

ITEM 606 MGS PAY ITEMS

THIS ITEM INCLUDES THE COST OF ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS TO INSTALL MGS PAY ITEMS IN ACCORDANCE WITH ALL SPECIFICATIONS, STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE AT THE UNIT BID PRICE.

ITEM	UNIT	DESCRIPTION
606	FT	GUARDRAIL, TYPE MGS
606	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS
606	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS
606	FT	GUARDRAIL, TYPE MGS, LONG SPAN
606		EACHANCHOR ASSEMBLY, MGS TYPE B
606		EACHANCHOR ASSEMBLY, MGS TYPE E
606		EACHANCHOR ASSEMBLY, MGS TYPE T
606		EACHMGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

ITEM 606 MGS BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE VARIOUS, AS PER PLAN

THIS ITEM INCLUDES THE COST OF ALL LABOR, EQUIPMENT, AND MATERIAL TO REMOVE, REPLACE, AND ALIGN DAMAGED COMPONENTS OF THE ASSEMBLIES IN ACCORDANCE WITH THEIR RESPECTIVE SPECIFICATIONS, STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE AT THE UNIT BID PRICE.

ITEM UNIT DESCRIPTION

606	EACHMGS BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 1, AS PER PLAN
606	EACHMGS BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 2, AS PER PLAN

PLAN INSERT SHEETS

ANY REFERENCE TO STANDARD CONSTRUCTION DRAWINGS (SCD) FOUND WITHIN THE PLAN INSERT SHEETS REFER TO OTHER PLAN INSERT SHEETS WITH THE SAME DESIGNATION. AN EXAMPLE IS SCD GR-1.1 MENTIONED ON A PLAN INSERT SHEET REFERS TO PLAN INSERT SHEET GR-1.1.

GUARDRAIL REPLACEMENT DETERMINATION

GUARDRAIL TO BE INSTALLED SHALL, AS NOTED BELOW, BE EITHER TYPE MGS GUARDRAIL PER THE PROVIDED STANDARD DRAWINGS, OR THE PLAN INSERT SHEETS INCLUDED WITH THIS SET OF PLANS. BOTH THE TYPE MGS AND PLAN INSERT SHEET GUARDRAIL IS HIGHER THAN THE EXISTING GUARDRAIL HEIGHTS CURRENTLY FOUND THROUGHOUT THE DISTRICT. THE FOLLOWING DESCRIBES WHAT TYPE TO USE WHEN REPLACING DAMAGED GUARDRAIL, ASSEMBLIES, AND OTHER APPLICABLE ITEMS. NOTE THAT IF TYPE MGS IS NOT DESIGNATED, THEN USE PAY ITEMS PER THE PLAN INSERT SHEETS.

A SHORT RUN OF GUARDRAIL IS DEFINED AS 200 FEET OR LESS.

IF LESS THAN 50 PERCENT OF THE SHORT RUN OF GUARDRAIL IS TO BE REPLACED THEN REPLACE TO MATCH THE EXISTING GUARDRAIL TYPE AND HEIGHT UNLESS SAID HEIGHT IS LESS THAN 26.5 INCHES. IF THE EXISTING GUARDRAIL HEIGHT IS LESS THAN 26.5 INCHES THEN REPLACE WITH THE 29 INCH GUARDRAIL HEIGHT DESIGNATED IN THE PLAN INSERT SHEETS. USE A TRANSITION TAPER RATE OF 2 INCHES OVER 25 FEET TO TIE BACK INTO THE ADJACENT EXISTING GUARDRAIL HEIGHT.

IF 50 PERCENT OR MORE OF THE SHORT RUN OF GUARDRAIL IS TO BE REPLACED THEN REPLACE THE ENTIRE GUARDRAIL RUN WITH TYPE MGS.

A LONG RUN OF GUARDRAIL IS DEFINED AS ANY RUN LONGER THAN 200 FEET.

IF LESS THAN 50 PERCENT OF THE LONG RUN OF GUARDRAIL IS TO BE REPLACED THEN REPLACE TO MATCH THE EXISTING GUARDRAIL TYPE AND HEIGHT UNLESS SAID HEIGHT IS LESS THAN 26.5 INCHES. IF THE EXISTING GUARDRAIL HEIGHT IS LESS THAN 26.5 INCHES THEN REPLACE WITH THE 29 INCH GUARDRAIL HEIGHT DESIGNATED IN THE PLAN INSERT SHEETS. USE A TRANSITION TAPER RATE OF 2 INCHES OVER 25 FEET TO TIE BACK INTO THE ADJACENT EXISTING GUARDRAIL HEIGHT.

IF 50 TO 74 PERCENT OF THE LONG RUN OF GUARDRAIL IS TO BE REPLACED THEN REPLACE WITH THE 29 INCH GUARDRAIL HEIGHT DESIGNATED IN THE PLAN INSERT SHEETS. USE A TRANSITION TAPER RATE OF 2 INCHES OVER 25 FEET TO TIE BACK INTO THE ADJACENT EXISTING GUARDRAIL HEIGHT.

IF 75 PERCENT OR MORE OF THE LONG RUN OF GUARDRAIL IS TO BE REPLACED THEN REPLACE THE ENTIRE GUARDRAIL RUN WITH TYPE MGS.

GUARDRAIL INSTALLATION AFFECTING UTILITIES

THIS PROJECT REQUIRES THE INSTALLATION OF NEW GUARDRAIL POSTS. SURVEY WORK HAS NOT BEEN PERFORMED ON THIS PROJECT, NOR HAVE THE UTILITY LOCATIONS BEEN CONFIRMED IN THE FIELD. IN ADDITION TO CMS 105.07, IF, DURING THE COURSE OF INSTALLING ANY NEW GUARDRAIL COMPONENT, IT IS DETERMINED THAT A UTILITY CONFLICT MAY RESULT, THE CONTACTOR IS TO NOTIFY THE PROJECT ENGINEER IMMEDIATELY. UTILITES ARE NOT TO BE RELOCATED AS A RESULT OF THIS OPERATION. ADJUSTMENTS TO THE PROPOSED GUARDRAIL WILL ACCOMMODATE THE EXISTING UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE GUARDRAIL VIA MEANS THAT WOULD BE COMPLIANT WITH THE IMPACTED UTILITY'S SAFETY GUIDELINES AS WELL AS STILL MEETING ODOT'S DESIGN CRITERIA. ANY MINOR ADJUSTMENTS MADE TO THE PROPOSED GUARDRAIL INSTALLATIONS SHALL BE INCIDENTAL TO PAY ITEM 606.

ITEM 606 - SPECIAL-CABLE BARRIER, READJUST CABLE TENSION (REPAIR)

THIS ITEM SHALL INCLUDE ALL WORK, EQUIPMENT, AND MATERIAL NECESSARY TO RE-ADJUST TENSION IN THE CABLE TO THE MANUFACTURER'S SPECIFICATIONS AS DIRECTED BY THE ENGINEER. ONLY THE DAMAGES CABLE WITHIN A RUN SHALL BE ADJUSTED. THE BID PRICE PER CABLE SHALL BE FOR ONE EACH.

ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR RECONSTRUCTED

THIS ITEM OF WORK WILL INCLUDE ALL WORK, EQUIPMENT AND MATERIAL NECESSARY TO RECONSTRUCT THE CABLE BARRIERANCHOR ASSEMBLY INCLUDING ALL ANCHOR POSTS ANDCONCRETE FOUNDATIONS TO THE CURRENT MANUFACTURER'SSPEC-IFICATIONS. THE RECONSTRUCTED ASSEMBLY WILL INCLUDETHE RE-TENSIONING OF THE ENTIRE SYSTEMS CABLES TO THEMANUFACTURER'S SPECIFICATIONS AS DIRECTED BY THE ENGINEER.THE PAYMENT FOR THIS ITEM WILL BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM 606 - SPECIAL - CABLE BARRIER, ANCHORRECONSTRUCTED.

ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR REPAIR

THIS ITEM OF WORK WILL INCLUDE ALL WORK, EQUIPMENT ANDMATERIAL NECESSARY TO REPAIR THE CABLE BARRIER ANCHORASSEMBLY INCLUDING ALL ANCHOR POSTS. THIS ITEM WILL NOTINCLUDE THE REPLACEMENT OF ANY OF THE CONCRETE ANCHOR FOUNDATIONS. THE REPAIR OF THE ASSEMBLY WILL INCLUDE THERE-TENSIONING OF THE ENTIRE SYSTEMS CABLES TO THEMANUFACTURER'S SPECIFICATIONS AS DIRECTED BY THEENGINEER. THE PAYMENT FOR THIS ITEM IS INCLUDED IN THEUNIT PRICE BID FOR EACH ITEM 606 - SPECIAL- CABLE BARRIER,ANCHOR REPAIR.

ITEM 606 - SPECIAL - CABLE BARRIER, TENSIONING

THIS ITEM WILL INCLUDE ALL WORK, EQUIPMENT AND MATERIALNECESSARY TO RE-TENSION CABLE BARRIER OR ANNUAL TENSIONING OF RUNS THROUGHOUT THE DISTRICT (A LIST OF ANNUAL TENSIONING LOCATIONS WILL BE GIVEN TO THE CONTRACTOR AT THE PRECON), TO THE MANUFACTURER'S SPECIFICATION AS DIRECTED BY THE ENGINEER. ITEM WILL BE FOR EACH AND INCLUDED IN THE UNIT BID PRICE BID FOR ITEM 606 - SPECIAL - CABLE BARRIER, TENSIONING.

END ANCHORS AND IMPACT ATTENUATORS: NCHRP-350 & MASH (2016) REPAIR/REPLACEMENT GUIDELINES

END ANCHORS AND IMPACT ATTENUATORS REQUIRING REPAIR OR REPLACEMENT SHALL FOLLOW THE GUIDANCE LISTED ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE HERE: [HTTPS://WWW.TRANSPORTATION.OHIO.GOV/WORKING/ENGINEERING/ROADWAY/MANUALS-STANDARDS/ROADWAY-APPROVED-PRODUCTS](https://www.transportation.ohio.gov/working/engineering/roadway/manuals-standards/roadway-approved-products). END ANCHORS AND IMPACT ATTENUATORS MEETING NCHRP-350 MAY BE REPAIRED ONLY. IF REPLACEMENT IS WARRANTED THEN THE REPLACEMENT SHALL BE WITH A DEVICE MEETING MASH (2016) REQUIREMENTS.

REPLACING DAMAGED NON-MGS END ANCHOR WITH MGS END ANCHOR

WHEN REPLACING A NON-MGS END ANCHOR WITH AN MGS END ANCHOR, ALSO REPLACE THE ADJACENT 50' OF EXISTING GUARDRAIL (IF TYPE 5) WITH NEW MGS GUARDRAIL TO ALLOW FOR A HEIGHT TRANSITION PER STANDARD DRAWING MGS-4.3.

ITEM SPECIAL, 690 MISC.: CONCRETE REPAIR

THIS ITEM SHALL BE AS SPECIFIED IN 622.01 THROUGH 622.07 OF THE CMS AND SHALL INCLUDE THE REMOVAL AND ALL WORK NECESSARY TO REPAIR OR REPLACE SECTION OF CONCRETE BARRIER WALL, BARRIER END SECTIONS, AND CONCRETE SUPERSTRUCTURE PARAPETS. THE PROPOSED TYPE OF CONCRETE BARRIER SHALL MATCH THE EXISTING DESIGN INCLUDING BUT NOT LIMITED TO THE FOLLOWING STANDARD DRAWINGS: RM-4.3, RM-4.4, RM-4.5, RM-4.6, BR-1.

IN THE EVENT THAT A UTILITY WITHIN THE BARRIER HAS BEEN DAMAGED, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO ADVISE THE DEPARTMENT OF THE NEEDED UTILITY REPAIR. IN THE EVENT THAT THIS IS AN EMERGENCY REPAIR ITEM, THE CONTRACTOR SHALL BE GIVEN 72 HOURS TO BEGIN WORK. THIS TIME SHALL BEGIN ONCE NOTIFIED OF THE UTILITY REPAIR BEING COMPLETED.

THE DEPARTMENT WILL MEASURE CONCRETE BARRIER AND CONCRETE SUPERSTRUCTURE PARAPET BY THE AMOUNT OF CUBIC YARD COMPLETED AND ACCEPTED AND CONCRETE BARRIER END SECTIONS BY EACH. THESE ITEMS SHALL BE BID TO INCLUDE ALL LABOR, TOOLS, EQUIPMENT, HARDWARE, AND INCIDENTALS NECESSARY FOR THE REMOVAL OF DAMAGED BARRIER AND INSTALLATION. INSTALLATION AND REPAIR SHALL INCLUDE ALL INCIDENTALS SUCH AS DOWELED REINFORCING STEEL AND AS SPECIFIED IN 622.09. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDE AND CARRIED TO THE GENERAL SUMMARY:

ITEM	UNIT	DESCRIPTION
690	EACH	SPECIAL - MISC.: CONCRETE BARRIER END SECTION
690	CY	SPECIAL - MISC.: CLASS QC1, CONCRETE BARRIER REPAIR
690	CY	SPECIAL - MISC.: CLASS QC2, SUPERSTRUCTURE BARRIER REPAIR



SHEET NUMBER												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
3		4	5		7							01/SAF/21		EXT	TOTAL			SHEET NO.
ROADWAY																		
35												7,000	606	98000	7,000	FT	GUARDRAIL, MISC.:TYPE 5 REBUILT USING WOOD POST	2
												35	606	98100	35	EACH	GUARDRAIL, MISC.: URGENT REPAIR	3
												2	SPECIAL	69098000	2	EACH	MISC.: CONCRETE BARRIER SECTION	5
												20	SPECIAL	69098700	20	CY	MISC.: CLASS QC1, CONCRETE BARRIER REPAIR	5
												10	SPECIAL	69098700	10	CY	MISC.: CLASS QC2, SUPERSTRUCTURE BARRIER REPAIR	5
PAVEMENT																		
54												54	609	23001	54	FT	COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	3
												25	609	24510	25	FT	CURB, TYPE 4-C	
TRAFFIC CONTROL																		
		100										100	626	00110	100	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	4
MISCELLANEOUS STRUCTURE																		
												25	517	72205	25	FT	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 1 STEEL POSTS), AS PER PLAN	4
												25	517	72307	25	FT	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS), AS PER PLAN	4
MAINTENANCE OF TRAFFIC																		
					50							50	614	11110	50	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
												120	614	13600	120	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A TWO LANE HIGHWAY	
												10	614	13700	10	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A FOUR LANE UNDIVIDED HIGHWAY	
												40	614	13800	40	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A 4 LANE OR GREATER DIVIDED HIGHWAY	
												15	614	13800	15	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A 4 LANE OR GREATER DIVIDED HIGHWAY(CITY OF CINCINNATI)	
												325	614	13900	325	EACH	MAINTENANCE OF TRAFFIC FOR SHOULDER CLOSURE	
												80	614	13900	80	EACH	MAINTENANCE OF TRAFFIC FOR SHOULDER CLOSURE(CITY OF CINCINNATI)	
INCIDENTALS																		
												425	624	15000	425	EACH	MOBILIZATION	