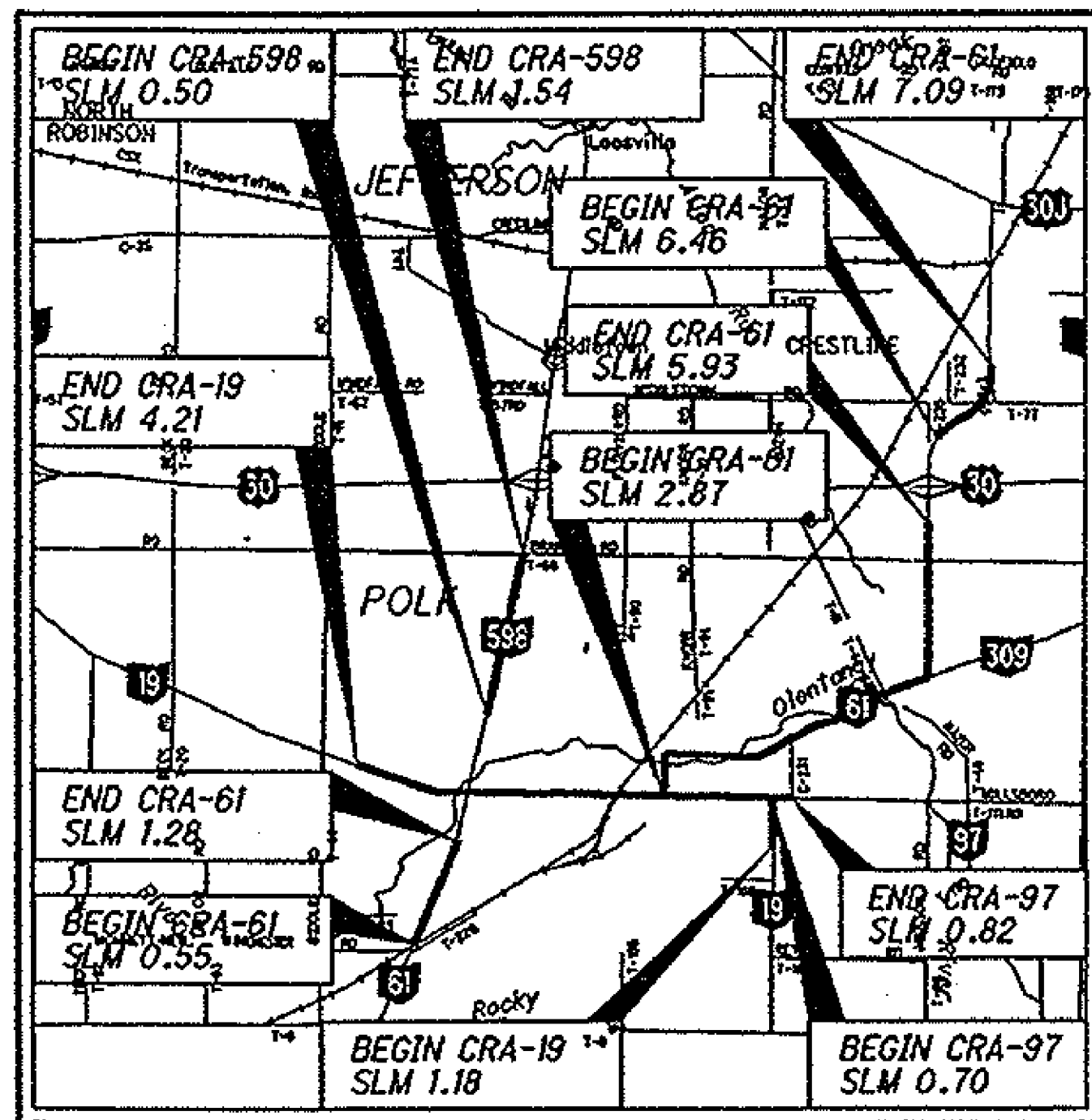


CRA - SR-19-1.18/VARIOUS
 090047 PID - 79449
 Dist 3 1/28/2009



LOCATION MAP

LATITUDE: 040°44'01" N LONGITUDE: 082°46'42" W

SCALE IN MILES



PORTION TO BE IMPROVED
 INTERSTATE & DIVIDED HIGHWAY
 UNDIVIDED STATE & FEDERAL ROUTES
 OTHER ROADS

DESIGN DESIGNATION

SEE SHEETS 2 & 3.

DESIGN EXCEPTIONS

NONE

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

CRA-19-1.18
CRA-61-0.55 (2.87)
CRA-97-0.70
CRA-598-0.00

CITY OF CRESTLINE
CITY OF GALION
JACKSON TOWNSHIP
POLK TOWNSHIP

PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE PAVEMENT PLANING AND RESURFACING WITH ASPHALT CONCRETE, PAVEMENT REPAIR, ADJUSTMENT OF CASTINGS, GUARDRAIL BARRIER, AND PAVEMENT MARKINGS.

PROJECT LENGTH:
 CRA-19 3.03 MILES
 CRA-61 4.42 MILES
 CRA-97 0.12 MILES
 CRA-598 1.04 MILES
 TOTAL= 8.61 MILES

PROJECT EARTH DISTURBED AREA: N/A ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES

2008 SPECIFICATIONS

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

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

APPROVED *J. Hart*
 DATE 11/3/08 DISTRICT DEPUTY DIRECTOR

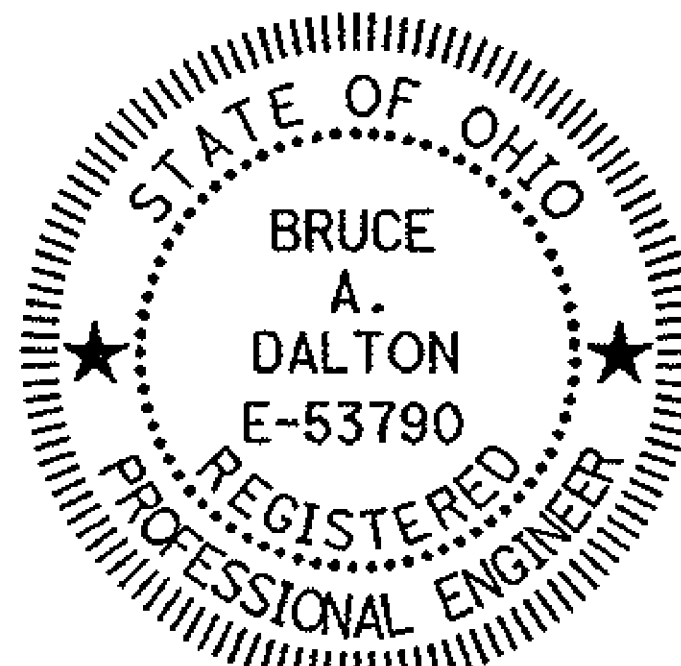
APPROVED *James J. Besley*
 DATE 11-12-08 DIRECTOR, DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS:

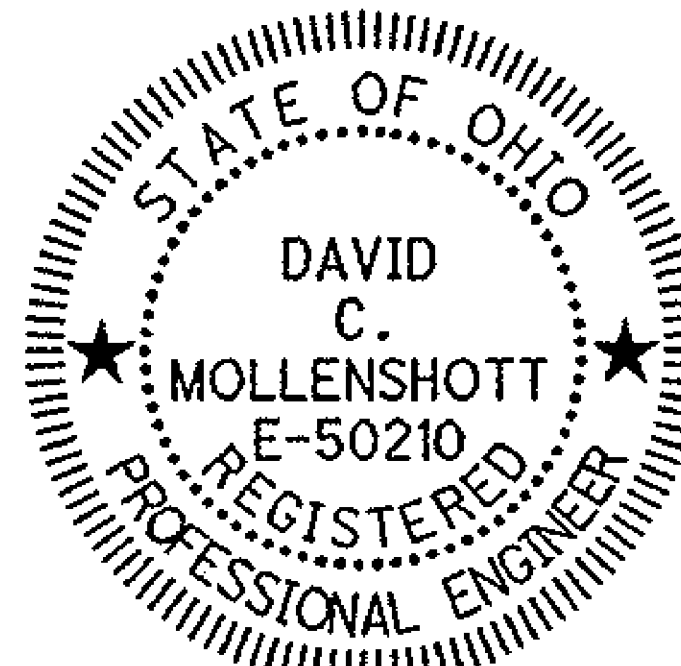
TITLE	1	STRUCTURE SUMMARY	27-28
STRAIGHT LINE DIAGRAM	2-3	STRUCTURE GENERAL NOTES	29-30
DESIGN DESIGNATION	2-3	BRIDGE TREATMENT	31
GENERAL NOTES	4-6	STRUCTURE CRA-19-0354	31A-32
MAINTENANCE OF TRAFFIC NOTES	7	STRUCTURE CRA-61-0307	33
DROP-OFFS IN WORK ZONES	8	STRUCTURE CRA-61-0361	34
MAILBOX FACILITIES	9	STRUCTURE CRA-61-0460	35
GENERAL SUMMARY	10-11	STRUCTURE CRA-61-0687	36
PAVEMENT & SHOULDER DATA	12-13		
TYPICAL SECTIONS	14-15		
GUARDRAIL GENERAL NOTES	16		
ROADWAY SUB-SUMMARY	17		
GUARDRAIL DETAILS	18-20		
PAVEMENT MARKING/RPM SUB-SUMMARY	21-23		
LOOP DETECTOR NOTES & DETAILS	24		
CURB RAMP DETAILS	25-26		

ROADWAY/PAVEMENT ENGINEERS SEAL:

STRUCTURE/CULVERT ENGINEERS SEAL:



SIGNED: *Bruce A. Dalton*
 DATE: 11/3/08



SIGNED: *David C. Mollenhott*
 DATE: 11/3/08

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	10/19/07	RM-1.1	7/19/08	TC-41.20	1/19/01				
BP-4.1	7/16/04			TC-42.20	7/16/04				
BP-5.1	7/28/00	MT-96.10	4/19/02	TC-52.10	1/19/07				
BP-7.1	1/19/07	MT-97.10	9/5/06	TC-52.20	1/19/07				
BP-7.2	1/19/07	MT-97.12	9/5/06	TC-71.10	1/19/07				
		MT-99.20m	1/30/95	TC-73.10	1/19/01				
DM-4.3	7/19/02	MT-105.10	10/18/02						
DM-4.4	7/19/02	MT-105.11	10/18/02						
GR-1.1	7/16/04								
GR-2.1	1/16/04								
GR-3.4	1/20/08								
GR-4.1	4/18/03								
GR-4.2	1/19/07								

SUPPLEMENTAL SPECIFICATIONS

800	10/17/08
832	4/25/08
848	4/15/05

UNDERGROUND UTILITIES

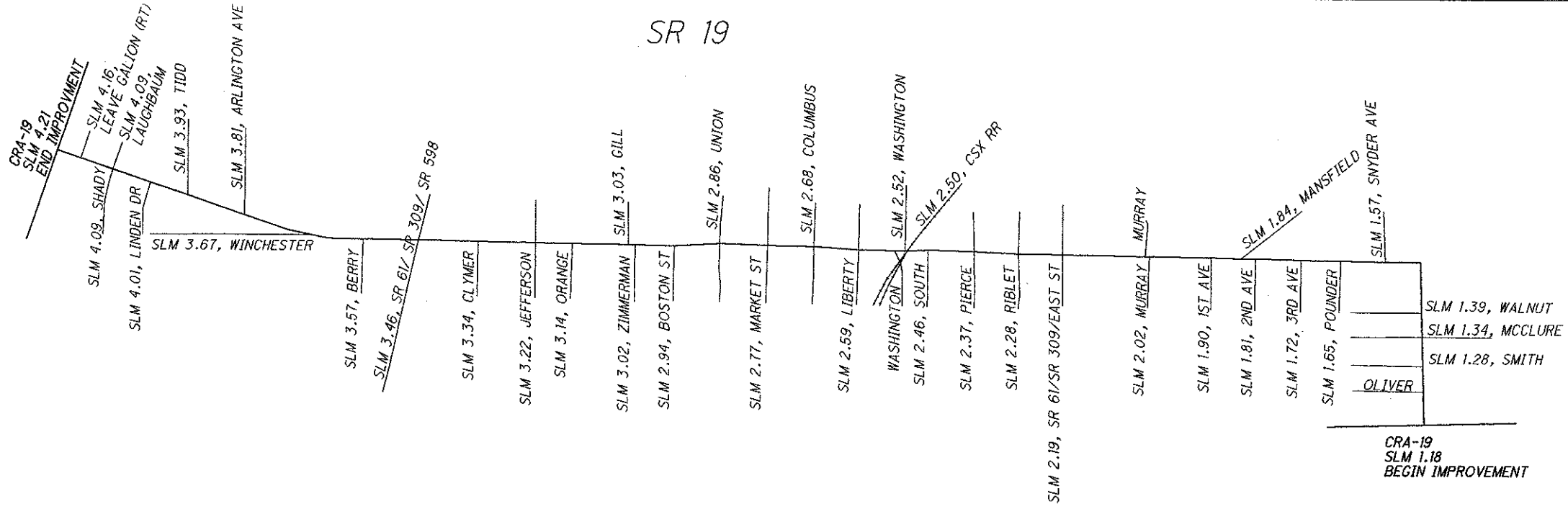
CONTACT BOTH SERVICES CALL TWO WORKING DAYS BEFORE YOU DIG
 CALL 1-800-362-2764 (TOLL FREE)
 OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY
 OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:



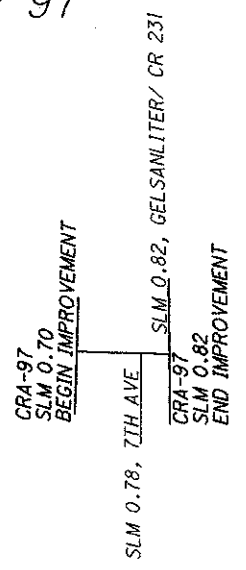
DESIGN FILE: i:\projects\79449\roadway\sheets\79449GT001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008

FEDERAL PROJECT NO. E071(066)
 PID NO. 79449
 CONSTRUCTION PROJECT NO.
 RAILROAD INVOLVEMENT
 CSX TRANSPORTATION, INC.
 CRA-19-1.18
 CRA-61-0.55 (2.87)
 CRA-97-0.70
 CRA-598-0.00
 1/36



DESIGN DESIGNATION	CRA-19 1.18 - 1.49	CRA-19 1.49 - 2.02	CRA-19 2.02 - 2.19	CRA-19 2.19 - 2.46	CRA-19 2.46 - 3.07	CRA-19 3.07 - 3.46	CRA-19 3.46 - 3.53	CRA-19 3.53 - 3.81	CRA-19 3.81 - 4.21
CURRENT ADT (2009)	4,100	5,310	7,550	7,550	7,550	7,550	10,280	10,280	10,280
DESIGN YEAR ADT (2021)	4,140	5,310	7,920	7,920	7,920	7,920	10,550	10,550	10,550
DESIGN HOURLY VOLUME (2021)	410	530	790	790	790	790	1060	1060	1060
DIRECTIONAL DISTRIBUTION	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
TRUCKS (24 HOUR B&C)	0.09	0.04	0.03	0.03	0.03	0.03	0.08	0.08	0.08
DESIGN/LEGAL SPEED	35 MPH	35 MPH	35 MPH	35 MPH	25 MPH	35 MPH	35 MPH	25 MPH	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL	URBAN MINOR ARTERIAL	URBAN MINOR ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN MINOR ARTERIAL	URBAN MINOR ARTERIAL	URBAN MINOR ARTERIAL
NHS PROJECT	NO	NO	NO	NO	NO	NO	NO	NO	NO

SR 97



DESIGN DESIGNATION	CRA-97 0.70 - 0.82
CURRENT ADT (2009)	5,930
DESIGN YEAR ADT (2021)	6,400
DESIGN HOURLY VOLUME (2021)	640
DIRECTIONAL DISTRIBUTION	0.52
TRUCKS (24 HOUR B&C)	0.05
DESIGN/LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION	URBAN MAJOR COLLECTOR
NHS PROJECT	NO

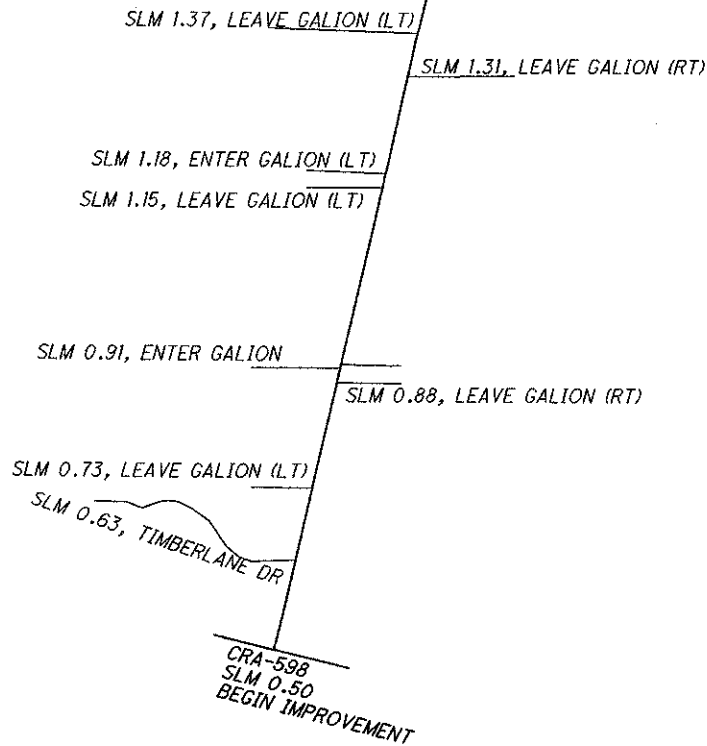
CALCULATED	KRB
	CHECKED
BAD	BAD
	BAD
STRAIGHT LINE DIAGRAM DESIGN DESIGNATION	
CRA-19-1.18 CRA-61-0.58 (2.87) CRA-97-0.70 CRA-598-0.50	
2	36

SR 598

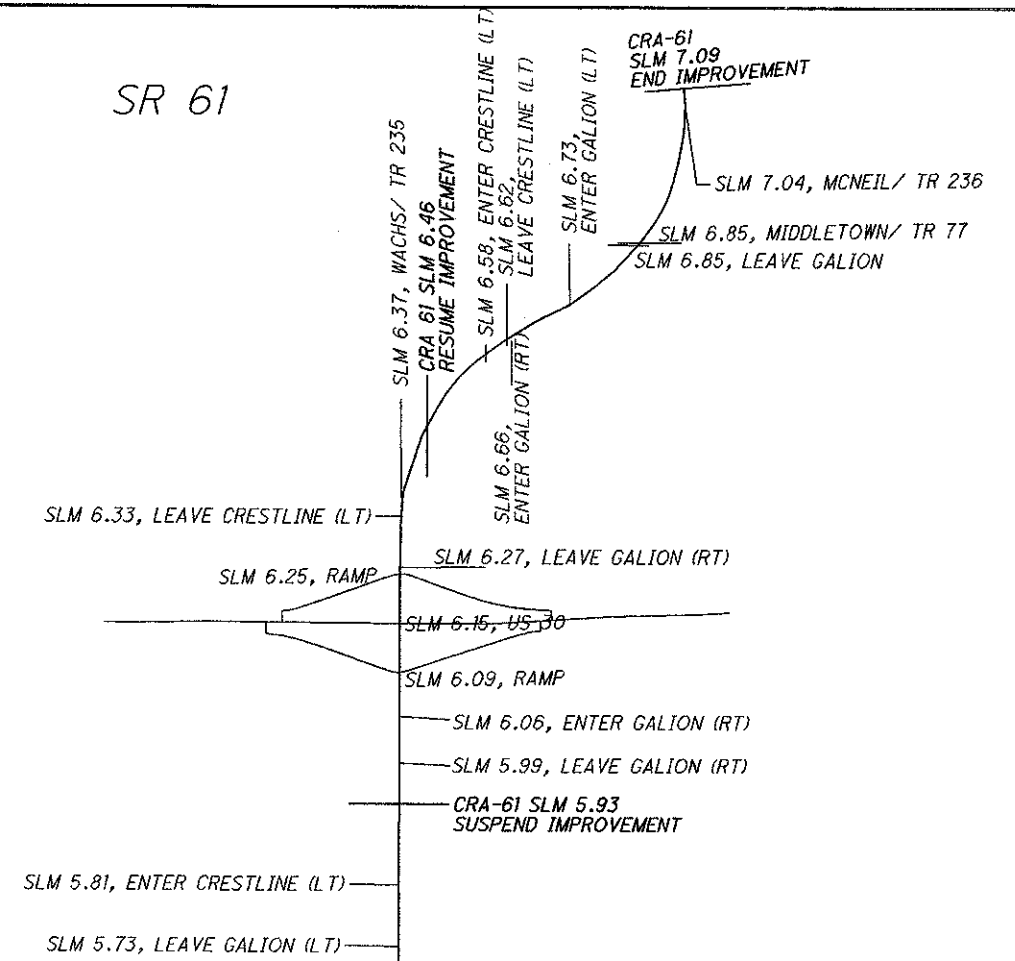
CRA-598
SLM 1.54
END IMPROVEMENT SLM 1.54, BRANDT/ TR 56

DESIGN DESIGNATION

	CRA-598 0.50 - 0.73	CRA-598 0.73 - 0.82	CRA-598 0.82 - 1.54
CURRENT ADT (2009)	8,380	5,670	5,670
DESIGN YEAR ADT (2021)	8,820	6,220	6,220
DESIGN HOURLY VOLUME (2021)	820	620	620
DIRECTIONAL DISTRIBUTION	0.51	0.51	0.51
TRUCKS (24 HOUR B&C)	0.06	0.07	0.07
DESIGN/LEGAL SPEED	35 MPH	35 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL
NHS PROJECT	NO	NO	NO



SR 61

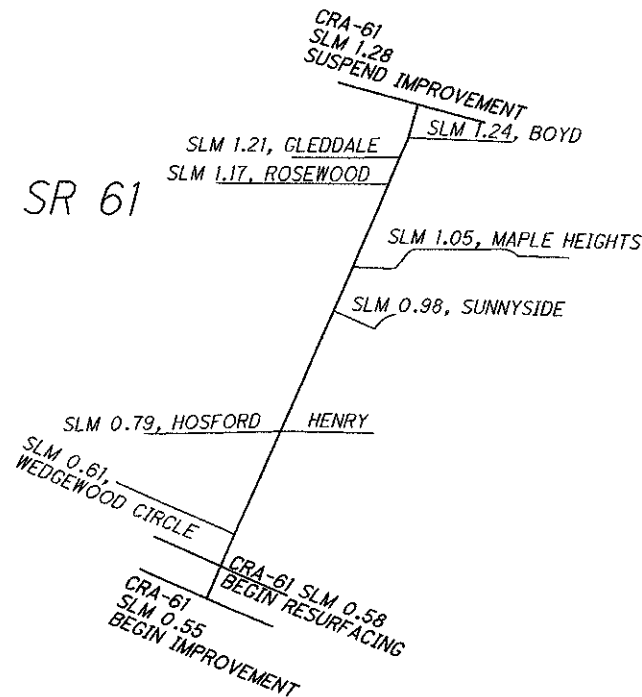


DESIGN DESIGNATION

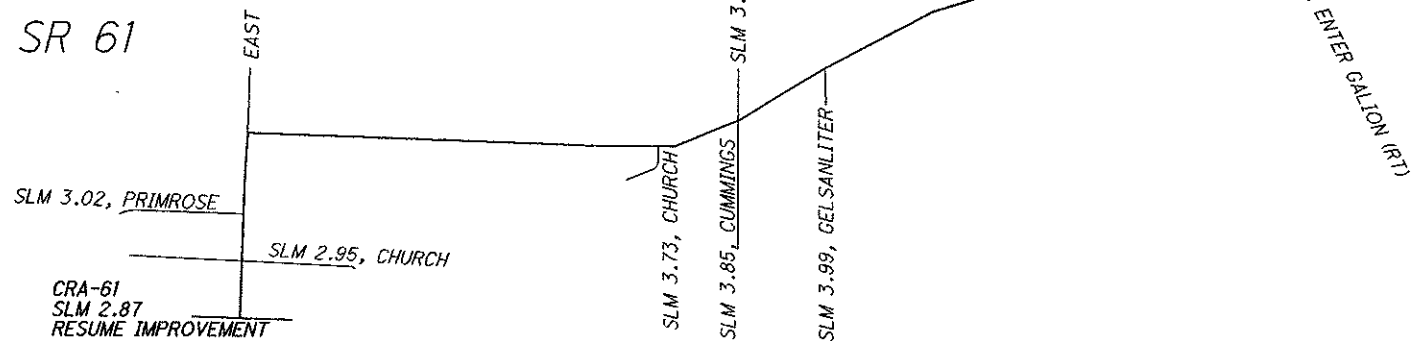
	CRA-61 0.58 - 1.28	CRA-61 2.87 - 3.99	CRA-61 3.99 - 4.07	CRA-61 4.07 - 4.98	CRA-61 4.98 - 7.09
CURRENT ADT (2009)	6,690	6,910	10,130	10,130	2,900
DESIGN YEAR ADT (2021)	7,100	7,980	10,940	10,940	3,110
DESIGN HOURLY VOLUME (2021)	710	800	1,090	1,090	310
DIRECTIONAL DISTRIBUTION	0.51	0.52	0.52	0.52	0.52
TRUCKS (24 HOUR B&C)	0.08	0.06	0.05	0.05	0.05
DESIGN/LEGAL SPEED	35 MPH	35 MPH	35 MPH	45 MPH	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN MAJOR COLLECTOR
NHS PROJECT	NO	NO	NO	NO	NO

NOTE: FOR SR 61 THE BEGIN IMPROVEMENT AT SLM 0.55 IS DUE TO THE PAVEMENT MARKINGS NORTH OF THE RAILROAD CROSSING.

SR 61



SR 61



CALCULATED
KRB
CHECKED
BAD

STRAIGHT LINE DIAGRAM
DESIGN DESIGNATION

CRA-19-1-18
CRA-61-0.58 (2.87)
CRA-97-0.70
CRA-598-0.50

3
36

DESIGN FILE: I:\projects\79449\roadway\sheets\79449GB002.dgn
WORKSTATION: ksday DATE: 11/3/2008

GENERAL

UTILITIES

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

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

GAS
COLUMBIA GAS TRANSMISSION
589 NORTH STATE ROAD
MEDINA, OHIO 44256
330-721-4163

CABLE
TIME WARNER CABLE
1575 LEXINGTON AVENUE
MANSFIELD, OHIO 44901
419-756-6091, EXT. 5109

ELECTRIC
AMERICAN ELECTRIC POWER
2622 SOUTH S.R. 100
TIFFIN, OHIO 44883
419-443-4609

ELECTRIC
OHIO EDISON COMPANY
1717 ASHLAND ROAD
MANSFIELD, OHIO 44905
419-521-6178

TELEPHONE
QWEST
1860 LINCOLN STREET, SUITE 200
DENVER, COLORADO 80295
303-837-3926

TELEPHONE
SPRINT - FIBER
769 BROOKSEDGE BLVD.
WESTERVILLE, OHIO 43081
513-254-4348

TELEPHONE
VERIZON
1534 S.R. 511 SOUTH
ASHLAND, OHIO 44805
419-282-6551

TELEPHONE
VERIZON BUSINESS
120 RAVINE ST.
AKRON, OHIO 44303
330-253-8267

CITY
CITY OF CRESTLINE
100 NORTH SELTZER STREET
CRESTLINE, OHIO 44827
419-683-3800

CITY
CITY OF GALION
301 HARDING WAY EAST
GALION, OH 44833
419-468-2818

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

PROGRESSION OF WORK

WIDENING SHALL BE DONE PRIOR TO RESURFACING. GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN. GUARDRAIL WORK SHALL BE DONE AFTER WIDENING, RESURFACING, AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

WORK LIMITS

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

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE 2008 CMS. CONVERSIONS SHALL BE APPROXIMATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

ROADWAY

ITEM 209 - LINEAR GRADING

THE CONTRACTOR IS REQUIRED TO PERFORM LINEAR GRADING ON THE GRADED SHOULDER. IT IS ANTICIPATED THAT THERE ARE AREAS WHERE THE GRADED SHOULDER IS AT A HIGHER ELEVATION THAN THE ADJACENT PROPOSED PAVEMENT. A 10:1 SLOPE SHALL BE ESTABLISHED, OR AS DIRECTED BY THE ENGINEER, WHEN PERFORMING ITEM 209 LINEAR GRADING. THE INTENT IS TO PROVIDE AN UNOBSTRUCTED AND POSITIVE FLOW OF STORM WATER FROM THE PAVEMENT TO THE DITCH. THE LINEAR GRADING SHALL BE PERFORMED AFTER THE INTERMEDIATE COURSE HAS BEEN COMPLETED AND BEFORE THE SURFACE COURSE IS PLACED. ALL LABOR AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER MILE FOR ITEM 209 LINEAR GRADING.

ITEM 604 - CASTINGS ADJUSTED TO GRADE

ANY UNIT OF THIS ITEM MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING OR INLET IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEER'S APPROVAL BEFORE USING. HOWEVER, IF A UNIT IS THE ADJUSTABLE FRAME TYPE AND CAN BE ADJUSTED USING THE EXISTING FRAME, THEN THE CONTRACTOR IS ONLY ALLOWED TO ADJUST THE FRAME.

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (1), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

APPROXIMATE LOCATIONS OF KNOWN CASTINGS

FUNDING PARTICIPATION:
FC = 80% FED. / 20% CRESTLINE
FG = 80% FED. / 20% GALION
FS = 80% FED. / 20% STATE

WATER VALVE				WATER VALVE				WATER VALVE			
ROUTE	SLM	FUNDING		ROUTE	SLM	FUNDING		ROUTE	SLM	FUNDING	
CRA-19	1.33	FG		CRA-19	2.50	FG		CRA-61	0.78	FG	
CRA-19	1.33	FG		CRA-19	2.50	FG		CRA-61	0.79	FG	
CRA-19	1.39	FG		CRA-19	2.54	FG		CRA-61	0.79	FG	
CRA-19	1.39	FG		CRA-19	2.79	FG		CRA-61	2.88	FG	
CRA-19	1.49	FG		CRA-19	2.79	FG		CRA-61	2.96	FG	
CRA-19	1.49	FG		CRA-19	2.94	FG		CRA-61	3.03	FG	
CRA-19	1.64	FG		CRA-19	2.95	FG		CRA-61	3.03	FG	
CRA-19	1.80	FG		CRA-19	2.96	FG		CRA-61	3.07	FG	
CRA-19	1.82	FG		CRA-19	3.04	FG		CRA-61	3.15	FG	
CRA-19	2.01	FG		CRA-19	3.21	FG		CRA-61	3.72	FG	
CRA-19	2.01	FG		CRA-19	3.21	FG		CRA-61	3.72	FG	
CRA-19	2.01	FG		CRA-19	3.33	FG		CRA-598	1.54	FS	
CRA-19	2.21	FG		CRA-19	3.33	FG		CRA-598	1.54	FS	
CRA-19	2.27	FG		CRA-19	3.33	FG		CRA-598	1.54	FS	
CRA-19	2.36	FG		CRA-19	3.50	FG		TOTAL		FUNDING	
CRA-19	2.43	FG		CRA-19	3.70	FG			47	FG	
CRA-19	2.48	FG		CRA-19	3.70	FG			3	FS	
CRA-19	2.50	FG		CRA-19	4.08	FG					

MONUMENT BOX			INLET		
ROUTE	SLM	FUNDING	ROUTE	SLM	FUNDING
CRA-19	1.28	FG	CRA-19	1.88	FG
CRA-19	1.43	FG	CRA-19	1.90	FG
CRA-19	3.51	FG		TOTAL	FUNDING
CRA-19	3.54	FG		2	FG
CRA-61	2.96	FG			
CRA-61	3.03	FG			
CRA-61	3.15	FG			
CRA-598	0.64	FG			
CRA-598	1.00	FG			
CRA-598	1.54	FS			
	TOTAL	FUNDING			
	9	FG			
	1	FS			

ROADWAY

CATCH BASIN			CATCH BASIN			CATCH BASIN		
ROUTE	SLM	FUNDING	ROUTE	SLM	FUNDING	ROUTE	SLM	FUNDING
CRA-19	1.49	FG	CRA-19	2.85	FG	CRA-61	0.81	FG
CRA-19	1.49	FG	CRA-19	2.85	FG	CRA-61	0.98	FG
CRA-19	1.54	FG	CRA-19	2.91	FG	CRA-61	0.98	FG
CRA-19	1.54	FG	CRA-19	2.91	FG	CRA-61	1.04	FG
CRA-19	1.61	FG	CRA-19	2.94	FG	CRA-61	1.06	FG
CRA-19	1.63	FG	CRA-19	2.94	FG	CRA-61	1.06	FG
CRA-19	1.67	FG	CRA-19	2.99	FG	CRA-61	2.95	FG
CRA-19	1.68	FG	CRA-19	2.99	FG	CRA-61	2.95	FG
CRA-19	1.71	FG	CRA-19	3.02	FG	CRA-61	3.03	FG
CRA-19	1.90	FG	CRA-19	3.03	FG	CRA-61	3.03	FG
CRA-19	1.94	FG	CRA-19	3.08	FG	CRA-61	3.07	FG
CRA-19	1.94	FG	CRA-19	3.09	FG	CRA-61	3.07	FG
CRA-19	2.11	FG	CRA-19	3.15	FG	CRA-61	3.10	FG
CRA-19	2.11	FG	CRA-19	3.15	FG	CRA-61	3.12	FG
CRA-19	2.28	FG	CRA-19	3.19	FG	CRA-61	3.12	FG
CRA-19	2.35	FG	CRA-19	3.19	FG	CRA-61	3.15	FG
CRA-19	2.35	FG	CRA-19	3.23	FG	CRA-61	3.15	FG
CRA-19	2.44	FG	CRA-19	3.23	FG	CRA-61	3.15	FG
CRA-19	2.44	FG	CRA-19	3.33	FG	CRA-61	3.17	FG
CRA-19	2.48	FG	CRA-19	3.33	FG	CRA-61	3.17	FG
CRA-19	2.48	FG	CRA-19	3.36	FG	CRA-61	3.27	FG
CRA-19	2.54	FG	CRA-19	3.38	FG	CRA-61	3.27	FG
CRA-19	2.54	FG	CRA-19	3.38	FG	CRA-61	3.29	FG
CRA-19	2.57	FG	CRA-19	3.48	FG	CRA-61	3.29	FG
CRA-19	2.57	FG	CRA-19	3.49	FG	CRA-61	3.37	FG
CRA-19	2.58	FG	CRA-19	3.55	FG	CRA-61	3.37	FG
CRA-19	2.58	FG	CRA-19	3.57	FG	CRA-61	3.45	FG
CRA-19	2.63	FG	CRA-19	3.59	FG	CRA-61	3.45	FG
CRA-19	2.63	FG	CRA-19	3.62	FG	CRA-61	3.54	FG
CRA-19	2.69	FG	CRA-19	3.62	FG	CRA-61	3.54	FG
CRA-19	2.69	FG	CRA-19	3.65	FG	CRA-61	5.51	FG
CRA-19	2.73	FG	CRA-19	3.69	FG	CRA-97	0.78	FG
CRA-19	2.73	FG	CRA-19	3.72	FG		TOTAL	FUNDING
CRA-19	2.82	FG	CRA-19	3.82	FG		102	FG
CRA-19	2.82	FG	CRA-61	0.81	FG			

MANHOLE			MANHOLE			MANHOLE		
ROUTE	SLM	FUNDING	ROUTE	SLM	FUNDING	ROUTE	SLM	FUNDING
CRA-19	1.28	FG	CRA-19	2.17	FG	CRA-19	3.57	FG
CRA-19	1.38	FG	CRA-19	2.18	FG	CRA-19	3.58	FG
CRA-19	1.49	FG	CRA-19	2.22	FG	CRA-19	3.65	FG
CRA-19	1.54	FG	CRA-19	2.27	FG	CRA-19	3.67	FG
CRA-19	1.54	FG	CRA-19	2.31	FG	CRA-19	3.70	FG
CRA-19	1.58	FG	CRA-19	2.36	FG	CRA-19	3.71	FG
CRA-19	1.63	FG	CRA-19	2.40	FG	CRA-19	3.77	FG
CRA-19	1.63	FG	CRA-19	2.45	FG	CRA-19	3.81	FG
CRA-19	1.71	FG	CRA-19	2.50	FG	CRA-19	3.93	FG
CRA-19	1.71	FG	CRA-19	2.95	FG	CRA-61	0.78	FG
CRA-19	1.75	FG	CRA-19	3.03	FG	CRA-61	2.96	FG
CRA-19	1.80	FG	CRA-19	3.15	FG	CRA-61	2.96	FG
CRA-19	1.80	FG	CRA-19	3.20	FG	CRA-61	3.00	FG
CRA-19	1.82	FG	CRA-19	3.33	FG	CRA-61	3.15	FG
CRA-19	1.84	FG	CRA-19	3.46	FG	CRA-61	3.15	FG
CRA-19	1.89	FG	CRA-19	3.46	FG	CRA-61	3.15	FG
CRA-19	1.89	FG	CRA-19	3.46	FG	CRA-598	0.61	FG
CRA-19	1.95	FG	CRA-19	3.46	FG	CRA-598	0.78	FG
CRA-19	2.01	FG	CRA-19	3.46	FG		TOTAL	FUNDING
CRA-19	2.10	FG	CRA-19	3.54	FG		60	FG
CRA-19	2.16	FG	CRA-19	3.56	FG			

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WORKSTATION: ksalay DATE: 11/3/2008

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GENERAL NOTES

CRA-19-1.18
CRA-61-0.58 (2.87)
CRA-97-0.70
CRA-598-0.50

ROADWAY

ITEM 608. CURB RAMP, TYPE A1, AS PER PLAN

ITEM 608, CURB RAMP, TYPE A1, AS PER PLAN IS INTENDED TO REPLACE THE EXISTING WALK, PAVEMENT, EMBANKMENT, AND CURB RAMPS WITH CURB RAMPS WITH TRUNCATED DOMES AND CURB (IF APPLICABLE). PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, EMBANKMENT OR EXCAVATION, GRADING, SEEDING, AND MATERIALS NECESSARY TO COMPLETE THE IMPROVEMENT EXCEPT WALK REMOVED, CURB REMOVED, AND CURB WILL BE PAID FOR SEPARATELY. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

DIAGONAL RAMPS (TYPE D) ARE DISCOURAGED FOR NEW CONSTRUCTION AND EXISTING DIAGONAL RAMPS SHOULD BE RETROFITTED WITH TWO PERPENDICULAR RAMPS, WHEN PRACTICABLE.

ITEM 608. TRUNCATED DOMES, BRICK

IN ADDITION TO STANDARD DRAWING BP-7.2, BRICKS SHALL BE USED AT THE LOCATIONS SPECIFIED IN THE PLANS AND THE BRICK COLOR SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.

PAVEMENT

ITEM 253 - PAVEMENT REPAIR & PAVEMENT REPAIR, MISC.: PARTIAL DEPTH

THESE ITEMS OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK. THE PAVEMENT CORING INFORMATION IS SHOWN ON THIS PLAN SHEET.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING AND BEFORE PLACEMENT OF THE INTERMEDIATE AND/OR SURFACE COURSE. THE REPAIR AREAS SHALL BE SAW CUT AND EXCAVATED TO PROVIDE STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA. PAVEMENT PLANING MAY BE USED AS AN ALTERNATIVE TO SAW CUTTING AND EXCAVATING. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE ADJACENT PAVEMENT. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT WITH A MAXIMUM DEPTH OF 12", BASED ON THE PAVEMENT DESIGN AND AN AVERAGE DEPTH OF 2". THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301 OR ITEM 448 TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 0" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE PAVEMENT REPAIR SHALL BE CLEANED AND COATED PER CMS 401.14, USING AN ASPHALT MATERIAL COMPLYING WITH 407.02. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH IS TO BE A MAXIMUM OF 4" DEEP AND ITEM 253 PAVEMENT REPAIR IS FOR DEPTHS GREATER THAN 4". PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR OR ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

WE ARE ANTICIPATING ONLY PARTIAL DEPTH REPAIRS ON THIS PROJECT. ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH AS FOLLOWS:

CRA-19 GALION.....	522 CU YD
CRA-19 FED/STATE	3 CU YD
CRA-61 GALION.....	348 CU YD
CRA-61 CRESTLINE.....	11 CU YD
CRA-61 FED/STATE	196 CU YD
CRA-97 GALION.....	4 CU YD
CRA-598 GALION.....	26 CU YD
CRA-598 FED/STATE	11 CU YD
TOTAL GALION.....	900 CU YD
TOTAL CRESTLINE.....	11 CU YD
TOTAL FED/STATE.....	210 CU YD

PAVEMENT CORING INFORMATION

CO/ROUTE/SLM	ASPHALT DEPTH	CONCRETE DEPTH	BRICK DEPTH	WHEEL TRACK/ SHOULDER	DIRECTION
CRA-19-1.28	10.0"			INSIDE	NB
CRA-19-1.96	3.8"			OUTSIDE	NB
CRA-19-2.31	4.5"	5.5"	3.8"	OUTSIDE	NB
CRA-19-2.70	1.7"		3.7"	OUTSIDE	NB
CRA-19-3.56	6.0"			OUTSIDE	NB
CRA-19-3.98	14.8"			OUTSIDE	NB
CRA-61-1.00	7.0"	7.0"		INSIDE	NB
CRA-61-2.98	11.8"			INSIDE	NB
CRA-61-3.00	9.1"			INSIDE	NB
CRA-61-3.90	12.0"			INSIDE	NB
CRA-61-5.01	14.5"			INSIDE	NB
CRA-598-1.00	7.1"			INSIDE	NB

PAVEMENT

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH ALONG THE CURB CONTINGENT ON THE FOLLOWING: THE PAVEMENT SLOPE SHALL BE CONTINUOUS BETWEEN THE CROWN AND THE CURB WHILE TRYING TO ACHIEVE THE TYPICAL CROSS SLOPE OF 0.016. THE MAXIMUM CROSS SLOPE SHALL BE 0.02 WHILE THE MINIMUM CROSS SLOPE SHALL BE 0.01. THE CROWN OF THE PAVEMENT SHALL BE LOCATED BETWEEN THE TRAVELED LANES, OR AS DIRECTED BY THE ENGINEER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CURB, TO PRODUCE A CROSS SLOPE IN CONFORMANCE WITH THE ABOVE GUIDELINES.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE INTO ALL CATCH BASINS AND INLETS.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FOURTEEN (14) CALENDAR DAYS. THE 14 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF PAVEMENT PLANING, ASPHALT CONCRETE.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (NON-CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE THICKNESS SHOWN IN THE PAVEMENT AND SHOULDER DATA SHEET TABLES AT THE CENTER OF PAVEMENT AT NON-CURBED AREAS. THE PAVEMENT SLOPE SHALL BE 0.016 PREFERRED AND 0.010 MINIMUM, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/SHOULDER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER OF PAVEMENT IN CONFORMANCE WITH THE ABOVE GUIDELINES.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE INTO ALL CATCH BASINS AND INLETS.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FOURTEEN (14) CALENDAR DAYS. THE 14 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108), AND FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07.

THE AMOUNT OF GRINDINGS RESULTING FROM THIS WORK MAY PRODUCE UNEXPECTED VOLUMES OF GRINDINGS DUE TO THE EXISTING TRANSVERSE SLOPE OF THE PAVEMENT.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF PAVEMENT PLANING, ASPHALT CONCRETE. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR UNEXPECTED VOLUMES OF ASPHALT GRINDINGS.

**ITEM 407, TACK COAT
ITEM 407, TACK COAT FOR INTERMEDIATE COURSE**

AS PER 407.06 THE APPLICATION RATES SHALL BE 0.08 GAL. PER SQ. YD. PRIOR TO THE INTERMEDIATE COURSE AND SHALL BE 0.03 GAL PER SQ. YD. PRIOR TO THE SURFACE COURSE FOR ESTIMATING PURPOSES ONLY. THE RATE OF APPLICATION SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. A COMPLETE PAVEMENT SURFACE COVERAGE SHALL BE REQUIRED. AREAS OF TACK STRIPPED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE RE-COATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COSTS AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER GALLON FOR ITEM 407, TACK COAT AND ITEM 407 TACK COAT FOR INTERMEDIATE COURSE.

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WORKSTATION: kscalay DATE: 11/3/2008

CALCULATED	KRB	CHECKED	BAD
GENERAL NOTES			
CRA-19-1.18			
CRA-61-0.58 (2.87)			
CRA-97-0.70			
CRA-598-0.50			
5			
36			

PAVEMENT

ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
 MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
 MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
 USE A PG 64-22 BINDER.
 MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
 WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE SOURCE GROUP LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.
 QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
 MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
 MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
 USE A PG 64-22 BINDER.
 MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
 QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN

THIS ITEM IS TO BE USED TO CREATE A SMOOTH TRANSITION FROM THE COMPLETED SURFACE COURSE OF THE PAVED SHOULDER TO THE EXISTING PAVED DRIVEWAYS. THIS ITEM SHALL BE AS DIRECTED BY THE ENGINEER. ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO CREATE A SMOOTH TRANSITION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
 MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
 MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
 USE A PG 64-22 BINDER.
 MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
 QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 617, COMPACTED AGGREGATE, AS PER PLAN

THIS ITEM OF WORK SHALL CONFORM TO ITEM 617 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BOOK WITH EXCEPTION OF 617.02 (MATERIALS).

THE MATERIAL ON THIS PROJECT SHALL BE THE ASPHALT CONCRETE GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS USED FOR THIS WORK ARE TO BE PLACED AND COMPACTED AS DESCRIBED IN 617.05 WITH SPECIAL CARE TO CREATE PROPER COMPACTION. 100% OF THIS MATERIAL SHALL PASS A 1.5 INCH SIEVE. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE TYPICAL SECTIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REQUIRED TO APPLY THE ITEM 408 PRIME COAT WITHIN 5 CALENDAR DAYS OF PLACING THE COMPACTED AGGREGATE, AS PER PLAN.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER CU. YD. OF ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

ITEM 254 PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254, PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN CMS 254.04. THE LIMIT OF THE PATCHING DEPTH IS 0 TO 2 IN.

PAVEMENT

INTERSECTIONS AND DRIVES

RURAL-INTERSECTIONS SHALL BE PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

URBAN-INTERSECTIONS SHALL BE PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

EXISTING PAVED DRIVES SHALL BE PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH A 4 FT. MINIMUM WIDTH APRON. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ANY GRADING NEEDED TO PAVE THE APRON SHALL BE INCLUDED IN THE RELATED ASPHALT ITEM FOR PAYMENT. ITEM 617 AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY OF ITEM 617 HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN AS AN EXTRA AREA ON THE PAVEMENT & SHOULDER DATA SHEET.

ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

PROFILE CORRECTION AT STRUCTURES

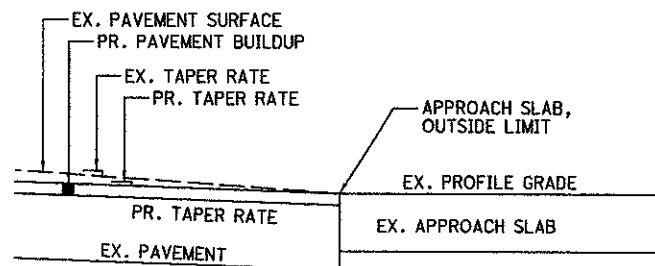
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE PROPOSED TREATMENT ON THE APPROACH SLABS (OUTSIDE LIMITS) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP.

THE MINIMUM DISTANCE BETWEEN CONSECUTIVE GRADE BREAKS IS:
 100' WHERE THE POSTED SPEED IS 50 MPH OR GREATER
 50' WHERE THE POSTED SPEED IS LESS THAN 50 MPH

THE FOLLOWING ARE TAPER RATES, BASED ON THE EXISTING PROFILE GRADE OF THE ROADWAY, WHICH SHALL BE MET TO ENSURE A SMOOTH TRANSITION.

SPEED	TAPER RATE
25	55:1
30	80:1
35	110:1
40	140:1
45	190:1
50	230:1
55	250:1
60	340:1
65	340:1
70	400:1

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESURFACING OPERATIONS.



PAVEMENT

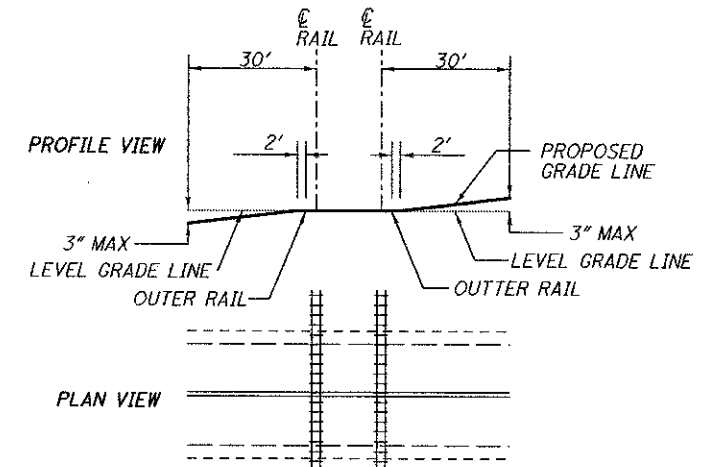
RAILROAD CROSSINGS

PRIOR TO ANY WORK AT RAILROAD CROSSINGS THE CONTRACTOR SHALL CONTACT THE AFFECTED RAILROAD AUTHORITY SO AS TO MAKE THEM AWARE OF THE PROGRESS AND SCHEDULE OF WORK. THE CONTRACTOR SHALL COOPERATE WITH THE RAILROAD SO AS TO ELIMINATE ANY SAFETY CONCERNS. FLAGGING WILL BE REQUIRED BY THE RAILROAD. REFER TO THE RAILROAD LIABILITY INSURANCE PROPOSAL NOTE.

THE CROWN SHALL BE WORKED OUT OF THE RESURFACED PAVEMENT ON EACH SIDE OF THE RAILROAD CROSSING, BEGINNING 50 FEET FROM THE NEAREST RAIL, BY RAISING THE EDGES OF THE RESURFACED PAVEMENT TO MEET THE PLATFORM ELEVATION.

SUSPEND AND RESUME RESURFACING AT THE HEADER TIE, AS DIRECTED BY THE ENGINEER.

GENERAL RAILROAD CROSSING DETAIL



WATER WORKS

ITEM 638 - VALVE BOX ADJUSTED TO GRADE

ANY UNIT OF THIS ITEM MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING OR INLET IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEER'S APPROVAL BEFORE USING.

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (I), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING OR GRATE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

ADJUST VALVE BOXES TO GRADE AS PER ITEM 638.18 IN THE CMS.

TRAFFIC CONTROL

ALTERNATE BID ITEMS

THE ITEM 642 ALTERNATE BID ITEMS FOR AUXILIARY MARKINGS ONLY APPLY TO THE CITY OF GALION.

DESIGN FILE: i:\projects\79449\roadway\sheets\79449GN001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008

CALCULATED
 KRB
 CHECKED
 BAD
 GENERAL NOTES

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

MAINTENANCE OF TRAFFIC

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE.

CONSTRUCTION "BUMP" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) SIGNS SHALL BE ERECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

PLACEMENT OF ASPHALT CONCRETE

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

ITEM 614. ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1.5 INCHES, AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS, AS DIRECTED BY THE ENGINEER. BEFORE THE ASPHALT CONCRETE RESURFACING IS PLACED, THE TEMPORARY WEDGE SHALL BE REMOVED AND THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
 FED/GALION = 25 CU YD
 FED/CRESTLINE = 25 CU YD
 FED/STATE = 25 CU YD

ITEM 614. MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

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

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

CRESTLINE HARVEST FESTIVAL (THIRD WEEK IN SEPTEMBER FROM WEDNESDAY THROUGH SUNDAY)
 GALION OCTOBERFEST (LAST FULL WEEKEND IN SEPTEMBER BEGINNING ON THURSDAY)
 GALION HIGH SCHOOL CROSS COUNTRY INVITATIONAL (SECOND SATURDAY IN SEPTEMBER)

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

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH CMS 108.07.

MAINTENANCE OF TRAFFIC

ITEM 614. WORK ZONE MARKING SIGN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04.

WORK ZONE MARKING SIGN: (W8-H13-36) NO EDGE LINE
 CRA-61 FED/GALION = 3 EACH
 CRA-61 FED/STATE = 10 EACH
 CRA-598 FED/STATE = 1 EACH

WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS
 CRA-61 FED/GALION = 4 EACH
 CRA-61 FED/CRESTLINE = 1 EACH
 CRA-61 FED/STATE = 8 EACH
 CRA-598 FED/STATE = 1 EACH

WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE
 CRA-61 FED/GALION = 2 EACH
 CRA-61 FED/STATE = 1 EACH
 CRA-598 FED/STATE = 1 EACH

TOTAL FED/GALION = 9 EACH
 TOTAL FED/CRESTLINE = 1 EACH
 TOTAL FED/STATE = 22 EACH

TIME LIMITATIONS - START WORK

WORK SHALL NOT START UNTIL ON OR AFTER JUNE 8, 2009 DUE TO SCHOOLS, EXCEPT ON SR 61 FROM SLM 4.98 TO SLM 7.09.

LIMITATIONS FOR STRUCTURE CRA-19-0354

MAINTAIN ONE LANE OF TRAFFIC UTILIZING A SIGNALIZED CLOSURE WITH THE FOLLOWING LIMITATIONS:

1. DUE TO THE LOCATION OF THE LOCAL BUSINESSES DRIVEWAYS, MAINTAIN ACCESS TO THESE BUSINESSES. DETAILS CAN BE FOUND ON SHEET 31A.
2. THE CONTRACTOR IS TO PROVIDE THE CITY OF GALION AND THE ENGINEER WITH AT LEAST 14 CALENDAR DAYS OF ADVANCE NOTICE SO THAT BUSINESSES CAN BE NOTIFIED AND A PRESS RELEASE BE PERFORMED.
3. LIMIT THE WORK TO A MAXIMUM OF FOUR (4) CONSECUTIVE WEEKENDS BETWEEN MAY 29, 2009 TO AUGUST 24, 2009.
4. IF POSSIBLE, IT IS REQUESTED BY THE CITY AND BUSINESSES TO PERFORM THIS WORK ON CONSECUTIVE WEEKENDS.
5. LIMIT THE SIGNALIZED CLOSURE BETWEEN 6:00 PM FRIDAY AND OPENED BY 6:00 AM MONDAY. ALL BARRELS, TEMPORARY STOP BARS AND TEMPORARY SIGNALS ARE TO BE REMOVED FROM THE ROADWAY AND DRIVEWAYS BY 6:00 AM MONDAY MORNING.
6. OTHER PLAN NOTES RESTRICTING THE CONTRACTOR FROM WORKING DURING SPECIAL EVENTS AND HOLIDAYS STILL APPLY.

FAILURE OF THE CONTRACTOR TO MEET THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07 OF THE CMS.

IF THE CONTRACTOR DOES NOT NEED TO SET UP THE SIGNALIZED CLOSURE ON FRIDAY NIGHTS AND PLANS TO WORK ONLY ON SATURDAY AND/OR SUNDAYS (FOR THE EXPANSION JOINT WORK ONLY), THE BUSINESSES REQUEST THAT THE CONTRACTOR NOT TO SET UP THE SIGNALIZED CLOSURE UNTIL NEEDED.

DESIGN FILE: I:\projects\79449\roadway\sheets\79449GN001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008

CALCULATED
 KRB
 CHECKED
 BAD

MAINTENANCE OF TRAFFIC NOTES

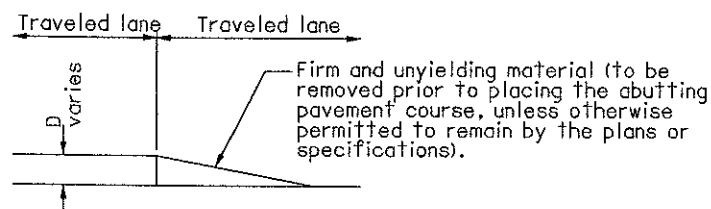
CRA-19-1.18
 CRA-61.0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

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.

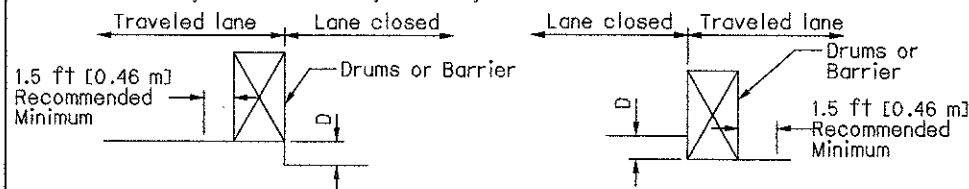


CONDITION I
DROP-OFFS BETWEEN TRAVELED LANES

- 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.

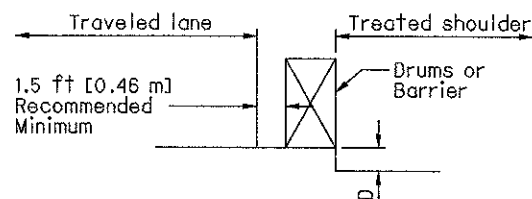


CONDITION II
DROP-OFFS WITHIN GRADED SHOULDER AREA

- 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].

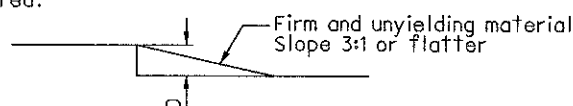
D - inches (mm)	Treatment
< 1-1/2 [< 40]	1) Erect W8-9a signs.
> 1-1/2 - 5 [$> 40-125$]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder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



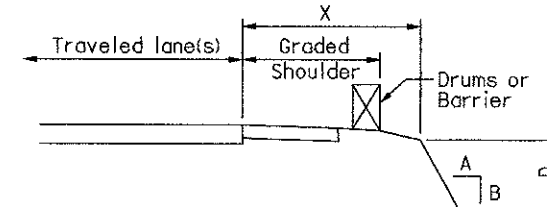
CONDITION III

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

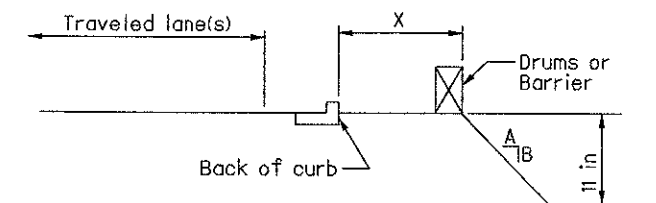


X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 4 [0 - 1.2]	Any	Any	(a)	(a)
4 - 30 [1.2 - 9.1]	Any	3:1 or Flatter	None	None
4 - 12 [1.2 - 3.6]	< 3 [< 75]	Steeper than 3:1	None	None
4 - 12 [1.2 - 3.6]	> 3 - < 12 [$> 75 - < 305$]	Steeper than 3:1	Drums	Drums
4 - 12 [1.2 - 3.6]	> 12 [> 305]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

DESIGN FILE: i:\projects\79449\roadway\sheet\79449GMO01.dgn
 WORKSTATION: ksalay DATE: 11/3/2008

ITEM SPECIAL, MAILBOX SUPPORT SYSTEM

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF EXISTING NON-STANDARD MAILBOX SUPPORTS AND FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED HARDWARE IN ACCORDANCE WITH THE DETAILS SHOWN, AND ATTACHING AN OWNER SUPPLIED MAILBOX, AT LOCATIONS DETERMINED BY THE ENGINEER.

IN ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE BOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.]

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4 1/2 IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE LOCAL POST MASTER AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE	
S.R. 19	FED/STATE = 1 EACH
	FED/GALION = 1 EACH
S.R. 61	FED/STATE = 1 EACH
	FED/GALION = 7 EACH

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE	
S.R. 61	FED/STATE = 1 EACH
	FED/GALION = 7 EACH

MAILBOX APPROACHES

THE MAILBOX APPROACHES SHALL BE PAVED THE SAME AS THE ROADWAY. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

GRADING SHALL BE PERFORMED IN THESE AREAS TO OBTAIN A BASE WHICH WILL ALLOW THE FINISHED GRADE TO BE FLUSH WITH ADJACENT PAVEMENT. A QUANTITY OF ITEM 617 COMPACTED AGGREGATE, AS PER PLAN HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

ITEM 209 - GRADING MAILBOX APPROACHES:	
S.R. 19	FED/GALION = 26 EACH
S.R. 61	FED/STATE = 7 EACH
	FED/GALION = 21 EACH
S.R. 97	FED/GALION = 5 EACH
S.R. 598	FED/GALION = 2 EACH

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN	
S.R. 19	FED/GALION = 52 CU. YD.
S.R. 61	FED/STATE = 14 CU. YD.
	FED/GALION = 42 CU. YD.
S.R. 97	FED/GALION = 10 CU. YD.
S.R. 598	FED/GALION = 4 CU. YD.

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

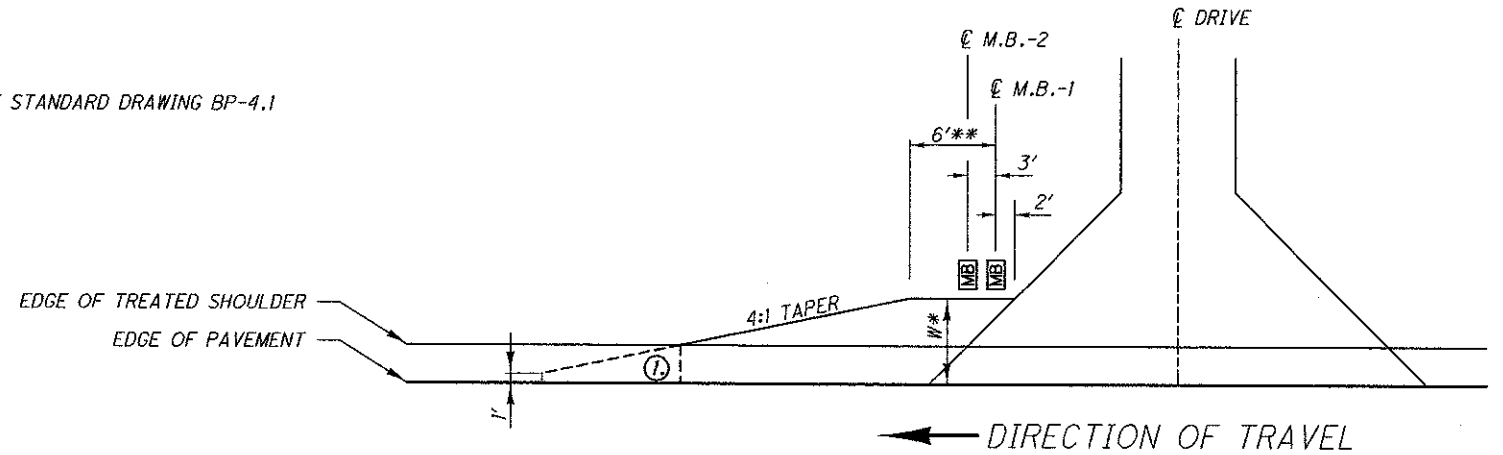
ADDRESSES AND/OR LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED:

<u>SINGLE SUPPORT SYSTEMS (FED/STATE)</u>	<u>DOUBLE SUPPORT SYSTEMS (FED/STATE)</u>
1110 S.R. 19	7616 S.R. 61

1737 S.R. 61

<u>SINGLE SUPPORT SYSTEMS (FED/GALION)</u>	<u>DOUBLE SUPPORT SYSTEMS (FED/GALION)</u>
1125 S.R. 19	744 S.R. 61
	788 S.R. 61
851 S.R. 61	807 S.R. 61
UNMARKED S.R. 61 (SLM 3.49 LT)	809 S.R. 61
1012 S.R. 61	860 S.R. 61
1170 S.R. 61	900 S.R. 61
1212 S.R. 61	1012 S.R. 61
1236 S.R. 61	
1255 S.R. 61	

FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



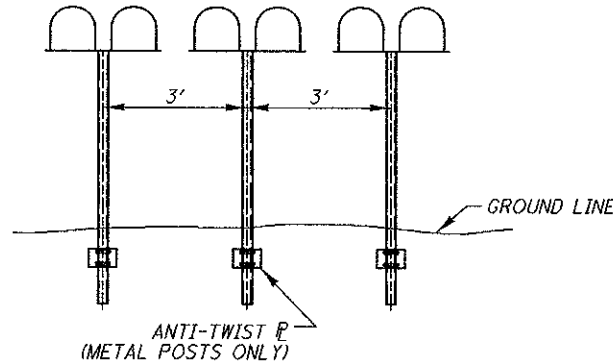
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' FROM THE EDGE OF PAVEMENT IF TREATED SHOULDER IS AGGREGATE GREATER.

W* NOTES

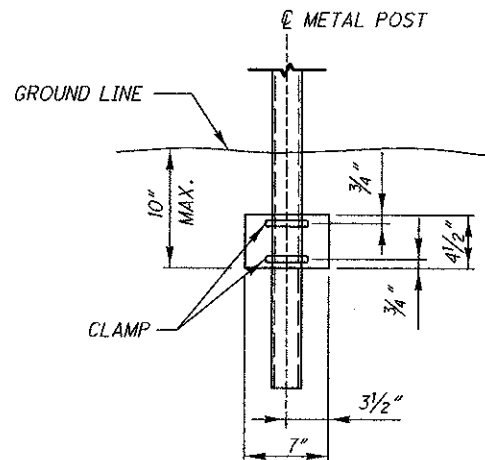
- 1) WHERE EXISTING STANDARD MAILBOX POSTS ARE BEHIND GUARDRAIL AND ARE TO REMAIN IN PLACE, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL.
- 2) WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND 6' MAXIMUM OR TO THE FACE OF THE EXISTING STANDARD MAILBOX IF IT IS LESS THAN 6 FEET.
- 3) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL AND MAILBOX SHALL BE INSTALLED BEHIND THE GUARDRAIL.
- 4) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MINIMUM.

**** NOTE**

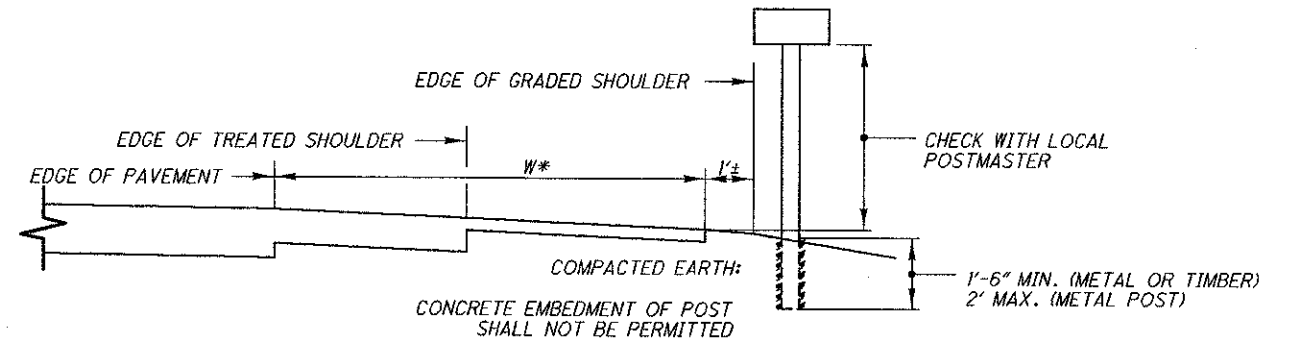
- 1) 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX.



GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



CROSS SECTION / ELEVATION VIEW

CALCULATED
KRB
CHECKED
BAD

MAILBOX FACILITIES

CRA-19-1.19
CRA-61-0.58 (2.87)
CRA-97-0.70
CRA-598-0.50

GENERAL SUMMARY

Table with columns: 100% GALION, 100% CRESTLINE, 80% FED-20% GALION, 80% FED-20% CRESTLINE, 80% FED-20% STATE, 100% GALION, 100% CRESTLINE, 80% FED-20% GALION, 80% FED-20% CRESTLINE, 80% FED-20% STATE, ITEM, ITEM EXT., TOTAL, UNIT, DESCRIPTION, REF. SHT.

GENERAL SUMMARY

CRA-19-1.18 CRA-61-0.58 (2.87) CRA-97-0.70 CRA-598-0.50

FUNDING PARTICIPATION			* - FOR TYPICALS, SEE SHEETS 14-15 # - INCLUDES DEDUCT AT STRUCTURES														CALC BY																						
FC = 80% FED. / 20% CRESTLINE	FG = 80% FED. / 20% GALION	FS = 80% FED. / 20% STATE	COUNTY-ROUTE	LOG POINT TO LOG POINT	LENGTH		WIDTH	PAVEMENT	TYPICAL	254			254		407		407		442		442		442		AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA		209	408	617		617						
				STRAIGHT LINE MILEAGE	MILE	FEET	FEET	AREA		PAVEMENT PLANING, ASPHALT CONCRETE (1.00")	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	PAVEMENT PLANING, ASPHALT CONCRETE (2.25")	PATCHING PLANED SURFACE	TACK COAT (0.08 GAL/SY)	TACK COAT FOR INTERM. COURSE (0.03 GAL/SY)	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448) (DRIVEWAYS)					LINEAR GRADING	PRIME COAT @ 0.40 GAL/SY	COMPACTED AGGREGATE, AS PER PLAN		SHOULDER PREPARATION												
							AVG.	SQ YD		SQ YD	SQ YD	SQ YD	SQ YD	GALLON	GALLON	INCH	CU YD	INCH	CU YD	INCH	CU YD	SL	SR	2 INCHES		AVG. THICKNESS													
										SQ YD	SQ YD	SQ YD	SQ YD	GALLON	GALLON	INCH	CU YD	INCH	CU YD	INCH	CU YD	FT	FT	SQ YD	MILE	GALLON	CU YD	SQ YD											
FG	CRA-19	1.18	1.40	0.22	1161.6	26.0	3,356	1			3,356	34	268	101	1.25	117	1.00	93						2.0	2.0	516	0.44	207	29	516									
FG	CRA-19	1.40	1.48	0.08	422.4	37.0	1,737	1			1,737	17	139	52	1.25	60	1.00	48						2.0	2.0	188	0.16	75	10	188									
FG	CRA-19	1.48	1.81	0.33	1742.4	31.0	6,002	2			6,002	60	480	180	1.25	208	1.00	167																					
FG	CRA-19	1.81	2.19	0.38	2006.4	36.5	8,137	2			8,137	81	651	244	1.25	283	1.00	226																					
FG	CRA-19	2.19	2.86	0.67	3537.6	38.5	15,133	3			15,133	151	1,211	454	1.25	525	1.00	420																					
FG	CRA-19	2.86	3.03	0.17	897.6	34.8	3,471	3			3,471	35	278	104	1.25	121	1.00	96																					
FG	CRA-19	3.03	3.39	0.36	1900.8	31.0	6,547	3			6,547	65	524	196	1.25	227	1.00	182																					
FG	CRA-19	3.39	3.40	0.01	52.8	38.5	214	3			214	2	17	6	1.25	7	1.00	6																					
FG	CRA-19	3.40	3.48	0.08	422.4	42.0	1,971	3			1,971	20	158	59	1.25	68	1.00	55																					
FG	CRA-19	3.48	3.51	0.03	158.4	40.5	713	4			713	7	57	21	1.25	25	1.00	20																					
# FG	CRA-19	3.51	3.58	0.07	369.6	40.5	1,221	2			1,221	12	98	37	1.25	42	1.00	34																					
FG	CRA-19	3.58	3.62	0.04	211.2	39.0	915	5			915	9	73	27	1.25	32	1.00	25					2.0			47	0.04	19	3	47									
FG	CRA-19	3.62	3.64	0.02	105.6	39.5	463	5			463	5	37	14	1.25	16	1.00	13					2.0			23	0.02	9	1	23									
FG	CRA-19	3.64	3.67	0.03	158.4	40.0	704	5			704	7	56	21	1.25	24	1.00	20					2.0			35	0.03	14	2	35									
FG	CRA-19	3.67	3.81	0.14	739.2	34.0	2,793	5			2,793	28	223	84	1.25	97	1.00	78					2.0			164	0.14	66	9	164									
FG	CRA-19	3.81	4.16	0.35	1848	26.0	5,339	1			5,339	53	427	160	1.25	185	1.00	148					2.0	2.0	821	0.70	329	46	821										
FG	CRA-19	4.16	4.21	0.05	264	27.0	396	1			396	4	32	12	1.25	14	1.00	11					2.0	2.0	59	0.05	23	3	59										
FS	CRA-19	4.16	4.21	0.05	264	27.0	396	1			396	4	32	12	1.25	14	1.00	11					2.0	2.0	59	0.05	23	3	59										
FG	CRA-19-0354, 25' LONG TRANSITION																																						
FG	EXTRA AREA FOR INTERSECTIONS										4,800			4,800	48	384	144	1.25	167	1.00	133																		
FS	EXTRA AREA FOR INTERSECTIONS																																						
FG	EXTRA AREA FOR PAVED DRIVES										1,044			1,044		84							2.25	65															
FS	EXTRA AREA FOR PAVED DRIVES										9			9		1						2.25	1																
FG	EXTRA AREA FOR AGGREGATE DRIVES										576			576														576											
FS	EXTRA AREA FOR AGGREGATE DRIVES																																						
FG	EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES										300			300		24	9	1.25	10	1.00	8																		
FS	EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES										10			10		1		1.25		1.00																			
FG	TOTAL QUANTITY FOR FED. / GALION FUNDING SPLIT												64,996	638	5,221	1,925		2,228		1,789						2,429	1.58	972	135	2,429									
FS	TOTAL QUANTITY FOR FED. / STATE FUNDING SPLIT												415	4	34	12		14		11						59	0.05	23	3	59									
TOTAL FOR CRA-19												65,411	642	5,255	1,937		2,242		1,800		66					2,488	1.63	995	138	2,488									
FG	CRA-61	0.58	0.72	0.14	739.2	28.5	2,341	1			2,341	23	187	70	1.25	81	1.00	65					2.0	2.0	329	0.28	131	18	329										
FG	CRA-61	0.72	0.73	0.01	52.8	33.0	194	5			194	2	16	6	1.25	7	1.00	5					2.0			12	0.01	5	1	12									
FG	CRA-61	0.73	1.28	0.55	2904	33.0	10,648	2			10,648	106	852	319	1.25	370	1.00	296																					
SLM 1.28 - SUSPEND, SLM 2.87 RESUME (SLM 1.60 TO 2.87 OVERLAP WITH CRA-19-3.46 TO 2.19)																																							
# FG	CRA-61	2.87	3.61	0.74	3907.2	31.5	13,352	6			13,352	134	1,068	401	1.25	464	1.00	371																					
# FG	CRA-61	3.61	3.85	0.24	1267.2	31.5	4,087	7			4,087	41	327	108	1.50	170							2.0	2.0	563	0.48	225	31	563										
FS	CRA-61	3.85	4.67	0.82	4329.6	38.0	18,281	7			18,281	183	1,462	488	1.50	762							2.0	2.0	1,924	1.64	770	107	1,924										
FS	CRA-61	4.67	4.82	0.15	792	38.5	1,694	7			1,694	17	136	46	1.50	71							2.0	2.0	176	0.15	70	10	176										
FG	CRA-61	4.67	4.82	0.15	792	38.5	1,694	7			1,694	17	136	46	1.50	71							2.0	2.0	176	0.15	70	10	176										
FS	CRA-61	4.82	4.93	0.11	580.8	38.5	1,242	7			1,242	12	99	32	1.50	52							2.0	2.0	129	0.11	52	7	129										
FG	CRA-61	4.82	4.93	0.11	580.8	38.5	1,242	7			1,242	12	99	32	1.50	52							2.0	2.0	129	0.11	52	7	129										
FG	CRA-61	4.93	4.98	0.05	264	38.5	1,129	7			1,129	11	90	28	1.50	47							2.0	2.0	117	0.10	47	7	117										
FG	CRA-61	4.98	5.73	0.75	3960	27.0	11,880	8			11,880	119	950	356	1.25	413	0.75	248					2.0	2.0	1,760	1.50	704	98	1,760										
FS	CRA-61	5.73	5.81	0.08	422.4	27.0	634	8			634	6	51	19	1.25	22	0.75	13					2.0	2.0	94	0.08	38	5	94										
FG	CRA-61	5.73	5.81	0.08	422.4	27.0	634	8			634	6	51	19	1.25	22	0.75	13					2.0	2.0	94	0.08	38	5	94										
FC	CRA-61	5.81	5.93	0.12	633.6	27.0	950	8			950	10	76	29	1.25	33	0.75	20					2.0	2.0	141	0.12	56	8	141										
FG	CRA-61	5.81	5.93	0.12	633.6	27.0	950	8			950	10	76	29	1.25	33	0.75	20					2.0	2.0	141	0.12	56	8	141										
SLM 5.93 - SUSPEND, SLM 6.46 RESUME (SLM 5.93 TO 6.46 NEW INTERCHANGE AT US 30)																																							
FS	CRA-61	6.46	6.58	0.12	633.6	27.0	1,901	8			1,901	19	152	57	1.25	66	0.75	40					2.0	2.0	282	0.24	113	16	282										
FC	CRA-61	6.58	6.62	0.04	211.2	27.0	317	8			317	3	25	10	1.25	11	0.75	7					2.0	2.0	47	0.04	19	3	47										
FS	CRA-61	6.58	6.62	0.04	211.2	27.0	317	8			317	3	25	10	1.25	11	0.75	7					2.0	2.0	47	0.04	19	3	47										
FS	CRA-61	6.62	6.66	0.04	211.2	27.0	634	8			634	6	51	19	1.25	22	0.75	13					2.0	2.0	94	0.08	38	5	94										
FS	CRA-61	6.66	6.73	0.07	369.6	27.0	554	8			554	6	44	17	1.25	19																							

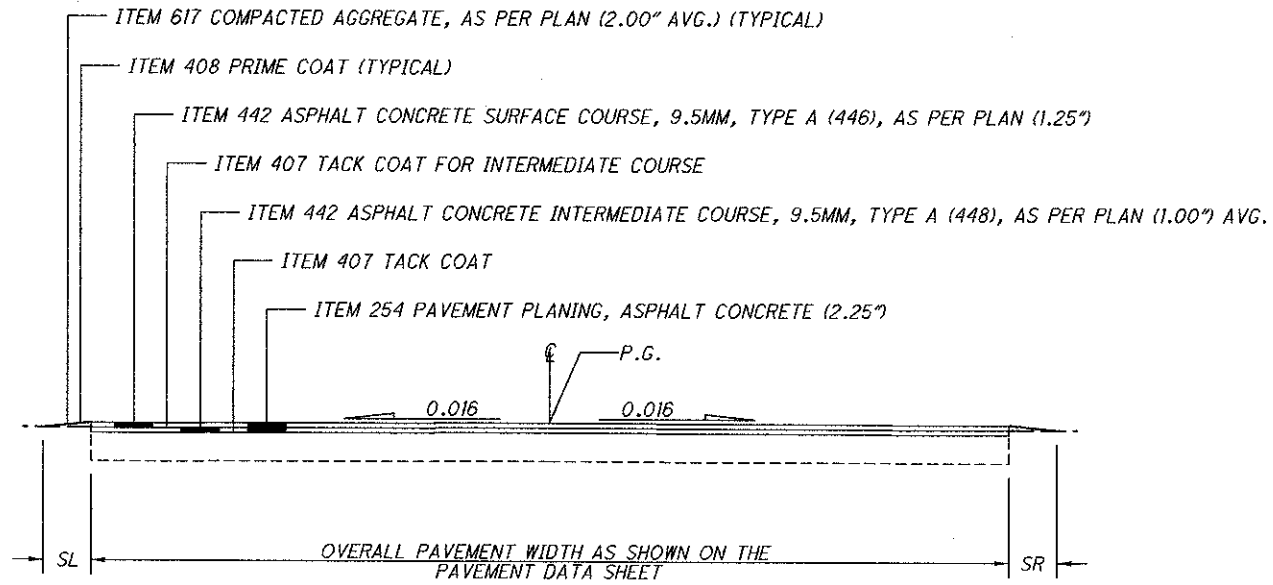
* - FOR TYPICALS, SEE SHEETS 14-15

FUNDING PARTICIPATION FC = 80% FED. / 20% CRESTLINE FG = 80% FED. / 20% GALION FS = 80% FED. / 20% STATE	COUNTY-ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG.	PAVEMENT AREA SQ YD	TYPICAL	254			254	407	407	442		442		AGGREGATE SHOULDER PROPOSED WIDTH SL SR	AGGREGATE SHOULDER AREA SQ YD	209	408	617		617	CALC BY													
		STRAIGHT LINE MILEAGE	MILE	FEET	PAVEMENT CONCRETE (1.00") SQ YD				PAVEMENT CONCRETE (1.50") SQ YD	PAVEMENT CONCRETE (2.25") SQ YD	PATCHING PLANED SURFACE SQ YD	TACK COAT (0.08 GAL/SY) GALLON	TACK COAT FOR INTERM. COURSE (0.03 GAL/SY) GALLON	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN INCH CU YD		ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN INCH CU YD		ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (448) (DRIVEWAYS) INCH CU YD			LINEAR GRADIN G MILE	PRIME COAT @ 0.40 GAL/SY GALLON	COMPACTED AGGREGATE, AS PER PLAN 2 INCHES AVG. THICKNESS CU YD		SHOULDER PREPARATION SQ YD	CALC BY													
						KRB																																	
FG	CRA-97	0.70	0.71	0.01	52.8	37.0	217	1				217	2	17	7	1.25	8	1.00	6																				
FG	CRA-97	0.71	0.74	0.03	158.4	32.0	563	1				563	6	45	17	1.25	20	1.00	16	2.0	2.0	23	0.02	9	1	23													
FG	CRA-97	0.74	0.78	0.04	211.2	24.5	575	1				575	6	46	17	1.25	20	1.00	16	2.0	2.0	70	0.06	28	4	70													
FG	CRA-97	0.78	0.82	0.04	211.2	37.0	868	1				868	9	69	26	1.25	30	1.00	24	2.0	2.0	94	0.08	38	5	94													
FG	EXTRA AREA FOR INTERSECTIONS							200				200	2	16	6	1.25	7	1.00	6																				
FG	EXTRA AREA FOR PAVED DRIVES							81				81		6						2.25	5																		
FG	EXTRA AREA FOR AGGREGATE DRIVES							18				18																											
FG	EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES							50				50		4	2	1.25	2	1.00	1							18	7	1	18										
FG	TOTAL QUANTITY FOR FED. / GALION FUNDING SPLIT													2,504	25	203	75		87		69				299	0.24	120	16	299										
FG	TOTAL FOR CRA-97													2,504	25	203	75		87		69				299	0.24	120	16	299										
FG	CRA-598	0.50	0.73	0.23	1,214.4	24.0	3,238	3				3,238	32	259	97	1.25	112	1.00	90																				
FS	CRA-598	0.73	0.76	0.03	158.4	24.0	211	3				211	2	17	6	1.25	7	1.00	6																				
FG	CRA-598	0.73	0.76	0.03	158.4	24.0	211	3				211	2	17	6	1.25	7	1.00	6																				
FS	CRA-598	0.76	0.88	0.12	633.6	24.0	845	9	845			845	8	68	25	1.25	29	1.00	23	2.0	2.0	141	0.12	56	8	141													
FG	CRA-598	0.76	0.88	0.12	633.6	24.0	845	9	845			845	8	68	25	1.25	29	1.00	23	2.0	2.0	141	0.12	56	8	141													
FS	CRA-598	0.88	0.91	0.03	158.4	24.0	422	9	422			422	4	34	13	1.25	15	1.00	12	2.0	2.0	70	0.06	28	4	70													
FG	CRA-598	0.91	1.15	0.24	1,267.2	24.0	3,379	9	3,379			3,379	34	270	101	1.25	117	1.00	94	2.0	2.0	563	0.48	225	31	563													
FS	CRA-598	1.15	1.18	0.03	158.4	24.0	211	9	211			211	2	17	6	1.25	7	1.00	6	2.0	2.0	35	0.03	14	2	35													
FG	CRA-598	1.15	1.18	0.03	158.4	24.0	211	9	211			211	2	17	6	1.25	7	1.00	6	2.0	2.0	35	0.03	14	2	35													
FG	CRA-598	1.18	1.31	0.13	686.4	24.0	1,830	9	1,830			1,830	18	146	55	1.25	64	1.00	51	2.0	2.0	305	0.26	122	17	305													
FG	CRA-598	1.31	1.37	0.06	316.8	24.0	422	9	422			422	4	34	13	1.25	15	1.00	12	2.0	2.0	70	0.06	28	4	70													
FS	CRA-598	1.31	1.37	0.06	316.8	24.0	422	9	422			422	4	34	13	1.25	15	1.00	12	2.0	2.0	70	0.06	28	4	70													
FS	CRA-598	1.37	1.54	0.17	897.6	24.0	2,394	9	2,394			2,394	24	192	72	1.25	83	1.00	67	2.0	2.0	399	0.34	160	22	399													
FG	EXTRA AREA FOR INTERSECTIONS							100				100	1	8	3	1.25	3	1.00	3																				
FS	EXTRA AREA FOR INTERSECTIONS							200				200	2	16	6	1.25	7	1.00	6																				
FG	EXTRA AREA FOR PAVED DRIVES							90				90		7						2.25	6																		
FS	EXTRA AREA FOR PAVED DRIVES							126				126		10								2.25	8																
FG	EXTRA AREA FOR AGGREGATE DRIVES							63				63																											
FS	EXTRA AREA FOR AGGREGATE DRIVES																																						
FG	EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES							30				30		2	1	1.25	1	1.00	1																				
FS	EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES																																						
FG	TOTAL QUANTITY FOR FED. / GALION FUNDING SPLIT													6,787	101	828	307		355		286				1,177	0.95	470	66	1,177										
FS	TOTAL QUANTITY FOR FED. / STATE FUNDING SPLIT													4,620	211	46	388	141		163		132				715	0.61	286	40	715									
FG	TOTAL FOR CRA-598													11,407	3,760	147	1,216	448		518		418				1,892	1.56	756	106	1,892									
FC	PROJECT TOTAL QUANTITY FOR FED. / CRESTLINE FUNDING SPLIT													1,267	13	101	39		44		27				188	0.16	75	11	188										
FG	PROJECT TOTAL QUANTITY FOR FED. / GALION FUNDING SPLIT													22,982	8,541	99,549	1,284		10,527		3,637				8,112	5.91	3,245	452	8,112										
FS	PROJECT TOTAL QUANTITY FOR FED. / STATE FUNDING SPLIT													12,809	22,243	626	348		2,862		422				4,363	3.55	1,746	243	4,363										
	PROJECT TOTALS													37,058	30,784	100,175	1,645		13,490		4,098				12,663	9.62	5,066	706	12,663										

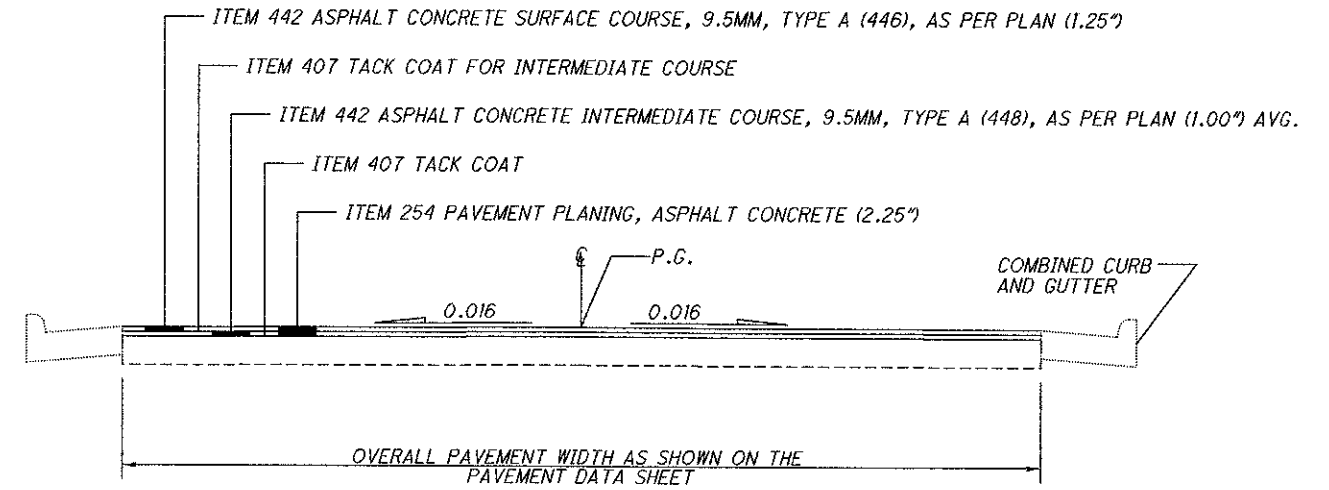
PAVEMENT & SHOULDER DATA

CRA-19-1.18 CRA-61-0.58 (2.87)
CRA-97-0.70 CRA-598-0.50

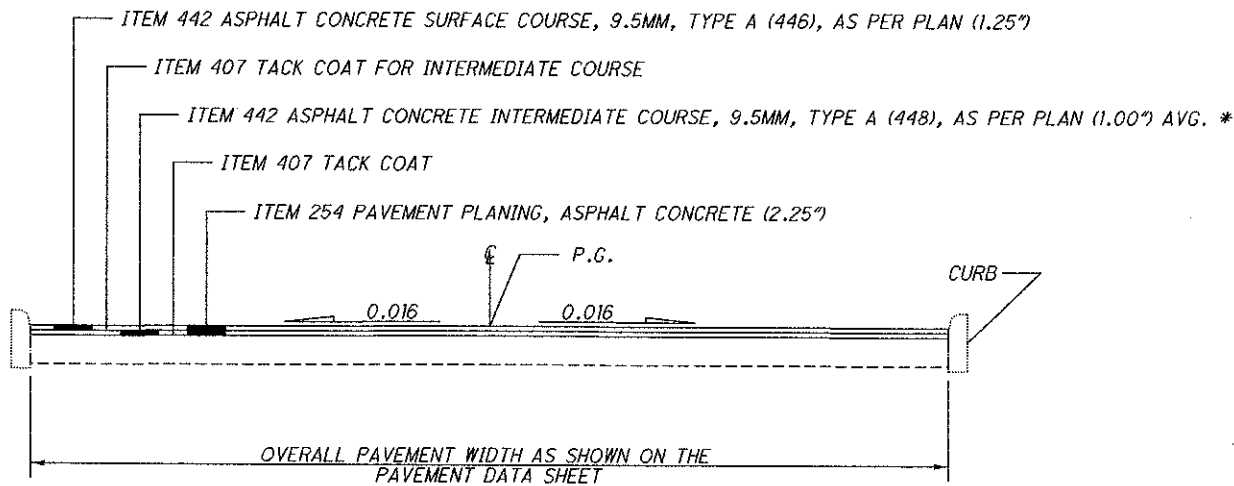
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 WORKSTATION: ksalay DATE: 11/3/2008



TYPICAL 1
 CRA-19-1.18 TO 1.48
 CRA-19-3.81 TO 4.21
 CRA-61-0.58 TO 0.72
 CRA-97-0.70 TO 0.82

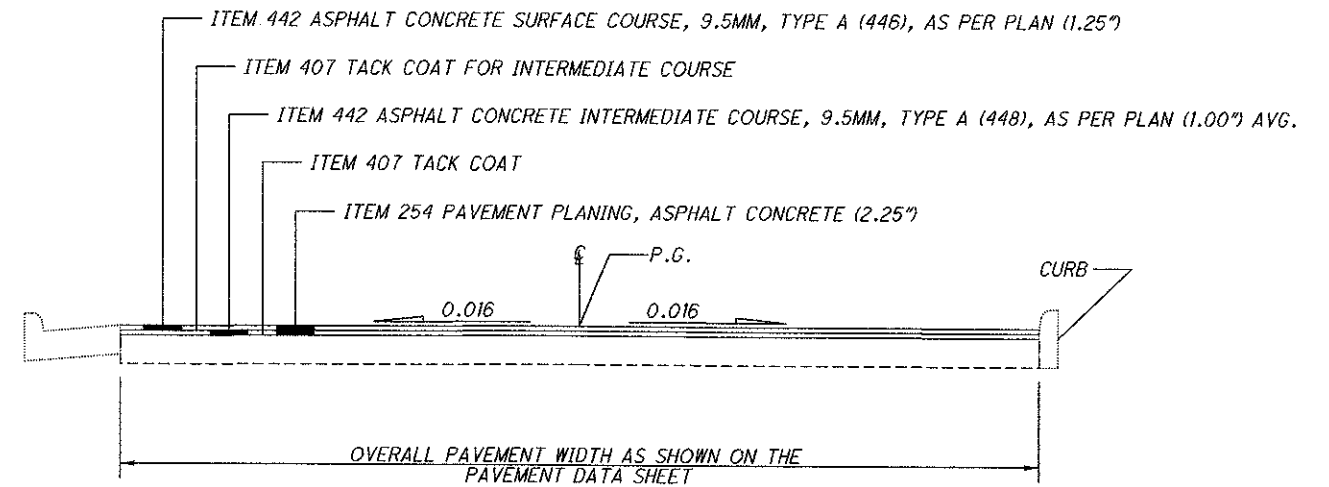


TYPICAL 3
 CRA-19-2.19 TO 3.48
 CRA-598-0.50 TO 0.76



TYPICAL 2
 CRA-19-1.48 TO 2.19
 CRA-19-3.51 TO 3.58
 CRA-61-0.73 TO 1.28

* AT CRA-19-0354 TRANSITION INTERMEDIATE COURSE FROM 1" TO 2" IN 25' AT BOTH ENDS OF APPROACH SLABS



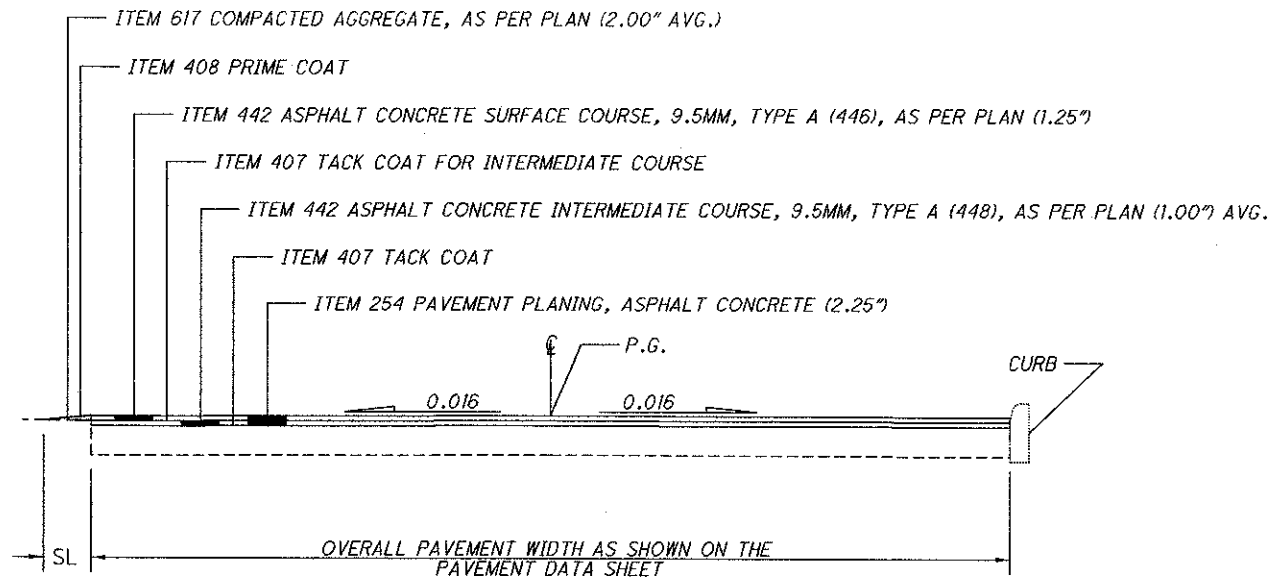
TYPICAL 4
 CRA-19-3.48 TO 3.51

CALCULATED
 KRB
 CHECKED
 BAD

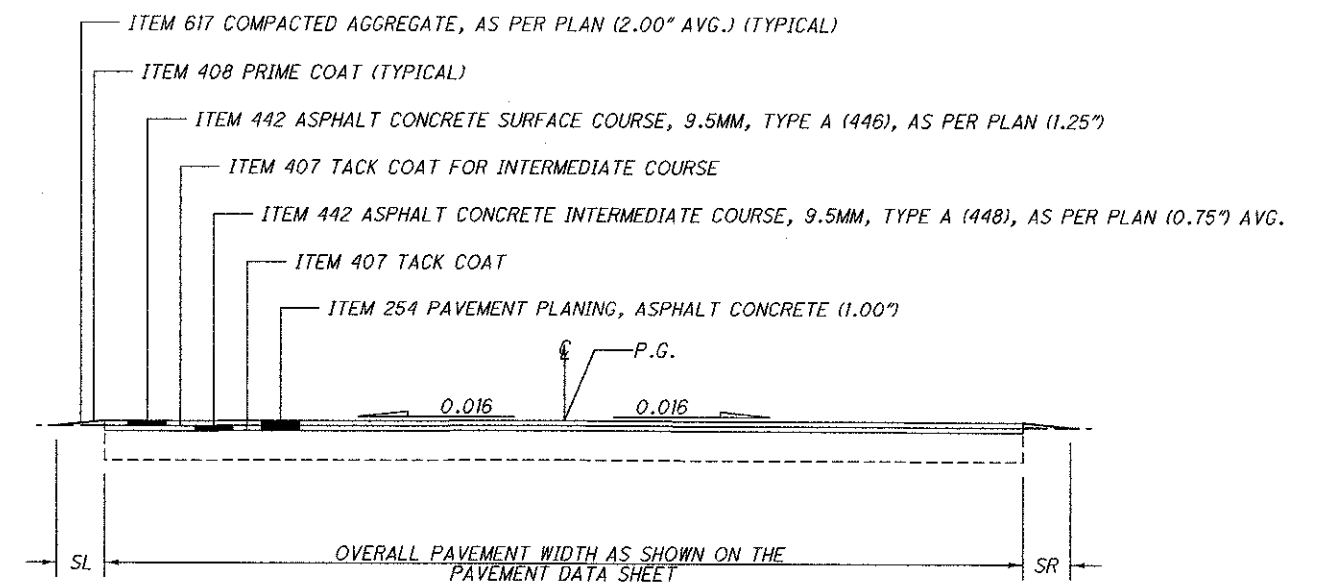
TYPICAL SECTIONS

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

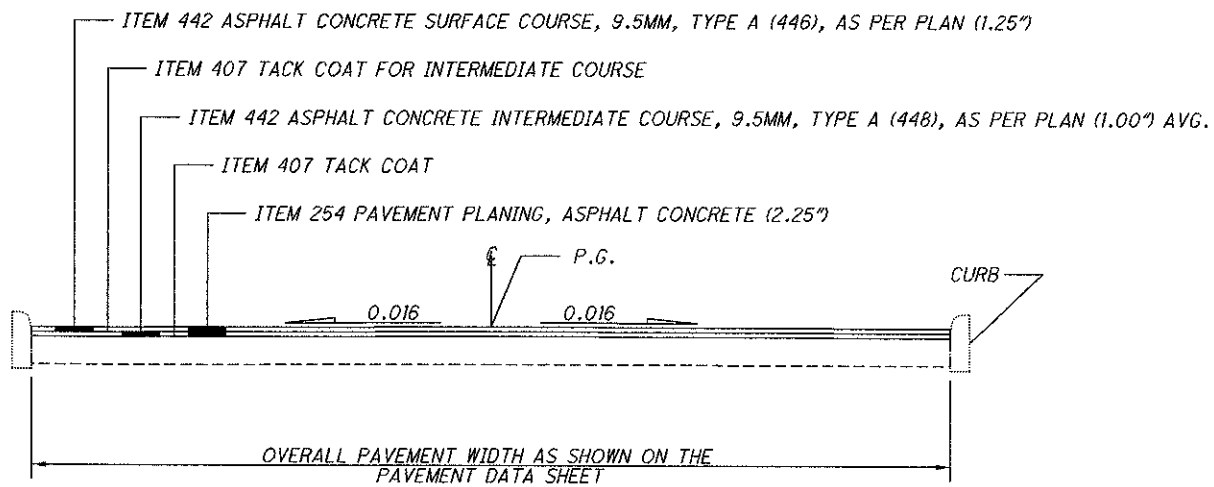
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 WORKSTATION: ksalay DATE: 11/3/2008



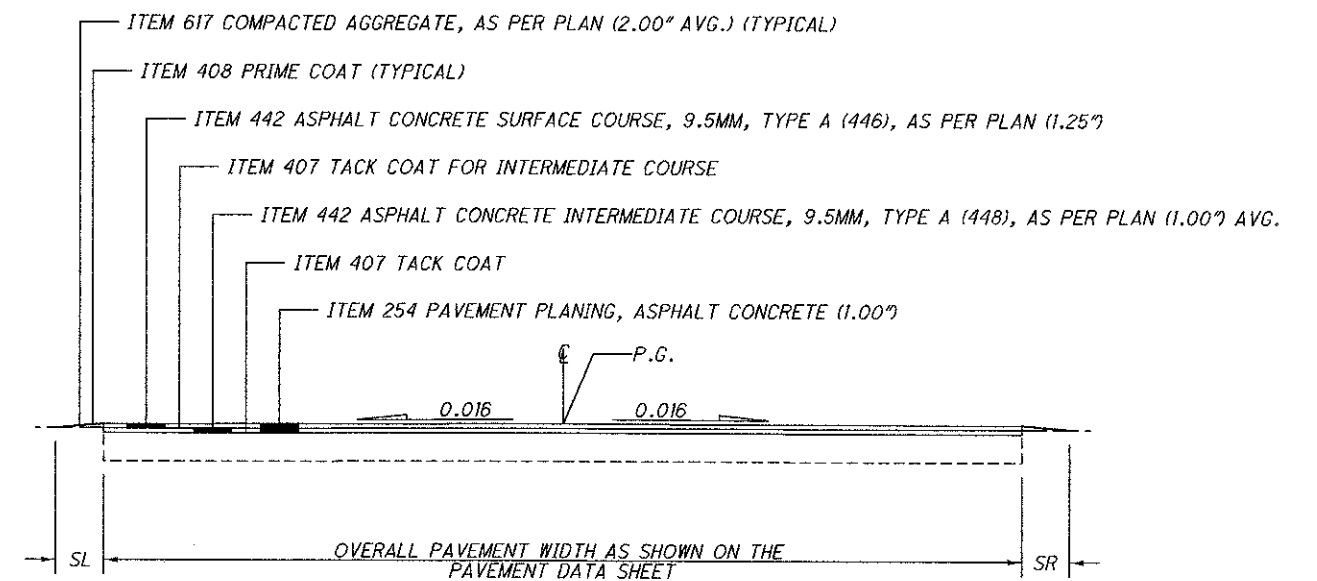
TYPICAL 5
 CRA-19-3.58 TO 3.81
 CRA-61-0.72 TO 0.73



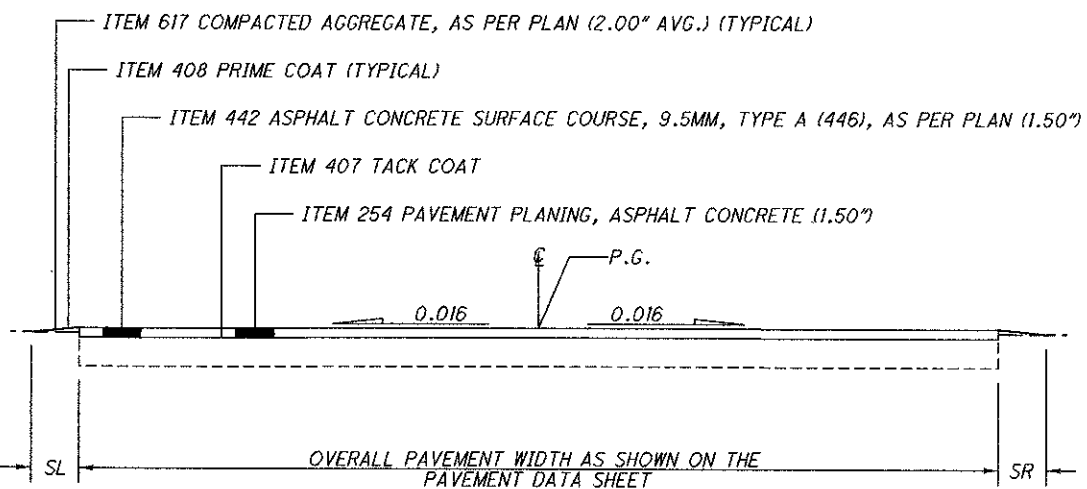
TYPICAL 8
 CRA-61-4.98 TO 5.93
 CRA-61-6.46 TO 7.09



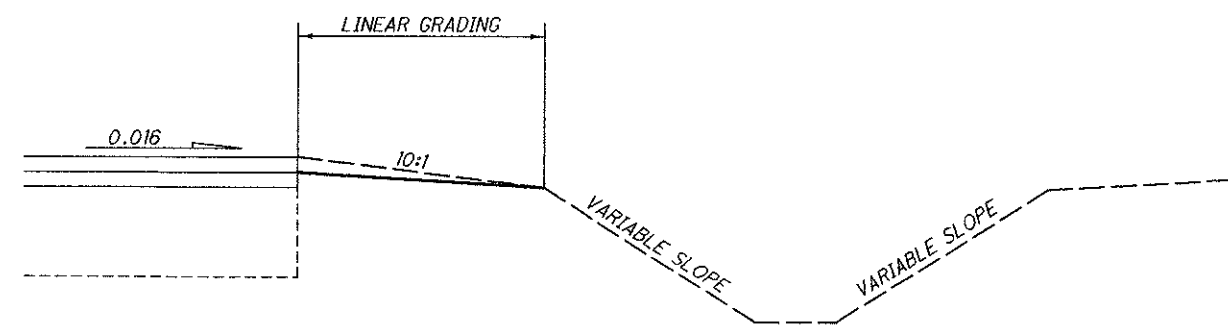
TYPICAL 6
 CRA-61-2.87 TO 3.61



TYPICAL 9
 CRA-598-0.76 TO 1.54



TYPICAL 7
 CRA-61-3.61 TO 4.98



LINEAR GRADING DETAIL

CALCULATED
 KRB
 CHECKED
 BAD

TYPICAL SECTIONS

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

DESIGN FILE: i:\projects\79449\roadway\sheet\79449GR_GN.dgn
 WORKSTATION: ksalay DATE: 11/3/2008

CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

LOCATIONS OF GUARDRAIL

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

SUGGESTED SEQUENCE OF GUARDRAIL WORK

1. GUARDRAIL WORK IS TO BEGIN AFTER THE LINEAR GRADING IS COMPLETED AND THE 617 MATERIAL IS PLACED.
2. REMOVE THE GUARDRAIL.
3. PERFORM THE RESHAPING UNDER GUARDRAIL INCLUDING COMPLETING THE EMBANKMENT, AS PER PLAN.
4. REBUILD/CONSTRUCT THE GUARDRAIL RUN.
5. INSTALL BARRIER REFLECTORS.

ITEM 202 - ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING TYPE A, ANCHOR ASSEMBLY INCLUDING ALL POSTS, HARDWARE, RAIL ELEMENTS, AND CONCRETE ANCHORS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ANCHOR AND CONCRETE AT POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN.

ITEM 203 - EMBANKMENT, AS PER PLAN

AT SPECIFIED LOCATIONS AND LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

EMBANKMENT MATERIAL SHALL BE LIMITED TO CMS ITEM 304 LIMESTONE.

AREAS WHERE EMBANKMENT MATERIAL IS TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENT IS PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO COMPACT 95% OF STANDARD PROCTOR TO THE SATISFACTION OF THE ENGINEER.

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE BY THE NUMBER OF CUBIC YARDS CONVERTED BY TICKET WEIGHT IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN

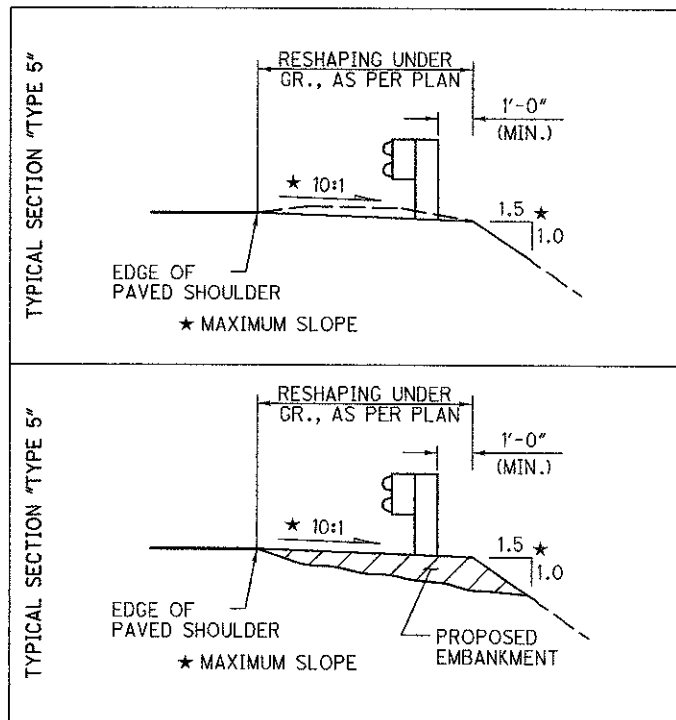
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED AT LOCATIONS SPECIFIED FOR WORK AS WELL AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

THE AREA IN FRONT OF, UNDER, AND BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAXIMUM (SEE DETAIL BELOW AS WELL AS THE GUARDRAIL DETAIL SHEETS FOR FURTHER DETAILS AND INFORMATION OF THE LIMITS OF THIS WORK).

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL, AS PER PLAN WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.



ITEM 606 - GUARDRAIL REBUILT, TYPE 5

THIS ITEM SHALL BE USED WHEN GUARDRAIL REQUIRES REPAIRS IN WHICH THE RAIL ELEMENT IS REUSABLE. ALSO, THIS ITEM WILL BE USED TO RE-ALIGN GUARDRAIL RUNS, AS DIRECTED BY THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT, AS DESCRIBED IN 606.05 AND TO INCLUDE REMOVAL AND REPLACEMENT OF ANY AND ALL DAMAGED MATERIAL, (REUSING THE RAIL ELEMENT), INCLUDING REPLACEMENT OF ANY MATERIALS DAMAGED DURING DISMANTLING OR ANY MATERIALS WHICH MAY HAVE DETERIORATED TO THE POINT THEY CANNOT BE REUSED.

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 ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	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" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) 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. #	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 T30.19, APPROXIMATELY 18" x 18" (450mm X 450mm).

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'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 (100mm) 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 1/4 INCHES (706mm) 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 NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

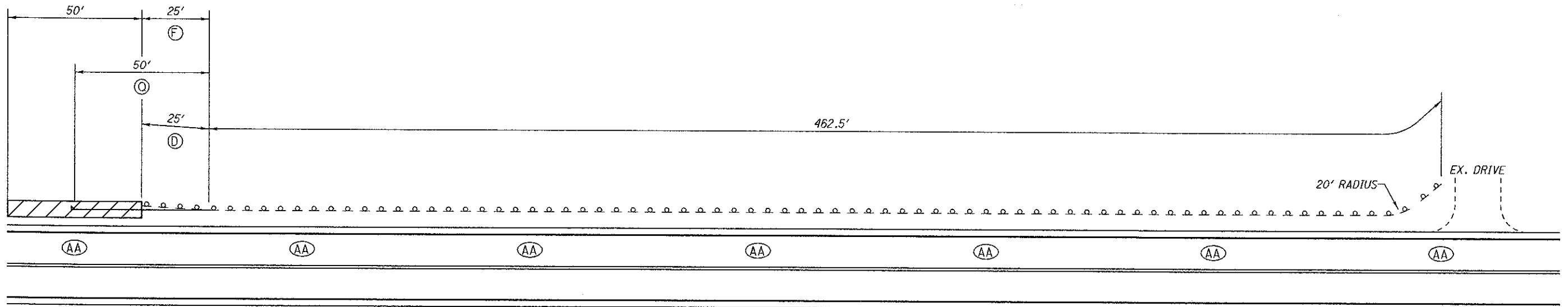
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED
KRB
CHECKED
BAD

GUARDRAIL GENERAL NOTES

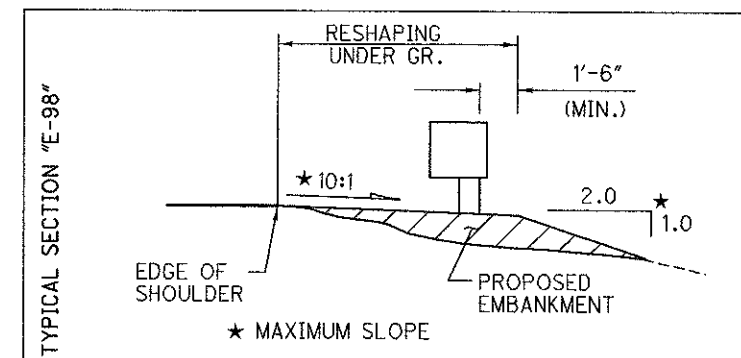
CRA-19-1.18
CRA-61-0.58 (2.87)
CRA-97-0.70
CRA-598-0.50

DESIGN FILE: I:\projects\79449\roadway\sheets\79449GR001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	EACH	1		1
▨	203	EMBANKMENT, AS PER PLAN	CU YD	22		22
ⓕ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	0.25		0.25
Ⓠ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
ⒶⒶ	626	BARRIER REFLECTOR, TYPE A2	EACH	7		7

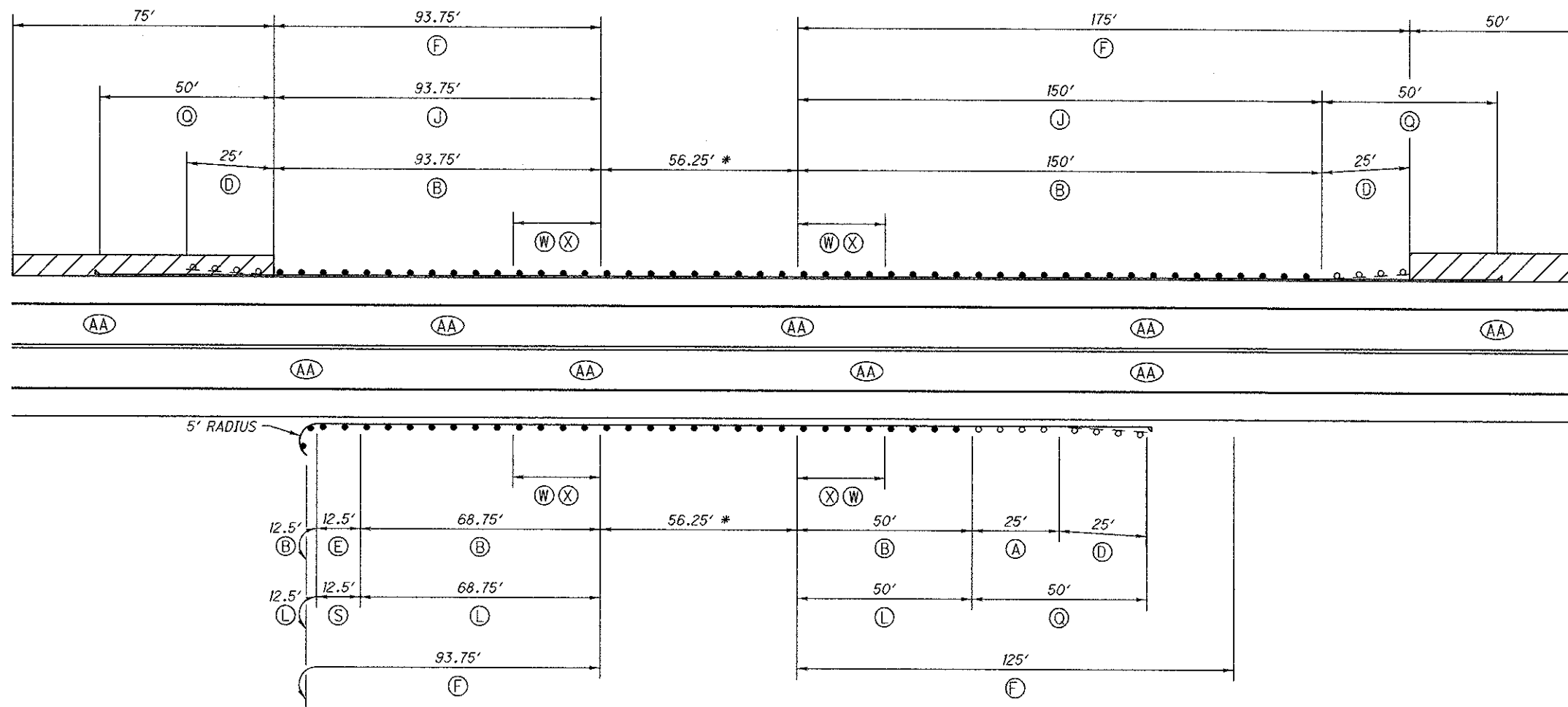
ALL QUANTITIES CARRIED TO SUB-SUMMARY SHEET, SHEET 17.



GUARDRAIL DETAILS
 CRA-61-4.39

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

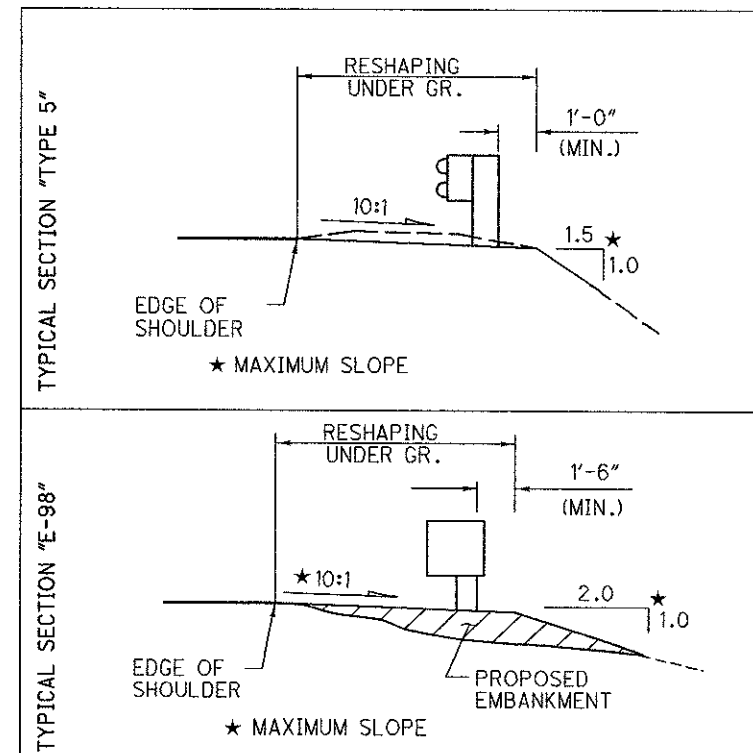
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 WORKSTATION: kslay DATE: 11/3/2008



NOTES:
 1) * GUARDRAIL WITH TUBULAR BACKUP - DO NOT DISTURB

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		25	25
(B)	202	GUARDRAIL REMOVED FOR REUSE	FT	243.75	131.25	375
(D)	202	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	EACH	2	1	3
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(W)	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH	2	2	4
(Hatched)	203	EMBANKMENT, AS PER PLAN	CU YD	46		46
(F)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION	2.6875	2.1875	4.875
(J)	606	GUARDRAIL REBUILT, TYPE 5, USING 9 FOOT POSTS	FT	243.75		243.75
(L)	606	GUARDRAIL REBUILT, TYPE 5	FT		131.25	131.25
(Q)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	1	3
(S)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(X)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
(AA)	626	BARRIER REFLECTOR, TYPE A2	EACH	5	4	9

ALL QUANTITIES CARRIED TO SUB-SUMMARY SHEET, SHEET 17.





20
10
0
HORIZONTAL
SCALE IN FEET

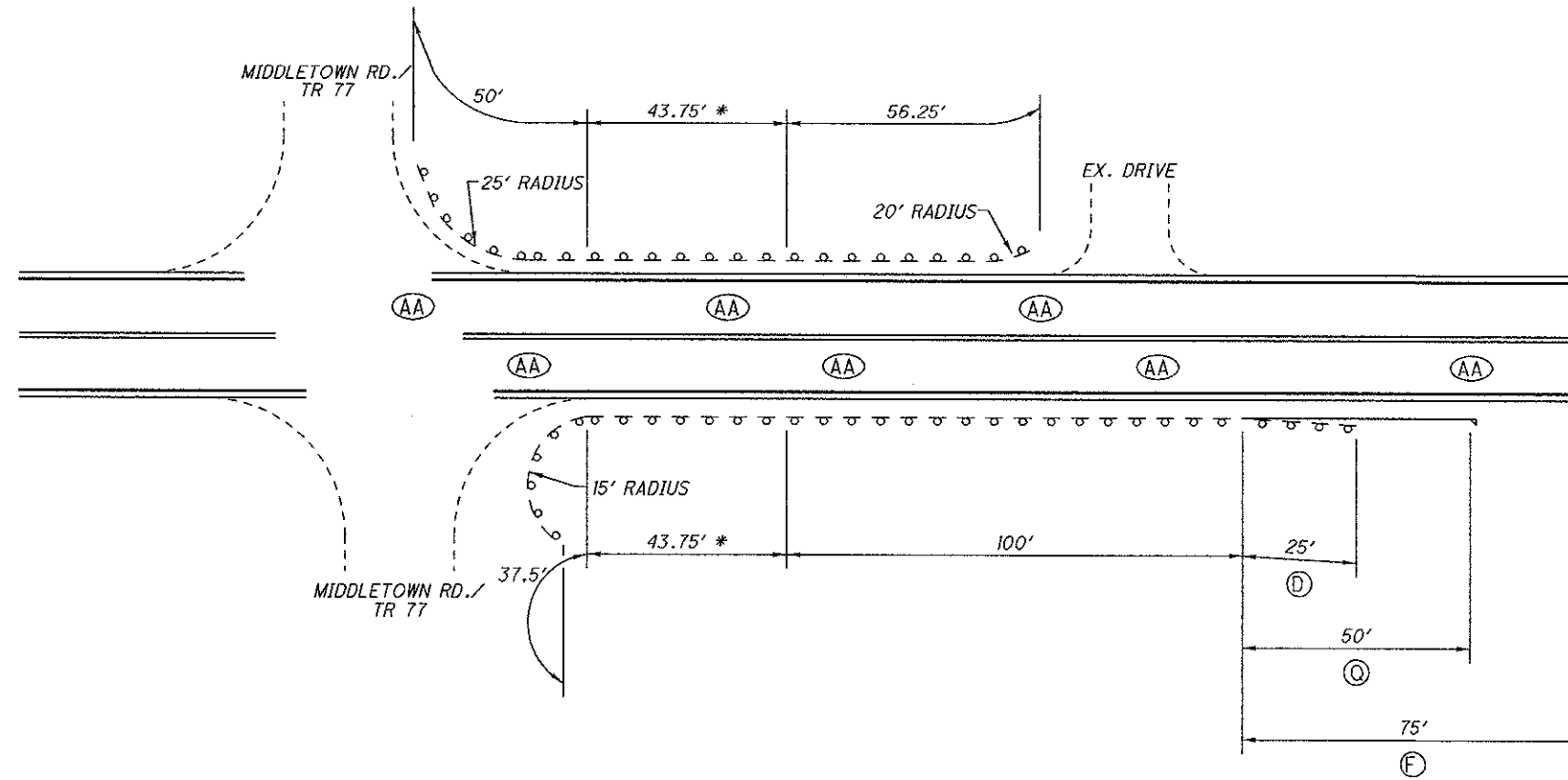
CALCULATED
KRB
CHECKED
BAD

GUARDRAIL DETAILS
CRA-61-4.60

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

19
36

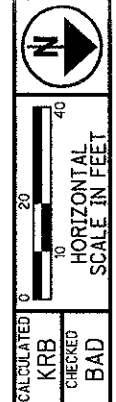
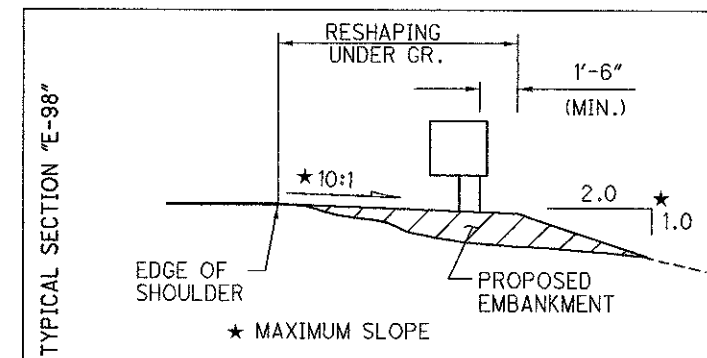
DESIGN FILE: I:\projects\79449\roadway\sheets\79449GR001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008



NOTES:
 1) * GUARDRAIL WITH TUBULAR BACKUP

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(D)	202	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	EACH		1	1
(F)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STATION		0.75	0.75
(E)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH		1	1
(AA)	626	BARRIER REFLECTOR, TYPE A2	EACH	3	4	7

ALL QUANTITIES CARRIED TO SUB-SUMMARY SHEET, SHEET 17.



CALCULATED
 KRB
 CHECKED
 BAD

GUARDRAIL DETAILS
CRA-61-6.87

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50

AUXILIARY & LONG LINE MARKINGS

COUNTY/ROUTE	LT or RT	SLM		HIGHWAY MILES		LANE MILES		642, TYPE 1														642 BASE BID								644 ALTERNATE BID																		
								614		642, TYPE 1		AUXILIARY MARKINGS												AUXILIARY MARKINGS (740.04)																								
								WORK ZONE CENTER LINE, CLASS I, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	WORK ZONE ARROW, CLASS I, 642 PAINT	WORK ZONE ARROW, CLASS III, 642 PAINT	TOTAL (PAY QUANTITY) (WHITE)	EDGE LINE	CENTER LINE	TOTAL (PAY QUANTITY)	CHANNELIZING LINE, TYPE 2	STOP LINE, TYPE 2	CROSSWALK LINE, TYPE 2	TRANSVERSE/DIAGONAL LINE, TYPE 2 (WHITE)	TRANSVERSE/DIAGONAL LINE, TYPE 2 (YELLOW)	RAILROAD SYMBOL MARKING, TYPE 2	SCHOOL SYMBOL MARKING	LANE ARROW TYPE 2				WORD ON PAVEMENT "ONLY"		CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	TRANSVERSE/DIAGONAL LINE (YELLOW)	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING	LANE ARROW				WORD ON PAVEMENT "ONLY"					
								FT	FT	FT	FT	EACH	EACH	MILE	MILE	MILE	MILE	8"	24"	12"	24"	24"	EACH	EACH	72 INCH, TYPE 2	96 INCH, TYPE 2	LEFT	RIGHT	THROUGH	COMBINATION	72 INCH, TYPE 2	96 INCH, TYPE 2	8"	24"	12"	24"	24"	EACH	EACH	EACH	EACH	EACH	EACH	LEFT	RIGHT	THROUGH	COMBINATION	72 INCH
FROM	TO	MILE	MILE	MILE	MILE	FT	FT	FT	FT	EACH	EACH	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH								
CRA-61	LT	5.81	5.93	0.12	0.12	0.18																																										
CRA-61	LT	6.58	6.62	0.04	0.04	0.06																																										
TOTAL				0.16	0.24							0.16		0.08																																		

RAISED PAVEMENT MARKERS

COUNTY	ROUTE	SLM		DETAIL	202 RAISED PAVEMENT MARKER REMOVED	PRISMATIC RETRO-REFLECTOR TYPES					REMARKS	DETAIL	DESCRIPTION																																			
						ONE-WAY	TWO-WAY																																									
							WHITE	YELLOW / YELLOW	WHITE / RED	YELLOW / RED				BLUE / BLUE																																		
FROM	TO	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH																																					
CRAWFORD	19	1.18	1.22	GAP																																												
CRAWFORD	19	4.16	4.21	GAP																																												
CRAWFORD	61	3.85	4.81	GAP																																												
CRAWFORD	61	4.81	4.98	15																																												
CRAWFORD	61	4.98	5.18	6																																												
CRAWFORD	61	5.18	5.93	GAP	4																																											
CRAWFORD	61	6.46	7.09	15	2																																											
CRAWFORD	97																																															
CRAWFORD	598	0.73	1.54	GAP																																												
TOTAL				6																																												

PAVEMENT MARKING / RPM SUB-SUMMARY (FED/CRESTLINE FUNDING)

CRA-19-1.18 CRA-61-0.58 (2.87)
CRA-97-0.70 CRA-598-0.50

AUXILIARY & LONG LINE MARKINGS

COUNTY/ROUTE	LT or RT	SLM		HIGHWAY MILES	LANE MILES	614								642, TYPE 1				644																	
						WORK ZONE CENTER LINE, CLASS I, 642 PAINT		WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT		WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT		WORK ZONE STOP LINE, CLASS I, 642 PAINT		WORK ZONE STOP LINE, CLASS III, 642 PAINT		WORK ZONE ARROW, CLASS I, 642 PAINT		WORK ZONE ARROW, CLASS III, 642 PAINT		TOTAL (PAY QUANTITY) (WHITE)		EDGE LINE		CENTER LINE		AUXILIARY MARKINGS (740.04)		SCHOOL SYMBOL MARKING		LANE ARROW			WORD ON PAVEMENT "ONLY"		
						FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	MILE	MILE	MILE	MILE	8"	24"	12"	24"	24"	RAILROAD SYMBOL MARKING	72 INCH	96 INCH	LEFT	RIGHT	THROUGH	COMBINATION	72 INCH	96 INCH		
CRA-19	RT	4.16	4.21	0.05	0.05	0.075								0.05																					
CRA-61	LT & RT	3.85	4.67	0.82	1.64	1.64			170	85				1.64																					
CRA-61	LT	4.67	4.93	0.26	0.26	0.26								0.26																					
CRA-61	LT	5.73	5.81	0.08	0.08	0.12								0.08																					
CRA-61	LT & RT	6.46	6.58	0.12	0.24	0.36								0.24																					
CRA-61	RT	6.58	6.62	0.04	0.04	0.06								0.04																					
CRA-61	LT & RT	6.62	6.66	0.04	0.08	0.12								0.08																					
CRA-61	LT	6.66	6.73	0.07	0.07	0.105								0.07																					
CRA-61	LT & RT	6.85	7.09	0.24	0.48	0.72			168	84				0.48																					
CRA-598	LT	0.73	0.88	0.15	0.15	0.225								0.12																					
CRA-598	LT & RT	0.88	0.91	0.03	0.06	0.09								0.06																					
CRA-598	LT	1.15	1.18	0.03	0.03	0.045								0.03																					
CRA-598	RT	1.31	1.37	0.06	0.06	0.09								0.06																					
CRA-598	LT & RT	1.37	1.54	0.17	0.34	0.51			168	84				0.34																					
TOTAL						3.58	4.42		506	253				3.55																					

RAISED PAVEMENT MARKERS

COUNTY	ROUTE	SLM		DETAIL	202								REMARKS	DETAIL	DESCRIPTION			
					RAISED PAVEMENT MARKER REMOVED		PRISMATIC RETRO-REFLECTOR TYPES				ONE-WAY							
					EACH	EACH	WHITE	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	BLUE / BLUE	WHITE				YELLOW		
CRAWFORD	19	1.18	1.22	GAP											CONTINUOUS ROUTE TREATMENT	1	MULTILANE UNDIVIDED TYPICAL SPACING	
CRAWFORD	19	4.16	4.21	GAP	3										CONTINUOUS ROUTE TREATMENT	2	TAPERED ACCEL. LANE	
CRAWFORD	61	3.85	4.81	GAP	91										CONTINUOUS ROUTE TREATMENT W/ SERIES OF CURVES	3	DECELERATION LANE	
CRAWFORD	61	4.81	4.98	15	4										THROUGH APPROACH @ SR 309, WEST APPROACH	4	PARALLEL ACCEL. LANE	
CRAWFORD	61	4.98	5.18	6											STOP APPROACH @ SR 309, NORTH APPROACH	5	MULTILANE DIVIDED/EXPRESSWAY	
CRAWFORD	61	5.18	5.93	GAP	3										CONTINUOUS ROUTE TREATMENT	6	STOP APPROACH	
CRAWFORD	61	6.46	7.09	15	54										2-CURVES PLUS FILL-INS	7	2 LANE APPR. WITH TURN LANE	
CRAWFORD	97														N/A	8	THROUGH APPROACH	
CRAWFORD	598	0.73	1.54	GAP	22										CONTINUOUS ROUTE TREATMENT	9	3 LANE APPR. WITH TURN LANE	
TOTAL					177												10	3 LANE DIVIDED TO 2 LANE TRANSITION

NOTES
 1) SEE PAVEMENT MARKING DETAIL SHEET SUPPLIED AT THE PRECONSTRUCTION MEETING.
 2) THE LANES SHALL BE STRIPED AT 12' WIDTHS.
 3) EDGE LINES ARE NOT TO BE PLACED IN FRONT OF CURB.
 4) PLACE CLASS III WORK ZONE MARKINGS ON SURFACE COURSE ONLY.
 5) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:
 SR 61 / GELSANLITER RD.
 SR 61 / NAZOR RD.
 SR 61 / MIDDLETOWN RD./TR 77
 SR 61 / MCNEIL RD./TR 236
 SR 598 / BRANDT RD./TR 56

PAVEMENT MARKING / RPM SUB-SUMMARY (FED/STATE FUNDING)

CRA-19-1.18 CRA-61-0.58 (2.87)
 CRA-97-0.70 CRA-598-0.50

ITEM 632. DETECTOR LOOP, AS PER PLAN

AN ESTIMATED QUANTITY OF 632 DETECTOR LOOP, AS PER PLAN HAS BEEN PROVIDED WHEN WIRE IS CUT, BROKEN OR DESTROYED DUE TO PAVEMENT PLANING, PAVEMENT REPAIR OR BUTT JOINT OPERATIONS. THIS ITEM SHALL ALSO BE USED FOR REPLACEMENT OF DETECTOR LOOPS THAT HAVE BEEN DAMAGED DUE TO PAVEMENT FAILURE. IT IS IMPERATIVE THAT REPLACEMENT OF LOOP DETECTORS BE INSTALLED AND FULLY FUNCTIONAL IN THE SHORTEST POSSIBLE TIME. THE CONTRACTOR SHALL HAVE REPLACEMENT LOOP DETECTORS INSTALLED AND FULLY FUNCTIONAL WITHIN 7 CALENDAR DAYS OF DESTRUCTION OF THE ORIGINAL LOOP.

THE CONTRACTOR SHALL NOTIFY DOUG HICKEY, DISTRICT 3 TRAFFIC DEPARTMENT, (PHONE 419-207-7184) 5 WORKING DAYS IN ADVANCE OF ANY PLANING OPERATIONS OR PAVEMENT REPAIR WORK THAT WILL DAMAGE DETECTOR LOOP INSTALLATIONS. THIS NOTIFICATION IS NEEDED FOR DISTRICT 3 TO SCHEDULE TEMPORARY SIGNAL TIMING MODIFICATIONS FOR THE TIME PERIOD WHEN THE DETECTOR LOOPS ARE OUT OF OPERATION. THE CONTRACTOR SHALL THEN RENOTIFY MR. HICKEY WITHIN 2 WORKING DAYS AFTER THE DAMAGED DETECTOR LOOPS ARE REPLACED SO THAT HE CAN RESCHEDULE DISTRICT CREWS TO RESTORE SIGNAL TIMINGS TO THE ORIGINAL SETTINGS.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF LIQUIDATED DAMAGES ACCORDING TO SECTION 108.07 OF THE CMS FOR EACH CALENDAR DAY BEYOND THE SPECIFIED LIMIT.

THE NEW LOOP DETECTORS SHALL BE PLACED AFTER THE PLANING AND PAVEMENT REPAIR OPERATIONS ARE COMPLETED WITHIN THE LOOP DETECTOR AREAS. THE LOOP DETECTORS SHALL NOT BE CUT INTO THE SURFACE COURSE.

NEW LOOP DETECTORS SHALL BE PLACED AT THE SAME LOCATIONS AND BE THE SAME SIZE AND TYPE AS THE EXISTING, OR AS DIRECTED BY THE ENGINEER. THE LOOP DETECTOR WIRE SHALL BE REPLACED TO THE PULL BOX OR POLE, WHICHEVER IS APPLICABLE, UNDER ITEM 632 AND TC-82.10.

THIS WORK SHALL INCLUDE THE POURED EPOXY INSULATED SPLICE(S) REQUIRED TO CONNECT THE LOOP DETECTOR WIRE TO EXISTING LEAD-IN CABLE AT THE PULL BOX OR POLE. THE SPLICES SHALL BE IN ACCORDANCE WITH SECTION 725.15 OF THE CMS. PAYMENT SHALL BE MADE PER EACH LOOP DETECTOR CONNECTED TO THE LEAD-IN CABLE.

THE CONTRACTOR WILL BE PROVIDED WITH DETAILED PLANS AT THE PRE CONSTRUCTION MEETING SHOWING DETECTOR LOOP PLACEMENTS. A TABLE SHOWING DIMENSIONS AND LOCATIONS IS PROVIDED BELOW FOR THE PURPOSE OF ESTIMATING.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH OF ITEM 632 DETECTOR LOOP, AS PER PLAN.

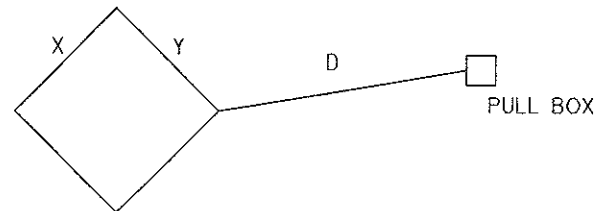
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 632 DETECTOR LOOP, AS PER PLAN 14 EACH (FED/GAL)

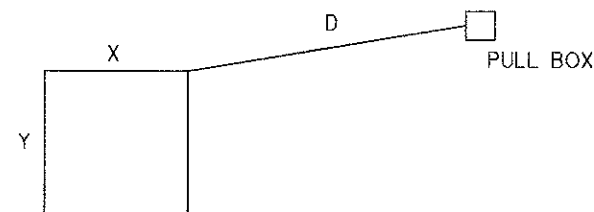
THE INTERSECTIONS INVOLVED ARE AS FOLLOWS:

ROUTE	SLM	LOCATION	TYPE	DIMENSION			
				D	X	Y	Z
SR 61	2.89	HARDING WAY EAST AND EAST ST.	B	23'	6'	26'	
SR 19	2.22	NORTH EAST ST. AND HARDING WAY EAST	A	16'	6'	6'	
SR 19	2.57	LIBERTY ST. AND HARDING WAY EAST	A	18'	6'	6'	
SR 19	2.63	LIBERTY ST. AND HARDING WAY EAST	A	18'	6'	6'	
SR 19	2.94	SOUTH BOSTON ST. AND HARDING WAY WEST	A	15'	6'	6'	
SR 19	2.99	SOUTH BOSTON ST. AND HARDING WAY WEST	A	13'	6'	6'	
SR 19	3.20	JEFFERSON ST. AND HARDING WAY WEST	A	13'	6'	6'	
SR 19	3.26	JEFFERSON ST. AND HARDING WAY WEST	A	20'	6'	6'	
SR 19	3.17	PORTLAND WAY AND HARDING WAY WEST	A	12'	6'	6'	
SR 19	3.44	PORTLAND WAY AND HARDING WAY WEST	B	37'	6'	25'	
SR 19	3.48	PORTLAND WAY AND HARDING WAY WEST	B	79'	6'	25'	
SR 19	3.51	PORTLAND WAY AND HARDING WAY WEST	A	13'	6'	6'	
SR 19	3.79	HARDING WAY WEST, WINCHESTER RD. AND BUCYRUS RD.	A	13'	6'	6'	
SR 19	3.80	HARDING WAY WEST, WINCHESTER RD. AND BUCYRUS RD.	B	20'	6'	25'	

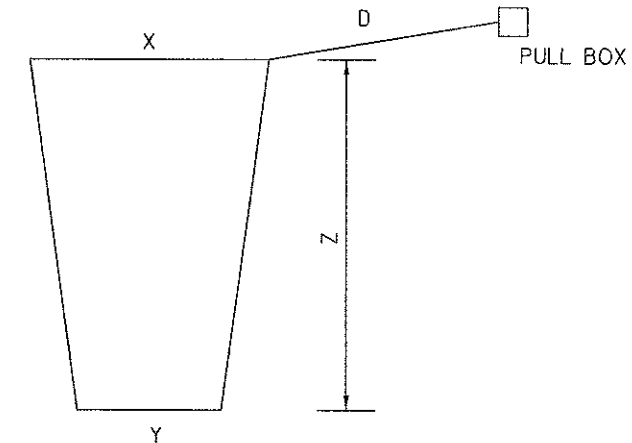
TYPE A



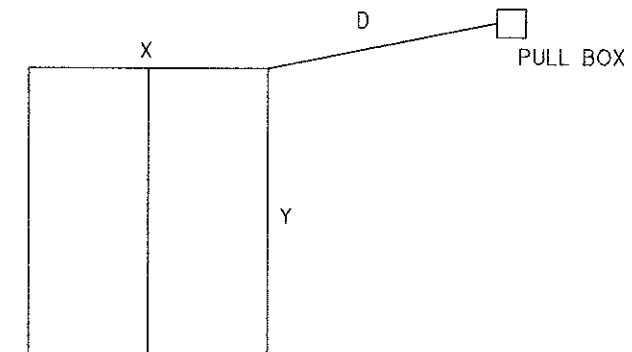
TYPE B



TYPE C

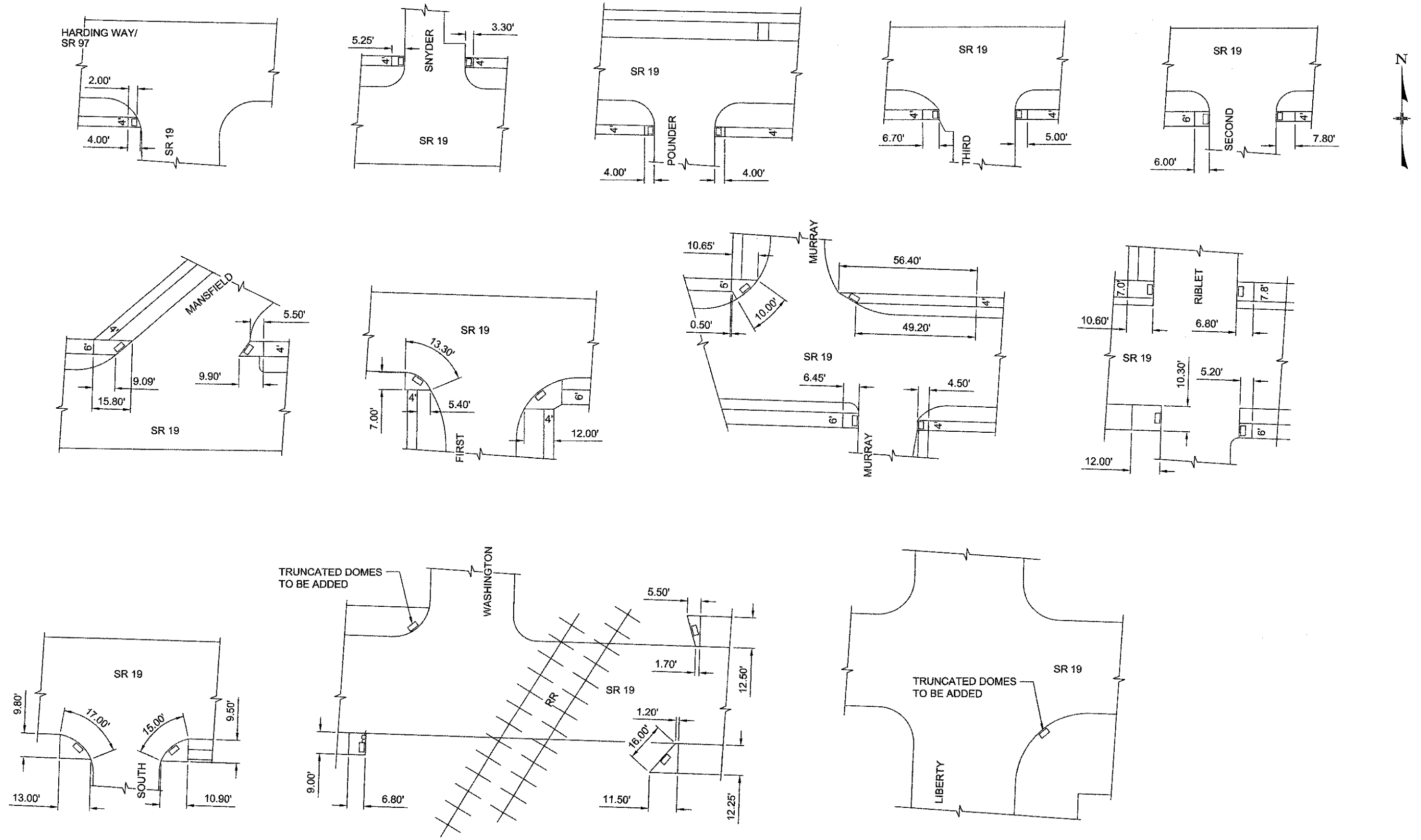


TYPE D



DESIGN FILE: I:\projects\79449@roadway\sheet\79449TM001.dgn
WORKSTATION: kscalay DATE: 11/3/2008

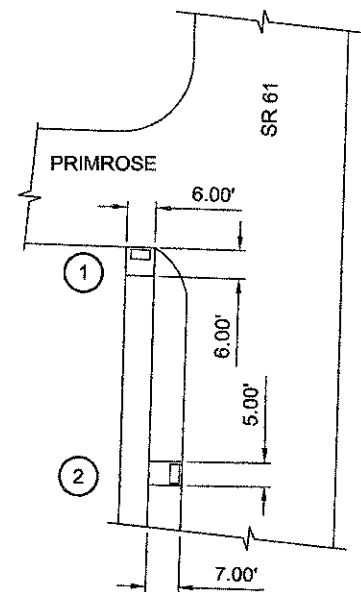
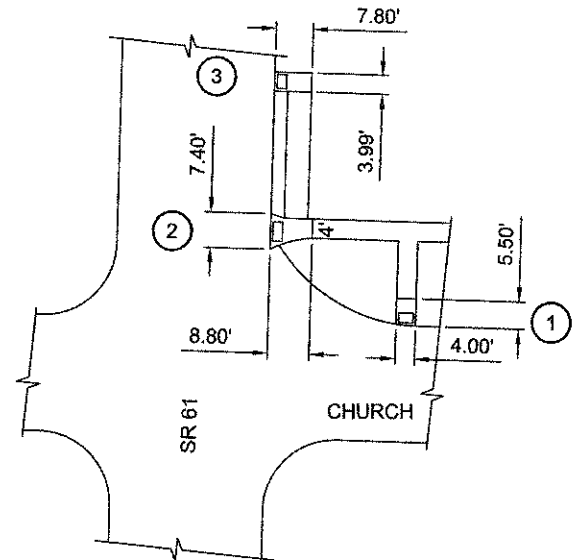
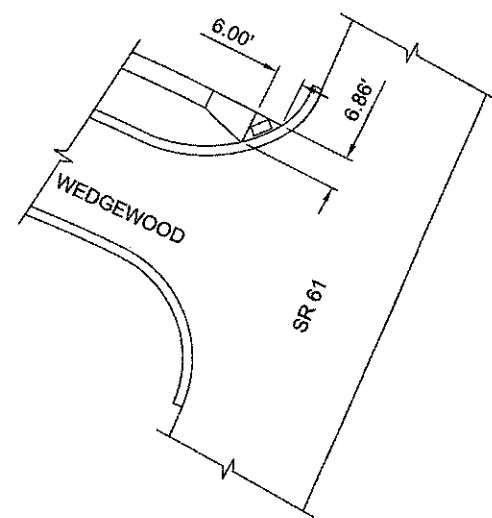
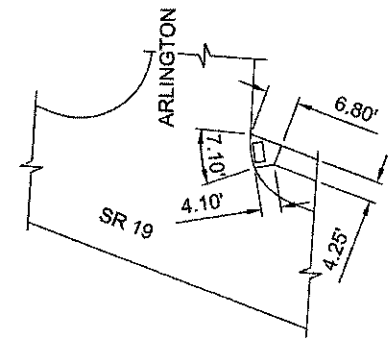
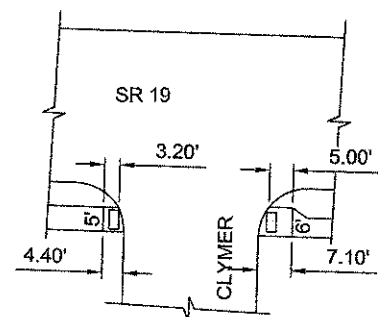
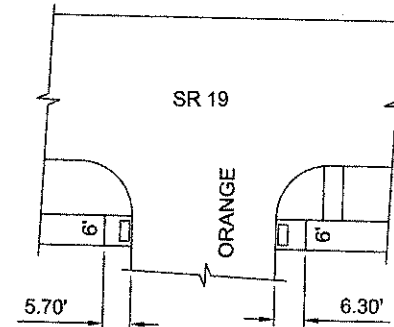
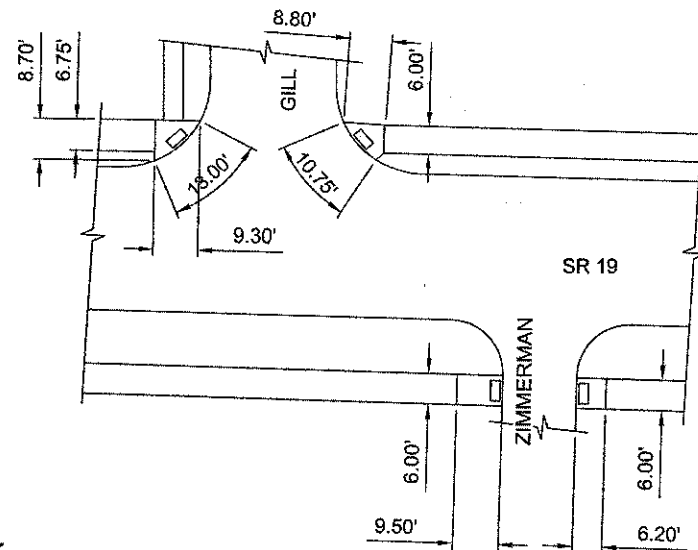
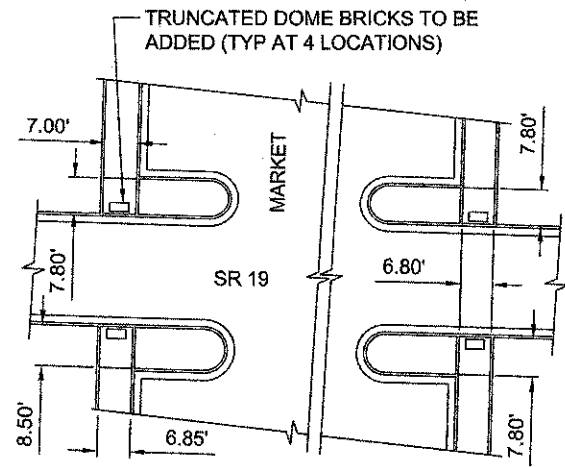
DESIGN FILE: I:\projects\79449\roadway\sheets\79449CURB RAMPS.dgn
 WORKSTATION:kslay DATE:11/3/2008



CALCULATED
 GAL ION
 CHECKED
 BAD

CURB RAMP DETAILS

CRA-19-1.18
 CRA-61-0.58 (2.87)
 CRA-97-0.70
 CRA-598-0.50



ALL ITEMS ARE ITEM 608, CURB RAMP, TYPE A1, AS PER PLAN UNLESS OTHERWISE NOTED

LOCATION	CORNER	REMOVE AND REPLACED (SF.)	RAMP TYPE/ DESCRIPTION PER DETAIL BP-7.1
SR 19 & SR 97	SW	12.00	A1
SR 19 & SNYDER	NE	13.20	A1
	NW	21.00	A1
SR 19 & POUNDER	SE	16.00	A1
	SW	16.00	A1
SR 19 & THIRD	SE	20.00	A1
	SW	26.80	A1
SR19 & SECOND	SE	31.20	A1
	SW	36.00	A1
SR 19 & MANSFIELD	NE	47.35	A1
	NW	74.68	A1
SR 19 & FIRST	SE	114.05	A1
	SW	52.52	A1
SR 19 & MURRAY	SE	18.00	A1
	SW	38.70	A1
	NE	211.20	A1
	NW	52.44	A1
SR 19 & RIBLET	SE	31.20	A1
	NE	53.04	A1
	SW	123.60	A1
SR 19 & SOUTH	SE	68.59	A1
	SW	86.83	A1
	NE	45.00	A1
SR 19, RAILROAD & WASHINGTON	SE	77.74	A1
	NW	0	* TRUNCATED DOMES TO BE ADDED
	SW	61.20	A1
SR 19 & LIBERTY	SE	0	* TRUNCATED DOMES TO BE ADDED
SR 19 & MARKET	NE	8.00	* TRUNCATED DOME BRICKS TO BE ADDED
	SE	8.00	* TRUNCATED DOME BRICKS TO BE ADDED
	NW	8.00	* TRUNCATED DOME BRICKS TO BE ADDED
	SW	8.00	* TRUNCATED DOME BRICKS TO BE ADDED
SR 19 & ZIMMERMAN	SE	37.20	A1
	SW	56.98	A1
SR 19 & GILL	NE	42.44	A1
	NW	50.08	A1
SR 19 & ORANGE	SE	37.80	A1
	SW	34.20	A1
SR 19 & CLYMER	SE	38.46	A1
	SW	19.67	A1
SR 19 & ARLINGTON	SE	30.66	A1
SR 61 & WEDGEWOOD	NW	22.62	A1
SR 61 & CHURCH	NE 1	21.61	A1
	NE 2	44.65	A1
	NE 3	31.20	A1
SR 61 & PRIMROSE	SW 1	35.00	A1
	SW 2	36.00	A1

ITEM 608, CURB RAMP, TYPE A1, AS PER PLAN 1961 SQ. FT. (100% GALION)
 * ITEM 608, TRUNCATED DOMES 2 EACH (100% GALION)
 * ITEM 608, TRUNCATED DOMES, BRICK 4 EACH (100% GALION)

CURB RAMP DETAILS

CRA-19-1-18
 CRA-61-0-58 (2.87)
 CRA-97-0-70
 CRA-598-0-50

CRA-19-0354

S.F.N. 1700448

(FEDERAL / STATE)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	130	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10300	159	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
513	10201	2852	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	
516	31001	84	FT	JOINT SEALER, AS PER PLAN	
848	10201	442	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/2" THICK)	
848	20000	442	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30201	12	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	
848	50000	35	SQ YD	HAND CHIPPING	
848	50100	LUMP		TEST SLAB	

CRA-61-0307

S.F.N. 1701908

(FEDERAL / STATE)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	183	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10300	369	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	

CRA-61-0361

S.F.N. 1701924

(FEDERAL / STATE)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	36	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10300	329	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	

DESIGN FILE: i:\projects\79449\structures\79449CG001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008

DESIGN AGENCY
ODOT
 DISTRICT THREE

DESIGNED	DATE
KRB	9/08
CHECKED	STRUCTURE FILE NUMBER
DCM	
DRAWN	REVIEWED
KRB	BAD
	STRUCTURE FILE NUMBER

STRUCTURE SUMMARY

CRA-19-1.18
 CRA-61-0.55 (2.87)
 CRA-97-0.70
 CRA-598-0.50

CRA-61-0460

S.F.N. 1701959

(FEDERAL / STATE)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	28	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	

CRA-61-0687

S.F.N. 1702084

(FEDERAL / STATE)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	74	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	

DESIGN FILE: i:\projects\79449\structures\79449CG002.dgn
WORKSTATION: ksalay DATE: 11/3/2008

DESIGN AGENCY
ODOT
DISTRICT THREE

REVIEWED
DATE 9/08
BAD
STRUCTURE FILE NUMBER

DRAWN
KRB
REVISED

DESIGNED
KRB
CHECKED
DCM

STRUCTURE SUMMARY

CRA-19-1-18
CRA-61-0-55 (2.87)
CRA-97-0-70
CRA-598-0-50

28
36

EXISTING STRUCTURE VERIFICATION:

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

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATION FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, INCLUDING THE 2003, 2004, 2005 AND 2006 SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING PLANS:

THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGES ARE AVAILABLE UPON REQUEST AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OH.

STRUCTURE #	PLAN NAME	DATE
CRA-19-0354	CRA-19-3.53-PART 1	1992
CRA-61-0307	CRA-61-4.936	1999
CRA-61-0361	BRIDGE OVER OLENTANGY CREEK CRA-30S-0361	1931 1968
CRA-61-0460	BRIDGE OVER OLENTANGY RIVER AND APPROACHES CRA-61-4.58	1933 1987
CRA-61-0687	SHELBY-GALION ROAD CRA-61-4.98	1935 1975

DECK PROTECTION METHOD:

2 1/2" SUPERPLASTICIZED DENSE CONCRETE OVERLAY
SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES:

SPECIAL CARE SHALL BE TAKEN, WHEN PLACING THE ASPHALT CONCRETE FEATHERING TO EFFECT A SMOOTH TRANSITION FROM THE EXISTING APPROACH PAVEMENT TO THE BRIDGE DECK THE CONTRACTOR'S ATTENTION IS CALLED TO STANDARD DRAWING BP-3.1 FOR REQUIRED TOLERANCES.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UP, AS PER PLAN

PAYMENT FOR THE ABOVE ITEM SHALL INCLUDE THE QUANTITY FOR THE HOLES MADE TO WELD THE STEEL MEMBERS TO THE EXISTING EXPANSION JOINT.

ITEM 516 - JOINT SEALER, AS PER PLAN

AFTER THE SUPERPLASTICIZED DENSE CONCRETE OVERLAY IS PLACED, A GROOVE SHALL BE MADE USING SAW CUTTING AT THE LOCATION OF THE EXISTING ELASTOMERIC COMPRESSION JOINT SEAL. THE GROOVE SHALL BE FILLED WITH THE JOINT SEALER. ALL LABOR, MATERIALS, AND EQUIPMENT TO COMPLETE THIS WORK SHALL BE INCIDENTAL TO ITEM 516 - JOINT SEALER, AS PER PLAN.

614 - MAINTAINING TRAFFIC FOR STRUCTURE CRA-19-0354

SEE PLAN NOTE ON SHEET 7 "LIMITATIONS FOR STRUCTURE CRA-19-0354".

DESIGN FILE: I:\projects\79449@structures\79449\001.dgn
WORKSTATION: ksclay DATE: 11/3/2008

DESIGN AGENCY ODOT DISTRICT THREE	DATE 9/08
	REVISION BAD STRUCTURAL FILE NUMBER
DESIGNED KRB CHECKED DCM	DRAWN KRB REVISED
STRUCTURE GENERAL NOTES	
CRA-19-1.18 CRA-61-0.55 (2.87) CRA-97-0.70 CRA-598-0.50	
29 36	

DESIGN FILE: I:\projects\79449\Structures\79449CN001.dgn
WORKSTATION: ksalay DATE: 11/3/2008

**ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE
OVERLAY USING HYDRODEMOLITION, AS PER PLAN
(2 1/2" THICK):**

**ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY
(VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN:**

THESE ITEMS SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION " BRIDGE DECK REPAIR
AND OVERLAY WITH CONCRETE USING HYDRODEMOLITION" WITH THE FOLLOWING REVISIONS:

THE THICKNESS OF THE CONCRETE REMOVED BY HYDRODEMOLITION AND PROPOSED OVERLAY
SHALL BE AS SPECIFIED IN THE PLANS.

ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED
BY ASTM C-127.

IN ADDITION TO THE ABOVE REQUIREMENTS, THE FOLLOWING REVISIONS SHALL APPLY:

(SEE 848.18) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS
(5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1/2 HOURS)
ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

(SEE 848.21) THE FINAL DECK SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A
RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY.

(SEE 848.23) FULL DEPTH REPAIR IS NOT REQUIRED IF LESS THAN ONE HALF OF THE
ORIGINAL DECK CONCRETE THICKNESS IS SOUND.

(SEE 848.29) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL
A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR
WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING A
UNIFORM APPLICATION OF CURING MATERIAL OF 705.07, TYPE 1 OR 1D, AS PER CMS 511.17
METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACED
WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR
MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL AT THE NEXT AVAILABLE SHORT
TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

(SEE 848.29) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE
UNTIL AFTER THE COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST
BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI (4.2 Mpa).

(SEE 848.30) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS
ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT
FROM 11:00 PM TO 9:30 AM.

(SEE 848.31) FOR EACH PHASE THE CONTRACTOR SHALL PROVIDE ENOUGH
MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS,
AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS
AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK
TESTS, AND THE MODULUS OF RUPTURE FOR EACH BEAM UNTIL THE
MODULUS OF RUPTURE OF THE TWO TESTS IS NOT LESS THAN 650 PSI (4.5 Mpa).
TRAFFIC IS ALLOWED ON THE OVERLAY AT 600 PSI (4.2 Mpa).

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL
REMAIN IN EFFECT.

DESIGN AGENCY DISTRICT THREE OFFICE OF PRODUCTION	DATE 9/08
	REVIEWED BAD STRUCTURAL FILE NUMBER
DESIGNED KFB CHECKED DCM	DRAWN KFB REVIEWED
STRUCTURE GENERAL NOTES	
CRA-19-1.18 CRA-61-0.55 (2.87) CRA-97-0.70 CRA-598-0.50	
30 36	

COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	BRIDGE DECK DATA					ROADWAY DATA		
			LENGTH (BRIDGE DECK)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			FT.	FT.	SQ.YD.			FT.	FT.	FT.
* CRA-19-0354	OVER OLENTANGY RIVER	SINGLE SPAN PRESTRESS BOX BEAM	54'-7"±	38'-0"± T/T CURBS	231	25° L.F.	CONCRETE	38'-0"	38'-0"	25'-0"
* CRA-61-0307	OVER OLENTANGY RIVER	SINGLE SPAN PRESTRESS BOX BEAM	66'-0"±	30'-2"± T/T CURBS	222	7° L.F.	CONCRETE	30'-2"	30'-2"	15'-0"
** CRA-61-0361	OVER OLENTANGY RIVER	SINGLE SPAN STEEL BEAM	72'-10"±	43'-0"±	348	45° L.F.	CONCRETE	31'-6"	30'-0"	22'-0"
+ CRA-61-0460	OVER OLENTANGY RIVER	SINGLE SPAN PRESTRESS BOX BEAM	48'-8"±	40'-0"±	217	0°	ASPHALT	38'-0"	40'-0"	20'-0"
++ CRA-61-0509	OVER TRIB. OF OLENTANGY RIVER	SINGLE SPAN CONCRETE SLAB	14'-6"±	38'-3"±	62	7° R.F.	ASPHALT	27'-0"		
+ CRA-61-0687	OVER PARAMORE CREEK	SINGLE SPAN PRESTRESS BOX BEAM	34'-4"±	33'-0"±	126	15° R.F.	ASPHALT	27'-0"	24'-0"	20'-0"

- * BUTT JOINT AT APPROACH SLAB. OMIT RESURFACING ON THE APPROACH SLABS AND BRIDGE DECK. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)
- ** BUTT JOINT AT BRIDGE DECK. OMIT RESURFACING ON THE BRIDGE DECK. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)
- + PLANE AND PAVE OVER STRUCTURE. (SEE DETAILS IN PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES)
- ++ PLANE AND PAVE OVER STRUCTURE. (NO STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

DESIGN FILE: I:\projects\79449\structures\79449GP001.dgn
 WORKSTATION: ksalley DATE: 11/3/2008

DESIGN AGENCY
 ODOT
 DISTRICT THREE

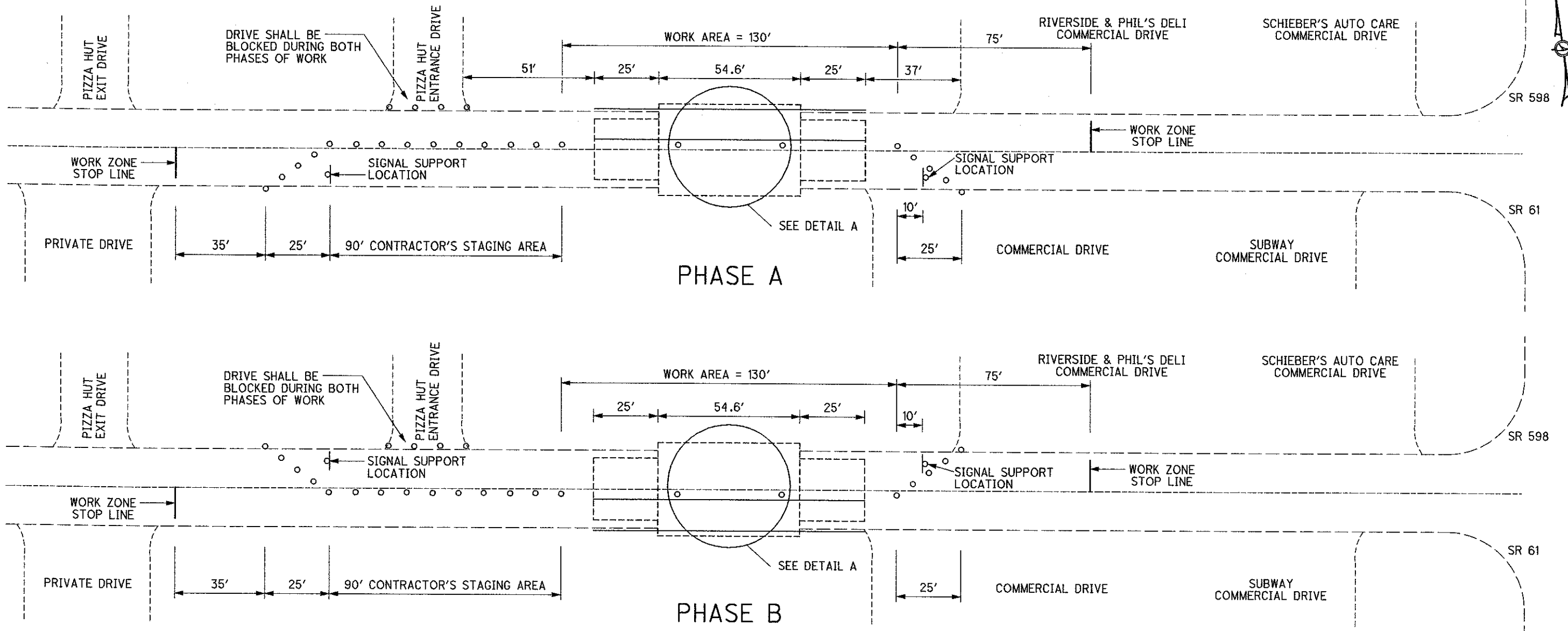
DATE
 9/08
 REVIEWED
 BAD
 STRUCTURE FILE NUMBER
 DRAWN
 KRB
 REVISED
 DESIGNED
 KRB
 CHECKED
 DCM

BRIDGE TREATMENT

CRA-19-1-18
 CRA-61-0-55 (2.87)
 CRA-97-0-70
 CRA-598-0-00

31
 36

DESIGN FILE: I:\projects\79449\structures\79449 CRA-19-3.54 MOT.DGN
 WORKSTATION: ksclay DATE: 11/3/2008



SIGNAL TIMING

A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 60 SECONDS

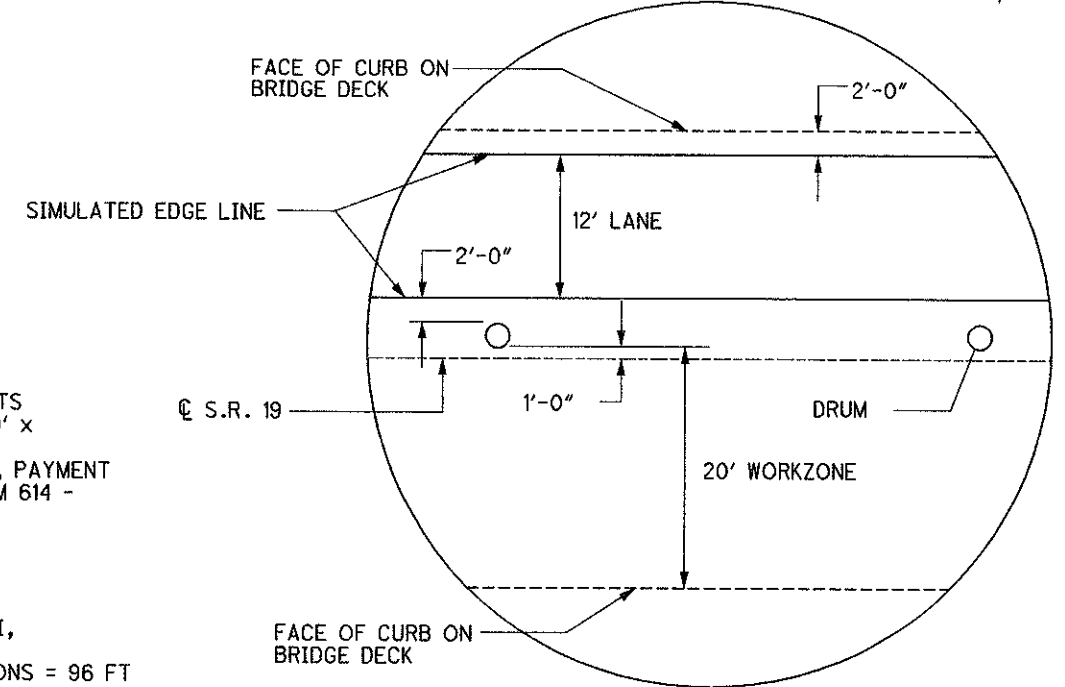
	GREEN	AMBER	RED
PHASE A	15	5	10
PHASE B	15	5	10

THE ABOVE TIMING MAY BE CHANGED WITH THE APPROVAL OF THE ENGINEER

FOR DETAILS NOT SHOWN SEE STANDARD DRAWING
 MT-96.10

NOTES:

- 1) THE CONTRACTOR SHALL USE PORTABLE TRAFFIC SIGNALS.
- 2) THE CONTRACTOR IS NOT REQUIRED TO REMOVE THE CENTER LINES.
- 3) ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC: AT EXPANSION JOINTS 2 JOINTS x 2 WEDGES/JOINT x 1/2 x (1/12)' x 3' WIDE x 38' LONG / 27 = 1 CU YD PLACE "BUMP" SIGNS AT THESE LOCATIONS, PAYMENT FOR THE SIGNS SHALL BE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC
- 4) ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC: 1 LONGITUDINAL JOINT x 1/2 x (1/12)' x 1' WIDE x 105' LONG / 27 = 1 CU YD
- 5) ITEM 614 - WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I: 12' LENGTH x 2 LOCATIONS x 4 APPLICATIONS = 96 FT



DETAIL A

(OPPOSITE LANE FOR PHASE B)

ITEM	QUANTITY	UNIT	DESCRIPTION
614	2	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
614	96	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET NO. 11

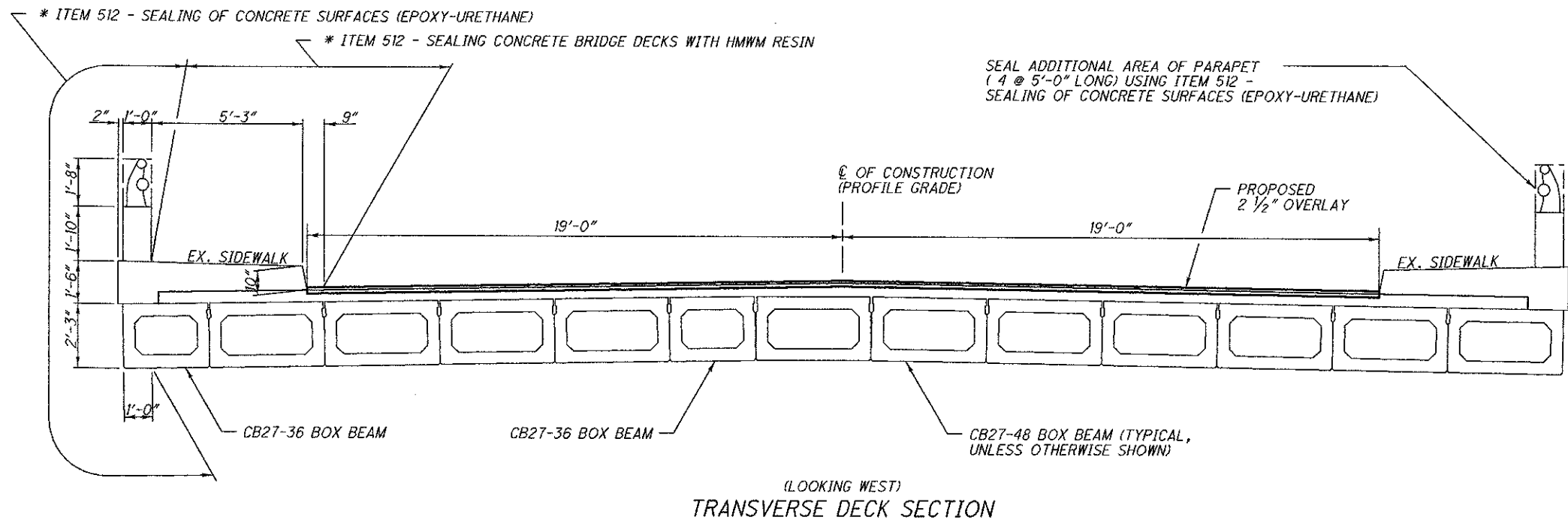
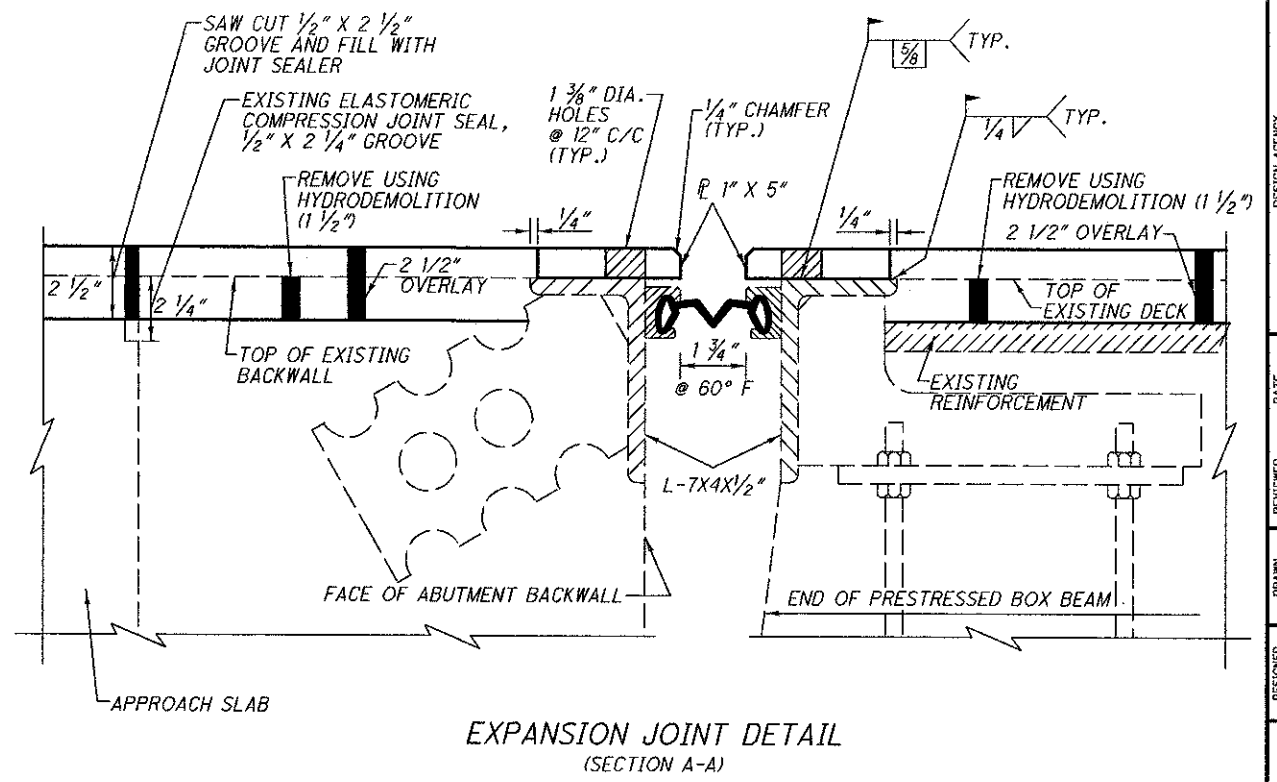
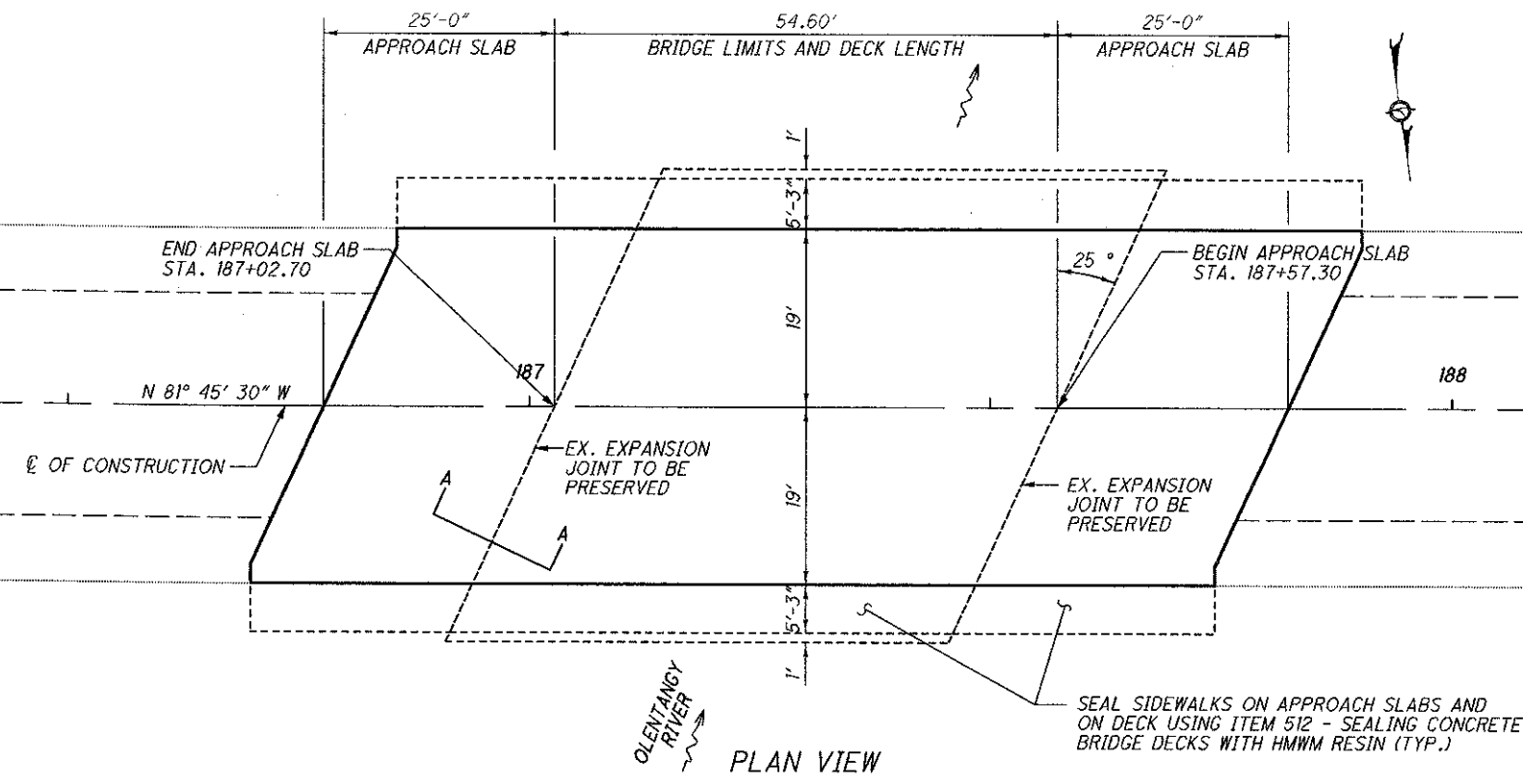
MAINTENANCE OF TRAFFIC
 CRA-19-0364
 OVER OLENTANGY RIVER

DESIGN AGENCY	DISTRICT THREE
DATE	10/08
REVIEWED	BAD
STRUCTURAL FILE NUMBER	1700448
DESIGNED	DCM
DRAWN	KRB
REVISOR	

CRA-19-1.18
 CRA-61-0.55 (2.87)
 CRA-97-0.70
 CRA-598-0.50

1 / 1
 31A
 36

DESIGN FILE: I:\projects\79449\structures\CRA-19-3.54\79449DP001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008



- NOTES
- * - TYPICAL TREATMENT ALONG BOTH SIDES OF THE STRUCTURE.
 - THE OVERLAY LENGTH SHALL BE FROM THE BEGINNING OF THE REAR APPROACH SLAB TO THE END OF THE FORWARD APPROACH SLAB.
 - HYDRODEMOLITION SHALL BE USED TO REMOVE 1 1/2" CONCRETE, AND A 2 1/2" OVERLAY SHALL BE PLACED.
 - TWO 1" X 5" STEEL BARS SHALL BE WELDED ONTO THE EXISTING EXPANSION JOINTS, AS SHOWN IN THE EXPANSION JOINT DETAIL.
 - THE EXISTING EXPANSION JOINT WITH STRIP SEAL BETWEEN THE ABUTMENT BACKWALL AND DECK SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES. IF THE CONTRACTOR DAMAGES THE STRIP SEAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING THE SEAL AT THE CONTRACTOR'S EXPENSE.
 - THE EXISTING ELASTOMERIC COMPRESSION JOINT SEAL BETWEEN THE APPROACH SLAB AND THE ABUTMENT BACKWALL SHALL BE REMOVED WITH THE HYDRODEMOLITION. AFTER THE OVERLAY IS PLACED, A NEW 1/2" X 2 1/2" GROOVE SHALL BE MADE BY SAW CUTTING AND FILLED WITH ITEM 516, JOINT SEALER, AS PER PLAN.

EXISTING STRUCTURE

SCOPE OF WORK:

- SEALING OF THE FASCIA BEAMS PLUS 1'-0" ALONG THE EDGE AND UNDERNEATH OF THE FASCIA BEAMS.
- SEALING OF THE ENTIRE PARAPETS (FRONT AND BACK).
- SEALING OF THE SIDEWALKS (TOP AND FACE OF CURB) PLUS 9" ON THE DECK ALONG THE FACE OF THE CURB.
- OVERLAY DECK AND FORWARD AND REAR APPROACH SLABS.

TYPE:
SINGLE SPAN PRESTRESSED CONCRETE ADJACENT COMPOSITE BOX BEAMS ON FULL HEIGHT ABUTMENTS WITH 5" CONCRETE DECK

SPAN: 50' C/C BEARINGS

ROADWAY: 38'-0" F/F CURB WITH 5'-3" SIDEWALKS

LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING

SKREW: 25°00'00" LF

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81, 25' LONG

ALIGNMENT: TANGENT

CROWN: 0.016

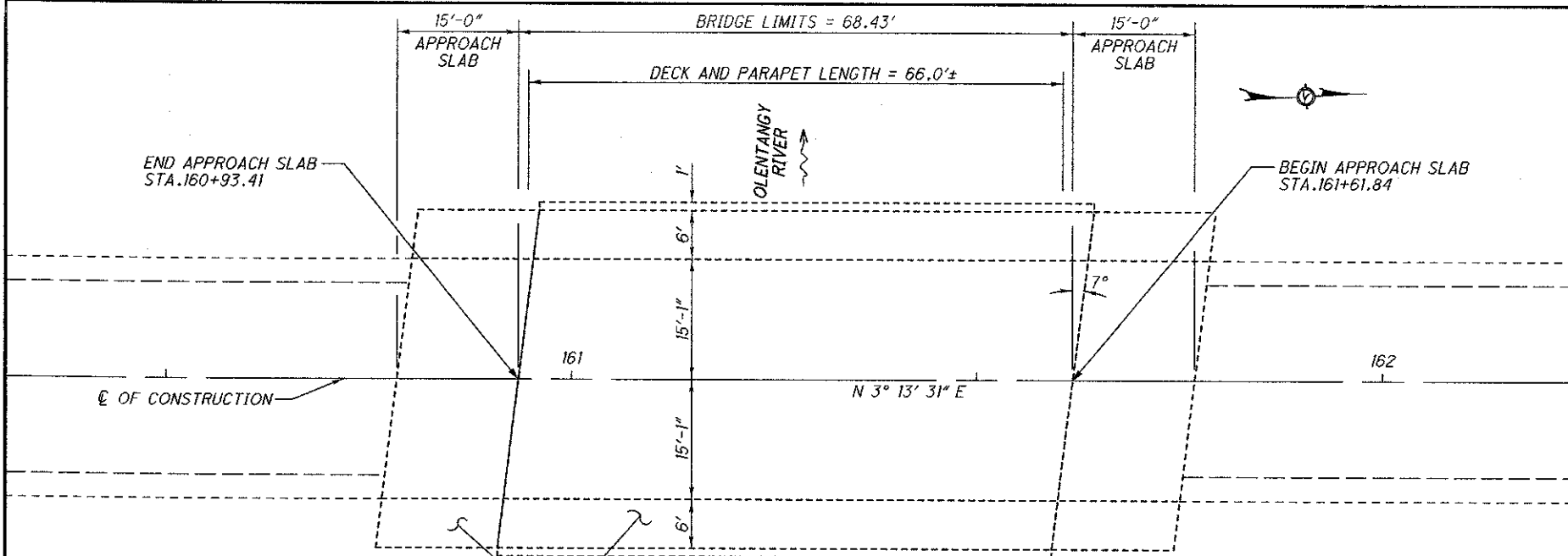
LATITUDE: N 40°44'03"
LONGITUDE: W 82°48'13"

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
512	10100	130	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	10300	159	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
513	10201	2852	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN
516	31001	84	FT	JOINT SEALER, AS PER PLAN
848	10201	442	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/2" THICK)
848	20000	442	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION
848	30201	12	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	50000	35	SQ YD	HAND CHIPPING
848	50100	LUMP		TEST SLAB

ALL QUANTITIES CARRIED TO THE STRUCTURE GENERAL SUMMARY.

DESIGN AGENCY: ODOT
 DISTRICT THREE
 DATE: 9/08
 REVIEWED: BAD
 DRAWN: KRB
 CHECKED: DCM
 STRUCTURE FILE NUMBER: 1700448
SITE PLAN
 CRA-19-0354
 OVER OLENTANGY RIVER
 CRA-19-1.18
 CRA-61-0.55 (2.87)
 CRA-97-0.70
 CRA-598-0.50
 1/1
 32
 36

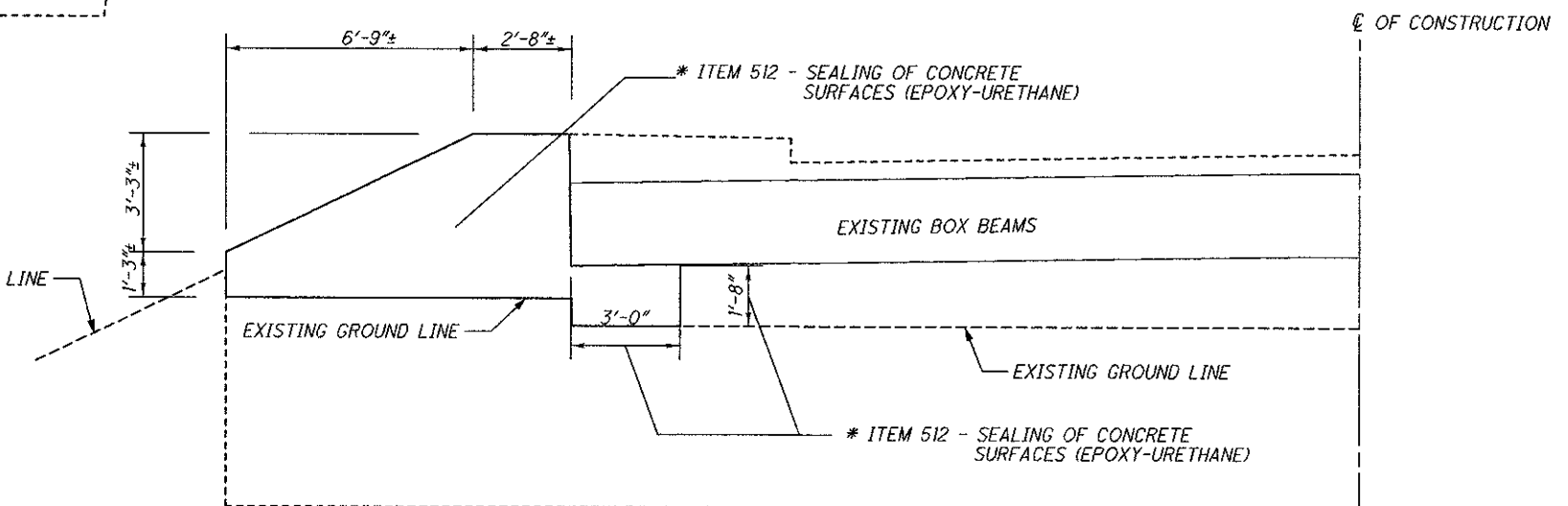
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 WORKSTATION: ksalay DATE: 11/3/2008



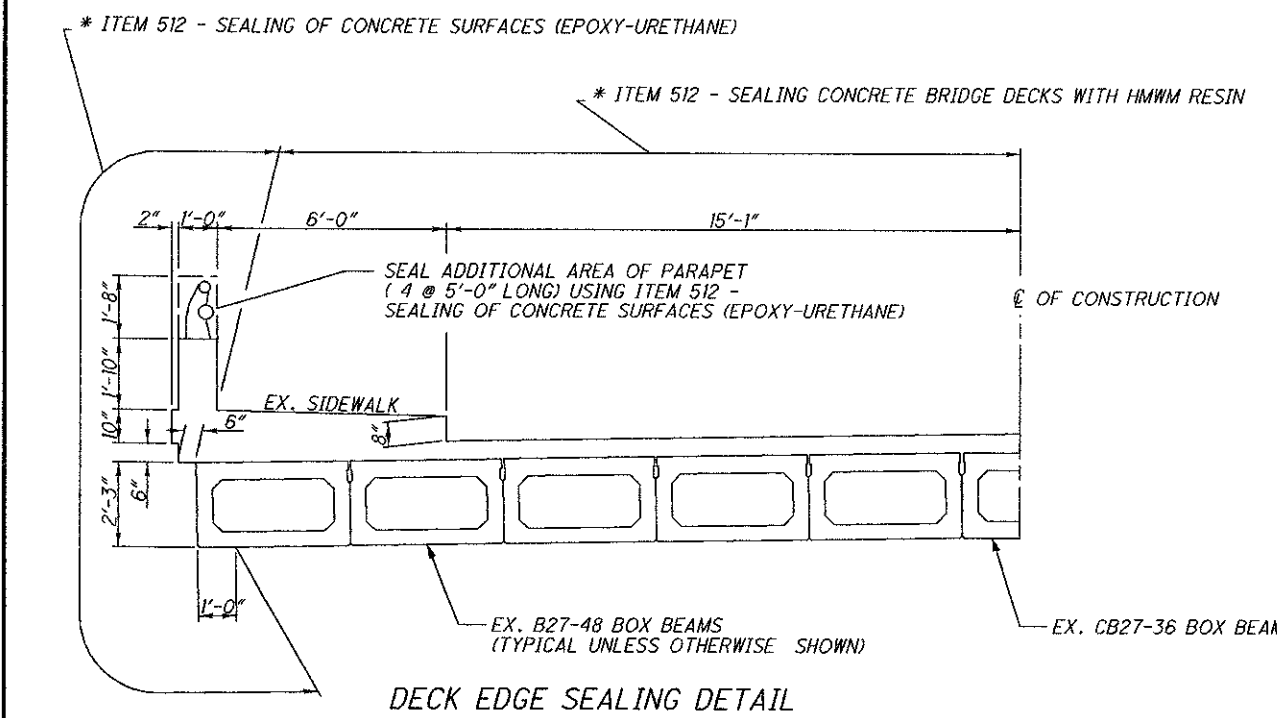
NOTE
 1) * - TYPICAL TREATMENT ALONG BOTH SIDES OF THE STRUCTURE.

* SEAL SIDEWALKS AND CURBS ON DECK AND APPROACH SLABS USING ITEM 512 - SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

PLAN VIEW



ABUTMENT SEALING DETAIL
 (WINGWALLS ARE 1'-6" THICK)



DECK EDGE SEALING DETAIL

EXISTING STRUCTURE

SCOPE OF WORK:
 1) SEALING OF THE FASCIA BEAMS PLUS 1'-0" ALONG THE EDGE AND UNDERNEATH OF THE FASCIA BEAMS.
 2) SEALING OF THE ENTIRE PARAPETS (FRONT AND BACK).
 3) SEALING OF THE DECK AND APPROACH SLAB SIDEWALKS (TOP AND FACE OF CURB) AND SEAL THE ABUTMENTS AND THE DECK.

TYPE:
 COMPOSITE PRESTRESSED CONCRETE BOX BEAM WITH CAPPED PILE SUBSTRUCTURE.

SPAN: 65' C/C BEARINGS

ROADWAY: 30'-0" F/F CURB WITH 6' SIDEWALKS

LOADING: MS18 AND THE ALTERNATE MILITARY LOADING

SKEW: 7°00'00"

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81M, 15' LONG

ALIGNMENT: TANGENT

CROWN: 0.016

LATITUDE: N 40°44'11"

LONGITUDE: W 82°46'41"

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
512	10100	183	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	10300	369	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

ALL QUANTITIES CARRIED TO THE STRUCTURE GENERAL SUMMARY.

DESIGN AGENCY: ODOT DISTRICT THREE

DATE: 9/08

REVIEWED: BAD STRUCTURE FILE NUMBER: 1701908

DRAWN: KRB

DESIGNED: KRB CHECKED: DCM

SITE PLAN

CRA-61-0307

OVER OLENTANGY RIVER

CRA-19-1-18

CRA-61-0.55 (2.87)

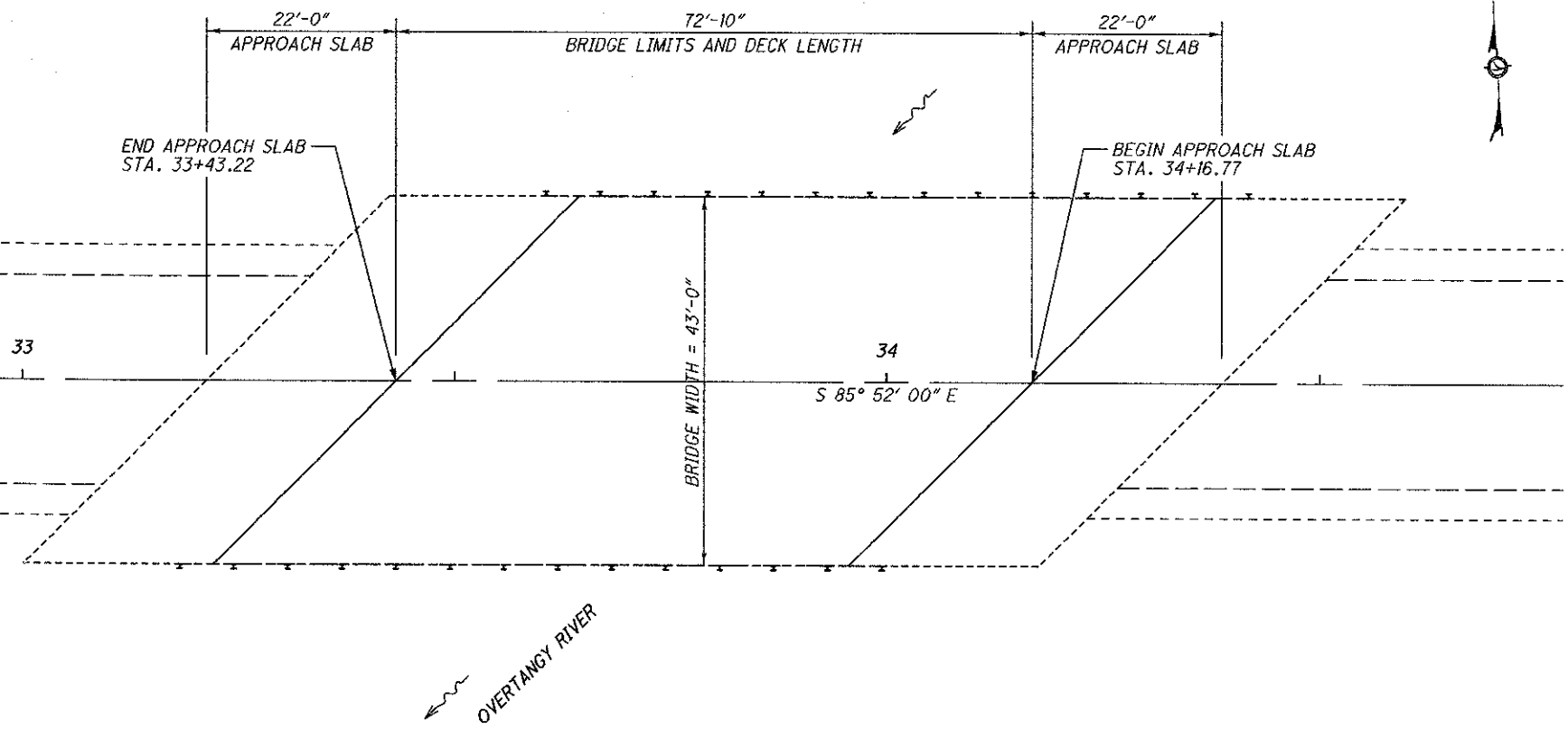
CRA-97-0.70

CRA-598-0.50

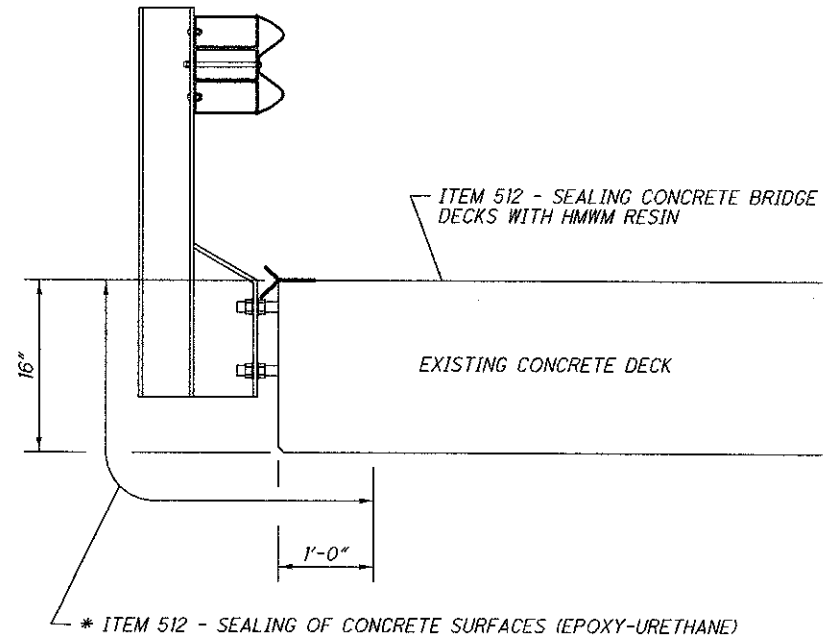
1/1

33/36

DESIGN FILE: I:\projects\79449\structures\CRA-61-3.61\79449DP001.dgn
 WORKSTATION: ksalay DATE: 11/3/2008



PLAN VIEW



DECK EDGE SEALING DETAIL
 (SEALING LENGTH = 68'-10"±)

NOTE
 1) * - TYPICAL TREATMENT ALONG BOTH SIDES OF THE STRUCTURE.
 2) SEE GUARDRAIL DETAIL SHEETS FOR THE GUARDRAIL TREATMENT APPROACHING AND TRAILING THE STRUCTURE.

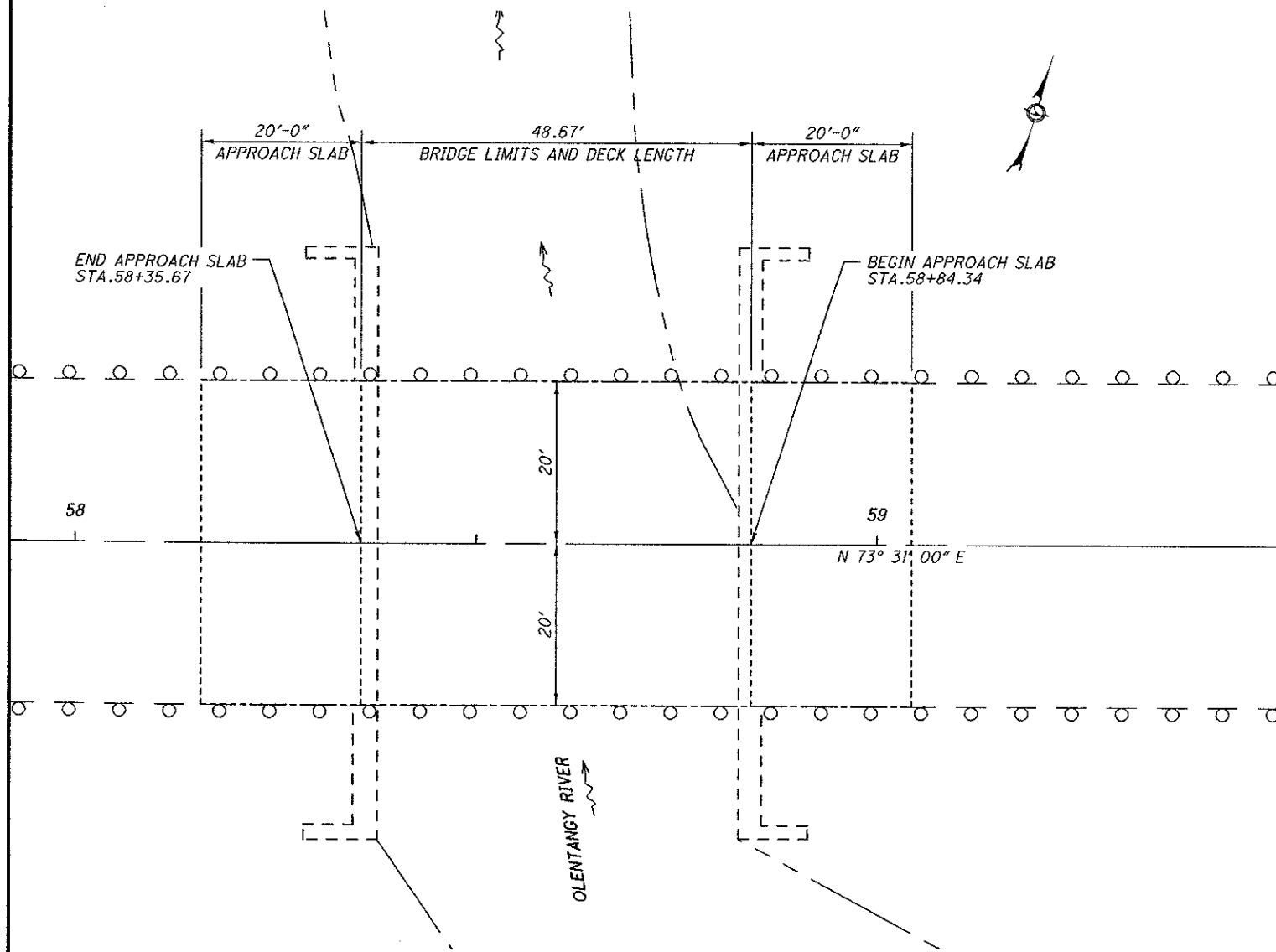
EXISTING STRUCTURE	
SCOPE OF WORK: 1) SEALING OF THE DECK. 2) SEALING OF THE DECK FASCIA (DECK EDGE) PLUS 1'-0" ALONG THE EDGE AND UNDERNEATH FROM THE FASCIA DECK (DECK EDGE).	
TYPE: 70' ROLLED I-BEAM SPAN	
SPAN: 70' C/C BEARINGS	
ROADWAY: 41'-0" F/F GUARDRAIL	
LOADING:	
SKEW: 45°00'00" LF	
WEARING SURFACE: MONOLITHIC CONCRETE	
APPROACH SLABS: 22'± LONG	
ALIGNMENT: TANGENT	
CROWN: 0.016	
LATITUDE: N 40°44'15"	
LONGITUDE: W 82°46'10"	

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
512	10100	36	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	10300	329	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

ALL QUANTITIES CARRIED TO THE STRUCTURE GENERAL SUMMARY.

DESIGNED KRB	CHECKED DCM	DRAWN KRB	REVIEWED BAD	DATE 9/08
				STRUCTURE FILE NUMBER 1701924
SITE PLAN				
CRA-61-0361 OVER OLENTANGY RIVER				
CRA-19-1.18 CRA-61-0.55 (2.87) CRA-97-0.70 CRA-598-0.50				
1 / 1				
34 36				
				DESIGN AGENCY ODOT DISTRICT THREE

DESIGN FILE: I:\projects\79449\structures\CRA-61-4.60\79449DP001.dgn
 WORKSTATION: ksdlay DATE: 11/3/2008

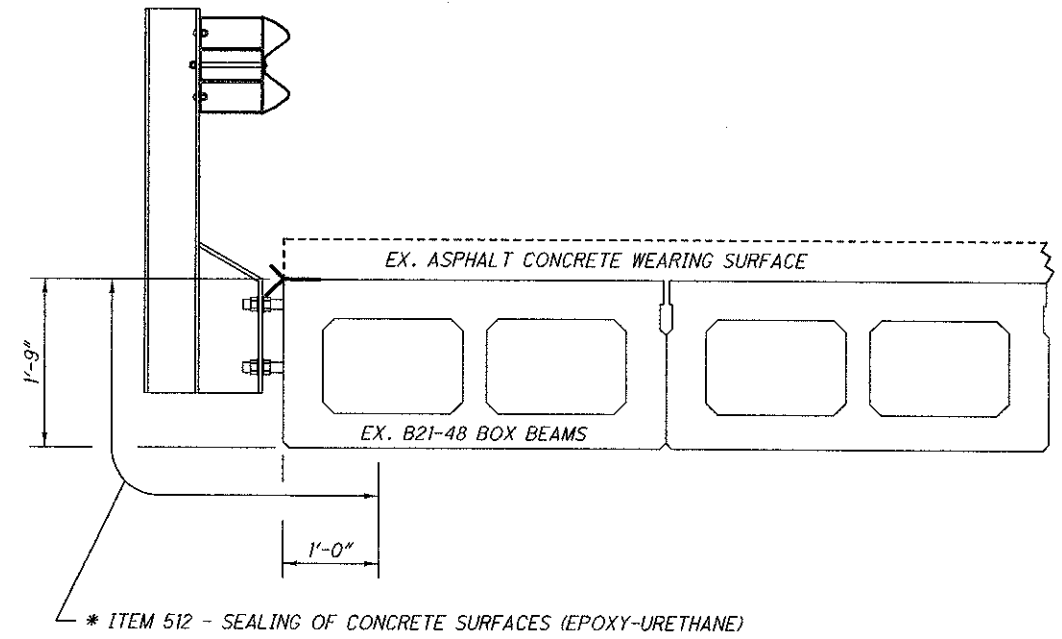


PLAN VIEW

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
512	10100	28	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO THE STRUCTURE GENERAL SUMMARY.

NOTE
 1) * - TYPICAL TREATMENT ALONG BOTH SIDES OF THE STRUCTURE.
 2) SEE GUARDRAIL DETAIL SHEETS FOR THE GUARDRAIL TREATMENT APPROACHING AND TRAILING THE STRUCTURE.



DECK EDGE SEALING DETAIL
 (SEALING LENGTH = 45'-2"*)

EXISTING STRUCTURE
<p>SCOPE OF WORK: 1) SEALING OF THE FASCIA BEAM PLUS 1'-0" ALONG THE EDGE AND UNDERNEATH OF THE FASCIA BEAM.</p> <p>TYPE: PRESTRESSED CONCRETE BOX BEAM WITH REINFORCED CONCRETE SUBSTRUCTURE.</p> <p>SPAN: 45' F/F ABUTMENTS, 47'-6" C/C BEARINGS</p> <p>ROADWAY: 40'-0" F/F GUARDRAIL</p> <p>LOADING: HS 20-44 AND THE ALTERNATE MILITARY LOADING</p> <p>SKREW: 0°</p> <p>WEARING SURFACE: ASPHALT CONCRETE</p> <p>APPROACH SLABS: AS-1-81, 20' LONG</p> <p>ALIGNMENT: TANGENT</p>

SITE PLAN
 CRA-61-0460
 OVER OLENTANGY RIVER

CRA-19-1.18
 CRA-61-0.55 (2.87)
 CRA-97-0.70
 CRA-598-0.50

1 / 1
 35
 36

DESIGN AGENCY
 ODOT
 DISTRICT THREE

DATE
 9/08

REVIEWED
 BAD

STRUCTURE FILE NUMBER
 1701959

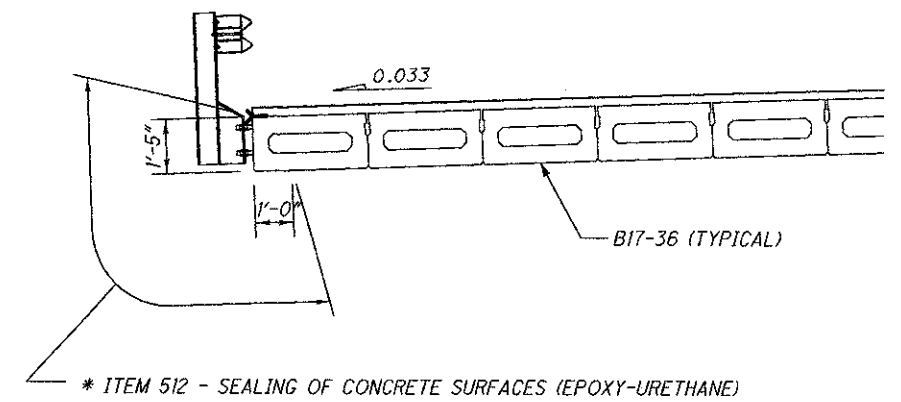
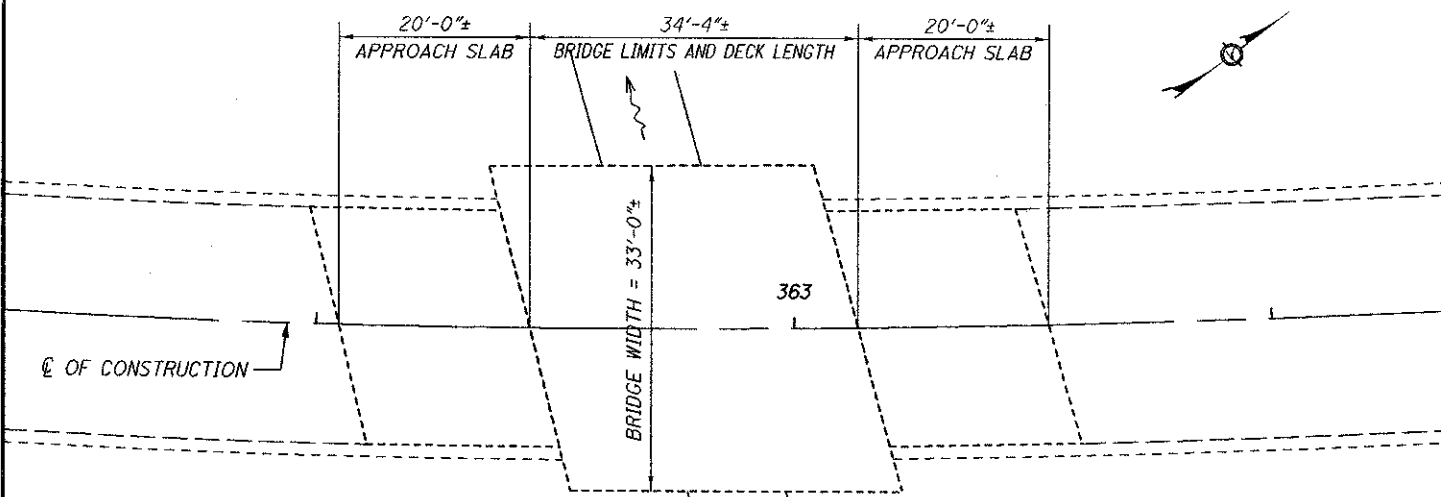
DESIGNED
 KRB

CHECKED
 DCM

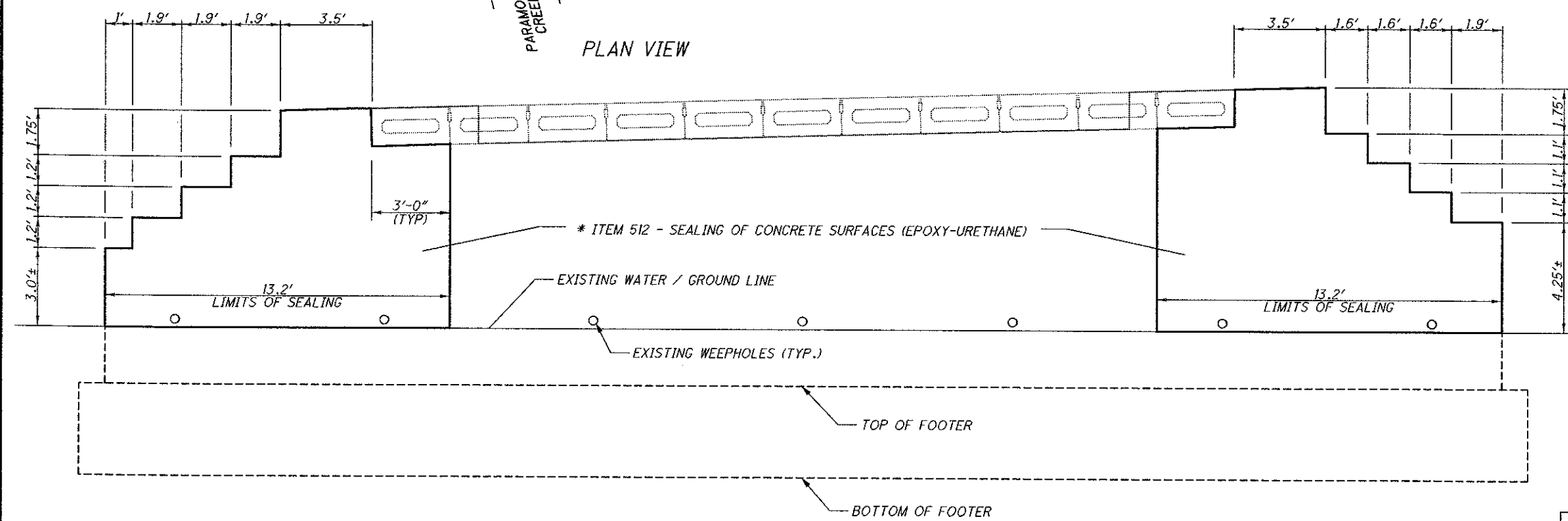
DRAWN
 KRB

REVISOR

DESIGN FILE: I:\projects\79449\structures\CRA-61-6.87\79449DP001.dgn
 WORKSTATION: kscalay DATE: 11/3/2008



DECK EDGE SEALING DETAIL
 (SEALING LENGTH = 31'-10"±)



ABUTMENT SEALING DETAIL

* ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

* ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

NOTE
 1) * - TYPICAL TREATMENT ALONG BOTH SIDES OF THE STRUCTURE.

EXISTING STRUCTURE

SCOPE OF WORK:
 1) SEALING OF THE FASCIA BEAMS PLUS 1'-0" ALONG THE EDGE AND UNDERNEATH OF THE FASCIA BEAMS.
 2) SEALING OF ABUTMENT/ WINGWALLS AS DETAILED ABOVE.

TYPE:
 PRESTRESSED CONCRETE NON COMPOSITE BOX BEAM SUPERSTRUCTURE WITH REINFORCED CONCRETE SUBSTRUCTURE ON EXISTING FOOTINGS.

SPAN: 31.79' CLEAR
 ROADWAY: 33'-0" F/F GUARDRAIL
 LOADING: HS20-44
 SKEW: 15°00'00" RF
 WEARING SURFACE: 2.50" ASPHALT CONCRETE
 APPROACH SLABS: AS-1-72, 20' LONG
 ALIGNMENT: 3°30' LEFT
 CROWN: 0.033
 LATITUDE: N 40°46'11"
 LONGITUDE: W 82°44'21"

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
512	10100	74	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO THE STRUCTURE GENERAL SUMMARY.

SITE PLAN
 CRA-61-0687
 OVER PARAMORE CREEK

DESIGN AGENCY: ODOT
 DISTRICT THREE

DATE: 9/08
 STRUCTURE FILE NUMBER: 1702084

REVIEWED: BAD
 STRUCTURE FILE NUMBER: 1702084

DRAWN: KRB
 REVISIONS: DCM

DESIGNED: KRB
 CHECKED: DCM

CRA-19-1.18
 CRA-61-0.55 (2.87)
 CRA-97-0.70
 CRA-598-0.00

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