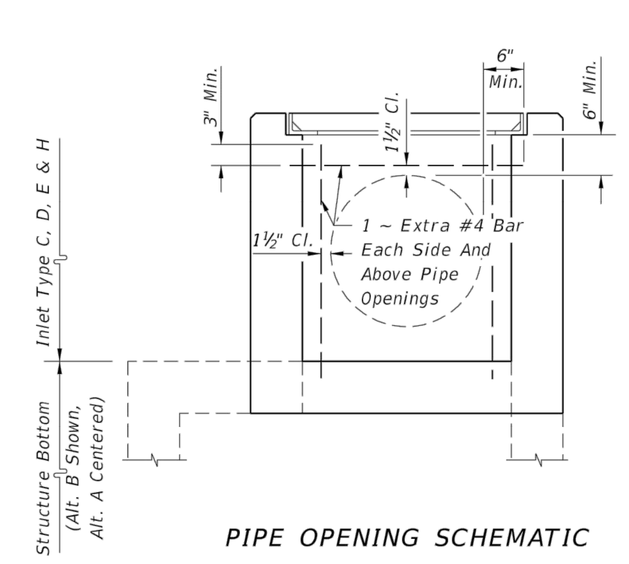

PIPE OPENING SCHEMATIC

ALT. A STRUCTURE BOTTOM FOR INLETS TYPE C, D AND E

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE, FL 32309
www.stantec.com C.A. No. 27013

Revision | By | Appd. | YY.MM.DD

Issued | By | Appd. | YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

Seal

Project Number: 215613796

File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-512

Revision 0 Sheet of

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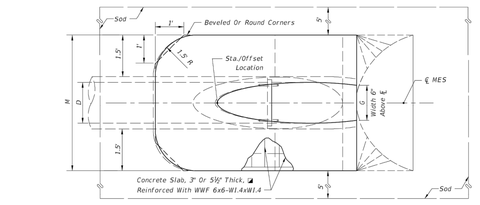
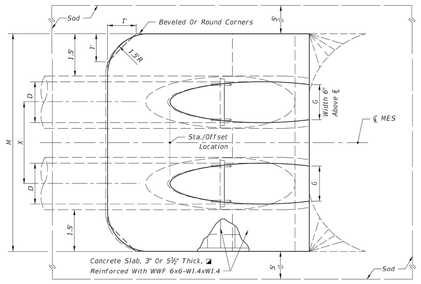
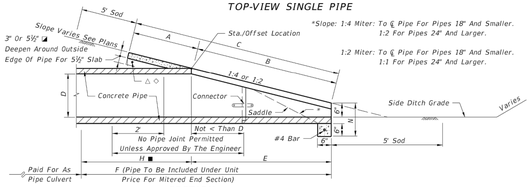
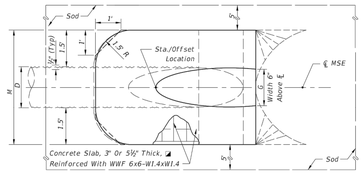
2020/01/14 1:48 PM By: Gerth, James

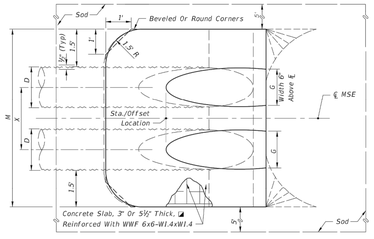
ORIGINAL SHEET - ANSI D

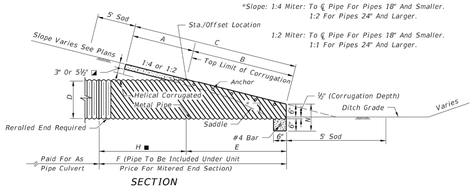


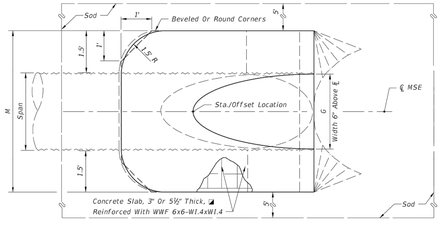


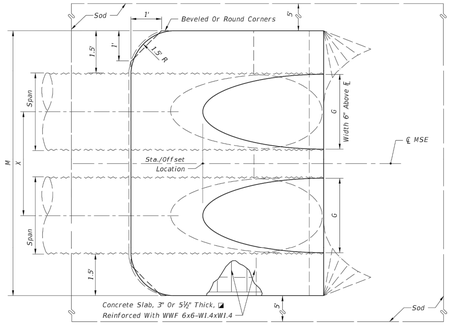


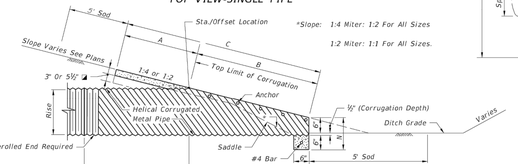


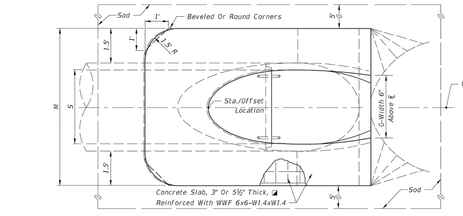


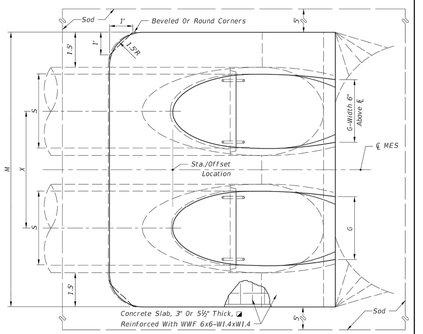


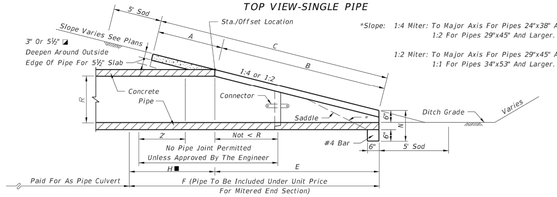












DIMENSIONS AND QUANTITIES

	D	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SY) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	2.9'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	3.4'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45
	42"	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	39	47	54
	54"	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	34	42	51	59
	60"	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64
	66"	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
1:4 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.53'	7.18' △	9.71'	7.03' △	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	28	32	36	40
	30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69
	60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.91'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	52	63	74	85

◪ See General Note 5.
See Sheet 5 For 3" Slab Quantities

■ Values shown for estimating pipe quantities and are for information only.

B	E	
△ 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 form bridge across crown of pipe. See section below.

TOP-VIEW SINGLE PIPE

SECTION

TOP-VIEW MULTIPLE PIPE

*Slope: 1:4 Miter: To ℄ Pipe For Pipes 18" And Smaller.
1:2 For Pipes 24" And Larger.

1:2 Miter: To ℄ Pipe For Pipes 18" And Smaller.
1:1 For Pipes 24" And Larger.

NOTE: See sheet 6 for details and notes.

SINGLE AND MULTIPLE ROUND CONCRETE PIPE

LAST REVISION 11/01/17
REVISION
DESCRIPTION:
FDOT
FY 2019-20
STANDARD PLANS
CROSS DRAIN MITERED END SECTION
INDEX 430-021
SHEET 1 of 6

DIMENSIONS AND QUANTITIES

	D	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SY) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	2'-7"	2.5'	1.68'	4.18'	1.5'	5.0'	1.23'	3.5'	4.33'	6.92'	9.50'	12.08'	1.04'	0.35	0.54	0.74	0.94	21	24	27	29
	18"	2'-10"	2.5'	2.24'	4.74'	2.0'	6.0'	1.41'	4'	4.58'	7.42'	10.25'	13.08'	1.04'	0.38	0.62	0.87	1.12	22	25	28	31
	24"	3'-5"	2.5'	3.35'	5.85'	3.0'	7.0'	1.73'	4'	5.08'	8.50'	11.92'	15.33'	1.04'	0.47	0.76	1.05	1.34	23	27	31	35
	30"	4'-3"	2.5'	4.47'	6.97'	4.0'	8.0'	2.00'	4'	5.58'	9.83'	14.08'	18.33'	1.04'	0.57	0.96	1.37	1.77	25	30	35	39
	36"	5'-1"	2.5'	5.59'	8.09'	5.0'	9.0'	2.24'	4'	6.08'	11.17'	16.25'	21.33'	1.04'	0.67	1.19	1.72	2.26	27	33	38	44
	42"	6'-0"	2.5'	6.71'	9.21'	6.0'	10.0'	2.45'	4'	6.58'	12.58'	18.58'	24.58'	1.04'	0.78	1.48	2.17	2.87	29	36	42	49
	48"	6'-9"	2.5'	7.83'	10.33'	7.0'	11.0'	2.65'	4'	7.08'	13.83'	20.58'	27.33'	1.04'	0.89	1.71	2.54	3.36	31	38	46	53
	54"	7'-8"	2.5'	8.94'	11.44'	8.0'	12.0'	2.83'	4'	7.58'	15.25'	22.92'	30.58'	1.04'	1.02	2.06	3.10	4.14	33	41	50	58
	60"	8'-6"	2.5'	10.06'	12.56'	9.0'	13.0'	3.00'	4'	8.08'	16.58'	25.08'	33.58'	1.04'	1.14	2.38	3.63	4.89	34	44	53	63
1:4 Slope	15"	2'-7"	2.5'	3.09'	5.59'	3.0'	7.0'	1.23'	4'	4.33'	6.92'	9.50'	12.08'	1.04'	0.44	0.68	0.91	1.15	22	25	28	31
	18"	2'-10"	2.5'	4.12'	6.62'	4.0'	8.0'	1.41'	4'	4.58'	7.42'	10.25'	13.08'	1.04'	0.49	0.77	1.03	1.31	24	27	30	33
	24"	3'-5"	2.5'	6.18'	8.68'	6.0'	10.0'	1.73'	4'	5.08'	8.50'	11.92'	15.33'	1.04'	0.65	1.09	1.38	1.77	27	30	34	38
	30"	4'-3"	2.5'	8.25'	10.75'	8.0'	12.0'	2.00'	4'	5.58'	9.83'	14.08'	18.33'	1.04'	0.81	1.34	1.90	2.44	29	34	39	44
	36"	5'-1"	2.5'	10.31'	12.81'	10.0'	14.0'	2.24'	4'	6.08'	11.17'	16.25'	21.33'	1.04'	0.97	1.68	2.41	3.14	32	38	44	49
	42"	6'-0"	2.5'	12.37'	14.87'	12.0'	16.0'	2.45'	4'	6.58'	12.58'	18.58'	24.58'	1.04'	1.13	2.08	3.06	4.02	35	42	48	55
	48"	6'-9"	2.5'	14.43'	16.93'	14.0'	18.0'	2.65'	4'	7.08'	13.83'	20.58'	27.33'	1.04'	1.29	2.49	3.69	4.88	38	46	53	60
	54"	7'-8"	2.5'	16.49'	18.99'	16.0'	20.0'	2.83'	4'	7.58'	15.25'	22.92'	30.58'	1.04'	1.48	2.98	4.47	5.98	41	49	58	66
	60"	8'-6"	2.5'	18.55'	21.05'	18.0'	22.0'	3.00'	4'	8.08'	16.58'	25.08'	33.58'	1.04'	1.66	3.49	5.31	7.13	44	53	63	72

◪ See General Note 5.
See Sheet 5
For 3" Slab Quantities

■ Values shown for estimating pipe quantities and are for information only

TOP VIEW-SINGLE PIPE

*Slope: 1:4 Miter: To ℄ Pipe For Pipes 18" And Smaller.
1:2 For Pipes 24" And Larger.

1:2 Miter: To ℄ Pipe For Pipes 18" And Smaller.
1:1 For Pipes 24" And Larger.

SECTION

TOP VIEW-MULTIPLE PIPE

NOTE: See Sheet 6 For Details And Notes.

SINGLE AND MULTIPLE ROUND CORRUGATED METAL PIPE

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1974 AASHTO — DIMENSIONS AND QUANTITIES

	SPAN	RISE	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SY) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	17"	13"	2"-6"	2.5'	1.30'	3.80'	1.17'	4'	1.39'	2.8'	4.50'	7.00'	9.50'	12.00'	1.04'	0.41	0.61	0.81	1.02	21	23	26	29
	21"	15"	2'-10"	2.5'	1.68'	4.17'	1.50'	5'	1.76'	3.5'	4.83'	7.67'	10.50'	13.33'	1.04'	0.43	0.66	0.88	1.10	22	25	28	31
	28"	20"	3'-5"	2.5'	2.61'	5.11'	2.33'	6'	2.22'	3.7'	5.42'	8.83'	12.25'	15.67'	1.04'	0.51	0.78	1.06	1.33	23	27	30	34
	35"	24"	4'-0"	2.5'	3.35'	5.85'	3.00'	7'	2.55'	4.0'	6.00'	10.00'	14.00'	18.00'	1.04'	0.57	0.90	1.22	1.55	24	29	33	38
	42"	29"	4'-9"	2.5'	4.29'	6.79'	3.83'	8'	2.97'	4.2'	6.58'	11.33'	16.08'	20.83'	1.04'	0.64	1.04	1.46	1.87	26	31	37	42
	49"	33"	5'-6"	2.5'	5.03'	7.53'	4.50'	9'	3.34'	4.5'	7.17'	12.67'	18.17'	23.67'	1.04'	0.73	1.23	1.72	2.22	28	34	40	46
	57"	38"	6'-4"	2.5'	5.96'	8.46'	5.33'	10'	3.65'	4.7'	7.83'	14.17'	20.50'	26.83'	1.04'	0.83	1.44	2.04	2.64	29	36	44	51
	64"	43"	7'-1"	2.5'	6.89'	9.39'	6.17'	11'	3.89'	4.8'	8.42'	15.50'	22.58'	29.67'	1.04'	0.95	1.67	2.39	3.11	31	39	47	55
	71"	47"	7'-10"	2.5'	7.64'	10.14'	6.83'	12'	4.14'	5.2'	9.00'	16.83'	24.67'	32.50'	1.04'	1.05	1.89	2.74	3.57	33	41	50	59
1:4 Slope	17"	13"	2'-6"	2.5'	2.41'	4.91'	2.33'	7'	1.39'	4.7'	4.50'	7.00'	9.50'	12.00'	1.04'	0.48	0.71	0.95	1.18	22	25	27	30
	21"	15"	2'-10"	2.5'	3.09'	5.59'	3.00'	8'	1.76	5.0'	4.83'	7.67'	10.50'	13.33'	1.04'	0.52	0.80	1.09	1.31	23	26	29	32
	28"	20"	3'-5"	2.5'	4.81'	7.31'	4.67'	9'	2.22'	4.3'	5.42'	8.83'	12.25'	15.67'	1.04'	0.61	0.92	1.27	1.59	25	29	33	37
	35"	24"	4'-0"	2.5'	6.18'	8.68'	6.00'	11'	2.55'	5.0'	6.00'	10.00'	14.00'	18.00'	1.04'	0.73	1.14	1.55	1.97	28	32	37	41
	42"	29"	4'-9"	2.5'	7.90'	10.40'	7.67'	12'	2.97'	4.3'	6.58'	11.33'	16.08'	20.83'	1.04'	0.87	1.39	1.92	2.45	30	35	41	46
	49"	33"	5'-6"	2.5'	9.28'	11.78'	9.00'	14'	3.34'	5.0'	7.17'	12.67'	18.17'	23.67'	1.04'	1.00	1.66	2.30	2.96	32	38	45	51
	57"	38"	6'-4"	2.5'	11.00'	13.50'	10.67'	16'	3.65'	5.3'	7.83'	14.17'	20.50'	26.83'	1.04'	1.18	2.00	2.82	3.64	35	42	49	56
	64"	43"	7'-1"	2.5'	12.71'	15.21'	12.33'	17'	3.89'	4.7'	8.42'	15.50'	22.58'	29.67'	1.04'	1.36	2.39	3.38	4.38	38	45	53	61
	71"	47"	7'-10"	2.5'	14.09'	16.59'	13.67'	19'	4.14'	5.3'	9.00'	16.83'	24.67'	32.50'	1.04'	1.50	2.65	3.81	4.97	40	48	57	66

◪ See General Note 5.
See Sheet 5 For 3" Slab Quantities

■ Values shown for estimating pipe quantities and are for information.

TOP VIEW-SINGLE PIPE

*Slope: 1:4 Miter: 1:2 For All Sizes

1:2 Miter: 1:1 For All Sizes.

SECTION

TOP VIEW-MULTIPLE PIPE

NOTE: See Sheet 6 For Details And Notes.

SINGLE AND MULTIPLE CORRUGATED METAL PIPE-ARCH

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DIMENSIONS & QUANTITIES

	Rise R	Span S	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONC. SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SY) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	12"	18"	2'-10"	1.97'	1.62'	3.59'	1.56'	4'	1.50'	2.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.30	0.49	0.67	0.85	21	24	27	30
	14"	23"	3'-4"	2.01'	1.99'	4.00'	1.89'	5'	1.90'	3.1'	5.38'	8.71'	12.04'	15.38'	1.23'	0.37	0.59	0.81	1.02	22	26	29	33
	19"	30"	4'-0"	2.11'	2.92'	5.03'	2.73'	6'	2.37'	3.3'	6.04'	10.04'	14.04'	18.04'	1.27'	0.50	0.80	1.09	1.39	24	28	33	37
	24"	38"	5'-0"	2.20'	3.85'	6.05'	3.56'	7'	2.85'	3.4'	6.79'	11.79'	16.79'	21.79'	1.31'	0.62	1.03	1.45	1.86	26	31	37	42
	29"	45"	5'-11"	2.34'	4.79'	7.13'	4.39'	8'	3.19'	3.6'	7.50'	13.42'	19.33'	25.25'	1.38'	0.75	1.30	1.84	2.39	28	34	41	47
	34"	53"	7'-0"	2.43'	5.72'	8.15'	5.23'	9'	3.57'	3.8'	8.25'	15.25'	22.25'	29.25'	1.42'	0.90	1.61	2.32	3.03	30	37	45	53
	38"	60"	7'-10"	2.52'	6.46'	8.98'	5.89'	9'	3.95'	3.1'	8.92'	16.75'	24.58'	32.42'	1.46'	1.03	1.89	2.74	3.60	31	40	49	57
	43"	68"	8'-11"	2.62'	7.39'	10.01'	6.73'	10'	4.28'	3.3'	9.67'	18.58'	27.50'	36.42'	1.50'	1.19	2.26	3.33	4.40	33	43	53	63
	48"	76"	9'-11"	2.71'	8.33'	11.04'	7.56'	11'	4.59'	3.4'	10.42'	20.33'	30.25'	40.17'	1.54'	1.38	2.65	3.93	5.21	35	46	57	68
	53"	83"	10'-8"	2.80'	9.26'	12.06'	8.39'	12'	4.77'	3.6'	11.08'	21.75'	32.42'	43.08'	1.58'	1.55	3.03	4.50	5.96	37	49	61	73
	58"	91"	11'-8"	2.90'	10.19'	13.09'	9.23'	13'	5.01'	3.8'	11.83'	23.50'	35.17'	46.83'	1.63'	1.75	3.47	5.20	6.93	39	52	65	78
1:4 Slope	12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.45	0.68	0.92	1.14	23	26	29	32
	14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'	0.53	0.83	1.13	1.42	24	28	32	35
	19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	0.74	1.15	1.57	1.98	27	32	36	40
	24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	0.97	1.57	2.19	2.81	30	36	41	47
	29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	1.22	2.07	2.92	3.77	33	40	46	53
	34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	1.48	2.62	3.77	4.92	36	44	52	59
	38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	1.72	3.12	4.53	5.92	38	47	56	65
	43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	2.02	3.78	5.56	7.32	41	51	61	71
	48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	2.34	4.49	6.64	8.79	44	55	66	77
	53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	2.66	5.17	7.66	10.16	47	59	71	83
	58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3.02	5.98	8.95	11.90	50	63	76	89

◪ See General Note 3.
See Sheet 5 For 3" Slab Quantities

■ Values shown for estimating pipe quantities and are for information only.

TOP VIEW-SINGLE PIPE

*Slope: 1:4 Miter: To Major Axis For Pipes 24"x38" And Smaller.
1:2 For Pipes 29"x45" And Larger.

1:2 Miter: To Major Axis For Pipes 29"x45" And Smaller.
1:1 For Pipes 34"x53" And Larger.

SECTION

NOTE: See Sheet 6 For Details And Notes.

TOP VIEW - MULTIPLE PIPE

SINGLE AND MULTIPLE ELLIPTICAL CONCRETE PIPE

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Attachment I

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE, FL 32309
www.stantec.com C.A. No. 27013

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS

TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

Seal

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-513
Revision 0
Sheet of

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2020/01/14 1:48 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

QUANTITIES FOR 3" THICK CONCRETE SLABS (CY)

	D	ROUND-CONCRETE Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	0.27	0.41	0.54	0.67
	18"	0.31	0.45	0.60	0.75
	24"	0.39	0.59	0.79	1.00
	30"	0.46	0.76	1.04	1.32
	36"	0.55	0.94	1.33	1.71
	42"	0.66	1.15	1.66	2.15
	48"	0.76	1.37	1.96	2.57
	54"	0.87	1.62	2.38	3.14
	60"	0.99	1.90	2.81	3.73
	66"	1.11	2.15	3.21	4.27
	72"	1.24	2.46	3.68	4.90
1:4 Slope	15"	0.40	0.61	0.80	1.00
	18"	0.47	0.69	0.91	1.14
	24"	0.60	0.90	1.21	1.52
	30"	0.76	1.19	1.63	2.07
	36"	0.89	1.48	2.05	2.63
	42"	1.05	1.82	2.57	3.34
	48"	1.21	2.15	3.07	4.00
	54"	1.39	2.55	3.72	4.88
	60"	1.59	3.02	4.44	5.86
	66"	1.91	3.66	5.40	7.15
	72"	2.12	4.18	6.24	8.30

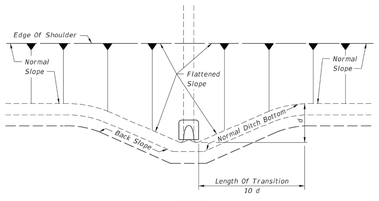
	D	ROUND-CMP Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	0.24	0.37	0.51	0.64
	18"	0.26	0.43	0.61	0.78
	24"	0.32	0.52	0.72	0.91
	30"	0.38	0.64	0.91	1.18
	36"	0.44	0.78	1.13	1.48
	42"	0.51	0.96	1.41	1.87
	48"	0.57	1.09	1.63	2.15
	54"	0.65	1.32	1.99	2.66
	60"	0.71	1.49	2.28	3.07
1:4 Slope	15"	0.31	0.47	0.63	0.79
	18"	0.34	0.53	0.71	0.90
	24"	0.44	0.69	0.92	1.18
	30"	0.53	0.88	1.25	1.60
	36"	0.62	1.07	1.53	2.00
	42"	0.71	1.30	1.92	2.52
	48"	0.80	1.54	2.29	3.02
	54"	0.91	1.83	2.74	3.67
	60"	1.02	2.15	3.27	4.39

	Span	Rise	CMP-ARCH Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	17"	13"	0.33	0.49	0.65	0.81
	21"	15"	0.33	0.50	0.67	0.83
	28"	20"	0.37	0.56	0.76	0.95
	35"	24"	0.40	0.62	0.84	1.07
	42"	29"	0.43	0.70	0.98	1.25
	49"	33"	0.49	0.82	1.15	1.48
	57"	38"	0.55	0.95	1.35	1.75
	64"	43"	0.62	1.10	1.57	2.05
	71"	47"	0.69	1.24	1.80	2.35
1:4 Slope	17"	13"	0.38	0.56	0.74	0.92
	21"	15"	0.39	0.59	0.80	0.95
	28"	20"	0.43	0.64	0.88	1.10
	35"	24"	0.49	0.77	1.05	1.33
	42"	29"	0.57	0.92	1.27	1.62
	49"	33"	0.65	1.08	1.50	1.93
	57"	38"	0.76	1.30	1.83	2.37
	64"	43"	0.87	1.55	2.18	2.83
	71"	47"	0.95	1.68	2.43	3.17

	Rise	Span	ELLIPTICAL-CONCRETE Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	12"	18"	0.19	0.33	0.45	0.57
	14"	23"	0.25	0.40	0.55	0.69
	19"	30"	0.34	0.55	0.75	0.95
	24"	38"	0.43	0.71	1.00	1.28
	29"	45"	0.52	0.90	1.27	1.65
	34"	53"	0.62	1.11	1.60	2.09
	38"	60"	0.70	1.29	1.87	2.46
	43"	68"	0.81	1.54	2.26	2.99
	48"	76"	0.93	1.79	2.66	3.53
	53"	83"	1.04	2.04	3.03	4.02
	58"	91"	1.17	2.33	3.49	4.66
1:4 Slope	12"	18"	0.30	0.45	0.61	0.76
	14"	23"	0.36	0.56	0.76	0.95
	19"	30"	0.51	0.79	1.08	1.36
	24"	38"	0.68	1.10	1.53	1.96
	29"	45"	0.86	1.45	2.04	2.63
	34"	53"	1.02	1.81	2.60	3.39
	38"	60"	1.18	2.14	3.10	4.05
	43"	68"	1.38	2.58	3.79	4.99
	48"	76"	1.59	3.05	4.51	5.97
	53"	83"	1.80	3.50	5.19	6.88
	58"	91"	2.04	4.04	6.05	8.05

LAST REVISION	DESCRIPTION:	FDOT	INDEX	SHEET
11/01/17		FY 2019-20 STANDARD PLANS	430-021	5 of 6

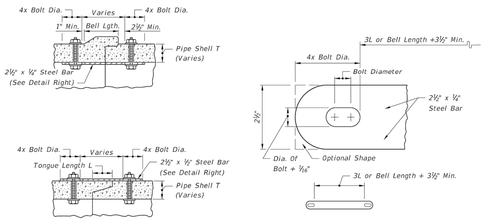
CROSS DRAIN MITERED END SECTION



PLAN

NOTE: See General Note 4

SLOPE AND DITCH TRANSITIONS



All bars, bolts, nuts and washers are to be galvanized steel.
Bolt diameters shall be ⅜" for 15" to 36" pipe and ½" 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.

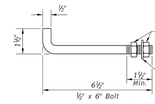
CONCRETE PIPE CONNECTOR

GENERAL NOTES

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of cross drain pipe; corrugated steel pipe mitered end sections may be used with any type of cross drain pipe except steel pipe. When bituminous coated metal pipe is specified for cross drain pipe, construct the mitered end sections with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the cross drain pipe, construct a concrete jacket in accordance with Index 430-001.
2. Use either corrugated metal or concrete mitered end sections for corrugated polyethylene pipe (HDPE), polyvinyl-chloride pipe (PVC) and polypropylene pipe (PPP). When used in conjunction with corrugated mitered end sections, make connection using either a formed metal band specifically designated to join HDPE or PVC pipe, with metal pipe or other coupler approved by the State Drainage Engineer. When used in conjunction with a concrete mitered end sections, concrete jacket constructed in accordance with Index 430-001.
3. Class NS concrete cast-in-place reinforced slabs are required for all sizes of cross drain pipes. Unless 3" thickness called for in plans, construct slabs at 5½" thick.
4. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered end section.
5. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.
6. Prior to placing concrete slab apply a bituminous coating to any portion of corrugated metal pipe in direct contact with concrete. Extend the coating 12" beyond the concrete slab.
7. When existing multiple cross drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered end sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.

DESIGN NOTES

1. Mitered end sections for pipe sizes 15", 18" and 24" round or equivalent pipe arch or elliptical pipe are permitted within the clear zone. When the slope intersection permits, the mitered end section may be located with the culvert opening as close as 8' beyond the outside edge of the shoulder.
2. Include slope and ditch transitions when the normal roadway slope must be flattened to place end section outside clear zone. See Slope and Ditch Transitions detail.



Anchors required for CMP only.

Anchor, washer and nuts to be galvanized steel.

Bend anchor where required to center in concrete slab. Damaged surfaces to be repaired after bending. Anchors are to be spaced a distance equal to four (4) corrugations. Place the anchors in the outside crest of corrugation.

Flat washers to be placed on inside wall of pipe.

Holes in the mitered end pipe are to be drilled or punched; burning not permitted.

ANCHOR DETAIL

SPECIAL DETAILS AND NOTES

LAST REVISION	DESCRIPTION:	FDOT	INDEX	SHEET
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CROSS DRAIN MITERED END SECTION

Attachment I

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE, FL 32309
www.stantec.com C.A. No. 27013

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. 5-514

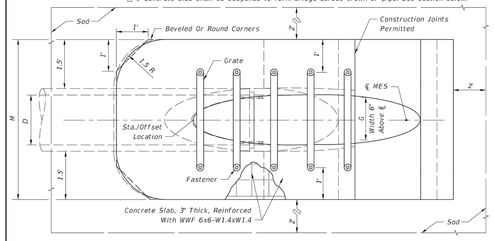
Revision 0 Sheet of

DIMENSIONS & QUANTITIES

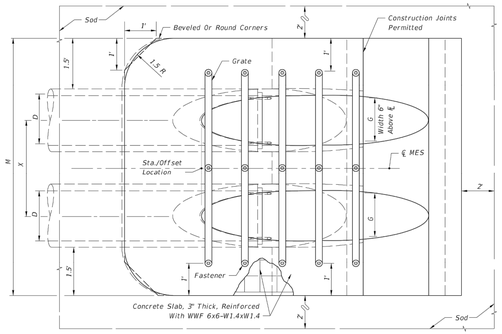
D	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	GRATE SIZES Standard Weight Pipe	GRATE SIZES Extra Strong Pipe	CONCRETE (CY) Single Pipe	CONCRETE (CY) Double Pipe	CONCRETE (CY) Triple Pipe	CONCRETE (CY) Quad. Pipe	SODDING (SY) Single Pipe	SODDING (SY) Double Pipe	SODDING (SY) Triple Pipe	SODDING (SY) Quad. Pipe
15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'			0.76	1.16	1.54	1.94	8	10	11	12
18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'			0.85	1.28	1.71	2.17	9	10	12	13
24"	3'-5"	2.53'	7.18' △	9.71'	7.03' △	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'			1.02	1.58	2.15	2.75	10	12	13	15
30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	2½"	3"	1.23	1.98	2.74	3.50	12	14	15	17
36"	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	2½"	3"	1.40	2.38	3.33	4.24	13	15	17	20
42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	2½"	3½"	1.60	2.83	4.04	5.26	14	17	19	22
48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	2½"	3½"	1.81	3.26	4.70	6.14	15	18	21	24
54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	3"	4"	2.03	3.78	5.54	7.28	17	20	23	27
60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	3"	4"	2.28	4.36	6.43	8.50	18	22	25	29

△ 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 form bridge across crown of pipe. See section below.

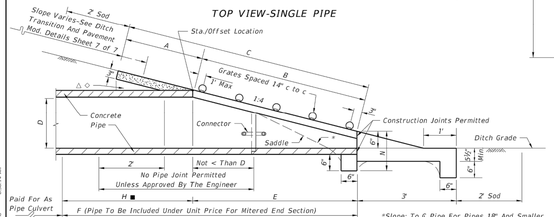
■ Values shown for estimating pipe quantities and are for information only.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



*Slope: To ℄ Pipe For Pipes 18" And Smaller 1:2 For Pipes 24" And Larger.

SECTION

Note: See Sheets 6 and 7 for details and general notes.

SINGLE AND MULTIPLE ROUND CONCRETE PIPE

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 1 of 7

DIMENSIONS & QUANTITIES

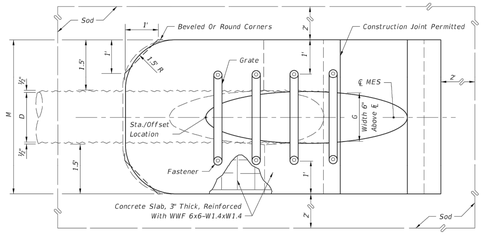
D	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	GRATE SIZES Standard Weight Pipe	GRATE SIZES Extra Strong Pipe	CONCRETE (CY) Single Pipe	CONCRETE (CY) Double Pipe	CONCRETE (CY) Triple Pipe	CONCRETE (CY) Quad. Pipe	SODDING (SY) Single Pipe	SODDING (SY) Double Pipe	SODDING (SY) Triple Pipe	SODDING (SY) Quad. Pipe
8"	2'-0"	2.5'	0.72'	3.22'	0.7'	4.0'	0.58'	3.3'	3.75'	5.75'	7.75'	9.75'	1.04'			0.52	0.90	1.22	1.54	7	8	8	9
10"	2'-2"	2.5'	1.34'	3.84'	1.3	5.0'	0.81'	3.7'	3.92'	6.08'	8.25'	10.41'	1.04'			0.64	0.99	1.34	1.70	7	8	9	10
12"	2'-4"	2.5'	2.06'	4.56'	2.0'	6.0'	1.00'	4.0'	4.08'	6.42'	8.75'	11.08'	1.04'			0.68	1.09	1.48	1.88	7	8	10	11
15"	2'-7"	2.5'	3.09'	5.59'	3.0'	7.0'	1.23'	4.0'	4.33'	6.92'	9.50'	12.08'	1.04'			0.64	1.00	1.35	1.71	8	9	10	11
18"	2'-10"	2.5'	4.12'	6.62'	4.0'	8.0'	1.41'	4.0'	4.58'	7.42'	10.25'	13.08'	1.04'			0.69	1.09	1.49	1.89	9	10	11	12
24"	3'-5"	2.5'	6.18'	8.68'	6.0'	10.0'	1.73'	4.0'	5.08'	8.50'	11.92'	15.33'	1.04'			0.83	1.34	1.82	2.34	10	11	13	14
30"	4'-3"	2.5'	8.25'	10.75'	8.0'	12.0'	2.00'	4.0'	5.58'	9.83'	14.08'	18.33'	1.04'	2½"	3"	0.96	1.63	2.32	2.99	11	13	15	17
36"	5'-1"	2.5'	10.31'	12.81'	10.0'	14.0'	2.24'	4.0'	6.08'	11.17'	16.25'	21.33'	1.04'	2½"	3"	1.08	1.92	2.77	3.62	12	14	17	19
42"	6'-0"	2.5'	12.37'	14.87'	12.0'	16.0'	2.45'	4.0'	6.58'	12.58'	18.58'	24.58'	1.04'	2½"	3½"	1.20	2.26	3.34	4.61	13	16	18	21
48"	6'-9"	2.5'	14.43'	16.93'	14.0'	18.0'	2.65'	4.0'	7.08'	13.83'	20.58'	27.33'	1.04'	2½"	3½"	1.60	3.11	4.62	6.12	14	17	20	23
54"	7'-8"	2.5'	16.49'	18.99'	16.0'	20.0'	2.83'	4.0'	7.58'	15.25'	22.92'	30.58'	1.04'	3"	4"	1.76	3.56	5.34	7.14	15	19	22	26
60"	8'-6"	2.5'	18.55'	21.05'	18.0'	22.0'	3.00'	4.0'	8.08'	16.58'	25.08'	33.58'	1.04'	3"	4"	1.94	4.03	6.12	8.20	17	20	24	28

■ Values shown for estimating pipe quantities and are for information only.

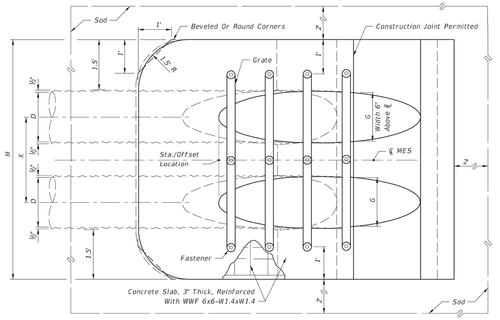
REMARKS

These sizes are restricted to inlet and outlet treatment for water management systems or similar applications.

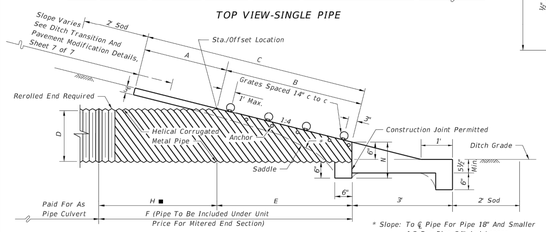
■ Values shown for estimating pipe quantities and are for information only.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



* Slope: To ℄ Pipe For Pipe 18" And Smaller 1:2 For Pipe 24" And Larger

SECTION

NOTE: See Sheets 6 and 7 for details and general notes.

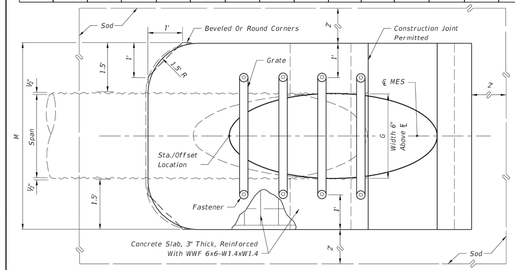
SINGLE AND MULTIPLE ROUND CORRUGATED METAL PIPE

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 2 of 7

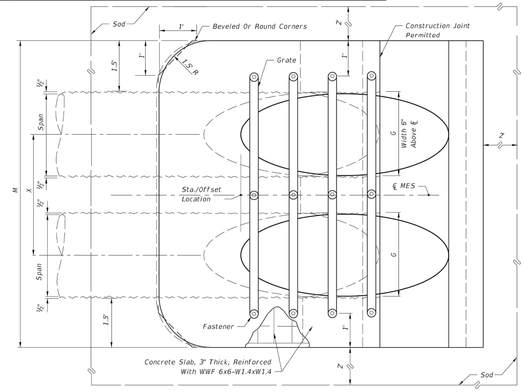
DIMENSIONS & QUANTITIES

1974 AASHTO Span	1974 AASHTO Rise	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	GRATE SIZES Standard Weight Pipe	GRATE SIZES Extra Strong Pipe	CONCRETE (CY) Single Pipe	CONCRETE (CY) Double Pipe	CONCRETE (CY) Triple Pipe	CONCRETE (CY) Quad. Pipe	SODDING (SY) Single Pipe	SODDING (SY) Double Pipe	SODDING (SY) Triple Pipe	SODDING (SY) Quad. Pipe
17"	13"	2'-6"	2.5'	2.41'	4.91'	2.33'	7'	1.39'	4.7'	4.50'	7.00'	9.50'	12.00'	1.04'			0.62	0.95	1.27	1.60	8	9	10	11
21"	15"	2'-10"	2.5'	3.09'	5.59'	3.00'	8'	1.76'	5.0'	4.83'	7.67'	10.50'	13.33'	1.04'			0.69	1.06	1.44	1.77	8	9	11	12
28"	20"	3'-5"	2.5'	4.81'	7.31'	4.67'	9'	2.22'	4.3'	5.42'	8.83'	12.25'	15.67'	1.04'			0.81	1.26	1.73	2.19	9	11	12	14
35"	24"	4'-0"	2.5'	6.18'	8.68'	6.00'	11'	2.55'	5.0'	6.00'	10.00'	14.00'	18.00'	1.04'	2½"	3"	0.94	1.51	2.09	2.66	10	12	14	15
42"	29"	4'-9"	2.5'	7.90'	10.40'	7.67'	12'	2.97'	4.3'	6.58'	11.33'	16.08'	20.83'	1.04'	2½"	3½"	1.06	1.76	2.46	3.16	11	13	15	17
49"	33"	5'-6"	2.5'	9.28'	11.78'	9.00'	14'	3.34'	5.0'	7.17'	12.67'	18.17'	23.67'	1.04'	2½"	3½"	1.19	2.02	2.84	3.68	12	14	17	19
57"	38"	6'-4"	2.5'	11.00'	13.50'	10.67'	16'	3.65'	5.3'	7.83'	14.17'	20.50'	26.83'	1.04'	3"	4"	1.35	2.35	3.35	4.36	13	16	19	22
64"	43"	7'-1"	2.5'	12.71'	15.21'	12.33'	17'	3.89'	4.7'	8.42'	15.50'	22.58'	29.67'	1.04'	3"	4"	1.50	2.70	3.86	5.03	14	17	20	24
71"	47"	7'-10"	2.5'	14.09'	16.59'	13.67'	19'	4.14'	5.3'	9.00'	16.83'	24.67'	32.50'	1.04'	3"	4"	1.62	2.94	4.27	5.59	15	18	22	25

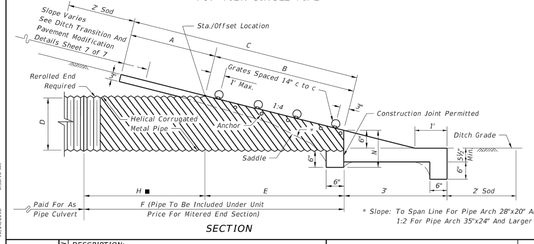
■ Values shown for estimating pipe quantities and are for information only.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



* Slope: To Span Line For Pipe Arch 28"x20" And Smaller 1:2 For Pipe Arch 35"x24" And Larger

SECTION

NOTE: See Sheets 6 and 7 for details and general notes.

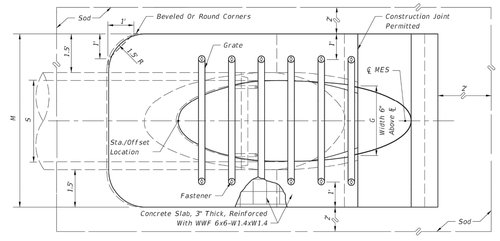
SINGLE AND MULTIPLE CORRUGATED METAL PIPE-ARCH

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 3 of 7

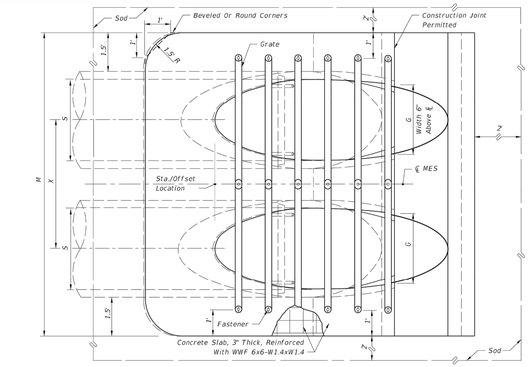
DIMENSIONS & QUANTITIES

Rise R	Span S	X	A	B	C	E	F	G	H ■	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	GRATE SIZES Standard Weight Pipe	GRATE SIZES Extra Strong Pipe	CONCRETE (CY) Single Pipe	CONCRETE (CY) Double Pipe	CONCRETE (CY) Triple Pipe	CONCRETE (CY) Quad. Pipe	SODDING (SY) Single Pipe	SODDING (SY) Double Pipe	SODDING (SY) Triple Pipe	SODDING (SY) Quad. Pipe
12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'			0.68	1.04	1.41	1.77	8	9	11	12
14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'			0.76	1.19	1.63	2.05	9	10	12	13
19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	2½"	3"	0.95	1.52	2.09	2.65	10	12	13	15
24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	2½"	3"	1.18	1.95	2.74	3.53	11	13	15	18
29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	2½"	3½"	1.41	2.42	3.44	4.45	12	15	18	20
34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	3"	3½"	1.63	2.92	4.22	5.52	13	17	20	23
38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	3"	4"	1.83	3.36	4.89	6.41	14	18	21	25
43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	3"	4"	2.09	3.95	5.80	7.65	16	20	23	27
48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	3"	HSS 5"x9⅝"	2.37	4.54	6.73	8.92	17	21	26	30
53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	3"	HSS 5"x9⅝"	2.61	5.09	7.56	10.03	18	23	27	32
58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3½"	HSS 5"x9⅞"	2.91	5.77	8.64	11.50	19	24	29	35

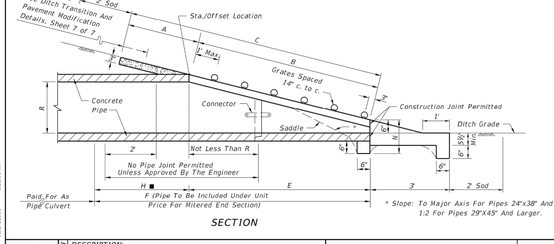
■ Values shown for estimating pipe quantities and are for information only.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



* Slope: To Major Axis For Pipes 24"x38" And Smaller. 1:2 For Pipes 29"X45" And Larger.

SECTION

NOTE: See Sheets 6 and 7 for details and general notes.

SINGLE AND MULTIPLE ELLIPTICAL CONCRETE PIPE

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 4 of 7

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE, FL 32309
www.stantec.com C.A. No. 27013

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

Dwn. JG	Chkd. CB	Dsgn. AM	YY.MM.DD 20.01.06

Drawing No. C-515

Revision 0 Sheet of

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2020/01/14 1:48 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

Drain Size	s	n	L	La
CONCRETE PIPE (ROUND)				
15"	3	4	4'-0"	4'-11"
18"	4	5	5'-2"	6'-1"
24"	6	7	7'-6"	8'-5"
30"	7	8	8'-8"	9'-7"
36"	9	10	11'-0"	11'-11"
42"	11	12	13'-4"	14'-3"
48"	13	14	15'-8"	16'-7"
54"	14	15	16'-10"	17'-9"
60"	16	17	19'-2"	20'-1"
CORRUGATED METAL PIPE (ROUND)				
15"	2	3	2'-10"	3'-9"
18"	3	4	4'-0"	4'-11"
24"	5	6	6'-4"	7'-3"
30"	7	8	8'-8"	9'-7"
36"	8	9	9'-10"	10'-9"
42"	10	11	12'-2"	13'-1"
48"	12	13	14'-6"	15'-5"
54"	14	15	16'-10"	17'-9"
60"	15	16	18'-0"	18'-11"

**

Drain Size	s	n	L	La
ELLIPTICAL CONCRETE PIPE				
12"x18"	2	3	2'-10"	3'-9"
14"x23"	3	4	4'-0"	4'-11"
19"x30"	4	5	5'-2"	6'-1"
24"x38"	5	6	6'-4"	7'-3"
29"x45"	7	8	8'-8"	9'-7"
34"x53"	8	9	9'-10"	0'-9"
38"x60"	10	11	12'-2"	13'-1"
43"x68"	11	12	13'-4"	14'-3"
48"x76"	13	14	15'-8"	16'-7"
53"x83"	14	15	16'-10"	17'-9"
58"x91"	15	16	18'-0"	18'-11"
CORRUGATED METAL PIPE (ARCH)				
17"x13"	1	2	1'-8"	2'-7"
21"x15"	2	3	2'-10"	3'-9"
28"x20"	4	5	5'-2"	6'-1"
35"x24"	5	6	6'-4"	7'-3"
42"x29"	6	7	7'-6"	8'-5"
49"x33"	7	8	8'-8"	9'-7"
57"x38"	9	10	11'-0"	11'-11"
64"x43"	10	11	12'-2"	13'-1"
71"x47"	12	13	14'-6"	15'-5"

***

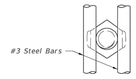
**

Note: ⅜" x 3" bolts are standard for all grate fasteners, except when the contractor elects to use the slotted upper holes for the intermediate fasteners on multiple drain pipes, which will require the following bolt lengths:

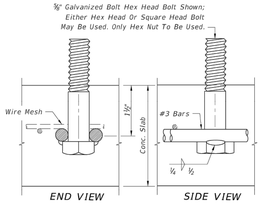
Grate Size (Std. & X-Stg.)	Bolt Length
2½"	5½"
3"	6"
3½"	6½"
4"	7"

** To be used only when grates are called for in the plans.

*** 1974 AASHTO Pipe Arch Sizes.



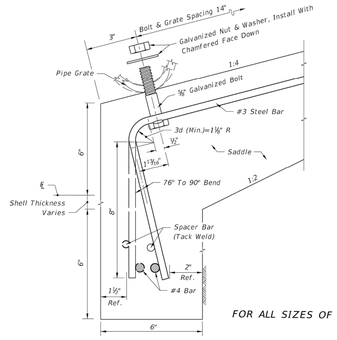
TOP VIEW



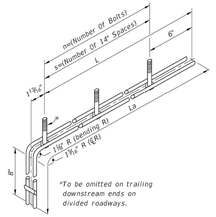
END VIEW SIDE VIEW

BOTTOM VIEW

The specified weld shall be made when the fabricated unit is subject to hazardous hauls and repeated handling. Tack welds are permitted for local or job site fabrication. Galvanizing over welded surface not required.



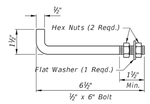
FOR ALL SIZES OF SINGLE AND MULTIPLE DRAIN PIPE FASTENER UNIT



*To be omitted on trailing downstream ends on divided roadways.

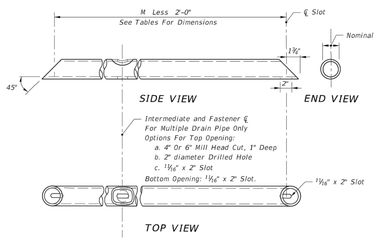
DETAILS FOR CONCRETE & CORRUGATED METAL PIPE

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 5 of 7



Notes:
Anchors required for CMP only.
Anchor, washer and nuts to be galvanized steel.
Bend anchor where required to center in concrete slab.
Damaged surfaces to be repaired after bending.
Anchors are to be spaced a distance equal to four (4) corrugations.
Place the anchors in the outside crest of corrugation.
Flat washer to be placed on inside wall of pipe.
Holes in the mitered end pipe are to be drilled or punched; burning not permitted.

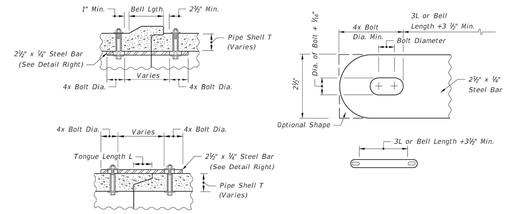
ANCHOR DETAIL



TOP VIEW

FOR SINGLE & MULTIPLE DRAIN PIPE
GRATE DETAIL

See General Notes, Sheet 7.

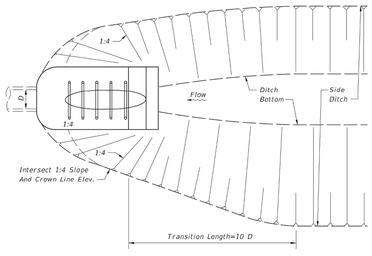


All bars, bolts, nuts and washers are to be galvanized steel.
Bolt diameters shall be ⅝" for 15" to 36" pipe and ¾" for 42" to 60" pipe.
Two connectors required per joint, located 60° right and left of bottom center of pipe.
Bolt holes in pipe shell are to be drilled.

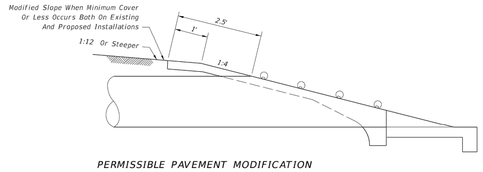
CONCRETE PIPE CONNECTOR DETAIL

DETAILS FOR CONCRETE & CORRUGATED METAL PIPE

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 6 of 7



PLAN
DITCH TRANSITION



PERMISSIBLE PAVEMENT MODIFICATION

GENERAL NOTES

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of side drain pipe; corrugated steel pipe mitered end sections may be used with any type of side drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of side drain pipe except steel pipe. When bituminous coated metal pipe is specified for side drain pipe, construct the mitered end sections with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the side drain pipe, construct a concrete jacket in accordance with Index 430-001.
2. Use either corrugated metal or concrete mitered end sections for corrugated polyethylene pipe (HDPE), polyvinyl-chloride pipe (PVC) and polypropylene pipe (PPP). When used in conjunction with corrugated mitered end sections, make connection using either a formed metal band specifically designated to join HDPE or PVC pipe, with metal pipe or other coupler approved by the State Drainage Engineer. When used in conjunction with a concrete mitered end sections, concrete jacket constructed in accordance with Index 430-001.
3. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered end section.
4. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.
5. Prior to placing concrete slab apply a bituminous coating to any portion of corrugated metal pipe in direct contact with concrete. Extend the coating 12" beyond the concrete slab.
6. When existing multiple side drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered end sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.
7. Class NS concrete cast-in-place reinforced slabs are required for all sizes of side drain pipes.
8. Install grates on all round pipes 30" or greater, pipe-arches 35"x24" or greater, and elliptical pipe 19"x30" or greater, unless excluded in the Plans. Install grates on smaller size pipes only when called for in the Plans. Omit the lower grate on the downstream end of mitered end sections along divided highways.
9. Use Schedule 80 pipe for the lower grate on all traffic approach ends and Schedule 40 pipe for all remaining grates. Fabricate the grates from ASTM A53, Grade B, black steel pipe and hot dip galvanize after fabrication in accordance with ASTM A123 for all corrosive environments.

DESIGN NOTES

1. Do not use grates until the debris transport potential has been evaluated by the drainage engineer and appropriate adjustments made. Ditch grades in excess of 3% or pipe with less than 1.5' of cover and grades in excess of 1% will require such an evaluation (General Note 10).
2. The design engineer must determine and designate in the plans which alternate types of mitered end section will not be permitted. Restrict use based on corrosive or structural requirements.
3. Contact the District Drainage Engineer for possible alternate treatment of side drain mitered end sections where a minimum spacing of 30' will not result between the toe points of the mitered end sections.
4. Provide ditch transitions on all grades in excess of 3%.

NOTES & INFORMATION

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX 430-022	SHEET 7 of 7

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ORIGINAL SHEET - ANSI D

Attachment I

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE, FL 32309
www.stantec.com C.A. No. 27013

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

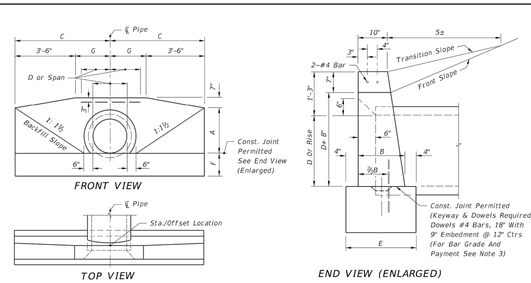
Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

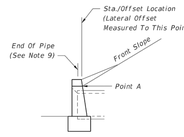
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-516

Revision 0 Sheet of



END VIEW (ENLARGED)



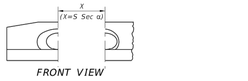
END VIEW

1. Position is set by the intersection of the front slope and Point A where this intersection falls outside the clear zone.
2. Where the front slope and Point A intersects inside the clear zone, the endwall is positioned so the Station/Offset Location is at the clear zone limit. The front slope is transitioned to the endwall as shown in Index 430-001.

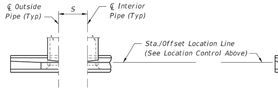
STANDARD LOCATION CONTROL

ENDWALL DIMENSIONS (EXCLUSIVE OF MULTIPLE PIPE SPACING)

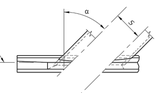
FRONT VIEW



FRONT VIEW



TOP VIEW
NORMAL PIPE



TOP VIEW
SKEWED PIPE

LEGEND

α Pipe Skew
S Center To Center Pipe Spacing
X Centerline To Centerline Dimension At Face Of Headwall

PIPE AND SPACING FOR MULTIPLE PIPE ENDWALL POSITIONS FOR SINGLE AND MULTIPLE

GENERAL NOTES

1. Endwall dimensions, locations and positions are for round and elliptical concrete pipe and for round and pipe-arch corrugated metal pipe. Round concrete pipe shown.
2. Front slope and ditch transitions shall be in accordance with Index 430-001.
3. Endwalls may be cast in place or precast concrete. Reinforcing steel shall be Grades 40 or 60. Additional reinforcement necessary for handling precast units shall be determined by the Contractor or the supplier. Cost of reinforcement shall be included in the contract unit price for Concrete, (Endwalls).
4. All exposed corners and edges of concrete are to be chamfered ¾".
5. Concrete shall be Class I, except ASTM C478 (4000 psi) concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.
6. On outfall ditches with side slopes flatter than 1:1½ provide 20' transitions from the endwall to the flatter side slopes, right of way permitting.
7. For sodding around endwalls see Index 524-001.
8. Payment for concrete quantities for endwalls skewed to the pipe shall be made on the following basis:

Endwall Skew to Pipe	Use Tabulated Value
0° to 5°	0°
6°	15°
16°	30°
31° or over	45°

9. Pipe length plan quantities shall be based on the pipe end locations shown in the standard location control end view, or lengths based on special endwall locations called for in the plans.
10. Payment for pipe in pipe culverts shall be based on plan quantities, adjusted for endwall locations subsequently established by the Engineer.
11. Endwalls to be paid for under the contract unit price for Class I Concrete (Endwalls), CY.

LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE	INDEX	SHEET
11/01/17	REVISION				430-030	1 of 2

DATA AND ESTIMATED QUANTITIES FOR ONE ENDWALL

ROUND CONCRETE AND CORRUGATED METAL PIPE

D	Opening Area (SF)	Dimensions												Class I Concrete (CY) Number And Type Of Pipe And Skew Angle Of Pipe																				D
														Single		Double				Triple				Quadruple									
	Number Of Pipes				A	B	C	E	F	G	S	X																					
	1	2	3	4								0°	15°	30°	45°	Conc	Metal	Concrete			Metal			Concrete			Metal			Concrete			Metal		
																		0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	
15"	1.23	2.46	3.69	4.92	1'-11"	1'-2"	4'-0"	1'-10"	1'-2"	0'-6"	2'-7"	2'-7"	2'-7"	2'-8"	3'-0"	3'-8"	1.23	1.24	1.59	1.60	1.65	1.74	1.62	1.63	1.68	1.78	1.94	1.96	2.05	2.23	1.99	2.02	2.11	2.30	15"
18"	1.77	3.54	5.31	7.08	2'-2"	1'-3"	4'-6"	1'-11"	1'-3"	1'-0"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.56	1.59	1.99	2.01	2.06	2.17	2.04	2.06	2.11	2.23	2.43	2.46	2.56	2.79	2.51	2.54	2.65	2.89	18"
21"	2.41	4.82	7.23	9.64	2'-5"	1'-4"	5'-0"	2'-0"	1'-4"	1'-6"	3'-2"	3'-2"	3'-3"	3'-8"	4'-6"	1.97																				21"
24"	3.14	6.28	9.42	12.56	2'-8"	1'-4"	5'-6"	2'-0"	1'-4"	1'-9"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	2.24	2.29	2.82	2.84	2.91	3.06	2.91	2.93	3.01	3.17	3.39	3.43	3.57	3.87	3.52	3.56	3.71	4.03	24"
27"	3.98	7.96	11.94	15.92	2'-11"	1'-5"	6'-0"	2'-1"	1'-5"	2'-0"	3'-10"	3'-10"	4'-0"	4'-5"	5'-5"	2.73																				27"
30"	4.91	9.82	14.73	19.64	3'-2"	1'-6"	6'-6"	2'-2"	1'-6"	2'-3"	4'-3"	4'-3"	4'-5"	4'-11"	6'-0"	3.26	3.34	4.13	4.16	4.26	4.49	4.28	4.31	4.43	4.67	4.98	5.04	5.25	5.69	5.20	5.27	5.49	5.97	30"
36"	7.07	14.14	21.21	28.28	3'-8"	1'-8"	7'-6"	2'-4"	1'-8"	4'-0"	5'-1"	5'-1"	5'-3"	5'-10"	7'-2"	4.53	4.64	5.73	5.77	5.92	6.23	5.95	6.00	6.15	6.49	6.92	7.00	7.29	7.91	7.25	7.34	7.65	8.33	36"
42"	9.62	19.24	28.86	38.48	4'-3"	1'-10"	8'-6"	2'-6"	2'-0"	5'-0"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	6.33	6.49	8.11	8.17	8.39	8.85	8.43	8.50	8.73	9.23	9.90	10.02	10.45	11.38	10.38	10.52	10.98	11.99	42"
48"	12.57	25.14	37.71	50.28	4'-8"	2'-1"	9'-6"	2'-9"	2'-0"	6'-0"	6'-9"	6'-9"	7'-0"	7'-10"	9'-7"	8.15	8.38	10.40	10.48	10.75	11.33	10.85	10.94	11.23	11.87	12.64	12.80	13.34	14.50	13.34	13.51	14.11	15.39	48"
54"	15.90	31.80	47.70	63.60	5'-2"	2'-6"	10'-6"	3'-2"	2'-3"	7'-0"	7'-8"	7'-8"	7'-11"	8'-10"	10'-10"	11.71	11.77	15.23	15.35	15.78	16.69	15.35	15.48	15.90	16.83	18.77	19.02	19.86	21.69	18.93	19.18	20.04	21.89	54"

CORRUGATED METAL PIPE ARCH

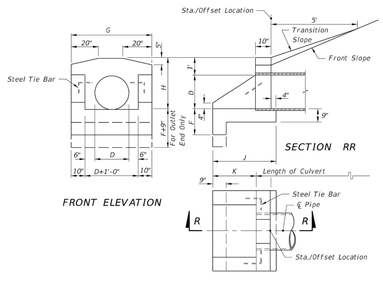
Span	Rise	Opening Area (SF)	Dimensions											Class I Concrete (CY) Number Of Pipe And Skew Angle Of Pipe												Span	Rise	Approx. Equiv. Round Pipe
		Number Of Pipes	A	B	C	E	F	G	S	X				Single	Double			Triple				Quadruple						
		1 2 3 4								0°	15°	30°	45°	0°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°			
17"	13"	1.1 2.2 3.3 4.4	1'-9"	1'-2"	3'-10"	1'-10"	1'-2"	0'-4"	2'-6"	2'-6"	2'-7"	2'-11"	3'-6"	1.16	1.47	1.48	1.52	1.60	1.78	1.80	1.88	2.04	2.09	2.12	2.23	2.48	17"	13"	15"
21"	15"	1.6 3.2 4.8 6.4	1'-11"	1'-2"	4'-3"	1'-10"	1'-2"	0'-9"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.33	1.69	1.70	1.75	1.84	2.04	2.06	2.15	2.33	2.40	2.44	2.57	2.84	21"	15"	18"
28"	20"	2.8 5.6 8.4 11.2	2'-4"	1'-3"	5'-2"	1'-11"	1'-3"	1'-8"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	1.78	2.31	2.33	2.39	2.53	2.83	2.87	2.99	3.26	3.36	3.42	3.60	4.01	28"	20"	24"
35"	24"	4.3 8.6 12.9 17.2	2'-8"	1'-4"	5'-11½"	2'-0"	1'-4"	2'-5½"	4'-0"	4'-0"	4'-2"	4'-7"	5'-8"	2.34	3.03	3.05	3.14	3.32	3.72	3.77	3.93	4.29	4.40	4.47	4.72	5.25	35"	24"	30"
42"	29"	5.9 11.8 17.7 23.6	3'-1"	1'-5"	6'-10½"	2'-1"	1'-5"	3'-4½"	4'-9"	4'-9"	4'-11"	5'-6"	6'-9"	3.13	4.06	4.09	4.20	4.45	4.99	5.06	5.28	5.76	5.93	6.03	6.36	7.09	42"	29"	36"
49"	33"	8.4 16.8 25.2 33.6	3'-5"	1'-6"	7'-8"	2'-2"	1'-6"	4'-2"	5'-6"	5'-6"	5'-8"	6'-4"	7'-9"	3.83	5.00	5.04	5.18	5.48	6.16	6.24	6.52	7.12	7.32	7.44	7.86	8.76	49"	33"	42"
57"	38"	10.6 21.2 31.8 42.4	3'-10"	1'-7"	8'-7½"	2'-3"	1'-7"	5'-1½"	6'-4"	6'-4"	6'-7"	7'-4"	8'-11"	4.87	6.31	6.36	6.53	6.91	7.74	7.84	8.18	8.93	9.18	9.33	9.85	10.96	57"	38"	48"
64"	43"	13.2 26.4 39.6 52.8	4'-3"	1'-8"	9'-6½"	2'-4"	1'-8"	6'-0½"	7'-1"	7'-1"	7'-4"	8'-2"	10'-0"	5.88	7.64	7.70	7.91	8.37	9.40	9.52	9.94	10.86	11.15	11.33	11.97	13.33	64"	43"	54"
71"	47"	16.9 33.8 50.7 67.6	4'-7"	1'-10"	10'-4"	2'-6"	2'-0"	6'-10"	7'-10"	7'-10"	8'-1"	9'-1"	11'-1"	7.80	10.15	10.23	10.51	11.12	12.49	12.65	13.22	14.43	14.85	15.10	15.94	17.77	71"	47"	60"

Note: Use the guidelines of General Note 8 for selecting tabular quantities.

CONCRETE ELLIPTICAL PIPE

Rise	Span	Opening Area (SF)	Dimensions								Class I Concrete (CY) Number Of Pipe And Skew Angle Of Pipe																Rise	Span	Approx. Equiv. Round Pipe
		Number Of Pipes	A	B	C	E	F	G	S	X				Single	Double			Triple				Quadruple						
		1 2 3 4								0°	15°	30°	45°	0°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°			
12"	18"	1.3 2.6 3.9 5.2	1'-8"	1'-2"	3'-9"	1'-10"	1'-2"	0'-3"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.09	1.45	1.46	1.51	1.60	1.80	1.82	1.91	2.09	2.16	2.20	2.33	2.60	12"	18"	15"
14"	23"	1.8 3.6 5.4 7.2	1'-10"	1'-3"	4'-2½"	1'-11"	1'-3"	8½"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	1.36	1.82	1.84	1.89	2.01	2.29	2.32	2.43	2.68	2.75	2.80	2.97	3.33	14"	23"	18"
19"	30"	3.3 6.6 9.9 13.2	2'-3"	1'-4"	5'-1½"	2'-0"	1'-4"	1'-7½"	4'-2"	4'-2"	4'-4"	4'-10"	5'-11"	1.89	2.55	2.57	2.65	2.82	3.22	3.27	3.43	3.77	3.88	3.95	4.19	4.70	19"	30"	24"
24"	38"	5.1 10.2 15.3 20.4	2'-8"	1'-5"	6'-3"	2'-1"	1'-5"	2'-9"	5'-2"	5'-2"	5'-4"	6'-0"	7'-4"	2.64	3.55	3.58	3.69	3.93	4.48	4.54	4.77	5.24	5.39	5.49	5.82	6.53	24"	38"	30"
29"	45"	7.4 14.8 22.2 29.6	3'-1"	1'-6"	7'-0"	2'-2"	1'-6"	3'-6"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	3.32	4.48	4.52	4.66	4.96	5.64	5.72	6.00	6.60	6.80	6.92	7.34	8.24	29"	45"	36"
34"	53"	10.2 20.4 30.6 40.8	3'-6"	1'-7"	7'-11½"	2'-3"	1'-7"	4'-5½"	7'-1"	7'-1"	7'-4"	8'-2"	10'-0"	4.24	5.76	5.81	6.00	6.39	7.29	7.40	7.76	8.55	8.81	8.97	9.52	10.70	34"	53"	42"
38"	60"	12.9 25.8 38.7 51.6	3'-10"	1'-8"	8'-9"	2'-4"	1'-8"	5'-3"	7'-11"	7'-11"	8'-2"	9'-2"	11'-2"	5.22	7.16	7.23	7.46	7.96	9.10	9.24	9.70	10.71	11.05	11.25	11.95	13.46	38"	60"	48"
43"	68"	16.6 33.2 49.8 66.4	4'-3"	1'-10"	9'-8½"	2'-6"	1'-10"	6'-2½"	8'-10"	8'-10"	9'-2"	10'-2"	12'-6"	6.63	9.01	9.09	9.38	10.00	11.39	11.56	12.13	13.36	13.77	14.02	14.88	16.73	43"	68"	54"
48"	76"	20.5 41.0 61.5 82.0	4'-8"	2'-1"	10'-8"	2'-9"	2'-0"	7'-2"	9'-9"	9'-9"	10'-1"	11'-3"	13'-9"	8.66	11.74	11.85	12.22	13.02	14.82	15.04	15.77	17.37	17.91	18.23	19.34	21.74	48"	76"	60"
53"	83"	24.8 49.6 74.4 99.2	5'-1"	2'-6"	11'-7"	3'-2"	2'-6"	8'-1"	10'-7"	10'-7"	10'-11"	12'-3"	15'-0"	12.50	16.98	16.98	17.67	18.83	21.47	21.78	22.86	25.18	25.97	26.44	28.06	31.55	53"	83"	66"
58"	91"	29.5 59.0 88.5 118.0	5'-6"	2'-10"	12'-6½"	3'-6"	2'-10"	9'-0½"	11'-4"	11'-4"	11'-9"	13'-1"	16'-0"	16.46	22.26	22.46	23.16	24.66	28.05	28.46	29.85	32.85	33.85	34.46	36.55	41.05	58"	91"	72"

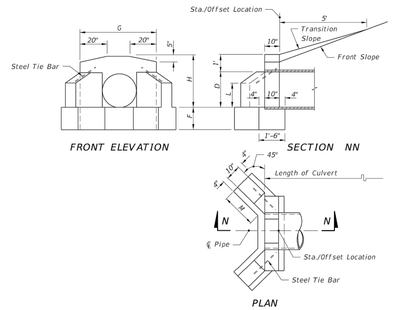
LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE	INDEX	SHEET
11/01/17	REVISION				430-030	2 of 2



FRONT ELEVATION — SECTION RR

PLAN

CONCRETE ENDWALL WITH U-TYPE WINGS FOR PIPE CULVERTS



FRONT ELEVATION — SECTION NN

PLAN

CONCRETE ENDWALL WITH 45° WINGS FOR PIPE CULVERTS

TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES PIPE CULVERT ENDWALLS WITH U-TYPE WINGS

DIMENSIONS							QUANTITIES IN ONE ENDWALL						
Opening		Wall			Footing		Concrete, Class I, Total (CY)						Steel Tie Bars
D	Area (ft²)	G	H	K	F	J	RCP		CMP		CIP		
							Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	
12"	0.8	3'-8"	2'-0"	1'-0"	1'-3"	2'-2"	0.48	0.55	0.49	0.57	0.49	0.57	none
15"	1.2	3'-11"	2'-3"	1'-5"	1'-3"	2'-7"	0.59	0.67	0.62	0.70	0.61	0.70	none
18"	1.8	4'-2"	2'-6"	1'-9"	1'-3"	2'-11"	0.70	0.79	0.74	0.82	0.74	0.82	none
24"	3.1	4'-8"	3'-0"	2'-6"	1'-6"	3'-8"	1.01	1.11	1.06	1.16	1.06	1.16	2–#6 Bars x 2'-0"
30"	4.9	5'-2"	3'-6"	3'-3"	1'-6"	4'-5"	1.33	1.44	1.41	1.51	1.40	1.51	2–#6 Bars x 2'-0"
36"	7.1	5'-8"	4'-0"	4'-0"	1'-9"	5'-2"	1.73	1.85	1.84	1.96	1.82	1.94	2–#6 Bars x 2'-6"
42"	9.6	6'-2"	4'-6"	4'-9"	2'-0"	5'-11"	2.19	2.32	2.32	2.45			2–#6 Bars x 2'-6"
48"	12.6	6'-8"	5'-0"	5'-6"	2'-0"	6'-8"	2.64	2.78	2.81	2.95			2–#6 Bars x 3'-0"

TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES PIPE CULVERT ENDWALLS WITH 45° WINGS

DIMENSIONS							QUANTITIES IN ONE ENDWALL			
Opening		Wall				Footing	Concrete, Class I Total (CY)			Steel Tie Bars
D	Area (ft²)	H	G	L	M	F	RCP	CMP	CIP	
15"	1.2	2'-3"	3'-7"	1'-0"	1'-3"	1'-3"	0.56	0.59	0.59	none
18"	1.8	2'-6"	3'-10"	1'-2"	1'-7"	1'-3"	0.74	0.77	0.77	none
24"	3.1	3'-0"	4'-4"	1'-5"	2'-1"	1'-4"	1.01	1.06	1.06	2 –#6 Bars x 2'-0"
30"	4.9	3'-6"	4'-10"	1'-9"	2'-5"	1'-6"	1.32	1.40	1.39	2 –#6 Bars x 2'-0"
36"	7.1	4'-0"	5'-4"	2'-0"	2'-11"	1'-8"	1.72	1.83	1.82	2 –#6 Bars x 2'-6"
42"	9.6	4'-6"	5'-10"	2'-3"	3'-6"	2'-0"	2.34	2.47		2 –#6 Bars x 2'-6"
48"	12.6	5'-0"	6'-4"	2'-6"	4'-0"	2'-0"	2.74	2.90		2 –#6 Bars x 2'-6"

GENERAL NOTES

1. Winged concrete endwalls are intended for use outside the clear zone.
2. Chamfer all exposed edges ¾".
3. Concrete shall be Class I, except ASTM C478 (4000 psi) Concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.
4. Endwall to be paid for under the contract unit price for Class I Concrete.
5. Sodding to be in accordance with Index 524-001, and paid for under the contract unit price for Performance Turf, SY.

LAST REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	WINGED CONCRETE ENDWALLS SINGLE ROUND PIPE	INDEX	SHEET
11/01/17	REVISION				430-040	1 of 1

Attachment I

Stantec
2316 Killearn Center Blvd., Suite 102
TALLAHASSEE FL 32309
www.stantec.com C.A. No. 27013

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT DRAINAGE DETAILS

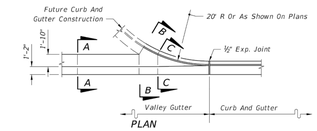
Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

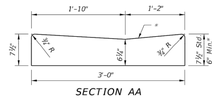
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-517

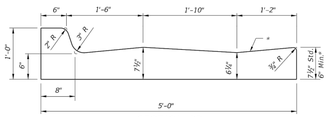
Revision 0 Sheet of



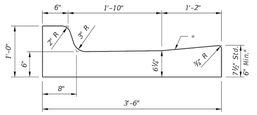
PLAN



SECTION AA

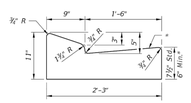


SECTION BB

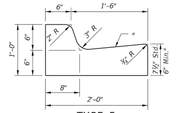


SECTION CC

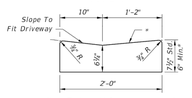
VALLEY GUTTER



TYPE E

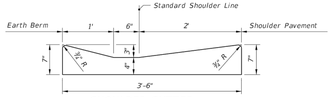


TYPE F

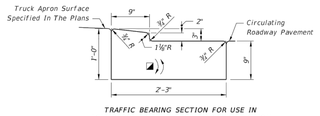


Note: To be paid for as parent curb.

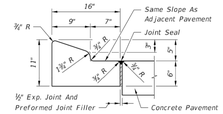
DROP CURB



SHOULDER GUTTER

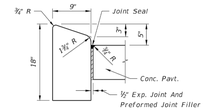


TRAFFIC BEARING SECTION FOR USE IN ROUNDABOUT CENTRAL ISLAND CONSTRUCTION
TYPE RA

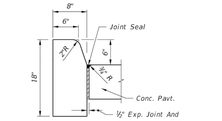


For details depicting usage adjacent to flexible pavement, see Sheet 2.

TYPE A



TYPE B



TYPE D

Note: For use adjacent to concrete or flexible pavement, concrete shown. Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 2.

CONCRETE CURB

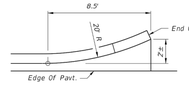
* When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The thickness of the lip shall be 6", unless otherwise shown on plans.

◪ Rotate entire section so that gutter cross slope matches slope of adjacent circulating roadway pavement.

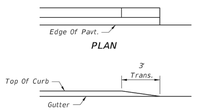
For use adjacent to concrete or flexible pavement. For details depicting usage adjacent to flexible pavement, see Sheet 2. Expansion joint, preformed joint filler and joint seal are required between curb & gutter and concrete pavement only, see Sheet 2.

CONCRETE CURB AND GUTTER

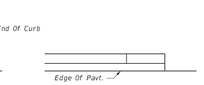
LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	CURB AND GUTTER	INDEX 520-001	SHEET 1 of 2



PLAN



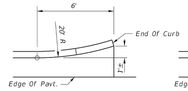
PROFILE
FLARED END



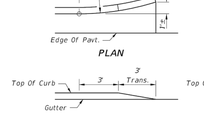
PLAN

PROFILE
STRAIGHT END

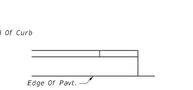
CURB TYPE A



PLAN



PROFILE
FLARED END



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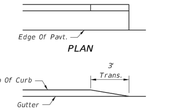
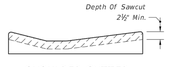


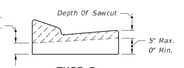
PROFILE
STRAIGHT END

CURB AND GUTTER TYPES E & F

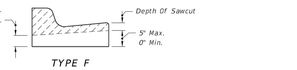
CURB AND GUTTER ENDINGS



SHOULDER GUTTER



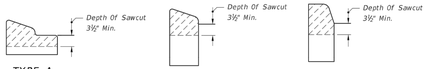
TYPE E



TYPE F

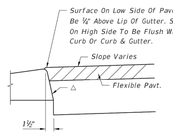
Sawcuts should be avoided within valley gutter and within curb and gutter endings.

CONTRACTION JOINT IN CURB AND GUTTER



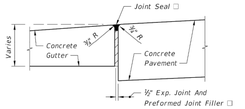
TYPE A TYPE B TYPE D

CONTRACTION JOINT IN CURB



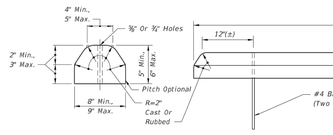
△ Applies to both high and low sides of pavement, low side shown.
Applies to shoulder gutter only where adjoining traffic lanes.

CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT

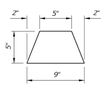


□ Applies to both high and low sides of pavement, low side shown.

EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT



CONCRETE BUMPER GUARD



ASPHALTIC CONCRETE CURB

GENERAL NOTES

1. For curb, gutter and curb & gutter provide ½" – ½" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers. Curb, gutter and curb & gutter expansion joints shall be located in accordance with Specification 520.

2. Ends of Curbs Types B and D shall transition from full to zero heights in 3'.

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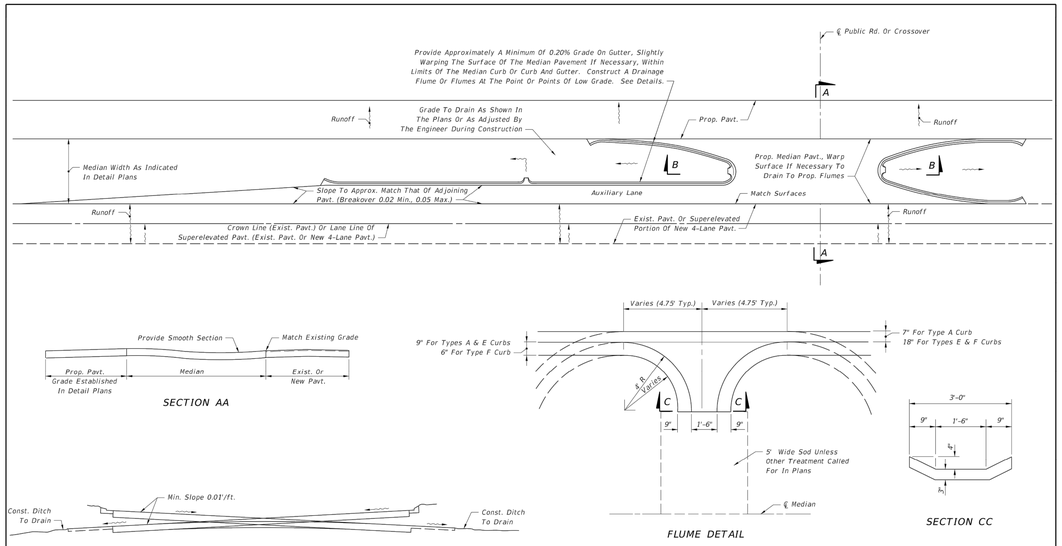

SECTION AA

FLUME DETAIL

SECTION CC

SECTION BB

(May Drain From Any Point Designated In the Plans Or As Adjusted By The Engineer During Construction)

GENERAL NOTES

1. These details are to apply to projects which provide for the conversion of 2-lane sections to 4-lane divided highway sections and for superelevated sections of new 4-lane divided highways. Layout above is illustration only. Cost of Flumes to be included in the contract price for Curb or Curb and Gutter. Sod to be paid for under the contract unit price for Performance Turf, SY.

2. Flumes to be located in low point of noses and at other points as designated in the plans. The locations may be adjusted by the Engineer during construction.

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	MEDIAN OPENING FLUME	INDEX 520-010	SHEET 1 of 1

Attachment I

Stantec
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www.stantec.com C.A. No. 27013

Issued	By	Appd.	YY.MM.DD
Revision	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT CURB DETAILS

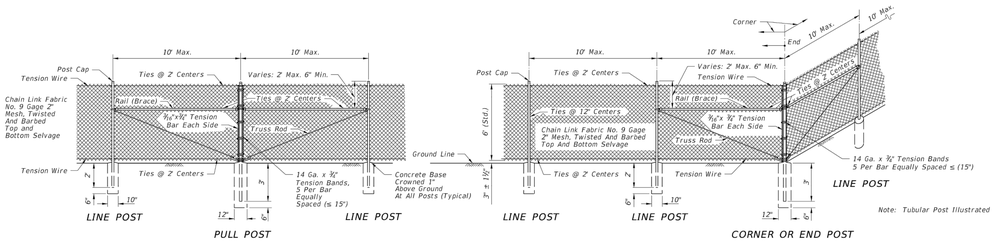
Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-518

Revision 0 Sheet of



Note: Tubular Post Illustrated

GENERAL NOTES

1. This fence to be used generally in urban areas.
2. For supplemental information refer to Specification 550.
3. Chain link fabric, post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous fittings and hardware shall meet the requirements of AASHTO and ASTM signify current reference.
4. Fence Component Options:
   A. Line post options:
      (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B): Schedule 40- 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
      (3) Aluminum alloy pipe- 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Steel H-Beam- 1⅞"x 1⅝": Zinc Galv. 1.8 oz./ft.: AASHTO M111 and Detail.
      (5) Aluminum alloy H-Beam- 1⅞"X 1⅝" Detail.
      (6) Steel C- 1⅞"X 1⅝" Galv.: 1.8 oz/ft. zinc: AASHTO M111; OR , 0.9 oz./ft². zinc-5% aluminum-mischmetal: ASTM F1043 and Detail.
      (7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

   B. Corner, end, and pull post options:
      (1) Galvanized steel pipe, Schedule 40- 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
      (3) Aluminum alloy pipe- 2½" nominal dia.: ASTM B241 or B221, Alloy 6063,T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

   C. Rail options:
      (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe; ASTM A53 steel, X 2 Tables Schedule 40; 1¼" nominal dia., 1.660" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
      (3) Aluminum alloy pipe- 1¼" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 1⅞" OD, 1½" NPS, 1.660" dec. equiv., 0.111" min. wall thick. and min. wt. 1.836 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

   D. Chain link fabric options (2" mesh with twisted and barbed selvage top and bottom for all options except as described in Note 10):
      (1) AASHTO M181 Type I – Zinc Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 1.8 oz/ft². (M181 Class D 2.0 oz./ft². modified to 1.8 oz./ft².).
      (2) AASHTO M181 Type II –Aluminum Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 0.40 oz./ft².
      (3) AASHTO M181 Type IV– Polyvinyl Chloride (PVC) Coated Steel, No. 9 gage (coated core wire diameter), core wire–zinc coated steel. PVC coating: M181 Class A (either extruded or extruded and bonded) or Class B (bonded). See table right. Unless the plans call for M181 standard colors medium green, dark green or black the coating color shall be soft gray matching that of No. 36622 of Federal Standard 595a.

   E. Tension wire options:
      (1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².: AASHTO M181.
      (2) Aluminum alloy wire with a diameter of 0.187⅝" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No.7 gage coated at the rate of 0.040 oz./ft².: AASHTO M181.

   F. Tie wire and hog ring options:
      (1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².
      (2) Aluminum alloy wire with a diameter of 0.144⅜" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	FENCE TYPE B	INDEX 550-002	SHEET 1 of 3

GENERAL NOTES CONTINUED

5. Unless a specific material is called for in the plans the Contractor may elect to use either a single type of material or a combination of material types from the component options listed in note 4. Combinations of optional materials are restricted as follows:
   (a) Only one fabric optional material will be permitted between corner and/or end post assemblies.
   (b) Only one line post optional material will be permitted between corner and/or end post assemblies.
   (c) Pull post assemblies shall be optional materials identical to either the linepost optional material or the corner and end post assembly optional material; but, pull post assemblies shall be the same optional material between any set of corner and/or end post assemblies.
6. Concrete for bases shall be Class NS concrete as specified in Section 347 of the Standard Specifications or a packaged, dry material meeting the requirements of a concrete under ASTM C-387. Materials for Class NS concrete may be proportioned by volume and/or by weight.
7. Line post shall be 8'-6" long (Standard). Line post are to be set in concrete as described above or by the following methods:
   (a) In accordance with special details and/or as specifically described in the contract plans and specifications.
   (b) In accordance with ASTM F567 Subsections 5.4 through 5.10 as approved by the Engineer. Line post installed in accordance with Section 5.8 shall be 9'-6" long.
   (c) Post mounted on concrete structure or solid rock shall be mounted in accordance with the base plate detail "Fence Mounting On Concrete Endwalls And Retaining Wall", Sheet 3; or, by embedment in accordance with ASTM F567 Subsection 5.5.

   End, pull and corner post assemblies shall be in concrete as detailed above for all soil conditions other than solid rock. Post within assemblies that are located on concrete structures or solid rock shall be set by base plate or by embedment as prescribed under (b) above for line post.

   Line and assembly posts for 6' fence which must be lengthened due to a variation in the normal ground clearance, shall be set an additional 3" in depth for each 1' of additional ground clearance.
8. Pull post shall be used at breaks in vertical grades of 15° or more, or at approximately 350' centers except that this maximum interval may be reduced by the Engineer on curves where the curve is greater than 3°.
9. Corner post are to be installed at all horizontal breaks in fence at 15° or more and as required at vertical breaks over 15° as determined by the Engineer.
10. When fence has an installed top of fabric height less than 6' knuckled top and bottom selvages shall be used unless the plans specifically identify locations for twisted selvage fabrics.
11. Unless sliding gates or special gates are called for in the plans, all gates shall be chain link swing gates meeting the material requirements described and as approved by the Engineer. Payment shall include the gates, single or double, all necessary hardware for installation and any additional length and/or size for posts at the opening. Gates shall be paid for under the contract unit price for Fence Gates, EA.
12. For construction purposes corner post assemblies shall consist of one corner post, two braces, two truss rods, and all necessary fittings and hardware as detailed. End post assemblies shall consist of one end post, one brace, one truss rod and all necessary fittings and hardware as detailed.
13. In areas where there are physical constraints outside the right-of-way which restricts the fence construction, the fabric may be installed on the inside of the posts..

TYPE IV VINYL COATED FABRIC								
AASHTO M181 Table 4 Redefined As Follows								
Specified Diameter Of Metallic Coated Core Wire			Minimum Weight Of Zinc Coating		PVC Thickness Range			
					M181 Class A (Extruded Or Extruded And Bonded Coating)		M181 Class B (Bonded Coating)	
in.	mm	gage	oz./ft².	g/m²	in.	mm	in.	mm
0.148	3.77	9	0.30	92	0.015 to 0.025	0.38 to 0.64	0.006 to 0.010	0.15 to 0.25

DESIGN NOTE

This index details fencing that is constructed with chain link fabric 6' (nominal) in height and with specific ground clearance. For fencing of different height or installation details, the fence shall be fully detailed in the Contract plans.

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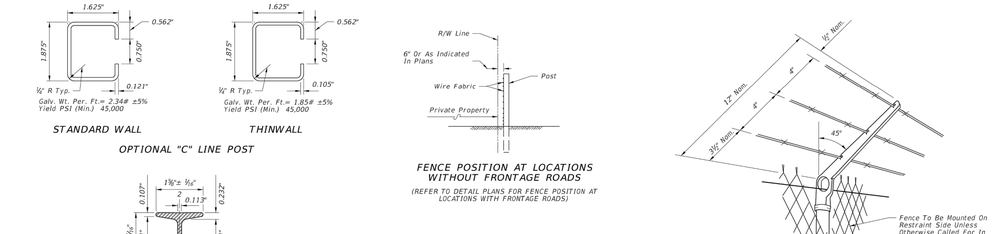
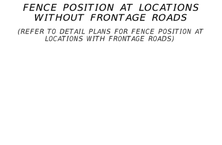
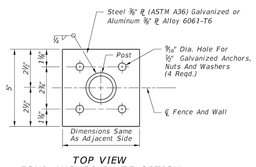
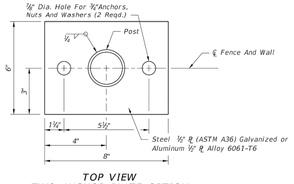




	STEEL		ALUMINUM	
Area (Sq. In.)	724		724	
Weight (Lb./Ft.)	2.72 ± 5% (Galv.)		0.91 ± 5%	
Surface Area (SF/Ft.)	0.776		0.776	
Tensile Strength (psi Min.)	80,000		30,000	
Yielding Point (psi Min.)	48,000		25,000	
	Axes		Axes	
	1-1	2-2	1-1	2-2
Moment Of Inertia	0.428	0.101	0.428	0.101
Section Modulus	0.456	0.124	0.456	0.124
Rad. Of Gyration	0.779	0.373	0.779	0.373

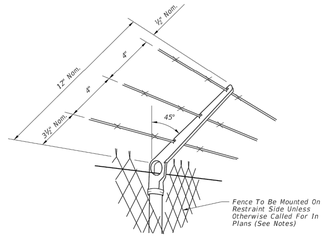
OPTIONAL 1⅞"x 1⅝" H-BEAM LINE POST





FENCE POSITION AT LOCATIONS WITHOUT FRONTAGE ROADS

(REFER TO DETAIL PLANS FOR FENCE POSITION AT LOCATIONS WITH FRONTAGE ROADS)



NOTES

Attachments to be used only when called for in the plans. Attachments to extend in direction of restraint. Unless otherwise called for in plans, direction of restraint will be as follows:
(a.) Outward on limited access right of way line.
(b.) Outward on controlled access right of way line.
(c.) Outward from utilities and hazardous facilities located within highway right of way.
(d.) Outward from lateral ditches, outfalls, retention basins, canals, borrow areas and similar support facilities.
(e.) Inward on pedestrian ways.

The cap-arm shall be designed to provide a drive fit over the top of posts and to exclude moisture in posts with tubular sections.

BARB WIRE ATTACHMENT

BASE PLATE AND ANCHOR NOTES:

1. Base plate identical for line, pull, end and corner posts and shall be considered an integral part of the respective posts for basis of payment.
2. Post to be plumbed by grout shim under base plate.
3. Anchors (Galvanized Steel):
   12" Cast In Place, 10½" Embedment: Headed Bolts, U-Bolts or Cluster Plates.
   8" Adhesive Anchors, 6" Min. Embedment.*
   *Adhesive anchors shall be headless anchor bolts set in drilled holes with an Adhesive Material System in accordance with Specifications 416 and 937; drilled holes shall be ⅛" larger in diameter than the anchor bolt.
   Expansion Bolts Not Permitted.

FENCE MOUNTING ON CONCRETE ENDWALL AND RETAINING WALLS

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Attachment I

Stantec
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Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT FENCE DETAILS

Seal

Project Number:	215613796		
File Name:	13796-TITLE BLOCK		
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-519

Revision 0 Sheet of

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2020.01.14 1:49 PM By: Gerth, James
ORIGINAL SHEET - ANSI D

GENERAL NOTES:

1. *INSTALLATION:* Construct guardrail in accordance with Specification 536.

   This Index, along with the plans and the manufacturers' drawings on the Approved Products List (APL), is sufficiently detailed for installation of General Guardrail, Low-Speed Guardrail, End Treatment assemblies, and their connecting options shown herein. This precludes requirements for shop drawing submittals unless otherwise specified in the plans.

2. *COMPATIBILITY:* The General Guardrail in this Index is based on the Midwest Guardrail System (MGS) design, with an approximate height of 31" at the top of the Panel (2'-1" mounting height at vertical ℄ of Panel) and a midspan panel splice as shown on Sheet 2. Guardrail components included on the APL, which are compatible with this Index, may also be identified as 31" or MGS Guardrail.

3. *STANDARD COMPONENTS:* Standard guardrail components, including posts, panels, and bolt systems, are based upon English unit conversions of the AASHTO-AGC-ARTBA Joint Committee Task Force 13 Report: A Guide to Standardized Highway Barrier Hardware (http://www.aashtotf13.org/Barrier-Hardware.php).

4. *BUTTON-HEAD BOLTS:* Install Button-Head Bolts where indicated using bolts, nuts, and washers as defined on Sheet 22. Place washers under nuts. Do not place washers between bolt heads and panels, except where otherwise shown in this Index.

5. *HEX-HEAD BOLTS:* Install Hex-Head Bolts where indicated using bolts, nuts, and washers in accordance with material properties of Specification 967. Place washers under nuts.

6. *MISCELLANEOUS ASPHALT PAVEMENT:* Install Miscellaneous Asphalt Pavement where indicated with a tolerance of ± ½" depth and in accordance with Specification 339.

7. *ADJACENT SIDEWALKS & SHARED USE PATHS:* When guardrail posts are placed within 4'-0" of a sidewalk or shared use path, use timber posts, or use steel posts only if treated with Pipe Rail as shown on Sheet 20.

   When timber posts are used, one of the following safety treatments is required for the bolt(s) protruding from the back face of the posts:

   a. After tightening the nut, trim the protruding post bolt flush with the nut and galvanize per Specification 562.
   b. Use post bolts 15" in length and countersink the washer and nut between 1" and 1½" deep into the back face of the post.
   c. Use 13" post bolts with sleeve nuts and washers.

   When End Treatment posts are within 4'-0" of a sidewalk or shared use path, steel posts are not permitted within the End Treatment segment. Terminate the Pipe Rail outside of End Treatment segments, as noted per Sheet 20.

8. *NESTED W-BEAM:* Where called for in the plans, install two W-Beam Panels mounted flush per location, securing all panels with Button-Head Bolts threaded through aligned slots and holes. 2" Button-Head Bolts are permitted for panel splice locations.

9. *CONNECTION TO RIGID BARRIER:* The connections to Rigid Barrier in this Index only apply to newly constructed bridge Traffic Railing and Concrete Barrier or where the complete Approach Transition Connection to Rigid Barrier shown herein can be installed without conflicting with existing Traffic Railings, structures, or approach slabs.

   For connecting guardrail to existing bridge Traffic Railings, see the layouts and details of Indexes 536-002, 521-404, and 421-405.

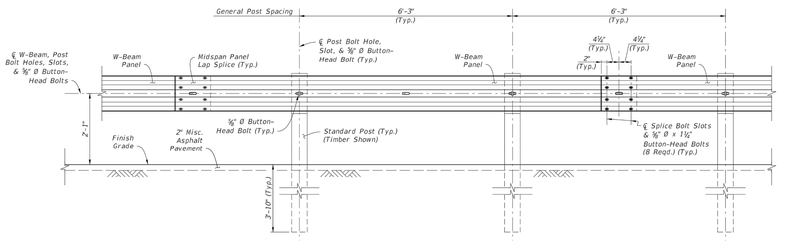
10. *CONNECTION TO EXISTING GUARDRAIL:* Where a transition to existing guardrail at 27" height is required, linearly transition the guardrail height over a distance ranging from 25'-0" to 31'-3". Provide an immediate transition to the required midspan splice using the available panel options on Sheet 4 (9'-4½" or 15'-7½" panel).

11. *PLANS CALLOUTS:* Begin/End Station labels are shown throughout this Index as they correspond to the station and offset callouts specified in the plans.

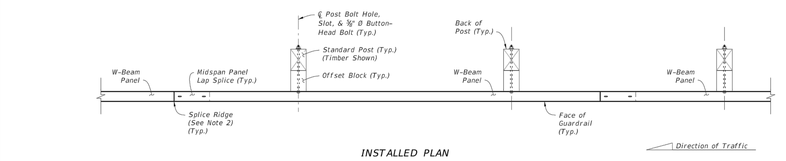
    In the plans, Begin/End Guardrail Station refers to the General TL-3 Guardrail Pay Item, and it may be abbreviated as Begin/End GR. Station. Where the Low-Speed TL-2 Guardrail Pay Item is specifically required, the callout in the plans will then specify Begin/End TL-2 GR. Station.

12. *QUANTITY MEASUREMENT:* Measure guardrail and corresponding components as defined in Specification 536. The Guardrail length is measured along the centerline of installed Panels, between the points labeled Begin/End Guardrail Station shown on the following Index Sheets and defined in the plans (typically measured from the ℄ of the panel's post bolt slots at the approach/trailing ends).

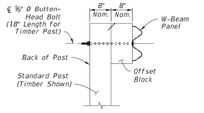
LAST REVISION 11/01/18	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 1 of 22



GENERAL GUARDRAIL INSTALLED ELEVATION



GENERAL GUARDRAIL INSTALLED PLAN



INSTALLED SECTION

NOTES:

1. *GENERAL:* Install the General Guardrail configuration where indicated in the plans. This may include tapered segments if called for in the plans.

   Use 12'-6" or longer W-Beam Panels. A single 6'-3" Panel may be used at the end of the run to meet the nominal Begin/End Guardrail Sta. requirements.

   Where a differing guardrail configuration is required for constructability beyond the options shown in this Index or the plans, obtain approval from the Engineer prior to installation.

2. *MIDSPAN PANEL LAP SPLICE:* For proper structural function, place all Lap Splices at midspan unless otherwise indicated.

   Lap the Panels with the Splice Ridge oriented downstream of the final Direction of Traffic in the nearest traffic lane. For reverse lane conditions, orient the Splice Ridge downstream of the lane direction with the highest traffic volume. Orienting Lap Splices for Temporary Traffic Control phasing is not required.

3. *CONNECTION DETAILS:* Connections to End Treatments, Approach Transitions, or other segment types are defined in the following Index Sheets, APL Drawings, or the plans.

4. *W-BEAM PANEL DETAILS:* See Sheet 4.

5. *POST & OFFSET BLOCK DETAILS:* See Sheet 5.

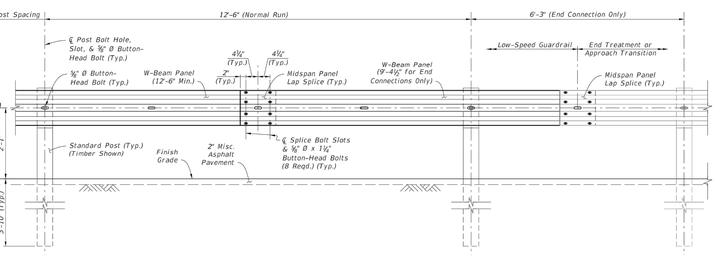
6. *GUARDRAIL SECTIONS:* For Sections showing typical mounting heights, grading, and lateral offsets in relation to adjacent roadway features, see Sheet 6.

7. *MODIFIED MOUNTS:* Where concrete structures, concrete sidewalk, or shallow depth conditions are encountered, see Sheet 21 for additional post mounting options.

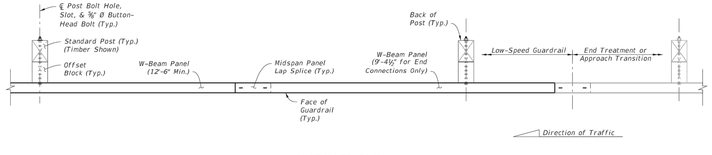
8. *DEFINED SEGMENTS:* The General Guardrail shown provides the base configuration, including Post Spacing and splice locations, for Defined Segment modifications where indicated in the plans and using the Guardrail Types, Sections, and/or hardware as shown in this Index (e.g. Double Faced W-Beam, Modified Thrie-Beam, Deep Posts at Slope Breaks, Pipe Rail, Rub Rail, or Reduced Post Spacing for Hazards).

GENERAL, TL-3 GUARDRAIL DETAILS

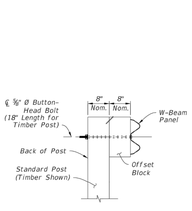
LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 2 of 22



LOW-SPEED GUARDRAIL INSTALLED ELEVATION



INSTALLED PLAN



INSTALLED SECTION

NOTES:

1. *GENERAL:* Install the Low-Speed Guardrail configuration where indicated in the plans. Low-Speed Guardrail may include tapered segments if called for in the plans.

   Use 12'-6" or 25'-0" W-Beam Panels for normal spans, and use 9'-4½" Panels for end connections to adjoining segments as shown. A single 6'-3" Panel may be used at the end of the Low-Speed Guardrail run along with a single reduced 6'-3" post spacing to meet the nominal Begin/End Guardrail Sta. required.

   Where a differing guardrail configuration is required for constructability beyond the options shown in this Index or the Plans, obtain approval from the Engineer prior to installation.

2. *MIDSPAN PANEL LAP SPLICE:* For proper structural function, place all Lap Splices at midspan unless otherwise indicated.

   Lap the Panels with the Splice Ridge oriented downstream of the final Direction of Traffic in the nearest traffic lane. For reverse lane conditions, orient the Splice Ridge downstream of the lane direction with the highest traffic volume. Orienting Lap Splices for Temporary Traffic Control phasing is not required.

3. *CONNECTION DETAILS:* Connections to End Treatments, Approach Transitions, or other segment types are defined in the following Index Sheets, APL Drawings, or the plans.

4. *W-BEAM PANEL DETAILS:* See Sheet 4.

5. *POST & OFFSET BLOCK DETAILS:* See Sheet 5.

6. *GUARDRAIL SECTIONS:* For Sections showing typical mounting heights, grading, and lateral offsets in relation to adjacent roadway features, see Sheet 6.

7. *MODIFIED MOUNTS:* Where concrete structures, concrete sidewalk, or shallow depth conditions are encountered, see Sheet 21 for additional post mounting options.

8. *RESTRICTIONS:* Low-Speed Guardrail segments are not permitted for use with items including, but not limited to, Double Faced W-Beam, Modified Thrie-Beam, Deep Posts at Slope Breaks, Pipe Rail, and/or Rub Rail.

LOW-SPEED, TL-2 GUARDRAIL DETAILS

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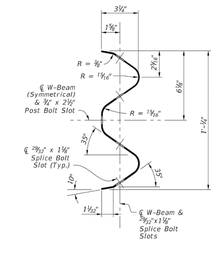
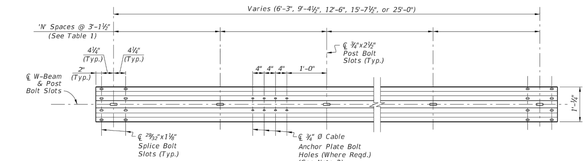


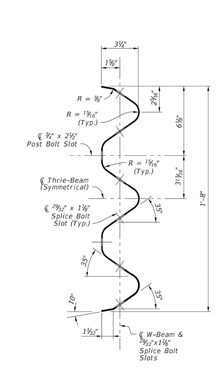
W-BEAM PANEL SECTION



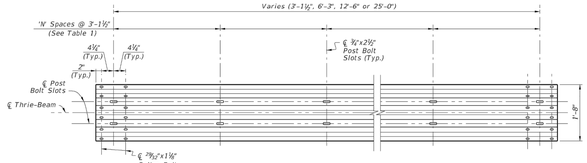
W-BEAM PANEL ELEVATION

PANEL SUMMARY TABLE:

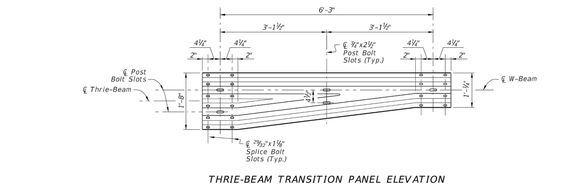
Panel Type	Number of Spaces 'N'	Gauge
6'-3" W-Beam	2	12
9'-4½" W-Beam	3	12
12'-6" W-Beam	4	12
15'-7½" W-Beam	5	12
25'-0" W-Beam	8	12
3'-1½" Thrie-Beam	1	10
6'-3" Thrie-Beam	2	12
12'-6" Thrie-Beam	4	12
25'-0" Thrie-Beam	8	12
Thrie-Beam Trans.	2	10



THRIE-BEAM PANEL SECTION



THRIE-BEAM PANEL ELEVATION



THRIE-BEAM TRANSITION PANEL ELEVATION (Reverse Direction Similar by Opposite Hand)

NOTES:

1. *MATERIALS:* Use corrugated steel panels in accordance with Specification 967 and made from either Class A, 12 gauge steel or Class B, 10 gauge steel as specified in the 'Panel Summary Table' above.

2. *CABLE ANCHOR PLATE BOLT HOLES:* Include ¾" Ø Cable Anchor Plate Bolt Holes only where required for installation of the Cable Anchor Plate shown on Sheet 9, 10, & 11.

   29/32" x 1⅛" slots may substitute for the ⅞" Ø holes shown.

W-BEAM AND THRIE-BEAM PANEL DETAILS

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Attachment I

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT GUARDRAIL DETAILS

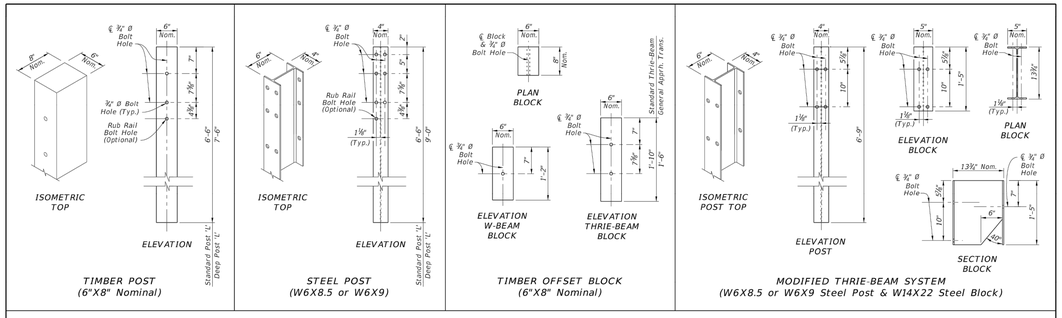
Seal

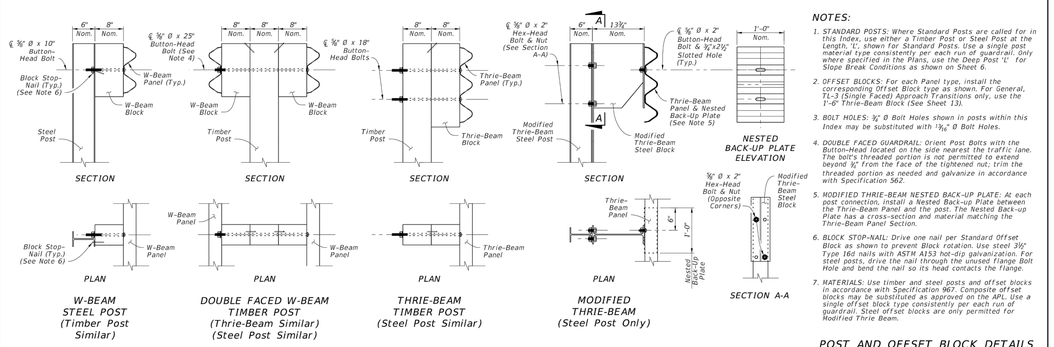
Project Number:	215613796
File Name:	13796-TITLE BLOCK

Dwn.	Chkd.	Dsgn.	YY.MM.DD
JG	CB	AM	20.01.06

Drawing No. C-520

Revision 0 Sheet of





NOTES:

1. STANDARD POSTS: Where Standard Posts are called for in this Index, use either a Timber Post or Steel Post at the Length, 'L', shown for Standard Posts. Use a single post material type consistently per each run of guardrail. Only where specified in the Plans, use the Deep Post 'L' for Slope Break Conditions as shown on Sheet 6.
2. OFFSET BLOCKS: For each Panel type, install the corresponding Offset Block type as shown. For General, TL-3 (Single Faced) Approach Transitions only, use the 1'-0" Thrie-Beam Block (See Sheet 13).
3. BOLT HOLES: 13/16" Ø Bolt Holes shown in posts within this Index may be substituted with 7/8" Ø Bolt Holes.
4. DOUBLE FACED GUARDRAIL: Orient Post Bolts with the Button-Head located on the side nearest the traffic lane. The bolt's threaded portion is not permitted to extend beyond ½" from the face of the tightened nut; trim the threaded portion as needed and galvanize in accordance with Specification 562.
5. MODIFIED THRIE-BEAM NESTED BACK-UP PLATE: At each post connection, install a Nested Back-up Plate between the Thrie-Beam Panel and the post. The Nested Back-up Plate has a cross-section and material matching the Thrie-Beam Panel Section.
6. BLOCK STOP-NAIL: Drive one nail per Standard Offset Block as shown to prevent Block rotation. Use steel 3½" Type 16d nails with ASTM A153 hot-dip galvanization. For steel posts, drive the nail through the unused Flange Bolt Hole and bend the nail so it's head contacts the flange.
7. MATERIALS: Use timber and steel posts and offset blocks in accordance with Specification 967. Composite offset blocks may be substituted as approved on the APL. Use a single offset block type consistently per each run of guardrail. Steel offset blocks are only permitted for Modified Thrie Beam.

POST AND OFFSET BLOCK DETAILS

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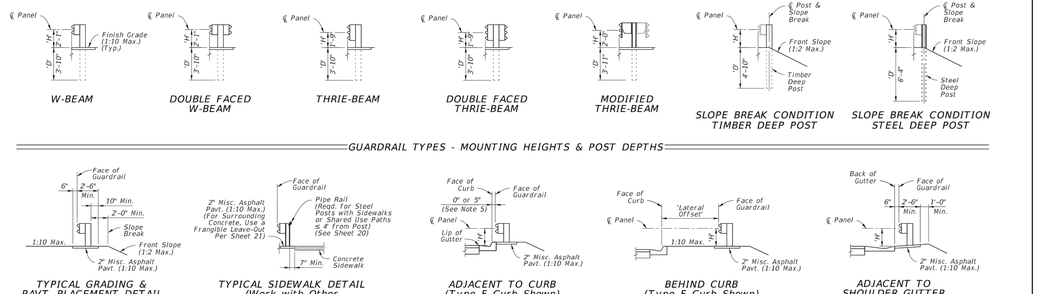
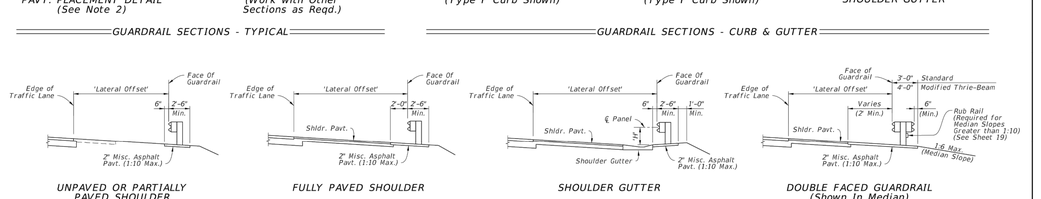




GUARDRAIL SECTIONS - SHOULDERS

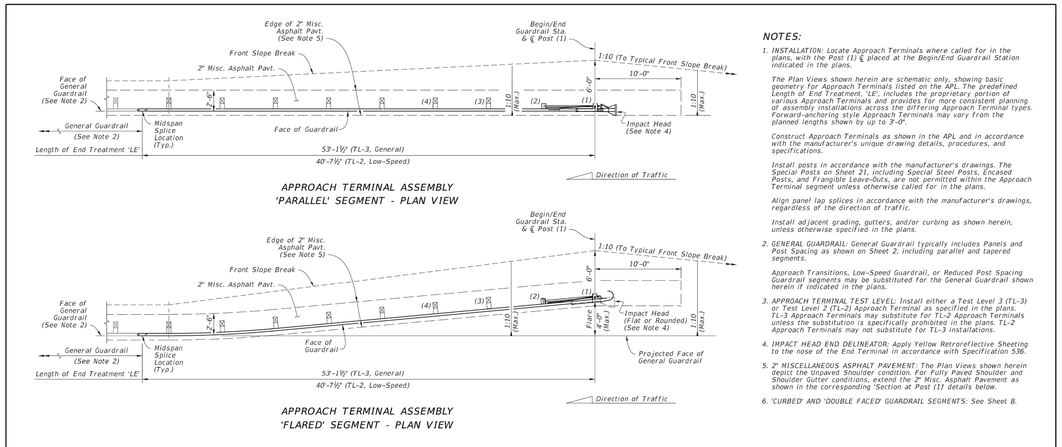
GUARDRAIL HEIGHT SUMMARY TABLE:			
Type:	Min. Depth 'D':	Mounting Height 'H':	Post Length 'L':
W-Beam (Single and Double Faced)	3'-10"	2'-1"	6'-6"
Thrie-Beam (Single and Double Faced)	3'-10"	1'-9"	6'-6"
Modified Thrie-Beam	3'-11"	2'-0"	6'-9"
Timber Deep Post	4'-10"	See Above	7'-6"
Steel Deep Post	6'-4"	See Above	9'-0"

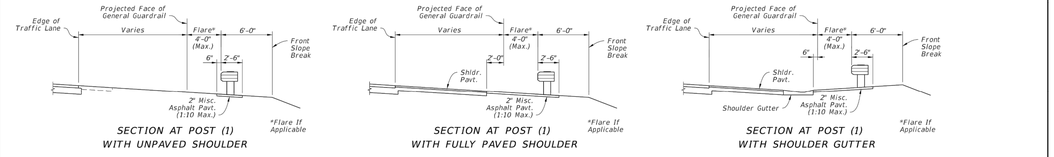
NOTES:

1. GUARDRAIL SECTIONS: Construct Sections as indicated in the plans. The details shown herein depict W-Beam Guardrail, but are applicable to the other defined Guardrail Types placed at the corresponding height, 'H'. Use components per Sheets 4 & 5. Steel and timber post types are interchangeable unless otherwise defined. The 1:10 Max. cross slope shown is the maximum slope permitted for proper guardrail function, but project-specific cross slope requirements are governed per the plans.
2. TYPICAL GRADING & PAVEMENT PLACEMENT DETAIL: Construct Features as depicted except where superceded by specific Guardrail Sections or the plans. Place the Slope Break a Minimum of 2' behind the post. For Deep Posts, the slope break may be placed at the ℄ Post with the 2" Miscellaneous Asphalt Pavement omitted.
3. SLOPE BREAK CONDITION: Install Deep Posts only where called for in the plans. Deep Posts are only permitted where post spacing is 6'-3" or less.
4. LATERAL OFFSETS: The Lateral Offsets shown are governed by the station and offset call outs for Face of Guardrail, as shown in the plans.
5. ADJACENT TO CURB: Place the Face of Guardrail consistently offset either flush with the Face of Curb or 5' behind the Face of Curb, as indicated by the plans station and offset callout. For offset changes, transition the Face of Guardrail as shown in the plans.

GUARDRAIL SECTIONS

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 6 of 22





NOTES:

1. INSTALLATION: Locate Approach Terminals where called for in the plans, with the Post (1) ℄ placed at the Begin/End Guardrail Station indicated in the plans.

   The Plan Views shown herein are schematic only, showing basic geometry for Approach Terminals listed on the APL. The predefined Length of End Treatment, 'LE', includes the proprietary portion of various Approach Terminals and provides for more consistent planning of assembly installations across the differing Approach Terminal types. Forward-anchoring style Approach Terminals may vary from the planned lengths shown by up to 3'-0".

   Construct Approach Terminals as shown in the APL and in accordance with the manufacturer's unique drawing details, procedures, and specifications.

   Install posts in accordance with the manufacturer's drawings. The Special Posts on Sheet 21, including Special Steel Posts, Encased Posts, and Frangible Leave-Outs, are not permitted within the Approach Terminal segment unless otherwise called for in the plans.

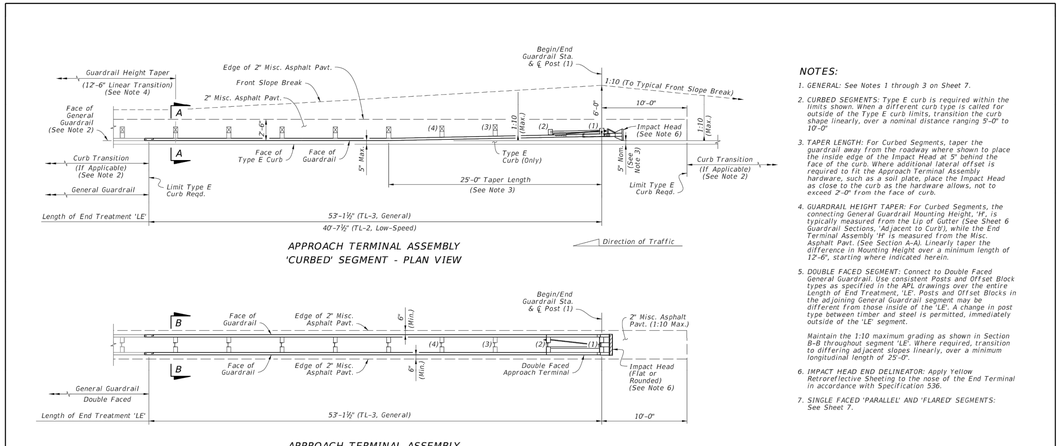
   Align panel lap splices in accordance with the manufacturer's drawings, regardless of the direction of traffic.

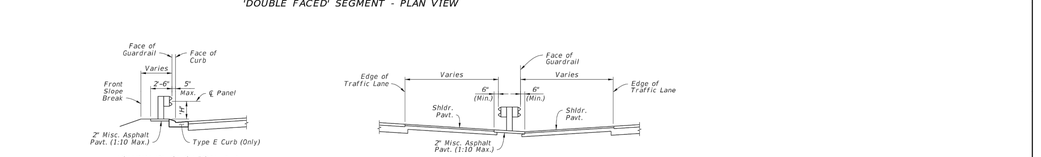
   Install adjacent grading, gutters, and/or curbing as shown herein, unless otherwise specified in the plans.
2. GENERAL GUARDRAIL: General Guardrail typically includes Panels and Post Spacing as shown on Sheet 2, including parallel and tapered segments.

   Approach Transitions, Low-Speed Guardrail, or Reduced Post Spacing Guardrail segments may be substituted for the General Guardrail shown herein if indicated in the plans.
3. APPROACH TERMINAL TEST LEVEL: Install either a Test Level 3 (TL-3) or Test Level 2 (TL-2) Approach Terminal as specified in the plans. TL-3 Approach Terminals may substitute for TL-2 Approach Terminals unless the substitution is specifically prohibited in the plans. TL-2 Approach Terminals may not substitute for TL-3 installations.
4. IMPACT HEAD END DELINEATOR: Apply Yellow Retroreflective Sheeting to the nose of the End Terminal in accordance with Specification 536.
5. 2" MISCELLANEOUS ASPHALT PAVEMENT: The Plan Views shown herein depict the Unpaved Shoulder condition. For Fully Paved Shoulder and Shoulder Gutter conditions, extend the 2" Misc. Asphalt Pavement as shown in the corresponding 'Section at Post (1)' details below.
6. 'CURBED' AND 'DOUBLE FACED' GUARDRAIL SEGMENTS: See Sheet 8.

END TREATMENT - APPROACH TERMINAL GEOMETRY PARALLEL AND FLARED

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 7 of 22





NOTES:

1. GENERAL: See Notes 1 through 3 on Sheet 7.
2. CURBED SEGMENTS: Type E curb is required within the limits shown. When a different curb type is called for outside of the Type E curb limits, transition the curb shape linearly, over a nominal distance ranging 5'-0" to 10'-0".
3. TAPER LENGTH: For Curbed Segments, taper the guardrail away from the roadway where shown to place the inside edge of the Impact Head at 5" behind the face of the curb. Where additional lateral offset is required to fit the Approach Terminal Assembly hardware, such as a soil plate, place the Impact Head as close to the curb as the hardware allows, not to exceed 2'-0" from the face of curb.
4. GUARDRAIL HEIGHT TAPER: For Curbed Segments, the connecting General Guardrail Mounting Height, 'H', is typically measured from the Lip of Gutter (See Sheet 6 Guardrail Sections, 'Adjacent to Curb'), while the End Terminal Assembly 'H' is measured from the Misc. Asphalt Pavt. (See Section A-A). Linearly taper the difference in Mounting Height over a minimum length of 12'-6", starting where indicated herein.
5. DOUBLE FACED SEGMENT: Connect to Double Faced General Guardrail. Use consistent Posts and Offset Block types as specified in the APL drawings over the entire Length of End Treatment, 'LE'. Posts and Offset Blocks in the adjoining General Guardrail segment may be different from those inside of the 'LE'. A change in post type between timber and steel is permitted, immediately outside of the 'LE' segment.

   Maintain the 1:10 maximum grading as shown in Section B-B throughout segment 'LE', Where required, transition to differing adjacent slopes linearly, over a minimum longitudinal length of 25'-0".
6. IMPACT HEAD END DELINEATOR: Apply Yellow Retroreflective Sheeting to the nose of the End Terminal in accordance with Specification 536.
7. SINGLE FACED 'PARALLEL' AND 'FLARED' SEGMENTS: See Sheet 7.

END TREATMENT - APPROACH TERMINAL GEOMETRY CURBED AND DOUBLE FACED

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Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT GUARDRAIL
DETAILS

Seal

Project Number:	215613796		
File Name:	13796-TITLE BLOCK		
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-521

Revision 0 Sheet of

Attachment I

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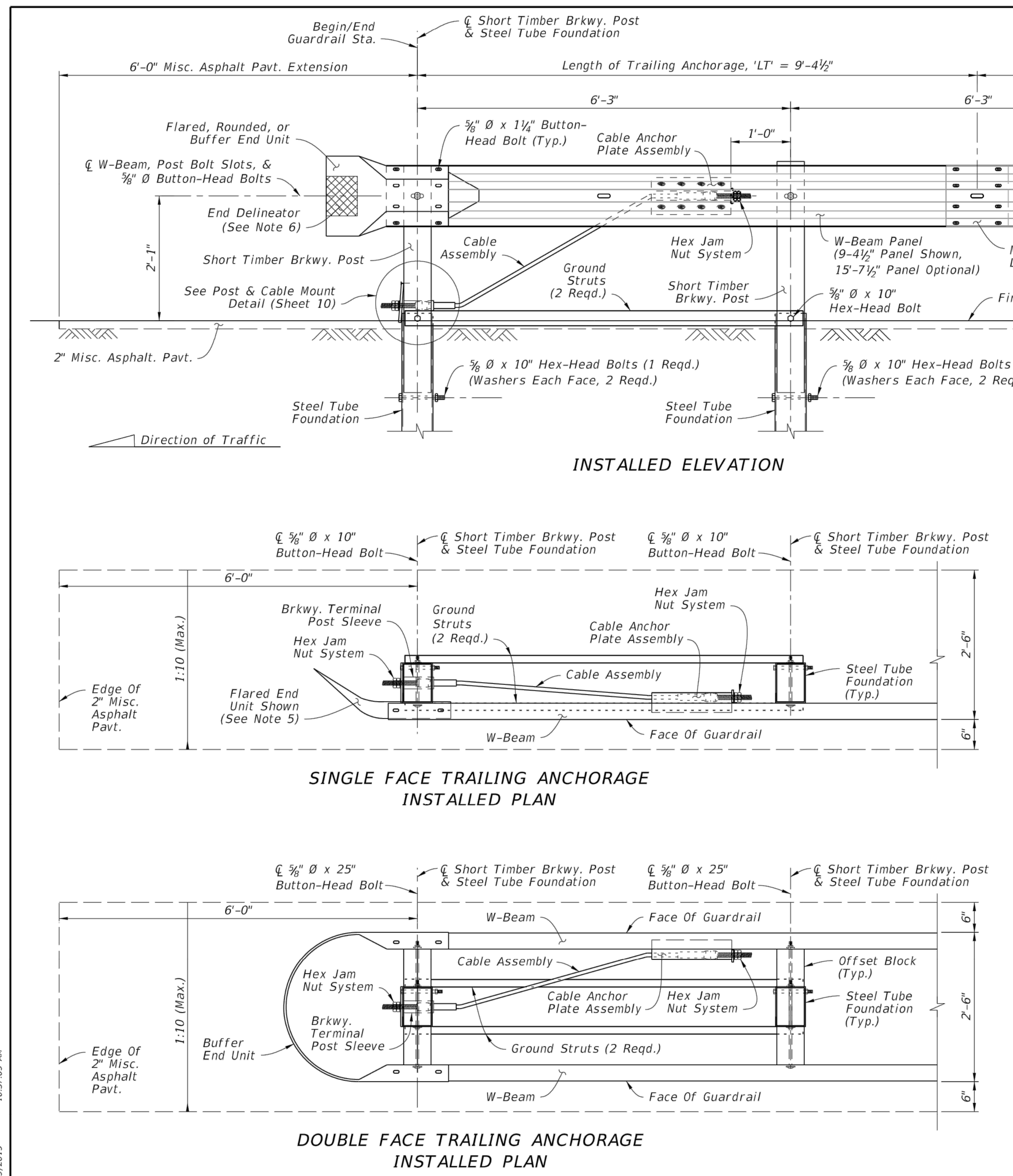
2020/01/14 1:49 PM By: Gerth, James
ORIGINAL SHEET - ANSI D

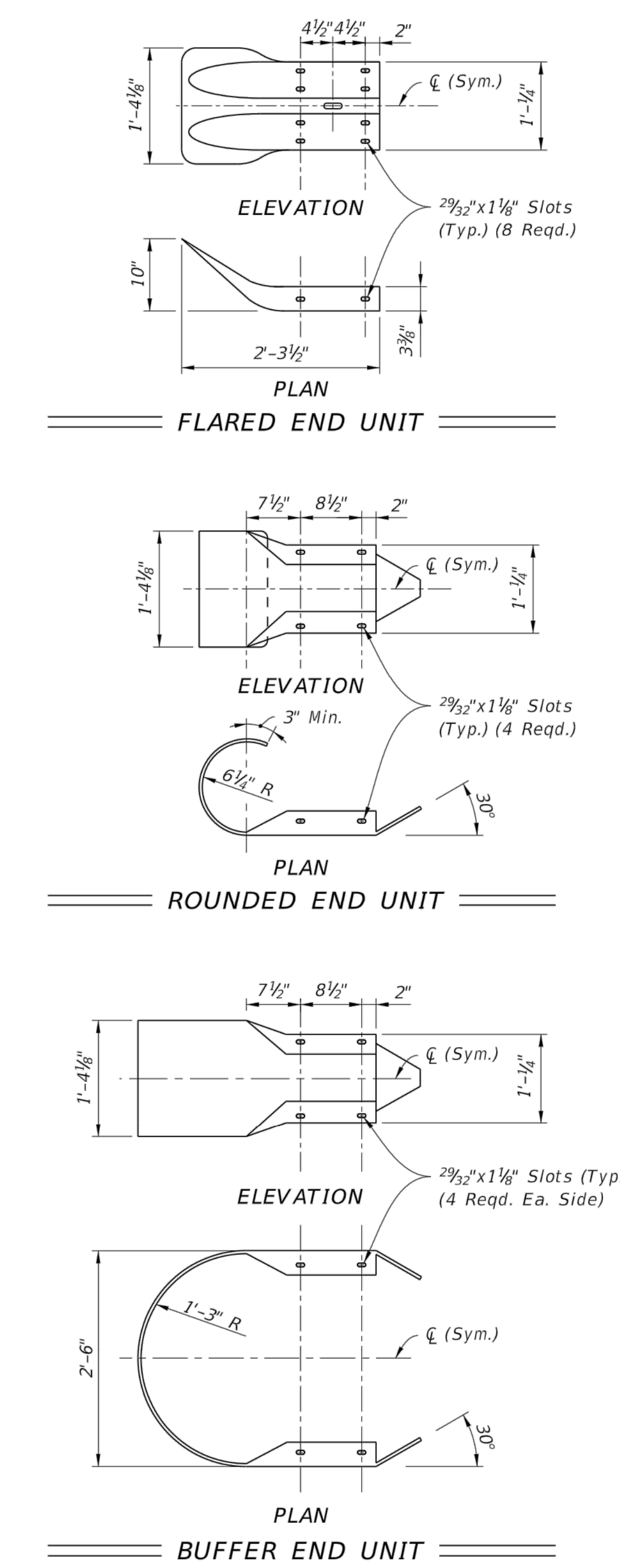
Attachment I



NOTES:

1. COMPONENT DETAILS: For additional component details, See Sheet 10.
2. END UNITS: Use materials for end units as defined in Specifications Section 967. End Units are referred to as "End or Buffer Sections" in AASHTO M180.

   Lap the Flared End Unit behind the W-Beam; lap the Rounded and Buffered End Units over the face of the W-Beam.
3. FOUNDATIONS: Install Steel Tubes by either of the following methods:
   a. Excavate, backfill, and compact material to provide full passive soil resistance to the surface of the Tube.
   b. Drive the Tube using a dummy timber post to prevent damage to the Breakaway Post.
4. GENERAL GUARDRAIL: General Guardrail typically includes Panels and Post Spacing as shown on Sheet 2, including parallel and tapered segments. Transitions, Low-Speed Guardrail, or Reduced Post Spacing Guardrail segments may be substituted for the General Guardrail shown herein if indicated in the plans.
5. SIDEWALK REQUIREMENTS: When sidewalks are located adjacent to the End Treatment, install a Rounded End Unit (Flared End Unit not permitted for this case).
6. END DELINEATOR: Mount retroreflective sheeting to the approach face of the End Unit in accordance with Specification Sections 536 and 967.



END TREATMENT - TRAILING ANCHORAGE

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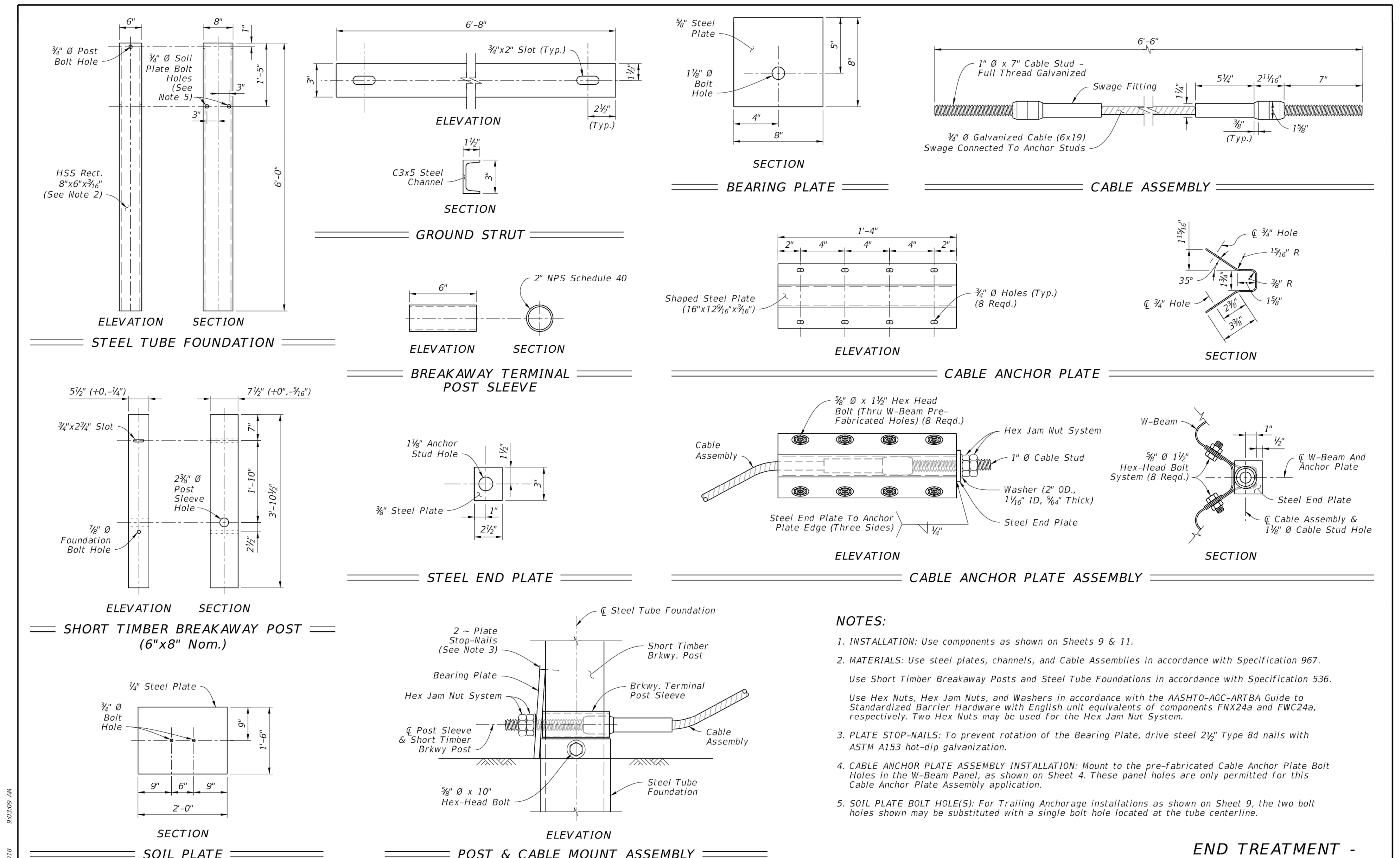

NOTES:

1. INSTALLATION: Use components as shown on Sheets 9 & 11.
2. MATERIALS: Use steel plates, channels, and Cable Assemblies in accordance with Specification 967.

   Use Short Timber Breakaway Posts and Steel Tube Foundations in accordance with Specification 536.

   Use Hex Nuts, Hex Jam Nuts, and Washers in accordance with the AASHTO-AGC-ARTBA Guide to Standardized Barrier Hardware with English unit equivalents of components FNX24a and FWC24a, respectively. Two Hex Nuts may be used for the Hex Jam Nut System.
3. PLATE STOP-NAILS: To prevent rotation of the Bearing Plate, drive steel 2½" Type 8d nails with ASTM A153 hot-dip galvanization.
4. CABLE ANCHOR PLATE ASSEMBLY INSTALLATION: Mount to the pre-fabricated Cable Anchor Plate Bolt Holes in the W-Beam Panel, as shown on Sheet 4. These panel holes are only permitted for this Cable Anchor Plate Assembly application.
5. SOIL PLATE BOLT HOLE(S): For Trailing Anchorage installations as shown on Sheet 9, the two bolt holes shown may be substituted with a single bolt hole located at the tube centerline.

END TREATMENT - COMPONENT DETAILS

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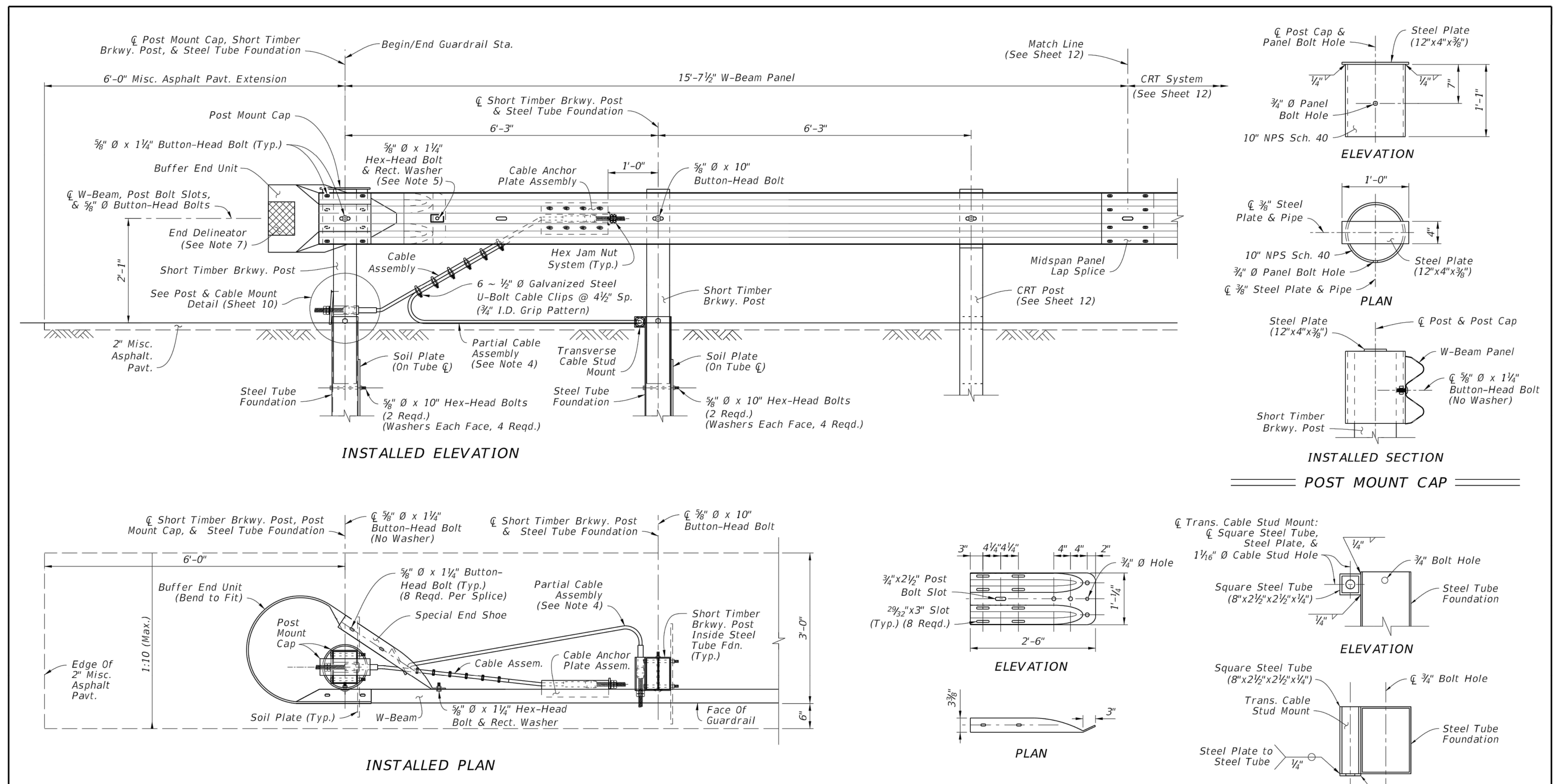


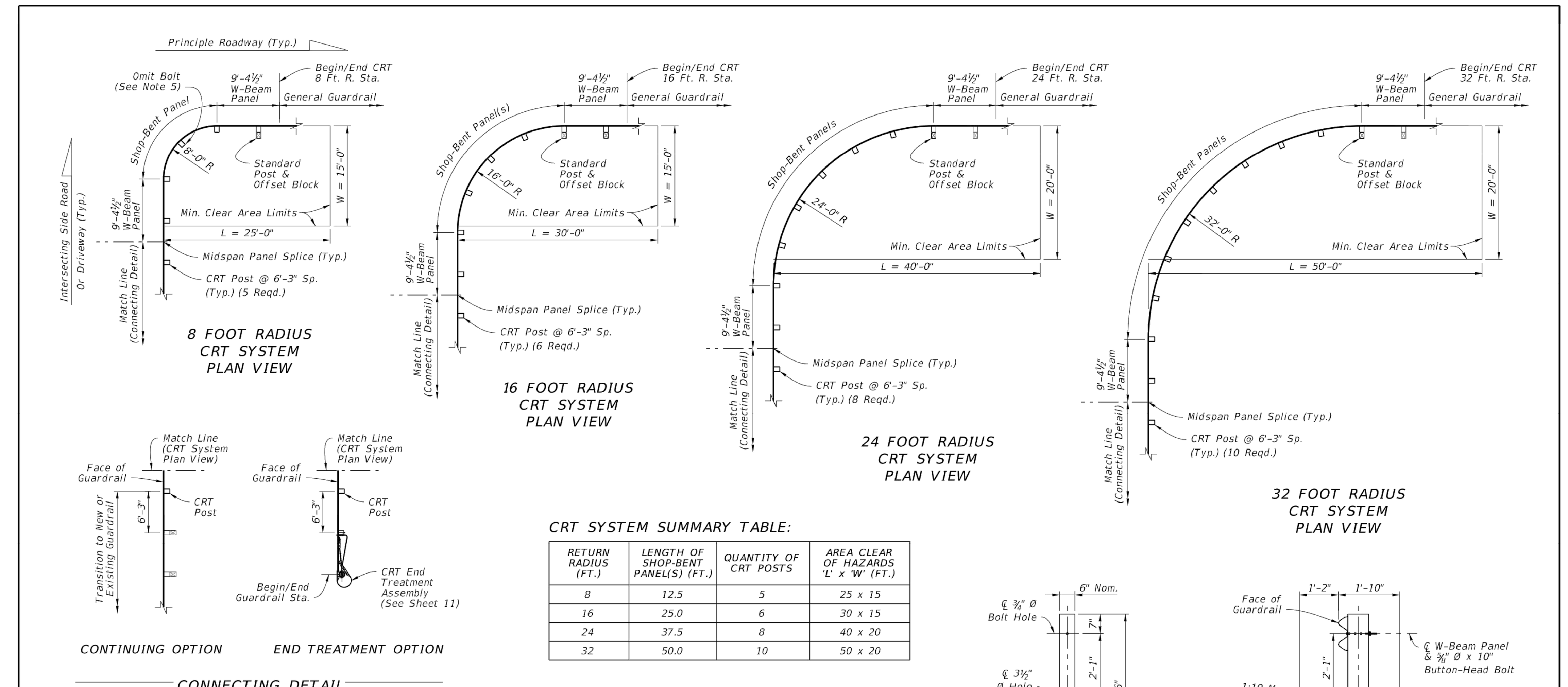
NOTES:

1. INSTALLATION: Use with CRT Systems as required on Sheet 12.
2. COMPONENT DETAILS: For additional component details, See Sheet 10 & 12. For the Rectangular Washer detail, see Sheet 22.
3. MATERIALS: Use steel End Shoes, Plates, Tubes, and pipes in accordance with Specifications 967.
4. PARTIAL CABLE ASSEMBLY: The Partial Cable Assembly is similar to the Cable Assembly defined on Sheet 10, except with a 9'-0" total length and the Swage Fitting and Cable Stud omitted from one end.

   Feed the Cable Stud through the Cable Stud Hole of the Transverse Cable Stud Mount as shown, and secure it with the Hex Jam Nut System as defined on Sheet 10.
5. SPECIAL END SHOE MOUNT: Punch a ¾" Ø hole in the W-Beam Panel as needed to secure the Special End Shoe with the ⅝" Ø Hex-Head Bolt. Galvanize hole per Specification 562.
6. FOUNDATIONS: Install Steel Tubes with attached Soil Plates by either of the following methods:
   a. Excavate, backfill, and compact material to provide full passive soil resistance to all surfaces of the tube and soil plate.
   b. Drive the steel tube and soil plate as a single unit using a dummy timber post to prevent damage to the breakaway post.
7. END DELINEATOR: Mount retroreflective sheeting to the approach face of the Buffer End Unit in accordance with Specifications 536 and 967.

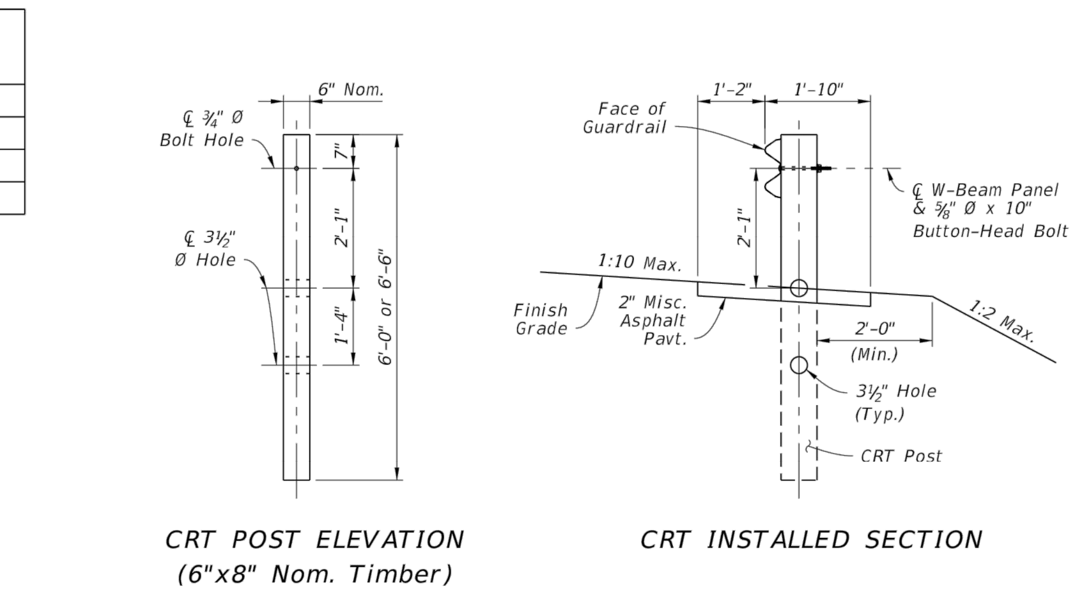
END TREATMENT - CONTROLLED RELEASE TERMINAL (CRT) SYSTEM

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 11 of 22



CRT SYSTEM SUMMARY TABLE:

RETURN RADIUS (FT.)	LENGTH OF SHOP-BENT PANEL(S) (FT.)	QUANTITY OF CRT POSTS	AREA CLEAR OF HAZARDS 'L' x 'W' (FT.)
8	12.5	5	25 x 15
16	25.0	6	30 x 15
24	37.5	8	40 x 20
32	50.0	10	50 x 20



NOTES:

1. INSTALLATION: Construct the specified radius layout and Connecting Detail option as shown in the plans.
2. MIN. CLEAR AREA: Keep the area behind the CRT free of fixed objects and aboveground hazards within the Min. Clear Area limits shown. Maintain a slope not steeper than 1:10 for a minimum 2' behind the posts, and maintain a slope not steeper than 1:2 beyond 2' from the posts.
3. APPROACH GRADING: Maintain grading on the roadway side of the guardrail face at a maximum slope of 1:10.
4. MATERIALS: For CRT Posts, use Timber Post material in accordance with Specification 967. Use steel panels and hardware in accordance with Specification 967.
5. BOLT OMISSION: For the 8 Foot Radius CRT System only, do not place a panel-to-post mount bolt at the center CRT Post (omit the ⅝" Button-Head Bolt only at the location shown).
6. SHOP-BENT PANELS: Install Shop-Bent panel(s) where indicated using 12'-0" or 25'-0" W-Beam Panels. Splice at post locations within the CRT radius using the General configuration of ⅝" Ø Button-Head Bolts (8 reqd. per splice).
7. GENERAL GUARDRAIL: General Guardrail typically includes Panels and Post Spacing as shown on Sheet 2, including parallel and tapered segments. Approach Transitions, Low-Speed Guardrail, or Reduced Post Spacing Guardrail segments may be substituted for the General Guardrail shown herein if indicated in the plans.

LAYOUT FOR CONTROLLED RELEASE TERMINAL (CRT) SYSTEMS - SIDE ROADS AND DRIVEWAYS

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 12 of 22

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Revision | By | Appd. | YY.MM.DD

Issued | By | Appd. | YY.MM.DD

Seal

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT GUARDRAIL DETAILS

Project Number: 215613796

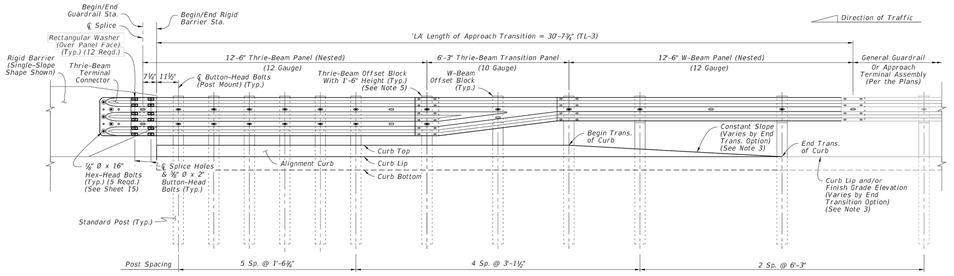
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

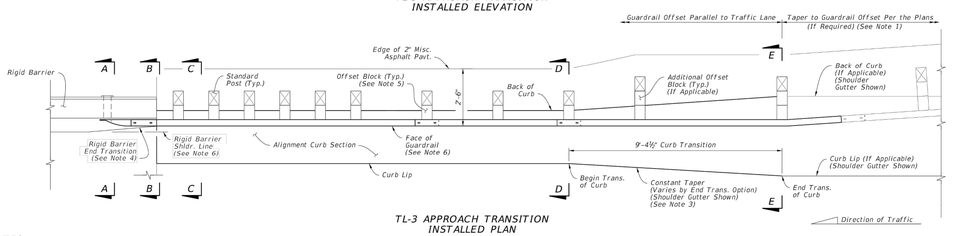
Drawing No. C-522

Revision 0 | Sheet of

ORIGINAL SHEET - ANSI D



TL-3 APPROACH TRANSITION
INSTALLED ELEVATION



TL-3 APPROACH TRANSITION
INSTALLED PLAN

NOTES:

1. *INSTALLATION:* Construct the Approach Transition segment where indicated in the plans. The required offset of the connecting adjacent guardrail is shown in the plans.

   The Layouts given on Sheet 17 provide basic schemes for connections to adjacent guardrail, where a taper to a differing guardrail offset may be required. If the adjacent guardrail segment has the same offset as the Approach Transition segment, then no taper is required.

   For existing bridge connection options, see Indexes 536-002, 521-404, and 521-405.

2. *SECTION VIEWS & DETAILS:* For cross sections and details including the barrier mounting hardware, curb transition, adjacent grading, and installation dimensions, see Sheet 15.

3. *END TRANSITION OF CURB OPTION:* The Plan and Elevation views depict an example Curb Transition to Shoulder Gutter from Section D-D to E-E, but this transition may require a different shape depending on the End Transition option indicated in the plans (Either a 'Shoulder Gutter Option', 'Raised Curb Option', or 'Flat No Curb Option'). See Sheet 15 for curb shape details.

4. *RIGID BARRIER END TRANSITION:* Taper the Rigid Barrier toe as shown. See Concrete Barrier, Index 521-001, and Traffic Railing, Indexes 521-422 and 521-428, for details.

5. *OFFSET BLOCKS:* For Thrie-Beam post locations within the Length of Approach Transition segment, use the Timber Offset Blocks with 1'-6" height shown on Sheet 5.

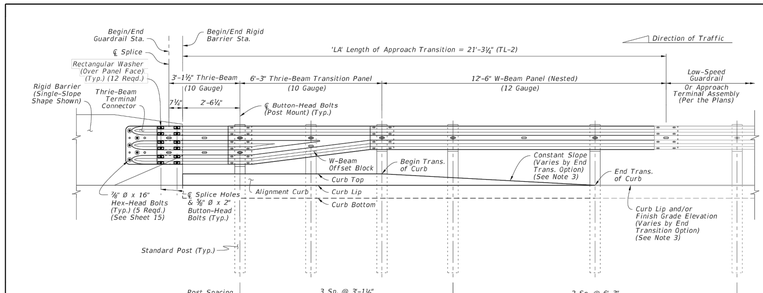
   For the midspan of the Thrie-Beam Transition Panel and for all other W-Beam locations shown herein, use the W-Beam Offset Blocks with 1'-2" height.

6. *OFFSET:* The required offset difference between the Face of Guardrail and Rigid Barrier Shoulder Line is considered negligible and may not be shown in the guardrail offset callouts in the plans. A consistent guardrail offset deviation of up to 4 inches outside of the Rigid Barrier Shoulder Line is permitted over the length 'LA'.

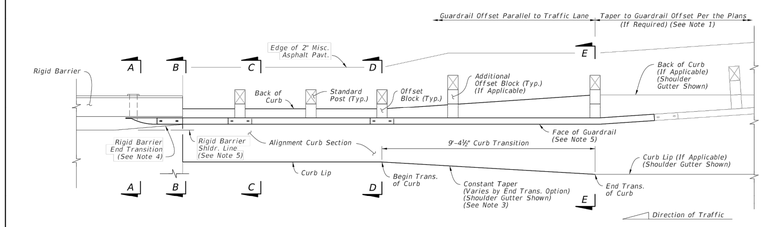
7. *GENERAL GUARDRAIL:* General Guardrail typically includes Panels and Post Spacing as shown on Sheet 2, including parallel and tapered segments. Approach Terminals, Low-Speed Guardrail, or Reduced Post Spacing Guardrail segments may be substituted for the General Guardrail shown herein if indicated in the plans.

APPROACH TRANSITION CONNECTION TO RIGID BARRIER - GENERAL, TL-3

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 13 of 22



TL-2 APPROACH TRANSITION
INSTALLED ELEVATION



TL-2 APPROACH TRANSITION
INSTALLED PLAN

NOTES:

1. *INSTALLATION:* Construct the Approach Transition segment where indicated in the plans. The required offset of the connecting adjacent guardrail is shown in the plans.

   The Layouts given on Sheet 17 provide basic schemes for connections to adjacent guardrail, where a taper to a differing guardrail offset may be required. If the adjacent guardrail segment has the same offset as the Approach Transition segment, then no taper is required.

   For existing bridge connection options, see Indexes 536-002, 521-404, and 521-405.

2. *SECTION VIEWS & DETAILS:* For cross sections and details including the barrier mounting hardware, curb transition, adjacent grading, and installation dimensions, see Sheet 15.

3. *END TRANSITION OF CURB OPTION:* The Plan and Elevation views depict an example Curb Transition to Shoulder Gutter from Section D-D to E-E, but this transition may require a different shape depending on the End Transition option indicated in the plans (Either a 'Shoulder Gutter Option', 'Raised Curb Option', or 'Flat No Curb Option'). See Sheet 15 for curb shape details.

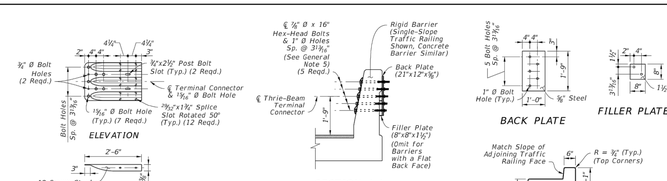
4. *RIGID BARRIER END TRANSITION:* Taper the Rigid Barrier toe as shown. See Concrete Barrier, Index 521-001, and Traffic Railing, Indexes 521-422 thru 521-428, for details.

5. *OFFSET:* The required offset difference between the Face of Guardrail and Rigid Barrier Shoulder Line is considered negligible and may not be shown in the guardrail offset callouts in the plans. A consistent guardrail offset deviation of up to 4 inches outside of the Rigid Barrier Shoulder Line is permitted over the length 'LA'.

6. *LOW-SPEED GUARDRAIL:* Low-Speed Guardrail typically includes Panels and Post Spacing as shown on Sheet 3, including parallel and tapered segments. Approach Terminals, General Guardrail, or Reduced Post Spacing Guardrail segments may be substituted for the Low-Speed Guardrail shown herein if indicated in the plans.

APPROACH TRANSITION CONNECTION TO RIGID BARRIER - LOW-SPEED, TL-2

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 14 of 22

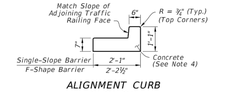


THRIE-BEAM TERMINAL
CONNECTOR DETAIL

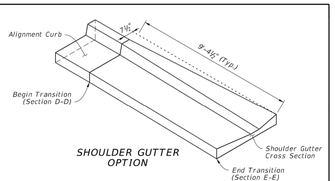
SECTION A-A
RIGID BARRIER TERMINAL
CONNECTOR MOUNT

BACK PLATE

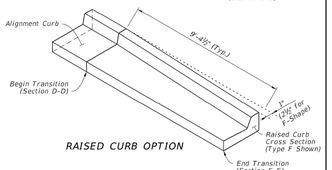
FILLER PLATE



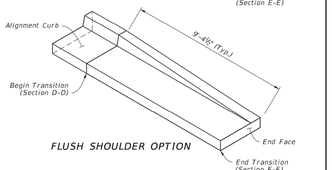
ALIGNMENT CURB
SECTION



SHOULDER GUTTER
OPTION

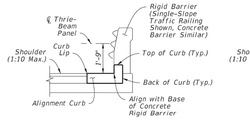


RAISED CURB OPTION

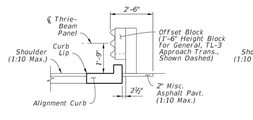


FLUSH SHOULDER OPTION

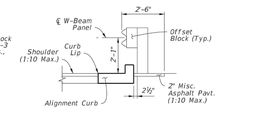
CURB TRANSITION ISOMETRIC VIEWS



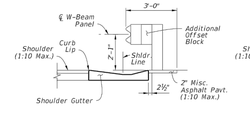
SECTION B-B
BEGIN ALIGNMENT CURB
(Mate to Rigid Barrier)



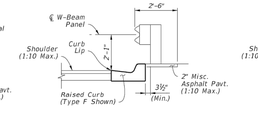
SECTION C-C
ALIGNMENT CURB
(Intermediate)



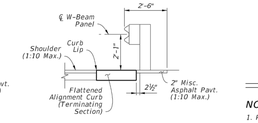
SECTION D-D
BEGIN TRANSITION
(End Alignment Curb)



SECTION E-E
END TRANSITION
SHOULDER GUTTER OPTION



SECTION E-E
END TRANSITION
RAISED CURB OPTION



SECTION E-E
END TRANSITION
FLUSH SHOULDER OPTION

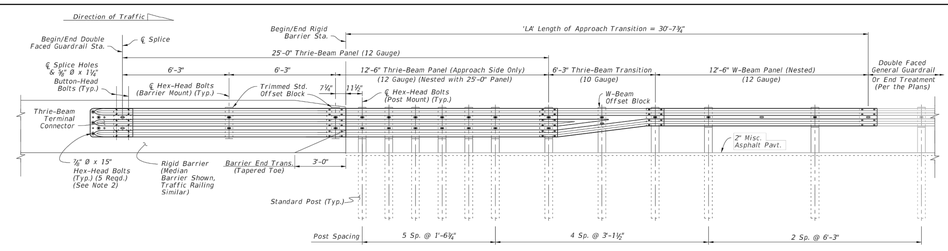
CURB TYPICAL SECTIONS

NOTES:

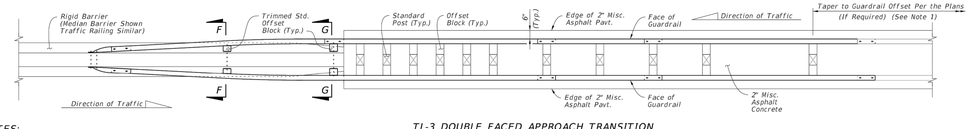
1. *PLAN AND ELEVATION VIEWS:* Work with Sheets 13 & 14.
2. *END TRANSITION OF CURB OPTION:* Install one of the three End Transition types shown per Section E-E as indicated by the plans.
3. *GRADING BEHIND POSTS:* Place Slope Break a Min. 2'-0" behind the post, per Sheet 6.
4. *MATERIALS & CONSTRUCTION:* Construct the concrete Aligning Curb and Curb transition in accordance with Specification 520. Use steel Plates and Thrie-Beam Terminal Connectors in accordance with Specification 967.

APPROACH TRANSITION CONNECTION - DETAILS

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 15 of 22



TL-3 DOUBLE FACED APPROACH TRANSITION
INSTALLED ELEVATION



TL-3 DOUBLE FACED APPROACH TRANSITION
INSTALLED PLAN

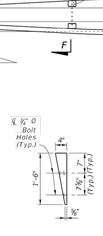
NOTES:

1. *INSTALLATION:* Construct the Approach Transition segment where indicated in the plans. The required offset of the connecting adjacent guardrail is shown in the plans.

   The Layouts given on Sheet 18 provide basic schemes for connections to adjacent guardrail, where a taper to a differing guardrail offset may be required. If the adjacent guardrail has the same offset as the Approach Transition segment, then no taper is required.

2. *THRIE-BEAM TERMINAL CONNECTOR:* See Sheet 15 for Details. The installed bolt's threaded portion is not permitted to extend beyond ½" from the face of the nut; trim the threaded portion as needed and galvanize in accordance with Specification 562.

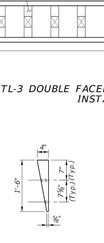
3. *GENERAL GUARDRAIL:* General Guardrail typically includes Panels and Post Spacing as shown on Sheet 2, including parallel and tapered segments. End Treatments or Reduced Post Spacing Guardrail segments may be substituted for the General Guardrail shown herein if indicated in the plans.



TYPE F-F
SECTION

TYPE G-G
SECTION

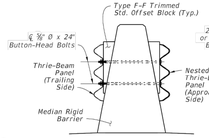
TRIMMED STD. OFFSET BLOCKS
TIMBER POST ALIGNMENT WIDTH



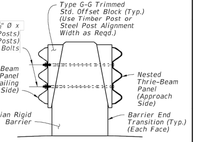
TYPE F-F
SECTION

TYPE G-G
SECTION

TRIMMED STD. OFFSET BLOCKS
STEEL POST ALIGNMENT WIDTH



SECTION F-F



SECTION G-G

APPROACH TRANSITION CONNECTION TO RIGID BARRIER WITH DOUBLE FACED GUARDRAIL

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 16 of 22

Attachment I

Stantec
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No.	Revision	By	Appd.	YY.MM.DD
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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

Seal

FDOT GUARDRAIL
DETAILS

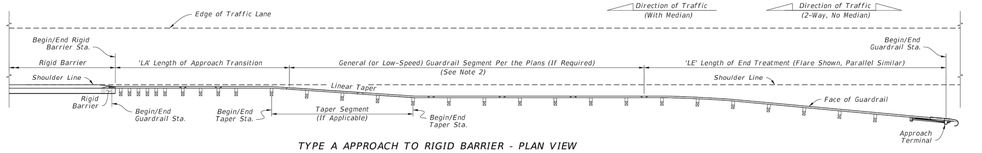
Project Number:	215613796
File Name:	13796-TITLE BLOCK

Dwn. JG	Chkd. CB	Dsgn. AM	YY.MM.DD 20.01.06

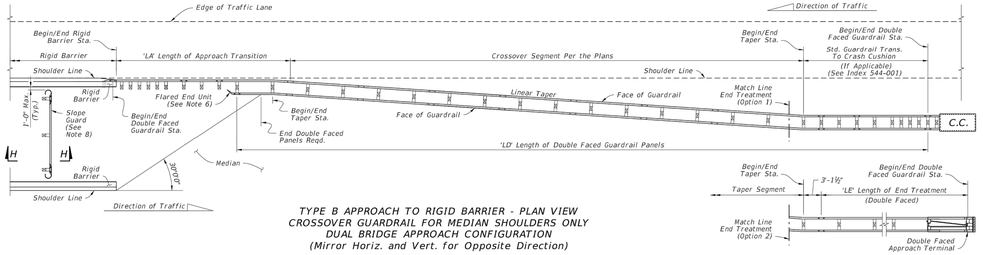
Drawing No. C-523

Revision 0 Sheet of

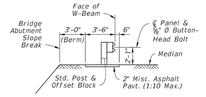
V:\215\active\215613796\civil\drawing\05_final_plans\sheet_files\215613796-C523-GUARDRAIL.dwg
2020/01/14 1:49 PM By: Gerth, James
ORIGINAL SHEET - ANSI D



TYPE A APPROACH TO RIGID BARRIER - PLAN VIEW
MEDIAN OR OUTSIDE SHOULDERS
(Mirror Horiz. and/or Vert. for Opposite Direction and/or Side of Road)



TYPE B APPROACH TO RIGID BARRIER - PLAN VIEW
CROSSOVER GUARDRAIL FOR MEDIAN SHOULDERS ONLY
DUAL BRIDGE APPROACH CONFIGURATION
(Mirror Horiz. and Vert. for Opposite Direction)



SECTION H-H
BRIDGE ABUTMENT
SLOPE GUARD
(Between Bridges)

NOTES:

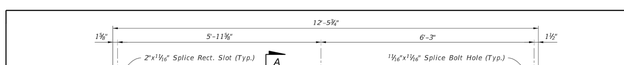
1. *INSTALLATION: The Plan Views shown are schematic only, showing example geometry for connecting guardrail segments including taper locations and Double Faced Guardrail requirements as applicable. Work this Sheet with the plans, where stationing and offsets for Begin/End Guardrail, Begin/End Rigid Barrier, and Begin/End Taper are specified. For existing bridge layouts, see Index 536-002, 521-404, and 521-405.*
2. *GENERAL (OR LOW-SPEED) GUARDRAIL SEGMENT: Construct this segment if shown in the plans. For the case where this segment's offset differs from the Approach Transition offset, linearly taper the guardrail between the Begin/End Taper Stations and offsets as specified in the plans.*

   For the shortest length case of a direct connection between the End Treatment and the Approach Transition, this segment may be omitted as shown in the plans.
3. *LENGTH OF APPROACH TRANSITION 'LA': Install the Approach Transition as shown per Sheet 13 or 14 as called for in the plans.*
4. *LENGTH OF END TREATMENT 'LE': Install the Approach Terminal End Treatment as shown per Sheet 7 or 8, where called for in the plans. Use the corresponding APL drawings for construction details.*
5. *CROSSOVER GUARDRAIL (FOR TYPE B APPROACH): Install the Crossover Segment tapering linearly from the Begin Taper Sta. and offset to the End Taper Sta. and offset as specified in the plans.*
6. *LENGTH OF DOUBLE FACED GUARDRAIL PANELS, 'LD' (FOR TYPE B APPROACH): Terminate the Double Faced Guardrail panels as shown (based upon the 30" line measured from the hazard on the opposite side of the median). Extend the panel segment longer than the dimension 'LD' as needed for the Panel's end Bolt Slot to align with a post Bolt hole.*

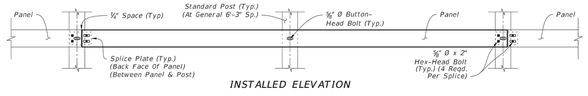
   Install a Flared End Unit where shown, as defined on Sheet 9.
7. *END TREATMENT OPTIONS (FOR TYPE B & C APPROACH): For Double Faced applications, use either a Double Faced Approach Terminal Assembly per Sheet 8 or a Crash Cushion per Index 544-001. For either Option, meet the 1:10 adjacent grading requirements for Approach Terminals as shown on Sheet 8.*
8. *SLOPE GUARD: Where indicated in the plans, install a Guardrail segment between bridge approaches and offset from the bridge abutment's Slope Break as shown. Install posts at the end bolt slots of the panel system. Use post spacing of either 3'-1½" or 6'-3", as needed to correctly fit system between barriers. The system may also be lengthened to fit by installing two Rounded End Units as defined on Sheet 9.*

LAYOUT TO RIGID BARRIER - APPROACH ENDS

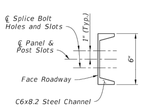
LAST REVISION 11/01/18	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 17 of 22



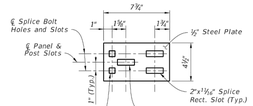
PANEL ELEVATION



INSTALLED ELEVATION

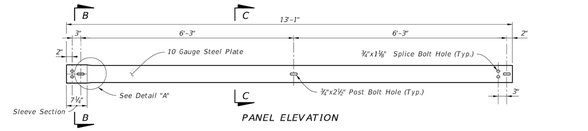


SECTION A-A
(Panel Typical)



SPLICE PLATE
ELEVATION

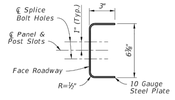
CHANNEL SECTION RUB RAIL



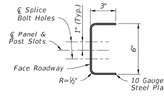
PANEL ELEVATION

PANEL PLAN

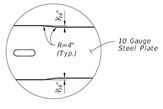
INSTALLED ELEVATION



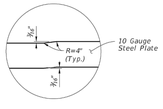
SECTION B-B
(Panel Sleeve End)



SECTION C-C
(Panel Typical)

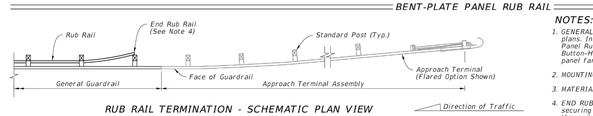


DETAIL "A"
(Sleeve Transition Elevation)



DETAIL "B"
(Sleeve Transition Plan)

BENT-PLATE PANEL RUB RAIL



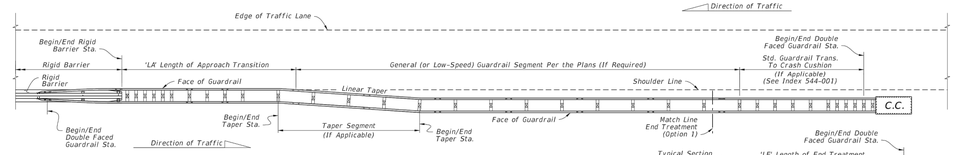
RUB RAIL TERMINATION - SCHEMATIC PLAN VIEW

NOTES:

1. *GENERAL: Install Rub Rail where called for in the plans. Position as shown on Sheet 6 unless otherwise shown in the plans. Install the backs of Rub Rail panels flush against Standard Posts. Either of the Channel Section or Bent-Plate Panel Rub Rail options may be used (consistent type per project). Where Double Sided Rub Rail is called for, thread the Button-Head Bolt through the Post Bolt Hole(s) and the panels on either side, and tighten the nut against the face of the panel farthest from adjacent traffic lanes. Trim the bolt's threaded portion in accordance with Note 4 on Sheet 5.*
2. *MOUNTING HEIGHT: Mount to the Standard Post's Rub Rail Bolt Hole as defined on Sheet 5.*
3. *MATERIALS: Use steel components in accordance with Specification 967.*
4. *END RUB RAIL: For Single Sided Rub Rail, terminate the run of Rub Rail by bending the panel behind the post and securing in place (as shown). For Double Sided Rub Rail, terminate the runs of Rub Rail on their respective front face of the post and secure with the typical Button-Head bolt.*

RUB RAIL DETAILS

LAST REVISION 11/01/17	REVISION	DESCRIPTION:	FDOT FY 2019-20 STANDARD PLANS	GUARDRAIL	INDEX 536-001	SHEET 19 of 22

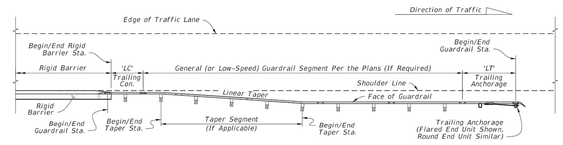


TYPE C APPROACH TO RIGID BARRIER - DOUBLE FACED GUARDRAIL
PLAN VIEW - MEDIAN SHOULDERS ONLY
(Mirror Horiz. and Vert. for Opposite Direction)

NOTES:

1. *See the applicable Notes on Sheet 17.*

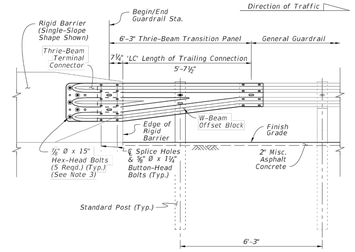
LAYOUT TO RIGID BARRIER - APPROACH ENDS WITH DOUBLE FACED GUARDRAIL



TYPE D TRAILING CONNECTION FROM RIGID BARRIER
PLAN VIEW - MEDIAN OR OUTSIDE SHOULDER
(Mirror Horiz. and/or Vert. for Opposite Direction and/or Side of Road)

NOTES:

1. *See the applicable Notes on Sheet 17.*
2. *LENGTH OF TRAILING ANCHORAGE, 'LT': Install the Trailing Anchorage as shown on Sheet 9, where called for in the plans.*
3. *THRIE-BEAM TERMINAL CONNECTOR: Install connector and bolts as shown on Sheet 15.*
4. *RIGID BARRIER SINGLE SLOPE END FACE: See Concrete Barrier Wall, Index 521-001, and Traffic Railing, Indexes 521-422 and 521-423, for details.*



TRAILING END TRANSITION CONNECTION
TO RIGID BARRIER - INSTALLED ELEVATION

LAYOUT TO RIGID BARRIER - TRAILING ENDS

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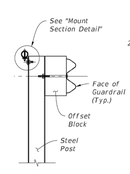
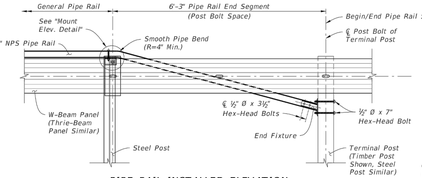
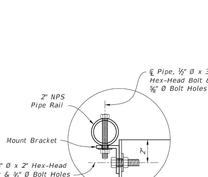


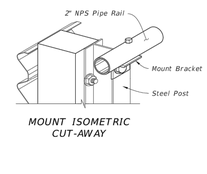
GENERAL PIPE RAIL SECTION



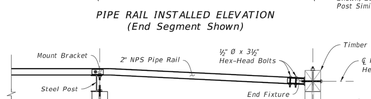
PIPE RAIL INSTALLED ELEVATION
(End Segment Shown)



MOUNT SECTION DETAIL



MOUNT ISOMETRIC
CUT-AWAY

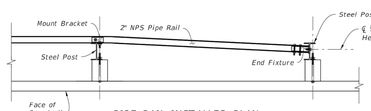


PIPE RAIL INSTALLED PLAN
END AT TIMBER POST OPTION

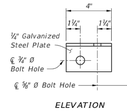
MOUNT ELEVATION DETAIL
(Back View - Mirrored)

NOTES:

1. *GENERAL: Install General Pipe Rail where indicated in the plans or when existing sidewalks or shared use paths are located less than 4'-0" from the back of Steel Posts as shown on Sheet 6.*
2. *PIPE RAIL END SEGMENTS: Place End Segments on both ends of General Pipe Rail runs, with End Fixtures mounted to Terminal Posts located outside of Approach Terminal Assembly ('LE'), Trailing Anchorage Assembly ('LT'), and Approach Transition ('LA') segments.*
3. *MATERIALS: Use steel brackets, fixtures, and pipes in accordance with Specification 967.*
4. *RAIL SPLICES: Install Rail Splices to join pieces of 2" NPS Pipe Rail into a continuous system. Place splices as needed, at a spacing of 18'-0" or greater. Orient the head of bolt on the top of the pipe.*

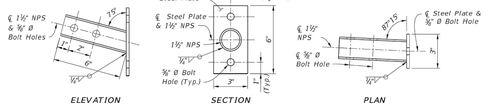


PIPE RAIL INSTALLED PLAN
END AT STEEL POST OPTION



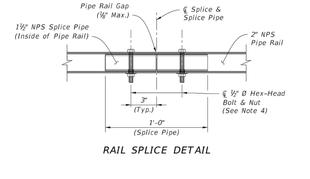
ELEVATION *SECTION*

MOUNT BRACKET DETAIL



ELEVATION *SECTION* *PLAN*

END FIXTURE DETAIL



RAIL SPLICE DETAIL

PEDESTRIAN SAFETY TREATMENT - PIPE RAIL

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Attachment I

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No.	Revision	By	Appd.	YY.MM.DD

No.	Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT GUARDRAIL
DETAILS

Seal

Project Number:	215613796
File Name:	13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-524

Revision 0 Sheet of

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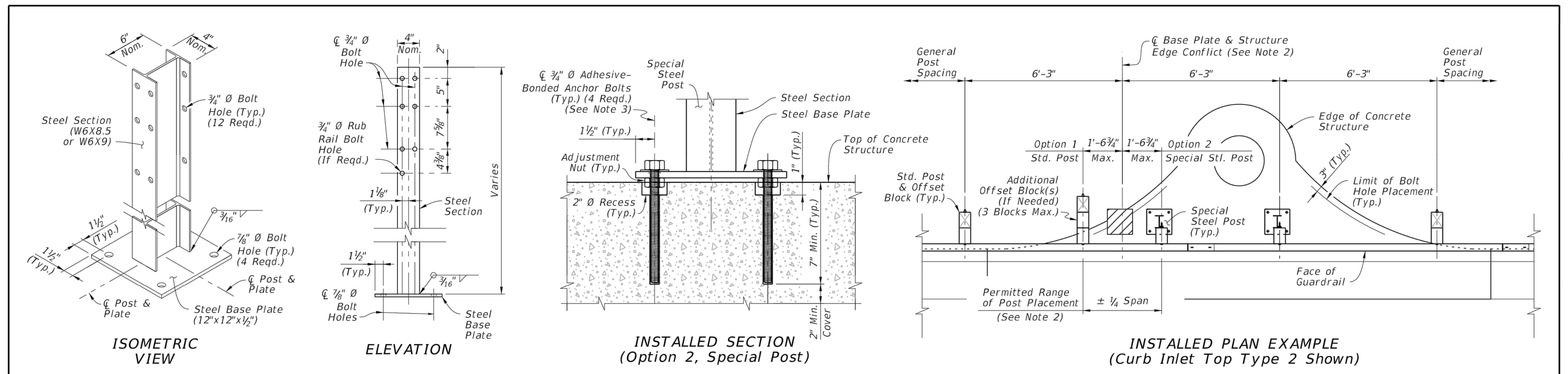
2020/01/14 1:49 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

Attachment I



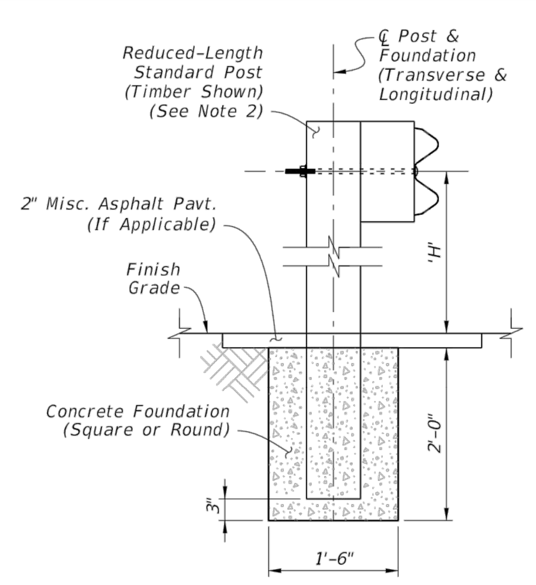
ISOMETRIC VIEW — ELEVATION — SPECIAL STEEL POST

INSTALLED SECTION (Option 2, Special Post) — INSTALLED PLAN EXAMPLE (Curb Inlet Top Type 2 Shown) — STRUCTURE MOUNTING

NOTES:

1. INSTALLATION: When the construction of Guardrail at the required post spacing results in post(s) located atop culverts, inlets, pier footings, or similar concrete structures, a Special Steel Post may be substituted for a Standard Post. Install where shown in the plans and/or as-needed, in accordance with Specification 536.
2. EDGE CONFLICT: When a required post location causes an Edge Conflict with the structure, where the Steel Base Plate is not located entirely on the structure at least 3" from the Edge of Concrete, the longitudinal post location may be altered by up to 1'-6¾" (Quarter Span) from the original required spacing location to prevent the Edge Conflict. With the post location adjusted, use a Std. Post mounted in soil (Option 1) or a Special Steel Post with its Base Plate mounted entirely on the structure (Option 2). Maintain the original required spacing locations upstream and downstream of the structure.
3. BASE PLATE MOUNT: Install Special Steel Posts as shown using steel Adhesive-Bonded Anchor Bolts in accordance with Specifications 536. Use ¾" Hex-Head Bolts for structures less than 9" deep as defined in the Specification.
4. PANEL MOUNT TO ADJUSTED POST: Punch additional ¾"x2½" Post Bolt Slot(s) in the W-Beam or Thrie-Beam Panel only where needed to mount the panel to a post in an adjusted location. Meet the Panel Post Bolt Slots requirements of Specification 536.
5. MATERIALS: Use steel base plates in accordance with Specification 536.

SPECIAL STEEL POST FOR CONCRETE STRUCTURE MOUNT

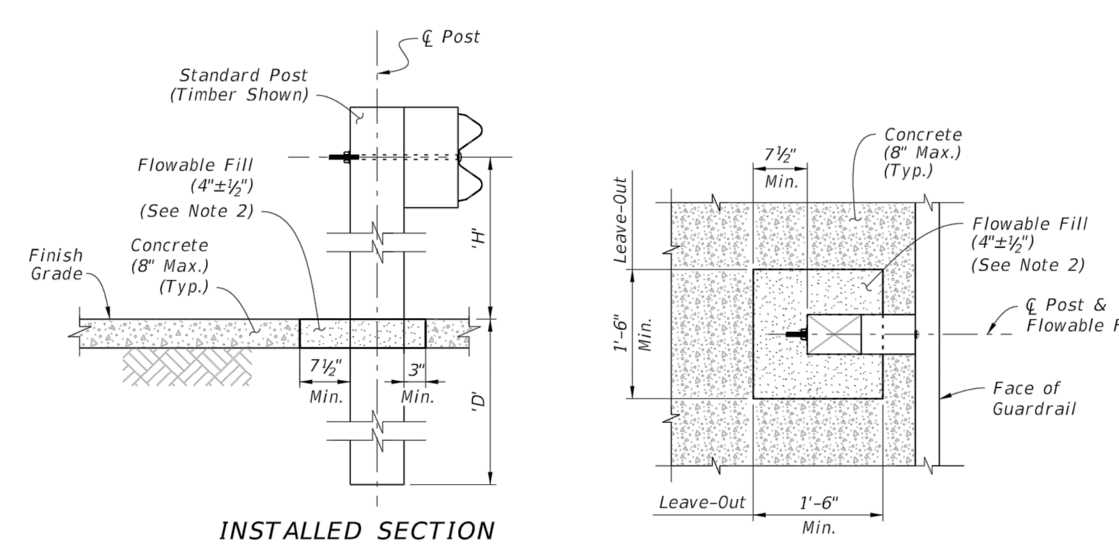


INSTALLED SECTION

NOTES:

1. INSTALLATION: When the construction of Guardrail at the required post spacing results in post(s) conflicting with underground utilities or other underground obstructions, an Encased Post may be used where a 2'-0" depth will avoid the conflict. Install where shown in the plans and/or as-needed, in accordance with Specification 536.
2. REDUCED-LENGTH STANDARD POST: Use a Standard Post with reduced Length such that the Panel Height 'H' is maintained while the post bottom terminates 3" from the bottom of the Concrete Foundation. Typically, the Post Length 'L' is 4'-7" for W-Beam Guardrail.
3. FOUNDATION: Use non-reinforced Class NS Concrete material in accordance with Specification 347. After casting the concrete, ensure the surrounding soil material is completely backfilled and tamped to provide full passive resistance.
4. LIMIT: Encased Posts are not permitted for consecutive posts unless otherwise shown in the plans.

ENCASED POST FOR SHALLOW MOUNT



INSTALLED SECTION — INSTALLED PLAN

NOTES:

1. INSTALLATION: When the construction of Guardrail at the required post spacing results in post(s) placed within a concrete surface (typically a sidewalk), use a Frangible Leave-Out around the post base as shown. Install where shown in the plans and/or as-needed, in accordance with Specification 536.

   For the required 1'-6" x 1'-6" Leave-Out, smoothly cut the existing concrete surface or form-up the square shape when an application has new surrounding concrete.

   Ensure Flowable Fill surface is smooth and even with the adjacent concrete surface.
2. MATERIALS: Use Non-Excavatable Flowable Fill in accordance with Specification 121, not to exceed 150 psi.

FRANGIBLE LEAVE-OUT FOR CONCRETE SURFACE MOUNT

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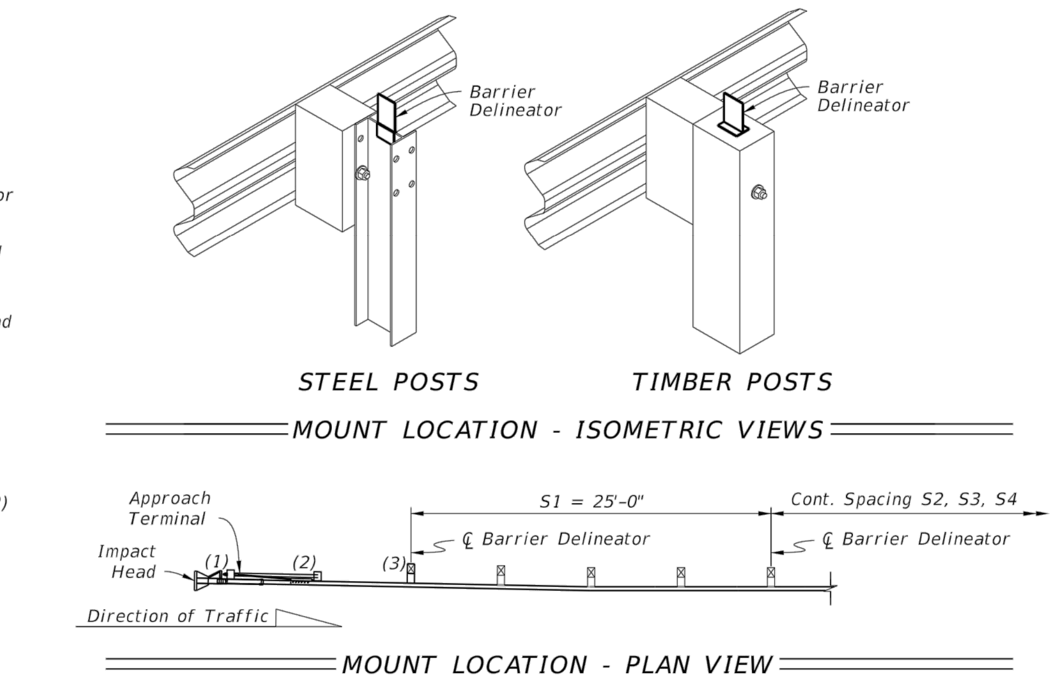
NOTES:

1. INSTALLATION: Install Barrier Delineators as shown in accordance with the plans, with Specifications 536 and 705, and with the manufacturer's design as approved on the APL.
2. MATERIALS: Use materials of the size and type defined for Barrier Delineators in Specifications 993.
3. COLOR: Use either white or yellow retroreflective sheeting to match the color of the nearest lane's edgeline.
4. MOUNT LOCATIONS: Mount Barrier Delineators atop posts as shown, starting with Post (3) of Approach Terminals and incrementally increasing spacing towards the downstream direction. Install the Barrier Delineators at the following spacing:

   S1 = 25' x 1 Space
   S2 = 50' x 1 Space
   S3 = 75' x 1 Space
   S4 = 100' x for the Remaining Run

   Additionally, place a Barrier Delineator on Post (2) of the Trailing Anchorage or on the post nearest the Rigid Barrier.
5. MEDIAN GUARDRAIL: Install retroreflective sheeting on both sides of the barrier delineator for Guardrail on medians.



STEEL POSTS — TIMBER POSTS — MOUNT LOCATION - ISOMETRIC VIEWS

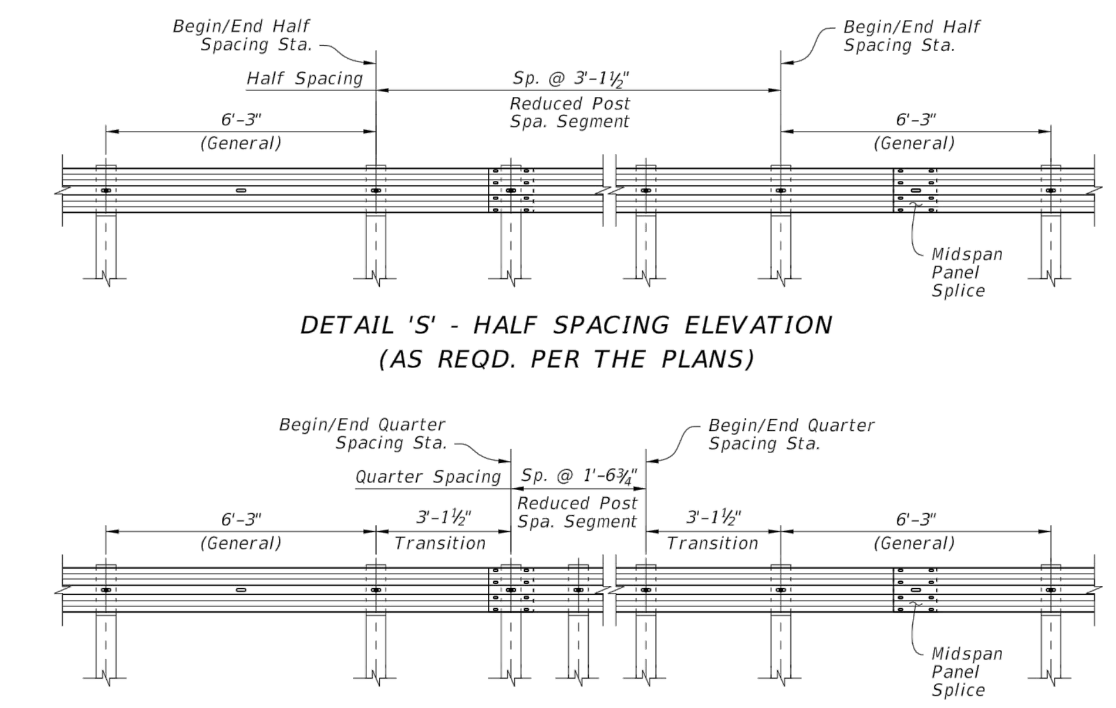
MOUNT LOCATION - PLAN VIEW

BARRIER DELINEATORS

NOTES:

1. INSTALLATION: Work these details with the plans, where Stationing for Begin/End Half Spacing and Begin/End Quarter Spacing are indicated if required.

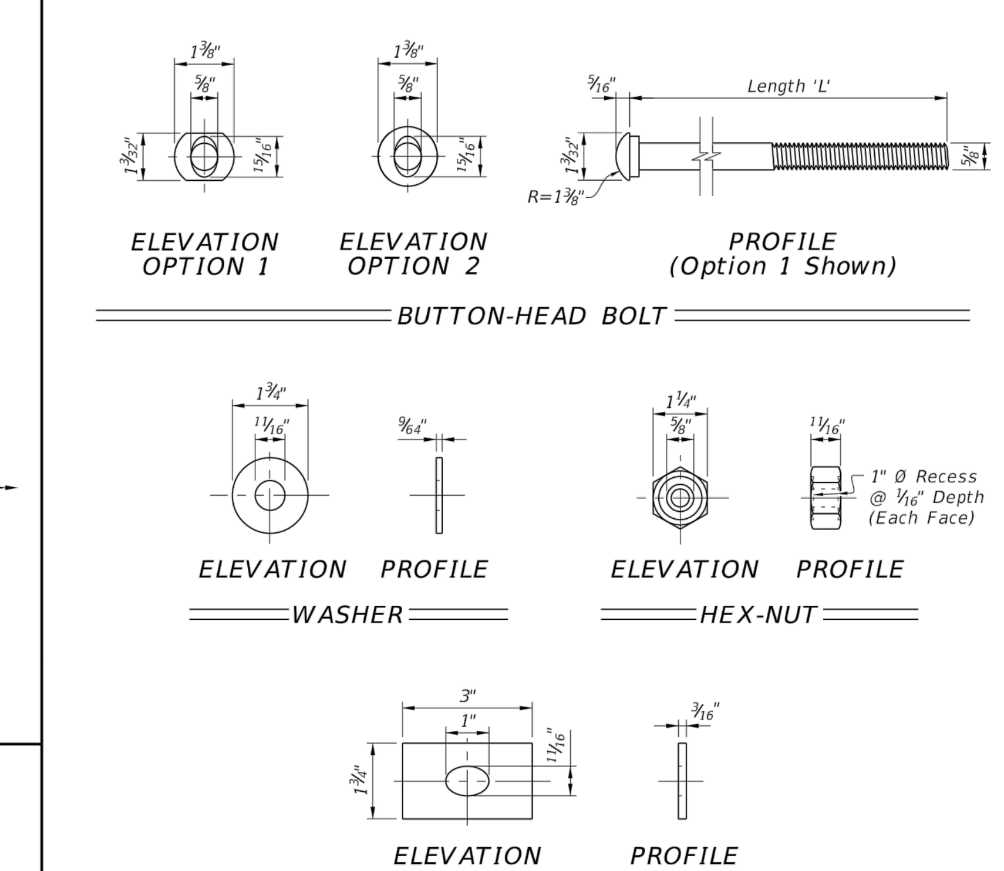
   Where the Begin/End Stations indicated in the plans do not correspond exactly to post locations in construction, extend the Reduced Post Spacing segment to the nearest post(s) before the Begin Station and/or after the End Station called for.
2. PANEL SPLICES: Midspan Panel Splices are not required in Transition and Reduced Post Spacing segments, however they are required for General segments. To place midspan splices in General segments, use one Non-General panel length (9'-4½" or 15'-7½") or add an additional Transition spaced post where required.
3. LOW-SPEED GUARDRAIL: For Reduced Post Spacing with Low-Speed Guardrail (12'-6" post spacing), the Reduced Spacing pattern requires a 6'-3" space between the 12'-6" and 3'-1½" spaces.
4. PANEL POST BOLT SLOTS: For Quarter Spacing configurations, punch additional ¾"x2½" Post Bolt Slots in the panels only where required for mounting and in accordance with Specification 536.



DETAIL 'S' - HALF SPACING ELEVATION (AS REQD. PER THE PLANS)

DETAIL 'S' - QUARTER SPACING ELEVATION (AS REQD. PER THE PLANS)

REDUCED POST SPACING FOR HAZARDS



ELEVATION OPTION 1 — ELEVATION OPTION 2 — PROFILE (Option 1 Shown) — BUTTON-HEAD BOLT

ELEVATION — PROFILE — WASHER

ELEVATION — PROFILE — HEX-NUT

ELEVATION — PROFILE

RECTANGULAR WASHER (For CRT & Terminal Connectors Where Shown - Install Over Panel Face)

BUTTON-HEAD BOLT LENGTHS:

Application(s):	Length 'L':	Min. Thread Length:
Panel Splice	1¼"	Full Length
Steel Post Mount - Single Faced Guardrail	10"	4"
Timber Post Mount - Single Faced Guardrail	18"	4"
Steel or Timber Post Mount - Double Faced Guardrail	25"	4"
Modified Thrie-Beam Panel / Terminal Connector Splice	2"	Full Length

NOTES:

1. Use nuts, bolts, and washers in accordance with Specification 967.
2. For Steel Posts with Double Faced Guardrail, the single 25" Length bolt (one bolt thru both post flanges) may be replaced with two 10" Length bolts (one bolt per post flange).
3. Use bolts listed in Table 2 in corresponding locations shown in this Index.

⅝" BUTTON-HEAD BOLT SYSTEM

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Issued | By | Appd. | YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

FDOT GUARDRAIL DETAILS

Seal

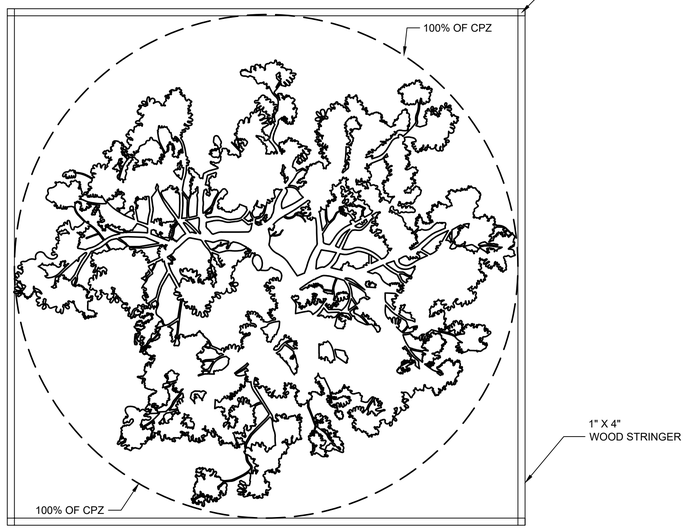
Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-525

Revision 0 Sheet of

ORIGINAL SHEET - ANSI D



GENERAL TREE PROTECTION NOTES:

1. ANY PROPOSED CONSTRUCTION ACTIVITY WITHIN THE CPZ WILL REQUIRE THE TREE TO BE REMOVED UNLESS A LICENSED/CERTIFIED ARBORIST WORKING IN CONJUNCTION WITH LEON COUNTY'S ARBORIST, CAN MITIGATE ANY IMPACTS TO THE TREE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TREE MITIGATION REPLACEMENTS REQUIRED BY LEON COUNTY.

2. IN THE EVENT AN IMPACTED TREE HAS BEEN RECOMMENDED TO BE SAVED BY A LICENSED/CERTIFIED ARBORIST AND THE TREE ARBORIST FOR LEON COUNTY, ALL REQUIREMENTS AND CONDITIONS REQUESTED BY LEON COUNTY SHALL BE PERFORMED BY THE CONTRACTOR IN A TIMELY MANOR IN CONJUNCTION WITH THE CONSTRUCTION SEQUENCING TO MINIMIZE FURTHER DAMAGE TO THE TREE.

3. ALL TREE ROOTS 3/4" DIAMETER AND LARGER EXPOSED DURING TRENCHING AND EXCAVATION SHALL BE CLEANLY CUT WITH A HANDSAW AND COVERED IMMEDIATELY WITH SOIL OR KEPT MOISTENED WITH WET BURLAP OR PEAT MOSS UNTIL THE TRENCH CAN BE FILLED. WHEN IT IS NOT POSSIBLE TO BACKFILL THE SAME DAY, THE ROOTS SHALL BE RECUT WITH A HANDSAW A REASONABLE DISTANCE FROM THE ORIGINAL CUT AND BACKFILLED IMMEDIATELY TO AVOID SOIL OR ROOT DEHYDRATION. ALL ENCOUNTERED ROOTS SHALL BE TREATED AS APPROPRIATE.

4. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES AND LANDSCAPING ON ADJACENT PROPERTIES, AND WILL BE SOLELY LIABLE FOR DAMAGE TO VEGETATION ON PROPERTIES ADJACENT TO CONSTRUCTION WORK ZONES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL TREES WITHIN THE VICINITY OF CONSTRUCTION THAT ARE NOT SHOWN ON THE PLANS TO BE REMOVED. A TREE PROTECTION BARRICADE IS TO BE INSTALLED AT OR NEAR THE CRITICAL PROTECTION ZONE (CPZ) OF EACH TREE PRIOR TO INITIATION OF ANY CONSTRUCTION ACTIVITY AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETED.

5. THE LEON COUNTY DEPARTMENT OF DEVELOPMENT SUPPORT AND ENVIRONMENTAL MANAGEMENT (850) 606-1300 WILL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION AND INVITED TO THE PRE-CONSTRUCTION MEETING.

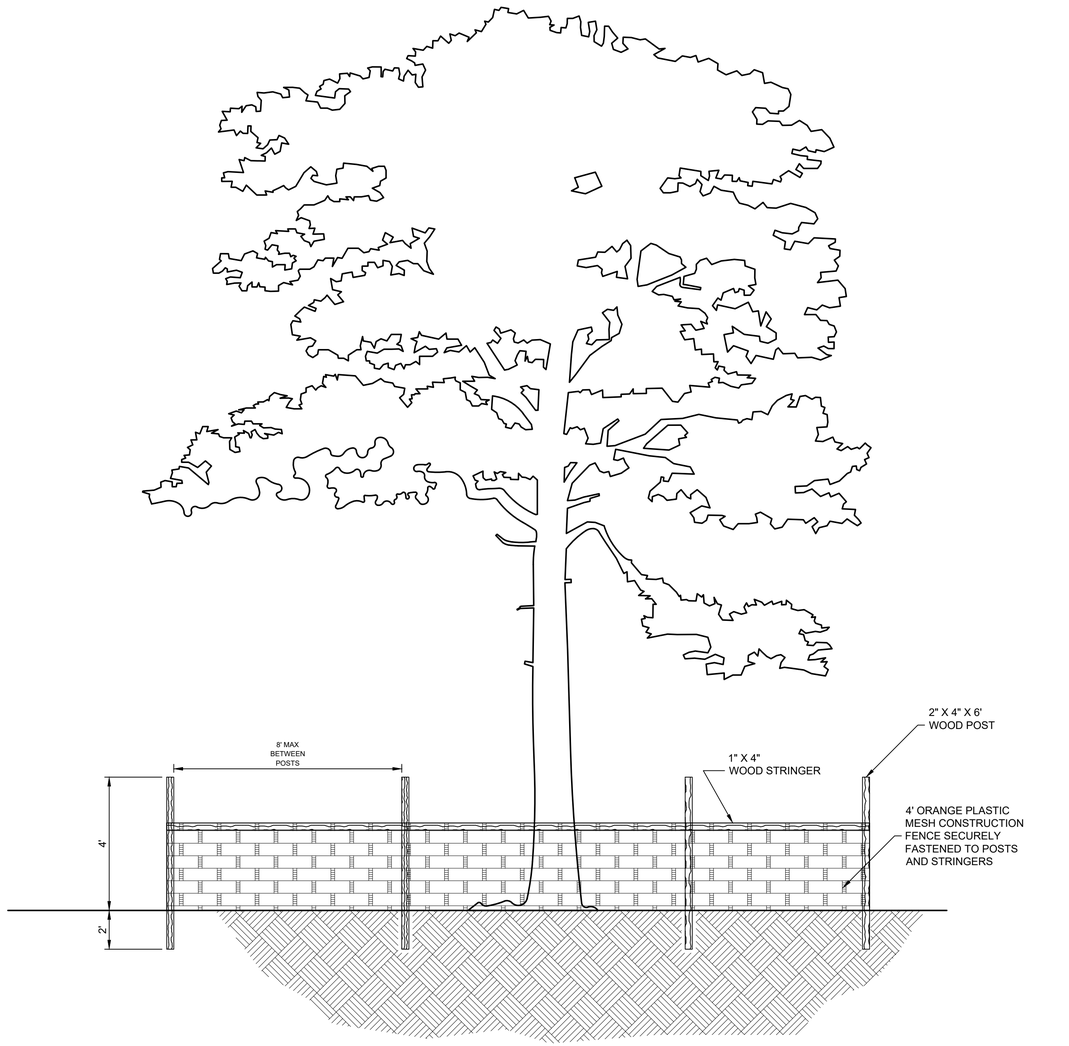
6. THE CONTRACTOR SHALL PROTECT THE CRITICAL PROTECTION ZONE (CPZ) OF ALL PROTECTED TREES ON THE PROJECT NOT DESIGNATED FOR REMOVAL IN THE PLANS OR AS DIRECTED BY THE ENGINEER WITH A TREE PROTECTION BARRICADE. THE CPZ IS A CIRCLE AROUND THE TREE HAVING A RADIUS OF 1' FOR EACH INCH OF THE TREE'S DIAMETER AT BREAST HEIGHT (DBH). THE CONTRACTOR SHALL CONTACT THE CITY OF TALLAHASSEE ENVIRONMENTAL DEPARTMENT ONCE THE PROTECTION MEASURES ARE IN PLACE AND PRIOR TO THE START OF CONSTRUCTION.

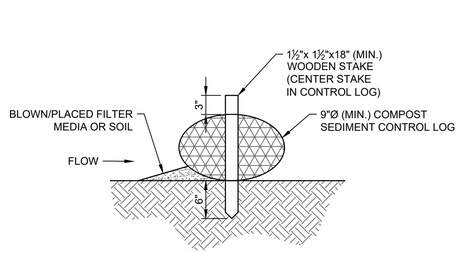
7. THE TREE PROTECTION BARRICADE SHALL BE CONSTRUCTED TO PROTECT THE CPZ TO THE GREATEST EXTENT POSSIBLE TO PREVENT ENCROACHMENT BY CONSTRUCTION EQUIPMENT, REMOVAL OF GROUND COVER, DISTURBANCE OR COMPACTION OF SOIL, OR DAMAGE TO THE ROOT SYSTEM. BARRICADES SHALL TERMINATE AT THE LIMITS OF CONSTRUCTION AND IN NO CASE SHALL IMPEDE ON THE ROADWAY PAVEMENT.

8. THERE SHALL BE NO STORAGE OF MATERIALS OR EQUIPMENT IN THE CPZ. REFER TO THE TREE PROTECTION BARRICADE DETAIL THIS SHEET. THE CONTRACTOR SHALL NOT PERFORM ANY WORK IN THE CPZ UNLESS APPROVED MITIGATION METHODS ARE FOLLOWED.

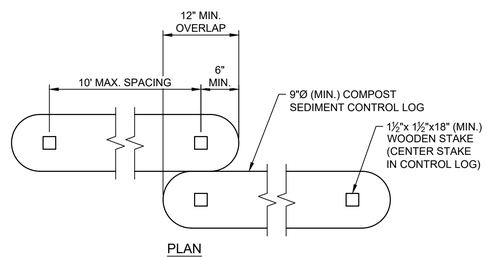
   - CUT MITIGATION: SAW CUT ROOTS 12 INCHES FROM THE EDGE OF UTILITY TRENCH CLOSEST TO THE TREE. REMOVE ALL ROOTS SO THAT THE UTILITY MAY BE INSTALLED. IF THE SAW CUT IS WITHIN 5 FEET OF THE TRUNK COLLAR OR REMOVED ROOTS ARE GREATER THAN 6 INCHES IN DIAMETER, CALL IN AN URBAN FORESTER IN ANTICIPATION OF TREE REMOVAL.

9. THE CONTRACTOR SHALL BEGIN WATERING IMPACTED TREES TWO WEEKS PRIOR TO USING ONE OF THE MITIGATION METHODS AND CONTINUE WATERING THROUGH SUBSTANTIAL COMPLETION OF THE PROJECT. IMPACTED TREES SHALL BE WATERED BY MECHANICAL IRRIGATION OR MANUALLY AT A RATE EQUIVALENT TO 1" OF WATER PER WEEK. WATER SHALL BE ADJUSTED AS REQUIRED BY LOCAL WEATHER CONDITIONS. PROVIDE APPROVED RAIN GAUGES ON SITE AS REQUIRED TO VERIFY APPLICATION RATES.





SECTION



PLAN

NOTES:

1. THIS DETAIL IS FOR USE WITH SEDIMENT CONTROL LOGS THAT ARE A MINIMUM 8 LB/FT.
2. PLACE LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES OR OBVIOUS WEAR.
4. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OR ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
5. FOLLOW MANUFACTURES GUIDE FOR STAKING. IF MANUFACTURES INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER MAX.

1 COMPOST SEDIMENT CONTROL LOG DETAIL
NTS

Attachment I

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Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT
MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

EROSION CONTROL
DETAILS

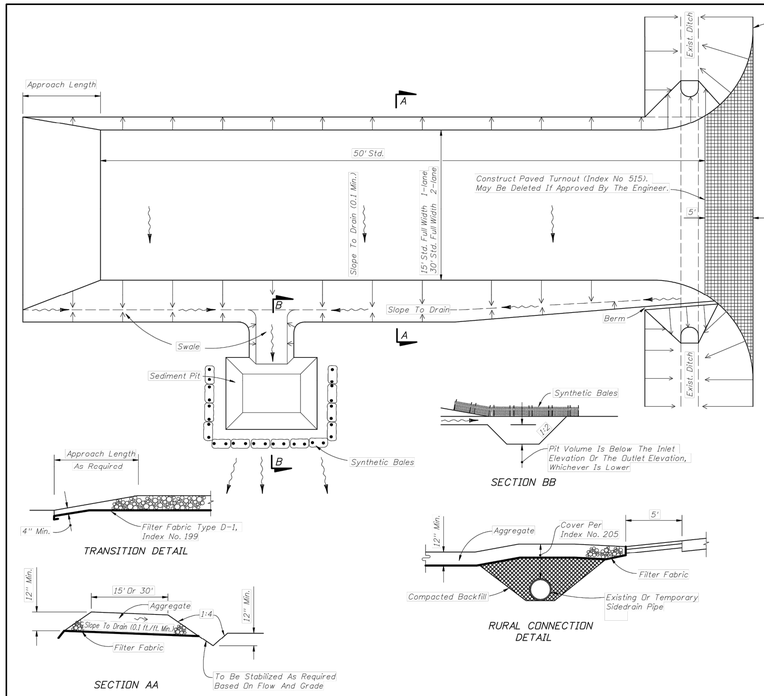
Seal

CHRIS E. BROCKMEIER
LICENSE
No. 68859
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 13796-TITLE BLOCK

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-526
Revision 0 Sheet of



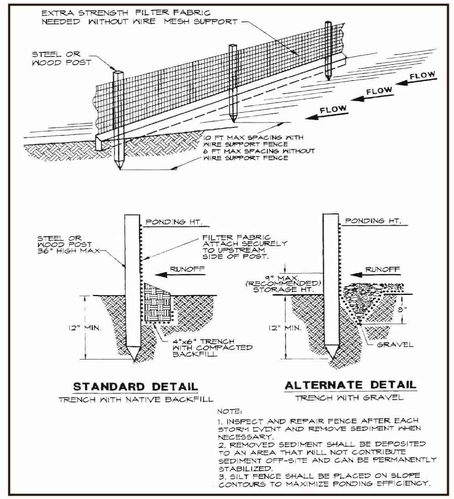
GENERAL NOTES

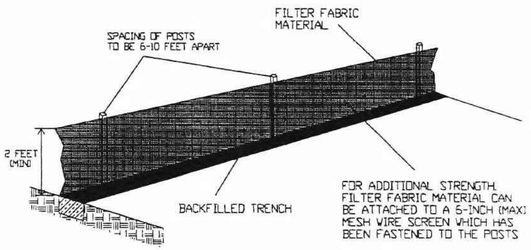
1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15' x 50'=100 ft.³ 30' x 50'=200 ft.³
   As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD; including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

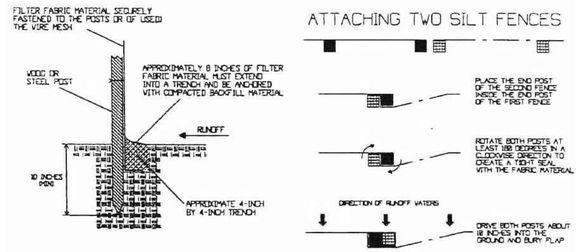
1 SOIL TRACKING PREVENTION DEVICE DETAILS

NTS

11. *When used to control sediments from a steep slope, silt fences should be placed away from the toe of the slope for increased holding capacity (see* ***Figure 3.44****).*
12. *Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.*





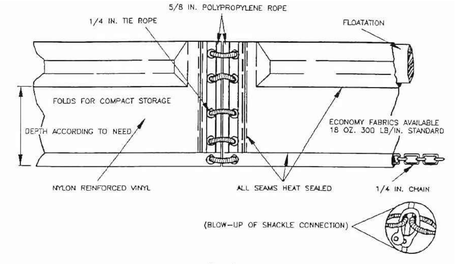


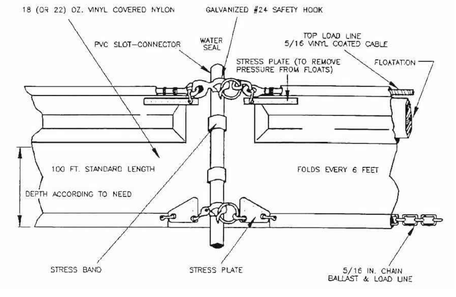
2 SILT FENCE DETAILS

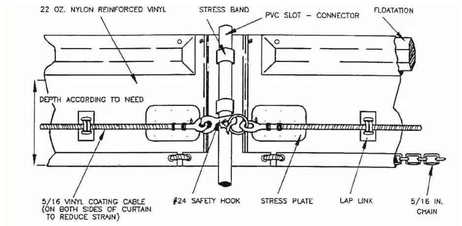
NTS

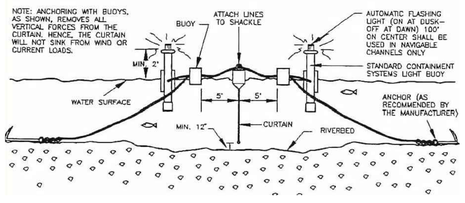
SWPP NOTES:

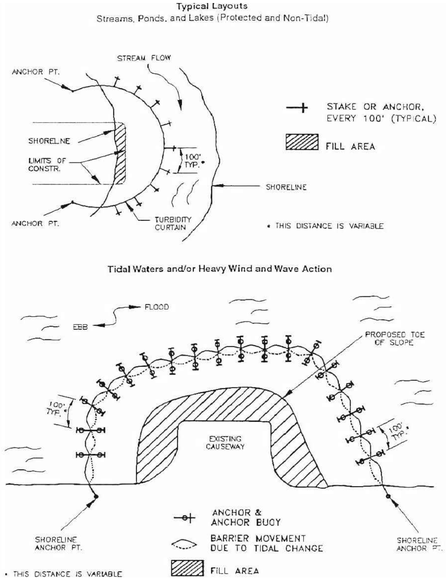
1. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN NPDES CONSTRUCTION PERMIT PRIOR TO CONSTRUCTION ACTIVITIES AND FOR COMPLIANCE WITH ALL STATE, LOCAL, AND FEDERAL PERMITS RELATED TO THIS PROJECT.
2. THE EROSION CONTROL MEASURES SET FORTH IN THESE PLANS ARE INTENDED AS MINIMUM STANDARDS. ALL EROSION CONTROL REQUIRED SHALL BE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPP). CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXPOSED AREAS, COST OF WHICH SHALL BE INCIDENTAL TO THE PROJECT.
3. AT THE REQUIRED PRECONSTRUCTION MEETING, CONTRACTOR SHALL PROVIDE IN WRITING THE NAME AND TELEPHONE NUMBER OF THE STORMWATER CONTROL OFFICER TO THE OWNER, THE OWNER'S DESIGNATED REPRESENTATIVE, LEON COUNTY, AND NWFWMD. THE OFFICER SHALL BE CERTIFIED UNDER THE FLORIDA STORMWATER, EROSION, AND SEDIMENT CONTROL INSPECTOR TRAINING PROGRAM AND SHALL BE AVAILABLE IN PERSON OR BY PHONE AT ALL TIMES DURING CONSTRUCTION.
4. THE STORMWATER CONTROL OFFICER SHALL BE RESPONSIBLE FOR CONTINUALLY MONITORING WEATHER CONDITIONS AND EVALUATE THE EFFECTIVENESS OF THE CONTROL MEASURES THROUGHOUT ALL PHASES OF CONSTRUCTION.
5. AS CONSTRUCTION PROGRESSES, THE STORMWATER CONTROL OFFICER SHALL MAKE ADJUSTMENTS AND/OR INSTALL ADDITIONAL MEASURES TO PREVENT DIRECT FLOW OR TRACKING OF SEDIMENTS ONTO ADJACENT PROPERTY, CONSERVATION AREAS, PUBLIC STREETS, OR DRAINAGE SYSTEMS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR REVISIONS TO AND IMPLEMENTATION OF THE SWPP WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING AN INSPECTION WHEN ADDITIONS OR MODIFICATIONS TO BEST MANAGEMENT PRACTICES (BMPS) ARE NECESSARY TO CORRECT OBSERVED PROBLEMS. REVISIONS SHALL OCCUR WHENEVER:
   - A SIGNIFICANT CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE AT THE CONSTRUCTION SITE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE UNITED STATES NOT PREVIOUSLY ADDRESSED IN THE DOCUMENT.
   - DISCHARGES ARE CAUSING WATER QUALITY EXCEEDANCES, AS DEFINED BY THE EPA, OR THE BMPS ARE INEFFECTIVE IN MINIMIZING POLLUTANTS IN STORMWATER DISCHARGE FROM THE CONSTRUCTION SITE.
7. TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PLACED ADJACENT TO ANY WATERWAY OR DRAINAGE FEATURE PRIOR TO CONSTRUCTION AND REMAIN IN PLACE UNTIL CONSTRUCTION OF THE FEATURE IS COMPLETE AND ALL AREAS SUITABLY STABILIZED.
8. SEDIMENTS TRACKED FROM VEHICLES ONTO ADJACENT PROPERTY, ROADWAYS OR INTO STORM DRAINAGE SYSTEMS SHALL BE RECOVERED AND DISPOSED OF PROPERLY.
9. EROSION CONTROL ITEMS ARE ESTIMATED FOR PREVENTION, CONTROL, ABATEMENT OF EROSION, SEDIMENTATION AND WATER POLLUTION. THESE ITEMS ARE TO BE USED AT LOCATIONS DESCRIBED IN THE APPROVED SWPP OR AS DIRECTED BY THE OWNER OR OWNER'S DESIGNATED REPRESENTATIVE TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
10. IF ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES BECOME REQUIRED DURING THE PROJECT'S DURATION, CONTRACTOR SHALL MAKE ADJUSTMENTS AT NO ADDITIONAL COST TO OWNER.
11. CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT SITE. SHOULD CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, CONTRACTOR SHALL REQUEST, IN WRITING, WRITTEN PERMISSION FROM THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE. CONTRACTOR SHALL PROVIDE THE OWNER OR OWNER'S DESIGNATED REPRESENTATIVE WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE. SINCE STATE LAW DOES NOT TREAT PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AND INTENDED FOR EQUIPMENT USE AS A HAZARDOUS MATERIAL, SUCH PRODUCTS DO NOT NEED THE MSDS SUBMITTAL. ANY KNOWN OR SUSPECTED HAZARDOUS MATERIAL FOUND ON THE PROJECT BY CONTRACTOR SHALL BE IMMEDIATELY REPORTED TO THE OWNER OF OWNER'S DESIGNATED REPRESENTATIVE AND WHO SHALL PROTECT THE AREA OS SUSPECTED CONTAMINATION FREE FURTHER ACCESS. THE OWNER OF OWNER'S DESIGNATED REPRESENTATIVE WILL ARRANGE FOR INVESTIGATION, IDENTIFICATION, AND REMEDIATION OF THE HAZARDOUS MATERIAL. CONTRACTOR SHALL NOT RETURN TO THE AREA OF CONTAMINATION UNTIL APPROVAL IS PROVIDED BY THE OWNER OF OWNER'S DESIGNATED REPRESENTATIVE.
12. ALL VEGETATIVE MATERIALS SHALL BE SUBJECT TO INSPECTION PRIOR TO PLACEMENT. ANY SOD WITH NOXIOUS WEEDS AND GRASSES SHALL BE REJECTED FOR USE ON THE PROJECT. CONTRACTOR SHALL FURNISH THE OWNER OR OWNER'S DESIGNATED REPRESENTATIVE, PRIOR TO INCORPORATION INTO THE PROJECT, A CERTIFICATION FROM THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICE DIVISION OF PLANT INDUSTRY, STATING THAT THE SOD, HAY, STRAW, AND MULCH MATERIAL ARE FREE OF NOXIOUS WEEDS.
13. EQUIPMENT MAINTENANCE AND REPAIR SHALL BE LIMITED TO ONE AREA OF THE PROJECT. AN ADEQUATE NUMBER OF OR WASTE DISPOSAL RECEPTACLES FOR LIQUID AND SOLID WASTE SHALL BE PROVIDED. WASTE SHALL BE DISPOSED OF PROPERLY OFF-SITE. THE MAINTENANCE AREAS SHALL BE SHALL BE INSPECTED AND CLEANED DAILY. CARE SHALL BE TAKEN THAT ANY OILS, GASOLINE, GREASE, SOLVENTS, AND OTHER POTENTIAL POLLUTANTS SHALL NOT BE WASHED OFF-SITE EITHER DIRECTLY OR INDIRECTLY, THROUGH THE STORMWATER CONVEYANCE SYSTEMS.
14. WASTE COLLECTION AND DISPOSAL -- A SUFFICIENT NUMBER OF WASTE AND TRASH RECEPTACLES SHALL BE PROVIDED AT ALL TIMES. RECEPTACLES AND OTHER WASTE COLLECTION AREAS SHALL BE KEPT NEAT AND ORDERLY. TRASH CANS AND DUMPSTERS SHALL HAVE COVERS TO PREVENT THE ENTRANCE OF RAINFALL. ALL WASTE MATERIAL SHALL BE COLLECTED AND DISPOSED AT A SUITABLE LANDFILL. TRASH COLLECTION POINTS SHALL BE LOCATED WHERE THEY WILL BE LEAST IMPACTED BY CONCENTRATED STORMWATER RUNOFF.
15. DEMOLITION AND ACCESS AREAS -- DUST CONTROL TECHNIQUES SHALL BE USED DURING DEMOLITION WHERE LARGE AMOUNTS OF DUST ARE GENERATED. IF WATER OR SLURRY IS USED TO CONTROL DUST, IT SHALL BE CONTAINED ON-SITE.
16. WASHING AREA -- AN AREA SHALL BE DESIGNATED BY THE CONTRACTOR FOR WASHING VEHICLES AND WILL BE LOCATED WHERE THE RUNOFF CAN BE COLLECTED IN A TEMPORARY HOLDING OR SEEPAGE BASIN. WASH AREA SHALL HAVE GRAVEL BASE.
17. STORAGE OF CONSTRUCTION MATERIALS -- AN ISOLATED AREA SHALL BE DESIGNATED TO STORE CHEMICALS, CEMENTS, SOLVENTS, PAINTS OR OTHER POTENTIAL POLLUTANTS. THE AREA SHALL LOCATED AS TO ELIMINATE RUNOFF POLLUTION. TOXIC CHEMICALS AND MATERIALS, SUCH AS PESTICIDES, PAINTS, AND ACIDS, SHALL BE STORED ACCORDING TO THE MANUFACTURER'S GUIDELINES. CARE SHALL BE TAKEN IN THE USE OF THESE MATERIALS TO AVOID ACCIDENTAL SPILLS. GROUNDWATER RESOURCES SHALL BE PROTECTED BY THE USE OF IMPERVIOUS MATERIALS ON ANY GROUND SURFACE WHERE TOXIC LIQUIDS ARE TO BE OPENED AND STORED.
18. SANITARY FACILITIES -- ADEQUATE SANITARY FACILITIES SHALL BE PROVIDED DURING ALL CONSTRUCTION PHASES FOR WORKERS ACCORDING TO APPLICABLE HEALTH AND SAFETY PRACTICES AND REGULATIONS.
19. ALL DISTURBED AREAS UNTOUCHED LONGER THAN 14 DAYS MUST BE STABILIZED WITH QUICK GROW GRASS SEED AND MULCH.











3 TURBIDITY BARRIER DETAILS

NTS

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www.stantec.com C.A. No. 27013

Attachment I

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

BEST MANAGEMENT PRACTICES

Seal

CHRISTINE E. BROCKMEIER LICENSE NO. 86859 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/6/2020

Project Number: 215613796
File Name: 215613796-C511-BMP

JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. C-527
Revision 0
Sheet of

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2020/01/14 1:49 PM By: Gerth, James

ORIGINAL SHEET - ANSI D

GENERAL NOTES

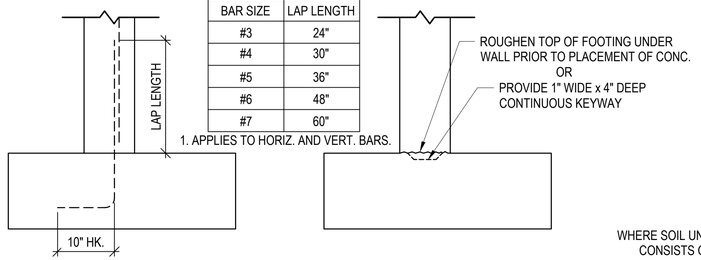
1. THE MIN. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3,500 PSI FOR FOUNDATIONS AND 4,000 PSI FOR WALLS. CONCRETE WORK SHALL COMPLY WITH ACI 318.

2. REINFORCING STEEL SHALL COMPLY WITH ASTM A615 AND SHALL HAVE A MIN. YIELD STRENGTH OF 60,000 PSI.

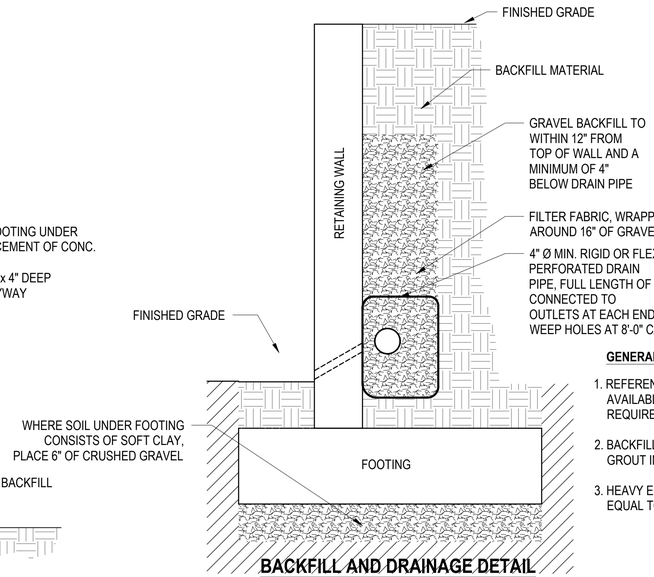
3. DOWELS CAN BE LAPPED ABOVE THE FOOTING IN ACCORDANCE WITH "TYPICAL DOWEL AND KEYWAY DETAIL."

LAP SPLICE SCHEDULE	
BAR SIZE	LAP LENGTH
#3	24"
#4	30"
#5	36"
#6	48"
#7	60"

1. APPLIES TO HORIZ. AND VERT. BARS.



TYPICAL DOWEL AND KEYWAY DETAIL



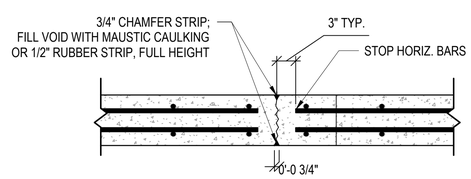
BACKFILL AND DRAINAGE DETAIL

GENERAL NOTES

1. REFERENCE GEOTECHNICAL REPORT FOR ALL FILL REQUIREMENTS IF AVAILABLE FOR THE PROJECT, REPORT SHALL GOVERN OVER FILL REQUIREMENTS SHOWN IN DETAIL.

2. BACKFILLING SHALL NOT BE PERMITTED UNTIL 7 DAYS AFTER PLACING GROUT IN CORES.

3. HEAVY EQUIPMENT SHALL MAINTAIN A DISTANCE AWAY FROM THE WALL EQUAL TO THE WALL'S HEIGHT.



CONTROL JOINT DETAIL

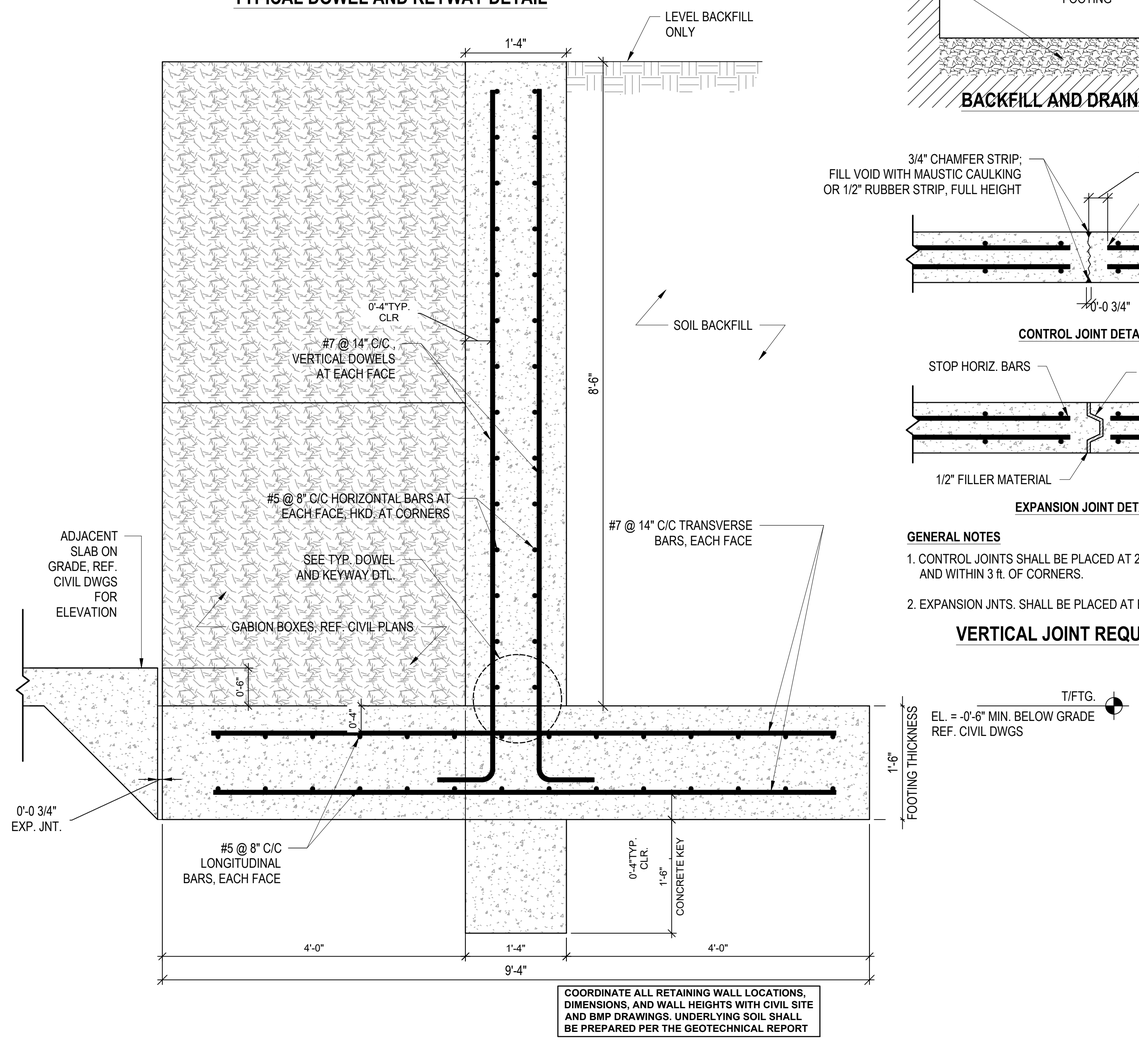
EXPANSION JOINT DETAIL

GENERAL NOTES

1. CONTROL JOINTS SHALL BE PLACED AT 20 ft. ON CENTER MAX. AND WITHIN 3 ft. OF CORNERS.

2. EXPANSION JNTS. SHALL BE PLACED AT EVERY 4 TH CONTROL JNT.

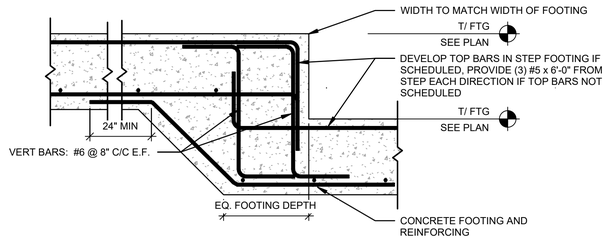
VERTICAL JOINT REQUIREMENTS



COORDINATE ALL RETAINING WALL LOCATIONS, DIMENSIONS, AND WALL HEIGHTS WITH CIVIL SITE AND BMP DRAWINGS. UNDERLYING SOIL SHALL BE PREPARED PER THE GEOTECHNICAL REPORT

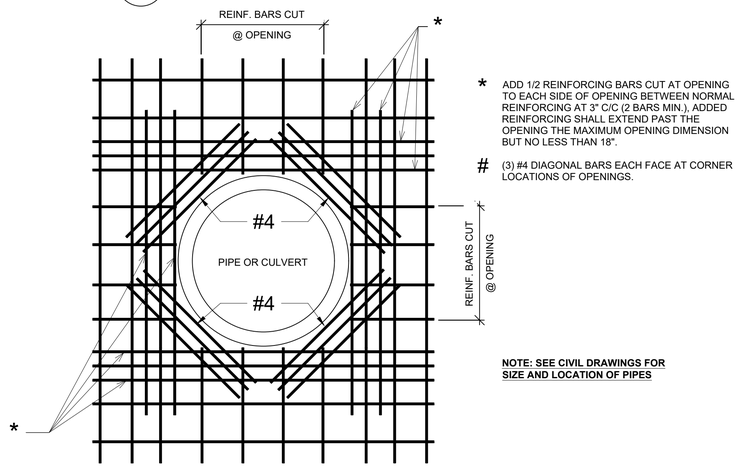
1 CONCRETE RETAINING WALL

1" = 1'-0"



2 TYPICAL STEPPED FOOTING AT DETAIL

3/4" = 1'-0"



* ADD 1/2 REINFORCING BARS CUT AT OPENING TO EACH SIDE OF OPENING BETWEEN NORMAL REINFORCING AT 3" C/C (2 BARS MIN.), ADDED REINFORCING SHALL EXTEND PAST THE OPENING THE MAXIMUM OPENING DIMENSION BUT NO LESS THAN 18".

\# (3) #4 DIAGONAL BARS EACH FACE AT CORNER LOCATIONS OF OPENINGS.

NOTE: SEE CIVIL DRAWINGS FOR SIZE AND LOCATION OF PIPES

PIPE OPENING ELEVATION

3 TYPOCAL REINFORCING AT OPENINGS

3/4" = 1'-0"

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Client/Project
LEON COUNTY
PUBLIC WORKS DEPARTMENT

MERIDIAN ROAD
DRAINAGE IMPROVEMENTS
TALLAHASSEE, FL

RETAINING WALL

Seal

Project Number:	215613796		
File Name:	13796-TITLE BLOCK		
JG	CB	AM	20.01.06
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Drawing No. S-101

Revision 0

Sheet of

Attachment I

ORIGINAL SHEET - ANSI D

Attachment I

SOD ALL SIDE-SLOPES
SOD & PIN ALL SWALES AND DITCHES
SOD & PIN ALL SIDE-SLOPES STEEPER THAN 4:1
LAP SOD & PIN ALL SIDE-SLOPES STEEPER THAN 3:1
(TYP.)

MERIDIAN ROAD

28+00

27+00

EDGE OF PAVEMENT

SOD DISTURBED AREAS NOT PLANTED WITH SHRUBS / GROUNDCOVER OR PERMANENTLY STABILIZED WITH ROCK (TYP.)

100' TREE CANOPY PROTECTION ZONE

100' TREE CANOPY PROTECTION ZONE

KEY MAP

GRAPHIC SCALE
0 5 10 20
1 inch = 10 ft.

NORTH

LEGEND

- LIVE OAK
- FL LEUCOTHOE
- NATIVE YAUPON
- OCALA ANISE
- DWARF WALTER'S VIBURNUM
- CONFEDERATE JASMINE
- VIRGINIA SWEETSPIRE
- DWARF FAKAHATCHEE GRASS
- FAKAHATCHEE GRASS
- CENTIPEDE SOD
- CENTIPEDE SOD & STABILIZATION
- PINE STRAW MULCH

REVISIONS

PROJECT NAME
MERIDIAN ROAD DRAINAGE IMPROVEMENTS

CLIENT NAME
STANTEC

DATE: 12/12/2019
DRAWN BY: DLC

COWLES LANDSCAPE ARCHITECTURE (CLA)
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COWLES LANDSCAPE ARCHITECTURE
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Florida Reg. No. 0666917

REGISTERED LANDSCAPE ARCHITECT
DAVID L. COWLES, JR.
LA #0666917
STATE OF FLORIDA

SHEET TITLE
LANDSCAPE PLAN

SHEET
LS1.0

SOD ALL SIDE-SLOPES
SOD & PIN ALL SWALES AND DITCHES
SOD & PIN ALL SIDE-SLOPES STEEPER THAN 4:1
LAP SOD & PIN ALL SIDE-SLOPES STEEPER THAN 3:1
(TYP.)

SOD DISTURBED AREAS NOT PLANTED WITH SHRUBS / GROUNDCOVER OR PERMANENTLY STABILIZED WITH ROCK (TYP.)

4:1 SLOPE

4:1 SLOPE

4:1 SLOPE

SEE CIVIL PLANS FOR STABILIZATION METHODS IN ADDITION TO SODDING (TYP.)

EXISTING GAS EASEMENT BOUNDARY (TYP.)

SHEET LS2.0
MATCHLINE
SHEET LS5.0

SHEET LS2.0
MATCHLINE
SHEET LS5.0

KEY MAP

GRAPHIC SCALE
0 5 10 20
1 inch = 10 ft.

NORTH

LEGEND

- LIVE OAK
- FL LEUCOTHOE
- NATIVE YAUPON
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REVISIONS

PROJECT NAME
MERIDIAN ROAD DRAINAGE IMPROVEMENTS

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Florida Reg. No. LA0669917

SHEET TITLE
LANDSCAPE PLAN

SHEET
LS2.0

100' TREE CANOPY PROTECTION ZONE

100' TREE CANOPY PROTECTION ZONE

MERIDIAN ROAD

23+00

SHEET LS2.0 **MATCHLINE** SHEET LS3.0

SHEET LS3.0 **MATCHLINE** SHEET LS4.0

P.O.L.E.

P-GAS

225 TF

90 IV

40 IV

100 TF

18 TD

SEE CIVIL PLANS FOR STABILIZATION METHODS IN ADDITION TO SODDING (TYP.)

SOD DISTURBED AREAS NOT PLANTED WITH SHRUBS / GROUNDCOVER OR PERMANENTLY STABILIZED WITH ROCK (TYP.)

EXISTING GAS EASEMENT BOUNDARY (TYP.)

SOD ALL SIDE-SLOPES
SOD & PIN ALL SWALES AND DITCHES
SOD & PIN ALL SIDE-SLOPES STEEPER THAN 4:1
LAP SOD & PIN ALL SIDE-SLOPES STEEPER THAN 3:1
(TYP.)

1/2" PVC IRRIGATION W/ 4.5" STEEL CASING

ASPHALT

KEY MAP

GRAPHIC SCALE

0 5 10 20

1 inch = 10 ft.

NORTH

LEGEND

- LIVE OAK
- FL LEUCOTHOE
- NATIVE YAUPON
- OCALA ANISE
- DWARF WALTER'S VIBURNUM
- CONFEDERATE JASMINE
- VIRGINIA SWEETSPIRE
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- FAKAHATCHEE GRASS
- CENTIPEDE SOD
- CENTIPEDE SOD & STABILIZATION
- PINE STRAW MULCH

REVISIONS

PROJECT NAME
MERIDIAN ROAD DRAINAGE IMPROVEMENTS

CLIENT NAME
STANTEC

DATE: 12/12/2019

DRAWN BY: DLC

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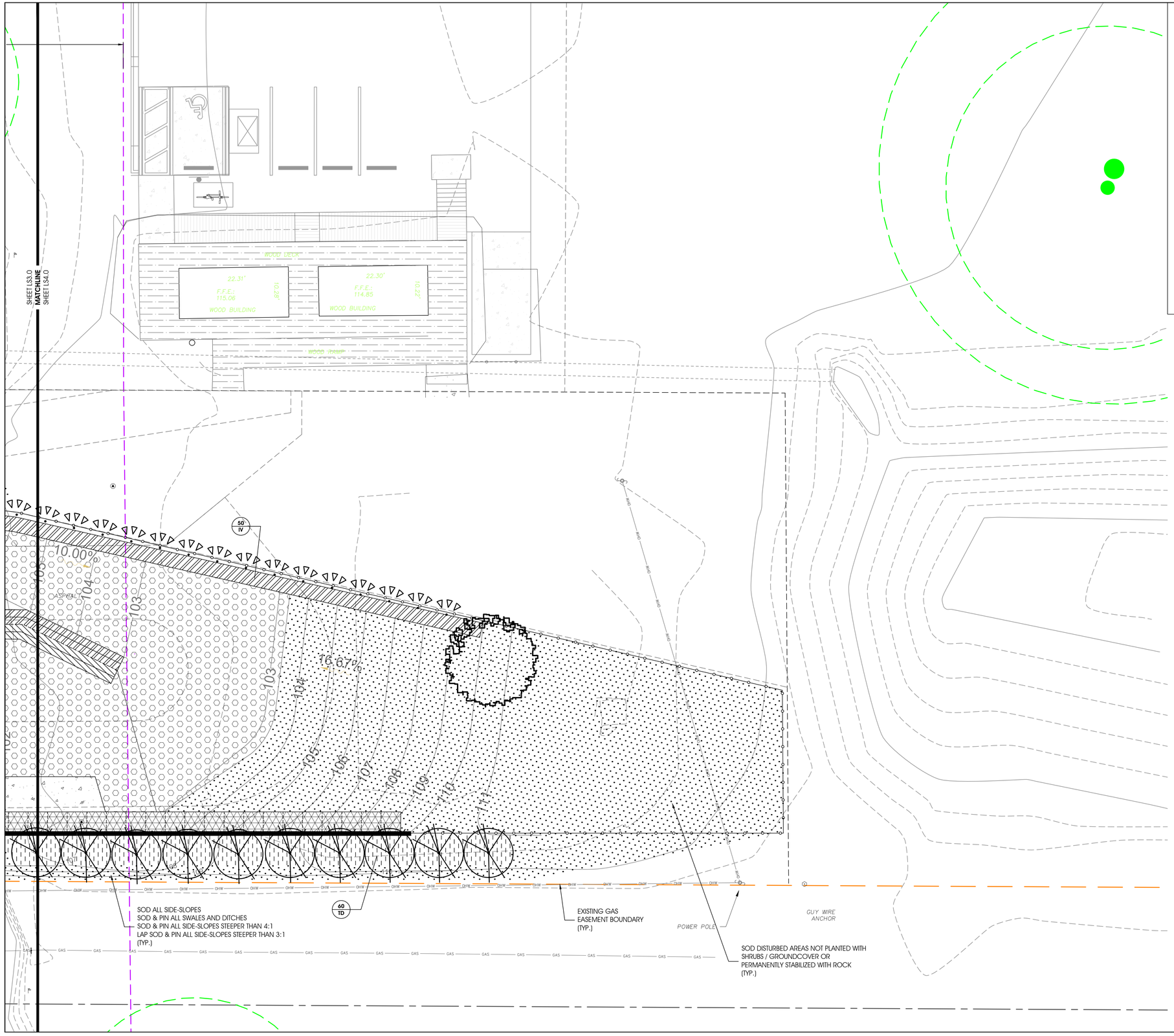
Florida Reg. No. LA0666917

SHEET TITLE
LANDSCAPE PLAN

SHEET
LS3.0



KEY MAP

GRAPHIC SCALE

0 5 10 20

1 inch = 10 ft.

NORTH

LEGEND

- LIVE OAK
- FL LEUCOTHOE
- NATIVE YAUPON
- OCALA ANISE
- DWARF WALTER'S VIBURNUM
- CONFEDERATE JASMINE
- VIRGINIA SWEETSPIRE
- DWARF FAKAHATCHEE GRASS
- FAKAHATCHEE GRASS
- CENTIPEDE SOD
- CENTIPEDE SOD & STABILIZATION
- PINE STRAW MULCH

REVISIONS

PROJECT NAME
MERIDIAN ROAD DRAINAGE IMPROVEMENTS

CLIENT NAME
STANTEC

DATE: 12/12/2019

DRAWN BY: DLC

COWLES LANDSCAPE ARCHITECTURE (CLA)
2285 LSESCOTT DRIVE
TALLAHASSEE, FL 32308
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David L. Cowles, Jr. R.L.A.
Florida Reg. No. LA0666917

SHEET TITLE
LANDSCAPE PLAN

SHEET
LS4.0

SHEET LS2.0
MATCHLINE
SHEET LS5.0

EXISTING GAS EASEMENT BOUNDARY (TYP.)

SOD DISTURBED AREAS NOT PLANTED WITH SHRUBS / GROUNDCOVER OR PERMANENTLY STABILIZED WITH ROCK (TYP.)

WOOD RAIL FENCE 2.5'H

METAL GUARDRAIL 2.5'H

JOHN HANCOCK DRIVE

LIGHT POLE

SEE CIVIL PLANS FOR STABILIZATION METHODS IN ADDITION TO SODDING (TYP.)

METAL GUARDRAIL 2.5'H

4' CHAIN LINK FENCE

SHEET LS5.0
MATCHLINE
SHEET LS6.0

KEY MAP

GRAPHIC SCALE
0 5 10 20
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NORTH

LEGEND

- LIVE OAK
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SHEET TITLE
LANDSCAPE PLAN

SHEET
LS5.0

4' CHAIN LINK FENCE

4' CHAIN LINK FENCE

4' CHAIN LINK FENCE

SHEET LS5.0
MATCHLINE
SHEET LS6.0

SEE CIVIL PLANS FOR STABILIZATION METHODS IN ADDITION TO SODDING (TYP.)

4' CHAIN LINK FENCE

4' CHAIN LINK FENCE

SOD ALL SIDE-SLOPES
SOD & PIN ALL SWALES AND DITCHES
SOD & PIN ALL SIDE-SLOPES STEEPER THAN 4:1
LAP SOD & PIN ALL SIDE-SLOPES STEEPER THAN 3:1
(TYP.)

CONCRETE DRIVEWAY

GUY WIRE ANCHORS

GUY WIRE ANCHORS

MAILBOX

EOP

MAILBOX

EDGE OF PAVEMENT

20 LF 8" PVC SS @ 0.49%

LEXINGTON ROAD

SOD DISTURBED AREAS NOT PLANTED WITH SHRUBS / GROUNDCOVER OR PERMANENTLY STABILIZED WITH ROCK (TYP.)

EOP

CONCRETE DRIVEWAY

EDGE OF

KEY MAP

GRAPHIC SCALE

0 5 10 20

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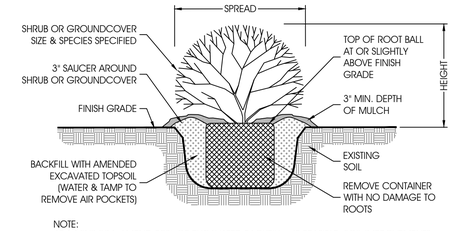
REGISTERED LANDSCAPE ARCHITECT
COWLES, JR.
LA 0666917
STATE OF FLORIDA

SHEET TITLE
LANDSCAPE PLAN

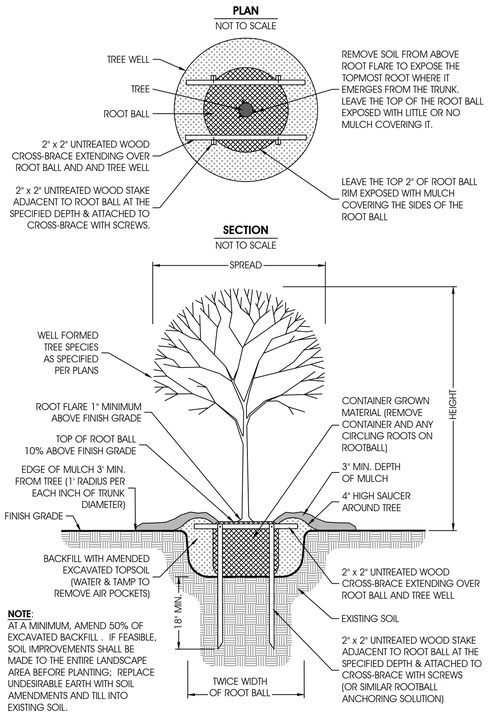
SHEET
LS6.0



NOTE:
AT A MINIMUM, AMEND 50% OF EXCAVATED BACKFILL . IF FEASIBLE, SOIL IMPROVEMENTS SHALL BE MADE TO THE ENTIRE LANDSCAPE AREA BEFORE PLANTING; REPLACE UNDESIRABLE EARTH WITH SOIL AMENDMENTS AND TILL INTO EXISTING SOIL.

SHRUB AND GROUNDCOVER DETAIL

NOT TO SCALE



NOTE:
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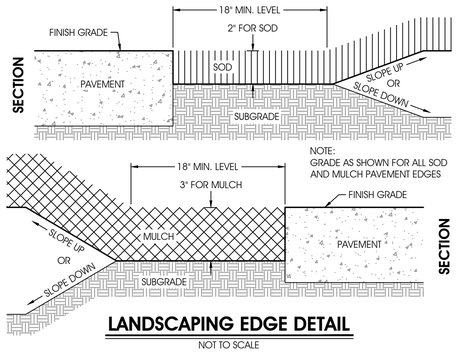
TREE PLANTING DETAIL

NOT TO SCALE

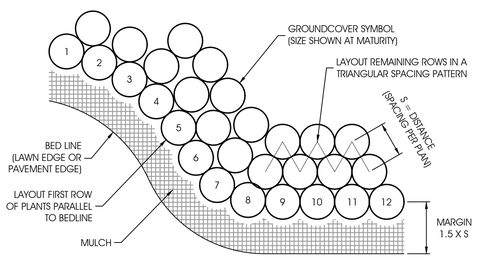
PLANTING SCHEDULE

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE/REMARKS
TREES				
QV	1	QUERCUS VIRGINIANA	LIVE OAK	10-12' HT. X 4-5' SPR., 3" CAL., 45 GAL
SHRUBS				
AP	21	AGARISTA POPULIFOLIA	FL LEUCOTHOE	48" X 24", 15 GAL.,10' O.C.
IX	8	ILEX VOMITORIA	NATIVE YAUPON	36" X 20", 7 GAL., 8' O.C.
IP	5	ILLICIUM PARVIFLORUM	YELLOW ANISE	18" X 16", 3 GAL., 6' O.C.
VO	43	VIBURNUM OBOVATUM 'WHORLED CLASS'	DWARF WALTER'S VIBURNUM	16" X 16", 3 GAL., 3' O.C.
TJ	78	TRACHELOSPERMUM JASMINOIDES	CONFEDERATE JASMINE	20" X 12", 3 GAL., 6' O.C., ESPALIERED TO FENCE
GROUNDCOVER				
IV	270	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	FULL, 3 GAL., 30" O.C.
TF	550	TRIPSACUM FLORIDANA	DWARF FAKAHATCHEE GRASS	FULL, 1 GAL., 18" O.C.
TD	78	TRIPSACUM DACTYLOIDES	FAKAHATCHEE GRASS	FULL, 3 GAL., 36" O.C.
TURFGRASS/LAWN				
SOD	-	EREMOCHLOA OPHIUROIDES	CENTIPEDE GRASS	SOD ALL DISTURBED AREAS UNLESS INDICATED TO CONTAIN SEED & MULCH, SHRUBS, GROUNDCOVER, MULCH OR OTHER MATERIAL.



LANDSCAPING EDGE DETAIL

NOT TO SCALE

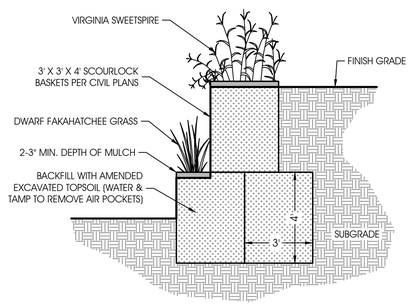


GROUNDCOVER LAYOUT DETAIL

NOT TO SCALE

GENERAL NOTES:

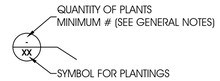
1. ALL PLANT MATERIAL SHALL BE FLORIDA #1 AS CLASSIFIED IN "GRADES AND STANDARDS FOR NURSERY PLANTS 2015, FIFTH EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.
2. QUANTITIES ON LANDSCAPE PLAN ARE MINIMUM ONLY. CONTRACTOR IS RESPONSIBLE FOR HIS OWN QUANTITY TAKE-OFF, AND SHALL PROVIDE ALL PLANT MATERIAL REQUIRED TO FILL PLANT BED AREA AT SPACING ON PLANT SCHEDULE.
3. INSTALL PINE STRAW MULCH (OR APPROVED EQUAL) WITHIN ALL LANDSCAPE AREAS AT A MINIMUM OF 3" COMPACTED THICKNESS. IF AN INDIVIDUAL TREE (NEWLY PLANTED OR EXISTING) IS SURROUNDED BY TURF, THE MULCH AREA SHALL BE DESCRIBED AS THE DIAMETER OF THE TRUNK IN TERMS OF RADIUS IN FEET. FOR EXAMPLE: 3" CALIPER TREE = 3' RADIUS (6' DIAMETER) MULCH AREA. DO NOT PILE MULCH AROUND THE TRUNK OR ROOT FLARE.
4. ALL REQUIRED LANDSCAPE AREAS AND BUFFER STRIPS SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM TO ALLOW 100 PERCENT COVERAGE OR PROVIDED WITH TEMPORARY / MANUALLY APPLIED APPLICATIONS. CONTRACTOR SHALL PROVIDE AN UNDERGROUND PERMANENT IRRIGATION SYSTEM, AN ABOVE-GROUND TEMPORARY IRRIGATION SYSTEM UNTIL LANDSCAPING IS ESTABLISHED OR MANUALLY IRRIGATE FROM WATER SOURCE/WATER TRUCK UNTIL LANDSCAPING IS ESTABLISHED - AS SHOWN ON THE IRRIGATION PLAN. ALL IRRIGATION LINES SHALL BE INSTALLED SO AS TO NOT IMPACT THE CRITICAL PROTECTION ZONE OF PROTECTED TREES USED AS CREDIT. THESE PROTECTED TREES SHALL BE CLEARLY MARKED IN THE FIELD AND ANY NECESSARY IRRIGATION DISTURBANCE SHALL BE APPROVED BY THE CONSULTING LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. CONTRACTOR SHALL NOTIFY COUNTY INSPECTORS IN ADVANCE PRIOR TO ANY POTENTIAL DISTURBANCE.
5. SOD ALL DISTURBED AREAS AND SLOPES GREATER THAN 4:1 UNLESS INDICATED TO CONTAIN SEED & MULCH, SHRUBS, GROUNDCOVER, MULCH OR OTHER MATERIAL.
6. CONTRACTOR SHALL GUARANTEE PLANTS FOR A PERIOD OF ONE YEAR FROM TIME OF INSTALLATION.
7. PERFORM A SOIL TEST AND APPLY THE NECESSARY AMENDMENTS AND/OR FERTILIZER. THE PLANTING AREAS SHALL NOT BE UNSUITABLE COMPACTED BACKFILL, BUT FERTILE WELL-DRAINED LOAMY TOPSOIL WITH AN APPROPRIATE RATIO OF NITROGEN, POTASSIUM, PHOSPHORUS AND MICRO-NUTRIENTS (CORRESPONDING TO THE NEEDS OF A SOIL TEST). THE NUTRIENTS SHALL NOT TO EXCEED THE REQUIREMENT IN SECTION 10-14.105 OF THE LEON COUNTY LAND DEVELOPMENT CODE.
8. A 36" CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS EXCEPT AS OTHERWISE REQUIRED OR APPROVED.



SCOURLOCK PLANTING DETAIL

NOT TO SCALE

PLANTING LEADER:



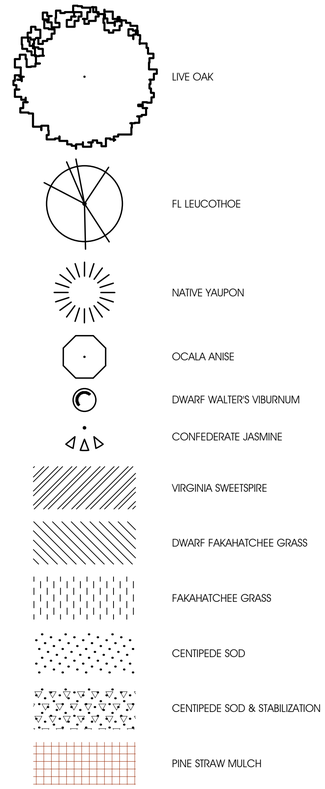
GRAPHIC SCALE

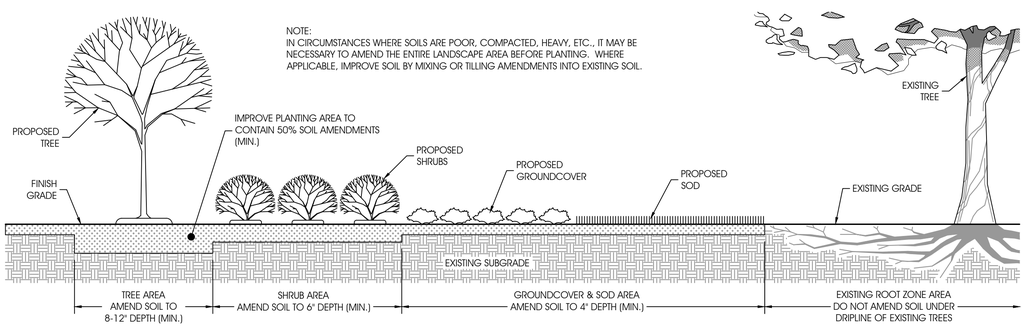
0 5 10 20

1 inch = 10 ft.

NORTH

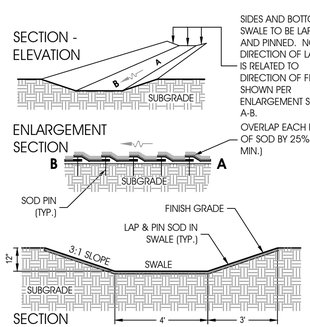
LEGEND





TYPICAL SOIL AMENDMENT SECTION

NOT TO SCALE



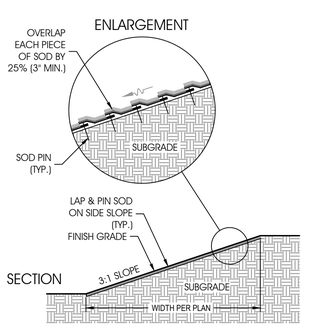
NOTES:
THE SOD SHALL BE LAPPED AND PINNED ON ALL SLOPES STEEPER THAN 1:3 (V:H) OR AREAS SPECIFIED PER PLAN IN THE FOLLOWING MANNER:

PLACE THE SOD ON THE PREPARED SURFACE AND STAGGER THE SOD PIECES TO AVOID A CONTINUOUS SEAM ALONG THE LINE OF FLOW. START AT THE BOTTOM OF THE SLOPE BREAK POINT AND WORK UP TO THE TOP OF THE SLOPE BREAK POINT, WITH THE UPPER ROW OF SOD OVERLAPPING THE LOWER ROW OF SOD BY 25% (3 INCHES MIN.). EMBED SOD FIRMLY AND SMOOTHLY BY LIGHT TAMPING WITH APPROPRIATE TOOLS. INSTALL SOD PINS IN THE OVERLAP LOCATIONS, WITH NOT LESS THAN FOUR PINS PER SQUARE YARD AND AT LEAST ONE PIN FOR EACH PIECE OF SOD. PINS SHALL BE A MINIMUM OF 6 INCHES LONG AND SHALL BE INSTALLED SO THAT THEY HOLD THE SOD FIRMLY IN PLACE YET PRESENT NO DANGER TO PEDESTRIANS OR MOWING CREWS. THE TYPE OF PIN AND THE METHOD OF INSTALLATION SHALL MEET THE APPROVAL OF THE ENGINEER OR LANDSCAPE ARCHITECT.

DO NOT USE SOD WHICH HAS BEEN CUT FOR MORE THAN 48 HOURS.

LAPPED & PINNED SOD SWALE DETAIL

NOT TO SCALE



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LAPPED & PINNED SOD SLOPE DETAIL

NOT TO SCALE

REVISIONS

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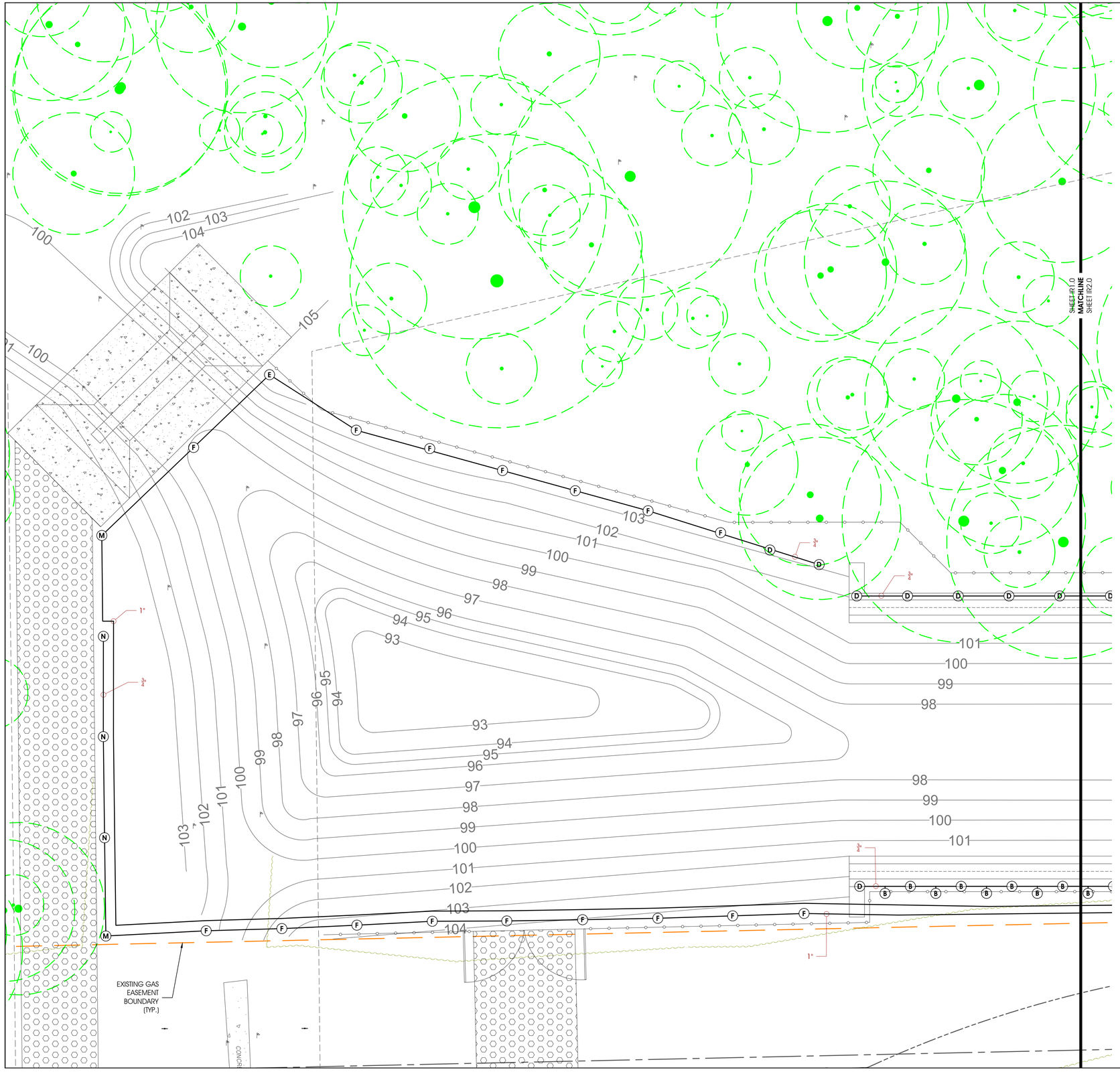
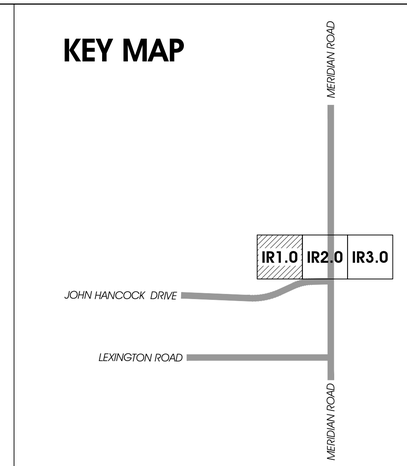
SHEET TITLE
LANDSCAPE PLAN

SHEET
LS7.0



KEY MAP



GRAPHIC SCALE

0 5 10 20

1 inch = 10 ft.

NORTH

IRRIGATION SCHEDULE

SYMBOL	MANF. NUMBER	GPM	PSI	RAD.	REMARKS
	HUNTER MP ROTATOR				
A	PROS - 12 - PRS40 - CV - MP800SR-90	0.23	40	10'	12" POP-UP
B	PROS - 12 - PRS40 - CV - MP800SR-180	0.42	40	10'	12" POP-UP
C	PROS - 12 - PRS40 - CV - MP800SR-210	0.43	40	10'	12" POP-UP
D	PROS - 12 - PRS40 - CV - MP800SR-360	0.78	40	10'	12" POP-UP
E	PROS - 12 - PRS40 - CV - MP1000-90	0.19	40	14'	12" POP-UP
F	PROS - 12 - PRS40 - CV - MP1000-180	0.37	40	14'	12" POP-UP
G	PROS - 12 - PRS40 - CV - MP1000-210	0.43	40	14'	12" POP-UP
H	PROS - 12 - PRS40 - CV - MP1000-270	0.57	40	14'	12" POP-UP
I	PROS - 12 - PRS40 - CV - MP1000-360	0.75	40	14'	12" POP-UP
J	PROS - 12 - PRS40 - CV - MPCORNER-45	0.19	40	14'	12" POP-UP
K	PROS - 12 - PRS40 - CV - MPCORNER-90	0.39	40	14'	12" POP-UP
L	PROS - 12 - PRS40 - CV - MPCORNER-105	0.45	40	14'	12" POP-UP
M	PROS - 12 - PRS40 - CV - MP2000-90	0.40	40	19'	12" POP-UP
N	PROS - 12 - PRS40 - CV - MP2000-180	0.74	40	19'	12" POP-UP
O	PROS - 12 - PRS40 - CV - MP2000-210	0.86	40	19'	12" POP-UP
P	PROS - 12 - PRS40 - CV - MP2000-270	1.10	40	19'	12" POP-UP
Q	PROS - 12 - PRS40 - CV - MP2000-360	1.47	40	19'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPLCS515	0.22	40	5' X 15'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPRCS515	0.22	40	5' X 15'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPSS530	0.44	40	5' X 30'	12" POP-UP
	OTHER				
	1" ELECTRIC VALVE: HUNTER PGV 101				
M	1" IRRIGATION METER				
	1" IRRIGATION BACKFLOW PREVENTER				
	1" GATE VALVE				
HB	HOSE BIB PER DETAIL				
C	HUNTER PRO-C 12 STATIONS CONTROLLER: PCC-12				
RS	RAIN SENSOR: HUNTER MINI-CLIK				
	BURIED IRRIGATION LINE (PVC SCH 40)				
	SCH 40 SLEEVE				
	SCH 40 MAINLINE				

ZONE NUMBER — 1 — 30 | 1.5 — GPM / VALVE SIZE

PROPOSED IRRIGATION ZONE

NOTE:
IRRIGATION PIPING LOCATIONS MAY BE DRAWN FOR GRAPHIC CLARITY ONLY. WHENEVER POSSIBLE, PIPING IS TO BE INSTALLED IN SOIL AREAS & MAINLINE AND LATERAL LINES SHALL BE PLACED IN SAME TRENCH. PLACE IRRIGATION PIPING ALONG THE EDGE OF PAVEMENT IF POSSIBLE AND MINIMIZE TRENCHING UNDER EXISTING TREES.

REVISIONS

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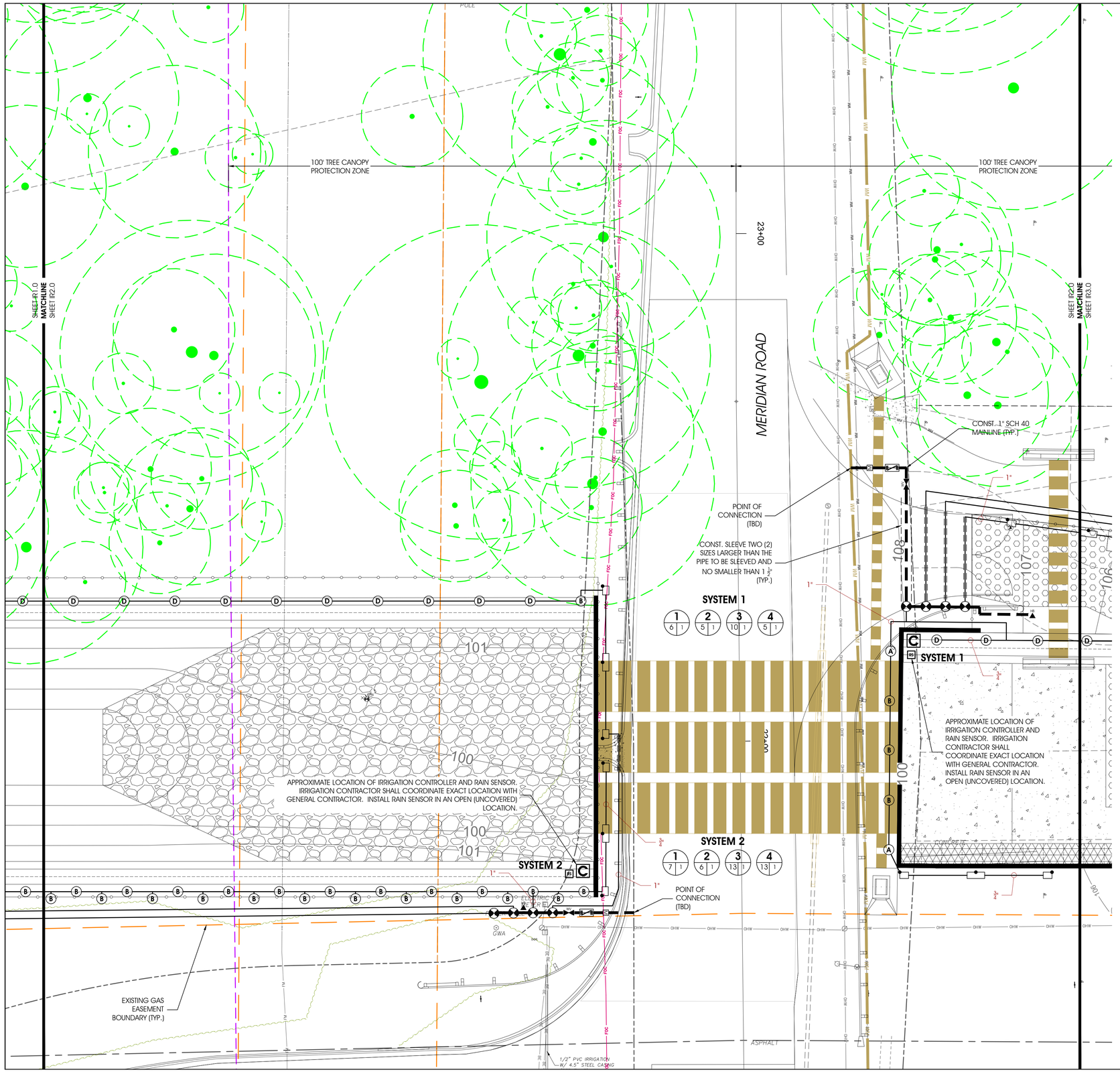
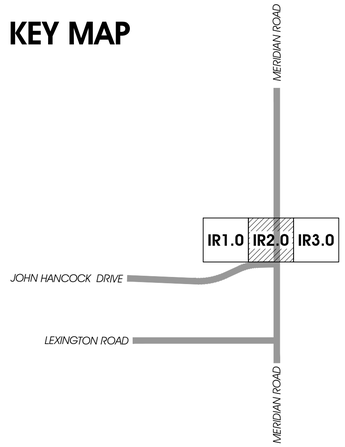
REGISTERED LANDSCAPE ARCHITECT
DAVID L. COWLES, JR.
LA #0666917
STATE OF FLORIDA

SHEET TITLE
IRRIGATION PLAN

SHEET
IR1.0



KEY MAP



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J	PROS - 12 - PRS40 - CV - MPCORNER-45	0.19	40	14'	12" POP-UP
K	PROS - 12 - PRS40 - CV - MPCORNER-90	0.39	40	14'	12" POP-UP
L	PROS - 12 - PRS40 - CV - MPCORNER-105	0.45	40	14'	12" POP-UP
M	PROS - 12 - PRS40 - CV - MP2000-90	0.40	40	19'	12" POP-UP
N	PROS - 12 - PRS40 - CV - MP2000-180	0.74	40	19'	12" POP-UP
O	PROS - 12 - PRS40 - CV - MP2000-210	0.86	40	19'	12" POP-UP
P	PROS - 12 - PRS40 - CV - MP2000-270	1.10	40	19'	12" POP-UP
Q	PROS - 12 - PRS40 - CV - MP2000-360	1.47	40	19'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPLCS515	0.22	40	5' X 15'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPRCS515	0.22	40	5' X 15'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPSS530	0.44	40	5' X 30'	12" POP-UP
	OTHER				
	1" ELECTRIC VALVE: HUNTER PGV 101				
M	1" IRRIGATION METER				
	1" IRRIGATION BACKFLOW PREVENTER				
	1" GATE VALVE				
HB	HOSE BIB PER DETAIL				
C	HUNTER PRO-C 12 STATIONS CONTROLLER: PCC-12				
RS	RAIN SENSOR: HUNTER MINI-CLIK				
	BURIED IRRIGATION LINE (PVC SCH 40)				
	SCH 40 SLEEVE				
	SCH 40 MAINLINE				

ZONE NUMBER

1

30 1.5

GPM VALVE SIZE

PROPOSED IRRIGATION ZONE

NOTE:
IRRIGATION PIPING LOCATIONS MAY BE DRAWN FOR GRAPHIC CLARITY ONLY. WHENEVER POSSIBLE, PIPING IS TO BE INSTALLED IN SOIL AREAS & MAINLINE AND LATERAL LINES SHALL BE PLACED IN SAME TRENCH. PLACE IRRIGATION PIPING ALONG THE EDGE OF PAVEMENT IF POSSIBLE AND MINIMIZE TRENCHING UNDER EXISTING TREES.

REVISIONS

PROJECT NAME
MERIDIAN ROAD DRAINAGE IMPROVEMENTS

CLIENT NAME
STANTEC

DATE: 12/12/2019

DRAWN BY: DLC

COWLES LANDSCAPE ARCHITECTURE (CLA)
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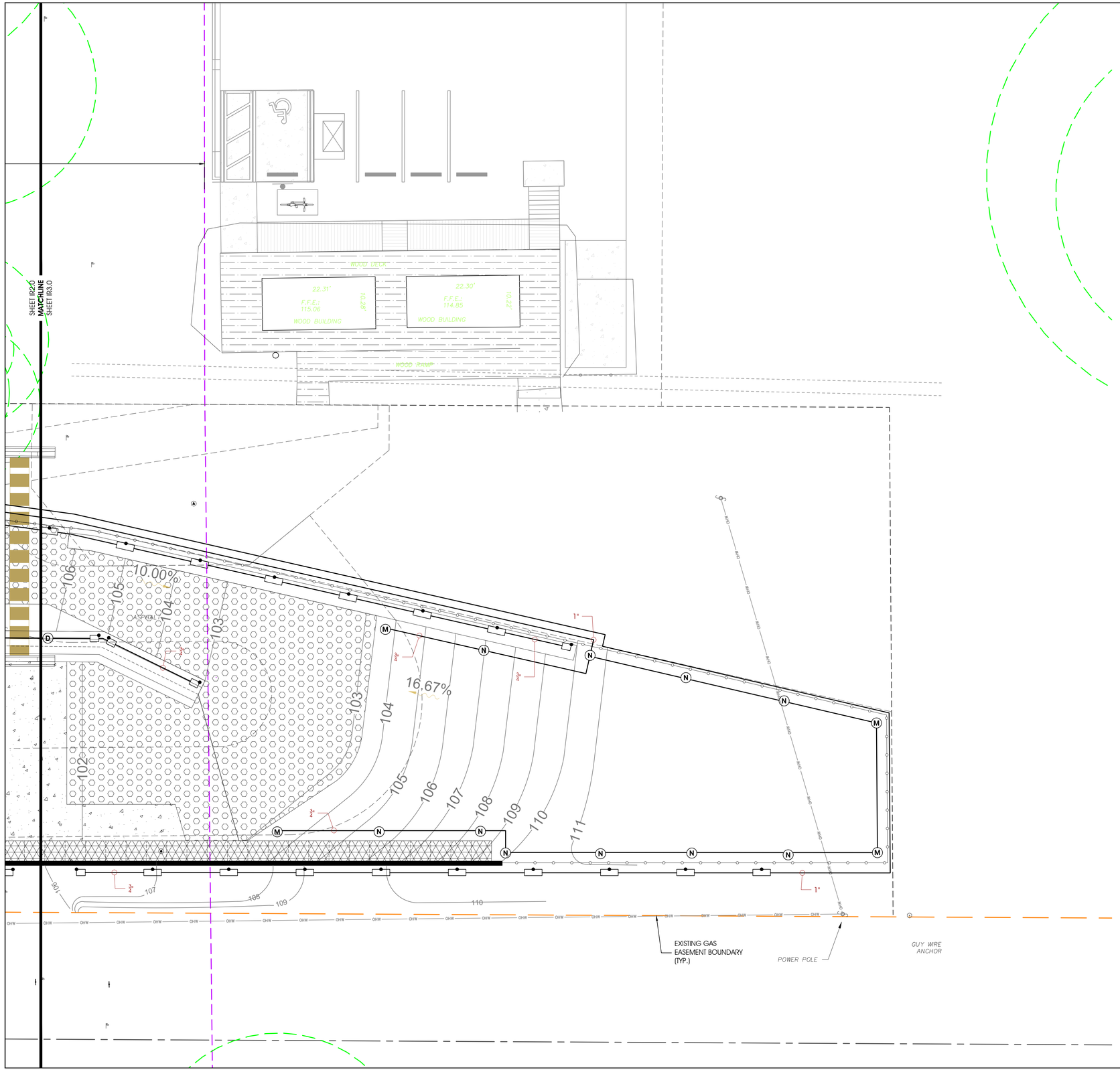
David L. Cowles, Jr. R.L.A.
Florida Reg. No. LA0666917

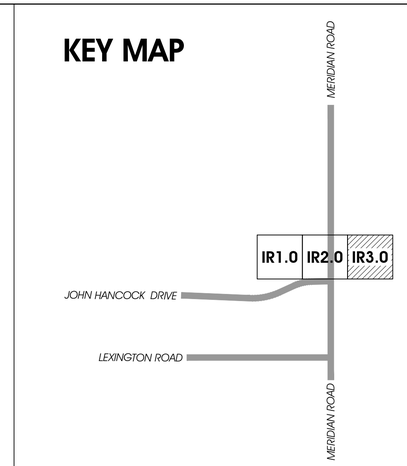
REGISTERED LANDSCAPE ARCHITECT
COWLES, JR.
LA 0666917
STATE OF FLORIDA

SHEET TITLE
IRRIGATION PLAN

SHEET
IR2.0



KEY MAP



GRAPHIC SCALE

0 5 10 20

1 inch = 10 ft.

NORTH

IRRIGATION SCHEDULE

SYMBOL	MANF. NUMBER	GPM	PSI	RAD.	REMARKS
	HUNTER MP ROTATOR				
A	PROS - 12 - PRS40 - CV - MP800SR-90	0.23	40	10'	12" POP-UP
B	PROS - 12 - PRS40 - CV - MP800SR-180	0.42	40	10'	12" POP-UP
C	PROS - 12 - PRS40 - CV - MP800SR-210	0.43	40	10'	12" POP-UP
D	PROS - 12 - PRS40 - CV - MP800SR-360	0.78	40	10'	12" POP-UP
E	PROS - 12 - PRS40 - CV - MP1000-90	0.19	40	14'	12" POP-UP
F	PROS - 12 - PRS40 - CV - MP1000-180	0.37	40	14'	12" POP-UP
G	PROS - 12 - PRS40 - CV - MP1000-210	0.43	40	14'	12" POP-UP
H	PROS - 12 - PRS40 - CV - MP1000-270	0.57	40	14'	12" POP-UP
I	PROS - 12 - PRS40 - CV - MP1000-360	0.75	40	14'	12" POP-UP
J	PROS - 12 - PRS40 - CV - MPCORNER-45	0.19	40	14'	12" POP-UP
K	PROS - 12 - PRS40 - CV - MPCORNER-90	0.39	40	14'	12" POP-UP
L	PROS - 12 - PRS40 - CV - MPCORNER-105	0.45	40	14'	12" POP-UP
M	PROS - 12 - PRS40 - CV - MP2000-90	0.40	40	19'	12" POP-UP
N	PROS - 12 - PRS40 - CV - MP2000-180	0.74	40	19'	12" POP-UP
O	PROS - 12 - PRS40 - CV - MP2000-210	0.86	40	19'	12" POP-UP
P	PROS - 12 - PRS40 - CV - MP2000-270	1.10	40	19'	12" POP-UP
Q	PROS - 12 - PRS40 - CV - MP2000-360	1.47	40	19'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPLCS515	0.22	40	5' X 15'	12" POP-UP
	PROS - 12 - PRS40 - CV - MPRCS515	0.22	40	5' X 15'	12" POP-UP
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RS	RAIN SENSOR: HUNTER MINI-CLIK				
	BURIED IRRIGATION LINE (PVC SCH 40)				
	SCH 40 SLEEVE				
	SCH 40 MAINLINE				

ZONE NUMBER

1

30 | 1.5

GPM VALVE SIZE

PROPOSED IRRIGATION ZONE

NOTE:
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David L. Cowles, Jr. R.L.A.
Florida Registration No. LA0666917

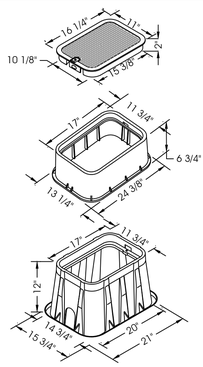
SHEET TITLE
IRRIGATION PLAN

SHEET
IR3.0

PART NUMBER	DESCRIPTION - MARKING	COLOR (BOX/COVER)	PALLET QTY.	PRODUCT CLASS
BOX & COVER 314BC	14"X19" BOX, OVERLAPPING COVER - ICV 14"X19" CORRUGATED BOX, OVERLAPPING	GREEN/ GREEN	84	20PR
314BCB	BOLT-DOWN COVER -ICV 14"X19" CORRUGATED BOX W/ NO HOLES	GREEN/ GREEN	84	20PR
314BCSAND	OVERLAPPING COVER - ICV 14"X19" BOX, OVERLAPPING COVER - ICV	SAND/ SAND	84	20PR
314BCBSAND	14"X19" CORRUGATED BOX, OVERLAPPING BOLT-DOWN COVER -ICV	SAND/ SAND	84	20PR
314BNHCWG	14" X 19" CORRUGATED BOX W/NO HOLES, OVERLAPPING COVER	PURPLE/ PURPLE	84	20PR
314PBCR	RECLAIMED WATER 14"X19" BOX, OVERLAPPING COVER -	PURPLE/ PURPLE	84	20PR
314PBCBR	RECLAIMED WATER 14"X19" CORRUGATED BOX, OVERLAPPING	PURPLE/ PURPLE	84	20PR
314PBCR NH	BOLT-DOWN COVER - RECLAIMED WATER 14"X19" CORRUGATED BOX W/ NO HOLES,	PURPLE/ PURPLE	84	20PR
314BCRG	OVERLAPPING COVER - RECLAIMED WATER 14"X19" BOX, 14"X19" OVERLAPPING COVER - RECLAIMED WATER	GREEN/ GREEN	84	20PR
COVER ONLY		GREEN	300	20PR
313C	14"X19" OVERLAPPING COVER - ICV	SAND	300	20PR
313CSAND	14"X19" OVERLAPPING COVER - ICV	PURPLE	300	20PR
313CR	14"X19" OVERLAPPING COVER - RECLAIMED WATER	GREEN	300	20PR
313CRG	14"X19" OVERLAPPING COVER - RECLAIMED WATER			
BOX ONLY		GREEN	84	20PR
3148	14"X19" BOX	SAND	84	20PR
3148SAND	14"X19" BOX	PURPLE	84	20PR
3148PB	14"X19" BOX	GREEN	84	20PR
3148NH	14"X19" CORRUGATED BOX W/ NO HOLES	PURPLE	84	20PR
3148NH	14"X19" CORRUGATED BOX W/ NO HOLES	GREEN	49	20PR
213-6 1138B	14"X19"X6" EXTENSION 2-1/2" X 3/8" SS BOLT	STEEL	(BAG OF 10)	20NM

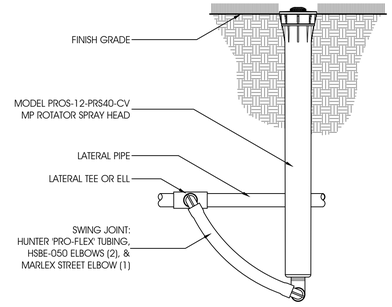
MANUFACTURER:
NDS, INC.
851 NORTH HARVARD AVE.
LINDSAY, CA 93247
www.ndspro.com
TOLL FREE: 1-800-726-1994
PHONE: (559) 562-9888
FAX: (559) 562-4488

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.



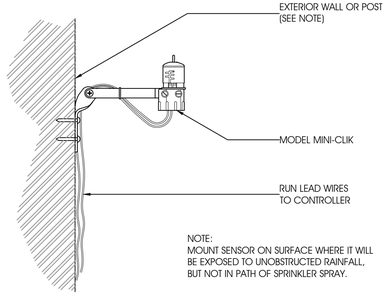
PRO PLUS SERIES VALVE BOXES DETAIL

NOT TO SCALE



HUNTER PROS-12-PRS40-CV SPRAY HEAD DETAIL

NOT TO SCALE

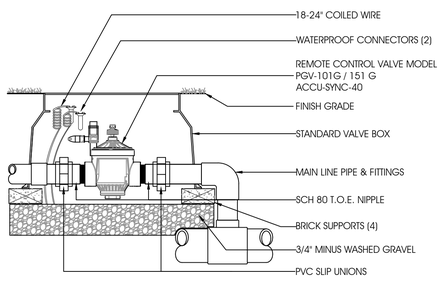


HUNTER MINI-CLIK RAIN SENSOR DETAIL

NOT TO SCALE

-WATERING SCHEDULE-

	ZONE	GPM	PROGRAM	TIME/DAY	DAYS/WEEK	DAYS/WEEK (AT INITIAL PLANTING) WEEK #1	WEEK #2	WEEK #3	WEEK #4
SYSTEM 1	1	6	BED	30 MIN.	2	7	5	4	3
	2	5	BED	30 MIN.	2	7	5	4	3
	3	10	TURF	30 MIN.	2	7	5	4	3
	4	5	BED	30 MIN.	2	7	5	4	3
SYSTEM 2	1	7	TURF	30 MIN.	2	7	5	4	3
	2	6	TURF	30 MIN.	2	7	5	4	3
	3	13	BED	30 MIN.	2	7	5	4	3
	4	13	BED	30 MIN.	2	7	5	4	3



HUNTER PGV GLOBE VALVE DETAIL

NOT TO SCALE

IRRIGATION NOTES:

1. IRRIGATION SYSTEM DESIGN REQUIREMENTS: MIN. 30 GPM @ 80 PSI @ THE WATER SOURCE.
2. VALVE NUMBERS INDICATE CONTROLLER STATION TO WHICH THAT VALVE IS TO BE CONNECTED.
3. AUTOMATIC ELECTRIC VALVES AND ISOLATION VALVES ARE TO BE INSTALLED IN RECTANGULAR VALVE BOXES PER DETAIL OR AS APPROVED.
4. WIRE CONNECTIONS TO THE ELECTRIC VALVES ARE TO BE MADE WITH WATERPROOF WIRE CONNECTORS.
5. ELECTRICAL WIRE IS TO BE TYPED UF 600 VOLT AWG - CONTROL CABLE, COMMON OR 'GROUND' WIRE IS TO BE #14 OR LARGER AND WHITE IN COLOR. CONTROL OF 'HOT' WIRE IS TO BE #14 OR LARGER AND ANY COLOR OTHER THAN WHITE.
6. ALL VALVE WIRES SHALL BE TAPED AT 20' INTERVALS AND LOCATED UNDER IRRIGATION MAINLINE OR AS SHOWN ON DETAIL.
7. POP-UPS ARE TO BE INSTALLED ON FUNNY PIPE OR AS SHOWN ON DETAIL.
8. SPRAY NOZZLES, INSTALLED IN SHRUB OR FLOWER BEDS, MAY REQUIRE EXTENSIONS FOR SUFFICIENT HEIGHT TO PREVENT INTERRUPTION OF THE STREAM BY THE PLANT MATERIAL.
9. PIPING MAY SOMETIMES BE INDICATED AS BEING LOCATED IN UNLIKELY AREAS; I.E., IN BUILDINGS, UNDER PAVEMENT, OUTSIDE OF PROPERTY LINES, ETC... THIS IS DONE FOR GRAPHIC CLARITY ONLY. WHENEVER POSSIBLE, PIPING IS TO BE INSTALLED IN SOIL AREAS.
10. MAINLINE IS TO BE INSTALLED A MINIMUM OF 18" BELOW FINISH GRADE. LATERAL LINES ARE TO BE INSTALLED A MINIMUM OF 14" BELOW FINISH GRADE.
11. UNLESS OTHERWISE INDICATED, ALL SLEEVES ARE TO BE PVC SCH 40 AND TWO (2) SIZES LARGER THAN THE PIPE TO BE SLEEVED. FOR EXAMPLE: THE SLEEVE FOR A 1" PIPE SHALL BE 1-1/2" PVC SCH 40. NO IRRIGATION SLEEVE SHALL BE SMALLER THAN 1-1/2".
12. ALL IRRIGATION MAINLINES SHALL BE PVC SCH 40 UNLESS OTHERWISE NOTED.
13. ALL IRRIGATION LATERALS SHALL BE PVC CLASS 200 PLASTIC PIPE UNLESS OTHERWISE NOTED.
14. EXACT CONTROLLER LOCATION SHALL BE DETERMINED IN THE FIELD AT THE TIME OF INSTALLATION AND APPROVED BY THE LANDSCAPE ARCHITECT.
15. LIGHTNING PROTECTION SHALL BE INSTALLED ON EACH CONTROLLER: A 5/8" x 8' COPPER CLAD LIGHTNING GROUND ROD W/5 OHMS OR LESS RESISTANCE TO EARTH AND CONNECTED TO THE CONTROLLER.
16. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR BRINGING ELECTRICAL POWER TO THE CONTROLLER LOCATION.
17. WHERE APPLICABLE, MAINLINE AND LATERAL SHALL BE PLACED IN SAME TRENCH OR AS SHOWN ON DETAIL.
18. ALL IRRIGATION HEADS SHALL BE A MINIMUM OF 12" FROM BUILDINGS AND WALLS. ALL IRRIGATION HEADS SHALL BE A MINIMUM OF 6" FROM PAVEMENT EDGES.
19. THE IRRIGATION CONTRACTOR MAY HAVE TO MAKE FIELD ADJUSTMENTS. ANY SUBSTANTIAL DEVIATIONS TO THE PLAN SHALL REQUIRE THE IRRIGATION CONTRACTOR TO PROVIDE AS-BUILT DRAWING(S) OF THE CONSTRUCTED SYSTEM.

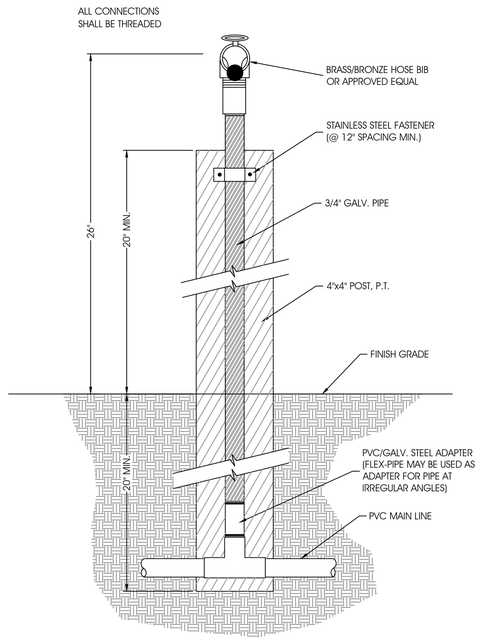
IRRIGATION SPECIFICATIONS

1. GENERAL/PRODUCTS
 1.1. SYSTEM SHALL CONFORM TO ALL LOCAL CROSS-CONNECTIONS, PLUMBING AND ELECTRICAL CODES.
 1.2. ALL MATERIALS TO BE INCORPORATED IN THIS SYSTEM SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS. ALL PIPE DAMAGED OR REJECTED BECAUSE OF DEFECTS SHALL BE REMOVED, WITH EXCEPTION TO RELOCATED MATERIAL, FROM THE SITE AT THE TIME OF REJECTION.
 1.3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE AND GUARANTEE COMPLETE 100% COVERAGE OF THE AREAS SHOWN ON THE DRAWINGS TO BE IRRIGATED. HE SHALL ALSO GUARANTEE THE SATISFACTORY OPERATION OF THE ENTIRE SYSTEM AND THE RESTORATION OF THE SITE PRIOR TO WORK.
 1.4. THE ENTIRE SYSTEM SHALL BE GUARANTEED TO BE COMPLETE AND FULLY OPERATIONAL FOR THE PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. CONTRACTOR SHALL REPAIR OR REPLACE ANY DEFECTS OCCURRING WITHIN THAT YEAR, FREE OF EXPENSE TO THE OWNER.
 1.5. AFTER FINAL ACCEPTANCE OF THE COMPLETED INSTALLATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING COMPLETE REPRODUCIBLE DRAWINGS PREPARED AND SHOWING ALL CHANGES. THESE DRAWINGS SHALL BE TURNED OVER TO THE OWNER.
 1.6. PLASTIC PIPE LINE SHALL BE RIGID UN-PLASTICIZED, BELL END, PVC TYPE (1102,2120, ETC), SCHEDULE 40 PVC (ASTM-1785).
 1.7. ALL PLASTIC PIPE FITTINGS SHALL BE SCHEDULE 40 PVC (ASTM D-2466) MOLDED FITTINGS MANUFACTURED OF THE SAME MATERIAL AS THE PIPE.

2. AS-BUILTS
 2.1. STATIC PRESSURE OF THE WATER SOURCE SHALL BE MEASURED AND NOTED ON THE SHOP DRAWINGS.
 2.2. THE PRESSURE LOSS THROUGH THE SYSTEM SHALL BE INCLUDED AS PART OF THE SHOP DRAWINGS.
 2.3. THE MAXIMUM AND MINIMUM PRESSURE AT THE BASE OF THE CLOSEST AND FURTHEST SPRINKLER SHALL BE INDICATED ON THE SHOP DRAWING.
 2.4. ADEQUATE PRESSURE RELIEF, SURGE PROTECTION, THRUST RESTRAINT, AND AIR RELIEF VALVES SHALL BE USED FOR ALL PIPING.

3. HYDROSTATIC TESTS
 3.1. TESTING OF THE INSTALLED SYSTEM SHALL BE REQUESTED OF THE CONTRACTOR BY THE OWNER IN WRITING AT LEAST 48 HOURS IN ADVANCE OF THE TEST.
 3.2. TESTING SHALL BE ACCOMPLISHED AT THE EXPENSE OF THE CONTRACTOR AND IN THE PRESENCE OF THE OWNER.
 3.3. WHEN TESTING WITH OPEN TRENCHES, CENTER LOAD PIPING WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE.
 3.4. MAIN LINES AND SUB-MAINS SHALL BE TESTED FOR TWO HOURS AND LATERAL LINES FOR ONE HOUR.
 3.5. IF LINES OR FITTINGS DO NOT HOLD OR MORE THAN 5 PSI IS LOST DURING TESTING, THE CONTRACTOR MUST MAKE CORRECTIONS AND RESCHEDULE TESTING.

4. EXECUTION
 4.1. ALL PRESSURIZED PLASTIC AND GALVANIZED PIPE, SPRINKLER LINES OR MAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 18 INCHES BASED ON FINISHED GRADES. NON-PRESSURIZED LINES SHALL BE INSTALLED WITH A MINIMUM COVER OF 12" BASED ON FINISHED GRADE.
 4.2. DEPTH OF SLEEVES UNDER ASPHALT OR CONCRETE SHALL BE 24", EXCEPT 30" FOR 6" AND LARGER PIPES, WHERE ANY CUTTING OR BREAKING OF SIDEWALKS, CONCRETE WORK AND/OR ASPHALT IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS, CONCRETE AND/OR ASPHALT SHALL BE OBTAINED FROM THOSE HAVING PROPER JURISDICTION.
 4.3. PIPE USED ABOVE GROUND WITH BACKFLOW PREVENTION DEVICES OR PUMPING STATIONS SHALL BE SCHEDULED 40 GALVANIZED STEEL (ASTM A-120/A-53) AND JOINTED WITH 150 POUND TESTED GALVANIZED MALLEABLE IRON PIPE FITTINGS (ASTM A-338). PIPE OF THE ABOVE TYPE SHALL BE ANCHORED WITH ONE CUBIC FOOT OF CONCRETE.
 4.4. THE BACKFILL SHALL BE THOROUGHLY COMPACTED AND EVENED OFF WITH THE ADJACENT SOIL LEVEL. BACKFILL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN 2 1/2".
 4.5. TRENCHES SHALL BE OPENED AND BACKFILLED ON THE SAME DAY.
 4.6. PLASTIC PIPE SHALL BE INSTALLED ACCORDING TO ASTM D-2855, ASAES-376, AND SCS 430-DD-1. PIPE SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER TO ALLOW FOR EXPANSION, CONTRACTION AND SNAKING.
 4.7. PLASTIC PIPE SHALL BE CUT WITH A HACK SAW WITH THE ASSISTANCE OF A SQUARE SAWING DEVICE, OR IN A MANNER TO ENSURE A SQUARE CUT. BURRS AT CUT ENDS SHALL BE REMOVED PRIOR TO INSTALLATION TO PROVIDE A SMOOTH UNOBSTRUCTED FLOW.
 4.8. ALL PLASTIC TO PLASTIC JOINTS SHALL BE SOLVENT WELD JOINTS OR SLIP SEAL JOINTS. ONLY THE SOLVENT RECOMMENDED BY THE PIPE MANUFACTURER (ASTMD-2564) SHALL BE USED. ALL FLEX PIPE SWING JOINTS SHALL BE CEMENTED WITH IPS #795, OR EQUAL. ALL PLASTIC PIPE AND FITTINGS SHALL BE CLEANED WITH APPROPRIATE PVC CLEANER (ASTM F-656), AND INSTALLED AS OUTLINED AND INSTRUCTED BY THE PIPE MANUFACTURER. NO GLUE SHALL BE LEFT INSIDE THE PIPE.
 4.9. THE SOLVENT WELD JOINTS SHALL BE MADE IN THE FOLLOWING MANNER:
  4.9.1. THOROUGHLY CLEAN THE MATING PIPE AND FITTING WITH A CLEAN DRY CLOTH.
  4.9.2. APPLY A UNIFORM COAT OF SOLVENT TO THE PIPE WITH AN APPROVED APPLICATOR.
  4.9.3. APPLY SOLVENT TO FITTING IN A SIMILAR MANNER.
  4.9.4. REAPPLY A LIGHT COAT OF SOLVENT TO THE PIPE AND IMMEDIATELY INSERT INTO THE FITTING.
  4.9.5. TURN THE PIPE OR FITTING ONE QUARTER TO INSURE EVEN DISTRIBUTION IN THE SOCKET. INSERT PIPE TO THE FULL DEPTH OF THE FITTING SOCKET.
  4.9.6. WIPE OFF ANY EXCESS SOLVENT THAT APPEARS AT THE OUTER SHOULDER OF THE FITTING. DO NOT USE AN EXCESSIVE AMOUNT OF SOLVENT SO AS TO AVOID ANY OBSTRUCTION TO FORM ON THE PIPE. ALLOW JOINTS TO SET A MINIMUM OF 24 HOURS BEFORE PRESSURE IS APPLIED TO THE SYSTEM.
 4.10. ALL OPENINGS SHALL BE CAPPED OR PLUGGED FOLLOWING THE INSTALLATION OF LINES TO PREVENT THE ENTRANCE OF MATERIALS THAT WOULD OBSTRUCT THE PIPE OR SPRINKLERS. LEAVE PLUG OR CAP IN PLACE UNTIL REMOVAL IS NECESSARY FOR COMPLETION OF INSTALLATION.
 4.11. THOROUGHLY FLUSH OUT ALL WATER LINES BEFORE INSTALLING HEADS, VALVES, AND OTHER HYDRANTS.
 4.12. UPON COMPLETION OF THE FLUSHING, THE CONTRACTOR SHALL RECAP THE LINES FOR PRESSURE TESTING..

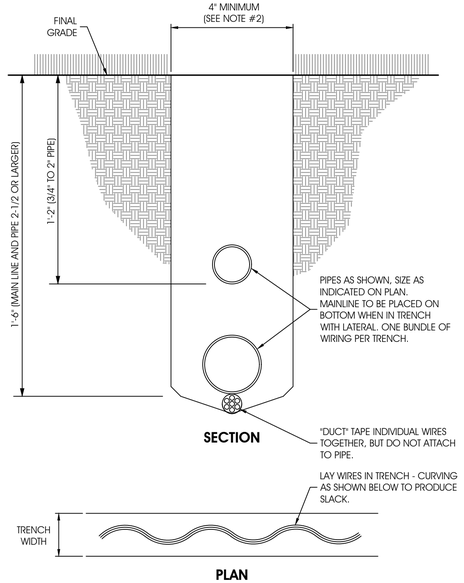


HOSE BIB DETAIL (POST RISER)

NOT TO SCALE

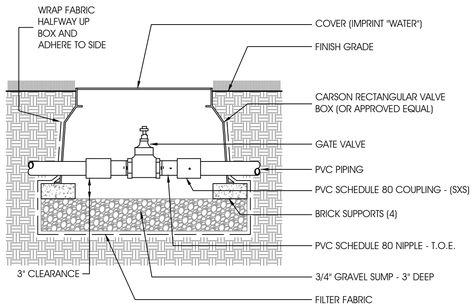
NOTES:
1. PREVENT UNCOVERED PIPE FROM FLOATING UP DURING RAINS. PIPE WHICH FLOATS-UP DUE TO WATER ACCUMULATION IN TRENCH SHALL BE RESET TO SPECIFIED DEPTHS AT NO EXTRA COSTS.

2. TRENCH WIDTH TO BE SIZED ACCORDING TO NEEDS. DO NOT DIG EXCESSIVELY WIDE TRENCH SO AS TO MINIMIZE DAMAGETO SURROUNDING SOILS AND VEGETATION.



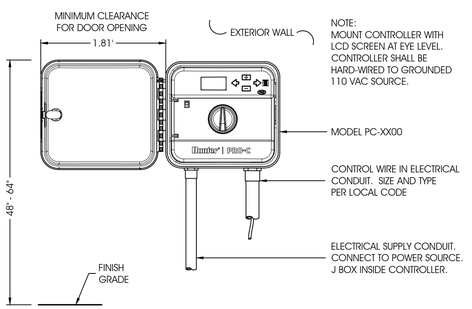
TRENCHING DETAIL

NOT TO SCALE



GATE VALVE DETAIL

NOT TO SCALE



HUNTER PRO-C WALL-MOUNT CONTROLLER DETAIL

NOT TO SCALE

REVISIONS

PROJECT NAME
MERIDIAN ROAD DRAINAGE IMPROVEMENTS

CLIENT NAME
STANTEC

DATE: 12/12/2019
DRAWN BY: DLC

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SHEET TITLE
IRRIGATION DETAIL SHEET

SHEET
IR4.0