

ITEM 614, MAINTAINING TRAFFIC

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY UTILIZING ONE-LANE, TWO-WAY ALTERNATING SIGNALIZED TRAFFIC UNLESS OTHERWISE NOTED IN THE PLANS. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, PAVEMENT FOR MAINTAINING TRAFFIC, AND THE COMPLETED PAVEMENT. HOURS FOR FLAGGING OPERATIONS ARE TO BE FROM 8 AM TO 3 PM.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTION SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	5 CY
ITEM 615, ROADS FOR MAINTAINING TRAFFIC	1 LS
ITEM 616, WATER	50 MGAL

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS SHOWN IN THE PLANS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUB-BASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN FIVE INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UN-COMPLETED BASE WIDENING SHALL BE BACK-FILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER	5 MGAL
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ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

AIR FORCE MARATHON

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN IS AS FOLLOWS:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE ALONG TAPERS AND TRANSITION AREAS AND ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 BI-DIRECTIONAL	64 EACH
ITEM 614, OBJECT MARKER, TWO-WAY	64 EACH
ITEM 614, INCREASED BARRIER DELINEATION	772 FEET

DELINEATION OF PORTABLE AND PERMANENT BARRIER (CONT)

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE DISTRICT PROJECT ENGINEER ((937)-497-6722, JACQUELINE.NICOL@DOT.OHIO.GOV), DISTRICT PUBLIC INFORMATION OFFICER ((513)933-6517, D08.pio@dot.pio.gov), DISTRICT PERMIT SECTION ((513)933-6577, d08.permits@dot.ohio.gov, CENTRAL OFFICE SPECIAL HAULING PERMITS SECTION ((614)351-2300, HAULING.PERMITS@DOT.OHIO.GOV), WPAFB - TRAFFIC ENGINEERING; 937-656-3450, WALTER.LEE@US.AF.MIL. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTICE TO OFFICE OF COMMUNICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO OFFICE OF COMMUNICATIONS
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONST. & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL (CONT)

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 5 (TWO-WAY)	46 EACH
ITEM 614, OBJECT MARKER, TWO-WAY	46 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

ITEM 614, WORK ZONE CENTER LINE, CLASS I, 642 PAINT	0.42 MILE
ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	1.57 MILE
ITEM 614, WORK ZONE STOP LINE, CLASS I, 642 PAINT	50 FT

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CALCULATED MAH CHECKED DRJ
MAINTENANCE OF TRAFFIC GENERAL NOTES
GRE-235-10.75 / 11.10
7
79

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SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	9	16	17	18	35	38	43	73	01/NHS/BR	EXT	TOTAL				
ROADWAY																	
LS						1,429					LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	5
											1,429	202	23000	1,429	SY	PAVEMENT REMOVED	
				400							400	202	38000	400	FT	GUARDRAIL REMOVED	
				4							4	202	42010	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
							228				228	203	10000	228	CY	EXCAVATION	
							896				896	203	20000	896	CY	EMBANKMENT	
						1,888					1,888	204	10000	1,888	SY	SUBGRADE COMPACTION	
							666				666	204	13000	666	CY	EXCAVATION OF SUBGRADE, 12" DEEP	
							666				666	204	30020	666	CY	GRANULAR MATERIAL, TYPE C	
						1					1	204	45000	1	HOUR	PROOF ROLLING	
							1,699				1,699	204	50000	1,699	SY	GEOTEXTILE FABRIC	
				475							475	606	15100	475	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
				4							4	606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
				4							4	606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
EROSION CONTROL																	
2											2	659	00100	2	EACH	SOIL ANALYSIS TEST	
173											173	659	00300	173	CY	TOPSOIL	
1,560								877			2,437	659	10000	2,437	SY	SEEDING AND MULCHING	
78											78	659	14000	78	SY	REPAIR SEEDING AND MULCHING	
78											78	659	15000	78	SY	INTER-SEEDING	
0.22											0.22	659	20000	0.22	TON	COMMERCIAL FERTILIZER	
0.32											0.32	659	31000	0.32	ACRE	LIME	
9											9	659	35000	9	MGAL	WATER	
4											4	659	40000	4	MSF	MOWING	
	LS										LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
	LS										LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
	LS										LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
	10,000										10,000	832	30000	10,000	EACH	EROSION CONTROL	
DRAINAGE																	
				144							144	605	31100	144	FT	AGGREGATE DRAINS	
PAVEMENT																	
						590					590	254	01000	590	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1-1/2" DEEP	
						368					368	301	46000	368	CY	ASPHALT CONCRETE BASE, PG64-22	
						294					294	304	20000	294	CY	AGGREGATE BASE	
						273					273	407	20000	273	GAL	NON-TRACKING TACK COAT	
						84					84	441	50200	84	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	
						69					69	441	50300	69	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
TRAFFIC CONTROL																	
				28							28	621	54000	28	EACH	RAISED PAVEMENT MARKER REMOVED	
				19							19	626	00110	19	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
				10.5							10.5	630	03100	10.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
				5							5	630	80100	5	SF	SIGN, FLAT SHEET	
				1							1	630	84900	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				1							1	630	86002	1	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
				0.82							0.82	646	10000	0.82	MILE	EDGE LINE, 4"	
				0.41							0.41	646	10200	0.41	MILE	CENTER LINE	
MISCELLANEOUS STRUCTURE: VANE ARM DETAILS																	
							LS				LS	201	11000	LS		CLEARING AND GRUBBING	
							546				546	203	10000	546	CY	EXCAVATION	
							274				274	203	20001	274	CY	EMBANKMENT, AS PER PLAN	38
							76				76	SPECIAL	20357160	76	CY	FOUNDATION EMBANKMENT	
							LS				LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
							LS				LS	503	21300	LS		UNCLASSIFIED EXCAVATION	
							68				68	511	81300	68	EACH	CONCRETE, MISC.: VANE ARM BLOCKS	
							2,040				2,040	524	94503	2,040	FT	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN	38
							500				500	524	95000	500	FT	DRILLED SHAFTS, MISC.: 18" DIAMETER PLUG PILE	
							877				877	670	00510	877	SY	SLOPE EROSION PROTECTION MAT, TYPE A	
							325				325	SPECIAL	69012010	325	SY	GEOTEXTILE FABRIC	
STRUCTURE OVER 20 FOOT SPAN (GRE-235-10.75)																	
							LS				LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	41, 59
							224				224	202	22900	224	SY	APPROACH SLAB REMOVED	
							1,927				1,927	202	23500	1,927	SY	WEARING COURSE REMOVED	
							LS				LS	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	41
							LS				LS	503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	41

GENERAL SUMMARY

GRE - 235 - 10.75 / 11.10

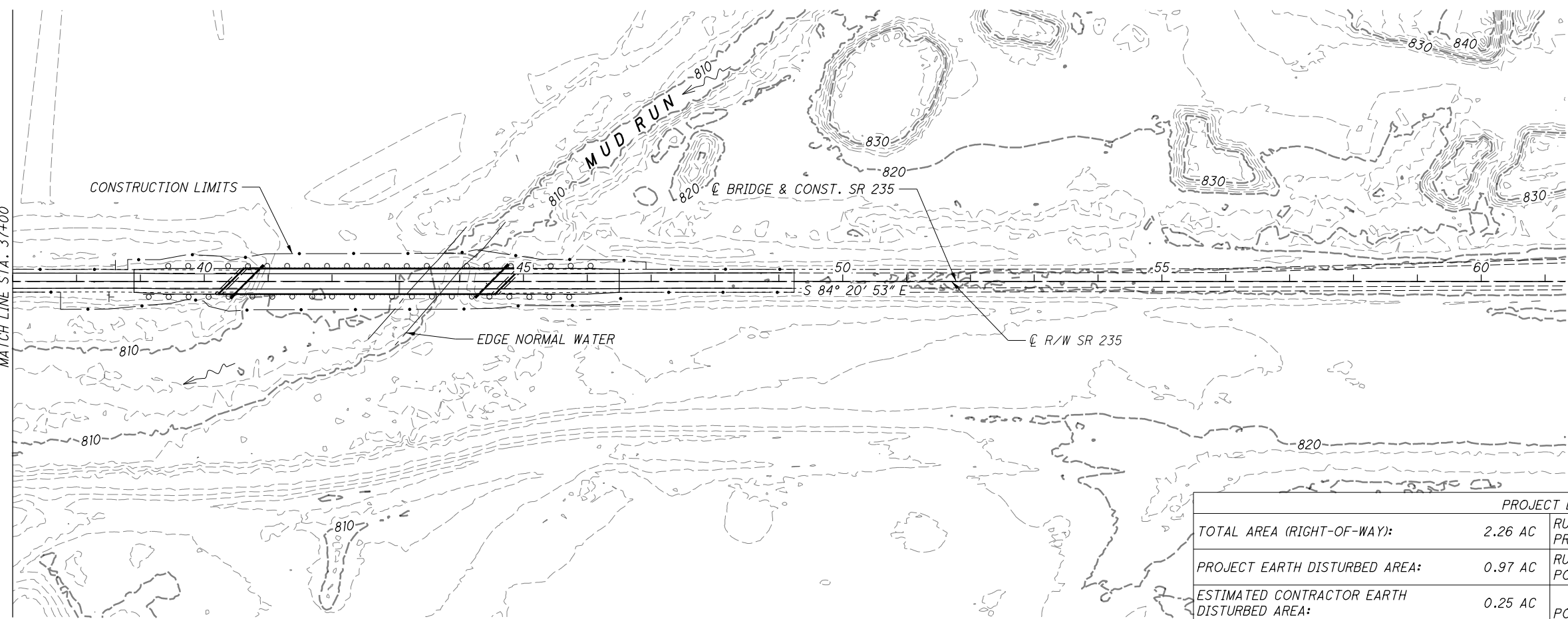
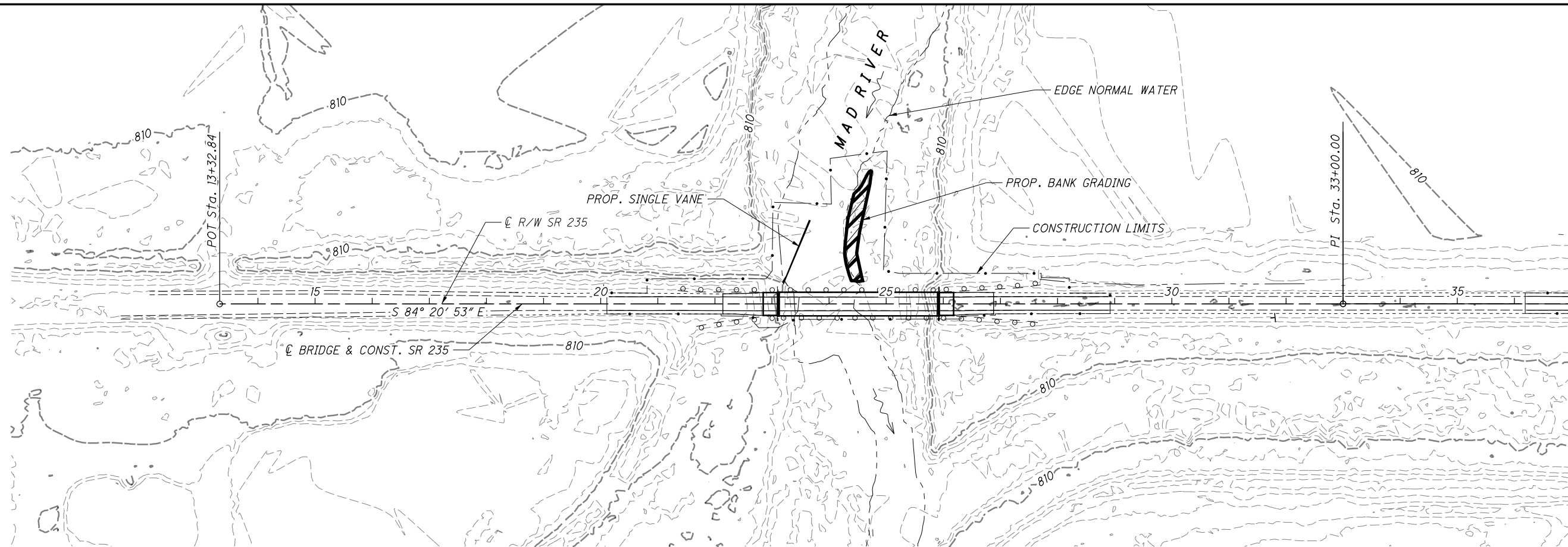
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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	9	16	17	18	35	38	43	73	01/NHS/BR							
									154,711		154,711	509	10000	154,711	LB	EPOXY COATED REINFORCING STEEL		
									293		293	510	10000	293	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		
									2		2	511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	51, 54	
									545		545	511	53014	545	CY	CLASS QC3 CONCRETE, MISC.: WITH QA/QC SUPERSTRUCTURE, AS PER PLAN	42	
									29		29	511	53014	29	CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE		
									84		84	512	10101	84	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	41	
									6		6	512	33000	6	SY	TYPE 2 WATERPROOFING		
									10		10	515	12071	10	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 54'-5 3/8")	41, 61	
									25		25	515	12071	25	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 52'-5 1/4")	41, 61	
									28		28	515	20001	28	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN	62, 70	
									114		114	516	10010	114	FT	ARMORLESS PREFORMED JOINT SEAL		
									114		114	516	13900	114	SF	2" PREFORMED EXPANSION JOINT FILLER		
									403		403	516	25000	403	SF	NYLON REINFORCED NEOPRENE SHEETING		
									120		120	516	43300	120	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (1.924"x8"x16")		
									10		10	516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (3.074"x8"x28")	58	
									775		775	517	70000	775	FT	RAILING (TWIN STEEL TUBE)		
									34		34	518	21200	34	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
									767		767	SPECIAL	51822300	767	FT	STEEL DRIP STRIP		
									73		73	519	11101	73	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	41	
									223		223	526	25000	223	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")		
									114		114	526	90030	114	FT	TYPE C INSTALLATION		
									2,011		2,011	845	60000	2,011	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
									35		35	845	61000	35	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		
									2,011		2,011	845	62000	2,011	SF	FIELD METALLIZING OF EXISTING STRUCTURAL STEEL		
																	STRUCTURE 20 FOOT SPAN AND UNDER (GRE-235-11.10)	
									LS		LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	75	
									1,513		1,513	202	23500	1,513	SY	WEARING COURSE REMOVED		
									500		500	256	10200	500	SF	BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT, TYPE C		
									61		61	441	50000	61	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22		
									682		682	509	10000	682	LB	EPOXY COATED REINFORCING STEEL		
									1,000		1,000	509	20001	1,000	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	72	
									6		6	511	34445	6	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN	72	
									10		10	511	50210	10	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE		
									LS		LS	513	10001	LS		STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	72	
									19,145		19,145	514	00050	19,145	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
									19,145		19,145	514	00056	19,145	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		
									19,357		19,357	514	00060	19,357	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
									19,357		19,357	514	00067	19,357	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	72	
									35		35	514	00504	35	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		
									20		20	514	10000	20	EACH	FINAL INSPECTION REPAIR		
									83		83	516	11211	83	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	78	
									14		14	516	44201	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(1.924"x12"x12")	77	
									LS		LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	72	
									575		575	517	75600	575	FT	DEEP BEAM BRIDGE RETROFIT RAILING		
									6		6	SPECIAL	51822300	6	FT	STEEL DRIP STRIP		
																	MAINTENANCE OF TRAFFIC	
			772								772	614	11630	772	FT	INCREASED BARRIER DELINEATION		
					8						8	614	12336	8	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		
			5								5	614	13000	5	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
			64								64	614	13310	64	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL		
			46								46	614	13318	46	EACH	BARRIER REFLECTOR, TYPE 5, TWO-WAY		
			110								110	614	13360	110	EACH	OBJECT MARKER, TWO WAY		
					15						15	614	18601	15	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	9	
			0.42			0.42					0.84	614	21100	0.84	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT		
			1.57			1.57					3.14	614	22110	3.14	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT		
			50			50					100	614	26200	100	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT		
			LS								LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC		
						2,177					2,177	615	25000	2,177	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B		
			55								55	616	10000	55	MGAL	WATER		
						1,860					1,860	622	41100	1,860	FT	PORTABLE BARRIER, UNANCHORED		
						1,320					1,320	622	41110	1,320	FT	PORTABLE BARRIER, ANCHORED		
																	INCIDENTALS	
											LS	103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND		
											LS	614	11000	LS		MAINTAINING TRAFFIC		
											LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
											LS	624	10000	LS		MOBILIZATION		

GENERAL SUMMARY


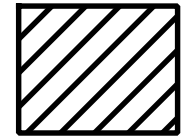
GRE - 235 - 10.75 / 11.10

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USGS MAP: FAIRBORN QUADRANGLE
 FAIRBORN, OHIO
 LONGITUDE: -84°02'49"*
 LATITUDE: 39°50'34"*
 *LONGITUDE AND LATITUDE TO
 APPROX. CENTER OF PROJECT

LEGEND

-  PROP. SINGLE VANE
-  PROP. BANK GRADING

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY):	2.26 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.80
PROJECT EARTH DISTURBED AREA:	0.97 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.8
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 AC	POST CONSTRUCTION BMP:	N/A
NOTICE OF INTENT DISTURBED AREA:	4.9 AC	IMMEDIATE RECEIVING WATERS:	MUD RUN
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	1.09 AC	SUBSEQUENT RECEIVING WATERS:	MAD RIVER
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE:	1.11 AC		

THIS 0.21 MILE PROJECT CONSISTS OF THE REHABILITATION OF BRIDGE GRE-235-1075 BY ZONE PAINTING AND BEARING REPLACEMENT. THIS PROJECT ALSO REHABILITATES GRE-235-1110 BY REPLACING SUPERSTRUCTURE, WITH MINIMUM ROADWAY APPROACH WORK.

CALCULATED
 MAH
 CHECKED
 DRJ



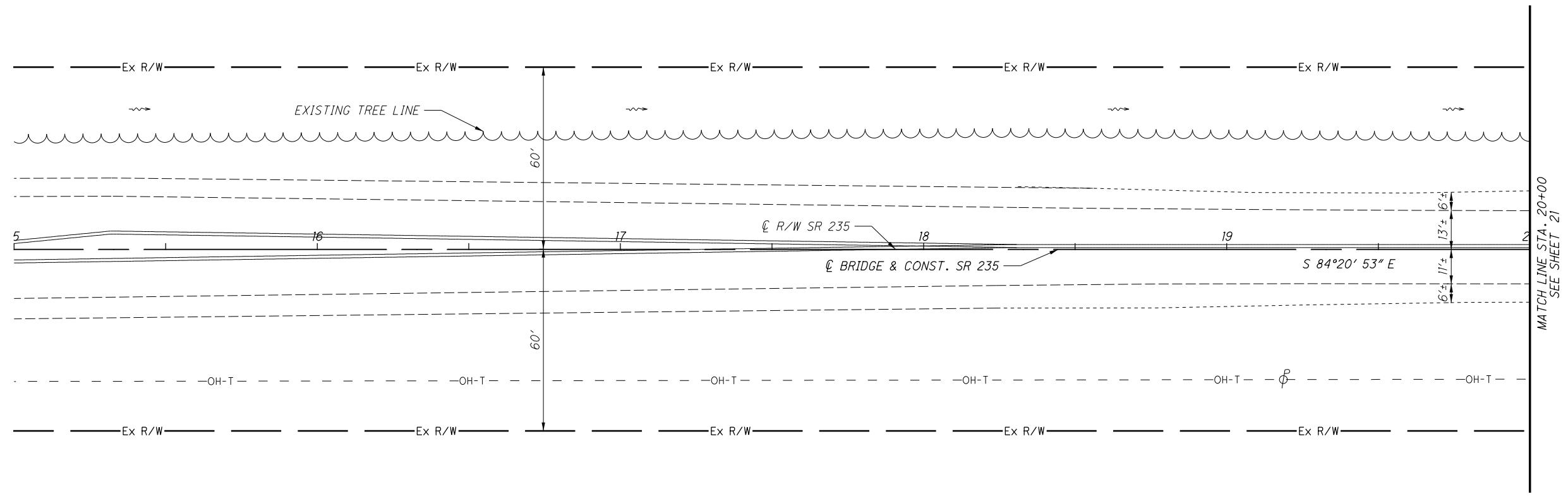

HORIZONTAL SCALE IN FEET

PROJECT SITE PLAN

GRE - 235 - 10.75 / 11.10

NOTES:

1. SEE SHEET 2 FOR ϕ DATA AND SURVEY CONTROL POINTS.



CALCULATED
MAH
CHECKED
DRJ

**PLAN AND PROFILE
STA. 15+00.00 TO STA. 20+00**

GRE - 235 - 10.75 / 11.10

20
79

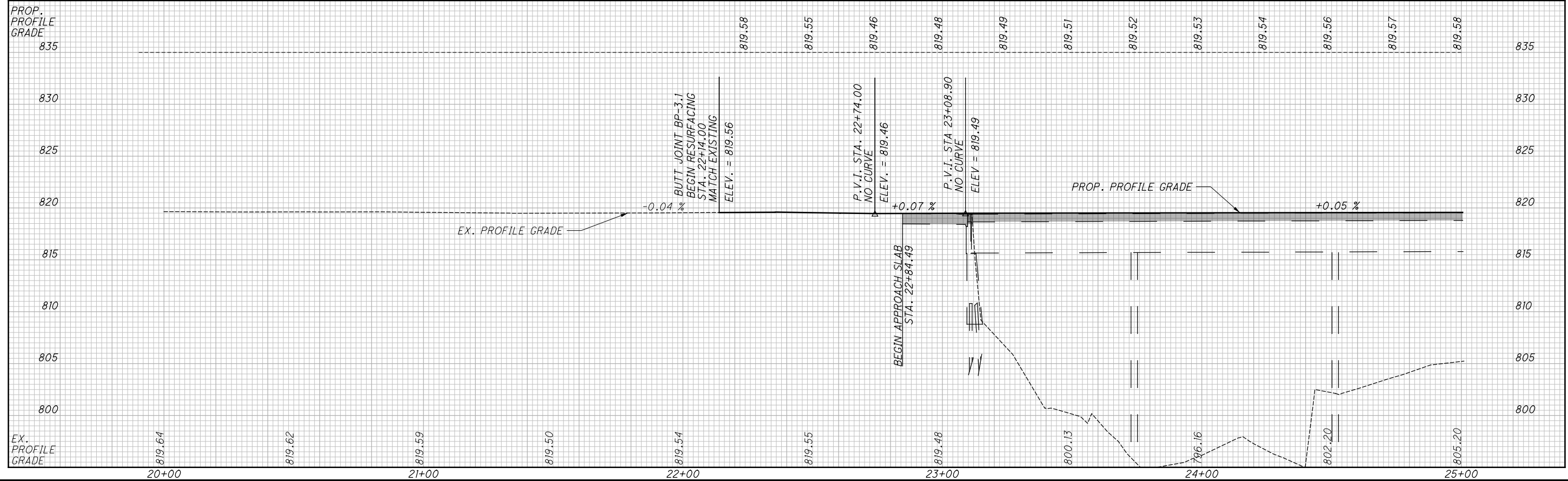
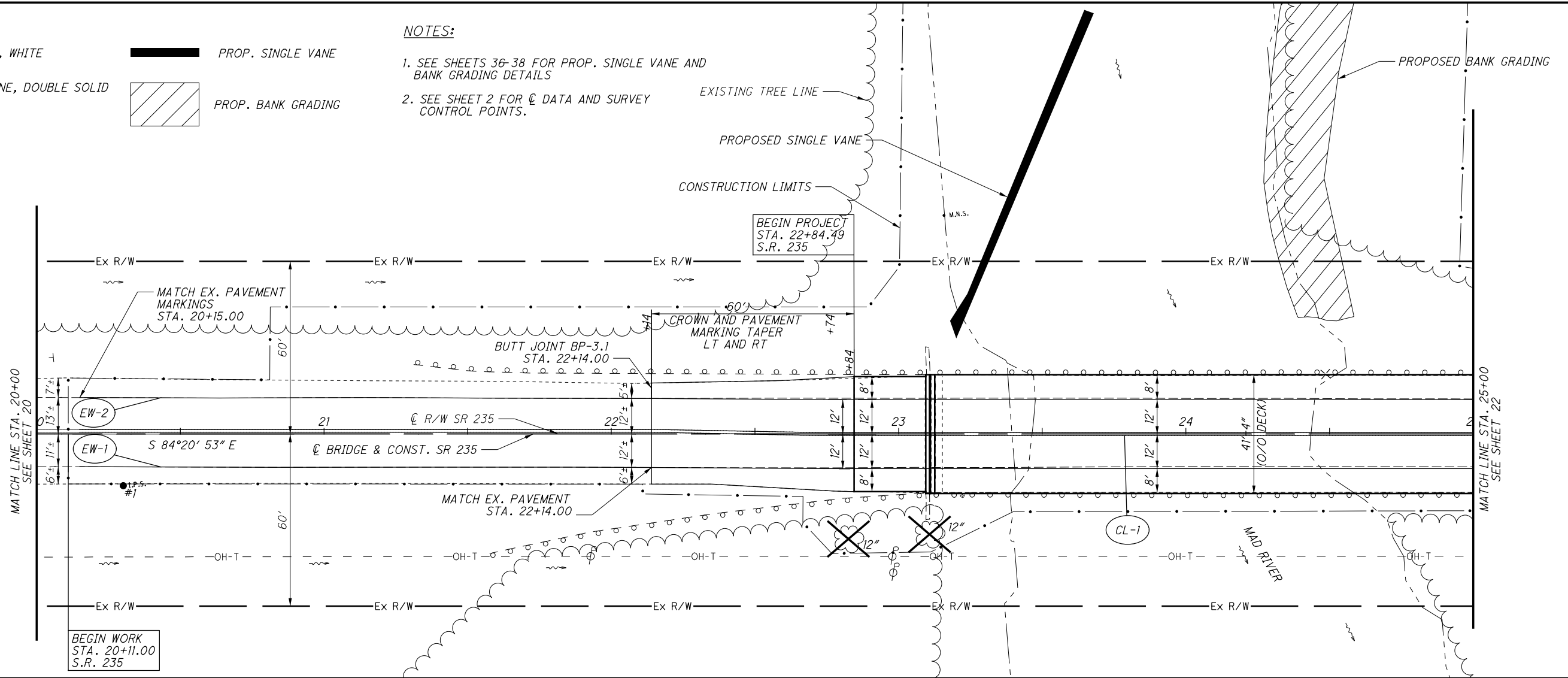
G:\Project\TOH00117.PE\01\Drawing\00826\Design\Roadway\Sheets\00826.GPO0.dgn 10/12/2020 1:29:37 PM MHebebrand

LEGEND

- EW-# EDGE LINE, WHITE
- CL-# CENTER LINE, DOUBLE SOLID
- R-# REMOVAL
- PROP. SINGLE VANE
- PROP. BANK GRADING

NOTES:

1. SEE SHEETS 36-38 FOR PROP. SINGLE VANE AND BANK GRADING DETAILS
2. SEE SHEET 2 FOR ϕ DATA AND SURVEY CONTROL POINTS.



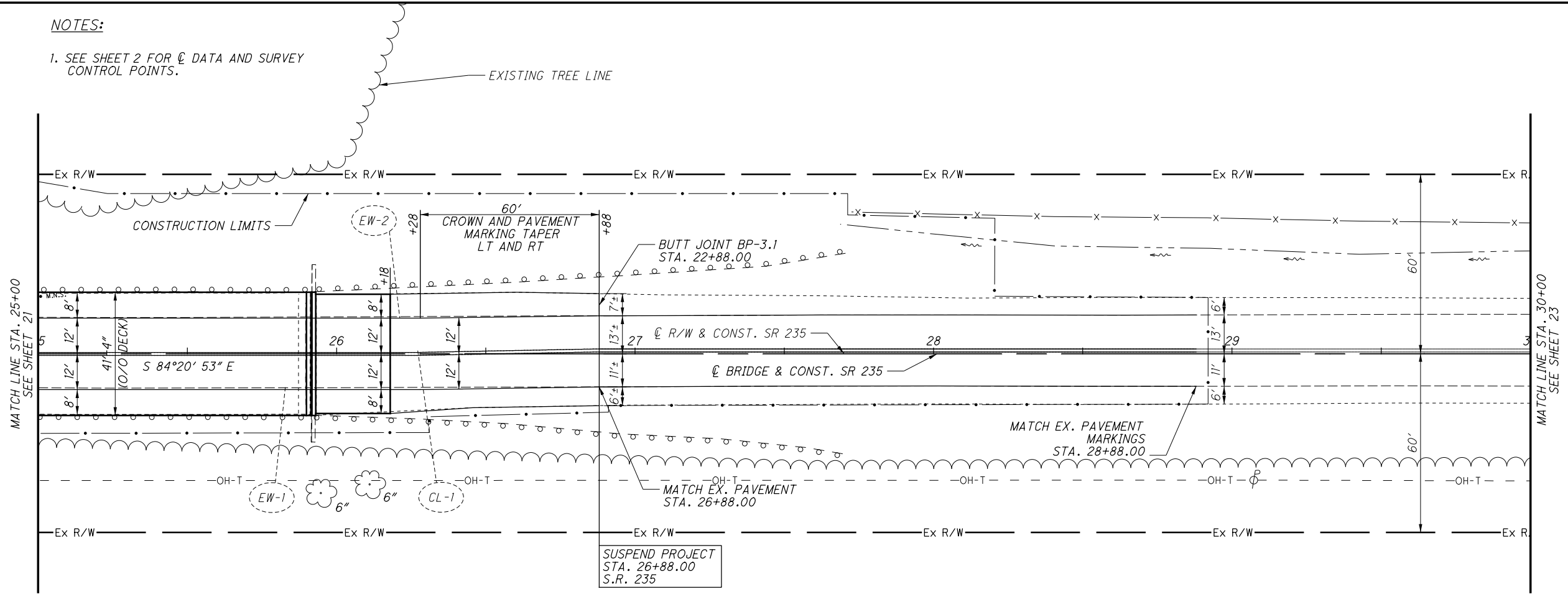
CALCULATED
MAH
CHECKED
DRJ

**PLAN AND PROFILE
STA. 20+00 TO 25+00**

GRE - 235 - 10.75 / 11.10

NOTES:

1. SEE SHEET 2 FOR ϕ DATA AND SURVEY CONTROL POINTS.



LEGEND

- EDGE LINE, WHITE
- CENTER LINE, DOUBLE SOLID



CALCULATED
MAH
CHECKED
DRJ

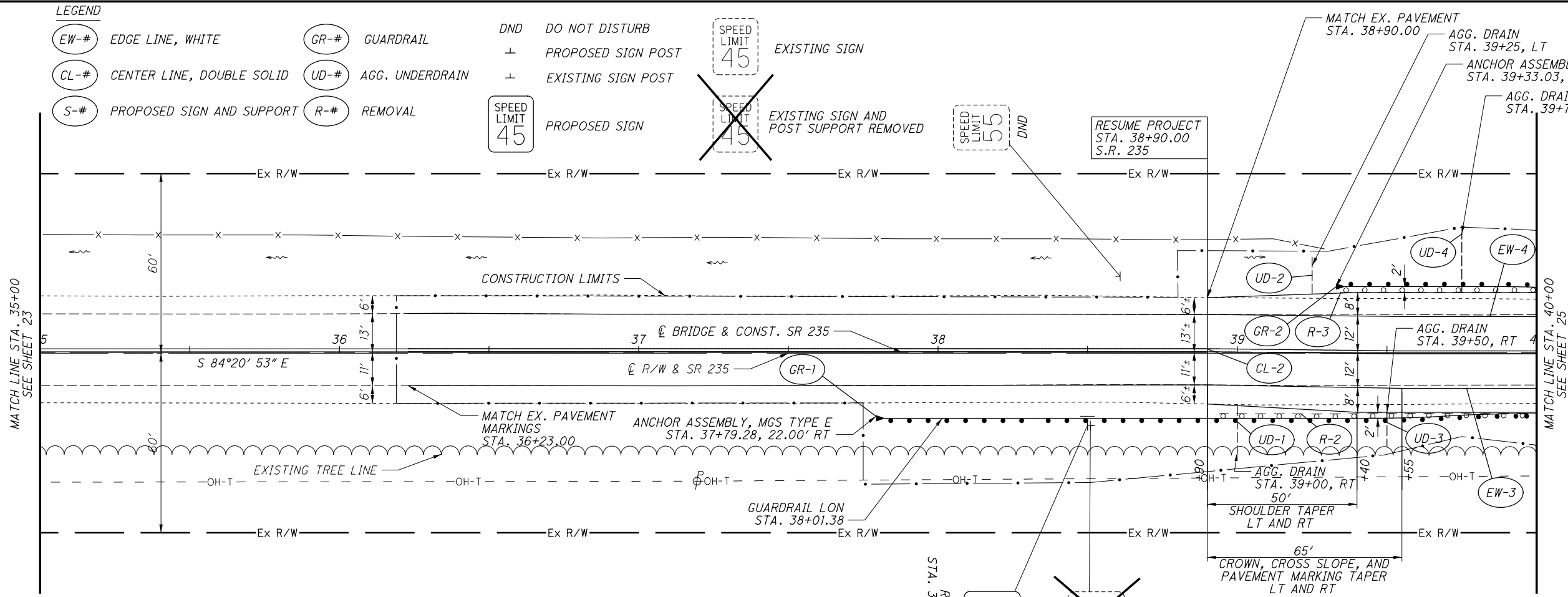
**PLAN AND PROFILE
STA. 25+00 TO STA. 30+00**

GRE - 235 - 10.75 / 11.10

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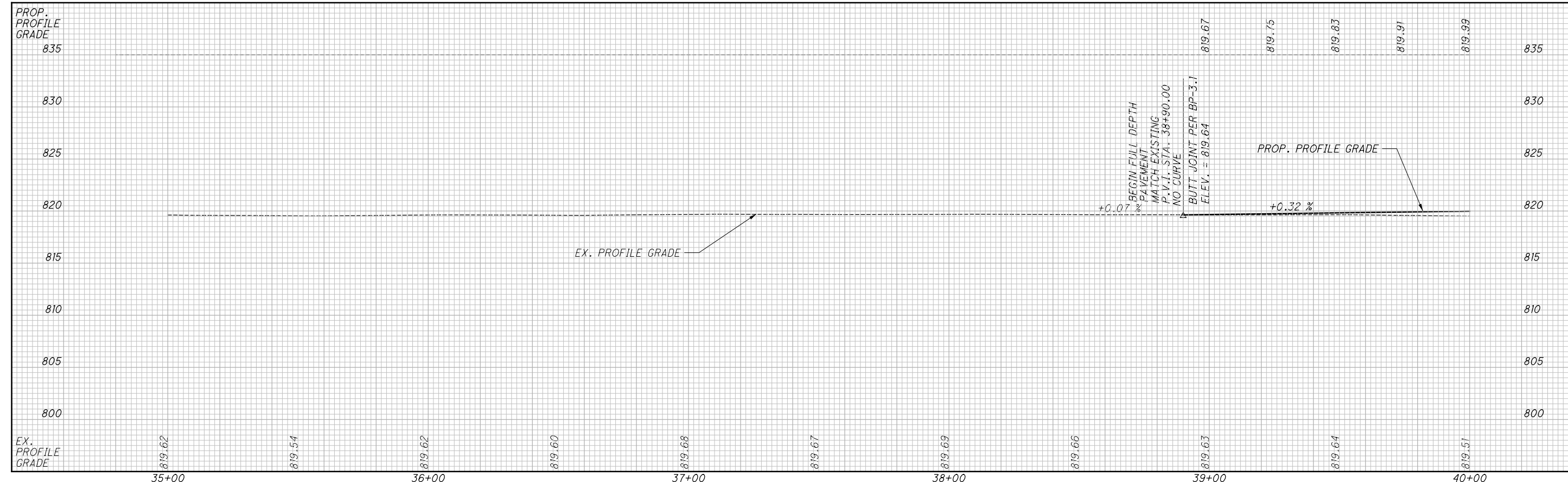
LEGEND

- EW-# EDGE LINE, WHITE
- CL-# CENTER LINE, DOUBLE SOLID
- S-# PROPOSED SIGN AND SUPPORT
- GR-# GUARDRAIL
- UD-# AGG. UNDERDRAIN
- R-# REMOVAL
- DND DO NOT DISTURB
- ± PROPOSED SIGN POST
- ± EXISTING SIGN POST
- SPEED LIMIT 45 PROPOSED SIGN
- EXISTING SIGN
- EXISTING SIGN AND POST SUPPORT REMOVED
- SPEED LIMIT 55 DND



NOTES:

1. SEE SHEET 2 FOR \hat{C} DATA AND SURVEY CONTROL POINTS.



CALCULATED MAH CHECKED DRJ

**PLAN AND PROFILE
STA. 35.00 TO STA. 40.00**

GRE - 235 - 10.75 / 11.10

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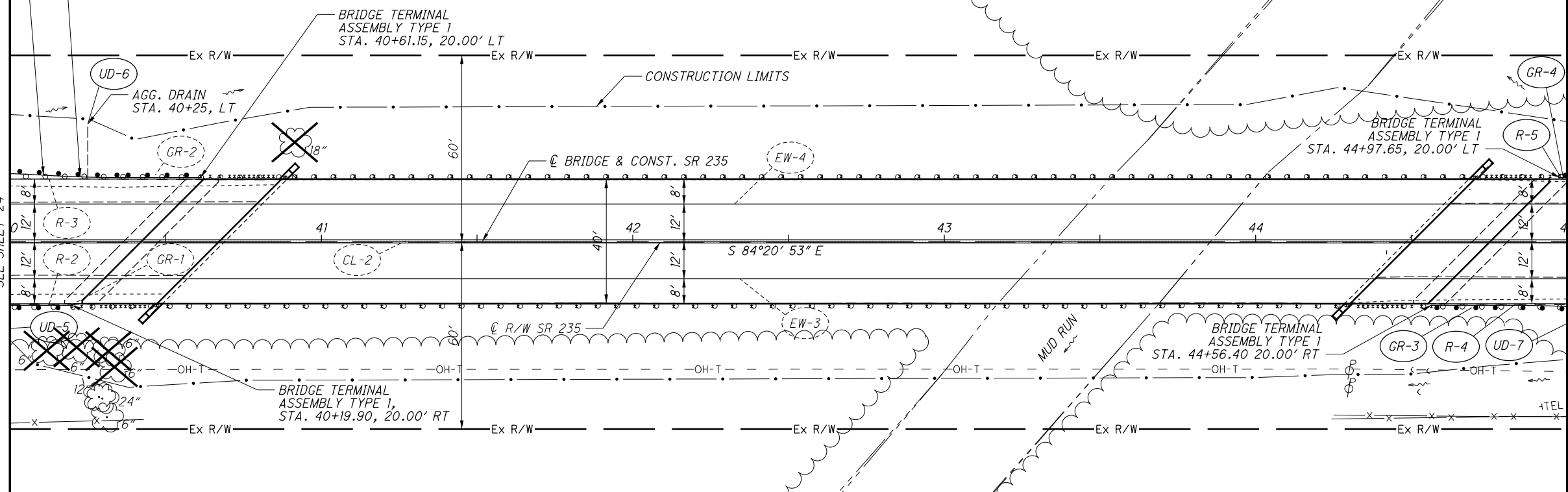
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GUARDRAIL LON
STA. 40+22.54
GUARDRAIL
OFFSET TRANSITION
PER MGS-6.1 (TYP.)

NOTES:

1. SEE SHEET 2 FOR ϕ DATA AND SURVEY
CONTROL POINTS.

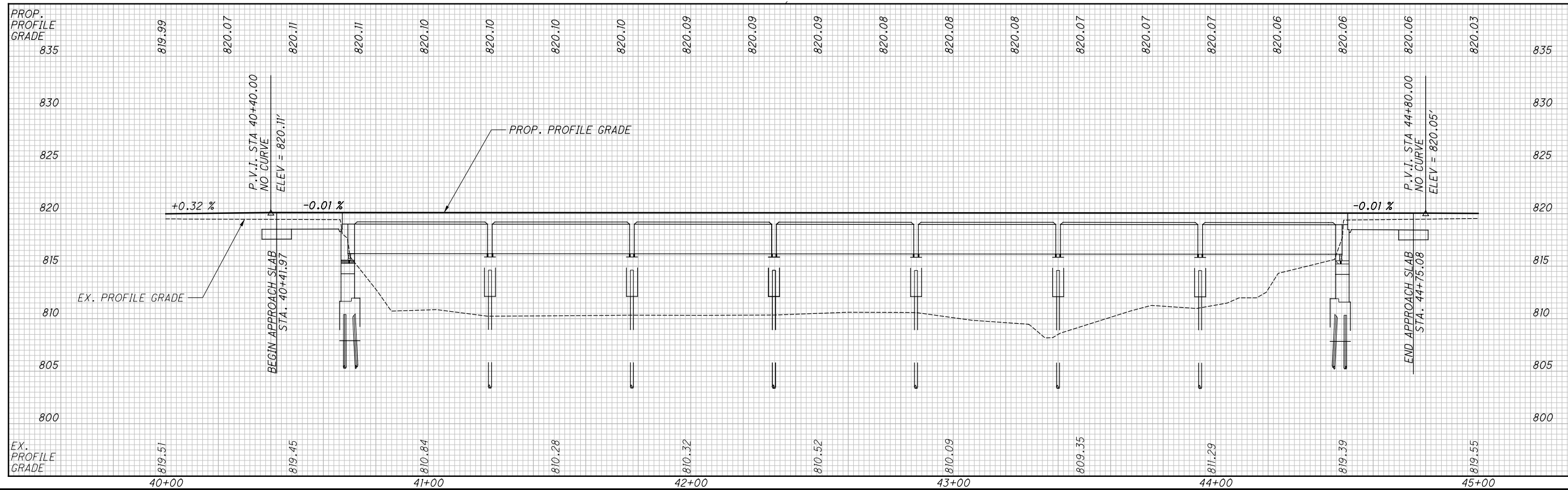
MATCH LINE STA. 40+00
SEE SHEET 24



MATCH LINE STA. 45+00
SEE SHEET 26

LEGEND

- EW-# EDGE LINE, WHITE
- GR-# GUARDRAIL
- R-# REMOVAL
- CL-# CENTER LINE, DOUBLE SOLID
- UD-# AGG. UNDERDRAIN

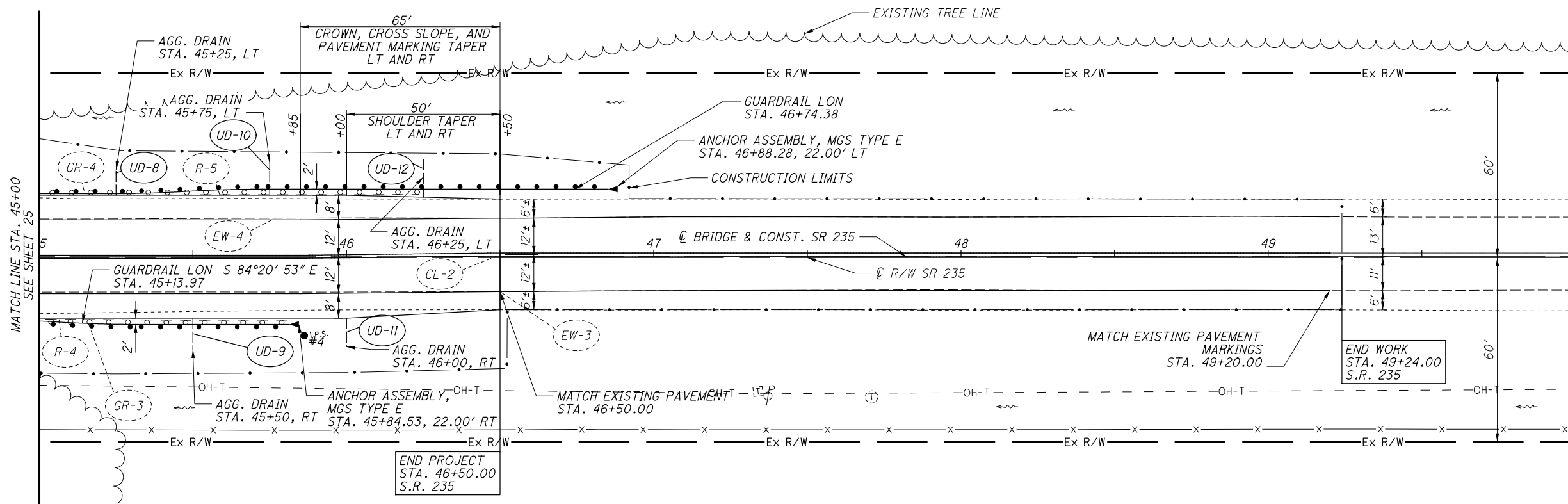


CALCULATED
MAH
CHECKED
DRJ

**PLAN AND PROFILE
STA. 40+00 TO STA. 45+00**

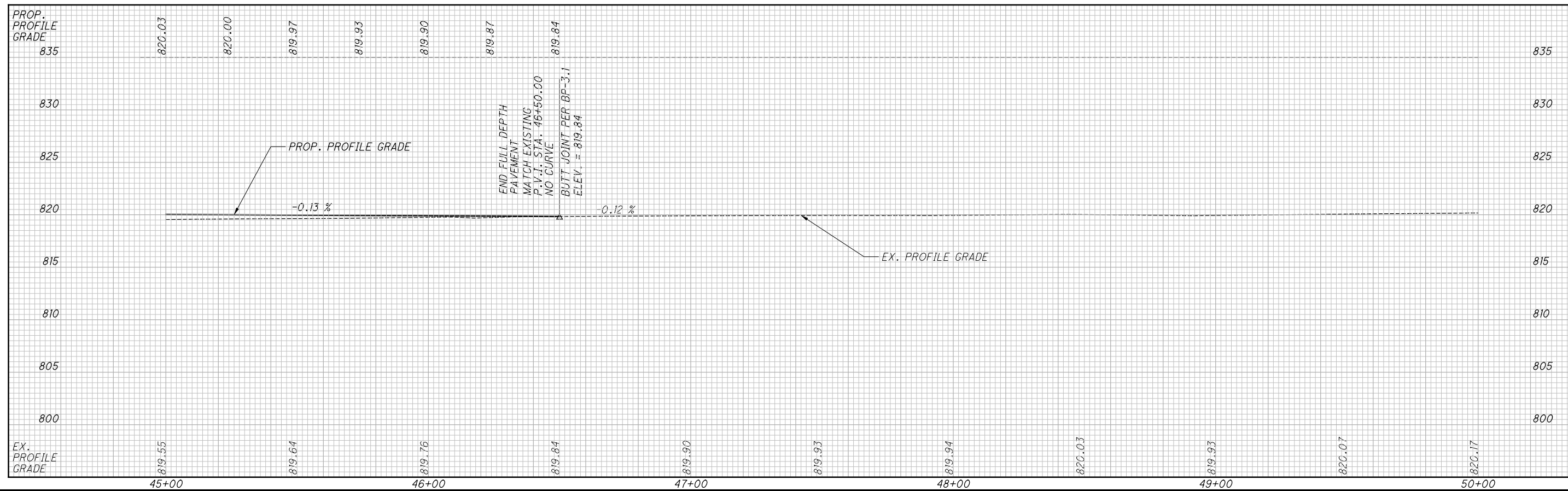
NOTES:

1. SEE SHEET 2 FOR ϕ DATA AND SURVEY CONTROL POINTS.



LEGEND

- EW-# EDGE LINE, WHITE
- GR-# GUARDRAIL
- R-# REMOVAL
- CL-# CENTER LINE, DOUBLE SOLID
- UD-# AGG. UNDERDRAIN

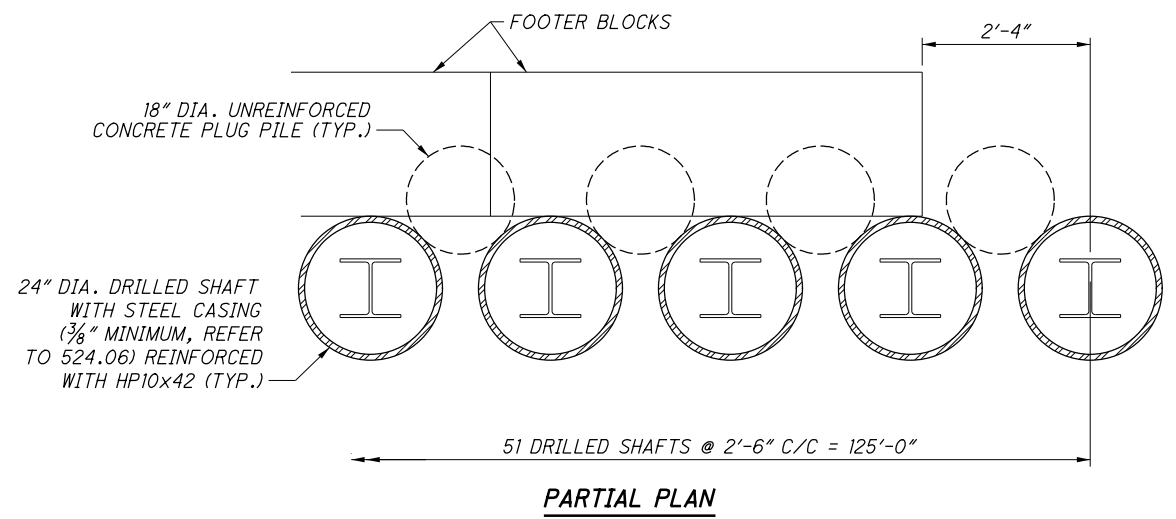


CALCULATED
MAH
CHECKED
DRJ

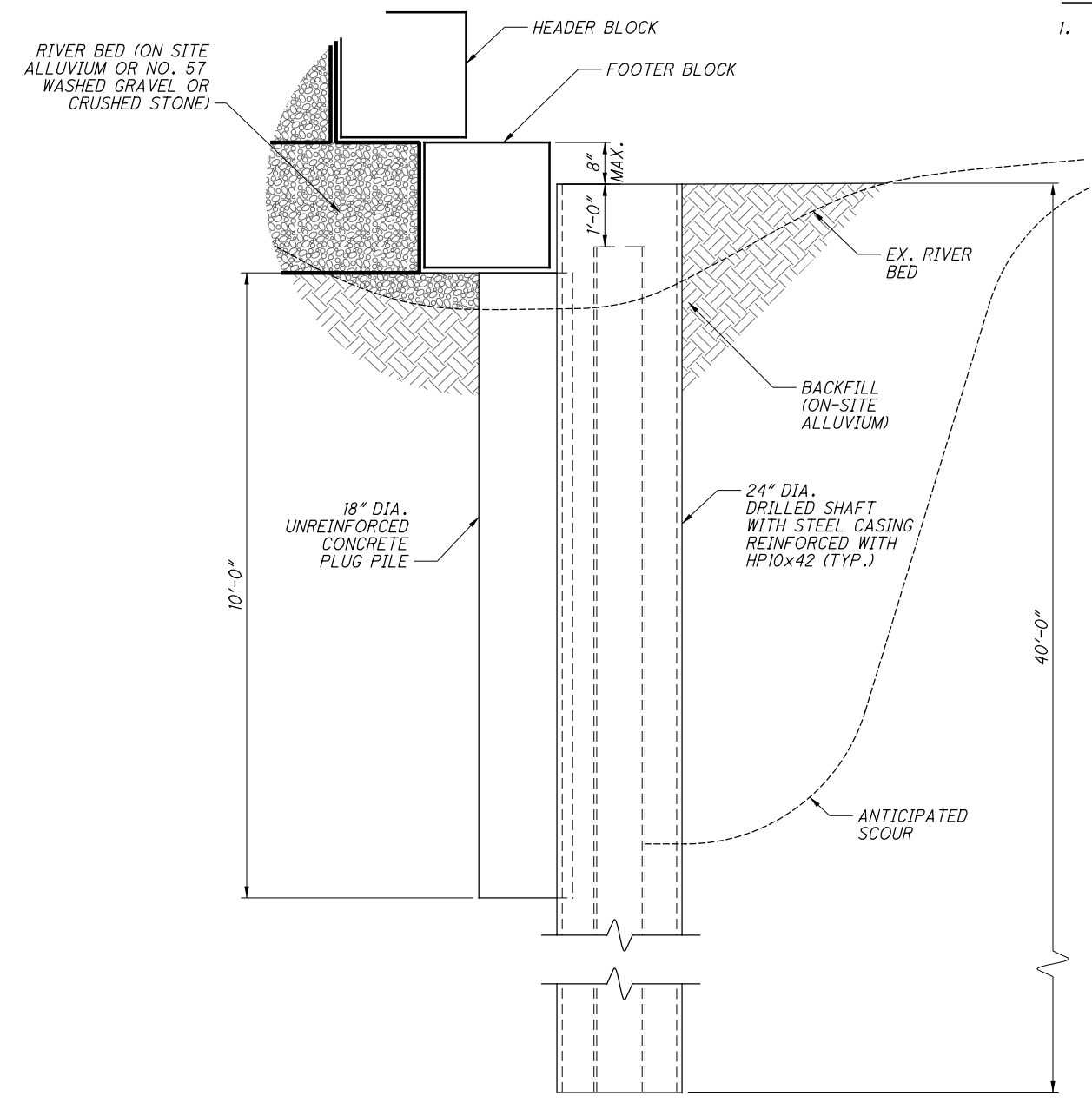
**PLAN AND PROFILE
STA. 45+00 TO END**

GRE - 235 - 10.75 / 11.10

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PARTIAL PLAN



**SECTION
PERMANENT SHORING DETAILS**

NOTE

1. STEEL CASING AND HP10x42, SHALL BE INCLUDED WITH ITEM 524 - DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN FOR PAYMENT.

DRILLED SHAFT NUMBER	TOP OF DRILLED SHAFT ELEVATION	CONCRETE PLUG PILE NUMBER	TOP OF PLUG PILE ELEVATION
1	803.50	1	801.92
2	803.33	2	801.75
3	803.17	3	801.58
4	803.00	4	801.42
5	802.83	5	801.25
6	802.67	6	801.08
7	802.50	7	800.92
8	802.33	8	800.75
9	802.17	9	800.58
10	802.00	10	800.42
11	801.83	11	800.25
12	801.67	12	800.08
13	801.50	13	799.92
14	801.33	14	799.75
15	801.17	15	799.58
16	801.00	16	799.42
17	800.83	17	799.25
18	800.67	18	799.08
19	800.50	19	798.92
20	800.33	20	798.75
21	800.17	21	798.58
22	800.00	22	798.42
23	799.83	23	798.25
24	799.67	24	798.08
25	799.50	25	797.92
26	799.33	26	797.75
27	799.17	27	797.58
28	799.00	28	797.42
29	798.83	29	797.25
30	798.67	30	797.08
31	798.50	31	796.92
32	798.33	32	796.75
33	798.17	33	796.58
34	798.00	34	796.42
35	797.83	35	796.25
36	797.67	36	796.08
37	797.50	37	795.92
38	797.33	38	795.75
39	797.17	39	795.58
40	797.00	40	795.42
41	796.83	41	795.25
42	796.67	42	795.08
43	796.50	43	794.92
44	796.33	44	794.75
45	796.17	45	794.58
46	796.00	46	794.42
47	795.83	47	794.25
48	795.67	48	794.08
49	795.50	49	793.92
50	795.33	50	793.75
51	795.17		

VANE ARM AND EAST BANK GRADING					CALC. BY: MPB	DATE: 6/19/20	AS PER PLAN
					CHK'D BY: AZF	DATE: 6/20/20	
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	STR. SHT. NO.		
201	11000	1	LS	CLEARING AND GRUBBING			
203	10000	546	CY	EXCAVATION			
203	20001	274	CY	EMBANKMENT, AS PER PLAN	2		
SPECIAL	203E57160	76	CY	SPECIAL - FOUNDATION EMBANKMENT			
503	11100	1	LS	COFFERDAMS AND EXCAVATION BRACING			
503	21300	1	LS	UNCLASSIFIED EXCAVATION			
511	81300	68	EACH	CONCRETE, MISC.: VANE ARM BLOCKS			
524	94503	2,040	FT	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN	3		
524	95000	500	FT	DRILLED SHAFTS, MISC.: 18" DIAMETER PLUG PILE			
659	10000	877	SY	SEEDING AND MULCHING			
670	00510	877	SY	SLOPE EROSION PROTECTION MAT, TYPE A			
SPECIAL	690E12010	325	SY	SPECIAL - GEOTEXTILE FABRIC			

DESIGN AGENCY
ARCADIS
 ARCADIS U.S., Inc.
 222 South Main Street, Suite 200 Akron, Ohio 44308
 Tel: 330-434-1995 Fax: 330-374-1995 www.arcadis.com

DESIGNED BY: RJB/JDC
 CHECKED BY: RBB

DRAWN BY: CAF
 REVISED

REVIEWED BY: JDH/MRD
 DATE: 3/06/20
 STRUCTURE FILE NUMBER: 2902222

VANE ARM - STRUCTURE DETAILS
 BRIDGE NO. GRE-235-1110 (STATE ROUTE 235)
 OVER MAD RIVER

GRE-235-10.75 / 11.10
 PID No. 100826

3 / 3

38
79

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ESTIMATED QUANTITIES					CALC. BY:	MPB	DATE:	3/02/20	AS PER PLAN
					CHK'D BY:	RBB	DATE:	3/05/20	
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GENERAL	STR. SHT. NO.
202	11203		LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3, 21
202	22900	224	SY	APPROACH SLAB REMOVED				224	
202	23500	1,927	SY	WEARING COURSE REMOVED	1703			224	
503	11101		LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					3
503	21301		LS	UNCLASSIFIED EXCAVATION, AS PER PLAN					3
509	10000	154,711	LB	EPOXY COATED REINFORCING STEEL	137540	4445	12726		
510	10000	293	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		293			
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN		2			13, 16
511	53014	545	CY	CLASS QC3 CONCRETE WITH QC/QA SUPERSTRUCTURE, AS PER PLAN	545				4
511	53014	29	CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE		29			
512	10101	84	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN		84			3
512	33000	6	SY	TYPE 2 WATERPROOFING		6			
515	12071	10	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 54'-5 3/8")	10				3, 23
515	12071	25	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 52'-5 1/4")	25				3, 23
515	20001	28	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN	28				24, 32
516	10010	114	FT	ARMORLESS PREFORMED JOINT SEAL				114	
516	13900	114	SF	2" PREFORMED EXPANSION JOINT FILLER	114				
516	25000	403	SF	NYLON REINFORCED NEOPRENE SHEETING	403				
516	43300	120	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (1.924"x8"x16")	120				
516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (3.074"x8"x28")	10				20
517	70000	775	FT	RAILING (TWIN STEEL TUBE)	775				
518	21200	34	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		34			
518	22300	767	FT	SPECIAL - STEEL DRIP STRIP	767				
519	11101	73	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		34	14	25	3
526	25000	223	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				223	
526	90030	114	FT	TYPE C INSTALLATION				114	
845	60000	2,011	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			2011		
845	61000	35	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			35		
845	62000	2,011	SF	FIELD METALLIZING OF EXISTING STRUCTURAL STEEL			2011		

DESIGN AGENCY
ARCADIS
 ARCADIS U.S., Inc.
 222 South Main Street, Suite 200 Akron, Ohio 44308
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REVIEWED DATE 3/06/20
 FUG STRUCTURE FILE NUMBER 2902184

DRAWN MPB REVISED
 DESIGNED RJB CHECKED CMD

ESTIMATED QUANTITIES
 BRIDGE NO. GRE-235-1075 (STATE ROUTE 235)
 OVER MUD RUN

GRE-235-10.75 / 11.10
 PID No. 100826

5 / 32

43
79