PLANS COMPONENTS

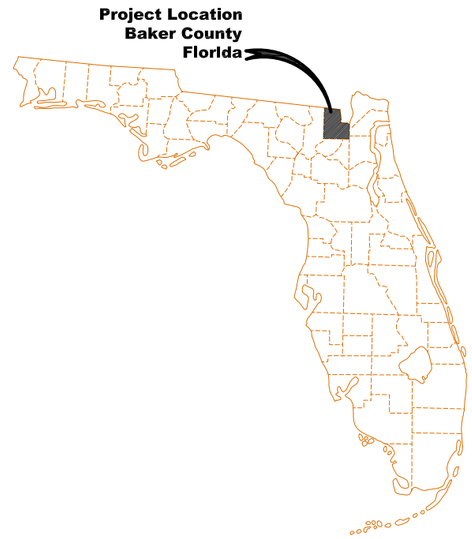
ROADWAY PLANS
DRAINAGE PLANS
EROSION AND SEDIMENT CONTROL PLANS
MAINTENANCE OF TRAFFIC PLANS

COUNTY ROAD 229
WIDENING AND RESURFACING PROJECT

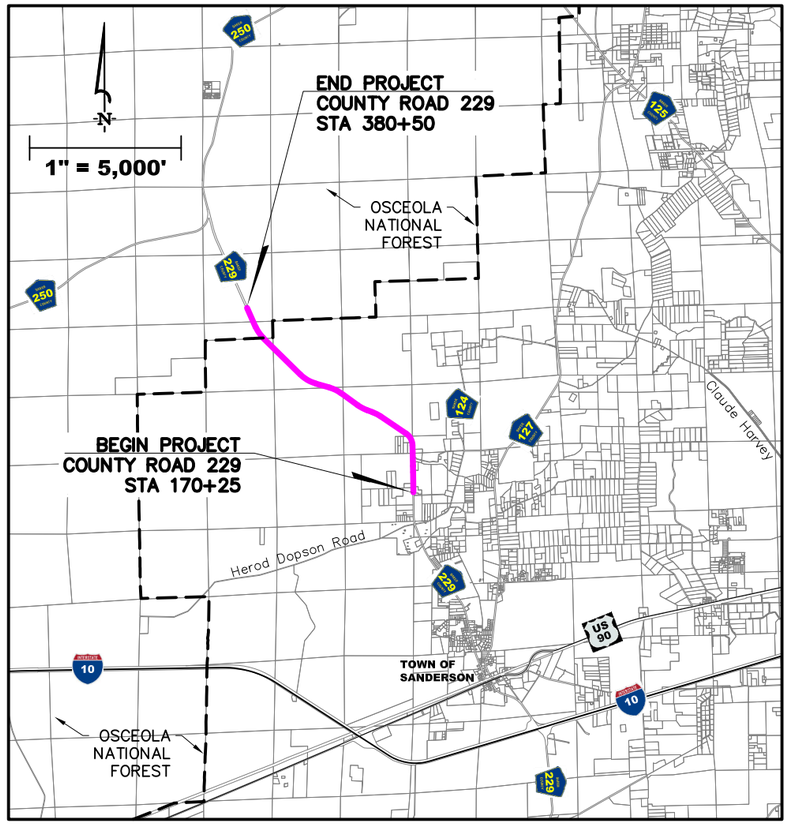
BAKER COUNTY PROJECT NUMBER 2024–XX
FDOT FID 445819–1–54–01

100 PERCENT SUBMITTAL

JANUARY 21, 2025



SHEET INDEX



LENGTH OF PROJECT		
	LINEAR FEET	MILES
PROJECT LENGTH	21,025	3.982
EXCEPTIONS	0	0
GROSS LENGTH OF PROJECT	21,025	3.982

COMMISSIONERS

RONALD MANN	DISTRICT 1
JIMMY ANDERSON	DISTRICT 2
TYLER MOBLEY	DISTRICT 3
JAMES BENNETT	DISTRICT 4
MARK HARTLEY	DISTRICT 5

COUNTY MANAGER
SARA LITTLE

ROAD SUPERINTENDENT
CHRIS LEE

TROY W. TARBOX, P.E.
FLA. P.E. LICENSE NO. 50661
TARBOX CONSULTING AND DESIGN, INC.
3716 RUBIN ROAD
JACKSONVILLE, FL 32257

GOVERNING STANDARD PLANS

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) AND APPLICABLE INTERIM REVISIONS.

GOVERNING STANDARD SPECIFICATIONS

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

KEY SHEET

DRAWING NO.
001

TROY W. TARBOX LICENSE No. 50661 STATE OF FLORIDA PROFESSIONAL ENGINEER

Troy W Tarbox

Digitally signed by Troy W Tarbox
Date: 2026.01.11 21:28:18 -05'00'

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

SHEET INDEX

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

BAKER COUNTY PRESERVING OUR FUTURE-PRESERVING OUR PAST

CR229 WIDENING AND RESURFACING PROJECT

SIGNATURE PAGE

DRAWING NO.

002

MINIMUM PERFORMANCE STANDARDS

1. GOVERNING STANDARDS AND SPECIFICATIONS SHALL INCLUDE THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION); FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION); BAKER COUNTY LAND DEVELOPMENT REGULATIONS; NOTES AND SPECIFICATIONS IN THESE PLANS; AND, AS MAY BE AMENDED BY CONTRACT DOCUMENTS.

2. CONTRACTOR AGREES THAT: (1) WORK SHALL BE PERFORMED IN A SAFE MANNER, AND THAT ALL OSHA SAFETY RULES AND GUIDELINES WILL BE FOLLOWED; (2) ALL TRENCH WORK SHALL BE PER STATE OF FLORIDA, CHAPTER 90-96 "TRENCH SAFETY ACT;" (3) ALL COSTS TO COMPLY WITH OSHA RULES AND GUIDELINES AND WITH THE FLORIDA TRENCH SAFETY ACT SHALL BE INCLUDED IN CONTRACTOR'S BID; AND (4) CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND FOR ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS, CAUSED BY HIS EMPLOYEES OR EMPLOYEES OF SUBCONTRACTORS, DURING THE COURSE OF THIS PROJECT.

3. THE CONTRACTOR SHALL MAINTAIN A SAFE AND SECURE CONSTRUCTION SITE.

4. CONTRACTOR TO MAINTAIN VERTICAL AND HORIZONTAL CONTROL UNDER SUPERVISION OF A PROFESSIONAL SURVEYOR AND MAPPER, LICENSED IN THE STATE OF FLORIDA.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INSURANCE REQUIRED FOR THE PROJECT.

6. CONTRACTOR SHALL PROVIDE ALL NECESSARY SIGNS, BARRIERS, LABOR, EQUIPMENT, ETC., TO MAINTAIN A SAFE ADEQUATE FLOW OF PEDESTRIAN AND VEHICULAR TRAFFIC ALONG ROADWAYS AND INTO AND OUT OF ADJACENT ROADWAYS AND DRIVEWAYS FOR THE DURATION OF CONSTRUCTION.

7. CONTRACTOR SHALL, AT A MINIMUM, IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) INDICATED OR REFERENCED ON THESE PLANS.

8. CONTRACTOR SHALL IMPLEMENT, INSPECT AND MAINTAIN ALL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) BMPs NECESSARY TO COMPLY WITH RULES AND REGULATIONS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION DISCHARGE SYSTEM (NPDES).

9. ALL IMPROVEMENTS (WORK, MATERIALS AND PRODUCTS) ARE TO BE UNCONDITIONALLY WARRANTED BY CONTRACTOR TO BAKER COUNTY FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF ACCEPTANCE BY BAKER COUNTY.

CONTRACTOR'S GENERAL OBLIGATIONS

RESPONSIBLE BID

1. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE PRIOR TO PREPARING HIS BID IN ORDER TO FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF EXISTING LOCAL CONDITIONS AT THE PROJECT SITE, EITHER SURFACE OR SUBSURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED AND THE EQUIPMENT, LABOR, AND MATERIALS THAT MAY BE REQUIRED TO COMPLETE THE WORK. FAILURE TO DO SO WILL NOT RELIEVE CONTRACTOR OF COMPLETE PERFORMANCE OF THE WORK.

2. CONTRACTOR SHALL ACCEPT THE CONDITION OF THE SITE AS A BASIS FOR PREPARING HIS BID.

3. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR THE COST OF REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL. HOWEVER, FOR SOME PROJECTS, AND BASED ON THE PLANS AND GEOTECHNICAL DATA PROVIDED IN THE BID DOCUMENTS, CONTRACTOR SHALL PROVIDE THE COUNTY WITH AN IN-PLACE VOLUME ESTIMATE OF UNSUITABLE MATERIAL ASSUMED IN THE PREPARATION OF HIS BID.

4. ALL COSTS ASSOCIATED WITH MEETING MINIMUM PERFORMANCE STANDARDS SHALL BE INCLUDED IN CONTRACTOR'S BID.

5. CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED CONSTRUCTION/ PERFORMANCE BONDS AS MAY BE REQUIRED BY BAKER COUNTY.

COORDINATION

1. CONTRACTOR IS RESPONSIBLE FOR SECURING LATEST APPROVED PLANS FOR USE BY HIMSELF AND/OR HIS SUBCONTRACTORS PRIOR TO CONSTRUCTION.

2. NOT LESS THAN TWO (2) FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION THAT IS NOT BENEATH THE WATERS OF THE STATE, AND NOT LESS THAN TEN (10) FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION THAT IS BENEATH THE WATERS OF THE STATE, CONTRACTOR SHALL CALL SUNSHINE 811 (811) SO AS TO ASSIST CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND NATURE OF ANY UNDERGROUND UTILITIES NEAR AREAS WHERE WORK WILL BE PERFORMED.

3. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE COUNTY, PROPERTY OWNERS AND/OR STATE TRAFFIC ENGINEER(S) SO AS TO MINIMIZE TRAFFIC INTERFERENCES AND TO INSURE SAFETY. REFER TO FEDERAL, STATE AND COUNTY MAINTENANCE OF TRAFFIC PLAN DETAILS AND STANDARDS, AND MAINTENANCE OF TRAFFIC PLANS, NOTES AND SPECIFICATIONS IN THESE PLANS, REGARDING MINIMUM REQUIREMENTS. ALL COSTS FOR MAINTENANCE OF TRAFFIC SHALL BE INCLUDED IN CONTRACTOR'S BID.

4. CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT, CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING PRIOR TO PROCEEDING WITH CONSTRUCTION.

5. CONTRACTOR MUST PROVIDE SUFFICIENT ADVANCE NOTICE TO THE ELECTRIC POWER UTILITY FOR THE RELOCATION OF ANY POWER POLES. SHOULD TEMPORARY POWER INTERRUPTIONS BE NECESSARY, AFFECTED PROPERTY OWNERS SHALL BE NOTIFIED, IN WRITING, AT LEAST 72 HOURS IN ADVANCE. IN NO CASE SHALL POWER BE INTERRUPTED FOR MORE THAN A FOUR-HOUR CONSECUTIVE PERIOD.

APPLICATIONS AND PERMITS

1. OPEN BURNING SHALL NOT BE PERMISSIBLE WITHIN THE LIMITS OF THE PROJECT SITE WITHOUT EXPRESS WRITTEN CONSENT FROM THE BAKER COUNTY FIRE MARSHAL.

2. FOR PROJECTS ONE (1) ACRE OR MORE IN SIZE, CONTRACTOR SHALL SUBMIT AN APPLICATION FOR AN FDEP NPDES STORM WATER CONSTRUCTION GENERAL PERMIT (CGP), INCLUDING THE "NOTICE OF INTENT" AND "NOTICE OF TERMINATION" FORMS. SUBMITTALS DUE AS REQUIRED BY NPDES PRIOR TO BEGINNING CONSTRUCTION.

3. PRIOR TO DISCHARGE OF PRODUCED GROUND WATER INTO SURFACE WATERS OF THE STATE, AS DEFINED IN CHAPTER 62-620, F.A.C., CONTRACTOR SHALL COMPLY WITH THE "GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER." IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (CUP), IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE WATER MANAGEMENT DISTRICT.

4. CONTRACTOR SHALL OBTAIN AND REVIEW ALL PERMITS LISTED UNDER "PERMITS BY BAKER COUNTY." CONTRACTOR'S BID SHALL INCLUDE WORK REQUIRED TO COMPLY WITH PERMIT CONDITIONS AND CONTRACTOR SHALL BE FULLY APPRAISED OF ALL PERMIT CONDITIONS PRIOR TO COMMENCING CONSTRUCTION.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CONSTRUCTION PHASE PERMITS THAT MAY BE REQUIRED TO COMPLETE THE WORKS OF THE PROJECT EXCEPT FOR PERMITS LISTED UNDER "PERMITS BY BAKER COUNTY."

6. THE CONTRACTOR SHALL SUBMIT A NOTICE OF COMMENCEMENT TO THE WATER MANAGEMENT DISTRICT AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

SURVEY AND GEOMETRY NOTES

1. GENERAL DATA USED TO PREPARE THESE PLANS WERE OBTAINED FROM FDOT RIGHT-OF-WAY MAPS, FDOT DESIGN OFFICE (HISTORICAL PLANS AND RECENT PLANS FOR US 90 IMPROVEMENTS IN CAD FORMAT) AND FROM GIS DATA PROVIDED BY THE BAKER COUNTY PROPERTY APPRAISER'S OFFICE.

2. DETAILED SURVEY DATA AT CROSS DRAIN LOCATIONS WERE PROVIDED BY WALTER WALDING SURVEYING SERVICES WITH FIELD WORK COMPLETED IN DECEMBER AND JANUARY OF 2020. ELEVATIONS REFERENCE THE NATIONAL GEODETIC VERTICAL DATUM 1988 (NGVD88).

3. HORIZONTAL DATUM IS STATE PLANE (FEET) FLORIDA NORTH ZONE 903.

SITE PREPARATION NOTES

CARE DURING CONSTRUCTION

1. CONTRACTOR SHALL CONTACT SUNSHINE 811, AT 811, A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION, CONFIRM VERBAL AND WRITTEN NOTICES, AND VERIFY LOCATIONS OF ALL UTILITIES ENTERING THE SITE AND THEIR LOCATION ON THE SITE.

2. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF EXISTING IMPROVEMENTS NOT SHOWN TO BE REMOVED BY THESE PLANS. CONTRACTOR SHALL RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITIONS, AS ACCEPTABLE TO THE COUNTY AND ANY OWNER OF AN EXISTING IMPROVEMENT.

3. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, CONTRACTOR SHALL CONTRACT WITH A PROFESSIONAL SURVEYOR AND MAPPER, LICENSED IN THE STATE OF FLORIDA, FOR REINSTALLATION OF THE MONUMENT AT NO COST TO THE COUNTY.

4. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL VERIFY GEOMETRIC DATA SHOWN ON THESE PLANS AND DIGITAL DATA PROVIDED BY THE COUNTY. CONTRACTOR SHALL VERIFY RIGHT-OF-WAY LOCATION AND DIMENSIONS, THE LOCATION AND CONDITION OF OF ALL EXISTING IMPROVEMENTS, BOTH HORIZONTALLY AND VERTICALLY AND CONFIRM THAT THE IMPROVEMENTS SHOWN ON THE PLANS WILL FIT IN THE MANNER INTENDED BY THE PLANS.

5. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS, GRADES, INVERTS AND TYPE OF MATERIALS OF ALL EXISTING IMPROVEMENTS AND UTILITIES LOCATED NEAR PROPOSED WORK AREAS, AT PROPOSED CROSSINGS, AND AT ALL POINTS OF CONNECTION.

6. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS AND/OR OF ANY UTILITY CONFLICTS OR OTHER DISCREPANCIES NOT IDENTIFIED BY THE PLANS.

7. THE CONTRACTOR SHALL PROTECT AND OTHERWISE RESTRICT ACCESS TO ALL OPEN TRENCHES AND EXCAVATION AREAS SO THAT THEY DO NOT ENDANGER THE GENERAL PUBLIC OR WORKERS.

8. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES BEFORE EARTHWORK BEGINS AND UNTIL PERMANENT STABILIZATION MEASURES ARE IN-PLACE AND ESTABLISHED. CONTRACTOR SHALL INSTITUTE NECESSARY MEASURES DURING CONSTRUCTION TO MINIMIZE EROSION, TURBIDITY, NUTRIENT LOADING, AND SEDIMENTATION TO ADJACENT LANDS AND IN THE RECEIVING WATERS.

9. PRIOR TO BEGINNING ANY OTHER CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL ON-SITE TREES TO REMAIN, AND OTHER OFF-SITE TREES NOT NECESSARILY NOTED, WHERE CONSTRUCTION ACTIVITIES ARE EXPECTED TO ENCROACH WITHIN THE TREE SETBACK DISTANCE DEFINED AS ONE (1) FOOT FOR EVERY TWO (2) INCHES OF TREE DIAMETER AT BREAST HEIGHT (4.5 FEET ABOVE THE GROUND).

10. ALL SLOPES 3H:1V SHALL BE SODDED. SLOPES STEEPER THAN 3H:1V SHALL BE STAPLED SOD.

11. ALL DISTURBED AREAS NOT REQUIRING SOD SHALL BE SEEDED WITH A MIXTURE OF LONG-TERM VEGETATION AND SHORT-TERM VEGETATION. THE LONG-TERM VEGETATION SHALL BE APPLIED AT A MINIMUM RATE OF 70 POUNDS PER ACRE. THE SHORT-TERM VEGETATION SHALL BE APPLIED AT A MINIMUM RATE OF 20 POUNDS PER ACRE AND SHALL CONSIST OF WINTER RYE FROM SEPTEMBER THROUGHOUT MARCH AND MILLET FROM APRIL THROUGH AUGUST.

12. ALL GRASS SOD AND SEEDED AREAS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL GRASS TREATMENTS ARE ESTABLISHED AND DISTURBED AREAS ARE STABILIZED AND UNTIL THE ENTIRE WORK IS ACCEPTED BY THE COUNTY.

CLEARING, GRUBBING, STRIPPING AND EARTHWORK

1. CONTRACTOR SHALL REMOVE ALL WASTE AND DEBRIS RESULTING FROM CONSTRUCTION ACTIVITIES AND DISPOSE OF OFF-SITE IN A LEGAL MANNER AT NO ADDITIONAL COST TO BAKER COUNTY.

2. TREES LOCATED WITHIN THE RIGHT-OF-WAY, AND DESIGNATED TO BE REMOVED, SHALL BE REMOVED PER FDOT SPECIFICATIONS.

3. BURNING OF TREES, BRUSH AND OTHER MATERIALS SHALL BE ALLOWED AT THE SITE ONLY WITH PRIOR WRITTEN APPROVAL FROM THE BAKER COUNTY FIRE MARSHAL.

4. IF UNSUITABLE MATERIAL IS ENCOUNTERED DURING GRADING OR OTHER EARTHWORK, CONTRACTOR SHALL REMOVE UNSUITABLE MATERIAL IN ACCORDANCE WITH FDOT STANDARDS.

5. CONTRACTOR SHALL SEPARATE SUITABLE MATERIAL FROM UNSUITABLE MATERIAL. UNLESS DIRECTED OTHERWISE, UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. ORGANIC MATERIAL MAY BE USED FOR TOP FILL IN AREAS TO BE LANDSCAPED. ORGANIC MATERIAL SHALL NOT BE USED UNDER BUILDING PADS OR AREAS TO BE PAVED.

6. AREAS SHOWN TO BE FILLED SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH FDOT STANDARDS.

7. IF CONTRACTOR ENCOUNTERS SITE CONDITIONS THAT WOULD REQUIRE CONTRACTOR TO DEVIATE FROM THESE PLANS OR OTHER REFERENCED SPECIFICATIONS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING.

STORM UTILITIES

1. DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED CONSISTENT WITH STATE AND COUNTY STANDARDS AND SPECIFICATIONS AND SHALL BE INSTALLED TO FIT WITH CURBING, PROPERTY LINES AND LOW POINTS AS SHOWN ON PLANS.

2. TRENCHING, BEDDING, BACKFILL AND COMPACTION SHALL BE IN COMPLETE ACCORDANCE WITH FDOT STANDARDS AND SPECIFICATIONS.

3. PIPE LENGTHS ARE SCALED DIMENSIONS. ACTUAL FIELD LENGTHS MAY VARY.

4. DRAINAGE PIPE JOINTS ARE TO BE FILTER WRAPPED AND ANNULAR SPACES BETWEEN PIPES AND DRAINAGE STRUCTURES SEALED WITH NON-SHRINK GROUT.

5. DRAINAGE PIPES ARE TO BE FLUSH WITH INSIDE OF DRAINAGE STRUCTURE.

6. PROPOSED DRAINAGE STRUCTURES SHALL HAVE TRAFFIC BEARING GRATES UNLESS OTHERWISE NOTED.

7. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES ARE CLEAN AND FUNCTIONING PROPERLY AT ACCEPTANCE.

OTHER UTILITIES AND IMPROVEMENTS

1. CONTRACTOR SHALL CONTACT SUNSHINE 811, AT 811, A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION, CONFIRM VERBAL AND WRITTEN NOTICES, AND VERIFY LOCATIONS OF ALL UTILITIES ENTERING THE SITE AND THEIR LOCATION ON THE SITE.

2. THE LOCATION OF UTILITIES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES WITHIN THE PROJECT AREA.

TRAFFIC SIGNS, MARKING AND CONTROL DEVICES

1. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH FDOT STANDARDS AND SPECIFICATIONS.

2. STOP BARS AND PAVEMENT ARROWS AND MESSAGES SHALL BE APPLIED THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT SPECIFICATION 701.

3. LANE AND EDGE LINES SHALL BE PAINTED IN ACCORDANCE WITH FDOT SPECIFICATION 710.

4. ROAD SIGNS SHALL MEET FDOT SPECIFICATION 701.

5. REGULATORY, WARNING AND INFORMATIONAL SIGNS SHALL BE MOUNTED SO THAT THE BOTTOM OF THE SIGN IS AT LEAST 7'-0" ABOVE FINAL GRADE.

6. OBJECT MARKERS AND DELINEATORS SHALL MEET FDOT SPECIFICATION 705

7. EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS NOTED IN THE PLANS OTHERWISE.

AS-BUILT REQUIREMENTS

1. IF REQUIRED BY CONTRACT DOCUMENTS, CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS CERTIFIED BY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA, AND SIGNED BY THE CONTRACTOR TO VERIFY MATERIALS AND QUANTITIES.

2. IF AS-BUILT DRAWINGS ARE SPECIFIED IN THE CONTRACT DOCUMENTS, CONTRACTOR SHALL COORDINATE WITH BAKER COUNTY AND ENGINEER REGARDING AS-BUILT, DATA, PRINTED MEDIA AND QUANTITIES, AS PERMITTING AND BAKER COUNTY REQUIREMENTS MAY VARY.

3. WHEN AS-BUILT DRAWINGS ARE REQUIRED:

   3.1. THE ENGINEER WILL PROVIDE CONTRACTOR WITH A DIGITAL COPY (AUTOCAD FORMAT) OF THE PROJECT AND ITS IMPROVEMENTS FOR HIS USE IN PREPARING AS-BUILT DRAWINGS.

   3.2. AS-BUILT DRAWINGS SHALL BE REFERENCED TO VERTICAL DATUM SHOWN ON THE PLANS AND SHALL INCLUDE THE FOLLOWING INFORMATION, UNLESS OTHERWISE DIRECTED BY BAKER COUNTY OR ENGINEER:

   3.2.1. HORIZONTAL LOCATIONS, TO THE NEAREST 0.10 FEET, FOR PAVEMENT AND CURBS;
   3.2.2. VERTICAL ELEVATIONS, TO THE NEAREST 0.01 FEET, FOR PIPE INVERTS AND DRAINAGE STRUCTURES;
   3.2.3. VERTICAL ELEVATIONS, TO THE NEAREST 0.01 FEET, FOR PAVEMENT CROWN AND EDGES; AND
   3.2.4. VERTICAL ELEVATIONS, TO THE NEAREST 0.10 FEET, FOR FINISHED GROUND ELEVATIONS AT ROAD SHOULDERS AND GRADING TIE-INS.

PERMITS BY BAKER COUNTY

1. ENVIRONMENTAL RESOURCE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD). SJRWMD GENERAL PERMIT NO. 229309-1 (ISSUED 1/9/2025).

2. US ARMY CORPS OF ENGINEERS (USACOE) NATIONWIDE PERMIT. (PENDING).

ADDITIONAL COUNTY REQUIREMENTS

1. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS MANAGER AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

2. NO WORK SHALL BE PERFORMED ON SUNDAY OR ON COUNTY-RECOGNIZED HOLIDAYS WITHOUT WRITTEN APPROVAL FROM THE COUNTY ADMINISTRATOR.

3. CONTRACTOR SHALL COORDINATE WORK WITH OTHER PROJECTS IN THE AREA.

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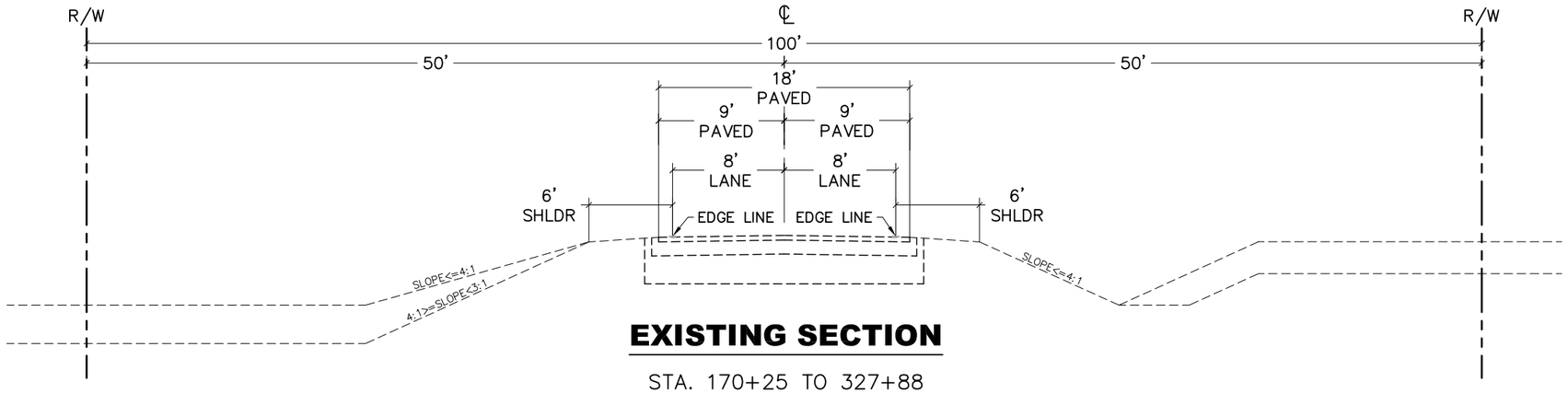
CR229 WIDENING AND RESURFACING PROJECT

GENERAL NOTES

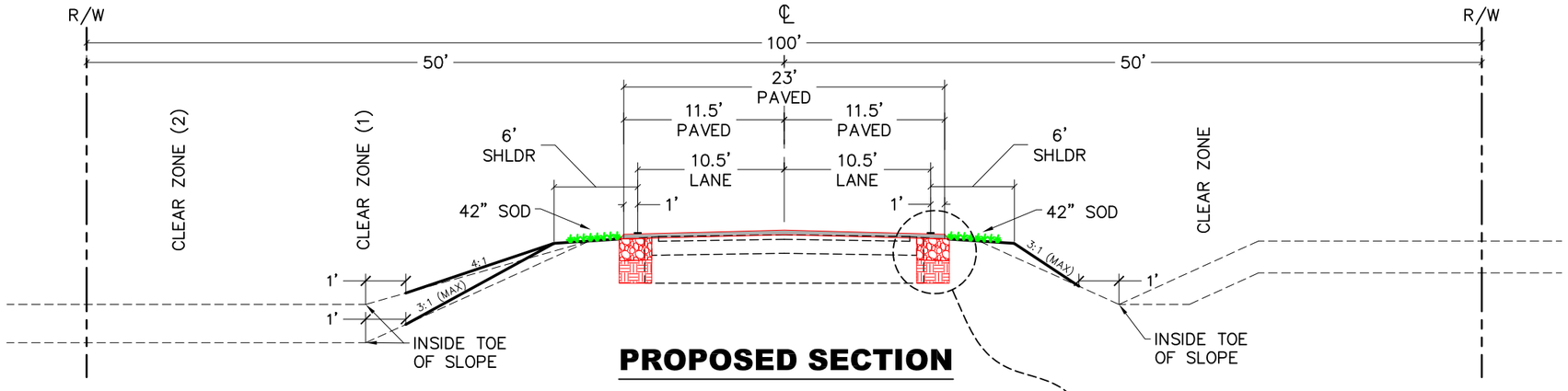
DRAWING NO.

100



EXISTING SECTION

STA. 170+25 TO 327+88



PROPOSED SECTION

STA. 170+25 TO 327+88

MILL AND RESURFACE

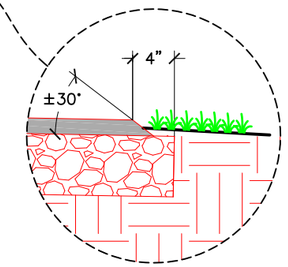
18.0' OF EXISTING ASPHALT PAVEMENT
1.5" (1 X 1–1/2" LIFT) SP–12.5 (PG76–22)
TRAFFIC LEVEL C
1" MILLING OF EXISTING ASPHALT

WIDENING

5.0' WIDENING (2.5' EACH SIDE)
3" (2 X 1–1/2" LIFTS) SP–12.5 (PG76–22)
TRAFFIC LEVEL C
OPTIONAL BASE GROUP 6
12" TYPE–B STABILIZED SUBGRADE
(SEE NOTES 4 AND 5)

SHOULDERS/SIDESLOPES

SEE NOTES 6, 7 & 8
ARGENTINE BAHIAGRASS (42"–WIDE ROLLS)
ARGENTINE BAHIAGRASS SEED



SAFETY EDGE
(BOTH SIDES)

TRAFFIC DATA

TWO–WAY AADT	= 1,500
K–FACTOR	= 9.5
GROWTH RATE	= 2.0%
PERCENT TRUCKS	= 20.9%
TOTAL ESALs (20–YEAR)	= 2,363,244
TOTAL ESALs (1–YEAR)	= 97,263
TRAFFIC LEVEL	= A
POSTED SPEED	= 45 & 55 MPH
DESIGN SPEED	= 50 & 60 MPH

TYPICAL SECTION NOTES:

1. PAVEMENT CROSS SLOPES SHOWN ARE TYPICAL. CROSS SLOPES WILL VARY FOR SUPERELEVATION SECTIONS AND TRANSITIONS.
2. PAVEMENT SHALL INCLUDE BEVELED SAFETY EDGES WITH BASE CONSTRUCTED 4" BEYOND THE EDGE OF PAVEMENT (BOTH SIDES).
3. SHOULDER SLOPES SHOWN ARE TYPICAL. SHOULDER SLOPES WILL VARY FOR SUPERELEVATION SECTIONS AND TRANSITIONS. CONTRACTOR SHALL MAINTAIN EXISTING SHOULDER SLOPES IN CONFORMANCE WITH FDOT INDEX 510. THE ALGEBRAIC DIFFERENCE IN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 7%.
4. ALL COMPACTION FOR ANY MATERIAL SHALL BE LIMITED TO THE STATIC MODE ONLY, UNLESS OTHERWISE DIRECTED BY COUNTY.
5. THESE PLANS ASSUME THAT EXISTING ROADWAY EMBANKMENT IS STABILIZED AND THAT ADDITIONAL STABILIZATION WORK IS NOT REQUIRED FOR WIDENING OR SHOULDER REWORK. CONTRACTOR TO NOTIFY BAKER COUNTY, IN WRITING, IF FIELD CONDITIONS FIND OTHERWISE.
6. WHERE SHOULDER REWORK IS REQUIRED, COMPLETE WORK IN ACCORDANCE WITH FDOT INDEX 105; HOWEVER, INSTALL A SINGLE 42"–WIDE ROW OF SOD ADJACENT TO THE FINISHED EDGE OF PAVEMENT. THE ADJACENT GROUND SHALL BE GRADED 2–1/2" BELOW THE ADJACENT PAVEMENT SURFACE TO PROVIDE A 1" DROP–OFF THAT WILL ALLOW SURFACE DRAINAGE OVER PLACED GRASS SOD.
7. REWORKED SHOULDERS SHALL NOT BE STEEPER THAN 3:1 AND SHALL TIE INTO EXISTING GRADE 1' ABOVE THE INSIDE TOE OF SLOPE.
8. SOD ALL DISTURBED AREAS WITH SLOPES OF 3H:1V OR STEEPER. GRASS SEED ALL OTHER DISTURBED AREAS.

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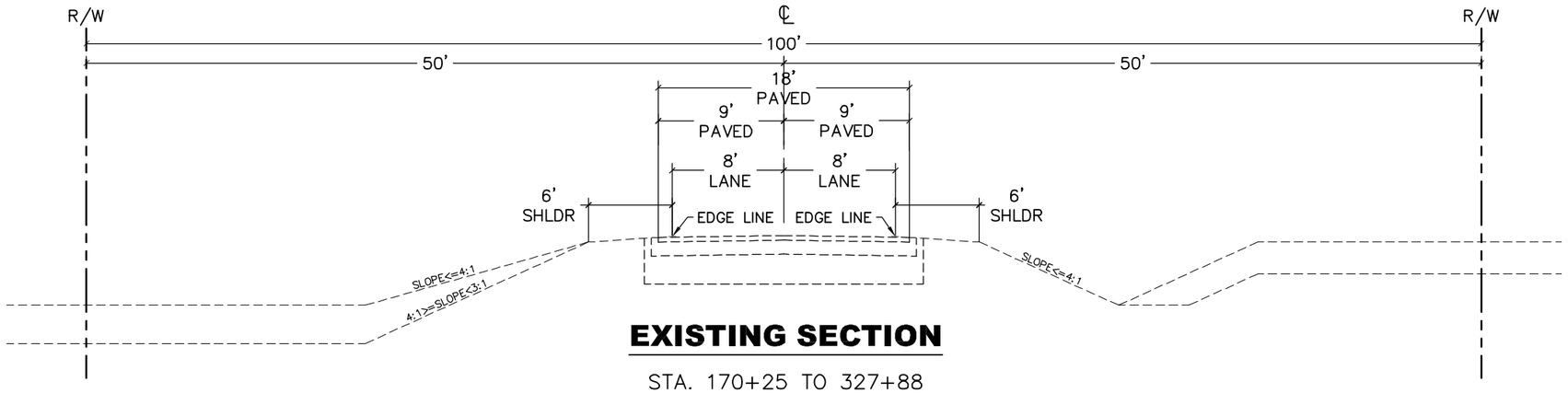
CR229 WIDENING AND RESURFACING PROJECT

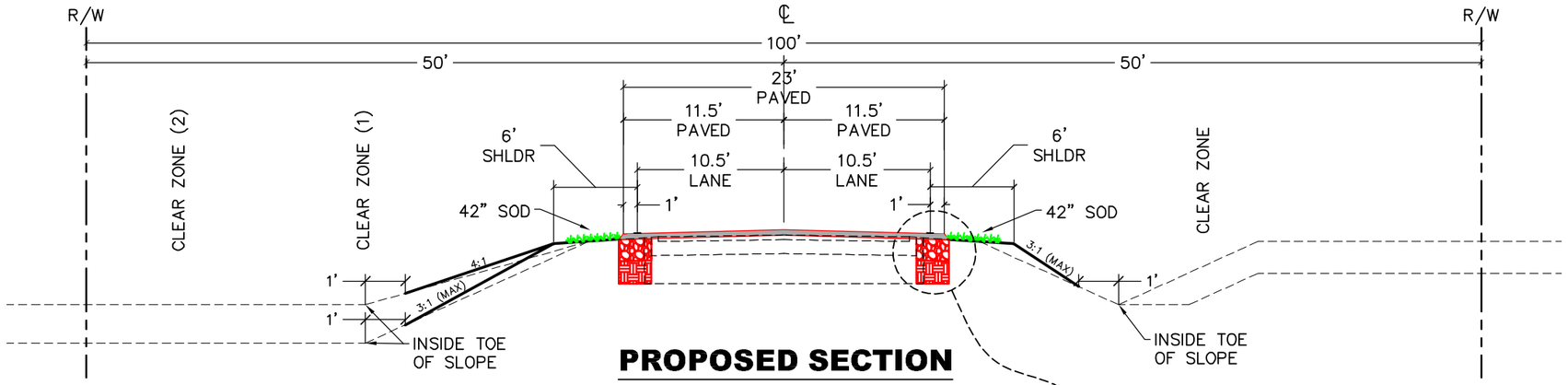
TYPICAL SECTIONS

DRAWING NO.
200



EXISTING SECTION

STA. 170+25 TO 327+88



PROPOSED SECTION

STA. 170+25 TO 327+88

LEVEL AND RESURFACE

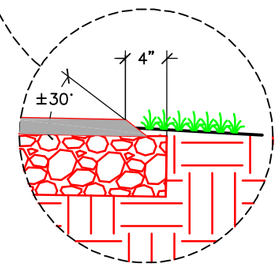
18.0' OF EXISTING ASPHALT PAVEMENT
1.5" (1 X 1–1/2" LIFT) SP–12.5 (PG76–22)
TRAFFIC LEVEL C
LEVELING COURSE SP–9.5 (75 LBS/SY)

WIDENING

5.0' WIDENING (2.5' EACH SIDE)
3" (2 X 1–1/2" LIFTS) SP–12.5 (PG76–22)
TRAFFIC LEVEL C
OPTIONAL BASE GROUP 6
12" TYPE–B STABILIZED SUBGRADE
(SEE NOTES 4 AND 5)

SHOULDERS/SIDESLOPES

SEE NOTES 6, 7 & 8
ARGENTINE BAHIAGRASS (42"–WIDE ROLLS)
ARGENTINE BAHIAGRASS SEED



SAFETY EDGE
(BOTH SIDES)

TRAFFIC DATA

TWO–WAY AADT	= 1,500
K–FACTOR	= 9.5
GROWTH RATE	= 2.0%
PERCENT TRUCKS	= 20.9%
TOTAL ESALs (20–YEAR)	= 2,363,244
TOTAL ESALs (1–YEAR)	= 97,263
TRAFFIC LEVEL	= A
POSTED SPEED	= 45 & 55 MPH
DESIGN SPEED	= 50 & 60 MPH

TYPICAL SECTION NOTES:

1. PAVEMENT CROSS SLOPES SHOWN ARE TYPICAL. CROSS SLOPES WILL VARY FOR SUPERELEVATION SECTIONS AND TRANSITIONS.
2. PAVEMENT SHALL INCLUDE BEVELED SAFETY EDGES WITH BASE CONSTRUCTED 4" BEYOND THE EDGE OF PAVEMENT (BOTH SIDES).
3. SHOULDER SLOPES SHOWN ARE TYPICAL. SHOULDER SLOPES WILL VARY FOR SUPERELEVATION SECTIONS AND TRANSITIONS. CONTRACTOR SHALL MAINTAIN EXISTING SHOULDER SLOPES IN CONFORMANCE WITH FDOT INDEX 510. THE ALGEBRAIC DIFFERENCE IN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 7%.
4. ALL COMPACTION FOR ANY MATERIAL SHALL BE LIMITED TO THE STATIC MODE ONLY, UNLESS OTHERWISE DIRECTED BY COUNTY.
5. THESE PLANS ASSUME THAT EXISTING ROADWAY EMBANKMENT IS STABILIZED AND THAT ADDITIONAL STABILIZATION WORK IS NOT REQUIRED FOR WIDENING OR SHOULDER REWORK. CONTRACTOR TO NOTIFY BAKER COUNTY, IN WRITING, IF FIELD CONDITIONS FIND OTHERWISE.
6. WHERE SHOULDER REWORK IS REQUIRED, COMPLETE WORK IN ACCORDANCE WITH FDOT INDEX 105; HOWEVER, INSTALL A SINGLE 42"–WIDE ROW OF SOD ADJACENT TO THE FINISHED EDGE OF PAVEMENT. THE ADJACENT GROUND SHALL BE GRADED 2–1/2" BELOW THE ADJACENT PAVEMENT SURFACE TO PROVIDE A 1" DROP–OFF THAT WILL ALLOW SURFACE DRAINAGE OVER PLACED GRASS SOD.
7. REWORKED SHOULDERS SHALL NOT BE STEEPER THAN 3:1 AND SHALL TIE INTO EXISTING GRADE 1' ABOVE THE INSIDE TOE OF SLOPE.
8. SOD ALL DISTURBED AREAS WITH SLOPES OF 3H:1V OR STEEPER. GRASS SEED ALL OTHER DISTURBED AREAS.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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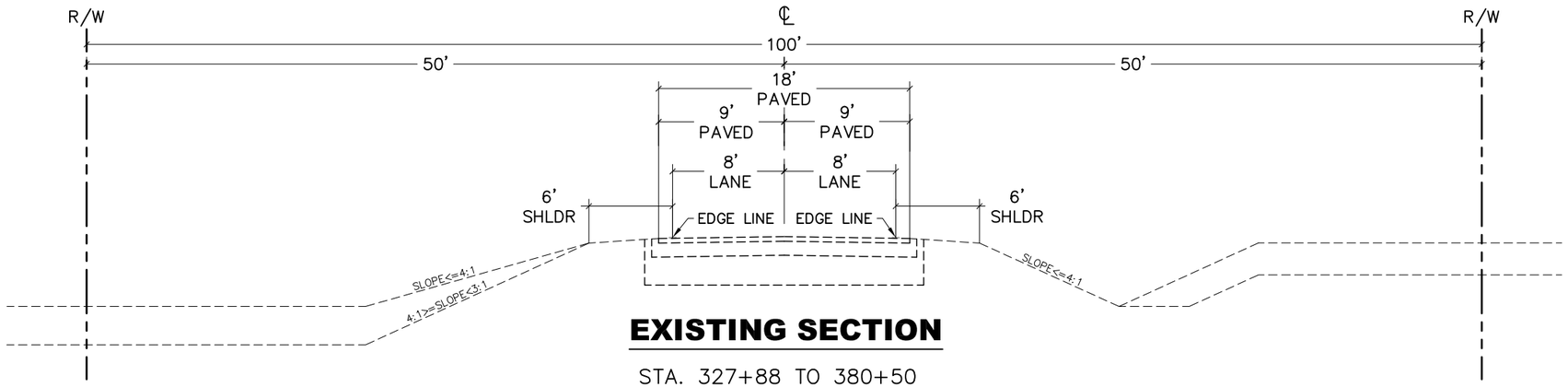
3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

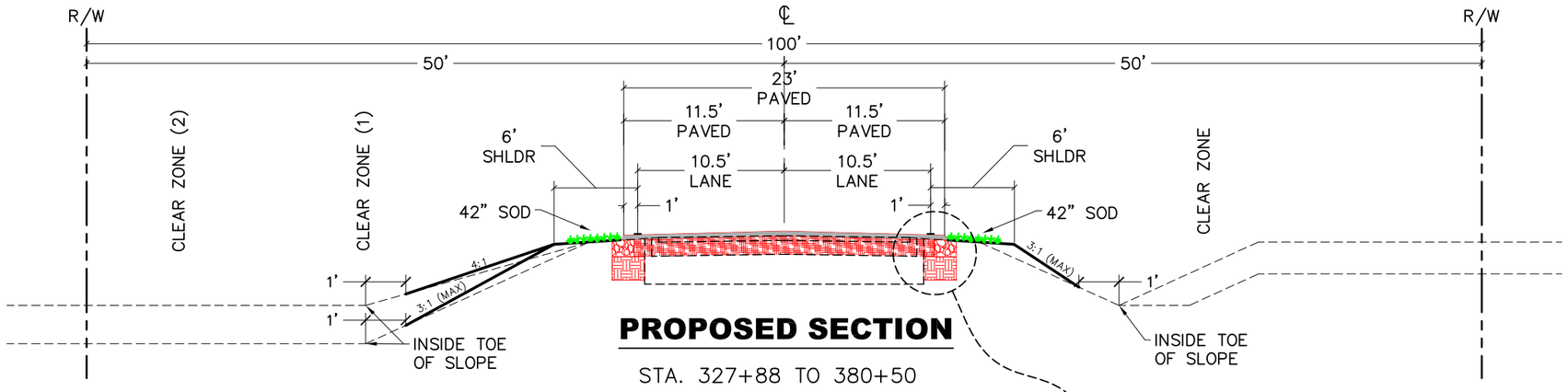
TYPICAL SECTION 1A

DRAWING NO.
200A



EXISTING SECTION

STA. 327+88 TO 380+50



PROPOSED SECTION

STA. 327+88 TO 380+50

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8. SOD ALL DISTURBED AREAS WITH SLOPES OF 3H:1V OR STEEPER. GRASS SEED ALL OTHER DISTURBED AREAS.

FULL–WIDTH ASPHALT PAVEMENT

23.0' (2 X 10.5' LANES + 2 X 1.0' SHLDRS)
3" (2 X 1–1/2" LIFTS) SP–12.5
TRAFFIC LEVEL C

FULL DEPTH RECLAIMATION

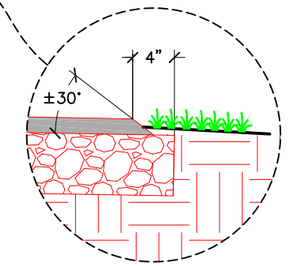
OVERLAY FULL WIDTH OF EXISTING ASPHALT PAVEMENT
WITH 6" OF LIMEROCK BASE MATERIAL
PRIOR TO PULVERIZING AND MIXING. FINISH TO MEET OBG 6
MINIMUM STANDARDS.

WIDENING

5.0' WIDENING (2.5' EACH SIDE)
OPTIONAL BASE GROUP 6
12" TYPE–B STABILIZED SUBGRADE
(SEE NOTES 4 AND 5)

SHOULDERS/SIDESLOPES

SEE NOTES 6, 7 & 8
ARGENTINE BAHIAGRASS (42"–WIDE ROLLS)
ARGENTINE BAHIAGRASS SEED



SAFETY EDGE
(BOTH SIDES)

TRAFFIC DATA

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POSTED SPEED	= 45 & 55 MPH
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CR229 WIDENING AND RESURFACING PROJECT

TYPICAL SECTIONS

DRAWING NO.
201

CURVE 6
PI STA=201+14.51
CURVE DELTA = 000° 57′ 53″
CURVE DEGREE = 000° 12′ 48″
TANGENT LENGTH = 226.09′
LENGTH OF ARC = 452.17′
LENGTH OF CHORD = 452.16
RADIUS=26852.32′

CURVE 7
PI STA=213+32.48
CURVE DELTA = 055° 07′ 22″
CURVE DEGREE = 004° 59′ 16″
TANGENT LENGTH = 599.55′
LENGTH OF ARC = 1105.16′
LENGTH OF CHORD = 1063.03
RADIUS=1148.73′

CURVE 8
PI STA=245+68.16
CURVE DELTA = 014° 42′ 57″
CURVE DEGREE = 002° 05′ 39″
TANGENT LENGTH = 353.32′
LENGTH OF ARC = 702.75′
LENGTH OF CHORD = 700.82
RADIUS=2736.12′

CURVE 9
PI STA=257+82.91
CURVE DELTA = 015° 50′ 02″
CURVE DEGREE = 001° 58′ 29″
TANGENT LENGTH = 403.51′
LENGTH OF ARC = 801.88′
LENGTH OF CHORD = 799.33
RADIUS=2901.62′

REVISIONS			
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CR229 WIDENING AND RESURFACING PROJECT

PROJECT LAYOUT

DRAWING NO.
300

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CR229 WIDENING AND RESURFACING PROJECT

PROJECT LAYOUT

DRAWING NO.

301

BEGIN PROJECT
STA 170+25

96' PAVEMENT WIDTH TRANSITION

MX17090L RELOCATE OBJECT MARKER (OM3-L R/W)

MX17113L RELOCATE OBJECT MARKER (OM3-R R/W)

COUNTY MAINTAINED R/W

VERDIE DORMAND ROAD

SX17465L TO REMAIN SGL. POST SIGN <12 SF (R2-1 : 25MPH)

SX17479L RELOCATE SGL. POST SIGN <12 SF (D3-1)

County Road 229
(100' RIGHT OF WAY)

1" = 100'

170+00 | 175+00 | 180+00

SHLDR / EOP / 5' / 18' / 23'

SDX17103L | SDX17060R | SDX17413R | SDX17647L

EOP / SHLDR

121' PAVEMENT WIDTH TRANSITION

MBX17090R RELOCATE MAILBOX (12155)

MBX17085R RELOCATE MAILBOX (12122)

FENCE

MBX17624R RELOCATE MAILBOX (12234)

R/W

60'

——— — ———	RIGHT OF WAY
==========	EDGE OF ASPHALT & WHITE EDGELINE
- - - - - - - - - -	EDGE OF DIRT ROAD OR DRIVEWAY
CDX##	EXISTING CROSS DRAIN
SDX##@	EXISTING SIDE DRAIN @ L = LEFT R = RIGHT

FDOT DRAINAGE EASEMENT

15' / 20'

185+00 | 190+00 | 195+00

HWXX186L REMOVE (SANDBAG HEADWALL)

MX18653L RELOCATE OBJECT MARKER (OM2-2V)

SDX18808R | SDX19123R

CD18649 1 X 30" RCP

HWXX18649R REMOVE (SANDBAG HEADWALL)

MX18645R RELOCATE OBJECT MARKER (OM2-2V)

MBX19147R RELOCATE MAILBOX (12515)

SX19355L RELOCATE SGL. POST SIGN <12 SF (R2-1 : 45MPH)

SX19477R RELOCATE SGL. POST SIGN <12 SF (R2-1 : 55MPH)

MX19607L RELOCATE OBJECT MARKER (OM2-2V)

CD19653 DBL. 7'X5' CBC

MX19608R RELOCATE OBJECT MARKER (OM2-2V)

MX19698R RELOCATE OBJECT MARKER (OM2-2V)

MX19702L RELOCATE OBJECT MARKER (OM2-2V)

SX20027L RELOCATE SGL. POST SIGN <12 SF (D3-1)

SEE NOTES ON SHEET 311 REGARDING THESE EXISTING SIGNS AND MAILBOXES

REMOVE 95 LF OF EXISTING GUARDRAIL SYSTEM (LEFT SIDE)

REMOVE 87.5 LF OF EXISTING GUARDRAIL SYSTEM (RIGHT SIDE)

EARLS HAVEY ROAD

STOP

FDOT DRAINAGE EASEMENT

COUNTY MAINTAINED R/W

REVISIONS			
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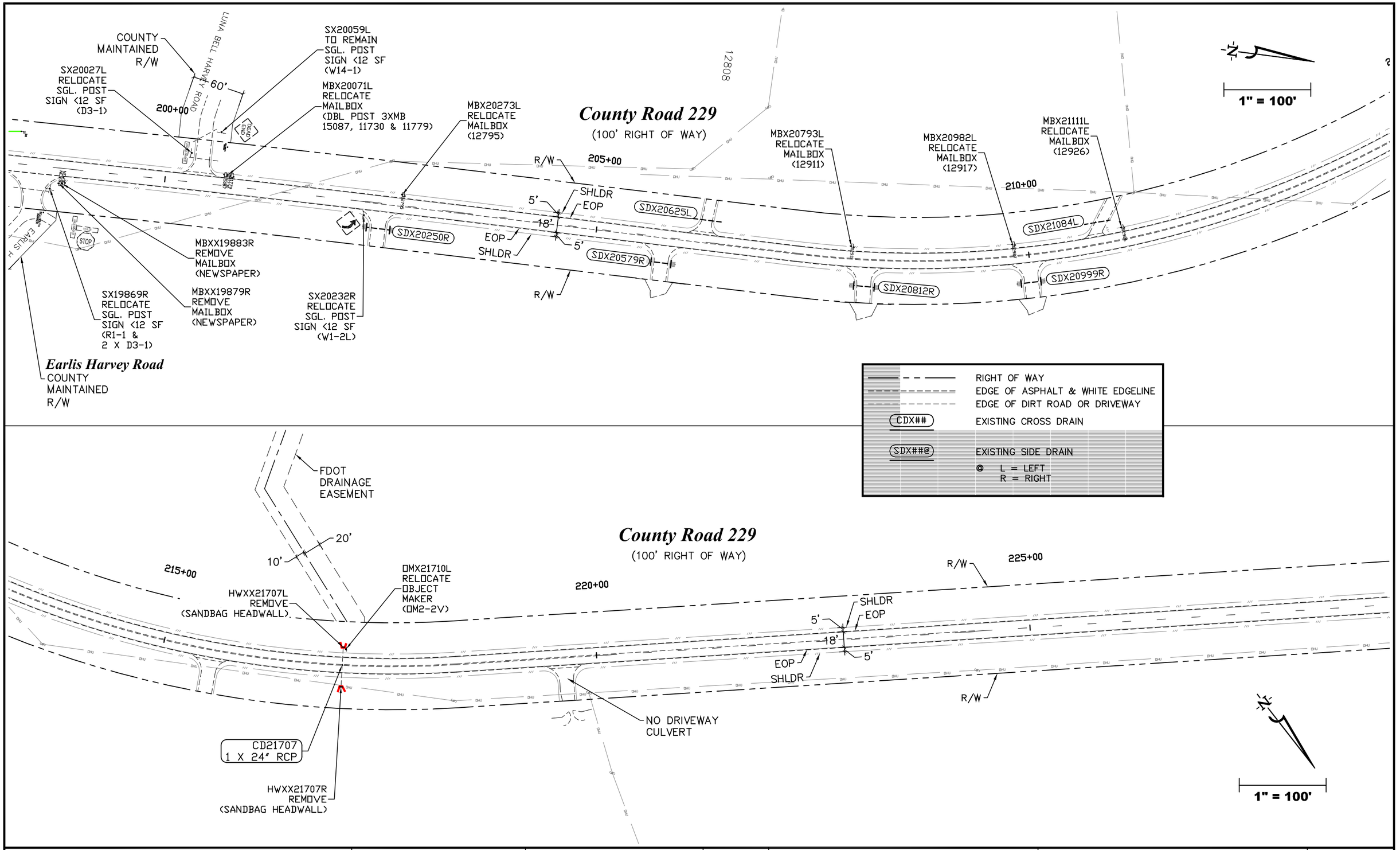
CR229 WIDENING AND RESURFACING PROJECT

PLAN - EXISTING CONDITIONS

DRAWING NO. **310**



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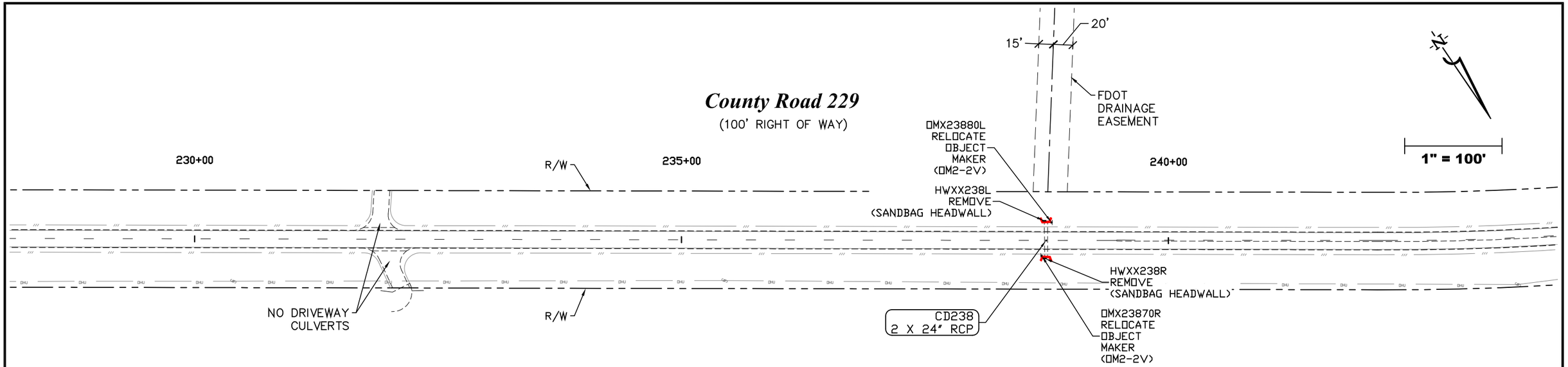
CR229 WIDENING AND RESURFACING PROJECT

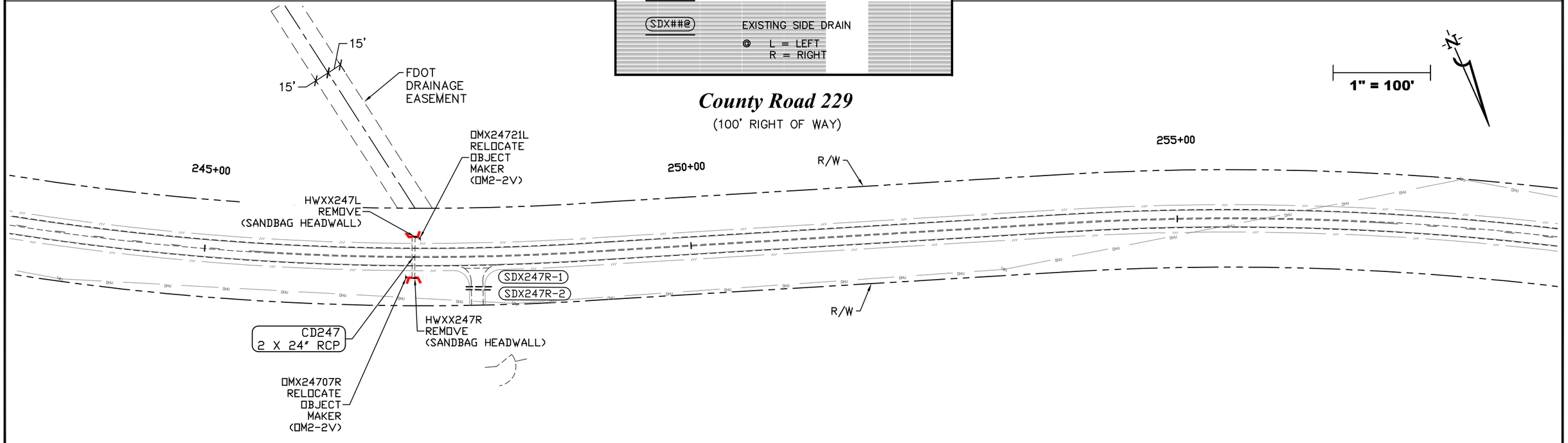
PLAN - EXISTING CONDITIONS

DRAWING NO.

311



RIGHT OF WAY
EDGE OF ASPHALT & WHITE EDGELINE
EDGE OF DIRT ROAD OR DRIVEWAY
CDX## EXISTING CROSS DRAIN
SDX##@ EXISTING SIDE DRAIN
@ L = LEFT
R = RIGHT



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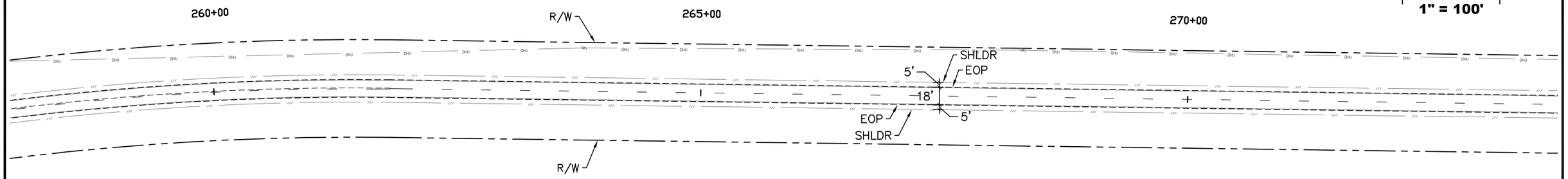
CR229 WIDENING AND RESURFACING PROJECT

PLAN - EXISTING CONDITIONS

DRAWING NO.
312

County Road 229

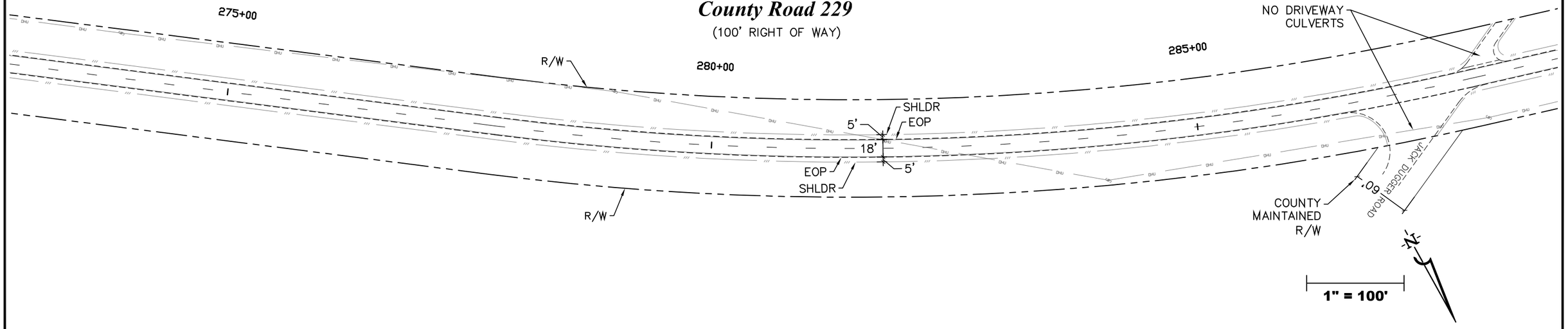
(100' RIGHT OF WAY)



——— - - ———	RIGHT OF WAY
----------	EDGE OF ASPHALT & WHITE EDGELINE
- - - - - -	EDGE OF DIRT ROAD OR DRIVEWAY
(CDX##)	EXISTING CROSS DRAIN
(SDX##@)	EXISTING SIDE DRAIN @ L = LEFT R = RIGHT

County Road 229

(100' RIGHT OF WAY)



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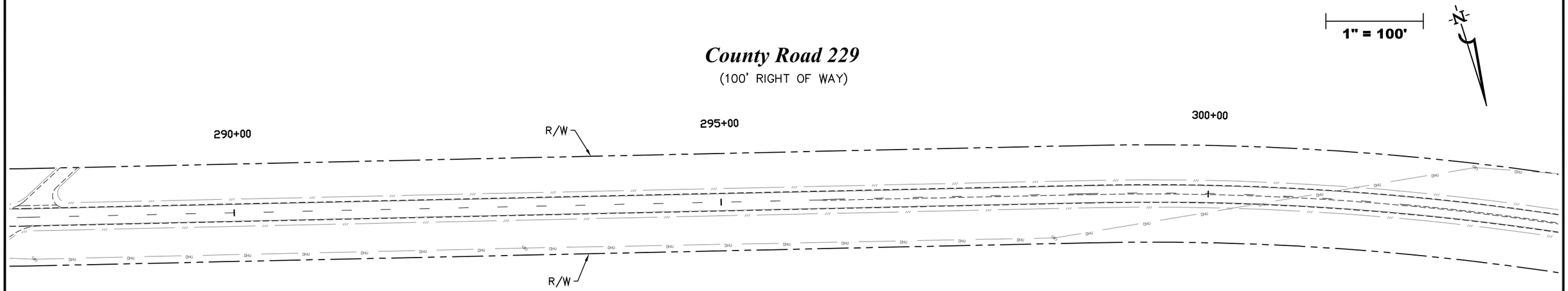
PLAN - EXISTING CONDITIONS

DRAWING NO.

313



RIGHT OF WAY
EDGE OF ASPHALT & WHITE EDGELINE
EDGE OF DIRT ROAD OR DRIVEWAY
CDX## EXISTING CROSS DRAIN
SDX##@ EXISTING SIDE DRAIN
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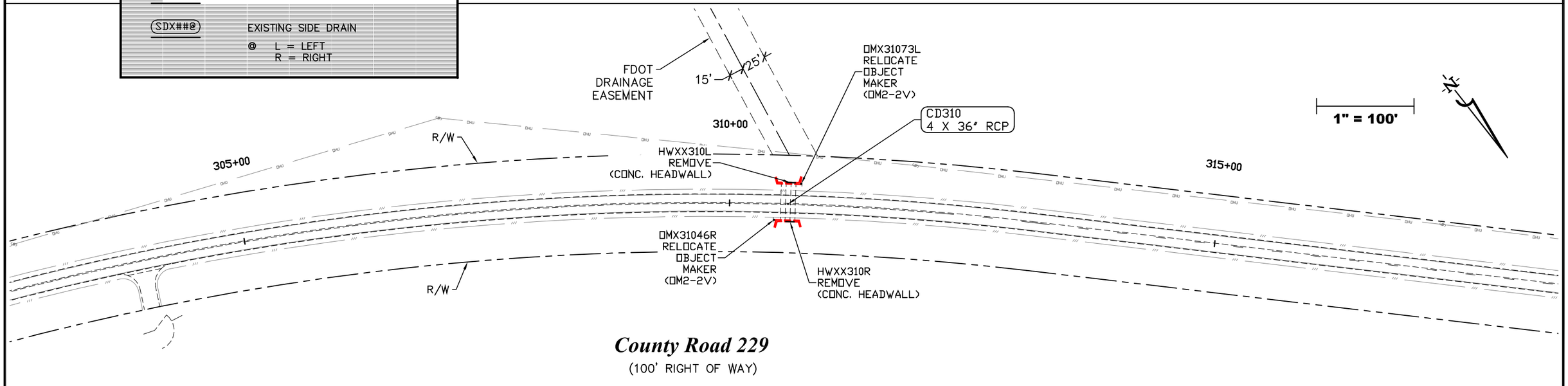

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BAKER COUNTY — PROTECTING OUR FUTURE-PRESERVING OUR PAST

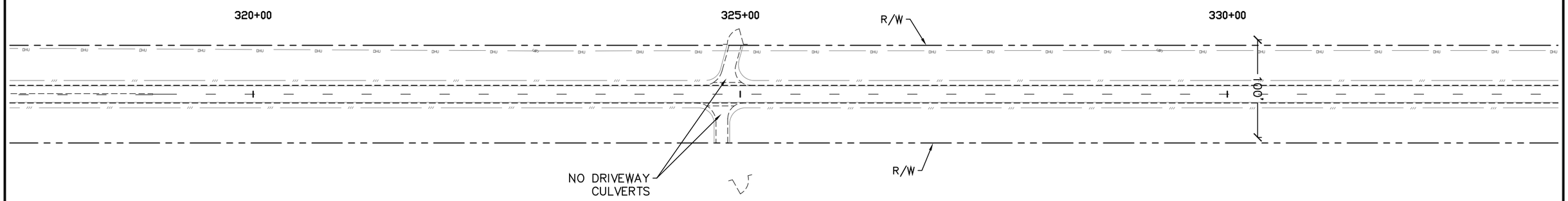
CR229 WIDENING AND RESURFACING PROJECT

PLAN - EXISTING CONDITIONS

DRAWING NO.
314

County Road 229

(100' RIGHT OF WAY)



1" = 100'

——— – – ———	RIGHT OF WAY
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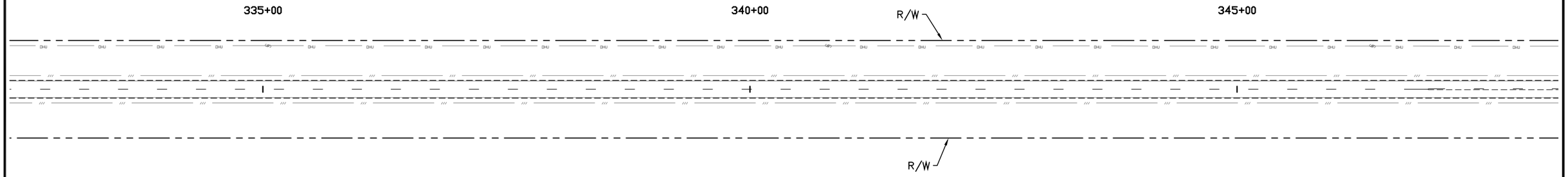
- - - - - - - - - -	EDGE OF DIRT ROAD OR DRIVEWAY
(CDX##)	EXISTING CROSS DRAIN
(SDX##@)	EXISTING SIDE DRAIN
@	L = LEFT R = RIGHT

County Road 229

(100' RIGHT OF WAY)



1" = 100'

REVISIONS			
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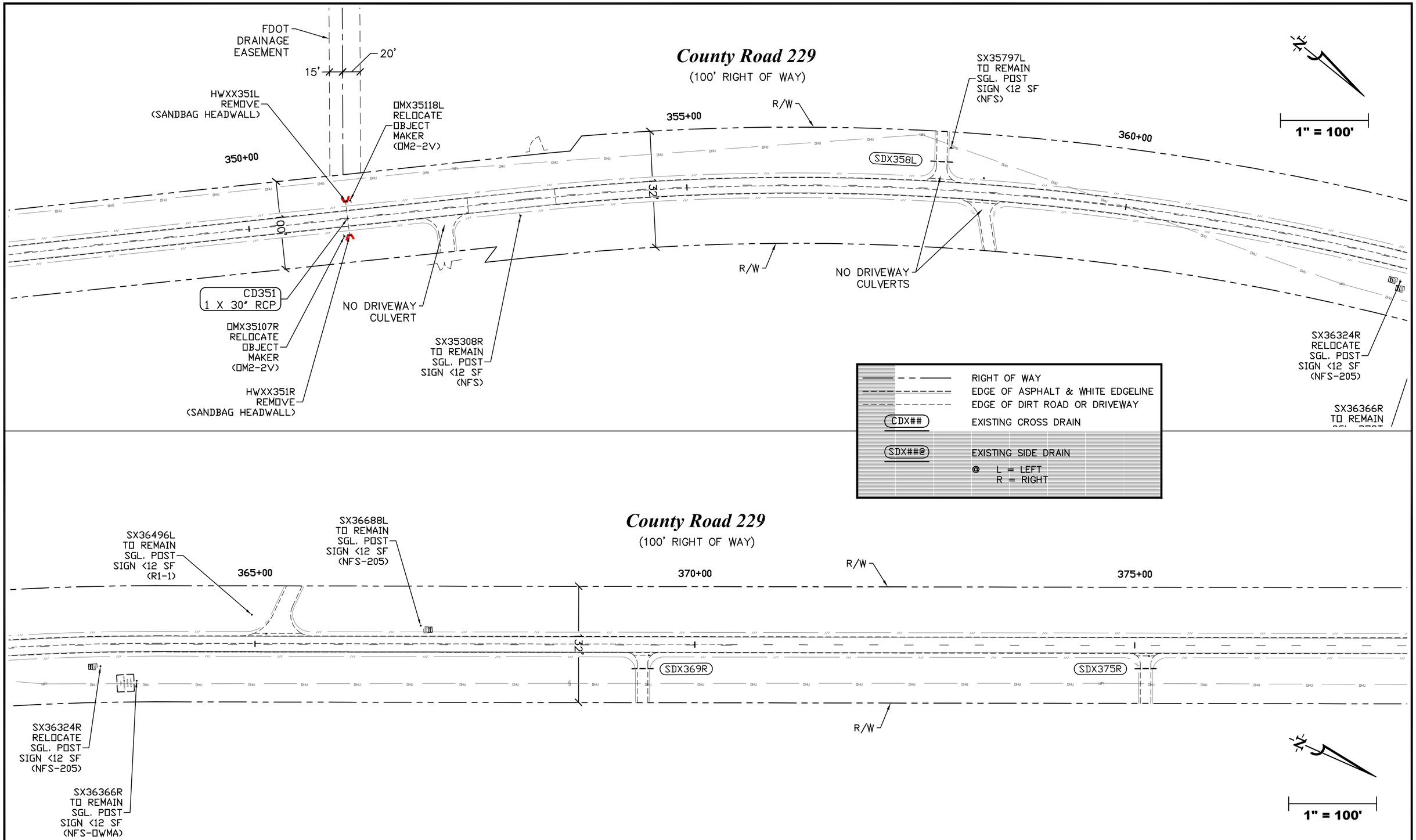
PLAN - EXISTING CONDITIONS

DRAWING NO.

315



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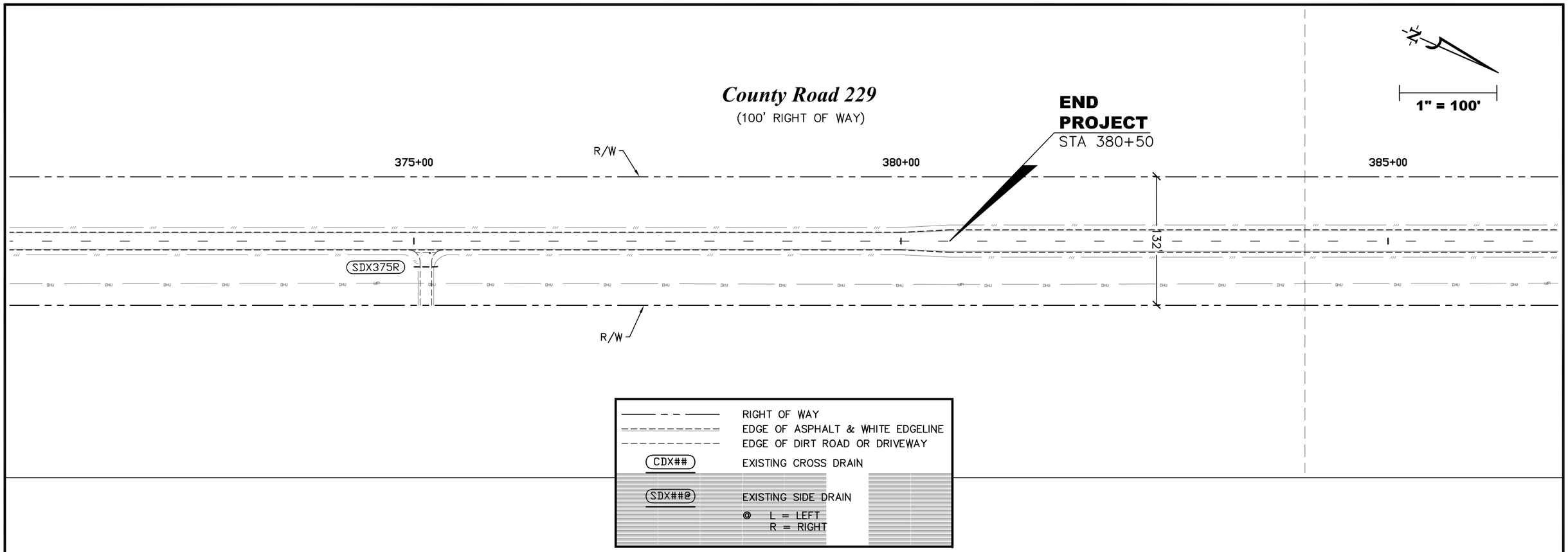
PLAN - EXISTING CONDITIONS

DRAWING NO.
316



REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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Tarbox consulting & design, inc.
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TROY W. TARBOX, P.E.
FLA. P.E. LICENSE NO. 50661
TARBOX CONSULTING AND DESIGN, INC.
3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

PLAN - EXISTING CONDITIONS

DRAWING NO.
317

SIGNS TO BE RELOCATED

ID	SIGN DESCRIPTION	STATION	CURRENT OFFSET & SIDE	MIN. OFFSET TO EDGE OF SIGN FROM ROAD CL	MIN. OFFSET TO EDGE OF SIGN FROM NEW EDGE OF SHLDR
SR20023L	D3-1	200+23.14	36 (L)	24' (L)	6'
SX17479L	D3-1	174+78.88	35 (L)	24' (L)	6'
SX19355L	R2-1 : 45MPH	193+54.92	14 (L)	24' (L)	6'
SX19477R	R2-1 : 55MPH	194+76.63	15 (R)	24' (R)	6'
SX19869R	R1-1 & 2 X D3-1	198+69.19	25 (R)	24' (R)	6'
SX20027L	D3-1	200+27.38	33 (L)	24' (L)	6'
SX20232R	W1-2L	202+32.00	16 (R)	24' (R)	6'
SX36324R	NFS-205	363+23.97	25 (R)	24' (R)	6'

SIGNS TO REMAIN IN CURRENT LOCATION

ID	SIGN DESCRIPTION	STATION	CURRENT OFFSET & SIDE	MIN. OFFSET TO EDGE OF SIGN FROM ROAD CL	MIN. OFFSET TO EDGE OF SIGN FROM NEW EDGE OF SHLDR
SX17465L	R2-1 : 25MPH	174+64.95	130 (L)	24' (L)	6'
SX20059L	W14-1	200+58.79	61 (L)	24' (L)	6'
SX35308R	NFS	353+08.49	17 (R)	24' (R)	6'
SX35797L	NFS	357+97.37	48 (L)	24' (L)	6'
SX36366R	NFS-OWMA	363+65.30	42 (R)	24' (R)	6'
SX36496L	R1-1	364+96.30	33 (L)	24' (L)	6'
SX36688L	NFS-205	366+88.39	21 (L)	24' (L)	6'

MAILBOXES TO BE RELOCATED

ID	MAILBOX ADDRESS	STATION	CURRENT OFFSET & SIDE	MIN. OFFSET TO FACE OF MAILBOX FROM ROAD CL	MIN. OFFSET TO FACE OF MAILBOX FROM NEW ETW	NOTES
MBX17085R	12122	170+84.83	15 (R)	20' (R)	8'	
MBX17090R	12155	170+89.90	15 (R)	20' (R)	8'	
MBX17624R	12234	176+24.18	15 (R)	20' (R)	8'	
MBX19147R	12515	191+47.05	13 (R)	20' (R)	8'	
MBX20071L	DBL POST 3XMB 15087, 11730 & 11779	200+71.34	13 (L)	20' (L)	8'	
MBX20273L	12795	202+73.43	13 (L)	20' (L)	8'	
MBX20793L	12911	207+94.25	15 (L)	20' (L)	8'	
MBX20982L	12917	209+82.21	14 (L)	20' (L)	8'	
MBX21111L	12926	211+10.95	14 (L)	20' (L)	8'	

MAILBOXES TO BE REMOVED

ID	MAILBOX ADDRESS	STATION	CURRENT OFFSET & SIDE	MIN. OFFSET TO FACE OF MAILBOX FROM ROAD CL	MIN. OFFSET TO FACE OF MAILBOX FROM NEW ETW	NOTES
MBXX19879R	NEWSPAPER	198+79.01	18 (R)	20' (R)	8'	
MBXX19883R	NEWSPAPER	198+82.94	18 (R)	20' (R)	8'	

OBJECT MARKERS TO BE RELOCATED

ID	SIGN DESCRIPTION	STATION (SIDE)
OMX17090L	OM3-L R/W	170+90.47 (L)
OMX17113L	OM3-R R/W	171+13.14 (L)
OMX18645R	OM2-2V	186+45.39 (R)
OMX18653L	OM2-2V	186+53.16 (L)
OMX19607L	OM2-2V	196+06.94 (L)
OMX19608R	OM2-2V	196+08.13 (R)

OBJECT MARKERS TO BE RELOCATED

ID	SIGN DESCRIPTION	STATION (SIDE)
OMX19698R	OM2-2V	196+98.25 (R)
OMX19702L	OM2-2V	197+01.81 (L)
OMX21710L	OM2-2V	217+10.28 (L)
OMX23870R	OM2-2V	238+69.88 (R)
OMX23880L	OM2-2V	238+79.85 (L)
OMX24707R	OM2-2V	247+07.37 (R)

OBJECT MARKERS TO BE RELOCATED

ID	SIGN DESCRIPTION	STATION (SIDE)
OMX24721L	OM2-2V	247+20.99 (L)
OMX31046R	OM2-2V	310+45.98 (R)
OMX31073L	OM2-2V	310+72.77 (L)
OMX35107R	OM2-2V	351+06.89 (R)
OMX35118L	OM2-2V	351+17.70 (L)

REVISIONS

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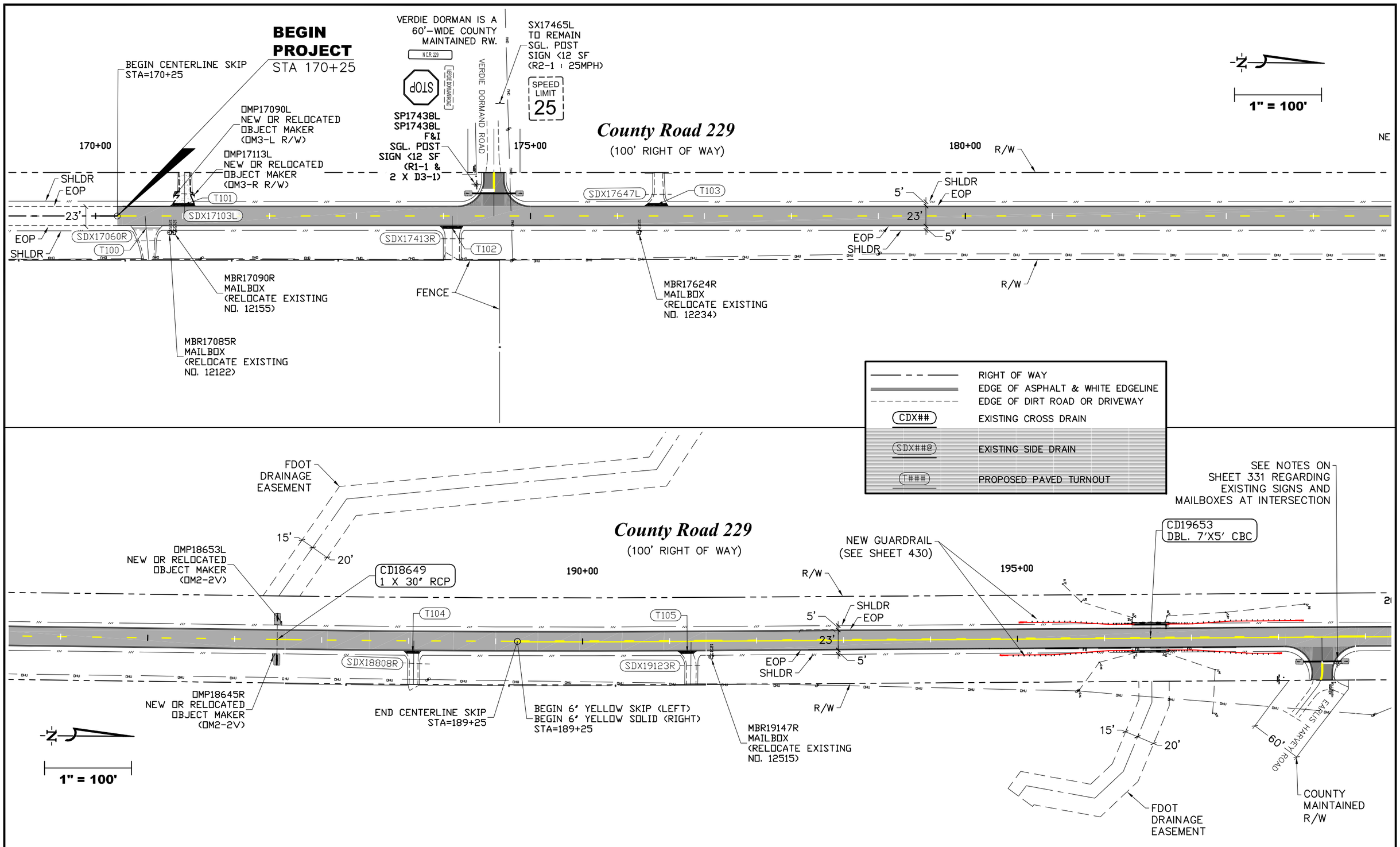
CR229 WIDENING AND RESURFACING PROJECT

EXISTING MARKERS, SIGNS AND MAILBOXES

DRAWING NO.

320



REVISIONS			
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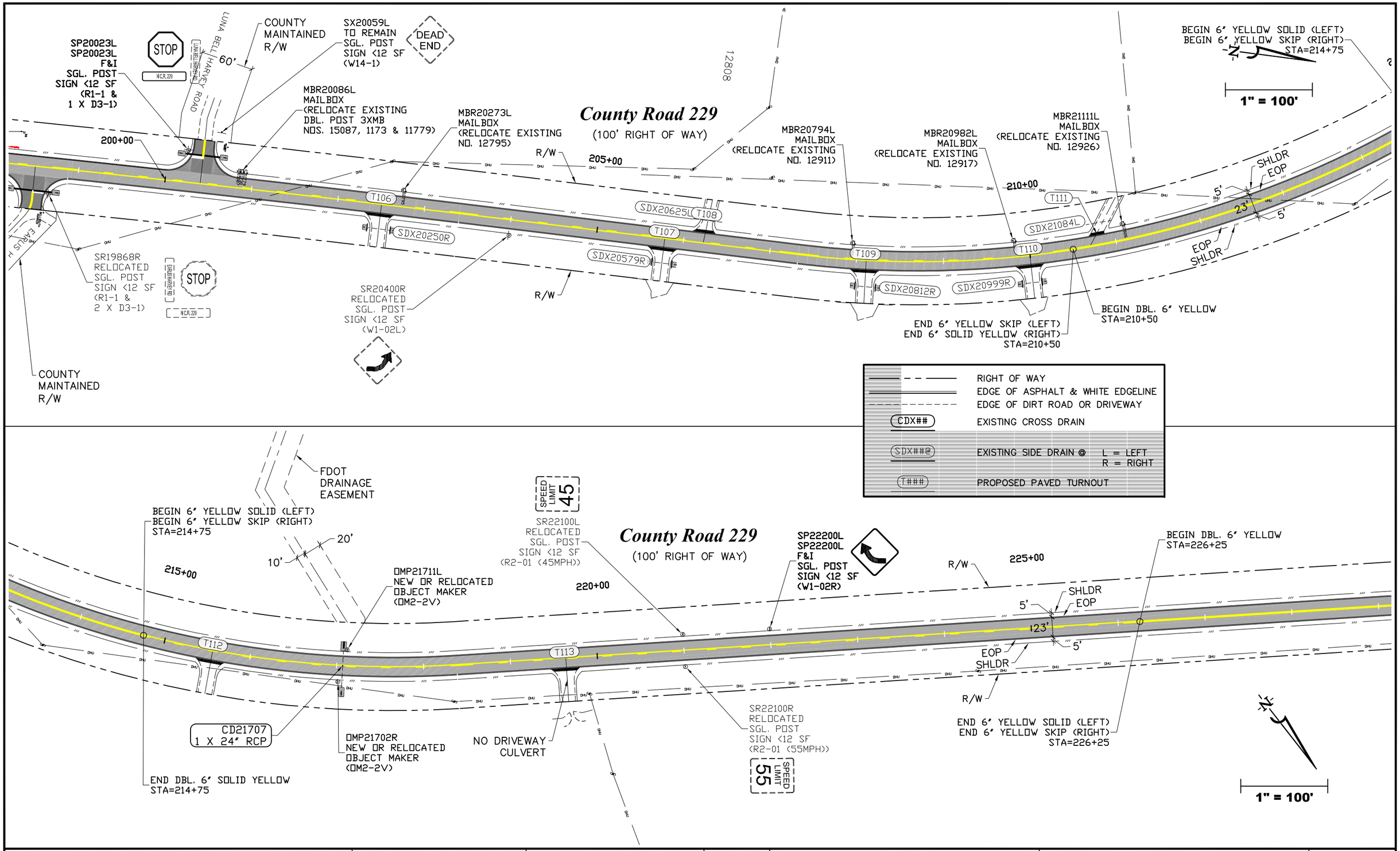
CR229 WIDENING AND RESURFACING PROJECT

PLAN - PROPOSED CONDITIONS

DRAWING NO.

330



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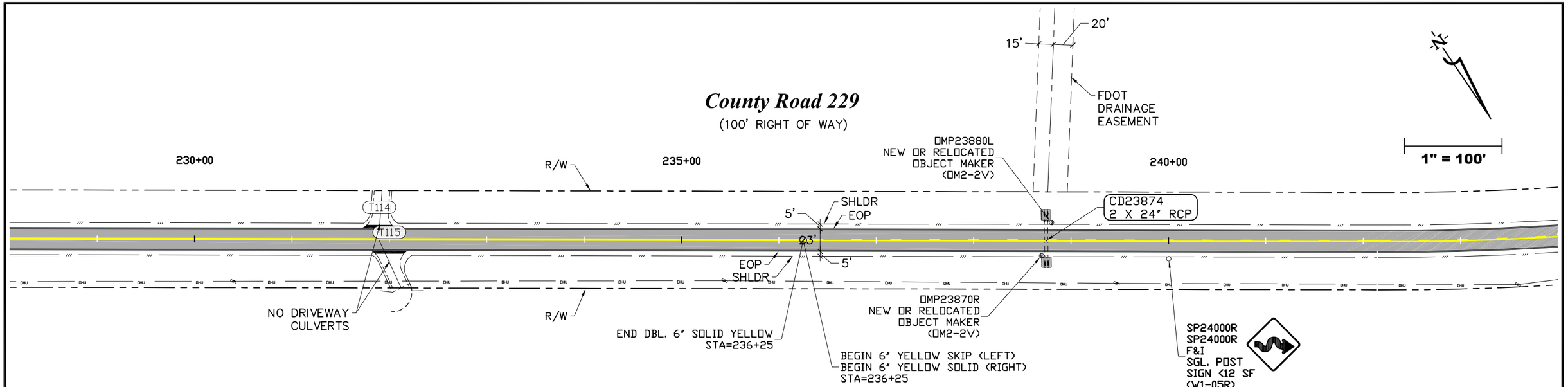
PLAN - PROPOSED CONDITIONS

DRAWING NO.

331



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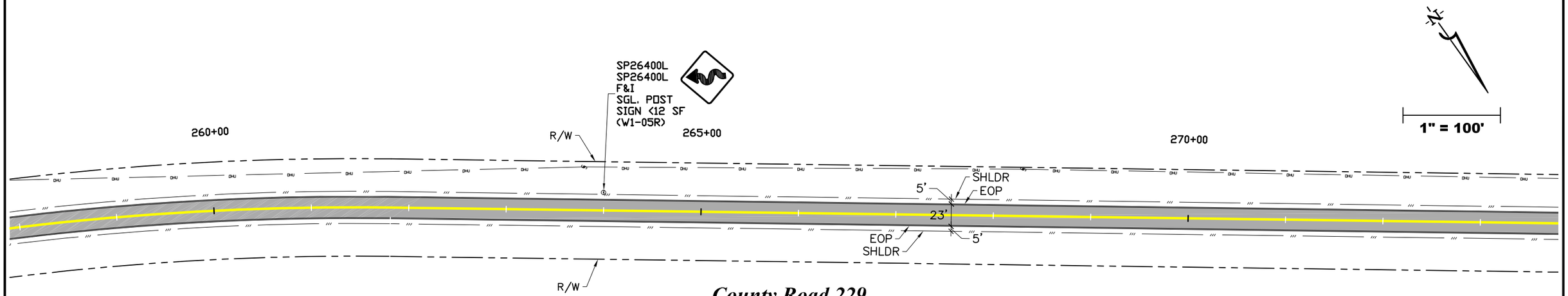
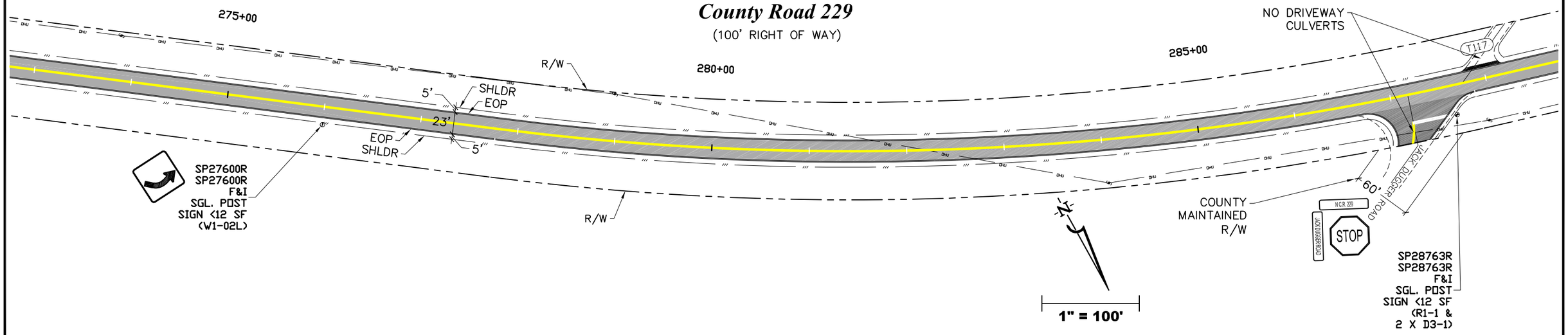
PLAN - PROPOSED CONDITIONS

DRAWING NO.
332



	RIGHT OF WAY
	EDGE OF ASPHALT & WHITE EDGELINE
	EDGE OF DIRT ROAD OR DRIVEWAY
CDX##	EXISTING CROSS DRAIN
SDX##@	EXISTING SIDE DRAIN @ L = LEFT R = RIGHT
T###	PROPOSED PAVED TURNOUT



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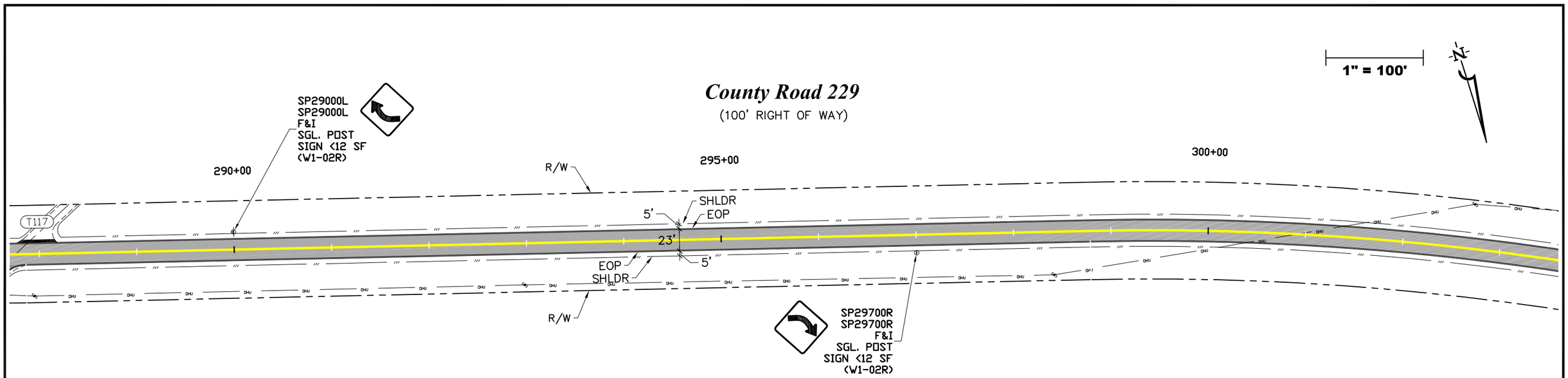
PLAN - PROPOSED CONDITIONS

DRAWING NO.

333



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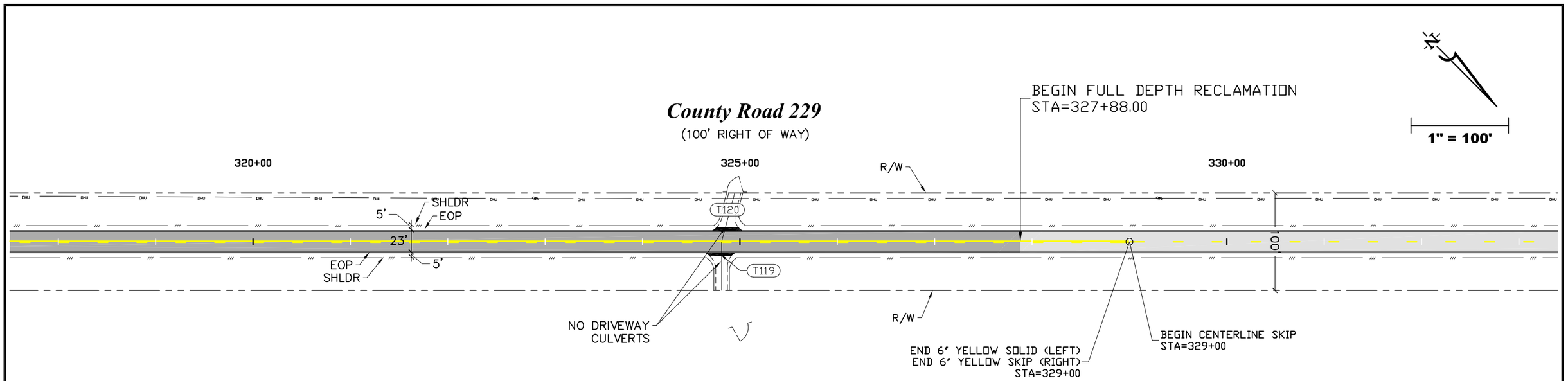
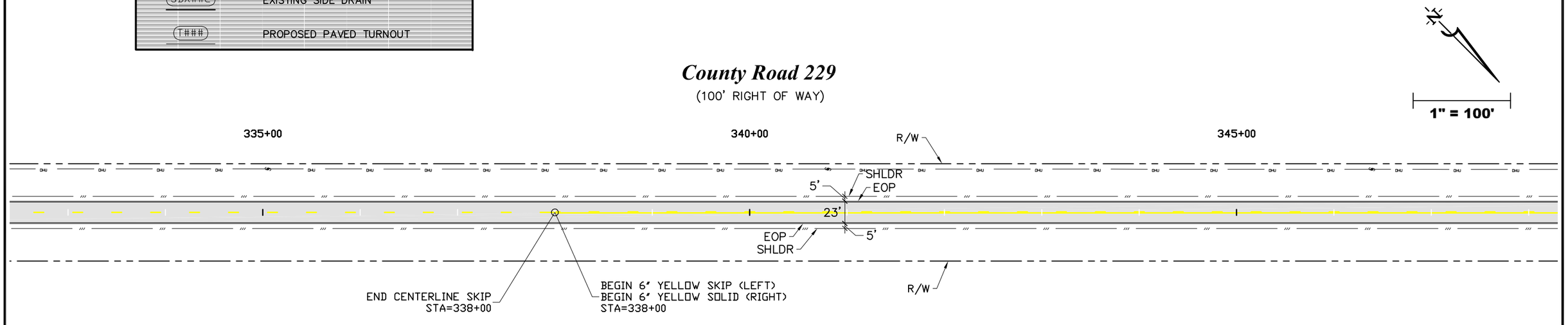
PLAN - PROPOSED CONDITIONS

DRAWING NO.

334



RIGHT OF WAY
EDGE OF ASPHALT & WHITE EDGELINE
EDGE OF DIRT ROAD OR DRIVEWAY
CDX## EXISTING CROSS DRAIN
SDX##@ EXISTING SIDE DRAIN
T### PROPOSED PAVED TURNOUT



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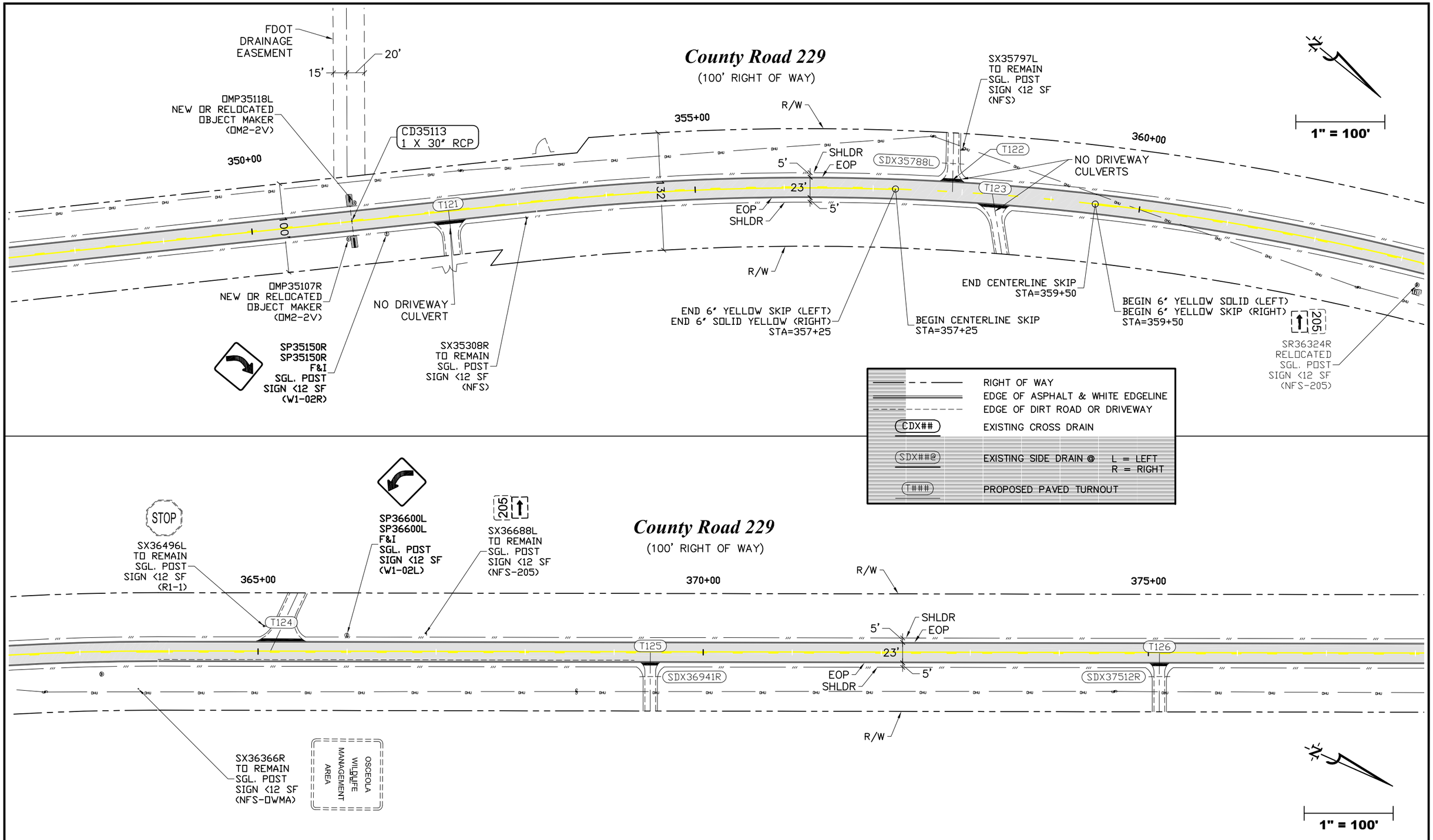
PLAN - PROPOSED CONDITIONS

DRAWING NO.
335



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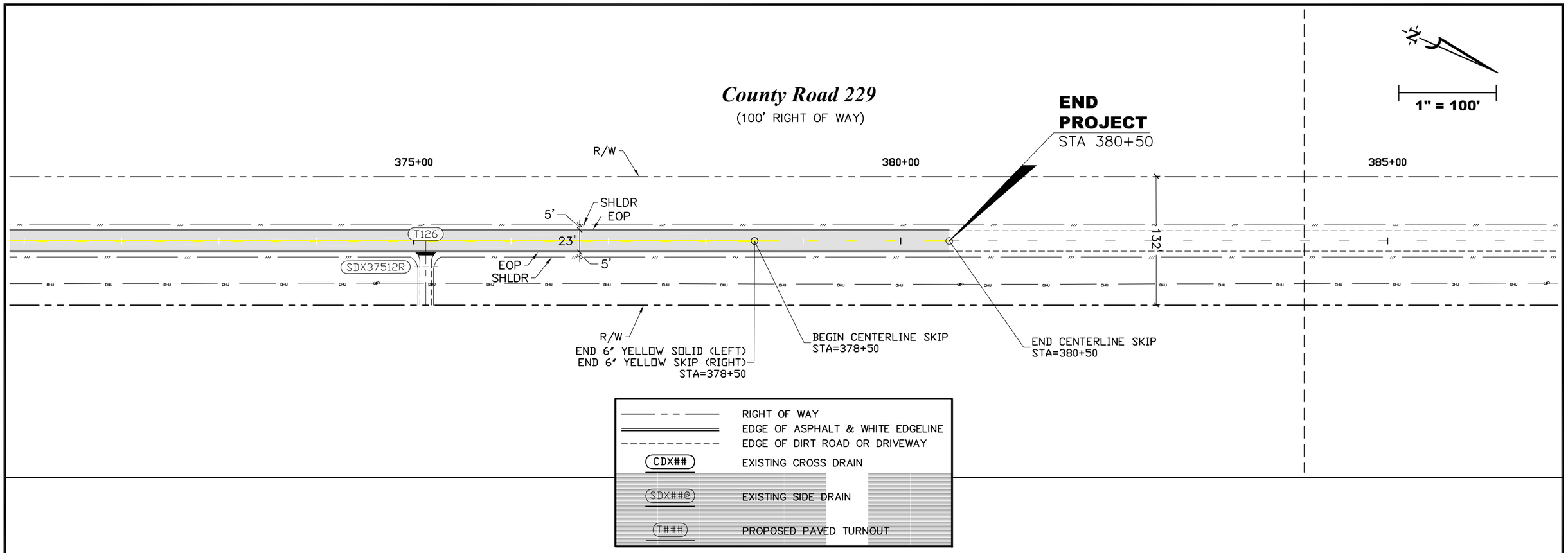
PLAN - PROPOSED CONDITIONS

DRAWING NO. **336**



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PLAN - PROPOSED CONDITIONS

DRAWING NO.

337

DRIVEWAY TURNOUT SCHEDULE

ID	STA	MATERIAL	MID–PT LENGTH (FT)	TURNOUT WIDTH (FT)	AREA (SY)
T100	170+42(R)	EXISTING ASPHALT	32	5.0	17.9
T101	170+88(L)	CONCRETE	26	5.0	14.5
T102	173+98(R)	EXISTING ASPHALT	24	5.0	13.2
T103	176+33(L)	EXISTING ASPHALT	24	5.0	13.5
T104	187+96(R)	EXISTING ASPHALT	16	5.0	9.2
T105	191+12(R)	EXISTING ASPHALT	17	5.0	9.5
T106	202+34(R)	EXISTING ASPHALT	30	5.0	16.5
T107	205+62(R)	EXISTING ASPHALT	30	5.0	16.5
T108	206+11(L)	EXISTING ASPHALT	23	5.0	12.7
T109	207+96(R)	EXISTING ASPHALT	29	5.0	16.2
T110	209+84(R)	EXISTING ASPHALT	29	5.0	16.2
T111	210+71(L)	EXISTING ASPHALT	17	5.0	9.3
T112	215+41(R)	EXISTING ASPHALT	29	5.0	16.2
T113	219+48(R)	EXISTING ASPHALT	30	5.0	16.5
T114	231+75(L)	EXISTING ASPHALT	30	5.0	16.4
T115	231+83(R)	EXISTING ASPHALT	33	5.0	18.4
T116	247+68(R)	EXISTING ASPHALT	23	5.0	12.8
T117	287+80(L)	EXISTING ASPHALT	37	5.0	20.8
T118	303+77(R)	EXISTING ASPHALT	33	5.0	18.1
T119	324+67(R)	EXISTING ASPHALT	26	5.0	14.3
T120	324+74(L)	EXISTING ASPHALT	26	5.0	14.7
T121	352+06(R)	EXISTING ASPHALT	32	5.0	18.0
T122	357+77(L)	EXISTING ASPHALT	23	5.0	12.8
T123	358+21(R)	EXISTING ASPHALT	31	5.0	17.5
T124	365+01(L)	EXISTING ASPHALT	51	5.0	28.1
T125	369+31(R)	EXISTING ASPHALT	18	5.0	10.2
T126	375+03(R)	EXISTING ASPHALT	18	5.0	10.2

ASPHALT TOTAL =	395.7
CONCRETE TOTAL =	14.5*

* INFORMATIONAL ONLY.
EXISTING CONCRETE TURNOUT TO REMAIN AS IS.

Summary Takeoff Report

Pay Item ID	Description	Quantity	Unit
0160 0004	TYPE B STABILIZATION	13300.20	SY
0285 0706 002	OBG 06 - MAIN ROAD, WIDENING	11680.55	SY
0285 0706 004	OBG 06 - SIDE ROAD, NEW LANE	705.33	SY
0286 0002	OBG 02 - DRIVEWAY TURNOUT	234.77	SY
0327 0070 100	MILLING EXISTING ASPHALT - MAIN ROAD, 1" AVG DEPTH	31525.80	SY
0332 0006	FULL DEPTH RECLAMATION - 6" LIMEROCK	10524.00	SY
0334 0052 001 000 15	SUPERPAVE ASPHALT, TRAFFIC B, PG76-22 MAIN ROAD, EXISTING LANE, 1.5"	2660	TN
0334 0052 001 000 30	SUPERPAVE ASPHALT, TRAFFIC B, PG76-22 MAIN ROAD, EXISTING LANE, 3.0"	1776	TN
0334 0052 001 002 30	SUPERPAVE ASPHALT, TRAFFIC B, PG76-22 MAIN ROAD, WIDENING, 3.0"	1971	TN
0334 0052 001 004 15	SUPERPAVE ASPHALT, TRAFFIC B, PG76-22 MAIN ROAD, NEW TURNOUT, 1.5"	20	TN
0334 0052 002 001 20	SUPERPAVE ASPHALT, TRAFFIC B, PG76-22 SIDE ROAD, NEW LANE, 2.0"	61	TN
0339 0001	MISCELLANEOUS ASPHALT PAVEMENT	8	TN
0710 1110 001	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6"	8.021	GM
0710 1112 005	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID 24"	77.275	LF
0710 1121 001 001	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6" (MAIN ROAD)	4.782	GM
0710 1121 001 002	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6" (SIDE ROAD)	0.031	GM
0710 1123 002	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SKIP, 6"	2.571	GM

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CR229 WIDENING AND RESURFACING PROJECT

PAVEMENT CONSTRUCTION QUANTITIES

DRAWING NO.
345

RELOCATED EXISTING SIGNS

ID	SIGN DESCRIPTION	STATION	CURRENT OFFSET & SIDE	MIN. OFFSET TO EDGE OF SIGN FROM ROAD CL	MIN. OFFSET TO EDGE OF SIGN FROM NEW EDGE OF SHLDR
SR19869R	R1-1 & 2 X D3-1	198+68.34	31 (R)	24' (R)	6'
SR20400R	W1-02L	204+00.03	18 (R)	24' (R)	6'
SR22100L	R2-01 (45MPH)	220+99.67	18 (L)	24' (L)	6'
SR22100R	R2-01 (55MPH)	221+00.33	18 (R)	24' (R)	6'
SR36324R	NFS-205	363+23.97	25 (R)	24' (R)	6'

NEW SIGNS

ID	SIGN DESCRIPTION	STATION	MIN. OFFSET TO EDGE OF SIGN FROM NEW EDGE OF SHLDR
SP17438L	R1-1 & 2 X D3-1	174+37.54 (L)	6'
SP20023L	R1-1 & 1 X D3-1	200+23.14 (L)	6'
SP22200L	W1-02R	221+99.67 (L)	6'
SP24000R	W1-05R	240+00.33 (R)	6'
SP26400L	W1-05R	263+99.67 (L)	6'
SP27600R	W1-02L	276+00.33 (R)	6'
SP28763R	R1-1 & 2 X D3-1	287+63.32 (R)	6'
SP29000L	W1-02R	289+99.66 (L)	6'
SP29700R	W1-02R	297+00.33 (R)	6'
SP31500L	W1-02L	314+99.67 (L)	6'
SP35150R	W1-02R	351+50.33 (R)	6'
SP36600L	W1-02L	365+99.67 (L)	6'

RELOCATED EXISTING MAILBOXES

ID	MAILBOX ADDRESS	STATION	CURRENT OFFSET & SIDE	MIN. OFFSET TO FACE OF MAILBOX FROM ROAD CL	MIN. OFFSET TO FACE OF MAILBOX FROM NEW ETW	NOTES
MBR17085R	RELOCATE EXISTING NO. 12122	170+84.83	19 (R)	20' (R)	8'	
MBR17090R	RELOCATE EXISTING NO. 12155	170+89.90	19 (R)	20' (R)	8'	
MBR17624R	RELOCATE EXISTING NO. 12234	176+24.18	19 (R)	20' (R)	8'	
MBR19147R	RELOCATE EXISTING NO. 12515	191+47.05	18 (R)	20' (R)	8'	
MBR20086L	RELOCATE EXISTING DBL. POST 3XMB NOS. 15087, 1173 & 11779	200+86.13	19 (L)	20' (L)	8'	
MBR20273L	RELOCATE EXISTING NO. 12795	202+73.43	19 (L)	20' (L)	8'	
MBR20794L	RELOCATE EXISTING NO. 12911	207+94.26	18 (L)	20' (L)	8'	
MBR20982L	RELOCATE EXISTING NO. 12917	209+82.21	19 (L)	20' (L)	8'	
MBR21111L	RELOCATE EXISTING NO. 12926	211+10.95	19 (L)	20' (L)	8'	

NEW OBJECT MARKERS

ID	SIGN DESCRIPTION	STATION
OMP21702R	OM2-2V	217+02.37 (R)
OMP21711L	OM2-2V	217+11.07 (L)
OMR17090L	OM3-L R/W	170+90.47 (L)
OMR17113L	OM3-R R/W	171+13.14 (L)
OMR18645R	OM2-2V	186+45.39 (R)
OMR18653L	OM2-2V	186+53.16 (L)
OMR23870R	OM2-2V	238+69.88 (R)

NEW OBJECT MARKERS

ID	SIGN DESCRIPTION	STATION
OMR23880L	OM2-2V	238+79.85 (L)
OMR24707R	OM2-2V	247+07.37 (R)
OMR24721L	OM2-2V	247+20.99 (L)
OMR31046R	OM2-2V	310+45.98 (R)
OMR31073L	OM2-2V	310+72.77 (L)
OMR35107R	OM2-2V	351+06.89 (R)
OMR35118L	OM2-2V	351+17.70 (L)

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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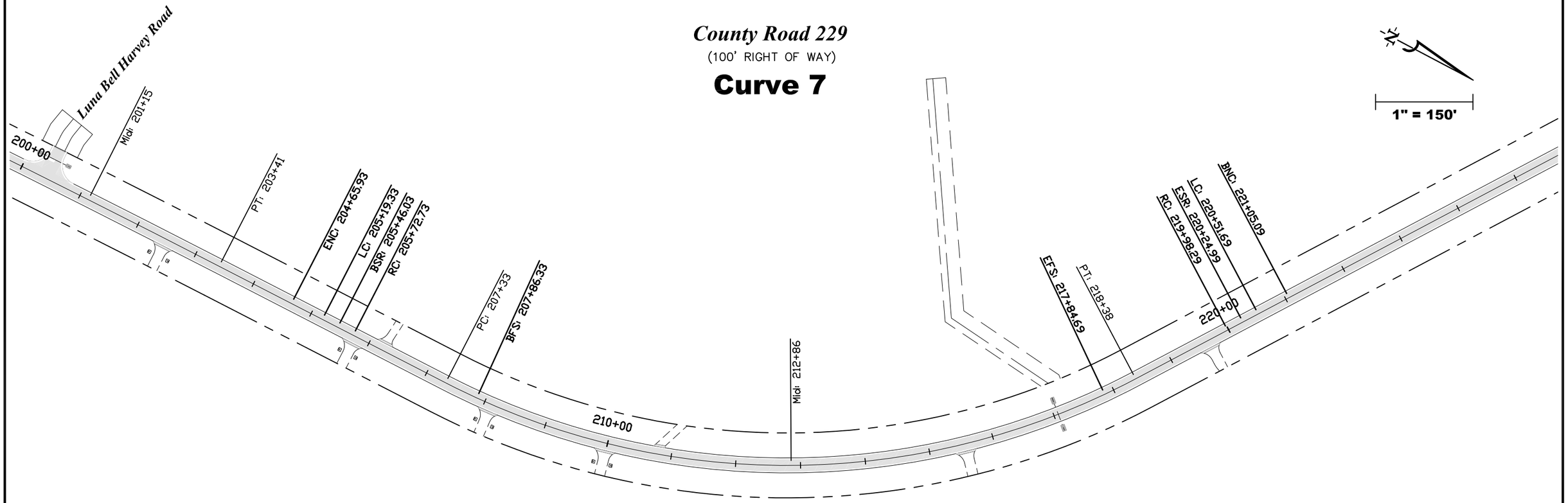
3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

NEW AND RELOCATED SIGNS

DRAWING NO.

350



EXISTING CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
7	205+38.97'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
7	205+90.92'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
7	206+16.90'	Begin Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
7	206+42.87'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
7	208+03.92'	Begin Full Super	-6.00%	-8.20%	1.20%	8.20%
7	217+67.10'	End Full Super	-6.00%	-8.20%	1.20%	8.20%
7	219+28.15'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
7	219+54.12'	End Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
7	219+80.10'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
7	220+32.05'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

PROPOSED CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
7	204+65.93'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
7	205+19.33'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
7	205+46.03'	Begin Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
7	205+72.73'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
7	207+86.33'	Begin Full Super	-6.00%	-10.00%	3.00%	10.00%
7	217+84.69'	End Full Super	-6.00%	-10.00%	3.00%	10.00%
7	219+98.29'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
7	220+24.99'	End Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
7	220+51.69'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
7	221+05.09'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

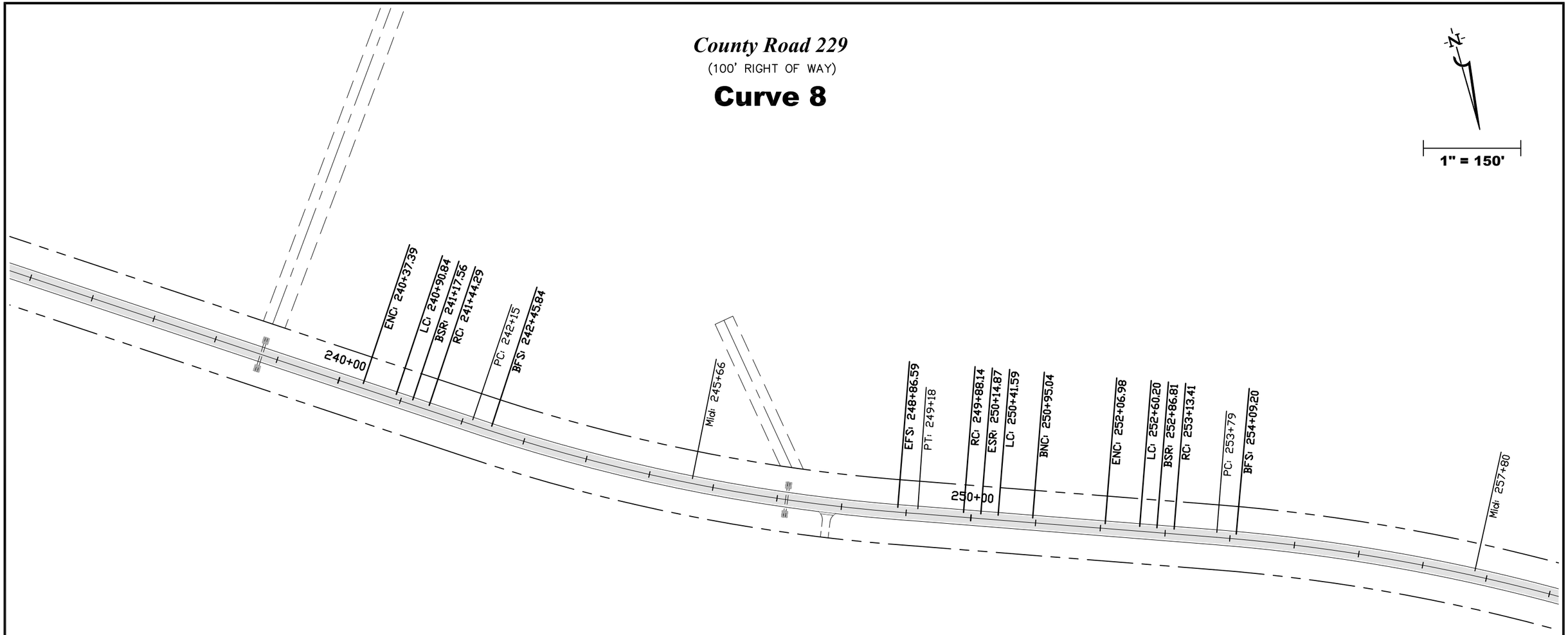
SUPERELEVATION DATA - CURVE 07

DRAWING NO.
400

County Road 229

(100' RIGHT OF WAY)

Curve 8



EXISTING CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
8	240+65.50'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
8	241+18.84'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
8	241+45.50'	Begin Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
8	241+72.17'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
8	242+62.84'	Begin Full Super	-6.00%	-5.40%	-1.60%	5.40%
8	248+69.59'	End Full Super	-6.00%	-5.40%	-1.60%	5.40%
8	249+60.26'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
8	249+86.93'	End Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
8	250+13.59'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
8	250+66.93'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

PROPOSED CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
8	240+37.39'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
8	240+90.84'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
8	241+17.56'	Begin Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
8	241+44.29'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
8	242+45.84'	Begin Full Super	-6.00%	-5.80%	-1.20%	5.80%
8	248+86.59'	End Full Super	-6.00%	-5.80%	-1.20%	5.80%
8	249+88.14'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
8	250+14.87'	End Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
8	250+41.59'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
8	250+95.04'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

SUPERELEVATION DATA - CURVE 08

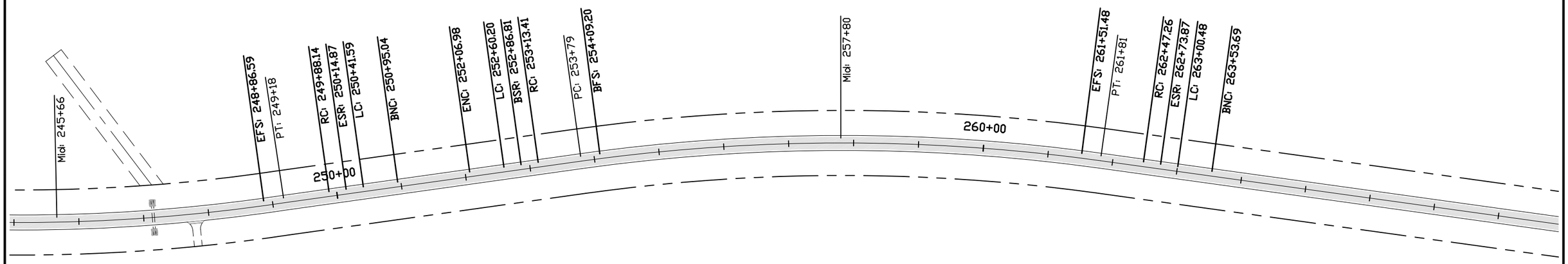
DRAWING NO. **401**

County Road 229

(100' RIGHT OF WAY)

Curve 9

1" = 150'



EXISTING CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
9	252+33.27'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
9	252+86.73'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
9	253+13.46'	Begin Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
9	253+40.19'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
9	254+25.73'	Begin Full Super	-1.80%	5.20%	-6.00%	-5.20%
9	261+34.95'	End Full Super	-1.80%	5.20%	-6.00%	-5.20%
9	262+20.49'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
9	262+47.22'	End Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
9	262+73.95'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
9	263+27.41'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

PROPOSED CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
9	252+06.98'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
9	252+60.20'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
9	252+86.81'	Begin Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
9	253+13.41'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
9	254+09.20'	Begin Full Super	-1.40%	5.60%	-6.00%	-5.60%
9	261+51.48'	End Full Super	-1.40%	5.60%	-6.00%	-5.60%
9	262+47.26'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
9	262+73.87'	End Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
9	263+00.48'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
9	263+53.69'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

SUPERELEVATION DATA - CURVE 09

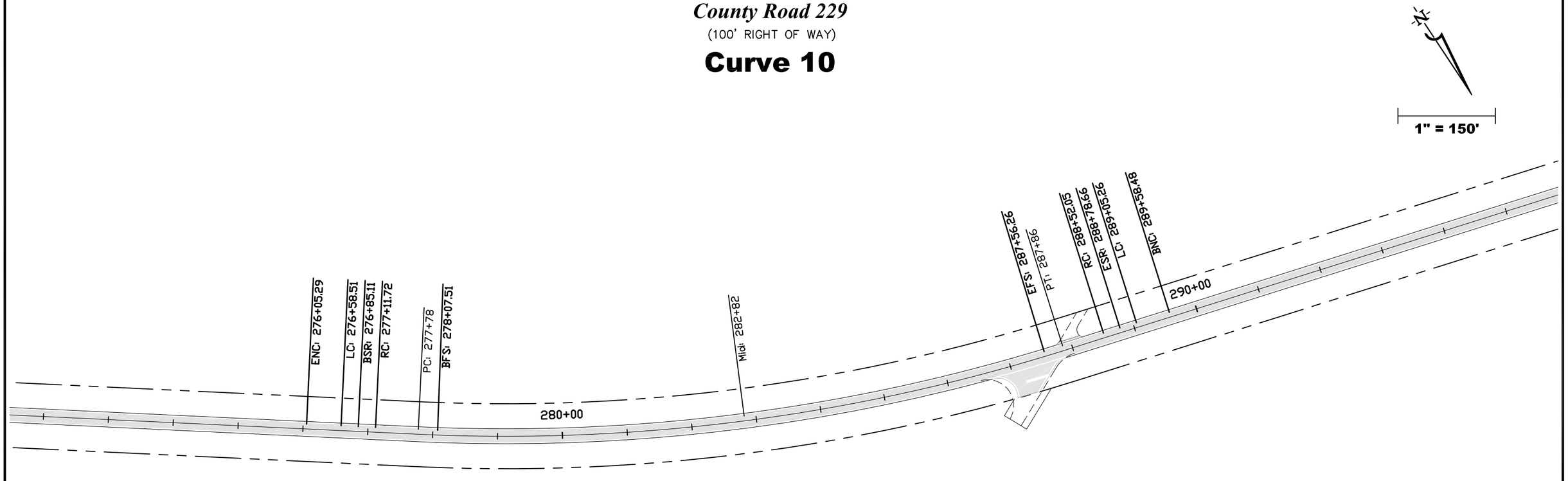
DRAWING NO.

402

County Road 229

(100' RIGHT OF WAY)

Curve 10



EXISTING CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
10	276+31.57'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
10	276+85.04'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
10	277+11.77'	Begin Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
10	277+38.50'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
10	278+24.04'	Begin Full Super	-6.00%	-5.20%	-1.80%	5.20%
10	287+39.74'	End Full Super	-6.00%	-5.20%	-1.80%	5.20%
10	288+25.27'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
10	288+52.00'	End Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
10	288+78.74'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
10	289+32.20'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

PROPOSED CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
10	276+05.29'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
10	276+58.51'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
10	276+85.11'	Begin Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
10	277+11.72'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
10	278+07.51'	Begin Full Super	-6.00%	-5.60%	-1.40%	5.60%
10	287+56.26'	End Full Super	-6.00%	-5.60%	-1.40%	5.60%
10	288+52.05'	Reverse Crown	-6.00%	-2.00%	-5.00%	2.00%
10	288+78.66'	End Shoulder Rollover	-6.00%	-2.00%	-6.00%	1.00%
10	289+05.26'	Level Crown	-6.00%	-2.00%	-6.00%	0.00%
10	289+58.48'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

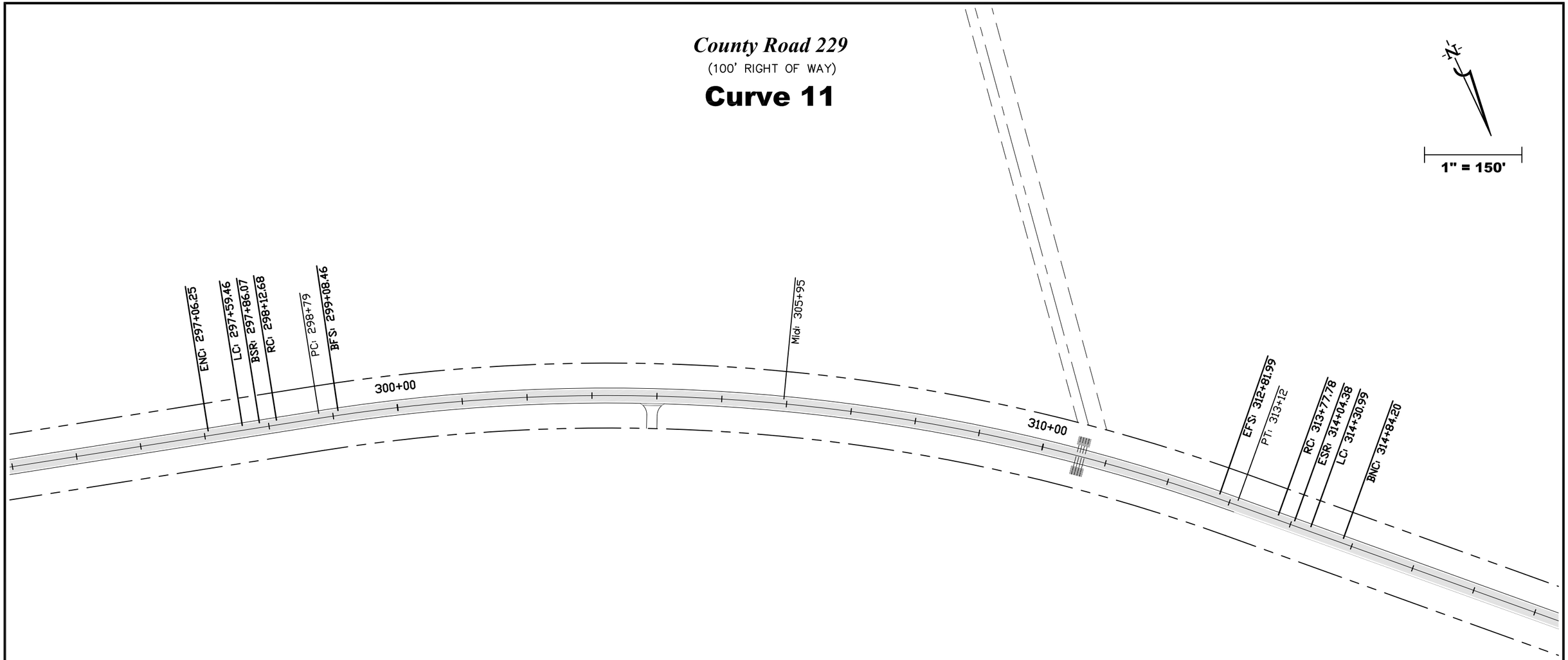
SUPERELEVATION DATA - CURVE 10

DRAWING NO. **403**

County Road 229

(100' RIGHT OF WAY)

Curve 11



EXISTING CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
11	297+32.53'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
11	297+85.99'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
11	298+12.72'	Begin Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
11	298+39.45'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
11	299+24.99'	Begin Full Super	-1.80%	5.20%	-6.00%	-5.20%
11	312+65.46'	End Full Super	-1.80%	5.20%	-6.00%	-5.20%
11	313+51.00'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
11	313+77.73'	End Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
11	314+04.46'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
11	314+57.92'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

PROPOSED CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
11	297+06.25'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
11	297+59.46'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
11	297+86.07'	Begin Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
11	298+12.68'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
11	299+08.46'	Begin Full Super	-1.40%	5.60%	-6.00%	-5.60%
11	312+81.99'	End Full Super	-1.40%	5.60%	-6.00%	-5.60%
11	313+77.78'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
11	314+04.38'	End Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
11	314+30.99'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
11	314+84.20'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

SUPERELEVATION DATA - CURVE 11

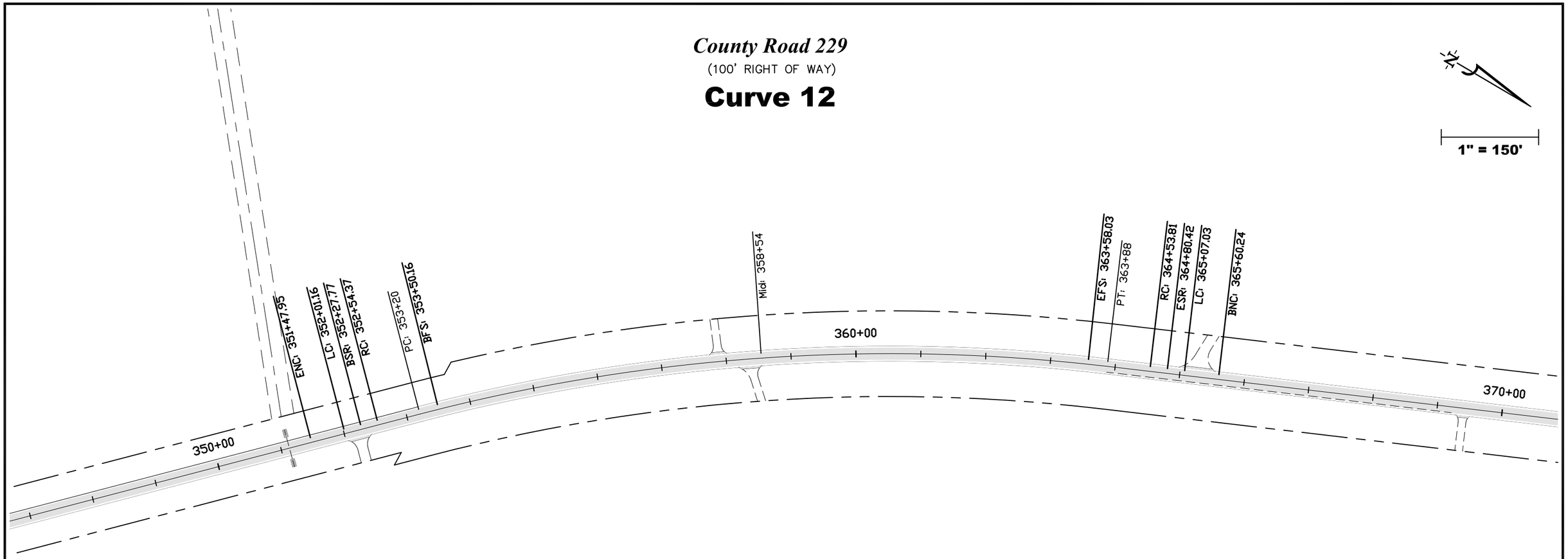
DRAWING NO.

404

County Road 229

(100' RIGHT OF WAY)

Curve 12



1" = 150'

EXISTING CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
12	351+74.23'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
12	352+27.69'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
12	352+54.42'	Begin Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
12	352+81.15'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
12	353+66.69'	Begin Full Super	-1.80%	5.20%	-6.00%	-5.20%
12	363+41.50'	End Full Super	-1.80%	5.20%	-6.00%	-5.20%
12	364+27.04'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
12	364+53.77'	End Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
12	364+80.50'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
12	365+33.96'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

PROPOSED CONDITIONS

Curve No.	Station	Description	Left Outside Shoulder	Left Outside Lane	Right Outside Shoulder	Right Outside Lane
12	351+47.95'	End Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%
12	352+01.16'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
12	352+27.77'	Begin Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
12	352+54.37'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
12	353+50.16'	Begin Full Super	-1.40%	5.60%	-6.00%	-5.60%
12	363+58.03'	End Full Super	-1.40%	5.60%	-6.00%	-5.60%
12	364+53.81'	Reverse Crown	-5.00%	2.00%	-6.00%	-2.00%
12	364+80.42'	End Shoulder Rollover	-6.00%	1.00%	-6.00%	-2.00%
12	365+07.03'	Level Crown	-6.00%	0.00%	-6.00%	-2.00%
12	365+60.24'	Begin Normal Crown	-6.00%	-2.00%	-6.00%	-2.00%

REVISIONS

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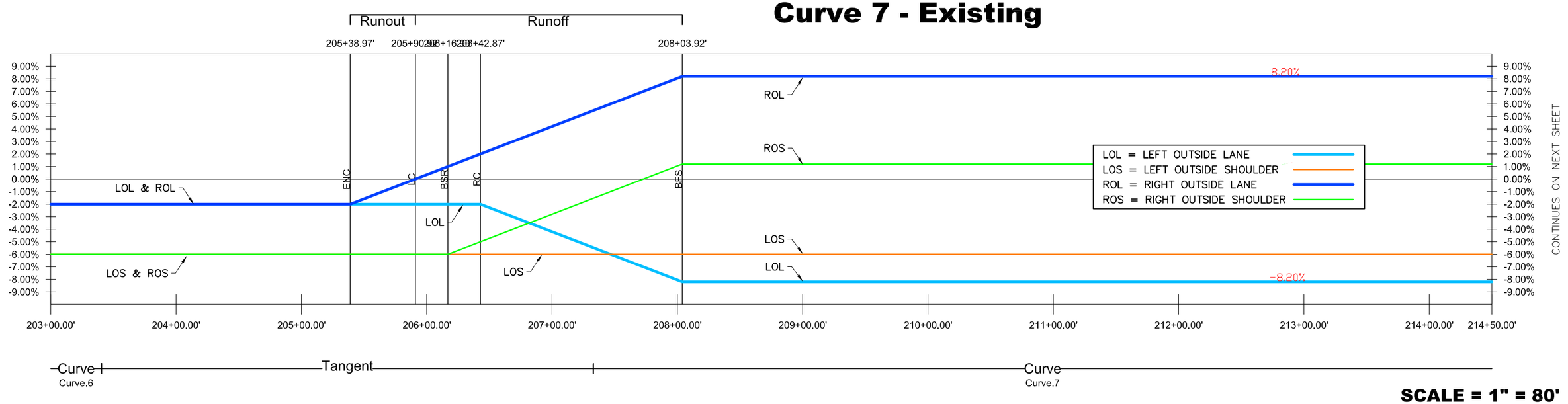
CR229 WIDENING AND RESURFACING PROJECT

SUPERELEVATION DATA - CURVE 12

DRAWING NO. **405**

County Road 229

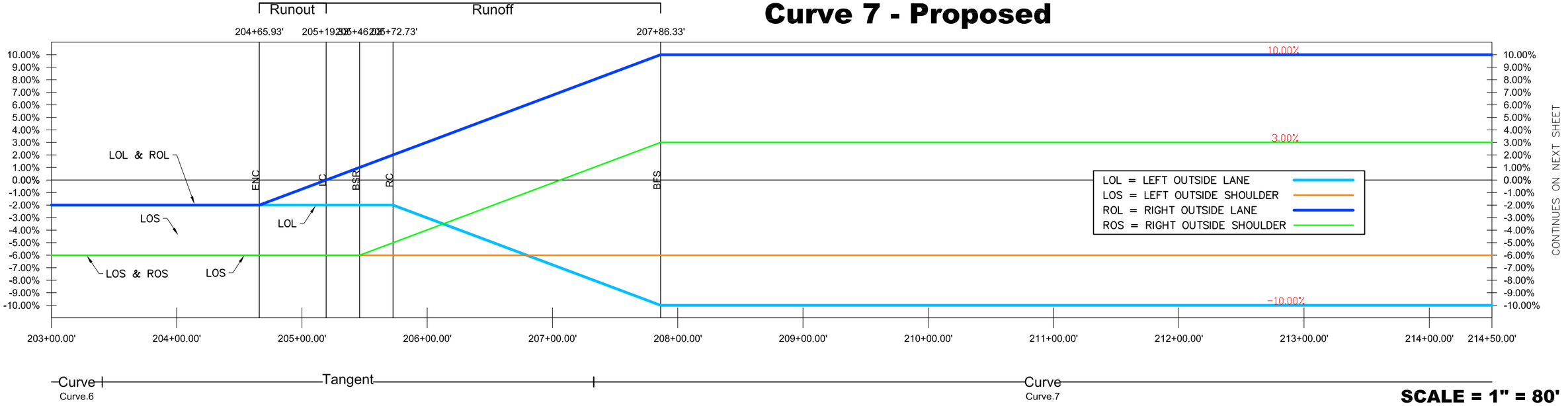
Curve 7 - Existing



SCALE = 1" = 80'

County Road 229

Curve 7 - Proposed



SCALE = 1" = 80'

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

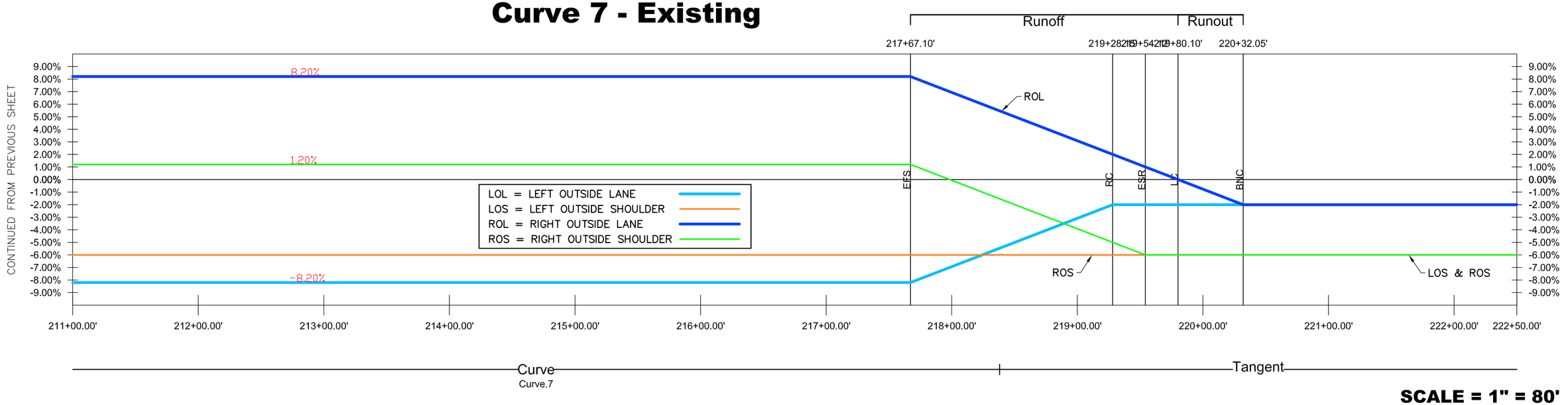
SUPERELEVATION VIEWS

DRAWING NO.

410-A

County Road 229

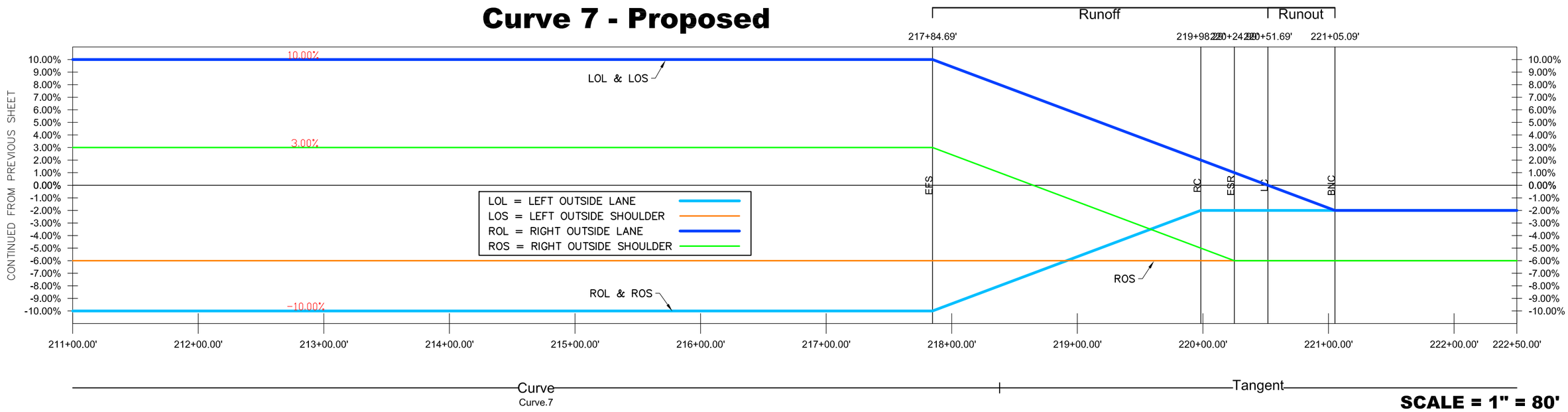
Curve 7 - Existing



SCALE = 1" = 80'

County Road 229

Curve 7 - Proposed



SCALE = 1" = 80'

REVISIONS

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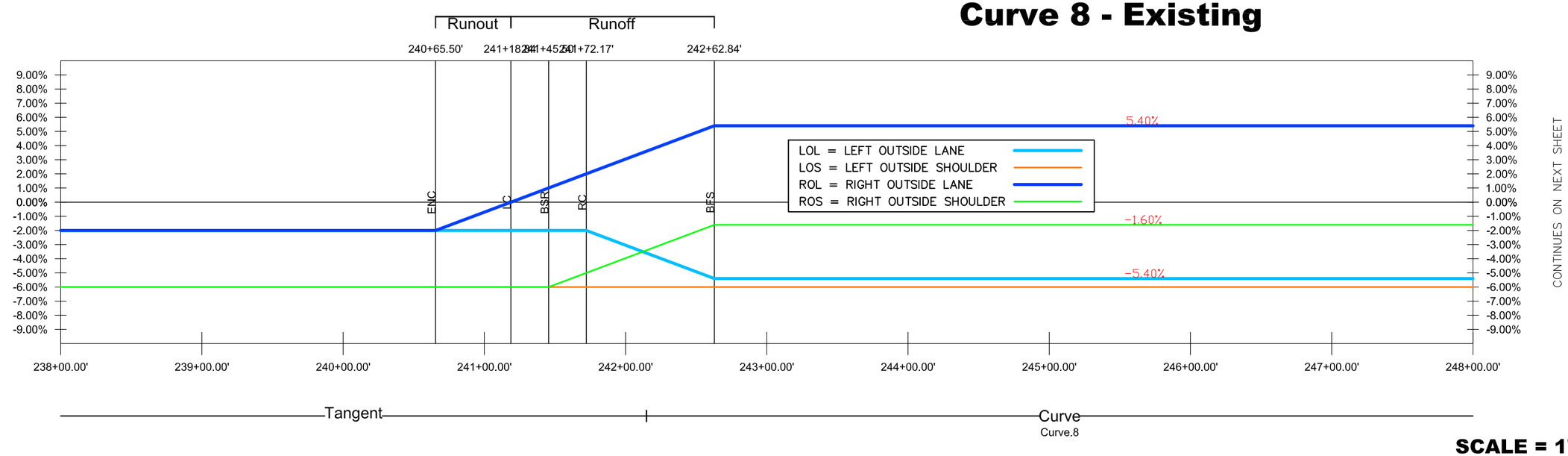
SUPERELEVATION VIEWS

DRAWING NO.

410-B

County Road 229

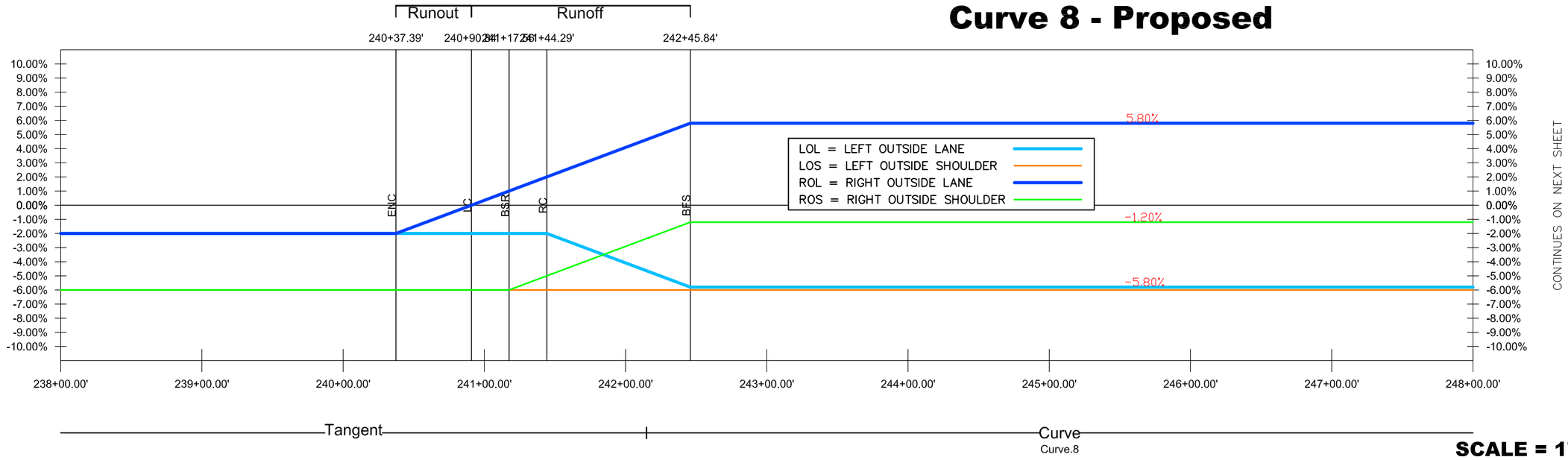
Curve 8 - Existing



SCALE = 1" = 80'

County Road 229

Curve 8 - Proposed



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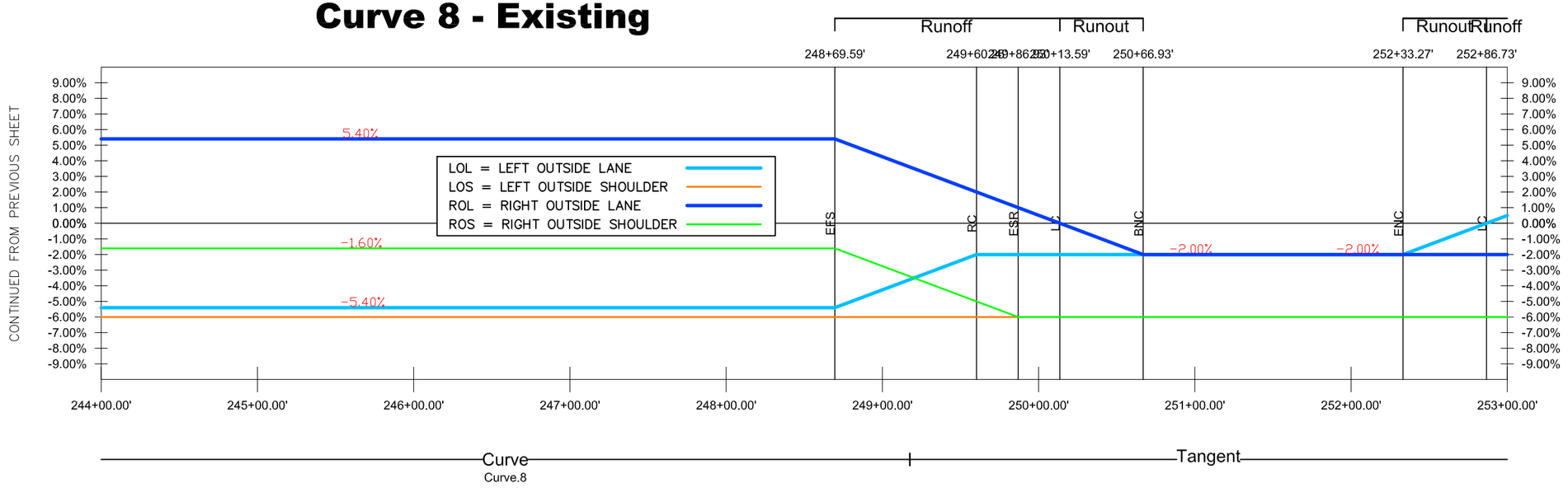
SUPERELEVATION VIEWS

DRAWING NO.

411-A

County Road 229

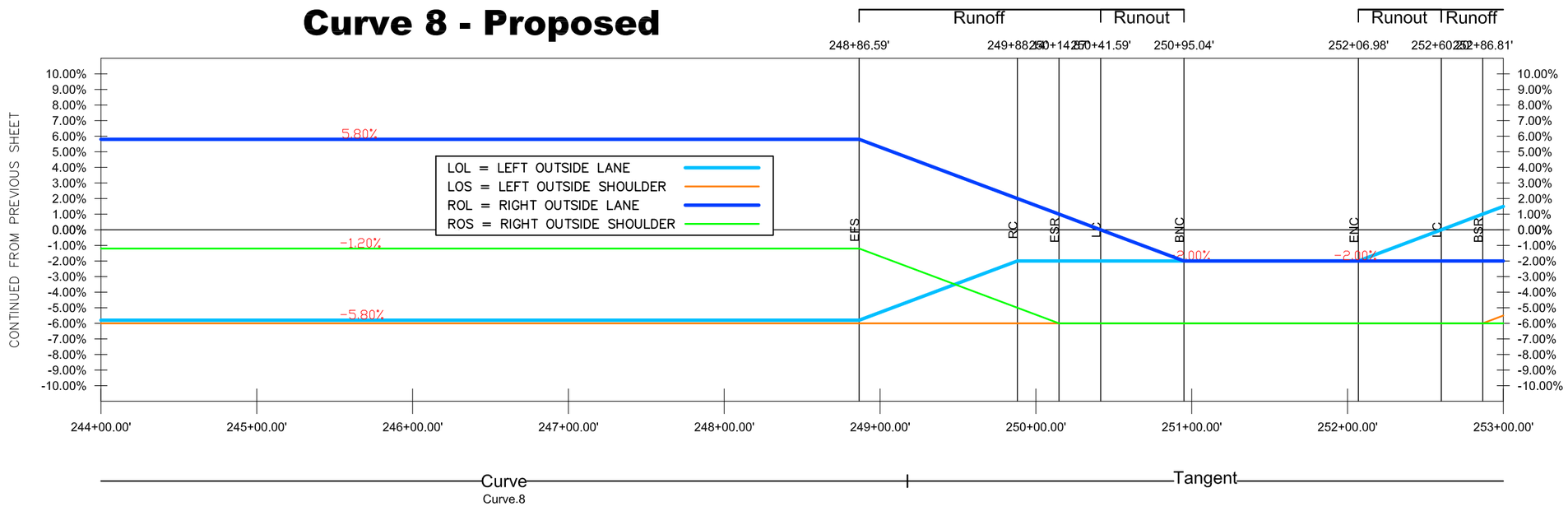
Curve 8 - Existing



SCALE = 1" = 80'

County Road 229

Curve 8 - Proposed



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CR229 WIDENING AND RESURFACING PROJECT

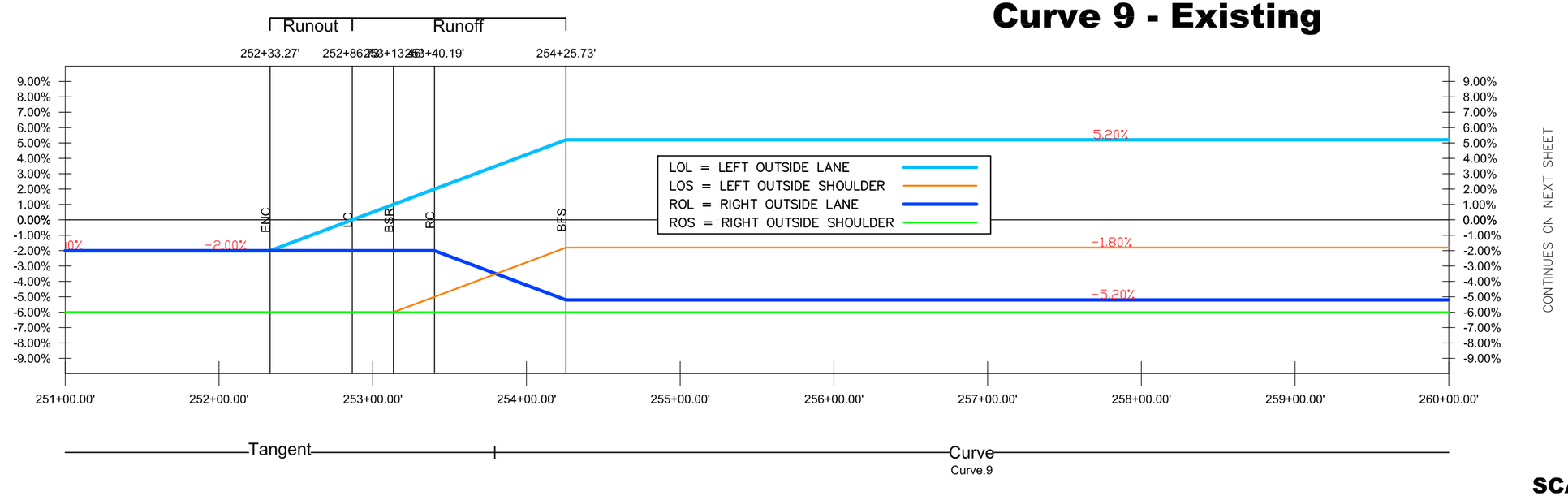
SUPERELEVATION VIEWS

DRAWING NO.

411-B

County Road 229

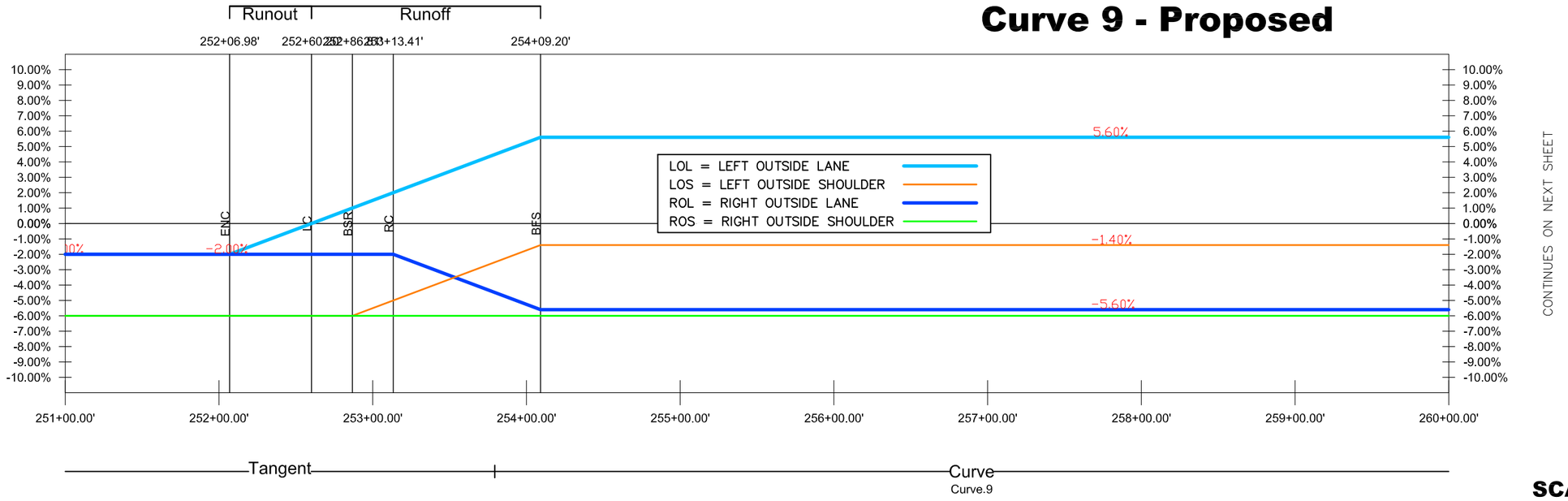
Curve 9 - Existing



SCALE = 1" = 80'

County Road 229

Curve 9 - Proposed



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CR229 WIDENING AND RESURFACING PROJECT

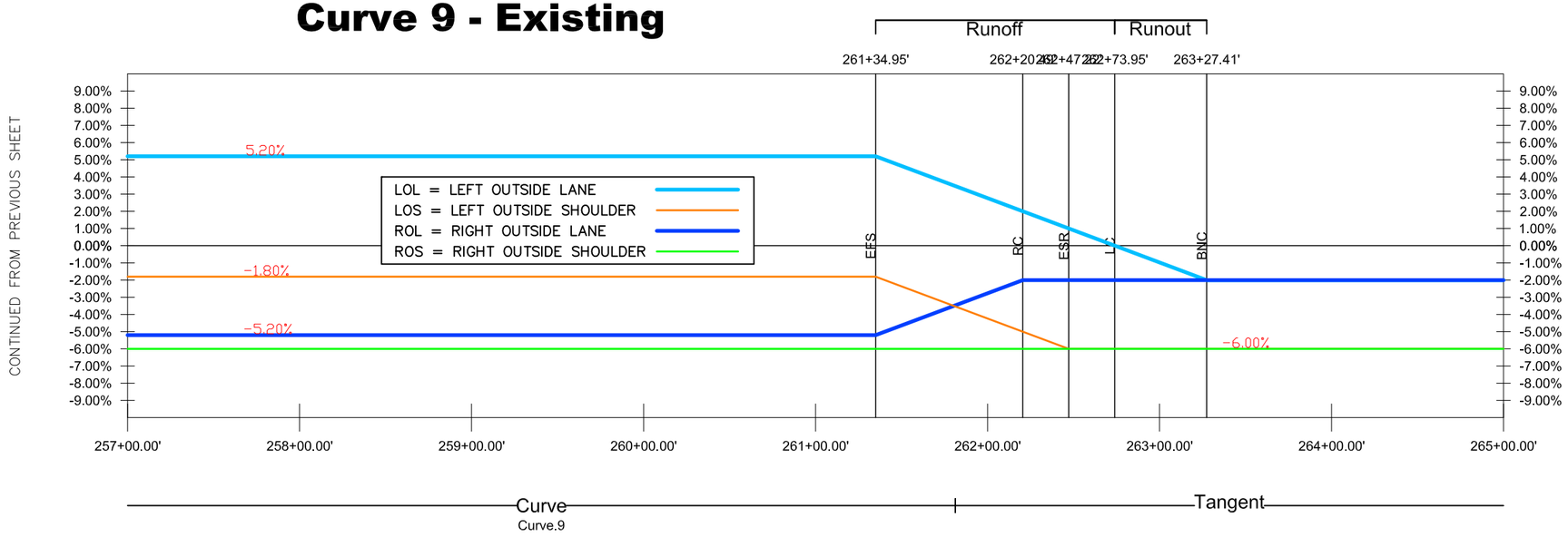
SUPERELEVATION VIEWS

DRAWING NO.

412-A

County Road 229

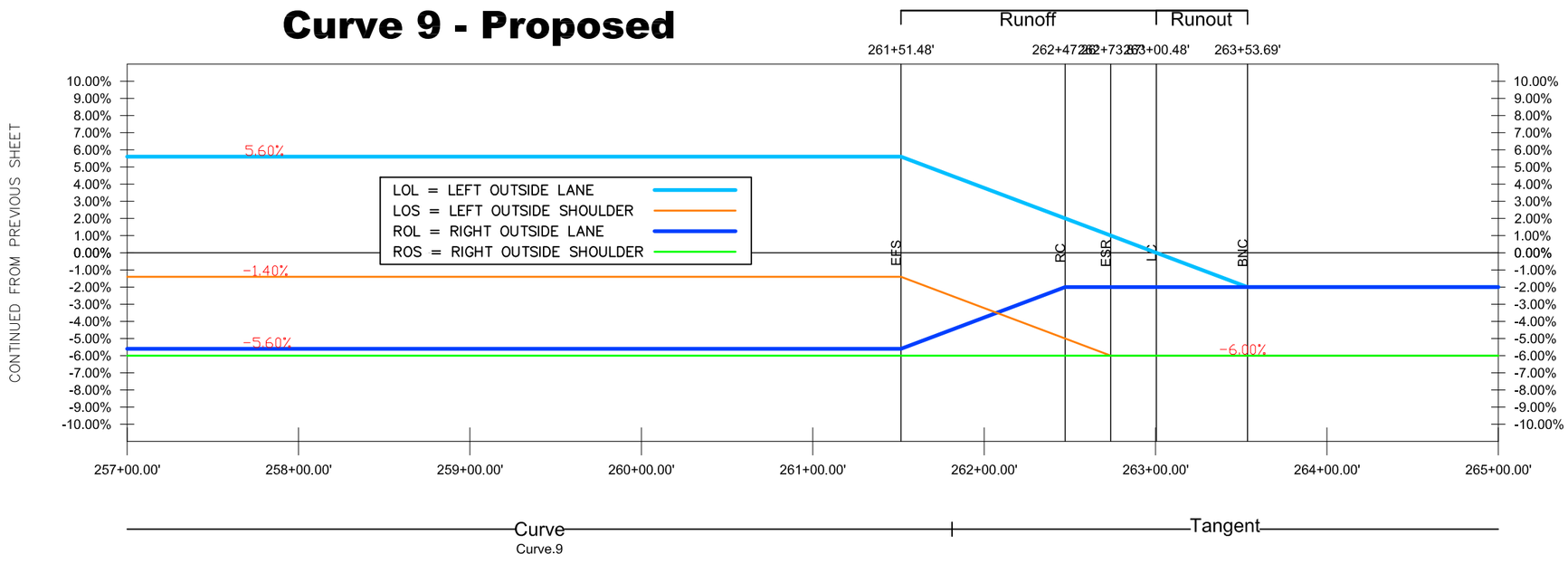
Curve 9 - Existing



SCALE = 1" = 80'

County Road 229

Curve 9 - Proposed



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CR229 WIDENING AND RESURFACING PROJECT

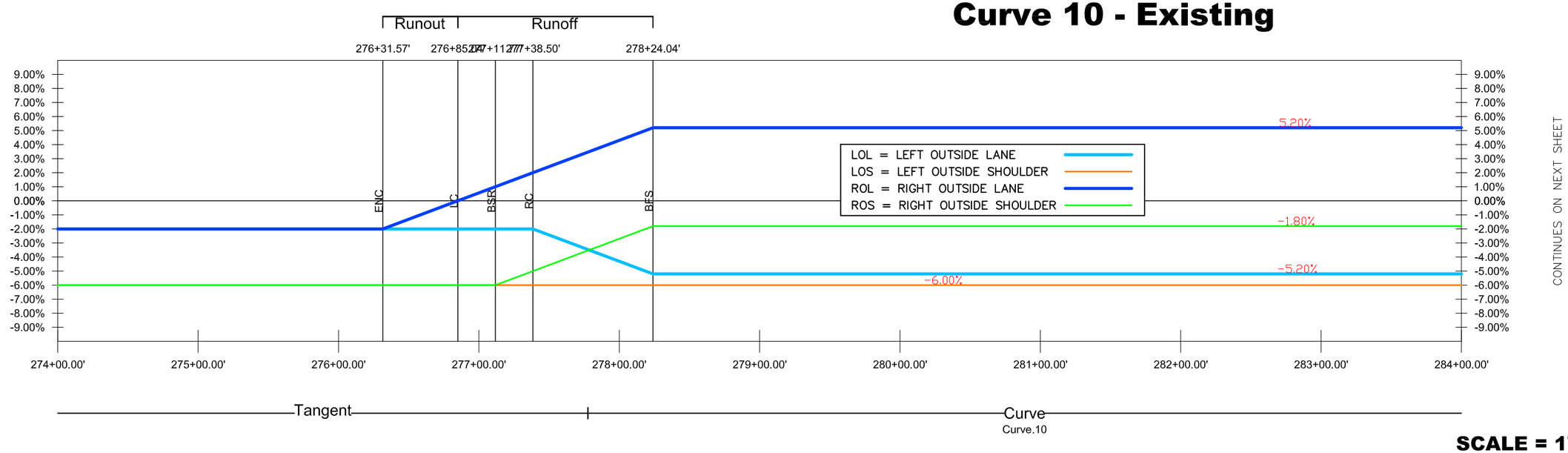
SUPERELEVATION VIEWS

DRAWING NO.

412-B

County Road 229

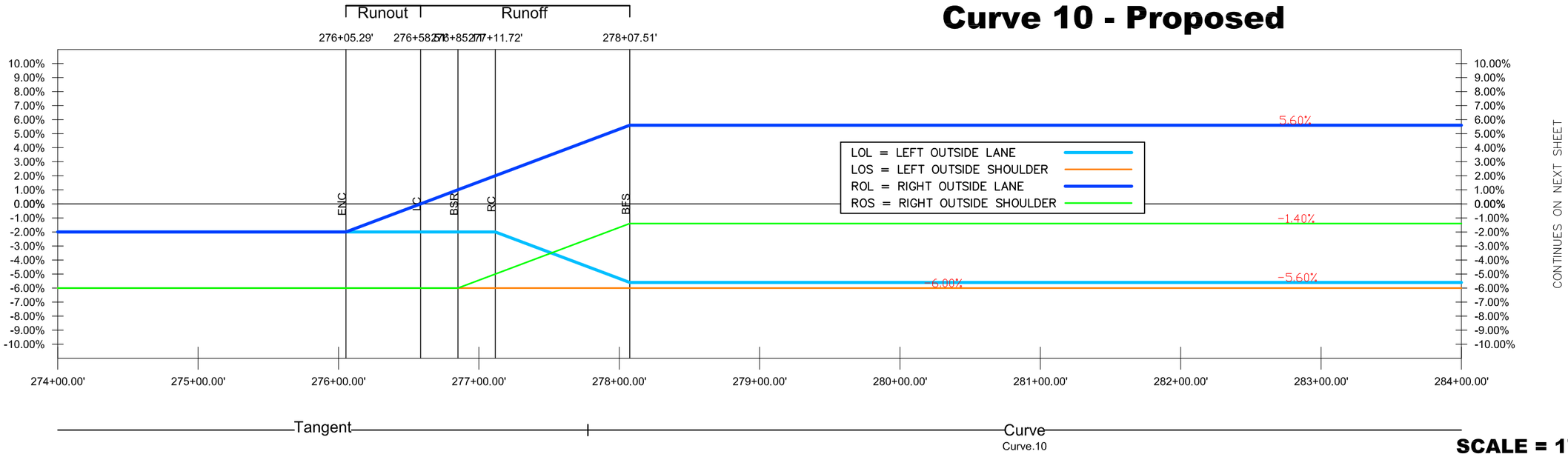
Curve 10 - Existing



SCALE = 1" = 80'

County Road 229

Curve 10 - Proposed



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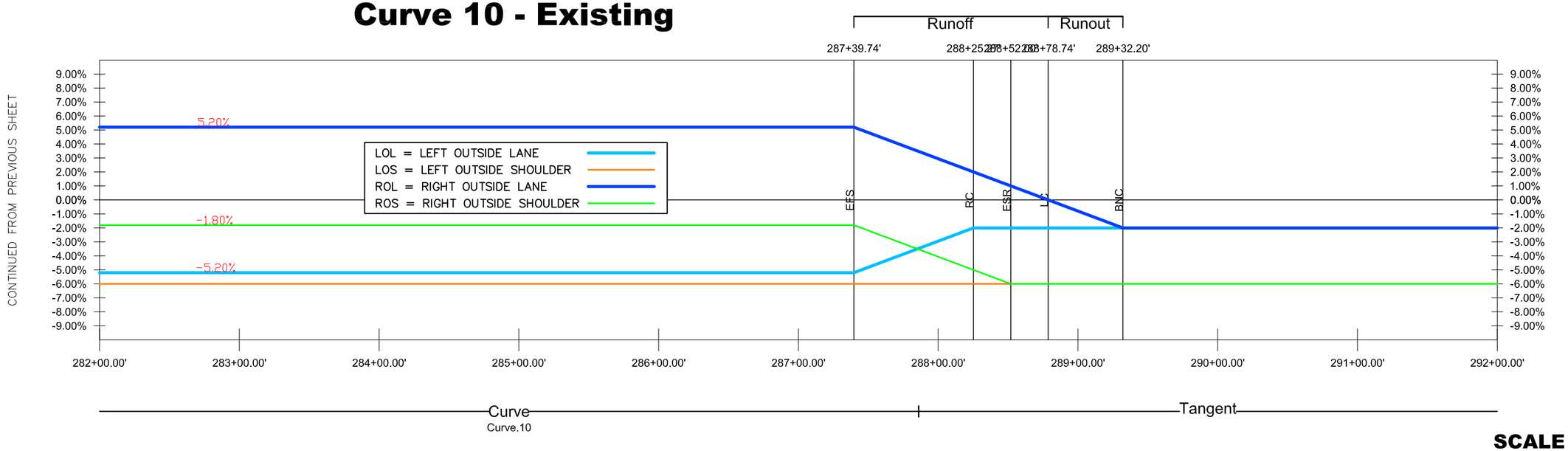
SUPERELEVATION VIEWS

DRAWING NO.

413-A

County Road 229

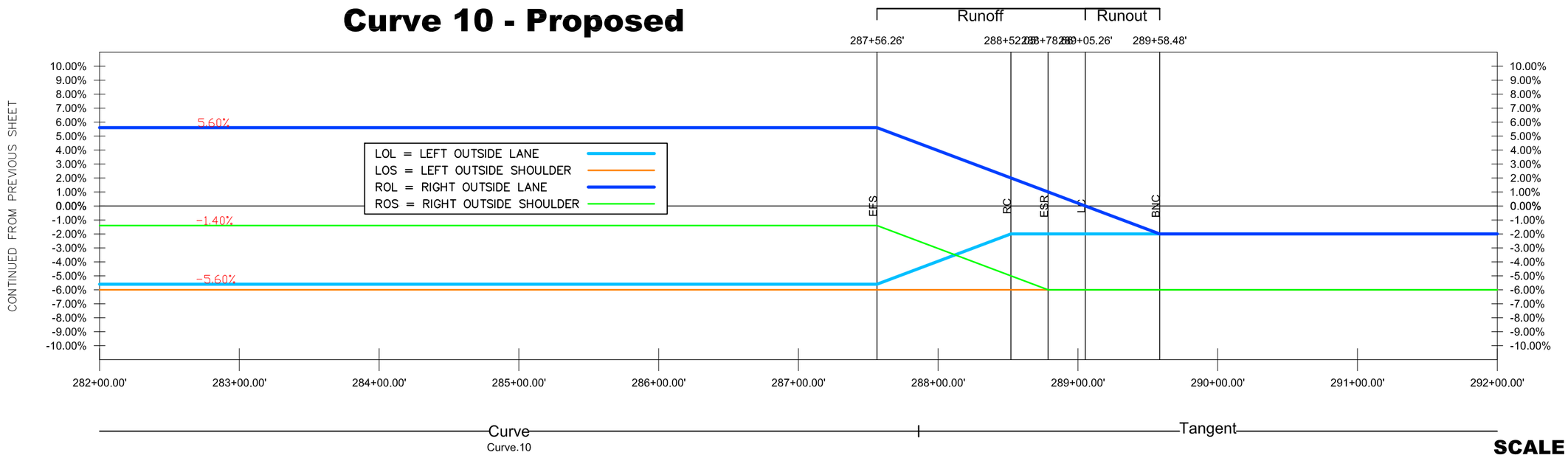
Curve 10 - Existing



SCALE = 1" = 80'

County Road 229

Curve 10 - Proposed



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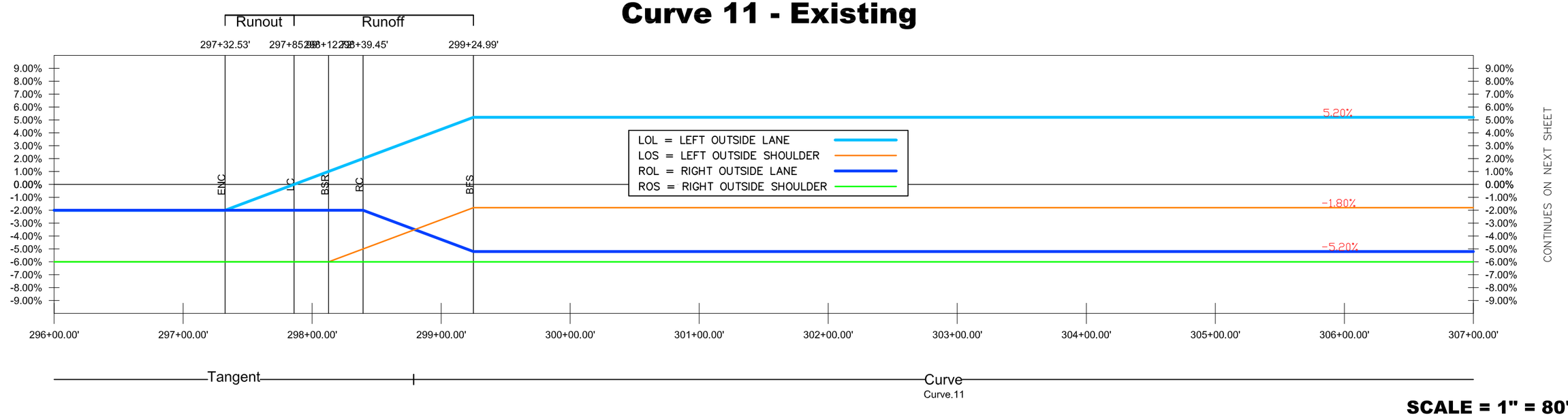
SUPERELEVATION VIEWS

DRAWING NO.

413-B

County Road 229

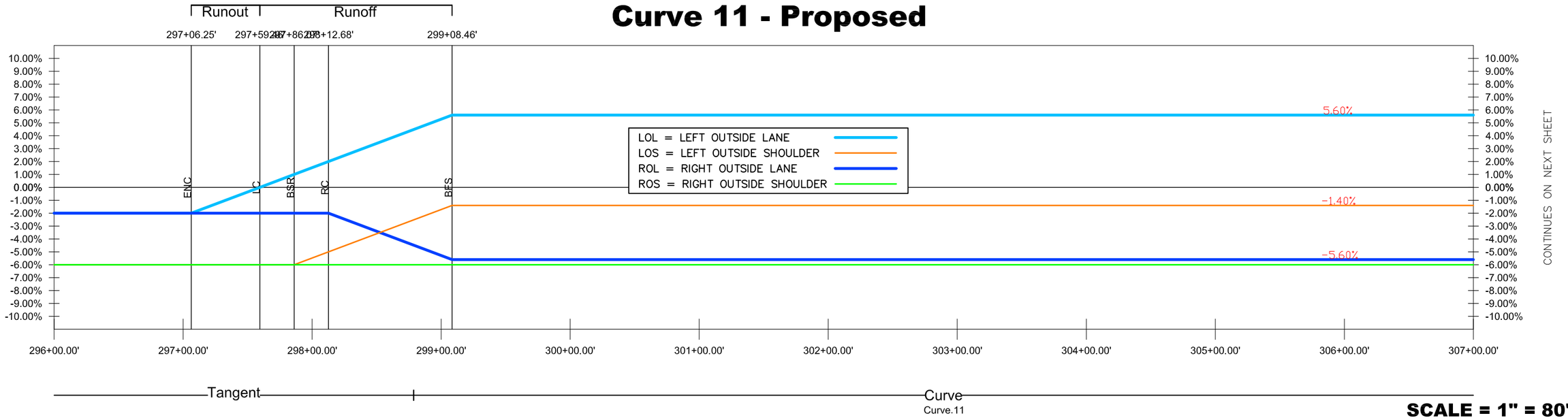
Curve 11 - Existing



SCALE = 1" = 80'

County Road 229

Curve 11 - Proposed



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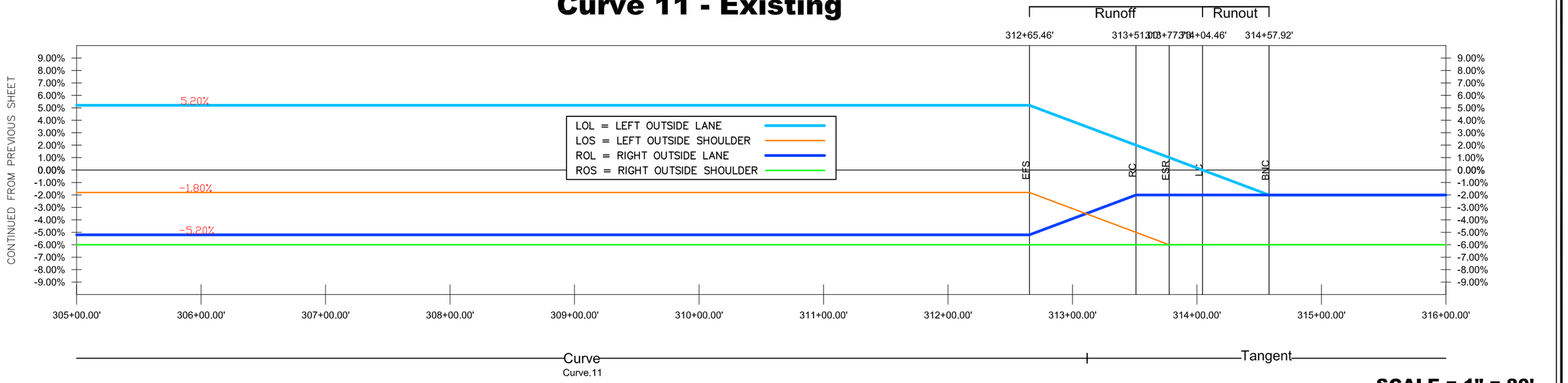
SUPERELEVATION VIEWS

DRAWING NO.

414-A

County Road 229

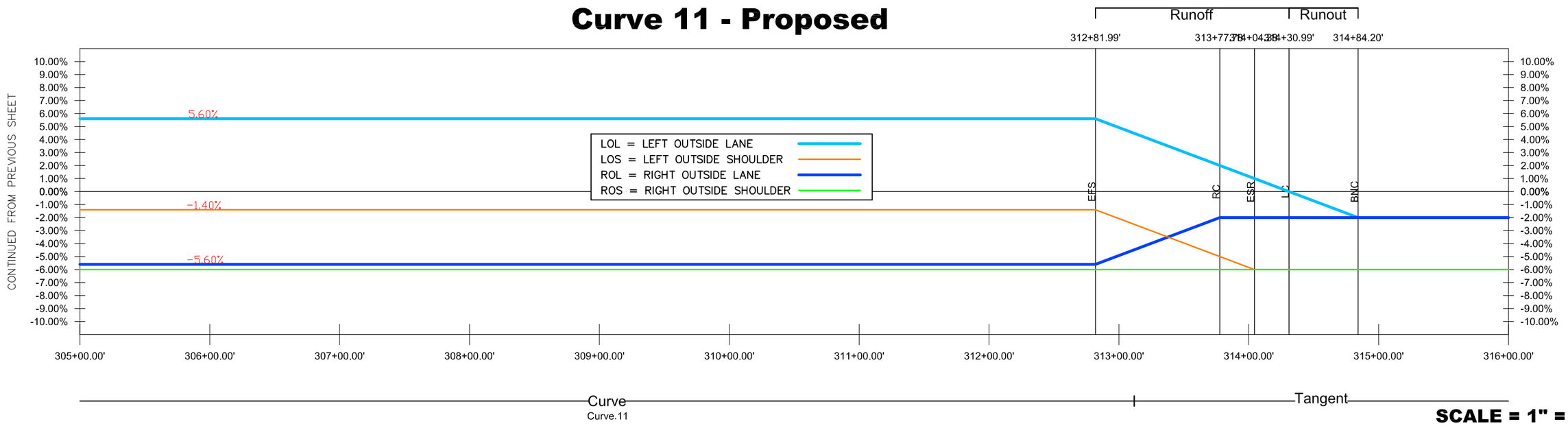
Curve 11 - Existing



SCALE = 1" = 80'

County Road 229

Curve 11 - Proposed



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CR229 WIDENING AND RESURFACING PROJECT

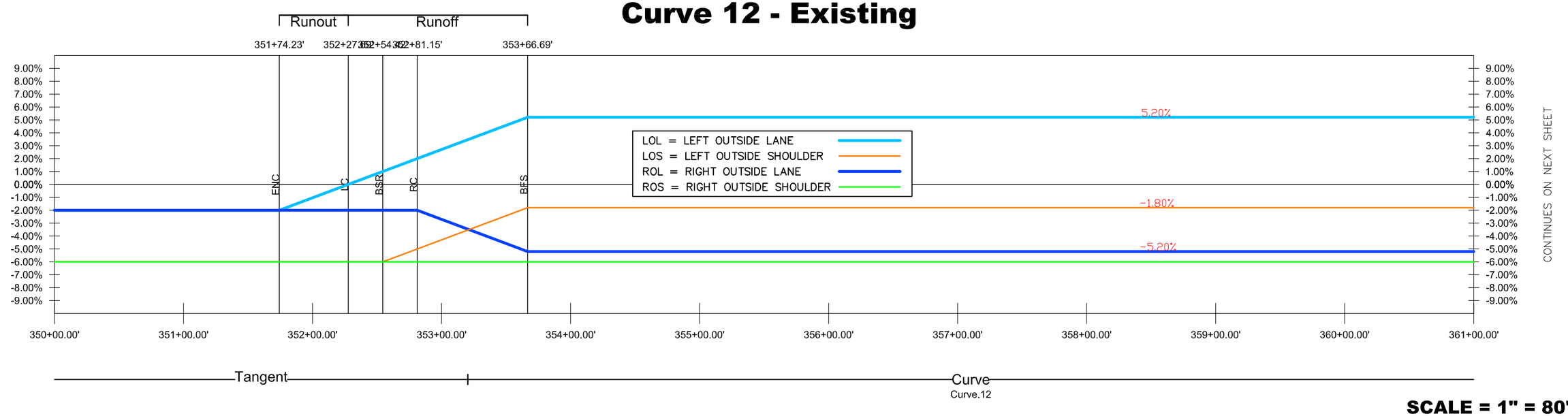
SUPERELEVATION VIEWS

DRAWING NO.

414-B

County Road 229

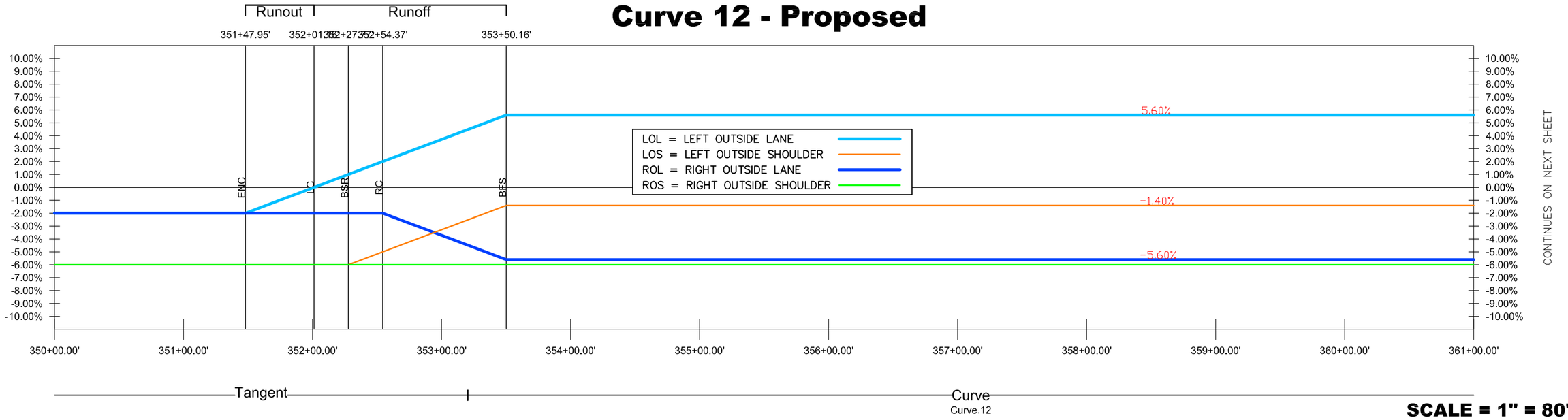
Curve 12 - Existing



SCALE = 1" = 80'

County Road 229

Curve 12 - Proposed



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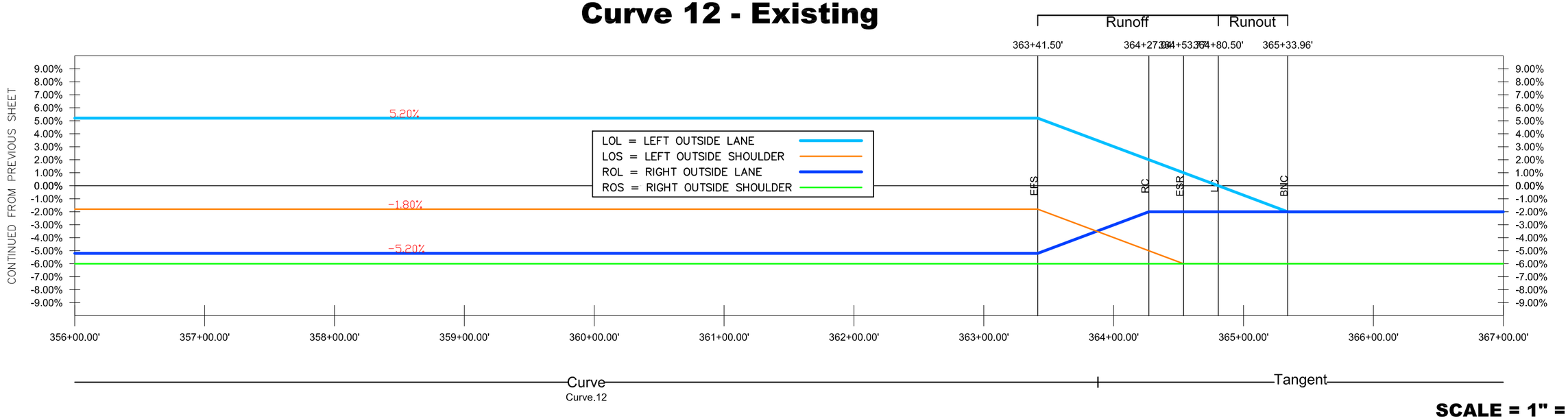
SUPERELEVATION VIEWS

DRAWING NO.

415-A

County Road 229

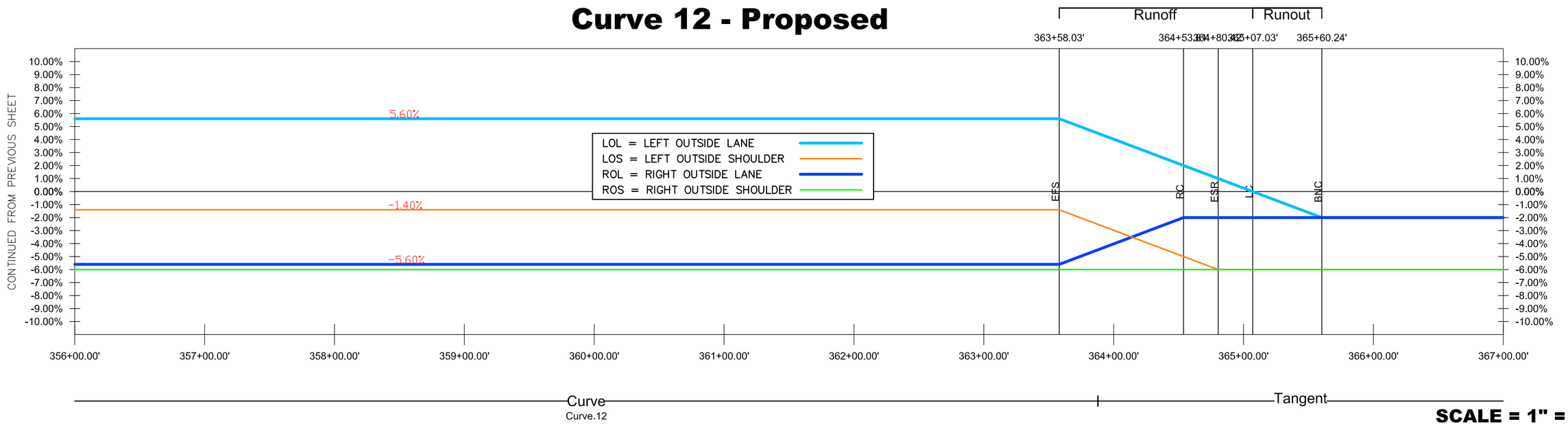
Curve 12 - Existing



SCALE = 1" = 80'

County Road 229

Curve 12 - Proposed



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CR229 WIDENING AND RESURFACING PROJECT

SUPERELEVATION VIEWS

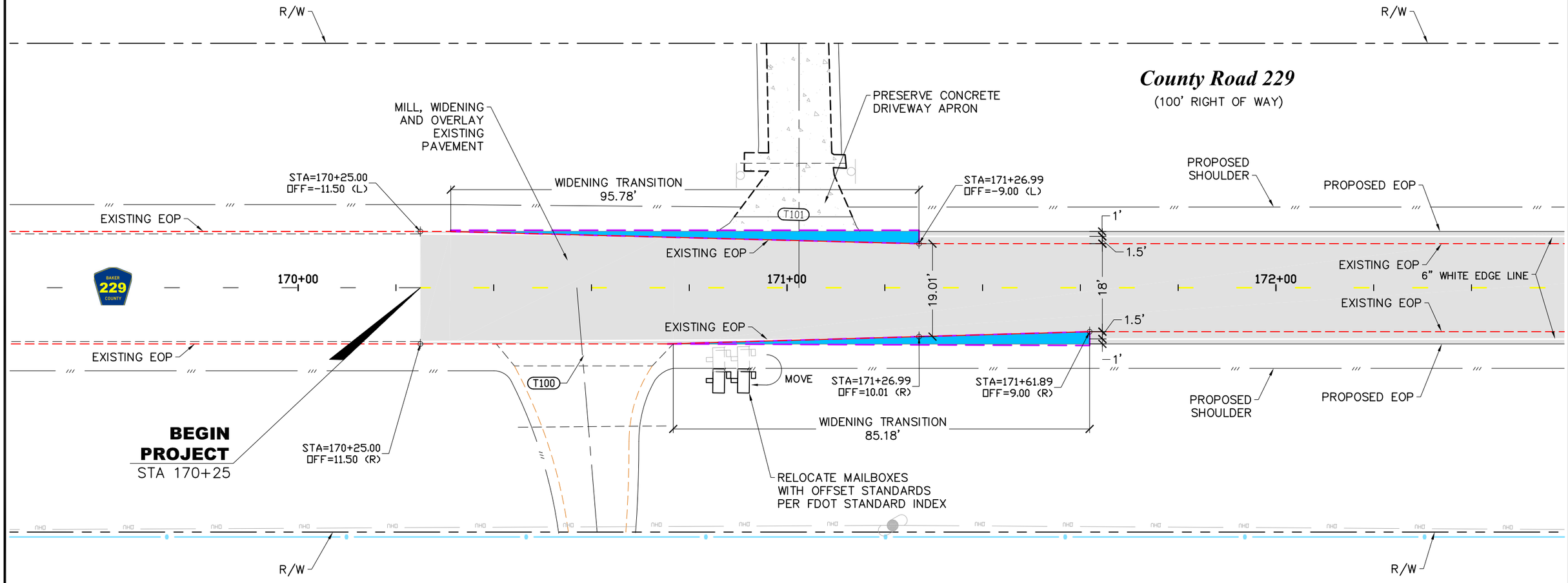
DRAWING NO.

415-B

BEGINNING PAVEMENT TRANSITION			
TRANSITION WIDENING - LEFT SIDE			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 6	240	26.67
ASPAHLT PAVEMENT	3" SP12.5	207	23.00

N

1" = 20'



PAVEMENT NOTES:

1. OPTIONAL BASE GROUP (OBG) AREAS INCLUDE 4" OF BASE EXTENSION.
2. PRESERVE THE EXISTING CONCRETE DRIVEWAY AT TURNOUT T101.

BEGINNING PAVEMENT TRANSITION			
TRANSITION WIDENING - RIGHT SIDE			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 6	122	13.56
ASPAHLT PAVEMENT	3" SP12.5	107	11.89

PAVEMENT TRANSITION NOTES:

1. CONTRACTOR TO COMPLETE PAVEMENT TRANSITIONS TO MATCH EXISTING PAVEMENT AND LANE WIDTHS AT THE LIMITS OF THE PROJECT.
2. CONTACTOR TO COMPLETE SHOULDER GRADING TRANSITIONS TO MATCH SHOULDERS AND SLOPES AT THE LIMITS OF THE PROJECT.

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

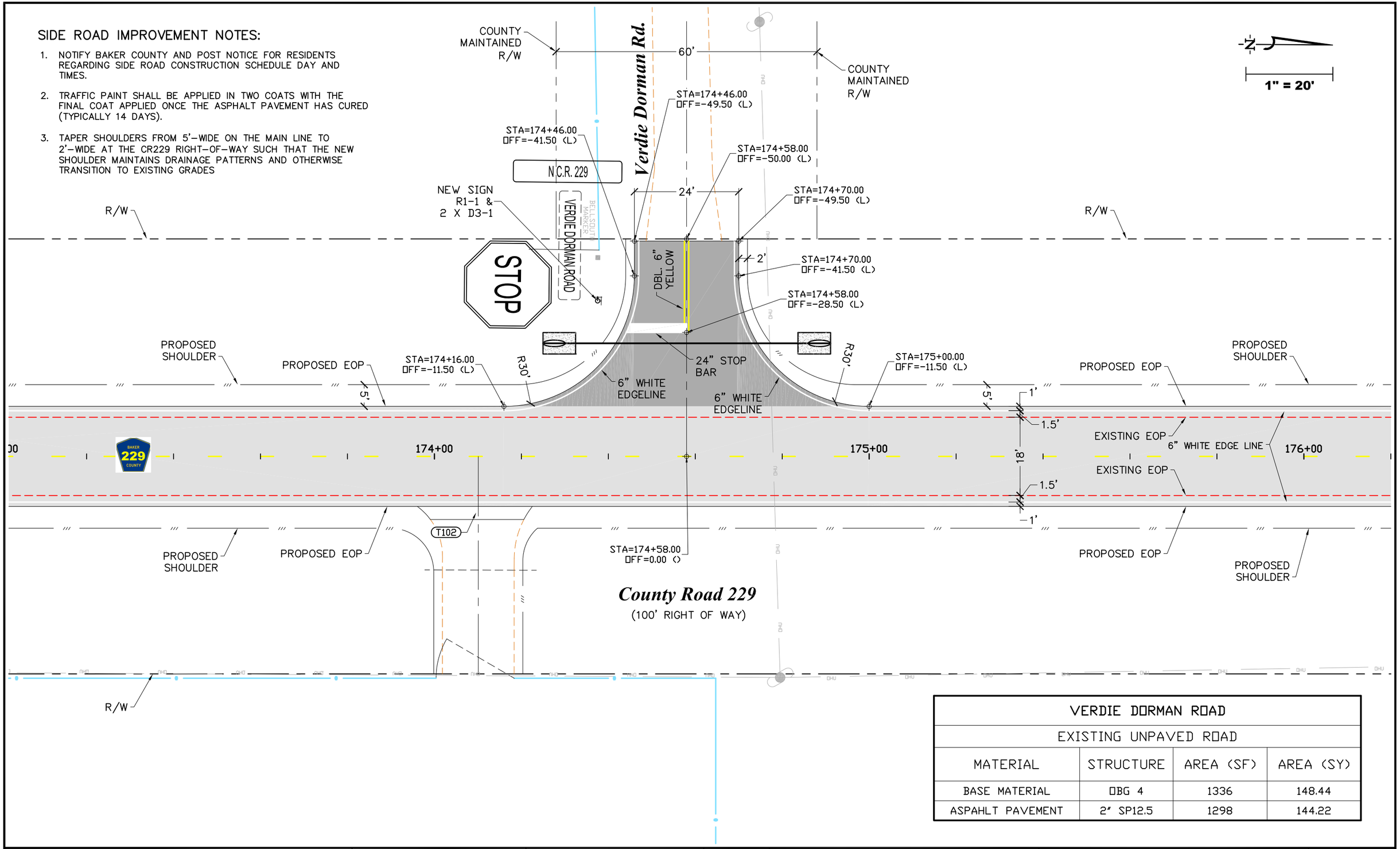
PAVEMENT GEOMETRY PLANS

DRAWING NO.

420

SIDE ROAD IMPROVEMENT NOTES:

1. NOTIFY BAKER COUNTY AND POST NOTICE FOR RESIDENTS REGARDING SIDE ROAD CONSTRUCTION SCHEDULE DAY AND TIMES.
2. TRAFFIC PAINT SHALL BE APPLIED IN TWO COATS WITH THE FINAL COAT APPLIED ONCE THE ASPHALT PAVEMENT HAS CURED (TYPICALLY 14 DAYS).
3. TAPER SHOULDERS FROM 5'–WIDE ON THE MAIN LINE TO 2'–WIDE AT THE CR229 RIGHT–OF–WAY SUCH THAT THE NEW SHOULDER MAINTAINS DRAINAGE PATTERNS AND OTHERWISE TRANSITION TO EXISTING GRADES



VERDIE DORMAN ROAD			
EXISTING UNPAVED ROAD			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 4	1336	148.44
ASPAHLT PAVEMENT	2" SP12.5	1298	144.22

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CR229 WIDENING AND RESURFACING PROJECT

PAVEMENT GEOMETRY PLANS

DRAWING NO. **421**

EARLIS HARVEY ROAD			
EXISTING UNPAVED ROAD			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	DBG 4	1339	148.78
ASPAHLT PAVEMENT	2" SP12.5	1301	144.56

1" = 20'

R/W

County Road 229

(100' RIGHT OF WAY)

PROPOSED GUARDRAIL

PROPOSED SHOULDER

PROPOSED GUARDRAIL END TREATMENT

STA=198+50.00
OFF=0.00 (R)

PROPOSED SHOULDER

PROPOSED EOP

STA=199+98.62
OFF=-11.50 (L)

R1-1 X 1

1'

1.5'

18'

PROPOSED EOP

EXISTING EOP

6" WHITE EDGE LINE

198+00

199+00

200+00

EXISTING EOP

1.5'

1'

PROPOSED EOP

STA=198+08.00
OFF=11.50 (R)

6" WHITE EDGELINE

24" STOP BAR

6" WHITE EDGELINE

STA=198+92.01
OFF=11.50 (R)

1'

5'

PROPOSED GUARDRAIL

PROPOSED SHOULDER

R30'

R30'

PROPOSED SHOULDER

PROPOSED EOP

STA=198+50.00
OFF=28.50 (R)

DBL. 6" YELLOW

24'

A2

R/W

STA=198+36.92
OFF=49.50 (R)

COUNTY MAINTAINED R/W

60'

Earlis Harvey Road

BELLSOUTH MARKER

STA=198+48.16
OFF=50.00 (R)

EARLIS HARVEY RD

NEW SIGN
R1-1 &
2 X D3-1

N.C.R. 229

STOP

R/W

STA=198+62.00
OFF=49.50 (R)

COUNTY MAINTAINED R/W

A1

FDC MARKER

BELLSOUTH MARKER

OHU

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3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

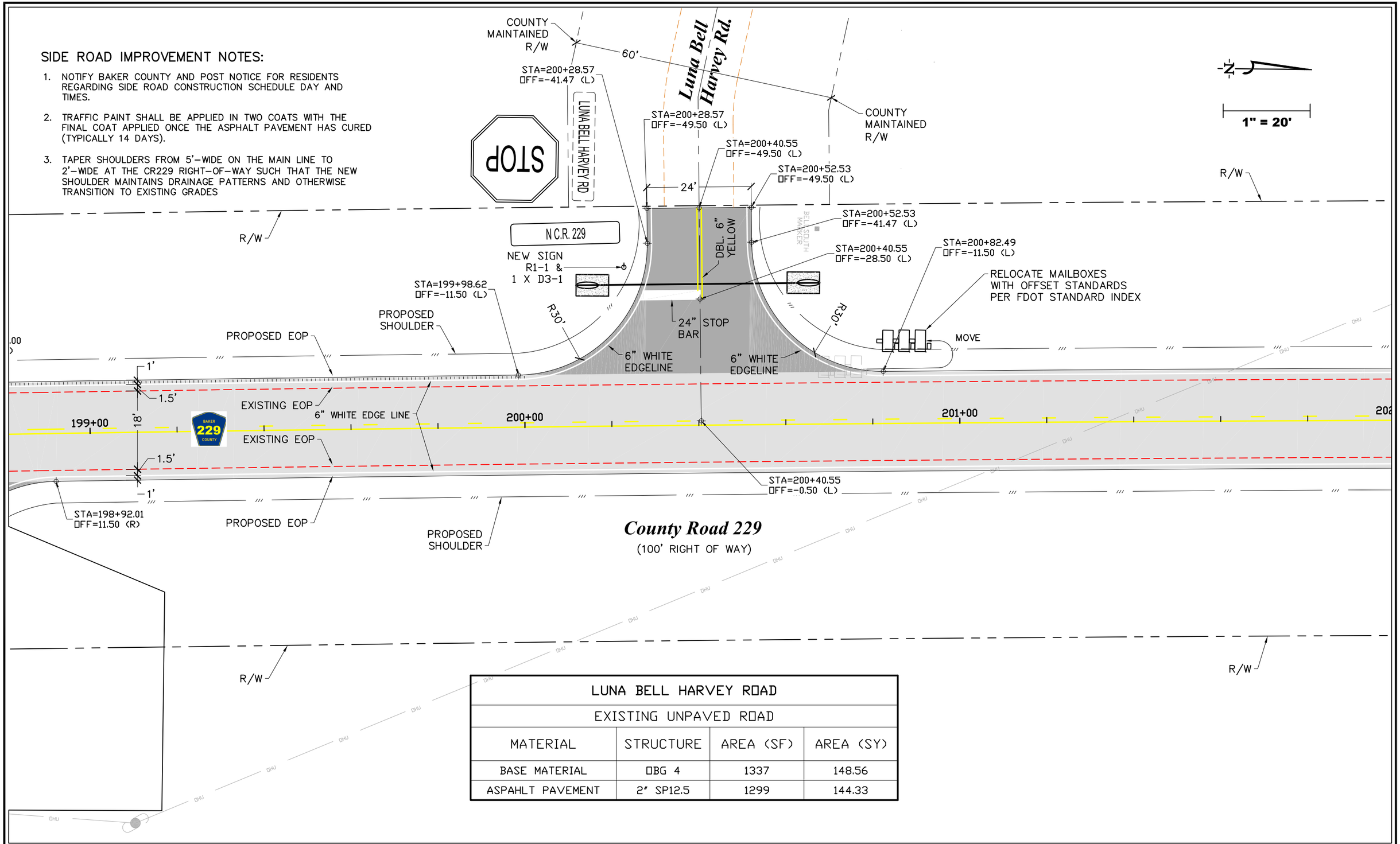
PAVEMENT GEOMETRY PLANS

DRAWING NO.

422

SIDE ROAD IMPROVEMENT NOTES:

1. NOTIFY BAKER COUNTY AND POST NOTICE FOR RESIDENTS REGARDING SIDE ROAD CONSTRUCTION SCHEDULE DAY AND TIMES.
2. TRAFFIC PAINT SHALL BE APPLIED IN TWO COATS WITH THE FINAL COAT APPLIED ONCE THE ASPHALT PAVEMENT HAS CURED (TYPICALLY 14 DAYS).
3. TAPER SHOULDERS FROM 5'-WIDE ON THE MAIN LINE TO 2'-WIDE AT THE CR229 RIGHT-OF-WAY SUCH THAT THE NEW SHOULDER MAINTAINS DRAINAGE PATTERNS AND OTHERWISE TRANSITION TO EXISTING GRADES



LUNA BELL HARVEY ROAD			
EXISTING UNPAVED ROAD			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 4	1337	148.56
ASPAHLT PAVEMENT	2" SP12.5	1299	144.33

REVISIONS

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PAVEMENT GEOMETRY PLANS

DRAWING NO.

423

JACK DUGGER ROAD			
EXISTING UNPAVED ROAD			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 4	2337	259.67
ASPAHLT PAVEMENT	2" SP12.5	2259	251.00

1" = 20'

R/W

R/W

County Road 229

(100' RIGHT OF WAY)

PROPOSED SHOULDER

PROPOSED EOP

STA=287+18.12
OFF=0.00 ()

T117

PROPOSED EOP

PROPOSED SHOULDER

1'

1.5'

18'

EXISTING EOP

286+00

287+00

288+00

EXISTING EOP

6" WHITE EDGE LINE

EXISTING EOP

1.5'

1'

PROPOSED SHOULDER

PROPOSED EOP

STA=286+69.80
OFF=11.50 (R)

6" WHITE EDGELINE

24" STOP BAR

6" WHITE EDGELINE

STA=287+85.13
OFF=11.50 (R)

STA=287+65.46
OFF=19.04 (R)

PROPOSED EOP

PROPOSED SHOULDER

STA=287+18.12
OFF=28.50 (R)

DBL. 6" YELLOW

JACK DUGGER ROAD

N.C.R. 229

STOP

R/W

R/W

COUNTY MAINTAINED R/W

STA=286+98.27
OFF=49.50 (R)

STA=287+32.08
OFF=49.50 (R)

NEW SIGN
R1-1 &
2 X D3-1

60'

Jack Dugger Road

COUNTY MAINTAINED R/W

REVISIONS			
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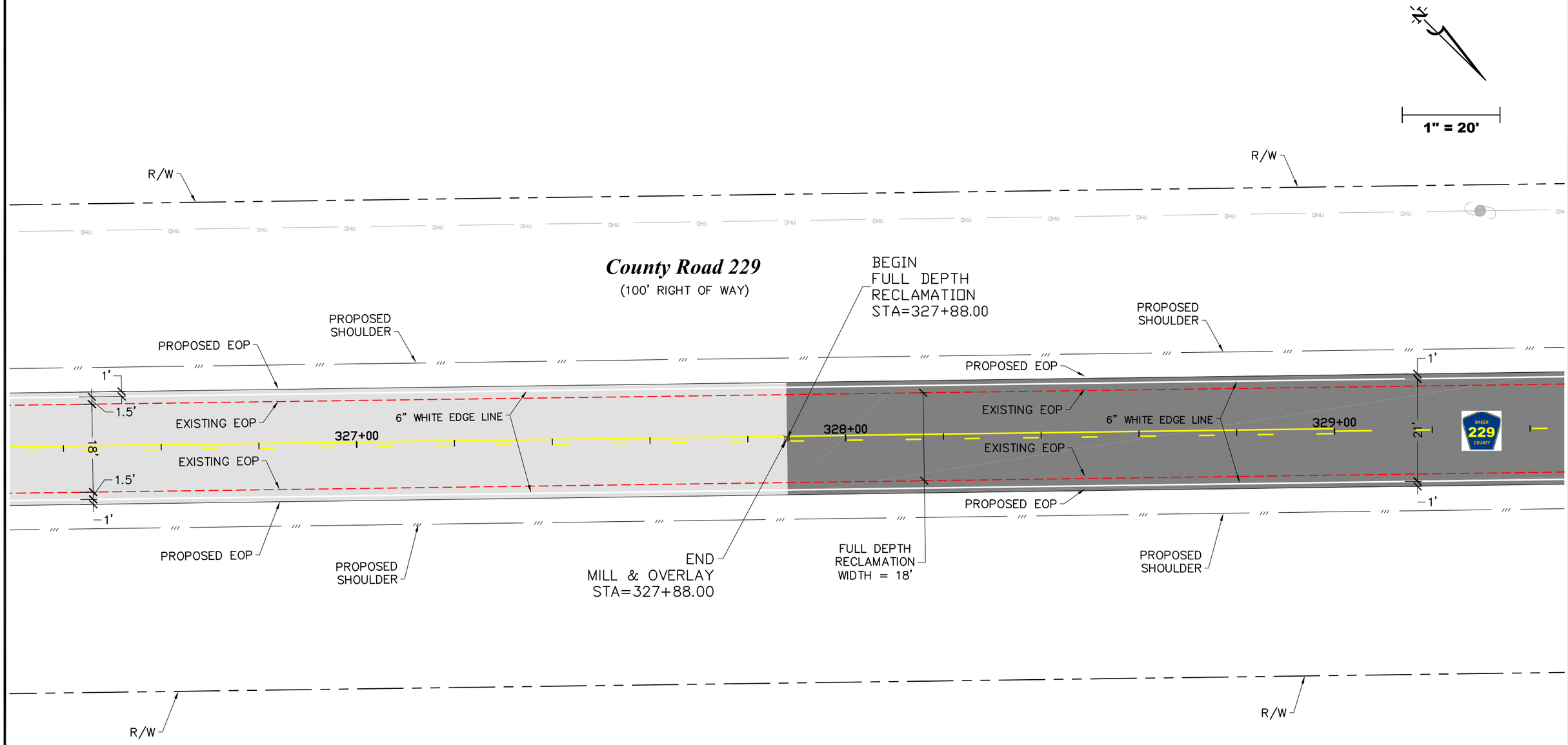
PAVEMENT GEOMETRY PLANS

DRAWING NO.

424



PAVEMENT SECTION DESIGNS

1. PAVEMENT IMPROVEMENT DESIGNS CHANGE AT STATION 327+88 FROM A MILL AND OVERLAY DESIGN TO A FULL-DEPTH RECLAMATION DESIGN.
2. SEE SHEETS 200 AND 201 FOR TYPICAL PAVEMENT SECTION DESIGN SPECIFICATIONS AND NOTES.

REVISIONS			
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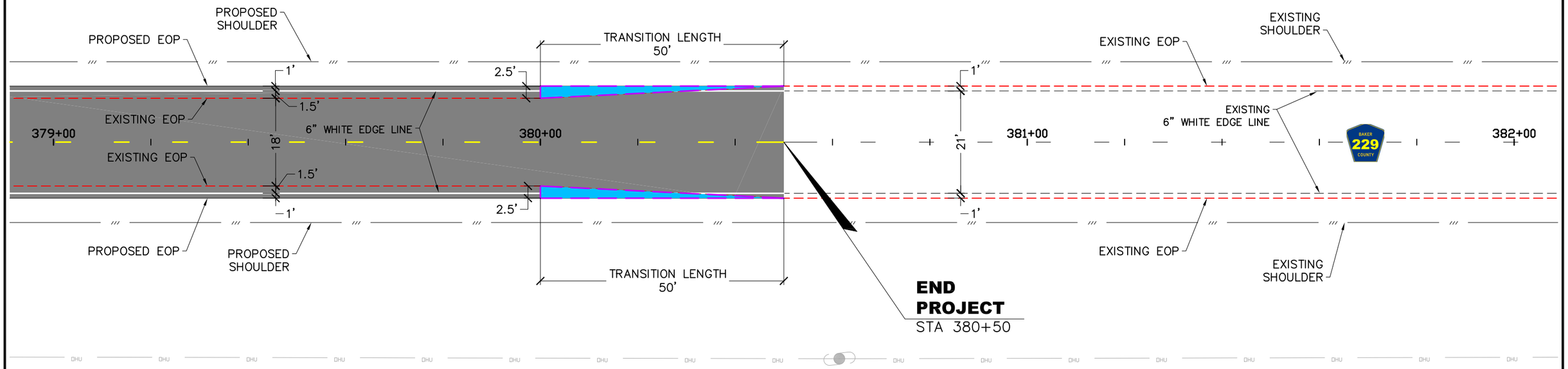
CR229 WIDENING AND RESURFACING PROJECT

PAVEMENT GEOMETRY PLANS

DRAWING NO.
425

1" = 20'

ENDING PAVEMENT TRANSITION			
TRANSITION WIDENING - LEFT SIDE			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 6	90	10.00
ASPAHLT PAVEMENT	3" SP12.5	63	7.00



County Road 229

(132' RIGHT OF WAY)

ENDING PAVEMENT TRANSITION			
TRANSITION WIDENING - RIGHT SIDE			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG 6	90	10.00
ASPAHLT PAVEMENT	3" SP12.5	63	7.00

PAVEMENT NOTES:

1. OPTIONAL BASE GROUP (OBG) AREAS INCLUDE 4" OF BASE EXTENSION.

PAVEMENT TRANSITION NOTES:

1. CONTRACTOR TO COMPLETE PAVEMENT TRANSITIONS TO MATCH EXISTING PAVEMENT AND LANE WIDTHS AT THE LIMITS OF THE PROJECT.
2. CONTACTOR TO COMPLETE SHOULDER GRADING TRANSITIONS TO MATCH SHOULDERS AND SLOPES AT THE LIMITS OF THE PROJECT.

REVISIONS

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PAVEMENT GEOMETRY PLANS

DRAWING NO.

426

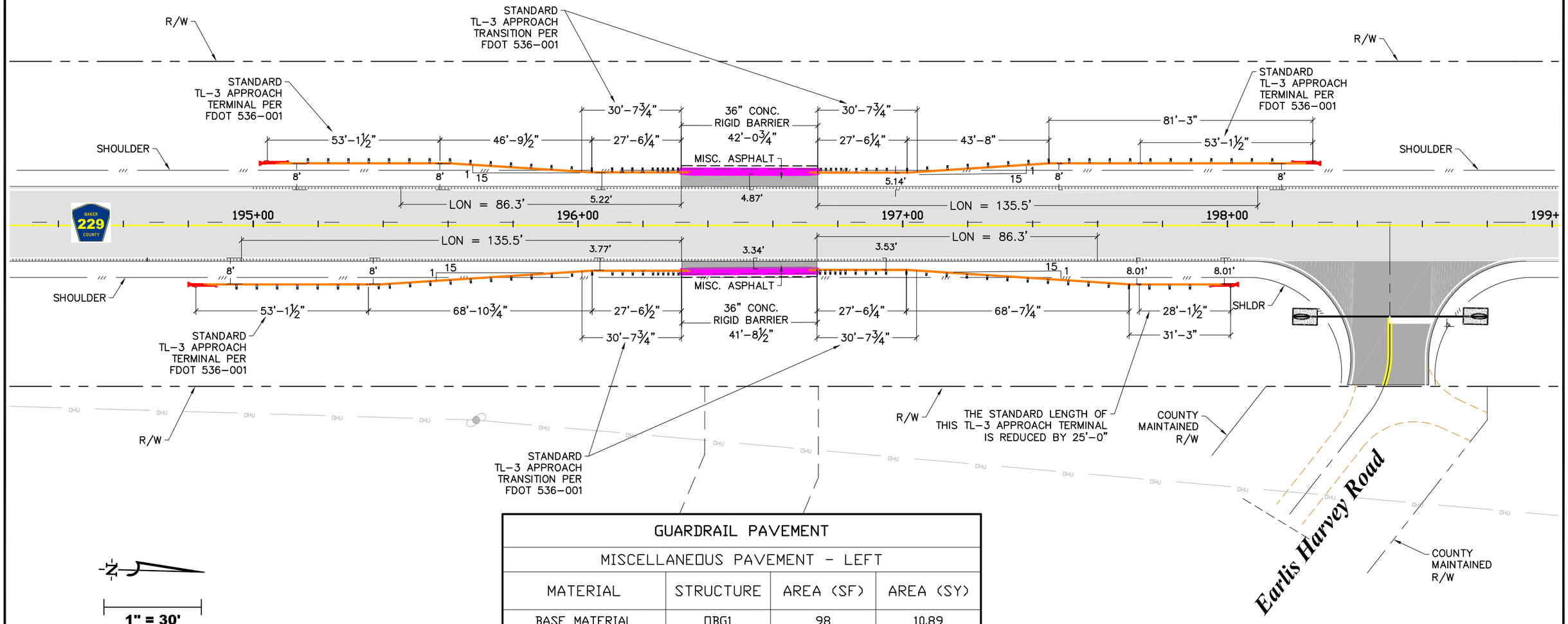
GUARDRAIL PAVEMENT			
MISCELLANEOUS PAVEMENT - LEFT			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG1	164	18.22
ASPAHLT PAVEMENT	2" SP12.5	164	18.22

GUARDRAIL NOTES:

1. CONSTRUCT 36" CONCRETE TRAFFIC RAILING RIGID BARRIERS FOR LENGTH OF EXISTING CONCRETE HEADWALL PER CUSTOM DETAILS (SEE 450 SERIES SHEETS FOR DETAILS).
2. CONSTRUCT PARALLEL TYPE APPROACH AND END TERMINALS PER FDOT INDEX 536-001.
3. CONSTRUCT TL-3 APPROACH TRANSITION CONNECTION TO RIGID BARRIER PER FDOT INDEX 536-001.
4. GUARDRAIL TAPERS ARE 1:15.
5. POST SPACING SHALL BE CONSISTENT WITH FDOT INDEX 536-001.

County Road 229

(100' RIGHT OF WAY)



GUARDRAIL PAVEMENT			
MISCELLANEOUS PAVEMENT - LEFT			
MATERIAL	STRUCTURE	AREA (SF)	AREA (SY)
BASE MATERIAL	OBG1	98	10.89
ASPAHLT PAVEMENT	2" SP12.5	98	10.89

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CR229 WIDENING AND RESURFACING PROJECT

GUARDRAIL PLANS - LAYOUT

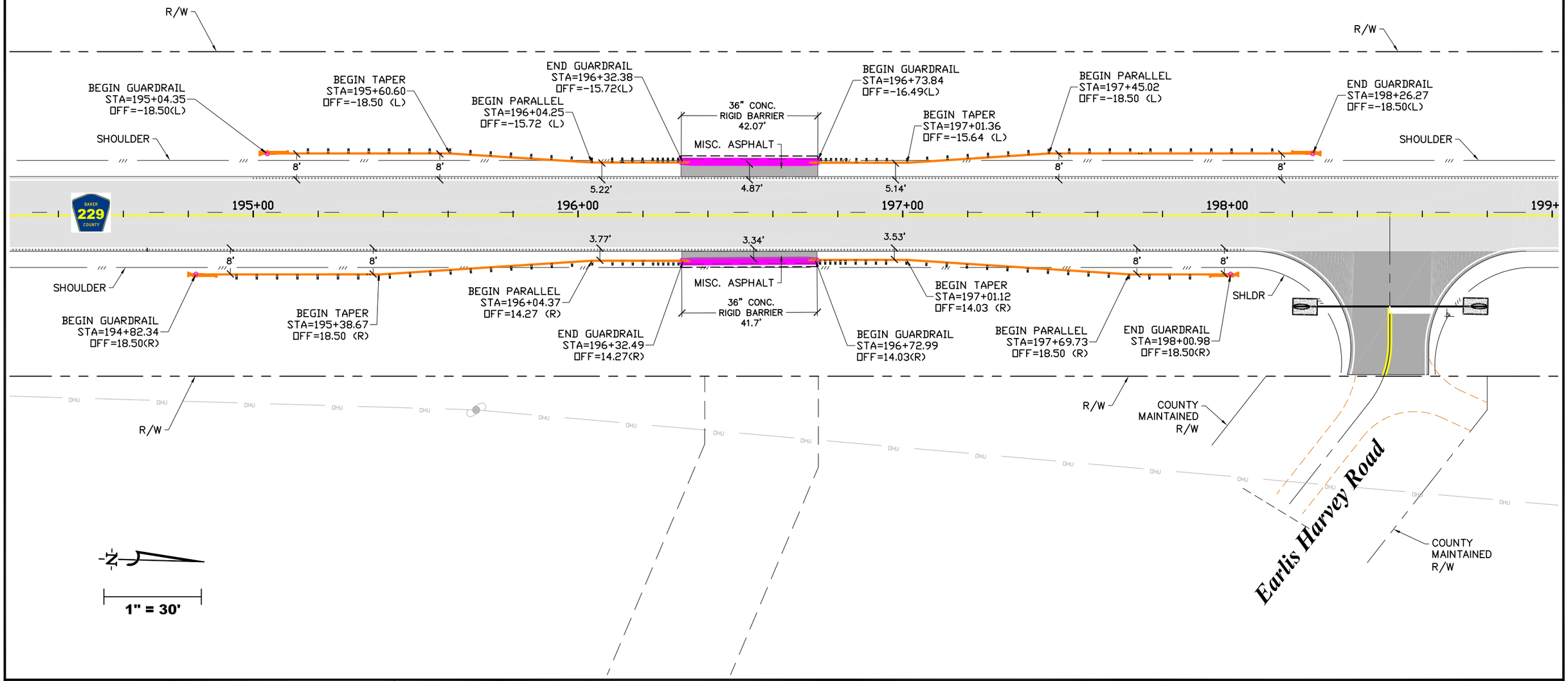
DRAWING NO. **430**

GUARDRAIL NOTES:

1. STATIONS REFER TO STATIONS SHOWN ON FDOT STANDARD INDEX 536.
2. OFFSETS FOR STATION/OFFSET LABELS ARE FROM ROADWAY CENTERLINE.
3. OFFSET DIMENSIONS ARE FROM THE EDGE OF TRAVELWAY TO FACE OF GUARDRAIL AND BARRIER WALL.
4. POST SPACING SHALL BE CONSISTENT WITH FDOT INDEX 536-001 FOR APPROACH ENDS SINCE GUARDRAILS ARE WITHIN THE CLEARZONE FOR BOTH DIRECTIONS OF TRAVEL.

County Road 229

(100' RIGHT OF WAY)



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CR229 WIDENING AND RESURFACING PROJECT

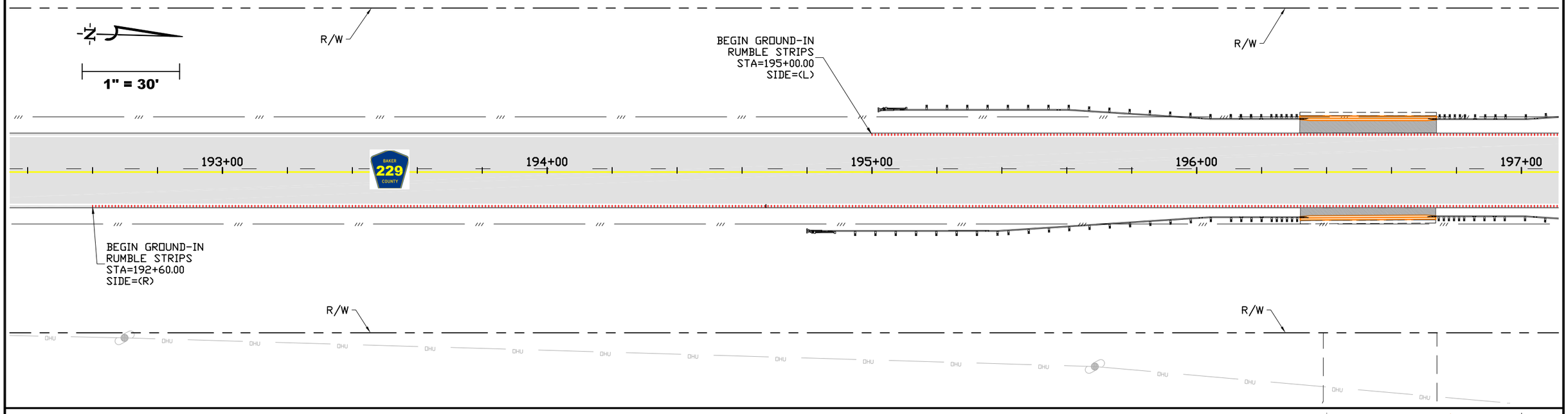
GUARDRAIL PLANS - STATION-OFFSET

DRAWING NO.

431

County Road 229

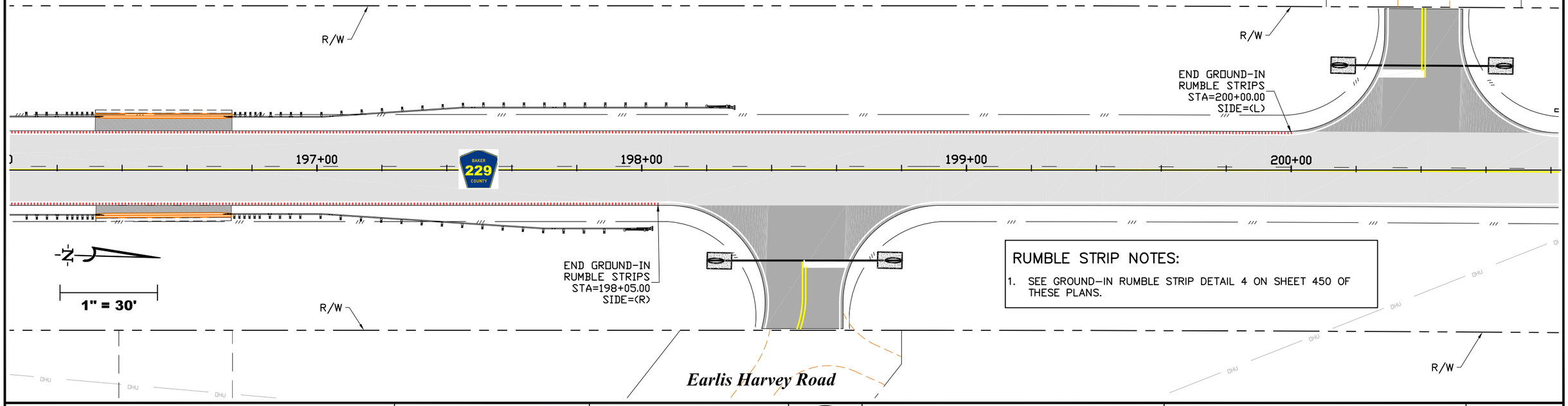
(100' RIGHT OF WAY)



County Road 229

(100' RIGHT OF WAY)

Luna Bell Road



Earlis Harvey Road

RUMBLE STRIP NOTES:

1. SEE GROUND-IN RUMBLE STRIP DETAIL 4 ON SHEET 450 OF THESE PLANS.

REVISIONS			
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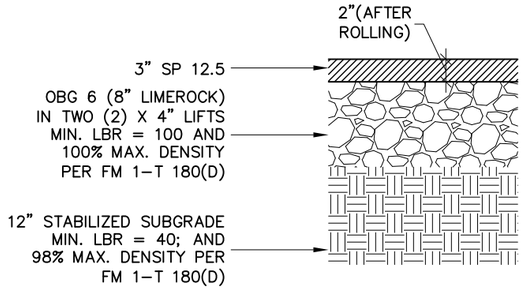
CR229 WIDENING AND RESURFACING PROJECT

GROUND-IN RUMBLE STRIPS

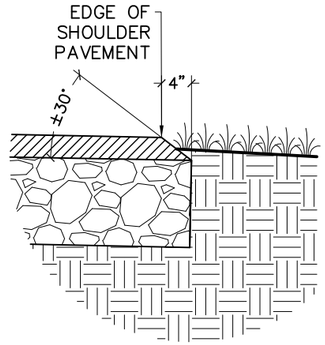
DRAWING NO.

432



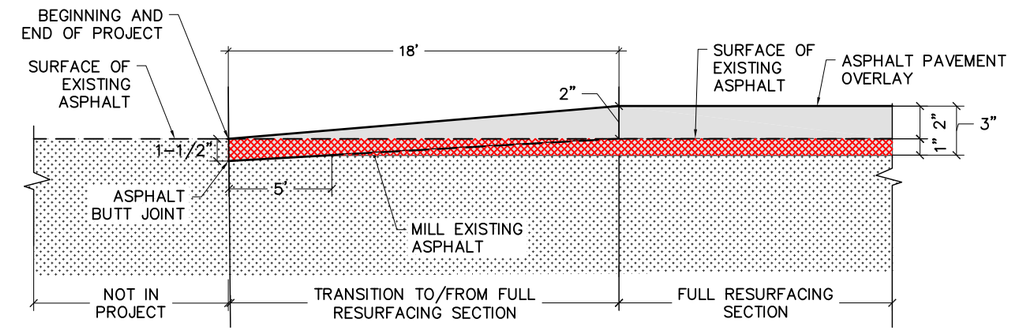
1. THE PLANS CALL FOR 6" OF LIMEROCK BASE ADDED TO THE PAVEMENT SURFACE PRIOR TO PULVERIZING OPERATIONS TO PRODUCE A 8"-THICK COMPACTED BASE COURSE.
2. A MIX DESIGN WILL BE PROVIDED BY BAKER COUNTY AND INCLUDED IN THE BID DOCUMENTS.
3. THE MIX DESIGN WILL INCLUDE DETAILS REGARDING ASPHALT EMULSION OR FOAMED ASPHALT, WATER REQUIREMENTS, PORTLAND CEMENT ADDITIVE, BINDER CONTENT, PULVERIZATION GRADATION REQUIREMENTS, COMPACTION REQUIREMENTS, FINISHING AND PROTECTION AND CURING.

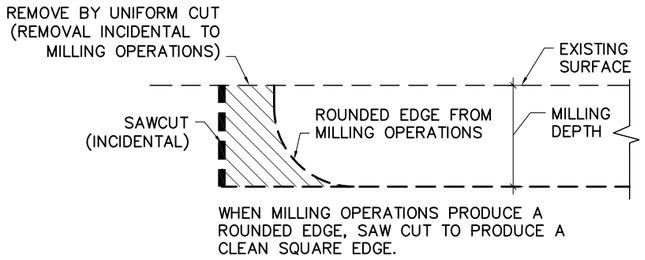
1 / 450 FULL-DEPTH CONSTRUCTION



1. SAFETY EDGES (BOTH SIDES) ARE REQUIRED FOR ENTIRE LENGTH OF PROJECT.
2. THE SAFETY EDGE IS NOT INCLUDED TO DETERMINE PAVEMENT WIDTH.
3. OPTIONAL BASE GROUP SHALL EXTEND TO OUTSIDE TIP OF SAFETY EDGE.
4. THE FULL WIDTH OF ASPHALT PAVEMENT SHALL BE ROLL COMPACTED.
5. GRASS SOD SHALL BE INSTALLED BELOW THE PAVEMENT SURFACE FOR ADEQUATE DRAINAGE.

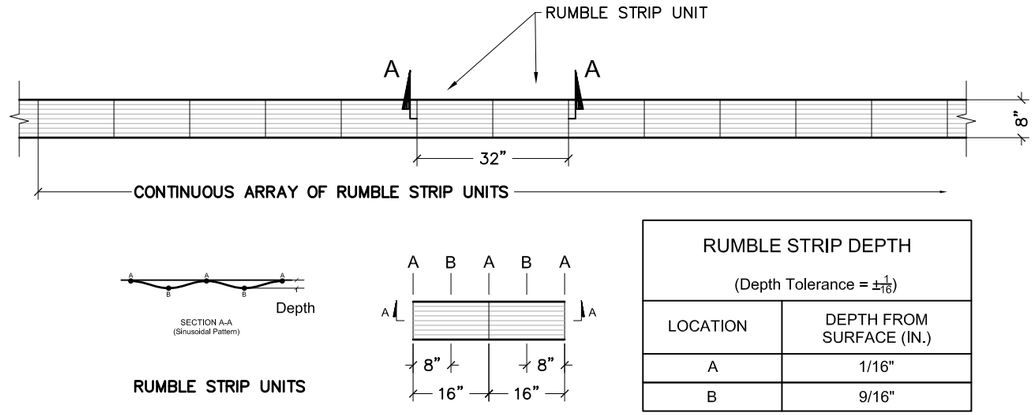
2 / 450 SAFETY EDGE





1. THE MILLED BUTT JOINT SHALL HAVE VERTICAL FINISHED FACES.
2. THE MILLED SURFACE SHALL BE CLEANED TO REMOVE ALL DIRT AND DEBRIS.
3. APPLY A TACK COAT TO ALL MILLED SURFACES PRIOR TO CONSTRUCTING A PAVEMENT OVERLAY.
4. COMPACT ASPHALT PAVEMENT TO BE FLUSH WITH THE EXISTING ADJACENT PAVEMENT.

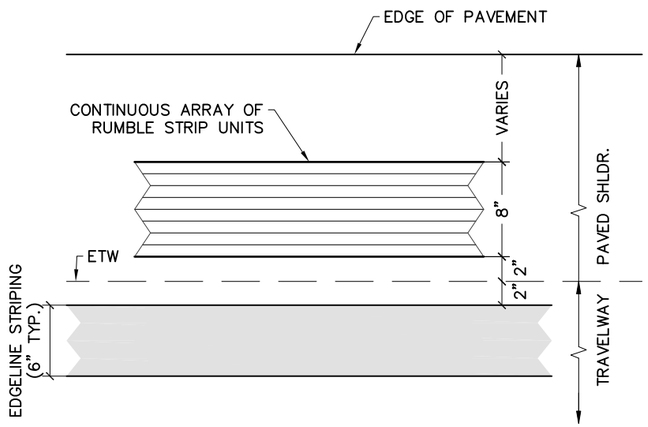
3 / 450 TRANSITIONS AT BEGINNING AND END OF PROJECT



RUMBLE STRIP DEPTH (Depth Tolerance = ±1/16)	
LOCATION	DEPTH FROM SURFACE (IN.)
A	1/16"
B	9/16"

RUMBLE STRIP DIMENSIONS

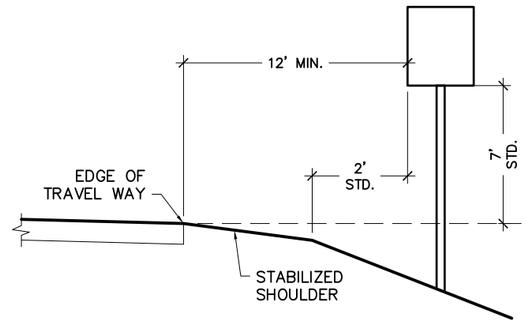
1. STRAIGHTNESS TOLERANCE OF GROUND-IN RUMBLE STRIPS IN THE ROADWAY LONGITUDINAL DIRECTION IS PLUS OR MINUS 1/2".
2. AT INTERSECTIONS AND MAJOR DRIVEWAYS, TERMINATE OUTSIDE SHOULDER RUMBLE STRIPS AT THE RADIUS RETURN.



RUMBLE STRIP LOCATION

OUTSIDE PAVED SHOULDER WIDTH GREATER THAN 0'-0" AND LESS THAN 5'-0"

4 / 450 GROUND-IN RUMBLE STRIPS - WITHIN 1'-WIDE PAVED SHOULDER
FROM FDOT INDES No. 546-020
NOT TO SCALE



1. SIGNS SHALL BE INSTALLED PER FDOT INDEX 700-101.
2. SIGN PANELS SHALL BE CONSISTENT WITH FDOT INDEX 700-010 AND MUTCD STANDARDS, MOST RECENT EDITIONS.

5 / 450 SIGN INSTALLATION DETAIL
FDOT INDEX 17302
NOT TO SCALE

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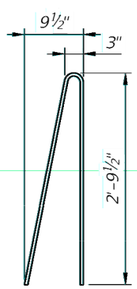
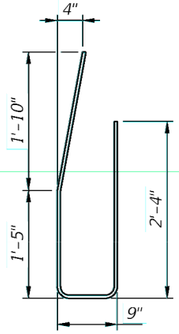
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS

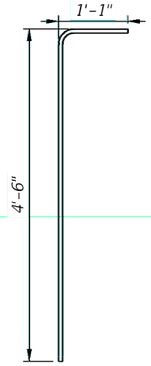
DRAWING NO. **450**



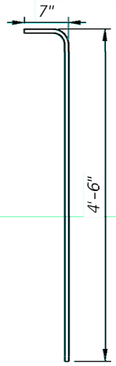
BAR 4P



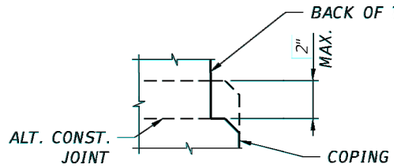
4V1 BAR



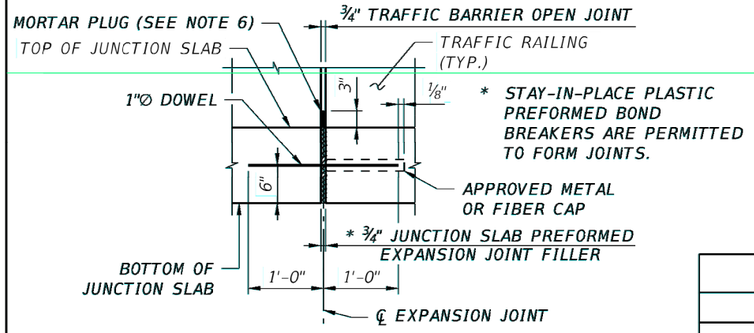
BAR 5L



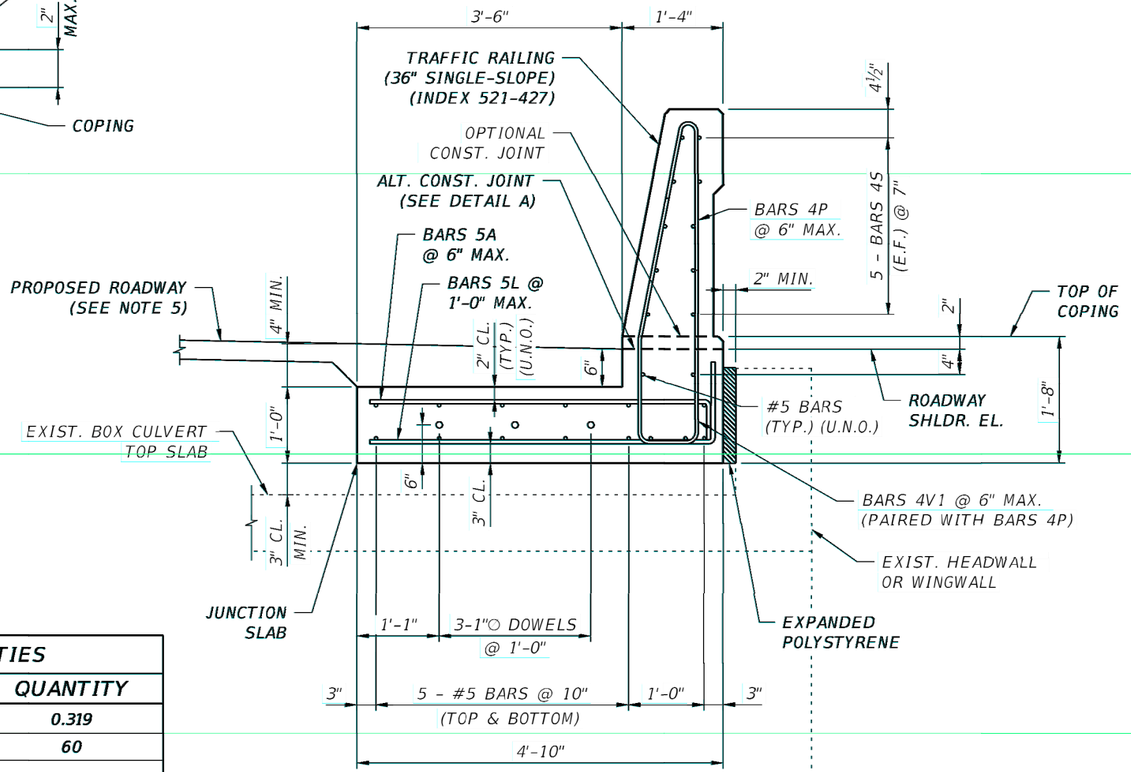
BAR 5A



DETAIL A



DOWEL AND EXPANSION JOINT DETAIL

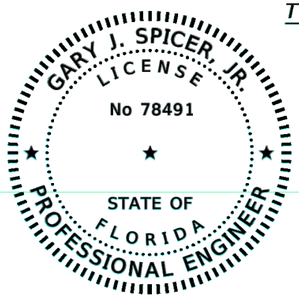


TYPICAL SECTION

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
CONCRETE	CY/LF	0.319
REINFORCING STEEL	LB/LF	60
ADDITIONAL REINF. @ EXPANSION JOINT (STEEL DOWELS)	LB	16

MODIFIED JUNCTION SLAB NOTES:

1. MATERIALS:
   CONCRETE: CLASS IV (f'c = 5,500 PSI)
   REINFORCING: ASTM A615 (GRADE 60)
   DOWELS: ASTM A36 (HOT DIP GALVANIZED SMOOTH ROUND BARS)
2. GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2025-26 STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND FY 2025-26 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY THE CONTRACT PLANS.
3. DESIGN SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANSPORTATION STRUCTURES MANUAL DATED JANUARY 2025. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.
4. INSTALL DOWELS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 350.
5. MATCH CROSS SLOPE OF TRAVEL LANE OR SHOULDER.
6. CONSTRUCT A ¾" EXPANSION JOINT IN JUNCTION SLAB AND COPING PLUMB AND PERPENDICULAR OR RADIAL TO THE GUTTER LINE. PROVIDE EXPANSION JOINTS AT 30'-0" MINIMUM AND 90'-0" MAXIMUM INTERVALS. EXPANSION JOINTS ARE TO COINCIDE WITH OPEN JOINTS IN TRAFFIC RAILING. PROVIDE A 3"x3" MORTAR PLUG IN OPEN JOINTS AT THE BASE OF THE CONCRETE BARRIER TO CONTAIN RUNOFF.
7. PROVIDE AND INSTALL PREFORMED EXPANSION JOINT FILLER IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 932.
8. CONSTRUCT ½" V-GROOVES IN JUNCTION SLAB AND COPING AT 30'-0" MAXIMUM INTERVALS. SPACE V-GROOVES EQUALLY BETWEEN EXPANSION JOINTS. V-GROOVE LOCATIONS ARE TO COINCIDE WITH V-GROOVE LOCATIONS IN TRAFFIC RAILING.
9. PREPARE SOIL UNDER JUNCTION SLAB IN ACCORDANCE WITH FDOT SPECIFICATION 120-9.3.
10. JUNCTION SLAB SECTIONS SHALL HAVE A MINIMUM LENGTH OF 20'-0".
11. SEE SHEET 2 OF FDOT INDEX 521-610 FOR END TRANSITION DETAILS FOR GUARDRAIL ATTACHMENT.
12. SEE SHEET 5 OF FDOT INDEX 521-427 FOR DRAINAGE SLOT DETAILS IN TRAFFIC RAILING.
13. DESIGN IS BASED ON MINIMUM FRICTION ANGLE OF 30 DEGREES FOR SOILS.
14. APPLICABILITY OF MODIFIED JUNCTION SLAB AND CONDITION OF THE EXISTING BOX CULVERT SHALL BE EVALUATED ON A PROJECT SPECIFIC BASIS PRIOR TO IMPLEMENTING THIS DETAIL.



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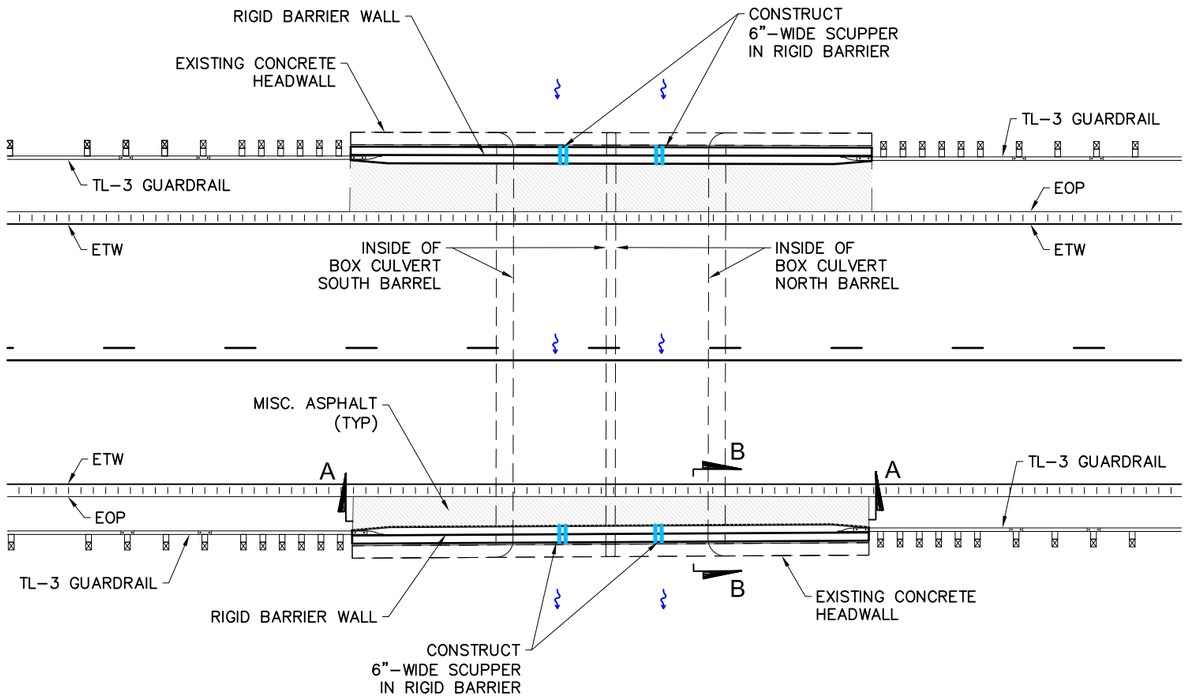
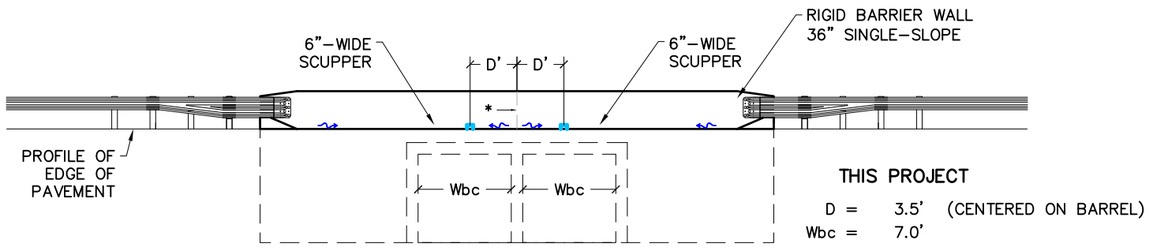
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS

DRAWING NO. **451**

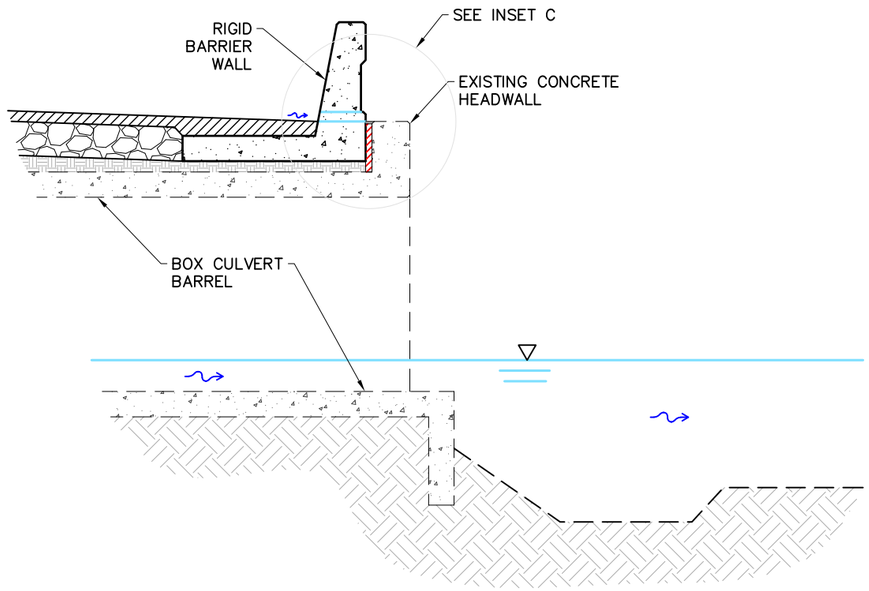




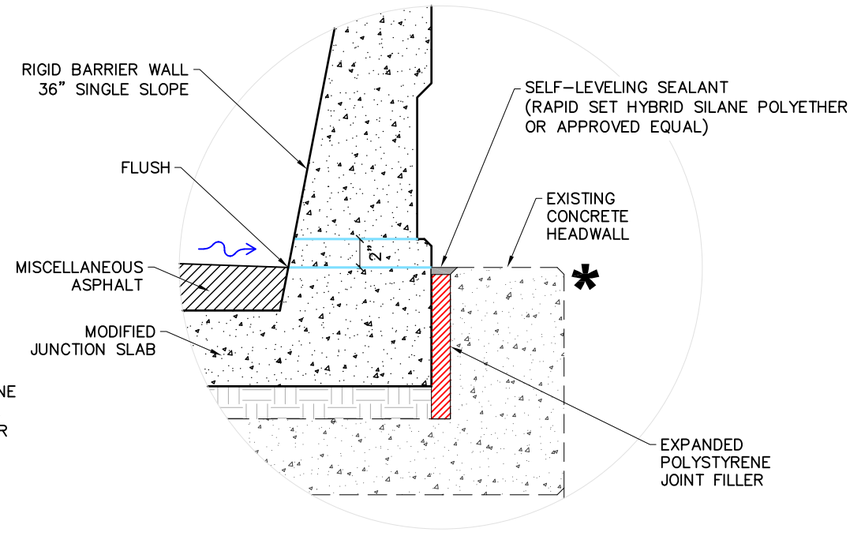
THIS PROJECT

D = 3.5' (CENTERED ON BARREL)
Wbc = 7.0'

SECTION A-A



SECTION B-B



INSET C

1. SCUPPERS CENTERLINES SHALL BE LOCATED A DISTANCE D' FROM THE CENTERLINE OF THE BARRIER WALL, WHICH CORRESPONDS TO THE CENTERLINE OF THE BOX CULVERT, UNLESS NOTED OTHERWISE. WHEN THERE IS AN EXPANSION JOINT AT THE CENTERLINE, D SHALL NOT BE LESS THAN 6'–9". WHEN THERE ARE NO EXPANSION JOINTS WITHIN 6'–9" OF THE SIDEWALLS OF THE BOX CULVERT, D SHALL EQUAL A DISTANCE THAT WOULD CENTER THE SCUPPER OVER EACH BOX CULVERT BARREL SO THAT RUNOFF DISCHARGES DO NOT ERODE THE SIDE BANKS OF THE DRAINAGE WAY.
2. REFER TO INDEX 521–427, SHEET 5 OF 5 (STANDARD PLANS FOR BRIDGE CONSTRUCTION) REGARDING SCUPPER DIMENSIONS AND POSITIONING WITH RESPECT TO JOINTS AND REINFORCING STEEL WITHIN THE RIGID BARRIER WALLS.
3. SLOPE MISCELLANEOUS PAVEMENT TO DRAIN TO THE SCUPPERS.
4. FLOW THRU SCUPPERS SHALL NOT BE IMPEDED BY THE EXISTING HEADWALL. WHERE NECESSARY, CUT NOTCHES IN THE EXISTING HEADWALL, THE WIDTH OF THE SCUPPERS, TO MAINTAIN THE FLOW LINE OF A SCUPPER.
5. USE A SELF–LEVELING SEALANT TO MAKE WATER–TIGHT THE GAP BETWEEN THE PROPOSED MODIFIED JUCTION SLAB AND THE EXISTING HEADWALL.
6. REFER TO BARRIER WALL AND SCUPPER DETAILS IN THE 460 SHEET SERIES.

* 1. IN CASES WHERE THE TOP OF THE EXISTING HEADWALL IS ABOVE THE EXIT FLOW LINE OF THE SCUPPER, A 6"–WIDE NOTCH SHALL BE CUT INTO THE EXISTING HEADWALL SO THAT THE FLOW LINE OF THE NOTCH IS FLUSH WITH THE FLOW LINE OF THE SCUPPER.

* 2. USE A SELF–LEVELING SEALANT (RAPID SET OR APPROVED EQUAL) TO MAKE THE 2" GAP BETWEEN THE BARRIER WALL AND THE EXISTING HEADWALL WATERTIGHT.

1 / 452 **RIGID BARRIER WALL - SCUPPERS**
SITE PLAN

REVISIONS			
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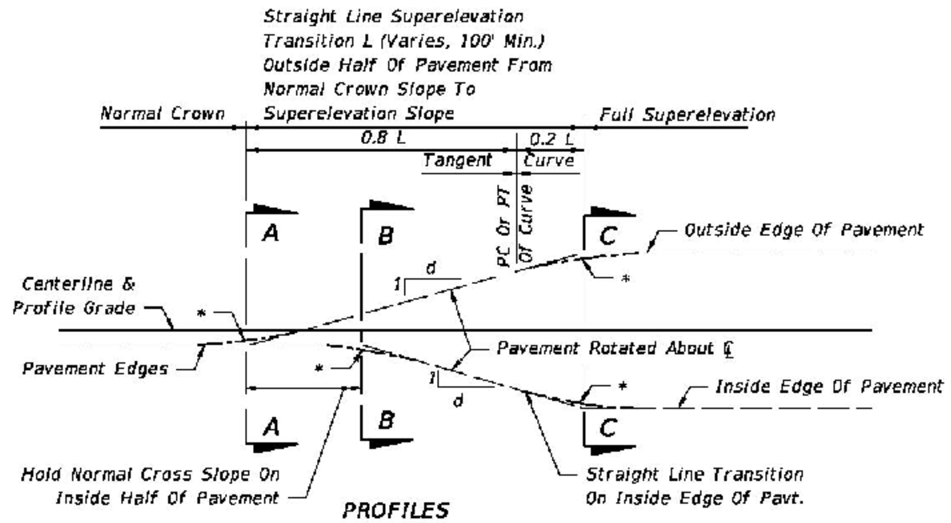
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS

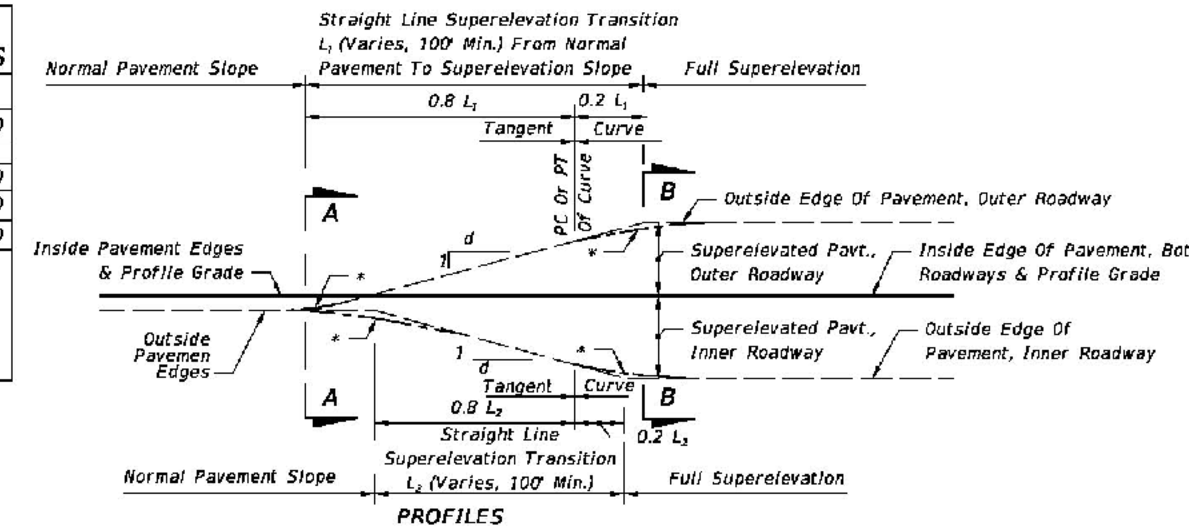
DRAWING NO. **452**

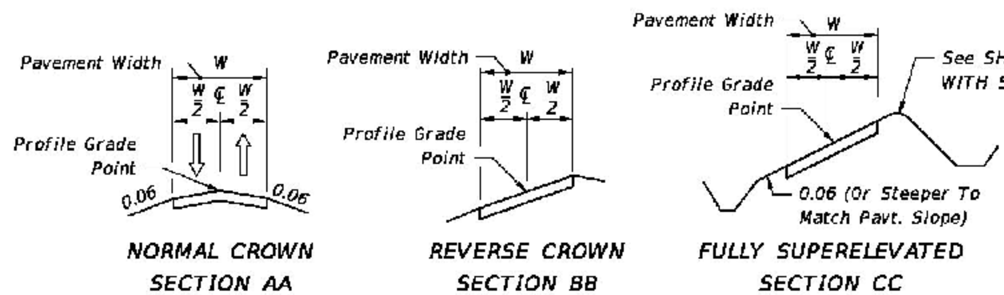


SLOPE RATIOS FOR SUPERELEVATION TRANSITIONS				
NUMBER OF LANES IN ONE DIRECTION	DESIGN SPEED, MPH			
	25-40	45-50	55-60	65-70
	1 : d			
1 Lane & 2 Lane	1:175	1:200	1:225	1:250
3 Lane	--	1:160	1:180	1:200
4 Lane or More	--	1:150	1:170	1:190

The length of superelevation transition is to be determined by the relative slope between the travel way edge of pavement and the profile grade, except that the minimum length of transition shall be 100 ft.

* Short Vertical Curves Are To Be Used On Construction To Avoid Angular Breaks In Edge Profiles

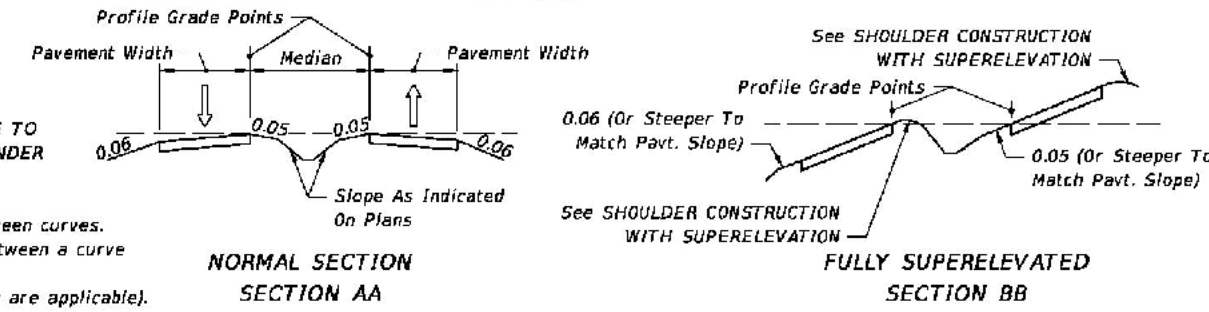




THESE TRANSITION DETAILS ARE TO APPLY IN ALL CASES, EXCEPT UNDER THE FOLLOWING CONDITIONS:

1. Curves of insufficient length.
2. Insufficient tangent length between curves.
3. Deficient transition distance between a curve and other control point(s).
4. At PCC's or PRC's (Runoff rates are applicable).

Transitions for these exceptions are to be as detailed in the plans.



2-LANE, 4-LANE OR 6-LANE PAVEMENT, NO MEDIAN

2-LANE, 4-LANE OR 6-LANE PAVEMENT WITH MEDIAN

SUPERELEVATION TRANSITIONS

SYMBOL:

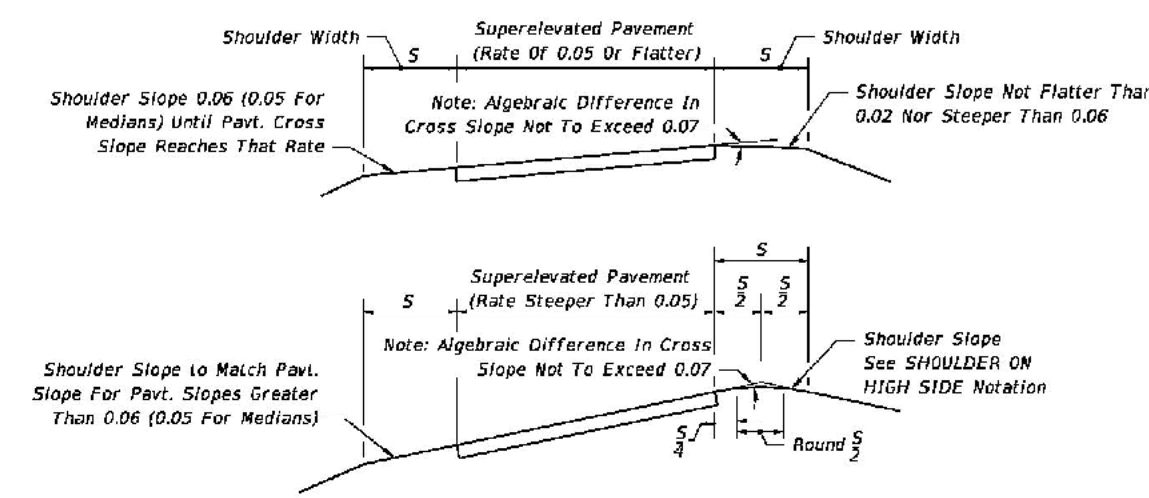
⇨ Direction of Traffic

NOTES:

1. These details apply to both paved and grassed shoulders. For median shoulders use 0.05 in lieu of 0.06.

2. SHOULDER ON HIGH SIDE: A shoulder slope of 0.06 downward from the edge of travel way will be maintained until a 0.07 break in slope at the pavement edge is reached due to superelevation of the pavement. As the pavement superelevation increases, the 0.07 break in slope will be maintained and the shoulder flattened until the shoulder slope reaches the minimum of 0.02 downward from the edge of travel way. Any further increase in pavement superelevation will necessitate sloping the inside half of the shoulder toward the travel way and the outer half outward, both at 0.02 for superelevations 0.06-0.09 and both at 0.03 for superelevation 0.10. For shoulders with paved widths 5 feet or less see Special Shoulder Break Over Details on Sheet 2 of 2.

3. SHOULDER ON LOW SIDE: Maintain 0.06 cross slope across shoulder until pavement cross slope reaches 0.06. For pavement cross slopes greater than 0.06, shoulder to have same slope as pavement. See SHOULDER SLOPES ON SUPERELEVATION SECTION (Sheet 2).



SHOULDER CONSTRUCTION WITH SUPERELEVATION

10/17/2023 8:17:40 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	SUPERELEVATION TRANSITIONS - HIGH SPEED ROADWAYS	INDEX	SHEET
11/01/23						000-510	1 of 2

REVISIONS			
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CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

DRAWING NO.
460

GENERAL NOTES:

1. The location and construction of mailboxes shall conform to the rules and regulations of the United States Postal Service as modified by this Index.

2. Mailboxes will not be permitted on Interstate highways, freeways, or other highways where prohibited by law or regulation.

3. The contractor shall give the Postmaster of the delivery route(s) written notice of project construction 7 days prior to the beginning of work, with Saturdays, Sundays and Holidays excluded.

   The Contractor shall furnish and install one mailbox in accordance with this Index at each mail patron delivery location and maintain the box throughout the contract period. The Contractor shall apply box numbers to each patron box in accordance with identification specifications of the Domestics Mail Manual of the U. S. Postal Service: where local street names and house numbers are authorized by the Postmaster as a postal address, the Contractor shall inscribe the house number on the box; if the box is located on a different street from the patrons residence, the Contractor shall inscribe the street name and house number on the box.

   The Contractor shall coordinate removal of the patrons existing mailboxes. Immediately after installing the new mailboxes the Contractor must notify each "Mail Delivery Patron" by Certified Mail that removal of the existing mailboxes must be accomplished in 21 days after receipt of notices. Patrons shall have the option of removing their existing mailboxes or leaving the mailboxes in place for removal by the Contractor; removal by the Contractor shall be included in the contract unit price for Mailbox, Each. The Contractor shall dispose of mailboxes and supports in areas provided by him.

   Reuse of existing mailboxes by the Contractor will not be a requirement under any construction project; however where an existing mailbox meets the design requirements of this Index and is structurally and functionally sound, the Contractor at his option may elect to reuse the existing mailbox in lieu of constructing a new mailbox. Any use of existing mailboxes must be approved by the Engineer.

4. Mailboxes shall be light sheet metal or plastic construction, in traditional style only, and only in Size 1 as prescribed by the Domestic Mail Manual of the U. S. Postal Service (DMM).

   Mailbox production standards, lists of approved manufacturers and suppliers of mailboxes, design approval and guidance may be obtained by writing to the Rural Delivery Division, Delivery Service Department, Operations Group, USPS Headquarters, Washington, DC 20260.

5. Mailboxes shall be located on the right-hand side of the roadway in the direction of the delivery route, except on one-way roads and streets where they may be placed on the left-hand side.

   Mailboxes on rural highways shall be set with the roadside face of the box offset from the edge of the traveled way a minimum distance of the greater of the following:

   a. Shoulder width plus 8" to 12"

   b. 10' for ADT over 10,000 vpd
      8' for ADT 100 to 10,000 vpd
      6' for ADT under 100 vpd
      2'-6" for low speed and ADT under 100 vpd

   When a mailbox is installed within the limits of guardrail it should be placed behind the guardrail whenever practical.

   Mailboxes on curbed highways, roads, and streets shall be set with the face of the box between 6" and 12" behind the face of curb. If the sidewalk abuts the curb or if an unusual condition exists which makes it difficult or impractical to install or serve boxes at the curb, the Contractor, with concurrence of the local postal authority, may be permitted to install all mailboxes at the back edge of the sidewalk, where they can be served by the carrier from the sidewalk.

6. Mailboxes shall be set with the bottom of the box between 42" and 48" above the mail stop surface, unless the U.S. Postal Service establishes other height restrictions.

7. No more than two mailboxes may be mounted on a support structure unless the support structure and mailbox arrangements have been shown to be safe by crash testing in accordance with NCHRP Report 350.

   Neighborhood Delivery and Collection Box Units (NDCBU) are a specialized multiple mailbox installation that must be located outside the highway and street clear zones. The location of NDCBUs is the sole responsibility of the Postmaster for the delivery route under consideration.

8. Lightweight newspaper receptacles may be mounted below the mailbox on the side of the support post in conformance with the USPS Domestic Mail Manual. The mail patron shall be responsible for newspaper receptacle installation and maintenance.

9. Wood and steel support posts for both single and double mailbox mountings shall be embedded no more than 24" into the ground.

   Concrete, block, brick, stone or other rigid foundation structure or encasement, either above or below the shoulder ground line, will not be permitted for mailboxes on rural highways. On urban roads and streets where mailbox support posts are set within rigid pavement back of curb, the support posts shall be separated from the pavement by a minimum of 1" of expansion material.

   Support posts shall not be fitted nor installed with surface mount base plates.

10. At driveway entrances mailboxes shall be placed on the far side of the driveway in the direction of the delivery route.

    At intersecting roads mailboxes shall be located 100' or more from the centerline of the intersecting road on the far side in the direction of the delivery route, with the distance increased to 200' when the route volume exceeds 400 vehicles per day.

11. Wood support posts shall be in conformance with the material and dimensional requirements of Specification 952 and the treatment requirements of Specification 955.

    Steel support posts shall have an external finish equal to or better than two coats of weather resistant, air dried or baked, paint or enamel. Surface(s) shall be cleaned of all loose scale prior to finishing. The Postal Service prefers that posts be painted white, but other colors may be used when approved by the Engineer. When galvanized posts are used painting is not required.

    Mounting brackets, plates, platforms, shelves and accessory hardware surface finishes are to be suited to support post finish.

12. Mailboxes shall be paid for under the contract unit price for Mailboxes, Each. Payment shall be full compensation for boxes, posts and accessory items essential for installation in accordance with this standard; erection; adjustments to suit construction needs; and, for identification letters and numbers.

    Payment shall be limited to one mailbox per patron address whether the mailbox is new, reused, salvaged, reset or relocated. Payment shall be per mailbox regardless of the number of mailboxes per support or grouping arrangement.

    The above compensation shall include any work and cost incurred by the contractor for removal and disposal of existing mailboxes.

    There shall be no payment participation for NDCBU furnishing, assembly, installation, resetting or relocation.

10/17/2023 8:26:47 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	MAILBOXES	INDEX	SHEET
11/01/17					110-200	1 of 3

REVISIONS			
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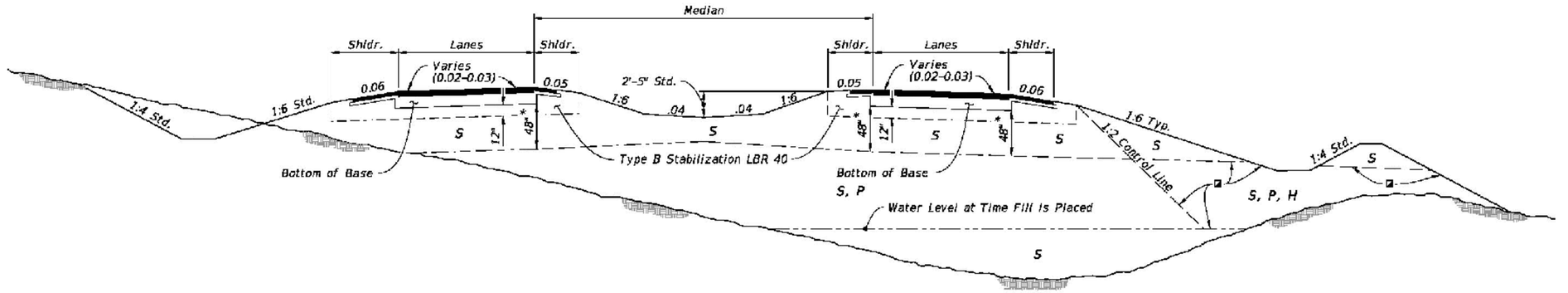
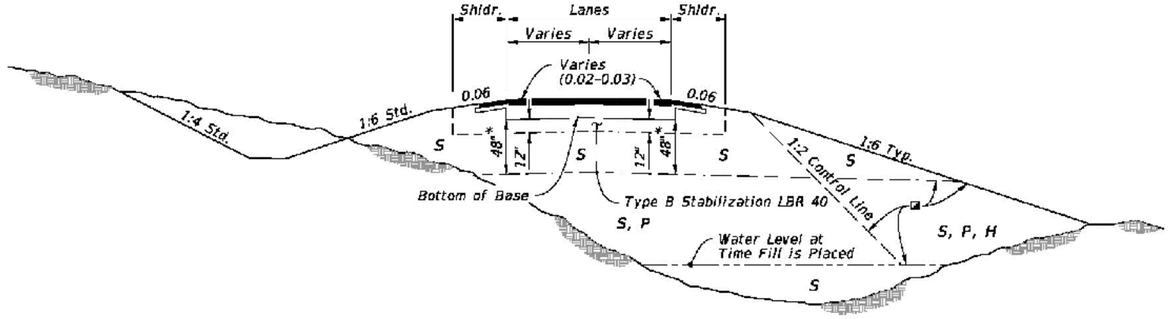
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

DRAWING NO. **461**



DIVIDED ROADWAYS



UNDIVIDED ROADWAY

GENERAL NOTES:

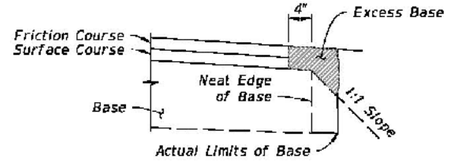
1. Roadway dimensions are representative. Subgrade dimensions and control lines are standard. The details shown on this Index do not supersede the details shown in the Plans or Indexes 120-002 and 160-001.

2. Plastic (P) soils may be placed above the existing water level (at the time of construction) to within 4 feet of the proposed base. It should be placed uniformly in the lower portion of the embankment for some distance along the project rather than full depth for short distances.

3. High Plastic (H) soils excavated within the project limits may be used in embankment construction as indicated on this Index. High Plastic soils are not to be used for embankment construction when obtained from outside the project limits.

4. Select (S) soils having an average organic content of more than two and one-half (2.5) percent, or having an individual test value which exceeds four (4) percent, are not permitted in the subgrade portion of the roadbed. Select (S), Plastic (P), or High Plastic (H) soils having an average organic content of more than five (5) percent, or an organic content individual test result which exceeds seven (7) percent, are not permitted in the portion of embankment inside the control line, unless written authorization is provided by the District Geotechnical Engineer; these soils may be used for embankment construction outside the control line, unless restricted by the Plans or otherwise specified in the Plans, provided they can be compacted sufficiently to sustain a drivable surface for operational vehicles as approved by the Engineer. Determine average organic content from the test results from a minimum of three randomly selected samples from each stratum or stockpile of a particular material. Perform tests in accordance with FM 1-T 267.

5. Highly organic soils, composed primarily of partially decayed organic matter, often dark brown or black in color with an odor of decay, and sometimes fibrous, are designated as muck. Further, any stratum or stockpile of soil which contains pockets of highly organic material may be designated as Muck (M). Highly organic soils are not permitted within the subgrade or embankment portion of the roadbed.



NOTES:

1. All material in the shaded area is excess base to be removed.

2. There is no additional payment for removal of excess base material.

REMOVAL OF EXCESS BASE MATERIAL

SYMBOL	SOIL	CLASSIFICATION (AASHTO M 145)
S	Select	A-1, A-3, A-2-4 **
P	Plastic	A-2-5, A-2-6, A-2-7, A-4, A-5, A-6, A-7 (ALL WITH LL < 50)
H	High Plastic	A-2-5, A-2-7, A-5 Or A-7 (ALL WITH LL > 50)
M	Muck	A-8

Classification listed left to right in order of preference.

☑ See General Notes Nos. 4 & 5 for utilization of soils classified as organic material or muck.

** Certain types of A-2-4 material are likely to retain excess moisture and may be difficult to dry and compact. They should be used in the embankment above the water level existing at time of construction. They may be used in the subgrade portion of the roadbed when approved by the District Materials Engineer. A-2-4 material placed below the existing water level must be nonplastic and contain less than 15% passing the No. 200 U.S. Standard sieve.

* For cut sections this dimension may be reduced to 24"; see Index 120-002. For minor collectors and local facilities this dimension may be reduced to 18".

GENERAL NOTES AND FLEXIBLE PAVEMENT

10/17/2023 8:27:08 AM

LAST REVISION	REVISION	DESCRIPTION:				
11/01/23			FDOT FY 2024-25 STANDARD PLANS	EMBANKMENT UTILIZATION	INDEX 120-001	SHEET 1 of 3

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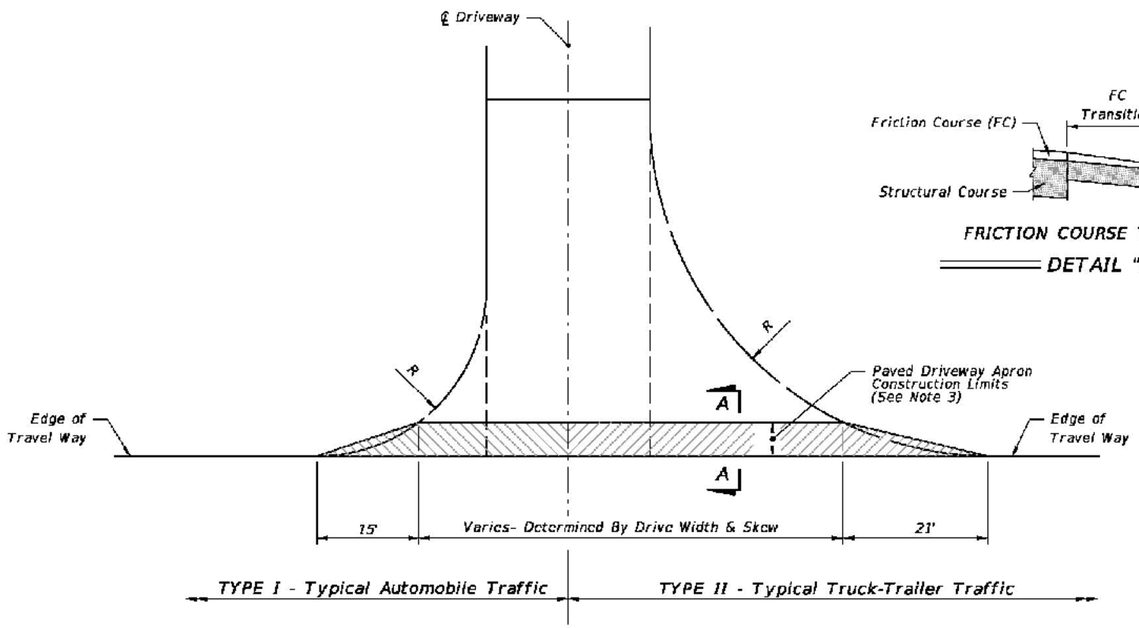
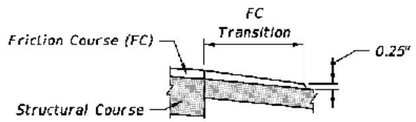
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

DRAWING NO. 462

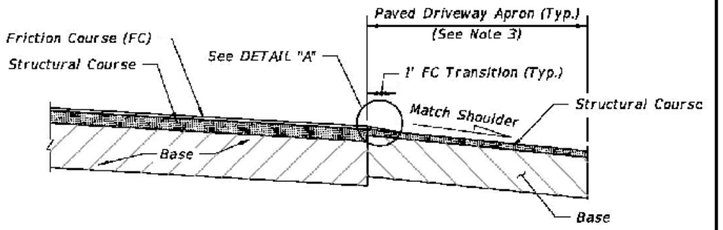


DRIVEWAY TYPES

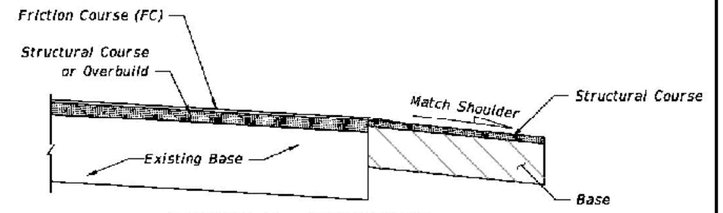


FRICTION COURSE TRANSITION

DETAIL "A"



SECTION AA - NEW CONSTRUCTION



SECTION AA - RESURFACING

NEW DRIVEWAY

AREAS FOR ONE 5' DEEP DRIVEWAY APRON (SY)

Drive Width (Ft.)	Intersection			
	Normal		Skewed	
	Type I	Type II	Type I	Type II
12	26	51	31	60
14	27	52	33	61
16	28	53	34	63
18	29	54	35	64
20	31	55	37	65
22	32	56	38	67
24	33	57	39	68
26	34	58	40	69
28	35	59	42	70
30	36	61	43	72
32	37	62	44	73
34	38	63	46	74
36	39	64	47	76
38	41	65	48	77
40	42	66	49	78
42	43	67	51	79
44	44	68	52	81
46	45	69	53	82
48	46	71	55	83
50	47	72	56	85
52	48	73	57	86
54	49	74	58	87
56	51	75	60	88
58	52	76	61	90
60	53	77	62	91

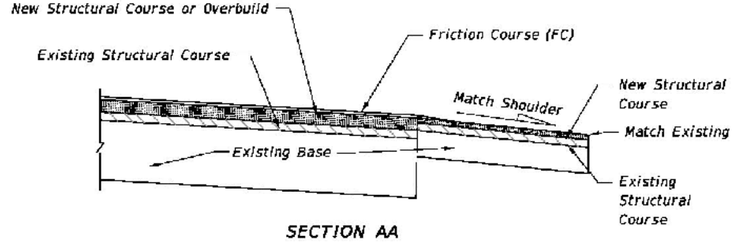
MATERIAL TYPES AND THICKNESSES FOR PAVED CONNECTIONS

Course	Materials	Minimum Thickness (in.)	
		Connections	Roadway*
Structural	Asphaltic Concrete	1½"	1½"
Bases	Optional Base (See Specification 285)	O.B.G. 2	O.B.G. 3

* Travel way flares (bypass lanes), auxiliary lanes serving more than a single connection, and all median crossovers including their auxiliary lanes and/or transition tapers.

NOTES

1. Use same material for driveway structural course and roadway overbuild or structural course, except as approved by the Engineer for graded connections. Other Department-approved equivalent pavements may be used at the discretion of the Engineer.
2. Auxiliary lanes and their transition tapers shall be the same structure as the abutting travel way pavement thickness or any of the roadway structures tabulated above, whichever is thicker.
3. If an asphalt base course is used for a driveway, its thickness may be increased to match the edge of travel way pavement thickness in lieu of a separate structural course. 6" of Portland cement concrete will be acceptable in lieu of the asphalt base and structural courses. See Notes 4 and 5 below.
4. A structural course is required for flexible pavements when they are used for auxiliary lanes serving more than a single connection.
5. Use Class NS concrete at least 6" thick for driveways paved with Portland Cement Concrete. Construct in accordance with Specifications 347, 350, and 522.
6. The Department may require other pavement criteria where local conditions warrant.



SECTION AA

RESURFACING EXISTING DRIVEWAY

GENERAL NOTES:

1. Driveways are to be constructed or resurfaced for low volume (single family, duplex, farm, etc.) residential connections as directed by the Engineer.
2. Driveways construction is not required for low volume residential connections where roadway shoulders are paved.
3. Match existing paved shoulder widths ≥ 4'. For all other shoulders conditions, construct at 5' wide.
4. Connections beyond the shoulder width are to be constructed as directed by the Engineer.
5. Construct Driveway Base in accordance with Specification 286.
6. Payment for structural course and friction course is to be included in roadway pavement pay item.

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LAST REVISION	REVISION	DESCRIPTION:				
11/01/18			FDOT FY 2024-25 STANDARD PLANS	PAVED AND GRADED DRIVEWAYS	INDEX 330-001	SHEET 2 of 2

REVISIONS

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CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

DRAWING NO. 463

SHEET	CONTENTS
1	General Notes; Index Contents
2	General, TL-3 Guardrail - Installed Plan and Elevation
3	Low-Speed, TL-2 Guardrail - Installed Plan and Elevation
4	W-Beam and Thrie-Beam Panel Details
5	Post and Offset Block Details
6	Guardrail Sections - Heights and Adjacent Slopes
7	End Treatment - Approach Terminal Geometry, Parallel
8	End Treatment - Approach Terminal Geometry, Curbed and Double Faced
9	End Treatment - Trailing Anchorage
10	End Treatment - Component Details
11	End Treatment - Controlled Release Terminal (CRT) System
12	Layout for CRT System - Side Roads and Driveways
13	Approach Transition Connection to Rigid Barrier - General, TL-3
14	Approach Transition Connection to Rigid Barrier - General, TL-3 - Curb Connections
15	Approach Transition Connection to Rigid Barrier - Low-Speed, TL-2
16	Approach Transition Connection to Rigid Barrier - Low-Speed, TL-2 - Curb Connections
17	Approach Transition Connection to Rigid Barrier - Details
18	Approach Transition Connection to Rigid Barrier - Double Faced Guardrail
19	Layout to Rigid Barrier - Approach Ends
20	Layout to Rigid Barrier - Approach Ends with Double Faced Guardrail Layout to Rigid Barrier - Trailing Ends Trailing End Transition Connection to Rigid Barrier
21	Trailing End Transition Connection to Rigid Barrier - Curb Connections
22	Rub Rail Details
23	Pedestrian Safety Treatment - Pipe Rail
24	Modified Mount - Special Steel Post for Concrete Structure Mount; Modified Mount - Encased Post for Shallow Mount; Modified Mount - Frangible Leave-Out for Concrete Surface Mount
25	Barrier Delineators - Post Mounted; Clear Space - Reduced Post Spacing for Hazards; ⅝" Button-Head Bolt System

GENERAL NOTES:

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

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

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

3. STANDARD COMPONENTS: Standard guardrail components, including posts, panels, and bolt systems, are based on the Task Force 13 Publication: Guide to Roadside Hardware Components (http://tf13.org/Guides/componentGuide/).

4. BUTTON-HEAD BOLTS: Install Button-Head Bolts where indicated using bolts, nuts, and washers as defined on Sheet 25. Place washers under nuts against timber posts. Washers are not required at steel post flanges and panel lap splices. Do not place washers between bolt heads and panels, except where otherwise shown in this Index.

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

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

7. ADJACENT SIDEWALKS & SHARED USE PATHS: When guardrail posts are placed within 4'-0" of a sidewalk or shared use path, use timber posts, or use steel posts only if treated with Pipe Rail as shown on Sheet 23.

   When timber posts are used, one of the following safety treatments is required for the bolt(s) protruding from the back face of the posts:
   a. After tightening the nut, trim the protruding post bolt flush with the nut and galvanize per Specification 562.
   b. Use post bolts 15" in length and countersink the washer and nut between 1" and 1½" deep into the back face of the post.
   c. Use 15" post bolts with sleeve nuts and washers.

   When End Treatment posts are within 4'-0" of a sidewalk or shared use path, steel posts are not permitted within the End Treatment segment. Terminate the Pipe Rail outside of End Treatment segments, as noted per Sheet 23.

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

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

   For connecting guardrail to existing bridge Traffic Railings, see Indexes 536-002, 521-404, and 521-405.

10. CONNECTION TO EXISTING GUARDRAIL: Where a transition to existing guardrail at 27" height is required. Linearly transition the new guardrail height over a distance ranging from 25'-0" to 31'-3". Height transitions must occur outside of End Treatment and Approach Transition segments.

    Provide an immediate transition to the required midspan panel splice using the available panel options on Sheet 4 (9'-4½" or 15'-7½" panel). Alternatively, this transition to midspan panel splice may be achieved by installing a single reduced post spacing of 3'- 1½" within the new guardrail, immediately adjacent to the connection location.

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

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

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

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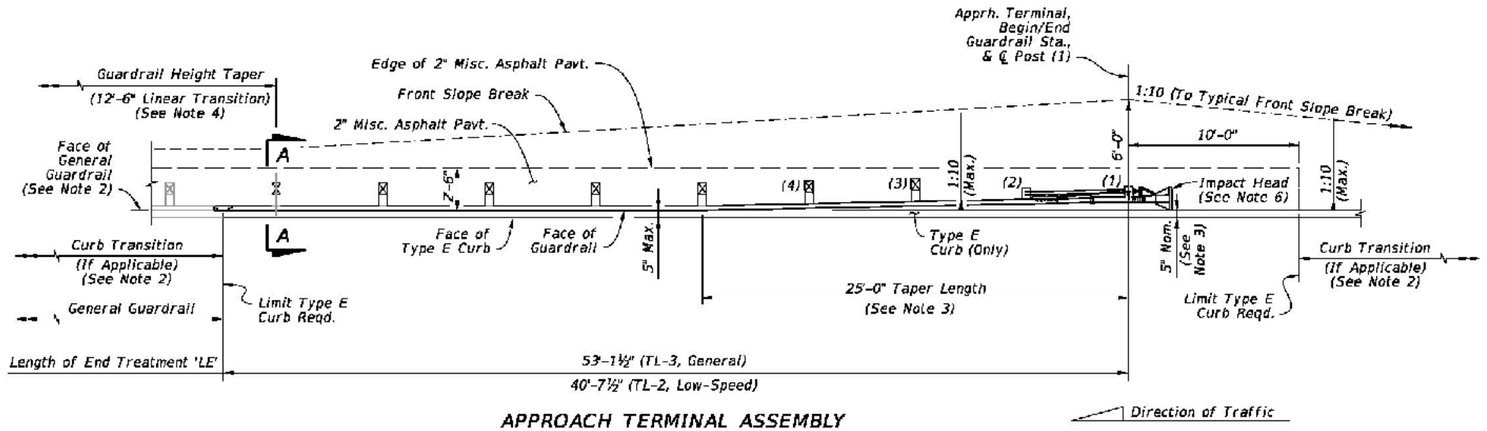
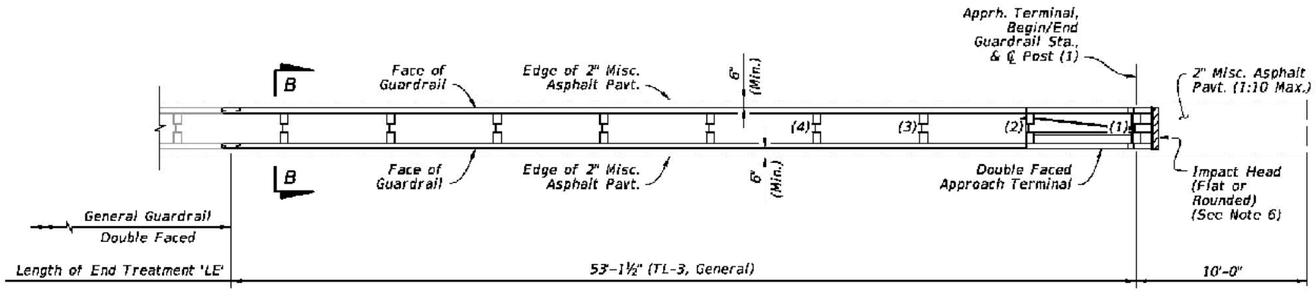
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

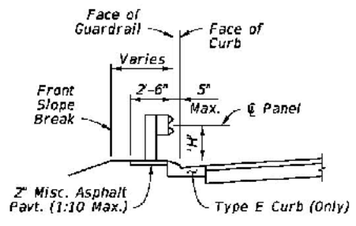
DRAWING NO. **464**



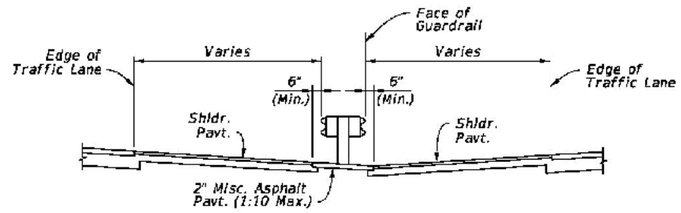
APPROACH TERMINAL ASSEMBLY
'CURBED' SEGMENT - PLAN VIEW



APPROACH TERMINAL ASSEMBLY
'DOUBLE FACED' SEGMENT - PLAN VIEW



'CURBED' SECTION A-A
(Height, 'H', Measured from Misc. Asphalt Pavt.)



'DOUBLE FACED' SECTION B-B
(1:10 Slope or Flatter Reqd.)

NOTES:

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

   Maintain the 1:10 maximum grading as shown in Section B-B throughout segment 'LE'. Where required, transition to differing adjacent slopes linearly, over a minimum longitudinal length of 25'-0".
6. IMPACT HEAD END DELINEATOR: Apply Yellow Retroreflective Sheeting to the nose of the End Terminal in accordance with Specification 536.
7. CLEAR AREA REQUIREMENT: Do not place any permanent aboveground installations within the areas shown with 1:10 maximum grading. For the finished condition, keep this area free of all aboveground obstructions, including dense vegetation and trees.
8. 2" MISCELLANEOUS ASPHALT PAVEMENT: The 2" Misc. Asphalt Pavement shown upstream of Post (1) may be substituted with a different pavement type where called for in the Plans.
9. SINGLE FACED 'PARALLEL' SEGMENTS: See Sheet 7.

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END TREATMENT - APPROACH TERMINAL GEOMETRY CURBED AND DOUBLE FACED

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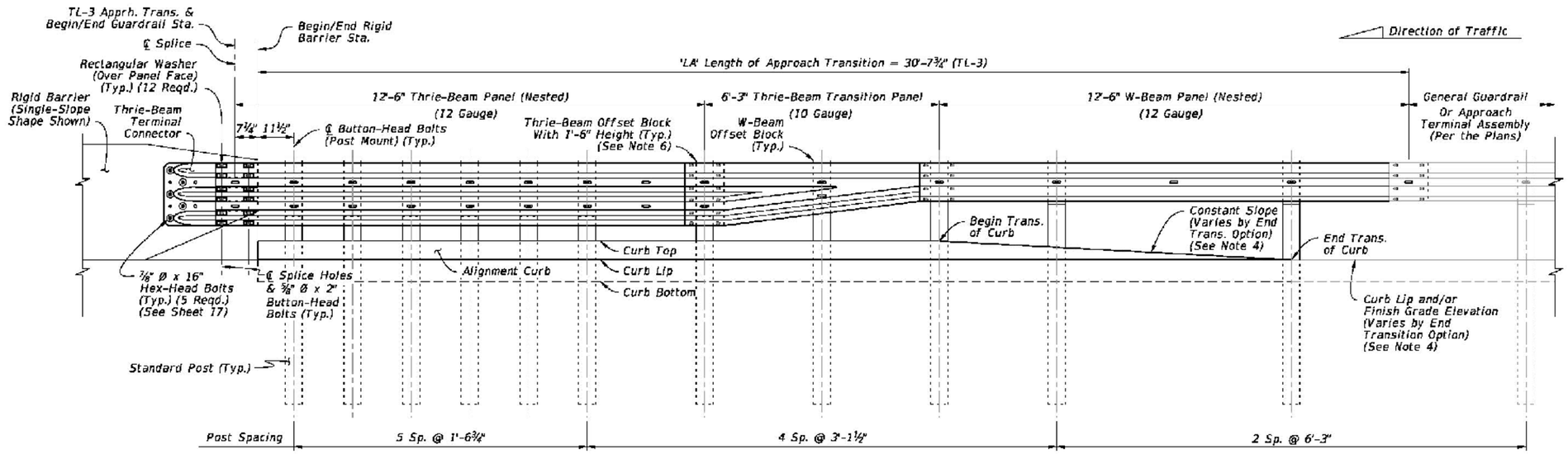
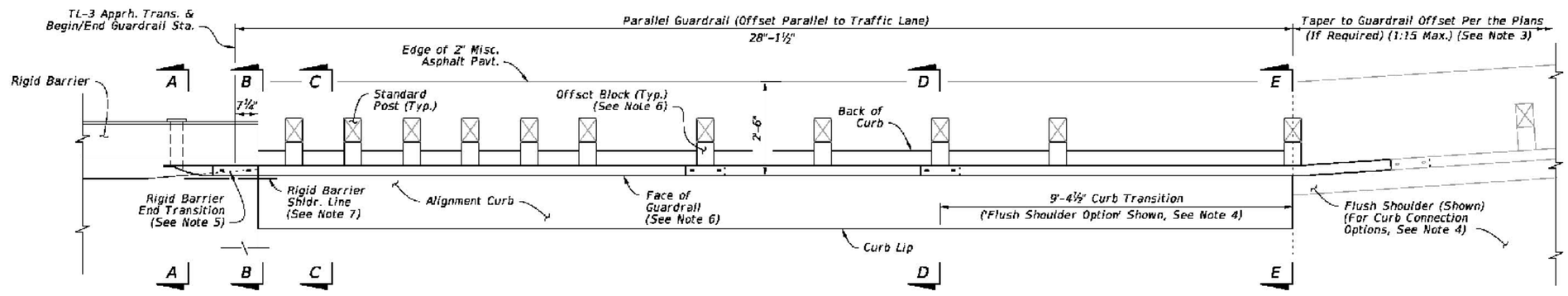
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

DRAWING NO. **465**



TL-3 APPROACH TRANSITION INSTALLED ELEVATION



TL-3 APPROACH TRANSITION INSTALLED PLAN

NOTES:

1. *INSTALLATION:* Construct the Approach Transition segment where indicated in the plans. For example Layouts showing the Approach Transition's fit among other guardrail segments, see Sheet 19.

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

2. *SECTION VIEWS & DETAILS:* For cross sections and details, including the barrier mounting hardware, curb transition, adjacent grading, and installation dimensions, see Sheet 17.

3. *GUARDRAIL TAPER:* The connecting guardrail may require a different lateral offset if shown in the plans. At the location shown herein, taper the guardrail to the connecting guardrail offset. If the adjacent guardrail segment has the same offset as the Approach Transition segment, then no taper is required.

4. *END TRANSITION OF CURB OPTIONS:* The Plan and Elevation views depict an example Curb Transition to Flush Shoulder from Section D-D to E-E, but this transition may require a different shape depending on the End Transition option shown in the plans (Either a 'Shoulder Gutter Option', 'Raised Curb Option', or 'Flush Shoulder Option'). See Sheet 14 for additional curb options and Sheet 17 for curb shape details.

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

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

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

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

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

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

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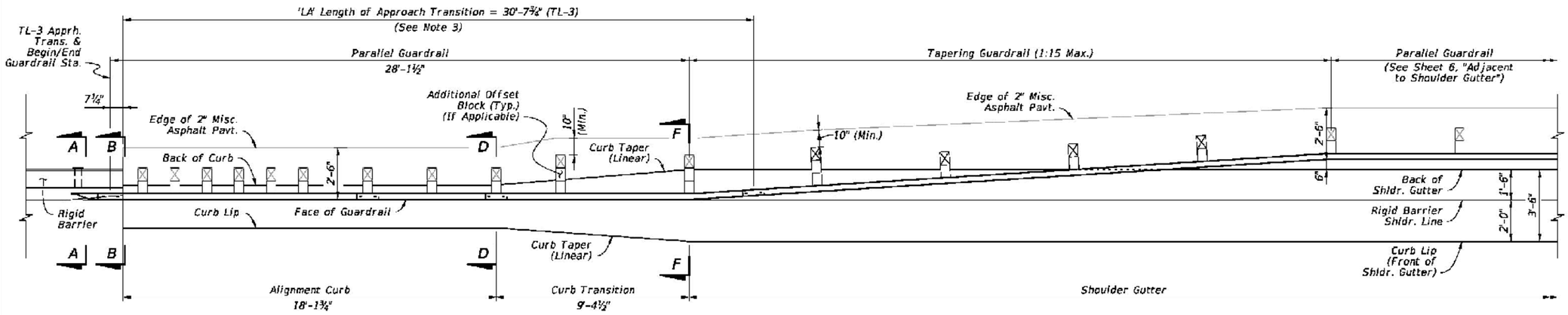
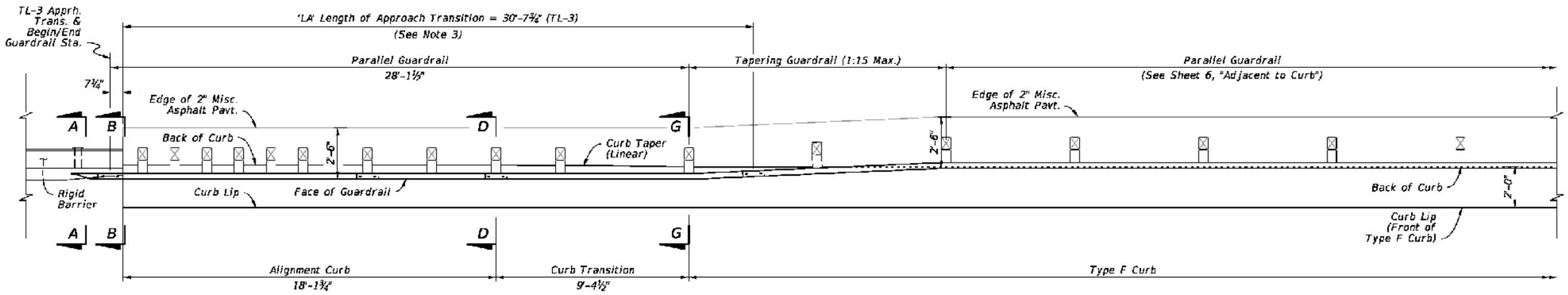


TL-3 APPROACH TRANSITION WITH 'SHOULDER GUTTER' CONNECTION - PLAN VIEW



TL-3 APPROACH TRANSITION WITH 'TYPE F CURB' CONNECTION - PLAN VIEW

NOTES:

1. GENERAL: See the applicable notes and details on Sheet 13.
2. SECTION VIEWS & DETAILS: For cross sections and details, including the barrier mounting hardware, curb transition, adjacent grading, and installation dimensions, see Sheet 17.
3. ELEVATION VIEW: For post and panel installation details within 'LA', see the elevation view on Sheet 13. The curb details will differ depending on curb option required.

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

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CONSTRUCTION DETAILS - FDOT

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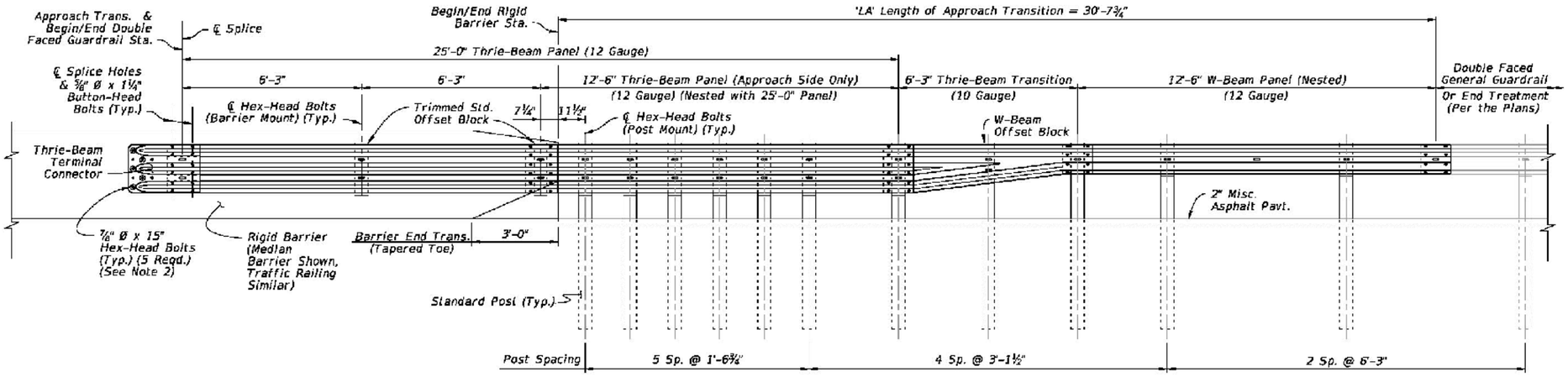
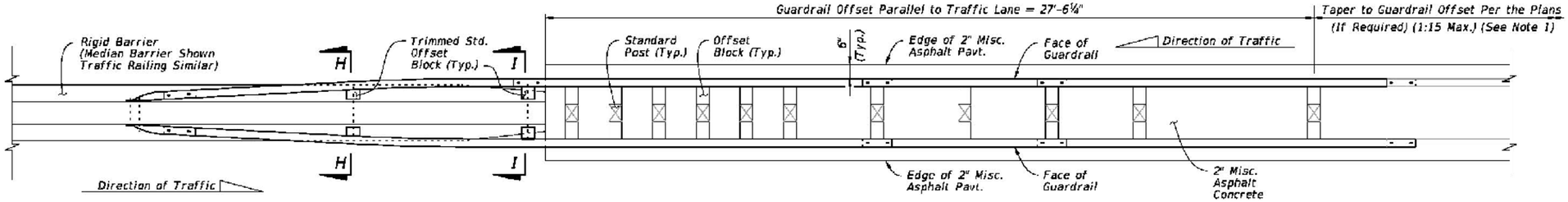


TL-3 DOUBLE FACED APPROACH TRANSITION INSTALLED ELEVATION



TL-3 DOUBLE FACED APPROACH TRANSITION INSTALLED PLAN

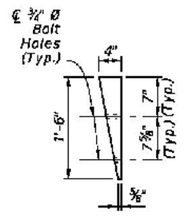
NOTES:

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

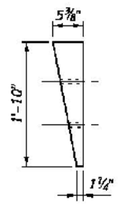
   The Layout given on Sheet 20 provides a basic scheme for connections to adjacent guardrail, where a taper to a differing guardrail offset may be required. If the adjacent guardrail has the same offset as the Approach Transition segment, then no taper is required.

2. THRIE-BEAM TERMINAL CONNECTOR: See Sheet 17 for Details. The installed bolt's threaded portion is not permitted to extend beyond 3#4" from the face of the nut; trim the threaded portion as needed and galvanize in accordance with Specification 562.

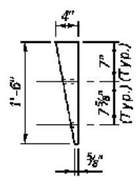
3. GENERAL GUARDRAIL: General Guardrail typically includes Panels and Post Spacing as shown on Sheet 2, including parallel and tapered segments. End Treatments or Reduced Post Spacing Guardrail segments may be substituted for the General Guardrail shown herein if indicated in the plans.



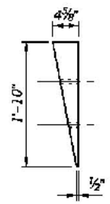
TYPE H-H SECTION



TYPE I-I SECTION



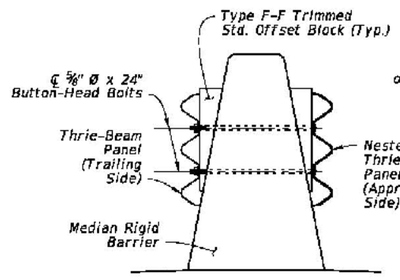
TYPE H-H SECTION



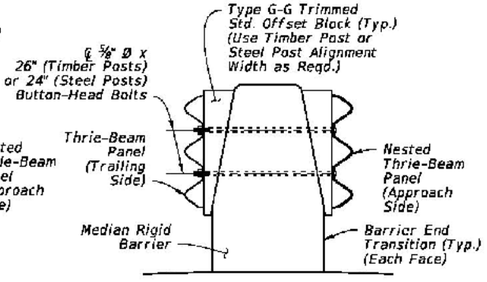
TYPE I-I SECTION

TRIMMED STD. OFFSET BLOCKS
TIMBER POST ALIGNMENT WIDTH

TRIMMED STD. OFFSET BLOCKS
STEEL POST ALIGNMENT WIDTH



SECTION H-H



SECTION I-I

APPROACH TRANSITION CONNECTION TO RIGID BARRIER WITH DOUBLE FACED GUARDRAIL

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CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

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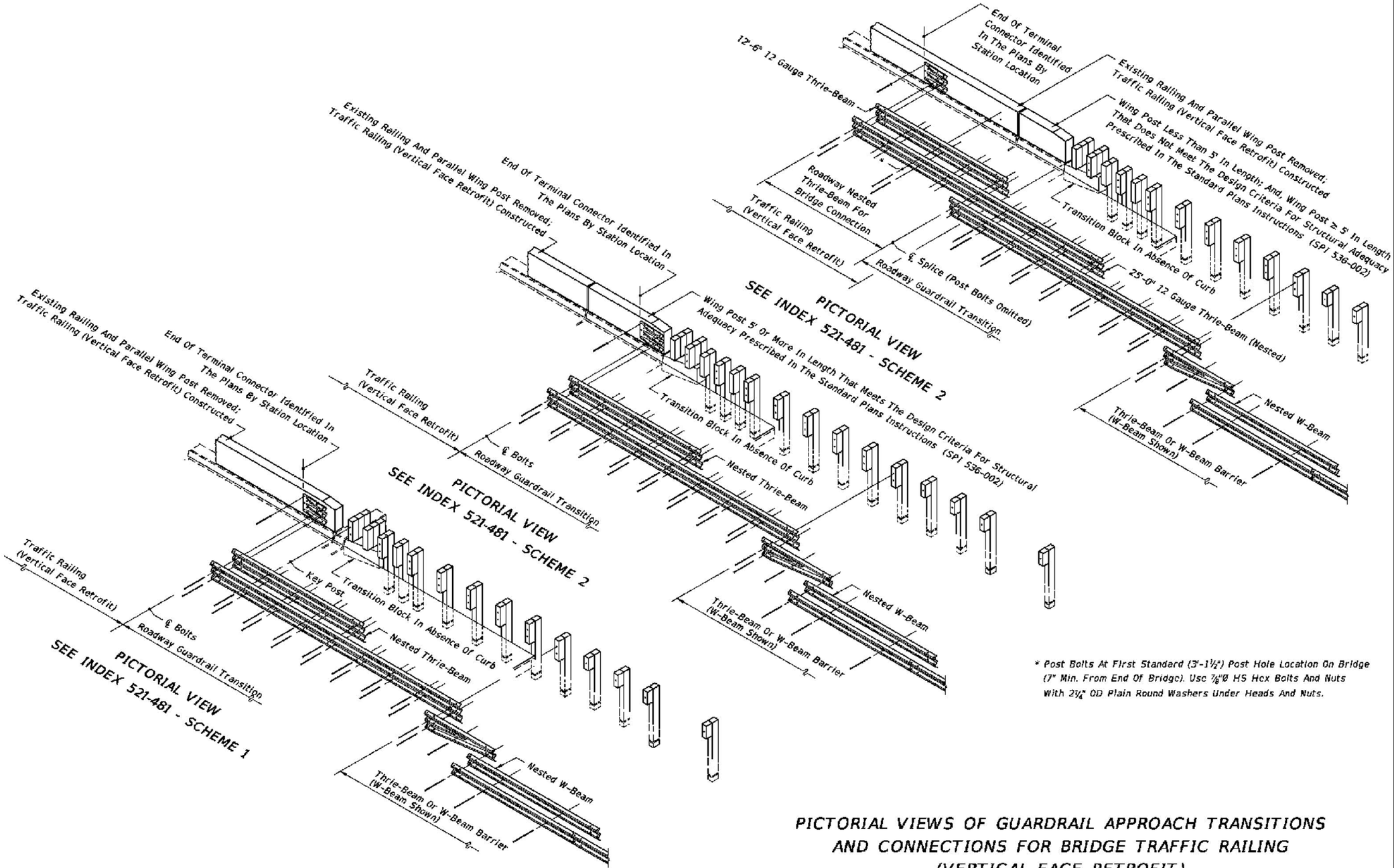

* Post Bolts At First Standard (3'-1½") Post Hole Location On Bridge (7" Min. From End Of Bridge). Use ⅞"Ø HS Hex Bolts And Nuts With 2¼" OD Plain Round Washers Under Heads And Nuts.

10/17/2023 9:20:11 AM

PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (VERTICAL FACE RETROFIT)

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GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

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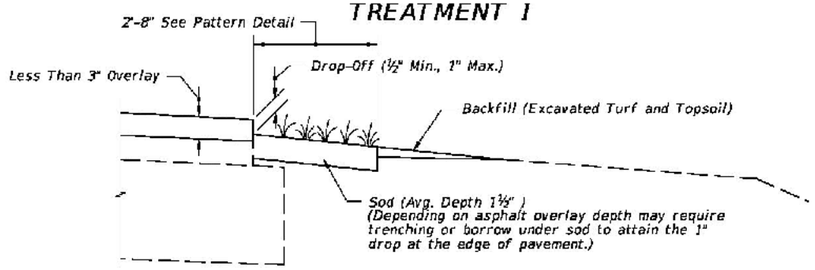
3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

DRAWING NO. **469**

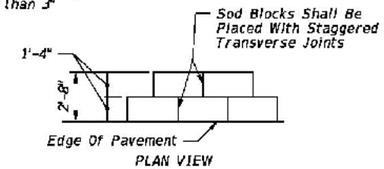
TREATMENT I



COMPLETED SHOULDER

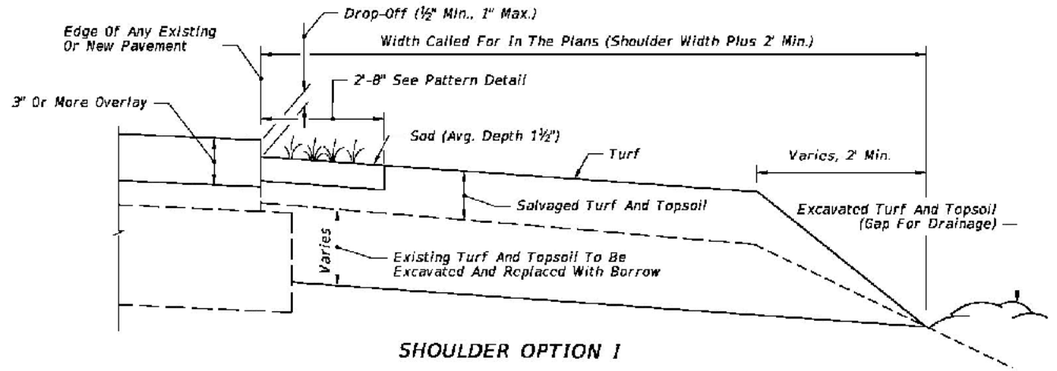
CRITERIA FOR USING TREATMENT I

Project
- is resurfacing, widening and resurfacing or construction of shoulder pavement
- is rural or is urban without curb and gutter
- resurfacing build-up is less than 3"

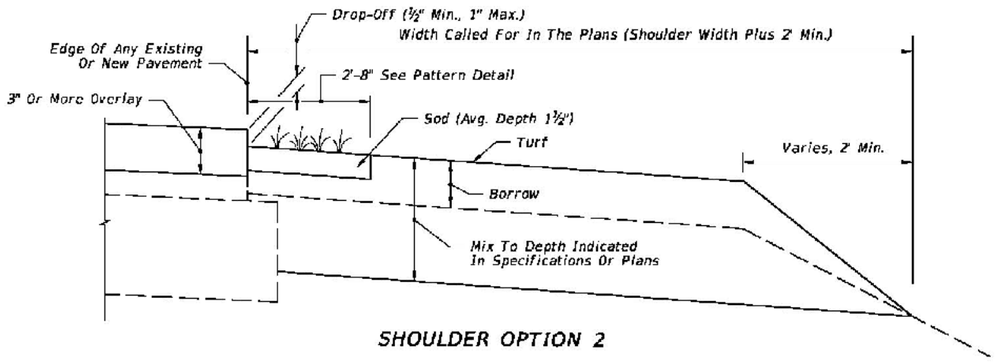


PATTERN DETAIL

TREATMENT II



SHOULDER OPTION 1



SHOULDER OPTION 2

CRITERIA FOR USING TREATMENT II

Project
- is resurfacing or construction of shoulder pavement
- is rural or is urban without curb and gutter
- resurfacing build-up is 3" or more

A SIMILAR TREATMENT MAY BE USED FOR PROJECTS THAT REQUIRE SHOULDER WIDENING. DETAILS ARE TO BE SHOWN IN THE PLANS.

GENERAL NOTES

1. Treatment I:

   If trenching under sod is necessary to achieve the required Drop-Off, excavated topsoil is to be used for filling voids and low areas at the edge of pavement or for flushing along the edge of sod. Excess material to be uniformly distributed over the shoulder.

2. Treatment II:

   A. Borrow must meet the requirements for a "Select" material in accordance with Index 120-001 and Specification 120.

   B. Borrow may be used in lieu of excavated turf and topsoil when economically feasible. There will be no additional payment for substituting borrow for excavated turf and topsoil.

3. Special attention is to be directed at achieving the required Drop-Off at the edge of pavement, within the dimension range shown.

4. Activities such as clearing, grading, and excavating that will disturb one or more acres of land require coverage under the Generic Permit for Stormwater Discharge from Large and Small Construction Activities from the Florida Department of Environmental Protection, and implementation of appropriate pollution prevention measures to minimize erosion and sedimentation and properly manage stormwater.

5. Turf Establishment:

   A. Wildflowers destroyed by shoulder sodding and turf operations are to be reestablished under the seeding rates prescribed for permanent wildflower #2 Group shown by table on Index 570-001.

   B. Establish turf in accordance with Specification 570.

10/17/2023 9:25:00 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/18			FDOT FY 2024-25 STANDARD PLANS	SHOULDER SODDING AND TURF ON EXISTING FACILITIES	570-010	1 of 1

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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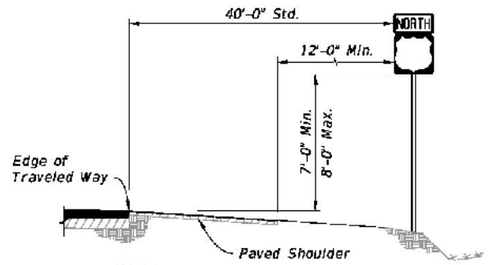
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

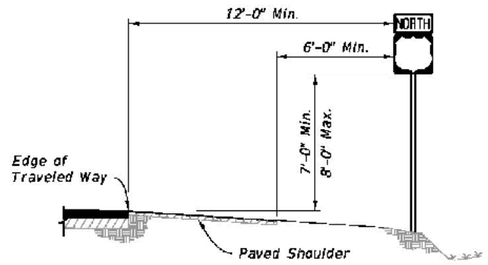
DRAWING NO. **470**



NOTE:
If median width does not allow standard offset from both roadway, center sign in median.

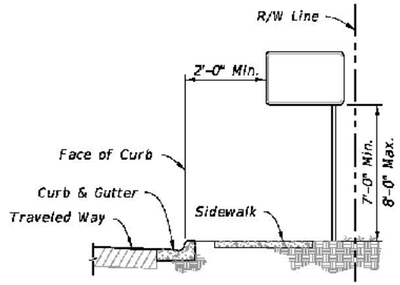
CASE I

Use on Limited Access Roadways



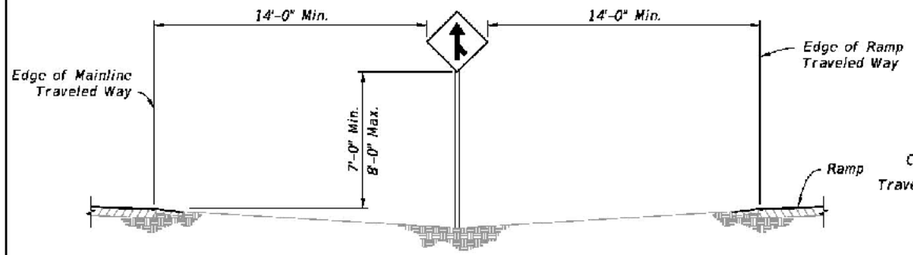
CASE II

Use on Arterial and Collector Roadways, and Limited Access Ramps



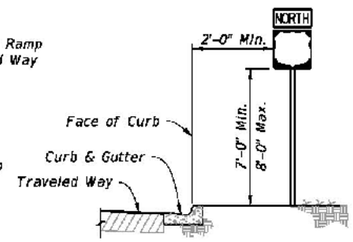
CASE III

Use on Arterial and Collector Roadways



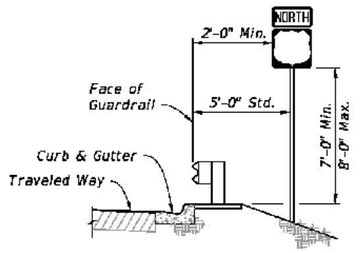
CASE IV

Use on Limited Access Roadways



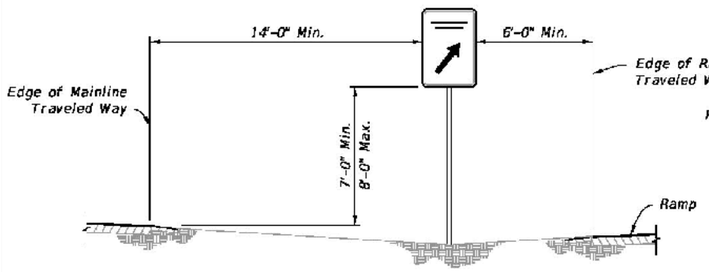
CASE V

Use in Business or Residential Areas Only



CASE VI

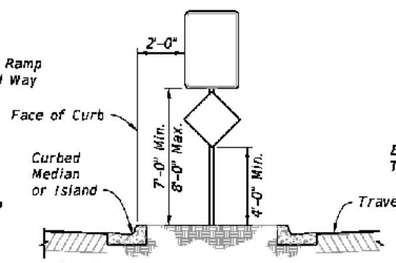
Use on Roadways With Signs Behind Guardrail



CASE VII

REST AREA AND EXIT GORE SIGNS

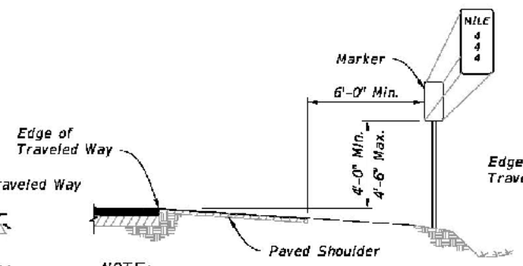
Use on Limited Access Roadways



NOTES:
1. For separators <6'-0", center the sign within the separator, center sign column on island.
2. Offset 6'-0" Std. (2'-0" Min.) from Median or Island Nose.

CASE VIII

Use on Island or Curbed Median

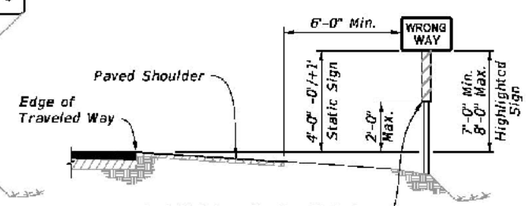


NOTE:
For more information refer to Section 2H of the MUTCD.

CASE IX

MILE POST MARKER

Use on Limited Access Roadways



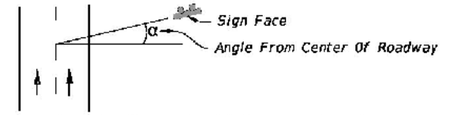
CASE X

WRONG-WAY SIGNS

(See Note 8)

GENERAL NOTES:

1. Single-Column Signs Shown, Multi-Column Signs similar. These typical sections serve as a guide for locating the traffic signs required under various roadside conditions. For size and details of sign construction and footing, refer to the appropriate Index and Plans.
2. Verify the length of sign supports in the field prior to fabrication.
3. Install ground signs at an angle of 1 to 4 degrees away from the traffic flow (see illustration). Install shoulder mounted signs rotated counterclockwise and median mounted signs rotated clockwise. Install signs on a curve as noted above from the perpendicular to the motorist line of sight.



4. The setback for Stop and Yield signs may be reduced to 3' minimum from the Edge of Traveled Way if required for visibility in business or residential sections with no curb and speeds of 30 MPH or less.
5. The mounting heights are measured from the bottom of the sign panel to a horizontal line extended from the Edge of Traveled Way or from the ground surface at the back of curb. If the standard heights cannot be met, the minimum heights are as follows:

   Limited Access Roadways – 7'

   Arterial and Collector Roadways:
   5' – Rural
   7' – Urban (including residential with parking and/or pedestrian activity)

   Limited Access Roadways:
   If a secondary sign is mounted below the major sign, mount the major sign so that the bottom of the sign is at least 8' above the edge of the traveled way and the secondary sign at least 5' above the edge of the traveled way.

   Arterial and Collector Roadways:
   Rural, mount the secondary sign at least 5' above the edge of the traveled way.
   Urban, mount the secondary sign at least 7' above the edge of the traveled way.
6. Do not install sign supports in the bottom of ditches.
7. Install sign supports so they do not reduce the accessible width of Sidewalks or Shared Use Paths to less than 4' min. clear width.
8. CASE X sign placement is for Interstate Exit Ramps only. Use CASE I through Case VIII as appropriate for all other Wrong Way signs.

10/17/2023 9:42:55 AM

LAST REVISION	REVISION	DESCRIPTION:
11/01/23		

FDOT FY 2024-25 STANDARD PLANS

TYPICAL SECTIONS FOR PLACEMENT OF SINGLE AND MULTI-COLUMN SIGNS

INDEX 700-101 | SHEET 1 of 1

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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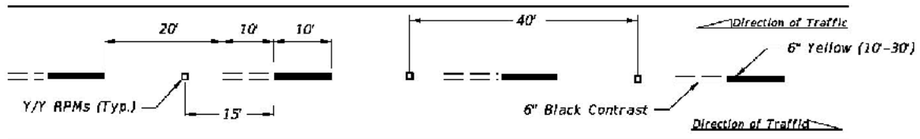
CERTIFICATE OF AUTHORIZATION 23132

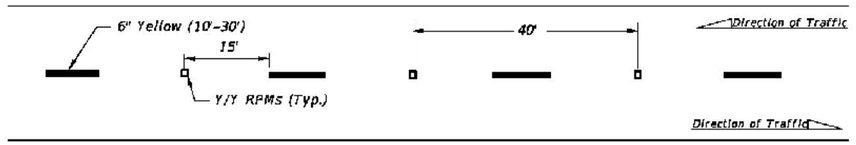
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

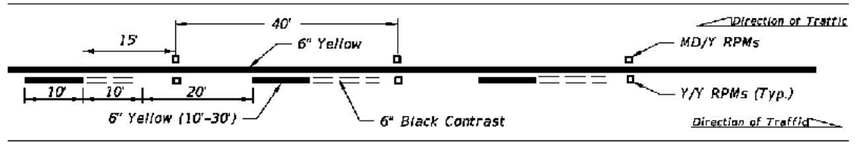
DRAWING NO. 471



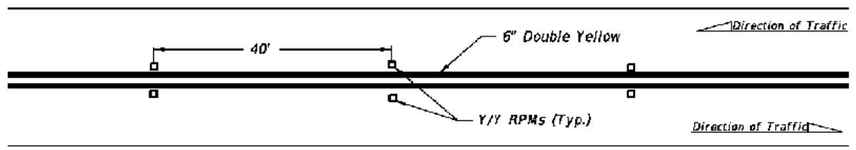
ALTERNATING SKIP LINE



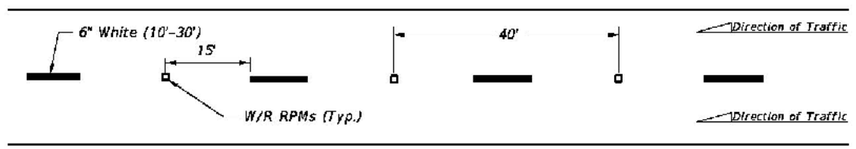
SKIP LINE



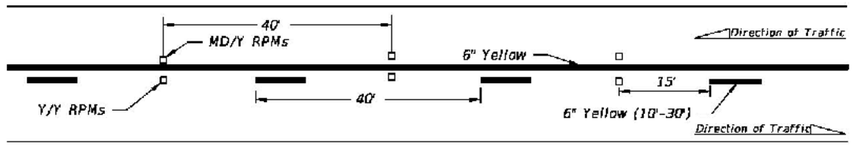
SOLID LINE WITH ALTERNATING SKIP



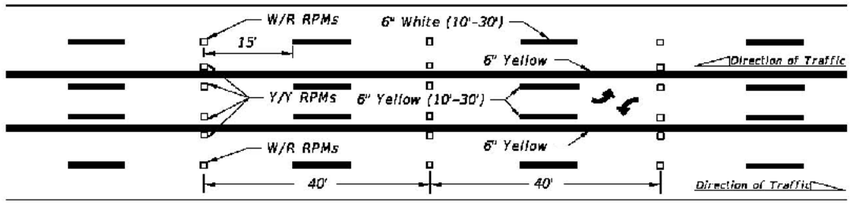
DOUBLE SOLID LINE



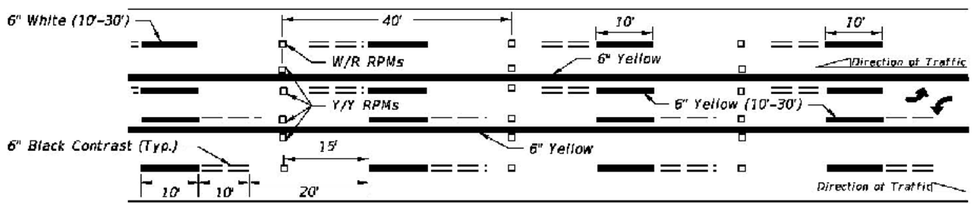
MULTILANE



SOLID LINE WITH SKIP



SKIP LINE WITH TWO-WAY LEFT TURN LANE



ALTERNATING SKIP LINE WITH TWO-WAY LEFT TURN LANE

NOTES:

1. Offset all RPMs 1" from solid longitudinal lines unless otherwise noted or shown.
2. Spacing may be reduced for sharp curves if required.
3. For placement of RPMs on ramps, see Index 711-003.
4. Make the traffic face of the RPM the same color as the pavement marking that it is supplementing.

LEGEND:

B/C = BACK OF CURB

EOP = EDGE OF PAVEMENT

RPM = RAISED PAVEMENT MARKER

W/R = WHITE/RED RPM

Y/Y = YELLOW/YELLOW RPM

Y/R = YELLOW/RED RPM

MD/Y = MONO-DIRECTIONAL YELLOW RPM

10/17/2023 9:47:22 AM

LAST REVISION	REVISION	DESCRIPTION:	FY 2024-25 STANDARD PLANS	TYPICAL PLACEMENT OF RAISED PAVEMENT MARKERS	INDEX	SHEET
11/01/18					706-001	1 of 6

REVISIONS

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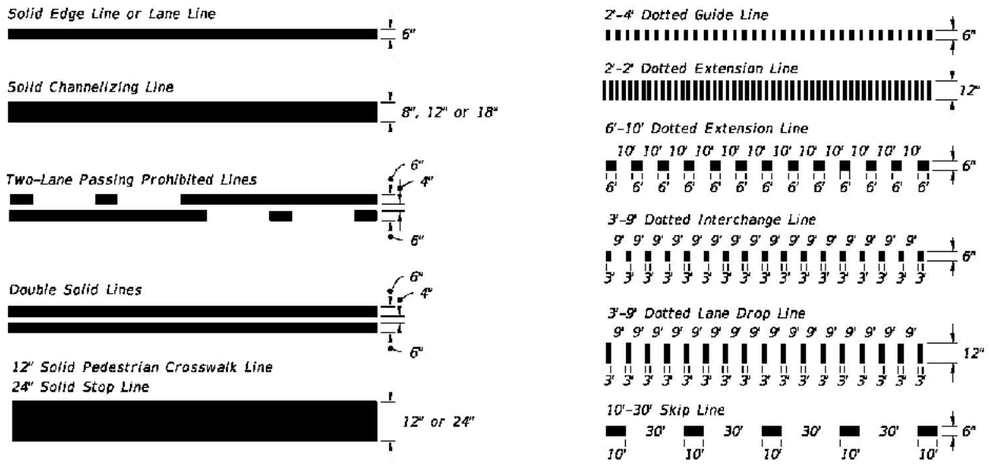
CERTIFICATE OF AUTHORIZATION 23132

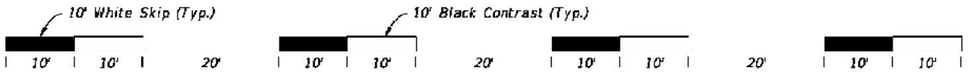
CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

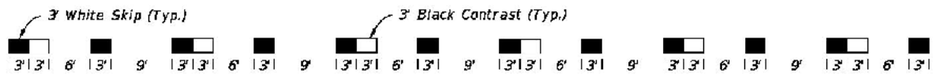
DRAWING NO. **472**



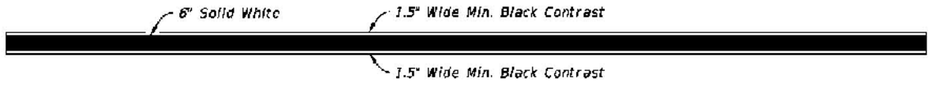
PAVEMENT MARKING LINES



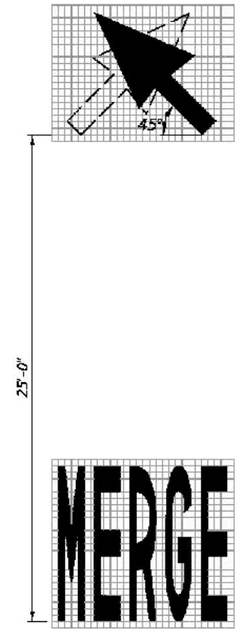
10'-30' SKIP LINE WITH CONTRAST MARKINGS



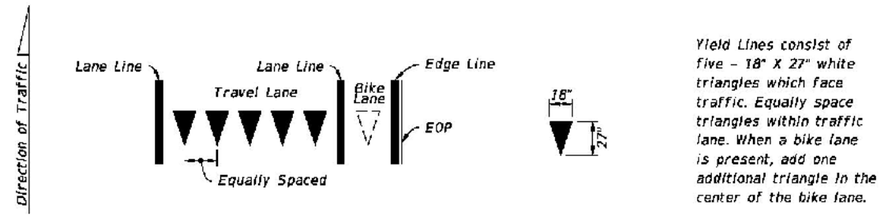
DOTTED LINE WITH ALTERNATING CONTRAST MARKINGS
(3'-9' Dotted Line Shown, Other Dotted Lines Similar)



LONGITUDINAL SOLID LANE LINE WITH CONTRAST MARKINGS
(Not For Use On Edge Lines)



MARKINGS FOR MERGE



Yield Lines consist of five - 18" X 27" white triangles which face traffic. Equally space triangles within traffic lane. When a bike lane is present, add one additional triangle in the center of the bike lane.

YIELD LINES

10/17/2023 9:48:26 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/22			FDOT FY 2024-25 STANDARD PLANS	PAVEMENT MARKINGS	711-001	2 of 13

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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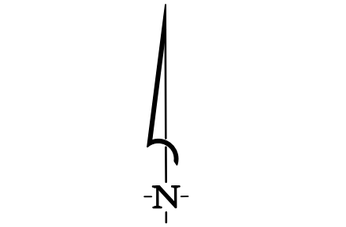
BAKER COUNTY

CR229 WIDENING AND RESURFACING PROJECT

CONSTRUCTION DETAILS - FDOT

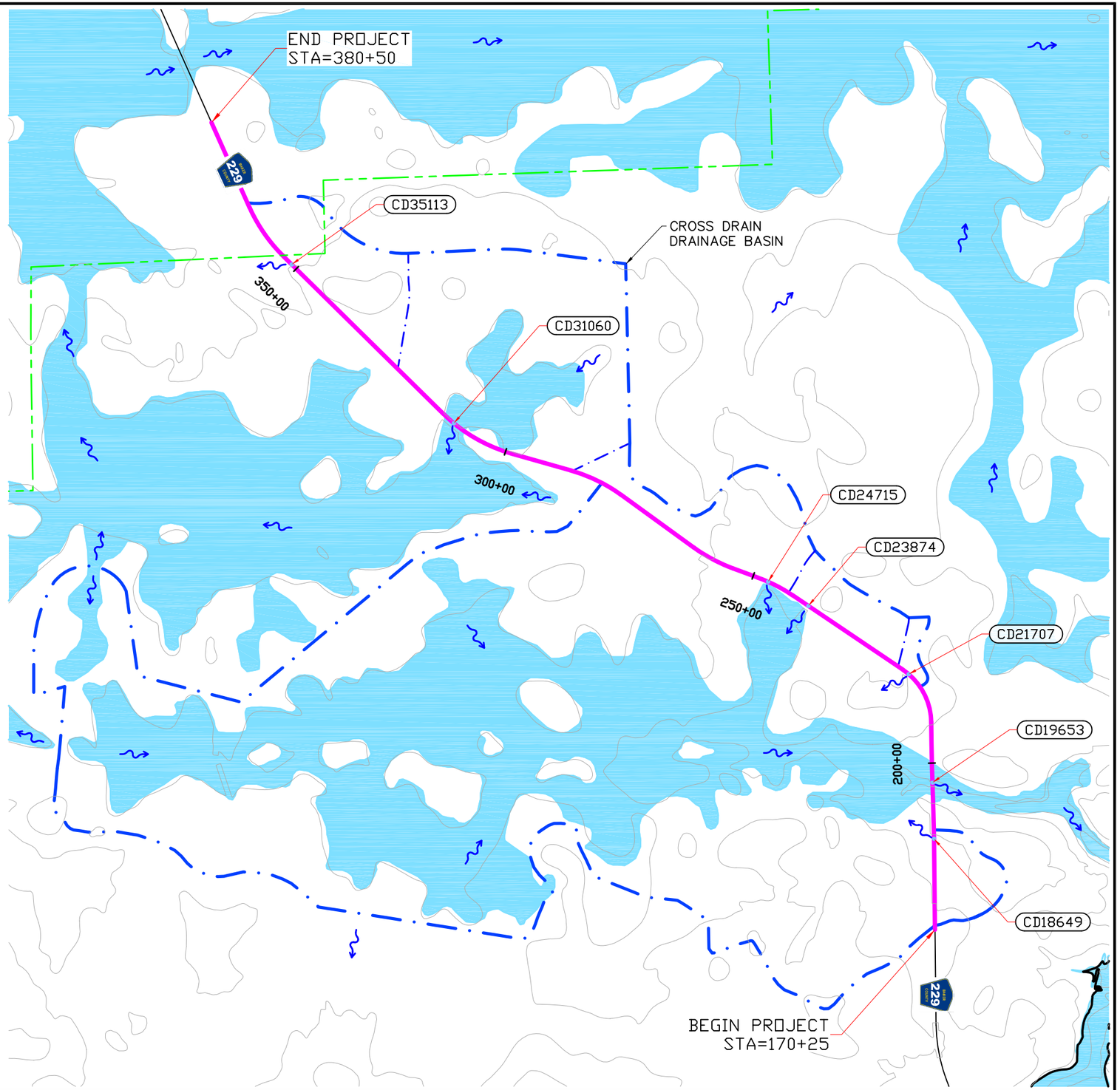
DRAWING NO. **473**



CROSS DRAIN DRAINAGE SUMMARY				
DRAINAGE BASIN ID	AREA (ACRES)	AREA (SM)	100-YEAR DISCHARGE (CFS)	100-YEAR CULVERT CAPACITY (CFS)
CD18649	37.1	0.06	32	40
CD19653	2012.3	3.14	308	443
CD21707	8.8	0.01	12	26
CD23874	40.6	0.06	34	42
CD24715	95.1	0.15	42	42
CD31060	306.3	0.48	104	104
CD35113	88.5	0.14	38	38

HYDROLOGY/HYDRAULICS NOTES

1. THE DRAINAGE BASINS SHOWN ARE BASED ON DELINEATIONS PROVIDED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) USING U.S. GEOLOGICAL SURVEY 7.5 MINUTE TOPOGRAPHIC MAPS AND THEREFORE BASED ON CONTOURS AND HYDROGRAPHY MAPPED AT THAT SCALE. HOWEVER, SOME OF THE BOUNDARIES HAVE BEEN REVISED BY FDEP USING PROJECT AREA KNOWLEDGE, AND IN SOME CASES, INFORMATION FROM LOCAL GOVERNMENTS AND CONSULTANTS REGARDING STORMWATER DRAINAGE PATTERNS. FDEP'S ENGINEERING DIVISION LAST UPDATED THEIR DRAINAGE BASINS IN AUGUST OF 2011.
2. THE DRAINAGE AREAS FOR THE ROAD CROSS DRAINS WERE MODIFIED FOR THE PURPOSES OF THIS PROJECT TO CONFORM WITH AERIAL MAPS AND WITH FIELD OBSERVATIONS.
3. USGS REGRESSION ANALYSIS WAS USED TO ESTIMATE 100-YEAR DISCHARGE RATES. BASIN PARAMETERS INCLUDED DRAINAGE AREA, AVERAGE BASIN SLOPE, BASIN LAKE AREA PERCENT AND LOCAL REGRESSION CONSTANTS.
4. CULVERT CAPACITY WAS EVALUATED USING HY8 CULVERT ANALYSIS SOFTWARE. THE REPORTED CULVERT CAPACITY REPRESENTS THE MAXIMUM 100-YEAR DISCHARGE RATE AT THE CULVERT BEFORE THE ROADWAY WOULD BE OVERTOPPED.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE MAP

DRAWING NO.

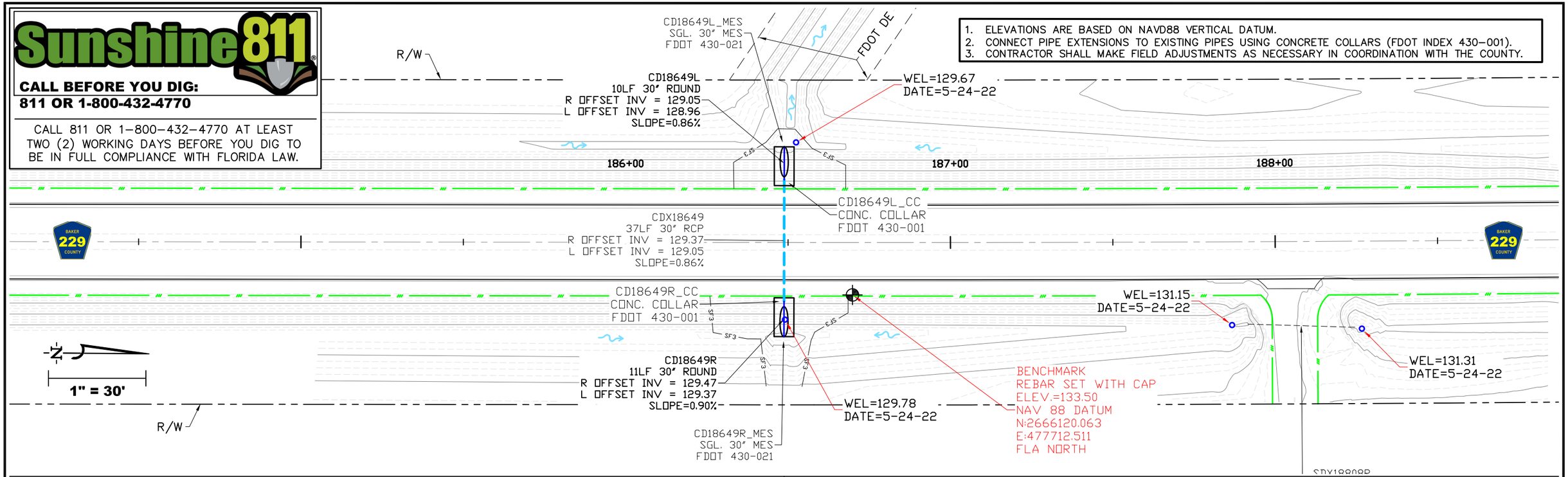
500

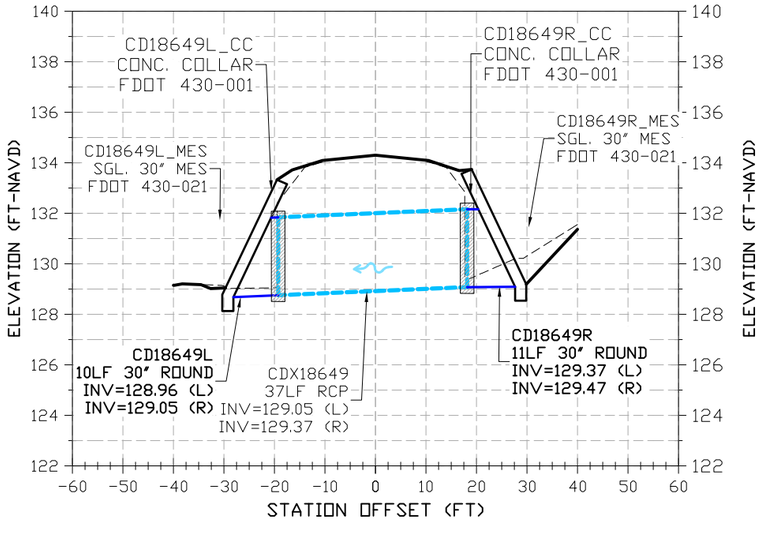
Sunshine811

CALL BEFORE YOU DIG:
811 OR 1-800-432-4770

CALL 811 OR 1-800-432-4770 AT LEAST TWO (2) WORKING DAYS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH FLORIDA LAW.

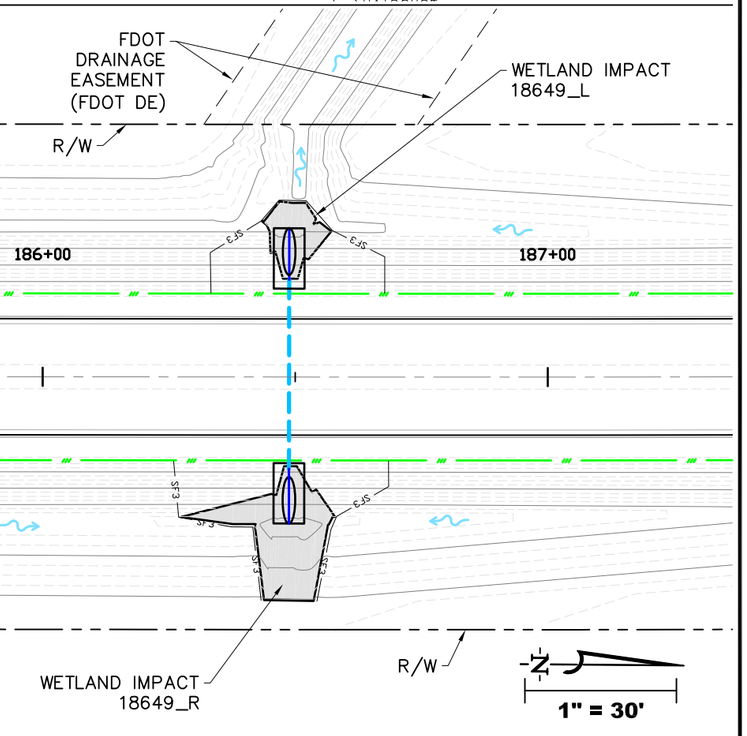
1. ELEVATIONS ARE BASED ON NAVD88 VERTICAL DATUM.
2. CONNECT PIPE EXTENSIONS TO EXISTING PIPES USING CONCRETE COLLARS (FDOT INDEX 430-001).
3. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NECESSARY IN COORDINATION WITH THE COUNTY.





WETLAND IMPACTS @ 18649 LEFT			
IMPACT AREA		CUT & FILL (CY)	
120	SF	0.2	CUT
13	SY	3.3	FILL
0.003	ACRES	3.1	NET

WETLAND IMPACTS @ 18649 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
337	SF	2.5	CUT
37	SY	3.6	FILL
0.008	ACRES	1.2	NET



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3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

CROSS DRAIN EXTENSIONS

DRAWING NO.
510

Sunshine811

CALL BEFORE YOU DIG:
811 OR 1-800-432-4770

CALL 811 OR 1-800-432-4770 AT LEAST TWO (2) WORKING DAYS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH FLORIDA LAW.

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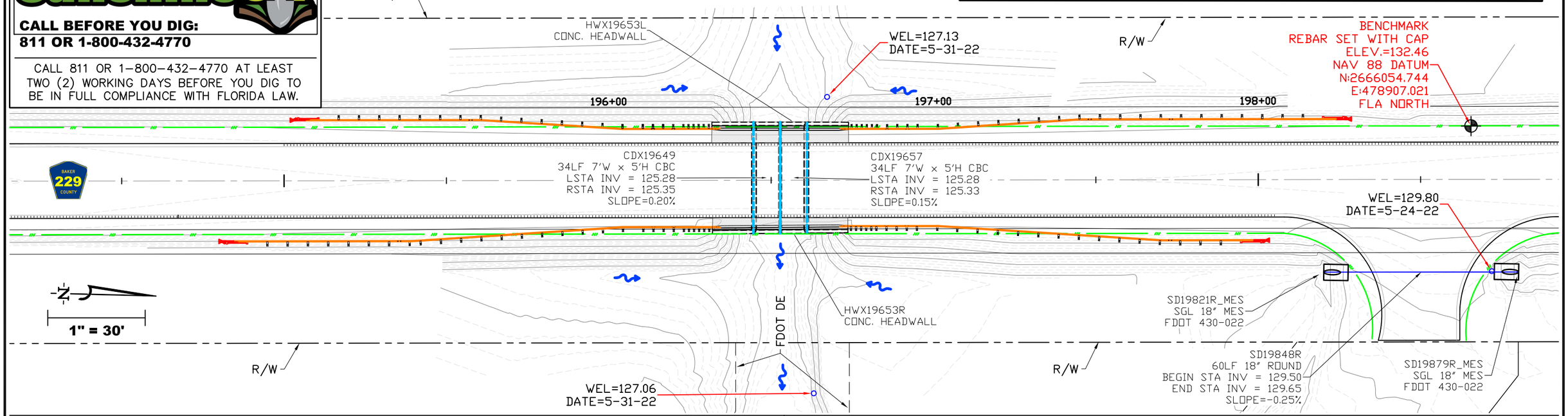
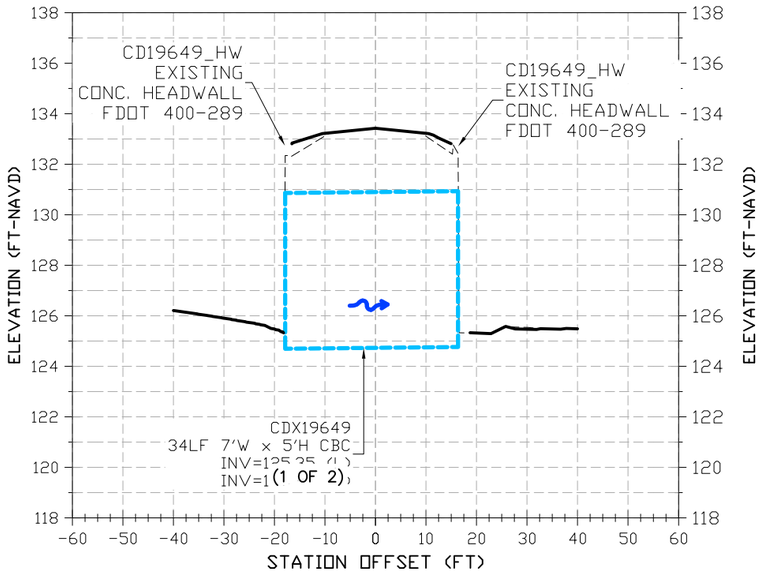
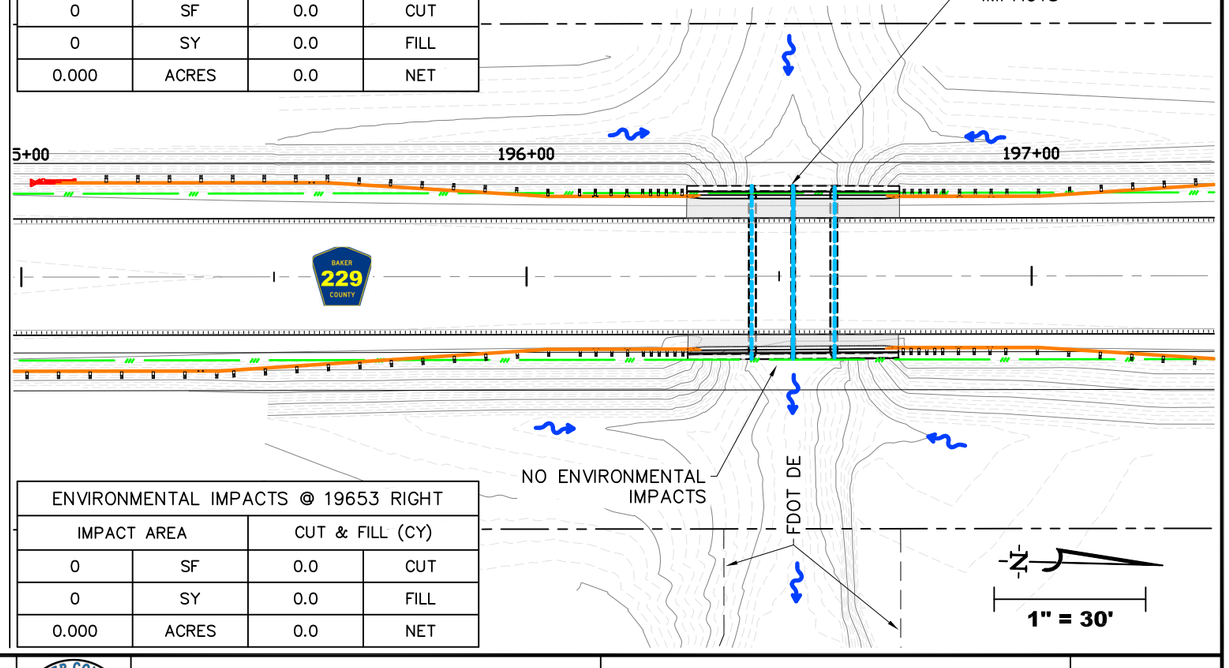




(1 OF 2)

ENVIRONMENTAL IMPACTS @ 19653 LEFT			
IMPACT AREA		CUT & FILL (CY)	
0	SF	0.0	CUT
0	SY	0.0	FILL
0.000	ACRES	0.0	NET



ENVIRONMENTAL IMPACTS @ 19653 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
0	SF	0.0	CUT
0	SY	0.0	FILL
0.000	ACRES	0.0	NET

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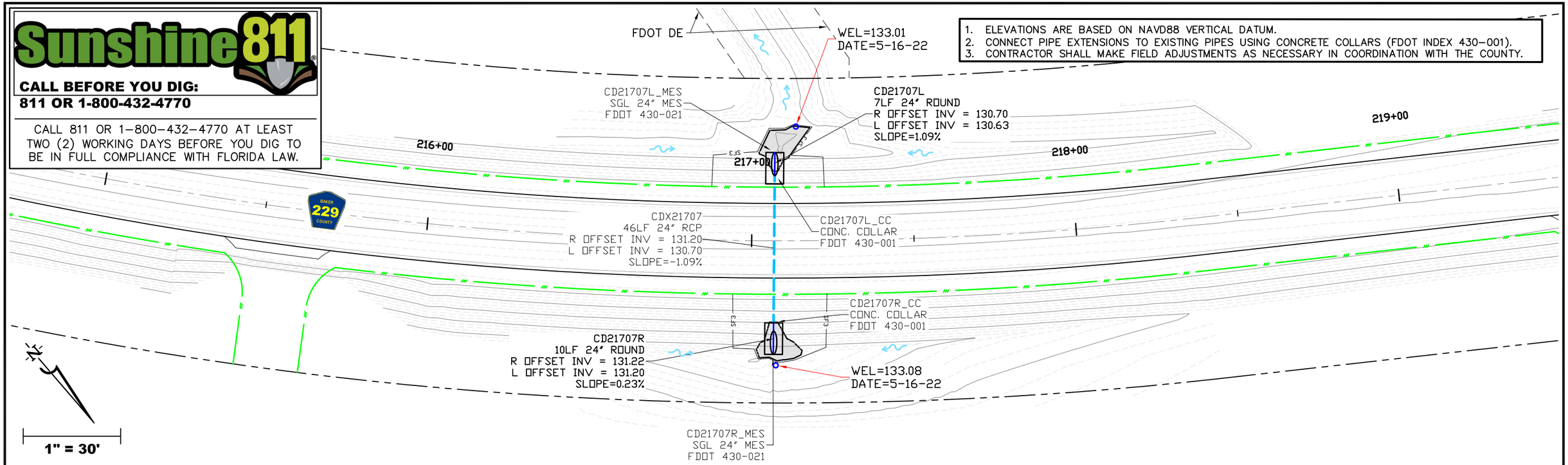
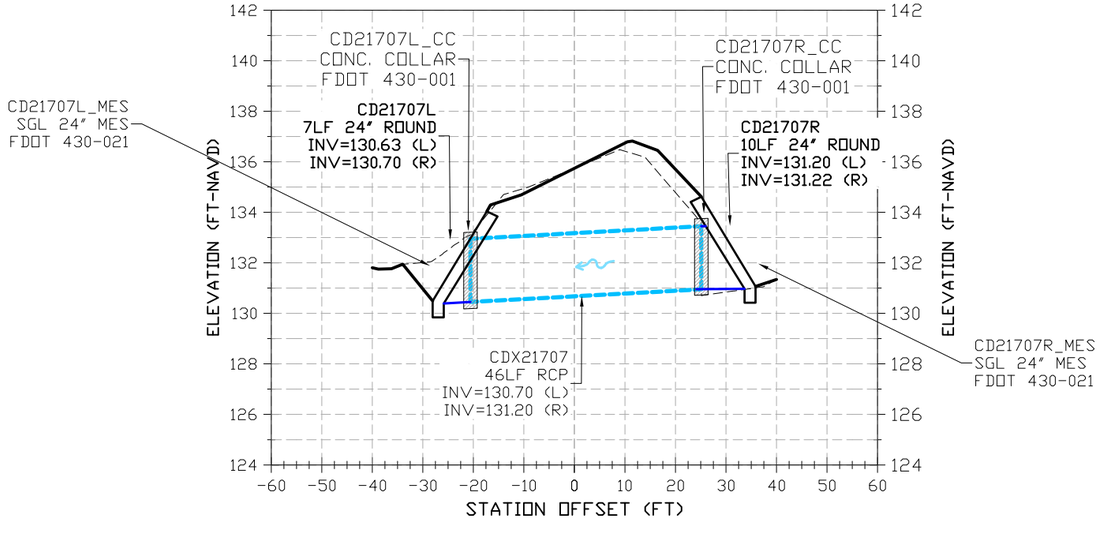
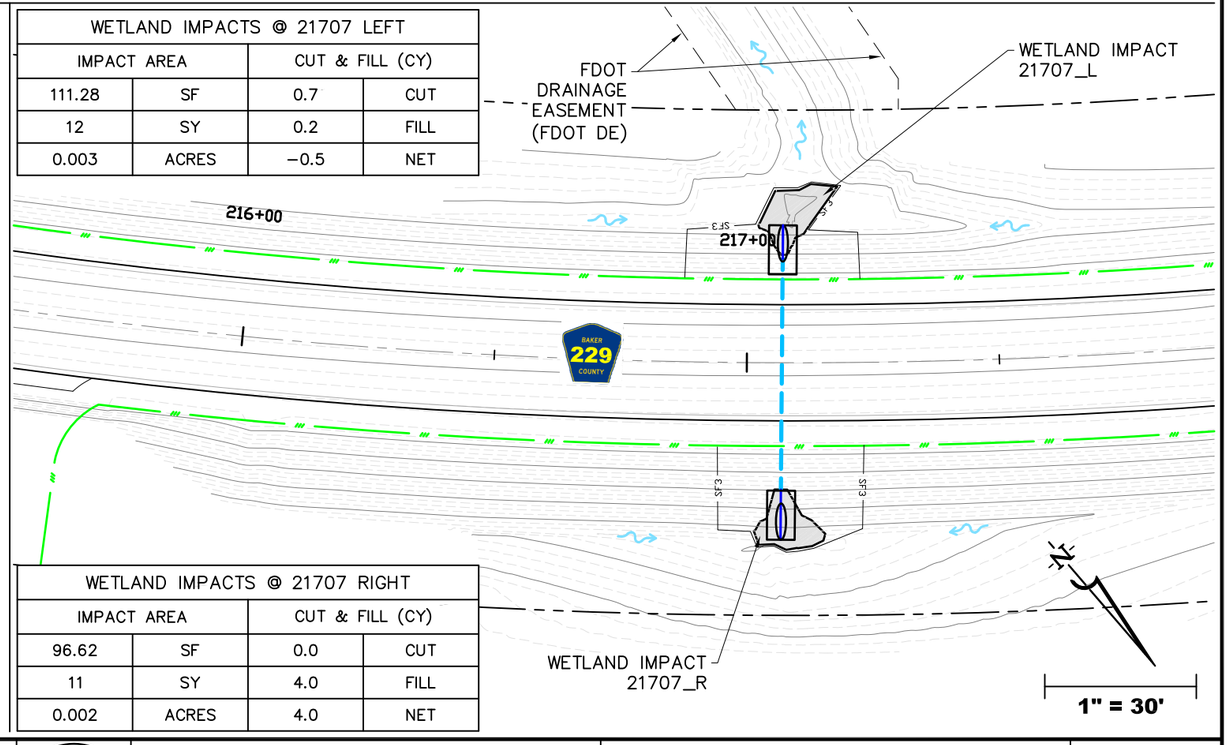




WETLAND IMPACTS @ 21707 LEFT			
IMPACT AREA		CUT & FILL (CY)	
111.28	SF	0.7	CUT
12	SY	0.2	FILL
0.003	ACRES	-0.5	NET

WETLAND IMPACTS @ 21707 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
96.62	SF	0.0	CUT
11	SY	4.0	FILL
0.002	ACRES	4.0	NET



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CROSS DRAIN EXTENSIONS

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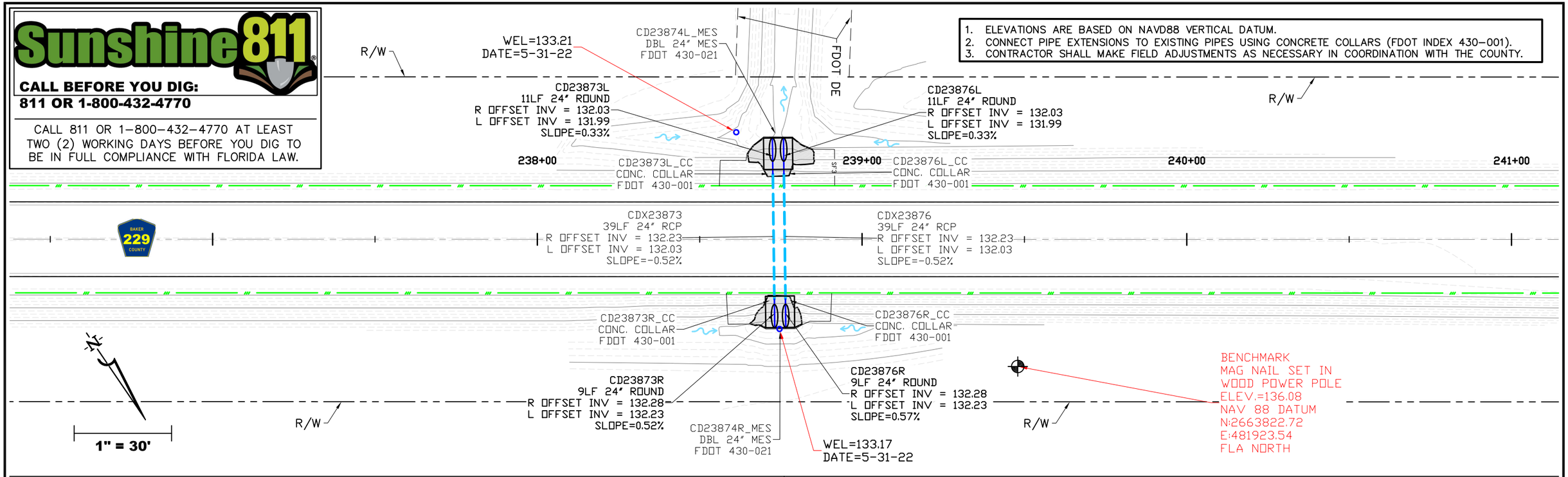
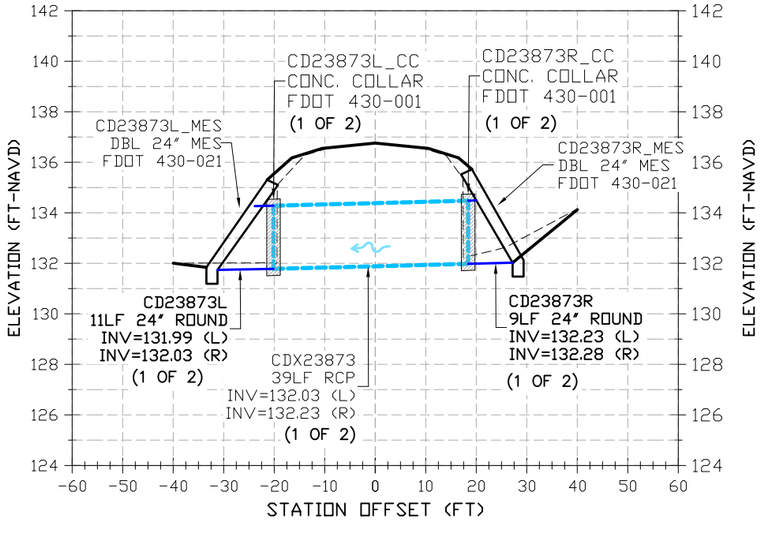
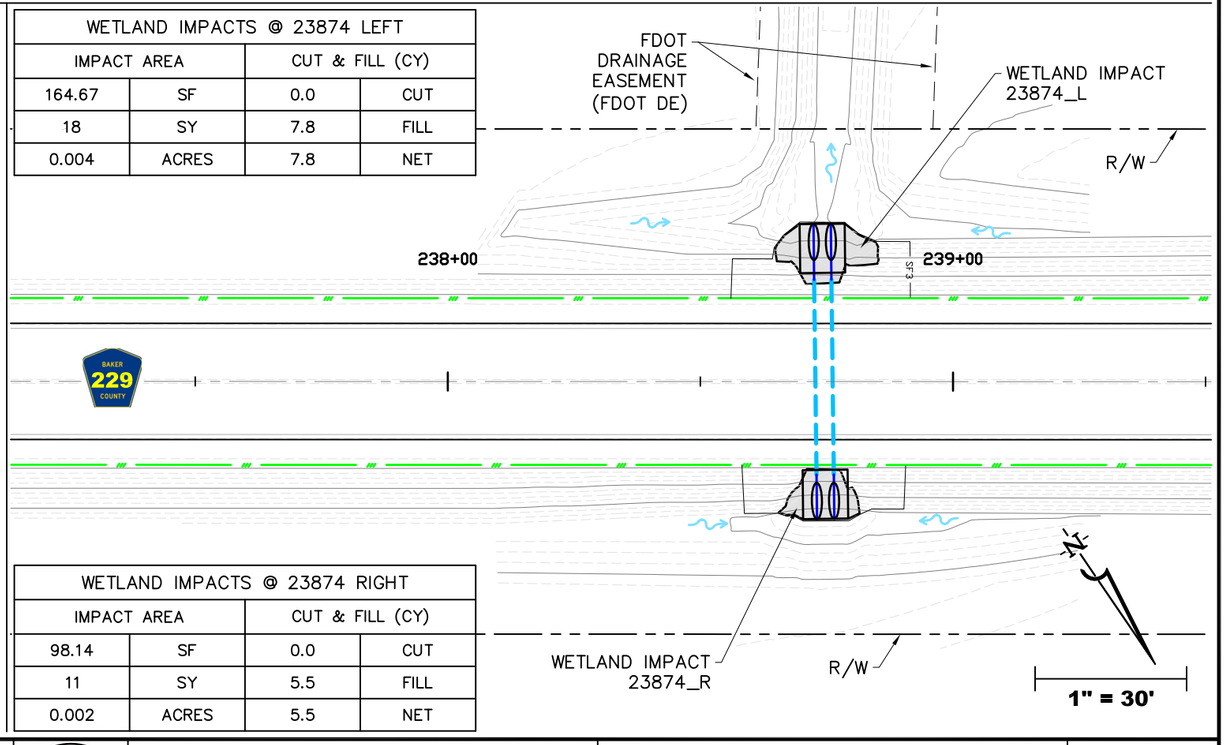




WETLAND IMPACTS @ 23874 LEFT			
IMPACT AREA		CUT & FILL (CY)	
164.67	SF	0.0	CUT
18	SY	7.8	FILL
0.004	ACRES	7.8	NET

WETLAND IMPACTS @ 23874 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
98.14	SF	0.0	CUT
11	SY	5.5	FILL
0.002	ACRES	5.5	NET



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CROSS DRAIN EXTENSIONS

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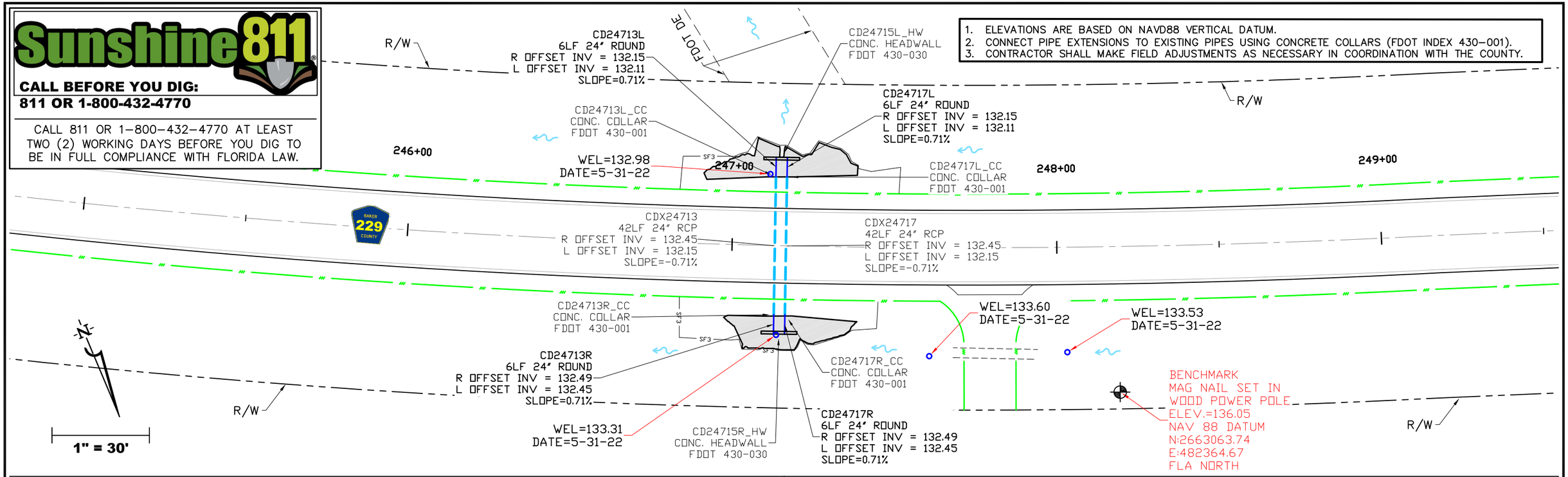
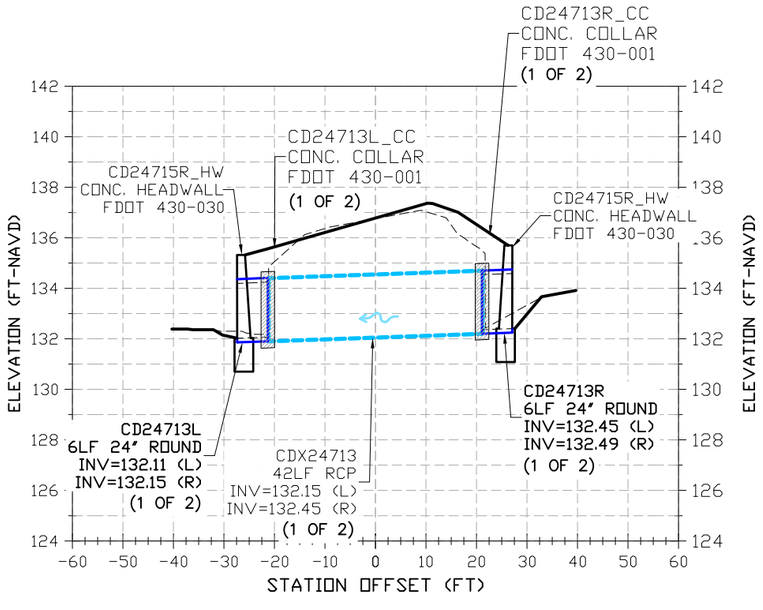
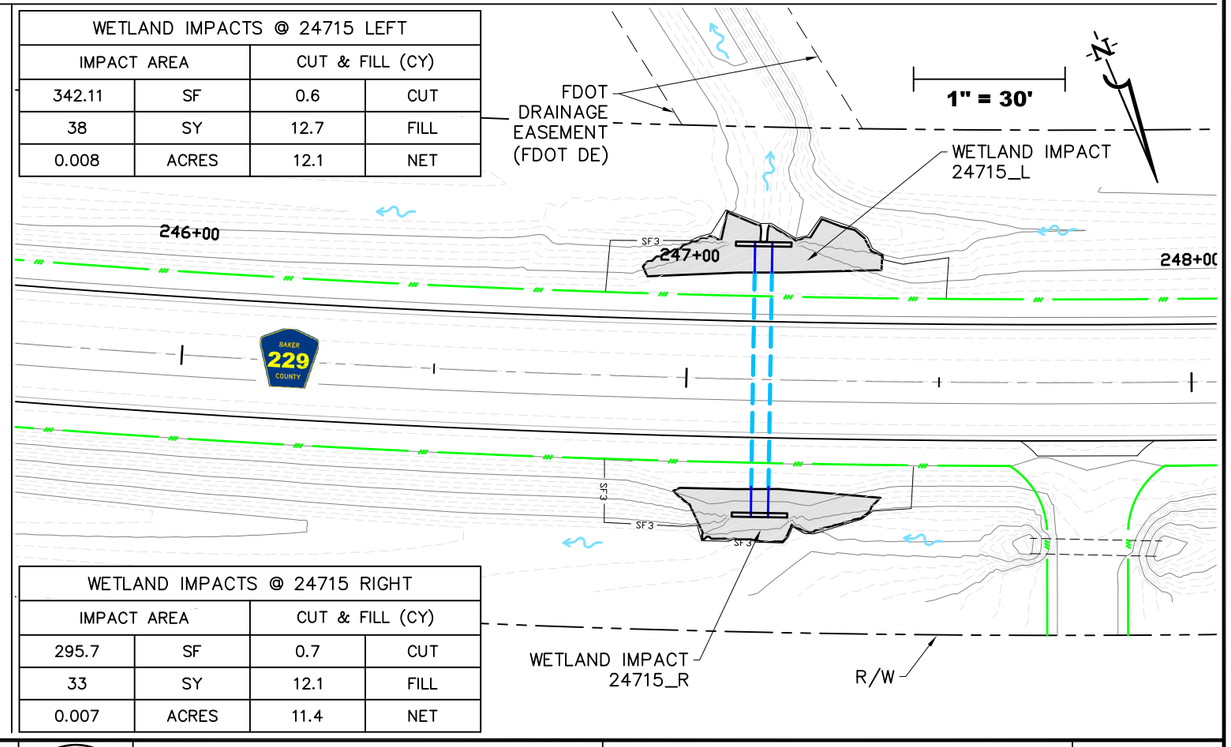




WETLAND IMPACTS @ 24715 LEFT			
IMPACT AREA		CUT & FILL (CY)	
342.11	SF	0.6	CUT
38	SY	12.7	FILL
0.008	ACRES	12.1	NET

WETLAND IMPACTS @ 24715 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
295.7	SF	0.7	CUT
33	SY	12.1	FILL
0.007	ACRES	11.4	NET



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CR229 WIDENING AND RESURFACING PROJECT

CROSS DRAIN EXTENSIONS

DRAWING NO. **514**

Sunshine 811

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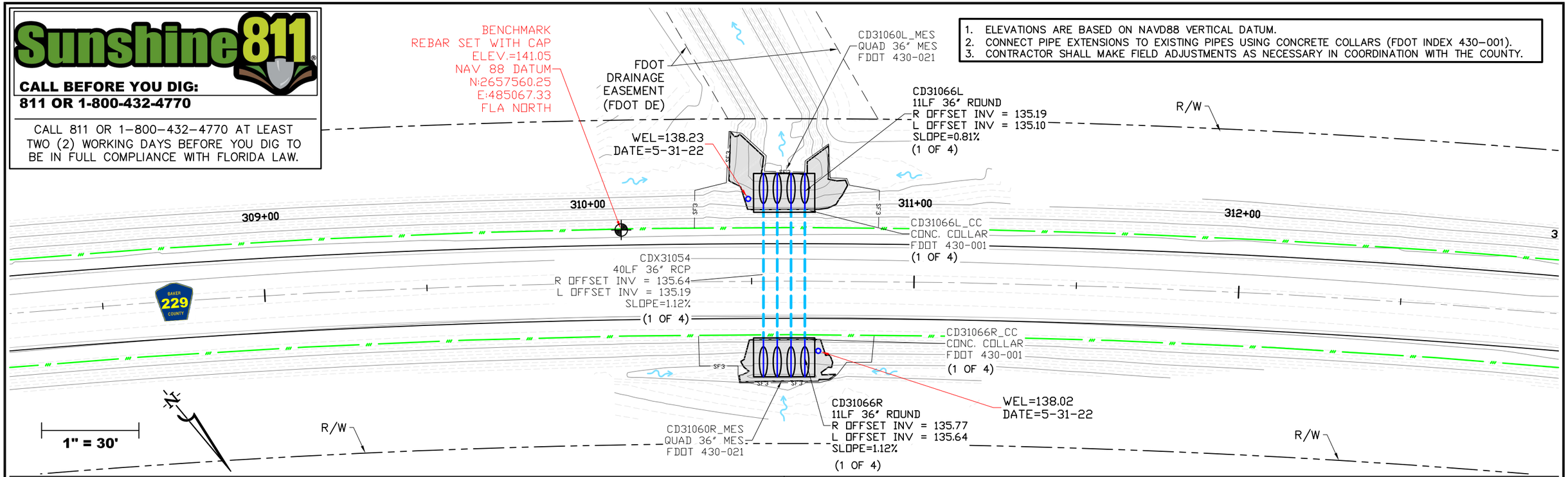
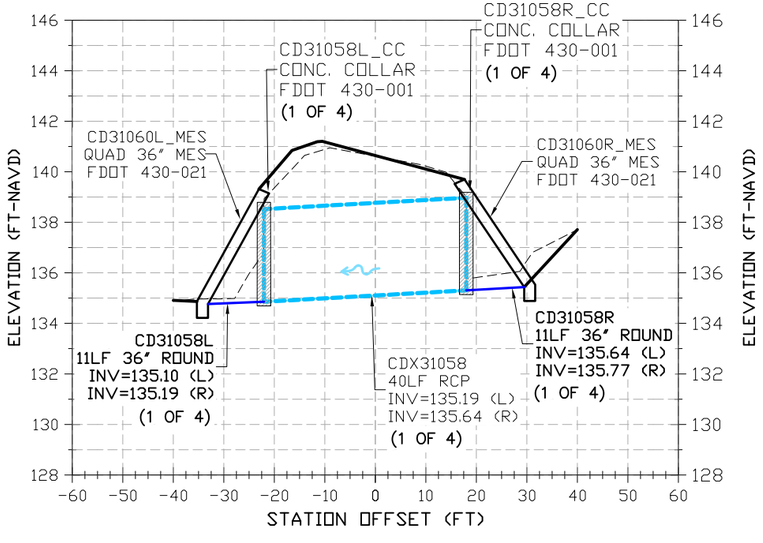
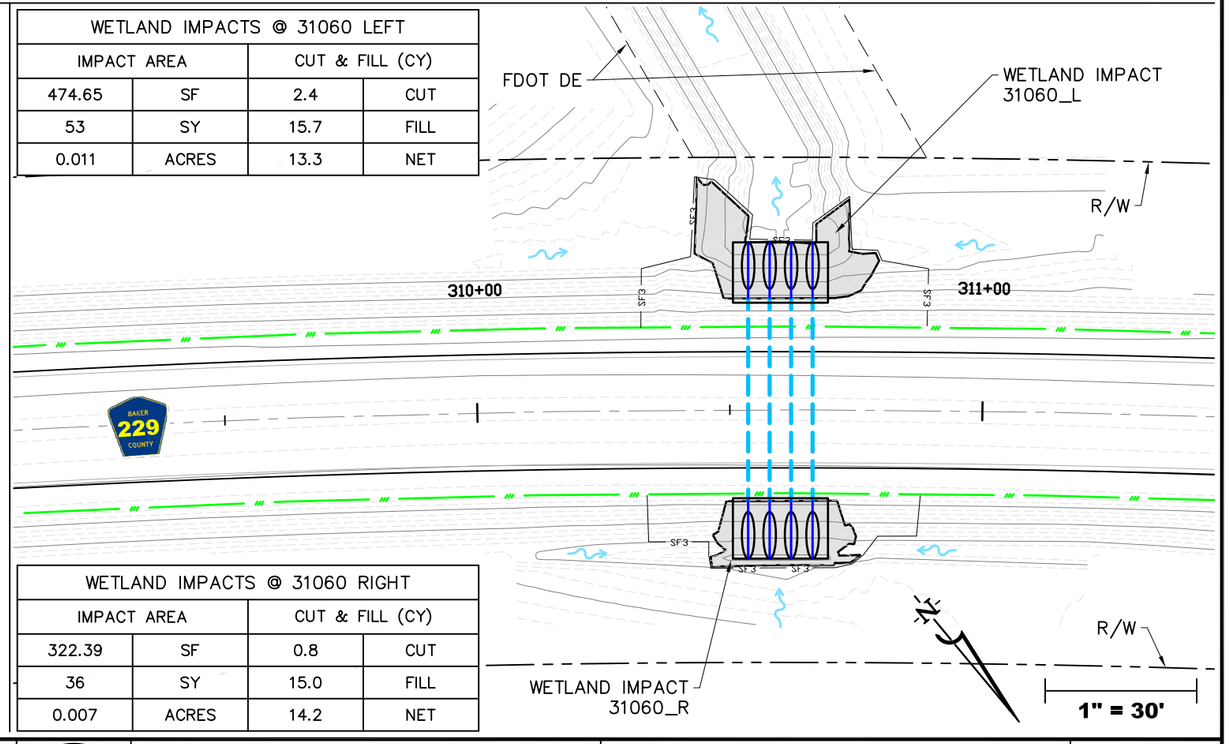




WETLAND IMPACTS @ 31060 LEFT			
IMPACT AREA		CUT & FILL (CY)	
474.65	SF	2.4	CUT
53	SY	15.7	FILL
0.011	ACRES	13.3	NET

WETLAND IMPACTS @ 31060 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
322.39	SF	0.8	CUT
36	SY	15.0	FILL
0.007	ACRES	14.2	NET



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CROSS DRAIN EXTENSIONS

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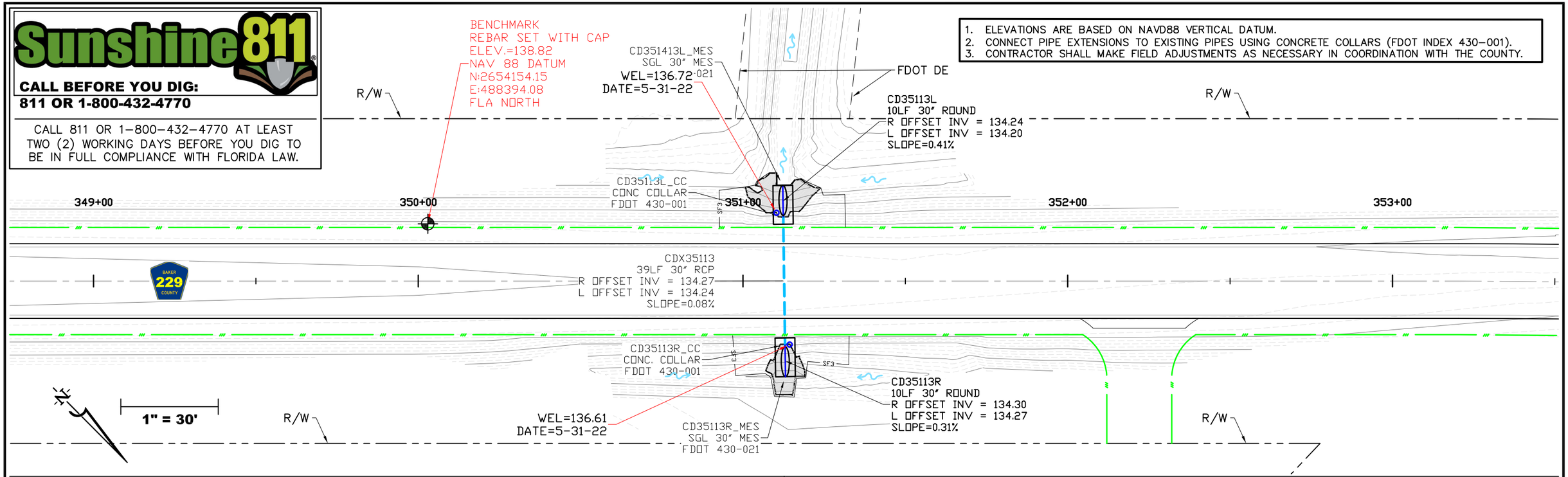
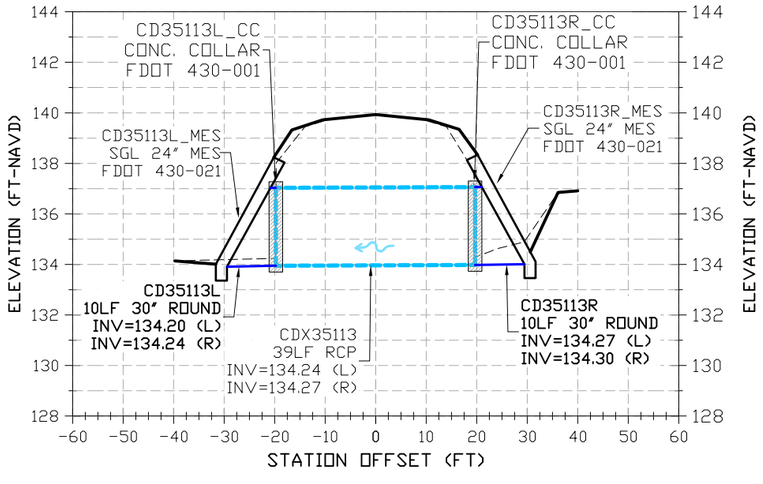
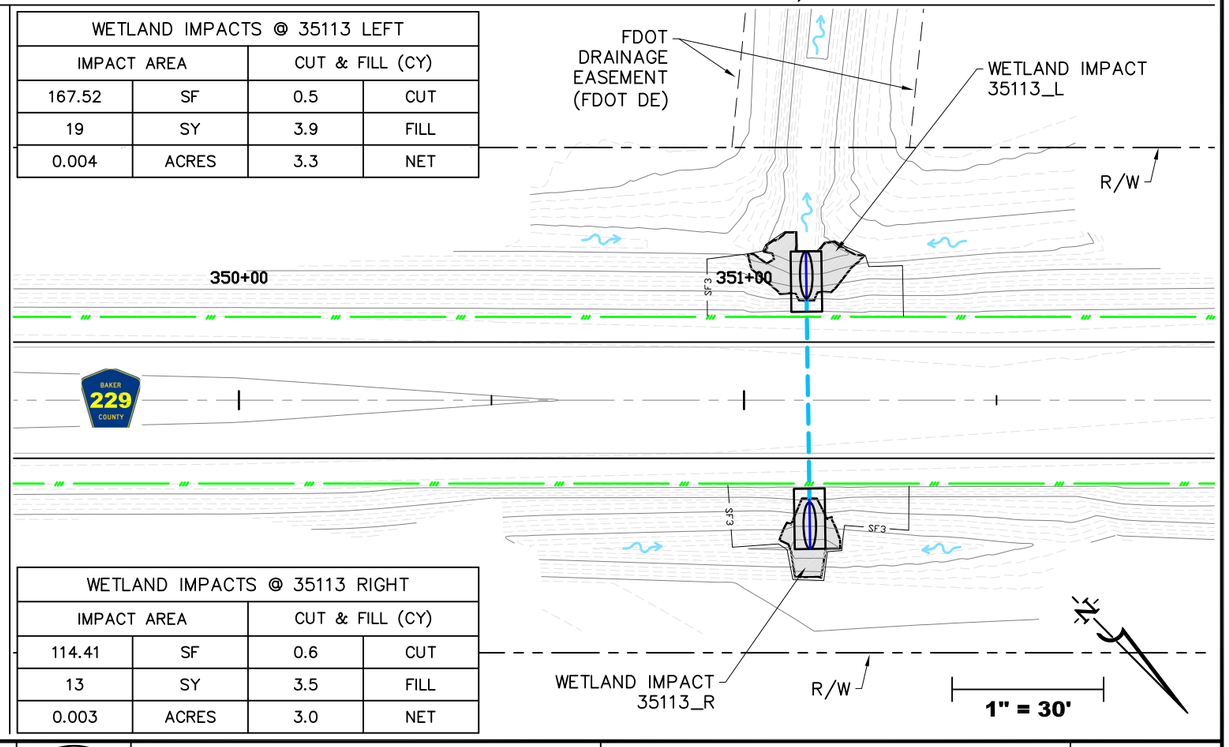




WETLAND IMPACTS @ 35113 LEFT			
IMPACT AREA		CUT & FILL (CY)	
167.52	SF	0.5	CUT
19	SY	3.9	FILL
0.004	ACRES	3.3	NET

WETLAND IMPACTS @ 35113 RIGHT			
IMPACT AREA		CUT & FILL (CY)	
114.41	SF	0.6	CUT
13	SY	3.5	FILL
0.003	ACRES	3.0	NET



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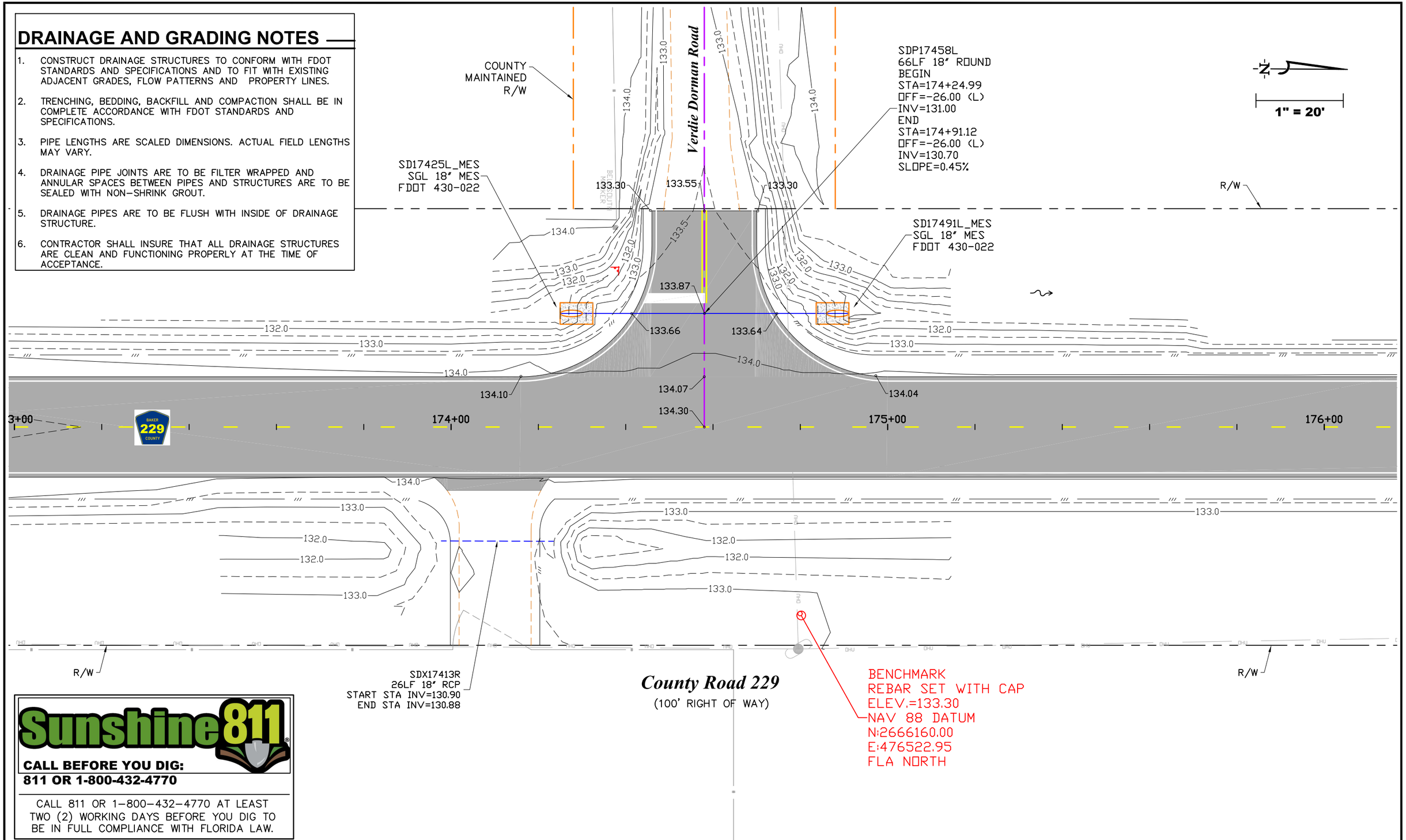
CR229 WIDENING AND RESURFACING PROJECT

CROSS DRAIN EXTENSIONS

DRAWING NO. **516**

DRAINAGE AND GRADING NOTES

1. CONSTRUCT DRAINAGE STRUCTURES TO CONFORM WITH FDOT STANDARDS AND SPECIFICATIONS AND TO FIT WITH EXISTING ADJACENT GRADES, FLOW PATTERNS AND PROPERTY LINES.
2. TRENCHING, BEDDING, BACKFILL AND COMPACTION SHALL BE IN COMPLETE ACCORDANCE WITH FDOT STANDARDS AND SPECIFICATIONS.
3. PIPE LENGTHS ARE SCALED DIMENSIONS. ACTUAL FIELD LENGTHS MAY VARY.
4. DRAINAGE PIPE JOINTS ARE TO BE FILTER WRAPPED AND ANNULAR SPACES BETWEEN PIPES AND STRUCTURES ARE TO BE SEALED WITH NON-SHRINK GROUT.
5. DRAINAGE PIPES ARE TO BE FLUSH WITH INSIDE OF DRAINAGE STRUCTURE.
6. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES ARE CLEAN AND FUNCTIONING PROPERLY AT THE TIME OF ACCEPTANCE.



Sunshine 811

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CR229 WIDENING AND RESURFACING PROJECT

PAVEMENT GRADING PLANS

DRAWING NO.
520

DRAINAGE AND GRADING NOTES

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N

1" = 20'

BENCHMARK
REBAR SET WITH CAP
ELEV.=132.46
NAV 88 DATUM
N:2666054.744
E:478907.021
FLA NORTH

County Road 229
(100' RIGHT OF WAY)

R/W

197+00 198+00 199+00 200+00

SD19821R_MES
SGL 18" MES
FDOT 430-022

SDX19815R
24LF 18" Corrugated Metal Pipe
START STA INV=128.72
END STA INV=128.51

Earlis Harvey Road

Sunshine 811
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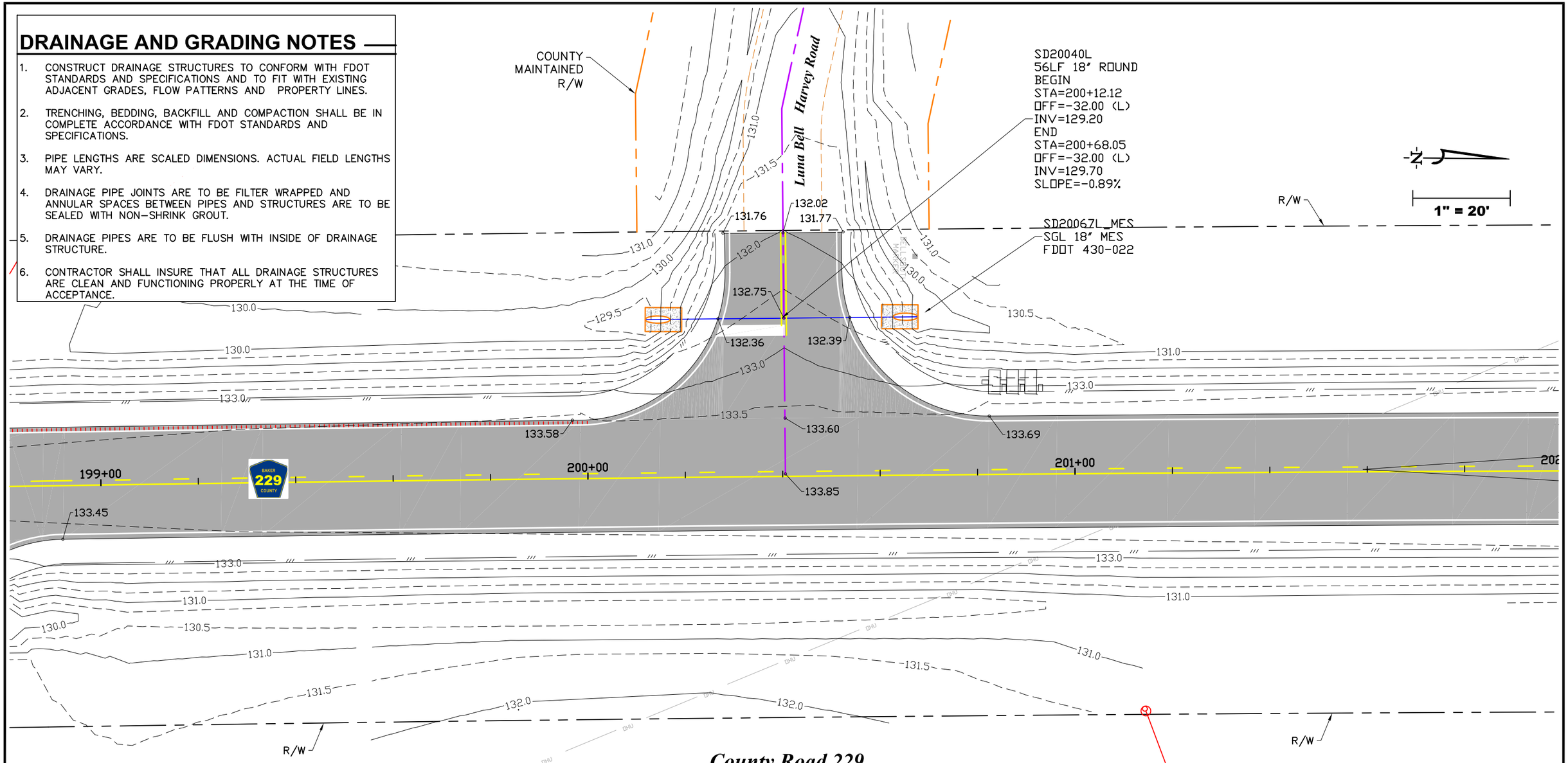
5. DRAINAGE PIPES ARE TO BE FLUSH WITH INSIDE OF DRAINAGE STRUCTURE.
6. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES ARE CLEAN AND FUNCTIONING PROPERLY AT THE TIME OF ACCEPTANCE.



County Road 229
(100' RIGHT OF WAY)

Sunshine811
CALL BEFORE YOU DIG:
811 OR 1-800-432-4770

CALL 811 OR 1-800-432-4770 AT LEAST TWO (2) WORKING DAYS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH FLORIDA LAW.

BENCHMARK
IRON PIPE FOUND LB# 6888
ELEV.=131.37
NAV 88 DATUM
N:2666113.20
E:479157.02
FLA NORTH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

PAVEMENT GRADING PLANS

DRAWING NO.
522

1" = 20'

N

County Road 229

(100' RIGHT OF WAY)

R/W

R/W

286+00

287+00

288+00

141.73

141.5

142.0

142.34

142.29

142.16

141.58

141.26

141.56

140.39

140.72

140.70

140.0

141.0

141.5

139.5

139.0

COUNTY MAINTAINED R/W

COUNTY MAINTAINED R/W

Jack Dugger Road

BAKER 229 COUNTY

OHU

Sunshine 811

CALL BEFORE YOU DIG:

811 OR 1-800-432-4770

CALL 811 OR 1-800-432-4770 AT LEAST TWO (2) WORKING DAYS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH FLORIDA LAW.

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CERTIFICATE OF AUTHORIZATION 23132

BAKER COUNTY — PROVIDING OUR FUTURE - PRESERVING OUR PAST

CR229 WIDENING AND RESURFACING PROJECT

PAVEMENT GRADING PLANS

DRAWING NO.

523

EXISTING CROSS DRAIN STRUCTURES TO BE REMOVED		
STRUCTURE ID	STATION (SIDE)	DESCRIPTION
HWXX186L	186+49 (L)	SANDBAG HEADWALL
HWXX247R	247+15 (R)	SANDBAG HEADWALL
HWXX18649R	186+49 (R)	SANDBAG HEADWALL
HWXX21707L	217+07 (L)	SANDBAG HEADWALL
HWXX21707R	217+07 (R)	SANDBAG HEADWALL
HWXX23874L	238+74 (L)	SANDBAG HEADWALL
HWXX23874R	238+75 (R)	SANDBAG HEADWALL
HWXX24715L	247+15 (L)	SANDBAG HEADWALL
HWXX31060L	310+60 (L)	CONC. HEADWALL
HWXX31060R	310+60 (R)	CONC. HEADWALL
HWXX35113L	351+12 (L)	SANDBAG HEADWALL
HWXX35113R	351+13 (R)	SANDBAG HEADWALL

EXISTING SIDE DRAIN PIPES TO BE REMOVED			
PIPE ID	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)
SDXX17460L	18.000	33.2	0.51%
SDXX19848R	18.000	40.7	−0.37%
SDXX20040L−1	18.000	33.3	−1.08%
SDXX20040L−2	18.000	30.6	1.67%

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE PIPE AND STRUCTURE TABLES

DRAWING NO.

540

NEW CROSS DRAIN STRUCTURES		
STRUCTURE ID	STATION (SIDE)	DESCRIPTION
CD18649L_CC	186+49 (L)	CONC. COLLAR FDOT 430-001
CD18649L_MES	186+49 (L)	SGL. 30" MES FDOT 430-021
CD18649R_CC	186+49 (R)	CONC. COLLAR FDOT 430-001
CD18649R_MES	186+49 (R)	SGL. 30" MES FDOT 430-021
CD21707L_CC	217+07 (L)	CONC. COLLAR FDOT 430-001
CD21707L_MES	217+07 (L)	SGL 24" MES FDOT 430-021
CD21707R_CC	217+07 (R)	CONC. COLLAR FDOT 430-001
CD21707R_MES	217+07 (R)	SGL 24" MES FDOT 430-021
CD23873L_CC	238+73 (L)	CONC. COLLAR FDOT 430-001
CD23873R_CC	238+73 (R)	CONC. COLLAR FDOT 430-001
CD23874L_MES	238+74 (L)	DBL 24" MES FDOT 430-021
CD23874R_MES	238+75 (R)	DBL 24" MES FDOT 430-021
CD23876L_CC	238+76 (L)	CONC. COLLAR FDOT 430-001
CD23876R_CC	238+76 (R)	CONC. COLLAR FDOT 430-001
CD24713L_CC	247+13 (L)	CONC. COLLAR FDOT 430-001
CD24713R_CC	247+13 (R)	CONC. COLLAR FDOT 430-001
CD24715L_HW	247+15 (L)	CONC. HEADWALL FDOT 430-030
CD24715R_HW	247+15 (R)	CONC. HEADWALL FDOT 430-030
CD24717L_CC	247+16 (L)	CONC. COLLAR FDOT 430-001
CD24717R_CC	247+17 (R)	CONC. COLLAR FDOT 430-001
CD31054L_CC	310+54 (L)	CONC. COLLAR FDOT 430-001

NEW CROSS DRAIN STRUCTURES		
STRUCTURE ID	STATION (SIDE)	DESCRIPTION
CD31054R_CC	310+54 (R)	CONC. COLLAR FDOT 430-001
CD31058L_CC	310+58 (L)	CONC. COLLAR FDOT 430-001
CD31058R_CC	310+58 (R)	CONC. COLLAR FDOT 430-001
CD31060L_MES	310+60 (L)	QUAD 36" MES FDOT 430-021
CD31060R_MES	310+60 (R)	QUAD 36" MES FDOT 430-021
CD31062L_CC	310+62 (L)	CONC. COLLAR FDOT 430-001
CD31062R_CC	310+62 (R)	CONC. COLLAR FDOT 430-001
CD31066L_CC	310+66 (L)	CONC. COLLAR FDOT 430-001
CD31066R_CC	310+66 (R)	CONC. COLLAR FDOT 430-001
CD35113L_CC	351+12 (L)	CONC COLLAR FDOT 430-001
CD35113R_CC	351+13 (R)	CONC. COLLAR FDOT 430-001
CD35113R_MES	351+13 (R)	SGL 30" MES FDOT 430-021
CD351413L_MES	351+12 (L)	SGL 30" MES FDOT 430-021

NEW SIDE DRAIN STRUCTURES		
STRUCTURE ID	STATION (SIDE)	DESCRIPTION
SD17425L_MES	174+25 (L)	SGL 18" MES FDOT 430-022
SD17491L_MES	174+91 (L)	SGL 18" MES FDOT 430-022
SD19821R_MES	198+20 (R)	SGL 18" MES FDOT 430-022
SD19879R_MES	198+80 (R)	SGL 18" MES FDOT 430-022
SD20013L_MES	200+12 (L)	SGL 18" MES FDOT 430-022
SD20067L_MES	200+68 (L)	SGL 18" MES FDOT 430-022

NEW CROSS DRAIN PIPES			
PIPE ID	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)
CD18649L	30.000	10.2	0.86%
CD18649R	30.000	10.9	0.90%
CD21707L	24.000	6.6	1.09%
CD21707R	24.000	9.9	0.23%
CD23873L	24.000	11.1	0.33%
CD23873R	24.000	8.8	0.52%
CD23876L	24.000	11.1	0.33%
CD23876R	24.000	8.8	0.57%
CD24713L	24.000	6.1	0.71%
CD24713R	24.000	6.0	0.71%
CD24717L	24.000	6.1	0.71%
CD24717R	24.000	6.0	0.71%
CD31054L	36.000	11.1	0.81%
CD31054R	36.000	11.5	1.12%
CD31058L	36.000	11.1	0.81%
CD31058R	36.000	11.5	1.12%
CD31062L	36.000	11.0	0.81%
CD31062R	36.000	11.5	1.12%
CD31066L	36.000	11.1	0.81%
CD31066R	36.000	11.5	1.12%
CD35113L	30.000	9.7	0.41%
CD35113R	30.000	9.8	0.31%

NEW SIDE DRAIN PIPES			
PIPE ID	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)
SDP17458L	18.000	66.1	0.45%
SD19848R	18.000	60.0	-0.25%
SD20040L	18.000	56.0	-0.89%

REVISIONS

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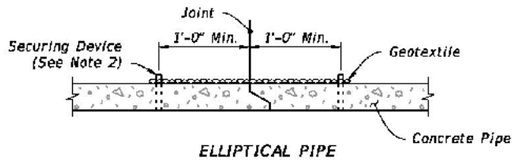
CR229 WIDENING AND RESURFACING PROJECT

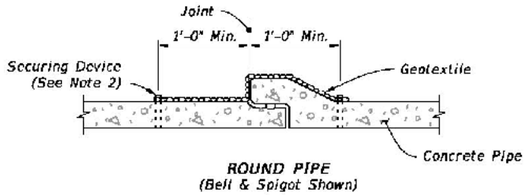
DRAINAGE PIPE AND STRUCTURE TABLES

DRAWING NO.

541

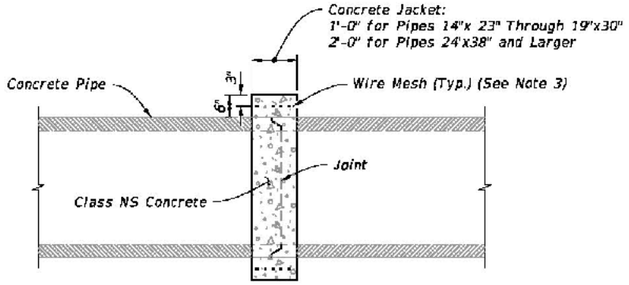


ELLIPTICAL PIPE
(Tongue & Groove Shown)

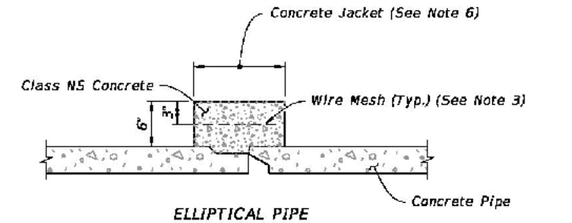


ROUND PIPE
(Bell & Spigot Shown)

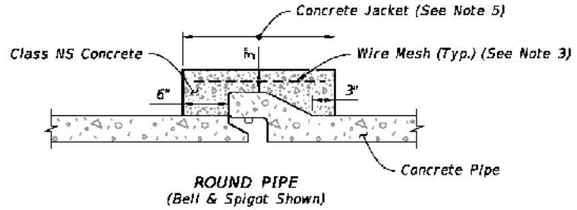
SECTION VIEW



ELLIPTICAL PIPE

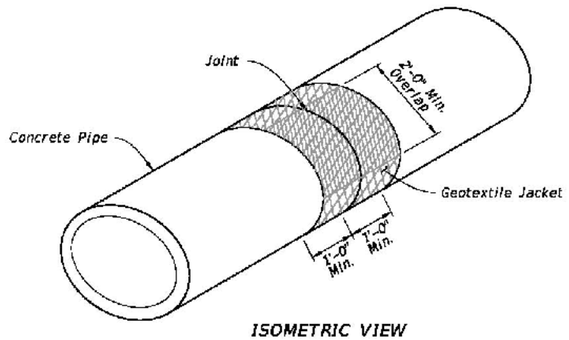


ELLIPTICAL PIPE
(Tongue & Groove Shown)



ROUND PIPE
(Bell & Spigot Shown)

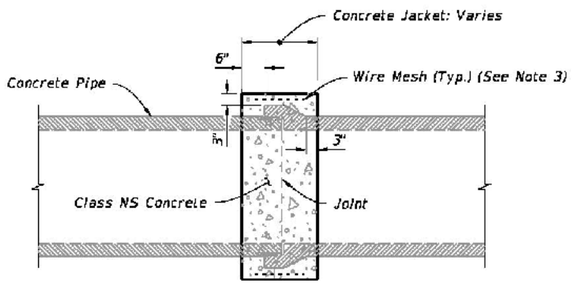
DISSIMILAR JOINTS



ISOMETRIC VIEW

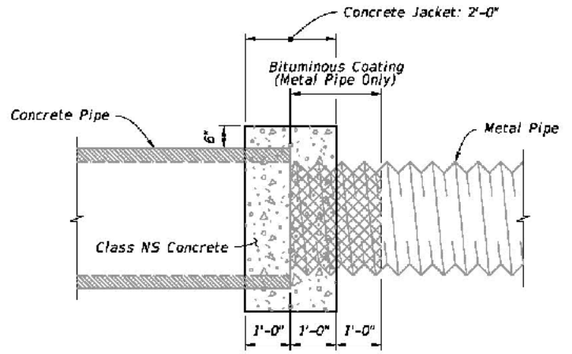
GEOTEXTILE JACKET

(For All Pipe Types - Concrete Elliptical Pipe Shown)



ROUND PIPE

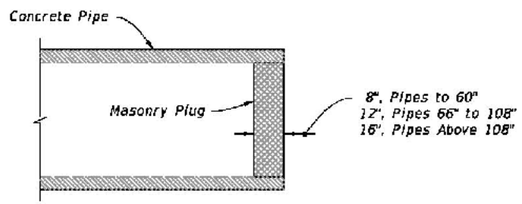
SIMILAR TYPES
(Only When Called For In The Plans)



CONCRETE AND METAL PIPE SHOWN
(Others Similar)

DISSIMILAR TYPES

CONCRETE JACKET



PIPE PLUG

NOTES:

1. Alternate connection must be approved by the Engineer.
2. Install Type D-3 geotextile in accordance with Specification 514. Install securing device to hold the geotextile jacket on to the pipe.
3. Any wire mesh arrangement which provides 0.126 square inches of steel area per linear foot both ways may be used, provided the wires are spaced a minimum of 2" and/or a maximum of 6" on centers.
4. Do not use a concrete jacket to join dissimilar metal pipes.
5. 12" for pipes 15" through 24"; 24" for pipes 30" and larger.
6. 12" for pipes 14" x 23" through 19" x 30"; 24" for pipes 24" x 38" and larger.

GEOTEXTILE JACKET, CONCRETE JACKET, AND PIPE PLUG

10/17/2023 8:43:26 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	MISCELLANEOUS DRAINAGE DETAILS	INDEX	SHEET
11/01/23						430-001	3 of 7

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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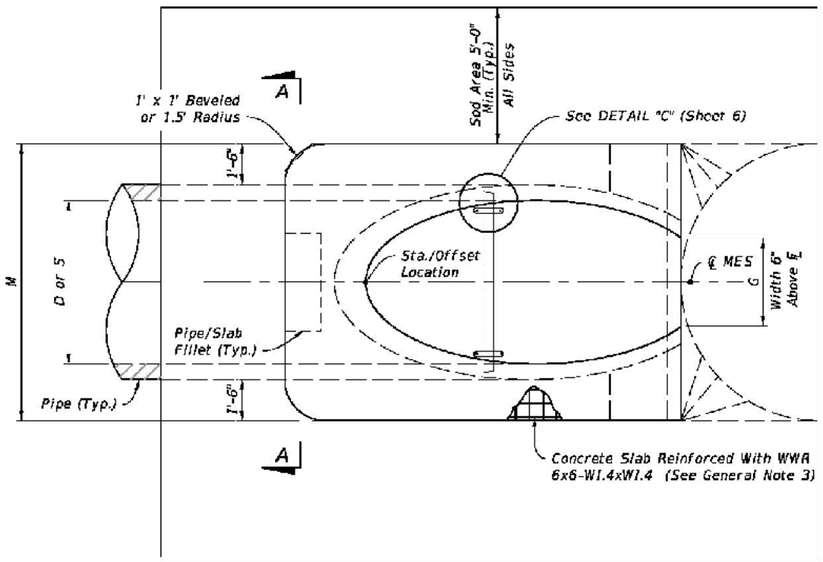
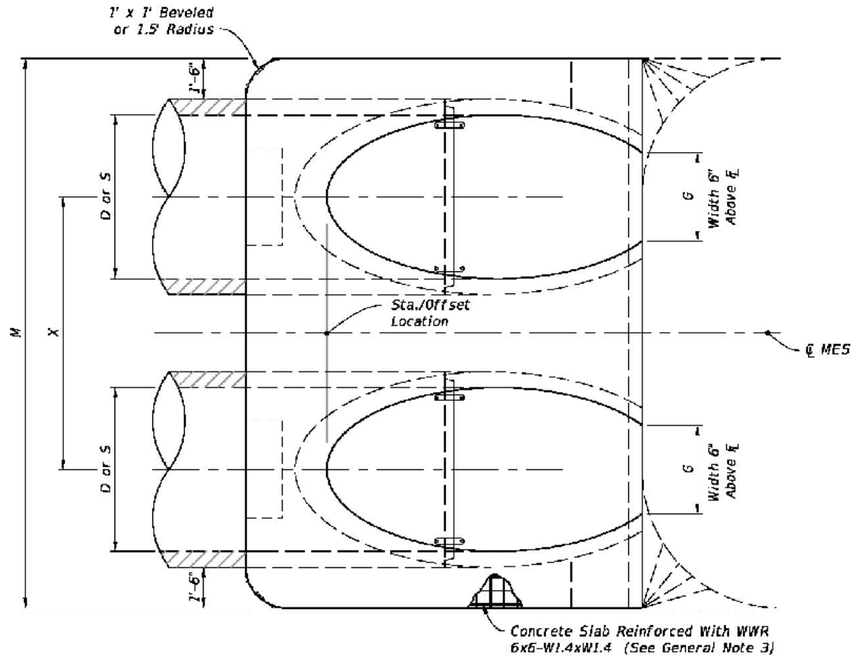
CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

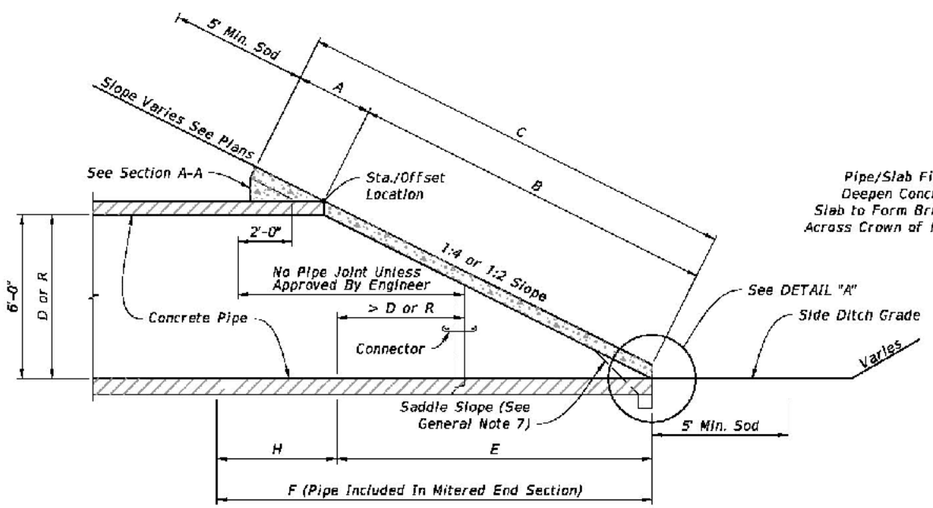
DRAWING NO. **550**



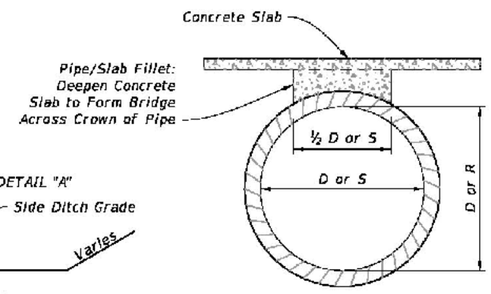
PLAN - SINGLE PIPE



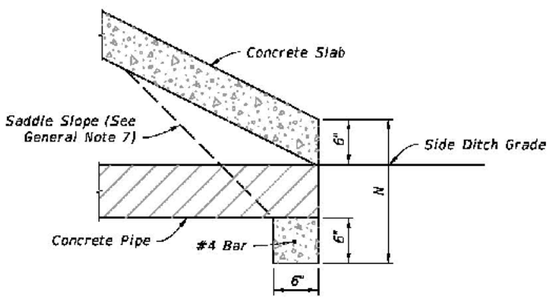
PLAN - MULTIPLE PIPE



ELEVATION



SECTION A-A
(Pipe/Slab Fillet)



DETAIL "A"

ROUND CONCRETE PIPE
(Elliptical Pipe Similar)

NOTE: See Table 1 on Sheet 3 for Dimensions and Quantities.

10/17/2023 8:45:48 AM

SINGLE AND MULTIPLE CONCRETE PIPE

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/19			FDOT FY 2024-25 STANDARD PLANS	CROSS DRAIN MITERED END SECTION	430-021	2 of 6

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

DRAWING NO. **551**

TABLE 1
SINGLE AND MULTIPLE CONCRETE PIPE DIMENSIONS AND QUANTITIES

		Dia. D	Rise R	Span S	X	A	B	C	E	F	G	H	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONC. SLAB (CY) (See General Note 3) Single Pipe	5½" CONC. SLAB (CY) (See General Note 3) Double Pipe	5½" CONC. SLAB (CY) (See General Note 3) Triple Pipe	5½" CONC. SLAB (CY) (See General Note 3) Quad. Pipe	3" CONC. SLAB (CY) (See General Note 3) Single Pipe	3" CONC. SLAB (CY) (See General Note 3) Double Pipe	3" CONC. SLAB (CY) (See General Note 3) Triple Pipe	3" CONC. SLAB (CY) (See General Note 3) Quad. Pipe	SODDING (SY) Single Pipe	SODDING (SY) Double Pipe	SODDING (SY) Triple Pipe	SODDING (SY) Quad. Pipe
Round Concrete Pipe	1:2 Slope	15"	—	—	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	2.9'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	0.27	0.41	0.54	0.67	21	24	27	30
		18"	—	—	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	0.31	0.45	0.60	0.75	22	25	28	31
		24"	—	—	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	3.4'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	0.39	0.59	0.79	1.00	24	28	32	35
		30"	—	—	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	0.46	0.76	1.04	1.32	26	31	35	40
		36"	—	—	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	0.55	0.94	1.33	1.71	28	34	39	45
		42"	—	—	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	0.66	1.15	1.66	2.15	30	37	43	50
		48"	—	—	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	0.76	1.37	1.96	2.57	32	39	47	54
		54"	—	—	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	0.87	1.62	2.38	3.14	34	42	51	59
		60"	—	—	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	0.99	1.90	2.81	3.73	36	45	55	64
		66"	—	—	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	1.11	2.15	3.21	4.27	38	48	58	68
		72"	—	—	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	1.24	2.46	3.68	4.90	40	51	62	73
	1:4 Slope	15"	—	—	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	0.40	0.61	0.80	1.00	23	26	29	32
		18"	—	—	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	0.47	0.69	0.91	1.14	25	28	31	35
		24"	—	—	3'-5"	2.53'	7.18' △	9.71'	7.03' △	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	0.60	0.90	1.21	1.52	28	32	36	40
		30"	—	—	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	0.76	1.19	1.63	2.07	31	36	41	46
		36"	—	—	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	0.89	1.48	2.05	2.63	34	40	46	52
		42"	—	—	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	1.05	1.82	2.57	3.34	38	44	51	58
		48"	—	—	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	1.21	2.15	3.07	4.00	41	48	56	63
		54"	—	—	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	1.39	2.55	3.72	4.88	44	52	61	69
		60"	—	—	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	1.59	3.02	4.44	5.86	47	56	66	75
		66"	—	—	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	1.91	3.66	5.40	7.15	49	59	69	80
		72"	—	—	10'-0"	3.91'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	2.12	4.18	6.24	8.30	52	63	74	85
Elliptical Concrete Pipe	1:2 Slope	—	12"	18"	2'-10"	1.97'	1.62'	3.59'	1.56'	4'	1.50'	2.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.30	0.49	0.67	0.85	0.19	0.33	0.45	0.57	21	24	27	30
		—	14"	23"	3'-4"	2.01'	1.99'	4.00'	1.89'	5'	1.90'	3.1'	5.38'	8.71'	12.04'	15.38'	1.23'	0.37	0.59	0.81	1.02	0.25	0.40	0.55	0.69	22	26	29	33
		—	19"	30"	4'-0"	2.11'	2.92'	5.03'	2.73'	6'	2.37'	3.3'	6.04'	10.04'	14.04'	18.04'	1.27'	0.50	0.80	1.09	1.39	0.34	0.55	0.75	0.95	24	28	33	37
		—	24"	38"	5'-0"	2.20'	3.85'	6.05'	3.56'	7'	2.85'	3.4'	6.79'	11.79'	16.79'	21.79'	1.31'	0.62	1.03	1.45	1.86	0.43	0.71	1.00	1.28	26	31	37	42
		—	29"	45"	5'-11"	2.34'	4.79'	7.13'	4.39'	8'	3.19'	3.6'	7.50'	13.42'	19.33'	25.25'	1.38'	0.75	1.30	1.84	2.39	0.52	0.90	1.27	1.65	28	34	41	47
		—	34"	53"	7'-0"	2.43'	5.72'	8.15'	5.23'	9'	3.57'	3.8'	8.25'	15.25'	22.25'	29.25'	1.42'	0.90	1.61	2.32	3.03	0.62	1.11	1.60	2.09	30	37	45	53
		—	38"	60"	7'-10"	2.52'	6.46'	8.98'	5.89'	9'	3.95'	3.1'	8.92'	16.75'	24.58'	32.42'	1.46'	1.03	1.89	2.74	3.60	0.70	1.29	1.87	2.46	31	40	49	57
		—	43"	68"	8'-11"	2.62'	7.39'	10.01'	6.73'	10'	4.28'	3.3'	9.67'	18.58'	27.50'	36.42'	1.50'	1.19	2.26	3.33	4.40	0.81	1.54	2.26	2.99	33	43	53	63
		—	48"	76"	9'-11"	2.71'	8.33'	11.04'	7.56'	11'	4.59'	3.4'	10.42'	20.33'	30.25'	40.17'	1.54'	1.38	2.65	3.93	5.21	0.93	1.79	2.66	3.53	35	46	57	68
		—	53"	83"	10'-8"	2.80'	9.26'	12.06'	8.39'	12'	4.77'	3.6'	11.08'	21.75'	32.42'	43.08'	1.58'	1.55	3.03	4.50	5.96	1.04	2.04	3.03	4.02	37	49	61	73
		—	58"	91"	11'-8"	2.90'	10.19'	13.09'	9.23'	13'	5.01'	3.8'	11.83'	23.50'	35.17'	46.83'	1.63'	1.75	3.47	5.20	6.93	1.17	2.33	3.49	4.66	39	52	65	78
	1:4 Slope	—	12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.45	0.68	0.92	1.14	0.30	0.45	0.61	0.76	23	26	29	32
		—	14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'	0.53	0.83	1.13	1.42	0.36	0.56	0.76	0.95	24	28	32	35
		—	19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	0.74	1.15	1.57	1.98	0.51	0.79	1.08	1.36	27	32	36	40
		—	24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	0.97	1.57	2.19	2.81	0.68	1.10	1.53	1.96	30	36	41	47
		—	29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	1.22	2.07	2.92	3.77	0.86	1.45	2.04	2.63	33	40	46	53
		—	34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	1.48	2.62	3.77	4.92	1.02	1.81	2.60	3.39	36	44	52	59
		—	38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	1.72	3.12	4.53	5.92	1.18	2.14	3.10	4.05	38	47	56	65
		—	43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	2.02	3.78	5.56	7.32	1.38	2.58	3.79	4.99	41	51	61	71
		—	48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	2.34	4.49	6.64	8.79	1.59	3.05	4.51	5.97	44	55	66	77
		—	53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	2.66	5.17	7.66	10.16	1.80	3.50	5.19	6.88	47	59	71	83
		—	58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3.02	5.98	8.95	11.90	2.04	4.04	6.05	8.05	50	63	76	89

B	E	
△ 6.42'	△ 6.25'	Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40'	◇ 10.10'	Dimensions permitted to allow use of 12' standard pipe lengths.

10/17/2023 8:45:56 AM

CONCRETE PIPE DIMENSIONS AND QUANTITIES

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	CROSS DRAIN MITERED END SECTION	INDEX	SHEET
11/01/19					430-021	3 of 6

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

DRAWING NO. **552**

GENERAL NOTES:

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of side drain pipe; corrugated steel pipe mitered end sections may be used with any type of side drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of side drain pipe except steel pipe. When bituminous coated metal pipe is specified for side drain pipe, construct the mitered end sections with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the side drain pipe, construct a concrete jacket in accordance with Index 430-001 or use manufacturer approved coupler.

2. Use either corrugated metal or concrete mitered end sections for corrugated polyethylene pipe (HDPE), polyvinyl-chloride pipe (PVC), steel reinforced polyethylene pipe (SRPE), and polypropylene pipe (PP). When used in conjunction with corrugated metal mitered end sections, make connection using a formed metal band specifically designated to join HDPE, PVC, SRPE, or PVC pipe. When used in conjunction with a concrete mitered end sections, construct concrete jacket in accordance with Index 430-001.

3. Use class N5 concrete cast-in-place reinforced slabs for all cross drain pipes.

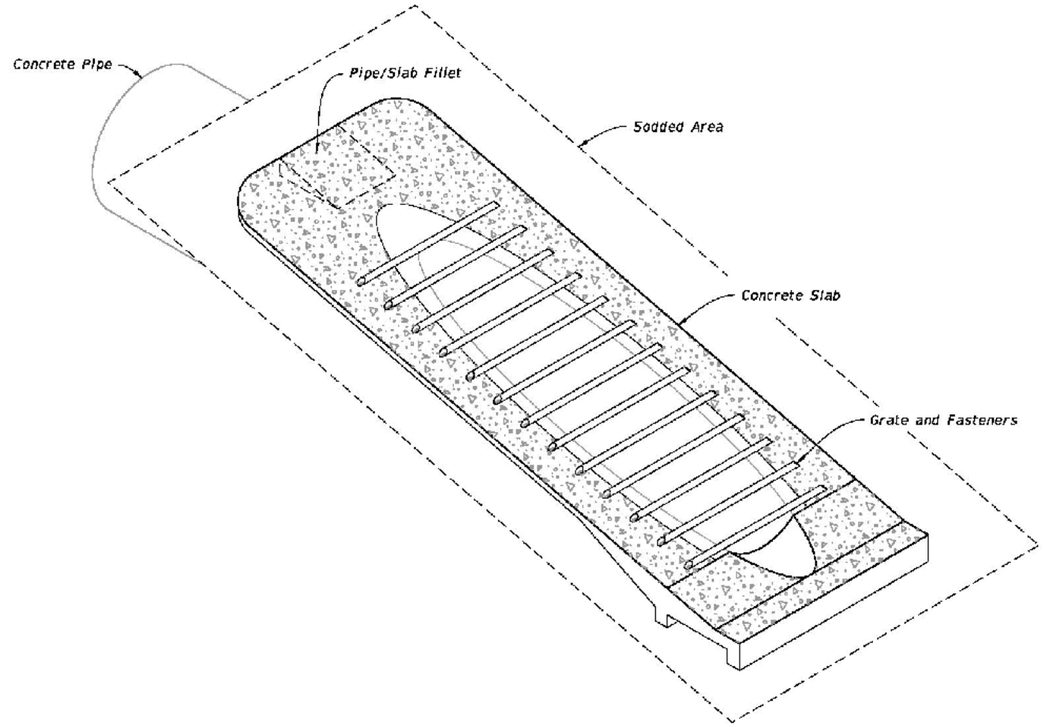
4. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered end section.

5. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.

6. When existing multiple side drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered end sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.

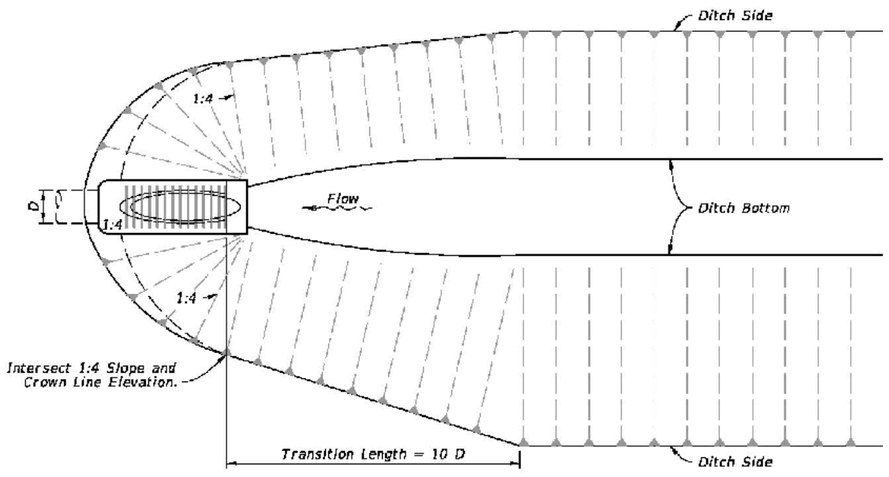
7. Saddle Slope:
   - 1:4 Miter – Slope to ℄ of pipe for round pipes less than or equal to 18" diameter and 1:1 for round pipes greater than or equal to 24" diameter.
     Slope to the major axis for elliptical pipes 24"x38" or smaller and 1:2 for pipes 29"x45" or larger.
     Slope to the span line for pipe arch 28"x20" or smaller and 1:2 for pipe arch 35"x24" or larger.
   - 1:2 Miter – Slope to ℄ of pipe for round pipes less than or equal to 18"diameter and 1:2 for round pipes greater than or equal to 24" diameter.
     Slope to the major axis for elliptical pipes 29"x45" or smaller and 1:1 for pipes 34"x53" or larger.
     Slope 1:1 for all pipe arch sizes.

8. Quantities shown are for estimating purposes only.



SIDEDRAIN MITERED END SECTION
(Concrete Pipe Shown, Corrugated Metal Pipe Similar)

TABLE OF CONTENTS:



DITCH TRANSITION

10/17/2023 8:46:25 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/23			FDOT FY 2024-25 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	430-022	1 of 7

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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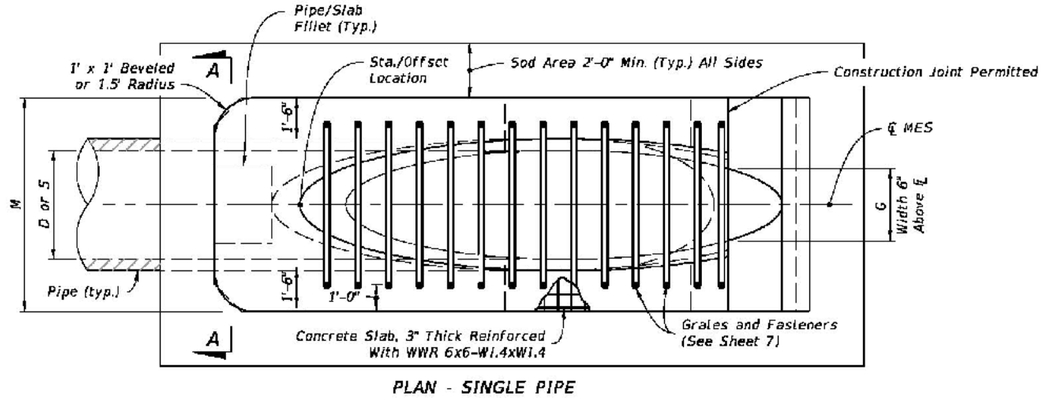
CERTIFICATE OF AUTHORIZATION 23132

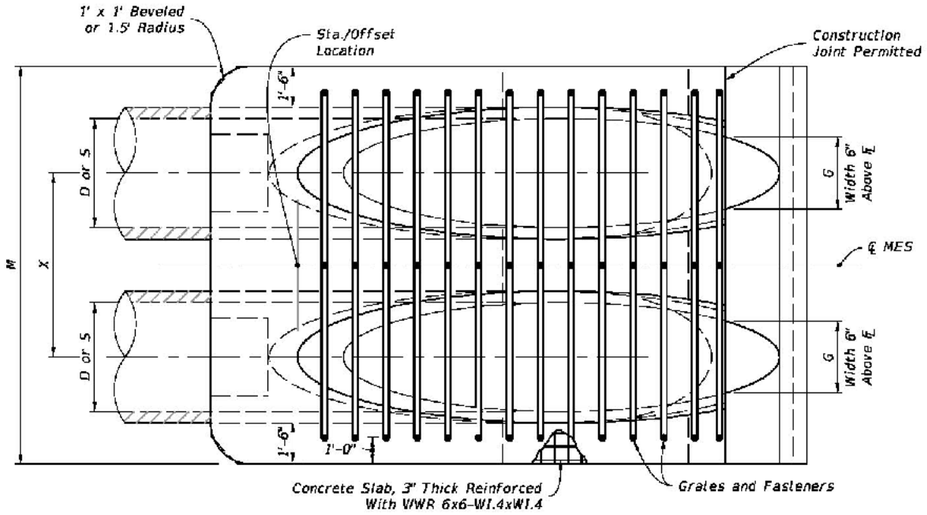
CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

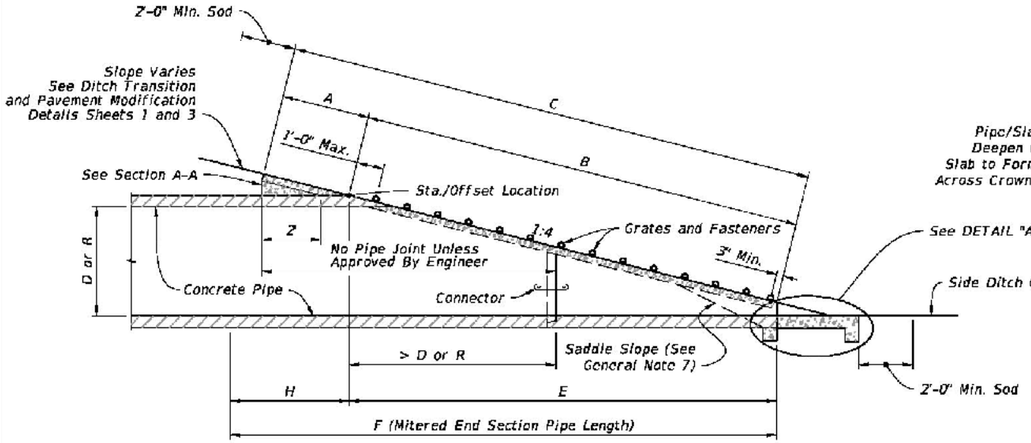
DRAWING NO. **553**



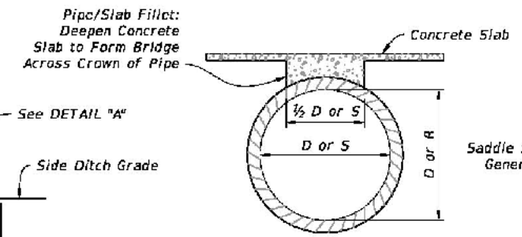
PLAN - SINGLE PIPE



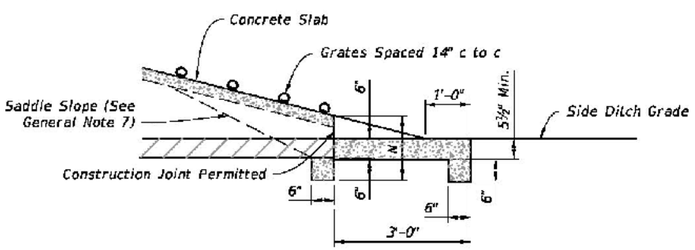
PLAN - MULTIPLE PIPE



ELEVATION



SECTION A-A
(Pipe/Slab Fillet)



DETAIL "A"

ROUND CONCRETE PIPE
(Elliptical Pipe Similar)

SINGLE AND MULTIPLE CONCRETE PIPE

10/17/2023 8:46:34 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	INDEX	SHEET
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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CR229 WIDENING AND RESURFACING PROJECT

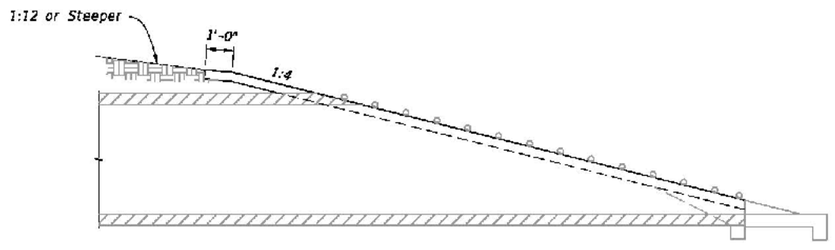
DRAINAGE DETAILS - FDOT

DRAWING NO. 554

SINGLE AND MULTIPLE CONCRETE PIPE DIMENSIONS AND QUANTITIES

Pipe	Dia. D	Rise R	Span S	X	A	B	C	E	F	G	H	M				N	GRATE SIZES		3" CONC. SLAB (CY)				SODDING (SY)			
												Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe		STANDARD WEIGHT PIPE	EXTRA STRONG PIPE	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
Round Concrete	15"	—	—	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'			0.76	1.16	1.54	1.94	8	10	11	12
	18"	—	—	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'			0.85	1.28	1.71	2.17	9	10	12	13
	24"	—	—	3'-5"	2.53'	7.18'△	9.71'	7.03' △	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'			1.02	1.58	2.15	2.75	10	12	13	15
	30"	—	—	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	2½"	3"	1.23	1.98	2.74	3.50	12	14	15	17
	36"	—	—	5'-1"	2.87'	11.31'◇	14.18'	11.03' ◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	2½"	3"	1.40	2.38	3.33	4.24	13	15	17	20
	42"	—	—	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	2½"	3½"	1.60	2.83	4.04	5.26	14	17	19	22
	48"	—	—	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	2½"	3½"	1.81	3.26	4.70	6.14	15	18	21	24
	54"	—	—	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	3"	4"	2.03	3.78	5.54	7.28	17	20	23	27
	60"	—	—	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	3"	4"	2.28	4.36	6.43	8.50	18	22	25	29
Elliptical Concrete	—	12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'			0.68	1.04	1.41	1.77	8	9	11	12
	—	14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'			0.76	1.19	1.63	2.05	9	10	12	13
	—	19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	2½"	3"	0.95	1.52	2.09	2.65	10	12	13	15
	—	24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	2½"	3"	1.18	1.95	2.74	3.53	11	13	15	18
	—	29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	2½"	3½"	1.41	2.42	3.44	4.45	12	15	18	20
	—	34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	3"	3½"	1.63	2.92	4.22	5.52	13	17	20	23
	—	38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	3"	4"	1.83	3.36	4.89	6.41	14	18	21	25
	—	43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	3"	4"	2.09	3.95	5.80	7.65	16	20	23	27
	—	48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	3"	HSS 5"x5/16"	2.37	4.54	6.73	8.92	17	21	26	30
	—	53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	3"	HSS 5"x5/16"	2.61	5.09	7.56	10.03	18	23	27	32
	—	58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3½"	HSS 5"x5/8"	2.91	5.77	8.64	11.50	19	24	29	35

△6.42' △6.25' Dimensions permitted to allow use of 8' standard pipe lengths.
◇10.40' ◇10.10' Dimensions permitted to allow use of 12' standard pipe lengths.



PERMISSIBLE PAVEMENT MODIFICATION

10/17/2023 8:46:43 AM

CONCRETE PIPE DIMENSIONS AND QUANTITIES AND PERMISSIBLE PAVEMENT MODIFICATION

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/19			FY 2024-25 STANDARD PLANS	SIDE DRAIN MITERED END SECTION	430-022	3 of 7

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY TROY W. TARBOX, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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TROY W. TARBOX, P.E.
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3716 RUBIN ROAD
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

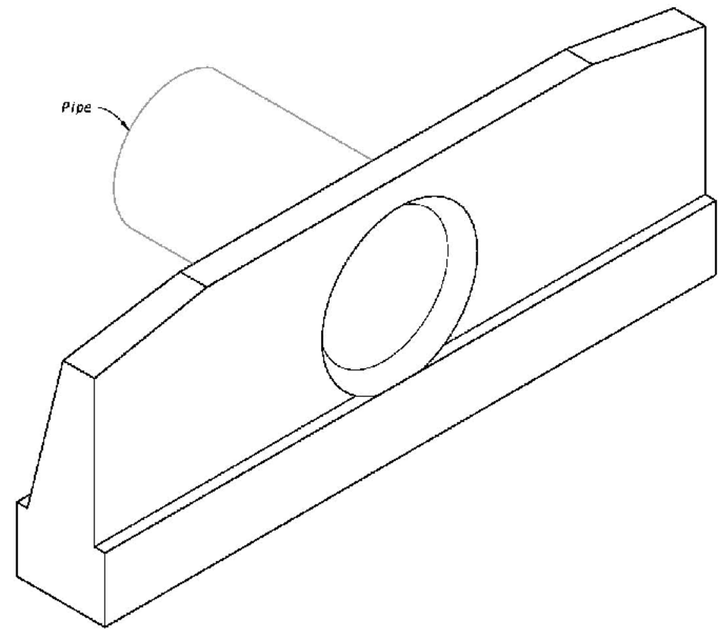
DRAINAGE DETAILS - FDOT

DRAWING NO. 555

GENERAL NOTES:

1. Use Class II concrete.
2. Reinforcing steel is either Grade 40 or 60.
3. Endwalls may be cast in place or precast concrete. (Additional reinforcement necessary for handling precast units will be determined by the Contractor or the supplier).
4. Chamfer all exposed edges and corners to ¾".
5. Endwall dimensions, locations and positions are for round and elliptical concrete pipe and for round and pipe-arch corrugated metal pipe. Round concrete pipe shown.
6. On outfall ditches with side slopes flatter than 1:1.5 provide 20' transitions from the endwall to the flatter side slopes, right of way permitting.
7. Construct front slope and ditch transitions in accordance with Index 430-001.
8. Quantities shown are for estimating purposes only.

TABLE OF CONTENTS:



STRAIGHT CONCRETE ENDWALL

10/17/2023 8:47:19 AM

LAST REVISION	REVISION	DESCRIPTION:				
11/01/21			FY 2024-25 STANDARD PLANS	STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE	INDEX 430-030	SHEET 1 of 4

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

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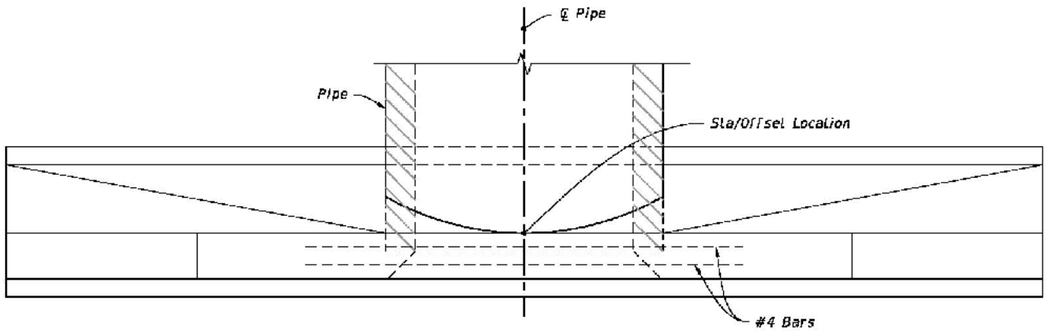
JACKSONVILLE, FL 32257
CERTIFICATE OF AUTHORIZATION 23132

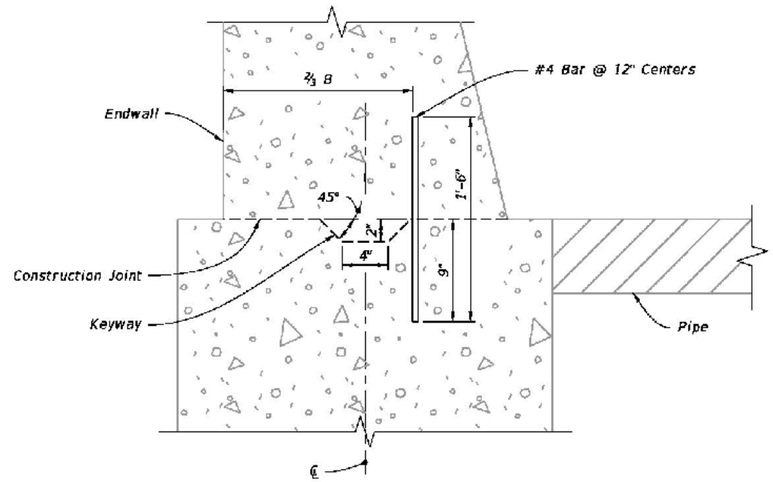
CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

DRAWING NO. **556**

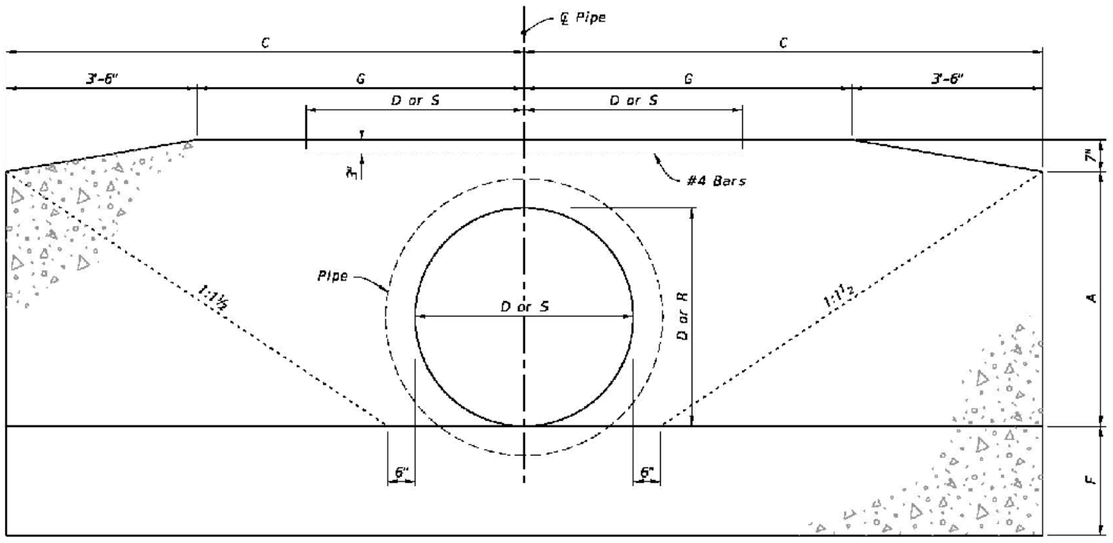


PLAN

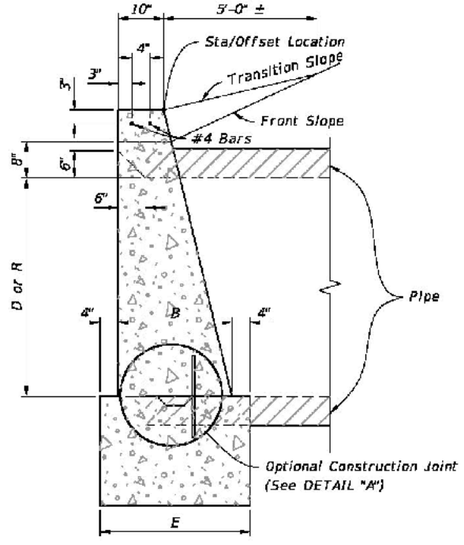


NOTE: Keyway and Dowels are required for optional construction joint.

DETAIL "A"



FRONT ELEVATION



SIDE ELEVATION

10/17/2023 8:47:36 AM

CONCRETE ENDWALL DETAILS

LAST REVISION	REVISION	DESCRIPTION:				
11/01/19			FY 2024-25 STANDARD PLANS	STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE	INDEX 430-030	SHEET 2 of 4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CERTIFICATE OF AUTHORIZATION 23132

CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

DRAWING NO. **557**

ROUND CONCRETE AND CORRUGATED METAL PIPE

Pipe	Dia. D	Opening Area (SF) Number Of Pipes 1	2	3	4	Dimensions A	B	C	E	F	G	Y	X 0°	15°	30°	45°	Class II Concrete (CY) Number Of Pipe And Skew Angle Of Pipe (α) Single 0°	Double 0°	15°	30°	45°	Triple 0°	15°	30°	45°	Quadruple 0°	15°	30°	45°	Dia. D
Concrete	15"	1.23	2.46	3.69	4.92	1'-11"	1'-2"	4'-0"	1'-10"	1'-2"	0'-6"	2'-7"	2'-7"	2'-8"	3'-0"	3'-8"	1.23	1.59	1.60	1.65	1.74	1.94	1.96	2.05	2.23	2.30	2.34	2.47	2.74	15"
	18"	1.77	3.54	5.31	7.08	2'-2"	1'-3"	4'-6"	1'-11"	1'-3"	1'-0"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.56	1.99	2.01	2.06	2.17	2.43	2.46	2.56	2.79	2.86	2.91	3.06	3.40	18"
	21"	2.41	4.82	7.23	9.64	2'-5"	1'-4"	5'-0"	2'-0"	1'-4"	1'-6"	3'-2"	3'-2"	3'-3"	3'-8"	4'-6"	1.97													21"
	24"	3.14	6.28	9.42	12.56	2'-8"	1'-4"	5'-6"	2'-0"	1'-4"	2'-0"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	2.24	2.82	2.84	2.91	3.06	3.39	3.43	3.57	3.87	3.97	4.03	4.24	4.69	24"
	27"	3.98	7.96	11.94	15.92	2'-11"	1'-5"	6'-0"	2'-1"	1'-5"	2'-6"	3'-10"	3'-10"	4'-0"	4'-5"	5'-5"	2.73													27"
	30"	4.91	9.82	14.73	19.64	3'-2"	1'-6"	6'-6"	2'-2"	1'-6"	3'-0"	4'-3"	4'-3"	4'-5"	4'-11"	6'-0"	3.26	4.13	4.16	4.26	4.49	4.98	5.04	5.25	5.69	5.84	5.93	6.24	6.91	30"
	36"	7.07	14.14	21.21	28.28	3'-8"	1'-8"	7'-6"	2'-4"	1'-8"	4'-0"	5'-1"	5'-1"	5'-3"	5'-10"	7'-2"	4.53	5.73	5.77	5.92	6.23	6.92	7.00	7.29	7.91	8.13	8.26	8.69	9.62	36"
	42"	9.62	19.24	28.86	38.48	4'-2"	1'-10"	8'-6"	2'-6"	2'-0"	5'-0"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	6.33	8.11	8.17	8.39	8.85	9.90	10.02	10.45	11.38	11.68	11.87	12.51	13.89	42"
	48"	12.57	25.14	37.71	50.28	4'-8"	2'-1"	9'-6"	2'-9"	2'-0"	6'-0"	6'-9"	6'-9"	7'-0"	7'-10"	9'-7"	8.15	10.40	10.48	10.75	11.33	12.64	12.80	13.34	14.50	14.89	15.13	15.93	17.68	48"
	54"	15.90	31.80	47.70	63.60	5'-2"	2'-6"	10'-6"	3'-2"	2'-3"	7'-0"	7'-8"	7'-8"	7'-11"	8'-10"	10'-10"	11.71	15.23	15.35	15.78	16.69	18.77	19.02	19.86	21.69	22.29	22.66	23.93	26.67	54"
Corrugated Metal	15"	1.23	2.46	3.69	4.92	1'-11"	1'-2"	4'-0"	1'-10"	1'-2"	0'-6"	2'-7"	2'-7"	2'-8"	3'-0"	3'-8"	1.24	1.62	1.63	1.68	1.78	1.99	2.02	2.11	2.30	2.37	2.41	2.75	2.84	15"
	18"	1.77	3.54	5.31	7.08	2'-2"	1'-3"	4'-6"	1'-11"	1'-3"	1'-0"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.59	2.04	2.06	2.11	2.23	2.51	2.54	2.65	2.89	2.96	3.01	3.17	3.53	18"
	21"	2.41	4.82	7.23	9.64	2'-5"	1'-4"	5'-0"	2'-0"	1'-4"	1'-6"	3'-2"	3'-2"	3'-3"	3'-8"	4'-6"														21"
	24"	3.14	6.28	9.42	12.56	2'-8"	1'-4"	5'-6"	2'-0"	1'-4"	2'-0"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	2.29	2.91	2.93	3.01	3.17	3.52	3.56	3.71	4.03	4.14	4.20	4.43	4.91	24"
	27"	3.98	7.96	11.94	15.92	2'-11"	1'-5"	6'-0"	2'-1"	1'-5"	2'-6"	3'-10"	3'-10"	4'-0"	4'-5"	5'-5"														27"
	30"	4.91	9.82	14.73	19.64	3'-2"	1'-6"	6'-6"	2'-2"	1'-6"	3'-0"	4'-3"	4'-3"	4'-5"	4'-11"	6'-0"	3.34	4.28	4.31	4.43	4.67	5.20	5.27	5.49	5.97	6.13	6.23	6.56	7.29	30"
	36"	7.07	14.14	21.21	28.28	3'-8"	1'-8"	7'-6"	2'-4"	1'-8"	4'-0"	5'-1"	5'-1"	5'-3"	5'-10"	7'-2"	4.64	5.95	6.00	6.15	6.49	7.25	7.34	7.65	8.33	8.57	8.71	9.18	10.20	36"
	42"	9.62	19.24	28.86	38.48	4'-2"	1'-10"	8'-6"	2'-6"	2'-0"	5'-0"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	6.49	8.43	8.50	8.73	9.23	10.38	10.52	10.98	11.99	12.32	12.52	13.22	14.73	42"
	48"	12.57	25.14	37.71	50.28	4'-8"	2'-1"	9'-6"	2'-9"	2'-0"	6'-0"	6'-9"	6'-9"	7'-0"	7'-10"	9'-7"	8.36	10.85	10.94	11.23	11.87	13.34	13.51	14.11	15.39	15.82	16.08	16.97	18.90	48"
	54"	15.90	31.80	47.70	63.60	5'-2"	2'-6"	10'-6"	3'-2"	2'-3"	7'-0"	7'-8"	7'-8"	7'-11"	8'-10"	10'-10"	11.77	15.35	15.48	15.90	16.83	18.93	19.18	20.04	21.89	22.51	22.89	24.17	26.96	54"

ELLIPTICAL CONCRETE AND CORRUGATED METAL PIPE ARCH

Pipe	Rise R	Span S	Opening Area (SF) Number Of Pipes 1	2	3	4	Dimensions A	B	C	E	F	G	Y	X 0°	15°	30°	45°	Class II Concrete (CY) Number Of Pipe And Skew Angle Of Pipe (α) Single 0°	Double 0°	15°	30°	45°	Triple 0°	15°	30°	45°	Quadruple 0°	15°	30°	45°	Rise R	Span S	Approx. Equiv. Round
Concrete	12"	18"	1.3	2.6	3.9	5.2	1'-8"	1'-2"	3'-9"	1'-10"	1'-2"	0'-3"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.09	1.45	1.46	1.51	1.60	1.80	1.82	1.91	2.09	2.16	2.20	2.33	2.60	12"	18"	15"
	14"	23"	1.8	3.6	5.4	7.2	1'-10"	1'-3"	4'-2½"	1'-11"	1'-3"	8½"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	1.36	1.82	1.84	1.89	2.01	2.29	2.32	2.43	2.68	2.75	2.80	2.97	3.33	14"	23"	18"
	19"	30"	3.3	6.6	9.9	13.2	2'-3"	1'-4"	5'-1½"	2'-0"	1'-4"	1'-7½"	4'-2"	4'-2"	4'-4"	4'-10"	5'-11"	1.89	2.55	2.57	2.65	2.82	3.22	3.27	3.43	3.77	3.88	3.95	4.19	4.70	19"	30"	24"
	24"	38"	5.1	10.2	15.3	20.4	2'-8"	1'-5"	6'-3"	2'-1"	1'-5"	2'-9"	5'-2"	5'-2"	5'-4"	6'-0"	7'-4"	2.64	3.55	3.58	3.69	3.93	4.48	4.54	4.77	5.24	5.39	5.49	5.82	6.53	24"	38"	30"
	29"	45"	7.4	14.8	22.2	29.6	3'-1"	1'-6"	7'-0"	2'-2"	1'-6"	3'-6"	6'-0"	6'-0"	6'-3"	6'-11"	8'-6"	3.32	4.48	4.52	4.66	4.96	5.64	5.72	6.00	6.60	6.80	6.92	7.34	8.24	29"	45"	36"
	34"	53"	10.2	20.4	30.6	40.8	3'-6"	1'-7"	7'-11½"	2'-3"	1'-7"	4'-5½"	7'-1"	7'-1"	7'-4"	8'-2"	10'-0"	4.24	5.76	5.81	6.00	6.39	7.29	7.40	7.76	8.55	8.81	8.97	9.52	10.70	34"	53"	42"
	38"	60"	12.9	25.8	38.7	51.6	3'-10"	1'-8"	8'-9"	2'-4"	1'-8"	5'-3"	7'-11"	7'-11"	8'-2"	9'-2"	11'-2"	5.22	7.16	7.23	7.46	7.96	9.10	9.24	9.70	10.71	11.05	11.25	11.95	13.46	38"	60"	48"
	43"	68"	16.6	33.2	49.8	66.4	4'-3"	1'-10"	9'-8½"	2'-6"	1'-10"	6'-2½"	8'-10"	8'-10"	9'-2"	10'-2"	12'-6"	6.63	9.01	9.09	9.38	10.00	11.39	11.56	12.13	13.36	13.77	14.02	14.88	16.73	43"	68"	54"
	48"	76"	20.5	41.0	61.5	82.0	4'-8"	2'-1"	10'-8"	2'-9"	2'-0"	7'-2"	9'-9"	9'-9"	10'-1"	11'-3"	13'-9"	8.66	11.74	11.85	12.22	13.02	14.82	15.04	15.77	17.37	17.91	18.23	19.34	21.74	48"	76"	60"
	53"	83"	24.8	49.6	74.4	99.2	5'-1"	2'-6"	11'-7"	3'-2"	2'-6"	8'-1"	10'-7"	10'-7"	10'-11"	12'-3"	15'-0"	12.50	16.98	16.98	17.67	18.83	21.47	21.78	22.86	25.18	25.97	26.44	28.06	31.55	53"	83"	66"
	58"	91"	29.5	59.0	88.5	118.0	5'-6"	2'-10"	12'-6½"	3'-6"	2'-10"	9'-0½"	11'-4"	11'-4"	11'-9"	13'-1"	16'-0"	16.46	22.25	22.46	23.16	24.66	28.05	28.46	29.85	32.85	33.85	34.46	36.55	41.05	58"	91"	72"
Corrugated Metal	13"	17"	1.1	2.2	3.3	4.4	1'-9"	1'-2"	3'-10"	1'-10"	1'-2"	0'-4"	2'-6"	2'-6"	2'-7"	2'-11"	3'-6"	1.16	1.47	1.48	1.52	1.60	1.78	1.80	1.88	2.04	2.09	2.12	2.23	2.48	13"	17"	15"
	15"	21"	1.6	3.2	4.8	6.4	1'-11"	1'-2"	4'-3"	1'-10"	1'-2"	0'-9"	2'-10"	2'-10"	2'-11"	3'-3"	4'-0"	1.33	1.69	1.70	1.75	1.84	2.04	2.06	2.15	2.33	2.40	2.44	2.57	2.84	15"	21"	18"
	20"	28"	2.8	5.6	8.4	11.2	2'-4"	1'-3"	5'-2"	1'-11"	1'-3"	1'-8"	3'-5"	3'-5"	3'-6"	3'-11"	4'-10"	1.78	2.31	2.33	2.39	2.53	2.83	2.87	2.99	3.26	3.36	3.42	3.60	4.01	20"	28"	24"
	24"	35"	4.3	8.6	12.9	17.2	2'-8"	1'-4"	5'-11½"	2'-0"	1'-4"	2'-5½"	4'-0"	4'-0"	4'-2"	4'-7"	5'-8"	2.34	3.03	3.05	3.14	3.32	3.72	3.77	3.93	4.29	4.40	4.47	4.72	5.25	24"	35"	30"
	29"	42"	5.9	11.8	17.7	23.6	3'-1"	1'-5"	6'-10½"	2'-1"	1'-5"	3'-4½"	4'-9"	4'-9"	4'-11"	5'-6"	6'-9"	3.13	4.06	4.09	4.20	4.45	4.99	5.06	5.28	5.76	5.93	6.03	6.36	7.09	29"	42"	36"
	33"	49"	8.4	16.8	25.2	33.6	3'-5"	1'-6"	7'-8"	2'-2"	1'-6"	4'-2"	5'-6"	5'-6"	5'-8"	6'-4"	7'-9"	3.83	5.00	5.04	5.18	5.48	6.16	6.24	6.52	7.12	7.32	7.44	7.86	8.76	33"	49"	42"
	38"	57"	10.6	21.2	31.8	42.4	3'-10"	1'-7"	8'-7½"	2'-3"	1'-7"	5'-1½"	6'-4"	6'-4"	6'-7"	7'-4"	8'-11"	4.87	6.31	6.36	6.53	6.91	7.74	7.84	8.18	8.93	9.18	9.33	9.85	10.96	38"	57"	48"
	43"	64"	13.2	26.4	39.6	52.8	4'-3"	1'-8"	9'-6½"	2'-4"	1'-8"	6'-0½"	7'-1"	7'-1"	7'-4"	8'-2"	10'-0"	5.88	7.64	7.70	7.91	8.37	9.40	9.52	9.94	10.86	11.15	11.33	11.97	13.33	43"	64"	54"
	47"	71"	16.9	33.8	50.7	67.6	4'-7"	1'-10"	10'-4"	2'-6"	2'-0"	6'-10"	7'-10"	7'-10"	8'-1"	9'-1"	11'-1"	7.80	10.15	10.23	10.51	11.12	12.49	12.65	13.22	14.43	14.85	15.10	15.94	17.77	47"	71"	60"

NOTES:

1. Dimension X is calculated as: X = Y*SEC α.
2. Select tabular quantities using skew values as follows:

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

CONCRETE AND METAL PIPE TABLES

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE	INDEX	SHEET
11/01/21						430-030	3 of 4

10/17/2023 8:47:33 AM

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

DRAINAGE DETAILS - FDOT

DRAWING NO. **558**

WETLAND IMPACTS SUMMARY

Name	2d Area Each Side of Cross Drain	Combined Area at Cross Drain	Cut	Fill	Net
18649_L_V	120.21 SF		0.16 CY	3.30 CY	3.14 CY<Fill>
18649_R_V	337.43 SF		2.48 CY	3.64 CY	1.15 CY<Fill>
		457.64 SF 0.0105 AC			
21707_L_V	111.28 SF		0.69 CY	0.15 CY	0.54 CY<Cut>
21707_R_V	96.62 SF		0.00 CY	4.03 CY	4.03 CY<Fill>
		207.90 SF 0.0048 AC			
23874_L_V	164.67 SF		0.00 CY	7.77 CY	7.77 CY<Fill>
23874_R_V	98.14 SF		0.00 CY	5.51 CY	5.51 CY<Fill>
		262.81 SF 0.0060 AC			
24715_L_V	342.11 SF		0.57 CY	12.68 CY	12.11 CY<Fill>
24715_R_V	295.70 SF		0.68 CY	12.08 CY	11.39 CY<Fill>
		637.81 SF 0.0146 AC			
31060_L_V	474.65 SF		2.37 CY	15.68 CY	13.31 CY<Fill>
31060_R_V	322.39 SF		0.76 CY	14.98 CY	14.22 CY<Fill>
		797.04 SF 0.0183 AC			
35113_L_V	167.52 SF		0.53 CY	3.87 CY	3.34 CY<Fill>
35113_R_V	114.41 SF		0.56 CY	3.54 CY	2.98 CY<Fill>
		281.93 SF 0.0065 AC			
Totals	2,645.13 SF	2,645.13 SF 0.0607 AC	8.80 CY	87.23 CY	79.49 CY<Fill>

WETLAND IMPACTS NOTES:

1. THE CUT AND FILL DATA SHOWN WERE GENERATED USING AUTOCAD CIVIL 3D. DATA IN THE "COMBINED AREA AT CROSS DRAIN COLUMN" WAS HAND CALCULATED TO SHOW COMPLIANCE WITH 62-330.447 LIMITATIONS.
2. EACH LINE IN THE TABLE ABOVE REPRESENTS A VOLUME SURFACE COMPARISON BETWEEN EXISTING AND PROPOSED SURFACES WITHIN A COMMONLY-DEFINED BOUNDARY AREA DEFINED BY AN ELEVATION OF THE ROAD EMBANKMENT LEVEL WITH THE EXISTING CROSS DRAIN HEADWALL AND THE LIMITS OF PROPOSED GRADING.
3. THE NAMING CONVENTION INDICATES THE CROSS DRAIN LOCATION AND SIDE OF ROAD. FOR EXAMPLE, 18649_L_V IS A COMPARISON VOLUME AT CROSS DRAIN 18649 ON THE LEFT SIDE OF THE ROAD. THE "V" INDICATES THAT THE SURFACE IS A VOLUME SURFACE.
4. CUT AND FILL CALCULATIONS ARE BASED ON IN-PLACE MEASURES AND DO NOT ACCOUNT FOR FLUFF AND COMPACTION EARTHWORK FACTORS USED BY CONTRACTORS TO ACCOUNT FOR TRUCKLOAD MEASURES.
5. CUT AND FILL CALCULATIONS ACCOUNT FOR EXISTING HEADWALL REMOVAL AND NEW HEADWALL AND CROSS DRAIN PIPE EXTENSIONS.

REVISIONS

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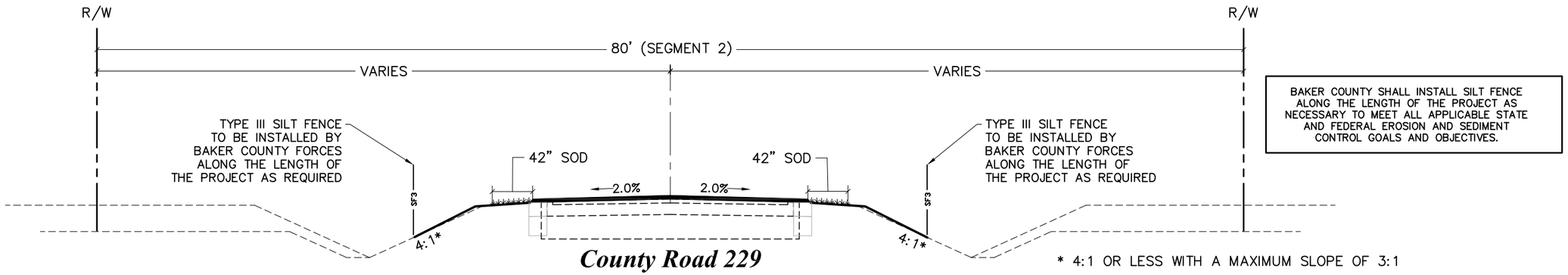
CR229 WIDENING AND RESURFACING PROJECT

WETLAND IMPACTS SUMMARY

DRAWING NO.

700



BAKER COUNTY SHALL INSTALL SILT FENCE ALONG THE LENGTH OF THE PROJECT AS NECESSARY TO MEET ALL APPLICABLE STATE AND FEDERAL EROSION AND SEDIMENT CONTROL GOALS AND OBJECTIVES.

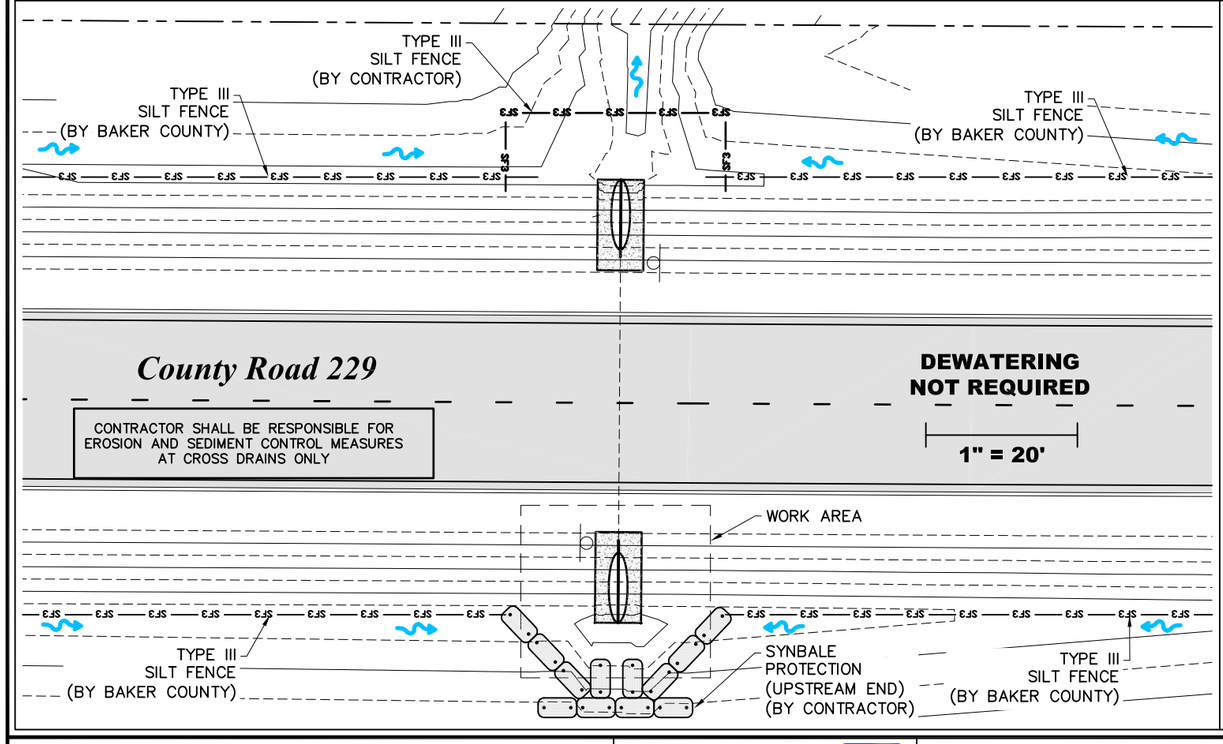
* 4:1 OR LESS WITH A MAXIMUM SLOPE OF 3:1

MAINLINE

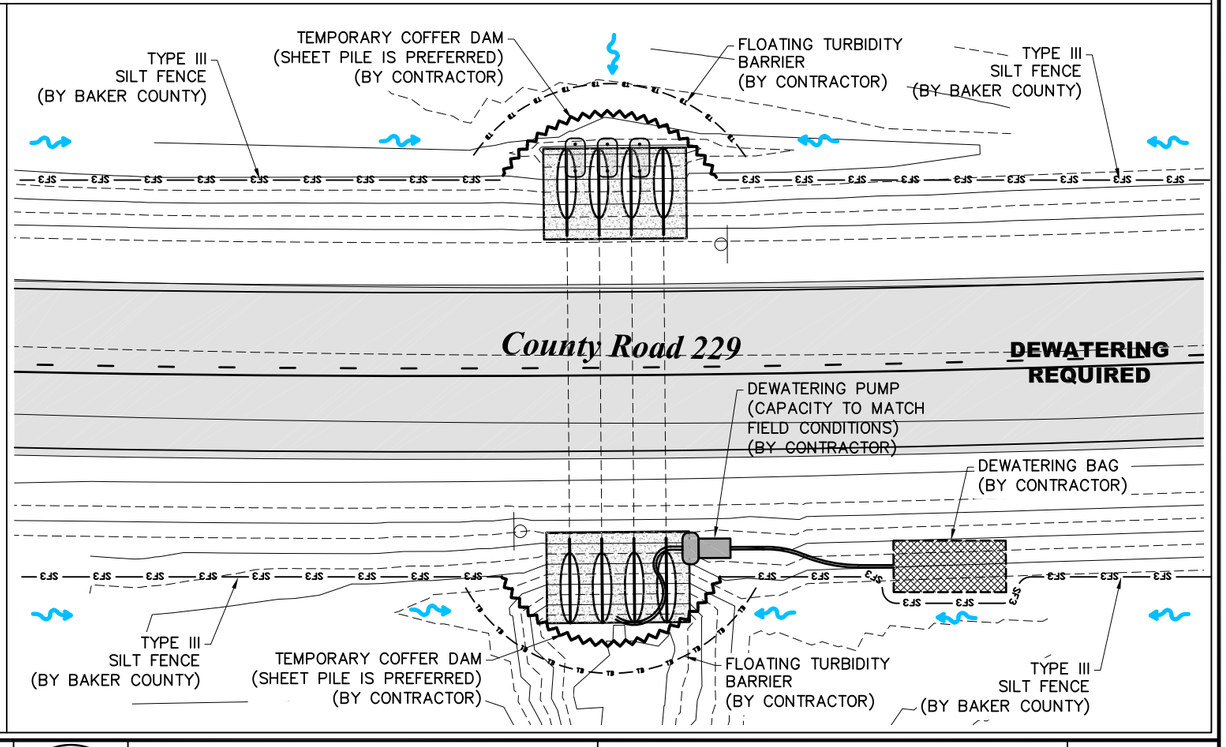
1. CONTRACTOR SHALL INSTALL 42" OF GRASS SOD ALONG THE PROPOSED EDGE OF PAVEMENT.
2. ALL OTHER DISTURBED AREAS SHALL BE STABILIZED WITH BAHIA GRASS SEED BY BAKER COUNTY FORCES. WHERE SLOPES ARE STEEPER THAN 3H:1V, BAKER COUNTY SHALL STABILIZE THE SLOPES WITH BAHIA GRASS SOD.
3. ALL GRASS SOD AND SEED SHALL BE ARGENTINE BAHIA PER FDOT 981.

Sunshine811
CALL BEFORE YOU DIG:
811 OR 1-800-432-4770
CALL 811 OR 1-800-432-4770 AT LEAST TWO (2) WORKING DAYS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH FLORIDA LAW.

1. SHOULDER REWORK LINES SHOWS ARE NOT TO SCALE AND ARE DRAWN AS SHOWN TO ILLUSTRATE EXISTING AND PROPOSED ROAD EMBANKMENT AND SIDE DITCH SLOPES.
2. IN MOST CASES, SHOULDER REWORK WILL TIE INTO THE EXISTING ROAD EMBANKMENT WELL UPGRADIENT OF THE SIDE DITCH BOTTOM PROFILE AND NO WORK WILL BE REQUIRED FOR SIDE DITCH BACK SLOPES.



CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL MEASURES AT CROSS DRAINS ONLY



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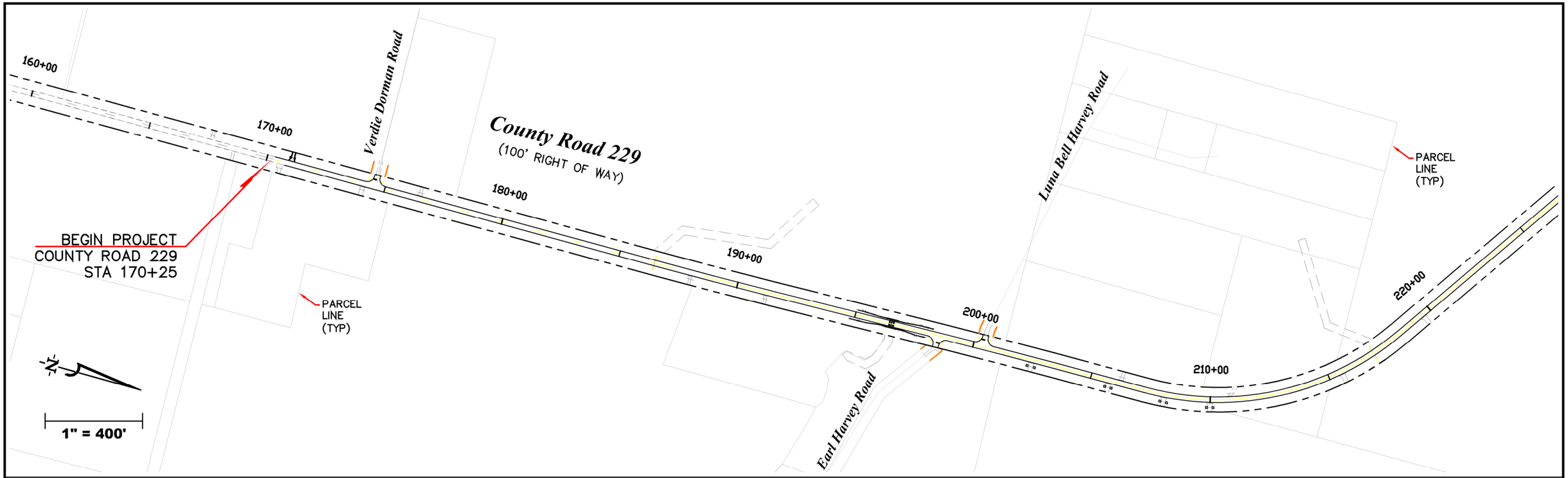
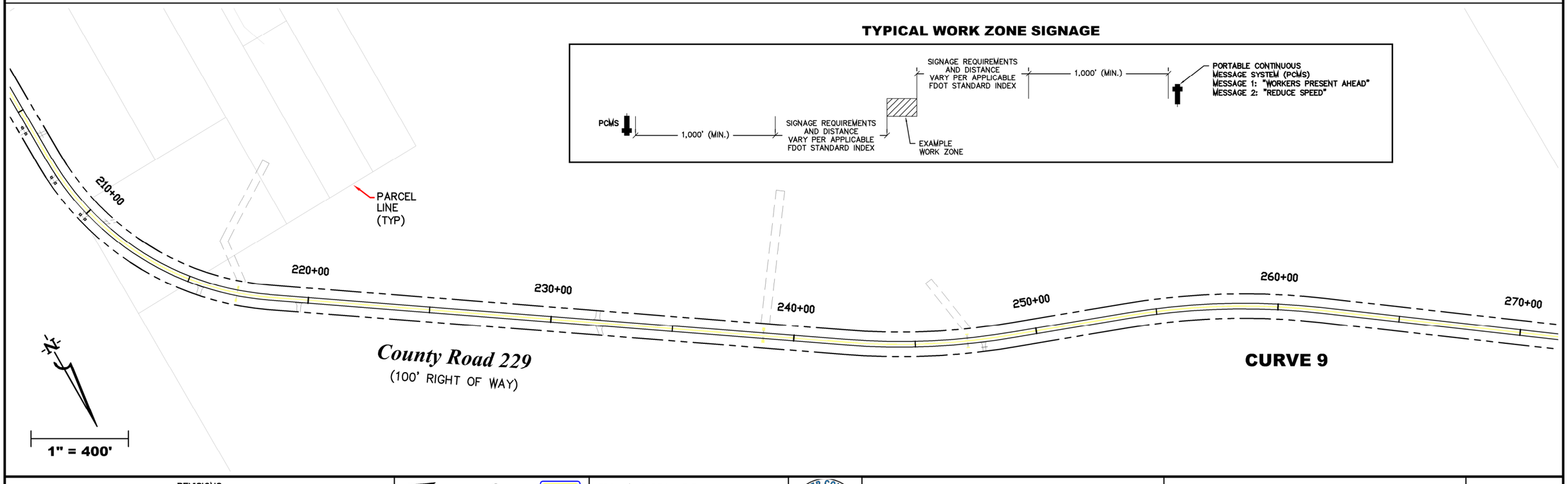
CR229 WIDENING AND RESURFACING PROJECT

EROSION AND SEDIMENT CONTROL PLAN

DRAWING NO.
800





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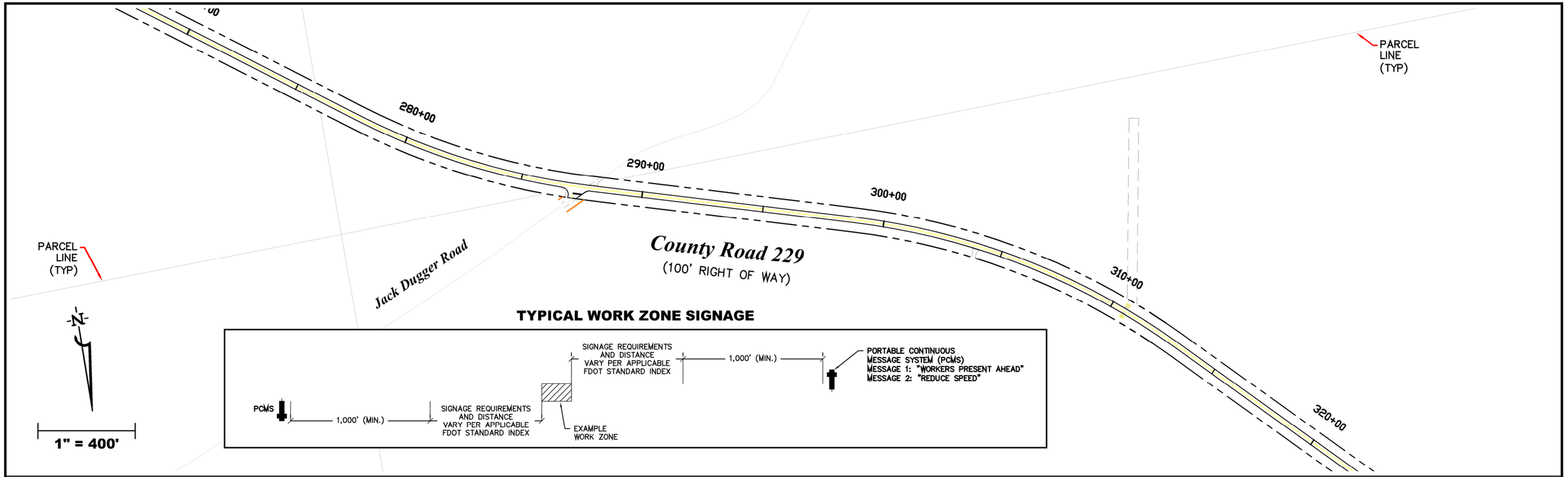
CR229 WIDENING AND RESURFACING PROJECT

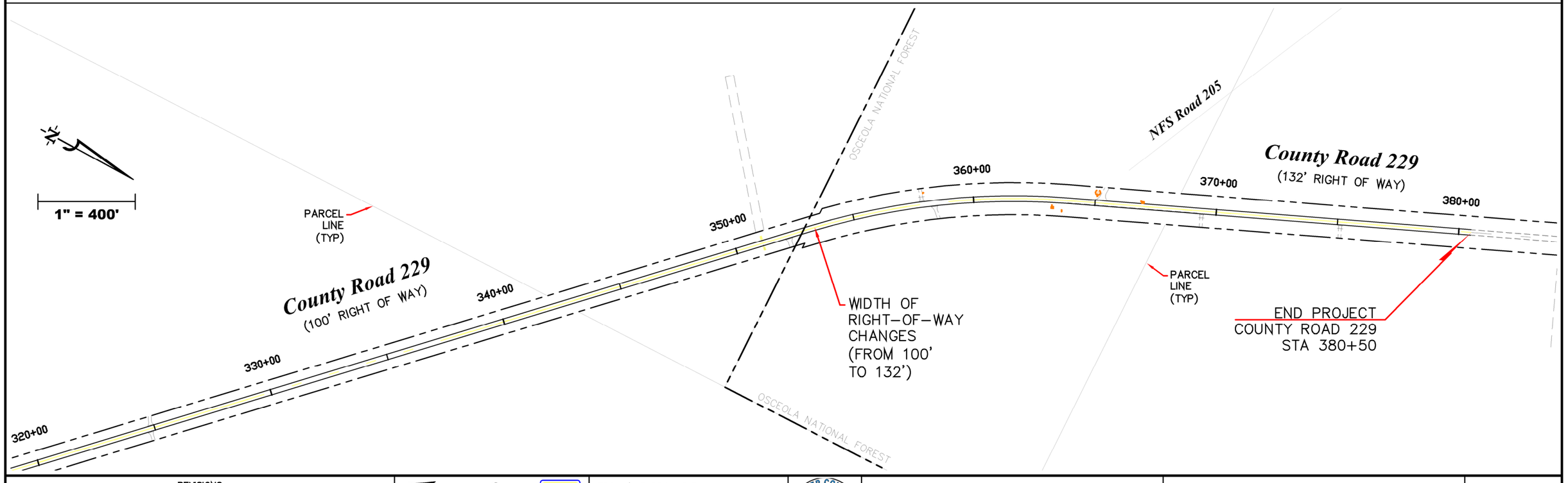
MAINTENANCE OF TRAFFIC PLAN

DRAWING NO.

900



TYPICAL WORK ZONE SIGNAGE



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CR229 WIDENING AND RESURFACING PROJECT

MAINTENANCE OF TRAFFIC PLAN

DRAWING NO.

901

MAINTENANCE OF TRAFFIC REQUIREMENTS

MINIMUM REQUIREMENTS

1. ACCESS TO ALL STREETS AND DRIVEWAYS ARE TO BE MAINTAINED AT ALL TIMES.
2. THIS MAINTENANCE OF TRAFFIC PLAN REPRESENTS MINIMUM REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE TRAFFIC CONTROLS FOR ACTUAL FIELD CONDITIONS AND CONSTRUCTION SEQUENCES.
3. THE CONTACTOR IS RESPONSIBLE FOR TRAFFIC MAINTENANCE AND CONTROL THROUGHOUT THE CONSTRUCTION PROCESS AND THAT IMPLEMENTED CONTROLS ARE CONSISTENT WITH STANDARDS ADOPTED BY STATE AND LOCAL AGENCIES, .
4. THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL TRAFFIC CONTROL DEVICES USED MEET MATERIALS, CONSTRUCTION, AND INSTALLATION STANDARDS AND GUIDELINES SPECIFIED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION

HOURS OF OPERATION AND EXTENT OF ACTIVE WORK ZONE

1. PROJECT HOURS ARE BETWEEN 7:00 AM AND 7:00 PM, MONDAY THRU FRIDAY, AND DAYLIGHT HOURS ON WEEKENDS AND HOLIDAYS.
2. THE CONTRACTOR SHALL CONFINE HIS ACTIVE WORK AREA TO NO MORE THAN 1000 FEET (PARALLEL TO RIGHT-OF-WAY) AT A TIME.
3. WORK AREAS SHOWN ARE NOT FIXED AND WILL MOVE WITH CONSTRUCTION ALONG AND WITHIN THE RIGHT-OF-WAY.
4. CONTRACTOR SHALL NOT HAVE MORE THAN ONE (1) WORK AREA ACTIVE AT ANY TIME. AN ACTIVE WORK AREA SHALL BE COMPLETED AND MADE SAFE FOR THE PUBLIC, BEFORE ACTIVATING A NEW WORK AREA.

TRAFFIC FLOW AND LANE CLOSURES

1. PROPERLY EQUIPPED FLAGMEN SHALL CONTROL THE TRAFFIC BYPASSING ANY ONE LANE WORK ZONE AT ALL TIMES. WHEN TWO-WAY TRAFFIC IS RESTORED, FLAGMEN MAY NOT BE NECESSARY.
2. IN NO CASE WILL THE CONTRACTOR OPERATE A STREET AS A ONE WAY ONLY.
3. THE CONTRACTOR SHALL MAINTAIN ONE OPEN LANE AT ALL TIMES DURING WORKING HOURS AND RESTORE TO TWO LANES FOR ALL NON-WORKING HOURS.
4. WORK OPERATIONS SHALL BE CONFINED TO ONE TRAVEL LANE, LEAVING THE OTHER OR OPPOSING TRAVEL LANE OPEN TO TRAFFIC.
5. ALL VEHICLES, EQUIPMENT, WORKERS (EXCEPT FLAGGERS) AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT.
6. FLAGGERS SHALL BE IN SIGHT OF EACH OTHER, OR IN DIRECT COMMUNICATION, AT ALL TIMES.
7. LONGITUDINAL DIMENSIONS SHOWN ON THE PLANS ARE GUIDELINES AND ARE TO BE ADJUSTED TO FIT FIELD CONDITIONS.
8. NO TRENCHES ARE TO REMAIN OPEN WHEN WORKERS ARE NOT PRESENT.
9. FOR GENERAL TCZ REQUIREMENTS AND ADDITIONAL INFORMATION, REFER TO FDOT STANDARD PLANS PROVIDED IN THIS PLAN SET AND IN THE FDOT STANDARD PLANS. IF A CONSTRUCTION CONDITION BECOMES NECESSARY WHERE A CUSTOM MAINTENANCE OF TRAFFIC PLAN IS NECESSARY, THE CONTRACTOR SHALL NOTIFY BAKER COUNTY IN WRITING, AND OBTAIN APPROVAL FROM THE COUNTY, IN ADVANCE OF IMPLEMENTING SUCH A TRAFFIC CONTROL MEASURE.

CONSTRUCTION, RESTORATION AND REPLACEMENT

1. CONTRACTOR SHALL NOTIFY BAKER COUNTY A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO IMPLEMENTATION OF THE MOT.
2. OPEN TRENCHES ARE TO BE COVERED WITH STEEL PLATES WHEN UNATTENDED.
3. THE ROADWAY SHALL BE RESTORED TO AT LEAST A LIMEROCK SURFACE BEFORE IT IS REOPENED TO TRAFFIC AND BEFORE THE CONTRACTOR MOVES TO THE NEXT CONSTRUCTION ZONE.
4. THE CONTRACTOR MUST MAINTAIN EXISTING SIGNING AND PAVEMENT MARKINGS. IF SIGNS OR PAVEMENT MARKINGS ARE DAMAGED DUE TO CONTRACTOR'S ACTIVITY, THE CONTRACTOR IS REQUIRED TO REPLACE THEM IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS IMMEDIATELY.
5. DUST CONTROL MEASURES ARE TO BE IMPLEMENTED ON ALL UNPAVED SURFACES UNTIL PAVED.
6. WHERE CONSTRUCTION PHASING IS NOT SHOWN ON PLANS, OR IS TO BE ALTERED, CONTRACTOR IS TO SUBMIT A PHASING PLAN WITH A PROPOSED CONSTRUCTION SCHEDULE TO BAKER COUNTY PRIOR TO CONSTRUCTION.

RESPONSIBILITY

1. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE MAINTENANCE OF TRAFFIC CONTROLS FOR WORKS OF THIS PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT PROPER AND ADEQUATE MEASURES ARE TAKEN TO INSURE PUBLIC SAFETY AND THE SAFETY OF ANYONE ASSOCIATED WITH WORKS OF THE PROJECT.

REVISIONS			
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CR229 WIDENING AND RESURFACING PROJECT

MAINTENANCE OF TRAFFIC PLAN

DRAWING NO.

902

SHEET	TABLE OF CONTENTS
1	General Notes, TTC Tables
2	Definitions Temporary Traffic Control Devices Overhead Work Railroads Sight Distance Above Ground Hazard
3	Clear Zone Widths For Work Zones Superelevation Length Of Lane Closures Overweight/Oversize Vehicles Lane Widths High-Visibility Safety Apparel Speed Reduction Signing
4	Flagger Control Survey Work Zones Signs
5	Work Zone Sign Supports
6	Commonly Used Warning and Regulatory Signs In Work Zones
7	Manholes/Crosswalks/Joints Truck Mounted Attenuators Signals Channelizing Devices Channelizing Devices Consistency Advanced Warning Arrow Boards
8	Drop-Offs In Work Zones
9	Business Entrance Temporary Asphalt Separator
10	Channelizing Devices Notes Temporary Barrier Notes
11	Pavement Markings

GENERAL NOTES:

1. This Index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.

2. Use this Index in accordance with the Plans and Indexes 102-601 through 102-680. Indexes 102-601 through 102-680 are Department-specific typical applications of commonly encountered situations. Adjust device location or number thereof as recommended by the Worksite Traffic Supervisor and approved by the Engineer. Devices include, but are not limited to, flaggers, portable temporary signals, signs, pavement markings, and channelizing devices. Comply with MUTCD or applicable Department criteria for any changes and document the reason for the change.

3. Except for emergencies, any road closure on State Highway System must comply with Section 335.15, F.S.

TABLE 1
CHANNELIZING DEVICE SPACING

Work Zone Speed (mph)	Max. Spacing (feet)			
	Cones or Temporary Tubular Markers		Type I Barricades, Type II Barricades, Vertical Panels, or Drums	
	Taper	Tangent	Taper	Tangent
≤ 45	25	50	25	50
≥ 50	25	50	50	100

TABLE 2
TAPER LENGTH "L"

Work Zone Speed (mph)	Min. Length (feet)
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

Where: W = width of offset in feet
S = speed in mph

TABLE 3
WORK ZONE SIGN SPACING "X"

Road Type	Min. Spacing (feet)
Arterials and Collectors with Work Zone Speed ≤ 40 mph	200
Arterials and Collectors with Work Zone Speed ≥ 45 mph	500
Limited Access Roadways *	1,500

* For Limited access roadways with work zone speed ≤ 55 mph, the minimum spacing may be reduced in accordance with the MUTCD and as approved by the Engineer.

TABLE 4
BUFFER LENGTH "B"

Work Zone Speed (mph)	Min. Length (feet)
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

Note: When Buffer Length "B" cannot be attained due to geometric constraints, use the greatest length possible, but not less than 155 feet.

SYMBOLS:

- Work Area
- Channelizing Device
- Work Zone Sign
- Type III Barricade
- Lane Identification and Direction of Traffic

10/17/2023 8:27:38 AM

LAST REVISION	REVISION	DESCRIPTION:
11/01/23		

FDOT FY 2024-25 STANDARD PLANS

GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

INDEX 102-600

SHEET 1 of 11

REVISIONS

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CR229 WIDENING AND RESURFACING PROJECT

FDOT STANDARD MOT DETAILS

DRAWING NO. 950

DEFINITIONS:

Regulatory Speed (In Work Zones)

The maximum permitted travel speed posted for the work zone is indicated by the regulatory speed limit signs. The work zone speed must be shown or noted in the plans. This speed should be used as the minimum design speed to determine runout lengths, departure rates, flare rates, lengths of need, clear zone widths, taper lengths, crash cushion requirements, marker spacings, superelevation and other similar features.

Advisory Speed

The maximum recommended travel speed through a curve or a hazardous area.

Travel Way

The portion of the roadway for the movement of vehicles. For traffic control through work zones, travel way may include the temporary use of shoulders and any other permanent or temporary surface intended for use as a lane for the movement of vehicular traffic.

a. Travel Lane: The designated widths of roadway pavement marked to carry through traffic and to separate it from opposing traffic or traffic occupying other traffic lanes.

b. Auxiliary Lane: The designated widths of roadway pavement marked to separate speed change, turning, passing and climbing maneuvers from through traffic.

Detour, Lane Shift, and Diversion

A detour is the redirection of traffic onto another roadway to bypass the temporary traffic control zone. A lane shift is the redirection of traffic onto a different section of the permanent pavement. A diversion is the redirection of traffic onto a temporary roadway, usually adjacent to the permanent roadway and within the limits of the right of way.

Aboveground Hazard

An aboveground hazard is any object, material or equipment other than traffic control devices that encroaches upon the travel way or that is located within the clear zone which does not meet the Department's safety criteria, i.e., anything that is greater than 4" in height and is firm and unyielding or doesn't meet breakaway requirements.

TEMPORARY TRAFFIC CONTROL DEVICES:

1. All temporary traffic control devices shall be ON the Department's Approved Products List (APL). Ensure the appropriate APL number is permanently marked on the device in a readily visible location.

2. All temporary traffic control devices shall be removed as soon as practical when they are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer appropriate shall be removed or covered. Do not store temporary traffic control devices on the shoulder, sidewalk, or other roadway facility not affected by the work when work is suspended.

3. Arrow Boards, Portable Changeable Message Signs, Radar Speed Display Trailer, Portable Regulatory Signs, and any other trailer mounted device shall be delineated with a channelizing device placed at each corner when in use and shall be moved outside the travel way and clear zone or be shielded by a barrier or crash cushion when not in use.

OVERHEAD WORK:

Work is only allowed over a traffic lane when one of the following options is used:

OPTION 1 (OVERHEAD WORK USING A MODIFIED LANE CLOSURE)

Overhead work using a modified lane closure is allowed if all of the following conditions are met:

a. Work operation is located in a signalized intersection and limited to signals, signs, lighting and utilities.
b. Work operations are 60 minutes or less.
c. Speed limit is 45 mph or less.
d. Aerial lift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
e. Aerial lift equipment is placed directly below the work area to close the lane.
f. Traffic control devices are placed in advance of the vehicle/equipment closing the lane using a minimum 100 foot taper.
g. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic control officer.

OPTION 2 (OVERHEAD WORK ABOVE AN OPEN TRAFFIC LANE)

Overhead work above a open traffic lane is allowed if all of the following conditions are met:

a. Work operation is located on a utility pole, light pole, signal pole, or their appurtenances.
b. Work operations are 60 minutes or less.
c. Speed limit is 45 mph or less.
d. No encroachment by any part of the work activities and equipment within an area bounded by 2 feet outside the edge of travel way and 18 feet high.
e. Aerial lift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
f. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic control officer.
g. Adequate precautions are taken to prevent parts, tools, equipment and other objects from falling into open lanes of traffic.
h. Other Governmental Agencies, Rail facilities, or Codes may require a greater clearance. The greater clearance required prevails as the rule.

OPTION 3 (OVERHEAD WORK ADJACENT TO AN OPEN TRAFFIC LANE)

Overhead work adjacent to an open traffic lane is allowed if all of the following conditions are met:

a. Work operation is located on a utility pole, light pole, signal pole, or their appurtenances.
b .Work operations are 1 day or less.
c. Speed limit is 45 mph or less.
d. No encroachment by any part of the work activities and equipment within 2 foot from the edge of travel way up to 18' height. Above 18' in height, no encroachment by any part of the work activities and equipment over the open traffic lane (except as allowed in Option 2 for work operations of 60 minutes or less).
e. Aerial lift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
f. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic control officer.
g. Adequate precautions are taken to prevent parts, tools, equipment and other objects from falling into open lanes of traffic.
h. Other Governmental Agencies, Rail facilities, or Codes may require a greater clearance. The greater clearance required prevails as the rule.

OVERHEAD WORK: (Cont.)

OPTION 4 (OVERHEAD WORK MAINTAINING TRAFFIC WITH NO ENCROACHMENT BELOW THE OVERHEAD WORK AREA)

Traffic shall be detoured, shifted, diverted or paced as to not encroach in the area directly below the overhead work operations in accordance with the appropriate Index drawing or detailed in the plans. This option applies to, but not limited to, the following construction activities:

a. Beam, girder, segment, and bent/pier cap placement.
b. Form and falsework placement and removal.
c. Concrete placement.
d. Railing construction located at edge of deck.
e. Structure demolition.

OPTION 5 (CONDUCTOR/CABLE PULLING ABOVE AN OPEN TRAFFIC LANE)

Overhead cable and/or de-energized conductor installations initial pull to proper tension shall be done in accordance with the appropriate Index or temporary traffic control plan.

Continuous pulling operations of secured cable and/or conductors are allowed over open lane(s) of traffic with no encroachment by any part of the work activities, materials or equipment within the minimal vertical clearance above the travel way. The utility shall take precautions to ensure that pull ropes and conductors/cables at no time fall below the minimum vertical clearance.

On Limited Access facilities, a site specific temporary traffic control plan is required. The temporary traffic control plan shall include:

a. The temporary traffic control set up for the initial pulling of the pull rope across the roadway.
b. During pulling operations, advance warning consisting of no less than a Changeable Message Sign upstream of the work area with alternating messages, "Overhead Work Ahead" and "Be Prepared to Stop" followed by a traffic control officer and police vehicle with blue lights flashing during the pulling operation.

RAILROADS:

Railroad crossings affected by a construction project should be evaluated for traffic controls to reduce queuing on the tracks. The evaluation should include as a minimum: traffic volumes, distance from the tracks to the intersections, lane closure or taper locations, signal timing, etc.

SIGHT DISTANCE:

1. Tapers: Transition tapers should be obvious to drivers. If restricted sight distance is a problem (e.g., a sharp vertical or horizontal curve), the taper should begin well in advance of the view obstruction. The beginning of tapers should not be hidden behind curves.

2. Intersections: Traffic control devices at intersections must provide sight distances for the road user to perceive potential conflicts and to traverse the intersection safely. Construction equipment and materials shall not restrict intersection sight distance.

ABOVEGROUND HAZARD:

1. Aboveground hazards (see definitions) are to be considered work areas during working hours and treated with appropriate work zone traffic control procedures. During nonworking hours, all objects, materials and equipment that constitute an aboveground hazard must be stored/placed outside the travel way and clear zone or be shielded by a barrier or crash cushion.

2. For aboveground hazards within a work zone the clear zone required should be based on the regulatory speed posted during construction.

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CR229 WIDENING AND RESURFACING PROJECT

FDOT STANDARD MOT DETAILS

DRAWING NO. **951**

CLEAR ZONE WIDTHS FOR WORK ZONES:

The term 'clear zone' describes the unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane. The table below gives clear zone widths in work zones for medians and roadside conditions other than for roadside canals; where roadside canals are present, clear zone widths are to conform with the distances to canals as described in the FDOT Design Manual 215.2.

TABLE 5

CLEAR ZONE WIDTHS FOR WORK ZONES

WORK ZONE SPEED (MPH)	TRAVEL LANES & MULTILANE RAMPS (feet)	AUXILIARY LANES & SINGLE LANE RAMPS (feet)
60-70	30	18
55	24	14
45-50	18	10
30-40	14	10
ALL SPEEDS CURB & GUTTER	4' BEHIND FACE OF CURB	4' BEHIND FACE OF CURB

NOTE: For temporary conditions where existing curb has been removed but not reconstructed, curb and gutter values may be used.

SUPERELEVATION:

Horizontal curves constructed in conjunction with work zone traffic control should have the required superelevation applied to the design radii. Under conditions where normal crown controls curvature, the minimum radii that can be applied are listed in the table below.

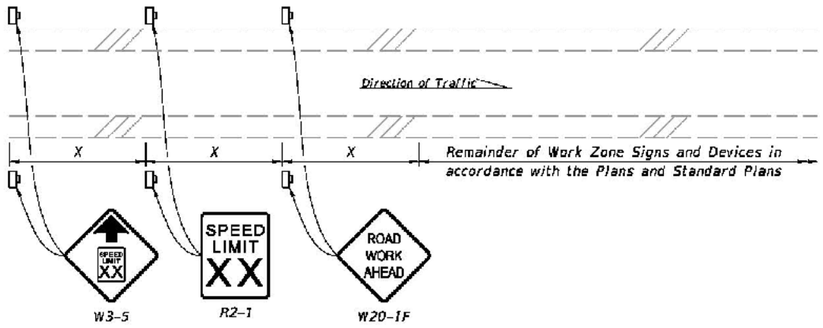
TABLE 6

MINIMUM RADII FOR NORMAL CROWN

WORK ZONE POSTED SPEED	MINIMUM RADIUS
MPH	feet
70	4090
65	3130
60	2400
55	1840
50	1390
45	1080
40	820
35	610
30	430
Superelevate When Smaller Radii is Used	

LENGTH OF LANE CLOSURES:

For interstates and state highways with a posted speed of 55MPH or greater, lane closures must not exceed 3 miles (includes taper, buffer, and work zone) in any given direction and must not close two consecutive interchanges.



NOTES:

1. *X = Work Zone Sign Spacing*
2. *When called for in the Plans, use this detail in accordance with the Plans and Standard Plans. Place the speed reduction signs (W3-5 and R2-1) in advance of the "Road Work Ahead" sign (W20-1F) as shown.*
3. *Do not use this detail in conjunction with the Motorist Awareness System.*
4. *For speed reductions greater than 10 MPH, reduce the speed in 10 MPH increments of 'X' distance. Do not reduce the speed below the minimum statutory speed for the class of facility.*
5. *Place additional "Speed Limit" signs (R2-1) at intervals of no more than one mile for rural conditions and 1,000 feet for urban conditions.*
6. *For undivided roadways, omit the signs shown in the median.*
7. *Remove temporary regulatory speed signs as soon as the conditions requiring the reduced speed no longer exist. Once the work zone regulatory speeds are removed, the regulatory speed existing prior to construction will automatically go back into effect.*

SPEED REDUCTION SIGNING

OVERWEIGHT/OVERSIZE VEHICLES:

Restrictions to Lane Widths, Heights or Load Capacity can greatly impact the movement of over dimensioned loads. The Contractor shall notify the Engineer who in turn shall notify the State Permits Office, phone no. (850) 410-5777, at least seven calendar days in advance of implementing a maintenance of traffic plan which will impact the flow of overweight/oversized vehicles. Information provided shall include location, type of restriction (height, width or weight) and restriction time frames. When the roadway is restored to normal service the State Permits Office shall be notified immediately.

LANE WIDTHS:

Lane widths of through roadways should be maintained through work zone travel ways wherever practical. Provide minimum widths for work zone travel lanes as follows: 11' for Interstate with at least one 12' lane provided in each direction, unless formally excepted by the Federal Highway Administration; 11' for all other limited access roadways; and 10' for all other facilities.

HIGH-VISIBILITY SAFETY APPAREL:

All high-visibility safety apparel shall meet the requirements of the International Safety Equipment Association (ISEA) and the American National Standards Institute (ANSI) for "High-Visibility Safety Apparel", and labeled as ANSI/ISEA 107-2004 or newer. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined by the standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. Class 3 apparel may be substituted for Class 2 apparel. Replace apparel that is not visible at 1,000 feet.

WORKERS: All workers within the right-of-way shall wear ANSI/ISEA Class 2 apparel. Workers operating machinery or equipment in which loose clothing could become entangled during operation shall wear fitted high-visibility safety apparel. Workers inside the bucket of a bucket truck are not required to wear high-visibility safety apparel.

UTILITIES: When other industry apparel safety standards require utility workers to wear apparel that is inconsistent with FDOT requirements such as NFPA, OSHA, ANSI, etc., the other standards for apparel may prevail.

FLAGGERS: For daytime activities, Flaggers shall wear ANSI/ISEA Class 2 apparel. For nighttime activities, Flaggers shall wear ANSI/ISEA Class 3 apparel.

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CR229 WIDENING AND RESURFACING PROJECT

FDOT STANDARD MOT DETAILS

DRAWING NO. **952**

FLAGGER CONTROL:

Regulatory Speed (In Work Zones)

Where flaggers are used, a FLAGGER symbol or legend sign must replace the WORKERS symbol or legend sign.

The flagger must be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed or to stop as required before entering the work site. Flaggers shall be positioned to maintain maximum color contrast between the Flagger's high-visibility safety apparel and equipment and the work area background.

Hand-Signaling Devices

STOP/SLOW paddles are the primary hand-signaling device. The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. If the STOP/SLOW paddle is placed on a rigid staff, the minimum length of the staff, measured from the bottom of the paddle to the end of the staff that rests on the ground, must not be less than 6 ft. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 6 inches high and should be fabricated from light semirigid material. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When used at night-time, the STOP/SLOW paddle shall be retroreflectorized.

Flag use is limited to immediate emergencies, intersections, and when working on the centerline or shared left turn lanes where two (2) flaggers are required and there is opposing traffic in the adjacent lanes. Flags, when used, shall be a minimum of 24 inches square, made of a good grade of red material, and securely fastened to a staff that is approximately 36 inches in length. When used at nighttime, flags shall be retroreflectorized red.

Flashlight, lantern or other lighted signal that will display a red warning light shall be used at night.

Flagger Stations

Flagger stations shall be located far enough in advance of the work area so that approaching road users will have sufficient distance to stop before entering the work area. When used at nighttime, the flagger station shall be illuminated.

SURVEY WORK ZONES:

The SURVEY CREW AHEAD symbol or legend sign shall be the principal Advance Warning Sign used for Traffic Control Through Survey Work Zones and may replace the ROAD WORK AHEAD sign when lane closures occur, at the discretion of the Party Chief.

When Traffic Control Through Work Zones is being used for survey purposes only, the END ROAD WORK sign as called for on certain 102 Series of Indexes should be omitted.

Survey Between Active Traffic Lanes or Shared Left Turn Lanes

The following provisions apply to Main Roadway Traffic Control Work Zones. These provisions must be adjusted by the Party Chief to fit roadway and traffic conditions when the Survey Work Zone includes intersections.

(A) A STAY IN YOUR LANE (MOT-1-06) sign shall be added to the Advance Warning Sign sequence as the second most immediate sign from the work area.

(B) Elevation Surveys-Cones may be used at the discretion of the Party Chief to protect prism holder and flagger(s). Cones, if used, may be placed at up to 50' intervals along the break line throughout the work zone.

SURVEY WORK ZONES: (Cont.)

(C) Horizontal Control-With traffic flow in the same direction, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' towards the flow of traffic.

(D) Horizontal Control-With traffic flow in opposite directions, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' in both directions towards the flow of traffic.

SIGNS:

SIGN MATERIALS

Mesh signs and non-retroreflectice vinyl signs may only be used for daylight operations. Non-retroreflectice vinyl signs must meet the requirements of Specifications Section 994.

Retroreflective vinyl signs meeting the requirements of Specification Section 994 may be used for daylight or night operations not to exceed 1 day except as noted in the Indexes.

Rigid or Lightweight sign panels may be used in accordance with the vendor APL drawing for the sign stand to which they are attached.

INTERSECTING ROAD SIGNING

Signing for the control of traffic entering and leaving work zones by way of intersecting crossroads shall be adequate to make drivers aware of work zone conditions. When Work operations exceed 60 minutes, place the ROAD WORK AHEAD sign on the side street entering the work zone.

ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING

Adjoining work zones may not have sufficient spacing for standard placement of signs and other traffic control devices in their advance warning areas or in some cases other areas within their traffic control zones. Where such restraints or conflicts occur or are likely to occur, one of the following methods will be employed to avoid conflicts and prevent conditions that could lead to misunderstanding on the part of the traveling public as to the intended travel way by the traffic control procedure applied:

(A) For scheduled projects the engineer in responsible charge of project design will resolve anticipated work zone conflicts during the development of the project traffic control plan. This may entail revision of plans on preceding projects and coordination of plans on concurrent projects.

(B) Unanticipated conflicts arising between adjoining in progress highway construction projects will be resolved by the Resident Engineer for projects under his residency, and, by the District Construction Engineer for in progress projects under adjoining residencies.

(C) The District Maintenance Engineer will resolve anticipated and occurring conflicts within scheduled maintenance operations.

(D) The Unit Maintenance Engineer will resolve conflicts that occur within routine maintenance works; between routine maintenance work, unscheduled work and/or permitted work; and, between unit controlled maintenance works and highway construction projects.

SIGNS: (Cont.)

SIGN COVERING AND INTERMITTENT WORK STOPPAGE SIGNING

Existing or temporary traffic control signs that are no longer applicable or are inconsistent with intended travel paths shall be removed or fully covered.

Sign blanks or other available coverings must completely cover the existing sign. Rigid sign coverings shall be the same size as the sign it is covering, and bolted in a manner to prevent movement.

Sign covers are incidental to work operations and are not paid for separately.

SIGNING FOR DETOURS, LANE SHIFTS AND DIVERSIONS

Detours should be signed clearly over their entire length so that motorists can easily determine how to return to the original roadway. The reverse curve (W1-4) warning sign should be used for the advanced warning for a lane shift. A diversion should be signed as a lane shift.

EXTENDED DISTANCE ADVANCE WARNING SIGN

Advance Warning Signs shall be used at extended distance of one-half mile or more when limited sight distance or the nature of the obstruction may require a motorist to bring their vehicle to a stop. Extended distance Advanced Warning Signs may be required on any type roadway, but particularly be considered on multilane divided highways where vehicle speed is generally in the higher range (45 MPH or more).

UTILITY WORK AHEAD SIGN

The UTILITY WORK AHEAD (W21-7) sign may be used as an alternate to the ROAD WORK AHEAD or the ROAD WORK XX FT (W20-1) sign for utility operations on or adjacent to a highway.

LENGTH OF ROAD WORK SIGN

The length of road work sign (G20-1) bearing the legend ROAD WORK NEXT_____ MILES is required for all projects of more than 2 miles in length. The number of miles entered should be rounded up to the nearest mile. The sign shall be located at begin construction points.

GROOVED PAVEMENT AHEAD SIGN

The GROOVED PAVEMENT AHEAD sign is required 500 feet in advance of a milled or grooved surface open to traffic. The W8-15P placard shall be used in conjunction with the GROOVED PAVEMENT AHEAD sign.

END ROAD WORK SIGN

The END ROAD WORK sign (G20-2) should be installed on all projects, but may be omitted where the work operation is less than 1 day. The sign should be placed approximately 500 feet beyond the end of a construction or maintenance project unless other distance is called for in the plans. When other Construction or Maintenance Operations occur within 1 mile this sign should be omitted and signing coordinated in accordance with Index 102-600, ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING.

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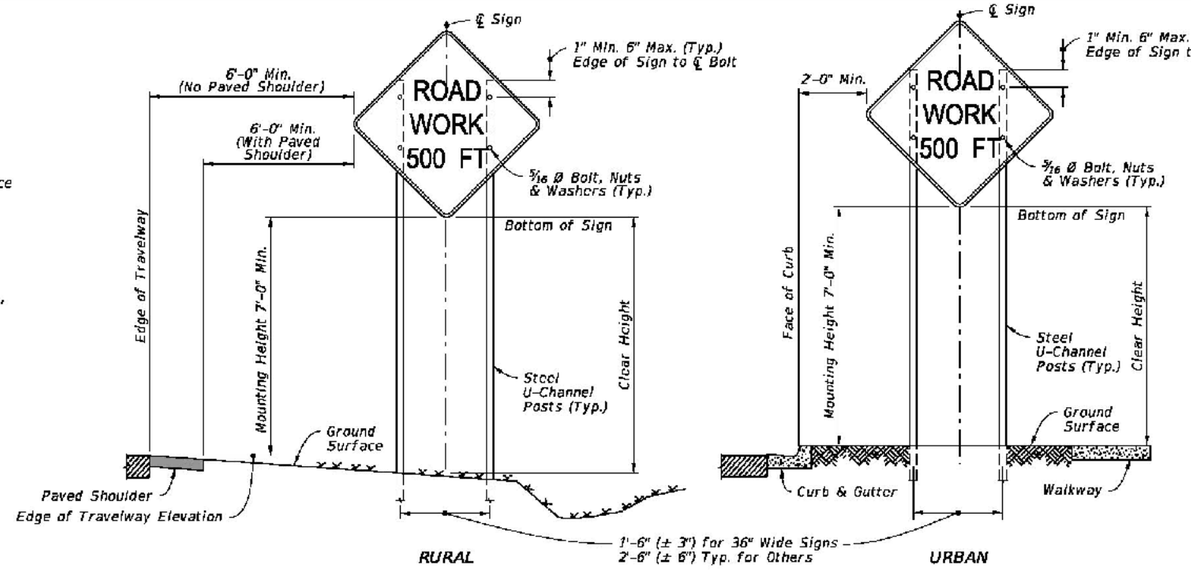
CR229 WIDENING AND RESURFACING PROJECT

FDOT STANDARD MOT DETAILS

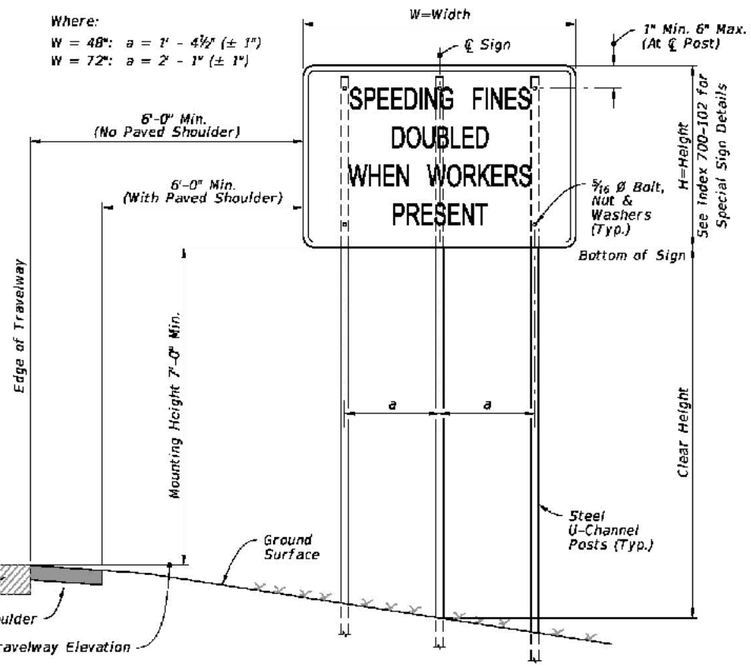
DRAWING NO. **953**

NOTES:

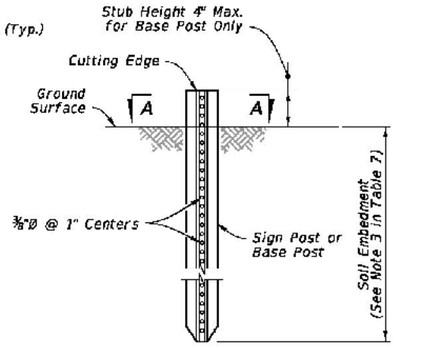
1. All signs shall be post mounted when work operations exceed one day except for:
   a. Road closure signs mounted in accordance with the vendor drawing for the Type III Barricade shown on the APL.
   b. Pedestrian and bicycle advanced warning or pedestrian regulatory signs mounted on sign supports in accordance with the vendor drawing shown on the APL.
   c. Median barrier mounted signs per Index 700-013.
   d. Bridge mounted signs per Index 700-012.
2. Unless shielded with barrier or outside of the Clear Zone, signs mounted on temporary supports or barricades, and barricade/sign combination must be crashworthy in accordance with NCHRP 350 requirements and included on the Approved Products List (APL).
3. Use only approved systems listed on the Department's Approved Products List (APL).
4. Manufacturers seeking approval of U-Channel and steel square tube sign support assemblies for inclusion on the Approved Products List (APL) must submit a APL application, design calculations (for square tube only), and detailed drawings showing the product meets all the requirements of this Index.
5. Provide 3 lb/ft Steel U-Channel Posts with a minimum section modulus of 0.43 in^3 for 60 ksi steel, a minimum section modulus of 0.37 in^3 for 70 ksi steel, or a minimum section modulus of 0.34 in^3 for 80 ksi steel.
6. Provide 4 lb/ft Steel U-Channel Posts with a minimum section modulus of 0.56 in^3 for 60 ksi steel, or a minimum section modulus of 0.47 in^3 for 70 ksi or 80 ksi steel.
7. U-channel posts shall conform with ASTM A 499, Grade 60, or ASTM A 576, Grade 1080 (with a minimum yield strength of 60 ksi). Square tube posts shall conform with ASTM A 653, Grade 50, or ASTM A 1011, Grade 50.
8. Sign attachment bolts, washers, nuts, and spacers shall conform with ASTM A307 or A 36.
9. Install 4 lb/ft Steel U-Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the APL.
10. The contractor may install 3 lb/ft Steel U-Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the APL.
11. Install all posts plumb.
12. The contractor may set posts in preformed holes to the specified depth with suitable backfill tamped securely on all sides, or drive 3 lb/ft sign posts and any size base post in accordance with the manufacturer's detail shown on the APL.



2 POST SIGN SUPPORT MOUNTING DETAILS
(SINGLE POST SIMILAR)

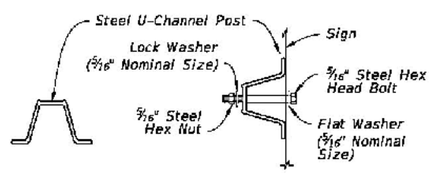


3 POST SIGN SUPPORT MOUNTING DETAILS



See APL for post, splice and connection details.
No bolts installed closer than 1" to cutting edge.

FOUNDATION DETAIL



(SCHEMATIC) SECTION A-A

(WITHOUT Z-BRACKET)

SIGN ATTACHMENT DETAIL

TABLE 7
POST AND FOUNDATION TABLE FOR WORK ZONE SIGNS

SIGN SHAPE	SIGN SIZE (inches)	NUMBER OF STEEL U CHANNEL POSTS
Octagon	30x30	1
Triangle	36x36x36	1
	48x48x48	1
	60x60x60	2
Rectangle (W x H)	24x18	1
	24x30	1
	30x24	1
	36x18	1
	36x24	1
	48x18	1
	48x24	1
	36x48	2
	48x30	2
	48x36	2
	54x36	2
	48x60	3
	72x48	3
Square	30x30	1
	36x36	2
	48x48	2
Diamond	48x48	2
Circle	36Ø	2

Notes For Table:

1. Use 3 lb/ft posts for Clear Height up to 10' and 4 lb/ft posts for Clear Height up to 12'.
2. Minimum foundation depth is 4.0' for 3 lb/ft posts and 4.5' for 4 lb/ft posts.
3. For both 3 lb/ft and 4 lb/ft base or sign posts installed in rock, a minimum cumulative depth of 2' of rock layer is required.
4. The soil plate as shown on the APL vendor drawing is not required for base posts or sign posts installed in existing rock (as defined in Note 3), asphalt roadway, shoulder pavement or soil under sidewalk.
5. For diamond warning signs with supplement plaque (up to 5 ft^2 in area), use 4 lb/ft posts for up to 10 ft Clear Height (measure to the bottom of diamond warning sign).

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WORK ZONE SIGN SUPPORTS

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GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

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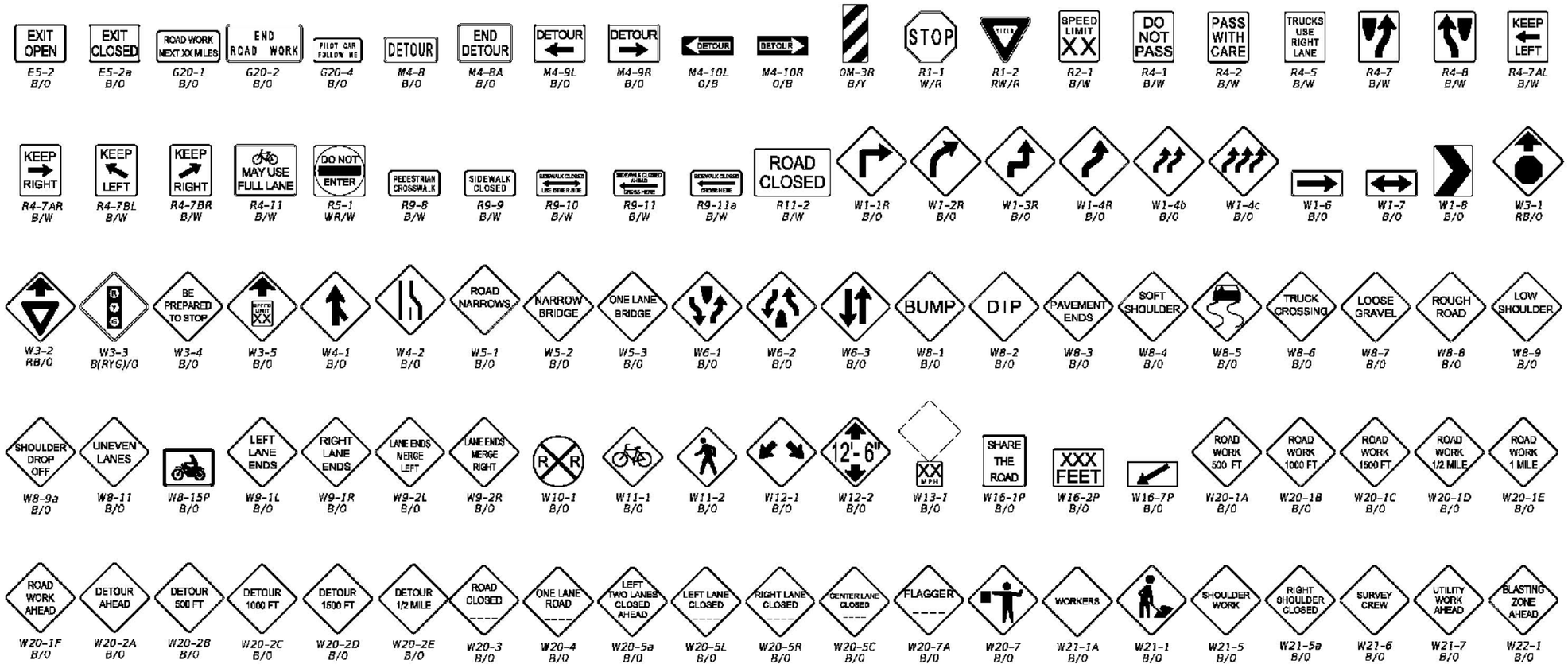
DRAWING NO. **954**



NOTES:

1. The size of diamond shaped Temporary Traffic Control (TTC) warning signs shall be a minimum of 48" X 48".
2. Fluorescent orange shall be used for all orange colored work zone signs.
3. The sign shields, symbols and messages contained on this sheet are provided for ready reference to those signs used in the development of the 102 Series of Indexes and are commonly used in the development of traffic control plans. For additional signs and sign detail information refer to the STANDARD HIGHWAY SIGNS MANUAL as specified in the MUTCD. Special signs for traffic control plans will be as approved by the State Traffic Plans Engineer.

   The sign codes shown on this sheet are for the purpose of identifying cell names found in the Traffic Control Cell Library (TCZ.Cel).

   The STANDARD HIGHWAY SIGNS MANUAL should be referenced for the official sign codes for use in the development of traffic control plans.

   See Index 700-102 for MOT sign details.

COLOR CODES:

Legend and/or Symbol Background

R-Red (Reflectorized)
Y-Yellow (Reflectorized)
G-Green (Reflectorized)
O-Orange (Reflectorized)
B-Black (Non-Reflectorized)
W-White (Reflectorized)

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COMMONLY USED WARNING AND REGULATORY SIGNS IN WORK ZONES

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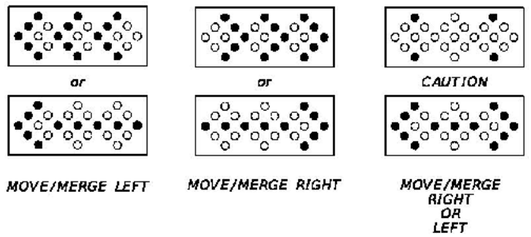


MODES

NOTES:

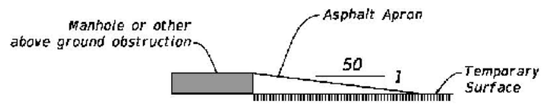
An arrow board in the arrow or chevron mode shall be used only for stationary or moving lane closures on multilane roadways.

For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode.

A single arrow board shall not be used to merge traffic laterally more than one lane. When arrow boards are used to close multiple lanes, a single board shall be used at the merging taper for each closed lane.

When Advance Warning Arrow Boards are used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.

ADVANCE WARNING ARROW BOARDS



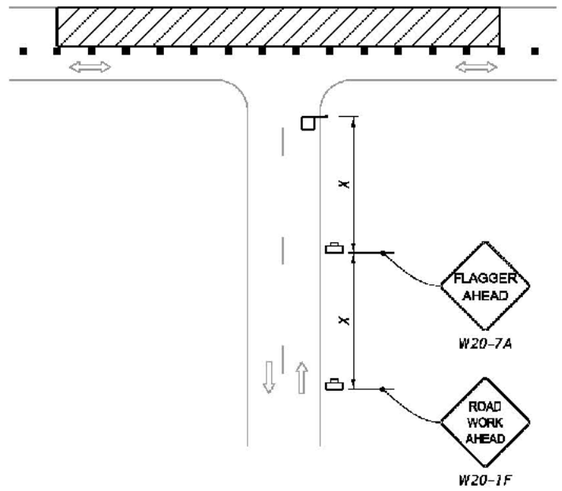
NOTES:

Manholes extending 1" or more above the travel lane and crosswalks having an uneven surface greater than ¼" shall have a temporary asphalt apron constructed as shown above.

All transverse joints that have a difference in elevation of 1" or more shall have a temporary asphalt apron constructed as shown above.

The apron is to be removed prior to constructing the next lift of asphalt. The cost of the temporary asphalt shall be included in the contract unit price for Maintenance of Traffic, LS.

MANHOLES/CROSSWALKS/JOINTS



NOTE:

Optionally, use "Flagger Ahead" sign with text (W20-7A) instead of "Flagger Ahead" sign with symbol (W20-7).

SIDE ROAD INTERSECTING THE WORK ZONE

SIGNALS:

Existing traffic signal operations that require modification in order to carry out work zone traffic control shall be included in the Plans and be approved by the District Traffic Operations Engineer.

Refer to Specification 102-9 for additional information.

CHANNELIZING DEVICES:

Channelizing devices for work zone traffic control shall be as prescribed in Part VI of the MUTCD, subject to supplemental revisions provided in the contract documents and the 102 Series of Indexes. Lighting Devices must not be used to supplement channelization. Omit tapers and channelizing devices for paved shoulders less than 4' in width.

CHANNELIZING DEVICE CONSISTENCY:

Barricades, vertical panels, cones, tubular markers and drums shall not be intermixed within either the lateral transition or within the tangent alignment.

TRUCK/TRAILER-MOUNTED ATTENUATORS:

Truck/Trailer-mounted attenuators (TMA) can be used for moving operations and short-term stationary operations. For moving operations, see Index 102-607. For short-term, stationary operations, see Part VI of the MUTCD.

10/17/2023 8:22:18 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/21			FY 2024-25 STANDARD PLANS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	102-600	7 of 11

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CR229 WIDENING AND RESURFACING PROJECT

FDOT STANDARD MOT DETAILS

DRAWING NO. 956

DROP-OFF CONDITION NOTES

1. These conditions and treatments can be applied only in work areas that fall within a properly signed work zone.

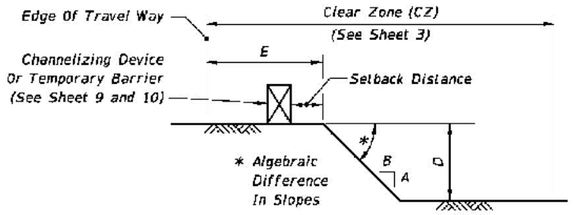
2. When drop-offs occur within the clear zone due to construction or maintenance activities, protection devices are required (See Table 8). A drop-off is defined as a drop in elevation, parallel to the adjacent travel lanes, greater than 3" with slope (A:B) steeper than 1:4. In superelevated sections, the algebraic difference in slopes should not exceed 0.25 (See Drop-off Condition Detail).

3. Drop-offs may be mitigated by placement of slopes with optional base material per Specifications Section 285. Slopes shallower than 1:4 may be required to avoid algebraic difference in slopes greater than 0.25. Include the cost for the placement and removal of the material in Maintenance of Traffic, LS. Use of this treatment in lieu of a temporary barrier is not eligible for CSIP consideration. Conduct daily inspections for deficiencies related to erosion, excessive slopes, rutting or other adverse conditions. Repair any deficiencies immediately.

4. For Setback Distance, refer to the Index or Approved Products List (APL) drawing of the selected barrier.

5. For Conditions 1 and 3 provided in Table 8, any drop-off condition that is created and restored within the same work period will not be subject to use of temporary barriers; however, channelizing devices will be required.

6. When permanent curb heights are ≥ 6", no channelizing device will be required. For curb heights < 6", see Table 8.



DROP-OFF CONDITION DETAIL

Table 8 Drop-off Protection Requirements			
Condition	E (ft)	D (in.)	Device Required
1	0–12	> 3	Temporary Barrier
2	> 12–CZ	> 3 to ≤ 5	Channelizing Device
3	0–CZ	> 5	Temporary Barrier
4	Removal of Bridge or Retaining Wall Barrier		Temporary Barrier
5	Removal of portions of Bridge Deck		Temporary Barrier

TRAVEL LANE TREATMENT FOR MILLING OR RESURFACING NOTES

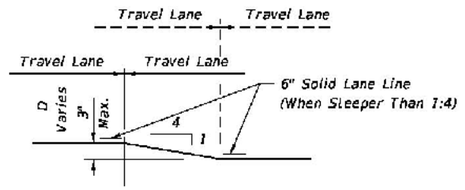
1. This treatment applies to resurfacing or milling operations between adjacent travel lanes.

2. Whenever there is a difference in elevation between adjacent travel lanes, the W8-11 sign with "UNEVEN LANES" is required at intervals of ½ mile maximum.

3. If D is 1½" or less, no treatment is required.

4. Treatment allowed only when D is 3" or less.

5. If the slope is steeper than 1:4 (not to be steeper than 1:1), the R4-1 and MOT-1-06 signs shall be used as a supplement to the W8-11; this condition should never exceed 3 miles in length.



TRAVEL LANE TREATMENT FOR MILLING OR RESURFACING DETAIL

PEDESTRIAN WAY DROP-OFF CONDITION NOTES

1. A pedestrian way drop-off is defined as:

   a. a drop in elevation greater than 10" that is closer than 2' from the edge of the pedestrian way

   b. a slope steeper than 1:2 that begins closer than 2' from the edge of the pedestrian way when the total drop-off is greater than 60"

2. Protect any drop-off adjacent to a pedestrian way with pedestrian longitudinal channelizing devices, temporary barrier wall, or approved handrail.

DROP-OFFS IN WORK ZONES

10/17/2023 8:22:25 AM

LAST REVISION	REVISION	DESCRIPTION:	FY 2024-25 STANDARD PLANS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX	SHEET
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REVISIONS

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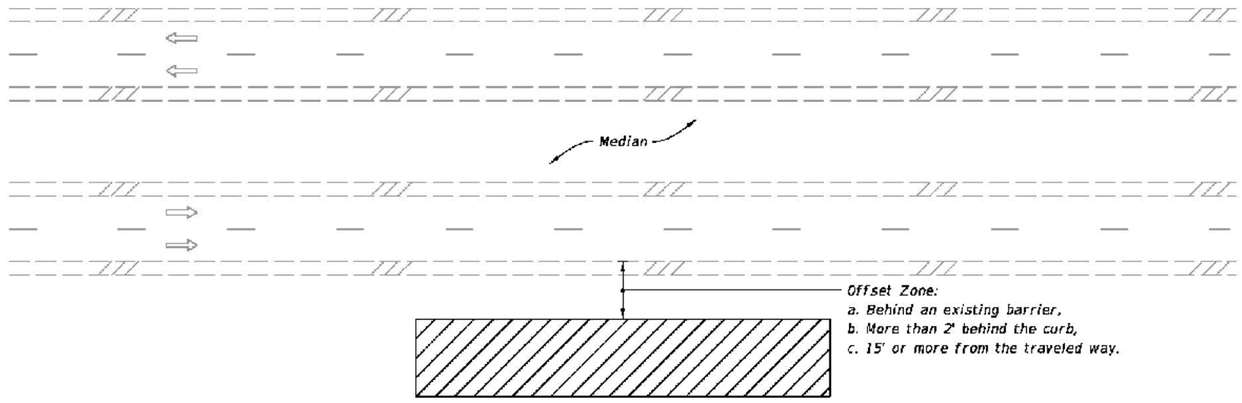
FDOT STANDARD MOT DETAILS

DRAWING NO. **957**



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

NOTES:

1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
2. Use Index 102-602 when the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the Offset Zone in any one hour period.
3. Use Index 102-660 when Work Area encroaches a Sidewalk.

SYMBOLS:

- Work Area
- Lane Identification and Direction of Traffic

10/17/2023 8:22:52 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/20			FDOT FY 2024-25 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	102-601	1 of 1

REVISIONS

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FDOT STANDARD MOT DETAILS

DRAWING NO. **958**

NOTE:

1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.

2. L = Taper Length
   X = Work Zone Sign Spacing
   B = Buffer Length
   See Index 102-600 for "L", "X", "B", and channelizing device spacing values.

3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.

4. When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.

5. For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.

6. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.

7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.

8. Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.

9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

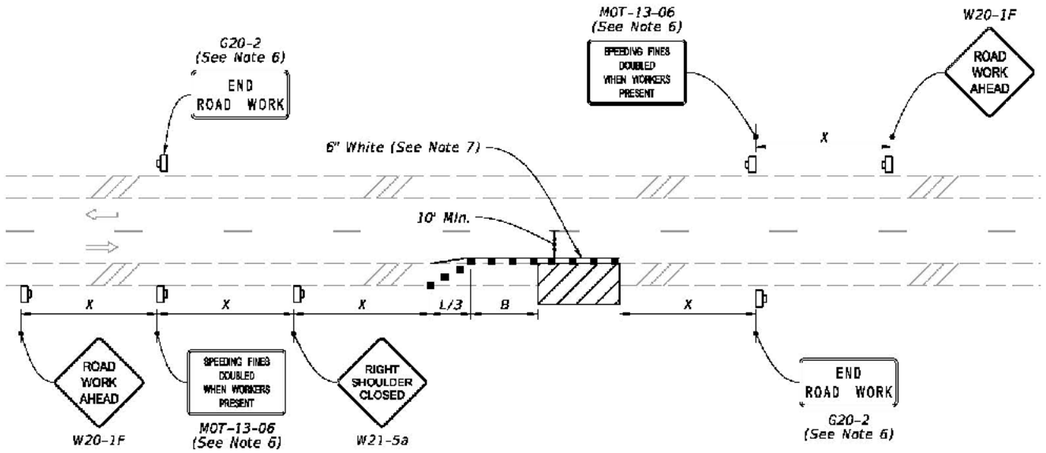
SYMBOLS:

Work Area

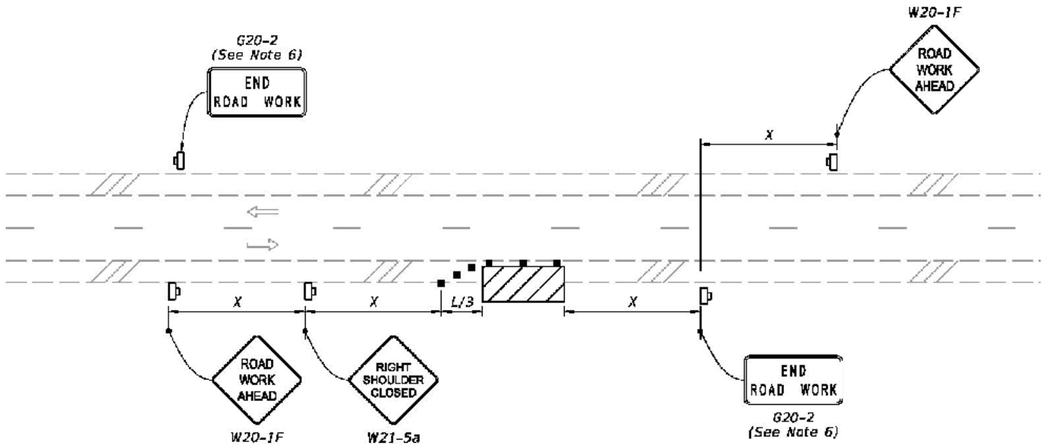
Channelizing Device (See Index 102-600)

Work Zone Sign

Lane Identification and Direction of Traffic



TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY
WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

10/17/2023 8:22:59 AM

LAST REVISION	REVISION	DESCRIPTION:				
11/01/21			FY 2024-25 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX 102-602	SHEET 1 of 2

REVISIONS			
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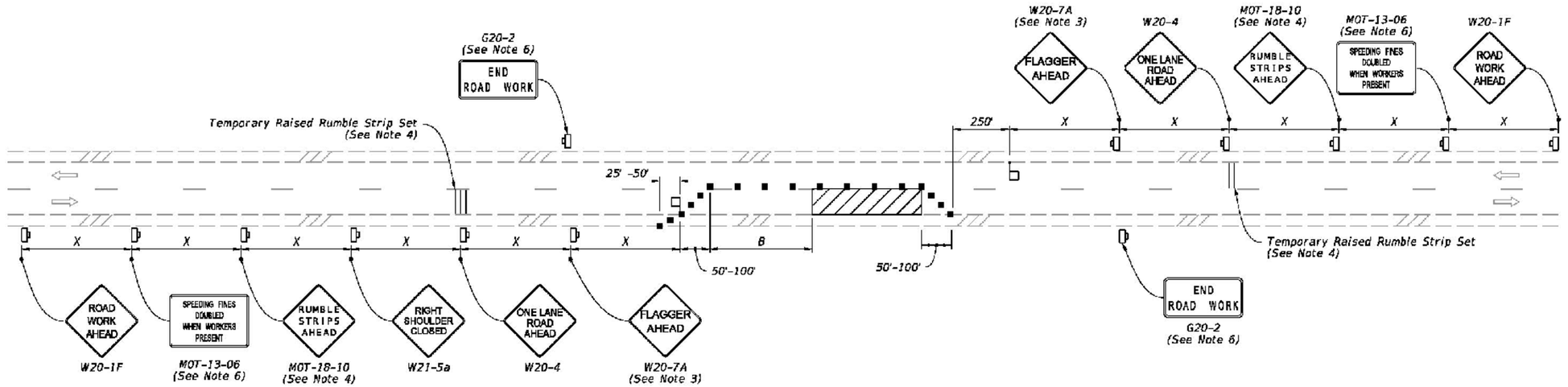
FDOT STANDARD MOT DETAILS

DRAWING NO. **959**



NOTES:

1. This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.

2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Spacing
   See Index 102-600 for "L", "B", "X" and channelizing device spacing values.

3. Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).

4. Use temporary raised rumble strips when the existing posted speed is 55 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (MOT-18-10) and associated work zone sign spacing.

5. Additional one-way control may be provided by the following means:
   a. Flag-carrying vehicle
   b. Official vehicle
   c. Pilot vehicles
   d. Traffic signals

   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.

6. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.

7. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.

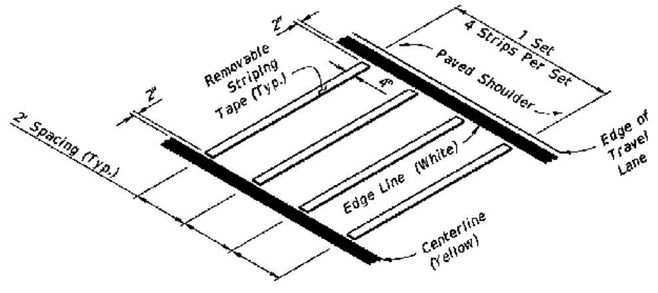
8. Railroad Crossings:

   a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.

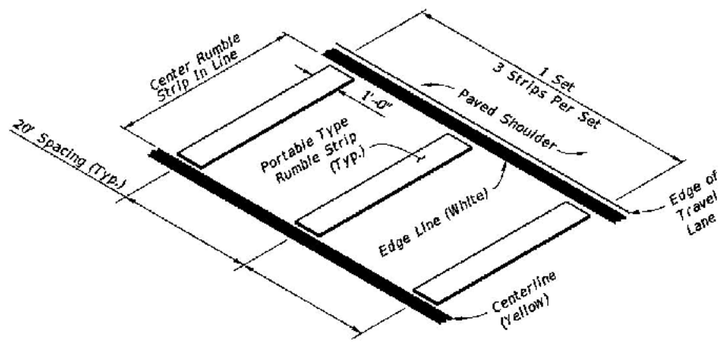
   b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification and Direction of Traffic



OPTION - 1
REMOVABLE STRIPING TYPE



OPTION - 2
PORTABLE TYPE

RUMBLE STRIP SETS

10/17/2023 8:23:12 AM

LAST REVISION	REVISION	DESCRIPTION:				
11/01/21			FDOT FY 2024-25 STANDARD PLANS	TWO-LANE, TWO-WAY WORK WITHIN THE TRAVEL WAY	INDEX 102-603	SHEET 1 of 2

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