



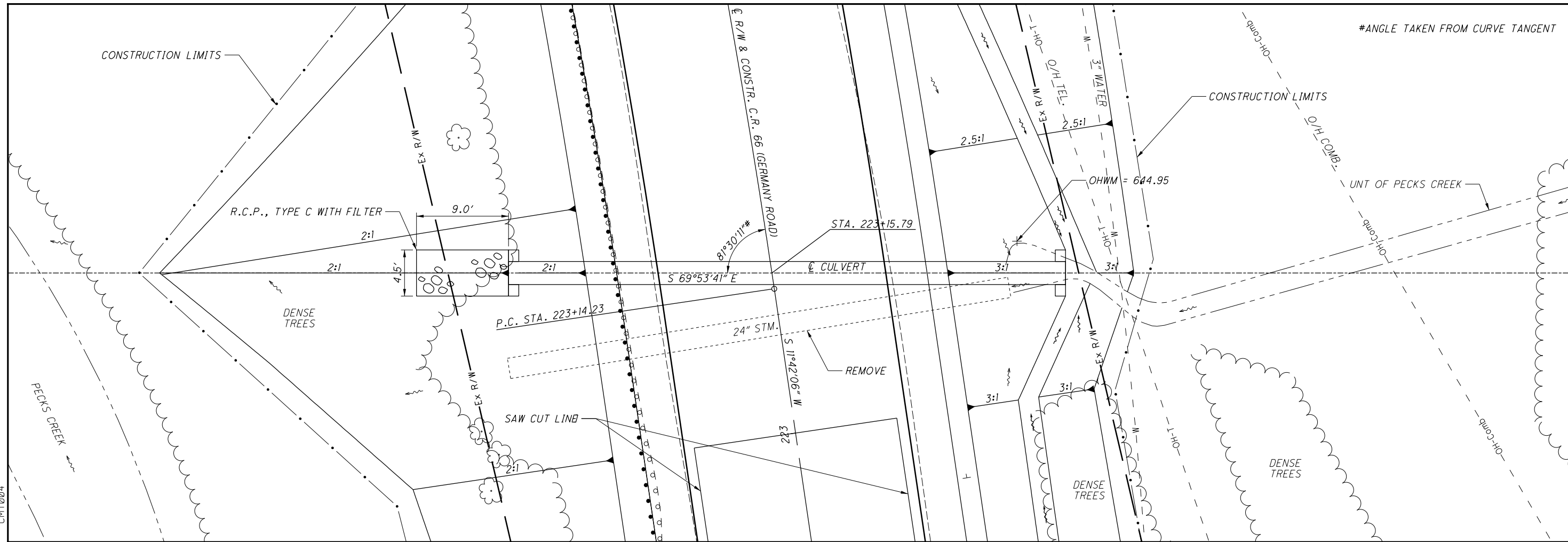
P:\PIK\TR\PIKTR0026.Germany\99204\roadway\sheet\99204GG003.dgn Sheet 3/8/2021 9:06:00 AM CMT026

SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
8	9	16	85	01/STR/ PV	EXT	TOTAL													
<b>RETAINING WALLS</b>																			
			15	15	203	35150	15	CY	GRANULAR MATERIAL, TYPE F										
			LS	LS	503	21300	LS		UNCLASSIFIED EXCAVATION										
			1,895	1,895	507	00400	1,895	FT	STEEL PILES, MISC.: SOLDIER PILES HP14X73	84									
			876	876	507	00400	876	FT	STEEL PILES, MISC.: SOLDIER PILES HP14X89	84									
			1,578	1,578	507	00400	1,578	FT	STEEL PILES, MISC.: SOLDIER PILES HP14X117	84									
			3,267	3,267	507	00400	3,267	FT	STEEL PILES, MISC.: SOLDIER PILES W27X84	84									
			32,440	32,440	509	10000	32,440	LB	EPOXY COATED REINFORCING STEEL										
			406	406	511	46010	406	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING										
			63	63	511	81300	63	EACH	CONCRETE, MISC.: 8" X 24" X 69" PRECAST CONCRETE LAGGING	84									
			69	69	511	81300	69	EACH	CONCRETE, MISC.: 8" X 36" X 69" PRECAST CONCRETE LAGGING	84									
			30	30	511	81300	30	EACH	CONCRETE, MISC.: 8" X 24" X 69" PRECAST CONCRETE LAGGING WITH OPENING	84									
			30	30	511	81300	30	EACH	CONCRETE, MISC.: 8" X 36" X 69" PRECAST CONCRETE LAGGING WITH OPENING	84									
			41	41	511	81300	41	EACH	CONCRETE, MISC.: 8" X 24" X 93" PRECAST CONCRETE LAGGING	84									
			94	94	511	81300	94	EACH	CONCRETE, MISC.: 8" X 36" X 93" PRECAST CONCRETE LAGGING	84									
			47	47	511	81300	47	EACH	CONCRETE, MISC.: 8" X 24" X 93" PRECAST CONCRETE LAGGING WITH OPENING	84									
			959	959	512	10100	959	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)										
			16	16	512	33000	16	SY	TYPE 2 WATERPROOFING										
			118	118	516	13600	118	SF	1" PREFORMED EXPANSION JOINT FILLER										
			1,521	1,521	517	70000	1,521	FT	RAILING (TWIN STEEL TUBE)										
			300	300	524	94603	300	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	84									
			420	420	524	94605	420	FT	DRILLED SHAFTS, 30" DIAMETER INTO BEDROCK, AS PER PLAN	84									
			4,280	4,280	524	94703	4,280	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	84									
			2,620	2,620	524	94705	2,620	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN	84									
			1,750	1,750	524	95000	1,750	FT	DRILLED SHAFTS, MISC.: PLUG SHAFT, 42" DIAMETER, UNREINFORCED	84									
			3,537	3,537	SPECIAL	53000600	3,537	SF	STRUCTURES: PREFABRICATED GEOCOMPOSITE DRAIN	84									
<b>MAINTENANCE OF TRAFFIC</b>																			
			175		175	410	12000	175	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B									
				16	16	614	11110	16	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE									
				2	2	614	12384	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)									
			LS		LS	614	12420	LS		DETOUR SIGNING									
				21	21	614	13310	21	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL									
				21	21	614	13360	21	EACH	OBJECT MARKER, TWO WAY									
			46		46	616	10000	46	MGAL	WATER									
				990	990	622	41100	990	FT	PORTABLE BARRIER, UNANCHORED									
<b>INCIDENTALS</b>																			
			LS		LS	614	11000	LS		MAINTAINING TRAFFIC									
					6	619	16000	6	MNTH	FIELD OFFICE, TYPE A									
					LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING									
					LS	624	10000	LS		MOBILIZATION									

CALCULATED DTS CHECKED MDW  
**GENERAL SUMMARY**  
 PIK-C.R. 66-(3.95)(4.47)  
 13  
 161

△ QUANTITIES UPDATED 3/8/21

P:\PIK\TR\PIKTR0026\_Germany\99204\roadway\sheet\99204DD001.dgn Sheet 2/23/2021 3:14:33 PM CMT004



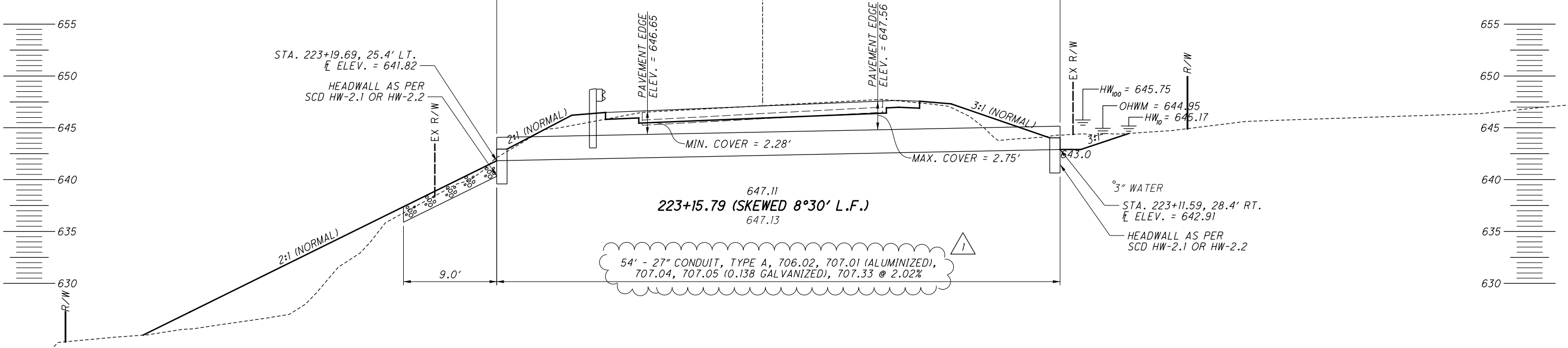
#ANGLE TAKEN FROM CURVE TANGENT

0 5 10  
2.5'  
HORIZONTAL SCALE IN FEET

CALCULATED  
KAM  
CHECKED  
MDW

**HYDRAULIC DESIGN DATA**

DRAINAGE AREA = 21.304 ACRES  
 $Q_{10} = 18.12$  CFS  
 $Q_{100} = 24.86$  CFS  
 $HW_{10} = 645.17$   
 $HW_{100} = 645.75$   
 $V_{10} = 10.64$  FPS  
 $V_{100} = 11.52$  FPS  
 $pH = 7.6$   
 ABRASION LEVEL = 1  
 DESIGN SERVICE LIFE = 50 YRS.



**CULVERT DETAILS**  
**STA. 223+15.79**

**PIK-C.R. 66-(3.95)(4.47)**

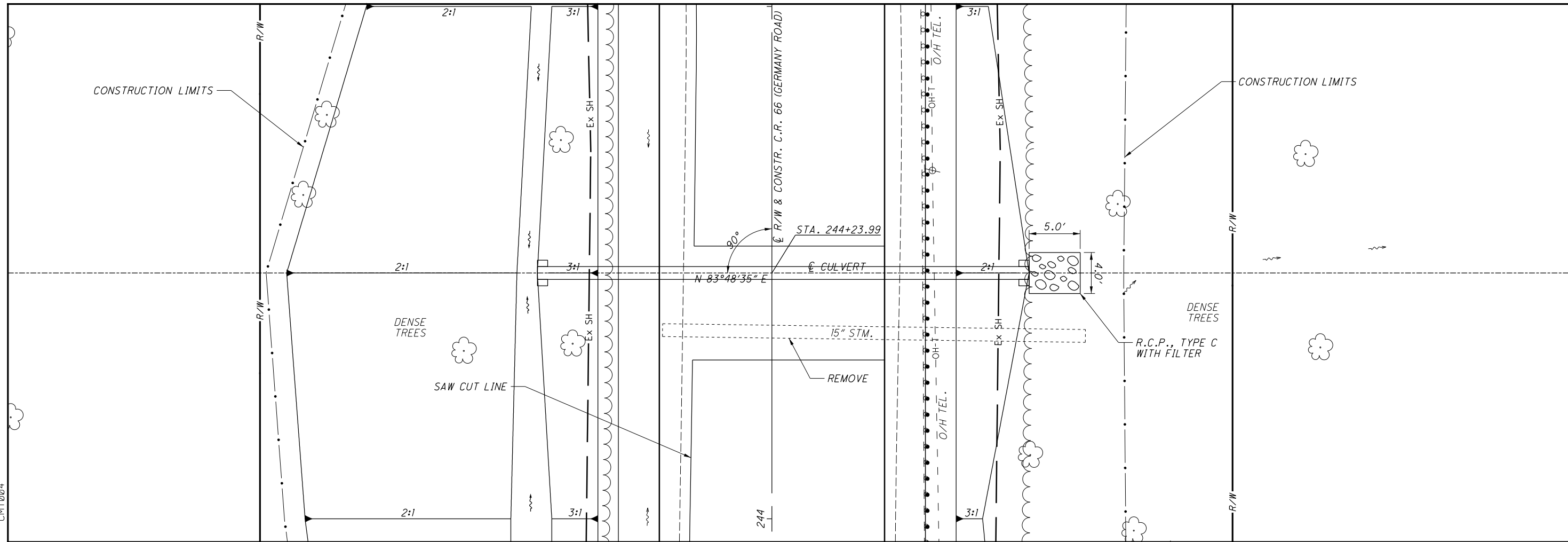
1 MATERIAL LIST UPDATED 2/23/21

**NOTE**  
 1. FOR QUANTITIES SEE SHEET 15.

P:\PIK\TR\PIKTR0026\_Germany\99204\roadway\sheet\99204DD002.dgn Sheet 2/23/2021 3:17:06 PM CMT004

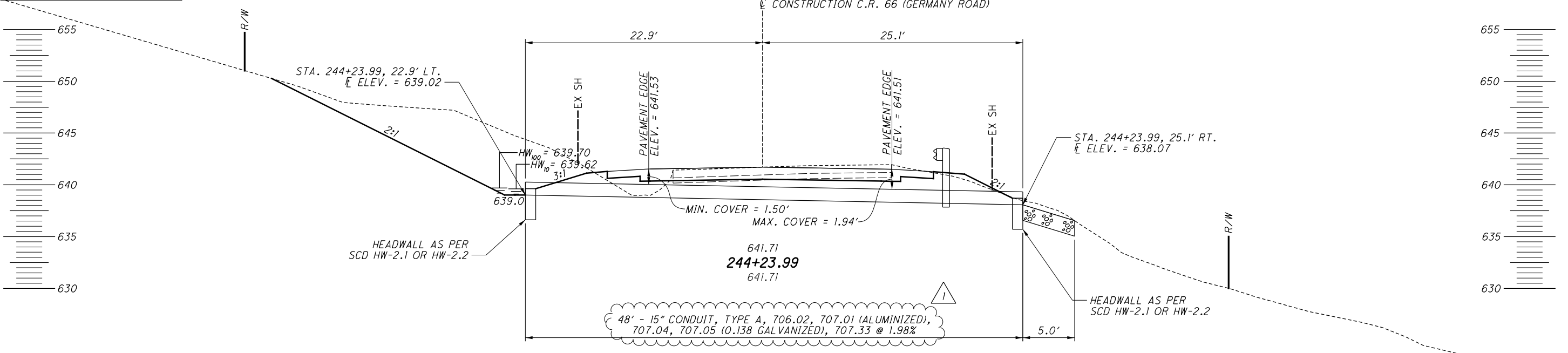
CALCULATED  
KAM  
CHECKED  
MDW

0 5 10  
2.5  
HORIZONTAL  
SCALE IN FEET



**HYDRAULIC DESIGN DATA**

DRAINAGE AREA = 0.52 ACRES  
 $Q_{10} = 0.73$  CFS  
 $Q_{100} = 0.98$  CFS  
 $HW_{10} = 639.62$   
 $HW_{100} = 639.70$   
 $V_{10} = 4.71$  FPS  
 $V_{100} = 5.11$  FPS  
 $pH = 7.6$   
 ABRASION LEVEL = 1  
 DESIGN SERVICE LIFE = 50 YRS.



**CULVERT DETAILS**  
**STA. 244+23.99**

**PIK-C.R. 66-(3.95)(4.47)**

NOTE  
1. MATERIAL LIST UPDATED 2/23/21  
1. FOR QUANTITIES SEE SHEET 15.

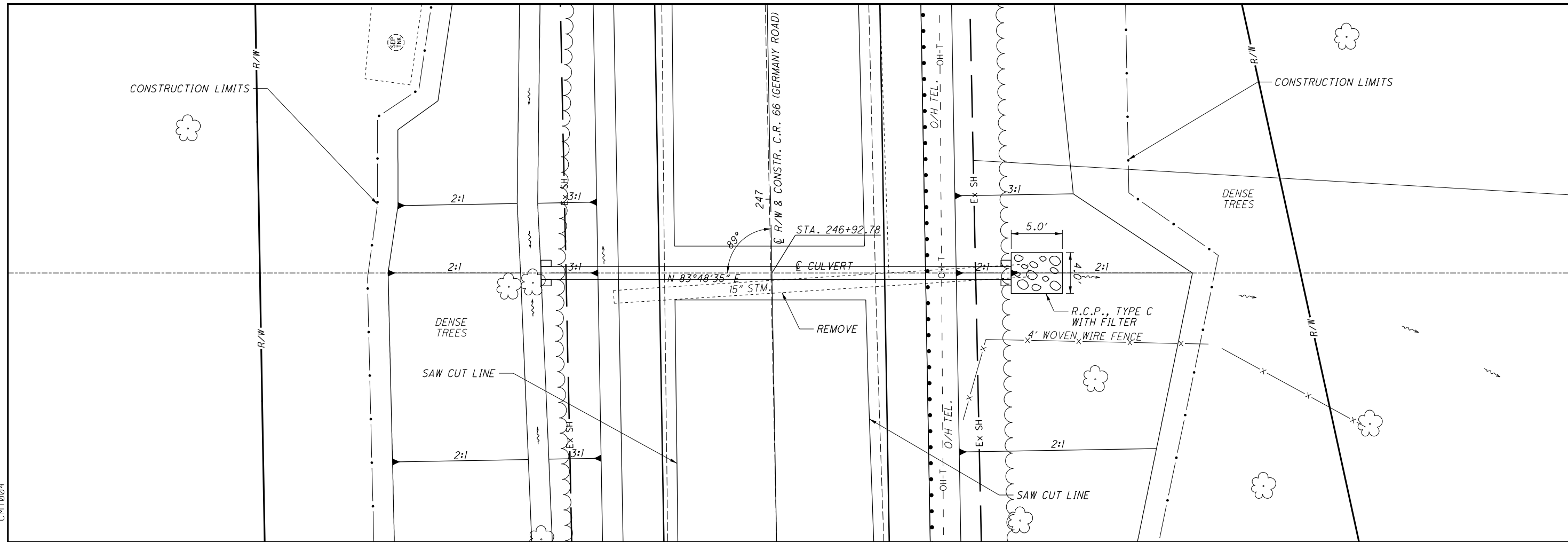
P:\PIK\TR\PIKTR0026\_Germany\99204\roadway\sheets\99204DD003.dgn Sheet 2/23/2021 3:19:47 PM CMT004


  
 0 5 10
   
 2.5' HORIZONTAL
   
 SCALE IN FEET

CALCULATED  
 KAM  
 CHECKED  
 MDW

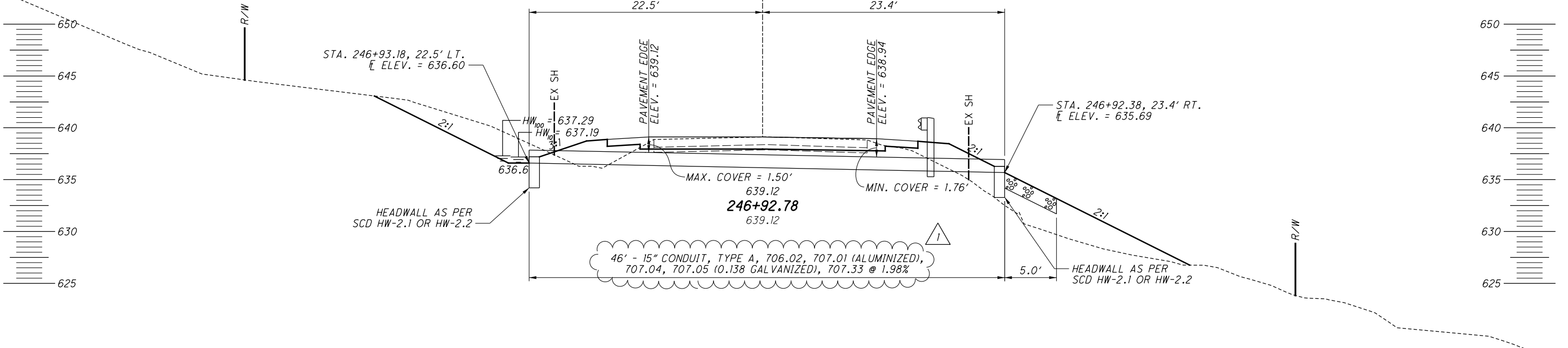
**CULVERT DETAILS**  
**STA. 246+92.78**

**PIK-C.R. 66-(3.95)(4.47)**



**HYDRAULIC DESIGN DATA**

DRAINAGE AREA = 0.61 ACRES  
 $Q_{10} = 0.90$  CFS  
 $Q_{100} = 1.21$  CFS  
 $HW_{10} = 637.19$   
 $HW_{100} = 637.29$   
 $V_{10} = 5.02$  FPS  
 $V_{100} = 5.48$  FPS  
 $pH = 7.6$   
 ABRASION LEVEL = 1  
 DESIGN SERVICE LIFE = 50 YRS.



1 MATERIAL LIST UPDATED 2/23/21

NOTE  
1. FOR QUANTITIES SEE SHEET 15.

P:\PIK\TR\PIKTR0026\_Germany\99204\structures\Wall\_001\sheet\99204\_001\sheet.dgn Sheet 3/8/2021 8:39:12 AM CMT026

ESTIMATED QUANTITIES							DESIGNED:ERK DATE: 11/1/2018	CHECKED:GDJ DATE:11/1/2018
ITEM	EXTENSION	WALL 1	WALL 2	WALL 3	TOTAL	UNIT	DESCRIPTION	SHEET #
203	35150			15	15	CY	GRANULAR MATERIAL, TYPE F	
503	21300	LS	LS		LS	-	UNCLASSIFIED EXCAVATION	
507	00400			1895	1895	FT	STEEL PILES, MISC.: SOLDIER PILES HPI4X73	84
507	00400	876			876	FT	STEEL PILES, MISC.: SOLDIER PILES HPI4X89	84
507	00400	1578			1578	FT	STEEL PILES, MISC.: SOLDIER PILES HPI4X117	84
507	00400		3267		3267	FT	STEEL PILES, MISC.: SOLDIER PILES W27X84	84
509	10000	12638	19802		32440	LB	EPOXY COATED REINFORCING STEEL	
511	46010	197	209		406	CY	CLASS OC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	81300	63			63	EACH	CONCRETE, MISC.: 8" X 24" X 69" PRECAST CONCRETE LAGGING	84
511	81300	69			69	EACH	CONCRETE, MISC.: 8" X 36" X 69" PRECAST CONCRETE LAGGING	84
511	81300	30			30	EACH	CONCRETE, MISC.: 8" X 24" X 69" PRECAST CONCRETE LAGGING WITH OPENING	84
511	81300	30			30	EACH	CONCRETE, MISC.: 8" X 36" X 69" PRECAST CONCRETE LAGGING WITH OPENING	84
511	81300			41	41	EACH	CONCRETE, MISC.: 8" X 24" X 93" PRECAST CONCRETE LAGGING	84
511	81300			94	94	EACH	CONCRETE, MISC.: 8" X 36" X 93" PRECAST CONCRETE LAGGING	84
511	81300			47	47	EACH	CONCRETE, MISC.: 8" X 24" X 93" PRECAST CONCRETE LAGGING WITH OPENING	84
512	10100	469	490		959	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	33000	7	9		16	SY	TYPE 2 WATERPROOFING	
516	13600	58	60		118	SF	1" PREFORMED EXPANSION JOINT FILLER	
517	70000	658	863		1521	FT	RAILING (TWIN STEEL TUBE)	
524	94603	300			300	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	84
524	94605	420			420	FT	DRILLED SHAFTS, 30" DIAMETER, INTO BEDROCK, AS PER PLAN	84
524	94703	782	2150	1348	4280	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	84
524	94705	680	1440	500	2620	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN	84
524	95000	330	1420		1750	FT	DRILLED SHAFTS, MISC.: PLUG SHAFT, 42" DIAMETER, UNREINFORCED	84
SPECIAL	53000600	1049		2488	3537	SF	STRUCTURES: PREFABRICATED GEOCOMPOSITE DRAIN	84

△ QUANTITIES UPDATED 3/8/21

CALCULATED  
ERK  
CHECKED  
GDJ

RETAINING WALL ESTIMATED QUANTITIES

PIK-C.R. 66-(3.95)(4.47)

DRILLED SHAFT SCHEDULE WITH PLUG SHAFTS (CONT.)

PIK-C.R. 66-3.95 RETAINING WALL 1

SHAFT NUMBER	SHAFT LOCATION ALONG WALL STATIONING	SHAFT LOCATION ALONG CENTERLINE OF CONSTR. STATIONING	CENTER OF SHAFT OFFSET FROM CENTERLINE OF CONSTR. FT.	SHAFT DIAMETER INCHES	SHAFT SPACING FT.	APPROX. EXISTING GROUND ELEVATION	TOP OF CAP ELEVATION	BOTTOM OF CAP ELEVATION/ TOP OF LAGGING	TOP OF SOLDIER PILE	TOP OF SHAFT	APPROX. BOTTOM OF SHAFT	TOTAL DRILLED SHAFT LENGTH FT.	524	524	524	LAGGING HEIGHT	BEAM SIZE	APPROX. LENGTH OF PILE FT.
													SHAFT LENGTH INTO BEDROCK FT.	SHAFT LENGTH ABOVE BEDROCK FT.	PLUG SHAFT LENGTH			
105 *	13+78.00	216+22.63	16.5	36.0	3.0	682.43	685.78	682.24	681.74	682.24	662.81	19.63	10.00	9.63			HPI4X117	18.93
106	13+81.00	216+25.59	15.25	42.0	3.0	682.44	685.83	682.24		682.24	676.24	6.20			6.20			
107 *	13+84.00	216+28.55	16.5	36.0	3.0	682.44	685.88	682.24	681.74	682.24	662.85	19.59	10.00	9.59			HPI4X117	18.88
108	13+87.00	216+31.51	15.25	42.0	3.0	682.46	685.93	682.24		682.24	676.24	6.22			6.22			
109 *	13+90.00	216+34.46	16.5	36.0	6.0	682.44	685.98	683.24	684.24	679.24	662.90	19.54	10.00	9.54		4.00	HPI4X117	21.34
110 *	13+96.00	216+40.38	16.5	36.0	6.0	682.12	686.07	683.24	684.24	678.24	662.95	19.17	10.00	9.17		5.00	HPI4X117	21.29
111 *	14+02.00	216+46.29	16.5	36.0	6.0	681.78	686.14	683.24	684.24	678.24	662.99	18.78	10.00	8.78		5.00	HPI4X117	21.24
112 *	14+08.00	216+52.21	16.5	30.0	6.0	681.46	686.20	683.24	684.24	678.24	663.04	18.42	10.00	8.42		5.00	HPI4X89	21.19
113 *	14+14.00	216+58.12	16.5	30.0	6.0	681.16	686.26	683.24	684.24	677.24	663.09	18.07	10.00	8.07		6.00	HPI4X89	21.15
114 *	14+20.00	216+64.04	16.5	30.0	6.0	680.89	686.30	684.24	685.24	677.24	663.14	17.75	10.00	7.75		7.00	HPI4X89	22.10
115 *	14+26.00	216+69.95	16.5	30.0	6.0	680.64	686.34	684.24	685.24	677.24	663.18	17.46	10.00	7.46		7.00	HPI4X89	22.05
116 *	14+32.00	216+75.87	16.5	30.0	6.0	680.44	686.36	684.24	685.24	677.24	663.23	17.21	10.00	7.21		7.00	HPI4X89	22.00
117 *	14+38.00	216+81.78	16.5	30.0	6.0	680.27	686.37	684.24	685.24	676.24	663.28	16.99	10.00	6.99		8.00	HPI4X89	21.96
118 *	14+44.00	216+87.70	16.5	30.0	6.0	680.00	686.37	684.24	685.24	676.24	663.33	16.68	10.00	6.68		8.00	HPI4X89	21.91
119 *	14+50.00	216+93.61	16.5	30.0	6.0	679.88	686.36	684.24	685.24	676.24	663.37	16.51	10.00	6.51		8.00	HPI4X89	21.86
120 *	14+56.00	216+99.53	16.5	30.0	6.0	679.82	686.34	684.24	685.24	676.24	663.42	16.40	10.00	6.40		8.00	HPI4X89	21.82
121 *	14+62.00	217+05.44	16.5	30.0	6.0	679.80	686.32	684.24	685.24	676.24	663.47	16.33	10.00	6.33		8.00	HPI4X89	21.77
122 *	14+68.00	217+11.36	16.5	30.0	6.0	679.80	686.27	683.24	685.24	676.24	663.52	16.29	10.00	6.29		7.00	HPI4X89	21.72
123 *	14+74.00	217+17.27	16.5	30.0	6.0	679.83	686.22	683.24	684.24	676.24	663.56	16.27	10.00	6.27		7.00	HPI4X89	20.67
124 *	14+80.00	217+23.19	16.5	30.0	6.0	679.88	686.16	683.24	684.24	676.24	663.61	16.27	10.00	6.27		7.00	HPI4X89	20.63
125 *	14+86.00	217+29.10	16.5	30.0	6.0	679.95	686.09	683.24	684.24	676.24	663.66	16.29	10.00	6.29		7.00	HPI4X89	20.58
126 *	14+92.00	217+35.02	16.5	30.0	6.0	680.01	686.00	683.24	684.24	676.24	663.70	16.31	10.00	6.31		7.00	HPI4X89	20.53
127 *	14+98.00	217+40.93	16.5	30.0	6.0	679.94	685.91	683.24	684.24	676.24	663.75	16.19	10.00	6.19		7.00	HPI4X89	20.48
128 *	15+04.00	217+46.85	16.5	30.0	6.0	679.86	685.81	683.24	684.24	676.24	663.80	16.06	10.00	6.06		7.00	HPI4X89	20.44
129 *	15+10.00	217+52.76	16.5	30.0	6.0	679.80	685.69	683.24	684.24	676.24	663.60	16.20	10.00	6.20		7.00	HPI4X89	20.64
130 *	15+16.00	217+58.68	16.5	30.0	6.0	679.76	685.57	683.24	684.24	676.24	663.40	16.36	10.00	6.36		7.00	HPI4X89	20.84
131 *	15+22.00	217+64.59	16.5	30.0	6.0	679.74	685.43	683.24	684.24	676.24	663.20	16.54	10.00	6.54		7.00	HPI4X89	21.04
132 *	15+28.00	217+70.51	16.5	30.0	6.0	679.74	685.29	682.24	684.24	676.24	663.00	16.74	10.00	6.74		6.00	HPI4X89	21.23
133 *	15+34.00	217+76.42	16.5	30.0	6.0	679.77	685.13	682.24	683.24	676.24	662.80	16.97	10.00	6.97		6.00	HPI4X89	20.43
134 *	15+40.00	217+82.33	16.5	30.0	6.0	679.82	684.96	682.24	683.24	676.24	662.60	17.22	10.00	7.22		6.00	HPI4X89	20.63
135 *	15+46.00	217+88.25	16.5	30.0	6.0	679.71	684.79	682.24	683.24	676.24	662.40	17.31	10.00	7.31		6.00	HPI4X89	20.83
136 *	15+52.00	217+94.16	16.5	30.0	6.0	679.58	684.60	682.24	683.24	676.24	662.21	17.37	10.00	7.37		6.00	HPI4X89	21.03
137 *	15+58.00	218+00.08	16.5	30.0	6.0	679.45	684.40	681.24	683.24	676.24	662.01	17.44	10.00	7.44		5.00	HPI4X89	21.23
138 *	15+64.00	218+05.99	16.5	30.0	6.0	679.31	684.19	681.24	682.24	676.24	661.81	17.51	10.00	7.51		5.00	HPI4X89	20.43
139 *	15+70.00	218+11.91	16.5	30.0	6.0	679.19	683.97	681.24	682.24	676.24	661.61	17.58	10.00	7.58		5.00	HPI4X89	20.63
140 *	15+76.00	218+17.82	16.5	30.0	6.0	679.06	683.74	681.24	682.24	676.24	661.41	17.65	10.00	7.65		5.00	HPI4X89	20.83
141 *	15+82.00	218+23.74	16.5	30.0	6.0	678.94	683.50	681.24	682.24	675.24	661.21	17.73	10.00	7.73		6.00	HPI4X89	21.03
142 *	15+88.00	218+29.65	16.5	30.0	6.0	678.81	683.25	680.24	682.24	675.24	661.01	17.80	10.00	7.80		5.00	HPI4X89	21.23
143 *	15+94.00	218+35.57	16.5	30.0	6.0	678.68	682.99	680.24	681.24	675.24	660.81	17.87	10.00	7.87		5.00	HPI4X89	20.43
144 *	16+00.00	218+41.48	16.5	30.0	6.0	678.47	682.72	680.24	681.24	675.24	660.61	17.86	10.00	7.86		5.00	HPI4X89	20.63
145 *	16+06.00	218+47.40	16.5	30.0	6.0	678.27	682.44	679.24	681.24	675.24	660.41	17.86	10.00	7.86		4.00	HPI4X89	20.83
146 *	16+12.00	218+53.31	16.5	30.0	6.0	678.07	682.14	679.24	680.24	674.24	660.21	17.86	10.00	7.86		5.00	HPI4X89	20.03
147 *	16+18.00	218+59.23	16.5	30.0	6.0	677.80	681.84	679.24	680.24	674.24	660.01	17.79	10.00	7.79		5.00	HPI4X89	20.23
148 *	16+24.00	218+65.14	16.5	30.0	6.0	677.49	681.52	678.24	680.24	674.24	659.81	17.67	10.00	7.67		4.00	HPI4X89	20.43
149 *	16+30.00	218+71.06	16.5	30.0	6.0	677.17	681.20	678.24	679.24	673.24	659.62	17.56	10.00	7.56		5.00	HPI4X89	19.62
150 *	16+36.00	218+76.97	16.5	30.0	6.0	676.86	680.87	678.24	679.24	673.24	659.42	17.44	10.00	7.44		5.00	HPI4X89	19.82
151 *	16+42.00	218+82.89	16.5	30.0	6.0	676.55	680.52	677.24	679.24	673.24	659.22	17.33	10.00	7.33		4.00	HPI4X89	20.02
152 *	16+48.00	218+88.80	16.5	30.0	6.0	676.20	680.16	677.24	678.24	673.24	659.02	17.18	10.00	7.18		4.00	HPI4X89	19.22
153 *	16+54.00	218+94.72	16.5	30.0	6.0	675.84	679.80	677.24	678.24	673.24	658.82	17.02	10.00	7.02			HPI4X89	19.42

SUBTOTAL	42" DIAMETER			329.92		
	36" DIAMETER	680.00	781.63		HPI4X117	1577.30
	30" DIAMETER	420.00	299.34		HPI4X89	875.60
TOTALS CARRIED TO SHEET 85	42" DIAMETER			330		
	36" DIAMETER	680	782		HPI4X117	1578
	30" DIAMETER	420	300		HPI4X89	876

\* - DRILLED SHAFT WITHIN ZONE 2. DRILLED SHAFT TO BE PERMANENTLY CASED TO TOP OF ROCK PER C&MS 524.04.D.

2 QUANTITIES UPDATED 3/8/21

CALCULATED GDU CHECKED ERK  
**DRILLED SHAFT SCHEDULE - RETAINING WALL 1**  
**PIK-C.R. 66-(3.95)(4.47)**  
 90  
 161

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