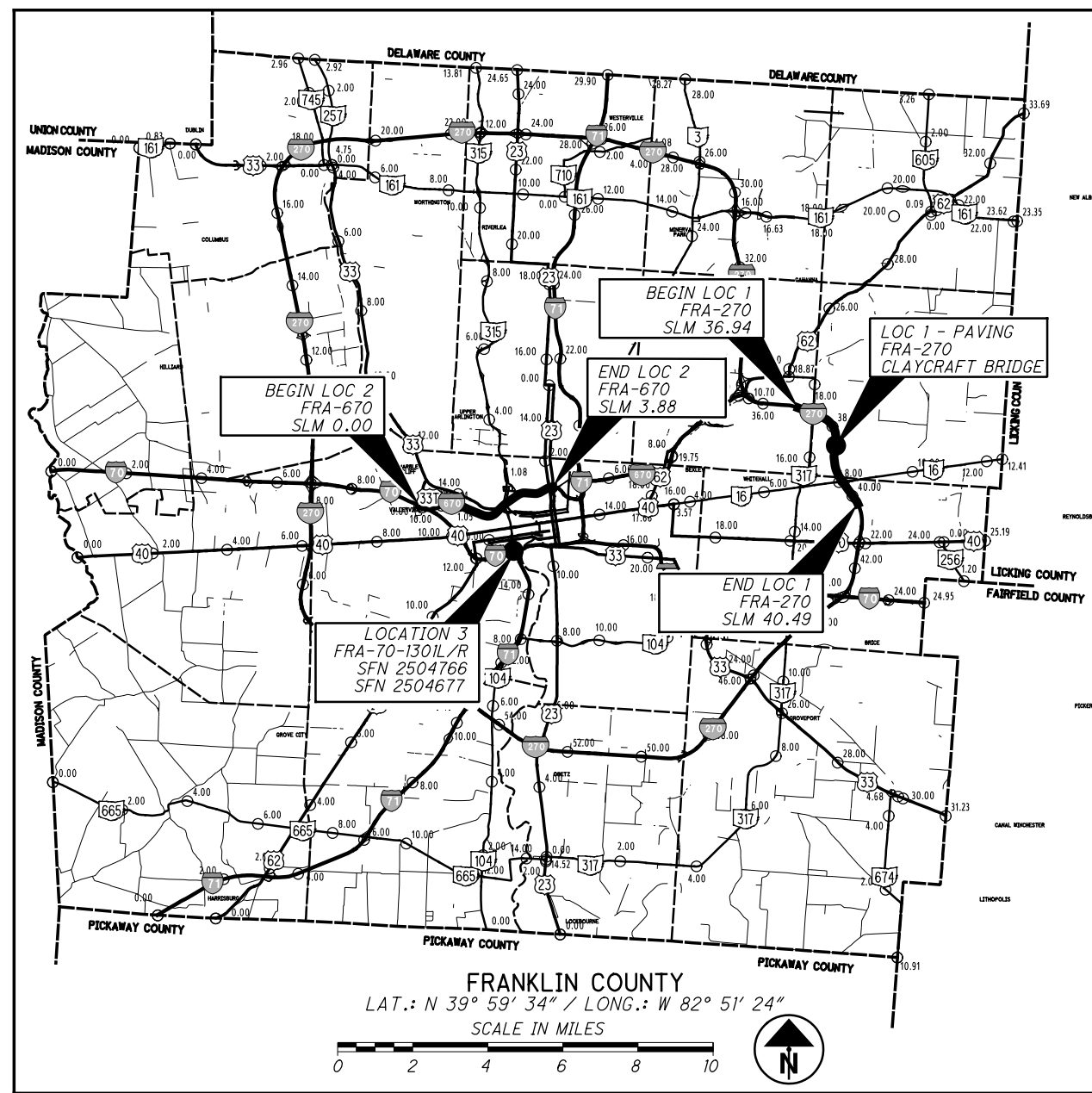


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STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**FRA-270/670 SP**  
**FY20 PRIORITY**  
 CITY OF COLUMBUS/CITY OF GAHANNA

LOC	COUNTY	ROUTE	BEGIN SLM	END SLM	COUNTY	TOWNSHIP
1	FRA	270	36.94	40.49	FRANKLIN	MIFFLIN, JEFFERSON, TRURO
2	FRA	670	0.00	3.88	FRANKLIN	FRANKLIN, MARION
3	FRA	070	1301L/R SFN 2504766, 25404677		FRANKLIN	FRANKLIN

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PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF PARTIAL DEPTH PAVEMENT REPAIRS AT VARIOUS LOCATIONS ALONG IR-270 AND IR-670 IN FRANKLIN COUNTY, RESURFACING OF A PORTION OF IR-270 IN THE NORTHBOUND DIRECTION UNDER THE CLAYCRAFT BRIDGE AND SOME MINOR BRIDGE WORK ON SFN 2504766 AND SFN 2504677 (EASTBOUND AND WESTBOUND BRIDGES OVER S.R.315).

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

EARTH DISTURBED AREA:

PROJECT EARTH DISTURBED AREA	N/A *
EST. CONTRACTOR EARTH DISTURBED AREA	N/A *
NOTICE OF INTENT EARTH DISTURBED AREA	N/A *

\* MAINTENANCE PROJECT

UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig

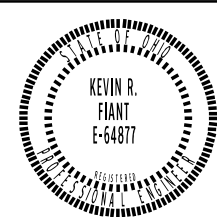


OHIO811. 8-1-1. or 1-800-362-2764 (Non-members must be called directly)

PLAN PREPARED BY:



ENGINEERS SEAL:



SIGNED: *Kevin Fiant*  
 DATE: 1-10-2020

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS
BP-3.1 10/18/19	800 01/17/20
MT-95.30 07/19/19	821 04/20/12
MT-95.50 07/21/17	832 10/19/18
MT-98.10 01/20/17	872 07/19/19
MT-98.11 04/19/19	921 04/20/12
MT-98.20 04/19/19	
MT-98.22 01/20/17	
MT-98.28 01/20/17	
MT-98.29 07/19/19	
MT-99.20 04/19/19	
MT-101.60 01/20/17	SPECIAL PROVISIONS
MT-101.90 07/21/17	
MT-105.10 07/19/13	

PLANS CERTIFIED BY:  
 NAME: *Luca V. Dennis* DATE: 1-10-20  
 DISTRICT 6  
 OHIO DEPT. OF TRANSPORTATION

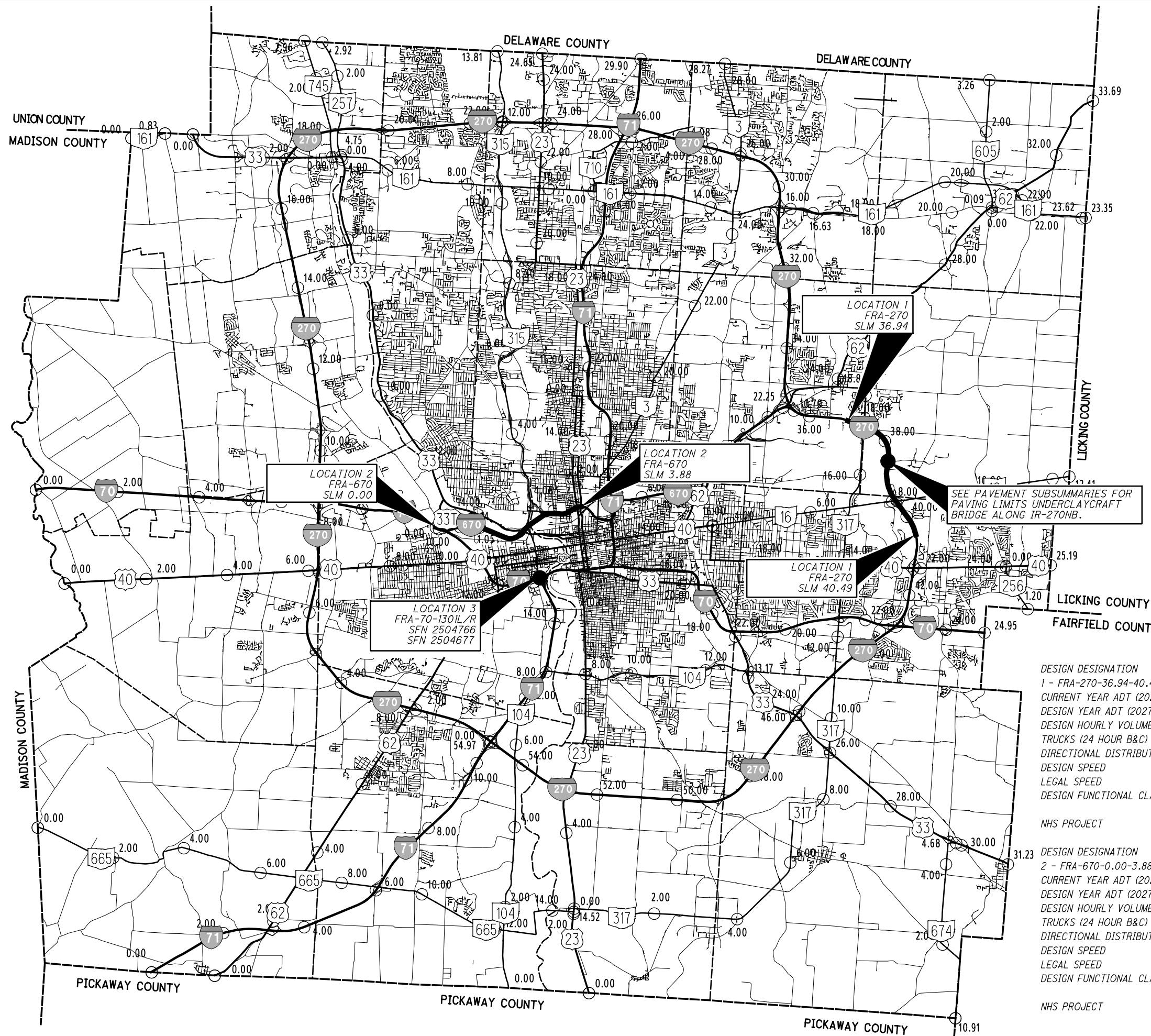
APPROVED: *Michael R. Bluff*  
 DATE: 1/13/2020  
 DISTRICT DEPUTY DIRECTOR

APPROVED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NONE  
 PID NO. 91903  
 CONSTRUCTION PROJECT NO.  
 RAILROAD INVOLVEMENT NONE  
**FRA-270/670 SP**  
**FY20 PRIORITY**  
 1/18

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CATEGORY	GROUP	RESPONSIBLE ENTITY	PLAN SPLIT CODE	DESCRIPTION
INTERSTATE	PAVEMENT	STATE	01/IMS/PV	FRA-270 FROM SLM 36.94 TO SLM 40.49 & FRA-670 FROM SLM 0.00 TO SLM 3.88, FRA-70-130IL/R SFN 2504766, 2504677
INTERSTATE	PAVEMENT	STATE	02/IMS/PV	PAVING FRA-270 NB FROM SLM 38.20 TO SLM 38.80.



DESIGN DESIGNATION	1 - FRA-270-36.94-40.49	
CURRENT YEAR ADT (2020)		123,000
DESIGN YEAR ADT (2027)		127,000
DESIGN HOURLY VOLUME (2027)		15,000
TRUCKS (24 HOUR B&C)		11%
DIRECTIONAL DISTRIBUTION		50%
DESIGN SPEED		70 MPH
LEGAL SPEED		70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	01 INTERSTATE (URBAN)	
NHS PROJECT		YES
DESIGN DESIGNATION	2 - FRA-670-0.00-3.88	
CURRENT YEAR ADT (2020)		156,000
DESIGN YEAR ADT (2027)		171,000
DESIGN HOURLY VOLUME (2027)		17,000
TRUCKS (24 HOUR B&C)		10%
DIRECTIONAL DISTRIBUTION		50%
DESIGN SPEED		70 MPH
LEGAL SPEED		70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	01 INTERSTATE (URBAN)	
NHS PROJECT		YES



6500  
3250  
0  
HORIZONTAL  
SCALE IN FEET

CALCULATED GVD  
CHECKED DKR

**LOCATION MAP**  
**FRANKLIN COUNTY**

**FRA-270/670 SP**  
**FY20 PRIORITY**

2  
18

**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 CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY ODOT PERSONNEL. THE CONSTRUCTION INSPECTOR SHALL APPROVE ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR CONDITION AND LOCATION BEFORE THE CONTRACTOR WILL BE ALLOWED TO BEGIN WORK. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, HIS PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED.

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

**LANES OPEN DURING HOLIDAYS AND SPECIAL EVENTS**

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 OR EVENTS:

HOLIDAYS  
CHRISTMAS FOURTH OF JULY  
NEW YEAR'S EVE LABOR DAY  
MEMORIAL DAY THANKSGIVING

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 MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00 NOON TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 NOON WEDNESDAY THROUGH 6:00 AM FRIDAY
THANKSGIVING	5:00 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

**SPECIAL EVENTS:**

RED WHITE & BOOM - DURING THE SCHEDULED EVENT HOURS (12PM ON JULY 3 TO 1AM ON JULY 4) NO WORK SHALL BE PERFORMED AND ALL AVAILABLE LANES SHALL BE OPEN TO TRAFFIC.

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 (PN 127).

**PUBLIC OUTREACH AND NOTIFICATION:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICE VIA EMAIL AT [d06.pio@dot.ohio.gov](mailto:d06.pio@dot.ohio.gov) TO COORDINATE EFFORTS TO NOTIFY ADJACENT RESIDENTS AND BUSINESSES OF THE UPCOMING PROJECT. ADVANCE NOTIFICATION SHALL OCCUR NO LATER THAN FOURTEEN (14) DAYS PRIOR TO THE FIRST DAY OF WORK. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC INFORMATION OFFICE.

**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. THE PROJECT ENGINEER SHALL RECEIVE THIS NOTIFICATION 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 SHOULD LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, 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	
Start of Construction & Traffic Pattern Changes	N/A	14 calendar days prior to implementation	

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

**PERMITS:**

THE CONTRACTOR IS TO OBTAIN ALL PERMITS REQUIRED FROM THE CITY OF COLUMBUS. PERMITS CAN BE OBTAINED FROM THE DIVISION OF PLANNING AND OPERATIONS PERMIT OFFICE; PHONE NUMBER 614-645-7497.

**PERMITTED LANE CLOSURES:**

THE EXISTING NUMBER OF LANES IN EACH DIRECTION SHALL BE MAINTAINED IN ACCORDANCE WITH THE LANE VALUE CONTRACT TABLE FOR EACH LOCATION UNLESS OTHERWISE SHOWN IN THE PLANS.

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 CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

**PERMITTED LANE CLOSURES (CONT'D):**

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

**RIGHT OF WAY PERMITS:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE RIGHT OF WAY USE PERMITS TO INSTALL MAINTENANCE OF TRAFFIC SIGNING.

**USE OF STANDARD DRAWINGS**

FOR THE PURPOSE OF THIS PROJECT, "MOVING OPERATION" SHALL BE LIMITED TO PAVEMENT MARKING STRIPING.

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 SIGHT OBSTRUCTIONS. LOCATIONS OF THE TAPER ZONES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER, BUT TAPER LENGTHS MUST MEET THE MINIMUM STANDARDS. TAPERS SHOULD BE PLACED IN TANGENT SECTIONS WHENEVER POSSIBLE. ADDITIONAL YIELD SIGNS MAY BE REQUIRED FOR RAMPS WITHIN 1,000 FEET OF A WORK ZONE. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

FOR ANY MULTILANE HIGHWAY, DEVICE SPACING SHALL BE A MAXIMUM OF 40' CENTER ON CENTER IN THE TAPERS AND 80' CENTER ON CENTER IN THE TANGENT SECTIONS.

**WORK SITE LIGHTING**

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.

**WORK ZONE PAVEMENT MARKINGS, CLASS I, 642 PAINT:**

THESE ITEMS ARE TO BE PERFORMED AT ALL PAVEMENT REPAIR AREAS. THE CONTRACTOR SHALL MAINTAIN THESE MARKINGS UNTIL THE PERMANENT MAKINGS CAN BE PLACED IN ACCORDANCE WITH ITEM 642 PAVEMENT MARKINGS.

WORK ZONE LANE LINE, CLASS I, 642 PAINT, 6" = 1.92 MILE  
WORK ZONE EDGE LINE, CLASS I, 642 PAINT, 6" = 3.72 MILE  
WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT, 12" = 392 FT

**SHORT DURATION RAMP CLOSURES:**

FOR THE PURPOSE OF PERFORMING THE REQUIRED WORK OR WHEN REQUIRED BY THE INTERSTATE ENTRANCE RAMP CLOSURE NOTE, RAMPS MAY BE CLOSED FOR SHORT DURATIONS AND DETOURED IN ACCORDANCE WITH THE RAMP CLOSURE TABLE IF APPROVED BY THE ENGINEER. RAMP CLOSURES ARE SUBJECT TO DISINCENTIVES.

FOR ALL SERVICE RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 60 HOURS AND/OR, FOR ALL SYSTEM RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 24 HOURS

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.
- POSITIVE GUIDANCE ALONG THE DETOUR ROUTE WITH DETOUR SIGNS (M4-9 SERIES) IN ACCORDANCE WITH THE DETOUR SIGNS NOTE.

FOR ALL RAMP CLOSURES LASTING LESS THAN 12 HOURS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

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MAINTENANCE OF TRAFFIC NOTES

FRA-270/670 SP  
FY20 PRIORITY

**SHORT DURATION RAMP CLOSURES (CONT'D):**

- A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

WHEN CLOSING ENTRANCE RAMPS, CORRESPONDING LEAD-IN LANES AND TURN LANES SHALL ALSO BE CLOSED.

IF A DESIGNATED DETOUR ROUTE IS NOT PROVIDED IN THE PLANS, TRAFFIC SHALL BE DIRECTED TO THE NEXT INTERCHANGE, IF AVAILABLE, TO TURN AROUND. IF THE USE OF THE NEXT INTERCHANGE IS NOT POSSIBLE, AN ALTERNATIVE DETOUR ROUTE SHALL BE PROVIDED BY THE ENGINEER.

SERVICE RAMP: INTERCHANGE RAMPS BETWEEN FREEWAYS (OR EXPRESSWAYS) AND NON-FREEWAYS (OR NONEXPRESSWAYS). THESE RAMPS PROVIDE ACCESS (CONNECTIONS) BETWEEN FREEWAYS/EXPRESSWAYS AND OTHER PRINCIPAL/MINOR ARTERIALS, COLLECTORS OR LOCAL ROADS.

SYSTEM RAMP: INTERCHANGE RAMPS (OR CONNECTORS) BETWEEN FREEWAYS (OR EXPRESSWAYS) AND FREEWAYS (OR EXPRESSWAYS).

**USE OF WEIGHTED CHANNELIZERS:**

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

THE MARKINGS ON THE WEIGHTED CHANNELIZERS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETRO REFLECTIVE STRIPES 6 INCHES WIDE. EACH WEIGHTED CHANNELIZERS SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETRO REFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES SHALL NOT EXCEED 2 INCHES WIDE. THE WEIGHTED CHANNELIZERS 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 OPERATION 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 BARRIERS. WORK IS TO RESUME ON THE FOLLOWING DAY OR NIGHT.

WHEN USED AT NIGHT, WEIGHTED CHANNELIZERS SHALL ONLY BE PLACED IN THE TANGENT AREA. 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. MAXIMUM SPACING OF THE WEIGHTED CHANNELIZERS SHALL BE 40 FEET. 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 THE WEIGHTED CHANNELIZERS. ALL BALLASTS USED SHOULD BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

**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 OMTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TCP-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 OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TCP-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).

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 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 1440 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.

**ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN:**

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE WHEN NO LONGER NEEDED, CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. ONLY CLASS I OR II SIGNS WILL BE PERMITTED.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TEMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETRO REFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

A PCMS SHALL BE PLACED "AS DIRECTED BY THE PROJECT ENGINEER" IN CONJUNCTION WITH LANE CLOSURES. THE MESSAGES SHALL BE AS DIRECTED BY THE ENGINEER. THE 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 WILL BE OFF, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9" BY 15" MINIMUM, FACING 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 TROUBLE SHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NEEDED.

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 SHOULD BE SUPPORTED, BUT NORMALLY, NOT MORE THAN TWO MESSAGE PHASES SHOULD BE EMPLOYED, ALTHOUGH THREE PHASES MAY BE USED IN UNUSUAL CONDITIONS. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE. 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 FOR DIFFERENT DAYS OF THE WEEK.

THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03 SHALL MAINTAIN THE PCMS UNIT IN GOOD WORKING ORDER. 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 A FAILURE. ANY FAILURE SHALL NOT RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATIONS AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN, AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF ITS RESPONSIBILITIES AS OUTLINED IN 104.04. PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT BID PRICE PER MONTH FOR EACH ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE FOLLOWING QUANTITY HAS BEEN PROVIDED.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN:  
(3 SIGNS X 5 MONTHS) = 15 SNMT

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MAINTENANCE OF TRAFFIC NOTES

FRA-270/670 SP  
FY20 PRIORITY

**ITEM 614 - DETOUR SIGNING**

SIZE AND PLACEMENT OF DETOUR SIGNS (M4-9) SHOULD FOLLOW THE REQUIREMENTS OF THE OMUTCD SECTION 6F.03, SECTION 2A.11 AND TABLE 6F.01.

DETOUR SIGNING SHALL PROVIDE DRIVERS ADEQUATE TIME TO CLEARLY READ THE SIGNS AND MAKE THE PROPER DECISIONS AT EACH REQUIRED TURNING MOVEMENT. THE DESIGNATED DETOUR ROUTE SHALL BE SIGNED IN ACCORDANCE WITH THE REQUIREMENTS BELOW:

- APPROXIMATELY 1500 FEET PRIOR TO TIP OF THE PAINTED GORE AT AN INTERCHANGE WHEN EXITING A HIGH SPEED (45 MPH OR HIGHER) FACILITY.
- AT OR NEAR THE EXISTING SIGN IN THE GORE OF AN INTERCHANGE RAMP.
- AT OR NEAR THE FIRST EXISTING LANE ASSIGNMENT SIGN ON AN INTERCHANGE EXIT RAMP.
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT THE END OF AN EXIT RAMP.
- APPROXIMATELY 500 FEET PRIOR TO A REQUIRED TURN AT AN INTERSECTION NOT CONTROLLED BY A STOP SIGN (FOR 45 MPH OR HIGHER ONLY).
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT AN INTERSECTION.
- EVERY TWO MILES ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS OUTSIDE A CITY.
- EVERY TWO BLOCKS ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS WITHIN A CITY.
- AT ANY OTHER INTERSECTION OR DECISION POINT WHERE THE DETOUR ROUTE IS CONTRARY TO THE NORMAL, EXPECTED TURNING MANEUVER OR OTHERWISE UNCLEAR.

DETOUR SIGNS SHALL BE PLACED, WHEN POSSIBLE, NEXT TO BUT NOT BLOCKING EXISTING ROUTE MARKERS OR LANE ASSIGNMENT SIGNS. DETOUR SIGNS SHALL NOT OBSCURE OR BE OBSCURED BY OTHER EXISTING OR TEMPORARY SIGNS.

DETOUR SIGNS SHALL BE ERECTED AND/OR UNCOVERED PRIOR TO THE ROAD OR RAMP BEING CLOSED TO TRAFFIC BUT NO EARLIER THAN FOUR HOURS PRIOR TO THE CLOSURE. DETOUR SIGNS SHALL BE COVERED AND/OR REMOVED NO LATER THAN FOUR HOURS FOLLOWING THE ROAD OR RAMP RE-OPENING TO TRAFFIC.

PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, PROPER SIGN PLACEMENT AND SIZING, TIMELY ERECTING AND/OR UNCOVERING OF SIGNS, MAINTAINING SIGNS, AND TIMELY COVERING AND/OR REMOVING SIGNS AND SUPPORTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - DETOUR SIGNING = LUMP SUM

**MAINTENANCE OF TRAFFIC FOR MARKING PAVEMENT REPAIRS:**

PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, LEO HOURS, AND INCIDENTALS NEEDED TO PERFORM THE ABOVE LISTED WORK IS CONSIDERED INCIDENTAL TO MAINTAINING TRAFFIC ON THE PROJECT AND WILL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

**COORDINATION WITH ADJACENT PROJECTS:**

THE CONTRACTOR SHALL COORDINATE WORK WITH ODOT AND THE CONTRACTORS ON THE ADJACENT PROJECTS. FRA-270-38.53, PID 110368 AND FRA-70-14054, PID 105322. COORDINATION SHALL BE MADE TO PREVENT CONFLICTING ADVANCE WARNING SIGNS, CONFLICTING DETOUR ROUTES, OVERLAPPING/CONFLICTING LANE CLOSURES, AND TO ENSURE THAT A MINIMUM DISTANCE OF 2 MILES BETWEEN ADJACENT LANE CLOSURES IS MAINTAINED. THIS IS NOT AN EXHAUSTIVE LIST OF COORDINATION ITEMS THAT MAY NEED TO BE RESOLVED BETWEEN PROJECTS. THE DEPARTMENT RESERVES THE RIGHT TO DECIDE WHICH PROJECT'S ACTIVITIES TAKE PRECEDENCE. PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WILL CONSIDER THIS AN EXCUSABLE, NON-COMPENSABLE DELAY PER 108.06.B. ON PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WHERE THE CONTRACTOR FAILED TO MEET THE NOTIFICATION REQUIREMENTS, THE DELAYS SHALL NOT BE CONSIDERED EXCUSABLE OR COMPENSABLE.

ATTENDANCE AT DEPARTMENT ORDERED TRAFFIC COORDINATION MEETINGS BETWEEN ADJACENT PROJECTS SHALL BE CONSIDERED MANDATORY FOR EACH PROJECT'S SUPERINTENDENT AND WORKSITE TRAFFIC SUPERVISOR (WTS), AND INCIDENTAL TO THE LUMP SUM MAINTENANCE OF TRAFFIC PAYMENT ITEM.

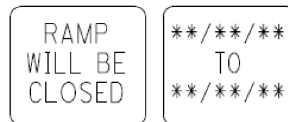
**INTERSTATE ENTRANCE RAMP CLOSURES (FRANKLIN COUNTY ONLY):**

IF THE INTERSTATE IS REDUCED TO ONE THROUGH LANE, ALL NON-INTERSTATE ENTRANCE RAMPS ENTERING DIRECTLY INTO THE WORK ZONE TRANSITION AREA, ACTIVITY AREA OR TERMINATION AREA AS DEFINED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) OR ENTERING WITHIN 1000 FEET OF THE FIRST ARROW BOARD SHALL BE CLOSED IN ACCORDANCE WITH THE SHORT DURATION RAMP CLOSURES NOTE.

**NOTIFICATION OF RAMP CLOSURES:**

NOTIFY THE ENGINEER IN WRITING AT LEAST 7 DAYS IN ADVANCE OF THE RAMP CLOSURE. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN 2 CLASS A PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) IN ACCORDANCE WITH SUPPLEMENT 1061. PCMS'S SHALL BE POSITIONED TO DISPLAY THE DATE AND DURATION OF THE RAMP CLOSURE FOR THE PERIOD OF TIME AND AT THE RAMPS SPECIFIED IN THE PLANS FOR FULL CLOSURE, OR AS DIRECTED BY THE ENGINEER.

PROVIDE THE FOLLOWING MESSAGES, OR OTHER MESSAGES AS DIRECTED BY THE ENGINEER (\* DENOTED LIMITS OF EACH SCREEN MESSAGE):



BEFORE CLOSURE

THE CONTRACTOR OR ENGINEER SHALL PROVIDE THE ACTUAL DATES AND TIMES.

**LANE VALUE CONTRACT TABLE:**

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 Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
<b>FRA-270</b>						
Goshen Lane (35.90) to SR 317 (37.36)	4	4 to 3	5AM-9AM & 3PM-7PM	No Restriction	No Restriction	\$200
		4 to 2	5AM-8PM	7AM-9AM & 2PM-7PM	7AM-9AM & 2PM-7PM	\$200
		4 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$200
SR 317 (37.36) to US 40 (40.90)	4	4 to 3	5AM-9AM & 3PM-7PM	No Restriction	No Restriction	\$200
		4 to 2	5AM-8PM	7AM-9AM & 2PM-7PM	7AM-9AM & 2PM-7PM	\$200
		4 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$200
US 40 (40.90) to Livingston Avenue (42.13) Main line	2	2 to 1	5AM-8PM	6AM-7PM	6AM-7PM	\$200
US 40 (40.90) to Livingston Avenue (42.13) Collector Distributor	4	4 to 3	5AM-9AM & 3PM-7PM	No Restriction	No Restriction	\$200
		4 to 2	5AM-8PM	7AM-9AM & 2PM-7PM	7AM-9AM & 2PM-7PM	\$200
		4 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$200
Short term shoulder closures are not permitted 5AM-9AM and 3PM-7PM Monday-Friday.						

LANE VALUE CONTRACT TABLE						
<b>FRA-670</b>						
Section	Existing Number of Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
I-70 (0.00) to Grandview Ave (0.90)	3	3 to 2	5AM-9AM & 2PM-7PM	4PM-6PM	4PM-6PM	\$100
		3 to 1	5AM-9PM	6AM-8PM	6AM-11PM	\$100
Grandview Ave (0.90) to SR 315 SB exit (1.65)	4	4 to 3	5AM-9AM & 3PM-6PM	No Restriction	No Restriction	\$100
		4 to 2	5AM-9AM & 2PM-7PM	4PM-6PM	4PM-6PM	\$100
		4 to 1	5AM-9PM	6AM-8PM	6AM-8PM	\$100
SR 315 SB exit (1.65) to Neil Avenue (3.14)	3	3 to 2	5AM-9PM	6AM-7PM	6AM-7PM	\$200
		3 to 1	5AM-11PM	6AM-10PM	6AM-11PM	\$200
Neil Avenue (3.14) to 3rd Street (3.72)	4	4 to 3	5AM-9AM & 3PM-6PM	No Restriction	No Restriction	\$200
		4 to 2	5AM-9PM	6AM-7PM	6AM-7PM	\$200
		4 to 1	5AM-11PM	6AM-11PM	6AM-11PM	\$200
3rd Street (3.72) to Cleveland Avenue (4.30) Westbound	2	2 to 1	5AM-11PM	6AM-11PM	6AM-11PM	\$200
3rd Street (3.72) to Cleveland Avenue exit (4.04) Eastbound	2	2 to 1	5AM-11PM	6AM-11PM	6AM-11PM	\$200
Short term shoulder closures are NOT permitted 5AM-9AM and 3PM-6PM Monday-Friday.						

Ramp Closure Restrictions Interstate 270 in Franklin County					
Secondary Route: State Route 317 SLM along 270: 37.36 (East Side)					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
A	OH-317 SB to I-270 WB	5AM-8PM	8AM-8PM	OH-317 S to 270 S (Ramp H) to OH-16 to 270 N	OH-317 S to OH-16 to 270 N
E	I-270 EB to OH-317 SB	5AM-11PM	8AM-8PM	270 S to OH-16 to 270 N to OH-317 (Ramp L)	270 S to OH-16 to OH-317
H	OH-317 SB to I-270 EB	5AM-7PM	8AM-7PM	OH-317 S to OH-16 to 270 S	None
L	I-270 WB to OH-317 NB	5AM-7PM	8AM-7PM	270 N to US-62 E to OH-317	270 N to W. Johnstown Rd.* to S. Stygler Rd.* to US-62 W to 270 S to oh-317 (Ramp E)
N	OH-317 NB to I-270 WB	5AM-7PM	8AM-7PM	OH-317 to US-62 W to 270 N	OH-317 to 270 S (Ramp T) to OH-16 to 270 N
T	OH-317 NB to I-270 EB	5AM-9AM & 3PM-7PM	No Restriction	317 to 270 N (Ramp N) to US-62 E to OH-317 to 270 S (Ramp H)	OH-317 to US-62 W to 270 S

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Secondary Route: State Route 16 SLM along 270: 39.50 (East Side)					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
S	SR-16 WB to I-270 SB	5AM-9PM	8AM-8PM	SR 16 WB to I-270 NB to SR 317 NB to I-270 SB	SR 16 WB to SR 317(Hamilton Rd) SB to US-40(Main St) EB to I-270 SB*
T	SR-16 EB to I-270 SB	5AM-9AM & 3PM-7PM	No Restriction	SR 16 EB to I-270 NB to SR 317 NB to I-270 SB	SR 16 to SR 317(Hamilton Rd) SB to US-40(Main St) EB to I-270 SB*
U	I-270 SB to SR-16 EB	5AM-12AM	8AM-8PM	I-270 S to US-40 to I-270 N to SR-16 E (Ramp W)	I-270 S to US-40(Main St)WB to SR 317(Hamilton Rd) NB to SR-16*
V	SR-16 EB to I-270 NB	5AM-9AM & 3PM-7PM	No Restriction	SR-16 EB to I-270 SB to US-40 to I-270 N	SR 16 to SR 317(Hamilton Rd) NB to I-270 NB*
W	I-270 NB to SR-16 EB	5AM-8PM	8AM-7PM	I-270 N to SR-317 to I-270 S to SR-16 E (Ramp U)	I-270 NB to US-40(Main St) WB to SR 317(Hamilton Rd) NB to SR-16*
X	I-270 NB to SR-16 WB	5AM-7PM	8AM-7PM	I-270 N to SR-317 to I-270 S to SR-16 W (Ramp Z)	I-270 NB to US-40(Main St) WB to SR 317(Hamilton Rd) NB to SR-16*
Y	SR-16 WB to I-270 NB	5AM-11PM	8AM-9PM	SR-16 W to I-270 S (Ramp S) to US-40 to I-270 N	SR-16 W to SR-317 N to I-270 N
Z	I-270 SB to SR-16 WB	5AM-9AM & 3PM-7PM	No Restriction	I-270 S to US-40 to I-270 N to SR-16 W (Ramp X)	I-270 S to SR-16 E (Ramp U) to I-270 N (Ramp V) to SR-16 W (Ramp X)

\* with permission of local road agencies

Ramp Closure Restrictions Interstate 670 in Franklin County					
Secondary Route: US route 33T SLM along 670: 0.62					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
"A"	I-670 WB to US-33 WB	6AM-8AM	4PM-6PM	670 WB to Grandview Ave to US 33	None
"B"	US-33 EB to I-670 EB	6AM-9AM	3PM-6PM	US 33 EB to Grandview Ave to 670 EB	None
Secondary Route: Grandview Ave SLM along 670: 0.95					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
A	Grandview Ave. to I-670 WB	5AM-9AM & 3PM-7PM	No Restriction	Grandview Ave. S to 670 E (Ramp C) to US-33 to 670 W	Grandview Ave. N to US-33 E to 670 W
B	I-670 WB to Grandview Ave.	5AM-7PM	8AM-7PM	670 W to US-33 E to Grandview Ave.	670 W to 70 W to Hague Ave. to Fisher Rd. to 70 E to 670 E to Grandview Ave. (Ramp D)
C	Grandview Ave. to I-670 EB	5AM-7PM	8AM-7PM	Grandview Ave. to 670 W (Ramp A) to 70 W to Hague Ave. to Fisher Rd. to 70 E to 670 E	Grandview Ave. N to US-33 W to 670 E
D	I-670 EB to Grandview Ave.	5AM-7PM	8AM-7PM	670 E to US-33 W to Grandview Ave.	670 E to US-33 to 670 W to Grandview Ave. (Ramp B)
Secondary Route: US route 33 SLM along 670: 2.13 670/33 Combined					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
S-C	US-33 to I-670/US-33T WB	5AM-9AM & 3PM-7PM	No Restriction	US-33 E to OH-315 S (Ramp S-J) to 70 E to 71 N to 670 W	US-33 W to Grandview Ave.* to 670 W

Secondary Route: State Route 315 SLM along 670: 2.36 670/33 Combined					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
S-E	I-670/US-33T EB to US-33T EB	5AM-7PM	8AM-7PM	670 E to Neil Ave.* to US-33 W	670 E to OH-315 N (Ramp S-I) to Goodale St. to Twin Rivers Dr.* to US-33
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
S-G	OH-315 SB to I-670/US-33T WB	5AM-8PM	8AM-7PM	OH-315 S to 70 E to 71 N to 670 W	OH-315 S to Town St. to S Hartford Ave.* N to W Broad* to N Souder Ave.* N to US-33 W to 670 W (Ramp S-C)
S-I	I-670/US-33T EB to I-OH-315 NB	5AM-7PM	8AM-7PM	670 E to 71 S to 70 W to OH-315 N	670 E to N 4th St. to 670 W to OH-315 N
S-K	I-670 WB to OH-315 SB	5AM-10PM	8AM-8PM	670 W to Grandview Ave. to 670 E to OH-315 S (Ramp S-E & S-J)	670 W to Grandview Ave. N to US-33 E to OH-315 S (Ramp S-J)
S-L	OH-315 NB to I-670 EB	5AM-7PM	8AM-7PM	OH-315 N to Lane Ave to OH-315 S to 670 E	OH-315 N to Goodale St. to Vine St.* E to Neil Ave.* N to 670 E
Secondary Route: Neil Ave SLM along 670:					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
NC	I-670 EB to Neil Ave	5AM-8PM	8AM-8PM	I-670 to Goodale St WB to Park St SB to Vine St WB to Neil Ave.	
Secondary Route: State Route 315 SLM along 670: 3.00					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
NK	OH-315 SB to I-670 EB	5AM-7PM	8AM-7PM	315 S to 70/71 E to 71 N to 670	315 S to Vine St to Neil Ave to 670 E
OC	OH-315 NB to Goodale Blvd.	5AM-9AM & 3PM-7PM	No Restriction	OH-315 N to W Lane Ave. to OH-315 S to Olentangy River Rd. (Ramp OB) to W Goodale St.	OH-315 N to Cannon Dr.* to King Ave.* E to Neil Ave.* S to W Goodale St.
OE	I-670 to OH-315 NB	5AM-10PM	8AM-9PM	670 W to Grandview Ave. to 670 E to OH-315 N	670 W to Grandview Ave. to Goodale Blvd.* F to OH-315 N (Ramp OF)
Secondary Route: State Route 315C SLM along 670:					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
NB	I-670 WB to SR-315 NB	5AM-10PM	8AM-9PM	I-670 WB to Grandview Ave to I-670 EB to SR-315 NB	
Secondary Route: Goodale SLM along 670: 3.75					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route

Secondary Route: State Route 23 SLM along 670: 3.75					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
NJ	I-670 EB to Goodale St.	N/A	N/A	670 E to N 3rd St. (Ramp NI) to E Chestnut St.* W to N High St. to E Goodale St.	670 E to 71 S to Broad St. to Cleveland Ave. N to E Spring St.* W to N 4th St. to E Goodale St.
NI	I-670 EB to N 3rd St.	5AM-8PM	8AM-7PM	670 E to Leonard Ave. to 670 W to N 3rd St.	670 E to Goodale St.* W (Ramp NJ) to N High St. N to Warren St.* E to N 3rd St.
NL	N 3rd St. to I-670 WB	5AM-9AM & 3PM-7PM	No Restriction	N 3rd St. to 670 E to Leonard Ave. to 670 W to 670 W (Ramp NO)	N 3rd St. to E long St.* to N 4th St. to 670 W (Ramp NM)
NM	N 4th St. to I-670 WB	5AM-8PM	8AM-7PM	N 4th St. to E 1st Ave.* to Summit St. S to 670 W (Ramp NL)	N 4th St. to 670 E to 71 N to E 5th Ave. W to Summit St. S to 670 W (Ramp NL)
NP	I-670 WB to N Fourth St.	5AM-9AM & 3PM-7PM	No Restriction	670 W to Neil Ave. to Vine St.* E to N High St. S to E Nationwide Blvd.* E to N 4th St.	670 W to Neil Ave.* N to W 5th Ave.* E to N 4th St.
NQ	N 3rd St. to I-670 EB	5AM-7PM	8AM-7PM	N 3rd St. to E Spring St.* to Neil Ave. to 670 E	N 3rd St. to E Chestnut St.* to N 4th St. to E Nighth St.* to Cleveland Ave. N to 670 E
Secondary Route: Interstate Route 670 SLM along 670: 3.88					
Ramp Designation	Movement	No Closures Allowed		Detour Routes	
		Mon-Fri	Sat-Sun	Primary Detour Route	Secondary Detour Route
NO	I-670 WB to I-670 WB	4AM-1AM	7AM-9PM	670 W to N 4th St. (Ramp NP) to E 1st Ave.* W to Summit St. S to 670 W (Ramp NL)	None

\* with permission of local road agencies

LANE VALUE CONTRACT TABLE						
Section (SLM)	Existing Number of Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
<b>FRA-70</b>						
Sounder Ave (12.82) to Scioto River (13.41)	2	2 to 1	5AM-11PM	6AM-11PM	6AM-11PM	\$545
Scioto River (13.41) to Short Street (13.73)	3	3 to 2	5AM-9PM	7AM-9AM & 1PM-7PM	7AM-9AM & 1PM-7PM	\$365
		3 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$365
Short Street (13.73) to Grant Avenue (14.56)	3	3 to 2	5AM-9PM	6AM-10PM	6AM-10PM	\$355
		3 to 1	5AM-11PM	5AM-10PM	5AM-10PM	\$355
Short term shoulder closures are permitted any time except 5AM-9AM and 3PM-6PM Monday-Friday.						

CALCULATED  
GVD  
CHECKED  
XXX

MAINTENANCE OF TRAFFIC NOTES

FRA-270/670 SP  
FY20 PRIORITY

10  
18

SHORT DURATION RAMP CLOSURE CHART  
I-71

SHORT DURATION RAMP CLOSURE CHART  
I-70

Secondary Route: Interstate Route 70/71 SLM along 70: 13.09					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
AC	I-71 NB to I-70/71 EB	5AM-11PM	7AM-9PM	71 N to 70 W (Ramp AD) to US-62 S to Sullivant Ave. W to 70 E to 70/71 E	71 N to OH-315 N to US-33 W to OH-315 S to 70/71 E (Ramp BC)
DB	I-70/71 WB to I-71 SB	5AM-12AM	8AM-9PM	70/71 W to OH-315 N (Ramp DA) to US-33 W to OH-315 S to 71 S	70/71 W to 70 W to US-62 S to Sullivant Ave. W to 70 E to 71 S (Ramp CE)
Secondary Route: Interstate Route 71 SLM along 70: 13.09					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
AD	I-71 NB to I-70 WB	5AM-9PM	8AM-8PM	71 N to OH-315 N to US-62 E to 2nd St.* to 70/71 W to 70 W	71 N to 70/71 E (Ramp AC) to W Fulton St.* to S Front St.* to W Mound St.* to 70/71 to 70 W
CE	I-70 EB to I-71 SB	5AM-9PM	8AM-8PM	70 E to OH-315 N (Ramp CA) to US-33 W to OH-315 S to 71 S	None
Secondary Route: State Route 315 SLM along 70: 13.09					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
AD	I-71 NB to I-70 WB	5AM-9PM	8AM-8PM	71 N to OH-315 N to US-62 E to 2nd St.* to 70/71 W to 70 W	71 N to 70/71 E (Ramp AC) to W Fulton St.* to S Front St.* to W Mound St.* to 70/71 to 70 W
BC	OH-315 SB to I-70/71 EB	5AM-10PM	8AM-8PM	OH-315 S to 71 S to Greenlawn Ave. to 71 N to 70/71 E (Ramp AC)	OH-315 S to 70 W (Ramp BD) to US 62 S to Sullivant Ave. W to 70 E to 70/71 E
BD	OH-315 SB to I-70 WB	5AM-7PM	8AM-7PM	OH-315 S to 71 S to Greenlawn Ave. to 71 N to 70 W (Ramp AD)	OH-315 S to 70/71 E to W Fulton St.* to S Front St.* to W Mound St.* to 70 W
CA	I-70 EB to OH-315 NB	5AM-7PM	8AM-7PM	70 E to 70/71 E to W Fulton St.* to S Front St.* to W Mound St.* to 70/71 W to OH-315 N (Ramp DJ)	70 E to 71 S (Ramp CE) to Greenlawn Ave. to 71 N to OH-315 N

Secondary Route: State Route 315 SLM along 71: 15.09 (70/71 Combined)					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
BC	OH-315 SB to I-70/71 EB	5AM-10PM	8AM-8PM	OH-315 S to 71 S to Greenlawn Ave. to 71 N to 70/71 E (Ramp AC)	OH-315 S to 70 W (Ramp BD) to US-62 S to Sullivant Ave. W to 70 E to 70/71 E
DA	I-70/71 WB to OH-315 NB	5AM-7PM	8AM-7PM	70/71 W to 71 S to Greenlawn Ave. to 71 N to OH-315 N	70/71 W to OH-315 N (Ramp DJ)
Secondary Route: 2nd St SLM along 71: 15.50 (70/71 Combined)					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
N/A	2nd St. SB to I-70/71 WB	5AM-7PM	8AM-7PM	W Mound St. to S 3rd St. to 70/71 W	W Mound St. E to S High St. N to E Main St. E to 70/71 W
Secondary Route: Fulton SLM along 71: 17.24					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
O	E. Fulton St. to I-71 NB	5AM-9AM & 3PM-7PM	No Restriction	S 18th St. to US-33 W to Parsons Ave. to 71 N (Ramp S)	E Fulton St. E to Miller Ave.* S to 70 W to 71 N
Secondary Route: US Route 23 SLM along 71: 16.29 (70/71 Combined)					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
B	I-70/71 EB to US-23 EB	5AM-7PM	8AM-7PM	70/71 E to US-23 E (Ramp D)	70/71 E to S 18th St.* to US-33 W to US-23
C	US-23 DA WB to I-70/71 WB	5AM-8PM	8AM-7PM	US-23 DA to S. High N to West Mound St.* to 70/71 W (Ramp N/A)	US-23 W to S. High S US-23/33 E to 70 E (Ramp F) to US-40 E to Parsons Ave.* to E Main St.* to 71 S to 70/71 W

**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 ENGINEERS 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.

**BRIDGE VERTICAL CLEARANCE:**

ANY WORK (FALSEWORK, TRAFFIC PROTECTION, CONTAINMENT, ETC.) OVER LVIE TRAFFIC BY THE CONTRACTOR THAT REDUCES THE EXISTING BRIDGE VERTICAL CLEARANCE IS PROHIBITED UNLESS FOUR (4) WEEKS ADVANCE NOTICE IS PROVIDED TO THE ENGINEER WITH NEW PROPOSED VERTICAL CLEARANCES. THE CONTRACTOR SHALL PROVIDE FIELD MEASUREMENTS BEFORE ALLOWING TRAFFIC UNDERNEATH. IF ANY WORK IS TO OCCUR BELOW 14'-6", THEN SIGNS ON THE STRUCTURE AND ADVANCE WARNING SIGNS SHALL BE INSTALLED A MINIMUM OF TWO (2) WEEKS PRIOR TO PERFORMING SUCH WORK. SIGNING SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD) AND THE OHIO "TRAFFIC ENGINEERING MANUAL" (TEM). NO WORK OVER TRAFFIC SHALL OCCUR WITH A VERTICAL CLEARANCE LESS THAN 14'-0". LOWERING THE VERTICAL CLEARANCE DURING CONSTRUCTION IS CONSIDERED THE CONTRACTOR'S MEANS AND METHODS OF ACCOMPLISHING THE WORK, AND THEREFORE THE STATE IS NOT RESPONSIBLE FOR ANY DAMAGE FROM VEHICULAR IMPACTS THAT MAY RESULT AS PER CMS 107.10. PAYMENT FOR NY SIGNS, SIGN SUPPORTS, ETC. MATERIALS AND LABOR SHALL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

**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 APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

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 DAMAGING IMPACT.

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

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

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

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

**PAVEMENT MARKING REMOVAL:**

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF PAVEMENT MARKINGS WHERE INDICATED IN THE PLAN, AND IN THE MANNER DESCRIBED IN THE SPECIFICATIONS. PAYMENT FOR REMOVAL OF PAVEMENT MARKINGS INCLUDING ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO REMOVE THE PAVEMENT MARKING AND PROPERLY DISPOSE OF ANY EXCESS MATERIAL SHALL BE INCLUDED IN ITEM 614. UPON COMPLETION OF ALL MAINTENANCE OPERATIONS, ALL REMAINING PAVEMENT MARKINGS APPLIED WITHIN MAINTENANCE PART SHALL BE REMOVED. PAYMENT SHALL BE INCLUDED WITHIN ITEM 614 - MAINTAINING TRAFFIC.

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SHEET NUMBER						PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED GVD	CHECKED XXX
5-6	7-10	12	18	18A		01/IMS/PV	02/IMS/PV									
												EROSION CONTROL				
							1000		832	30000	1000	EACH	EROSION CONTROL			
													PAVEMENT			
							863		251	01021	863	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 1			5
							1,173		251	01021	1,173	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 2			5
							497		251	01031	497	CY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 3			5
							21,824		254	01000	21,824	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"			
							1,855		407	20000	1,855	GAL	NON-TRACKING TACK COAT			
							909		442	10001	909	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN			6
							15,840		872	10000	15,840	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)			6
													TRAFFIC CONTROL			
							257		621	00100	257	EACH	RPM			
							678		621	54000	678	EACH	RAISED PAVEMENT MARKER REMOVED			
	4								632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN			5
	4								632	27200	4	EACH	LOOP DETECTOR TIE IN			
							4.92		642	00104	4.92	MILE	EDGE LINE, 6", TYPE 1			
							3.72		642	00204	3.72	MILE	LANE LINE, 6", TYPE 1			
							3560		642	00404	3,560	FT	CHANNELIZING LINE, 12", TYPE 1			
													MAINTENANCE OF TRAFFIC			
							1,440		614	11110	1440	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE			
							LS		614	12421	LS		DETOUR SIGNING			
							15		614	18601	15	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN			8
							3.72		614	20110	3.72	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT			
							4.92		614	22110	4.92	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT			
							3560		614	23210	3,560	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT			
													STRUCTURES OVER 20 FOOT SPAN			
							3,529		202	23500	3,529	SY	FRA-70-13.01L (SFN 2504677)			
							706		407	20000	706	GAL	WEARING COURSE REMOVED			
							393		442	20200	393	CY	NON-TRACKING TACK COAT			
													ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)			
							177		519	12304	177	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C, AS PER PLAN			18A
							25		519	12510	25	SF	SPECIAL - PATCHING CONCRETE BRIDGE DECK, FULL DEPTH, AS PER PLAN			18A
							2		614	12337	2	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), AS PER PLAN			18A
							1,509		622	41001	1,509	FT	PORTABLE BARRIER, 32", AS PER PLAN			
							0.29		646	10010	0.29	MI	EDGE LINE, 6"			
							0.15		646	10110	0.15	MI	LANE LINE, 6"			
							148		856	10000	148	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE			
							1,954		202	23500	1,954	SY	FRA-70-13.01R (SFN 2504766)			
							391		407	20000	391	GAL	WEARING COURSE REMOVED			
							218		442	20200	218	CY	NON-TRACKING TACK COAT			
													ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)			
							98		519	12304	98	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C, AS PER PLAN			18A
							25		519	12510	25	SF	SPECIAL - PATCHING CONCRETE BRIDGE DECK, FULL DEPTH, AS PER PLAN			18A
							0.23		646	10010	0.23	MI	EDGE LINE, 6"			
							0.12		646	10110	0.12	MI	LANE LINE, 6"			
							82		856	10000	82	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE			
													INCIDENTALS			
							LS		614	11000	LS		MAINTAINING TRAFFIC			
							LS		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN			5
							LS		624	10000	LS		MOBILIZATION			

GENERAL SUMMARY

FRA-270/670 SP  
FY20 PRIORITY



ESTIMATED QUANTITIES					CALC.	DATE	CHK'D	DATE
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	FRA-70-1301L	FRA-70-1301R	ATM	10/7/19
202	23500	5483	SY	WEARING COURSE REMOVED	3,529	1,954		
407	20000	1097	GAL	NON-TRACKING TACK COAT	706	391		
442	20200	611	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)	393	218		
519	12304	275	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C, AS PER PLAN	177	98		2, 4
519	12510	50	SF	SPECIAL - PATCHING CONCRETE BRIDGE DECK, FULL DEPTH, AS PER PLAN	25	25		2, 4
614	12337	2	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), AS PER PLAN	2			4
622	41001	1509	FT	PORTABLE BARRIER, 32", AS PER PLAN	1,509			4
646	10010	0.52	MI	EDGE LINE, 6"	0.29	0.23		
646	10110	0.27	MI	LANE LINE, 6"	0.15	0.12		
856	10000	230	CU YD	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE	148	82		

**EXISTING STRUCTURE**

TYPE: 6 SPAN CONTINUOUS STEEL GIRDER WITH NON-COMPOSITE REINFORCED CONCRETE DECK AND SUBSTRUCTURE ON FRICTION PILES

SPANS: 72.00'±, 118.00'±, 84.00'±, 84.00'±, 95.00'±, 82.00'± c/c BEARINGS

ROADWAY: 58'-0", MIN., VARIES F/F SAFETY CURB

LOADING: HS-20-33 & INTER. ALTERNATE

SKEW: 5°45" RT. FWD TO REFERENCE CHORD

APPROACH SLABS: AS-1-67 (25' LONG)

ALIGNMENT: VARIES

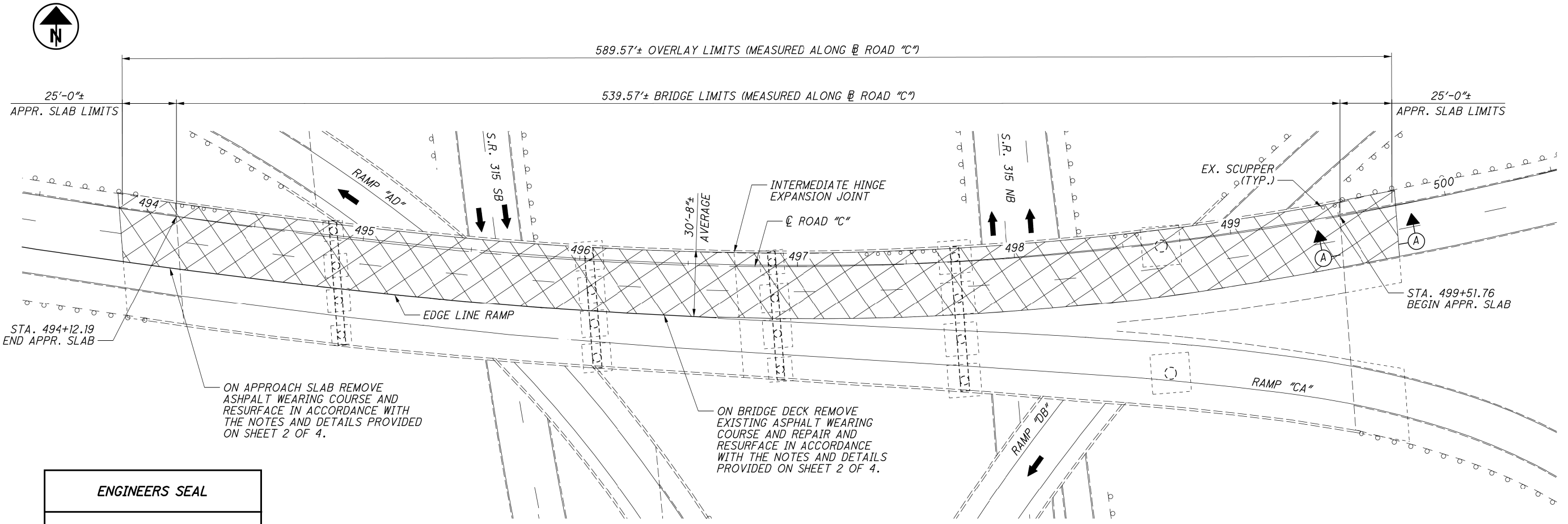
STRUCTURAL FILE NUMBER: 2504766

DATE BUILT: 1975

DISPOSITION: TO BE RESURFACED

DESIGN AGENCY: **ms consultants, inc.**  
2221 Schrock Road  
Columbus, Ohio 43229

DATE: SEP 2019  
REVIEWED: GLG  
DRAWN: CDH  
DESIGNED: ATM  
FRANKLIN COUNTY  
STA. 494+12.19  
STA. 499+51.76



ON APPROACH SLAB REMOVE ASPHALT WEARING COURSE AND RESURFACE IN ACCORDANCE WITH THE NOTES AND DETAILS PROVIDED ON SHEET 2 OF 4.

ON BRIDGE DECK REMOVE EXISTING ASPHALT WEARING COURSE AND REPAIR AND RESURFACE IN ACCORDANCE WITH THE NOTES AND DETAILS PROVIDED ON SHEET 2 OF 4.

**PLAN VIEW**  
FRA-70-1301R

**PROPOSED STRUCTURE**

PROPOSED WORK: REMOVAL OF EXISTING ASPHALT OVERLAY AND INSTALLATION OF NEW ASPHALT OVERLAY

COORDINATES: LATITUDE 39°57'01"  
LONGITUDE 83°01'03"

**ENGINEERS SEAL**

STATE OF OHIO  
GARY L. GARDNER, JR.  
E-66193  
REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Gary L. Gardner*

DATE: \_\_\_\_\_

**LEGEND:**

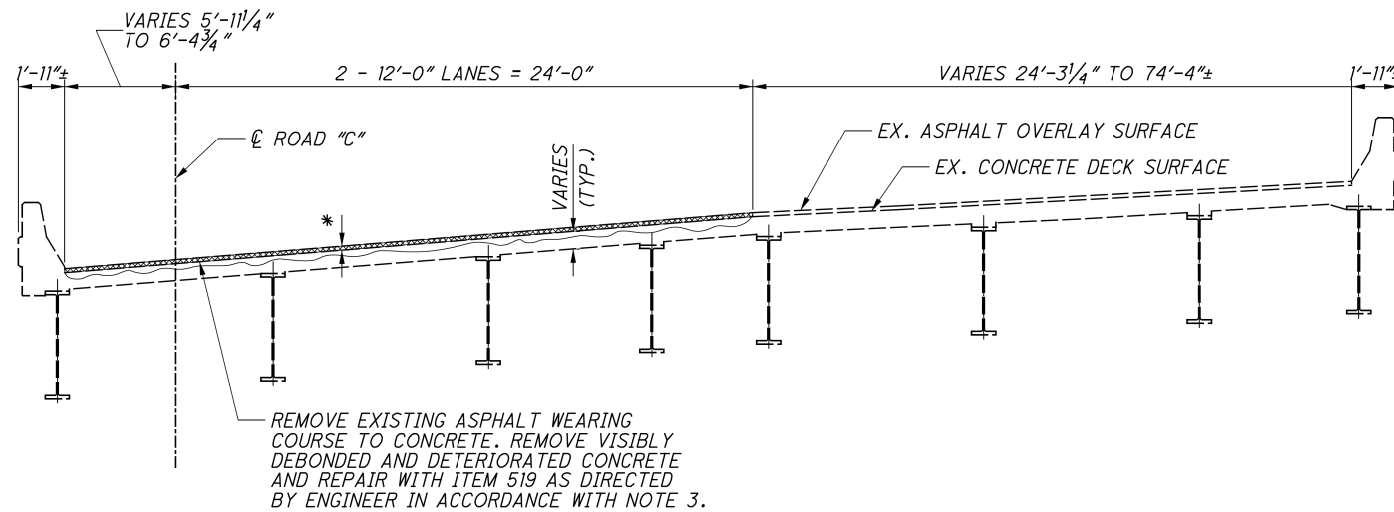
☒ LIMITS OF ASPHALT REMOVAL AND REPLACEMENT

**SITE PLAN**  
BRIDGE NO. FRA-70-1301R  
EASTBOUND I-70 OVER S.R.315

FRA-270/670 SP  
FY20 PRIORITY  
PID No. 91903

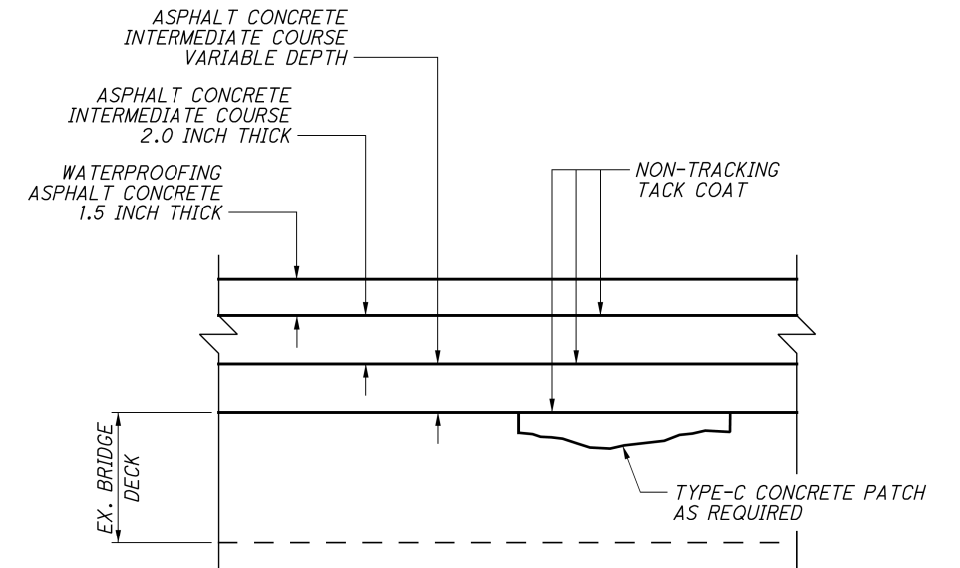
1/4  
18A  
18

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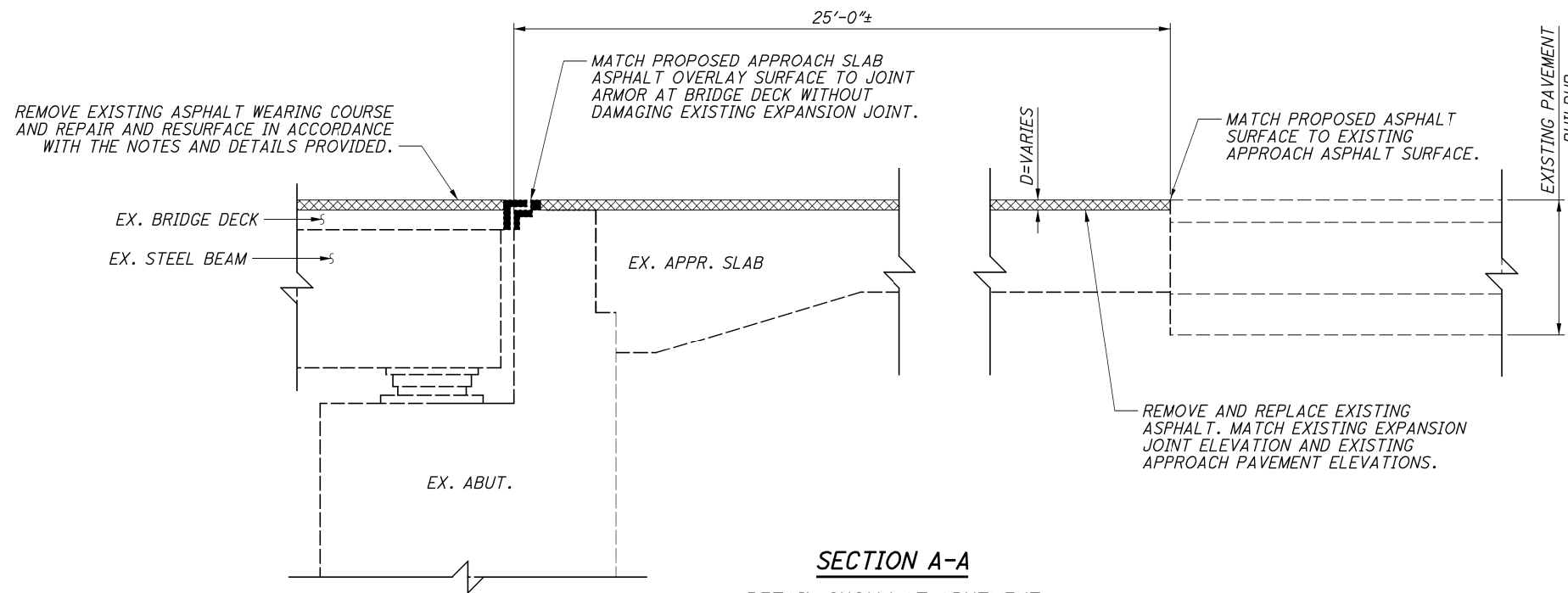


**TYPICAL TRANSVERSE SECTION**

FRA-70-1301R



**TYPICAL PAVEMENT DETAIL**



**SECTION A-A**

DETAIL SHOWN AT ABUTMENT EXPANSION JOINT. DETAIL AT INTERMEDIATE HINGE EXPANSION JOINT SIMILAR.

**NOTES:**

- PERFORM RESURFACING WORK MOT IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC NOTES ON SHEETS 7 THROUGH 10, 10A. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING TRAFFIC UNDER AND ADJACENT TO THE WORK ON THE BRIDGE WHILE REMOVING DECK CONCRETE. USE RAMP CLOSURES OR PROTECTIVE FALSE DECKING TO PREVENT THE POSSIBILITY OF DEBRIS FALLING ON TRAFFIC.
- PAVEMENT WEDGING AND MOT SIGNAGE SHALL BE INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC.
- ITEM 519 - PATCHING CONCRETE BRIDGE DECK, TYPE C, SHALL BE IN ACCORDANCE WITH CMS 256.08, TYPE C MATERIAL, EXCEPT AS NOTED. AFTER REMOVING EXISTING ASPHALT OVERLAY FROM THE BRIDGE DECK, REMOVE ALL VISIBLE LOOSE AND SPALLED CONCRETE FROM THE BRIDGE DECK USING 35 POUND MAXIMUM HAMMER SIZE. DO NOT SOUND THE DECK FOR DELAMINATION. USE TYPE C CONCRETE REPAIR MATERIAL ONLY WHERE EXISTING DECK REINFORCEMENT IS VISIBLE. SURFACE SPALLS THAT DO NOT HAVE VISIBLE REINFORCING MAY BE FILLED WITH VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE. WHERE REINFORCING IS ENCOUNTERED, PROVIDE 1/2" CLEARANCE AROUND THE REINFORCING BUT DO NOT REMOVE CONCRETE TO MORE THAN 1" CLEAR. (IT IS NOT THE DEPARTMENT'S INTENT TO REMOVE ALL UNSOUND CONCRETE OR PERFORM FULL-DEPTH REPAIRS ON THIS BRIDGE) TYPE C REPAIR MATERIAL SHALL BE EITHER OF THE FOLLOWING MATERIALS: CHEMSPEED 65 BY CHEMMASTERS/MADISON; OR RAPID ROAD REPAIR BY QUIKRETE/GA.
- THE THICKNESS OF THE VARIABLE DEPTH ASPHALT LAYER IS ASSUMED TO BE 2" FOR ESTIMATING PURPOSES.
- ITEM 519 - SPECIAL - PATCHING CONCRETE BRIDGE DECK, FULL DEPTH, AS PER PLAN. ALTHOUGH IT IS THE DEPARTMENT'S INTENT TO TRY TO AVOID FULL-DEPTH DECK REPAIRS, A CONTINGENCY QUANTITY HAS BEEN PROVIDED FOR EACH BRIDGE IN THE EVENT THAT THE NEED FOR FULL-DEPTH REPAIRS IS IDENTIFIED DURING BRIDGE DECK PREPARATION FOR THE NEW ASPHALT OVERLAY. FULL DEPTH REPAIRS SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER. THIS WORK SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO PERFORM FULL-DEPTH BRIDGE DECK REPAIRS INCLUDING REMOVING LOOSE AND UNSOUND CONCRETE, FORMING AND PLACING CONCRETE FOR FULL-DEPTH REPAIRS. PERFORM FULL DEPTH REPAIRS IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 848, DATED JANUARY 20, 2017, SECTION 848.23 EXCEPT THAT THE ENGINEER SHALL BE RESPONSIBLE FOR IDENTIFYING ALL FULL-DEPTH REPAIR AREAS. CONCRETE FOR FULL-DEPTH REPAIRS MAY BE CLASS QC2 CONCRETE OR MAY BE THE SAME MATERIAL AS THE PARTIAL-DEPTH TYPE C BRIDGE DECK PATCHES.
- RESURFACING WORK AND INSTALLATION OF PRECAST BARRIER IS TO BE COMPLETED BY SEPTEMBER 1, 2020.

**EXISTING STRUCTURE VERIFICATION:**

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 CMS 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.

**LEGEND:**

LIMITS OF ASPHALT REMOVAL AND REPLACEMENT

\* EXISTING ASPHALT OVERLAY THICKNESS VARIES 3 1/2" TO 5 1/2" RESURFACE IN ACCORDANCE WITH TYPICAL PAVEMENT DETAIL.

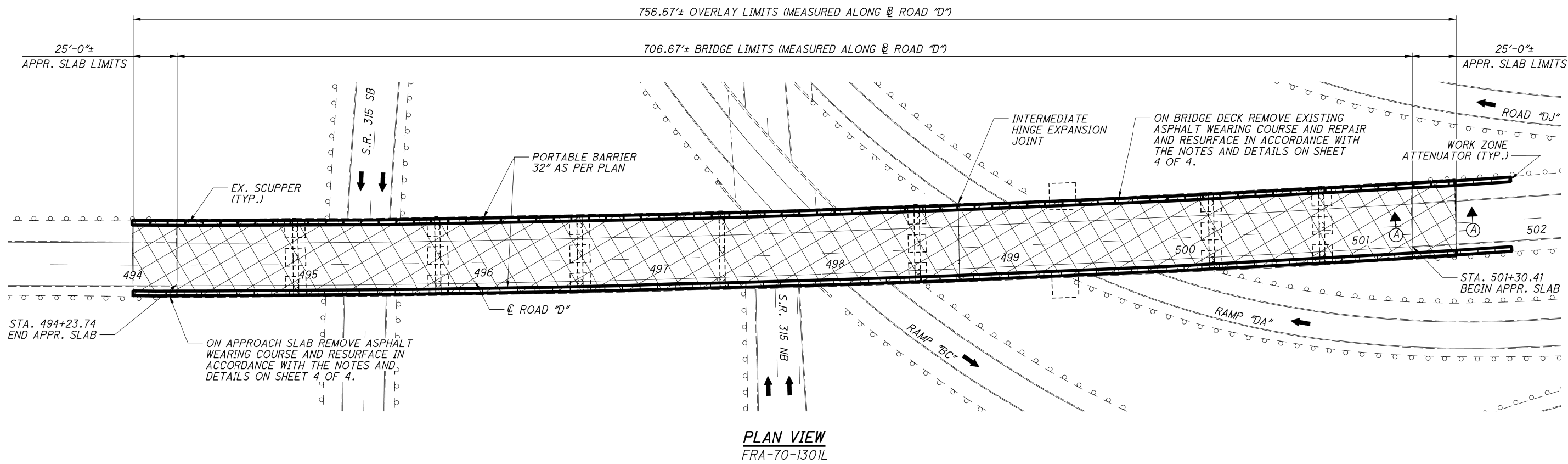
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DESIGN AGENCY		ms consultants, inc.	
DATE		2221 Schrock Road Columbus, Ohio 43229	
REVIEWED	GLG	DATE	SEP 2019
DRAWN	CDH	STRUCTURE FILE NUMBER	2504766
DESIGNED	ATM	CHECKED	ELP
GENERAL NOTES AND DETAILS			
FRA-70-1301R			
EASTBOUND I-70 OVER S.R.315			
FRA-270/670 SP		FY20 PRIORITY	
PID No. 91903			
2 / 4		18B 18	

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EXISTING STRUCTURE	
TYPE: STEEL BEAMS AND GIRDERS WITH NON-COMPOSITE REINFORCED CONCRETE DECK AND SUBSTRUCTURE ON FRICTION PILES	
SPANS: 67.01'±, 81.00'±, 81.00'±, 81.00'±, 111.02'±, 84.02'±, 84.01'±, 63.01'±, 50.01'± c/c BEARINGS	
ROADWAY: 42'-0"± TOE/TOE PARAPETS	
LOADING: HS-20-44 & INTER. ALTERNATE	
SKEW: 0°49'35" TO REFERENCE CHORD (L.F)	
APPROACH SLABS: AS-1-67 (25' LONG)	
ALIGNMENT: 0°28'00" CURVE LEFT	
STRUCTURAL FILE NUMBER: 2504677	
DATE BUILT: 1975	
DISPOSITION: TO BE RESURFACED	

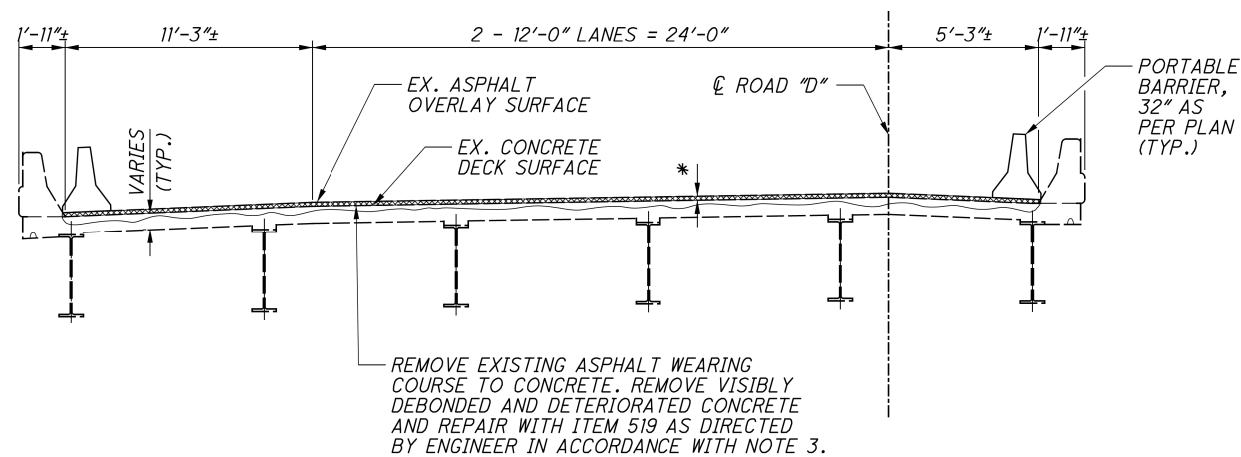


**LEGEND:**  
 LIMITS OF ASPHALT REMOVAL AND REPLACEMENT

PROPOSED STRUCTURE	
PROPOSED WORK: REMOVAL OF EXISTING ASPHALT OVERLAY AND INSTALLATION OF NEW ASPHALT OVERLAY.	
COORDINATES: LATITUDE	39°57'03"
LONGITUDE	83°01'04"

DESIGNED ATM CHECKED ELP	DRAWN CDH REVISED	REVIEWED GLG STRUCTURE FILE NUMBER 2504677	DATE SEP 2019	DESIGN AGENCY <b>ms consultants, inc.</b> 2221 Schrock Road Columbus, Ohio 43229	
					FRANKLIN COUNTY STA. 494+23.74 STA. 501+30.41
					<b>SITE PLAN</b> BRIDGE NO. FRA-70-1301L WESTBOUND I-70 OVER S.R.315
<b>FRA-270/670 SP</b> <b>FY20 PRIORITY</b> PID No. 91903				3 / 4	
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**TYPICAL TRANSVERSE SECTION**

FRA-70-1301L

**LEGEND:**

 LIMITS OF ASPHALT REMOVAL AND REPLACEMENT

\* EXISTING ASPHALT OVERLAY THICKNESS VARIES 3" TO 5 1/2" RESURFACE IN ACCORDANCE WITH TYPICAL PAVEMENT DETAIL.

**EXISTING STRUCTURE VERIFICATION:**

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 CMS 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.

**NOTES:**

- PERFORM RESURFACING WORK MOT IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC NOTES ON SHEETS 7 THROUGH 10, 10A THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING TRAFFIC UNDER AND ADJACENT TO THE WORK ON THE BRIDGE WHILE REMOVING DECK CONCRETE. USE RAMP CLOSURES OR PROTECTIVE FALSE DECKING TO PREVENT THE POSSIBILITY OF DEBRIS FALLING ON TRAFFIC.
- PAVEMENT WEDGING AND MOT SIGNAGE SHALL BE INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC.
- ITEM 519 - PATCHING CONCRETE BRIDGE DECK, TYPE C, SHALL BE IN ACCORDANCE WITH CMS 256.08, TYPE C MATERIAL, EXCEPT AS NOTED. AFTER REMOVING EXISTING ASPHALT OVERLAY FROM THE BRIDGE DECK, REMOVE ALL VISIBLE LOOSE AND SPALLED CONCRETE FROM THE BRIDGE DECK USING 35 POUND MAXIMUM HAMMER SIZE. DO NOT SOUND THE DECK FOR DELAMINATION. USE TYPE C CONCRETE REPAIR MATERIAL ONLY WHERE EXISTING DECK REINFORCEMENT IS VISIBLE. SURFACE SPALLS THAT DO NOT HAVE VISIBLE REINFORCING MAY BE FILLED WITH VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE. WHERE REINFORCING IS ENCOUNTERED, PROVIDE 1/2" CLEARANCE AROUND THE REINFORCING BUT DO NOT REMOVE CONCRETE TO MORE THAN 1" CLEAR. (IT IS NOT THE DEPARTMENT'S INTENT TO REMOVE ALL UNSOUND CONCRETE OR PERFORM FULL-DEPTH REPAIRS ON THIS BRIDGE) TYPE C REPAIR MATERIAL SHALL BE EITHER OF THE FOLLOWING MATERIALS: CHEMSPEED 65 BY CHEMMASTERS/MADISON; OR RAPID ROAD REPAIR BY QUIKRETE/GA.
- THE THICKNESS OF THE VARIABLE DEPTH ASPHALT LAYER IS ASSUMED TO BE 2" FOR ESTIMATING PURPOSES.
- ITEM 519 - SPECIAL - PATCHING CONCRETE BRIDGE DECK, FULL DEPTH, AS PER PLAN ALTHOUGH IT IS THE DEPARTMENT'S INTENT TO TRY TO AVOID FULL-DEPTH DECK REPAIRS, A CONTINGENCY QUANTITY HAS BEEN PROVIDED FOR EACH BRIDGE IN THE EVENT THAT THE NEED FOR FULL-DEPTH REPAIRS IS IDENTIFIED DURING BRIDGE DECK PREPARATION FOR THE NEW ASPHALT OVERLAY. FULL DEPTH REPAIRS SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER. THIS WORK SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO PERFORM FULL-DEPTH BRIDGE DECK REPAIRS INCLUDING REMOVING LOOSE AND UNSOUND CONCRETE, FORMING AND PLACING CONCRETE FOR FULL-DEPTH REPAIRS. PERFORM FULL DEPTH REPAIRS IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 848, DATED JANUARY 20, 2017, SECTION 848.23 EXCEPT THAT THE ENGINEER SHALL BE RESPONSIBLE FOR IDENTIFYING ALL FULL-DEPTH REPAIR AREAS. CONCRETE FOR FULL-DEPTH REPAIRS MAY BE CLASS QC2 CONCRETE OR MAY BE THE SAME MATERIAL AS THE PARTIAL-DEPTH TYPE C BRIDGE DECK PATCHES.
- PORTABLE BARRIER, 32" AS PER PLAN. PORTABLE BARRIER IS TO BE LEFT IN PLACE. DO NOT REMOVE.
- ITEM 614-WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL), AS PER PLAN THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING TYPE IMPACT ATTENUATOR FOR A 24" WIDE HAZARD. 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 AND IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. PLACE THE WORK ZONE IMPACT ATTENUATOR AS CLOSE AS IS PRACTICAL TO THE EXISTING BARRIER AND GUARDRAIL TO MAXIMIZE AVAILABLE SHOULDER WIDTH. THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT. DO NOT USE GATING IMPACT ATTENUATORS. 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE WORK ZONE IMPACT ATTENUATOR UNTIL SUBSTANTIAL COMPLETION OF THE PROJECT. AFTER SUBSTANTIAL COMPLETION THE WORK ZONE IMPACT ATTENUATOR IS TO BE LEFT IN PLACE AND MAINTENANCE RESPONSIBILITY WILL BE ASSUMED BY ODOT.
- RESURFACING WORK AND INSTALLATION OF PRECAST BARRIER IS TO BE COMPLETED BY SEPTEMBER 1, 2020.
- FOR SECTION A-A AND TYPICAL PAVEMENT DETAIL. REFER TO SHEET 2/4.

	DESIGN AGENCY <b>ms consultants, inc.</b> 2221 Schrock Road Columbus, Ohio 43229	DATE MM/DD/YY XXX	STRUCTURE FILE NUMBER 2504677	DRAWN CDH	REVISIONS REVISED	DESIGNED ATM	CHECKED ELP		
<b>GENERAL NOTES AND DETAILS</b> FRA-70-1301R WESTBOUND I-70 OVER S.R.315									
<b>FRA-270/670 SP</b> <b>FY20 PRIORITY</b> PID No. 91903				4 / 4				18D 18	