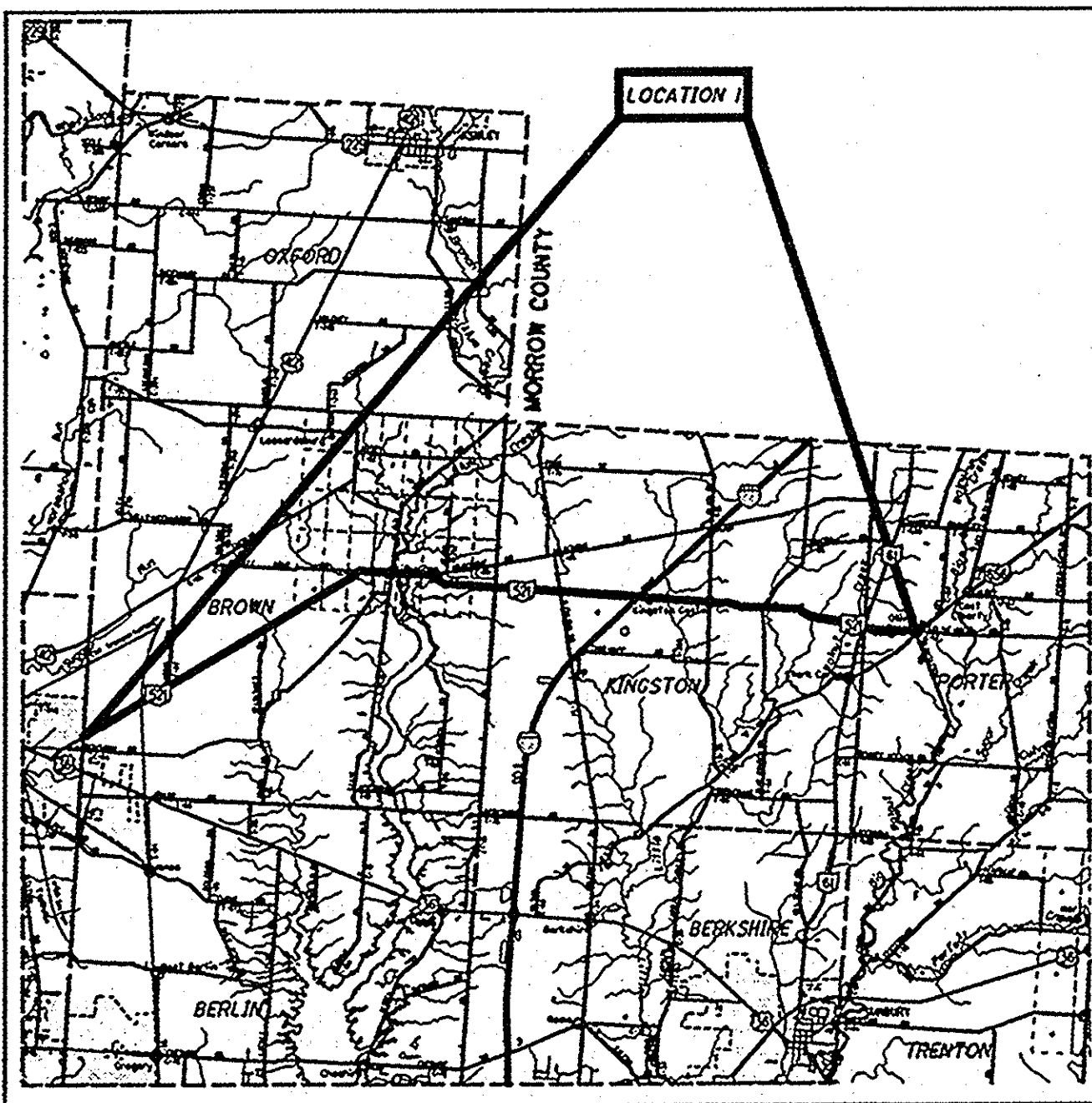


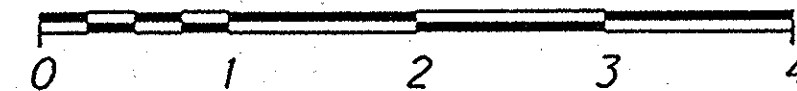
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DEL - 521 - 2.29
BROWN TOWNSHIP
KINGSTON TOWNSHIP
PORTER TOWNSHIP
DELAWARE COUNTY



LOCATION MAP

LATITUDE: 40°19'30" LONGITUDE: 82°58'35"

SCALE IN MILES



PORTION TO BE IMPROVED	
INTERSTATE HIGHWAY	
STATE & FEDERAL ROUTES	
COUNTY & TOWNSHIP ROADS	
OTHER ROADS	

DESIGN DESIGNATION **SR-521**

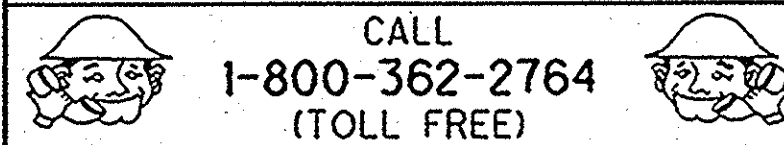
CURRENT ADT (2012)	2880
DESIGN YEAR ADT (2024)	3800
DESIGN HOURLY VOLUME (2024)	158
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	280
DESIGN SPEED	55
LEGAL SPEED	55
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL MAJOR COLLECTOR	
NHS PROJECT	N/A

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG



OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:

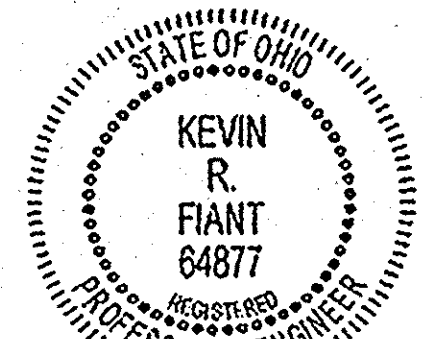
ODOT DISTRICT SIX PRODUCTION
400 EAST WILLIAM STREET
DELAWARE, OHIO 43015

INDEX OF SHEETS:

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	10/19/07	TC-41.20	1/19/01	CB-3.3	7/15/05	SS832	05/05/09
BP-7.1	10/15/10	TC-41.20	1/19/01	CB-3.4	7/15/05	800-2010	04/15/11
MT-97.10	10/15/10	TC-65.10	1/21/05	MH-1.2	1/20/06		
MT-97.12	10/15/10	TC-65.11	1/21/05	DM-1.1	1/21/11		
MT-99.20	1/16/09	TC-71.10	1/21/11	DM-1.4	4/21/06		
MT-101.60	4/7/09	TC-73.10	1/19/01				
MT-101.90	1/16/09	TC-73.10	1/19/01				
MT-105.10	1/16/09	TC-82.10	7/16/10				
						SPECIAL PROVISIONS	

ENGINEERS SEAL:



SIGNED: *Kevin R. Fiant*
DATE: 4-20-11

PROJECT DESCRIPTION

RESURFACING 11.33 MILES OF SR-521 IN DELAWARE COUNTY, STORM SEWER INSTALLATION AT CSX BRIDGE OVER SR-521, AND VARIOUS BRIDGE WORK.

PROJECT EARTH DISTURBED AREA:	0.17 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	0.30 ACRES

NOI EDA AREAS FOR STORM SEWER WORK ONLY.
RESURFACING WORK IS MAINTENANCE ACTIVITY.

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY FOR SEWER WORK AND WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY FOR RESURFACING WORK AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

PLANS CERTIFIED BY:
NAME: *Carthel Ransaw III* DATE: 7.21.11
DISTRICT 6
OHIO DEPT. OF TRANSPORTATION

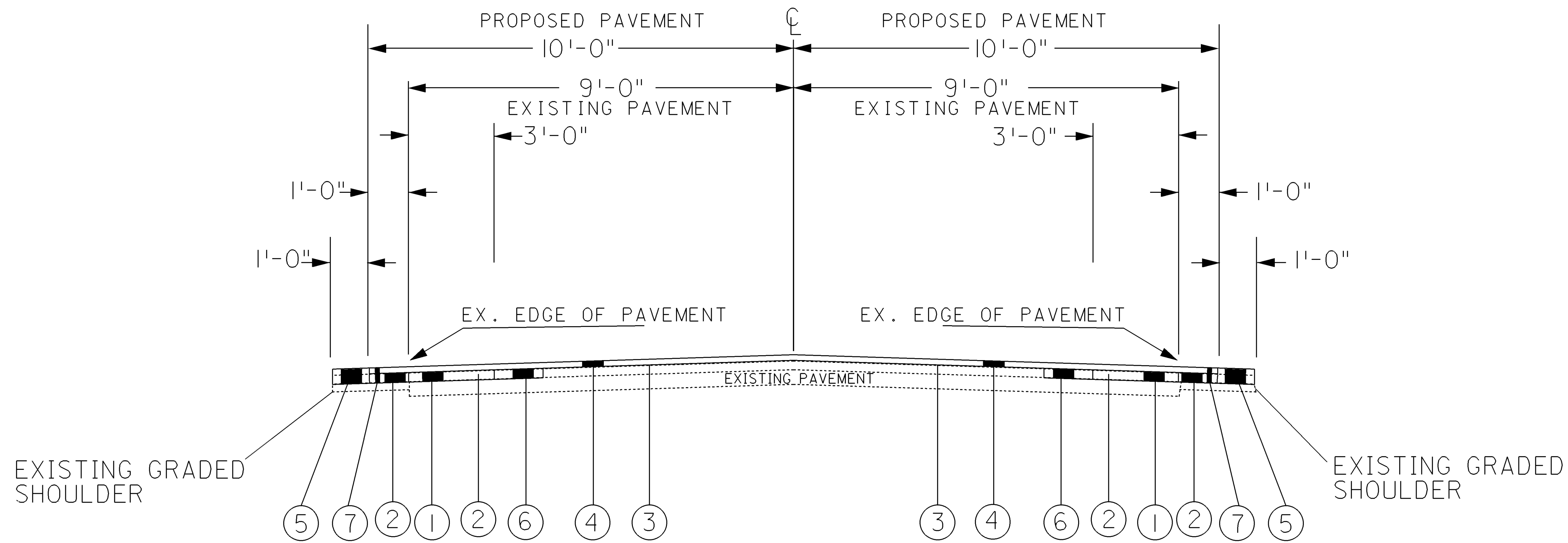
APPROVED DATE: 4-20-11
DISTRICT DEPUTY DIRECTOR
[Signature]

APPROVED DATE: 5-6-11
DIRECTOR, DEPARTMENT OF TRANSPORTATION
[Signature]

FEDERAL PROJECT NO. **E110 (239)**
PID NO. **79364**
CONSTRUCTION PROJECT NO. **CSX TRANSPORTATION INC.**
RAILROAD INVOLVEMENT **DEL - 521 - 2.29**
PAGE 1 OF 26

Contract Proposal available
@www.contracts.dot.
state.oh.us/home

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TYPICAL 2

TYPICAL SECTIONS

SLM 2.29	-	SLM 2.34
SLM 2.37	-	SLM 3.10
SLM 3.16	-	SLM 6.78
SLM 7.05	-	SLM 9.93
SLM 10.00	-	SLM 10.32
SLM 10.33	-	SLM 12.75
SLM 12.76	-	SLM 13.62

LEGEND

PROPOSED PAVEMENT:

- ① ITEM 254 4" PAVEMENT PLANING (3' WIDE)
- ② ITEM 301 4" ASPHALT CONCRETE BASE, PG64-22 (4' WIDE)
- ③ ITEM 407 TACK COAT
- ④ ITEM 448 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
- ⑤ ITEM 617 COMPACTED AGGREGATE (AVERAGE 2" DEEP AND 1' WIDE)
- ⑥ ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR
AS DETAILED IN TABLE ON SHEET 3 (VARIOUS WIDTH)
- ⑦ ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING

NOTE: SHOULDER WIDENING WORK TO BE PERFORMED PRIOR TO OVERLAY

SHOULDER TREATMENT		REMARKS	
ITEM	DESCRIPTION	START LOG POINT	END LOG POINT
209	PERPARING SUBGRADE FOR SHOULDER PAVING	2.29	13.62
254	4" PAVEMENT PLANING (3' WIDE)	2.37	12.75
301	4" ASPHALT CONCRETE (4' WIDE)	3.16	10.33
407	TACK COAT (3' WIDE)	7.05	9.93
617	COMPACTED AGGREGATE	10.00	12.75
TYPICAL		2.29	13.62
CARRIED TO GENERAL SUMMARY			
TOTAL		2.176	38298
TOTAL		2872	709

SHOULDER TREATMENT DETAILS AND SUBSUMMARY

DEL-521-2.29

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ALIGNMENT AND PROFILE:

THE WORK PROPOSED BY THIS PROJECT IS FOR THE RESURFACING OF THE EXISTING PAVEMENT AND DRAINAGE WORK. THE ALIGNMENT OF THE EXISTING PAVEMENT WILL NOT BE CHANGED, AND THE PROFILE OF THE PROPOSED SURFACE WILL BE SIMILAR TO THAT OF THE EXISTING PAVEMENT EXCEPT THAT IT MAY BE RAISED AN AMOUNT EQUAL TO THE THICKNESS OF THE RESURFACING COURSE OR COURSES SPECIFIED IN THESE PLANS.

Mr. Clay Huebner
 Consolidated Electric Cooperative, Inc.
 5255 State Route 95
 P. O. Box 111
 Mt. Gilead, OH 43338-0111
 419.947.3055
 chuebner@conelec.com

10.429	EB & WB	10'	34'	38
12.078	EB & WB	10'	34'	38
12.876	EB & WB	100'	18'	200
12.909	EB	3575'	2'	794
12.967	EB & WB	100'	18'	200
12.967	WB	808'	2'	180
13.586	EB & WB	148'	18'	296

TOTAL SQ YDS = 2269

CONTRACTORS EQUIPMENT - OPERATION AND STORAGE:

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. EQUIPMENT SHALL HAVE AT LEAST ONE AMBER FLASHING LIGHT. WHEN PARKED ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE LOCATED EITHER A MINIMUM OF THIRTY FEET FROM THE EDGE OF PAVEMENT OR SIX FEET BEHIND GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT AN APPROVED CONTRACTOR'S STORAGE AREA. EQUIPMENT SHALL NOT BE PARKED OR STORED ON THE RAILROAD ACCESS ROAD.

Mr. Chris Avery
 Frontier Communications
 1300 Columbus Sandusky Road
 Marion, OH 43302
 740.383.0551
 ira.avery@ftr.com

Mr. George McElvain
 Qwest Communications Company, LLC
 1801 California St, Fl 26
 Denver, Colorado 80202
 303.299.0170
 george.mcelvain@qwest.com

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN = 2269 S.Y.

ITEM 301 - ASPHALT CONCRETE BASE, AS PER PLAN:

THIS ITEM IS ONLY FOR USE OVER THE STORM SEWER PLACED IN THE ROADWAY. THE CONDUIT IS TO BE PLACED AS NORMAL. THE TOP 3 INCHES OF THE PAVEMENT, UNDER THE ITEM 251, ARE TO BE ITEM 301 TO CREATE A SOLID PAVEMENT BASE FOR THE 6 INCHES OF ASPHALT TO BE PLACED WITH THE ITEM 251.

WORK LIMITS:

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS. THE CONTRACTOR WILL PERFORM ALL WORK WITHIN THE EXISTING RIGHTS OF WAY.

Mr. Joe Thomas
 Sprint Communications
 11370 Enterprise Park Drive
 Sharonville, OH 45241
 513.612.4204
 joseph.j.thomas@sprint.com

ITEM 407 - TACK COAT:

THE TACK COAT OPERATION SHALL BE AS DETERMINED AT A PRE-CONSTRUCTION CONFERENCE AS PER 407.06 AND APPLICATION RATES SHALL NOT EXCEED 0.075 GALLONS PER SQUARE YARD.

FARM DRAINS:

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

CONTINGENCY QUANTITIES:

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

UNDERGROUND UTILITIES:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ANY UNDERGROUND UTILITIES MARKED.
 OHIO UTILITY PROTECTION SERVICE 1-800-362-2764
 NON-MEMBERS MUST BE CALLED DIRECTLY.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

SURVEYING POSITIONAL PARAMETERS:

USE THE FOLLOWING VERTICAL AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING
 ORTHOMETRIC HEIGHT DATUM: NAVD 88
 GEOID: G09

HORIZONTAL POSITIONING
 REFERENCE FRAME: NADA Cors
 ELLIPSOID: Wgs84
 MAP PROJECTION: Lambert Conformal Conic
 COORDINATE SYSTEM: Ohio North
 COMBINED SCALE FACTOR: 1.0000128525
 COMPUTATION POINT (X,Y,Z) -
 EASTING (X): 1823973.84sft NORTHING (Y): 233194.29sft
 ELEVATION (Z): 945.17sft

FIELD DRIVES:

AN ESTIMATED QUANTITY OF GRAVEL HAS BEEN PROVIDED FOR THIS WORK UNDER ITEM 617 - COMPACTED AGGREGATE ON PLAN SHEET 9 TO BE USED AS DIRECTED BY THE PROJECT ENGINEER TO PROVIDE A REASONABLE TRANSITION BETWEEN THE EXISTING DRIVEWAY AND THE PROPOSED ASPHALT CONCRETE. NO FIELD DRIVES SHALL BE PAVED. ALL GRADING, LABOR, MATERIAL, TOOLS, EQUIPMENT, AND INCIDENTALS NEEDED TO COMPLETE THE DRIVEWAY APPROACHES SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 617 - COMPACTED AGGREGATE.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN:

REPAIRS SHALL CONSIST OF REMOVING 4" OF PAVEMENT AND PLACING 4" OF ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 FOR AN AVERAGE WIDTH OF 4'. WORK SHALL BE PERFORMED PRIOR TO RESURFACING AND IN CONJUNCTION WITH SHOULDER WORK. REPAIR AREAS ARE TO BE INCLUDED INTO GENERAL RESURFACING. THE QUANTITY SHOWN ALLOWS FOR AREAS SHOWN IN THE TABLE BELOW, AND ON PLAN SHEET 18/26 AS WELL AS CONTINGENCY AREAS AS DIRECTED BY THE ENGINEER. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

UTILITIES OWNERSHIP FOR STORM SEWER WORK:

THE UTILITIES AND THEIR PERSPECTIVE OWNERS LISTED BELOW MAY BE LOCATED WITHIN THE PROJECT WORK AREAS.

Mr. Ed Hughes
 AT&T Legacy
 5980-G Wilcox Place
 Dublin, OH 43016
 614.760.8320
 ehughes@hlgengineering.com

BEGIN SLM	DIRECTION	LENGTH OF 4" REPAIRS	WIDTH OF 4" REPAIR	AREA SQ YDS
6.185	WB	50'	3'	17
6.198	EB	42'	1'	5
6.344	WB	1447'	2'	322
6.869	EB & WB	10'	34'	38
8.139	EB	26'	7'	20
9.316	EB	206'	3'	67
9.77	EB	48'	3'	16
10.005	EB & WB	10'	34'	38

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603 8" CONDUIT, TYPE B 10 FT.
 603 8" CONDUIT, TYPE E 10 FT.

GENERAL NOTES

DEL-521-2.29

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ITEM 604 - MONUMENT ASSEMBLY:

THIS ITEM OF WORK SHALL INSTALL CENTERLINE MONUMENTS AT THE FOLLOWING INTERSECTIONS:

- 1. S.R. 521 AND TR 85 SKINNER RD.
- 2. S.R. 521 AND CR 34 NORTH GALENA RD.
- 3. S.R. 521 AND CR 33 CARTER CORNER RD.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED FOR INSTALLATION. PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH. CONTACT 740.833.8250 (SURVEY DEPT.) FOR ANY QUESTIONS. THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

ITEM 604 - MONUMENT ASSEMBLY = 3 EACH

ITEM 617 - WATER:

THIS ITEM SHALL BE USED "AS DIRECTED BY THE ENGINEER".
2,519 CUBIC YARDS OF AGGREGATE / 1,000 = 3 M/GAL.

ITEM 617 - WATER: = 3 M/GAL.

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN:

THIS ITEM SHALL CONSIST OF STATIONING USING 3 FT LATH STAKES OR PAINT MARKINGS. THE STAKES OR PAINT MARKINGS SHALL BE SPACED AT 200 FT INTERVALS AND EXTEND THROUGHOUT THE LENGTH OF THE PROJECT. PLACEMENT OF THE STAKES OR PAINT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED, MISSING STAKES, OR PAINT MARKINGS. PAINT MARKINGS SHALL BE USED IN AREAS WHERE THE PLACEMENT OF STAKES IS NOT POSSIBLE AND APPROVED BY THE PROJECT ENGINEER.

CONSTRUCTION LAYOUT STAKES, AS PER PLAN WILL BE PAID FOR AT THE CONTRACT LUMP SUM BID, WHICH PRICE SHALL BE FULL COMPENSATION FOR ALL SERVICES, MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS, INCLUDING THE REMOVAL, NECESSARY TO COMPLETE THIS ITEM.

ITEM 642 - PAVEMENT MARKING:

THE LOCATIONS, SIZES AND SHAPES OF PROPOSED PAVEMENT MARKINGS WILL BE THE SAME AS EXISTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION, SIZE AND SHAPE OF THE EXISTING PAVEMENT MARKINGS BEFORE THE PAVEMENT PLANING AND RESURFACING OBLITERATES THEM. THE CONTRACTOR SHALL REMOVE PRIOR TO THE PLACEMENT OF ALL PERMANENT PAVEMENT MARKINGS ALL WORK ZONE MARKINGS. ANY PERMANENT PAVEMENT MARKING WHICH IS PLACED OVER WORK ZONE CENTERLINES, LANE LINES, AUXILIARY MARKINGS OR PLACED IN THE WRONG LOCATION SHALL BE REMOVED AND THE PERMANENT MARKING REPAIRED AT THE CONTRACTORS EXPENSE.

SEEDING AND MULCHING:

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	67 CU. YD.
659, SEEDING AND MULCHING	605 SQ. YD.
659, REPAIR SEEDING AND MULCHING	73 SQ. YD.
659, INTER-SEEDING	73 SQ. YD.
659, COMMERCIAL FERTILIZER	0.08 TON
659, LIME	0.13 ACRES
659, WATER	8 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

REVIEW OF DRAINAGE FACILITIES:

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

ITEM SPECIAL - PIPE CLEANOUT:

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:
SPECIAL, PIPE CLEANOUT 20 FT.

ENVIRONMENTAL COMMITMENTS:

NO TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO ANY STREAMS, DRAINAGE COURSES OR BODIES OF WATER. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALT OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING RESURFACING OR OTHER SIMILAR ACTIVITIES SHALL NOT BE DISPOSED OF WITHIN A FLOODPLAIN BELOW THE 100-YEAR FLOOD ELEVATION. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT LIQUIDS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE (E.G. PAINT, SEALER, SOLVENT) FROM ENTERING STREAMS, WETLANDS OR OTHER "WATERS OF THE UNITED STATES" AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

WATERSHED PROTECTION:

THE PROJECT AREA IS WITHIN THE SOURCE WATER PROTECTION AREAS FOR COLUMBUS PUBLIC WATER SYSTEM- HAP CREMEAN WATER SYSTEM, DEL-CO OLENTANGY WATER SYSTEM, DEL-CO ALUM CREEK WATER SYSTEM AND THE CITY OF WESTERVILLE PUBLIC WATER SYSTEM PLANTS. IT IS ESSENTIAL THAT ALL ACTIVITIES ASSOCIATED WITH THIS WORK BE PERFORMED IN A MANNER CONSISTENT WITH BEST WATERSHED MANAGEMENT PRACTICES INCLUDING, BUT NOT LIMITED TO: AREAS OF DISTURBED GROUND SHALL HAVE APPROPRIATE EROSION AND SEDIMENT CONTROLS. IF HAZARDOUS/TOXIC MATERIALS INCLUDING BUT NOT LIMITED TO FUELS, OILS, BITUMEN'S PAINTS, SEALANTS, OR OTHER

CHEMICALS, ARE STORED ON SITE, THEY SHALL BE STORED IN A DOUBLE-CONTAINMENT MANNER. ALL EQUIPMENT REPAIRS, MAINTENANCE, AND MECHANICAL WORK THAT COULD RESULT IN THE RELEASE OF HAZARDOUS/TOXIC MATERIALS SHALL BE PERFORMED IN AN APPROPRIATELY CONTAINED AREA, PREFERABLY OFF SITE OR AN APPROPRIATE OFF-SITE FACILITY. IN THE EVENT THAT ANY HAZARDOUS/TOXIC MATERIALS INCLUDING, BUT NOT LIMITED TO FUELS OILS, BITUMEN'S PAINTS, SEALANTS, OR OTHER CHEMICALS ARE SPILLED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY EMERGENCY SERVICES BY CALLING 911, THE OHIO EPA @ (800) 282-9378 COLUMBUS PUBLIC WATER SYSTEM @ (614)645-8270, DEL-CO WATER @ (740)833-2181 AND THE CITY OF WESTERVILLE PUBLIC WATER @ (614)901-6779. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE DETAILED INFORMATION RELATIVE TO THE TYPE AND QUANTITY OF MATERIAL THAT HAS BEEN SPILLED AS WELL AS THE EXACT LOCATION AND THE EXACT TIME AT WHICH THE SPILL OCCURRED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INFORMING ALL SUBCONTRACTORS AND OTHER AGENTS OF THESE RESPONSIBILITIES, PRECAUTIONS, AND PROHIBITIONS.

EROSION CONTROL:

A QUANTITY OF 3000 EACH OF ITEM 832 HAS BEEN PROVIDED AND IS TO BE USED AT THE STORM SEWER WORK LOCATION AND RESURFACING LOCATIONS AS DIRECTED BY ENGINEER.

UTILITIES OWNERSHIP FOR RESURFACING WORK:

LISTED BELOW ARE THE KNOWN UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

COLUMBIA GAS OF OHIO 1600 DUBLIN ROAD - EW 2 COLUMBUS, OH 43215 614.481.1057	CONSOLIDATED ELE. COOPERATIVE, INC. 5255 STATE ROUTE 95 P. O. BOX 111 MT. GILEAD, OH 43338-0111 419.947.3055
DEL-CO WATER COMPANY 6773 OLENTANGY RIVER ROAD DELAWARE, OH 43015-8872 740.548.7746/740.201.0133	TIME WARNER CABLE 3760 INTERCHANGE DRIVE COLUMBUS, OH 43204 614.255.6349/614.348.2994
EMBARQ 15 EAST GAMBIER MT. VERNON, OH 43050 740.397.3609	VERIZON 550 LEADER STREET MARION, OH 43302 740.383.0551
AEP 850 TECH CENTER DRIVE GAHANNA, OH 43230-6605 614.883.6831	BRIGHT ENERGY 5255 STATE ROUTE 95 P. O. BOX 111 MT. GILEAD, OH 43338-0111 419.947.3055
TIME WARNER CABLE 3760 INTERCHANGE DRIVE COLUMBUS, OH 43204 614.255.6349/614.348.2994	CITY OF DELAWARE DEPARTMENT OF PUBLIC UTILITIES 225 CHERRY STREET DELAWARE OHIO 43015 (740)203-1901
DELAWARE COUNTY REGIONAL SEWER DISTRICT 50 CHANNING STREET DELAWARE, OH 43015 740.833.2240	

GENERAL NOTES

DEL-521-2.29

ITEM 614 - MAINTAINING TRAFFIC:

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION). COPIES ARE AVAILABLE FROM,

THE OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC ENGINEERING,
1980 WEST BROAD STREET
COLUMBUS, OHIO 43223

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY ODOT PERSONNEL. THE CONSTRUCTION INSPECTOR SHALL APPROVE ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR CONDITION AND LOCATION BEFORE THE CONTRACTOR WILL BE ALLOWED TO BEGIN WORK. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, ALL WORK SHALL BE TERMINATED.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTIFICATION OF TRAFFIC RESTRICTIONS:

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE BUT IS NOT LIMITED TO ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHOULD LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, DETOUR ROUTES IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME FRAME TABLE

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP AND ROAD CLOSURES	>= 2 WEEKS	14 BUSINESS DAYS PRIOR TO CLOSURE
	> 12 HOURS AND < 2 WEEKS	7 BUSINESS DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES/RESTRICTIONS	>= 2 WEEKS	7 BUSINESS DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME FRAME TABLE.

NOTIFICATION OF CONSTRUCTION INITIATION:

THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT d06.pio@dot.state.oh.us AND THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT d06.mot@dot.state.oh.us OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

ITEM 614 - WORK ZONE MARKING SIGN:

LOCATION 1: DEL S.R. 521:
THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED:
W8-H13 "NO EDGE LINES" = 24 EACH
R4-1-36 "DO NOT PASS" = 12 EACH
TOTALS:
ITEM 614 - WORK ZONE MARKING SIGN: = 36 EACH

ITEM 614 - WORK ZONE CENTER LINE, CLASS II:

THE FOLLOWING QUANTITY HAS BEEN PROVIDED:
LOCATION 1: DEL S.R. 521:
SLM 2.29 - 3.10 MI. X 1 APPLICATION = 0.81 MI.
SLM 3.16 - 13.62 MI. X 1 APPLICATION = 10.46 MI.
TOTALS:
ITEM 614 - WORK ZONE CENTER LINE, CLASS II: = 11.27 MI.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 3 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 7. A DIS-INCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1,000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

PAVEMENT MARKING

FOR THE PURPOSE OF THIS PROJECT, "MOVING OPERATION" SHALL BE LIMITED TO PAVEMENT MARKING STRIPING.

IT MAY BE NECESSARY TO EXTEND THE ADVANCE WARNING AND BUFFER ZONES BEYOND THE MINIMUM DISTANCES SHOWN ON THE STANDARD DRAWINGS. THIS MAY BE DUE TO HORIZONTAL ALIGNMENT, VERTICAL ALIGNMENT, RAMP LOCATIONS, OR OTHER SIGHT OBSTRUCTIONS. LOCATIONS OF THE TAPER ZONES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER, BUT TAPER LENGTHS MUST MEET THE MINIMUM STANDARDS. TAPERS SHOULD BE PLACED IN TANGENT SECTIONS WHENEVER POSSIBLE. ADDITIONAL YIELD SIGNS MAY BE REQUIRED FOR RAMPS WITHIN 1,000 FEET OF A WORK ZONE. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

RURAL PAVING AREA:

ONE LANE - TWO WAY TRAFFIC SHALL BE MAINTAINED DURING OVERLAY PLACEMENT USING FLAGGERS OR PORTABLE TEMPORARY SIGNALS AT ALL TIMES. THE ONLY TIME THAT THE ROADWAY MAY BE CLOSED IS DURING THE STORM SEWER INSTALLATION AND PAVEMENT OVERLAY UNDER THE CSX RAILROAD.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME SHALL NOT BE

PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE:

USE OF L.E.O.'S BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT GENERALLY BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE PROJECT ENGINEER. LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OHIO MANUAL UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS.

- SET UP AND TEAR DOWN OF ROADWAY CLOSURE.

LAW ENFORCEMENT OFFICERS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO CHASE MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF THE MOTORISTS ACTIONS ARE CONSIDERED WRECKLESS, THEN PURSUIT OF THE MOTORIST MAY BE APPROPRIATE.

THE L.E.O.'S WORK AT THE DIRECTION OF THE CONTRACTOR AND THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEO'S AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEO. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THEIR RESPECTIVE DUTIES, PLACEMENT AND WILL RESOLVE ANY ISSUES BETWEEN THE TWO PARTIES THAT MAY ARISE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE SERVICES WITH,

THE DELAWARE COUNTY SHERIFF AT 1-740-833-2810 OR THE OHIO HIGHWAY PATROL AT 1-614-466-2660.

THE L.E.O. SHOULD REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING THE SHIFT. THE L.E.O. IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF THE SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE L.E.O. SHOULD NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE, WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF THE SHIFT.

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A L.E.O. ARE TO BE INCLUDED IN THE UNIT BID PRICE ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR.

IF THE CONTRACTOR WISH TO UTILIZE THE L.E.O. FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE: = 16 L.E.O. HOURS

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FLOODLIGHTING:

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

PUBLIC OUTREACH AND NOTIFICATION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICE AT (740) 833-8260 TO COORDINATE EFFORTS TO NOTIFY ALL LOCAL COUNTY, STATE AND FEDERAL EMERGENCY SERVICES, SCHOOL DISTRICTS AND ADJACENT RESIDENTS AND BUSINESSES OF THE UPCOMING CLOSURE. ADVANCE NOTIFICATION SHALL OCCUR NO LATER THAN FOURTEEN (14) DAYS PRIOR TO CLOSING THE ROAD. IF, SUBSEQUENT TO THE ADVANCE NOTIFICATION, THE START DATE IS CHANGED, THEN A NEW SEVEN (7) DAY NOTIFICATION WILL BE REQUIRED. THE ROAD CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES SHALL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN):

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

LANES OPEN DURING SPECIAL EVENTS

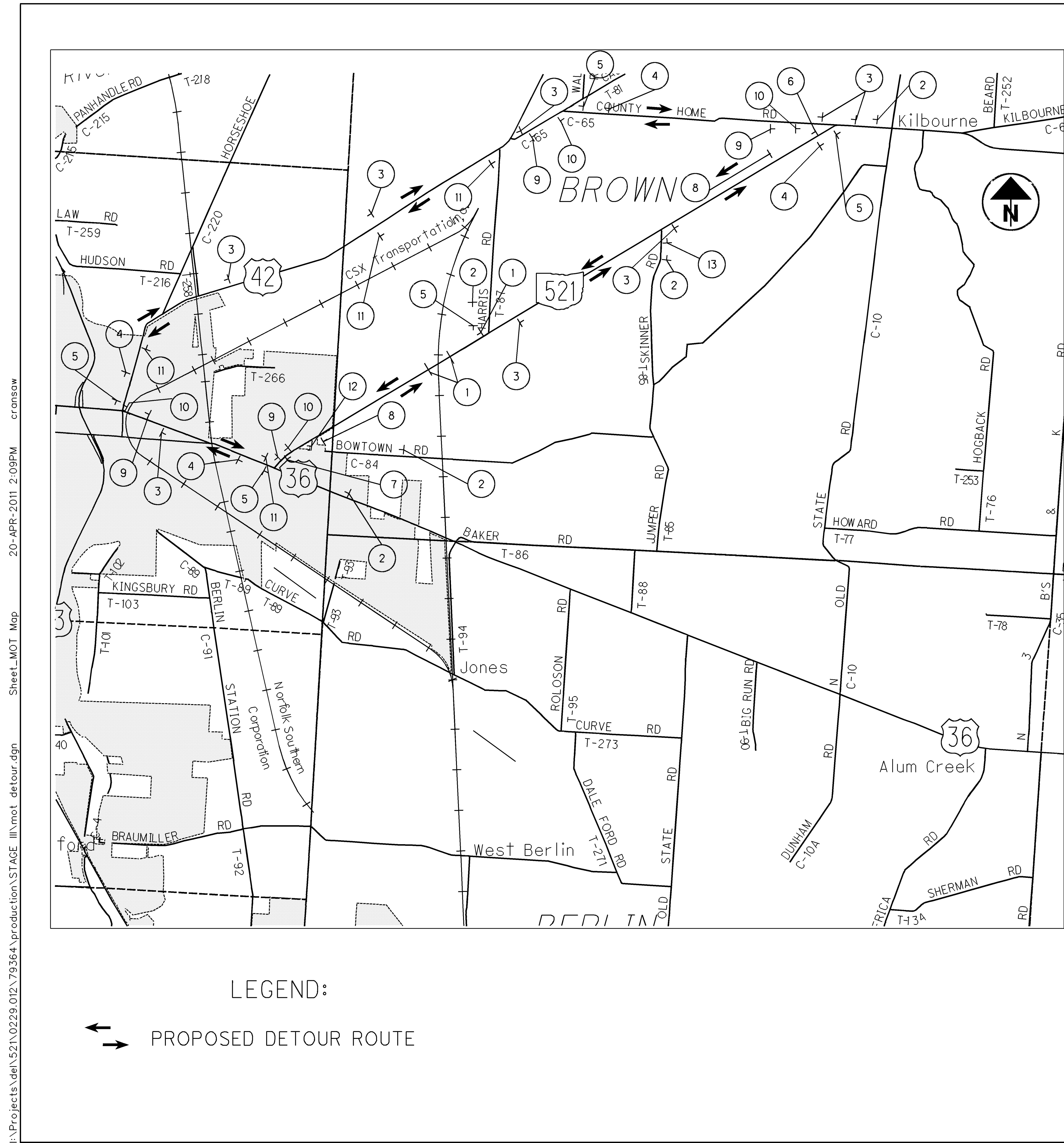
NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED EVENTS:
SPECIAL EVENTS:

DELAWARE COUNTY FAIR - SEPTEMBER 17-24, 2011

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE OF \$1000 PER CALENDAR DAY.

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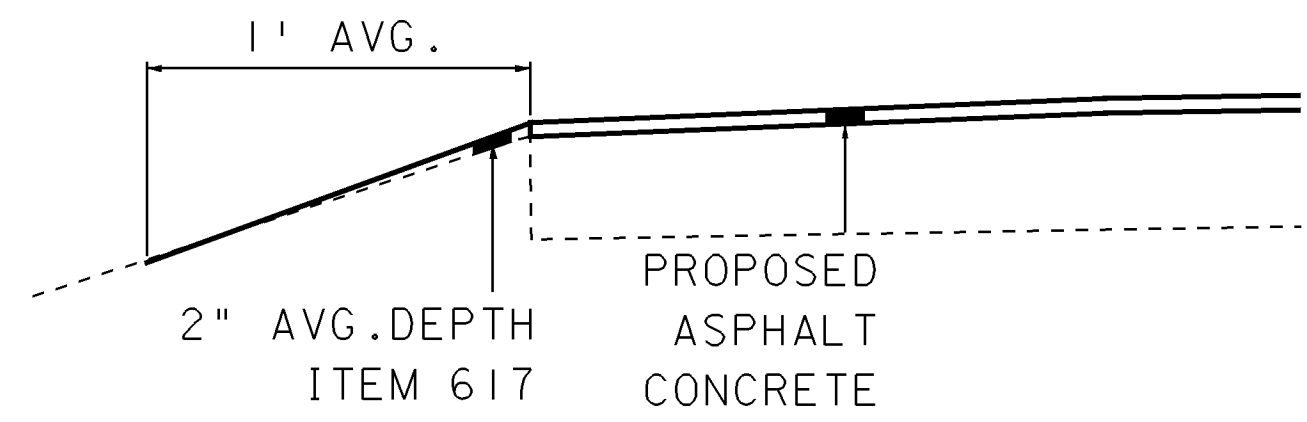
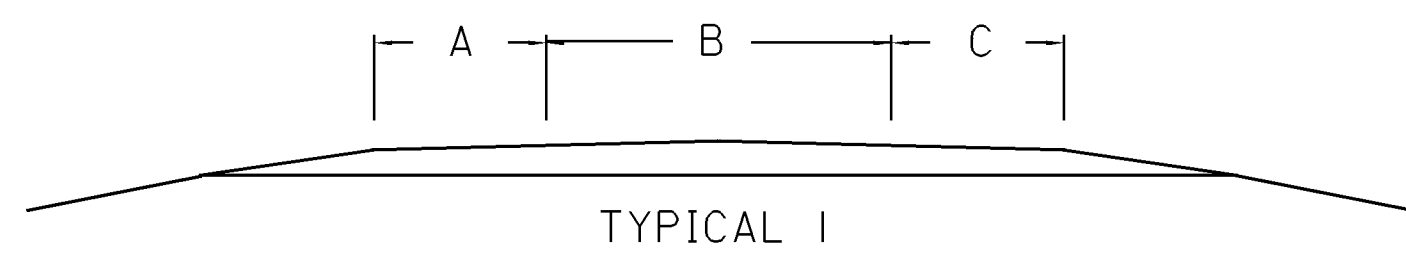
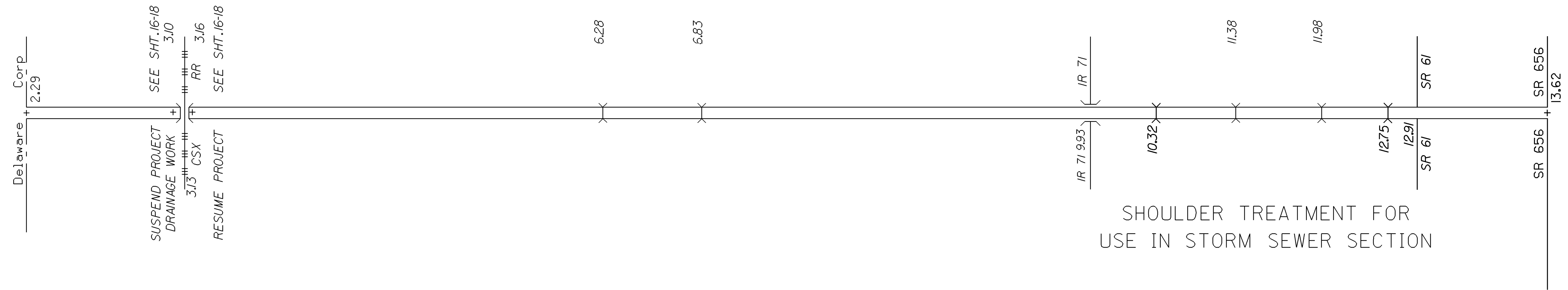
LEGEND:

PROPOSED DETOUR ROUTE

①	②	③		
 ROAD CLOSED <small>R11-2-48 IN ACCORDANCE WITH MT-101.60</small>	 SR 521 CLOSED AT RAILROAD FOLLOW DETOUR <small>SPECIAL 60" X 48" BLACK ON ORANGE</small>	 WEST <small>M3-4-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-9-30</small>		
④	⑤	⑥		
 WEST <small>M3-4-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-H9bL-30</small>	 WEST <small>M3-4-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-9L-30</small>	 ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY <small>R11-3A-60 ON TYPE III BARRICADE</small> ROAD CLOSED 1.2 MILES AHEAD LOCAL TRAFFIC ONLY <small>R11-3A-60 ON TYPE III BARRICADE</small>		
⑧	⑨	⑩	⑪	⑫
 END DETOUR <small>M4-8A-24</small>	 EAST <small>M3-2-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-H9bR-30</small>	 EAST <small>M3-2-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-9R-30</small>	 EAST <small>M3-2-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-9-30</small>	 EAST <small>M3-2-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-H9bL-30</small>
	⑬			
	 WEST <small>M3-4-24</small> <small>MI-5-30-3</small> DETOUR <small>M4-9R-30</small>			

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SEE SHEET 25 FOR STRUCTURE TREATMENTS
 SEE SHEET 15 FOR PLANING QUANTITIES AT STRUCTURES

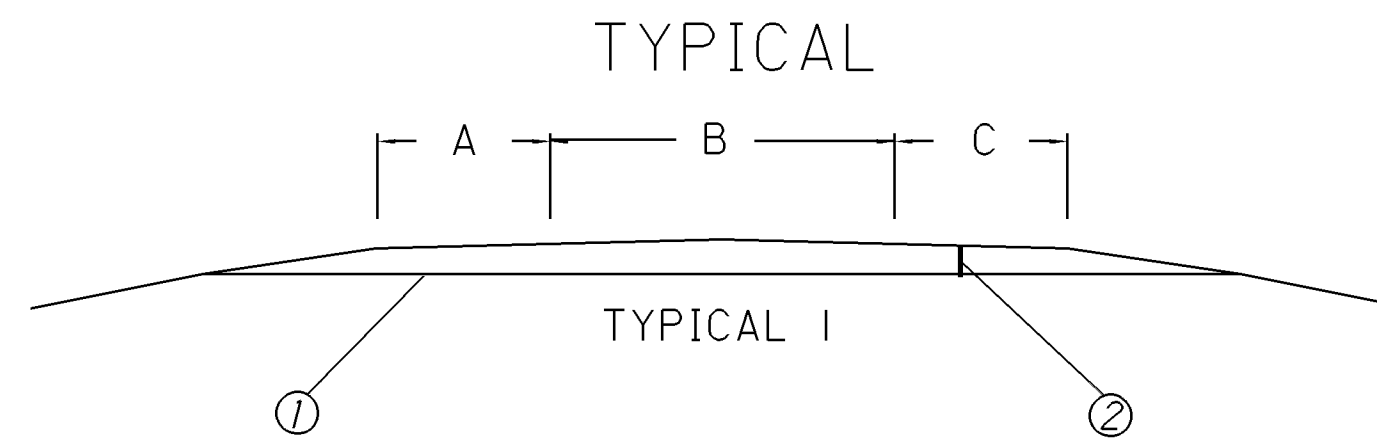


LOCATION							SURFACE ASPHALT							REMARKS					
LOCATION	COUNTY	ROUTE	START LOG POINT	END LOG POINT	LENGTH		TYPICAL	PAVEMENT WIDTH			PAVEMENT AREA	254			407		448		617
								A	B	C		0.075 GAL PER SY	AVG DEPTH		COMPACTED AGGREGATE (AVG. 2' DEEP 1' WIDE)				
SLM	SLM	MI	FT	FT	FT	FT	FT	FT	FT	FT	SY	SY	GAL		IN	CY	CY		
1	DEL	SR 521	2.29	3.14	0.85	4488	1	1.0	18.0	1.0	9973		748	1.50	416			BEGIN PROJECT WITH BUTT JOINT SEE SHEET 15 FOR PLANING QUANTITIES (UGP)	
			3.14	6.78	3.64	19219	1	1.0	18.0	1.0	42709		3203	1.50	1780			(RGP)	
			6.78	7.05	0.27	1426	1		20.0		3168		238	1.50	132			KILBOURNE	
			7.05	12.90	5.85	30888	1	1.0	18.0	1.0	68640	150	5148	1.50	2860			SUSPEND PROJECT AT S.R. 61 TRANSITION WITH PAVEMENT PLANING BOTH SIDES OF S.R. 61	
			12.91	13.62	0.71	3749	1	1.0	18.0	1.0	8331	150	625	1.50	347			RESUME PROJECT OTHER SIDE OF S.R. 61	
			3.10	3.16	0.06	317										4		SHOULDER TREATMENT FOR USE IN STORM SEWER SECTION (SEE DETAIL)	
			6.28			-19			18.0		-38		-3	1.50	-2			DEDUCT FOR STRUCTURE	
			11.38			-14			18.0		-28		-2	1.50	-1			DEDUCT FOR STRUCTURE	
			11.98			-10			18.0		-20		-2	1.50	-1			DEDUCT FOR STRUCTURE	
											1240					69		VARIOUS GRAVEL DRIVES	
TOTALS CARRIED TO GENERAL SUMMARY												300	9955		5531	73			

PAVEMENT SUBSUMMARY AND DETAILS

DEL - 521 - 2.29

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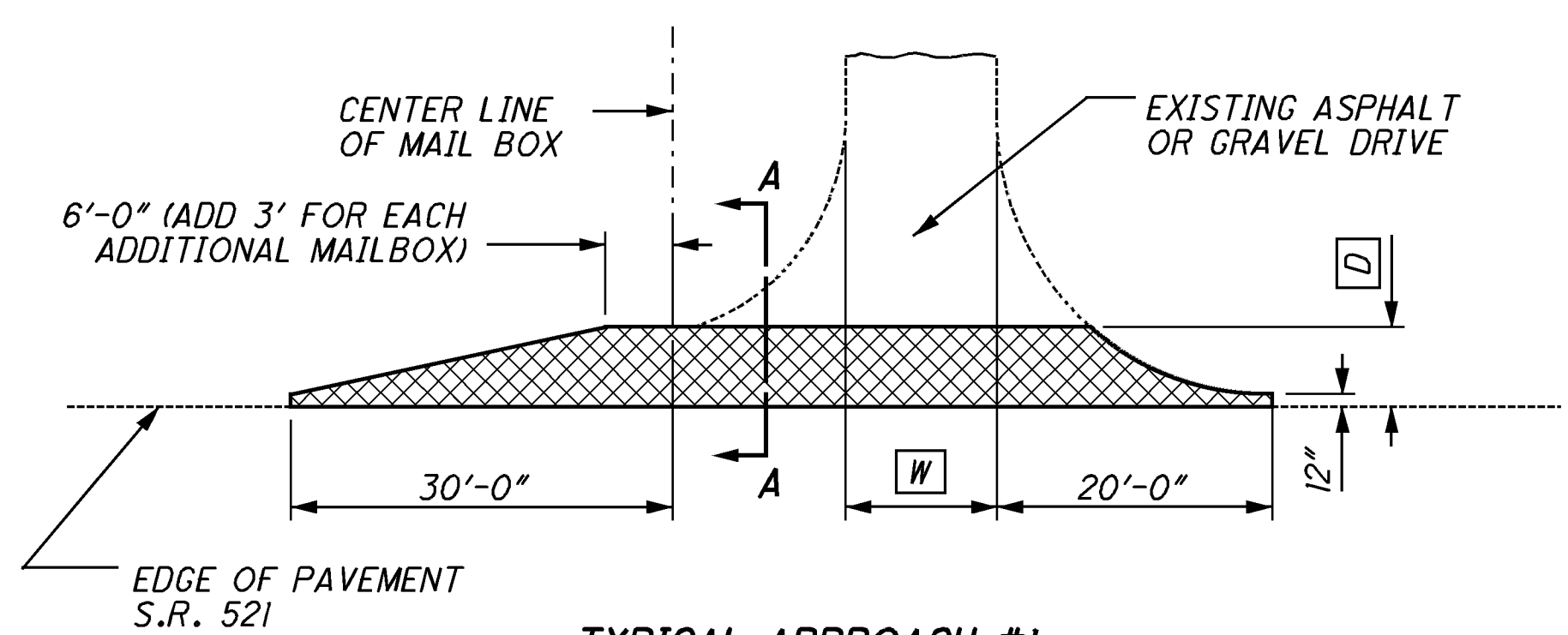


- ①- ITEM 407 TACK COAT
- ②- 1.5" ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

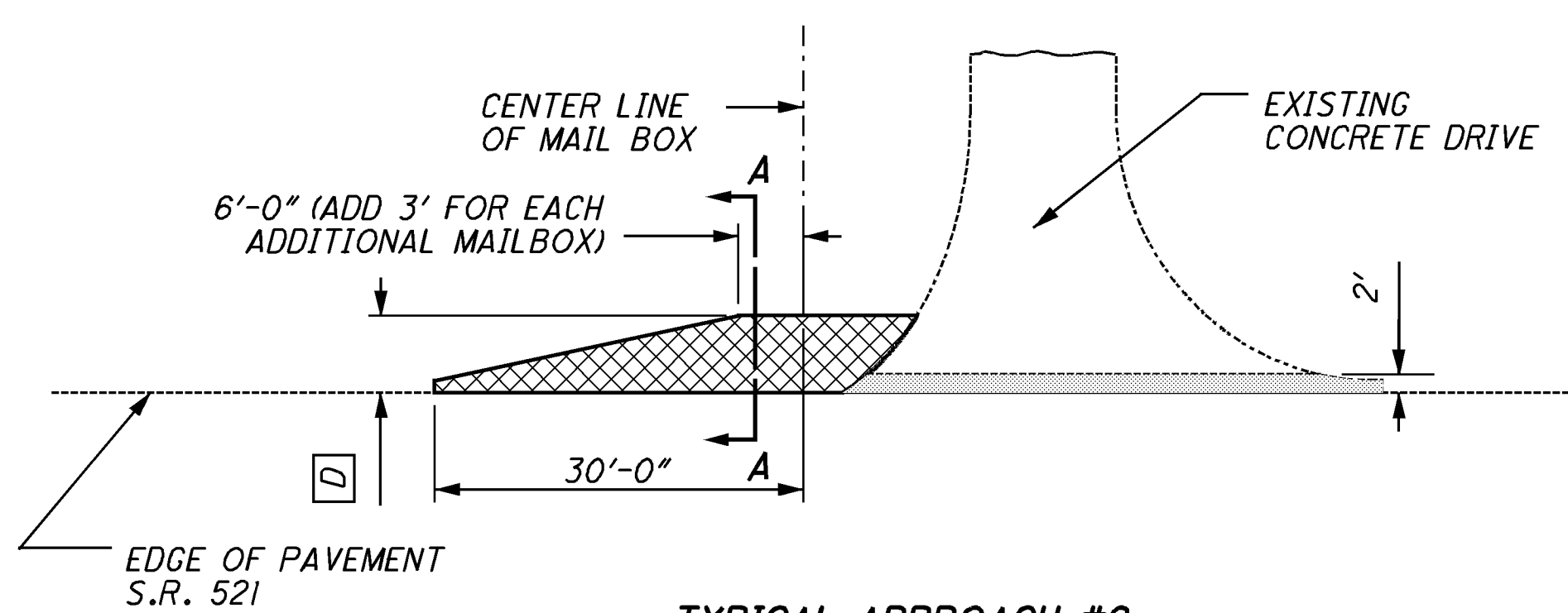
LOCATION							SURFACE COURSE							REMARKS			
LOCATION	COUNTY	ROUTE	START LOG POINT	END LOG POINT	LENGTH		SIDE	TYPICAL	PAVEMENT WIDTH			PAVEMENT AREA	254		407	448	
									A	B	C		PAVEMENT PLANING FOR BUTT JOINTS AT INTERSECTIONS AND DRIVES		TACK COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE, PG64-22	
									FT	FT	FT				SY	0.075 GAL PER SY	AVG DEPTH
SLM	SLM	MI	FT														
1	DEL	SR-521	2.34	2.37	0.03	158	R	I			11.0	194		15	1.50	8	TURN LANE @ J.V.S. (UGP)
			6.67	6.76	0.09	475	R	I			7.0	370		28	1.50	15	EXTRA AREA IN KILBOURNE
			6.67	6.76	0.09	475	L	I	6.0			317		24	1.50	13	EXTRA AREA IN KILBOURNE
							L/R				240	240		18	1.50	10	VARIOUS ASPHALT DRIVES
			3.54				L				45	45		3	1.50	2	HARRIS RD. (TWP RD. 87)
			4.96				R				45	45		3	1.50	2	SKINNER RD. (TWP RD.85)
			6.36				L				45	45		3	1.50	2	COUNTY HOME RD. (CR 65)
			6.69				L/R				90	90		7	1.50	4	MAIN ST. (TR 1019)
			6.77				L/R				90	90		7	1.50	4	OLD STATE RD. (CR 10)
			6.99				R				45	45		3	1.50	2	HOGBACK RD. (TWP 76)
			7.26				L				45	45		3	1.50	2	KILBOURNE RD. (CR 65)
			8.13				L/R				90	90		7	1.50	4	N. 3B'S & K RD. (CR 35)
			8.96				L/R				90	90		7	1.50	4	N. GALENA RD. (CR 34)
			10.86				L/R				90	90		7	1.50	4	CARTER'S CORNER RD. (CR 33)
			1.55				L/R				90	90		7	1.50	4	BLUE CHURCH RD. (TWP 67)
TOTAL											1886	1005	142	80			

PROVIDE BUTT JOINTS AND STOP BARS TO EACH COUNTY AND TOWNSHIP ROAD APPROACH. PAVEMENT AT EACH OF THESE APPROACHES SHOULD EXTEND BACK TO THE RIGHT OF WAY LIMITS. THE AVERAGE DISTANCE ON THIS PROJECT IS 20' BEYOND THE EDGELINE.

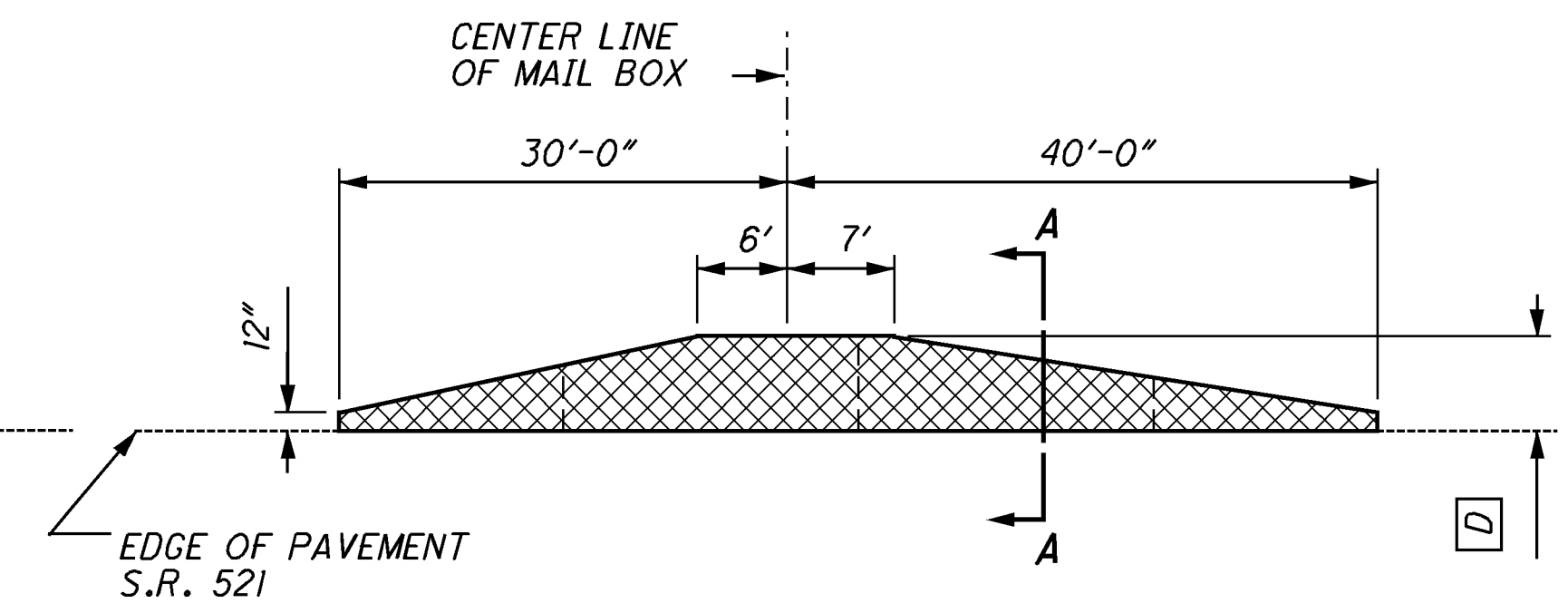
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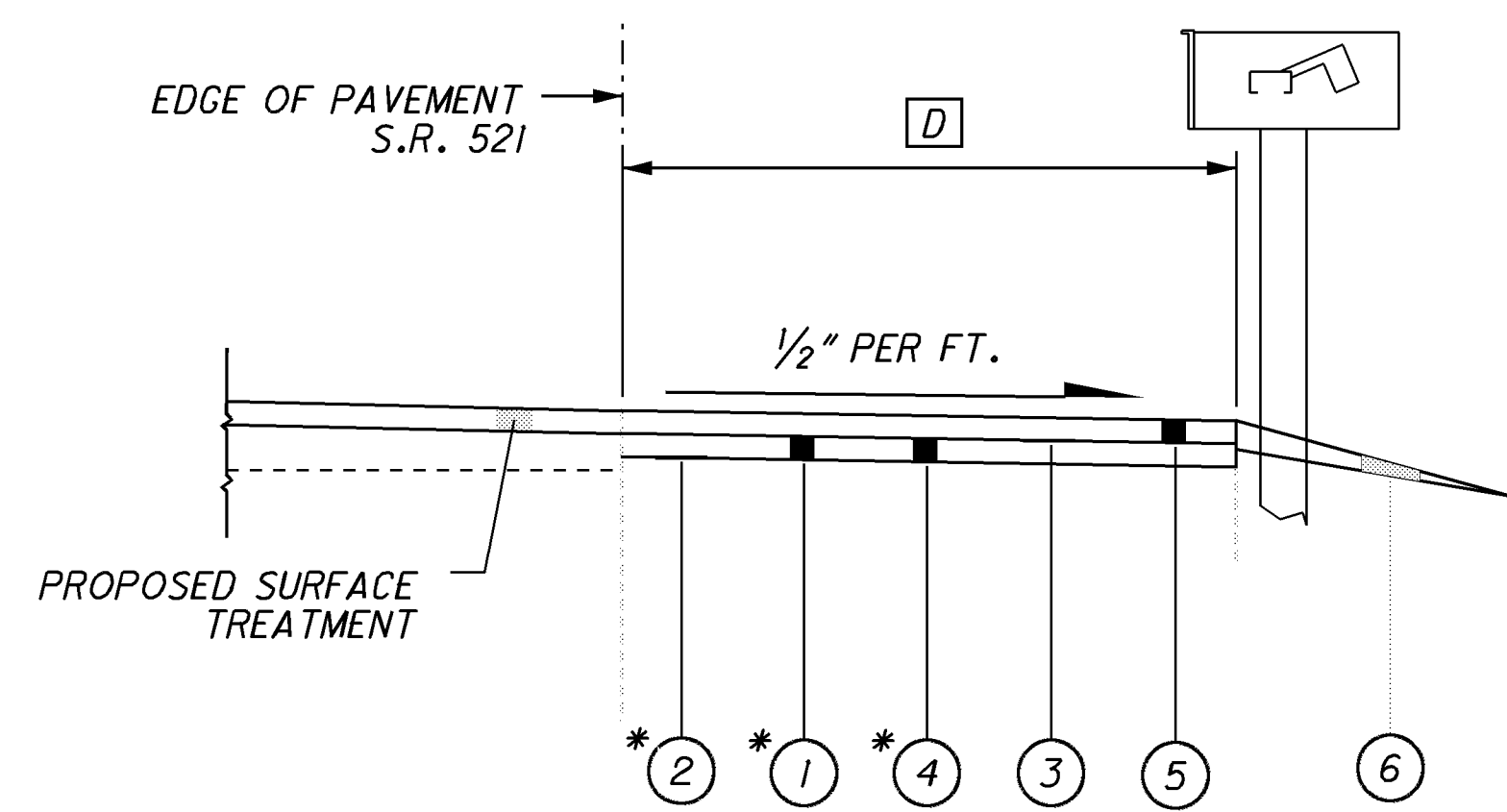
**TYPICAL APPROACH #1
COMBINED DRIVEWAY & MAIL BOX APPROACH**
MAIL BOX POSITIONED PAST DRIVE SHOWN. MIRROR FOR MAILBOX PRECEDING DRIVE.
THE EXISTING MAIL BOX POSITION SHALL REMAIN. DIMENSION **D** SHALL NOT EXCEED 6'.
W = WIDTH OF EXISTING DRIVEWAY.



**TYPICAL APPROACH #2
COMBINED DRIVEWAY & MAIL BOX APPROACH**
MAIL BOX POSITIONED PAST DRIVE SHOWN. MIRROR FOR MAILBOX PRECEDING DRIVE.
THE EXISTING MAIL BOX POSITION SHALL REMAIN. DIMENSION **D** SHALL NOT EXCEED 6'.
W = WIDTH OF EXISTING DRIVEWAY.



**TYPICAL APPROACH #3
TYPICAL MAIL BOX APPROACH**
THE EXISTING MAIL BOX POSITION SHALL REMAIN. DIMENSION **D** SHALL NOT EXCEED 6'.
W = WIDTH OF EXISTING DRIVEWAY.



**SECTION A-A
MAILBOX APPROACH DETAIL**
* OMIT EXCAVATION AND INTERMEDIATE COURSE ON EXISTING ASPHALT APPROACHES.

- LEGEND:**
- ① ITEM 203 - 1/2" EXCAVATION
 - ② ITEM 407 - TACK COAT @ 0.075 GAL/SQ YD
 - ③ ITEM 407 - TACK COAT FOR INTERMEDIATE @ 0.05 GAL/SQ YD
 - ④ ITEM 448 - (1 1/2") ASPHALT CONCRETE INTERM. COURSE, TYPE I, PG64-22
 - ⑤ ITEM 448 - (1 1/2") ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22
 - ⑥ ITEM 617 - (2" AVG) COMPACTED AGGREGATE

NOTES:
FOR QUANTITIES AND LOCATIONS OF THESE APPROACHES, SEE SHEET 12/26.
FOR TYPICAL MAIL BOX APPROACH AND OTHER ADDITIONAL INFORMATION SEE STA. DWG. BP 4.1 (7/16/04)
FOR MORE INFORMATION INVOLVING TAPERS AND FEATHERING SEE STANDARD DRAWING BP-3.1 (10/19/07)

*ITEM 642 - TRAFFIC PAINT FOR LONG LINE MARKINGS ON DEL-521
 ITEM 644 - THERMOPLASTIC PAVEMENT MARKINGS FOR AUXILIARY MARKINGS ON DEL-521
 PROVIDE STOP BARS AT EACH OF THE INTERSECTING COUNTY AND TOWNSHIP ROADS
 SEE BELOW FOR LOCATIONS.
 EDGE LINE TO BE LOCATED @ 1' FROM EDGE OF PAVEMENT.

L O C	C O U N T Y	R O U T E	L O G E N D		L E N G T H		S I D E	D E S C R I P T I O N	L O N G L I N E M A R K I N G S					A U X I L I A R Y M A R K I N G S										
			S L M	S L M	M I	F T			642		L A N E L I N E	644		L A N E A R R O W S					S C H O O L Z O N E					
									C E N T E R L I N E	E D G E L I N E		C E N T E R L I N E	E D G E L I N E	C H A N N E L I Z I N G L I N E	S T O P L I N E	O N L Y	L A N E A R R O W S							
										E Q U I V S O L I D L I N E							W H I T E	Y E L L O		Y E L L O	S O L I D	W H I T E	Y E L L O	L T
M I	M I	M I	M I	M I	M I	M I	M I	M I	L F	L F	L F	L F	L F	E A C H	E A C H	E A C H	E A C H	E A C H	E A C H					
I	DEL	521	2.29	3.14	0.85	59822		MAINLINE (UGP)	0.85	10.660	1.70													
			3.14	13.62	10.48	55334		MAINLINE (RGP)	10.48		20.96													
			2.37					TURN LANE (UGP)							92									
			2.50				L	SCHOOL ZONE (UGP)																1
			3.54				L	HARRIS RD. (TWP RD. 87) (RGP)								10								
			4.96				R	SKINNER RD. (TWP RD.85)								10								
			6.36				L	COUNTY HOME RD. (CR 65)								10								
			6.69				R/L	MAIN ST. (TR 1019)								20								
			6.77				R/L	OLD STATE RD. (CR 10)								20								
			6.99				R	HOGBACK RD. (TWP 76)								10								
			7.26				L	KILBOURNE RD. (CR 65)								10								
			8.13				R/L	N. 38'S & K RD. (CR 35)								20								
			8.96				R/L	N. GALENA RD. (CR 34)								20								
			10.86				R/L	CARTER'S CORNER RD. (CR 33)								20								
			11.55				R/L	BLUE CHURCH RD. (TWP 67)								28								
			12.90				R	STOP BAR @ SR 61								10								
			12.91				L	STOP BAR @ SR 61								10								
			13.62				R	STOP BAR @ SR 665								10								
TOTALS CARRIED TO GENERAL SUMMARY									11.33		22.66					92	208							1

I:\Projects\del\521\0229.012\79364\production\STAGE III\TS101.dgn Design 20-APR-2011 2:14PM cransaw

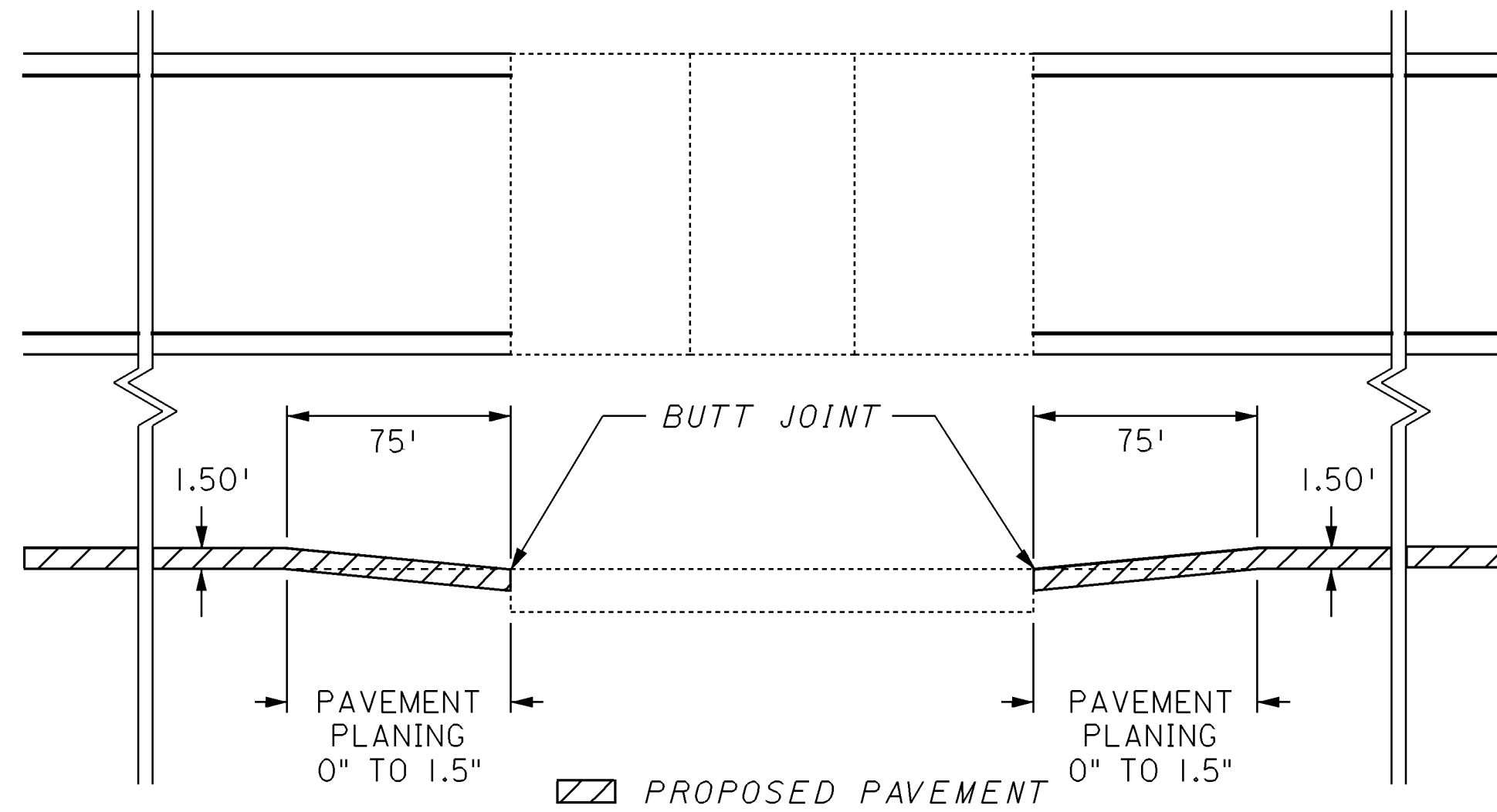
PAVEMENT MARKING SUBSUMMARY

DEL - 5.21 - 2.29

I:\Projects\del\521\0229.012\79364\production\STAGE III\TS102.dgn sheet_ts102 20-APR-2011 2:15PM cransaw

DETAIL		DETAIL	
GAP	TYPICAL CENTER LINE	7	ONE LANE BRIDGE
1	THRU APPROACH	8	STOP APPROACH
2	HORIZONTAL CURVE	9	TWO WAY LEFT TURN LANE
3	HORIZONTAL CURVE ALTERNATE	10	APPROACH W/LEFT TURN LANE
5	4 LANE UNIDIVIDED TO 2 LANE TRANSITION	11	HORIZONTAL CURVE W/RADIUS LESS THAN 1250'
6	MULTILANE DIVIDED-CONTROLLED ACCESS	12	HORIZONTAL CURVE W/RADIUS LESS THAN 820'

LOCATION					REFLECTOR TYPE													TOTAL		REMARKS	
LOCATION	COUNTY	ROUTE	BEGIN LOG	END LOG	DETAIL	ONE WAY					TWO WAY								621		621
						W		Y	WW	WR				YR	YY	RAISED PAVEMENT MARKER REMOVED	RPM				
						RIGHT EDGE LINE	LANE LINE	LEFT EDGE LINE	RIGHT EDGE LINE	RIGHT EDGE LINE	CHANNEL-IZING LINE	LANE LINE	LEFT EDGE LINE	CENTER LINE							
40	80	120	80	40	80	40	80	80	80	20	40	80	EACH	EACH							
1	DEL	SR 521	2.29	3.14	GAP													56	56	BEGIN PROJECT (UGP)	
			3.14	6.01	GAP														189	189	(RGP)
			6.01	6.22	12														28	28	
			6.22	6.91	GAP														46	46	
			6.91	7.36	12														91	91	
			7.36	10.78	GAP														226	226	
			10.78	10.96	12														24	24	
			10.96	11.68	GAP														48	48	
			11.68	12.02	12														45	45	
			12.02	12.88	GAP														57	57	
			12.88	12.92	8 RT/LT	22	10												3	3	STOP APPROACH @ SR-61
			12.92	13.60	GAP														45	45	
			13.60	13.62	8 / RT	11	5												1	1	STOP APPROACH @ SR-665 / END PROJECT
TOTALS CARRIED TO GENERAL SUMMARY																	745	859			

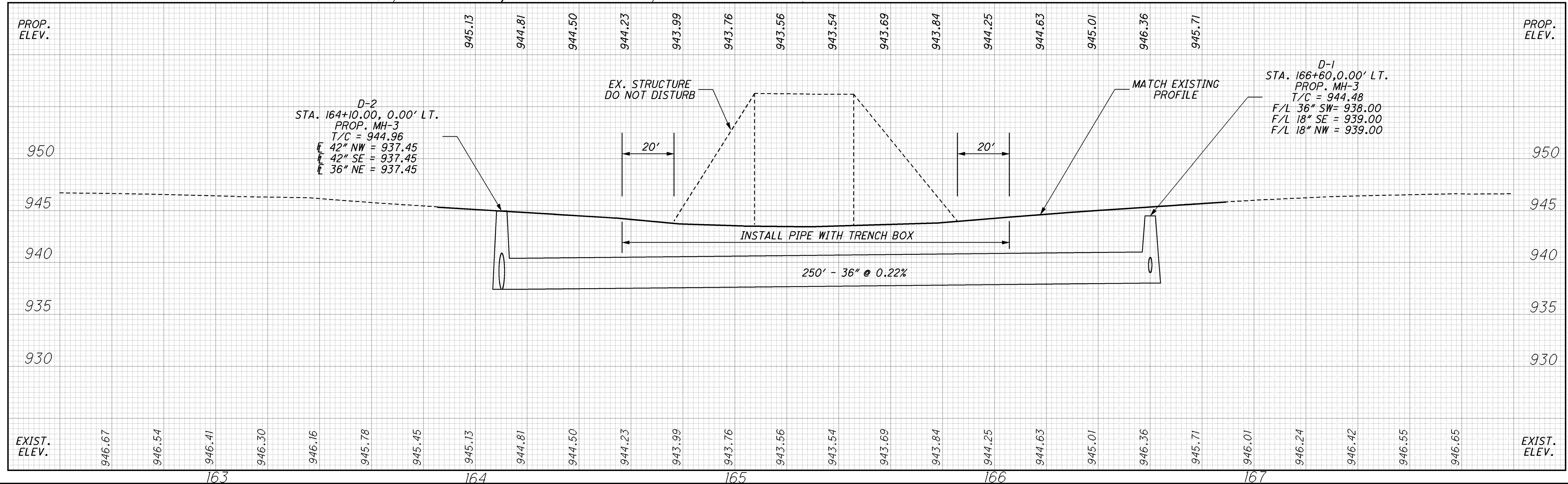
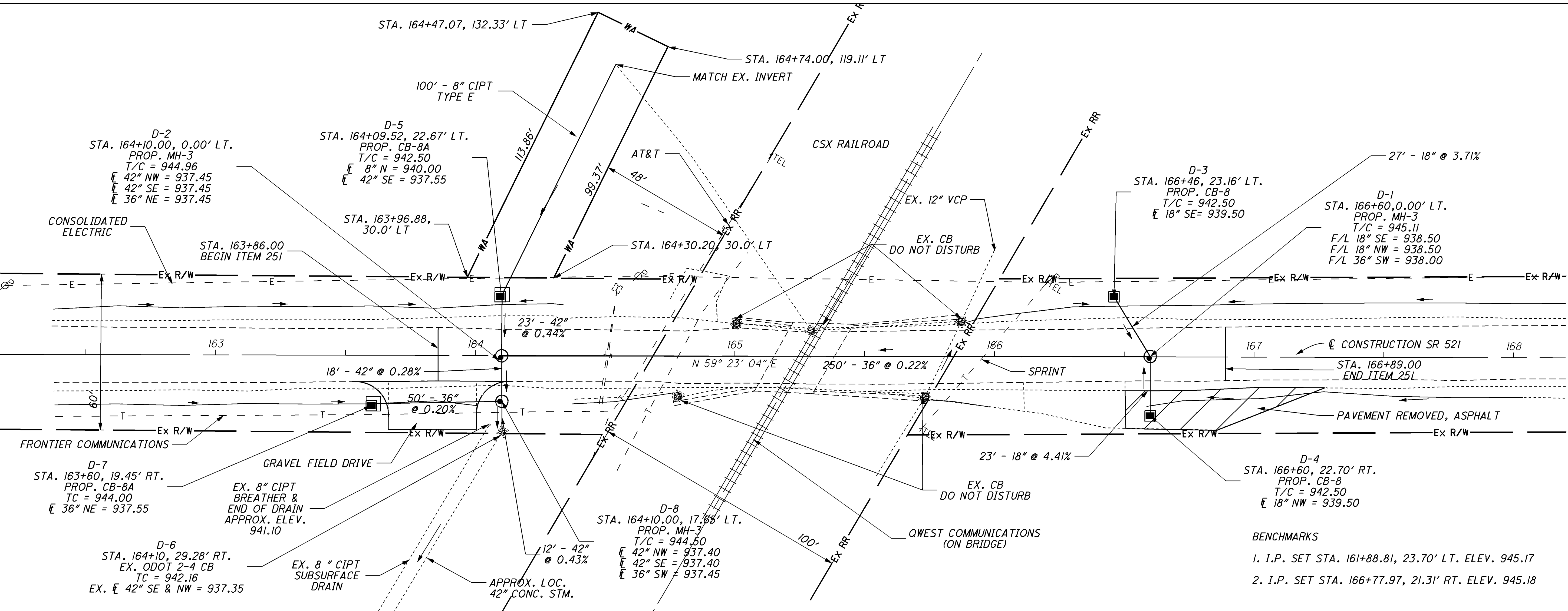


ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE:
 PLANING TO BE USED AT THE STRUCTURES OR OTHER AREAS NOTED.
 QUANTITIES CARRIED TO GENERAL SUMMARY

DEL-521-BEGIN PROJECT	=	150 S.Y.	X 1	=	150 S.Y.	(UGP)
DEL-521-3.10	=	150 S.Y.	X 1	=	150 S.Y.	(UGP)
DEL-521-3.16	=	150 S.Y.	X 1	=	150 S.Y.	(RGP)
DEL-521-6.83(STRUCTURE)	=	167 S.Y.	X 2	=	334 S.Y.	
DEL-521-9.93(STRUCTURE)	=	150 S.Y.	X 2	=	300 S.Y.	
DEL-521-10.32(STRUCTURE)	=	150 S.Y.	X 2	=	300 S.Y.	
DEL-521-12.75(STRUCTURE)	=	150 S.Y.	X 2	=	300 S.Y.	
DEL-521-END PROJECT	=	150 S.Y.	X 1	=	150 S.Y.	

TOTAL ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE = 1834 S.Y.

I:\Projects\del\521\0229\012\79364\production\STAGE III\Sheet_Drainage A1.dgn Sheet_Drainage Profile 21-APR-2011 9:06AM cransaw



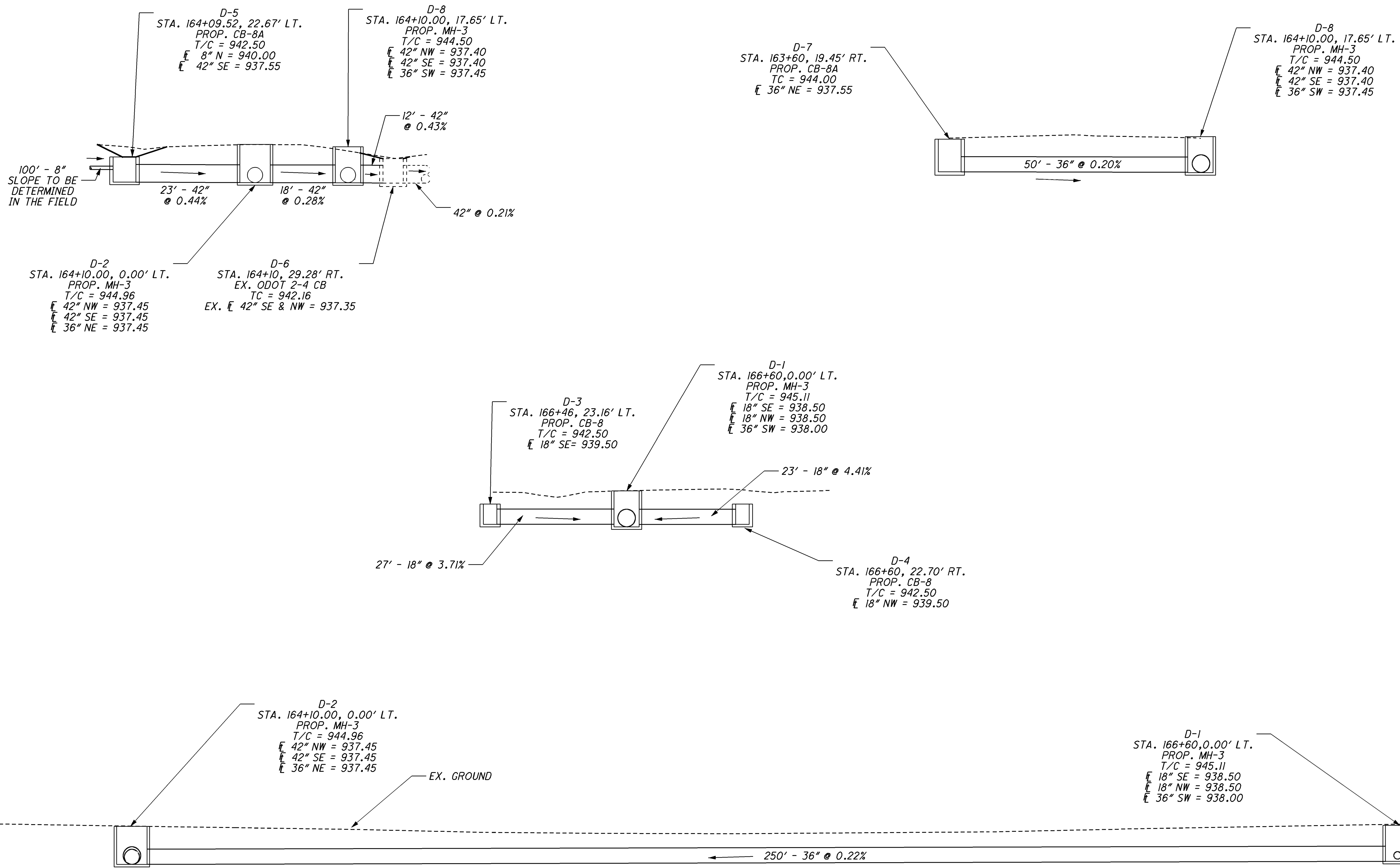
CALCULATED
MK
CHECKED

PLAN AND PROFILE

DEL-521-2.29

16
26

I:\Projects\del\521\0229\012\79364\production\STAGE III\SEWER PROFILE A1.dgn Storm_profile 21-APR-2011 9:20AM cransaw



CALCULATED
CHECKED

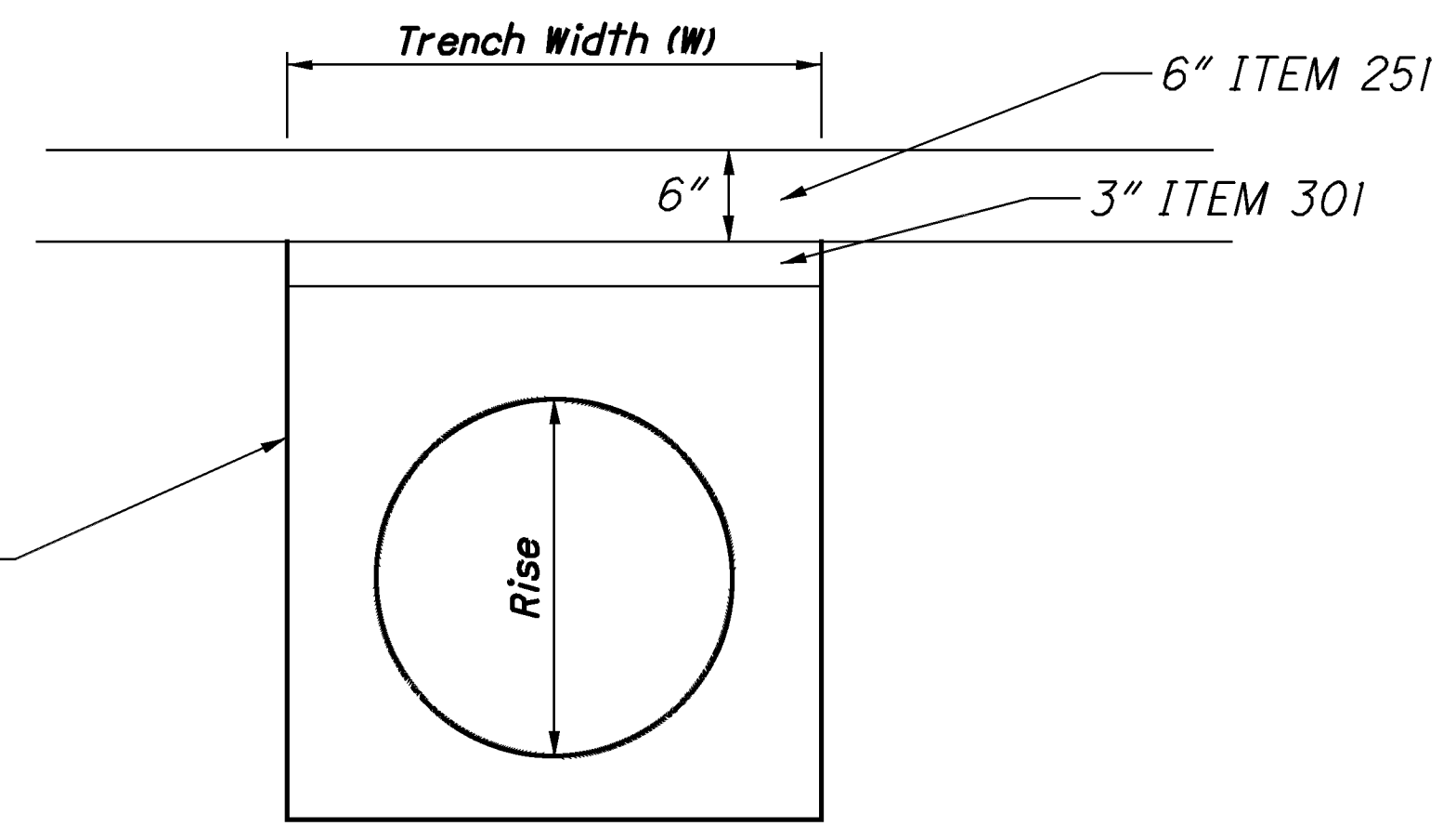
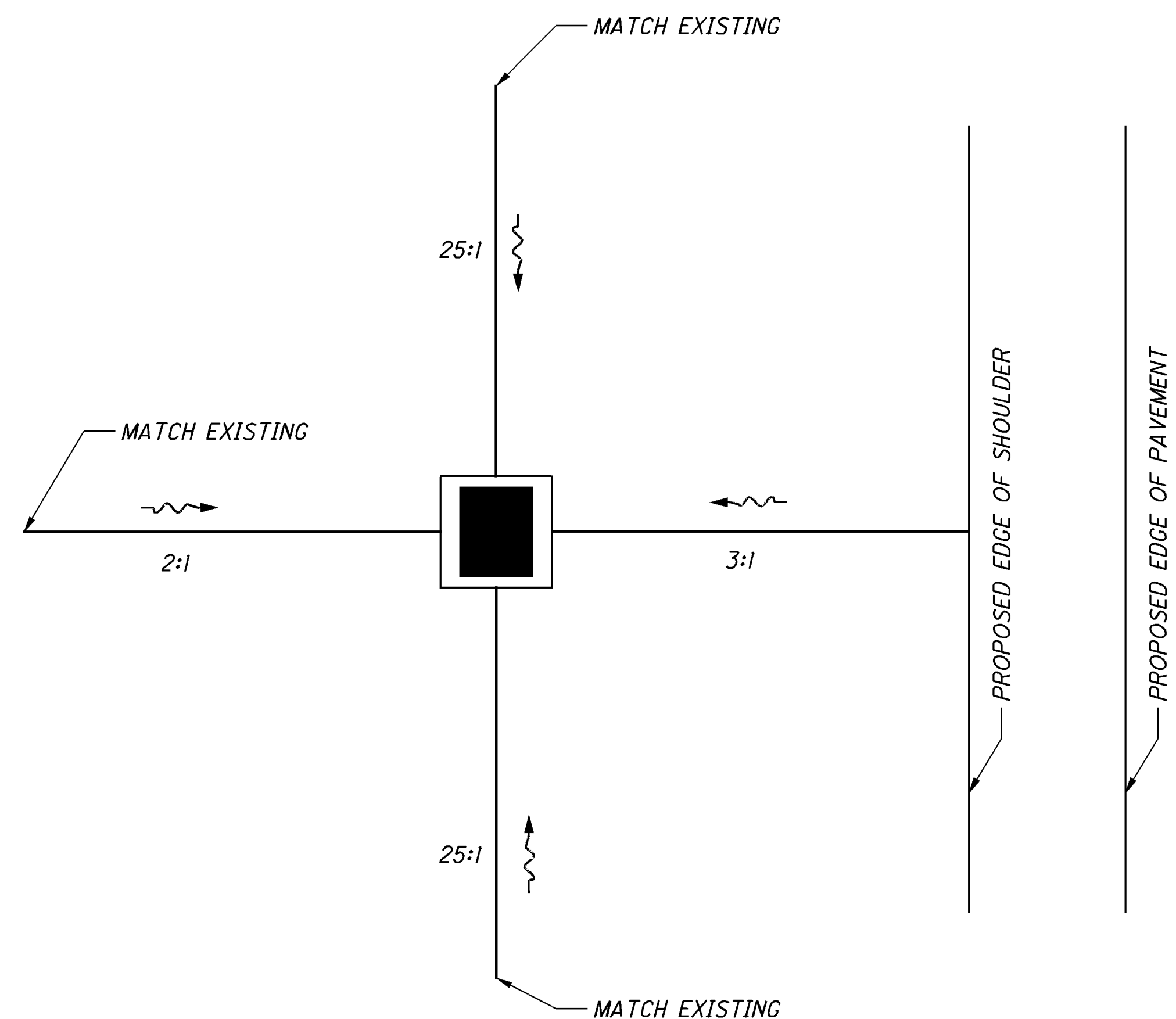
0 5 10 20
HORIZONTAL SCALE IN FEET

STORM SEWER PROFILE

DEL-521-2.29

REFERENCE SHEET	STATION		LENGTH FT	CADD GENERATED AREA SQ FT	202		251		301		304		203 EXCAVATION CU YD	203 EMBANKMENT CU YD	603 8" CONDUIT, TYPE B FT	603 8" CONDUIT, TYPE E FT	603 18" CONDUIT, TYPE B FT	603 36" CONDUIT, TYPE B FT	603 36" CONDUIT, TYPE C FT	603 42" CONDUIT, TYPE B FT	SPECIAL PIPE CLEANOUT FT	604 CATCHBASIN, NO. 8 EACH	604 CATCHBASIN, NO. 8A EACH	604 MANHOLE, NO. 3 EACH	614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE HOUR	617 WATER M GAL	REMARKS
					PAVEMENT REMOVED, ASPHALT (L * W)/9		PARTIAL DEPTH PAVEMENT REPAIR (L * W)/9		3" ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN (L*W) * (3.0/12)/27		6" AGGREGATE BASE (L*W) * (6.0/12)/27																
					AVG. WIDTH FT	AREA SQ YD	AVG. WIDTH FT	AREA SQ YD	AVG. WIDTH FT	VOLUME CU YD	AVG. WIDTH FT	VOLUME CU YD															
FROM	TO																										
3,4															10	10				20						3	
3			309.00					5.24	15																		
5																									16		
3	163+86.00	166+89.00	303.00				21	707																			
	163+66.47	164+00.47	34.00	700.0							20.59	13.0															GRAVEL FIELD DRIVE
	166+50.67	167+27.23	76.56	864.0	11.29	96																					REMOVAL OF PAVED PULL-OFF
16													89	6		100	50	250	50	53		2	2	3			SEE GRADING DETAIL
TOTALS CARRIED TO GENERAL SUMMARY					96		707		15		13		89	6	10	110	50	250	50	53	20	2	2	3	16	3	

GRADING DETAIL



SEE PROFILE VIEW FOR LIMITS OF INSTALLATION WITH A TRENCH BOX.

ITEM 301 - ASPHALT CONCRETE, AS PER PLAN
 THE PLACEMENT OF ITEM 301 IS SHOWN IN THIS DETAIL. SEE STANDARD CONSTRUCTION DRAWING DM-1.4 FOR CONDUIT INSTALLATION. SEE SHEET 3 FOR ADDITIONAL CLARIFICATION.

NOTE: THE QUANTITIES OF EXCAVATION AND EMBANKMENT WERE CALCULATED FROM THE GRADING DETAIL. THE DITCH NEEDS TO BE GRADED AT THE SPECIFIED SLOPE UNTIL MATCH EXISTING. THE HIGH EDGE OF CATCHBASIN GRATE SHALL BE TOWARDS THE RAILROAD EMBANKMENT.

I:\Projects\del\521\0229\012\79364\production\STAGE III\SEWER SUB SUMMARY A1.dgn Sheet_DS101 21-APR-2011 9:07AM cransow

SUBSUMMARY AND DETAILS

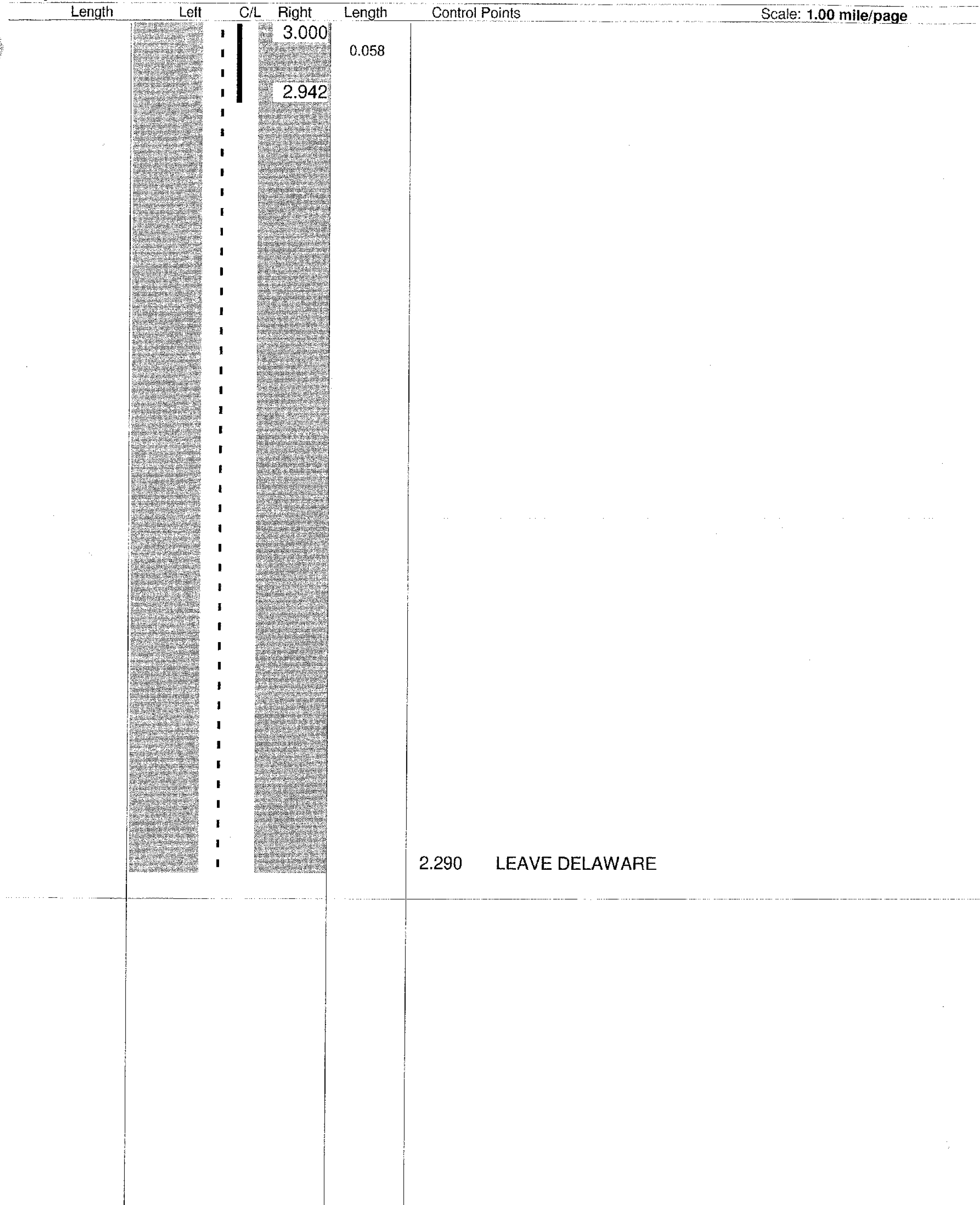
DEL-521-2.29

CALCULATED
MK
CHECKED
LLW

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ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

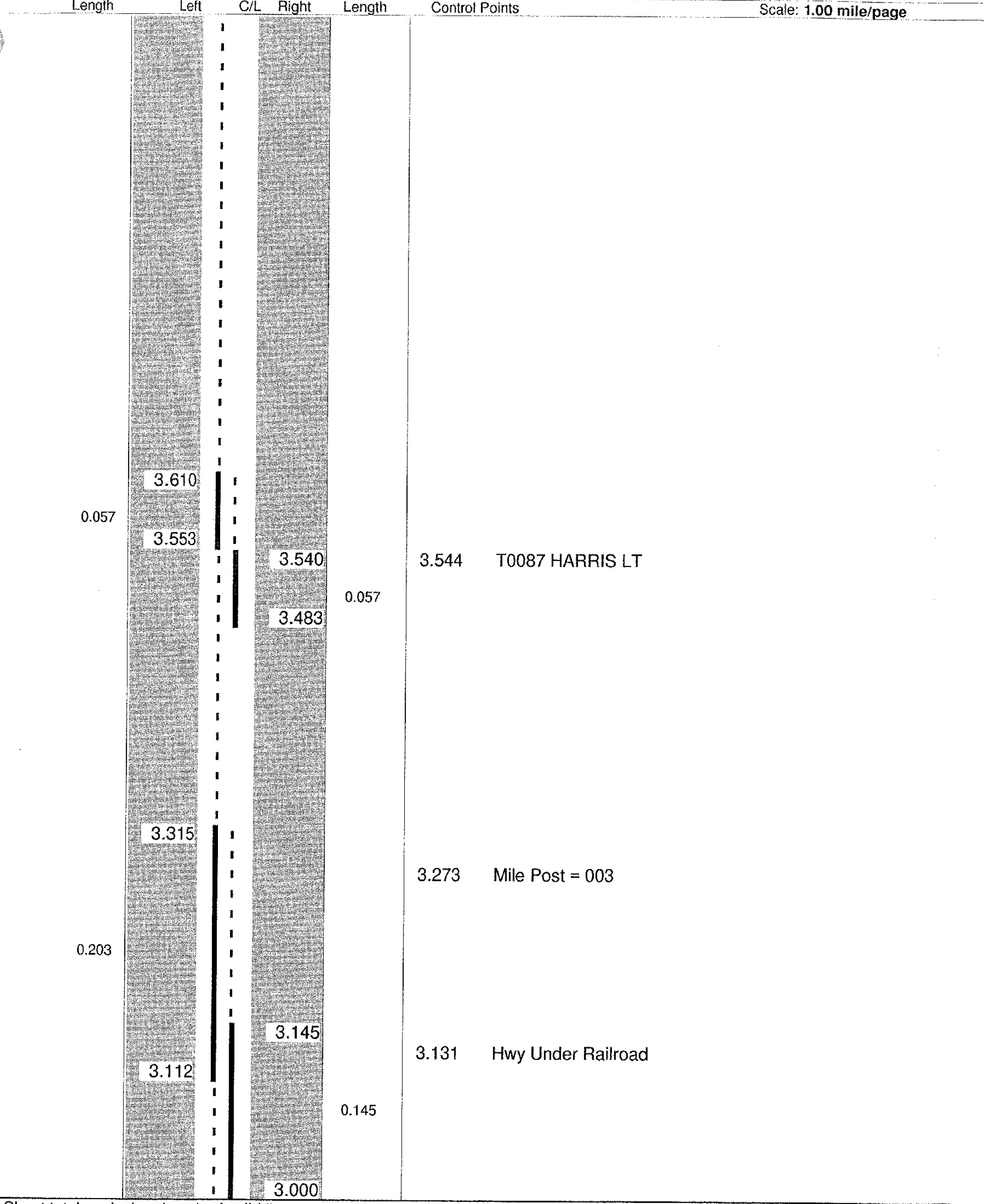
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 Length: 11.256 Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 0.236 Accum. total: 0.236 © 2003 - MasterMind Systems, Inc. - Traffic Safety Suite

ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

Route: 0521R Direction: East From: 2.290 LEAVE DELAWARE To: 13.546 S0656R
 Length: 11.256 Scale: 1.00 mile/page



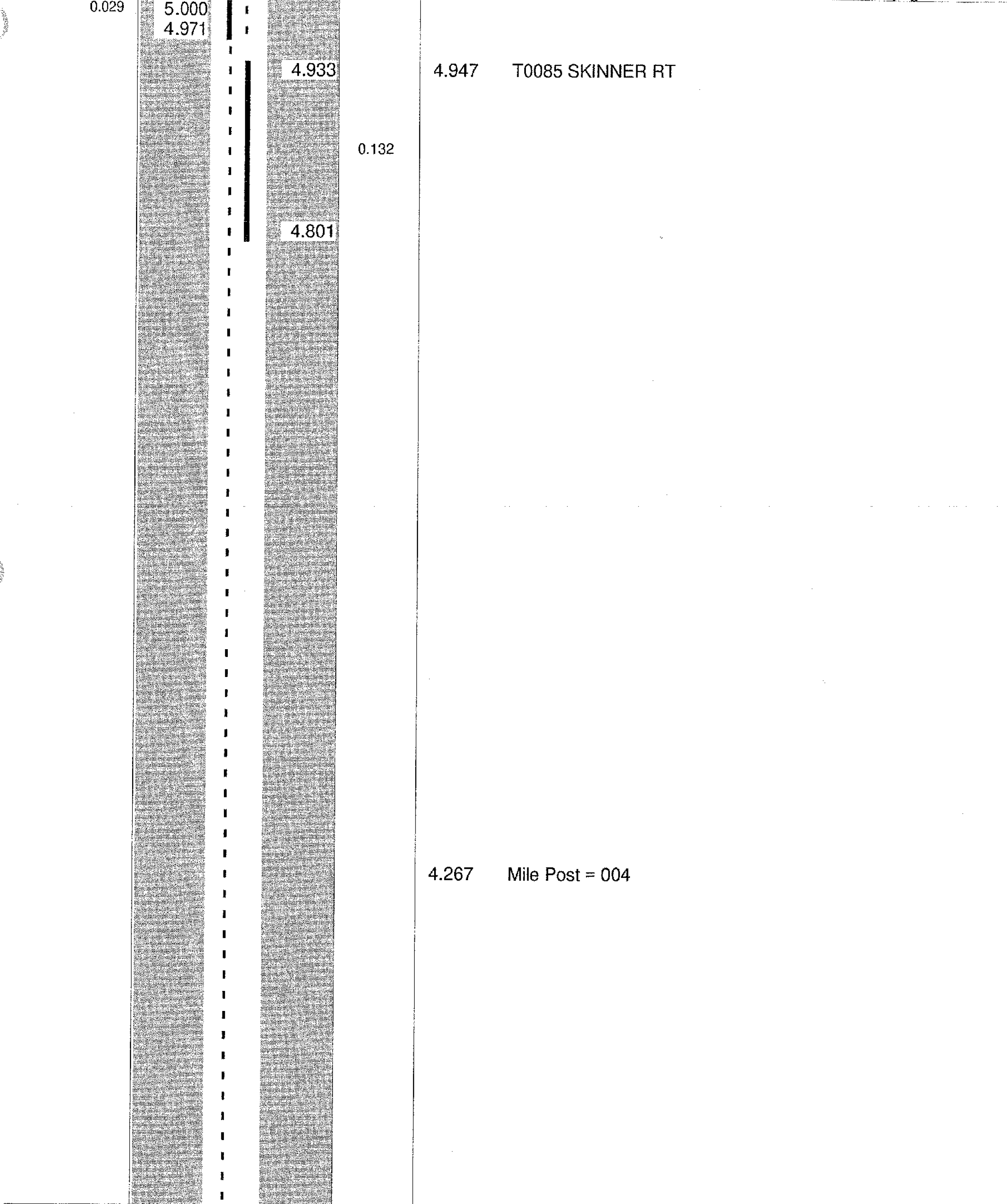
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NO PASSING ZONE LOG

DEL - 521 - 2.29

ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

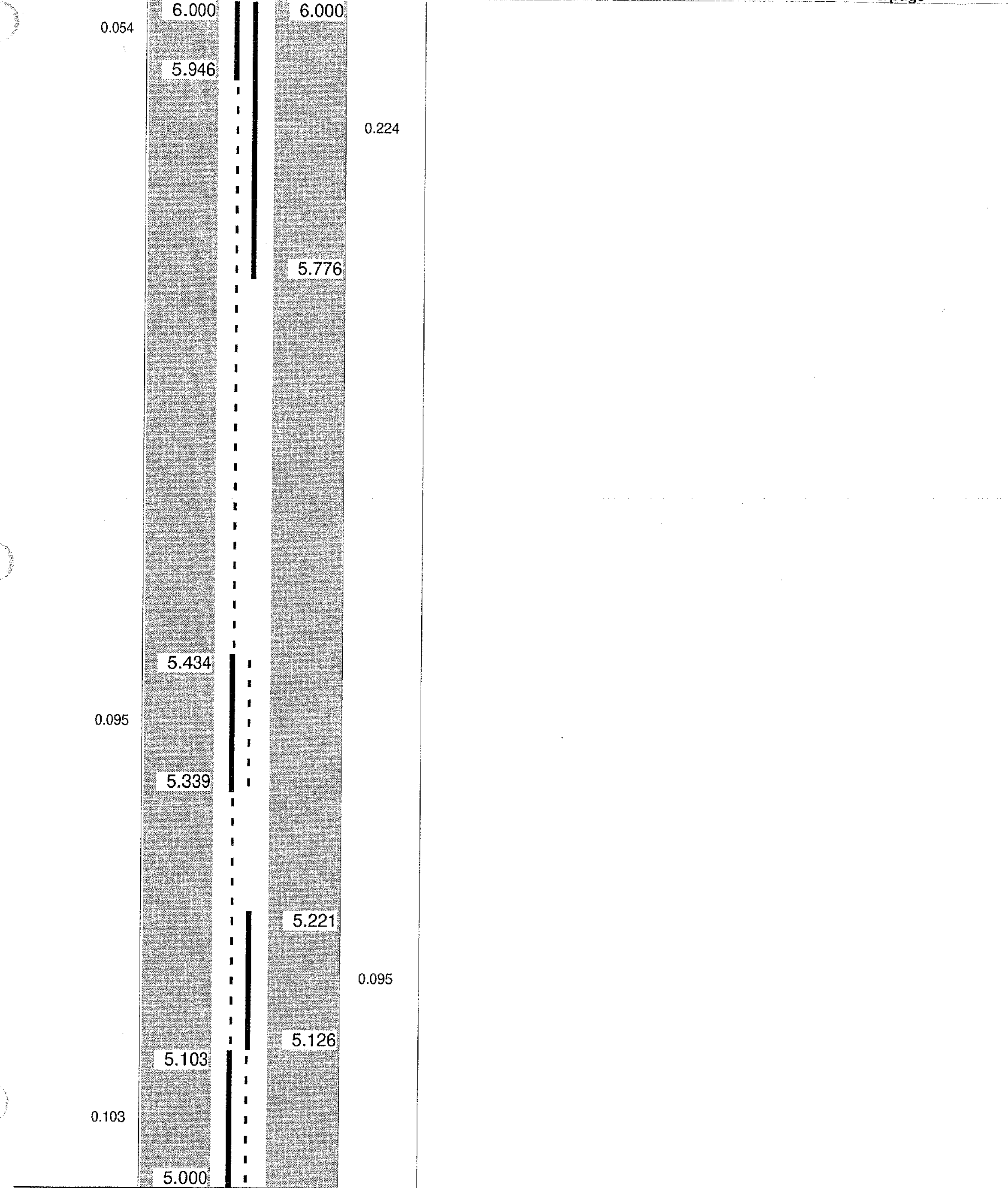
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Length: 11.256 Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 0.411 Accum. total: 1.351 © 2003 - MasterMind Systems, Inc. - Traffic Safety Suite

ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

Route: 0521R Direction: East From: 2.290 LEAVE DELAWARE To: 13.546 S0656R
Length: 11.256 Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 0.808 Accum. total: 2.159 © 2003 - MasterMind Systems, Inc. - Traffic Safety Suite

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NO PASSING ZONE LOG

DEL-521-2.29

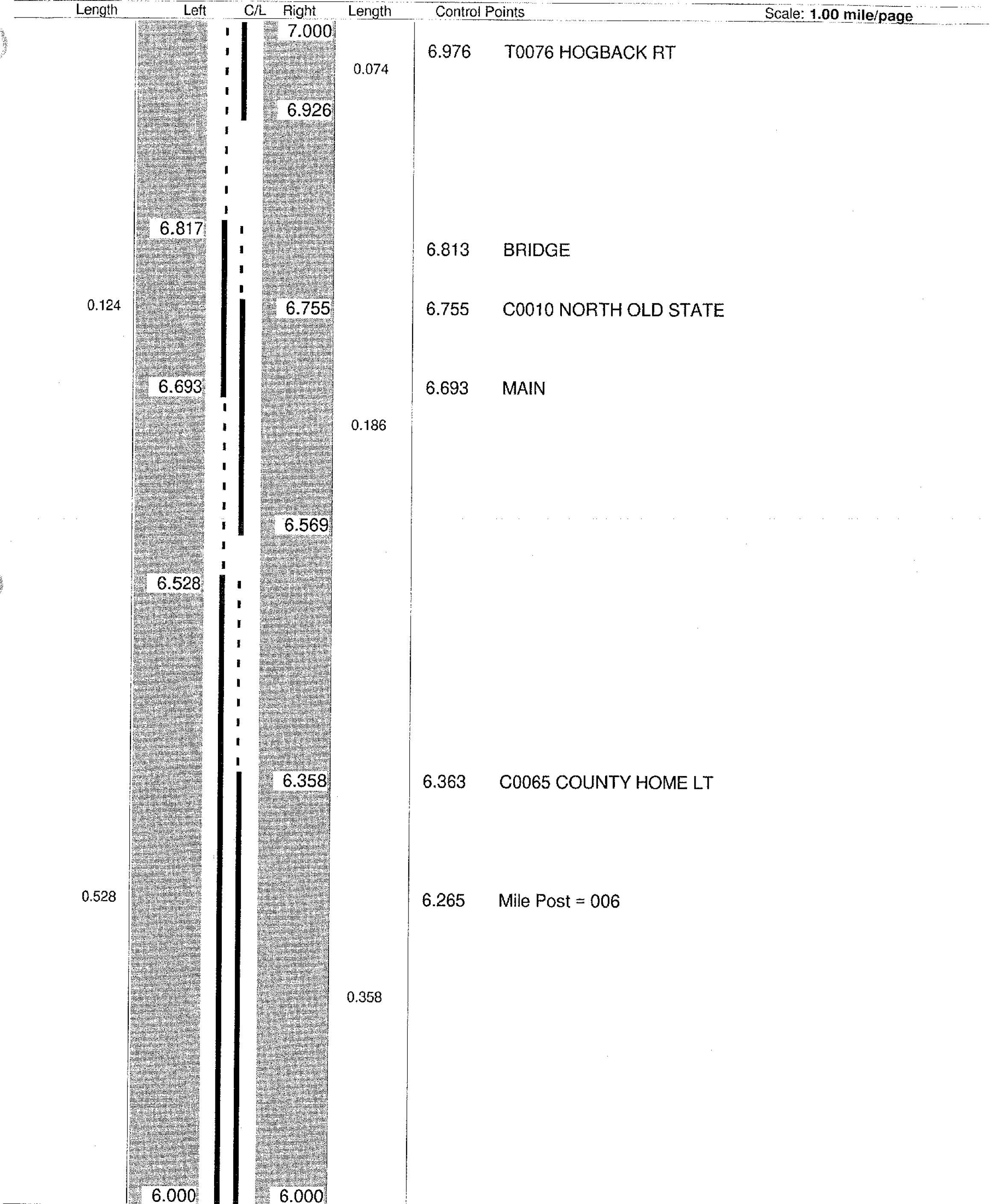
ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

Route: 0521R
Length: 11.256

Direction: East

From: 2.290 LEAVE DELAWARE
To: 13.546 S0656R

Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 1.415

Accum. total: 3.574

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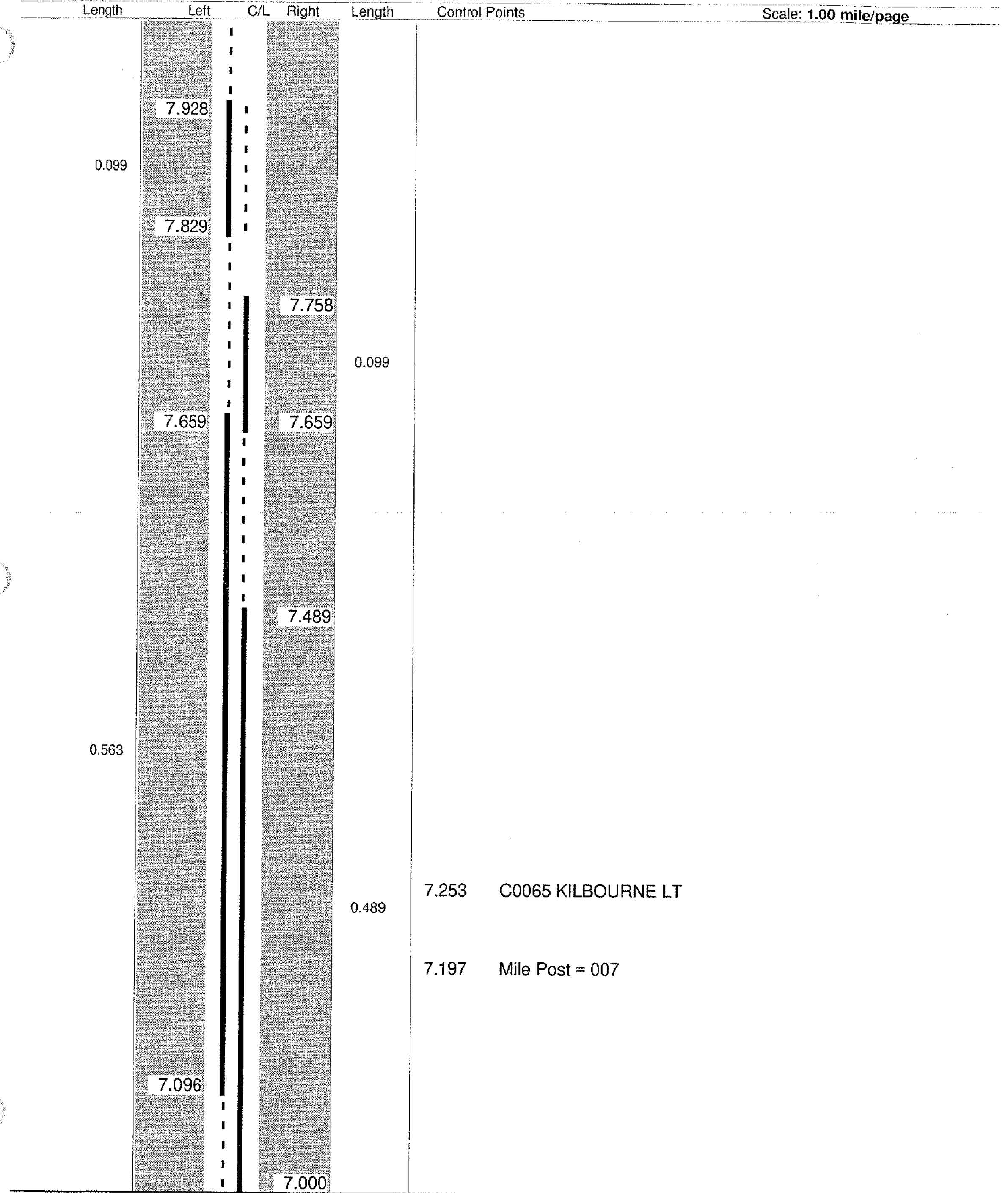
ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

Route: 0521R
Length: 11.256

Direction: East

From: 2.290 LEAVE DELAWARE
To: 13.546 S0656R

Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 1.402

Accum. total: 4.976

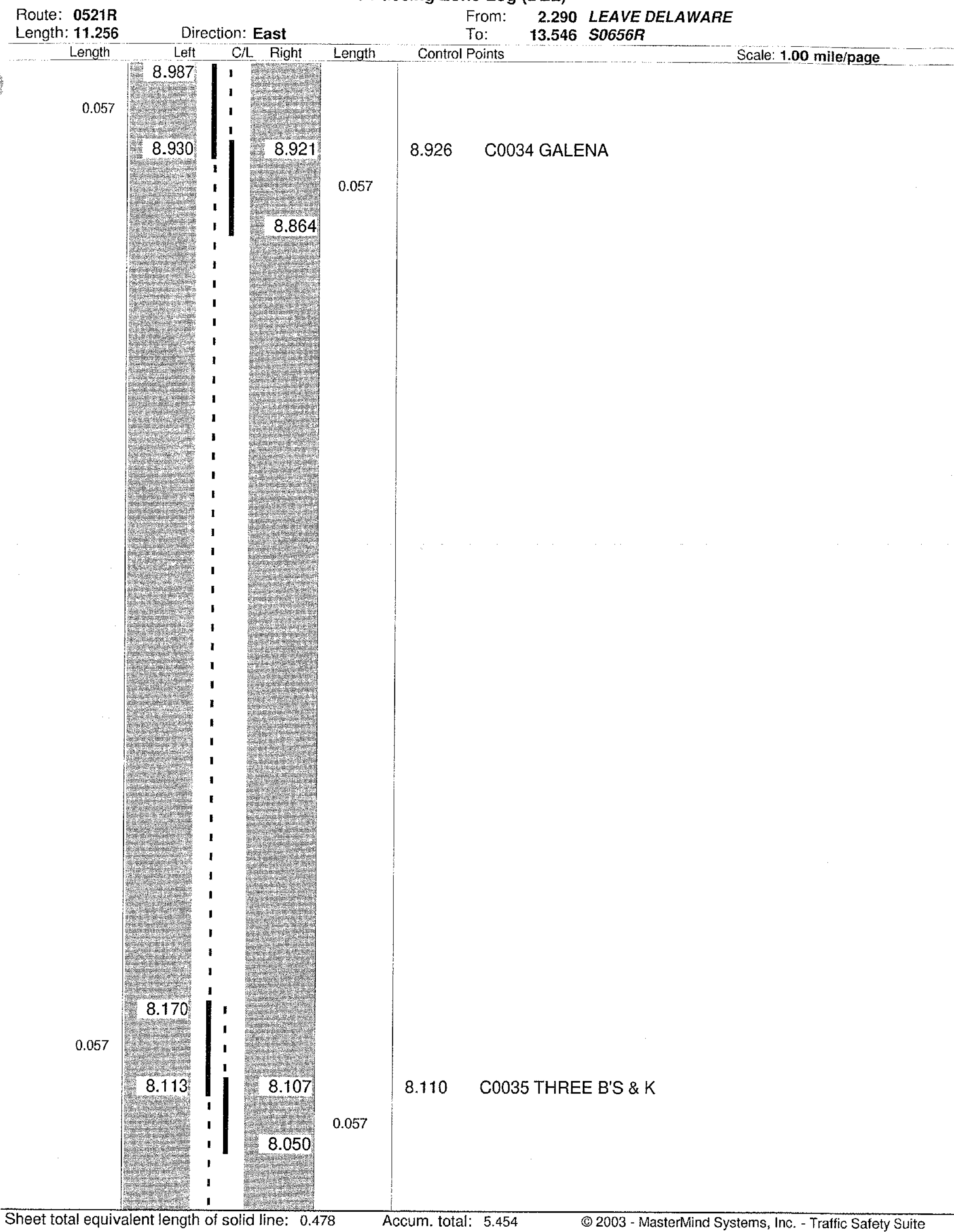
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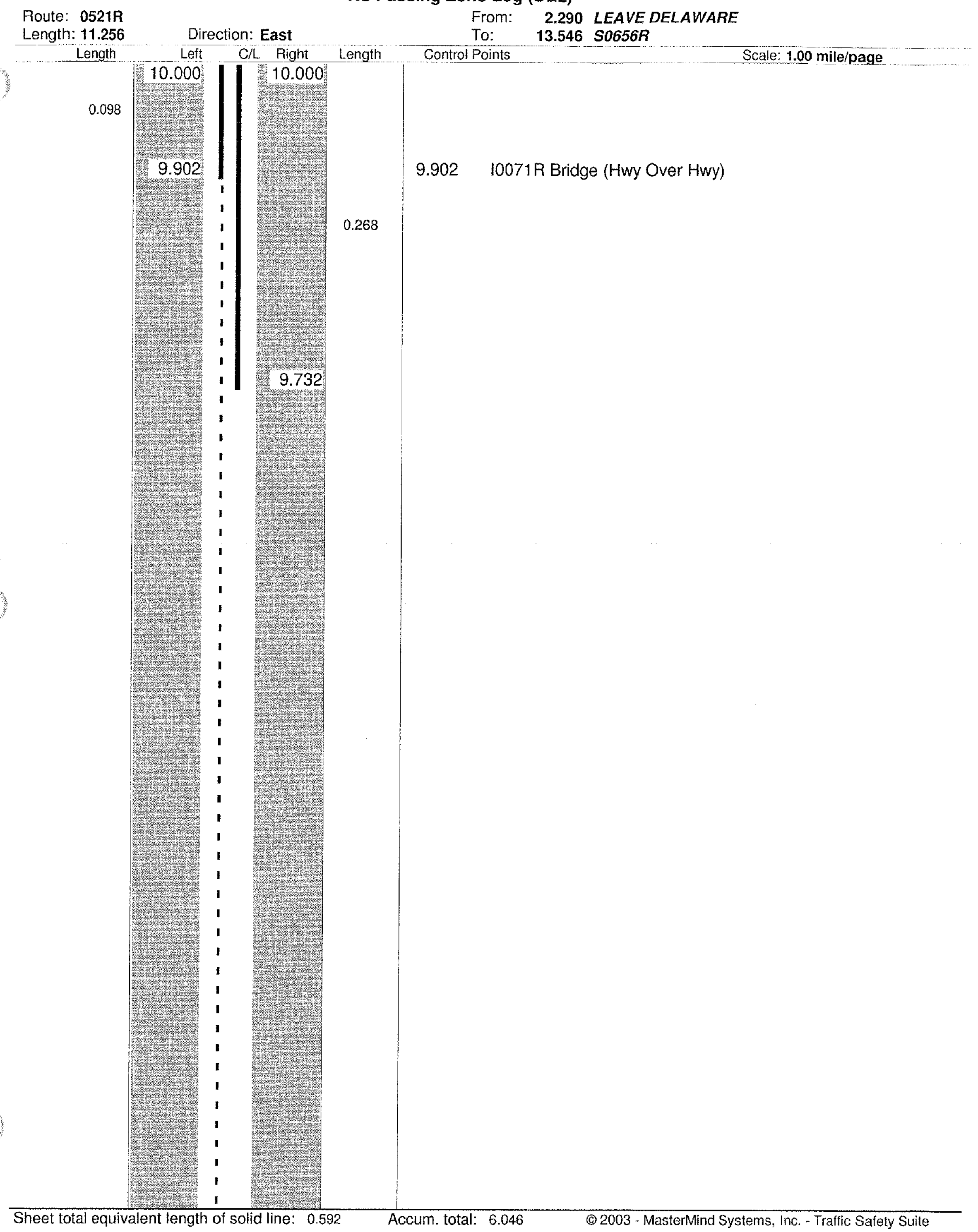
NO PASSING ZONE LOG

DEL-521-2.29

ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)



ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

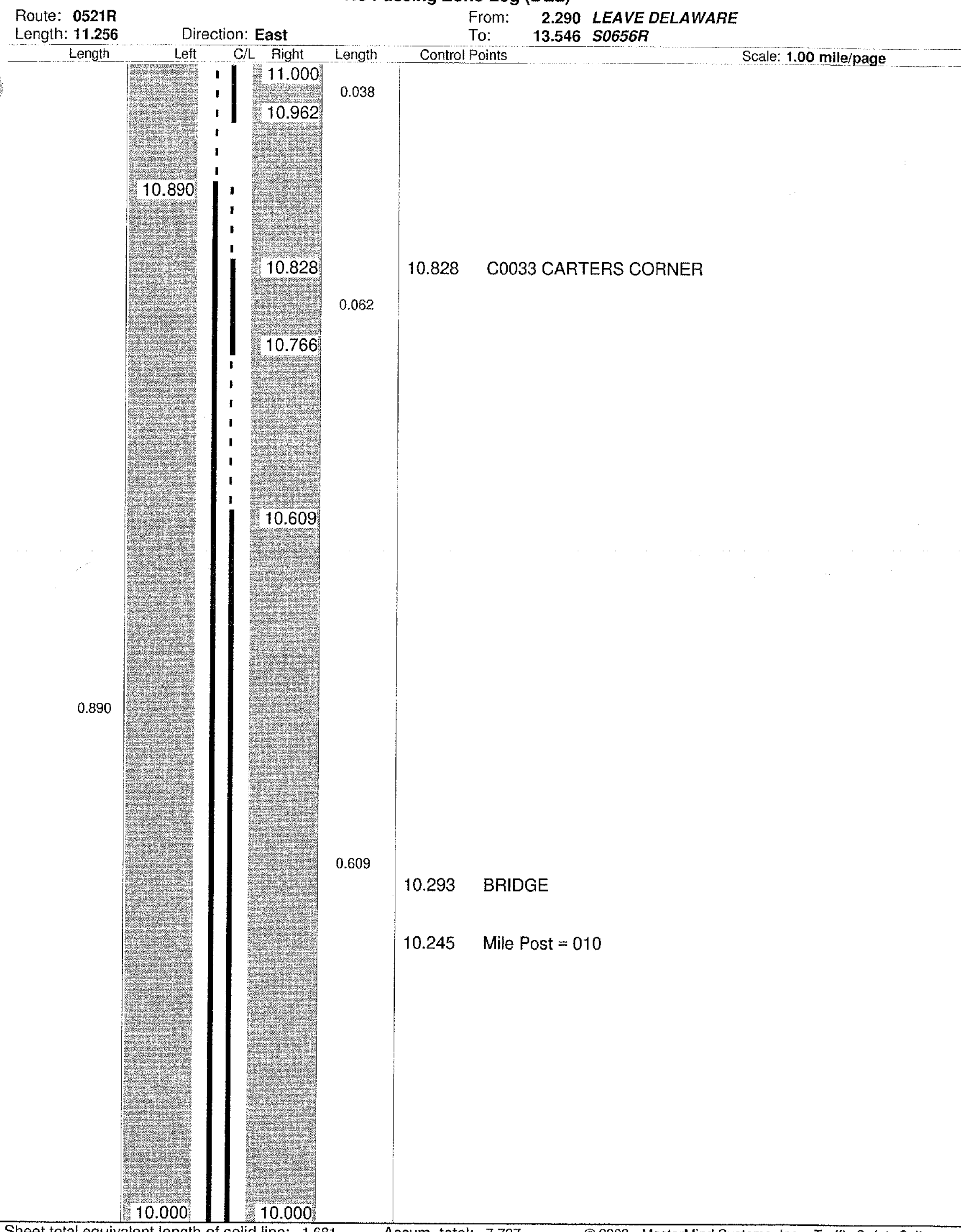


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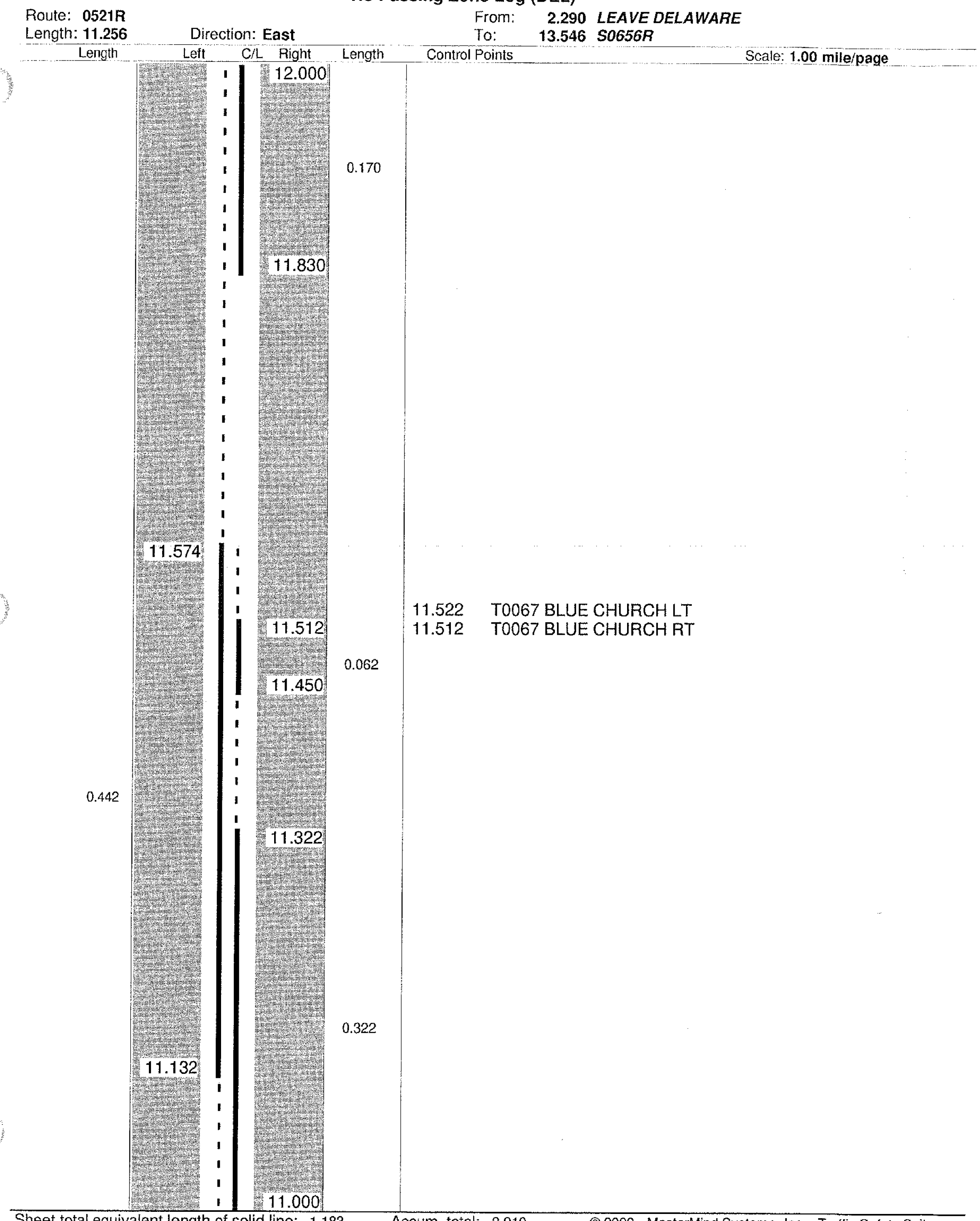
NO PASSING ZONE LOG

DEL-521-2.29

ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)



ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)



I:\Projects\del\521\0229\012\79364\production\STAGE III\zone5.dgn Design 20-APR-2011 2:21PM cransaw

NO PASSING ZONE LOG

DEL-521-2.29

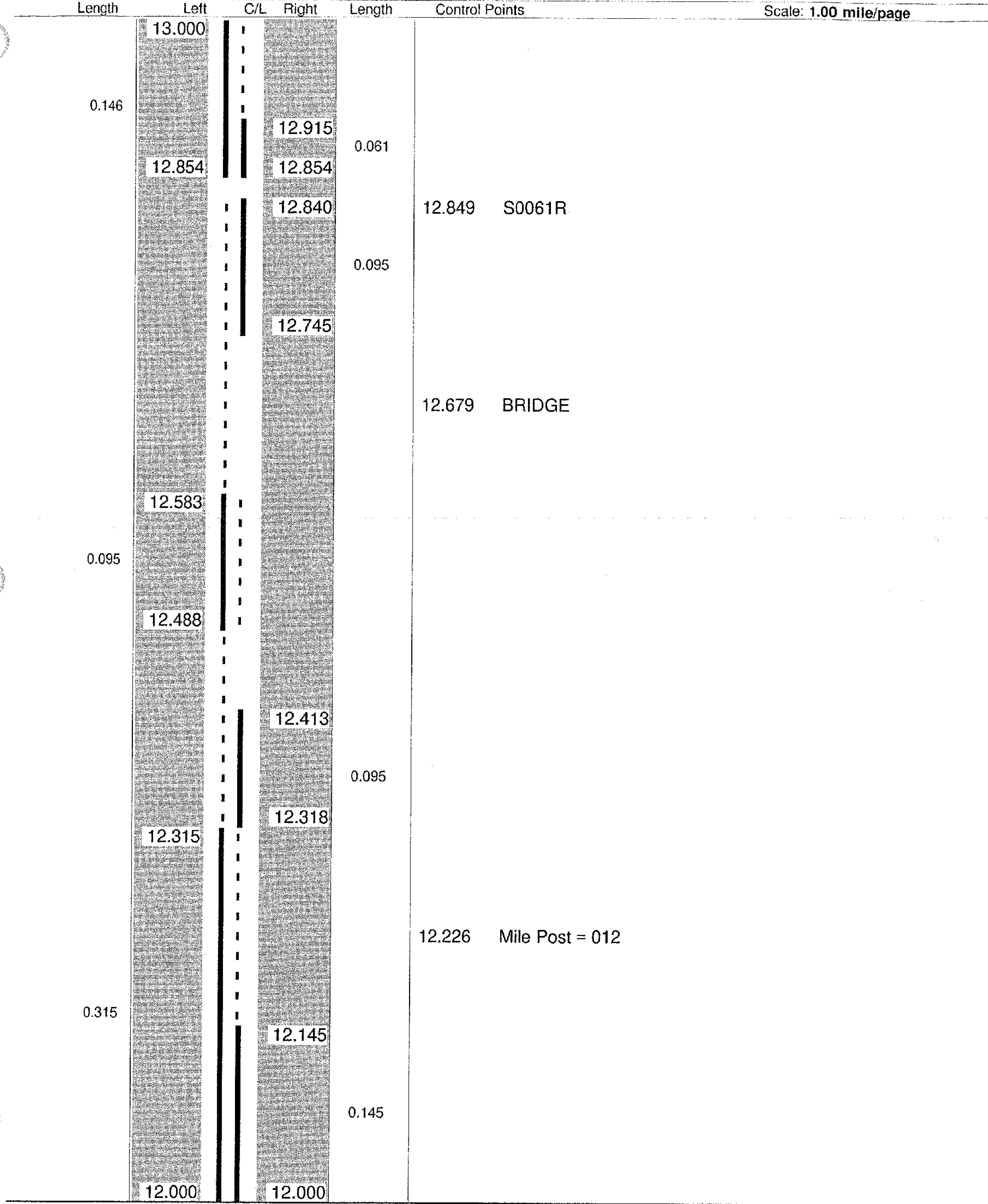
ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

Route: 0521R
Length: 11.256

Direction: East

From: 2.290 LEAVE DELAWARE
To: 13.546 S0656R

Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 1.147

Accum. total: 10.057

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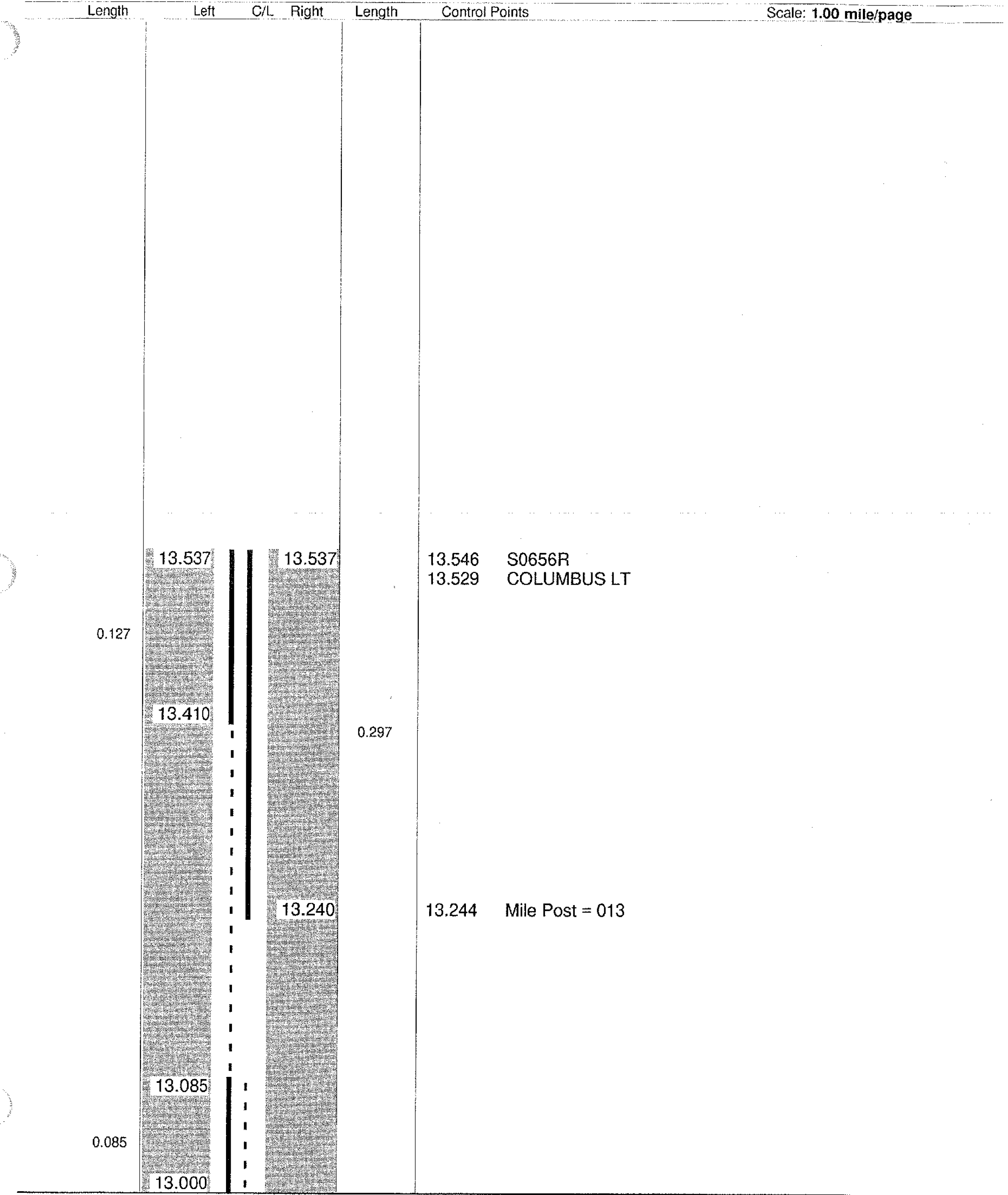
ODOT Dist 6 - Delaware Co - FINAL
No Passing Zone Log (DEL)

Route: 0521R
Length: 11.256

Direction: East

From: 2.290 LEAVE DELAWARE
To: 13.546 S0656R

Scale: 1.00 mile/page



Sheet total equivalent length of solid line: 0.612

Accum. total: 10.669

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NO PASSING ZONE LOG

DEL-521-2.29

DEL-521-3.13 (213451) UNDER CSX RR
 • SEE SHEET # FOR DETAILS
 DO NOT DECREASE EXISTING VERTICAL CLEARANCE.
 THE CONTRACTOR TO VERIFY BEFORE/AFTER.

DEL-521-6.28 (2103508) OVER SHEETS DITCH
DEL-521-11.38 (2103591) OVER TAYLOR DITCH
DEL-521-11.98 (2103621) OVER ROSECRANS RUN
 • PAVE OVER WITH SAME TREATMENT AS ROADWAY

DEL-521-6.83 (2103516) OVER ALUM CREEK
 3-SPAN STEEL BEAM BRIDGE
 DECK AREA = 753 S.Y.
 • DO NOT PAVE DECK. BUTT JOINTS AT END OF APPROACH SLABS
 • PATCH DECK, TYPE B DECK PATCHING. ESTIMATED QUANTITY 10%
 • SEAL DECK WITH SRS
 • CLEAN DEBRIS FROM EXPANSION JOINTS
 • CLEAN DEBRIS FROM SCUPPERS

DEL-521-9.93 (2103540) OVER I-71
 4-SPAN STEEL BEAM BRIDGE
 DECK AREA = 1484 S.Y.
 • DO NOT PAVE DECK. BUTT JOINTS AT END OF DECK
 • PATCH DECK, TYPE B DECK PATCHING. ESTIMATED QUANTITY 10%
 • CLEAN DEBRIS FROM EXPANSION JOINTS
 • CLEAN DEBRIS FROM SCUPPERS

DEL-521-10.32 (2103575) OVER LITTLE WALNUT CREEK
 3-SPAN CONCRETE SLAB BRIDGE
 DECK AREA = 266 S.Y.
 • DO NOT PAVE DECK. BUTT JOINTS AT END OF DECK
 • PATCH DECK, TYPE B DECK PATCHING. ESTIMATED QUANTITY 20%
 • SEAL DECK WITH SRS
 • PLACE POLYMER MODIFIED EXPANSION JOINT SYSTEM, BOTH ENDS

DEL-521-11.38 (2103591) OVER LITTLE WALNUT CREEK
 3-SPAN CONCRETE SLAB BRIDGE
 DECK AREA = 266 S.Y.
 • DO NOT PAVE DECK. BUTT JOINTS AT END OF APPROACH SLABS
 • PATCH DECK, TYPE B DECK PATCHING. ESTIMATED QUANTITY 20%
 • SEAL DECK WITH SRS
 • PLACE POLYMER MODIFIED EXPANSION JOINT SYSTEM, BOTH ENDS

THE CLEANING OF EXPANSION JOINTS AND/OR SCUPPERS AS LISTED ABOVE IS TO BE INCIDENTAL TO THE OTHER ITEMS OF WORK DESCRIBED AT EACH STRUCTURE.

SEE SHT. NO.	DESCRIPTION	UNIT	EXT. TOTAL	ITEM	LOCATION 1		RURAL PAVING	URBAN PAVING	ITEM	EXT. TOTAL	UNIT	DESCRIPTION	SEE SHT. NO.
					SFN#(2103516)	SFN#(2103516)							
6	DEL-521-6.28 SFN#(2103508)												
3	DEL-521-6.83 SFN#(2103516)	753											
	DEL-521-9.93 SFN#(2103540)												
	DEL-521-10.32 SFN#(2103575)	266											
	DEL-521-11.38 SFN#(2103591)		2										
	DEL-521-11.98 SFN#(2103621)		2										
	DEL-521-12.75 SFN#(2103664)												
							166	56	33				
							185	128	309				
							10400	5163300	51912300				
							47020						
							407	10000					
			12				498	47020					
		GALLON											
		CU	20										
		SY	1185										
		FT	128										26
		SY	309										

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PAVETECH INTERNATIONAL 4660 DUKE DRIVE SUITE 390 MASON, OH 45040 TEL: (513) 770-3122	LINEAR DYNAMICS, INC. 79 MONTGOMERY ST. MONTGOMERY, PA 17752 TEL: (570) 547-1621	WATSON-BOWMAN ACME 95 PINEVIEW DR. AMHERST, NY 14228 TEL: (716) 691-7566 OR TEL: (800) 253-9226
--	---	---

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE: POLYMER MODIFIED ASPHALT
SOFTENING POINT: 180 DEGREES F. MIN.
FLOW: 3 mm. MAX. AT 140 DEGREES F.
PENETRATION: 9 mm. MAX. AT 77 DEGREES F.
1 mm. MIN AT 0 DEGREES F.
ASTM D 3407
DUCTILITY: 40 cm. MIN. ASTM D 113
RESILIENCE: 60% MIN. AT 77 DEGREES F.
TENSILE ADHESION: 700% MIN.
SPECIFIC GRAVITY: 1.10 * 0.05
POURING TEMP: 350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION

THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER

SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/2" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

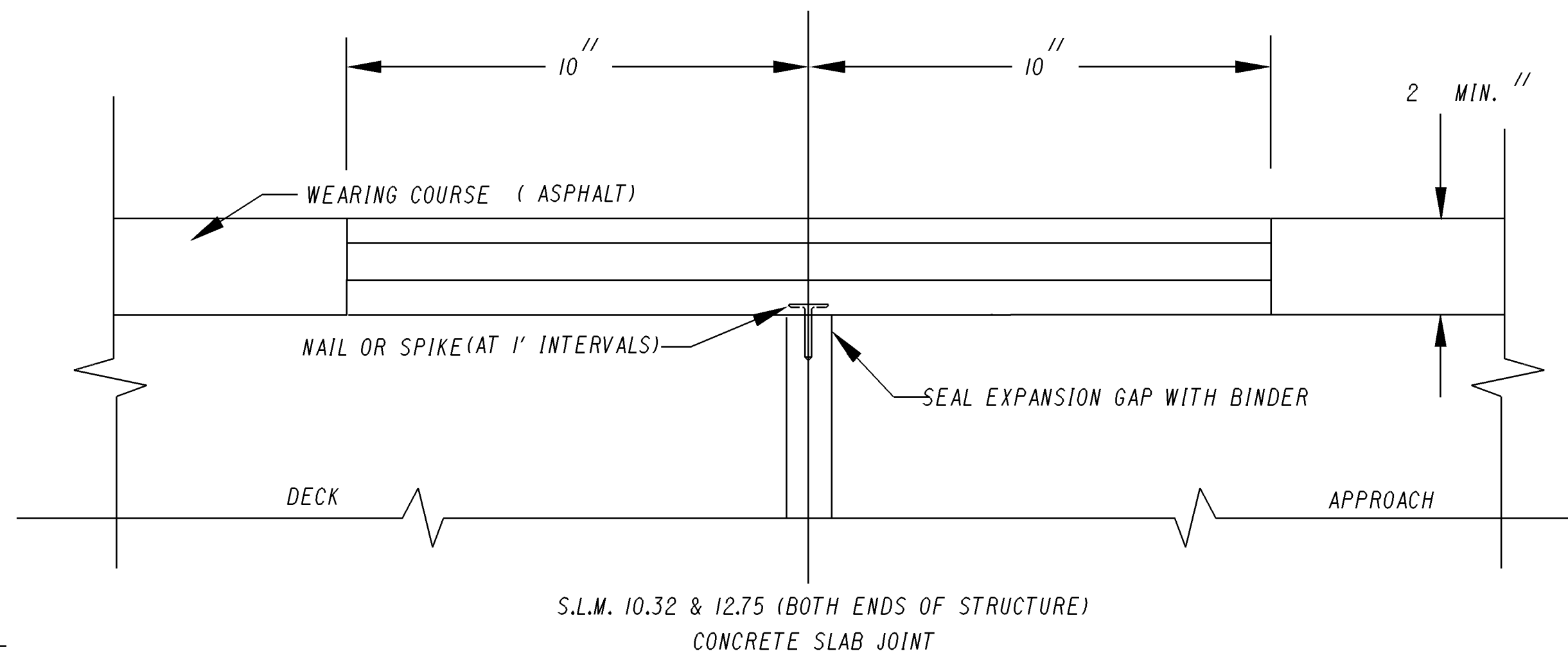
METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM:

DEL - 521 - 10.32 72 FT.
DEL - 521 - 12.75 56 FT.

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM = 128 FT. QUANTITIES HAVE BEEN CARRIED TO SHEET 25



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POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

DEL-521-2.29