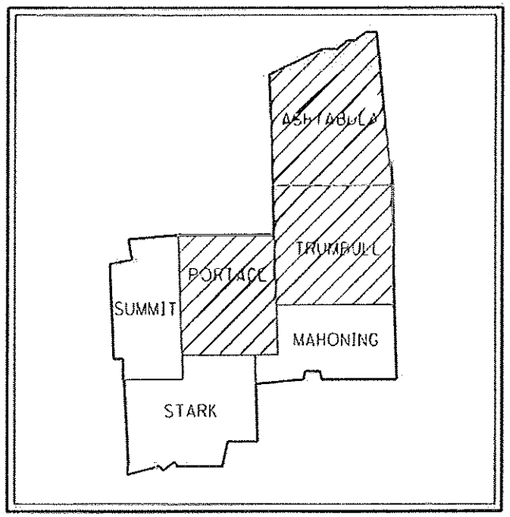
D04 - BH FY2018 (East)
180214 PID - 96678
Dist 4 3/22/2018

Contract Proposal Available @
www.contracts.dot.state.oh.us/home



LOCATION MAP

LATITUDE: N41°19'11" LONGITUDE: W80°45'47"

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

D04-BH-FY2018 (EAST)

CITIES OF CONNEAUT, CORTLAND, AND GENEVA

VILLAGES OF GARRETTSVILLE, MANTUA, NEWTON FALLS, AND NORTH KINGSVILLE

ASHTABULA, BAZETTA, BRACEVILLE, BRISTOL, BURGHILL, DORSET, GENEVA, HARTFORD, HOWLAND, JEFFERSON, KINGSVILLE, KINSMEN, LENOX, MECCA, NEWLYME, ORWELL, PIERPONT, PLYMOUTH, SAYBROOK, VERNON, AND WINDSOR TOWNSHIP

ASHTABULA, PORTAGE AND TRUMBULL COUNTY

STRUCTURE	NHS	FUNCTIONAL CLASSIFICATION
ATB-7-2755	NO	URBAN MINOR ARTERIAL
ATB-7-3039	NO	URBAN MINOR ARTERIAL
ATB-11-0855	NO	RURAL OTHER FREEWAY & EXPRESSWAY
ATB-20-0165	YES	URBAN PRINCIPAL ARTERIAL
ATB-20-0325	YES	URBAN PRINCIPAL ARTERIAL
ATB-20-2160	YES	URBAN PRINCIPAL ARTERIAL
ATB-45-2339	NO	URBAN MINOR ARTERIAL
ATB-84-1475	NO	URBAN MINOR ARTERIAL
ATB-84-2048	NO	RURAL MINOR ARTERIAL
ATB-90-1582L	YES	RURAL INTERSTATE
ATB-90-1583R	YES	RURAL INTERSTATE
ATB-90-2173L	YES	RURAL INTERSTATE
ATB-90-2172R	YES	RURAL INTERSTATE
ATB-90-2272L	YES	URBAN INTERSTATE
ATB-90-2272R	YES	URBAN INTERSTATE
ATB-90-2386	NO	URBAN INTERSTATE
ATB-90-2650	NO	URBAN INTERSTATE
ATB-90-2724	NO	URBAN INTERSTATE
ATB-90-2771L	YES	URBAN INTERSTATE
ATB-90-2771R	YES	URBAN INTERSTATE
ATB-90-2838L	YES	URBAN INTERSTATE

STRUCTURE	NHS	FUNCTIONAL CLASSIFICATION
ATB-90-2840R	YES	URBAN INTERSTATE
ATB-167-0234	NO	RURAL MAJOR COLLECTOR
ATB-167-0684	NO	RURAL MAJOR COLLECTOR
ATB-193-1137	NO	RURAL MAJOR COLLECTOR
ATB-322-0528	NO	RURAL MINOR ARTERIAL
ATB-534-0106	NO	RURAL MAJOR COLLECTOR
POR-14-0624	YES	URBAN PRINCIPAL ARTERIAL
POR-44-2183	NO	RURAL MINOR ARTERIAL
POR-86-1195	NO	URBAN MAJOR COLLECTOR
TRU-5-1624	YES	URBAN PRINCIPAL ARTERIAL
TRU-5-1917	YES	URBAN PRINCIPAL ARTERIAL
TRU-7-1165	NO	RURAL MINOR ARTERIAL
TRU-45-1693	NO	RURAL MINOR ARTERIAL
TRU-45-2011	NO	RURAL MINOR ARTERIAL
TRU-46-0889	NO	URBAN MAJOR COLLECTOR
TRU-87-2056	NO	RURAL MAJOR COLLECTOR
TRU-88-0900	NO	RURAL MINOR ARTERIAL
TRU-88-1328	NO	RURAL MINOR ARTERIAL
TRU-88-2331	NO	RURAL MINOR ARTERIAL
TRU-534-0451	NO	URBAN MAJOR COLLECTOR
TRU-534-0990	NO	RURAL MAJOR COLLECTOR

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE — Call Before You Dig 1-800-362-2764

(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE 1-800-925-0988

PLAN PREPARED BY:
ODOT --- DISTRICT 4 PLANNING AND ENGINEERING
2088 SOUTH ARLINGTON ROAD
AKRON, OHIO 44306

ENGINEERS SEAL:

STATE OF OHIO — MARK J ANDRASIK — E-80194 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: M. Andrasik

DATE: 12/18/17

STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
DM-4.3	1/15/16	MT-97.10	7/18/14				800-2016	1/19/18	
		MT-101.70	1/17/14				821	4/20/12	
MGS-1.1	7/21/17	MT-101.75	7/15/16				832	1/17/14	
MGS-2.1	7/19/13	MT-105.10	7/19/13				843	4/18/03	
MGS-3.1	7/21/17						921	4/20/12	
MGS-4.3	1/18/13	TC-42.20	10/18/13						
MGS-6.1	7/19/13	TC-71.10	1/20/17						
RM-4.2	4/18/14								
DBR-2-73	7/19/02								
OS-1-92	7/18/03								
EXJ-6-06	1/18/13								
TST-1-99	7/15/16								
MT-95.30	7/21/17								

APPROVED _____ DISTRICT DEPUTY DIRECTOR
DATE 12/18/17

APPROVED _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION
DATE 12-11-18

PROJECT DESCRIPTION

BRIDGE MAINTENANCE ON VARIOUS ROUTES IN ATB, POR AND TRU COUNTIES.

EARTH DISTURBED AREAS

PROJECT EDA:	N/A MAINTENANCE ONLY
ESTIMATED CONTRACTOR EDA:	N/A MAINTENANCE ONLY
NOTICE OF INTENT EDA:	N/A MAINTENANCE ONLY

2016 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.

INDEX OF SHEETS:

FEDERAL PROJECT NO. NON-FEDERAL

PID NO. 96678

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

D04-BH-FY2018

I:\Project Data\D04\96678_BH-FY2018\Design

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-4826 MIKE SIMPKINS

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

RAISED PAVEMENT MARKINGS (ATB-534-0106)

THIS WORK SHALL CONSIST OF REMOVING AND REPLACING THE EXISITNG RAISED PAVEMENT MARKINGS ON THE DECK SURFACE THAT ARE REMOVED TO COMPLETE WORK UNDER ITEM 257 - DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT DIAMOND AND ITEM SPEC - BRIDGE DECK GROOVING. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 621 - RAISED PAVEMENT MARKER REMOVED, 4 EACH
ITEM 621 - RPM, 4 EACH

PAVEMENT MARKINGS

THIS WORK WILL CONSIST OF REPACING THE EXISITNG PAVEMENT MARKINGS THAT ARE REMOVED DURING THE SURFACE PREPARTION OF ITEM 512, TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

BARRIER REFLECTORS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS DIRECTED BY THE ENGINEER FOR INSTALLING/REPLACING BARRIER REFLECTORS ON ALL EXISTING BARRIER RUNS WITHIN THE PROJECT LIMITS.

REF NO.	STRUCTURE	642 EDGE LINE, 6"	642 LANE LINE, 6"	642 CENTER LINE	642 CHANNELIZING LINE, 8"	642 LANE ARROW	642 CURB MARKING	626 BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL
		MILE	MILE	MILE	FT	EACH	FT	EACH
	ATB-7-2755	0.189		0.095				10
	ATB-7-3039	0.198	0.099					6
	ATB-11-0856							6
	ATB-20-0160			0.013	66.50	1		6
	ATB-20-0325		0.034					6
	ATB-20-2160	0.275	0.275	0.138				10
	ATB-45-2339	0.037		0.019				6
	ATB-84-1475	0.150		0.075				8
	ATB-84-2048	0.150		0.075				8
	ATB-90-1582L	0.159	0.080					10
	ATB-90-1583R	0.161	0.080					10
	ATB-90-2173L	0.062	0.031					6
	ATB-90-2172R	0.062	0.031					6
	ATB-90-2272L	0.062	0.031					6
	ATB-90-2272R	0.062	0.031					6
	ATB-90-2385	0.157	0.078					10
	ATB-90-2651							8
	ATB-90-2724							8
	ATB-90-2771L	0.063	0.031					6
	ATB-90-2771R	0.044	0.022					6
	ATB-90-2838L	0.094	0.047					6
	ATB-90-2840R	0.094	0.047					6
	ATB-167-0234	0.062		0.031				6
	ATB-167-0884	0.046		0.023				6
	ATB-193-1137	0.037		0.018				6
	ATB-322-0528	0.084		0.042				6
	ATB-534-0106	0.061		0.031				6
	POR-14-0620	0.077		0.039				6
	POR-44-2180	0.042		0.021				6
	POR-88-1196	0.049		0.024				6
	TRU-5-1621	0.081		0.041				6
	TRU-5-1917			0.016	18	2		6
	TRU-7-1164	0.116		0.058				8
	TRU-45-1691	0.055		0.027				6
	TRU-45-2010	0.065		0.033				6
	TRU-46-0985	0.042		0.021				6
	TRU-87-2056	0.053		0.027				6
	TRU-88-0900	0.037		0.018				6
	TRU-88-1328	0.099		0.050				6
	TRU-88-2332	0.123		0.061				8
	TRU-534-0450				127	1	210	6
	TRU-534-0988	0.085		0.042				6
TOTALS CARRIED TO GENERAL SUMMARY		3.24	0.92	1.04	212	4	210	284

CALCULATED BFR
CHECKED MJA

GENERAL NOTES

D04-BH-FY2018

PAINTING AND SEALING OPERATIONS:

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER STRUCTURAL MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE FROM ENTERING THE STATE SCENIC UPPER CUYAHOGA RIVER, CONNEAUT CREEK, GRAND RIVER, ASHTABULA RIVER AND/OR OTHER STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OR A RELEASE.

THE CONTRACTOR SHALL LIMIT THE AMOUNT OF OPEN CONCRETE SEALER TO THE EXTENT PRACTICABLE TO PERFORM THE REQUIRED WORK. DISCARDED CONTAINERS SHALL BE REMOVED FROM THE VICINITY OF STATE SCENIC UPPER CUYAHOGA RIVER, CONNEAUT CREEK, GRAND RIVER, ASHTABULA RIVER AND UNDER NO CIRCUMSTANCES SHALL ANY SEALER BE STORED WITH THE 100-YEAR FLOOD PLAIN OF THE STATE SCENIC UPPER CUYAHOGA RIVER, CONNEAUT CREEK, GRAND RIVER AND ASHTABULA RIVER.

STATE SCENIC RIVER AVOIDANCE:

THE UPPER CUYAHOGA RIVER, CONNEAUT CREEK, GRAND RIVER AND ASHTABULA RIVER AT THE POR-44-21.83, ATB-7-27.55, ATB-7-30.39, ATB-90-21.73L, ATB-90-21.72R, ATB-322-5.28, ATB-90-15.82L AND ATB-90-15.83R BRIDGE LOCATIONS ARE DESIGNATED STATE SCENIC RIVER. UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT (LIFT, SCAFFOLDING, BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER THE STATE SCENIC RIVERS. NO WORK SHALL BE PERFORMED BELOW THE IDENTIFIED ORDINARY HIGH WATER MARK (OHWM) OF THESE STATE SCENIC RIVERS. NO FILL MATERIAL SHALL BE PLACED BELOW THE OHWM OF THESE STATE SCENIC RIVERS.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ALL CONSTRUCTION MATERIALS, WASTE MATERIALS, WATER CHEMICALS OR OTHER SUBSTANCES USED TO CONSTRUCT THE PROJECT FROM ENTERING THE STATE SCENIC RIVERS. SHOULD ANY MATERIALS AND/OR DEMOLITION DEBRIS FALL INTO THE RIVER, ALL WORK SHALL BE STOPPED, AND ALL DEBRIS/MATERIAL, ETC. SHALL BE REMOVED IMMEDIATELY, AND IN SUCH A WAY AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

TREE CUTTING/REMOVAL PROHIBITED:

THE STRUCTURES ARE LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. TREE TRIMMING IS PERMITTED AT THESE LOCATIONS AS DIRECTED BY THE PROJECT ENGINEER, HOWEVER, NO TREES SHALL BE REMOVED AT THESE LOCATIONS. 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 FEET.

WETLAND AVOIDANCE:

NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY WETLANDS LOCATED ADJACENT TO OR BENEATH THE BRIDGES AT ATB-20-3.25, ATB-7-27.55, ATB-84-14.75, ATB-90-27.71L, ATB-90-27.71R, ATB-167-2.34, ATB-193-11.37, ATB-322-5.28, TRU-46-9.89, TRU-87-20.56 AND TRU-88-9.00. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS IN THESE WETLANDS.

ODNR PRECONSTRUCTION NOTIFICATION - POR-14-6.24, POR-44-21.83, ATB-7-27.55, ATB-7-30.39, ATB-90-21.73L, ATB-90-21.72R, ATB-322-5.28, ATB-90-15.82L AND ATB-90-15.83R:

THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF NATURAL AREA & PRESERVES, MUST RECEIVE PRECONSTRUCTION NOTIFICATION. AT LEAST FIFTEEN (15) CALENDAR DAYS PRIOR TO THE BEGINNING OF ANY WORK INCLUDING INSTALLATION OF MAINTENANCE OF TRAFFIC SIGN AGE, STAGING OF EQUIPMENT AND/OR MATERIALS, ETC., WITHIN 1,000 FEET OF THE STATE SCENIC UPPER CUYAHOGA RIVER, CONNEAUT CREEK, GRAND RIVER AND ASHTABULA RIVER, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF NATURAL AREAS.

INFORMATION REQUIRED AS PART OF THE PRECONSTRUCTION NOTIFICATION SHALL INCLUDE:

1) THE CONTRACTORS NAME AND ADDRESS
2) CONTRACTOR AND ODOT, DISTRICT 4 CONSTRUCTION REPRESENTATIVE CONTACT INFORMATION
3) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REHABILITATION
4) ONE COPY OF THE CONSTRUCTION PLANS.

THE CONTRACTOR SHALL COMPILE THE ABOVE PRECONSTRUCTION NOTIFICATION AND SUBMIT IT TO:

MATTHEW SMITH, NE OHIO ASSISTANT REGIONAL SCENIC RIVER MANAGER
ODNR DIV. WATERCRAFT
WEST BRANCH STATE PARK
5708 ESWORTHY ROAD
RAVENNA, OHIO 44266
OFFICE: 330-298-9195
CELL: 440-225-5582
FAX: 330-297-5653
EMAIL: matthew.smith@dnr.state.oh.us

A COPY OF THE NOTIFICATION SHALL BE PROVIDED TO THE ODOT PROJECT ENGINEER. THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE PRECONSTRUCTION NOTIFICATION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN: ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

MOSQUITO CREEK AND SHENANGO WILDLIFE AREAS - TRU-87-20.56, TRU-88-13.28 & TRU-88-23.31:

THE CONTRACTOR SHALL NOT STAGE OR STORE ANY CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE MOSQUITO CREEK OR SHENANGO WILDLIFE AREA BOUNDARIES.

MOSQUITO LAKE STATE PARK FACILITIES:

THE CONTRACTOR SHALL NOT STAGE OR STORE ANY CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE MOSQUITO LAKE STATE PARK BOUNDARY. THIS INCLUDES THE FISHING ACCESS PARKING LOTS LOCATED ADJACENT TO THE SR 88 CAUSEWAY AND MAINTAINING TWO-WAY BOAT TRAFFIC BENEATH THE TRU-88-13.28 BRIDGE OVER MOSQUITO CREEK RESERVOIR AT ALL TIMES THROUGHOUT PROJECT CONSTRUCTION.

MOSQUITO CREEK RESERVOIR/STREAM AVOIDANCE:

UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT (LIFT, SCAFFOLDING, BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER MOSQUITO CREEK RESERVOIR OR THE STREAMS LOCATED AT THE REMAINING BRIDGES AT ATB-20-1.65, ATB-20-3.25, ATB-45-23.39, ATB-167-2.34, ATB-167-8.84, ATB-193-11.37, ATB-534-1.06, POR-88-11.95, TRU-5-16.24, TRU-5-19.17, TRU-7-11.65, TRU-45-16.93, TRU-45-20.11, TRU-46-9.89, TRU-87-20.56, TRU-88-9.00, TRU-88-13.28, TRU-88-23.31, TRU-534-4.51 AND TRU-534-9.90. NO WORK SHALL BE PERFORMED BELOW THE IDENTIFIED ORDINARY HIGH WATER MARK (OHWM) OF THESE WATERS. NO FILL MATERIAL SHALL BE PLACED BELOW THE OHWM. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ALL CONSTRUCTION MATERIALS, WASTE MATERIALS, WATER CHEMICALS OR OTHER SUBSTANCES USED TO CONSTRUCT THE PROJECT FROM ENTERING THE RESERVOIR AND STREAMS. SHOULD ANY MATERIALS AND/OR DEMOLITION DEBRIS FALL INTO THE RESERVOIR OR THE STREAMS, ALL WORK SHALL BE STOPPED, AND ALL DEBRIS/MATERIAL, ETC. SHALL BE REMOVED IMMEDIATELY, AND IN SUCH A WAY AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

MIGRATORY BIRD PROTECTION:

NESTS FOR NATIVE BIRDS PROTECTED UNDER THE MIGRATORY BIRD TREATY ACT (MBTA) WERE IDENTIFIED ON THE BRIDGES AT ATB-20-3.25, ATB-7-27.55, ATB-90-15.82L, ATB-90-15.83R, ATB-90-21.73L, ATB-90-21.72R, ATB-322-5.28, POR-14-6.24, TRU-5-16.24, TRU-11-11.65, TRU-45-20.11, TRU-534-4.51, DURING THE FIELD SURVEYS FOR THE PROJECT. THE MBTA PROHIBITS THE KILLING OR CAPTURE OF NATIVE BIRDS PROTECTED UNDER THE ACT. IF CONSTRUCTION ACTIVITIES ARE TO OCCUR BETWEEN THE DATES OF MARCH 1 AND OCTOBER 1 ON THIS STRUCTURE, THEN PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR MUST INSPECT THE STRUCTURE FOR EVIDENCE OF AN ACTIVE BIRD NEST CONTAINING AN EGG OR CHICK. WRITTEN CONFIRMATION OF THE INSPECTION, INCLUDING A STATEMENT WHETHER AN ACTIVE NEST WAS FOUND, MUST BE PROVIDED TO THE ENGINEER. IF AN ACTIVE NEST CONTAINING AN EGG OR CHICK IS ENCOUNTERED, IMPACTS TO THE NEST MUST BE AVOIDED UNTIL ALL DEVELOPING BIRDS ARE ABLE TO INDEPENDENTLY FLY FROM THE NEST. IF NO NESTS ARE ENCOUNTERED DURING THE INSPECTION, OR IF ONLY INACTIVE NESTS THAT DO NOT CONTAIN AN EGG OR CHICK ARE ENCOUNTERED, CONSTRUCTION ACTIVITIES CAN PROCEED. INACTIVE NESTS CAN BE REMOVED AND DESTROYED

POR-SR 14-6.24 (SFN: 6700586) & POR-SR 44-2183 (SFN: 6701639) - LAKE ROCKWELL RESERVOIR & UPPER CUYAHOG RIVER/AKRON DRINKING WATER SUPPLY AVOIDANCE:

LAKE ROCKWELL RESERVOIR, WHICH IS FED BY THE STATE SCENIC UPPER CUYAHOGA RIVER, IS A SOURCE FOR THE CITY OF AKRON DRINKING WATER SUPPLY. BECAUSE OF THIS, LAKE ROCKWELL RESERVOIR AND THE SURROUNDING AREAS ARE HIGHLY RESTRICTED. UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT (BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER BELOW THE ORDINARY HIGH WATER MARK (OHWM) OF 1052 MSL ESTABLISHED FOR LAKE ROCKWELL RESERVOIR.

THE CONTRACTOR SHALL DEVELOP A SPILL CONTAINMENT AND CLEANUP PLAN PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES AND PARTICULAR ATTENTION SHALL ALSO BE GIVEN TO DRAINAGE WAYS, DITCHES, WETLANDS AND OPEN WATER AREAS. APPROPRIATELY DESIGNED EROSION CONTROLS SHALL BE UTILIZED AND ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL FINAL PROJECT SITE STABILIZATION IS ACHIEVED AND ACCEPTED BY THE ENGINEER. EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM THE LAKE ROCKWELL RESERVOIR, WETLANDS, AND OTHER WATERS OF THE UNITED STATES TO THE EXTENT PRACTICABLE. IDLE EQUIPMENT, PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE STORED IN PROXIMITY OF LAKE ROCKWELL RESERVOIR, WETLANDS AND OTHER WATERS OF THE UNITED STATES. ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER AND UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR DISCHARGE ANY PETROCHEMICALS AND/OR TOXIC AND HAZARDOUS MATERIALS.

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER TOXIC/HAZARDOUS MATERIALS SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR AND REPORTED TO THE PROJECT ENGINEER. IN EACH CASE WHERE THERE IS AN INCIDENT OF HAZARDOUS MATERIAL SPILL IN A REPORTABLE QUANITY OR ANY SPILL THAT COULD POSE A RISK TO SURFACE WATER OR GROUNDWATER, THE CONTRACTOR SHALL, AS SOON AS POSSIBLE, NOTIFY THE PROJECT ENGINEER AND THE FOLLOWING AGENCIES:

STREETSBORO WATER DEPARTMENT EMERGENCY/SERVICE: (STREETSBORO SERVICE DEPARTMENT) 330-626-2856
EMERGENCY/SERVICE AFTER HOURS: (STREETSBORO POLICE DEPARTMENT NON-EMERGENCY) 330-626-4976

STREETSBORO FIRE DEPARTMENT PHONE: 330-626-4664 CALL 9-1-1 FOR ALL EMERGENCIES

CITY OF AKRON WATER DISTRIBUTION DIVISION FOR EMERGENCIES OR SECURITY CONCERNS: PHONE: 330-375-2420 (24-HOUR DISPATCH)

OHIO EPA SPILL REPORTING - 24 HOUR EMERGENCY SERVICE 800-282-9378

PROVIDE AS MUCH OF THE FOLLOWING INFORMATION AS POSSIBLE:

1. TIME OBSERVED
2. LOCATION
3. MATERIAL RELEASED
4. PROBABLE SOURCE
5. VOLUME & DURATION
6. PRESENT & ANTICIPATED MOVEMENT OF CONTAMINANT
7. PERSONNEL ON SCENE
8. ACTIONS ALREADY INITIATED
9. PERSON(S) ON THE SCENE TO CONTACT.

THE CONTRACTOR SHALL DEVELOP A SPILL CONTAINMENT AND CLEANUP PLAN PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES.

CALCULATED BFR
CHECKED MJA

GENERAL NOTES

D04-BH-FY2018

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. ON ROADS WITH 3 OR LESS LANES: A MINIMUM OF ONE BIDIRECTIONAL TEN FOOT LANE SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

ON ROADS WITH 4 OR MORE LANES: A MINIMUM OF ONE ELEVEN FOOT LANE SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. ATB-11 AND ATB-90: TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE [1] MILE.

6. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

7. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH PERMANENT MARKINGS) ALL LANE, CENTER, CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE SURFACE PREPARATION.

8. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION.

9. THE CONTRACTOR SHALL PLACE THE SIGN W6-3 [TWO-WAY TRAFFIC] PER OMUTCD 6F.32. PAYMENT FOR THAT SIGN SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614- MAINTAINING TRAFFIC. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE PLANS PER CMS 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:
614, WORK ZONE MARKING SIGN,(ALL PHASES) 50 EACH

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REP- RESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISS- ING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

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

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

GENEVA GRAPE FESTIVAL (SEPTEMBER 29-30)
MANTUA POTATO STOMP

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

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $2000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

LANE CLOSURES (ATB-11, ATB-90)

DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT:
http://plcm.dot.state.oh.us

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF $2500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

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

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP CLOSURES	>=2WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

LANE CLOSURES (ATB-84, POR-14, TRU-534 AND POR-88)

ALL LANES OF TRAFFIC ON STRUCTURES ATB-84-1475, ATB-84-2048, POR-14-6.24, TRU-534-4.51 AND POR-88-11.95 SHALL BE OPEN TO TRAFFIC FROM 6AM TO 8PM DAILY. SHOULD THE CONTRACTOR FAIL TO MEET THE ABOVE REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $2000 PER HOUR OR PORTION THEROF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

CALCULATED CNC CHECKED LAB

MAINTENANCE OF TRAFFIC GENERAL NOTES

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

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

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

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

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

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

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

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

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.

DECK EDGE REPLACEMENT TRU-7-11.64

THE WORK ZONE LAYOUT FOR TRU-7-11.64 DECK EDGE REPLACEMENT SHOWN ON SHEET 6 SHALL BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION. THE ADJACENT LANE TO THE PORTABLE BARRIER MAY BE CLOSED DURING WORKING HOURS AND TRAFFIC SHALL BE MAINTAINED PER STANDARD CONSTRUCTION DRAWING MT-97.10. DURING NON-WORKING HOURS, ONE LANE OF TRAFFIC ON TRU-7 SHALL BE MAINTAINED.

THE CONTRACTOR MAY MAINTAIN TRAFFIC FOR TRU-7-11.65 PER THE DETAILS SHOWN ON SHEET 6 FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS PER PHASE. SHOULD THE CONTRACTOR FAIL TO MEET THE ABOVE REQUIREMENT A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $2000 PER DAY THAT THE WORK ZONE REMAINS IN PLACE.

TRU-7-11.64 DECK EDGE REPLACEMENT WORK ZONE

THE FOLLOWING QUANTITES SHALL BE USED IN THE TRU-7-11.64 DECK EDGE REPLACEMENT WORK ZONE AS SHOWN ON SHEET 6 AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 622, PORTABLE BARRIER, 32", BRIDGE MOUNTED, (ANCHORED), 620 FT
ITEM 614, WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL), 4 EACH
ITEM 614, BARRIER REFLECTORS, TYPE 1, 12 EACH
ITEM 614, OBJECT MARKERS, TWO-WAY, 12 EACH
ITEM 614, WORK ZONE CENTERLINE, CLASS III, 642 PAINT, 0.57 MILE
ITEM 614, WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT, 1.14 MILE

CALCULATED CNC
CHECKED LAB

MAINTENANCE OF TRAFFIC GENERAL NOTES

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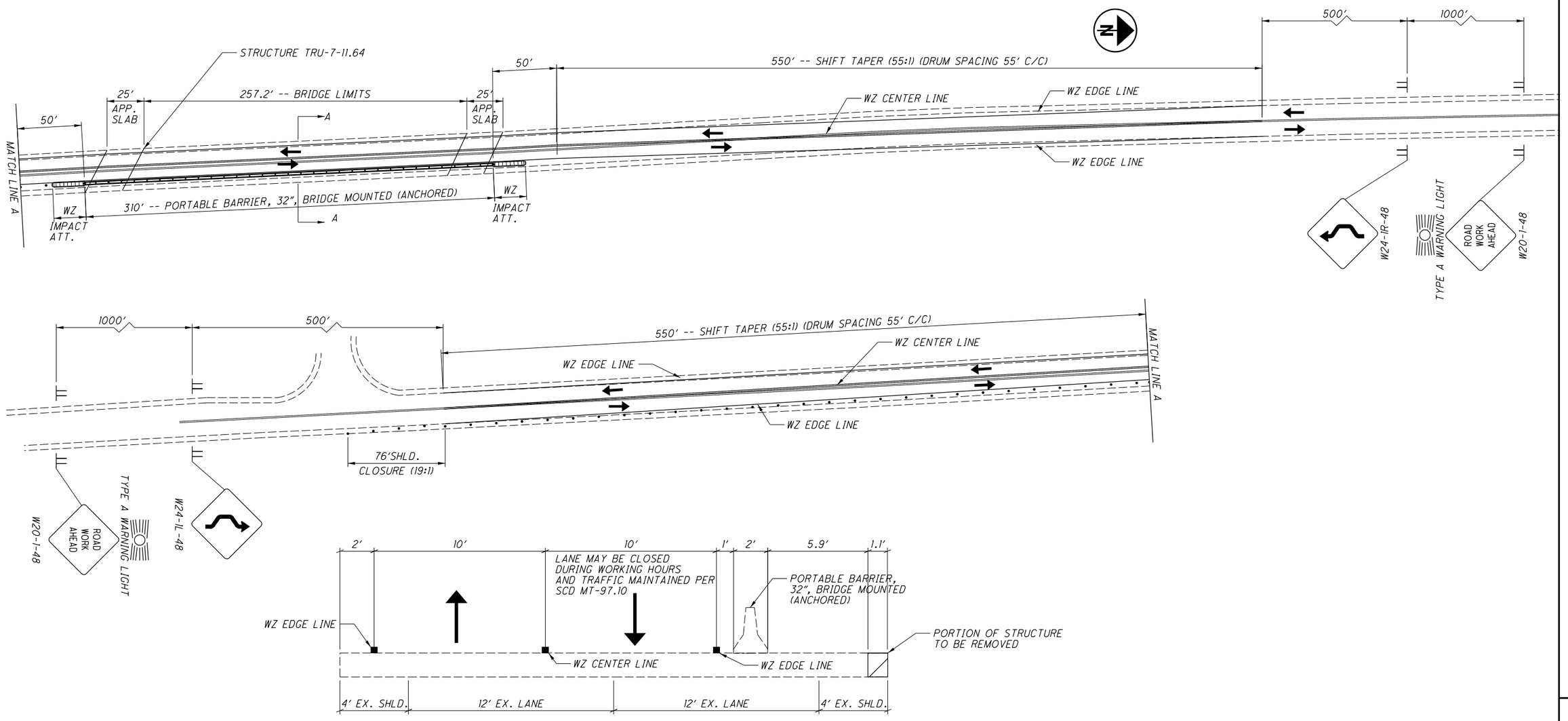

TYPICAL SECTION A-A

NOTE: THE ABOVE TYPICAL AND WORK ZONE LAYOUT FOR THE DECK EDGE REPAIRS OF STRUCTURE TRU-7-11.64 SHALL BE USED FOR PHASE 1 AND PHASE 2 OF THE REPAIRS. PHASE 1 AND PHASE 2 ARE MIRROR IMAGES

CALCULATED CNC
CHECKED LAB

MAINTENANCE OF TRAFFIC TRU-7-1164 WORK ZONE

D04-BH-FY2018

SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
									2	5			01/NFP/BR		EXT	TOTAL			
																		ROADWAY	
										620			620	622	41020	620	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED, (ANCHORED)	
																		EROSION CONTROL	
													3,000	832	30000	3,000	EACH	EROSION CONTROL	
																		TRAFFIC CONTROL	
									4				4	621	00100	4	EACH	RPM	
									4				4	621	54000	4	EACH	RAISED PAVEMENT MARKER REMOVED	
									284				284	626	00102	284	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
									3.24				3.24	642	00094	3.24	MILE	EDGE LINE, 6"	
									0.92				0.92	642	00194	0.92	MILE	LANE LINE, 6"	
									1.04				1.04	642	00290	1.04	MILE	CENTER LINE	
									212				212	642	00390	212	FT	CHANNELIZING LINE, 8"	
									210				210	642	00790	210	FT	CURB MARKING	
									4				4	642	01290	4	EACH	LANE ARROW	
																		STRUCTURE REPAIRS	
																		FOR ATB-11-0856 ESTIMATED QUANTITIES	13
																		FOR ATB-167-0234 ESTIMATED QUANTITIES	16
																		FOR ATB-167-0884 ESTIMATED QUANTITIES	16
																		FOR ATB-193-1137 ESTIMATED QUANTITIES	16
																		FOR ATB-20-0160 ESTIMATED QUANTITIES	13
																		FOR ATB-20-0325 ESTIMATED QUANTITIES	13
																		FOR ATB-20-2160 ESTIMATED QUANTITIES	14
																		FOR ATB-322-0528 ESTIMATED QUANTITIES	16
																		FOR ATB-45-2339 ESTIMATED QUANTITIES	14
																		FOR ATB-534-0106 ESTIMATED QUANTITIES	16
																		FOR ATB-7-2755 ESTIMATED QUANTITIES	13
																		FOR ATB-7-3039 ESTIMATED QUANTITIES	13
																		FOR ATB-84-1475 ESTIMATED QUANTITIES	14
																		FOR ATB-84-2048 ESTIMATED QUANTITIES	14
																		FOR ATB-90-1582L ESTIMATED QUANTITIES	14
																		FOR ATB-90-1583R ESTIMATED QUANTITIES	14
																		FOR ATB-90-2172R ESTIMATED QUANTITIES	14
																		FOR ATB-90-2173L ESTIMATED QUANTITIES	14
																		FOR ATB-90-2272L ESTIMATED QUANTITIES	15
																		FOR ATB-90-2272R ESTIMATED QUANTITIES	15
																		FOR ATB-90-2385 ESTIMATED QUANTITIES	15
																		FOR ATB-90-2651 ESTIMATED QUANTITIES	15
																		FOR ATB-90-2724 ESTIMATED QUANTITIES	15
																		FOR ATB-90-2771L ESTIMATED QUANTITIES	15
																		FOR ATB-90-2771R ESTIMATED QUANTITIES	15
																		FOR ATB-90-2838L ESTIMATED QUANTITIES	15
																		FOR ATB-90-2840R ESTIMATED QUANTITIES	16
																		FOR POR-14-0620 ESTIMATED QUANTITIES	16
																		FOR POR-44-2180 ESTIMATED QUANTITIES	16
																		FOR POR-88-1196 ESTIMATED QUANTITIES	17
																		FOR TRU-45-1691 ESTIMATED QUANTITIES	17
																		FOR TRU-45-2010 ESTIMATED QUANTITIES	17
																		FOR TRU-46-0985 ESTIMATED QUANTITIES	17
																		FOR TRU-5-1621 ESTIMATED QUANTITIES	17
																		FOR TRU-5-1917 ESTIMATED QUANTITIES	17
																		FOR TRU-534-0450 ESTIMATED QUANTITIES	18
																		FOR TRU-534-0988 ESTIMATED QUANTITIES	18
																		FOR TRU-7-1164 ESTIMATED QUANTITIES	17
																		FOR TRU-87-2056 ESTIMATED QUANTITIES	17
																		FOR TRU-88-0900 ESTIMATED QUANTITIES	18
																		FOR TRU-88-1328 ESTIMATED QUANTITIES	18
																		FOR TRU-88-2332 ESTIMATED QUANTITIES	18

CALCULATED BFR
CHECKED MJA

GENERAL SUMMARY

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SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
										4	5		01/NFP/BR		EXT	TOTAL			
																		MAINTENANCE OF TRAFFIC	
											4		4	614	12338	4	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
										50			50	614	12460	50	EACH	WORK ZONE MARKING SIGN	
											12		12	614	13310	12	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
											12		12	614	13360	12	EACH	OBJECT MARKER, TWO WAY	
											0.57		0.57	614	21550	0.57	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
											1.14		1.14	614	22360	1.14	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
																		INCIDENTALS	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													14	619	16010	14	MNTH	FIELD OFFICE, TYPE B	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

CALCULATED BFR
CHECKED MJA

GENERAL SUMMARY

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STRUCTURE PROPOSED WORK TABLE

Bridge Name	SFN	Feature Intersected	Deck Sealing	Deck Patching (concrete)	Concrete Patching (non-deck)	Epoxy Sealing of Concrete	* Erosion/Slope Protection Repair	Drainage System Cleaned/Repaired	Clearing & Grubbing	New Structure Identification Signs	* Other Work
ATB-7-2755	0400947	Conneaut Creek	X			X			X		X
ATB-7-3039	0401021	Conneaut Creek	X		MEDIAN, CURB	X		X	X		
ATB-11-0856	0401129	Under Mill Road	X								
ATB-20-0160	0401986	Wheeler Creek	X			X			X	X	
ATB-20-0325	0402087	Cowles Creek	X			X			X	X	
ATB-20-2160	0402265	Over Norfolk Southern RR	X						X	X	
ATB-45-2339	0402656	East Branch Indian Creek	X						X	X	
ATB-84-1475	0403393	Over SR 46 & Sr 11	X		SUBSTRUCTURE, PARAPETS	X		X	X		X
ATB-84-2048	0403458	Over ATB-90-20.10	X			X			X	X	
ATB-90-1582L	0404268	Ashtabula River	X		PARAPETS	X			X	X	
ATB-90-1583R	0404292	Ashtabula River	X						X	X	
ATB-90-2173L	0404411	Conneaut Creek	X	X		X			X	X	
ATB-90-2172R	0404446	Conneaut Creek	X	X	PARAPETS	X			X	X	
ATB-90-2272L	0404470	Over South Ridge Road	X						X	X	
ATB-90-2272R	0404500	Over South Ridge Road	X						X	X	
ATB-90-2385	0404535	Under Keffus Road	X						X	X	
ATB-90-2651	0404683	Under Dorman Road	X						X	X	
ATB-90-2724	0404713	Under Middle Road	X						X	X	
ATB-90-2771L	0404748	Over Furnace Road	X						X	X	
ATB-90-2771R	0404772	Over Furnace Road	X						X	X	
ATB-90-2838L	0404802	Over B & LE RR	X						X	X	
ATB-90-2840R	0404837	Over B & LE RR	X						X	X	
ATB-167-0234	0404950	Mill Creek	X		PARAPETS	X			X	X	X
ATB-167-0884	0405035	Branch Ashtabula River	X								
ATB-193-1137	0405477	Mill Creek	X				X		X	X	
ATB-322-0528	0406244	Grand River	X				X				
ATB-534-0106	0406848	Phelps Creek	X	X	DECK EDGE	X	X		X	X	X
POR-14-0620	6700586	Over Cuyahoga River	X						X	X	
POR-44-2180	6701639	Branch Cuyahoga River	X						X	X	
POR-88-1196	6703607	Eagle Creek	X		SUBSTRUCTURE	X	X		X	X	
TRU-5-1621	7801173	Mosquito Creek	X	X	SUBSTRUCTURE	X			X	X	
TRU-5-1917	7801211	Walnut Creek	X	X	SUBSTRUCTURE	X			X	X	
TRU-7-1164	7801564	Yankee Run	X		SUBSTRUCTURE	X			X	X	X
TRU-45-1691	7802234	Center Creek	X						X	X	
TRU-45-2010	7802285	Baughman Creek	X			X			X	X	
TRU-46-0985	7802595	Spring Run	X						X	X	
TRU-87-2056	7805586	Pymatuning Creek	X		SUBSTRUCTURE, DECK EDGE	X			X	X	
TRU-88-0900	7805853	Deacon Creek	X						X	X	
TRU-88-1328	7805918	Mosquito Creek Reservoir	X				X				
TRU-88-2332	7806035	Pymatuning Creek	X						X	X	
TRU-534-0450	7807295	West Branch Mahoning River	X		SUBSTRUCTURE, DECK EDGE	X	X		X	X	X
TRU-534-0988	7807414	Eagle Creek	X	X		X			X	X	

* FOR PROPOSED WORK SUPPLEMENTARY NOTES SEE SHEET 2/18

PROPOSED WORK DESCRIPTION

DECK SEALING
- SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY FED RESIN CONCRETE TREATMENT.

DECK PATCHING (CONCRETE)
- REPAIR VISIBLY UNSOUND OR PREVIOUSLY PATCHED AREAS OF THE EXISTING DECK AND APPROACH SLAB.

CONCRETE PATCHING (NON-DECK)
- PATCH ALL UNSOUND AREAS AT THE LOCATIONS NOTED IN THE STRUCTURE PROPOSED WORK TABLE
- SEAL ALL REPAIRED AREAS WITH EPOXY URETHANE.

EPOXY SEALING OF CONCRETE
- REMOVE EXISTING SEALER IF PRESENT AND SEAL THE EXPOSED CONCRETE SURFACES WITH WITH EPOXY URETHANE CONCRETE SEALER. SEE SHEETS 18/18 FOR DETAILS.

ERROSION/SLOPE PROTECTION REPAIR
- REPAIR ERROSION AT THE LOCATION DESCRIBED IN THE SUPPLEMENTARY NOTES

DRAINAGE SYSTEM CLEANED/REPAIRED
- CLEAN OUT SCUPPERS

CLEARING AND GRUBBING
-CLEARING AND GRUBBING 15' AROUND THE STRUCTURE TO REMOVE VEGETATION.

OTHER WORK
-SEE SUPPLEMENTARY NOTES

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED BFR | DRAWN BFR | REVIEWED RAS | DATE 12/4/17
CHECKED MJA | REVISED | STRUCTURE FILE NUMBER

STRUCTURE GENERAL NOTES
ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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PID No. 96678

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PROPOSED WORK SUPPLEMENTARY NOTES

ATB-7-2755
-REMOVE AND REPLACE THE EXISTING FORWARD AND REAR EXPANSION JOINT GLAND.

ATB-84-1475
- REMOVE ALL SPALLED AREAS OF THE DECK FLOOR AND SEAL WITH EPOXY URETHANE.

ATB-90-2172R
-ASPHALT PAVEMENT AT THE REAR APPROACH SLAB IS TO REMAIN.

ATB-167-0234
-CHANNEL CLEANOUT AT THE FORWARD RIGHT OF THE STRUCTURE TO REMOVE FALLEN LOGS AND DEBRIS

ATB-193-1137
-REPAIR THE EROSION AT THE REAR LEFT AND REAR RIGHT WINGWALLS.

ATB-322-0528
-REPAIR THE TOP PORTION OF THE FORWARD AND REAR SLOPE PROTECTION NEAR THE FOOTERS.

ATB-534-0106
-REPAIR THE FORWARD AND REAR SLOPE PROTECTION.
-REPAIR DAMAGED RAILING ON THE RIGHT SIDE OF THE STRUCTURE.
-DIAMOND GRINDING OF THE EXISTING CONCRETE WEARING SURFACE.
-DECK GROOVING OF THE EXISTING CONCRETE WEARING SURFACE.

POR-88-1196
-REPAIR THE FORWARD AND REAR SLOPE PROTECTION.

TRU-7-1164
-REMOVE AND REPLACE THE LEFT AND RIGHT BRIDGE RAILING.
-REMOVE AND REPLACE 14" OF THE LEFT AND RIGHT BRIDGE DECK EDGE.
-INSTALL NEW DRIP STRIP
-REFURBISH OUTER PIER BEARINGS

TRU-88-1328
-REPAIR EROSION AT THE FORWARD AND REAR SLOPE PROTECTION AND WINGWALLS

TRU-534-0450
- REMOVE ALL SPALLED AREAS OF THE DECK FLOOR AND SEAL WITH EPOXY URETHANE.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

DBR-2-73 DATED/REVISED 7/19/2002

DS-1-92 DATED/REVISED 07/18/2003

EXJ-6-06 DATED/REVISED 1/18/2013

TST-1-99 DATED/REVISED 7/15/2016

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED/REVISED 4/18/2003

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

CLEARING AND GRUBBING

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 ESTIMATED QUANTITIES 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.

EROSION REPAIR

THIS WORK WILL CONSIST OF REPAIRING THE EROSION OR SLOPE PROTECTION AT THE LOCATIONS DETAILED IN THE PROPOSED WORK SUPPLEMENTARY NOTES FOR STRUCTURES ATB-193-1137, ATB-322-0528, ATB-534-0106, POR-88-1196, AND TRU-88-1328. REPAIR WORK WILL BE PAID FOR BY THE FOLLOWING ITEMS.

ATB-193-1137:
ITEM 203, BORROW 2 CY.
ITEM 601, DUMPED ROCK FILL, TYPE C 2 CY

ATB-322-0528:
ITEM 203, BORROW 5 CY.
ITEM 601, DUMPED ROCK FILL, TYPE C 5 CY

ATB-534-0106:
ITEM 203, BORROW 5 CY.
ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION 10 CY.

POR-88-1196:
ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION 5 CY.

TRU-88-1328:
ITEM 203, BORROW 5 CY.
ITEM 601, DUMPED ROCK FILL, TYPE B 10 CY.

ITEM 202 - REMOVAL MISC.; CHANNEL CLEANOUT (ATB-167-0234)

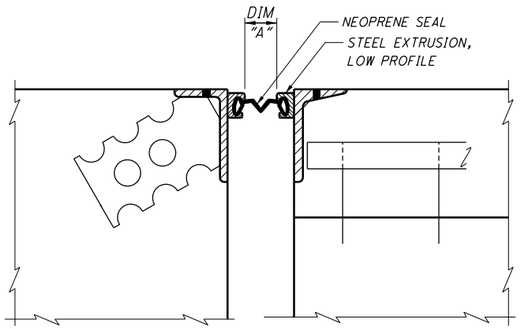
THIS WORK SHALL CONSIST OF REMOVING SEDIMENT BUILD-UP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR STRUCTURES ATB-167-0234. ANY TREES WITHIN THE CHANNEL OR BANK LIMITS SHALL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED RESTORE THE ORIGINAL CHANNEL PROFILE. EQUIPMENT IS NOT TO ENTER THE WATERWAY, BUT STAGED ON THE BANK OR BRIDGE. WHEN USING A BUCKET-TYPE EXCAVATOR, NO MORE THAN INCIDENTAL FALLBACK FROM THE BUCKET IS AUTHORIZED. NO BANK SHAPING, STREAM RELOCATION OR CHANNELIZATION IS AUTHORIZED WITHOUT A SECTION 404 & 401 PERMIT. WORK SHALL NOT CHANGE THE EXISTING CONTOURS OF THE STREAM BOTTOM AND BANK, AND ALL DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH APPROVAL OF THE ENGINEER. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT SHALL BE PAID FOR AT A UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN

THIS ITEM WILL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING SEALS FROM EDGE TO EDGE OF STRUCTURE ATB-7-2755 DECK. UPON REMOVAL OF THE SEAL, THE CONTRACTOR WILL ATTEMPT TO MATCH THE REPLACEMENT SEAL AS CLOSELY AS POSSIBLE WITH THE EXISTING SEAL SO AS TO PROVIDE A SNUG, WATERTIGHT SEAL. THE EXISTING SEAL WILL BE FIELD MEASURE PRIOR TO ORDERING MATERIAL.

THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 516, ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN. THIS PRICE WILL INCLUDE THE REMOVAL OF THE EXISTING SEAL, LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS REQUIRED TO REPLACE THE SEAL.



DIMENSION A

TEMPERATURE, °F	ATB-7-2755
30°	2 1/2"
40°	2 3/8"
50°	2 1/8"
60°	2"
70°	1 7/8"
80°	1 3/4"
90°	1 1/2"

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND RE-WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

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

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA			

STRUCTURE GENERAL NOTES

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

D04-BH-FY2018
PID No. 96678

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 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.

ITEM 257, DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT (ATB-534-0106)

THIS WORK WILL CONSIST OF DIAMOND GRINDING THE DECK WEARING SURFACE TO REMOVE EXISTING TRANSVERSE DECK GROOVING. THE DIAMOND GRINDING SHALL BE PERFORMED TO THE DEPTH OF THE EXISTING GROOVING TO PRODUCE A SMOOTH DECK

ITEM 511, BRIDGE DECK GROOVING (ATB-534-0106)

THIS WORK WILL CONSIST OF GROOVING OF THE CONCRETE WEARING SURFACE TO PRODUCE A LONGITUDINAL CORDUROY-TYPE TEXTURE. THIS WORK SHALL BE PERFORMED AS PER CMS 511.17.

SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURE(S)
ATB-84-1475
ATB-534-0450
WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: CURB REPAIR

THIS ITEM WILL BE USED TO REPAIR THE DETERIORATED FACE OF THE CURB ON THE BRIDGE DECK AND/OR APPROACH SLABS. THIS WORK WILL BE PERFORMED IN ACCORDANCE WITH ITEM 519 - PATCHING CONCRETE STRUCTURES AND AS MODIFIED HEREIN.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 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.

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: CURB REPAIR AND WILL BE PAID FOR PER FOOT.

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS:

ATB-20-0160	(SFN: 0401986)
ATB-20-0325	(SFN: 0402087)
ATB-20-2160	(SFN: 0402265)
ATB-45-2339	(SFN: 0402656)
ATB-84-2048	(SFN: 0403458)
ATB-90-1582L	(SFN: 0404268)
ATB-90-1583R	(SFN: 0404292)
ATB-90-2173L	(SFN: 0404411)
ATB-90-2172R	(SFN: 0404446)
ATB-90-2272L	(SFN: 0404470)
ATB-90-2272R	(SFN: 0404500)
ATB-90-2385	(SFN: 0404535)
ATB-90-2651	(SFN: 0404683)
ATB-90-2724	(SFN: 0404713)
ATB-90-2771L	(SFN: 0404748)
ATB-90-2771R	(SFN: 0404772)
ATB-90-2838L	(SFN: 0404802)
ATB-90-2840R	(SFN: 0404837)
ATB-167-0234	(SFN: 0404950)
ATB-193-1137	(SFN: 0405477)
ATB-534-0106	(SFN: 0406848)
POR-14-0620	(SFN: 6700586)
POR-44-2180	(SFN: 6701639)
POR-88-1196	(SFN: 6703607)
TRU-5-1621	(SFN: 7801173)
TRU-5-1917	(SFN: 7801211)
TRU-7-1164	(SFN: 7801564)
TRU-45-1691	(SFN: 7802234)
TRU-45-2010	(SFN: 7802285)
TRU-46-0985	(SFN: 7802595)
TRU-87-2056	(SFN: 7805586)
TRU-88-0900	(SFN: 7805853)
TRU-88-2332	(SFN: 7806035)
TRU-534-0450	(SFN: 7807295)
TRU-534-0988	(SFN: 7807414)

OBJECT MARKERS AND STRUCTURE/CULVERT IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

ATB-20-0160 (2 APPROACHES), ATB-20-0325 (2 APPROACHES), ATB-20-2160 (2 APPROACHES), ATB-45-2339 (2 APPROACHES), ATB-84-2048 (2 APPROACHES), ATB-90-1582L (1 APPROACH), ATB-90-1583R (1 APPROACH), ATB-90-2173L (1 APPROACH), ATB-90-2172R (1 APPROACH), ATB-90-2272L (1 APPROACH), ATB-90-2272R (1 APPROACH), ATB-90-2385 (2 APPROACHES), ATB-90-2651 (2 APPROACHES), ATB-90-2724 (2 APPROACHES), ATB-90-2771L (1 APPROACH), ATB-90-2771R (1 APPROACH), ATB-90-2838L (1 APPROACH), ATB-90-2840R (1 APPROACH), ATB-167-0234 (2 APPROACHES), ATB-193-1137 (2 APPROACHES), ATB-534-0106 (2 APPROACHES), POR-14-0620 (2 APPROACHES), POR-44-2180 (2 APPROACHES), POR-88-1196 (2 APPROACHES), TRU-5-1621 (2 APPROACHES), TRU-5-1917 (2 APPROACHES), TRU-7-1164 (2 APPROACHES), TRU-45-1691 (2 APPROACHES), TRU-45-2010 (2 APPROACHES), TRU-46-0985 (2 APPROACHES), TRU-87-2056 (2 APPROACHES), TRU-88-0900 (2 APPROACHES), TRU-88-2332 (2 APPROACHES), TRU-534-0450 (2 APPROACHES), TRU-534-0988 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 2-3 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

DESIGN AGENCY
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MJA			

STRUCTURE GENERAL NOTES

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

D04-BH-FY2018
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SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

TRANSVERSE DECK AND APPROACH SLAB GROOVES

CONSTRUCT THE NEW WIDENED PORTION OF THE BRIDGE DECK AND APPROACH SLABS WITH TRANSVERSE GROOVES TO MATCH THE EXISTING BRIDGE DECK AND APPROACH SLABS. THE GROOVES SHALL BE PLACED ACCORDING TO THE SAME REQUIREMENTS OF CMS 511.17, EXCEPT THE GROOVES SHALL BE TRANSVERSE TO MATCH THE EXISTING GROOVES, INSTEAD OF LONGITUDINAL AS DESCRIBED IN THE CMS.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

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

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

DECK REMOVALS - COMPOSITE DECK DESIGNS - STEEL SUPERSTRUCTURES: DUE TO THE PRESENCE OF WELDED STUDS TO THE EXISTING STRUCTURAL STEEL, SUBMIT A DETAILED PROCEDURE OF THE DECK REMOVAL TO THE ENGINEER AT LEAST 7 DAYS BEFORE CONSTRUCTION BEGINS. THE PROCEDURE SHALL INCLUDE ALL DETAILS, EQUIPMENT AND METHODS TO BE USED FOR REMOVAL OF THE CONCRETE OVER THE FLANGES AND AROUND THE STUDS. REPLACE OR REPAIR MAIN STEEL AND STUDS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA		7801564	

STRUCTURE GENERAL NOTES
BRIDGE NO. TRU-7-1164
SR 7 OVER YANKEE RUN

D04-BH-FY2018
PID No. 96678

CALC:	BFR	DATE: 11/17/2017
CHECKED:	MJA	DATE: 12/1/2017

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
	ATB-7-2755 0400947 01/NFP/BR	ATB-7-3039 0401021 01/NFP/BR	ATB-11-0856 0401129 01/NFP/BR	ATB-20-0160 0401986 01/NFP/BR	ATB-20-0325 0402087 01/NFP/BR							
	LS	LS		LS	LS			201	11000		CLEARING AND GRUBBING	
	500	20		113	180			512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	2440	1320	668	303	399			512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
	500			113	180			512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
	88							516	01300	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS	
		16						518	12500	EACH	SCUPPER, MISC.: CLEANOUT	2/18
		100						519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3/18
		50						SPECIAL	51911720	FT	PATCHING CONCRETE STRUCTURE, MISC.: CURB REPAIR	3/18
				12	12			630	80100	SF	SIGN, FLAT SHEET	
				2	2			630	80100	SF	SIGN, FLAT SHEET, 730.20	
				42	42			630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
				2	2			630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				2	2			630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

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MJA			

STRUCTURE ESTIMATED QUANTITIES

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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PID No. 96678

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CALC:	BFR	DATE: 11/17/2017
CHECKED:	MJS	DATE: 12/1/2017

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
ATB-20-2160 0402265 01/NFP/BR	ATB-45-2339 0402656 01/NFP/BR	ATB-84-1475 0403393 01/NFP/BR	ATB-84-2048 0403458 01/NFP/BR	ATB-90-1582L 0404268 01/NFP/BR	ATB-90-1583R 0404292 01/NFP/BR	ATB-90-2173L 0404411 01/NFP/BR	ATB-90-2172R 0404446 01/NFP/BR					
LS	LS	LS	LS	LS	LS	LS	LS	201	11000		CLEARING AND GRUBBING	
		30	386	10		1187	1187	512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
2318	439	1464	1581	2432	2074	2383	2313	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
			386			1187	1187	512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
		12						518	12500	EACH	SCUPPER, MISC.: CLEANOUT	2/18
		150		50			100	519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3/18
						5	5	519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
		10						SPECIAL	53000800	SY	STRUCTURES MISC.: CONCRETE SPALL REMOVAL	3/18
12	12		12	6	6	6	6	630	80100	SF	SIGN, FLAT SHEET	
2	2		2	1	1	1	1	630	80100	SF	SIGN, FLAT SHEET, 730.20	
42	42		42	21	21	21	21	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
6	2		6	3	3	3	3	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
6	2		6	3	3	3	3	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA			

STRUCTURE ESTIMATED QUANTITIES

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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CALC:	BFR	DATE: 11/17/2017
CHECKED:	MJA	DATE: 12/1/2017

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
ATB-90-2272L 0404470 01/NFP/BR	ATB-90-2272R 0404500 01/NFP/BR	ATB-90-2385 0404535 01/NFP/BR	ATB-90-2651 0404683 01/NFP/BR	ATB-90-2724 0404713 01/NFP/BR	ATB-90-2771L 0404748 01/NFP/BR	ATB-90-2771R 0404772 01/NFP/BR	ATB-90-2838L 0404802 01/NFP/BR					
LS	LS	LS	LS	LS	LS	LS	LS	201	11000		CLEARING AND GRUBBING	
944	799	971	763	848	959	567	1439	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
6	6	12	12	12	6	6	6	630	80100	SF	SIGN, FLAT SHEET	
1	1	2	2	2	1	1	1	630	80100	SF	SIGN, FLAT SHEET, 730.20	
21	21	42	42	42	21	21	21	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
3	3	2	2	2	3	3	3	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
3	3	2	2	2	3	3	3	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

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STRUCTURE FILE NUMBER

STRUCTURE ESTIMATED QUANTITIES

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
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CALC:	BFR	DATE: 11/17/2017
CHECKED:	MJA	DATE: 12/1/2017

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
ATB-90-2840R 0404837 01/NFP/BR	ATB-167-0234 0404950 01/NFP/BR	ATB-167-0384 0405035 01/NFP/BR	ATB-193-1137 0405477 01/NFP/BR	ATB-322-0528 0406244 01/NFP/BR	ATB-534-0106 0406848 01/NFP/BR	POR-14-0620 6700586 01/NFP/BR	POR-44-2180 6701639 01/NFP/BR					
LS	LS		LS		LS	LS	LS	201	11000		CLEARING AND GRUBBING	
	LS							202	98000		REMOVAL MISC.: CHANNEL CLEANOUT	
			2	5	5			203	40000	CY	BORROW	
					632			257	10000	SY	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT	
					632			SPECIAL	51160000	SY	BRIDGE DECK GROOVING	3/18
	130				10			512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
1216	693	474	345	981	632	998	523	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
	120							512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
					50			517	75500	FT	BRIDGE RAILING REBUILT	
	50				50			519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3/18
					7			519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
					10			601	20000	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
			2	5				601	27000	CY	DUMPED ROCK FILL, TYPE C	
6	12		12		12	12	12	630	80100	SF	SIGN, FLAT SHEET	
1	2		2		2	2	2	630	80100	SF	SIGN, FLAT SHEET, 730.20	
21	42		42		42	42	42	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
3	2		2		2	2	2	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
3	2		2		2	2	2	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

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STRUCTURE ESTIMATED QUANTITIES
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PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR46, SR 87, SR88, SR534

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ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
POR-88-1196 6703607 01/NFP/BR	TRU-5-1621 7801173 01/NFP/BR	TRU-5-1917 7801211 01/NFP/BR	TRU-7-1164 7801564 01/NFP/BR	TRU-45-1691 7802234 01/NFP/BR	TRU-45-2010 7802285 01/NFP/BR	TRU-46-0985 7802595 01/NFP/BR	TRU-87-2056 7805586 01/NFP/BR					
LS	LS	LS	LS	LS	LS	LS	LS	201	11000		CLEARING AND GRUBBING	
			150					202	38000	FT	GUARDRAIL REMOVED	
			LS					202	11203		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	4/18
			4291					509	10000	LB	EPOXY COATED REINFORCING STEEL	
			408					510	10000	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
			38					511	21520	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
15	20	20	150		120		15	512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
401	781	379	1093	707	842	545	436	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
					120			512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
			112					512	10300	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
			6					516	45305	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	2/18
			LS					516	47001		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	2/18
			510					517	70000	FT	RAILING (TWIN STEEL TUBE)	
			621					SPECIAL	51822300	FT	STEEL DRIP STRIP	4/18
100	150	150	300				100	519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3/18
	10	10						519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
5								601	20000	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
			4					606	35002	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			50					606	15050	FT	GUARDRAIL, TYPE MGS	
12	12	12	12	12	12	12	12	630	80100	SF	SIGN, FLAT SHEET	
2	2	2	2	2	2	2	2	630	80100	SF	SIGN, FLAT SHEET, 730.20	
42	42	42	42	42	42	42	42	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
2	6	2	6	2	2	6	6	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
2	6	2	6	2	2	6	6	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	

DESIGN AGENCY
ODOT --- DISTRICT 4
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STRUCTURE ESTIMATED QUANTITIES

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CALC:	BFR	DATE: 11/17/2017
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ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
TRU-88-0900 7805853 01/NFP/BR	TRU-88-1328 7805918 01/NFP/BR	TRU-88-2332 7806035 01/NFP/BR	TRU-534-0450 7807295 01/NFP/BR	TRU-534-0988 7807414 01/NFP/BR								
LS		LS	LS	LS				201	11000		CLEARING AND GRUBBING	
	5							203	40000	CY	BORROW	
			80	170				512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
376	990	1587	1214	1019				512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
				170				512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
			200					519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3/18
				5				519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
			50					SPECIAL	53000800	SY	STRUCTURES MISC.: CONCRETE SPALL REMOVAL	3/18
	10							601	26000	CY	DUMPED ROCK FILL, TYPE B	
12		12	12	12				630	80100	SF	SIGN, FLAT SHEET	
2		2	2	2				630	80100	SF	SIGN, FLAT SHEET, 730.20	
42		42	42	42				630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
6		2	6	6				630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
6		2	6	6				630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
			50					843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	

DESIGN AGENCY
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STRUCTURE ESTIMATED QUANTITIES

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR534.
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BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS														
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN									
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY									
ATB-7-2755	459.00	44.00	2244.00		2244.00								20.00	44.00	97.78	REAR		97.78									
													20.00	44.00	97.78	FWD		97.78									
ATB-7-3039	212.00	56.00	1319.11		1319.11								25.00	56.00	155.56	REAR					*ASPHALT SURFACE APPROACH SLAB						
													25.00	56.00	155.56	FWD					*ASPHALT SURFACE APPROACH SLAB						
ATB-11-0856	197.00	30.50	667.61		667.61								25.00	30.50	84.72	REAR					*ASPHALT SURFACE APPROACH SLAB						
													25.00	30.50	84.72	FWD					*ASPHALT SURFACE APPROACH SLAB						
ATB-20-0160	36.50	41.00	166.28		166.28								15.00	41.00	68.33	REAR		68.33									
													15.00	41.00	68.33	FWD		68.33									
			TOTALS		4397											TOTALS		333									

BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS														
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN									
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY									
ATB-20-0325	49.76	40.00	221.16		221.16								20.00	40.00	88.89	REAR		88.89									
													20.00	40.00	88.89	FWD		88.89									
ATB-20-2160	341.19	52.00	1971.32		1971.32								30.00	52.00	173.33	REAR		173.33									
													30.00	52.00	173.33	FWD		173.33									
ATB-45-2339	68.56	40.00	304.71		304.71								15.00	40.00	66.67	REAR		66.67									
													15.00	40.00	66.67	FWD		66.67									
ATB-84-1475	345.21	33.33	1278.43		1278.43								25.00	33.33	92.58	REAR		92.58									
													25.00	33.33	92.58	FWD		92.58									
ATB-84-2048	345.09	36.00	1380.36		1380.36								25.00	36.00	100.00	REAR		100.00									
													25.00	36.00	100.00	FWD		100.00									
ATB-90-1582L	370.87	52.00	2142.80		2142.80								25.00	52.00	144.44	REAR		144.44									
													25.00	52.00	144.44	FWD		144.44									
ATB-90-1583R	374.08	44.00	1828.84		1828.84								25.00	44.00	122.22	REAR		122.22									
													25.00	44.00	122.22	FWD		122.22									
			TOTALS		9128											TOTALS		1577									

DESIGN AGENCY
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DATE 12/4/17
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STRUCTURE DETAILS

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS											
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN						
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY						
ATB-90-2173L	448.61	43.00	2143.36		2143.36								25.00	43.00	119.44	REAR		119.44						
													25.00	43.00	119.44	FWD		119.44						
ATB-90-2172R	448.61	43.00	2143.36		2143.36								25.00	43.00	119.44	REAR		50.00			*MAJORITY ASPHALT SURFACE APPROACH SLAB			
													25.00	43.00	119.44	FWD		119.44						
ATB-90-2272L	113.34	52.00	654.85		654.85								25.00	52.00	144.44	REAR		144.44						
													25.00	52.00	144.44	FWD		144.44						
ATB-90-2272R	113.34	44.00	554.11		554.11								25.00	44.00	122.22	REAR		122.22						
													25.00	44.00	122.22	FWD		122.22						
ATB-90-2385	363.82	24.00	970.19		970.19								25.00	24.00	66.67	REAR					*ASPHALT SURFACE APPROACH SLAB			
													25.00	24.00	66.67	FWD					*ASPHALT SURFACE APPROACH SLAB			
ATB-90-2651	285.84	24.00	762.24		762.24								25.00	24.00	66.67	REAR					*ASPHALT SURFACE APPROACH SLAB			
													25.00	24.00	66.67	FWD					*ASPHALT SURFACE APPROACH SLAB			
ATB-90-2724	317.68	24.00	847.15		847.15								25.00	24.00	66.67	REAR					*ASPHALT SURFACE APPROACH SLAB			
													25.00	24.00	66.67	FWD					*ASPHALT SURFACE APPROACH SLAB			
			TOTALS		8076											TOTALS		942						

BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS											
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN						
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY						
ATB-90-2771L	115.82	52.00	669.18		669.18								25.00	52.00	144.44	REAR		144.44						
													25.00	52.00	144.44	FWD		144.44						
ATB-90-2771R	115.82	44.00	566.23		566.23								25.00	44.00	122.22	REAR					*ASPHALT SURFACE APPROACH SLAB			
													25.00	44.00	122.22	FWD					*ASPHALT SURFACE APPROACH SLAB			
ATB-90-2838L	198.93	52.00	1149.37		1149.37								25.00	52.00	144.44	REAR		144.44						
													25.00	52.00	144.44	FWD		144.44						
ATB-90-2840R	198.68	44.00	971.32		971.32								25.00	44.00	122.22	REAR		122.22						
													25.00	44.00	122.22	FWD		122.22						
ATB-167-0234	134.00	38.00	565.78		565.78								15.00	38.00	63.33	REAR		63.33						
													15.00	38.00	63.33	FWD		63.33						
ATB-167-0884	80.50	35.33	316.01		316.01								20.00	35.33	78.51	REAR		78.51						
													20.00	35.33	78.51	FWD		78.51						
ATB-193-1137	57.01	32.00	202.70		202.70								20.00	32.00	71.11	REAR		71.11						
													20.00	32.00	71.11	FWD		71.11						
			TOTALS		4441											TOTALS		1249						

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STRUCTURE DETAILS

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PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS											
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN							
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY							
ATB-322-0528	170.52	40.00	757.87		757.87								25.00	40.00	111.11	REAR		111.11							
													25.00	40.00	111.11	FWD		111.11							
ATB-534-0106	112.07	40.00	498.09		498.09								25.00	24.00	66.67	REAR		66.67							
													25.00	24.00	66.67	FWD		66.67							
POR-14-0620	164.06	44.00	802.07		802.07								20.00	44.00	97.78	REAR		97.78							
													20.00	44.00	97.78	FWD		97.78							
POR-44-2180	62.00	42.00	289.33		289.33								25.00	42.00	116.67	REAR		116.67							
													25.00	42.00	116.67	FWD		116.67							
POR-88-1196	98.83	28.00	307.47		307.47								15.00	28.00	46.67	REAR		46.67							
													15.00	28.00	46.67	FWD		46.67							
TRU-5-1621	173.96	32.84	634.76		634.76								20.00	32.84	72.98	REAR		72.98							
													20.00	32.84	72.98	FWD		72.98							
TRU-5-1917	35.18	40.00	156.36		156.36								25.00	40.00	111.11	REAR		111.11							
													25.00	40.00	111.11	FWD		111.11							
			TOTALS		3446											TOTALS		1246							

BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS											
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN							
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY							
TRU-7-1164	257.20	32.00	914.49		914.49								25.00	32.00	88.89	REAR		88.89							
													25.00	32.00	88.89	FWD		88.89							
TRU-45-1691	94.49	44.00	461.95		461.95								25.00	44.00	122.22	REAR		122.22							
													25.00	44.00	122.22	FWD		122.22							
TRU-45-2010	132.04	44.00	645.53		645.53								20.00	44.00	97.78	REAR		97.78							
													20.00	44.00	97.78	FWD		97.78							
TRU-46-0985	61.32	44.00	299.79		299.79								25.00	44.00	122.22	REAR		122.22							
													25.00	44.00	122.22	FWD		122.22							
TRU-87-2056	140.00	28.00	435.56		435.56								12.00	28.00	37.33	REAR									
													12.00	28.00	37.33	FWD									
TRU-88-0900	66.60	40.00	296.00		296.00								15.00	24.00	40.00	REAR		40.00							
													15.00	24.00	40.00	FWD		40.00							
TRU-88-1328	212.00	34.00	800.89		800.89								25.00	34.00	94.44	REAR		94.44							
													25.00	34.00	94.44	FWD		94.44							
			TOTALS		3855											TOTALS		1132							

*ASPHALT SURFACE APPROACH SLAB

*ASPHALT SURFACE APPROACH SLAB

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED BFR | DRAWN BFR | CHECKED MJA | REVIEWED RAS | DATE 12/4/17 | REVISED | STRUCTURE FILE NUMBER

STRUCTURE DETAILS

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS											
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN								LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN						
	FT	FT	SQ YD		SY								FT	FT	SQ YD			SY						
TRU-88-2332	274.57	44.00	1342.34		1342.34								25.00	44.00	122.22	REAR		122.22						
													25.00	44.00	122.22	FWD		122.22						
TRU-534-0450	160.00	52.00	924.44		924.44								25.00	52.00	144.44	REAR		144.44						
													25.00	52.00	144.44	FWD		144.44						
TRU-534-0988	173.50	41.00	790.39		790.39								25.00	41.00	113.89	REAR		113.89						
													25.00	41.00	113.89	FWD		113.89						
			TOTALS		3058											TOTALS		762						

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

REVIEWED RAS DATE 12/4/17 | STRUCTURE FILE NUMBER
DRAWN BFR | REVISED
DESIGNED BFR | CHECKED MJA

STRUCTURE DETAILS

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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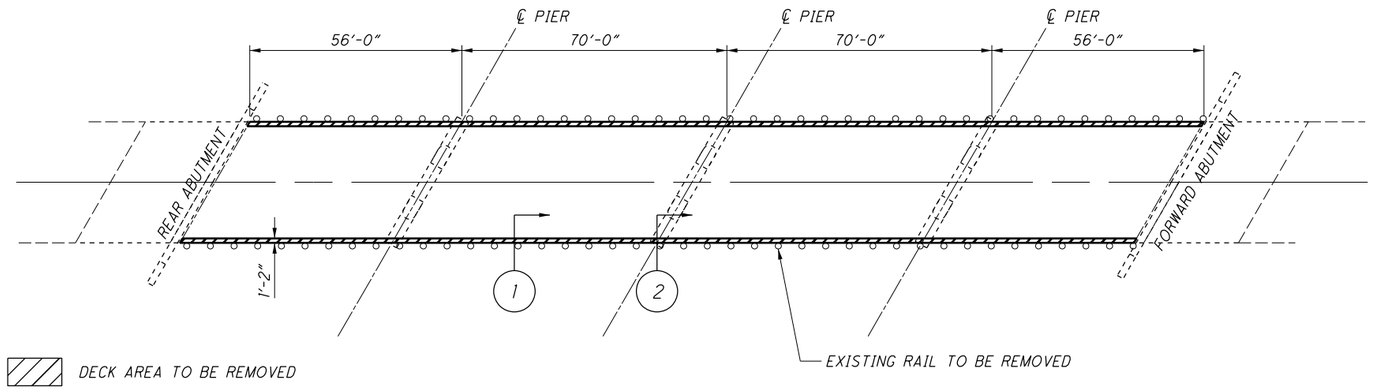
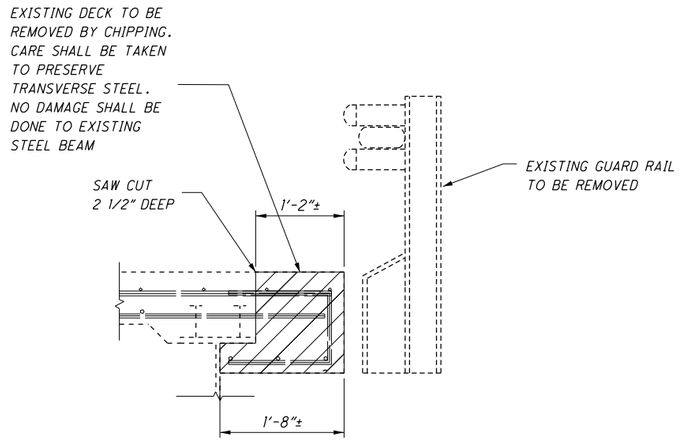
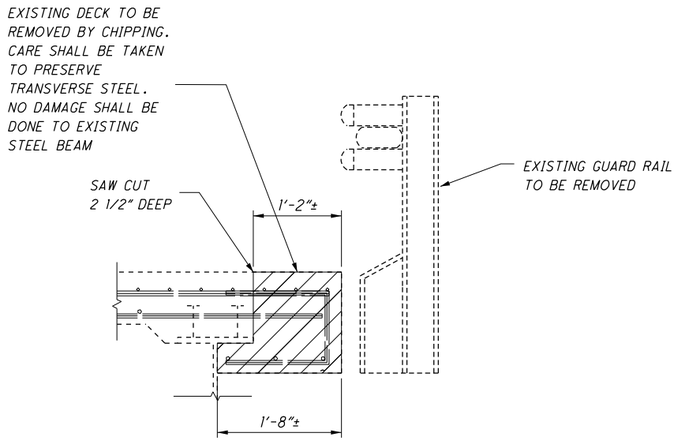
EXISTING PLAN VIEW



1 EXISTING PARTIAL SECTION AT MIDSPAN AND ABUTMENTS



2 EXISTING PARTIAL SECTION AT PIER



DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA			

STRUCTURE DETAILS
BRIDGE NO: TRU-7-1164
FEATURE INTERSECTED: YANKEE RUN

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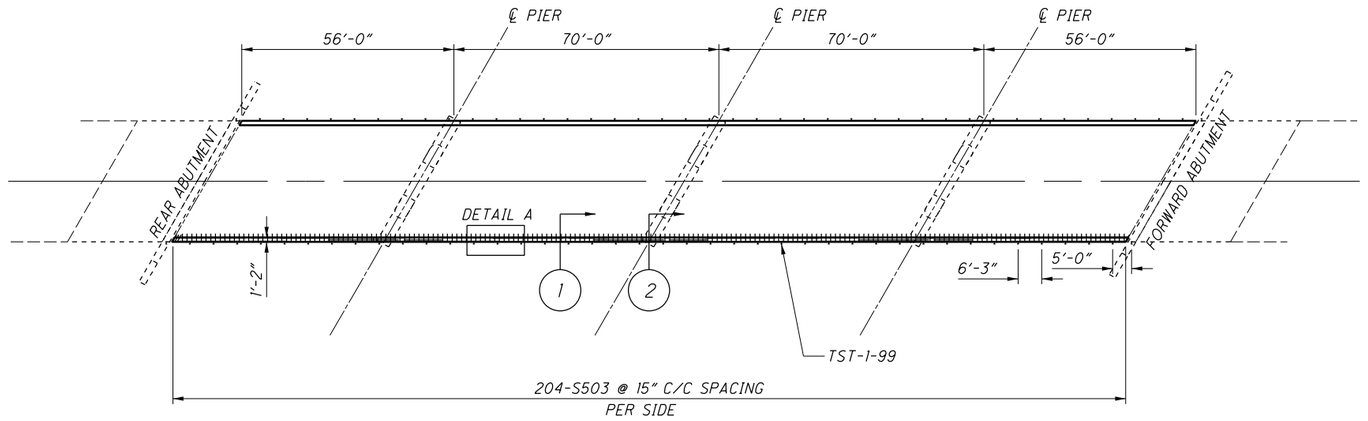
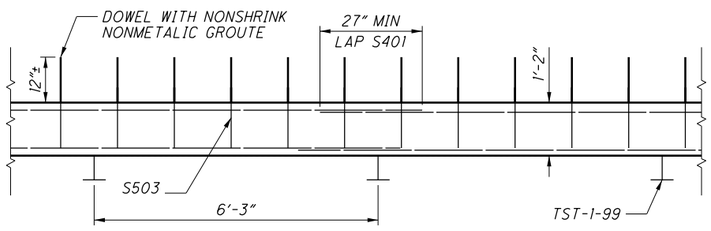
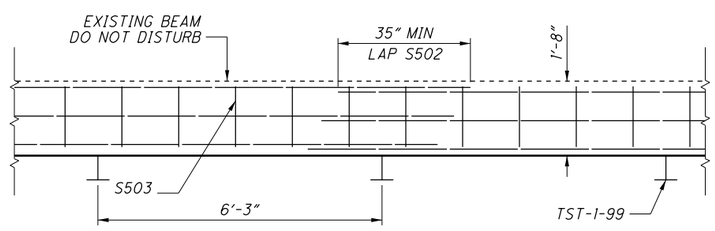
PROPOSED PLAN VIEW



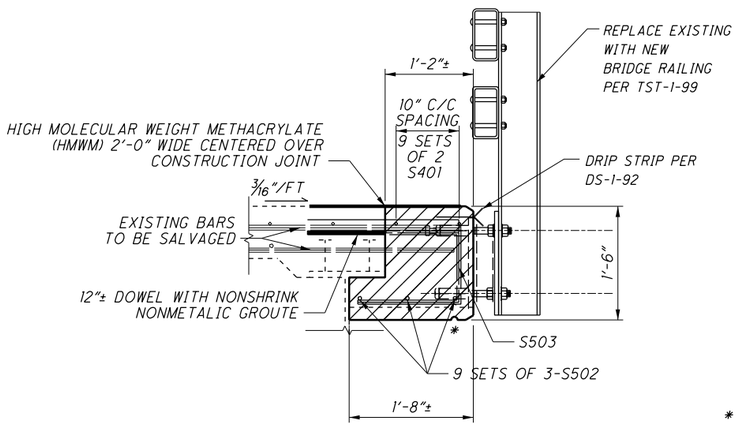
DETAIL A (TOP)



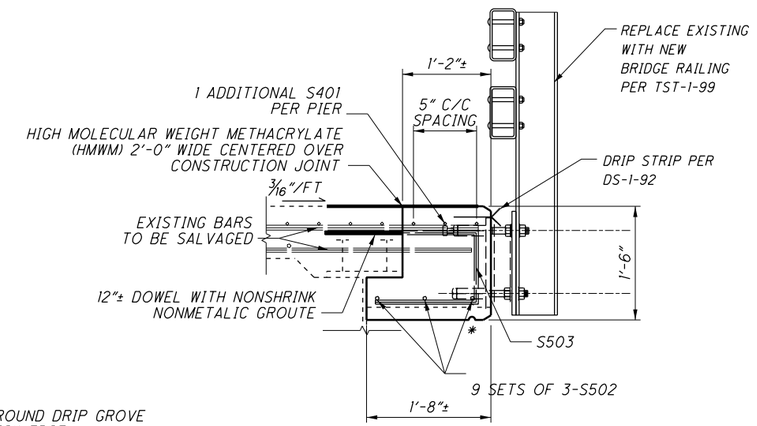
DETAIL A (BOTTOM)



1 PROPOSED PARTIAL SECTION AT MIDSPAN AND ABUTMENTS



2 PROPOSED PARTIAL SECTION AT PIER



* 1" DIAMETER HALF ROUND DRIP GROVE
SPACED 3" FROM DECK EDGE

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA			

STRUCTURE DETAILS

BRIDGE NO: TRU-7-1164
FEATURE INTERSECTED: YANKEE RUN

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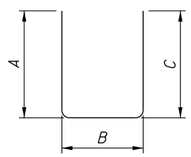
MARK	NUMBER				LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS				
	REAR ABUT	FWD ABUT	SUPER	TOTAL				A	B	C	D	E
S401			42	42	30'-3"	849	STR					
S502			54	54	30'-3"	1704	STR					
S503			408	408	4'-1"	1738	2	2'-0"	11"	1'-4"		
	SUPERSTRUCTURE SUB-TOTAL					4291						
	ABUTMENT SUB-TOTAL					0						
	GRAND TOTAL					4291						

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TOOUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORNCING STEEL TO BE EPOXY COATED



TYPE-2

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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STRUCTURE DETAILS
BRIDGE NO: TRU-7-1164
FEATURE INTERSECTED: YANKEE RUN

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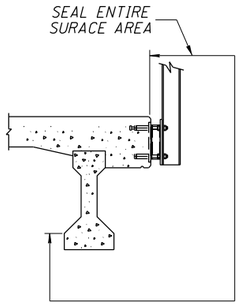
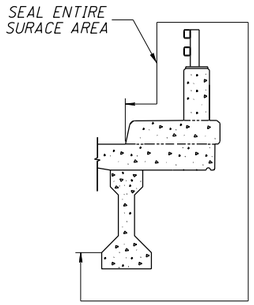
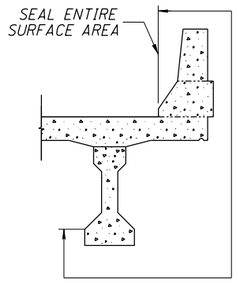


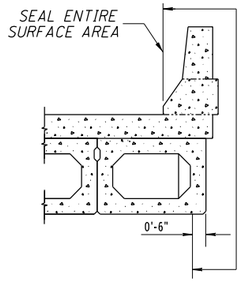
DETAIL A
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



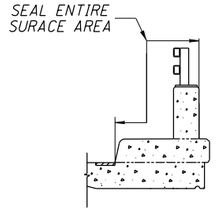
DETAIL B
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



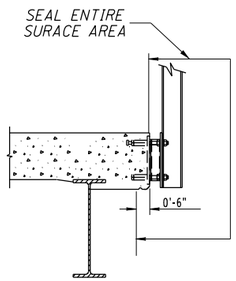
DETAIL C
CONCRETE DECK WITH
DEFLECTOR PARAPET



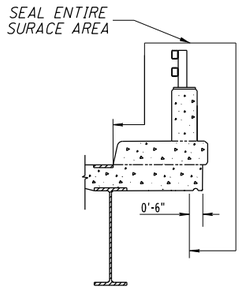
DETAIL D
PRESTRESSED BOX BEAM DECK
WITH DEFLECTOR PARAPET



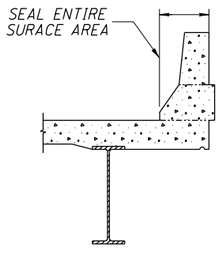
DETAIL F1
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



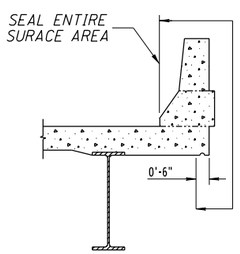
DETAIL E
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



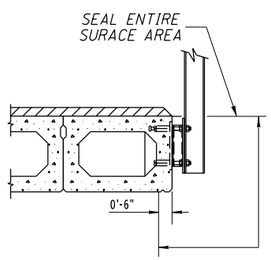
DETAIL F
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



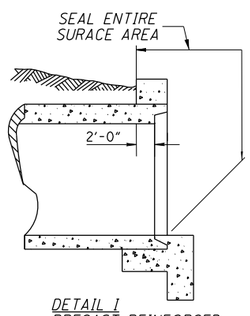
DETAIL G1
CONCRETE DECK WITH
DEFLECTOR PARAPET



DETAIL G
CONCRETE DECK WITH
DEFLECTOR PARAPET



DETAIL H
PRESTRESSED BOX BEAM DECK
WITH OVER THE SIDE DRAINAGE



DETAIL I
PRECAST REINFORCED
CONCRETE BOX CULVERT

The

BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
ATB-7-2755	PRESTRESSED CONCRETE BEAM SIMPLE SPAN	SEAL INSIDE FACE AND TOP OF PARAPET PER DETAIL G1	PER CMS			500		500
ATB-7-3039	STEEL BEAM CONTINUOUS	SEAL PATCHED MEADIAN AND CURB	PER CMS				20	20
ATB-20-0160	CONCRETE SLAB SIMPLE SPAN	SEAL CURB, SIDEWALK, INSIDE FACE AND TOP OF PARAPET PER DETAIL F1	PER CMS			113		113
ATB-20-0325	CONCRETE SLAB CONTINUOUS	SEAL CURB, SIDEWALK, INSIDE FACE AND TOP OF PARAPET PER DETAIL F1	PER CMS			180		180
ATB-84-1475	STEEL BEAM CONTINUOUS	SEAL PATCHED PARAPETS SEAL PATCHED SUBSTRUCTURE SEAL ALL REMOVED SPALLS ON THE DECK FLOOR	PER CMS				30	30
ATB-84-2048	STEEL BEAM CONTINUOUS	SEAL INSIDE FACE AND TOP OF PARAPET PER DETAIL G1	PER CMS			386		386
ATB-90-1582L	STEEL BEAM CONTINUOUS	SEAL PATCHED PARAPET AREAS	PER CMS				10	10
ATB-90-2173L	STEEL BEAM CONTINUOUS	SEAL PER DETAIL G	PER CMS			1187		1187
ATB-90-2172R	STEEL BEAM CONTINUOUS	SEAL PER DETAIL G	PER CMS			1187		1187
ATB-167-0234	STEEL BEAM CONTINUOUS	SEAL INSIDE FACE AND TOP OF PARAPET PER DETAIL G1	PER CMS			120	10	130
ATB-534-0106	CONCRETE SLAB CONTINUOUS	SEAL PATCHED DECK EDGE AREAS	PER CMS				10	10
POR-88-1196	CONCRETE SLAB CONTINUOUS	SEAL PATCHED SUBSTRUCTURE AREAS	PER CMS				15	15
TRU-5-1621	STEEL BEAM CONTINUOUS	SEAL PATCHED SUBSTRUCTURE AREAS	PER CMS				20	20
TRU-5-1917	PRESTRESSED CONCRETE BOX BEAM SIMPLE SPAN	SEAL PATCHED SUBSTRUCTURE AREAS	PER CMS				20	20
TRU-7-1164	STEEL BEAM CONTINUOUS	SEAL PER DETAIL E SEAL PATCHED SUBSTRUCTURE AREAS	PER CMS			115	35	150
TRU-45-2010	CONCRETE SLAB CONTINUOUS	SEAL INSIDE FACE AND TOP OF PARAPET PER DETAIL F1	PER CMS			120		120
TRU-87-2056	STEEL BEAM CONTINUOUS	SEAL PATCHED DECK EDGE AREAS SEAL PATCHED SUBSTRUCTURE AREAS	PER CMS				15	15
TRU-534-0450	STEEL BEAM CONTINUOUS	SEAL PATCHED DECK EDGE AREAS SEAL PATCHED SUBSTRUCTURE SEAL ALL REMOVED SPALLS ON THE DECK FLOOR	PER CMS				80	80
TRU-534-0988	STEEL BEAM CONTINUOUS	SEAL INSIDE FACE AND TOP OF PARAPET PER DETAIL G1	PER CMS			170		170

NOTE: EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
BFR	BFR	RAS	12/4/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MJA			

STRUCTURE DETAILS

ASHTABULA: SR7, SR11, US20, SR45, SR84, IR90, SR167, SR193, US322, SR534.
PORTAGE: SR14, SR44, SR88. TRUMBULL: SR5, SR7, SR45, SR46, SR 87, SR88, SR534

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