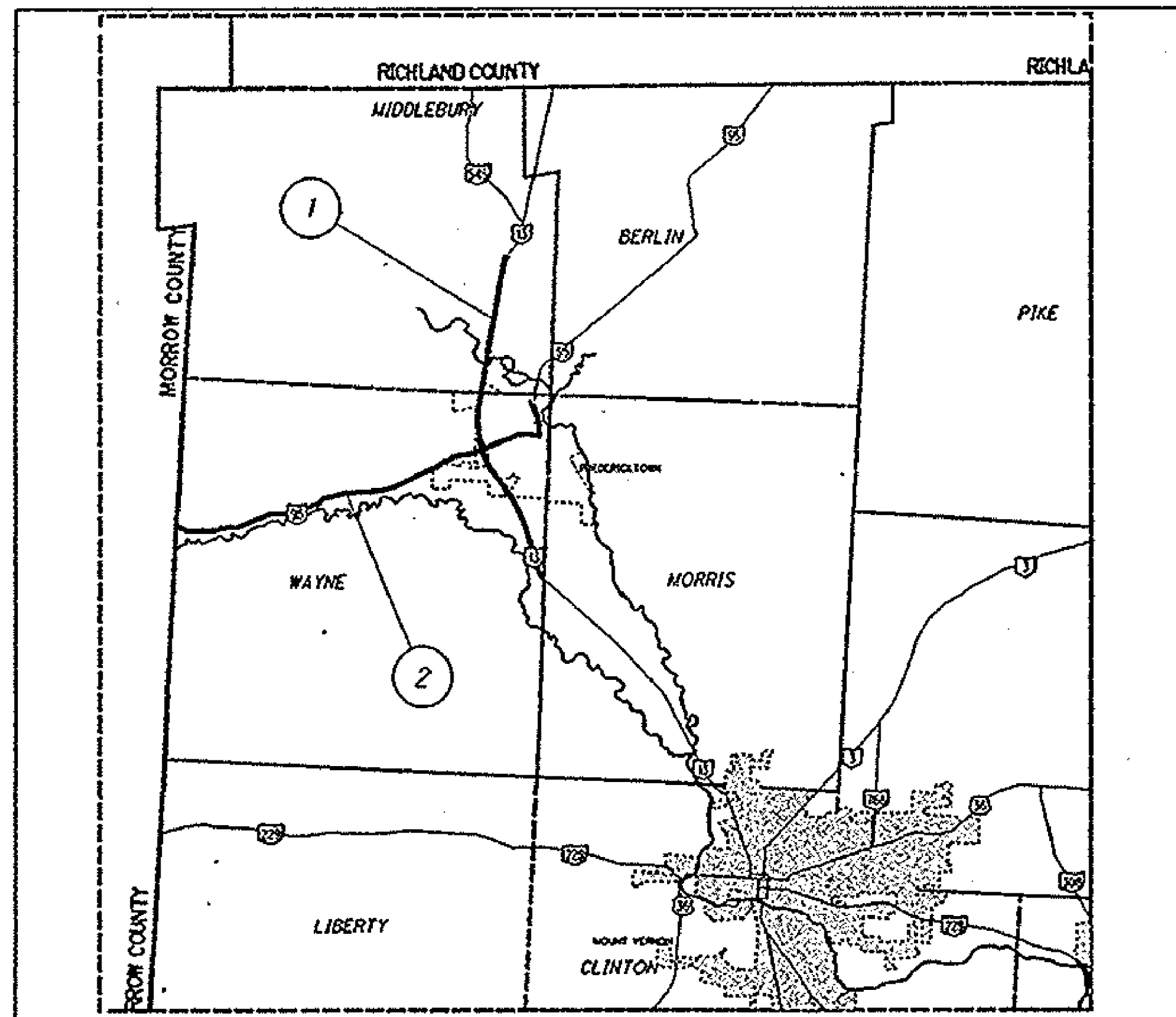


KNO - SR-13-16.02;KNO-95-0.00
 090015 PID - 25687
 Dist 5 1/14/2009



LOCATION MAP

LON/LAT: 82° 33' 30" / 40° 29' 02"

PORTION TO BE IMPROVED

DESIGN DESIGNATION	LOCATIONS	
	1	2
Functional Classification	RPA	RMC
Current ADT (2008)	8600	3800
Design Year ADT (2020)	10200	4400
Design Hourly Volume (2020)	1020	440
Directional Distribution	50%	50%
Trucks (24 Hour B&C)	10%	8%
Design Speed	65mph	55mph
Legal Speed	60mph	55mph

RMC = RURAL MAJOR COLLECTOR
 RPA = RURAL PRINCIPAL ARTERIAL

DESIGN EXCEPTIONS: KNO-95-0.00
 SHOULDER WIDTH 4-28-08
 HORIZONTAL ALIGNMENT 4-28-08

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 PROTECTIVE
 SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
 OHIO DEPARTMENT OF TRANSPORTATION
 DISTRICT 5 PRODUCTION OFFICE

ENGINEER'S SEAL

STATE OF OHIO

DOUGLAS N. MORGAN
 E-63839

REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Douglas N. Morgan*
 DATE: 10/14/2008

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

KNO-13-16.02
KNO-95-0.00

WAYNE AND MIDDLEBURY TOWNSHIPS
 KNOX COUNTY

INDEX OF SHEETS:

TITLE SHEET 1
 GENERAL NOTES 2-8
 ASPHALT CONCRETE DATA 9
 PAVED SHOULDER DATA 10
 EXTRA AREAS DATA 11-13
 BRIDGE TREATMENT DETAILS 14-16
 CURB RAMP DETAILS 17,18
 PAVEMENT MARKING DATA 19-21
 PAVEMENT MARKING DETAILS 22-24
 RPM DATA 25
 LOCATION SUB-SUMMARIES 26-28
 GENERAL SUMMARY 29,30
 WIDENING PLAN 31-40
 BRIDGE PLAN (KNO-95-0323) 41-58

STANDARD CONSTRUCTION DRAWINGS

AS-1-81	7-19-02	MT-96.20	4-19-02	PCB-91	7-19-02
		MT-96.25	4-20-01		
BP-3.1	10-19-07	MT-97.10	9-5-06	RM-4.2	10-19-07
BP-4.1	7-16-04	MT-97.11	9-5-06		
BP-5.1	7-28-00	MT-97.12	9-5-06	TC-65.10	1-21-05
BP-7.1	1-19-07	MT-98.10	10-19-07	TC-65.11	1-21-05
BP-7.2	1-19-07	MT-98.11	10-19-07	TC-71.10	1-19-07
		MT-98.20	10-19-07	TC-73.10	1-19-01
GR-1.1	7-16-04	MT-98.21	10-19-07		
GR-2.1	1-16-04	MT-98.22	10-19-07	TST-1-99	4-18-08
GR-3.6	1-16-04	MT-98.28	10-19-07	SUPPLEMENTAL SPECIFICATIONS	
GR-4.2	1-19-07	MT-99.20M	1-30-95	800	10-17-08
		MT-101.70	10-18-02	832	4-25-06
MT-35.10	4-20-01	MT-105.10	10-18-02	847	4-15-05
MT-95.30	9-5-06	MT-105.11	10-18-02		
MT-96.11	4-19-02				

PROJECT DESCRIPTION:

ASPHALT CONCRETE RESURFACING, AND RELATED WORK, ON S.R. 13. RESURFACING AND CURVE WIDENING/SUPERELEVATION CORRECTION ON S.R. 95. BRIDGE DECK OVERLAY AND NEW APPROACH SLAB INSTALLATION ON KNO-95-0323.

Project Earth Disturbed Area =

0.6 ACRE

Estimated Contractor Earth Disturbed Area =

0.125 ACRE

Notice of Intent Earth Disturbed Area =

0.725 ACRE

LOCATION	COUNTY	ROUTE	BEGIN SLM	END SLM	LENGTH MILES	CITY/VILLAGE
1	KNO	S.R. 13	16.00	20.80	4.80	FREDERICKTOWN
2	KNO	S.R. 95	0.00	5.69	5.69	FREDERICKTOWN

2008 SPECIFICATIONS

THE STANDARD 2008 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

APPROVED *William H. Fidenbaum*

DATE 10-20-08 DISTRICT DEPUTY DIRECTOR

APPROVED *James Bradley*

DATE 10/30/08 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E071 (015)

PID NO.
25687

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

KNO-13-16.02
KNO-95-0.00

1/58

P:\KNO\25687\Design\Roadway\Plan_Sheets\General\K013_MTS_001.dgn 11-OCT-2008 8:40AM loby

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT SHOULD NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA. BELOW IS A LIST OF UTILITIES LOCATED WITHIN THE PROJECT LIMITS AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT OWNERS AND VERIFY LOCATIONS:

AMERICAN ELECTRIC POWER CO.
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
ATTN: RICK ECKLE
614-883-6829

EMBARQ
441 WEST BROAD STREET
PATASKALA, OHIO 43062
ATTN: GALEN GOZDAN
740-927-3000

COLUMBIA GAS OF OHIO
1120 WEST 4TH STREET
MANSFIELD, OHIO 44906
ATTN: ERIC BELL
419-427-3226

TIME WARNER CABLE
1266 DUBLIN ROAD
COLUMBUS, OHIO 43215
ATTN: KEVIN RICH
614-481-5263

CONSOLIDATED ELECTRIC COOP
680 SUNBURY ROAD
P.O. BOX 630
DELAWARE, OHIO 43015
ATTN: TIM APPEGATE
740-363-2641

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZE LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICES MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE SUCH CLOSURE OR LANE RESTRICTIONS.

SEND NOTIFICATION TO:

DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR
P.O. BOX 306
JACKSONSTOWN, OH 43030
PHONE: (740) 323-4400 EXT. 5241

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

CONVERT THE ENGLISH STANDARD DRAWINGS REFERENCED IN THIS PLAN TO METRIC UNITS USING THE ENGLISH TO SI (METRIC) CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. CONVERSIONS WILL BE APPROPRIATELY PRECISE AND REFLECT STANDARD INDUSTRY SI (METRIC) VALUES WHERE SUITABLE.

ITEM 617 COMPACTED AGGREGATE, AS PER PLAN

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE. ALL QUALITY REQUIREMENTS EXCEPT SHALE SHALL BE WAIVED. OTHER GRADATION REQUIREMENTS SHALL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX SHALL BE WAIVED. IF PERMITTED, THE CONTRACTOR MAY USE RECYCLED ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.05 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DOCUMENT EXISTING MARKING LOCATIONS (i.e. BY USE OF VIDEO, PICTURES) AND PLACE NEW PAVEMENT MARKINGS AS NEAR AS POSSIBLE TO THE EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS.

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.

FEATHERING

FEATHERING OF THE ASPHALT CONCRETE SHALL BE DONE IN ACCORDANCE WITH SCD DRAWING BP-3.1, 10-19-07.

GENERAL NOTES

KNO-13-16.02
KNO-95-0.00

ITEM 614 WORK ZONE MARKING SIGNS

A QUANTITY OF WORK ZONE MARKING SIGNS HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

WORK ZONE MARKING SIGNS	LOCATIONS	
	1	2
W8-H12a (NO EDGE LINES)	4	5
W20-1 (ROAD WORK AHEAD)	9	26
G20-2 (END ROAD WORK)	9	26
TOTAL	22	57

MAIL BOX TURN OUTS

A QUANTITY OF ASPHALT CONCRETE HAS BEEN PROVIDED IN THE PLAN TO COVER MAIL BOX TURN OUTS. TURN OUTS SHALL BE PAVED AS SHOWN IN THE DETAIL IN DRAWING BP-4.1, 7-16-04.

ANY EXTRA GRADING OF THE SHOULDERS, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE MAIL BOX TURN OUTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 2 - 19 CU.YD.

ITEM 604 CATCH BASIN / MANHOLE ADJUSTED TO GRADE
ITEM 638 VALVE BOX ADJUSTED TO GRADE

THESE ITEMS SHALL BE USED TO ADJUST CATCH BASINS, MANHOLES AND WATER VALVE BOXES LOCATED THROUGH OUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. ALL MATERIALS, LABOR EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED SHALL BE INCLUDED FOR PAYMENT WITH THE ITEMS LISTED BELOW.

ANY GAS VALVE BOXES AND TELEPHONE COMPANY MANHOLES ON THIS PROJECT SHALL BE ADJUSTED TO GRADE BY THE RESPECTIVE OWNERS.

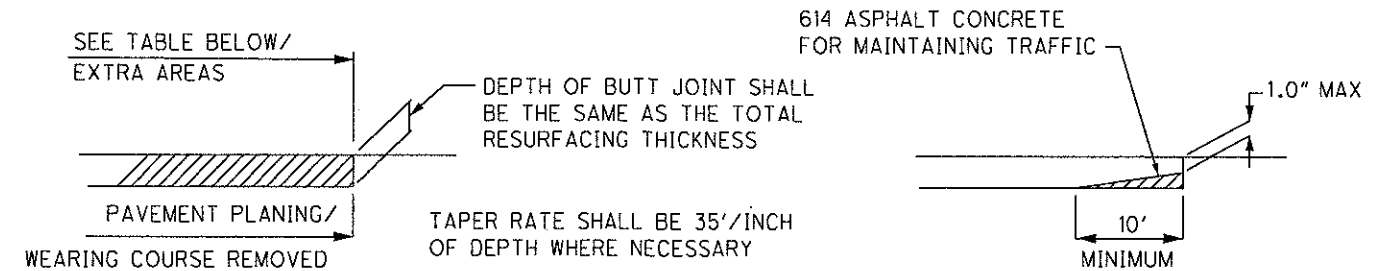
ITEM 604 CATCH BASIN ADJUSTED TO GRADE
LOCATION 2 - 2 EACH

ITEM 604 MANHOLE ADJUSTED TO GRADE
LOCATION 2 - 9 EACH

ITEM 638 VALVE BOX ADJUSTED TO GRADE
LOCATION 2 - 15 EACH

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT EXTRA AREAS WITH WEARING COURSE REMOVED. AFTER THE JOINT IS CONSTRUCTED, THE DROP OFF CREATED SHALL BE MINIMIZED BY IMMEDIATELY PLACING THE PROPOSED INTERMEDIATE COURSE TO WITHIN 1.0" OF EXISTING ROADWAY SURFACE OR BY PLACING A WEDGE AS SHOWN BELOW USING ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC. BUTT JOINTS SHALL BE AS PER SCD BP-3.1, 10-19-07 UNLESS OTHERWISE SHOWN IN THE PLANS.



LOCATION	ROUTE	DESCRIPTION	SLM	202 WEARING COURSE REMOVED SO. YD.	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU.YD.
1	S.R. 13	BEGIN WORK	16.00	*	0.6
1	S.R. 13	KNO-13-1833R	18.33	#	1.1
1	S.R. 13	KNO-13-1833L	18.33	#	1.1
1	S.R. 13	KNO-13-1915R	19.15	#	1.1
1	S.R. 13	KNO-13-1915L	19.15	#	1.1
1	S.R. 13	END WORK	20.80	*	0.7
1	S.R. 13	TOTALS			5.7
2	S.R. 95	BEGIN WORK	0.00	136	0.5
2	S.R. 95	STA. 5+00 (SHEET 34)		312	0.5
2	S.R. 95	STA. 13+00 (SHEET 35)		312	0.5
2	S.R. 95	KNO-95-0323	3.23	272	1.0
2	S.R. 95	KNO-95-0437	4.37	406	1.0
2	S.R. 95	END WORK	5.69	*	1.8
2		TOTALS			5.3

* INCLUDED FOR PAYMENT WITH PAVEMENT PLANING
SEE BRIDGE TREATMENT DATA SHEET 14

GENERAL NOTES

KNO-13-16.02
KNO-95-0.00

RESIDENCE AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 448 ASPHALT CONCRETE HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL TYPICALLY EXTEND 4' INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT). THERE ARE 5 TYPES OF DRIVES: CONCRETE, ASPHALT, GRAVEL, GRAVEL WITH ASPHALT APRON, AND FIELD/OIL WELL DRIVES. FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED. GRAVEL DRIVES SHALL BE PAVED BACK 4' INTO THE DRIVEWAY UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CONCRETE AND ASPHALT DRIVES SHALL HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (PREFERRED 4') AS DIRECTED BY THE ENGINEER SO AS TO PROVIDE A SMOOTH TRANSITION. GRAVEL DRIVES WITH ASPHALT APRONS SHALL ALSO HAVE BUTT JOINTS OR AS SHORT A ASPHALT TAPER AS POSSIBLE (PREFERRED 4') BUT ONLY IF THE EXISTING ASPHALT APRON IS IN AN ACCEPTABLE CONDITION TO BE PAVED OVER AS DIRECTED BY THE ENGINEER. IF THE ASPHALT APRON CANNOT BE PAVED OVER (FOR EXAMPLE, BROKEN INTO SMALL PIECES) AS DETERMINED BY THE ENGINEER, IT SHALL BE REMOVED BEFORE BEING PAVED BACK 4' INTO THE DRIVEWAY. ALL GRADING, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 2 - 20 CU.YD.

ITEM 408 PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GALLON PER SQUARE YARD TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS. THE FOLLOWING QUANTITY OF PRIME COAT, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

ITEM 408 PRIME COAT, AS PER PLAN
LOCATION 2 - 4391 GAL.

ITEM 621 RAISED PAVEMENT MARKER REMOVED

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS TO REMOVE RAISED PAVEMENT MARKERS FOR DISPOSAL BY THE CONTRACTOR. RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO RESURFACING OF THE ROADWAY. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 621 RAISED PAVEMENT MARKER REMOVED
LOCATION 1 - 689 EACH
LOCATION 2 - 551 EACH

ITEM 209 LINEAR GRADING

IN ORDER TO PROVIDE POSITIVE DRAINAGE FROM THE ROADWAY SURFACE TO THE SHOULDER BREAK, THE EXISTING ROADWAY SHOULDERS SHALL BE GRADED AND SHAPED USING A GRADER OF ADEQUATE SIZE TO PERFORM THE WORK TO THE SATISFACTION OF THE ENGINEER. ALL EXCESS MATERIAL REMAINING AROUND GUARDRAIL AND OTHER AREAS AFTER THE GRADER WORK IS COMPLETED AND NOT DISPOSED OF ON THE SITE, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL EQUIPMENT, LABOR, OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 209 LINEAR GRADING. THIS WORK MAY BE INTERMITTENT AND SPREAD THROUGHOUT THE PROJECT LIMITS, AS DIRECTED BY THE ENGINEER. ALL LINEAR GRADING WORK SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM 209 LINEAR GRADING
LOCATION 2 - 2 MILE

ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURES)

AT LEAST ONE LANE OF TRAFFIC NORTHBOUND AND SOUTHBOUND SHALL BE MAINTAINED WHILE PAVING IN THE 4-LANE SECTION OF LOCATION 1.

TRAFFIC SHALL NOT BE MAINTAINED ON A PLANED SURFACE. ALL PLANED SURFACES SHALL BE OVERLAYED WITH AT LEAST ASPHALT CONCRETE INTERMEDIATE COURSE BEFORE OPENING TO TRAFFIC (LOCATIONS 1 & 2).

CALCULATED
LME
CHECKED
DNM

GENERAL NOTES

KNO-13-16.02
KNO-95-0.00

4
58

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

DEPTH OF PAVEMENT PLANING SHALL BE AS DESCRIBED BELOW OR AS DIRECTED BY THE ENGINEER. THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE CENTER/LANE LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. THIS MAY REQUIRE ADDITIONAL MILLING DEPTH DUE TO EXISTING GRADER PATCHES AND PAVEMENT REPAIR. IN NO CASE SHALL A THIN LAYER (LESS THAN OR EQUAL TO 0.5") OF AN EXISTING COURSE OF ASPHALT BE PERMITTED TO REMAIN IN PLACE. ANY ADDITIONAL PASSES WITH THE PLANING MACHINE OR VARIATIONS IN DEPTH OF THE PLANING TO MEET ALL OF THESE REQUIREMENTS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WORK, ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN. ALL SPECIFICATIONS OF ITEM 254 SHALL APPLY.

LOCATIONS 1:

PLANE 1.5" IN DEPTH FULL WIDTH OF PAVEMENT (INCLUDING PAVED SHOULDERS)

LOCATION 2:

PLANE 2.0" IN DEPTH FULL WIDTH OF PAVEMENT FROM SLM 4.71 TO 5.69 (INCLUDING PAVED SHOULDERS)

7500 TONS OF RACP (GRINDINGS) SHALL BE DELIVERED TO THE OHIO DEPARTMENT OF TRANSPORTATION - KNOX COUNTY GARAGE, 505 HARCOURT ROAD MT. VERNON, OHIO 43050. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

ITEM 516 2" DEEP JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL PLACE A 1" X 2.0" DEEP BEAD OF JOINT SEALER (AS PER 705.04) AT THE LOCATIONS SHOWN IN PLANS. THE CONTRACTOR SHALL SAW CUT A CHANNEL FOR THE JOINT SEALER. THE COST FOR SAW CUTTING THE CHANNEL FOR THE JOINT SEALER SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516 2" DEEP JOINT SEALER, AS PER PLAN.

WORK ZONE CENTER LINE AND LANE LINE

THE ROADWAY SHALL NOT BE OPEN TO TRAFFIC WITHOUT EITHER PERMANENT OR TEMPORARY (CLASS III LANE LINE/CLASS III CENTER LINE) PAVEMENT MARKINGS IN PLACE. IF PERMANENT PAVEMENT MARKINGS ARE NOT READY TO BE PLACED, THE CONTRACTOR SHALL PLACE WORK ZONE CENTER LINE, CLASS III AND WORK ZONE LANE LINE, CLASS III IN ORDER TO RE-OPEN THE ROADWAY. THE QUANTITIES SHOWN BELOW ARE CARRIED TO THE SUB-SUMMARIES FOR THE PURPOSE DESCRIBED ABOVE.

LOCATION 1:

ITEM 614 WORK ZONE CENTER LINE, CLASS III - 0.15 MILE
ITEM 614 WORK ZONE LANE LINE, CLASS III - 8.89 MILE

LOCATION 2:

ITEM 614 WORK ZONE CENTER LINE, CLASS III - 5.91 MILE

Item 614. Work Zone Impact Attenuator for 24" Wide Hazards (Unidirectional or Bidirectional)

This item shall consist of furnishing and installing one of the following impact attenuators:

1. The QuadGuard CZ, (24 inches (610 millimeters) wide six-bay) work zone impact attenuator manufactured by Energy Absorption Systems, Inc., 35 East Wacker Drive, Chicago, IL 60601 (telephone: 312-467-6750).

The length of the six-bay QuadGuard CZ is 20'-9" (6.33 meters). Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Drawing Number	Drawing Name	Drawing/ Revision Date	ODOT Approval Date
QSCZCVR-T4	QuadGuard CZ System for Construction Zones	5/13/99 Rev. J	8/27/99
35-40-10	QuadGuard System Concrete Pad, CZ, QG	11/19/97 Rev. D	8/27/99
35-40-16	QuadGuard System Backup Assembly, CZ, QG	7/30/99 Rev. F	8/27/99
354051z	QuadGuard CZ System Nose Assembly, CZ, QG, 24, 30, 36	5/17/99	8/27/99
35-40-18	Transition Assembly, 4 Offset, QG	6/25/99 Rev. F	8/27/99
35400260	QuadGuard System PCMB Anchor Assembly	11/19/97 Rev. C	8/27/99

2. The TRACC (Trinity Attenuating Crash Cushion) manufactured by Trinity Industry, 1170 N. State Street, Girard, Ohio 44420 (telephone: 330-545-4373).

The TRACC is 21'-0" (6.4 meters) long and 2'-7" (0.8 meter) wide. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Drawing Number	Drawing Name	Drawing/ Revision Date	ODOT Approval Date
SS450	Crash-cushion Attenuating Terminal Plan, Elevation & Sections	3/12/99 Rev. 1	8/27/99
SS455	TRACC Transition to W-beam Median Barrier Plan, Elevation & Sections	2/18/99	8/27/99
SS461	TRACC Transition to Concrete Safety Shape Barrier Plan, Elevation & Sections	6/30/99 Rev. 1	8/27/99
SS462	TRACC Transition to Concrete Barrier Single Slope Plan, Elevation & Sections	6/30/99	8/27/99

3. The Barrier Systems, Inc. TAU-II Impact Attenuator, Distributed by Road Systems, Inc., Sales Support, 2183 Elm Trace, Austintown, OH 44515, (telephone 330-799-9291).

The TAU-II for this note is a parallel 8-bay unit 24' long and 35" wide). Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Drawing Number	Drawing Name	Drawing/ Revision Date	ODOT Approval Date
A040416	Universal TAU-II Parts List	4/22/04	10/16/04
A040420	Universal TAU-II Foundation, Flush Mount Backstop	4/28/04	10/16/04
A040105	Universal TAU-II Foundation, PCB Backstop (Referenced on A04020)	1/07/04	10/16/04
B040239	Application, Flush Mount Backstop (Typical for parallel 60 mph unit)	4/21/04	10/16/04

The Contractor shall provide a replacement unit when an impact is severe enough to require complete replacement of the attenuator. The Contractor shall have a spare parts package available on the project site at all times when an attenuator is in place. The Contractor shall provide a minimum of one complete spare parts package for every one to six units installed on the project site. For example, five installed units require one spare parts package and seven installed units require two spare parts packages.

When bidirectional designs are specified, the Contractor shall supply appropriate transitions. Payment for the above work shall be made at the unit price bid and shall include all labor, tools, equipment and materials necessary to construct, maintain and repair a complete and functional impact attenuator system, including all related backups, transitions, leveling pads, hardware and grading, not separately specified, as required by the manufacturer.

CALCULATED
LME
CHECKED
DNM

GENERAL NOTES

KNO-13-16.02
KNO-95-0.00

5
58

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS,
AS PER PLAN**

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THIS LIST IS AVAILABLE ON THE ODOT WEBSITE AT [HTTP://WWW.DOT.STATE.OH.US/TESTLAB/APPLISTS/MISC/PCMS.HTM](http://www.dot.state.oh.us/testlab/applists/misc/pcms.htm). THE LIST CURRENTLY CONTAINS CLASS I, II, AND III UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 1250 FT., 850 FT. AND 650 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE HIGH-INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS,
AS PER PLAN (cont'd)**

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE- CONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS,
AS PER PLAN (cont'd)**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

A TOTAL OF 2 PCMS SHALL BE REQUIRED FOR THIS PROJECT

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN - 4 SIGN-MONTH
QUANTITY CARRIED TO GENERAL SUMMARY

K013_MGN_006.DGN 6-16-08

CALCULATED
LINE
CHECKED
DMM

GENERAL NOTES

KNO-13-16.02
KNO-95-0.00

6
58

MOBILIZATION

THE CONTRACTOR SHALL ON ANY CONTRACT FOR WHICH HIS BID EXCEEDS \$50,000.00 INCLUDE AN AMOUNT TO COVER ANY APPLICABLE EXPENDITURES REFERRED TO UNDER ITEM 624 OF THE 2005 CONSTRUCTION AND MATERIAL SPECIFICATIONS. PAYMENT SHALL BE THE LUMP SUM BID PRICE FOR ITEM 624, MOBILIZATION.

RESHAPING BERM

BERMS AT LOCATIONS WHERE EXISTING GUARDRAIL IS REMOVED OR WHERE NEW GUARDRAIL IS TO BE ERECTED SHALL BE RESHAPED AS DIRECTED BY THE ENGINEER TO ENSURE A SMOOTH SURFACE FREE FROM ALL IRREGULARITIES. EXCESS EMBANKMENT REQUIRED TO ACHIEVE THE ABOVE SHALL BE INCIDENTAL TO THE ITEM. EXCESS EXCAVATION RESULTING FROM RESHAPING BERMS SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT FOR RESHAPING BERMS AS DESCRIBED SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER FOOT FOR ITEM SPECIAL, RESHAPING BERM 288 FEET. BERM RESHAPING, GUARDRAIL REMOVAL AND CONSTRUCTION SHALL BE PERFORMED ON ONE SIDE OF THE PAVEMENT AT ANY GIVEN TIME. THE OPEN AREA DUE TO GUARDRAIL REMOVAL SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH TEMPORARY GUIDE MARKERS OR BARRICADES AT ALL TIMES. WHERE EXISTING GUARDRAIL IS REMOVED, NEW GUARDRAIL SHALL BE ERECTED AS PER 202.09. ANY AREAS LEFT UNGUARDED OVERNIGHT SHALL BE PROTECTED BY THE USE OF BARRICADES, DRUMS, OR OTHER WARNING DEVICES IN ACCORDANCE WITH "DROPOFFS IN WORK ZONES" AND TO THE SATISFACTION OF THE ENGINEER.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 8 P.M. AND 6 A.M. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

REMOVED MATERIALS

ALL REMOVED MATERIALS EXCEPT AS NOTED ELSEWHERE IN THE PLANS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE JOB SITE.

LOCATION OF GUARDRAIL

THE LOCATIONS OF THE GUARDRAIL RUNS, AS SHOWN IN THESE PLANS ARE SUBJECT TO ADJUSTMENTS PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATION WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

AN ADDITIONAL QUANTITY OF 20 CU. YDS. HAS BEEN INCLUDED IN THE PLANS TO STABILIZE BERMS AND OR REPAIR PAVEMENT OR BERMS DAMAGED WHEN MAINTAINING TRAFFIC.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1. THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE:330-545-4373). THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG. REV. DATE	ODOT APPROVAL DATE
SSS265M	ET-2000 (1997)		
SS142	PLAN, ELEVATION AND SECTIONS ET2000 PLUS 50'-0" RAIL, SLEEVE W/PL POSTS 1-4	6/20/97	3/6/98
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	4/12/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	2/29/00	7/31/00
		5/22/00	7/31/00

2. THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE STOW, OHIO, 44224 (TELEPHONE: 330-346-0721) THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG. REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES		
		12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18"x18". REFER TO THE MANUFACTURE'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES FROM THE EDGE OF THE SHOULDER. ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622 PORTABLE CONCRETE BARRIER, 32"

THE CONTRACTOR SHALL INSTALL A PORTABLE CONCRETE BARRIER, 32" AS PER STANDARD DRAWING RM-4.2. ITEM 622 PORTABLE CONCRETE BARRIER, 32" HAS BEEN PROVIDED FOR MAINTAINING TRAFFIC AS SHOWN ON SHEETS [4/18] - [5/18]. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL THE MOVEMENT OF THE BARRIERS IS COMPLETE AND TRAFFIC IS MAINTAINED. AFTER THE PROJECT HAS BEEN COMPLETED THE PORTABLE CONCRETE BARRIER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE PROJECT SITE.

ITEM 622 PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED

THE CONTRACTOR SHALL INSTALL A PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED AS PER STANDARD DRAWING PCB-91. CONNECTIONS OF THE SEGMENTS SHALL BE ACCOMPLISHED BY USING 1/4" DIA. HIGH STRENGTH BOLTS. ANCHORING OF PORTABLE CONCRETE BARRIER ON THE BRIDGE SHALL BE OMITTED. ITEM 622 PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED HAS BEEN PROVIDED FOR MAINTAINING TRAFFIC AS SHOWN ON SHEETS [4/18] - [5/18]. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL THE MOVEMENT OF THE BARRIERS IS COMPLETE AND TRAFFIC IS MAINTAINED. AFTER THE PROJECT HAS BEEN COMPLETED THE PORTABLE CONCRETE BARRIER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE PROJECT SITE.

ELECTRICAL INSPECTION BY STATE LICENSED INSPECTOR

MOST ELECTRIC COMPANYS REQUIRE THAT ALL NEW OR RELOCATED ELECTRIC SERVICE ENCLOSURES ARE TO BE INSPECTED BY A LICENSED STATE INSPECTOR PRIOR TO CONNECTION TO A UTILITY DISTRIBUTION LINE. THIS IS A NEW SITUATION FOR ODOT BECAUSE INSPECTIONS ARE NOW BEING REQUIRED FOR TRAFFIC CONTROL DEVICES AND LIGHTING INSTALLATIONS.

THE CONTRACTOR SHALL HIRE A LICENSED ELECTRICAL INSPECTOR; PAY THE APPROPRIATE FEE(S), AND ADVISE THE DISTRICT ROADWAY SERVICES MANAGER OF THE TIME OF THE INSPECTION(S) SO THAT HE MAY HAVE A REPRESENTATIVE IN ATTENDANCE. IT IS TO BE NOTED THAT THE INSPECTION DOES NOT SUBSTITUTE FOR ODOT'S FINAL INSPECTION, NOR DOES IT SUPERSEDE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

THE COST OF THE INSPECTIONS SHALL BE CONSIDERED AS INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE LIGHTING INSTALLATIONS OR TRAFFIC CONTROL DEVICES.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

SEEDING AND MULCHING, CLASS I

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

- ITEM 659 - SEEDING AND MULCHING BRIDGE - 542 SQ.YD. , WIDENING - 1831 SQ.YD.
- ITEM 659 - REPAIR SEEDING AND MULCHING BRIDGE - 27 SQ.YD. , WIDENING - 92 SQ.YD.
- ITEM 659 - COMMERCIAL FERTILIZER BRIDGE - 0.07 TON , WIDENING - 0.09 TON
- ITEM 659 - LIME BRIDGE - 0.11 ACRES , WIDENING - 0.38 ACRES
- ITEM 659 - WATER BRIDGE - 2.93 M. GAL. , WIDENING - 5 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.

ITEM 614 MAINTAINING TRAFFIC (KNO-95-0323)

THROUGH TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY THE USE OF PART WIDTH CONSTRUCTION AS SHOWN ON SHEETS [2/18] - [5/18]. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND TOOLS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

NORTHEAST SHOULDER REPAIR

CARE SHALL BE TAKEN DURING ALL EXCAVATION AND PHASE I WORK TO KEEP THE EXISTING DUMP ROCK ON THE NORTHEAST SHOULDER IN PLACE. AFTER ALL EXCAVATION AND OTHER WORK IN THE AREA OF THE NORTHEAST SHOULDER INCLUDING INSTALLING THE GUARDRAIL RUN HAS BEEN COMPLETED AND PRIOR TO OPENING PHASE I TO TRAFFIC, THE CONTRACTOR SHALL ADJUST THE PLACEMENT OF THE EXISTING ROCK AS NECESSARY TO MAINTAIN A STABILIZED SHOULDER AND ADD TYPE D DUMP FILL AND EMBANKMENT TO FILL THE VOIDS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE WORK:

- ITEM 203 EMBANKMENT.....5 CU. YD.
- ITEM 601 DUMPED ROCK FILL, TYPE D.....5 CU. YD.

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BGN_001.DGN

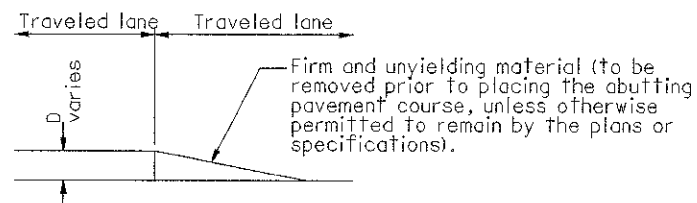
DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DATE	11-01-07
REVIEWED	DTF
DRAWN	DDH
DESIGNED	DDH
CHECKED	DDH
STRUCTURE FILE NUMBER	4202465
TAG	
GENERAL NOTES	
	BRIDGE NO. KNO-95-0323
	OVER BOONE CREEK
	KNO-13-16-02
	KNO-95-0-00
	7
	58

GENERAL NOTES

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see L&D Manual Volume One, Section 500. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing RM-4.2 and Item 622.
- When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When W8-9 (Low Shoulder) signs or W8-9a (Shoulder Drop-Off) signs or W8-11 (Uneven Lanes) signs are required, they shall be placed 750 feet [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the drop-off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10 feet [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5 inches [125] and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
 - Lengths greater than 60 feet [18 m] - utilize appropriate treatment from Condition I.
 - Lengths of 60 feet [18 m] or less - repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

- This treatment may be used when permitted for Condition I only.
- W8-11 sign required.



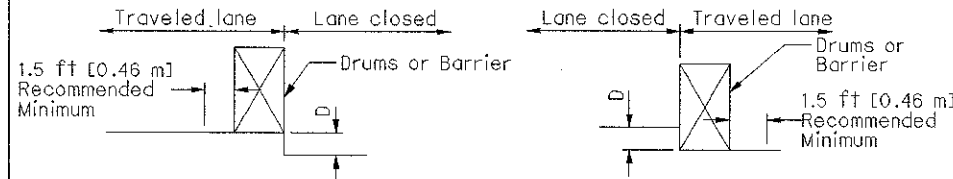
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D - inches (mm)	Treatment
< 1-1/2 [< 40]	Erect W8-11 sign.
1-1/2 - 3 [$40 - 75$]	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 - 5 [$> 75 - 125$]	Lane closure utilizing drums as shown below.
> 5 [> 125]	Lane closure utilizing portable concrete barrier as shown below.

* Cones may be used for daytime only conditions.



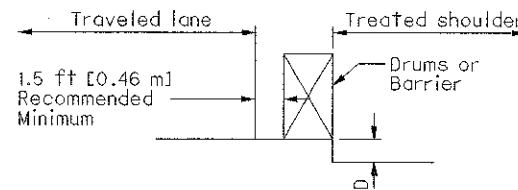
CONDITION II

DROP-OFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12 feet [3.6 m].

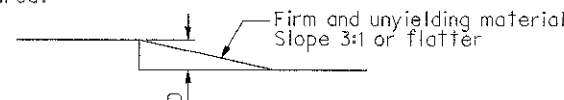
D - inches (mm)	Treatment
< 1-1/2 [< 40]	1) Erect W8-9a signs.
> 1-1/2 - 5 [$> 40 - 125$]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 - 12 [$125 - 305$] Daylight only	If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below.
> 5 - 24 [$> 125 - 610$]	1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24 [> 610]	Lane closure utilizing portable concrete barrier as shown below.

* Minimum lane widths shall be 10 ft [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per CMS 401.15 is required.
- W8-9 signs required.



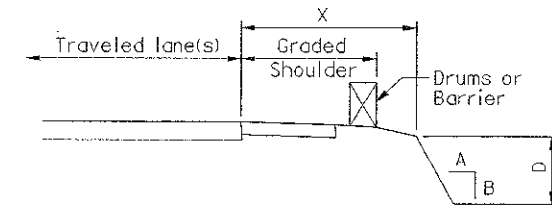
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

CHART A

- USE FOR:
- Uncurbed Facilities
 - Curbed Facilities, where:
 - Curbs are less than 6 inch [150] in height
 - Curbs are 6 inch [150] or greater in height and the legal speed is greater than 40 mph [70 km/hr].

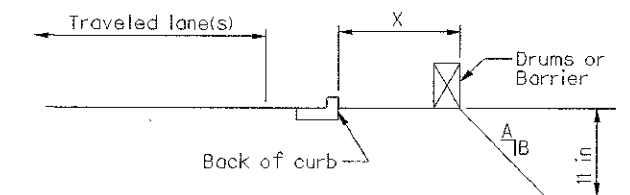


X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 4 [$0 - 1.2$]	Any	Any	(a)	(a)
4 - 30 [$1.2 - 9.1$]	Any	3:1 or Flatter	None	None
4 - 12 [$1.2 - 3.6$]	< 3 [< 75]	Steeper than 3:1	None	None
4 - 12 [$1.2 - 3.6$]	> 3 - < 12 [$> 75 - < 305$]	Steeper than 3:1	Drums	Drums
4 - 12 [$1.2 - 3.6$]	> 12 [> 305]	Steeper than 3:1	Drums	Barrier
> 12 - 20 [$> 3.6 - 6.1$]	< 12 [< 305]	Steeper than 3:1	None	None
> 12 - 20 [$> 3.6 - 6.1$]	> 12 - 24 [$> 305 - < 610$]	Steeper than 3:1	Drums	Drums
> 12 - 20 [$> 3.6 - 6.1$]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 20 - 30 [$> 6.1 - 9.1$]	< 24 [< 610]	Steeper than 3:1	None	None
> 20 - 30 [$> 6.1 - 9.1$]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 30 [> 9.1 m]	Any	Any	None	None

(a) Use treatment specified under Condition II.

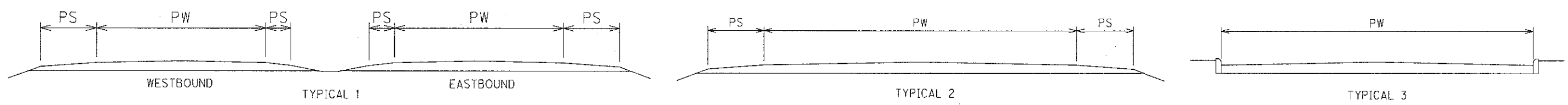
CHART B

- USE FOR: Curbed facilities, where the curb is 6 inches [150 mm] or greater in height and the legal speed is 40 mph [70 km/h] or less.

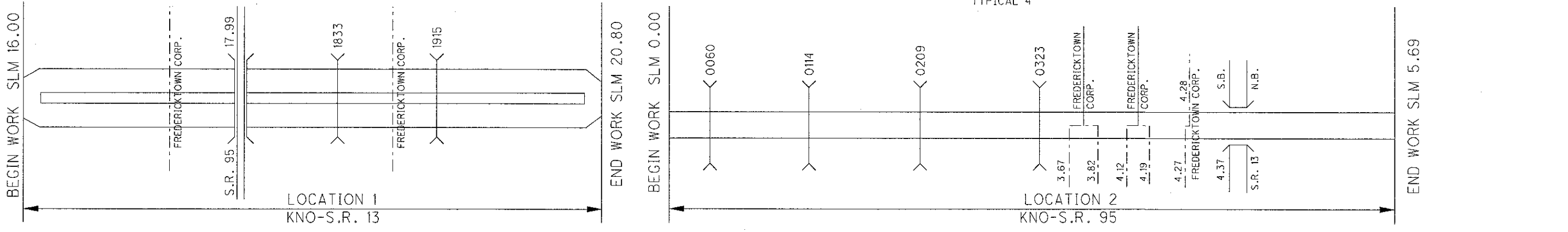


X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 10 [$0 - 3.0$ m]	< 12 [< 305]	Any	None	Drums
0 - 10 [$0 - 3.0$ m]	> 12 [> 305]	Any	Drums	Drums
> 10 [> 3.0 m]	Any	Any	None	None

CALCULATED
LME
CHECKED
DNM



PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER

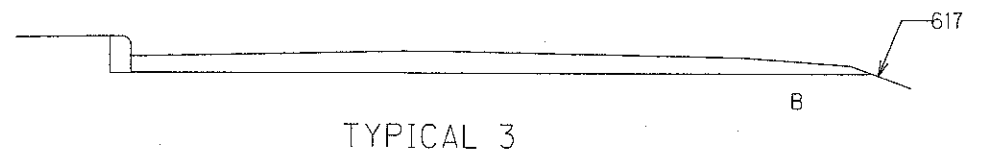
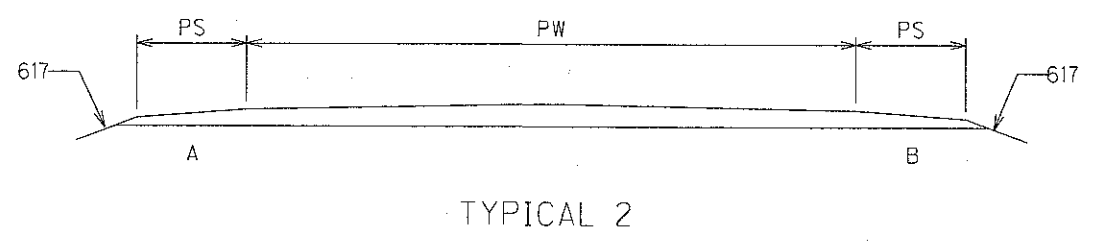
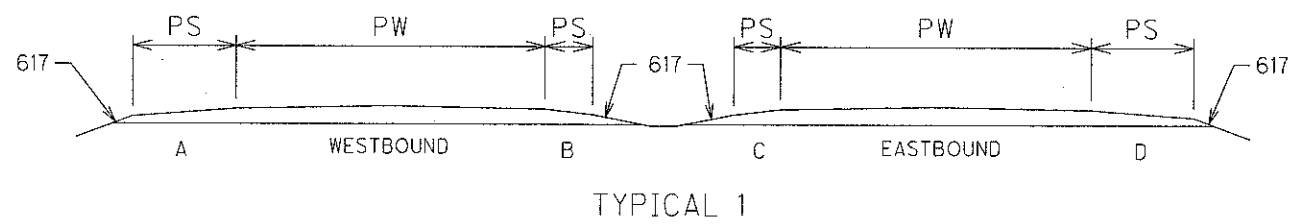


PAVEMENT DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		PAVEMENT WIDTH (FEET)	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA	254		407		448 ASPHALT CONCRETE			
					MILES	LIN. FT.					SQ. YD.	SQ. YD.	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS INCHES	INTERMEDIATE COURSE, TYPE 1, PG 64-22 CU. YD.	THICKNESS INCHES	SURFACE COURSE, TYPE 1, PG 70-22M CU. YD.
1	KNO	S.R. 13	16.00	16.06	0.06	316.80	36.0 (AVG.)	2	448	1,267.2	1,267.2	95.1				1.50	52.8	
1	KNO	S.R. 13 N.B.	16.06	20.74	4.68	24,710.40	24.0	1	448	65,894.4	65,894.4	4,942.1				1.50	2,745.6	
1	KNO	S.R. 13 S.B.	16.06	20.74	4.68	24,710.40	24.0	1	448	65,894.4	65,894.4	4,942.1				1.50	2,745.6	
1	KNO	S.R. 13	20.74	20.80	0.06	316.80	36.0 (AVG.)	2	448	1,267.2	1,267.2	95.1				1.50	52.8	
BRIDGE DEDUCTIONS (FROM SHEET 16)										(1,885.4)	(1,885.4)	(141.5)				1.50	(78.6)	
LOCATION 1 (TOTALS CARRIED TO SHEET 26)											132,437.8	9,932.9						5,518.2
2	KNO	S.R. 95	0.00	0.11	0.11	580.80	24.0	2	448	1,548.8		116.2				1.25	53.8	
2	KNO	S.R. 95	0.11	0.23	0.12	600.00	VARIES	2	448	SEE SHEETS 31-40 FOR QUANTITIES AND DETAILS FOR THIS SECTION								
2	KNO	S.R. 95	0.23	3.93	3.70	19,536.00	24.0	2	448	52,096.0		3,907.2				1.25	1,808.9	
2	KNO	S.R. 95	3.93	3.99	0.06	316.80	30.0 (AVG.)	2	448	1,056.0		79.2				1.25	36.7	
2	KNO	S.R. 95	3.99	4.07	0.08	422.40	36.0	2	448	1,689.6		126.8				1.25	58.7	
2	KNO	S.R. 95	4.07	4.17	0.10	528.00	46.0 (AVG.)	2	448	2,698.7		202.5				1.25	93.8	
2	KNO	S.R. 95	4.17	4.22	0.05	264.00	34.0	2	448	997.3		74.8				1.25	34.7	
2	KNO	S.R. 95	4.22	4.28	0.06	316.80	30.0 (AVG.)	2	448	1,056.0		79.2				1.25	36.7	
2	KNO	S.R. 95	4.28	4.71	0.43	2,270.40	24.0	2	448	6,054.4		454.1				1.25	210.3	
2	KNO	S.R. 95	4.71	4.93	0.22	1,161.60	24.0	3	448	3,097.6	3,097.6	232.4	154.9	0.75	64.6	1.25	107.6	
2	KNO	S.R. 95	4.93	5.19	0.26	1,372.80	30.0	3	448	4,576.0	4,576.0	343.2	228.8	0.75	95.4	1.25	158.9	
2	KNO	S.R. 95	5.19	5.21	0.02	105.60	46.0 (AVG.)	3	448	539.7	539.7	40.5	27.0	0.75	11.3	1.25	18.8	
2	KNO	S.R. 95	5.21	5.29	0.08	422.40	50.0 (AVG.)	3	448	2,346.7	2,346.7	176.1	117.4	0.75	48.9	1.25	81.5	
2	KNO	S.R. 95	5.29	5.38	0.09	475.20	58.0 (AVG.)	3	448	3,062.4	3,062.4	229.7	153.2	0.75	63.8	1.25	106.4	
2	KNO	S.R. 95	5.38	5.69	0.31	1,636.80	27.0	4	448	4,910.4	4,910.4	368.3	245.6	0.75	102.3	1.25	170.5	
BRIDGE DEDUCTIONS (FROM SHEET 16)										(1,216.0)	(1,216.0)	(91.2)	(60.8)	0.75	(25.4)	1.25	(42.3)	
LOCATION 2 (TOTALS CARRIED TO SHEET 27)											17,316.8	6,339.0	866.1			360.9		2,935.0

ASPHALT CONCRETE DATA

KNO-13-16.02
KNO-95-0.00



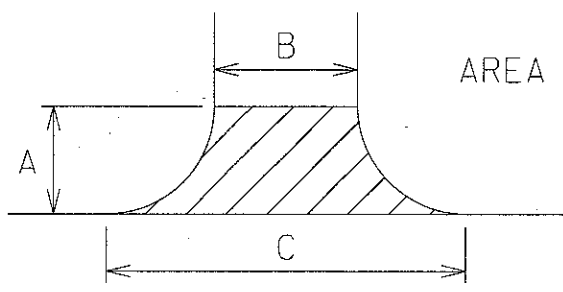
SHOULDER DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)				SHOULDER AREA SQ. YD.	254		407		448 ASPHALT CONCRETE				617		
								MILES	LIN. FT.	A	B		C	D	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS INCHES	INTERMEDIATE COURSE, TYPE 1, PG 64-22 CU. YD.	THICKNESS INCHES	SURFACE COURSE, TYPE 1, PG 70-22M CU. YD.	THICKNESS INCHES	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH) CU. YD.
1	KNO	S.R. 13	16.00	16.06	0.06	316.80	2	8	8														
1	KNO	S.R. 13 N.B.	16.06	20.74	4.68	24,710.40	1	8	4														
1	KNO	S.E. RAMP TO S.R. 95				785.00	2	3	3														
1	KNO	N.E. RAMP FROM S.R. 95				760.00	2	3	3														
1	KNO	S.W. RAMP FROM S.R. 95				855.00	2	3	3														
1	KNO	N.W. RAMP TO S.R. 95				768.00	2	3	3														
1	KNO	S.R. 13 S.B.	16.06	20.74	4.68	24,710.40	1			4	8												
1	KNO	S.R. 13	20.74	20.80	0.06	316.80	2	8	8														
DEDUCT FOR BRIDGES (FROM SHEET 16)											(942.6)	(942.60)	(70.70)				1.50	(39.3)	1.5	(18.7)			
LOCATION 1 (TOTALS CARRIED TO SHEET 26)												68,190.2	5,114.7					2,841.6		966.9			
2	KNO	S.R. 95	0.00	0.11	0.11	580.80	2	2	2														
2	KNO	S.R. 95	0.11	0.23	0.12	600.00	SEE SHEETS 31-40 FOR QUANTITIES AND DETAILS FOR THIS SECTION																
2	KNO	S.R. 95	0.23	4.27	4.04	21,331.20	2	2	2														
2	KNO	S.R. 95	4.27	4.71	0.44	2,323.20	2	2	2														
2	KNO	S.R. 95	5.38	5.69	0.31	1,636.80	3		2														
DEDUCT FOR BRIDGES (FROM SHEET 16)											(158.2)	(158.20)	(11.90)	(8.00)	0.75	(3.30)	1.25	(5.50)	1.25	(4.7)			
LOCATION 2 (TOTALS CARRIED TO SHEET 27)												205.5	823.4	10.2				4.3		381.3		394.7	

CALCULATED
LME
CHECKED
DNM

PAVED SHOULDER DATA

KNO-13-16.02
KNO-95-0.00



$$\text{AREA} = \frac{A(B+C)}{2} \times 9$$

TYPICAL INTERSECTION

* AREA FIELD MEASURED

EXTRA AREAS

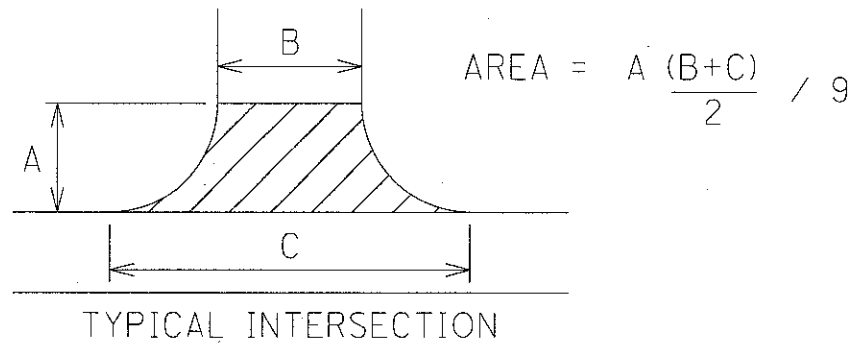
LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS			AREA SQ. YD.	202 WEARING COURSE REMOVED SQ. YD.	407		448 ASPHALT CONCRETE			
					DETAIL DIMENSION					TACK COAT @ 0.075 GAL./SQ. YD. GAL.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./SQ. YD. GAL.	THICKNESS INCHES	INTERMEDIATE COURSE, TYPE 1, PG 64-22 CU. YD.	THICKNESS INCHES	SURFACE COURSE, TYPE 1, PG 70-22M CU. YD.
					A	B	C								
					FT.	FT.	FT.								
1	KNO	S.R. 13		CROSSOVER *				218.0	218.0	16.4			1.50	9.1	
1	KNO	S.R. 13	RT	CO.RD. 69	30	30	155	308.4	308.4	23.2			1.50	12.9	
1	KNO	S.R. 13		CROSSOVER *				1,051.0	1,051.0	78.9			1.50	43.8	
1	KNO	S.R. 13	RT	CO. RD. 11	30	23	130	255.0	255.0	19.2			1.50	10.7	
1	KNO	S.R. 13	LT	CO. RD. 11	30	23	130	255.0	255.0	19.2			1.50	10.7	
1	KNO	S.R. 13		CROSSOVER *				1,017.0	1,017.0	76.3			1.50	42.4	
1	KNO	S.R. 13	RT	CO. RD. 6	30	21	110	218.4	218.4	16.4			1.50	9.1	
1	KNO	S.R. 13	LT	CO. RD. 6	30	22	110	220.0	220.0	16.5			1.50	9.2	
1	KNO	S.R. 13		CROSSOVER *				992.0	992.0	74.4			1.50	41.4	
1	KNO	S.R. 13	RT	CO. RD. 49	30	28	120	246.7	246.7	18.6			1.50	10.3	
1	KNO	S.R. 13	LT	CO. RD. 49	30	28	120	246.7	246.7	18.6			1.50	10.3	
LOCATION 1 (TOTALS CARRIED TO SHEET 26)									5,028.2	377.7				209.9	
2	KNO	S.R. 95	RT	LUCERNE RD. - T.R. 392	36	19	95	228.0		17.1			1.25	8.0	
2	KNO	S.R. 95	LT	LUCERNE RD. - T.R. 392	39	28	110	299.0		22.5			1.25	10.4	
2	KNO	S.R. 95	LT	McCLELLAND RD. - T.R. 393	30	18	48	110.0		8.3			1.25	3.9	
2	KNO	S.R. 95	LT	VAIL RD. - T.R. 411	20	14	48	68.9		5.2			1.25	2.4	
2	KNO	S.R. 95	LT	PHILLIPS RD. - T.R. 368	34	36	114	283.4		21.3			1.25	9.9	
2	KNO	S.R. 95	RT	PINKLEY RD. - T.R. 366	28	20	70	140.0		10.5			1.25	4.9	
2	KNO	S.R. 95	LT	PINKLEY RD. - T.R. 366	30	20	60	133.4		10.1			1.25	4.7	
2	KNO	S.R. 95	LT	COMMERCIAL DR.	62	43	113	537.4		40.4			1.25	18.7	
2	KNO	S.R. 95	RT	DVEBLISS PARKWAY	29	38	69	172.4		13.0			1.25	6.0	
2	KNO	S.R. 95	RT	VILLAGE PARKWAY - T.R. 608	28	36	74	171.2		12.9			1.25	6.0	
2	KNO	S.R. 95	LT	N.W. RAMP FROM S.R. 13	65	24	125	538.1	538.1	40.4			1.25	18.7	
2	KNO	S.R. 95	RT	S.W. RAMP TO S.R. 13	65	26	135	581.4	581.4	43.7			1.25	20.2	
2	KNO	S.R. 95	LT	N.E. RAMP TO S.R. 13	65	24	132	563.4	563.4	42.3			1.25	19.6	
2	KNO	S.R. 95	RT	S.E. RAMP FROM S.R. 13	65	23	122	523.7	523.7	39.3			1.25	18.2	
LOCATION 2 (SUB-TOTALS CARRIED SHEET 12)									2,206.6	327.0			151.6		

K013_MEA_001.DGN 5-29-08

CALCULATED
LME
CHECKED
DNN

EXTRA AREA DATA

KNO-13-16-02
KNO-95-0-00



EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS			AREA SQ. YD.	202 WEARING COURSE REMOVED SQ. YD.	407		448 ASPHALT CONCRETE			
					DETAIL DIMENSION					TACK COAT @ 0.075 GAL./SQ. YD. GAL.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./SQ. YD. GAL.	THICKNESS INCHES	INTERMEDIATE COURSE, TYPE 1, PG 64-22 CU. YD.	THICKNESS INCHES	SURFACE COURSE, TYPE 1, PG 70-22M CU. YD.
					A	B	C								
					FT.	FT.	FT.								
LOCATION 2 (SUB-TOTALS FROM SHEET 12)								2206.6	327.0					151.6	
2	KNO	S.R. 95	LT	BOLLINGER DR.	31	39	85	213.6	213.6	16.1	10.7	0.75	4.5	1.25	7.5
2	KNO	S.R. 95	RT	LEVERING DR.	31	23	63	148.2	148.2	11.2	7.5	0.75	3.1	1.25	5.2
2	KNO	S.R. 95	LT	CAROL DR.	25	23	40	87.5	87.5	6.6	4.4	0.75	1.9	1.25	3.1
2	KNO	S.R. 95	LT	TAYLOR ST.	36	24	84	216.0	216.0	16.2	10.8	0.75	4.5	1.25	7.5
2	KNO	S.R. 95	RT	BURGETT DR.	CONCRETE - SKIP										
2	KNO	S.R. 95	LT	N. MULBERRY ST.	26	24	44	98.3	98.3	7.4	5.0	0.75	2.1	1.25	3.5
2	KNO	S.R. 95	RT	S. MULBERRY ST.	25	24	42	91.7	91.7	6.9	4.6	0.75	2.0	1.25	3.2
2	KNO	S.R. 95	LT	N. CHESTNUT ST.	27	20	41	91.5	91.5	6.9	4.6	0.75	2.0	1.25	3.2
2	KNO	S.R. 95	RT	S. CHESTNUT ST.	29	21	48	111.2	111.2	8.4	5.6	0.75	2.4	1.25	3.9
2	KNO	S.R. 95	RT	S. MAIN ST.	17	52	95	138.9	138.9	10.5	7.0	0.75	2.9	1.25	4.9
2	KNO	S.R. 95	RT	E. SANDUSKY ST.	15	52	90	118.4	118.4	8.9	6.0	0.75	2.5	1.25	4.2
2	KNO	S.R. 95	LT	W. SECOND ST.	18	19	20	39.0	39.0	3.0	2.0	0.75	0.9	1.25	1.4
2	KNO	S.R. 95	RT	E. SECOND ST.	18	27	48	75.0	75.0	5.7	3.8	0.75	1.6	1.25	2.7
2	KNO	S.R. 95	LT	W. COLLEGE ST.	18	28	46	74.0	74.0	5.6	3.7	0.75	1.6	1.25	2.6
2	KNO	S.R. 95	RT	E. COLLEGE ST.	25	35	46	112.5	112.5	8.5	5.7	0.75	2.4	1.25	4.0
2	KNO	S.R. 95	LT	W. FIRST ST.	17	30	50	75.6	75.6	5.7	3.8	0.75	1.6	1.25	2.7
2	KNO	S.R. 95	RT	E. FIRST ST.	22	24	38	75.8	75.8	5.7	3.8	0.75	1.6	1.25	2.7
2	KNO	S.R. 95	RT	MILL ST.	23	24	36	76.7	76.7	5.8	3.9	0.75	1.6	1.25	2.7
2	KNO	S.R. 95	LT	HIGH ST.	54	16	64	240.0	240.0	18.0	12.0	0.75	5.0	1.25	8.4
2	KNO	S.R. 95	LT	TUTTLE AVE.	35	28	47	145.9	145.9	11.0	7.3	0.75	3.1	1.25	5.1
2	KNO	S.R. 95	LT	SALEM AVE.	48	26	50	202.7	202.7	15.3	10.2	0.75	4.3	1.25	7.1
LOCATION 2 (TOTALS CARRIED TO SHEET 27)								4,639.1	510.4	122.4		51.6		237.2	

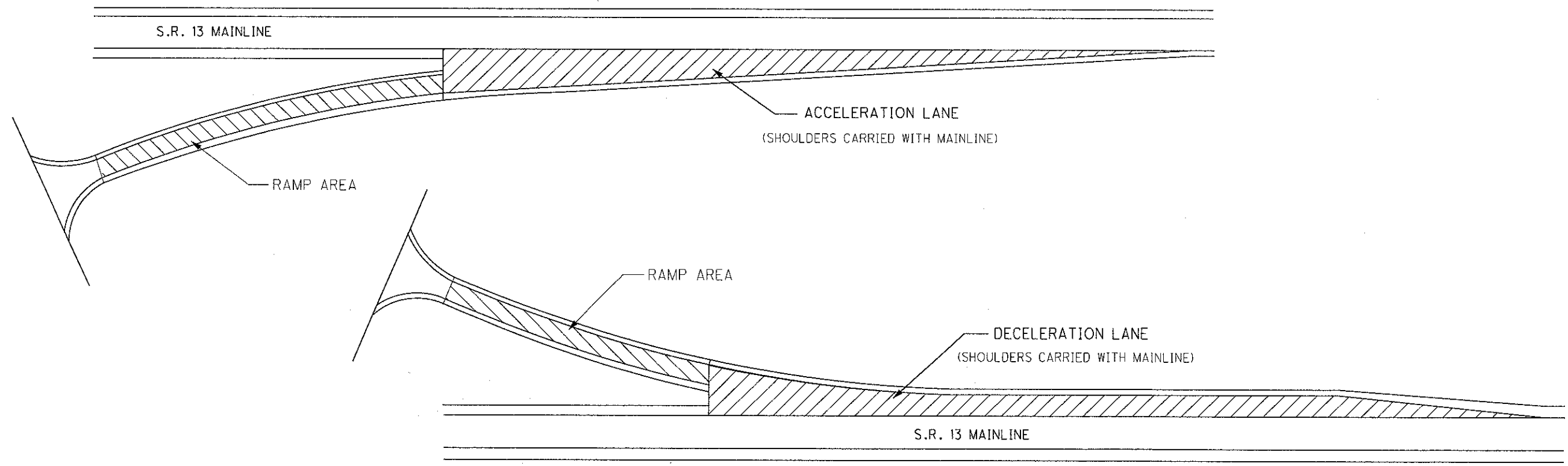
CALCULATED
LME
CHECKED
DNM

EXTRA AREA DATA

KNO-13-16.02
KNO-95-0.00

RAMP DATA													
LOCATION	COUNTY	ROUTE	DESCRIPTION	RAMP LENGTH	RAMP WIDTH	AREA	254	407		448 ASPHALT CONCRETE			
							PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	TACK COAT @ 0.075 GAL./SQ. YD.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./SQ. YD.	THICKNESS	INTERMEDIATE COURSE, TYPE 1, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M
				FEET	FEET	SQ. YDS.	SQ. YDS.	GAL.	GAL.	INCH	CU. YDS.	INCH	CU. YDS.
1	KNO	S.R. 13 N.B.	DECELERATION LANE TO S.R. 95 *			1311	1311	99				1.50	54.7
1	KNO	S.R. 13 N.B.	S.E. RAMP	785	16	1396	1396	105				1.50	58.2
1	KNO	S.R. 13 N.B.	ACCELERATION LANE FROM S.R. 95 *			2047	2047	154				1.50	85.3
1	KNO	S.R. 13 N.B.	N.E. RAMP	760	16	1351	1351	102				1.50	56.3
1	KNO	S.R. 13 S.B.	DECELERATION LANE TO S.R. 95 *			1226	1226	92				1.50	51.1
1	KNO	S.R. 13 S.B.	N.W. RAMP	768	16	1365	1365	103				1.50	56.9
1	KNO	S.R. 13 S.B.	ACCELERATION LANE FROM S.R. 95 *			2407	2407	181				1.50	100.3
1	KNO	S.R. 13 S.B.	S.W. RAMP	855	16	1520	1520	114				1.50	63.4
1			TOTALS (CARRIED TO SHEET 26)				12623	950					526.2

* AREA FIELD MEASURED



BRIDGE TREATMENT

LOCATION 1

KNO-13-1799: OVERHEAD, MILL AND FILL 1.5" UNDER BRIDGE
 KNO-13-18.33 L & R: BUTT JOINT AT APPROACH SLABS
 KNO-13-1915 L & R: REMOVE AND REPLACE SURFACE COURSE ON APPROACH SLABS,
 BUTT JOINT AT BRIDGE DECK

LOCATION 2

KNO-95-0060: PAVE OVER WITH SURFACE COURSE ONLY
 KNO-95-0114: SAME TREATMENT AS ROADWAY
 KNO-95-0209: SAME TREATMENT AS ROADWAY
 KNO-95-0323: SEE SHEETS 41-58 FOR BRIDGE PLAN
 KNO-95-0437: REMOVE AND REPLACE SURFACE COURSE ON APPROACH SLABS,
 BUTT JOINT AT BRIDGE DECK

CALCULATED
 LME
 CHECKED
 DNM

BRIDGE DATA

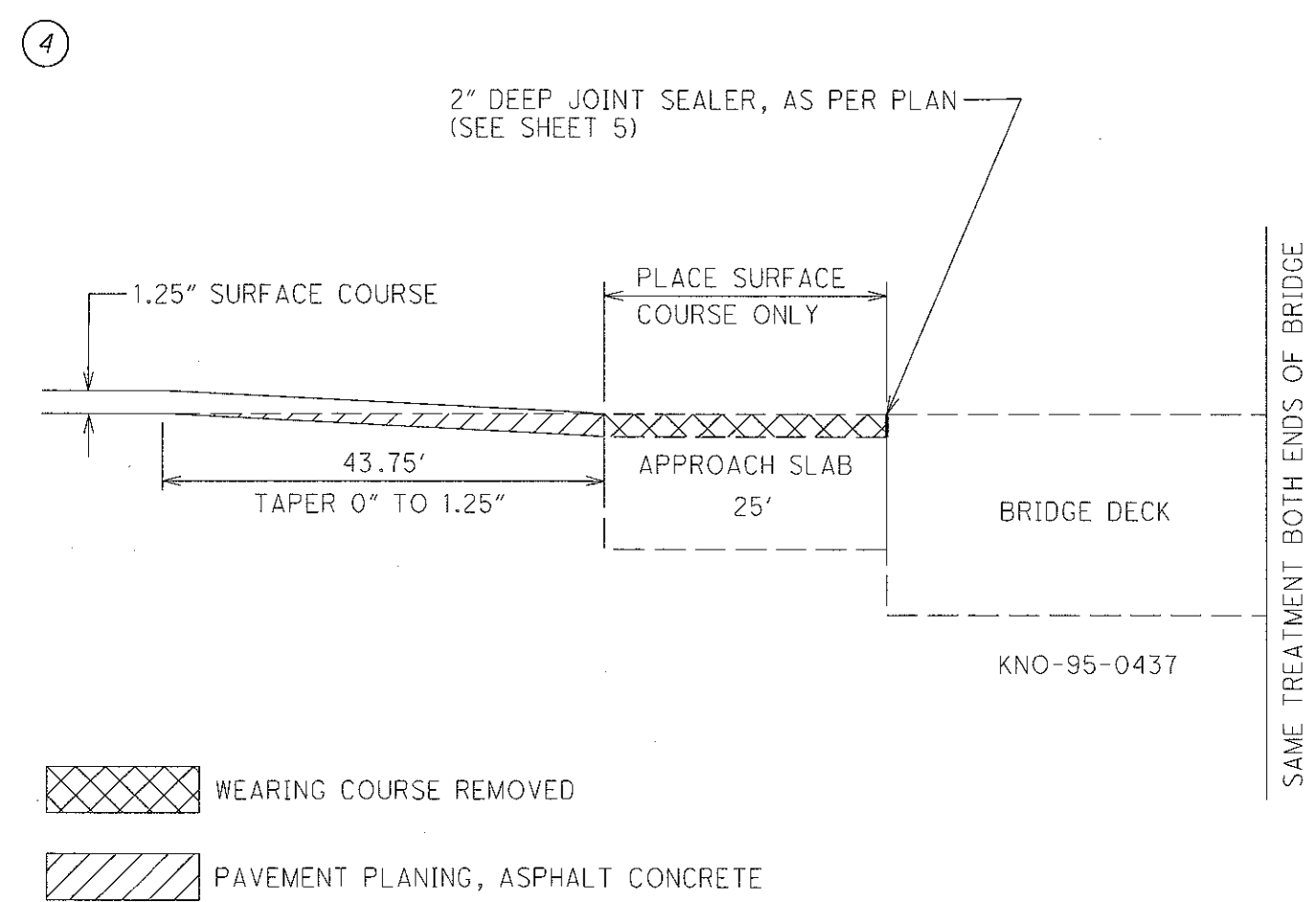
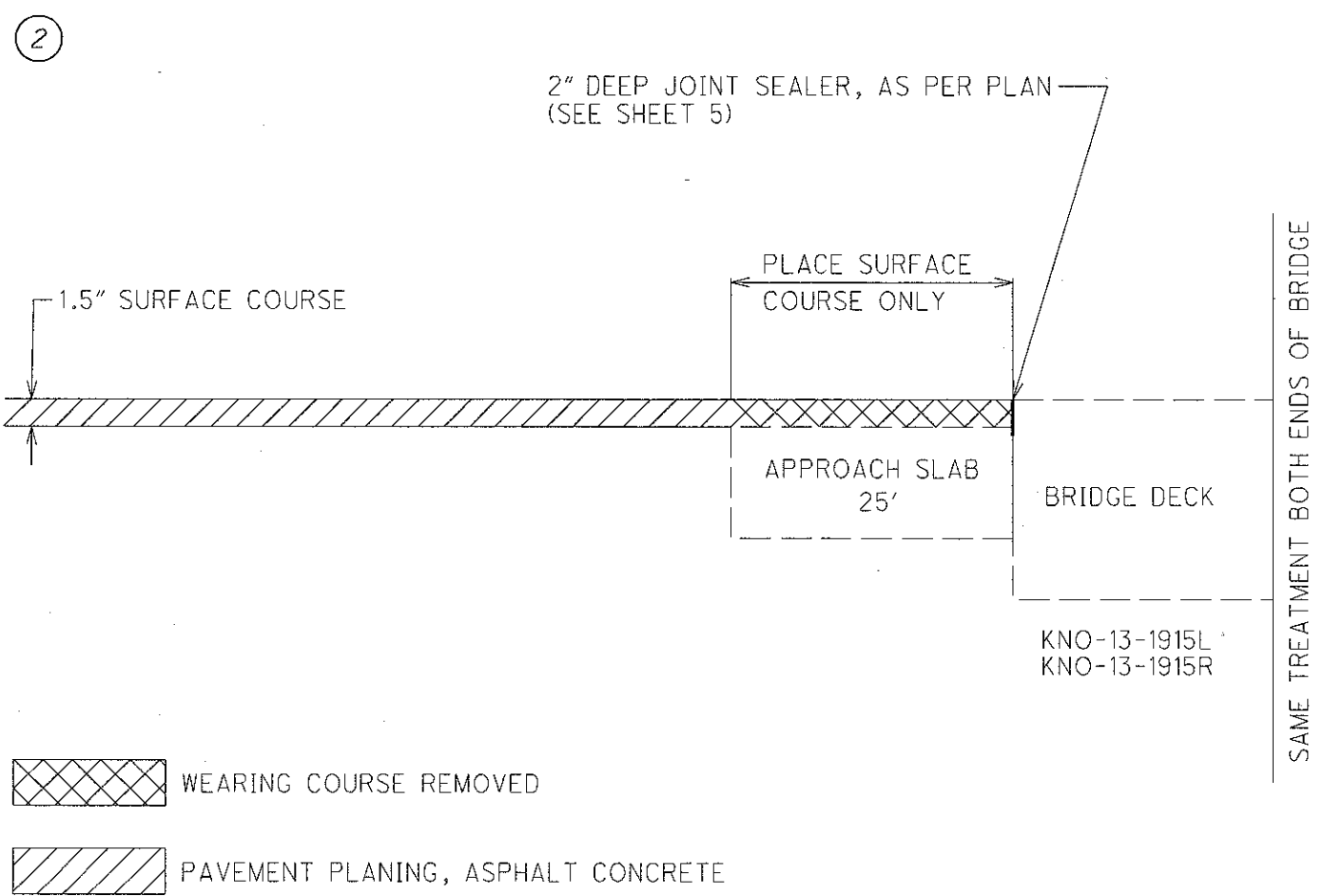
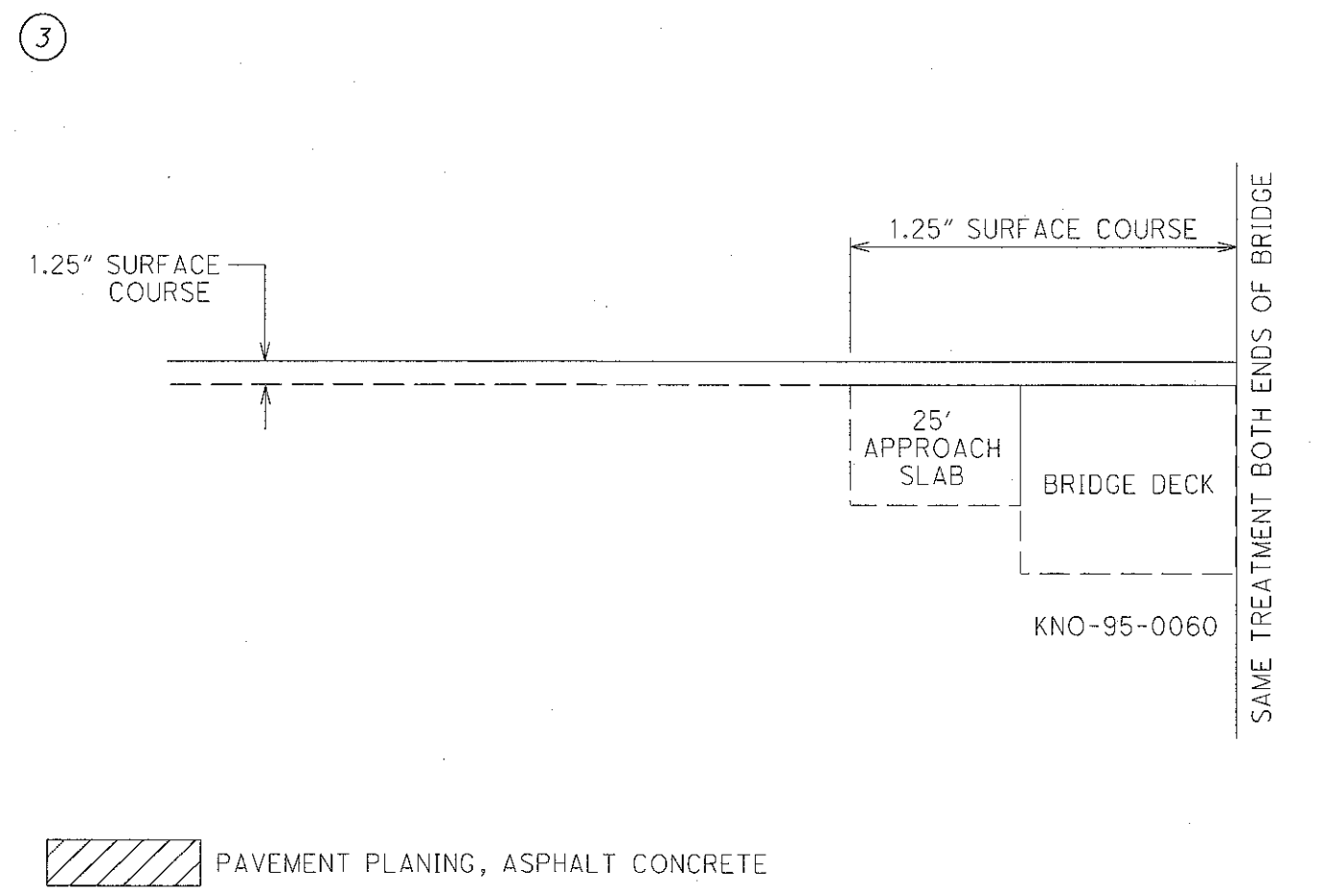
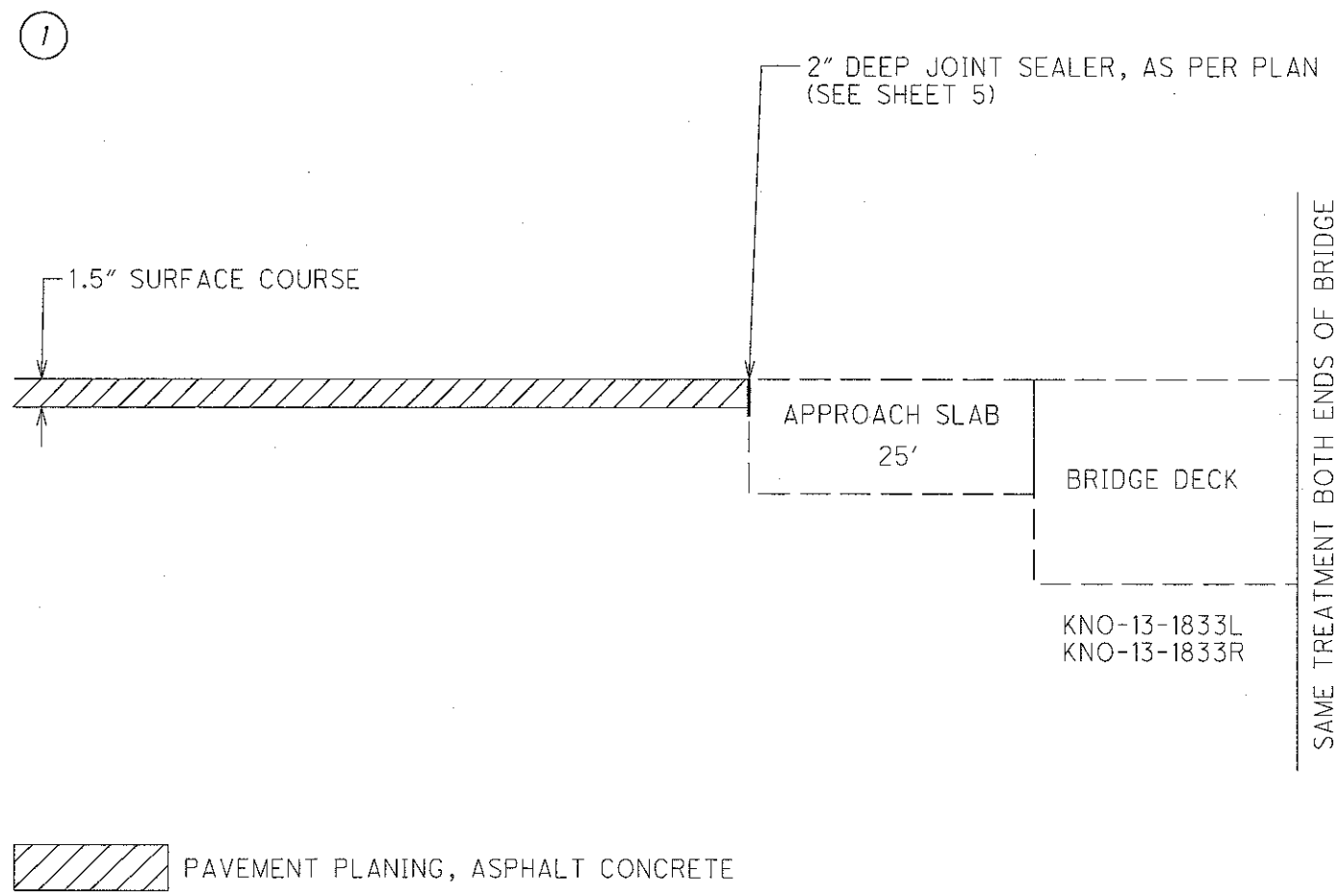
L O C A T I O N	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)	WIDTH	AREA	APPROACH SLAB LENGTH	APPROACH SLAB WIDTH	APPROACH SLAB AREA (INCLUDES BOTH APPROACH SLABS)	DETAIL (SEE SHEETS 15-16)	202		407		448 ASPHALT CONCRETE				516			
									WEARING COURSE REMOVED	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	S E M E R C O U R S E	INTERMEDIATE COURSE, TYPE 1, PG 64-22	S E M E R C O U R S E	SURFACE COURSE, TYPE 1, PG 70-22M	2" DEEP JOINT SEALER, AS PER PLAN				
																	SQ.YD.	GAL.	GAL.	INCHES
1	KNO-13-1799	OVERHEAD						5												
1	KNO-13-1833R	67	40	297.8	25	40.0	222.3	1										80		
1	KNO-13-1833L	67	43.5 (AVG.)	323.9	25	43.5 (AVG.)	241.7	1										87		
1	KNO-13-1915R	187	40	831.2	25	40.0	222.3	2	222.3	16.7				1.5	9.3			80		
1	KNO-13-1915L	187	40	831.2	25	40.0	222.3	2	222.3	16.7				1.5	9.3			80		
LOCATION 1 (TOTALS CARRIED TO SHEET 26)									444.6	33.4					18.6		327			
2	KNO-95-0060	18.5	40	82.3	25	24.0	133.4	3		16.2				1.25	7.5					
2	KNO-95-0114	CULVERT																		
2	KNO-95-0209	CULVERT																		
2	KNO-95-0323	53.5	44	261.6	25	44.0	244.5	SEE BRIDGE SHEETS 41-58												68
2	KNO-95-0437	234	30	780.0	25	24.0	133.4	4	133.4	10.0				1.25	4.6			60		
LOCATION 2 (TOTALS CARRIED TO SHEET 27)									133.4	26.2					12.1		128			

BRIDGE TREATMENT DATA

KNO-13-16.02
 KNO-95-0.00

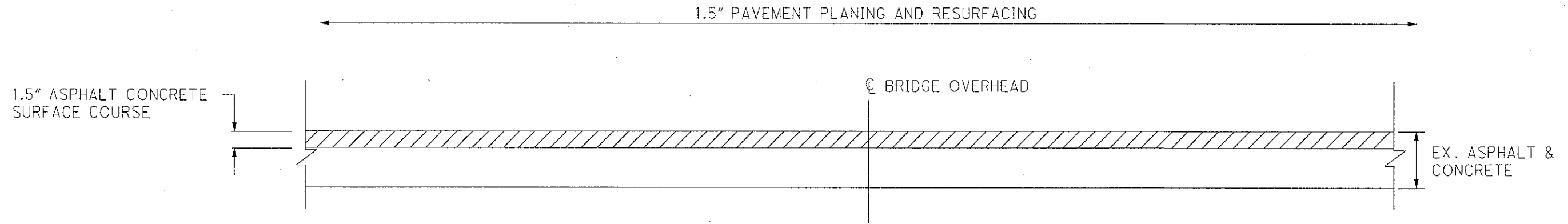
BRIDGE DECK DETAILS

KNO-13-16.02
KNO-95-0.00



K013_MBT_002.DGN 6-5-08

5



BRIDGE:
KNO-13-17.99

 PAVEMENT PLANING, ASPHALT CONCRETE

BRIDGE DEDUCTIONS

MAINLINE
(APPROACH SLABS ADDED TO
LENGTH WHERE APPLICABLE)

LOCATION 1:

KNO-13-1799 - OVERHEAD (NO DEDUCTION)
 KNO-13-1833R - $[(67' \times 24') + 2(25' \times 24')] / 9 = 312.0$ SQ.YD.
 KNO-13-1833L - $[(67' \times 24') + 2(25' \times 24')] / 9 = 312.0$ SQ.YD.
 KNO-13-1915R - $[(186.5' \times 24') + 2(25' \times 24')] / 9 = 630.7$ SQ.YD.
 KNO-13-1915L - $[(186.5' \times 24') + 2(25' \times 24')] / 9 = 630.7$ SQ.YD.

TOTAL = 1885.4 SQ.YDS.

LOCATION 2:

KNO-95-0060 - $[(18.5' \times 24') + 2(25' \times 24')] / 9 = 182.7$ SQ.YD.
 KNO-95-0114 - BOX CULVERT - NO DEDUCTION
 KNO-95-0209 - BOX CULVERT - NO DEDUCTION
 KNO-95-0323 - $[(53.5' \times 24') + 2(25' \times 24')] / 9 = 276.0$ SQ.YD.
 KNO-95-0437 - $[(234' \times 24') + 2(25' \times 24')] / 9 = 757.3$ SQ.YD.

TOTAL = 1216.0 SQ.YDS.

BRIDGE DEDUCTIONS

PAVED SHOULDERS
(APPROACH SLABS ADDED TO
LENGTH WHERE APPLICABLE)

LOCATION 1:

KNO-13-1799 - OVERHEAD (NO DEDUCTION)
 KNO-13-1833R - $[(67' \times 12') + 2(25' \times 12')] / 9 = 156.0$ SQ.YD.
 KNO-13-1833L - $[(67' \times 12') + 2(25' \times 12')] / 9 = 156.0$ SQ.YD.
 KNO-13-1915R - $[(186.5' \times 12') + 2(25' \times 12')] / 9 = 315.3$ SQ.YD.
 KNO-13-1915L - $[(186.5' \times 12') + 2(25' \times 12')] / 9 = 315.3$ SQ.YD.

TOTAL = 942.6 SQ.YDS.

LOCATION 2:

KNO-95-0060 - $(18.5' \times 4') / 9 = 8.2$ SQ.YD.
 KNO-95-0114 - BOX CULVERT - NO DEDUCTION
 KNO-95-0209 - BOX CULVERT - NO DEDUCTION
 KNO-95-0323 - $[(53.5' \times 4') + 2(25' \times 4')] / 9 = 46.0$ SQ.YD.
 KNO-95-0437 - $(234' \times 4') / 9 = 104.0$ SQ.YD.

TOTAL = 158.2 SQ.YDS.

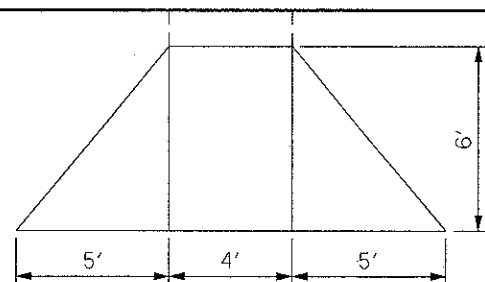
CALCULATED
LME
CHECKED
DNM

BRIDGE DECK DETAILS

KNO-13-16.02
KNO-95-0.00

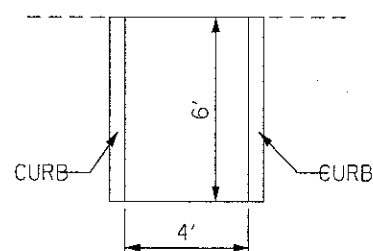
16
58

K013_MBT_003.DGN 7-11-08



TYPE A1 RAMP
(TYPICAL)
AVERAGE AREA = 54 SQ.FT.

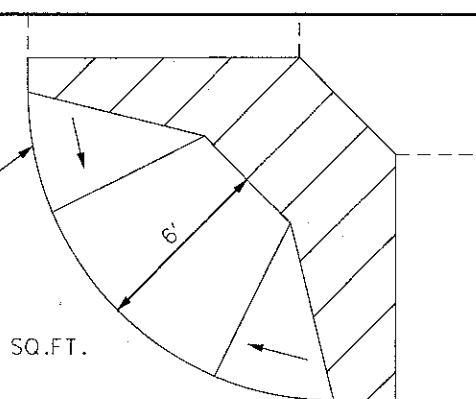
SEE SCD BP-7.1, 1-19-07
FOR CURB RAMP DETAILS



TYPE A2 RAMP
(TYPICAL)
AVERAGE AREA = 24 SQ.FT.

EXTRA SIDEWALK =

LENGTH VARIES
WITH RADIUS



TYPE D RAMP
(TYPICAL)
AVERAGE AREA = 60 SQ.FT.

CURB RAMPS

SHEET NO.	REFERENCE NO.	SIDE	DESCRIPTION	202		608				609		COMMENTS	
				CURB REMOVED	WALK REMOVED	4' CONCRETE WALK (FOR RAMP AREA)	4' CONCRETE WALK (EXTRA WALK)	CURB RAMPS			TRUNCATED DOMES		CURB, TYPE 6
								TYPE A1	TYPE A2	TYPE D			
								FEET	SQ.FT.	SQ.FT.			
LOCATION 2 - S.R. 95													
18	CR-1	RT	LEVERING DR.	14.0	54.0	54.0		1				14.0	
	CR-2	RT	LEVERING DR.	14.0	54.0	54.0		1				14.0	
	CR-3	LT	CAROL DR.	14.0	89.0	54.0	35.0	1					13' TOTAL WALK LENGTH FROM BACK OF CURB
	CR-4	LT	TAYLOR ST.	22.0	27.0	27.0				1		22.0	REMOVE & REPLACE 9' X 6' TRIANGLE, ADD TRUNCATED DOMES
	CR-5	LT	TAYLOR ST.	14.0	54.0	54.0		1				14.0	
	CR-6	RT	ACROSS FROM TAYLOR ST.	6.0	48.0	24.0	24.0	1				14.0	12' TOTAL WALK LENGTH FROM BACK OF CURB
	CR-7	RT	BURGETT DR.							1			
	CR-8	RT	BURGETT DR.							1			
	CR-9	LT	N. MULBERRY ST.	24.0	93.0	54.0		1				24.0	REMOVE 13' X 3' EXTRA WALK PERPENDICULAR TO S.R. 95
	CR-10	LT	N. MULBERRY ST.	14.0	114.0	54.0	60.0	1				14.0	REMOVE & REPLACE 15' OF WALK PAST CURB RAMP, TIE INTO EXISTING WALK
	CR-11	RT	S. MULBERRY ST.	14.0	158.0	54.0	104.0	1				14.0	13' WALK LENGTH FROM BACK OF CURB, 19' X 4' WALK PERPENDICULAR TO RAMP
	CR-12	RT	S. MULBERRY ST.	14.0	54.0	54.0		1				14.0	
	CR-13	LT	N. CHESTNUT ST.	24.0	102.0	54.0		1				24.0	REMOVE 16' X 3' EXTRA WALK PERPENDICULAR TO S.R. 95
	CR-14	LT	N. CHESTNUT ST.	14.0	54.0	54.0		1				14.0	
	CR-15	RT	S. CHESTNUT ST.	14.0	54.0	54.0		1				14.0	
	CR-16	RT	S. CHESTNUT ST.	14.0	54.0	54.0		1				14.0	
	CR-17	CL	ON S.R. 95 @ MAIN ST.	6.0	24.0	24.0			1			14.0	
	CR-18	CL	ON S.R. 95 @ MAIN ST.	6.0	24.0	24.0			1			14.0	
	CR-19	RT	S. MAIN ST.	6.0	24.0	24.0			1			14.0	
	CR-20	RT	S. MAIN ST.	6.0	24.0	24.0			1			14.0	
	CR-21	LT	N. MAIN ST.	6.0	24.0	24.0			1			14.0	
	CR-22	LT	N. MAIN ST.	6.0	24.0	24.0			1			14.0	
	CR-23	RT	E. SANDUSKY ST.	6.0	24.0	24.0			1			14.0	
	CR-24	RT	E. SANDUSKY ST.								1		
	CR-25	LT	W. SECOND ST.	14.0	54.0	54.0		1				14.0	
	CR-26	LT	W. SECOND ST.	14.0	54.0	54.0		1				14.0	
	CR-27	RT	E. SECOND ST.	14.0	54.0	54.0		1				14.0	
	CR-28	RT	E. SECOND ST.	14.0	54.0	54.0		1				14.0	
	CR-29	LT	W. COLLEGE ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-30	LT	W. COLLEGE ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-31	RT	E. COLLEGE ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-32	RT	E. COLLEGE ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-33	LT	W. FIRST ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-34	LT	W. FIRST ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-35	RT	E. FIRST ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-36	RT	E. FIRST ST.	16.0	60.0	60.0	72.0			1		16.0	
	CR-37	LT	TUTTLE AVE.	14.0	54.0	54.0		1				14.0	
	CR-38	LT	TUTTLE AVE.	14.0	54.0	54.0		1				14.0	
	CR-39	LT	SALEM AVE.	14.0	82.0	54.0	28.0	1				14.0	13' TOTAL WALK LENGTH FROM BACK OF CURB
18	CR-40	LT	SALEM AVE.	14.0	144.0	54.0	120.0	1				14.0	REMOVE & REPLACE 15' OF WALK PAST CURB RAMP IN EACH DIRECTION
LOCATION 2 (TOTALS CARRIED TO SHEET 27)				498	2,207	2,726		21	7	8	4	548	

K013_CRD_001.DGN 7/18/08

CALCULATED
LME
CHECKED
DMM

CURB RAMP DATA

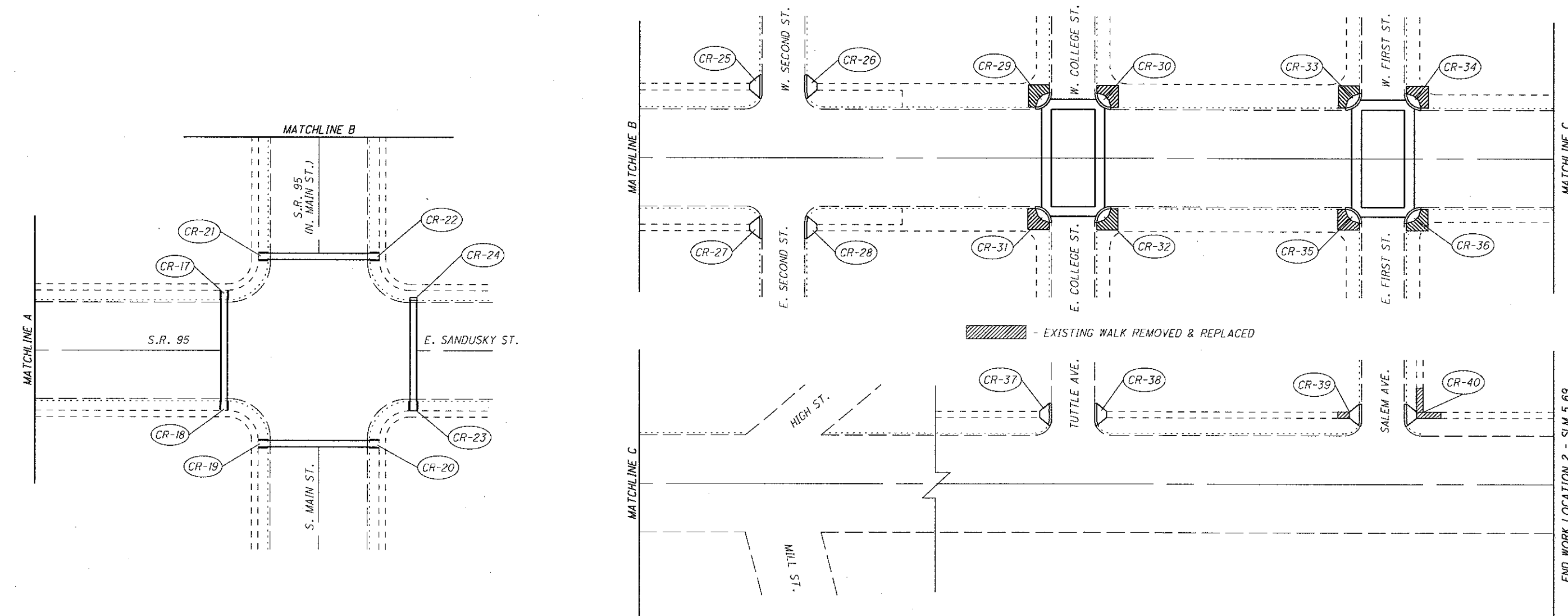
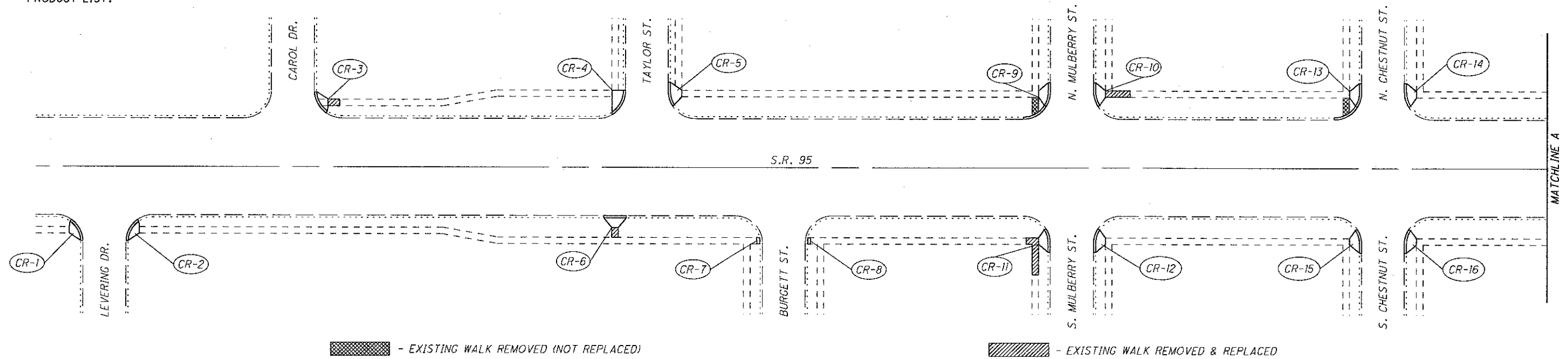
KNO-13-16.02
KNO-95-0.00

NOTE:
 ALL CURB RAMP (IN NEW OR EXISTING WALK) SHALL BE PAID FOR AS FOLLOWS:
 THE CURB RAMP ITSELF (AS PER SCD BP-7.1) SHALL BE PAID FOR AS EACH (A1, A2,
 OR D) AND SHALL INCLUDE THE COST OF FURNISHING AND INSTALLING THE
 TRUNCATED DOMES, GRADING, FORMING, AND FINISHING OF THE CURB RAMP AREA.
 SIDEWALK SHALL BE MEASURED FROM BACK OF CURB AT CROSSWALK, THROUGH
 THE CURB RAMP, TO WHERE IT TIES INTO EXISTING SIDEWALK.
 RETRO-FIT TRUNCATED DOMES SHALL BE A TYPE LISTED ON THE APPROVED
 PRODUCT LIST.

S.R. 95 FREDERICKTOWN

* DRAWING NOT TO SCALE

CALCULATED
 LIME
 CHECKED
 DNM



K013_DET_001.dgn 7-17-08

FREDERICKTOWN PLAN SHEET

KNO-13-16.02
 KNO-95-0.00

18
 58

END WORK LOCATION 2 - SLM 5.69

ITEM 642/644 EDGE LINE SUB-SUMMARY														
LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY						TOTAL EDGE LINE MILES	REMARKS	
						WHITE EDGE LINE QUANTITIES			YELLOW EDGE LINE QUANTITIES					
			FROM	TO		TOTAL MILES	HIGHWAY MILES	RAMP MILES	TOTAL MILES	HIGHWAY MILES	RAMP MILES			
1	KNO	S.R. 13	16.00	16.06	0.06	0.12	0.12					0.12	2-LANE TO 4-LANE TRANSITION	
1	KNO	S.R. 13	16.06	20.74	4.68	9.36	9.36				9.36	9.36	18.72	4-LANE DIVIDED
1	KNO	S.R. 13	20.74	20.80	0.06	0.12	0.12						0.12	4-LANE TO 2-LANE TRANSITION
LOCATION 1 (TOTAL CARRIED TO SHEET 26)						9.60					9.36		18.96	
2	KNO	S.R. 95	0.00	4.50	4.50	9.00	9.00						9.00	
2	KNO	S.R. 95	4.50	4.71	0.21	0.42	0.42						0.42	
2	KNO	S.R. 95	5.40	5.69	0.29	0.58	0.58						0.58	
LOCATION 2 (TOTAL CARRIED TO SHEET 27)						10.00							10.00	

LOCATION 1 (S.R. 13) SHALL BE ITEM 644 EDGE LINE
LOCATION 2 (S.R. 95) SHALL BE ITEM 642 EDGE LINE

ITEM 644 LANE LINE SUB-SUMMARY													
LOCATION	COUNTY	ROUTE	S.L.M.		INFORMATION ONLY						TOTAL LANE LINE MILES	REMARKS	
					LANE LINE QUANTITIES								
			FROM	TO	TOTAL MILES	DASHED	SOLID						
1	KNO	S.R. 13 N.B.	16.06	20.55	4.49	4.49						4.49	4-LANE DIVIDED
1	KNO	S.R. 13 S.B.	16.34	20.74	4.40	4.40						4.40	4-LANE DIVIDED
LOCATION 1 (TOTAL CARRIED TO SHEET 26)						8.89	8.89					8.89	

ITEM 642/644 CENTER LINE SUB-SUMMARY									
LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY		TOTAL CENTER LINE MILES	REMARKS
						CENTER LINE QUANTITIES			
			FROM	TO		TOTAL MILES	EQUIVALENT SOLID LINE		
1	KNO	S.R. 13	16.00	16.06	0.06	0.12	0.240	0.12	2 LANE TO 4 LANE TRANSITION
1	KNO	S.R. 13 S.B.	16.06	16.09	0.03	0.03	0.060	0.03	
1	KNO	S.R. 13 S.B.	16.15	16.28	0.13	0.13	0.260	0.13	
1	KNO	S.R. 13 N.B.	20.63	20.74	0.11	0.11	0.220	0.11	
1	KNO	S.R. 13	20.74	20.80	0.06	0.12	0.240	0.12	4 LANE TO 2 LANE TRANSITION
LOCATION 1 (TOTAL CARRIED TO SHEET 26)								0.15	
2	KNO	S.R. 95	0.00	4.50	4.50	4.50	6.521	4.50	
2	KNO	S.R. 95	4.50	5.69	1.19	1.19	2.106	1.19	
LOCATION 2 (TOTAL CARRIED TO SHEET 27)								0.22	EXTRA LINE FOR GORE AREAS AT TURN LANES (SEE SHEET 24)
								5.91	

LOCATION 1 (S.R. 13) SHALL BE ITEM 644 CENTER LINE
LOCATION 2 (S.R. 95) SHALL BE ITEM 642 CENTER LINE

CALCULATED
LME
CHECKED
DNM

EDGE / LANE / CENTER LINE DATA

KNO-13-16.02
KNO-95-0.00

644 THERMOPLASTIC

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	TRANSVERSE/DIAGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT		SCHOOL SYMBOL MARKING		LANE ARROW			8" CHANNELIZING LINE	ISLAND MARKING	RAILROAD MARKING SYMBOL	REMARKS												
					WHITE	YELLOW			"ONLY"		72"	96"	72"	96"	THRU					LT.	RT.										
									FT.	FT.												EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT.	SQ. FT.	EACH
									FT.	FT.												EACH	EACH	EACH	EACH	EACH	EACH	FT.	SQ. FT.	EACH	
1	KNO	S.R. 13	2 TO 4 LANE TRANSITION	CL		398													INCLUDES S.B. MARKINGS NORTH OF CO. RD. 69												
1	KNO	S.R. 13	CO. RD. 69	RT			55												SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	CO. RD. 11	RT			40			1									SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	CO. RD. 11	LT			40			1									SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	S.E. RAMP S.R. 95				65						1						SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	N.E. RAMP S.R. 95																SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	S.W. RAMP S.R. 95																SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	N.W. RAMP S.R. 95				49						1						SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	CO. RD. 6	RT			36			1				1					SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	CO. RD. 6	LT			36			1				1					SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	CO. RD. 49	RT			40			1				1					SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	CO. RD. 49	LT			40			1				1					SEE NOTE ON SHEET 2												
1	KNO	S.R. 13	4 TO 2 LANE TRANSITION	CL		279																									
LOCATION 1 (TOTALS CARRIED TO SHEET 26)						677	401			8			3	7			2,066														
2	KNO	S.R. 95	LUCERNE RD. - T.R. 392	RT			20												PLACE 20' FROM CL S.R. 95												
2	KNO	S.R. 95	LUCERNE RD. - T.R. 392	LT			26												PLACE 24' FROM CL S.R. 95												
2	KNO	S.R. 95	McCLELLAND RD. - T.R. 393	LT			14												PLACE 24' FROM CL S.R. 95												
2	KNO	S.R. 95	VAIL RD. - T.R. 411	LT			14												PLACE 20' FROM CL S.R. 95												
2	KNO	S.R. 95	PHILLIPS RD. - T.R. 368	LT			32												PLACE 22' FROM CL S.R. 95												
2	KNO	S.R. 95	PINKLEY RD. - T.R. 366	RT			18												PLACE 22' FROM CL S.R. 95												
2	KNO	S.R. 95	PINKLEY RD. - T.R. 366	LT			18												PLACE 18' FROM CL S.R. 95												
2	KNO	S.R. 95	ON S.R. 95 BEFORE COMMERCIAL DR.	LT		115				1				2			300		LEFT TURN LANE (SEE SHEET 24)												
2	KNO	S.R. 95	COMMERCIAL DR.	LT			50												PLACE 32' FROM CL S.R. 95												
2	KNO	S.R. 95	ON S.R. 95 AFTER COMMERCIAL DR.	LT		248				1						150	95		RIGHT TURN LANE (SEE SHEET 24)												
2	KNO	S.R. 95	ON S.R. 95 BEFORE DIVEBLISS PKWY	RT						1						235			RIGHT TURN LANE (SEE SHEET 24)												
2	KNO	S.R. 95	DIVEBLISS PARKWAY	RT																											
2	KNO	S.R. 95	ON S.R. 95 AFTER DIVEBLISS PKWY	LT		114				1				2			210		LEFT TURN LANE (SEE SHEET 24)												
2	KNO	S.R. 95	VILLAGE PARKWAY - T.R. 608	RT															SEE NOTE ON SHEET 2												
LOCATION 2 (SUB-TOTALS CARRIED TO NEXT SHEET)						477	192			4			4	4			895														

CALCULATED
LIME
CHECKED
DNM

AUXILIARY MARKING DATA

KNO-13-16.02
KNO-95-0.00

20
58

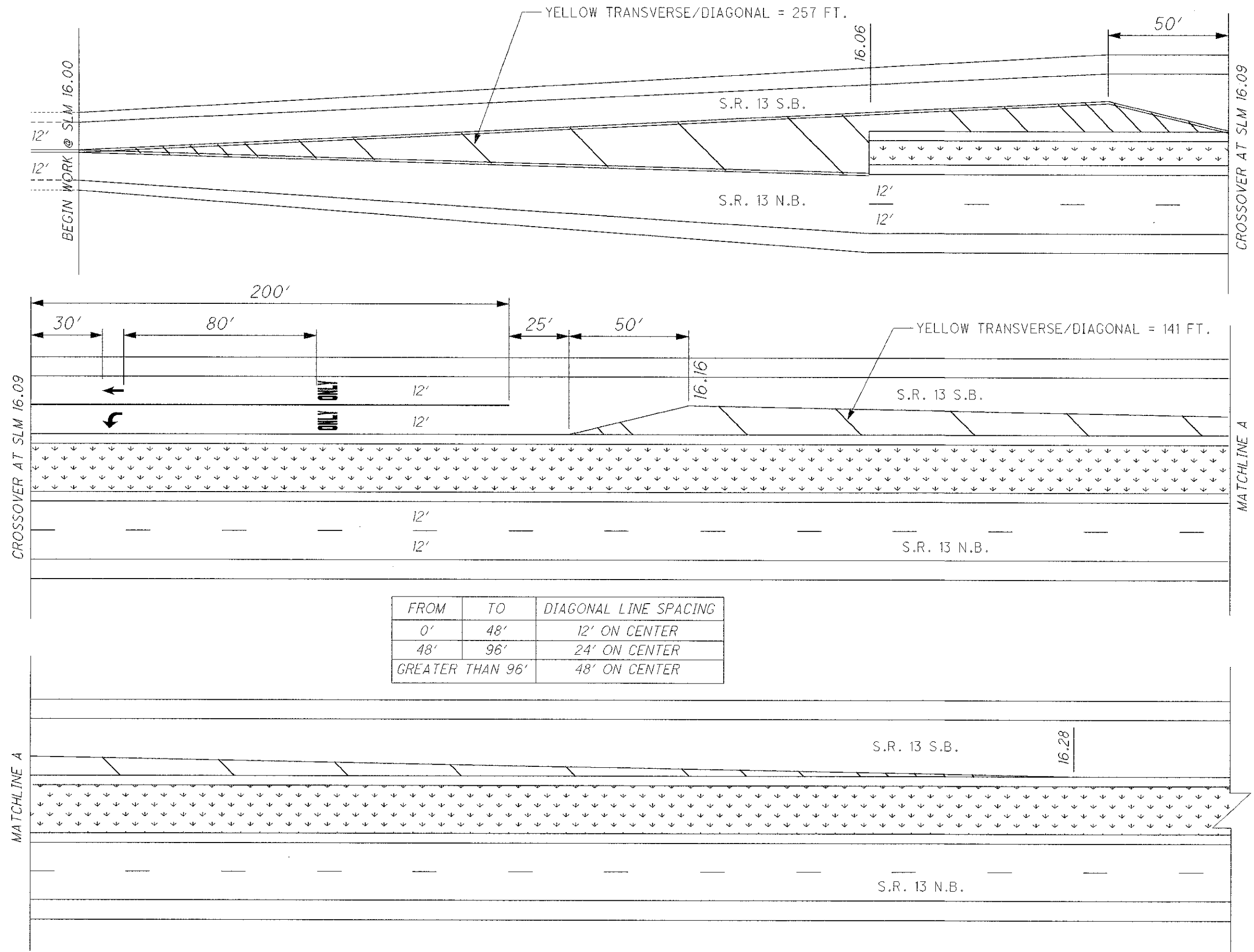
K013_TAS_001.DGN 6-4-08

644 THERMOPLASTIC

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	TRANSVERSE/ DIAGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT		SCHOOL SYMBOL MARKING		LANE ARROW			8" CHANNELIZING LINE	ISLAND MARKING	RAILROAD MARKING SYMBOL	REMARKS		
					WHITE FT.	YELLOW FT.			"ONLY"		72" EACH	96" EACH	72" EACH	96" EACH	THRU EACH					LT. EACH	RT. EACH
									FT.	FT.											
SUB-TOTALS FROM SHEET 20						477	192			4				4	4	895					
2	KNO	S.R. 95	BOLLINGER DR.	LT			32												PLACE 30' FROM CL S.R. 95		
2	KNO	S.R. 95	LEVERING DR.	RT			12												SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	CAROL DR.	LT			12												PLACE 16' FROM CL S.R. 95		
2	KNO	S.R. 95	ON S.R. 95 @ SLM 4.92							1									SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 BEFORE TAYLOR ST.				96												SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	TAYLOR ST.	LT			12	60											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 AFTER TAYLOR ST.				96												SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	BURGETT DR.	RT															NO WORK - CONCRETE		
2	KNO	S.R. 95	ON S.R. 95 @ SLM 5.08							1									SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	N. MULBERRY ST.	LT			12	54											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	S. MULBERRY ST.	RT			14	48											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	N. CHESTNUT ST.	LT			10	50											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	S. CHESTNUT ST.	RT			10	48											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 @ MAIN ST.				16	100											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	S. MAIN ST.	RT															SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	E. SANDUSKY ST.	RT			25	104											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 @ SANDUSKY ST.				18	102											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	W. SECOND ST.	LT			10	38											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	E. SECOND ST.	RT			12	54											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	W. COLLEGE ST.	LT			12	60											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 BEFORE COLLEGE ST.				20	120											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	E. COLLEGE ST.	RT			12	60											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 AFTER COLLEGE ST.				22	120											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 BEFORE FIRST ST.					120											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	W. FIRST ST.	LT				68											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	E. FIRST ST.	RT			10	48											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 AFTER FIRST ST.					112											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 BEFORE MILL ST.				12												SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	MILL ST.	RT			12	56											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	HIGH ST.	LT			12												SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	ON S.R. 95 AFTER HIGH ST.				13												SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	TUTTLE AVE.	LT			10	56											SEE NOTE ON SHEET 2		
2	KNO	S.R. 95	SALEM AVE.	LT			12	54											SEE NOTE ON SHEET 2		
LOCATION 2 (TOTALS CARRIED SHEET 27)						477	534	1,724		4	2			4	4	895					

AUXILIARY MARKING DATA

KNO-13-16.02
KNO-95-0.00



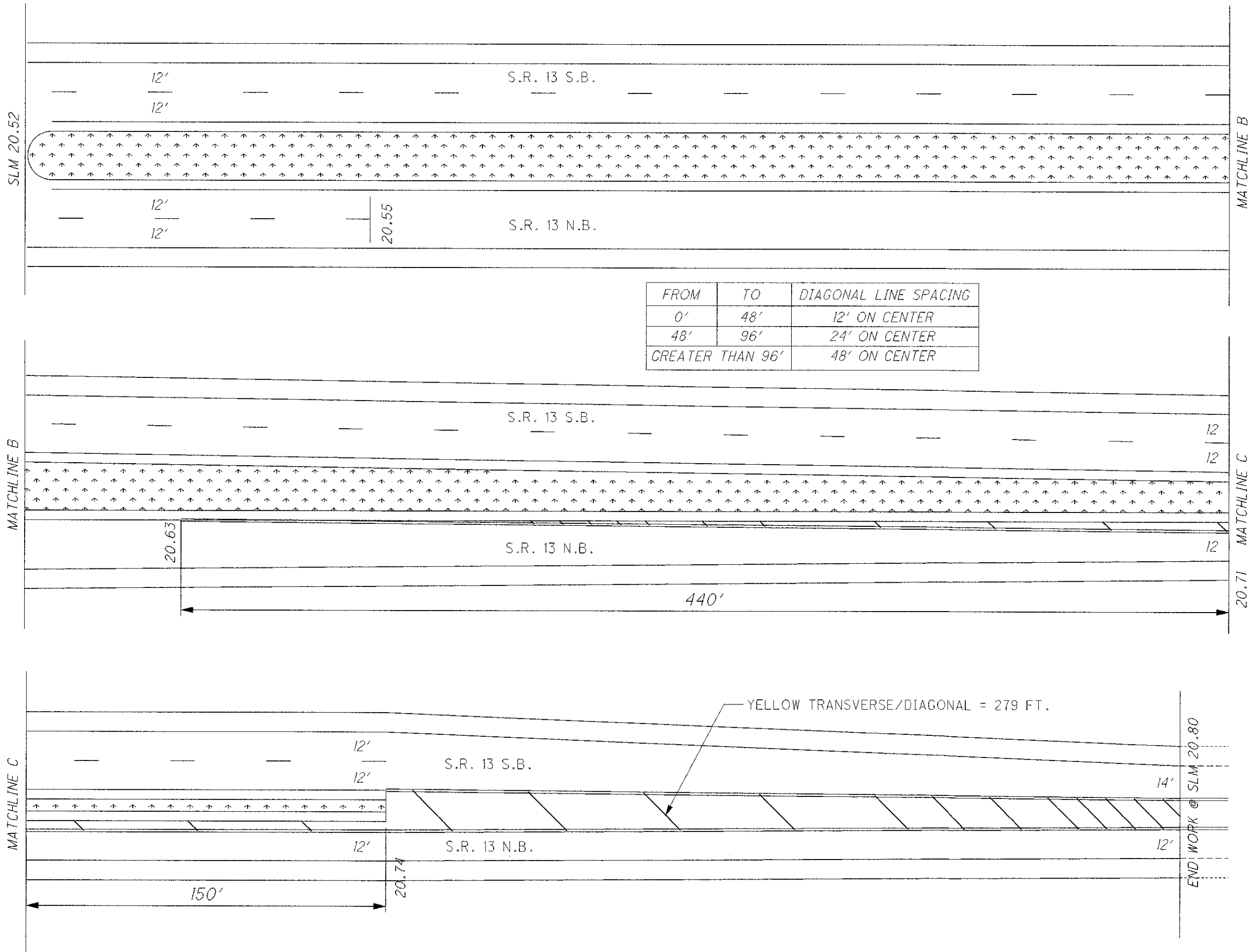
NOT TO SCALE

CALCULATED
LIME
CHECKED
DNM

PAVEMENT MARKING DETAIL - S.R. 13

KNO-13-16.02
KNO-95-0.00

INTRSECTION S.R. 13 AND CO. RD. II



NOT TO SCALE

CALCULATED
LIVE
CHECKED
DNM

PAVEMENT MARKING DETAIL - S.R. 13

KNO-13-16.02
KNO-95-0.00



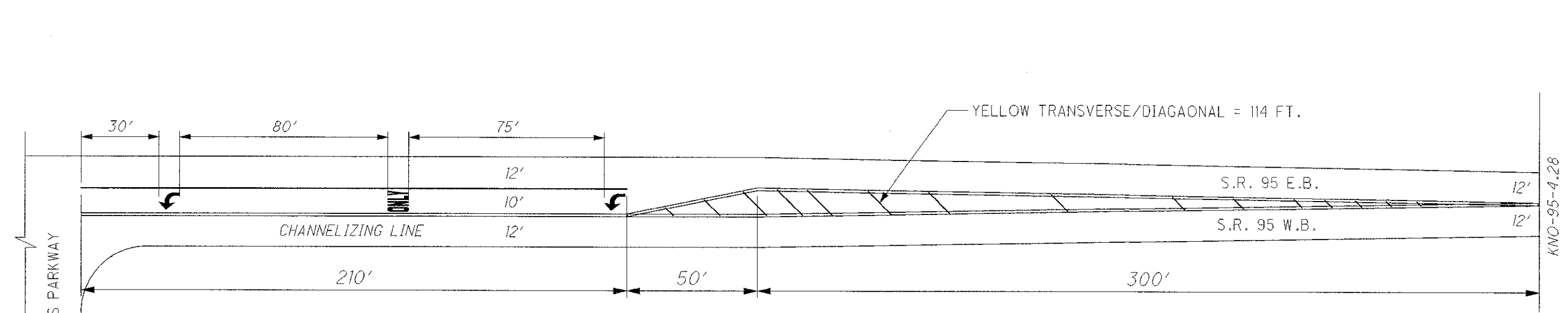
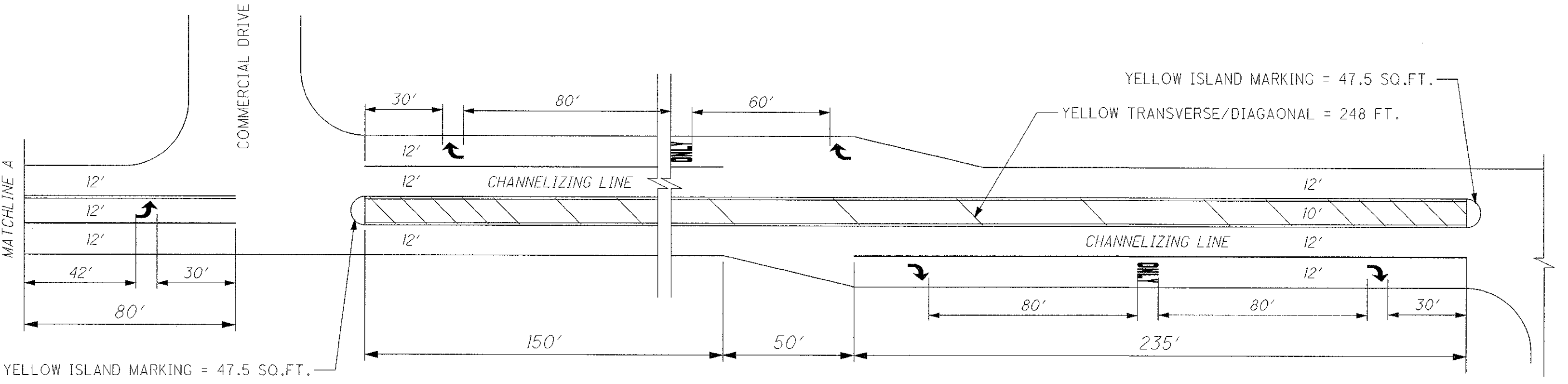
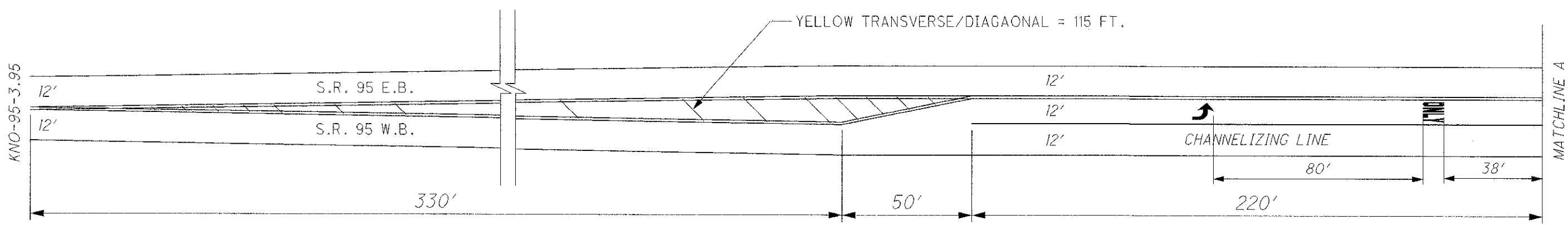
NOT TO SCALE

CALCULATED
LIME
CHECKED
DMM

PAVEMENT MARKING DETAIL - S.R. 95

KNO-13-16.02
KNO-95-0.00

24
58



FROM	TO	DIAGONAL LINE SPACING
0'	48'	12' ON CENTER
48'	96'	24' ON CENTER
GREATER THAN 96'		48' ON CENTER

P:\KNO\25687\Design\Roadway\Plan_Sheets\General\K013_PMD_001.dgn 23-JUL-2008 11:00AM leby

KNO-95-3.95

MATCHLINE A

MATCHLINE A

KNO-95-4.28

DETAIL	
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40' *
12	HORIZONTAL CURVE ALT. *
GAP	CENTERLINE AT 80' TYP.

* SEE NOTE 5, SCD TC-65.11 SHEET 2/2
REM = REMARKS

CALCULATED
LIME
CHECKED
DNM

RAISED PAVEMENT MARKER DATA

KNO-13-16.02
KNO-95-0.00

25
58

ITEM 621 RPM SUB-SUMMARY

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		DETAIL	621 RPM EACH	PRISMATIC RETRO-REFLECTOR COLORS INFORMATION ONLY					REMARKS
									ONE-WAY		TWO-WAY			
									WHITE	YELLOW	YELLOW YELLOW	WHITE RED	YELLOW RED	
1	KNO	S.R. 13	16.00	16.28	0.28	1,479	REM	38			22	16		2 LANE TO 4 LANE TRANSITION, 80' SPACING CENTER LINE
1	KNO	S.R. 13 N.B.	16.06	20.55	4.49	23,707	REM	297				297		80' SPACING ON LANE LINE
1	KNO	S.R. 13 S.B.	16.34	20.74	4.40	23,232	REM	291				291		80' SPACING ON LANE LINE
1	KNO	S.R. 13					10	6				6		LEFT TURN LANE @ C.R. 69, 40' SPACING ON CHANNELIZING LINE
1	KNO	S.R. 13					10	8				8		LEFT TURN LANES @ C.R. 11, 40' SPACING ON CHANNELIZING LINE
1	KNO	S.R. 13					10	8				8		LEFT TURN LANES @ C.R. 6, 40' SPACING ON CHANNELIZING LINE
1	KNO	S.R. 13					10	8				8		LEFT TURN LANES @ C.R. 49, 40' SPACING ON CHANNELIZING LINE
1	KNO	S.R. 13	20.74	20.80	0.06	317	REM	28			12	16		4 LANE TO 2 LANE TRANSITION, 80' SPACING CENTER LINE
LOCATION 1 (TOTAL CARRIED TO SHEET 26)								684			34	650		
2	KNO	S.R. 93	0.00	0.15	0.15	792	GAP	10			10			
2	KNO	S.R. 93	0.15	0.19	0.04	211	11	6			6			PC 0.15 PT 0.19 L=211' DEG 9
2	KNO	S.R. 93	0.19	0.54	0.35	1,848	GAP	24			24			
2	KNO	S.R. 93	0.54	0.57	0.03	158	11	4			4			PC 0.54 PT 0.57 L=158' DEG 6
2	KNO	S.R. 93	0.57	0.65	0.08	422	GAP	6			6			
2	KNO	S.R. 93	0.65	0.68	0.03	158	11	4			4			PC 0.65 PT 0.68 L=158' DEG 8
2	KNO	S.R. 93	0.68	0.81	0.13	686	GAP	9			9			
2	KNO	S.R. 93	0.81	0.87	0.06	317	11	8			8			PC 0.81 PT 0.87 L=317' DEG 6
2	KNO	S.R. 93	0.87	1.32	0.45	2,376	GAP	30			30			
2	KNO	S.R. 93	1.32	1.41	0.09	475	11	12			12			PC 1.32 PT 1.41 L=475' DEG 6
2	KNO	S.R. 93	1.41	1.60	0.19	1,003	GAP	13			13			
2	KNO	S.R. 93	1.60	1.66	0.06	317	11	8			8			PC 1.60 PT 1.66 L=317' DEG 6
2	KNO	S.R. 93	1.66	1.80	0.14	739	GAP	10			10			
2	KNO	S.R. 93	1.80	1.82	0.02	106	11	3			3			PC 1.80 PT 1.82 L=106' DEG 9
2	KNO	S.R. 93	1.82	1.96	0.14	739	GAP	10			10			
2	KNO	S.R. 93	1.96	2.02	0.06	317	11	8			8			PC 1.96 PT 2.02 L=317' DEG 9
2	KNO	S.R. 93	2.02	2.08	0.06	317	GAP	4			4			
2	KNO	S.R. 93	2.08	2.14	0.06	317	11	8			8			PC 2.08 PT 2.14 L=317' DEG 8
2	KNO	S.R. 93	2.14	2.93	0.79	4,171	GAP	53			53			
2	KNO	S.R. 93	2.93	3.00	0.07	370	11	10			10			PC 2.93 PT 3.00 L=370' DEG 5
2	KNO	S.R. 93	3.00	4.26	1.26	6,653	GAP	84			84			
2	KNO	S.R. 93	3.95				10	15			7	8		LEFT TURN @ COMERCIAL DRIVE
2	KNO	S.R. 93	4.09				REM	8				8		RIGHT TURN @ COMERCIAL DRIVE, 40 SPACING ON CHANNELIZING
2	KNO	S.R. 93	4.12				REM	12			6	6		RIGHT TURN @ COMERCIAL DRIVE, 40 SPACING ON CHANNELIZING
2	KNO	S.R. 93	4.18				10	13			7	6		LEFT TURN @ DIVELBLISS PARKWAY
2	KNO	S.R. 93	4.26	4.31	0.05	264	11	7			7			PC 4.26 PT 4.31 L=264' DEG 5
LOCATION 2 (TOTAL CARRIED TO SHEET 27)								379			351	28		

K013_TRM_001.DGN 6-12-08

CALCULATED
LME
CHECKED
DNM

LOCATION 1 (SHEET TOTALS CARRIED TO SHEETS 29,30)												ITEM	ITEM EXT.	GRAND TOTAL LOCATION 1	UNIT	DESCRIPTION	SEE SHEET	
3	4	5	6	9	10	11	13	14	19	20	25							
						5,029		445					202	23500	5,474	SQ.YD.	WEARING COURSE REMOVED	
				132,438	68,191		12,623						254	01001	213,252	SQ.YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	5
				9,933	5,115	378	950	34					407	10000	16,410	GALLON	TACK COAT	
													407	14000		GALLON	TACK COAT FOR INTERMEDIATE COURSE	
				5,519	2,842	210	527	19					448	46904	9,117	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
								327					516	31011	327	FEET	2" DEEP JOINT SEALER, AS PER PLAN	5
22													614	12460	22	EACH	WORK ZONE MARKING SIGN	
6													614	13000	6	CU.YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			4										614	18601	4	SIGN-MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
		8.89											614	20550	8.89	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
		0.15											614	21550	0.15	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
					967								617	10101	967	CU.YD.	COMPACTED AGGREGATE, AS PER PLAN	2
											684		621	00100	684	EACH	RPM	
	689												621	54000	689	EACH	RAISED PAVEMENT MARKER REMOVED	
									18.96				644	00100	18.96	MILE	EDGE LINE	
									8.89				644	00200	8.89	MILE	LANE LINE	
									0.15				644	00300	0.15	MILE	CENTER LINE	
										2,066			644	00400	2,066	FEET	CHANNELIZING LINE	
										401			644	00500	401	FEET	STOP LINE	
										677			644	00700	677	FEET	TRANSVERSE/DIAGONAL LINE	
										10			644	01300	10	EACH	LANE ARROW	
										8			644	01410	8	EACH	WORD ON PAVEMENT, 96"	

LOCATION 1 SUB-SUMMARY

KNO-13-16.02
KNO-95-0.00

K013_GSS_01.DGN 6-18-08

LOCATION 2 (SHEET TOTALS CARRIED TO SHEETS 29,30)													ITEM	ITEM EXT.	GRAND TOTAL LOCATION 2	UNIT	DESCRIPTION	SEE SHEET	
3	4	5	9	10	12	14	17	19	21	25	33	40							
					4,640	134								202	23500	4,828	SQ.YD.	WEARING COURSE REMOVED	
							2,207							202	30000	2,207	SQ.FT.	WALK REMOVED	
							498							202	32000	498	FEET	CURB REMOVED	
												307		203	10000	307	CU.YD.	EXCAVATION	
												103		203	20000	103	CU.YD.	EMBANKMENT	
											873			204	10000	873	SQ.YD.	SUBGRADE COMPACTION	
	2													209	60500	2	MILE	LINEAR GRADING	
			17,317	206							1,400			254	01001	18,923	SQ.YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	5
											152			301	46000	152	CU.YD.	ASPHALT CONCRETE BASE, PG64-22	
											113			304	20000	113	CU.YD.	AGGREGATE BASE	
			6,339	824	511	27					109			407	10000	7,810	GALLON	TACK COAT	
			867	11	123						102			407	14000	1,103	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
	4,391													408	10001	4,391	GALLON	PRIME COAT, AS PER PLAN	4
12			361	5	52						70			448	46020	500	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
19	20		2,935	382	238	13					71			448	46904	3,678	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
							128							516	31011	128	FEET	2" DEEP JOINT SEALER, AS PER PLAN	5
2														604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
9														604	34500	9	EACH	MANHOLE ADJUSTED TO GRADE	
											70			605	31100	70	FEET	AGGREGATE DRAINS	
							2,726							608	10000	2,726	SQ.FT.	4" CONCRETE WALK	
							21							608	52110	21	EACH	CURB RAMP, TYPE A1	
							7							608	52120	7	EACH	CURB RAMP, TYPE A2	
							8							608	52170	8	EACH	CURB RAMP, TYPE D	
							4							608	53000	4	EACH	TRUNCATED DOMES	
							548							609	26000	548	FEET	CURB, TYPE 6	
57														614	12460	57	EACH	WORK ZONE MARKING SIGN	
6														614	13000	6	CU.YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		5.91												614	21550	5.91	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
				395										617	10101	395	CU.YD.	COMPACTED AGGREGATE, AS PER PLAN	2
										379				621	00100	379	EACH	RPM	
	551													621	54000	551	EACH	RAISED PAVEMENT MARKER REMOVED	
15														638	10800	15	EACH	VALVE BOX ADJUSTED TO GRADE	
								10.00						642	00100	10.00	MILE	EDGE LINE, TYPE 1	
								5.91						642	00300	5.91	MILE	CENTER LINE, TYPE 1	
										895				644	00400	895	FEET	CHANNELIZING LINE	
										534				644	00500	534	FEET	STOP LINE	
										1,724				644	00600	1,724	FEET	CROSSWALK LINE	
										477				644	00700	477	FEET	TRANSVERSE/DIAGONAL LINE	
										2				644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
										8				644	01300	8	EACH	LANE ARROW	
										4				644	01410	4	EACH	WORD ON PAVEMENT, 96"	

K013_055_02.DGN 6-18-08

CALCULATED
LME
CHECKED
DNM

LOCATION 2 SUB-SUMMARY

**KNO-13-16.02
KNO-95-0.00**

LOCATION 2 (SHEET TOTALS CARRIED TO SHEETS 29,30)										ITEM	ITEM EXT.	GRAND TOTAL LOCATION 2	UNIT	DESCRIPTION	SEE SHEET
7	43	44	45	46	47	48	58								
LUMP										201	11000	LUMP		CLEARING AND GRUBBING	
						337.5				202	38000	337.5	FEET	GUARDRAIL REMOVED	
	8	3					183			203	10000	194	CU.YD.	EXCAVATION	
5							84			203	20000	89	CU.YD.	EMBANKMENT	
	46	16					251			204	10000	313	SQ.YD.	SUBGRADE COMPACTION	
	8	3								301	46000	11	CU.YD.	ASPHALT CONCRETE BASE, PG64-22	
							42			304	20000	42	CU.YD.	AGGREGATE BASE	
							6			407	10000	6	GALLON	TACK COAT	
							4			448	46904	4	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
5										601	28000	5	CU.YD.	DUMPED ROCK FILL, TYPE D	
						125				606	13000	125	FEET	GUARDRAIL, TYPE 5	
						3				606	22010	3	EACH	ANCHOR ASSEMBLY, TYPE E-98	
						1				606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T	
						4				606	32160	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST	
288										606	50000	288	FEET	SPECIAL - RESHAPING BERM	
		1	2							614	12346	3	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), 24" WIDTH	
							358			614	12800	358	EACH	WORK ZONE RAISED PAVEMENT MARKER	
20										614	13000	20	CU.YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
				10						614	13202	10	EACH	BARRIER REFLECTOR, TYPE A2	
				12						614	13300	12	EACH	BARRIER REFLECTOR, TYPE B	
				8						614	13302	8	EACH	BARRIER REFLECTOR, TYPE B2	
				20						614	13360	20	EACH	OBJECT MARKER, TWO WAY	
				0.06						614	21550	0.06	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
				0.04						614	22350	0.04	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
				24						614	26000	24	FEET	WORK ZONE STOP LINE, CLASS I	
				500						622	40020	500	FEET	PORTABLE CONCRETE BARRIER, 32"	
				120						622	40040	120	FEET	PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED	
				8						626	00100	8	EACH	BARRIER REFLECTOR	
										644	30000	900	FEET	REMOVAL OF PAVEMENT MARKING	
2,373										659	00500	2,373	SQ.YD.	SEEDING AND MULCHING, CLASS 1	
119										659	14000	119	SQ.YD.	REPAIR SEEDING AND MULCHING	
0.16										659	20000	0.16	TON	COMMERCIAL FERTILIZER	
0.49										659	31000	0.49	ACRE	LIME	
8										659	35000	8	M GAL.	WATER	
FOR STRUCTURE QUANTITIES SEE SHEET 50															

K013_GSS_03.DGN 8-5-08

LOCATION TOTALS			ITEM	ITEM EXT.	GRAND TOTAL LOCATIONS 1 & 2	UNIT	DESCRIPTION	SEE SHEET
1	2							
	LUMP		201	11000	LUMP		CLEARING AND GRUBBING	
5,474	4,828		202	23500	10,302	SQ.YD.	WEARING COURSE REMOVED	
	2,207		202	30000	2,207	SQ.FT.	WALK REMOVED	
	498		202	32000	498	FEET	CURB REMOVED	
	337.5		202	38000	337.5	FEET	GUARDRAIL REMOVED	
	501		203	10000	501	CU.YD.	EXCAVATION	
	192		203	20000	192	CU.YD.	EMBANKMENT	
	1,186		204	10000	1,186	SQ.YD.	SUBGRADE COMPACTION	
	2		209	60500	2	MILE	LINEAR GRADING	
213,252	18,923		254	01001	232,175	SQ.YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	5
	163		301	46000	163	CU.YD.	ASPHALT CONCRETE BASE, PG64-22	
	155		304	20000	155	CU.YD.	AGGREGATE BASE	
16,410	7,816		407	10000	24,226	GALLON	TACK COAT	
	1,103		407	14000	1,103	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
	4,391		408	10001	4,391	GALLON	PRIME COAT, AS PER PLAN	
	500		448	46020	500	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
9,117	3,682		448	46904	12,799	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
327	128		516	31011	455	FEET	2" DEEP JOINT SEALER, AS PER PLAN	
	5		601	28000	5	CU.YD.	DUMPED ROCK FILL, TYPE D	
	2		604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
	9		604	34500	9	EACH	MANHOLE ADJUSTED TO GRADE	
	70		605	31100	70	FEET	AGGREGATE DRAINS	
	125		606	13000	125	FEET	GUARDRAIL, TYPE 5	
	3		606	22010	3	EACH	ANCHOR ASSEMBLY, TYPE E-98	
	1		606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T	
	4		606	32160	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST	
	288		606	50000	288	FEET	SPECIAL - RESHAPING BERM	
	2,726		608	10000	2,726	SQ.FT.	4" CONCRETE WALK	
	21		608	52110	21	EACH	CURB RAMP, TYPE A1	
	7		608	52120	7	EACH	CURB RAMP, TYPE A2	
	8		608	52170	8	EACH	CURB RAMP, TYPE D	
	4		608	53000	4	EACH	TRUNCATED DOMES	
	548		609	26000	548	FEET	CURB, TYPE 6	

K013.GGS_01.DGN 8-26-08

CALCULATED
LME
CHECKED
DMM

GENERAL SUMMARY

**KNO-13-16.02
KNO-95-0.00**

LOCATION TOTALS			ITEM	ITEM EXT.	GRAND TOTAL LOCATIONS 1 & 2	UNIT	DESCRIPTION	SEE SHEET
1	2							
	3		614	12346	3	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), 24" WIDTH	
22	57		614	12460	79	EACH	WORK ZONE MARKING SIGN	
	358		614	12800	358	EACH	WORK ZONE RAISED PAVEMENT MARKER	
6	26		614	13000	32	CU.YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
	10		614	13202	10	EACH	BARRIER REFLECTOR, TYPE A2	
	12		614	13300	12	EACH	BARRIER REFLECTOR, TYPE B	
	8		614	13302	8	EACH	BARRIER REFLECTOR, TYPE B2	
	20		614	13360	20	EACH	OBJECT MARKER, TWO WAY	
4			614	18601	4	SIGN-MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
8.89			614	20550	8.89	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
0.15	5.97		614	21550	6.12	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
	0.04		614	22350	0.04	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
	24		614	26000	24	FEET	WORK ZONE STOP LINE, CLASS I	
967	395		617	10101	1,362	CU.YD.	COMPACTED AGGREGATE, AS PER PLAN	2
	500		622	40020	500	FEET	PORTABLE CONCRETE BARRIER, 32"	
	120		622	40040	120	FEET	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
684	379		621	00100	1,063	EACH	RPM	
689	551		621	54000	1,240	EACH	RAISED PAVEMENT MARKER REMOVED	
	8		626	00100	8	EACH	BARRIER REFLECTOR	
	15		638	10800	15	EACH	VALVE BOX ADJUSTED TO GRADE	
	10.00		642	00100	10.00	MILE	EDGE LINE, TYPE 1	
	5.91		642	00300	5.91	MILE	CENTER LINE, TYPE 1	
18.96			644	00100	18.96	MILE	EDGE LINE	
8.89			644	00200	8.89	MILE	LANE LINE	
0.15			644	00300	0.15	MILE	CENTER LINE	
2,066	895		644	00400	2,961	FEET	CHANNELIZING LINE	
401	534		644	00500	935	FEET	STOP LINE	
	1,724		644	00600	1,724	FEET	CROSSWALK LINE	
677	477		644	00700	1,154	FEET	TRANSVERSE/DIAGONAL LINE	
	2		644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
10	8		644	01300	18	EACH	LANE ARROW	
8	4		644	01410	12	EACH	WORD ON PAVEMENT, 96"	
	900		644	30000	900	FEET	REMOVAL OF PAVEMENT MARKING	
	2,373		659	00500	2,373	SQ.YD.	SEEDING AND MULCHING, CLASS 1	
	119		659	14000	119	SQ.YD.	REPAIR SEEDING AND MULCHING	
	0.16		659	20000	0.16	TON	COMMERCIAL FERTILIZER	
	0.49		659	31000	0.49	ACRE	LIME	
	8		659	35000	8	M GAL.	WATER	
			832	30000	1,000	EACH	EROSION CONTROL	
							FOR STRUCTURE QUANTITIES SEE SHEET 50/58 (KNO-95-0323)	
			103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
			614	11000	LUMP		MAINTAINING TRAFFIC	
			619	16000	2	MONTH	FIELD OFFICE, TYPE A	
			623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
			624	10000	LUMP		MOBILIZATION	

K013.G65.02.DGN 8-26-08

CALCULATED
LIME
CHECKED
DNM

GENERAL SUMMARY

KNO-13-16-02
KNO-95-0-00

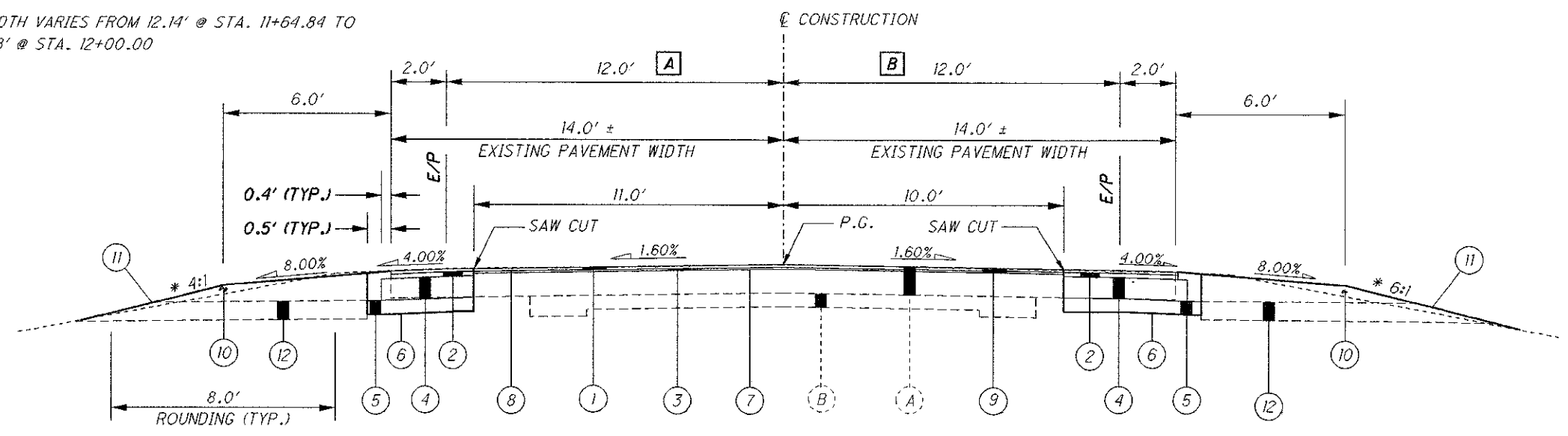
S.R. 95 PAVEMENT PLANING TABLE

STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ E
6+00	1091.92	0.17
6+25	1091.96	0.15
6+50	1091.99	0.14
6+75	1092.03	0.13
7+00	1092.06	0.12
7+25	1092.11	0.06
7+50	1092.16	0.02
7+75	1092.20	0.03
8+00	1092.23	0.06
8+25	1092.24	0.09
8+50	1092.22	0.12
8+75	1092.18	0.13
9+00	1092.12	0.13
9+25	1092.03	0.20
9+50	1091.93	0.24
9+75	1091.83	0.24
10+00	1091.73	0.20
10+25	1091.66	0.13
10+50	1091.61	0.12
10+75	1091.59	0.08
11+00	1091.59	0.18
11+25	1091.62	0.25
11+50	1091.66	0.20
11+75	1091.72	0.15
12+00	1091.77	0.17

A - WIDTH VARIES FROM 11.55' @ STA. 11+64.84 TO 11.10' @ STA. 12+00.00

B - WIDTH VARIES FROM 12.14' @ STA. 11+64.84 TO 12.28' @ STA. 12+00.00

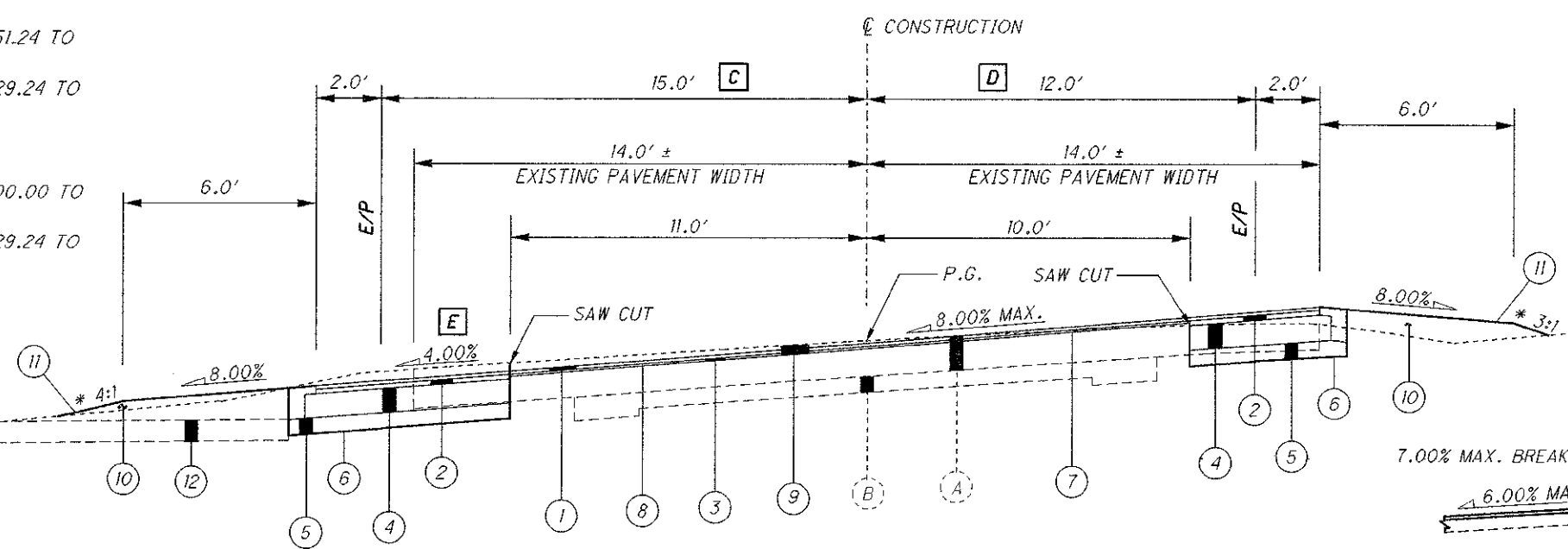
* - UNLESS OTHERWISE SHOWN IN THE CROSS SECTIONS



NORMAL SECTION - S.R. 95
STA. 11+64.84 TO STA. 12+00.00

C - WIDTH VARIES FROM 11.71' @ STA. 6+00 TO 12.0' @ STA. 6+65.28
 - WIDTH VARIES FROM 12.0' @ STA. 6+65.28 TO 15.0' @ STA. 8+43.28
 - WIDTH VARIES FROM 15.0' @ STA. 9+51.24 TO 12.0' @ STA. 11+29.24
 - WIDTH VARIES FROM 12.0' @ STA. 11+29.24 TO 11.55' @ STA. 11+64.84

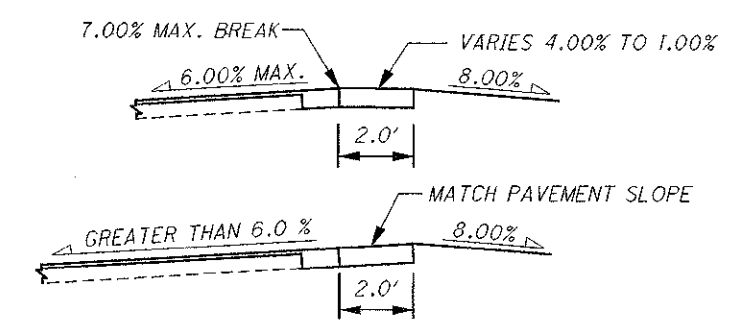
D - WIDTH VARIES FROM 11.21' @ STA. 6+00.00 TO 12.0' @ STA. 6+65.28
 - WIDTH VARIES FROM 12.0' @ STA. 11+29.24 TO 12.14' @ STA. 11+64.84



SUPERELEVATED SECTION - S.R. 95
STA. 6+00.00 TO STA. 11+64.84

E - 4.00% OR PAVEMENT SLOPE, WHICHEVER IS GREATER.

F - IN AN EFFORT TO CORRECT THE SUPERELEVATION AND ESTABLISH A CONSISTENT PROFILE ALONG THE CURVE AT THIS LOCATION, THE PAVEMENT SHALL BE PLANED TO A DEPTH INDICATED IN THE PAVEMENT PLANING TABLE LOCATED ABOVE. THE PROPOSED CROSS SLOPE SHALL BE ESTABLISHED FROM THE CENTER LINE TO THE EXISTING EDGE OF PAVEMENT.



SHOULDER DETAILS

LEGEND

- (1) ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
- (2) ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
- (3) ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22 (VARIABLE)
- (4) ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- (5) ITEM 304 - 6" AGGREGATE BASE 16"
- (6) ITEM 204 - SUBGRADE COMPACTION
- (7) ITEM 407 - TACK COAT
- (8) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- (9) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE **F**
- (10) ITEM 203 - EMBANKMENT
- (11) ITEM 659 - SEEDING AND MULCHING
- (12) ITEM 605 - AGGREGATE DRAINS
- (A) 12" ± EXISTING ASPHALT CONCRETE
- (B) 6" TO 9" EXISTING REINFORCED CONCRETE PAVEMENT

EXISTING TYPICAL SECTIONS
S.R. 95 - STA. 6+00.00 TO STA. 12+00.00

KNO-13-16.02
KNO-95-0.00

25687.PTS.01.DGN 4/16/08 (V8)

SUPERELEVATION TABLE

P.I. STATION 8+98.09

Dc = 8° 04' 11"

LEFT SIDE						CENTERLINE CONTROL		RIGHT SIDE						REMARKS
EDGE OF SHOULDER	SHOULDER WIDTH	SHOULDER CROSS SLOPE	EDGE OF PAVEMENT	PAVEMENT WIDTH	PAVEMENT CROSS SLOPE	STATION	PROFILE GRADE	PAVEMENT CROSS SLOPE	PAVEMENT WIDTH	EDGE OF PAVEMENT	SHOULDER CROSS SLOPE	SHOULDER WIDTH	EDGE OF SHOULDER	
1091.51	2.00	-0.040	1091.59	11.71	-0.0280	6+00.00	1091.92	0.0160	11.21	1092.10	-0.040	2.00	1092.02	
1091.65	2.00	-0.040	1091.73	11.82	-0.0188	6+25.00	1091.96	0.0160	11.51	1092.14	-0.040	2.00	1092.06	
1091.70	2.00	-0.040	1091.78	11.86	-0.0160	6+32.68	1091.97	0.0160	11.61	1092.15	-0.040	2.00	1092.07	R.C.
1091.72	2.00	-0.040	1091.80	11.93	-0.0160	6+50.00	1091.99	0.0160	11.82	1092.18	-0.040	2.00	1092.10	
1091.74	2.00	-0.040	1091.82	12.00	-0.0160	6+65.28	1092.01	0.0160	12.00	1092.20	-0.040	2.00	1092.12	
1091.75	2.00	-0.040	1091.83	12.16	-0.0160	6+75.00	1092.03	0.0160	12.00	1092.22	-0.040	2.00	1092.14	
1091.78	2.00	-0.040	1091.86	12.59	-0.0160	7+00.00	1092.06	0.0160	12.00	1092.25	-0.040	2.00	1092.17	
1091.78	2.00	-0.040	1091.86	12.60	-0.0160	7+00.88	1092.06	0.0160	12.00	1092.25	-0.040	2.00	1092.17	R.C.
1091.68	2.00	-0.040	1091.76	13.01	-0.0268	7+25.00	1092.11	0.0268	12.00	1092.43	-0.040	2.00	1092.35	
1091.57	2.00	-0.040	1091.65	13.43	-0.0381	7+50.00	1092.16	0.0381	12.00	1092.61	-0.032	2.00	1092.55	
1091.42	2.00	-0.049	1091.52	13.85	-0.0493	7+75.00	1092.20	0.0493	12.00	1092.80	-0.021	2.00	1092.75	
1091.32	2.00	-0.056	1091.43	14.10	-0.0560	7+89.88	1092.22	0.0560	12.00	1092.90	-0.014	2.00	1092.87	P.C.
1091.25	2.00	-0.061	1091.37	14.27	-0.0605	8+00.00	1092.23	0.0605	12.00	1092.96	4' RNDG	2.00	1093.08	
1091.04	2.00	-0.072	1091.19	14.69	-0.0718	8+25.00	1092.24	0.0718	12.00	1093.10	4' RNDG	2.00	1093.25	
1090.87	2.00	-0.080	1091.03	15.00	-0.0800	8+43.28	1092.23	0.0800	12.00	1093.19	4' RNDG	2.00	1093.35	F.S.
1090.86	2.00	-0.080	1091.02	15.00	-0.0800	8+50.00	1092.22	0.0800	12.00	1093.18	4' RNDG	2.00	1093.34	
1090.82	2.00	-0.080	1090.98	15.00	-0.0800	8+75.00	1092.18	0.0800	12.00	1093.14	4' RNDG	2.00	1093.30	
1090.76	2.00	-0.080	1090.92	15.00	-0.0800	9+00.00	1092.12	0.0800	12.00	1093.08	4' RNDG	2.00	1093.24	
1090.67	2.00	-0.080	1090.83	15.00	-0.0800	9+25.00	1092.03	0.0800	12.00	1092.99	4' RNDG	2.00	1093.15	
1090.57	2.00	-0.080	1090.73	15.00	-0.0800	9+50.00	1091.93	0.0800	12.00	1092.89	4' RNDG	2.00	1093.05	
1090.57	2.00	-0.080	1090.73	15.00	-0.0800	9+51.24	1091.93	0.0800	12.00	1092.89	4' RNDG	2.00	1093.05	F.S.
1090.68	2.00	-0.069	1090.81	14.60	-0.0693	9+75.00	1091.83	0.0693	12.00	1092.66	4' RNDG	2.00	1092.80	
1090.79	2.00	-0.058	1090.91	14.18	-0.0581	10+00.00	1091.73	0.0581	12.00	1092.43	-0.012	2.00	1092.40	
1090.81	2.00	-0.056	1090.93	14.10	-0.0560	10+04.64	1091.72	0.0560	12.00	1092.39	-0.014	2.00	1092.36	P.T.
1090.92	2.00	-0.047	1091.02	13.76	-0.0468	10+25.00	1091.66	0.0468	12.00	1092.22	-0.023	2.00	1092.18	
1091.06	2.00	-0.040	1091.14	13.34	-0.0356	10+50.00	1091.61	0.0356	12.00	1092.04	-0.034	2.00	1091.97	
1091.19	2.00	-0.040	1091.27	12.91	-0.0244	10+75.00	1091.59	0.0244	12.00	1091.88	-0.040	2.00	1091.80	
1091.31	2.00	-0.040	1091.39	12.60	-0.0160	10+93.64	1091.59	0.0160	12.00	1091.78	-0.040	2.00	1091.70	R.C.
1091.31	2.00	-0.040	1091.39	12.49	-0.0160	11+00.00	1091.59	0.0131	12.00	1091.75	-0.040	2.00	1091.67	
1091.34	2.00	-0.040	1091.42	12.07	-0.0160	11+25.00	1091.62	0.0019	12.00	1091.64	-0.040	2.00	1091.56	
1091.35	2.00	-0.040	1091.43	12.00	-0.0160	11+29.24	1091.62	0.0000	12.00	1091.62	-0.040	2.00	1091.54	1/2 LEVEL
1091.40	2.00	-0.040	1091.48	11.74	-0.0160	11+50.00	1091.66	-0.0049	12.08	1091.60	-0.040	2.00	1091.52	
1091.43	2.00	-0.040	1091.51	11.55	-0.0160	11+64.84	1091.69	-0.0084	12.14	1091.59	-0.040	2.00	1091.51	N.C.
1091.41	2.00	-0.040	1091.49	11.42	-0.0200	11+75.00	1091.72	-0.0108	12.18	1091.58	-0.040	2.00	1091.50	
1091.36	2.00	-0.040	1091.44	11.10	-0.0300	12+00.00	1091.77	-0.0108	12.28	1091.64	-0.040	2.00	1091.56	

SUPERELEVATION TABLE

KNO-13-16.02
KNO-95-0.00

25687_GST_SR95.DGN 4/22/08

ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M

MAINLINE

STA. 6+00.00 TO STA. 6+65.28 - 65.28'
 LT - ((11.71' + 12.0')/2 x 65.28' x (1.25/12))/27 = 3.0 C.Y.
 RT - ((11.21' + 12.0')/2 x 65.28' x (1.25/12))/27 = 3.0 C.Y.
 STA. 6+65.28 TO STA. 8+43.28 - 178.0'
 LT - ((12.0' + 15.0')/2 x 178.0' x (1.25/12))/27 = 9.3 C.Y.
 RT - ((12.0' x 178.0' x (1.25/12))/27 = 8.3 C.Y.
 STA. 8+43.28 TO STA. 9+51.24 - 107.96'
 LT - ((15.0' x 107.96' x (1.25/12))/27 = 6.3 C.Y.
 RT - ((12.0' x 107.96' x (1.25/12))/27 = 5.0 C.Y.
 STA. 9+51.24 TO STA. 11+29.24 - 178.0'
 LT - ((15.0' + 12.0')/2 x 178.0' x (1.25/12))/27 = 9.3 C.Y.
 RT - ((12.0' x 178.0' x (1.25/12))/27 = 8.3 C.Y.
 STA. 11+29.24 TO STA. 12+00.00 - 70.76'
 LT - ((12.0' + 11.10')/2 x 70.76' x (1.25/12))/27 = 3.2 C.Y.
 RT - ((12.0' + 12.28')/2 x 70.76' x (1.25/12))/27 = 3.4 C.Y.

PAVED SHOULDERS

STA. 6+00.00 TO STA. 12+00.00 - 600.0'
 LT - (2.0' x 600.0' x (1.25/12))/27 = 4.7 C.Y.
 RT - (2.0' x 600.0' x (1.25/12))/27 = 4.7 C.Y.

DRIVES

DR-1 (353.75 S.F. X (1.25/12))/27 = 1.4 C.Y.
 DR-2 (264.4 S.F. X (1.25/12))/27 = 1.1 C.Y.

TOTAL CARRIED TO SHEET 27 = 71.0 C.Y.

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (VARIABLE)

MAINLINE (AVERAGE DEPTH = 1")

STA. 6+00.00 TO STA. 12+00.00 - 600.0'
 LT - ((11.0' x 600.0' x (1/12))/27 = 20.4 C.Y.
 RT - ((10.0' x 600.0' x (1/12))/27 = 18.6 C.Y.

TOTAL CARRIED TO SHEET 27 = 39.0 C.Y.

ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22

PAVEMENT WIDENING AND SHOULDERS

STA. 6+00.00 TO STA. 8+43.28 - 243.28'
 LT - ((2.73' + 6.0')/2 x 243.28' x (1.75/12))/27 = 5.8 C.Y.
 RT - ((3.21' + 4.0')/2 x 243.28' x (1.75/12))/27 = 4.8 C.Y.
 STA. 8+43.28 TO STA. 9+51.24 - 107.96'
 LT - (6.0' x 107.96' x (1.75/12))/27 = 3.5 C.Y.
 RT - (4.0' x 107.96' x (1.75/12))/27 = 2.4 C.Y.
 STA. 9+51.24 TO STA. 12+00.00 - 248.76'
 LT - ((6.0' + 2.10')/2 x 248.76' x (1.75/12))/27 = 5.5 C.Y.
 RT - ((4.0' + 4.28')/2 x 248.76' x (1.75/12))/27 = 5.6 C.Y.

DRIVES

DR-1 (353.75 S.F. X (1.75/12))/27 = 2.0 C.Y.
 DR-2 (264.4 S.F. X (1.75/12))/27 = 1.4 C.Y.

TOTAL CARRIED TO SHEET 27 = 31.0 C.Y.

ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22

PAVEMENT WIDENING AND SHOULDERS

STA. 6+00.00 TO STA. 8+43.28 - 243.28'
 LT - ((3.06' + 6.33')/2 x 243.28' x (9/12))/27 = 31.8 C.Y.
 RT - ((3.54' + 4.33')/2 x 243.28' x (9/12))/27 = 26.6 C.Y.
 STA. 8+43.28 TO STA. 9+51.24 - 107.96'
 LT - (6.33' x 107.96' x (9/12))/27 = 19.0 C.Y.
 RT - (4.33' x 107.96' x (9/12))/27 = 13.0 C.Y.
 STA. 9+51.24 TO STA. 12+00.00 - 248.76'
 LT - ((6.33' + 2.43')/2 x 248.76' x (9/12))/27 = 30.3 C.Y.
 RT - ((4.33' + 4.61')/2 x 248.76' x (9/12))/27 = 30.9 C.Y.

TOTAL CARRIED TO SHEET 27 = 151.6 C.Y.

ITEM 304 - 6" AGGREGATE BASE

PAVEMENT WIDENING AND SHOULDERS

STA. 6+00.00 TO STA. 8+43.28 - 243.28'
 LT - ((3.56' + 6.83')/2 x 243.28' x (6/12))/27 = 23.4 C.Y.
 RT - ((4.04' + 4.83')/2 x 243.28' x (6/12))/27 = 20.0 C.Y.
 STA. 8+43.28 TO STA. 9+51.24 - 107.96'
 LT - (6.83' x 107.96' x (6/12))/27 = 13.7 C.Y.
 RT - (4.83' x 107.96' x (6/12))/27 = 9.7 C.Y.
 STA. 9+51.24 TO STA. 12+00.00 - 248.76'
 LT - ((6.83' + 2.93')/2 x 248.76' x (6/12))/27 = 22.5 C.Y.
 RT - ((4.83' + 5.11')/2 x 248.76' x (6/12))/27 = 22.9 C.Y.

TOTAL CARRIED TO SHEET 27 = 112.2 C.Y.

ITEM 204 - SUBGRADE COMPACTION

PAVEMENT WIDENING AND SHOULDERS

STA. 6+00.00 TO STA. 8+43.28 - 243.28'
 LT - (((3.56' + 6.83')/2 + 1.5') x 243.28')/9 = 181.0 S.Y.
 RT - (((4.04' + 4.83')/2 + 1.5') x 243.28')/9 = 160.5 S.Y.
 STA. 8+43.28 TO STA. 9+51.24 - 107.96'
 LT - ((6.83' + 1.5') x 107.96')/9 = 100.0 S.Y.
 RT - ((4.83' + 1.5') x 107.96')/9 = 76.0 S.Y.
 STA. 9+51.24 TO STA. 12+00.00 - 248.76'
 LT - (((6.83' + 2.93')/2 + 1.5') x 248.76')/9 = 176.4 S.Y.
 RT - (((4.83' + 5.11')/2 + 1.5') x 248.76')/9 = 178.9 S.Y.

TOTAL CARRIED TO SHEET 27 = 872.8 S.Y.

ITEM 407 - TACK COAT

MAINLINE

STA. 6+00.00 TO STA. 12+00.00 - 600.0'
 LT - ((11.0' x 600.0')/9) x 0.075 GAL./S.Y. = 55 GAL.
 RT - ((10.0' x 600.0')/9) x 0.075 GAL./S.Y. = 50 GAL.

DRIVES

DR-1 (353.75 S.F.)/9 x 0.05 GAL./S.Y. = 2.0 GAL.
 DR-2 (264.4 S.F.)/9 x 0.05 GAL./S.Y. = 1.5 GAL.

TOTAL CARRIED TO SHEET 27 = 108.5 GAL.

ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

MAINLINE

STA. 6+00.00 TO STA. 6+65.28 - 65.28'
 LT - ((11.71' + 12.0')/2 x 65.28')/9 x 0.05 GAL./S.Y. = 4.3 GAL.
 RT - ((11.21' + 12.0')/2 x 65.28')/9 x 0.05 GAL./S.Y. = 4.2 GAL.
 STA. 6+65.28 TO STA. 8+43.28 - 178.0'
 LT - ((12.0' + 15.0')/2 x 178.0')/9 x 0.05 GAL./S.Y. = 13.4 GAL.
 RT - ((12.0' x 178.0')/9 x 0.05 GAL./S.Y. = 11.9 GAL.
 STA. 8+43.28 TO STA. 9+51.24 - 107.96'
 LT - (15.0' x 107.96')/9 x 0.05 GAL./S.Y. = 9.0 GAL.
 RT - (12.0' x 107.96')/9 x 0.05 GAL./S.Y. = 7.2 GAL.
 STA. 9+51.24 TO STA. 11+29.24 - 178.0'
 LT - ((15.0' + 12.0')/2 x 178.0')/9 x 0.05 GAL./S.Y. = 13.4 GAL.
 RT - ((12.0' x 178.0')/9 x 0.05 GAL./S.Y. = 11.9 GAL.
 STA. 11+29.24 TO STA. 12+00.00 - 70.76'
 LT - ((12.0' + 11.10')/2 x 70.76')/9 x 0.05 GAL./S.Y. = 4.5 GAL.
 RT - ((12.0' + 12.28')/2 x 70.76')/9 x 0.05 GAL./S.Y. = 4.8 GAL.

PAVED SHOULDERS

STA. 6+00.00 TO STA. 12+00.00 - 600.0'
 LT - (2.0' x 600.0')/9 x 0.05 GAL./S.Y. = 6.7 GAL.
 RT - (2.0' x 600.0')/9 x 0.05 GAL./S.Y. = 6.7 GAL.

DRIVES

DR-1 (353.75 S.F.)/9 x 0.05 GAL./S.Y. = 2.0 GAL.
 DR-2 (264.4 S.F.)/9 x 0.05 GAL./S.Y. = 1.5 GAL.

TOTAL CARRIED TO SHEET 27 = 101.5 GAL.

ITEM 202 - WEARING COURSE REMOVED

DRIVES

DR-1 353.75 S.F./9 = 39.3 S.Y.
 DR-2 (264.4 S.F.)/9 = 14.7 S.Y.

TOTAL CARRIED TO SHEET 27 = 54.0 S.Y.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

MAINLINE

STA. 6+00.00 TO STA. 12+00.00 - 600.0'
 LT - ((11.0' x 600.0')/9) = 733.3 S.Y.
 RT - ((10.0' x 600.0')/9) = 666.7 S.Y.

TOTAL CARRIED TO SHEET 27 = 1,400 S.Y.

ITEM 605 - AGGREGATE DRAINS

LT SIDE

STA. 6+25 10 FT
 STA. 6+75 10 FT
 STA. 7+25 10 FT
 STA. 7+75 10 FT
 STA. 8+25 10 FT

RT SIDE

STA. 11+50 10 FT
 STA. 12+00 10 FT

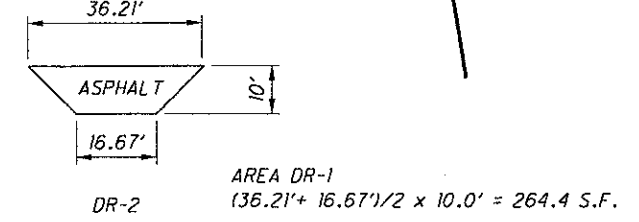
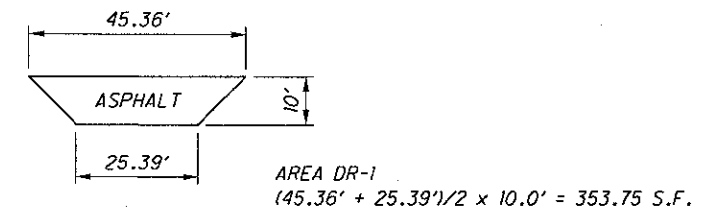
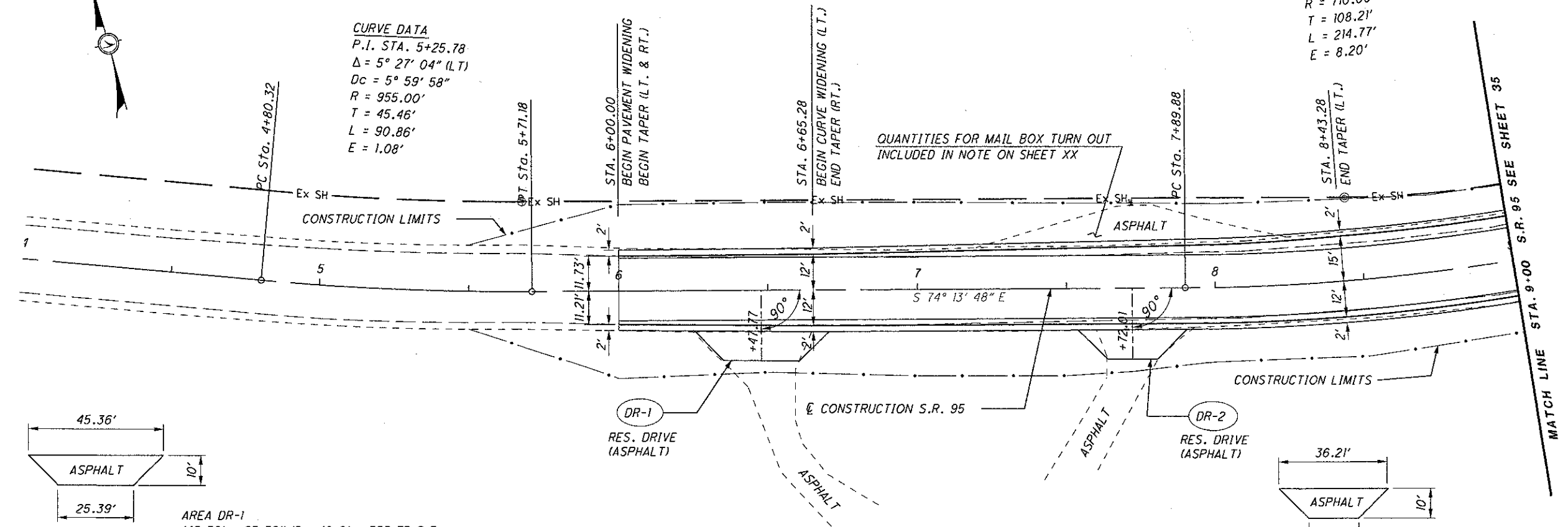
TOTAL CARRIED TO SHEET 27 = 70 FT

BENCHMARK 1 - TOP OF CONCRETE MONUMENT; 30.01 FEET LEFT OF EXISTING S.R. 95 CENTERLINE STA. 5+67.77 ELEVATION = 1086.38

CURVE DATA
 P.I. STA. 8+98.09
 $\Delta = 17^\circ 19' 53''$ (LT)
 $D_c = 8^\circ 04' 11''$
 $R = 710.00'$
 $T = 108.21'$
 $L = 214.77'$
 $E = 8.20'$

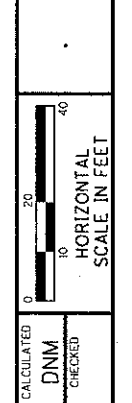
CURVE DATA
 P.I. STA. 5+25.78
 $\Delta = 5^\circ 27' 04''$ (LT)
 $D_c = 5^\circ 59' 58''$
 $R = 955.00'$
 $T = 45.46'$
 $L = 90.86'$
 $E = 1.08'$

QUANTITIES FOR MAIL BOX TURN OUT INCLUDED IN NOTE ON SHEET XX



FOR ESTIMATED QUANTITIES SEE SHEET 33
 FOR DRIVE PROFILES SEE CROSS SECTIONS SHEETS 36 & 37

										1091.92	1091.95	1091.99	1092.02		1092.06	1092.11	1092.16	1092.20		1092.23	1092.24	1092.22	1092.18	1092.12					
1105																										1105			
1100																					165' V.C. P.V.I. STA. 8+50.00 ELEV. = 1,092.35 S.S.D. = 1844'								1100
1095			PROP. 1.25" OVERLAY S.R. 95								100.00' WEARING COURSE REMOVED															1095			
1090																										1090			
1085																										1085			
1080																										1080			
1075																										1075			
										1091.92	1091.96			1092.01		1092.01				1092.12		1092.17		1092.08		1091.92			
	4+00			5+00				6+00						7+00						8+00					9+00				



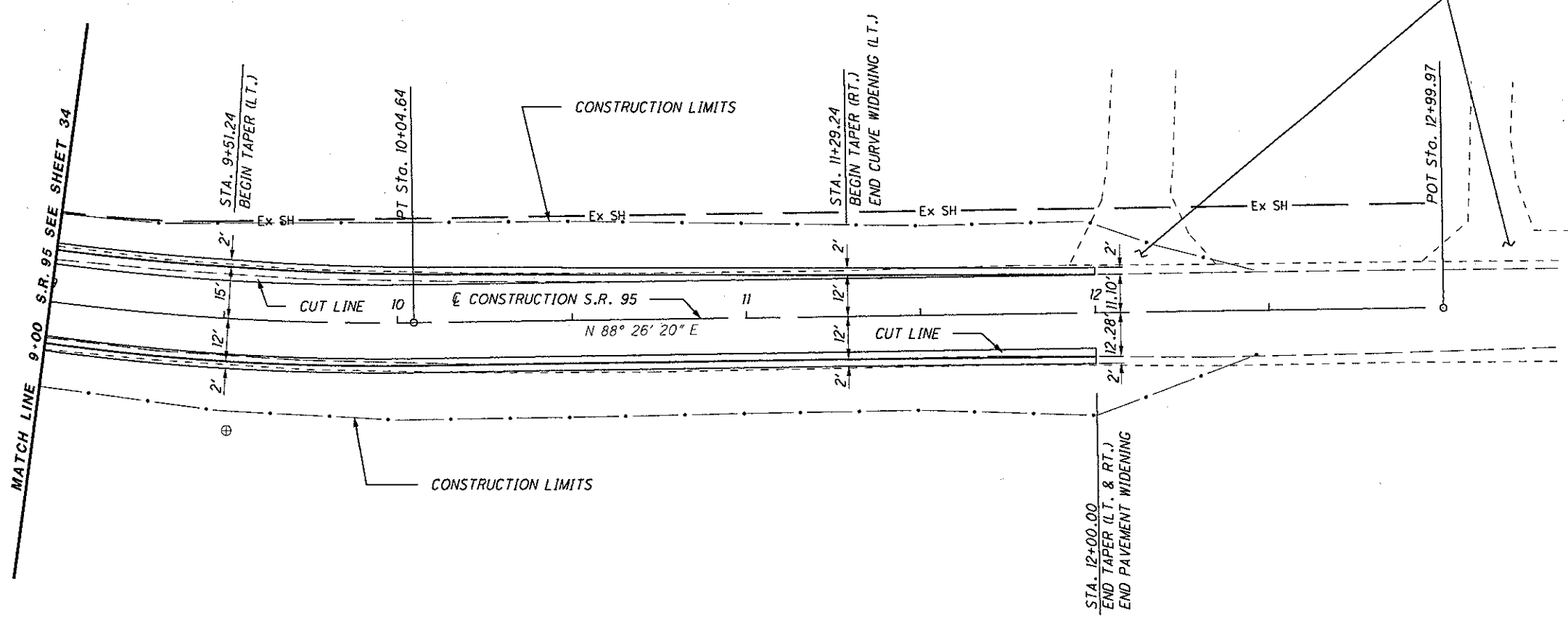
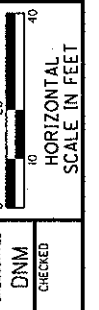
PLAN AND PROFILE - S.R. 95
 STA. 4+00 TO STA. 9+00

KNO-13-16.02
 KNO-95-0.00
 4 / 10
 34
 58

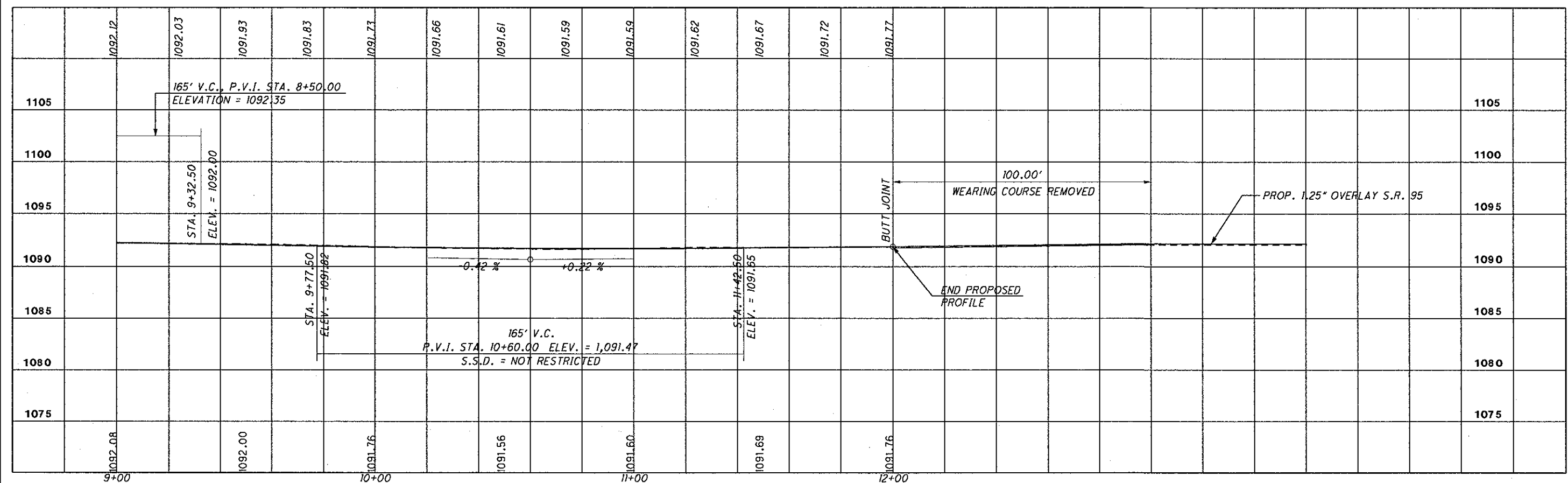
25687_ppp_001.dgn 04/16/08

BENCHMARK #2 - TOP OF CONCRETE; 31.94 FEET RIGHT OF EXISTING S.R. 95 CENTERLINE STA. 9+52.49 ELEVATION = 1091.92

QUANTITIES FOR THESE RESIDENTIAL DRIVES ARE INCLUDED IN PLAN NOTE ON SHEET 4.



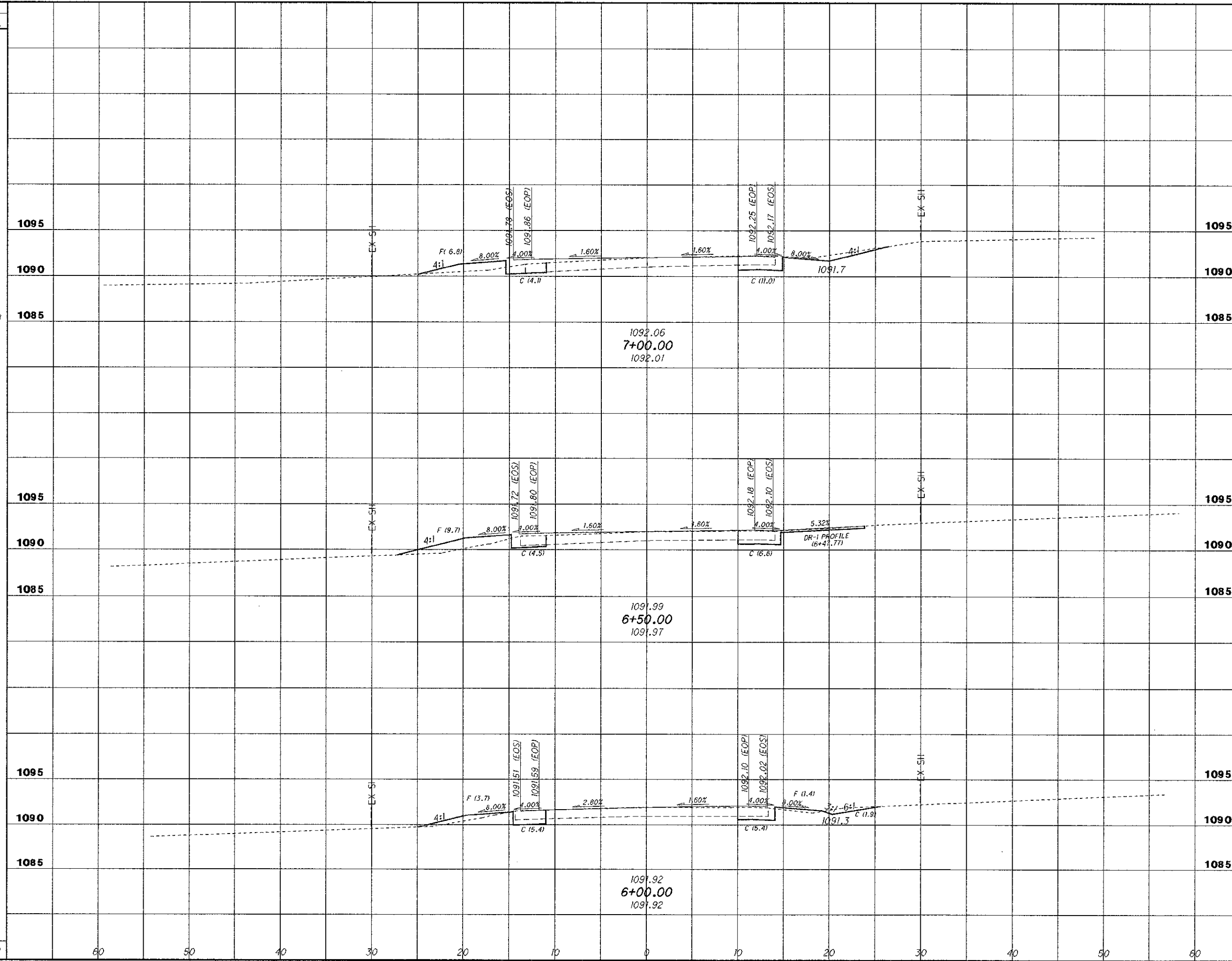
FOR ESTIMATED QUANTITIES SEE SHEET 33



PLAN AND PROFILE - S.R. 95
STA. 9+00 TO STA. 12+99.97

KNO-13-16.02
KNO-95-0.00

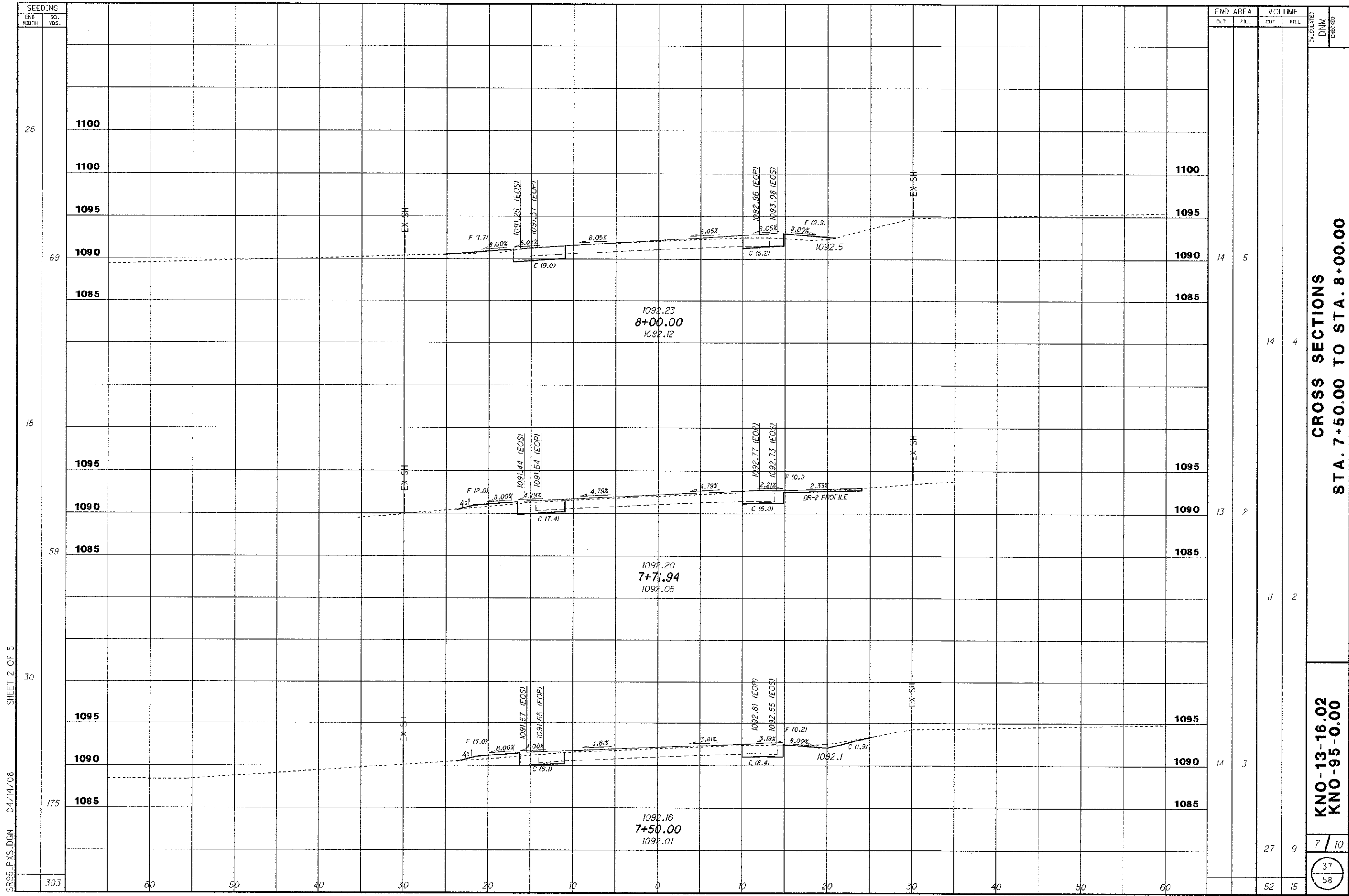
SEEDING
 END SO. WIDTH YDS.
 33
 158
 24
 161
 34
 0
 319



END AREA	VOLUME	
	CUT	FILL
15	7	
24	16	
11	10	
22	14	
13	5	
0	0	
46	30	

CALCULATED
 DNM
 CHECKED
CROSS SECTIONS
STA. 6+00.00 TO STA. 7+00.00
KNO-13-16.02
KNO-95-0.00
 6 / 10
 36
 58

SR95_PXS.DGN 04/14/08 SHEET 1 OF 5



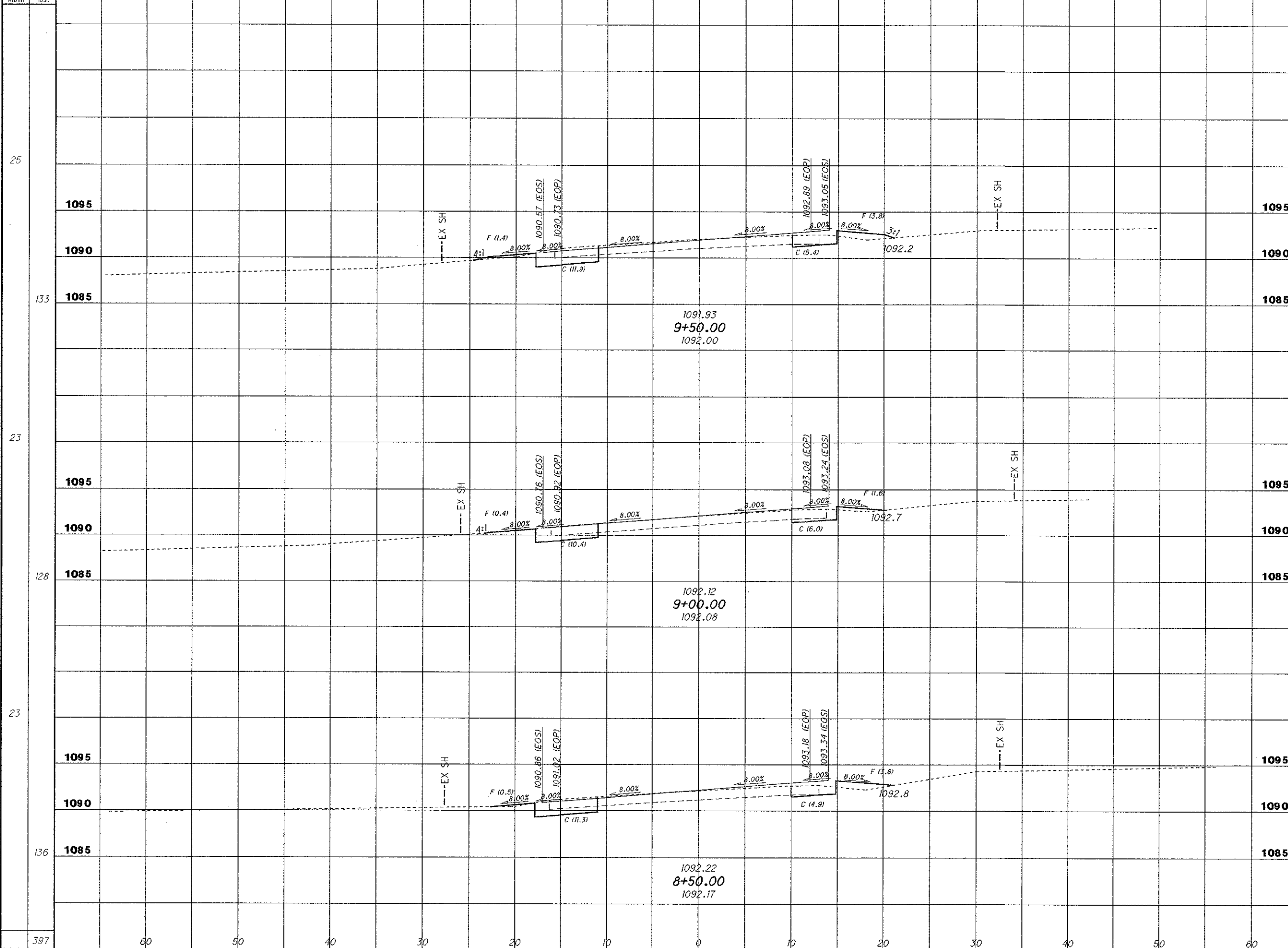
SR95_PXS.DGN 04/14/08 SHEET 2 OF 5

CROSS SECTIONS
STA. 7+50.00 TO STA. 8+00.00

KNO-13-16.02
KNO-95-0.00

7 / 10
 37 / 58

SEEDING
END WIDTH SO. YDS.



END AREA	VOLUME	
	CUT	FILL
17	5	
16	2	
16	4	
89	20	

CROSS SECTIONS
STA. 8+50.00 TO STA. 9+50.00

8 / 10

38 / 58

SR95_PXS.DGN 04/14/08 SHEET 3 OF 5

25

23

23

397

133

128

136

1095

1090

1085

1095

1090

1085

1095

1090

1085

1095

1090

1085

1095

1090

1085

1095

1090

1085

1091.93
9+50.00
1092.00

1092.12
9+00.00
1092.08

1092.22
8+50.00
1092.17

31

30

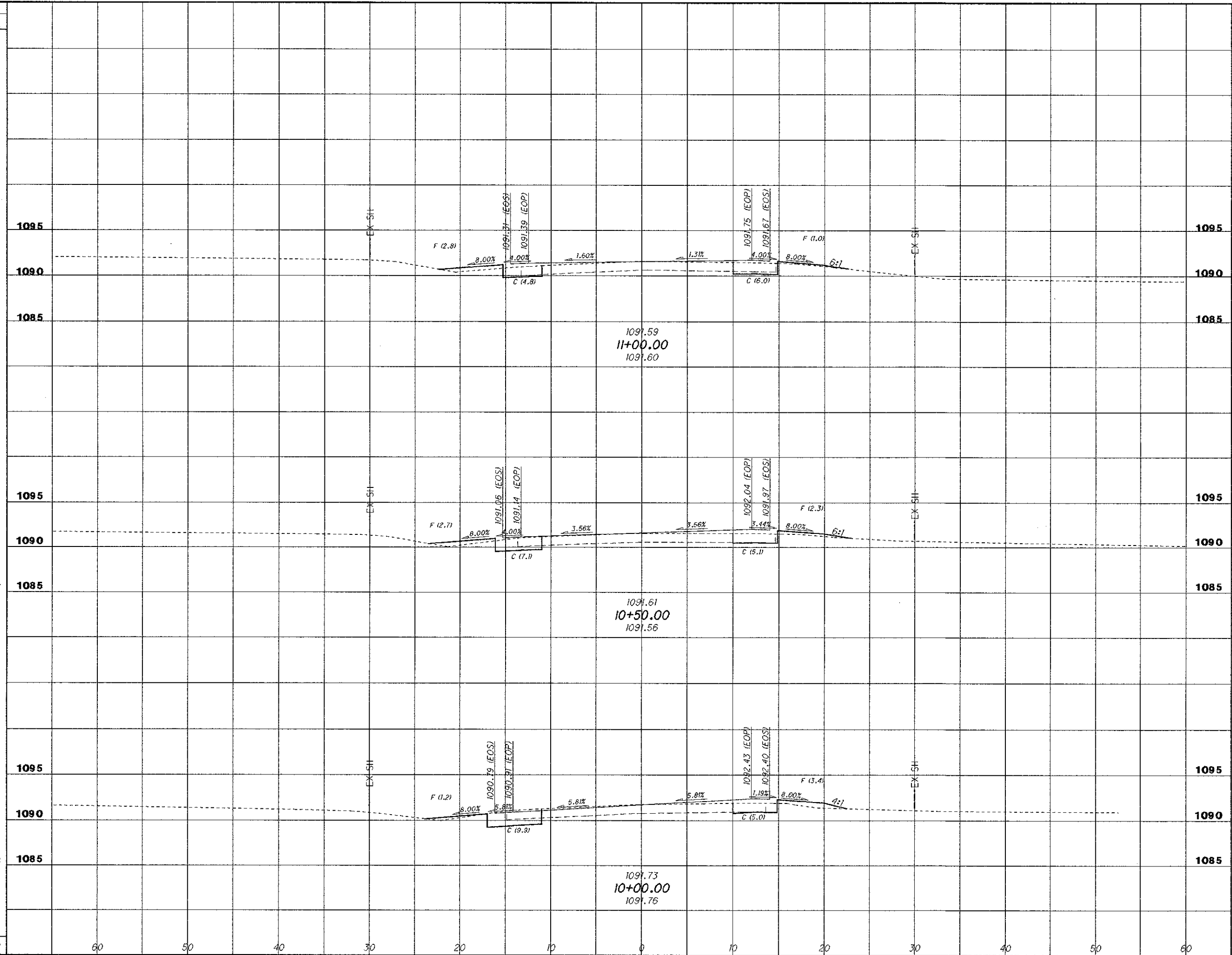
28

CALCULATED

DNM

CHECKED

SEEDING
 END WIDTH SO. YDS.
 33
 181
 32
 175
 31
 156
 512
 60 50 40 30 20 10 0 10 20 30 40 50 60
 SR95.PXS.DGN 04/14/08 SHEET 4 OF 5



END AREA	VOLUME	CALCULATED	
		CUT	FILL
11	4		
12	5		
15	5		
76	26	9	10

CROSS SECTIONS
 STA. 10+00.00 TO STA. 11+00.00
 KNO-13-16.02
 KNO-95-0.00
 39 / 58

SEEDING
END SO. YDS.
100TH

21

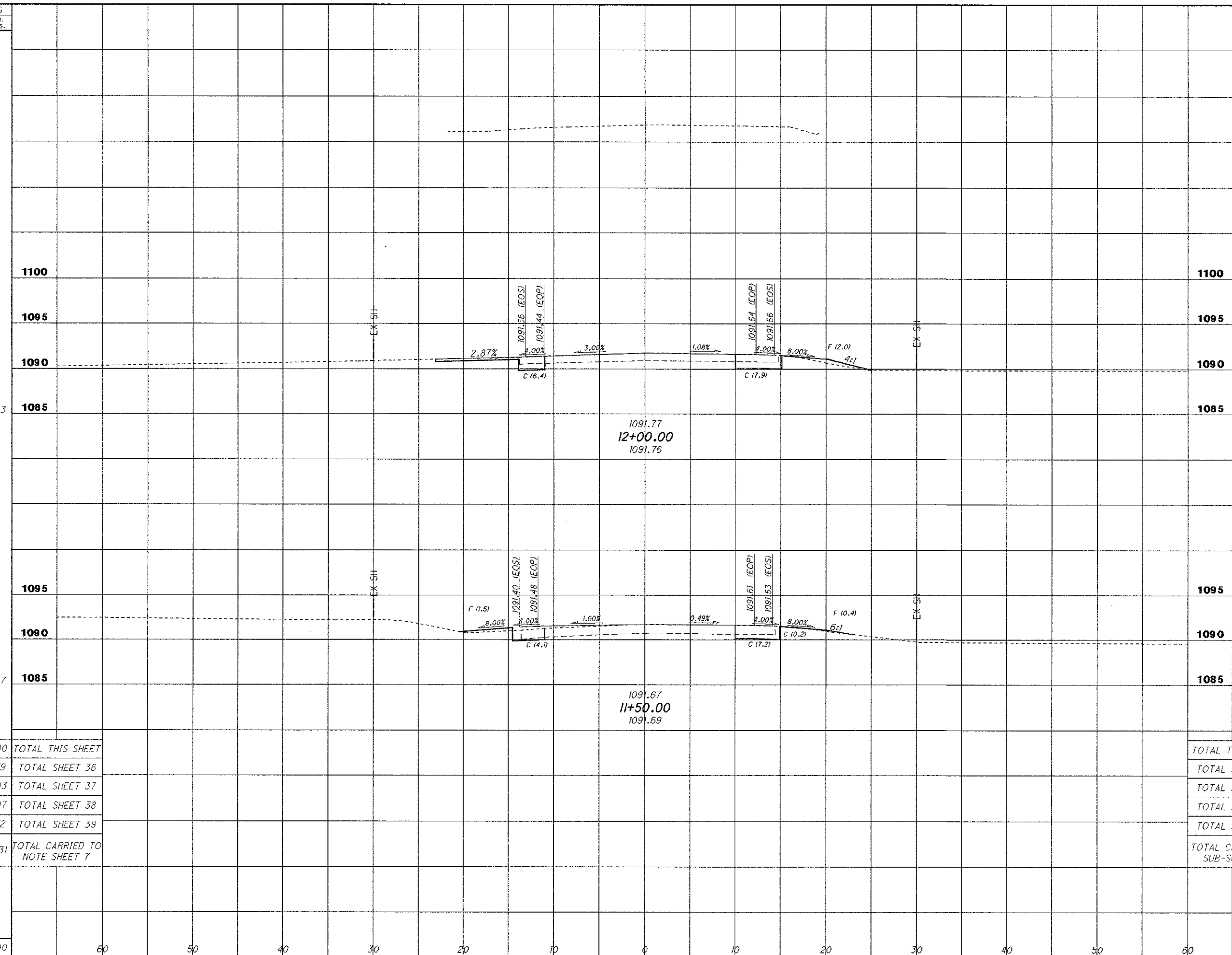
133

27

167

SHEET 5 OF 5

SR95_PXS.DGN 7/21/08



END	AREA		VOLUME	
	CUT	FILL	CUT	FILL
1100				
1095				
1090	14	2		
1085			24	6
1095				
1090	12	2		
1085			20	6
300	TOTAL THIS SHEET		44	12
319	TOTAL SHEET 36		46	30
303	TOTAL SHEET 37		52	15
397	TOTAL SHEET 38		89	20
512	TOTAL SHEET 39		76	26
1831	TOTAL CARRIED TO NOTE SHEET 7		307	103
	TOTAL CARRIED TO SUB-SUMMARY			

CALCULATED
DMM
CHECKED

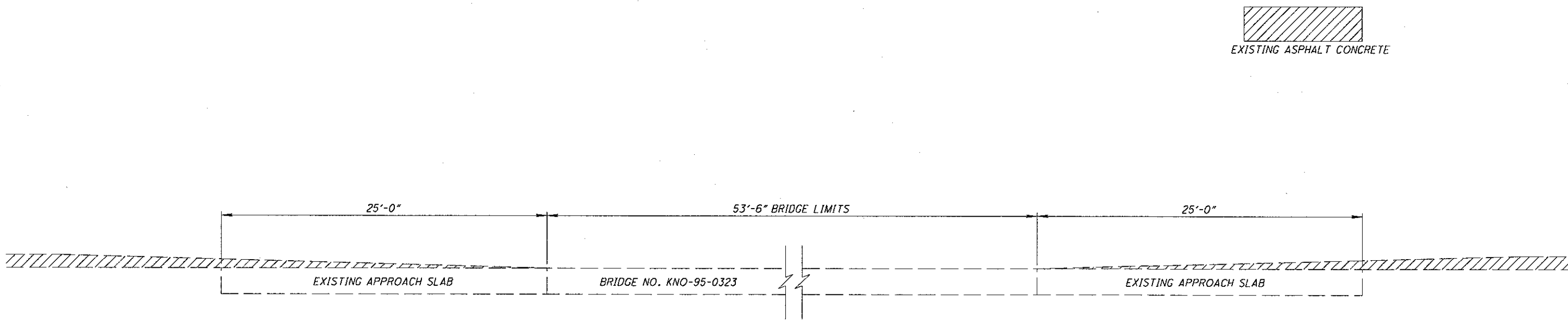
CROSS SECTIONS
STA. 11+50.00 TO STA. 12+50.00

KNO-13-16.02
KNO-95-0.00

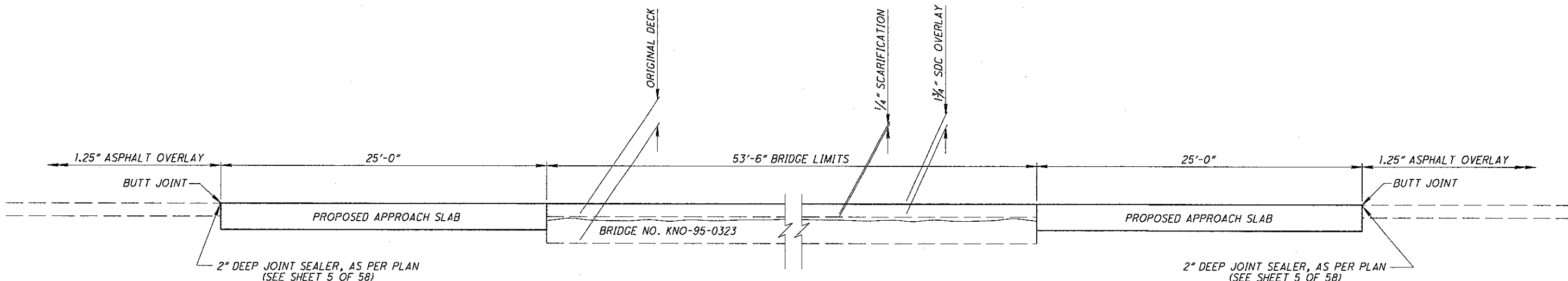
10 / 10

40
58

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BPS_001.DGN

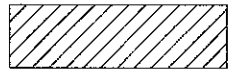


EXISTING PROFILE SECTION


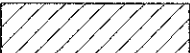


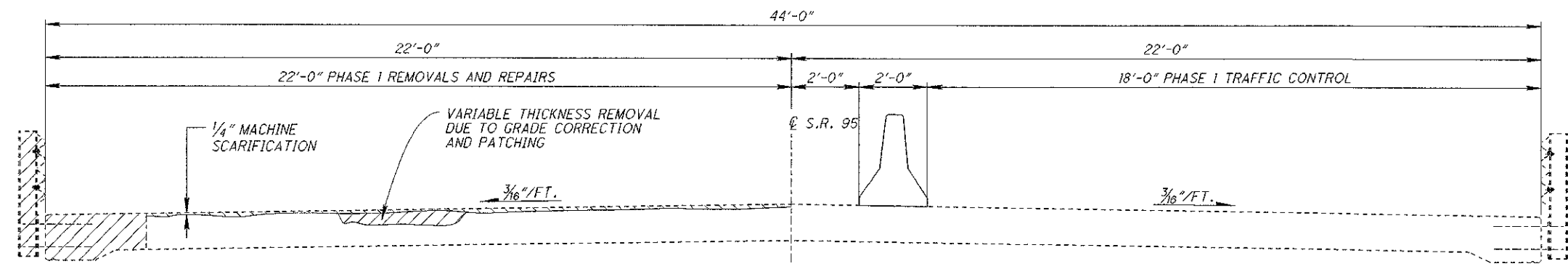
PROPOSED PROFILE SECTION

NOTE:
 PAVEMENT IS TO BE FINISHED 1/4"
 HIGHER THAN THE APPROACH SLAB
 ENDS AND BE FEATHERED AS PER
 STD. DWG. BP-3.1.

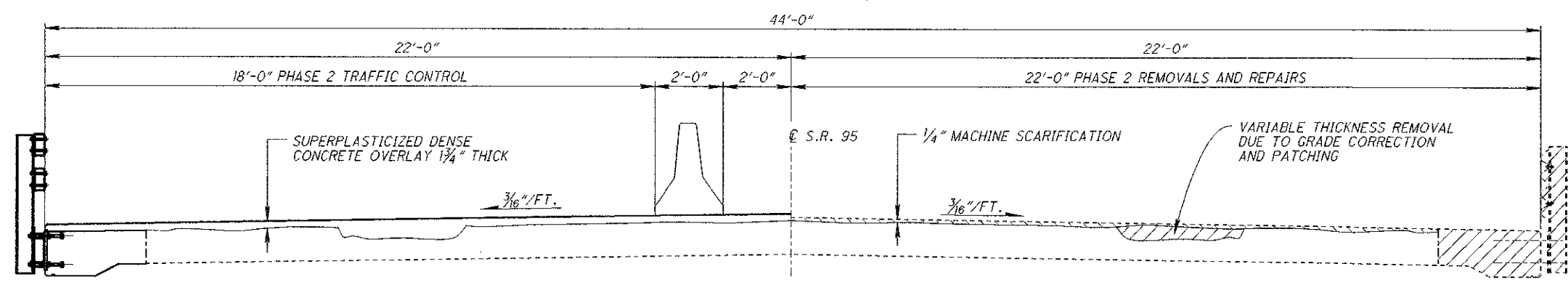

 EXISTING ASPHALT CONCRETE

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED DTF	DATE 11-01-07
DESIGNED DDH	STRUCTURE FILE NUMBER 4202465
CHECKED TAG	REVISION
BRIDGE PROFILE SECTION BRIDGE NO. KNO-95-0323 OVER BOONE CREEK	
KNO-13-16.02 KNO-95-0.00	
1 / 18	
41 58	

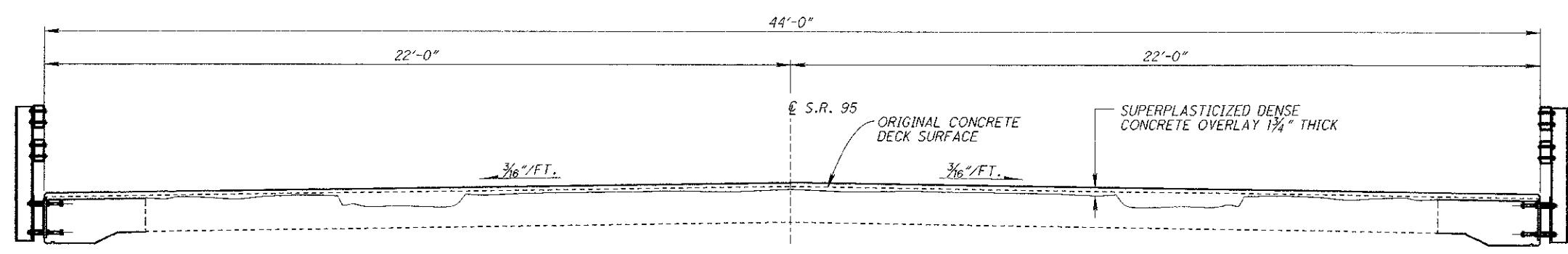
 1/4" MACHINE SCARIFICATION
 REMOVALS



PHASE ONE TRAFFIC CONTROL, REMOVALS AND REPAIRS



PHASE TWO TRAFFIC CONTROL, REMOVALS AND REPAIRS



OPEN TO TRAFFIC

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN SHEETS\GENERAL\SR95_MDS_004.DGN

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

DATE
11-01-07
REVIEWED
DTF
STRUCTURE FILE NUMBER
4202465

DRAWN
DDH
REVIS
CHECKED
TAG

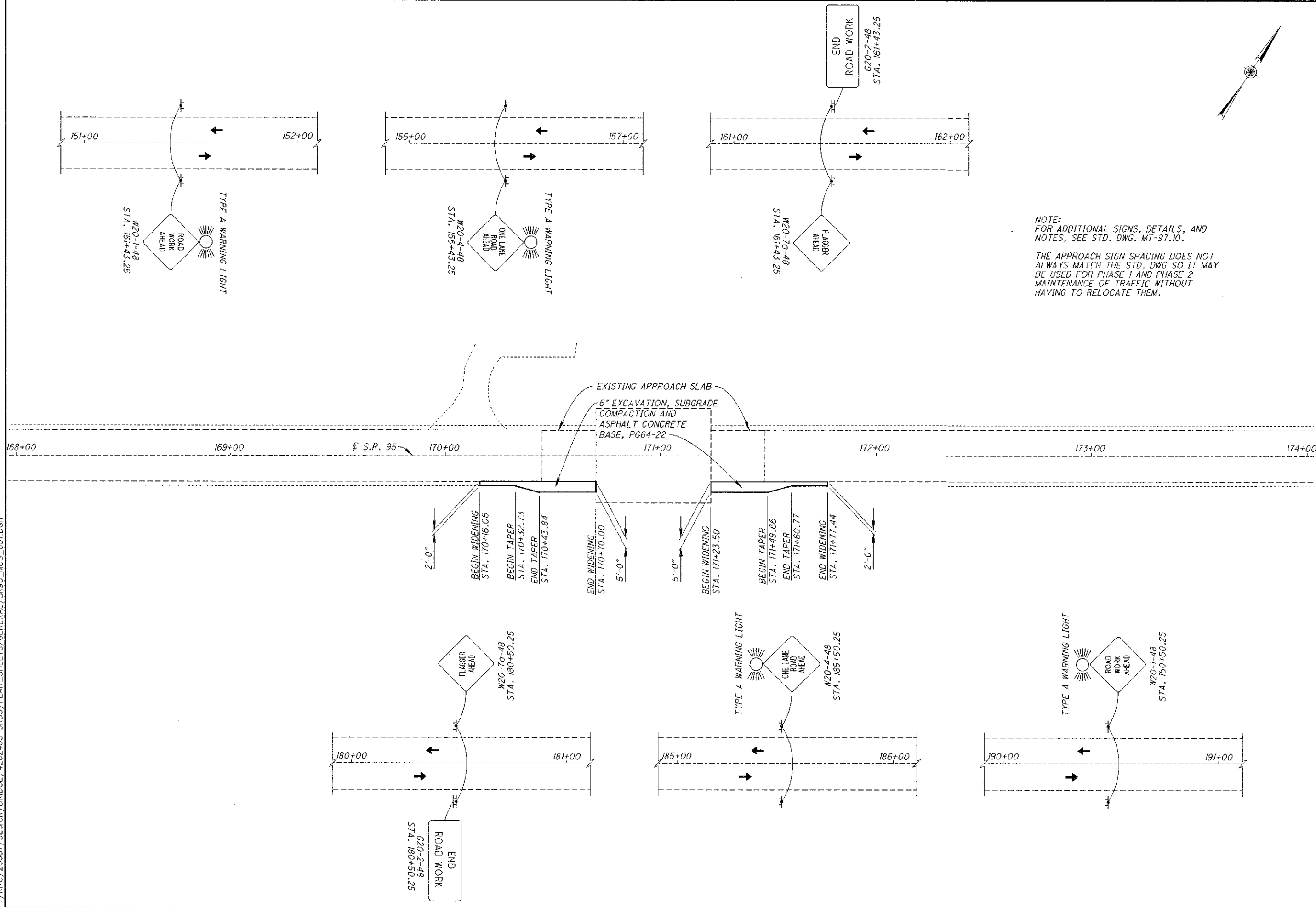
MAINTENANCE OF TRAFFIC PHASE DETAILS
BRIDGE NO. KNO-95-0323
OVER BOONE CREEK

KNO-13-16.02
KNO-95-0.00

2 / 18

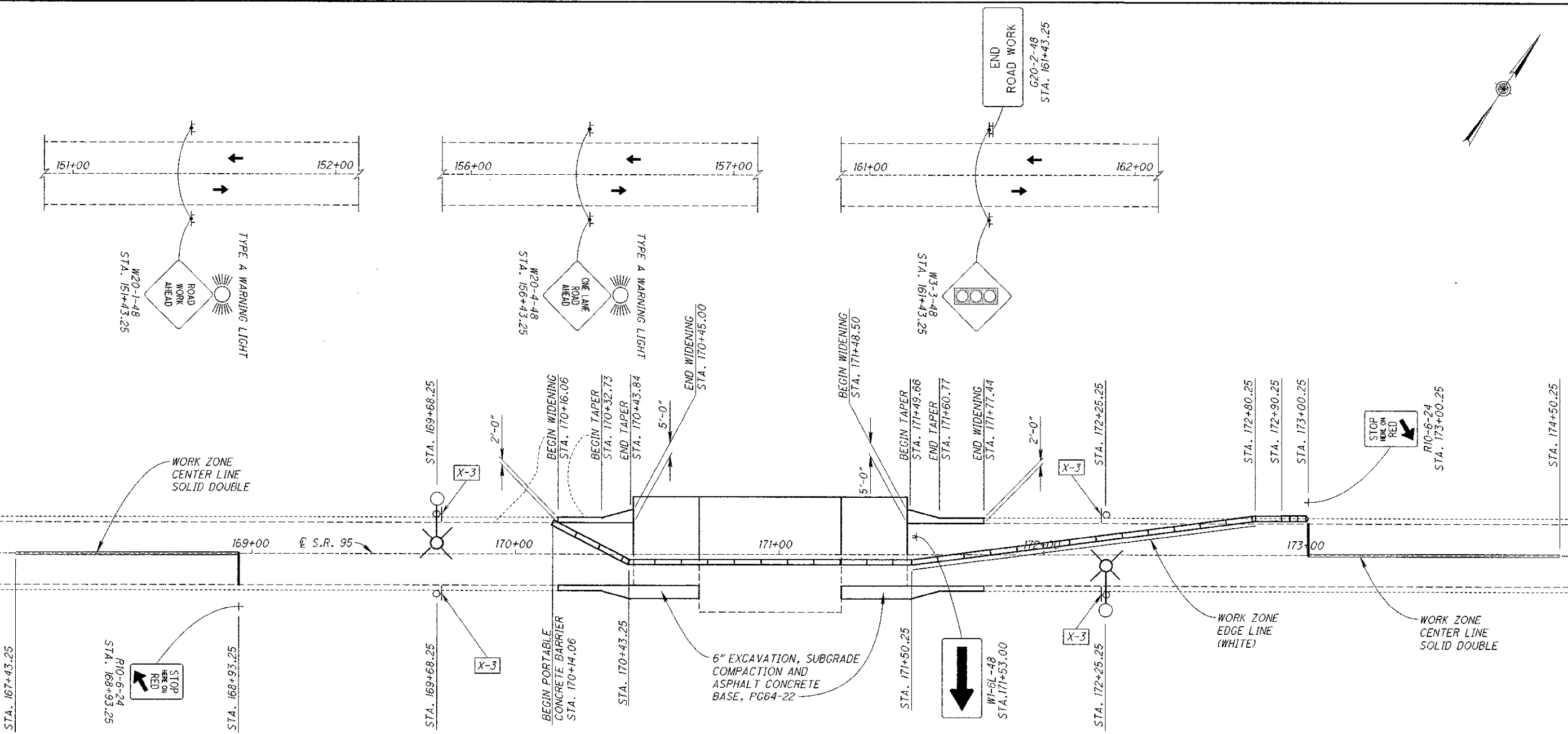
42
58

P:\KNO\256687\DESIGN\BRIDGE\4202465 SR95\PLAN_SHEETS\GENERAL\SR95_MDS_001.DGN



NOTE:
FOR ADDITIONAL SIGNS, DETAILS, AND NOTES, SEE STD. DWG. MT-97.10.
THE APPROACH SIGN SPACING DOES NOT ALWAYS MATCH THE STD. DWG SO IT MAY BE USED FOR PHASE 1 AND PHASE 2 MAINTENANCE OF TRAFFIC WITHOUT HAVING TO RELOCATE THEM.

DESIGNED DDH		DRAWN DDH		REVIEWED DIT		DATE 11-01-07		DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
CHECKED TAG		REVISED		STRUCTURE FILE NUMBER 4202465					
PAVEMENT WIDENING FOR MAINTAINING TRAFFIC					BRIDGE NO. KNO-95-0323 OVER BOONE CREEK				
KNO-13-16.02					KNO-95-0.00				
3/18									



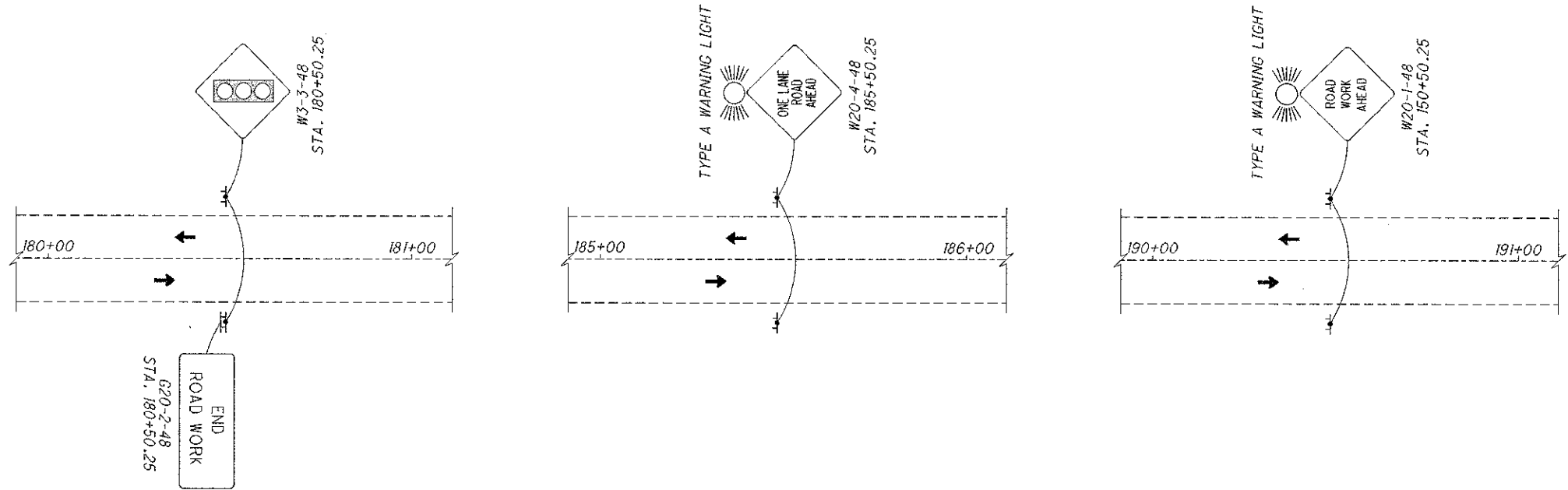
SIGNAL PHASING & TIMING

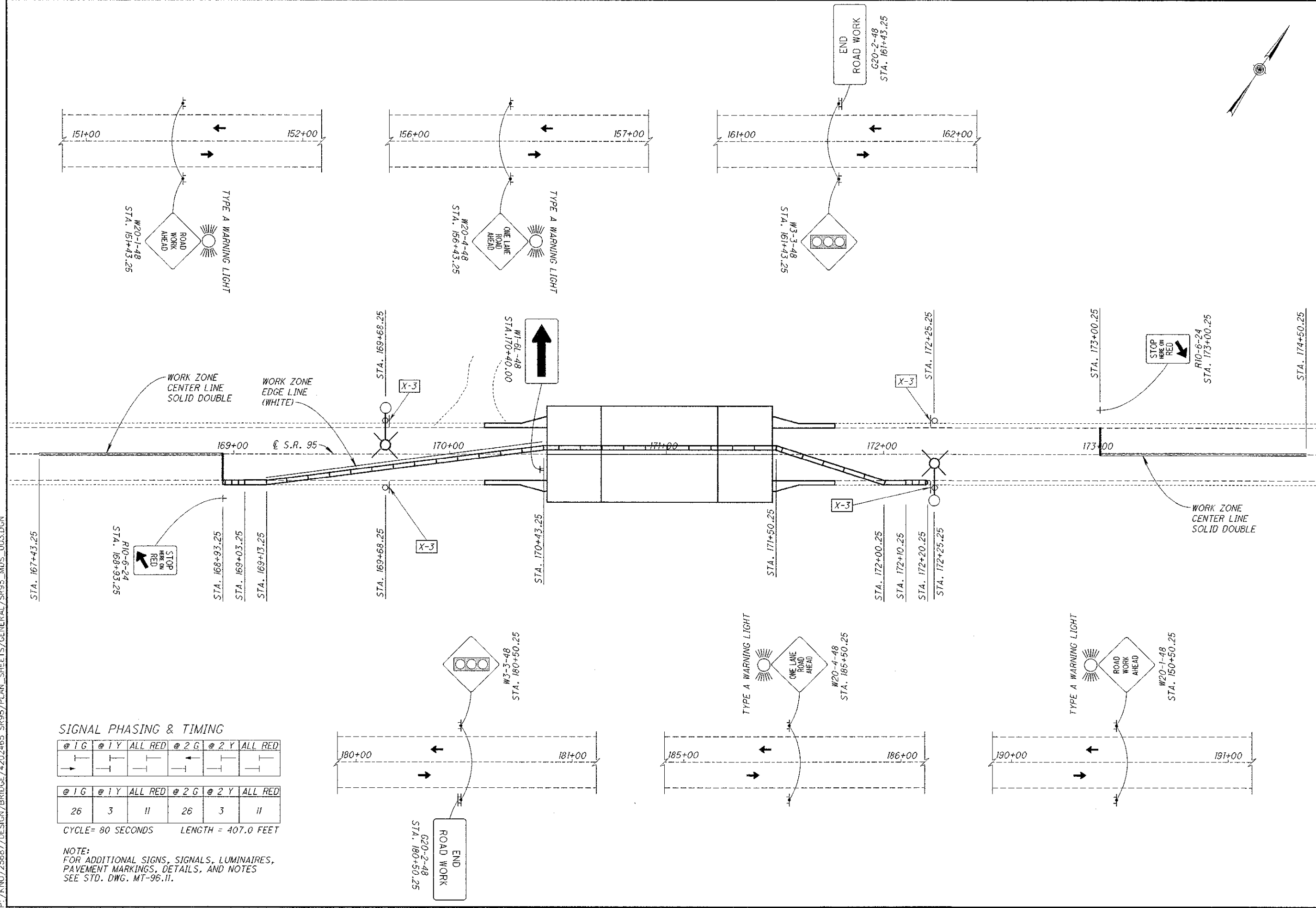
@ 1 G	@ 1 Y	ALL RED	@ 2 G	@ 2 Y	ALL RED
→	→	→	←	←	←

@ 1 G	@ 1 Y	ALL RED	@ 2 G	@ 2 Y	ALL RED
31	26	11	26	3	11

CYCLE = 80 SECONDS LENGTH = 407.0 FEET

NOTE:
FOR ADDITIONAL SIGNS, SIGNALS, LUMINAIRES,
PAVEMENT MARKINGS, DETAILS, AND NOTES
SEE STD. DWG. MT-96.11.





SIGNAL PHASING & TIMING

@ 1 G	@ 1 Y	ALL RED	@ 2 G	@ 2 Y	ALL RED
→	→	—	←	←	—
26	3	11	26	3	11

CYCLE = 80 SECONDS LENGTH = 407.0 FEET

NOTE:
FOR ADDITIONAL SIGNS, SIGNALS, LUMINAIRES,
PAVEMENT MARKINGS, DETAILS, AND NOTES
SEE STD. DWG. MT-96.11.

P:/KNO/25687/DESIGN/BRIDGE/4202465 SR 95/PLAN_SHEETS/GENERAL/SR95_MDS_005.DGN

614 BARRIER REFLECTORS

STATIONING	SPACING (FT)	TYPE A		TYPE B		TYPE A2	TYPE B2	OBJECT MARKERS, TWO-WAY
		W	Y	W	Y			
PHASE 1 (ON PCB)								
170+14.06 - 170+43.25	50			2				2
170+43.25 - 171+50.25	50						4	4
171+50.25 - 172+90.25	50			4				4
PHASE 1 (ON EXISTING GUARDRAIL)								
169+80.00 - 171+80.00	50					5		
PHASE 2 (ON PCB)								
169+03.25 - 170+43.25	50			4				4
170+43.25 - 171+50.25	50						4	4
171+50.25 - 172+10.25	50			2				2
PHASE 2 (ON NEW GUARDRAIL)								
170+27.19 - 172+13.82	50					5		
TOTALS		0	0	12	0	10	8	20

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY
 ITEM 614 BARRIER REFLECTOR, TYPE B (WHITE).....12 EACH
 ITEM 614 BARRIER REFLECTOR, TYPE A2.....10 EACH
 ITEM 614 BARRIER REFLECTOR, TYPE B2.....8 EACH

614 BARRIER REFLECTORS
 THESE REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO ALL REQUIREMENTS OF 626 EXCEPT THAT SPACING SHALL BE AS SHOWN ON THIS SHEET.

614 OBJECT MARKERS
 THE PHASE 2 QUANTITY OF 10 EACH SHALL BE NON-PREFORMED IF THE PROJECT ENGINEER CONSIDERS THE PHASE 1 OBJECT MARKERS ACCEPTABLE FOR PHASE 2 AFTER THE PORTABLE CONCRETE BARRIER HAS BEEN MOVED.

LEGEND
 W - WHITE
 Y - YELLOW
 PCB - PORTABLE CONCRETE BARRIER

626 BARRIER REFLECTORS

STATIONING	SIDE	SPACING (FT)	TYPE A		TYPE B		TYPE A2	TYPE B2	REMARKS
			W	Y	W	Y			
170+27.19 - 172+13.82	LT.	100	5						
169+79.69 - 171+88.82	RT.	100	3						
TOTALS			8						

PORTABLE CONCRETE BARRIER, 32"
PHASE 1
 STA. 170+14.06 TO STA. 170+66.75 = 60 FOOT
 STA. 171+26.75 TO STA. 172+90.25 = 170 FOOT
PHASE 2
 STA. 169+03.25 TO STA. 170+66.75 = 170 FOOT
 STA. 171+26.75 TO STA. 172+10.25 = 90 FOOT
 490 FOOT

PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED
PHASE 1
 STA. 170+66.75 TO STA. 171+26.75 = 60 FOOT
PHASE 2
 STA. 170+66.75 TO STA. 171+26.75 = 60 FOOT
 120 FOOT

WORK ZONE STOP LINE, CLASS I
 STA. 168+93.25 = 12 FOOT
 STA. 173+00.25 = 12 FOOT
 24 FOOT

WORK ZONE CENTER LINE, CLASS III
 STA. 167+43.25 TO STA. 168+93.25 = 150 FOOT
 STA. 173+00.25 TO STA. 174+50.25 = 150 FOOT
 300 FOOT (0.057 MILE)

WORK ZONE EDGE LINE, CLASS III
PHASE 1
 STA. 171+50.25 TO STA. 172+80.2551.51 = 130.03 FOOT
PHASE 2
 STA. 169+13.2541.99 TO STA. 170+43.25 = 130.03 FOOT
 206.60 FOOT (0.039 MILE)

DESIGN AGENCY
 OHIO DEPARTMENT OF
 TRANSPORTATION, DISTRICT 5

REVIEWED DATE 6
 DDH DTF
 STRUCTURE FILE NUMBER 4202465

MAINTAINING TRAFFIC - QUANTITIES
 BRIDGE NO. KNO-95-0323
 OVER BOONE CREEK

KNO-13-16.02
KNO-95-0.00

6/18

46
 58

GENERAL

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS). THE MARKERS SHALL BE YELLOW OR WHITE, AS DESCRIBED IN THE PLAN.

MATERIAL

ALL MARKERS SHALL BE OF SUFFICIENT STRENGTH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR DAMAGED BY IMPACTS FROM VEHICLES TIRES, INCLUDING THOSE OF HIGH PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN ONE OR TWO DIRECTIONS ON EACH MARKER AS REQUIRED BY THE USAGE AND SHALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATE FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCHES FOR TYPE A OR 3.0 SQUARE INCHES FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING:

SPECIFIC INTENSITY

INCIDENCE ANGLE (DEGREES)	TYPE A	
	WHITE	YELLOW
0	1.0	0.6
20	0.4	0.24
45	-	-

INCIDENCE ANGLE (DEGREES)	TYPE B	
	WHITE	YELLOW
0	3.0	1.8
20	1.2	0.72
45	0.3	0.2

ANGLE OF INCIDENCE FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE RETURNED RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT-CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A MARKERS ARE INTENDED TO PROVIDE HIGH VISIBILITY BOTH DAY AND NIGHT. THEIR DAY TIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE AND COLOR AS FOLLOWS:

1) THE MARKERS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.

2) WHEN VIEWED FROM ABOVE, THE MARKERS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.

3) WHEN VIEWED FROM THE FRONT, PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE MARKER SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 1.5 SQUARE INCHES.

TYPE B MARKERS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETROREFLECTING AUTOMOTIVE HEADLIGHT BACK TO DRIVER.

INSTALLATION

WORK ZONE RAISED PAVEMENT MARKERS SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD, A BITUMINOUS ADHESIVE OR OTHER CONSTRUCTION GRADE ADHESIVES (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE TO ANCHOR THE MARKER UNDER THE ABOVE CONDITIONS. WHEN IT IS NECESSARY TO ATTACH MARKERS TO NEW CONCRETE PAVEMENT WITH CURING COMPOUND REMAINING, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD. MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE, AT HIS EXPENSE, ANY MARKERS WHICH FAIL (BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISIBILITY IS SIGNIFICANTLY DIMINISHED OR OF AN UNACCEPTABLE COLOR, DETACHED OR BROKEN REFLECTOR, HOUSING DETACHED FROM ADHESIVE).

MARKERS ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS, THUS THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 UNTIL APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK AND/OR THE USE OF THESE DEVICES TO AVOID THIS PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE WZRPMS DURING THIS PERIOD AND THEY ARE SUBSEQUENTLY REMOVED OR DESTROYED BY SNOW AND ICE CONTROL ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY, AT HIS EXPENSE, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM EFFECTIVE DURING DAY AND NIGHT AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE MARKERS SHALL BE PLACED ACCURATELY TO DEPICT STRAIGHT OR UNIFORMLY CURVING LINES. WHEN USED TO SUPPLEMENT WORK ZONE PAVEMENT MARKINGS, THEY SHALL BE PLACED ON OR IMMEDIATELY ADJACENT TO THE PAVEMENT MARKING. LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY OR SIX INCHES LATERALLY TO AVOID PLACEMENT ON JOINTS, OR ON CRACKED OR DETERIORATED PAVEMENT. MARKERS SHALL NOT BE PLACED DIRECTLY ON PAVEMENT MARKINGS IF THIS DETRACTS FROM THEIR ABILITY TO REMAIN ATTACHED TO THE PAVEMENT.

APPLICATION

1) WHEN REQUIRED TO SUPPLEMENT PAVEMENT MARKING, WORK ZONE RAISED PAVEMENT MARKERS SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A OR B	20'C/C
LANE LINE	A OR B	40'C/C*
CENTER LINE (SINGLE/BROKEN)	A OR B	40'C/C*
CENTER LINE (DOUBLE/SOLID)	A OR B	2 UNITS SIDE BY SIDE 4 INCHES APART 20'C/C
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A OR B	10'C/C

* CENTERED IN GAP

2) WHEN USED TO SIMULATE (REPLACE) PAVEMENT MARKING, WORK ZONE RAISED PAVEMENT MARKERS SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A	5' C/C
LANE LINE	A	4 @ 3.33'C/C 30' GAP (40' CYCLE)
CENTER LINE (DOUBLE/SOLID)	A	2 UNITS SIDE BY SIDE 5' C/C
CENTER LINE (SINGLE/BROKEN)	A	4 @ 3.33'C/C 30' GAP (40' CYCLE)
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A	5' C/C
EDGE LINE (TWO COLOR) (WHITE/YELLOW)	A	BACK TO BACK 5' C/C

YELLOW MARKERS USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL INCLUDE REFLECTIONS FOR BOTH DIRECTIONS. ALL OTHER YELLOW AND WHITE MARKERS SHALL PROVIDE RETROREFLECTIVITY FOR ONE DIRECTION ONLY.

REMOVAL

REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT. PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN OR ROUGHENED SIGNIFICANTLY.

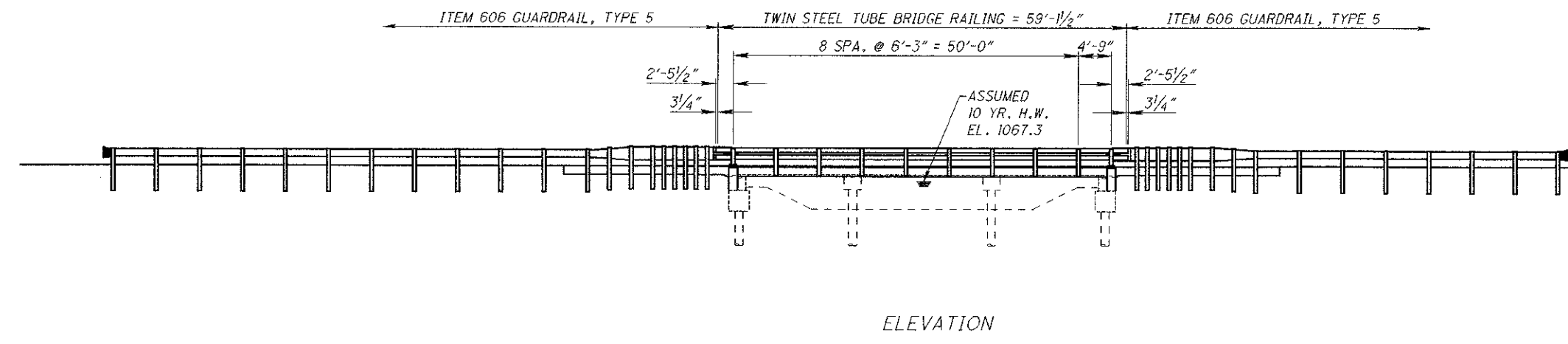
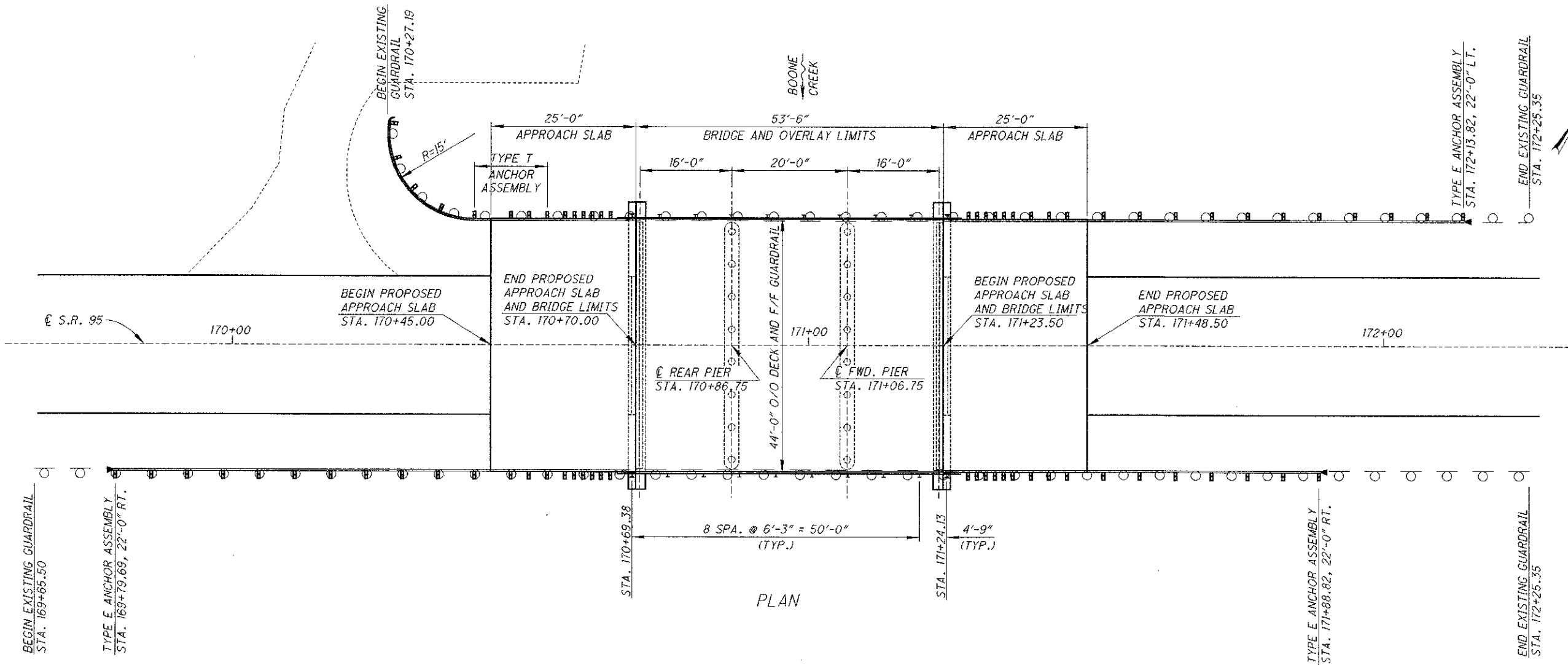
PAVEMENT

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH MARKER AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK. IT SHALL ALSO INCLUDE REPLACEMENT AT NO ADDITIONAL COST OF ALL WORK ZONE RAISED PAVEMENT MARKERS WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON, EXCEPT DUE TO FAILURE OF THE PAVEMENT TO WHICH THEY ARE ATTACHED.

ITEM 614				QUANTITY				REMARKS	
WORK ZONE RAISED PAVEMENT MARKER				EACH					
STATIONING			SPACING	TYPE A			TYPE B OR A		
FROM	TO	SIDE	(FT)	W	Y	Y/Y	W	Y	Y/Y
PHASE 1									
170+43.25	171+50.25	LT.	5	22	22				
168+93.25	170+43.25	RT.	5	31					
170+43.25	173+00.25	RT.	5	52	52				
PHASE 2									
168+93.25	171+50.25	LT.	5	52	52				
171+50.25	173+00.25	LT.	5	31					
170+43.25	171+50.25	RT.	5	22	22				
TOTAL ITEM 614 WORK ZONE RAISED PAVEMENT MARKER				210	148				
				358					

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_MDS_006.DGN

P:\KNO\25687\DESIGN\BRIDGE\4202465_SR95\PLAN_SHEETS\GENERAL\SR95_BPE_001.DGN



DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
REVIEWED	DATE	STRUCTURE FILE NUMBER	4202465
DDH	11-01-07	REVISION	
DDH		TAG	
PLAN AND ELEVATION			
BRIDGE NO. KNO-95-0323 OVER BOONE CREEK			
KNO-13-16.02			
KNO-95-0.00			
8 / 18		48 / 58	

REFERENCE

DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED IN THE DISTRICT 5 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, JACKSONTOWN, OHIO.

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 A616 OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

ABUTMENT CONCRETE

ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE DECK EDGES HAVE BEEN REPLACED.

REINFORCING STEEL

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL INCLUDED IN 509.

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY

SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MECHANICAL SPLICE CONNECTORS

THIS PLAN DETAILS A MECHANICAL SPLICE CONNECTOR THAT BOTH RE-BARS SCREW INTO. THE RE-BARS HAVE BEEN CALCULATED WITH A 2" CLEARANCE AT THE OUTER EDGE. IF A DIFFERENT TYPE OF MECHANICAL SPLICE CONNECTOR IS USED, THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN NO LESS THAN A 2" CLEARANCE. ANY WORK PERFORMED SHALL BE AT NO ADDITIONAL COST TO THE STATE. ALL MECHANICAL SPLICE CONNECTORS INCLUDING WORK, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN ITEM 509 EPOXY COATED REINFORCING STEEL FOR PAYMENT.

REMOVALS OVER WATER

REASONABLE CARE SHALL BE USED WHEN REMOVING MATERIAL OVER WATER. ANY MATERIAL DROPPED SHALL BE IMMEDIATELY REMOVED FROM THE WATER AND DISPOSED OF AWAY FROM THE SITE EXCEPT FOR MASONARY MATERIAL WHICH MAY BE USED FOR BANK PROTECTION AS APPROVED BY THE ENGINEER.

GENERAL PROVISIONS

THE CONTRACTOR'S ATTENTION IS CALLED TO ALL OF SECTION 100 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION.

UTILITIES

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

CONSOLIDATED ELECTRIC COOP INC. EMBARO
680 SUNBURY ROAD 441 WEST BROAD STREET
P.O. BOX 630 PATASKALA, OHIO 43062
DELEWARE, OHIO 43015 ATTN.: DENNIS FIGLEY
ATTN.: TIM APPLIGATE PH. 740-927-3000
PH. 740-363-2641

FILL UNDER APPROACH SLABS

ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE NEW APPROACH SLABS AS DETAILED ON THE APPROACH SLAB DETAIL SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN

CONCRETE FOR APPROACH SLABS SHALL BE CLASS S, CMS499. THE HMW RESIN SEALING (SEE PROPOSAL NOTE) ALONG THE LONGITUDINAL CONSTRUCTION JOINT AND MECHANICAL SPLICE CONNECTORS INCLUDING LABOR, TOOLS, MATERIALS AND INCIDENTALS SHALL BE INCLUDED IN ITEM 526, REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN FOR PAYMENT.

KOKOSING STATE SCENIC RIVER NOTES

PORTIONS OF THE PROJECT AREA ARE WITHIN 1000 FEET OF THE KOKOSING STATE SCENIC RIVER. THEREFORE, IN ACCORDANCE WITH THE MEMORANDUM OF AGREEMENT (MOA) BETWEEN ODOT AND ODNR (AGREEMENT NO. 11323) THE FOLLOWING CONDITIONS APPLY TO THE PROPOSED PROJECT:
NO INSTREAM WORK IS PERMITTED AT THE KNO-95-3.23 BRIDGE OVER BOONE CREEK. ANY MATERIALS WHICH FALL INTO THE STREAM DURING THE DECK REPAIR WORK SHALL BE PROMPTLY REMOVED.
IF ANY EARTHWORK IS PERFORMED WITHIN 1000 FEET OF THE KOKOSING RIVER, A SEDIMENT AND EROSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BEFORE EARTHWORK COMMENCES. ALL CONTROLS SHALL BE PROPERLY MAINTAINED UNTIL FINAL SITE STABILIZATION HAS BEEN ACHIEVED. ALL DENUDED AREAS (LOCATION WHERE VEGETATION IS REMOVED) SHALL BE SEEDED AND MULCHED IMMEDIATELY UPON COMPLETION OF EARTHWORK OR WITHIN SEVEN DAYS. PROPERLY INSTALLED (FRAMED AND ENTRENCHED) SEDIMENT FENCE SHALL BE UTILIZED AROUND ANY STORM SEWER INLETS. APPROPRIATELY DESIGNED ROCK CHECK DAMS AND OTHER EROSION CONTROLS SHALL BE UTILIZED IN DITCHES AND CULVERTS. PARTICULAR ATTENTION SHALL BE GIVEN TO WATERCOURSES THAT COULD CONVEY SEDIMENT LADEN WATER DIRECTLY TO A DESIGNATED SCENIC RIVER. ANY DENUDED DITCHES SHALL BE SEEDED AND PROTECTED IMMEDIATELY WITH EROSION CONTROL MATTING OR SOD UPON COMPLETION OF EARTHWORK. STRAW BALES SHALL NOT BE UTILIZED AS A FORM OF SEDIMENT AND EROSION CONTROL. ALL SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED UPON STABILIZATION OF THE PROJECT AREA.
IF ROADSIDE DITCH MAINTENANCE IS NECESSARY WITHIN 1000 FEET OF A DESIGNATED STATE SCENIC RIVER, THEN THE DITCH SHALL BE MAINTAINED ONLY FOR THE ORIGINAL INTENDED FUNCTION AND RESTORED TO THE ORIGINAL DESIGN CONFIGURATION. ANY DENUDED DITCHES SHALL BE SEEDED AND PROTECTED IMMEDIATELY WITH EROSION CONTROL MATTING OR SOD UPON COMPLETION OF EARTHWORK. STRAW BALES SHALL NOT BE UTILIZED AS A FORM OF SEDIMENT AND EROSION CONTROL. ALL SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED UPON STABILIZATION OF THE PROJECT AREA.
NO TREE CUTTING OR VEGETATION REMOVAL SHALL OCCUR WITHIN 1000 FEET OF THE KOKOSING RIVER UNLESS WRITTEN APPROVAL IS OBTAINED FROM HECTOR SANTIAGO, CENTRAL OHIO SCENIC RIVER COORDINATOR, TELEPHONE NUMBER (614) 265-6814. IF TREE CUTTING OR VEGETATION REMOVAL IS REQUIRED, THE PROJECT ENGINEER SHALL IMMEDIATELY NOTIFY AMY TOOHEY DISTRICT ENVIRONMENTAL COORDINATOR AT (740) 323-5191 OR CHRIS YODER AT (740) 323-5193.
NO TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINTS, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO A SCENIC RIVER OR ANY TRIBUTARY WATERCOURSES. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALTIC OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING RESURFACING OR OTHER SIMILAR ACTIVITIES SHALL BE REMOVED IMMEDIATELY FROM WITHIN 1000 FEET OF A SCENIC RIVER AND DISPOSED OF AT AN APPROPRIATE FACILITY ABOVE THE FEMA 100 YEAR FLOOD ELEVATION AND NOT WITHIN 1000 FEET OF THE SCENIC RIVER.

ENVIRONMENTAL COORDINATOR NOTIFICATION

THE CONTRACTOR SHALL CONTACT THE DISTRICT ENVIRONMENTAL COORDINATOR, AMY TOOHEY AT 740-323-5191 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION SO THE UNDERSIDE OF THE BRIDGE CAN BE INSPECTED FOR THE PRESENCE OF BATS.

DOWEL HOLES

PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. DRILL DOWEL HOLES WHERE SHOWN IN PLANS EXCEPT AS NOTED ABOVE. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NON SHRINK, NON METALLIC EPOXY GROUT, 705.20.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CONCRETE REMOVAL ON DECK EDGES SHALL BE DONE BY THE USE OF 63 - 85 LB. CLASS JACKHAMMERS ONLY. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 85-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BGN_001.DGN

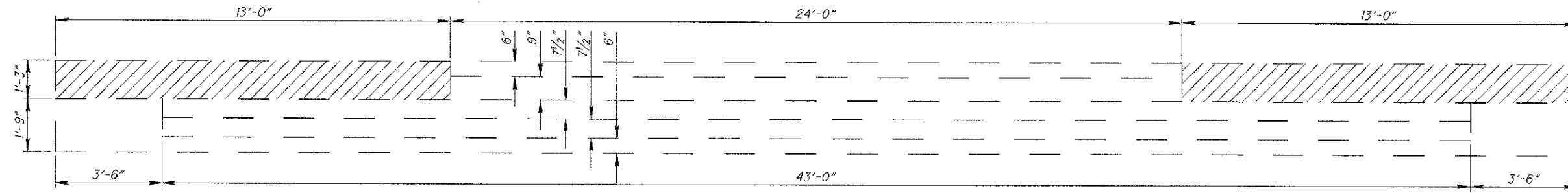
DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DATE: 11-01-07
REVISION: DTF
STRUCTURE FILE NUMBER: 4202465
DRAWN: DDH
CHECKED: DDH
TAG: DDH
BRIDGE NOTES: BRIDGE NO. KNO-95-0323 OVER BOONE CREEK
KNO-13-16-02
KNO-95-0.00
9/18
49
58

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BCS_001.DGN

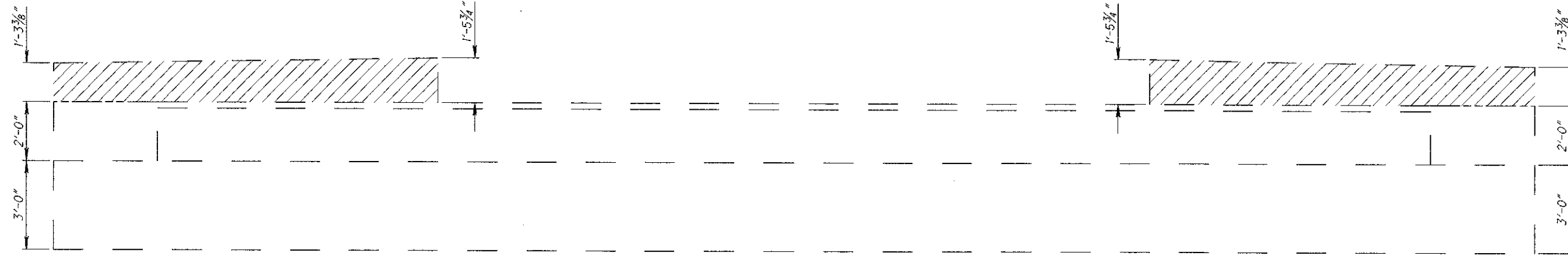
SHEET NUMBER										PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
												202	11300	4	CU. YD.	PORTIONS OF STRUCTURE REMOVED, ABUTMENT	
												202	11301	15	CU. YD.	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	9/18
												202	22900	134	SO. YD.	APPROACH SLAB REMOVED	
												202	38500	125	FT.	BRIDGE RAILING REMOVED	
												503	21100	1	CU. YD.	UNCLASSIFIED EXCAVATION	
												509	10000	3224	POUND	EPOXY COATED REINFORCING STEEL	
												510	10000	84	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
												511	32200	15	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE	
												511	45700	1	CU. YD.	CLASS C CONCRETE, ABUTMENT	
												512	10050	83	SO. YD.	SEALING OF CONCRETE SURFACES (NON-EPOXY)	9/18 15/18
												516	31011	68	FT.	2" DEEP JOINT SEALER, AS PER PLAN	
												SPEC.	516E31300	88	FT.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
												517	70000	118.25	FT.	RAILING (TWIN STEEL TUBE)	9/18
												526	25001	245	SO. YD.	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	
												847	10200	262	SO. YD.	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (1 3/4" THICK)	
												847	20200	13	CU. YD.	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS)	
												847	30000	LUMP		TEST SLAB	

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	DATE 11-01-07	REVIEWED DTF	STRUCTURE FILE NUMBER 4202465
DESIGNED DDH	CHECKED DDH	DRAWN DDH	REVISIONS TAG
BRIDGE SUMMARY			
BRIDGE NO. KNO-95-0323			
OVER BOONE CREEK			
KNO-13-16.02 KNO-95-0.00			
10 / 18		50 58	

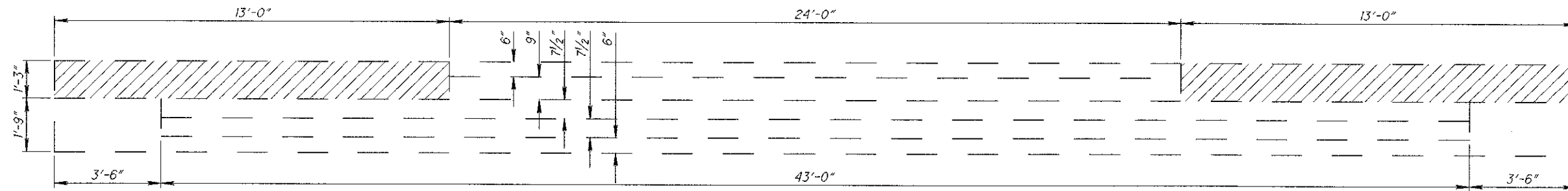
P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BEA_001.DGN



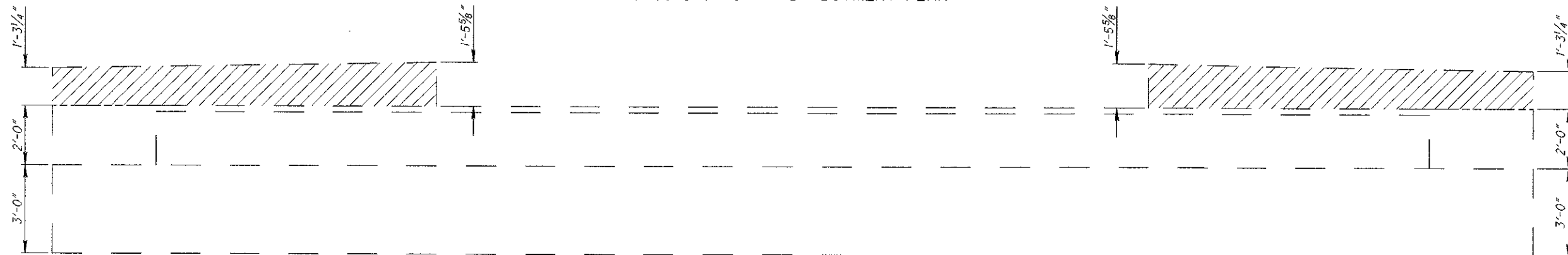
EXISTING REAR ABUTMENT PLAN



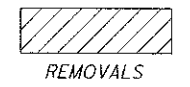
EXISTING REAR ABUTMENT ELEVATION



EXISTING FORWARD ABUTMENT PLAN

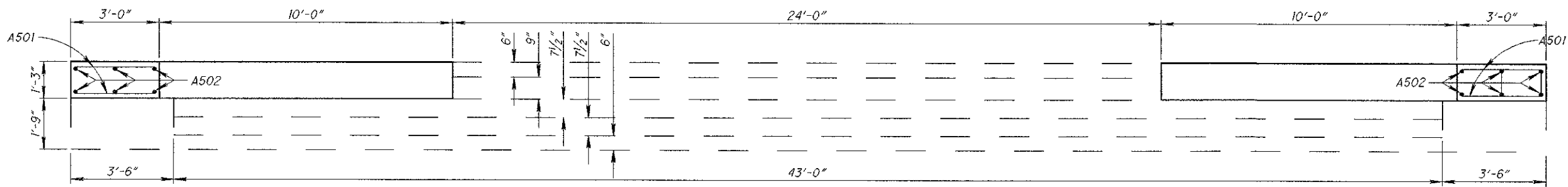


EXISTING FORWARD ABUTMENT ELEVATION

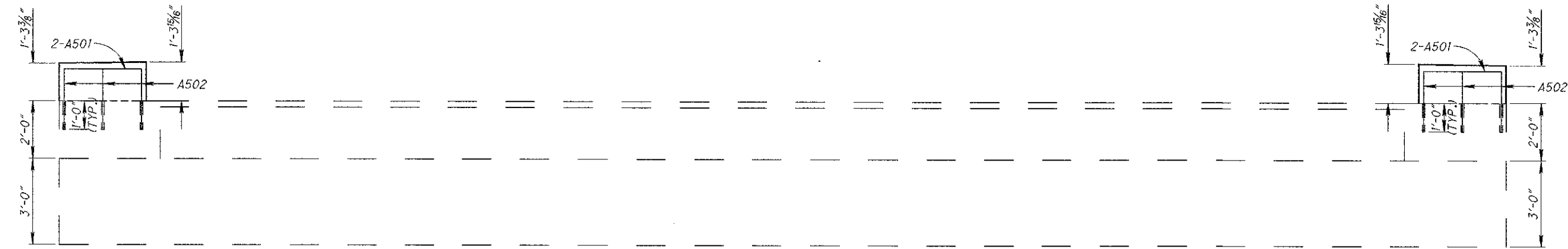


REMOVALS

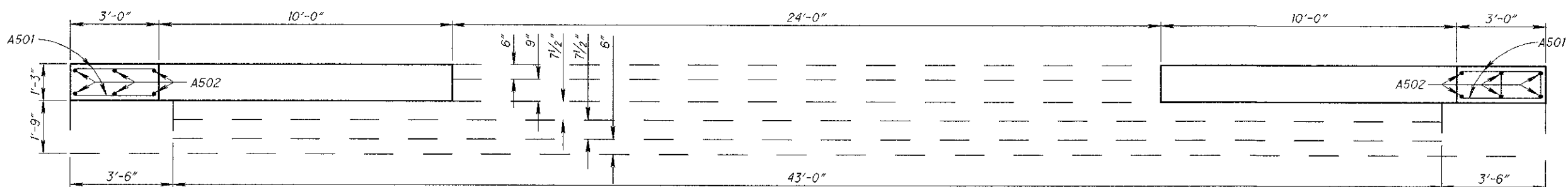
DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DATE	11-01-07	STRUCTURE FILE NUMBER	4202465
REVIEWED	DTF	DRAWN	DDH
DESIGNED	DDH	CHECKED	TAG
ABUTMENT REMOVAL DETAILS			
BRIDGE NO. KNO-95-0323			
OVER BOONE CREEK			
KNO-13-16.02		KNO-95-0.00	
11 / 18		51 / 58	



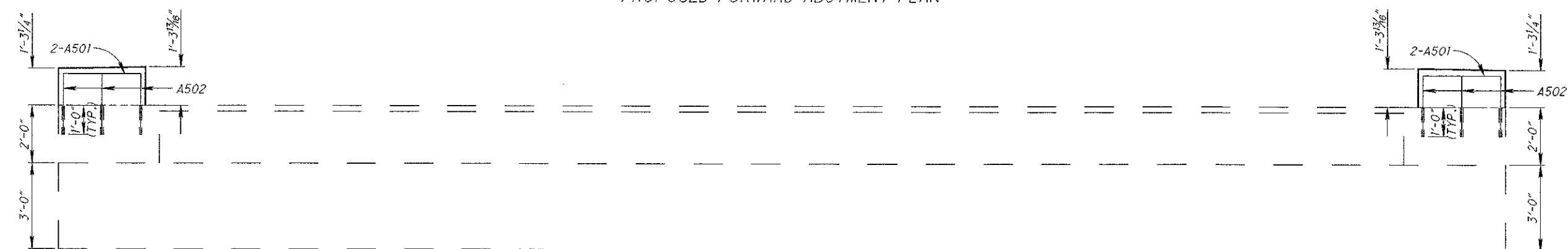
PROPOSED REAR ABUTMENT PLAN



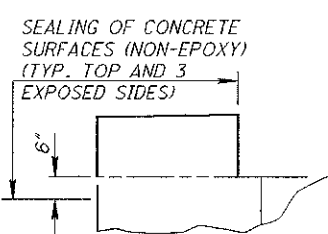
PROPOSED REAR ABUTMENT ELEVATION



PROPOSED FORWARD ABUTMENT PLAN

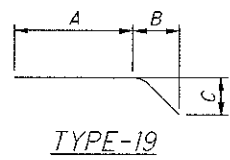


PROPOSED FORWARD ABUTMENT ELEVATION

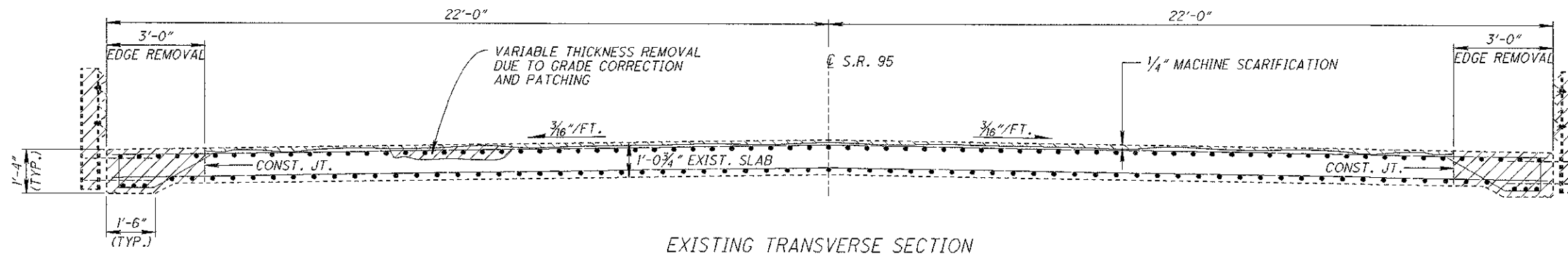


NOTE:
FOR LOCATION AND DETAILS
OF A801 BARS SEE SHEET 18/18.

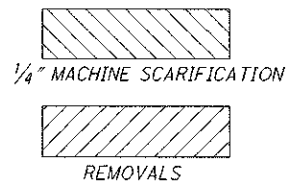
MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS		
					A	B	C
ABUTMENT							
A501	8	2'-8"	22	STR.	2'-8"		
A502	24	2'-1"	52	STR.	2'-1"		
A801	60	3'-11"	628	19	1'-7"	1'-2"	2'-0"
TOTAL			702				



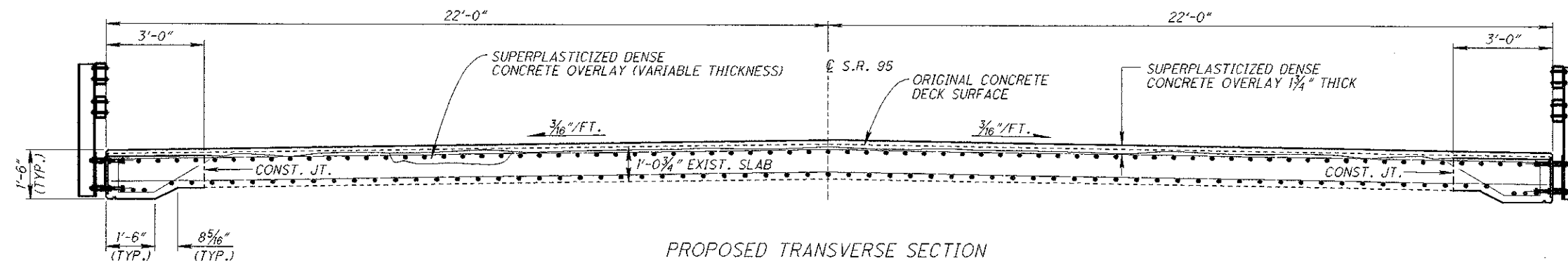
P:\KNO\25687\DESIGN\BRIDGE\4202465_SR_95\PLAN_SHEETS\GENERAL\SR95_BPA_001.DGN



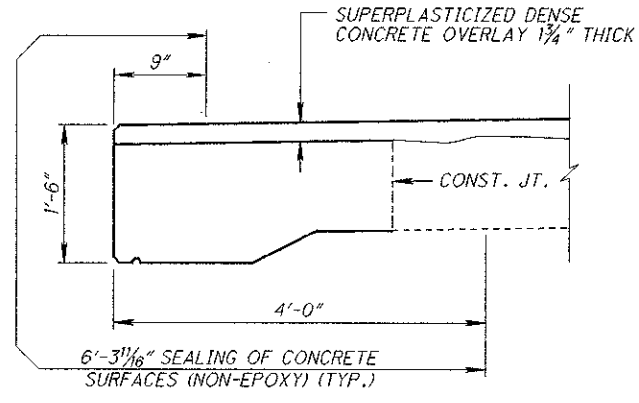
EXISTING TRANSVERSE SECTION



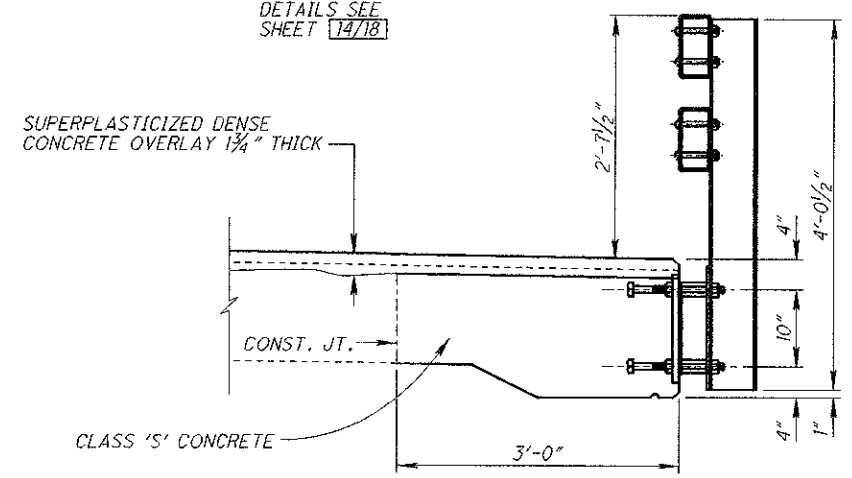
BRIDGE RAIL, POSTS, ANCHOR BOLTS AND LONGITUDINAL RE-STEEL SHALL BE REMOVED AND DISPOSED OF. TRANSVERSE RE-STEEL TO BE PRESERVED IN PLACE. ALL LOOSE RUST ON TRANSVERSE RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER. (TYP.)



PROPOSED TRANSVERSE SECTION



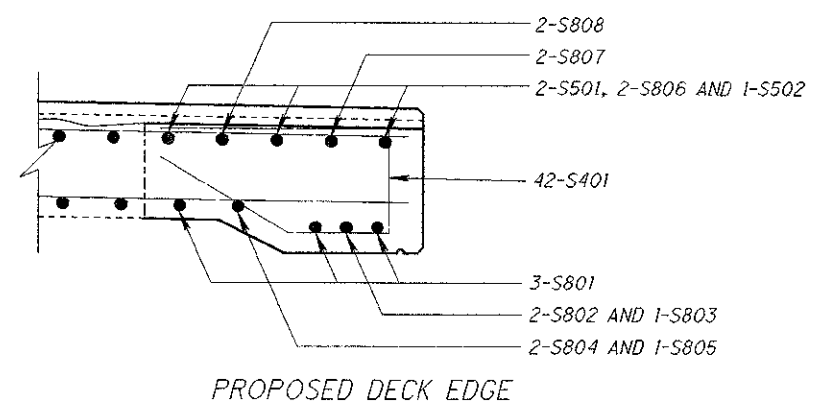
NOTE:
FOR RE-STEEL
DETAILS SEE
SHEET 14/18



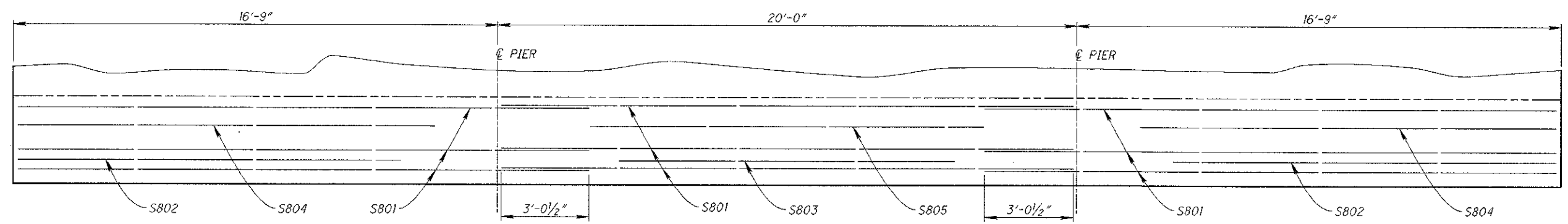
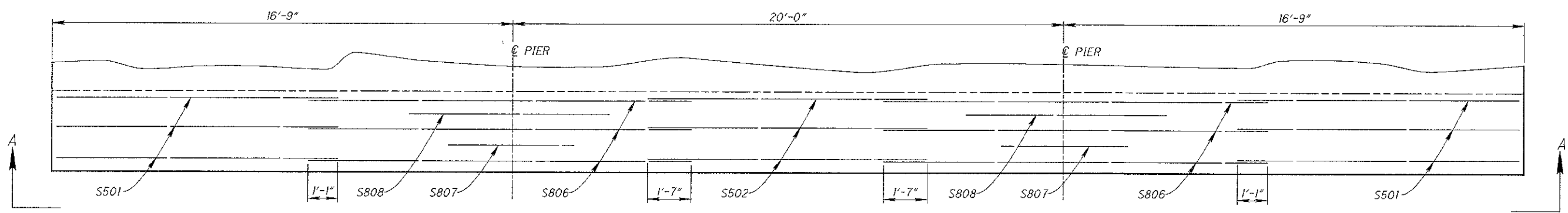
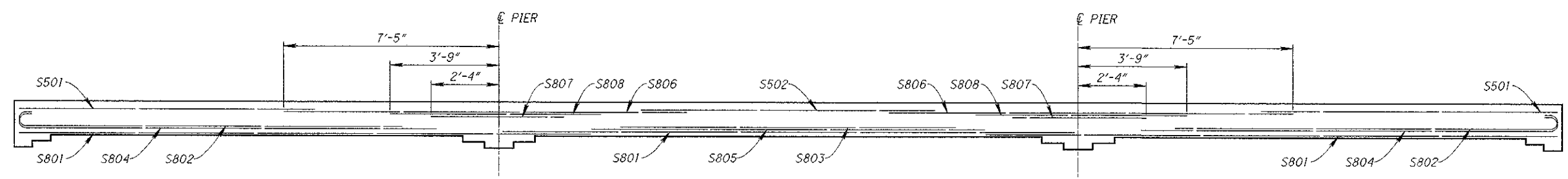
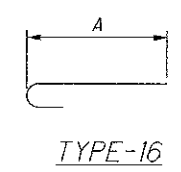
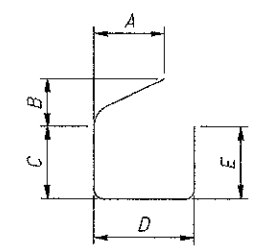
NOTE:
NEW EDGES TO BE ROUGH FINISHED 1/4"
LOWER THAN ORIGINAL DECK SURFACE

P: /KNO/25687/DESIGN/BRIDGE/4202465 SR. 95/PLAN_SHEETS/GENERAL/SR95_BTS_001.DGN

DATE	11-01-07
REVIEWED	DTF
STRUCTURE FILE NUMBER	4202465
DRAWN	DDH
CHECKED	REVIS
DESIGNED	TAG



MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS				
					A	B	C	D	E
DECK									
S401	84	6'-4"	355	12	9"	1'-4"	1'-3"	1'-1"	2'-8"
S501	12	10'-3"	128	STR.	10'-3"				
S502	6	10'-2"	64	STR.	10'-2"				
S801	18	19'-9"	949	STR.	19'-9"				
S802	4	14'-4"	153	16	13'-3"				
S803	2	11'-7"	62	STR.	11'-7"				
S804	4	15'-6"	166	16	14'-5"				
S805	2	13'-7"	73	STR.	13'-7"				
S806	12	13'-11"	446	STR.	13'-11"				
S807	4	4'-7"	49	STR.	4'-7"				
S808	4	7'-2"	77	STR.	7'-2"				
TOTAL			2522						



P:\KNO\25687\DESIGN\BRIDGE\4202465_SR_95\PLAN_SHEETS\GENERAL\SR95_BSD_001.DGN

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

DATE
11-01-07
REVIEWED
DTF
STRUCTURE FILE NUMBER
4202465
DRAWN
DDH
REVIS
DESIGNED
DDH
CHECKED
TAG

DECK EDGE RE-STEEL DETAILS
BRIDGE NO. KNO-95-0323
OVER BOONE CREEK

KNO-13-16.02
KNO-95-0.00

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 1/4" 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 1/4 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:

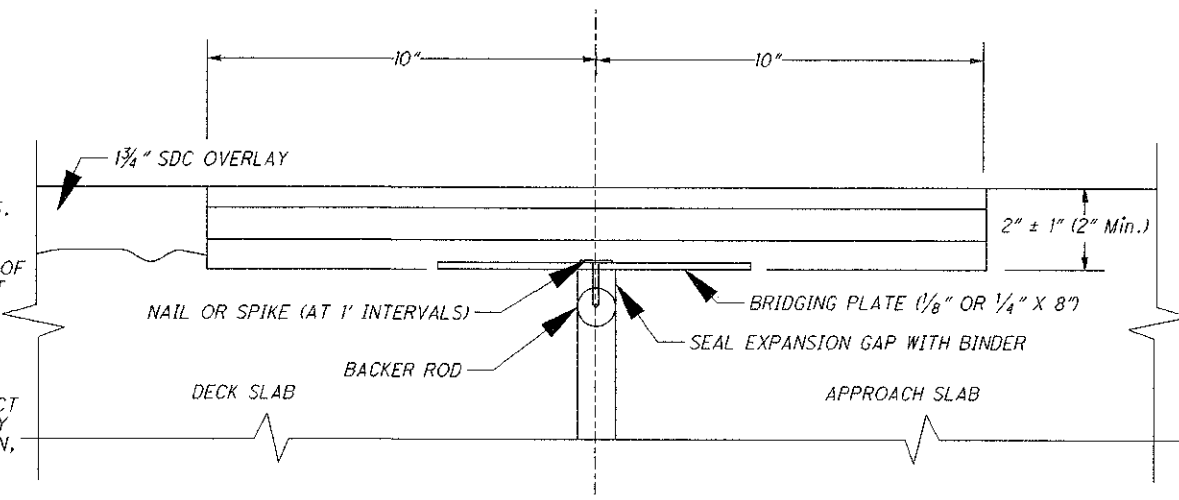
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER 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.



TYPICAL CONCRETE SLAB JOINT

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR95\PLAN_SHEETS\GENERAL\SR95_BEJ_001.DGN

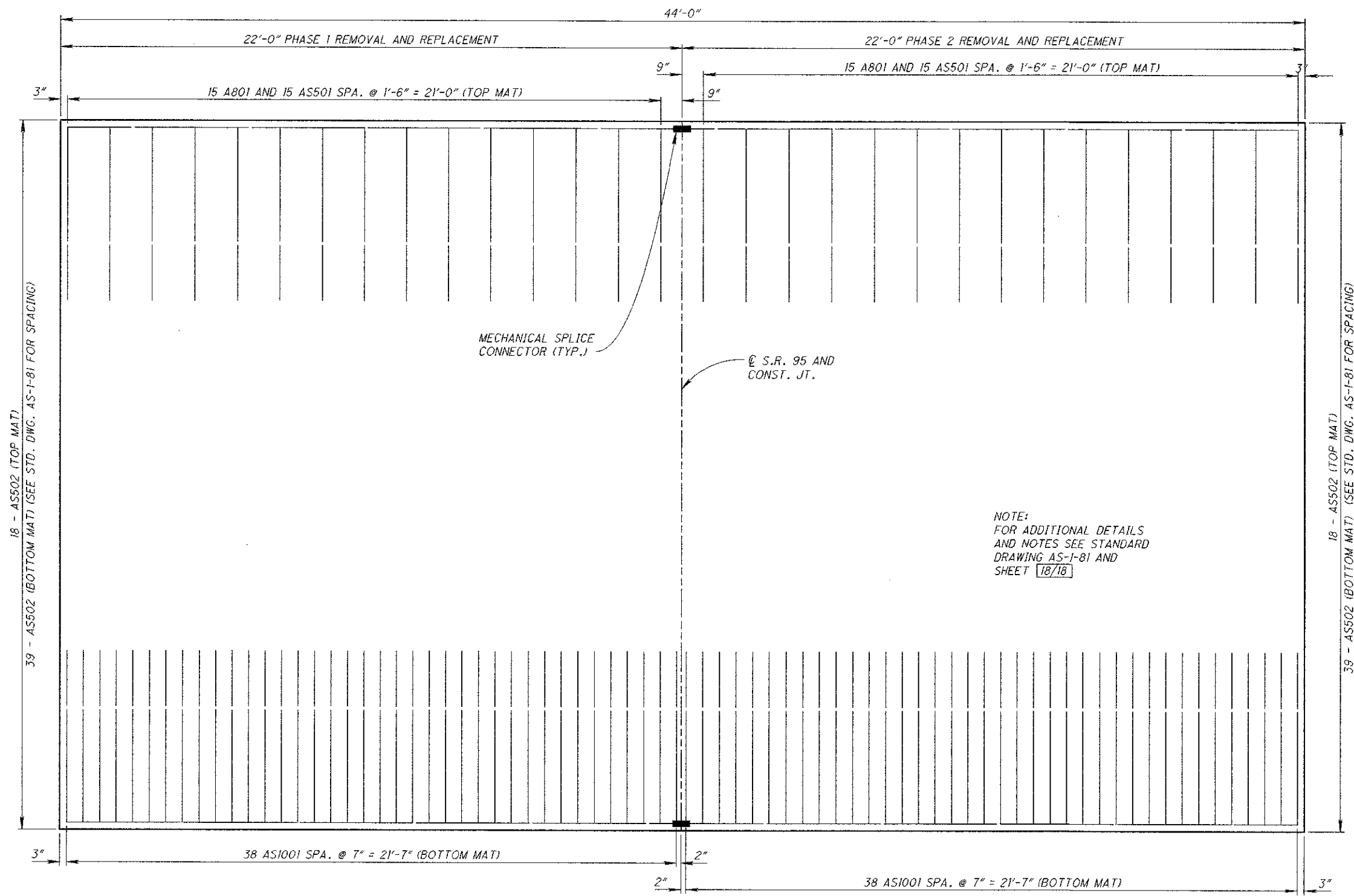
OFFICE OF STRUCTURAL ENGINEERING

DESIGNED: DDH
 TAG REVIEWED: DTF

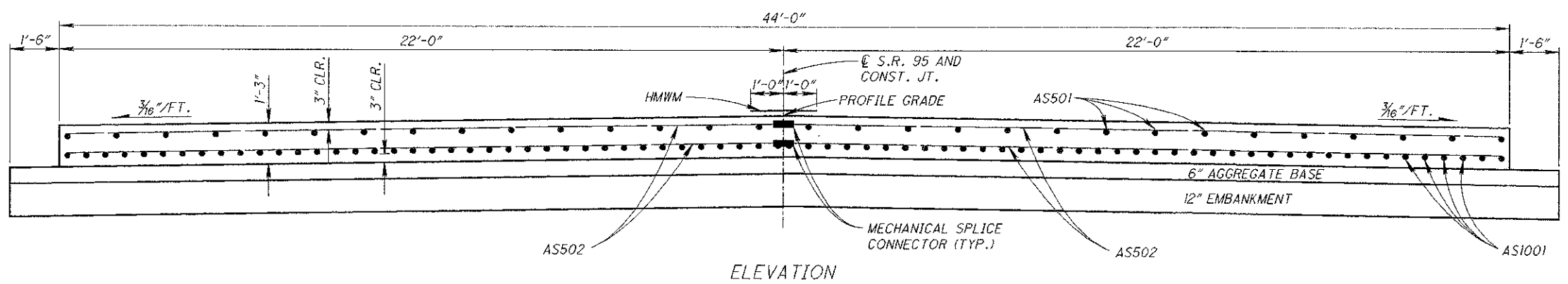
PLAN INSERT SHEET
 POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
 BRIDGE NO. KNO-95-0323 OVER BOONE CREEK

KNO-13-16-02
 KNO-95-0.00

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BAS_001.DGN

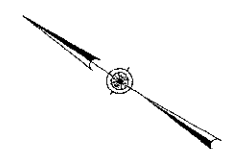


PLAN



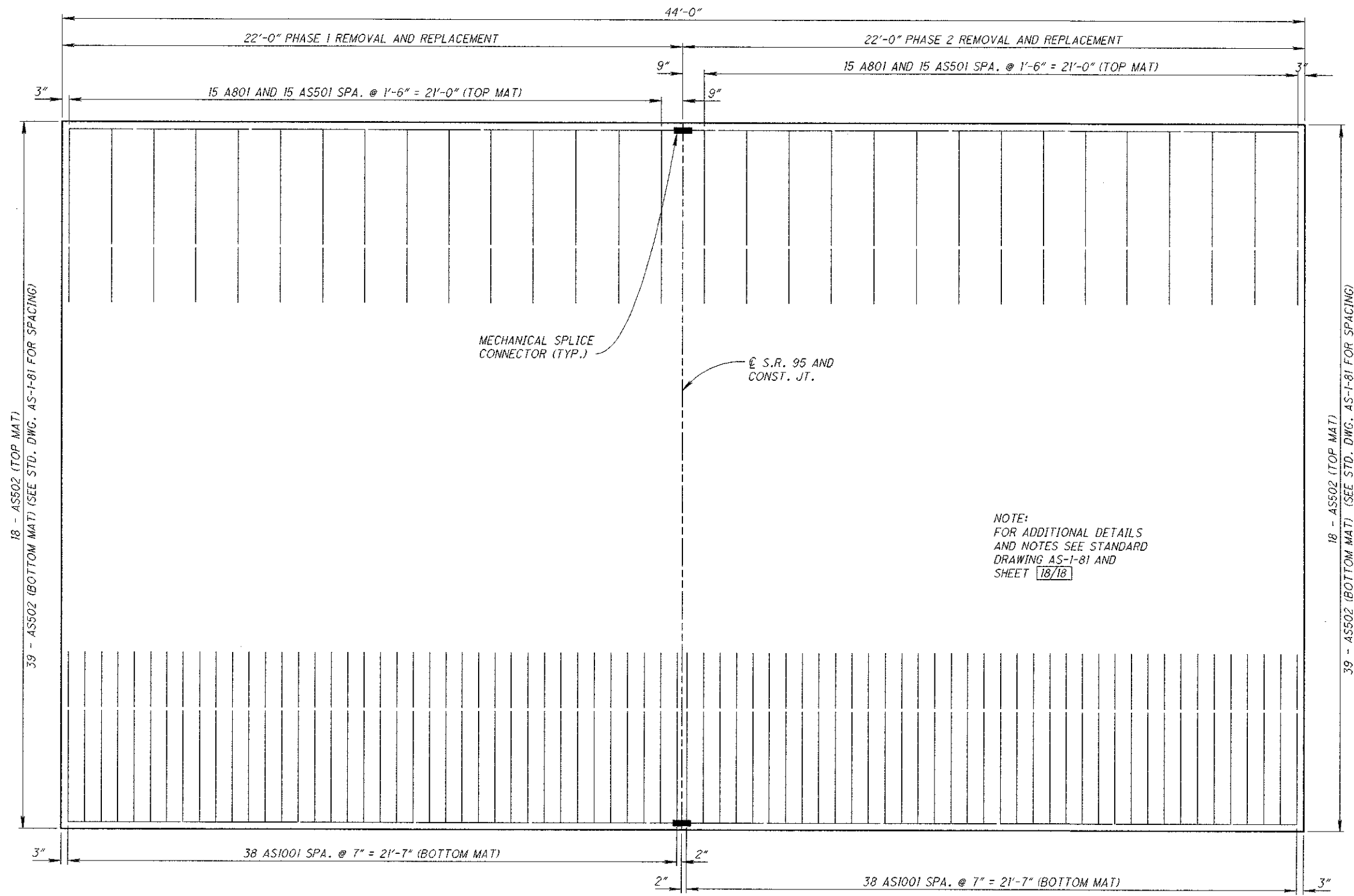
ELEVATION

NOTE:
FOR ADDITIONAL DETAILS
AND NOTES SEE STANDARD
DRAWING AS-F-81 AND
SHEET 18/18

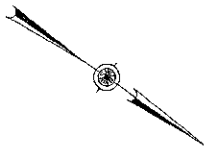
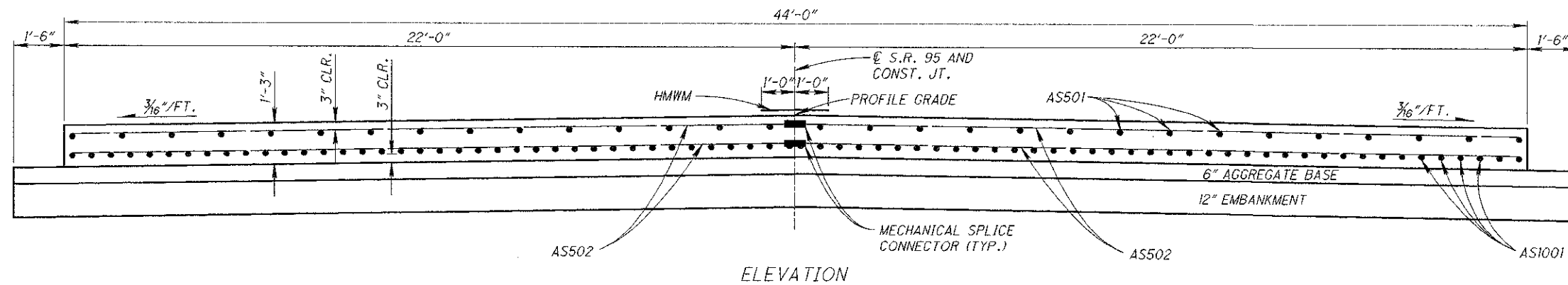


DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5		DATE 11-01-07	DESIGNED DDH	DRAWN DDH	REVIEWED DTF	STRUCTURE FILE NUMBER 4202465
BRIDGE NO. KNO-95-0323 OVER BOONE CREEK		REAR APPROACH SLAB DETAILS				
KNO-13-16.02 KNO-95-0.00		16 / 18				
56 58						

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BAS_002.DGN



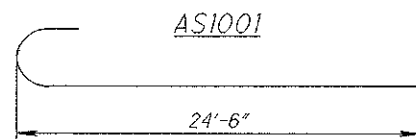
PLAN



DESIGN AGENCY		DATE	REVIEWED	DESIGNED
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5		11-01-07	DTF	DDH
		STRUCTURE FILE NUMBER	REVIS	CHECKED
		4202465		TAG
FORWARD APPROACH SLAB DETAILS				
BRIDGE NO. KNO-95-0323				
OVER BOONE CREEK				
KNO-13-16.02				
KNO-95-0.00				
		17 / 18		
		57 / 58		

APPROACH SLAB			
MARK	NUMBER REQ'D.	SHAPE	LENGTH
AS501	60	STR.	24'-6"
AS502	228	STR.	21'-9"
AS1001	152	BT.	25'-11"

RE-STEEL TO BE INCLUDED FOR PAYMENT IN ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN



ITEM	DESCRIPTION	QUANTITY	UNIT
203	EXCAVATION	183	CU.YD.
203	EMBANKMENT	84	CU.YD.
204	SUBGRADE COMPACTION	251	SQ.YD.
304	AGGREGATE BASE	42	CU.YD.
510	DOWEL HOLE WITH NONSHRINK, NONMETALLIC GROUT	60	EACH
516	2" DEEP JOINT SEALER, AS PER PLAN	68	FT.
526	REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN	245	SQ. YD.

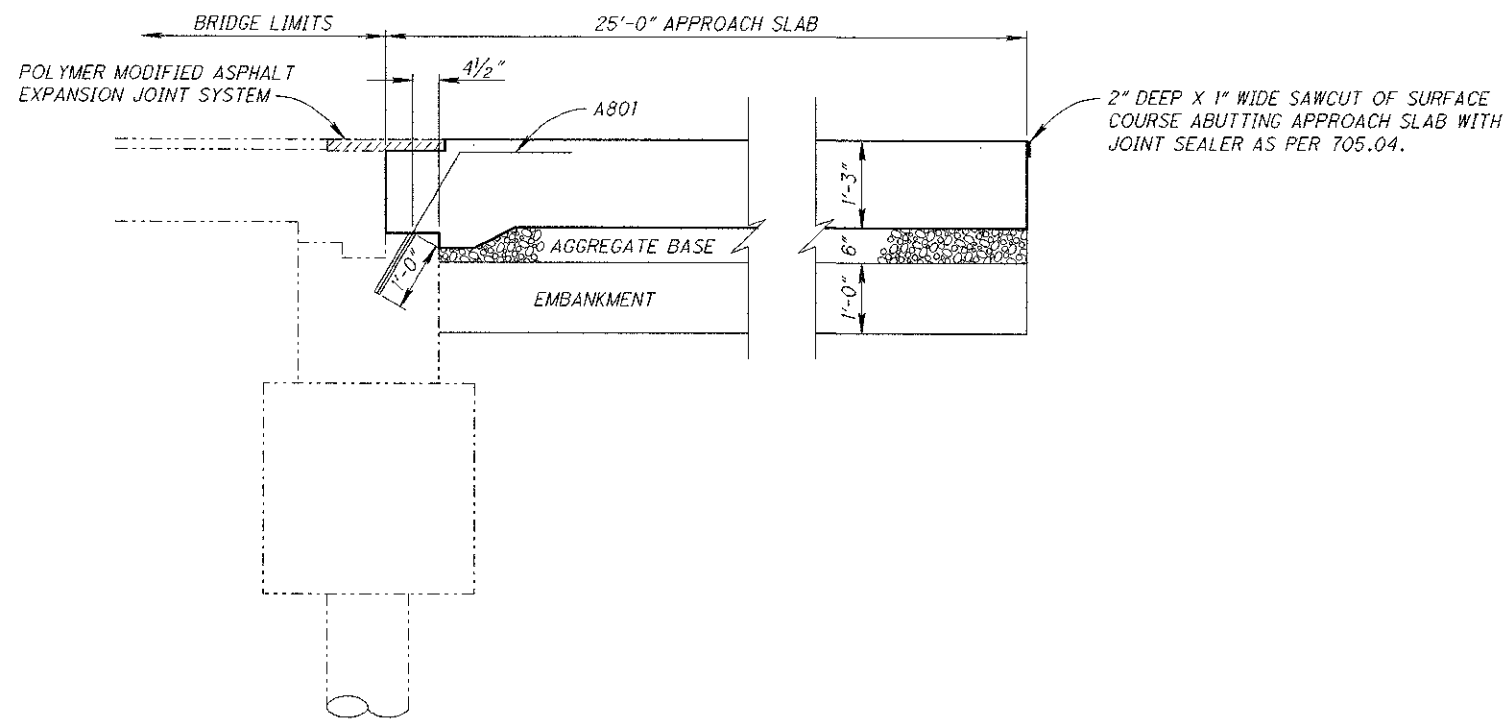
ITEM 203, 204 AND 304 QUANTITIES CARRIED TO SHEET 28
 ITEM 510, 516, 526 AND 530 QUANTITIES CARRIED TO SHEET 10/18

NOTE:
 FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.

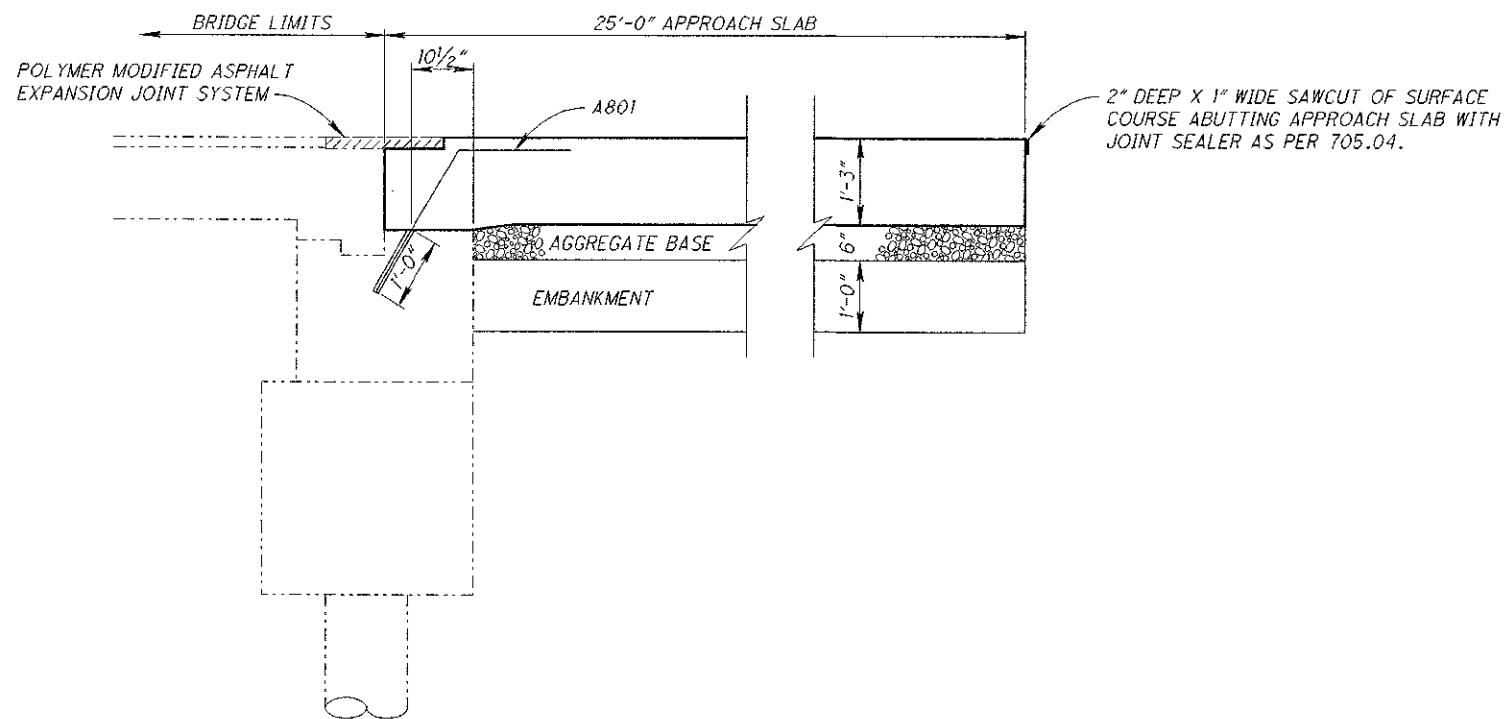
NOTE:
 ALL LONGITUDINAL CONSTRUCTION JOINTS SHALL BE SEALED 2'-0" IN WIDTH WITH HMWM RESIN (SEE PROPOSAL NOTE). APPROACH SLAB SEALING AND MECHANICAL SPLICE CONNECTORS TO BE INCLUDED IN ITEM 526 REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN.

NOTE:
 FOR A801 BENDING DIAGRAM AND BAR SCHEDULE SEE SHEET 12/18

BASIS OF PAVEMENT: IN ADDITION TO THE INCIDENTAL ITEMS LISTED IN 526.08, THE DEPARTMENT WILL INCLUDE THE FOLLOWING ITEMS FOR PAYMENT: THE PREFORMED EXPANSION JOINT FILLER AND JOINT SEALER AT THE CORNERS AND SIDES OF THE APPROACH SLAB.



DETAIL AT EXISTING APPROACH SLAB SEAT



DETAIL AT APPROACH SLAB SEAT WIDENING

P:\KNO\25687\DESIGN\BRIDGE\4202465 SR 95\PLAN_SHEETS\GENERAL\SR95_BAS_003.DGN

DESIGN AGENCY
 OHIO DEPARTMENT OF
 TRANSPORTATION, DISTRICT 5

REVIEWED DATE 11-01-07
 DTF STRUCTURE FILE NUMBER 4202465
 DRAWN DDH
 CHECKED TAG

FORWARD APPROACH SLAB DETAILS
 BRIDGE NO. KNO-95-0323
 OVER BOONE CREEK

KNO-13-16.02
 KNO-95-0.00

18 / 18

58
 58