

**LOCATION MAP  
DISTRICT 6**  
 LATITUDE: 83° 02' 58" LONGITUDE: 40° 17' 52"



# STATE OF OHIO DEPARTMENT OF TRANSPORTATION D 06 - G R - F Y 25

VARIOUS GUARDRAIL REPAIR AT VARIOUS LOCATIONS WITHIN :  
 DELAWARE, FAYETTE, MADISON, MARION, MORROW, PICKAWAY, AND UNION COUNTIES.

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**FEDERAL PROJECT NUMBER**

NON FEDERAL

**RAILROAD INVOLVEMENT**

NONE

**2023 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE OF TRAFFIC AND SAFETY WILL BE AS SET FORTH ON PLANS AND ESTIMATES.

**LIMITED ACCESS**

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 0.0 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.0 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES (NOI NOT REQUIRED)

*Jack Marchbanks*  
 Jack Marchbanks, PhD  
 Director, Department of Transportation

*Anthony C. Turowski*  
 Anthony C. Turowski, P.E.  
 District 06 Deputy Director

**UNDERGROUND UTILITIES**  
 Contact Two Working Days  
 Before You Dig

**OHIO811.org**  
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
 (Non members must be called directly)



**ENGINEER'S SEAL**

STANDARD CONSTRUCTION DRAWINGS							
MGS-1.1	07/16/21	MT-95.30	07/19/19	TC-41.20	10/18/13	<b>SUPPLEMENTAL SPECIFICATIONS</b>	
MGS-2.1	01/19/18	MT-95.31	07/19/19	TC-41.40	10/18/13	800	01/19/24
MGS-3.1	01/19/18	MT-97.10	04/19/19	TC-42.20	10/18/13	821	04/20/12
MGS-3.2	01/18/13	MT-98.11	01/17/20	TC-52.10	10/18/13	832	07/21/23
MGS-4.1	01/20/17	MT-98.20	04/19/19	TC-52.20	01/15/21		
MGS-4.2	07/19/13	MT-98.22	01/17/20	TC-61.10	04/21/23		
MGS-4.3	01/18/13	MT-98.28	01/17/20				
MGS-5.2	07/15/16	MT-101.90	07/17/20				
MGS-5.3	07/15/16	MT-105.10	01/17/20				
RM-4.3	01/21/22	DBR-2-73	07/19/02				
RM-4.4	07/21/23	DBR-3-11	07/15/11				
RM-4.5	07/21/17						
RM-4.6	07/19/13						

DESIGN AGENCY	
DESIGNER	DKR
REVIEWER	
PROJECT ID	119494
SHEET TOTAL	P:1   21

PID#119494 D06-GR-FY25

**GENERAL:**

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

**GENERAL DESCRIPTION:**

THIS IS A DISTRICT WIDE GUARDRAIL REPAIR PROJECT. THE INTENT OF THIS PLAN IS TO REPAIR DAMAGED GUARDRAIL AND ANCHOR ASSEMBLIES THROUGHOUT DISTRICT 6 ON ODOT MAINTAINED ROUTES. WHEN GUARDRAIL IS TO BE REPAIRED, THE HIGHWAY MANAGEMENT DEPARTMENT SHALL NOTIFY THE CONTRACTOR OF THE LOCATION BY PHONE AND SHALL FAX THE WORK ORDER. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DEPARTMENT (740-833-8095) 24 HOURS BEFORE BEGINNING THE REPAIR WORK.

**ITEM 624 - MOBILIZATION, AS PER PLAN, EMERGENCY REPAIR:**

THE INTENT OF THIS ITEM IS TO COMPENSATE THE CONTRACTOR FOR HIS COST TO QUICKLY RESPOND TO AN "EMERGENCY" REPAIR WORK ORDER REQUEST.

THE WORK ORDERS RECEIVED BY THE CONTRACTOR WILL ALL BE LABELED "EMERGENCY" OR "NON-EMERGENCY". IF THE WORK ORDER IS LABELED "EMERGENCY", THE CONTRACTOR WILL BE EXPECTED TO COMPLETE THE WORK ORDER WITHIN 72 HOURS (INCLUDING WEEKENDS) OF NOTIFICATION.

THIS MOBILIZATION WILL APPLY TO EACH LOCATION OF "EMERGENCY" WORK. A LOCATION WILL BE DEFINED AS ANY SET OF "EMERGENCY" WORK ORDERS THAT ARE GIVEN TO THE CONTRACTOR AT A SPECIFIC TIME THAT ARE WITHIN A ONE MILE RADIUS.

IN THE EVENT THAT THE CONTRACTOR HAS NOT COMPLETED THE "EMERGENCY" WORK ORDER WITHIN THE 72 HOURS (INCLUDING WEEKEND, DAYS, EXCLUDING HOLIDAYS) HE SHALL BE ASSESSED A DISINCENTIVE OF \$1,000 PER CALENDAR DAY THAT THE WORK ORDER IS NOT COMPLETED. EXCEPTIONS WILL BE GIVEN IF THERE IS WEATHER AS SPECIFIED IN 108.06 ON ANY OF THESE WORK ORDERS.

PAYMENT FOR THIS ITEM SHALL BE FOR EACH "EMERGENCY" REPAIR COMPLETED WITHIN THE 72 HOURS ALLOTTED. ALL MATERIAL, LABOR, EQUIPMENT, ETC. REQUIRED FOR THE REPAIR WILL BE PAID BY ITS RESPECTIVE PAY ITEM LISTED IN THIS PLAN. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM	DESCRIPTION	TOTAL	UNIT
624	MOBILIZATION, AS PER PLAN, EMERGENCY REPAIR	4	EACH

**ITEM 624 - MOBILIZATION, AS PER PLAN, PRIORITY REPAIR:**

THE INTENT OF THIS ITEM IS TO COMPENSATE THE CONTRACTOR FOR HIS COST TO RESPOND TO A "PRIORITY" REPAIR WORK ORDER REQUEST. PRIORITY REPAIR WORK ORDERS INVOLVE SPECIFIC GUARDRAIL WORK AT LOCATIONS OUTLINED IN THE PLAN. THIS SPECIFIED WORK CAN BE FOUND ON PLAN SHEETS P.17A - P.17J.

THE CONTRACTOR WILL BE EXPECTED TO COMPLETE THIS PRIORITY WORK WITHIN 4 WEEKS (INCLUDING WEEKENDS) OF NOTIFICATION BY THE PROJECT ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM	DESCRIPTION	TOTAL	UNIT
624	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR	7	EACH

**CONTINUOUS WORK PROVISION:**

IF THE WORK ORDER IS LABELED "NON-EMERGENCY", THE CONTRACTOR WILL BE EXPECTED TO COMPLETE THE WORK ORDER WITHIN 14 DAYS (INCLUDING WEEKEND DAYS BUT EXCLUDING HOLIDAYS AS NOTED ON SHEET 11/16) OF NOTIFICATION. IN THE EVENT THE CONTRACTOR HAS NOT COMPLETED THE "NON-EMERGENCY" WORK ORDER WITHIN THIS TIME FRAME, CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE OF \$1,000 (PER CMS 108.07) PER CALENDAR DAY THAT THE WORK ORDER IS NOT COMPLETED. THESE PROVISIONS WILL BE STRICTLY FOLLOWED IN THIS CONTRACT. EXCEPTIONS WILL BE GIVEN IF THERE IS WEATHER PROHIBITING WORK ON ANY OF THESE WORK ORDERS.

**UNDERGROUND UTILITIES:**

THE ODOT CONTRACTOR IS REQUIRED TO CONTACT OUPS A MINIMUM OF 48 HOURS EXCLUDING WEEKENDS AND HOLIDAYS TO PERMIT ALL UNDERGROUND UTILITIES AN OPPORTUNITY TO MARK THEIR LINES. IT IS ALSO THE ODOT CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL NON-MEMBERS OF OUPS DIRECTLY A MINIMUM OF 48 HOURS NOTICE EXCLUDING WEEKENDS AND HOLIDAYS TO PROVIDE THEM WITH THE SAME OPPORTUNITY.

IT IS ODOT'S EXPECTATION THAT ALL GUARD RAIL POSTS WILL BE INSTALLED IN THE SAME LOCATIONS AND THERE WILL BE NO DISRUPTION TO UNDERGROUND UTILITIES. IF THERE IS A UTILITY MARKING WITHIN THE TOLERANCE ZONE OF A UTILITY LOCATE FROM THE PROPOSED GUARDRAIL PLACEMENT IT IS THE CONTRACTORS RESPONSIBILITY TO DIRECTLY CONTACT THE IMPACTED UTILITY AND WORK WITH THEM TO FIND A SOLUTION THAT DOES NOT CHANGE THE GUARDRAIL PLACEMENT OR DAMAGE THE EXISTING UTILITY. NO UTILITY RELOCATION WILL BE REIMBURSED NOR WILL DELAY CLAIMS BE PERMISSIBLE BASED ON LACK OF COORDINATION BETWEEN THE ODOT CONTRACTOR AND THE IMPACTED UTILITY.

OHIO UTILITY PROTECTION SERVICE 1-800-362-2764  
 NON-MEMBERS MUST BE CALLED DIRECTLY

**TERM AND TERMINATION OF THE CONTRACTOR:**

IN ADDITION TO THE GENERAL PROVISIONS AS SPECIFIED IN SECTION 100 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, IT IS STIPULATED THAT THE CONTRACT SHALL LAST NO LONGER THAN THE SPECIFIED COMPLETION DATE. UPON WRITTEN NOTICE FROM THE DIRECTOR OF TRANSPORTATION TO THE CONTRACTOR, OF NOT LESS THAN 15 CALENDAR DAYS, THE DIRECTOR MAY TERMINATE THE CONTRACT AT ANYTIME.

DESIGN AGENCY



DESIGNER  
 DKR  
 REVIEWER

PROJECT ID  
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**CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE:**

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. EQUIPMENT SHALL HAVE AT LEAST ONE AMBER FLASHING LIGHT. WHEN PARKED ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE LOCATED EITHER A MINIMUM OF THIRTY FEET FROM THE EDGE OF PAVEMENT OR SIX FEET BEHIND GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT AN APPROVED CONTRACTOR'S STORAGE AREA.

**CONTINGENCY QUANTITIES:**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

**GUARDRAIL POST HOLES:**

ALL HOLES REMAINING AFTER REMOVAL OF GUARDRAIL POSTS SHALL BE FILLED WITH GRANULAR MATERIAL, EXCESS MATERIAL RESULTING FROM GUARDRAIL RECONSTRUCTION, OR EXCESS MATERIAL FROM BERM RESHAPING. FILL MATERIAL CONTAINING SOD SHALL NOT BE USED. ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER. MATERIAL PLACED IN HOLES SHALL BE THOROUGHLY COMPACTED AND LEVELED OFF AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE GUARDRAIL ITEM.

**GUARDRAIL REPLACEMENT:**

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

**REMOVAL ITEMS:**

GUARDRAIL, POSTS AND MISCELLANEOUS HARDWARE DESIGNATED FOR REMOVAL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE REMOVED ITEM. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR USE ONLY WHEN THE ENGINEER DESIGNATES THAT THE REMOVED GUARDRAIL IS TO BE STORED, OR THAT NEW RAIL IS NOT TO BE PUT BACK AT THE SAME LOCATION:

ITEM	DESCRIPTION	TOTAL	UNIT
202	GUARDRAIL REMOVED	1,175	FT

**ITEM 202 - BRIDGE RAILING REMOVED:**

THE CONTRACTOR SHALL REMOVE RAIL, AS DESIGNATED, IN GOOD ORDER. ANY DAMAGE TO BRIDGE FASCIA RESULTING FROM THE REMOVAL OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

ITEM	DESCRIPTION	TOTAL	UNIT
202	BRIDGE RAILING REMOVED	75	FT

**ITEM 202 - ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN:**

ALL EXISTING CONCRETE SHALL BE REMOVED IN ADDITION TO ALL GUARDRAIL PARTS. CONCRETE BECOMES PROPERTY OF THE CONTRACTOR. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION.

ITEM	DESCRIPTION	TOTAL	UNIT
202	ANCHOR ASSEMBLY REMOVED, TYPE A, APP	22	EACH

**ITEM 202 - REMOVAL MISC.:IMPACT ATTENUATOR:**

ALL GUARDRAIL PARTS FROM REMOVAL BECOMES PROPERTY OF THE CONTRACTOR. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION.

ITEM	DESCRIPTION	TOTAL	UNIT
202	REMOVAL MISC.:IMPACT ATTENUATOR	1	EACH

**ITEM 517 - RAILING, AS PER PLAN:**

THIS ITEM INCLUDES ALL LABOR, EQUIPMENT AND MATERIAL NECESSARY TO REMOVE AND REPLACE ANY AND ALL EXISTING DAMAGED COMPONENTS OF THE DEEP BEAM RAIL AND STEEL TUBULAR BACK UP IN ACCORDANCE WITH APPLICABLE STANDARD DRAWINGS. SHOP DRAWINGS AND FABRICATING APPROVAL IS NOT REQUIRED FOR REPLACING MATERIAL. POST LENGTH AND ANCHOR BOLT SPACING SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING TO INSURE A 2.25 FT. CLEARANCE FROM THE TOP OF RAIL TO SURFACE OF BRIDGE DECK. ADDITIONAL QUANTITIES HAVE BEEN PROVIDED TO BE USED WHERE DIRECTED. PAYMENT SHALL BE AT THE UNIT PRICE BID FOR:

ITEM	DESCRIPTION	TOTAL	UNIT
517	RAILING (DEEP BEAM W/ STEEL TUBE B/UP & TYPE 2 POST)	12.5	FT
517	RAILING (DEEP BEAM W/ STEEL TUBE B/UP & TYPE 2 POST), AS PER PLAN	12.5	FT
517	DEEP BEAM BRIDGE RETROFIT RAILING, APP	25	FT

**GUARDRAIL TYPE 5 PLAN INSERT SHEETS/ARCHIVED STANDARD DRAWINGS:**

A PORTION OF THIS PROJECT INVOLVES REPAIRING TYPE 5 GUARDRAIL. ARCHIVED STANDARD DRAWINGS OF TYPE 5 GUARDRAIL ARE PROVIDED AS PLAN INSERT SHEETS ON ROADWAY ENGINEERING'S PLAN INSERT SHEETS WEB PAGE.

P.I.S.	ARCH. DATE	P.I.S.	ARCH. DATE
GR-1.1	7/20/12	GR-3.6	7/20/12
GR-2.1	7/20/12	GR-4.1	7/20/12
GR-2.2	7/20/12	GR-4.2	7/20/12
GR-2.3	7/20/12	GR-4.5	1/20/12
GR-2.4	7/20/12	GR-5.1	4/16/10
GR-3.1	7/20/12	GR-5.2	4/16/10
GR-3.2	7/20/12	GR-5.3	4/16/10
GR-3.3	7/20/12	GR-6.1	4/16/10
GR-3.4	7/20/12	GR-6.2	4/16/10
GR-3.5	7/20/12		

GENERAL NOTES

DESIGN AGENCY



DESIGNER  
DKR  
REVIEWER

PROJECT ID  
119494

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D06-GR-FY25  
 MODEL: 119494\_GN103 PAPER SIZE: 11x8.5 (in.) DATE: 5/13/2024 TIME: 10:40:07 AM USER: drankin  
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**ITEM 606 - GUARDRAIL, (VARIOUS TYPE), AS PER PLAN:**

THESE ITEMS SHALL INCLUDE THE REMOVAL AND ALL WORK NECESSARY TO REPLACE SECTIONS OF DAMAGED GUARDRAIL WITH THE TYPE SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THESE ITEMS SHALL INCLUDE REPLACING GUARDRAIL, POST AND/OR ASSOCIATED HARDWARE WITHIN THE LENGTH DESIGNATED FOR REPAIR AND ALL WORK NECESSARY TO RESET AND ALIGN POST AND GUARDRAIL FOR RE-USE AS DIRECTED BY THE ENGINEER.

ADJUSTMENT OF ADJACENT RAIL OUTSIDE THE LIMITS DESIGNATED FOR REPLACEMENT, IF NECESSARY, IN ORDER TO REESTABLISH SPACING, WILL BE CONSIDERED INCIDENTAL TO THIS ITEM. SECTIONS TO BE REPLACED WILL BE DESIGNATED BY THE ENGINEER FROM CENTER OF POST TO CENTER OF POST. MATERIALS SHALL BE NEW ITEMS UNDER THIS CONTRACT. POST AND BLOCKS SHALL BE OF THE SAME TYPE AS THE EXISTING RUN. ADDITIONAL QUANTITIES HAVE BEEN PROVIDED TO BE USED WHERE DIRECTED. PAYMENT SHALL BE AT THE UNIT PRICE BID FOR:

ITEM	DESCRIPTION	TOTAL	UNIT
606	GUARDRAIL,TYPE 5, AS PER PLAN	750	FT
606	GUARDRAIL,TYPE 5 WITH TUBULAR BACKUP	12.5	FT
606	GUARDRAIL,TYPE 5 WITH TUBULAR BACKUP, AS PER PLAN	12.5	FT
606	GUARDRAIL,TYPE 5A	12.5	FT
606	GUARDRAIL,TYPE 5A, AS PER PLAN	25	FT
606	GUARDRAIL, TYPE MGS	3,337.5	FT
606	GUARDRAIL, TYPE MGS, AS PER PLAN	1,800	FT
606	GUARDRAIL, TYPE MGS, AS PER PLAN, WITH FOOTING ANCHORS	50	FT
606	GUARDRAIL, TYPE MGS W/ LONG POSTS	1,200	FT
606	GUARDRAIL,BARRIER DESIGN, TYPE 5	50	FT
606	GUARDRAIL,BARRIER DESIGN, TYPE 5, APP	75	FT
606	GUARDRAIL, TYPE MGS, 25' LONG-SPAN	25	FT

**ITEM 606 - GUARDRAIL REBUILT, (VARIOUS TYPE), APP:**

THIS ITEM INCLUDES ALL LABOR EQUIPMENT AND MATERIAL NECESSARY TO REMOVE AND REPLACE ANY AND ALL EXISTING DAMAGED COMPONENTS INCLUDING POSTS, BLOCKS, AND HARDWARE IN ACCORDANCE WITH PLAN INSERT SHEET:

GR-2.1

SECTIONS TO BE REBUILT SHALL BE DESIGNATED BY THE ENGINEER FROM CENTER OF POSTS. PAYMENT SHALL BE AT THE UNIT BID PRICE.

ITEM	DESCRIPTION	TOTAL	UNIT
606	GUARDRAIL REBUILT, TYPE MGS, APP	300	FT
606	GUARDRAIL REBUILT,TYPE 5, APP	100	FT

**ITEM 606 - GUARDRAIL POST, 9 FT., AS PER PLAN:**

AN ESTIMATED NUMBER OF 9 FT. LONG GUARDRAIL POSTS HAVE BEEN LISTED TO BE USED AS DIRECTED BY THE ENGINEER TO OBTAIN A REASONABLE LINE AND ELEVATION OF GUARDRAIL ELEMENTS. EXCEPT FOR LENGTH, THE POST SHALL MEET THE APPLICABLE REQUIREMENTS NOTED IN ITEM 710. THE UNIT BID PRICE FOR THIS ITEM SHALL BE THE DIFFERENCE FOR SUPPLYING THE 9 FT. LONG POST IN LIEU OF THE STANDARD LENGTH GUARDRAIL POSTS INCLUDED IN THE 606 GUARDRAIL BID ITEMS, AND SHALL BE PAID AS EACH. STANDARD LENGTH POSTS REQUIRED TO COMPLETE THE VARIOUS RUNS SHALL BE INCLUDED IN THE 606 GUARDRAIL BID ITEMS. PAYMENT SHALL BE AT THE UNIT BID PRICE.

ITEM	DESCRIPTION	TOTAL	UNIT
606	GUARDRAIL POST	5	EACH
606	GUARDRAIL POST, 9 FT., AS PER PLAN	10	EACH

**ITEM 606 - CURVED RAIL ELEMENTS:**

ALL RADII OF CURVED RAIL ARE ESTIMATED AND ACTUAL RADII OF PROPOSED RAIL SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING. LENGTH OF CURVED RAIL ELEMENTS, WHERE CALLED FOR IN A RUN, SHALL NOT BE INCLUDED IN THE TOTAL LENGTH OF RUN SHOWN IN THE GUARDRAIL COLUMN, HOWEVER, THE CURVED RAIL ELEMENT TOTAL SHALL BE INCLUDED WITH THE GUARDRAIL TOTALS ON THE GENERAL SUMMARY SHEET.

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE A:**

THIS ITEM SHALL INCLUDE ALL WORK, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT TYPE A ANCHOR ASSEMBLY IN ACCORDANCE WITH SCD:

MGS-4.1

THE FOLLOWING QUANTITIES HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM	DESCRIPTION	TOTAL	UNIT
606	ANCHOR ASSEMBLY, MGS TYPE A	2	EACH

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B (MASH 2016):**

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.

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.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH REBOUNDBLE RETROREFLECTIVE SHEETING, PER CMS 730.191.

GENERAL NOTES

DESIGN AGENCY



DESIGNER

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REVIEWER

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PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM	DESCRIPTION	TOTAL	UNIT
606	ANCHOR ASSEMBLY, MGS TYPE B (MASH 2016)	11	EACH

**ITEM 606 – ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016):**

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 B IMPACT HEAD SHALL BE COVERED WITH REBOUNDABLE RETROREFLECTIVE SHEETING, PER CMS 730.191.

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.

THE FOLLOWING QUANTITIES HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM	DESCRIPTION	TOTAL	UNIT
606	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	42	EACH

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE T:**

THIS ITEM INCLUDES THE REMOVAL AND ALL WORK AND EQUIPMENT NECESSARY TO REPLACE THE EXISTING ANCHOR ASSEMBLY. THIS ITEM SHALL INCLUDE ALL WORK, EQUIPMENT AND MATERIALS NECESSARY TO REPLACE THE EXISTING ASSEMBLY IN ACCORDANCE WITH SCD: MGS-4.2

ADDITIONAL QUANTITIES HAVE BEEN PROVIDED TO BE USED WHERE DIRECTED. PAYMENT SHALL BE AT THE UNIT PRICE BID FOR:

ITEM	DESCRIPTION	TOTAL	UNIT
606	ANCHOR ASSEMBLY, MGS TYPE T	13	EACH

**ITEM 606 - ANCHOR ASSEMBLY REBUILT, TYPE A, AS PER PLAN:**

THIS ITEM INCLUDES ALL WORK, MATERIALS, AND EQUIPMENT NECESSARY TO REPLACE A SINGLE 25 FT. LONG RAIL ELEMENT AND REMOVE EXISTING POST, IF NECESSARY, (36" CONCRETE ANCHOR NOT INCLUDED). THIS ITEM SHALL INCLUDE ALL WORK, EQUIPMENT, AND MATERIALS NECESSARY TO REPLACE THE DAMAGED COMPONENTS OF THE EXISTING ASSEMBLY IN ACCORDANCE WITH PLAN INSERT SHEETS:

GR-4.1

PAYMENT SHALL BE AT THE UNIT BID PRICE.

ITEM	DESCRIPTION	TOTAL	UNIT
606	ANCHOR ASSEMBLY REBUILT, TYPE A, APP	2	EACH

**ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, AS PER PLAN:**

THIS ITEM INCLUDES THE REMOVAL AND ALL WORK AND EQUIPMENT NECESSARY TO REPLACE ANY AND ALL DAMAGED COMPONENTS OF THE EXISTING BRIDGE TERMINAL ASSEMBLY IN ACCORDANCE WITH SCD: MGS-3.1 MGS-3.2

WHEN REMOVAL OF ANCHOR BOLTS OF DAMAGED BRIDGE TERMINAL ASSEMBLIES IS NECESSARY, THE ANCHORS SHALL BE REPLACED WITH BOLTS EXTENDING THROUGH THE BRIDGE PARAPET, AS DIRECTED BY THE ENGINEER. THIS IS INCLUDED IN THE RESPECTIVE ITEM OF WORK.

ITEM	DESCRIPTION	TOTAL	UNIT
606	MGS BRIDGE TERMINAL ASSEMBLY,TYPE 1,APP	3	EACH
606	MGS BRIDGE TERMINAL ASSEMBLY,TYPE 2,APP	1	EACH

**ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 4 , AS PER PLAN:**

THIS ITEM INCLUDES THE REMOVAL AND ALL WORK AND EQUIPMENT NECESSARY TO REPLACE ANY AND ALL DAMAGED COMPONENTS OF THE EXISTING BRIDGE TERMINAL ASSEMBLY PER PLAN INSERT SHEETS:

GR-3.1 GR-3.2 GR-3.3 GR-3.4 GR-3.5

ADDITIONAL QUANTITIES HAVE BEEN PROVIDED TO BE USED WHERE DIRECTED. PAYMENT SHALL BE AT THE UNIT PRICE BID FOR:

ITEM	DESCRIPTION	TOTAL	UNIT
606	BRIDGE TERMINAL ASSEMBLY, TYPE 4, APP	2	EACH

DESIGN AGENCY



DESIGNER  
DKR  
REVIEWER

PROJECT ID  
119494

SHEET	TOTAL
P.5	21

606	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL 12 GAUGE, 12.5' PANEL #2-#4	20	EACH
606	ANCHOR ASSEMBLY, MISC.:DEEP BEAM GUARDRAIL, 12 GAUGE, 25' PANEL #2	10	EACH
606	ANCHOR ASSEMBLY, MISC.:DEEP BEAM GUARDRAIL 12 GAUGE, END ANC, 12.5' PANEL #1	4	EACH
606	ANCHOR ASSEMBLY, MISC.:DEEP BEAM GUARDRAIL, 12 GAUGE, END ANC, 25' PANEL #1	10	EACH
606	ANCHOR ASSEMBLY, MISC.:GUARDRAIL EXTRUDER, 2000	4	EACH
606	ANCHOR ASSEMBLY, MISC.:GUARDRAIL EXTRUDER, MSKT	4	EACH
606	ANCHOR ASSEMBLY, MISC.:GUARDRAIL EXTRUDER, PLUS	1	EACH
606	ANCHOR ASSEMBLY, MISC.:GUARDRAIL EXTRUDER, RSI	2	EACH
606	ANCHOR ASSEMBLY, MISC.:GROUND STRUT	1	EACH
606	ANCHOR ASSEMBLY, MISC.:SOIL PLATE	1	EACH
606	ANCHOR ASSEMBLY, MISC.:STEEL FOUNDATION TUBE, 4'-6"	1	EACH
606	ANCHOR ASSEMBLY, MISC.:WOOD POST (3.75' LONG)	30	EACH
606	ANCHOR ASSEMBLY, MISC.:WOOD POST (6.0' LONG)	9	EACH

**ITEM 626 - BARRIER REFLECTOR:**

AN ESTIMATED QUANTITY OF BARRIER REFLECTORS HAVE BEEN PROVIDED FOR LOCATIONS THAT ARE RECEIVING NEW GUARDRAIL. AN ESTIMATED QUANTITY OF GROUND MOUNTED DELINEATORS HAVE BEEN PROVIDED TO BE INSTALLED AT THE HEAD OF REPAIRED TYPE E UNITS, AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM	DESCRIPTION	TOTAL	UNIT
620	DELINEATOR, POST GROUND MOUNTED	4	EACH
626	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	93	EACH

**NOTIFICATION OF CONSTRUCTION INITIATION:**

AT LEAST FOURTEEN DAYS PRIOR TO STARTING INITIAL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT d06.pio@dot.ohio.gov, THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT d06.mot@dot.ohio.gov AND THE CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614)728-4099 OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

**ENVIRONMENTAL COMMITMENTS:**

ANY AND ALL CONSTRUCTION DEBRIS, EARTHEN DEBRIS, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, AND TRASH SHOULD BE DISPOSED OF AT AN APPROVED UPLAND SITE OR LAND FILL ABOVE FEMA 100-YEAR FLOOD ELEVATIONS. DISPOSAL OF ANY SUCH MATERIALS WITHIN 1000 FEET OF A SCENIC RIVER IS PROHIBITED.

THE CONTRACTOR SHALL NOT DISCHARGE TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND TO A SCENIC RIVER, ITS TRIBUTARIES, OR DRAINAGE WAYS. IF REFUELING OF IMMOBILE EQUIPMENT IS NECESSARY WITHIN THE FLOODPLAIN OR NEAR ANY TRIBUTARY DRAINAGE WAYS, DITCHES, OR STREAM, THE CONTRACTOR SHALL PROVIDE SECONDARY CONTAINMENT WITH ENOUGH CAPACITY TO COMPLETELY CONTAIN AND COLLECT ALL POTENTIAL LIQUID WASTES IN THE EVENT OF A SPILL.

IN ACCORDANCE WITH ORC 3750.06, REPORTABLE SPILLS MUST BE REPORTED TO THE LOCAL FIRE DEPARTMENT (911), THE LOCAL EMERGENCY COORDINATOR (740) 417-6229 [24 HOUR], AND THE OHIO SPILL LINE (1-800-282-9378).

THE CONTRACTOR SHALL KEEP ALL IDLE EQUIPMENT, FUELS, LUBRICANTS, AND ANY STORAGE FOR/OF POTENTIALLY TOXIC OR HAZARDOUS MATERIALS OUT OF THE FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA AND NOT WITHIN 1000 FEET OF A SCENIC RIVER.

NO TREE CLEARING IS REQUIRED OR PERMITTED ON THIS PROJECT.

NO STREAMS, DITCHES, OR WETLANDS SHALL BE IMPACTED AS PART OF THIS PROJECT.

GENERAL NOTES

DESIGN AGENCY



DESIGNER  
DKR  
REVIEWER

PROJECT ID  
119494

SHEET	TOTAL
P.10	21

SHEET NUMBER		ITEM	ITEM EXT.	GRAND TOTAL 01/NFP/21	UNIT	DESCRIPTION	SEE SHEET NO.
2 - 10	11 - 12						
<b>ROADWAY</b>							
		202	38000	1175	FT	GUARDRAIL REMOVED	3
		202	38500	75	FT	BRIDGE RAILING REMOVED	3
		202	42001	22	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	3
		202	98100	1	EACH	REMOVAL MISC.:IMPACT ATTENUATOR	3
		517	72306	12.5	FT	RAILING(DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS)	3
		517	72307	12.5	FT	RAILING(DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS),AS PER PLAN	3
		517	75601	25	FT	DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN	3
		606	13001	750	FT	GUARDRAIL, TYPE 5, AS PER PLAN	4
		606	13010	12.5	FT	GUARDRAIL, TYPE 5 WITH TUBULAR BACKUP	4
		606	13011	12.5	FT	GUARDRAIL, TYPE 5 WITH TUBULAR BACKUP, AS PER PLAN	4
		606	13050	12.5	FT	GUARDRAIL, TYPE 5A	4
		606	13051	25	FT	GUARDRAIL, TYPE 5A, AS PER PLAN	4
		606	15050	3337.5	FT	GUARDRAIL, TYPE MGS	4
		606	15051	1800	FT	GUARDRAIL, TYPE MGS, AS PER PLAN	4
		606	15051	50	FT	GUARDRAIL, TYPE MGS, AS PER PLAN, WITH FOOTING ANCHORS	4
		606	15100	1200	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	4
		606	15500	50	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	4
		606	15501	75	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5, AS PER PLAN	4
		606	16051	300	FT	GUARDRAIL REBUILT, TYPE MGS, AS PER PLAN	4
		606	16501	100	FT	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	4
		606	17350	25	FT	GUARDRAIL, TYPE MGS, 25' LONG-SPAN	4
		606	17900	5	EACH	GUARDRAIL POST	4
		606	18501	10	EACH	GUARDRAIL POST, 9 FEET, AS PER PLAN	4
		606	25550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE A	4
		606	26050	11	EACH	ANCHOR ASSEMBLY, MGS TYPE B (MASH 2016)	5
		606	26150	42	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	5
		606	26550	13	EACH	ANCHOR ASSEMBLY, MGS TYPE T	5
		606	27801	2	EACH	ANCHOR ASSEMBLY REBUILT, TYPE A, AS PER PLAN	5
		606	35003	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	5
		606	35103	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	5
		606	35141	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	5
		606	60012	3	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL) (MASH 2016)	6
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 1)(BREAKMASTER) PANEL/STRAP ASSEMBLY	7
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 1)(CAT) NOSE PLATE, 10 GAUGE, ROLLED	7
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 1)(CAT) WOOD BLOCKS #1	7
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 1)(CAT) WOOD BLOCKS #2 - #6	7
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 1)(CAT) WOOD POST, #1 (3.50')	7
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 1)(CAT) WOOD POST, #2-6 (3.50')	7
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 2) DEBRIS CLEANOUT	9
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 2) DIAPHRAGM	9
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 2) FENDER PANEL	9
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 2) NOSE ASSEMBLY	9
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 2) TYPE 1 CARTRIDGE	9
		606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: (TYPE 2) TYPE 2 CARTRIDGE	9
		606	98100	8	EACH	GUARDRAIL, MISC.: CABLE BARRIER: ANCHOR POST	9
		606	98100	80	EACH	GUARDRAIL, MISC.: CABLE BARRIER: ANCHOR POST RESET	9
		606	98100	4	EACH	GUARDRAIL, MISC.: CABLE BARRIER: CABLE SPLICE	9
		606	98100	4	EACH	GUARDRAIL, MISC.: CABLE BARRIER: CABLE TURNBUCKLE	9
		606	98100	2	EACH	GUARDRAIL, MISC.: CABLE BARRIER: CONCRETE ANCHOR FOUNDATION	9
		606	98100	1	EACH	GUARDRAIL, MISC.: CABLE BARRIER: CONCRETE ANCHOR FOUNDATION, NU-TEN	9

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

DKR

REVIEWER

PROJECT ID

119494

SHEET TOTAL

P.15 21

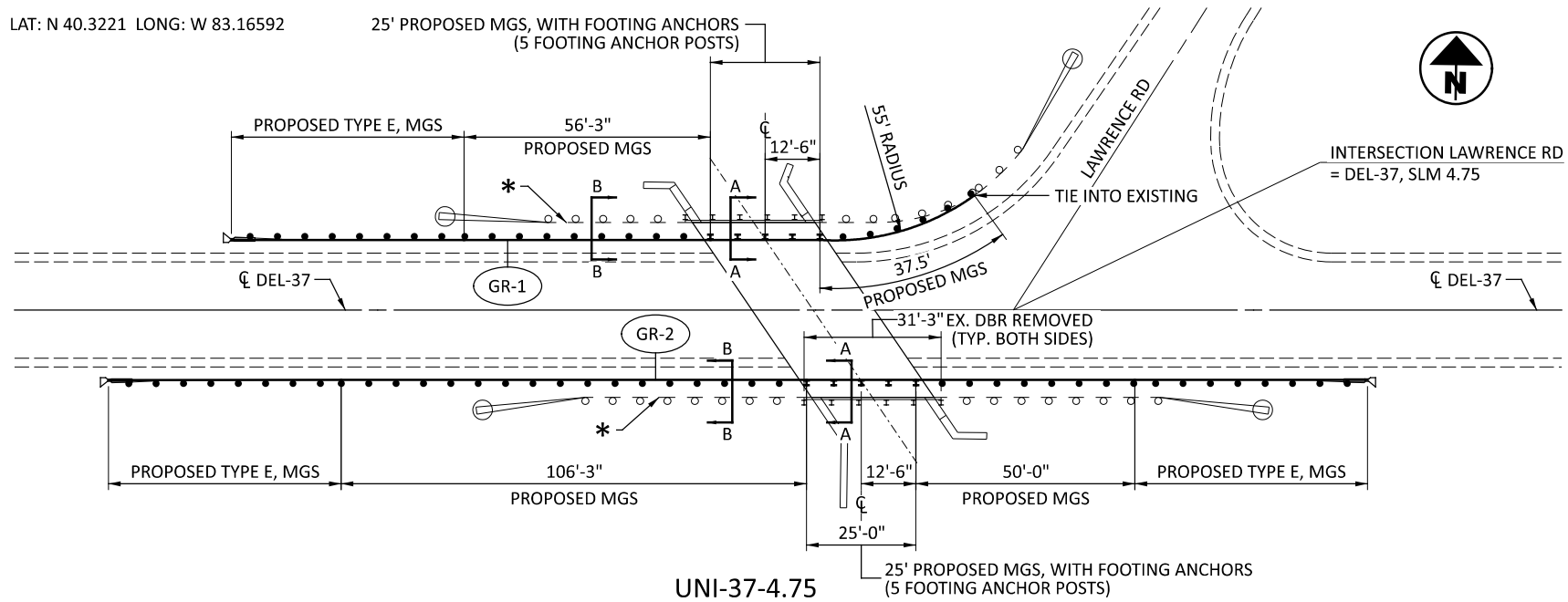
SHEET NUMBER		ITEM	ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE
2 - 10	11 - 12		EXT.	01/NFP/21			SHEET NO.
4		606	98100	4	EACH	GUARDRAIL, MISC.: CABLE BARRIER: CONCRETE LINE POST FOUNDATION WITH SLEEVE	9
900		606	98100	900	EACH	GUARDRAIL, MISC.: CABLE BARRIER: LINE POST	9
50		606	98100	50	EACH	GUARDRAIL, MISC.: CABLE BARRIER: LINE POST (SAFENCE C-POST)	9
10		606	98100	10	EACH	GUARDRAIL, MISC.: CABLE BARRIER: POST REFLECTOR	9
272		606	98100	272	EACH	GUARDRAIL, MISC.: CABLE BARRIER: TENSIONING	9
5		606	99200	5	EACH	ANCHOR ASSEMBLY, MISC.: #1 AND #2 BOTTOM POST	9
10		606	99200	10	EACH	ANCHOR ASSEMBLY, MISC.: #1 AND #2 TOP POST	9
10		606	99200	10	EACH	ANCHOR ASSEMBLY, MISC.: #2 THRU #8 SYT POST	9
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: 12 GAUGE, BUFFERED, ROLLED END TERMINAL	9
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: 2"X5-1/2"PIPE SLEEVE	9
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: BEARING PLATE	9
20		606	99200	20	EACH	ANCHOR ASSEMBLY, MISC.: BLOCKS	9
3		606	99200	3	EACH	ANCHOR ASSEMBLY, MISC.: CABLE ANCHOR BRACKET	9
4		606	99200	4	EACH	ANCHOR ASSEMBLY, MISC.: CABLE ASSEMBLY	9
4		606	99200	4	EACH	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL, 12 GAUGE - SLOT 1	9
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL, 12 GAUGE - SLOT 2	9
20		606	99200	20	EACH	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL, 12 GAUGE, 12.5' PANEL #2-#4	10
10		606	99200	10	EACH	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL, 12 GAUGE, 25' PANEL #2	10
4		606	99200	4	EACH	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL, 12 GAUGE, END ANC, 12.5' PANEL #1	10
10		606	99200	10	EACH	ANCHOR ASSEMBLY, MISC.: DEEP BEAM GUARDRAIL, 12 GAUGE, END ANC, 25' PANEL #1	10
4		606	99200	4	EACH	ANCHOR ASSEMBLY, MISC.: EXTRUDER, 2000	10
4		606	99200	4	EACH	ANCHOR ASSEMBLY, MISC.: EXTRUDER, MSKT	10
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: EXTRUDER, PLUS	10
2		606	99200	2	EACH	ANCHOR ASSEMBLY, MISC.: EXTRUDER, RSI	10
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: GROUND STRUT	10
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: SOIL PLATE	10
1		606	99200	1	EACH	ANCHOR ASSEMBLY, MISC.: STEEL FOUNDATION TUBE 4'-6"	10
30		606	99200	30	EACH	ANCHOR ASSEMBLY, MISC.: WOOD POST(3.75' LONG)	10
9		606	99200	9	EACH	ANCHOR ASSEMBLY, MISC.: WOOD POST(6.0' LONG)	10
<b>TRAFFIC CONTROL</b>							
4		620	00500	4	EACH	DELINEATOR, POST GROUND MOUNTED	10
93		626	00110	93	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	10
<b>MAINTENANCE OF TRAFFIC</b>							
	5	614	11110	5	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	12
	62	614	13600	62	EACH	MAINTENANCE OF TRAFFIC - ONE LANE CLOSURE ON A TWO LANE HIGHWAY	12
	7	614	13700	7	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A FOUR LANE UNDIVIDED HIGHWAY	12
	15	614	13800	15	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A 4 LANE OR GREATER DIVIDED HIGHWAY	12
	140	614	13900	140	EACH	MAINTENANCE OF TRAFFIC FOR SHOULDER CLOSURE	12
<b>INCIDENTALS</b>							
		624	10000	LS		MOBILIZATION	
4		624	15001	4	EACH	MOBILIZATION, AS PER PLAN, EMERGENCY REPAIR	2
7		624	15001	7	EACH	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR	2





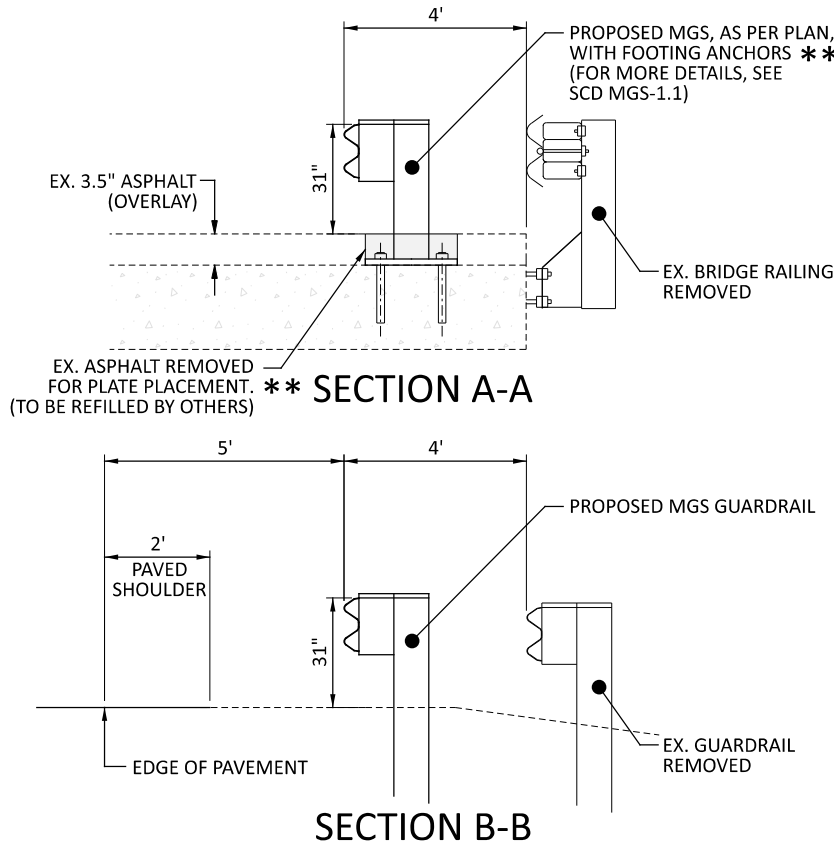
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25' PROPOSED MGS, WITH FOOTING ANCHORS  
(5 FOOTING ANCHOR POSTS)



UNI-37-4.75

**\* EXISTING GUARDRAIL, BRIDGE RAILING, AND ANCHOR ASSEMBLIES REMOVED**  
**\*\* REMOVAL OF ASPHALT SHALL BE AT EACH POST LOCATION. HOLES SHALL BE NEAT AND NO MORE THAN 3" LARGER THAN PLATES IN ANY DIRECTION. ALL LABOR, MATERIAL, AND EQUIPMENT TO PERFORM ASPHALT REMOVAL AND GUARDRAIL PLACEMENT SHALL BE INCLUDED IN ITEM 606 GUARDRAIL, TYPE MGS, AS PER PLAN, WITH FOOTING ANCHORS.**



REFERENCE	COUNTY	ROUTE	SLM	SIDE	QUANTITIES							
					202	202	202	606	606	606	626	624
					GUARDRAIL REMOVED	BRIDGE RAILING REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS, AS PER PLAN, WITH FOOTING ANCHORS	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	EACH	FT	FT	EACH	EACH	EACH
GR-1	DELAWARE	SR-37	4.75	LT	68.75	31.25	1	93.75	25	1	4	1
GR-2	DELAWARE	SR-37	4.75	RT	100	31.25	2	156.25	25	2	4	

**QUANTITIES ARE FOR THIS LOCATION ONLY.**  
**SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.**

GUARDRAIL PLAN, DEL-37-4.75

DESIGN AGENCY



DESIGNER

DKR

REVIEWER

PROJECT ID

119494

SHEET TOTAL

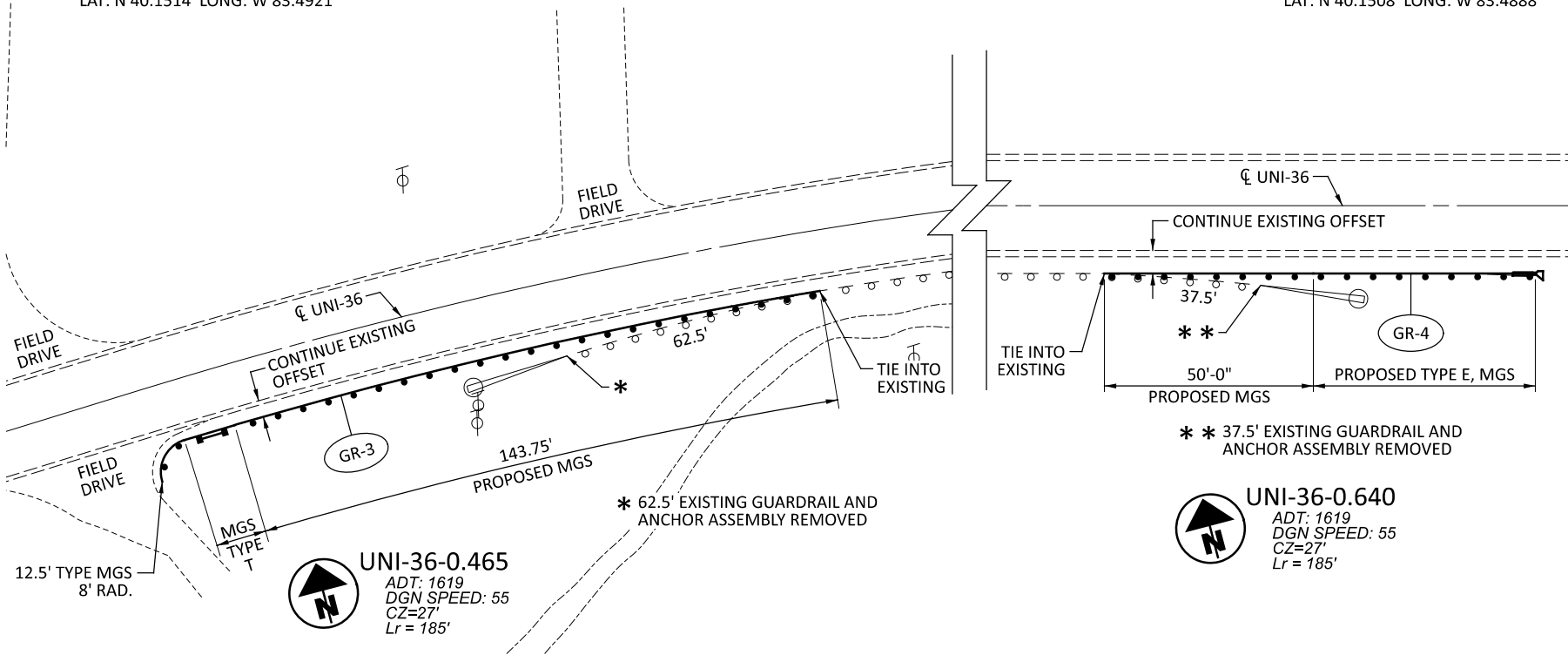
P.17A 21

D06-GR-FY25

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LAT: N 40.1514 LONG: W 83.4921

LAT: N 40.1508 LONG: W 83.4888



**UNI-36-0.465**  
 ADT: 1619  
 DGN SPEED: 55  
 CZ=27'  
 Lr = 185'

**UNI-36-0.640**  
 ADT: 1619  
 DGN SPEED: 55  
 CZ=27'  
 Lr = 185'

REFERENCE	COUNTY	ROUTE	SLM	SIDE	QUANTITIES						
					202	202	606	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	ANCHOR ASSEMBLY, MGS TYPE T	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH	EACH
GR-3	UNION	US-36	0.465	RT	62.50	1	156.25		1	3	0.5
GR-4	UNION	US-36	0.640	RT	37.50	1	50.00	1		2	0.5

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

GUARDRAIL PLAN, UNI-36-0.465, UNI-36-0.640

DESIGN AGENCY



DESIGNER  
**DKR**

REVIEWER

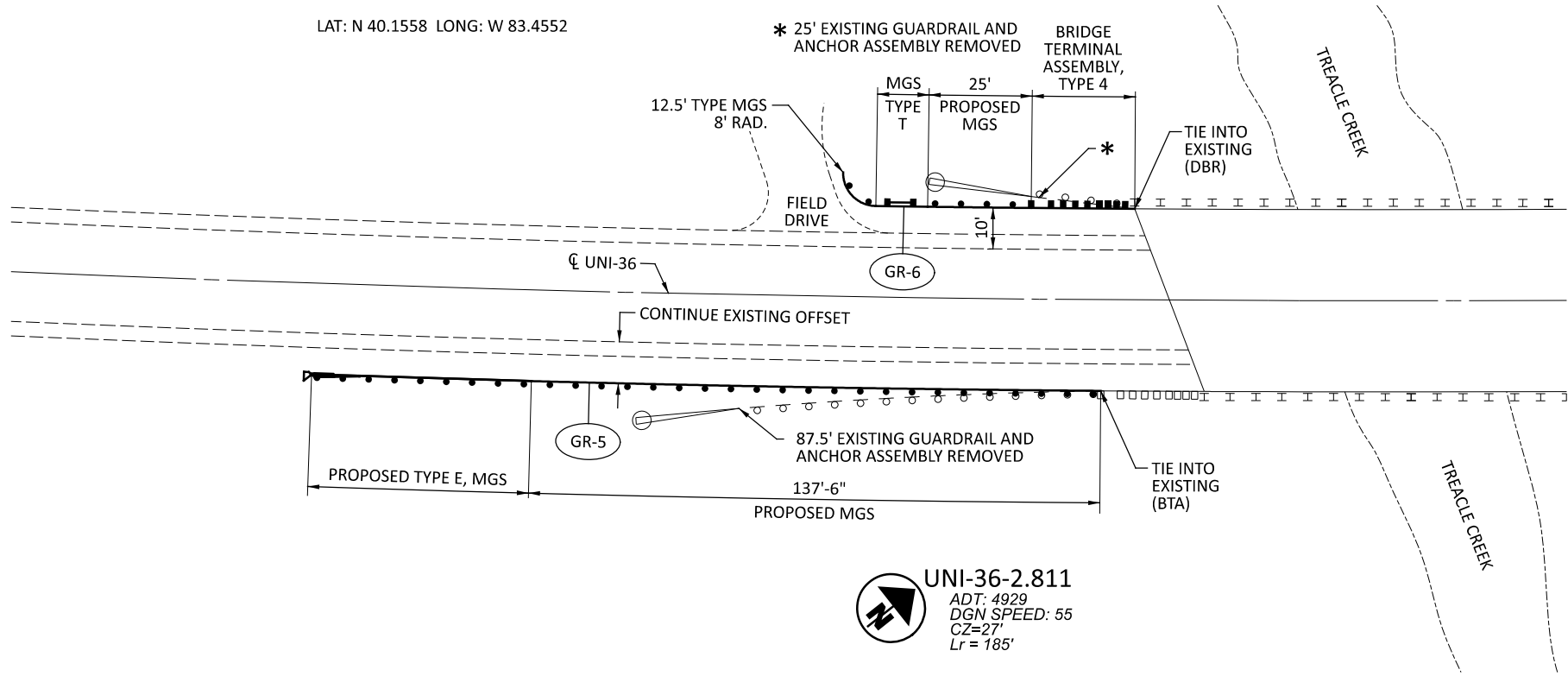
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**119494**

SHEET TOTAL  
**P.178 B 21**

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LAT: N 40.1558 LONG: W 83.4552



LOCATION					QUANTITIES							
REFERENCE	COUNTY	ROUTE	SLIM	SIDE	202	202	606	606	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	ANCHOR ASSEMBLY, MGS TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH	EACH	EACH
GR-5	UNION	US-36	2.811	RT	87.50	1	137.50	1			3	0.25
GR-6	UNION	US-36	2.811	LT	25.00	1	37.50		1	1	2	0.25

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

GUARDRAIL PLAN, UNI-36-2.811

DESIGN AGENCY



DESIGNER

DKR

REVIEWER

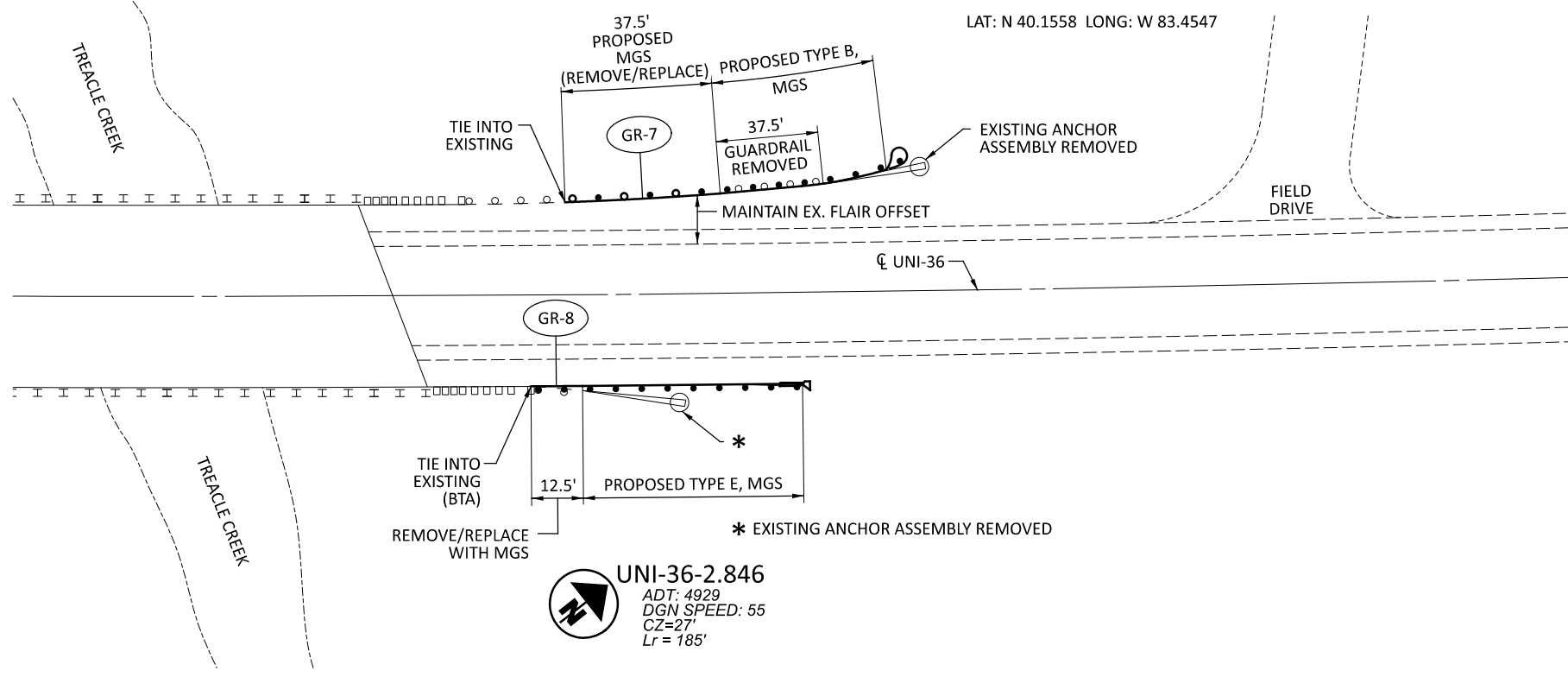
PROJECT ID

119494

SHEET TOTAL

P.17C B 21

D06-GR-FY25  
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GUARDRAIL PLAN, UNI-36-2.846

LOCATION					QUANTITIES						
REFERENCE	COUNTY	ROUTE	SLIM	SIDE	202	202	606	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH	EACH
GR-7	UNION	US-36	2.846	LT	62.50	1	37.50	1		2	0.25
GR-8	UNION	US-36	2.846	RT	12.50	1	12.50		1	2	0.25

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

DESIGN AGENCY



DESIGNER

DKR

REVIEWER

PROJECT ID

119494

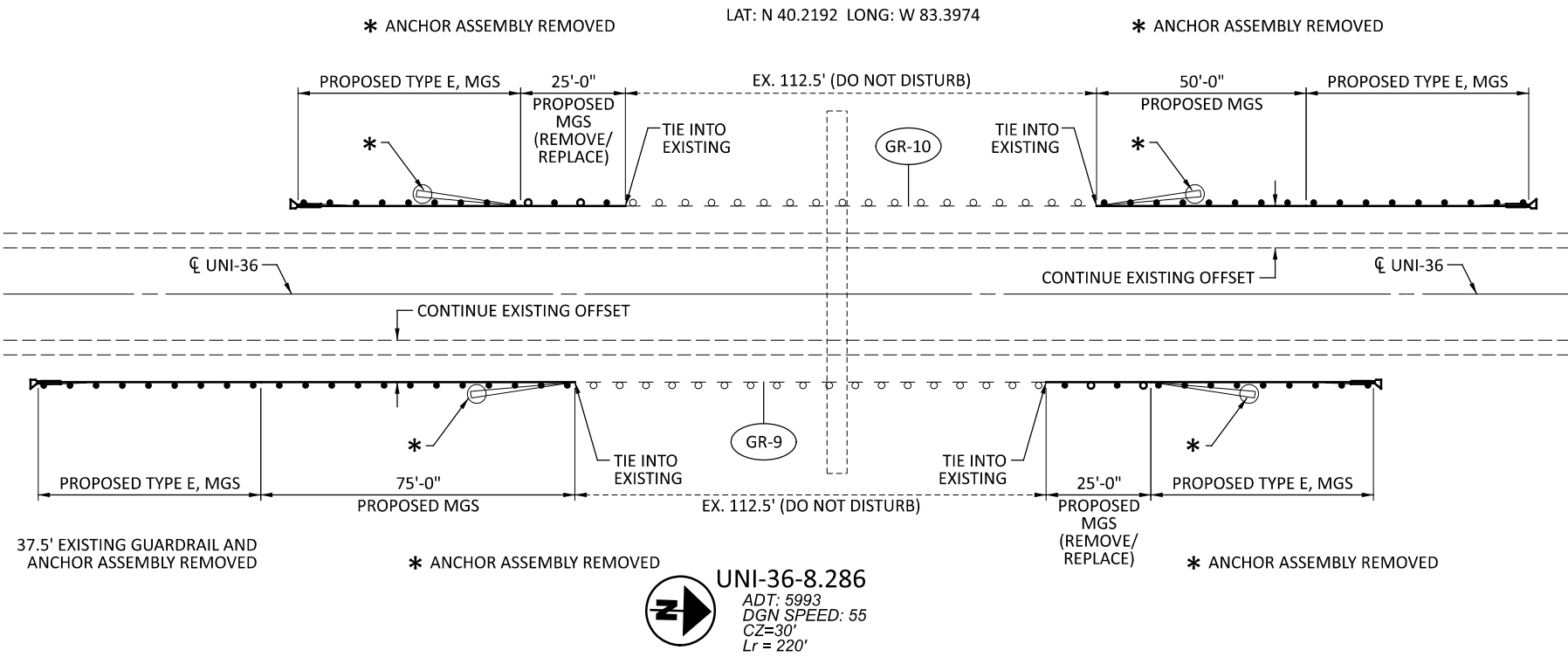
SHEET TOTAL

P.17D 21

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D06-GR-FY25

LAT: N 40.2192 LONG: W 83.3974



GUARDRAIL PLAN, UNI-36-8.286

LOCATION					QUANTITIES					
					202	202	606	606	626	624
REFERENCE	COUNTY	ROUTE	SLIM	SIDE	GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH
GR-9	UNION	US-36	8.286	RT	25.00	2	100.00	2	3	0.5
GR-10	UNION	US-36	8.286	LT	25.00	2	75.00	2	3	0.5

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

DESIGN AGENCY



DESIGNER  
DKR

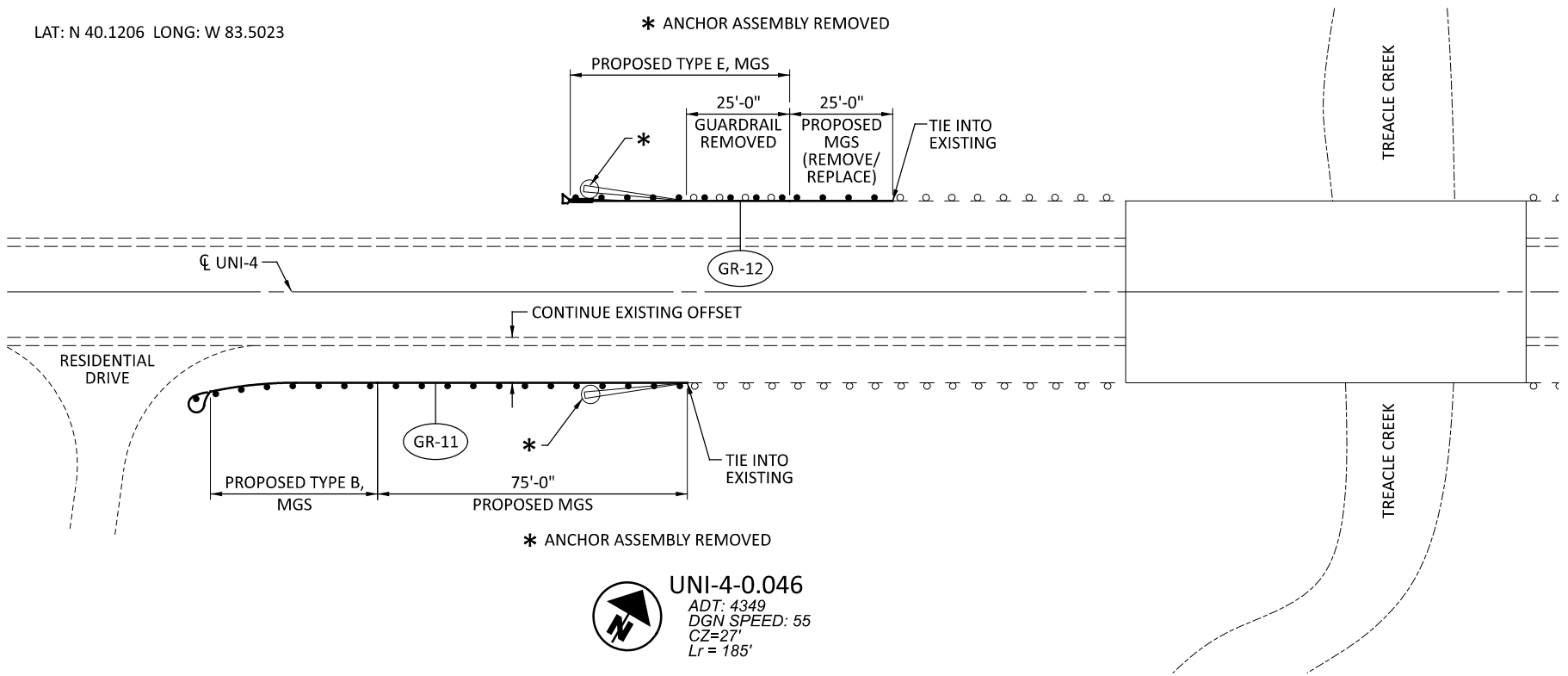
REVIEWER

PROJECT ID  
119494

SHEET TOTAL  
P.17E B 21

LAT: N 40.1206 LONG: W 83.5023

\* ANCHOR ASSEMBLY REMOVED



\* ANCHOR ASSEMBLY REMOVED



UNI-4-0.046

ADT: 4349  
DGN SPEED: 55  
CZ=27'  
Lr = 185'

GUARDRAIL PLAN, UNI-4-0.046

LOCATION					QUANTITIES						
REFERENCE	COUNTY	ROUTE	SLM	SIDE	202	202	606	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH	EACH
GR-11	UNION	SR-4	0.046	LT	50.00	1	25.00		1	2	0.25
GR-12	UNION	SR-4	0.046	RT		1	75.00	1		3	0.25

QUANTITIES ARE FOR THIS LOCATION ONLY.

SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

DESIGN AGENCY



DESIGNER

DKR

REVIEWER

PROJECT ID

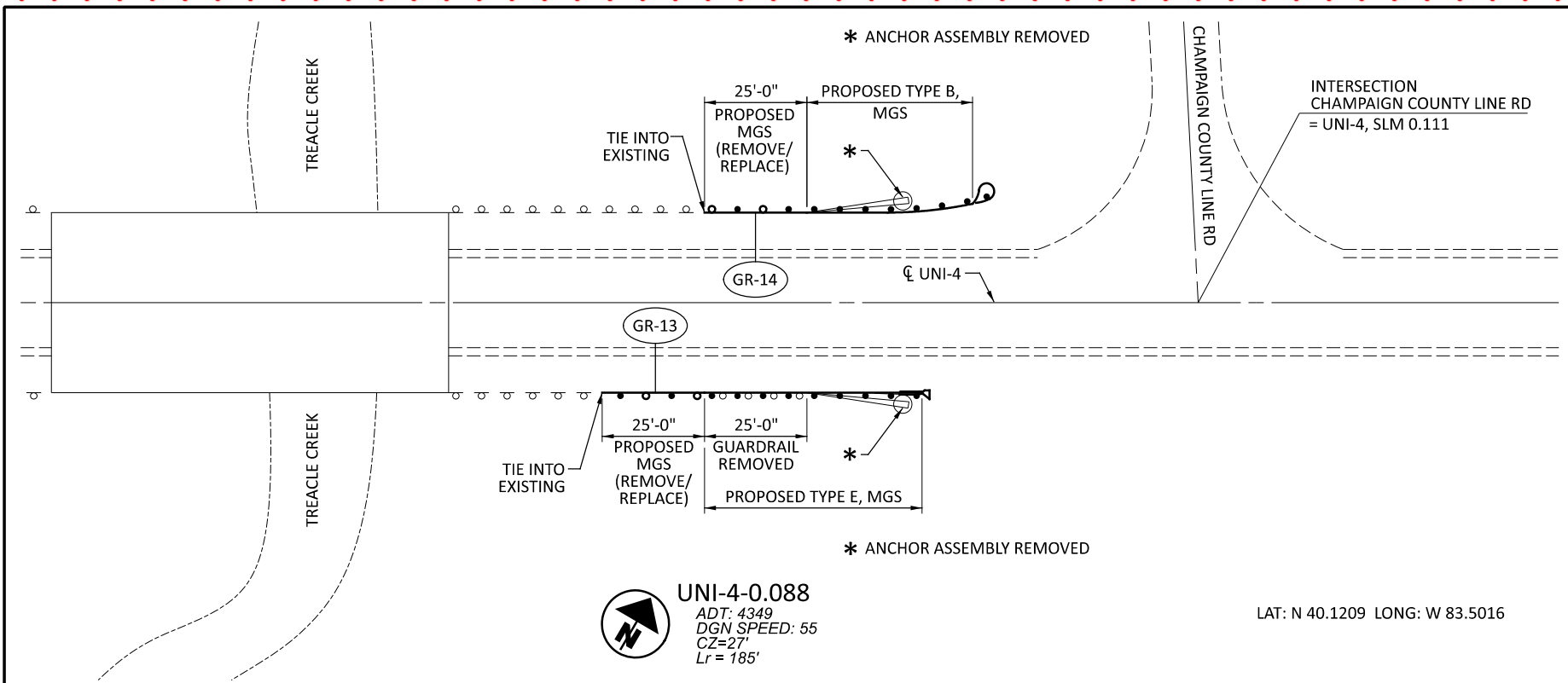
119494

SHEET TOTAL

P.17F 21

D06-GR-FY25  
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D06-GR-FY25  
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**UNI-4-0.088**  
 ADT: 4349  
 DGN SPEED: 55  
 CZ=27'  
 Lr = 185'

LAT: N 40.1209 LONG: W 83.5016

GUARDRAIL PLAN, UNI-4-0.088

LOCATION					QUANTITIES						
REFERENCE	COUNTY	ROUTE	SLM	SIDE	202	202	606	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH	EACH
GR-13	UNION	SR-4	0.088	RT	50.00	1	25.00		1	2	0.25
GR-14	UNION	SR-4	0.088	LT	25.00	1	25.00	1		2	0.25

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

DESIGN AGENCY



DESIGNER

DKR

REVIEWER

PROJECT ID

119494

SHEET TOTAL

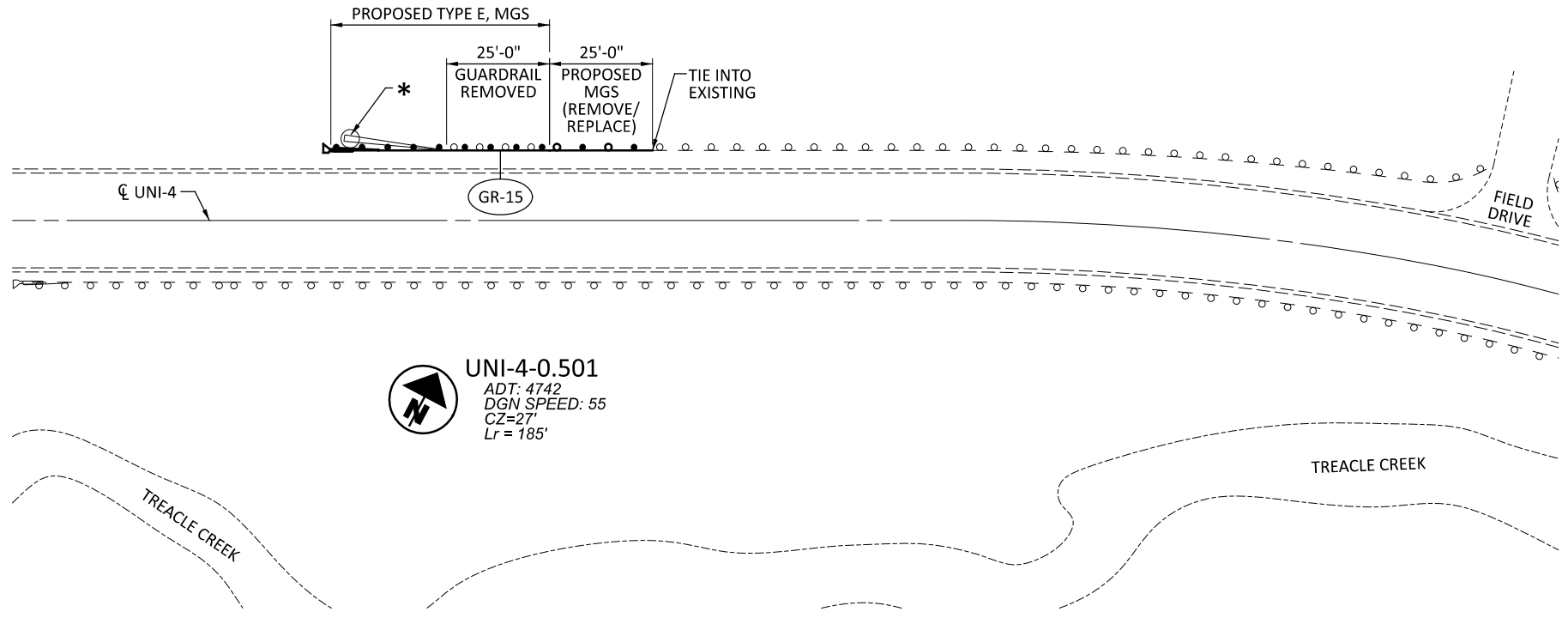
P.17G 21

D06-GR-FY25

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LAT: N 40.1238 LONG: W 83.4949

\* ANCHOR ASSEMBLY REMOVED



**UNI-4-0.501**  
 ADT: 4742  
 DGN SPEED: 55  
 CZ=27'  
 Lr = 185'

REFERENCE	COUNTY	ROUTE	SLM	SIDE	QUANTITIES					
					202	202	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH
GR-15	UNION	SR-4	0.501	LT	50.00	1	25.00	1	2	0.5

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

GUARDRAIL PLAN, UNI-4-0.501

DESIGN AGENCY



DESIGNER  
DKR

REVIEWER

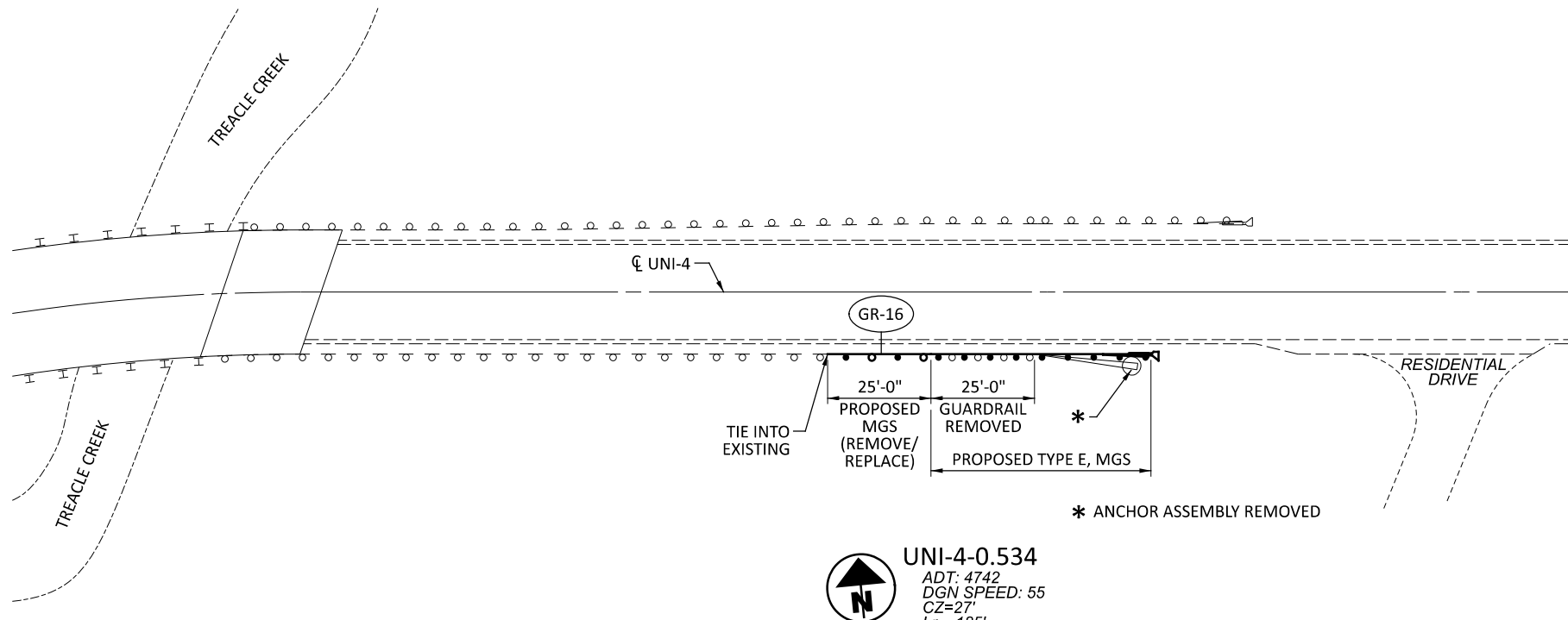
PROJECT ID  
119494

SHEET TOTAL  
P.17H 21



D06-GR-FY25

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**UNI-4-0.534**  
 ADT: 4742  
 DGN SPEED: 55  
 CZ=27'  
 Lr = 185'

LAT: N 40.1238 LONG: W 83.4943

LOCATION					QUANTITIES					
REFERENCE	COUNTY	ROUTE	SLM	SIDE	202	202	606	606	626	624
					GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	EACH	FT	EACH	EACH	EACH
GR-16	UNION	SR-4	0.534	RT	50.00	1	25.00	1	2	0.5

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.

GUARDRAIL PLAN, UNI-4-0.534

DESIGN AGENCY



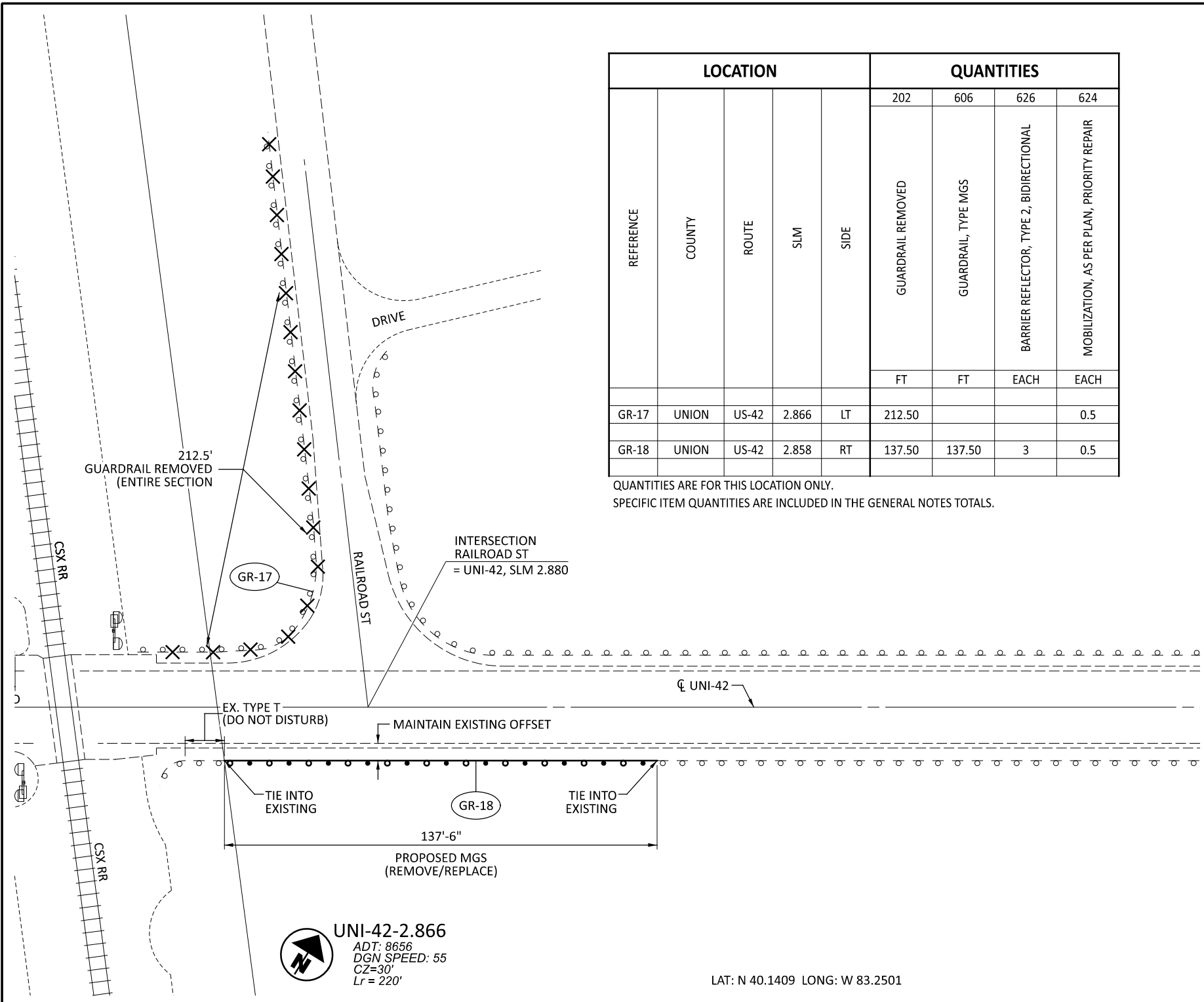
DESIGNER  
**DKR**

REVIEWER

PROJECT ID  
**119494**

SHEET TOTAL  
**P.171 21**

D06-GR-FY25  
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LOCATION					QUANTITIES			
REFERENCE	COUNTY	ROUTE	SLM	SIDE	202	606	626	624
					GUARDRAIL REMOVED	GUARDRAIL, TYPE MGS	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	MOBILIZATION, AS PER PLAN, PRIORITY REPAIR
					FT	FT	EACH	EACH
GR-17	UNION	US-42	2.866	LT	212.50			0.5
GR-18	UNION	US-42	2.858	RT	137.50	137.50	3	0.5

QUANTITIES ARE FOR THIS LOCATION ONLY.  
 SPECIFIC ITEM QUANTITIES ARE INCLUDED IN THE GENERAL NOTES TOTALS.



**UNI-42-2.866**

ADT: 8656  
 DGN SPEED: 55  
 CZ=30'  
 Lr = 220'

LAT: N 40.1409 LONG: W 83.2501

**GUARDRAIL PLAN, UNI-42-2.866**

DESIGN AGENCY



DESIGNER  
**DKR**  
 REVIEWER

PROJECT ID  
**119494**

SHEET TOTAL  
**P.171 21**