

I EXCEPTIONS	ENGINEERS SEAL: FOR STRUCTURES OVER 20' SPAN SCHE OF OF GREGORY D. JOHNSON 66952								
UNDERGROUND UTILITIES	OVAL			STANDA	RD CONSTRUCTIO	N DRAWINGS		EMENTAL ICATIONS	SPECIAL PROVISIONS
Contact Two Working Days Before You Dig	SIGNED: Duy Station	RM-4.2	10/24/19				800-201	9 10/18/19	METROPARKS
	DATE: 11/14/2019						821		ACCESS PERMIT
		MT-95.30	7/19/19				832		02/24/2020
<b>HIO811</b> .org	ENGINEERS SEAL:	MT-95.31	7/19/19				921	4/20/12	
	FOR ENTIRE PLAN EXCEPT	MT-95.45	4/19/19						EXISTING
Before You Dig	STRUCTURES OVER 20' SPAN	MT-95.50	7/21/17				 		PAINT SURVEY
	STE OF OT	MT-97.10	4/19/19				 		10/04/19
HI0811, 8-1-1, or 1-800-362-2764	STA HOM	MT-101.70	7/20/18				 		
(Non-members must be called directly)	TONY W	MT-101.75	7/15/16				 		
	RO GRIESHOP	MT-102.10	1/18/19						
PLAN PREPARED BY:	70196	MT-105.10	7/19/13				 		
CARPENTER_//	NOUNCE / STERE	MT-110.10	7/19/13						
	-T-WD int F	TC-41.20	10/18/13						
MARTY transportation	SIGNED: Tom W. Dushaf	TC-52.10	10/18/13				 		
6612 SINGLETREE DRIVE COLUMBUS, OH 43229 614.856.2424 * WWW.CMTRAN.COM	DATE: 11/14/2019	TC-52.20	7/20/18						

DESIG

NONE

 $\bigcirc$ 

 $\bigcirc$ 

# PROJECT DESCRIPTION

PAINT THE STRUCTURAL STEEL OF THE I.R. 480 BRIDGE OVER THE ROCKY RIVER AND THE LORAIN AVE (S.R. 10) BRIDGE OVER THE ROCKY RIVER.

# EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: N/A ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A N/A NOTICE OF INTENT EARTH DISTURBED AREA: (MAINTENANCE PROJECT)

# 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.

# 2019 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 AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED DATE 11/14/19 DISTRICT DEPUTY DIRECTOR

APPROVED DATE\_\_\_

DIRECTOR, DEPARTMENT OF TRANSPORTATION

CUY-480-6.47/VAR	RAILROAD INVOLVEMENT	CONSTRUCTION PROJECT NO.	PID NO.	FEDERAL PROJECT NO.
PAINT	NONE		22131	NON-FEDERAL

22/

### PROJECT DESCRIPTION

PAINT THE STRUCTURAL STEEL OF THE I.R. 480 BRIDGE OVER THE ROCKY RIVER AND THE LORAIN AVE (S.R. 10) BRIDGE OVER THE ROCKY RIVER.

### EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO SECTIONS 102.05, 105.02, AND 513.04 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12 OFFICE 5500 TRANSPORTATION BOULEVARD GARFIELD HEIGHTS, OH 44125

OR

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/ CONTRACTS/PAGES/DESIGNFILES.ASPX

#### LIMITS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING LIMITATIONS:

1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO THE MAINTENANCE OF TRAFFIC SHEETS IN THIS PLAN).

### COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HER/HIS OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED. IR 480 RESURFACING PROJECTS, CUY-480-0.00 AND CUY-480-6.78, ARE SCHEDULED TO BE UNDER CONSTRUCTION WITHIN THE LIMITS OF CONSTRUCTION AT CUY-480-0647. ALSO A SLOPE REPAIR PROJECT, CUY-90-07.58/VAR SLOPE, IS SCHEDULED TO BE UNDER CONSTRUCTION UNDER BOTH CUY-480-0647 AND CUY-10-0869.

#### EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC THE CONTRACTOR'S ATTENTION IS DIRECTED TO C&MS 614.035. IN ADDITION, THE FOLLOWING PROVISIONS SHALL APPLY:

- ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN THIRTY DAYS.
- ALL DISTURBED AREAS SHALL BE RETURNED TO -THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE STATE.

#### CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS LISTED BELOW:

CUY-480-0647: 9:00 PM AND 7:00 AM MONDAY THRU SUNDAY AND ALL-DAY HOLIDAYS

CUY-10-0869: 7:00 PM AND 8:00 AM MONDAY THRU SATURDAY, ALL-DAY SUNDAYS, AND ALL-DAY HOLIDAYS

IN ADDITION. DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

### 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 ARFA.

IF ANY UTILITIES ARE DAMAGED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE APPROPRIATE UTILITY OWNER(S).

### STAGING AREA ON/WITHIN STATE RIGHT-OF-WAY

THERE ARE NO SPECIFIC AREAS GIVEN IN THE PLANS FOR THE CONTRACTOR TO USE AS STAGING AREA(S). IF THE CONTRACTOR WANTS TO USE AN AREA(S) FOR STAGING, REGARDLESS IF IT FALLS WITHIN THE PROJECT LIMITS OR NOT. THE CONTRACTOR IS TO CONTACT MELVIN STAFFORD AT 216-584-2137 AT DISTRICT 12 IN ORDER TO APPLY FOR A PERMIT PER SECTION 107.02 OF THE C&MS. IF A PERMIT IS GRANTED, ALL CONDITIONS OF THE PERMIT SHALL BE MET IN ADDITION TO THE REQUIREMENTS OF 104.04 OF THE C&MS, AT NO COST TO THE STATE. IF THE PROJECT ENGINEER DEEMS THAT ALL THE CONDITIONS OF THE PERMIT WERE NOT MET, THEN 10% OF THE CONTRACT BID AMOUNT FOR MOBILIZATION HALL BE WITHHELD UNTIL ALL CONDITIONS OF THE PERMIT ARE SATISFIED.

### CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201. CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING. THIS ITEM SHALL INCLUDE TRIMMING BACK ALL TREE BRANCHES AND BRUSH WHICH ARE WITHIN 10'-O" OF ANY LOCATION TO HAVE A PAINTED OR SEALED SURFACE. ANY COMPLETE TREE REMOVALS REQUIRED FOR CONSTRUCTION ACCESS ARE TO BE APPROVED BY THE ENGINEER.

#### COORDINATION WITH CLEVELAND METROPARKS

ODOT HAS OBTAINED A CONSTRUCTION ACCESS PERMIT FROM CLEVELAND METROPARKS FOR WORK WITHIN CLEVELAND METROPARKS PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL COMPLIANCE WITH THE CONSTRUCTION ACCESS PERMIT AS PROVIDED IN THE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL RESTORE THE PARK PROPERTY TO A CONDITION AT LEAST AS GOOD AS EXISTED PRIOR TO THE PROJECT AT NO ADDITIONAL COST TO THE STATE.

THE CONTRACTOR SHALL PROVIDE CLEVELAND METROPARKS WITH AN OPPORTUNITY TO INSPECT THE PARK PROPERTY PRIOR TO COMPLETION OF CONSTRUCTION.

THE CONTRACTOR SHALL COORDINATE THE PROJECT SCHEDULE WITH CLEVELAND METROPARKS.

CLEVELAND METROPARKS 4101 FULTON PARKWAY CLEVELAND, OH 44144 ATTN: SEAN MCDERMOTT PHONE: 216-635-3258

#### RESTORATION AND CLEAN UP

RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO THAT EXISTING THE WORK WAS STARTED PER C&MS 104.04.

REMOVE ANY BROKEN GLASSWARE FOUND BY CREWS IN THE WORK AREA. DISPOSE OF ANY BROKEN GLASS IN REGULAR RUBBISH DISPOSAL UNITS. DISPOSE OF ALL REMOVED MATERIALS OFF OF THE RIGHT OF WAY AND PARK PROPERTY. PAYMENT FOR RESTORATION WORK IS INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN VALLEY PARKWAY IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. AT THE COMPLETION OF CONSTRUCTION, VALLEY PARKWAY SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR CONSTRUCTION ACCESS AT NO ADDITIONAL COST TO THE STATE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

### **INTERIM COMPLETION DATE**

ALL ABOVE DECK WORK ITEMS ON CUY-10-0869 SHALL BE COMPLETE BY NOVEMBER 15, 2020. ABOVE DECK WORK ITEMS INCLUDE BRIDGE RAILING REPAIR, SEALING OF CONCRETE (SIDEWALK, CURB AND DECK FASCIA), AND ALL ABOVE DECK PAINTING AS DESCRIBED IN THE PLANS. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, A DISINCENTIVE SHALL BE ACCESSED IN THE AMOUNT OF \$4.000 PER CALENDAR DAY BEGINNING NOVEMBER 16, 2020.

### WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

# ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER I THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FFFT.

### ENVIRONMENTAL COMMITMENTS

TO MINIMIZE IMPACTS TO THE KIRTLAND'S WARBLER DURING MIGRATION, TREES AND BRUSH LOCATED WITHIN 3-MILES OF LAKE ERIE SHORELINE WILL NOT BE REMOVED BETWEEN APRIL 22ND AND JUNE IST OR BETWEEN AUGUST 15TH AND OCTOBER 15TH. IF THIS SPECIES IS ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS DURING CONSTRUCTION OPERATIONS, ALL CONSTRUCTION OPERATIONS WILL CEASE AND THE USFWS COLUMBUS FIELD OFFICE BE NOTIFIED IMMEDIATELY (614-416-8993). ACTIVITY WILL NOT RESUME UNTIL COORDINATION WITH USFWS HAS BEEN CONCLUDED.

THE CONTRACTOR SHALL ENSURE ACCESS TO ROCKY RIVER RESERVATION TO BE MAINTAINED AT ALL TIMES, EXCEPT FOR THE TIME NEEDED TO TEMPORARILY OCCUPY THE PROPERTY.

THE CONTRACTOR SHALL ENSURE APPROPRIATE SIGNAGE TO BE INSTALLED TO ALERT USERS OF ROCKY RIVER RESERVATION OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS.

THE CONTRACTOR SHALL ENSURE THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT OR MATERIALS TO NOT TAKE PLACE OUTSIDE PROPOSED CONSTRUCTION LIMITS THAT ARE WITHIN THE DEFINED BOUNDARIES OF THE 4(F) PROPERTY.

THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND CLEVELAND METROPARKS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL ENSURE TEMPORARY CONSTRUCTION FENCING TO BE INSTALLED ALONG PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE 4(F) PROPERTY AND THE PUBLIC.

THE FENCE SHALL BE BRIGHT ORANGE PLASTIC NYLON CONSTRUCTION FENCE SECURELY FASTENED TO WOOD STIFFENER STAKES AT NO MORE THAN 6 FOOT SPACING. THE CONSTRUCTION FENCE SHALL BE NOMINALLY 4 FEET HIGH AT THE TOP EDGE AND SHALL NOT SAG BELOW 36 INCHES (12 INCH SAG). THE CONTRACTOR SHALL MAINTAIN OR REPLACE DAMAGED FENCE, AS DIRECTED BY THE ENGINEER, FOR THE DURATION OF WORK AT NO ADDITIONAL COST TO THE STATE. REMOVE THE TEMPORARY CONSTRUCTION FENCE UPON THE COMPLETION OF WORK. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER AND CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 607 - FENCE, MISC.: CONSTRUCTION FENCE 3000 FT

ш -0 Ζ ∢ £ ш Ζ ш G £ ◄ >  $\overline{}$ 47 Q 4 0 Δ ω 4 > C 2

22

S

#### BRIDGE NO. CUY-480-0647

### ITEM 514 - FIELD PAINTING OF EXISTING STEEL

THE CONTRACTOR SHALL NOT OVERSPRAY ONTO THE CONCRETE SUPERSTRUCTURE COMPONENTS, DECK PARAPETS, AND CONCRETE SUBSTRUCTURE COMPONENTS (E.G. BACKWALLS, ABUTMENTS, AND PIERS). PAINTING SHALL BE CONFINED TO THE STRUCTURAL STEEL COMPONENTS, UTILITY SUPPORTS. DRAINAGE SYSTEM DOWNSPOUTS SHALL BE PAINTED FROM DECK BOTTOM TO TOP OF PIER CAP, ALONG WITH SCUPPERS.

UTILITY CONDUITS SHALL NOT BE PAINTED. STEEL UTILITY SUPPORTS, DRAINAGE SCUPPERS, ROCKERS, BOLSTERS, AND THE INSPECTION HANDRAILS SHALL BE PAINTED.

THE CONTRACTOR SHALL NOT BLAST OR PAINT THE INSPECTION CABLES. INSPECTION CABLES SHALL BE PROTECTED OR COVERED FROM SURFACE PREPARATION AND PAINT OVERSPRAY.

THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR #595B-34128 (GREEN, GLOSS).

SUBMIT WORKING DRAWINGS AND CALCULATIONS FOR THE PAINT CONTAINMENT SYSTEMS/ENCLOSURE PER C&MS 501.05B, EXCEPT AS NOTED. THE PAINT CONTAINMENT SYSTEM/ENCLOSURE SHALL BE PROPERLY DESIGNED TO WITHSTAND GRAVITY AND WIND LOADINGS AND SHALL NOT IMPOSE ANY DETRIMENTAL EFFECTS ON THE STRUCTURAL INTEGRITY OF THE BRIDGE. STRESSES IN BRIDGE MEMBERS/COMPONENTS SHALL NOT EXCEED ALLOWABLE OPERATING STRESSES AS SET FORTH IN THE AASHTO MANUAL FOR BRIDGE EVALUATION, LATEST EDITION. THE WIND SPEED USED FOR THE DESIGN OF THE CONTAINMENT SYSTEM/ENCLOSURE SHALL BE DETERMINED BY THE CONTRACTOR. IF WIND SPEEDS ARE FORECASTED TO EXCEED THESE LIMITS, THE CONTRACTOR SHALL HAVE A PLAN IN PLACE TO MODIFY/REMOVE THE CONTAINMENT SYSTEM SO THAT THE ALLOWABLE STRESSES IN BRIDGE MEMBERS ARE NOT EXCEEDED. ALL COSTS ASSOCIATED WITH MODIFICATION/REMOVAL OF THE CONTAINMENT SYSTEM SHALL BE AT THE CONTRACTOR'S EXPENSE. ALL DEBRIS FROM ANY OPERATION LISTED ABOVE (PAINT, RUST, MILLSCALE, SOLVENT, WATER, ETC.) MUST BE COLLECTED/CONTAINED WITHIN A MOVABLE WORK PLATFORM AND PROPERLY DISPOSED OF AS DEFINED IN C&MS 514 AND 107.19.

#### PAINT COMPATIBILITY TEST SECTION

BEFORE ANY PAINTING CAN BEGIN ON THIS BRIDGE (AND AT LEAST 24 HOURS PRIOR TO PAINTING), A 2' X 2' SECTION OF EXISTING SOUND PAINT SHALL BE REMOVED DOWN TO BARE METAL. THE PRIMER TO BE USED SHALL BE APPLIED TO THE TEST SECTION MAKING SURE THAT PRIMER OVERLAPS EXPOSED EDGES OF SOUND PAINT. ANY LIFTING, WRINKLING OR OTHER DETRIMENTAL EFFECTS ON THE SURROUNDING SOUND PAINT WITHIN THE FIRST 24 HOURS SHALL BE GROUNDS FOR DISAPPROVAL OF THE SELECTED PRIMER AND ANOTHER PRIMER SHALL BE SELECTED FOLLOWED BY ANOTHER TEST SECTION. THE COST OF THESE TEST SECTIONS SHALL BE INCLUDED FOR PAYMENT WITH SURFACE PREPARATION.

#### BRIDGE NO. CUY-10-0869

### ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF ANY EXISTING COATINGS. NO ADDITIONAL PAYMENT WILL BE MADE FOR REMOVAL OF EXISTING CONCRETE SEALER AND SURFACE PREPARATION.

THE RECENTLY INSTALLED VANDAL PROTECTION FENCE AND ASSOCIATED COMPONENTS SHALL BE PROTECTED WHEN SEALER IS APPLIED.

THE COLOR OF THE PROPOSED EPOXY-URETHANE SEALER SHALL MATCH THE EXISTING SEALER COLOR.

IN ADDITION TO THE LIMITS SHOWN ON SHEET 21, INCLUDE ALL EXPOSED CONCRETE SURFACES OF THE ABUTMENTS AND PIERS.

### BRIDGE NO. CUY-10-0869

### <u>ITEM 512 - SEALING OF CONCRETE SURFACES</u> (NON-EPOXY), AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF ANY EXISTING COATINGS. NO ADDITIONAL PAYMENT WILL BE MADE FOR REMOVAL OF EXISTING CONCRETE SEALER AND SURFACE PREPARATION.

### BRIDGE NO. CUY-10-0869

### ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN

# <u>ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN</u>

CONCRETE REPAIR QUANTITIES HAVE BEEN PROVIDED FOR EACH SUBSTRUCTURE UNIT BASED ON FIELD INVESTIGATION AND PREVIOUS INSPECTION REPORTS. SPECIFIC PATCHING AND CRACK REPAIR LOCATIONS SHALL BE DETERMINED BY THE ENGINEER. ALL ACCESS REQUIRED TO DETERMINE PATCHING AND CRACK REPAIR LOCATIONS SHALL BE PROVIDED BY THE CONTRACTOR.

ALL CONCRETE REPAIRS SHALL BE PER CMS 519 OR 512.07 UNLESS NOTED OTHERWISE.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN CMS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED, INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. WHERE APPLICABLE, CONTRACTOR SHALL ENSURE ANY EXISTING BRIDGE COMPONENTS ARE PROTECTED DURING THE PATCHING OPERATIONS.

CONCRETE PATCHING SHALL BE FORMED TO MATCH ORIGINAL BRIDGE AESTHETICS AND GEOMETRY.

NO WORK SHALL BE PERFORMED BELOW THE HIGH-WATER ELEVATION.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT UNDER THE RESPECTIVE PAY ITEMS.

LONG	RETE REPAIR QUANTIT.	IES TABLE
SUBSTRUCTURE UNIT	ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN	ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN
WEST ABUTMENT	37	5
EAST ABUTMENT	50	20
PIER 1	30	15
PIER 2	90	35
PIER 3	99	14
PIER 4	53	11
PIER 5	10	4
PIER 6	3	0
PIER 7	0	4
PIER 8	0	2
TOTAL CARRIED TO GENERAL SUMMARY	372 FT	110 SF

CONCRETE DEDAID OUANITITIES TABLE

#### BRIDGE NO. CUY-10-0869

### ITEM 514 - FIELD PAINTING OF EXISTING STEEL

ALL STEEL SURFACES SHALL BE PAINTED UNLESS STATED OTHERWISE. UTILITIES SHALL NOT BE PAINTED BUT SHALL BE PROTECTED FROM DAMAGE DURING BLASTING AND PAINTING OPERATIONS. ALL UTILITY SUPPORT BRACKETS SHALL BE PAINTED. THE RECENTLY INSTALLED VANDAL PROTECTION FENCE AND ASSOCIATED COMPONENTS SHALL NOT BE PAINTED. ANY SURFACE NOT REQUIRED TO BE PAINTED SHALL BE PROTECTED PER C&MS 514.23. THE CONTRACTOR WILL BE REQUIRED TO REPAIR ALL DAMAGE CAUSED BY BLASTING AND PAINTING OPERATIONS.

SUBMIT WORKING DRAWINGS AND CALCULATIONS FOR THE PAINT CONTAINMENT SYSTEM/ENCLOSURE PER C&MS 501.05B EXCEPT AS NOTED. THE PAINT CONTAINMENT SYSTEM/ENCLOSURE SHALL BE PROPERLY DESIGNED TO WITHSTAND GRAVITY AND WIND LOADINGS AND SHALL NOT IMPOSE ANY DETRIMENTAL EFFECTS ON THE STRUCTURAL INTEGRITY OF THE BRIDGE. STRESSES IN BRIDGE MEMBERS/COMPONENTS SHALL NOT EXCEED ALLOWABLE OPERATING STRESSES AS SET FORTH IN THE AASHTO MANUAL FOR BRIDGE EVALUATION, LATEST EDITION. THE WIND SPEED USED FOR THE DESIGN OF THE CONTAINMENT SYSTEM/ENCLOSURE SHALL BE DETERMINED BY THE CONTRACTOR. IF WIND SPEEDS ARE FORECASTED TO EXCEED THESE LIMITS, THE CONTRACTOR SHALL HAVE A PLAN IN PLACE TO MODIFY/REMOVE THE CONTAINMENT SYSTEM SO THAT THE ALLOWABLE STRESSES IN BRIDGE MEMBERS ARE NOT EXCEEDED. ALL COSTS ASSOCIATED WITH MODIFICATION/REMOVAL OF THE CONTAINMENT SYSTEM SHALL BE AT THE CONTRACTOR'S EXPENSE.

#### EXISTING PAINT SYSTEM

A SURVEY WAS PERFORMED ON THE EXISTING PAINT SYSTEM TO TEST FOR THE PRESENCE OF LEAD BASED PAINT. EXISTING PAINT SYSTEM MAY CONSIST OF LEAD BASED PAINT. A COPY OF THE EXISTING PAINT SURVEY IS PROVIDED IN THE SPECIAL PROVISIONS. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL PROTECTION LAWS, REGULATIONS, AND ORDINANCES INCLUDING, BUT NOT LIMITED TO, AIR QUALITY, WASTE CONTAINMENT, AND WASTE REMOVAL. THE CONTRACTOR SHALL COMPLY WITH THE APPLICABLE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION AND OSHA.

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

PAINT COMPATIBILITY TEST SECTION BEFORE ANY PAINTING CAN BEGIN ON THIS BRIDGE (AND AT LEAST 24 HOURS PRIOR TO PAINTING), A 2' X 2' SECTION OF EXISTING SOUND PAINT SHALL BE REMOVED DOWN TO BARE METAL. THE PRIMER TO BE USED SHALL BE APPLIED TO THE TEST SECTION MAKING SURE THAT PRIMER OVERLAPS EXPOSED EDGES OF SOUND PAINT. ANY LIFTING, WRINKLING OR OTHER DETRIMENTAL EFFECTS ON THE SURROUNDING SOUND PAINT WITHIN THE FIRST 24 HOURS SHALL BE GROUNDS FOR DISAPPROVAL OF THE SELECTED PRIMER AND ANOTHER PRIMER SHALL BE SELECTED FOLLOWED BY ANOTHER TEST SECTION. THE COST OF THESE TEST SECTIONS SHALL BE INCLUDED FOR PAYMENT WITH SURFACE PREPARATION.

## BRIDGE NO. CUY-10-0869

### <u> ITEM 514 - FIELD PAINTING OF EXISTING STEEL,</u> (BELOW DECK EXTERIOR)

THE EXTERIOR BELOW THE BRIDGE DECK STEEL INCLUDES THE STEEL BELOW THE DECK EXPOSED TO THE OPEN AIR SUCH AS SUBSTRUCTURE STEEL SURFACES, GIRDERS, FLOOR BEAMS, STRINGERS, TOWERS, APPROACH COLUMNS, ARCHES, SPANDREL COLUMNS, AND DRAINAGE SYSTEMS.

THE EXTERIOR BELOW BRIDGE DECK PAINT SYSTEM SHALL BE PER C&MS 514. THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR #595B-34128 (GREEN, GLOSS).

## BRIDGE NO. CUY-10-0869

### <u> ITEM 514 - FIELD PAINTING OF EXISTING STEEL,</u> (BELOW DECK INTERIOR)

THE INTERIOR STEEL INCLUDES THE FULL INTERIOR (CONFINED SPACE) OF THE TOWERS, SPANDREL COLUMNS, AND APPROACH SPAN COLUMNS AS WELL AS A 3-FOOT STRIP AROUND EACH ACCESS HATCH TO THE ARCHES. THE REMAINDER OF THE ARCH INTERIORS ARE TO BE LEFT IN AS-EXISTING CONDITION.

THE INTERIOR PAINT SYSTEM SHALL BE PER C&MS 514. THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR #595B-34128 (GREEN, GLOSS).

ш -0 Ζ ∢ EB Z Ш G £ ◄ > > 47 AIN Q 0 Δ ω 4 >

S

CO

#### BRIDGE NO. CUY-10-0869

### <u>ITEM 514 - SURFACE PREPARATION OF EXISTING</u> STRUCTURAL STEEL, AS PER PLAN (ABOVE DECK)

### ITEM 514 - FIELD PAINTING EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN (ABOVE DECK)

### <u>ITEM 514 - FIELD PAINTING STRUCTURAL STEEL,</u> INTERMEDIATE COAT, AS PER PLAN (ABOVE DECK)

### <u>ITEM 514 - FIELD PAINTING STRUCTURAL STEEL,</u> <u>FINISH COAT (ABOVE DECK)</u>

THE EXTERIOR ABOVE THE BRIDGE DECK STEEL WORK CONSISTS OF PAINTING THE ENTIRE EXISTING STEEL RAILING, INCLUDING BUT NOT LIMITED TO ALL RAILING POSTS, STRUCTURAL TUBING, RAILING GRILLES, BASE PLATES, TOP PLATES, AS WELL AS PORTIONS OF THE EXISTING RAILING THAT IS REPLACED. PAINTING WILL ALSO INCLUDE EXISTING STEEL LIGHT STANDARDS (4), EXISTING END POSTS (4), STEEL CURB PLATE, AND EXISTING LIGHT POLES ON BRIDGE (11). REFER TO EXISTING PLANS FOR DETAILS OF EXISTING RAILING, LIGHT STANDARDS, AND END POSTS.

THE ABOVE BRIDGE DECK PAINT SYSTEM SHALL CONSIST OF THE FOLLOWING:

- 1. A COMPLETE WASH-DOWN OF ALL STEEL BY HAND WITH POTABLE WATER.
- 2. SOLVENT CLEANING BY METHODS DESCRIBED IN SSPC-SP I OVER ENTIRE RAILING SURFACE.
- 3. SURFACE PREPARATION TO REMOVE ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE AND UNSOUND PAINT AND ROUGHENING OF THE SURFACE OF THE EXISTING COATING BY POWER TOOL CLEANING PER SSPC-SP 3.
- 4. A TEST SECTION TO VERIFY COMPATIBILITY OF PRIMER WITH EXISTING PAINT.
- 5. A SPOT PRIME USING AN APPROVED EPOXY MASTIC (5 MILS MIN.) AS DEFINED IN C&MS 708.02.C. COVER ANY AREAS OF EXPOSED BARE METAL.
- 6. A FULL INTERMEDIATE COAT USING AN APPROVED EPOXY MASTIC (5 MILS MIN.) AS DEFINED IN C&MS 708.02-C. COVER ALL AREAS OF THE BRIDGE INCLUDING OVER SPOT PRIME. SPOT PRIME OR FULL PRIME/INTERMEDIATE SHALL BE TINTED TO CONTRAST WITH PREVIOUS COAT.
- 7. ANY OPEN GAPS SHALL BE CAULKED PER C&MS 514.19.
- 8. A COMPLETE FINISH COAT USING A URETHANE PER C&MS 514. FOR ALL MEMBERS OTHER THAN THE EXISTING LIGHT POLES THE FINISH COAT SHALL BE FEDERAL COLOR #595B-34128 (GREEN, GLOSS). THE EXISTING LIGHT POLES SHALL HAVE A FINISH COAT TO MATCH THE EXISTING COLOR (GREY).
- 9. PRIMER, INTERMEDIATE COATS, AND FINISH COATS MUST BE BY SAME MANUFACTURER.
- 10. ALL DEBRIS FROM ANY OPERATION LISTED ABOVE (PAINT, RUST, MILLSCALE, SOLVENT, WATER, ETC.) MUST BE COLLECTED/CONTAINED WITHIN A MOVABLE WORK PLATFORM AND PROPERLY DISPOSED OF AS DEFINED IN C&MS 514 AND 107.19.
- 11. ALL PROVISIONS OF C&MS 514 WILL APPLY TO THIS PROJECT, EXCEPT THOSE WHICH DIRECTLY CONFLICT WITH THIS NOTE.

### BRIDGE NO. CUY-10-0869

### <u> ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN</u>

THIS ITEM INCLUDES REPLACEMENT OF EXISTING DETERIORATED BRIDGE RAILING MEMBERS AS DIRECTED BY THE ENGINEER. BASED ON PRELIMINARY FIELD INSPECTION, IT IS ANTICIPATED THAT PORTIONS OF THE LONGITUDINAL TUBE RAILS (TS 4×4×0.3i25") WILL REQUIRE REPLACEMENT. THIS ITEM SHALL INCLUDE FOR PAYMENT SUPPLY AND ERECTION IN PLACE OF RAILING ELEMENTS INCLUDING BUT NOT LIMITED TO CONNECTIONS, EXPANSION JOINTS, ETC.. THIS ITEM WILL ALSO INCLUDE PAYMENT FOR REMOVAL AND DISPOSAL OF THE EXISTING RAILING MEMBERS REPLACED. THIS ITEM SHALL CONFORM TO C&MS 513, EXCEPT AS MODIFIED BELOW.

THE TUBE RAILS SHALL BE ASTM A500 GRADE B HOLLOW STRUCTURAL STEEL MEMBERS IN THE SIZES AND LENGTHS AS SHOWN IN EXISTING PLANS AND DETERMINED IN THE FIELD. BOLTS AND HARDWARE SHALL BE ASTM F3125 GRADE A325 BOLTS. TUBING, BOLTS, AND HARDWARE SHALL BE GALVANIZED PER C&MS 711.02 AND 711.09.

THE FOLLOWING CONTINGENCY OUANTITIES HAVE BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER: ITEM 513, STRUCTURAL STEEL, LEVEL UF, AS PER PLAN 40,000 LB (ASSUMES 2,400 LF OF TUBE RAIL)

 $\bigcirc$ 

 $\bigcirc$ 

CALCULATED ERK CHECKED TWG
GENERAL NOTES
GI
CUY - 480-6.47/ VAR PAINT

#### ITEM 614 - MAINTAINING TRAFFIC

GENERALLY, THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAKE THE PROPOSED REPAIR WITH A MINIMUM OF HAZARD, DELAY, AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK ZONE UNDER THIS CONTRACT. IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

### I. <u>NOTIFICATION</u>

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 FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER BY EMAIL AT (DI2.PUBLIC.INFROMATION@DOT.OHIO.GOV)

DISTRICT PERMIT SECTION BY EMAIL AT (DISTRICT12.PERMITS@DOT.OHIO.GOV)

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY EMAIL AT (HAULING.PERMITS@DOT.OHIO.GOV)

CLEVELAND METROPARKS, SEAN MCDERMOTT BY PHONE AT (216) 635-3258 OR EMAIL AT SEMI@CLEVELANDMETROPARKS.COM

CITY OF CLEVELAND, ANDREW CROSS BY PHONE AT (216) 664-3197 OR EMAIL AT ACROSS@CITY.CLEVELAND.OH.US

CITY OF FAIRVIEW PARK, SHAWN LEININGER BY PHONE AT (440) 333-2200 OR EMAIL AT SHAWN.LEININGER@FAIRVIEWPARK.ORG

FAIRVIEW HOSPITAL BY PHONE AT (216) 476-7000

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.

NO	DTIFICATION TIME	TABLE				
ITEM	DURATION OF	NOTICE DUE TO				
11 LW	CLOSURE	PERMITS & PIO				
	>= 2 WFFKS	21 CALENDAR DAYS				
	2-2 WEEKS	PRIOR TO CLOSURE				
RAMP & ROAD	> 12 HOURS &	14 CALENDAR DAYS				
CLOSURES	< 2 WEEKS	PRIOR TO CLOSURE				
	< 12 HOURS	4 BUSINESS DAYS				
	C IZ HOURS	PRIOR TO CLOSURE				
	>= 2 WEEKS	14 CALENDAR DAYS				
LANE CLOSURES &	2-2 WEENS	PRIOR TO CLOSURE				
RESTRICTIONS	< 2 WEEKS	5 BUSINESS DAYS				
	V Z WEEKS	PRIOR TO CLOSURE				
START OF		14 CALENDAR DAYS				
CONSTRUCTION &	NZA	PRIOR TO				
TRAFFIC PATTERN	INZ A	IMPLEMENTATION				
CHANGES		INT LEWENTATION				

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

### II. LANE CLOSURE RESTRICTIONS

- 1. LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST WHICH IS LOCATED ON THE ODOT WEBSITE: HTTP://WWW.DOT. STATE.OH.US/DISTRICTS/DI2/HIGHWAYMANAGEMENT/ PAGES/PERMITTEDLANECLOSURES.ASPX THE LATEST REVISION AT 14 DAYS PRIOR TO THE BID DATE SHALL BE IN EFFECT FOR THIS PROJECT.
- 2. UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.
- 3. MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE OMUTCD.
- 4. PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT A TIME AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.
- 5. ALL DRIVES AND SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES.

NOTWITHSTANDING THE ABOVE, NO LANE CLOSURES SHALL OCCUR DURING THE PERIOD BEGINNING AT 12:00 NOON ON THE DAY PRECEDING AND CONTINUING UNTIL NOON ON THE FOLLOWING LEGAL HOLIDAYS AND HOLIDAY WEEKENDS SUCH AS MEMORIAL DAY, FOURTH OF JULY, AND LABOR DAY. FURTHERMORE, NO LANE CLOSURES ARE TO BE IMPLEMENTED OR IN PLACE DURING INCREASED TRAFFIC VOLUMES CAUSED BY SPECIAL EVENTS OR WHEN THE ENGINEER DEEMS THE CLIMATOLOGICAL CONDITIONS TOO HAZARDOUS.

#### (CUY-10-0869)

THE CONTRACTOR IS PERMITTED TO CLOSE THE CURB LANE ON LORAIN ROAD ONE SIDE AT A TIME IN ACCORDANCE WITH SCD MT-95.31. NO TRAFFIC RESTRICTIONS ARE ANTICIPATED ON VALLEY PARKWAY. ALL LANES AND SIDEWALKS SHALL BE REOPENED FOR WINTER FROM NOVEMBER 16 TO APRIL 1.

#### (CUY-480-0647)

THE CONTRACTOR IS PERMITTED TO CLOSE THE EASTBOUND OUTSIDE SHOULDER FOR AN EXTENDED PERIOD OF TIME. TRAFFIC SHALL BE SHIFTED TOWARDS THE MEDIAN IN ACCORDANCE WITH MT-102.10 AND SHEETS 9-9A. PRIOR TO SHIFTING TRAFFIC, THE CONTRACTOR SHALL TACK WELD THE EASTBOUND MEDIAN SCUPPER CASTING ON I' C/C ON ALL SIDES TO KEEP THE CASTINGS IN PLACE FOR THE DURATION OF THE MAINTENANCE OF TRAFFIC SETUP. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC. THE LONG-TERM SHOULDER CLOSURE AND LANE SHIFTS ARE PERMITTED UNTIL NOVEMBER 16, 2021. ALL LANES SHALL BE RETURNED TO ORIGINAL LAYOUT BY NOVEMBER 16, 2021.

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

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 50 CY ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS 25 SY

### III. MAINTENANCE OF TRAFFIC SYSTEMS

1. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE. OR MERGE CONDITIONS EXISTS. HE MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

2. CONDITIONS

DURING ALL PARTS OF THIS PROJECT FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE "MANUAL" OR AS SHOWN IN THE STANDARD DRAWINGS.

3. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITIONS WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

4. FLAGGERS

AT LEAST ONE FLAGGER IS REQUIRED FOR CLOSURE. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

5. PROTECTION OF PUBLIC

PERSONAL CARS SHALL NOT BE PARKED WITHIN THE RIGHT OF WAY.

6. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

<u>IV.</u>	MAINTENANCE OF TRAFFIC MATERIALS	CALCULATE ERK CHECKED TWG
1.	SIGNS	CAI
	SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES ARE TO BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.	
2.	SIGN SUPPORT	E S
	SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.	L NOTI
3.	FLASHING ARROW REQUIREMENT	RA
	WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO SUPPLEMENTAL SPECIFICATION 821, 921 AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS.	AFFIC GENE
4.	DRUMS	TR
	DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEOUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.	ICE OF
5.	CONES	AN
	CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.	
6.	BARRIER PORTABLE BARRIER IF NECESSARY IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.	MAIN
7.	FLASHERS	
	FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWINGS.	
8.	FLOODLIGHTING	AR
	FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORKSITE 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.	CUY-480-6.47 / V PAINT
		5

#### 9. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING. OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

### <u>V. PAYMENT</u>

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

### MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME, WHICH SHALL BE DEVISED BY THE WORKSITE TRAFFIC SUPERVISOR (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE TRAFFIC CONTROL ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER CAN BE SHOWN BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST REVISION) THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN ACCEPTED.

IF DURING THE PROJECT THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.

PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614-MAINTAINING TRAFFIC.

### CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

### <u>ITEM 614 - LAW ENFORCEMENT OFFICER (WITH</u> <u>PATROL CAR) FOR ASSISTANCE DURING</u> <u>CONSTRUCTION OPERATIONS</u>

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 OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) MAY 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 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 REQUIREMENTS OF CMS 614 AND THE OMUTCD, 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:

- 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). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.
- WHEN CONSTRUCTION VEHICLES ARE ENTERING/ EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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 THE 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.

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 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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 WHICH 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 DURING CONSTRUCTION OPERATIONS 100 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 AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS.

### <u>ITEM 614 – PORTABLE CHANGEABLE MESSAGE SIGNS,</u> <u>AS PER PLAN</u>

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 WILL BE DETERMINED BY THE ENGINEER PRIOR TO BEGINNING WORK ON THIS PROJECT. 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.

 $\bigcirc$ 

 $\bigcirc$ 

0

 $\bigcirc$ 

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN I HOUR 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 ON 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 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.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN....24 SIGN MONTH, ASSUMING 3 PCMS SIGNS FOR 8 MONTHS

## CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEOUATE DRIVEWAYS, WALKWAYS, METROPARKS VALLEY PARKWAY, MULTI-USE TRAIL AND METROPARKS BRIDLE PATH IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EOUIPMENT TO ALL ADJOINING PROPERTIES. THE CONTRACTOR SHALL COORDINATE AND SUBMIT TO THE METROPARKS FOR COMMENT ON THEIR PLANS TO MAINTAIN CONTINUOUS ACCESS TO THEIR FACILITIES. THE COST FOR ALL MATERIALS, EOUIPMENT, AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC CUY - 480-6.47 / VAR PAINT

Σ

6 22

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

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NONGATING 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 BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

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

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

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EOUIPMENT 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.

#### DELINEATION OF PORTABLE AND PERMANENT BARRIER

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

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

THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE I (ONE-WAY) ITEM 614, OBJECT MARKER, ONE WAY

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

### EXISTING RAISED PAVEMENT MARKERS

THE CONTRACTOR SHALL REMOVE THE PRISMATIC RETRO-REFLECTOR WITHIN ANY RAISED PAVEMENT MARKER THAT IS IN CONFLICT WITH THE WORK ZONE PAVEMENT MARKINGS AND REPLACE WHEN NO LONGER IN CONFLICT WITH NEW A PRISMATIC RETRO-REFLECTOR OF THE SAME KIND AND COLOR PER C&MS 614.11.G.2.

### LANE CONTRACT TABLE

DESCRIPTION OF CRITICAL LANE TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT PER LANE
IR 480 EAST - CLAGUE RD TO I-71 RAMPS	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	<b>\$</b> 235
IR 480 WEST - CLAGUE RD TO I-71 RAMPS	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	<b>\$</b> 235

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

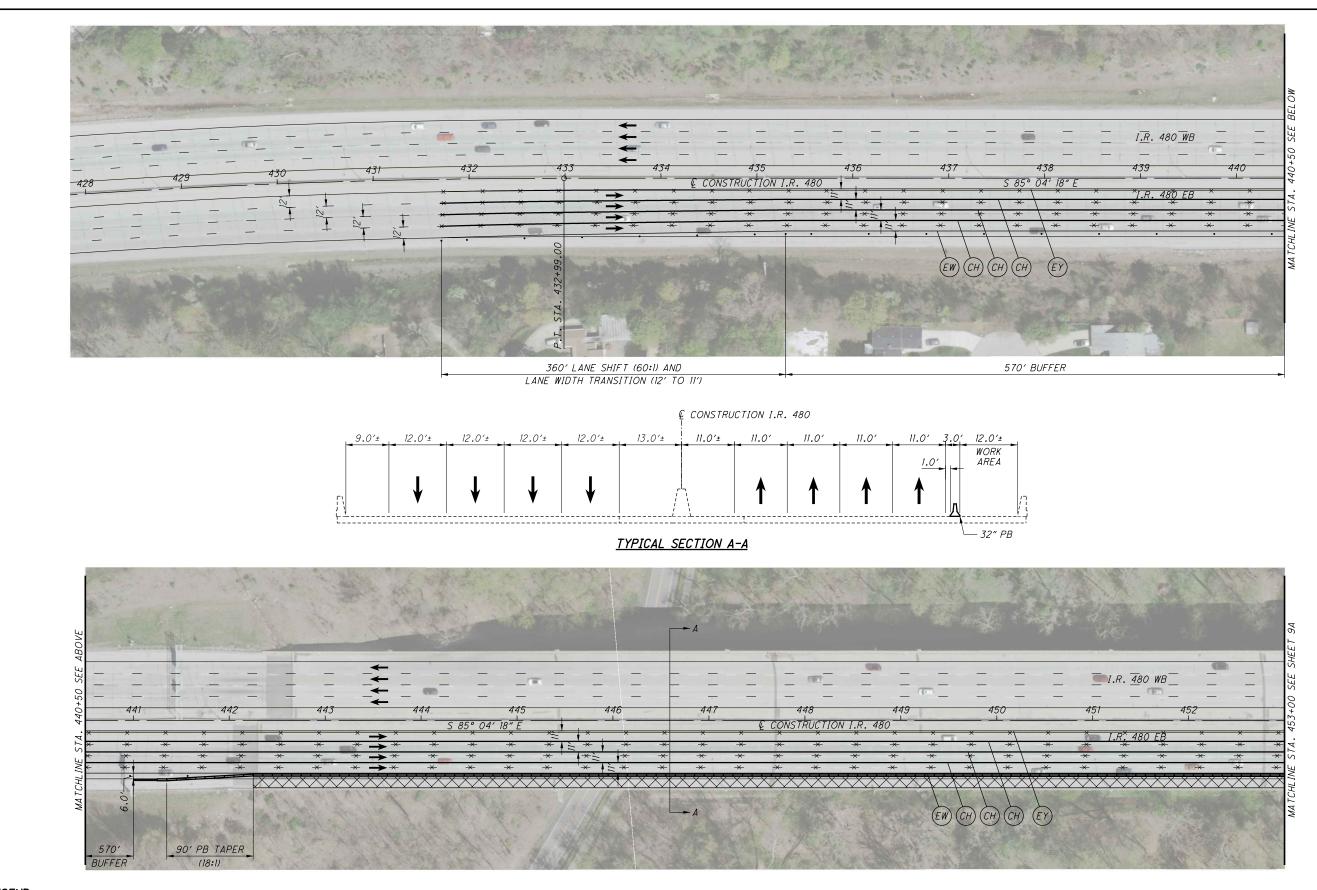
CALCULATED ERK CHECKED TWG
MAINTENANCE OF TRAFFIC GENERAL NOTES
CUY -480-6.47 / VAR PAINT

						614	614	614	614	614	614	622	644	644	644
REF. NO.	PHASE	LOCATION	STA	TION	SIDE	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I (MHITE)	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I (YELLOW)	WORK ZONE CHAMNELIZING LINE, CLASS I, 12", 740.06, TYPE I	PORTABLE BARRIER, 32"	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LANE, 4"
			FROM	ТО		EACH	EACH	EACH	MILE	MILE	FT	FT	MILE	MILE	MIL
PB	1	I.R. 480	441+25	458+45	RT	1	36	36				1720			
CH CH	1	I.R. 480 I.R. 480	431+70 431+70	462+05 462+05	RT RT						3035 3035				
СН	1	I.R. 480	431+70	462+05	RT						3035				
EW	1	I.R. 480	431+70	462+05	RT				0.58				0.29		
EΥ	1	I.R. 480	431+70	462+05	RT					0.58				0.29	-
EW	1	S.R. 10	458+40	473+00	LT				0.28						0.
EW	1	S.R. 10	473+92	476+22	LT				0.04						0.
EW	2	S.R. 10	450+55	454+22	RT				0.07						0.
EW	2	S.R. 10	454+80	471+61	RT				0.32						0.
															-
															1
															+
															-
					-										+
															1
			-		BTOTAL				1.29	0.58			0.29	0.29	<u> </u>
тот		CARRIED TO	GENERAL	SUMMA	RY	1	36	36	1.	87	9105	1720	0.	.58	0.2

 $\bigcirc$ 

 $\bigcirc$ 

644	646	646	646	646	8
					CULATI CDW ECKED
LANE LANE, 6"	EDGE LINE, 6° (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LANE, 4"	LANE LANE, 6"	CALCULATED KDW CHECKED TWG
MILE	MILE	MILE	MILE	MILE	≻
0.29 0.29 0.29	0.29	0.29		0.29 0.29 0.29	INTENANCE OF TRAFFIC SUBSUMMARY
			0.23		<b>FRAFFIO</b>
			0.23		OF 1
					Ч С Ш
					ENAI
					ΜA
					A R
					1 / /
					47 T
					СUY - 480-6.47 / VAR РАІNТ
					UΥ-4
	0.29	0.29			<b>D</b>
0.87		58	0.46	0.87	$\begin{pmatrix} 0 \\ 22 \end{pmatrix}$



# <u>LEGEND</u>

XX WORK AREA

- DRUMS @ 60' C/C (TAPER) OR 120' C/C (TANGENT)
- PORTABLE BARRIER, 32"
- WORK ZONE IMPACT ATTENUATOR

- REMOVE EXISTING MARKINGS
- TRAFFIC FLOW ARROW  $\rightarrow$

(EY)

СН

- EW WORK ZONE EDGE LINE (WHITE)
  - WORK ZONE EDGE LINE (YELLOW)
  - WORK ZONE CHANNELIZING LINE

 $\bigcirc$ 

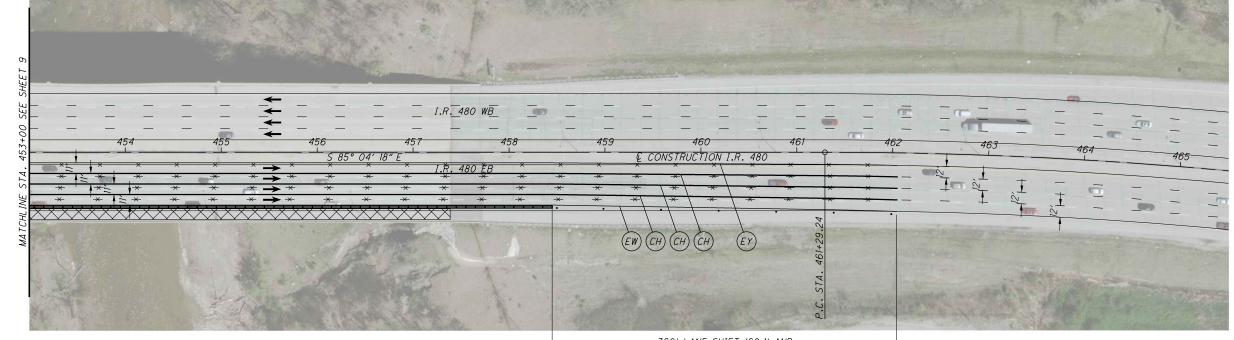
 $\bigcirc$ 

 $\bigcirc$ 

# <u>NOTES</u>

1. SEE MT-102.10 FOR ADDITIONAL DETAILS. 2. SEE SHEET 8 FOR ESTIMATED QUANTITIES.





360' LANE SHIFT (60:1) AND LANE WIDTH TRANSITION (11' TO 12')

# <u>LEGEND</u>

WORK AREA

 DRUMS @ 60' C/C (TAPER) OR 120' C/C (TANGENT)

 PORTABLE BARRIER, 32"

, on the binner, of

WORK ZONE IMPACT ATTENUATOR

- REMOVE EXISTING MARKINGS
- → TRAFFIC FLOW ARROW

×

(EY)

СН

- (EW) WORK ZONE EDGE LINE (WHITE)
  - WORK ZONE EDGE LINE (YELLOW)
  - WORK ZONE CHANNELIZING LINE

 $\bigcirc$ 

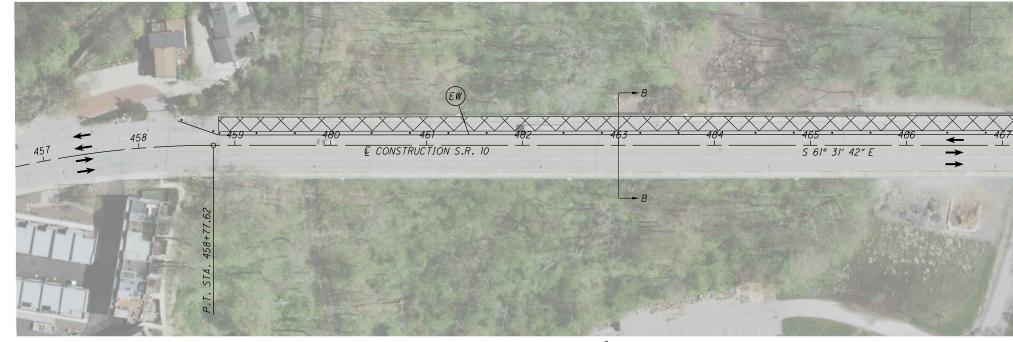
 $\bigcirc$ 

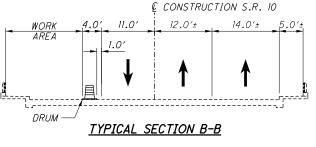
 $\bigcirc$ 

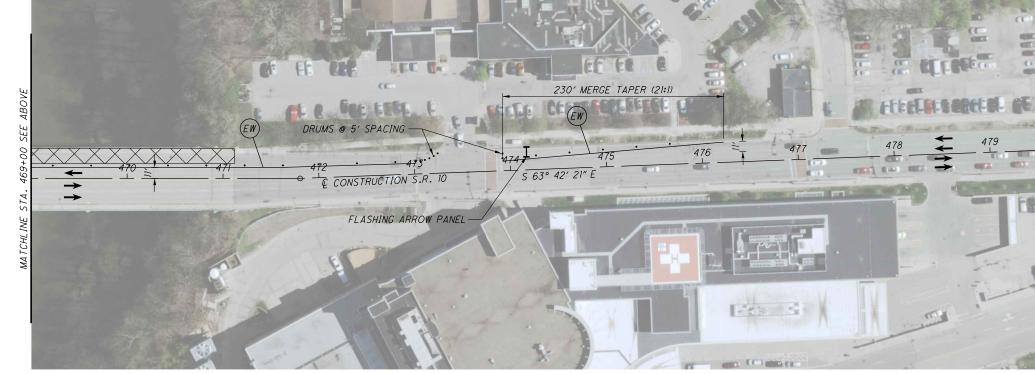
# <u>NOTES</u>

SEE MT-102.10 FOR ADDITIONAL DETAILS.
 SEE SHEET 8 FOR ESTIMATED QUANTITIES.











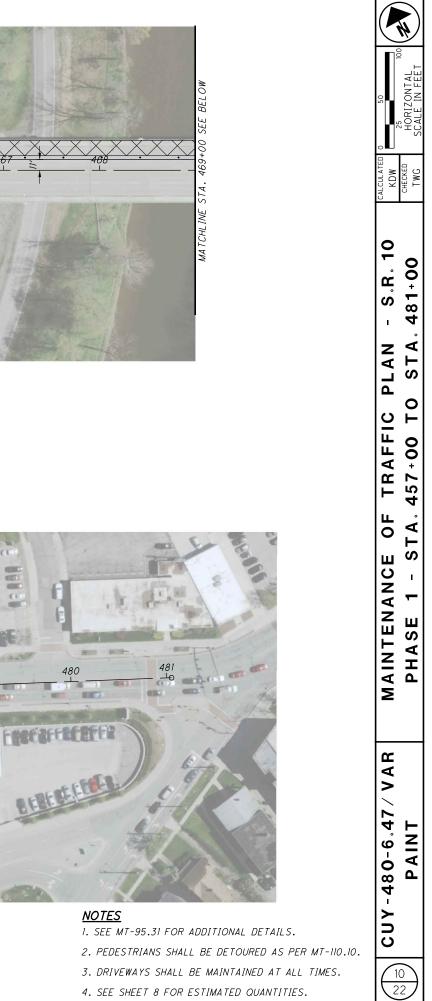
→

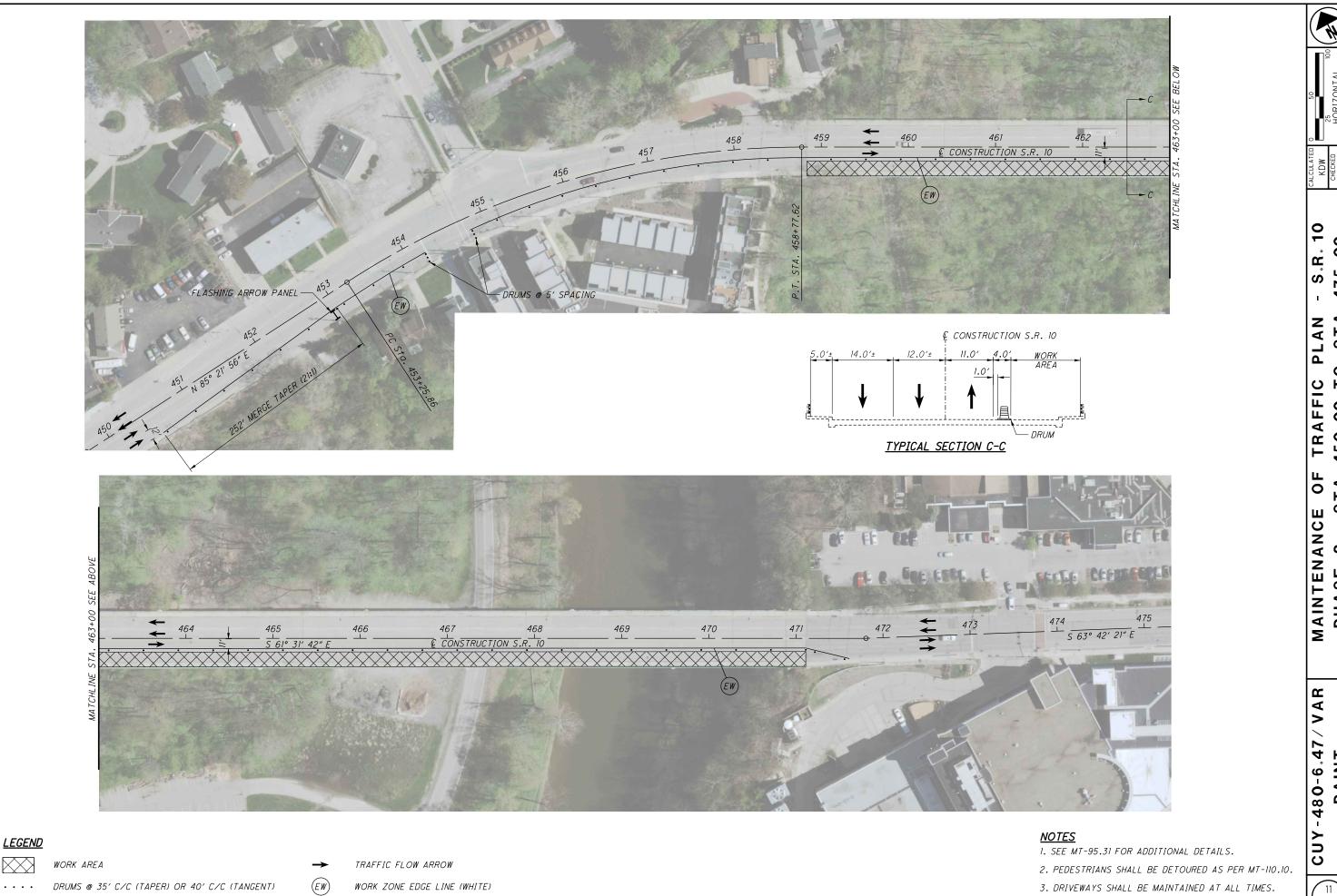
•••• DRUMS @ 35' C/C (TAPER) OR 40' C/C (TANGENT)

TRAFFIC FLOW ARROW

(EW) WORK ZONE EDGE LINE (WHITE)

 $\bigcirc$ 





 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

3. DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.

4. SEE SHEET 8 FOR ESTIMATED QUANTITIES.

HORIZONTAL 475+00 PLAN ) STA TRAFFIC P 450 + 00STA MAINTENANCE Phase 2 - S PAINT

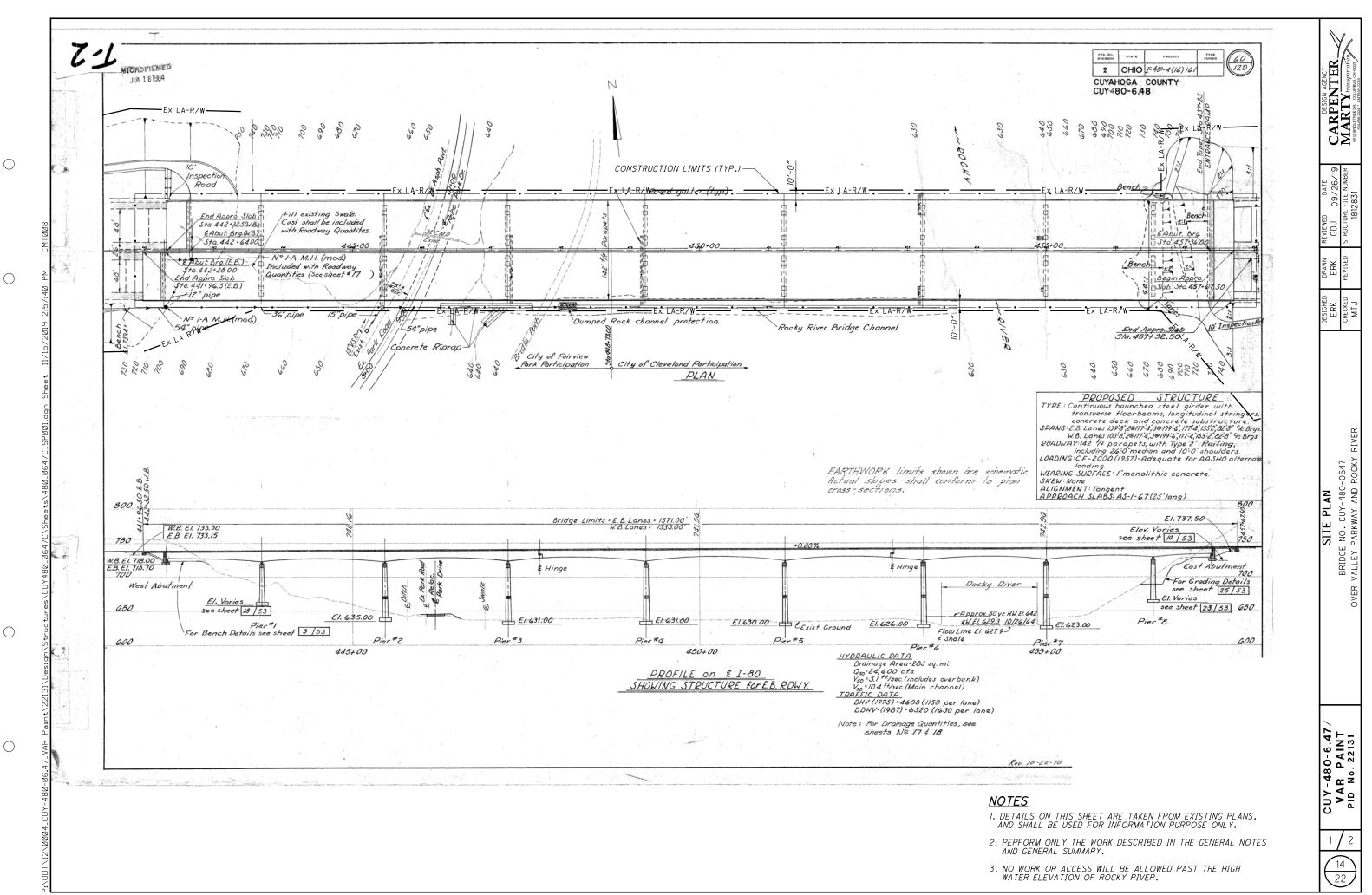
22

			2	3	4			01/1/1/5/	02/NHS/	ITEM			UNIT	
				Ĵ	4	8	GEN	BR	BR		EXT	TOTAL		
			LS					LS	LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN
			3,000					25	3,000	607	98000	3,000	FT	FENCE, MISC.: CONSTRUCTION FENCE
	 						5,000	2,500	2,500	832	30000	5,000	ЕАСН	EROSION CONTROL
									,					
						0.50		0.50		0.1.1	0.010.4	0.50		5005 / 11/5 - 0/
 	  '					0.58 0.25		0.58	0.25	644 644	00104 00200	0.58 0.25	MILE MILE	EDGE LINE, 6" LANE LINE, 4"
						0.87		0.87		644	00204	0.87	MILE	LANE LINE, 6"
						0.59		0.59		646	10010	0.59	MUE	EDGE LINE, 6"
						0.38		0.50	0.46	646	10100	0.38	MILE	LANE LINE, 4"
 						0.87		0.87		646	10110	0.87	MILE	LANE LINE, 6"
														STRUCTURE OV
							610.300	610.300	)	514	00050	610.300	SE	SURFACE PREPARATION OF EXISTING ST
							610,300	610,300	)	514	00056	610,300	SF	FIELD PAINTING OF EXISTING STRUCTUR
		ļ!									00060			FIELD PAINTING STRUCTURAL STEEL, IN
							610,300	610,300		514	00066	610,300	55	FIELD PAINTING STRUCTURAL STEEL, FIN
							650	650		514	00504	650	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXIS
		-					300	300		514	10000	300	EACH	FINAL INSPECTION REPAIR
														STRUCTURE O
													SY	SEALING OF CONCRETE SURFACES (NON-1 SEALING OF CONCRETE SURFACES (EPOX
				372			5,514		372	512	10601	372	FT	CONCRETE REPAIR BY EPOXY INJECTION
					40,000				40,000	513	10201	40,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF
							LS		LS	514	00100	LS		SURFACE PREPARATION OF EXISTING ST
							LS		LS	514	00100	LS		SURFACE PREPARATION OF EXISTING STR
	'						LS		LS	514	00101	LS		SURFACE PREPARATION OF EXISTING ST
							LS		LS	514	00200	LS		FIELD PAINTING OF EXISTING STRUCTUR
 	 													FIELD PAINTING OF EXISTING STRUCTUR, FIELD PAINTING OF EXISTING STRUCTUR,
							23		23	5//	00201	23		
							LS		LS	514	00300	LS		FIELD PAINTING STRUCTURAL STEEL, IN FIELD PAINTING STRUCTURAL STEEL, IN
										514	00300	LS		FIELD PAINTING STRUCTURAL STEEL, IN
									1.5		0.0.40.0			
		-												FIELD PAINTING STRUCTURAL STEEL, FIN FIELD PAINTING STRUCTURAL STEEL, FIN
							LS		LS	514	00400	LS		FIELD PAINTING STRUCTURAL STEEL, FIN
		ļ!					137		137	514	00504	137	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXI.
							418		418	514	00504	418	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXI.
							252		252	514	00504	252	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXI
							43		43	514	10000	43	EACH	FINAL INSPECTION REPAIR (BELOW DECK
							194		194	514	10000		EACH	FINAL INSPECTION REPAIR (BELOW DECK
	<u> </u>			110			20		110	514	11101	26 110	SF	FINAL INSPECTION REPAIR (ABOVE DECK. PATCHING CONCRETE STRUCTURE, AS PE
	  '	<sup> </sup>												
	1	1 7												
			Image: state s	Image: Section of the section of th	Image: state of the state o	Image: state of the state		Image: Construction of the second s	Image: Construction of the second	Image: Construction of the second s	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Image: Construction of the second s	Image: Constraint of the second sec	Image: Constraint of the second sec

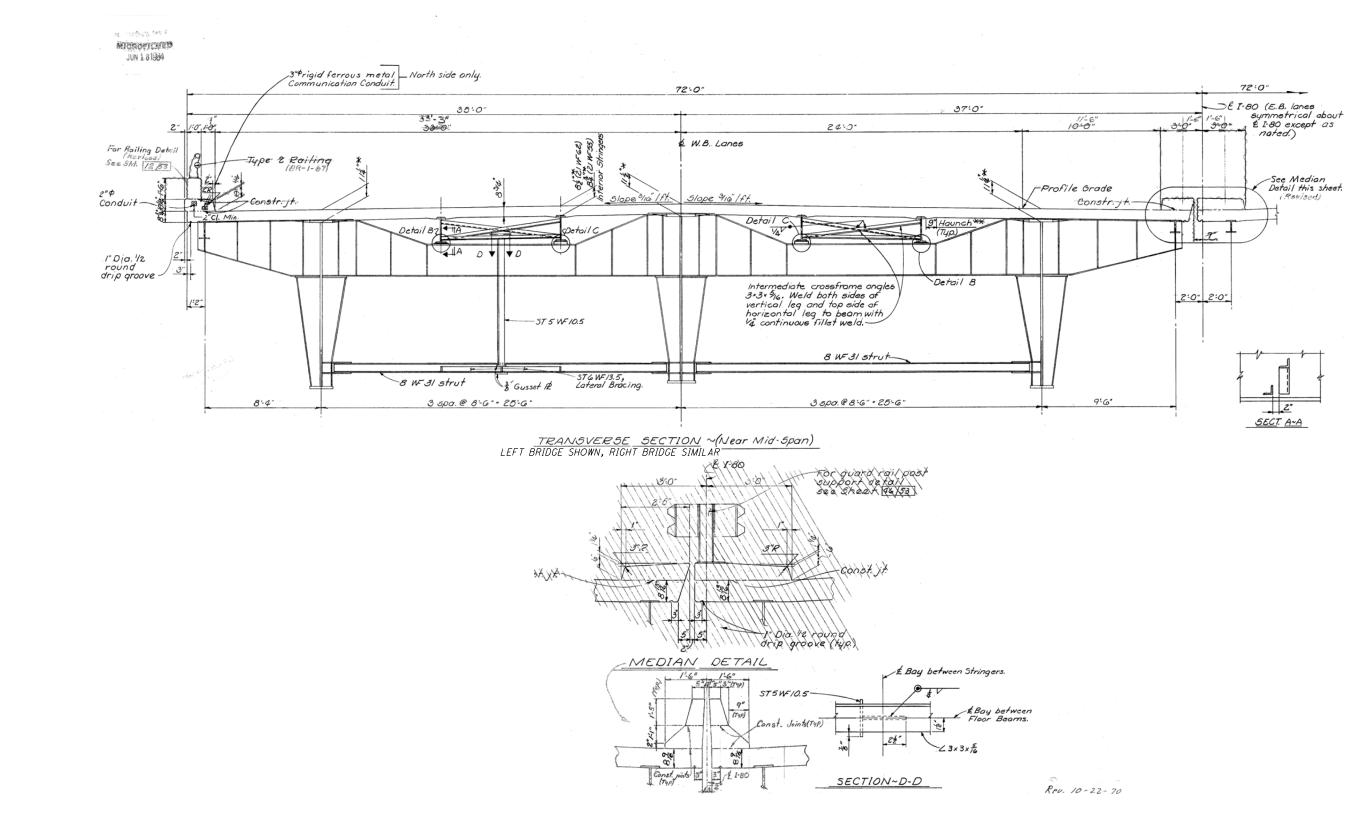
DESCRIPTION	SEE Sheet No.	CALCULATED ERK CHECKED TWG
ROADWAY		
Ν	2 2 2	
EROSION CONTROL		
TRAFFIC CONTROL		
		Ч
		MA
OVER 20 FOOT SPAN (CUY-480-0647)		SUMMARY
TRUCTURAL STEEL IRAL STEEL, PRIME COAT		
INTERMEDIATE COAT FINISH COAT		ER /
XISTING STRUCTURAL STEEL		GENERAL
OVER 20 FOOT SPAN (CUY-10-0869)		
N-EPOXY), AS PER PLAN DXY-URETHANE), AS PER PLAN	3, 21 3, 21	
DN, AS PER PLAN UF, AS PER PLAN	3 4,22	
TRUCTURAL STEEL (BELOW DECK INTERIOR) STRUCTURAL STEEL (BELOW DECK EXTERIOR)		
TRUCTURAL STEEL, AS PER PLAN (ABOVE DECK)	4	
IRAL STEEL, PRIME COAT (BELOW DECK INTERIOR) IRAL STEEL, PRIME COAT (BELOW DECK EXTERIOR) IRAL STEEL, PRIME COAT, AS PER PLAN (ABOVE DECK)	4	
NTERMEDIATE COAT (BELOW DECK INTERIOR)		
NTERMEDIATE COAT (BELOW DECK EXTERIOR) NTERMEDIATE COAT, AS PER PLAN (ABOVE DECK)	4	к
FINISH COAT (BELOW DECK INTERIOR) FINISH COAT (BELOW DECK EXTERIOR) FINISH COAT (ABOVE DECK)		ΛV
XISTING STRUCTURAL STEEL (BELOW DECK INTERIOR)		47 / T
XISTING STRUCTURAL STEEL (BELOW DECK EXTERIOR) XISTING STRUCTURAL STEEL (ABOVE DECK)		80-6.4 PAINT
CK INTERIOR) CK EXTERIOR) CK)		- 48 P
PER PLAN	3	СUY - 480-6.47 РАІNТ
		$\frac{12}{12}$
		22

					SHEET	F NUM.						PA	RT.		ІТЕМ	GRAND		
							5	6	8	GEN		01/IMS/ BR	02/NHS/ BR	ITEM	ЕХТ	TOTAL	UNIT	
																		MA
							05					05		605014	51010510	05	614	
							25	100				25 100		SPECIAL 614	51912510 11110	25 100	SY HOUR	PATCHING CONCRETE BRIDGE DECK LAW ENFORCEMENT OFFICER WITH PATR
								100	1			1		614	12336	1		WORK ZONE IMPACT ATTENUATOR (UNID
							50					50		614	13000	50	СҮ	ASPHALT CONCRETE FOR MAINTAINING
-									36			36		614	13310	36	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY
$\bigcirc$									70			70		014	17750	70	54.00	
								24	36			36 24		614 614	13350 18601	36 24	EACH SNMT	OBJECT MARKER, ONE WAY
								24	1.87			1.16	0.71	614	22210	1.87	MILE	PORTABLE CHANGEABLE MESSAGE SIGN, WORK ZONE EDGE LINE, CLASS I, 6", 74
									9,105			9,105		614	23410	9,105	FT	WORK ZONE CHANNELIZING LINE, CLASS
									1,720			1,720		622	41000	1,720	FT	PORTABLE BARRIER, 32"
$\bigcirc$												LS	LS	614	11000	LS		MAINTAINING TRAFFIC
										28		14	14	619	16020	28	MNTH	FIELD OFFICE, TYPE C
												LS	LS	624	10000	LS		MOBILIZATION
c	o ———																	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-																	
20																		
NO C																		
C	<b>5</b>																	
L L																		
c																		
e c																		
ų L																		
È																		
-	ب م																	
Ļ																		
	с																	
- C	ם ס																	
0 8 8																		
Ĺ	ວ ວ																	
1012																		
C																		
-	ers																	
-																		
0																		
	0 L																	
-																		
0100																		
	10																	
	ō																	
$\cap$	<u> </u>																	
	-																	
7 7	, ,		1															
0 																		
0	4 04																	
2	5							-										
ī.																		
000																		
ć																		
	<u></u>		<u> </u>															
	<u> </u>		-								-							
Ċ		1		L	I		1		I			1		1	1	1		<u> </u>

DESCRIPTION	SEE SHEET NO.	CALCULATED ERK CHECKED TWG
MAINTENANCE OF TRAFFIC	NO.	CA
MAINTENANCE OF TRAFFIC		
ROL CAR FOR ASSISTANCE DIRECTIONAL)		
TRAFFIC Y		
I, AS PER PLAN	5	
740.06, TYPE I S I, 12″, 740.06, TYPE I		
INCIDENTALS		۲
		MAF
		ΝN
		GENERAL SUMMARY
		RΑ
		ENE
		G
		Я
		VA
		.47/ Т
		80-6.4 P AIN T
		- 48 P
		СUY - 480-6.47 / VAR РАІNТ
		$\int \frac{13}{13}$
		$\begin{pmatrix} 13\\ 22 \end{pmatrix}$



 $\bigcirc$ 



 $\bigcirc$ 

 $\bigcirc$ 

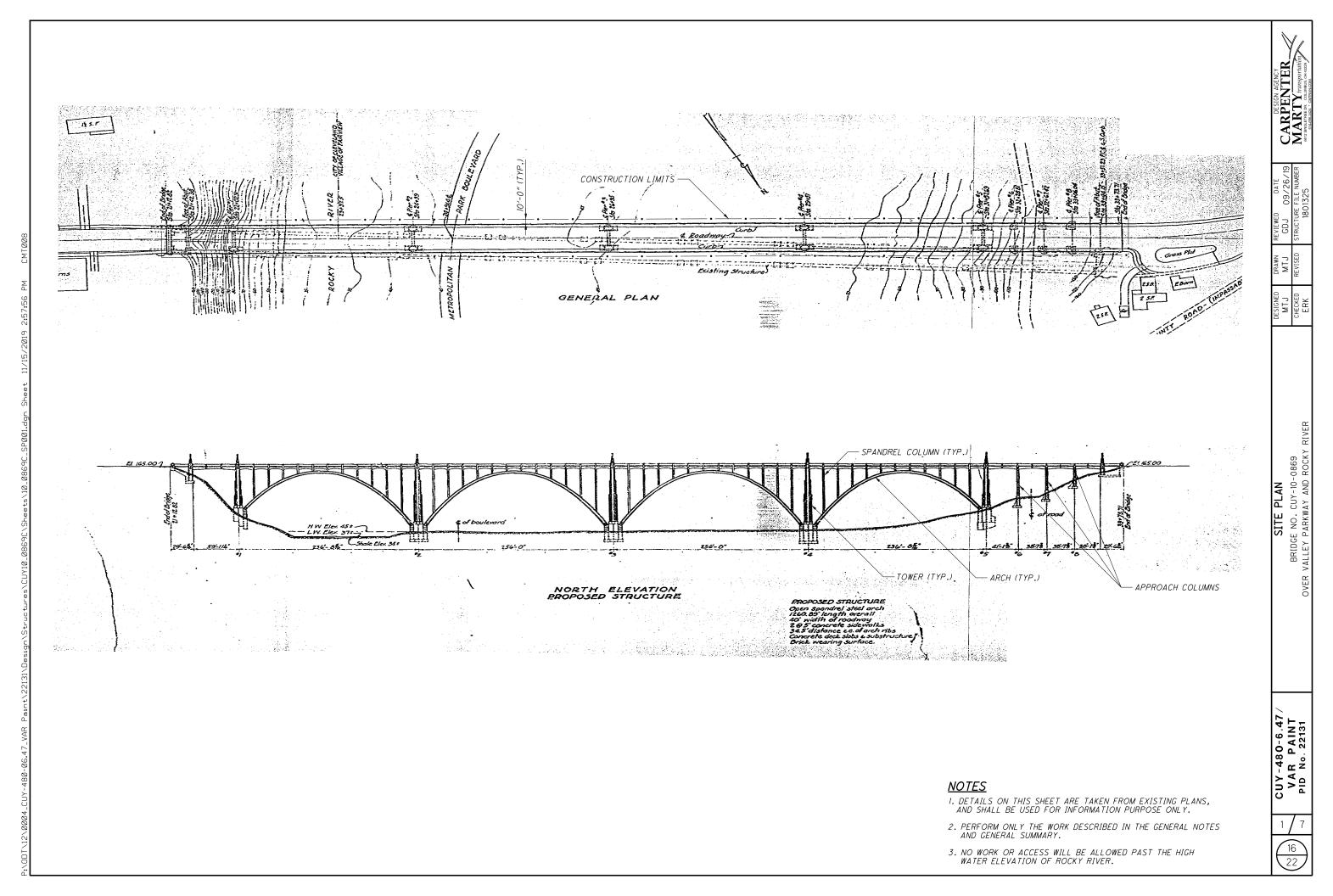
 $\bigcirc$ 

<u>NOTES</u>

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS, AND SHALL BE USED FOR INFORMATION PURPOSE ONLY.

2. PERFORM ONLY THE WORK DESCRIBED IN THE GENERAL NOTES AND GENERAL SUMMARY.

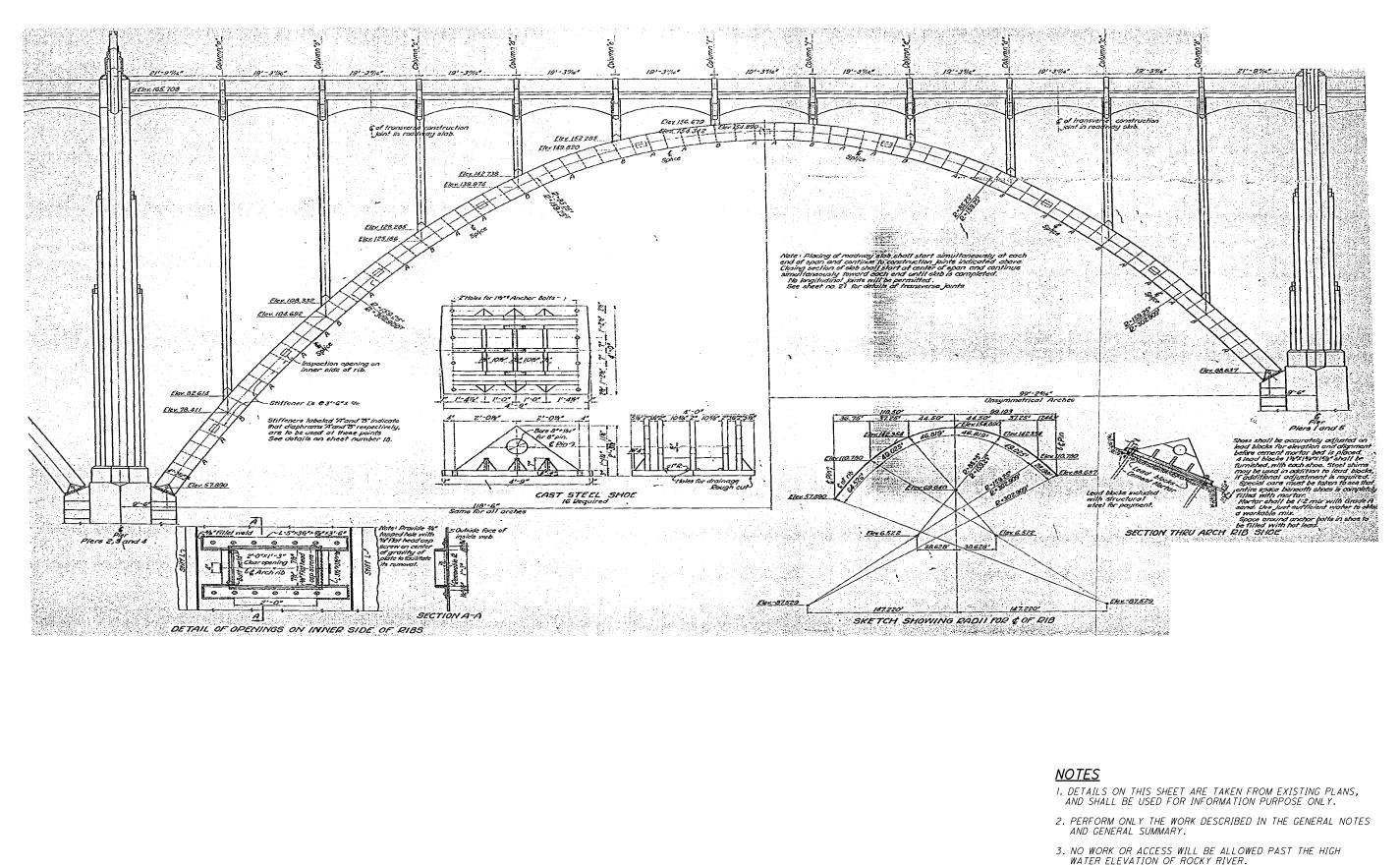
2	CUY-480-6.47/	TRANSVERSE SECTION	DESIGNED	DRAWN FDV	REVIEWED DATE	
$\underline{/}$	VAR PAINT	BRIDGE NO. CUY-480-0647	CHECKED	REVISED	STRUCTURE FILE NUMBER	MARTY
2	PID No. 22131	OVER VALLEY PARKWAY AND ROCKY RIVER	MTJ		1812831	6612 SINGLEREE DR. COLUMBUS: OH 43229



 $\bigcirc$ 

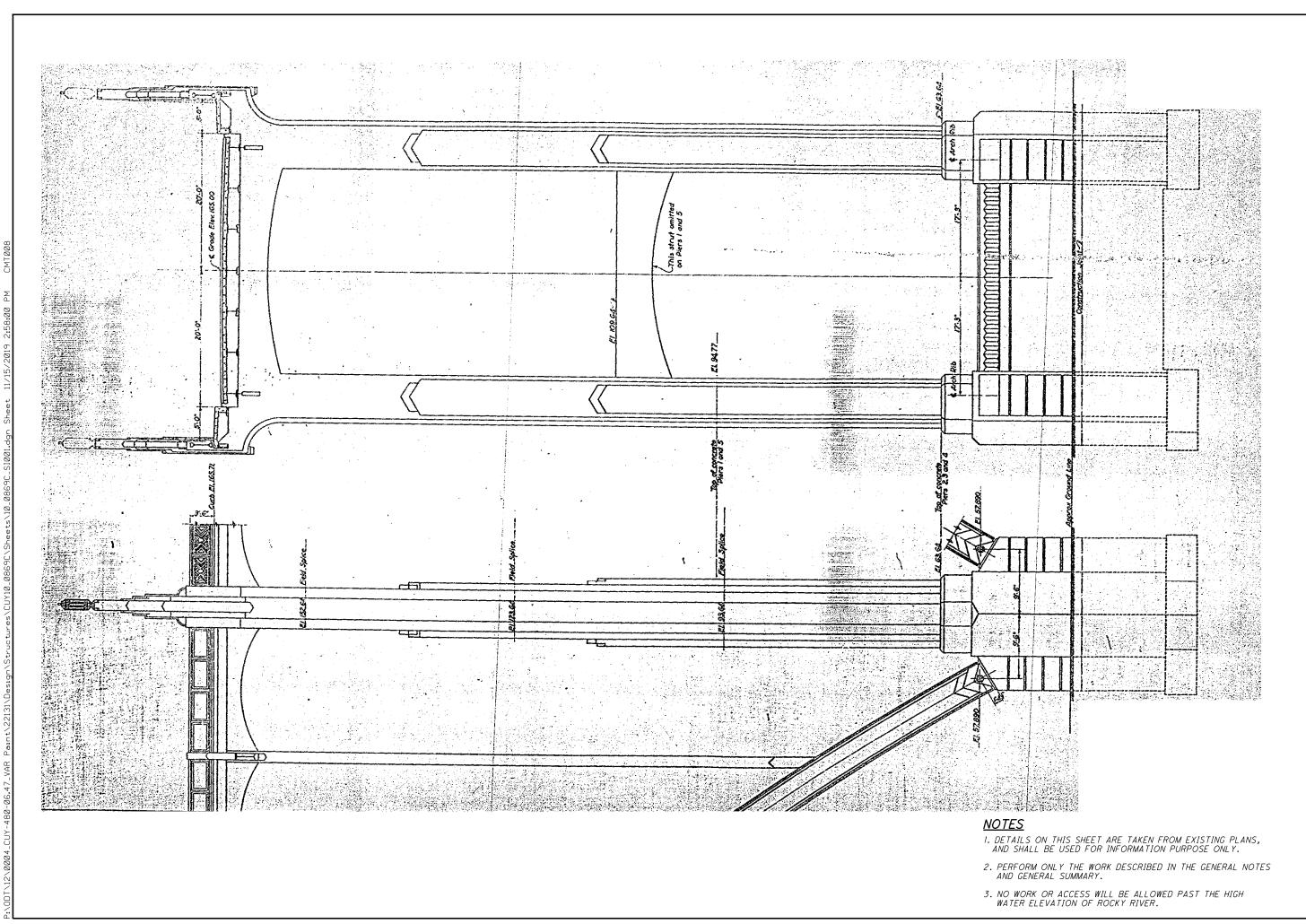
 $\bigcirc$ 

0



 $\bigcirc$ 

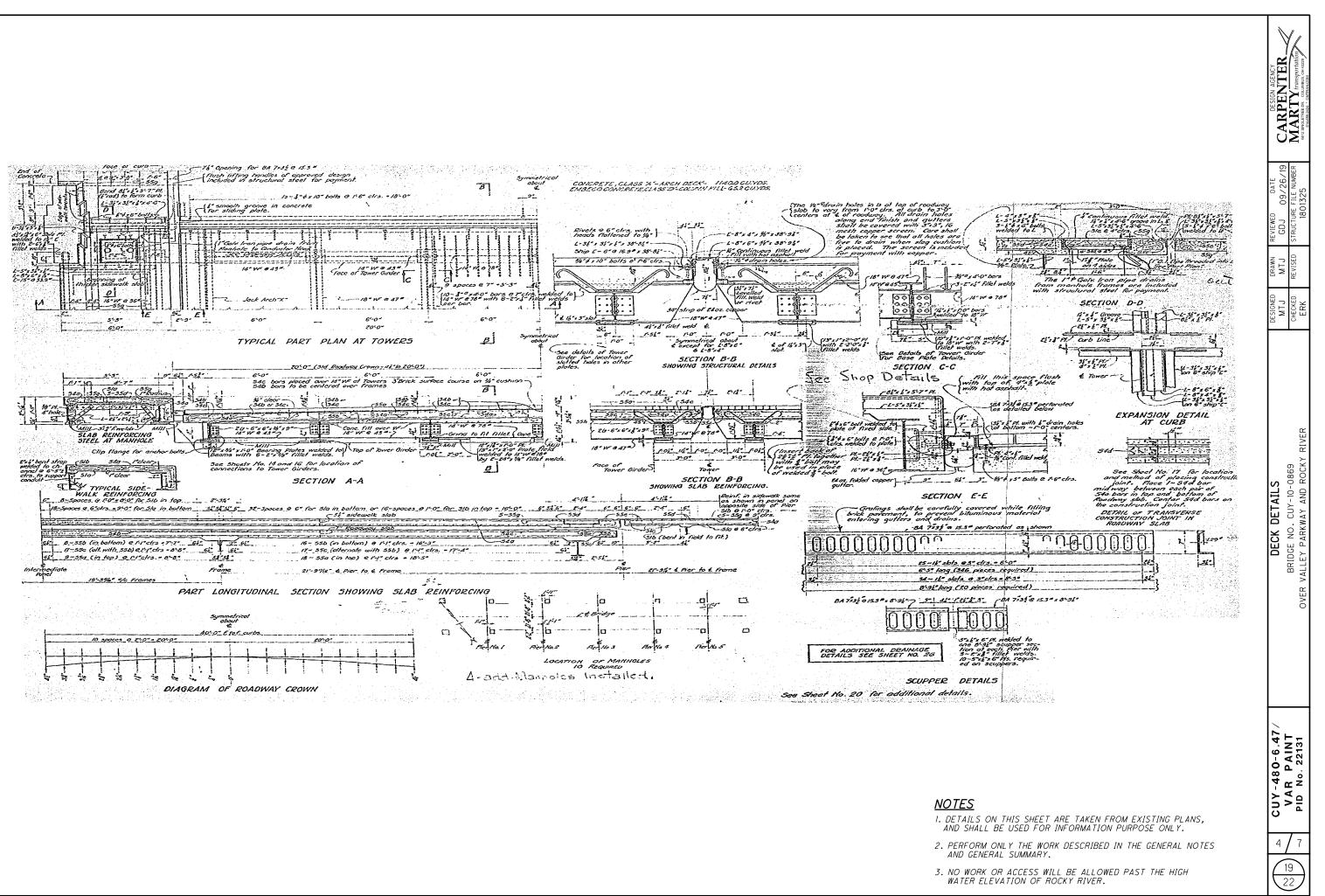




 $\bigcirc$  $\bigcirc$ 

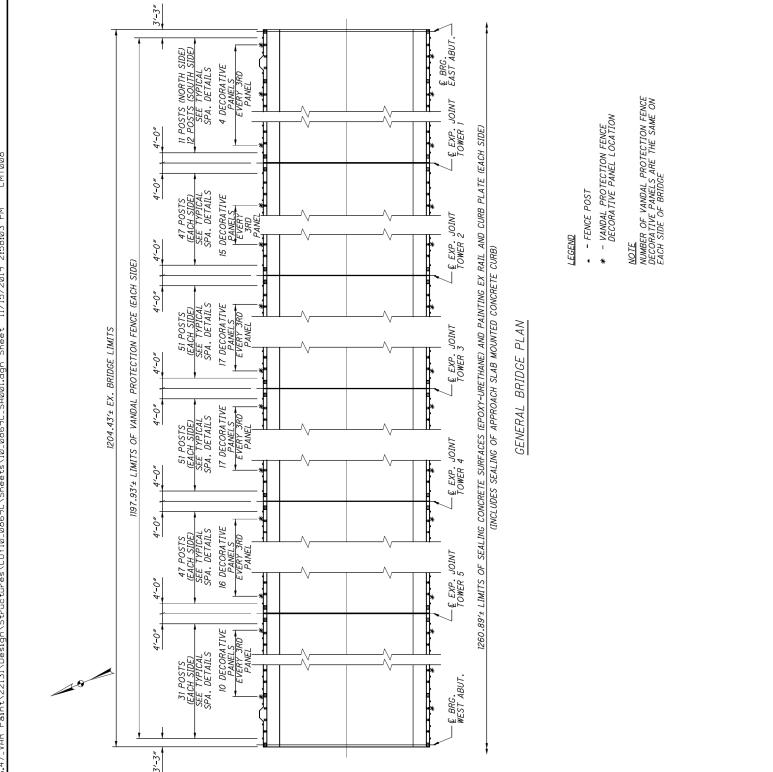
 $\bigcirc$ 

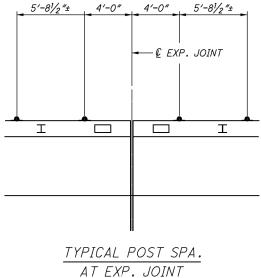


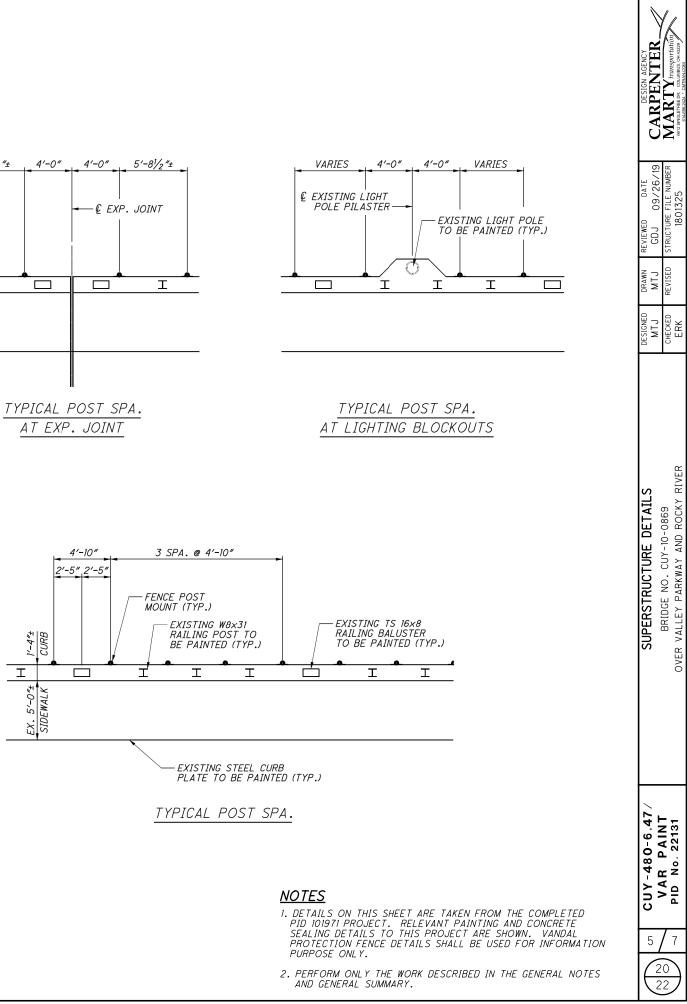


 $\bigcirc$ 

 $\bigcirc$ 







 $\bigcirc$ 

 $\bigcirc$ 

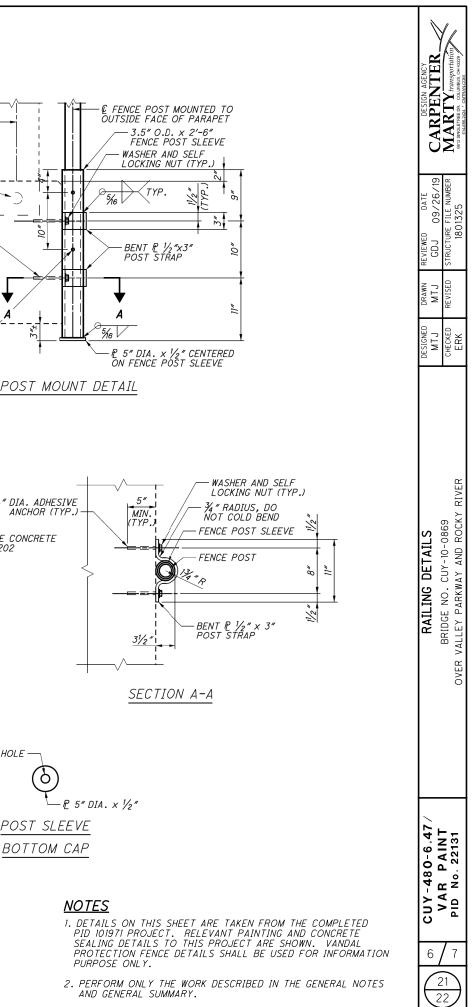
1.66″ O.D. TOP RAIL € RAILING POST 2.875″ O.D. STRAIGHT POST (TYP.) TOP OF CURB EX. 2″ DIA. ELECTRICAL CONDUIT 1.66" O.D. LINE T RAIL (TYP.) LIMITS OF SEALING CONCRETE SURFACES (NON-EPOXY) ½″ DIA. ADHESIVE ANCHOR (TYP.)-CHAIN LINK FENCE 1"x1" FABRIC, 11 GAUGE F. 2 \_\_\_\_\_ EXISTING RAILING 1 TO BE PAINTED EXISTING CONCRETE CURB \* EXISTING STEEL CURB PLATE (11"± TALL) TO BE PAINTED FULL LENGTH OF BRIDGE - RAIL ELİMINATED IN PID 101971 PROJECT THREADED HOLES FOR ONE, C=== 3/8" - 20 X 3/8" GLAVANIZED HEXAGON SOCKET SET SCREW, EACH SIDE. HOLES SHALL BE DRILLED AND TAPPED BEFORE ASSEMBLY IS GALVANIZED. 1" 3.5″ O.D. × 2′-6″ FENCE POST SLEEVE FENCE POST MOUNT DETAIL FOR CONNECTION DETAILS, SEE FENCE POST MOUNTS POST SLEEVE BOTTOM CAP DETAIL, SHEET 20. TYPICAL FENCE SECTION LIMITS OF SEALING CONCRETE SURFACES -(EPOXY URETHANE) SPA. VARIES (8'-0" MAX.) 2 EQUAL SPACES (DECORATIVE PANEL) ½″ DIA. ADHESIVE ANCHOR (TYP.) 1′−4″± MALLEABLE IRON OR CAST IRON LOOP CAP – 2.875″ O.D. STRAIGHT POST (TYP.) 1.66" O.D. TOP RAIL LINE -TOP OF CURB - REMOVE LOOSE CONCRETE AS PER ITEM 202 - END RAIL CLAMP TYP.(TYP.) BOULEVARD WITH TWO 3/8" X 21/2" BOLTS (TYP.)-TYP. \_\_\_\_\_ EXISTING RAILING TO BE PAINTED -1.66″ O.D. LINE RAIL (TYP.) '-2″ ő CONCRETE TO BE SEALED WITH CAULKING COMPOUND UPON INSTALLATION (TYP.) SEALING LIMITS BRIDGE FENCE DETAILS RAIL NOT INSTALLED IN PID 101971 PROJECT NOT SHOWN FOR CLARITY E e to 11/2" DIA. HOLE -Ò FENCE POST MOUNTS (TYP.) POST SLEEVE INSIDE ELEVATION OF FENCE

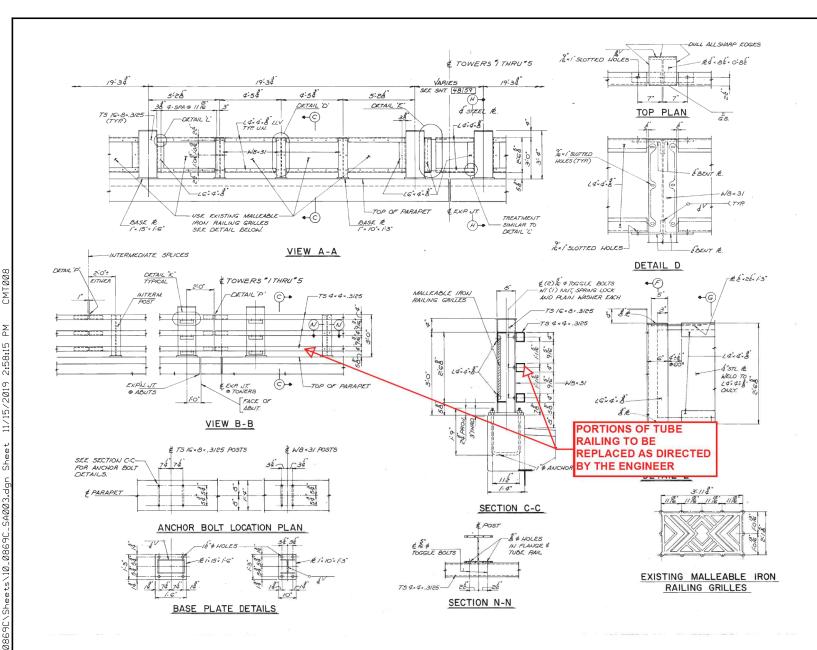
 $\bigcirc$ 

0

0

0







NOTES 1. DETAILS ( AND SHALL 2. PERFORM AND GENE

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

V - >11 c

M ONLY THE WORK DESCRIBED IN THE GENERAL NOTES		
1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1      1       1      1       1		SHE. ?
Image: construction of the work of the optimization of the optimizatio of the optization of the optimization of the optization of the o		REVIEWED DATE GDJ 09/26/19 STRUCTURE FILE NUMBER 1801325
Image: Straig Paint       Image: Straig Paint         Image: Straige: Straig Paint       Image: Straig		DRAWN MTJ REVISED
ON THIS SHEET ARE TAKEN FROM EXISTING PLANS, LAQUES TO BE PROTECTED DURING ANTINING (TP.) ON THIS SHEET ARE TAKEN FROM EXISTING PLANS, LL BE USED FOR INFORMATION PURPOSE ONLY. MONLY THE WORK DESCRIBED IN THE GENERAL NOTES VERAL SUMMARY.		DESIGNED MTJ CHECKED ERK
ON THIS SHEET ARE TAKEN FROM EXISTING PLANS, LL BE USED FOR INFORMATION PURPOSE ONLY. M ONLY THE WORK DESCRIBED IN THE GENERAL NOTES VERAL SUMMARY.		RAILING DETAILS BRIDGE NO. CUY-10-0869 OVER VALLEY PARKWAY AND ROCKY RIVER
M ONLY THE WORK DESCRIBED IN THE GENERAL NOTES		CUY-480-6.47/ VAR PAINT PID No. 22131
VERAL SUMMARY.	ON THIS SHEET ARE TAKEN FROM EXISTING PLANS, LL BE USED FOR INFORMATION PURPOSE ONLY.	
	M ONLY THE WORK DESCRIBED IN THE GENERAL NOTES NERAL SUMMARY.	