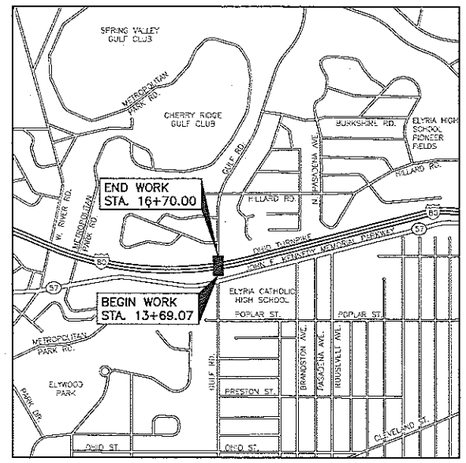
INDEX OF SHEETS



OHIO TURNPIKE COMMISSION

THE JAMES W. SHOCKNESSY OHIO TURNPIKE

CONTRACT NO. 43-12-02

MILEPOST NO. 146.4

DECK REPLACEMENT OF GULF ROAD BRIDGE
LORAIN COUNTY, OHIO

SCALES

PLAN _____ 0 20

PROFILE _____ HORIZONTAL 0 20 VERTICAL 0 20

CROSS SECTIONS _____ HORIZONTAL 0 10 VERTICAL 0 10

UNDERGROUND UTILITIES
TWO WORKING DAYS BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

APPROVED FOR
THE OHIO TURNPIKE COMMISSION
BY _____
CHIEF ENGINEER
12-29-11
DATE

OHIO TURNPIKE COMMISSION STANDARD DRAWINGS

AS-4	1-24-11	DJ-1	6-25-07	TCR-1	6-25-07
AS-5	1-24-11	DJ-2	6-25-07	TCR-2	12-21-11
CL-1	6-25-07	DJ-3	6-25-07	TCR-9	12-21-11
CL-2	6-25-07	DJ-5	6-25-07	TCR-10	12-21-11
				TCR-15	12-21-11

OHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS

BP-3.1	10-19-07	SBR-1-99	7-19-02	TC-42.20	1-21-11
BP-2.3	7-16-04	VPF-1-90	4-15-11	MT-35.10	4-20-01
BP-5.1	7-28-00			MT-95.31	7-17-09
				MT-95.32	7-17-09
GR-1.1	7-16-04			MT-101.60	4-17-09
GR-2.1	1-16-04			MT-105.10	1-16-09
GR-3.1	10-16-09			1 MT-95.41	4-17-09
GR-3.2	10-16-09				
GR-4.1	1-21-11				

PREPARED BY
ARCADIS
ARCADIS US, Inc.
Suite 1250
1100 Superior Avenue
Cleveland, Ohio 44114
Tel: 216-781-6177 Fax: 216-781-6243
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DESIGN CONTRACT NO. 71-10-05

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DRJ	1-31-12

SEALING OF DOCUMENTS

		SHEETS CERTIFIED
STATE OF OHIO ROBERT BRYAN BEASLEY E-57770 REGISTERED PROFESSIONAL ENGINEER	NAME: BOB BEASLEY, P.E. DATE: 12-23-11	SHEETS: 6-17
STATE OF OHIO DANIEL R. JOZITY E-69828 REGISTERED PROFESSIONAL ENGINEER	NAME: DANIEL R. JOZITY, P.E., PTOE DATE: 12-23-11	SHEETS: 1-5

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GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS DATED: JANUARY 1, 2010, AND THE OHIO TURNPIKE COMMISSION SPECIAL PROVISIONS CONTAINED IN THE CONTRACT DOCUMENTS SHALL GOVERN THIS PROJECT.

ODOT ITEM REFERENCES:

ALL REFERENCES TO ODOT ITEMS REFER TO THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS, 2010 EDITION.

UTILITIES NOTIFICATION AND UNDERGROUND UTILITIES:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE, AND THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY IN THE AREA FOR UTILITY STAKING. THE MARKING OR LOCATING OF PROTECTION SERVICE SHALL BE UTILITIES THROUGH THE UTILITY APPROXIMATELY TWO DAYS AHEAD OF THE COORDINATED TO STAY PLANNED CONSTRUCTION.

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE NORTH ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, AND THE NORTH AMERICAN DATUM OF 1983.

WORK LIMITS

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

ORIGINAL CONSTRUCTION PLANS

ORIGINAL CONSTRUCTION PLANS, SHOWING THE ORIGINAL ALIGNMENT, PROFILE AND DETAILS OF THE BRIDGE ARE AVAILABLE FOR INSPECTION AT THE OHIO TURNPIKE COMMISSION HEADQUARTERS.

682 PROSPECT STREET
BEREA, OHIO 44017
(440) 234-2081

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

LORAIN-MEDINA RURAL ELECTRIC
22898 WEST ROAD
WELLINGTON, OHIO 44090
800-222-5673

OHIO EDISON COMPANY
6326 LAKE AVENUE
ELYRIA, OHIO 44035
440-326-3231

COLUMBIA GAS OF OHIO
7080 FRY ROAD
MIDDLEBURG HTS, OHIO
44130
440-891-2428

QWEST COMMUNICATIONS
1860 LINCOLN ST., SUITE 200
DENVER, COLORADO 80295
303-837-3926

VERIZON
83 TOWNSEND AVENUE
NORWALK, OHIO 44857
419-744-3617

RURAL LORAIN COUNTY WATER AUTHORITY
42401 SR 303, BOX 567
LAGRANGE, OHIO 44050
440-355-5121

AVON LAKE MUNICIPAL UTILITIES
201 MILLER ROAD
AVON LAKE, OHIO 44012
440-933-6226

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 P.M. AND 6:00 A.M. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. ANY VARIANCE TO THE ABOVE REQUIREMENTS SHALL BE APPROVED BY THE CHIEF ENGINEER A MINIMUM OF ONE WEEK PRIOR TO THE WORK COMMENCING.

FLASHING AMBER LIGHTS FOR VEHICLES

ALL CONSTRUCTION AND SUPPLY VEHICLES INVOLVED WITH THE CONSTRUCTION IN THIS CONTRACT SHALL BE EQUIPPED WITH AMBER FLASHING SAFETY LIGHTS IN ACCORDANCE WITH THE OHIO TURNPIKE COMMISSION'S "STANDARD PROCEDURE FOR MAINTENANCE AND CONTRACTOR'S OPERATIONS UNDER TRAFFIC ON THE OHIO TURNPIKE", LATEST EDITION.

CONTINGENCY QUANTITIES

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE CHIEF ENGINEER FOR SUBGRADE IMPROVEMENTS, PAVEMENT REPAIR, TEMPORARY FENCE AND ROADWAY WORK:

204, EXCAVATION OF SUBGRADE	22 CU. YD.
204, GRANULAR EMBANKMENT	22 CU. YD.
253, PAVEMENT REPAIR, AS PER PLAN	26 SQ. YD.
604, MANHOLE ADJUSTED TO GRADE	1 EACH
SP607, TEMPORARY FENCE	300 FEET
SP607, TEMPORARY GATE	2 EACH
638, VALVE BOX ADJUSTED TO GRADE	1 EACH

FOR ITEM 253, PAVEMENT REPAIR, AS PER PLAN THE CONTRACTOR SHALL MATCH THE THICKNESS OF THE EXISTING PAVEMENT BUILDUP. THE CONTRACTOR SHALL USE ITEMS 304, AGGREGATE BASE, 301 ASPHALT CONCRETE BASE, PG64-22 AS THE PAVEMENT TYPES TO BRING THE PAVEMENT UP TO THE PLANNED SURFACE. ITEM 301 AND ITEM 304 ARE INCIDENTAL TO ITEM 253 AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

NOTIFICATION

THE CONTRACTOR SHALL NOTIFY IN WRITING THE FOLLOWING AGENCIES AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION, AND AT LEAST 72 HOURS BEFORE REOPENING STREET TO TRAFFIC:

THE CITY OF ELYRIA POLICE DEPARTMENT
THE CITY OF ELYRIA FIRE DEPARTMENT
THE CITY OF ELYRIA EMS
THE LORAIN COUNTY SHERIFF DEPARTMENT
THE ELYRIA BOARD OF EDUCATION
THE CITY OF ELYRIA CITY ENGINEER
THE CITY OF ELYRIA SERVICE DEPARTMENT
OHIO STATE HIGHWAY PATROL

EXISTING RIGHT OF WAY FENCE

IT IS THE INTENT OF THE PROJECT FOR THE EXISTING RIGHT OF WAY FENCE NEAR THE BRIDGE TO REMAIN, HOWEVER IF THE CONTRACTOR DEEMS IT IS NECESSARY TO REMOVE THE FENCE FOR HIS OPERATIONS AS APPROVED BY THE CHIEF ENGINEER, THE CONTRACTOR SHALL CAREFULLY REMOVE THE FENCE AND REINSTALL THE FENCE IN ACCORDANCE WITH ITEM 607. IF THE FENCE BECOMES DAMAGED DUE TO THE CONTRACTORS OPERATIONS THE FENCE SHALL BE REPLACED AT NO COST TO THE PROJECT.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

EROSION CONTROL

IT IS THE INTENT OF THE PROJECT TO NOT DISTURB ANY SEEDED AREAS AND/OR DRAINAGE ELEMENTS. ANY WORK INVOLVING SEEDED AREAS, DRAINAGE ELEMENTS OR EROSION CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT COST AND SHALL BE REPAIRED/PROTECTED AS DIRECTED BY THE CHIEF ENGINEER.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

MAINTENANCE OF TRAFFIC

THIS PROJECT CONSISTS OF BRIDGE REHABILITATION AND MINOR PAVEMENT REPAIR. VEHICULAR TRAFFIC RESTRICTIONS ON GULF ROAD SHALL BE LIMITED TO A SINGLE LANE CLOSURE IN EACH DIRECTION (MAINTAIN A MINIMUM OF 3 TRAVEL LANES) UNTIL THE ROADWAY CAN BE DETOURED AS DESCRIBED BELOW. TURNPIKE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITH THE EXCEPTION OF LANE CLOSURES FOR FALSE WORK, DECK DEMOLITION, PATCHING AND OTHER ITEMS. ALL LANE CLOSURES ON THE TURNPIKE SHALL BE APPROVED BY THE CHIEF ENGINEER AND SHALL BE IN ACCORDANCE WITH OTC STANDARD CONSTRUCTION DRAWINGS. 1

THE CONTRACTOR STORAGE AREA SHALL BE LIMITED TO THE WORK AREA BETWEEN THE TEMPORARY FENCE. THE FINAL LOCATION OF THE TEMPORARY FENCE SHALL BE APPROVED BY THE CHIEF ENGINEER. QUANTITIES FOR THE TEMPORARY FENCE AND GATE ARE SHOWN TO THE LEFT.

NOTICE OF CLOSURE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND REMOVE ALL SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AND AS SHOWN ON THE DETOUR PLAN DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC OR RESTRICTED WITH LANE CLOSURES AND UTILIZED AS AN ALTERNATE ROUTE. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND REMOVE ALL SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS SHOWN ON THE PLANS. 1

ALL SIGNS FOR THE MAINTENANCE OF TRAFFIC SHALL BE NEW OR LIKE NEW CONDITION SUBJECT TO THE APPROVAL OF THE CHIEF ENGINEER. LIKE NEW SHALL MEET THE ACCEPTABLE CRITERIA AS DEFINED AND ILLUSTRATED IN THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) PUBLICATION "QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES".

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH SP614, ITEM 614, OHIO TURNPIKE AND O.D.O.T. STANDARD CONSTRUCTION DRAWINGS 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 ITEM SP614, MAINTAINING TRAFFIC, UNLESS ~~SEPARATELY ITEMIZED IN THE PLAN~~

GULF ROAD CLOSURE LIMITATION

THE TOTAL CLOSURE OF GULF ROAD SHALL BE LIMITED TO THE SUMMER MONTHS WHEN THE ELYRIA SCHOOLS ARE NOT IN SESSION. WORK NOT INVOLVING TOTAL CLOSURE CAN BE COMPLETED WHILE SCHOOL IS IN SESSION. SINGLE LANE CLOSURES IN EACH DIRECTION SHALL BE ALLOWED PRIOR TO AND AFTER THE TOTAL CLOSURE AND SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS MT-95.31, MT-95.32 AND/OR MT-95.41. THE COST OF THE PORTABLE CONCRETE BARRIER SHALL BE INCLUDED IN ITEM SP614 - MAINTAINING TRAFFIC. THE TOTAL CLOSURE OF GULF ROAD SHALL BE PERMITTED FROM JUNE 7, 2012 OR THE END OF THE SCHOOL YEAR WHICHEVER IS LATER TO AUGUST 18, 2012 OR THE BEGINNING OF THE SCHOOL YEAR WHICHEVER IS EARLIER. LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IF THE ABOVE CLOSURE PERIOD IS EXCEEDED. 1

GULF ROAD PEDESTRIAN ACCESS

A MINIMUM OF ONE ACCESSIBLE AMERICANS WITH DISABILITIES ACT (ADA) ACCEPTABLE PATH OR THE EXISTING/PROPOSED SIDEWALK SHALL BE MAINTAINED ACROSS THE BRIDGE DURING THE MONTHS THE ELYRIA SCHOOL DISTRICT IS IN SESSION. THE CONTRACTOR SHALL SUBMIT A PLAN TO THE CHIEF ENGINEER WHICH DETAILS HOW PEDESTRIAN ACCESS WILL BE MAINTAINED. 1

METHOD OF PAYMENT

PAYMENT FOR THE MAINTENANCE OF TRAFFIC ITEMS, UNLESS SPECIFIED SEPARATELY, SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM SP614 - MAINTAINING TRAFFIC, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO COMPLETE THE WORK AS DETAILED IN THE PLANS AND DESCRIBED ABOVE.

SP614, MAINTAINING TRAFFIC	LUMP SUM

ABBREVIATIONS

STA = STATION
FT = FEET
TYP = TYPICAL
EX = EXISTING
BRG = BEARING
TELE = TELEPHONE
MIN = MINIMUM
HOR = HORIZONTAL
PROP = PROPOSED
ELEV = ELEVATION
EXP = EXPANSION
ABUT = ABUTMENT
PAVT = PAVEMENT
CONST = CONSTRUCTION
O/O = OUTSIDE TO OUTSIDE
SQ FT = SQUARE FEET
SQ YD = SQUARE YARDS
CU YD = CUBIC YARDS
FWD = FORWARD
BOTT = BOTTOM
SPA = SPACING
MAX = MAXIMUM
CLR = CLEARANCE
NW = NORTHWEST
SE = SOUTHEAST
SW = SOUTHWEST
NE = NORTHEAST
PEJF = PREFORMED EXPANSION JOINT FILLER
SER = SERIES
EF = EACH FACE
FF = FAR FACE
NF = NEAR FACE
LT = LEFT
RT = RIGHT
SQ = SQUARE
OC = ON CENTER
PSF = POUNDS PER SQUARE FOOT

NO.	REVISIONS	BY	DATE
1	ADDENDUM 4	DRJ	1-31-12

OHIO TURNPIKE COMMISSION

GULF ROAD BRIDGE
OVER OHIO TURNPIKE

GENERAL NOTES

ARCADIS

DESIGNED:	D.R.J.	CHECKED:	T.M.D.	DATE:	9/2011
DRAWN:	D.R.J.	IN CHARGE:	E.J.A.	SCALE:	N/A

CONTRACT 43-12-02 DWG 2 OF 17

\\OH6FP1\Data\Project\CL000981.B001\Drawing\General\02 Notes 2-1-12.dwg; 2/02/12 - 7:32am; djozity

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 OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP–MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED, AS DIRECTED BY THE CHIEF ENGINEER, FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING THE AM AND PM PEAK HOURS TO ENSURE TRAFFIC FLOWS THRU THE INTERSECTION DURING THE TIMES OF LANE CLOSURES.
- FOR LANE CLOSURES: DURING INITIAL SET–UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG–TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

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.

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 DURING CONSTRUCTION OPERATIONS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS 180 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 SHALL BE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS.

ALTERNATE ROUTE SIGNING

DURING TIMES OF SINGLE LANE CLOSURES ON GULF ROAD THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE SIGNING TO DESIGNATE THE DETOUR ROUTE AS SHOWN ON DRAWING 4 AS AN ALTERNATE ROUTE. ALL SIGNS AND THEIR PLACEMENT SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE ODOT TRAFFIC ENGINEERING MANUAL. ONCE THE TOTAL CLOSURE IS IN EFFECT THE ALTERNATE ROUTE SIGNS SHALL BE REMOVED AND REPLACED WITH THE DETOUR ROUTE SIGNING AS SHOWN ON DRAWING 4. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM SP614 – MAINTAINING TRAFFIC.

1

SINGLE LANE CLOSURES

IF THE CONTRACTOR ELECTS TO CLOSE A LANE IN EACH DIRECTION A SUBMITTAL TO THE CHIEF ENGINEER IS REQUIRED. THE SUBMITTAL SHALL INCLUDE A PHASING PLAN SHOWING THE LOCATIONS OF THE DECK BEING CUT ON THE TRANSVERSE SECTION, LOCATION OF THE ADA ACCESSIBLE PATH IN PLAN VIEW, AND A LIST OF ITEMS OF WORK TO BE PERFORMED DURING THE CLOSURE. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR RECEIVES APPROVAL IN WRITING OF THE SUBMITTED ITEMS FROM THE CHIEF ENGINEER.

NO.	REVISIONS	BY	DATE
1	ADDENDUM 4	DRJ	1–31–12

OHIO TURNPIKE COMMISSION

GULF ROAD BRIDGE
OVER OHIO TURNPIKE

GENERAL NOTES

ARCADIS

DESIGNED:	D.R.J.	CHECKED:	T.M.D.	DATE:	1/2012
DRAWN:	D.R.J.	IN CHARGE:	E.J.A.	SCALE:	N/A

CONTRACT 43–12–02 DWG 2A OF 17

\\OH6FP1\Data\Project\CL000981.B001\Drawing\General\02 Notes 2-1-12.dwg; 2/02/12 - 7:32am; djozity

BRIDGE ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
IB.ART.6		LUMP SUM	PREMIUM FOR CONTRACT PERFORMANCE BOND AND PAYMENT BOND
SP202		LUMP SUM	PORTIONS OF STRUCTURE REMOVED
SP509	118,574	POUND	EPOXY COATED REINFORCING STEEL
509	100	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL
SP511A	386	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE DECK SLAB, USING SHRINKAGE COMPENSATING CEMENT
SP511A	66	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE I CEMENT
SP511A	69	CU. YD.	CLASS S CONCRETE, ABUTMENT SLABS, USING SHRINKAGE COMPENSATING CEMENT
SP511A	3	CU. YD.	CLASS S CONCRETE, USING SHRINKAGE COMPENSATING CEMENT FOR PREPLACEMENT TESTING
513	25	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN
516	5	EACH	BEARING DEVICE, MISC.: ANCHOR BOLT REPLACEMENT, AS PER PLAN
SP516A	35	LIN. FT.	CRACK REPAIR USING EPOXY INJECTION
SP516B	885	LIN. FT.	SEALING OF CONSTRUCTION JOINTS
SP519	165	SQ. FT.	PATCHING CONCRETE STRUCTURES
SP527		LUMP SUM	FALSEWORK, TEMPORARY BRACING, AND PROTECTIVE STRUCTURES
SP533A	142	LIN. FT.	1 1/2" ELASTOMERIC COMPRESSION SEAL IN STRUCTURAL STEEL JOINT
SP533	142	LIN. FT.	THREE (3) INCH CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINTS
SP536	713	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE
SP536	358	SQ. YD.	CONCRETE WEATHERPROOFING, BARRIERS AND PARAPETS
SP536	1,765	SQ. YD.	CONCRETE WEATHERPROOFING, DECK AND ABUTMENT SLABS
SP607	445	LIN. FT.	TYPE I FENCE, ALL ALUMINUM (9'–0" CHAIN LINK WITH SPECIALS), AS PER PLAN
SP607	429	LIN. FT.	TYPE II FENCE, ALL ALUMINUM (4'–0" CHAIN LINK WITH SPECIALS), AS PER PLAN
SP614		LUMP SUM	MAINTAINING TRAFFIC
614	180	HOUR	LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS
SP618		LUMP SUM	FIELD OFFICE
SP623		LUMP SUM	CONSTRUCTION LAYOUT SURVEY
624		LUMP SUM	MOBILIZATION

ROADWAY ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
202	1,661	SQ. FT.	WALK REMOVED
202	158	FT.	CURB REMOVED
202	128	FT.	FENCE REMOVED
202	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A
202	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED
204	22	CU. YD.	EXCAVATION OF SUBGRADE
204	22	CU. YD.	GRANULAR EMBANKMENT
253	26	SQ. YD.	PAVEMENT REPAIR, AS PER PLAN
254	501	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE, 3"
407	51	GAL.	TACK COAT
407	26	GAL.	TACK COAT FOR INTERMEDIATE COURSE
448	25	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–22
448	18	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64–22
604	1	EACH	MANHOLE ADJUSTED TO GRADE
606	4	EACH	ANCHOR ASSEMBLY, TYPE A, USING STEEL POSTS
606	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1, USING STEEL POSTS
606	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2, USING STEEL POSTS
606	112.5	FT.	GUARDRAIL, TYPE 5, USING STEEL POSTS
SP607	128	LIN. FT.	TYPE II FENCE, ALL ALUMINUM (6'–0" CHAIN LINK WITH SPECIALS)
SP607	350	LIN. FT.	TEMPORARY FENCE
SP607	2	EACH	TEMPORARY GATE
608	1,661	SQ. FT.	4" CONCRETE WALK
609	158	FT.	CURB, TYPE 6
638	1	EACH	VALVE BOX ADJUSTED TO GRADE
642	0.13	MILE	LANE LINE
642	0.07	MILE	CENTER LINE
642	256	FT.	CHANNELIZING LINE
642	8	EACH	LANE ARROW

ITEM 513 – WELDED STUD SHEAR CONNECTORS, AS PER PLAN

REPLACE ALL EXISTING SHEAR STUDS DEEMED BY THE CHIEF ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE COMMISSION WILL MEASURE THE REPLACEMENT SHEAR STUDS BY THE NUMBER EACH ACCEPTED IN PLACE. A CONTINGENCY AMOUNT OF 25 EACH HAS BEEN INCLUDED IN THE QUANTITY.

REPLACE ALL EXISTING SHEAR STUDS WHICH ARE DEEMED BY THE CHIEF ENGINEER TO BE MADE UNUSABLE DUE TO REMOVAL OPERATIONS WITH NEW STUDS OF THE SAME SIZE AT NO COST TO THE COMMISSION.

ITEM 509 – REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE CHIEF ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE COMMISSION WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. AN ESTIMATED QUANTITY OF 100 POUNDS HAS BEEN INCLUDED FOR THIS WORK. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE CHIEF ENGINEER TO BE MADE UNUSABLE BY REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE COMMISSION.

STRUCTURAL GENERAL NOTES

PROPOSED WORK

THE GULF ROAD BRIDGE OVER THE OHIO TURNPIKE SHALL BE REHABILITATED UNDER THIS CONTRACT. MAJOR WORK INCLUDES REPLACING THE THE BRIDGE AND ABUTMENT ROADWAY DECK, DECK JOINTS AND SIDEWALKS WITH SAFETY BARRIERS AND FENCING. DETAILS OF THIS WORK ARE SHOWN IN THE PLANS.

DESIGN SPECIFICATIONS

STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 2002, AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS. THE DESIGN LOADING IS HS–20–44 CASE II AND THE ALTERNATE MILITARY LOADING.

THE CLASS OF CONCRETE AND THE GRADES OF REINFORCING STEEL FOR THE CONSTRUCTION ARE AS FOLLOWS:

CONCRETE CLASS S – COMPRESSIVE STRENGTH 4,500 P.S.I.
REINFORCING STEEL – ASTM A615, A616, A617 – GRADE 60

REMOVAL

GENERAL:

THE CONTRACTOR SHALL REMOVE THE DESIGNATED PORTIONS OF THE EXISTING STRUCTURE TO THE LIMITS SHOWN ON THE PLANS OR TO THE LIMITS AS DIRECTED BY THE CHIEF ENGINEER. WHEN SO DIRECTED BY THE CHIEF ENGINEER, THE CONTRACTOR SHALL WET DOWN THE CONCRETE THOROUGHLY DURING REMOVAL OPERATIONS TO PREVENT SPREAD OF DUST. ALL NECESSARY LABOR AND MATERIAL SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED WITH ITEM SP202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT.

CONCRETE REMOVAL:

CONCRETE SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISELS EDGED TOOLS AND/OR BY SAW CUTTING THE CONCRETE DECKS AND REMOVING IN SECTIONS.

CARE SHALL BE TAKEN TO ENSURE AGAINST DAMAGE TO THE STEEL AND CONCRETE MEMBERS WHICH ARE TO BE RETAINED AND TO PRESERVE THE BOND OF THE RETAINED REINFORCEMENT TO THE EXISTING CONCRETE. THESE BARS SHALL BE CLEANED OF ALL CONCRETE FRAGMENTS AND FOREIGN MATTER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE BARS; HAND TOOLS SHALL BE EMPLOYED FOR FINAL CLEANING. DAMAGED AREAS OF REINFORCEMENT THAT ARE TO REMAIN SHALL BE CUT AND STRESS TRANSFER ACCOMPLISHED BY EITHER A LAPPED OR MECHANICAL SPLICE. ANY ADDITIONAL REINFORCEMENT OR MECHANICAL SPLICES SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COMMISSION. OTHER EXISTING REINFORCEMENT WITHIN THE REMOVAL LIMITS SHALL BE REMOVED AND DISPOSED OF.

DUE TO THE PRESENCE OF WELDED STUDS TO THE EXISTING STRUCTURAL STEEL, SUBMIT A DETAILED PROCEDURE OF THE DECK REMOVAL TO THE CHIEF 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 CHIEF ENGINEER. OBTAIN THE CHIEF ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

DISPOSAL OF REMOVED MATERIAL:

THE CONTRACTOR SHALL NOT PERMIT ANY REMOVED MATERIAL TO DROP TO THE GROUND. MEANS SHALL BE PROVIDED FOR CATCHING REMOVED MATERIAL. THE CONTRACTOR SHALL SUBMIT TO THE CHIEF ENGINEER FOR APPROVAL DETAILS OF THE METHODS TO BE USED FOR REMOVING AND COLLECTING THE MATERIAL. ALL CONCRETE, STEEL, REINFORCING STEEL, ASPHALT, ETC. REMOVED FROM THE STRUCTURE, UNLESS SPECIFIED, BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED BY HIM FROM THE SITE.

UNDER NO CIRCUMSTANCES SHALL THE MATERIAL BE PERMITTED TO REMAIN ON THE PREMISES, RIGHT OF WAY OR STREETS PENDING DISPOSAL OF SAME OR FOR ANY OTHER PURPOSES, UNLESS OTHERWISE SPECIFIED BY THE CHIEF ENGINEER.

DIMENSIONS

DIMENSIONS GIVEN ARE MEASURED HORIZONTALLY AND AT 60° F UNLESS OTHERWISE NOTED. DIMENSIONS GIVEN FOR THE EXISTING STRUCTURE ARE FROM THE ORIGINAL CONSTRUCTION PLANS. SOME VARIATION FROM PLAN DIMENSIONS ARE EXPECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FIT–UP BETWEEN THE PROPOSED AND EXISTING CONSTRUCTION. ADEQUATE MEASUREMENTS SHALL BE MADE IN THE FIELD PRIOR TO THE FABRICATION OR INSTALLATION OF ANY PART TO INSURE THAT ALL PARTS CAN BE PROPERLY ASSEMBLED AS SPECIFIED IN THE PLANS. ANY ADDITIONAL COST RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT WILL BE AWARDED BY THE COMMISSION.

ITEM SP536 – CONCRETE WEATHERPROOFING

ITEM SP536 – CONCRETE WEATHERPROOFING SHALL BE APPLIED TO THE FOLLOWING NEW EXPOSED CONCRETE SURFACES OF THE BRIDGE:

- THE TOP OF NEW ABUTMENT SLABS AND NEW SUPERSTRUCTURE SLABS.
- ALL NEW PARAPET SURFACES AND SLAB SIDE EDGES.
- THE BOTTOM SURFACE OF THE NEW SUPERSTRUCTURE SLAB FROM THE SLAB SIDE EDGE TO THE EXTERIOR STRINGER FLANGE.
- ALL EXPOSED CONCRETE SURFACES OF ALL ABUTMENTS AND PIERS. SEALING SHALL NOT BE DONE UNTIL ANY CONCRETE PATCHING REPAIRS HAVE BEEN COMPLETED AND CURED.

CARE SHALL BE TAKEN NOT TO APPLY WEATHERPROOFING ON CONSTRUCTION JOINT SURFACES. SURFACES TO RECEIVE JOINT SEALER OR FASCIA BEAM PAINT.

CONCRETE PARAPETS

DEFLECTION JOINTS:

DEFLECTION JOINTS SHALL BE CONSTRUCTED BY SAWING THE CONCRETE AFTER IT HAS TAKEN ITS INITIAL SET AND BEFORE ANY CRACKS DEVELOP. THE USE OF AN EDGE GUIDE, FENCE OR JIG SHALL BE USED TO ENSURE THAT THE CUT JOINTS SHALL BE STRAIGHT, TRUE AND ALIGNED ON BOTH FACES OF THE PARAPET. THE JOINT SHALL BE THE WIDTH OF THE SAW BLADE, NOT TO EXCEED ONE QUARTER (0.25) INCH, AND SHALL BE ONE AND ONE–HALF (1.5) INCHES DEEP. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK, EXCEPT AS NOTED ON THE PLANS AND SHALL BE CAULKED WITH A ONE (1) INCH THICKNESS OF MATERIAL CONFORMING TO FEDERAL SPECIFICATION TT–S–00227E. THE BOTTOM HALF (0.5) INCH OF THE SAWED JOINT AT THE OUTSIDE FACE OF THE PARAPET SHALL BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

PARAPET FORMS:

FORMS FOR THE BRIDGE PARAPETS AND SLAB SIDE EDGES SHALL BE IN ACCORDANCE WITH 508.02 OF THE SPECIFICATIONS AND THE FOLLOWING:

WHEN WOOD FORMS ARE USED THEY SHALL PROVIDE A SMOOTH SURFACE OF UNIFORM TEXTURE AND COLOR SUBSTANTIALLY EQUAL TO THAT WHICH WOULD BE OBTAINED WITH THE USE OF THE NEW PLYWOOD CONFORMING TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY PRODUCT STANDARD PSI FOR EXTERIOR B–B CLASS I PLYWOOD.

FORMS SHALL BE OF A CONSTRUCTION WHICH WOULD ALLOW FOR THEIR REMOVAL WITHIN 24 HOURS OF THE CONCRETE PLACEMENT WITHOUT CAUSING DAMAGE TO THE CONCRETE.

NO.	REVISIONS	BY	DATE
1	ADDENDUM 4	DRJ	1–31–12

OHIO TURNPIKE COMMISSION

GULF ROAD BRIDGE
OVER OHIO TURNPIKE

GENERAL NOTES AND QUANTITIES

ARCADIS

DESIGNED:	C.M.D.	CHECKED:	R.B.B.	DATE:	9/2011
DRAWN:	M.P.B.	IN CHARGE:	E.J.A.	SCALE:	-----

CONTRACT 43–12–02 DWG 7 OF 17

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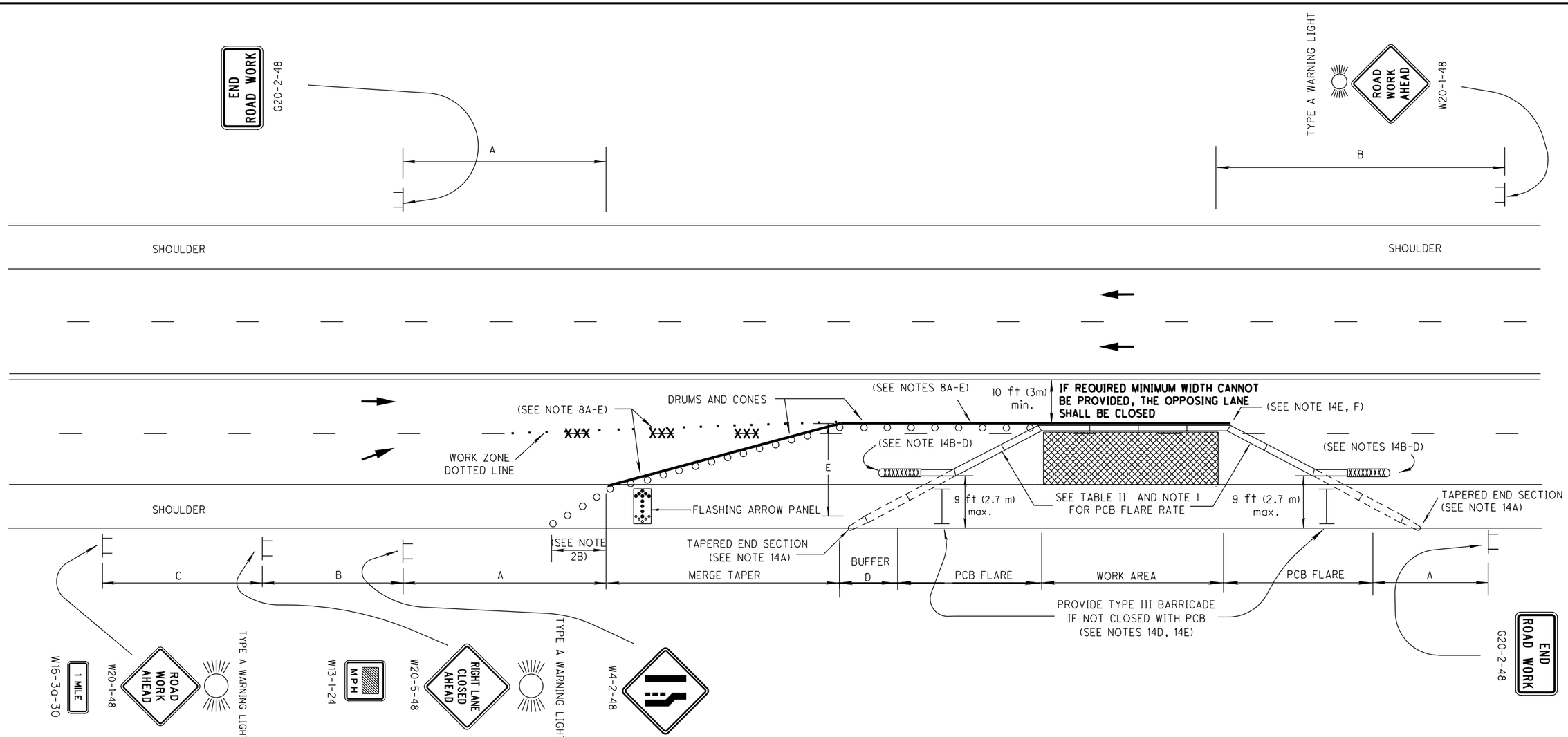

LEGEND

- DRUMS
- PORTABLE CONCRETE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- ATTENUATOR
- OPTIONAL TREATMENT
- DIRECTION OF TRAVEL

TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE BETWEEN SIGNS FT(m)		
	A	B	C
MAJOR CONVENTIONAL	500 (150)	500 (150)	500 (150)
FREEWAY & EXPRESSWAY	1000 (300)	1500 (450)	2640 (800)

TABLE II

SPEED LIMIT (MPH)	MERGING TAPER RATE MINIMUM	SHOULDER TAPER RATE MINIMUM	PCB FLARE RATE MINIMUM	MAXIMUM DRUM SPACING FT (m)		BUFFER (D) FT (m) MINIMUM	CLEAR ZONE WIDTH (E) FT (m)
				Taper sec.	Tangent sec.		
25	11:1	4:1	8:1	25 (7.5)	40 (12)	155 (45)	15 (5)
30	15:1	5:1	8:1	30 (9)	40 (12)	200 (60)	15 (5)
35	21:1	7:1	10:1	35 (10.5)	40 (12)	250 (75)	15 (5)
40	27:1	9:1	11:1	40 (12)	80 (24)	305 (95)	15 (5)
45	45:1	15:1	13:1	45 (13.5)	80 (24)	360 (110)	19 (6)
50	50:1	17:1	14:1	50 (15)	80 (24)	425 (130)	19 (6)
55	55:1	18:1	16:1	55 (16.5)	80 (24)	495 (150)	23 (7)

4-17-09
Corrected

CLOSING RIGHT LANE OF A MULTI-LANE UNDIVIDED HIGHWAY WITH PORTABLE CONCRETE BARRIER

OFFICE OF TRAFFIC ENGINEERING

MT-95.41

SHB/LAM

GENERAL NOTES:

DESIGN SPEED

1. The design speed used for taper rates should typically be the permanent legal speed. However, on construction projects for which the speed limit is reduced, the reduced speed may be used in determining the taper rate when the taper is not the first active construction area within the project.

TAPERS

2A. The minimum acceptable length for the merge taper shall be determined by multiplying the width of offset by the merge taper rate. The merge taper rate is provided in Table II.

2B. The minimum acceptable length for the shoulder taper shall be determined by multiplying the width of the shoulder by the shoulder taper rate. The shoulder taper rate is provided in Table II.

SIGN SPACING

3A. The minimum spacing between work zone signs is shown in Table I. Maximum spacing should not be greater than 1.5 times the distances shown in Table I.

3B. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200 feet (60 meters) for speeds of 45 mph or less and a minimum of 400 feet (120 meters) for speeds 50 mph or greater.

ADJUSTMENTS FOR SIGHT DISTANCE

4. The location of the merging taper and the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.

BASIC SIGNING

5A. ROAD WORK AHEAD (W20-1) signs shall be provided on entrance ramps or roadways entering the work limits.

5B. END ROAD WORK (G20-2) signs are only required for lane closures of more than one day. It is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits.

5C. Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any W20-1 or G20-2 sign which falls within the limits of another traffic control zone shall be omitted or covered during the period when both projects are active.

SIGNING DETAILS

6A. The Advisory Speed plaque W13-1 shall be used when specified in the plan.

6B. 36 inch (900 millimeter) warning signs may be used when the approach speed limit is 40 mph or less.

6C. The Distance plaque W16-3a (or W16-2a if the distance shown is in feet) shall indicate the distance to the beginning of the merging taper. Distances less than one mile may be expressed in feet. The plaque may be omitted if Extra Advance Sign Groups are not used.

6D. Provide signing on the inactive side of the highway, as shown, when called for in the plans.

6E. Provide the appropriate word or symbol legend necessary on lane reduction signs (W4-2, W20-5) to correctly identify which lane is to be closed.

EXTRA ADVANCE WARNING SIGNING

7. Extra Advance Warning Sign Groups consisting of ROAD WORK AHEAD (W20-1), LANE CLOSED AHEAD (W20-5) and WATCH FOR STOPPED TRAFFIC (W3-H7) signs plus distance plaques may be specified in the plans or may be required to be erected, as determined by the the Engineer (see Standard Construction Drawing MT-95.50).

PAVEMENT MARKING/RPMs

8A. If the construction operation requires a lane closure for more than one day, then the existing conflicting reflectors from the raised pavement markers (RPMs) shall be removed.

8B. Additionally, if a lane closure of greater than 3 days is required, then the following shall be performed:

a) The appropriate color work zone edge lines shall be applied along the taper.
b) The existing conflicting pavement markings shall be removed or covered as per CMS 614.11G.
c) Work Zone Dotted Lines, 3 feet (0.9 meters) in length separated by 9 foot (2.7 meter) gaps, shall be provided to identify the merge.

8C. Work zone edge lines shall be provided along the tangent section when called for in the plans.

8D. Work zone pavement markings which would conflict with the final traffic lanes shall be removable (CMS 740.06 Type I) tape unless the area will be resurfaced prior to project completion.

8E. After completion of the work, pavement markings other than CMS 740.06, Type I shall be removed in accordance with CMS 614.11I. The original markings and raised pavement marker reflectors shall be restored at no additional cost unless separately itemized in the plans.

EQUIPMENT/MATERIALS STORAGE

9A. No equipment or material shall be located within the taper or buffer zone.

9B. When no work is being performed, all material and equipment shall be stored as per CMS 614.03.

FLASHING ARROW PANEL

10. The flashing arrow panel shall be chosen from the ODOT approved list available on the ODOT web site at http://www.dot.state.oh.us/ .
Click on the Alphabetical List of choices and select TestLab/Materials Management. Then click on Approved List. Then click on Flashing Arrow Panel located near the bottom of the screen.

FLASHING WARNING LIGHTS

11. Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) signs and on the LANE CLOSED AHEAD (W20-5) signs are required whenever a night lane closure is necessary.

INTERSECTION/DRIVEWAY ACCESS

12. Within the length of closure, provision shall be made to control traffic entering from intersecting streets and major drives as necessary to prevent wrong-way movements and to keep vehicles off of new pavement not ready for traffic. The contractor shall:

a) Place across the closed lane, either 3 drums (cones) or barricades,
and/or
b) Provide an additional flagger at every public street intersection and major driveway.

Drums (cones) placed across the closed lane shall be located 25 feet (7.5 meters) beyond the projected pavement edges of the driveway or cross highway, as shown in Standard Construction Drawing MT-97.11. For barricades, see Standard Construction Drawing MT-101.60.

Existing stop signs shall be relocated as necessary to assure proper location for the traffic conditions.

The method of control shall be subject to the approval of the Engineer.

DRUMS

13. The maximum drum spacing along tapers and along tangent sections shall be as shown in Table II. A minimum of 5 drums shall be used to close the upstream shoulder.

PORTABLE CONCRETE BARRIERS

14A. A tapered end section may be used in place of the impact attenuator at locations where the last full section of PCB can be extended outside of the clear zone for approaching traffic. See TABLE II for clear zone widths.

14B. If it is necessary to provide the contractor with access to the work area behind the PCB flare, the PCB end treatment shall include an impact attenuator. The maximum width of opening shall be 9 feet between the impact attenuator and the outside edge of the paved shoulder.

14C. If contractor access is provided as per note 14B, the length of PCB shall be adequate to shield the work area from the motorist. This length of need of PCB shall be determined from the calculations provided in the L&D Manual, Volume 1, Figure 602-1E, and shall require the approval of the Engineer.

14D. When used, impact attenuators shall be installed parallel to traffic. Also, the last full section of PCB, adjacent to the impact attenuator, shall be located parallel to traffic.

14E. Where narrow medians are provided, see Table II to determine whether or not the downstream end of the PCB is located within the clear zone of opposing traffic. If the PCB is located within the clear zone of opposing traffic, the downstream end shall be flared away from opposing traffic to shield the work area from potential errant vehicles crossing the median.

14F. If the PCB is located beyond the clear zone of opposing traffic, the downstream end of the PCB may be provided with a tapered end, located 10 feet beyond the work area.

14G. Where PCB is located beyond the edge of the paved shoulder, the cross slope within the clear zone, including the surface on which the PCB is placed, shall be graded at 10:1 or flatter. If the cross slope is steeper than 10:1, the PCB shall be terminated on the paved shoulder. The PCB shall be extended along the paved shoulder as necessary to satisfy the length of need, and then terminated using an impact attenuator.

14H. The work area shall be adequately protected from traffic approching from intersections and driveway approaches using PCB and impact attenuators as called for by the Engineer.

14I. For installation procedures, refer to manufacturer's installation instructions.

14J. For details on delineation of Portable Concrete Barrier, see Standard Construction Drawing MT-101.70.

4-17-09 Corrected

CLOSING RIGHT LANE OF A MULTI-LANE UNDIVIDED HIGHWAY WITH PORTABLE CONCRETE BARRIER

OFFICE OF TRAFFIC ENGINEERING

MT-95.41

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