

# DEVELOPMENT PLANS FOR CYPRESS CREEK TOWN CENTER NORTH INFRASTRUCTURE IMPROVEMENTS (PONDSIDE DRIVE EXTENSION)

## PROJECT INFORMATION

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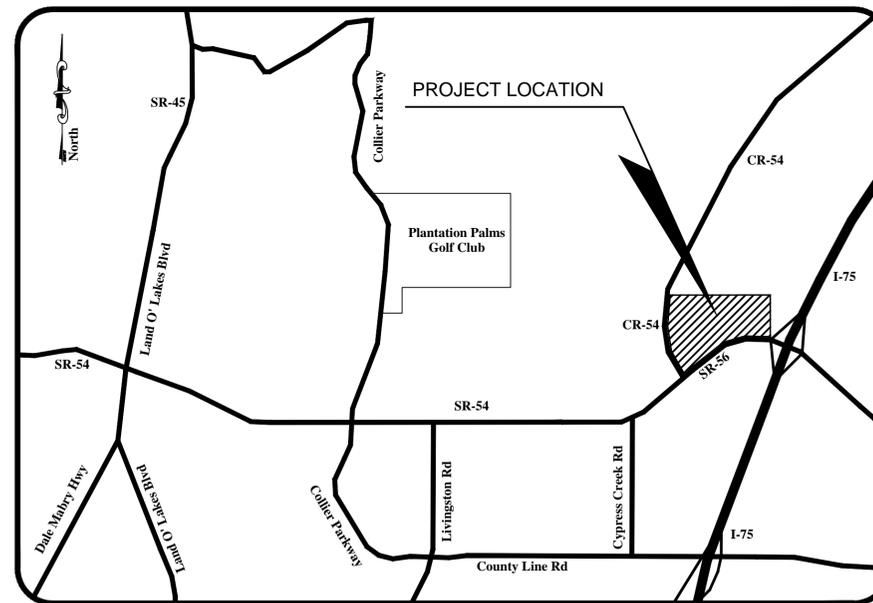
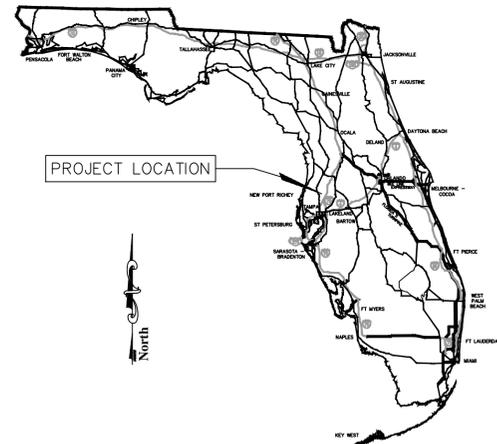
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STR: 27-26S-19E, PASCO COUNTY FLORIDA  
PARCEL ID: 27-26-19-0010-0000-0010; 27-26-19-0010-0000-0012

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ISSUED FOR:  
COUNTY SUBMITTAL  
10-20-2015

FDOT DRAINAGE	CONSTRUCTION	FDPE UTILITIES	SWFWM ERP	PASCO COUNTY	Drawing Index	
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**VICINITY MAP**

*PREPARED BY*



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STATEMENT OF OWNERSHIP AND UNIFIED CONTROL:  
CURRENT PARCEL OWNER: PASCO RANCH, INC.

**ENGINEER'S CERTIFICATION**

I HEREBY CERTIFY THAT THE DESIGN OF THIS PROJECT, AS PREPARED UNDER MY PERSONAL DIRECTION AND CONTROL, COMPLIES WITH ALL APPLICABLE STANDARDS, INCLUDING THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS" AS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION PURSUANT TO 334.044(10)(a) AND 336.045, FLORIDA STATUTE.

NO.	DATE	DESCRIPTION
6		
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4		
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COVER SHEET

CYPRESS CREEK TOWN  
CENTER NORTH  
(PONDSIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
JOB #: 0967  
SEC.: 27  
TWN: 26S  
RNG: 19E  
DESIGNED: E.L.R. DRAWN: E.L.R. APPROVED: J.A.C.

JOSEPH A. CIMINO  
FL P.E. # 67540

Plot Date: 10/20/2015  
Datum: NGVD 1929

G-100

2015 WRA Plot Date: 10/20/2015 08:27:58 AM CAD File Path: S:\PROJECT FILES\0967 - PASCO 24 INC. - C/C/T - NORTH CREEK TOWN CENTER NORTH EXTENSION\PLAN COVER.DWG

CALL 48 HOURS BEFORE YOU DIG **811.**  
IT'S THE LAW! DIAL 811 Know what's below. Call before you dig.  
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

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**GENERAL CONSTRUCTION NOTES**

- UNLESS OTHERWISE NOTED HEREIN, THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:
  - PASCO COUNTY LAND DEVELOPMENT CODE (IAP 31, 2012)
  - CURRENT WATER AND WASTEWATER STANDARDS OF PASCO COUNTY. THE WATER AND WASTEWATER SYSTEMS SHALL BE DEDICATED TO PASCO COUNTY FOR OWNERSHIP AND MAINTENANCE.
  - THE STORM DRAINAGE COLLECTION SYSTEM AND PROPOSED ROADWAY SHALL MEET PASCO COUNTY CURRENT SPECIFICATION FOR DESIGN. WHERE INDICATED ON THE PLANS, THE RIGHT-OF-WAY SHALL BE DEDICATED TO THE COUNTY FOR OWNERSHIP AND MAINTENANCE. ACCORDINGLY, THE ABOVE NOTED DOCUMENTS SHALL BE THE TECHNICAL SPECIFICATIONS FOR THE CONSTRUCTION OF THIS PROJECT AND THE CONTRACTOR SHALL OBTAIN AND FULLY FAMILIARIZE HIMSELF WITH THE CONTENTS OF SAID SPECIFICATIONS. IN THE EVENT THAT A DISCREPANCY OCCURS BETWEEN THESE PLANS AND THE FOREMENTIONED SPECIFICATIONS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN WRITING. THE CONTRACTOR SHALL HAVE A SET OF THESE PLANS MARKED "APPROVED FOR CONSTRUCTION" ALONG WITH A COPY OF ALL THE DOCUMENTS NOTED ABOVE ON THE PROJECT SITE AT ALL TIMES.
  - ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSURE THAT ALL CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
  - PRIOR TO CONSTRUCTION COMMENCEMENT, THE CONTRACTOR SHALL OBTAIN FROM THE ENGINEER AND/OR THE DEVELOPER COPIES OF ALL PERTINENT PERMITS AND APPROVALS RELATED TO THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY POST ALL PERMITS ON-SITE AND TO ASSURE ALL CONSTRUCTION ACTIVITIES ARE IN COMPLIANCE WITH THE CONDITIONS OF ALL PERMITS AND APPROVALS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES WHETHER OR NOT THEY ARE INDICATED ON THESE PLANS AND SHALL NOTIFY ALL UTILITY OWNERS A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION COMMENCEMENT. THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND GOVERNING AGENCIES NECESSARY FOR CONSTRUCTION OF THE PROJECT, INCLUDING BUT NOT LIMITED TO PASCO COUNTY UTILITIES, TECO, WREC, BRIGHTHOUSE NETWORKS, AND SUNSHINE ONE (1-800-333-4770) PRIOR TO ANY EXCAVATION.
  - THE CONTRACTOR SHALL ASSURE AND BE RESPONSIBLE FOR THE PROPER PLACEMENT AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT.
  - THE CONTRACTOR SHALL ASSURE AND BE RESPONSIBLE FOR THE PROPER PLACEMENT OF TREE BARRICADES PRIOR TO COMMENCING CONSTRUCTION AND SHALL MAINTAIN THE TREE BARRICADES THROUGHOUT THE DURATION OF CONSTRUCTION. TREE BARRICADES SHALL BE PLACED IN ACCORDANCE WITH PASCO COUNTY REQUIREMENTS AND THE SITE SPECIFIC PERMIT ISSUED BY THE COUNTY.
  - DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIFLINE OF TREES TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY PASCO COUNTY.
  - AREAS DISTURBED BY THE CONTRACTOR OUTSIDE OF THE CONSTRUCTION SITE SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION; THIS INCLUDES LANDS OWNED BY THE DEVELOPER.
  - THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO GUARD AGAINST FUGITIVE DUST DURING CONSTRUCTION.
  - ALL PRACTICAL AND NECESSARY EFFORTS SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS, SURFACE WATERS OR ONTO ADJACENT PROPERTIES. THESE EFFORTS SHALL INCLUDE THE PLACEMENT AND MAINTENANCE OF SILT SCREENS AS INDICATED ON THESE PLANS AND/OR AS REQUIRED BY CONSTRUCTION PERMITS AND APPROVALS. RE-VEGETATION AND STABILIZATION OF DISTURBED GROUND SURFACES SHALL BE ACCOMPLISHED AS RAPIDLY AS POSSIBLE TO PREVENT EROSION FROM OCCURRING AND TO REDUCE SEDIMENTATION IN RUN-OFF.
  - THE CONTRACTOR SHALL NOT UNDERTAKE ANY WORK HE FEELS WILL CONSTITUTE A CHANGE ORDER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER AND THE DEVELOPER.
  - THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, FOR HIS REVIEW, ALL SHOP DRAWINGS A MINIMUM OF SEVEN (7) WORKING DAYS IN ADVANCE OF THE DATE FOR THE START OF THE WORK.
  - ALL EXISTING WELLS TO BE ABANDONED SHALL BE PROPERLY ABANDONED BY A LICENSED WATER WELL CONTRACTOR IN ACCORDANCE WITH SWFWMD RULES 40D-3 AND 17-21.10(4) F.A.C.
  - PRIOR TO BIDDING, CONTRACTOR SHALL VERIFY THE TOPOGRAPHICAL INFORMATION AS SHOWN ON THE CONSTRUCTION DRAWINGS AND ACCEPT THE SITE (ACCURATE TO 0.5 FEET OF THE CONTOUR INTERVAL AND 0.2 FEET OF THE CONTOUR INTERVAL) AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INTERPRETING AS ACCEPTANCE BY CONTRACTOR OF ALL REPRESENTATIONS IN CONTRACT DOCUMENTS. CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING OPERATIONS IN ACCORDANCE WITH STANDARD CONSTRUCTION PROCEDURES AS REQUIRED TO CONSTRUCT ALL FACILITIES SHOWN ON THE CONSTRUCTION DRAWINGS.
  - ALL UNSUITABLE MATERIAL SHALL BE REMOVED BY CONTRACTOR FROM STRUCTURAL AREAS AND PLACED ON SITE IN NON STRUCTURAL AREAS OR AS SPECIFIED BY THE DEVELOPER. ALL EXCESS FILL MATERIAL EXCAVATED FROM THE SITE SHALL BE STOCKPILED ON SITE AS DIRECTED BY THE DEVELOPER AND SHALL REMAIN THE PROPERTY OF THE DEVELOPER.
  - THE DEVELOPER SHALL PROVIDE 2 BENCH MARKS AND A COORDINATE CONTROL SHEET FROM THE ENGINEER FOR THE CONTRACTOR'S USE. ALL FIELD SURVEY LAYOUT FOR THE FACILITIES SHOWN ON THE CONSTRUCTION DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN A SET OF FIELD "AS BUILT" FOR ALL IMPROVEMENTS NOTING ANY FIELD ADJUSTMENTS. THE "AS BUILT" SHALL INCLUDE SLOPE AND MITIGATION AREA GRADING. PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL BE RESPONSIBLE TO SUBMIT A CERTIFIED SET OF "AS BUILT" TO THE ENGINEER. EACH SHEET OF THE PLANS SHALL BE SIGNED, SEALED AND DATED BY A PROFESSIONAL LAND SURVEYOR LICENSED TO PERFORM LAND SURVEYING SERVICES IN THE STATE OF FLORIDA. THE ENGINEER SHALL REVIEW THE "AS BUILT" AND RECORD THEM INTO RECORD DRAWINGS.
  - CONTRACTOR TO CONSTRUCT ALL BUILDING PADS IN A LINEAR GRADING FASHION AS SHOWN ON THE CONSTRUCTION DRAWINGS. ALL BUILDINGS SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR VALUE (ASTM D-1557), AS PART OF THE AS BUILTS REQUIREMENTS UNDER #18 (ABOVE), THE CONTRACTOR SHALL ALSO AS BUILT THE BUILDING PADS AS SHOWN ON THE CONSTRUCTION DRAWINGS.
  - CONTRACTS TO OBTAIN ALL REQUIRED PERMITS FOR BURNING ON SITE.
  - DEVELOPER SHALL PROVIDE SOILS AND MATERIALS TESTING SERVICES FROM A LICENSED GEOTECHNICAL ENGINEER AT HIS OWN EXPENSE. CONTRACTOR SHALL COOPERATE WITH THE OWNER'S GEOTECHNICAL ENGINEER AND SHALL NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST 24 HOURS PRIOR TO ANY TESTING REQUIRED BY THE DEVELOPER, GOVERNMENTAL AGENCY OR AS RECOMMENDED BY GEOTECHNICAL ENGINEER. IF A FAILURE IN ANY OF THE CONTRACTOR'S ACTIVITIES RELATED TO SOILS OR MATERIALS TESTING OCCURS, THE CONTRACTOR SHALL IMMEDIATELY REMEDY THE FAILURE AT HIS EXPENSE AND RE-SCHEDULE THE RE-TESTING AS NECESSARY. ALL RE-TESTING FEES FROM THE GEOTECHNICAL ENGINEER RESULTING FROM THE FORESAID FAILURES SHALL BE AT THE CONTRACTOR'S EXPENSE.
  - WORK PERFORMED BY THE CONTRACTOR SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE OR ADJACENT TO THE SITE BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES, INCLUDING BUT NOT LIMITED TO TECO, WREC & VERIZON.
  - OVERALL CLEAN-UP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH PASCO COUNTY STANDARDS OR AS DIRECTED BY THE ENGINEER AND OWNER.
  - THE CONTRACTOR SHALL PROTECT AND MAINTAIN ACCESS TO PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE IMMEDIATELY CORRECTED TO THE SATISFACTION OF THE ENGINEER AND THE OWNER AT THE CONTRACTOR'S EXPENSE.
  - ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, THE OWNER, AND THE APPLICABLE GOVERNMENTAL AGENCY.
  - ANY U.S.C. & G.S. MONUMENT WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED BY THE CONTRACTOR.
  - GATED ENTRIES REQUIRE SIREN OPENING SYSTEM, (SOS), OR 3M OPTICOM SYSTEM FOR EMERGENCY ACCESS.

**CONSTRUCTION SEQUENCE & MAINTENANCE SCHEDULE OF EROSION CONTROL**

- SEE BMP PLAN FOR SILT SCREEN BARRIER DETAILS & SCHEDULE.
- ALL EROSION CONTROL DEVICES AS INDICATED ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION.
- DAILY INSPECTION OF THE EROSION CONTROL WILL BE REQUIRED BY THE CONTRACTOR. ANY DISTURBANCE OF THESE DEVICES SHALL BE REPAIRED IMMEDIATELY.
- SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE HALF THE DEPTH OF THE SILTATION CONTROL BARRIER SHALL BE IMMEDIATELY REMOVED AND PLACED IN A SAFE AREA.
- JURISDICTIONAL LINES SHALL BE MARKED IN THE FIELD FOR IDENTIFICATION AND LIMITS OF CONSTRUCTION.
- MAINTENANCE OF ALL EROSION CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE LIFE OF THE PROJECT OR UNTIL APPROVED FOR REMOVAL BY THE ENGINEER.
- SEE NOTE 9 & 10 OF THE GENERAL NOTES THIS DWG.

**EROSION PROTECTION**

THE CONTRACTOR IS RESPONSIBLE FOR SITE CONDITIONS FROM THE DATE OF NOTICE TO PROCEED, UNTIL THE PROJECT IS ACCEPTED BY THE OWNER, ENGINEER AND PASCO COUNTY. ACCORDINGLY, THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO CONTROL FUGITIVE DUST AND EROSION. PROTECTION FROM EROSION INTO EXISTING WETLANDS, DRAINAGE WAYS, CONSERVATION AREAS, NATURAL AREAS AND OFFSITE AREAS, AS WELL AS NEWLY CONSTRUCTED ROADWAYS, STORMWATER FACILITIES AND MITIGATION AREAS, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL MANAGE HIS WORK SO AS TO PREVENT EROSION. THIS MAY REQUIRE ADDITIONAL MEASURES FROM THOSE SHOWN ON THE CONSTRUCTION PLANS, SUCH AS WINDROWS, DIVERSION SWALES, SEED & MULCH, STAKED HAY BALES, OR OTHER EROSION CONTROL MEASURES NECESSARY TO ADJUST TO VARYING SITE CONDITIONS OR INCREMENT WEATHER. IF EROSION OCCURS, THE CONTRACTOR SHALL IMMEDIATELY REMEDY THE DAMAGE CAUSED BY SUCH EROSION BY CONTROLLED REMOVAL OF SEDIMENTS, REPLANTING IF NECESSARY AND RE-ESTABLISHMENT OF EROSION PROTECTION DEVICES, AT THE CONTRACTOR'S SOLE EXPENSE.

**HISTORICAL PRESERVATION NOTE**

IF DURING CONSTRUCTION ACTIVITIES, ANY EVIDENCE OF HISTORIC RESOURCES, INCLUDING BUT NOT LIMITED TO ABORIGINAL OR HISTORIC POTTERY, PREHISTORIC STONE TOOLS, BONE OR SHELL TOOLS, HISTORIC TRASH PITS, OR HISTORIC WORK SHALL BE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND PASCO COUNTY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE RESOURCES FOUND ON THE SITE.

**PROTECTED PLANT/ANIMAL NOTE**

IF DURING CONSTRUCTION ACTIVITIES, ANY EVIDENCE OF THE PRESENCE OF STATE AND/OR FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND PASCO COUNTY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE.

**OPERATION/MAINTENANCE SCHEDULE**

THE DEVELOPER OR HIS ASSIGNS SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE DETENTION AREA AND SUBSURFACE SYSTEM. THIS WILL REQUIRE INSURANCE ON AT LEAST AN ANNUAL BASIS OF THE ON-SITE DRAINAGE SYSTEM, INCLUDING BUT NOT LIMITED TO, INLETS, STORM MANHOLES, DETENTION AREAS, AND CONTROL STRUCTURES, MAKING SURE THAT THE SYSTEM IS FREE FROM EXCESS SILT, DEBRIS AND SEDIMENTATION BUILD-UP. THIS MAY REQUIRE PERIODIC FLUSHING OF THE SUBSURFACE DRAINAGE SYSTEM, CUTTING AND REMOVAL OF VEGETATION FROM AND AROUND STRUCTURES, AND REMOVAL OF ACCUMULATED SEDIMENTS FROM THE BOTTOM OF THE DETENTION AREAS AND STRUCTURES AS NEEDED TO MAINTAIN THE VIABILITY OF THE ORIGINAL DESIGN INTENT. THE DESIGNATED LITTORAL ZONE SHALL BE MAINTAINED AS A FUNCTIONAL BIOLOGICAL FILTRATION AREA (I.E. VEGETATED ZONE) AND SHALL NOT BE LESS THAN 35% OF THE POND SURFACE.

**GENERAL MAINTENANCE**

- ALL STORM WATER PIPES, INLETS, CATCH BASINS, MANHOLES, FLUMES, POND INFLOW AND OUTFALL STRUCTURES (INCLUDING OIL SKIMMERS), AND DISCHARGE PIPES SHOULD BE INSPECTED ON A REGULAR BASIS (MONTHLY OR QUARTERLY) AND AFTER MAJOR RAINFALLS. THEY SHOULD BE MAINTAINED BY REMOVING BUILT-UP DEBRIS AND VEGETATION AND REPAIRING DETERIORATING STRUCTURES.
- CHEMICALS, OILS, GREASES, OR SIMILAR WASTES ARE NOT TO BE DISPOSED OF DIRECTLY TO THE STORMWATER FACILITY OR THROUGH STORM SEWERS. TREATMENT PONDS ARE DESIGNED TO TREAT NORMAL ROAD, PARKING LOT, ROOF AND YARD RUNOFF ONLY. SOME CHEMICALS MAY INTERFERE WITH A TREATMENT POND'S FUNCTIONS OR KILL VEGETATION AND WILDLIFE. DISPOSE OF THESE POTENTIALLY DANGEROUS MATERIALS PROPERLY BY TAKING THEM TO RECYCLING FACILITIES OR TO LOCAL "AMNESTY DAYS" SPONSORED BY MANY LOCAL GOVERNMENTS. ALSO, DO NOT DISPOSE OF GRASS CLIPPINGS IN SWMS. GRASS CLIPPINGS POSE PROBLEMS BY SMOTHERING DESIRABLE VEGETATION, CLOGGING OUTFALL STRUCTURES, AND WHEN THEY DECOMPOSE, MAY CAUSE UNSIGHTLY ALGAE BLOOMS THAT CAN KILL FISH.
- ACCUMULATED POND SEDIMENTS MAY CONTAIN HEAVY METALS SUCH AS LEAD, CADMIUM AND MERCURY, AS WELL AS OTHER POTENTIALLY HAZARDOUS MATERIALS. THEREFORE, SEDIMENTS REMOVED FROM STORM SEWERS, INLETS, PIPES AND PONDS SHOULD BE DISPOSED OF AT AN APPROVED FACILITY (CHECK WITH THE COUNTY SOLID WASTE DEPARTMENT OR THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR DISPOSITION FACILITIES APPROVED TO ACCEPT TREATMENT POND SEDIMENT).
- DURING ANY REPAIR OR MAINTENANCE ACTIVITY USE CARE TO AVOID CAUSING EROSION OR SILTATION TO ADJACENT OR OFF-SITE AREAS.
- REMEMBER, ALTERATIONS (FILLING, ENLARGING, ETC.) OF ANY PART OF THE STORMWATER FACILITY IS NOT PERMITTED WITHOUT PRIOR APPROVAL FROM ALL APPLICABLE GOVERNING AGENCIES.
- THE APPROVED OPERATION AND MAINTENANCE PERMIT AND AS-BUILT DRAWINGS ARE AVAILABLE AT YOUR LOCAL DISTRICT OFFICE. REFER TO THOSE PLANS AND PERMITS FOR ADDITIONAL RESTRICTIONS, INSTRUCTIONS AND CONDITIONS.
- IT IS USUALLY MORE COST EFFECTIVE TO MONITOR AND PERFORM ROUTINE MAINTENANCE ON A SWMS, RATHER THAN LET IT FAIL AND HAVE TO RECONSTRUCT THE ENTIRE SYSTEM.
- MOSQUITO GROWTH CAN BE MINIMIZED IN A SWMS BY THE FOLLOWING MEASURES:
  - DO NOT DUMP GRASS CLIPPINGS OR OTHER ORGANIC DEBRIS INTO SWMS. DECAYING GRASS CLIPPINGS AND OTHER DECOMPOSING VEGETATION CREATE IDEAL CONDITIONS FOR BREEDING MOSQUITOS.
  - CLEAN OUT ANY OBSTRUCTIONS WHICH GET INTO THE SYSTEM. DEBRIS CAN OBSTRUCT FLOW AND HARBOR MOSQUITO EGGS AND LARVAE.
  - REMOVE WATER LETTUCE AND WATER HYACINTH, WHICH NURISH AND SHELTER MOSQUITO LARVAE.
  - STOCK PONDS WITH PREDATORY "MOSQUITOFISH" - GAMBUSIA MINNOWS

**WET DETENTION POND MAINTENANCE**

- ALL SODDED SIDE SLOPES AND BERMS SHOULD BE MAINTAINED BY THE PROCEDURE OUTLINED FOR DITCHES AND SWALES. INFLOW STRUCTURES SHOULD BE MAINTAINED BY THE PROCEDURES OUTLINED UNDER "GENERAL MAINTENANCE".
- MAINTAIN AND PROMOTE WETLAND VEGETATION THAT BECOMES ESTABLISHED IN THE LITTORAL ZONE. DO NOT CUT, MOW, USE HERBICIDE OR GRASS CARP TO REMOVE ANY OF THE VEGETATION IN THE LITTORAL ZONE WITHOUT PRIOR APPROVAL FROM THE DISTRICT. REFER TO THE CONDITIONS OF THE PERMIT AND CONSTRUCTION NOTES OF ANY FURTHER INSTRUCTIONS.
- WHEN WET DETENTION POND LITTORAL ZONES ARE INTENTIONALLY PLANTED FOR AESTHETIC PURPOSES OR TO OFFSET WETLANDS IMPACTS, REMOVAL OF WEEDY OR EXOTIC VEGETATION MAY BE REQUIRED AND REPLANTING OF APPROPRIATE VEGETATION. CHECK WITH THE LOCAL DISTRICT SERVICE OFFICE TO DETERMINE SPECIFIC REQUIREMENTS.
- ON A MONTHLY OR QUARTERLY BASIS AND AFTER SEVERE RAINFALL EVENTS, CHECK THE AREA IN FRONT OF THE OUTFALL CONTROL STRUCTURE FOR BUILT-UP SEDIMENTS AND VEGETATION THAT IMPAIR THE OPERATION OF THE STRUCTURE. REMOVE SEDIMENT AND VEGETATION TO AN APPROVED DISPOSAL SITE.
- WHEN THE LITTORAL ZONE VEGETATION IS NOT MAINTAINED AND ACCUMULATES TO SUCH AN EXTENT THAT WATER DEPTH DECREASES, THE LITTORAL ZONE MAY NEED TO BE REGRADED AND REVEGETATED. WHEN IT APPEARS THAT A POND HAS REACHED THIS STATE, IT IS BEST TO CONTACT A DISTRICT REPRESENTATIVE PRIOR TO LARGE SCALE MAINTENANCE.

**DITCH & SWALE MAINTENANCE**

SOME MSSW AND ERP PERMITS REQUIRE THAT THE VEGETATION IN SOME DITCHES BE PROTECTED TO OFFSET WETLAND IMPACTS. PERMITTED DURING CONSTRUCTION OR FOR WATER QUALITY TREATMENT, THE PERMIT OR APPROVED CONSTRUCTION SHOULD CLEARLY IDENTIFY WHICH DITCH VEGETATION MUST BE PRESERVED. IF YOU'RE UNSURE, CONTACT THE LOCAL DISTRICT SERVICE OFFICE. IF VEGETATION IS NOT REQUIRED TO BE PROTECTED, DITCHES AND SWALES SHOULD BE PERIODICALLY MOWED AND CLEANED OF ACCUMULATED REFUSE. DURING THE MOWING OPERATIONS, DITCHES AND SWALES SHOULD BE INSPECTED FOR BARE SPOTS, DAMAGE OR EROSION. BARE AREAS SHOULD BE SODDED OR SEEDED TO REPLACE THE GRASS COVER. IN THE CASE OF EROSION, REPLACE THE MISSING SOILS AND BRING THE AREA BACK TO GRADE. SOME DITCHES ARE DESIGNATED TO STORE RUNOFF FOR SHORT PERIODS OF TIME UTILIZING DITCH BLOCKS OR RAISED INLETS. THESE DITCH BLOCKS OR INLETS SHOULD NOT BE REMOVED OR ALTERED. IF YOU ARE UNABLE TO IDENTIFY WHAT TYPE OF TREATMENT METHOD SERVES YOUR DEVELOPMENT, CONTACT THE DISTRICT SERVICE OFFICE.

**HOW TO OPERATE AND MAINTAIN THE STORMWATER MANAGEMENT SYSTEM**

YOUR STORMWATER MANAGEMENT SYSTEM (SWMS) IS DESIGNED AND CONSTRUCTED TO COMPLY WITH CERTAIN ENVIRONMENTAL PROTECTION CRITERIA. STORMWATER PONDS AND THEIR ASSOCIATED SURFACE WATER MANAGEMENT FACILITIES ARE DESIGNED TO CAPTURE AND REMOVE POLLUTANTS FROM SPECIFIC WATERSHED STORMWATER RUNOFF THROUGH PROCESSES SUCH AS PERCOLATION, FILTERING AND/OR DETENTION. AS LONG AS THEY ARE CONSTRUCTED PROPERLY AND MAINTAINED IN AN EFFECTIVE STATE, WATER QUALITY STANDARDS ARE PRESUMED TO BE MET. STORMWATER MANAGEMENT SYSTEMS SHOULD BE INSPECTED ON A ROUTINE BASIS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. INSPECTIONS SHOULD BE SCHEDULED ON A MONTHLY OR QUARTERLY BASIS AND FOLLOWING ANY MAJOR RAIN EVENT. MORE FREQUENT INSPECTIONS MAY BE NECESSARY DURING THE RAINY SEASON. KEEPING DETAILED NOTES ON MAINTENANCE ACTIVITIES WILL BE HELPFUL TO THE DISTRICT AT THE TIME OF YOUR 18 OR 24 MONTH INSPECTION. YOUR MANAGEMENT AND STORAGE OF SURFACE WATERS (MSSW) PERMIT OR ENVIRONMENTAL RESOURCES PERMIT (ERP) INCLUDES A CONDITION THAT SPECIFIES HOW OFTEN THE INSPECTION REPORTS ARE DUE. IT WOULD BE WISE TO DESIGNATE ONE INDIVIDUAL AS THE PERSON RESPONSIBLE FOR OVERSEEING OPERATION AND MAINTENANCE ACTIVITIES; MONITORING AND REPORTING THIS WILL ALLOW THAT INDIVIDUAL TO BECOME WELL-ACQUAINTED WITH THE SWMS. A COPY OF THE PERMIT AND DISTRICT-APPROVED CONSTRUCTION DRAWINGS SHOULD BE MADE AVAILABLE TO THE RESPONSIBLE PERSON IF QUESTIONS OR ISSUES DEVELOP.

**DRAINAGE**

- STANDARD INDICES REFER TO THE LATEST EDITION OF PASCO COUNTY & FDOT SPECIFICATIONS.
- ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM 676-72A) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH PASCO COUNTY AND FDOT DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
- PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURE WITH THE EXCEPTION OF MITERED AND FLARED END SECTIONS, WHICH ARE NOT INCLUDED IN LENGTHS.
- ALL DRAINAGE STRUCTURE TOPS AND COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
- ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO CLEAN PIPES AND INLETS PRIOR TO FINAL ACCEPTANCE.

**National Pollution Discharge Elimination System (NPDES) Requirements**

THE ENGINEER WILL COMPLETE APPROPRIATE SECTIONS OF THE NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) APPLICATIONS AVAILABLE FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). THE ENGINEER WILL SUBMIT THE NOI AND THE NOT TO THE OWNER OR THE CONTRACTOR FOR COMPLETION, SIGNATURE AND TRANSMITTAL TO THE FDEP. THE ENGINEER WILL ALSO PREPARE A SUGGESTED DRAFT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE SITE. THE ENGINEER WILL SUBMIT THE SUGGESTED DRAFT SWPPP TO THE OWNER OR THE CONTRACTOR FOR USE ONLY AS A GUIDE IN PREPARING THE FINAL SWPPP. THE FINAL SWPPP AS PREPARED BY THE OWNER OR THE CONTRACTOR, WILL BE LOCATED ON SITE AND MONITORED AS DESCRIBED IN THE NOI.

THE OWNER OR THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

- SIGNING THE NOI, NOT, AND THE FINAL SWPPP AS THE "OPERATOR AND/OR RESPONSIBLE AUTHORITY" FOR THE PROJECT.
- IMPLEMENTING THE "BEST MANAGEMENT PRACTICES" AS SHOWN IN THE FINAL SWPPP PREPARED BY OTHERS.
- MAINTAINING THE "BEST MANAGEMENT PRACTICES" AS SHOWN IN THE SWPPP PREPARED BY OTHERS AS REQUIRED TO ACCOMMODATE CONDITIONS IN THE FIELD.
- MONITORING THE SITE CONDITIONS AND PREPARING ALL REPORTS AS REQUIRED BY THE CONDITIONS OF THE GENERAL NPDES PERMIT.

**WATER, WASTEWATER & REUSE WATER SYSTEM NOTES**

- HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE AS FOLLOWS:
  - NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-610.
  - NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
  - NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
  - NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.
  - VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES SHALL BE AS FOLLOWS:
    - NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
    - NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
    - AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
    - SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES.
    - NO WATER MAIN SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE, STORM SEWER MANHOLE OR INLET STRUCTURE.
    - ALL UTILITY MATERIAL AND WORKMANSHIP MUST COMPLY WITH "PASCO COUNTY STANDARDS FOR DESIGN AND CONSTRUCTION OF WATER, WASTEWATER, AND RECLAIMED WATER FACILITIES", JUNE 1995 EDITION T-200 AND MEET THE REQUIREMENTS OF THE FOLLOWING:
      - ALL PVC WATER MAIN SMALLER THAN 4 INCHES SHALL BE CLASS 200 AND MEET THE REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D-2241.
      - ALL PVC SANITARY SEWER PIPE SHALL MEET THE REQUIREMENTS OF ASTM D-3034 WITH THICKNESS AS FOLLOWS: AT INVERTS FROM 0' - 12' SHALL BE SDR-35, INVERT DEPTHS FROM 12' - 18' SHALL BE SDR 26. FOR INVERTS DEEPER THAN 18', SHALL BE SDR 26 THROUGH OR COME INTO CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE, STORM SEWER MANHOLE OR INLET STRUCTURE.
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**STOP WORK NOTES:**

(1) IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF HISTORIC RESOURCES, INCLUDING BUT NOT LIMITED TO ABORIGINAL OR HISTORIC POTTERY, PREHISTORIC STONE TOOLS, BONE OR SHELL TOOLS, HISTORIC TRASH PITS, OR HISTORIC BUILDING FOUNDATION, ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND THE FLORIDA DEPARTMENT OF HISTORIC RESOURCES (STATE HISTORIC PRESERVATION OFFICER) AND PASCO COUNTY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE RESOURCES FOUND ON THE SITE.

(2) IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE AND FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND PASCO COUNTY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE.\*

STORMWATER POND

**POND A**  
 TOB EL. = 58.00  
 SHW EL. = 55.00  
 DLW EL. = 55.30  
 DHW25 EL. = 56.96  
 DHW100 EL. = 57.44  
 BOT EL. = 47.00  
 (PER ERP 43026931.001)

WETLAND CONSERVATION AREA

**POND B**  
 TOB EL. = 55.50  
 SHW EL. = 50.95  
 DLW EL. = 51.95  
 DHW25 EL. = 54.01  
 DHW100 EL. = 54.71  
 BOT EL. = 47.00  
 (PER ERP 43026931.001)

WETLAND CONSERVATION AREA

C-102

C-103

SUMP PERMITTED UNDER ERP 43026931.001 OVERFLOW EL. = 52.14

PONDSIDE DRIVE

NORTH ROADWAY PROJECT AREA (10.35 AC.)

MARSHBEND WAY

PROPOSED LIFT STATION (UNDER SEPARATE PERMIT)

GARDEN VILLAGE

C-101

SIERRA CENTER BLVD

MARSHBEND WAY

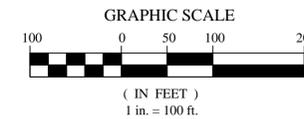
SIERRA CENTER BLVD

PONDSIDE DRIVE

PUBLIC LIFT STATION (EXISTING)

GRAND CYPRESS DRIVE

STATE ROAD 56



**SITE DATA**  
 - PROJECT AREA: 207 ACRES (ENTIRE CCTC NORTH PROPERTY)  
 9.50 (PONDSIDE DRIVE PROJECT AREA)  
 - EXISTING ZONING: PASCO COUNTY, FL (MPUD 6288)  
 - FUTURE LANDUSE: ROR (RETAIL, OFFICE, RESIDENTIAL) AND CON (CONSERVATION LANDS)  
 27-28-19-0010-00900-0010, 27-26-19-0010-00900-0012  
 - PWR: VACANT PASTURE  
 - EXISTING LANDUSE:  
 - PROPOSED USE: THIS APPLICATION IS FOR INFRASTRUCTURE ONLY

**EAST COUNTY APPROVALS**  
 - APPROXIMATE CUT: 10,000 CY  
 - APPROXIMATE FILL: 10,000 CY  
 - ALL ON-SITE CUT IS ANTICIPATED TO BE USED ON-SITE

**DATUM REFERENCE**  
 ALL EXISTING AND PROPOSED ELEVATIONS REFERENCE NGVD29 DATUM  
 NAVD88 = NGVD29 - 0.83'

| SITE/AREA CALCULATIONS | TOTAL CCTC NORTH | PONDSIDE DRIVE PROJECT AREA |
|------------------------|------------------|-----------------------------|
| - PROJECT AREA:        | 207 AC           | 9.50 AC                     |
| - WETLANDS:            | 36.35 AC         | 0.00 AC                     |
| - TYPE 1 WETLANDS:     | 10.84 AC         | 0.00 AC                     |
| - TYPE 2 WETLANDS:     | 25.51 AC         | 0.00 AC                     |
| - STORMWATER PONDS:    | 12.9 AC          | 0.00 AC                     |
| - REMAINING UPLANDS:   | 157.60 AC        | 9.50 AC                     |

**FEMA MAP PANEL**  
 PANEL 12101 C0409 F - REVISED SEPTEMBER 26, 2014 (DATUM NGVD 29)

**UTILITIES**  
 - WATER: PUBLIC PROVIDED BY PASCO COUNTY  
 - SEWER: PUBLIC PROVIDED BY PASCO COUNTY SYSTEM OFFSITE  
 - FIRE: PUBLIC PROVIDED BY PASCO COUNTY (VIA HYDRANTS)  
 - STORM: PRIVATE MASTER STORMWATER MAINTAINED BY POA  
 - UNDERDRAINS: PRIVATE MAINTAINED BY POA  
 - ELECTRIC: WITHLACOCHEE RIVER ELECTRIC

**NOTE:** PRIVATE PROPERTY OWNERS ASSOCIATIONS (POA);  
 CYPRESS CREEK TOWN CENTER PROPERTY OWNERS ASSOCIATION, INC  
 509 GUSMANO DE AVILA, SUITE 200 TAMPA, FL 33613

2015 WRA  
 Plot Date: 10/20/15 8:58:40 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCO CO INC - CCTC NORTH CENTER DRIVE EXTENSION\PLAN OVERALL SITE.DWG  
 Plot Date: 10/20/15 8:58:40 AM

| NO. | DATE | DESCRIPTION | BY |
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| 6   |      |             |    |
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| 1   |      |             |    |

Engineering ~ Environmental  
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OVERALL SITE PLAN

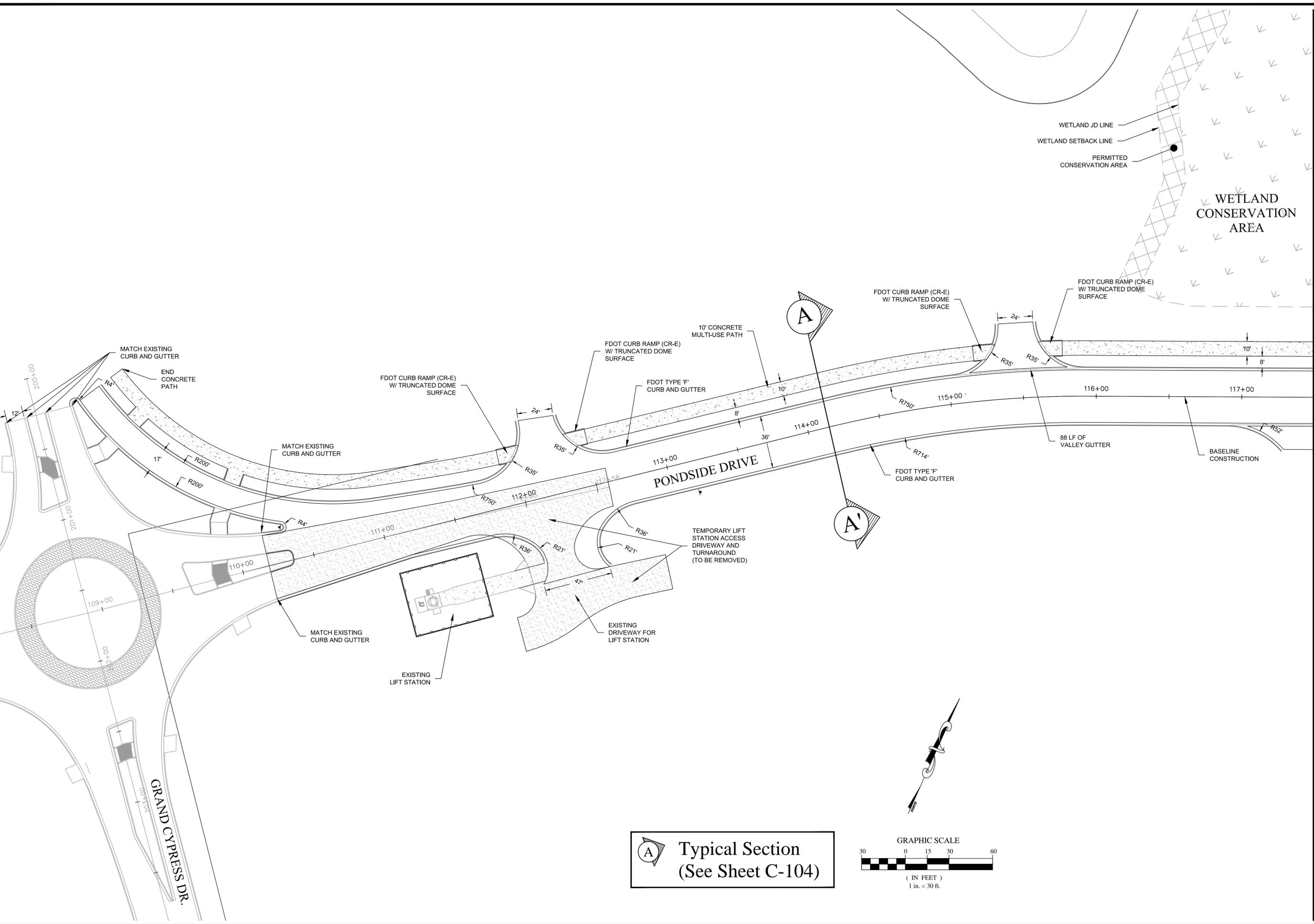
CYPRESS CREEK TOWN CENTER NORTH (PONDSIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967 SEC.: 27 TOWN: 26S RNG.: 19E DESIGNED: ELR DRAWN: ELR APPROVED: JAC

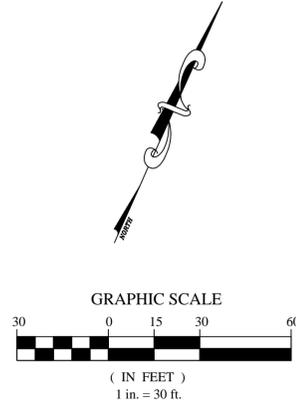
Plot Date: 10/20/15  
 Datum: NGVD 1929

C-100

2015 WRA  
 Plot Date: 10/20/2015 8:59:04 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCAGO SA, INC. - CCTC NORTH CADDIS PLANS\NORTH EXTENSION\PLANS - HORIZONTAL CONTROL.DWG



**A** Typical Section  
(See Sheet C-104)



MATCHLINE - SEE SHEET C-102

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| 6   |      |             |    |
| 5   |      |             |    |
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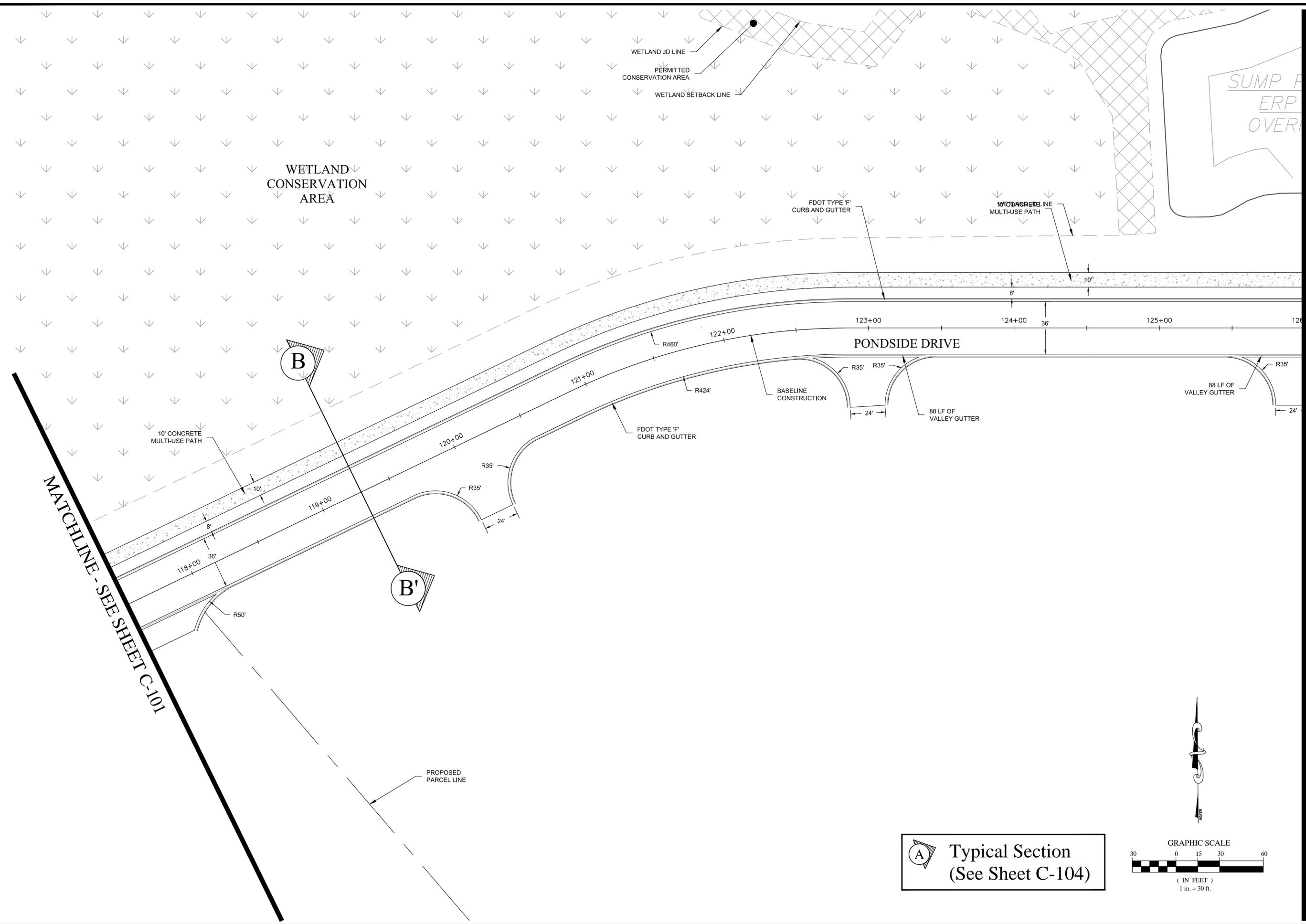
HORIZONTAL CONTROL  
 PLAN  
 CYPRESS CREEK TOWN  
 CENTER NORTH  
 (PONDSIDES DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANGE: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

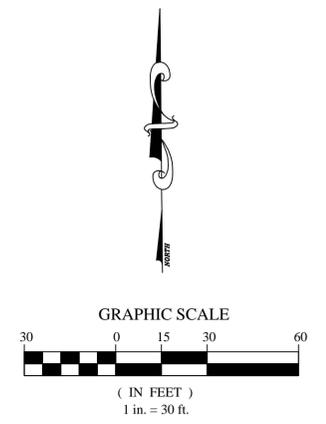
JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929

2015 WRA  
 Plot Date: 10/20/2015 8:59:10 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCOS SA INC. - CCTC NORTH CADDLE PASS NORTH EXTENSION\PLAN - HORIZONTAL CONTROL.DWG



**A** Typical Section  
 (See Sheet C-104)



MATCHLINE - SEE SHEET C-103

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| 6   |      |             |    |
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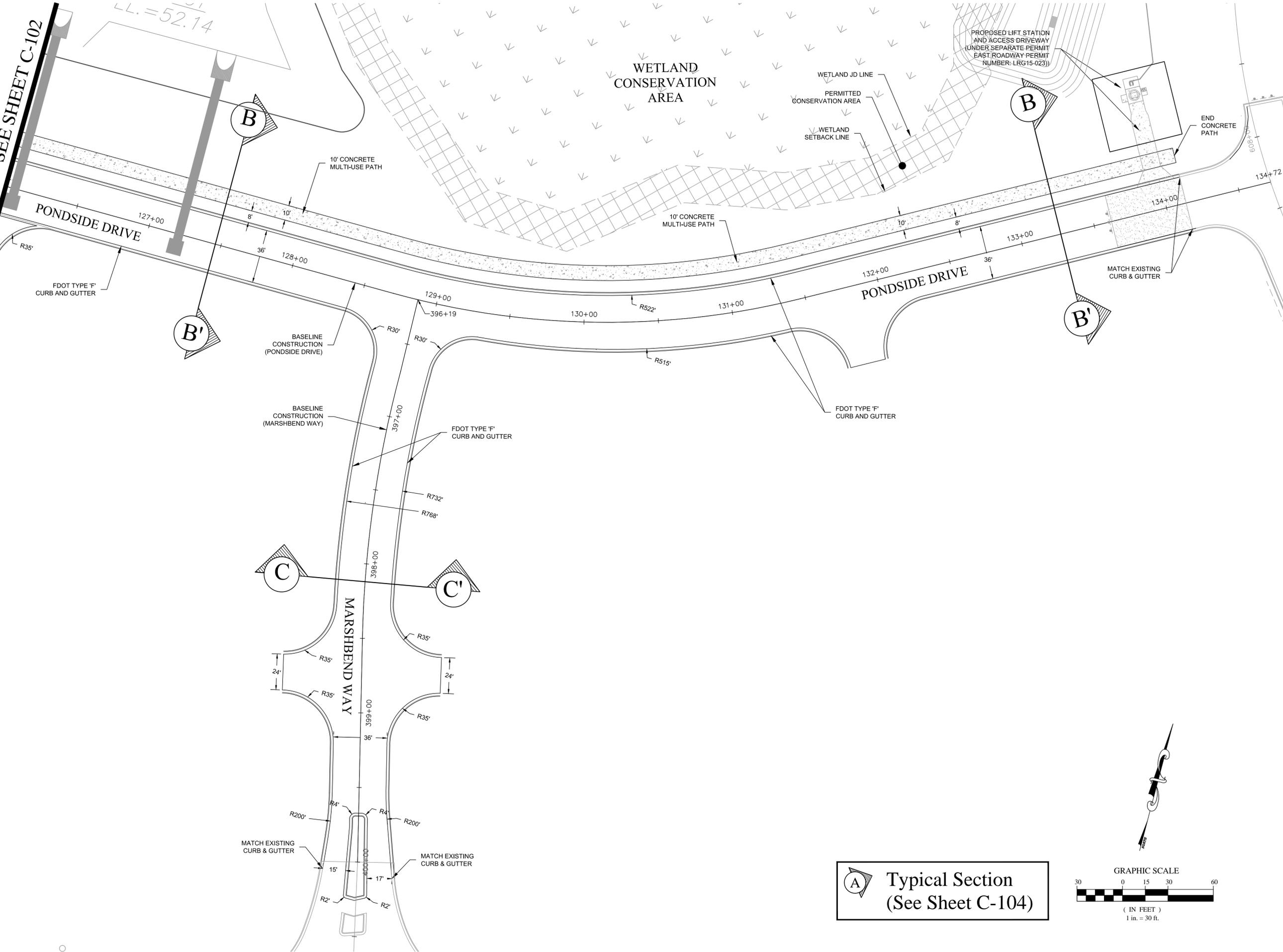
**HORIZONTAL CONTROL PLAN**  
 CYPRESS CREEK TOWN  
 CENTER NORTH  
 (POND SIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANGE: 26S  
 SECTION: 27  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

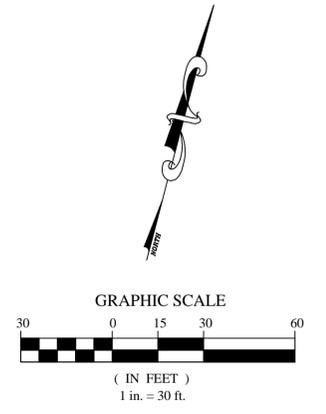
JOSEPH A. CIMINO  
 FL P.E. # 67540  
 Plot Date: 10/20/2015  
 Datum: NGVD 1929  
**C-102**

2015 WRA  
 Plot Date: 10/20/2015 8:59:16 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCO 54 INC. - CCTC NORTH CADDIS PLANS\NORTH EXTENSION PLAN\_HORIZONTAL CONTROL.DWG

**MATCHLINE - SEE SHEET C-102**



**(A)** Typical Section  
 (See Sheet C-104)



| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| 6   |      |             |
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 8043 Cooper Creek Blvd., Suite 210  
 University Park, Florida 34201  
 www.wrenge.com CA 00007652  
 Phone: 813 765 3130 941 275 9771



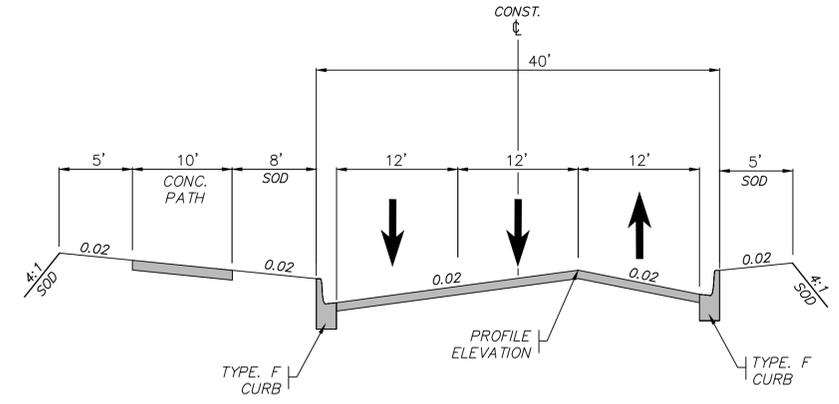
**HORIZONTAL CONTROL PLAN**

**CYPRESS CREEK TOWN CENTER NORTH (POND SIDE DRIVE EXTENSION)**

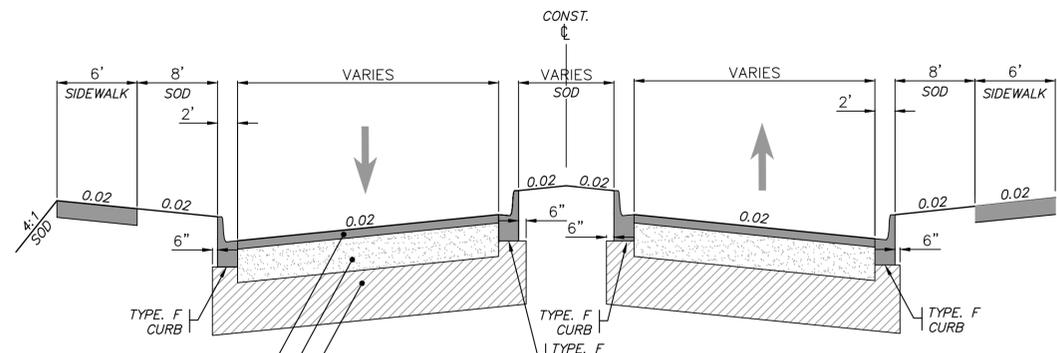
ISSUED FOR: PERMITTING  
 FOR # 0967

Plot Date: 10/20/2015  
 Datum: NGVD 1929

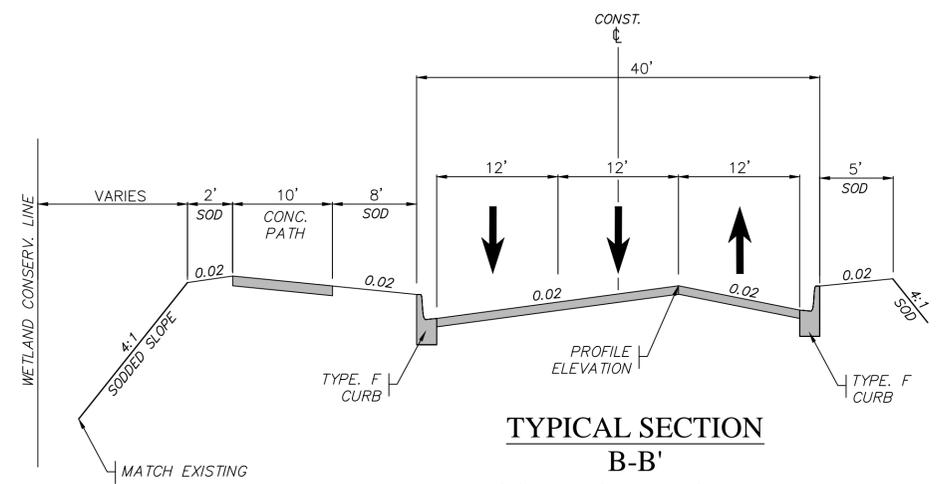
2015 WRA  
Plot Date: 10/20/2015 8:59:26 AM  
CAD File Path: S:\PROJECT FILES\0967 - PASCO ST INC. - CCTC NORTH CADD\PLAN NORTH EXTENSION\TYPICAL SECTIONS.DWG



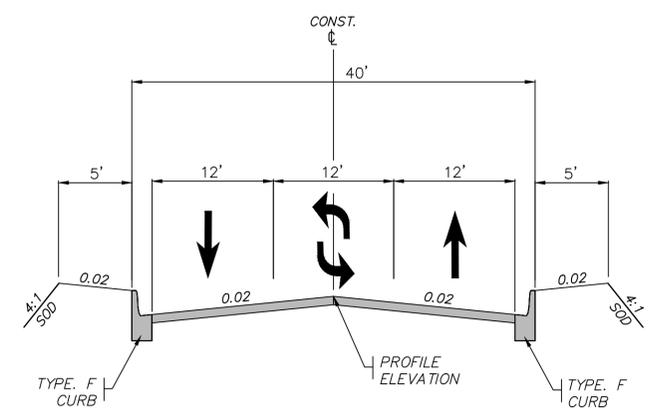
**TYPICAL SECTION  
A-A'**  
POSTED SPEED 25 MPH  
DESIGN SPEED 30 MPH



**TYPICAL PAVEMENT SECTION**



**TYPICAL SECTION  
B-B'**  
POSTED SPEED 25 MPH  
DESIGN SPEED 30 MPH



**TYPICAL SECTION  
C-C'**  
POSTED SPEED 25 MPH  
DESIGN SPEED 30 MPH

**PAVEMENT SN CALCULATIONS**

3" TYPE S-1 @ SN: 0.44 = 1.32  
 8" CRUSHED CONCRETE LBR 150 @ SN: 0.15 = 1.20  
 12" TYPE B STAB. SUBGRADE LBR 40 @ SN: 0.08 = 0.96  
 TOTAL SN = 3.48

**TYPICAL ROADWAY SECTION NOTES**

- (1) BELOW THE STABILIZED SUBGRADE A MINIMUM OF TWO FEET OF SELECT MATERIAL, CONSISTING OF A-3 (SP) SOIL WITH A MAXIMUM 15 PERCENT PASSING NUMBER 200 SIEVE, SHALL BE PROVIDED.
- (2) THE ENGINEER RESPONSIBLE FOR THE PROJECT SHALL CERTIFY TO THE COUNTY ENGINEERING SERVICES DIRECTOR (THRU PC ENGINEERING INSPECTIONS) THAT THE SELECT MATERIAL MEETS THESE STANDARDS PRIOR TO INSTALLATION OF THE BASE. CERTIFICATION SHALL STRICTLY COMPLY WITH THE SUBGRADE CERTIFICATION FORM AVAILABLE IN "ENGINEERING SERVICES DEPARTMENT: A PROCEDURAL GUIDE FOR THE PREPARATION OF ASSURANCES OF COMPLETION AND MAINTENANCE."
- (3) CRUSHED CONCRETE (LBR 150) SHALL BE COMPACTED TO 100% T-180. THE CRUSHED CONCRETE BASE MATERIAL GRADATION SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION SECTIONS 204 AND 901. THE CRUSHED CONCRETE SHALL ALSO CONFORM TO THE CRUSHED CONCRETE SPECIFICATIONS CONTAINED IN THE PASCO COUNTY TRANSPORTATION TECHNICAL MANUAL.
- (4) THESE PLANS SHALL CERTIFY THAT THE ROADWAY SYSTEM IS IN SUBSTANTIAL CONFORMANCE WITH THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE OF STREET AND HIGHWAYS, STATE OF FLORIDA", IN EFFECT AT THE TIME THE PLANS WERE PREPARED.

| NO. | DATE | DESCRIPTION | BY |
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Engineering ~ Environmental  
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 8043 Conner Creek Blvd., Suite 210  
 University Park, Florida 34201  
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 Phone: 813.265.3130 941.275.9721

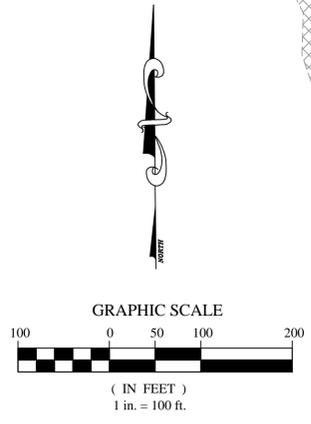
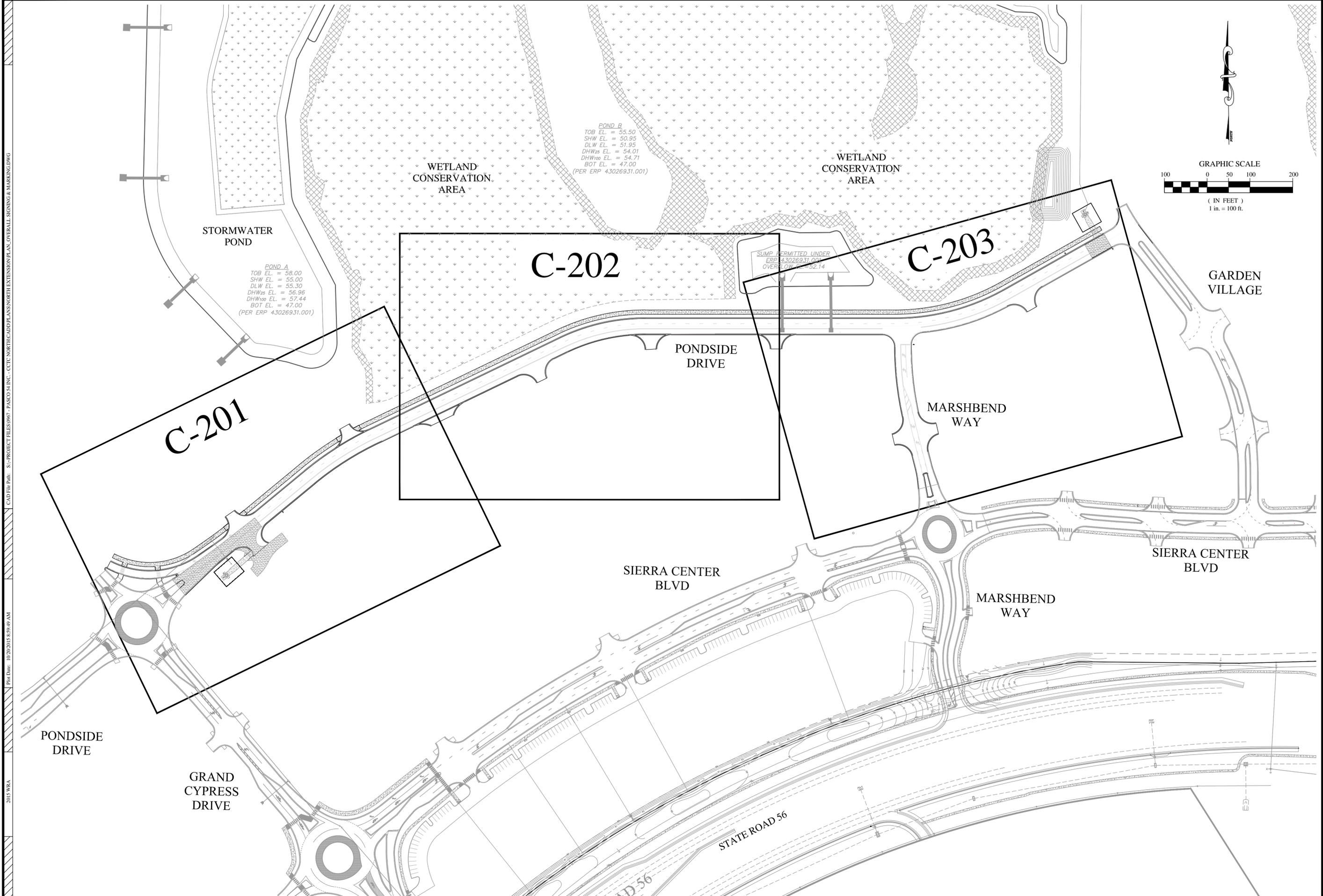


TYPICAL ROADWAY  
 SECTIONS

CYPRESS CREEK TOWN  
 CENTER NORTH  
 (POND SIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967  
 JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929



2015 WRA  
 Plot Date: 10/20/2015 8:59:49 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCOSI INC. - C-201 NORTH CADDIS PLANS\NORTH EXTENSION\PLAN, OVERALL SIGNING & MARKING.DWG

| NO. | DATE | DESCRIPTION |
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 8043 Corner Creek Blvd., Suite 210  
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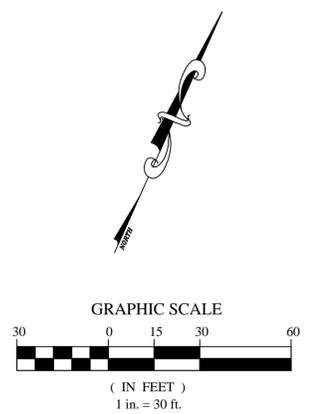
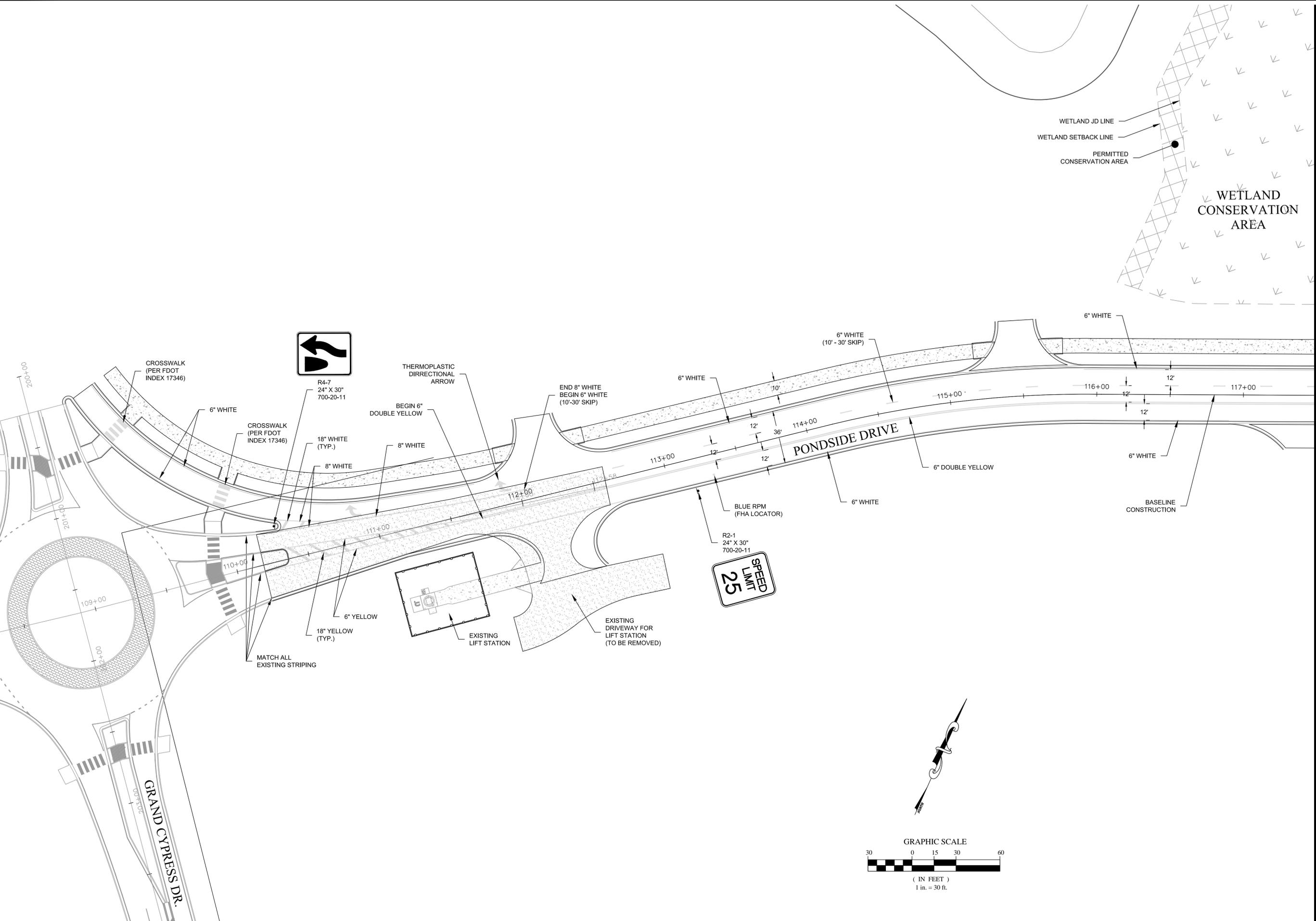
**OVERALL SIGNING & PAVEMENT MARKING PLAN**  
 CYPRESS CREEK TOWN CENTER NORTH (PONDSIDE DRIVE EXTENSION)  
 ISSUED FOR: PERMITTING  
 JOB # 0967  
 SEC. 27  
 TOWN: 26S  
 RNG: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540  
 Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-200



2015 WRA  
 Plot Date: 10/20/2015 9:08:21 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCAGO INC. - CCTC NORTH CADDIS PLANS\NORTH EXTENSION\PLANS\_SIGNING & MARKING.DWG



MATCHLINE - SEE SHEET C-203

| NO. | DATE | DESCRIPTION |
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| 6   |      |             |
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Engineering ~ Environmental  
**Water Resource**  
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 8043 Corner Creek Blvd., Suite 210  
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 Phone: 813.265.3130 941.275.9721

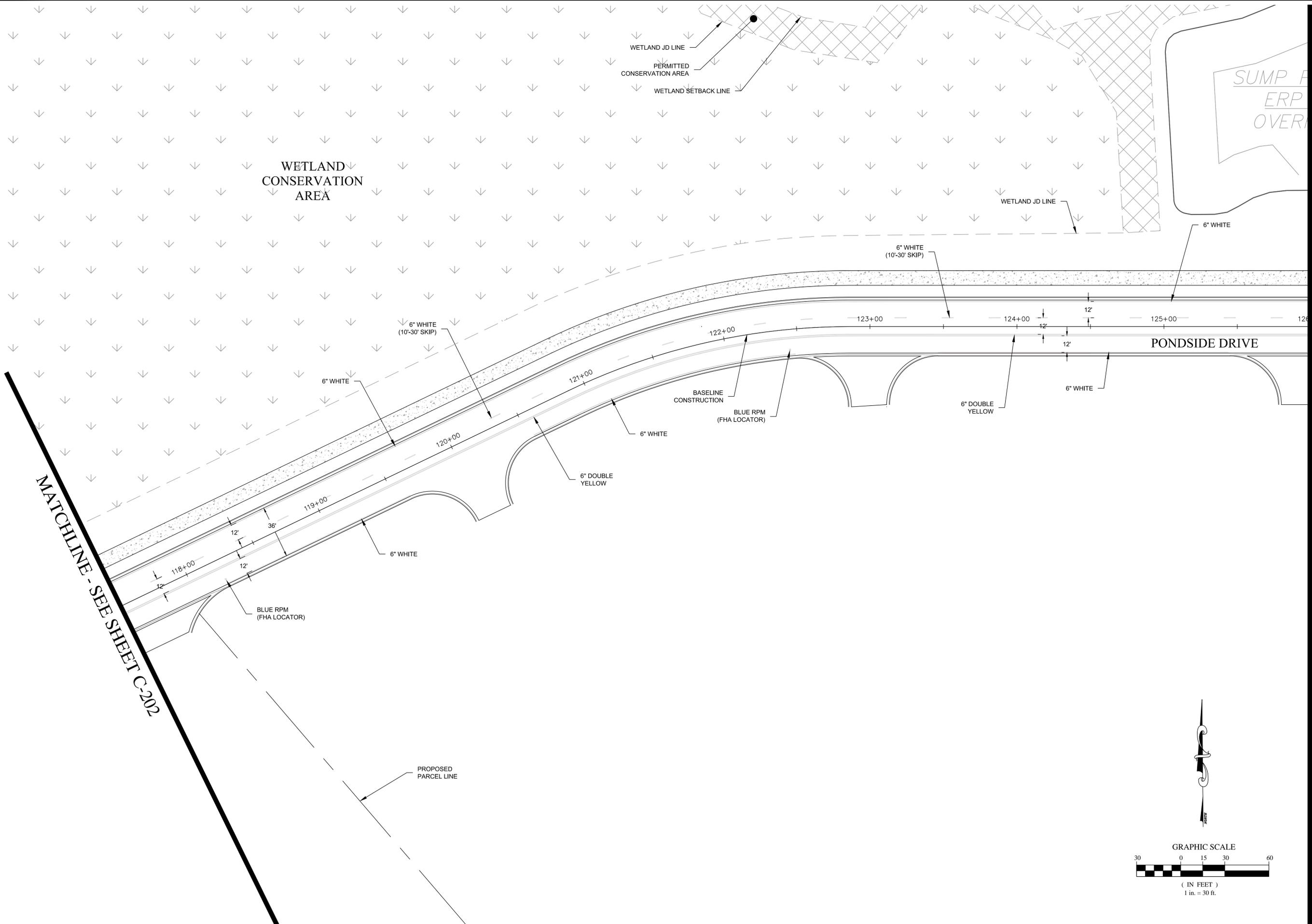


**SIGNING AND PAVEMENT MARKING PLAN**  
 CYPRESS CREEK TOWN CENTER NORTH (PONDSIDES DRIVE EXTENSION)  
 ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANG: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540  
 Plot Date: 10/20/2015  
 Datum: NGVD 1929

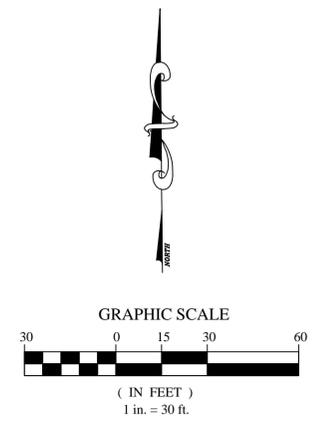
C-202

2015 WRA  
 Plot Date: 10/20/2015 9:08:26 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCO ST INC. - CCTC NORTH CADDILLAC NORTH EXTENSION\PLAN, SIGNING & MARKING.DWG



MATCHLINE - SEE SHEET C-202

MATCHLINE - SEE SHEET C-204



| NO. | DATE | DESCRIPTION | BY |
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| 6   |      |             |    |
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 Water Resource  
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SIGNING AND PAVEMENT  
 MARKING PLAN

CYPRESS CREEK TOWN  
 CENTER NORTH  
 (POND SIDE DRIVE EXTENSION)

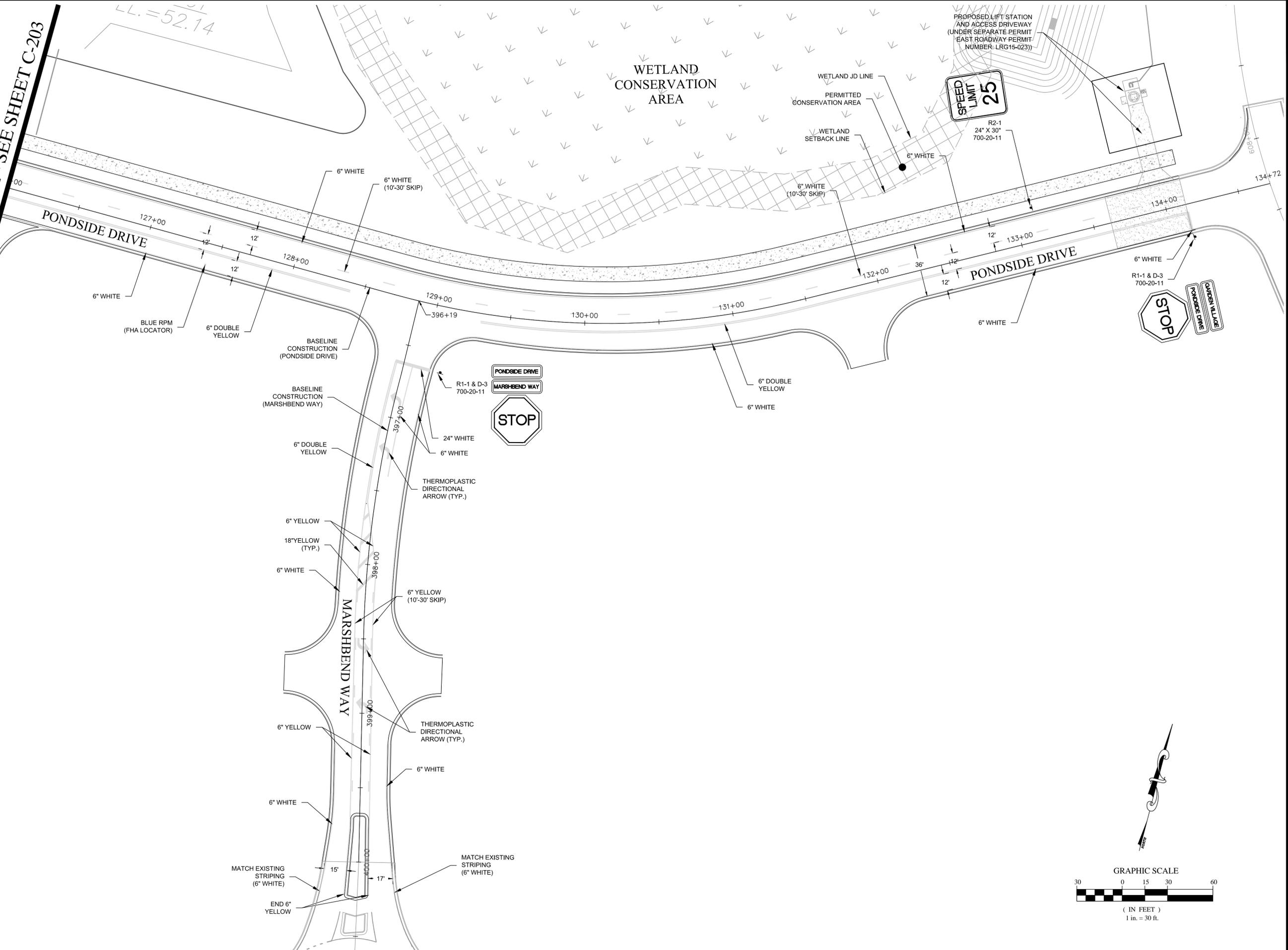
ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANGE: 19E  
 DRAWN: ELR  
 APPROVED: JAC

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-203

2015 WRA  
 Plot Date: 10/20/2015 9:08:31 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCAGO SA INC. - CCTC NORTH CADDIS PLANS\NORTH EXTENSION\PLAN\_SIGNING & MARKING.DWG

**MATCHLINE - SEE SHEET C-203**

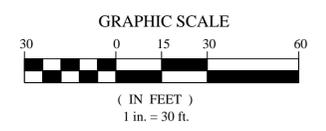


PROPOSED LIFT STATION AND ACCESS DRIVEWAY (UNDER SEPARATE PERMIT EAST ROADWAY PERMIT NUMBER: LRG15-023)

**SPEED LIMIT 25**  
R2-1  
24" X 30"  
700-20-11

**POND SIDE DRIVE**  
**MARSHBEND WAY**  
**STOP**

**STOP**  
**GARDEN WILLAGES**  
**POND SIDE DRIVE**



| REVISIONS |             |
|-----------|-------------|
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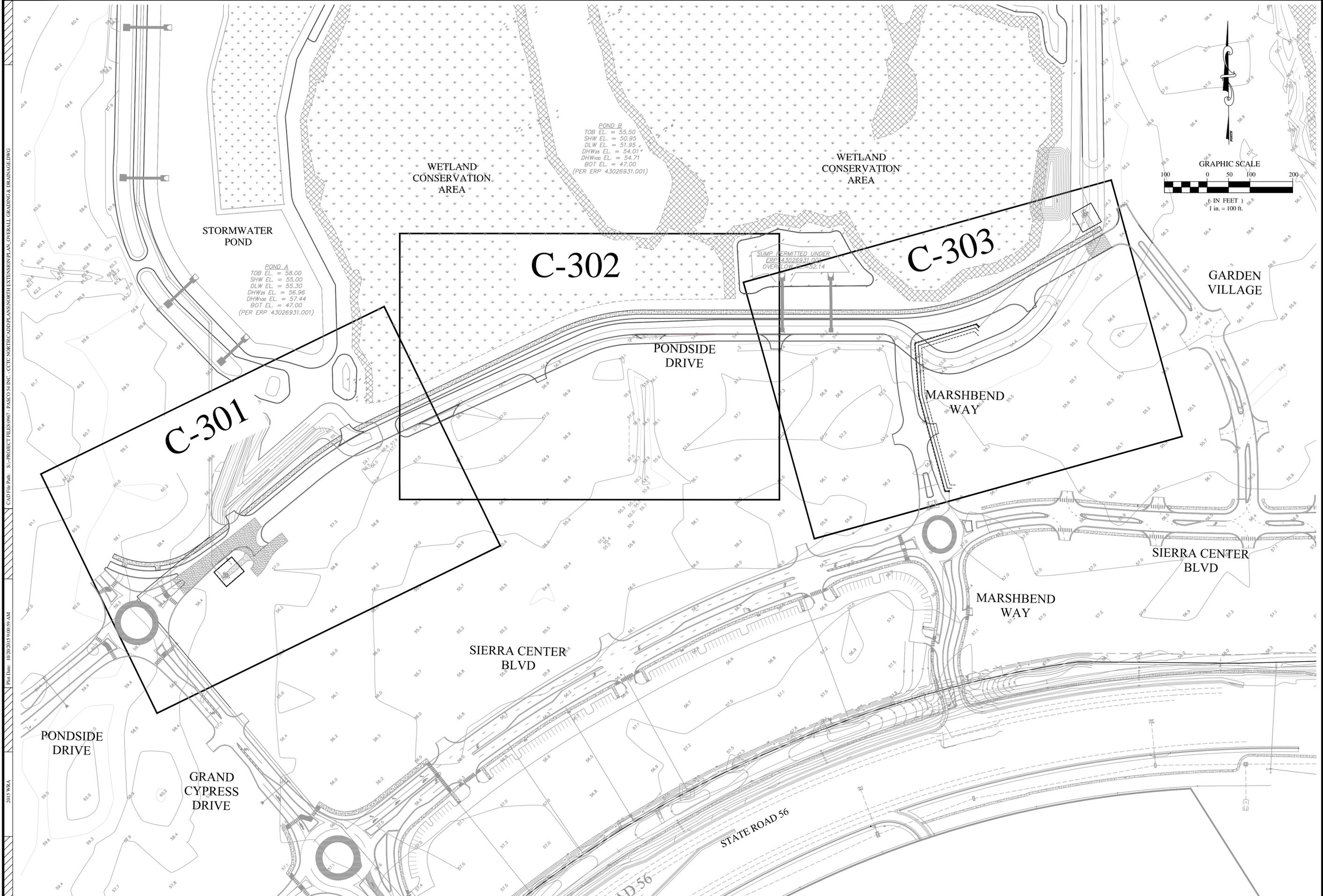
Engineering ~ Environmental  
 Water Resource  
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 Tampa, Florida 33624  
 8043 Corner Creek Blvd., Suite 210  
 University Park, Florida 34201  
 www.wraengineering.com CA 00007652  
 Phone: 813.265.3130 941.275.9721



**SIGNING AND PAVEMENT MARKING PLAN**  
 CYPRESS CREEK TOWN CENTER NORTH (POND SIDE DRIVE EXTENSION)  
 ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANGE: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929  
**C-204**

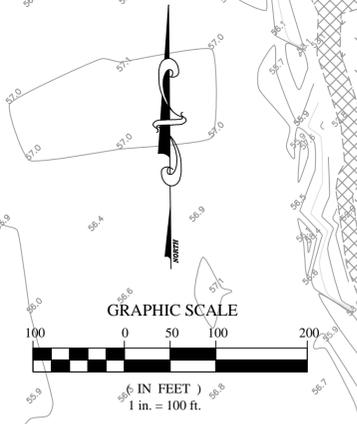


2015 WRA  
 Plot Date: 10/20/2015 9:08:59 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCAGO SA INC. - CCTC NORTH CENTER DRIVE EXTENSION\PLAN, OVERALL GRADING & DRAINAGE.DWG

**POND A**  
 TOB EL. = 58.00  
 SHW EL. = 55.00  
 DLW EL. = 55.30  
 DHW<sub>25</sub> EL. = 56.96  
 DHW<sub>100</sub> EL. = 57.44  
 BOT EL. = 47.00  
 (PER ERP 430269.31.001)

**POND B**  
 TOB EL. = 55.50  
 SHW EL. = 50.95  
 DLW EL. = 51.95  
 DHW<sub>25</sub> EL. = 54.01  
 DHW<sub>100</sub> EL. = 54.71  
 BOT EL. = 47.00  
 (PER ERP 430269.31.001)

SUMP PERMITTED UNDER  
 ERP 430269.31.001  
 OVERFLOW EL. = 52.14



| NO. | DATE | DESCRIPTION | BY |
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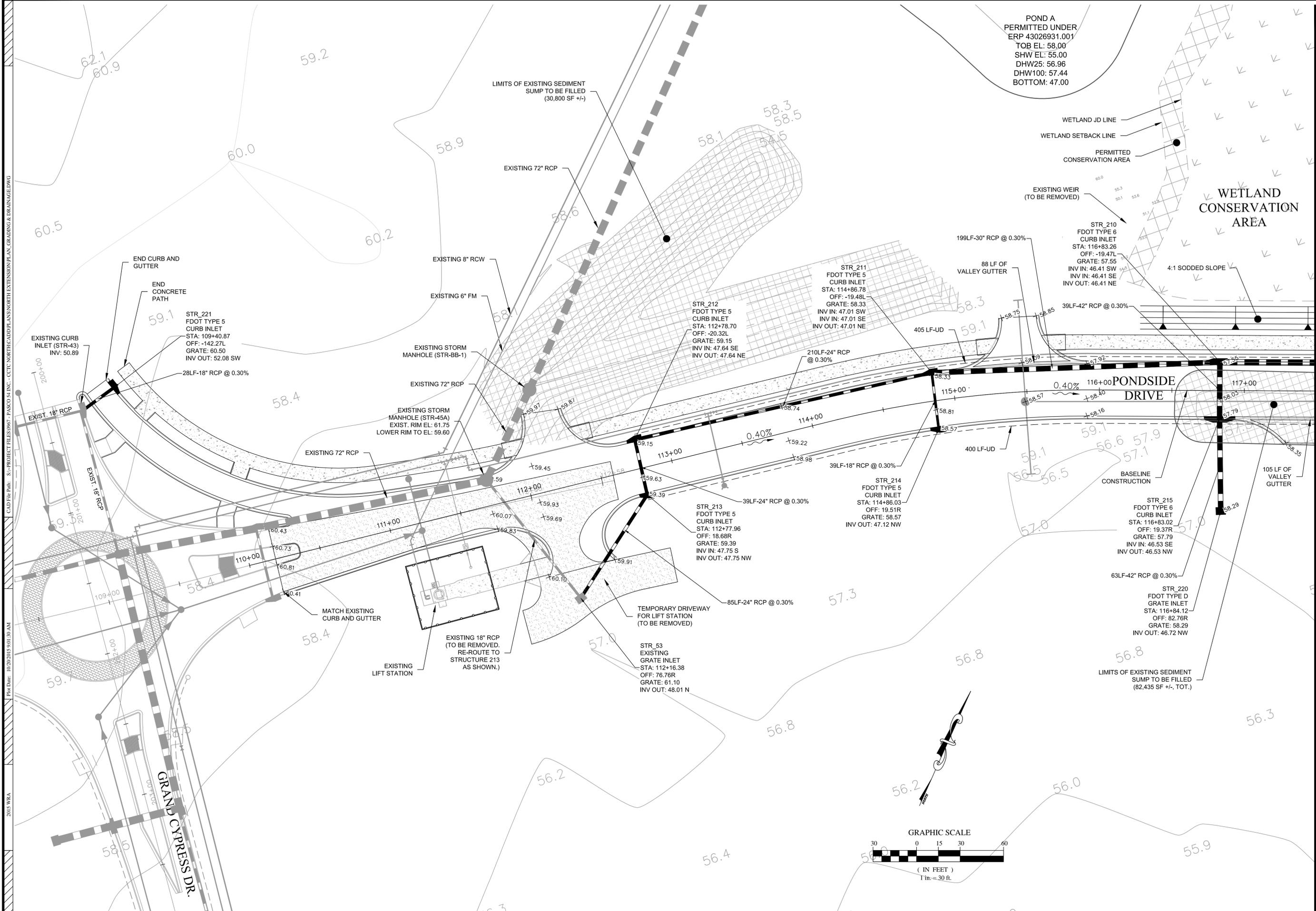
**OVERALL GRADING AND DRAINAGE PLAN**

**CYPRESS CREEK TOWN CENTER NORTH (PONDSIDE DRIVE EXTENSION)**  
 ISSUED FOR: PERMITTING  
 JOB # 0967 SEC. 27 TOWN 26S RANG 19E DESIGNED: ELR DRAWN: ELR APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-300



2015 WRA  
 Plot Date: 10/20/2015 10:28:58 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PANSO SA INC. - CCTC NORTH CENTER DRIVE EXTENSION PLAN, GRADING & DRAINAGE.DWG

POND A  
 PERMITTED UNDER  
 ERP 43026931.001  
 TOB EL: 58.00  
 SHW EL: 55.00  
 DHW25: 56.96  
 DHW100: 57.44  
 BOTTOM: 47.00

WETLAND JD LINE  
 WETLAND SETBACK LINE  
 PERMITTED  
 CONSERVATION AREA

WETLAND  
 CONSERVATION  
 AREA

STR\_210  
 FDOT TYPE 6  
 CURB INLET  
 STA: 116+83.26  
 OFF: -19.47L  
 GRATE: 57.55  
 INV IN: 46.41 SW  
 INV IN: 46.41 SE  
 INV OUT: 46.41 NE

STR\_211  
 FDOT TYPE 5  
 CURB INLET  
 STA: 114+86.78  
 OFF: -19.48L  
 GRATE: 58.33  
 INV IN: 47.01 SW  
 INV IN: 47.01 SE  
 INV OUT: 47.01 NE

STR\_212  
 FDOT TYPE 5  
 CURB INLET  
 STA: 112+78.70  
 OFF: -20.32L  
 GRATE: 59.15  
 INV IN: 47.64 SE  
 INV OUT: 47.64 NE

STR\_214  
 FDOT TYPE 5  
 CURB INLET  
 STA: 114+86.03  
 OFF: 19.51R  
 GRATE: 58.57  
 INV OUT: 47.12 NW

STR\_213  
 FDOT TYPE 5  
 CURB INLET  
 STA: 112+77.96  
 OFF: 18.68R  
 GRATE: 59.39  
 INV IN: 47.75 S  
 INV OUT: 47.75 NW

STR\_215  
 FDOT TYPE 6  
 CURB INLET  
 STA: 116+83.02  
 OFF: 19.37R  
 GRATE: 57.79  
 INV IN: 46.53 SE  
 INV OUT: 46.53 NW

STR\_220  
 FDOT TYPE D  
 GRATE INLET  
 STA: 116+84.12  
 OFF: 82.76R  
 GRATE: 58.29  
 INV OUT: 46.72 NW

STR\_53  
 EXISTING  
 GRATE INLET  
 STA: 112+16.38  
 OFF: 76.76R  
 GRATE: 61.10  
 INV OUT: 48.01 N

LIMITS OF EXISTING SEDIMENT  
 SUMP TO BE FILLED  
 (82,435 SF +/-, TOT.)

MATCHLINE - SEE SHEET C-302

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| 6   |      |             |    |
| 5   |      |             |    |
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| 2   |      |             |    |
| 1   |      |             |    |

Engineering ~ Environmental  
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 Tampa, Florida 33624  
 8043 Corner Creek Blvd., Suite 210  
 University Park, Florida 34201  
 www.wraengineering.com CA 00007652  
 Phone: 813.265.3130 941.275.9721



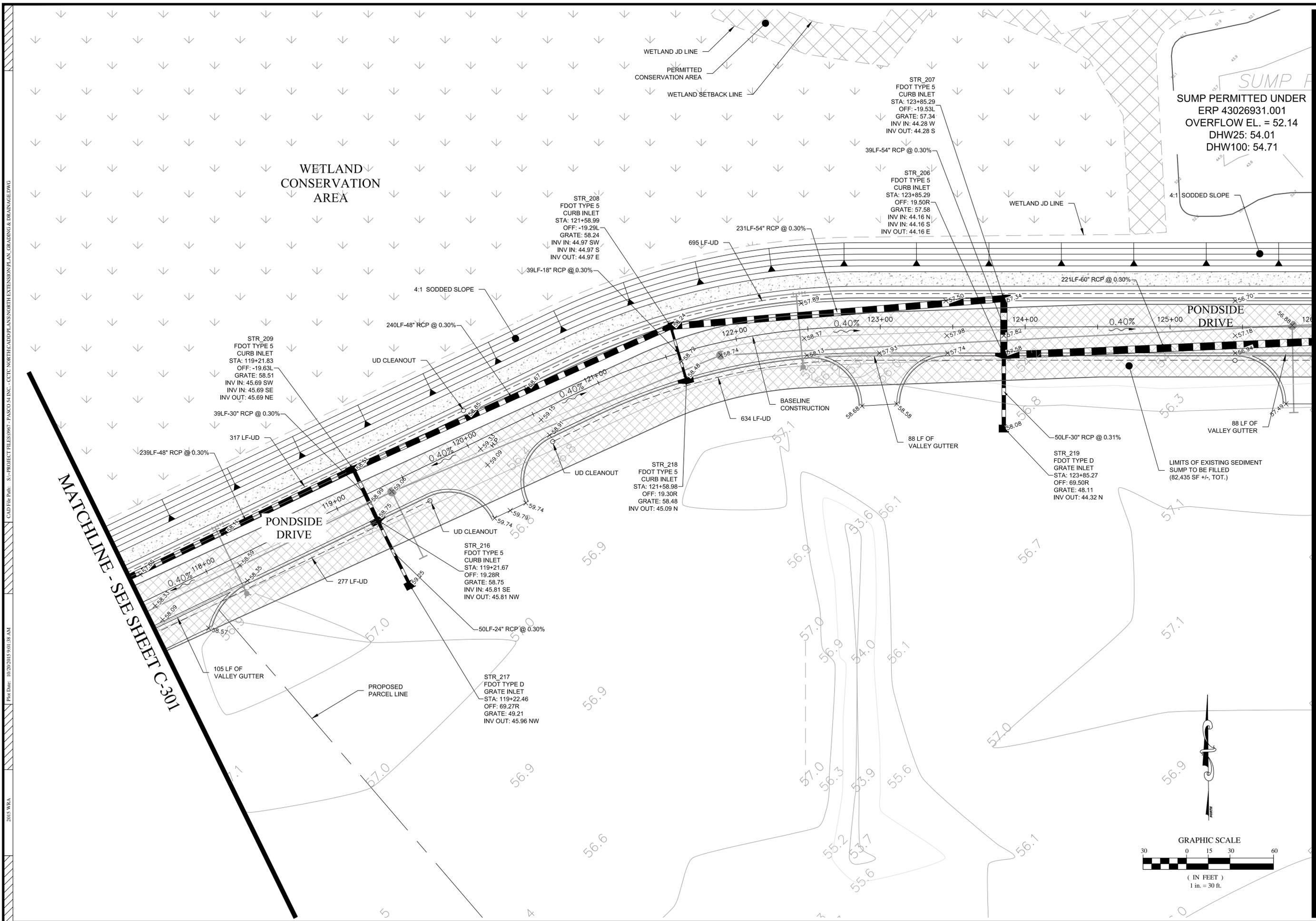
GRADING AND DRAINAGE  
 PLAN

CYPRESS CREEK TOWN  
 CENTER NORTH  
 (POND SIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967 SEC: 27 TOWN: 26S RING: 19E  
 DESIGNED: E.L.R. DRAWN: E.L.R. APPROVED: J.A.C.

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-301



2015 WRA  
 Plot Date: 10/20/2015 8:58 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PANSIDE DRIVE NORTH EXTENSION\PLAN, GRADING & DRAINAGE.DWG

MATCHLINE - SEE SHEET C-303

| NO. | DATE | DESCRIPTION | BY |
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Engineering ~ Environmental  
**Water Resource**  
 4360 W. Lindbergh Ave.  
 Tampa, Florida 33624  
 8043 Corner Creek Blvd., Suite 210  
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 www.wraengineering.com CA 0007652  
 Phone: 813.265.3130 941.275.9721



**GRADING AND DRAINAGE PLAN**  
 CYPRESS CREEK TOWN  
 CENTER NORTH  
 (PONDSIDES DRIVE EXTENSION)

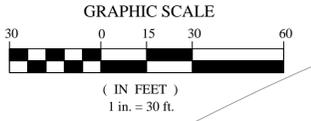
ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANGE: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

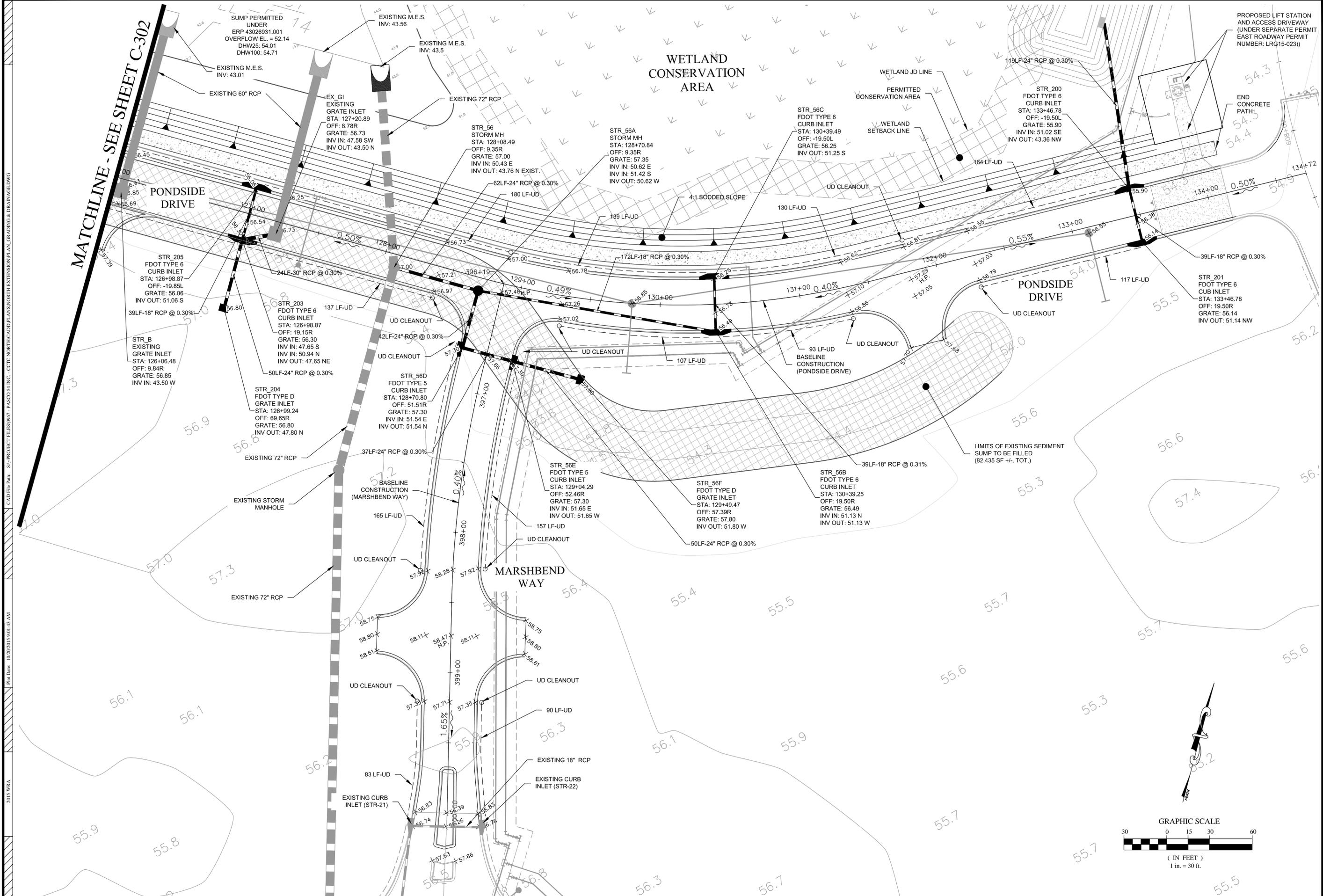
JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-302

**SUMP PERMITTED UNDER**  
**ERP 43026931.001**  
**OVERFLOW EL. = 52.14**  
**DHW25: 54.01**  
**DHW100: 54.71**





2015 WRA  
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 Plot Name: I:\2015\2015-04-25 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PANKO SA INC. - CCTC NORTH CENTER DRIVE EXTENSION PLAN, GRADING & DRAINAGE.DWG

| NO. | DATE | DESCRIPTION | BY |
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| 5   |      |             |    |
| 4   |      |             |    |
| 3   |      |             |    |
| 2   |      |             |    |
| 1   |      |             |    |

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 4360 W. Lindbergh Ave.  
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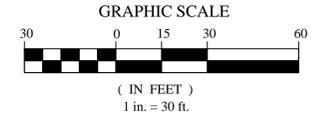


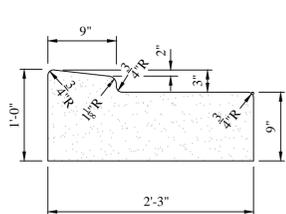
**GRADING AND DRAINAGE  
 PLAN**

**CYPRESS CREEK TOWN  
 CENTER NORTH  
 (POND SIDE DRIVE EXTENSION)**

ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 265  
 RING: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

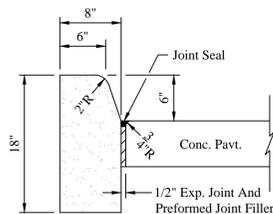
JOSEPH A. CIMINO  
 FL P.E. # 67540  
 Plot Date: 10/20/2015  
 Datum: NGVD 1929  
**C-303**





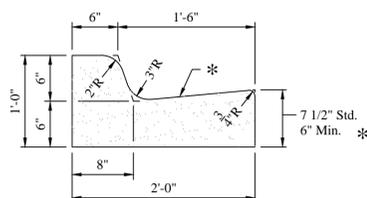
**TYPE 'RA' CURB DETAIL**

F.D.O.T. INDEX NO. 300  
NOT TO SCALE



**TYPE 'D' CURB DETAIL**

F.D.O.T. INDEX NO. 300  
NOT TO SCALE



**TYPE 'F' CURB DETAIL**

F.D.O.T. INDEX NO. 300  
NOT TO SCALE

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.

\* 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.

Note: For use adjacent to concrete or flexible pavement, concrete shown. For details depicting usage adjacent to flexible pavement, see diagram below. Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only.

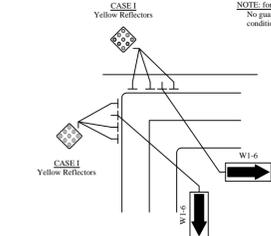
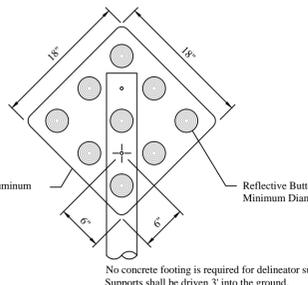
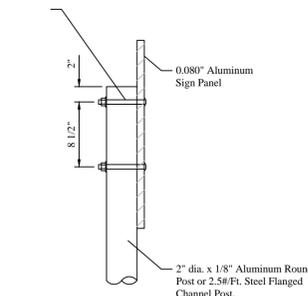
**GENERAL NOTES:**

- For curb, gutter and curb and gutter provide 1/8" - 1/4" 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 Section 520 of the standard specifications.

Ends of Curbs Type D shall transition from full to zero heights in 3 feet.

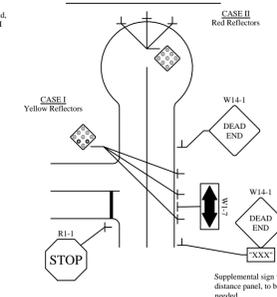
Aluminum Post: 3/8" dia. Aluminum Button Head Bolt with Nut and Lockwasher or 5/16" dia. Stainless Steel Hex Bolt with Flat Washer under Head and Lockwasher under Nut.

Channel Post: Provide Attachment in Accordance with the "Sign Attachment Detail" on Index No. 11865.



CASE I Object Markers (Type I) shall have a Yellow Reflective Background and Yellow Reflective Buttons.  
CASE II End of Road Markers Shall have a Red Reflective Background, and Red Reflective Buttons. Payment shall be under Pay Item for Type I Object Marker.

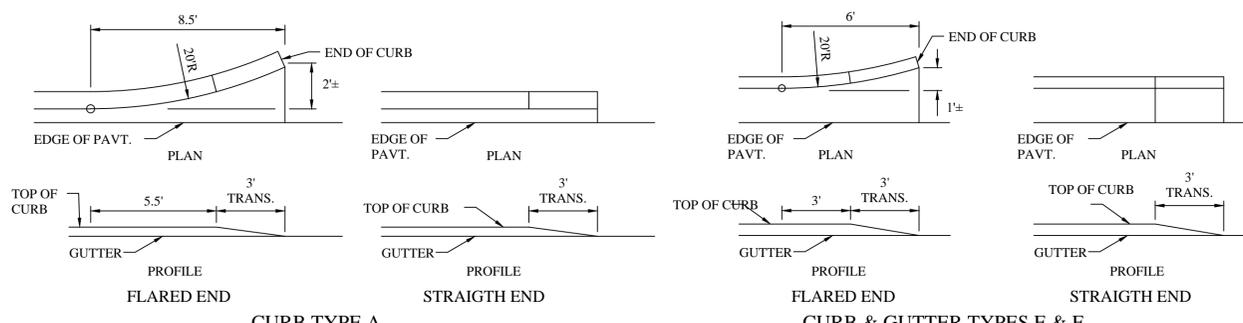
NOTE: For pavement marking see Index No. 17346  
No guardrail is required unless special field conditions require its use.



**NOTES:**

- THIS INDEX APPLICABLE TO RESIDENTIAL AND MINOR STREETS ONLY MAJOR STREETS TO BE EVALUATED ON A CASE BY CASE BASIS.
- "T" INTERSECTION - TWO-WAY ARROWS AND REFLECTORS ARE OPTIONAL, THE NEED SHOULD BE BASED ON A REVIEW OF EACH LOCATION.
- FOR ADDITIONAL DETAILS ON ALUMINUM ROUND POST, STEEL FLANGED CHANNEL POST, SIGN PANEL MATERIAL AND BOLTS, NUTS AND WASHERS SEE INDEX NOS. 11860 AND 11865.
- CASE I INSTALLATION - THE ARROW PANELS AND OBJECT MARKERS SHALL BE LOCATED APPROXIMATELY 20 FEET, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF THE TRAVEL LANE.

TRAFFIC CONTROLS FOR STREET TERMINATIONS  
F.D.O.T. INDEX NO. 17349



**CURB & GUTTER ENDINGS**

N.T.S.

**PASCO COUNTY CRUSHED CONCRETE BASE SPECIFICATIONS**

THE WORK SPECIFIED UNDER THIS SECTION CONSISTS OF THE CONSTRUCTION OF ROADWAY BASE UTILIZING CRUSHED CONCRETE (RECLAIMED CONCRETE AGGREGATE BASE MATERIAL) ON A PREPARED STABILIZED SUBGRADE OF LBR 40 WITH A DENSITY OF 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY AS DETERMINED BY FM 5-1780, METHOD D, IN CONFORMITY WITH THE LINES, GRADES NOTES AND TYPICAL CROSS SECTIONS SHOWN IN THE PLANS, AND AS DIRECTED BY THE COUNTY ENGINEER.

THE CONSTRUCTION OF CRUSHED CONCRETE BASE SHALL CONFORM TO THE REQUIREMENTS OF THIS SECTION, OR, IN LIEU THEREOF, SUCH REQUIREMENTS AS MAY BE ESTABLISHED BY THE COUNTY ENGINEER DURING CONSTRUCTION. THE COUNTY ENGINEER SHALL HAVE FULL AUTHORITY TO MODIFY THE PROVISIONS OF THIS SECTION AS DEEMED NECESSARY, IN HIS OPINION, TO MEET FIELD CONDITIONS AND REQUIREMENTS.

**MATERIALS**

CRUSHED CONCRETE MUST BE PRODUCED FROM A SOURCE APPROVED BY FLORIDA DEPARTMENT OF TRANSPORTATION OR THE COUNTY ENGINEER. THE SUPPLIER SHALL HAVE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERMIT REQUIREMENTS SECTION 62-701.730 OR BE QUALIFIED AS A CLEAN DEBRIS SOURCE UNDER DEP RULES. THE RECLAIMED CONCRETE AGGREGATE BASE SHALL CONSIST OF CRUSHED CONCRETE MATERIAL DERIVED FROM THE CRUSHING OF HARD PORTLAND CEMENT CONCRETE.

**COMPOSITION**

BASE MATERIAL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

| SIEVE SIZE | PERCENT BY WEIGHT PASSING |
|------------|---------------------------|
| 2 INCH     | 100                       |
| 3/4 INCH   | 65 to 95                  |
| 3/8 INCH   | 40 to 85                  |
| No. 4      | 25 to 65                  |
| No. 10     | 20 to 50                  |
| No. 50     | 5 to 25                   |
| No. 200    | 0 to 10                   |

BASE MATERIAL SHALL CONFORM TO THE FOLLOWING PLASTICITY REQUIREMENTS:  
CRUSHED CONCRETE BASE SHALL NOT CONTAIN PLASTIC SOILS SUCH THAT THE No. 40 SIEVE MATERIAL SHALL BE NON-PLASTIC.  
LIQUID LIMIT (AS DETERMINED BY AASHTO T80) (LESS THAN 25) PER MATERIAL TYPE

THE FINISHED IN-PLACE CRUSHED CONCRETE BASE **LIMEROCK BEARING RATIO** SHALL HAVE A MINIMUM (LBR) OF 150.

CRUSHED CONCRETE BASE SHALL BE FREE OF ALL MATERIALS THAT FALL UNDER THE CATEGORY OF SOLID WASTE OR HAZARDOUS MATERIALS AS DEFINED BY THE STATE OR LOCAL JURISDICTION AND SHALL MEET ALL DEP PERMIT REQUIREMENTS WHICH PERTAIN TO CONSTRUCTION, DEMOLITION AND RECYCLING OF THESE MATERIALS. CRUSHED CONCRETE BASE SHALL BE ASBESTOS FREE. THE FOLLOWING LIMITS SHALL NOT BE EXCEEDED:

|   |                     |
|---|---------------------|
| BITUMINOUS CONCRETE                     | 1% BY WEIGHT        |
| BRICKS                                  | 1% BY WEIGHT        |
| WOOD AND OTHER ORGANIC SUBSTANCES       | 0.5% BY WEIGHT      |
| HEAVY METALS (EXCEPT LEAD)              | 0.1% BY WEIGHT      |
| LEAD                                    | 5 PARTS PER MILLION |
| REINFORCED STEEL AND WELDED WIRE FABRIC | 0.1% BY WEIGHT      |
| PLASTER AND GYPSUM BOARD                | 0.1% BY WEIGHT      |

THE MATERIAL FOR CRUSHED CONCRETE BASE SHALL CONSIST ONLY OF CRUSHED CONCRETE PAVEMENT AND SUCH ADDITIVE MATERIAL AS MAY BE APPROVED BY THE COUNTY ENGINEER FOR THE PURPOSE OF FACILITATING CONSTRUCTION AND ACHIEVING THE DESIRED CHARACTERISTICS OF THE FINISHED IN-PLACE PRODUCT. APPROVAL FROM THE COUNTY ENGINEER IS REQUIRED BEFORE PLACING MATERIAL FROM MORE THAN ONE SOURCE. ONCE APPROVED, A CHANGE IN THE SOURCE OF BASE MATERIAL SHALL REQUIRE ADDITIONAL ACCEPTANCE TESTING. THE MATERIAL SHALL NOT CONTAIN CLUMPS, BALLS OR POCKETS OF SAND OR CLAY MATERIAL IN SIZE OR QUANTITY SUFFICIENT TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, STRENGTH OF THE CONCRETE BASE. EXISTING BASE IS TO BE REMOVED TO CONSTRUCT THE NEW BASE.

NOTE:  
NO DEVIATIONS TO THIS DETAIL WILL BE PERMITTED UNLESS APPROVED BY THE COUNTY ENGINEER.  
ANY PROPOSED ALTERATIONS SHALL BE CLEARLY IDENTIFIED AND HIGHLIGHTED ON DETAIL.

PASCO COUNTY ENGINEERING SERVICES  
**CRUSHED - CONCRETE BASE SPECIFICATIONS**  
DESIGN STANDARDS  
APPROVED BY JCW  
BCC APPROVAL  
REVISED

Sheet No. 1 of 2  
Index No. 104

**EQUIPMENT, PLACEMENT AND SPREADING OF MATERIAL**

USE MECHANICAL ROCK SPREADERS, EQUIPPED WITH A DEVICE THAT STRIKES OFF THE ROCK UNIFORMLY TO LAYING THICKNESS AND CAPABLE OF PRODUCING EVEN DISTRIBUTION. FOR ROADWAY WIDTHS OF 20 FEET OR LESS, CROSSOVERS, INTERSECTIONS, RAMP AREAS OR WHERE THE USE OF A MECHANICAL SPREADER IS NOT PRACTICABLE, THE CONTRACTOR MAY SPREAD THE CRUSHED CONCRETE BASE USING BULLDOZERS OR BLADE GRADERS. TRANSPORT CRUSHED CONCRETE TO THE POINT OF USE, OVER THE BASE PREVIOUSLY PLACED, AND DUMP IT ON THE END OF THE PRECEDING SPREAD. HAULING ON SUBGRADE TO DUMP CRUSHED CONCRETE BASE WILL BE PERMITTED ONLY WHEN, IN THE ENGINEER'S OPINION, THESE OPERATIONS WILL NOT BE DETRIMENTAL TO THE BASE AND SUBGRADE.

CRUSHED CONCRETE SHALL BE SPREAD UNIFORMLY WITHOUT SEGREGATION OF FINE OR COURSE MATERIALS. SEGREGATED AREAS SHALL BE REPLACED WITH PROPERLY GRADED CRUSHED CONCRETE AFTER REMOVAL.

THE MINIMUM THICKNESS OF THE CRUSHED CONCRETE BASE SHALL BE INDICATED ON THE PLANS. WHEN THE SPECIFIED COMPACTED THICKNESS OF THE CRUSHED CONCRETE BASE IS **GREATER THAN SIX INCHES, CONSTRUCT THE BASE IN MULTIPLE COURSES OF EQUAL THICKNESS. INDIVIDUAL COURSES SHALL NOT BE LESS THAN THREE INCHES.** PLACE CRUSHED CONCRETE MATERIAL TO ENSURE THE TOTAL THICKNESS SINGLE SOURCE INTEGRITY AT ANY STATION LOCATION OF THE BASE.

**COMPACTING, FINISHING AND TESTING REQUIREMENTS**

AFTER SPREADING IS COMPLETED THE CRUSHED CONCRETE SHALL BE UNIFORMLY COMPACTED, WITH WATER BEING ADDED AS REQUIRED TO A DENSITY OF NOT LESS THAN ONE HUNDRED PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99. DURING FINAL COMPACTATION OPERATIONS, IF THE BLADING OF ANY AREAS IS NECESSARY TO OBTAIN THE TRUE GRADE AND CROSS SECTION, FREE OF SCABS AND LAMINATIONS, THE COMPACTING OPERATIONS FOR SUCH AREAS SHALL BE COMPLETED PRIOR TO THE PERFORMANCE OF DENSITY TESTS ON THE FINISHED BASE.

MULTIPLE COURSE BASE: CLEAN THE FIRST COURSE OF FOREIGN MATERIAL, THEN BLADE AND BRING IT TO A SURFACE CROSS-SECTION APPROXIMATELY PARALLEL TO THE FINISHED BASE. BEFORE SPREADING ANY MATERIAL FOR THE UPPER COURSES, OBTAIN DENSITY TESTS FOR THE LOWER COURSES TO DETERMINE THAT THE REQUIRED COMPACTION (NOT LESS THAN ONE HUNDRED PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99) HAS BEEN OBTAINED. AFTER SPREADING THE CRUSHED CONCRETE FOR THE TOP COURSE, FINISH AND SHAPE ITS SURFACE TO PRODUCE THE REQUIRED GRADE AND CROSS-SECTION, FREE OF SCABS AND LAMINATIONS, AFTER COMPACTATION.

THE MINIMUM DENSITY THAT WILL BE ACCEPTED AT ANY LOCATION OUTSIDE THE TRAVELED ROADWAY (SUCH AS INTERSECTIONS, CROSSOVERS, TURNOUTS, ETC.) SHALL BE 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.

**TESTING OF BASE COURSE**

THE MINIMUM FREQUENCY OF SAMPLING AND TESTING OF CRUSHED CONCRETE MATERIAL, LAB DENSITY, FIELD DENSITY AND THICKNESS SHALL ADHERE TO THE FREQUENCY OF TESTING FOR LIMEROCK BASE IN THE MOST CURRENT EDITION OF "PASCO COUNTY ENGINEERING SERVICES DEPARTMENT TESTING SPECIFICATIONS FOR CONSTRUCTION OF ROADS, STORM DRAINAGE AND UTILITIES". ONE PLANT MIX DESIGN, ONE PLANT GRADATION TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (AASHTO T-27) (FM1-7027) INCLUDING A PLASTICITY INDEX (FM-7090) (AASHTO T-90) FROM THE APPROVED SOURCE SHALL BE SUBMITTED AT ONE PER DAY OR CHANGE OF MATERIAL. ONE ROADWAY FIELD TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C-136) SHALL BE SUBMITTED PER 500 FEET OF ROAD PER DAY PER MIX DESIGN, MINIMUM ONE PER ROAD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING PERFORMED IN CONNECTION WITH CONSTRUCTION OF THE BASE.

**CORRECTION OF DEFECTS**

ALL SEGREGATED AREAS OF FINE OR COURSE CRUSHED CONCRETE SHALL BE REMOVED AND REPLACED WITH PROPERLY GRADED RECLAIMED CONCRETE AGGREGATE BASE MATERIAL. ALL DEFECTS IN MATERIALS AND CONSTRUCTION SHALL BE CORRECTED BY THE CONTRACTOR, AT HIS EXPENSE, AND TO THE SATISFACTION OF THE COUNTY ENGINEER.

**PRIMING AND MAINTENANCE**

APPLY THE PRIME COAT ONLY WHEN THE BASE MEETS THE SPECIFIED DENSITY REQUIREMENTS AND WHEN THE MOISTURE CONTENT, AT THE TIME OF PRIMING, ENSURE THAT THE BASE IS FIRM, UNYIELDING AND IN SUCH CONDITION THAT NO UNIFORM DISTORTION WILL OCCUR. MAINTAIN THE TRUE CROWN AND TEMPLATE, WITH NO RUTTING OR DISTORTION, WHILE APPLYING THE SURFACE COURSE.

**PASCO COUNTY TESTING SPECIFICATIONS ON CRUSHED CONCRETE BASE**

TESTS FOR BASE THICKNESS, AND DENSITY SHALL BE LOCATED NO MORE THAN THREE HUNDRED (300) FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND ON THE CENTERLINE OF ROADWAY. THERE SHALL BE NO LESS THAN ONE (1) TEST PER STREET, BEARING WALLS, GRADATION AND FIELD TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C-136) SHALL BE NO MORE THAN FIVE HUNDRED (500) FEET.

EXAMPLE: A SEVEN HUNDRED FEET ROAD WOULD REQUIRE TWO FIELD LBR AND GRADATION TESTS, THREE FIELD DENSITY AND THICKNESS TESTS ALONG WITH THE APPROPRIATE LAB TESTING.

NOTE:  
NO DEVIATIONS TO THIS DETAIL WILL BE PERMITTED UNLESS APPROVED BY THE COUNTY ENGINEER.  
ANY PROPOSED ALTERATIONS SHALL BE CLEARLY IDENTIFIED AND HIGHLIGHTED ON DETAIL.

PASCO COUNTY ENGINEERING SERVICES  
**CRUSHED - CONCRETE BASE SPECIFICATIONS**  
DESIGN STANDARDS  
APPROVED BY JCW  
BCC APPROVAL  
REVISED

Sheet No. 2 of 2  
Index No. 104

**CONCRETE MULTI-USE PATH - TYPICAL SECTION**  
N.T.S.

**DESIGN PARAMETERS:**

- DESIGN SPEED 20 MPH.
- MIN. RADIUS 150'
- CLEAR ZONE WIDTH - (2' WIDE FLAT AREA)
- VERTICAL CLEARANCE - 8' MIN. (10' RECOMMENDED)
- SURFACE SHALL BE SANDY TEXTURE BROOM FINISH
- ALL PATHS SUBJECT TO LIGHT VEHICULAR TRAFFIC SHALL BE A MINIMUM OF 6" THICK, I.E., DRIVEWAYS. PATHS AT COMMERCIAL ENTRANCES SHALL BE A MINIMUM OF 8" THICK.
- IF AREA BETWEEN CURB AND MULTI-USE PATH IS NOT ASPHALT OR CONCRETE, SOD SHALL BE UTILIZED.

**SIDEWALK NOTES:**

- ALL CONCRETE SHALL BE 3,000 P.S.I. FIBER-REINFORCED.
- TOOL RADIUS ALL EXPOSED EDGES.
- CONSTRUCTION JOINTS @ 8 FT. INTERVALS.
- 1/2" EXPANSION JOINTS @ 100 FT. INTERVALS.
- SURFACE SHALL BE SANDY TEXTURE BROOM FINISH.
- ALL PATHS SUBJECT TO LIGHT VEHICULAR TRAFFIC SHALL BE A MINIMUM OF 6" THICK, I.E., DRIVEWAYS. PATHS AT COMMERCIAL ENTRANCES SHALL BE A MINIMUM OF 8" THICK.
- IF AREA BETWEEN CURB AND MULTI-USE PATH IS NOT ASPHALT OR CONCRETE, SOD SHALL BE UTILIZED.

NOTE:  
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PASCO COUNTY ENGINEERING SERVICES  
**CONCRETE MULTI-USE PATH - TYPICAL SECTION - URBAN ROADWAY**  
DESIGN STANDARDS  
APPROVED BY JCW  
BCC APPROVAL  
REVISED

Sheet No. 1 of 1  
Index No. 108

**REVISIONS**

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| 6   |      |             |    |
| 5   |      |             |    |
| 4   |      |             |    |
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**Engineering ~ Environmental**  
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Phone: 813.265.3130 941.275.9721

**WRA**

**ROADWAY DETAILS**

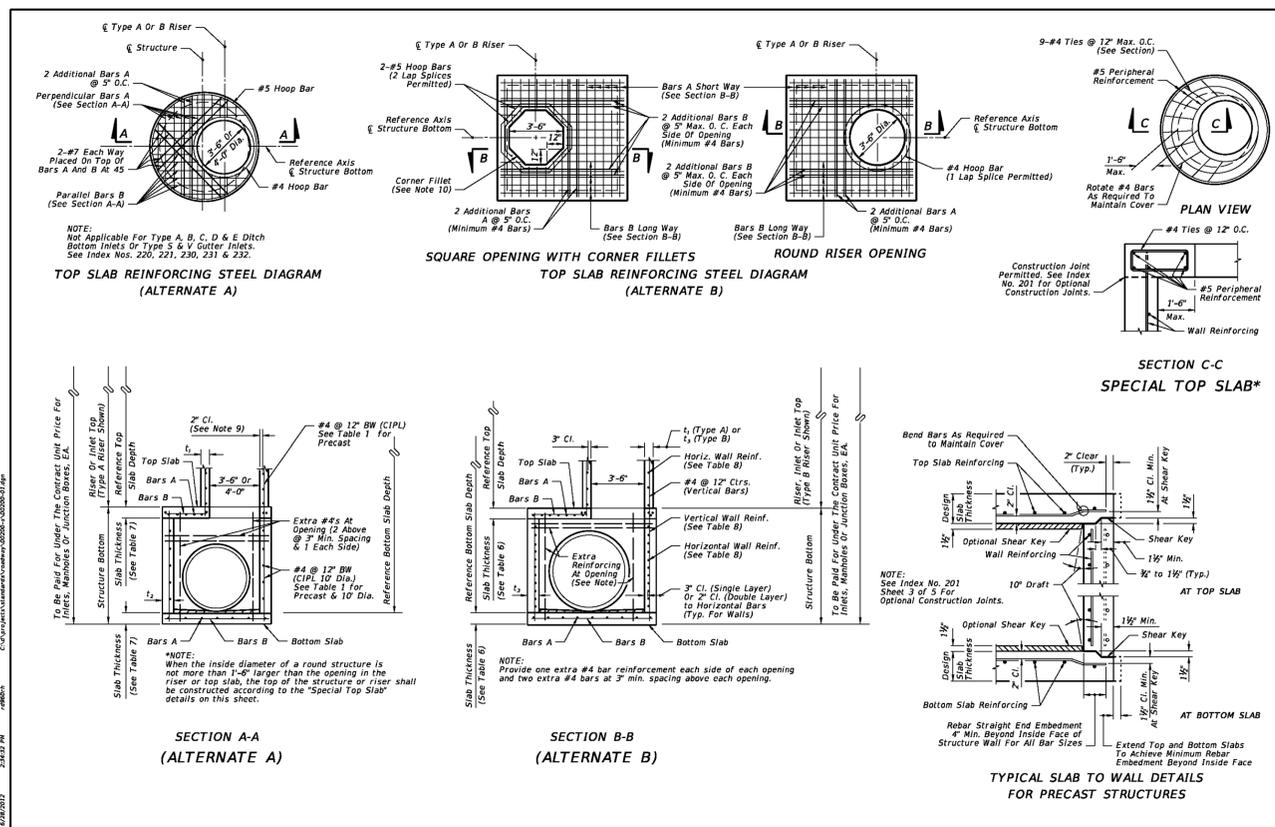
**CYPRESS CREEK TOWN CENTER NORTH (PONDSIDE DRIVE EXTENSION)**

ISSUED FOR: PERMITTING  
JOB # 0967  
SEC. 27  
TWN. 26S  
RNG. 19E  
DESIGNED: ELR  
DRAWN: ELR  
APPROVED: JAC

JOSEPH A. CIMINO  
FL P.E. # 67540

Plot Date: 10/20/2015  
Datum: NGVD 1929

C-304



| LAST REVISION | DESCRIPTION:               | INDEX NO. | SHEET NO. |
|---------------|----------------------------|-----------|-----------|
| 01/01/10      | FDOT DESIGN STANDARDS 2013 | 200       | 1         |

**SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES (TABLE 6)**  
(ALL SLABS 8" THICK EXCEPT AS NOTED - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

| SHORT-WAY SLAB DEPTH    | SCHEDULE (Bars A) | LONG-WAY SLAB DEPTH | SCHEDULE (Bars B) |
|-------------------------|-------------------|---------------------|-------------------|
| SIZE: 3'-6" x UNLIMITED |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 4' x UNLIMITED    |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 5' x 5'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 6' x 6'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 6' x 8'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 6' x 9'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 6' x 10'          |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 6' x UNLIMITED    |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 7' x 7'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 7' x 8'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 7' x 9'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 7' x 10'          |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 8' x 8'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 8' x 9'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 8' x 10'          |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 8' x UNLIMITED    |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 9' x 9'           |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 9' x 10'          |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 10' x 10'         |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 10' x UNLIMITED   |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |
| SIZE: 12' x 12'         |                   |                     |                   |
| 8" < 13"                | B10               | 8" < 13"            | B10               |
| 13" < 23"               | D7                | 13" < 23"           | D7                |
| 23" < 31"               | D7                | 23" < 31"           | D7                |
| 31" < 40"               | D7                | 31" < 40"           | D7                |

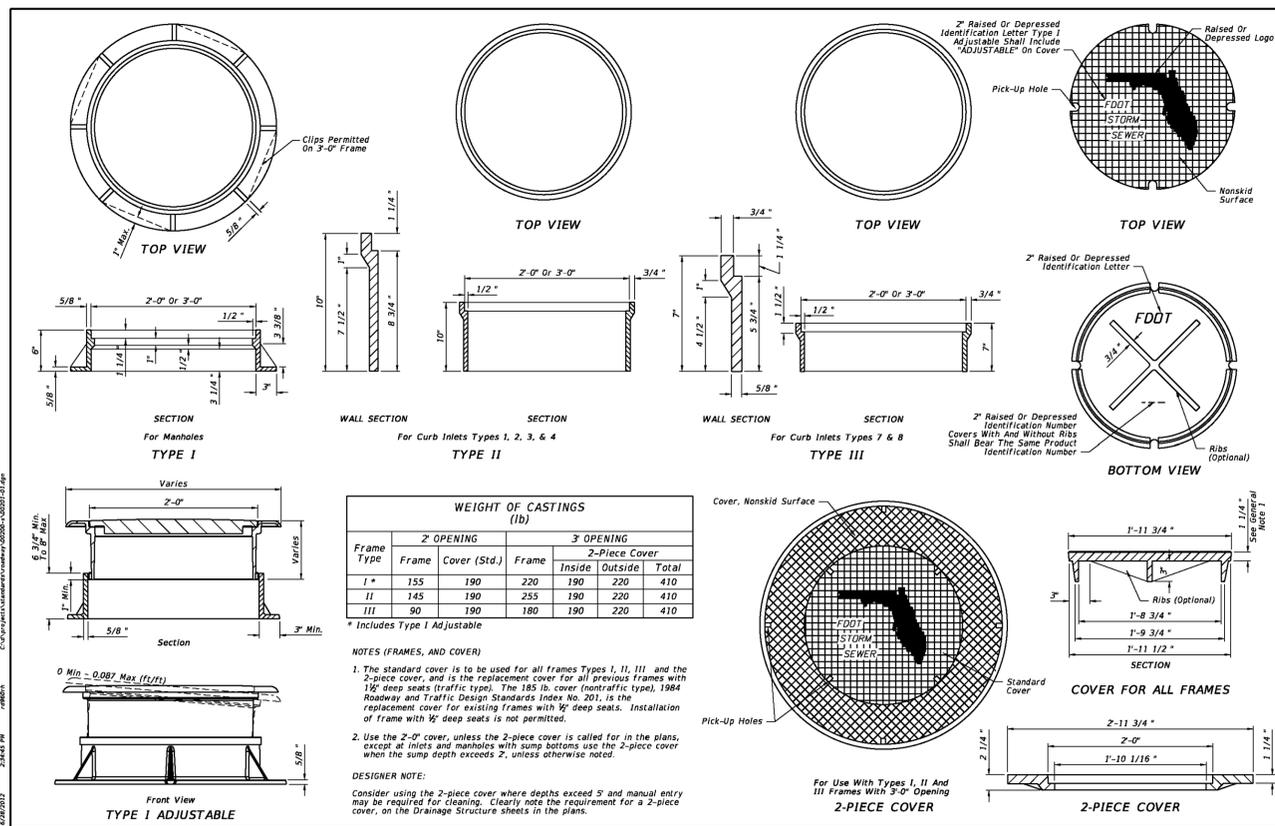
**SLAB DESIGNS - ROUND STRUCTURES (TABLE 7)**

| SLAB DEPTH            | SLAB THICKNESS | REINF. (2-WAY) SCHEDULE |
|-----------------------|----------------|-------------------------|
| 2'-10"                | 6"             | C6.5                    |
| 0.5' < 30"            | 6"             | A6                      |
| 39'-40"               | 6"             | B5.5                    |
| SIZE: 4'-0" DIAMETER  |                |                         |
| 8" < 19"              | 6"             | A6                      |
| 19" < 30"             | 6"             | B5.5                    |
| 39'-40"               | 6"             | C6.5                    |
| SIZE: 5'-0" DIAMETER  |                |                         |
| 8" < 14"              | 6"             | B5.5                    |
| 14" < 23"             | 6"             | C6.5                    |
| 23" < 31"             | 6"             | D7                      |
| 39'-40"               | 6"             | D4.5                    |
| SIZE: 6'-0" DIAMETER  |                |                         |
| 8" < 9"               | 6"             | B5.5                    |
| 9" < 19"              | 6"             | C6.5                    |
| 19" < 28"             | 6"             | C3.5                    |
| 28" < 30"             | 6"             | D4.5                    |
| 39'-40"               | 6"             | E6                      |
| SIZE: 7'-0" DIAMETER  |                |                         |
| 8" < 8"               | 6"             | C3.5                    |
| 8" < 14"              | 6"             | D4.5                    |
| 14" < 22"             | 6"             | F3.5                    |
| 22" < 29"             | 6"             | F3.5                    |
| 39'-40"               | 6"             | F3.5                    |
| SIZE: 8'-0" DIAMETER  |                |                         |
| 8" < 10"              | 6"             | D4.5                    |
| 10" < 16"             | 6"             | E6                      |
| 16" < 23"             | 6"             | F3.5                    |
| 23" < 27"             | 6"             | F3.5                    |
| 39'-40"               | 6"             | F3.5                    |
| SIZE: 10'-0" DIAMETER |                |                         |
| 8" < 8"               | 10"            | D4.5                    |
| 8" < 12"              | 10"            | E6                      |
| 12" < 20"             | 10"            | F3.5                    |
| 20" < 28"             | 10"            | F3.5                    |
| 28" < 40"             | 10"            | G3.5                    |
| SIZE: 12'-0" DIAMETER |                |                         |
| 8" < 8"               | 10"            | D4.5                    |
| 8" < 12"              | 10"            | E6                      |
| 12" < 20"             | 10"            | F3.5                    |
| 20" < 28"             | 10"            | F3.5                    |
| 28" < 40"             | 10"            | G3.5                    |

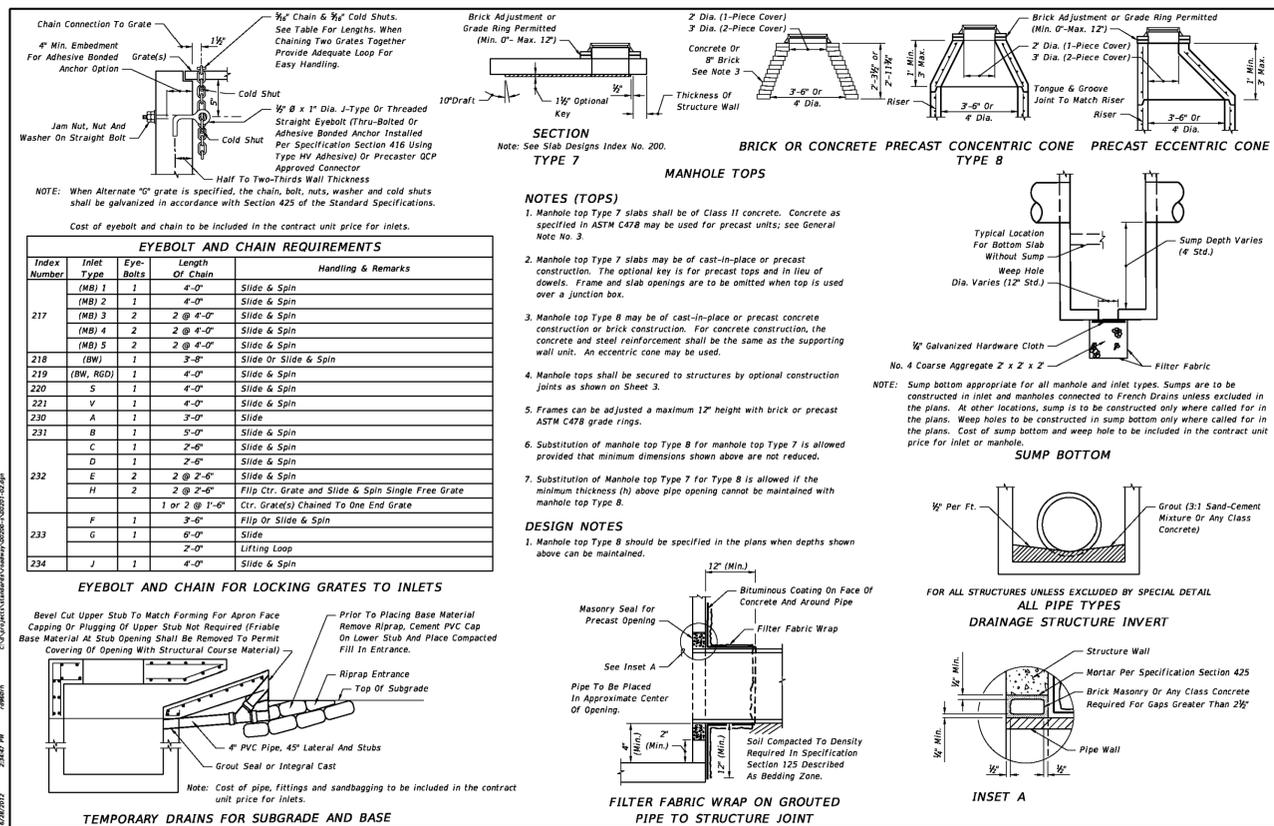
**SLAB AND WALL DESIGN TABLE NOTES**

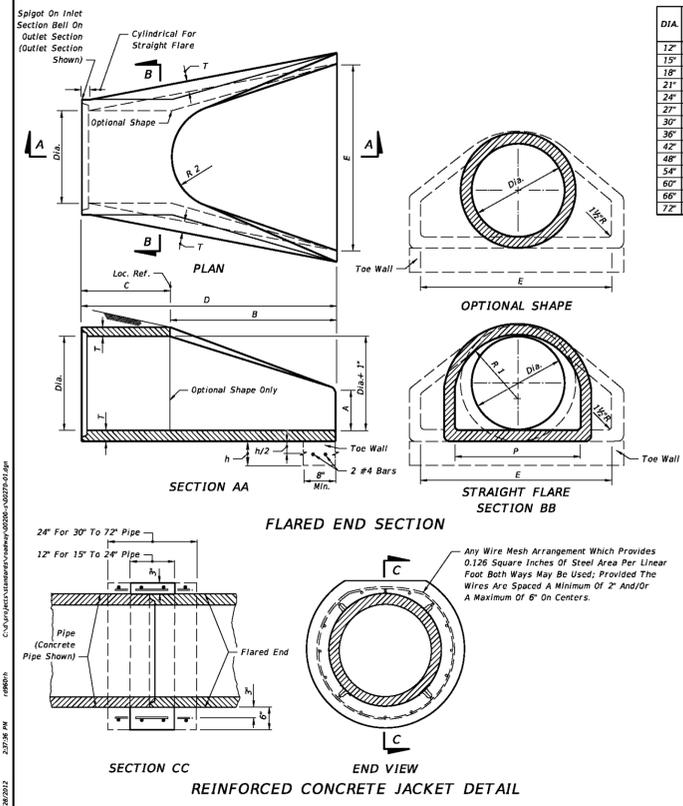
- Size is the inside dimension(s) of a structure.
- Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
- Bottom slabs for precast 3'-6" x 3'-6" rectangular structures at 15' depth or less, may be 6" thick.
- Slab depth is measured from finished grade to top of slab.
- Wall depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
- Wall height is the distance between top of lower slab to bottom of upper slab. Maximum wall height is 12' for wall lengths exceeding 5', or 10' for wall lengths exceeding 12'.
- Wall lengths exceeding 6'-0" require two layers of reinforcing (See Table 6) with 7' of cover from the horizontal bars to the inside and outside faces for each layer.
- Wall lengths exceeding the dimensions or depths shown in Table 8, or 12'-0" diameter require a special design.
- Wall thickness and reinforcing for rectangular structures is the same for both long and short sides.
- Reinforcing schedules with larger areas of steel may be substituted for schedules with smaller bar or wire spacing, except that Schedule B10 may not be substituted for Schedule A6. See Index 201, Sheet 4 for allowable bar spacing adjustments when larger areas of reinforcing are substituted.

| LAST REVISION | DESCRIPTION:               | INDEX NO. | SHEET NO. |
|---------------|----------------------------|-----------|-----------|
| 07/01/09      | FDOT DESIGN STANDARDS 2013 | 200       | 4         |



| LAST REVISION | DESCRIPTION:               | INDEX NO. | SHEET NO. |
|---------------|----------------------------|-----------|-----------|
| 01/01/12      | FDOT DESIGN STANDARDS 2013 | 201       | 1         |





| DIA. | T      | REINF. (IN/FT) | BELL OR SPIGOT | A       | B         | C          | D         | E     | P       | R 1     | R 2     | FLAT   | WEIGHT (LB) | h   | TOE WALL CLASS 1 CONC (CY) |
|------|--------|----------------|----------------|---------|-----------|------------|-----------|-------|---------|---------|---------|--------|-------------|-----|----------------------------|
| 12"  | 2"     | 0.07           | 1 1/2"         | 4"      | 2'-0"     | 4'-0 1/2"  | 6'-0 1/2" | 2'-0" | 19 3/8" | 10 1/2" | 9"      | 3 1/2" | 530         | 12" | .06                        |
| 15"  | 2 1/2" | 0.07           | 2"             | 6"      | 2'-3"     | 3'-10"     | 6'-1"     | 2'-6" | 24 3/4" | 12 1/2" | 11"     | 3 1/2" | 740         | 12" | .07                        |
| 18"  | 2 1/2" | 0.07           | 2 1/2"         | 9"      | 2'-3"     | 3'-10"     | 6'-1"     | 3'-0" | 26"     | 15 1/2" | 12"     | 4"     | 990         | 15" | .11                        |
| 21"  | 2 1/2" | 0.07           | 2 1/2"         | 9"      | 2'-11"    | 3'-2"      | 6'-1"     | 3'-6" | 31 3/4" | 16 1/2" | 13"     | 4"     | 1280        | 15" | .12                        |
| 24"  | 3"     | 0.07           | 2 1/2"         | 9 1/2"  | 3'-7 1/2" | 2'-6"      | 6'-1 1/2" | 4'-0" | 33 3/4" | 16 3/4" | 14"     | 4 1/2" | 1520        | 18" | .17                        |
| 27"  | 3 1/2" | 0.148          | 2 1/2"         | 10 1/2" | 4'-0"     | 2'-1 1/2"  | 6'-1 1/2" | 4'-6" | 36"     | 18 1/2" | 14 1/2" | 4 1/2" | 1930        | 18" | .19                        |
| 30"  | 3 1/2" | 0.148          | 3"             | 1'-0"   | 4'-6"     | 1'-3 1/2"  | 6'-1 1/2" | 5'-0" | 37"     | 18 1/2" | 15"     | 5"     | 2190        | 21" | .24                        |
| 36"  | 4"     | 0.148          | 3 1/2"         | 1'-3"   | 5'-3"     | 2'-10 1/2" | 8'-1 1/2" | 6'-0" | 47 1/2" | 24 1/2" | 20"     | 5 1/2" | 4100        | 21" | .29                        |
| 42"  | 4 1/2" | 0.148          | 3 1/2"         | 1'-9"   | 5'-3"     | 2'-11"     | 8'-2"     | 6'-6" | 53 1/2" | 27 1/2" | 22"     | 5 1/2" | 5380        | 24" | .36                        |
| 48"  | 5"     | 0.148          | 4 1/2"         | 2'-0"   | 6'-0"     | 2'-2"      | 8'-2"     | 7'-0" | 56 1/2" | 28 1/2" | 22"     | 5 1/2" | 6550        | 24" | .39                        |
| 54"  | 5 1/2" | 0.174          | 4 1/2"         | 2'-3"   | 5'-5"     | 2'-11"     | 8'-4"     | 7'-6" | 63 1/2" | 33 1/2" | 24"     | 6 1/2" | 8040        | 24" | .42                        |
| 60"  | 6"     | 0.174          | 5"             | 2'-6"   | 5'-0"     | 3'-3"      | 8'-3"     | 8'-0" | 72 1/2" | 36 1/2" | 24"     | 6 1/2" | 8750        | 24" | .44                        |
| 66"  | 6 1/2" | 0.174          | 5 1/2"         | 2'-0"   | 6'-6"     | 1'-9"      | 8'-3"     | 8'-6" | 72"     | 36 1/2" | 24"     | 7 1/2" | 10630       | 24" | .47                        |
| 72"  | 7"     | 0.174          | 6"             | 2'-0"   | 6'-6"     | 1'-9"      | 8'-3"     | 9'-0" | 77 1/2" | 38 1/2" | 24"     | 7 1/2" | 12520       | 24" | .50                        |

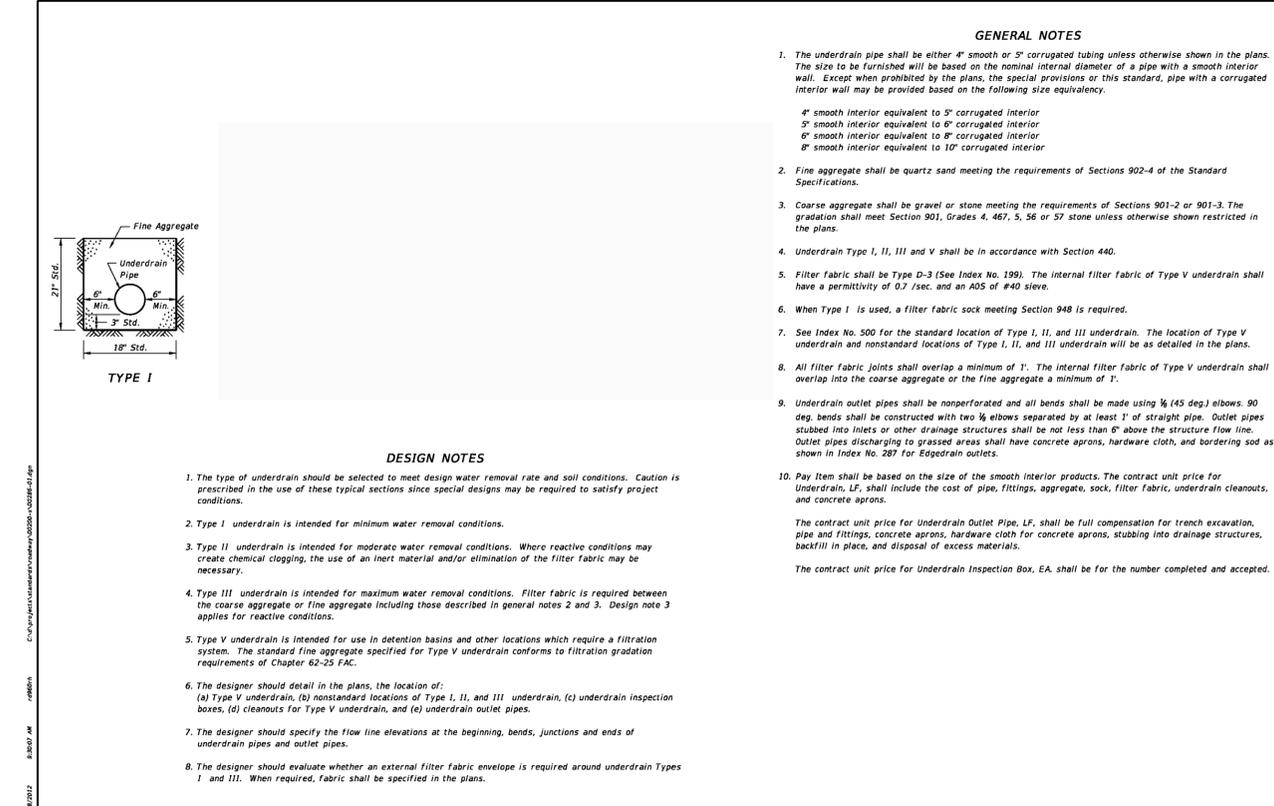
**GENERAL NOTES**

- Flared end sections shall conform to the requirements of ASTM C76 with the exception that dimensions and reinforcement shall be as prescribed in the table above. Circumferential reinforcement may consist of either one cage or two cages of steel. Compressive strength of concrete shall be 4000 psi. Shop drawings for flared end sections having dimensions other than above must be submitted for approval to the State Drainage Engineer.
- Connections between the flared end section and the pipe culvert may be any of the following types unless otherwise shown on the plans.
  - Joints meeting the requirements of Section 449 of the Standard Specifications (O-Ring Gasket). Flared end section joint dimensions and tolerances shall be identical or compatible to those used in the pipe culvert joint. When pipe culvert and flared end section manufacturers are different, the compatibility of joint designs shall be certified to by the manufacturer of the flared end sections.
  - Joints sealed with preformed plastic gaskets. The gaskets shall meet the requirements of Section 942-2 of the Standard Specifications and the minimum sizes for gaskets shall be as that specified for equivalent sizes of elliptical pipe.
  - Reinforced concrete jackets, as detailed on this drawing. Cost of the reinforced concrete jacket to be included in the contract unit price for the flared end section. When non-coated corrugated metal pipe is called for in the plans, the pipe shall be bituminous coated in the jacketed area as specified on Index No. 280. Bituminous coating to be included in the contract unit price for the pipe culvert. Concrete jacket shall be as specified on Index No. 280. Cost of concrete and reinforcement shall be included in the contract unit price for the pipe culvert.
- Toe walls shall be constructed when shown on the plans or at locations designated by the Engineer. Toe walls are to be cast-in-place with Class I Concrete and paid for under the contract unit price for Flared End Section (Concrete), EA. Reinforcing steel shall also be included in the cost of the Flared End Section (Concrete), EA.
- On skewed pipe culverts the flared end sections shall be placed in line with the pipe culvert. Side slopes shall be warped as required to fit the flared end sections.
- Flared End Section to be paid for under the contract unit price for Flared End Section (Concrete), EA. Soding shall be in accordance with Index No. 281, and paid for under the contract unit price for Performance Turf, SY.

**DESIGN NOTES**

- Flared end sections are intended for use outside the clear zone on median drain and cross drain installation, except that flared end sections for pipe sizes 12" and 15" are permitted within the clear zone. When the slope intersection permits, 12" and 15" flared end sections may be located with the culvert opening as close as 8' beyond the outside edge of the shoulder. Flared end sections are not intended for side drain installations.
- Reinforced concrete jackets shall be used at all locations where high velocities and/or highly erosive soils may cause disjuncting. These locations are to be shown on the plans.
- Toe walls shall be used whenever the anticipated velocity of discharge and soil type are such that erosive action would occur. Toe walls are not required where ditch pavement is provided, except when disjuncting would occur if the ditch pavement should fail.

|               |              |                            |           |           |
|---------------|--------------|----------------------------|-----------|-----------|
| LAST REVISION | DESCRIPTION: | FDOT DESIGN STANDARDS 2013 | INDEX NO. | SHEET NO. |
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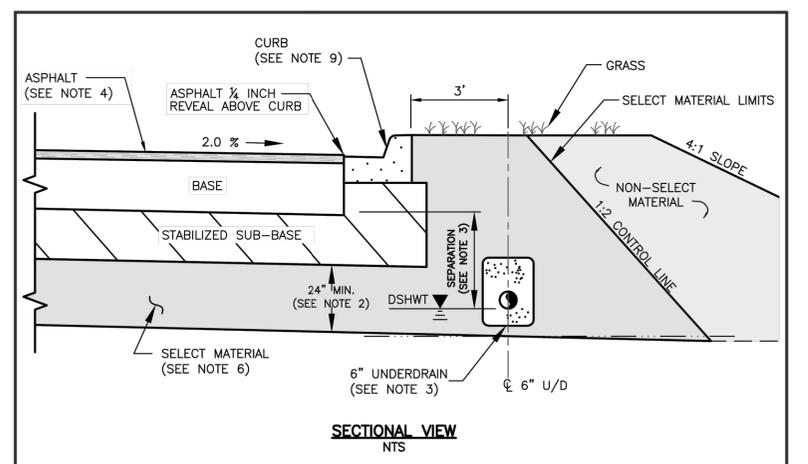
**GENERAL NOTES**

- The underdrain pipe shall be either 4" smooth or 5" corrugated tubing unless otherwise shown in the plans. The size to be furnished will be based on the nominal internal diameter of a pipe with a smooth interior wall. Except when prohibited by the plans, the special provisions or this standard, pipe with a corrugated interior wall may be provided based on the following size equivalency.
  - 4" smooth interior equivalent to 5" corrugated interior
  - 5" smooth interior equivalent to 6" corrugated interior
  - 6" smooth interior equivalent to 8" corrugated interior
  - 8" smooth interior equivalent to 10" corrugated interior
- Fine aggregate shall be quartz sand meeting the requirements of Sections 902-4 of the Standard Specifications.
- Coarse aggregate shall be gravel or stone meeting the requirements of Sections 901-2 or 901-3. The gradation shall meet Section 901, Grades 4, 467, 5, 56 or 57 stone unless otherwise shown restricted in the plans.
- Underdrain Type I, II, III and V shall be in accordance with Section 440.
- Filter fabric shall be Type D-3 (See Index No. 199). The internal filter fabric of Type V underdrain shall have a permeability of 0.7/sec. and an ADS of #40 sieve.
- When Type I is used, a filter fabric sock meeting Section 948 is required.
- See Index No. 500 for the standard location of Type I, II, and III underdrain. The location of Type V underdrain and nonstandard locations of Type I, II, and III underdrain will be as detailed in the plans.
- All filter fabric joints shall overlap a minimum of 1'. The internal filter fabric of Type V underdrain shall overlap into the coarse aggregate or the fine aggregate a minimum of 1'.
- Underdrain outlet pipes shall be nonperforated and all bends shall be made using 1/4 (45 deg) elbows. 90 deg. bends shall be constructed with two 1/4 elbows separated by at least 1' of straight pipe. Outlet pipes stubbed into inlets or other drainage structures shall be not less than 6" above the structure flow line. Outlet pipes discharging to grassed areas shall have concrete aprons, hardware cloth, and bordering sod as shown in Index No. 287 for Edgedrain outlets.
- Pay Item shall be based on the size of the smooth interior products. The contract unit price for Underdrain, LF, shall include the cost of pipe, fittings, aggregate, sock, filter fabric, underdrain cleanouts, and concrete aprons.
  - The contract unit price for Underdrain Outlet Pipe, LF, shall be full compensation for trench excavation, pipe and fittings, concrete aprons, hardware cloth for concrete aprons, stubbing into drainage structures, backfill in place, and disposal of excess materials.
  - The contract unit price for Underdrain Inspection Box, EA, shall be for the number completed and accepted.

**DESIGN NOTES**

- The type of underdrain should be selected to meet design water removal rate and soil conditions. Caution is prescribed in the use of these typical sections since special designs may be required to satisfy project conditions.
- Type I underdrain is intended for minimum water removal conditions.
- Type II underdrain is intended for moderate water removal conditions. Where reactive conditions may create chemical clogging, the use of an inert material and/or elimination of the filter fabric may be necessary.
- Type III underdrain is intended for maximum water removal conditions. Filter fabric is required between the coarse aggregate or fine aggregate including those described in general notes 2 and 3. Design note 3 applies for reactive conditions.
- Type V underdrain is intended for use in detention basins and other locations which require a filtration system. The standard fine aggregate specified for Type V underdrain conforms to filtration gradation requirements of Chapter 62-25 FAC.
- The designer should detail in the plans, the location of:
  - Type V underdrain, (b) nonstandard locations of Type I, II, and III underdrain, (c) underdrain inspection boxes, (d) cleanouts for Type V underdrain, and (e) underdrain outlet pipes.
- The designer should specify the flow line elevations at the beginning, bends, junctions and ends of underdrain pipes and outlet pipes.
- The designer should evaluate whether an external filter fabric envelope is required around underdrain Types I and III. When required, fabric shall be specified in the plans.

|               |              |                            |           |           |
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**SECTIONAL VIEW NOTES**

- THE MINIMUM VERTICAL SEPARATION BETWEEN THE DESIGN SEASONAL HIGH WATER TABLE (DSHWT) AND THE BOTTOM OF THE BASE AT THE LOWEST EDGE OF PAVEMENT SHALL BE AS FOLLOWS:
  - A. LIMEROCK BASE 24 INCH
  - B. SOIL CEMENT BASE 12 INCH
  - C. CRUSHED CONCRETE BASE (IF APPROVED) 12 INCH
  - D. ASPHALT BASE COURSE (ABC) 12 INCH
- A MINIMUM TWO (2) FEET OF SELECT MATERIAL CONSISTING OF A-1, A-3 OR A-2-4 WITH A MAXIMUM 15% PASSING THE #200 SIEVE BELOW THE STABILIZED SUB-BASE.
- IF THE VERTICAL SEPARATION BETWEEN DSHWT AND BOTTOM OF BASE IS LESS THAN 2 FEET, UNDERDRAINS SHALL BE CONSTRUCTED ALONG BOTH SIDES OF THE ROAD. IF 2-3 FEET, UNDERDRAINS SHALL BE CONSTRUCTED ALONG ONE SIDE. THE INVERT OF A SIX (6) INCH UNDERDRAIN SHALL BE TWO (2) FEET MINIMUM BELOW THE BOTTOM OF THE BASE.
- TYPE 2 THRU TYPE 5 ROADWAYS SHALL CONTAIN A MINIMUM OF 1.5 INCH OF SP ASPHALTIC CONCRETE. COLLECTOR ROADWAYS SHALL HAVE A MINIMUM OF THREE (3) INCHES OF SP ASPHALTIC CONCRETE. TYPE 1 ROADWAYS MAY BE COMPLETED IN STAGES, INITIALLY 2.25 INCHES OF SP 12.5 (S-1) ASPHALT COURSE WITH REQUIRED PAVEMENT MARKINGS AND 0.75 INCHES OF SP 9.5 (S-3) COURSE INSTALLED WITH ANY THERMOPLASTIC STRIPES, PRIOR TO RELEASE OF THE ASSURANCE FOR MAINTENANCE.
- THE ROAD DESIGN DRAWINGS SHALL CONTAIN SOIL BORING LOCATIONS WITH EXISTING SOIL DATA, OBSERVED WATER LEVEL AND DSHWT SURFACE. UNDERDRAIN OUTFALL POND DATA AND PROXIMATE WETLAND HYDRO PERIOD ELEVATIONS SHALL ALSO BE IDENTIFIED.
- SELECT MATERIAL SHALL BE PLACED PER FDOT INDEX DRAWINGS 500 & 505.
- THE REQUIRED MINIMUM STRUCTURAL NUMBER (SN) SHALL BE:
  - 2.34 MIN. TYPE 2 ROADWAY
  - 3.50 MIN. TYPE 1 ROADWAYS
  - 3.70 MIN. COUNTY COLLECTOR
  - 4.00 MIN. COUNTY ARTERIAL
- SOIL CEMENT BASE SHALL NOT BE CONSTRUCTED OVER STABILIZED SUBGRADE EXCEEDING LBR 20. THE COUNTY ASSIGNED LAYER COEFFICIENT FOR A MAXIMUM 12 INCH DEPTH, LBR 20 SHALL BE 0.04 PER INCH.
- CURB DESIGN IS SITE SPECIFIC AND SHALL BE IDENTIFIED ON PLANS.

**NOTES:**

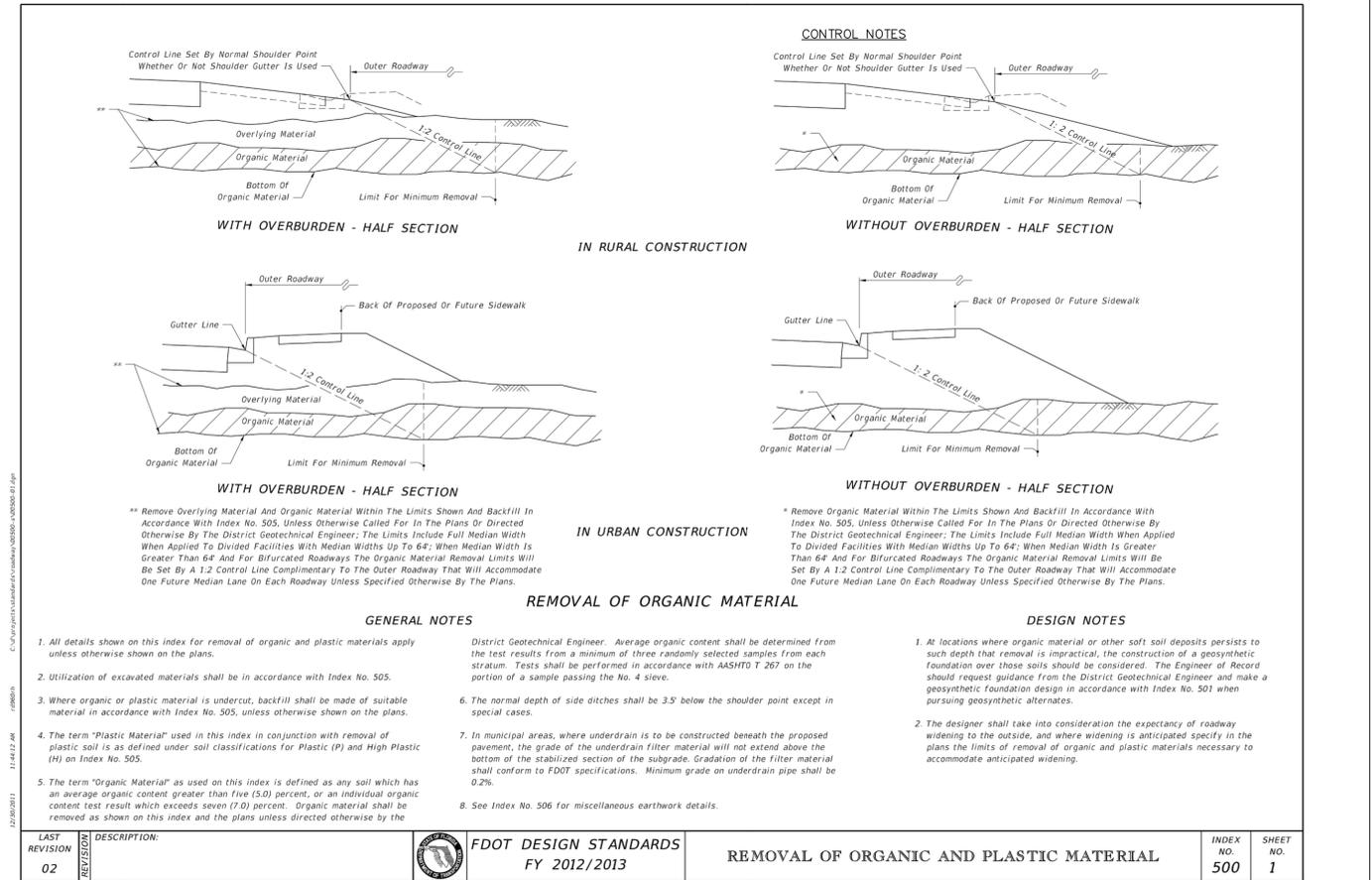
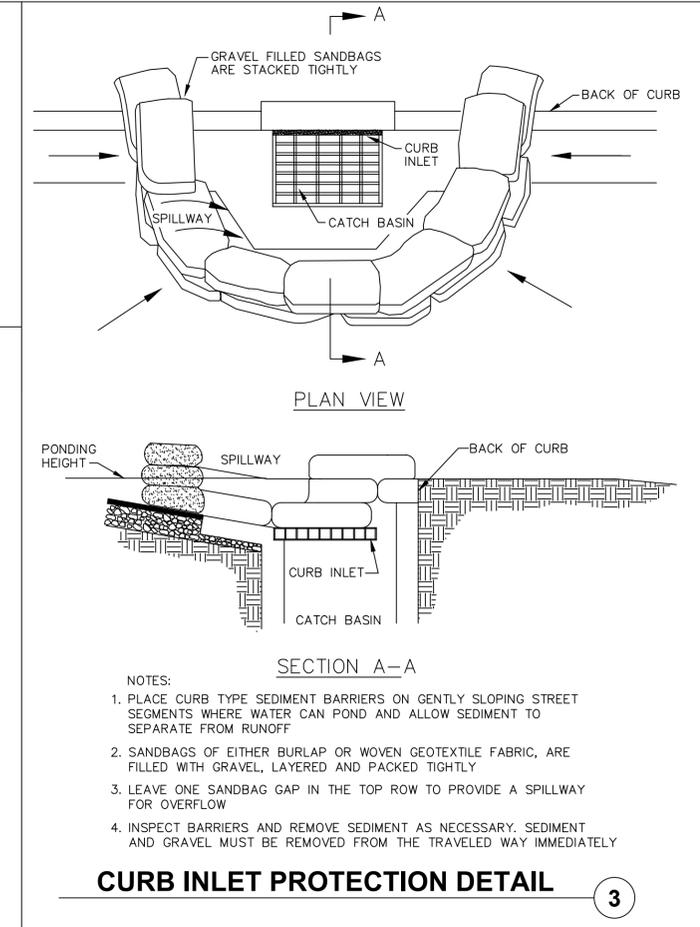
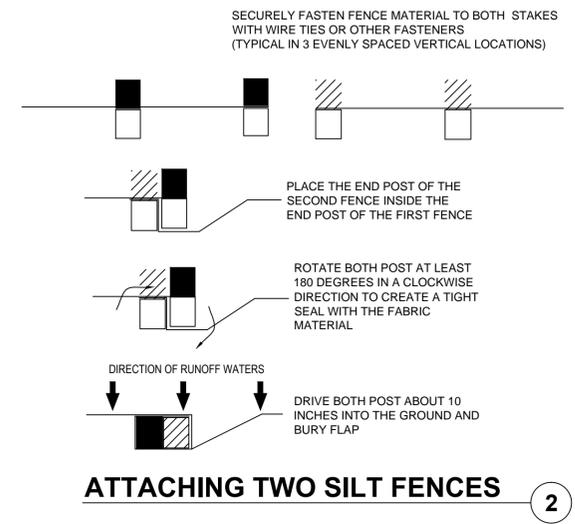
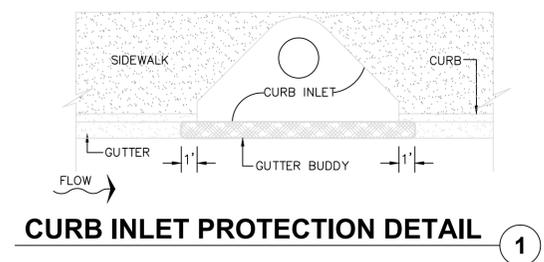
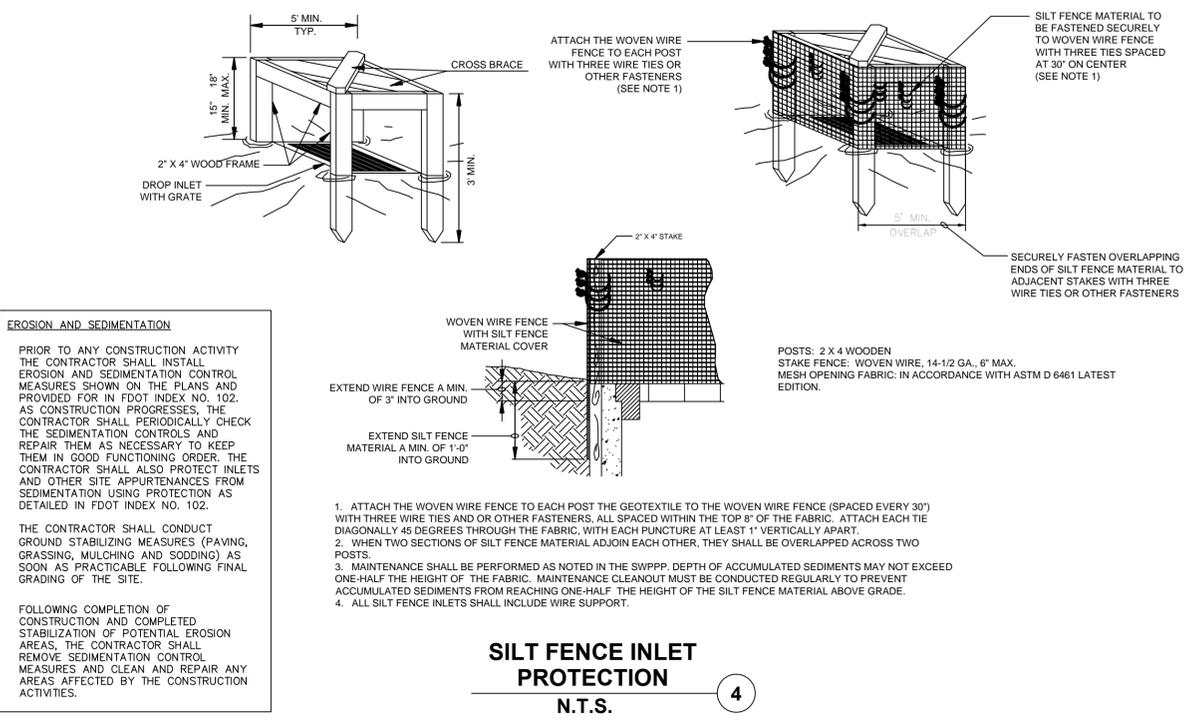
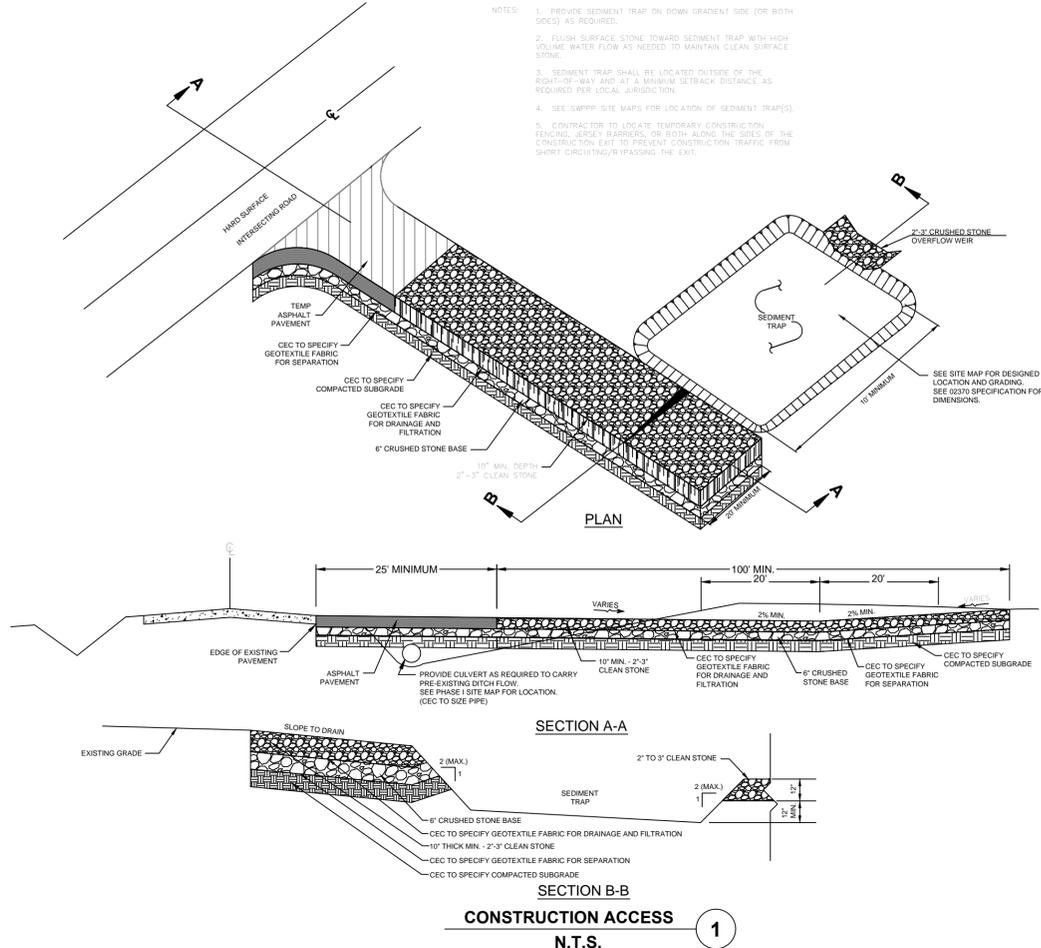
NO DEVIATIONS TO THIS DETAIL WILL BE PERMITTED UNLESS APPROVED BY THE COUNTY ENGINEER. ANY PROPOSED ALTERATIONS SHALL BE CLEARLY IDENTIFIED AND HIGHLIGHTED ON DETAIL.

|                                   |                         |                  |
|-----------------------------------|-------------------------|------------------|
| PASCO COUNTY ENGINEERING SERVICES | ROADWAY DESIGN CRITERIA | Sheet No. 1 of 1 |
| DESIGN STANDARDS                  | APPROVED BY JOW         | Index No. 100    |
|                                   | BCC APPROVAL            |                  |
|                                   | REVISED                 |                  |

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| <b>Engineering ~ Environmental</b><br><b>Water Resource</b><br>4360 W. Lindbergh Ave.<br>Tampa, Florida 33624<br>8043 Conner Creek Blvd., Suite 210<br>University Park, Florida 34201<br>www.wraengineering.com CA 00007652<br>Phone: 813.265.3130 941.275.9721 |  |
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| <b>DRAINAGE DETAILS</b>   |  |
| <b>CYPRESS CREEK TOWN</b><br><b>CENTER NORTH</b><br><b>(PONDSIDE DRIVE EXTENSION)</b>   |  |
| ISSUED FOR: PERMITTING<br>JOB #: 0907   | DESIGNED: ELR<br>DRAWN: ELR<br>APPROVED: JAC<br>TOWN: 265<br>SEC: 27 |
| JOSEPH A. CIMINO<br>FL P.E. # 67540   | NO. DATE<br>6<br>5<br>4<br>3<br>2<br>1                               |
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FDOT DESIGN STANDARDS FY 2012/2013

REMOVAL OF ORGANIC AND PLASTIC MATERIAL

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**WRA**

**EROSION CONTROL DETAILS**  
 CYPRESS CREEK TOWN CENTER NORTH (POND SIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967 SEC: 27 TOWN: 265 RING: 19E DESIGNED: ELR DRAWN: ELR APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540

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Plot Date: 10/20/2015  
Datum: NGVD 1929

C-400

**STORM WATER POLLUTION PREVENTION PLAN**

The following notes constitute a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the Florida Department of Environmental Protection's (FDEP) "National Pollutant Discharge Elimination System" (NPDES) Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

The following entities are identified as team members of "SWPPP": Water Resource Associates, the Developer, and the site contractor and his sub-contractors. Each team member has specific responsibilities and obligations. In general, all team members, with regard to their involvement and responsibilities on the project, are to implement all necessary storm water management controls to assure compliance with the NPDES Generic Permit for Storm Water Discharges from Construction Activities, the Southwest Florida Water Management District Permit, the applicable local governing agency (i.e. Pasco County) and the guidelines listed in the SWPPP. The duties and responsibilities of the team members as they pertain to the SWPPP are as follows:

**Water Resource Associates, Inc.**

- A. Develop SWPPP including, but not limited to, retention/detention ponds, control structures, erosion control methods and locations and stabilization criteria. This design is included within these construction plans and the following notes and instructions.
- B. Submit and obtain the necessary design related storm water permits from the Florida Department of Environmental Protection, the Southwest Florida Water Management District and other applicable governmental bodies.
- C. Upon notification by the developer of his intent to commence construction, submit a Notice of Intent to the FDEP on behalf of the developer and copy the contractor including SWPPP certification and copy of the permit.
- D. Submit to SWFWMD and the operator of the municipal separate storm water system, if applicable, a letter of construction commencement.
- E. Complete and submit a Notice of Termination and certification for developer. The NOT's shall be submitted no more than 30 days after (a) completion of the project and final stabilization of the site or (b) when responsibility for the site has ended. Final stabilization as defined by EPA is when all soil disturbing activities at the site have been completed and a uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all ungraded areas and areas not covered by permanent structures. As an alternative, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) may be employed. The client shall notify Water Resource Associates when one of these criteria has been met.

**Contractor**

- A. **RIPA AND ASSOCIATES LLC** is the designated SWPPP contractor for these construction activities. See SWPPP Map for applicable certifications. A copy of this SWPPP and certification shall be maintained onsite throughout the duration of construction.
- B. During construction, assure compliance with the designed Storm Water Pollution Prevention Plans prepared by Water Resource Associates and the NPDES Generic Permit for Storm Water Discharges from Large and Small Construction Activities.
- C. Maintain a copy of the construction plans, which include the Storm Water Pollution Prevention Plan, the NOT, and all inspections reports and certifications on site.
- D. Undertake all reasonable Best Management Practices (BMP's) to assure that silted or otherwise polluted storm water is not allowed to discharge from the site during all phases of construction. Stabilization BMP's that may be used include: straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders, storm drain inlet protection, outlet protection, sediment traps, and temporary sediment basins. Detention ponds may also be used as temporary sediment basins. Additional BMP's that may need to be implemented include: providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials. Providing waste receptacles at convenient locations and providing regular collection of wastes, including building material wastes. Minimizing off-site tracking of sediments. Making adequate preparations, including training and equipment to contain spills of oil and hazardous materials. Complying with applicable state or local waste disposal, sanitary sewer or septic system regulations and the use of appropriate pollution prevention measures for allowable non-storm water components of discharge.
- E. Notify Water Resource Associates and the developer in writing of any non-storm water pollution sources which are being stored, or otherwise used during the construction of the project, i.e., fertilizers, fuels, pesticides, other chemicals. The notification should be accompanied with the contractor's design and methods to prevent pollution run-off from these sources.

- F. Develop a maintenance and inspection plan which includes, but is not limited to the following:
  - A. The specific areas to be inspected and maintained that includes all the disturbed areas and material storage areas of the site.
  - B. The erosion and sediment controls identified in the SWPPP to be maintained and inspected and those additional controls that the contractor deems necessary.
  - C. Maintenance procedures.
  - D. The procedure to follow if additional work is required or whom to call.
  - E. Inspections and maintenance forms.
  - F. The personnel assigned to each task.

The following shall be inspected a minimum of once a week or within 24 hours after 0.50 inches of rainfall:

- Stabilization measures (once a month if fully stabilized).
- Structural controls.
- Discharge points.
- Construction entrances and exits.
- Areas used for storage of exposed materials.

An inspection form shall be completed for each inspection. Any permit violations should be noted and corrective measures shall be conducted as soon as practicable before the next anticipated storm event to ensure all facilities remain in good and effective operating condition, and no later than 7 days after the inspection occurred. If revisions to the SWPPP are needed, a report form for changes in the SWPPP shall be completed and a copy sent to Water Resource Associates. The original shall be kept on-site as documentation of the change. If the inspection passes, a certification that the facility is in compliance with the SWPPP and the NPDES permit must be signed by a duly authorized representative of the principal executive official of the operator of the SWPPP with one of the following qualifications:

- 1. Has successfully completed the Florida Stormwater, Erosion and Sediment Control Inspector Training Program.
- 2. Successfully completed a similar training program.
- 3. Has enough practical on the job training to be qualified to perform the inspections.

Retain inspection reports and certifications for at least three years.

- G. Site stabilization measures shall be initiated as soon as practical but in no case more than 7 days, in portions of the site where construction activities have temporarily or permanently ceased.
- H. Releases in Excess of Reportable Quantities.
  - 1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility or activity shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility or activity. This permit does not relieve the operator of the reporting requirements of 40 CFR part 117 and 40 CFR part 302. Where a release containing a hazardous substance in amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302, occurs during a 24 hour period:
    - a. The operator is required to notify the State Warning Point (800-210-0519 or 850-413-9911) as soon as he or she has knowledge of the discharge;
    - b. The operator shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and remedial steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and
    - c. The stormwater pollution prevention plan required under Part V of this permit must be modified within 14 calendar days of knowledge of the release: to provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the recurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.
  - 2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

**Developer**

- A. Notify WRA of your intent to commence construction. Sign the Notice of Intent form as operator of the storm water discharge facility and permittee and return to Water Resource Associates, Inc.
- B. Sign a Certification of Storm Water Pollution Prevention Plan and return it to Water Resource Associates, Inc.
- C. Notify WRA when it is time to submit a Notice of Termination as defined under Part E of the Water Resource Associates section of the SWPPP. Sign and return to Water Resource Associates, Inc. for submittal to FDEP a Notice of Termination form and certification.

**PRE-DEVELOPED SITE INFORMATION:**

- 1. Total site acreage: 9.2 ac. +/-
- 2. Land use: Vacant Pasture
- 3. Vegetation: Native grasses and other ground cover
- 4. Receiving waters or municipal separate storm water system: Master stormwater system that discharges to Cypress Creek
- 5. 25 Year/24 Hour rainfall depth: 8.5"
- 6. Soil types: FINE SANDS, DEPRESSIONAL MUCK AND CLEAN FILL

**PROJECT INFORMATION:**

- 1. Project type: Roadway, sidewalk and utility infrastructure
- 2. Anticipated construction sequence is as follows:
  - 1. Complete erosion control installation
  - 2. Clearing and grubbing
  - 3. Earthwork activities
  - 4. Storm water system construction
  - 5. Utility construction
  - 6. Base and pavement construction
  - 7. Final stabilization
- 3. Anticipated start date: FEBRUARY 2016
- 4. Anticipated completion date: SEPTEMBER 2016
- 5. Total acres disturbed: 9.2 ac. +/-
- 6. Pre-developed "CN" number: 80
- 7. Post-developed "CN" number: 98 for roadway and sidewalks
- 8. The storm water management system, upon completion and appropriate certification and as-built submittals will be operated and maintained by: CYPRESS CREEK TOWN CENTER POA, INC.
- 9. The potential source of pollution from this project is on-site development and construction activity.

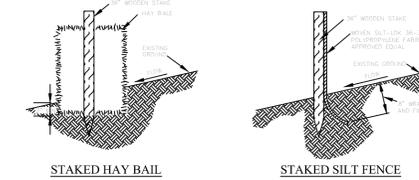
**GENERAL EROSION AND TURBIDITY CONTROL NOTES**

1. The Site Subcontractor shall be responsible for installation and maintenance of all erosion and turbidity controls and the quality and quantity of offsite or wetland discharges.
2. Prior to construction, the Site Subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewing agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriate techniques should be addressed to those agencies and/or discussed with the project engineer and owner.
3. The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for the this project should be made following assessment of the plans and project site specific factors and after consultations as needed with the project engineer and appropriate agencies. The Site Subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below:
  - A. Clay content in excavated materials and/or permeabilities rates
  - B. Depth of cut in ponds, trenches, or utility lines
  - C. Ambient ground water levels
  - D. Actual rainfall amounts and time of year relative to normal rainy seasons
  - E. Proximity to wetlands, water bodies or offsite properties
  - F. "Class" designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvest areas, etc.)
  - G. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
  - H. Fill height relative to natural grade and length and steepness of the proposed slopes
  - I. Existing topography and directions of surface flow
  - J. Type of equipment used
  - K. Project type
  - L. Duration of construction activities
  - M. Separation distance of onsite ponds
  - N. Ambient quality of surface and groundwater
  - O. Temporary stockpile locations and heights
4. At the onset of construction, the Site Subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
5. Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
6. The erosion and turbidity control measures shown herein are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the Site Subcontractor shall be included in the lump sum bid with no extras for materials and labor allowed.
7. Hay bales or silt screens shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.
8. Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of the project until all soil is stabilized.
9. No clay material shall be left exposed in any stormwater facility. If clay or sandy-clays are encountered during stormwater storage excavation, the Site Subcontractor shall notify the Engineer immediately before proceeding with further excavation. If the Engineer of Record has determined that such soils are non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency. If acid soils are left exposed at the permitted and designed depth the Site Subcontractor shall over-excavate the pond's bottom and side slopes by a minimum of twelve (12") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
10. The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
11. The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runoff from being discharged to wetland or other water bodies. It may be necessary to employ a combination of barriers, ditches and other erosion/turbidity control measures if conditions warrant.
12. Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and wetland buffers), sediment basins, or confined by an appropriate enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet State Water Quality Standards.
13. The Permittee shall schedule his operations such that the are unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations can follow immediately thereafter. Grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.
14. Water derived from various dewatering methods should be passed through sufficiently wide areas of existing upland vegetation to filter our excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until clarity is suitable to allow for its discharge. Plugging the outfalls from completed stormwater ponds may be needed to avoid discharge. However, such situations should be monitored closely to preclude berm failure if water levels rise too high.
15. Water can be transported around the site by the use of internal swales or by pumps and pipes.
16. Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, interceptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.
17. Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods include solid sod, seeding and mulching or hydromulching to provide a temporary or permanent grass cover mulch blankets, filter fabrics, etc., can be employed to provide vegetative cover.
18. Energy dissipaters (such as rip rap, a gravel bed, hay bales, etc.) shall be installed at the discharge point of pipes or swales if scouring is observed.
19. Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.
20. Implement storm drain inlet protection (hay bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.

21. Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
22. If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as alum to flocculate or coagulate the sediment particles.
23. Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.
24. All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
25. Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
26. Non-potable water shall be sprayed on all exposed earth surfaces during clearing grading, earth moving, and other site preparation activities. The exposed earth shall be watered throughout the day to minimize dust.
27. If the above controls remain ineffective in precluding release of turbid water, especially during pond or utility line dewatering, then the well points or sock drains to withdraw groundwater which may already be clear enough to allow for direct discharge to wetlands.
28. Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur throughout construction as necessary to insure the above methods are working suitably. This may be needed daily, if conditions so warrant. Site Subcontractors are encouraged to obtain and thoroughly review The Florida Development Manual: A Guide to Sound Land and Water Management, which was developed by the State of Florida Department of Environmental Protection in 1988. This provides fairly in-depth discussions of recommended techniques and also provides specific design and technical standards. A copy of this document is available for review at Water Resource Associates, Inc.
29. Spoil disposal locations are to be located outside of all wetland JD lines and buffer lines shown on the plan. Spoil disposal locations must be self-contained, in that erosion control measures such as silt fence and/or hay bails must be installed and maintained around each disposal area to prevent sediment runoff beyond the limits of construction.
30. Fill stockpiles are to be located outside of all wetland JD lines and buffer lines shown on the plan. Fill stockpiles must be self-contained, in that erosion control measures such as silt fence and/or hay bails must be installed and maintained around each stockpile to prevent sediment runoff beyond the limits of construction.

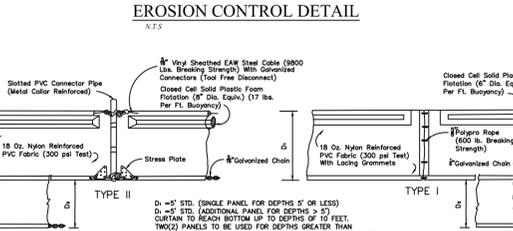
**Pond/Lake Excavation Note**

No excavation shall extend below the permitted design depths/elevations shown on the drawings, unless additional testing supports otherwise; and no lower semi-confining unit clayey soil material and/or no limestone materials shall be excavated, regardless if these materials are encountered within the permitted excavation depths/elevations. If any lower semi-confining unit clayey soil materials or limestone materials are encountered above the permitted depths/elevations, then excavation operations shall cease in the general area and the Engineer of Record shall be notified immediately.

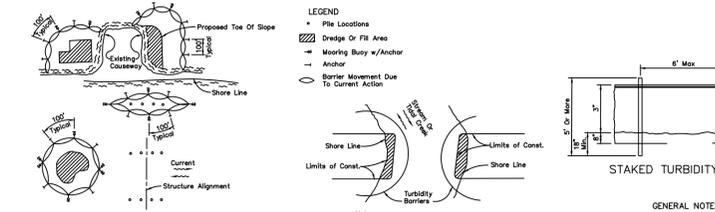


**EROSION CONTROL NOTES:**

1. TO PREVENT SEDIMENTARY RUNOFF DURING CONSTRUCTION, STAKED HAY BALES, EROSION CONTROL BARRIERS AND MATS SHALL BE TO BE PLACED AT STORM INLETS, OUTFALL LOCATIONS AND ADJACENT PROPERTY LINES AS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SEDIMENTATION BARRIERS IN A WORKING MANNER FOR THE DURATION OF CONSTRUCTION AND SHALL BE CRIMINALLY LIABLE IF AFTER FULL EVALUATION OF THE CONSTRUCTION AND SOILS ARE DETERMINED TO BE OF THE DEPTH OF THE SEDIMENTATION BARRIERS SHALL BE IMMEDIATELY REMOVED AND REPLACED IN THE SAME AREA. IN ADDITION TO SPECIFIED EROSION CONTROL LOCATIONS, THE CONTRACTOR SHALL PERFORM DAILY SITE INSPECTIONS FOR POTENTIAL EROSION PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE EROSION CONTROL IMMEDIATELY UPON COMMENCEMENT OF CONSTRUCTION AND SHALL BE CRIMINALLY LIABLE IF EROSION RUN OFF OCCURRED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF ALL CONSTRUCTION AND FINAL STABILIZATION.
2. CONTRACTOR TO PROVIDE CONSTRUCTION ACTIVITIES AND EQUIPMENT TO A MINIMUM 10' OUTFALL LOCATIONS WHICH DISCHARGE TO EXISTING JURISDICTIONAL AREAS. EROSION CONTROL BARRIERS SHALL BE USED IN LEU OF STAKED HAY BALES/ SILT SCREENS WHERE WARRANTED.
3. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN PLACE UNTIL THE SITE HAS BEEN STABILIZED AND REVEGETATED.
4. CONSTRUCTION METHODS AND MATERIALS TO BE USED IN ACCORDANCE WITH SECTION 104 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION SPECIFICATIONS. 18\"/>



**NOTE:** COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



**GENERAL NOTES**

1. Floating turbidity barriers are to be paid for under the contract unit price for Floating Turbidity Barrier, LF.
2. Staked turbidity barriers are to be paid for under the contract unit price for Floating Turbidity Barrier, LF.

**TURBIDITY BARRIER DETAIL (FDOT INDEX 103)**



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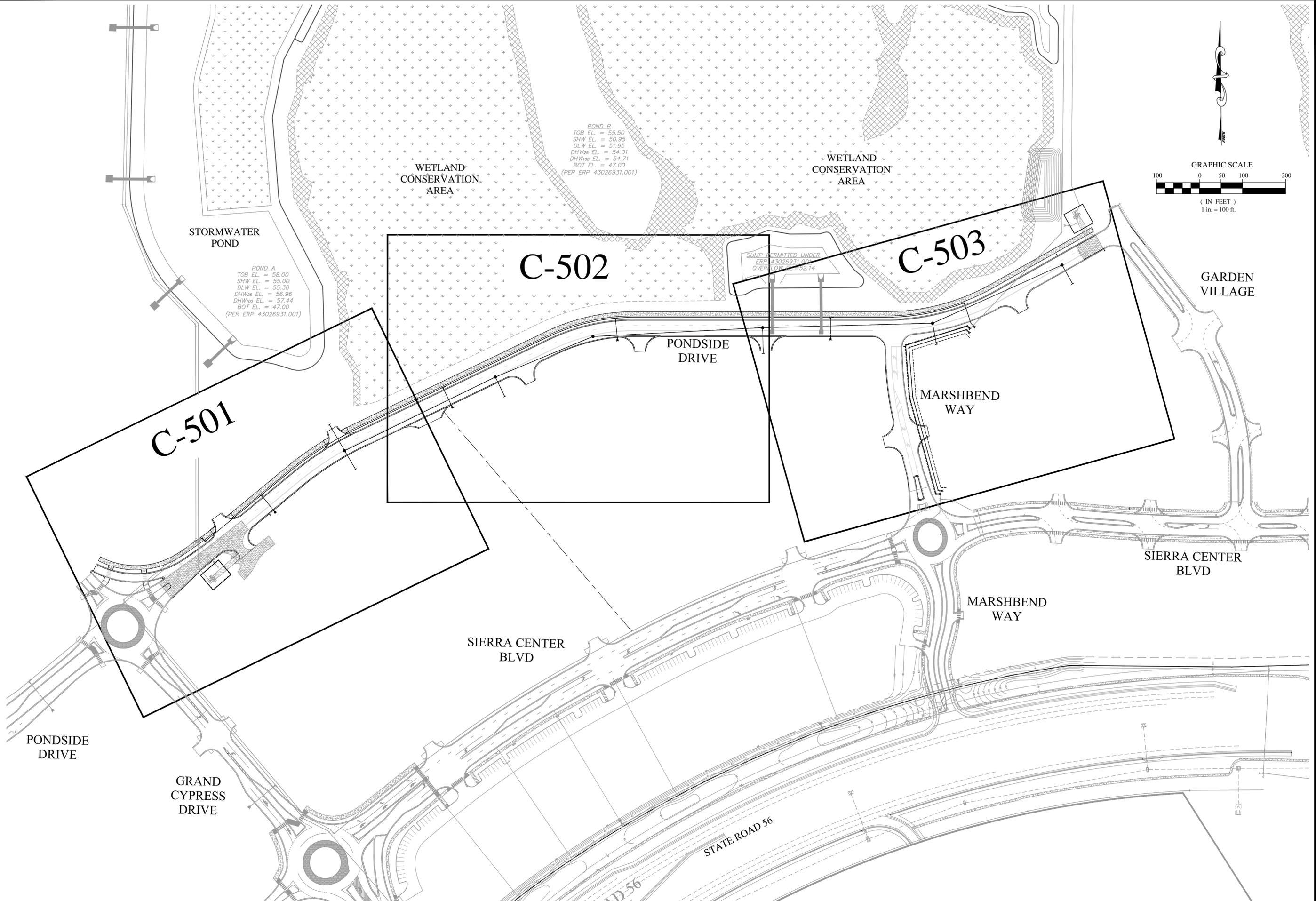
**Engineering ~ Environmental**  
**Water Resource Associates, Inc.**  
 4260 W. Lindbergh Ave.  
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 8043 Corner Creek Blvd., Suite 210  
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 www.waterresource.com CA 00007662  
 Phone: 813.265.3130 941.275.9721

**WRA**  
**STORMWATER POLLUTION PREVENTION PLAN**

**CYPRESS CREEK TOWN CENTER NORTH (POND SIDE DRIVE EXTENSION)**  
 ISSUED FOR: PERMITTING  
 JOB # 0967 SEC. 27  
 TOWN 265  
 RNG-19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC  
 JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
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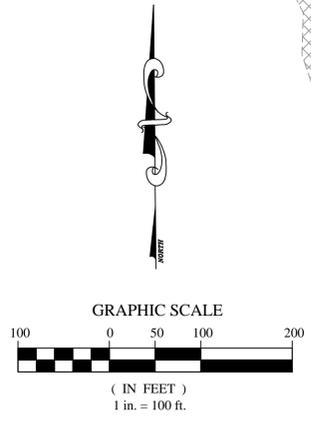
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**POND A**  
 TOB EL. = 58.00  
 SHW EL. = 55.00  
 DLW EL. = 55.30  
 DHW<sub>25</sub> EL. = 56.96  
 DHW<sub>100</sub> EL. = 57.44  
 BOT EL. = 47.00  
 (PER ERP 43026931.001)

**POND B**  
 TOB EL. = 55.50  
 SHW EL. = 50.95  
 DLW EL. = 51.95  
 DHW<sub>25</sub> EL. = 54.01  
 DHW<sub>100</sub> EL. = 54.71  
 BOT EL. = 47.00  
 (PER ERP 43026931.001)

SUMP PERMITTED UNDER  
 ERP 43026931.00  
 OVERFLOW EL. = 52.14



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**OVERALL WATER AND SEWER PLAN**

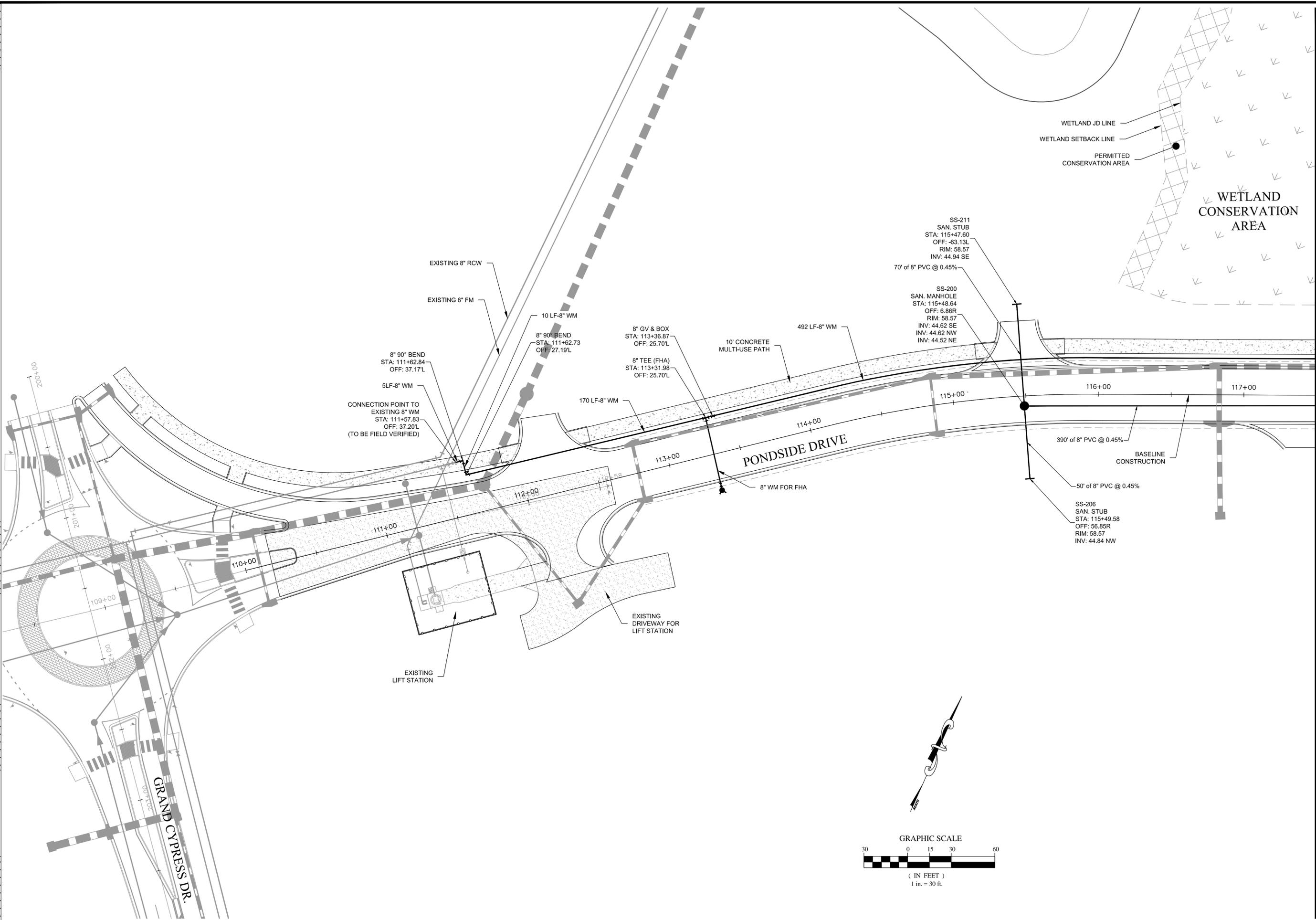
**CYPRESS CREEK TOWN CENTER NORTH (PONDSIDES DRIVE EXTENSION)**  
 ISSUED FOR: PERMITTING  
 JOB # 0967

JOSEPH A. CIMINO  
 FL P.E. # 67540

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MATCHLINE - SEE SHEET C-502

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DESIGNED: E.L.R. DRAWN: E.L.R. APPROVED: J.A.C.  
 TOWN: 26S. RANG: 19E.

ISSUED FOR: PERMITTING  
 JOB #: 1057

JOSEPH A. CIMINO  
 FL P.E. # 67540

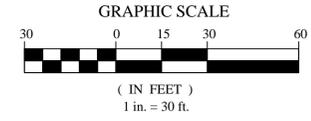
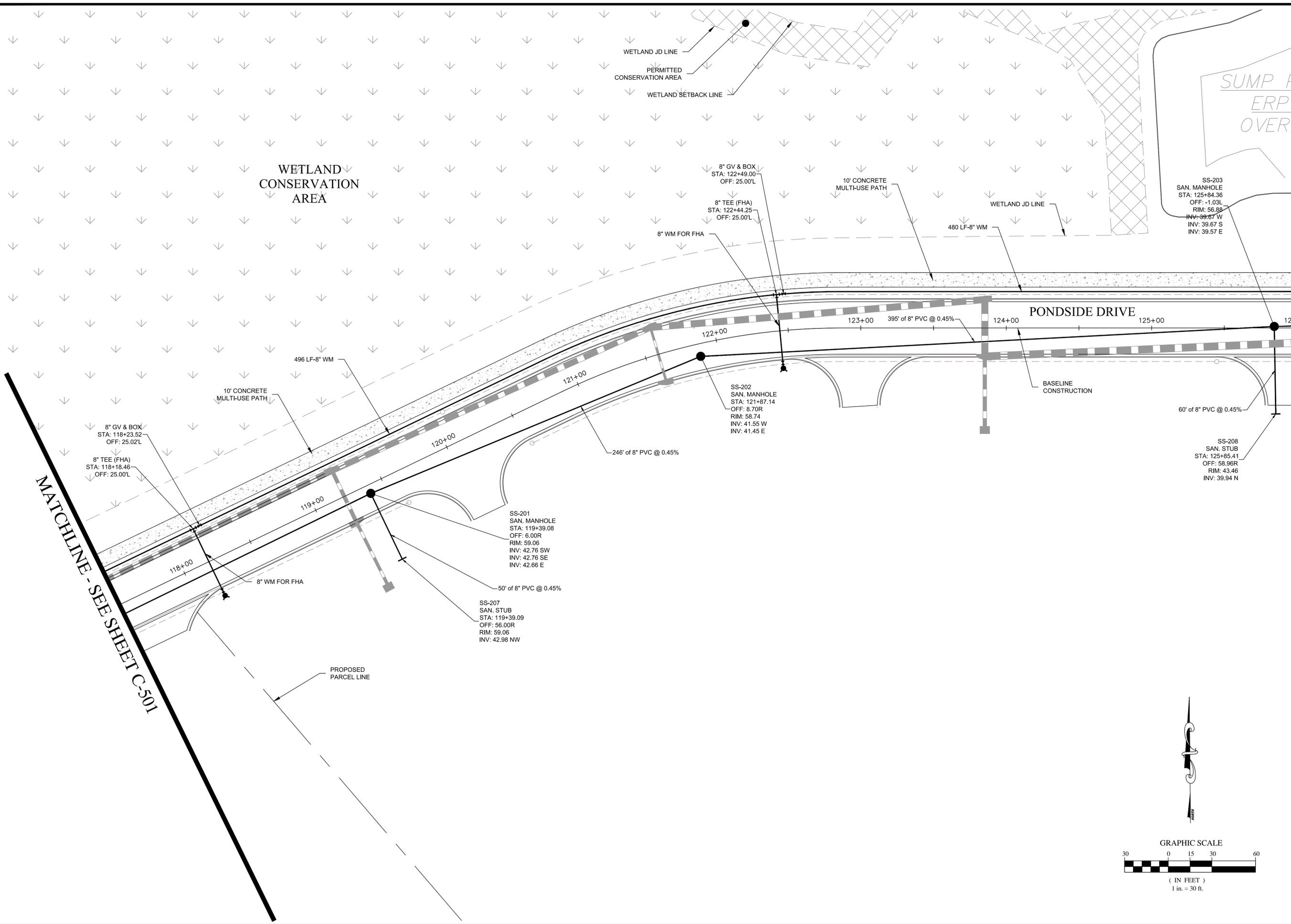
Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-501

WATER AND SEWER  
 PLAN

CYPRESS CREEK TOWN  
 CENTER NORTH  
 (POND SIDE DRIVE EXTENSION)

2015 WRA  
 Plot Date: 10/20/2015 10:52:42 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCOS SA INC. - CCTC NORTH CADDILLAC NORTH EXTENSION\PLAN, WATER & SEWER\DWG



MATCHLINE - SEE SHEET C-503

MATCHLINE - SEE SHEET C-501

| NO. | DATE | DESCRIPTION | BY |
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Engineering ~ Environmental  
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 Tampa, Florida 33624  
 8043 Corner Creek Blvd., Suite 210  
 University Park, Florida 34201  
 www.wraengineering.com CA 00007652  
 Phone: 813.265.3130 941.275.9721



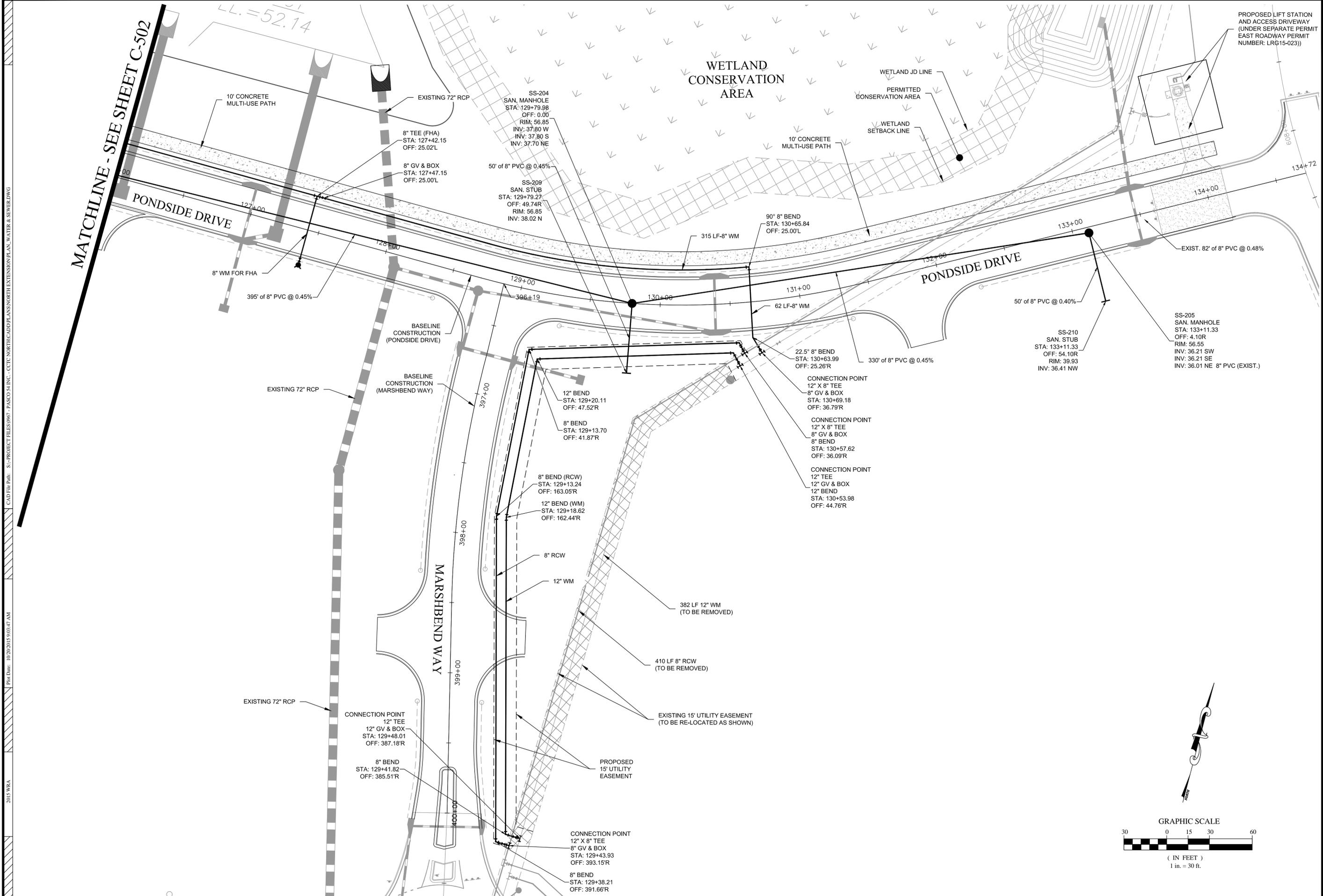
WATER AND SEWER  
 PLAN

CYPRESS CREEK TOWN  
 CENTER NORTH  
 (PONDSIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
 JOB #: 0967  
 TOWN: 26S  
 RANG: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929



MATCHLINE - SEE SHEET C-502

PROPOSED LIFT STATION AND ACCESS DRIVEWAY (UNDER SEPARATE PERMIT EAST ROADWAY PERMIT NUMBER: LRG15-023)

| NO. | DATE | DESCRIPTION | BY |
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 University Park, Florida 34201  
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 Phone: 813.265.3130 941.275.9721



DESIGNED: ELR DRAWN: ELR APPROVED: JAC  
 TOWN: 26S RANGE: 19E  
 JOB #: 0967  
 SEC: 27  
 ISSUED FOR: PERMITTING

WATER AND SEWER PLAN  
 CYPRESS CREEK TOWN  
 CENTER NORTH  
 (PONDSIDES DRIVE EXTENSION)

JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-503

2015 WRA  
 Plot Date: 10/20/2015 9:03:47 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCOS SA INC. - CCTC NORTH CADD\PLAN NORTH EXTENSION\PLAN, WATER & SEWER.DWG

2015 WRA  
Plot Date: 10/20/15  
Plot Desc: 102015 PASCO UT  
CAD File Path: S:\PROJECT FILES\9067 - PASCO S.U. INC. - C.C.T.C. NORTH CREEK DRIVE POND SIDE NORTH EXTENSION\DETAILS - UTILITY.DWG

### PIPE RESTRAINT LENGTHS IN FEET COMMON FITTINGS

| WATER MAINS - TEST PRESSURE 150 PSI |              |         |     |     |      |          |
|-------------------------------------|--------------|---------|-----|-----|------|----------|
| PIPE SIZE                           | FITTING TYPE |         |     |     |      | DEAD END |
|                                     | 11-1/4"      | 22-1/2" | 45" | 90" |      |          |
| 4"                                  | 2'           | 4'      | 8'  | 20' | 45'  |          |
| 6"                                  | 3'           | 6'      | 12' | 28' | 63'  |          |
| 8"                                  | 4'           | 7'      | 15' | 36' | 82'  |          |
| 10"                                 | 4'           | 9'      | 18' | 43' | 98'  |          |
| 12"                                 | 5'           | 10'     | 21' | 50' | 116' |          |
| 16"                                 | 6'           | 13'     | 26' | 63' | 148' |          |
| 20"                                 | 7'           | 15'     | 31' | 76' | 179' |          |
| 24"                                 | 9'           | 17'     | 36' | 87' | 208' |          |

| FORCE MAINS - TEST PRESSURE 100 PSI |              |         |     |     |      |          |
|-------------------------------------|--------------|---------|-----|-----|------|----------|
| PIPE SIZE                           | FITTING TYPE |         |     |     |      | DEAD END |
|                                     | 11-1/4"      | 22-1/2" | 45" | 90" |      |          |
| 4"                                  | 1'           | 3'      | 6'  | 13' | 30'  |          |
| 6"                                  | 2'           | 4'      | 8'  | 19' | 42'  |          |
| 8"                                  | 2'           | 5'      | 10' | 24' | 55'  |          |
| 10"                                 | 3'           | 6'      | 12' | 29' | 66'  |          |
| 12"                                 | 3'           | 7'      | 14' | 34' | 77'  |          |
| 16"                                 | 4'           | 8'      | 18' | 42' | 99'  |          |
| 20"                                 | 5'           | 10'     | 21' | 50' | 119' |          |
| 24"                                 | 6'           | 11'     | 24' | 58' | 139' |          |

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE FITTING ALONG THE PIPE IN BOTH DIRECTIONS (EXCEPT DEAD ENDS).

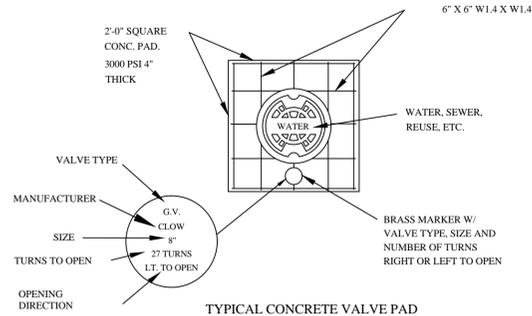
|         |          |   |   |
|---------|----------|---|---|
| CREATED | 02/24/03 | RESTRAINED JOINT TABLE<br>COMMON FITTINGS | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES                    | DETAIL 28   |

### PIPE RESTRAINT LENGTHS IN FEET TEES (BRANCH SIDE)

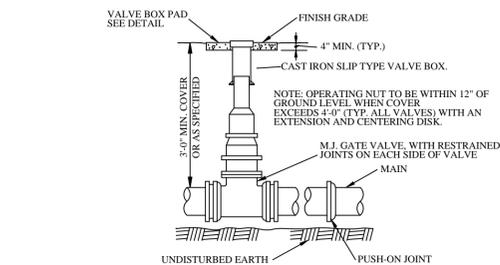
| WATER MAINS - TEST PRESSURE 150 PSI |             |     |     |     |     |     |     |      |      |
|-------------------------------------|-------------|-----|-----|-----|-----|-----|-----|------|------|
| RUN SIZE                            | BRANCH SIZE |     |     |     |     |     |     |      |      |
|                                     | 3"          | 4"  | 6"  | 8"  | 10" | 12" | 16" | 20"  | 24"  |
| 3"                                  | 6'          | 14' | 30' | —   | —   | —   | —   | —    | —    |
| 4"                                  | 2'          | 11' | 28' | 44' | —   | —   | —   | —    | —    |
| 6"                                  | 1'          | 2'  | 22' | 40' | 52' | —   | —   | —    | —    |
| 8"                                  | 1'          | 1'  | 16' | 35' | 48' | 62' | —   | —    | —    |
| 10"                                 | 1'          | 1'  | 10' | 30' | 44' | 58' | 83' | —    | —    |
| 12"                                 | 1'          | 1'  | 3'  | 25' | 40' | 55' | 80' | 103' | —    |
| 16"                                 | 1'          | 1'  | 1'  | 14' | 31' | 48' | 75' | 98'  | 119' |
| 20"                                 | 1'          | 1'  | 1'  | 2'  | 22' | 40' | 69' | 94'  | 116' |
| 24"                                 | 1'          | 1'  | 1'  | 1'  | 11' | 31' | 63' | 89'  | 111' |

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE TEE ALONG THE BRANCH FOR THE DISTANCE INDICATED. A MINIMUM OF 5 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALUG TYPE RESTRAINERS ARE REQUIRED ON ALL JOINTS.

|         |          |  |   |
|---------|----------|--|---|
| CREATED | 02/24/03 | RESTRAINED JOINT TABLE<br>TEES (BRANCH SIDE) | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES                       | DETAIL 29   |

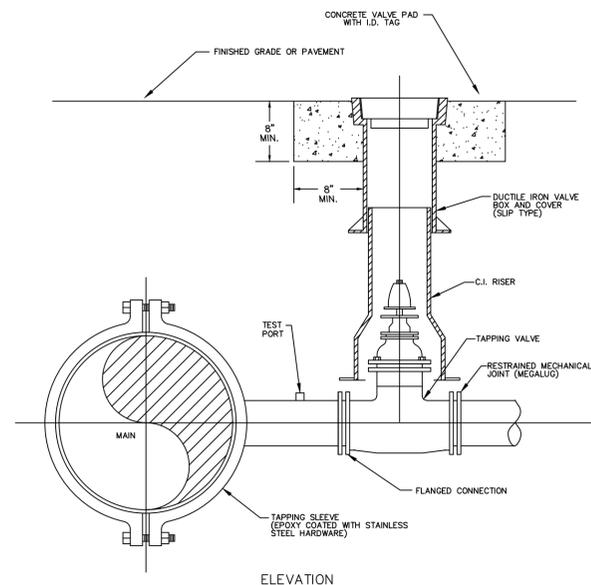


TYPICAL CONCRETE VALVE PAD



VALVE BOX DETAIL  
SLIP TYPE

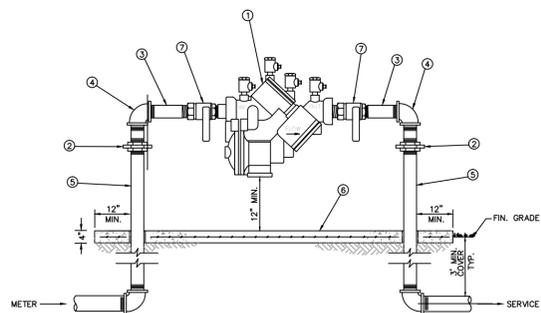
|         |          |                               |   |
|---------|----------|-------------------------------|---|
| CREATED | 02/24/03 | VALVE BOX DETAIL<br>SLIP TYPE | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES        | DETAIL 27   |



ELEVATION

NOTES:  
- SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.  
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.  
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

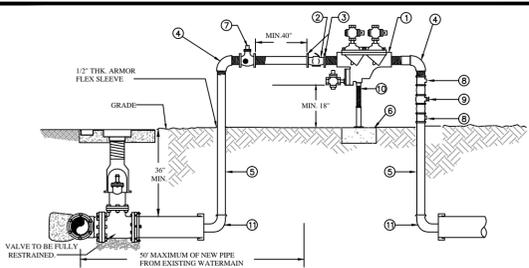
|         |          |  |   |
|---------|----------|--|---|
| CREATED | 02/24/03 | WATER, REUSE, AND FORCE MAIN<br>TAPPING DETAIL W/ VALVE LOCATION | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES   | DETAIL 34   |



| ITEM | QUANT. | DESCRIPTION   |
|------|--------|---|
| 1    | 1      | BACKFLOW PREVENTER ASSEMBLY, REDUCED PRESSURE ZONE    |
| 2    | 2      | UNIONS - GALV.  |
| 3    | 2      | NIPPLES - BRASS                                       |
| 4    | 2      | ELBOWS - GALV. 90°                                    |
| 5    | 2      | RISER - GALV.   |
| 6    | *      | CONCRETE SLAB   |
| 7    | 2      | BALL VALVES - BRASS OR S.S. (PROVIDED WITH BFP ASS'Y) |

NOTE:  
- FIELD ADJUST AND CUT ITEM 5 TO THE PROPER LENGTH.  
- MINIMUM CLEARANCE OF 24" TO BE MAINTAINED AROUND DEVICE FOR TESTING.  
- ENTIRE ASSEMBLY TO BE PAINTED SAFETY BLUE.  
- CONCRETE SLAB TO EXTEND 12" MIN. AROUND ENTIRE DEVICE.  
- DEVICE MUST BE LISTED WITH THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.

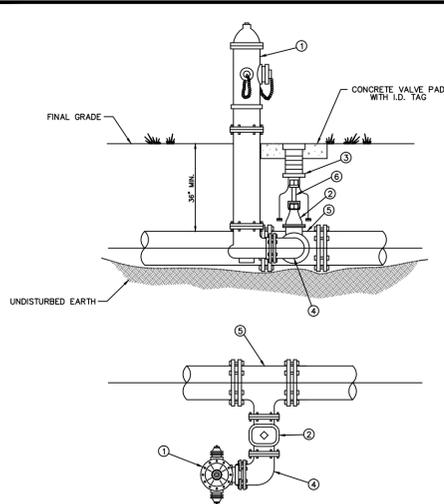
|         |          |  |   |
|---------|----------|--|---|
| CREATED | 02/24/03 | REDUCED PRESSURE<br>BACKFLOW PREVENTER<br>(SINGLE SERVICE: 3/4", 1", 1-1/2", 2") | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES   | DETAIL 12   |



| ITEM | QUANT. | DESCRIPTION   |
|------|--------|---|
| 1    | 1      | 2" BACKFLOW PREVENTER ASSEMBLY, REDUCED PRESSURE ZONE |
| 2    | 1      | 2" METER FURNISHED BY PASCO COUNTY UTILITIES          |
| 3    | 2      | BRASS-METER FLANGES OR ADAPTORS                       |
| 4    | 2      | 2" ELBOWS - GALV. 90°                                 |
| 5    | 2      | 2" RISER - GALV.                                      |
| 6    | *      | CONCRETE SLAB   |
| 7    | 1      | 2" VALVE - BRASS OR S.S.                              |
| 8    | 2      | TEE/VALVES - BRASS OR S.S.                            |
| 9    | 1      | 2" GATE VALVE - BRASS OR S.S.                         |
| 10   | 1      | PIPE STAND (SUPPORT)                                  |
| 11   | 2      | M.J. CAP WITH 2" TAP                                  |

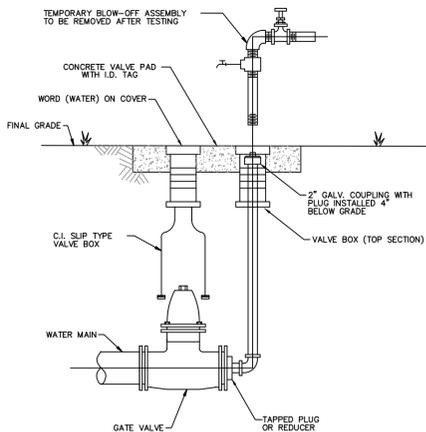
NOTE:  
- CONTRACTOR/CUSTOMER SHALL APPLY AT PASCO COUNTY UTILITIES CUSTOMER SERVICE FOR TEMPORARY WATER SERVICE AT LEAST THREE DAYS PRIOR TO REQUIRED SERVICE DATE.  
- THE METER WILL BE FURNISHED, INSTALLED AND INITIAL READING TAKEN BY PASCO COUNTY UTILITIES CERTIFIED BACKFLOW PREVENTION TECHNICIAN AT TIME OF METER INSTALLATION.  
- ALL FITTINGS, PIPING, VALVES AND MATERIALS INCLUDING THE PASCO COUNTY APPROVED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR/CUSTOMER.  
- CONTRACTOR/CUSTOMER FURNISHED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE MUST BE INSTALLED BEFORE THE METER IS INSTALLED BY PASCO COUNTY UTILITIES.  
- THE APPROVED BACKFLOW PREVENTION DEVICE SHALL BE TESTED AND CERTIFIED BY PASCO COUNTY UTILITIES CERTIFIED BACKFLOW PREVENTION TECHNICIAN AT TIME OF METER INSTALLATION.  
- CONTRACTOR/CUSTOMER SHALL PROTECT THE JUMPER/METER ASSEMBLY FROM DAMAGE.  
- CONTRACTOR/CUSTOMER IS RESPONSIBLE FOR BACTERIOLOGICAL TESTING AFTER CONNECTION OF TEMPORARY WATER SERVICE.  
- TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY SHALL NOT BE REMOVED UNTIL SYSTEM IS ACCEPTED AND DEPARTMENT OF HEALTH CERTIFICATION AND CLEARANCE FOR SERVICE FORM HAS BEEN RECEIVED BY PASCO COUNTY UTILITIES.  
- WHEN THE NEW SYSTEM IS ACCEPTED AND THE FINAL METER READING TAKEN BY PASCO COUNTY, THE TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY MUST BE COMPLETELY REMOVED FROM M.J. CAP TO M.J. CAP AND A NEW WATER MAIN IS TO BE CHLORINATED AND INSTALLED COMPLETING THE FINAL CONNECTION.  
- BY APPLYING FOR SERVICE, CONTRACTOR/CUSTOMER AGREES TO TAKE WATER SERVICE FROM PASCO COUNTY UTILITIES IN ACCORDANCE WITH THE APPROPRIATE RATE SCHEDULE AND IN ACCORDANCE WITH PASCO COUNTY UTILITIES RULES AND REGULATION.

|         |          |                                      |   |
|---------|----------|--------------------------------------|---|
| CREATED | 11/18/05 | TEMPORARY CONSTRUCTION WATER SERVICE | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED | 05/30/06 | PASCO COUNTY UTILITIES               | DETAIL 01   |



| ITEM | QUANT. | DESCRIPTION   |
|------|--------|---|
| 1    | 1      | HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW       |
| 2    | 1      | 6" VALVE, GATE, M.J. RESILIENT WEDGE                    |
| 3    | 1      | BOX, VALVE SLIP TYPE                                    |
| 4    | 1      | 6" BEND, ANCHORING, D.I.                                |
| 5    | 1      | TEE, ANCHORING, M.J.                                    |
| 6    | *      | VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE) |

|         |          |                                      |   |
|---------|----------|--------------------------------------|---|
| CREATED | 02/24/03 | FIRE HYDRANT<br>PARALLEL TO THE MAIN | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES               | DETAIL 22   |



NOTE:  
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED IN JOINT RESTRAINT TABLE (DETAIL 40)  
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

|         |          |                              |   |
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| CREATED | 02/24/03 | PERMANENT<br>BLOW-OFF DETAIL | PROVIDED FOR INFORMATIONAL<br>PURPOSES ONLY.<br>NO MODIFICATIONS WITHOUT<br>WRITTEN PCU APPROVAL. |
| REVISED |          | PASCO COUNTY UTILITIES       | DETAIL 25   |

| NO. | DATE | DESCRIPTION |
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4360 W. Lindbergh Ave.  
Tampa, Florida 33624  
8043 Cooper Creek Blvd., Suite 210  
University Park, Florida 34201  
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Phone: 813.265.3130 941.275.9721

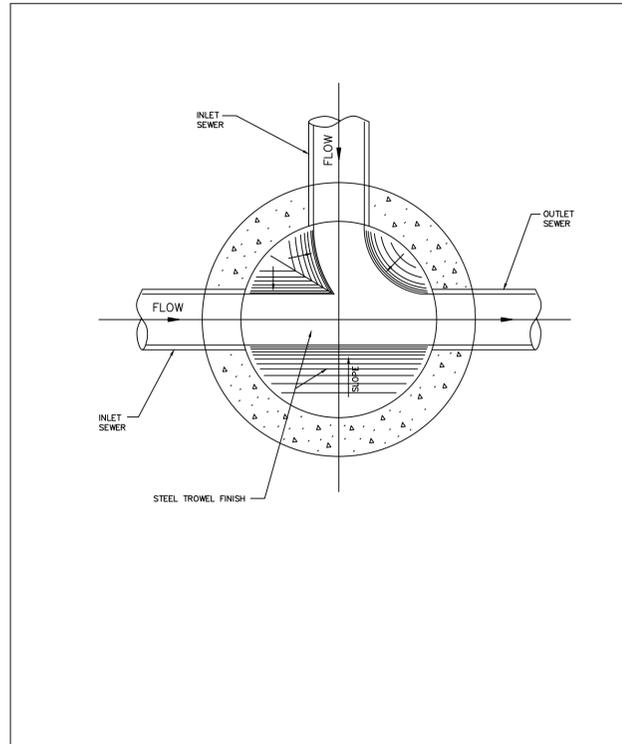


UTILITY DETAILS

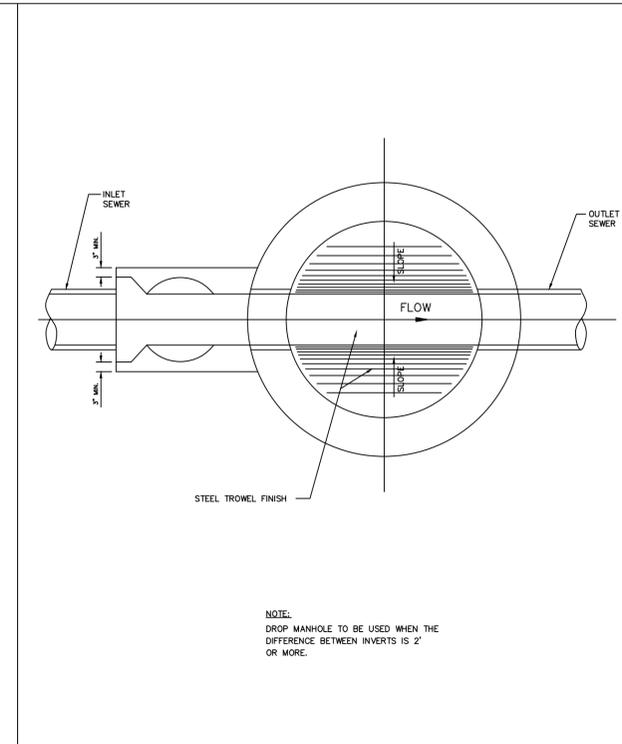
CYPRESS CREEK TOWN  
CENTER NORTH  
(PONDSIDE DRIVE EXTENSION)

ISSUED FOR: PERMITTING  
JOB #: 0967 SEC: 27 TOWN: 26S RING: 19E  
DESIGNED: E.L.R. DRAWN: E.L.R. APPROVED: J.A.C.  
JOSEPH A. CIMINO  
FL P.E. # 67540

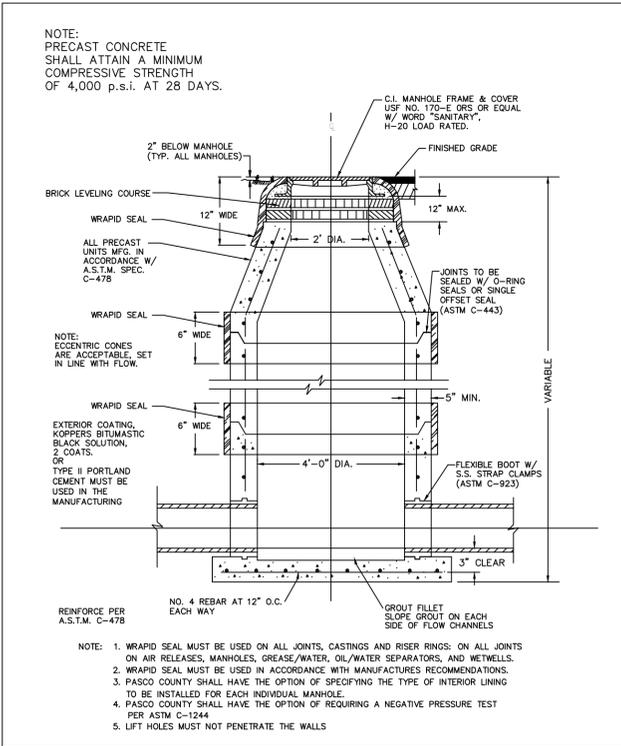
Plot Date: 10/20/15  
Datum: NGVD 1929



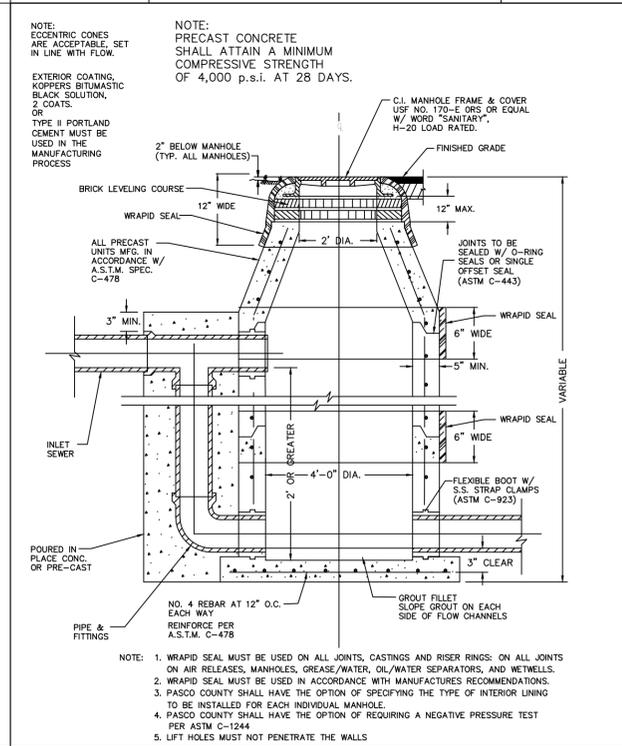
CREATED 02/24/03  
 REVISED \_\_\_\_\_  
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.  
**STANDARD MANHOLE (BENCH AND INVERTS)**  
 PASCO COUNTY UTILITIES  
 DETAIL 39



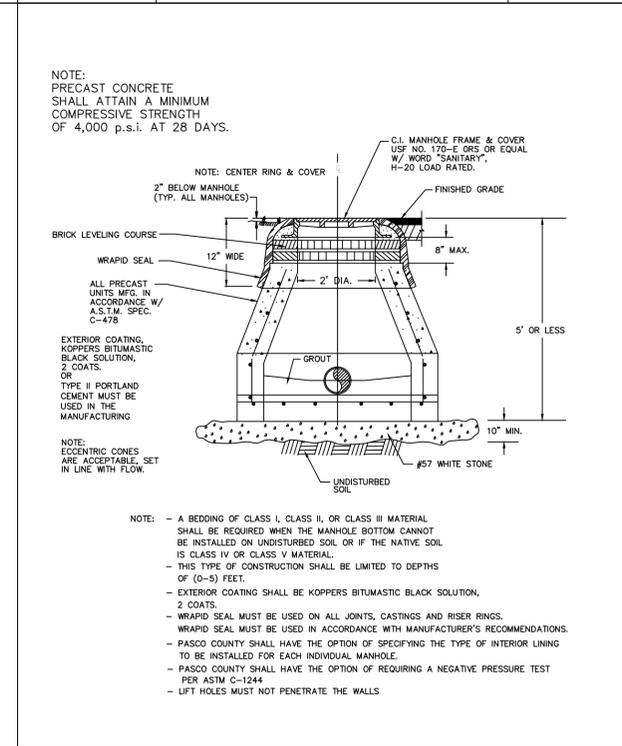
CREATED 02/24/03  
 REVISED \_\_\_\_\_  
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.  
**DROP MANHOLE (BENCH AND INVERTS)**  
 PASCO COUNTY UTILITIES  
 DETAIL 40



CREATED 02/24/03  
 REVISED \_\_\_\_\_  
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.  
**STANDARD MANHOLE**  
 PASCO COUNTY UTILITIES  
 DETAIL 41



CREATED 02/24/03  
 REVISED \_\_\_\_\_  
 PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL.  
**DROP MANHOLE**  
 PASCO COUNTY UTILITIES  
 DETAIL 42



CREATED 02/24/03  
 REVISED \_\_\_\_\_  
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**MANHOLE SHALLOW CONSTRUCTION (CLOSED BOTTOM)**  
 PASCO COUNTY UTILITIES  
 DETAIL 43

| NO. | DATE | DESCRIPTION |
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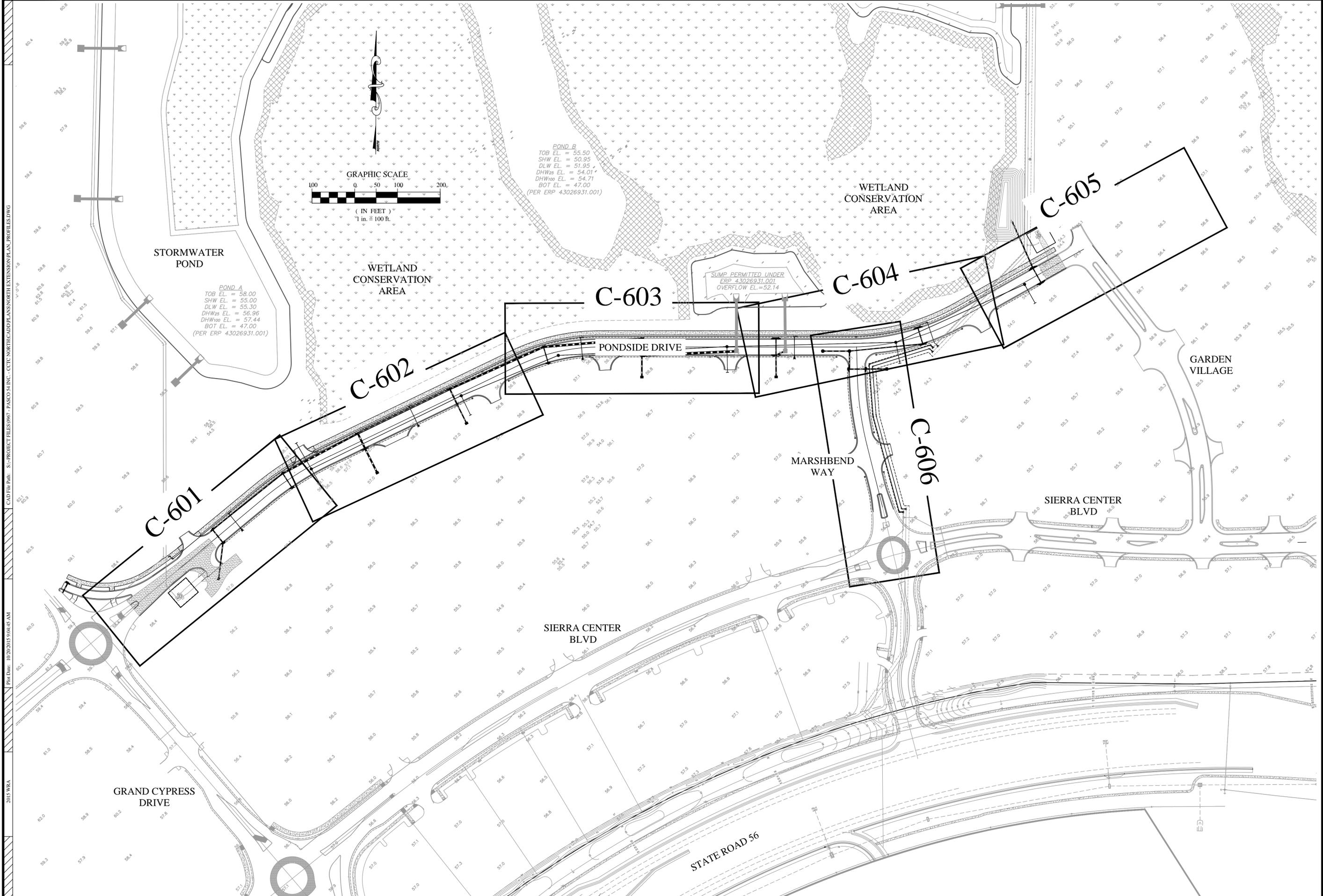


**UTILITY DETAILS**

**CYPRESS CREEK TOWN CENTER NORTH (PONDSIDE DRIVE EXTENSION)**

ISSUED FOR: PERMITTING  
 JOB # 0967  
 SEC. 27  
 TOWN 265  
 RING 19E  
 DESIGNED: E.L.R. DRAWN: E.L.R. APPROVED: J.A.C.

Plot Date: 10/20/2015  
 Datum: NGVD 1929



2015 WRA  
 Plot Date: 10/20/2015 09:45:45 AM  
 CAD File Path: S:\PROJECT FILES\0967 - PASCOS SA INC. - C/C/C NORTH CADDIS PLANS NORTH EXTENSION\PLAN - PROFILES.DWG

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**PLAN AND PROFILE**  
**KEY SHEET**

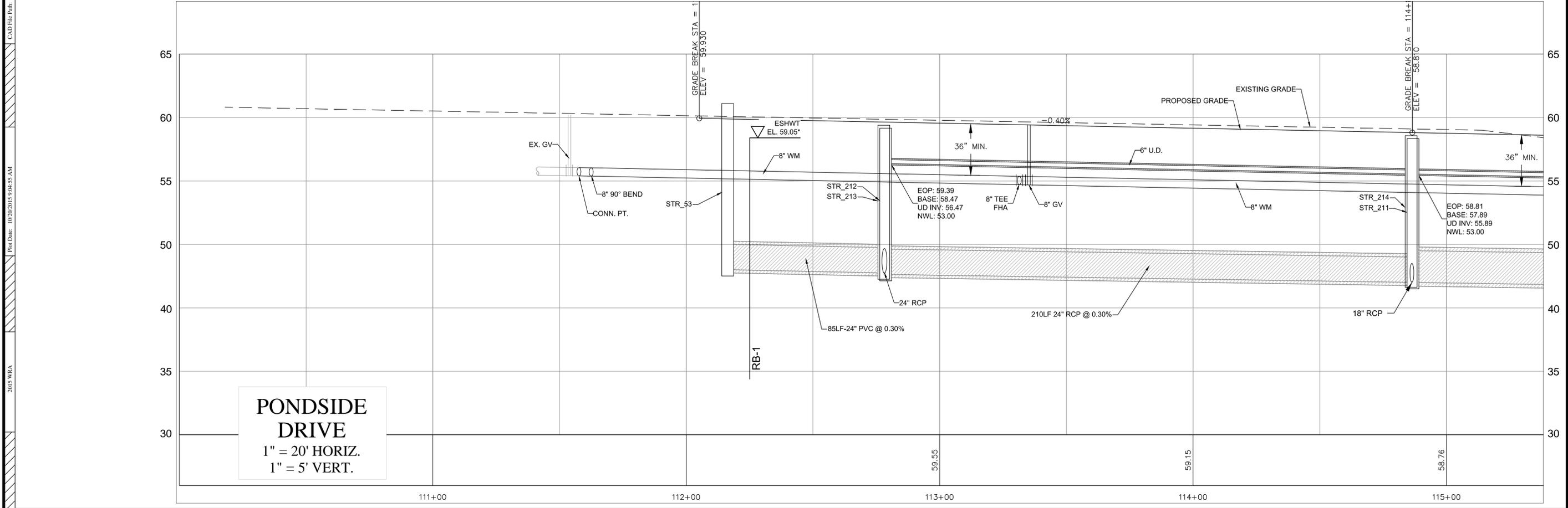
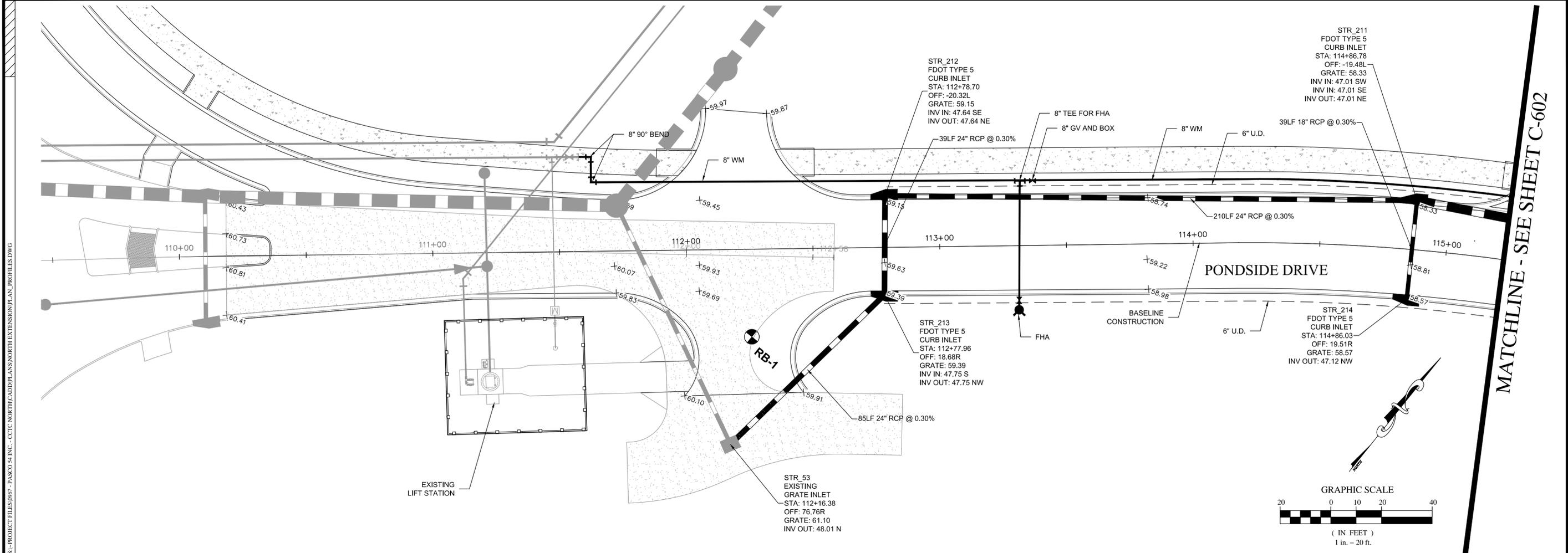
**CYPRESS CREEK TOWN**  
**CENTER NORTH**  
**(PONDSIDE DRIVE EXTENSION)**

ISSUED FOR: PERMITTING  
 JOB #: 0967

JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-600



**PONDSIDES DRIVE**  
 1" = 20' HORIZ.  
 1" = 5' VERT.

MATCHLINE - SEE SHEET C-602

| NO. | DATE | DESCRIPTION | BY |
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**PLAN AND PROFILE**

**CYPRESS CREEK TOWN  
 CENTER NORTH  
 (PONDSIDES DRIVE EXTENSION)**

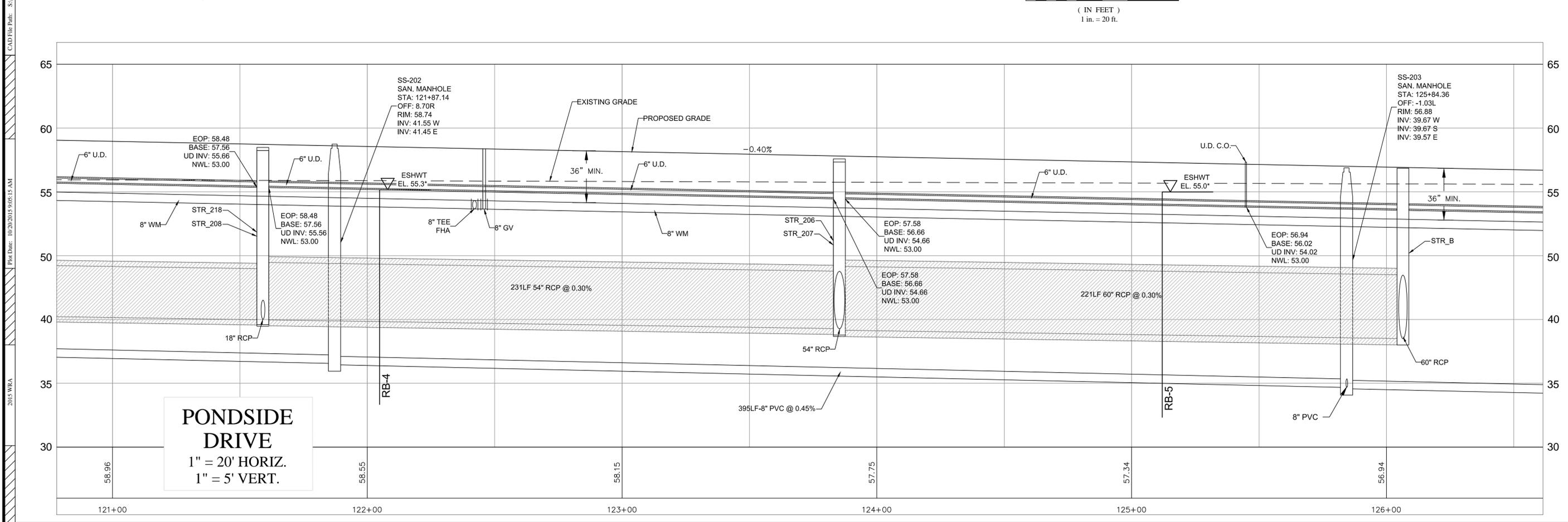
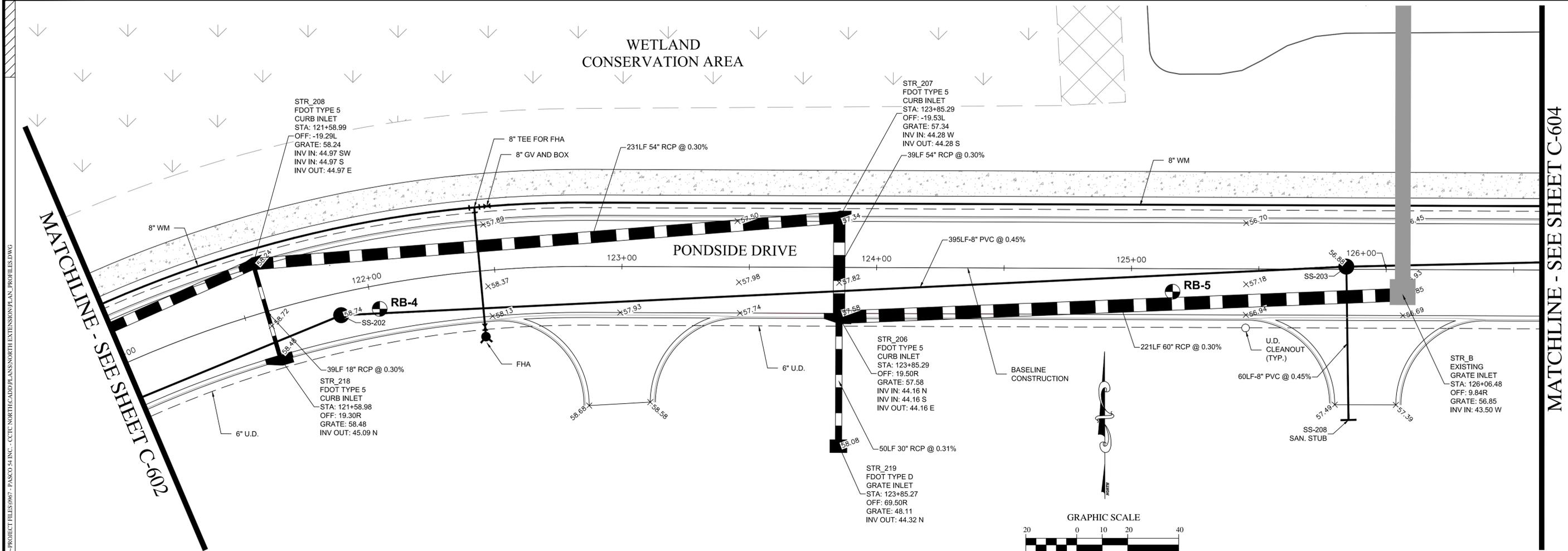
ISSUED FOR: PERMITTING  
 JOB #: 0967  
 SEC: 27  
 TOWN: 26S  
 RING: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-601

2015 WRA  
 Plot Date: 10/20/2015 9:45:55 AM  
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 CAD File Path: S:\PROJECT FILES\0967 - PASCOSI INC. - C/CTC NORTH/CADD/PLAN/NORTH EXTENSION/PLAN - PROFILES.DWG





2015 WRA  
 Plot Date: 10/20/2015 AM  
 Job # 0967  
 SEC: 27  
 TOWN: 26S  
 RANG: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC  
 CAD File Path: S:\PROJECT FILES\0967 - PASCAGO SA, INC. - C-CTC NORTH CADD\PLAN\EXTENSION\PLAN - PROFILES.DWG

**REVISIONS**

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| 6   |      |             |
| 5   |      |             |
| 4   |      |             |
| 3   |      |             |
| 2   |      |             |
| 1   |      |             |

**PLAN AND PROFILE**

**CYPRESS CREEK TOWN CENTER NORTH (PONDSIDES DRIVE EXTENSION)**

ISSUED FOR: PERMITTING  
 JOB # 0967  
 SEC: 27  
 TOWN: 26S  
 RANG: 19E  
 DESIGNED: ELR  
 DRAWN: ELR  
 APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540

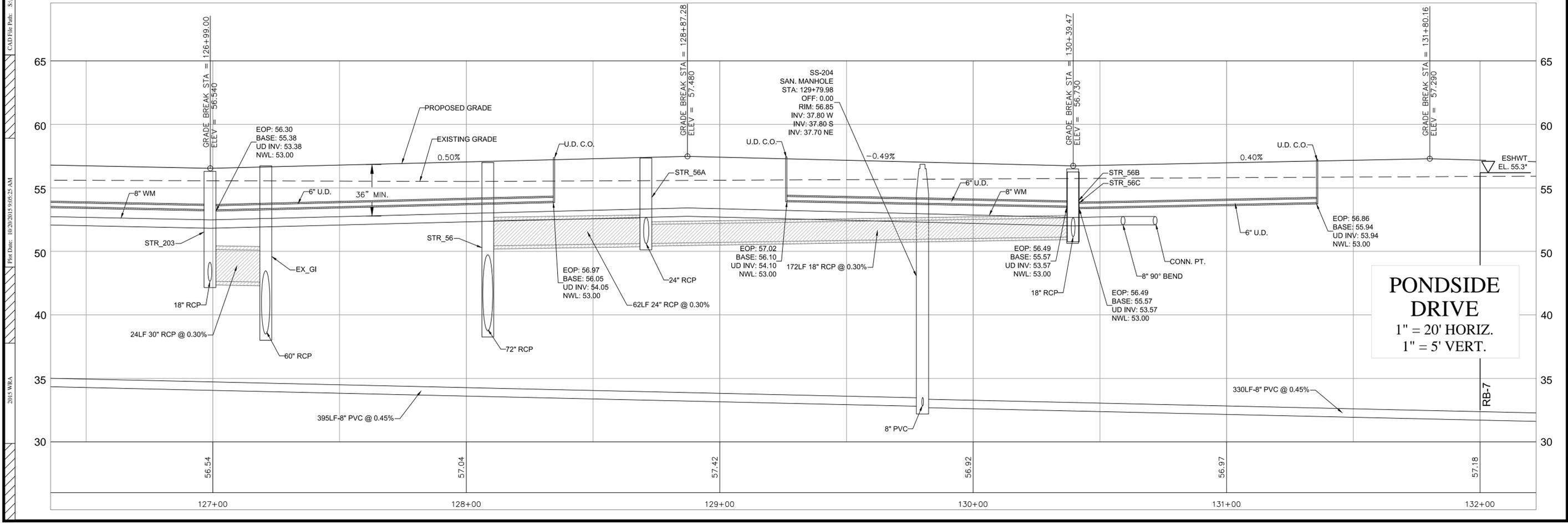
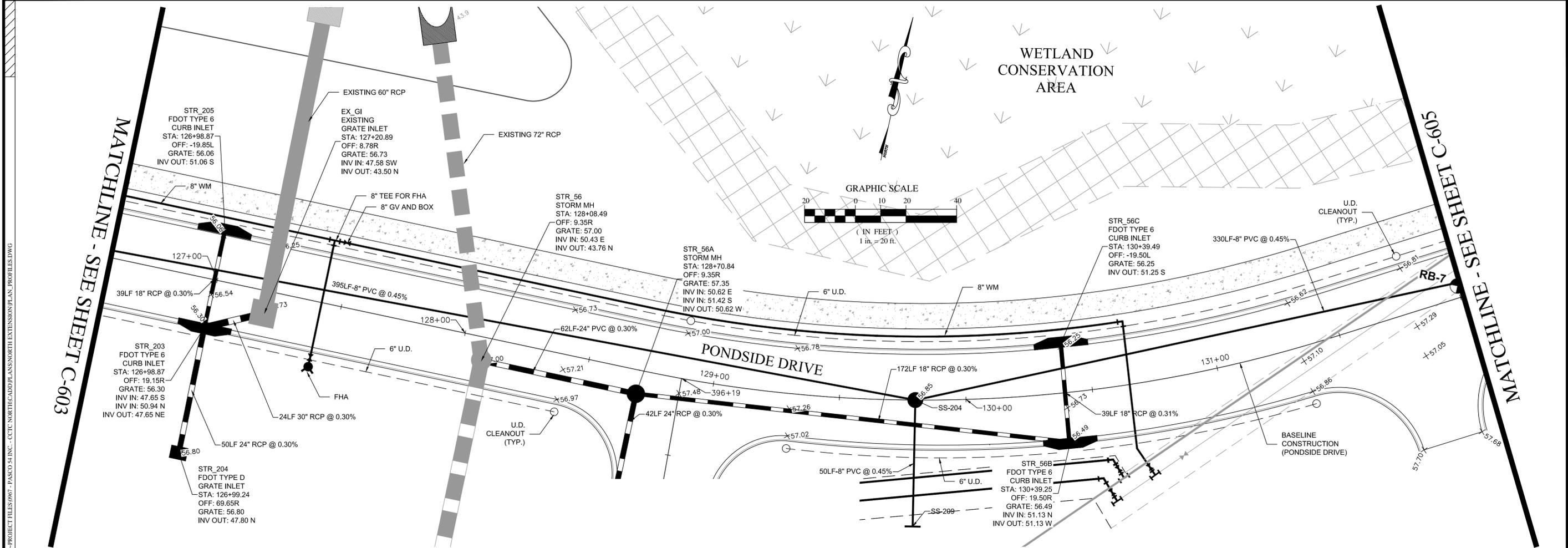
Plot Date: 10/20/2015  
 Datum: NGVD 1929

**C-603**

MATCHLINE - SEE SHEET C-604



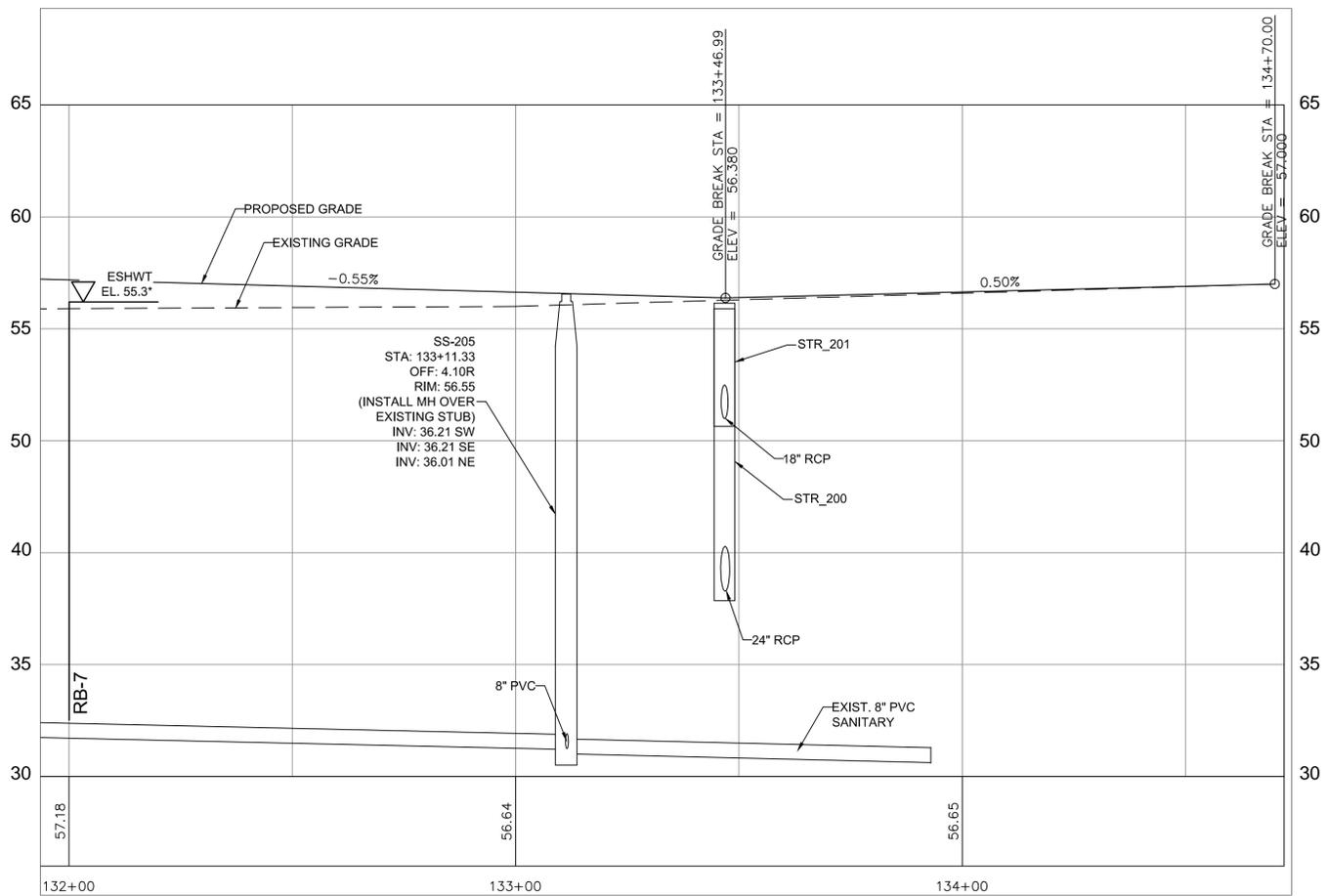
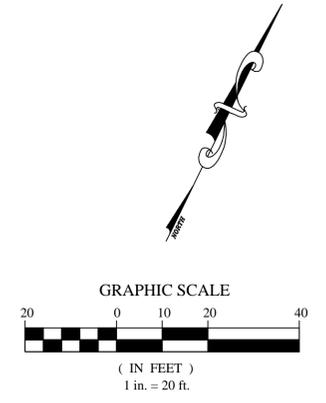
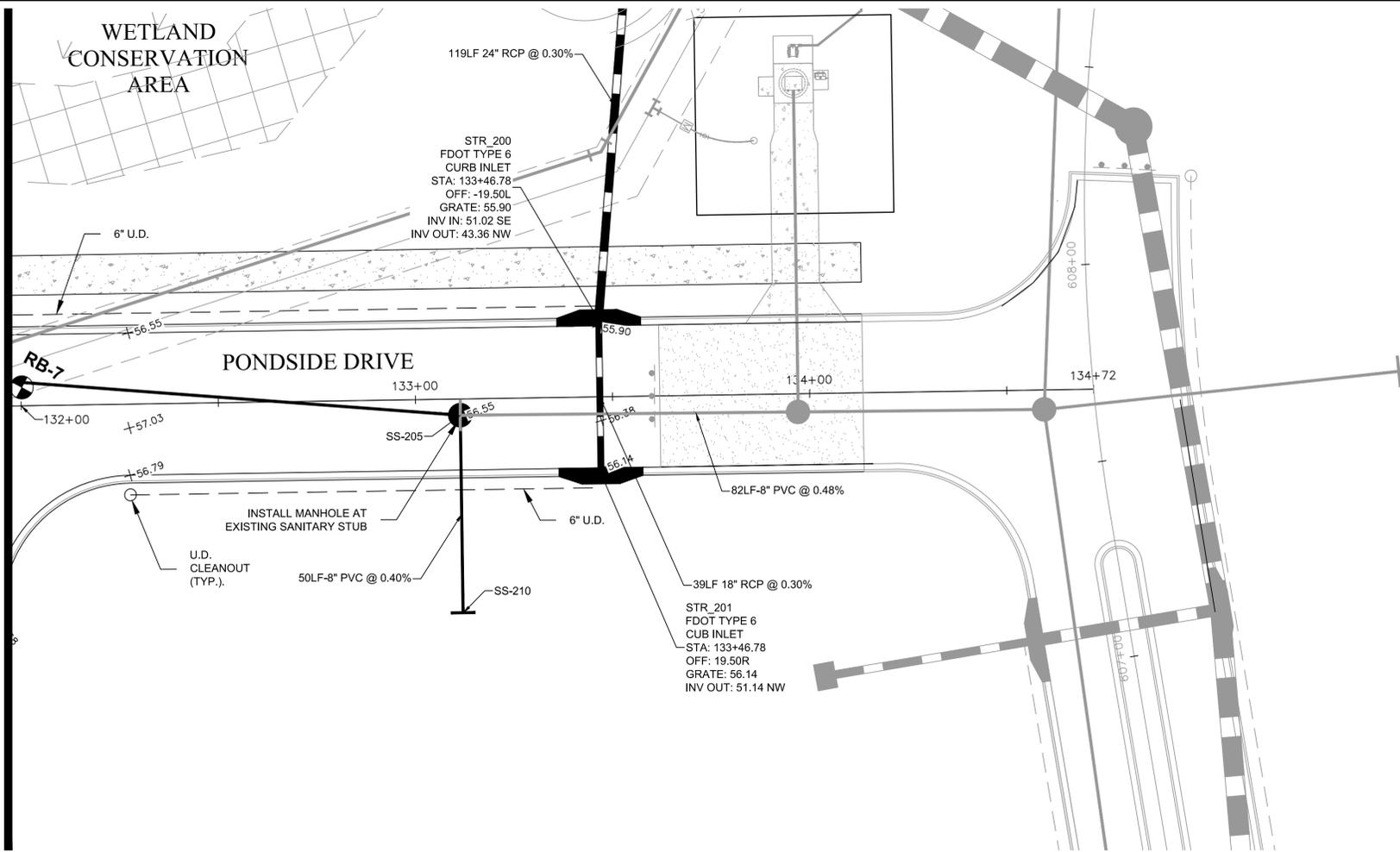
Engineering ~ Environmental  
**Water Resource**  
 4360 W. Lindbergh Ave.  
 Tampa, Florida 33624  
 8043 Corner Creek Blvd., Suite 210  
 University Park, Florida 34201  
 www.wraengineering.com CA 00007652  
 Phone: 813.265.3130 941.275.9721



CAD File Path: S:\PROJECT FILES\0967 - PASCOS 24 INC. - CCTC NORTH CADD\PLANS\NORTH EXTENSION\PLANS - PROFILES.DWG  
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 2015 WRA

2015 WRA  
Plot Date: 10/20/2015 10:55:35 AM  
CAD File Path: S:\PROJECT FILES\0967 - PASCAGO ST INC. - CCTC NORTH CADDILLAC AND NORTH EXTENSION\PLAN - PROFILES.DWG

MATCHLINE - SEE SHEET C-604



**PONDSIDES DRIVE**  
1" = 20' HORIZ.  
1" = 5' VERT.

| NO. | DATE | DESCRIPTION | BY |
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| 6   |      |             |    |
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| 2   |      |             |    |
| 1   |      |             |    |

**Engineering ~ Environmental**  
**Water Resource**  
4360 W. Lindbergh Ave.  
Tampa, Florida 33624  
8043 Corner Creek Blvd., Suite 210  
University Park, Florida 34201  
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**PLAN AND PROFILE**

**CYPRESS CREEK TOWN  
CENTER NORTH  
(PONDSIDES DRIVE EXTENSION)**

ISSUED FOR: PERMITTING  
JOB #: 0967

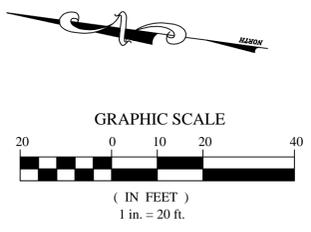
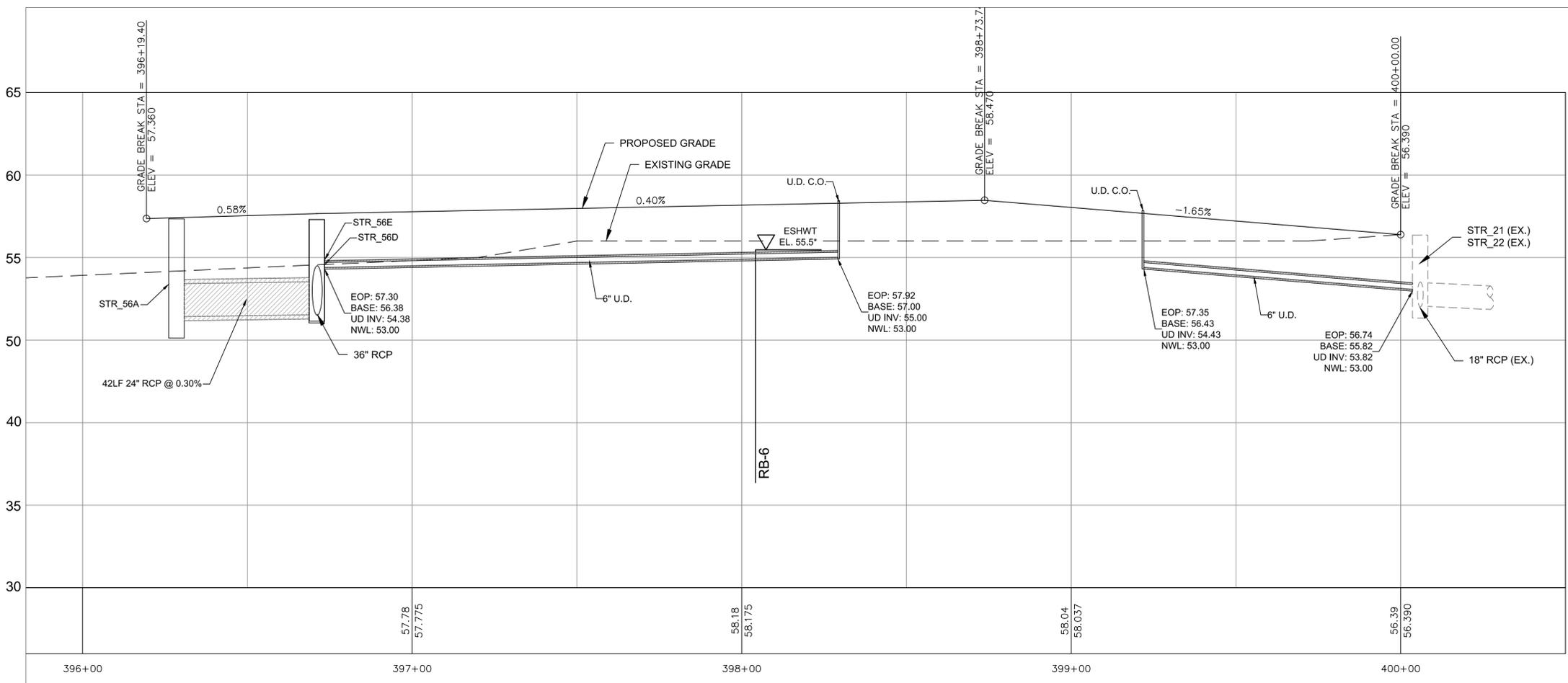
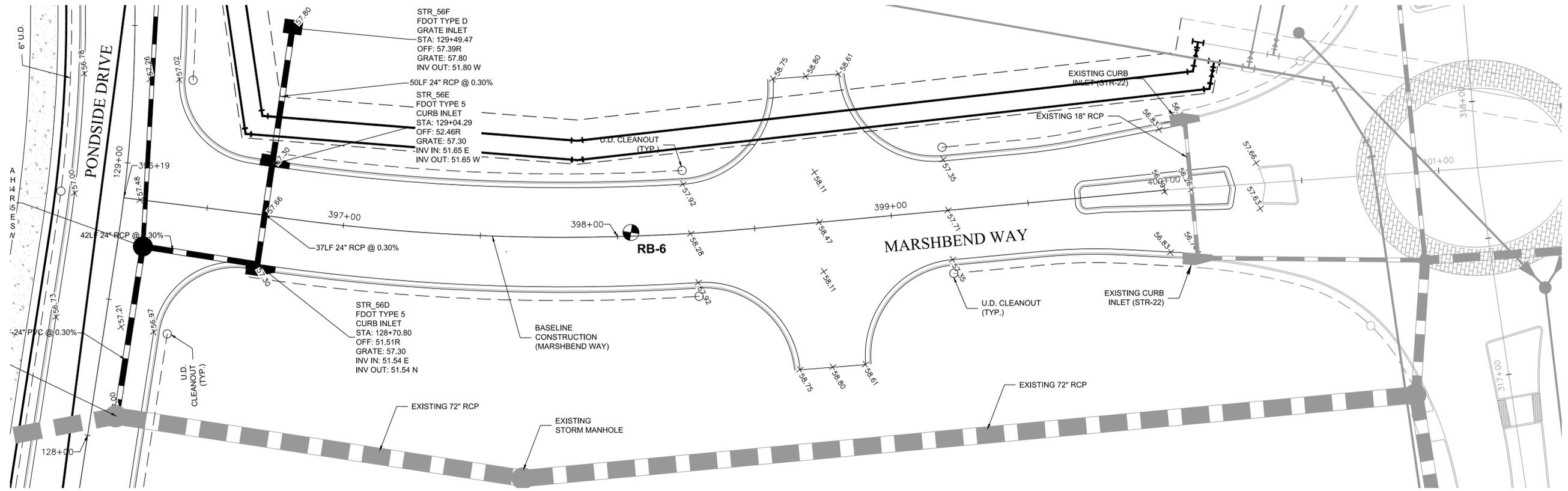
DESIGNED: E.L.R. DRAWN: E.L.R. APPROVED: J.A.C.  
TWN: 26S RANG: 26E

JOSEPH A. CIMINO  
FL P.E. # 67540

Plot Date: 10/20/2015  
Datum: NGVD 1929

C-605

2015 WRA  
 Plot Date: 10/20/2015 10:55:45 AM  
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| NO. | DATE | DESCRIPTION | BY |
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| 6   |      |             |    |
| 5   |      |             |    |
| 4   |      |             |    |
| 3   |      |             |    |
| 2   |      |             |    |
| 1   |      |             |    |

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**PLAN AND PROFILE**

**CYPRESS CREEK TOWN**  
**CENTER NORTH**  
**(PONDSIDE DRIVE EXTENSION)**  
 ISSUED FOR: PERMITTING  
 JOB #: 0967 SEC. 27 TOWN: 26S RANG: 19E DESIGNED: ELR DRAWN: ELR APPROVED: JAC

JOSEPH A. CIMINO  
 FL P.E. # 67540

Plot Date: 10/20/2015  
 Datum: NGVD 1929

C-606

