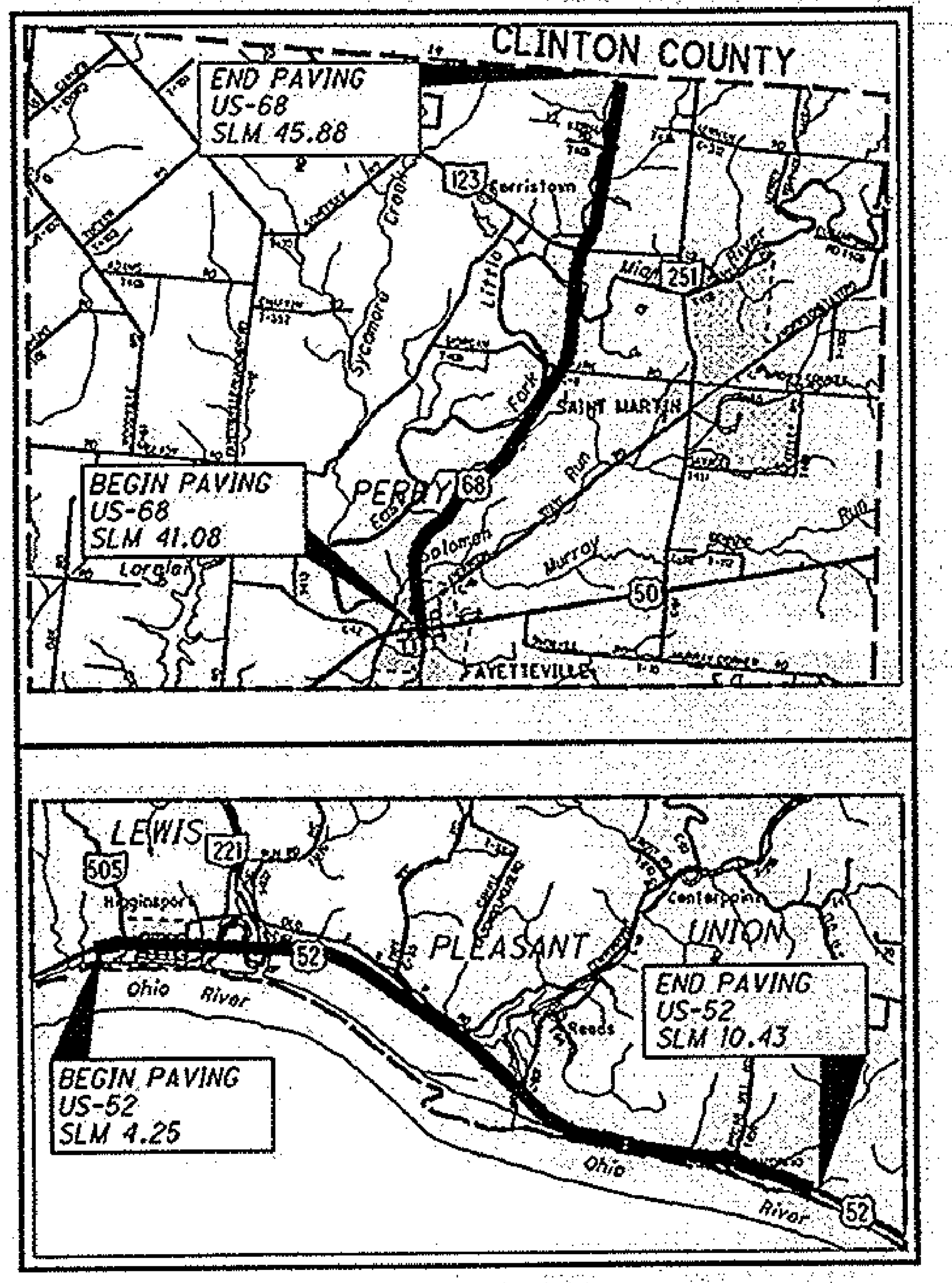


LOCATION MAP

SR 52 - LATITUDE: N 38°46'44" LONGITUDE: W 83°55'18"
USR 68 - LATITUDE: N 39°12'56" LONGITUDE: W 83°54'47"

SCALE IN MILES
0 1 2 3 4

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

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PLANNING AND ENGINEERING
650 EASTERN AVE.
CHILLICOTHE, OHIO 45601

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

BRO-52-4.25
BRO-68-41.08

VILLAGE OF HIGGINSPORT
VILLAGE OF FAYETTEVILLE
VILLAGE OF RIPLEY
LEWIS TOWNSHIP
PLEASANT TOWNSHIP
UNION TOWNSHIP
PERRY TOWNSHIP
BROWN COUNTY

INDEX OF SHEETS:

DESIGN DESIGNATION BRO-52-4.25

CURRENT ADT (2012) — 3310
TRUCKS (24 HOUR B&C) — 5%
DESIGN SPEED — 55 MPH
LEGAL SPEED — 55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
PRINCIPLE ARTERIAL
NHS PROJECT — NO

DESIGN EXCEPTIONS

NONE REQUIRED

DESIGN DESIGNATION BRO-68-41.08

CURRENT ADT (2012) — 2870
TRUCKS (24 HOUR B&C) — 10%
DESIGN SPEED — 55 MPH
LEGAL SPEED — 55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
MINOR ARTERIAL
NHS PROJECT — NO

DESIGN EXCEPTIONS

NONE REQUIRED

STATE OF OHIO
DIANNE E. KAHAL-BERMAN
E71505
REGISTERED
PROFESSIONAL ENGINEER

SIGNED Dianne E. Kahal-Berman, P.E.
DATE 7/1/14

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	4/20/12	MT-97.10	7/19/13	TC-41.20	10/18/13	EXJ-2-81	7/19/02
BP-4.1	7/19/13	MT-97.12	7/19/13				
BP-5.1	7/19/13	MT-99.20	7/19/13	TC-42.20	10/18/13	DS-1-92	7/18/03
BP-7.1	10/15/10	MT-105.10	7/19/13	TC-52.10	10/18/13		
				TC-52.20	1/17/14		
				TC-65.10	1/17/14		
				TC-65.11	1/17/14		
				TC-71.10	1/17/14		
				TC-73.10	1/17/14		

SUPPLEMENTAL SPECIFICATIONS

800	7/18/14
832	1/17/14

SPECIAL PROVISIONS

PROJECT DESCRIPTION

THE RESURFACING OF 6.18 MILES OF US-52 STARTING AT S.L.M. 4.25, THE WESTERN HIGGINSPORT CORP., AND ENDING AT S.L.M. 10.43 AND THE RESURFACING OF 4.80 MILES OF US-68 STARTING AT S.L.M. 41.08, NORTHERN EDGE OF U.S.R. 50 AND ENDING AT SLM 45.88 THE BROWN/CLINTON COUNTY LINE. NEW EPOXY PAVEMENT MARKING WILL BE INSTALLED ALONG THE ENTIRETY OF THE PROJECT.
WATERPROOFING AND RESURFACING OF STRUCTURES BRO-52-0552, BRO-52-0782 AND BRO-68-4142 IS INCLUDED IN THIS PROJECT.
THE RESURFACING OF 1.0380 MILES OF US-52 STARTING AT S.L.M. 12.3010 AND ENDING AT S.L.M. 13.3390 IN THE VILLAGE OF RIPLEY, INCLUDING PAVEMENT REPAIRS AND EPOXY PAVEMENT MARKINGS.

PROJECT EARTH DISTURBED AREA: N/A
(MAINTENANCE PROJECT)

ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A
(MAINTENANCE PROJECT)

NOTICE OF INTENT EARTH DISTURBED AREA: N/A
(MAINTENANCE PROJECT)

2013 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.

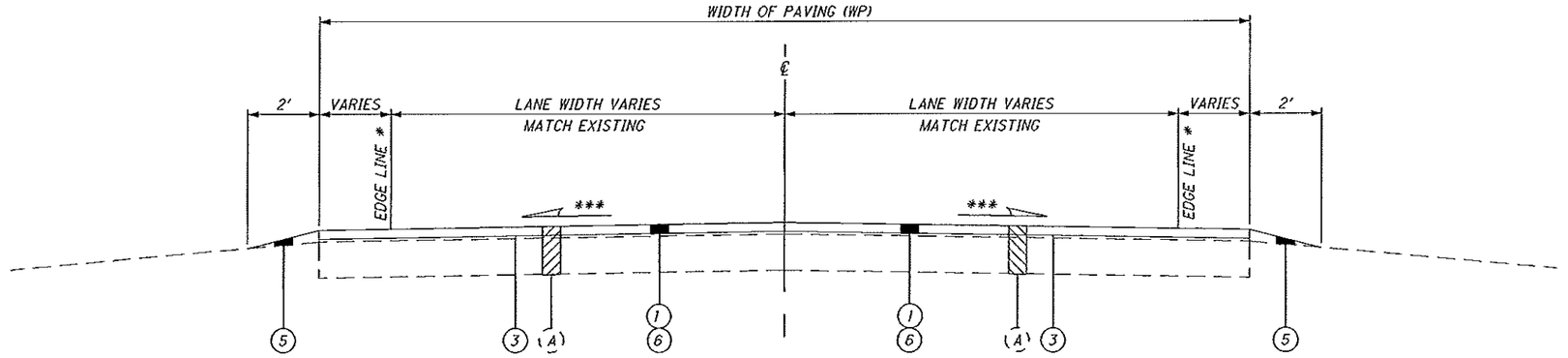
I HEREBY APPROVED THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Vaughn E. Wilson
DATE 7-1-14 DISTRICT DEPUTY DIRECTOR

APPROVED Jerry Wray
DATE 9-9-14 DIRECTOR, DEPARTMENT OF TRANSPORTATION

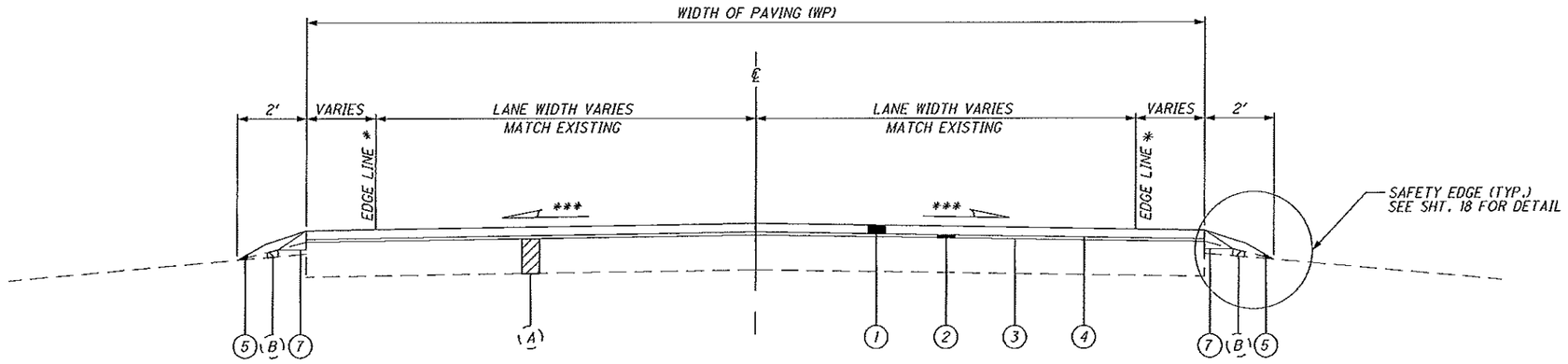
FEDERAL PROJECT NO. E091(174)
PID NO. 87253
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE

BRO-52-4.25
BRO-68-41.08



TYPICAL SECTION 1

BUTT JOINT AND PAVEMENT APPROACH TREATMENTS
SEE SHEETS 12 & 13 SECTION LOCATIONS



TYPICAL SECTION 2

SEE SHEETS 12 & 13 SECTION LOCATIONS

PAVEMENT LEGEND

(1) 448 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22
(2) 448 ** ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22, AS PER PLAN (SPOT LEVELING)
(3) 407 TACK COAT (0.075 GAL./SQ.YD.)
(4) 407 ** TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ.YD.)
(5) 617 2" AVERAGE DEPTH COMPACTED AGGREGATE
(6) 254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN, 1.5" MAX.
(7) 209 PREPARING SUBGRADE SHOULDER, AS PER PLAN
SEE SHEET 18 FOR DETAIL, SHEET 5 FOR GENERAL NOTES AND FOR QUANTITIES.

(A) EXISTING PAVEMENT AND BASE
(B) EXISTING SHOULDER

NOTES

TYPICAL SECTIONS SHOWN ARE FOR TANGENT SECTION WITH NORMAL CROWN ONLY. TYPICAL SECTIONS FOR SUPERELEVATED SECTIONS AND SUPERELEVATED TRANSITION SECTIONS FOR CURVED SECTIONS SHALL FOLLOW THE EXISTING PAVEMENT UNLESS THE ENGINEER DIRECTS THAT A CORRECTION IS TO BE PERFORMED.

* AFTER PAVEMENT OPERATIONS, EDGE OF PAVEMENT MARKINGS SHALL BE REPLACED AT CURRENT LOCATIONS. CONTRACTOR TO LOCATE MARKINGS BEFORE CONSTRUCTION. ENGINEER TO APPROVE PLACEMENT.

** SPOT LEVELING COURSE TO BE USED AS DIRECTED BY THE ENGINEER TO CORRECT IRREGULARITIES IN THE PROFILE AND CROSS SECTION OF THE EXISTING PAVEMENT PRIOR TO PLACEMENT OF THE UNIFORM 1.5" SURFACE COURSE. (0.5" AVERAGE THICKNESS WAS USED FOR ESTIMATING PURPOSES ONLY.)

ALTHOUGH SHOWN ON TYPICAL SECTION, SPOT LEVELING COURSE AND TACK COAT FOR INTERMEDIATE COURSE INTENDED TO BE PERFORMED ONLY AS DIRECTED BY ENGINEER.

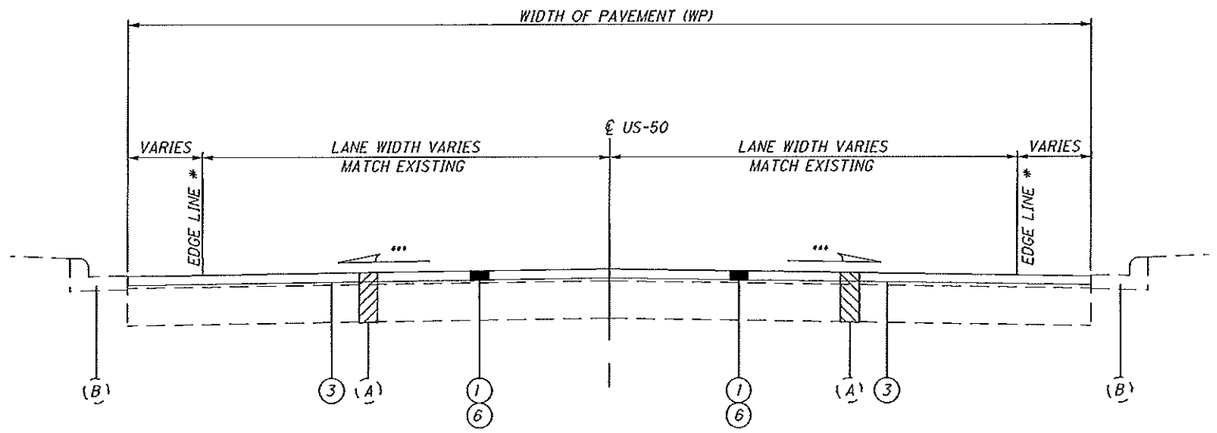
*** MATCH EXISTING SLOPE UNLESS THE ENGINEER DIRECTS THAT A CORRECTION IS TO BE PERFORMED.

SEE BP 3.1 FOR BUTT JOINT AND PAVEMENT FEATHERING. ALSO, SEE GENERAL NOTE, ITEM 254 - PAVEMENT PLANNING, ASPHALT CONCRETE, AS PER PLAN ON SHEET 5.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE EX. UTILITY GRATES, MANHOLES, AND VALVES, LOCATED IN ROADWAY AND ADJACENT TO ROADWAY, BEFORE PLANING. THE CONTRACTOR WILL LEAVE ALL UNDISTURBED BEFORE, DURING, AND AFTER CONSTRUCTION UNLESS NOTED OTHERWISE IN PLANS. MAINTAIN POSITIVE DRAINAGE AT EXISTING INLETS.

TYPICAL SECTIONS

BRO-52-4.25
BRO-68-41.08



TYPICAL SECTION 3

SEE SHEET 12 FOR SECTION LOCATIONS

PAVEMENT LEGEND

(1) 448 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
(2) 448 ** ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, AS PER PLAN (SPOT LEVELING)
(3) 407 TACK COAT (0.075 GAL./SQ.YD.)
(4) 407 ** TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ.YD.)
(5) 617 2" AVERAGE DEPTH COMPACTED AGGREGATE
(6) 254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN, 1.5" MAX.
(7) 209 PREPARING SUBGRADE SHOULDER, AS PER PLAN
SEE SHEET 18 FOR DETAIL, SHEET 5 FOR GENERAL NOTES AND FOR QUANTITIES.

(A) EXISTING PAVEMENT AND BASE
(B) EXISTING SHOULDER

NOTES

TYPICAL SECTIONS SHOWN ARE FOR TANGENT SECTION WITH NORMAL CROWN ONLY. TYPICAL SECTIONS FOR SUPERELEVATED SECTIONS AND SUPERELEVATED TRANSITION SECTIONS FOR CURVED SECTIONS SHALL FOLLOW THE EXISTING PAVEMENT UNLESS THE ENGINEER DIRECTS THAT A CORRECTION IS TO BE PERFORMED.

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** SPOT LEVELING COURSE TO BE USED AS DIRECTED BY THE ENGINEER TO CORRECT IRREGULARITIES IN THE PROFILE AND CROSS SECTION OF THE EXISTING PAVEMENT PRIOR TO PLACEMENT OF THE UNIFORM 1.5" SURFACE COURSE. (0.5" AVERAGE THICKNESS WAS USED FOR ESTIMATING PURPOSES ONLY.)

ALTHOUGH SHOWN ON TYPICAL SECTION, SPOT LEVELING COURSE AND TACK COAT FOR INTERMEDIATE COURSE INTENDED TO BE PERFORMED ONLY AS DIRECTED BY ENGINEER.

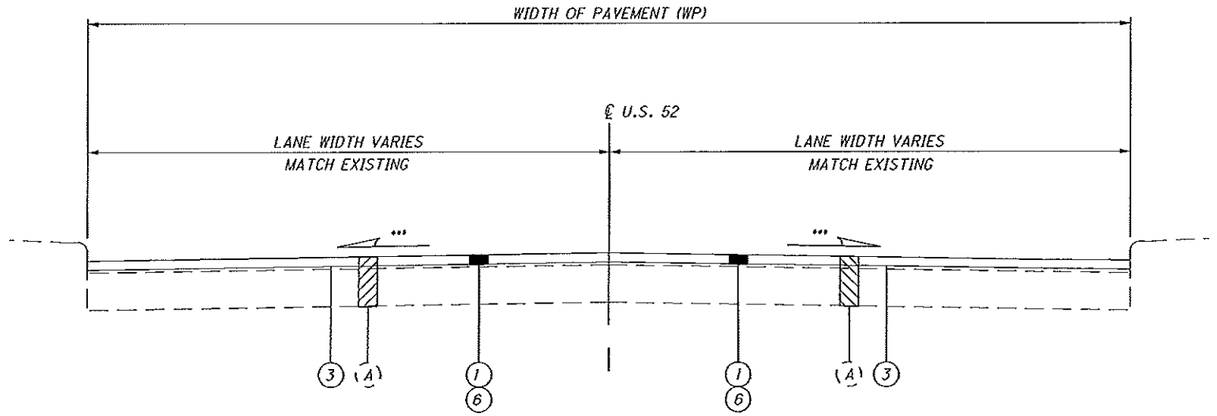
*** MATCH EXISTING SLOPE UNLESS THE ENGINEER DIRECTS THAT A CORRECTION IS TO BE PERFORMED.

SEE BP 3.1 FOR BUTT JOINT AND PAVEMENT FEATHERING. ALSO, SEE GENERAL NOTE, ITEM 254 - PAVEMENT PLANNING, ASPHALT CONCRETE, AS PER PLAN ON SHEET 5.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE EX. UTILITY GRATES, MANHOLES, AND VALVES, LOCATED IN ROADWAY AND ADJACENT TO ROADWAY, BEFORE PLANING. THE CONTRACTOR WILL LEAVE ALL UNDISTURBED BEFORE, DURING, AND AFTER CONSTRUCTION UNLESS NOTED OTHERWISE IN PLANS. MAINTAIN POSITIVE DRAINAGE AT EXISTING INLETS.

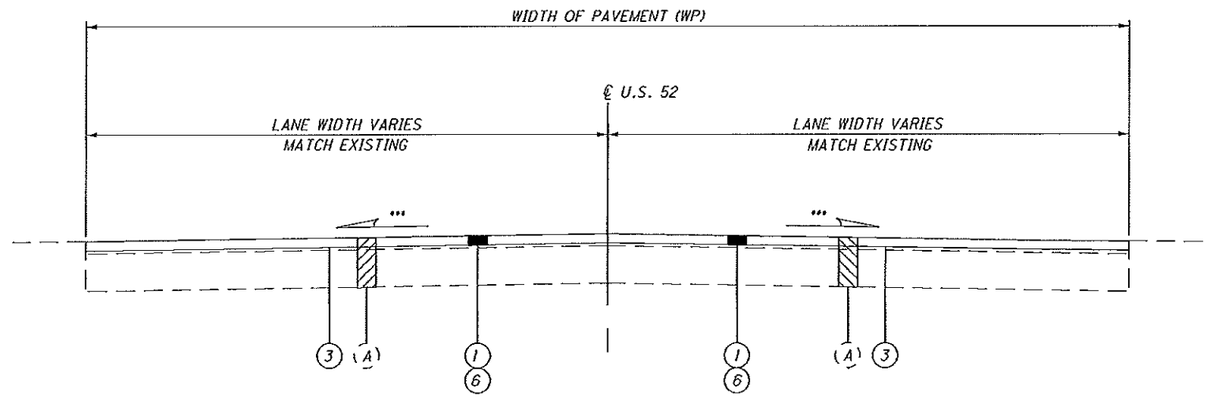
TYPICAL SECTIONS

BRO-52-4.25
BRO-68-41.08



TYPICAL SECTION 4

SEE SHEET 14 FOR SECTION LOCATIONS



TYPICAL SECTION 5

SEE SHEET 14 FOR SECTION LOCATIONS

PAVEMENT LEGEND

(1) 448 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22
(2) 448 ** ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22, AS PER PLAN (SPOT LEVELING)
(3) 407 TACK COAT (0.075 GAL./SQ.YD.)
(4) 407 ** TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ.YD.)
(5) 617 2" AVERAGE DEPTH COMPACTED AGGREGATE
(6) 254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN, 1.5" MAX.
(7) 209 PREPARING SUBGRADE SHOULDER, AS PER PLAN
SEE SHEET 18 FOR DETAIL, SHEET 5 FOR GENERAL NOTES AND FOR QUANTITIES.

(A) EXISTING PAVEMENT AND BASE
(B) EXISTING SHOULDER

NOTES

TYPICAL SECTIONS SHOWN ARE FOR TANGENT SECTION WITH NORMAL CROWN ONLY. TYPICAL SECTIONS FOR SUPERELEVATED SECTIONS AND SUPERELEVATED TRANSITION SECTIONS FOR CURVED SECTIONS SHALL FOLLOW THE EXISTING PAVEMENT UNLESS THE ENGINEER DIRECTS THAT A CORRECTION IS TO BE PERFORMED.

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** SPOT LEVELING COURSE TO BE USED AS DIRECTED BY THE ENGINEER TO CORRECT IRREGULARITIES IN THE PROFILE AND CROSS SECTION OF THE EXISTING PAVEMENT PRIOR TO PLACEMENT OF THE UNIFORM 1.5" SURFACE COURSE. (0.5" AVERAGE THICKNESS WAS USED FOR ESTIMATING PURPOSES ONLY.)

ALTHOUGH SHOWN ON TYPICAL SECTION, SPOT LEVELING COURSE AND TACK COAT FOR INTERMEDIATE COURSE INTENDED TO BE PERFORMED ONLY AS DIRECTED BY ENGINEER.

*** MATCH EXISTING SLOPE UNLESS THE ENGINEER DIRECTS THAT A CORRECTION IS TO BE PERFORMED.

SEE BP 3.1 FOR BUTT JOINT AND PAVEMENT FEATHERING. ALSO, SEE GENERAL NOTE, ITEM 254 - PAVEMENT PLANNING, ASPHALT CONCRETE, AS PER PLAN ON SHEET 5.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE EX. UTILITY GRATES, MANHOLES, AND VALVES, LOCATED IN ROADWAY AND ADJACENT TO ROADWAY, BEFORE PLANING. THE CONTRACTOR WILL LEAVE ALL UNDISTURBED BEFORE, DURING, AND AFTER CONSTRUCTION UNLESS NOTED OTHERWISE IN PLANS. MAINTAIN POSITIVE DRAINAGE AT EXISTING INLETS.

TYPICAL SECTIONS

BRO-52-4.25
BRO-68-41.08

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

BROWN COUNTY RURAL WATER ASSOCIATION
MR. DAN SARBACH
GENERAL MANAGER
3818 US 52, RIPLEY, OHIO 45167
(937) 375-4106

DUKE ENERGY ELECTRIC
MR. TOM BIRKENHAUER
SUPERVISOR-DITRIBUTION DESIGN
ELECTRIC DISTRIBUTION ENGINEERING
P.O. BOX 960, ROOM 467-A
CINCINNATI,OHIO 45201
(513) 287-1042

AT&T OHIO
MR. JESSE WEAD
TELECOMMUNICATIONS SPECIALIST
3233 WOODMAN DRIVE
DAYTON, OHIO 45420
(937) 296-3894
EMAIL:jw1291@att.com

DUKE ENERGY GAS
MR. BILL ROTH
GAS ENGINEER
139 EAST 4TH ST., ROOM 460 ANNEX
CINCINNATI, OHIO 45201
(513) 287-1098

TIME WARNER CABLE
MR. NEAL HENSLEY
CONSTRUCTION SUPERVISOR
11252 CORNELL PARK DRIVE
CINCINNATI, OHIO 45201
(513) 489-5907
EMAIL:neal.hensley@twcable.com

FRONTIER COMMUNICATIONS
MR. DALE DOTSON
CONTRACT ENGINEER
241 S. NELSON AVE.
WILMINGTON, OHIO 45177
(937) 382-0055

VILLAGE OF HIGGINSPORT
MR. JOEL HERRMANN, MAYOR
P.O. BOX 121
HIGGINSPORT, OHIO 45131
(937) 378-4155

VILLAGE OF RIPLEY
PUBLIC UTILITIES
P.O. BOX 219
123 WATERWORK DRIVE
RIPLEY, OHIO 45167
(937) 392-377

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

WINDOW CONTRACT TABLE

DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE
ALL WORK ON PROJECT	60

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

DISPOSAL OF ASPHALT GRINDINGS

ASPHALT GRINDINGS FROM THIS PROJECT ARE TO BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED.

RPM

IN ADDITION TO CMS 621.03, RPM'S SHALL NOT BE INSTALLED ON BRIDGES OR APPROACH SLABS THAT HAVE A CONCRETE SURFACE. INSTALL RPM'S IN ASPHALT CONCRETE BEFORE AND AFTER THE SUPERSTRUCTURE. RPM'S LOCATED IN EXISTING CONCRETE BRIDGE DECKS OR APPROACH SLABS SHALL BE LEFT IN PLACE.

ITEM 621, RAISED PAVEMENT MARKER (RPM) REMOVED

RPMs SHALL BE REMOVED PRIOR TO RESURFACING AND BE DISPOSED OF BY THE CONTRACTOR.

ALL BROKEN, CRACKED, FRAGMENTED OR PARTIAL REMNANTS OF RAISED PAVEMENT MARKERS (RPMs) SHALL BE TOTALLY REMOVED AND THE PAVEMENT RESTORED AS DESCRIBED IN THE CONSTRUCTION AND MATERIAL SPECIFICATION (CMS) ITEM 621.08.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

THIS ITEM SHALL BE IN ACCORDANCE WITH SECTION 254 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK:

(1.5" MAX.) - PLANING FOR BUTT JOINTS:

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION FROM THE PROPOSED PAVEMENT TYPICAL SECTION TO MEET THE EXISTING PAVEMENT OR BRIDGE DECK AND APPROXIMATE 1.5" ELEVATION TRANSITION IN THE PAVEMENT PROFILE IN ACCORDANCE WITH STANDARD DRAWING BP-3.1 DETAIL FOR "BUTT JOINT" EXCEPT THAT THE MINIMUM LENGTH OF THE BUTT JOINT SHALL BE 50 FOOT PER INCH OF PROPOSED OVERLAY. DEPTH OF PLANING IS VARIABLE FROM A MINIMUM OF 0" TO A MAXIMUM OF 1.5".

(3" MAX.) - PLANING AT BRIDGES BRO-52-0552, BRO-52-0782, AND BRO-68-4412

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION AND TO NOT INCREASE THE DEPTH OF THE WEARING COURSE ON THE BRIDGE AND APPROACH SO THAT THE DEAD LOAD ON THE BRIDGE IS NOT INCREASED.

PLANING OF BRIDGE DECKS AND APPROACH SLABS SHALL BE FULL WIDTH OF BRIDGE AND APPROACH SLABS AT THE UNIFORM DEPTH OF 3" AND VARIABLE ON APPROACH PAVEMENT FROM A MINIMUM OF 0" TO A MAXIMUM OF 1.5" IN ACCORDANCE WITH STANDARD DRAWING BP-3.1 DETAIL FOR "FEATHERING AT STRUCTURE" EXCEPT THAT THE MINIMUM LENGTH OF THE "FEATHER" SHALL BE 50 FOOT PER INCH OF PROPOSED OVERLAY ON THE APPROACH PAVEMENT TO THE BRIDGE.

EXTRA AREAS

QUANTITIES FOR EXTRA AREAS ARE SHOWN ON SHEETS 10 AND 11. THESE AREAS INCLUDE THE FOLLOWING:

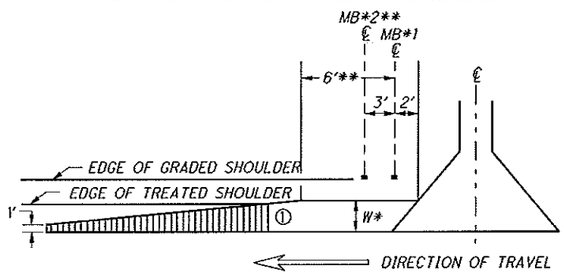
DRIVEWAYS - AVERAGE OF 3 FEET OFFSET FROM THE EDGE OF PAVEMENT, MAXIMUM TO BE DETERMINED BY THE ENGINEER TO PROVIDE ADEQUATE TRANSITION FROM THE DRIVE TO THE PROPOSED ALIGNMENT.

MAILBOX APPROACHES - MINIMUM OF 6 FEET FROM THE EDGE OF TRAVELED WAY OR AS DIRECTED BY THE ENGINEER.

TURN LANES - FULL WIDTH OR AS DIRECTED BY THE ENGINEER.

CURVE WIDENING - AS DIRECTED BY THE ENGINEER.

OTHER DESIGNATED AREAS - AS DIRECTED BY THE ENGINEER.



① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

* WHERE POSTS ARE BEHIND GUARDRAIL, TURNOUT SHALL EXTEND TO FACE OF GUARDRAIL. WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6' MINIMUM.

** ADD 3' FOR EACH ADDITIONAL MAILBOX.

ITEM 254 - PATCHING PLANED SURFACE

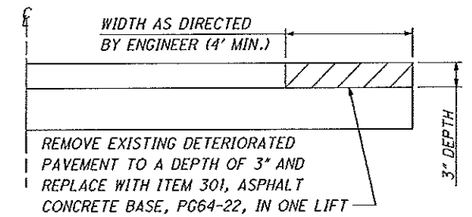
THIS ITEM SHALL BE IN ACCORDANCE WITH SECTION 254 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK:

ITEM 254 PATCHING PLANED SURFACE

01/STR/PV/STATE	117 SQ. YD.
03/NHS/PV/STATE	6309 SQ. YD.
TOTAL CARRIED TO THE GENERAL SUMMARY	6426 SQ. YD.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN



THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED AND CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR,AS PER PLAN

01/STR/PV/STATE	1566 SQ. YD.
03/NHS/PV/STATE	2148 SQ. YD.
TOTAL CARRIED TO THE GENERAL SUMMARY	3714 SQ.YD.

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22, AS PER PLAN (SPOT LEVELING)

THIS MATERIAL IS TO BE PLACED AS A SEPARATE LEVELING OPERATION AS DIRECTED BY THE ENGINEER TO CORRECT IRREGULARITIES IN THE EXISTING PAVEMENT CROSS SECTION AND PROFILE PRIOR TO PLACEMENT OF THE SURFACE COURSE. FOR ESTIMATING PURPOSES ONLY, THE PLAN USES A 0.5" DEPTH FOR THIS COURSE.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE ABOVE WORK:

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

01/STR/PV/State	5870 GAL.
03/NHS/PV/STSTE	8053 GAL.
TOTAL CARRIED TO THE GENERAL SUMMARY	13,923 GAL.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22, AS PER PLAN (SPOT LEVELING)

01/STR/PV/STATE	1087 CU. YD.
03/NHS/PV/STATE	1492 CU. YD.
TOTAL CARRIED TO THE GENERAL SUMMARY	2579 CU.YD.

CALCULATED BCB CHECKED HJH

GENERAL NOTES

BRO-52-4.25
BRO-68-41.08

SAFETY EDGE PLAN NOTE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THE CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
www.transtechsys.com

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
www.advantaedgepaving.com

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONIC LABORATORIES, INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 mm) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK:

ITEM 407, TACK COAT

01/STR/PV/STATE	80 GAL.
03/NHS/PV/STATE	102 GAL.
TOTAL CARRIED TO THE GENERAL SUMMARY	182 GAL.

ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

01/STR/PV/STATE	64 CU. YD.
03/NHS/PV/STATE	82 CU. YD.
TOTAL CARRIED TO THE GENERAL SUMMARY	146 CU. YD.

ITEM 209 - PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

REMOVED OR EXCAVATED MATERIALS SHALL BE RECYCLED OR DISPOSED OF ACCORDING TO CMS 105.16 AND 105.17. COST FOR REMOVED OR EXCAVATED MATERIALS TO BE INCLUDED IN ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK:

ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

01/STR/PV/STATE	8.70 MILE
03/NHS/PV/STATE	11.10 MILE
TOTAL CARRIED TO THE GENERAL SUMMARY	19.80 MILE

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: COMPRESSION SEAL

THIS ITEM SHALL CONSIST OF REMOVING AND REPLACING THE EXISTING COMPRESSION SEAL BETWEEN THE EXISTING DECK AND THE ABUTMENT BACKWALL.

SANDBLAST THE EXISTING STEEL ARMOR TO WHITE METAL AND THEN BLOW THE JOINT OPENING WITH OIL-FREE COMPRESSED AIR TO REMOVE LAITANCE AND DEBRIS FROM THE SANDBLASTING OPERATION. ONCE COMPLETE, INSTALL A CONTINUOUS COMPRESSION SEAL IN ACCORDANCE WITH STANDARD BRIDGE DRAWING EXJ-2-81.

ITEM 608 - 4" CONCRETE SIDEWALK AND ITEM 609 CURB, TYPE 2-B

IN THE EVENT OF CURB AND SIDEWALK BEING DESTROYED DURING INSTALLATION OR REPLACEMENT OF CURB RAMPS THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DETERMINED BY THE ENGINEER.

ITEM 608, 4" CONCRETE WALK

03/NHS/PV/STSTE	200 SQ.FT.

ITEM 609, CURB TYPE 2-B

03/NHS/PV/STATE	100 FT

ITEM 690 - SPECIAL-MISC.: ASPHALT CONCRETE MICROMILLING

THIS ITEM CONSISTS OF MICROMILLING THE EXISTING ¼" EPOXY OVERLAY FROM THE SUPERSTRUCTURE AND THE APPROACH SLABS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS. ENSURE THE MICROMILLED SURFACE MEETS SMOOTHNESS REQUIREMENTS AND PROVIDES A CONSTANT CROSS SLOPE. USE MICROMILLING EQUIPMENT THAT IS POWER DRIVEN AND SELF-PROPELLED HAVING SUFFICIENT POWER, TRACTION AND STABILITY TO REMOVE THE REQUIRED THICKNESS OF OVERLAY. THE MICROMILLING MACHINE SHALL USE CARBIDE TIPPED TEETH. THE CUTTING HEAD AND TEETH SHALL BE DESIGNED, MAINTAINED AND OPERATED TO PRODUCE A SURFACE FREE FROM GROOVES, RIDGES, GOUGES OR OTHER IRREGULARITIES DETRIMENTAL TO THE SAFE OPERATION OF VEHICLES IN TRAFFIC. USE A 6 FT. (1.83 METER) MINIMUM WIDTH CUTTING HEAD WITH A 2 INCH (5 MM) TOOTH SPACING.

THE MICROMILLING MACHINE SHALL HAVE A MINIMUM 2 POINT AVERAGE SYSTEM CAPABLE OF PROVIDING A UNIFORMLY VARYING DEPTH OF CUT AND CROSS SLOPE WHILE THE MACHINE IS IN MOTION.

ENSURE MILLINGS DO NOT FLOW ACROSS LANES USED BY THE TRAVELING PUBLIC OR INTO THE STREAM OR DRAINAGE FACILITIES. THE CONTRACTOR SHALL IMPLEMENT EFFECTIVE MEASURES TO CONTROL DUST, PAVEMENT CONTAMINATION, STREAM CONTAMINATION AND SCATTERING OF LOOSE PARTICLES DURING THE MILLING AND CLEANING OPERATION. ALL MILLING RESIDUE SHALL BE REMOVED FROM THE MILLED SURFACE.

MICROMILL THE SUPERSTRUCTURE AND APPROACH SLABS TO EXPOSE A SURFACE THAT IS 100% MILLED WHILE MAINTAINING A CONSTANT CROSS SLOPE BETWEEN THE MILLING EXTREMITIES IN EACH LANE.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE PER SQUARE YARD FOR ITEM 690, SPECIAL-MISC.: ASPHALT CONCRETE MICROMILLING, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK - TYPE B

BRIDGE BRO-52-0552, SFN: 0800813SHALL BE SOUND FOR PATCH AREAS. DESIGNATED AREAS SHALL BE APPROVED BY THE ENGINEER AND PATCHING SHALL BE DONE USING TYPE A MATERIALS AND PROCEDURES SHALL MEET THE REQUIREMENTS OF PROPOSAL NOTE 512, ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, 12/31/2012.

ESTIMATED AREAS FOR PATCHING ARE ON SHEET 18.

PAYMENT WILL BE FOR THE ACTUAL DECK AREA REPAIRED AT THE CONTRACT PRICE FOR ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK - TYPE B.

CALCULATED BCB
CHECKED HJH

GENERAL NOTES

BRO-52-4.25
BRO-68-41.08

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR WILL ADVISE THE DISTRICT PUBLIC INFORMATION OFFICER AT (740) 774-8834, OR FAX (740) 773-2710 SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/ CLARIFICATION FOR ANY QUESTIONS.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

MEMORIAL DAY	FOURTH OF JULY
LABOR DAY	THANKSGIVING
SPECIAL LOCAL EVENTS	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) MONDAY
MONDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) TUESDAY
TUESDAY	12:00N MONDAY THROUGH (6:00 AM OR 12:00N) WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH (6:00 AM OR 12:00N) THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) MONDAY
FRIDAY	12:00N THURSDAY THROUGH (6:00 AM OR 12:00N) MONDAY
SATURDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) MONDAY

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 IN THE AMOUNT OF $50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

THE CONTRACTOR SHALL ARRANGE FOR ALL MAINTENANCE OF TRAFFIC OPERATIONS SUCH THAT THERE WILL BE NO OBSTRUCTIONS TO THE CONTINUOUS FLOW OF TRAFFIC. ALL INTERSECTIONS AND DRIVEWAYS SHALL BE OPEN TO TRAFFIC AT ALL TIMES UNLESS OTHERWISE SHOWN IN THE PLAN.

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, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND OF THE TYPE AND LOCATION AS SHOWN IN THE PLANS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

ITEM 614, WORK ZONE MARKING SIGN

01/STR/PV	9 EACH
03/NHS/PV	16 EACH

ITEM 614, WORK ZONE CENTER LINE, CLASS II

01/STR/PV	4.80 MILE
03/NHS/PV	8.79 MILE

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

CALCULATED HJH CHECKED DKB

MAINTENANCE OF TRAFFIC NOTES

BRO-52-4.25
BRO-68-41.08

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SHEET NUMBER										PARTICIPATION			ALT.	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	10	11	12	13	14	15,17	01/STR/PV	02/STR/BR	03/NHS/PV	04/NHS/BR		(X)						
																		ROADWAY	
			1293							1293				202	30000	1,293	SQ FT	WALK REMOVED	
			200							200				202	32000	200	FT	CURB REMOVED	
	19.8							8.70		11.1				209	72051	19.80	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	6
	200									200				608	10000	200	SQ FT	4" CONCRETE WALK	
			1387							1387				608	52021	1387	SQ FT	CURB RAMP, TYPE A2, AS PER PLAN	
																		PAVEMENT	
3714								1566		2148				251	01001	3714	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN	
							1994			1994				253	01000	1,994	SQ YD	PAVEMENT REPAIR	
				10,326	584	21,220		584		31,546				254	01001	32,130	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	5
6426								117		6309				254	01600	6,426	SQ YD	PATCHING PLANED SURFACE	
	182			8244	6037	1592		6205		9990				407	10000	16,195	GALLON	TACK COAT	
13,923								5870		8053				407	14000	13,923	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
2,579								1,087		1492				441	50200	2,579	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, (448), AS PER PLAN	6
	146			4580	3354	884		3467		5575				441	50000	9,042	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE I, (448), PG64-22	
				317						317				609	10000	317	FT	ASPHALT CONCRETE CURB, TYPE I	
	100		36							136				609	16000	136	FT	CURB, TYPE 2-B	
				717	618			618		717				617	10100	1335	CU YD	COMPACTED AGGREGATE	
				8	7			7		8				617	25000	15	M GAL	WATER	
							3744	3744						618	40100	3744	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	
																		WATER WORK	
					2	2		2		2				638	53500	4	EACH	VALVE BOX ADJUSTED TO GRADE	
																		TRAFFIC CONTROL	
							758	336		422				621	00100	758	EACH	RPM	
							645	317		328				621	54000	645	EACH	RAISED PAVEMENT MARKER REMOVED	
			96							96				630	03100	96	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
			18							18				630	80101	18.00	SQ FT	SIGN, FLAT SHEET, AS PER PLAN	19
							21.35	9.87		11.48				646	10000	21.35	MILE	EDGE LINE, 4"	
							12.04	5.86		6.18				646	10200	12.04	MILE	CENTER LINE	
							366	366						646	10300	366	FT	CHANNELIZING LINE, 8"	
							14	14						646	10400	14	FT	STOP LINE	
							158	158						646	10500	158	FT	CROSSWALK LINE	
							100	100						646	10600	100	FT	TRANSVERSE/DIAGONAL LINE	
							2	2						646	20110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
							4	4						646	20300	4	EACH	LANE ARROW	

CALCULATED BCB
CHECKED HJH

GENERAL SUMMARY

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SHEET NUMBER								PARTICIPATION					ALT.	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	7						18	01/STR/PV	02/STR/BR	03/NHS/PV	04/NHS/BR		(X)						
																		CALCULATED BCB CHECKED HJH	
																		STRUCTURE 20 FOOT SPAN AND OVER (BRIDGE #)	
																		BRIDGE NO. BRO-52-0552 (SFN: 0800813)	
							500			500				254	01001	500	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	
							1356				1356			254	01001	1356	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	
							140			38	102			407	10000	140	GALLON	TACK COAT	
							102				102			407	14000	102	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
							57				57			448	46020	57	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22	
							78			21	57			448	47020	78	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	
							1356				1356			512	33010	1,356	SQ YD	TYPE 3 WATERPROOFING	
							68				68			516	14600	68	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: COMPRESSION SEAL	
							718				718			SPECIAL	51822300	718	FT	STEEL DRIP STRIP	
							272				272			SPECIAL	51912300	272	SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE B	
																		BRIDGE NO. BRO-52-0782 (SFN: 0800856)	
							600			600				254	01001	600	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	
							45			45				407	10000	45	GALLON	TACK COAT	
							25			25				448	47020	25	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	
							1205				1205			512	10400	1205	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
							1205				1205			SPECIAL	69098300	1,205	SQ YD	MISC.: CONCRETE MICROMILLING	
																		BRIDGE NO. BRO-68-4412 (SFN: 0802042)	
							467	467						254	01001	467	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	
							364		364					254	01001	364	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	
							62	35	27					407	10000	62	GALLON	TACK COAT	
							27		27					407	14000	27	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
							15		15					448	46020	15	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22	
							35	20	15					448	47020	35	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	
							364		364					512	33010	364	SQ YD	TYPE 3 WATERPROOFING	
							0.87		0.87					SPECIAL	51631400	0.87	CU YD	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
							234		234					SPECIAL	51822300	234	FT	STEEL DRIP STRIP	
									73					SPECIAL	51912300	73	SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE B	
																		MAINTENANCE OF TRAFFIC	
	25							9		16				614	12460	25	EACH	WORK ZONE MARKING SIGN	
	13.58							4.8		8.78				614	21400	13.58	MILE	WORK ZONE CENTER LINE, CLASS II	
																		INCIDENTALS	
								44%		56%				614	11000	LUMP		MAINTAINING TRAFFIC	
								44%		56%				624	10000	LUMP		MOBILIZATION	

GENERAL SUMMARY

BRO-52-4.25
BRO-68-41.08

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SHEET NO.	REFERENCE NO.	LOCATION	SLM	SIDE		RAMP TYPE	202		608	609		630			* NOTE: SEE SHEET 15.		
							WALK REMOVED	CURB REMOVED	CURB RAMP, TYPE A2	CURB, TYPE 2-B		SIGN, FLAT SHEET, AS PER PLAN *	GROUND MOUNTED SUPPORT, NO. 3 POST				
							SQ FT	FT	SQ FT	FT		SQ FT	FT				
15	C-1	INTERSECTION OF U.S.R. 52 & OLIVE ST.	4.53	RT	SW	A2	22	5	24	1							
	C-2			LT	NW	A2	20	5	22	1							
	C-3			RT	SE	A2	49	6	52	1							
	C-4			LT	NE	A2	16	5	19	1							
	S-1			RT	SW							2.25	12				
	S-2			LT	NW							2.25	12				
	S-3			RT	SE							2.25	12				
	S-4			LT	NE							2.25	12				
	C-5	INTERSECTION OF U.S.R. 52 & JOHN ST.	4.60	RT	SW	A2	33	5	36	1							
	C-6			LT	NW	A2	31	5	34	1							
	C-7			RT	SE	A2	34	6	37	1							
	C-8			LT	NE	A2	23	6	26	1							
	S-5			RT	SW							2.25	12				
	S-6			LT	NW							2.25	12				
	S-7			RT	SE							2.25	12				
	S-8			LT	NE							2.25	12				
16	C-9	INTERSECTION OF U.S.R. 52 & JACKSON ST.	4.68	RT	SW	A2	38	7	41	2							
	C-10			RT	SW	A2	37	6	40	2							
	C-11			LT	NW	A2	23	5	25	0							
	C-12			LT	NW	A2	40	6	43	1							
	C-13			RT	SE	A2	42	6	45	1							
	C-14			RT	SE	A2	26	5	28	0							
	C-15			LT	NE	A2	17	5	19	1							
	C-16			LT	NE	A2	20	6	22	1							
	C-17	INTERSECTION OF U.S.R. 52 & MAIN ST.	4.76	RT	SW	A2	26	4	28	0							
	C-18			RT	SW	A2	43	6	45	1							
	C-19			LT	NW	A2	27	5	29	1							
	C-20			LT	NW	A2	36	6	38	1							
	C-21			RT	SE	A2	28	6	31	1							
	C-22			RT	SE	A2	35	5	38	1							
	C-23			LT	NE	A2	25	6	28	1							
	C-24			LT	NE	A2	34	5	37	1							
17	C-25	INTERSECTION OF U.S.R. 52 & BROWN ST.	4.83	LT	NW	A2	23	6	26	1							
	C-26			LT	NW	A2	43	7	46	1							
	C-27			RT	SW	A2	38	7	41	2							
	C-28			RT	SW	A2	41	6	44	1							
	C-29			RT	SE	A2	48	6	51	1							
	C-30			RT	SE	A2	38	5	41	1							
	C-31			LT	NE	A2	35	5	37	1							
	C-32			LT	NE	A2	42	6	45	1							
	C-33	INTERSECTION OF U.S.R. 52 & WHITE OAK ST. (RT)/SR-221 (LT)	4.91	LT	NW	A2	38	6	40	1							
	C-34			LT	NW	A2	44	6	47	1							
	C-35			RT	SW	A2	57	8	61	2							
	C-36			LT	NE	A2	25	0	25	0							
		TOTAL					1197.00	200.00	1291.00	36.0		18.0	96.0				
		TOTALS CARRIED TO SHEET 11					1197	200	1291	36		18	96				

CALCULATED BCB
CHECKED DKB

CURB RAMP AND SIGNING SUBSUMMARY

BRO-52-4.25
BRO-68-41.08

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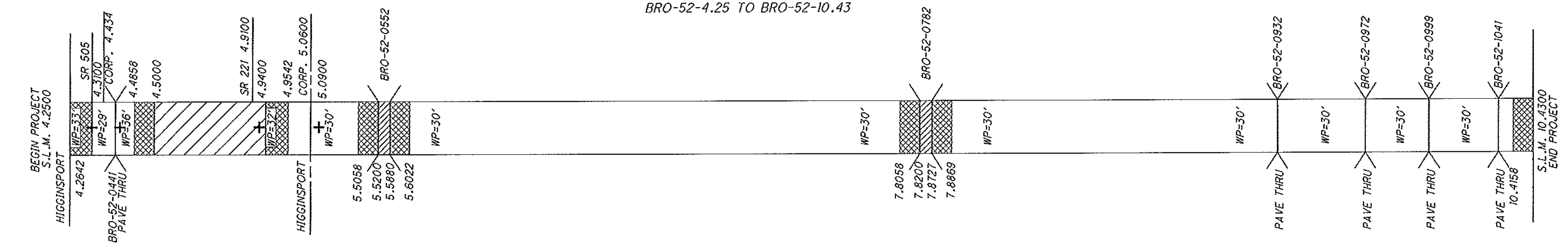
SHEET NO.	REFERENCE NO.	LOCATION	SLM	SIDE		RAMP TYPE	202		608	609		630			* NOTE: SEE SHEET 15.		
							WALK REMOVED	CURB REMOVED	CURB RAMP, TYPE A2	CURB, TYPE 2-B		SIGN, FLAT SHEET, AS PER PLAN *	GROUND MOUNTED SUPPORT, NO. 3 POST				
							SQ FT	FT	SQ FT	FT		SQ FT	FT				
18	C-37	INTERSECTION OF U.S.R. 52 & HOOK ST.	12.6450	RT	SW	A2	16		16								
	C-38			RT	SE	A2	16		16								
18	C-39	INTERSECTION OF U.S.R. 52 & VICTORIA ST.	12.6750	RT	SW	A2	16		16								
	C-40			RT	SE	A2	16		16								
18	C-41	INTERSECTION OF U.S.R. 52 & ASSUMPTION ST.	12.7050	RT	SW	A2	16		16								
	C-42			RT	SE	A2	16		16								
		TOTALS FROM THIS SHEET					96		96								
		TOTALS FROM SHEET 10					1197	200	1291	36		18	96				
		TOTALS CARRIED TO GENERAL SUMMARY					1293	200	1387	36		18	96				

CALCULATED EWW
CHECKED HJH

CURB RAMP AND SIGNING SUBSUMMARY

BRO-52-4.25
BRO-68-41.08



* EXISTING PAVEMENT LEGEND

I = AGGREGATE BASE OR TRAFFIC COMPACTED
K = WATER BOUND MACADAM SUCH AS 303
L = PLANT MIX ASPHALT CONCRETE 301, 302, 306 OR PENETRATION MACADAM
N = PLAIN CONCRETE
T = BRICK - RIDGID

+ = PAVEMENT WIDTH CHANGE

BUTT JOINT
MILL & FILL
OVERLAY

PAVEMENT DATA

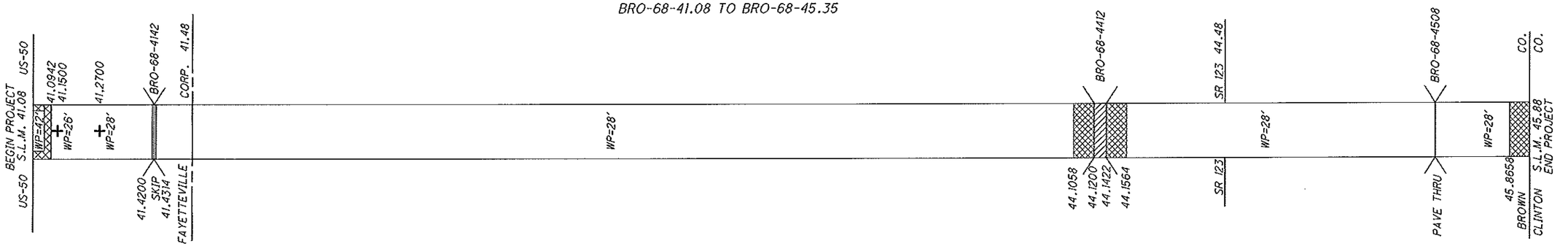
SECTION	ROUTE	PARTICIPATION	LOG POINT TO LOG POINT	LENGTH		WIDTH OF PAVING (WP)	TYPICAL	EXISTING PAVEMENT TYPE ASPHALT CONCRETE SURFACE ON * BASE	PAVEMENT AREA	202 CURB REMOVED	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.5" MAX.	407 TACK COAT (0.075 GAL/SQ.YD.)		448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 1.5"	609 ASPHALT CONCRETE CURB, TYPE 1					SHOULDER TREATMENT 617 COMPACTED AGGREGATE 2" AVG.	SHOULDER TREATMENT 617 WATER
				MILES	FT	FT			SQ. YD.	FT	SQ. YD.	GALLON		CU. YD.	FT					CU. YD.	M. GAL.
1	52	03	4.2500 - 4.2642	0.0142	74.9760	33	1	N	274.91		274.91	20.62		11.45						1.85	0.02
			4.2642 - 4.3100	0.0458	241.8240	33	2	N	886.69			66.50		36.95						5.97	0.06
			4.3100 - 4.4858	0.1758	928.2240	29	2	N	2990.94			224.32		124.62						22.92	0.23
			4.4858 - 4.5000	0.0142	74.9760	29	1	N	241.59		241.59	18.12		10.07						1.85	0.02
			4.5000 - 4.9400	0.4400	2323.2000	36	3	N	9292.80		9292.80	696.96		387.20							
			4.9400 - 4.9542	0.0142	74.9760	32	1	N	266.58		266.58	20		11.11						1.85	0.02
			4.9542 - 5.0900	0.1358	717.0240	32	2	N,L	2549.42			191.21		106.23						8.85	0.89
		03	5.0900 - 5.5058	0.4158	2195.4240	30	2	N,L	7318.08			548.86		304.92						54.21	0.54
		04	5.5058 - 5.6022	WORK LIMITS FOR BRIDGE BRO-52-0552 OVER WHITE OAK CREEK - SEE STRUCTURES SHEET 14 FOR QUANTITIES																	
		03	5.6022 - 7.8058	2.2036	11,635.0080	30	2	T,L	38,783.36			2908.75		1615.97						287.28	2.87
		04	7.8058 - 7.8869	WORK LIMITS FOR BRIDGE BRO-52-0782 OVER STRAIGHT CREEK - SEE STRUCTURES SHEET 14 FOR QUANTITIES																	
		03	7.8869 - 10.4158	2.5289	13,352.5920	30	2	N,L	44,508.64			3338.15		1854.53						329.69	3.30
		03	10.4158 - 10.4300	0.0142	74.9760	30	1	N,L	249.92		249.92	18.74		10.41						1.85	0.02
		03	4.39 - 4.45, RT	0.06	316.80					316.80					316.80						
EXTRA AREAS:																					
DRIVES									1860.00			139.50		77.50							
MAILBOX APPROACHES									690.00			51.75		28.75							
03/NHS/PV TOTALS										316.80	10,325.80	8,243.47		4,579.71	316.80					716.32	7.97
TOTALS CARRIED TO GENERAL SUMMARY										317	10,326	8,244		4580	317					717	8

CALCULATED BCB
CHECKED HJH

PAVEMENT CALCULATIONS

BRO-52-4.25
BRO-68-41.08

SECTION 2
BRO-68-41.08 TO BRO-68-45.35



* EXISTING PAVEMENT LEGEND

I = AGGREGATE BASE OR TRAFFIC COMPACTED
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+ = PAVEMENT WIDTH CHANGE

CALCULATED BCB
CHECKED HJH

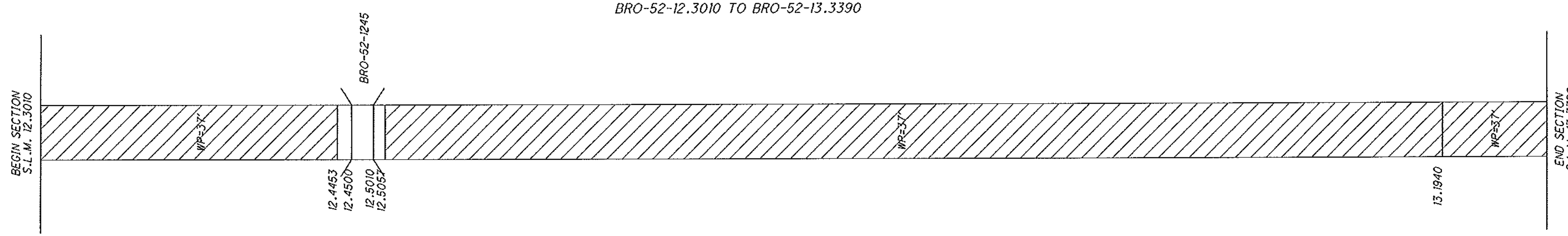
PAVEMENT CALCULATIONS

BRO-52-4.25
BRO-68-41.08

PAVEMENT DATA

SECTION	ROUTE	PARTICIPATION	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH FT.	WIDTH OF PAVING (WP) FT.	TYPICAL	EXISTING PAVEMENT TYPE ASPHALT CONCRETE SURFACE ON * BASE	PAVEMENT AREA SQ. YD.		254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.5" MAX. SQ. YD.	407 TACK COAT (0.075 GAL/SQ.YD.) GALLON		448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 1.5" CU. YD.		638 VALVE BOX ADJUSTED TO GRADE EACH				SHOULDER TREATMENT 617 COMPACTED AGGREGATE 2" AVG. CU. YD.	WATER M. GAL.
2	US-68	01	41.0800 - 41.0942	0.0142	74.9760	42	1	1	349.89		349.89	26.24		14.58							1.85	0.02
		01	41.0942 - 41.1500	0.0558	294.6240	42	2	1	1374.91			103.12		57.29							7.27	0.07
		01	41.1500 - 41.2700	0.1200	633.6000	26	2	1	1830.40			137.28		76.27		2					15.64	0.16
		01	41.2700 - 41.4200	0.1500	792.0000	28	2	1	2464.00			184.80		102.67							19.56	0.20
			41.4200 - 41.4314	0.0114	60.1920	SKIP LIMITS FOR BRIDGE BRO-68-4142 OVER SOLOMON RUN - SEE STRUCTURES SHEET 14 FOR QUANTITIES																
		01	41.4314 - 44.1058	2.6744	14,120.8320	28	2	1	43,931.48			3294.86		1830.48							348.66	3.49
		02	44.1058 - 44.1564	0.0506	267.1680	WORK LIMITS FOR BRIDGE BRO-68-4412 OVER E FORK LITTLE MIAMI RIVER - SEE STRUCTURES SHEET 14 FOR QUANTITIES																
		01	44.1564 - 45.8658	1.7094	9025.6320	28	2	1	28,079.74			2105.98		1169.99							222.86	2.23
		01	45.8658 - 45.8800	0.0142	74.9760	28	1	1	233.26		233.26	17.49		9.72							1.85	0.02
			EXTRA AREAS:																			
			DRIVES						1770.00			132.75		73.75								
			MAILBOX APPROACHES						450.00			33.75		18.75								
			03/NHS/PV TOTALS								583.15	6036.28		3353.49		2					617.69	6.18
			TOTALS CARRIED TO GENERAL SUMMARY								584	6037		3354		2					618	7

SECTION 3
BRO-52-12.3010 TO BRO-52-13.3390



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BUTT JOINT
MILL & FILL
OVERLAY

PAVEMENT DATA

SECTION	ROUTE	PARTICIPATION	LOG POINT TO LOG POINT	LENGTH		WIDTH OF PAVING (WP)	TYPICAL	EXISTING PAVEMENT TYPE ASPHALT CONCRETE SURFACE ON * BASE	PAVEMENT AREA		254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.5" MAX.	407 TACK COAT (0.075 GAL/SQ.YD.)		448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 1.5"		448 WATER VALVE ADJUSTED TO GRADE					
				MILES	FT.	FT.			SQ. YD.		SQ. YD.	GALLON		CU. YD.		EACH					
3	52		12.3010 TO 12.4453	0.1443	761.90	37	4		3132.26		3132.26	234.92		130.51							
			12.4453 TO 12.5057	NO WORK IN THIS AREA																	
			12.5057 TO 13.1940	0.6883	3634.22	37	4		14940.68		14940.68	1120.55		622.53		1					
			13.1940 TO 13.3390	0.1450	765.60	37	5		3147.47		3147.47	236.06		131.14		2					
TOTALS FOR 03/NHS/PV											21220.41	1591.53		884.18		3					
TOTALS CARRIED TO GENERAL SUMMARY											21220	1592		884		3					

CALCULATED EWW CHECKED HJH

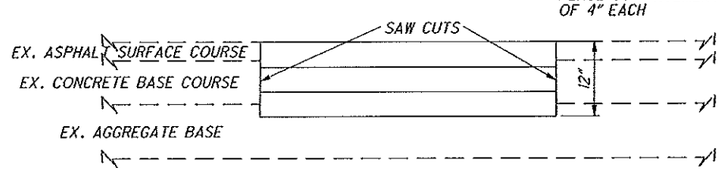
PAVEMENT CALCULATIONS

BRO-52-4.25
BRO-68-41.08

PAVEMENT REPAIR LOCATIONS

SECTION	ROUTE	PARTICIPATION	S.L.M.	WESTBOUND LANE	EASTBOUND LANE	REPAIR AREA DIMENSIONS			253
						WIDTH	LENGTH	REPAIR AREA	PAVEMENT REPAIR
						FT.	FT.	SQ.YD.	SQ.YD.
3	52	--	12.5270	X	X	37.0	6.0	24.67	24.67
			12.5380	X	X	37.0	6.0	24.67	24.67
			12.5490	X	X	37.0	6.0	24.67	24.67
			12.5610	X	X	37.0	6.0	24.67	24.67
			12.5720	X	X	37.0	13.0	53.44	53.44
			12.5780		X	5.0	50.0	27.78	27.78
			12.5850	X	X	37.0	9.0	37.00	37.00
			12.5960	X	X	37.0	6.0	24.67	24.67
			12.6270		X	21.5	25.0	59.72	59.72
			12.6420	X	X	37.0	6.0	24.67	24.67
			12.6520		X	21.5	13.0	31.06	31.06
			12.6520	X		15.5	6.0	10.33	10.33
			12.6630	X	X	37.0	12.0	49.33	49.33
			12.6750		X	21.5	18.0	43.00	43.00
			12.6850		X	21.5	20.0	47.78	47.78
			12.6850	X		15.5	5.0	8.61	8.61
			12.6960		X	21.5	13.0	31.06	31.06
			12.6960	X		15.5	7.0	12.06	12.06
			12.7070		X	21.5	9.0	21.50	21.50
			12.7120		X	21.5	3.0	7.17	7.17
			12.7200	X	X	37.0	8.0	32.89	32.89
			12.7300	X	X	37.0	5.0	20.56	20.56
			12.7420	X	X	37.0	8.0	32.89	32.89
			12.7530	X	X	37.0	11.0	45.22	45.22
			12.7650		X	21.5	5.0	11.94	11.94
			12.7730	X	X	37.0	5.0	20.56	20.56
			12.7760		X	21.5	3.0	7.17	7.17
			12.7870	X	X	37.0	6.0	24.67	24.67
			12.8030	X	X	37.0	4.0	16.44	16.44
			12.8080		X	6.0	6.0	4.00	4.00
			12.8130	X	X	37.0	5.0	20.56	20.56
			12.8330	X	X	37.0	12.0	49.33	49.33
			12.8440		X	21.5	12.0	28.67	28.67
			12.8550		X	21.5	5.0	11.94	11.94
			12.8650	X		15.5	4.0	6.89	6.89
			12.8750	X		15.5	7.0	12.06	12.06
			12.8760		X	21.5	4.0	9.56	9.56
			12.8860	X	X	37.0	6.0	24.67	24.67
			12.9020	X	X	37.0	5.0	20.56	20.56
			12.9190	X	X	37.0	9.0	37.00	37.00
			12.9310	X	X	37.0	6.0	24.67	24.67
			12.9440	X	X	37.0	8.0	32.89	32.89
			12.9540	X	X	37.0	14.0	57.56	57.56
TOTALS FOR THIS COLUMN									1140.56

PLACE 301 PAVEMENT IN 3 EQUAL LIFTS OF 4" EACH



TYPICAL SECTION FOR PAVEMENT REPAIR

PAVEMENT REPAIR LOCATIONS

SECTION	ROUTE	PARTICIPATION	S.L.M.	WESTBOUND LANE	EASTBOUND LANE	REPAIR AREA DIMENSIONS			253
						WIDTH	LENGTH	REPAIR AREA	PAVEMENT REPAIR
						FT.	FT.	SQ.YD.	SQ.YD.
3	52	--	12.9660	X	X	37.0	8.0	32.89	32.89
			12.9770	X	X	37.0	5.0	20.56	20.56
			12.9880		X	21.5	8.0	19.11	19.11
			12.9990	X	X	37.0	8.0	32.89	32.89
			13.0060	X		15.5	6.0	10.33	10.33
			13.0130	X	X	37.0	7.0	28.78	28.78
			13.0220		X	21.5	5.0	11.94	11.94
			13.0340	X	X	37.0	8.0	32.89	32.89
			13.0450	X	X	37.0	7.0	28.78	28.78
			13.0570		X	21.5	7.0	16.72	16.72
			13.0660	X		15.5	10.0	17.22	17.22
			13.0690		X	21.5	30.0	71.67	71.67
			13.0790	X	X	37.0	12.0	49.33	49.33
			13.0910	X	X	37.0	14.0	57.56	57.56
			13.1020	X	X	37.0	11.0	45.22	45.22
			13.1050		X	6.0	5.0	3.33	3.33
			13.1140		X	21.5	7.0	16.72	16.72
			13.1240	X		15.5	6.0	10.33	10.33
			13.1360	X	X	37.0	20.0	82.22	82.22
			13.1470	X	X	37.0	7.0	28.78	28.78
			13.1590		X	21.5	12.0	28.67	28.67
			13.1700		X	21.5	9.0	21.50	21.50
			13.2570		X	5.0	335.0	186.11	186.11
			TOTALS FOR THIS COLUMN						853.55
			TOTALS FROM PREVIOUS COLUMN						1140.56
TOTALS CARRIED TO GENERAL SUMMARY									1994

CALCULATED EWW
CHECKED HJH

PAVEMENT REPAIR LOCATIONS

BRO-52-4.25
BRO-68-41.08

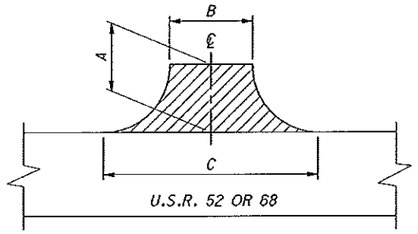
CALCULATED BCB | CHECKED HJH

FORMULA FOR CALCULATIONS

*(A*B)/9 = X SQ.YD.*

((C-B)/2)² = Y SQ.FT./9 = Y SQ.YD.

X SQ.YD. + Y SQ.YD. = PAVEMENT AREA



PAVEMENT DATA

SECTION	ROUTE	PARTICIPATION	S.L.M.	SIDE	DESCRIPTION	INTERSECTION DIMENSIONS A	B	C	PAVEMENT AREA	407 TACK COAT (0.075 GAL/SQ.YD.)		448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 1.5"	EXISTING SURFACE					COMMENTS
						FT.	FT.	FT.	SQ.YD.	GAL.		CU.YD.						
1	52	03	6.85	LT.	FREE SOIL RD.	45	16	100	276.00	20.70		11.50	ASPHALT					
			7.90	LT.	OLD A&P	35	17	80	176.36	13.23		7.35	ASPHALT					
			9.68	LT.	PISGAH HILL RD.	28	16	98	236.56	17.34		9.86	ASPHALT					
					TOTALS FOR 03/NHS/PV					51.67		28.70						
2	68	01	41.15	RT.	HUMBER ST.	14	26	54	62.22	4.67		2.59	ASPHALT					
			41.15	LT.	HUMBER ST.	14	26	54	62.22	4.67		2.59	ASPHALT					
			41.20	LT.	UNMARKED ALLEY	14	51	88	117.36	8.80		4.89	ASPHALT					
			41.25	RT.	ANDERSON STATE RD.	10	28	44	38.22	2.87		1.59	ASPHALT					
			41.34	LT.	ISAAC ST.	15	44	90	132.11	9.91		5.50	ASPHALT					
			43.52	RT.	PARK RD.	10	44	72	70.67	5.30		2.94	ASPHALT					
			43.52	LT.	MORGAN RD.	12	34	72	85.44	6.41		3.56	ASPHALT					
			44.48	RT.	S.R. 123	17	39	88	140.36	10.53		5.85	ASPHALT					
			44.48	LT.	S.R. 123	34	34	119	329.14	24.69		13.71	ASPHALT					
			45.30	RT.	KERNAN RD.	10	23	42	35.58	2.67		1.48	ASPHALT					
			45.30	LT.	KERNAN RD.	15	52	72	97.78	7.33		4.07	ASPHALT					
					TOTALS FOR 01/STR/PV					87.83		48.80						
					TOTALS FOR 03/NHS/PV					51.67		28.70						
					TOTALS FOR 01/STR/PV					87.83		48.80						
TOTALS CARRIED TO GENERAL SUMMARY										140		78						

PUBLIC ROAD CALCULATIONS

BRO-52-4.25
BRO-68-41.08

16
24

SECTION	ROUTE	PARTICIPATION	S.L.M. FROM	S.L.M. TO	618 RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN (GROOVED)		646 EDGE LINE, 4"	CENTER LINE	CHANNELIZING LINE, 8"	STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE	SCHOOL SYMBOL MARKING, 96"	LANE ARROW				621 RAISED PAVEMENT MARKER REMOVED	RPM ONE-WAY WHITE	RPM ONE-WAY YELLOW	RPM TWO-WAY WHITE/WHITE	RPM TWO-WAY YELLOW/YELLOW	RPM TWO-WAY WHITE/RED
					FT		MILE	MILE	FT	FT	FT	FT	EACH	EACH				EACH	EACH	EACH	EACH	EACH	EACH
1	US-52	03	4.25	10.43				6.18										328				422	
			4.25	4.50			0.50																
			4.94	10.43			10.98																
		TOTAL FOR PARTICIPATION 03					11.48	6.18										328				422	
2	US-68	01	41.08	45.88														317	16			320	
			41.0800	41.4200			0.68	0.34															
			41.4314	45.8800			8.90	4.45															
			41.4314	45.8800	3744																		
		TOTAL FOR PARTICIPATION 01			3744		9.58	4.79										317	16			320	
3	US-52		12.3010	13.3390				1.0380										70					
			12.3010 LT.							14.00	74.00												
			12.6240 INT. WITH 62/68					.03	200.00			100.00		4									
			12.6240 RT.						166.00														
			12.7982 RT.										1										
			12.9109								74.00												
			13.0798 LT.										1										
			13.1940	13.3390			.29																
		TOTAL FOR PARTICIPATION 01			3744		9.87	5.86	366	14.00	148	100.00	2	4				317	16			320	
		TOTAL FOR PARTICIPATION 03					11.48	6.18										328				422	
GRAND TOTALS CARRIED TO GENERAL SUMMARY					3744		21.35	12.04	366	14.00	148	100.00	2	4				645	758				

CALCULATED BCB
CHECKED DKB

PAVEMENT MARKING

BRO-52-4.25
BRO-68-41.08

CALCULATED BCB | CHECKED HJH

SECTION	PARTICIPATION	BRIDGE NUMBER	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	254 PAVEMENT PLANING; ASPHALT CONCRETE, AS PER PLAN 0" MIN. 1.5" MAX	254 PAVEMENT PLANING; ASPHALT CONCRETE, AS PER PLAN 3" MIN.	407 TACK COAT (0.075 GAL./SQ.YD)	407 TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ.YD)	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 1.5"	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 1.5"	512 TREATING OF CONCRETE BRIDGE DECK WITH SRS, AS PER PLAN	512 TYPE 3 WATERPROOFING	516 STRUCTURAL JOINT OR JOINT SEALER, MISC.: COMPRESSION SEAL	516 SPECIAL - POLY-MODIFIED ASPHALT EXPANSION JOINT SYSTEM	518 SPECIAL - STEEL DRIP STRIP	519 SPECIAL-PATCHING CONCRETE BRIDGE DECK, TYPE B	690 SPECIAL-MISC.: ASPHALT CONCRETE MICRO-MILLING	COMMENTS	STRUCTURE FILE NUMBER
			FT.	FT.	SQ. YD.	SQ. YD.	SQ. YD.	GALLON	GALLON	CU. YD.	CU. YD.	SQ. YD.	SQ. YD.	FT	CU. YD.	FT	SQ. YD.	SQ. YD.		
		BRO-52																		
	03	BRO-52-0441 (PAVE THRU)																	CONCRETE CULVERT	0800783
																			OVER HOG RUN	
																			SKEW=10°	
	04	BRO-52-0552	359	34	1356.22														STEEL BEAM	0800813
		5.5058 - 5.5200 (BUTT JOINT)																	WHITE OAK CREEK	
		30'W X 75'L/9 = 250 SQ. YD.				250		18.75			10.42								SKEW=0°	
		5.5200 - 5.5880	359	34	1356.22		1356.22	101.72	101.72	56.51	56.51		1356.22	68.00		718.00	271.24			
		5.5880 - 5.6022 (BUTT JOINT)																		
		30'W X 75'L/9 = 250 SQ. YD.				250		18.75			10.42									
		TOTALS CARRIED TO GENERAL SUMMARY				**500**	**1356**	**140**	**102**	**57**	**78**		**1356**	**68**		**718**	**272**			
	04	BRO-52-0782	278	39	1204.67														STEEL BEAM	0800856
		7.8058 - 7.8200 (BUTT JOINT)																	STRAIGHT CREEK	
		36'W X 75'L/9 = 300.00 SQ. YD.				300.00		22.50			12.50								SKEW=0°	
		7.8200 - 7.8727	278	39	1204.67							1204.67						1204.67		
		7.8727 - 7.8869 (BUTT JOINT)																		
		36'W X 75'L/9 = 300.00 SQ. YD.				300.00		22.50			12.50									
		TOTALS CARRIED TO GENERAL SUMMARY				**600**		**45**			**25**	**1205**						**1205**		
	03	BRO-52-0932 (PAVE THRU)																	CONCRETE CULVERT	0800800
																			TRIB. OF OHIO RIVER	
																			SKEW=14°	
	03	BRO-52-0972 (PAVE THRU)																	CONCRETE CULVERT	0800902
																			LEVANNA BRANCH STREAM	
																			SKEW=0°	
	03	BRO-52-0999 (PAVE THRU)																	CONCRETE CULVERT	0800937
																			LEVANNA BRANCH STREAM	
																			SKEW=0°	
		BRO-52-1041 (PAVE THRU)																	CONCRETE CULVERT	0800961
																			TRIB. OF OHIO RIVER	
																			SKEW=9°	
		BRO-68																		
		BRO-68-4142 (SKIP)																	STEEL BEAM	0802018
		41.4200 - 41.4314																	SOLOMON RUN	
																			SKEW=0°	
	02	BRO-68-4412	117	28	364.00														CONCRETE BOX	0802042
		44.1058 - 44.1200 (BUTT JOINT)																	E FORK LITTLE MIAMI RIVER	
		28'W X 75'L/9 = 233.33 SQ. YD.				233.33		17.50			9.72								SKEW=0°	
		44.1200 - 44.1422	117	28	364.00		364.00	27.30	27.30	15.17	15.17		364.00		0.864	234	72.8			
		44.1422 - 44.1564 (BUTT JOINT)																		
		28'W X 75'L/9 = 233.33 SQ. YD.				233.33		17.50			9.72									
		TOTALS CARRIED TO GENERAL SUMMARY				**467**	**364**	**62**	**27**	**15**	**35**		**364**		**0.87**	**234**	**73**			
	01	BRO-68-4508 (PAVE THRU)																	CONCRETE CULVERT	0802077
																			TRIB. W FORK	
																			SKEW=0°	

STRUCTURES

BRO-52-4.25
BRO-68-41.08

18
24

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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.

PRODUCT NAME	SUPPLIER	ADDRESS	PHONE NO.
THORMA-JOINT	DYNAMIC SURFACE APPLICATIONS, LTD	373 VILLAGE RD. PENNSDALE, PA 17756	(570)546-6041
MATRIX 502	CRAFCO INC.	420 N. ROOSEVELT AVE. CHANDLER, AZ 85226	(800)528-8242
EXPANDEX JOINT SYSTEM	WATSON-BOWMAN ACME	95 PINEVIEW DR. AMHERST, NY 14228	(716)691-7566
APJ ASPHALTIC PLUG EXPANSION JOINT	WYOMING EQUIPMENT SALES	281 SIXTH STREET P.O. BOX 287 WEST WYOMING, PA 18644	(570)693-2810

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 ACCOMODATE 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 1/32 " 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:

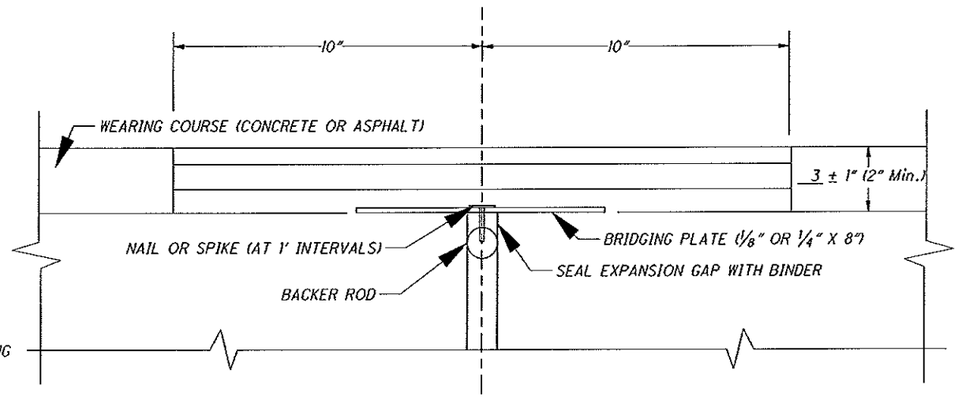
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER 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 CU. YD. AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, CU. YD., POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



TYPICAL PRESTRESSED BOX BEAM OR CONCRETE SLAB JOINT

OFFICE OF STRUCTURAL ENGINEERING

DESIGNED EWW CHECKED DKB REVIEWED

PLAN INSERT SHEET

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

BRO-52-4.25
BRO-68-41.08

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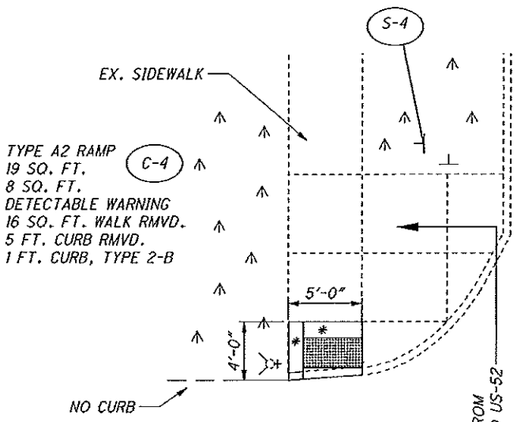
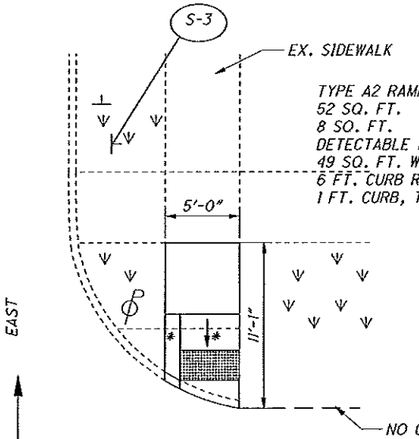
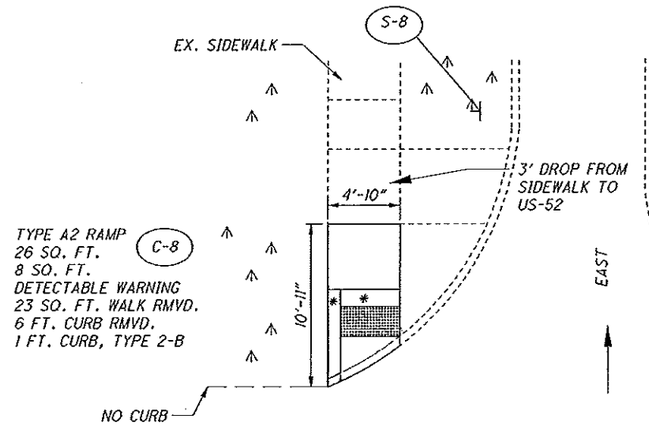
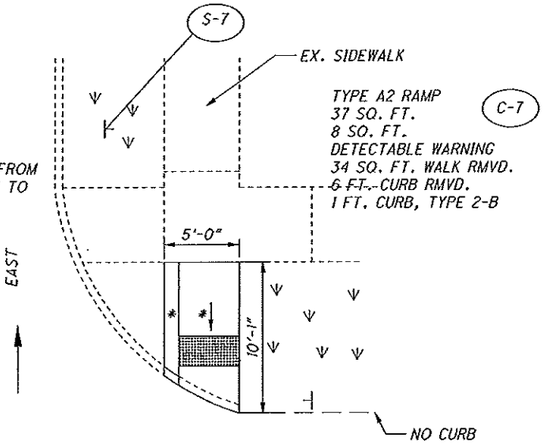








NOTES

1. * SEE STANDARD DRAWING BP 7.1 FOR ACCEPTABLE GRADES. MIN. GRADE ALLOWED IS 0.5%.
2. SAWCUT AT JOINTS (TYP.) UNLESS OTHERWISE INDICATED.
3. SAWCUTTING SHALL BE INCLUDED IN COST FOR ITEM 202, WALK REMOVED.
4. INSTALL ALL CURB RAMPS BEFORE APPLYING PROPOSED ASPHALT TO ROADWAY.
5. RAMPS SHALL MEET FINISHED PROPOSED ROADWAY GRADE. AS PER STANDARD DRAWING BP 7.1 VERTICAL CHANGE IN LEVEL EXCEEDING 1/8" BETWEEN 1. THE PAVEMENT AND GUTTER AND 2. GUTTER AND RAMP ARE NOT ALLOWED.
6. DESIGNS, QUANTITIES, AND DIMENSIONS ARE FOR ESTIMATE ONLY. DESIGNS PROVIDED ON THIS SHEET ARE NOT TO SUPERCEDE STANDARD DRAWING BP 7.1. CONTRACTOR TO FIELD VERIFY ESTIMATES.
7. CONSTRUCTION OF RAMPS MAY BE FIELD MODIFIED PER BP 7.1 WITH ENGINEER'S APPROVAL.
8. ALL CURB IS ASSUMED TO BE 6" DESIGNED IN PLAN VIEW.
9. EX. PAVEMENT MARKINGS WILL BE REPLACED IN KIND ONLY IN AREAS WHERE THEY ARE REMOVED DUE TO RESURFACING PROCESS.
10. PLACEMENT OF ADA SIGNS SHALL COMPLY WITH TC-42.20. FOR SIGN FABRICATION, SIGNCAD FILE SHALL BE MADE AVAILABLE BY CONTACTING ODOT DISTRICT 9 TRAFFIC DEPARTMENT, 740-774-0983.

SEE NOTE 10, THIS SHEET.

18' X 18' ARROW RIGHT
S-2, S-4, S-6, S-8

18' X 18' ARROW LEFT
S-1, S-3, S-5, S-7

LEGEND

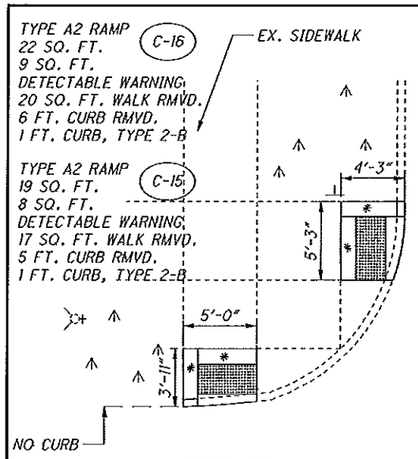
EX. CW	EXISTING CROSSWALK
PROP. CW	PROPOSED CROSSWALK
C-#	PROPOSED CURB RAMP INFORMATION ID NOS.
S-#	PROPOSED ADA SIGN
	EX. POLE
	EX. SIGN POST
	PROPOSED SIGN POST
	EX. VEGETATION
	EX. STORM INLET
	EX. HYDRANT
W	EX. WATER LINE MARKER
W	EX. WATER GATE VALVE
TR	EX. TRAFFIC SIGNAL BOX
E	EX. ELECTRIC VAULT
	EX. UNKNOWN MANHOLE DO NOT DISTURB
	EXISTING CATCH BASIN
	EX. PIPE

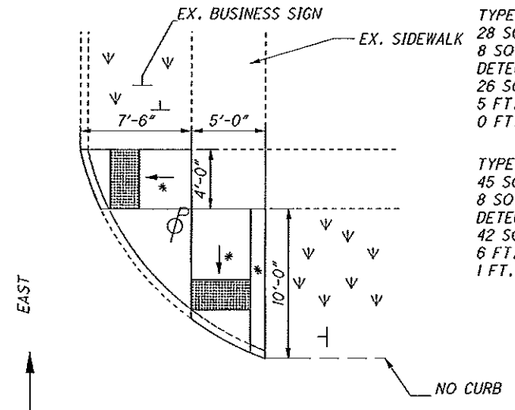
HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED BCB
CHECKED DKB

CURB RAMP DETAILS

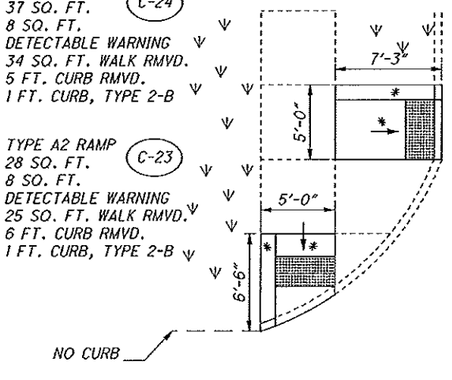
BRO-52-4.25
BRO-68-41.08

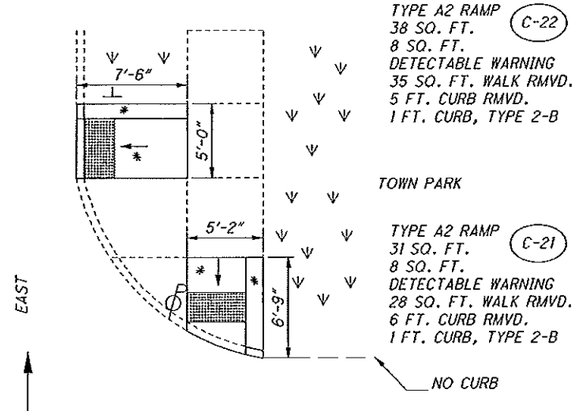


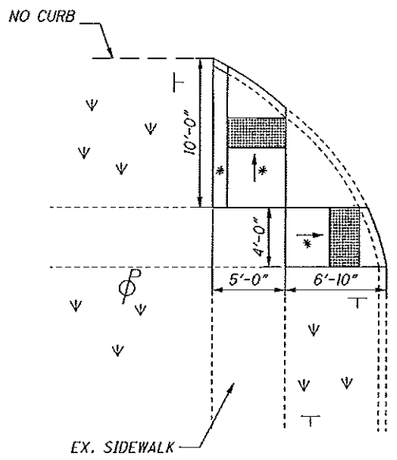


TYPE A2 RAMP
28 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
26 SQ. FT. WALK RMVD.
5 FT. CURB RMVD.
0 FT. CURB, TYPE 2-B
C-14

TYPE A2 RAMP
45 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
42 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-13

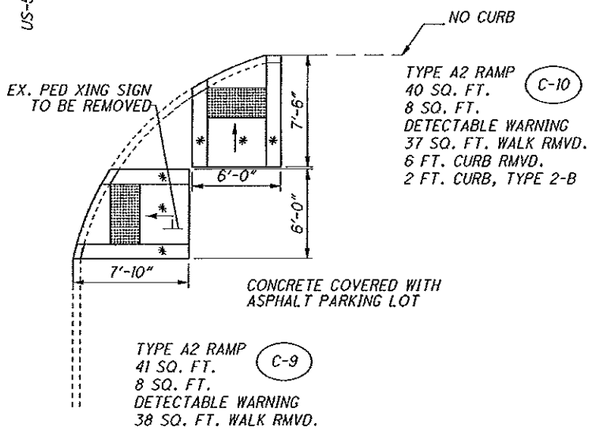






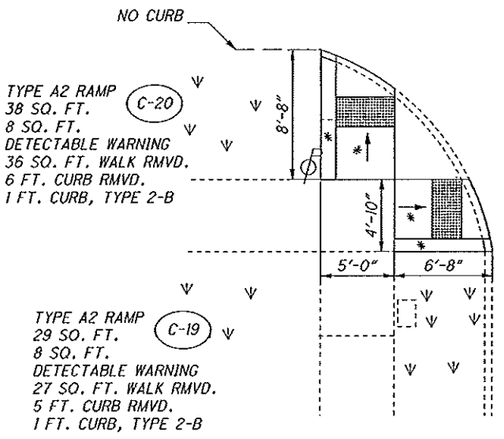
TYPE A2 RAMP
43 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
40 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-12

TYPE A2 RAMP
25 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
23 SQ. FT. WALK RMVD.
5 FT. CURB RMVD.
0 FT. CURB, TYPE 2-B
C-11



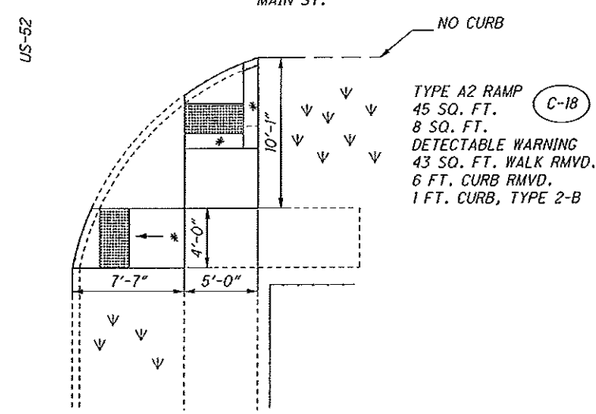
TYPE A2 RAMP
40 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
37 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
2 FT. CURB, TYPE 2-B
C-10

TYPE A2 RAMP
41 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
38 SQ. FT. WALK RMVD.
7 FT. CURB RMVD.
2 FT. CURB, TYPE 2-B
C-9



TYPE A2 RAMP
38 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
36 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-20

TYPE A2 RAMP
29 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
27 SQ. FT. WALK RMVD.
5 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-19



TYPE A2 RAMP
45 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
43 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-18

TYPE A2 RAMP
28 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
26 SQ. FT. WALK RMVD.
4 FT. CURB RMVD.
0 FT. CURB, TYPE 2-B
C-17

NOTES

1. * SEE STANDARD DRAWING BP 7.1 FOR ACCEPTABLE GRADES. MIN. GRADE ALLOWED IS 0.5%.
2. SAWCUT AT JOINTS (TYP.) UNLESS OTHERWISE INDICATED.
3. SAWCUTTING SHALL BE INCLUDED IN COST FOR ITEM 202, WALK REMOVED.
4. INSTALL ALL CURB RAMPS BEFORE APPLYING PROPOSED ASPHALT TO ROADWAY.
5. RAMPS SHALL MEET FINISHED PROPOSED ROADWAY GRADE. AS PER STANDARD DRAWING BP 7.1 VERTICAL CHANGE IN LEVEL EXCEEDING 1/8" BETWEEN 1. THE PAVEMENT AND GUTTER AND 2. GUTTER AND RAMP ARE NOT ALLOWED.
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9. EX. PAVEMENT MARKINGS WILL BE REPLACED IN KIND ONLY IN AREAS WHERE THEY ARE REMOVED DUE TO RESURFACING PROCESS.

LEGEND

EX. CW	EXISTING CROSSWALK
PROP. CW	PROPOSED CROSSWALK
C-#	PROPOSED CURB RAMP INFORMATION ID NOS.
	EX. POLE
	EX. SIGN POST
	PROPOSED SIGN POST
	EX. VEGETATION
	EX. STORM INLET
	EX. HYDRANT
W	EX. WATER LINE MARKER
W	EX. WATER GATE VALVE
	EX. TRAFFIC SIGNAL BOX
EV	EX. ELECTRIC VAULT
	EX. UNKNOWN MANHOLE DO NOT DISTURB
	EXISTING CATCH BASIN
	EX. PIPE

N

HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED BCB
CHECKED DKB

CURB RAMP DETAILS

BRO-52-4.25
BRO-68-41.08

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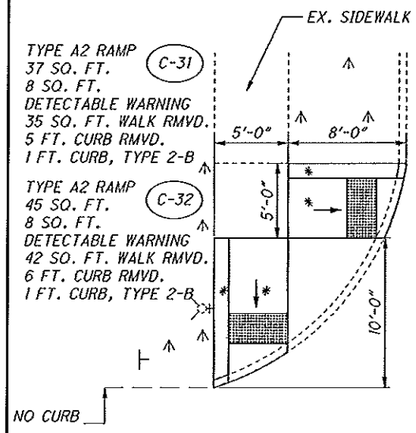
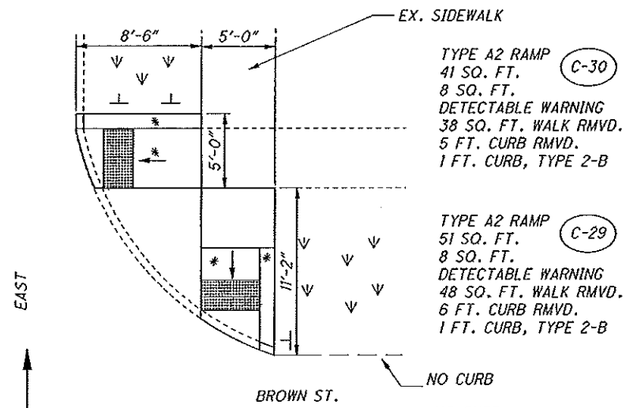
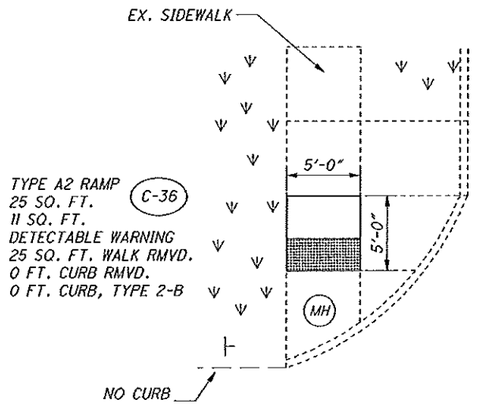
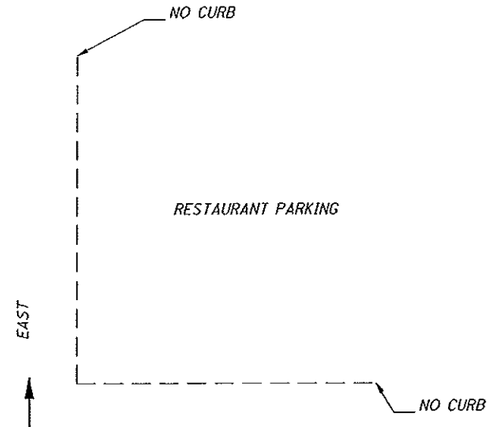
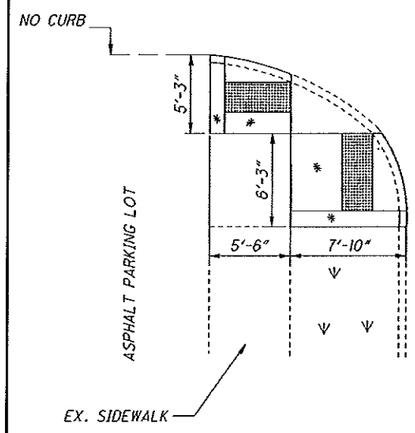
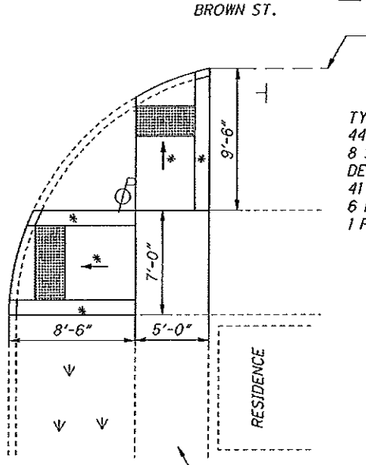


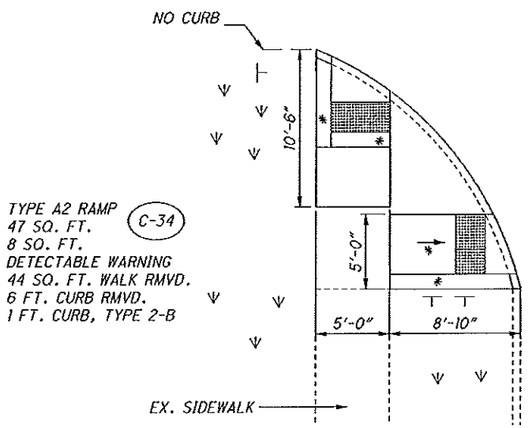


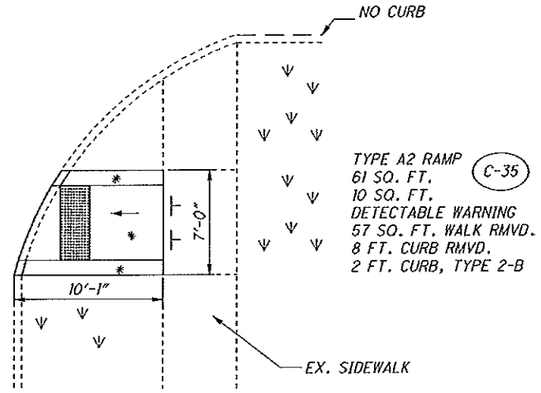












TYPE A2 RAMP
26 SQ. FT.
9 SQ. FT.
DETECTABLE WARNING
23 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-25

TYPE A2 RAMP
46 SQ. FT.
11 SQ. FT.
DETECTABLE WARNING
43 SQ. FT. WALK RMVD.
7 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-26

TYPE A2 RAMP
41 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
38 SQ. FT. WALK RMVD.
7 FT. CURB RMVD.
2 FT. CURB, TYPE 2-B
C-27

TYPE A2 RAMP
40 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
38 SQ. FT. WALK RMVD.
6 FT. CURB RMVD.
1 FT. CURB, TYPE 2-B
C-33

NOTES

1. * SEE STANDARD DRAWING BP 7.1 FOR ACCEPTABLE GRADES. MIN. GRADE ALLOWED IS 0.5%.
2. SAWCUT AT JOINTS (TYP.) UNLESS OTHERWISE INDICATED.
3. SAWCUTTING SHALL BE INCLUDED IN COST FOR ITEM 202, WALK REMOVED.
4. INSTALL ALL CURB RAMPS BEFORE APPLYING PROPOSED ASPHALT TO ROADWAY.
5. RAMPS SHALL MEET FINISHED PROPOSED ROADWAY GRADE. AS PER STANDARD DRAWING BP 7.1 VERTICAL CHANGE IN LEVEL EXCEEDING 1/8" BETWEEN 1. THE PAVEMENT AND GUTTER AND 2. GUTTER AND RAMP ARE NOT ALLOWED.
6. DESIGNS, QUANTITIES, AND DIMENSIONS ARE FOR ESTIMATE ONLY. DESIGNS PROVIDED ON THIS SHEET ARE NOT TO SUPERCEDE STANDARD DRAWING BP 7.1. CONTRACTOR TO FIELD VERIFY ESTIMATES.
7. CONSTRUCTION OF RAMPS MAY BE FIELD MODIFIED PER BP 7.1 WITH ENGINEER'S APPROVAL.
8. ALL CURB IS ASSUMED TO BE 6" DESIGNED IN PLAN VIEW.
9. EX. PAVEMENT MARKINGS WILL BE REPLACED IN KIND ONLY IN AREAS WHERE THEY ARE REMOVED DUE TO RESURFACING PROCESS.

LEGEND

EX. CW	EXISTING CROSSWALK
PROP. CW	PROPOSED CROSSWALK
C-#	PROPOSED CURB RAMP INFORMATION ID NOS.
	EX. POLE
	EX. SIGN POST
	PROPOSED SIGN POST
	EX. VEGETATION
	EX. STORM INLET
	EX. HYDRANT
	EX. WATER LINE MARKER
	EX. WATER GATE VALVE
	EX. TRAFFIC SIGNAL BOX
	EX. ELECTRIC VAULT
	EX. UNKNOWN MANHOLE DO NOT DISTURB
	EXISTING CATCH BASIN
	EX. PIPE

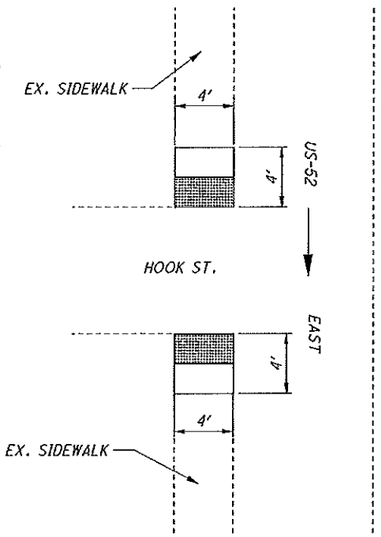
HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED BCB
CHECKED DKB

CURB RAMP DETAILS

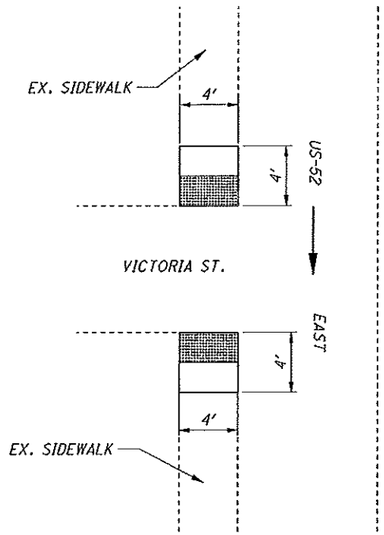
BRO-52-4.25
BRO-68-41.08

TYPE A2 RAMP (C-37)
16 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
16 SQ. FT. WALK RMVD.



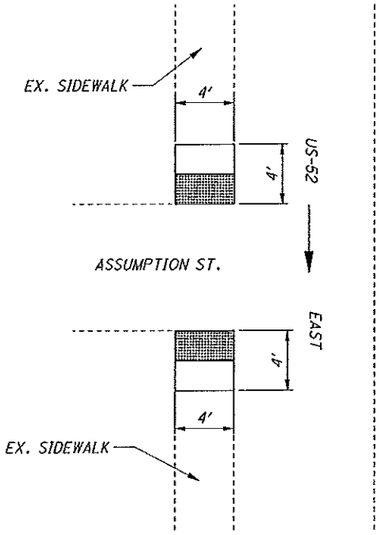
TYPE A2 RAMP (C-38)
16 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
16 SQ. FT. WALK RMVD.

TYPE A2 RAMP (C-39)
16 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
16 SQ. FT. WALK RMVD.



TYPE A2 RAMP (C-40)
16 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
16 SQ. FT. WALK RMVD.

TYPE A2 RAMP (C-41)
16 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
16 SQ. FT. WALK RMVD.



TYPE A2 RAMP (C-42)
16 SQ. FT.
8 SQ. FT.
DETECTABLE WARNING
16 SQ. FT. WALK RMVD.

NOTES

1. * SEE STANDARD DRAWING BP 7.1 FOR ACCEPTABLE GRADES. MIN. GRADE ALLOWED IS 0.5%.
2. SAWCUT AT JOINTS (TYP.) UNLESS OTHERWISE INDICATED.
3. SAWCUTTING SHALL BE INCLUDED IN COST FOR ITEM 202, WALK REMOVED.
4. INSTALL ALL CURB RAMPS BEFORE APPLYING PROPOSED ASPHALT TO ROADWAY.
5. RAMPS SHALL MEET FINISHED PROPOSED ROADWAY GRADE. AS PER STANDARD DRAWING BP 7.1 VERTICAL CHANGE IN LEVEL EXCEEDING 1/8" BETWEEN 1. THE PAVEMENT AND GUTTER AND 2. GUTTER AND RAMP ARE NOT ALLOWED.
6. DESIGNS, QUANTITIES, AND DIMENSIONS ARE FOR ESTIMATE ONLY. DESIGNS PROVIDED ON THIS SHEET ARE NOT TO SUPERCEDE STANDARD DRAWING BP 7.1. CONTRACTOR TO FIELD VERIFY ESTIMATES.
7. CONSTRUCTION OF RAMPS MAY BE FIELD MODIFIED PER BP 7.1 WITH ENGINEER'S APPROVAL.
8. ALL CURB IS ASSUMED TO BE 6" DESIGNED IN PLAN VIEW.
9. EX. PAVEMENT MARKINGS WILL BE REPLACED IN KIND ONLY IN AREAS WHERE THEY ARE REMOVED DUE TO RESURFACING PROCESS.

LEGEND

EX. CW	EXISTING CROSSWALK
PROP. CW	PROPOSED CROSSWALK
C-#	PROPOSED CURB RAMP INFORMATION ID NOS.
	EX. POLE
	EX. SIGN POST
	PROPOSED SIGN POST
	EX. VEGETATION
	EX. STORM INLET
	EX. HYDRANT
W	EX. WATER LINE MARKER
W	EX. WATER GATE VALVE
	EX. TRAFFIC SIGNAL BOX
	EX. ELECTRIC VAULT
	EX. UNKNOWN MANHOLE DO NOT DISTURB
	EXISTING CATCH BASIN
	EX. PIPE

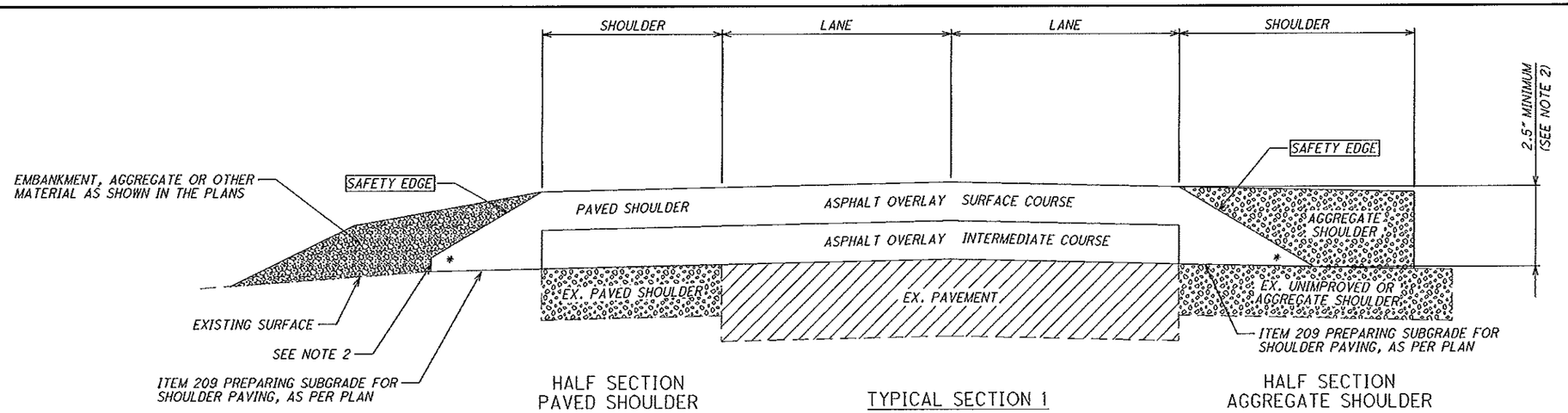
N

HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED EWW
CHECKED HJH

CURB RAMP DETAILS

BRO-52-4.25
BRO-68-41.08

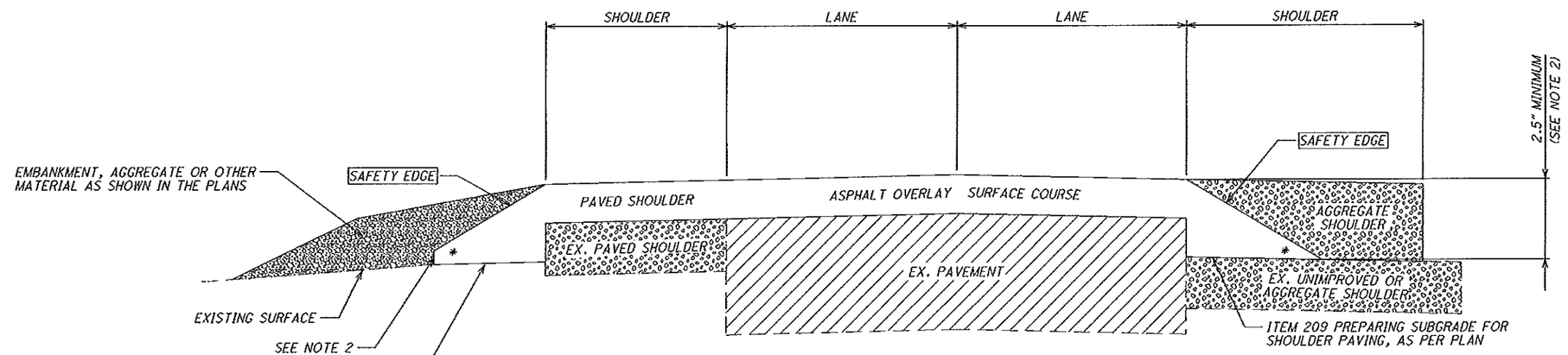


HALF SECTION PAVED SHOULDER

TYPICAL SECTION 1

N.T.S.

HALF SECTION AGGREGATE SHOULDER

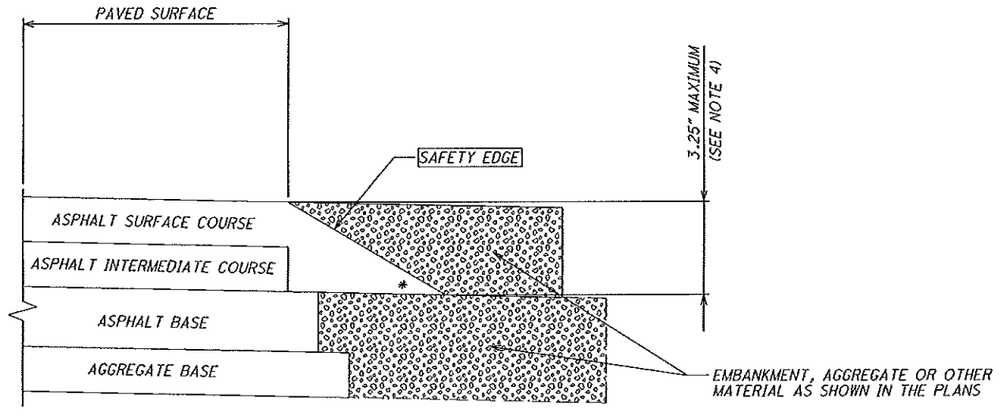


HALF SECTION PAVED SHOULDER

TYPICAL SECTION 2

N.T.S.

HALF SECTION AGGREGATE SHOULDER



HALF SECTION
NEW CONSTRUCTION

TYPICAL SECTION 3

N.T.S.

NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" (63MM) WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6" (150MM). CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6" (150 MM).

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

4.) FOR NEW PAVEMENT CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25" (82 MM).

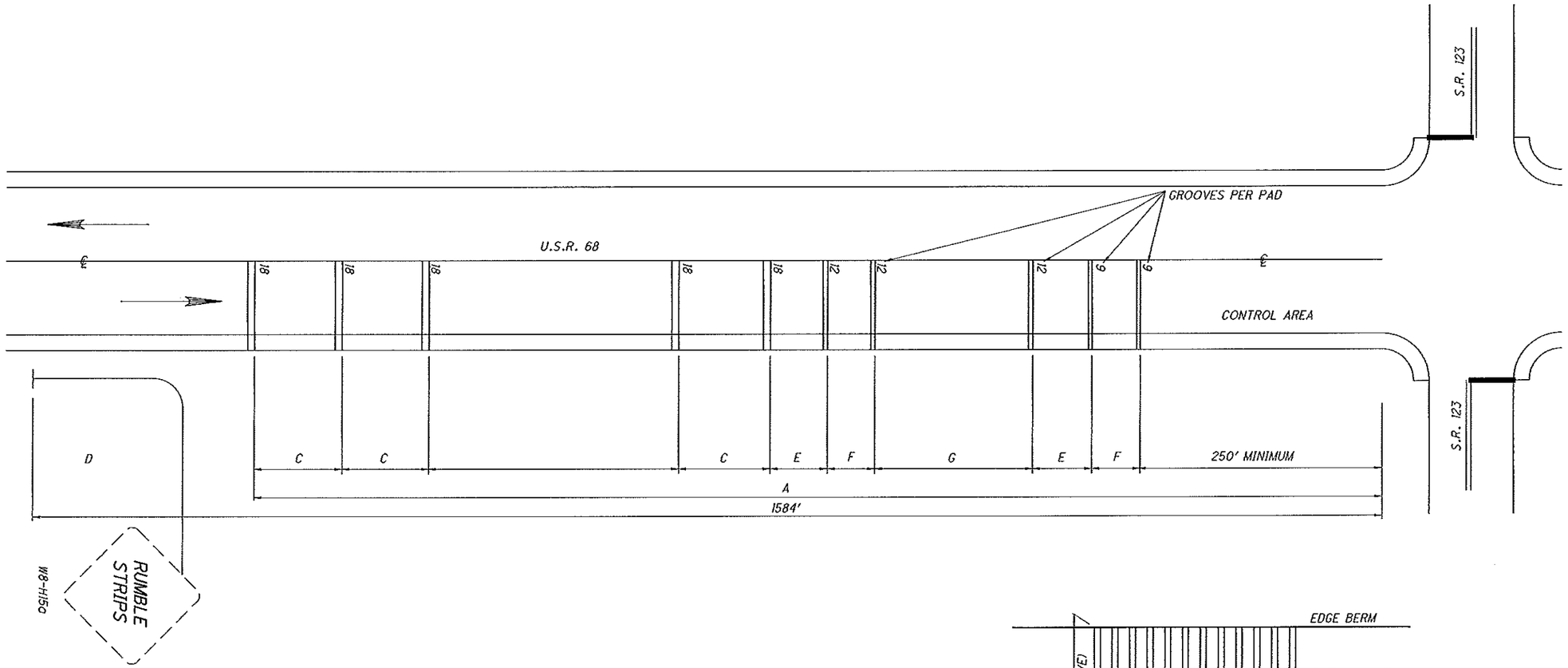
* 40° MAX

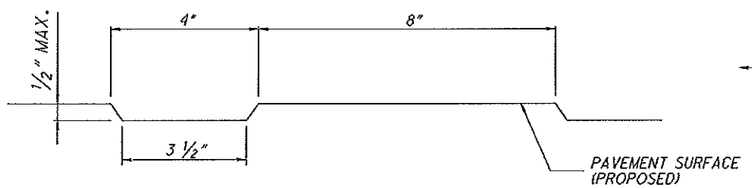
CALCULATED BCB
CHECKED DKB

SAFETY EDGE DETAIL

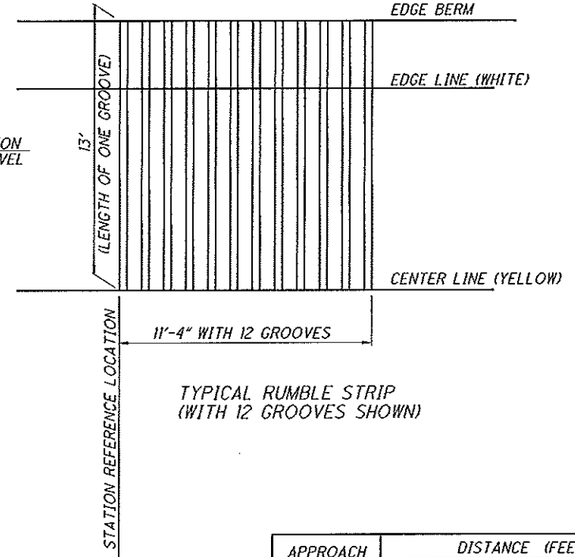
BRO-52-4.25
BRO-68-41.08

23
24





TYPICAL GROOVE DETAIL



TYPICAL RUMBLE STRIP
(WITH 12 GROOVES SHOWN)

GENERAL NOTES:

1. THE PROPOSED RUMBLE STRIPS SHALL CONSIST OF PARALLEL GROOVES CUT AT ONE (1) FOOT CENTER TO CENTER.

2. EACH GROOVE SHALL BE CUT TO A DEPTH OF APPROXIMATELY 3/8 INCH, WITH ALLOWANCE FOR PAVEMENT SURFACE IRREGULARITIES AND VARIATIONS. WIDTH OF THE GROOVE AT THE PAVEMENT SURFACE IS TO BE 4 INCHES, WITH TAPERED SIDES SUCH THAT GROOVE WIDTH AT THE BOTTOM IS APPROXIMATELY 3 1/2 INCHES. CONSTRUCTION METHODS OTHER THAN SAW CUTTING MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.

3. THE CONTROL AREA LENGTH SHALL BE A MINIMUM OF 250 FEET FOR ALL APPLICATIONS AND MAY BE EXTENDED AS NECESSARY. THE CONTROL AREA FOR CURVES (ON MAINLINES, DIRECTIONAL RAMPS, EXIT RAMPS OR OTHER NON-STOP APPROACHES) SHALL BE THE AREA FROM THE CLOSEST RUMBLE STRIP TO THE CURVE TO THE P.C. (POINT OF CURVE) CLOSEST TO THE RUMBLE STRIP. CONTROL AREA LENGTHS FOR VARIOUS RUMBLE STRIP APPLICATIONS MUST BE OF SUFFICIENT LENGTH TO ALLOW THE MOTORIST TO BRAKE THEIR VEHICLES PROPERLY.

4. METHOD OF MEASUREMENT SHALL BE CALCULATED ON A PER FOOT BASIS. THE LENGTH SHALL BE DETERMINED BY MULTIPLYING THE LENGTH OF EACH GROOVE BY THE NUMBER OF GROOVES AT EACH SEPARATE LOCATION. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT THE PAVEMENT RUMBLE STRIPS AS OUTLINED ABOVE.

APPROACH SPEED	DISTANCE (FEET)						
	A	B	C	D	E	F	G
50-55 MPH	1200	750-950	100	250	75	50	150
40-45 MPH	1060	680-840	85	210	65	45	125
35 OR LESS	895	590-705	70	165	50	35	100

CALCULATIONS FOR ITEM 618, RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN
NORTHBOUND-144 GROOVES AT 13' EACH = 1872 LIN.FT.
SOUTHBOUND-144 GROOVES AT 13' EACH = 1872 LIN.FT.
TOTAL = 3744 LIN. FT.
QUANTITY CARRIED TO PAVEMENT MARKING SUBSUMMARY - SHEET 17

CALCULATED BCB
CHECKED HJH

PAVEMENT DETAILS

RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN

BRO-52-4.25
BRO-68-41.08

24
24

01-JUL-2014 2:10PM hhille

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