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ARCADIS U.S. INC. 11400 PARKSIDE DR SUITE 410 KNOXVILLE, TN 37934

ELECTRONIC DOCUMENTS.

RACHEL H. COLE, P.E. NO. 119667

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET	ROADWAY-SIGN3
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS	1A
ESTIMATED ROADWAY QUANTITIES	2
TABULATED QUANTITIES	2F

ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEET	ROADWAY-SIGN1
SIGNATURE SHEET	ROADWAY-SIGN2
SIGNATURE SHEET	ROADWAY-SIGN3
TITLE SHEET	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS	1A
ESTIMATED ROADWAY QUANTITIES	2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE	2B
GENERAL NOTES	2C
SPECIAL NOTES	2D
ENVIRONMENTAL NOTES	2E
EROSION PREVENTION AND SEDIMENT CONTROL NOTES	2E1
TABULATED QUANTITIES	2F
UTILITY NOTES AND UTILITY OWNERS	3
PAVEMENT EDGE DROP-OFF NOTES FOR TRAFFIC CONTROL	4
*REFERENCE SHEET	R1
NOTE: THE ALPHABETICAL LETTERS "I", "O" & "Q" ARE NOT US NUMBERING OF SHEETS.	SED IN
NO PROJECT COMMITMENTS SHEETS IN THIS SET OF PLAN	NS
*PROVIDED BY REGION1 TRAFFIC OFFICE	

STANDARD ROADWAY DRAWINGS

EC-STR-3C 03-01-23 SILT FENCE WITH WIRE BACKING

EC-STR-3E 04-01-08 SILT FENCE FABRIC JOINING DETAILS

EC-STR-34 05-04-22 EROSION CONTROL BLANKET FOR SLOPE INSTALI

DWG.	REV.	DESCRIPTION
DVVG.	IXLV.	DESCIVIE HON

STANDARI LEGENDS	D ROADW	AY TITLE SHEET, ABBREVIATIONS, AND
RD-TP-1	10-01-24	STANDARD ROADWAY DRAWINGS TITLE SHEET
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND
ROADWAY	DESIGN S	STANDARDS
RD11-SE-1		TRANSITION AND CROSS SLOPE DETAILS
RD11-SE-2		SUPERELEVATION TRANSITION DETAILS FOR UNDIVIDED ROADWAYS
RD11-SE-2A		SUPERELEVATION TRANSITION SECTIONS FOR UNDIVIDED ROADWAYS
RD11-LR-2		MINIMUM RUNOFF LENGTHS (LR) FOR RURAL HIGHWAYS
SAFETY DI	ESIGN AN	D GUARDRAILS
S-CZ-1	06-28-19	CLEAR ZONE CRITERIA
S-PL-1	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED
S-PL-1A	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED (FOR RIGID OBJECTS)
S-PL-1B	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED ON CURVED ROADWAYS
S-PL-6	07-30-24	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-PL-6A	06-28-19	SAFETY PLAN SAFETY HARDWARE PLACEMENT IN MEDIAN
S-GR31-1	06-15-21	GUARDRAIL DETAILS
S-GRS-4	05-04-22	SPECIAL CASE GUARDRAIL HEIGHT TRANSITION DETAIL
S-GRT-2	06-28-19	TYPE 38 GUARDRAIL END TERMINAL
S-GRT-2P	10-16-20	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL
S-GRT-2R	06-28-19	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL (RETROFIT)
S-GRT-3	06-28-19	TYPE 21 GUARDRAIL END TERMINAL
S-GRT-4		TYPE 21 GATING END TERMINAL
S-GRT-4A		TYPE 21 GATING END TERMINAL ANCHOR DETAILS
S-GRT-4B		GATING TERMINAL POST & RAIL DETAILS
S-GRA-3	01-09-24	TYPE 13 GUARDRAIL ANCHOR
S-GRA-4	03-01-23	IN-LINE GUARDRAIL ANCHOR TO PRIVATE DRIVE
DESIGN - T	RAFFIC C	ONTROL
T-M-1	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-4	07-17-20	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-16	07-30-24	RUMBLE STRIPE INSTALLATION LAYOUT
T-M-16A	02-03-20	RUMBLE STRIPE DETAILS FOR EDGE OF PAVEMENT AND CENTERLINE
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3B 06-15-21 SILT FENCE

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 29S375-F8-002	QUANTITY 29S375-F3-002	TOTAL QUANTITY	
	208-01.05	BROOMING & DEGRASSING SHOULDERS	L.M.	13		13	
1)	307-01.15	ASC MIX (PG64-22) (BPMLC-HM) GRADING CS	TON	975		975	
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	83		83	
2)	411-03.12	ACS MIX(PG64-22) THIN LIFT D ASPHALT	TON	4885		4885	
	411-12.04	SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) (4IN WIDTH)	L.M.	13		13	
3)	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	280		280	
5)	705-02.10	GUARDRAIL TRANSITION 27IN TO 31IN	EACH		26	26	
5)	705-04.10	EARTH PAD FOR GUARD RAIL END TREATMENT	EACH		29	29	
5)	705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.		50	50	
5)	705-06.11	GR TERMINAL (IN-INLINE) MASH TL3	EACH		2	2	
5)	705-06.30	GR TERMINAL (ENERGY ABSORBING) MASH TL-2	EACH		29	29	
6)	706-06.03	RADIUS RAIL	L.F.		25	25	
5)	706-10.26	ROUNDED END ELEMENT	EACH		2	2	
	712-01	TRAFFIC CONTROL	LS	1		1	
7)	712-06	SIGNS (CONSTRUCTION)	S.F.	1213		1213	
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2		2	
	716-01.21	SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR) (1 COLOR)	EACH	415		415	
8)	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	415		415	
0)	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.		16	16	
9)	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.		200	200	
0)	716-04.04	PLASTIC PAVEMENT MARKING (TRANSVERSE SHOULDER)	L.F.		271	271	
1)	716-05.20	PAINTED PAVEMENT MARKING (6" LINE)	L.M.	52		52	
	717-01	MOBILIZATION	LS	1		1	

FOOTNOTES

- (1) TO BE USED FOR SPOT LEVELING. TO BE USED ONLY TO CORRECT DEFICIENCIES ON EXISTING PAVEMENT AND IS NOT TO BE COMBINED WITH OTHER COURSES.
- (2) INCLUDES <u>174 TONS</u> FOR COUNTY ROADS, <u>214 TONS</u> FOR PRIVATE DRIVES, AND <u>105 TONS</u> FOR BUSINESS ENTRANCES. PRIVATE DRIVES AND BUSINESS ENTRANCES ARE TO BE TIED IN AS NEEDED OR AS DIRECTED BY THE TDOT MANAGER.
- (3) FOR BEGINNING AND END OF PROJECT AND BRIDGES.
- (4) INCLUDES ALL MATERIAL NECESSARY FOR THE CONSTRUCTION OF THE PAD AND ANY NECESSARY EPSC MEASURES.
- (5) SEE SHEET NUMBER 2F FOR PROPOSED GUARDRAIL TABULATION BLOCK. INCLUDES THE THE COST OF REMOVAL OF THE EXISTING END TERMINALS. GUARDRAIL REMOVAL WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (6) QUANTITY IS ESTIMATED BASED ON AERIAL IMAGERY. CONTRACTOR SHALL FIELD VERIFY RADII AND LENGTHS PRIOR TO ORDERING MATERIALS AND BE PAID FOR THE ACTUAL LENGTH INSTALLED AS DIRECTED BY THE TDOT MANAGER.
- (7) SEE SHEET NUMBER 2F FOR TRAFFIC CONTROL SIGN TABULATION BLOCK.
- (8) ANY DAMAGE INCURRED DURING REMOVAL SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE TDOT MANAGER.
- (9) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC.
 PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
- (10) SEE SHEET 2F AND SHEET R1 FOR ADDITIONAL DETAILS AND INFORMATION.
- (11) INCLUDES 26 L.M. TO BE USED FOR TEMPORARY STRIPING DURING PLACEMENT OF THE SPOT LEVELING. TO BE USED FOR TEMPORARY STRIPING DURING THE MILLING OPERATION. NO PAYMENT WILL BE MADE FOR TEMPORARY STRIPING DURING PLACEMENT OF THE FINAL SURFACE (ON EITHER EXISTING SURFACE OR FINAL) COURSE DUE TO THE CONTRACTOR'S METHODS OF CONSTRUCTION.

NOTE: THERE ARE NO UTILITY ADJUSTMENTS ON THIS PROJECT.

TRAFFIC CONTROL SIGN TABULATION (RESURFACING)									
M.U.T.C.D.			SIZE	1		TOTAL	ITEM NO.		
SIGN	LEGEND \ DESCRIPTION	IN	INCH	IES	S.F.	NUMBER	712-06		
NO.		L	X	W		REQUIRED	S.F.		
G20-1	ROAD WORK NEXT 6 MILES	48"	Χ	24"	8	2	16		
G20-2	END ROAD WORK	48"	Х	24"	8	2	16		
W3-4	BE PREPARED TO STOP	48"	Х	48"	16	2	32		
W8-11	UNEVEN LANES	48"	Х	48"	16	32	512		
W13-1P	ADVISORY SPEED	30"	Х	30"	6	2	13		
W20-1	ROAD WORK AHEAD	48"	Х	48"	16	35	560		
W20-4	ONE LANE ROAD	48"	Х	48"	16	2	32		
W20-7	FLAGGER	48"	Χ	48"	16	2	32		
NOTE: THE CC	NSTRUCTION SIGNING IS TO BE A MINIMUM. O	TOTAL	1213						

MAY BE REQUIRED AS DIRECTED BY THE TDOT MANAGER.

OPEN FRONTAGE										
COUNTY	ROUTE	BEGIN L.M.	END L.M.	DIRECTION	START	END	ITEM NO. 716-02.04 (S.Y.)	ITEM NO. 716-04.04 (L.F.)	COMMENTS	
GRAINGER	375	5.080	11.360	NB	10.788	10.815	23	121	Business Entrance/Lakeshore Drive	
						TOTAL:	23	121		

	GUARDRAIL											
			GUARDRAIL	EARTH PAD	W BEAM GR	IN-LINE	TYPE 21	RADIUS	ROUNDED			
SII	DE	LOG MILE	TRANSITION	FOR END	(TYPE 2)	MASH TL-3	MASH TL2	RAIL	END ELEMENT			
			27IN TO 31 IN	TREATMENT	MASH TL3		(21.875')			NOTES		
\Box	RT		705-02.10	705-04.10	705-06.01	705-06.11	705-06.30	706-06.03	706-10.26			
_ '	K I		EACH	(EACH)	(L.F.)	(EACH)	(EACH)	(L.F.)	(EACH)			
	X	5.088				1		12.5	1	R = 8 FT		
	X	5.106	1	1			1					
	X	5.122		1			1					
	Х	5.172	1	1			1					
	Х	5.298	1	1			1					
	Х	5.330	1	1			1					
X		5.483	1	1			1					
X		5.648	1			1		12.5	1	R = 8 FT		
X		5.689	1	1			1					
X		5.717	1	1			1					
X		5.729			50					REPLACE DAMAGED RA		
X		5.803	1	1			1					
X		5.809	1	1			1					
X		5.839	1	1			1					
X		6.013	1	1			1					
	X	6.047	1	1			1					
X		6.128	1	1			1					
X		6.165	1	1			1					
	X	6.293		1			1					
	x	6.386	1	1			1					
	X	6.454		1			1					
	x	6.555	1	1			1					
	X	6.671	1	1			1					
X		6.681	1	1			1					
	X	6.691	1	1			1					
X		6.729	1	1			1					
	x	6.973	1	1			1					
	Х	7.024	1	1			1					
	Х	7.089	1	1			1					
	Х	7.140	1	1			1					
	Х	7.596		1			1					
	X	10.732	1	1			1					
		TOTALS	26	29	50	2	29	25	2			