CHARLOTTE COUNTY PUBLIC WORKS

SIDEWALK CONSTRUCTION PLANS

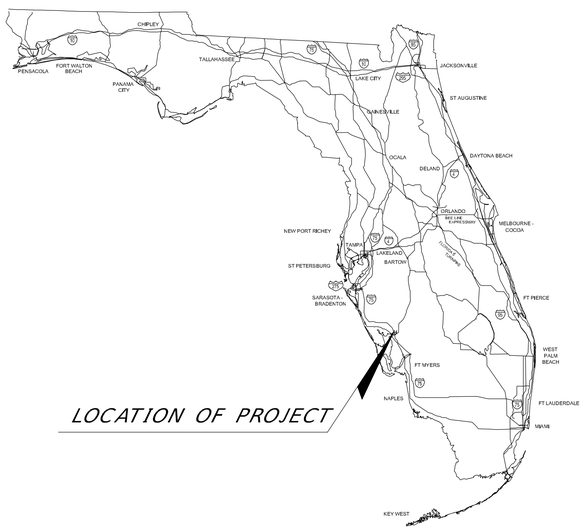
FOR

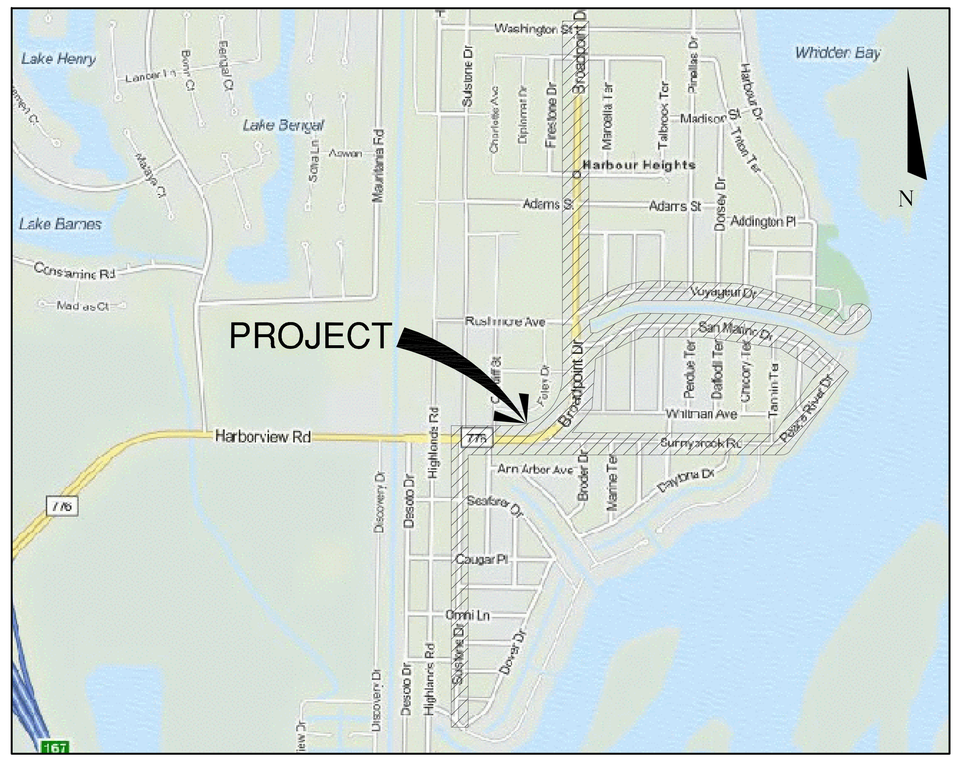
HARBOUR HEIGHTS MSBU–SIDEWALK DESIGNS

RLI No. 2014000282, WO No. 90

FOR

CHARLOTTE COUNTY BOARD OF COUNTY COMMISSIONERS





LOCATION MAP

HARBOUR HEIGHTS
CHARLOTTE COUNTY FLORIDA

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COUNTY COMMISSIONERS

KENNETH DOHERTY, DISTRICT 1, CHAIRMAN
WILLIAM TRUEX, DISTRICT 3, VICE CHAIRMAN
CHRISTOPHER CONSTANCE, DISTRICT 2
STEPHEN R. DEUTSCH, DISTRICT 4
TRICIA DUFFY, DISTRICT 5

PROJECT MANAGER:

ROY BENJAMIN CHARLOTTE COUNTY PUBLIC WORKS

COUNTY ENGINEER:

JOANNE VERNON, P.E.

DIRECTOR OF PUBLIC WORKS:

DANNY J. QUICK, P.E.

BID SET

THE WATER AND SEWER SERVICE WILL BE PROVIDED
WATER: CHARLOTTE HARBOR WATER DISTRICT
SEWER: N/A

THE POWER SERVICE WILL BE PROVIDED
BY FLORIDA POWER AND LIGHT

THE TELEPHONE SERVICE WILL BE PROVIDED
BY CENTURYLINK

SOLID WASTE WILL BE PROVIDED
WASTE MANAGEMENT

CALL 48 HOURS BEFORE YOU DIG
It's the Law! 1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

NOTE:
ALL HANDICAP RAMPS (TACTILE SURFACE AREAS) WILL BE TEXTURED IN ACCORDANCE WITH FLORIDA ACCESSIBILITY CODE SECTION 4-29.2 "DETECTABLE WARNINGS ON WALKING SURFACES". SAW CUTTING GROOVES IS NOT ACCEPTABLE.

THE FACILITIES COMPLY WITH ALL APPLICABLE STANDARDS INCLUDING THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS"

ALL FACILITIES CONTAINED HEREIN HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODES, F.A.C. (FLORIDA STATUTES, SECTIONS 553.501-553.513)

PLANS PREPARED BY:

CES/American

CHARLOTTE ENGINEERING & SURVEYING, INC.

1700 EL JOBEAN ROAD
PORT CHARLOTTE, FLORIDA 33948
T: (941) 629-2552
F: (941) 743-8298
E: ces@acp-ces.com

ORIGINAL DATE: – 04/02/2014

REVISIONS:

DATE	DESCRIPTION	BY
2015 10 21	REVISE PER COUNTY COMMENTS	
2015 10 08	REVISE PER COUNTY COMMENTS	
2015 01 15	REVISE PER COUNTY COMMENTS	
2014 10 15	REVISE PER COUNTY COMMENTS	

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
Job No. 12722

PRE-BID SUBMITTAL

THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING TO FAMILIARIZE HIMSELF WITH THE CONDITIONS FOR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER A WRITTEN LIST OF ALL PERMITS AND COPIES THEREOF, AND CAREFULLY REVIEW ALL PLANS, SPECIFICATIONS, AND PERMITS PREVIOUSLY SECURED ON BEHALF OF THE OWNER. IN CASE OF ANY DISCREPANCY EITHER IN PERMIT DOCUMENTS, PLANS, DRAWINGS, OR SPECIFICATIONS. THE CONTRACTOR MUST PROMPTLY SUBMIT A "WRITTEN CLARIFICATION REQUEST" TO THE OWNER, WHO WILL PROMPTLY FORWARD SAME TO THE ENGINEER WHO WILL MAKE A DETERMINATION IN WRITING. THE CONTRACTOR MUST VERIFY EXISTING FACILITY INFORMATION, AND ALL DESIGN/PERMIT DATA REQUIRED FOR WORK THAT IS TO CONNECT WITH EXISTING FACILITIES. ANY DISCREPANCIES BETWEEN THE CONTRACT REQUIREMENTS AND THE EXISTING CONDITIONS MUST BE REFERRED TO THE OWNER, IN WRITING, FOR AN ENGINEERING DETERMINATION. ANY FURTHER ADJUSTMENT DUE TO FAILURE BY THE CONTRACTOR TO IDENTIFY THE RELATED DISCREPANCY, WILL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY LICENSES AND ADDITIONAL PERMITS. AND FOR COMPLYING WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, CODES, AND REGULATIONS IN CONNECTION WITH THE PERFORMANCE OF THE WORK.

CONSTRUCTION SAFETY AND LIABILITY

THE CONTRACTOR MUST TAKE PROPER SAFETY AND HEALTH PRECAUTIONS TO PROTECT THE WORK, THE WORKERS, THE PUBLIC, AND THE PROPERTY OF OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS DELIVERED AND WORK PERFORMED UNTIL COMPLETION AND ALL ACCEPTANCES HAVE BEEN OBTAINED. THE CONTRACTOR SHALL MAINTAIN TRAFFIC DURING CONSTRUCTION IN ACCORDANCE WITH "THE STATE OF FLORIDA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO PERSONS OR PROPERTY THAT OCCURS AS A RESULT OF HIS NEGLIGENCE. THE CONTRACTOR MUST SAVE HARMLESS AND INDEMNIFY THE OWNER AND CHARLOTTE ENGINEERING AND SURVEYING, INC., ITS OFFICERS, REPRESENTATIVES, AND EMPLOYEES FROM ALL CLAIMS, LOSS, DAMAGE, ACTIONS, CAUSES OF ACTION, AND/OR EXPENSES RESULTING FROM, BROUGHT FOR, OR ON ACCOUNT OF ANY PERSONAL INJURY OR PROPERTY DAMAGE RECEIVED OR SUSTAINED BY ANY PERSONS OR PROPERTY GROWING OUT OF, OCCURRING, OR ATTRIBUTABLE TO ANY WORK PERFORMED UNDER OR RELATED TO THIS CONTRACT, RESULTING IN WHOLE OR IN PART FROM THE NEGLIGENT ACTS OR OMISSIONS OF THE CONTRACTOR, ANY SUBCONTRACTOR, OR ANY EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE CONTRACTOR OR ANY SUBCONTRACTOR.

PRE-CONSTRUCTION

THE OWNER SHALL SECURE PRIOR TO CONSTRUCTION A PROFESSIONAL LAND SURVEYOR TO PERFORM AN "AS-BUILT" SURVEY OF ALL COMPLETED IMPROVEMENTS. THE OWNER SHALL ALSO SECURE PRIOR TO CONSTRUCTION A PROFESSIONAL ENGINEER TO PROVIDE THE APPROPRIATE SERVICES NEEDED IN ORDER TO CERTIFY TO ALL APPLICABLE REGULATORY AGENCIES THAT THE IMPROVEMENTS WERE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH ALL APPLICABLE PERMITS AND APPROVALS. THE OWNER SHALL COORDINATE A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, SURVEYOR, CONTRACTOR, TESTING LAB, UTILITY COMPANIES, AND APPROPRIATE REGULATORY AGENCIES. THE CONTRACTOR SHALL PROVIDE A SHOP DRAWING SUBMISSION SCHEDULE FOR ALL PROJECT MATERIALS AND COMPONENTS. THE CONTRACTOR SHALL NOT INITIATE CONSTRUCTION OF ANY PORTION OF THE IMPROVEMENTS UNTIL THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED FOR THAT PORTION BY THE ENGINEER. THE OWNER, CONTRACTOR, ENGINEER AND UTILITY COMPANY SHALL ALSO DISCUSS ALL DOCUMENTATION REQUIRED FOR CONTRIBUTED FACILITIES TRANSFER FROM THE OWNER/DEVELOPER TO THE UTILITY COMPANY UPON PROJECT COMPLETION. UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, THE FOLLOWING DOCUMENTS SHALL BE PROVIDED:

DOCUMENTS REQUIRED FOR CONTRIBUTED FACILITIES FROM DEVELOPER TO UTILITY COMPANY:

1. UTILITY EASEMENT(S): MUST BE RECORDED AT COUNTY CLERK OF COURT OFFICE BEFORE SUBMITTING TO UTILITY.
2. EASEMENT ACKNOWLEDGMENT.
3. AFFIDAVIT.
4. RELEASE OF LIEN.
5. BILL OF SALE.
6. ASSIGNMENT OF RIGHTS UNDER UTILITY AGREEMENT: WHEN PROPERTY HAS BEEN TRANSFERRED TO A NEW OWNER.
7. DESCRIPTION OF FACILITIES: A SHORT EXPLANATION DEPICTING WHAT HAS BEEN CONSTRUCTED.
8. DETAILED COST OF CONSTRUCTION; MUST INCLUDE INDIVIDUAL ITEMS OR APPURTENANCES, UNIT COST AND TOTAL COST OF EACH. DO NOT INCLUDE WATER SERVICE LINES OR SEWER LATERALS.
9. RECORD DRAWINGS (AS-BUILT): MUST BE SIGNED AND SEALED BY ENGINEER OF RECORD. SUBMIT A REPRODUCIBLE MYLAR AND TWO COPIES OF PRINTS.
10. F.D.E.P. APPLICATION(S).
11. INSPECTION REPORT(S).
12. PRESSURE TEST REPORT(S).
13. INFILTRATION-EXFILTRATION TEST REPORT(S), INCLUDING VIDEO TAPES AND LAMPING REPORTS.
14. LIFT STATION INSPECTION (START-UP) REPORT(S) AND EQUIPMENT SHOP DRAWINGS.
15. BACTERIOLOGICAL TEST REPORT(S).
16. ENGINEER'S CERTIFICATE OF SUBSTANTIAL COMPLETION TO F.D.E.P.
17. SYSTEM(S) ACCEPTANCE LETTER(S) FROM F.D.E.P.

NOTES: ITEM 1-8 TO BE SUPPLIED BY OWNER. ITEMS 9-17 TO BE SUPPLIED BY ENGINEER OF RECORD.

UNLESS OTHERWISE SPECIFIED BY THE UTILITY, THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENTS OF THE WATER, GAS, SEWER, TELEPHONE, AND POWER COMPANIES, 10 DAYS IN ADVANCE, THAT HE INTENDS TO START WORK IN A SPECIFIC AREA. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE SUPPORT AND PROTECTION OF SEWERS, DRAINS, WATER LINES, GAS LINES, CONDUITS OF ANY KIND, UTILITIES OR OTHER STRUCTURES OWNED BY THE CITY, COUNTY, STATE OR BY PRIVATE OR PUBLIC UTILITIES LEGALLY OCCUPYING ANY STREET, ALLEY, PUBLIC PLACE, RIGHT-OF-WAY, OR EASEMENT.

PROJECT SIGN

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A CONSTRUCTION PROJECT SIGN AT A LOCATION DIRECTED BY THE OWNER. CHARLOTTE ENGINEERING AND SURVEYING, INC. SHALL PROVIDE A SEPARATE SIGN FOR INSTALLATION BY THE CONTRACTOR AT THIS LOCATION. THESE SIGNS SHALL BE ERECTED WITHIN 15 DAYS AFTER RECEIVING A NOTICE TO PROCEED. UPON PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE THESE SIGNS AND RETURN TO CHARLOTTE ENGINEERING AND SURVEYING, INC. THEIR SIGN.

ENVIRONMENTAL PROTECTION DURING CONSTRUCTION

PROTECTION OF LAND RESOURCES-EXCEPT IN AREAS IDENTIFIED ON THE PLANS TO BE CLEARED, THE CONTRACTOR MUST NOT DEFACE, INJURE, OR DESTROY TREES OR SHRUBS OR REMOVE OR CUT THEM WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER. IN THE ABSENCE OF A CLEARING PLAN, AREAS SHOWN FOR IMPROVEMENTS SHALL BE CLEARED UNLESS NOTED OTHERWISE.

PROTECTION OF WATER RESOURCES-IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INVESTIGATE AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, REGIONAL, COUNTY, AND MUNICIPAL LAWS CONCERNING POLLUTION OF WATER RESOURCES. ALL WORK MUST BE PERFORMED IN SUCH A MANNER THAT OBJECTIONABLE CONDITIONS WILL NOT BE CREATED IN PUBLIC WATERS RUNNING THROUGH, OR ADJACENT TO THE PROJECT AREA.

1. EROSION AND SEDIMENT CONTROL-ALL PRACTICABLE AND NECESSARY EFFORT SHOULD BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND THE TRANSPORT OF SEDIMENT TO SURFACE DRAINS, SURFACE WATER, OR ONTO OTHER PROPERTY BY ANY OR ALL OF THE FOLLOWING METHODS:
   - A. STORMWATER FACILITIES ARE TO BE BUILT AS EARLY IN THE CONSTRUCTION PHASE AS POSSIBLE TO ENSURE THE TREATMENT OF STORMWATER RUNOFF. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, HOWEVER, SUCH AS BERMS, SEDIMENT BASINS, GRASSING, SODDING, SAND BAGGING, BALED HAY OR STRAW, FLOATING SILT BARRIERS, STACKED SILT BARRIERS, ETC. MUST BE PROVIDED AND MAINTAINED UNTIL THE PERMANENT FACILITIES ARE COMPLETED AND OPERATIONAL.
   - B. RE-VEGETATION AND STABILIZATION OF DISTURBED GROUND SURFACES SHOULD BE ACCOMPLISHED AS SOON AS POSSIBLE.
   - C. FULL COMPACTION OF ANY FILL MATERIAL PLACED AROUND NEWLY INSTALLED STRUCTURES.
   - D. PROHIBIT THE USE OF ANY CONSTRUCTION EQUIPMENT THAT LEAKS EXCESSIVE AMOUNTS OF FUEL, OIL, OR HYDRAULIC FLUID.
2. ALL DISTURBED AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, EXCEPT RETENTION AREAS, AND SHALL BE STABILIZED BY SODDING, EXCEPT WHERE SEEDING AND MULCHING ARE CALLED FOR ON THE PLANS. THE LATEST VERSION OF THE F.D.O.T. ROAD AND BRIDGE SPECIFICATIONS SHALL BE USED, UNLESS MORE RESTRICTIVE LOCAL SPECIFICATIONS EXIST.

PROTECTION OF FISH AND WILDLIFE

THE CONTRACTOR MUST AT ALL TIMES PERFORM ALL WORK IN A WAY AND TAKE SUCH STEPS AS REQUIRED TO PREVENT ANY INTERFERENCE WITH OR DISTURBANCE TO FISH AND WILDLIFE. THE CONTRACTOR SHALL NOT ALTER WATER FLOWS OR OTHERWISE DISTURB NATIVE HABITATS AND JURISDICTIONAL WETLANDS LOCATED WITHIN AND/OR ADJACENT TO THE PROJECT AREA.

RECORDING AND PRESERVING HISTORICAL AND ARCHEOLOGICAL FINDS

ALL ITEMS HAVING ANY APPARENT HISTORICAL OR ARCHEOLOGICAL INTEREST THAT ARE DISCOVERED IN THE COURSE OF ANY CONSTRUCTION ACTIVITIES MUST BE CAREFULLY PRESERVED. THE CONTRACTOR MUST LEAVE THE ARCHEOLOGICAL FIND UNDISTURBED AND MUST IMMEDIATELY REPORT THE FIND TO THE OWNER SO THAT THE PROPER AUTHORITY MAY BE NOTIFIED.

EARTHWORK

I. GENERAL

1-01 SUBMITTALS
- A. EROSION AND CONTROL MEASURES
- B. COMPACTION TESTS
- C. SOILS CLASSIFICATION TESTS
- D. PRESERVATION PLANS

1-02 SITE EXAMINATION
- A. BEFORE SUBMITTING BIDS, CONTRACTORS SHALL INFORM THEMSELVES AS TO LOCATION AND NATURE OF THE WORK, CHARACTER OF EQUIPMENT AND FACILITIES NEEDED FOR PERFORMANCE OF THE WORK, GENERAL AND LOCAL CONDITIONS PREVAILING AT THE SITE, AND OTHER MATTERS WHICH MAY, IN ANY WAY, AFFECT THE WORK UNDER CONTRACT.
- B. EXAMINE SOURCES OF INFORMATION CONCERNING GROUND WATER LEVEL, WHETHER SURFACE OR SUBSURFACE. EACH BIDDER TO DRAW HIS OWN CONCLUSION CONCERNING GROUND WATER LEVELS AND HOW WATER AFFECTS HIS WORK.

1-03 SUBSURFACE INVESTIGATIONS
- A. SUBSURFACE DATA, INCLUDING GROUND WATER ELEVATIONS OR CONDITIONS, IF SHOWN ON THE DRAWINGS OR ATTACHED TO THESE SPECIFICATIONS, ARE PRESENTED ONLY AS INFORMATION THAT IS AVAILABLE WHICH INDICATED CERTAIN CONDITIONS FOUND AND LIMITED TO THE EXACT LOCATIONS, SHALL NOT BE INTERPRETED AS AN INDICATION OF CONDITIONS THAT MAY ACTUALLY BE DEVELOPED THROUGH THE PERIOD OF CONSTRUCTION. BIDDERS SHALL EXAMINE THE SITE OF THE WORK AND MAKE THEIR OWN DETERMINATION OF THE CHARACTER OF MATERIALS AND THE CONDITIONS TO BE ENCOUNTERED ON THE WORK, AND THEIR PROPOSAL SHALL BE BASED UPON THEIR OWN INVESTIGATIONS. THE OWNER AND ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR VARIATIONS FOUND TO EXIST BETWEEN THE ATTACHED DATA ABOVE REFERRED TO AND ACTUAL FIELD CONDITIONS THAT DEVELOP THROUGH THE PERIOD OF CONSTRUCTION.
- B. WHERE EXISTING GRADES, UTILITY LINES AND SUBSTRUCTURES ARE SHOWN ON THE DRAWINGS, THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR CORRECTNESS OF EXISTING CONDITIONS INDICATED. THE CONTRACTOR SHALL ASCERTAIN EXACT LOCATIONS OF UTILITIES AND SUBSTRUCTURES THAT MAY BE AFFECTED BY THIS PROJECT, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY THAT MAY RESULT FROM WORKING ON OR NEAR THOSE UTILITIES, SUBSTRUCTURES WHICH ARE NOT TO BE REMOVED OR DEMOLISHED.
- C. THE CONTRACTOR SHALL MAKE HIS OWN DEDUCTIONS OF THE SUBSURFACE CONDITIONS WHICH MAY AFFECT METHODS OR COST OF CONSTRUCTION AND HE AGREES THAT HE WILL MAKE NO CLAIM FOR DAMAGES OR OTHER COMPENSATION, EXCEPT SUCH AS ARE PROVIDED FOR IN THE AGREEMENT, SHOULD HE FIND CONDITIONS DURING THE PROGRESS OF THE WORK DIFFERENT FROM THOSE AS CALCULATED OR ANTICIPATED BY HIM.

1-04 BENCH MARKS AND MONUMENTS
- A. MAINTAIN CAREFULLY EXISTING BENCH MARKS, MONUMENTS, AND OTHER REFERENCE POINTS. IF DISTURBED OR DESTROYED, REPLACE AS DIRECTED.

1-05 JOB CONDITIONS
- A. CONDITION OF PREMISES: ACCEPT SITE AS FOUND AND EXCAVATE, FILL, COMPACT, AND BACKFILL SITE AS HEREINAFTER SPECIFIED.
- B. PROTECTION:
  1. EXISTING STRUCTURES AND PROPERTY: TAKE PRECAUTIONS TO GUARD AGAINST MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES AND FACILITIES; PROVIDE AND PLACE BRACING OR SHORING AS NECESSARY OR PROPER IN CONNECTION THEREWITH; BE RESPONSIBLE FOR SAFETY AND SUPPORT OF SUCH STRUCTURES; BE LIABLE FOR ANY MOVEMENT OR SETTLEMENT, ANY DAMAGE OR INJURY CAUSED THEREBY OR RESULTING THEREFROM. IF AT ANY TIME SAFETY OR ANY ADJACENT STRUCTURES APPEARS TO BE ENDANGERED, CEASE OPERATION, TAKE PRECAUTIONS TO SUPPORT SUCH STRUCTURES AND NOTIFY THE OWNER. RESUME OPERATIONS ONLY AFTER PERMISSION HAS BEEN GRANTED BY THE OWNER.
  2. SIDEWALKS AND STREETS: TAKE PRECAUTIONS TO GUARD AGAINST MOVEMENT, SETTLEMENT OR COLLAPSE OF ANY SIDEWALKS, CURBS OR STREET PASSAGES ON ADJOINING SITE; BE LIABLE FOR ANY SUCH MOVEMENT, SETTLEMENT OR COLLAPSE; REPAIR PROMPTLY SUCH DAMAGE WHEN SO ORDERED. INSTALL SUCH SHORING, INCLUDING SHEET PILING, AS MAY BE REQUIRED DURING EXCAVATION, TO PROTECT BANKS, ADJACENT PAVING, STRUCTURES AND UTILITIES.
  3. RESPONSIBILITY: BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES OR TO EQUIPMENT AND FURNISHINGS HOUSED THEREIN WHICH ARE DUE DIRECTLY OR INDIRECTLY TO CONSTRUCTION OPERATIONS. EXCEPT WHERE REMOVAL IS NECESSITATED BY SITE GRADING OR LOCATION OF NEW BUILDING, USE EVERY POSSIBLE PRECAUTION TO PREVENT INJURIES TO LANDSCAPING, DRIVES, CURBS, AND WALKS ON OR ADJACENT TO SITE OF THE WORK AND REPLACE, AT NO EXPENSE TO OWNER, ANY OF SUCH THAT ARE DESTROYED.

II. EXECUTION

2-01 GENERAL
- A. ACCOMPLISH IN A MANNER THAT PROVIDES FOR THE SAFETY OF THE PUBLIC AND WORKMEN AND PROVIDE FOR THE PROTECTION OF ALL PROPERTY.
- B. CONSTRUCTION: DO NOT CLOSE, OBSTRUCT OR STORE MATERIAL OR EQUIPMENT IN STREETS, SIDEWALKS, ALLEYS OR PASSAGEWAYS WITHOUT A PERMIT IN ACCORDANCE WITH LOCAL ORDINANCES, REGULATIONS, AND CODES.
- C. INTERFERENCE: CONDUCT OPERATIONS WITH MINIMUM INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, ALLEYS, SIDEWALKS AND OTHER FACILITIES.
- D. PNEUMATIC TOOLS: WORK WITH PNEUMATIC OR VIBRATORY TOOLS WILL BE PERMITTED ONLY IN A MANNER WHICH CAUSES NO RELATED DAMAGES.
- E. REMOVAL: UNLESS OTHERWISE NOTED OR SPECIFIED TO BE RELOCATED OR STORED, ALL MATERIALS REMOVED BECOME THE PROPERTY OF THE CONTRACTOR AND ARE BE REMOVED COMPLETELY AWAY FROM THE SITE BY HIM. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON THE SITE.
- F. TEMPORARY STRUCTURES: REMOVE ALL TEMPORARY STRUCTURES WHEN THEY ARE NO LONGER REQUIRED.
- G. REPAIR: CLEAN UP, REPAIR OR REPLACE AT NO COST TO OWNER ALL PROPERTY DAMAGED BY REASON OF REQUIRED WORK. ALL PATCH WORK SHALL MATCH EXISTING AND BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY CRAFTSMEN SKILLED IN THE TRADE INVOLVED. IN NEWLY GRADED AREAS TAKE EVERY PRECAUTION AND TEMPORARY MEASURE NECESSARY TO PREVENT DAMAGE FROM EROSION OF FRESHLY GRADED AREAS. WHERE ANY SETTLEMENT OR WASHING MAY OCCUR PRIOR TO ACCEPTANCE OF THE WORK, REPAIR AND RE-ESTABLISH GRADES TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER. THIS APPLIES TO DAMAGE TO THE NEWLY GRADED AREAS WITHIN THE CONSTRUCTION LIMITS AND DAMAGE TO ADJACENT PROPERTIES BY ERODED MATERIAL.

2-02 LOCATIONS AND ELEVATIONS
- A. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEYS, MEASUREMENTS AND LAYOUTS REQUIRED FOR PROPER EXECUTION OF THE WORK. LAY OUT LINES AND GRADES FROM EXISTING SURVEY CONTROL SYSTEM AND AS SHOWN ON DRAWINGS.

2-03 CLEARING AND GRUBBING
- A. WITHIN LIMITS OF AREAS DESIGNATED FOR GRADING AND SITE CONSTRUCTION WORK, REMOVE TREES, BRUSH, STUMPS, WOOD DEBRIS AND OTHER DELETERIOUS MATERIALS NOT REQUIRED TO REMAIN AS PART OF THE FINISHED WORK.
- B. REMOVE ALL GRASS, PLANTS, VEGETATION AND ORGANIC MATERIAL FROM SAME AREA.

2-04 STRIPPING
- A. STRIP ALL TOPSOIL, ORGANIC MATERIAL, SURFACE LITTER, RUBBLE, AND OVERBURDEN FOR ENTIRE DEPTH OF ROOT SYSTEM OF GRASS OR OTHER VEGETATION OVER THE LIMITS OF CONSTRUCTION.
- B. STOCKPILE TOPSOIL ON SITE WHERE DIRECTED.

2-05 EXECUTION
- A. BEGIN EXCAVATION AFTER STRIPPING, CLEARING AND GRUBBING WHERE APPLICABLE, HAS BEEN COMPLETED.
- B. EXCAVATE TO GRADES REQUIRED TO ACCOMMODATE THE PROPOSED CONSTRUCTION; DE-WATER AS NEEDED.
- C. REMOVE UNSATISFACTORY MATERIALS ENCOUNTERED FROM THE BUILDING AREAS, AND OTHER NON-LANDSCAPED AREAS.
- D. EXCAVATE IN SUCH A MANNER THAT QUICK AND EFFICIENT DRAINAGE OF STORMWATER WILL BE AFFECTED.
- E. CLASSIFY EXCAVATED MATERIALS AND STOCKPILE SEPARATELY SUITABLE SOILS FOR USE AS BACKFILL MATERIALS. IF SUFFICIENT QUANTITIES OF EXCAVATED MATERIALS MEETING REQUIREMENTS FOR BACKFILL ARE NOT AVAILABLE ON-SITE, PROVIDE MATERIALS MEETING THESE REQUIREMENTS.
- F. STOCKPILE EXCAVATED MATERIAL SUITABLE FOR USE AS FILL AND BACKFILL.

2-06 FILLING, BACKFILLING, AND COMPACTING
- A. THE WORK CONSISTS OF COMPACTION OF EXISTING EARTH (EXCLUDES ROCK), SURFACES AFTER EXCAVATION, FILLING AND COMPACTION OF SAID AREA TO LEVELS REQUIRED WITH SUITABLE BACKFILL MATERIAL.
- B. MATERIALS: SATISFACTORY FILL MATERIALS, AASHTO CLASSIFICATION A-3 OR BETTER, SHALL BE USED IN FILLS AND BACKFILLS.
- C. FILLING AND BACKFILLING: PLACE SATISFACTORY FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING SIX (6") INCHES IN LOOSE DEPTH. COMPACT AS SPECIFIED HEREIN. NO MATERIAL SHALL BE PLACED ON SURFACES THAT ARE MUDDY.
- D. COMPACTION: COMPACTION SHALL BE WITH EQUIPMENT SUITED TO SOIL BEING COMPACTED. MOISTEN OR AERATE MATERIAL, AS NECESSARY, TO PROVIDE MOISTURE CONTENT THAT WILL READILY FACILITATE OBTAINING SPECIFIED COMPACTION WITH EQUIPMENT USED. COMPACT EACH LAYER TO NOT LESS THAN PERCENTAGE OF MAXIMUM DENSITY SPECIFIED BELOW, DETERMINED IN ACCORDANCE WITH AASHTO T-180. INSURE THAT THE COMPACTION OF PREVIOUSLY PREPARED FILL AREAS HAS BEEN MAINTAINED PRIOR TO PLACING NEW LAYERS.
- E. RECONDITIONING OF SUBGRADE: WHERE APPROVED COMPACTED SUBGRADES ARE DISTURBED BY THE CONTRACTOR'S SUBSEQUENT OPERATIONS OR ADVERSE WEATHER, SUBGRADE SHALL BE SCARIFIED AND COMPACTED AS SPECIFIED HEREIN BEFORE TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION THEREON. RE-COMPACTION OVER UNDERGROUND UTILITIES SHALL BE BY POWER-DRIVEN HAND TAMPERS.
- F. COMPACTION REQUIREMENTS:
  1. FILL UNDER LAWNS AND PLANTED AREAS: 95%
  2. BELOW SLABS ON GRADE AND CONCRETE WALKS: 98%
  3. UNDER PAVING AND PARKING AREAS: 98%
- G. PROPOSED GRADES ARE DESIGNED FOR 4:1 SLOPES UNLESS OTHERWISE SPECIFIED. ALL SLOPES TO BE 4:1 MAXIMUM EXCEPT AS NOTED. (eg. STORMWATER POND).

2-07 TESTING
- A. THE CONTRACTOR WILL PROVIDE THE SERVICES OF A TESTING LABORATORY TO PERFORM SPECIFIED TESTS, INSPECTIONS, INSTRUMENTATION AND INSPECTION OF THE WORK.
- B. TESTS OF MATERIALS SHALL BE AS FOLLOWS:
  1. SOIL CLASSIFICATION: ONE TEST FROM EACH TYPE OF MATERIAL ENCOUNTERED AND/OR PROPOSED TO BE USED.
  2. LABORATORY TESTS FOR MOISTURE-CONTENT AND DENSITY ACCORDING TO AASHTO T-180: ONE TEST FOR EACH MATERIAL ENCOUNTERED AND/OR PROPOSED TO BE USED.
  3. FIELD TESTS FOR MOISTURE CONTENT AND DENSITY: ONE TEST PER LAYER OF FILL PER 5,000 SQUARE FEET OF AREA.
- C. ONE COPY OF ALL TEST REPORTS, SIGNED AND SEALED BY TESTING LABORATORY ARE TO BE PROVIDED TO THE ENGINEER.

SUPPLEMENTAL SPECIFICATIONS

GENERAL

THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND ADHERE TO THE SPECIFICATIONS AND STANDARDS OF THE UTILITY COMPANIES WHICH ARE SERVING THE PROJECT SITE. THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH ALL SITE DEVELOPMENT STANDARDS AND CODES OF THE REGULATORY AGENCIES ASSOCIATED WITH THIS PROJECT. THE LATEST VERSION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE CONSTRUCTION STANDARD SPECIFICATIONS THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS SHALL BE INCLUDED WITHIN THE PROJECT SPECIFICATIONS. UNLESS OTHERWISE NOTED, EITHER ON THE PLANS OR WITHIN THE SPECIFICATIONS, THE APPLICABLE SECTIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS SHALL APPLY INCLUDING REFERENCES THEREIN. THE GENERAL DESCRIPTION OF THE NATURE OF THE WORK SHALL BE SUFFICIENT CORRELATION TO THE FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, EXACT ITEM DESCRIPTION IS NOT REQUIRED. IN THE EVENT THERE ARE CONFLICTS BETWEEN SPECIFICATIONS OR REQUIREMENTS, THE MOST RESTRICTIVE (CONSERVATIVE) SPECIFICATION OR REQUIREMENT SHALL BE USED.

POTABLE WATER DISTRIBUTION/WASTEWATER COLLECTION INSTALLATION

UNLESS OTHERWISE NOTED ON THE PLANS, THE STANDARDS AND SPECIFICATIONS OF THE ASSOCIATED UTILITY COMPANY SERVING THE PROJECT SITE SHALL BE ADHERED TO FOR ALL MATERIALS, INSTALLATION, TESTING, AND CERTIFICATION ACTIVITIES FOR ALL PUMP STATIONS, MAIN LINES, SERVICES, AND APPURTENANCES. IF STANDARDS AND SPECIFICATIONS ARE NOT AVAILABLE, THE CONTRACTOR SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS ADOPTED BY LOCAL UTILITIES, LOCAL GOVERNMENTAL REGULATIONS, OR THE MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES, WHICHEVER IS SPECIFICALLY THE MOST RESTRICTIVE.

STORMWATER PIPE INSTALLATION AND MISCELLANEOUS EXCAVATIONS

UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM THE EXCAVATION, BEDDING, JOINTS, AND BACKFILLING OPERATIONS IN ACCORDANCE WITH THE POTABLE WATER/WASTEWATER INSTALLATION SPECIFICATIONS, LOCAL GOVERNMENTAL REGULATIONS OR STANDARDS, F.D.O.T. STANDARDS AND SPECIFICATIONS, OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES, WHICHEVER IS SPECIFICALLY THE MOST RESTRICTIVE.

UNSUITABLE MATERIALS

IF UNSUITABLE MATERIAL IS ENCOUNTERED WITHIN THE ROADWAY AREA AND/OR UTILITY AREAS IT SHALL BE REMOVED TO A DEPTH OF THREE (3.0') FEET BELOW THE SUB-BASE OR TRENCH BOTTOM AND SHALL BE BACKFILLED WITH A-3 MATERIAL OR BETTER WITH PLACEMENT AND COMPACTION METHODS IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, OR AS OTHERWISE NOTED ON THE PLANS. UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE SITE, UNLESS THE ENGINEER APPROVES USE WITHIN LANDSCAPED AREAS.

DE-WATERING

1-01 GENERAL
- A. DE-WATERING CONSISTS OF PERFORMING ALL WORK NECESSARY TO REMOVE SURFACE WATER AND/OR CONTROL THE GROUND WATER LEVELS AND HYDROSTATIC PRESSURES IN ORDER TO PERMIT ALL EXCAVATION AND CONSTRUCTION UNDER THIS CONTRACT TO BE PERFORMED IN THE DRY.
- B. WORK OF THIS SECTION INCLUDES INSTALLATION, OPERATIONS, MAINTENANCE, SUPERVISION, SUPPLY, DISMANTLING, AND REMOVAL FROM THE SITE OF THE DE-WATERING EQUIPMENT.
- C. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE POTENTIAL FOR EXCESSIVE RAINFALL, THE GROUND CONDITIONS, AND THE GROUND WATER CONDITIONS. GROUND WATER ELEVATION CAN FLUCTUATE. IT IS ANTICIPATED THAT ANY EXCAVATIONS MAY ENCOUNTER THE GROUND WATER TABLE.
- D. DRAINAGE OF THE SITE: AT ALL TIMES THE CONTRACTOR SHALL MAINTAIN AND OPERATE ADEQUATE SURFACE AND SUBSURFACE DRAINAGE METHODS IN ORDER TO KEEP THE CONSTRUCTION SITE DRY AND IN SUCH CONDITION THAT PLACEMENT AND COMPACTION OF FILL MAY PROCEED UNHINDERED BY SATURATION OF THE AREA. DURING CONSTRUCTION, THE SURFACE OF THE BACKFILL AREA SHALL BE LEFT IN SUCH CONDITION THAT PRECIPITATION AND/OR SURFACE WATER WILL RUN OFF WITHOUT PONDING.

1-02 METHOD
- A. THE CONTROL OF ALL SURFACE AND SUBSURFACE WATER IS PART OF THE DE-WATERING REQUIREMENTS. MAINTAIN ADEQUATE CONTROL SO THAT THE STABILITY OF EXCAVATED AND CONSTRUCTION SLOPES IS NOT ADVERSELY AFFECTED BY WATER, THAT EROSION IS CONTROLLED, AND THE FLOODING OF EXCAVATIONS OR DAMAGE TO STRUCTURES DOES NOT OCCUR. DRAIN SURFACE WATER AWAY FROM THE EXCAVATION.
- B. DISPOSE OF ALL WATER REMOVED FROM THE EXCAVATION IN A MANNER THAT WILL NOT ENDANGER PUBLIC HEALTH, PROPERTY, OR PORTIONS OF THE WORK UNDER CONSTRUCTION OR COMPLETED. DISPOSE OF WATER IN A MANNER THAT WILL CAUSE NO INCONVENIENCE WHATSOEVER TO THE OWNER OR TO OTHERS ENGAGED IN WORK AT THE SITE.
- C. DISPOSE OF WATER RESULTING FROM DE-WATERING OPERATIONS IN ACCORDANCE WITH CITY, COUNTY, STATE AND FEDERAL REGULATIONS.
- D. CONDUCT OPERATIONS SO THAT STORMWATER RUNOFF, SEDIMENT IS NOT DISCHARGED TO THE ADJACENT WATER BODIES, SEWERS, STREETS AND ADJACENT PROPERTIES.
- E. DE-WATERING SYSTEM SHALL BE SO DESIGNED AS TO PREVENT REMOVAL OF SOIL FINES FROM THE SITE DURING THE DE-WATERING OPERATION.

PORTLAND CEMENT CONCRETE PAVING

1-01 QUALITY ASSURANCE
- A. COMPLY WITH ACI STANDARDS "RECOMMENDED PRACTICES FOR CONSTRUCTION OF CONCRETE PAVEMENTS AND CONCRETE BASES" (ACI316, LATEST EDITION).

1-02 REFERENCE STANDARDS
- A. THE FOLLOWING REFERENCE STANDARDS OF THE ISSUES LISTED BELOW, BUT REFERRED TO THEREAFTER BY BASIC DESIGNATION ONLY, FORM A PART OF THIS SPECIFICATION TO THE EXTENT INDICATED BY THE REFERENCES THERETO. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH HEREINAFTER SPECIFIED STANDARDS.
  1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
  2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD
  3. FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) LATEST EDITION STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION - SECTION 350 - "CEMENT CONCRETE PAVEMENT".
  4. T-180 MOISTURE-DENSITY RELATIONS OF SOILS

1-03 SUBMITTALS
- A. THE CONTRACTOR SHALL SUBMIT TWO COPIES OF TEST REPORTS PREPARED BY AN INDEPENDENT TESTING LABORATORY AND CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF FLORIDA. THESE REPORTS SHALL INDICATE ALL TESTS PERFORMED AND SHALL INCLUDE A CERTIFICATION STATEMENT OF COMPLIANCE WITH THE PROJECT SPECIFICATIONS. TESTS SHALL BE PERFORMED AS SPECIFIED UNDER THIS SECTION.
  1. SUBMIT FOR REVIEW THE FOLLOWING:
     - A. CONCRETE DESIGN MIX AND PROVING FLEXURAL STRENGTH (MODULUS OF RUPTURE) TESTS
     - B. EXPANSION JOINT FILLER DATA
     - C. JOINT SEALER DATA
     - D. "PROPOSED PAVING CONSTRUCTION PLAN" WHICH SHALL SHOW THE CONCRETE PAVING JOINT TYPES AND LOCATIONS AND SHALL INCLUDE A STATEMENT OF PROPOSED SEQUENCE AND SCHEDULE OF PAVING OPERATIONS
     - E. RESULTS OF CONCRETE TESTS
     - F. RESULTS OF FIELD TESTS OF LBR AND COMPACTION OF STABILIZED SUBGRADE

1-04 MATERIALS
- A. STABILIZED SUBGRADE: PROVIDE 8 INCH UNDER SIDEWALK 12 INCH UNDER ROADWAY STABILIZED SUBGRADE (LBR 40 MIN) COMPACTED TO A MINIMUM DENSITY OF 98% AS DETERMINED BY AASHTO T-180
- B. CONCRETE: CONCRETE FOR CONCRETE PAVEMENT SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, A SLUMP RANGE BETWEEN 2 TO 4 INCHES AND A 28-DAY MODULUS OF RUPTURE OF 650 PSI AS DETERMINED BY THE REQUIREMENTS OF PARAGRAPH TESTING SPECIFIED HEREINAFTER.
- C. JOINT SEALER: JOINT SEALING SHALL CONFORM TO FEDERAL SPECIFICATIONS SS-S1401 OR SS-S-200d (COLD APPLIED).
- D. PRE-MOLDED EXPANSION JOINT FILLER: PRE-MOLDED EXPANSION JOINT FILLER SHALL CONFORM TO ASTM D1751-73.

1-05 EXECUTION
- A. COMPLY WITH ACI STANDARD 316-74 AND SECTION 350, FDOT STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED HEREIN.
- B. FINAL GRADING: ALL CONCRETE PAVEMENT SHALL HAVE A MAXIMUM DEVIATION OF 1/8 INCH(+/-) FROM THE SPECIFIED SURFACE PLANE AND PLAN GRADES.
- C. THE SURFACE FINISH SHALL BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE. IN GENERAL, THE TEXTURE IS OF A MEDIUM BROOM FINISH AFTER FLOATING.
- D. JOINTS
  1. CONTRACTION JOINTS INDICATED ON DRAWINGS, OR AS REQUIRED, SHALL BE PLACED PERPENDICULAR TO THE FINISH GRADE OF THE CONCRETE. JOINTS SHALL BE CUT TO A DEPTH OF 1/4 OF THE SLAB THICKNESS BY CUTTING WITH AN EDGING TOOL HAVING A 1/4 INCH RADIUS OR BY SAWING WITH A BLADE PRODUCING A CUT NOT LESS THAN 1/8 INCH IN WIDTH. SAW JOINTS WITHIN 4 TO 6 HOURS OF CONCRETE PLACEMENT.
  2. EXPANSION JOINTS SHALL BE PLACED WHERE INDICATED ON DRAWINGS, OR AS REQUIRED, USING 1/2 INCH THICK PREFORMED EXPANSION JOINT MATERIAL. ANCHOR WITH APPROVED DEVICES TO PREVENT DISPLACEMENT DURING PLACEMENT AND FINISHING. EDGES SHALL BE ROUNDED WITH AN EDGING TOOL. JOINTS SHALL BE FULL DEPTH OF CONCRETE EXCEPT THAT TOP EDGES SHALL BE 1/2 INCH BELOW THE FINISH CONCRETE SURFACE. EXPANSION JOINTS SHALL BE SEALED TO THE SURFACE BY FILLING WITH JOINT SEALING COMPOUND. JOINTS SHALL BE CLEAN AND DRY BEFORE SEALING COMPOUND IS PUT IN PLACE.
  3. CONSTRUCTION JOINTS ARE TO BE USED AT CONTRACTION JOINT LOCATIONS TO STOP CONCRETE POURS.
- E. CURING: CONCRETE SHALL BE CURED BY PROTECTING IT AGAINST LOSS OF MOISTURE AND MECHANICAL INJURY FOR AT LEAST THREE DAYS AFTER PLACEMENT. A PIGMENTED LIQUID CURING MEMBRANE SHALL BE APPLIED IMMEDIATELY AFTER FINISHING OPERATION AT THE RATE OF ONE GALLON TO NOT MORE THAN 200 SQUARE FEET.
- F. CLEANING AND SEALING JOINTS: JOINTS SHALL BE FILLED WITH JOINT-SEALING MATERIAL NO LESS THAN 8 HOURS AND WITHIN 2 WEEKS AFTER JOINTS ARE CUT. JUST PRIOR TO SEALING, EACH JOINT SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATERIAL INCLUDING ANY MEMBRANE CURING COMPOUND.
- G. TESTING: LABORATORY AND FIELD TESTING SHALL BE AT THE CONTRACTOR'S EXPENSE. IN ADDITION, ALL RETESTING SHALL BE DONE AT CONTRACTOR'S EXPENSE.
  1. DESIGN MIXES AND TESTING REQUIREMENTS FOR THE CONCRETE PAVEMENT SHALL BE AS FOLLOWS:
     - A. FLEXURAL STRENGTH TESTS OF CONCRETE AS BASIS FOR DESIGN
     - B. SLUMP, MODULUS OF RUPTURE AND 7- AND 28-DAY COMPRESSIVE STRENGTH TESTS SHALL BE PERFORMED ON SAMPLES TAKEN AT THE SITE AT A FREQUENCY OF TWO PER ACRE.
  2. WHERE THE FLEXURAL STRENGTH OF THE CONCRETE IS SPECIFIED, MAKE ONE STRENGTH TEST AND ONE FLEXURAL TEST FOLLOWING (ASTM C192 AND ASTM C78) FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF PLACED PER DAY. NUMBER OF CYLINDERS SHALL BE THREE FOR STRENGTH TEST AND THREE FOR FLEXURAL TEST. TEST ONE AT THREE DAYS, ONE AT SEVEN DAYS AND ONE AT 28 DAYS.

PAVEMENT MARKING

1-01 QUALITY ASSURANCE
- A. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IN A NEAT AND ACCURATE MANNER.
- B. ALL EQUIPMENT SHALL BE OF A TYPE AND DESIGN WHICH WILL READILY OBTAIN THE REQUIRED UNIFORMITY OF APPLICATION OF THE PAVEMENT MARKINGS BOTH AS TO THICKNESS OF COATING AND AS TO ALIGNMENT.

1-02 REFERENCE STANDARDS
- A. THE FOLLOWING PUBLICATIONS OF THE ISSUE LISTED BELOW, BUT REFERRED TO THEREAFTER BY BASIC DESIGNATION ONLY, FORM A PART OF THIS SPECIFICATION TO THE EXTENT INDICATED BY THE REFERENCES THERETO:
  1. SECTIONS 710 AND 711 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
  2. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION.

1-03 SUBMITTALS
- A. SUBMIT PAINT TESTS, AS SPECIFIED IN SECTION 971 OF THE FDOT SPECIFICATIONS AND AS APPLICABLE TO HEREINAFTER SPECIFIED MATERIAL.

1-04 MATERIALS AND COLORS
- A. THERMOPLASTIC: IN ACCORDANCE WITH REQUIREMENTS AS SPECIFIED IN SECTION 711 OF THE FDOT SPECIFICATIONS.
- B. PAINT: IN ACCORDANCE WITH REQUIREMENTS AS SPECIFIED IN SECTION 971-12, CODE T-2 OF THE FDOT SPECIFICATIONS, LATEX PAINT ONLY.
- C. COLORS: YELLOW AND WHITE PER FDOT, OR AS INDICATED ON THE DRAWINGS.

1-05 EXECUTION
- A. TIME OF APPLICATION: PAINTING SHALL BE DONE ONLY DURING DAYLIGHT HOURS AND, AS FAR AS PRACTICAL, SHALL BE TERMINATED IN TIME TO PERMIT SUFFICIENT DRYING BY SUNSET.
- B. WEATHER LIMITATIONS: NO PAINT SHALL BE APPLIED WHEN ANY MOISTURE IS PRESENT ON THE SURFACE TO BE PAINTED OR WHEN THE AIR TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT. PAINTING SHALL NOT BE DONE WHEN WINDS ARE SUFFICIENT TO CAUSE SPRAY DUST.
- C. PREPARATION OF SURFACE TO BE PAINTED: THE SURFACE WHICH IS TO BE PAINTED SHALL BE CLEANED, BY COMPRESSED AIR OR OTHER EFFECTIVE MEANS, IMMEDIATELY BEFORE THE START OF PAINTING AND SHALL BE CLEAN AND DRY WHEN THE PAINT IS APPLIED. ANY VEGETATION OR LOOSE SOILS SHALL BE REMOVED FROM THE PAVEMENT BEFORE STRIPING IS BEGUN.
- D. MIXING PAINT: THE PAINT SHALL BE THOROUGHLY MIXED BEFORE IT IS POURED INTO THE PAINTING MACHINE AND NO THINNING OF THE PAINT IN THE MACHINE WILL BE ALLOWED AT ANY TIME. BEFORE THE START OF EACH DAY'S WORK, THE PAINT CONTAINER, CONNECTIONS AND THE SPRAY NOZZLES ON THE MACHINE SHALL BE THOROUGHLY CLEANED WITH PAINT THINNER OR OTHER SUITABLE CLEANER.
- E. PAINT APPLICATION: THE TRAFFIC MARKINGS SHALL BE OF THE SPECIFIED DIMENSIONS WITH CLEAN, TRUE EDGES AND WITHOUT SHARP BREAKS IN THE ALIGNMENT. A UNIFORM COATING OF PAINT SHALL BE OBTAINED AND THE FINISHED MARKINGS SHALL CONTAIN NO LIGHT SPOTS OR PAINT SKIPS. ANY STRIPES WHICH DO NOT HAVE A UNIFORM, SATISFACTORY APPEARANCE, BOTH DAY AND NIGHT, SHALL BE CORRECTED.
- F. RATE OF PAINT APPLICATION: THE MINIMUM RATE OF APPLICATION FOR PAINT SHALL BE AS FOLLOWS:
  1. FOUR INCH SOLID: 20 GALLONS PER MILE.
  2. HANDICAP LOGO: IN CONFORMANCE TO THE REQUIREMENTS OF THIS SECTION AND LOCAL CODES.
  3. ANY OTHER WIDTH STRIPE OR MARKINGS: A DIRECT PROPORTION OF THE ABOVE ITEM 1.
- G. REQUIRED FILM THICKNESS: THE MINIMUM WET FILM THICKNESS FOR ALL PAINTED AREAS SHALL BE 15 MILS.
- H. ALIGNMENT OF STRIPES: WHERE A STRIPE DEVIATES FROM THE CORRECT ALIGNMENT, AS INDICATED BY THE STRING LINE, BY MORE THAN ONE INCH IN ANY 20 FOOT LENGTH, IT SHALL BE OBLITERATED AND THE STRIPE CORRECTED HEREINAFTER AS SPECIFIED IN SECTION 1.8 "CORRECTIVE MEASURES".

1-06 PROTECTION OF PAINTED MARKINGS
- A. PROTECTION OF STRIPES: ALL NEWLY PAINTED STRIPES, OR OTHER MARKINGS, SHALL BE PROTECTED UNTIL THE PAINT IS SUFFICIENTLY DRY TO PERMIT VEHICLES TO CROSS THE MARKING WITHOUT DAMAGE FROM THE TIRES.
- B. REPAIR OF DAMAGED AREAS: ANY PORTIONS OF THE STRIPES DAMAGED BY PASSING TRAFFIC OR FROM ANY OTHER CAUSE, SHALL BE REPAINTED AT THE CONTRACTOR'S EXPENSE.

1-07 DIMENSION AND ALIGNMENT TOLERANCE
- A. DIMENSIONS: NO MARKING SHALL BE LESS THAN THE SPECIFIED WIDTH. NO MARKINGS SHALL EXCEED THE SPECIFIED WIDTH BY MORE THAN ONE-HALF INCH. ALIGNMENT TOLERANCES SHALL BE AS SPECIFIED IN PARAGRAPH 1-05(H).
- B. CORRECTION RATES: ANY CORRECTIONS OF VARIATION IN THE WIDTH OF OR IN THE ALIGNMENT OF STRIPES SHALL NOT BE MADE ABRUPTLY BUT THE STRIPES SHALL BE RETURNED TO THE DESIGN WIDTH AT THE RATE OF AT LEAST 10 FEET FOR EACH 1/2 INCH OF CORRECTION.

1-08 CORRECTIVE MEASURES
- A. ALL PAINTED MARKINGS WHICH FAIL TO MEET THE SPECIFICATIONS, INCLUDING THE PERMISSIBLE TOLERANCES AND THE APPEARANCE REQUIREMENTS, OR ARE MARRED OR DAMAGED BY TRAFFIC OR FROM OTHER CAUSES, SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. ALL DRIP AND SPATTERED PAINT SHALL BE REMOVED. WHENEVER IT IS NECESSARY TO REMOVE PAINT, IT SHALL BE DONE BY MEANS WHICH WILL NOT DAMAGE THE UNDERLYING SURFACE OF THE PAVEMENT. WHEN NECESSARY TO CORRECT A DEVIATION WHICH EXCEEDS THE PERMISSIBLE TOLERANCE IN ALIGNMENT, THAT PORTION OF THE STRIPE AFFECTED SHALL BE REMOVED AND REPAINTED IN ACCORDANCE WITH THESE SPECIFICATIONS.
- B. CORRECTIVE DEVICES: MIS-ALIGNMENT, DEFECTIVE SURFACES, ETC, SHALL BE CORRECTED BY CHEMICAL AGENTS, OR BY ANY OTHER TYPE OF MECHANICAL DEVICE, WHICH WILL EFFECTIVELY REMOVE THE PAINT WITHOUT DAMAGE TO THE PAVEMENT SURFACE, OR WHICH WILL NOT PREVENT THE RE-APPLICATION OF MARKINGS.

1-09 SPARE PAINT
- A. PROVIDE THE OWNER WITH A MINIMUM OF FIVE (5) GALLONS OF TRAFFIC PAINT FROM THE SAME BATCH USED IN APPLICATION OF PAVEMENT MARKINGS. ALSO PROVIDE PAINT SPECIFICATIONS AND THE MANUFACTURER'S IDENTIFICATION NUMBER OF THE PAINT USED.

1-10 MARKING TYPE
- A. ANY PAVEMENT MARKINGS LOCATED WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE THERMOPLASTIC UNLESS OTHERWISE INDICATED.
- B. ANY PAVEMENT MARKINGS LOCATED ON-SITE SHALL BE PAINT UNLESS OTHERWISE INDICATED.

NOTES:

1. ALL DRAINAGE CULVERT JOINTS SHALL BE WRAPPED PER FDOT INDEX 280.
2. ANY CONSTRUCTION ENTRANCE DURING THE CONSTRUCTION PROCESS SHALL BE GRAVEL WITHIN THE RIGHT OF WAY TO REDUCE SAND/SILT FROM BEING TRUCKED INTO THE ROADWAY.
3. PROPOSED GRADES ARE DESIGNED FOR 4:1 SLOPES UNLESS OTHERWISE SPECIFIED.
4. A RIGHT OF WAY USE PERMIT WILL BE REQUIRED FOR WORK WITHIN THE RIGHT OF WAY.

CONSTRUCTION TOLERANCES

THE FOLLOWING ARE THE ALLOWABLE DEVIATIONS FROM PROJECT DESIGN GRADES AND GRADIENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM AND DOCUMENT COMPLIANCE WITH THESE TOLERANCES PRIOR TO PROCEEDING FROM ONE PHASE OF CONSTRUCTION TO THE NEXT:

I. STORMWATER MANAGEMENT/DRAINAGE FACILITIES
- A. PERIMETER CONTAINMENT BERM:
  - MINIMUM ELEVATION = DESIGN GRADE
  - MAXIMUM ELEVATION = DESIGN GRADE + 0.10 FOOT
- B. WATER CONTROL STRUCTURE:
  1. MINIMUM GRATE ELEVATION = DESIGN GRADE; MAXIMUM GRATE ELEVATION = DESIGN GRADE + 0.10 FOOT
  2. MINIMUM CREST ELEVATION = DESIGN GRADE; MAXIMUM CREST ELEVATION = DESIGN GRADE + 0.05 FOOT
  3. MINIMUM BLEEDER ELEVATION = DESIGN GRADE; MAXIMUM BLEEDER ELEVATION = DESIGN GRADE + 0.05 FOOT
  4. MINIMUM TOP OF FILTER ELEVATION = DESIGN GRADE; MAXIMUM TOP OF FILTER ELEVATION = DESIGN GRADE + 0.05 FOOT
- C. CATCH BASINS/INLETS/PIPE INVERTS:
  - MINIMUM ELEVATION = DESIGN GRADE - 0.05 FOOT
  - MAXIMUM ELEVATION = DESIGN GRADE + 0.05 FOOT
- D. SWALE GRADES/GRADIENTS:
  1. MINIMUM ELEVATION = DESIGN GRADE - 0.10 FOOT; MAXIMUM ELEVATION = DESIGN GRADE + 0.10 FOOT
  2. MINIMUM FLOWLINE GRADIENT = 90% OF DESIGN GRADIENT
- E. PAVEMENT GRADES/GRADIENTS:
  1. FLEXIBLE PAVEMENT GRADE: MINIMUM ELEVATION = DESIGN GRADE - 0.10 FOOT; MAXIMUM ELEVATION = DESIGN GRADE + 0.10 FOOT
  2. FLEXIBLE PAVEMENT GRADIENT = 90% OF DESIGN GRADIENT (CROSS SLOPE AND LONGITUDINAL SLOPE)
  3. RIGID (CONCRETE) PAVEMENT GRADE: MINIMUM ELEVATION = DESIGN GRADE - 0.05 FOOT; MAXIMUM ELEVATION = DESIGN GRADE + 0.05 FOOT
  4. RIGID PAVEMENT GRADIENTS:
     - A) MINIMUM GRADIENTS = 90% OF DESIGN GRADIENT (CROSS SLOPE AND LONGITUDINAL SLOPE)
     - B) MAXIMUM HANDICAP RAMP = 15:1 (GRADIENT UNLESS OTHERWISE SPECIFIED BY LOCAL CODES)

II. STORMWATER MANAGEMENT/DRAINAGE FACILITIES

UNLESS OTHERWISE SPECIFIED BY THE LOCAL UTILITY COMPANIES, THE FOLLOWING ARE THE ALLOWABLE TOLERANCES FOR THESE ACTIVITIES:
- A. MANHOLES AND PIPE INVERTS:
  1. MINIMUM ELEVATION = DESIGN GRADE - 0.05 FOOT; MAXIMUM ELEVATION = DESIGN GRADE + 0.05 FOOT
  2. MINIMUM LINE GRADIENT = 90% OF DESIGN GRADIENT
- B. ALIGNMENT/LOCATION OF APPURTENANCES: AS ALLOWED BY THE APPLICABLE UTILITY AND/OR LOCAL GOVERNMENTAL ENTITY. CONTRACTOR SHALL CONFIRM AND DOCUMENT THIS PRIOR TO CONSTRUCTION.

TESTING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING, COORDINATING, DOCUMENTING, AND PROVIDING THE FOLLOWING MINIMUM TESTING:

WATER DISTRIBUTION-UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, THE LINES SHALL BE PRESSURE TESTED TO THE RATING OF THE PIPE. THE LINES SHALL BE TESTED IN SEGMENTS BETWEEN MAINLINE VALVES. BACTERIOLOGICAL TEST SAMPLES SHALL BE TAKEN AT ALL BRANCH LINE TERMINATION POINTS OR CONNECTION POINTS, AND ALONG THE MAIN LINES AT DISTANCES NOT TO EXCEED 2,640 FEET. ALL HYDRANTS AND VALVES SHALL BE OPERATED TO TEST PERFORMANCE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 36 HOURS NOTICE TO THE ENGINEER OF RECORD PRIOR TO TESTING.

WASTEWATER COLLECTION-UNLESS OTHERWISE SPECIFIED BY THE UTILITY COMPANY, THE FORCE MAIN SHALL BE PRESSURE TESTED TO THE RATING OF THE PIPE. VALVES SHALL BE OPERATED TO TEST PERFORMANCE. DEPENDING UPON WATER TABLE CONDITIONS DETERMINED BY THE ENGINEER, THE GRAVITY LINES SHALL BE TESTED FOR EITHER INFILTRATION OR EXFILTRATION AND INFLOW. THERE SHALL BE NO INFILTRATION/EXFILTRATION OR INFLOW ALLOWED. THE CONTRACTOR SHALL SEAL ANY PIPE, FITTING OR MANHOLE AS REQUIRED. THE CONTRACTOR SHALL PROVIDE A VIDEO TAPE OF ALL MAIN GRAVITY LINES ALONG WITH A LOG OF LATERAL LOCATIONS. ALL ELECTRICAL AND MECHANICAL DEVICES AT LIFT STATIONS SHALL BE TESTED TO VERIFY PROPER OPERATIONAL STATUS. THE CONTRACTOR SHALL PROVIDE MAINTENANCE MANUALS TO THE OWNER. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 36 HOURS NOTICE TO THE ENGINEER OF RECORD PRIOR TO TESTING.

ALL COLLECTION PIPING WILL PASS THE 5% MANDREL TEST FOR THE APPROPRIATE PIPE SDR RATING. A UTILITY REPRESENTATIVE MUST BE PRESENT DURING BOTH THE VIDEO AND MANDREL TESTING. CONTRACTOR TO PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE UTILITY COMPANY PRIOR TO TESTING.

PRIVATE ROADWAY/PARKING SUBGRADE-THE SUBGRADE SHALL BE TESTED FOR THE LBR VALUE AT A FREQUENCY OF ONE PER 10,000 SF. DENSITY TESTS SHALL BE PERFORMED AT A FREQUENCY OF TWO PER 10,000 SF. THICKNESS SHALL BE MEASURED AT EACH DENSITY TEST LOCATION. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

PRIVATE ROADWAY/PARKING BASE-THE BASE SHALL BE TESTED FOR THE LBR VALUE AT A FREQUENCY OF ONE PER 10,000 SF. DENSITY TESTS SHALL BE PERFORMED AT A FREQUENCY OF TWO PER 10,000 SF. A SIEVE ANALYSIS SHALL BE PERFORMED AT A FREQUENCY OF ONE PER ACRE. THICKNESS SHALL BE MEASURED AT EACH DENSITY TEST LOCATION. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

PRIVATE ASPHALT PAVING-ASPHALTIC CONCRETE SHALL BE TESTED FOR THE FOLLOWING PARAMETERS: THICKNESS, SIEVE ANALYSIS, MIX TYPE, STABILITY, % BITUMEN, AND DENSITY. THE ASPHALT SHALL BE TESTED AT A FREQUENCY OF TWO PER ACRE. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

PUBLIC ROADWAYS-AS REQUIRED BY THE ENTITY HAVING JURISDICTION. THE CONTRACTOR SHALL DETERMINE AND DOCUMENT THESE SPECIFICATIONS PRIOR TO BIDDING.

PORTLAND CEMENT CONCRETE-CONCRETE SHALL BE TESTED FOR THE FOLLOWING PARAMETERS: SLUMP, MODULUS OF RUPTURE, AND 7 AND 28 DAY COMPRESSIVE STRENGTH. TESTS SHALL BE PERFORMED ON SAMPLES TAKEN AT THE SITE AT A FREQUENCY OF TWO PER ACRE. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

RETENTION/DETENTION FACILITIES-IF INCLUDED WITHIN THE PROJECT, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND PERFORM A DRAWDOWN AND CAPACITY TEST OF THE FACILITIES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT WATER AND ACCEPTABLE MEANS TO MEASURE THE WATER VOLUMES PROVIDED, IF REQUIRED BY THE ENGINEER. IF A FILTRATION SYSTEM IS INCLUDED WITHIN THE PROJECT, THE FILTER MEDIA SHALL BE TESTED FOR COMPLIANCE WITH ALL CURRENT SPECIFICATIONS OF THE WATER MANAGEMENT DISTRICT. A PROFESSIONAL ENGINEER'S CERTIFICATION OF COMPLIANCE SHALL BE PROVIDED BY THE TESTING LAB.

IN ADDITION TO THE ENVIRONMENTAL PROTECTION DURING CONSTRUCTION SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM THE FOLLOWING IN THE ORDER LISTED:

1. PRIOR TO COMMENCEMENT, PROVIDE NOTIFICATION TO THE ENVIRONMENTAL PROTECTION AGENCY (EPA) FOR N.P.D.E.S. PERMIT, THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT AND LOCAL GOVERNMENT.
2. ERECT A TURBIDITY SCREEN ON ANY DOWNSTREAM SYSTEM WHICH RECEIVES RUNOFF FROM THE PROJECT. INSTALL OUTFALL CONTROL STRUCTURE AND FILTRATION SYSTEM IF INCLUDED.
3. PROVIDE A TEMPORARY FILTER CLOTH COVERED WITH GRAVEL OVER ANY PROPOSED FILTERS.
4. INSTALL A TEMPORARY TURBIDITY SCREEN AT ALL CONTROL STRUCTURES.
5. CONSTRUCT A TEMPORARY PERIMETER BERM AS NECESSARY TO DIRECT ALL RUNOFF WITHIN ANY AREA PLANNED FOR CLEARING.
6. MAINTAIN FILTER DURING CONSTRUCTION TO PROVIDE CONTINUOUS OPERATION.
7. UPON PERFORMING FINAL GRADING, THE CONTRACTOR SHALL REMOVE ALL SILTS, CLAYS AND OTHER DELETERIOUS MATERIAL FROM THE BOTTOM OF ALL STORMWATER MANAGEMENT AREAS PRIOR TO GRASSING.
8. AFTER ACHIEVING A NON-ERODIBLE COVER OF GRASS, REMOVE TEMPORARY FILTER CLOTH AND GRAVEL OVER FILTERS AND REPLACE WITH NEW FILTER CLOTH AND COVER MATERIAL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
9. NOTIFY THE OWNER FOR FINAL INSPECTION.
10. UPON FINAL APPROVAL FROM THE OWNER, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES.

NOTES (continued):

5. A SEPARATE RIGHT OF WAY PERMIT WILL BE REQUIRED FOR UTILITY WORK WITHIN THE RIGHT OF WAY.
6. A SEPARATE NATURAL RESOURCE APPROVAL WILL BE REQUIRED PRIOR TO LAND CLEARING.
7. THE DRIVEWAY CULVERT SIZE, SUMP, AND MATERIAL ARE SUBJECT TO CHANGE AS A FUNCTION OF DESIGN REQUIREMENTS, FUTURE DRAINAGE PROJECTS, OR FIELD CONDITIONS AS DETERMINED BY CHARLOTTE COUNTY RIGHT OF WAY AT TIME OF LINE & GRADE INSPECTIONS.
8. SOD ALL DISTURBED AREAS AFTER FINAL GRADING.
9. OPEN CUTTING OF ROADWAYS FOR THE PURPOSE OF PROVIDING WATER OR SEWER TO THE PROPERTY WILL NOT BE ALLOWED.
10. ALL AREAS DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITY OR IMPROVEMENTS WITHIN THE COUNTY RIGHT OF WAY SHALL BE SODDED IN ITS ENTIRETY.
11. THE QUANTITIES INDICATED ON THE INLET & PIPE SCHEDULE ARE INTENDED AS A GUIDE FOR COMPARISON BIDDING AND DOES NOT RELEIVE THE CONTRACTOR FROM PROVIDING A COMPREHENSIVE MATERIAL TAKE OFF. IN THE EVENT THAT A DISCREPANCY OCCURS BETWEEN THE QUANTITIES LISTED IN THE INLET & PIPE SCHEDULE AND THE QUANTITIES INDICAGTED ON THE PLAN, THE QUANTITIES INDICATED ON THE PLAN SHALL GOVERN, AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD OF THE DISCREPANCY.
12. DIRECT ALL ROOF RUNOFF TO RETENTION/DETENTION AREAS.

NOTE: ALL INLETS AND STRUCTURES TO HAVE TRAFFIC BEARING GRATES.

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

GENERAL NOTES

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-0.02

STRUCTURE TABLE

STRUCTURE	STRUCTURE TYPE	RIM	PIPE NAME	INVERT ELEVATION	LOCATION
STR-1	Type D FDOT INDEX 232	5.87	P-05 P-06 SLOT (1) SLOT (2)	4 W 3.81 S 3.46 E 5.50 N 5.70	VOYAGEUR DRIVE 16+94
STR-2	Type D FDOT INDEX 232	6.05	P-05	1 E 3.87	VOYAGEUR DRIVE 16+50
STR-3	Type C FDOT INDEX 232	6.20	P-20 EX P-23	3 W 3.00 N 3.00 S 3.00	SAN MARINO DRIVE 28+33
STR-5	JB Type C FDOT INDEX 232	5.92	P-31 P-32 P-33	3 NE 2.60 W 2.60 SW 2.60	SAN MARINO DRIVE 38+69
STR-6	Type C FDOT INDEX 232	3.80	P-17 P-50 P-54	3 E 2.00 SW 2.00 NW 1.85	SAN MARINO DRIVE 19+73
STR-7	Type D FDOT INDEX 232	7.50	P-16 P-49 SLOT	3 NE 4.14 NW 4.14 SW 5.30	SAN MARINO DRIVE 13+27
STR-8	Type E FDOT INDEX 232	5.60	P-51 P-52	2 E 3.74 S 3.70	SAN MARINO DRIVE 16+59
STR-9	Type C FDOT INDEX 232	8.28	P-24 P-53	2 N 6.60 S 6.60	SULSTONE DRIVE 17+54

PIPE TABLE

STR NO	DESCRIPTION	LENGTH	INVERTS	STATION
EX	EX 12X18 ERCP	5LF	UPSTREAM 3.00 DOWNSTREAM 3.00	SAN MARINO DRIVE 28+34
P-01	12X18 ERCP	34LF	UPSTREAM 8.90 DOWNSTREAM 8.90	BROADPOINT ROAD 12+44
P-02	12X18 ERCP	28LF	UPSTREAM 9.00 DOWNSTREAM 9.00	BROADPOINT ROAD 36+55
P-03	14X23 ERCP	36LF	UPSTREAM 7.50 DOWNSTREAM 7.40	VOYAGEUR DRIVE 12+16
P-04	14X23 ERCP	32LF	UPSTREAM 7.20 DOWNSTREAM 7.10	VOYAGEUR DRIVE 13+50
P-05	12X18 ERCP	44LF	UPSTREAM 3.87 DOWNSTREAM 3.81	VOYAGEUR DRIVE 16+50
P-06	EXTEND 12X18 ERCP	5LF	UPSTREAM 3.46 DOWNSTREAM 3.46	VOYAGEUR DRIVE 16+94
P-07	12X18 ERCP	32LF	UPSTREAM 4.70 DOWNSTREAM 4.70	VOYAGEUR DRIVE 18+89
P-08	14X23 ERCP	38LF	UPSTREAM 6.70 DOWNSTREAM 6.70	VOYAGEUR DRIVE 22+88
P-09	12X18 ERCP	38LF	UPSTREAM 6.70 DOWNSTREAM 6.70	VOYAGEUR DRIVE 25+50
P-10	12X18 ERCP	36LF	UPSTREAM 6.70 DOWNSTREAM 6.70	VOYAGEUR DRIVE 28+48
P-11	12X18 ERCP	41LF	UPSTREAM 6.10 DOWNSTREAM 6.00	VOYAGEUR DRIVE 30+72
P-12	14X23 ERCP	42LF	UPSTREAM 5.60 DOWNSTREAM 5.50	VOYAGEUR DRIVE 31+48
P-13	12X18 ERCP	28LF	UPSTREAM 5.85 DOWNSTREAM 5.80	VOYAGEUR DRIVE 32+16
P-14	14X23 ERCP	24LF	UPSTREAM 3.50 DOWNSTREAM 3.50	VOYAGEUR DRIVE 35+00
P-15	12X18 ERCP	37LF	UPSTREAM 7.20 DOWNSTREAM 7.10	SAN MARINO DRIVE 11+90
P-16	14X23 ERCP	61LF	UPSTREAM 5.70 DOWNSTREAM 4.14	SAN MARINO DRIVE 13+87
P-17	12X18 ERCP	55LF	UPSTREAM 3.00 DOWNSTREAM 2.00	SAN MARINO DRIVE 20+29
P-18	12X18 ERCP	34LF	UPSTREAM 4.60 DOWNSTREAM 4.50	SAN MARINO DRIVE 21+61
P-19	12X18 ERCP	37LF	UPSTREAM 5.10 DOWNSTREAM 5.00	SAN MARINO DRIVE 23+76

PIPE TABLE

STR NO	DESCRIPTION	LENGTH	INVERTS	STATION
P-20	12X18 ERCP	19LF	UPSTREAM 4.30 DOWNSTREAM 3.00	SAN MARINO DRIVE 28+13
P-23	12X18 ERCP	21LF	UPSTREAM 4.30 DOWNSTREAM 3.00	SAN MARINO DRIVE 28+39
P-24	12X18 ERCP	63LF	UPSTREAM 6.60 DOWNSTREAM 6.50	SULSTONE DRIVE 17+54
P-25	12X18 ERCP	45LF	UPSTREAM 5.10 DOWNSTREAM 5.00	SAN MARINO DRIVE 30+08
P-26	12X18 ERCP	30LF	UPSTREAM 5.60 DOWNSTREAM 5.50	SAN MARINO DRIVE 30+33
P-27	12X18 ERCP	29LF	UPSTREAM 5.20 DOWNSTREAM 5.20	SAN MARINO DRIVE 32+61
P-28	12X18 ERCP	29LF	UPSTREAM 5.10 DOWNSTREAM 5.10	SAN MARINO DRIVE 33+40
P-30	12X18 ERCP	32LF	UPSTREAM 4.40 DOWNSTREAM 4.30	SAN MARINO DRIVE 37+07
P-31	12X18 ERCP	37LF	UPSTREAM 2.60 DOWNSTREAM 2.50	SAN MARINO DRIVE 38+69
P-32	12X18 ERCP	22LF	UPSTREAM 3.80 DOWNSTREAM 2.60	SAN MARINO DRIVE 38+51
P-33	12X18 ERCP	38LF	UPSTREAM 3.60 DOWNSTREAM 2.60	SUNNYBROOK PEACE RIVER DRIVE 43+35
P-34	12X18 ERCP	30LF	UPSTREAM 3.35 DOWNSTREAM 3.35	SUNNYBROOK PEACE RIVER DRIVE 35+86
P-35	12X18 ERCP	39LF	UPSTREAM 7.80 DOWNSTREAM 7.80	SUNNYBROOK PEACE RIVER DRIVE 18+18
P-36	12X18 ERCP	45LF	UPSTREAM 8.60 DOWNSTREAM 8.50	SUNNYBROOK PEACE RIVER DRIVE 16+03
P-37	12X18 ERCP	40LF	UPSTREAM 8.30 DOWNSTREAM 8.30	SUNNYBROOK PEACE RIVER DRIVE 14+86
P-38	12X18 ERCP	30LF	UPSTREAM 8.10 DOWNSTREAM 8.10	SULSTONE DRIVE 12+47
P-39	12X18 ERCP	30LF	UPSTREAM 6.20 DOWNSTREAM 6.15	SULSTONE DRIVE 20+12
P-40	12X18 ERCP	32LF	UPSTREAM 5.70 DOWNSTREAM 5.60	SULSTONE DRIVE 21+68
P-41	12X18 ERCP	31LF	UPSTREAM 5.60 DOWNSTREAM 5.50	SULSTONE DRIVE 24+83
P-42	12X18 ERCP	30LF	UPSTREAM 4.80 DOWNSTREAM 4.70	SULSTONE DRIVE 27+29

PIPE TABLE

STR NO	DESCRIPTION	LENGTH	INVERTS	STATION
P-43	12X18 ERCP	30LF	UPSTREAM 3.80 DOWNSTREAM 3.70	SULSTONE DRIVE 33+76
P-44	12X18 ERCP	42LF	UPSTREAM 3.80 DOWNSTREAM 3.80	SULSTONE DRIVE 38+04
P-45	12X18 ERCP	4LF	UPSTREAM 3.34 DOWNSTREAM 3.30	SULSTONE DRIVE 39+69
P-46	12X18 ERCP	37LF	UPSTREAM 3.60 DOWNSTREAM 3.60	SULSTONE DRIVE 40+62
P-47	12X18 ERCP	50LF	UPSTREAM 3.80 DOWNSTREAM 3.80	SULSTONE DRIVE ???
P-49	EX. 14X23 ERCP	7LF	UPSTREAM 4.14 DOWNSTREAM 4.14	SAN MARINO DRIVE 13+27
P-50	12X18 ERCP	12LF	UPSTREAM 2.80 DOWNSTREAM 2.00	SAN MARINO DRIVE 19+68
P-51	18" CMP	6LF	UPSTREAM 3.74 DOWNSTREAM 3.70	SAN MARINO DRIVE 16+59
P-52	12X18 ERCP	10LF	UPSTREAM 3.70 DOWNSTREAM 3.70	SAN MARINO DRIVE 16+59
P-53	12X18 ERCP	37LF	UPSTREAM 6.90 DOWNSTREAM 6.60	SULSTONE DRIVE 17+92
P-54	EX. 12X18	6LF	UPSTREAM 1.85 DOWNSTREAM 1.80	SAN MARINO DRIVE 19+73
SLOT	SLOT 6"	3LF	UPSTREAM 5.30 DOWNSTREAM 5.30	SAN MARINO DRIVE 13+27
SLOT (1)	12" WIDE SLOT	3LF	UPSTREAM 5.50 DOWNSTREAM 5.50	VOYAGEUR DRIVE 16+97
SLOT (2)	12" WIDE SLOT	4LF	UPSTREAM 5.70 DOWNSTREAM 5.70	VOYAGEUR DRIVE 16+94

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

GENERAL NOTES AND LEGENDS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-0.03

SUMMARY OF PAY ITEMS

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TS-01	SURVEY, STAKEOUT & RECORD DRAWING		
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-A	TEMPORARY EROSION CONTROL NNDES COMPLIANCE	LS	1
110-1	CLEARING AND GRUBBING	LS	1
120-1 & 120-6	EXCAVATION EMBANKMENT BORROW AND GRADING	LS	1
120-4	REMOVAL OF UNSUITABLE MATERIAL	CY	100
160-4	TYPE "B" STABILIZATION (LBR 40) 8" THICK SIDEWALK BASE	SY	10053
400-1-11	CONCRETE CLASS 1 GRAVITY WALL	CY	8.4
425-1-521	DITCH BOTTOM INLET (TYPE-C)	EA	4
425-1-541	DITCH BOTTOM INLET (TYPE-D)	EA	3
425-1-551	DITCH BOTTOM INLET (TYPE-E)	EA	1
425-1-529	MODIFY INLETS	EA	2
430-174-215	ELL. CONC. PIPE CULV. (12"X18")(CL 3)	LF	1360
430-174-218	ELL. CONC. PIPE CULV. (14"X23")(CL3)	LF	264
430-174-118	18" CORRUGATED METAL PIPE (SD)	LF	6
515-1-2	PIPE HANDRAIL (ALUMINUM) (INDEX 870)	LF	51
520-2	TYPE "D" CURB	LF	34
522-1-D	CONCRETE DRIVEWAY (4" THICK) FIBERMESH	SY	2400
522-1	CONCRETE SIDEWALK (4" THICK)	SY	7666
522-1-E	TEXTURED CONCRETE DRIVE	SY	28
575-1-3	SODDING STANDARD	SY	24,000
575-1-4	SODDING PREMIUM (FLORITAM)	SY	150
700-20-11	STOP SIGN	AS	1
700-20-40	EXISTING SIGN RELOCATION	AS	25
710-17	* REMOVE EXISTING PAINTED STOP BARS	SF	96

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
710-11-123	CROSSWALK STRIPE (12"),WHITE PAINT	LF	2566
710-11-125	STOP BAR STRIPE (24"), WHITE PAINT	LF	382
164-4800	FIRE HYDRANT (RELOCATE)	EA	2
1080-15	ADJUST & MODIFY WATER METER BOX	EA	2
1080-15A	ADJUST & MODIFY SANITARY MH RIM TO GRADE	EA	2
1080-15B	ADJUST & MODIFY VALVE BOX	EA	13

NOTES:
CONTRACTOR IS RESPONSIBLE TO VIDEO TAPE ENTIRE PROJECT PRIOR TO START OF CONSTRUCTION.

CONTRACTOR IS TO CLEAN ALL STRUCTURES PRIOR TO ACCEPTANCE.

ALL SIGNS THAT ARE REMOVED DURING CONSTRUCTION ARE TO BE REPLACED.

ALL AREAS DISTURBED OUTSIDE OF CONSTRUCTION LIMITS, WILL BE SODDED AT THE CONTRACTORS EXPENSE.

NO TREES ARE TO BE REMOVED WITHOUT PRIOR APPROVAL OF THE COUNTY

* STOP BAR PAINT SHALL BE REMOVED BY WATER BLASTING OR GROUND OFF ROADWAY

NOTE:
CERTAIN ASSUMPTIONS HAVE BEEN MADE CONCERNING THE LISTED QUANTITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EACH QUANTITY FOR BIDDING PURPOSES.

AT THE PRECONSTRUCTION MEETING THE CONTRACTOR WILL BE PROVIDED WITH A DISK, CONTAINING THE THE PROJECT IN DIGITAL FORMAT FOR THE USE IN CONSTRUCTION STAKE-OUT OF THE PROJECT.

REVISIONS

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

SUMMARY OF QUANTITIES

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-0.05

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

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KEY SHEET

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

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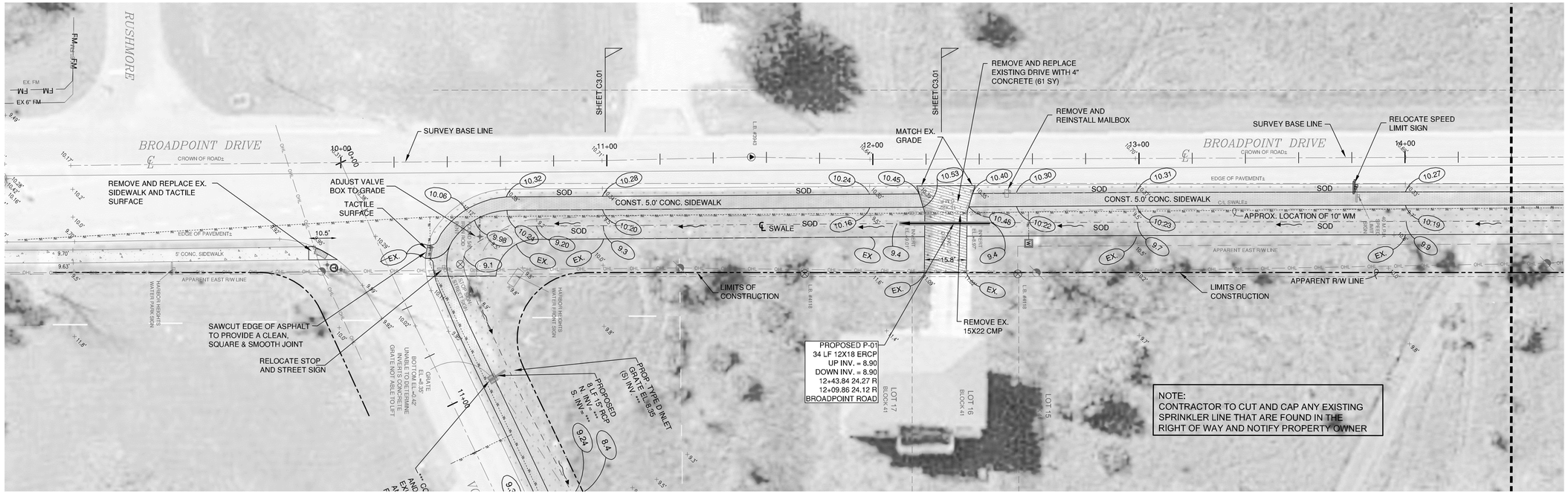
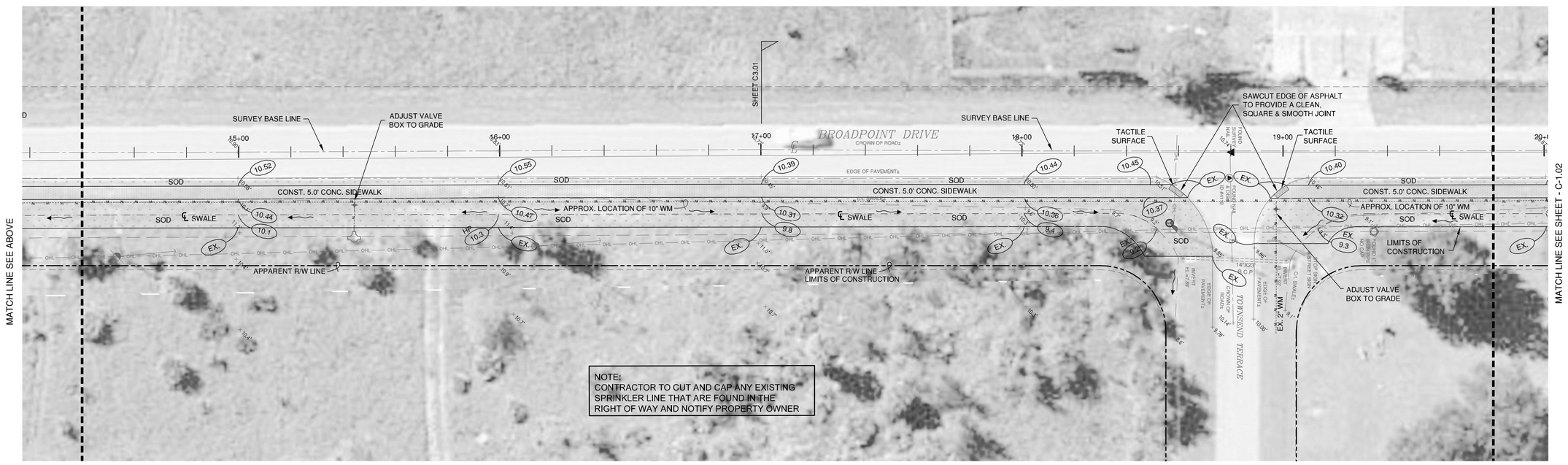
C-0.06





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

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GRADING PLAN
BROADPOINT DRIVE

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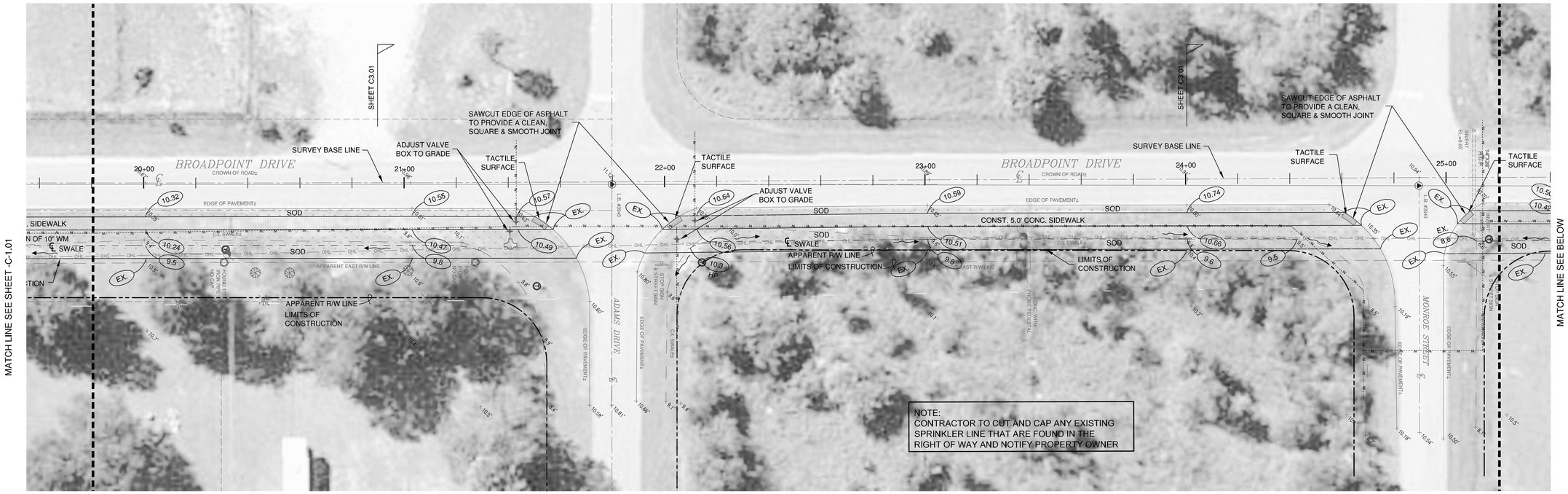
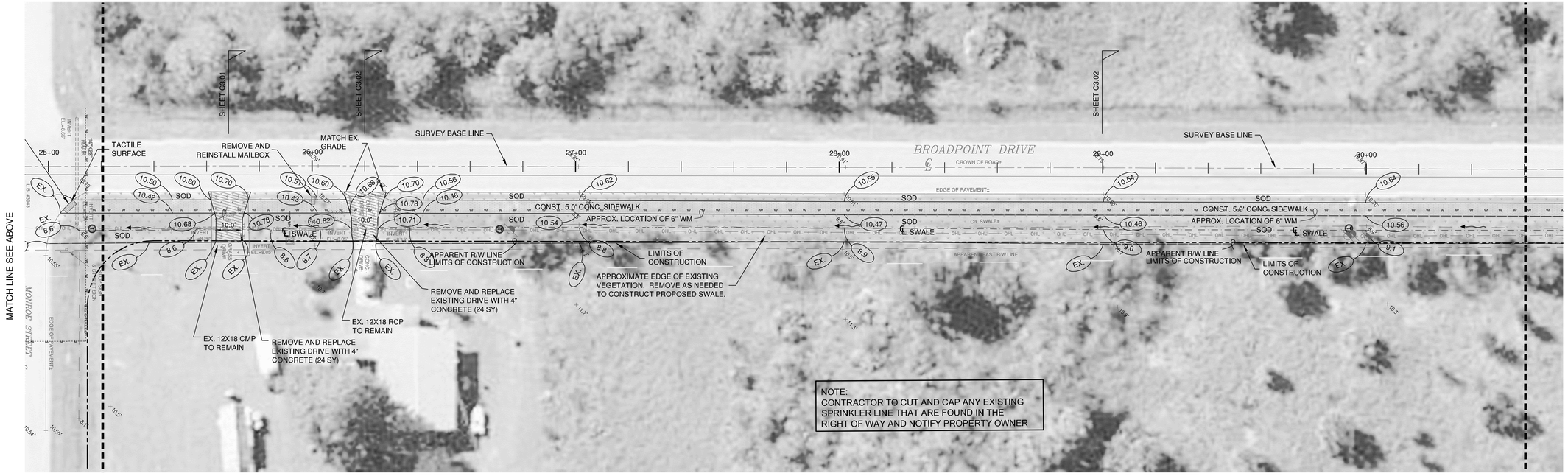
C-1.01





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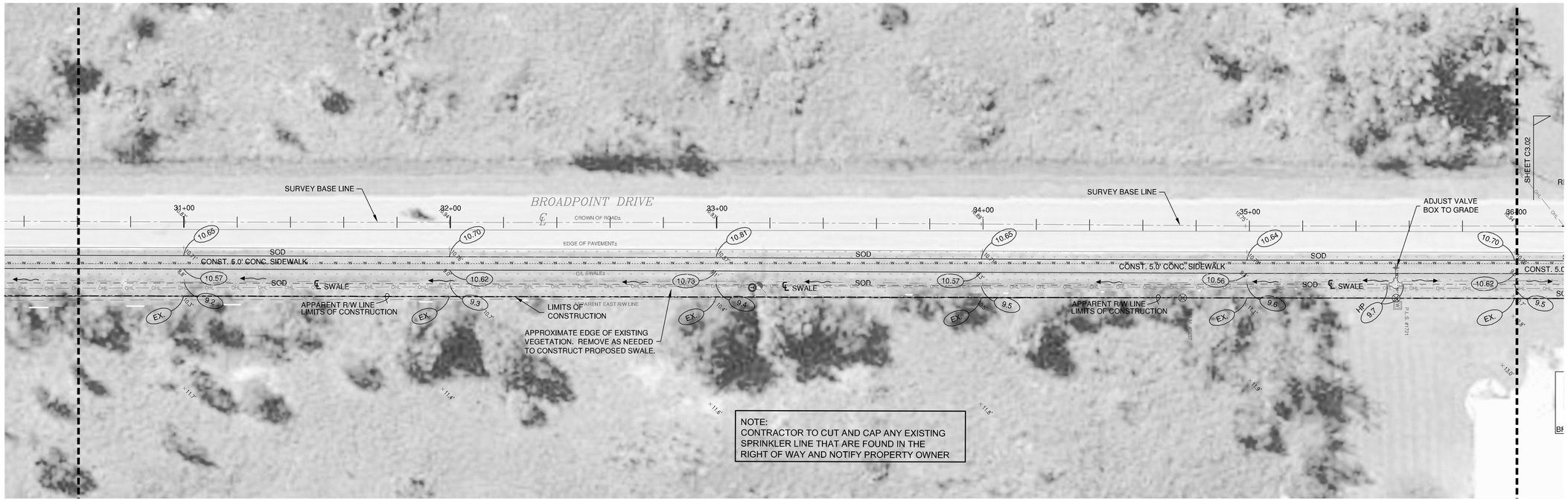

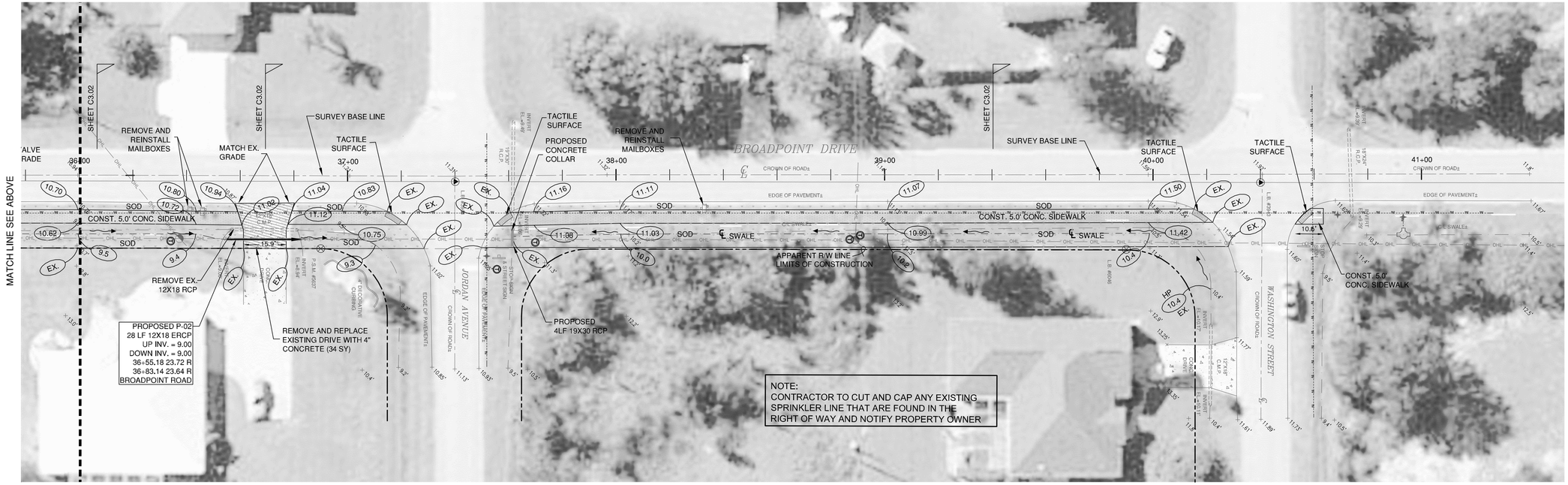

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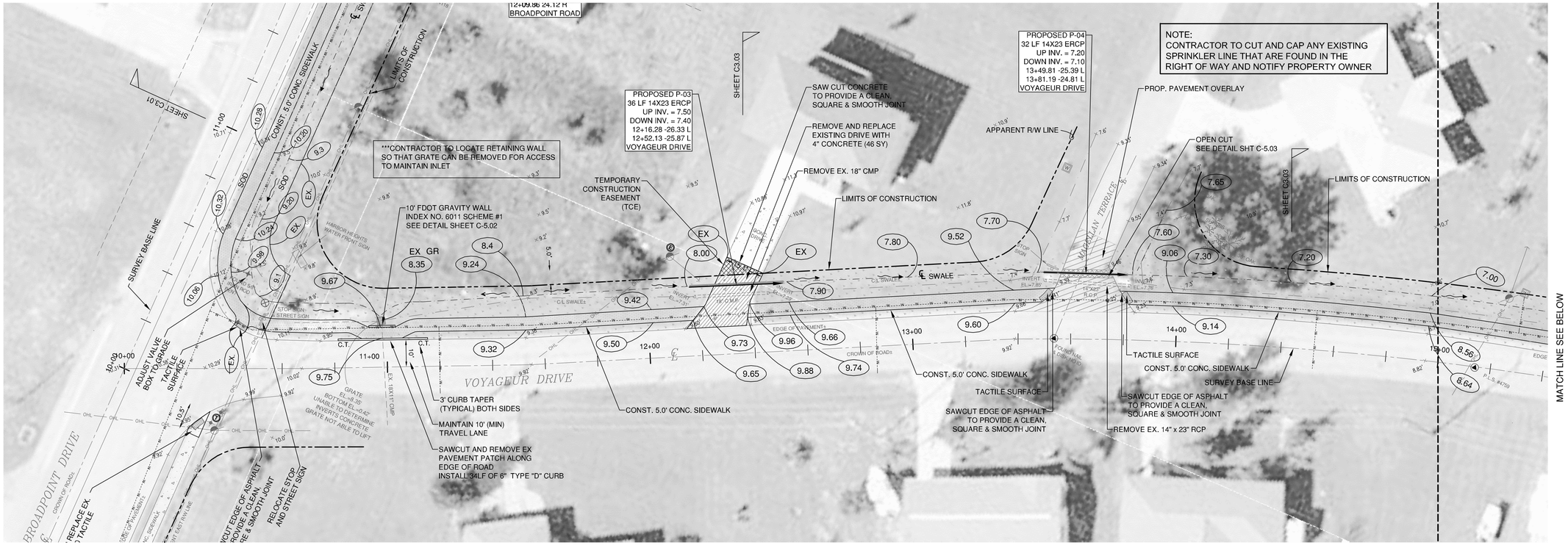

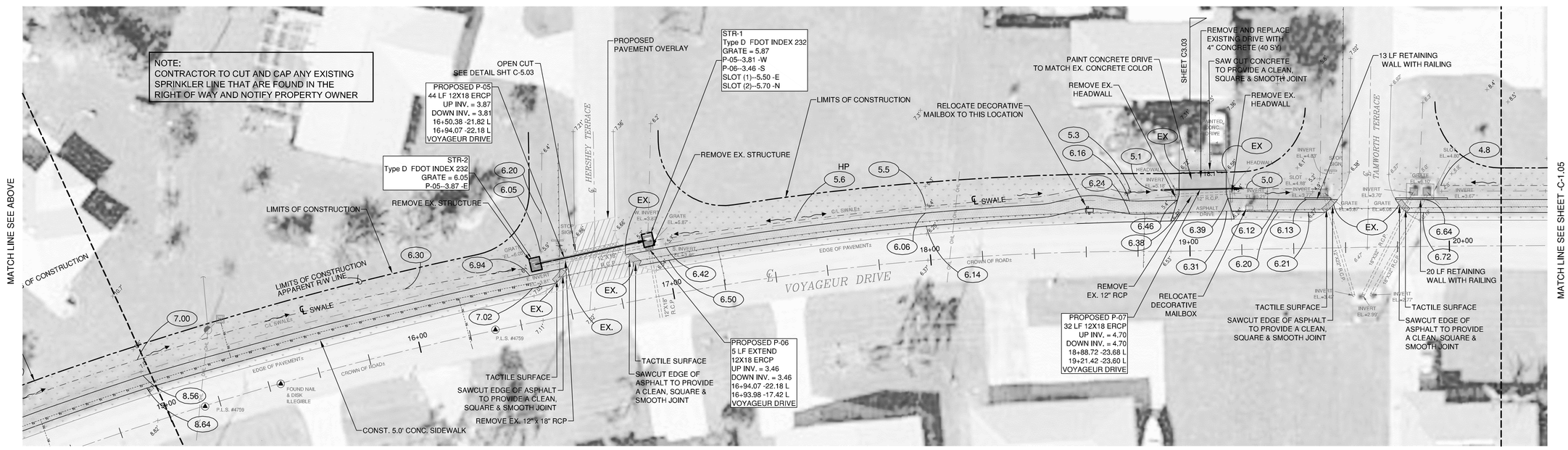

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- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 11 12	ADD GRAVITY WALL REV SIDEWALK		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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Fax No.: (941) 743-8298
E-mail: ces@acp-ces.com
CIVIL ENGINEERS-LAND DEVELOPMENT
SPORTS FACILITY CONSULTANTS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

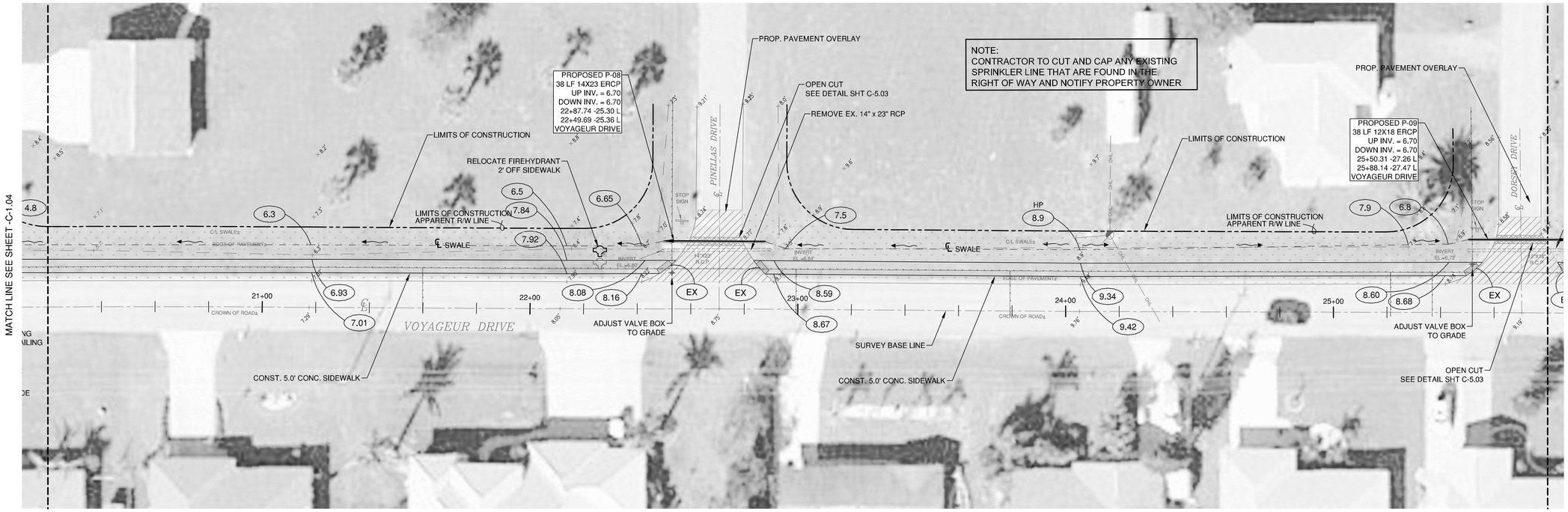
GRADING PLAN
VOYAGEUR DRIVE

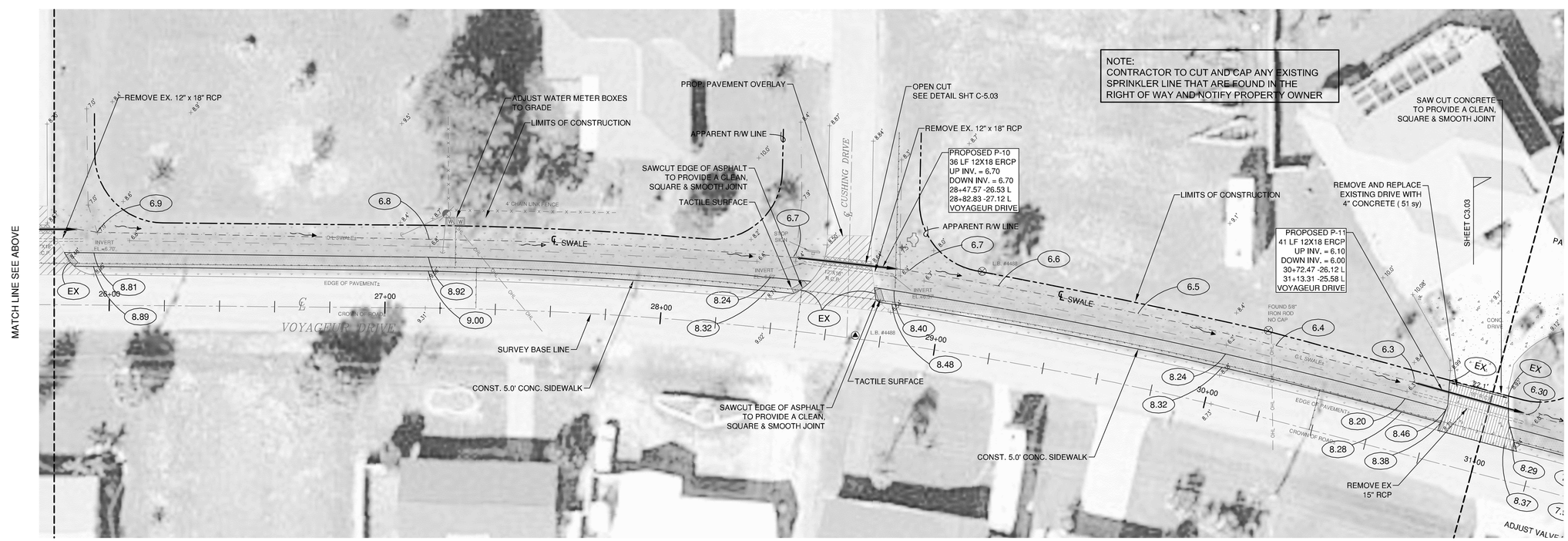
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No. 12722

SCALE AS SHOWN

JOB #12722

C-1.04





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

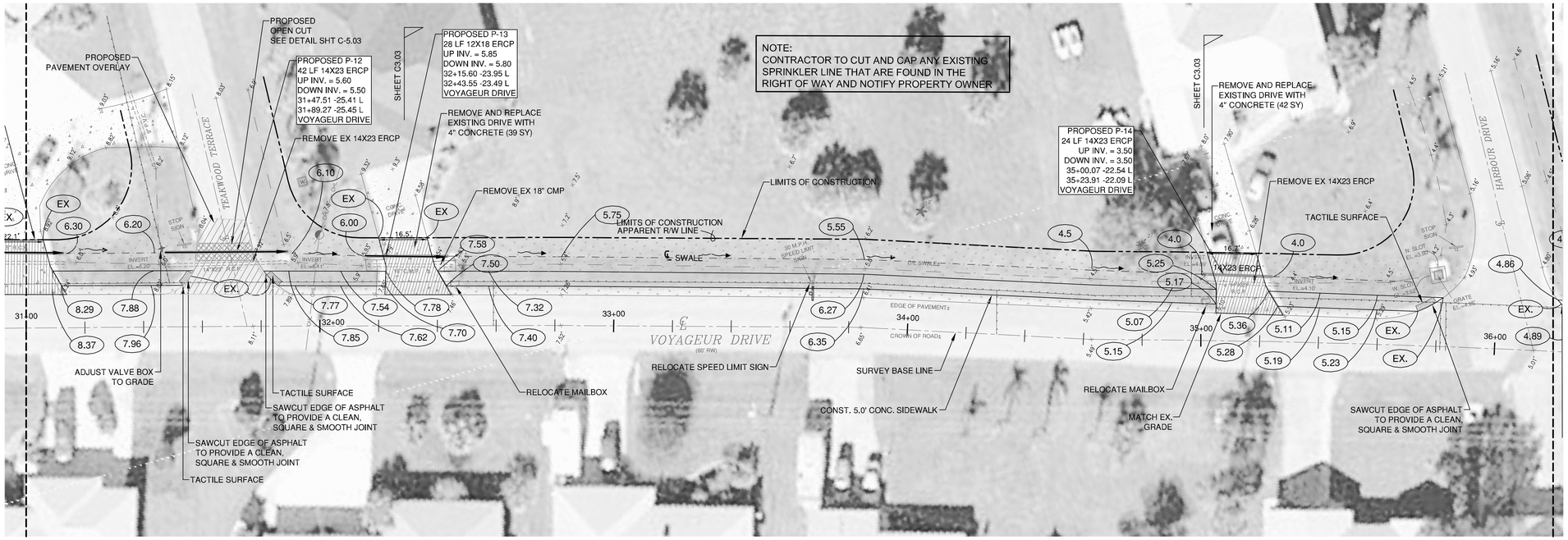
SITE PLAN
VOYAGEUR DRIVE

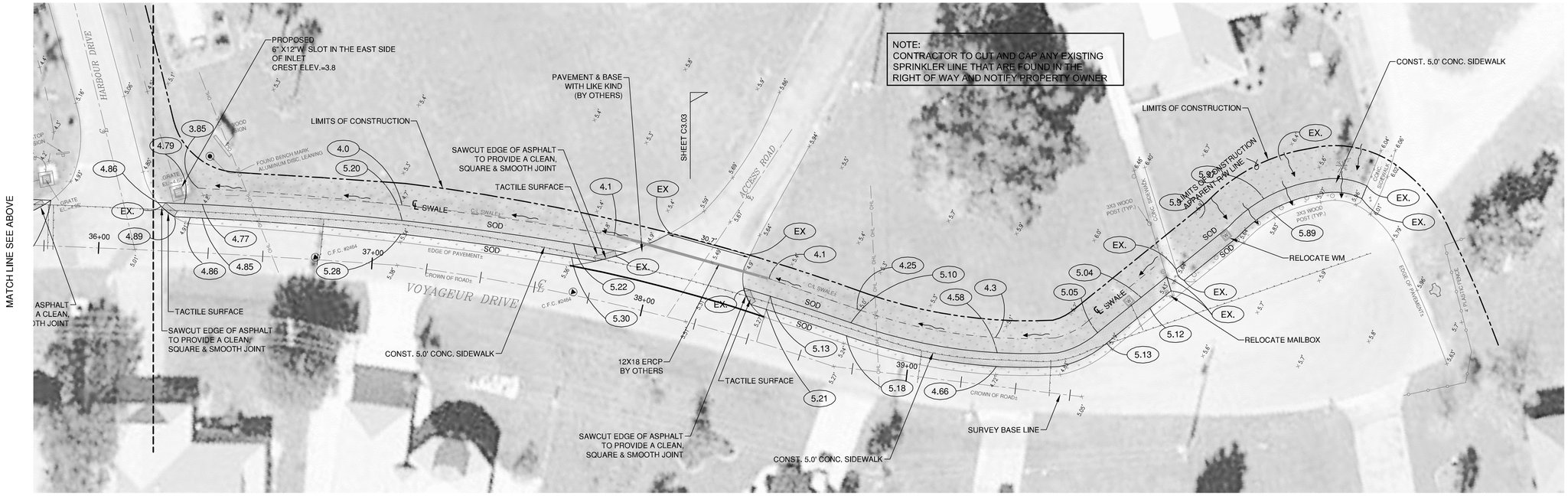
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.05





REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

GRADING PLAN
VOYAGEUR DRIVE

Joseph S. Menen, P.E.
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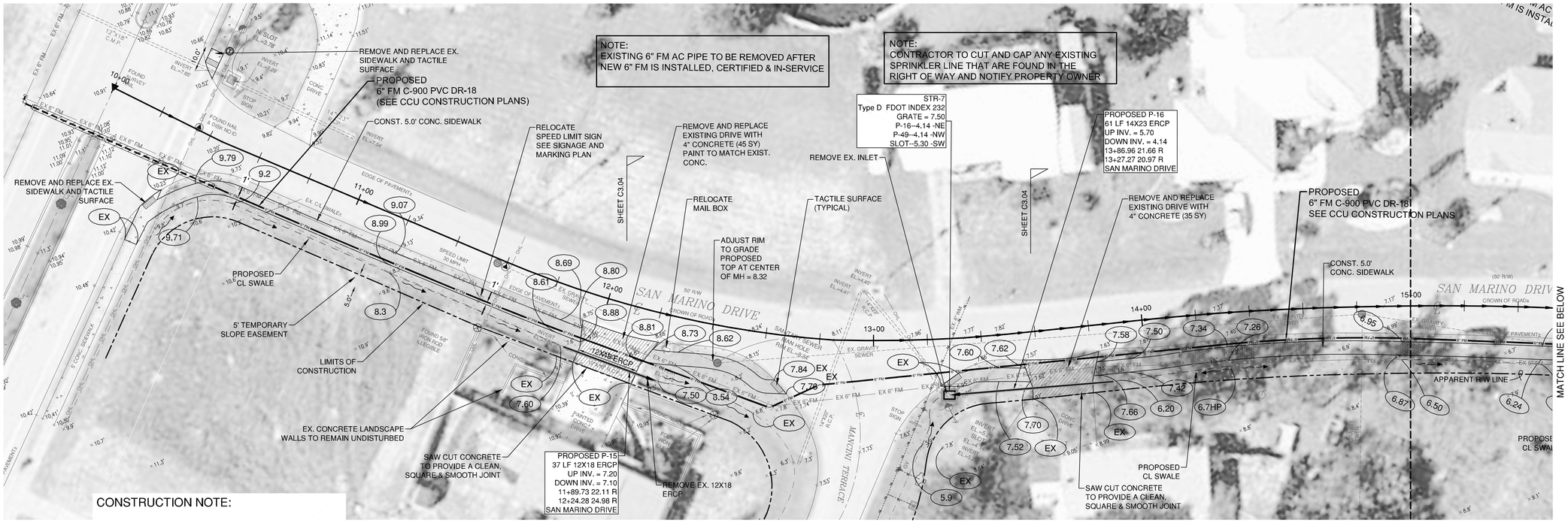
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

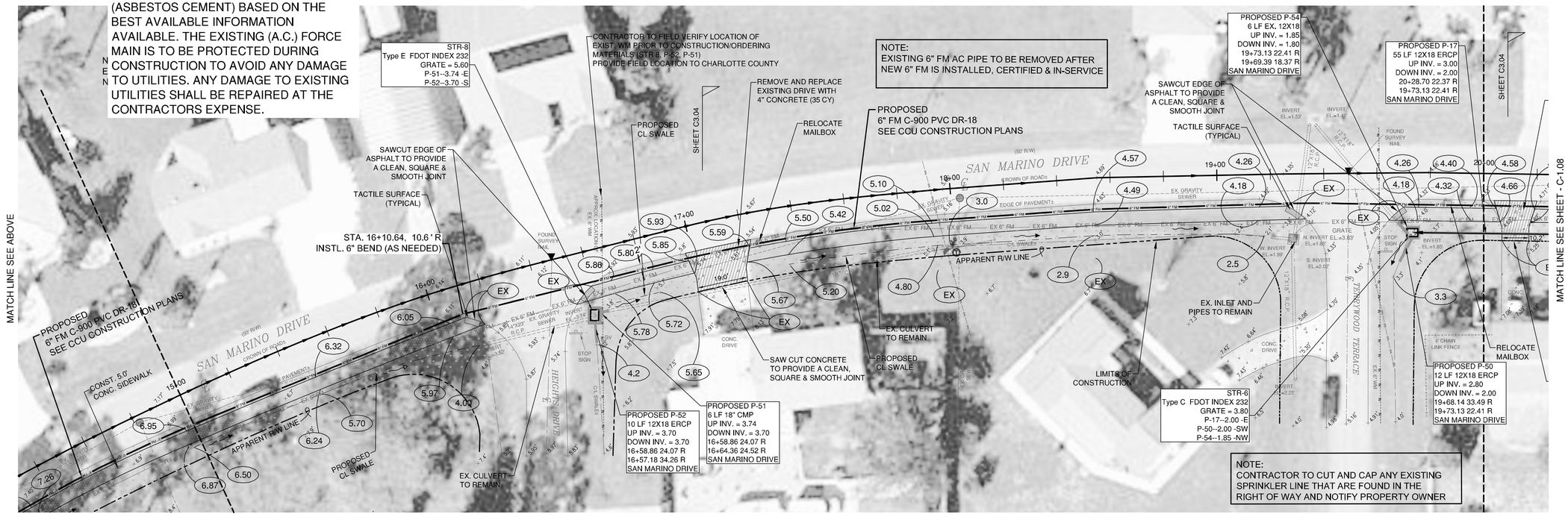
JOB #12722

C-1.06



CONSTRUCTION NOTE:

THE CONSTRUCTION PLAN SHOW THE EXISTING UTILITIES AND FORCE MAIN, (ASBESTOS CEMENT) BASED ON THE BEST AVAILABLE INFORMATION AVAILABLE. THE EXISTING (A.C.) FORCE MAIN IS TO BE PROTECTED DURING CONSTRUCTION TO AVOID ANY DAMAGE TO UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.



LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2015 09 21	ADD CCU FM		
2015 02 11	REVISE PER COUNTY COMMENTS		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

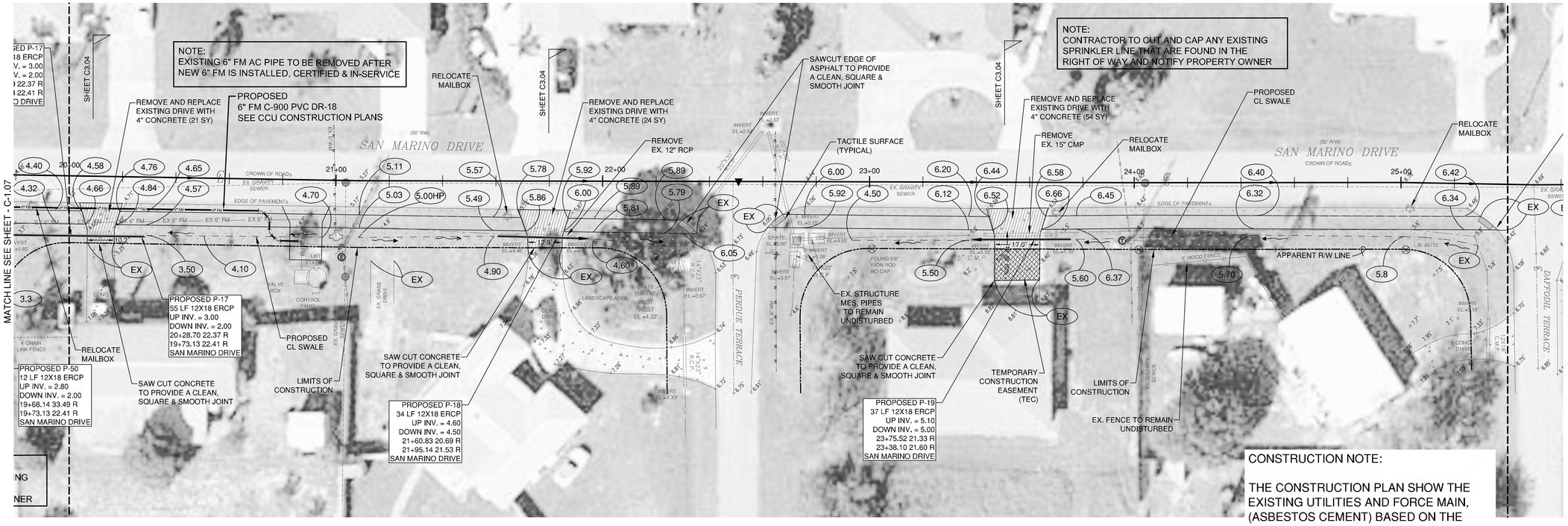
GRADING PLAN
SAN MARINO DRIVE

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.07



CONSTRUCTION NOTE:

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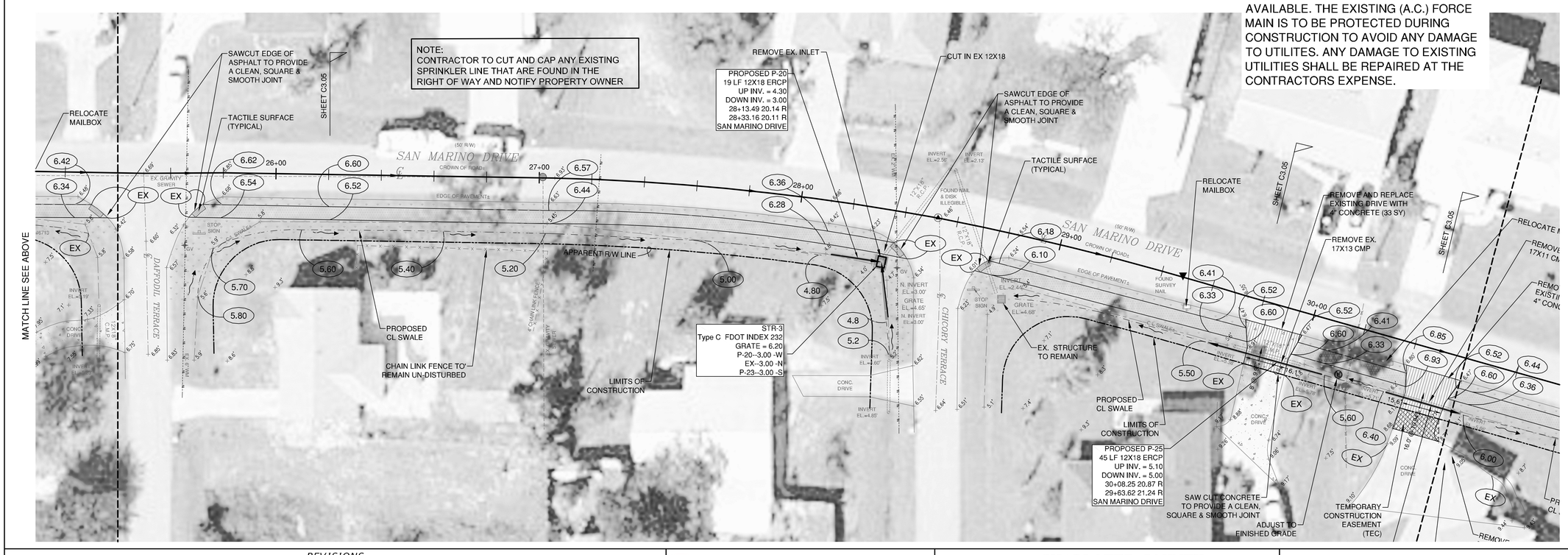

LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FH/)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2015 09 21	ADD CCU FM		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

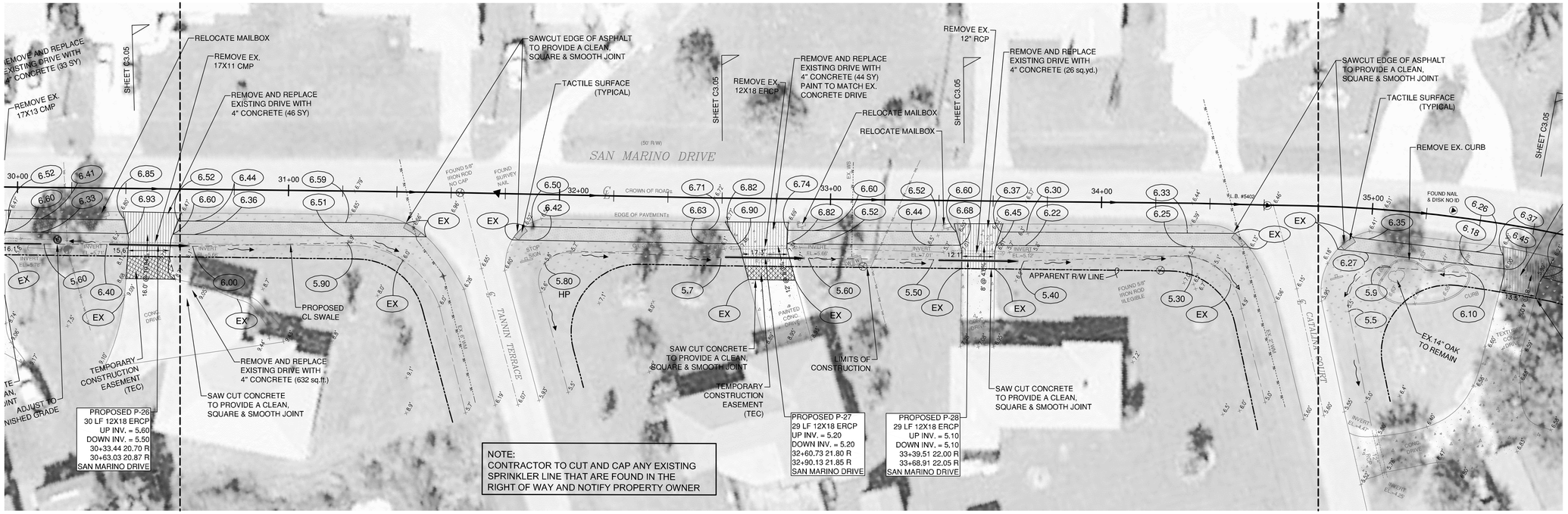
GRADING PLAN
SAN MARINO DRIVE

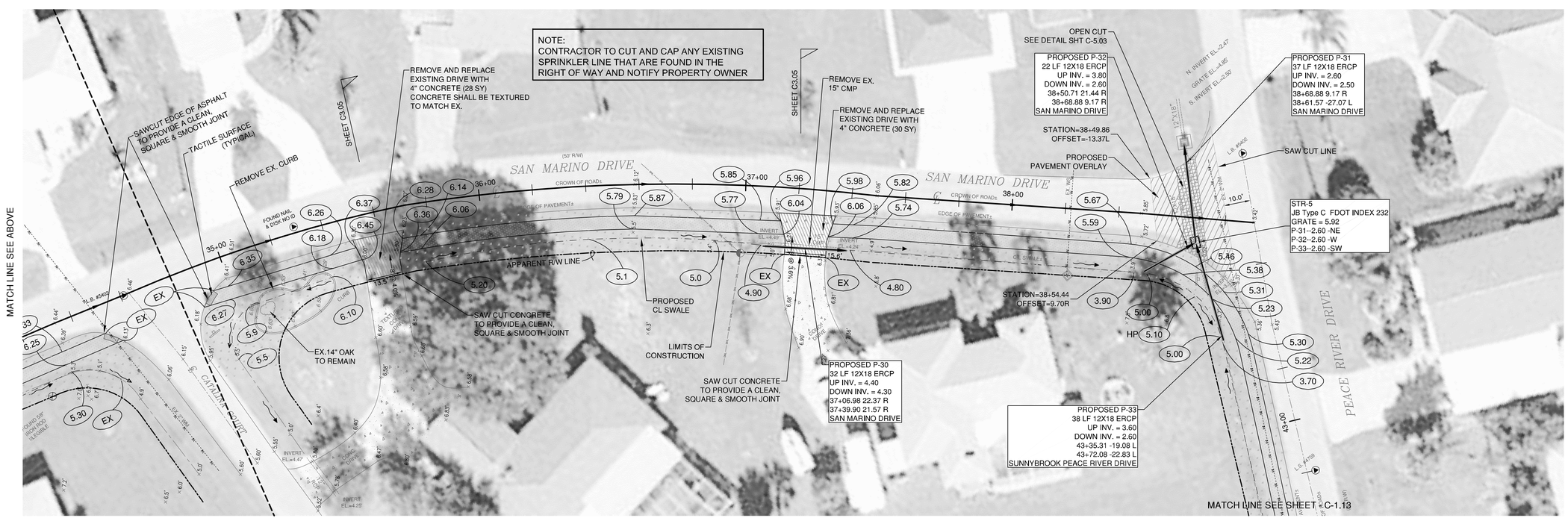
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.08





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (THY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

GRADING PLAN
SAN MARINO DRIVE

Joseph S. Menen, P.E.
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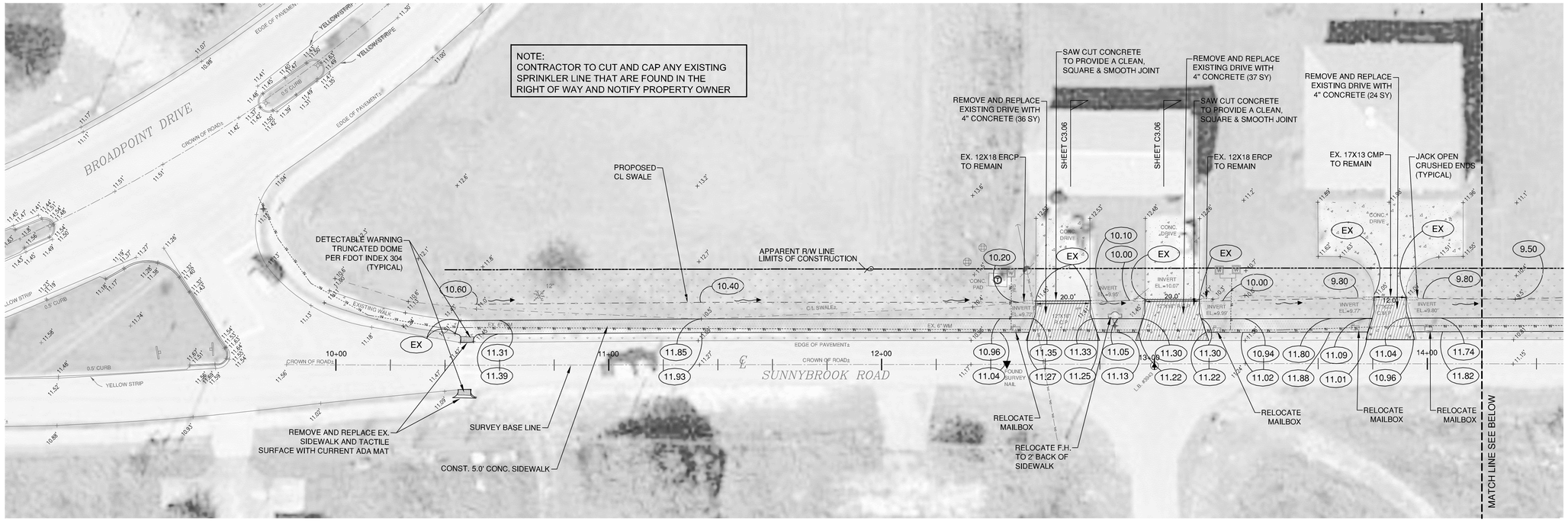
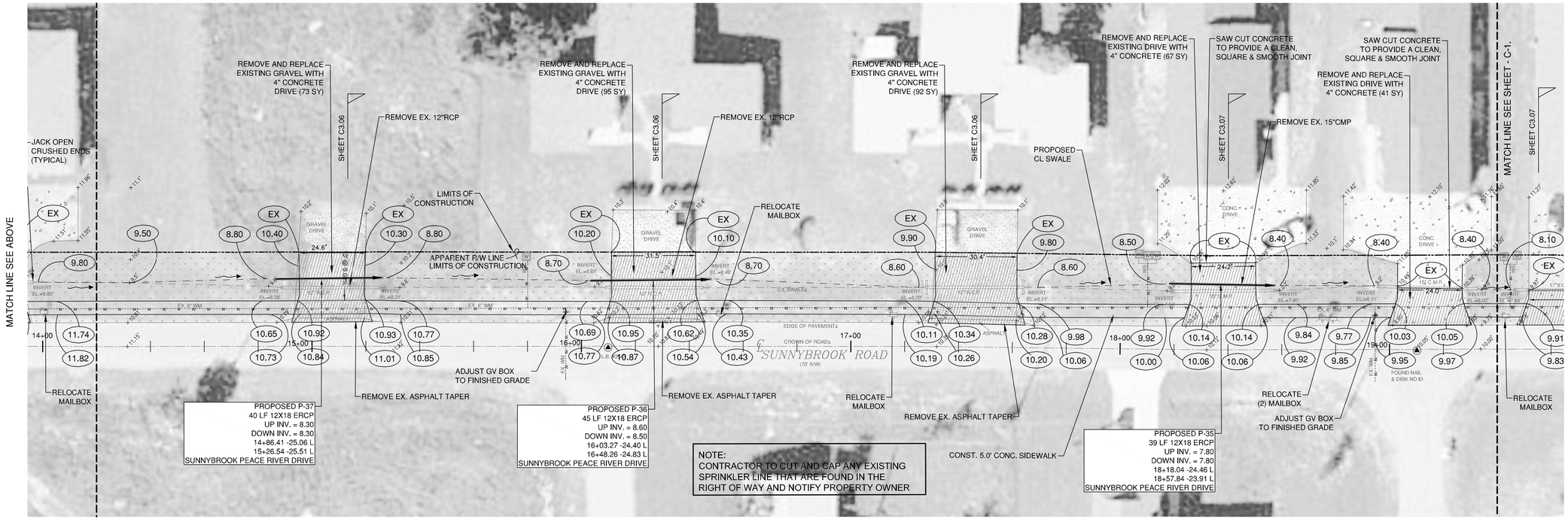
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.09





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
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- = FOUND DRILL HOLE
- = ELECTRIC METER
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- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

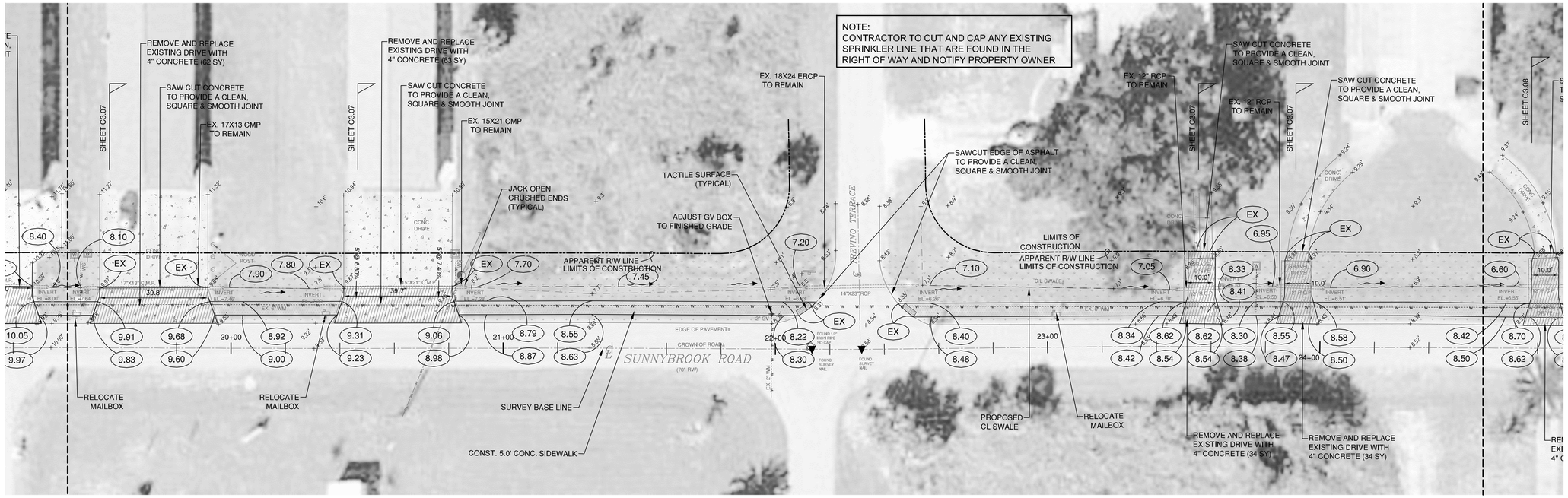
GRADING PLAN
SUNNYBROOK ROAD

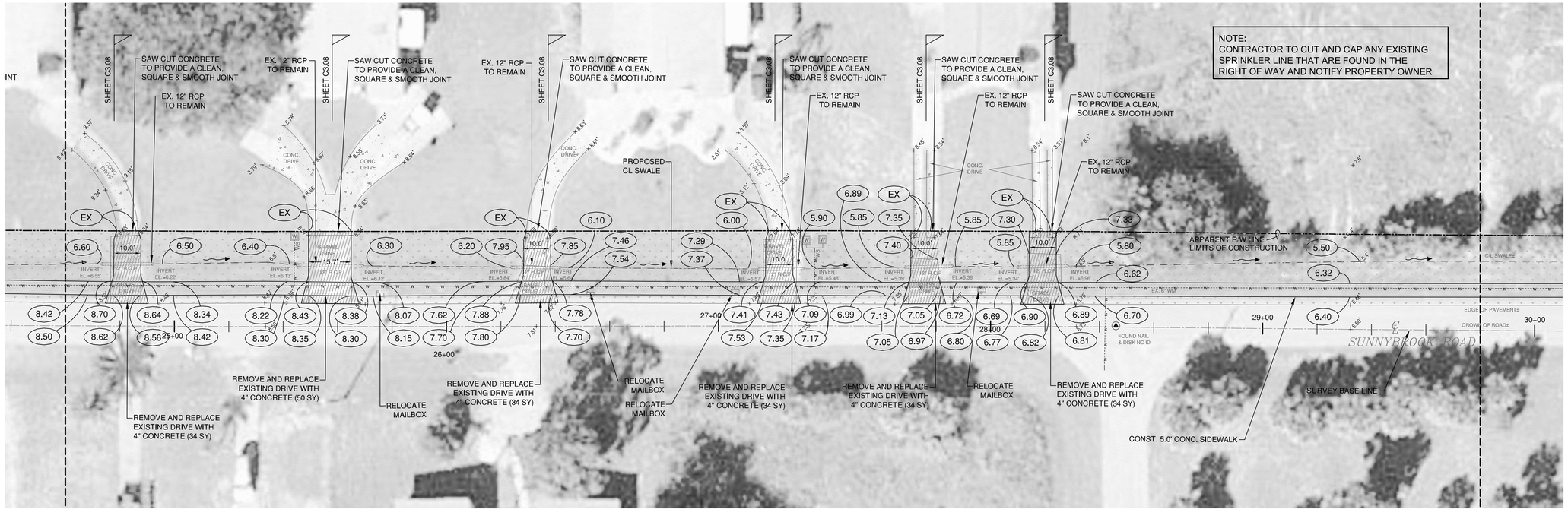
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.10





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FH)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
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- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

GRADING PLAN
SUNNYBROOK ROAD

Joseph S. Menen, P.E.
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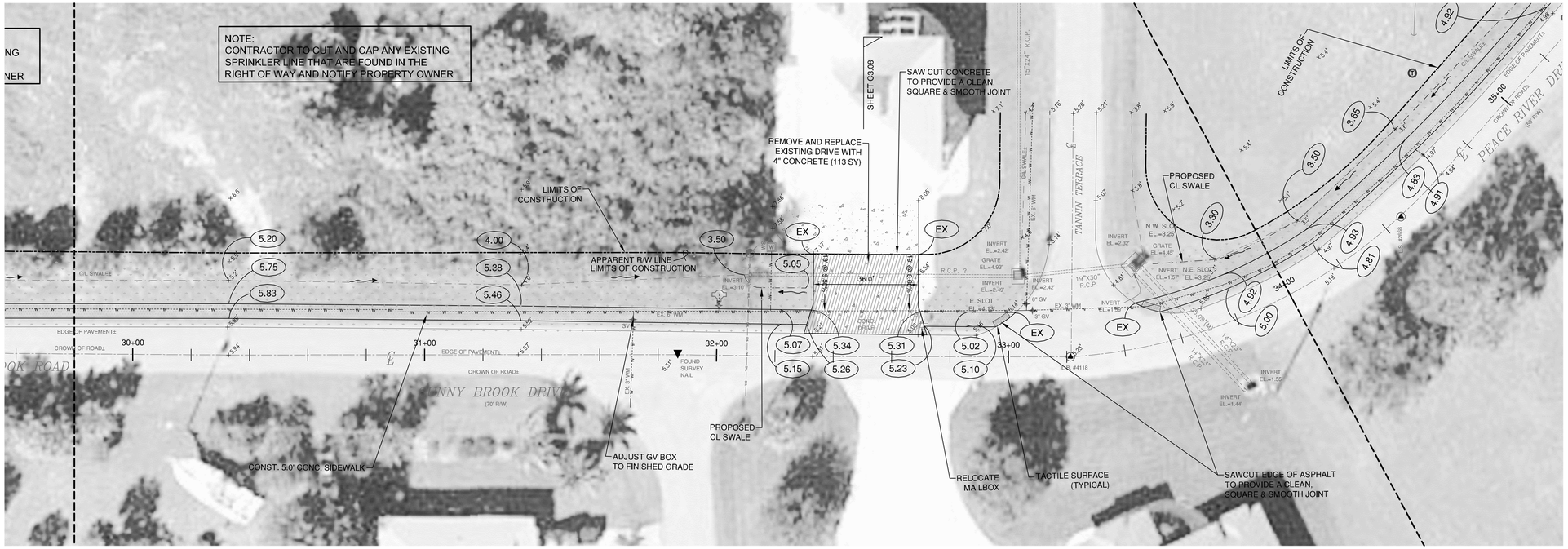
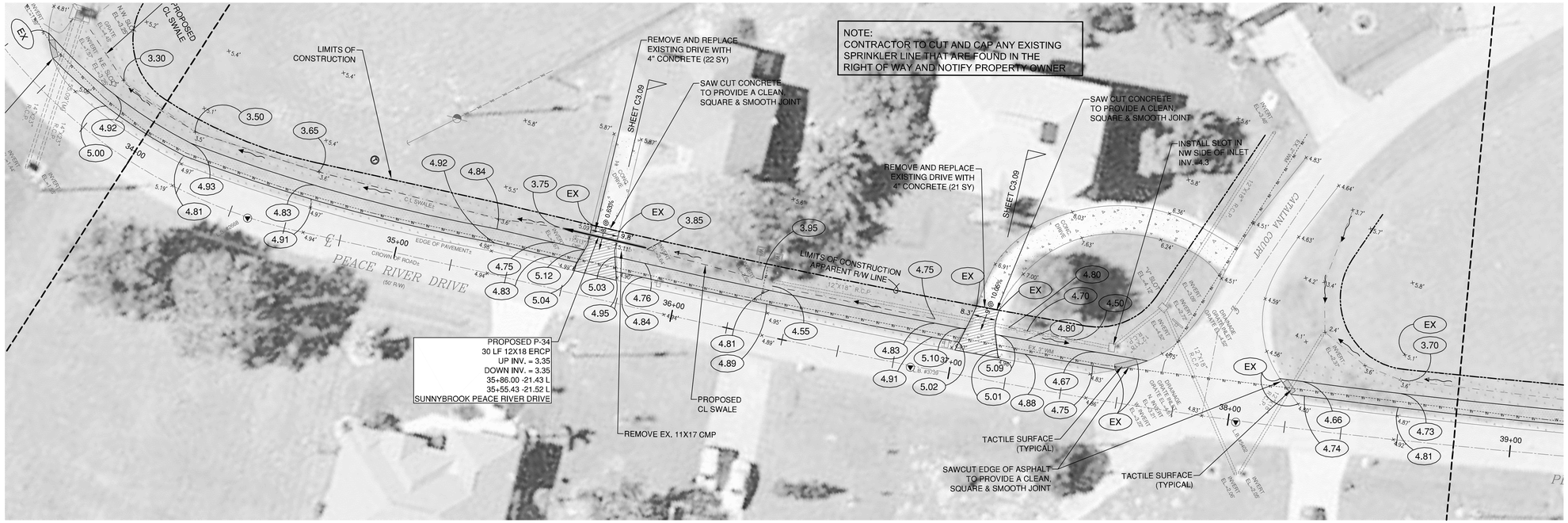
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.11





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
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- = FOUND DRILL HOLE
- = ELECTRIC METER
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- = FIRE HYDRANT (FHY)
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- = MAIL BOX
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- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

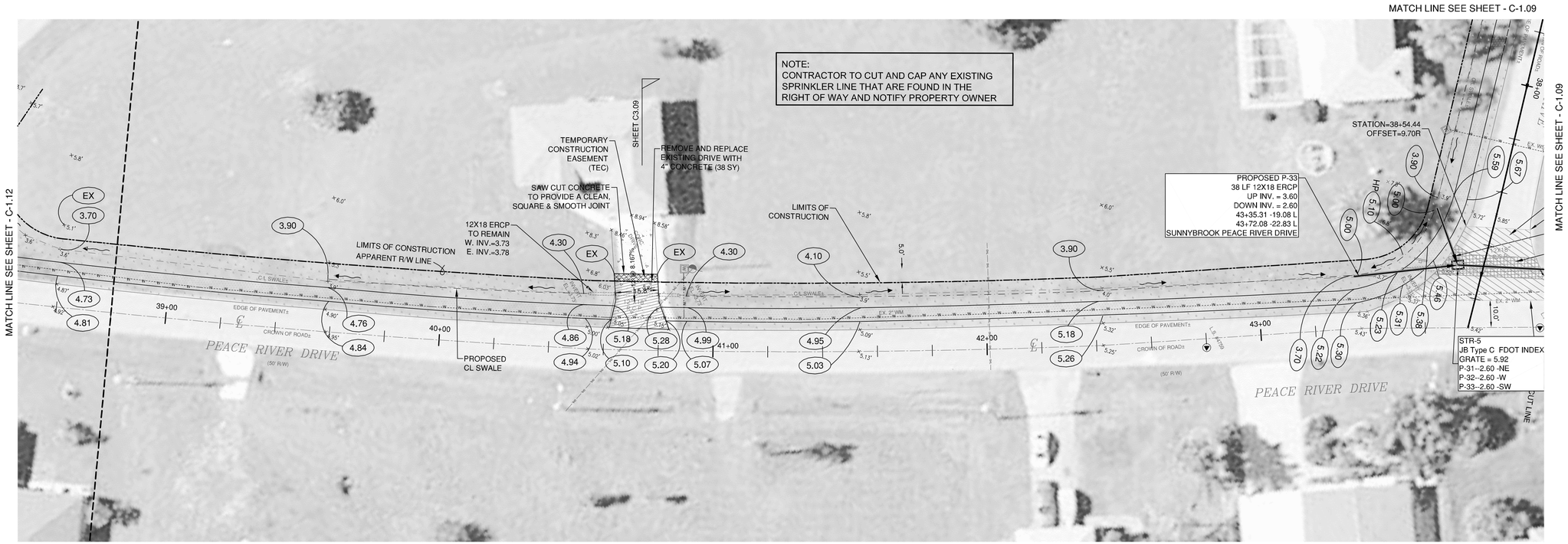
GRADING PLAN
SUNNYBROOK ROAD
PEACE RIVER DRIVE

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.12



LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
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- = ELECTRIC METER
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- = FIRE HYDRANT (FHY)
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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

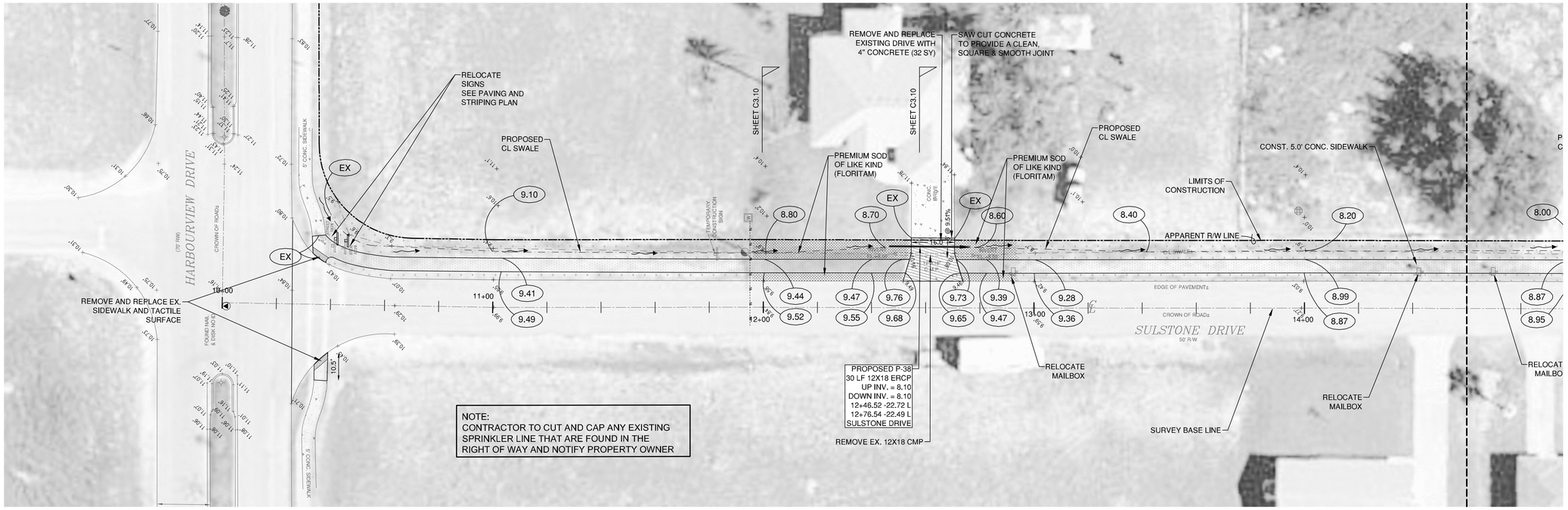
GRADING PLAN
PEACE RIVER DRIVE

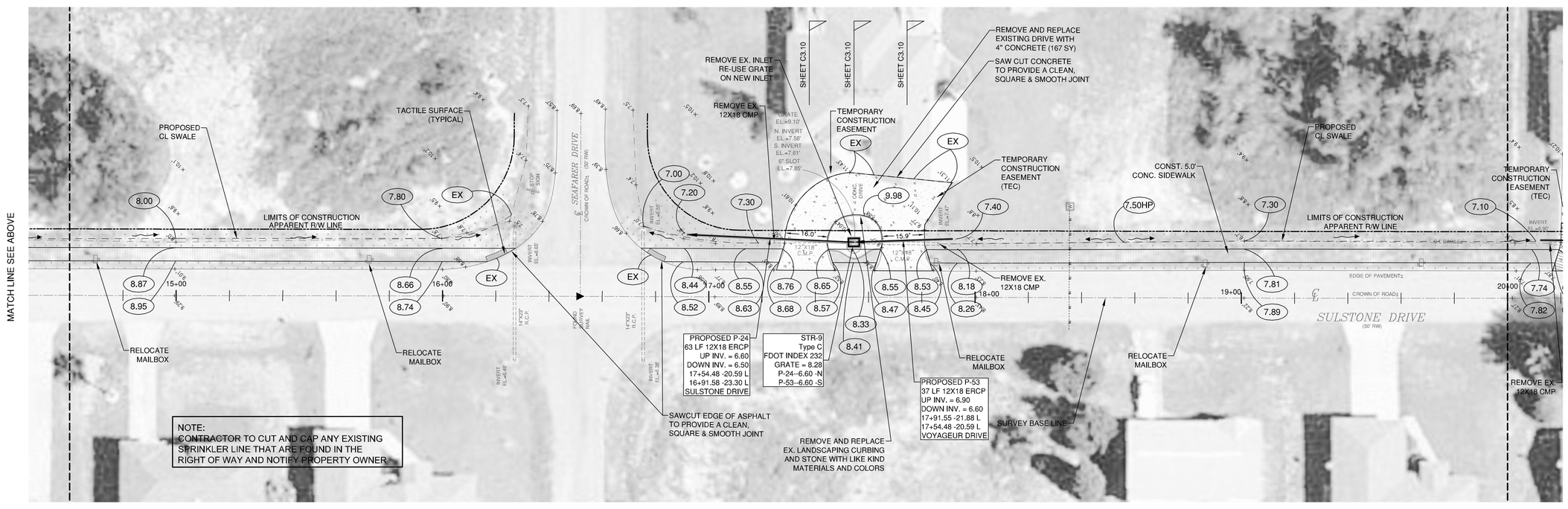
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.13





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
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- = GATE VALVE
- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

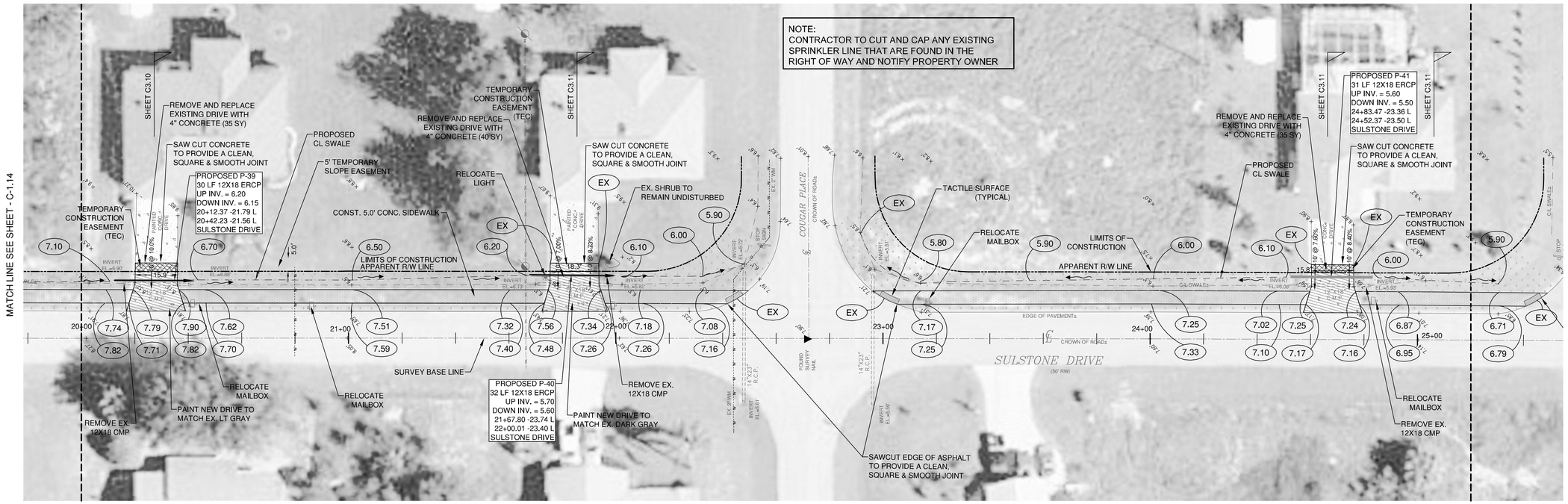
GRADING PLAN
SULSTONE DRIVE

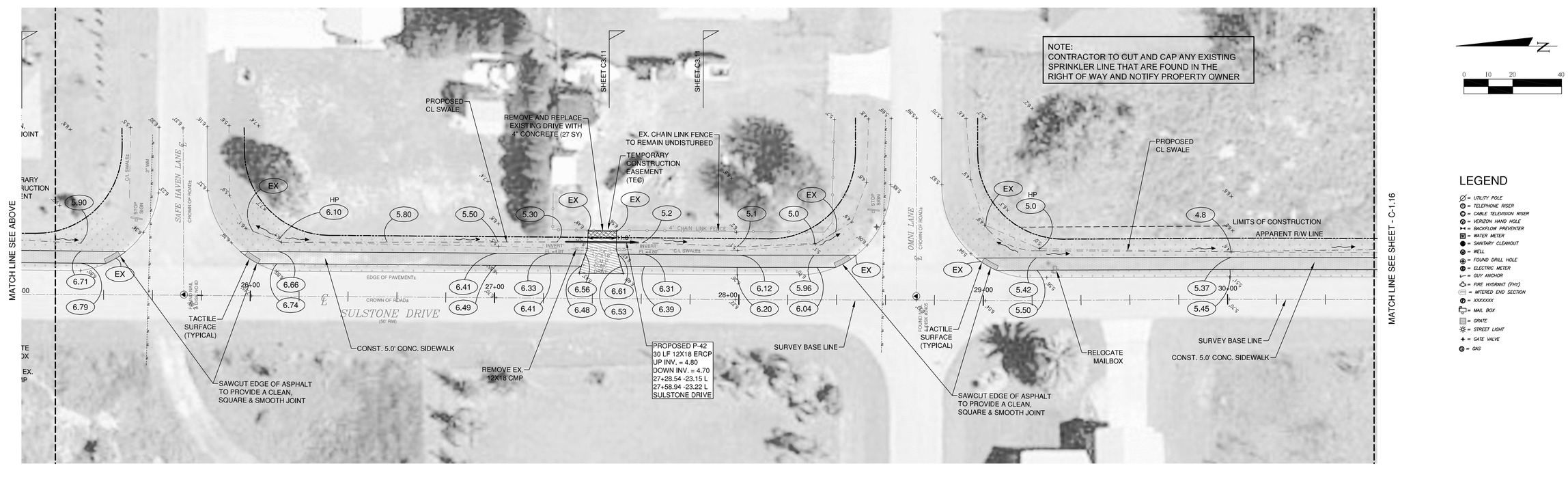
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.14





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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CIVIL ENGINEERS-LAND DEVELOPMENT
SPORTS FACILITY CONSULTANTS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

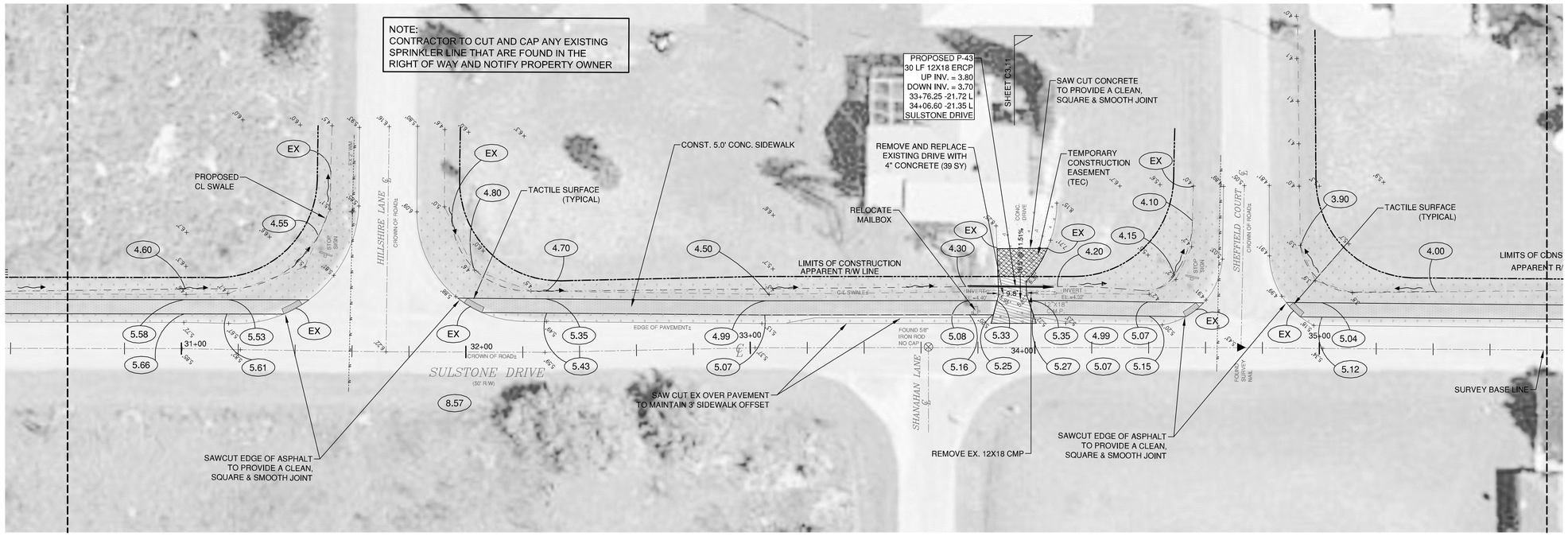
GRADING PLAN
SULSTONE DRIVE

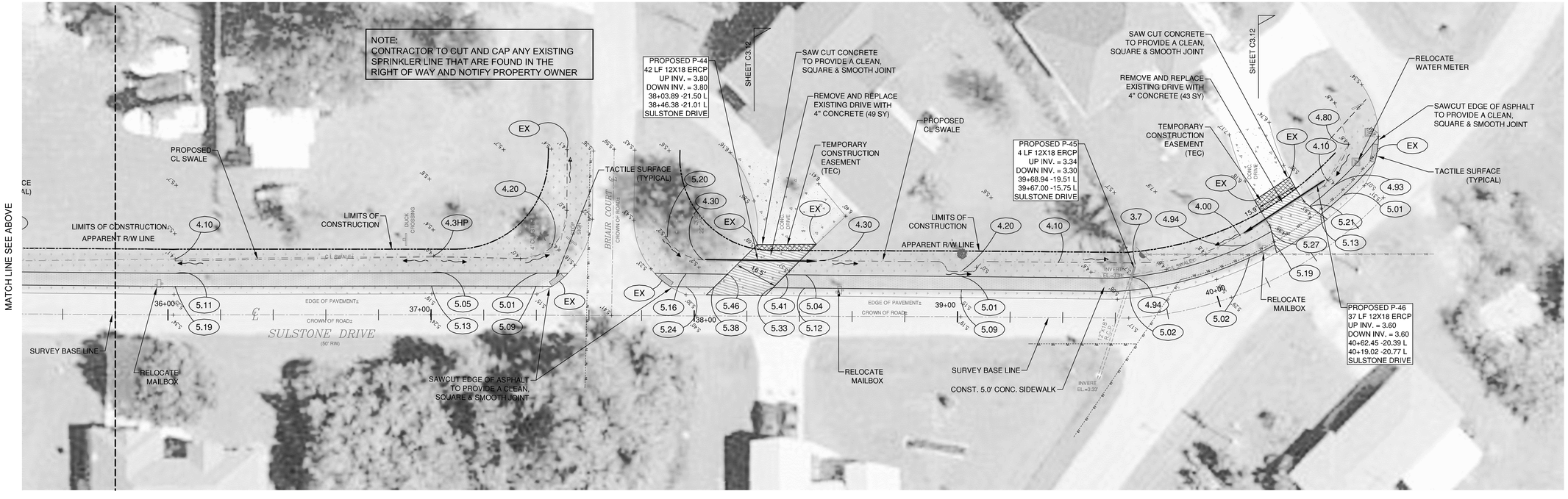
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-1.15





LEGEND

- = UTILITY POLE
- = TELEPHONE RISER
- = CABLE TELEVISION RISER
- = VERIZON HAND HOLE
- = BACKFLOW PREVENTER
- = WATER METER
- = SANITARY CLEANOUT
- = WELL
- = FOUND DRILL HOLE
- = ELECTRIC METER
- = GUY ANCHOR
- = FIRE HYDRANT (FHY)
- = MITERED END SECTION
- = XXXXXXX
- = MAIL BOX
- = GRATE
- = STREET LIGHT
- = GATE VALVE
- = GAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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LB No. 2904
ILB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

GRADING PLAN
SULSTONE DRIVE

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

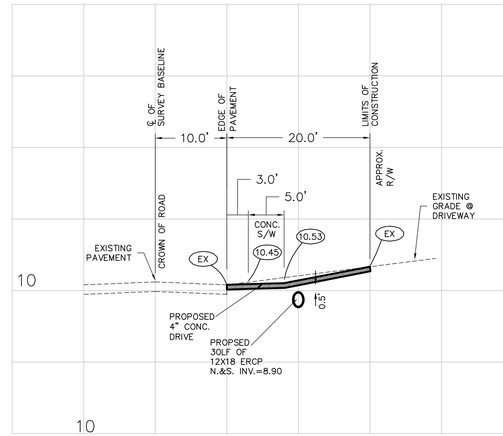
SCALE AS SHOWN

JOB #12722

C-1.16

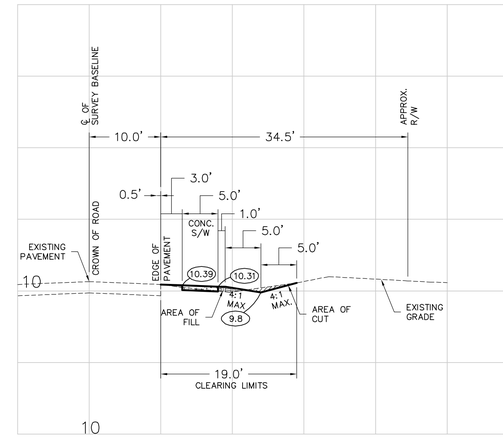
SIDEWALK SECTION
STA. 11+00.00
BROADPOINT DR.

SHEET C1.01



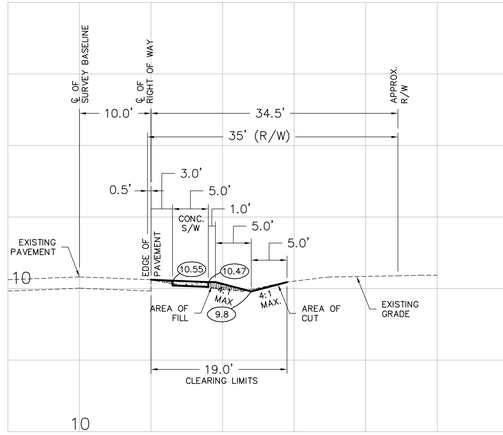
SIDEWALK SECTION
STA. 12+25.00
BROADPOINT DR.

SHEET C1.01



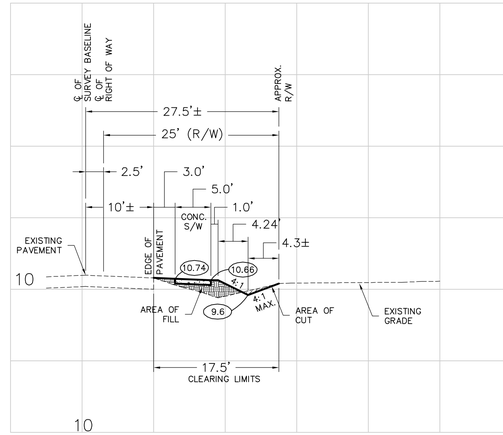
SIDEWALK SECTION
STA. 17+00.00
BROADPOINT DR.

SHEET C1.01



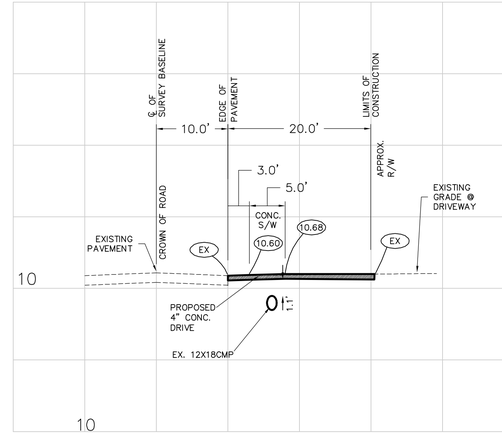
SIDEWALK SECTION
STA. 21+00.00
BROADPOINT DR.

SHEET C1.02



SIDEWALK SECTION
STA. 24+00.00
BROADPOINT DR.

SHEET C1.02



SIDEWALK SECTION
STA. 25+75.00
BROADPOINT DR.

SHEET C1.02

H=1"=10' V=1"=20'

0 5 10 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

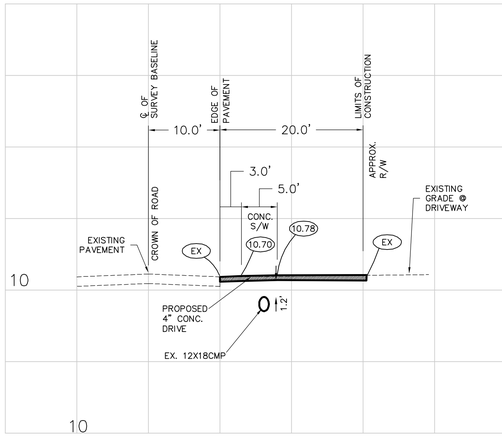
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

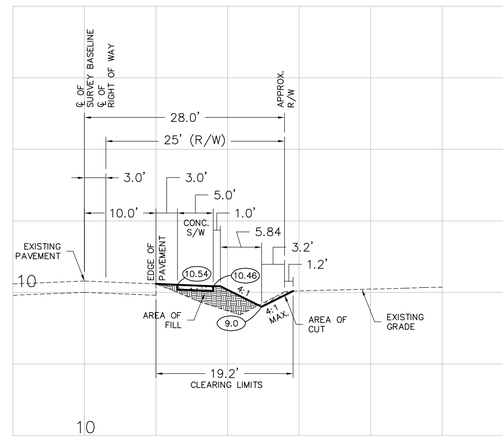
SCALE AS SHOWN

JOB #12722

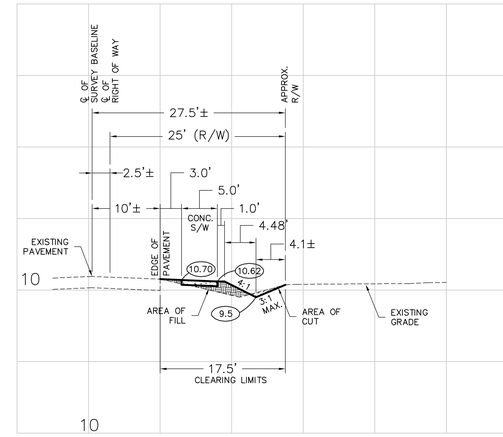
C-3.01



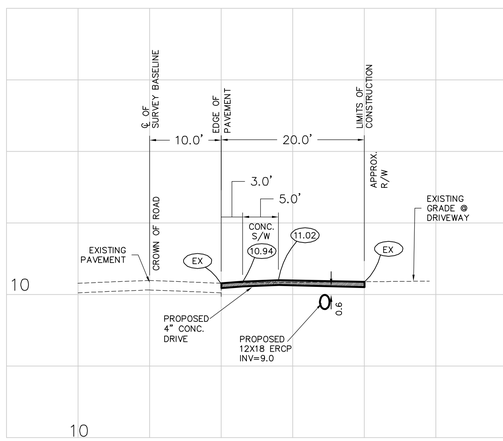
SIDEWALK SECTION
STA. 26+25.00
BROADPOINT DR.
SHEET C1.02



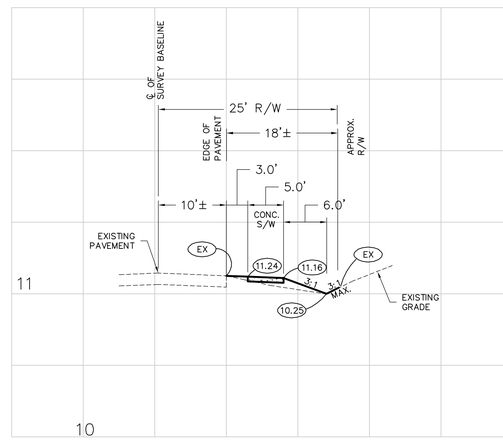
SIDEWALK SECTION
STA. 29+00.00
BROADPOINT DR.
SHEET C1.02



SIDEWALK SECTION
STA. 36+00.00
BROADPOINT DR.
SHEET C1.03



SIDEWALK SECTION
STA. 36+65.00
BROADPOINT DR.
SHEET C1.03



SIDEWALK SECTION
STA. 39+40.00
BROADPOINT DR.
SHEET C1.03

H=1"=10' V=1"=20'
0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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EB No. 2904

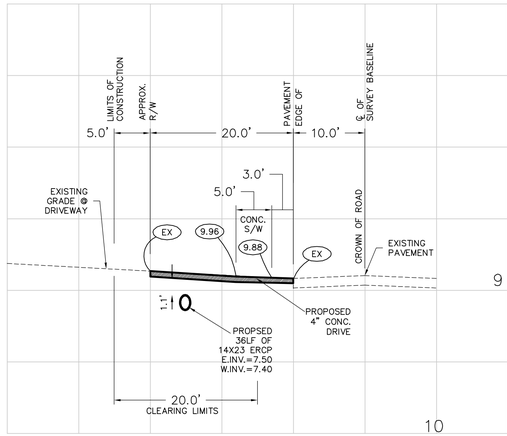
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

SIDEWALK SECTIONS

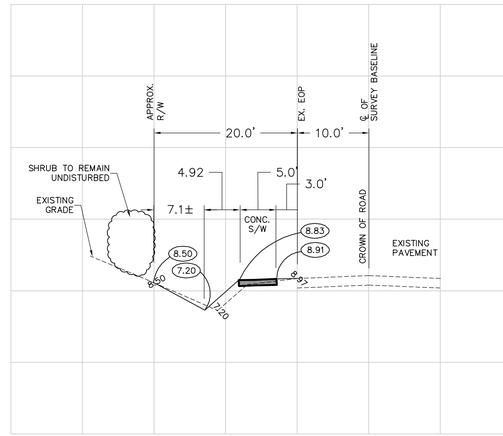
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN
JOB #12722
C-3.02



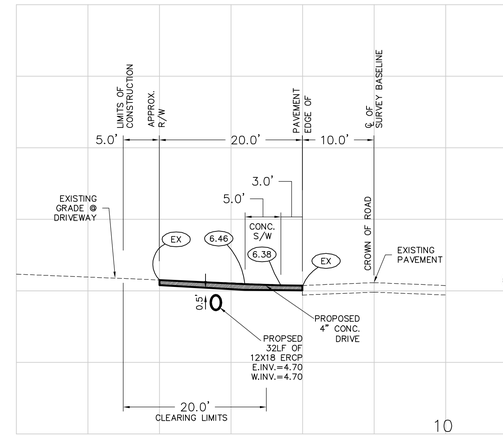
SIDEWALK SECTION
STA. 12+25.00
VOYAGEUR DR.

SHEET C1.04



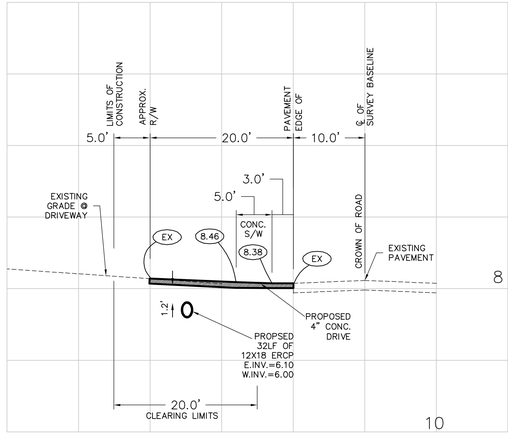
SIDEWALK SECTION
STA. 14+40.00
VOYAGEUR DR.

SHEET C1.04



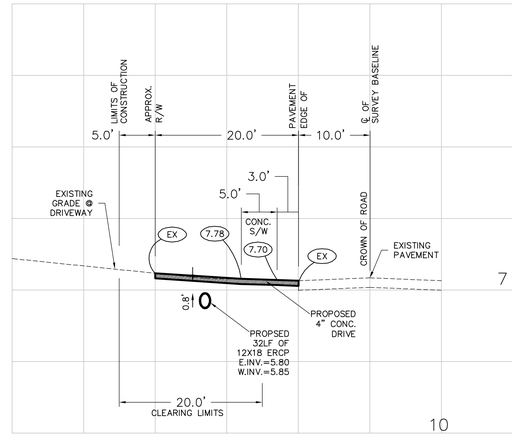
SIDEWALK SECTION
STA. 19+10.00
VOYAGEUR DR.

SHEET C1.04



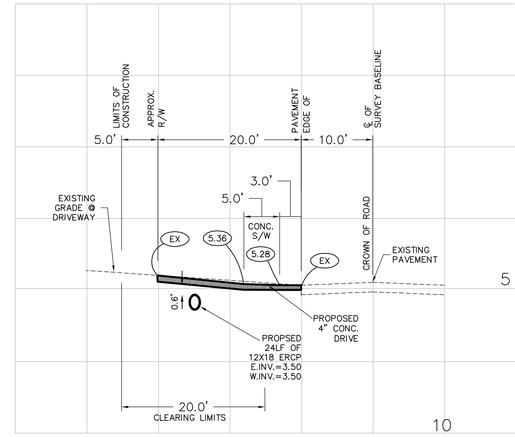
SIDEWALK SECTION
STA. 30+90.00
VOYAGEUR DR.

SHEET C1.05



SIDEWALK SECTION
STA. 32+25.00
VOYAGEUR DR.

SHEET C1.05



SIDEWALK SECTION
STA. 35+20.00
VOYAGEUR DR.

SHEET C1.05

H=1"=10' V=1"=20'

0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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LC No. 371
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EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

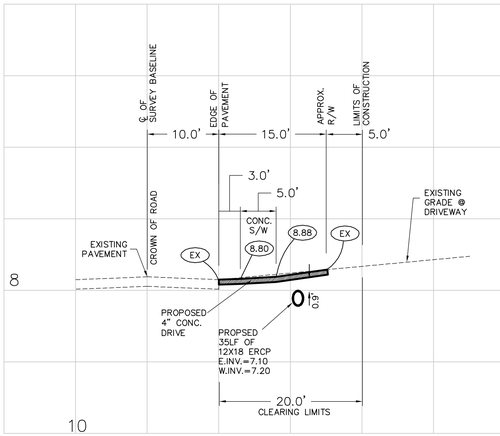
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

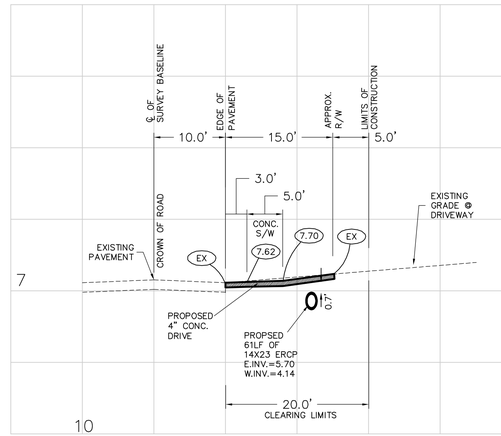
JOB #12722

C-3.03



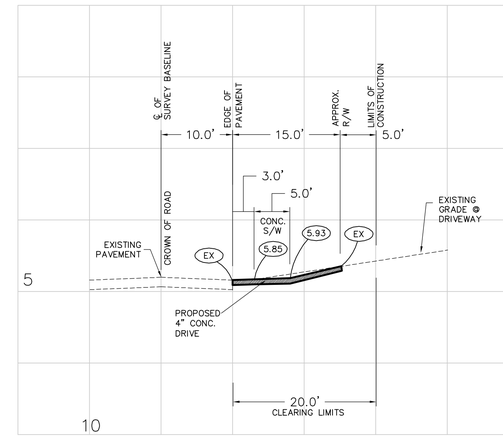
SIDEWALK SECTION
STA. 12+00.00
SAN MARINO DR.

SHEET C1.07



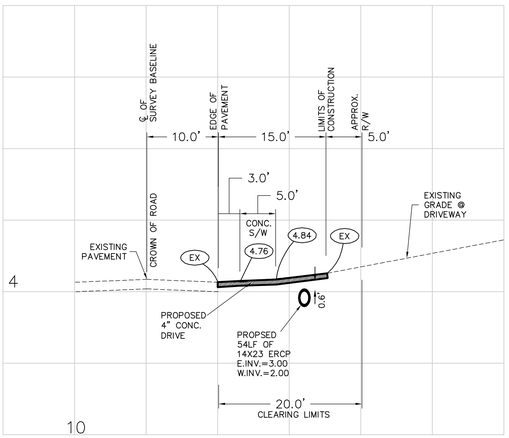
SIDEWALK SECTION
STA. 13+60.00
SAN MARINO DR.

SHEET C1.07



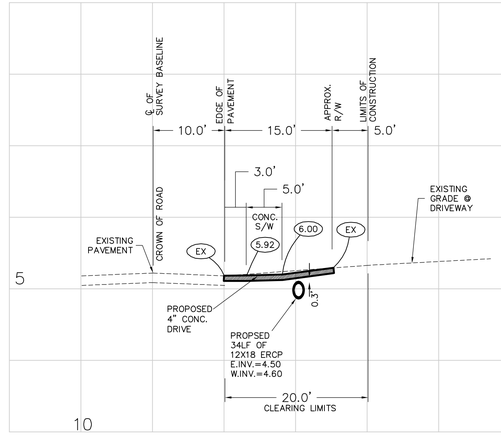
SIDEWALK SECTION
STA. 17+00.00
SAN MARINO DR.

SHEET C1.07



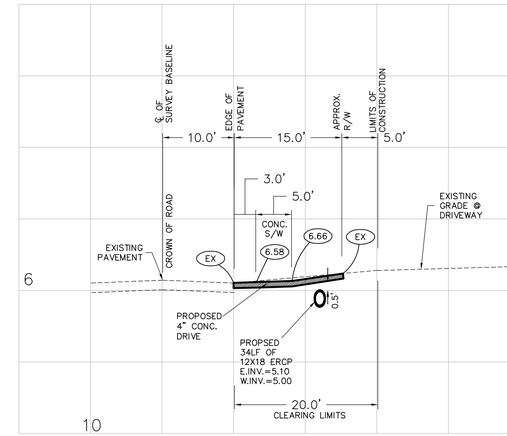
SIDEWALK SECTION
STA. 20+15.00
SAN MARINO DR.

SHEET C1.08



SIDEWALK SECTION
STA. 21+85.00
SAN MARINO DR.

SHEET C1.08



SIDEWALK SECTION
STA. 23+45.00
SAN MARINO DR.

SHEET C1.08

H=1"=10' V=1"=20'

0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

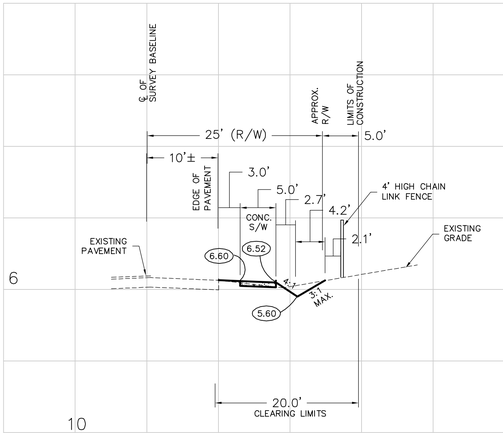
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

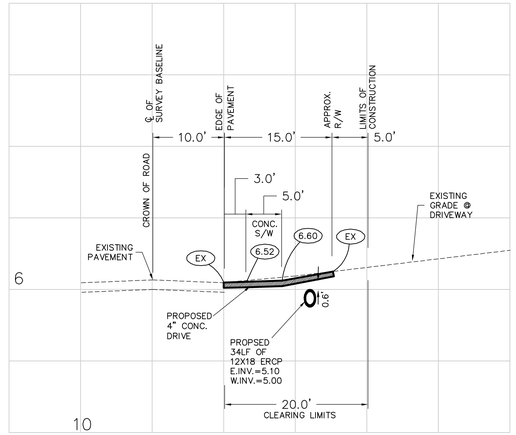
JOB #12722

C-3.04



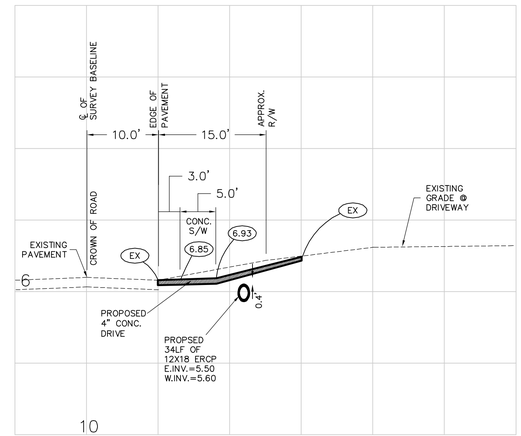
SIDEWALK SECTION
STA. 26+20.00
SAN MARINO DR.

SHEET C1.08



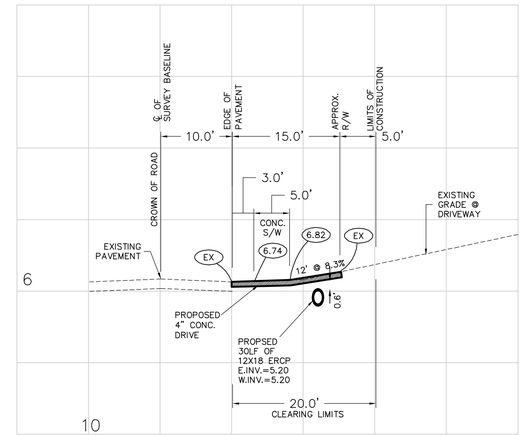
SIDEWALK SECTION
STA. 29+80.00
SAN MARINO DR.

SHEET C1.08



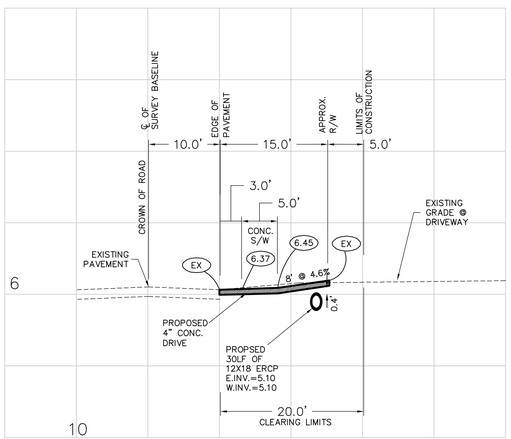
SIDEWALK SECTION
STA. 30+40.00
SAN MARINO DR.

SHEET C1.09



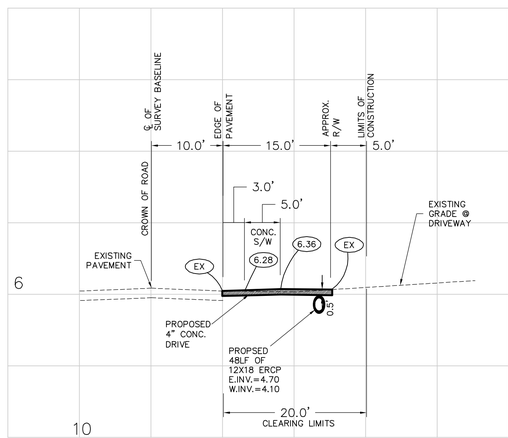
SIDEWALK SECTION
STA. 32+80.00
SAN MARINO DR.

SHEET C1.09



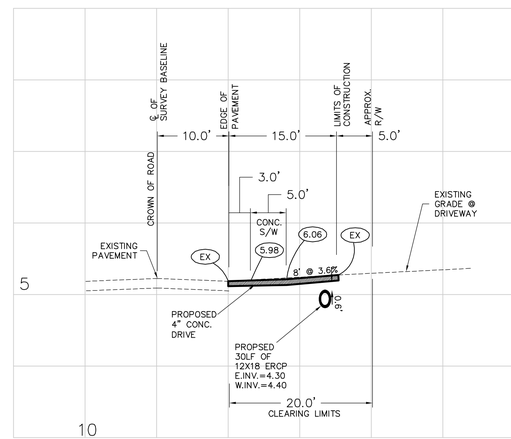
SIDEWALK SECTION
STA. 33+60.00
SAN MARINO DR.

SHEET C1.09



SIDEWALK SECTION
STA. 35+65.00
SAN MARINO DR.

SHEET C1.09



SIDEWALK SECTION
STA. 37+25.00
SAN MARINO DR.

SHEET C1.09

H=1"=10' V=1"=20'

0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

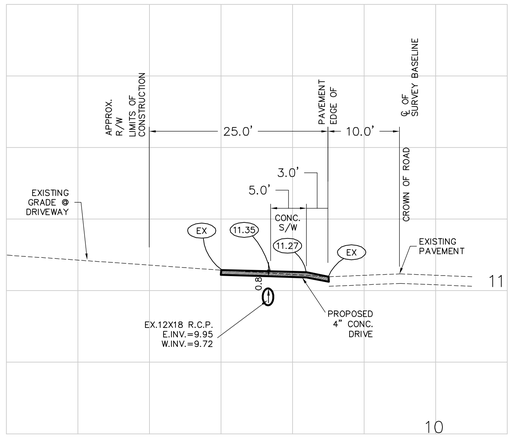
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

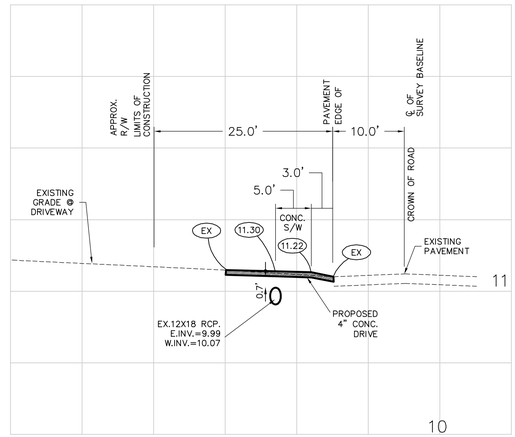
SCALE AS SHOWN

JOB #12722

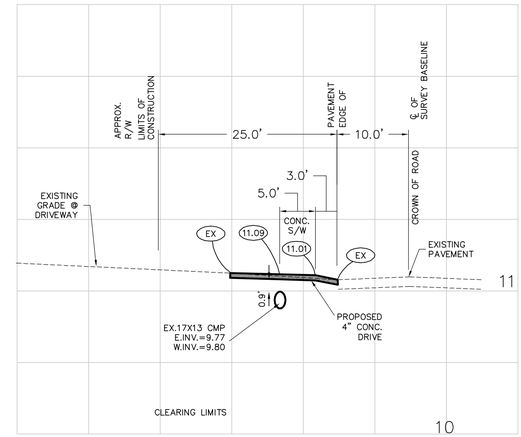
C-3.05



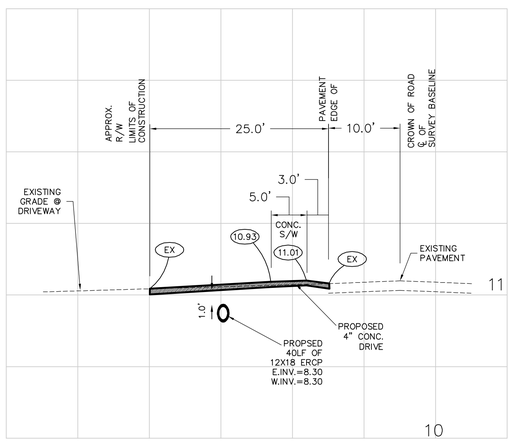
SIDEWALK SECTION
STA. 12+60.00
SUNNYBROOK RD.
SHEET C1.10



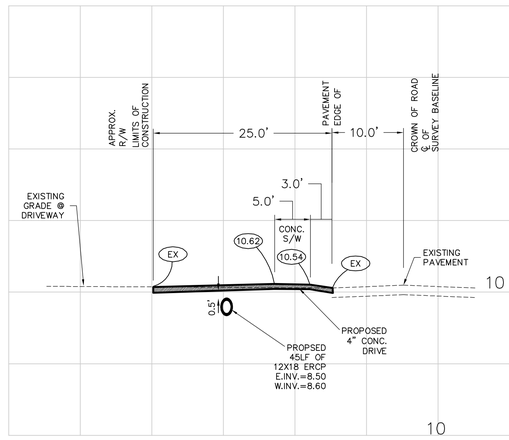
SIDEWALK SECTION
STA. 13+00.00
SUNNYBROOK RD.
SHEET C1.10



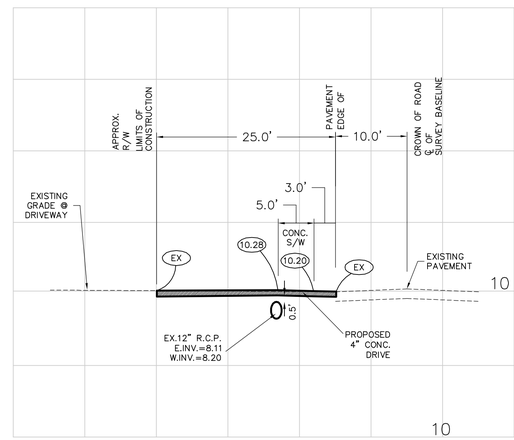
SIDEWALK SECTION
STA. 13+80.00
SUNNYBROOK RD.
SHEET C1.10



SIDEWALK SECTION
STA. 15+20.00
SUNNYBROOK RD.
SHEET C1.10



SIDEWALK SECTION
STA. 16+40.00
SUNNYBROOK RD.
SHEET C1.10



SIDEWALK SECTION
STA. 17+60.00
SUNNYBROOK RD.
SHEET C1.10

H=1"=10' V=1"=20'
0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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SPORTS FACILITY CONSULTANTS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
LC No. 371
LB No. 2904
EB No. 2904

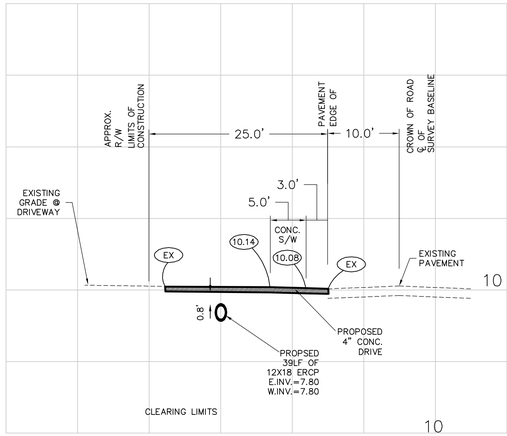
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

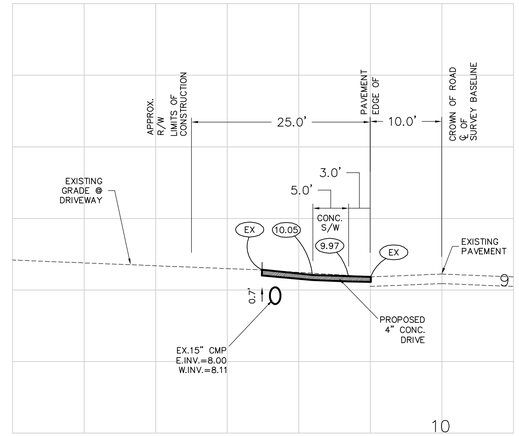
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

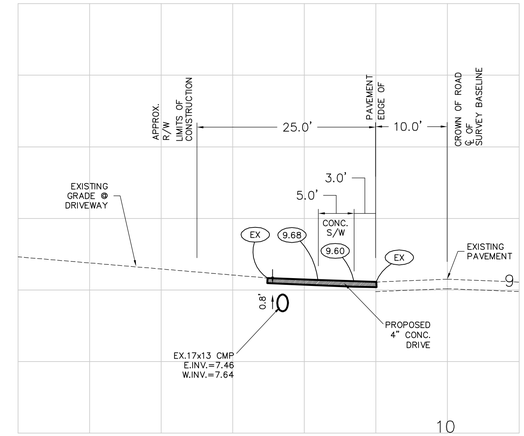
SCALE AS SHOWN
JOB #12722
C-3.06



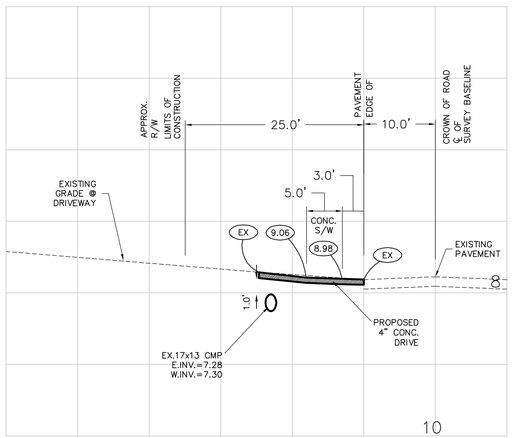
SIDEWALK SECTION
STA. 18+25.00
SUNNYBROOK RD.
SHEET C1.10



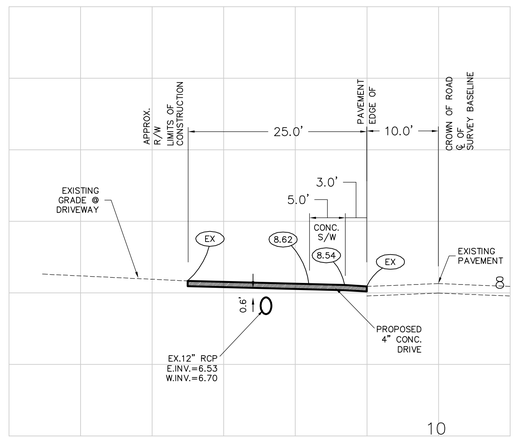
SIDEWALK SECTION
STA. 19+25.00
SUNNYBROOK RD.
SHEET C1.10



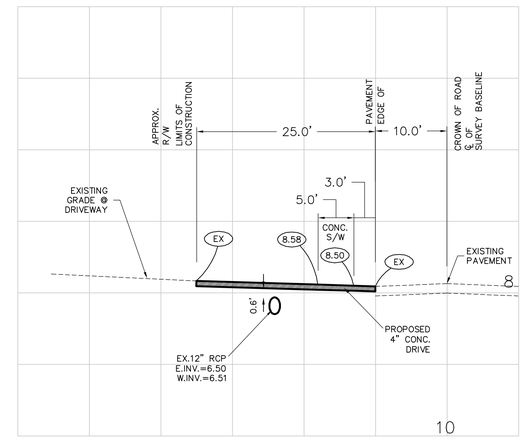
SIDEWALK SECTION
STA. 19+85.00
SUNNYBROOK RD.
SHEET C1.11



SIDEWALK SECTION
STA. 20+80.00
SUNNYBROOK RD.
SHEET C1.11



SIDEWALK SECTION
STA. 23+60.00
SUNNYBROOK RD.
SHEET C1.11



SIDEWALK SECTION
STA. 23+95.00
SUNNYBROOK RD.
SHEET C1.11

H=1"=10' V=1"=20'
0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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EB No. 2904

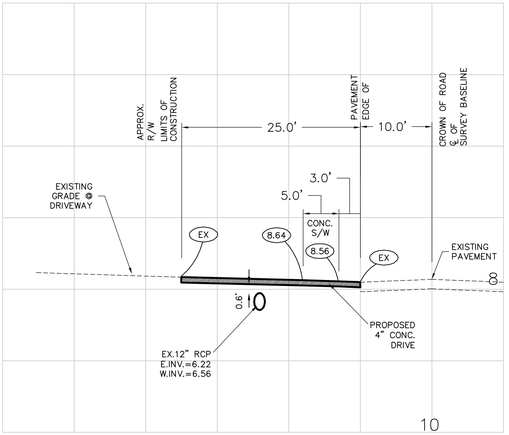
CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

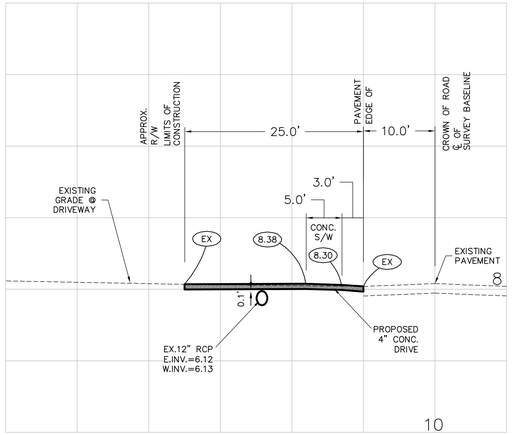
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

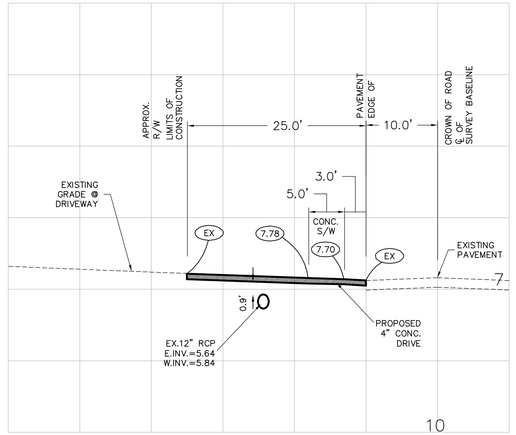
SCALE AS SHOWN
JOB #12722
C-3.07



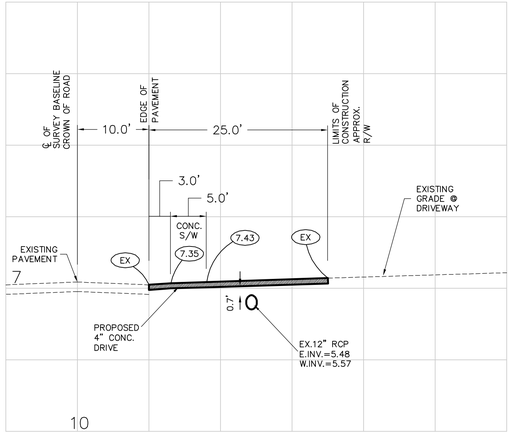
SIDEWALK SECTION
STA. 24+86.00
SUNNYBROOK RD.
SHEET C1.11



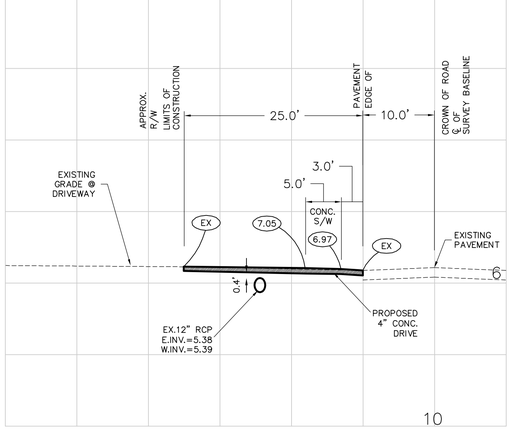
SIDEWALK SECTION
STA. 25+66.00
SUNNYBROOK RD.
SHEET C1.11



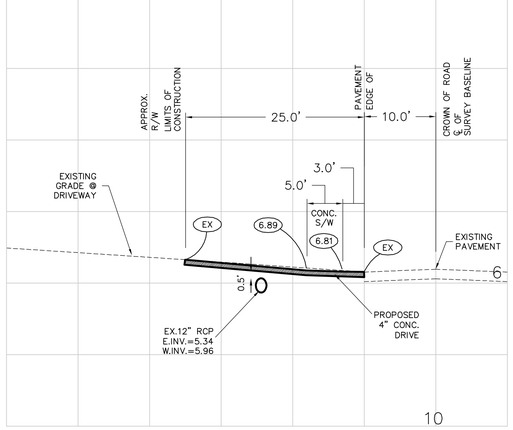
SIDEWALK SECTION
STA. 26+40.00
SUNNYBROOK RD.
SHEET C1.11



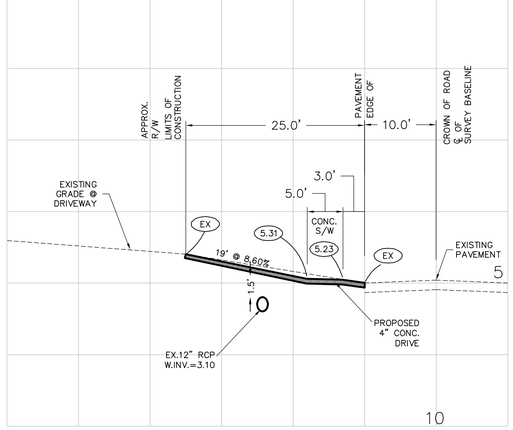
SIDEWALK SECTION
STA. 27+27.00
SUNNYBROOK RD.
SHEET C1.11



SIDEWALK SECTION
STA. 27+80.00
SUNNYBROOK RD.
SHEET C1.11



SIDEWALK SECTION
STA. 28+25.00
SUNNYBROOK RD.
SHEET C1.11



SIDEWALK SECTION
STA. 32+65.00
SUNNYBROOK RD.
SHEET C1.12

H=1"=10' V=1"=20'

0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

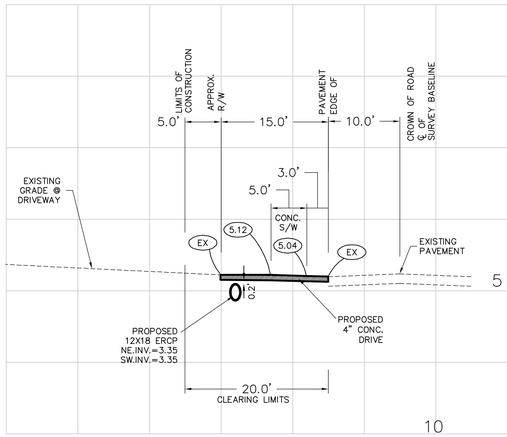
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

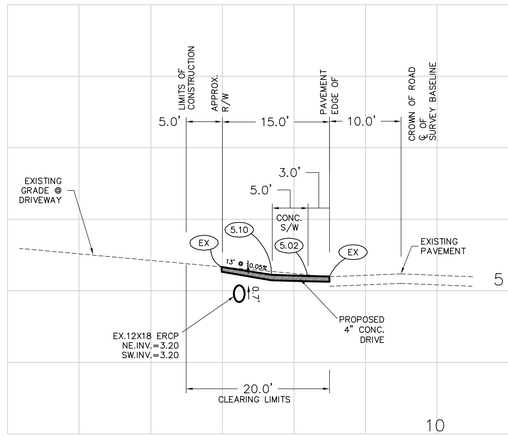
SCALE AS SHOWN

JOB #12722

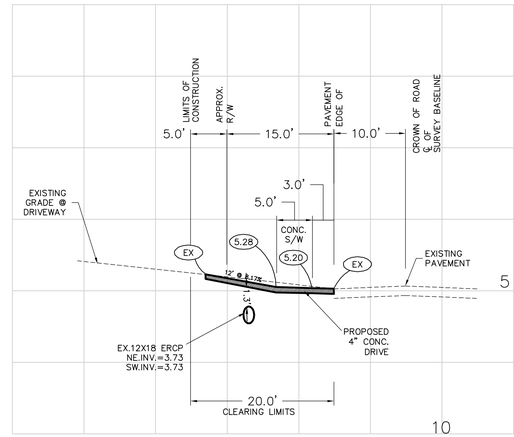
C-3.08



SIDEWALK SECTION
STA. 35+65.00
PEACE RIVER RD.
SHEET C1.12



SIDEWALK SECTION
STA. 37+05.00
PEACE RIVER RD.
SHEET C1.12



SIDEWALK SECTION
STA. 40+80.00
PEACE RIVER RD.
SHEET C1.13

H=1"=10' V=1"=20'
0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

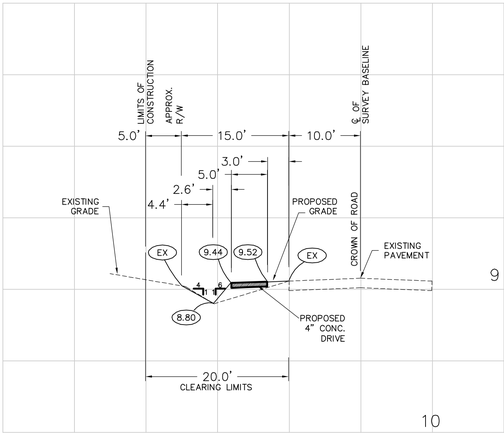
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

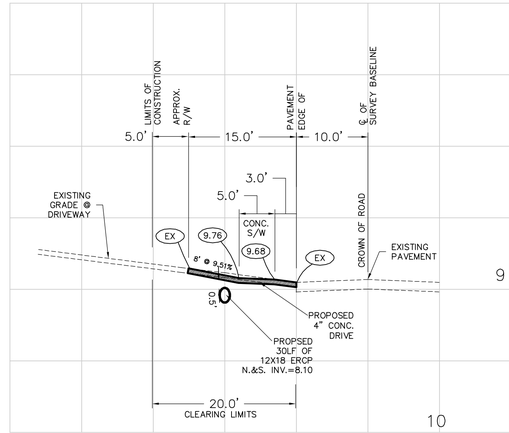
SCALE AS SHOWN

JOB #12722

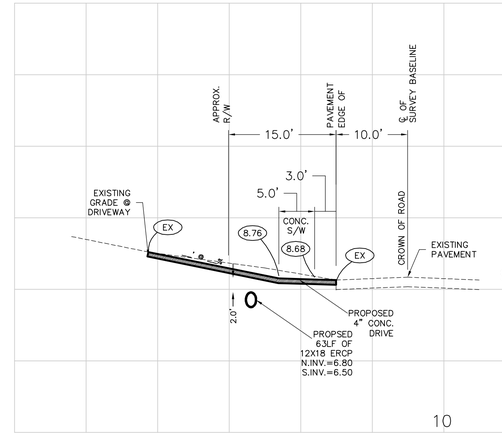
C-3.09



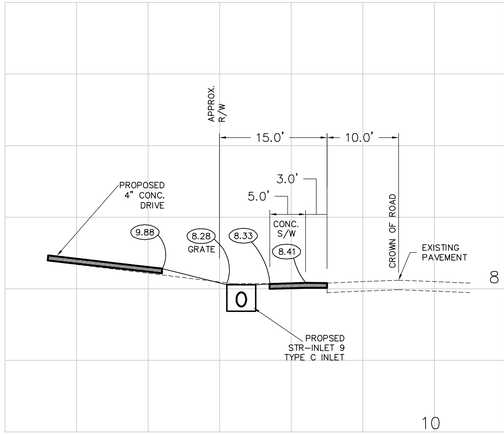
SIDEWALK SECTION
STA. 12+00.00
SULSTONE DR.
SHEET C1.14



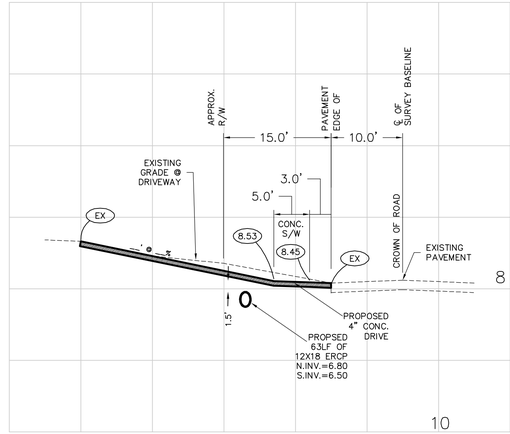
SIDEWALK SECTION
STA. 12+70.00
SULSTONE DR.
SHEET C1.14



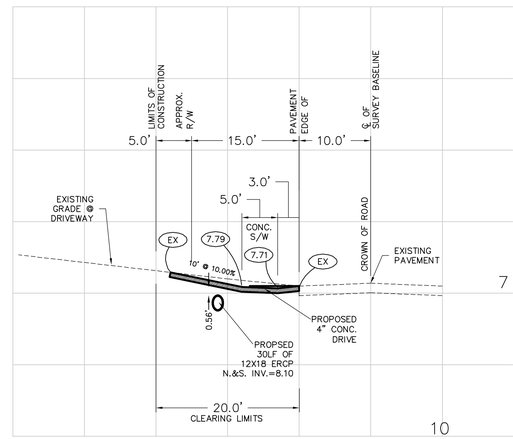
SIDEWALK SECTION
STA. 17+25.00
SULSTONE DR.
SHEET C1.14



SIDEWALK SECTION
STA. 17+50.00
SULSTONE DR.
SHEET C1.14



SIDEWALK SECTION
STA. 17+80.00
SULSTONE DR.
SHEET C1.14



SIDEWALK SECTION
STA. 20+25.00
SULSTONE DR.
SHEET C1.15

H=1"=10' V=1"=20'

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

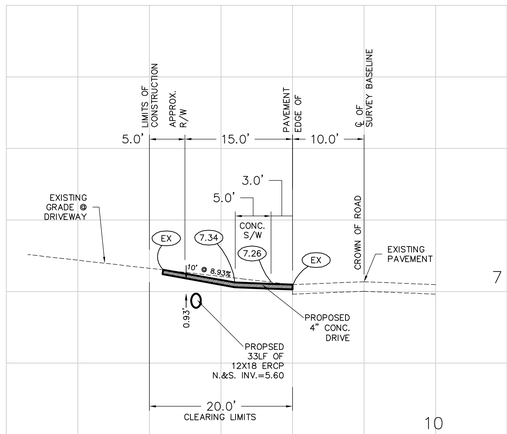
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

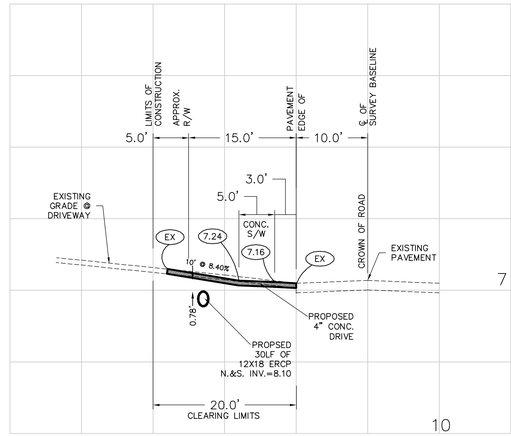
SCALE AS SHOWN

JOB #12722

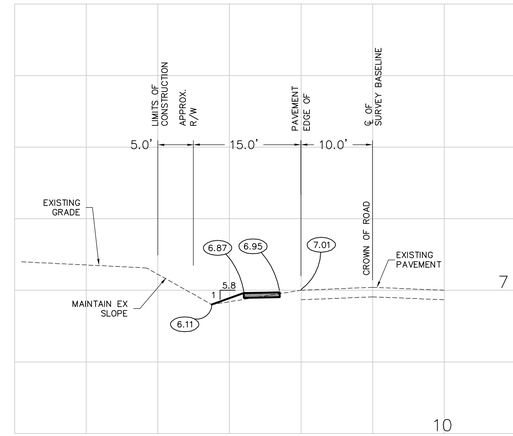
C-3.10



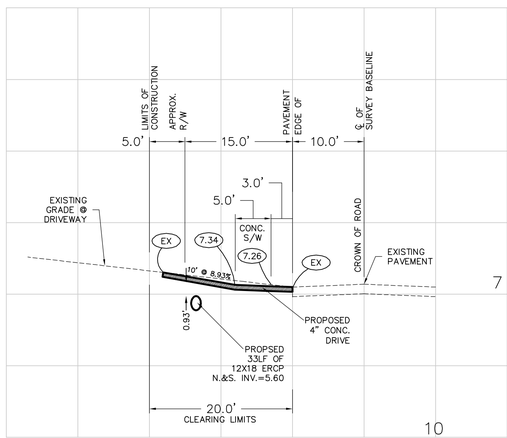
SIDEWALK SECTION
STA. 21+85.00
SULSTONE DR.
SHEET C1.15



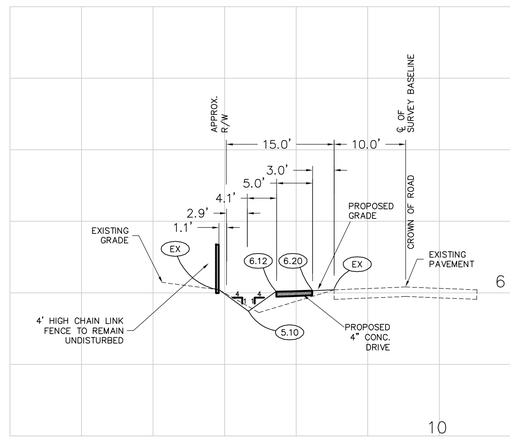
SIDEWALK SECTION
STA. 24+68.00
SULSTONE DR.
SHEET C1.15



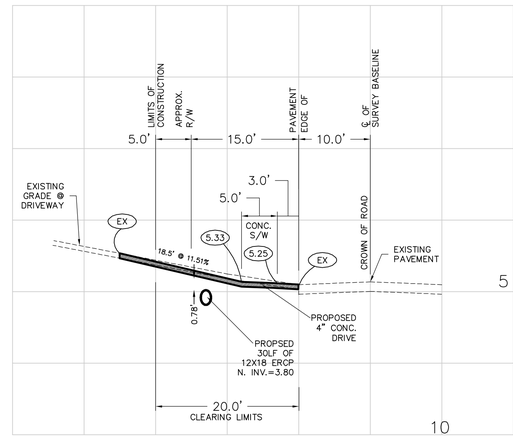
SIDEWALK SECTION
STA. 25+00.00
SULSTONE DR.
SHEET C1.15



SIDEWALK SECTION
STA. 27+40.00
SULSTONE DR.
SHEET C1.15



SIDEWALK SECTION
STA. 28+00.00
SULSTONE DR.
SHEET C1.15



SIDEWALK SECTION
STA. 33+85.00
SULSTONE DR.
SHEET C1.16

H=1"=10' V=1"=20'

0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 02 11	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

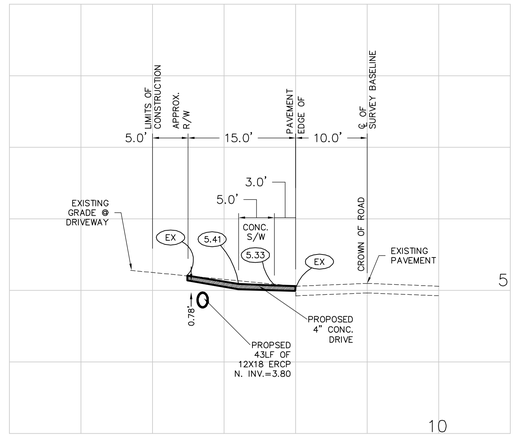
SIDEWALK SECTIONS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

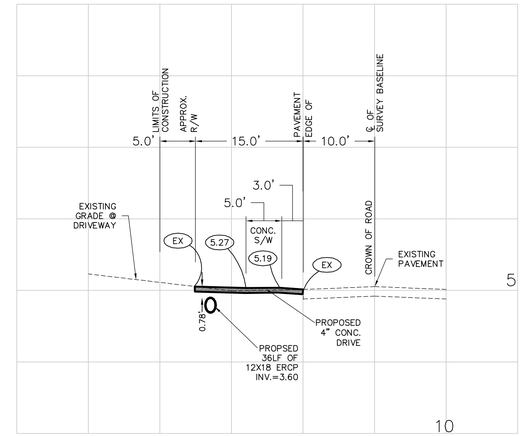
SCALE AS SHOWN

JOB #12722

C-3.11



SIDEWALK SECTION
STA. 38+23.00
SULSTONE DR.
SHEET C1.16



SIDEWALK SECTION
STA. 40+35.00
SULSTONE DR.
SHEET C1.16

H=1"=10' V=1"=20'
0 5 20

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

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SIDEWALK SECTIONS

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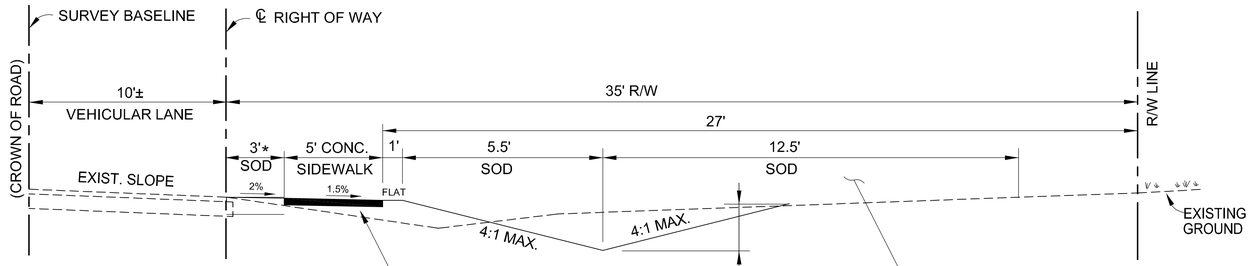
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN
JOB #12722
C-3.12



SOD NOTE:

PRIOR TO SODDING CONTRACTOR SHALL LOWER GRADE 0.1' ALONG SIDEWALK AND EXISTING ROAD EDGE OF PAVEMENT (TO PREVENT BLOCKING OF DRAINAGE)

NOTE:

1. CONCRETE TO BE FDOT CLASS I, 3,000 PSI MINIMUM.
2. INSPECTION IS REQUIRED ONCE THE SIDEWALK IS FORMED.

4" CONCRETE SIDEWALK, 6" AT COMMERCIAL DRIVES WITH FIBER MESH REINF. CONTRACTION AND EXPANSION JOINTS AND AS APPROVED BY THE CHARLOTTE COUNTY PUBLIC WORKS DEPARTMENT WITH 8" TYPE "B" STABILIZED SUBGRADE COMPACTED TO 98% DENSITY AND A MINIMUM LBR 40, AASHTO T-180 EXTENDING 6" BEYOND EDGE ON EACH SIDE.

CLEARING LIMITS FOR EXOTIC PLANT/TREE SPECIES REMOVAL OR TRIMMING VARIES, SEE APPROXIMATE CLEARING LIMITS SHOWN ON PLANS. (REMOVE IF ROOT SYSTEM IS WITHIN COUNTY R.O.W. - OTHERWISE TRIM.

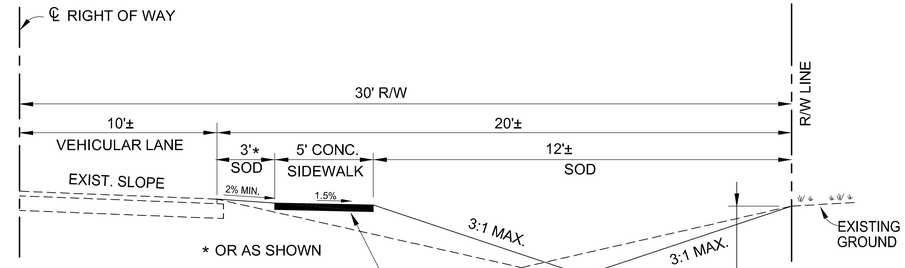
NOTE:
REMOVAL / TRIMMING IS INCIDENTAL TO COST OF PROJECT. (NO SEPARATE PAY ITEM)

SIDEWALK TYPICAL SECTION

FOR BROADPOINT DRIVE

FROM VOYAGEUR DRIVE TO ADAM STREET

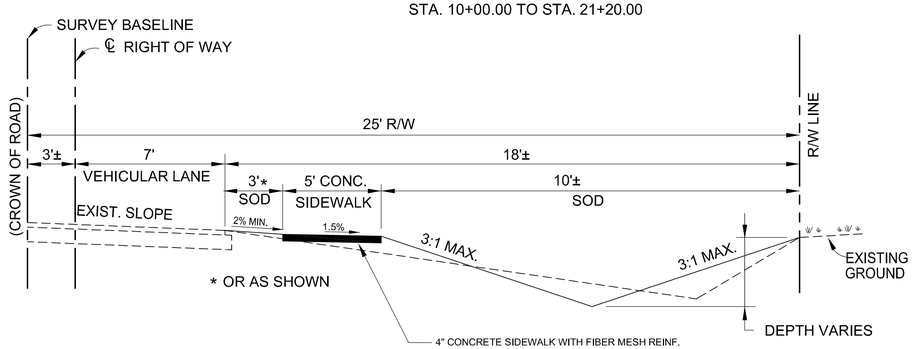
STA. 10+00.00 TO STA. 21+20.00



4" CONCRETE SIDEWALK WITH FIBER MESH REINF. CONTRACTION AND EXPANSION JOINTS AND AS APPROVED BY THE CHARLOTTE COUNTY PUBLIC WORKS DEPARTMENT WITH 8" TYPE "B" STABILIZED SUBGRADE COMPACTED TO A MINIMUM LBR 40, AASHTO T-180 EXTENDING 6" BEYOND EDGE ON EACH SIDE.

SIDEWALK TYPICAL SECTION

FOR VOYAGEUR DRIVE



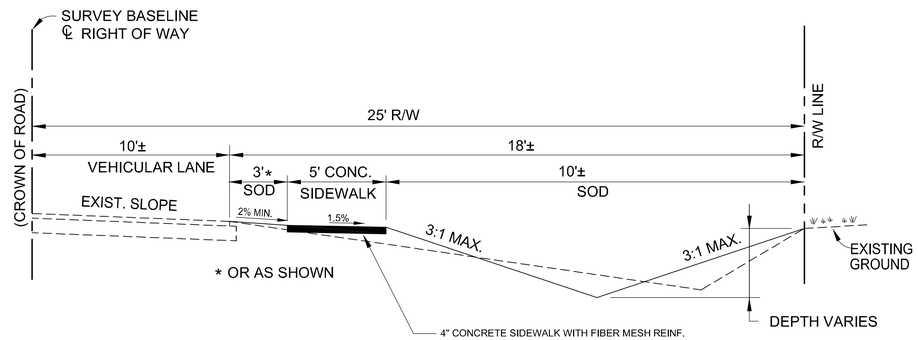
4" CONCRETE SIDEWALK WITH FIBER MESH REINF. CONTRACTION AND EXPANSION JOINTS AND AS APPROVED BY THE CHARLOTTE COUNTY PUBLIC WORKS DEPARTMENT WITH 8" TYPE "B" STABILIZED SUBGRADE COMPACTED TO A MINIMUM LBR 40, AASHTO T-180 EXTENDING 6" BEYOND EDGE ON EACH SIDE.

SIDEWALK TYPICAL SECTION

FOR BROADPOINT DRIVE

FROM ADAM STREET TO WASHINGTON STREET

STA. 22+00.00 TO STA. 40+25.00

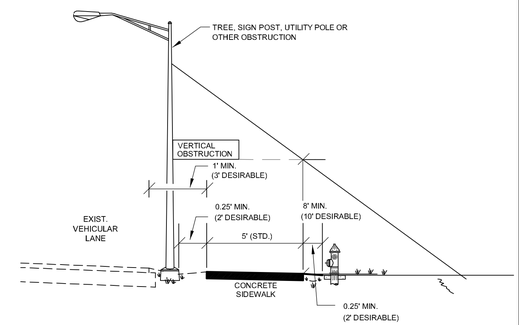


4" CONCRETE SIDEWALK WITH FIBER MESH REINF. CONTRACTION AND EXPANSION JOINTS AND AS APPROVED BY THE CHARLOTTE COUNTY PUBLIC WORKS DEPARTMENT WITH 8" TYPE "B" STABILIZED SUBGRADE COMPACTED TO A MINIMUM LBR 40, AASHTO T-180 EXTENDING 6" BEYOND EDGE ON EACH SIDE.

SIDEWALK TYPICAL SECTION

SULSTONE DR STA. 10+00.00 TO STA. 40+80.00

PEACE RIVER DR STA. 33+40.00 TO STA. 43+80.00

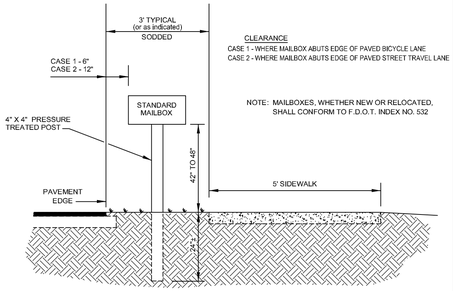


SIDEWALK MINIMUM CLEARANCE STANDARDS

RURAL DESIGN

GENERAL NOTES:

1. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER F.D.O.T. INDEX NO. 310 AND F.D.O.T. STANDARD SPECIFICATION NO. 522 EXCEPT FOR CURB CUT RAMP RUNS WHICH SHALL BE FINISHED IN ACCORDANCE WITH INDEX NO. 304 EXCEPT AMENDMENTS TO DESIGN PER CHARLOTTE COUNTY PUBLIC WORKS.
2. THERE SHALL BE NO CHANGE OR DEVIATION OF THESE PLANS OR SPECIFICATIONS UNLESS PRIOR WRITTEN APPROVAL FROM THE ENGINEER IS OBTAINED.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF AND WHEN A POSSIBLE ERROR IS FOUND IN THE PLANS OR STAKED ALIGNMENT AND/OR GRADES. THE ENGINEER MAY ACCEPT, REVISE TO ACCOMMODATE CONDITIONS, OR REJECT THE FACILITY BEING CONSTRUCTED. IT IS IMPERATIVE THAT THE CONTRACTOR NOTIFY THE ENGINEER OF THESE SITUATIONS AS SOON AS POSSIBLE, PRIOR TO EXPENDITURE OF FUNDS.
4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND COORDINATE RELOCATIONS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND REPORT THE EXACT LOCATION OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS, WHETHER THEY ARE IDENTIFIED ON THE DRAWINGS OR NOT.
5. EROSION AND SEDIMENT CONTROL BEST MANAGEMENT SHALL BE OBSERVED DURING CONSTRUCTION BY THE CONTRACTOR. THE METHODS WHICH SHOULD BE USED INCLUDE BUT ARE NOT LIMITED TO:
   - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SILTATION CAUSED BY CONSTRUCTION ACTIVITY ENTERING THE STORM DRAINAGE SYSTEM, BOTH ON-SITE AND OFF-SITE. THE CONTRACTOR SHALL UTILIZE SAND BAGS OR OTHER EROSION CONTROL METHODS TO CONTROL EROSION.
   - B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AT ALL TIMES DURING CONSTRUCTION BY UTILIZING WATER TRUCKS, ANTI-DRAFT FENCING, OR OTHER APPROVED METHODS, AND BY COVERING OPEN BODIED TRUCKS TRANSPORTING DEBRIS.
   - C. EROSION CONTROL MEASURES SHALL BE PROVIDED PER F.D.O.T. INDEX NOS. 100 - 105 AS APPLICABLE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE, INCLUDING MOWING AND CLEANUP UNTIL THE PROJECT IS ACCEPTED. IF, BY THEN, THE GROWTH IS NOT FIRMLY ESTABLISHED, THE CONTRACTOR WILL CONTINUE TO BE RESPONSIBLE FOR MAINTENANCE, UNTIL THE GROWTH IS ESTABLISHED.
7. THE CONTRACTOR SHALL USE EXTREME CARE NOT TO DAMAGE THE ROOT SYSTEMS OF TREES AND OTHER LANDSCAPE FEATURES WHICH ARE TO BE SAVED, AND/OR SALVAGED, FOR RESTORATION PURPOSES. NO EQUIPMENT, SUPPLIES, OR VEHICLES SHALL BE STORED WITHIN THE DRIP LINE OF TREES TO REMAIN AND BE PRESERVED.
8. AS PART OF CLEARING AND GRUBBING, ALL DEBRIS IS TO BE REMOVED FROM THE PROJECT SITE AND SALVAGED BY THE CONTRACTOR OR TRANSPORTED TO A LEGAL DISPOSAL AREA.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE JOB SITE, REVIEW THE CONSTRUCTION AND DESIGN REQUIREMENTS, PROJECT PERMITS, CONDITIONS, STIPULATIONS, AND RESTRICTIONS AS NECESSARY TO FAMILIARIZE HIMSELF WITH THE ENTIRE PROJECT PRIOR TO BIDDING.
10. THE COUNTY SHALL SECURE AN INDEPENDENT TESTING LABORATORY DURING CONSTRUCTION TO PERFORM SUCH TESTING AS NEEDED TO CERTIFY THAT THE MATERIAL AND STRUCTURAL COMPONENT SPECIFICATIONS NOTED HAVE BEEN MET. THE CONTRACTOR SHALL ALSO SUBMIT, FOR REVIEW AND APPROVAL, TO THE ENGINEER OF RECORD, A MINIMUM OF FOUR COPIES OF SHOP DRAWINGS AND/OR MATERIAL CERTIFICATIONS FOR ALL MATERIALS PRIOR TO ORDERING SAME FOR THE PROJECT.
11. THE CONTRACTOR SHALL CLEAR THE SITE ONLY TO THE EXTENT NECESSARY TO CONSTRUCT THE REQUIRED IMPROVEMENTS. DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR, AT HIS EXPENSE.
12. ALL DISTURBED GRASSED AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AND STABILIZED BY SODDING.
13. ALL CONSTRUCTION SHALL COMPLY WITH THE FLORIDA ACCESIBILITY CODE AT CURBS, GUTTERS, SIDEWALKS, INTERSECTIONS, ETC. HANDICAP RAMPS ARE TO BE PER THE CHARLOTTE COUNTY HANDICAP RAMP DETAIL. SAW CUTTING GROOVES IN RAMPS IS NON-CONFORMING AND POSES A LIABILITY.
14. CLASS I CONCRETE, 3,000 PSI @ 28 DAYS SHALL BE USED FOR ALL SIDEWALKS AND CONCRETE STRUCTURES, SIDEWALKS TO RECEIVE FIBERMESH REINFORCING.
15. MITERED END SECTIONS (MES), WHERE SPECIFIED, SHALL BE CONSTRUCTED PER F.D.O.T. INDEX NO. 272. CULVERT LENGTHS SHOWN ON PLANS EXCLUDE THE MITERED END SECTION.
16. ALL PIPE JOINTS SHALL BE WRAPPED PER F.D.O.T. INDEX NO. 280.
17. FILL MATERIAL, PLACED IN THE RIGHT OF WAY SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY IN SIX (6) INCH LIFTS MAXIMUM - UNLESS SPECIFICATIONS ALLOW OTHERWISE.
18. FILL MATERIAL UTILIZED SHALL BE TYPE A-3.
19. CONTRACTOR TO ADHERE TO THE GUIDELINES OF THE FLORIDA "TRENCH AND SAFETY ACT".
20. PLAN GRADES, ON GRASSED AREAS, INDICATE TOP OF SOD.
21. SEE SIGNING AND PAVEMENT MARKING PLANS FOR RELOCATION OF ALL SIGNS AFFECTED BY SIDEWALK DESIGNS.
22. CULVERT EXTENSION LENGTHS SHOWN ON PLANS DO NOT INCLUDE THE LENGTH OF DAMAGED ENDS OF EXISTING CULVERTS. THE EXTENT OF DAMAGE SHALL BE DETERMINED AND THE LENGTH OF EXTENSION INCREASED, ACCORDINGLY. PIPE ENDS SHALL BE SAWCUT BY THE CONTRACTOR AT HIS EXPENCE.
23. CONTRACTOR SHALL VERIFY EXISTING CULVERT SIZES, WHERE PROPOSED EXTENSIONS OR CONNECTIONS ARE SPECIFIED ON PLANS, PRIOR TO ORDERING NEW CULVERT MATERIAL.
24. MODIFICATION OF EXISTING UTILITIES SHALL CONFORM TO CHARLOTTE HARBOUR WATER STANDARDS AND SPECIFICATIONS.
25. WATER METER RELOCATION, WHERE SPECIFIED ON PLANS, SHALL INCLUDE SERVICE PIPE RECONNECTION.
26. MAILBOX INSTALLATION AND RELOCATION, WHERE SPECIFIED ON PLANS, SHALL CONFORM TO F.D.O.T. INDEX NO. 532.
27. REMOVAL OF PROTECTED TREE SPECIES SHALL REQUIRE A TREE REMOVAL PERMIT.
28. CONCRETE JACKETS, AROUND METAL CULVERTS, SHALL BE INSTALLED WHERE EXTENSIONS REQUIRING BENDS ARE DESIGNATED ON THE PLANS. EXISTING METAL CULVERTS TO BE SAWCUT AT APPROPRIANT ANGLE.
29. IT IS THE CONTRACTOR'S RESPONSIBILTY TO ALLOW HOMEOWNER'S REASONABLE ACCESS TO THEIR PROPERTY AT ALL TIMES DURING CONSTRUCTION. THIS PROVISION SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.
30. IT IS THE CONTRACTOR'S RESPONSIBILTY TO MAKE PROVISIONS FOR TEMPORARY MAIL SERVICE, WITHOUT INTERRUPTION OF SERVICE, WHERE NEW OR RELOCATED MAILBOXES ARE SPECIFIED ON THE PLANS. THIS PROVISION SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.
31. TRAFFIC BEARING GRATES AND RIMS SHALL BE UTILIZED ON ALL PROPOSED STRUCTURES.
32. MATERIAL PLACEMENT BETWEEN ROADWAY AN TACTILE SURFACE:
    THE CONTRACTOR SHALL USE EXPANSION JOINT CAPS WITH REMOVABLE CAP STRIPS AS MANUFACTURED BY VINYLEX CORPORATION. EXPANSION JOINT SEALER SHALL BE SONOLASTIC SLI AS MANUFACTURED BY REXNORD CHEMICAL PRODUCTS, INC. EXPANSION JOINT SEALER SHALL NOT BE PLACED IN DEPTHS GREATER THAN THAT RECOMMENDED BY THE MANUFACTURER AT ANY ONE (1) TIME. IF THE JOINT REQUIRES SEALER GREATER THAN THAT RECOMMENDED BY THE MANUFACTURER, THE CONTRACTOR SHALL INSTALL THE MATERIAL IN TWO (2) PLACEMENTS, ONLY AFTER THE FIRST PLACEMENT HAS SUFFICIENTLY CURED. ALL REMOVABLE CAP STRIPS ARE TO BE LOCATED ABOVE THE FINISHED SIDEWALK SURFACE AND SHALL NOT BE TOOLED OVER. THE REMOVABLE CAP STRIPS SHALL BE PULLED AND FILLED WITH JOINT SEALER WITHIN TWENTY-FOUR (24) HOURS OF THE PLACEMENT OF THE CONCRETE. THE COST OF THIS WORK AND MATERIALS SHALL BE INCLUDED IN BID ITEM 522-1.
33. ALL INLET GRATING, DESIGNATED ON PLANS TO BE REMOVED, SHALL BE RETURNED TO THE COUNTY.
34. THE CONTRACTOR SHALL SWACUT AND REMOVE EXISTING PAVEMENT OVERBUILD, BEYOND "TRUE" EDGE OF PAVEMENT, ON PAVED RETURNS, (RADII) AND SHALL EXTEND SIDEWALK TO CUT PAVEMENT EDGE.
35. WHERE ASPHALT DRIVEWAYS ARE DESIGNATED TO BE REPLACED ON THE PLANS, THE ADFACENT ROADWAY PAVEMENT EDGE SHALL BE TRIMMED BY SWACUTTING AND REMOVED.
36. MODIFIED INLETS REQUIRING EXTENSION (RAISING) OF WALLS, SHALL BE CONSTRUCTED ACCORDING TO THE DETAIL ENTITLED " METHOD OF CONSTRUCTION FOR WALL EXTENSION OF EXISTING DRAINAGE STRUCTURES".
37. IF EXISTING CULVERT PIPES ARE TO BE CUT TO PROVIDE A CLEAN CONNECTION FOR PIPE EXTENSIONS, THE COST OF CUTTING PIPE WILL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND SHALL BE INCLUDED WITHIN THE UNIT PRICE OF THE PIPE.
38. ALL CONCRETE COLLARS SHALL INCLUDE MITER CUTTING PIPES TO PROVIDE A CLOSE FITTING JOINT. JOINT SHALL NOT BE BRIDGED WITH CONCRETE.



MAILBOX RELOCATION

N.T.S.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
Charlotte Engineering & Surveying, Inc.
1700 El Jobean Road
Port Charlotte, Florida 33948
Telephone No.: (941) 629-2552
Fax No.: (941) 743-8298
E-mail: ces@acp-ces.com
CIVIL ENGINEERS/LAND DEVELOPMENT
SPORTS FACILITY CONSULTANTS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

TYPICAL SECTIONS & NOTES

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-5.01

SPECIFICATION FOR CONCRETE SIDEWALKS
CONSTRUCTED WITHIN THE CHARLOTTE COUNTY RIGHT OF WAY

GENERAL:

The Contractor shall obtain a Charlotte County Right of Way Use Permit prior to construction of sidewalks within the County Right of Way.

Sidewalks within the Charlotte County Right of Way shall be constructed in accordance with the following Specifications and with the Standard Details attached to this document.

Minimum sidewalk width shall be six feet (6'). The width may be reduced to five feet (5') in exceptional circumstances, where insufficient space exists to construct the standard width.

All sidewalk ramps, curb ramps and detectable warnings shall be constructed to meet the requirements of the Americans with Disability Act (Revised 1994).

STABILIZING:

Prior to placing concrete sidewalk the subgrade shall be stabilized with commercial stabilizing material to a depth of eight inches (8") to provide a firm and unyielding base, achieving a minimum Limerock Bearing Ratio (LBR) of 40. The stabilized subgrade shall extend six inches (6") beyond the sidewalk on either side. No sidewalk concrete shall be placed until the subgrade has been accepted by the County.

CONCRETE SIDEWALKS:

Concrete sidewalks shall be constructed to a minimum thickness of four inches (4"), except across commercial accesses, where they shall be a minimum of six inches (6"), using Portland Cement Concrete with a minimum twenty-eight day compressive strength of 3,000 psi. The contractor will be required to provide the County with the appropriate compressive strength test results. The concrete shall be reinforced with either fibermesh or wire mesh. Fibermesh fibers will be mixed in accordance to standards set forth in ASTM C-1116. Reinforcing fibers shall be used in strict accordance with the manufacturer's instructions and recommendations as to the type and amount for uniform distribution. Only fibers specifically designed and manufactured for use in concrete and so certified by the manufacturer shall be acceptable.

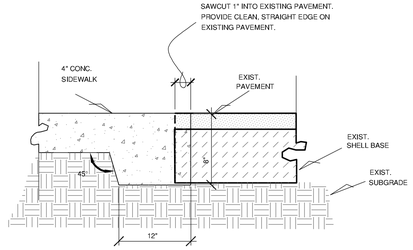
Wire mesh reinforcement shall be 6"x6" #10 mesh, supported on appropriate chairs.

Expansion joints shall be provided between existing sidewalks and curbs or driveways and at intersections between sidewalk and other fixed objects, at intervals at new pours, at all cold joints and at the intersection of the sidewalk with asphalt pavements. The spcing for contraction/contrl joints shall be equivalent to the sidewalk width. Expansion joints shall be spaced no greater than 32 feet apart and at an even joint. Tooled joints shall be straight and perpendicular to the edge of the sidewalk. The Contractor shall use expansion joint caps with removable cap stips as manufactured by Vinylex Corporation. Expansion joint sealer shall not be placed in depths greater than 3/4" at any one (1) time. If the joint requires greater than 3/4" of joint sealer, the Contractor shall place the material in two (2) placements, only after the first placement has sufficiently cured. All removable cap strip shall be placed above the finished sidewalk surface and shall not be tooled over. The removable cap strips shall be pulled and filled with joint sealer within 24 hours of the placement of the concrete.

Where the sidewalk meets pavement including roads and driveways, the Contractor shall saw cut egde of the existing pavment and provide a thickened surface.

The Contractor shall provide tactile (detectable) surfaces per the details in the attachments at all crossings.

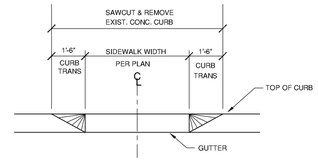
Concrete shall be cured in accordance with the requirments of FDOT Specifications Section 520-8.



SIDEWALK TO EXIST. PAVEMENT DETAIL

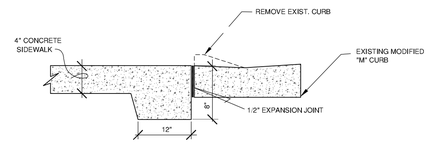
NOT TO SCALE

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY FOR FEATHERING AND REPLACEMENT OF ASPHALT, AS NECESSARY TO INSURE A SMOOTH TRANSITION, AT PAVEMENT EDGE. THIS WORK IS INCIDENTAL TO THE COST OF THE PROJECT.



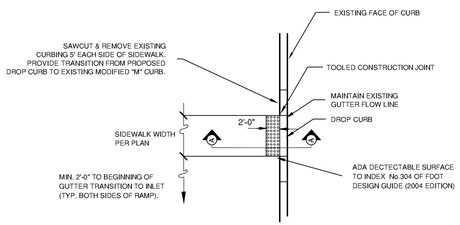
SIDEWALK TO CURB FRONT VIEW

NOT TO SCALE



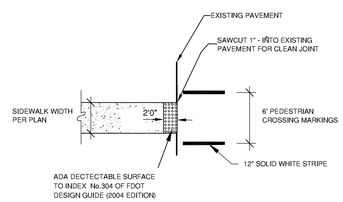
SECTION A–A

NOT TO SCALE



SIDEWALK TO CURB DETAIL

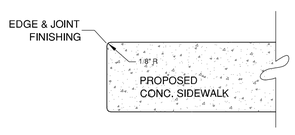
NOT TO SCALE



SIDEWALK SINGLE PEDESTRIAN CROSSING DETAIL

NOT TO SCALE

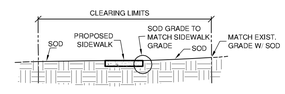
NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY FOR FEATHERING AND REPLACEMENT OF ASPHALT, AS NECESSARY TO INSURE A SMOOTH TRANSITION, AT PAVEMENT EDGE. THIS WORK IS INCIDENTAL TO THE COST OF THE PROJECT.



FINISHING EDGE OF CONCRETE SIDEWALK DETAIL

NOT TO SCALE

ALL CONCRETE SIDEWALK EDGES, INCLUDING THOSE AT FORMED JOINTS, SHALL BE FINISHED WITH AN EDGER HAVING A RADIUS OF 3 mm. 1/8 INCH. TRAVERSE JOINT SHALL BE EDGED BEFORE BROOMING, AND THE BROOMING SHALL ELIMINATE THE FLAT SURFACE LEFT BY THE SURFACE FACE OF THE EDGER. CORNERS AND EDGES WHICH HAVE CRUMBLED AND AREAS WHICH LACK SUFFICIENT MORTAR FOR PROPER FINISHING SHALL BE CLEANED AND FILLED SOLIDLY WITH A PROPERLY PROPORTIONED MORTAR MIXTURE AND THEN FINISHED.



SIDEWALK SODDING DETAIL

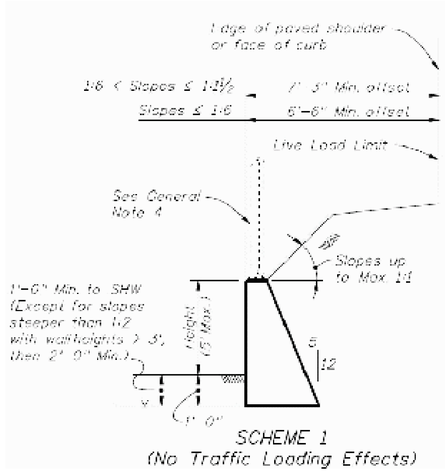
(NOT TO SCALE)

SODDING NOTES:

1) SOD SHALL BE BAHIA GRASS, UNLESS WHERE ENCOUNTERED THERE IS EXISTING FLORATAN, SAINT AUGUSTINE, ...ETC. SOD SHALL BE INSTALLED LIKE KIND. CONTRACTOR SHALL REPLACE ALL LIKE-KIND SOD AT CONTRACTORS EXPENSE & TO THE SATISFACTION OF CHARLOTTE COUNTY PUBLIC WORKS (CCPW).

2) ANY AREAS DISTURBED OUTSIDE THE CLEARING LIMITS THAT HAVE BEEN DISTURBED AS A RESULT OF THE SUBJECT SIDEWALK CONTRACTOR SHALL BE SODDED TO THE SATISFACTION OF CCPW. REPLACE ALL LIKE-KIND SOD AT THE EXPENSE OF THE CONTRACTOR.

3) ANY EXISTING VEGETATION PLANTERS, DECORATIVE LANDSCAPING, MAIL BOXES OR ANY OTHER IMPROVEMENTS/DECORATIONS THAT ARE DISTURBED WITHIN THE CLEARING LIMITS, UNLESS SHOWN ON THE PLANS SHALL BE RE-INSTALLED OR REPLACED IN IT'S EXISTING LOCATION, IN THE SAME CONDITION PRIOR TO CONSTRUCTION AND TO THE SATISFACTION OF CCPW.

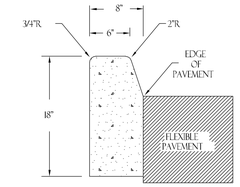


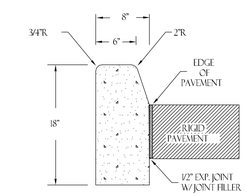
ESTIMATED QUANTITIES FOR WALL					
HEIGHT (FT.)	PER LINEAR FOOT OF WALL				WEEP HOLES & DRAIN REQD.
	CLASS I CONCRETE (CY)			REINF. STEEL (LB.)	
	SCHEME 1	SCHEME 2	SCHEME 3		
1'	0.08	0.11 (0.20*)	0.03	3 (4*)	No
2'	0.14	0.20 (0.32*)	0.09	4 (5*)	No
3'	0.22	0.32 (0.47*)	0.29	5 (6*)	Yes
4'	0.32	0.47 (0.65*)	0.43	6 (7*)	Yes
5'	0.43	0.65 (0.85*)	0.60	7 (8*)	Yes

ESTIMATED QUANTITIES NOTES:

For Scheme 3 Junction Slab and Traffic Railing see the referenced Design Standards for estimated quantities.

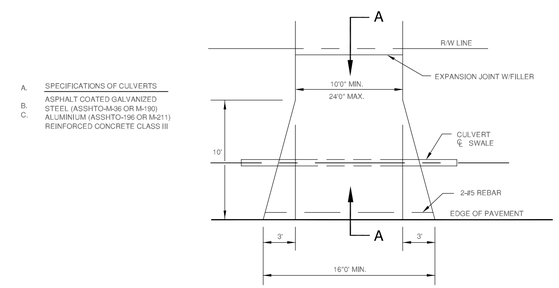
* 1 or 2' 0" Toe Depth in Scheme 2.



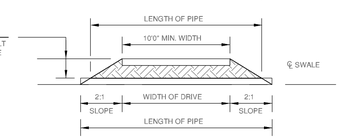


REFER TO TYPICAL PAVEMENT SECTION FOR PAVEMENT DESIGN

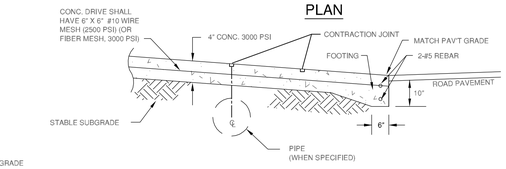
TYPICAL TYPE D CURB



MINIMUM COVER	CONCRETE DRIVE	ASPHALT DRIVE
CONC. PIPE	4"	4"
ALUM. PIPE	4"	6"



PLAN



SECTION "A-A"

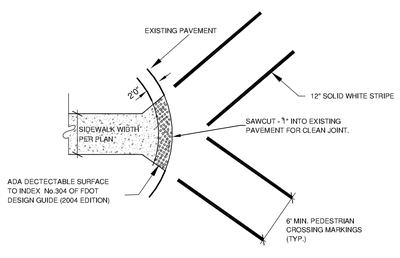
NOTE:

1. SWALES LESS THAN 0.70 OF A FOOT BELOW THE EDGE OF PAVEMENT MAY NOT REQUIRE A CULVERT, BUT SWALES EXCEEDING 0.70 OF A FOOT WILL REQUIRE A CULVERT. THE CULVERT SIZE TO BE SPECIFIED BY THE COUNTY INSPECTOR.
2. DRIVEWAY CONSTRUCTION TO CONFORM TO CHARLOTTE COUNTY ORDINANCE 85-43.
3. PROPOSED DRIVEWAYS TO BE CONSTRUCTED WITH CONCRETE UNLESS OTHERWISE DESIGNATED ON PLANS.

CHARLOTTE COUNTY STANDARD ROAD DETAIL

RESIDENTIAL DRIVEWAY

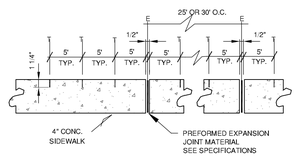
NOT TO SCALE



SIDEWALK DUAL PEDESTRIAN CROSSING DETAIL

NOT TO SCALE

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY FOR FEATHERING AND REPLACEMENT OF ASPHALT, AS NECESSARY TO INSURE A SMOOTH TRANSITION, AT PAVEMENT EDGE. THIS WORK IS INCIDENTAL TO THE COST OF THE PROJECT.



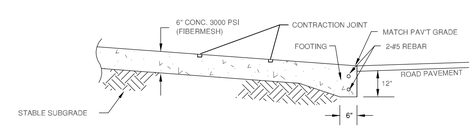
LONGITUDINAL SECTION

LOCATION OF SIDEWALK JOINTS

LEGEND: T = TOOLED JOINT
E = EXPANSION JOINT W/ ZIP STRIP

EXPANSION & TOOLED JOINTS DETAIL

NOT TO SCALE



CHARLOTTE COUNTY STANDARD ROAD DETAIL

COMMERCIAL DRIVEWAY

NOT TO SCALE

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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SPORTS FACILITY CONSULTANTS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

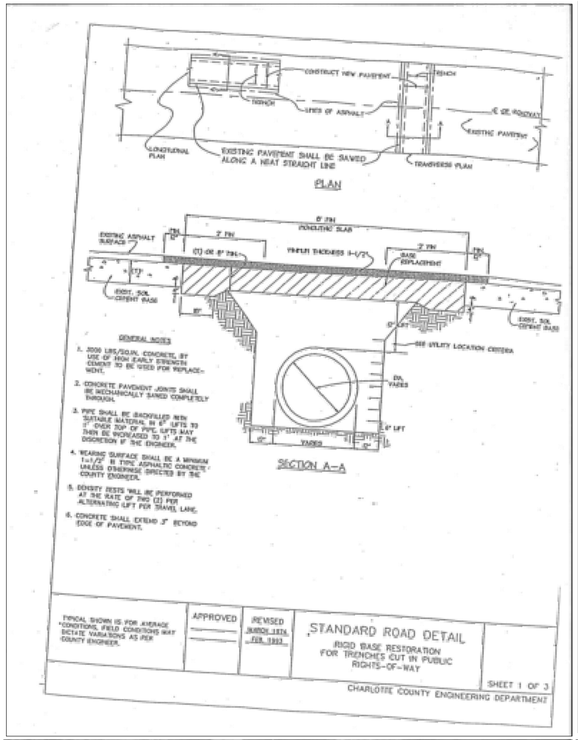
CIVIL DETAILS

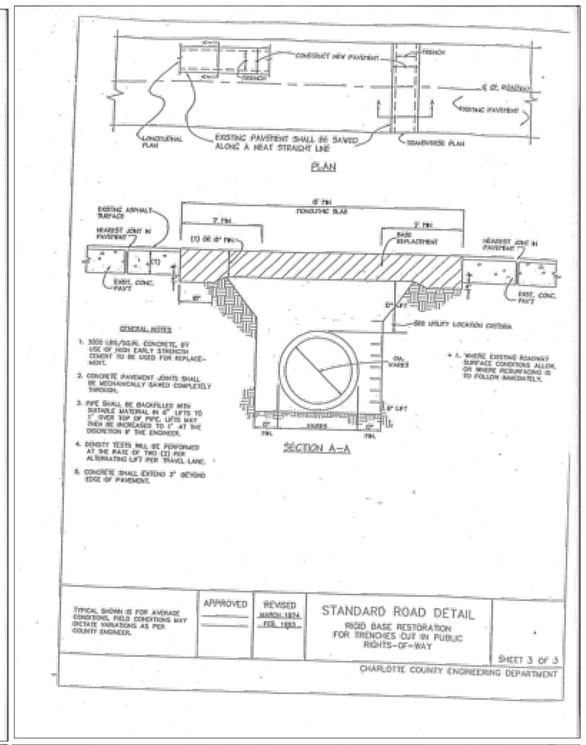
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

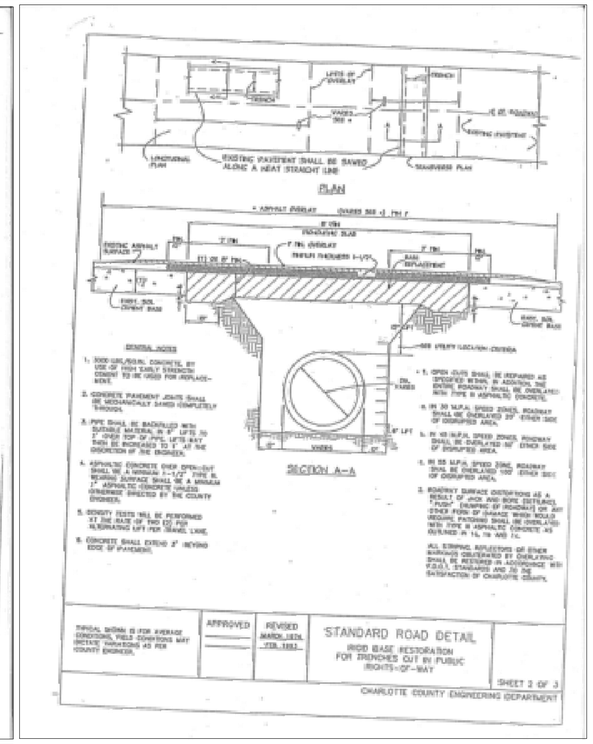
SCALE AS SHOWN

JOB #12722

C–5.02







GENERAL NOTES

1. REPLACEMENT BASE TO BE CONCRETE, 3000 P.S.I. WITH HIGH EARLY STRENGTH CEMENT TO BE USED FOR REPLACEMENT.

2. CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED COMPLETELY THROUGH.

3. PIPE SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN 6" LIFTS TO 1' OVER TOP OF PIPE. LIFTS MAY THEN BE INCREASED TO 1' AT THE DISCRETION OF THE ENGINEER.

4. WEARING SURFACE SHALL BE A MINIMUM 1 1/2" TYPE III ASPHALTIC CONCRETE UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER.

5. DENSITY TESTS WILL BE PERFORMED AT THE RATE OF TWO (2) PER ALTERNATING LIFT, ONE PER TRAVEL LANE.

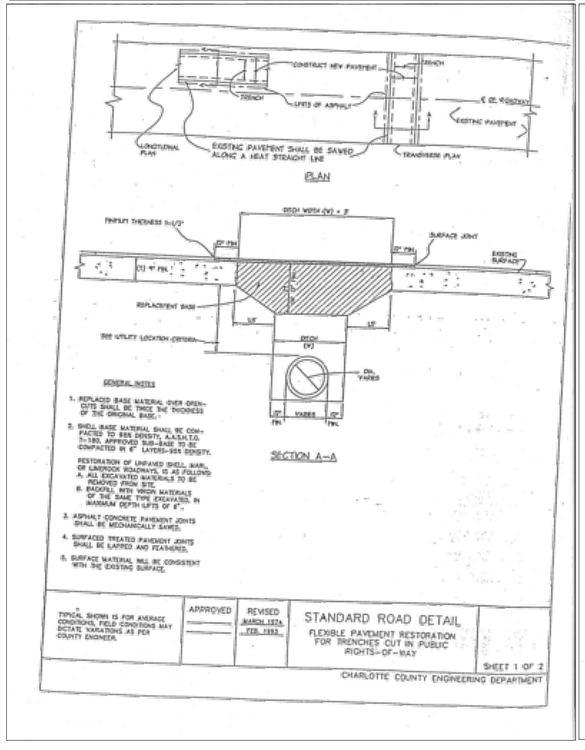
6. CONCRETE SHALL EXTEND 3" BEYOND THE EDGE OF PAVEMENT.

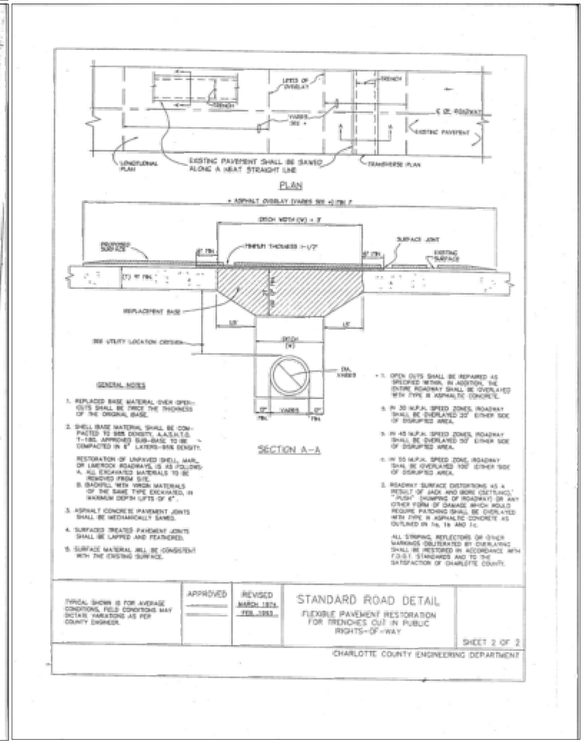
7. WHEN EXISTING BASE MATERIAL IS SHELL OR ROCK, REPLACEMENT BASE MAY BE SHELL OR ROCK TO A DEPTH OF 2T. (OPTIONAL BASE GROUP 9)

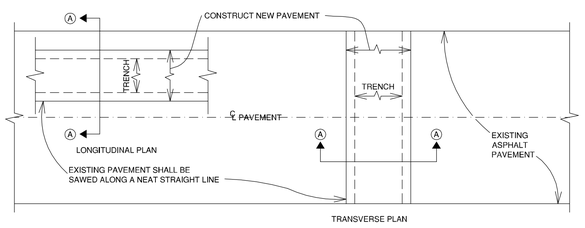
8. FLOWABLE FILL MAY BE SUBSTITUTED FOR BACKFILL MATERIAL UPON APROVAL OF CHARLOTTE COUNTY. FLOWABLE FILL SHALL NOT BE SUBSTITUTED FOR BASE MATERIAL.

9. ALL STRIPING, REFLECTORS OR OTHER MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH F.D.O.T. STANDARDS AND TO THE SATISFACTION OF CHARLOTTE COUNTY.

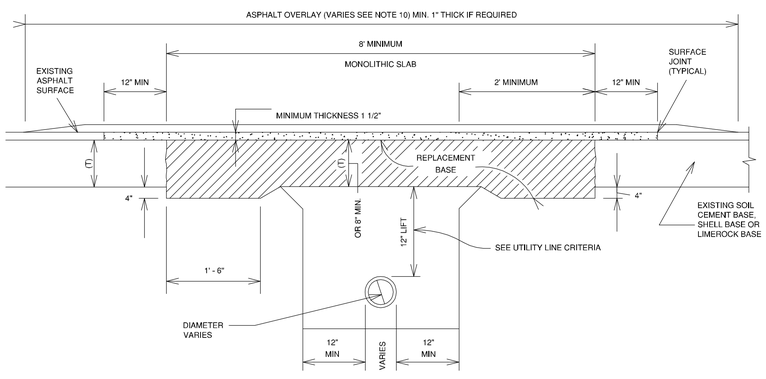
10. OPEN CUTS SHALL BE REPAIRED AS SPECIFIED WITHIN. IN ADDITION, THE ENTIRE ROADWAY SHALL BE OVERLAYED WITH TYPE III ASPHALTIC CONCRETE.







PLAN



SECTION A-A

PAVEMENT RESTORATION CONCRETE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
Charlotte Engineering & Surveying, Inc.
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CHARLOTTE COUNTY
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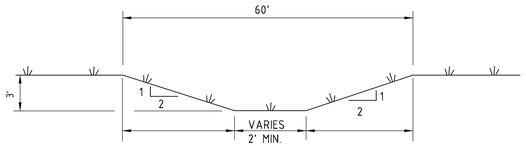
CIVIL DETAILS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

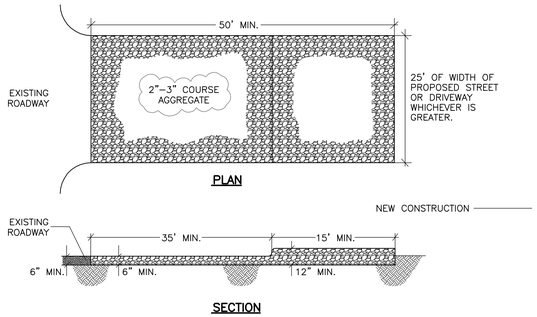
C-5.03



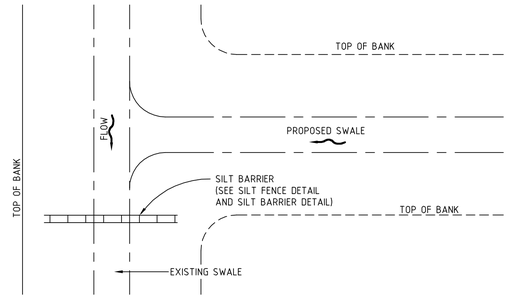
TYPICAL SEDIMENT/DEWATERING SWALE SECTION

NOTES

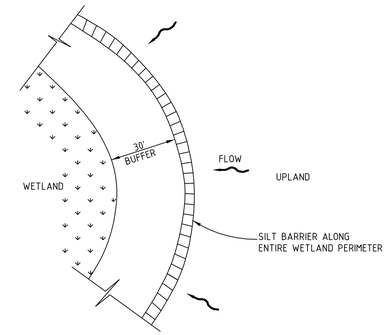
1. ENTRANCE(S) SHALL BE LOCATED TO PROVIDE MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
2. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOP DRESSING WITH STONE WILL BE NECESSARY. CONTRACTOR SHALL MAINTAIN AS NECESSARY.
4. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.
5. FREQUENT CHECKS OF THE ENTRANCE(S) AND TIMELY MAINTENANCE SHALL BE PROVIDED.
6. NOTES ARE APPLICABLE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS ESTABLISHED.



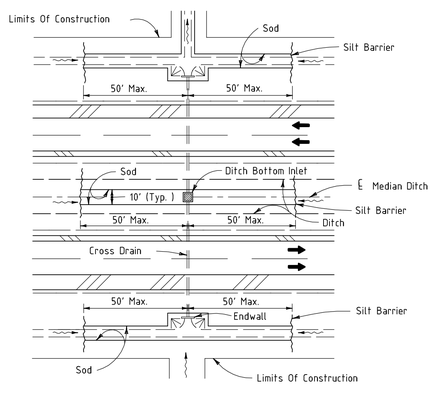
TEMPORARY CONSTRUCTION ENTRANCE



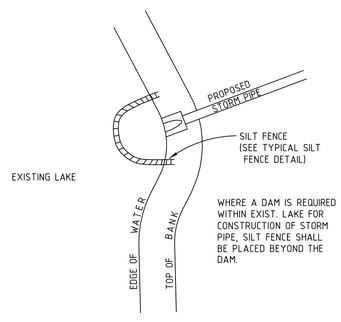
SILT BARRIER @ CONNECTION OF SWALE TO EXISTING SWALE



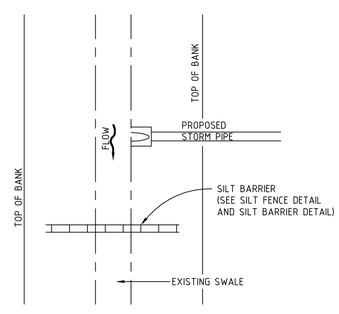
SILT BARRIER ALONG WETLAND PERIMETER



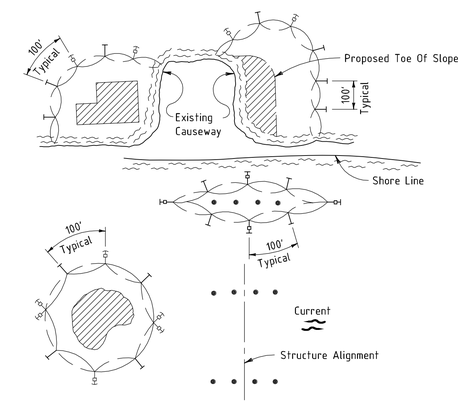
DITCH INSTALLATIONS AT DRAINAGE STRUCTURES



SILT BARRIER @ CONNECTION OF STORM PIPE TO EXISTING LAKE



SILT BARRIER @ CONNECTION OF STORM PIPE TO EXISTING SWALE



NOTES:

1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the Standard Specifications.

TURBIDITY BARRIER APPLICATIONS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
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CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

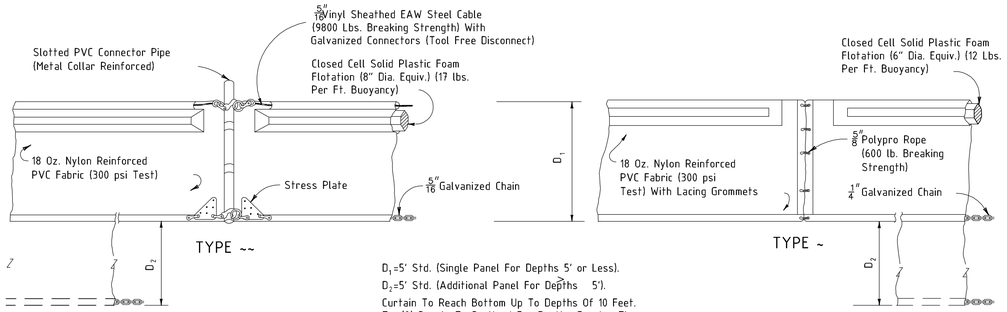
EROSION CONTROL DETAILS

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-5.04



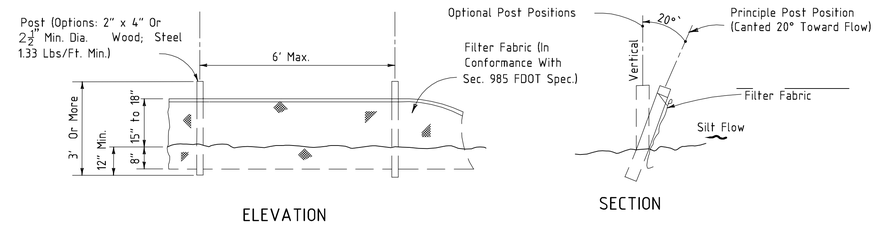
D_1=5' Std. (Single Panel For Depths 5' or Less).

D_2=5' Std. (Additional Panel For Depths > 5').

Curtain To Reach Bottom Up To Depths Of 10 Feet. Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: 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.

FLOATING TURBIDITY BARRIERS

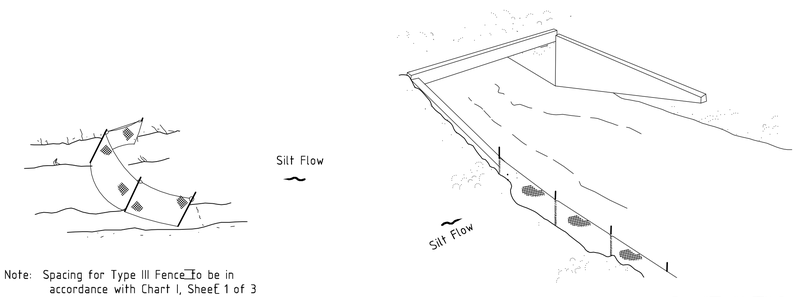


Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE

PRIOR TO PLACING THE MATTING, THE CONTRACTOR SHALL GRADE AND COMPACT THE AREA TO PROVIDE A SMOOTH SURFACE, WITH NO DEPRESSED, VOID, SOFT, OR UNCOMPACTED AREAS, IS FREE FROM OBSTRUCTIONS, SUCH AS TREE ROOTS, PROJECTING STONES OR OTHER FOREIGN MATTER. AFTER SEEDING OPERATIONS, PLACE MATTING IN ALL SWALES/CHANNELS. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. CONTRACTOR SHALL SUBMIT A STAPLING PATTERN DETAIL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PLACE THE MATTING, FOUR (4) FEET MINIMUM WIDTH, CENTERED ON THE SWALE FLOWLINE, PARALLEL TO THE DIRECTION OF WATER FLOW. MATTING ENDS SHALL BE OVERLAPPED SUFFICIENTLY FOR COMMON ROW OF STAPLES AT THE UPSTREAM/UPHILL END AT THE TOP ("SHINGLED"). STAPLE THE OVERLAP ACROSS THE END OF THE OVERLAPPING LENGTH. A TRENCH SHALL BE CONSTRUCTED AT THE UPSTREAM TERMINATION, SIX (6) INCH MINIMUM DEPTH. THE MATTING SHALL BE STAPLED TO THE BOTTOM OF THE TRENCH. CONTRACTOR SHALL THEN BACKFILL AND COMPACT THE TRENCH.

EROSION CONTROL MATTING INSTALLATION REQUIREMENTS



Note: Spacing for Type III Fence to be in accordance with Chart 1, Sheet 1 of 3 and ditch installations at drainage structures Sheet 2 of 3.

Type III Silt Fence

Type II or IV Silt Fence

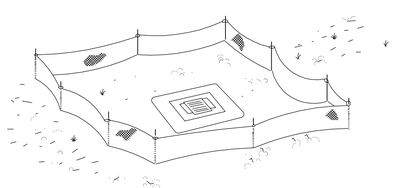
Type III Silt Fence

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

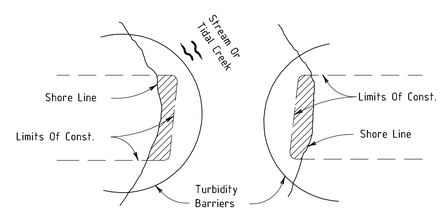
SILT FENCE APPLICATIONS

LEGEND

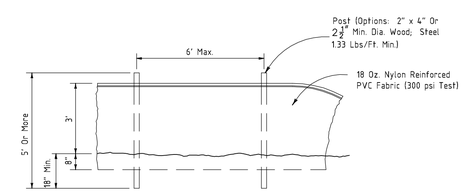
- Pile Locations
- Dredge Or Fill Area
- Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action



Type II or IV Silt Fence Protection Around Ditch Bottom Inlets.



Note:
Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.



STAKED TURBIDITY BARRIER

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 Staked Turbidity Barrier, LF.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
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2014 09 17	30% PLANS		

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EROSION CONTROL DETAILS

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State of Florida
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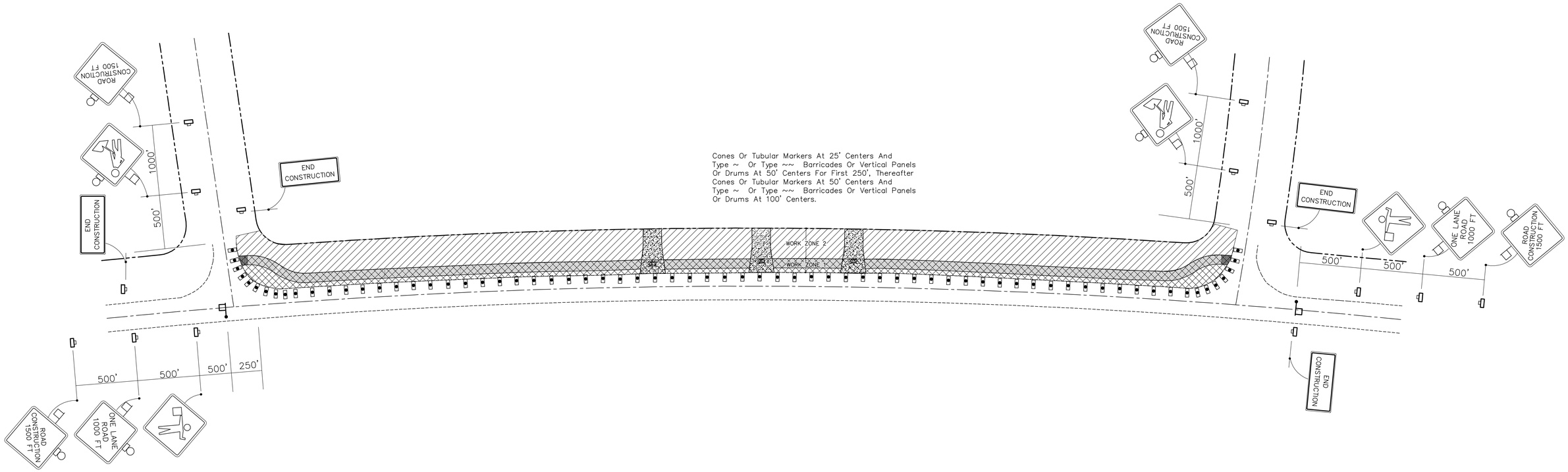
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-5.05



TWO–LANE, TWO–WAY RURAL (INCLUDING INTERSECTIONS) SINGLE LANE CLOSURE

(REFER TO INDEX 604)

WORK ZONE 1 (SIDEWALK TO EDGE OF PAVEMENT AND POURING OPERATION OF SIDEWALK)

TAPER AND LENGTH OF ONE LANE SEGMENT ARE MOVEABLE, DEPENDING ON EXACT LOCATION OF CONSTRUCTION IN WORK ZONE 1.

WORK ZONE 2

BARRICARES MAY BE MOVED OFF EDGE OF PAVEMENT WHEN WORK IS CONDUCTED IN WORK ZONE 2.

SUGGESTED PHASING FOR HARBORVIEW ROAD

PHASE 1

PHASE 2

PHASE 3

MAINTENANCE OF TRAFFIC GENERAL NOTES

ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST ADDITION, PART IV AND THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 600 SERIES.

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AND CONTROLLED BY FLAGGERS AT ALL TIMES ALONG THE PROJECT.

ALL ONE LANE ROAD SIGNS SHALL BE FULLY COVERED AND FLAGGER SIGNS SHALL BE EITHER REMOVED OR FULLY COVERED WHEN NO WORK IS BEING PREFORMED AND THE ROADWAY IS OPEN TO FULL TRAFFIC.

AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED FOR ALL SIDE STREETS AND DRIVEWAYS DURING CONSTRUCTION.

ENDING TAPER TO BE ESTABLISHED AT END OF THE ACTUAL WORK ZONE EACH DAY.

ANY ADDITIONAL TRAFFIC CONTROL DEVICES DEEMED NECESSARY DURING THE PROJECT WILL BE PROVIDED BY THE CONTRACTOR.

ADDITIONAL FLAGMAN AND M.O.T. SIGNS MAY BE NECESSARY. THE CONTRACTOR SHALL PROVIDE ADDITIONAL M.O.T. IN ACCORDANCE WITH THE M.U.C.T.D. OR AS DIRECTED AT NO ADDITIONAL COST.

THE CONTRACTOR SHALL PROVIDE SAFE WORK ZONE FOR NIGHT TIME HOURS.

THE CONTRACTOR SHALL PROVIDE SIGNING AND FLAGGING TO INDICATE END OF SIDEWALK WORKZONE AT END OF EACH DAY.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWELVE(12) HOURS PRIOR TO THE ROADWAY CLOSURE AND/OR DETOUR.
CHARLOTTE COUNTY TRANSPORTATION ENG. DEPT.---941–575–3600
EMERGANCY MEDICAL SERVICES (E.M.S.)----------941–629–9996
CHARLOTTE COUNTY FIRE DEPT.----------941–625–4203
CHARLOTTE COUNTY SHERIFF'S DEPT.----------941–625–2101
CHARLOTTE COUNTY SCHOOL BOARD–TRANS. DEPT.---941–639–2121
THE PUBLIC–NEWSPAPERS, RADIO AND TELEVISION STATIONS
72 HOURS PRIOR TO CLOSURE AND/OR DETOUR

GENERAL NOTES (INDEX 604) (WORK AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE OF THE EDGE OF PAVEMENT)

1. Construction operations shall be confined to one traffic lane, leaving the opposite lane open to traffic.
2. All vehicles, equipment, workers, (except flaggers) and their activities are restricted at all times to one side of the pavement.
3. Additional one–way control may be effected by the following means:
   (1) Flag–carrying vehicle (2) Official vehicle
   (3) Pilot vehicles (4) Traffic signals

   When flaggers are the sole means of one–way control the flaggers shall be in sight of each other or in direct communication at all times.
4. The first two warning signs shall have a 18" x 18" (min.) orange flag and a Type B light attached and operating at all times.
5. The FLAGGER legend sign may be substituted for the symbol sign.
6. All signs shall be post mounted if the closure time exceeds 12 hours.
7. $L\ (min) = \frac{WS}{2}$ for speeds ≥ 45 mph
   $= \frac{WS^2}{120}$ for speeds ≤ 40 mph
   Where:
   W= Width of lateral transition in feet.
   S= Posted speed limit (MPH).
8. The ONE–LANE ROAD signs are to be fully covered and the FLAGGER signs either removed or fully covered when no work is being performed and the highway is open to two–way traffic.
9. Arrows denote direction of traffic only and do not reflect pavement markings.
10. Longitudinal dimensions are to be adjusted to fit field conditions.See Index No. 600.
11. When a side road intersects the highway on which work is being performed additional traffic control devices shall be erected in accordance with other applicable TCZ Indexes.
12. For general TCZ requirements and additional information refer to Index No. 600.

SYMBOLS

- Work Area
- Sign With 18" x 18" (Min.) Orange Flag And Type B Light
- Type ~ Or Type ~~ Barricade Or Vertical Panel Or Drum (With Steady Burning Light At Night Only). Cones Or Tubular Markers May Be Used During Daylight Only.
- Type ~. Type ~~ Or Type ~~~ Barricade Or Vertical Panel Or Drum (With Flashing Light)
- Work Zone Sign
- Flagger

GENERAL NOTES (INDEX 602) (FOR WORK NOT CLOSER TO 2' TO ROADWAY)

1. All vehicles, equipment, workers (except flaggers) and their activities are restricted at all times to one side of the roadway.
2. If the work operation does not exceed 60 minutes, traffic control will be in conformance with Index No. 607.
3. If the work operation encroaches on the through traffic lanes or when four or more work vehicles enter the through traffic lanes in a one hour period a flagger shall be provided and the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs see Index No. 603.
4. The first two warning signs shall have a 18" x 18" (min.) orange flag and a Type B light attached and operating at all times.

   Mesh signs may be used for (Daylight Only) operations Type B Lights and Orange Flags are not required.
5. The WORKERS legend sign may be substituted for the symbol sign.
6. All signs shall be post mounted if the closure time exceeds 12 hours.
7. $L\ (min) = \frac{WS}{2}$ for speeds ≥ 45 mph
   $= \frac{WS^2}{120}$ for speeds ≤ 40 mph
   Where:
   W= Width of shoulder in feet, 8' minimum.
   S= Posted speed limit (MPH).
8. Arrows denote direction of traffic only and do not reflect pavement markings.
9. Longitudinal dimensions are to be adjusted to fit field conditions.See Index No. 600.
10. WORKERS sign to be removed or fully covered when no work is being performed.
11. END CONSTRUCTION signs required only when work exceeds one daylight period.
12. When a side road intersects the highway on which work is being performed additional traffic control devices shall be erected in accordance with other applicable TCZ Indexes.
13. For general TCZ requirements and additional information refer to Index No. 600.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
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2014 09 17	30% PLANS		

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LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

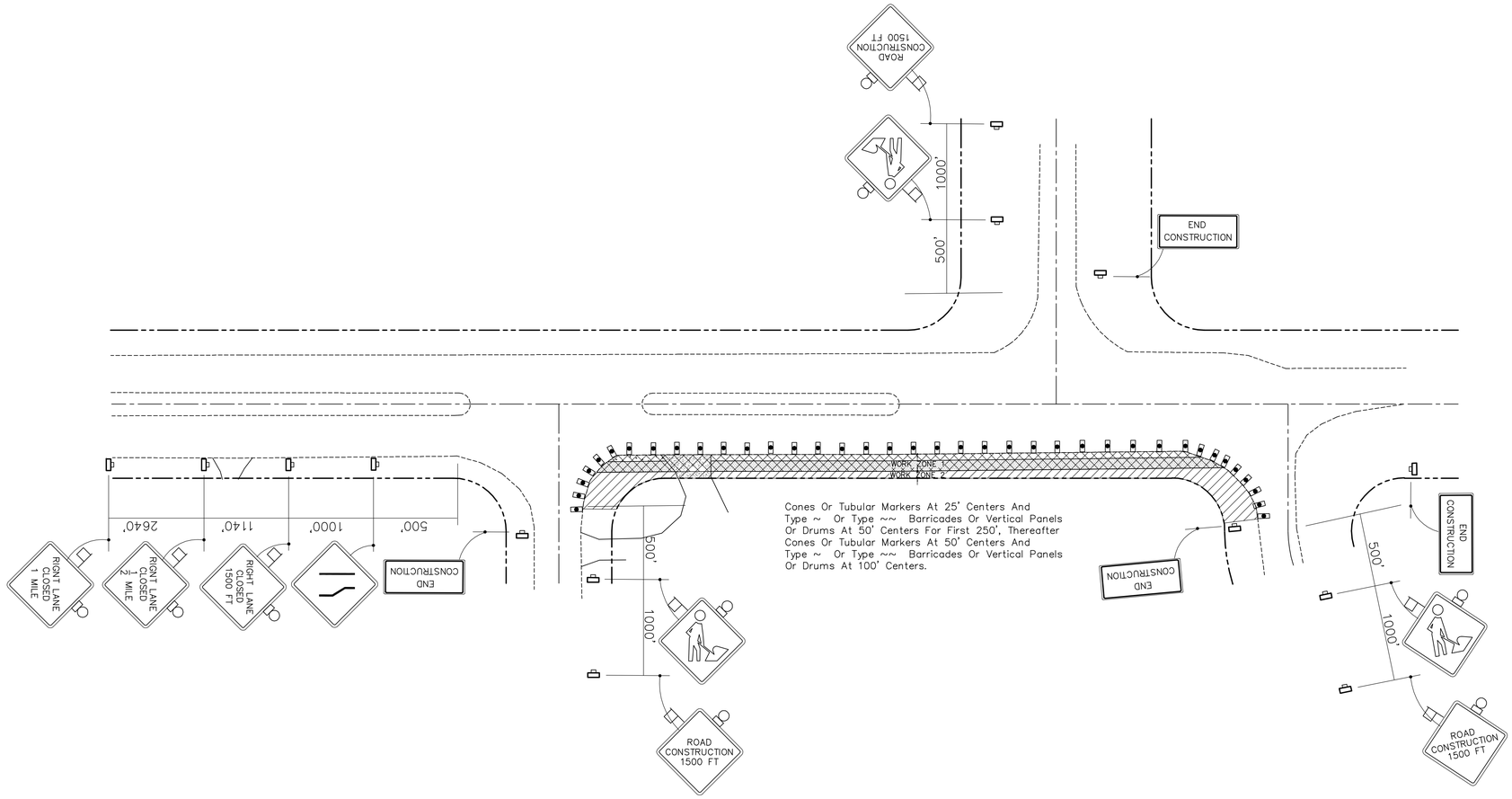
MAINTENANCE OF TRAFFIC

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C–6.01



MULTILANE, DIVIDED RURAL (INCLUDING INTERSECTIONS) SINGLE LANE CLOSURE

(REFER TO INDEX 613)

WORK ZONE 1 (SIDEWALK TO EDGE OF PAVEMENT AND POURING OPERATION OF SIDEWALK)

TAPER AND LENGTH OF ONE LANE SEGMENT ARE MOVEABLE, DEPENDING ON EXACT LOCATION OF CONSTRUCTION IN WORK ZONE 1.

WORK ZONE 2

BARRICARES MAY BE MOVED OFF EDGE OF PAVEMENT WHEN WORK IS CONDUCTED IN WORK ZONE 2.

GENERAL NOTES (INDEX 611) (MULTILANE, DIVIDED)

1. All vehicles, equipment, workers and their activities are restricted at all times to one side of the roadway.
2. If the work operation encroaches on the through traffic lanes or when four or more work vehicles enter the through traffic lanes in a one hour period a flagger shall be provided and a FLAGGER sign shall be substituted for the WORKERS sign. The flagger shall be positioned at the point of vehicle entry or departure from the work area.
3. This TCZ plan also applies to work performed in the median more than 2 feet but less than 15 feet from the edge of either pavement.
4. The first two warning signs, each side, shall have a 18" x 18" (min.) orange flag and a Type B light attached and operating at all times.

   Mesh signs may be used for (Daylight Only) operations Type B Lights and Orange Flags are not required.
5. The WORKERS legend sign may be substituted for the symbol sign.
6. L (min)= $\frac{WS}{2}$ for speeds 45 mph

   = $\frac{WS^2}{120}$ for speeds 40 mph

   Where:
   W= Width of lateral transition in feet
   S= Posted speed limit (MPH).
7. Arrows denote direction of traffic only and do not reflect pavement markings.
8. Longitudinal dimensions are to be adjusted to fit field conditions. See Index No. 600.
9. When work is being performed on a multilane undivided roadway the signs normally mounted in the median (as shown) shall be omitted.
10. WORKERS signs to be removed or fully covered when no work is being performed.
11. END CONSTRUCTION signs required only when work exceeds one daylight period.
12. When a side road intersects the highway on which work is being performed additional traffic control devices shall be erected in accordance with other applicable TCZ Indexes.
13. If the work operation does not exceed 15 minutes, signs, barricades, vertical panels, cones, tubular markers, or drums will not be required provided vehicles in the work area have warning light(s) operating.
14. For general TCZ requirements and additional information refer to Index No. 600.

SYMBOLS

- Work Area
- Sign With 18" x 18" (Min.) Orange Flag And Type B Light
- Type ~ Or Type ~~ Barricade Or Vertical Panel Or Drum (With Steady Burning Light At Night Only). Cones Or Tubular Markers May Be Used During Daylight Only.
- Type ~, Type ~~ Or Type ~~~ Barricade Or Vertical Panel Or Drum (With Flashing Light)
- Work Zone Sign
- Flagger

MAINTENANCE OF TRAFFIC GENERAL NOTES

ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST ADDITION, PART IV AND THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 600 SERIES.

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AND CONTROLLED BY FLAGGERS AT ALL TIMES ALONG THE PROJECT.

ALL ONE LANE ROAD SIGNS SHALL BE FULLY COVERED AND FLAGGER SIGNS SHALL BE EITHER REMOVED OR FULLY COVERED WHEN NO WORK IS BEING PREFORMED AND THE ROADWAY IS OPEN TO FULL TRAFFIC.

AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED FOR ALL SIDE STREETS AND DRIVEWAYS DURING CONSTRUCTION.

ENDING TAPER TO BE ESTABLISHED AT END OF THE ACTUAL WORK ZONE EACH DAY.

ANY ADDITIONAL TRAFFIC CONTROL DEVICES DEEMED NECESSARY DURING THE PROJECT WILL BE PROVIDED BY THE CONTRACTOR.

ADDITIONAL FLAGMAN AND M.O.T. SIGNS MAY BE NECESSARY. THE CONTRACTOR SHALL PROVIDE ADDITIONAL M.O.T. IN ACCORDANCE WITH THE M.U.C.T.D. OR AS DIRECTED AT NO ADDITIONAL COST.

THE CONTRACTOR SHALL PROVIDE SAFE WORK ZONE FOR NIGHT TIME HOURS.

THE CONTRACTOR SHALL PROVIDE SIGNING AND FLAGGING TO INDICATE END OF SIDEWALK WORKZONE AT END OF EACH DAY.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWELVE(12) HOURS PRIOR TO THE ROADWAY CLOSURE AND/OR DETOUR.

CHARLOTTE COUNTY TRANSPORTATION ENG. DEPT.----941-575-3600
EMERGANCY MEDICAL SERVICES (E.M.S.)----------941-629-9996
CHARLOTTE COUNTY FIRE DEPT.----------941-625-4203
CHARLOTTE COUNTY SHERIFF'S DEPT.----------941-625-2101
CHARLOTTE COUNTY SCHOOL BOARD-TRANS. DEPT.---941-639-2121
THE PUBLIC-NEWSPAPERS, RADIO AND TELEVISION STATIONS
72 HOURS PRIOR TO CLOSURE AND/OR DETOUR

GENERAL NOTES (INDEX 613) (MULTILANE, DIVIDED)

1. Work operations shall be confined to one traffic lane, leaving the adjacent lane open to traffic.
2. All vehicles, equipment, workers and their activities are restricted at all times to one side of the pavement.
3. The first two warning signs, each side, shall have a 18" x 18" (min.) orange flag and a Type B light attached and operating at all times.
4. All signs shall be post mounted if the closure time exceeds 12 hours.
5. On undivided highways the median signs as shown are to be omitted.
6. When work is performed in the median lane on divided highways the barricading plan is inverted and left lane closed and lane reduction signs substituted for the right lane closed and lane reduction signs.

   The same applies to undivided highways with the following exceptions: (a) Work shall be confined within one median lane. (b) Additional barricades, cones, or drums shall be placed along the centerline abutting the work area and across the trailing end of the work area.

   When work on undivided highways occurs across the centerline so as to encroach on both median lanes, the inverted plan is applied to the approach of both roadways.
7. Signs and traffic control devices are to be modified in accordance with INTERMITTENT WORK STOPPAGE details (sheet 2 of 2) when no work is being performed and the highway is open to traffic.
8. L (min.)= Length of taper in feet:
   = WS for speeds 45 mph
   = $\frac{WS^2}{60}$ for speeds 40 mph

   Where:
   W= Width of lateral transition in feet
   S= Posted speed limit (MPH).
9. Arrows denote direction of traffic only and do not reflect pavement markings.
10. Longitudinal dimensions are to be adjusted to fit field conditions. See Index No. 600.
11. When work is being performed on a multilane undivided roadway the signs normally mounted in the median (as shown) shall be omitted.
12. When a side road intersects the highway on which work is being performed, additional traffic control devices shall be erected in accordance with other applicable TCZ Indexes.
13. For general TCZ requirements and additional information refer to Index No. 600.

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2014 09 17	30% PLANS		

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LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

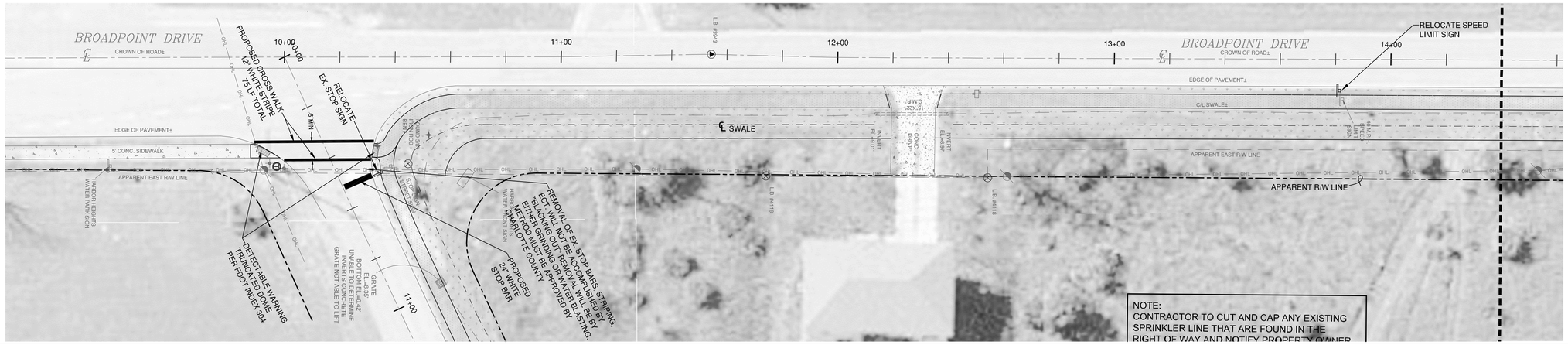
MAINTENANCE OF TRAFFIC

Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No. 12722

SCALE AS SHOWN

JOB #12722

C-6.02



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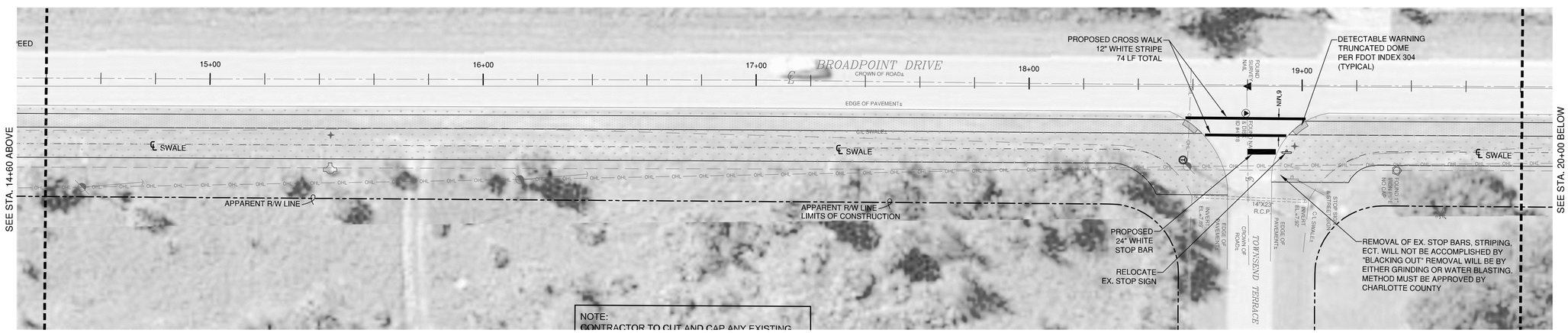

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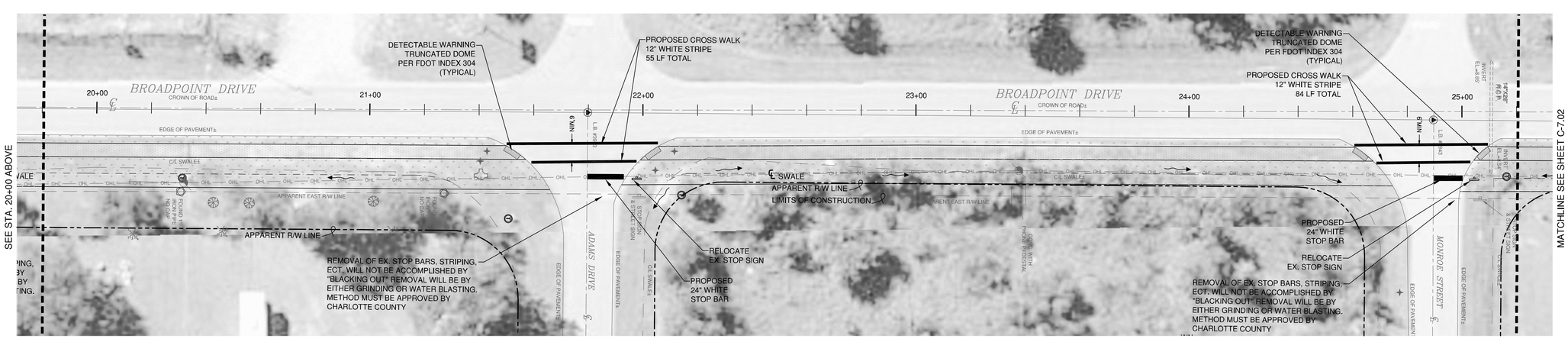

MATCHLINE SEE SHEET C-7.02

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EB No. 2504

CHARLOTTE COUNTY
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SIGNING & PAVEMENT MARKINGS

Joseph S. Menen, P.E.
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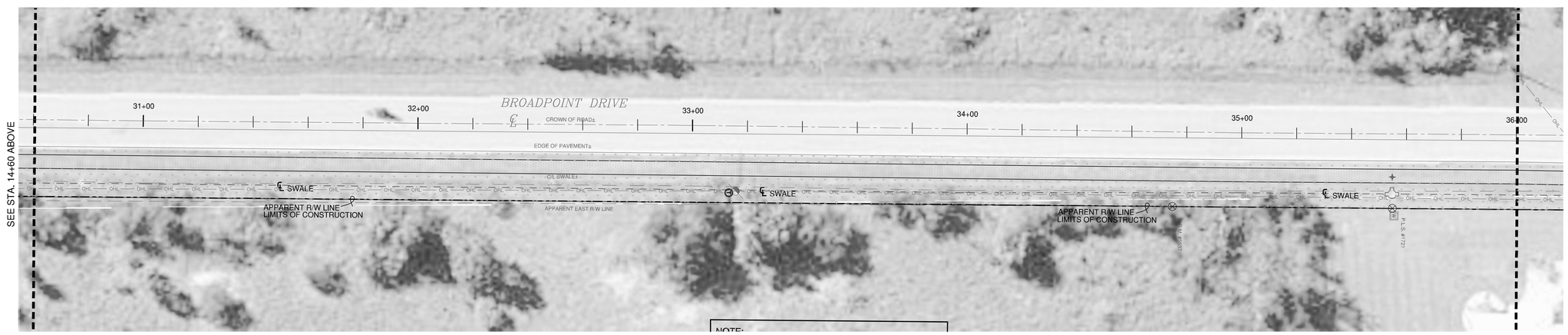
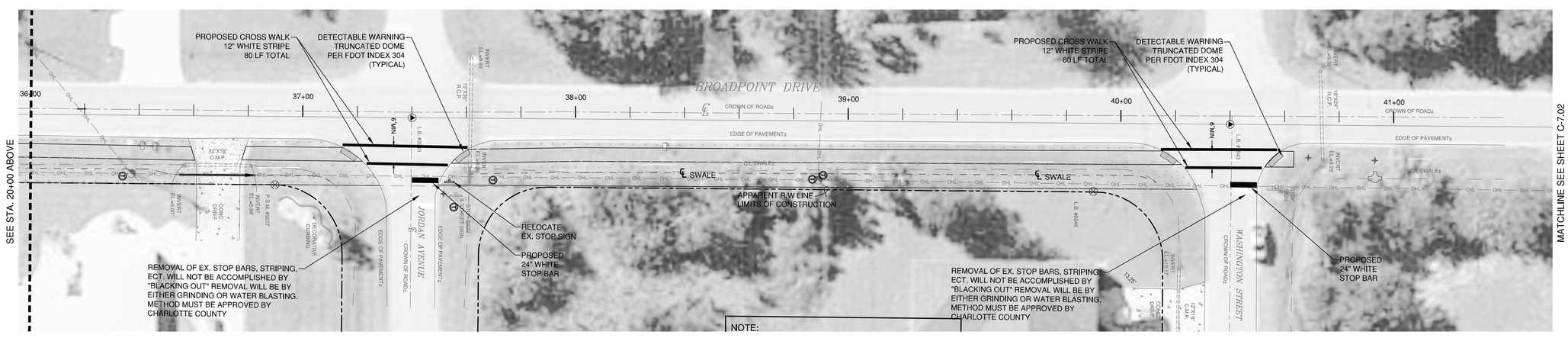
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-7.01





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CHARLOTTE COUNTY
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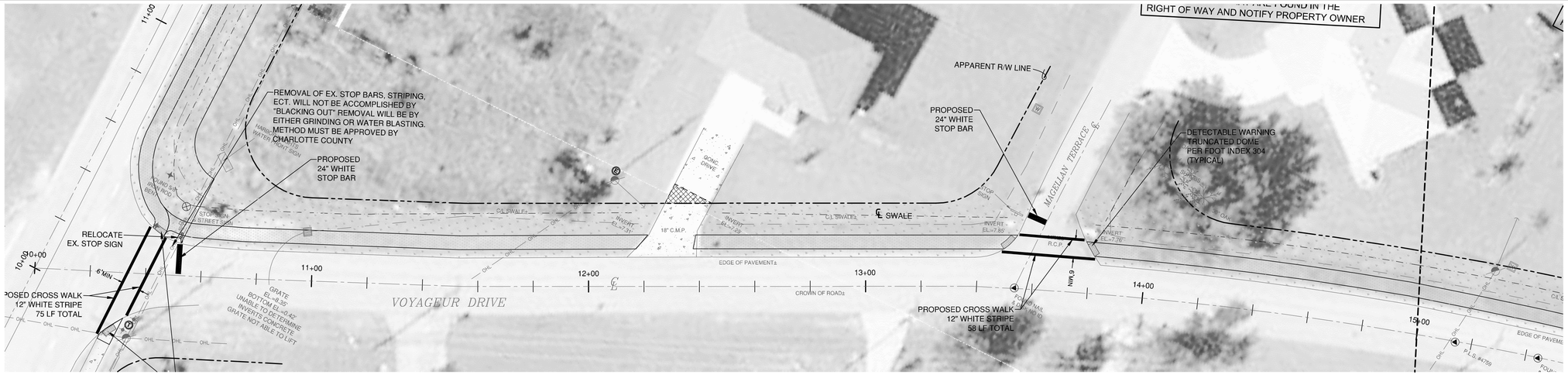

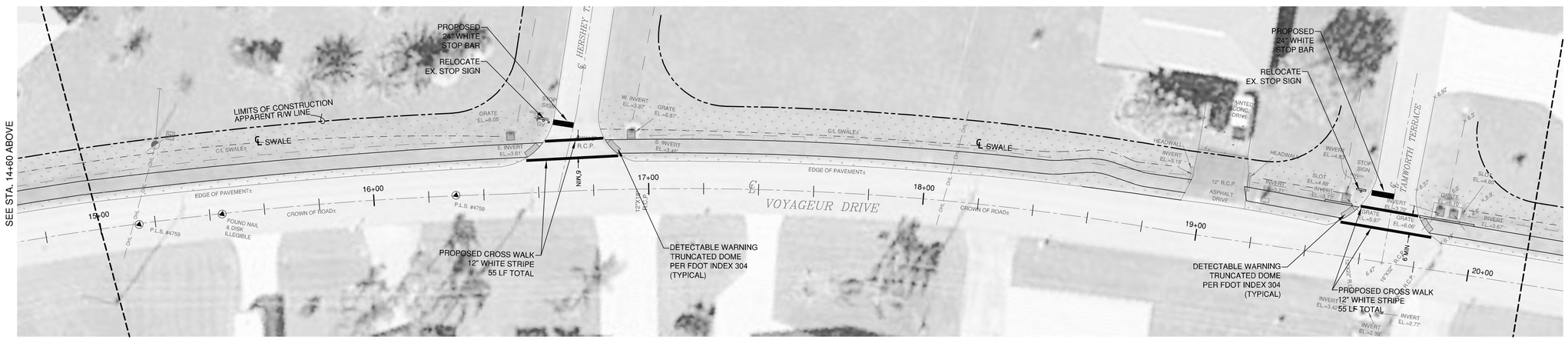

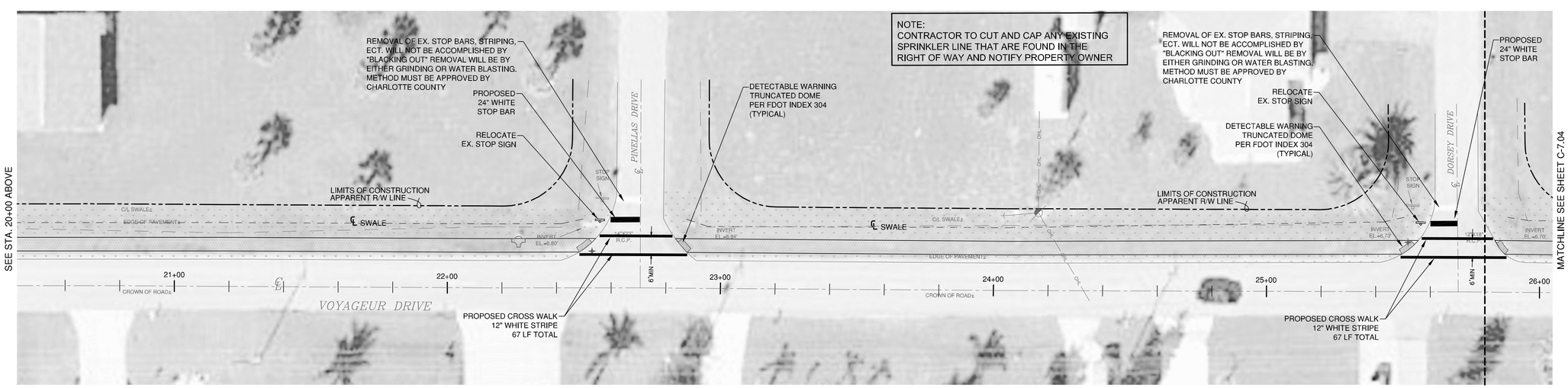

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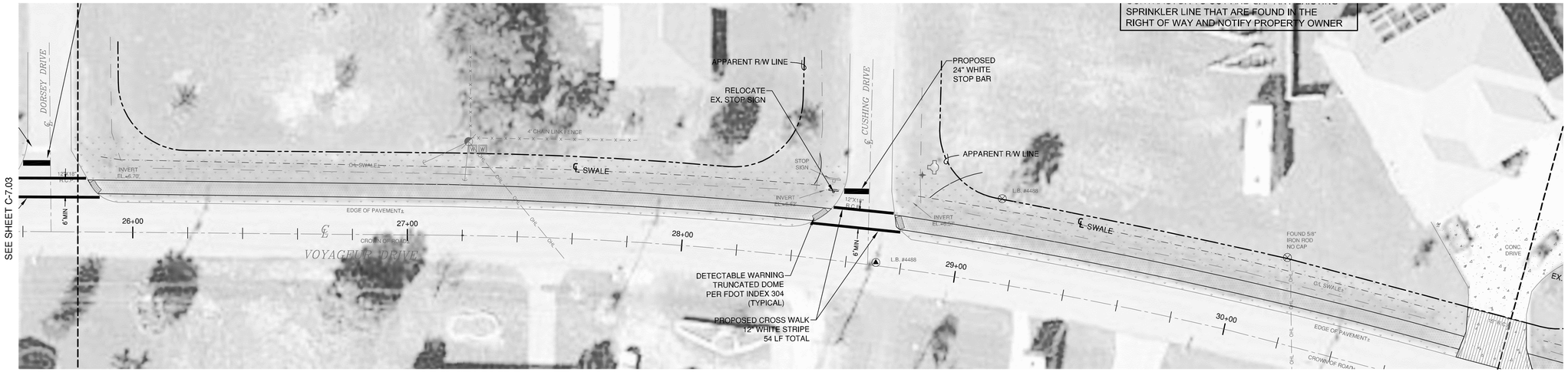
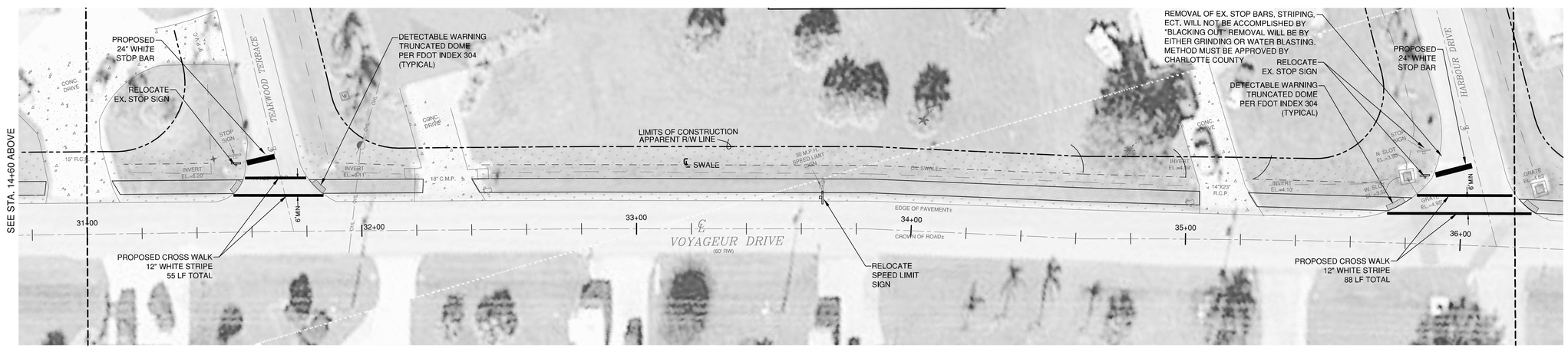
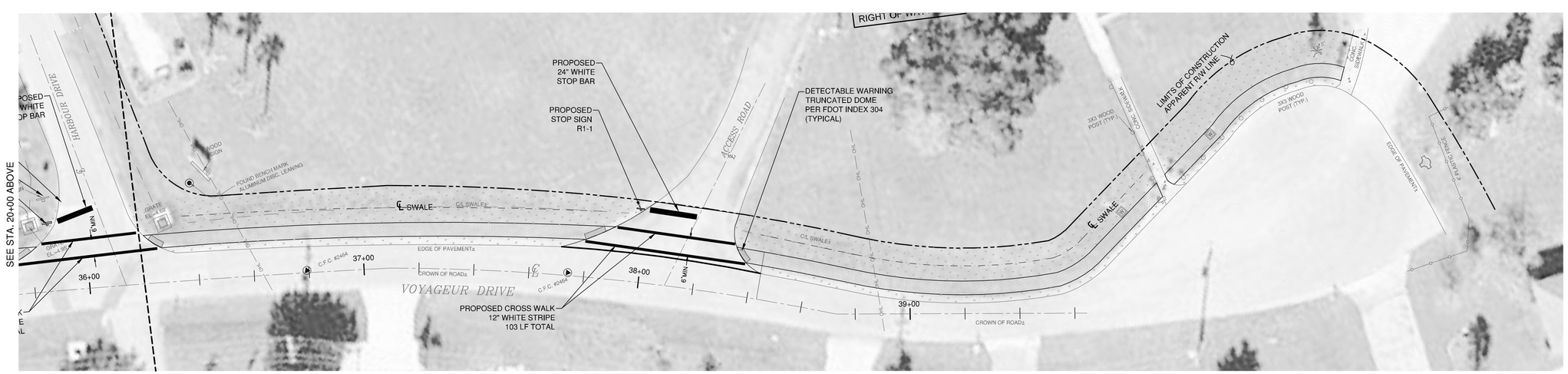
C-7.03







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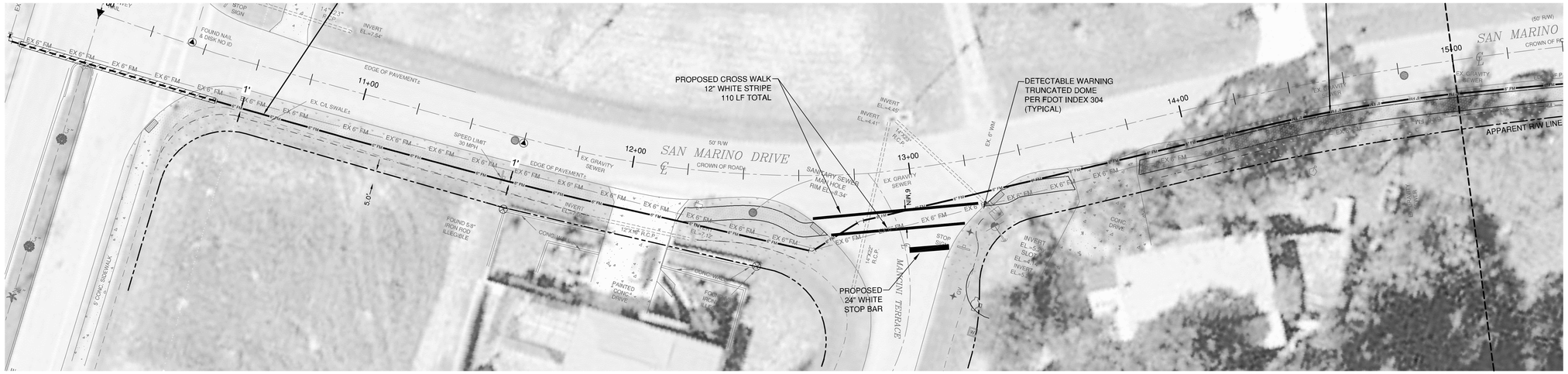
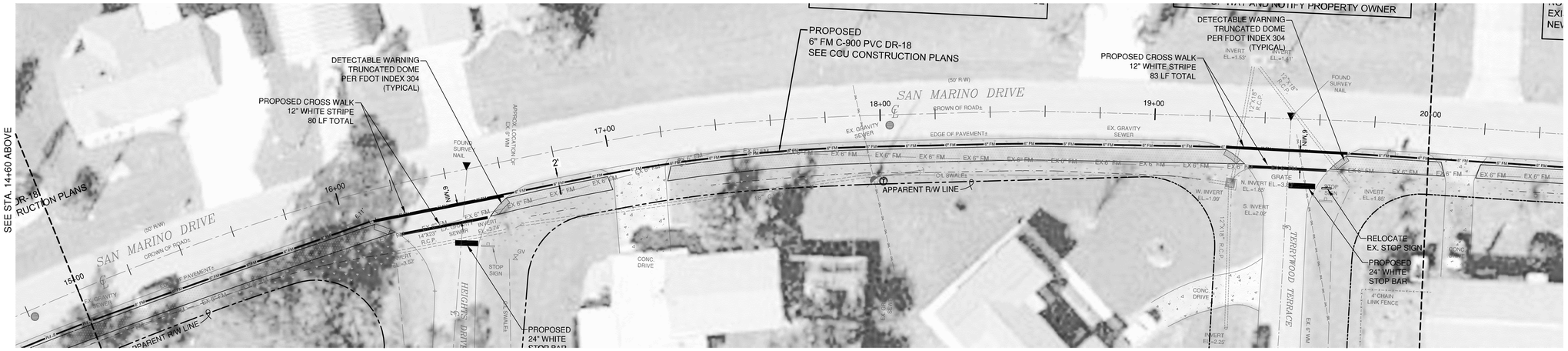
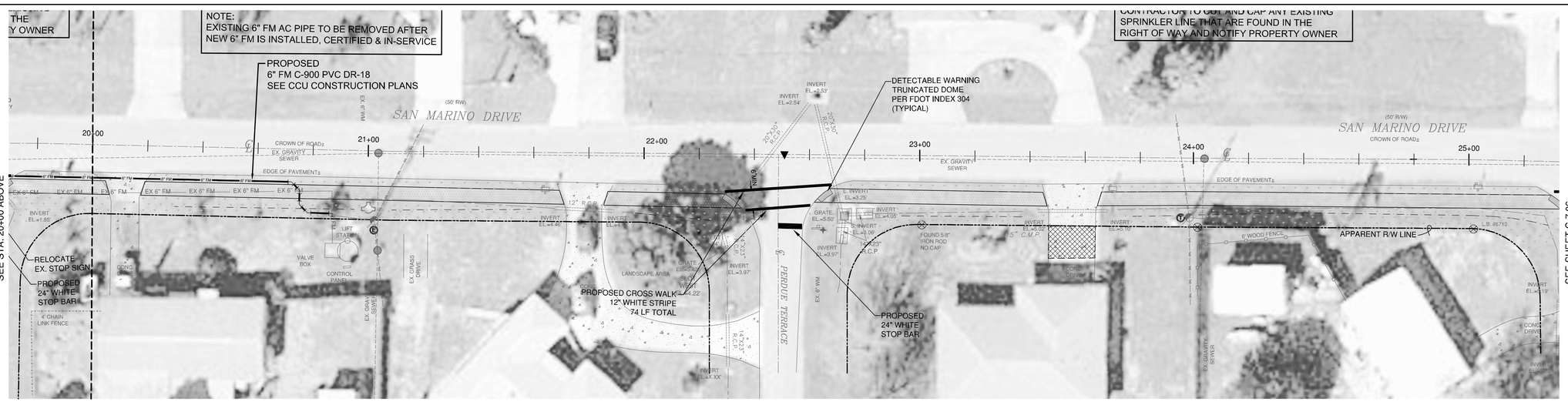
C-7.04







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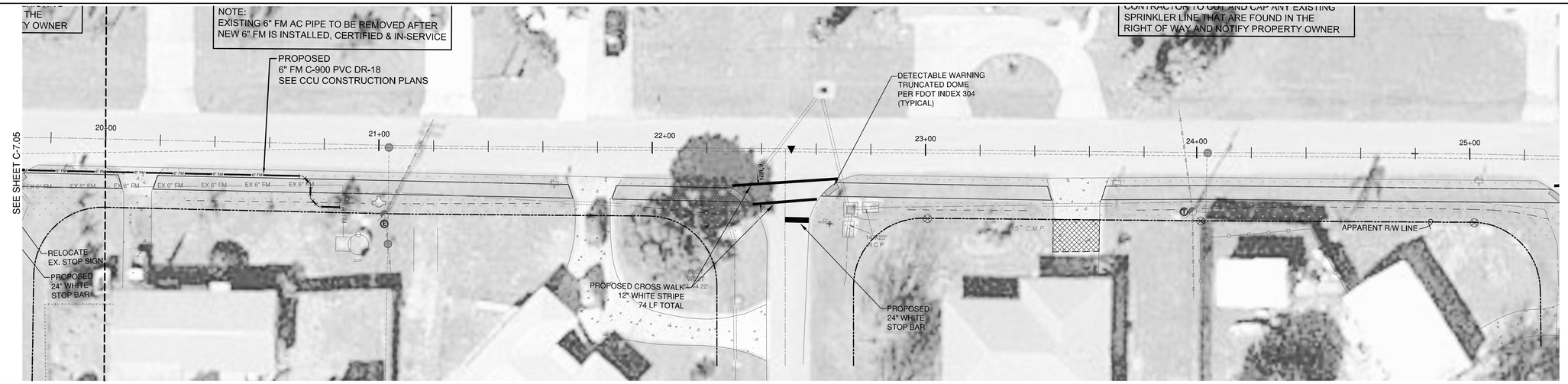

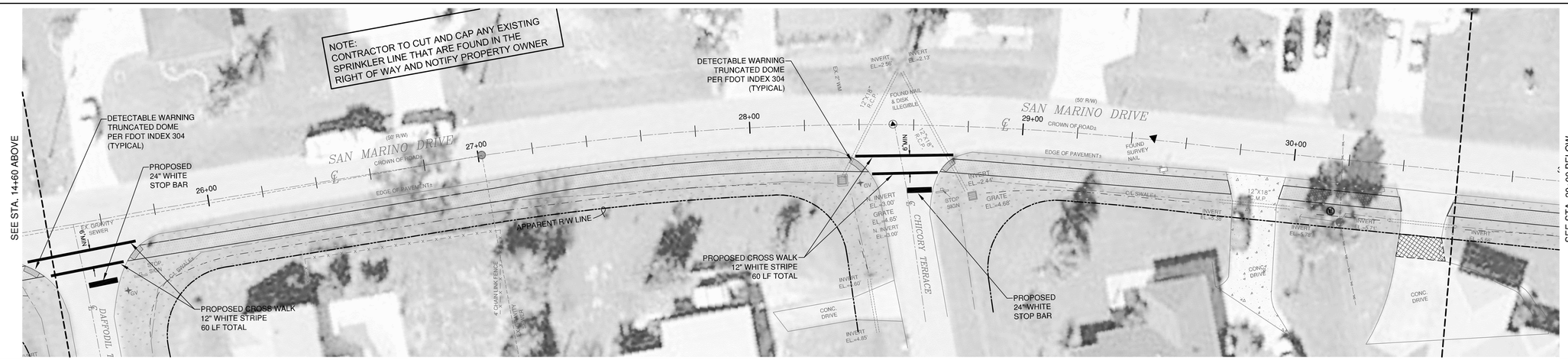

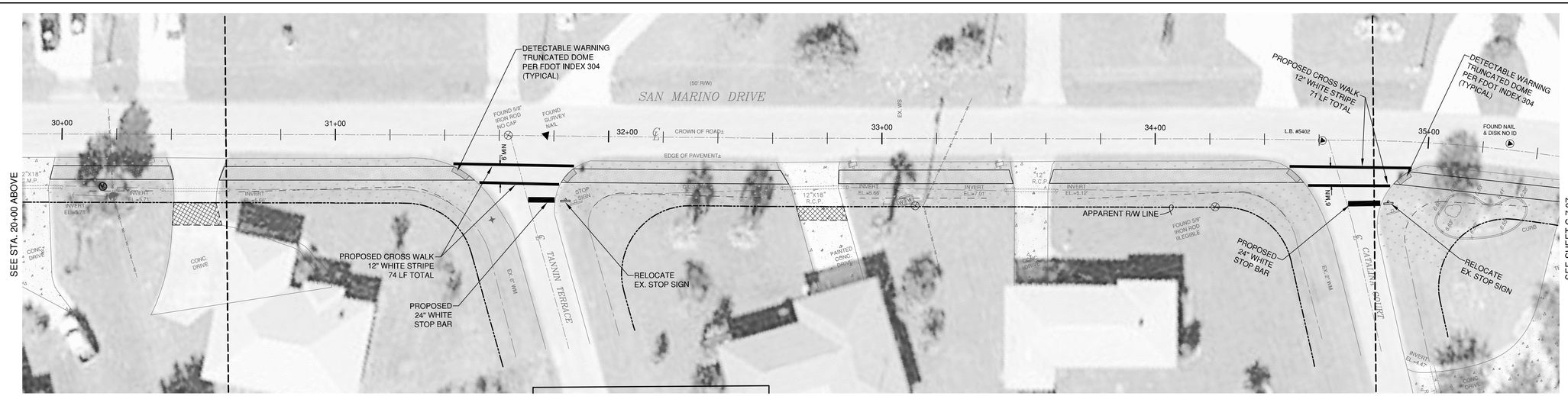

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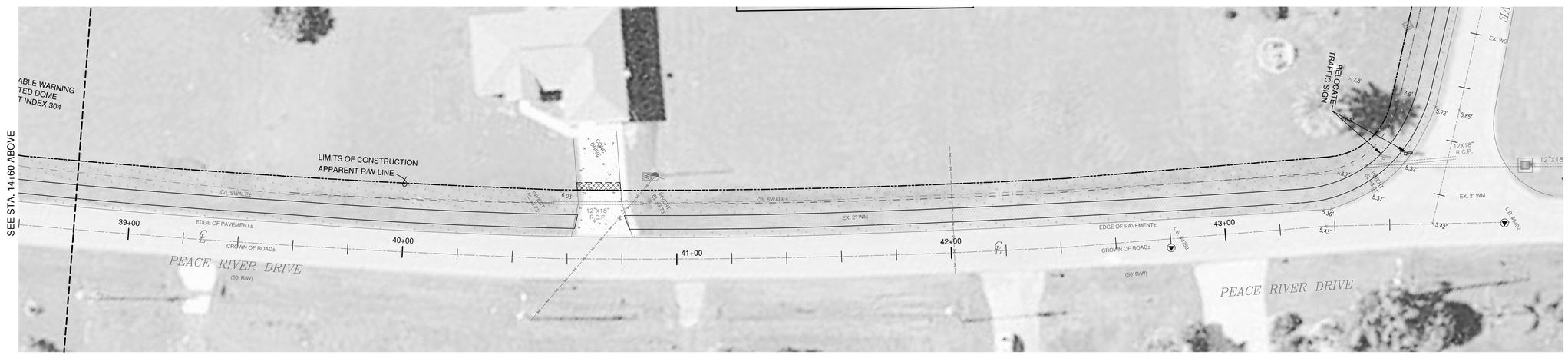
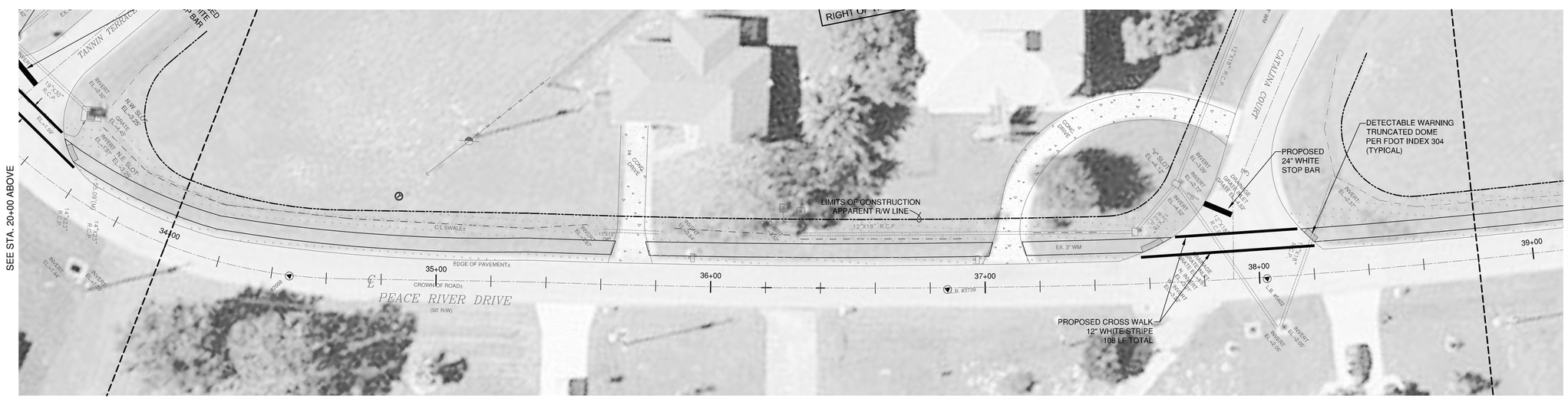
JOB #12722

C-7.06





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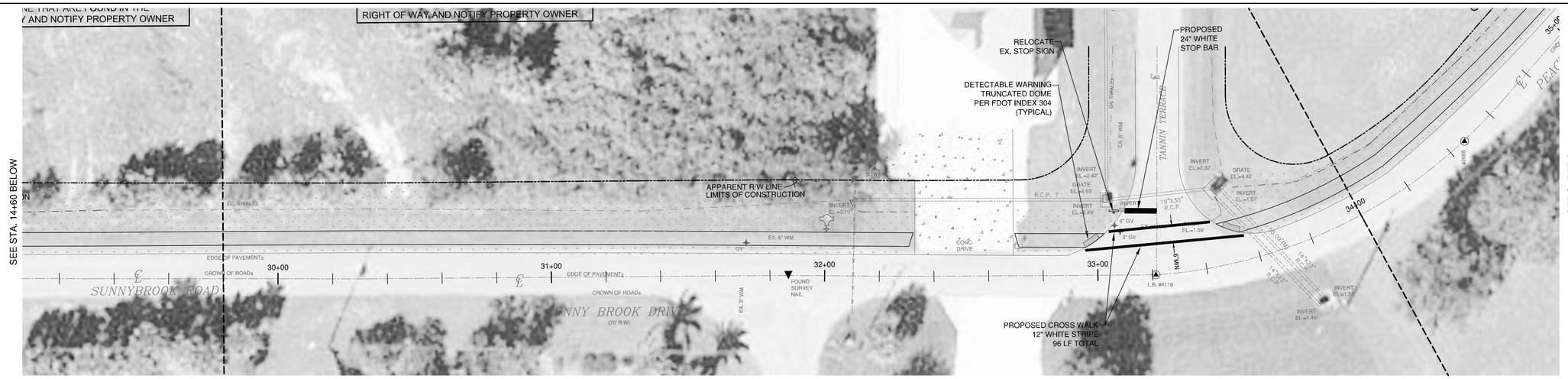
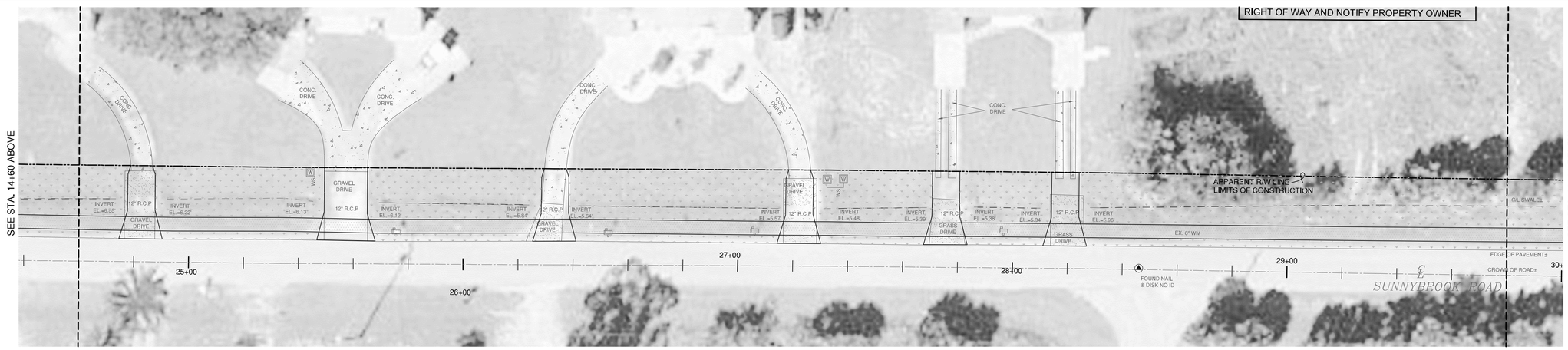
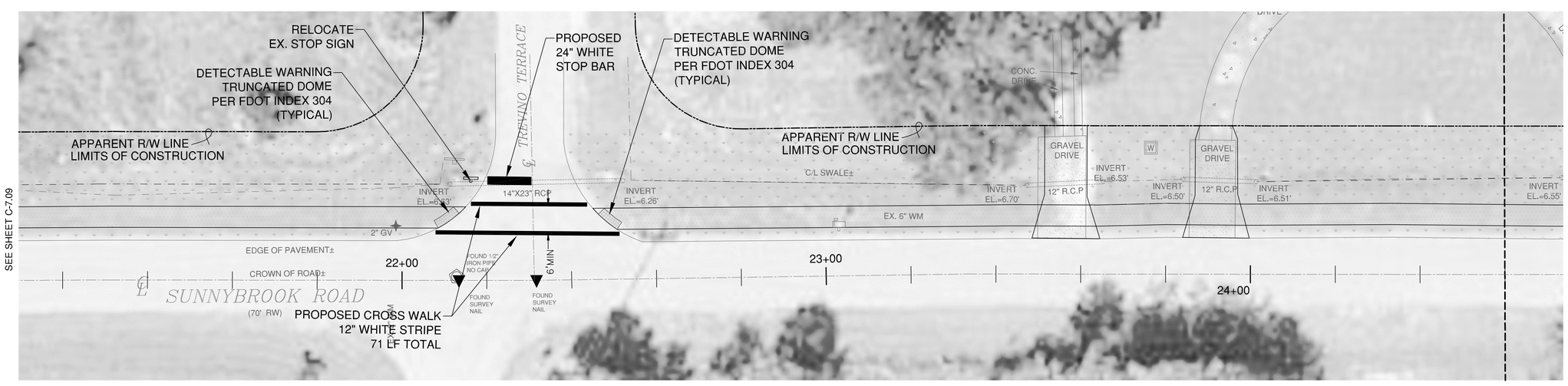
JOB #12722

C-7.07







REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2015 01 15	REVISE PER COUNTY COMMENTS		
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
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LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

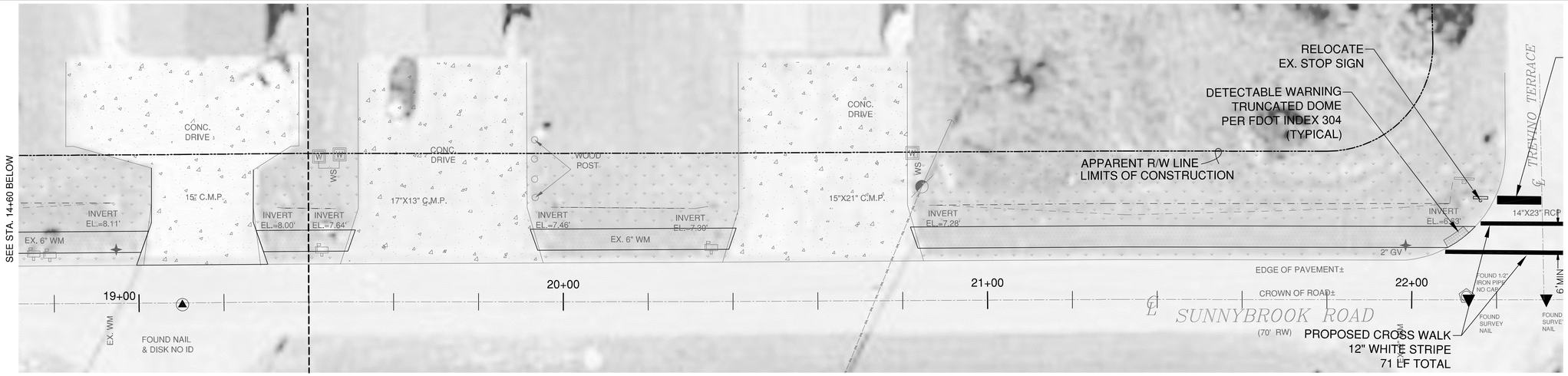
SIGNING & PAVEMENT MARKINGS

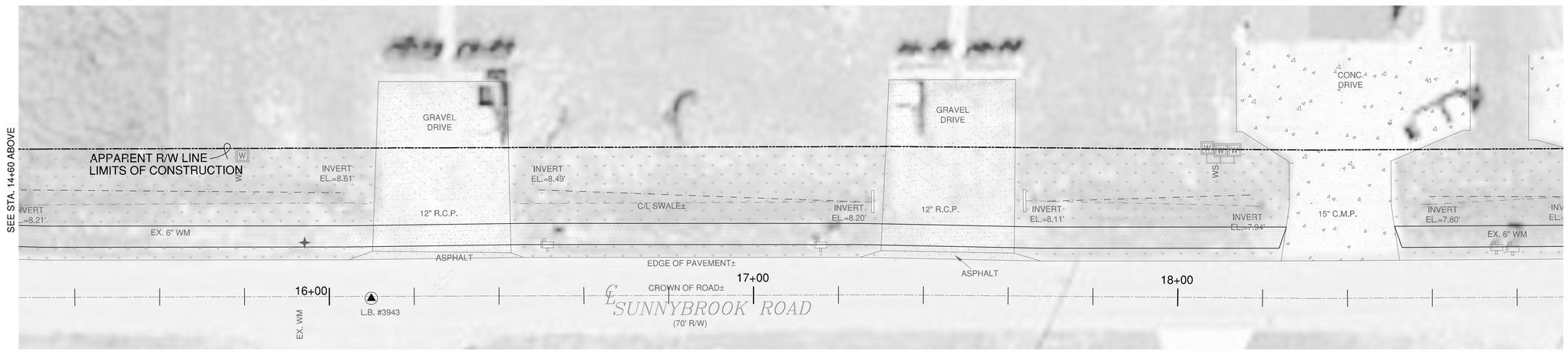
Joseph S. Menen, P.E.
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

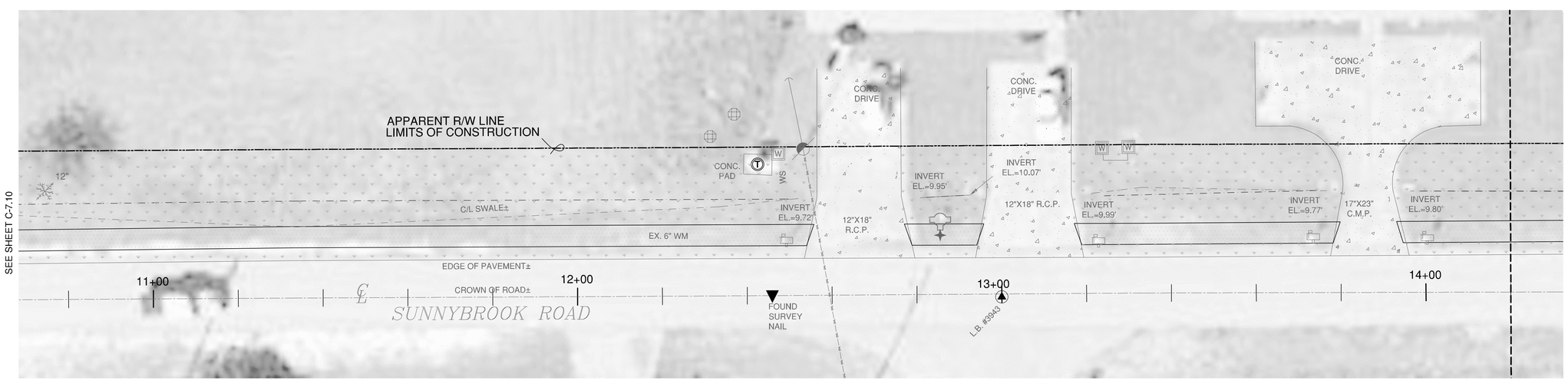
SCALE AS SHOWN

JOB #12722

C-7.08







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C-7.09

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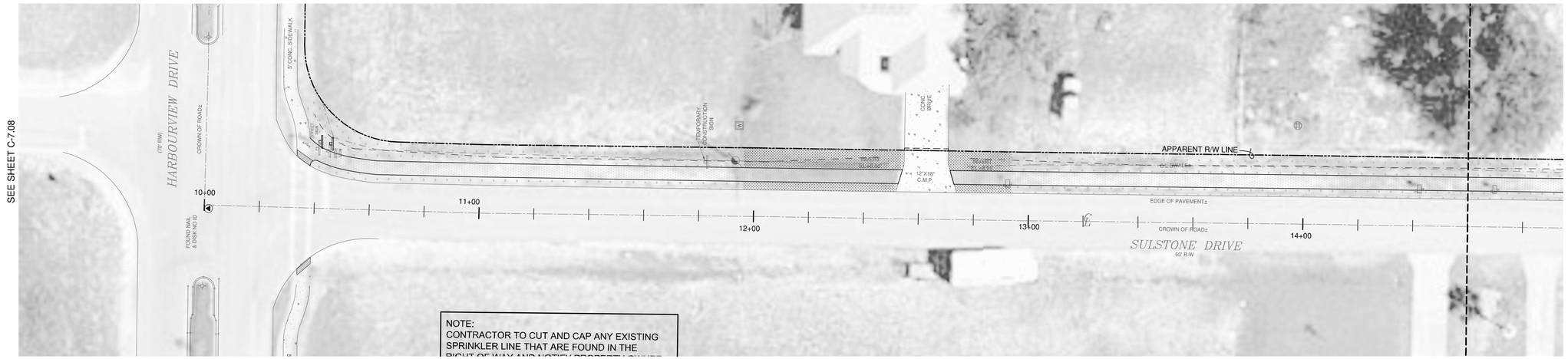
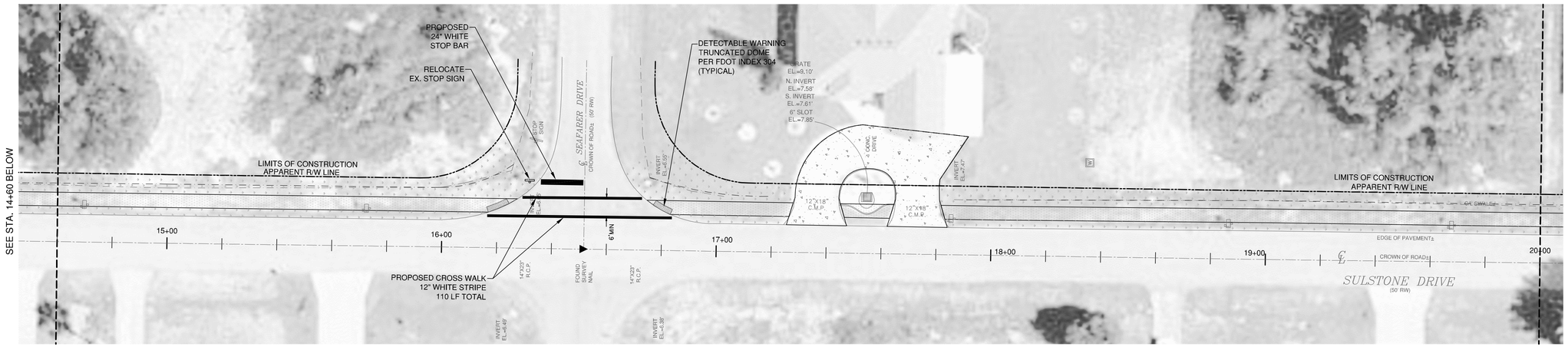
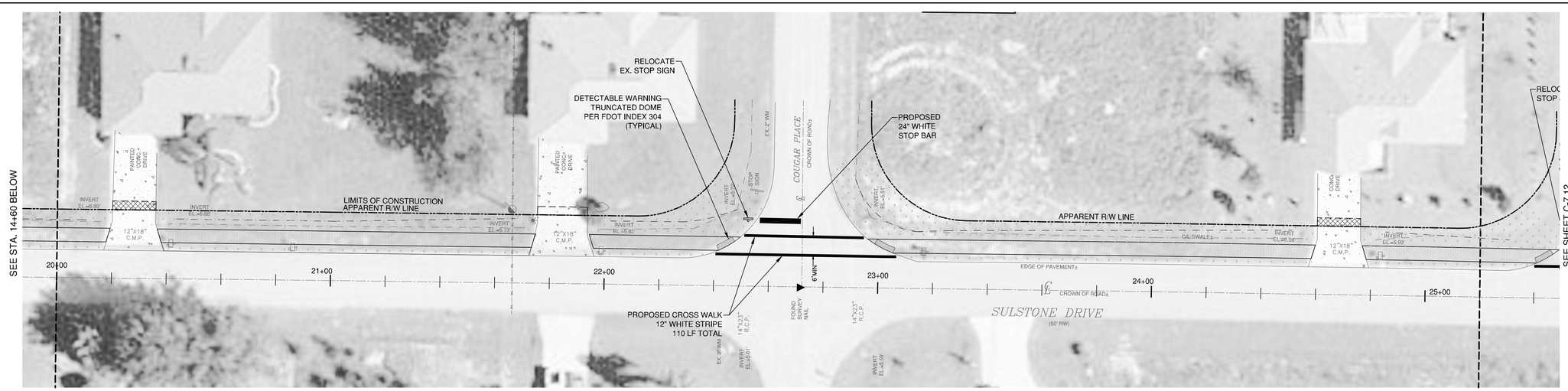
C-7.10







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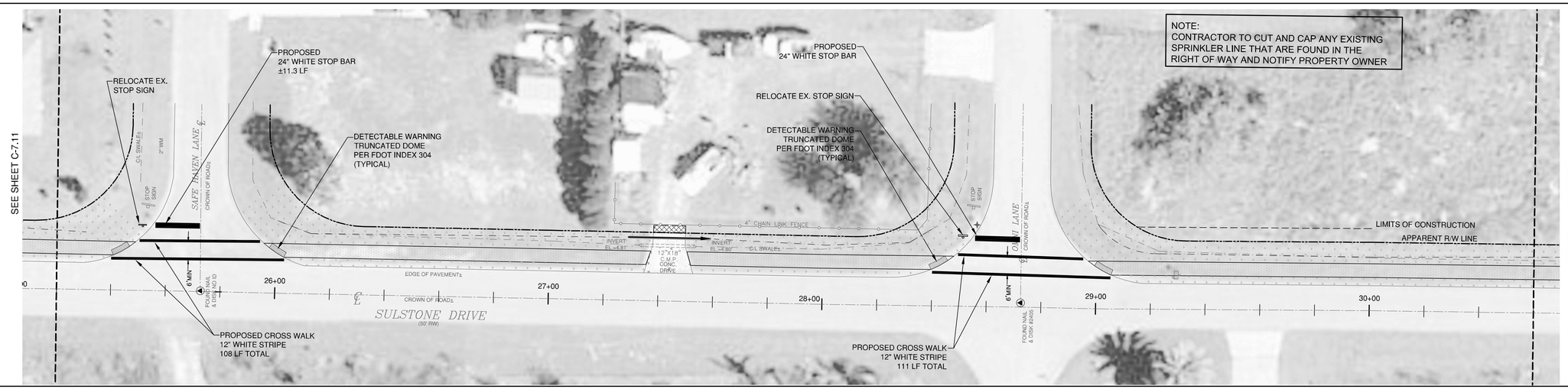
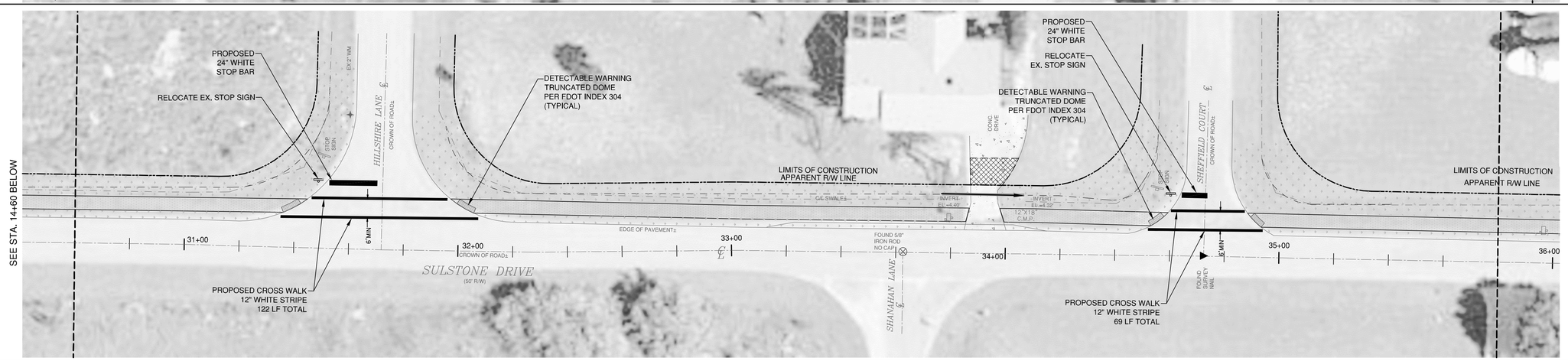
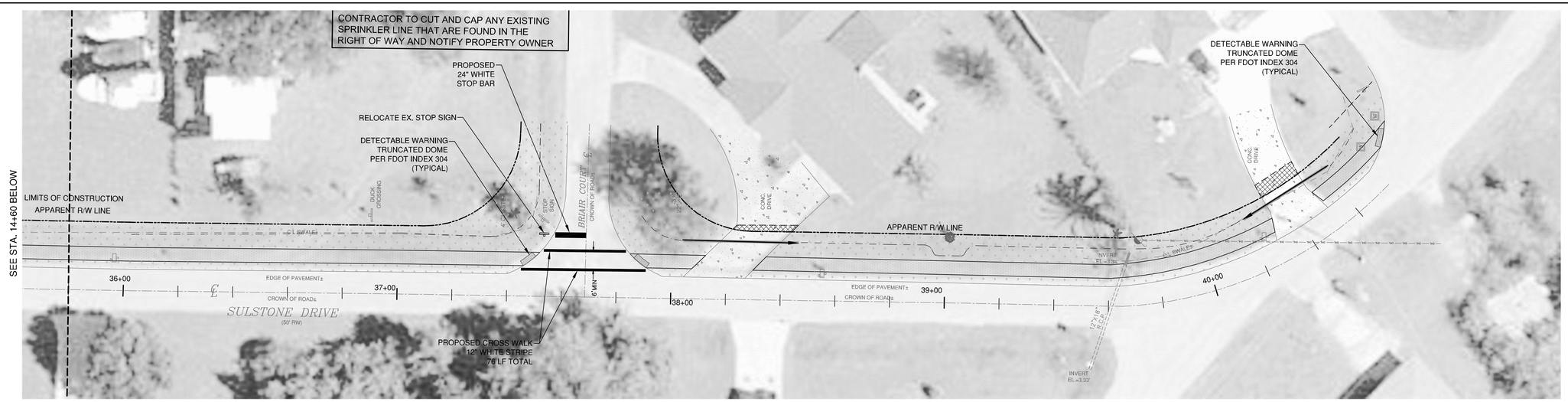
C-7.11







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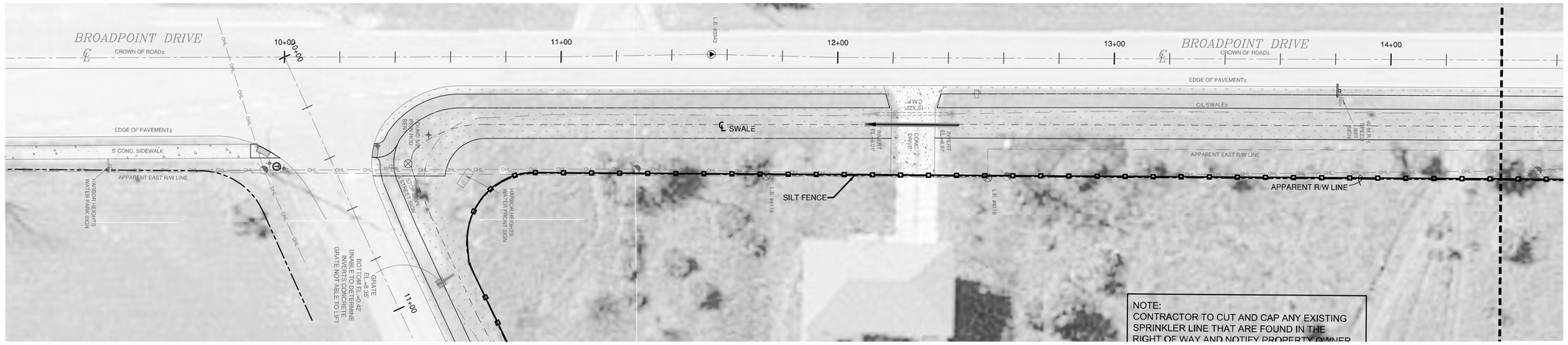
SCALE AS SHOWN

JOB #12722

C-7.12



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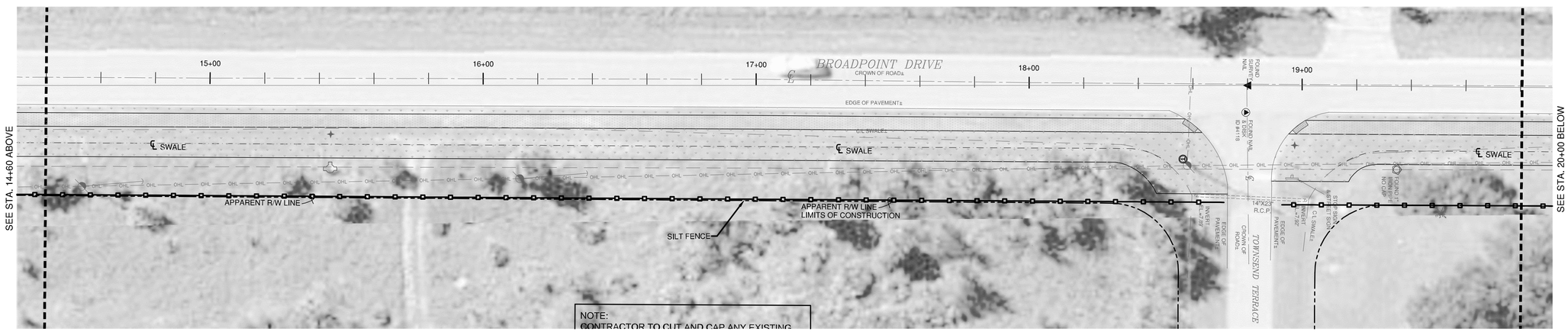
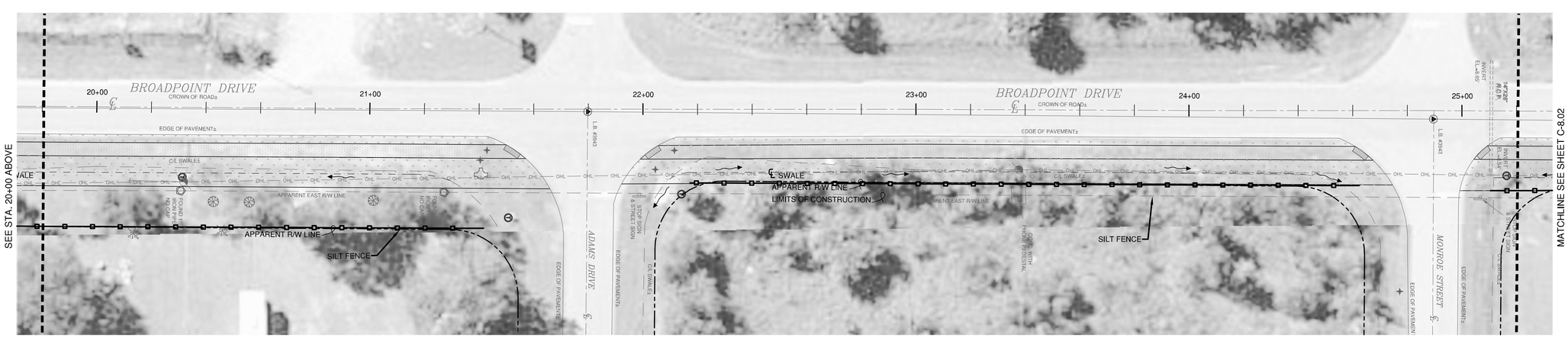


SEE STA. 14+60 ABOVE

SEE STA. 20+00 BELOW



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MATCHLINE SEE SHEET C-8.02

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EB No. 2504

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

EROSION CONTROL

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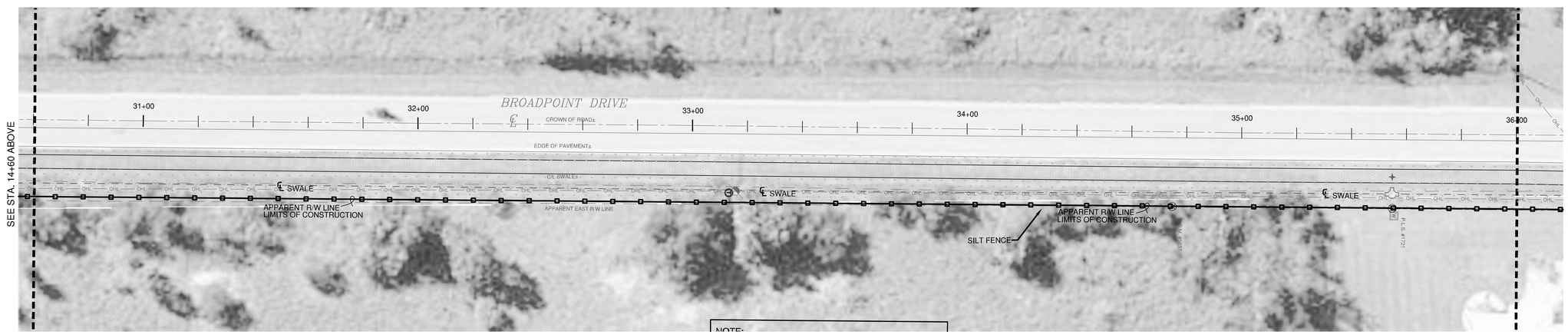
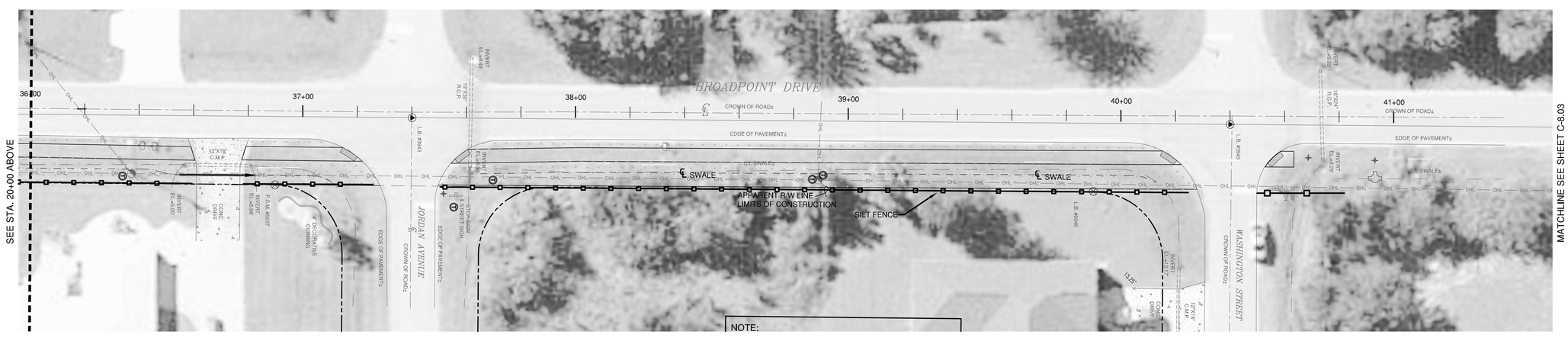
P.E. No. 44745
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

SCALE AS SHOWN

JOB #12722

C-8.01





NOTE:

NOTE:

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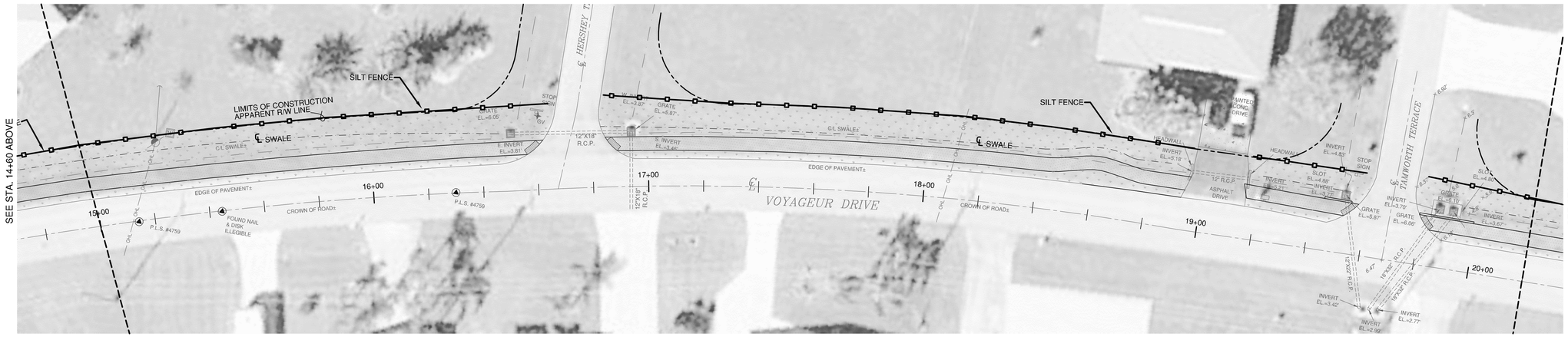
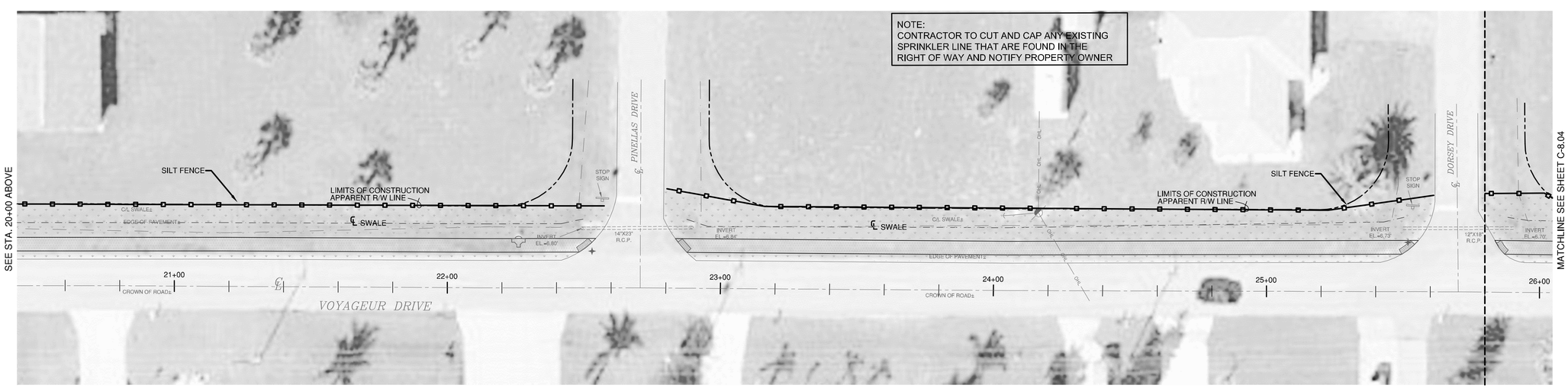
SCALE AS SHOWN

JOB #12722

C-8.02





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CHARLOTTE COUNTY
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S/W NO.	COUNTY	COUNTY PROJECT NO.

EROSION CONTROL

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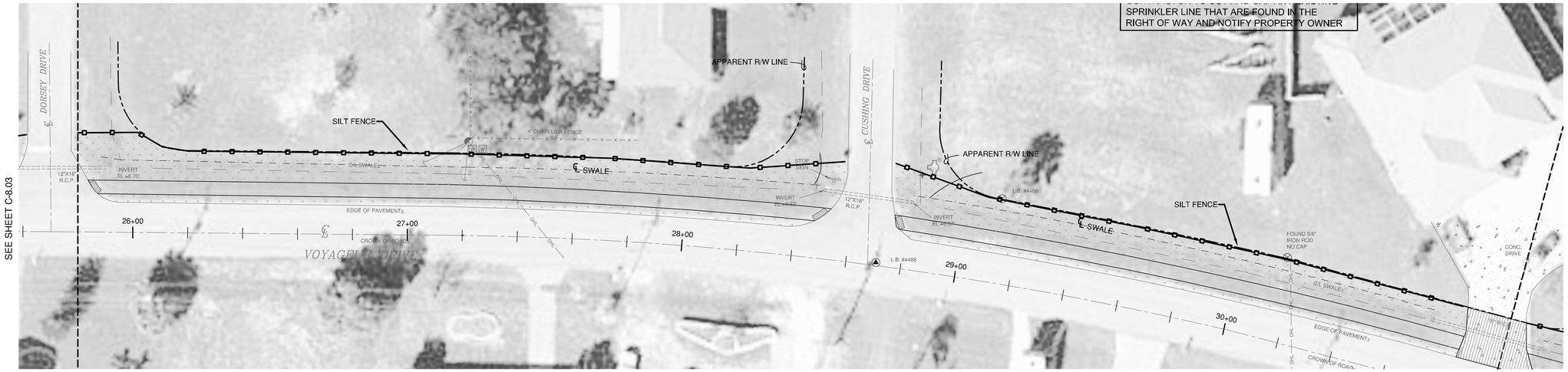
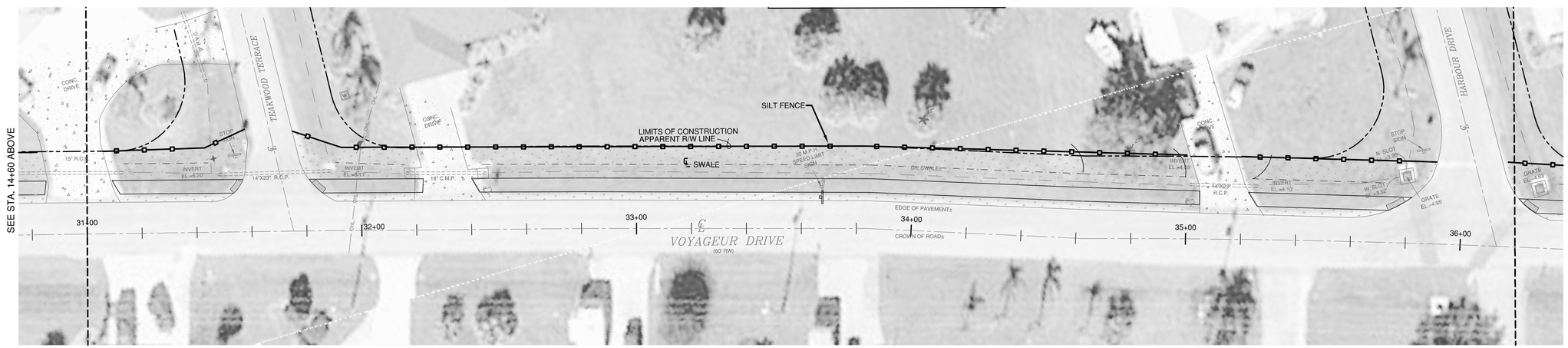
State of Florida
Charlotte Engineering & Surveying, Inc.
Corporation No. 2904
CES PROJECT No: 12722

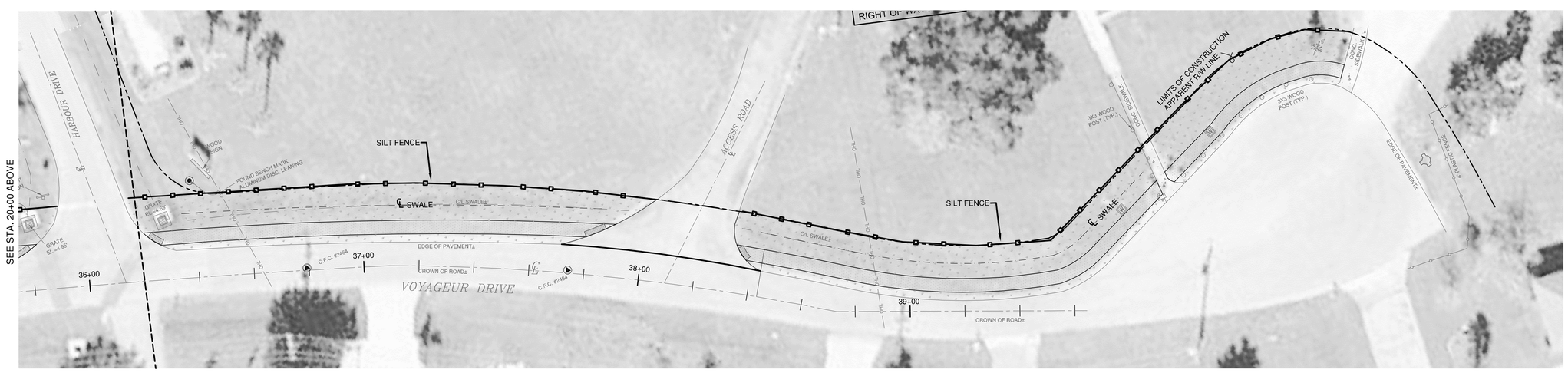
SCALE AS SHOWN

JOB #12722

C-8.03







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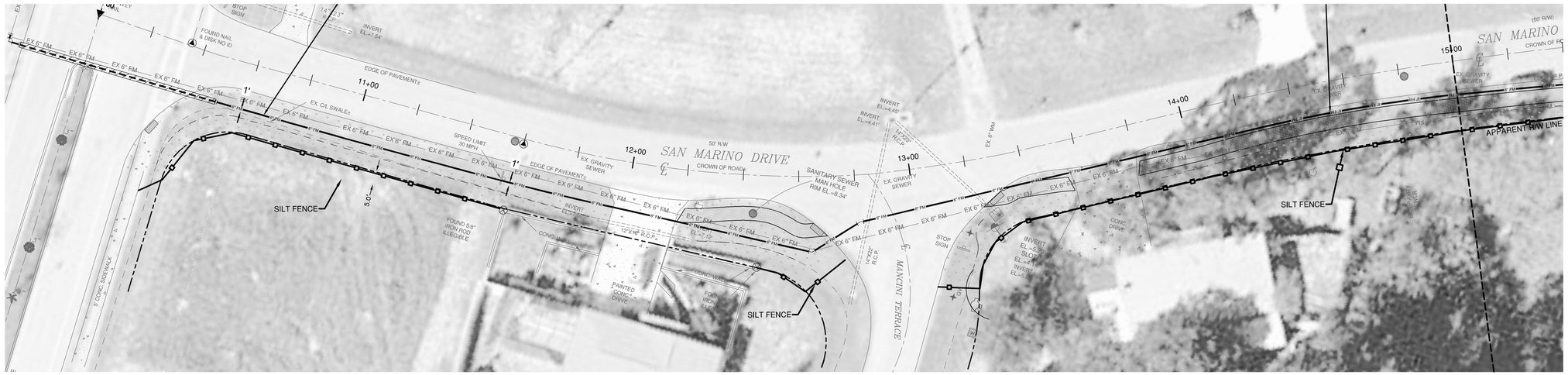
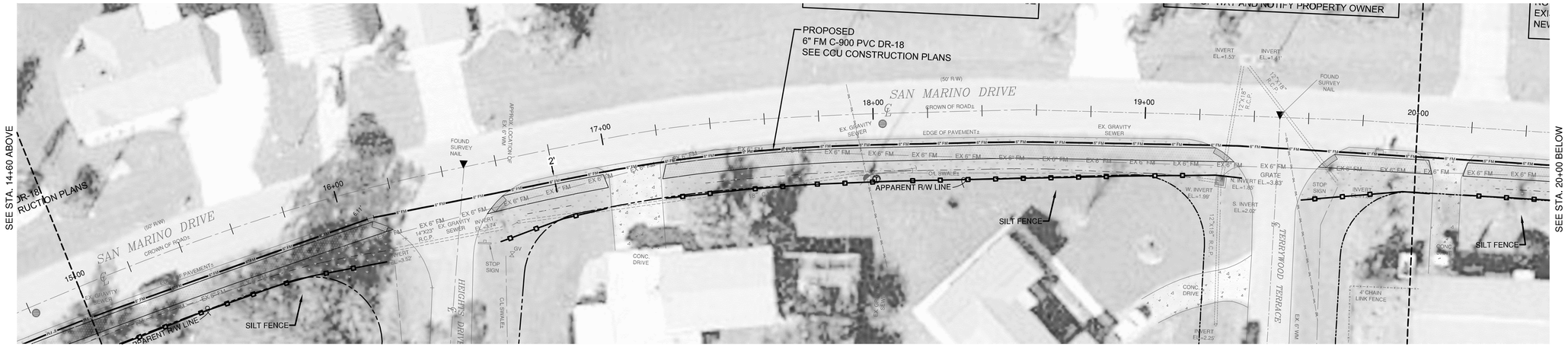
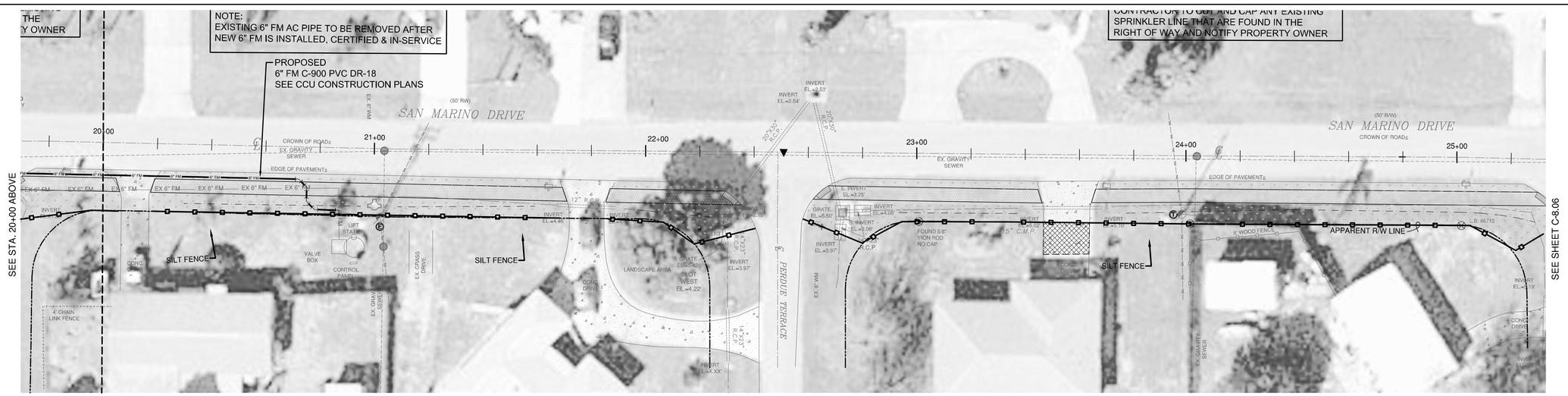
JOB #12722

C-8.04







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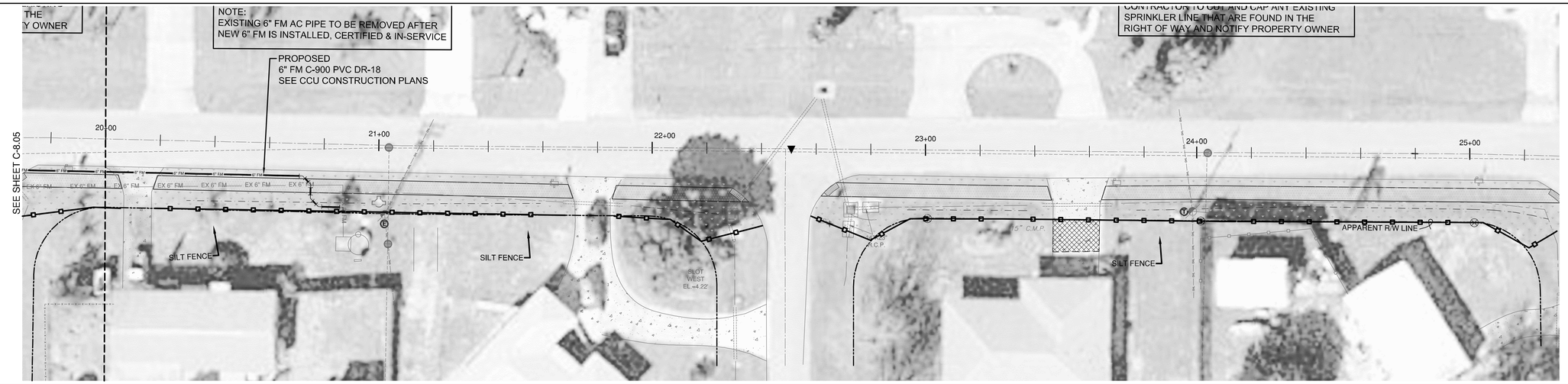
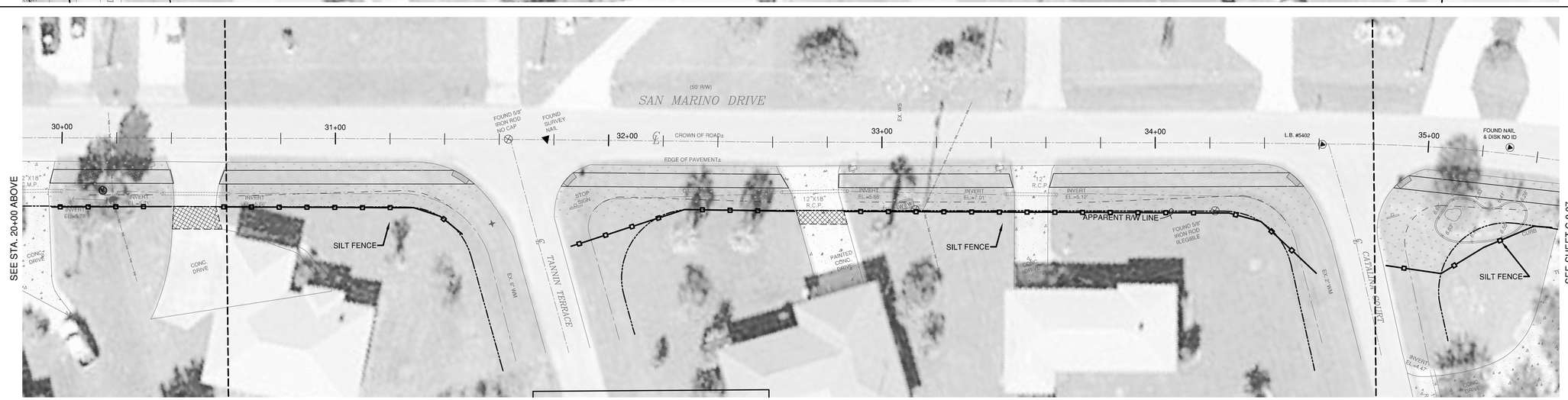
C-8.05





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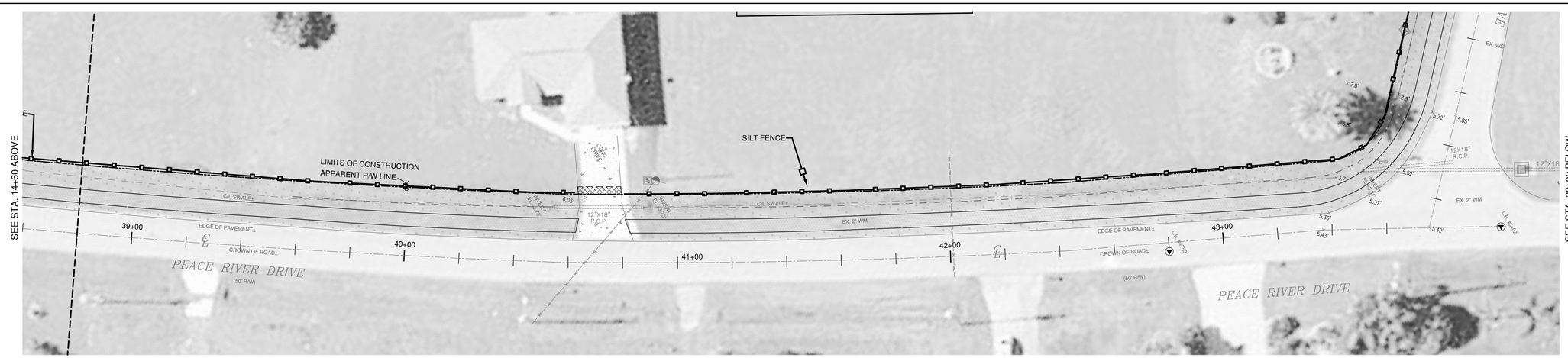
C-8.06



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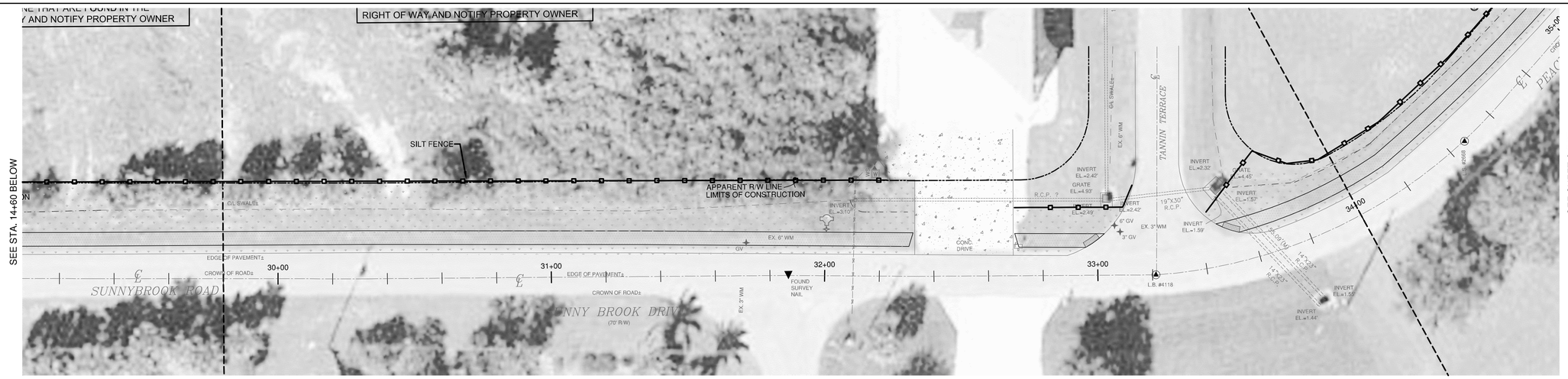

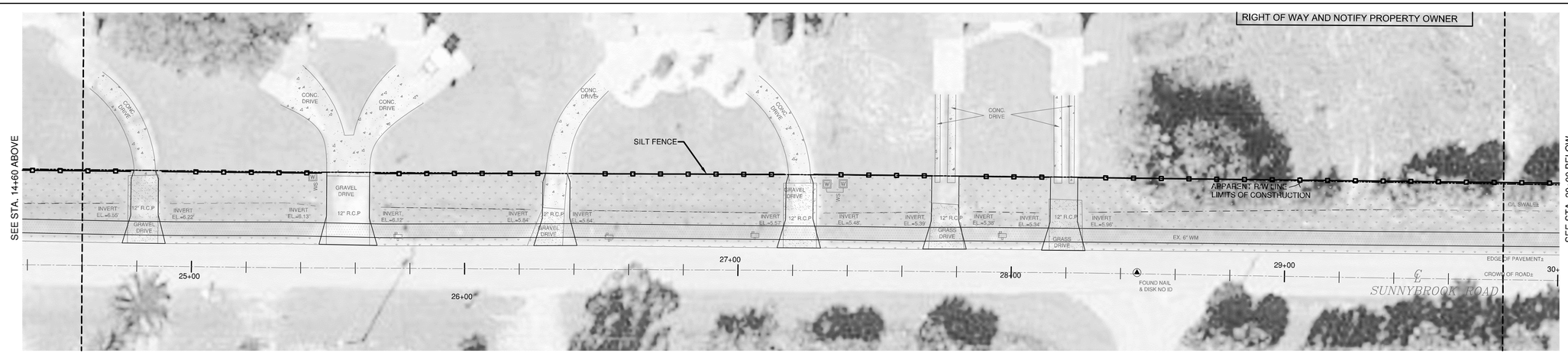

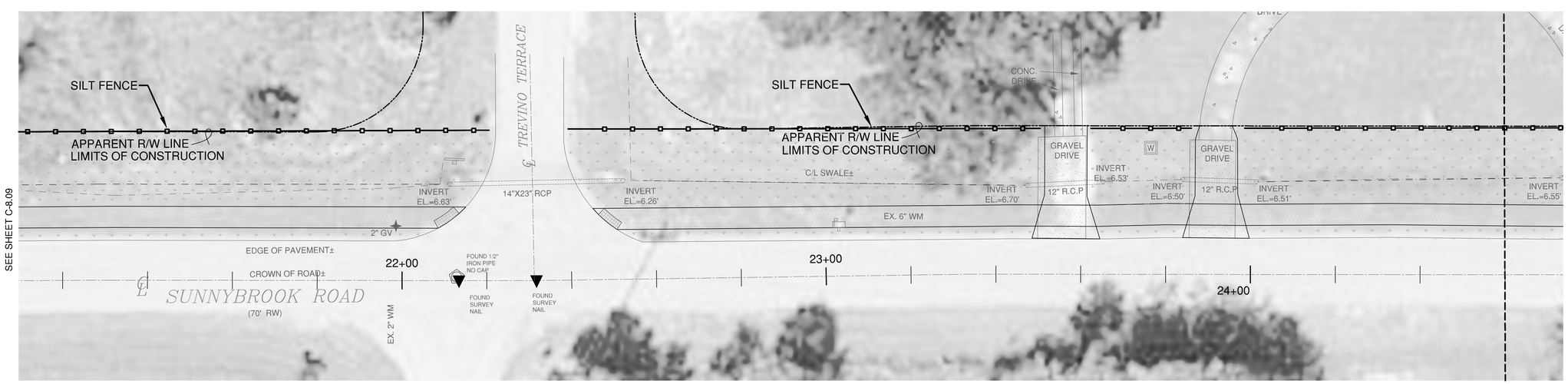

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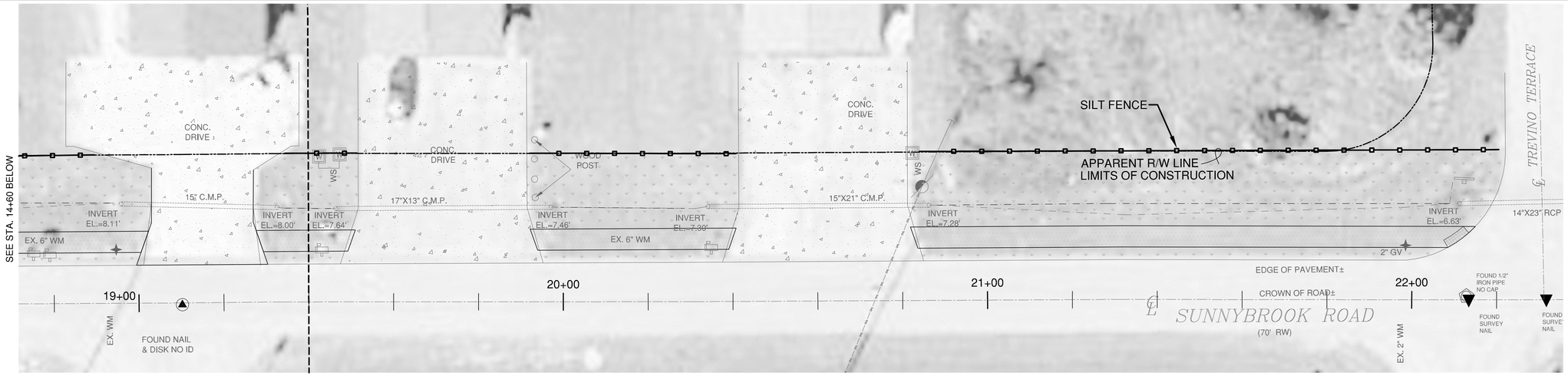
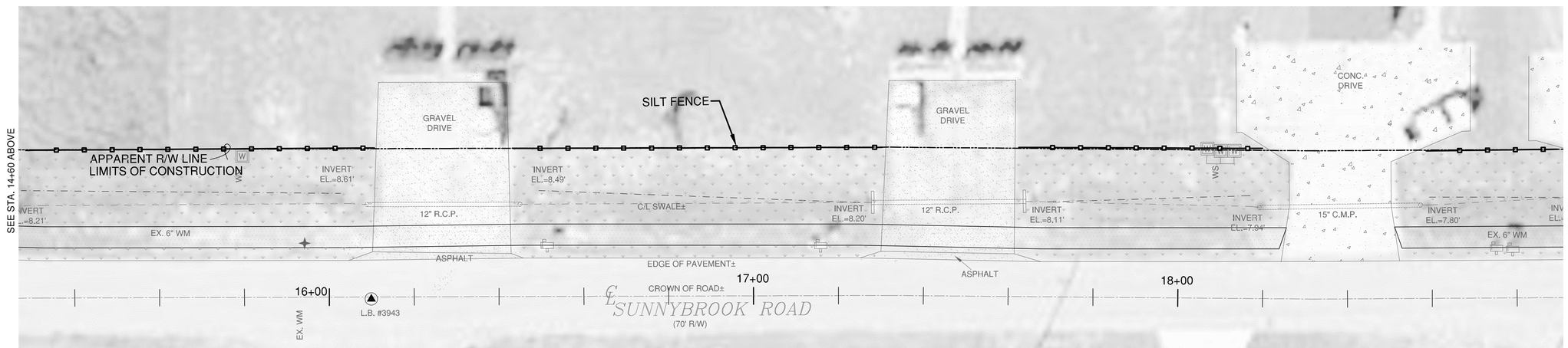
Corporation No. 2904
CES PROJECT No: 12722

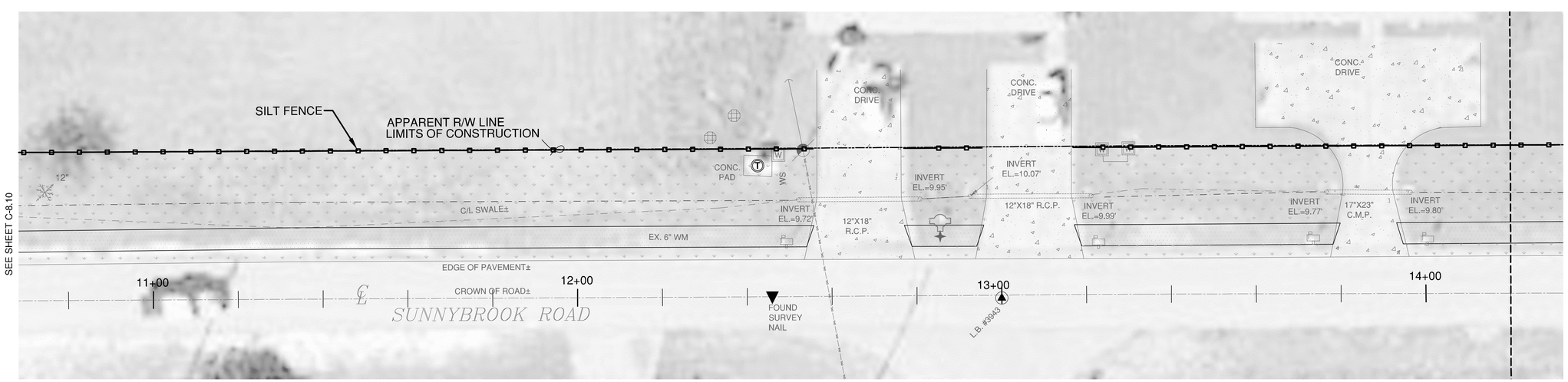
SCALE AS SHOWN

JOB #12722

C-8.08







REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
2014 11 14	60% PLANS		
2014 10 15	REVISE PER COUNTY COMMENTS		
2014 09 17	30% PLANS		

CES/American
Charlotte Engineering & Surveying, Inc.
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Fax No.: (941) 743-8298
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CIVIL ENGINEERS-LAND DEVELOPMENT
SPORTS FACILITY CONSULTANTS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
LC No. 371
LB No. 2904
EB No. 2904

CHARLOTTE COUNTY
BOARD OF COUNTY COMMISSIONERS

S/W NO.	COUNTY	COUNTY PROJECT NO.

EROSION CONTROL

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P.E. No. 44745
State of Florida
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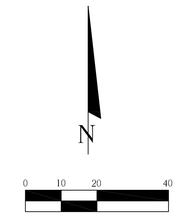
JOB #12722

C-8.09

SEE SHEET C-7.08



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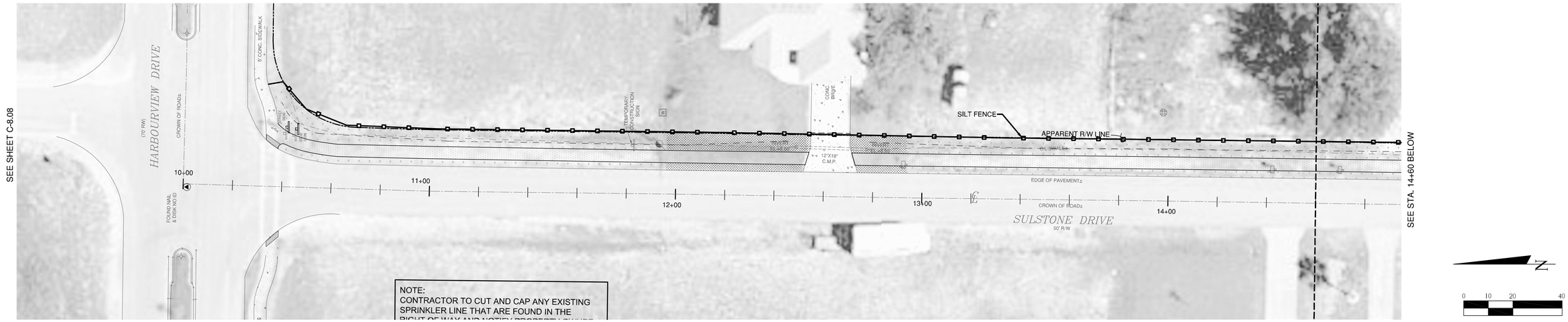
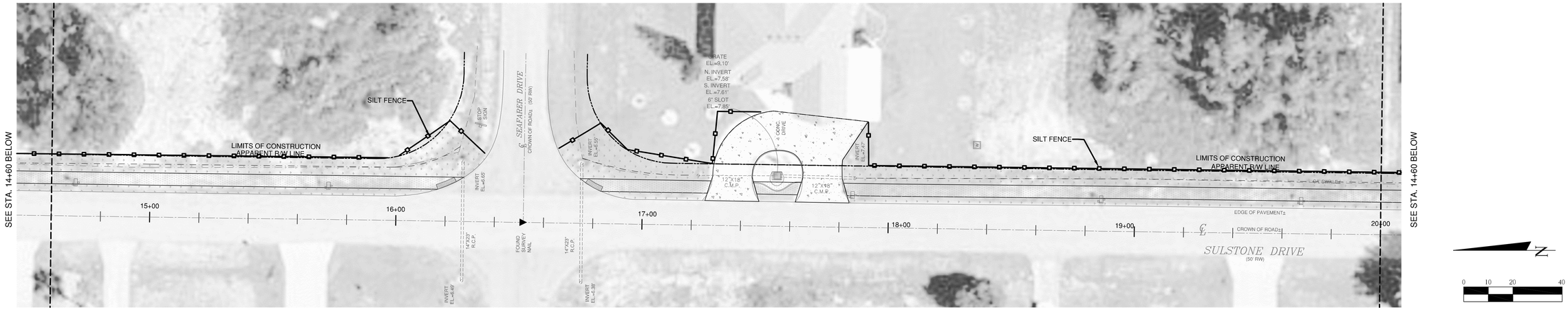
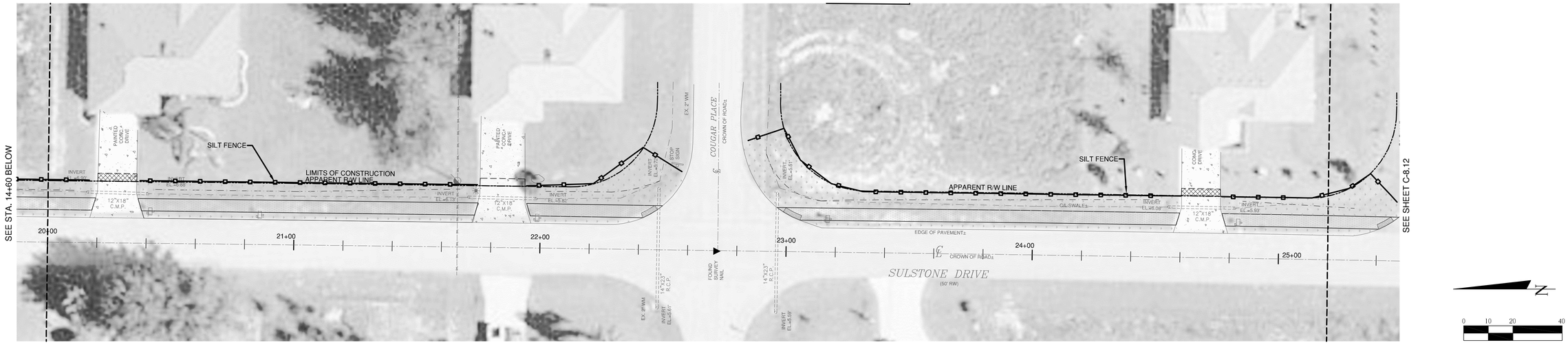
C-8.10







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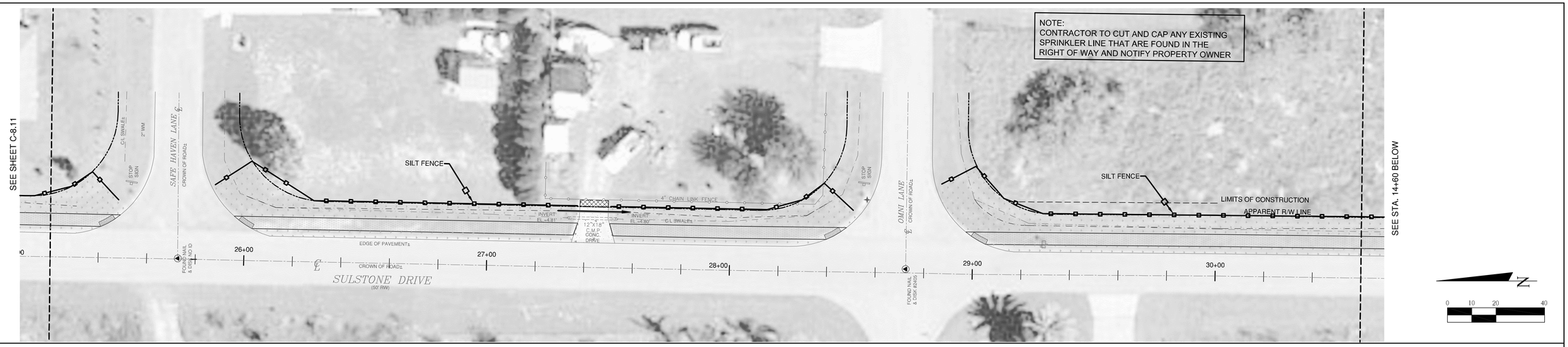

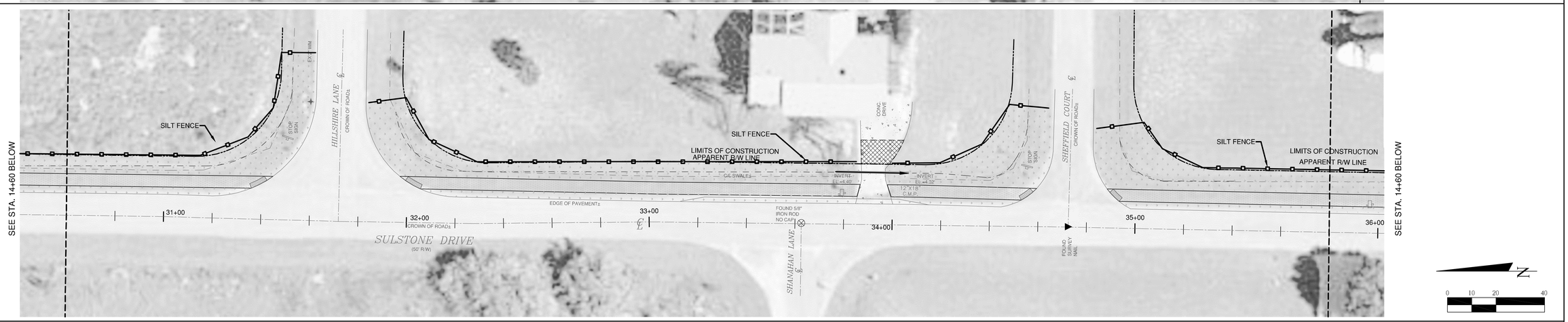

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