				SHEET NUN	M.		_		PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET	J ULATED 11 C
10	39	40	41	42	43	83	171	OFFICE CALCS	01/SAF/21 02/S>2/21 03/MPO/28		TILM	EXT	TOTAL	ONIT	DESCRIPTION	NO.	CALCU
								LUMP	LUMP		201	11000	LS		ROADWAY CLEARING AND GRUBBING		_
		1							1		202	20010	1	EACH	HEADWALL REMOVED		
		1,593							1,593		202	23000	1,593	SY	PAVEMENT REMOVED		
		830					_		830		202	30000	830	SF	WALK REMOVED		_
		4							4		202	30600	4	SY	CONCRETE MEDIAN REMOVED		
		936					1		936		202	32000	936	FT	CURB REMOVED		_
		78 44							78 44	+	202	32500 32600	78 44	FT FT	CURB AND GUTTER REMOVED GUTTER REMOVED		
		64					1		64	†	202	35100	64	FT	PIPE REMOVED, 24" AND UNDER		
		43							43		202	35200	43	FT	PIPE REMOVED, OVER 24"		
		1,392							1,392		202	38000	1,392	FT	GUARDRAIL REMOVED		
		8							8	1	202	58300 58500	8	EACH EACH	CATCH BASIN OR INLET REMOVED CATCH BASIN ABANDONED		_
		200							1 8 8 9		SPECIAL	20270000	2 8 0 0 0	FT	FILL AND PLUG EXISTING CONDUIT 15"	9	-
	()	1,255	}						1,255	3	202	98400	1,255	SF	REMOVAL MISC.: RIPRAP REMOVED	9	
									uuu aaa	Y		1.2.2.2)			
			2,023 1,432						2,023 1,432	 	203	10000 20000	2,023 1,432	CY CY	EXCAVATION EMBANKMENT	_	-
			1,754			86		1,201	1,432	+ +	203	10000	1,432	SY	SUBGRADE COMPACTION		
	762.5							,	762.5		606	15050	762.5	FT	GUARDRAIL, TYPE MGS		
	12.5								12.5		606	17360	12.5	FT	GUARDRAIL, TYPE MGS, LONG-SPAN		
	5								5		606	26150	5	EACH	ANCHOR ASSEMBLY, MGS TYPE E MASH 2016	10	
	4								4		606	26550	4	EACH	ANCHOR ASSEMBLY, MGS TYPE T		
	22 225								23,225	1	606 608	35002 10000	1 23,225	EACH SF	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 4" CONCRETE WALK		
	23,225 9								9		608	10000	9	SF	4" CONCRETE WALK, AS PER PLAN	10	
	-												-				
	1,939								1,939		608	52000	1,939	SF	CURB RAMP		
	154 246						2,431	-	2,585 246	1	608 622	98000 10160	2,585 246	SF	WALKWAY, MISC.: TYPE A	9	
	1								240	+	622	25000	1	EACH	CONCRETE BARRIER, SINGLE SLOPE, TYPE D CONCRETE BARRIER END SECTION, TYPE D		-
	3								3		622	25050	3	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D		-
				10.43					10.43		654	10001	10.43	MSF	RENOVATING EXISTING SOIL, AS PER PLAN	9	
															EROSION CONTROL		_
_				3.94	2				3.94	1	601 601	11000 21050	3.94	SY SY	RIPRAP, TYPE D TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT		_
J				455					455		601	37500	455	FT	PAVED GUTTER, TYPE 1-2		-
16				,,,,,					416		659	00300	416	СҮ	TOPSOIL		
752									3,752		659	00500	3,752	SY	SEEDING AND MULCHING, CLASS 1		
88 88							1		188 188		659 659	14000 15000	188 188	SY SY	REPAIR SEEDING AND MULCHING INTER-SEEDING		
85									0.85	+ +	659	20000	0.85	TON	COMMERCIAL FERTILIZER		_
78									0.78		659	31000	0.78	ACRE	LIME		
1									21		659	35000	21	MGAL	WATER		
				1,158.69			1		1,158.69 LUMP		671 832	14000 15000	1,158.69 LS	~~\$\/~	STORM WATER POLLUTION PREVENTION PLAN		
									LUMP		832	15000	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS		+
									LUMP		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE		
								5,000	5,000		832	39000	5,000	~ EACH ~			
				0.69	<u> </u>				0.69		602	20000	0.69	СҮ	DRAINAGE CONCRETE MASONRY		
					1,350				1,350		605	11110	1,350	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC		
00					79				100 279		605 611	13300 00510	100 279	FT FT	6" UNCLASSIFIED PIPE UNDERDRAINS 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	+	-
				59	, ,				59		611	04400	59	FT	12" CONDUIT, TYPE B		
				٨					Q		611	05900	R	FT	15" CONDUIT, TYPE B	-	4
				5					5		611	07600	5	FT	18" CONDUIT, TYPE C		
				21					21		611	10400	21	FT	24" CONDUIT, TYPE B		
				5 80					5 80	 	611	10600	5 80	FT c+	24" CONDUIT, TYPE C		4
				δU					80		611	16600	٥٥	ΓI 	36" CONDUIT, TYPE C		
				2					2		611 611	98150 98540	2		CATCH BASIN, NO. 3		1
			_		-		-	1	ı 1 1	1	h I I	. UVL/I/)	1 1	EACH	CATCH BASIN, NO. 2-4	Ī	1
				1				+ +	1	+	611	98630	1		CATCH BASIN ADJUSTED TO GRADE	<u> </u>	

		-			SHEE	T NUM.						PART.		ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET	CULATED VLC HECKED
	10	39	42	43	83		154	155	156	OFFICE CALCS	01/SAF/21 02/	/S>2/21 03/MPC 8	04/ENH/31	(X)	112101	EXT	TOTAL	01411	DESCRIT TION	NO.	CALC
			1									1 1			611	98820	1	EACH	DRAINAGE (CONT.) INLET, NO. 3D		1
			4		<u> </u>	<u> </u>		<u> </u>				4			611	99574	4		MANHOLE, NO. 3		1
			3	}							j j	3			611	99654	3	<u> </u>	MANHOLE ADJUSTED TO GRADE		<u>j</u>
	_	(2								<u> </u>	2			611	99660	2		MANHOLE RECONSTRUCTED TO GRADE		1
	3			1	<u> </u> 			<u> </u>			<u> </u>	4			611	99710	war	EACH	PRECAST REINFORCED CONCRETE OUTLET		-
					<u> </u> 						1 1	<u> </u>			<u> </u>	<u> </u>			PAVEMENT		1
\bigcirc	4				2	İ İ				147		153			301	56000	153		ASPHALT CONCRETE BASE, PG64-22, (449)		<u> </u>
					1 1			<u> </u>		197		197			304	20000 20000	197	CY	AGGREGATE BASE		<u> </u>
					1 1	<u> </u>		<u> </u>		89	<u> </u>	90			407 441	70500	90		NON-TRACKING TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)		1
										34		34			442	22100	34		ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449)		<u> </u>
					<u> </u>					17		1 47			1 440	22400	17	CV	ACRUALT CONCRETE INTERMEDIATE COURSE 10 MM. TVDE A (AAO)		<u> </u>
			<u> </u>		l 1 70	<u> </u>		<u> </u>		43	<u> </u>	70			442 452	22400 12010	43 70		ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (449) 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		1
					10			<u> </u>		89	1 1	89		<u> </u>	452	13010	89		9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		1
		124										124			609	14000	124		CURB, TYPE 2-A		
		1,592 5			<u> </u> 	<u> </u>		<u> </u> 			<u> </u>	1,592	<u>' </u>		609 609	26000 71000	1,592 5		CURB, TYPE 6 CONCRETE MEDIAN		1 6
		<u> </u>													003	71000	3	31	CONCRETE MEDIAN		₹
																			WATER WORK		įΣ
		2			<u> </u>			<u> </u>				2			638	10300	2	EACH	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE LIGHTING		Į
								LUMP				LUMF)		202	75700	LS		CONTROL CENTER REMOVED		 S
							2	4				6			625	00480	6		CONNECTION, UNFUSED PERMANENT		
							4	6	5			15			625	14000	15		LIGHT POLE FOUNDATION, 24" X 6' DEEP	157	↓
							1	0				1			625 625	14001 15200	1		LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN LIGHT TOWER FOUNDATION, 36" X 25' DEEP	153	\d
																					Ш
							1		,			1			625	21000	1		LIGHT TOWER MAINTENANCE PLATFORM, TYPE A	150	Z
							182		/		1	182			625 625	21400 25014	182		LIGHT TOWER MAINTENANCE PLATFORM, MISC.: REMOVE PLATFORM CONDUIT, 3/4", 725.052	159	Щ
off							2,052	1,298	428			3,77			625	25410	3,778		CONDUIT, 2", 725.052		
agro								45				45			625	25506	45	FT	CONDUIT, 3", 725.052]
					<u> </u>	<u> </u>	40	463				503			625	2 5900	503	FT FT	CONDUIT, JACKED OR DRILLED, 2"		1
AM					<u> </u> 		3	1 105			 	3			625	27520	3		REMOVAL OF LUMINAIRE AND REERECTION		1
:05							2,052	1,196	428			3,670	6		625	29010	<i>3,676</i>		TRENCH, 30" DEEP		1
1:50					<u> </u> 	<u> </u>	2	<u> </u>			<u> </u>	2	<u> </u>		625	<i>29901</i>	2	EACH	JUNCTION BOX, AS PER PLAN, WALL MOUNTED, 6"x6"	153	1
4-1					<u> </u>		11	11	1		1	23			625	30530	23	EACH	PULL BOX, 725.06, SIZE 18		1
202						<u> </u>		1				1			625	31510	1	EACH	PULL BOX REMOVED		<u> </u>
/15/					<u> </u>		20	28	6			54			625 625	32000 34000	54	<u> </u>	GROUND ROD POWER SERVICE		<u> </u>
4					<u> </u> 	<u> </u>	1	2				1			625	35020	1		RE-ERECT EXISTING LIGHT TOWER		1
g							2,052	1,196	428			3,67	6		625	36010	3 , 676		UNDERGROUND WARNING/MARKING TAPE		<u> </u>
)					<u> </u>			<u> </u>	LUMP			LUMF	 		SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	153	<u> </u>
0000					<u> </u> 			<u> </u>	1 LOIMF		<u> </u>	LUMP			625	75360	1		LIGHT TOWER REMOVED FOR STORAGE	100	1
619					<u> </u>	<u> </u>		1			<u> </u>	1	İ		625	75510	1	EACH	POWER SERVICE REMOVED		_[
80/					<u> </u>			1 1	1			1 1			625	75540	1		LIGHT TOWER FOUNDATION REMOVED		
e ts					<u> </u>	<u> </u>		<u> </u>			<u> </u>	1 1	<u> </u>		625 630	75800 89812	<u> </u>		DISCONNECT CIRCUIT REMOVAL OF WOOD POLE AND DISPOSAL		1
she							2	3				5			632	70400	5		CONDUIT RISER, 2" DIAMETER		1 4
w d y					<u> </u> 			1				1			632	89300	1	EACH	WOOD POLE		4
oad			<u> </u>		<u> </u> 	<u> </u>	6	12	5		<u> </u>	23		 	625	<u>1</u> 10481	23	EACH	LIGHTING ALTERNATES LIGHT POLE, AESTHETIC, AS PER PLAN (ALTERNATE 1)	153	∤
Q 4					<u> </u> 		6	12	5			23		X	625	27550	23		LUMINAIRE, DECORATIVE (ALTERNATE 1)	153	, r
. 25							14	32	10			56		Х	625	00450	56		CONNECTION, FUSED PULL APART (ALTERNATE 1)	153	N
72					<u> </u> 		7 6,726	16 5,367	5 1,374		<u> </u>	28 13,46	<u> </u>	<i>X</i> <i>v</i>	625 625	00460 23200	28 13 , 467		CONNECTION, UNFUSED PULL APART (ALTERNATE 1) NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE (ALTERNATE 1)	153 153	
MOT			<u> </u>		<u> </u> 		210	420	175		<u> </u>	805		X	625	23400	805		NO. 10 AWG POLE AND BRACKET CABLE (ALTERNATE 1)	153 153	† –
01								4			<u> </u>	4	İ	Χ	625	27502	4	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), ASYMMETRIC, 240V, 3000K (ALTERNATE 1)	153	j
5_0					<u> </u>		6	12	5			23		<i>X</i>	625	10481 27550	23		LIGHT POLE, AESTHETIC, AS PER PLAN (ALTERNATE 2)	170	2
229					<u> </u>	<u> </u>	14	32	10		<u> </u>	56	<u> </u>	<u> </u>	625 625	00450	23 56		LUMINAIRE, DECORATIVE (ALTERNATE 2) CONNECTION, FUSED PULL APART (ALTERNATE 2)	170 153	1
180							13	28	10			51	İ	X	625	00460	51	EACH	CONNECTION, UNFUSED PULL APART (ALTERNATE 2)	153	
	_	·	. Ī			ı	0 000	1 0 070 Ī	1 070		1 1	17.01	^ I	- V		07000	17 010	. <i>c</i> -	INO A AWO DAGO VOLT DICTRIBUTION CARLE (ALTERNATE O)	453	35
) 18 					<u> </u> 		8,808 336	6,976 672	1,832 280		<u> </u>	17,61 1,288		<i>X</i> v	625 625	23200 23400	17,616 1,288		NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE (ALTERNATE 2) NO. 10 AWG POLE AND BRACKET CABLE (ALTERNATE 2)	153 153	220

		SHEE	T NUM.	PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET
116	117	148	173	01/SAF/21 02/SAF/21 03/MP0/2 04/ENH/31	(X)	I I ⊏IVI	EXT	TOTAL	UNIT	DESCRIFTION	NO.
										TRAFFIC SIGNALS (CONT.)	
75				92 3.75		630	80100	95.75	SF	SIGN, FLAT SHEET	
6				126		630	80224	126	SF	SIGN, OVERHEAD EXTRUSHEET	
	1			1		630	89812	1	EACH	REMOVAL OF WOOD POLE AND DISPOSAL	
9				19		632	05006	19		VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	
7				4		632	20740	4	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AUDIBLE	
1				4		632	20751	4	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN	114
9				19		632	25000	19	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
7				4		632	25010	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
)8 '89				408 4,362 427		632 632	40200 40700	408 4,789	FT	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
03				4,502 421		032	40700	4,703	ГІ	SIGNAL CABLE, I CONDUCTOR, NO. 14 AWG	
5				6		632	64011	6		SIGNAL SUPPORT FOUNDATION, AS PER PLAN	114
7		8		8		632	64020	8	EACH	PEDESTAL FOUNDATION AS BED DIAN	11.4
		7 247		7 247		632	64021	J 7 247	EACH	PEDESTAL FOUNDATION, AS PER PLAN	114
		3,247		3,247		632	67300	3,247	FI	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG	
		1,595		1,595		632	68300	1,595		POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
10	113			423		632	69320	423		POWER CABLE, 3 CONDUCTOR, NO. 2 AWG	
·						632	70000	2		POWER SERVICE	
	3	2		7 7		632 632	70001 70400	6		POWER SERVICE, AS PER PLAN CONDUIT RISER, 2" DIAMETER	147
	<u> </u>							Ŭ			
'				1		632	72131	1		SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12, AS PER PLAN	114
2				2		632	72141	2		SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13, AS PER PLAN	114
2				2		632	72151	2		SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14, AS PER PLAN	114
						632	78101	1		COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 6, AS PER PLAN	114
						632	89300	/	EACH	WOOD POLE	
7				3		632	90008	3	EACH	PEDESTAL, 15', TRANSFORMER BASE	114
		8		8		632	90010	8		PEDESTAL, MISC.: PEDESTAL, 15' TRANSFORMER BASE	147
2				2		632	90100	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
2				2		633	65511	2		CABINET, TYPE TS-2, AS PER PLAN	115
						633	67100	2	EACH	CABINET FOUNDATION	
2				2		633	67200	2		CONTROLLER WORK PAD	
2				2		633	74000	2	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS)	
	3,101			3,101		804	15010	3,101	FT FT	FIBER OPTIC CABLE, 24 FIBER	
	1,389			1,389		809	24500	1,389	FT	CONDUIT, 4", MULTICELL, HDPE WITH 4 * 1* INNERDUCTS	
>	1,000			2		809	60040	2		CCTV IP-CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ	
		807		807		809	64550	807	FT	ETHERNET CABLE, OUTDOOR-RATED	
		2		2		809	65990	2		ITS DEVICE, MISC::RELOCATE CCTV IP-CAMERA SYSTEM, WRONG WAY	147
5				6		809	69001	6		ADVANCE RADAR DETECTION, AS PER PLAN	115
·				3		809	69101	3	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	115
,						809	69123	2		ATC CONTROLLER, AS PER PLAN	114
		2				809	69130	2		WRONG WAY DETECTION SYSTEM	
	LUMP			LUMP		809	70050	LS		AS-BUILT CONSTRUCTION PLANS	
										RETAINING WALLS (002)	
			LUMP	LUMP		503	21300	LS		UNCLASSIFIED EXCAVATION	
			2,918		~~~	509~	10000	2,918		EPQXY COAJED SJEEL REINFORCEMENT	
			32	32		511	46210	32	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING	
			32	32		512	10100	32		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
			7	7		<u>512</u>	33001	7	SY	TYPE 2 WATERPROOFING, AS PER PLAN	173
			21	21		516	13600	21	SF	1" PREFORMED EXPANSION JOINT FILLER	
			23	27		518	21200	23	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
		 	76	76	† †	518	39800	76	FT	4" PERFORATED CORRUGATED PLASTIC PIPE	
			70	70		518	39900	70	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
					1						
-					<u>. </u>			· · · · ·		<u> </u>	

				SHEET	NUM.	 	1		_	RT.	_	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET
12	13	14	<i>15</i>	171	182		OFFICE CALCS	01/SAF/21	02/SAF/21	03/MPO/2 8	04/ENH/3	1	EXT	TOTAL	O/VI /	DESCRIT TION	NO.
																RETAINING WALLS (003)	
					50					50		203	20000	50		EMBANKMENT	(177)
					<i>LUMP</i> 34,963					<i>LUMP</i> 34,963		503 509	21300 1Q00Q	LS 34,963		UNCLASSIFIED EXCAVATION EPOXY COATED STEEL REINFORCEMENT	178
					150					150		511	46011	150	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	178
					4,050					4,050		511	7/2000	4,050		CONCRETE, MISC.: FORMLINER	168
					2						2	511	81300	2	EACH	CONCRETE, MISC.: AESTHETIC TEST PANEL	168
					400					400	1	<i>518</i>	20000	400		PREFABRICATED GEOCOMPOSITE DRAIN	170
					450 45					450 45		518 518	39800 39900	450 45		4" PERFORATED CORRUGATED PLASTIC PIPE 4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	179 179
					5,190					5,190		520	10001	5,190		PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	179
				6	~~~					~~~	6	SPECIAL	53000400	6	EACH	STRUCTURES, AESTHETIC LOGO	168
				}	363				(363		SPECIAL	53051100		EACH	RETAINING WALL, SOIL NAIL, 20' LONG, MINIMUM	178
				\longrightarrow	1.9					19		SPECIAL SPECIAL		19	EACH EACH	RETAINING WALL, SOIL NAIL VERIFICATION TEST RETAINING WALL, SOIL NAIL PROOF TEST	178
					70					10		37 EOTAE	03001120	70	LAUIT	NETAINING WALL, SOIL WAIL THOOF TEST	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
																RETAINING WALLS (003) ALTERNATES	
					530					530		512	10100	530	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (ALTERNATE 1)	
				321						321		512	10050	321	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY) (ALTERNATE 2)	168
			1	107			102			209		512	10100	209	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (ALTERNATE 2)	168
		80								80	_	614	11110	80	HOUR	MAINTENANCE OF TRAFFIC LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		00					2			2		SPECIAL		2		WORK ZONE TRAFFIC SIGNAL	113
_							LUMP			LUMP		614	12420	LS		DETOUR SIGNING	
5 20										20		614 614	12500 12600	20		REPLACEMENT SIGN REPLACEMENT DRUM	
			20														
	4		29							29 4		614 614	12800 18601	29 4		WORK ZONE RAISED PAVEMENT MARKER PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	13
			0.24							0.24		614	20110	0.24	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
			0.72							0.72		614	22110	0.72	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
			401							401		614	23210	401		WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
			12 5							12 5		614 614	<i>26200</i> <i>30200</i>	12 5		WORK ZONE STOP LINE, CLASS I, 642 PAINT WORK ZONE ARROW, CLASS I, 642 PAINT	
11			2,922							11 2,922		616 642	10000 30000	11 2,922		WATER REMOVAL OF PAVEMENT MARKING	
			8							8		642	30020	8		REMOVAL OF PAVEMENT MARKING	
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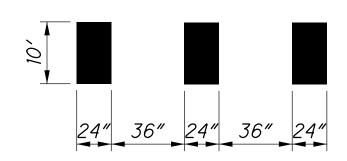
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REF. NO.	SHEET NO.	STA	TION	SIDE	RIPRAP, TYPE D	AVED GUTTER, TYPE 1-2	CONCRETE MASONRY	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	18" CONDUIT, TYPE C	24" CONDUIT, TYPE B	24" CONDUIT, TYPE C	36" CONDUIT, TYPE C	CATCH BASIN, NO. 3	CATCH BASIN, NO. 2-4	ATCH BASIN ADJUSTED TO GRADE	INLET, NO. 2-6	INLET, NO. 3D	MANHOLE, NO. 3	HOLE ADJUSTED TO GRADE	HOLE RECONSTRUCTED TO GRADE	OVATING EXISTING SOIL, AS PER PLAN	EROSION CONTROL MAT	CALCULA JDC CHECKE
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		FROM	ТО		SY	FT	CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	MSF	SY	
D-1 AVFS-1	47 47-49	753- 3+13.71	+07.48 6+74.10	RT LT																1		1.82	202.30	
D-2	49	756-	+28.50	RT					<u> </u>			<u> </u> 		<u> </u> 		<u> </u>	<u> </u> 			1	<u> </u> 	<u> </u> 		<u> </u>
D-3	49		+11.06	RT												1								│ ≻
D-4 AVFS-2	49 49-51	758+12.81 7+56.38	758+27.83 10+53.24	RT LT									15						1			2.39	265.02	E
AVI 3-2	49-01	7 100.30	10133.24				<u> </u>			1	<u> </u>		<u> </u>	<u> </u>	<u> </u>				<u> </u>		<u> </u>	2.59	203.02	4
D-5	51	760+36.91	760+54.65	RT	3.94		0.69				İ	İ	26		İ				<u> </u>	İ	<u> </u>	<u> </u>	İ] 2
D-6 D-7	51 51		+97.98 +70.01	RT RT				5	Ω								1	1						5
D-7 D-8	51	762+62.51	762+77.51	RT					0				15					1	1					S
D-9	51	764+98.94	765+00.88	RT				9									1					1		
D-9A	51	764-	+99.91 	RT			<u> </u>			<u> </u>	1	<u> </u> 	<u> </u>	<u> </u> 	1	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	1	<u> </u>	<u> </u>	5
PG-1	51	761+25.00	765+50.00	RT		425	<u> </u>					<u> </u>		<u> </u>					<u> </u>	<u> </u>		<u> </u>		\ \
AVFS-3	51-53	14+61.75	16+89.67	LT																		1.81	201.6	j
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D-10 D-11	53 53	766+42.90 767+05.15	766+52.88 767+18.10	RT RT		5	<u> </u>			<u> </u>		1	11	<u> </u>	1	<u> </u>	<u> </u> 	<u> </u>	<u> </u>	1		<u> </u> 	<u> </u> 	4
D-11 D-12	53 53		+76. <i>04</i>	RT		<u> </u>		7			15	5	13		'				1					Z
D-13	53		+73.88	RT				-			6						1							
PG-2	53	765+50.00	765+75.00	RT		25	•							•										1 &
AVFS-4	53-55	17+99.75	22+77.47	LT			<u> </u>		<u> </u>	1	<u> </u>	<u> </u>	<u> </u> 	<u> </u> 	<u> </u> 	<u> </u>	<u> </u>	<u> </u>	<u> </u> 	<u> </u>	<u> </u>	2.46	273.14	
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D-14	55	773+11.42	773+21.27	RT				14						1						mm	· · · · · · · · · · · · · · · · · · ·	<u> </u>		Ī
D-15 D-16	55 55		+10.01	RT RT			<u> </u> 			1		<u> </u> 	<u> </u> 	<u> </u> 	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u> 	H	1	<u> </u>	<u> </u>	
D-10 D-17	55 55	774+88.52	+63.34 775+00.00	LT			<u> </u>	24		<u> </u>		<u> </u> 	<u> </u> 	1 1	<u> </u> 	<u> </u> 	<u> </u> 	<u> </u> 	<u> </u> 	<u> </u>		<u> </u> 	<u> </u>	1
D-18	55	774+83.52	774+88.52	LT						5	<u> </u>	<u> </u>		<u> </u>					1		<u> </u>	<u> </u>	<u> </u>	1
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AN APPROVED MECHANICAL DAMPING DEVICE SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE END OF THE ARM AS SHOWN ON TC-81.22 OR AS DIRECTED BY THE ENGINEER

ITEM 644 CROSSWALK LINE, AS PER PLAN

CROSSWALK LINES SHALL BE AS SHOWN BELOW, WITH HORIZONTAL MEASUREMENT GIVEN IN LINEAR FEET FOR EACH PAINTED AREA FOR THE ENTIRE LENGTH OF THE CROSSWALK. METHOD OF MEASUREMENT SHALL BE PER CMS 641.12



FIBER OPTIC CABLE MARKER

THE CONTRACTOR SHALL FURNISH AND INSTALL THIS ITEM ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATIONS 804/904.

REFERENCE LOCATION SIGNS

THE LOCATION OF REFERENCE LOCATION SIGNS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED DATE OF REFERENCE LOCATION SIGN INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF REFERENCE LOCATION SIGNS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET REFERENCE LOCATION SIGNS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A REFERENCE LOCATION SIGN SHALL BE OMITTED.

ITEM 630 SPAN WIRE SIGN SUPPORT, TYPE TC-17.11, DESIGN 8,

AS PER PLAN

ITEM 630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN X, AS PER PLAN

ITEM 630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN X, AS PER PLAN

ITEM 630 OVERHEAD SIGN SUPPORT, TYPE TC-16.22, DESIGN X,
AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWINGS, SIGNAL SUPPORTS AND APPURTANCES SHALL BE PAINTED BLACK (FEDSTD-595b 17038) IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 916.

MST CHECKED RJM

FIC CONTROL GENERAL NOTES

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T-725-14.41



168 220

STANDARD FINISH COLOR FS-27722 **COLOR FS-34138** STANDARD FINISH -STANDARD FINISH **COLOR FS-27722** COLOR FS-27722 STONE FORMLINER COLOR: ALTERNATE 1: FS-27722 ALTERNATE 2: 5 DYE COLOR MIX minim

TEST PANEL 1 DETAIL



COLOR MOCK UP BASIS OF DESIGN PROVIDED BY CONCRETE ARTISTS (513) 400-0482, OR APPROVED EQUAL. CONTRACTOR TO COORDINATE TEST PANEL COLORS WITH OWNER, ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

ITEM 511: CONCRETE, MISC.: FORMLINERS
THE FOLLOWING REQUIREMENTS WILL BE APPLICABLE TO ALL AREAS WHICH
THE FORMLINER TEXTURE IS APPLIED. WHERE A TEXTURE IS NOT
INDICATED, THE CONCRETE SHALL BE FINISHED PER THE ODOT C&MS 511.

FORMLINERS SHALL BE MADE OF THERMOFORMED ABS, STYRENE PLASTIC, OR URETHANE, AND SHALL BE OF SUFFICIENT STRENGTH TO MAINTAIN ITS FORM WHILE CONCRETE IS BEING POURED. THEY SHALL BE ATTACHED PLUMB AND LEVEL IN FORMS IN A CONTINUOUS PATTERN PER THE DETAILS, AND SHALL BE OVERLAPPED ON ALL SIDES BY 1/16". IMPERFECTIONS IN THE CONCRETE UPON REMOVAL OF THE FORMLINER SHALL BE PATCHED WITH THE SAME MATERIALS AND MIX TO RESTORE THE SURFACE TO A CONSISTENT NATURAL STONE LOOK SURFACE.

BASIS OF DESIGN - CUSTOMROCK MINNEHAHA BLEND. 2020 WEST 7TH STREET, ST. PAUL, MN 55116. WWW.CUSTOMROCK.COM, OR APPROVED EQUAL.

PAYMENT FOR FORMLINERS INCLUDING ALL MATERIALS, LABOR AND EQUIPMENT SHALL BE MADE UNDER ITEM 511: CONCRETE, MISC.: FORMLINER ON A SQUARE FOOT BASIS.

ITEM 511: CONCRETE, MISC.: AESTHETIC TEST PANEL
TEST PANEL SHALL BE PROVIDED TO REPRESENT ALL AESTHETIC
TREATMENTS UTILIZED ON THE WALLS WITHIN THE PROJECT.

TEST PANEL 1 SHALL BE 10' X 10', AND SHALL REPRESENT A SECTION OF WALL WITH FORMLINER "A", INCLUDING FORMLINER TEXTURE, COLUMN DETAIL, AND COPING DETAIL. TEST PANEL 1 SHALL ALSO REPRESENT A SECTION OF WALL WITH THE LOGO FORMLINER AT WALL 3, AND WILL MATCH THE SIZE AND DEPTH PROVIDED IN THE DETAIL. TEST PANEL SHALL INCLUDE ALL SEALANT COLORS AS CALLED FOR IN PLANS. SEAL TEST PANEL AS PER "TEST PANEL 1 DETAIL".

CAST PANEL ON SITE USING THE SAME MATERIALS, METHODS, EQUIPMENT AND PERSONNEL AS WILL THE FINAL PRODUCT. PROVIDE TEST PANEL PRIOR TO THE PURCHASE OF STAIN FOR THE ENTIRE PROJECT.

PAYMENT FOR THE TEST PANEL, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE MADE UNDER PAY ITEM 511: CONCRETE, MISC.: AESTHETIC TEST PANEL, EACH.

ITEM 512: SEALING OF CONCRETE SURFACES
STONE FORMLINER COLOR:
SURFACES WITH FORMLINER "A" SHALL RECEIVE A MIX OF FIVE
CONCRETE DYE COLORS DISTRIBUTED IN A RANDOMIZED PATTERN
TO MIMIC THE IMAGE ON THIS SHEET. THIS COLOR MOCK UP IS
AVAILABLE TO BE ON SITE FOR REFERENCE WHEN CREATING THE
TEST PANEL. DYE SHALL BE EXTERIOR ARMOUR DYE, OR
APPROVED EQUAL. DYE COLORS SHALL BE:

- MEDIUM GRAY
- BUFF
- TAUPE
- SAND - SUN BUFF

DYED SURFACES TO BE SEALED WITH A LOW GLOSS SEALER PER ODOT C&MS 512.

SEALING OF CONCRETE SURFACES WITH RANDOMIZED MULTI COLORED SEALER SHALL BE PERFORMED BY A CONTRACTOR WITH AT LEAST 5 YEARS EXPERIENCE IN CREATING STONE LIKE TEXTURES IN CONCRETE WALLS.

LOGO COLOR: LOGO FORMLINER INSET AREAS SHALL BE SEALED WITH AN EPOXY URETHANE SYSTEM PER THE ODOT C&MS 512. ALL SURFACES WITHIN THE INSET LOGO INCLUDING THE BACK AND SIDES SHALL RECEIVE

SEALER. SEALER COLOR SHALL BE FS-34138.

STANDARD FINISH COLOR:
ALL REMAINING WALL SURFACES, INCLUDING COPING, COLUMNS, AND
STANDARD FINISH CONCRETE WITHIN LOGO PANELS SHALL BE
SEALED WITH AN EPOXY URETHANE SYSTEM PER THE ODOT C&MS
512. SEALER COLOR SHALL BE FS-27722.

ITEM 530: SPECIAL - STRUCTURES, AESTHETIC LOGO FORMLINER FOR AESTHETIC LOGO SHALL BE OF SUFFICIENT STRENGTH TO MAINTAIN ITS FORM WHILE CONCRETE IS BEING POURED. THEY SHALL BE ATTACHED PLUMB AND LEVEL IN FORMS PER THE DETAILS. IMPERFECTIONS IN THE CONCRETE UPON REMOVAL OF THE FORMLINER SHALL BE PATCHED WITH THE SAME MATERIALS AND MIX TO RESTORE THE SURFACE TO A CONSISTENT SMOOTH SURFACE.

PAYMENT FOR FORMLINERS INCLUDING ALL MATERIALS, LABOR AND EQUIPMENT SHALL BE MADE UNDER ITEM 530: SPECIAL - STRUCTURES, AESTHETIC LOGO.



DECORATIVE HARDSCAPE SUBSUMMARY

MOT-725-14.41

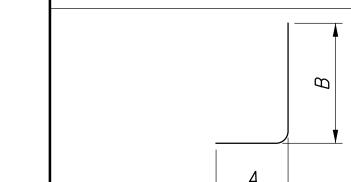


DIMENSIONS

2"

220

				ESTIMATED QUANTITIES	
ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF.
503	21300	LS		UNCLASSIFIED EXCAVATION	
	21300	LO		ONCLASSIFIED EXCAVATION	
509	10000	2918	LB	EPOXY COATED STEEL REINFORCEMENT	
\sim	~~~~	~~~~	~~~		
511	46210	32	CY	CLASS QC1 CONCRETE, RETAINING WALL INCLUDING FOOTING	
	mm		<u> </u>		
512	10100	32	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	33001	7	SY	TYPE 2 WATERPROOFING	
516	13600	21	SF	1" PREFORMED EXPANSION JOINT FILLER	
518	21200	23	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	39800	76	FT	4" PERFORATED CORRUGATED PLASTIC PIPE	
518	39900	70	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	



BAR BENDING DIAGRAMS

TYPE-1

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA:

CONCRETE QC1

COMPRESSIVE STRENGTH 4000 PSI

CONCRETE QC5 COMPRESSIVE STRENGTH 4000 PSI (DRILLED SHAFTS)

REINFORCING STEEL

ASTM, A615, OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

ABBREVIATIONS: BOT. - BOTTOM € - CENTERLINE CIP - CAST-IN-PLACE CLR. - CLEAR CONST. - CONSTRUCTION DIA. - DIAMETER E.F. - EACH FACE EL. - ELEVATION EX. - EXISTING FF - FAR FACE MAX. - MAXIMUM MIN. - MINIMUM NF - NEAR FACE PROP. - PROPOSED R/W - RIGHT OF WAY STA. - STATION TYP. - TYPICAL

W/ - WITH

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, 2W501:

- 2. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
- 3. "ST." INDICATES A STRAIGHT BAR.
- 4. ALL REINFORCING TO BE EPOXY COATED.

NOTES:

NUMBER

TOTAL

10

20

20

10

SER. OF

9

18

SER. OF

2W514 | SER. OF

9

13

SER. OF

94

2W507 | SER. OF

2W509 SER. OF

LENGTH

14'-6"

30'-0"

6'-8"

14'-2"

20'-0"

24'-0"

7′-4″

ΤO

8'-3"

11′-8″

8'-3"

ΤO

6'-10"

14'-0"

6'-10"

ΤO

7′-4″

7′-2″

7′-4″

ΤO

7′-10″

7′-10″

ΤO

8'-9"

8'-9"

ΤO

7′-4″

3′-6″

TOTAL =

MARK

2W501

2W502

2W503

2W504

2W505

2W506

2W508

2W510

2W511

2W5012

2W513

2W515

2W5016

WALL 2

WEIGHT

(LBS)

152

626

126

178

293

501

106

171

56

147

20

135

28

15

344

2,918

TYPE

ST.

ST.

ST.

ST.

ST.

ST.

ST.

ST.

64.5

72

84

84

66

66

64.5

66

72

72

84

84

15.5

15.5

15.5

15.5

15.5

15.5

15.5

21.5

21.5

21.5

21.5

21.5

21.5

21.5

2W: LOCATION OF THE BARS IN THE STRUCTURE (WALL 2) 5: BAR SIZE DIMENSION NO. 5

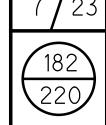
01: SEQUENCE NUMBER

DATE	1/11/2024	STRUCTURE FILE NUMBER	
REVIEWED	RJM	STRUCTURE	
DRAWN	TBC	REVISED	
GNED	РА	CKED PM	

ESTIMATED QUANTITIES
RETAINING WALL 3
ALONG SR 725

108619

MOT-725-14.41 PID



				ESTIMATED QUANTITIES	
ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF
203	20000	50	CY	EMBANKMENT	178
503	21101	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	178
509	10000	34,963	LB	EPOXY COATED STEEL REINFORCEMENT	
511	46011	+ /	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING, AS PER PLAN	178
511	71200	2 4,050	SF	CONCRETE, MISC.: FORMLINER	168
511	81300	2	EACH	CONCRETE, MISC.: AESTHETIC TEST PANEL	168
512	10100	530	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
518	20000	400	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
<i>518</i>	39800	450	FT	4" PERFORATED CORRUGATED PLASTIC PIPE	179
<i>518</i>	39900	45	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	179
520	10001	5,190	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE, AS PER PLAN	179
	F1100	767	FACIL		178
530 530	51100 51110	363	EACH	RETAINING WALL, SOIL NAIL 20' LONG, MINIMUM	178
			EACH	RETAINING WALL, SOIL NAIL VERIFICATION TEST	178
530	51120	19	EACH	RETAINING WALL, SOIL NAIL PROOF TEST	110