




LOCATION MAP


LATITUDE: 40°41'29" LONGITUDE: -83°9'0.5"





PORTION TO BE IMPROVED 

INTERSTATE HIGHWAY 

FEDERAL ROUTES 

STATE ROUTES 

COUNTY & TOWNSHIP ROADS 

OTHER ROADS 

DESIGN DESIGNATION

CURRENT ADT (2025)	US-23	SR-231
DESIGN YEAR ADT (2045)	14,500	1,800
DESIGN HOURLY VOLUME (2045)	16,500	2,100
DIRECTIONAL DISTRIBUTION	1,600	300
TRUCKS (24 HOUR B&C)	51%	14%
DESIGN SPEED	28%	22%
LEGAL SPEED	65 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	03 PRINCIPAL ARTERIAL	05 MAJOR COLLECTOR
	OTHER (RURAL)	(RURAL)
NHS PROJECT	YES	YES

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVER: NONE REQUIRED

UNDERGROUND UTILITIES

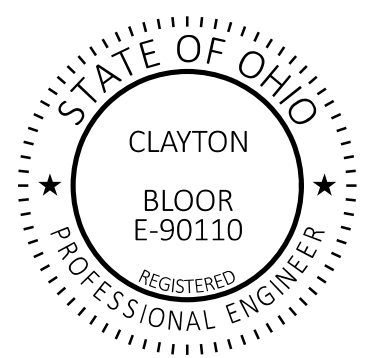
Contact Two Working Days
Before You Dig

 **OHIO811.org**
Before You Dig

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



ENGINEER'S SEAL



INDEX OF SHEETS

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
MT-95.30	07/19/19	TC-41.20	10/18/13			800	01/17/25	
MT-95.45	07/21/23	TC-42.20	10/18/13			821	04/20/12	
MT-95.50	07/21/17	TC-52.10	10/18/13			832	07/19/24	
MT-96.11	07/21/23	TC-52.20	01/15/21			849	01/18/13	
MT-96.20	01/17/25					921	07/19/24	
MT-97.10	04/19/19	GSD-1-19	07/19/24					
MT-99.50	07/21/23							
MT-101.60	01/17/25	VPF-1-90	01/19/18					
MT-101.70	07/19/24							
MT-101.75	07/21/23							
MT-105.10	01/17/20							

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MAR-231-3.42

GRAND PRAIRIE TOWNSHIP

MARION COUNTY

FEDERAL PROJECT NUMBER

NON-FEDERAL

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REPAIR DAMAGE CAUSED BY A VEHICLE HIT WITH BEAM REPLACEMENT AND HEAT STRAIGHTENING AT THE FOLLOWING LOCATION:

MAR-231-3.42

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES

LIMITED ACCESS

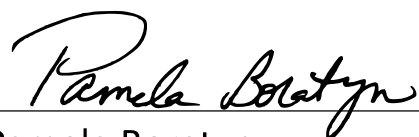
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

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 EXCEPT AS NOTED ON SHEETS P.3 - P.10, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.


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


Pamela Boratyn
Director, Department of Transportation

PID # 122349 MAR-23-3.42

DESIGN AGENCY



DESIGNER

CAB

REVIEWER

DKR 03/13/25

PROJECT ID

122349

SHEET

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TOTAL

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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 VIA EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV 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 MANGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

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.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATIONS OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

REMOVAL ITEMS

UNLESS OTHERWISE INSTRUCTED ITEMS 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.

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.

CENTERLINE CONSTRUCTION

THE INTENT OF THIS PROJECT IS THAT ALL WORK IS TO BE COMPLETED WITHIN THE EXISTING RIGHT OF WAY. THE CENTERLINE SHOWN IN THIS PLAN IS TO BE CONSIDERED A CENTERLINE REFERENCE OF CONSTRUCTION ONLY AND NOT TO BE CONSTRUED AS THE ACTUAL GEOMETRIC ALIGNMENT OF THE ROADWAY.

ANY CENTERLINE STATIONING PROVIDED IS TO BE USED AS A REFERENCE OF PROJECT LENGTH ONLY AND SHALL NOT BE USED TO ESTABLISH PRECISE LOCATIONS OF ANY OTHER FEATURES SUCH AS/NOT LIMITED TO THE EXISTING RIGHTS OF WAY.

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER, OR ADJACENT TO, THE WORK AREA.

ASBESTOS SURVEY

AN ASBESTOS SURVEY FOR SFN 5103215 SR 231 BRIDGE OVER US-23 SCHEDULED FOR REHABILITATION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. A COPY OF THE ASBESTOS INSPECTION REPORT FOR THE STRUCTURE IS INCLUDED IN THE PLAN PACKAGE FOR THIS PROJECT. THE ASBESTOS INSPECTION REPORT DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS ABOVE REGULATORY LIMITS.

SUBMIT A COMPLETED ELECTRONIC NOTIFICATION OF DEMOLITION AND RENOVATION FORM (NDRF), APPLICABLE FEES, AND THE ASBESTOS INSPECTION REPORT TO THE OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH. SUBMIT THE NDRF AND PAYMENT ALONG WITH THE ASBESTOS INSPECTION REPORT USING THE OEPA EBUSINESS CENTER. SUBMIT ONE ELECTRONIC PDF COPY AND ONE HARD COPY OF THE NDRF TO THE ENGINEER. THE ENGINEER WILL PROVIDE ONE COPY TO THE DISTRICT ENVIRONMENTAL STAFF.

GENERAL NOTES

DESIGN AGENCY



DESIGNER

CAB

REVIEWER

DKR 03/13/25

PROJECT ID

122349

SHEET

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TOTAL

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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 SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). 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, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

Notification Time Frame Table			
Item	Duration of Closure	Notification due to District 6 Communications Office	Sign Displayed to Public
Ramp & Road Closures	>= 2 weeks	21 calendar days prior to closure	14 calendar days prior to closure
	> 12 hours & < 2 weeks	14 calendar days prior to closure	7 calendar days prior to closure
	<= 12 hours	4 business days prior to closure	2 business days prior to closure
Lane Closures & Restrictions	>= 2 weeks	14 calendar days prior to closure	
	< 2 weeks	5 business days prior to closure	

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

EXISTING MAINTENANCE OF TRAFFIC DEVICES ON S.R. 231

EXISTING PORTABLE BARRIER, SIGNALS, ATTENUATORS DEVICES ON MAR-231-3.42 IS PROPERTY OF ODOT MARION COUNTY. CONTACT COUNTY A MINIMUM TWO WEEKS PRIOR TO START OF MOT CONSTRUCTION IN ORDER FOR THE COUNTY TO COORDINATE THE REMOVAL OF THE EXISTING DEVICES.

ITEM 614 - MAINTAINING TRAFFIC

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 (CURRENT EDITION). COPIES ARE AVAILABLE FROM,

THE OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF TRAFFIC
1980 WEST BROAD STREET
COLUMBUS, OHIO 43223

THE EXISTING NUMBER OF LANES IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING PERIODS OF WORK AT WHICH LANES MAY BE CLOSED IN ACCORDANCE WITH THE LANE VALUE CONTRACT FOR EACH LOCATION AND IN ACCORDANCE WITH STANDARD DRAWING MT-95.30. ADDITIONALLY, US-23 SB UNDER MAR-231-3.42 MAY CLOSE FOR 2 WEEKEND PERIODS TO PERFORM THE BRIDGE REPAIRS AND BEAM PAINTING. THE ALLOWABLE TIME FOR EACH WEEKEND WILL BE FRI 9 PM TO MON 6 AM. THIS ALLOWABLE CLOSURE WILL BE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLAN ON P. 5-6 AS WELL AS STANDARD DRAWING MT-99.50.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS 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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATION, 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 614, DETOUR SIGNING AND ITEM 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DO NOT EXCEED THE PERMITTED LANE CLOSURE TIMES POSTED ON THE DEPARTMENT'S PERMITTED LANE CLOSURE WEBSITE OR THE LANE VALUE CONTRACT TABLE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SUBMIT A LANE CLOSURE APPLICATION REQUEST FORM TO THE ENGINEER IN WRITING, FIVE (5) WORKING DAYS IN ADVANCE OF THE LANE(S) CLOSURE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO LANE CLOSURES WILL BE PERMITTED DURING HOLIDAYS OR SPECIAL EVENTS, SEE SPECIAL EVENTS/HOLIDAY NOTE. MONITOR TRAFFIC FLOW AND RE-OPEN LANES IF ANY BACKUP BEGINS TO OCCUR. CLOSING THE LANES BEFORE THE ALLOWABLE TIME AND/OR FAILURE TO RE-OPEN ALL LANES TO TRAFFIC AS DESIGNATED IN THE PLANS WILL RESULT IN A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE LISTED ON THIS SHEET AND ACCORDING TO THE LANE VALUE CONTRACT PROPOSAL NOTE. PLACE AN UNOCCUPIED PROTECTION VEHICLE, CLOSE TO THE WORK WHENEVER WORKERS ARE IN THE WORK AREA, WHENEVER MAINTAINING TRAFFIC ACCORDING TO STANDARD DRAWING MT-95.30 OR AS DIRECTED BY THE ENGINEER. REMOVED THESE VEHICLES FROM THE PAVEMENT WHENEVER WORKERS ARE NOT IN THE WORKING AREA. EQUIP THE VEHICLES WITH A 360 DEGREE ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE FROM A MINIMUM DISTANCE OF 1 QUARTER MILE. PERFORM ALL WORK AND SUPPLY ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH C&MS 614 AND THE LATEST VERSION OF 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.

LANE VALUE CONTRACT

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME A LANE/SHOULDER/RAMP IS CLOSED BY THE CONTRACTOR'S ACTION WHILE NOT OTHERWISE PERMITTED BY THE LANE VALUE CONTRACT TABLE.

LANE VALUE CONTRACT TABLE						
Section (SLM)	Existing Number of Through Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Thur	Fri	Sat & Sun	
MAR-23						
Delaware County line (0.00) to Wyandot County line (19.97)	2	2 to 1	3PM-7PM	2PM-7PM	No Restriction	\$120

LANES OPEN DURING HOLIDAYS, CONT'D

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS.

HOLIDAYS	LABOR DAY
NEW YEAR'S (OBSERVED)	GENERAL/REGULAR ELECTION DAY (NOV)
MEMORIAL DAY	THANKSGIVING
FOURTH OF JULY (OBSERVED)	
CHRISTMAS (OBSERVED)	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00 NOON FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00 NOON FRIDAY THROUGH 6:00 AM WEDNESDAY
TUESDAY (GEN./REG. ELECTION)	5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY
WEDNESDAY	12:00 NOON TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 NOON WEDNESDAY THROUGH 6:00 AM FRIDAY
THANKSGIVING	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00 NOON THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00 NOON FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA WIDE.

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

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE TO BE APPROVED BY THE ENGINEER. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE



ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN, CONT'D

PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 1 SIGN MONTH ASSUMING 1 PCMS SIGN(S) FOR 1 MONTH(S)

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTUCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTUCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMTUCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS, CONT'D

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION;
AND,
AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC. WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:
THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
THE ACTIVE WORK AREA Laterally CLOSEst TO THE OPEN TRAVELED LANE; OR
OTHER LOCATION AS APPROVED BY THE ENGINEER. THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS, CONT'D

THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 120 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

USE OF STANDARD DRAWINGS

IT MAY BE NECESSARY TO EXTEND THE ADVANCE WARNING AND BUFFER ZONES BEYOND THE MINIMUM DISTANCES SHOWN ON THE STANDARD DRAWINGS. THIS MAY BE DUE TO HORIZONTAL ALIGNMENT, VERTICAL ALIGNMENT, RAMP LOCATIONS, OR OTHER SIGH OBSTRUCTIONS. LOCATIONS OF THE THE TAPER ZONES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER. TAPERS SHOULD BE PLACED IN TANGENT SECTIONS WHERE EVER POSSIBLE.

USE OF WEIGHT CHANNELIZERS

THE WEIGHTED CHANNELIZER MAY BE USED IN ACCORDANCE WITH THIS SECTION. THE WEIGHTED CHANNELIZER SHALL BE PREDOMINANTLY ORANGE IN COLOR AND SHALL BE MADE OF LIGHTWEIGHT, FLEXIBLE, AND DEFORMABLE MATERIAL. THE WEIGHTED CHANNELIZER SHALL BE AT LEAST 42 INCHES IN HEIGHT WITH A WEIGHTED BASE. THEY MAY HAVE A HANDLE OR LIFTING DEVICE THAT EXTENDS ABOVE THE 42 INCHES MINIMUM HEIGHT.

THE MARKING ON THE WEIGHTED CHANNELIZER SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 6 INCHES WIDE.

EACH WEIGHTED CHANNELIZER SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES SHALL NOT EXCEED 2 INCHES WIDE. THE WEIGHTED CHANNELIZER SHALL HAVE A 4-INCH MINIMUM WIDTH, REGARDLESS OF ORIENTATION.

USE OF WEIGHTED CHANNELIZERS ON FREEWAYS AND MULTILANE HIGHWAYS SHALL BE LIMITED TO SHORT-TERM OPERATIONS FOR EITHER DAY OR NIGHT. UPON COMPLETION OF WORK, THE WEIGHTED CHANNELIZERS SHALL BE REMOVED. THE WEIGHTED CHANNELIZERS MAY AGAIN BE PLACED ON THE HIGHWAY WHEN THE WORK IS TO RESUME ON THE FOLLOWING DAY OR NIGHT. ANY LANE CLOSURE USING CHANNELIZATION DEVICES EXPECTED TO REMAIN FOR MORE THAN TWELVE HOURS SHALL REQUIRE THE USE OF DRUMS OR BARRICADES.

WHEN USED AT NIGHT, WEIGHTED CHANNELIZERS SHALL ONLY BE PLACED IN THE TANGENT AREA AND AT A MAXIMUM SPACING OF 40 FEET. THE TANGENT AREA IS DEFINED AS THE AREA AFTER THE TRANSITION TAPER WHERE THE WORK TAKES PLACE. DRUMS SHALL BE USED IN THE TRANSITION TAPERS FOR NIGHT OPERATIONS.

STEPS SHOULD BE TAKEN TO ENSURE THAT THE WEIGHTED CHANNELIZERS WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. BALLASTS SHOULD NOT PRESENT A HAZARD IF THE WEIGHTED CHANNELIZERS ARE INADVERTENTLY STRUCK. NOR SHOULD THEY AFFECT THE VISIBILITY OF WEIGHTED CHANNELIZERS. ALL BALLASTS USED SHOULD BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

USE OF WEIGHT CHANNELIZERS, CONT'D

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

PERMITS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS IN ADVANCE OF ANY WORK BEING DONE IN ALL LOCAL AGENCIES RIGHT OF WAY BY THE CONTRACTOR OR SUB-CONTRACTORS AS REQUIRED BY CMS 107.0S.

APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S)

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE APPROVED MOT EXCEPTION(S) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTION(S) INCLUDE:
-US-23 SOUTH AT SR-231 WEEKEND CLOSURES FOR BRIDGE REPAIR AND BEAM PAINTING.

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF 30 CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER AS WELL AS THE CONTRACTOR, AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED 04/01/2025 FOR PID 122349" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTION(S) LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE MOT EXCEPTION COMMITTEE (MOTEC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO THE DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE MOTEC. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

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

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 APPROVED PRODUCTS 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 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.

DESIGN AGENCY



DESIGNER

CAB

REVIEWER

MNH 03/13/25

PROJECT ID

122349

SHEET

P.4

TOTAL

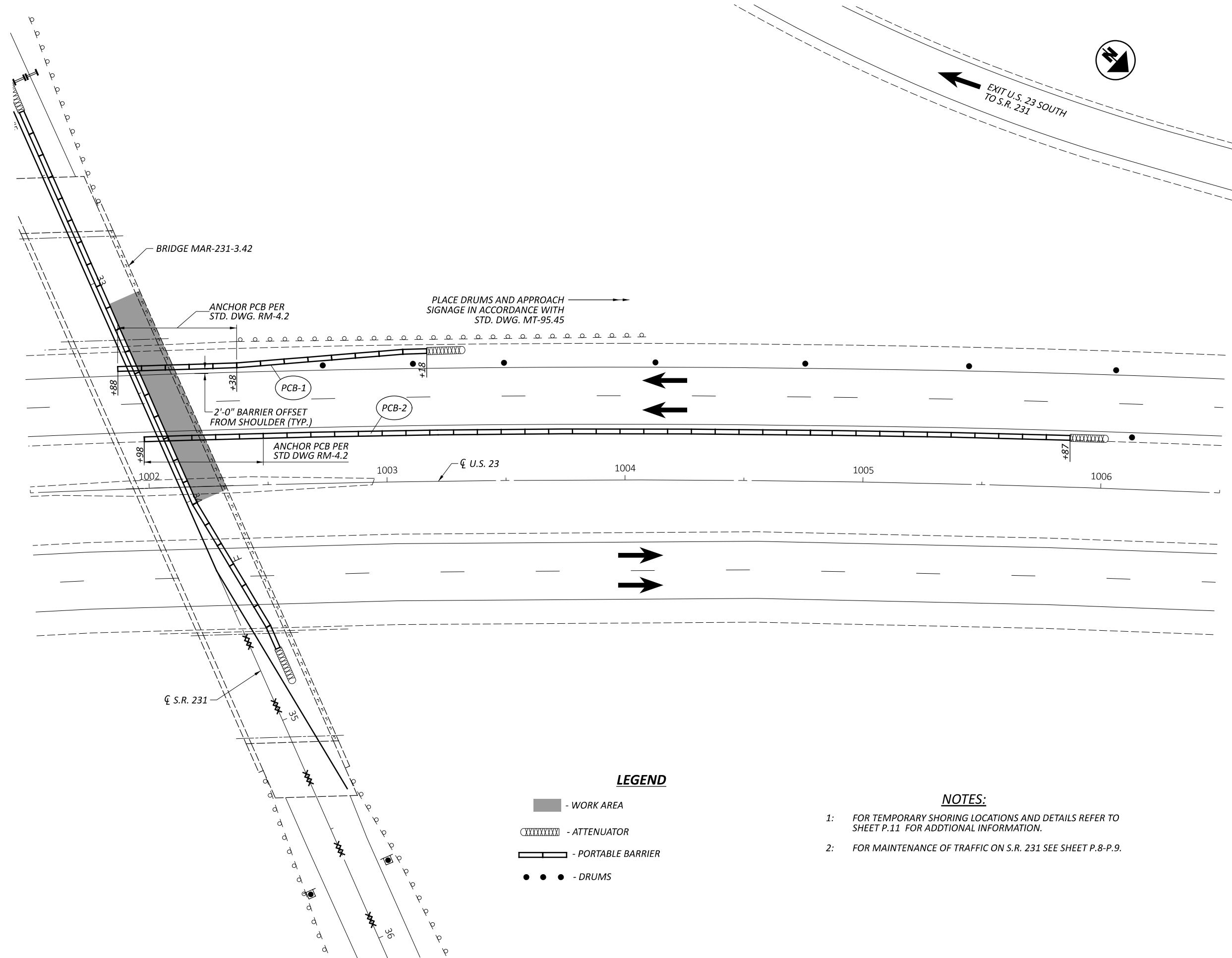
P.18

REF NO.	ALIGNMENT	STATION		SHEET	614	614	614	614	614	614	622	622
					WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS III, 4" , 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED
		FROM	TO		EACH	EACH	EACH	EACH	MILE	FT	FT	FT
PCB-1	U.S. 23	1001+88	1003+18		1		4	4			70	50
PCB-2	U.S. 23	1001+98	1006+87		1		9	9			340	50
PCB-3	S.R. 231	32+22	34+72			2	6				250	
EL-1	S.R. 231	31+11	35+37						0.08			
SL-1	S.R. 231	30+61								12		
SL-2	S.R. 231	36+47								12		
TOTALS CARRIED TO SUBSUMMARY					2	2	19	13	0.08	24	660	100

SIGNAL PHASING & INITIAL SETTINGS

PHASE 1			PHASE 2		
1-G	1-Y	ALL RED	1-G	1-Y	ALL RED
22	3	20	22	3	20

INITIAL CYCLE TIMING LENGTH = 90 SECONDS

MAINTENANCE OF TRAFFIC
PLAN U.S. 23HORIZONTAL
SCALE IN FEET
0 10 20 40

DESIGN AGENCY



DESIGNER

JPH

REVIEWER

CAB 06/23/25

PROJECT ID

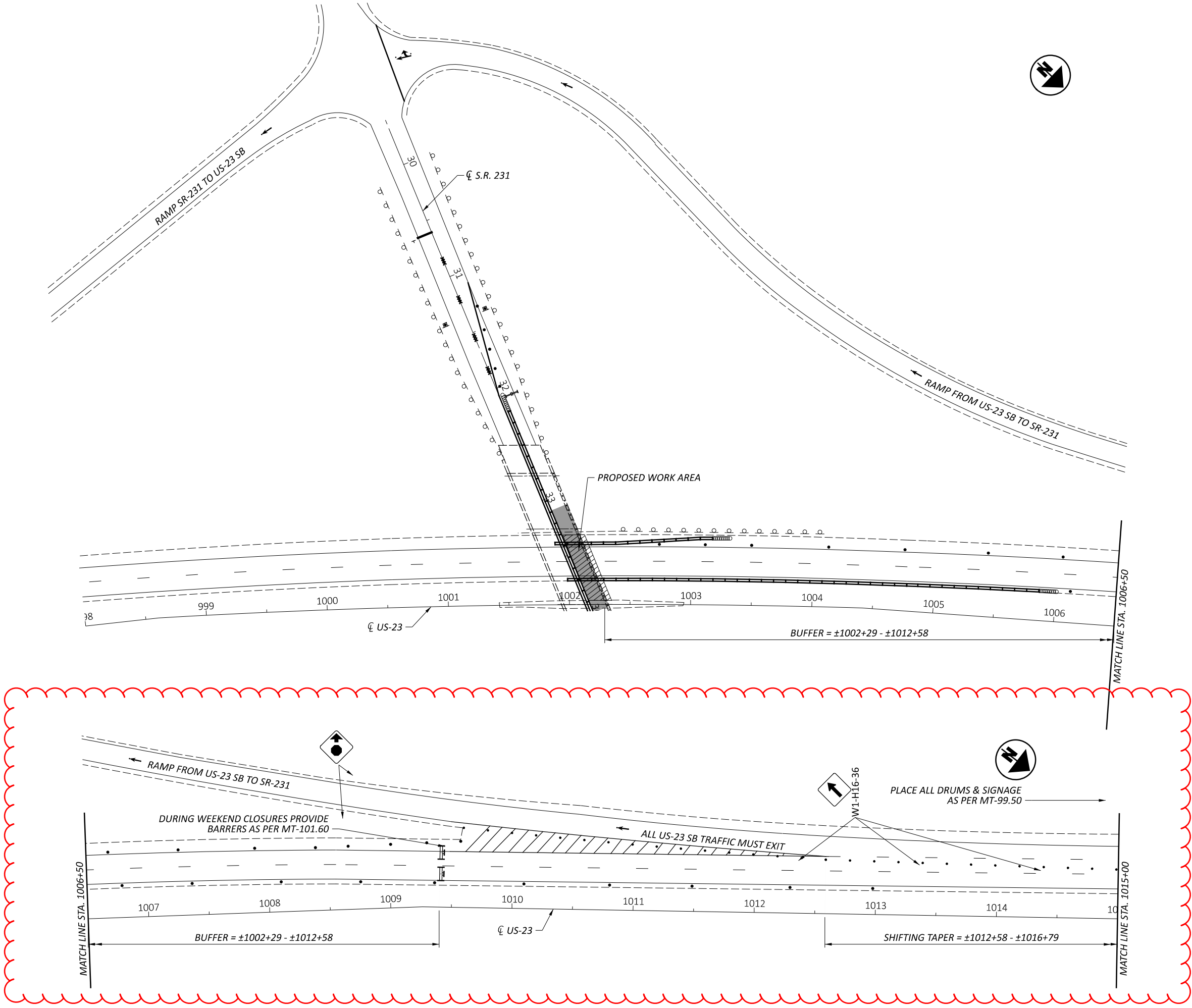
122349

SHEET

P.6

TOTAL

P.18



MAINTENANCE OF TRAFFIC PLAN
WEEKEND CLOSURE U.S. 23 SB



DESIGN AGENCY



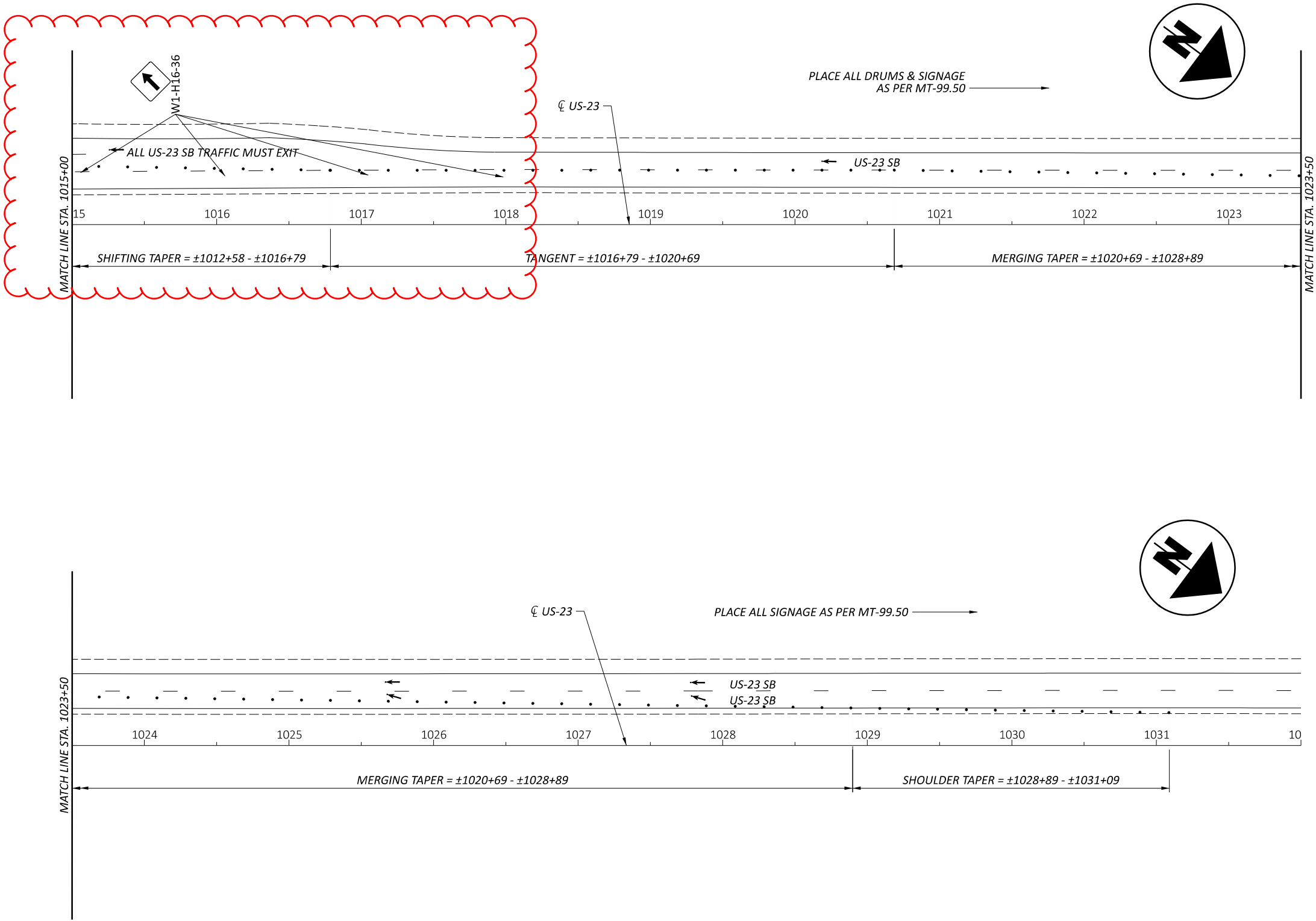
DESIGNER
CAB

REVIEWER
MNH 03/13/25

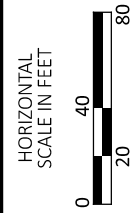
PROJECT ID
122349

SHEET
P.7

TOTAL
P.18



MAINTENANCE OF TRAFFIC PLAN
WEEKEND CLOSURE U.S. 23 SB



DESIGN AGENCY



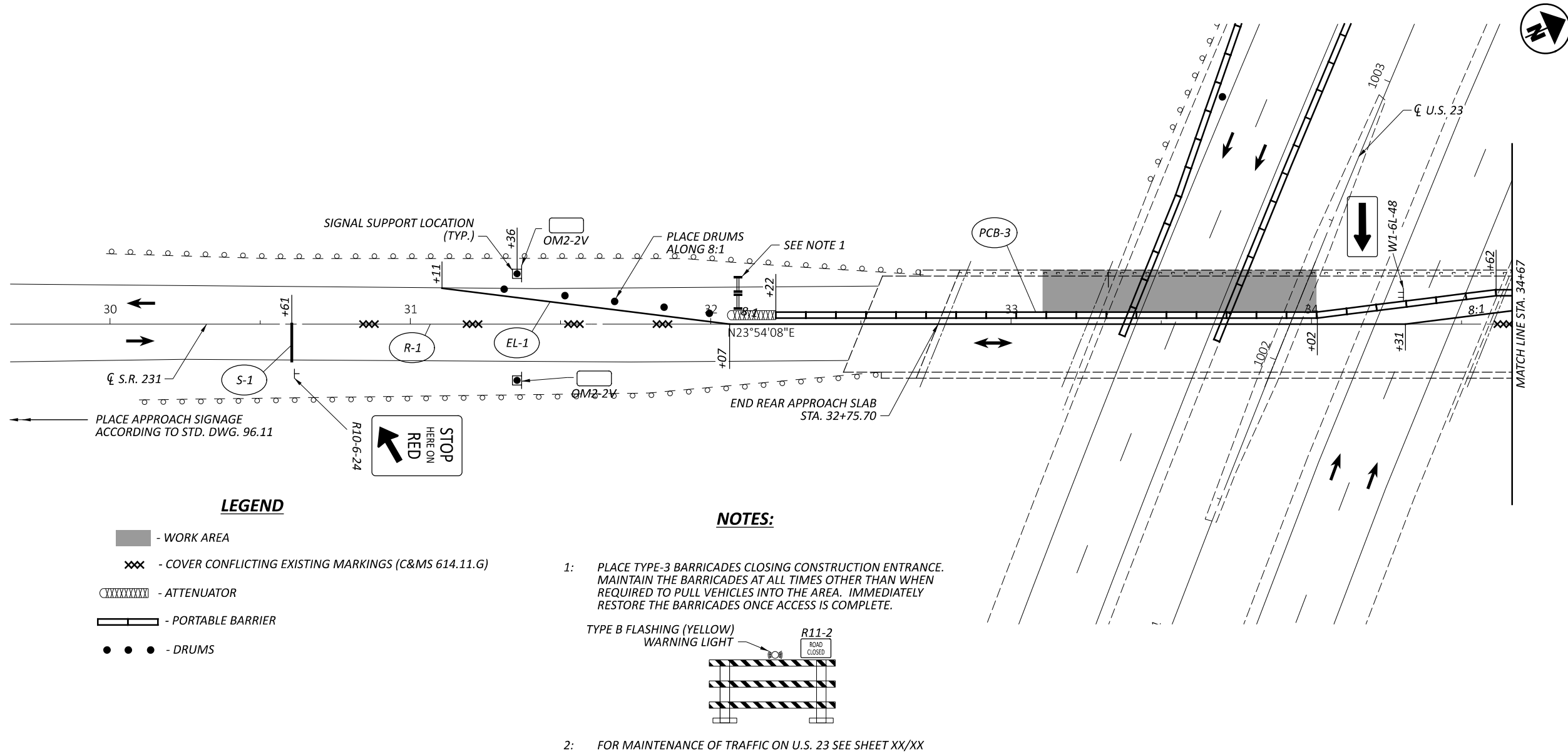
DESIGNER
CAB

REVIEWER
MNH 03/13/25

PROJECT ID
122349

SHEET
P.8

TOTAL
P.18

MAINTENANCE OF TRAFFIC
PLAN OH-231

DESIGN AGENCY



DESIGNER

JPH

REVIEWER

CAB 06/23/25

PROJECT ID

122349

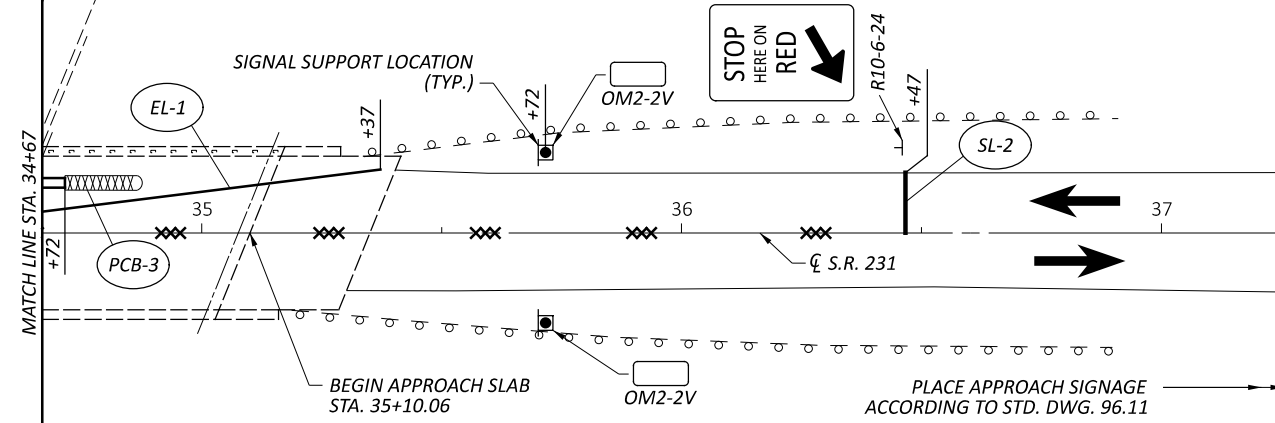
SHEET

P.9

TOTAL

P.18

HORIZONTAL
SCALE IN FEET
0 10 20 40



MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 9:17:24 AM USER: cdbor
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SHEET NUM.													PART.	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
								4	5	12	13	15	01/NHS/13		EXT	TOTAL			
													100	832	30000	100	EACH	EROSION CONTROL	
																		TRAFFIC CONTROL	
										16			16	630	03100	16	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										16			16	630	80101	16	SF	SIGN, FLAT SHEET, AS PER PLAN	12
												1	1	630	97700	1	EACH	SIGNING, MISC.: STRUCTURE MOUNTED SIGN	15
																		STRUCTURE OVER 20 FOOT SPAN (MAR-231-3.42)	
																		SEE SHEET 14	
																		MAINTENANCE OF TRAFFIC	
								120					120	614	11110	120	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
									2				2	614	12380	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
									2				2	614	12384	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
									19				19	614	13310	19	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
									13				13	614	13350	13	EACH	OBJECT MARKER, ONE WAY	
									0.08				0.08	614	20550	0.08	mile	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT	
									24				24	614	26610	24	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
									660				660	622	41100	660	FT	PORTABLE BARRIER, UNANCHORED	
									100				100	622	41110	100	FT	PORTABLE BARRIER, ANCHORED	
																		INCIDENTALS	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

CAB

REVIEWER

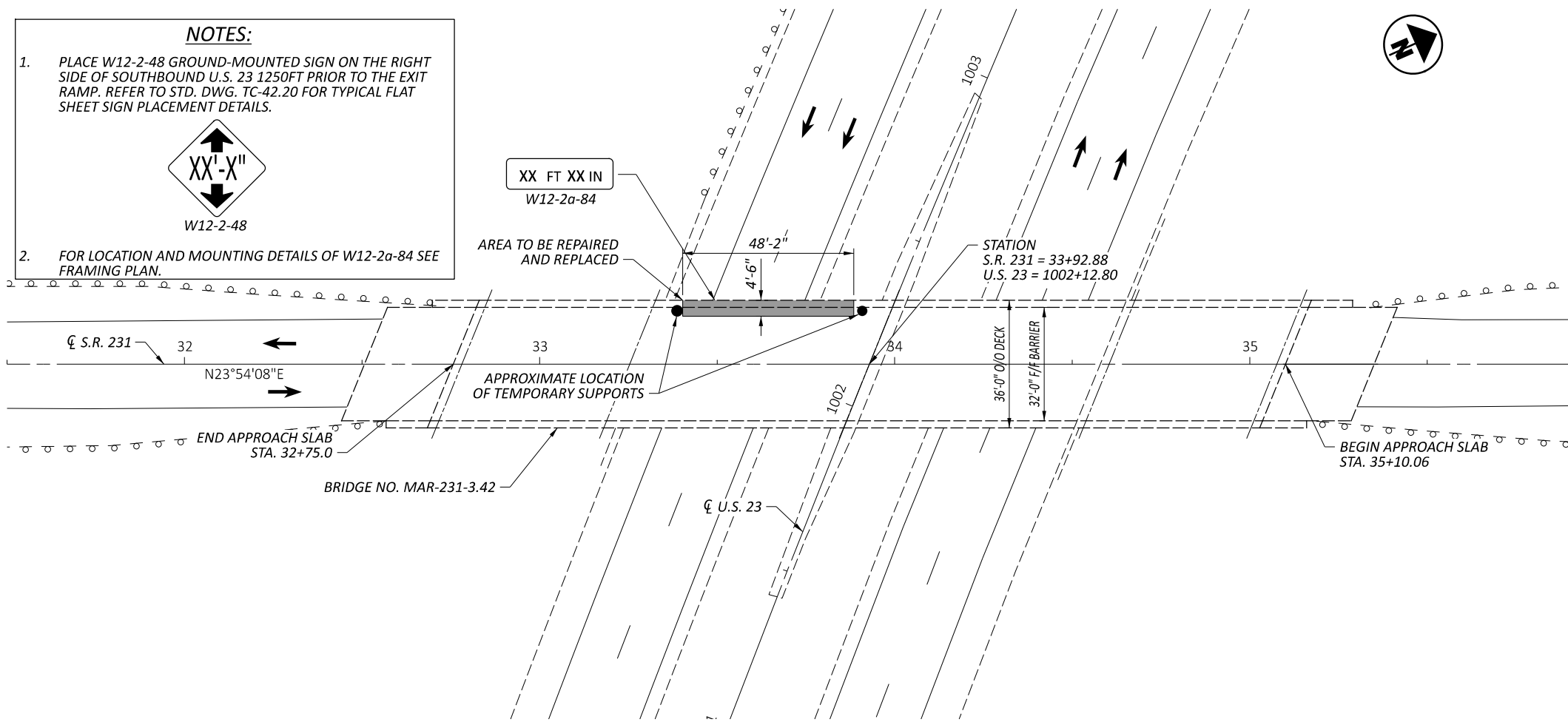
DKR 03/13/25

PROJECT ID

122349

SHEET	TOTAL
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**NOTES**

DESIGN TRAFFIC:

S.R. 231

2025 ADT = 1,800

2025 ADTT = 396

DIRECTIONAL DISTRIBUTION = 14%

U.S. 23

2025 ADT = 14,500

2025 ADTT = 4,060

DIRECTIONAL DISTRIBUTION = 51%

14.7' MINIMUM VERTICAL CLEARANCE

EXISTING STRUCTURETYPE: CONTINUOUS STEEL BEAM WITH REINFORCED
CONCRETE DECK AND SUBSTRUCTURE

SPANS: 47'-3", 67'-6", 67'-6", 47'-3"

ROADWAY: 32'-0" F/F BARRIER

LOADING: CF 400 (57) (HS-20)

SKEW: 22°03'

WEARING SURFACE: 2" SUPERPLASTICIZED DENSE CONCRETE

APPROACH SLABS: AS-1-54 (25' LONG)

ALIGNMENT: TANGENT

CROWN: 3/16" PER FT.

STRUCTURE FILE NUMBER: 5103215

DATE BUILT: 1968, MODIFIED 1995 & 2019

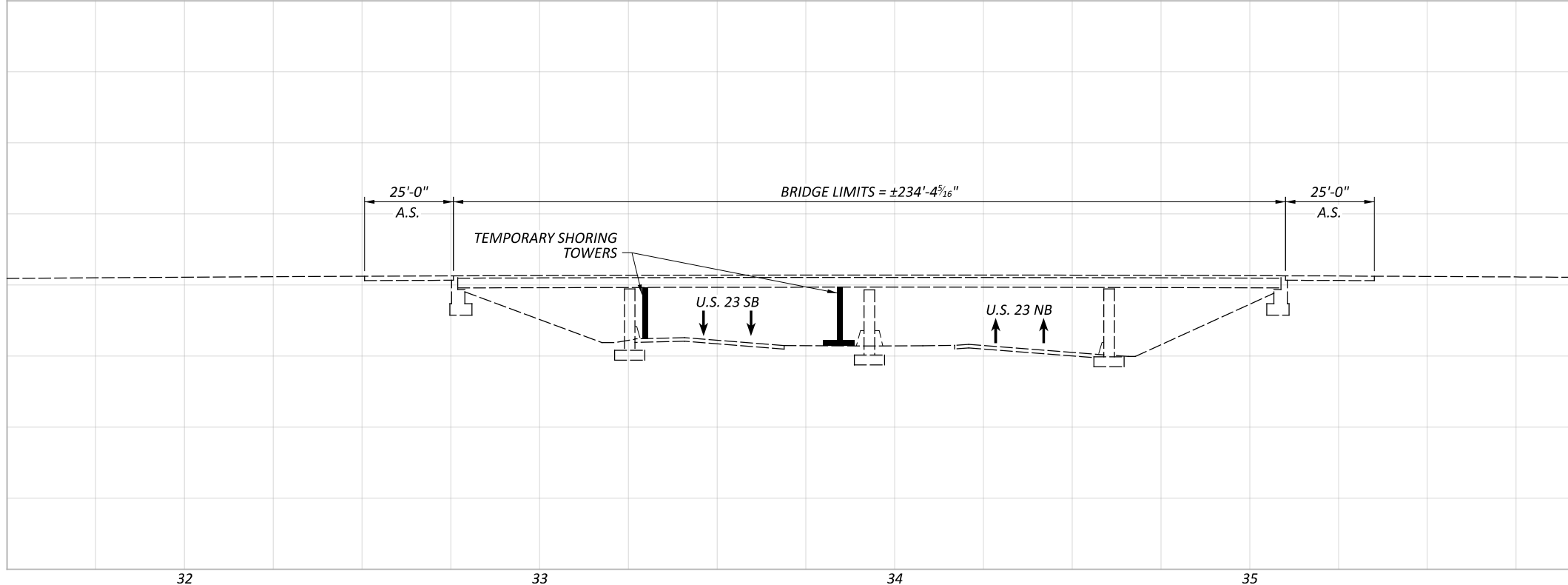
PROPOSED WORK: REPLACE AND REPAIR DAMAGED FASCIA GIRDER
AND DECK EDGE.**ITEM 630 SIGN, FLAT SHEET AS PER PLAN**

THIS WORK INCLUDES INSTALLING 1-LOW CLEARANCE SIGN W12-2-36 IN LOCATION SPECIFIED ON THIS SHEET. PRIOR TO ORDERING THE SIGN, THE CONTRACTOR SHALL FIELD VERIFY THE BRIDGE CLEARANCE ALONG EACH BEAM LINE AT THE EDGE LINE OF EACH ROUTE TO VERIFY THE CLEARANCE OF THE BRIDGE. THE POSTED CLEARANCE OF THE BRIDGE SHALL BE THE MEASURED MINIMUM DISTANCE MINUS 4". VERIFY THE CLEARANCE MEASUREMENT WITH THE DISTRICT BRIDGE ENGINEER PRIOR TO ORDERING.

ALL MATERIALS, LABOR, AND INCIDENTALS TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 630 SIGN, FLAT SHEET AS PER PLAN. (16 SF HAS BEEN CARRIED TO THE GENERAL SUMMARY)

ITEM 630 GROUND MOUNTED SUPPORT, NO. 3 POST

A QUANTITY OF 16 FT OF GROUND MOUNTED SUPPORT, NO. 3 POST HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR INSTALLATION OF W12-2-48 SIGNS.

SITE PLAN
BRIDGE NO. MAR-231-3.42
OVER U.S. 23

SFN

5103215

DESIGN AGENCY

DESIGNER
JPHCHECKER
JMREVIEWER
CAB 06/23/25PROJECT ID
122349SUBSET TOTAL
1 7SHEET TOTAL
P.12 P.18

EXISTING STRUCTURE VERIFICATION

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):
VPF-1-90 DATED 01-19-18

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATION:
SS 849 DATED/REVISED 1-18-13

DESIGN STRESSES

DESIGN DATA:

CONCRETE:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI
(SUPERSTRUCTURE)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD
STRENGTH 60-KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI

EXISTING ASTM A36 GRADE 36. DO NOT SUBJECT ANY PART OF
THE STRUCTURE TO A JACKING, PULLING OR RESTRAINING UNIT
STRESS EXCEEDING 18,000 PSI.

DESIGN STRESSES

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO
THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF
THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND
MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE
EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL
BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR
IS REFERRED TO C&MS, SECTIONS 102.05, 105.02, AND 513.04. BASE
CONTRACT BID PRICES UPON A RECOGNITION OF THE
UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID
EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE
DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON
ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN
THE FIELD.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF
SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF SUPPORTING, RAISING, OR RE-
POSITIONING EXISTING STRUCTURES TO THE REQUIREMENTS
DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN
ACCORDANCE WITH C&MS 501.05. IF DURING THE JACKING
OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE,
SEPARATION OF THE CONCRETE DECK FROM THE STEEL BEAMS, OR
OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED,
IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL
SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE
DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE
ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT
SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION
IN ACCORDANCE WITH C&MS 512.07. THE DEPARTMENT WILL NOT
PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED
REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL
CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A
REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY
FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.
THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM
BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES
THAT ARE THE CONTRACT PRICE FOR ITEM 516, JACKING AND
TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER
PLAN (SECONDARY MEMBERS)

THIS WORK CONSISTS OF THE REMOVAL OF STEEL SECONDARY
MEMBERS (CROSSFRAMES) AS SPECIFIED IN THE PLANS OR DIRECTED
BY THE ENGINEER. FLAME CUT OR SAW CUT THE EXISTING
MEMBERS TO WITH 1/8 INCH OF THE EXISTING MAIN MATERIAL
USING A MECHANICAL GUIDE ACCORDING TO C&MS 513.12 AND
PROVIDE SHIELDING AS NECESSARY TO PREVENT DAMAGE TO MAIN
OR SECONDARY MATERIALS TO BE PRESERVED. GRIND THE
REMAINING CUT SURFACES OF THE EXISTING MEMBER SMOOTH IN
PREPARATION FOR COMPLETE PENETRATION OR FILLET WELDING.
PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 MILL
(TO ACCOMMODATE THE PROPOSED REPLACEMENT MATERIALS).
DETERMINE FINAL QUANTITIES BY FIELD MEASUREMENTS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE
THE QUANTITY OF REMOVALS ON A PER POUND BASIS AND WILL
INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND
INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR
PAYMENT WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS
PER PLAN (SECONDARY MEMBERS)

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER
PLAN (MAIN MEMBERS)

THIS WORK CONSISTS OF THE REMOVAL OF STEEL MAIN MEMBERS
(FASCIA BEAM) AND WEB AND FLANGE SPLICE PLATES AS SPECIFIED
IN THE PLANS OR DIRECTED BY THE ENGINEER. SUPPORT THE
EXISTING MEMBERS ACCORDING TO ITEM 516 - JACKING AND
TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

THE EXISTING BEAM IS SEVERELY DAMAGE DUE TO IMPACT DAMAGE.
SUBMIT CONSTRUCTION PLANS FOR SUPPORTING AND REMOVING
MAIN MEMBER ACCORDING TO C&MS 501.05.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE
THE QUANTITY OF REMOVALS ON A PER POUND BASIS AND WILL
INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND
INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR
PAYMENT WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS
PER PLAN (MAIN MEMBERS).

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER
PLAN (SUPERSTRUCTURE)

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS AND
BRIDGE RAILING SYSTEMS. OTHER REMOVALS FOR THE PROJECT ARE
SEPARATELY ITEMIZED. ITEMS TO BE REMOVED INCLUDE ALL
EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND
MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE
INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED
TO BE REMOVED BY THE ENGINEER. THE DEPARTMENT WILL NOT
PERMIT THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-
RAMS. DO NOT BEGIN WORK UNTIL THE ENGINEER ACCEPTS THE
METHOD OF REMOVAL AND THE WEIGHT OF THE HAMMER SHALL
BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A
MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE
EXISTING CONCRETE REINFORCEMENT TO BE PRESERVED. CHIPPING
HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND
CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT
CONTACT WITH CONCRETE REINFORCEMENT THAT IS TO BE
RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION
PLANS ACCORDING TO C&MS 501.05.

INCLUDED IN THIS WORK IS THE REMOVAL OF THE EXISTING
HP14x117 (35FT LONG) TEMPORARY SUPPORT BEAM LOCATED ON
THE DECK AND ATTACHED TO THE EXISTING FASCIA GIRDER. THIS
BEAM WILL REMAIN PROPERTY OF DISTRICT 6 SPECIAL PROJECTS
TEAM. COORDINATE WITH ODOT DISTRICT 6 SPECIAL PROJECTS
DURING BEAM REMOVAL TO ENSURE THEY CAN RECIEVE AND MOVE
THE BEAM FROM SITE.

THE PROVISIONS OF ITEM 202 APPLY EXPECT AS SPECIFIED BY THE
FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK
REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO
BE SALVAGED AND INCORPORATED INTO THE PROPOSED
STRUCTURE.

BEFORE DECK SLAB CUTTING BEGINS, DRAW THE OUTLINE OF
PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE
DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT
HOLES 2 INCHES OUTSIDE OF THESE LINES TO CONFIRM THE
LOCATION OF THE FLANGE EDGES. DECK CUTS OVER OR WITHIN 2
INCHES OF THE FLANGE EDGES SHALL NOT EXTEND LOWER THAN
THE BOTTOM LAYER OF CONCRETE REINFORCEMENT IN THE DECK
SLAB. CUTS MADE OUTSIDE 2 INCHES OF THE FLANGE EDGES MAY
EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK
CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID
DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO
THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS
DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO
THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK,
SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO
REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN
THE ENGINEER'S APPROVAL BEFORE PERFORMING ANY REPAIR.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE
THE QUANTITY OF REMOVALS ON A CUBIC YARD BASIS. THE
DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF
REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF
STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)

ITEM 607 - FENCE, MISC.: VANDAL PROTECTION FENCE
REMOVAL AND REPLACEMENT

THIS WORK CONSISTS OF THE REMOVAL AND REPLACEMENT OF
EXISTING VANDAL PROTECTION FENCING TO ALLOW FOR THE
RECONSTRUCTION OF THE CONCRETE DECK AND BARRIER.

THE CONTRACTOR SHALL VERIFY AND NOTE THE EXISTING FENCE
POST DIMENSIONS PRIOR TO DISMANTLING.

THE CONTRACTOR SHALL REMOVE THE FENCING FABRIC IN A
MANNER TO BE RE-INSTALLED. REMOVE THE FABRIC STARTING AT
THE END OF THE BRIDGE, DETACHING IT FROM POSTS AND RAILS,
ROLLING AND SECURING IT PAST THE BARRIER RECONSTRUCTION
LIMITS.

UN-BOLT THE EXISTING POSTS AND DISMANTLE THE RAILS SUCH
THAT THEY ARE PRESERVED FOR REINSTALLATION.

REINSTALL THE VANDAL PROTECTION FENCING TO THE EXISTING
LIMITS FOLLOWING INSTALLATION OF NEW BARRIER ACCORDING TO
VPF-1-90.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE
THE QUANTITY OF REMOVALS BASED ON THE DISTANCE BETWEEN
THE LAST POSTS RETAINED. REMOVAL OF NECESSARY FABRIC IS
INCLUDED INCLUDE IN THE PER FOOT PRICE. ALL MATERIALS, TOOLS,
LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE
THE ABOVE WORK WILL BE INCLUDED WITH ITEM 607 FENCE, MISC.:
VANDAL PROTECTION FENCE REMOVAL AND REPLACEMENT.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS
PER PLAN

ALL REQUIREMENTS OF C&MS 513 APPLY TO SHOP FABRICATED
MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS
ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE
DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING
FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN
SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL
ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS
ACCORDING TO 513.06 OR SUPPLY THE ENGINEER WITH "AS BUILT"
DRAWINGS MEETING 513.06 AFTER COMPLETION OF FIELD
FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED
DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT
CONDITION. THE ENGINEER MAY CONTACT THE OFFICE OF
STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE
ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE
DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS
STAMPED, SEALED AND DATED ACCORDING TO S1002, TO THE
STRUCTURAL WELDING AND METALS SECTION OF THE OFFICE OF
MATERIAL MANAGEMENT FOR RECORD PURPOSES. THE MEMBERS
INCLUDED INTERMEDIATE CROSSFRAME MEMBERS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL INCLUDE
ALL MATERIALS, TOOLS, LABOR, EQUIPMENT, AND INCIDENTALS
NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT AND
WILL BE MEASURED ON A PER POUND BASIS WITH ITEM 513 -
STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 2, AS
PER PLAN

ALL REQUIREMENTS OF C&MS 513 APPLY. THE CONTRACTOR SHALL
FIELD VERIFY ALL MEASUREMENTS AND APPLICABLE TOLERANCES
REQUIRED FOR MAIN FASCIA GIRDER. SPLICE PLATES AND BOLTS
ARE INCLUDED IN THIS PAY ITEM AND THE CONTRACTOR SHALL FIELD
VERIFY ALL BOLT HOLE LOCATIONS AND ENSURE FIT-UP UPON
ERECTION.

MEASUREMENT AND PAYMENT: MEASUREMENT SHALL BE PER
POUND UNIT OF THE MAIN FASCIA GIRDER SPLICE TO SPLICE. COST
FOR THE PLATE STEEL AND BOLTS SHALL BE INCLUDED IN THIS
MEASUREMENT AND IS NOT SEPARATELY ITEMIZED. THE
DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR,
EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE
ABOVE WORK FOR PAYMENT AND WILL BE MEASURED ON A PER
POUND BASIS WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL
2, AS PER PLAN.

ITEM 849 HEAT STRAIGHTENING OF DAMAGED MEMBERS

THE FOLLOWING ITEMS HAVE BEEN INCLUDED TO BE USED AS
DIRECTED BY THE ENGINEER.

ITEM 849 DAMAGE ASSESSMENT: LUMP SUM
ITEM 849 SURFACE PREPARATION: LUMP SUM
ITEM 849 STRAIGHTENING DAMAGED MEMBERS: LUMP SUM

FOLLOWING REMOVAL OF MAIN MEMBER, VERIFY THE PLUMB OF
THE EXISTING MEMBERS AS TO BE REATTACHED TO. IF IT IS NOTED
THE BEAMS ARE OUT OF PLUMB, JACK AND HEAT STRAIGHTEN THE
DAMAGED MEMBERS ACCORDING TO SUPPLEMENTAL
SPECIFICATION 849

ITEM 514 - SPECIAL - SHOP PAINTING AND FIELD TOUCH
UP OF STRUCTURAL STEEL

THIS ITEM SHALL INCLUDE THE SURFACE PREPARATION, PRIME COAT,
INTERMEDIATE COAT, AND FINISH COAT FOR PAINTING OF
STRUCTURAL STEEL MEMBERS. APPLY ALL THREE COATS OF PAINT
ACCORDING TO C&MS 514 DURING SHOP PREPARATION OF
MEMBERS AND FOLLOWING ERECTING THE NEW MEMBERS
PERFORM FIELD TOUCH UPS TO EXISTING AND NEW MEMBERS IN
AREAS WHERE THERE IS EXPOSED STEEL.

THE CONTRACTOR SHALL MATCH THE EXISTING PAINT COLOR AS
CLOSE AS POSSIBLE.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE
THE QUANTITY OF PAINTING BASED ON THE SQUARE FOOT OF NEW
STEEL, BOLTED CONNECTION PLATES, AND ESTIMATED PORTION OF
EXISTING STEEL TO BE REPAINTED DUE TO
HEATSTRAIGHTENING/WELDING. THE DEPARTMENT WILL INCLUDE
ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS
NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH
ITEM 514 - SPECIAL -SHOP PAINTING AND FIELD TOUCH UP OF
STRUCTURAL STEEL: SF.

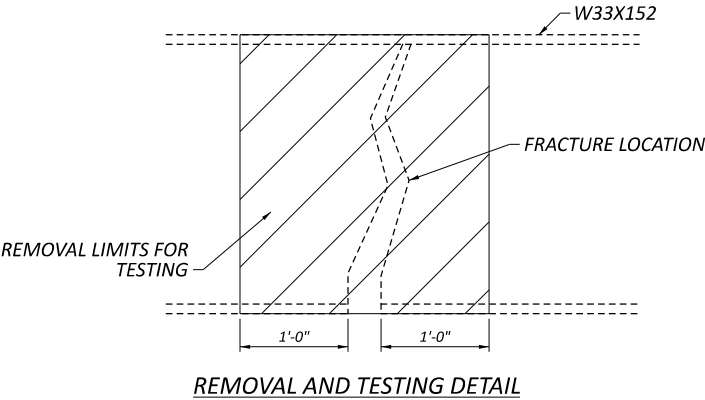
ITEM 530 SPECIAL - STRUCTURES, MISC, AS PER PLAN -
EXISTING BEAM REMOVAL AND TESTING

REMOVAL AND TESTING
THIS WORK SHALL CONSIST OF REMOVING, CATALOGING,
TRANSPORTING, TESTING AND REPORTING RESULTS OF STRUCTURAL
STEEL. THE STRUCTURAL STEEL TO BE REMOVED FOR TESTING SHALL
BE 1'-0" ON EACH SIDE OF THE FRACTURE (~2'-0" TOTAL REMOVAL).
THE REMOVAL SHALL INCLUDE THE BOTTOM FLANGE, WEB AND TOP
FLANGE.

THE PORTION OF THE BEAM REMOVED FOR TESTING SHALL BE
MARKED WITH THE DIRECTION OF STATIONING AND THE UP
DIRECTION PRIOR TO TRANSPORTING.

THE TESTING FACILITY SHALL EXTRACT A TOTAL OF FIVE COUPONS
FROM THE PORTION OF THE BEAM REMOVED FOR TESTING. ONE
COUPON SHALL BE TAKEN FROM THE TOP FLANGE. TWO COUPONS
FROM THE BOTTOM FLANGE AND THE WEB ON EACH SIDE OF THE
FRACTURE PLAN. EACH COUPON SHALL BE TESTED FOR CVN
TESTING, ASTM E23 OR ASTM A370, AT AASHTO TEMPERATURE
ZONE 2 AND THE ROCKWELL HARDNESS FOR STEEL MEETING ASTM
A36. THE CONTRACTOR SHALL SUBMIT ALL TEST RESULTS TO THE
ENGINEER.

THE TESTING LABORATORY (OR EQUAL)
NSL ANALYTICAL
4535 RENAISSANCE PARKWAY
CLEVELAND, OH 44128
PHONE: 216-475-9000



STRUCTURE NOTES
BRIDGE NO. MAR-231-3.42
OH 231 OVER US 23


SFN	
5103215	
DESIGN AGENCY	
DESIGNER	CHECKER
CAB	JM
REVIEWER	
DRO 03/13/25	
PROJECT ID	
122349	
SUBSET	TOTAL
2	7
SHEET	TOTAL
P.13	P.18

ESTIMATED QUANTITIES									
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11301	14	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)			14		
202	11401	561	LB	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SECONDARY MEMBERS)			561		
202	11401	6,410	LB	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (MAIN MEMBERS)			6,410		
509	10000	2,526	LB	EPOXY COATED REINFORCING STEEL			2,526		
511	34410	6	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE			6		
511	34448	8	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			8		
512	10050	43	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			43		
512	10300	6	SY	SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN			6		
513	10201	561	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			561		
513	10241	6,410	LB	STRUCTURAL STEEL MEMBERS, LEVEL 2, AS PER PLAN			6,410		
514	80020	54	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL					
516	47001		LS	JACKING TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					
530	00200		LS	STRUCTURES, MISC, AS PER PLAN.; EXISTING BEAM REMOVAL AND TESTING					13
607	98000	55	FT	FENCE, MISC.: VANDAL PROTECTION FENCE REMOVAL AND REPLACEMENT			55		
849	10000		LS	DAMAGE ASSESSMENT					
849	10500		LS	SURFACE PREPARATION					
849	10700		LS	STRAIGHTENING DAMAGED MEMBERS					

ESTIMATED STRUCTURE QUANTITIES
BRIDGE NO. MAR-231-3.42
OH 231 OVER US 23

SFN
5103215

DESIGN AGENCY



DESIGNER
CAB

CHECKER
JM

REVIEWER
DRO 03/13/25

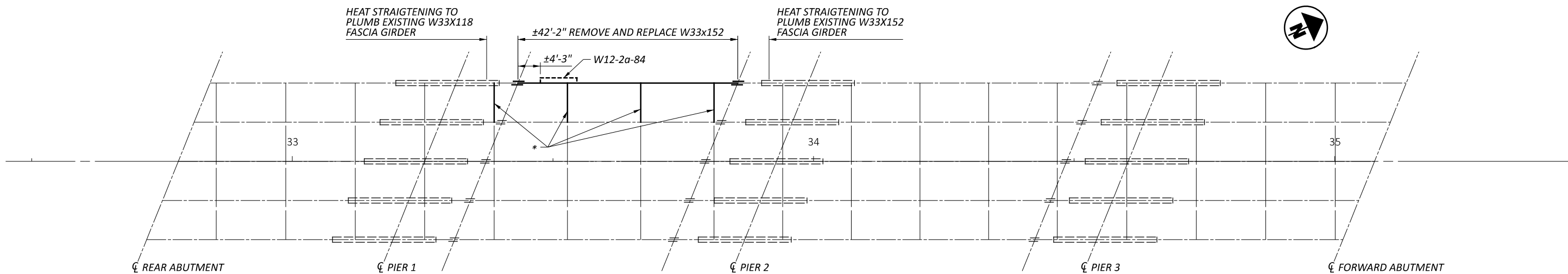
PROJECT ID
122349

SUBSET
3

TOTAL
7

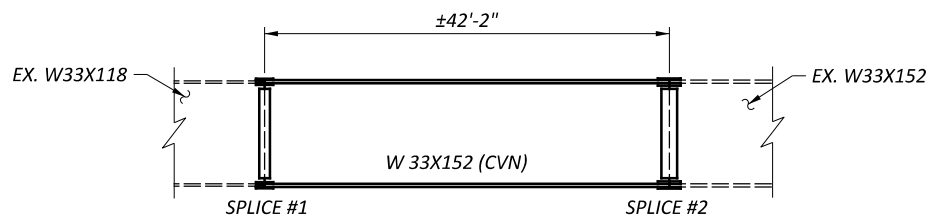
SHEET
P.14

TOTAL
P.18

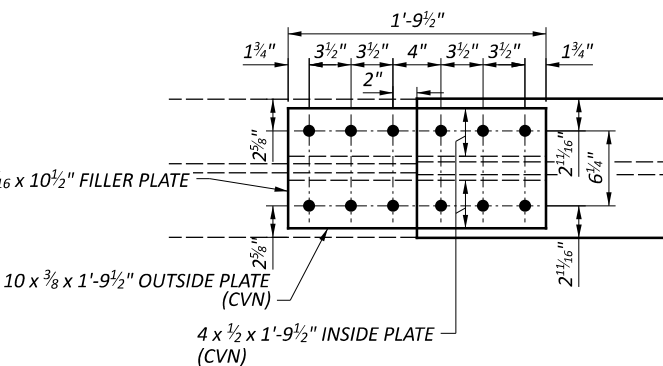
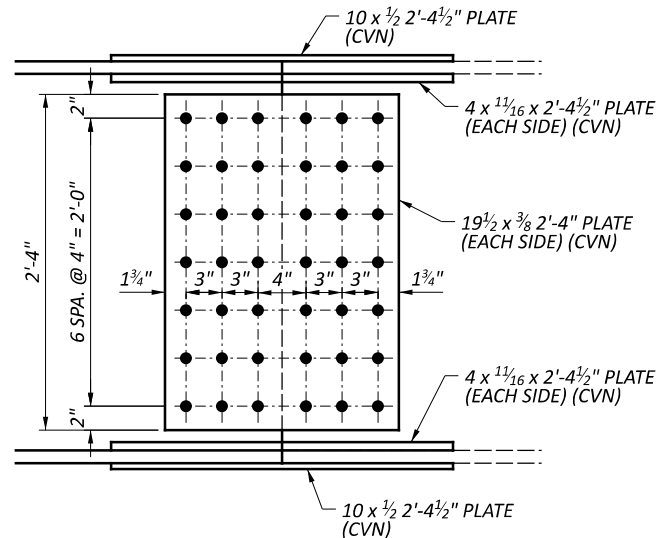
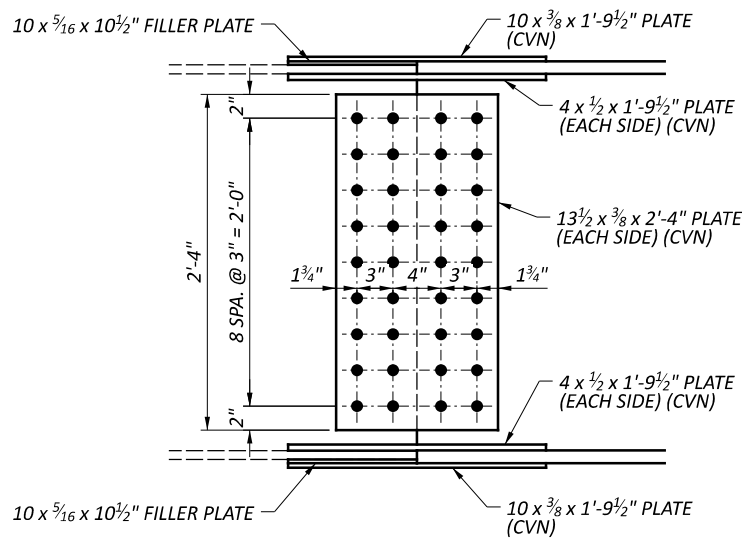


* - REMOVE AND REPLACE EXISTING INTERMEDIATE CROSSFRAMES
L 3x3x $\frac{7}{16}$

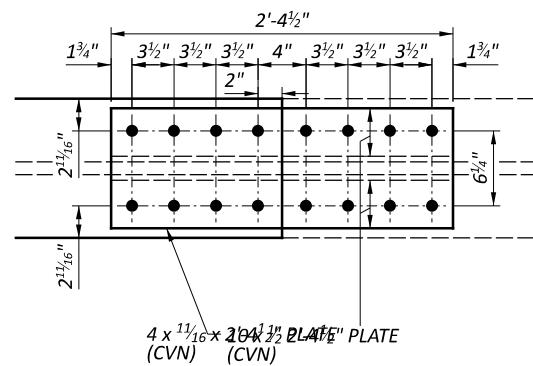
FRAMING PLAN



BEAM ELEVATION



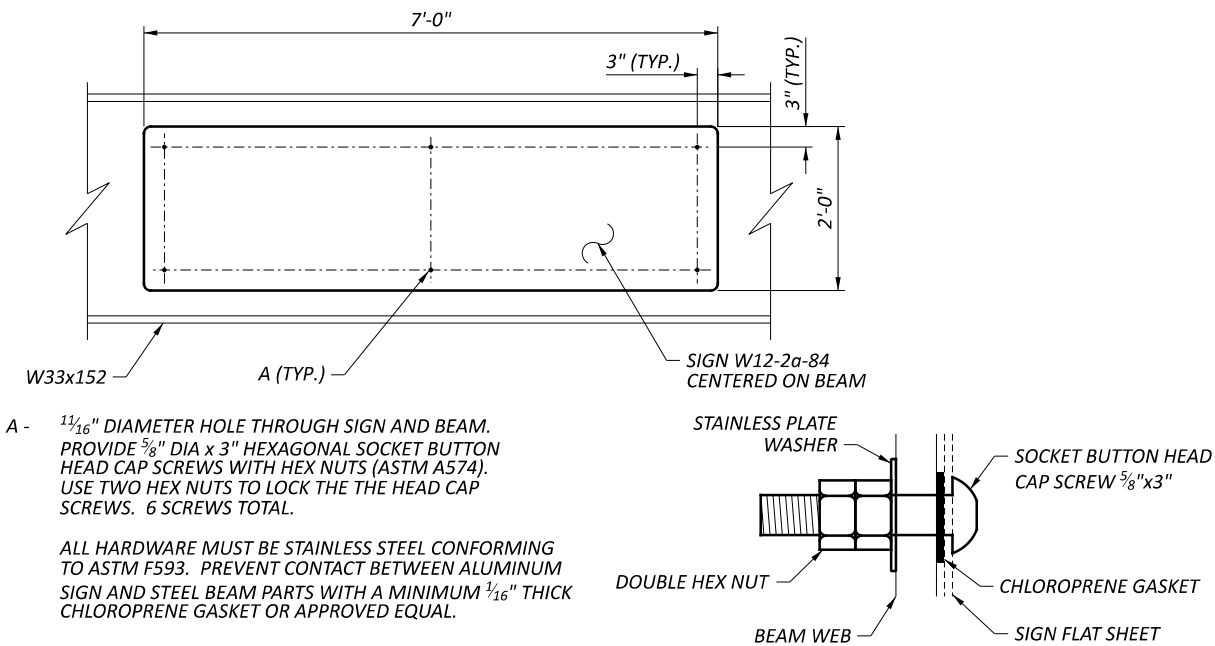
SPLICE #1



SPLICE #2

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING BOLT PATTERN DIMENSIONS OF EXISTING BEAM PRIOR TO DRILLING WEB AND FLANGE SPLICE PLATES. ENSURE FIT UP OF PROPOSED W33X152 LEAVING A $\frac{1}{4}$ " GAP MAXIMUM BETWEEN EXISTING BEAMS.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN C&MS 711.01.
3. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325 UNLESS OTHERWISE NOTED.



W12-2a-84 SIGN ATTACHMENT DETAILS

ITEM 630 SIGNING, MISC.: STRUCTURE MOUNTED SIGN

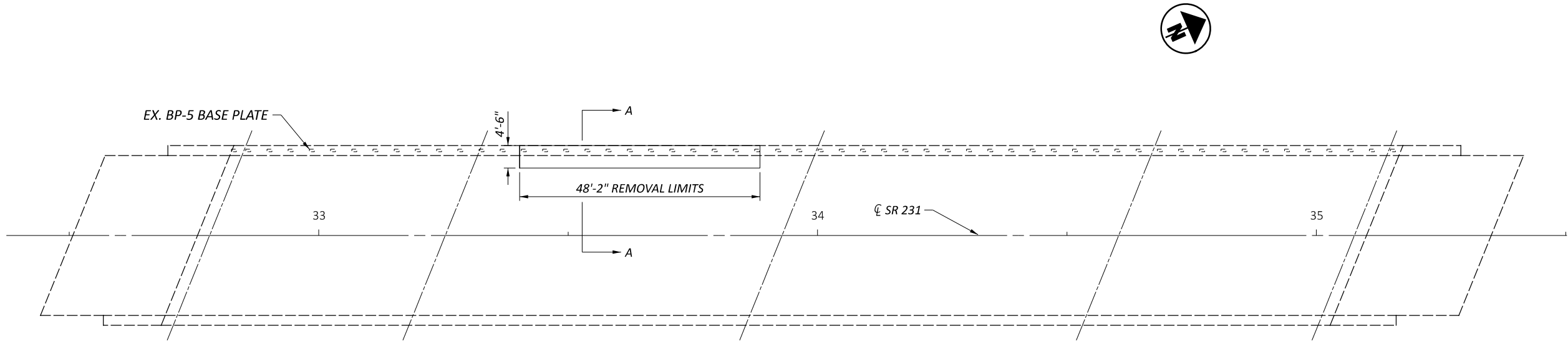
THIS WORK INCLUDES MOUNTING OF W12-2a-84 CLEARANCE SIGN FOR STRUCTURE MAR-231-3.42. THE CONTRACTOR SHALL FURNISH THE FLAT SHEET ACCORDING TO STANDARD DRAWING TC-52.20 AND DRILL HOLES INTO THE SIGN AND STEEL BEAM ACCORDING TO THE DETAILS ABOVE. PROVIDE ALL SPECIFIED HARDWARE AND CONNECT THE SIGN IN ACCORDANCE WITH THE ABOVE DETAILS AND SPECIFICATIONS.

PRIOR TO ORDERING THE SIGN, THE CONTRACTOR SHALL FIELD VERIFY THE BRIDGE CLEARANCE ALONG EACH BEAM LINE AT THE EDGE LINE OF SOUTHBOUND ROUTE TO VERIFY THE CLEARANCE OF THE BRIDGE. THE POSTED CLEARANCE OF THE BRIDGE SHALL BE THE MEASURE MINIMUM DISTANCE MINUS 4". VERIFY THE CLEARANCE MEASUREMENT WITH THE DISTRICT BRIDGE ENGINEER PRIOR TO ORDERING.

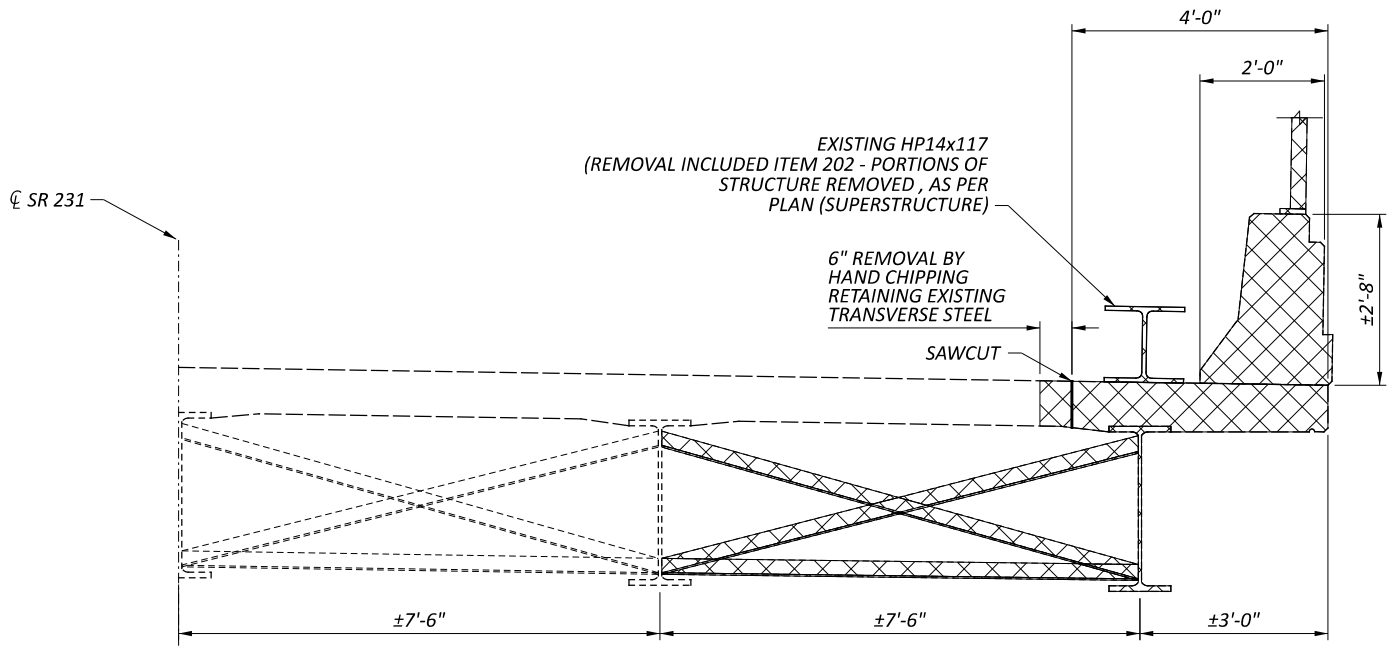
ENSURE FIELD PAINTING OF WEB HOLES IS CONDUCTED PRIOR TO PLACEMENT OF SIGN TO ENSURE BARE STEEL IS COVERED.

ALL MATERIALS, DRILLING, LABOR AND INCIDENTALS SHALL BE INCLUDE IN THE BID PRICE FOR ITEM 630 SIGNING, MISC.: STRUCTURE MOUNTED SIGN. (1 - EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY)



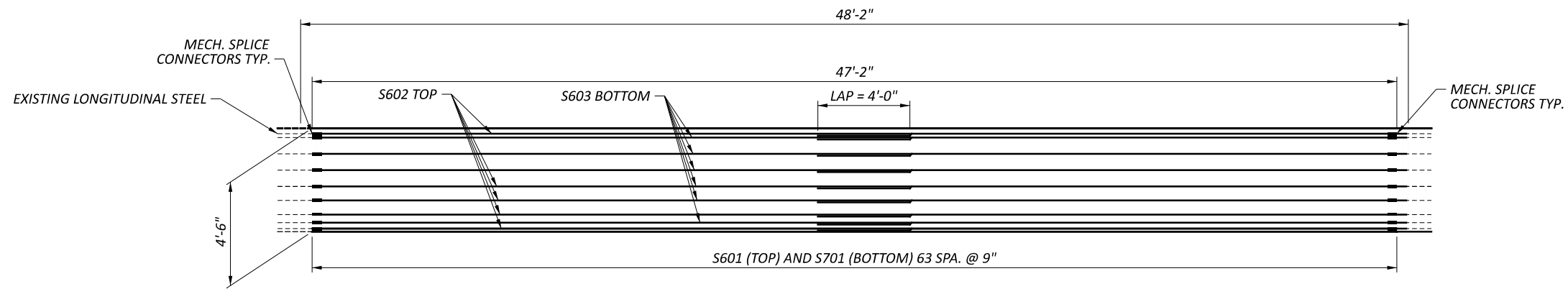


PLAN



SECTION A-A

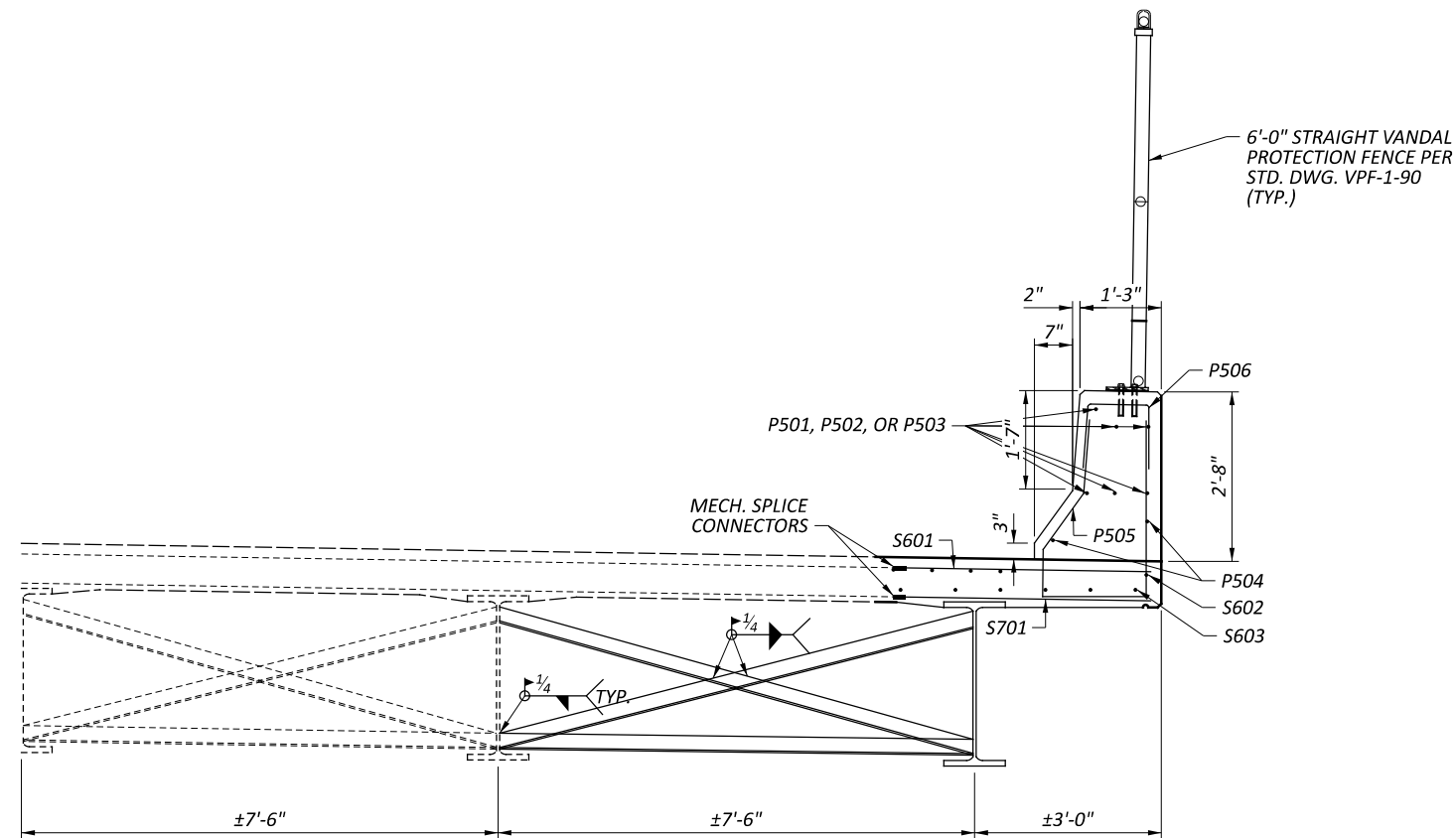
REMOVAL LIMITS



DECK REINFORCING PLAN TOP AND BOTTOM MAT

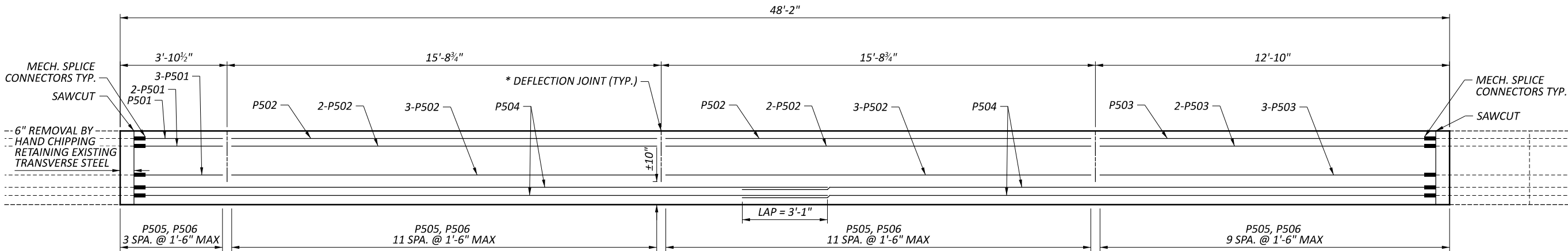
NOTES:

- 1 - LOCATION OF PROPOSED AND EXISTING REINFORCING STEEL SHOWN TO BE THE APPROXIMATE LOCATION BASED ON THE EXISTING PLANS.
- 2 - SEAL ALL NEW CONSTRUCTION JOINTS WITH HMWM AS PER C&MS 511.19.



TRANSVERSE SECTION

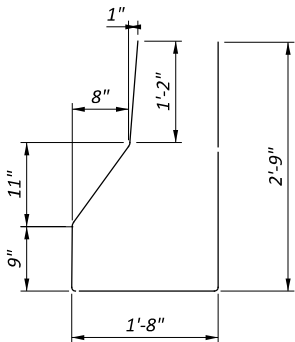




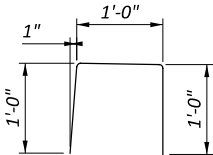
PARAPET ELEVATION DETAILS

- * - SAWCUT DEFLECTION JOINTS MINIMUM OF 1¼" ALONG THE PERIMETER OF PARAPET WHILE CONCRETE IS STILL GREEN OR AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.
- AFTER THE CONCRETE CURING PERIOD SPECIFIED IN CMS 511.14 HAS BEEN REACHED, PERFORM 4" SAWCUT ALONG THE PERIMETER OF THE PARAPET.
- SEAL THE PERIMETER OF THE DEFLECTION JOINTS TO A MINIMUM DEPTH OF 1" WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPW S. LEAVE THE BOTTOM 1/2" OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.
- SAWCUTTING AND SEALING OF DEFLECTION JOINTS SHALL BE INCLUDED FOR PAYMETN IN ITEM 511 CLASS QC2 CONCRETE, SUPERSTRUCTURE.

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S601	64	3'-10"	369	STR							
S602	10	25'-7"	385	STR							
S603	12	25'-7"	462	STR							
S701	64	3'-10"	502	STR							
P501	6	3'-3"	21	STR							
P502	12	15'-5"	193	STR							
P503	6	12'-2"	77	STR							
P504	4	25'-2"	105	STR							
P505	38	7'-6"	298	44							
P506	38	3'-0"	119	46							
SUBTOTAL			2526								



TYPE-44



TYPE-46