ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446), AS PER PLAN, PG 70-22M

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

LINEAR GRADING

AREAS WHERE THE SHOULDER IS HIGHER THAN THE EDGE OF PAVEMENT WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE. THIS WORK WILL ONLY BE PERFORMED IN AREAS NECESSARY AND WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

209, LINEAR GRADING, 348 STA.
659, SEEDING AND MULCHING, 9667 SQ YD
659, COMMERCIAL FERTILIZER, 1.3 TON
659, LIME, 2 ACRES
659, WATER, 52.2 M. GAL.

ITEM 611 – MANHOLE ADJUSTED TO GRADE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, 623.05 FOR MONUMENT BOXES, OR 638.18 FOR VALVE BOXES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE THE CASTING) AND REMOVE AND DISCARD THE EXISTING CASTING. INSTALL A NEW CASTING TO GRADE (ACCORDING TO TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN REPLACED.

CMS 499 CLASS QCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION AND FURNISHING OF A NEW CASTING, AND ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER

MAH US 422:
ITEM 611, MANHOLE ADJUSTED TO GRADE, AS PER PLAN, 2 EACH

ITEM 611 – CATCH BASIN ADJUSTED TO GRADE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER

MAH SR 193 / US 422:
ITEM 611, CATCH BASIN ADJUSTED TO GRADE, 6 EACH

ITEM 611 – CATCH BASIN RECONSTRUCTED TO GRADE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER

TRU US 422:
ITEM 611, CATCH BASIN RECONSTRUCTED TO GRADE, 2 EACH

Qty & items added for replacement of 3 additional guardrail panels.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, 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.

GUARDRAIL & GUARDRAIL ANCHOR ASSEMBLY REPLACEMENT

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL USED TO REPLACE DAMAGED OR MISSING GUARDRAIL PANELS AND ANCHOR ASSEMBLIES AS DIRECTED BY THE ENGINEER

TRU US 422: SLM 12.46 TO 12.51 RIGHT Repair location added
ITEM 202 - GUARDRAIL REMOVED, 87.5 FT
ITEM 606 - GUARDRAIL, TYPE MGS 37.5 FT
ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016), 1 EACH
ITEM 626 - BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL), 5 EACH

ITEM SPECIAL - VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LECENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES:
MAH-422-0217 (SFN:5005175)

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:
SPECIAL - VERTICAL CLEARANCE, 1 EACH

GENERAL NOTES

DESIGN AGENCY

DESIGNER BFR
REVIEWER MJA 06/15/21
PROJECT ID 91900
SHEET P.5 TOTAL 37

MAH/TRU-422/VAR-1.90/VAR

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 9/15/2021 TIME: 1:57:13 PM USER: brosst
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SHEET NUM.								PART.						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	5	20	21	22	23	24	25	01/NHS/PV	02/NHS/PV/YOUN	03/S>2/PV/YOUN	04/S>2/PV/WARR	06/NHS/BR	08/S>2/OT/WARR						
																		ROADWAY	
	87.5												87.5	202	38000	87.5	FT	GUARDRAIL REMOVED Qty Change	
676								376		50	250			203	10000	676	CY	EXCAVATION	
	348							348						209	60200	348	STA	LINEAR GRADING	
		51	25	127				203						209	72000	203	STA	PREPARING SUBGRADE FOR SHOULDER PAVING	
	37.5												37.5	606	15050	37.5	FT	GUARDRAIL, TYPE MGS New Item	
	1												1	606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
	1							1						SPECIAL	69098000	1	EACH	VERTICAL CLEARANCE	5
																		EROSION CONTROL	
	9,667							9,667						659	10000	9,667	SY	SEEDING AND MULCHING	
	1.3							1.3						659	20000	1.3	TON	COMMERCIAL FERTILIZER	
	2							2						659	31000	2	ACRE	LIME	
	52.2							52.2						659	35000	52.2	MGAL	WATER	
								3,000						832	30000	3,000	EACH	EROSION CONTROL	
																		DRAINAGE	
	6							6						611	98630	6	EACH	CATCH BASIN ADJUSTED TO GRADE	
	2												2	611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
	2								2					611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	5
																		PAVEMENT	
			15,588		5,462			21,050						254	01000	21,050	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	
		23,186	11,869	30,713				65,204	564					254	01000	65,768	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=3.25")	
4,050								2,250		300	1,500			255	10501	4,050	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM, AS PER PLAN	4
16,350								9,000		1,350	6,000			255	20000	16,350	FT	FULL DEPTH PAVEMENT SAWING	
1,000								450		100	450			258	10000	1,000	EACH	RETROFIT DOWEL BAR	
676								376		50	250			304	20000	676	CY	AGGREGATE BASE	
		3,479	3,185	4,608	492			11,679	85					407	20000	11,764	GAL	NON-TRACKING TACK COAT	
		451	1,427	971	920			3,750	19					408	10001	3,769	GAL	PRIME COAT, AS PER PLAN	5
		1,221	649	2,020				3,839	51					442	00100	3,890	CY	ANTI-SEGREGATION EQUIPMENT	
		967	1,144	1,280	228			3,595	24					442	10001	3,619	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG70-22M	5
		1,128	577	1,493				3,170	28					442	10100	3,198	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
		63	199	135	128			522	3					617	10101	525	CY	COMPACTED AGGREGATE, AS PER PLAN	5
		1,268	674	523				2,412	53					875	10000	2,465	LB	LONGITUDINAL JOINT ADHESIVE	
																		TRAFFIC CONTROL	
						357		357						621	00100	357	EACH	RPM	
						270		270						621	54000	270	EACH	RAISED PAVEMENT MARKER REMOVED	
	5												5	626	00110	5	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL) Qty Change	
						7.9	2.54	9.34	0.08	0.3	0.5	0.22		646	10010	10.44	MILE	EDGE LINE, 6"	
						4.03	0.29	3.3	0.04	0.25	0.5	0.23		646	10110	4.32	MILE	LANE LINE, 6"	
						0.15	0.21			0.15		0.21		646	10200	0.36	MILE	CENTER LINE	
						1,005	172	605		100	300	172		646	10300	1,177	FT	CHANNELIZING LINE, 8"	
						5,150		5,150						646	10310	5,150	FT	CHANNELIZING LINE, 12"	
						194	156	144			50	156		646	10400	350	FT	STOP LINE	
						597		497			100			646	10500	597	FT	CROSSWALK LINE	
						490		490						646	10600	490	FT	TRANSVERSE/DIAGONAL LINE	
						80		80						646	10620	80	FT	CHEVRON MARKING	
						16	3	12			4	3		646	20300	19	EACH	LANE ARROW	
						10		10						646	20320	10	EACH	WRONG WAY ARROW	
						3,540		3,540						646	20504	3,540	FT	DOTTED LINE, 6"	

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER BFR

REVIEWER MJA 06/15/21

PROJECT ID 91900

SHEET P.18 TOTAL 37

MAH/TRU-422/VAR-1.90/VAR

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 9/15/2021 TIME: 1:57:40 PM USER: bross1
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