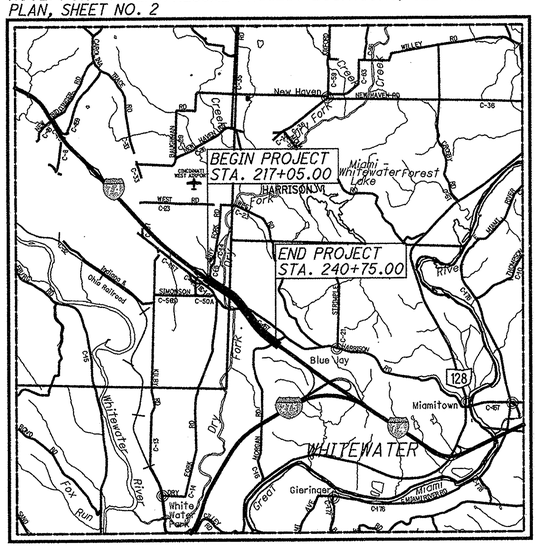
NOTE: FOR SUSPEND/RESUME PROJECT LOCATIONS, SEE SCHEMATIC PLAN, SHEET NO. 2



LOCATION MAP

LATITUDE: 39°14'05" N LONGITUDE: 84°45'40" W

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

STATE & FEDERAL ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

SEE SHEET 2 FOR DESIGN DESIGNATIONS

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBER
STRUCTURAL CAPACITY - HAM-74-0495	04/21/2010	95

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD. * DUBLIN, OH 43017
614.634.7000 T * WDTRANSPORTATION.COM

ENGINEERS SEAL: (ROADWAY)

STATE OF OHIO
KYLE A MESSAROS
71906
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 9/1/11

ENGINEERS SEAL: (STRUCTURE)

STATE OF OHIO
SHANE THOMAS KALINOSKI
73569
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 9/1/11

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAM-74-3.54/VAR

HARRISON TOWNSHIP
WHITEWATER TOWNSHIP
HAMILTON COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THE REHABILITATION OF 4 STRUCTURES ALONG I.R. 74 AND 2 OVERHEAD STRUCTURES BY HYDRODEMOLITION OF THE EXISTING CONCRETE DECKS AND PLACEMENT OF A SUPERPLASTICIZED DENSE CONCRETE OVERLAY ON EACH. PROJECT ALSO INCLUDES MINIMAL APPROACH WORK ON EACH STRUCTURE.

EARTH DISTURBED AREAS

I.R. 74 OVER DRY FORK CREEK
PROJECT EARTH DISTURBED AREA: 0.15 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA: 0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A

MORGAN ROAD
PROJECT EARTH DISTURBED AREA: 0.86 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA: 0.29 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.90 ACRES

LIMITED ACCESS

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

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS 9-26 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Steve Mary
DATE 12/20/11 DISTRICT DEPUTY DIRECTOR

APPROVED Jerry Wrapp
DATE 1-4-12 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	10/19/07	GR-1.1	7/16/04	MT-35.10	4/20/01	TC-41.20	1/19/01
BP-4.1	7/16/04	GR-2.1	1/16/04	MT-95.30	7/17/09	TC-42.20	1/21/11
BP-5.1	7/28/00	GR-3.1	10/16/09	MT-95.50	4/17/09	TC-52.10	1/19/07
BP-9.1	4/15/05	GR-4.1	1/21/11	MT-98.10	7/17/09	TC-61.30	7/15/11
		GR-4.2	1/19/07	MT-98.11	7/17/09	TC-65.10	1/21/05
DM-1.4	7/15/11			MT-99.30	4/15/11	TC-65.11	1/21/05
DM-4.1	10/21/11	AS-1-81	7/19/02	MT-101.60	4/17/09	TC-73.10	10/21/11
DM-4.3	4/17/09	BR-1	7/19/02	MT-101.70	4/15/11	TC-82.10	1/21/11
DM-4.4	4/17/09	SICD-1-96	7/19/02	MT-101.90	10/21/11		
		VPF-1-90	4/15/11	MT-102.20	4/17/09		
F-2.1	7/28/00			MT-105.10	1/16/09		
F-3.1	4/16/10						
F-3.3	7/28/00						
F-3.4	7/28/00						

SUPPLEMENTAL SPECIFICATIONS

800-2010	1/20/12
802	4/15/11
832	5/5/09
848	10/21/11
917	10/15/10
927	4/15/05

SPECIAL PROVISIONS

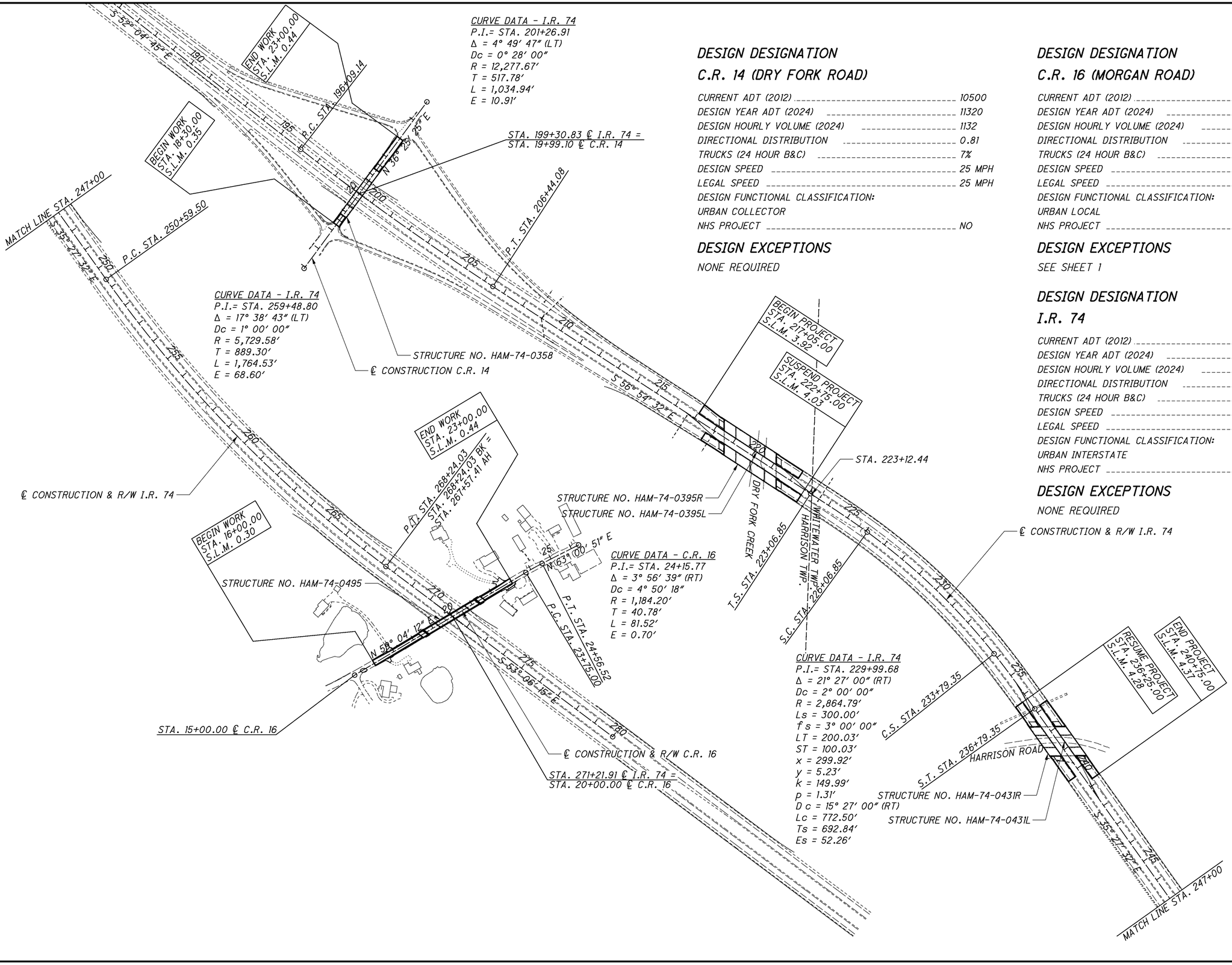
WATERWAY PERMIT CONDITIONS 10/12/11

FEDERAL PROJECT NO. E110 (623)
PID NO. 82961
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
HAM-74-3.54/VAR
1 / 115

HAM - IR-74-3.54/VAR
120171 PID - 82961
Dist 8 3/22/2012

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

P:\CO\ODT\08\0682_HAM-74-3.54\82961\roadway\sheets\82961GT001.dgn



DESIGN DESIGNATION
C.R. 14 (DRY FORK ROAD)

CURRENT ADT (2012)	10500
DESIGN YEAR ADT (2024)	11320
DESIGN HOURLY VOLUME (2024)	1132
DIRECTIONAL DISTRIBUTION	0.81
TRUCKS (24 HOUR B&C)	7%
DESIGN SPEED	25 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN COLLECTOR	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

DESIGN DESIGNATION
C.R. 16 (MORGAN ROAD)

CURRENT ADT (2012)	1230
DESIGN YEAR ADT (2024)	1340
DESIGN HOURLY VOLUME (2024)	161
DIRECTIONAL DISTRIBUTION	0.58
TRUCKS (24 HOUR B&C)	15%
DESIGN SPEED	40 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN LOCAL	
NHS PROJECT	NO

DESIGN EXCEPTIONS

SEE SHEET 1

DESIGN DESIGNATION
I.R. 74

CURRENT ADT (2012)	59240
DESIGN YEAR ADT (2024)	70880
DESIGN HOURLY VOLUME (2024)	7797
DIRECTIONAL DISTRIBUTION	0.58
TRUCKS (24 HOUR B&C)	23%
DESIGN SPEED	65 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE REQUIRED

HORIZONTAL SCALE IN FEET
0 100 200 400

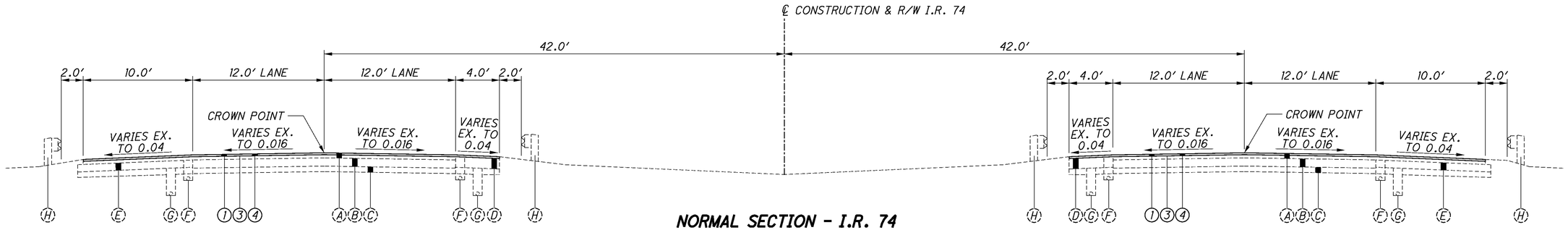
CALCULATED KAM
CHECKED KPC

SCHEMATIC PLAN

HAM-74-3.54/ VAR

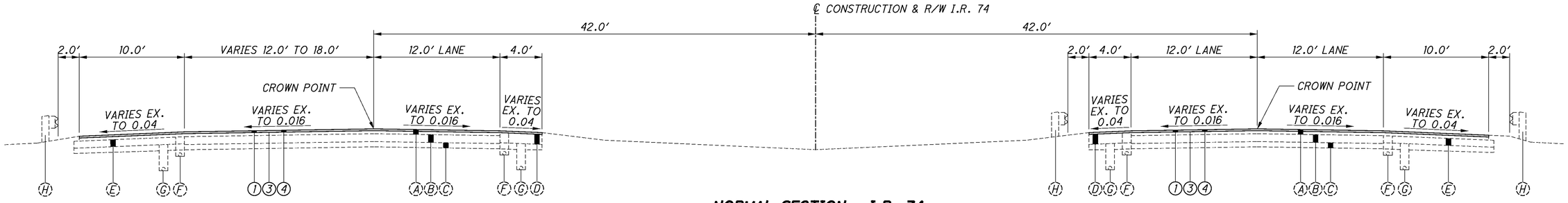
2
115

P:\CO\ODT\08\0682_HAM-74-3.54\82961\roadway\sheets\82961GB001.dgn 8/31/2011 1:25:18 PM Wda377



NORMAL SECTION - I.R. 74

SECTION APPLIES:
STA. 217+75.00 TO STA. 218+27.70 EASTBOUND
STA. 221+53.05 TO STA. 222+25.00 EASTBOUND
STA. 221+53.05 TO STA. 222+25.00 WESTBOUND
STA. 239+59.53 TO STA. 240+25.00 EASTBOUND



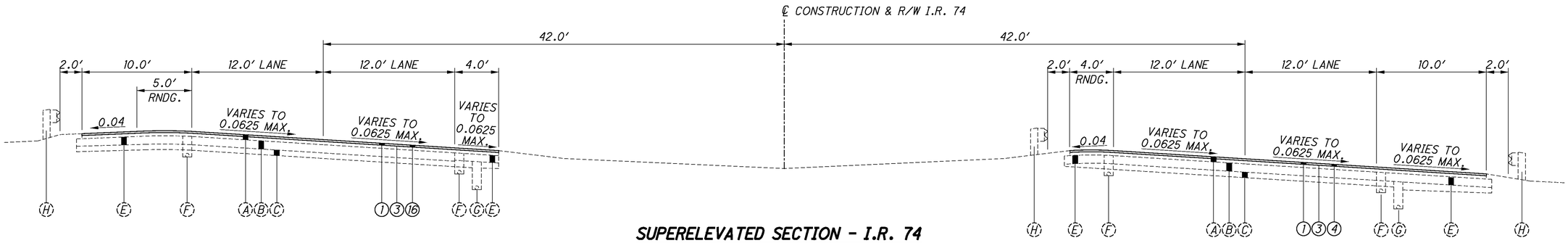
NORMAL SECTION - I.R. 74

SECTION APPLIES:
STA. 217+05.00 TO STA. 218+27.70 WESTBOUND

LEGEND

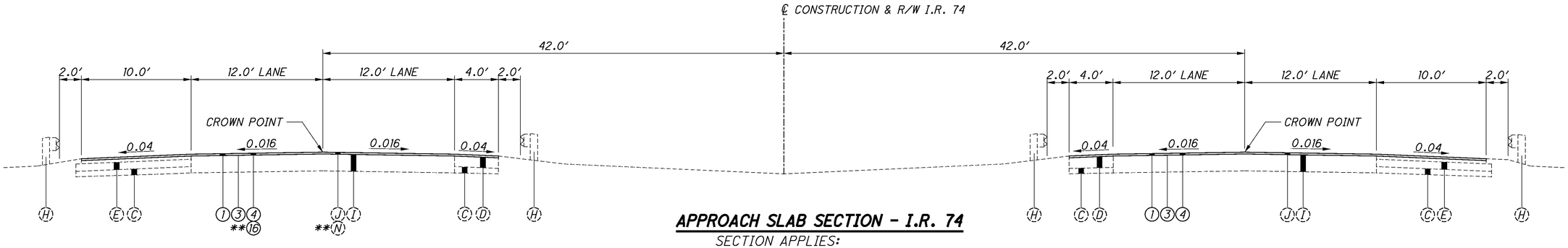
1. ITEM 442 2″ ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (448)
2. ITEM 407 TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL/SQ YD)
3. ITEM 407 TACK COAT (0.075 GAL/SQ YD)
4. ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH = 2″)
5. ITEM 448 1¼″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
6. ITEM 448 1¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
7. ITEM 448 2″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
8. ITEM 301 6″ ASPHALT CONCRETE BASE, PG64-22
9. ITEM 304 6″ AGGREGATE BASE
10. ITEM 304 8″ AGGREGATE BASE
11. ITEM 204 SUBGRADE COMPACTION
12. ITEM 659 SEEDING AND MULCHING
13. ITEM 605 AGGREGATE DRAINS
14. ITEM 606 GUARDRAIL, TYPE 5
15. ITEM 526 REINFORCED CONCRETE APPROACH SLABS (T = 15″)
16. ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES 2″ MIN. TO 4″ MAX.)

- (A) EXISTING 5½″± ASPHALT PAVEMENT
- (B) EXISTING 9″± CONCRETE PAVEMENT
- (C) EXISTING 6″± SUBBASE
- (D) EXISTING 9″± ASPHALT PAVEMENT
- (E) EXISTING 5″± CRUSHED AGGREGATE
- (F) EXISTING SHALLOW 4″ UNDERDRAIN
- (G) EXISTING 6″ UNDERDRAIN
- (H) EXISTING GUARDRAIL
- (I) EXISTING CONCRETE APPROACH SLAB
- (J) EXISTING 2″± ASPHALT CONCRETE OVERLAY
- (K) EXISTING 3″± AGGREGATE BASE
- (L) EXISTING 3″± ASPHALT PAVEMENT
- (M) EXISTING 10″± AGGREGATE BASE
- (N) EXISTING 4″± ASPHALT CONCRETE OVERLAY



SUPERELEVATED SECTION - I.R. 74

SECTION APPLIES:
STA. 222+25.00 TO STA. 222+75.00 EASTBOUND
STA. 236+25.00 TO STA. 237+49.05 EASTBOUND
STA. 236+80.00 TO STA. 237+49.05 WESTBOUND



APPROACH SLAB SECTION - I.R. 74

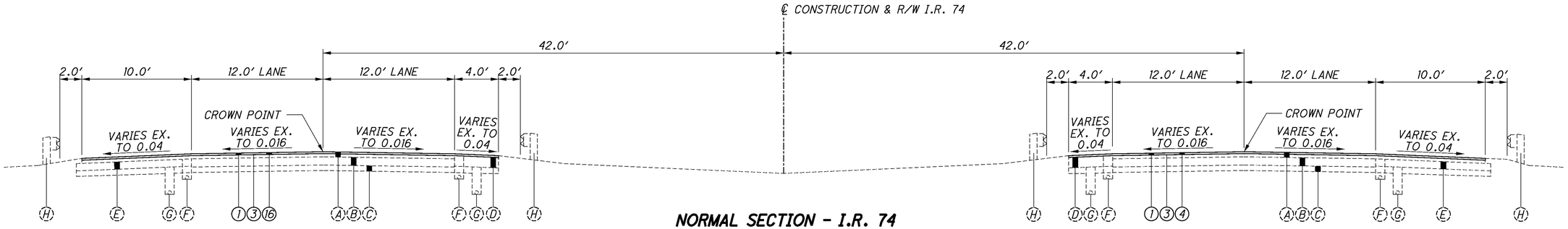
SECTION APPLIES:
STA. 218+27.70 TO STA. 218+52.70 EASTBOUND & WESTBOUND
STA. 221+28.05 TO STA. 221+53.05 EASTBOUND & WESTBOUND
STA. 237+49.05 TO STA. 237+74.05 EASTBOUND & WESTBOUND**
STA. 239+34.53 TO STA. 239+59.53 EASTBOUND & WESTBOUND**

NOTES

SEE SHEET 3 FOR LEGEND
* OR AS SHOWN ON CROSS-SECTIONS
# 0.04 MIN, 0.08 DESIRABLE

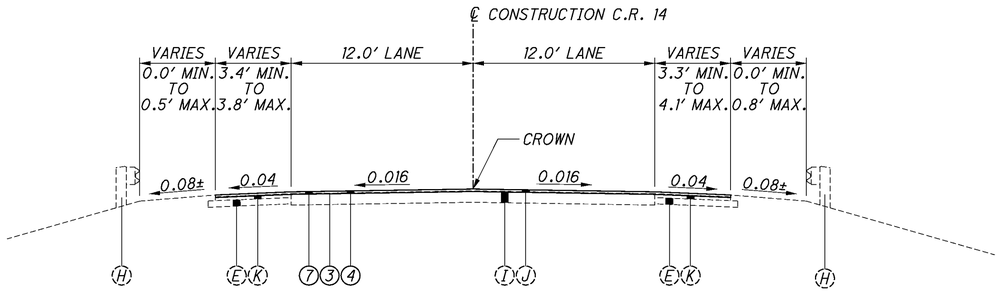
TYPICAL SECTIONS

HAM-74-3.54/VAR



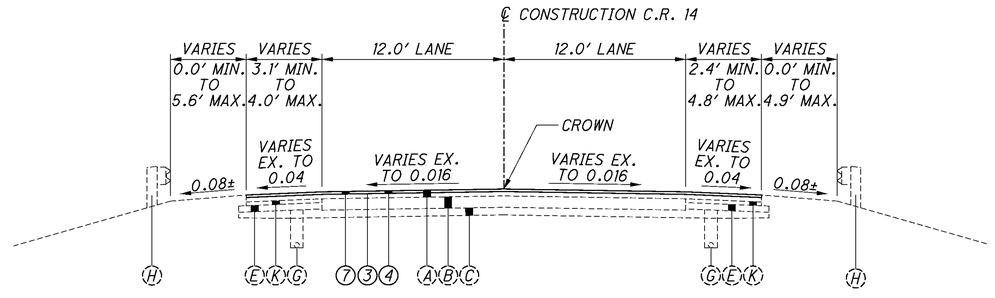
NORMAL SECTION - I.R. 74

SECTION APPLIES:
STA. 239+59.53 TO STA. 240+75.00 WESTBOUND



APPROACH SLAB SECTION - C.R. 14 (DRY FORK ROAD)

SECTION APPLIES:
STA. 18+53.75 TO STA. 18+78.75
STA. 21+28.25 TO STA. 21+53.25



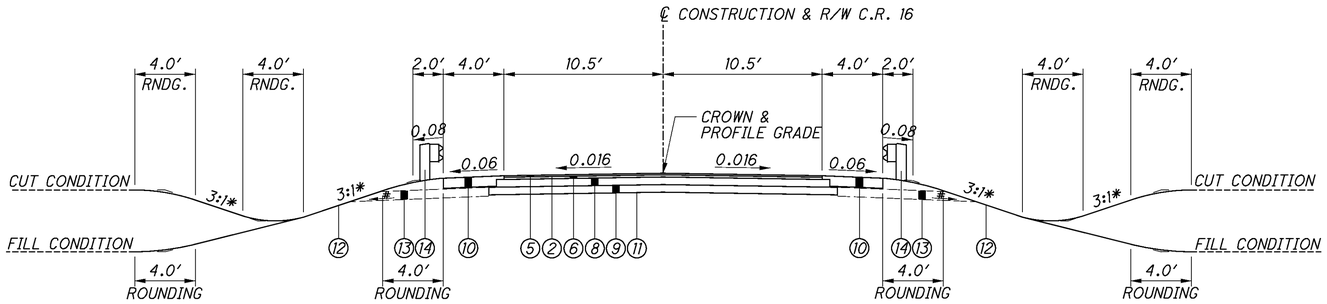
NORMAL SECTION - C.R. 14 (DRY FORK ROAD)

SECTION APPLIES:
STA. 18+30.00 TO STA. 18+53.75
STA. 21+53.25 TO STA. 23+00.00

NOTE
SEE SHEET 3 FOR LEGEND

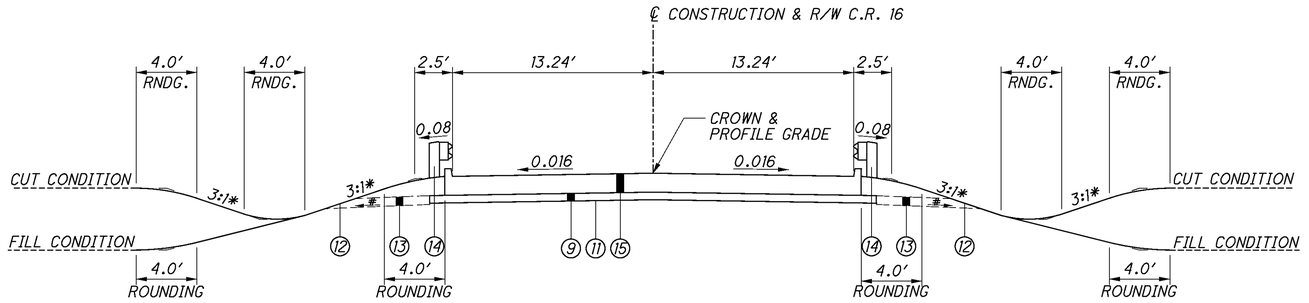
TYPICAL SECTIONS

HAM-74-3.54/VAR



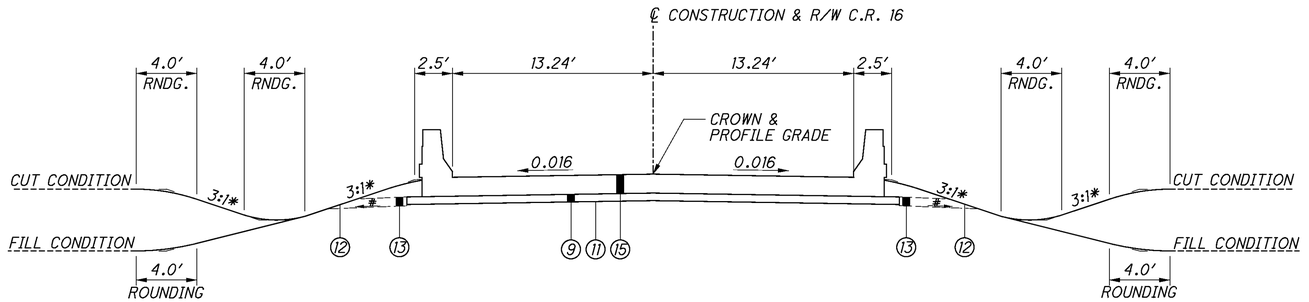
NORMAL SECTION - C.R. 16 (MORGAN ROAD)

SECTION APPLIES:
STA. 16+00.00 TO STA. 18+37.28
STA. 21+54.14 TO STA. 23+00.00



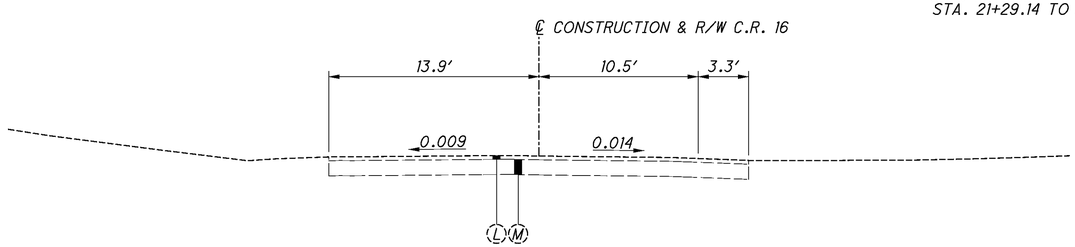
APPROACH SLAB SECTION - C.R. 16 (MORGAN ROAD)

SECTION APPLIES:
STA. 18+37.28 TO STA. 18+48.20
STA. 21+43.23 TO STA. 21+54.14



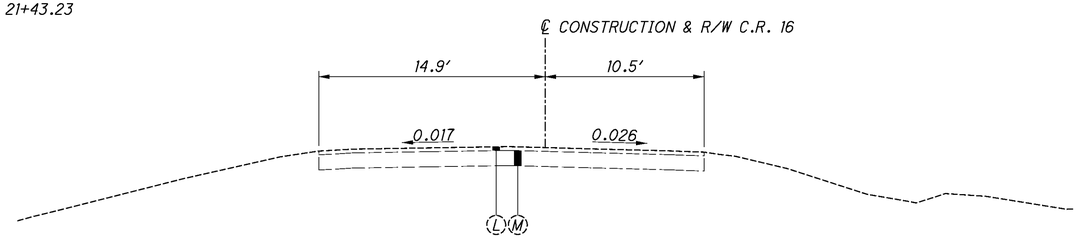
APPROACH SLAB SECTION - C.R. 16 (MORGAN ROAD)

SECTION APPLIES:
STA. 18+48.20 TO STA. 18+62.28
STA. 21+29.14 TO STA. 21+43.23



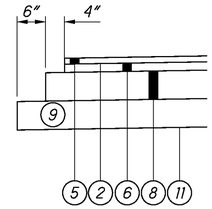
SECTION OF EXISTING ADJOINING PAVEMENT - C.R. 16 (MORGAN ROAD)

STA. 23+00.00



SECTION OF EXISTING ADJOINING PAVEMENT - C.R. 16 (MORGAN ROAD)

STA. 16+00.00



BASE AND SUBBASE STEP DETAIL

NOTES

1. SEE SHEET 3 FOR LEGEND
2. SEE BRIDGE PLANS FOR APPROACH SLAB DETAILS

TYPICAL SECTIONS

HAM-74-3.54/VAR

UTILITIES

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

ELECTRIC:
DUKE ENERGY
139 E. 4TH ST., ROOM 467A
CINCINNATI, OH 45202
ATTN: AARON WRIGHT
PHONE: 513-287-3674

CABLE:
TIME WARNER CABLE
11252 CORNELL PARK DRIVE
CINCINNATI, OH 45242
ATTN: GARY NAPIER
PHONE: 513-469-5483

TELEPHONE:
CINCINNATI BELL TELEPHONE
221 EAST 4TH ST., BLDG. 121-900
CINCINNATI, OH 45201
ATTN: MARK CONNER
PHONE: 513-565-7043

LEVEL 3 COMMUNICATIONS, LLC
400 PIKE STREET (SUITE 300)
CINCINNATI, OH 45202
ATTN: TIM TAYLOR
PHONE: 513-632-1806

WATER:
CLEVES WATER WORKS
3 SOUTH MIAMI AVE.
P.O. BOX 40
CLEVES, OH 45002
ATTN: ERIC WINHUSEN
PHONE: 513-623-1619

CINCINNATI WATER WORKS
4747 SPRING GROVE AVE.
CINCINNATI, OH 45232
ATTN: JON HUNSEDER
PHONE: 513-591-6856

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.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

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 GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SURVEYING PARAMETERS

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSTITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING
ORTHOMETIC HEIGHT DATUM: NAVD 88
GEOID: GEOID03

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD 83 (NSRS 2007)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR: 0.99990490

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST 2 EACH
659, TOPSOIL 300 CU. YD.
(2702) X (111 CY / 1000 SY) = 299.92 CU. YD.
659, REPAIR SEEDING AND MULCHING 135 SQ. YD.
(2702) X (0.05) = 135.10 SQ. YD.
659, INTER-SEEDING 135 SQ. YD.
(2702) X (0.05) = 135.10 SQ. YD.
659, COMMERCIAL FERTILIZER 0.38 TON
[(2702) X 1 TON / 7410 SY)] + [(135) X (1 TON / 11115 SY)] = 0.38 TON
659, LIME 0.56 ACRES
(2702) X 1 ACRE / 4840 SY) = 0.56 ACRES
659, WATER 15 M GAL.
[(2702) X (0.0054 M GAL / SY)] + [(135) X (0.0027 GAL / SY)] = 14.95 M GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CONSTRUCTION NOTIFICATION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE CLOSURES, AND/OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (513)932-7651 OR EMAIL AT D08.PIO.FORM@DOT.STATE.OH.US. THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

CONSTRUCTION NOISE (C.R. 16 ONLY)

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7 PM AND 7 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

WORK LIMITS

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

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 607 - FENCE REMOVED AND REBUILT

CAREFULLY RECONDITION AND RE-ERECT FENCE AND COMPONENT PARTS AS DETAILED ON THE PLANS. DO NOT DAMAGE THE FENCE OR COMPONENT PARTS. ANY NEW PARTS WHICH ARE NEEDED, AS DETERMINED BY THE ENGINEER, WILL BE SUPPLIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

THE AMOUNT OF REBUILT FENCE TO BE PAID FOR WILL BE THE NUMBER OF FEET REBUILT, COMPLETE IN PLACE AND MEASURED AS PROVIDED FOR IN 607.09.

PAYMENT FOR THE ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 607, FENCE REMOVED AND REBUILT.

CENTERLINE CONSTRUCTION REFERENCES AND BENCHMARKS C.R. 14 - GROUND COORDINATES

STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
15+92.29	0.00	℄	459769.82	1325019.66		P.O.T.
18+28.10	24.76	LT.	459974.26	1325139.75	581.24	BM #1
18+30.00	0.00	℄	459961.09	1325160.80		P.O.T.
21+72.84	19.23	RT.	460225.54	1325379.83	586.13	BM #2
23+00.00	0.00	℄	460339.28	1325439.86		P.O.T.
24+99.10	0.00	℄	460499.48	1325558.07		P.O.T.
PROJECT SCALE FACTOR: 0.99990490						

CENTERLINE CONSTRUCTION REFERENCES AND BENCHMARKS C.R. 16 - GROUND COORDINATES

STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
14+94.33	0.00	℄	454979.00	1330108.08		P.O.T.
16+00.00	0.00	℄	455033.31	1330198.72		P.O.T.
18+29.45	15.96	RT.	455137.55	1330403.75	674.76	BM #7
18+35.02	14.58	LT.	455166.61	1330392.83	674.82	BM #8
21+32.58	23.49	LT.	455327.20	1330643.50	670.69	BM #9
21+55.58	14.82	RT.	455306.16	1330682.92	671.33	BM #10
23+00.00	0.00	℄	455393.10	1330799.18		P.O.T.
23+75.00	0.00	℄	455431.65	1330863.52		P.C.
24+15.78	0.70	LT.	455452.61	1330898.50		P.I.
24+56.52	0.00	℄	455471.12	1330934.83		P.T.
26+35.58	0.00	℄	455552.37	1331094.39		P.O.T.
PROJECT SCALE FACTOR: 0.99990490						

CENTERLINE CONSTRUCTION & R/W REFERENCES AND BENCHMARKS I.R. 74 - GROUND COORDINATES

STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
174+38.65	0.00	℄	461625.43	1323292.65		P.O.T.
196+09.14	0.00	℄	460291.51	1325004.86		P.C.
200+99.59	0.40	LT.	459998.22	1325397.91		CONC. MON. FND.
201+26.91	10.91	RT.	459973.30	1325413.32		P.I.
206+44.08	0.00	℄	459690.61	1325847.11		P.T.
210+01.20	0.06	RT.	459495.58	1326146.28		CONC. MON. FND.
215+01.43	0.00	℄	459222.52	1326565.41		CONC. MON. FND.
217+00.00	0.00	℄	459114.11	1326731.77		P.O.T.
217+89.50	68.32	LT.	459122.48	1326844.06	540.41	BM #3
221+93.02	68.45	RT.	458787.59	1327107.46	535.26	BM #4
222+75.00	0.00	℄	458800.18	1327213.51		P.O.T.
223+06.85	0.00	℄	458782.79	1327240.19		T.S.
226+06.85	0.00	℄	458614.66	1327488.61		S.C.
229+95.45	26.24	LT.	458385.74	1327802.63		P.I.
233+79.35	0.00	℄	458081.44	1328044.33		C.S.
236+25.00	0.00	℄	457884.43	1328191.03		P.O.T.
236+79.35	0.00	℄	457840.19	1328222.58		S.T.
237+69.53	9.54	LT.	457772.27	1328282.67	570.12	BM #5
238+28.47	2.03	RT.	457717.55	1328307.44	551.98	BM #6
240+00.31	0.49	LT.	457579.03	1328409.17		CONC. MON. FND.
240+75.00	0.00	℄	457517.91	1328452.11		P.O.T.
245+00.13	0.19	LT.	457171.75	1328698.89		CONC. MON. FND.
250+59.50	0.00	℄	456716.01	1329023.24		P.C. CONC. MON. FND.
259+48.80	68.61	RT.	455991.64	1329539.14		P.I.
268+23.86	0.05	RT.	455457.80	1330250.18		CONC. MON. FND.
268+24.03	0.00	℄	455457.74	1330250.34		P.T.
275+00.05	0.57	RT.	455011.43	1330843.90		CONC. MON. FND.
280+00.00	0.00	℄	454711.74	1331244.08		P.O.T.
PROJECT SCALE FACTOR: 0.99990490						

MULTIPLY GROUND COORDINATES BY PROJECT SCALE FACTOR TO OBTAIN GRID COORDINATES.

CALCULATED KAM CHECKED KPC

GENERAL NOTES

HAM-74-3.54/ VAR

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4-1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE CONSTRUCTION LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 603 - 6" CONDUIT, TYPE B	50 FT.
ITEM 603 - 6" CONDUIT, TYPE E	50 FT.
ITEM 603 - 6" CONDUIT, TYPE F	50 FT.
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	5 CU. YD.

DEMOLITION AND RENOVATION

THE CONTRACTOR SHALL COMPLETE AN OHIO EPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS TO HT OHIO EPA AT LEAST TEN (10) WORKING DAYS BEFORE OPERATIONS BEGIN.

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

STA. 16+00, LT.	8 FT.
STA. 16+25, RT.	9 FT.
STA. 16+50, LT.	10 FT.
STA. 16+75, RT.	19 FT.
STA. 17+00, LT.	17 FT.
STA. 17+25, RT.	9 FT.
STA. 17+50, LT.	10 FT.
STA. 17+75, RT.	8 FT.
STA. 18+00, LT.	10 FT.
STA. 18+25, RT.	8 FT.
STA. 18+37.28, LT.	11 FT.
STA. 21+54.14, RT.	11 FT.
STA. 21+75, LT.	9 FT.
STA. 22+00, RT.	10 FT.
STA. 22+25, LT.	9 FT.
STA. 22+50, RT.	12 FT.
	TOTAL = 170 FT.

PROJECTS LOCATED OVER A SOLE SOURCE AQUIFER

THE PROJECT IS LOCATED ENTIRELY OVER THE GREATER MIAMI SOLE SOURCE AQUIFER, A DESIGNATED SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER. SPILLS OF FUELS, OILS, CHEMICALS, OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE OHIO EPA DIVISION OF DRINKING AND GROUND WATERS SOUTHWEST DISTRICT OFFICE AT (937)285-6357, OR THE OHIO EPA'S 24-HOUR EMERGENCY CONTACT NUMBER AT (800)282-9378 FOR CLEANUP OF THE SPILL.

ITEM 630 - SPECIFIC SERVICE AND TOURIST-ORIENTED DIRECTIONAL SIGNS REMOVAL AND REINSTALLATION

IN THE EVENT THAT THIS PROJECT NECESSITATES THE REMOVAL OF ANY SPECIFIC SERVICE (LOGO) SIGNS AND/OR TOURIST-ORIENTED DIRECTIONAL SIGNS (TODS) THAT ARE NOT SPECIFICALLY DESCRIBED IN OTHER ITEMS OF WORK, THE CONTRACTOR SHALL CAREFULLY REMOVE SUCH SIGNS. REMOVED LOGO SIGNS AND TODS SHALL BE IMMEDIATELY RE-ERECTED ON APPROVED TEMPORARY SUPPORTS IN THE SAME GENERAL VICINITY ALONG THE ROADWAY TO BE VIEWED BY THE MOTORING PUBLIC. UNLESS THE ORIGINAL SUPPORTS WILL BE REUSED, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SUPPORTS AND FOUNDATIONS IN ACCORDANCE WITH ITEM 630.12. THE CONTRACTOR SHALL NOTIFY OHIO LOGOS, INC. AT (800) 860-5646 AT LEAST 60 DAYS PRIOR TO PROJECT COMPLETION TO ALERT THEM THAT ONE OR MORE LOGO SIGNS AND/OR TODS ARE ON TEMPORARY SUPPORTS. OHIO LOGOS, INC. WILL MAKE ARRANGEMENTS TO HAVE THE SIGNS INSTALLED ON PERMANENT SUPPORTS AT THE COMPLETION OF THE PROJECT.

THIS ITEM OF WORK INCLUDES REMOVAL AND TEMPORARY RE-ERECTION OF LOGO SIGNS AND TODS, FURNISHING AND INSTALLATION OF TEMPORARY SUPPORTS, REMOVAL AND DISPOSAL OF THE ORIGINAL SUPPORTS AND FOUNDATIONS, AND PROVIDING NOTIFICATION TO OHIO LOGOS, INC. THIS WORK WILL BE INCLUDED IN THE LUMP SUM PAYMENT FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED KAM
CHECKED KPC

GENERAL NOTES

HAM-74-3.54/VAR

ITEM 614, MAINTAINING TRAFFIC

ON I.R. 74, A MINIMUM OF TWO LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED MONDAY THROUGH FRIDAY DURING THE TIMES SPECIFIED BY THE PERMITTED LANE CLOSURE SCHEDULE WITH A MINIMUM OF ONE LANE IN EACH DIRECTION AT ALL OTHER TIMES AND THE WEEKEND FOR THE DECK OVERLAYS WITH A WEEKEND BEING DEFINED AS 7 PM FRIDAY THROUGH 6 AM MONDAY.

ALL CONSTRUCTION ON THE DESIGNATED SIDE OF THE ROADWAY SHALL BE COMPLETED DURING EACH PHASE OF CONSTRUCTION. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE OHIO M.U.T.C.D. CURRENT EDITION.

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

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

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE B..= 100 CU. YD.
ITEM 616, WATER.....= 10 M. GAL.
ITEM 617, COMPACTED AGGREGATE.....= 100 CU. YD.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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

LANE CLOSURES

THE CONTRACTOR WILL HAVE ALL LANES OPEN TO TRAFFIC ACCORDING TO THE FOLLOWING TABLE.

LANE VALUE CONTRACT TABLE

DESCIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DESINCENTIVE $ PER TIME UNIT
ALL LANES/RAMPS OPEN TO TRAFFIC ON I.R. 74 MONDAY THROUGH FRIDAY	SEE PERMITTED LANE CLOSURE SCHEDULE	15 MIN.	$2000
MINIMUM ONE LANE IN EACH DIRECTION AND RAMPS OPEN TO TRAFFIC	7 PM FRIDAY THROUGH 6 AM MONDAY	15 MIN.	$2000

SEQUENCE OF CONSTRUCTION FOR I.R. 74

PHASE 1

1. BUILD 2 FEET OF PAVEMENT BETWEEN THE EXISTING GUARDRAIL AND OUTSIDE PAVED SHOULDER AS SHOWN IN PLANS WITHOUT BRIDGE WORK.
2. CONTRACTOR SHALL FILL THE RUMBLE STRIPS ON THE OUTSIDE SHOULDER ALONG I.R. 74 EB AND WB, FOR A SMOOTH SURFACE, BEFORE MOVING TRAFFIC BY USING ASHPALTIC MATERIAL.
3. PROVIDE AND INSTALL CONSTRUCTION SIGNS ALONG I.R. 74 FOR THE SAFE TRAFFIC MOVEMENT.
4. MOVE TRAFFIC TO OUTSIDE LANE & SHOULDER BY USING DRUMS TO CONTROL TRAFFIC.
5. MAINTAIN TRAFFIC ON TWO LANE IN EACH DIRECTION.
6. REMOVE 4 FEET OF INSIDE SHOULDERS, AND REPLACE BY 5 FEET AS SHOWN IN PLANS WITHOUT BRIDGE WORK.

PHASE 1A

1. PROVIDE AND INSTALL CONSTRUCTION SIGNS ALONG I.R. 74 FOR THE SAFE TRAFFIC MOVEMENT.
2. MOVE TRAFFIC TO OUTSIDE SHOULDER AND PART OF INSIDE LANE.
3. CONSTRUCT 5.5' INSIDE SHOULDER ON DECK AND INSIDE LANE ON DECK APPROACH SLAB AND PAVEMENT FOR BOTH STRUCTURES CONCURRENTLY. THIS WORK SHALL BE PERFORMED DURING THE WEEKEND.

PHASE 2

1. PROVIDE AND INSTALL CONSTRUCTION SIGNS ALONG I.R. 74 FOR THE SAFE TRAFFIC MOVEMENT.
2. MOVE TRAFFIC ONTO THE INSIDE LANE WITH NEWLY BUILT SHOULDER.
3. CONSTRUCT OUTSIDE LANE ON DECK, APPROACH SLAB AND PAVEMENT AT BOTH ENDS OF BOTH STRUCTURES CONCURRENTLY FOR THE WEEKEND WORK ONLY.
4. PROVIDE NECESSARY FINAL PAVEMENT MARKINGS, RUMBLE STRIPS ALL I.R. 74, REMOVE CONSTRUCTION SIGNS, DRUMS, ETC. FROM THE WORK AREA BEFORE SHIFTING THE TRAFFIC ON THE NORMAL TRAFFIC PATTERN.

C.R. 16 (MORGAN ROAD)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 60 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 25. DISINCENTIVES SHALL BE ASSESSED IN THE AMOUNT OF $2000.00 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ACCESS TO THE RESIDENTIAL DRIVES SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, OR TEMPORARY SURFACES USING ITEMS 410 AND 615.

C.R. 14 (DRY FORK ROAD)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 3 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 24. DISINCENTIVES SHALL BE ASSESSED IN THE AMOUNT OF $2000.00 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

WHEN C.R. 14 IS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL USE DRUMS TO CLOSE THE LEFT TURN LANE ON THE WESTBOUND EXIT RAMP. A "RIGHT TURN ONLY" (R10-H5A-24) SIGN SHALL BE INSTALLED ON THE EASTBOUND AND WESTBOUND EXIT RAMPS. THE DRUMS AND SIGNS SHALL BE REMOVED WHEN C.R. 14 IS REOPENED TO TRAFFIC. THE CONTRACTOR SHALL CONTACT ODOT TRAFFIC MAINTENANCE A MINIMUM OF THREE DAYS PRIOR TO ANY WORK TO ADJUST THE SIGNAL TIMING WHEN THE LOOP DETECTORS ARE NOT FUNCTIONAL TO PROVIDE EFFICIENT SIGNAL OPERATION.

MOT FOR OVERPASS STRUCTURE PAINTING OPERATIONS

FOR BRIDGES HAM-74-0358 AND HAM-74-0495, THE CONTRACTOR SHALL MAKE USE OF THE TRAFFIC CONTROL SET UP FOR THE MAINLINE BRIDGE WORK WHEN SETTING UP THE PAINTING ENCLOSURES. IF THE CONTRACTOR CHOOSES TO PERFORM THIS WORK AT ANOTHER TIME, THE CONTRACTOR SHALL SHIFT I.R. 74 TRAFFIC AS PER MT-102.10 IN ORDER TO ACCOMODATE THE PAINTING ENCLOSURES SUCH THAT AT LEAST TWO 11-FOOT LANES ARE PROVIDED IN EACH DIRECTION. THE CONTRACTOR MAY CLOSE ONE LANE OF TRAFFIC DURING TIMES THAT FOLLOW THE PERMITTED LANE CLOSURE MAP. THE COST OF THIS TRAFFIC CONTROL SHALL BE INLUDED IN THE LUMP SUM ITEM BID FOR ITEM 614 - MAINTAINING TRAFFIC. THE CONTRACTOR WILL BE REQUIRED TO PROTECT ANY EQUIPMENT AND/OR MATERIAL PARKED OR STORED WITHIN 30 FT. OF THE EDGE OF TRAVELED PAVEMENT BY LOCATING THE ITEM 6 FT. BEHIND EXISTING GUARDRAIL, 30 FT. FROM THE EDGE OF TRAVELED PAVEMENT OR BEHIND PORTABLE CONCRETE BARRIER WITH AN IMPROVED ATTENUATOR PLACED PER STANDARD CONSTRUCTION DRAWING MT-102.10 IF TRAFFIC IS SHIFTED OR THE OMUTCD FIGURE TA-5 IF A SHOULDER CLOSURE IS INSTALLED ON I.R. 74. THIS WORK SHALL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC LUMP SUM.

VERTICAL CLEARANCES

ANY WORK (FALSEWORK, TRAFFIC PROTECTION, CONTAINMENT, ETC.) OVER LIVE TRAFFIC BY THE CONTRACTOR THAT REDUCES THE EXISTING VERTICAL CLEARANCE IS PROHIBITED UNLESS 4 WEEKS ADVANCED NOTICE IS PROVIDED WITH NEW PROPOSED VERTICAL CLEARANCES. THE CONTRACTOR SHALL PROVIDE FIELD MEASUREMENTS BEFORE ALLOWING TRAFFIC UNDERNEATH. IF ANY WORK IS TO OCCUR BELOW 14'-6", THEN SIGNS ON THE STRUCTURE AND ADVANCE WARNING SIGNS SHALL BE INSTALLED A MINIMUM OF 2 WEEKS PRIOR TO PERFORMING SUCH WORK. SIGNING SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD) AND THE OHIO "TRAFFIC ENGINEERING MANUAL" (TEM). NO WORK OVER TRAFFIC SHALL OCCUR WITH A VERTICAL CLEARANCE LESS THAN 13'-10". LOWERING THE VERTICAL CLEARANCE DURING CONSTRUCTION IS CONSIDERED THE CONTRACTOR'S MEANS AND METHODS OF ACCOMPLISHING THE WORK, AND THEREFORE THE STATE IS NOT RESPONSIBLE FOR ANY DAMAGE FROM VEHICULAR IMPACTS THAT MAY RESULT AS PER 107.10. PAYMENT FOR ANY SIGNS, SIGN SUPPORTS, ETC. SHALL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

DROPOFFS IN WORKZONE

THE DROPOFF ADJACENT TO THE TRAVELED LANE SHALL BE NO GREATER THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. THIS REQUIREMENT MAY BE MET BY TEMPORARILY PLACING SUBBASE AND BASE MATERIAL TO WITHIN 5 INCHES OF THE EXISTING GRADE ADJACENT TO THE TRAVELED LANE AND SLOPING THE MATERIAL AT 3:1 OR FLATTER WITHIN THE EXCAVATED AREA. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS DURING WORKING HOURS. THESE REQUIREMENTS SHALL BE MET AT NO ADDITIONAL COST.

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
EASTER	MOTHER'S DAY

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	6:00 AM FRIDAY THROUGH 7:00 PM MONDAY
MONDAY	6:00 AM FRIDAY THROUGH 7:00 PM TUESDAY
TUESDAY	6:00 AM MONDAY THROUGH 7:00 PM WEDNESDAY
WEDNESDAY	6:00 AM TUESDAY THROUGH 7:00 PM THURSDAY
THURSDAY	6:00 AM WEDNESDAY THROUGH 7:00 PM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 7:00 PM MONDAY
FRIDAY	6:00 AM THURSDAY THROUGH 7:00 PM MONDAY
SATURDAY	6:00 AM FRIDAY THROUGH 7:00 PM MONDAY

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $75.00 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

PATCHING RUMBLE STRIPS

THE CONTRACTOR SHALL MILL THE EXISTING RUMBLE STRIPS A WIDTH OF 3 FEET AT 1½ INCH DEPTH AND PAVE WITH 1½ INCH ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1. PAYMENT FOR ALL MATERIALS, LABOR AND EQUIPMENT SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 614, MAINTAINING TRAFFIC, MISC.: RUMBLE STRIP MILLED/FILLED 7150 FT.

CALCULATED JSB CHECKED AM

MAINTENANCE OF TRAFFIC GENERAL NOTES

HAM-74-3.54/VAR

TRUCK MOUNTED ATTENUATOR

WHEN THE CONTRACTOR IS SETTING SHORT TERM WORK ZONE AND THE SHOULDERS ARE LESS THAT 3 M (10 FT) IN WIDTH AND ON A ROAD WITH SPEEDS 45 MPH OR HIGHER, A TRUCK MOUNTED ATTENUATOR (TMA) MUST TRAIL THE OPERATION OF SETTING THE ADVANCE WARNING SIGNS UP OR TAKING THEM DOWN. THIS SAME TRUCK MUST HAVE A TYPE B FLASHING ARROW PANEL MOUNTED ON IT FACING THE REAR OF THE TRUCK.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

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 FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

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

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

* FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

* WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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

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

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE..... 400 HOURS

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

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

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

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

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

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

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN..... 30 DAY

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE CONTRACTOR SHALL USE FLEXIBLE PAVEMENT ONLY AND THE PAVEMENT SHALL REMAIN IN PLACE AFTER CONSTRUCTION. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PAVEMENT SHALL BE PAID FOR UNDER ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER..... 10 M. GAL.

FLOODLIGHTING

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

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC (SECTION 642-2).

GUARDRAIL DELINEATION

OBJECT MARKERS SHALL BE INSTALLED ON ALL GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKER SPACING SHALL BE APPROXIMATELY 50 FEET.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING OBJECT MARKERS.

AN ESTIMATED QUANTITY OF 95 EACH OF ITEM 614 OBJECT MARKERS, ONE-WAY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

BARRIER DELINEATION

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTOR AND OBJECT MARKER SPACING SHALL BE AS PER MT-101.70.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING BARRIER REFLECTORS AND OBJECT MARKERS.

AN ESTIMATED QUANTITY OF 46 EACH ITEM 614 BARRIER REFLECTOR AND 46 EACH OF ITEM 614 OBJECT MARKER, ONE-WAY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

ITEM 614, DETOUR SIGNING

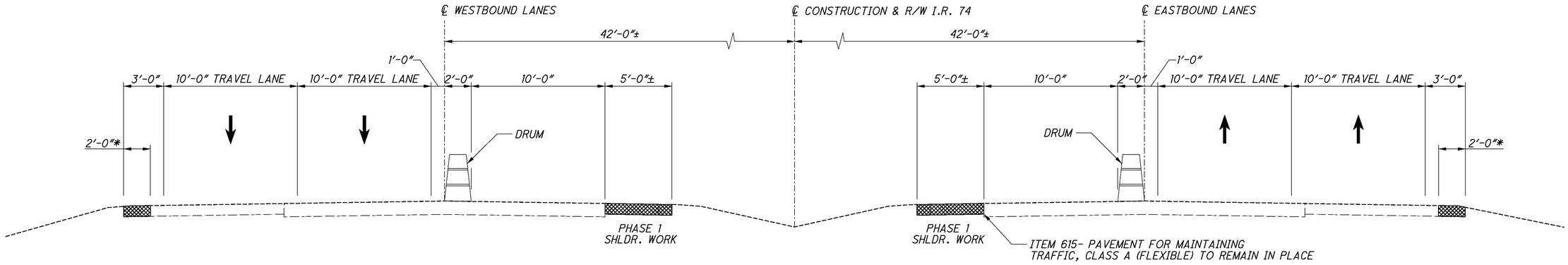
THE CONTRACTOR SHALL PROVIDE, MAINTAIN AND SUBSEQUENTLY REMOVE ALL DETOUR SIGNING AND SUPPORTS AS SHOWN ON SHEETS 24 AND 25. ALL WORK SHALL BE PAID FOR UNDER ITEM 614, DETOUR SIGNING.

CALCULATED JSB CHECKED AM

GENERAL NOTES

MAINTENANCE OF TRAFFIC

HAM-74-3.54/ VAR



* - BUILD 2′-0″ SHOULDER BY USING ITEM 615 BETWEEN THE EXISTING GUARDRAIL AND PAVED SHOULDER BOTH EASTBOUND AND WESTBOUND.

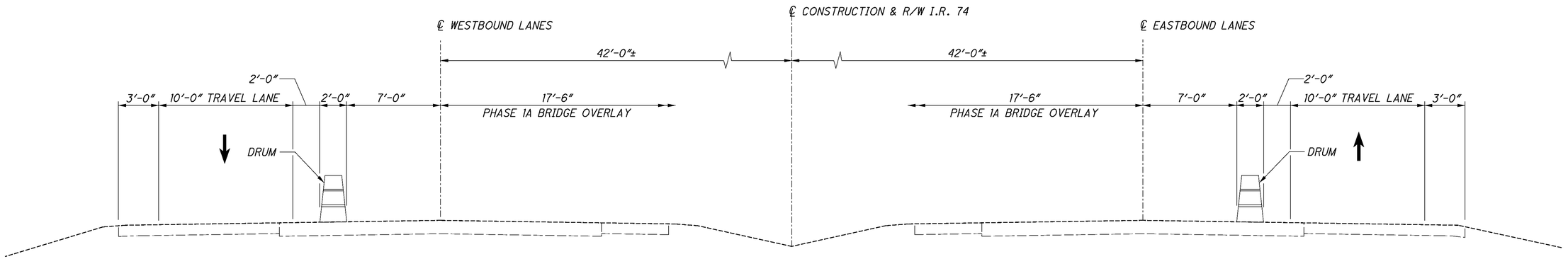
CONSTRUCTION OF 2′-0″ SHOULDER SHALL BE PERFORMED PRIOR TO THE START OF PHASE 1 MAINTENANCE OF TRAFFIC.

PHASE 1 MAINTENANCE OF TRAFFIC SECTION

LIMITING STATIONS

LEFT (WB)		RIGHT (EB)	
STA. 214+00 TO STA. 218+40	= 440.00 FT	STA. 214+00 TO STA. 218+62	= 462.00 FT
STA. 221+10 TO STA. 237+90	= 1680.00 FT	STA. 221+40 TO STA. 237+60	= 1620.00 FT
STA. 239+48 TO STA. 249+00	= 952.00 FT	STA. 239+15 TO STA. 242+50	= 952.00 FT
TOTAL	= 3072.00 FT	TOTAL	= 2417.00 FT
Δ STA. 220+98 TO STA. 238+09	= 1711.00 FT	Δ STA. 221+85 TO STA. 237+16	= 1531.00 FT
Δ STA. 239+92 TO STA. 248+00	= 808.00 FT	Δ STA. 239+00 TO STA. 241+25	= 225.00 FT
TOTAL	= 2519.00 FT	TOTAL	= 1756.00 FT

Δ = OUTSIDE SHOULDER WIDENING



PHASE 1A MAINTENANCE OF TRAFFIC SECTION (PER PLCM)

CALCULATED EC CHECKED AM

MAINTENANCE OF TRAFFIC
PHASE 1 & 1A - SECTIONS

HAM-74-3.54/VAR

11
115

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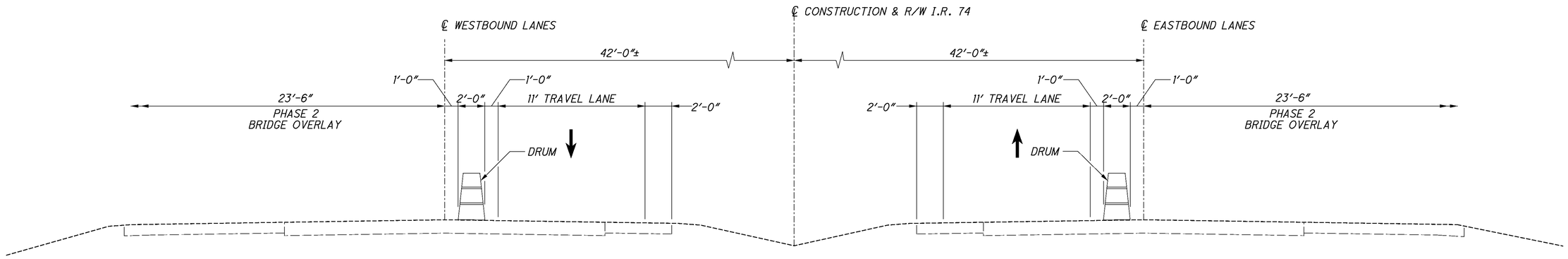

PHASE 2 MAINTENANCE OF TRAFFIC & CONSTRUCTION (WEEKEND)

CALCULATED EC
CHECKED AM

MAINTENANCE OF TRAFFIC
PHASE 2 - SECTIONS

HAM-74-3.54/VAR

12
115

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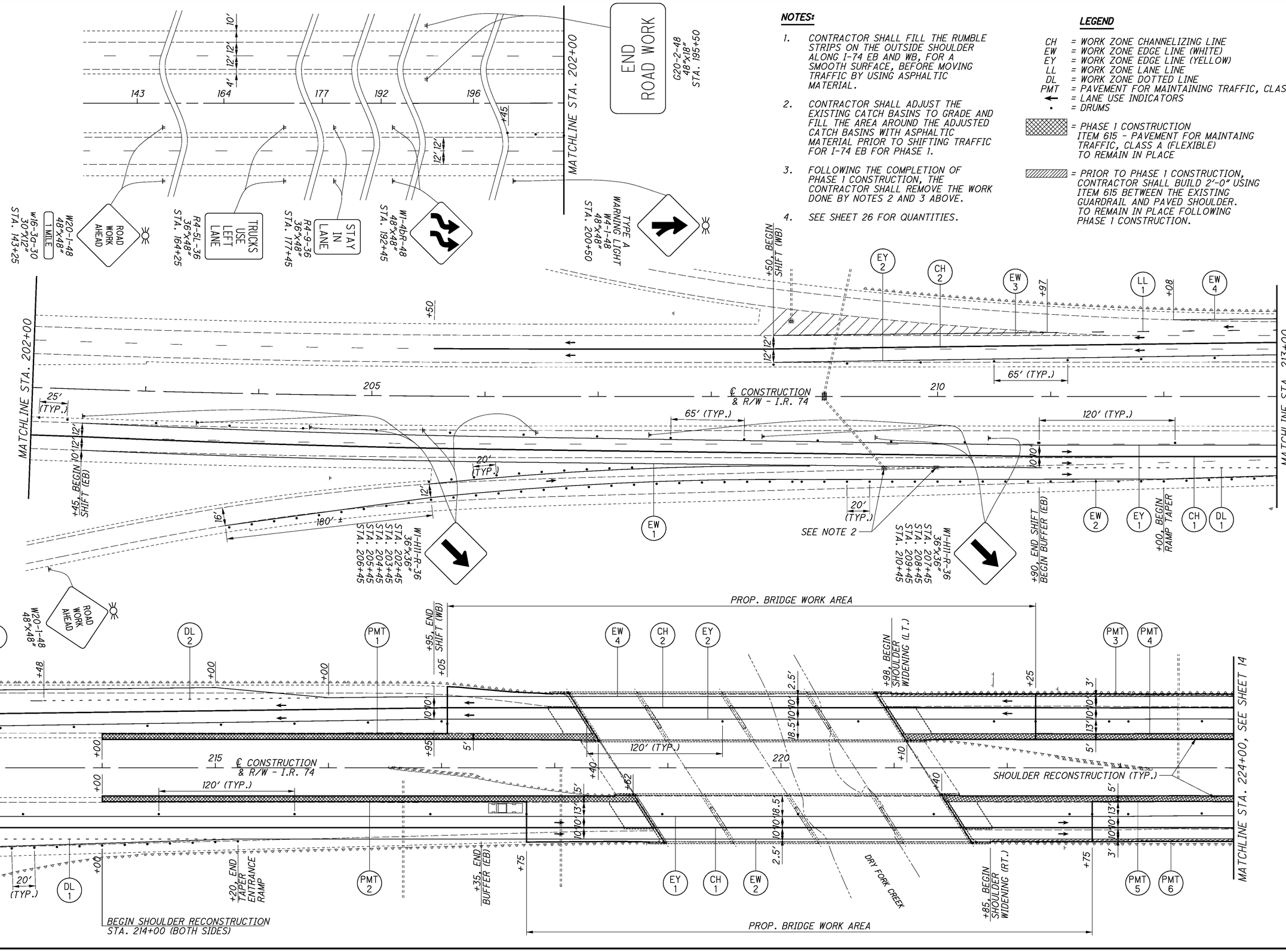
NOTES:

1. CONTRACTOR SHALL FILL THE RUMBLE STRIPS ON THE OUTSIDE SHOULDER ALONG I-74 EB AND WB, FOR A SMOOTH SURFACE, BEFORE MOVING TRAFFIC BY USING ASPHALTIC MATERIAL.
2. CONTRACTOR SHALL ADJUST THE EXISTING CATCH BASINS TO GRADE AND FILL THE AREA AROUND THE ADJUSTED CATCH BASINS WITH ASPHALTIC MATERIAL PRIOR TO SHIFTING TRAFFIC FOR I-74 EB FOR PHASE 1.
3. FOLLOWING THE COMPLETION OF PHASE 1 CONSTRUCTION, THE CONTRACTOR SHALL REMOVE THE WORK DONE BY NOTES 2 AND 3 ABOVE.
4. SEE SHEET 26 FOR QUANTITIES.

LEGEND

- CH = WORK ZONE CHANNELIZING LINE
- EW = WORK ZONE EDGE LINE (WHITE)
- EY = WORK ZONE EDGE LINE (YELLOW)
- LL = WORK ZONE LANE LINE
- DL = WORK ZONE DOTTED LINE
- PMT = PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- ← = LANE USE INDICATORS
- • = DRUMS
- = PHASE 1 CONSTRUCTION ITEM 615 - PAVEMENT FOR MAINTAING TRAFFIC, CLASS A (FLEXIBLE) TO REMAIN IN PLACE
- = PRIOR TO PHASE 1 CONSTRUCTION, CONTRACTOR SHALL BUILD 2'-0" USING ITEM 615 BETWEEN THE EXISTING GUARDRAIL AND PAVED SHOULDER. TO REMAIN IN PLACE FOLLOWING PHASE 1 CONSTRUCTION.



HORIZONTAL SCALE IN FEET
0 20 40 80

CALCULATED EC
CHECKED AM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 143+00 TO STA. 224+00

HAM-74-3.54/VAR

13
115

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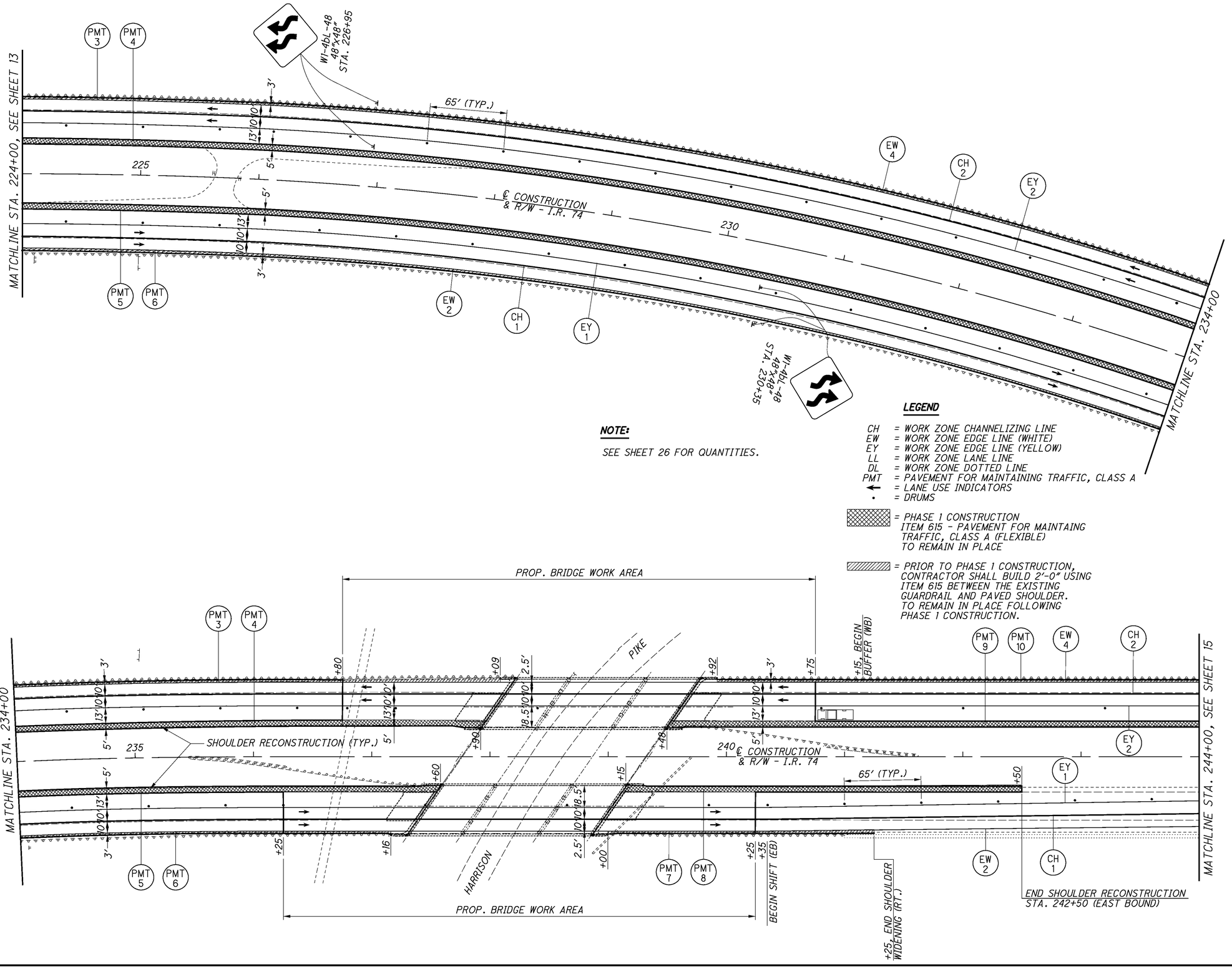

NOTE:

SEE SHEET 26 FOR QUANTITIES.

LEGEND

CH	= WORK ZONE CHANNELIZING LINE
EW	= WORK ZONE EDGE LINE (WHITE)
EY	= WORK ZONE EDGE LINE (YELLOW)
LL	= WORK ZONE LANE LINE
DL	= WORK ZONE DOTTED LINE
PMT	= PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
←	= LANE USE INDICATORS
•	= DRUMS

= PHASE 1 CONSTRUCTION
ITEM 615 - PAVEMENT FOR MAINTAING TRAFFIC, CLASS A (FLEXIBLE)
TO REMAIN IN PLACE

= PRIOR TO PHASE 1 CONSTRUCTION, CONTRACTOR SHALL BUILD 2'-0" USING ITEM 615 BETWEEN THE EXISTING GUARDRAIL AND PAVED SHOULDER. TO REMAIN IN PLACE FOLLOWING PHASE 1 CONSTRUCTION.

HORIZONTAL SCALE IN FEET
0 20 40 80

CALCULATED EC
CHECKED AM

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 224+00 TO STA. 244+00

HAM-74-3.54/ VAR

14
115

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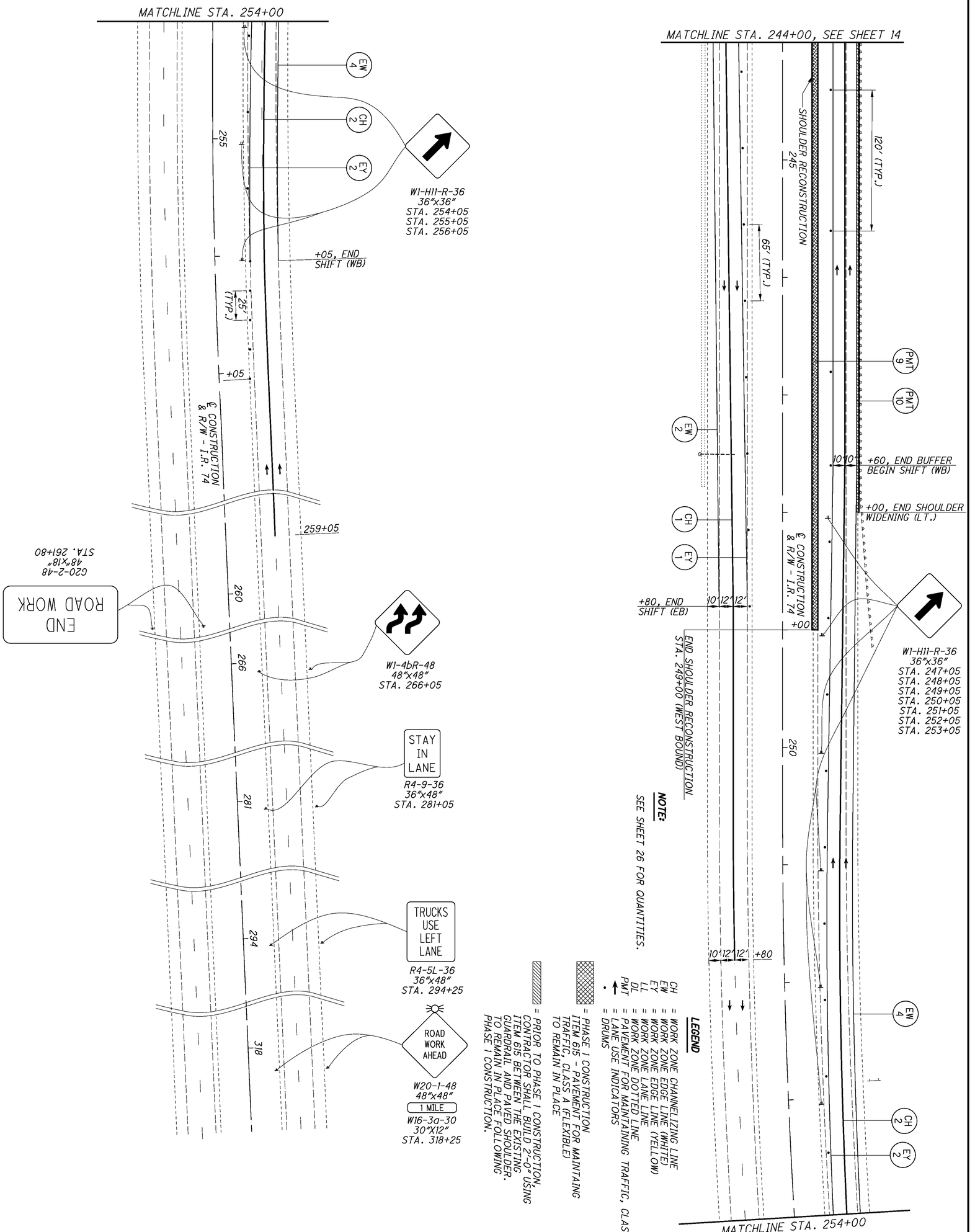


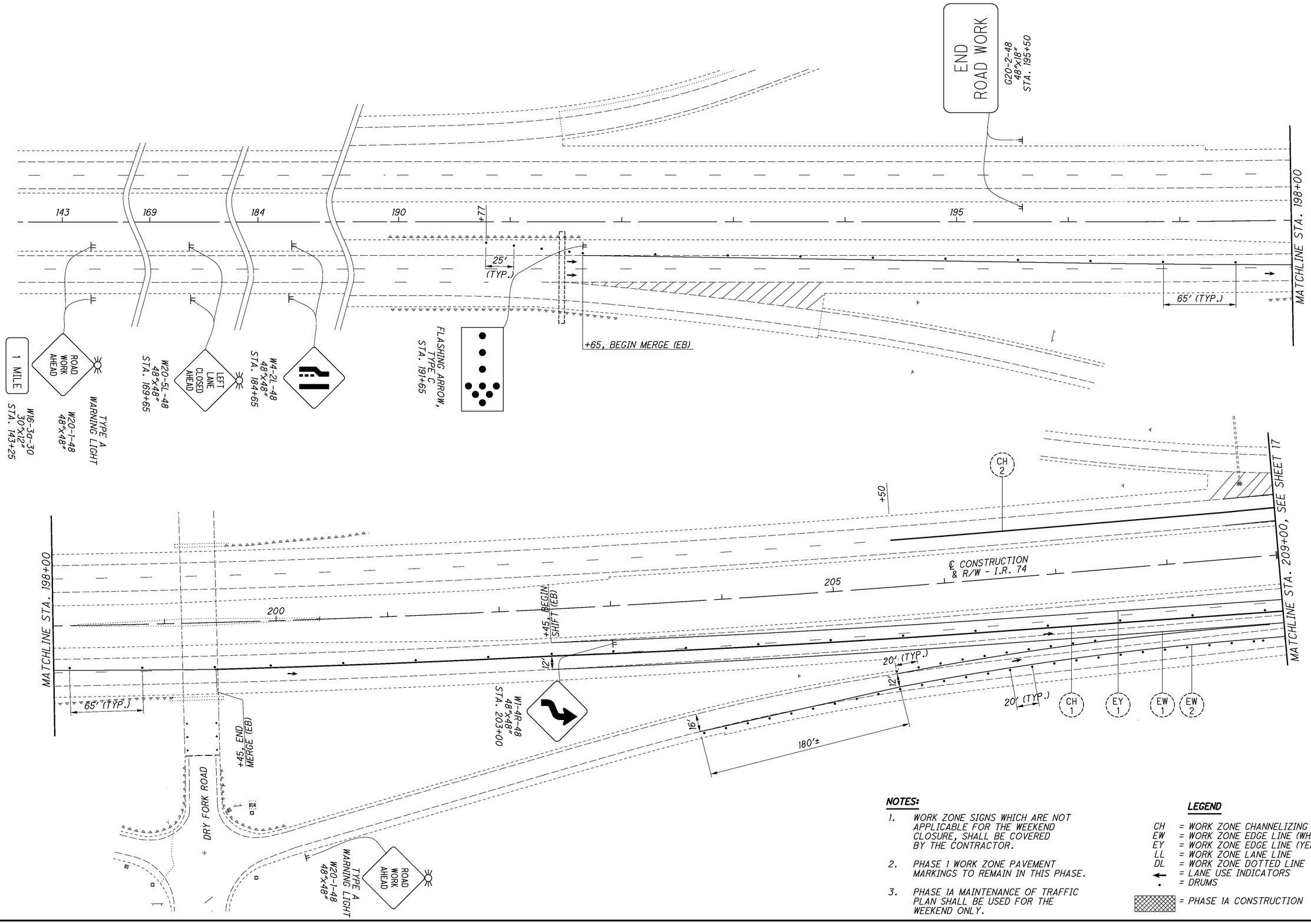
15 / 115	HAM-74-3.54/ VAR	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 STA. 244+00 TO STA. 319+00	CALCULATED EC CHECKED AM	0 40 20 80 HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
STA. 143+00 TO STA. 209+00

HAM-74-3.54/VAR

CALCULATED EC
CHECKED AM

HORIZONTAL SCALE IN FEET
0 20 40 80



NOTES:

1. WORK ZONE SIGNS WHICH ARE NOT APPLICABLE FOR THE WEEKEND CLOSURE, SHALL BE COVERED BY THE CONTRACTOR.
2. PHASE 1 WORK ZONE PAVEMENT MARKINGS TO REMAIN IN THIS PHASE.
3. PHASE 1A MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.

LEGEND

- CH = WORK ZONE CHANNELIZING LINE
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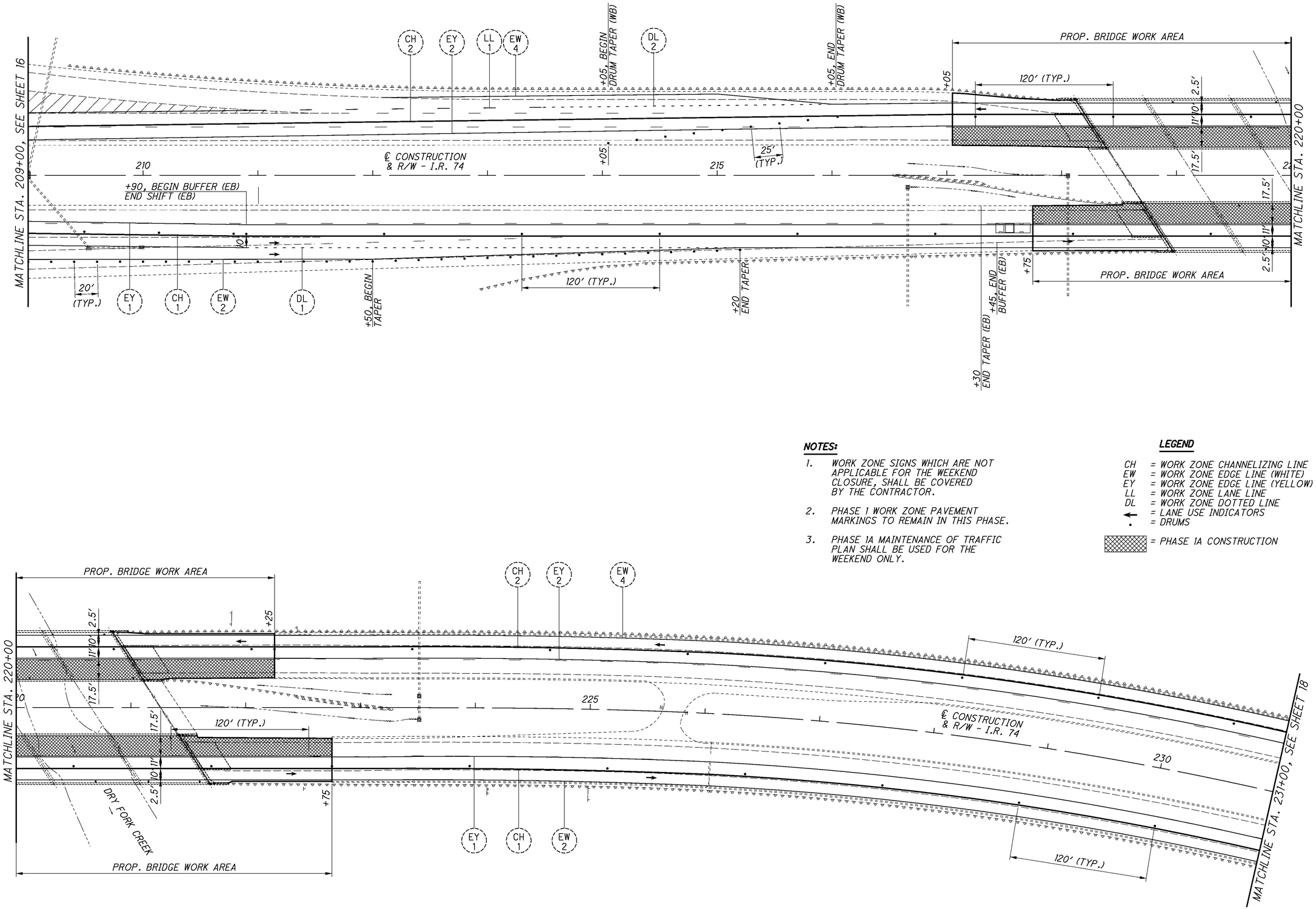
- LL = WORK ZONE LANE LINE
- DL = WORK ZONE DOTTED LINE
- ← = LANE USE INDICATORS
- • = DRUMS
- = PHASE 1A CONSTRUCTION


MATCHLINE STA. 209+00, SEE SHEET 16
CH 2
EY 2
LL 1
EW 4
+05, BEGIN DRUM TAPER (WB)
DL 2
+05, END DRUM TAPER (WB)
+05
PROP. BRIDGE WORK AREA
120' (TYP.)
2.5'
11'
10'
17.5'
℄ CONSTRUCTION & R/W - I.R. 74
210
215
25' (TYP.)
+90, BEGIN BUFFER (EB) END SHIFT (EB)
10'
20' (TYP.)
EY 1
CH 1
EW 2
DL 1
+50, BEGIN TAPER
120' (TYP.)
+20, END TAPER
+30, END TAPER (EB)
+45, END BUFFER (EB)
+75
PROP. BRIDGE WORK AREA
MATCHLINE STA. 220+00
NOTES:
1. WORK ZONE SIGNS WHICH ARE NOT APPLICABLE FOR THE WEEKEND CLOSURE, SHALL BE COVERED BY THE CONTRACTOR.
2. PHASE 1 WORK ZONE PAVEMENT MARKINGS TO REMAIN IN THIS PHASE.
3. PHASE 1A MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.
LEGEND
CH = WORK ZONE CHANNELIZING LINE
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EY = WORK ZONE EDGE LINE (YELLOW)
LL = WORK ZONE LANE LINE
DL = WORK ZONE DOTTED LINE
= LANE USE INDICATORS
= DRUMS
= PHASE 1A CONSTRUCTION
PROP. BRIDGE WORK AREA
MATCHLINE STA. 220+00
+25
+75
DRY FORK CREEK
225
230
MATCHLINE STA. 231+00, SEE SHEET 18
HORIZONTAL SCALE IN FEET
0
20
40
80
CALCULATED EC
CHECKED AM
MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
STA. 209+00 TO STA. 231+00
HAM-74-3.54/VAR
17
115
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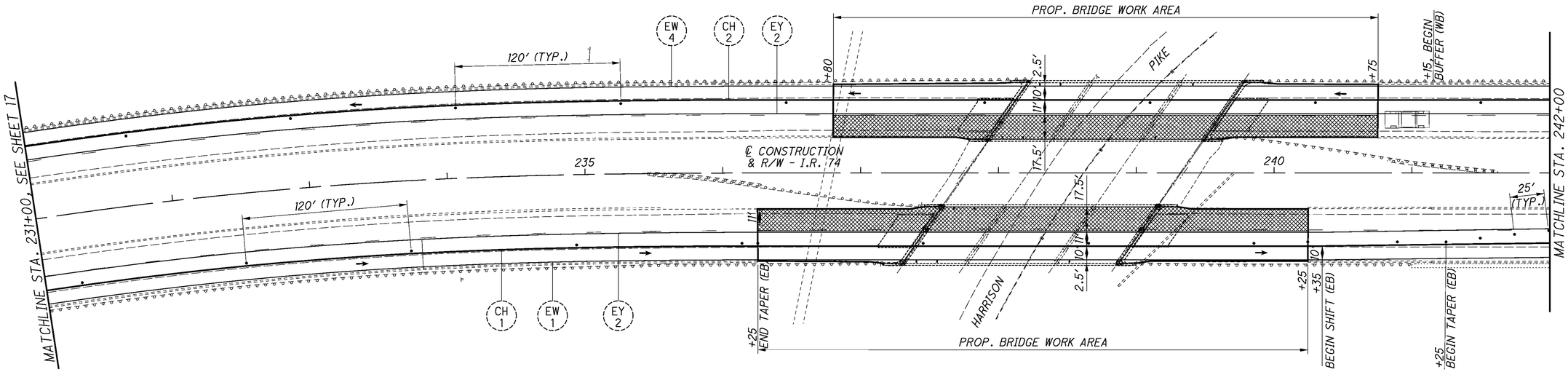

NOTES:

1. WORK ZONE SIGNS WHICH ARE NOT APPLICABLE FOR THE WEEKEND CLOSURE, SHALL BE COVERED BY THE CONTRACTOR.
2. PHASE 1 WORK ZONE PAVEMENT MARKINGS TO REMAIN IN THIS PHASE.
3. PHASE 1A MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.

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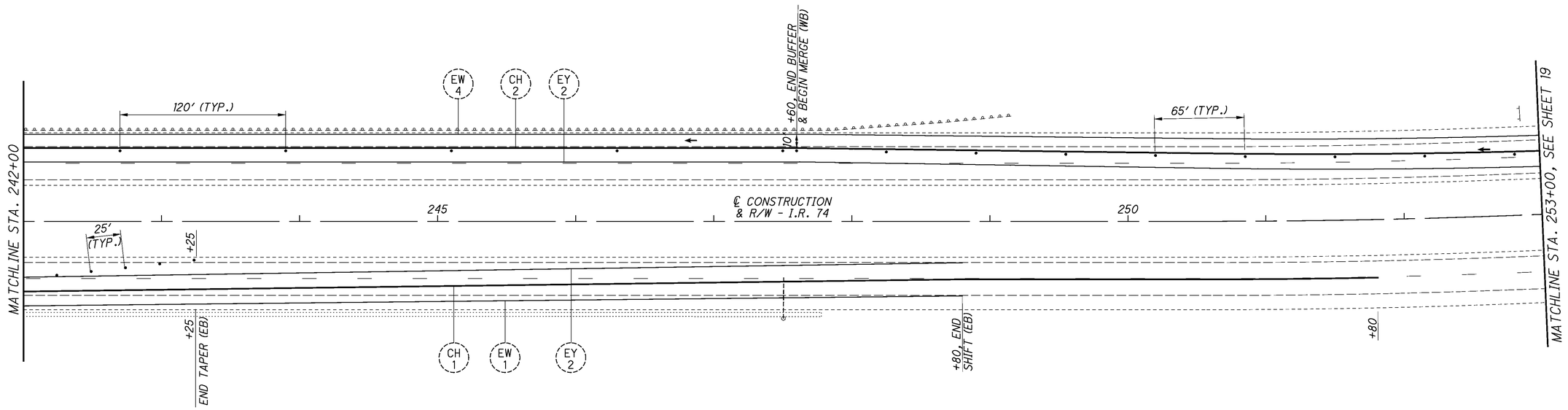
DL	= WORK ZONE DOTTED LINE
←	= LANE USE INDICATORS
•	= DRUMS
	= PHASE 1A CONSTRUCTION



MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
STA. 231+00 TO STA. 253+00

HAM-74-3.54/ VAR

18
115

HORIZONTAL SCALE IN FEET
0 20 40 80

CALCULATED EC
CHECKED AM

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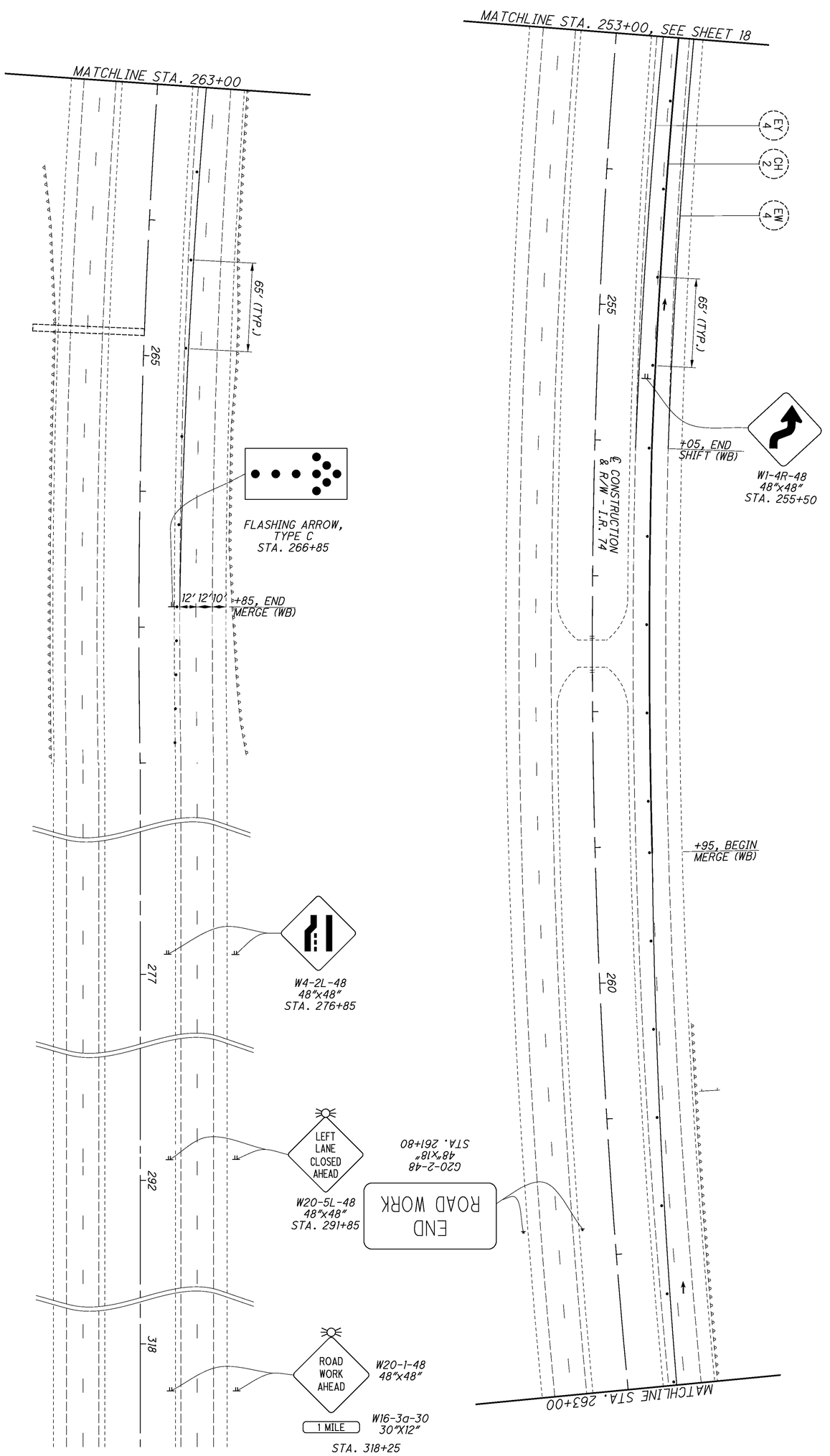

NOTES:

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2. PHASE 1 WORK ZONE PAVEMENT MARKINGS TO REMAIN IN THIS PHASE.
3. PHASE 1A MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.

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LL = WORK ZONE LANE LINE
DL = WORK ZONE DOTTED LINE
= LANE USE INDICATORS
= DRUMS

= PHASE 1A CONSTRUCTION

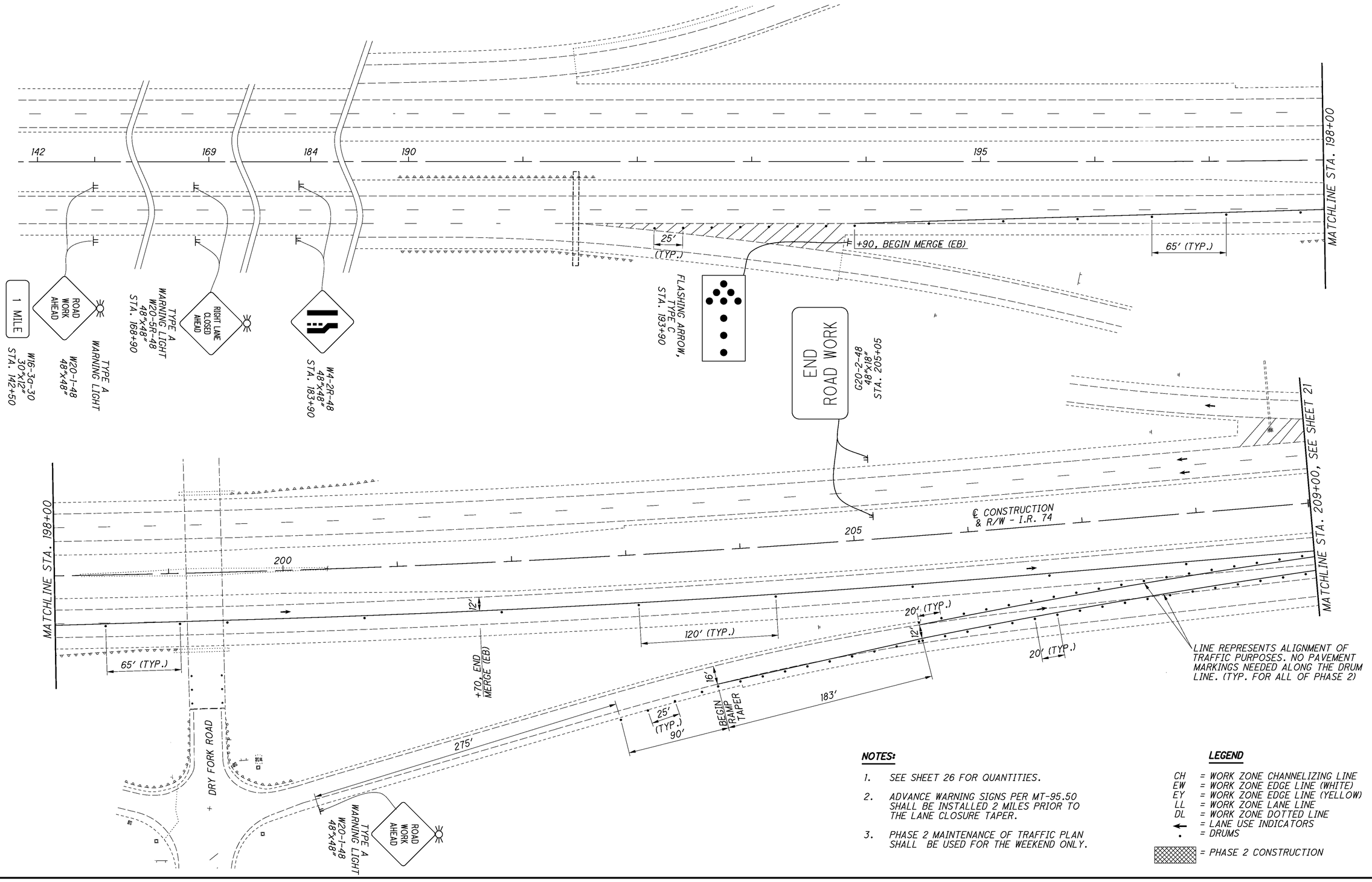
19 / 115	HAM-74-3.54/ VAR	MAINTENANCE OF TRAFFIC PLAN - PHASE 1A STA. 253+00 TO STA. 319+00	CALCULATED EC CHECKED AM	0 40 20 80 HORIZONTAL SCALE IN FEET	

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 142+00 TO STA. 209+00

CALCULATED EC
CHECKED AM

HORIZONTAL SCALE IN FEET
0 20 40 80

HAM-74-3.54/VAR



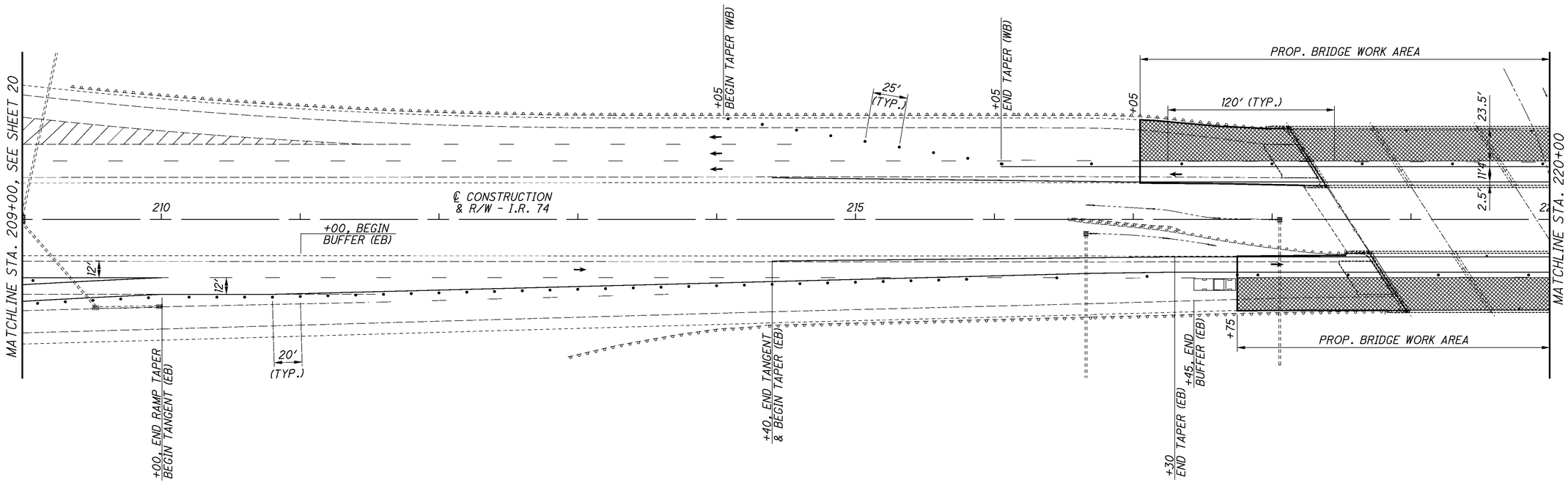
NOTES:

1. SEE SHEET 26 FOR QUANTITIES.
2. ADVANCE WARNING SIGNS PER MT-95.50 SHALL BE INSTALLED 2 MILES PRIOR TO THE LANE CLOSURE TAPER.
3. PHASE 2 MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.

LEGEND

CH	= WORK ZONE CHANNELIZING LINE
EW	= WORK ZONE EDGE LINE (WHITE)
EY	= WORK ZONE EDGE LINE (YELLOW)
LL	= WORK ZONE LANE LINE
DL	= WORK ZONE DOTTED LINE
↑	= LANE USE INDICATORS
•	= DRUMS

= PHASE 2 CONSTRUCTION



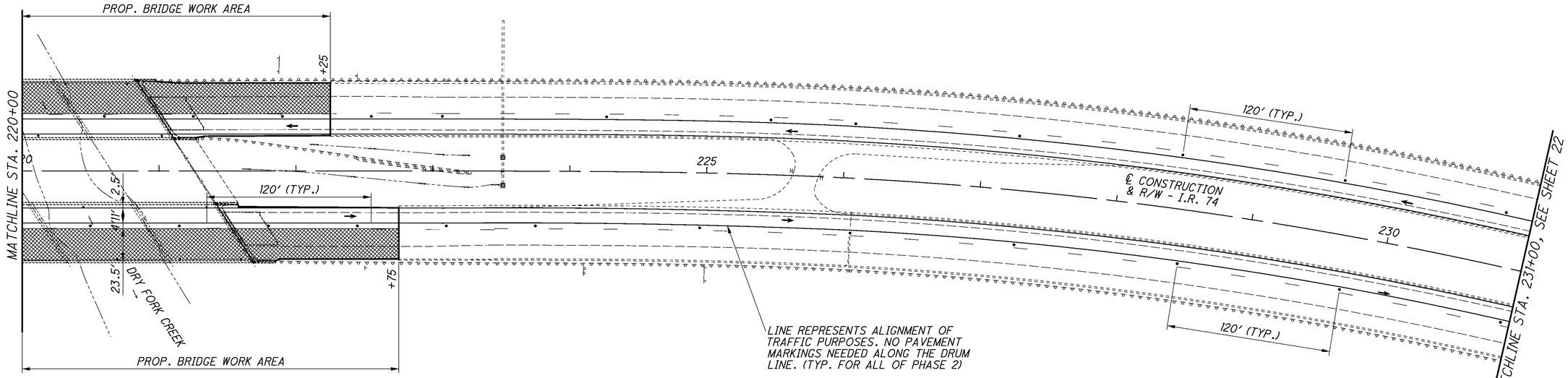
LEGEND

CH	= WORK ZONE CHANNELIZING LINE
EW	= WORK ZONE EDGE LINE (WHITE)
EY	= WORK ZONE EDGE LINE (YELLOW)
LL	= WORK ZONE LANE LINE
DL	= WORK ZONE DOTTED LINE
←	= LANE USE INDICATORS
•	= DRUMS

= PHASE 2 CONSTRUCTION

NOTES:

1. SEE SHEET 26 FOR QUANTITIES.
2. PHASE 2 MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.



HORIZONTAL SCALE IN FEET
0 20 40 80

CALCULATED EC
CHECKED AM

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 209+00 TO STA. 231+00

HAM-74-3.54/VAR

21
115

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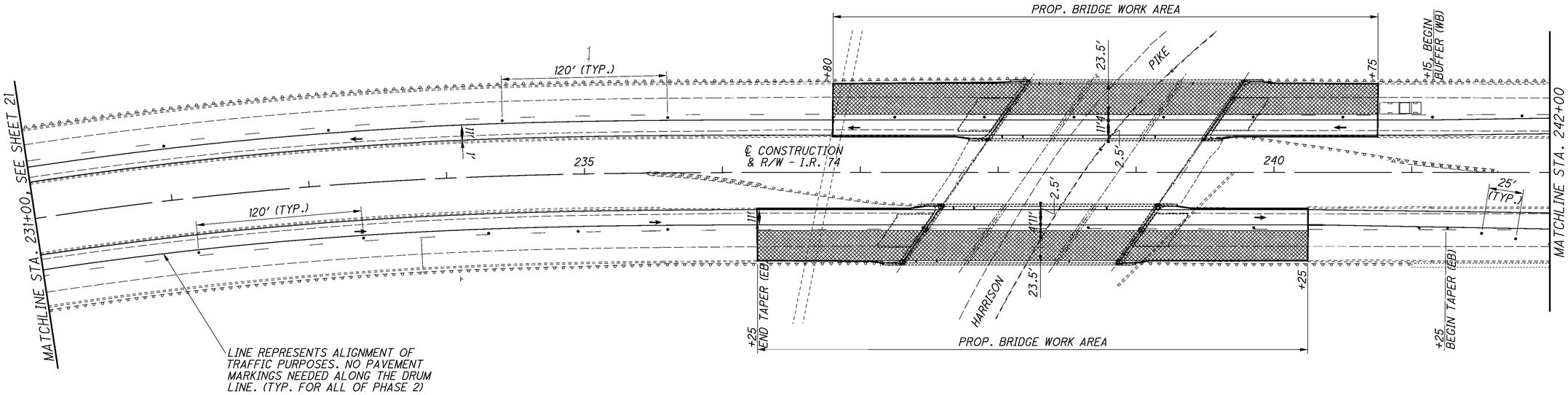
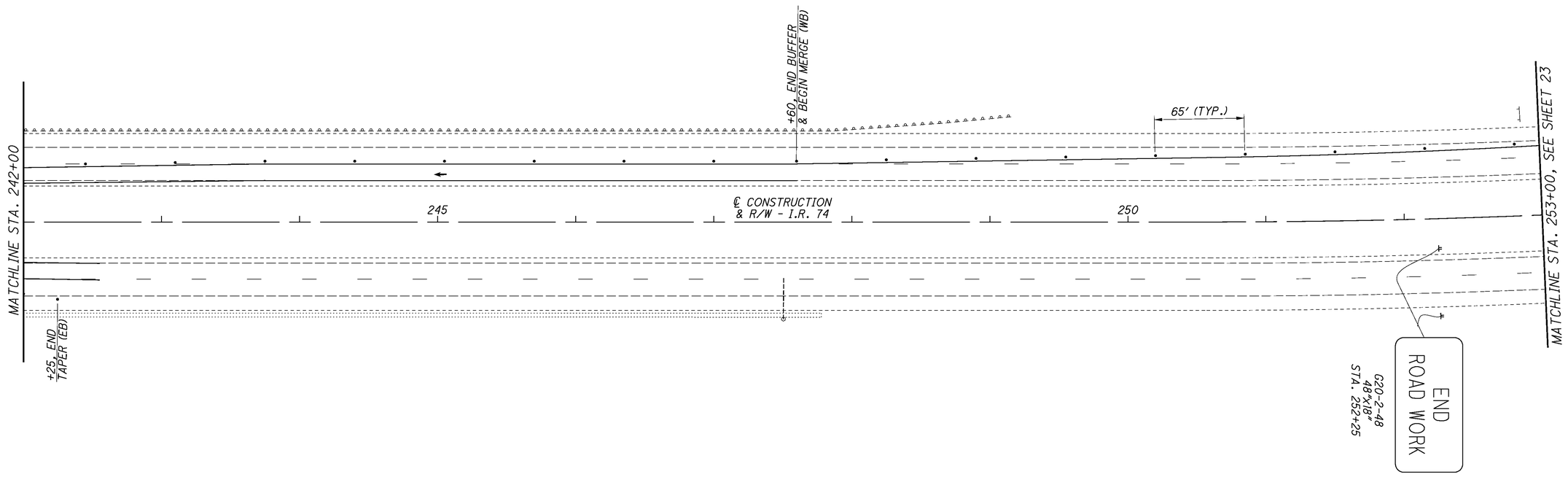


NOTES:

1. SEE SHEET 26 FOR QUANTITIES.
2. PHASE 2 MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.

LEGEND

- CH = WORK ZONE CHANNELIZING LINE
- EW = WORK ZONE EDGE LINE (WHITE)
- EY = WORK ZONE EDGE LINE (YELLOW)
- LL = WORK ZONE LANE LINE
- DL = WORK ZONE DOTTED LINE
- ← = LANE USE INDICATORS
- • = DRUMS
- = PHASE 2 CONSTRUCTION



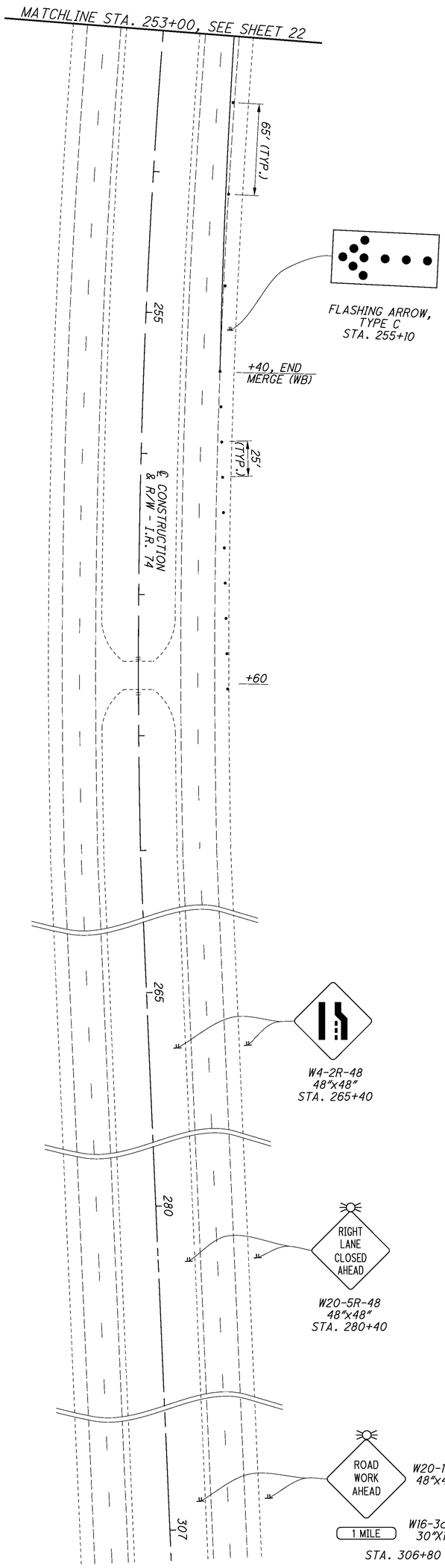
HORIZONTAL SCALE IN FEET: 0, 20, 40, 80

CALCULATED EC | CHECKED AM

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 231+00 TO STA. 253+00

HAM-74-3.54/VAR

22
115



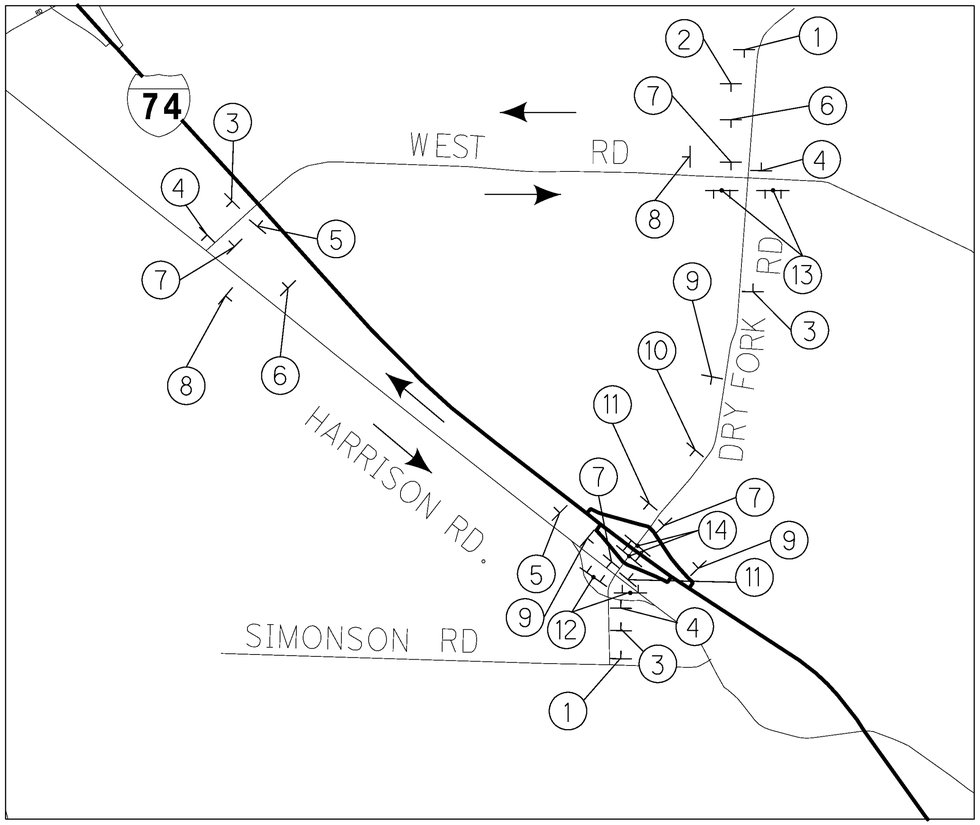
NOTES:

1. SEE SHEET 26 FOR QUANTITIES.
2. ADVANCE WARNING SIGNS PER MT-95.50 SHALL BE INSTALLED 2 MILES PRIOR TO THE LANE CLOSURE TAPER.
3. PHASE 2 MAINTENANCE OF TRAFFIC PLAN SHALL BE USED FOR THE WEEKEND ONLY.

LEGEND

CH = WORK ZONE CHANNELIZING LINE
EW = WORK ZONE EDGE LINE (WHITE)
EY = WORK ZONE EDGE LINE (YELLOW)
LL = WORK ZONE LANE LINE
DL = WORK ZONE DOTTED LINE
= LANE USE INDICATORS
= DRUMS

= PHASE 2 CONSTRUCTION



ESTIMATED OFFICIAL SIGNED DETOUR ADDED LENGTH = 4.04 MILES

LEGEND

OFFICIAL SIGNED DETOUR ROUTE

(1) ROAD CLOSED AHEAD
W20-3-48

(2) DETOUR 1500 FT
W20-2-48

(3) DRY FORK RD. / DETOUR
W16-8-24
M4-8-24
M5-1L-24

(4) DRY FORK RD. / DETOUR
W16-8-24
M4-8-24
M6-1L-24

(5) DETOUR / NORTH / DRY FORK RD.
M4-8-24
M3-1-24
W16-8-24

(6) DRY FORK RD. / DETOUR
W16-8-24
M4-8-24
M5-1R-24

(7) DRY FORK RD. / DETOUR
W16-8-24
M4-8-24
M6-1R-24

(8) DETOUR / SOUTH / DRY FORK RD.
M4-8-24
M3-3-24
W16-8-24

(9) ROAD WORK AHEAD
W20-1-48
WITH TYPE A WARNING LIGHT

(10) ROAD CLOSED 1000 FT
W20-3-48
WITH TYPE A WARNING LIGHT

(11) ROAD CLOSED 500 FT
W20-3-48

(12) OPEN TO I-74 EAST RAMP / ROAD CLOSED 0.4 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR
R11-3A-60
M4-10L-48

(13) OPEN TO I-74 WEST RAMP / ROAD CLOSED 1 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR
M4-10R-48
R11-3A-60

(14) ROAD CLOSED
R11-2-48
WITH TYPE B FLASHING WARNING LIGHT

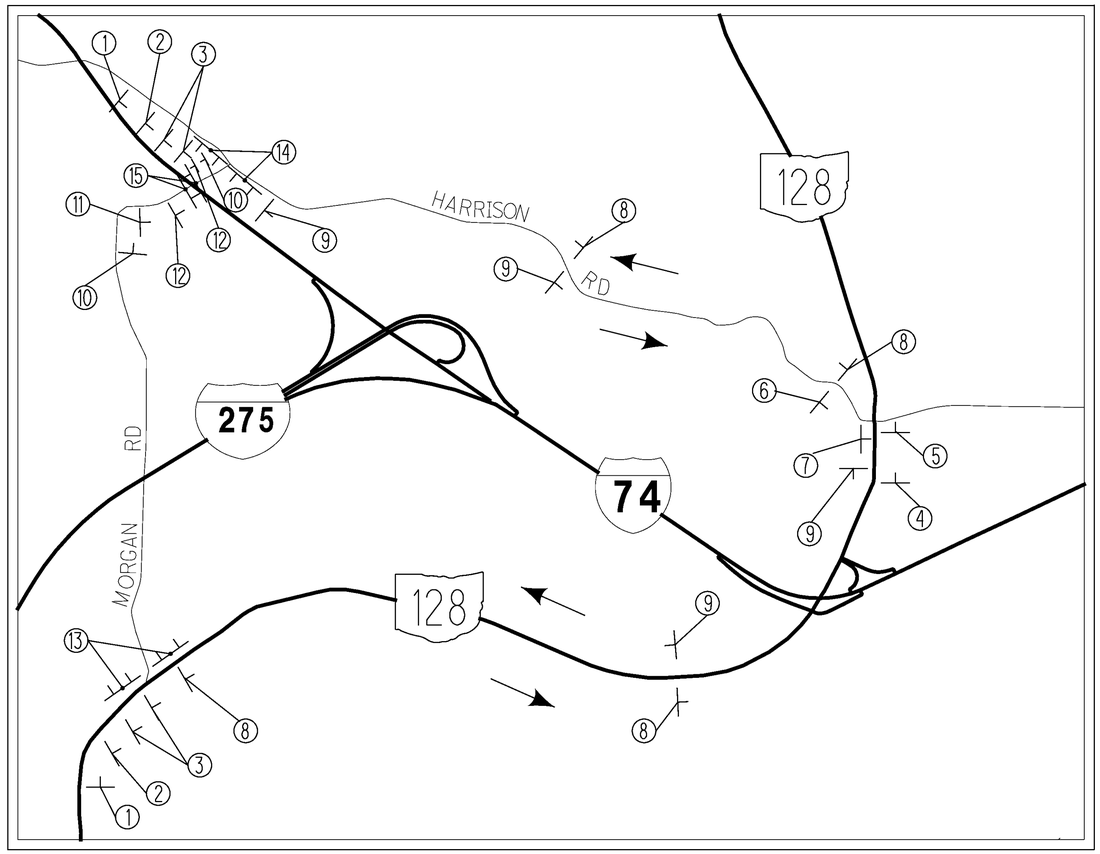
NOTE

WHEN DRY FORK ROAD IS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL USE DRUMS TO CLOSE THE LEFT TURN LANE ON THE WESTBOUND EXIT RAMP. A "RIGHT TURN ONLY" (R10-H5A-24) SIGN SHALL BE INSTALLED ON THE EASTBOUND AND WESTBOUND EXIT RAMPS. THE DRUMS AND SIGNS SHALL BE REMOVED WHEN DRY FORK ROAD IS REOPENED TO TRAFFIC.

HORIZONTAL SCALE IN FEET
0 1000 2000
CALCULATED BLM
CHECKED JSB

MAINTENANCE OF TRAFFIC DRY FORK RD. DETOUR

HAM-74-3.54/ VAR



NTS

ESTIMATED OFFICIAL SIGNED DETOUR ADDED LENGTH = 4.04 MILES

LEGEND

OFFICIAL SIGNED DETOUR ROUTE

① ROAD CLOSED AHEAD / MORGAN RD. — W20-3-48, W16-8-24

② DETOUR 1500 FT / MORGAN RD. — W20-2-48, W16-8-24

③ MORGAN RD. / DETOUR ↑ — W16-8-24, M4-8-24, M6-3-24

④ MORGAN RD. / DETOUR ↰ — W16-8-24, M4-8-24, M5-1L-24

⑤ MORGAN RD. / DETOUR ← — W16-8-24, M4-8-24, M6-1L-24

⑥ MORGAN RD. / DETOUR ↱ — W16-8-24, M4-8-24, M5-1R-24

⑦ MORGAN RD. / DETOUR → — W16-8-24, M4-8-24, M6-1R-24

⑧ DETOUR NORTH / MORGAN RD. — M4-8-24, M3-1-24, W16-8-24

⑨ DETOUR SOUTH / MORGAN RD. — M4-8-24, M3-3-24, W16-8-24

⑩ ROAD WORK AHEAD — W20-1-48 WITH TYPE A WARNING LIGHT

⑪ ROAD CLOSED 1000 FT — W20-3-48 WITH TYPE A WARNING LIGHT

⑫ ROAD CLOSED 500 FT — W20-3-48

⑬ ROAD CLOSED 2 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR → — R11-3A-60, M4-10R-48

⑭ ROAD CLOSED 0.16 MILES AHEAD / LOCAL TRAFFIC ONLY / DETOUR ← — R11-3A-60, M4-10L-48

⑮ ROAD CLOSED — R11-2-48 WITH TYPE B FLASHING WARNING LIGHT

HORIZONTAL SCALE IN FEET 0 1000 2000

CALCULATED BLM CHECKED JSB

MAINTENANCE OF TRAFFIC
MORGAN RD. DETOUR

HAM-74-3.54/VAR

25
115

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SHEET NO.	PHASE	REF. NO.	614 WORK ZONE LANE LINE, CLASS I, 740.06, TYPE I (FT)	614 WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I, WHITE (FT)	614 WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I, YELLOW (FT)	614 WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I (FT)	614 WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I (FT)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SQ YD)		
13	1	EW-1		845						
13-15	1	EW-2		4630						
13	1	EW-3		247						
13-15	1	EW-4		4397						
13-15	1	EY-1			4635					
13-15	1	EY-2			4755					
13-15	1	CH-1				5235				
13-15	1	CH-2				5355				
13	1	DL-1					430			
13	1	DL-2					252			
13	1	LL-1	251							
13	1	PMT-1						245		
13	1	PMT-2						263		
13-14	1	PMT-3						404		
13-14	1	PMT-4						944		
13-14	1	PMT-5						878		
13-14	1	PMT-6						334		
14	1	PMT-7						56		
14	1	PMT-8						202		
14-15	1	PMT-9						527		
14-15	1	PMT-10						180		
		SUBTOTAL	251	10119	9390					
TOTALS CARRIED TO GENERAL SUMMARY			0.05 MI	3.69 MI		10590	682	4033		

STATION FROM	STATION TO	SIDE	SPACING	614 WORK ZONE RAISED PAVEMENT MARKER (YELLOW) (EACH)	614 WORK ZONE RAISED PAVEMENT MARKER (WHITE) (EACH)
EASTBOUND I.R. 74					
YELLOW EDGE LINE					
199+45	213+90	RT	20	73	
237+35	251+80	RT	20	73	
WHITE EDGE LINE					
199+45	210+90	RT	20		58
237+35	251+80	RT	20		73
CHANNELIZING LINE					
199+45	213+90	RT	20		73
213+90	237+35	RT	120		20
237+35	251+80	RT	20		73
WESTBOUND I.R. 74					
WHITE EDGE LINE					
205+50	210+97	LT	20		28
216+00	219+95	LT	20		20
244+60	259+05	LT	20		73
YELLOW EDGE LINE					
205+50	219+95	LT	20	73	
244+60	259+05	LT	20	73	
CHANNELIZING LINE					
205+50	219+95	LT	20		73
219+95	244+60	LT	120		21
244+60	259+05	LT	20		73
	SUBTOTAL			292	585
TOTAL CARRIED TO GENERAL SUMMARY				877	

CALCULATED TWG
CHECKED KAM

MAINTENANCE OF TRAFFIC SUBSUMMARY

HAM-74-3.54/ VAR

26
115

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
								7	8	29	47	48	OFFICE CALCS						
																		ROADWAY	
								LUMP						201	11000	LUMP		CLEARING AND GRUBBING	
													1248	202	23010	1248	SQ YD	PAVEMENT REMOVED, ASPHALT	
										40				202	35100	40	FT	PIPE REMOVED, 24" AND UNDER	
										386				202	38000	386	FT	GUARDRAIL REMOVED	
										1				202	38800	1	EACH	GUARD POST REMOVED	
										2				202	75250	2	EACH	GATE REMOVED	
											336			203	10000	336	CU YD	EXCAVATION	
											260			203	20000	260	CU YD	EMBANKMENT	
												362	1230	204	10000	1592	SQ YD	SUBGRADE COMPACTION	
										312.5				606	13000	312.5	FT	GUARDRAIL, TYPE 5	
										3				606	25000	3	EACH	ANCHOR ASSEMBLY, TYPE A	
										1				606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T	
										4				606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
										330				607	35000	330	FT	FENCE REMOVED AND REBUILT	
										5				SPECIAL	69050000	5	EACH	MAILBOX SUPPORT	8
																		EROSION CONTROL	
										687				601	32000	687	CU YD	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	
									5					601	32200	5	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
								2						659	00100	2	EACH	SOIL ANALYSIS TEST	
								300						659	00300	300	CU YD	TOPSOIL	
											2702			659	10000	2702	SQ YD	SEEDING AND MULCHING	
								135						659	14000	135	SQ YD	REPAIR SEEDING AND MULCHING	
								135						659	15000	135	SQ YD	INTER-SEEDING	
								0.38						659	20000	0.38	TON	COMMERCIAL FERTILIZER	
								0.56						659	31000	0.56	ACRE	LIME	
								15						659	35000	15	M GAL	WATER	
										26				660	20000	26	SQ YD	SODDING REINFORCED	
													7400	832	30000	7400	EACH	EROSION CONTROL	
																		DRAINAGE	
									50					603	00900	50	FT	6" CONDUIT, TYPE B	
									50					603	01400	50	FT	6" CONDUIT, TYPE E	
									50					603	01500	50	FT	6" CONDUIT, TYPE F	
										51				603	04900	51	FT	12" CONDUIT, TYPE D	
									170					605	31100	170	FT	AGGREGATE DRAINS	
																		PAVEMENT	
													4945	254	01000	4945	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
													160	301	46000	160	CU YD	ASPHALT CONCRETE BASE, PG64-22	
												15		301	48000	15	CU YD	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	
													241	304	20000	241	CU YD	AGGREGATE BASE	
												8	371	407	10000	379	GALLON	TACK COAT	
													37	407	14000	37	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
													231	442	20000	231	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
													45	448	46050	45	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
													76	448	47020	76	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
												4		448	48020	4	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
												254		452	10000	254	SQ YD	6" NON-REINFORCED CONCRETE PAVEMENT	
										30				609	24510	30	FT	CURB, TYPE 4-C	
													2.53	618	40600	2.53	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)	

CALCULATED KAM
CHECKED KPC

GENERAL SUMMARY

HAM-74-3.54/VAR

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
								9	10	26	29	62	63						
																		TRAFFIC CONTROL	
												104		621	00100	104	EACH	RPM	
											13			626	00100	13	EACH	BARRIER REFLECTOR	
													65	630	03100	65	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
													4	630	85100	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
													5	630	86002	5	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
													6	632	26500	6	EACH	DETECTOR LOOP	
													6	632	27200	6	EACH	LOOP DETECTOR TIE IN	
												1.99	2.21	644	00100	4.20	MILE	EDGE LINE	
												2.09		644	00200	2.09	MILE	LANE LINE	
													0.10	644	00300	0.10	MILE	CENTER LINE	
													358	644	00400	358	FT	CHANNELIZING LINE	
													25	644	00500	25	FT	STOP LINE	
												0.17	0.38	645	00110	0.55	MILE	EDGE LINE, TYPE A3	
												0.17		645	00210	0.17	MILE	LANE LINE, TYPE A3	
													0.11	645	00310	0.11	MILE	CENTER LINE, TYPE A3	
																		STRUCTURES 20' AND OVER	
																		FOR BRIDGE NO. HAM-74-0358 ESTIMATED QUANTITIES SEE SHEET 65	
																		FOR BRIDGE NO. HAM-74-0395L ESTIMATED QUANTITIES SEE SHEET 75	
																		FOR BRIDGE NO. HAM-74-0395R ESTIMATED QUANTITIES SEE SHEET 75	
																		FOR BRIDGE NO. HAM-74-0431L ESTIMATED QUANTITIES SEE SHEET 84	
																		FOR BRIDGE NO. HAM-74-0431R ESTIMATED QUANTITIES SEE SHEET 84	
																		FOR BRIDGE NO. HAM-74-0495 ESTIMATED QUANTITIES SEE SHEET 97	
																		MAINTENANCE OF TRAFFIC	
								100						410	11000	100	CU YD	TRAFFIC COMPACTED SURFACE, TYPE B	
									400					614	11110	400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
									LUMP					614	12420	LUMP		DETOUR SIGNING	
										877				614	12800	877	EACH	WORK ZONE RAISED PAVEMENT MARKER	
									46					614	13100	46	EACH	BARRIER REFLECTOR	
									141					614	13350	141	EACH	OBJECT MARKER, ONE WAY	
								7150						614	18030	7150	FT	MAINTAINING TRAFFIC, MISC.: RUMBLE STRIP MILLED/FILLED	9
									30					614	18401	30	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10
										0.05				614	20200	0.05	MILE	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE 1	
										4.85				614	22200	4.85	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE 1	
										10590				614	23400	10590	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE 1	
										682				614	24400	682	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE 1	
								LUMP						615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
										4033				615	20001	4033	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	10
								10	10					616	10000	20	M GAL	WATER	
								100						617	10100	100	CU YD	COMPACTED AGGREGATE	
								LUMP						614	11000	LUMP		MAINTAINING TRAFFIC	
														619	16010	9	MONTH	FIELD OFFICE, TYPE B	
														623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
														624	10000	LUMP		MOBILIZATION	

CALCULATED KAM
CHECKED KPC

GENERAL SUMMARY

HAM-74-3.54/ VAR

REF NO.	SHEET NO.	STATION TO STATION	202 PIPE REMOVED, 24" AND UNDER FT	202 GUARDRAIL REMOVED FT	202 GUARD POST REMOVED EACH	202 GATE REMOVED EACH	601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER CU YD	603 12" CONDUIT, TYPE D FT	606 GUARDRAIL, TYPE 5 FT	606 ANCHOR ASSEMBLY, TYPE A EACH	606 ANCHOR ASSEMBLY, TYPE T EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	607 FENCE REMOVED AND REBUILT FT	609 CURB, TYPE 4-C FT	626 BARRIER REFLECTOR EACH	660 SODDING REINFORCED SQ YD	SPECIAL MAILBOX SUPPORT EACH		
C-1	38	21+48.57 TO 21+63.86 (MORGAN RD.)												15					
C-2	38	21+59.51 TO 21+74.51 (MORGAN RD.)												15					
D-1	38	22+60.10 TO 23+11.11 (MORGAN RD.)						51											
E-1	38	21+62.66 TO 21+71.66 (MORGAN RD.)														14.2			
E-2	38	21+73.80 TO 21+82.80 (MORGAN RD.)														12.0			
F-1	33	218+39.68 TO 218+69.59 (I.R. 74)											55						
F-2	34	221+11.16 TO 221+41.07 (I.R. 74)											55						
F-3	35	237+59.91 TO 237+92.14 (I.R. 74)											56						
F-4	36	239+16.44 TO 239+48.67 (I.R. 74)											56						
F-5	37	18+23.08 TO 18+58.17 (MORGAN RD.)											43						
F-6	37	18+64.40 TO 18+69.48 (MORGAN RD.)											17						
F-7	38	21+22.09 TO 21+35.78 (MORGAN RD.)											30						
F-8	38	21+33.31 TO 21+47.30 (MORGAN RD.)											18						
GR-1	37	17+18.22 TO 18+55.68 (MORGAN RD.)							106.25	1		1			4				
GR-2	37	17+44.98 TO 18+44.94 (MORGAN RD.)							68.75	1		1			3				
GR-3	38	21+35.75 TO 22+28.67 (MORGAN RD.)							81.25		1	1			3				
GR-4	38	21+46.49 TO 22+33.95 (MORGAN RD.)							56.25	1		1			3				
M-1	37	16+69.60 (MORGAN RD.)															1		
M-2	37	16+75.34 TO 16+78.34 (MORGAN RD.)															2		
M-3	38	22+55.52 TO 22+58.52 (MORGAN RD.)															2		
R-1	37	17+50.51 TO 18+57.38 (MORGAN RD.)		107															
R-2	37	17+56.01 TO 18+69.20 (MORGAN RD.)		113															
R-3	38	21+20.73 TO 22+04.65 (MORGAN RD.)		84															
R-4	38	21+33.79 TO 22+15.95 (MORGAN RD.)		82															
R-5	38	22+51.18 TO 22+70.45 (MORGAN RD.)				1													
R-6	38	22+70.76 TO 23+10.83 (MORGAN RD.)	40																
R-7	38	23+11.13 TO 23+11.65 (MORGAN RD.)				1													
R-8	38	23+25.21 (MORGAN RD.)			1														
RCP-1	33	219+32.76 TO 219+90.11 (I.R. 74)					171.7												
RCP-2	33	219+90.64 TO 220+47.99 (I.R. 74)					171.7												
RCP-3	34	220+07.76 TO 220+65.11 (I.R. 74)					171.7												
RCP-4	34	220+65.64 TO 221+22.99 (I.R. 74)					171.7												
TOTALS CARRIED TO GENERAL SUMMARY			40	386	1	2	687	51	312.5	3	1	4	330	30	13	26	5		

CALCULATED KAM CHECKED KPC

SUBSUMMARY

HAM-74-3.54/VAR

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY)	1.61 ACRES
PROJECT EARTH DISTURBED AREA	0.86 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.29 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.63
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.67
IMMEDIATE RECEIVING WATERS	UNNAMED DITCH
SUBSEQUENT RECEIVING WATERS	GREAT MIAMI RIVER
PRE-CONSTRUCTION PAVED AREA	0.40 ACRES
POST-CONSTRUCTION PAVED AREA	0.46 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	4.90 ACRES

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KAM
CHECKED TWG

EQUATION:
STA. 268+24.03 BK
STA. 267+57.41 AH

P.T. STA. 268+24.03

℄ CONSTRUCTION & R/W I.R. 74

I.R. 74 WESTBOUND

I.R. 74 EASTBOUND

STA. 20+00.00 ℄ C.R. 16 (MORGAN RD.) =
STA. 271+21.91 ℄ I.R. 74

℄ CONSTRUCTION & R/W C.R. 16

N 59° 04' 12" E

N 63° 00' 51" E

S 53° 06' 15" E

P.C. STA. 23+75.00

P.T. STA. 24+56.52

RESIDENTIAL GRASS AREA

POND

DENSE WOODS

GRAVEL DRIVE

CONC. DRIVE

LUTHER LANE

ASPHALT DRIVE

COMMERCIAL GRASS AREA

GRAVEL PARKING LOT

ASPHALT PARKING LOT

12" TYPE D

Ex R/W

Ex LA

Ex SH

LEGEND

- RESIDENTIAL
- COMMERCIAL
- OUT BUILDING

PROJECT DESCRIPTION

PROJECT CONSISTS OF 0.13 MILE OF IMPROVEMENT OF MORGAN ROAD BY REHABILITATION OF THE EXISTING BRIDGE OVER I.R. 74 WITH MINIMAL APPROACH WORK. APPROACH WORK INCLUDES FULL-DEPTH PAVEMENT REPLACMENT, REPLACEMENT OF GUARDRAIL, AND NEW DRIVEWAYS FOR ADJACENT PROPERTIES.

POST CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS) ARE NOT REQUIRED AND ARE NOT BEING USED ON THIS PROJECT.

USGS QUADRANT NO. 39084-B7-TF-024
HOOVEN, OHIO

LATITUDE: N 39°14'05"*
LONGITUDE: W 84°45'40"*
* LONGITUDE AND LATITUDE TO APPROXIMATE CENTER OF PROJECT

PROJECT SITE PLAN

HAM-74-3.54/VAR

30
115

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BENCHMARK

BM #1
STA. 18+28.10, 24.76' LT.
IRON PIN SET W/ CAP
ELEV. = 581.24

Ex LA
Ex LA
Ex LA
EASTBOUND EXIT RAMP
STA. 19+99.10 ℄ C.R. 14 (DRY FORK RD.)=
STA. 199+30.83 ℄ I.R. 74
BEGIN WORK
STA. 18+30.00
I.R. 74 EASTBOUND
I.R. 74 WESTBOUND
℄ CONSTRUCTION & R/W I.R. 74
CONSTRUCTION LIMITS
STRUCTURE NO. HAM-74-0358
BM #1
4.6'
2.6'
13.0'
4.2'
+36
90°*
N 36° 25' 25" E
END APPROACH SLAB
STA. 18+78.75
CONSTRUCTION LIMITS
BEGIN APPROACH SLAB
STA. 18+53.75
MATCH LINE STA. 20+50 SEE SHEET 32
16
17
18
19
20
198
199
200
201
℄ CONSTRUCTION C.R. 14
Ex LA
Ex LA
Ex LA
EASTBOUND ENTRANCE RAMP

LEGEND

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH = 2")

*ANGLE TAKEN FROM CURVE TANGENT

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN - C.R. 14 (DRY FORK RD.)
STA. 15+50 TO STA. 20+50

HAM-74-3.54/VAR

31
115

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BENCHMARK

BM #2
STA. 21+72.84, 19.23' RT.
IRON PIN SET W/ CAP
ELEV. = 586.13

I.R. 74 WESTBOUND

WESTBOUND ENTRANCE RAMP

EX LA

END WORK
STA. 23+00.00

STRUCTURE NO. HAM-74-0358

BEGIN APPROACH SLAB
STA. 21+28.25

END APPROACH SLAB
STA. 21+53.25

CONSTRUCTION LIMITS

MATCH LINE STA. 20+50 SEE SHEET 31

21 22 N 36° 25' 25" E 23 24 ℄ CONSTRUCTION C.R. 14

3.8'
12.9'
14.2'
2.4'

BM #2

+55

CONSTRUCTION LIMITS

WESTBOUND EXIT RAMP

Ex LA

Ex LA

Ex LA

NOTE
FOR LEGEND SEE SHEET 31.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN - C.R. 14 (DRY FORK RD.)
STA. 20+50 TO STA. 25+50

HAM-74-3.54/VAR

32
115

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BENCHMARK

BM #3
STA. 217+89.50, 68.32' LT.
IRON PIN SET W/ CAP
ELEV. = 540.41

Ex LA Ex LA Ex LA Ex LA Ex LA Ex LA

Ex CH Ex CH

BEGIN PROJECT
STA. 217+05.00
S.L.M. 3.92

ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, 3.0' THICK
STRUCTURE NO. HAM-74-0395L
CONSTRUCTION LIMITS
BEGIN APPROACH SLAB
STA. 218+27.70
REMOVE AND REBUILD
IF NEEDED FOR ACCESS
END APPROACH SLAB
STA. 218+52.70

DRY FORK CREEK

RCP-1

BM #3

I.R. 74 WESTBOUND

7.4'
33.7'
4.4'
26.2'

70.2'
23.0'

215 216 217 218 219

℄ CONSTRUCTION & R/W I.R. 74

S 56° 54' 32" E

F-1

RCP-2

26.6'
3.9'
27.1'
8.0'

I.R. 74 EASTBOUND

15" STM.
15" STM.

+75

MATCH LINE STA. 220+00 SEE SHEET 34

STRUCTURE NO. HAM-74-0395R
CONSTRUCTION LIMITS

Ex LA Ex LA Ex LA Ex LA Ex LA Ex LA

Ex CH

NOTES

1. FOR QUANTITIES SEE SHEET 29.
2. FOR LEGEND SEE SHEET 31.
3. ORDINARY HIGH WATER ELEVATION = 518.0

RCP-1 AREA = 1545.68 SQ. FT.
RCP-2 AREA = 1545.68 SQ. FT.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN - I.R. 74
STA. 214+50 TO STA. 220+00

HAM-74-3.54/VAR

33
115

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BENCHMARK

BM #4
STA. 221+93.02, 68.45' RT.
IRON PIN SET W/ CAP
ELEV. = 535.26

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

Ex LA

ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, 3.0' THICK (TYP.)
STRUCTURE NO. HAM-74-0395L
CONSTRUCTION LIMITS
REMOVE AND REBUILD IF NEEDED FOR ACCESS
DO NOT DISTURB

RCP-3
RCP-4
RCP-2
F-2

70.3'
70.2'
70.3'
23.0'
23.0'
23.0'

+25.0
9.8'
24.2'
4.4'
25.9'
26.8'
3.6'
24.6'
9.2'

15" STM.
15" STM.

I.R. 74 WESTBOUND
I.R. 74 EASTBOUND

S 56° 54' 32" E
℄ CONSTRUCTION & R/W I.R. 74

221 222 223 224 225

MATCH LINE STA. 220+00 SEE SHEET 33

DRY FORK CREEK

BM #4

T.S. STA. 223+06.85

BEGIN APPROACH SLAB
STA. 221+28.05

END APPROACH SLAB
STA. 221+53.05

STRUCTURE NO. HAM-74-0395R

CONSTRUCTION LIMITS

SUSPEND PROJECT
STA. 222+75.00
S.L.M. 4.03

Ex CH

CURVE DATA - I.R. 74
P.I. STA. 229+99.68
Δ = 21° 27' 00" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
Ls = 300.00'
f s = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.23'
k = 149.99'
p = 1.31'
D c = 15° 27' 00" (RT)
Lc = 772.50'
Ts = 692.84'
Es = 52.26'
S.C. STA. 226+06.85
C.S. STA. 233+79.35
S.T. STA. 236+79.35

RCP-3 AREA = 1545.68 SQ. FT.
RCP-4 AREA = 1545.68 SQ. FT.

NOTES

1. FOR QUANTITIES SEE SHEET 29.
2. FOR LEGEND SEE SHEET 31.
3. ORDINARY HIGH WATER ELEVATION = 518.0

PLAN - I.R. 74
STA. 220+00 TO STA. 225+50

HAM-74-3.54/VAR

BENCHMARKS

BM #5
STA. 237+69.53, 9.54' LT.
IRON PIN SET W/ CAP
ELEV. = 570.12

BM #6
STA. 238+28.47, 2.03' RT.
IRON PIN SET W/ CAP
ELEV. = 551.98

Ex LA

I.R. 74 WESTBOUND

I.R. 74 EASTBOUND

℄ CONSTRUCTION & R/W I.R. 74

233 234 235 236 237 238

CLS. STA. 233+79.35

STRUCTURE NO. HAM-74-0431L

CONSTRUCTION LIMITS

REMOVE AND REBUILD IF NEEDED FOR ACCESS

+80.0

9.8'

23.5'

4.2'

26.7'

26.0'

3.6'

24.2'

10.0'

BM #5

BM #6

S 35° 27' 32" E

80" STM

F-3

S.T. STA. 236+79.35

MATCH LINE STA. 238+50 SEE SHEET 36

EX. WATER

F.O.

CONSTRUCTION LIMITS

END APPROACH SLAB
STA. 237+74.05

BEGIN APPROACH SLAB
STA. 237+49.05

STRUCTURE NO. HAM-74-0431R

RESUME PROJECT
STA. 236+25.00
S.L.M. 4.28

C.R. 457 (HARRISON ROAD)

U/G TEL. & CABLE

Ex R/W

CURVE DATA - I.R. 74
P.I. STA. 229+99.68
Δ = 21° 27' 00" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
Ls = 300.00'
f s = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.23'
k = 149.99'
p = 1.31'
D c = 15° 27' 00" (RT)
Lc = 772.50'
Ts = 692.84'
Es = 52.26'
I.S. STA. 223+06.85
S.C. STA. 226+06.85

NOTE

FOR QUANTITIES SEE SHEET 29.

LEGEND

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
EB (DEPTH = 2")
WB (VARIABLE DEPTH: 2" TO 4")

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN - I.R. 74
STA. 233+00 TO STA. 238+50

HAM-74-3.54/ VAR

35
115

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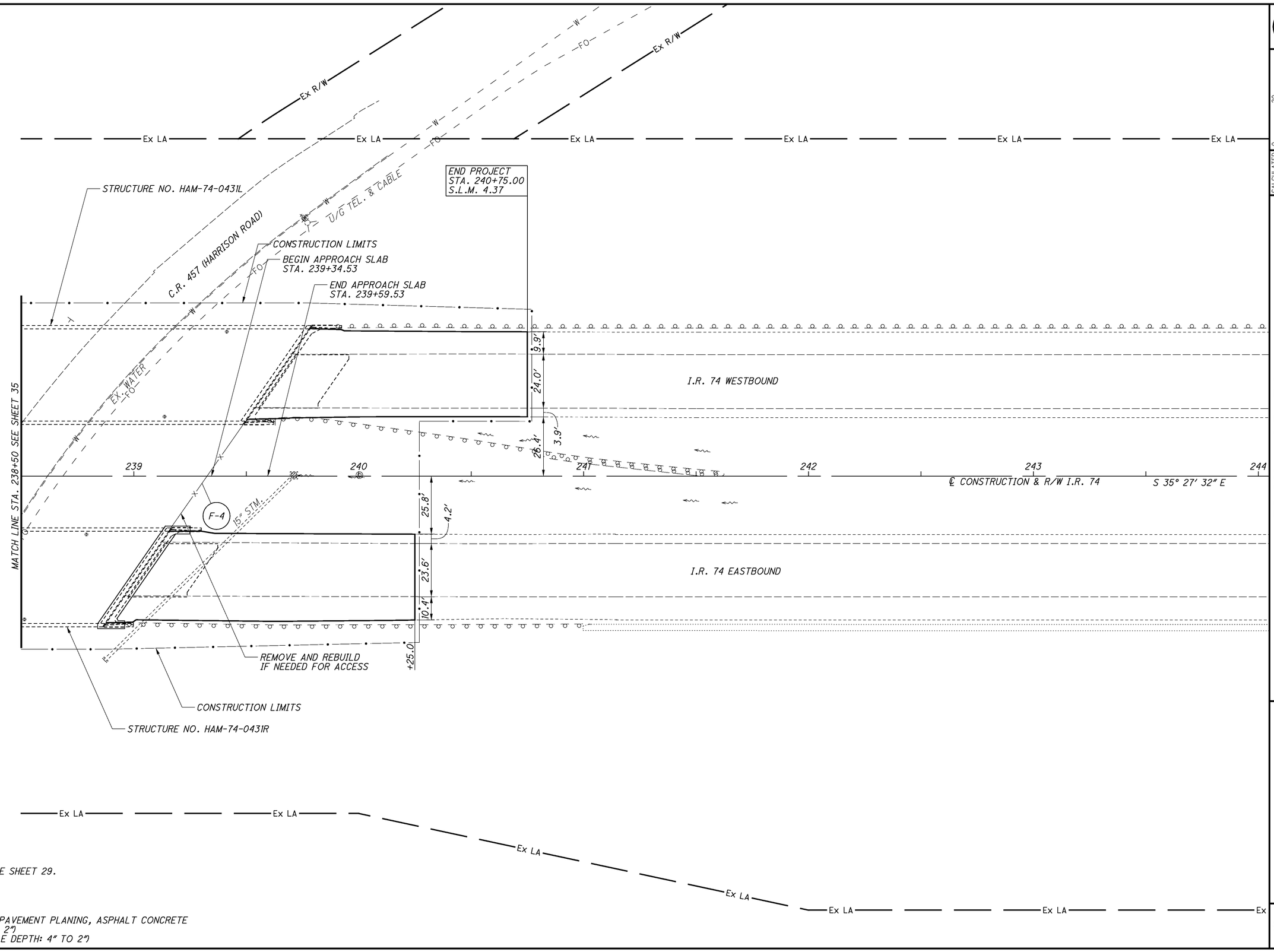


NOTE

FOR QUANTITIES SEE SHEET 29.

LEGEND

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
EB (DEPTH = 2")
WB (VARIABLE DEPTH: 4" TO 2")

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN - I.R. 74
STA. 238+50 TO STA. 244+00

HAM-74-3.54/VAR

36
115

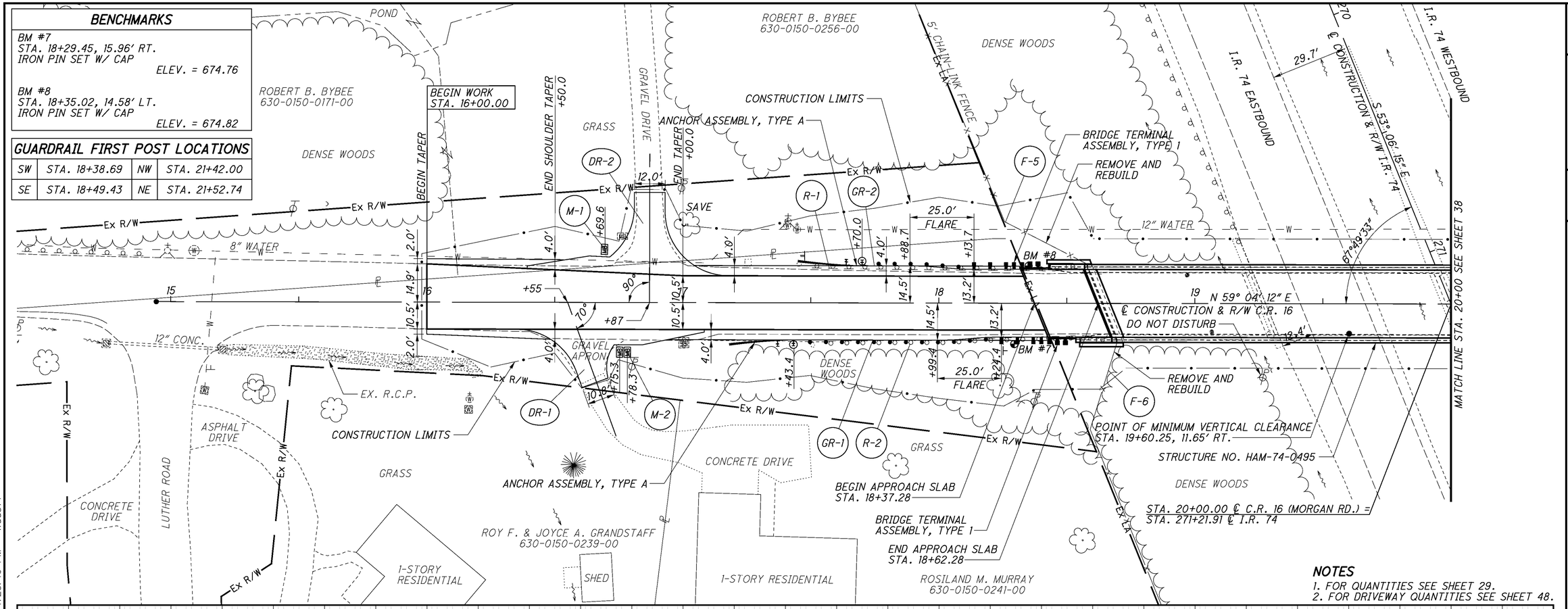
BENCHMARKS

BM #7
STA. 18+29.45, 15.96' RT.
IRON PIN SET W/ CAP
ELEV. = 674.76

BM #8
STA. 18+35.02, 14.58' LT.
IRON PIN SET W/ CAP
ELEV. = 674.82

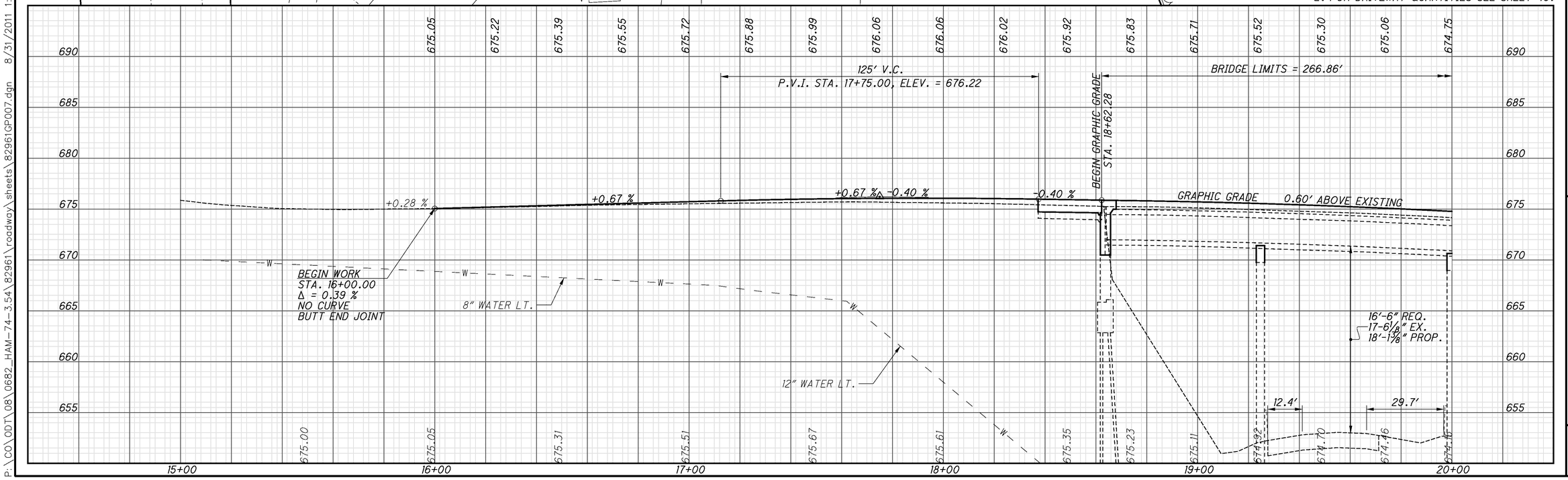
GUARDRAIL FIRST POST LOCATIONS

SW	STA. 18+38.69	NW	STA. 21+42.00
SE	STA. 18+49.43	NE	STA. 21+52.74



NOTES

1. FOR QUANTITIES SEE SHEET 29.
2. FOR DRIVEWAY QUANTITIES SEE SHEET 48.



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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN AND PROFILE - C.R. 16 (MORGAN RD.) STA. 15+00 TO STA. 20+00

HAM-74-3.54/VAR

37
115

BENCHMARKS

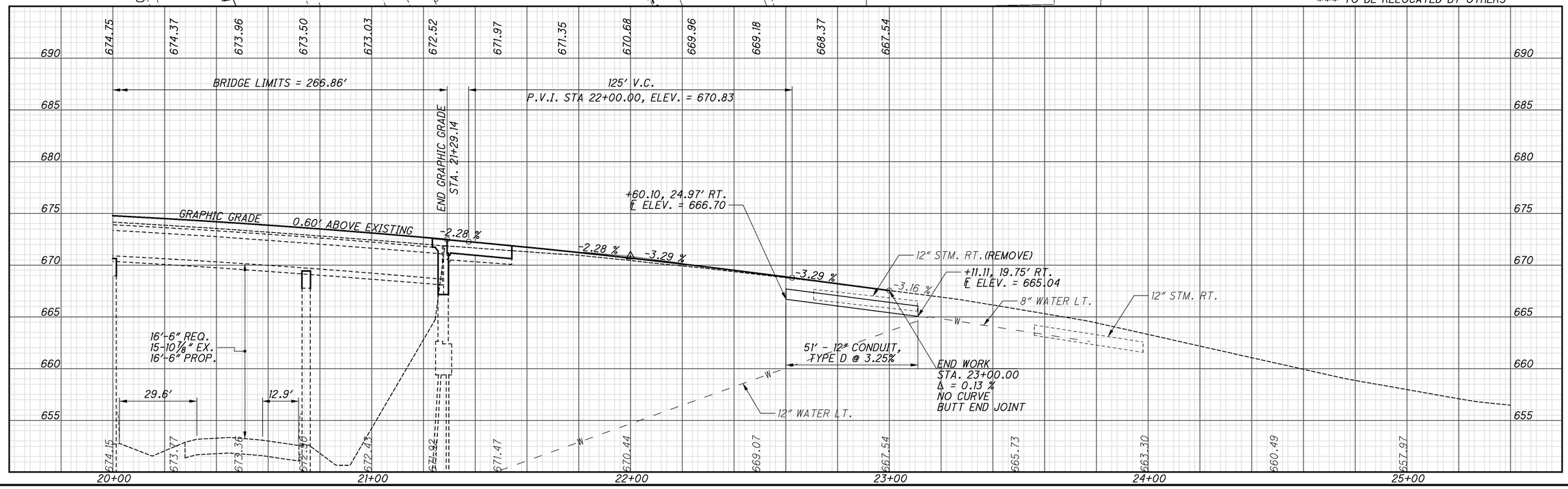
BM #9
STA. 21+32.58, 23.49' LT.
IRON PIN SET W/ CAP
ELEV. = 670.69

BM #10
STA. 21+55.58, 14.82' RT.
IRON PIN SET W/ CAP
ELEV. = 671.33

CONSTRUCTION LIMITS
REINFORCED SODDING
CURB, TYPE 4-C
BRIDGE TERMINAL ASSEMBLY, TYPE 1
END APPROACH SLAB STA. 21+54.14
STA. 20+00.00 ℄ C.R. 16 (MORGAN RD.) = STA. 271+21.91 ℄ I.R. 74
REMOVE AND REBUILD
STRUCTURE NO. HAM-74-0495
BEGIN APPROACH SLAB STA. 21+29.14
MATCH LINE STA. 20+00 SEE SHEET 37
N 59° 04' 12" E ℄ CONSTRUCTION & R/W C.R. 16
SEE NOTE 3
S 53° 06' 15" E 272.12' ℄ CONSTRUCTION & R/W I.R. 74
I.R. 74 EASTBOUND
I.R. 74 WESTBOUND
29.6'
12.9'
REMOVE AND REBUILD
BRIDGE TERMINAL ASSEMBLY, TYPE 1
CURB, TYPE 4-C
REINFORCED SODDING
CONSTRUCTION LIMITS
ANCHOR ASSEMBLY, TYPE A
ANCHOR ASSEMBLY, CONCRETE TYPE T
5' CHAIN-LINK FENCE
Ex LA
WILLIAM F. & SUSAN M. KOHL 630-0150-0228-00
LAWRENCE R. & WANDA L. SNYDER 630-0150-0159-00
GRAVEL DRIVE
BEGIN TAPER +25.0
END TAPER +92.0
END WORK STA. 23+00.00
DENSE TREES
25.0' FLARE
BM #9
BM #10
12" WATER
Ex SH
Ex R/W
GRASS
DAVID & YOHO SHIRRELL 630-0150-0220-00
1-STORY COMMERCIAL
GUY SCHAIBLE 630-0150-0221-00
GRAVEL DRIVE
8" WATER
12" CMP
12" STM.
DO NOT DISTURB
REMOVE
12" TYPE D
HENRY & DIANE PALANCI 630-0150-0175-00
BOCK REALTY, LLC. 630-0150-0205-00
ASPHALT DRIVE
P.C. STA. 23+75.00
P.T. STA. 24+56.52
E-1 R-3 GR-3 DR-3 DR-4 R-6 D-1 R-8 R-7 DR-5 R-5 M-3 C-1 C-2 R-4 F-8 F-7 E-2 GR-4

CURVE DATA
P.I.= STA. 24+15.77
Δ = 3° 56' 39" (RT)
Dc = 4° 50' 18"
R = 1,184.20'
T = 40.78'
L = 81.52'
E = 0.70'

NOTES
1. FOR QUANTITIES SEE SHEET 29.
2. FOR CURB DETAILS SEE SCD DM-4.1.
3. POINT OF MINIMUM VERTICAL CLEARANCE, STA. 20+50.99, 11.16' RT.
4. FOR DRIVEWAY QUANTITIES SEE SHEET 48.
*** TO BE RELOCATED BY OTHERS



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

PLAN AND PROFILE - C.R. 16 (MORGAN RD.)
STA. 20+00 TO STA. 25+50

HAM-74-3.54/VAR

38
115

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SEEDING	
END WIDTH	SQ. YDS.
20	0
0	
	0
0	
0	
0	
0	

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

680 675 670 665 660

AHEAD
BACK

EX R/W

8" WATER

675.05
16+00.00
675.05
BEGIN WORK

671.4

EX. ROCK CHANNEL PROTECTION

671.9

672.7

15+75.00
674.98

15+50.00
675.00

ITEM 202 - PAVEMENT REMOVED, ASPHALT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	0		
0	0		
		0	0
0	0		
		0	0
0	0		
		0	0
0	0		
		0	0

CALCULATED MMB
CHECKED KAM

CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 15+50.00 TO STA. 16+00.00

HAM-74-3.54/ VAR

39
115

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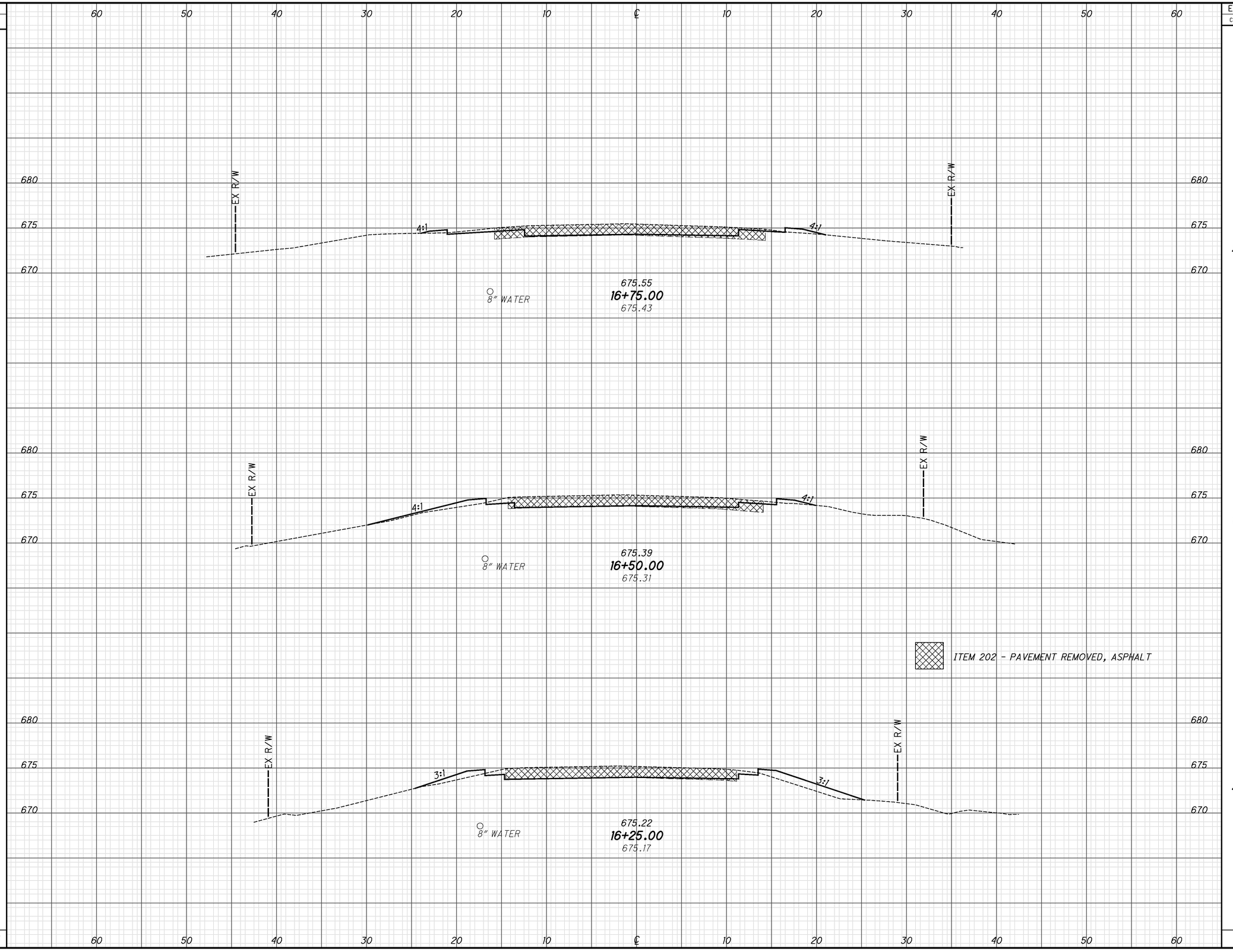
SEEDING	
END WIDTH	SQ. YDS.
42	117
42	114
40	83
	314

END AREA	
CUT	FILL
2	12
1	11
1	11
2	13

VOLUME	
CUT	FILL
1	11
1	11
3	6
5	28

CALCULATED MMB
CHECKED KAM



CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 16+25.00 TO STA. 16+75.00

HAM-74-3.54/VAR

40
115

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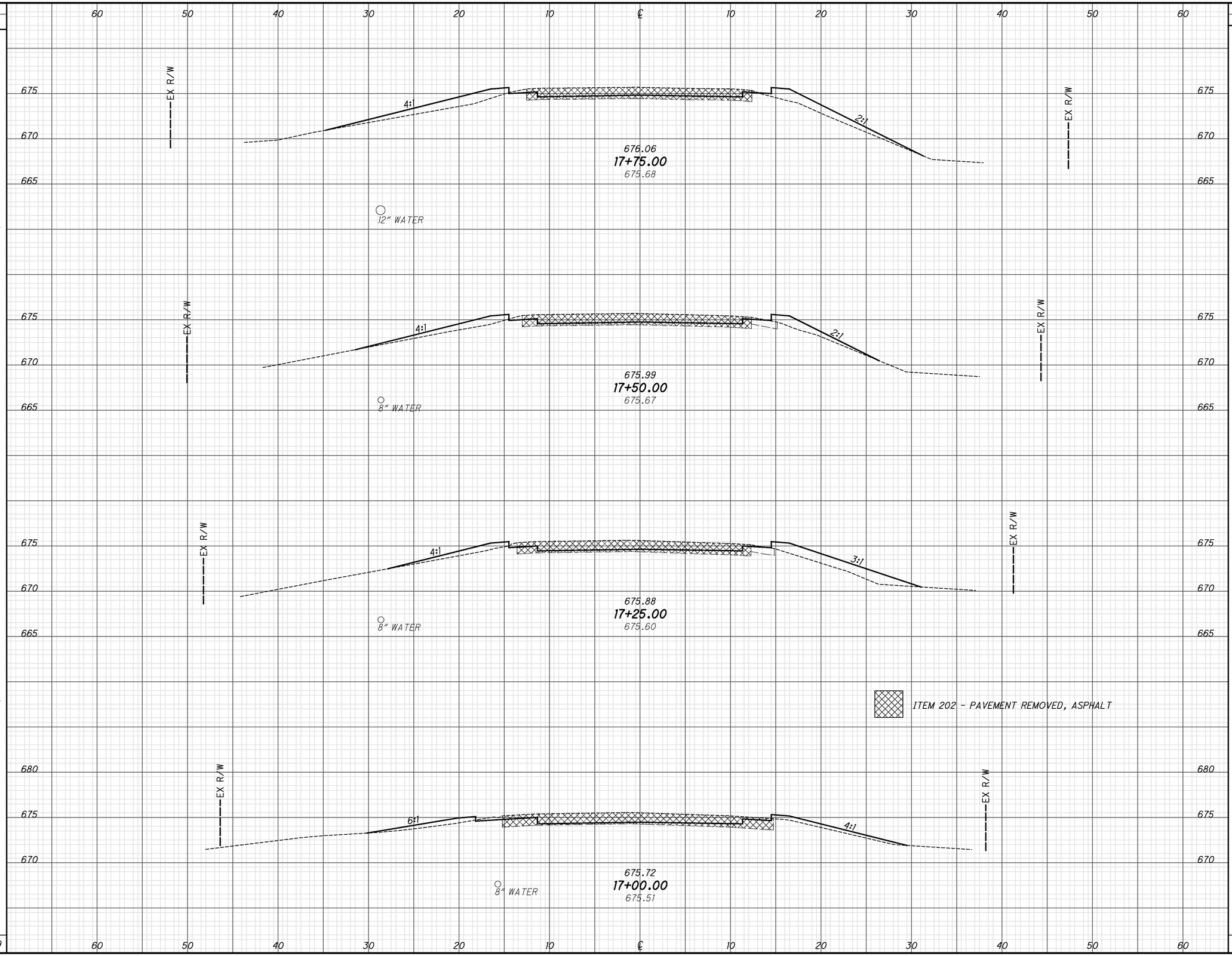
SEEDING END WIDTH	SEEDING SQ. YDS.
70	188
65	174
60	156
52	131
	649



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1	35		
		1	27
1	24		
		1	25
1	31		
		1	25
1	22		
		1	16
		4	93

CALCULATED MMB
CHECKED KAM

CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 17+00.00 TO STA. 17+75.00

HAM-74-3.54/ VAR

41
115

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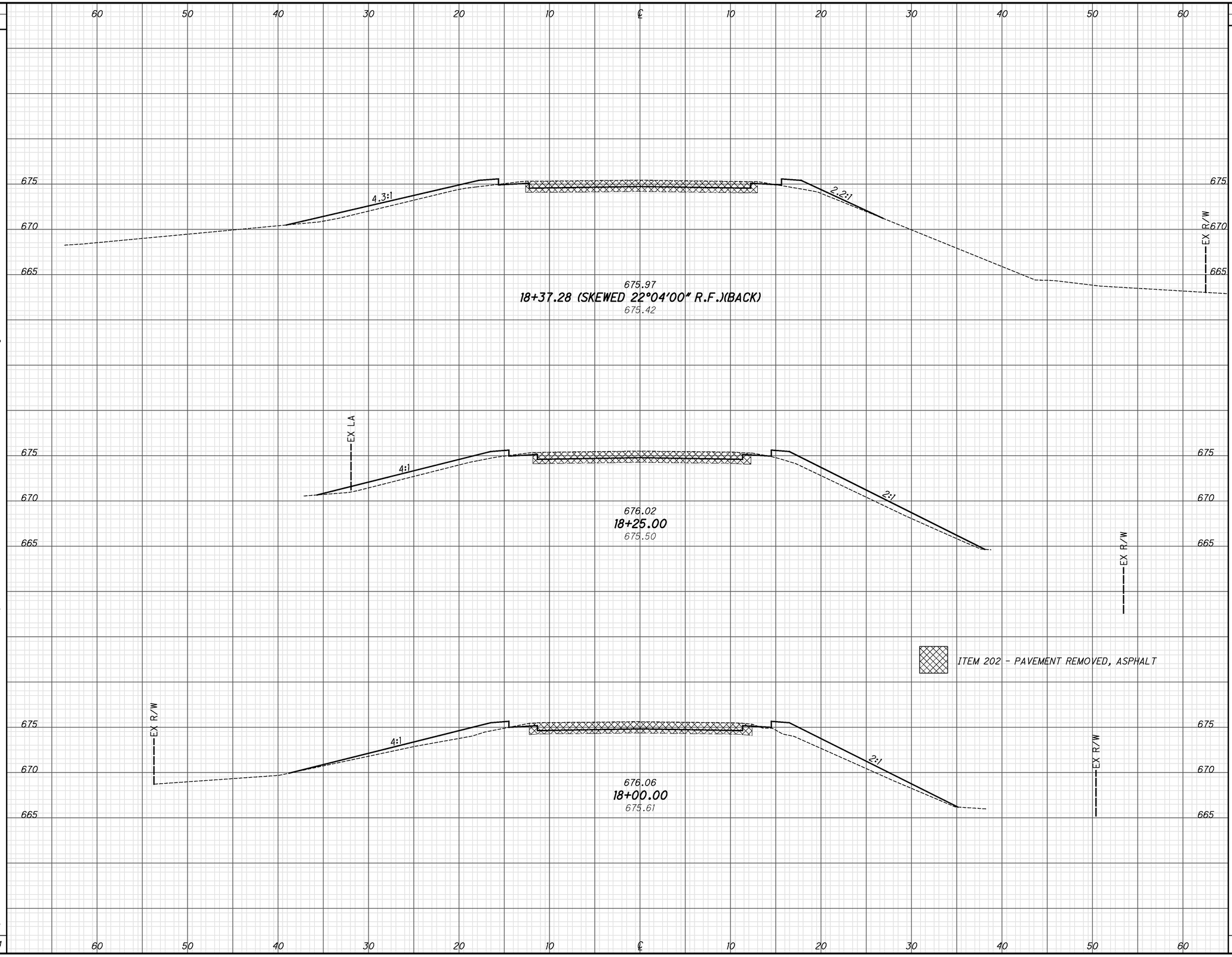
SEEDING	
END WIDTH	SQ. YDS.
80	102
70	201
75	201
	504



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	31		
		1	17
1	42		
		1	38
1	39		
		1	34
		3	89

CALCULATED MMB
CHECKED KAM

CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 18+00.00 TO STA. 18+37.28

HAM-74-3.54/ VAR

42
115

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SEEDING END WIDTH	SEEDING SQ. YDS.
20	
0	
0	
59	
59	
	192
79	
	192

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

670
AHEAD
BACK
665
660

672.45
21+29.14 (SKEWED 22°04'00" R.F.)(AHEAD)
671.84
BEGIN APPROACH SLAB

675
AHEAD
BACK
670
665

50:1

28:8:1

675.87
18+62.28 (SKEWED 22°04'00" R.F.)(BACK)
675.27
END APPROACH SLAB

ITEM 202 - WEARING COURSE REMOVED

675
670
665

4.3:1

2.2:1

EX R/W

675.97
18+37.28 (SKEWED 22°04'00" R.F.)(AHEAD)
675.42
BEGIN APPROACH SLAB

660

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
5	0		
0	0		
0	0		
40	0		
40	0		
		22	7
8	16		
		22	7

CALCULATED MMB
CHECKED KAM

CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 18+37.28 TO STA. 21+29.14

HAM-74-3.54/VAR

43
115

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SEEDING	
END WIDTH	SQ. YDS.
59	146
67	121
67	267

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

EX SH

675 670 665

2:1

3:1

668.2

671.35

21+75.00

671.03

EX LA

4:1 4:1

669.3

675 670 665

2.2:1

3.2:1

668.1

4.3:1

669.5

671.87

21+54.14 (SKEWED 22°04'00" R.F.)(AHEAD)

671.40

ITEM 202 - WEARING COURSE REMOVED

ITEM 202 - PAVEMENT REMOVED, ASPHALT

675 670 665

2.2:1

3.2:1

668.1

4.3:1

669.5

671.87

21+54.14 (SKEWED 22°04'00" R.F.)(BACK)

671.40

END APPROACH SLAB

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

END AREA	
CUT	FILL
84	15
70	19
78	5

VOLUME	
CUT	FILL
59	13
38	2
97	15

CALCULATED MMB

CHECKED KAM

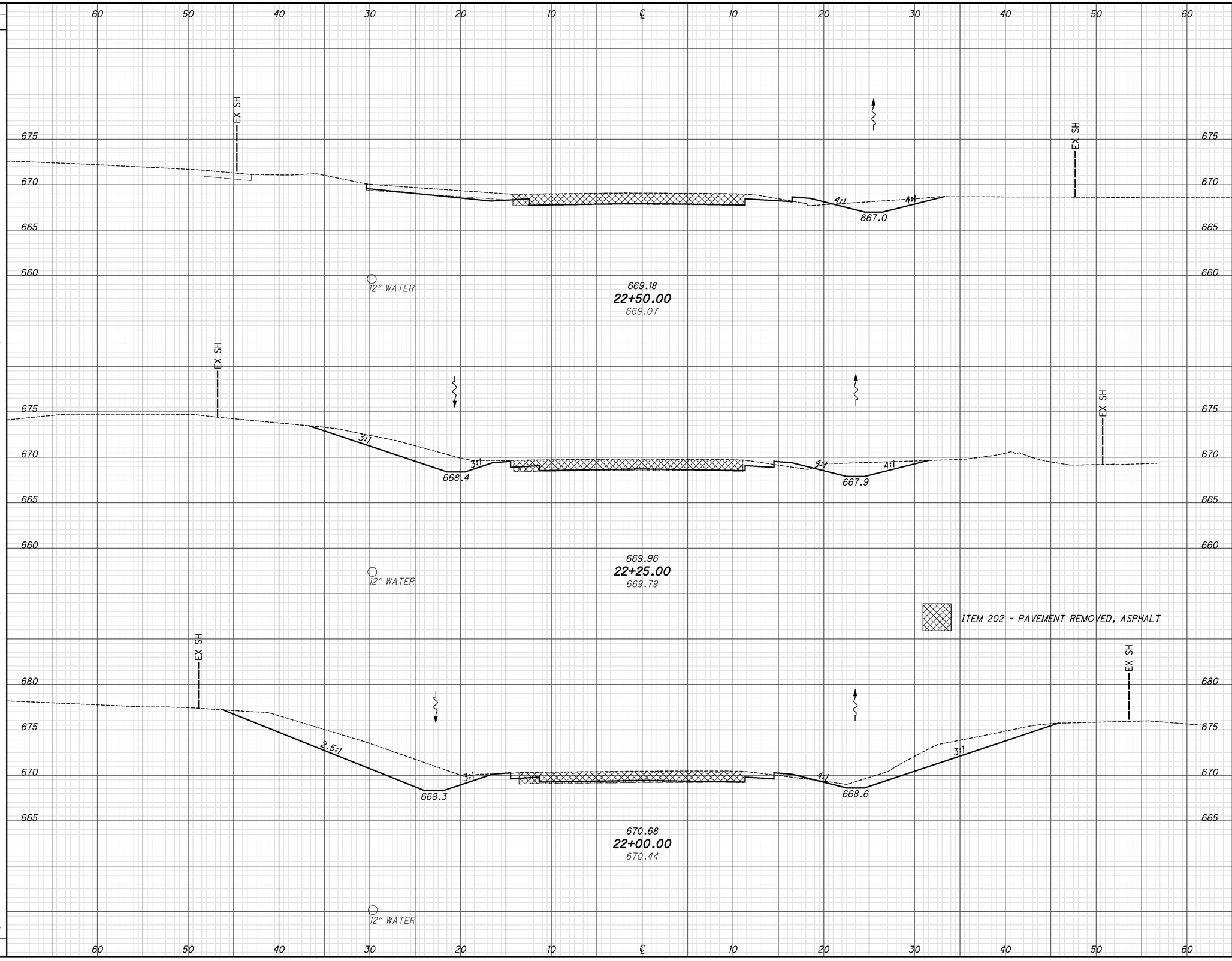
CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 21+54.14 TO STA. 21+75.00

HAM-74-3.54/VAR

SEEDING END WIDTH	SEEDING SQ. YDS.
31	138
68	196
73	183
	517

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	5	28	5
38	6	59	6
89	6	81	10
		168	21

CALCULATED MMB
CHECKED KAM



CROSS SECTIONS - C.R. 16 (MORGAN RD.) STA. 22+00.00 TO STA. 22+50.00

HAM-74-3.54/VAR

45
115

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SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
28		5	0		
	76			8	1
27		12	2		
	69			11	2
23		12	3		
	75			16	4
	220			35	7

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

675 670 665 660

EX SH

12" WATER

3:1 3:1 664.5

23+25.00
666.75

6:1

12" CMP 12" TYPE D REMOVE

667.54
23+00.00
667.54
END WORK

ITEM 202 - PAVEMENT REMOVED, ASPHALT

668.37
22+75.00
668.34

CALCULATED MMB
CHECKED KAM

CROSS SECTIONS - C.R. 16 (MORGAN RD.)
STA. 22+75.00 TO STA. 23+25.00

HAM-74-3.54/ VAR

46
115

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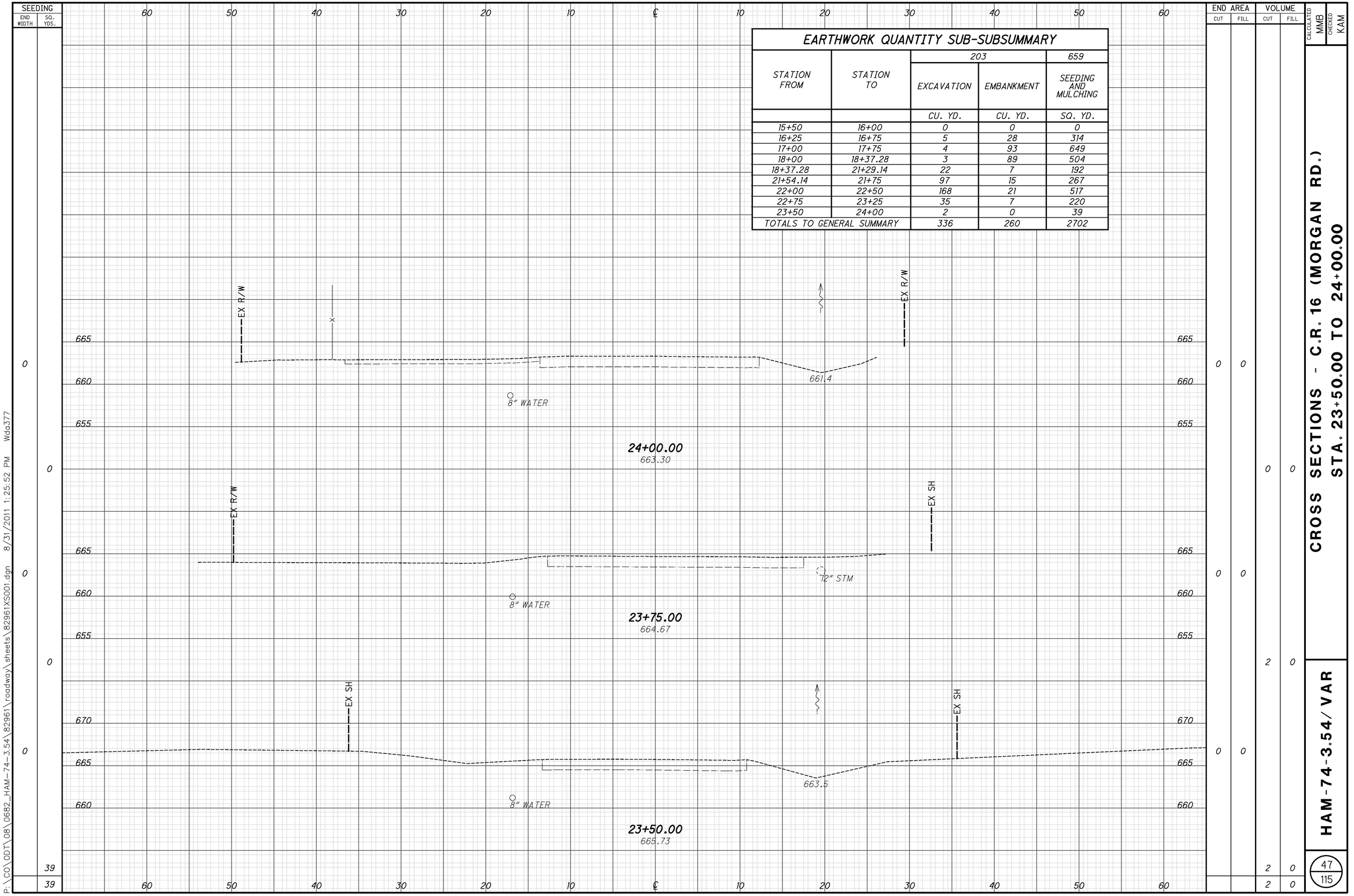
SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0
0	0
39	39

EARTHWORK QUANTITY SUB-SUBSUMMARY

STATION FROM	STATION TO	203 EXCAVATION	203 EMBANKMENT	659 SEEDING AND MULCHING
		CU. YD.	CU. YD.	SQ. YD.
15+50	16+00	0	0	0
16+25	16+75	5	28	314
17+00	17+75	4	93	649
18+00	18+37.28	3	89	504
18+37.28	21+29.14	22	7	192
21+54.14	21+75	97	15	267
22+00	22+50	168	21	517
22+75	23+25	35	7	220
23+50	24+00	2	0	39
TOTALS TO GENERAL SUMMARY		336	260	2702



END AREA	
CUT	FILL
0	0
0	0
0	0
0	0
0	0

VOLUME	
CUT	FILL
0	0
2	0
2	0

CALCULATED MMB
CHECKED KAM

CROSS SECTIONS - C.R. 16 (MORGAN RD.) STA. 23+50.00 TO 24+00.00

HAM-74-3.54/VAR

47
115

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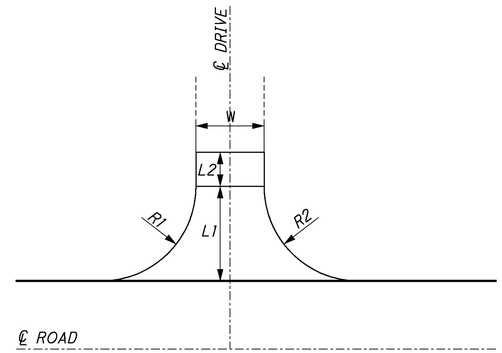
SHEET NO.	REFERENCE NO.	STATION	SIDE	DRIVE TYPE	DRIVE ANGLE	APRON LENGTH "L1"	DRIVEWAY LENGTH "L2"	WIDTH "W"	R1 (LEFT SIDE RADII OF DRIVE LOOKING FROM ℄)	R2 (RIGHT SIDE RADII OF DRIVE LOOKING FROM ℄)	CADD GENERATED SURFACE AREA	204 SUBGRADE COMPACTION	301 5" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	407 TACK COAT (0.075 GAL./SQ. YD.)	448 1 ¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	452 6" NON-REINFORCED CONCRETE PAVEMENT				
					DEG.	FT.	FT.	FT.	FT.	FT.	SQ. FT.	SQ. YD.	CU. YD.	GAL.	GAL.	SQ. YD.				
37	DR-1	16+55.00	RT.	RES.	110	21.9	0.0	10.8	15.00	25.00	527.74	58.6				58.6				
37	DR-2	16+87.00	LT.	RES.	90	26.4	5.5	12.0	25.00	25.00	765.98	85.1				85.1				
38	DR-3	22+50.00	LT.	RES.	80	20.2	10.3	10.0	25.00	N/A	511.77	56.9				56.9				
38	DR-4	22+72.00	LT.	RES.	70	16.5	11.6	12.0	N/A	25.00	478.27	53.1				53.1				
38	DR-5	22+85.00	RT.	COMM.	90	18.8	0.0	32.9	25.00	25.00	974.01	108.2	15.0	8.1	3.8					
TOTALS CARRIED TO GENERAL SUMMARY												362	15	8	4	254				

TYPE 1 DRIVEWAY PLAN VIEW (TYPICAL)



PROPOSED RESIDENTIAL DRIVEWAY BUILDUP:

ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT
ITEM 204 - SUBGRADE COMPACTION

PROPOSED COMMERCIAL DRIVEWAY BUILDUP:

ITEM 448 - 1 ¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)
ITEM 407 - TACK COAT (0.075 GAL./SQ. YD.)
ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)
ITEM 204 - SUBGRADE COMPACTION

CALCULATED KAM
CHECKED KPC

DRIVEWAY SUBSUMMARY

HAM-74-3.54/VAR

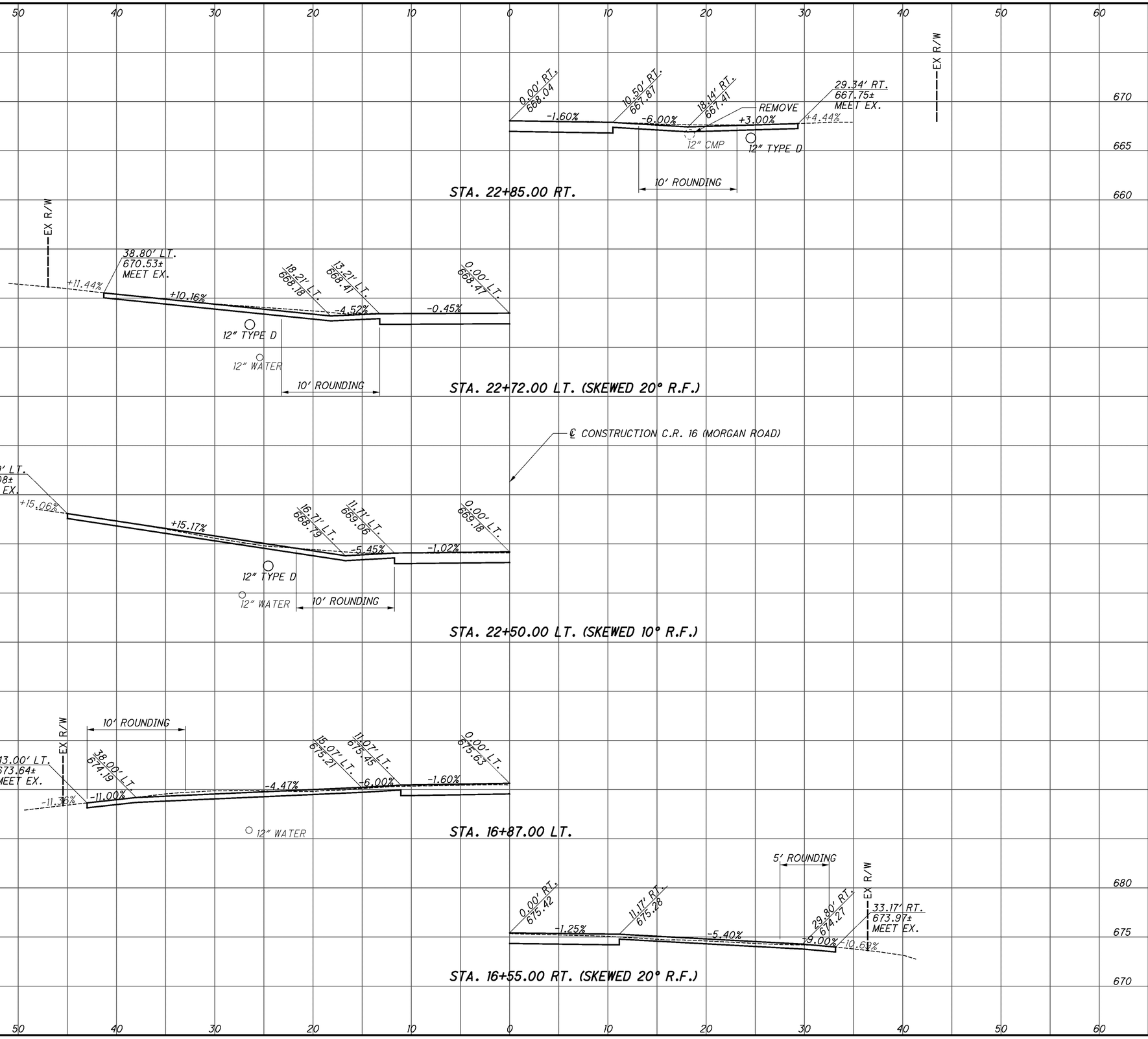
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

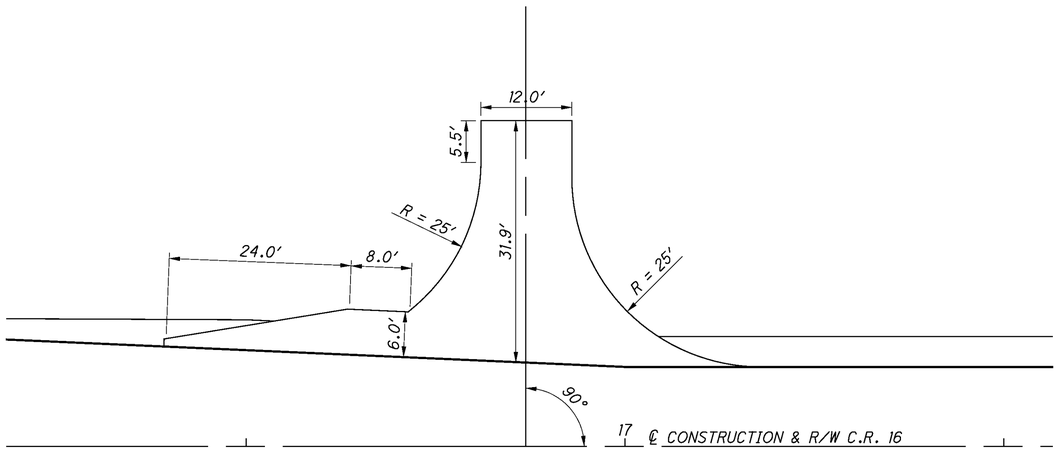
CALCULATED MMB

CHECKED KAM

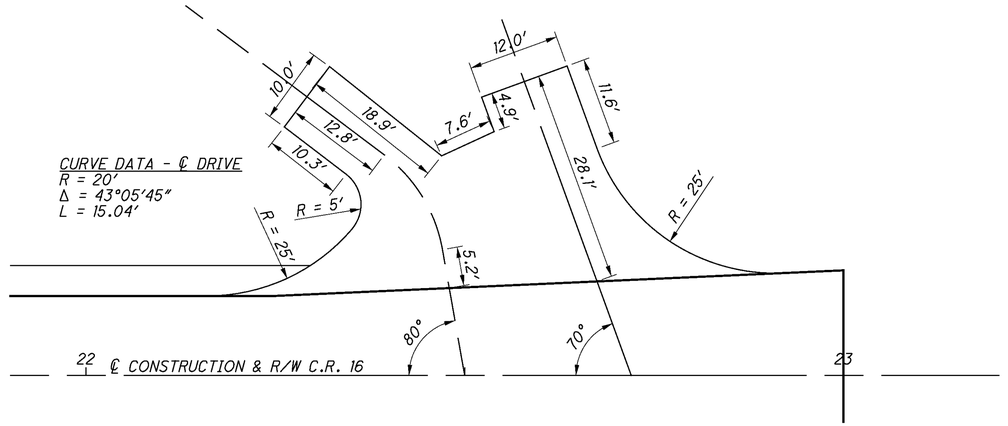


DRIVEWAY PROFILES - C.R. 16 (MORGAN RD.)
STA. 16+55.00 TO STA. 22+85.00

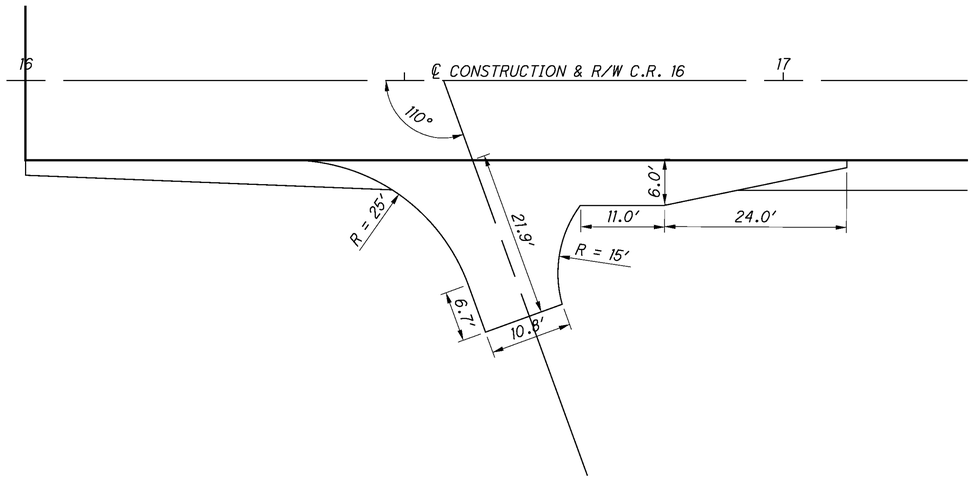
HAM-74-3.54/VAR



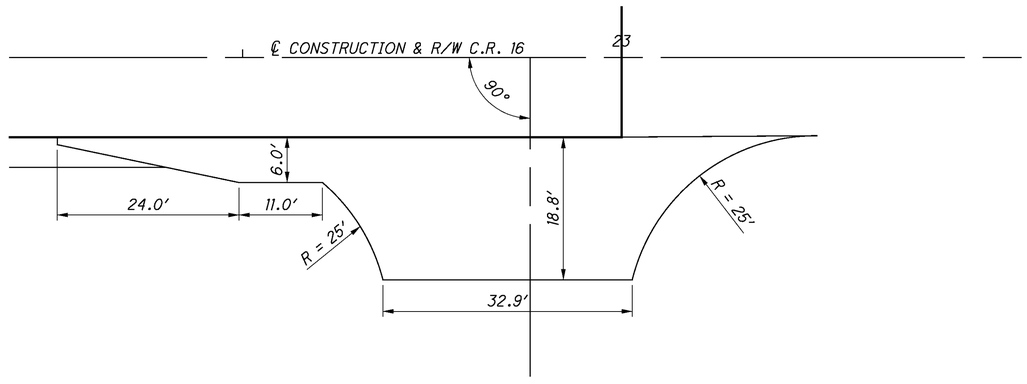
STA. 16+87.00 LT.



STA. 22+50.00 LT., STA. 22+72.00 LT.



STA. 16+55.00 RT.



STA. 22+85.00 RT.

CALCULATED MMB
CHECKED KAM

DRIVE DETAILS - C.R. 16 (MORGAN RD.)

HAM-74-3.54/VAR

50
115

NOTES

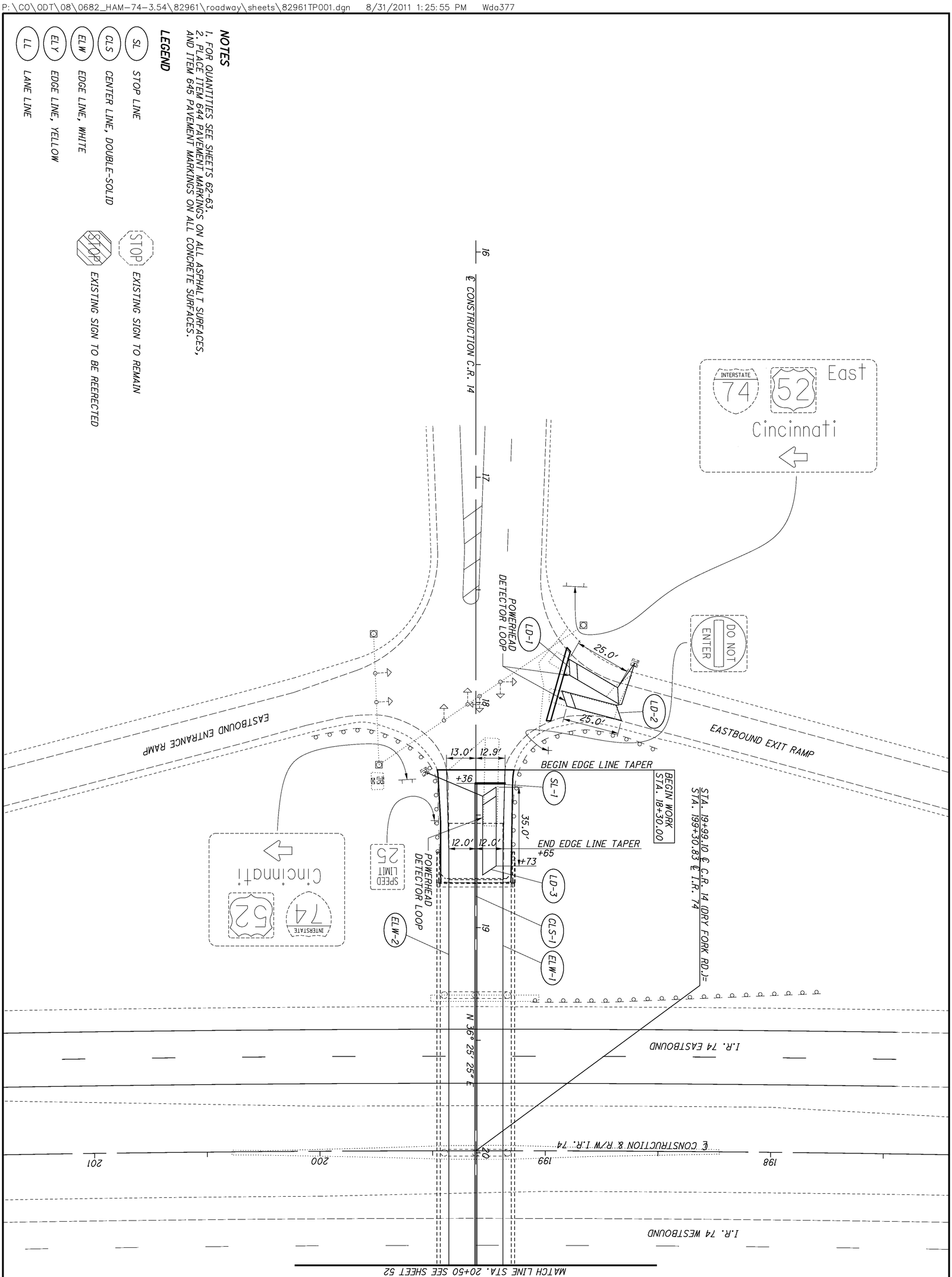
1. FOR QUANTITIES SEE SHEETS 62-63.
2. PLACE ITEM 644 PAVEMENT MARKINGS ON ALL ASPHALT SURFACES, AND ITEM 645 PAVEMENT MARKINGS ON ALL CONCRETE SURFACES.

LEGEND

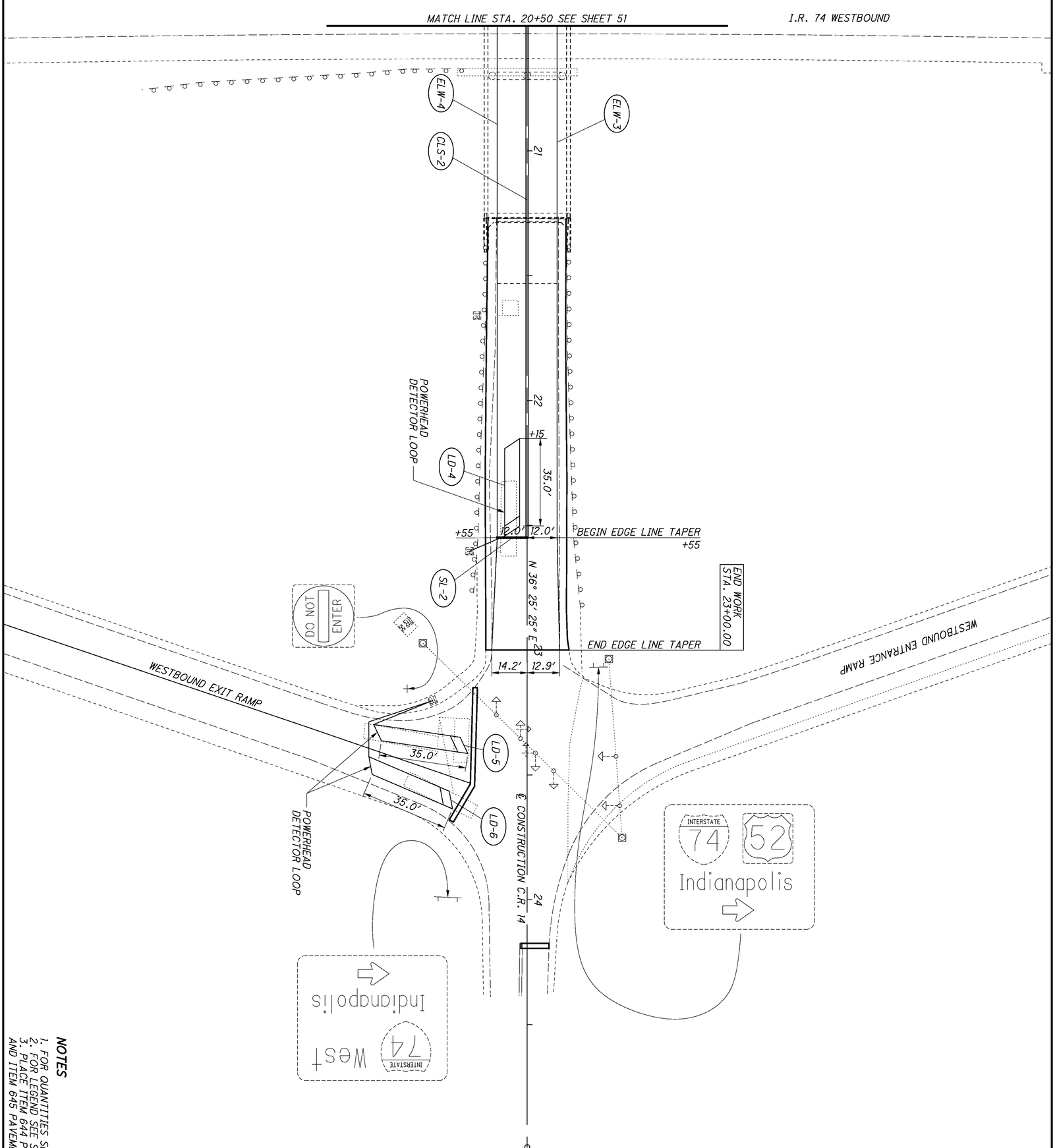
- SL — STOP LINE
- CLS — CENTER LINE, DOUBLE-SOLID
- ELW — EDGE LINE, WHITE
- ELY — EDGE LINE, YELLOW
- LL — LANE LINE

STOP — EXISTING SIGN TO REMAIN

STOP — EXISTING SIGN TO BE REERECTED

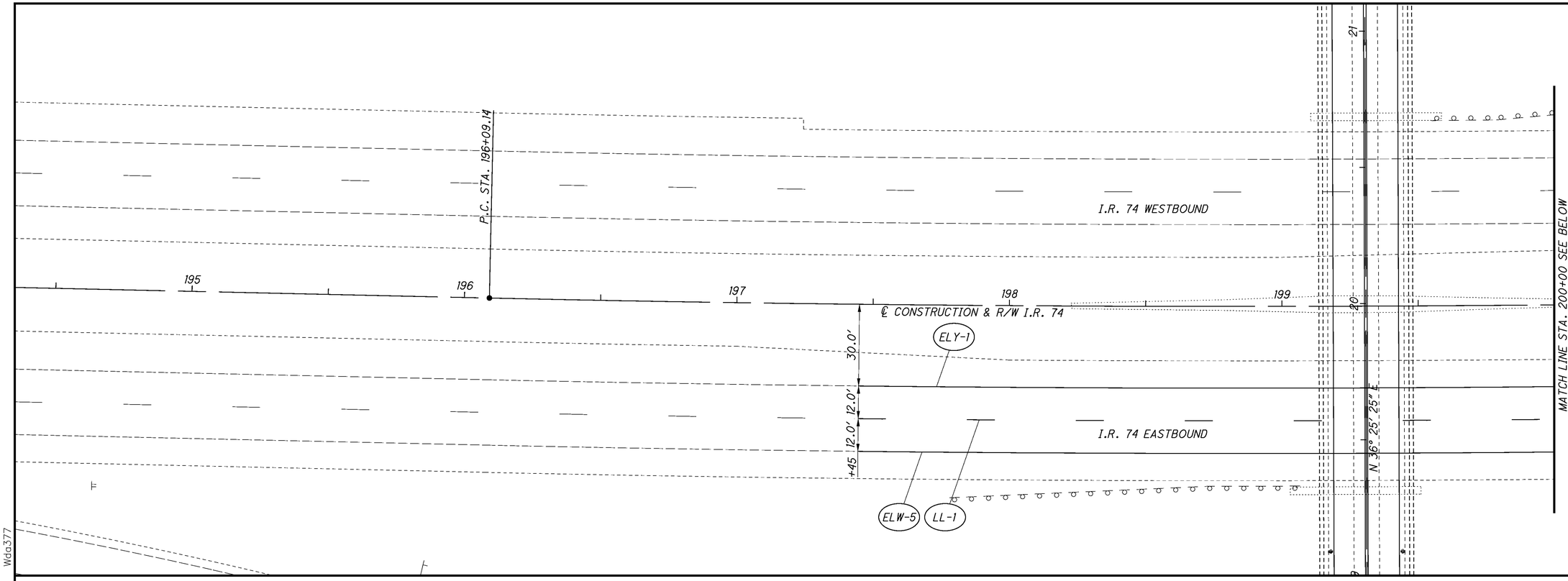


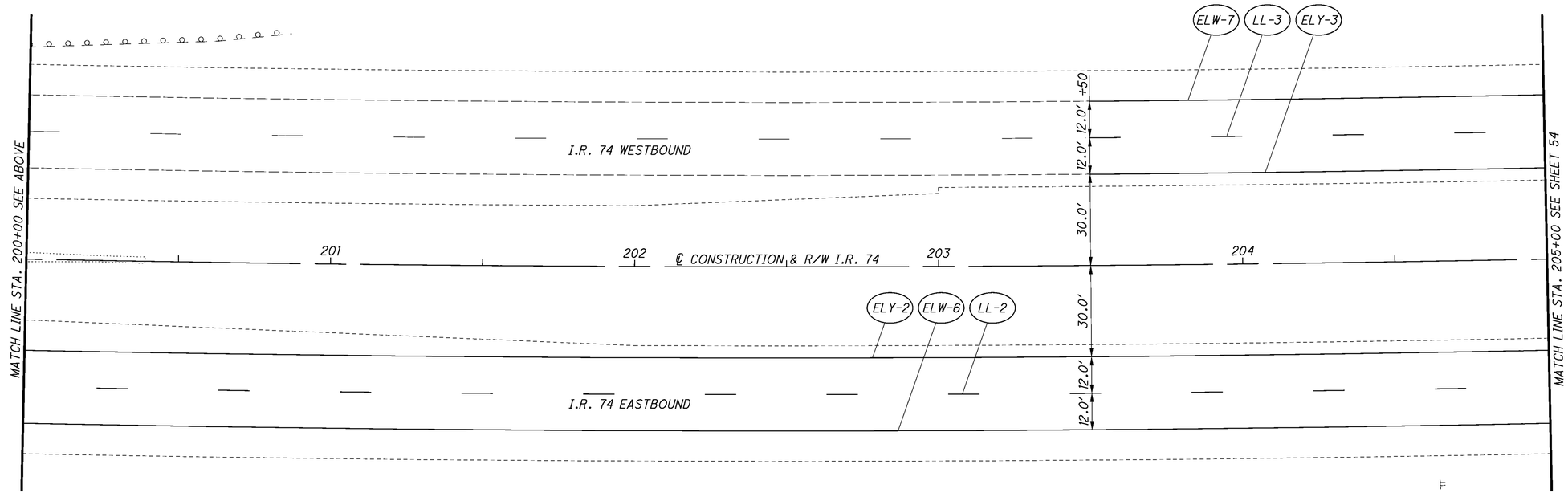
51 / 115	HAM-74-3.54/ VAR	TRAFFIC CONTROL PLAN-C.R. 14 (DRY FORK RD.) STA. 16+00 TO STA. 20+50	CALCULATED KAM / CHECKED KPC	0 10 20 40 HORIZONTAL SCALE IN FEET



NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. PLACE ITEM 644 PAVEMENT MARKINGS ON ALL ASPHALT SURFACES, AND ITEM 645 PAVEMENT MARKINGS ON ALL CONCRETE SURFACES.





NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - I.R. 74
STA. 194+50 TO STA. 205+00

HAM-74-3.54/VAR

53
115

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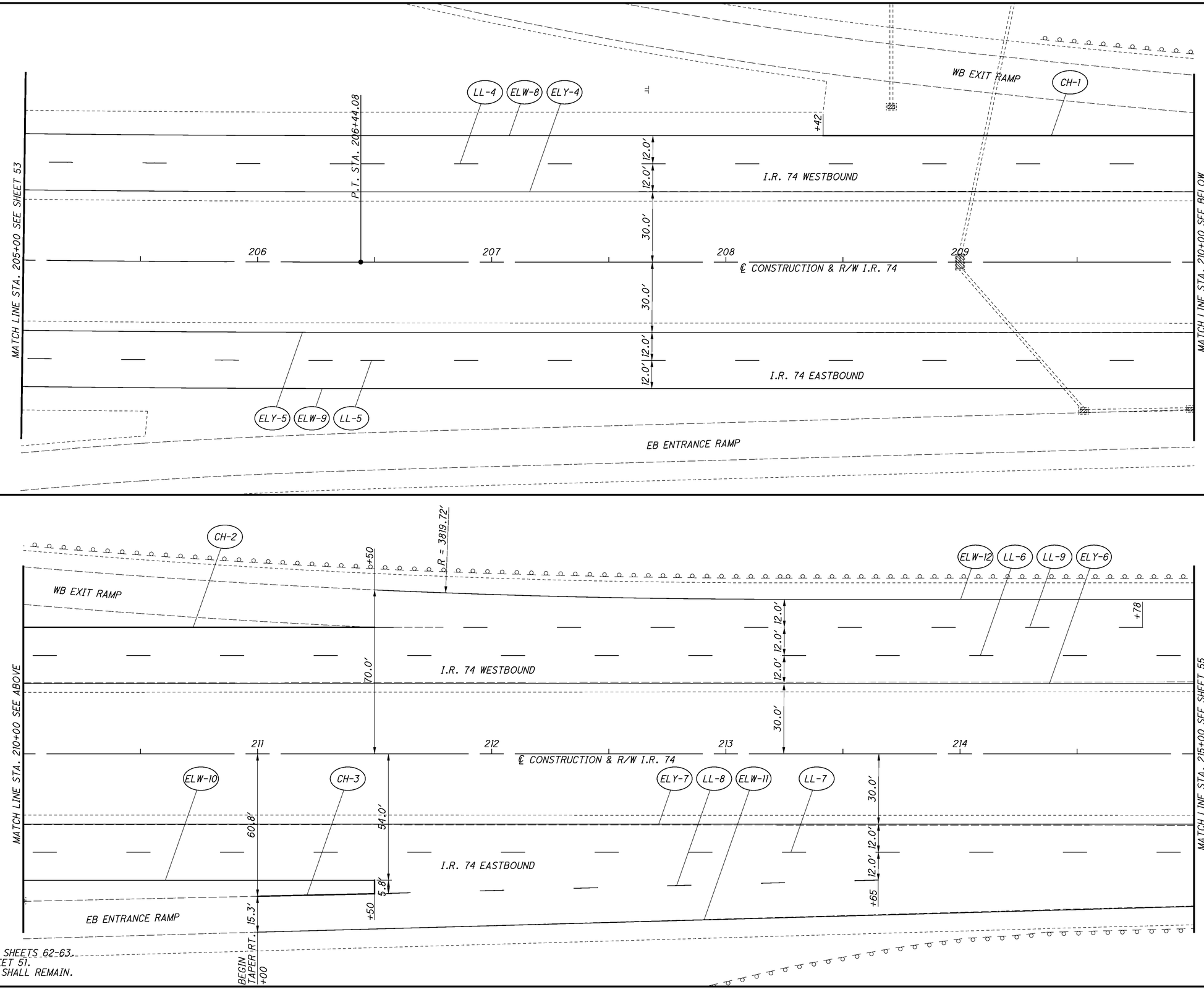


NOTES

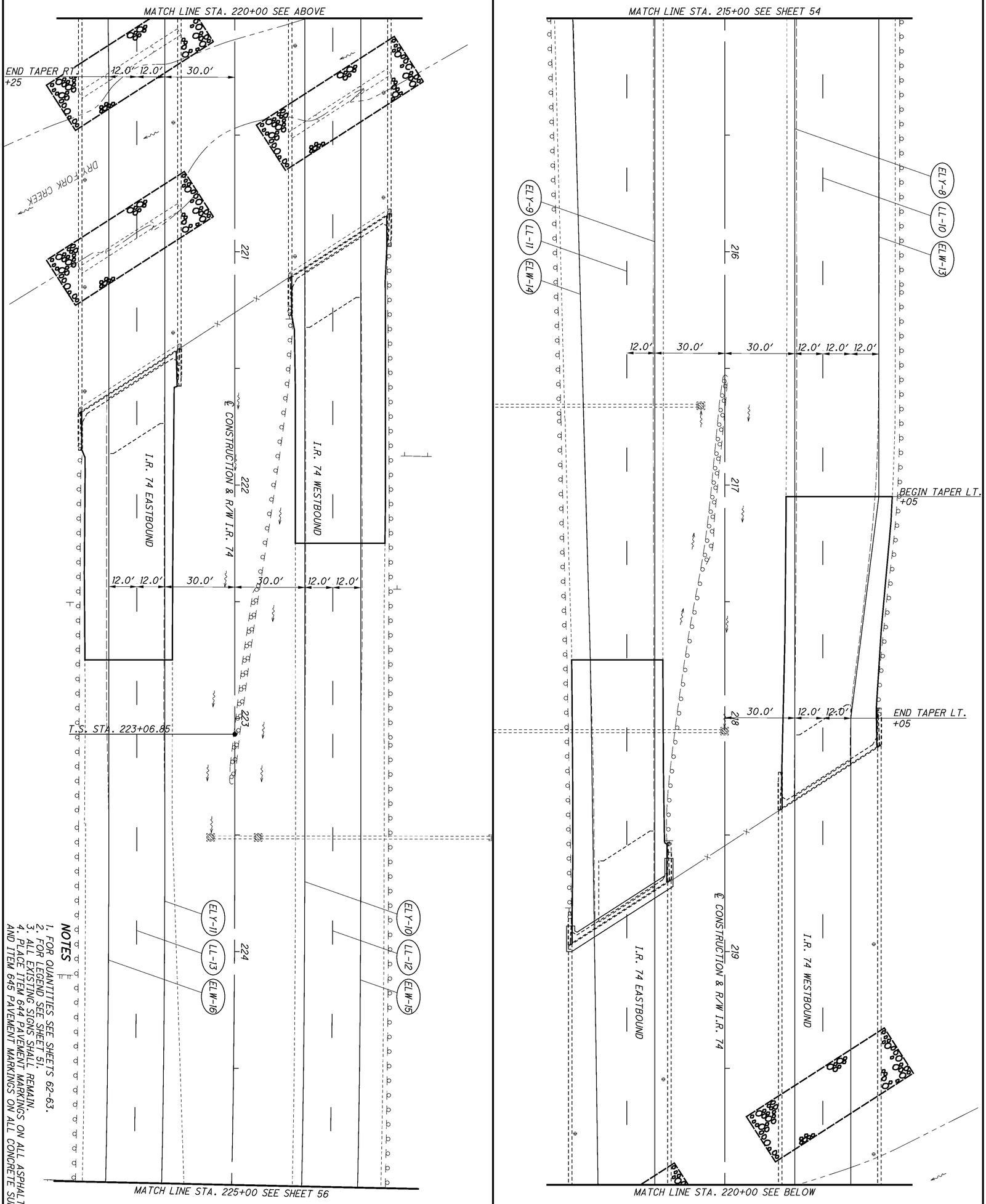
1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - I.R. 74
STA. 205+00 TO STA. 215+00

HAM-74-3.54/VAR



NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.
4. PLACE ITEM 644 PAVEMENT MARKINGS ON ALL ASPHALT SURFACES, AND ITEM 645 PAVEMENT MARKINGS ON ALL CONCRETE SURFACES.

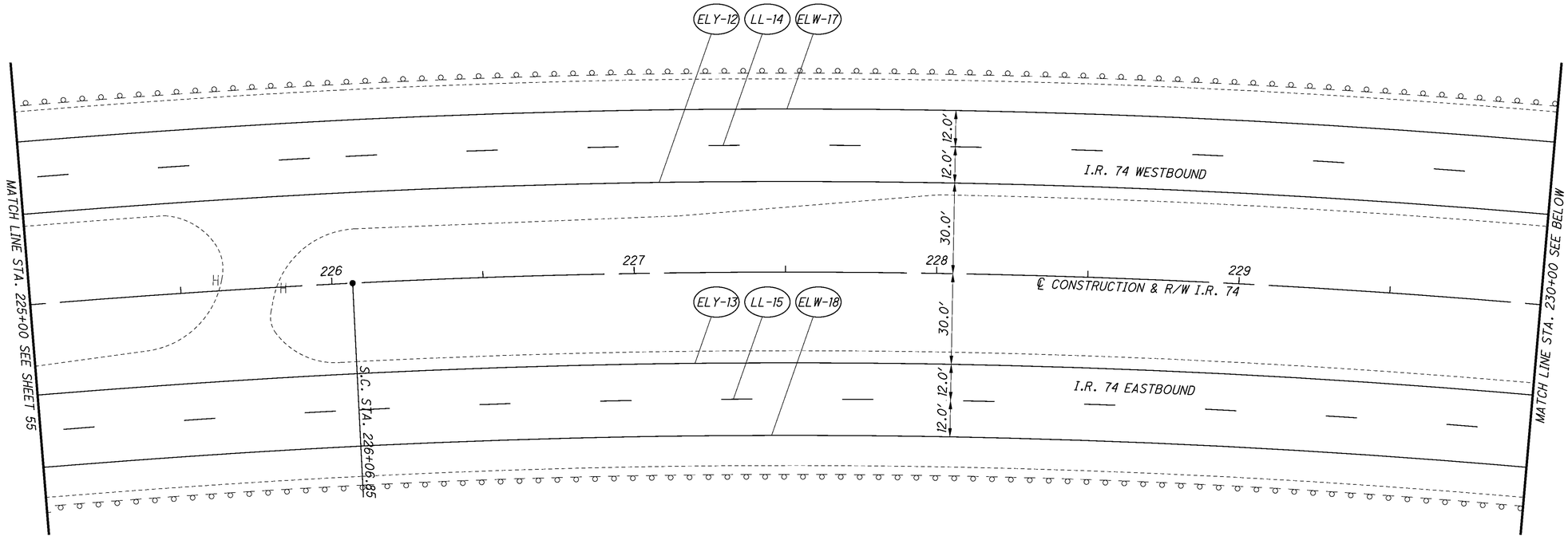
55
115

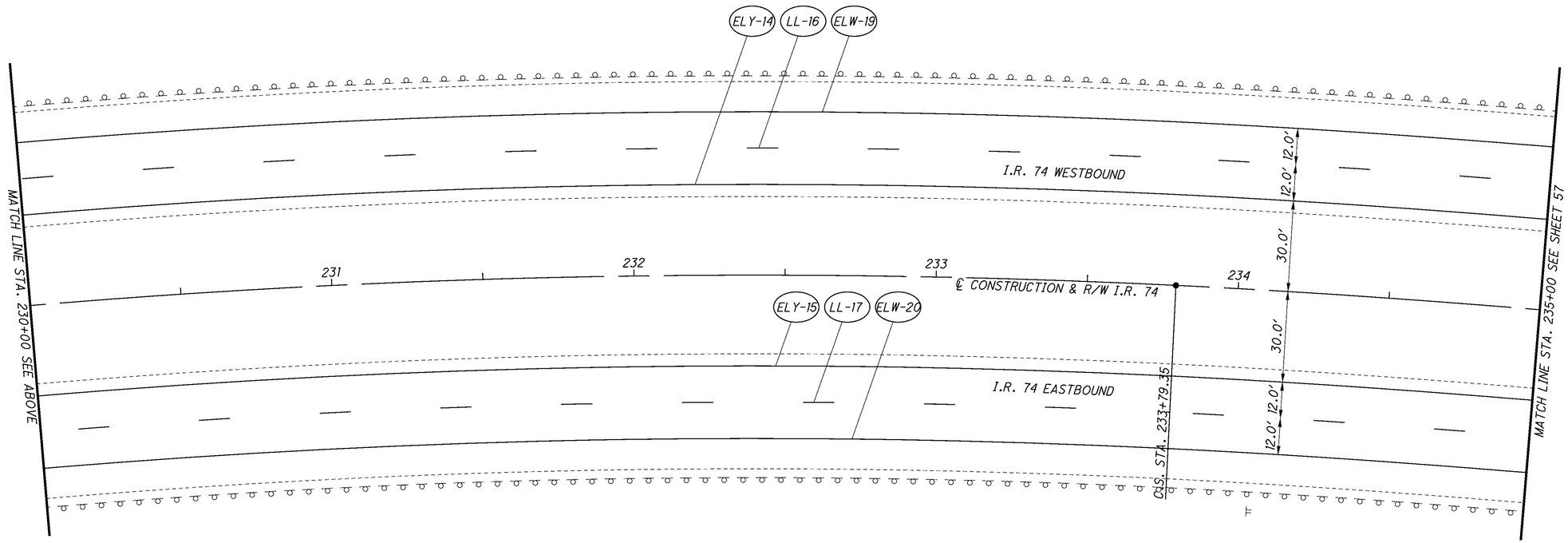
HAM-74-3.54/ VAR

TRAFFIC CONTROL PLAN - I.R. 74
STA. 215+00 TO STA. 225+00

CALCULATED KAM
CHECKED KPC

0 20
10 40
HORIZONTAL SCALE IN FEET





NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.

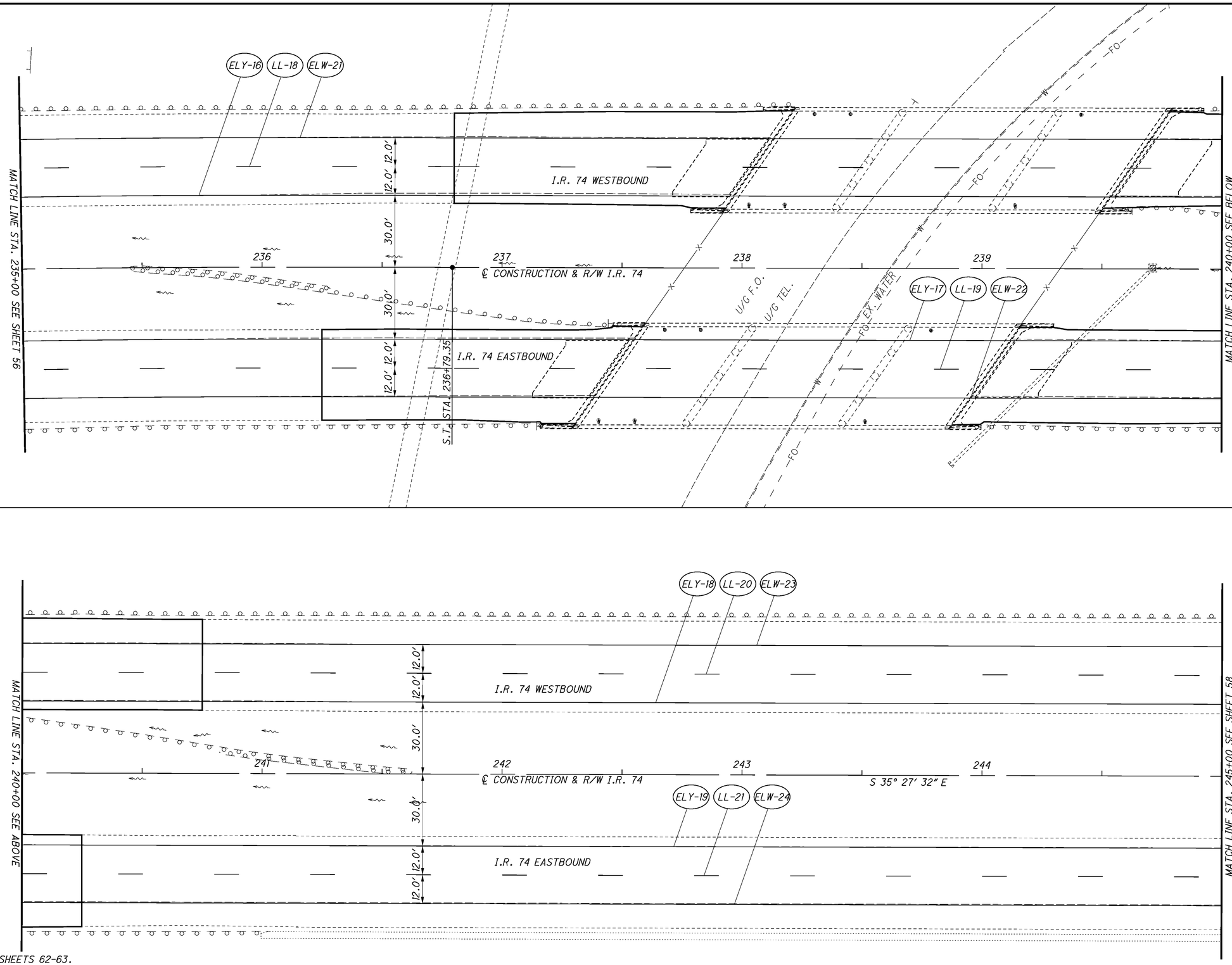
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - I.R. 74
STA. 225+00 TO STA. 235+00

HAM-74-3.54/VAR

56
115



NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.
4. PLACE ITEM 644 PAVEMENT MARKINGS ON ALL ASPHALT SURFACES, AND ITEM 645 PAVEMENT MARKINGS ON ALL CONCRETE SURFACES.

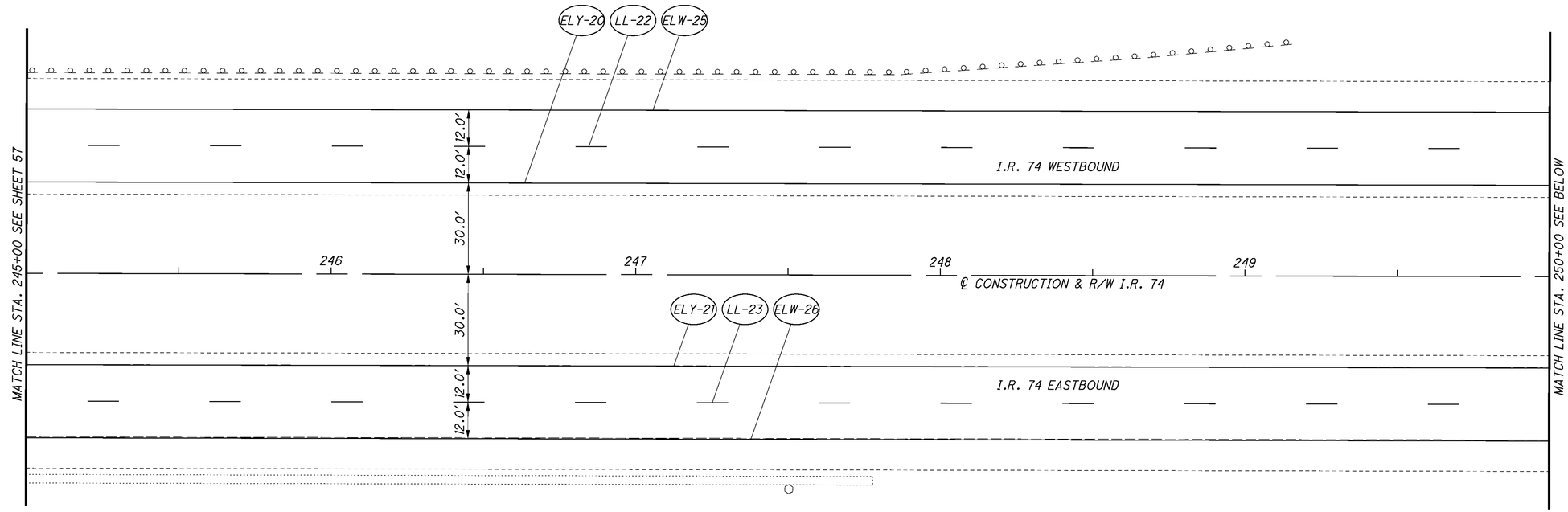
HORIZONTAL SCALE IN FEET
0 10 20 40

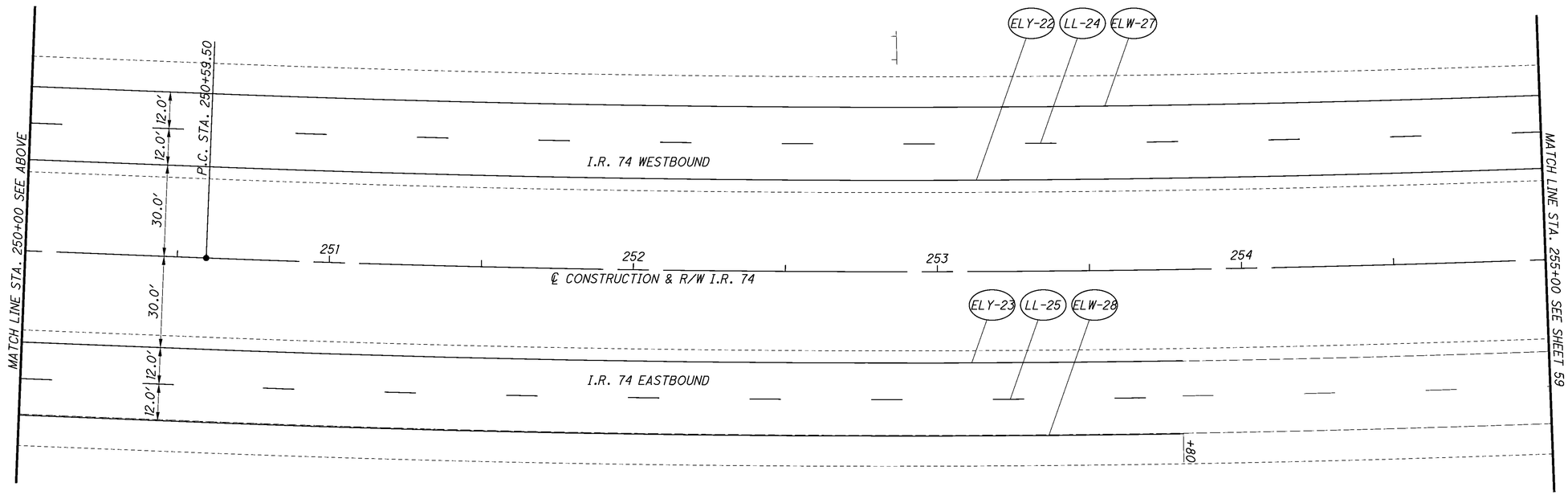
CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - I.R. 74
STA. 235+00 TO STA. 245+00

HAM-74-3.54/VAR

57
115





NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.

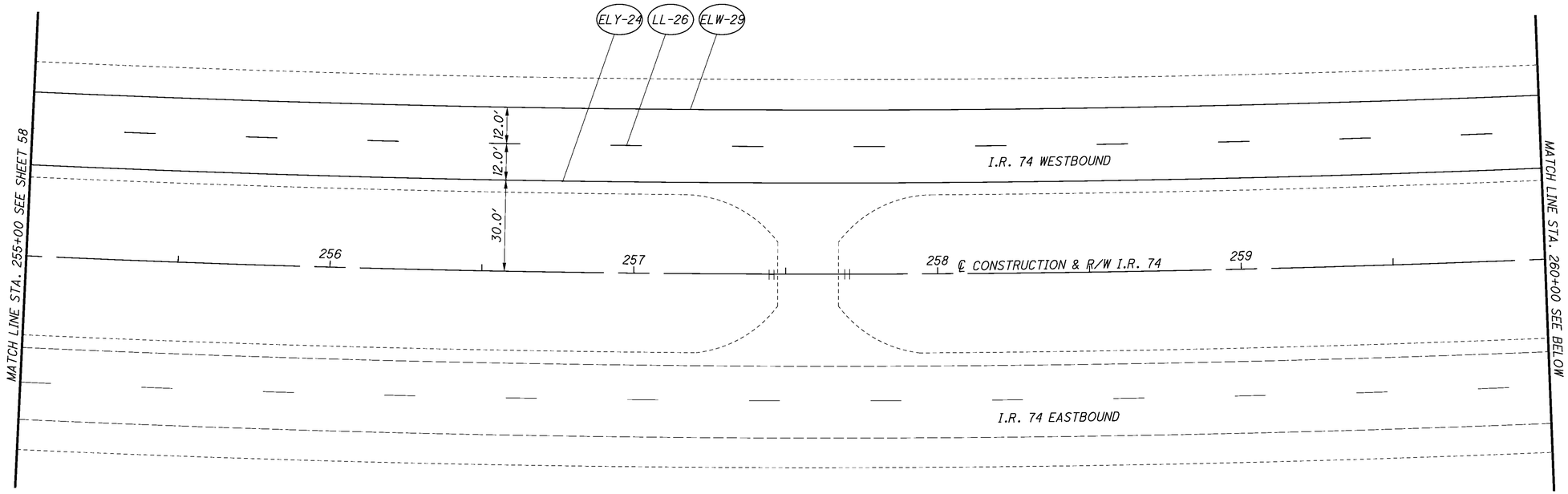
HORIZONTAL SCALE IN FEET
0 10 20 40

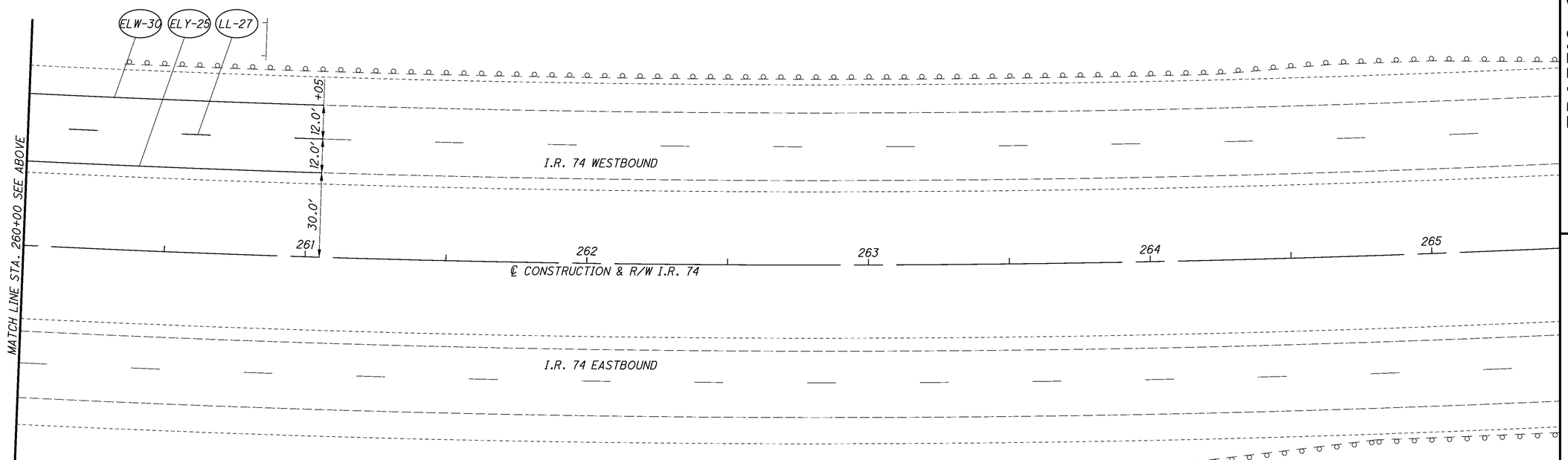
CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - I.R. 74
STA. 245+00 TO STA. 255+00

HAM-74-3.54/VAR

58
115





NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. ALL EXISTING SIGNS SHALL REMAIN.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - I.R. 74 STA. 255+00 TO STA. 265+00

HAM-74-3.54/VAR

59
115

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POND

DENSE WOODS

DENSE WOODS

GRASS

GRAVEL DRIVE

5' CHAIN-LINK FENCE

BEGIN WORK
STA. 16+00.00

BEGIN TAPER

END TAPER
+00

S-1

CLS-3

ELW-31

ELW-32

I.R. 74 WESTBOUND

I.R. 74 EASTBOUND

270

℄ CONSTRUCTION & R/W I.R. 74

S 53° 06' 15" E

271

℄ CONSTRUCTION & R/W C.R. 16

N 59° 04' 12" E

MATCH LINE STA. 20+00 SEE SHEET 61

STA. 20+00.00 ℄ C.R. 16 (MORGAN RD.) =
STA. 271+21.91 ℄ I.R. 74

15

16

17

18

19

10.3'

10.0'

10.0'

2.4'

8.3'

12" CONC.

GRAVEL APRON

DENSE WOODS

GRASS

CONCRETE DRIVE

ASPHALT DRIVE

LUTHER ROAD

CONCRETE DRIVE

GRASS

MATCH GUARDRAIL ON BRIDGES

S-2

DENSE WOODS

1-STORY RESIDENTIAL

SHED

1-STORY RESIDENTIAL

5' CHAIN-LINK FENCE

NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. PLACE ITEM 644 PAVEMENT MARKINGS ON ALL ASPHALT SURFACES, AND ITEM 645 PAVEMENT MARKINGS ON ALL CONCRETE SURFACES.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN
STA. 15+00 TO STA. 20+00

HAM-74-3.54/VAR

60
115

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STA. 20+00.00 ℄ C.R. 16 (MORGAN RD.) =
STA. 271+21.91 ℄ I.R. 74

MATCH LINE STA. 20+00 SEE SHEET 60

5' CHAIN-LINK FENCE

S-3

MATCH LINE FOR I.R. 74 BRIDGES

CONCRETE DRIVE

GRAVEL DRIVE

BEGIN TAPER +25

DENSE TREES

END WORK STA. 23+00.00

END TAPER

GRASS

1-STORY COMMERCIAL

GRASS

GRAVEL DRIVE

GRAVEL DRIVE

GRAVEL DRIVE

N 59° 04' 12" E
℄ CONSTRUCTION & R/W C.R. 16

21

22

23

24

25

N 63° 00' 51" E

10.0'

10.0'

10.6'

8.8'

1.9'

12" CMP

12" STM.

12" STM.

ELW-33

CLS-4

ELW-34

GRASS

GRAVEL DRIVE

P.C. STA. 23+75.00

P.T. STA. 24+56.52

GRASS

ASPHALT DRIVE

GRAVEL DRIVE

S-4

1-STORY COMMERCIAL

1-STORY COMMERCIAL

1-STORY COMMERCIAL

5' CHAIN-LINK FENCE

S 53° 06' 15" E 272
℄ CONSTRUCTION & R/W I.R. 74

I.R. 74 WESTBOUND

I.R. 74 EASTBOUND

273

NOTES

1. FOR QUANTITIES SEE SHEETS 62-63.
2. FOR LEGEND SEE SHEET 51.
3. PLACE ITEM 644 PAVEMENT MARKINGS ON ALL ASPHALT SURFACES, AND ITEM 645 PAVEMENT MARKINGS ON ALL CONCRETE SURFACES.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL PLAN - C.R. 16 (MORGAN RD.)
STA. 20+00 TO STA. 25+50

HAM-74-3.54/VAR

61
115

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	621 RPM, 1-WAY (WHITE) EACH	644 EDGE LINE (YELLOW) FT	644 LANE LINE FT	644 EDGE LINE, TYPE A3 (YELLOW) FT	644 LANE LINE, TYPE A3 FT
53	LL-1	I.R. 74 EASTBOUND	197+45 TO 200+00	RT.	3		255		
53	LL-2	I.R. 74 EASTBOUND	200+00 TO 205+00	RT.	4		502		
53	LL-3	I.R. 74 WESTBOUND	203+50 TO 205+00	LT.	2		150		
54	LL-4	I.R. 74 WESTBOUND	205+00 TO 210+00	LT.	4		500		
54	LL-5	I.R. 74 EASTBOUND	205+00 TO 210+00	RT.	4		500		
54	LL-6	I.R. 74 WESTBOUND	210+00 TO 215+00	LT.	4		500		
54	LL-7	I.R. 74 EASTBOUND	210+00 TO 215+00	RT.	4		500		
54	LL-8	I.R. 74 EASTBOUND	211+50 TO 213+65	RT.	3		216		
54	LL-9	I.R. 74 WESTBOUND	211+50 TO 213+65	LT.	4		328		
55	LL-10	I.R. 74 WESTBOUND	215+00 TO 220+00	LT.	4		325		175
55	LL-11	I.R. 74 EASTBOUND	215+00 TO 220+00	RT.	4		375		122
55	LL-12	I.R. 74 WESTBOUND	220+00 TO 225+00	LT.	4		398		102
55	LL-13	I.R. 74 EASTBOUND	220+00 TO 225+00	RT.	4		344		156
56	LL-14	I.R. 74 WESTBOUND	225+00 TO 230+00	LT.	5		508		
56	LL-15	I.R. 74 EASTBOUND	225+00 TO 230+00	RT.	5		492		
56	LL-16	I.R. 74 WESTBOUND	230+00 TO 235+00	LT.	4		507		
56	LL-17	I.R. 74 EASTBOUND	230+00 TO 235+00	RT.	4		493		
57	LL-18	I.R. 74 WESTBOUND	235+00 TO 240+00	LT.	4		338		162
57	LL-19	I.R. 74 EASTBOUND	235+00 TO 240+00	RT.	4		338		162
57	LL-20	I.R. 74 WESTBOUND	240+00 TO 245+00	LT.	4		500		
57	LL-21	I.R. 74 EASTBOUND	240+00 TO 245+00	RT.	4		500		
58	LL-22	I.R. 74 WESTBOUND	245+00 TO 250+00	LT.	4		500		
58	LL-23	I.R. 74 EASTBOUND	245+00 TO 250+00	RT.	4		500		
58	LL-24	I.R. 74 WESTBOUND	250+00 TO 255+00	LT.	5		497		
58	LL-25	I.R. 74 EASTBOUND	250+00 TO 253+80	RT.	4		382		
59	LL-26	I.R. 74 WESTBOUND	255+00 TO 260+00	LT.	4		496		
59	LL-27	I.R. 74 WESTBOUND	260+00 TO 261+05	LT.	1		105		
53	ELY-1	I.R. 74 EASTBOUND	197+45 TO 200+00	RT.		255			
53	ELY-2	I.R. 74 EASTBOUND	200+00 TO 205+00	RT.		501			
53	ELY-3	I.R. 74 WESTBOUND	203+50 TO 205+00	LT.		150			
54	ELY-4	I.R. 74 WESTBOUND	205+00 TO 210+00	LT.		500			
54	ELY-5	I.R. 74 EASTBOUND	205+00 TO 210+00	RT.		500			
54	ELY-6	I.R. 74 WESTBOUND	210+00 TO 215+00	LT.		500			
54	ELY-7	I.R. 74 EASTBOUND	210+00 TO 215+00	RT.		500			
55	ELY-8	I.R. 74 WESTBOUND	215+00 TO 220+00	LT.		333		167	
55	ELY-9	I.R. 74 EASTBOUND	215+00 TO 220+00	RT.		371		129	
55	ELY-10	I.R. 74 WESTBOUND	220+00 TO 225+00	LT.		391		109	
55	ELY-11	I.R. 74 EASTBOUND	220+00 TO 225+00	RT.		352		148	
56	ELY-12	I.R. 74 WESTBOUND	225+00 TO 230+00	LT.		505			
56	ELY-13	I.R. 74 EASTBOUND	225+00 TO 230+00	RT.		495			
56	ELY-14	I.R. 74 WESTBOUND	230+00 TO 235+00	LT.		505			
56	ELY-15	I.R. 74 EASTBOUND	230+00 TO 235+00	RT.		495			
57	ELY-16	I.R. 74 WESTBOUND	235+00 TO 240+00	LT.		338		162	
57	ELY-17	I.R. 74 EASTBOUND	235+00 TO 240+00	RT.		338		162	
57	ELY-18	I.R. 74 WESTBOUND	240+00 TO 245+00	LT.		500			
57	ELY-19	I.R. 74 EASTBOUND	240+00 TO 245+00	RT.		500			
58	ELY-20	I.R. 74 WESTBOUND	245+00 TO 250+00	LT.		500			
58	ELY-21	I.R. 74 EASTBOUND	245+00 TO 250+00	RT.		500			
58	ELY-22	I.R. 74 WESTBOUND	250+00 TO 255+00	LT.		498			
58	ELY-23	I.R. 74 EASTBOUND	250+00 TO 253+80	RT.		382			
59	ELY-24	I.R. 74 WESTBOUND	255+00 TO 260+00	LT.		497			
59	ELY-25	I.R. 74 WESTBOUND	260+00 TO 261+05	LT.		105			
SUBTOTAL						10511	11052	877	879
TOTALS CARRIED TO GENERAL SUMMARY					104	1.99 MI.	2.09 MI.	0.17 MI.	0.17 MI.

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL SUBSUMMARY

HAM-74-3.54/ VAR

62
115

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	630 GROUND MOUNTED SUPPORT, NO. 3 POST (FT)	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION (EACH)	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL (EACH)	632 DETECTOR LOOP (EACH)	632 LOOP DETECTOR TIE IN (EACH)	644 EDGE LINE (WHITE) (FT)	644 CENTER LINE (DOUBLE-SOLID) (FT)	644 CHANNELIZING LINE (FT)	644 STOP LINE (FT)	645 EDGE LINE, TYPE A3 (WHITE) (FT)	645 CENTER LINE, TYPE A3 (DOUBLE-SOLID) (FT)
51	ELW-1	C.R. 14	18+30 TO 20+50	LT.						48				172	
51	ELW-2	C.R. 14	18+30 TO 20+50	RT.						48				172	
52	ELW-3	C.R. 14	20+50 TO 23+00	LT.						171				79	
52	ELW-4	C.R. 14	20+50 TO 23+00	RT.						171				79	
53	ELW-5	I.R. 74 EASTBOUND	197+45 TO 200+00	RT.						255					
53	ELW-6	I.R. 74 EASTBOUND	200+00 TO 205+00	RT.						502					
53	ELW-7	I.R. 74 WESTBOUND	203+50 TO 205+00	LT.						149					
54	ELW-8	I.R. 74 WESTBOUND	205+00 TO 210+00	LT.						342					
54	ELW-9	I.R. 74 EASTBOUND	205+00 TO 210+00	RT.						501					
54	ELW-10	I.R. 74 EASTBOUND	210+00 TO 211+50	RT.						150					
54	ELW-11	I.R. 74 EASTBOUND	211+00 TO 215+00	RT.						400					
54	ELW-12	I.R. 74 WESTBOUND	211+50 TO 215+00	LT.						350					
55	ELW-13	I.R. 74 WESTBOUND	215+00 TO 220+00	LT.						318				183	
55	ELW-14	I.R. 74 EASTBOUND	215+00 TO 220+00	RT.						388				112	
55	ELW-15	I.R. 74 WESTBOUND	220+00 TO 225+00	LT.						407				94	
55	ELW-16	I.R. 74 EASTBOUND	220+00 TO 225+00	RT.						336				163	
56	ELW-17	I.R. 74 WESTBOUND	225+00 TO 230+00	LT.						510					
56	ELW-18	I.R. 74 EASTBOUND	225+00 TO 230+00	RT.						490					
56	ELW-19	I.R. 74 WESTBOUND	230+00 TO 235+00	LT.						510					
56	ELW-20	I.R. 74 EASTBOUND	230+00 TO 235+00	RT.						490					
57	ELW-21	I.R. 74 WESTBOUND	235+00 TO 240+00	LT.						338				162	
57	ELW-22	I.R. 74 EASTBOUND	235+00 TO 240+00	RT.						338				162	
57	ELW-23	I.R. 74 WESTBOUND	240+00 TO 245+00	LT.						500					
57	ELW-24	I.R. 74 EASTBOUND	240+00 TO 245+00	RT.						500					
58	ELW-25	I.R. 74 WESTBOUND	245+00 TO 250+00	LT.						500					
58	ELW-26	I.R. 74 EASTBOUND	245+00 TO 250+00	RT.						500					
58	ELW-27	I.R. 74 WESTBOUND	250+00 TO 255+00	LT.						496					
58	ELW-28	I.R. 74 EASTBOUND	250+00 TO 253+80	RT.						383					
59	ELW-29	I.R. 74 WESTBOUND	255+00 TO 260+00	LT.						495					
59	ELW-30	I.R. 74 WESTBOUND	260+00 TO 261+05	LT.						105					
60	ELW-31	C.R. 16	16+00 TO 20+00	LT.						233				167	
60	ELW-32	C.R. 16	16+00 TO 20+00	RT.						241				159	
61	ELW-33	C.R. 16	20+00 TO 23+00	LT.						150				150	
61	ELW-34	C.R. 16	20+00 TO 23+00	RT.						142				158	
51	CLS-1	C.R. 14	18+36 TO 20+50	℄							42				172
52	CLS-2	C.R. 14	20+50 TO 22+55	℄							126				79
60	CLS-3	C.R. 16	16+00 TO 20+00	℄							237				163
61	CLS-4	C.R. 16	20+00 TO 23+00	℄							146				154
51	SL-1	C.R. 14	18+36	LT.									13		
52	SL-2	C.R. 14	22+55	RT.									12		
60	S-1	C.R. 16	17+48	LT.	13	1	1								
60	S-2	C.R. 16	18+25	RT.	13	1	1								
61	S-3	C.R. 16	22+12	LT.	13	1	1								
61	S-4	C.R. 16	22+45	RT.	13/13	1	2								
51	LD-1	I.R. 74 EASTBOUND EXIT		LT.				1	1						
51	LD-2	I.R. 74 EASTBOUND EXIT		RT.				1	1						
51	LD-3	C.R. 14	18+38 TO 18+73	LT.				1	1						
52	LD-4	C.R. 14	22+15 TO 22+50	RT.				1	1						
52	LD-5	I.R. 74 WESTBOUND EXIT		LT.				1	1						
52	LD-6	I.R. 74 WESTBOUND EXIT		RT.				1	1						
54	CH-1	I.R. 74 WESTBOUND	208+42 TO 210+00	LT.								158			
54	CH-2	I.R. 74 WESTBOUND	210+00 TO 211+50	LT.								150			
54	CH-3	I.R. 74 WESTBOUND	211+00 TO 211+50	RT.								50			
SUBTOTAL										11657	551			2012	568
TOTALS CARRIED TO GENERAL SUMMARY					65	4	5	6	6	2.21 MI.	0.10 MI.	358	25	0.38 MI.	0.11 MI.

CALCULATED KAM
CHECKED KPC

TRAFFIC CONTROL SUBSUMMARY

HAM-74-3.54/ VAR

63
115

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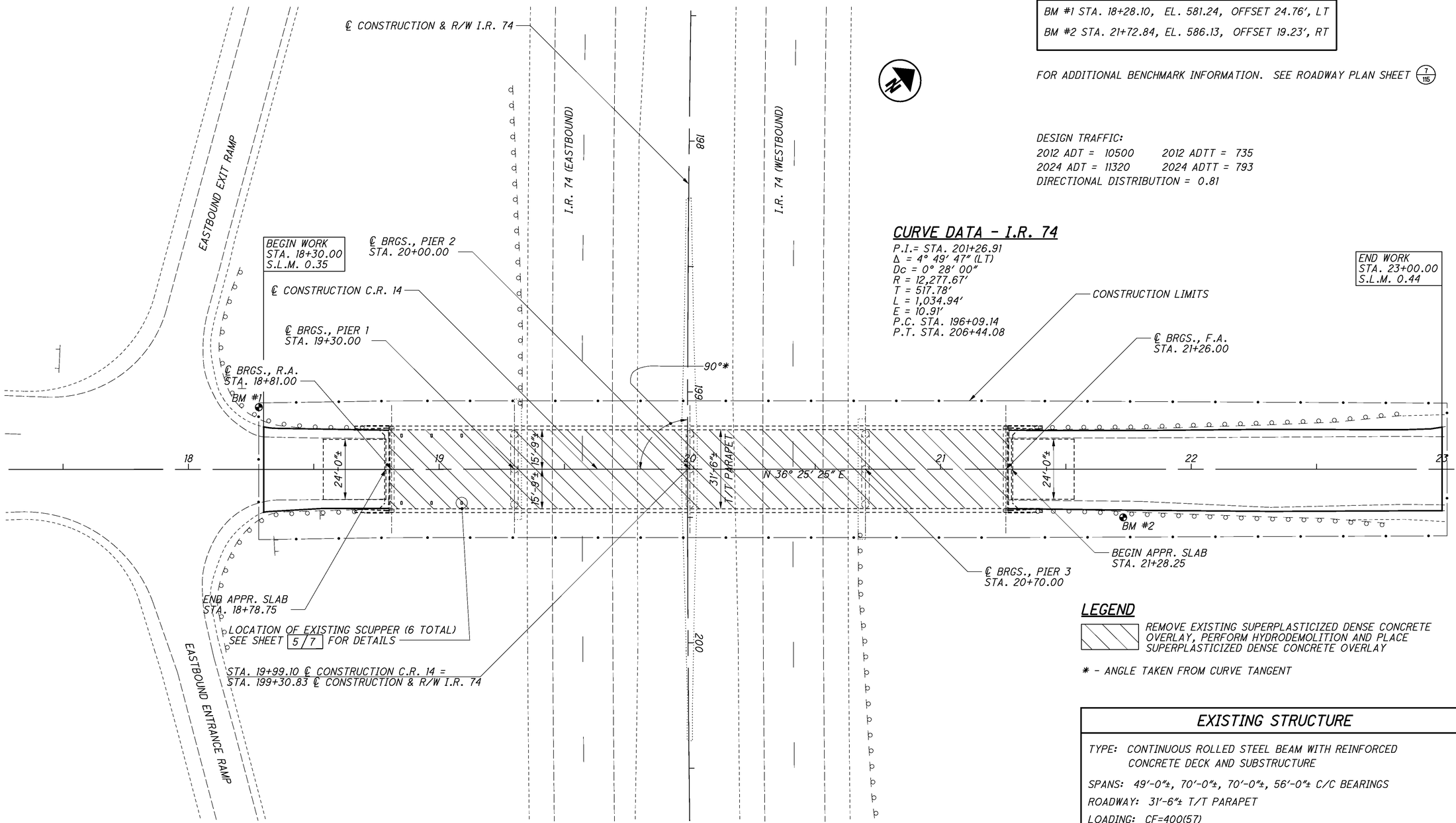


BENCHMARK DATA

BM #1 STA. 18+28.10, EL. 581.24, OFFSET 24.76', LT

BM #2 STA. 21+72.84, EL. 586.13, OFFSET 19.23', RT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 7/115

DESIGN TRAFFIC:

2012 ADT = 10500 2012 ADTT = 735

2024 ADT = 11320 2024 ADTT = 793

DIRECTIONAL DISTRIBUTION = 0.81

CURVE DATA - I.R. 74

P.I.= STA. 201+26.91
Δ = 4° 49' 47" (LT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 517.78'
L = 1,034.94'
E = 10.91'
P.C. STA. 196+09.14
P.T. STA. 206+44.08

LEGEND

REMOVE EXISTING SUPERPLASTICIZED DENSE CONCRETE OVERLAY, PERFORM HYDRODEMOLITION AND PLACE SUPERPLASTICIZED DENSE CONCRETE OVERLAY

* - ANGLE TAKEN FROM CURVE TANGENT

EXISTING STRUCTURE

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 49'-0"±, 70'-0"±, 70'-0"±, 56'-0"± C/C BEARINGS

ROADWAY: 31'-6"± T/T PARAPET

LOADING: CF=400(57)

SKEW: NONE

WEARING SURFACE: 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY

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

ALIGNMENT: TANGENT

CROWN: 0.016±

STRUCTURAL FILE NUMBER: 3107981

DATE BUILT: 1962

DISPOSITION: TO BE REHABILITATED

PROPOSED WORK

1. REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY AND HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.
2. PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO EXISTING DECK.
3. REMOVE PORTION OF BOTTOM FLANGE SPLICE PLATE AT PIER 3, BEAM 4.
4. REPLACE EXISTING ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS.
5. PAINT ALL STRUCTURAL STEEL WITH SYSTEM OZEU.
6. PERFORM MISCELLANEOUS TASKS SUCH AS SEALING EXPOSED PORTIONS OF CONCRETE AND PATCHING SUBSTRUCTURE.
7. MILL AND FILL APPROACH PAVEMENT INCLUDING APPROACH SLABS AS OUTLINED IN ROADWAY PLANS.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD. · DUBLIN, OH 43017
614.634.7000 T · WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-18-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3107981	

GENERAL PLAN

BRIDGE NO. HAM-74-0358
C.R. 14 (DRY FORK ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

1/7

64/115

STANDARD DRAWINGS AND SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

848 DATED 1-21-11

DESIGN SPECIFICATIONS

THE PROPOSED WORK CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20, CASE II AND THE ALTERNATE MILITARY LOADING (BEARINGS) CF 400 (57) EXISTING STRUCTURE

DESIGN DATA

ASTM A709 GRADE 50 - YIELD STRENGTH 50,000 PSI

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY

ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL

FIELD PAINT EXISTING BEAMS AND CROSSFRAMES. THE COATING SHALL BE A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT (FORMALLY REFERRED TO AS SYSTEM OZEU) ACCORDING TO CMS 514. THE COLOR OF THE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO. 14277 (GREEN).

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

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.

ITEM 512 - SEALING OF CONCRETE SURFACES, (EPOXY-URETHANE)

THE COLOR OF THE URETHANE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO. 17778 (LIGHT NEUTRAL).

ITEM 519 - PATCHING CONCRETE STRUCTURE, 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 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, 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 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

A) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING AN UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE MUST BE DRY PRIOR TO PLACEMENT OF THE CURING MATERIAL. IF THE CURING MATERIAL CANNOT BE PLACED WITHIN THE SAME SHORT-TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL HAVE 24 HOURS FROM REMOVAL OF THE WET CURE TO APPLY THE MEMBRANE-CURING COMPOUND.

B) TRAFFIC WILL NOT BE PERMITED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI.

C) FOR EACH POUR, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS AND THE MODULUS OF RUPTURE OF EACH BEAM UNTIL THE MODULUS OF RUPTURE OF TWO TESTS IS NOT LESS THAN 650 PSI. TRAFFIC WILL BE ALLOWED ON THE OVERLAY AT 600 PSI.

D) TWO TEST SLABS WILL BE REQUIRED IN ACCORDANCE WITH SS 848 IF A PERIOD OF 30 DAYS OR MORE HAS ELAPSED SINCE THE POURING OF THE TEST SLABS OR ANY OVERLAY OPERATION AS PART OF THIS PROJECT.

E) THE MAXIMUM AMOUNT OF OVERLAY MATERIAL TO BE CARRIED BY ANY ONE VEHICLE DURING THE OVERLAY OPERATIONS IS 6 CY.

F) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1 1/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

G) THE FINAL SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY. HAND CHIPPING IS FOR THE PURPOSE OF CHIPPING AREAS WHERE THE HYDRODEMOLITION MACHINE DOES NOT HAVE ACCESS. IF THE DESIRED DEPTH IS ACHIEVED BY HYDRODEMOLITION, NO FURTHER REMOVAL IS NECESSARY.

H) FULL DEPTH REPAIR WILL NOT BE REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

I) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 9:30 AM.

J) MECHANICAL MEANS MAY BE USED TO REMOVE THE EXISTING RIGID OVERLAY AND TOP 0.5 INCH OF THE ORIGINAL DECK. THE REMAINING 0.5 INCH OF ORIGINAL DECK SHALL BE REMOVED BY HYDRODEMOLITION.

PAYMENT FOR ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN ITEM 848-SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN.

ESTIMATED QUANTITIES

DESIGNED: STK DATE: 05-06-11 — CHECKED: LWG DATE: 05-12-11

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	APP
512	10100	982	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	121	241	620	
514	00050	9849	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			9848	
514	00056	9849	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			9849	
514	00060	9849	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			9849	
514	00066	9849	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			9849	
514	00504	17	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			17	
514	10000	10	EACH	FINAL INSPECTION REPAIR			10	
516	44101	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 2¾"X14"X9" WITH 1½"X15"X12" LOAD PLATE, AS PER PLAN	2			7/7
516	44101	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 2¾"X14"X8½" WITH 1½"X15"X12" LOAD PLATE, AS PER PLAN	2			7/7
516	44101	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 2¾"X14"X9" WITH 1½"X15"X12" LOAD PLATE AND 1½"X10"X26" MASONRY PLATE, AS PER PLAN	4			7/7
516	47001	LUMP	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP	2/7
519	11101	30	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	30			2/7
SPECIAL	530E00200	LUMP	-	STRUCTURE, MISC.: REMOVAL OF EXISTING SPLICE PLATE			LUMP	6/7
848	10201	862	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLOTION, AS PER PLAN (T = 3")			862	2/7
848	20000	862	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			862	
848	30200	54	CU YD	SUPERPLASTICIZIED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			54	
848	50000	87	SQ YD	HAND CHIPPING			87	
848	50100	LUMP	-	TEST SLAB			LUMP	
848	50320	862	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T = 2")			862	
848	50340	345	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			345	

wd transportation
DESIGN AGENCY
a WD PARTNERS division
7007 DISCOVERY BLVD. • DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

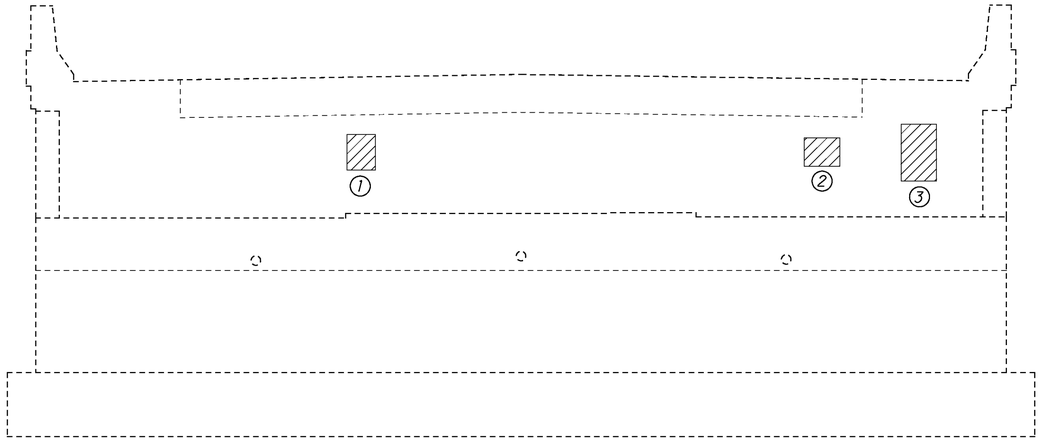
DESIGNED STK | DRAWN STK | REVIEWED WHM | DATE 10-18-10 | STRUCTURE FILE NUMBER 3107981 | CHECKED LWG | REVISED

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. HAM-74-0358
C.R.14 (DRY FORK ROAD) OVER I.R. 74

HAM-74-3.54/ VAR
PID No. 82961

2 / 7

65
115



REAR ABUTMENT ELEVATION

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

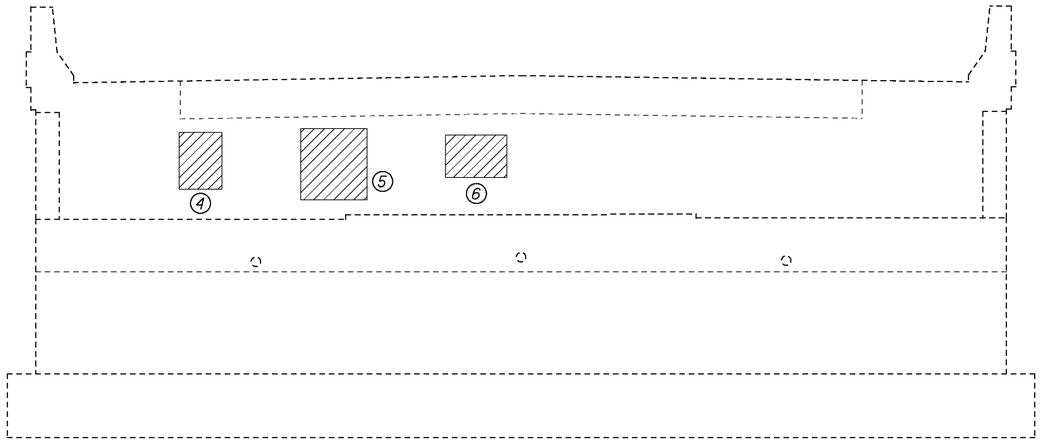
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

REAR ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
①	2.0	3.0*
②	2.0	3.0*
③	3.0	4.5*
TOTAL R.A.	7.0	10.5*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION



FORWARD ABUTMENT ELEVATION

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

FORWARD ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
④	3.0	4.5*
⑤	6.0	9.0*
⑥	4.0	6.0*
TOTAL F.A.	13.0	19.5*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

NOTE

SEAL ALL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE, LIGHT NEUTRAL, FEDERAL COLOR NO. 17778.

LEGEND

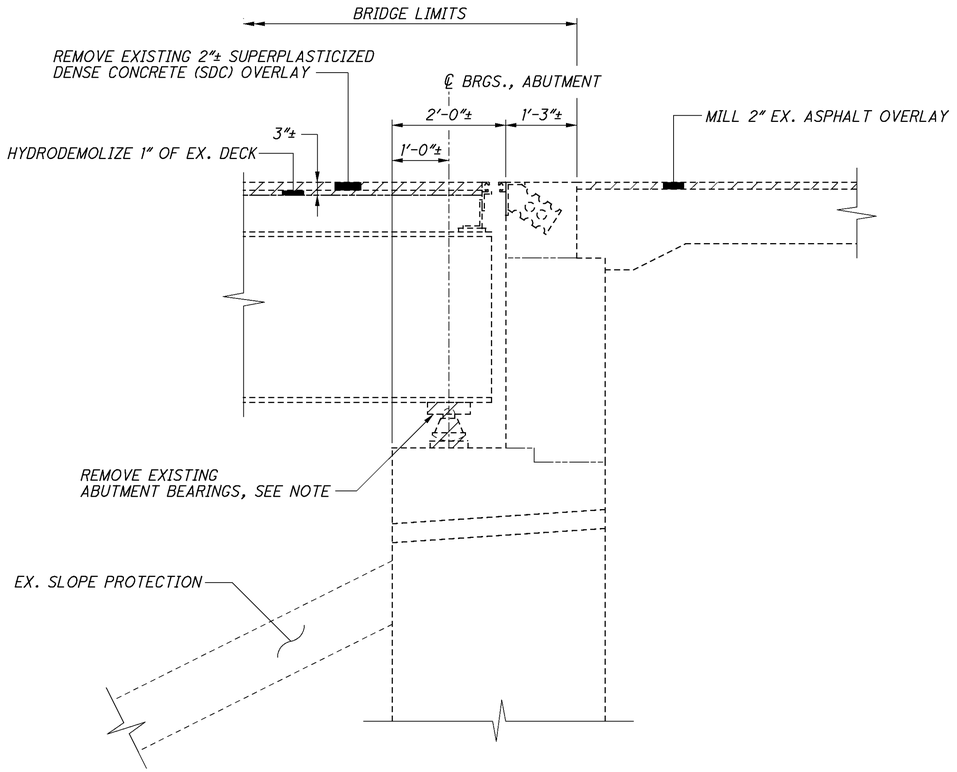
ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD. * DUBLIN, OH 43017
614.634.7000 * WDTRANSPORTATION.COM

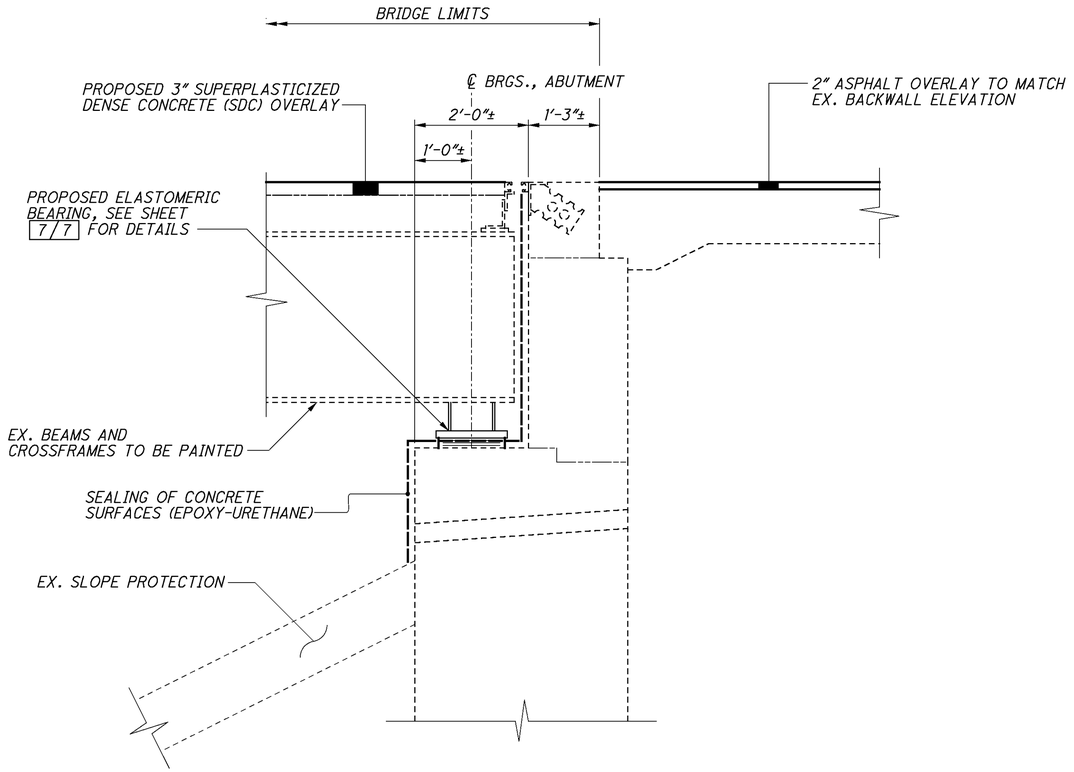
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-18-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3107981	

ABUTMENT REPAIR DETAILS
BRIDGE NO. HAM-74-0358
C.R. 14 (DRY FORK ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961



EXISTING ABUTMENT SECTION

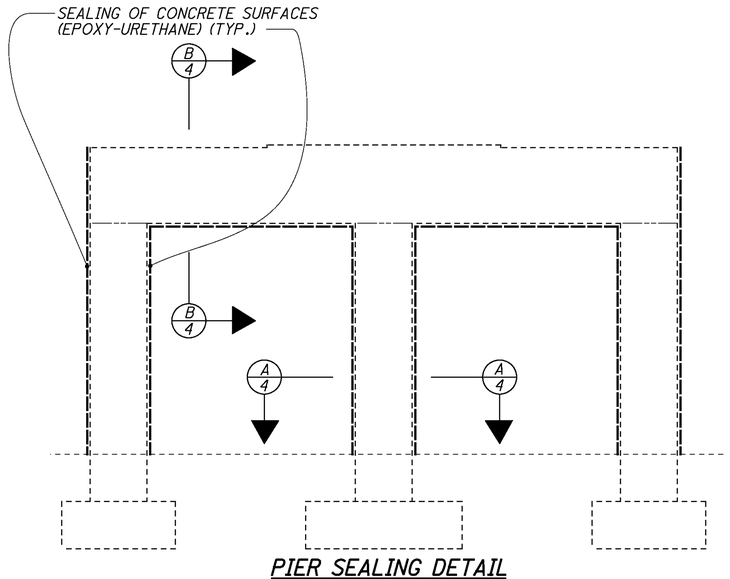


PROPOSED ABUTMENT SECTION

FORWARD ABUTMENT SHOWN, REAR ABUTMENT SIMILAR

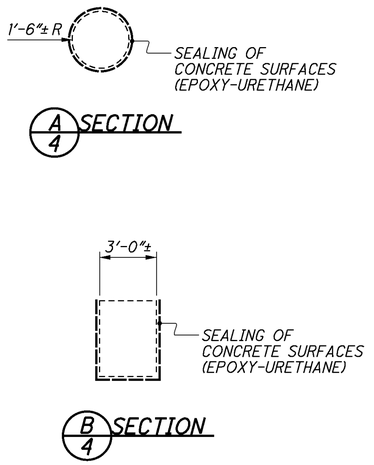
NOTE

EXISTING ABUTMENT BEARINGS ARE R100. REFER TO ODOT STD. DWG. RB-1-55 FOR ADDITIONAL BEARING DETAILS.



PIER SEALING DETAIL

(TYP. ALL PIERS)



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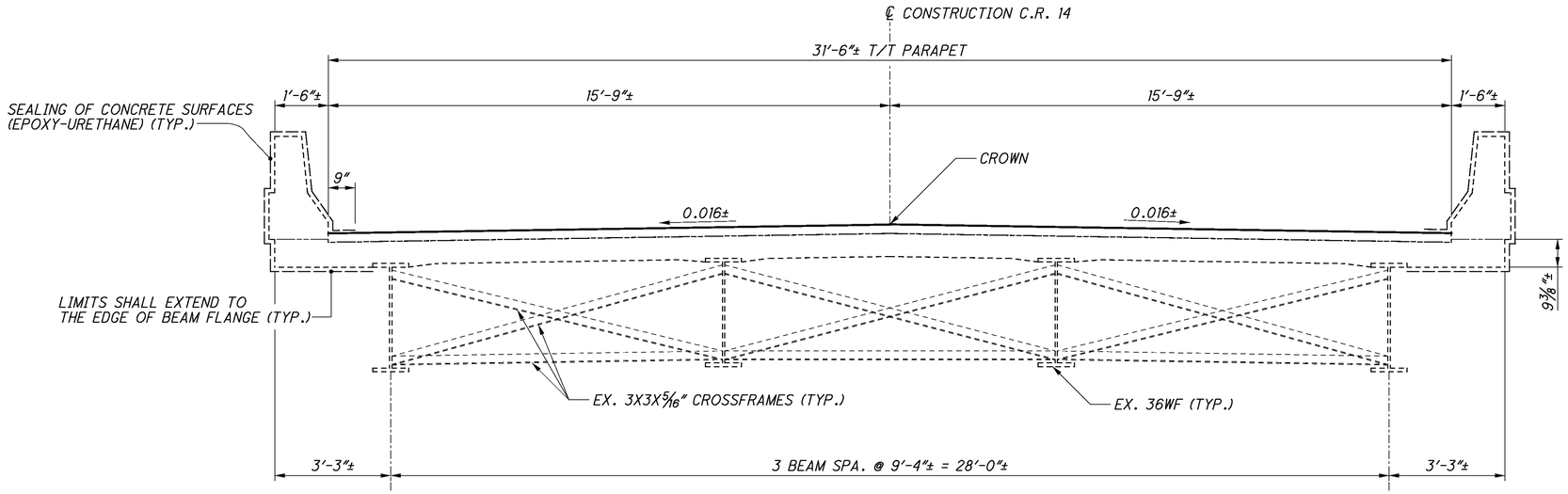
DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-18-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3107981	

ABUTMENT DETAILS & PIER SEALING

BRIDGE NO. HAM-74-0358
C.R. 14 (DRY FORK ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961



TRANSVERSE SECTION

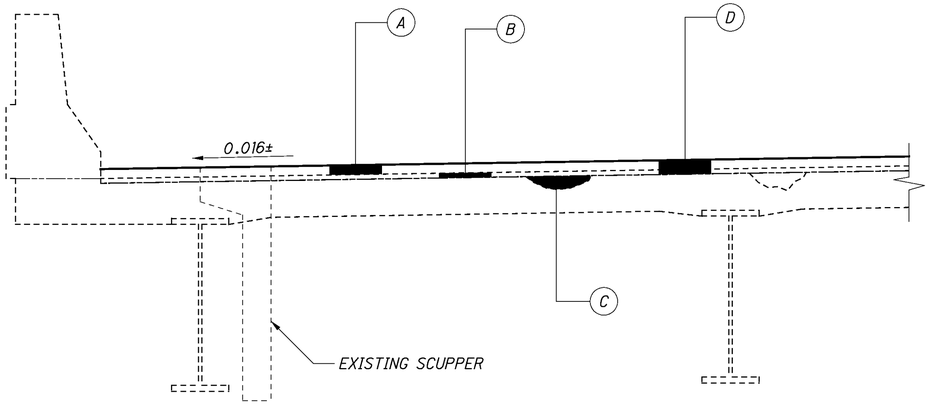
PROPOSED WORK

(A) - REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY.

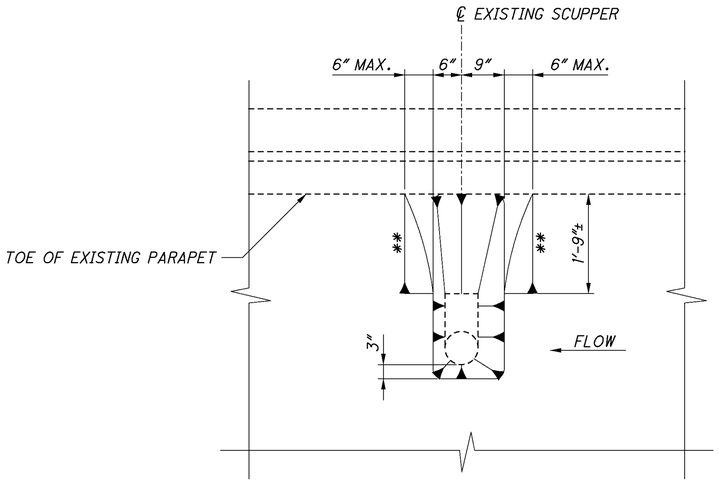
(B) - HYDRODEMOLIZE 1" OF THE EXISTING DECK.

(C) - PARTIAL DEPTH REPAIRS TO THE DECK TO BE MADE AS DIRECTED BY THE ENGINEER.

(D) - PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO THE EXISTING DECK.



OVERLAY DETAIL



SCUPPER OVERLAY DETAIL

LEGEND

** - MATCH EXISTING SLOPE

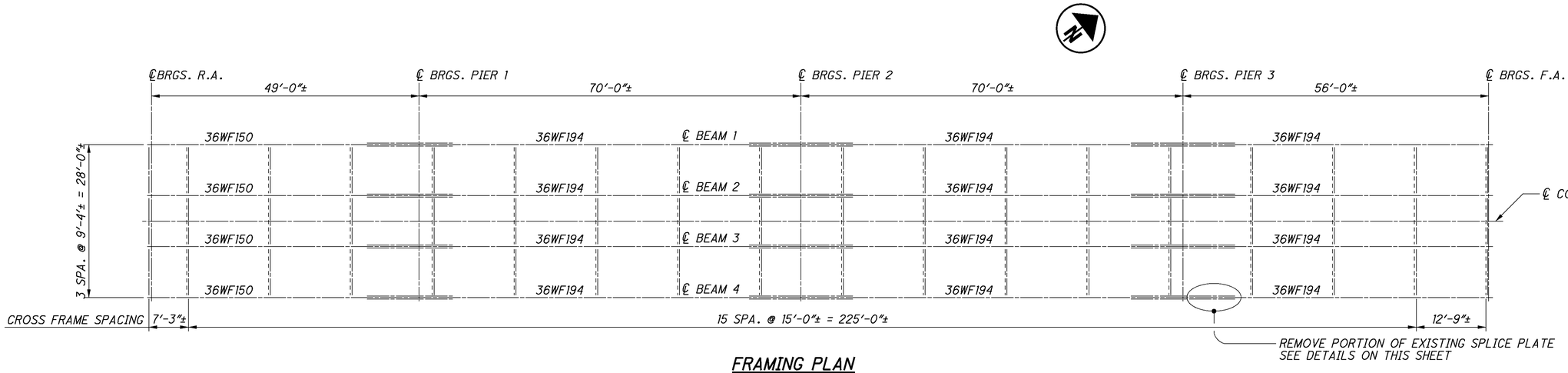
DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-18-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3107981	

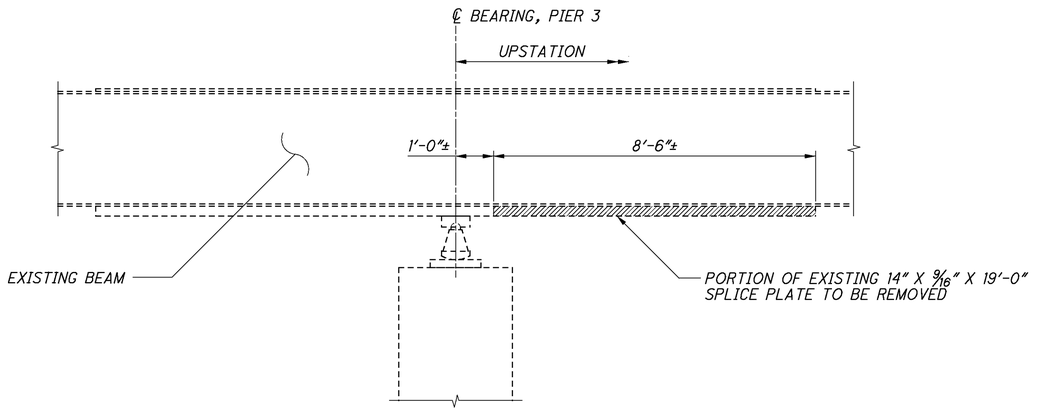
TRANSVERSE SECTION AND OVERLAY DETAILS

BRIDGE NO. HAM-74-0358
C.R. 14 (DRY FORK ROAD) OVER I.R. 74

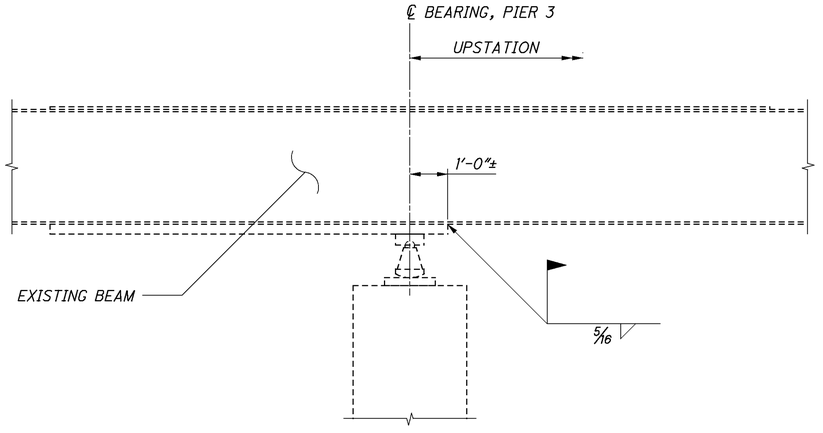
HAM-74-3.54/VAR
PID No. 82961



FRAMING PLAN



SPLICE PLATE REMOVAL DETAIL



PROPOSED WORK

NOTE

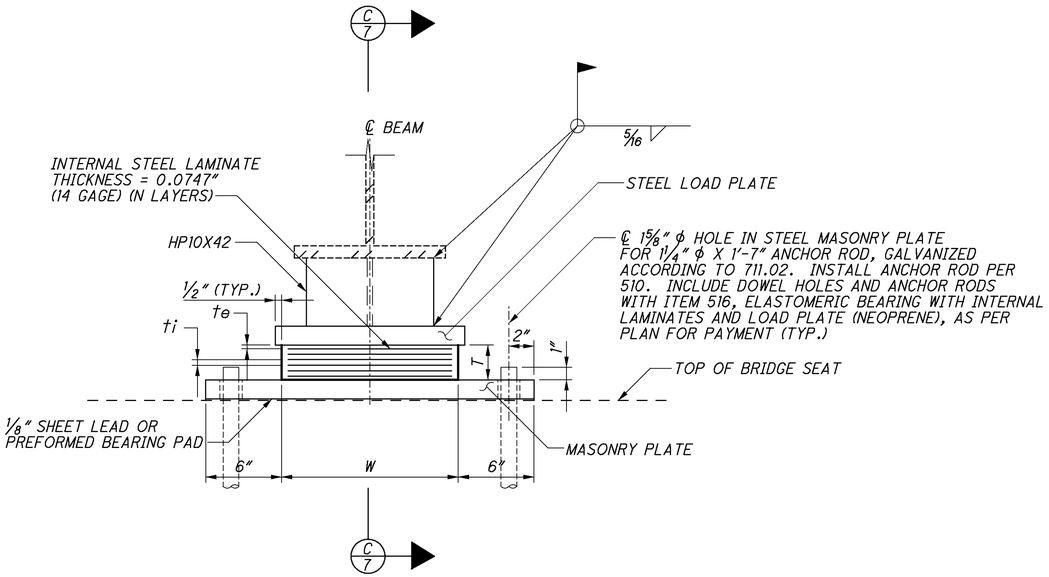
PERFORM WORK CAREFULLY DURING CUTTING OF THE EXISTING SPLICE PLATE TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE SPLICE PLATE CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR. ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO REMOVE AND WELD THE SPLICE PLATE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, STRUCTURE, MISC.: REMOVAL OF EXISTING SPLICE PLATE.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN OH 43017
614.654.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-18-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3107981	

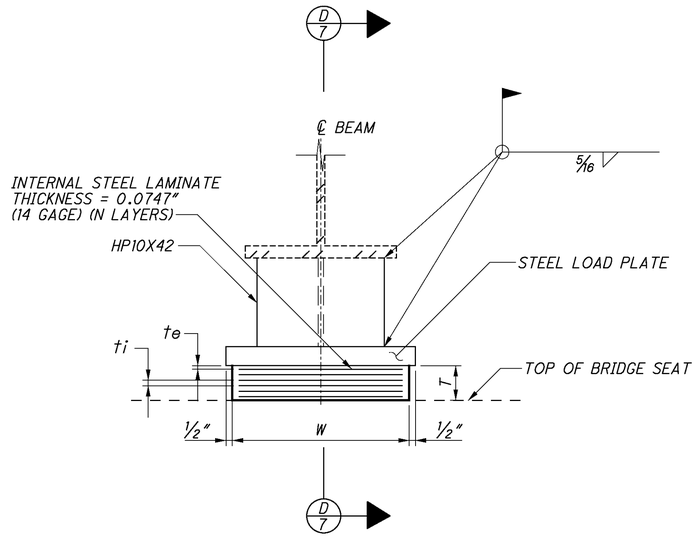
SUPERSTRUCTURE DETAILS
BRIDGE NO. HAM-74-0358
C.R. 14 (DRY FORK ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961



LAMINATED ELASTOMERIC EXPANSION BEARING

REAR ABUTMENT

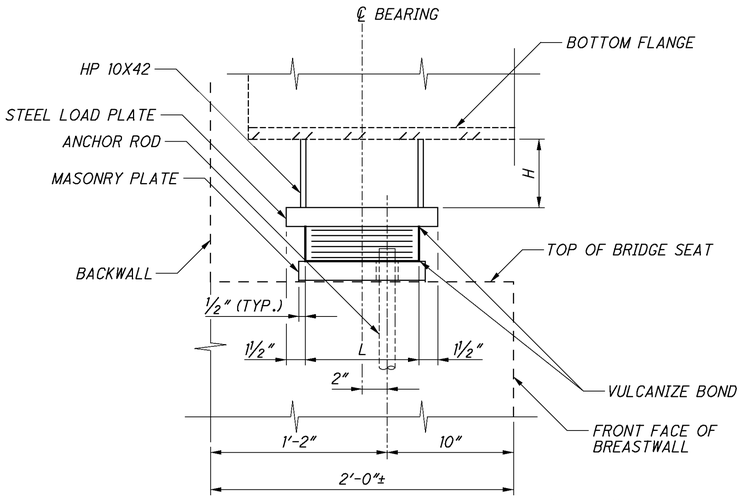


LAMINATED ELASTOMERIC EXPANSION BEARING

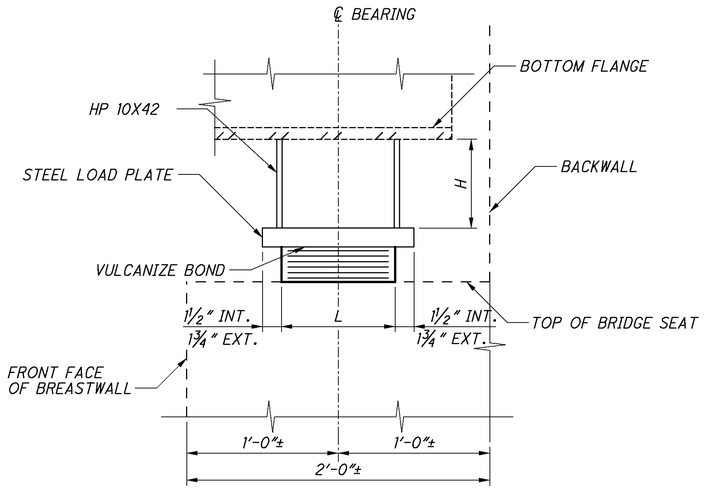
FORWARD ABUTMENT

HP 10X42 HEIGHT (H)

REAR ABUTMENT			FORWARD ABUTMENT		
BEAM	LOCATION	H (IN.)	BEAM	LOCATION	H (IN.)
B1	HR	5¼±	B1	HR	6 15/16±
	HC	5⅜±		HC	6 15/16±
	HF	5½±		HF	6 15/16±
B2	HR	5⅜±	B2	HR	6 13/16±
	HC	5½±		HC	6 13/16±
	HF	5⅝±		HF	6 13/16±
B3	HR	5½±	B3	HR	6 15/16±
	HC	5⅝±		HC	6 15/16±
	HF	5¾±		HF	6 15/16±
B4	HR	5⅜±	B4	HR	6 7/16±
	HC	5½±		HC	6 7/16±
	HF	5⅝±		HF	6 7/16±



C 7 SECTION



D 7 SECTION

LEGEND

ti = THICKNESS OF INTERNAL LAYERS
te = THICKNESS OF EXTERNAL LAYERS
T = TOTAL THICKNESS OF ELASTOMERIC BEARING
N = NUMBER OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747" (14 GAGE)
N-1 = NUMBER OF INTERNAL LAYERS
INT. = INTERIOR BEAM
EXT. = EXTERIOR BEAM

NOTES

1. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

2. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F ± 10° F, RAISE THE GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F ± 10° F.

3. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

4. STEEL AND MASONRY PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. THE STEEL PLATES SHALL BE ASTM A709 GRADE 50 AND BE SIMILARLY COATED AS THE STRUCTURAL STEEL. SURFACE PREPARATION AND PRIMING SHALL BE DONE IN THE SHOP AND BE INCLUDED IN THE UNIT PRICE BID FOR BEARINGS, EACH. FIELD COATS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

5. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO VERIFY THE HP HEIGHTS PROVIDED BY THE FOLLOWING EQUATION:

   REAR ABUTMENT FINAL HP HEIGHT = [(CONTRACTOR'S BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S BEAM SEAT ELEVATION)] - (SHEET LEAD THICKNESS + MASONRY PLATE THICKNESS + ELASTOMERIC BEARING THICKNESS + STEEL LOAD PLATE THICKNESS)

   FORWARD ABUTMENT FINAL HP HEIGHT = [(CONTRACTOR'S BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S BEAM SEAT ELEVATION)] - (ELASTOMERIC BEARING THICKNESS + STEEL LOAD PLATE THICKNESS)

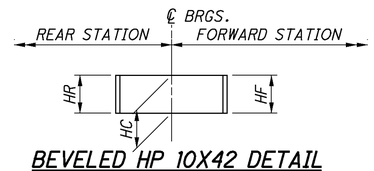
   HP BEVEL DIMENSIONS ARE BASED ON THE ORIGINAL CONSTRUCTION PLAN'S PROFILE GRADE AND SHOULD BE VERIFIED BY THE CONTRACTOR.

   ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

6. BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO REMOVE THE EXISTING BEARINGS AND FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN. ALL COST ASSOCIATED WITH THE HP SECTIONS, MASONRY AND LOAD PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.

ELASTOMERIC BEARINGS

LOCATION		BEARING DIMENSIONS							STEEL LOAD PLATE			MASONRY PLATE			REACTIONS (NO FWS)		MAXIMUM TOTAL LOAD
		L	W	ti	te	T	N	N-1	LENGTH	WIDTH	THICKNESS	LENGTH	WIDTH	THICKNESS	DL	LL	
REAR ABUTMENT	ALL BEAMS	9"	14"	0.3604"	0.25"	2¾"	6	5	12"	15"	1½"	10"	26"	1½"	27.8 k	53.7 k	81.5 k
FORWARD ABUTMENT	INTERIOR BEAMS	9"	14"	0.3604"	0.25"	2¾"	6	5	12"	15"	1½"	N/A	N/A	N/A	35.1 k	55.5 k	90.6 k
	EXTERIOR BEAMS	8½"	14"	0.3604"	0.25"	2¾"	6	5	12"	15"	1½"	N/A	N/A	N/A	30.2 k	42.4 k	72.6 k



BEVELED HP 10X42 DETAIL

wd transportation
DESIGN AGENCY
a WD PARTNERS division
7007 DISCOVERY BLVD. • DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

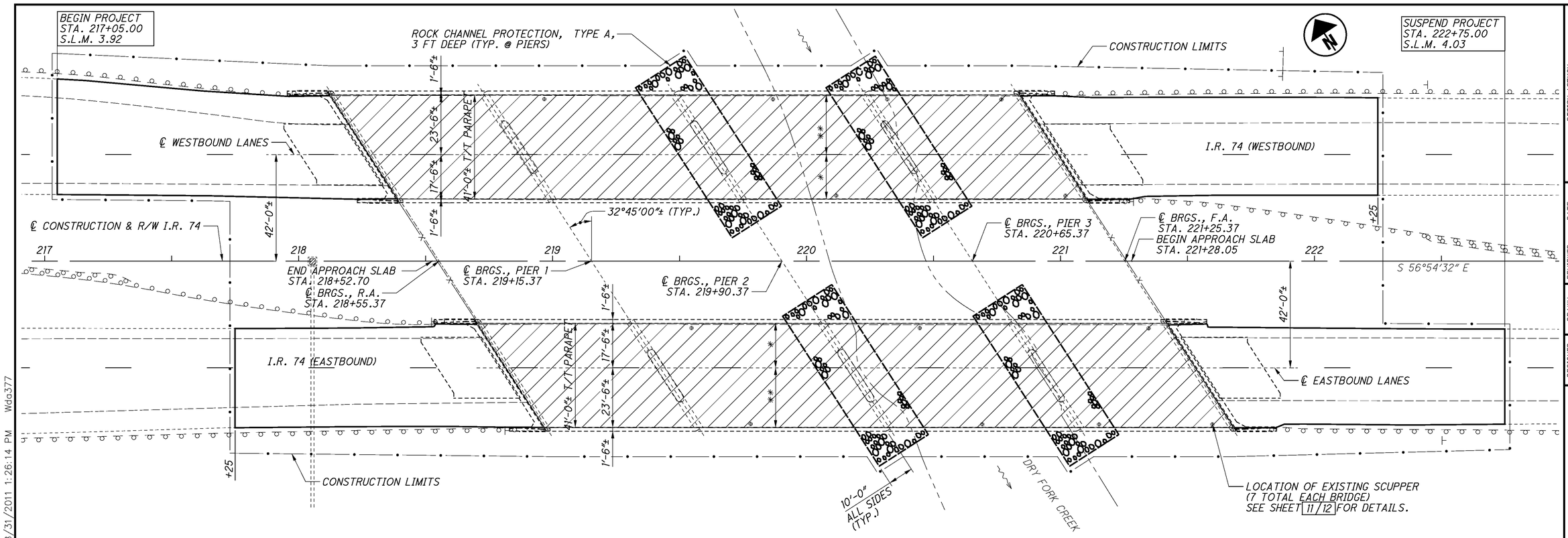
DESIGNED STK | DRAWN STK | REVIEWED WHM | DATE 10-18-10
CHECKED GDJ | REVISED | STRUCTURE FILE NUMBER 3107981

BEARING DETAILS
BRIDGE NO. HAM-74-0358
C.R. 14 (DRY FORK ROAD) OVER I.R. 74

HAM-74-3.54/ VAR
PID No. 82961

7 / 7

70
115



LEGEND

REMOVE EXISTING SUPERPLASTICIZED DENSE CONCRETE OVERLAY, PERFORM HYDRODEMOLITION AND PLACE SUPERPLASTICIZED DENSE CONCRETE OVERLAY

PROPOSED WORK (EASTBOUND AND WESTBOUND)

1. REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY AND HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.
2. PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO EXISTING DECK.
3. REPLACE EXISTING ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS.
4. PIER 2 AND PIER 3 SHALL BE PROTECTED WITH TYPE A, ROCK CHANNEL PROTECTION, FOR A MINIMUM WIDTH OF 10 FEET IN ALL DIRECTIONS. THE DEPTH SHALL BE A MINIMUM OF 3 FEET THICK OVERTOP THE FOOTERS.
5. PAINT ALL STRUCTURAL STEEL WITH SYSTEM OZEU (FEDERAL COLOR 14277 GREEN).
6. PERFORM MISCELLANEOUS TASKS SUCH AS SEALING EXPOSED PORTIONS OF CONCRETE AND PATCHING SUBSTRUCTURE.
7. MILL AND FILL APPROACH PAVEMENT INCLUDING APPROACH SLABS AS OUTLINED IN ROADWAY PLANS.

NOTE

FOR THIS PROJECT, PERMITS FOR SECTIONS 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN "WATERS OF THE UNITED STATES" AS SHOWN BELOW. IF EITHER OF THE LIMITS PROVIDED ARE EXCEEDED, THEN A 404/401 PERMIT MODIFICATION WILL BE REQUIRED. IF A PERMIT MODIFICATION IS REQUIRED, REFER TO SUPPLEMENTAL SPECIFICATION 832.09 FOR THE APPLICATION REQUIREMENTS.

PLAN AREA OF TEMPORARY FILL MATERIAL = 0.58 ACRES
TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 7482 YD³

LEGEND

* - PHASE 1A CONSTRUCTION = 17'-6"
** - PHASE 2 CONSTRUCTION = 23'-6"

ORDINARY HIGH WATER ELEVATION 518.0

DESIGN TRAFFIC:
2012 ADT = 59240 2012 ADTT = 13626
2024 ADT = 70880 2024 ADTT = 16303
DIRECTIONAL DISTRIBUTION = 0.58

BENCHMARK DATA			
BM #3 STA. 217+89.50,	EL. 540.41,	OFFSET 68.32',	LT.
BM #4 STA. 221+93.02,	EL. 535.26,	OFFSET 68.45',	RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 7/115

EXISTING STRUCTURE

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINF. CONC. DECK & SUBSTRUCTURE WITH CONCRETE SAFETY PARAPETS.
SPANS: 60'-0"±, 75'-0"±, 75'-0"±, 60'-0"± C/C BEARINGS
ROADWAY: 41'-0"± T/T PARAPET
LOAD FREQUENCY: CF 2000 (57)
SKEW: 32°45'00"± R.F.
WEARING SURFACE: 2"± SUPERPLASTILIZED DENSE CONCRETE OVERLAY
APPROACH SLABS: 25'± LONG (AS-1-54)
ALIGNMENT: TANGENT
NORMAL CROWN: 0.016±
STRUCTURAL FILE NUMBER: 3108015 (LEFT), 3108074 (RIGHT)
DATE BUILT: 1962
DISPOSITION: TO BE REHABILITATED

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-12-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108015/3108074	

GENERAL PLAN
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961

1/12

71/115

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STANDARD DRAWINGS AND SPECIFICATIONS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

GSD-1-96	DATED 7-19-02
CSB-1-55	DATED 2-2-59

AND TO SUPPLEMENTAL SPECIFICATIONS:

848	DATED 4-16-10

DESIGN SPECIFICATIONS

THE PROPOSED WORK CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2003 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20, CASE II AND THE ALTERNATE MILITARY LOADING.
CF1000(57) (STRUCTURE)

DESIGN DATA

STRUCTURAL STEEL
ASTM A709, GRADE 50 YIELD STRENGTH 50,000 PSI.

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

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.

ITEM 513 SEALING OF CONCRETE SURFACES, (EPOXY URETHANE)

THE COLOR OF THE URETHANE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO 17778 (LIGHT NEUTRAL).

ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL

FIELD PAINT EXISTING BEAMS AND CROSSFRAMES. THE COATING SHALL BE A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT (FORMALLY REFERRED TO AS SYSTEM OZEU) ACCORDING TO CMS 514. THE COLOR OF THE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO. 14277 (GREEN).

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, 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 519 - PATCHING CONCRETE STRUCTURE, 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 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE PARTIAL REMOVAL OF THE EXISTING END CROSSFRAMES IN ORDER TO INSTALL THE PROPOSED ABUTMENT BEARINGS. REMOVE PORTIONS OF THE END CROSSFRAME BY FIELD CUTTING THE BOTTOM DIAGONAL AND HORIZONTAL MEMBERS AS REQUIRED TO FIELD DRILL HOLES FOR THE ANCHOR RODS. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. GRIND THE EXISTING WELDS TO A SMOOTH FINISH BEFORE WELDING THE EXISTING CROSSFRAMES BACK INTO PLACE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ESTIMATED QUANTITIES

DESIGNED: ELC DATE: 9/1/11 — CHECKED: JSB DATE: 9/1/11

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE (3108015) ABUT.	LEFT BRIDGE (3108015) PIERS	LEFT BRIDGE (3108015) SUPER.	RIGHT BRIDGE (3108074) ABUT.	RIGHT BRIDGE (3108074) PIERS	RIGHT BRIDGE (3108074) SUPER.	SEE SHT.
202	11201	LUMP	-	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP			LUMP	2/12
503	11100	LUMP	-	COFFERDAMS AND EXCAVATION BRACING		LUMP			LUMP		
512	10100	2230	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	136	415	564	136	415	564	
512	10300	122	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			61			61	
512	10600	5	FT	CONCRETE REPAIR BY EPOXY INJECTION	5						
513	90000	517	LBS	STRUCTURAL STEEL, MISC.: REPLACEMENT OF END CROSSFRAMES, AS PER PLAN			517				3/12
513	95020	LUMP	-	STRUCTURAL STEEL, MISC.: MAINTENANCE AND INSPECTION OF COPING HOLES, AS PER PLAN			LUMP			LUMP	3/12
514	00050	32343	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			16130			16213	
514	00056	32426	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			16213			16213	
514	00060	32426	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			16213			16213	
514	00066	32426	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			16213			16213	
514	00504	24	MANHOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			12			12	
514	10000	14	EACH	FINAL INSPECTION REPAIR			7			7	
516	44101	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE	12			12			12/12
				NEOPRENE, (8" X 14" X 2 ½" PAD, 11" X 15" X 1 ½" PLATE, 1 ½" X 9" X 23" MASONRY PLATE), AS PER PLAN							
516	47001	LUMP	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP			LUMP	2/12
519	11101	30	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4.50	15.00		10.50	0		2/12
848	10201	2476	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (T=3")			1238			1238	3/12
848	20000	2476	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			1238			1238	
848	30200	154	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			77			77	
848	50000	248	SQ YD	HAND CHIPPING			124			124	
848	50100	LUMP	-	TEST SLAB			LUMP			LUMP	
848	50200	12	CU YD	FULL-DEPTH REPAIR			3			9	
848	50320	2476	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=2")			1238			1238	
848	50340	990	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			495			495	

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED ELC | DRAWN BLM | REVIEWED TAI | DATE 5-12-11
CHECKED JSB | REVISED | STRUCTURE FILE NUMBER 3108015/3108074

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961

ITEM 848-SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (T= 3")

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

A) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING AN UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE MUST BE DRY PRIOR TO PLACEMENT OF THE CURING MATERIAL. IF THE CURING MATERIAL CANNOT BE PLACED WITHIN THE SAME SHORT-TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL HAVE 24 HOURS FROM REMOVAL OF THE WET CURE TO APPLY THE MEMBRANE-CURING COMPOUND.

B) TRAFFIC WILL NOT BE PERMITED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI.

C) FOR EACH POUR, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS AND THE MODULUS OF RUPTURE OF EACH BEAM UNTIL THE MODULUS OF RUPTURE OF TWO TESTS IS NOT LESS THAN 650 PSI. TRAFFIC WILL BE ALLOWED ON THE OVERLAY AT 600 PSI.

D) TWO TEST SLABS WILL BE REQUIRED IN ACCORDANCE WITH SS 848 IF A PERIOD OF 30 DAYS OR MORE HAS ELAPSED SINCE THE POURING OF THE TEST SLABS OR ANY OVERLAY OPERATION AS PART OF THIS PROJECT.

E) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1 1/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

F) THE FINAL SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY. HAND CHIPPING IS FOR THE PURPOSE OF CHIPPING AREAS WHERE THE HYDRODEMOLITION MACHINE DOES NOT HAVE ACCESS. IF THE DESIRED DEPTH IS ACHIEVED BY HYDRODEMOLITION, NO FURTHER REMOVAL IS NECESSARY.

G) FULL DEPTH REPAIR WILL NOT BE REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

H) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 9:30 AM.

I) MECHANICAL MEANS MAY BE USED TO REMOVE THE EXISTING RIGID OVERLAY AND TOP 0.5 INCH OF THE ORIGINAL DECK. THE REMAINING 0.5 INCH OF ORIGINAL DECK SHALL BE REMOVED BY HYDRODEMOLITION.

PAYMENT FOR ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN ITEM 848-SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN.

ITEM 513 STRUCTURAL STEEL, MISC.: MAINTENANCE AND INSPECTION OF COPING HOLES, AS PER PLAN

THIS ITEM SHALL CONFORM TO CONSTRUCTION AND MATERIAL SPECIFICATION FOR ITEM 513 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

THE CONTRACTOR SHALL USE AN ESTABLISHED NON-DESTRUCTIVE EXAMINATION TECHNIQUE TO INSPECT AND MAINTAIN FATIGUE CRITICAL PORTIONS OF THE EXISTING STRUCTURAL STEEL IN THE VICINITY OF ANY AND ALL COPING HOLES.

LIQUID PENETRANT INSPECTION SHALL BE USED TO DETECT ANY SURFACE CONNECTED DISCONTINUITIES; SUCH AS, FATIGUE CRACKS, QUENCHING, FRACTURES, POROSITY, INCOMPLETE FUSION, AND FLAWS IN JOINTS. LIQUID PENETRANT EXAMINATION SHALL BE IN COMPLIANCE WITH ASTM E165 (1994 OR LATEST EDITION) AND PERFORMED, AS FOLLOWS:

PRECLEANING
GRIND SMOOTH THE COPING HOLES AT THE TOP AND BOTTOM OF THE WEB SPLICES (OVER THE PIERS). PREPARE SURFACE BY APPLYING CLEANER TO THE SURFACE TO BE EXAMINED AND ADJACENT AREAS. THEY SHOULD BE FREE OF CONTAMINANTS, SUCH AS FLUX, WELD SPATTER, SCALE, RUST, PAINT, OIL, AND GREASE. CONTAMINANTS CAN PREVENT OR DELAY THE PENETRANT FROM ENTERING THE FLAWS, THEREBY UNDERMINING THE INSPECTION PROCESS.

PENETRANT APPLICATION
COVER THE SURFACE TO BE INSPECTED WITH RED DYE PENETRANTS. ONCE APPLIED, THE PENETRANT IS ALLOWED TO DWELL OR REMAIN ON THE INSPECTION AREA FOR FIVE MINUTES OR MORE. DURING THIS TIME THE PENETRANT FLOWS INTO ANY FLAWS OR DISCONTINUITIES.

PENETRANT REMOVAL
SURFACE PENETRANT IS REMOVED BY WIPING BOTH WITH DRY AND WITH CLEANER AND/OR REMOVER MOISTENED TOWELS. THE SURFACE IS WIPED CLEAN, BUT DYE PENETRANT REMAINS IN CRACK.

DEVELOPER APPLICATION
USE SPRAY-ON METHOD FOR APPLYING NONAQUEOUS DEVELOPER. THE OBJECTIVE IS TO SPRAY A LIGHT, EVEN COAT OF DEVELOPER THAT IS SLIGHTLY DAMP WHEN IT HITS THE SURFACE. IT SHOULD BE DAMP TO ENABLE THE SOLVENT, WHICH IS VOLATILE (EVAPORATES QUICKLY), TO COUPLE WITH THE PENETRANT IN THE FLAW AND SPEED THE RETURN OF THE PENETRANT TO THE SURFACE. IT SHOULD NOT BE SO DAMP AS TO DILUTE OR OVERSPREAD THE PENETRANT. TWO OR THREE LIGHT SPRAYS OF DEVELOPER ARE BETTER THAN ONE HEAVY APPLICATION, FOR LEAK DETECTION.

EXAMINATION
THE CONTRACTOR SHALL INSPECT THE TREATED AREAS AND REPORT ANY INDICATIONS OF FATIGUE ISSUES. THESE ISSUES SHOULD BE REPRESENTED IN A REPORT AND MADE AVAILABLE TO THE DISTRICT WHO WILL DETERMINE IF THE INDICATIONS ARE A PROBLEM OR IF THE EXISTING FATIGUE CRITICAL STRUCTURAL MEMBERS ARE ACCEPTABLE.

REPORTING
THE CONVENTIONAL STANDARDS INCLUDE METHODS FOR EVALUATING INDICATIONS. FLAWS MAY BE INDICATED IN VARIOUS WAYS. LINES INDICATE CRACKS, SEAMS, OR INCOMPLETE FUSION. DOTS IN A LINE OR A CURVE MAY INDICATE A TIGHT CRACK. POROSITY APPEARS AS A SERIES OF DOTS.

ACTIONS
IF CRACKS ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE DISTRICT BRIDGE ENGINEER WHO WILL DETERMINE REPAIR PROCEDURES.

MEASUREMENT & PAYMENT
THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. PAYMENT FOR ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED 513 STRUCTURAL STEEL, MISC.: MAINTENANCE AND INSPECTION OF COPING HOLES, AS PER PLAN

ITEM 513 REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL AND REPLACEMENT OF THE EXISTING END CROSSFRAMES DUE TO DETERIORATION. REMOVE THE END CROSSFRAMES BY DETACHING AT THE EXISTING WELDED WEB CONNECTION. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. GRIND THE EXISTING WELDS TO A SMOOTH FINISH BEFORE WELDING THE REPLACEMENT CROSSFRAMES INTO PLACE. ITEMS TO BE REPLACED ARE AS FOLLOWS:

HAM-74-0395 LEFT BRIDGE

REAR ABUTMENT:
THE END CROSSFRAMES IN BAY 2 AND 3

FORWARD ABUTMENT:
THE END CROSSFRAMES IN BAY 2

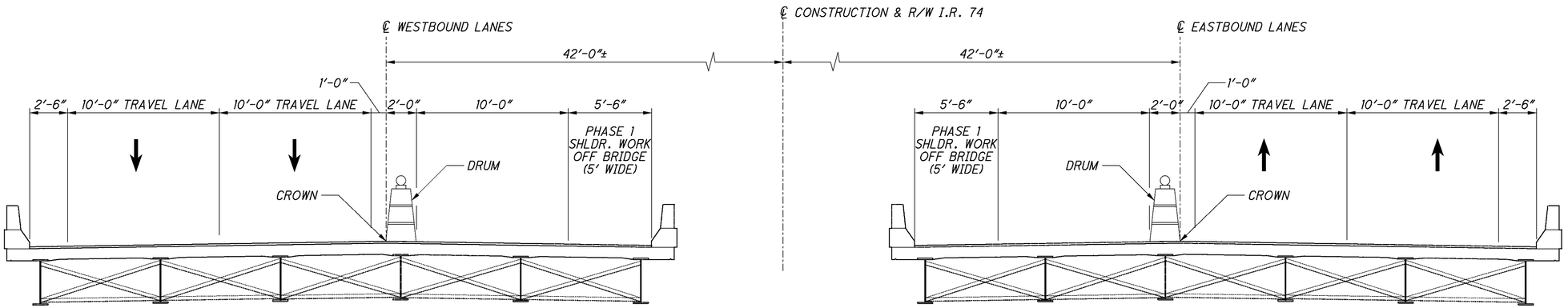
MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF END CROSSFRAMES REMOVED AND REPLACED ON A POUNDS PER UNIT COST BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 513 REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

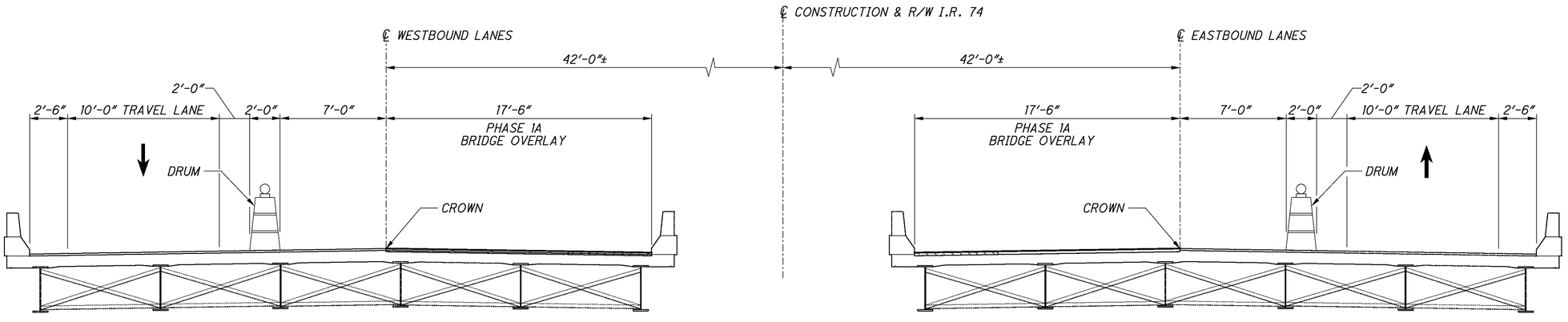
DESIGNED ELC | DRAWN BLM | REVIEWED TAI | DATE 5-12-11
CHECKED JSB | REVISED | STRUCTURE FILE NUMBER 3108015/3108074

GENERAL NOTES
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961



PHASE 1 MAINTENANCE OF TRAFFIC & CONSTRUCTION



PHASE 1A MAINTENANCE OF TRAFFIC & CONSTRUCTION (PER PLCM)

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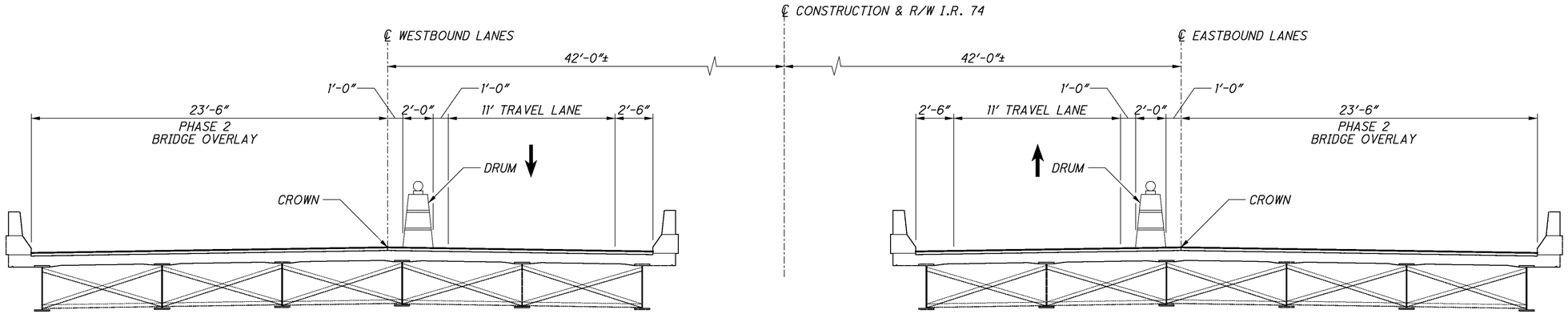
DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-12-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108015/3108074	

PHASE 1 & 1A CONSTRUCTION DETAILS
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961



PHASE 2 MAINTENANCE OF TRAFFIC & CONSTRUCTION (WEEKEND)

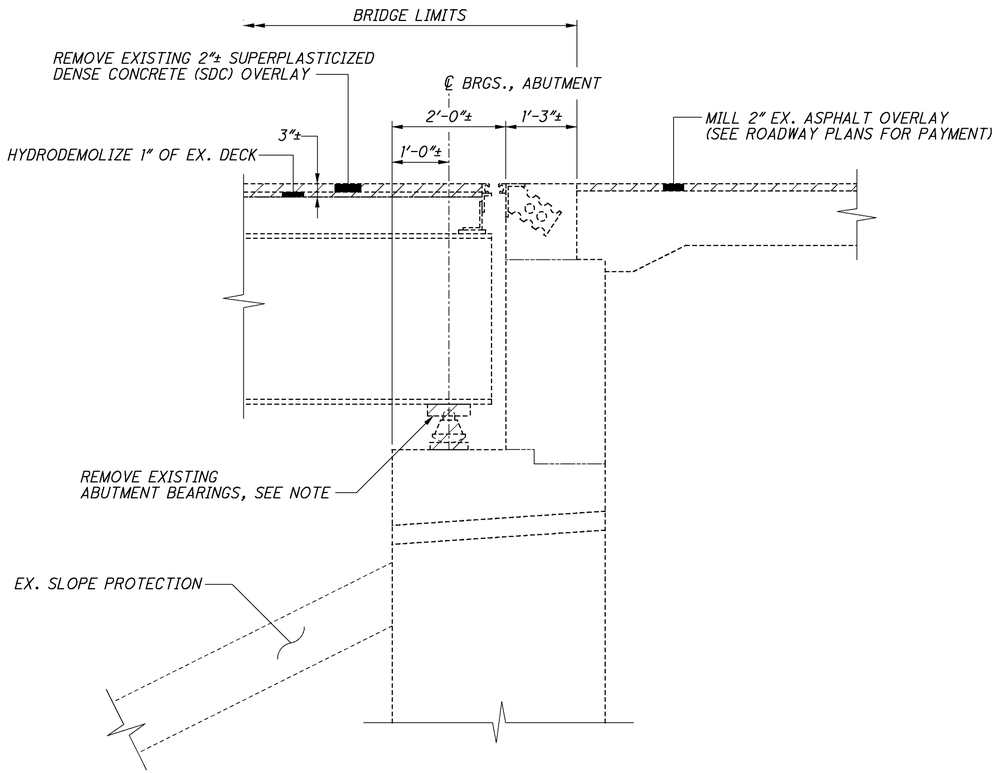
NOTE: BOTH 0395 & 0431 E.B. DECKS ARE TO BE COMPLETED IN ONE (1) WEEKEND
BOTH 0395 & 0431 W.B. DECKS ARE TO BE COMPLETED IN ONE (1) WEEKEND

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

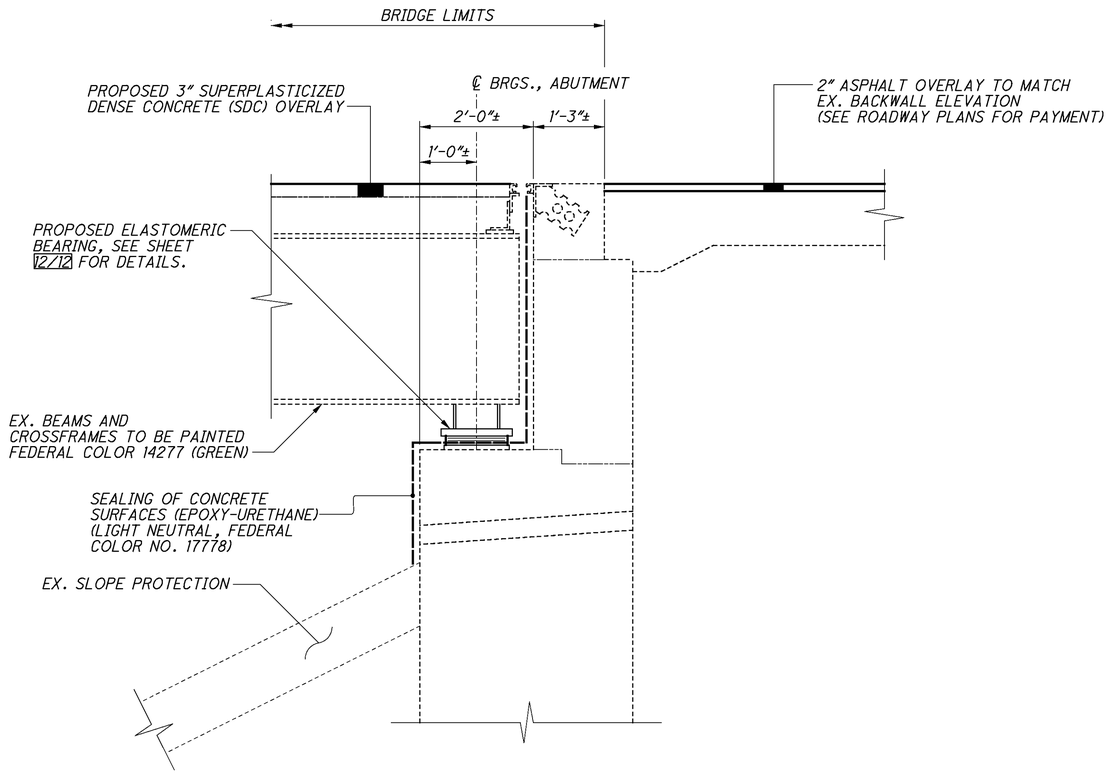
DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-12-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108015/3108074	

PHASE 2 CONSTRUCTION DETAILS
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961



EXISTING ABUTMENT SECTION



PROPOSED ABUTMENT SECTION

NOTE

EXISTING ABUTMENT BEARINGS ARE R100. REFER TO ODOT STD. DWG. RB-1-55 FOR ADDITIONAL BEARING DETAILS.

DESIGN AGENCY
DYNOTEC, INC.
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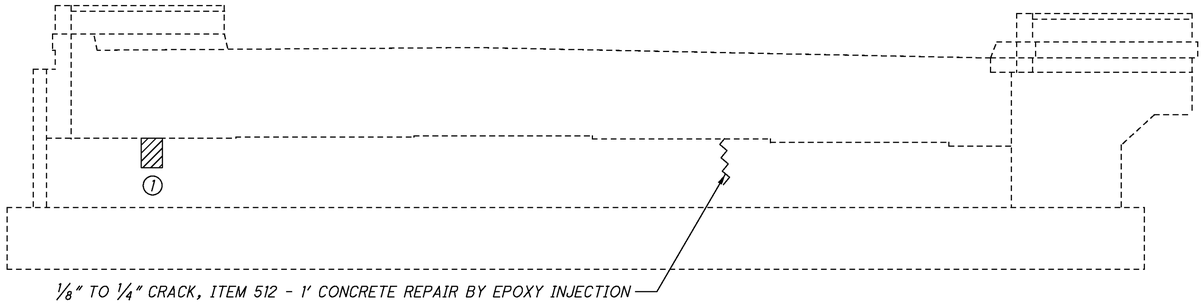
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-12-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108015/3108074	

ABUTMENT DETAILS

BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961



REAR ABUTMENT ELEVATION (WESTBOUND)

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

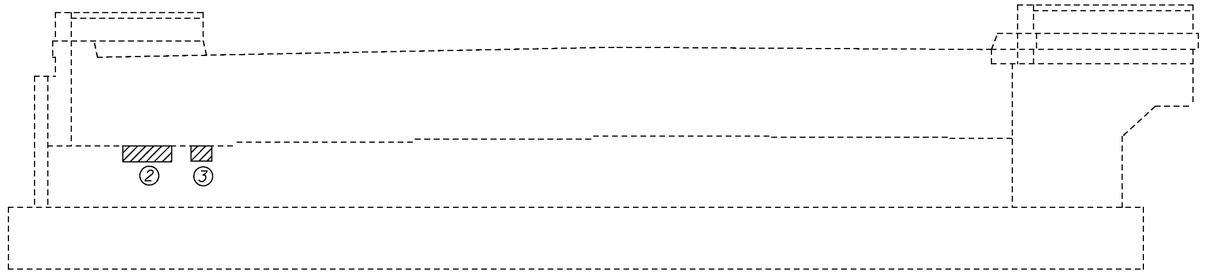
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

REAR ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
1	2.00	3.00*
2	3.00	4.50*
3	1.00	1.50*
TOTAL R.A.	6.00	9.00*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION



REAR ABUTMENT ELEVATION (EASTBOUND)

ITEM 512 CONCRETE REPAIR BY EPOXY INJECTION

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (LIN. FT.)

REAR ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
1 - CRACK	1.33	2.00*
TOTAL R.A.	1.33	2.00*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

NOTE

SEAL ALL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE, LIGHT NEUTRAL, FEDERAL COLOR NO. 17778.

LEGEND

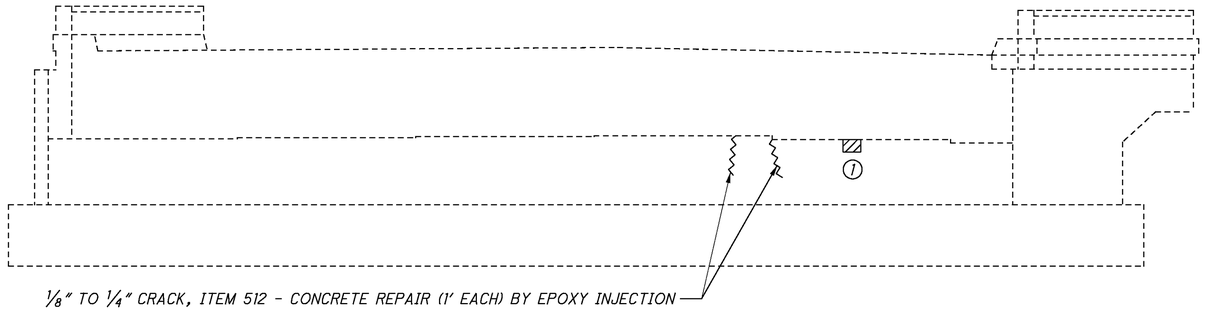
ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED ELC | DRAWN SJB | REVIEWED TAI | DATE 5-12-11
CHECKED JSB | REVISED | STRUCTURE FILE NUMBER 3108015/3108074

REAR ABUTMENT REPAIR DETIALS
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961



FORWARD ABUTMENT ELEVATION (WESTBOUND)

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

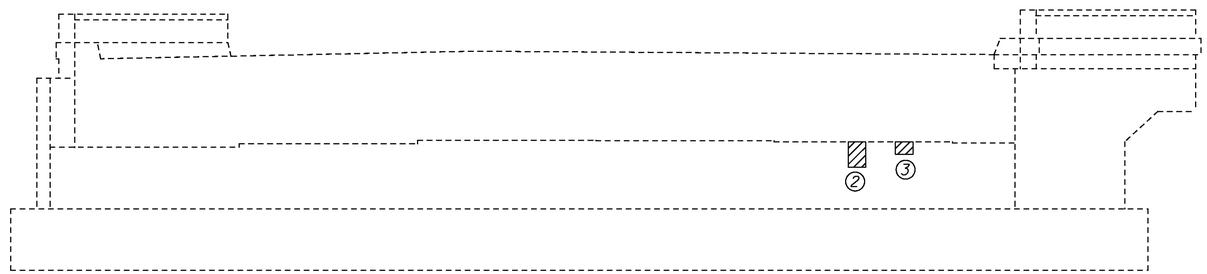
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

FORWARD ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
(1)	1.00	1.50*
(2)	2.00	3.00*
(3)	1.00	1.50*
TOTAL F.A.	4.00	6.00*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION



FORWARD ABUTMENT ELEVATION (EASTBOUND)

ITEM 512 CONCRETE REPAIR BY EPOXY INJECTION

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (LIN. FT.)

FORWARD ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
2 - CRACKS	2.00	3.00*
TOTAL F.A.	2.00	3.00*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

NOTE

SEAL ALL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE, LIGHT NEUTRAL, FEDERAL COLOR NO. 17778.

LEGEND

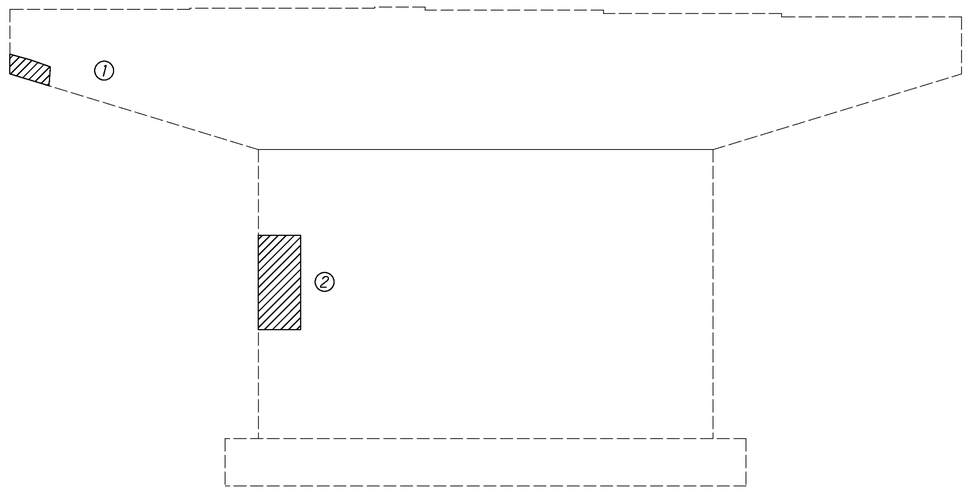
ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

DESIGN AGENCY
DYNOTEC, INC.
2331 E. DUB-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED ELC | DRAWN SJB | REVIEWED TAI | DATE 5-12-11
CHECKED JSB | REVISED | STRUCTURE FILE NUMBER 3108015/3108074

FORWARD ABUTMENT REPAIR DETIALS
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961



PIER 2 (WESTBOUND)

PILING NOT SHOWN

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

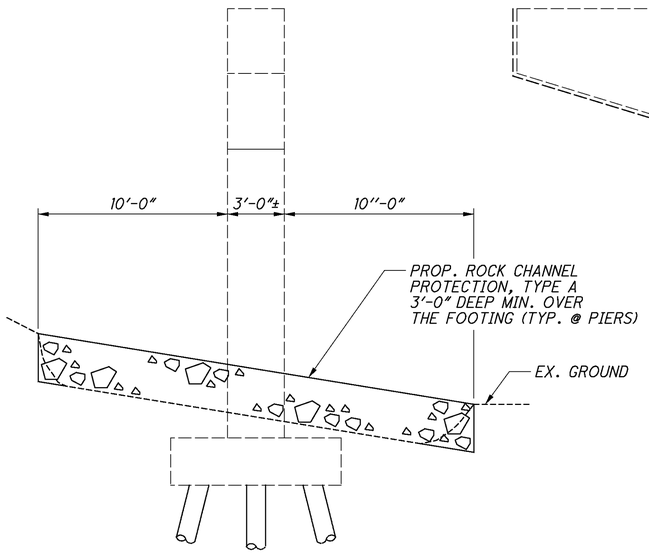
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

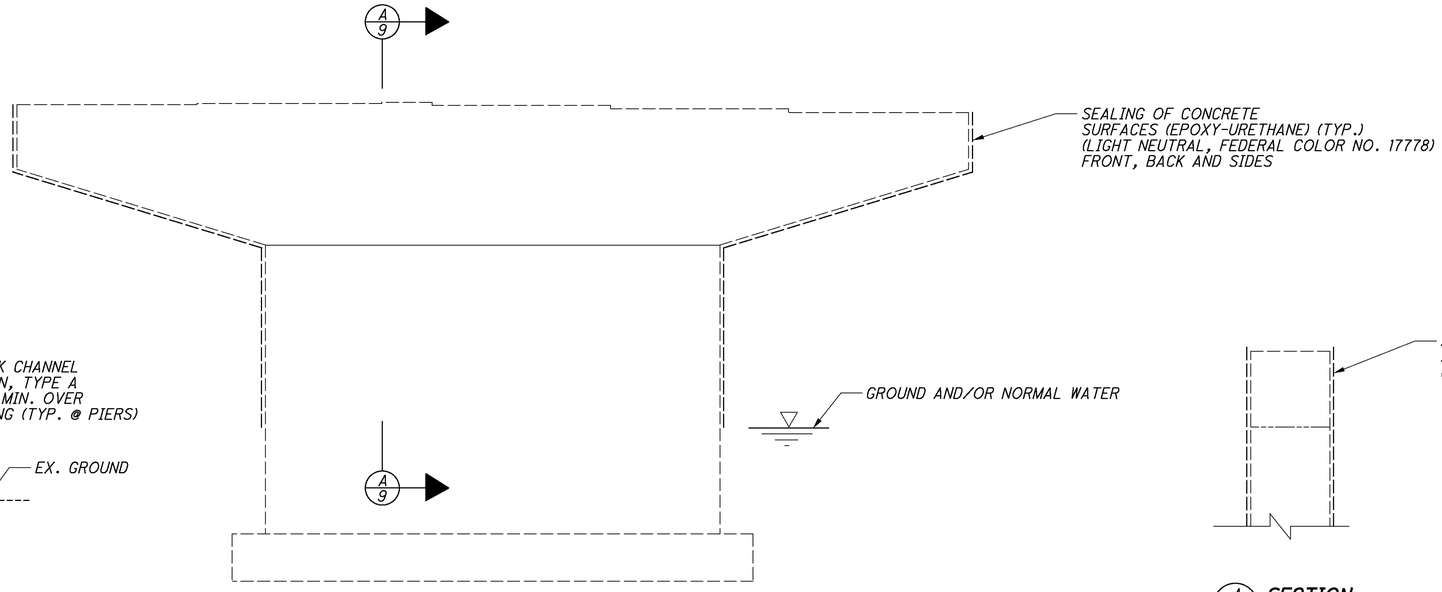
ESTIMATED PATCHING QUANTITIES (SQ. FT.)

PIER 2	MEASURED QUANTITIES	ESTIMATED QUANTITIES
①	2.00	3.00*
②	7.50	11.25*
TOTAL PIER 2	9.50	14.25*

** - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION*

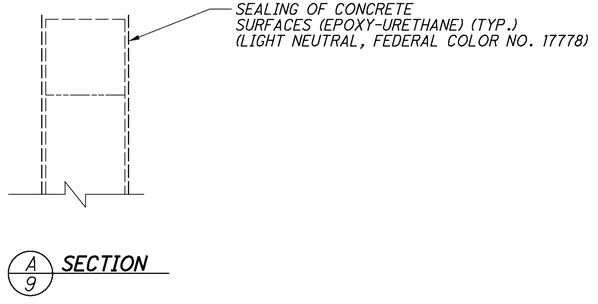


PIERS 2 & 3 (LOOKING DOWNSTREAM)



PIER SEALING DETAIL

(TYP. ALL PIERS)



DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
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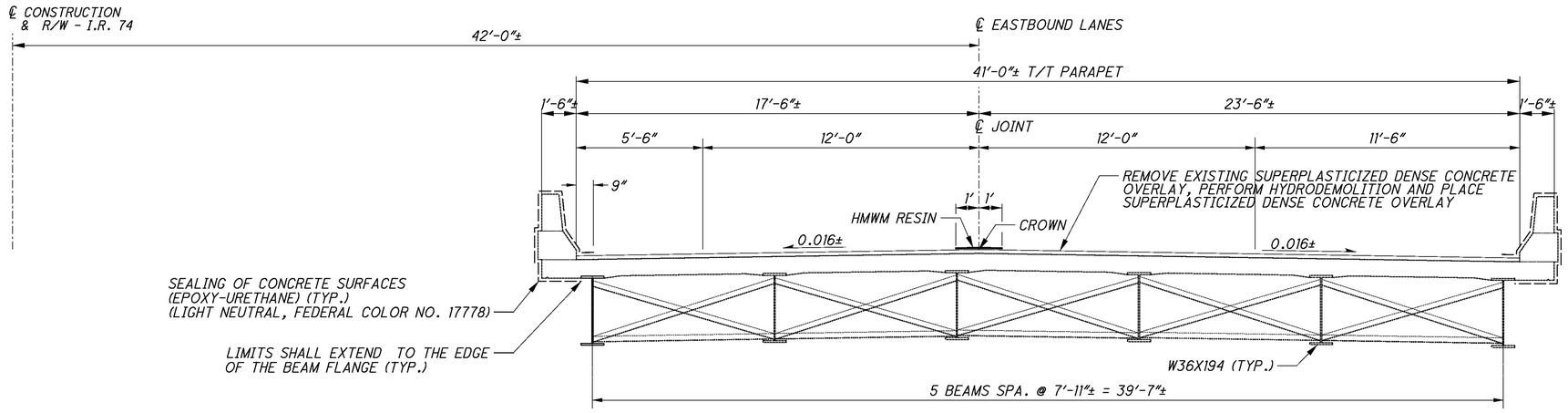
DESIGNED	DRAWN	REVIEWED	DATE
ELC	SJB	TAI	5-12-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108015/3108074	

PIER REPAIR DETIALS

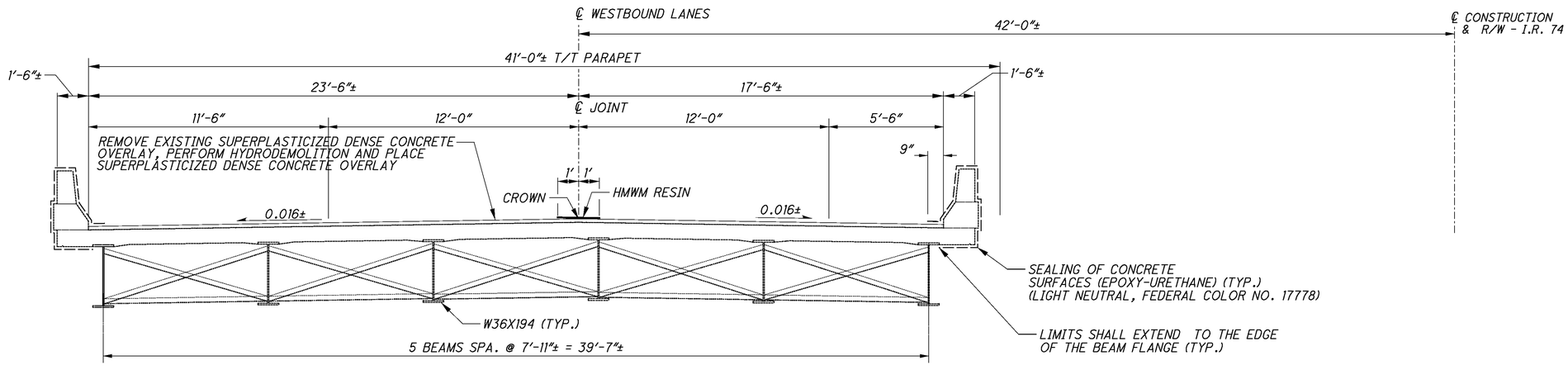
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR

PID No. 82961



TRANSVERSE SECTION (EASTBOUND)



TRANSVERSE SECTION (WESTBOUND)

NOTE

SEE SHEET 11/12 FOR OVERLAY DETAILS

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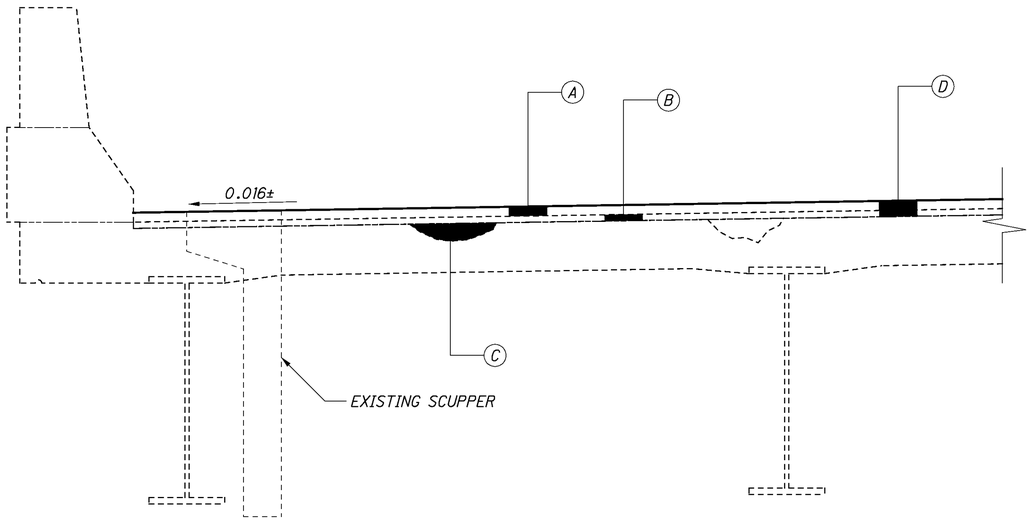
JSB	----	3108015/3108074	

TRANSVERSE SECTION
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961

10 / 12

80
115



OVERLAY DETAIL (EASTBOUND AND WESTBOUND)

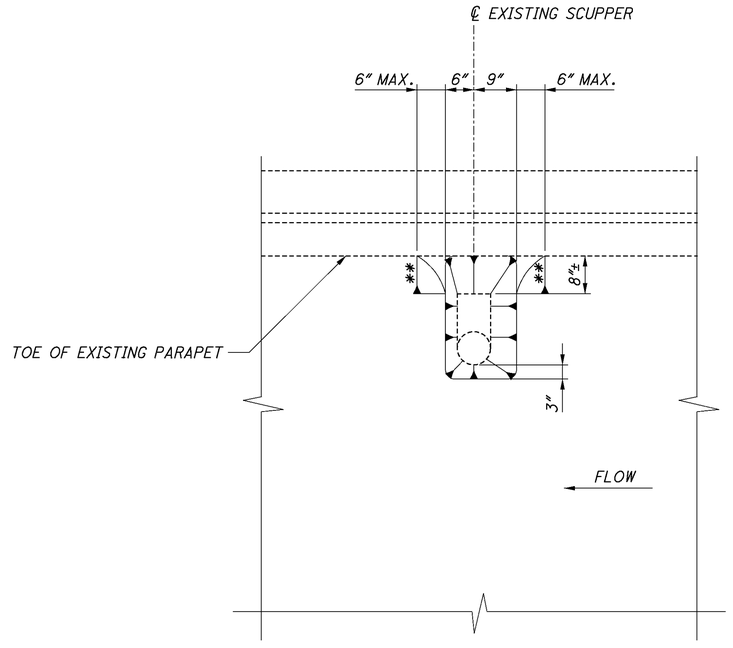
PROPOSED WORK (EASTBOUND AND WESTBOUND)

(A) - REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY.

(B) - HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.

(C) - PARTIAL AND FULL DEPTH REPAIRS TO THE DECK TO BE MADE AS DIRECTED BY THE ENGINEER.

(D) - PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO THE EXISTING DECK.



LEGEND

** - MATCH EXISTING SLOPE

SCUPPER OVERLAY DETAIL

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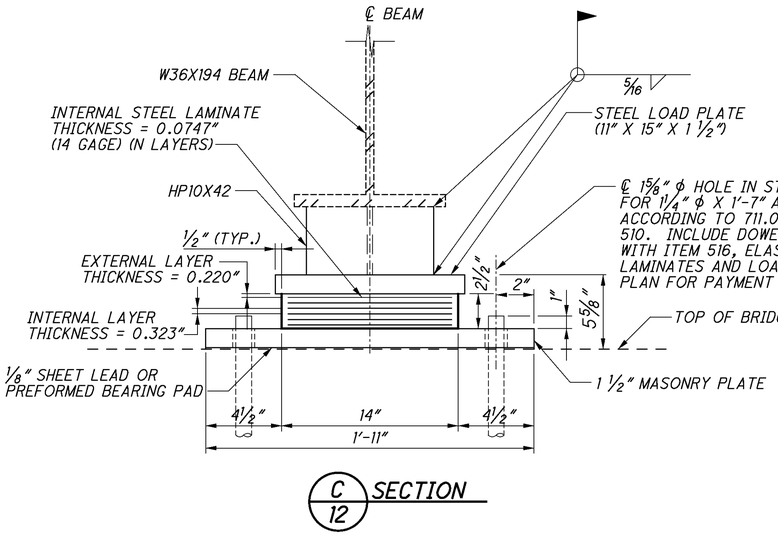
OVERLAY DETAILS
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

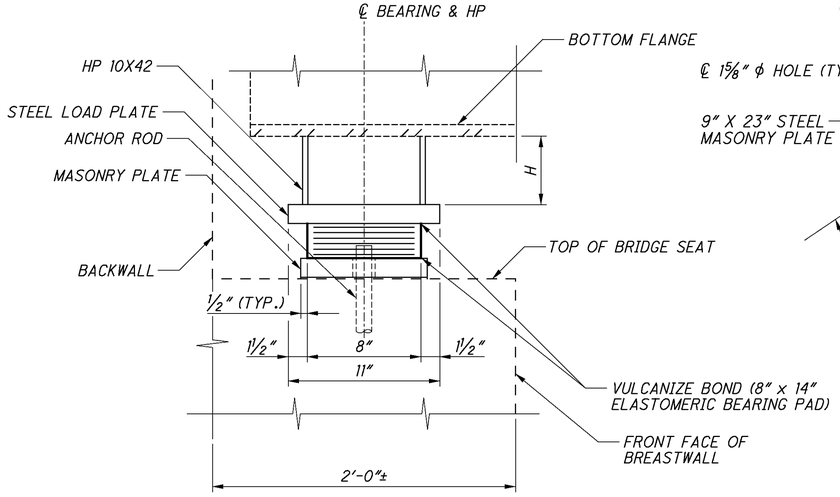
HAM-74-3.54/VAR
PID No. 82961



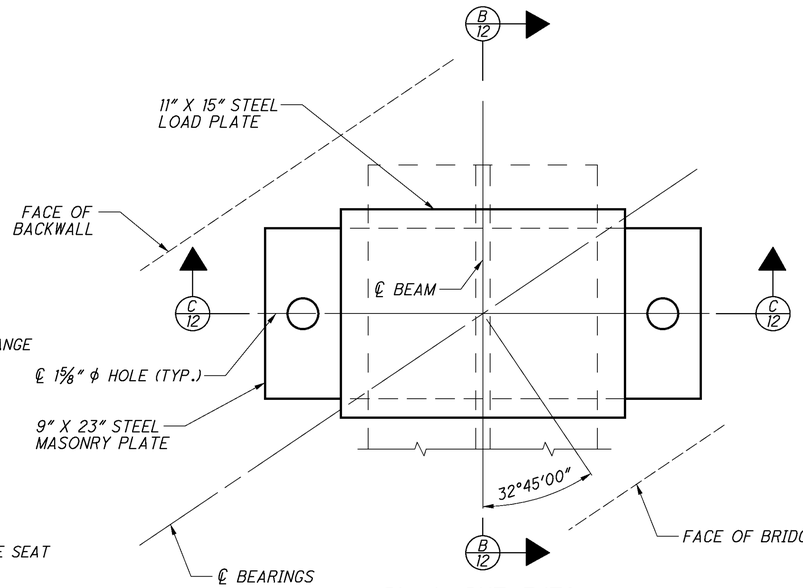
C/12 SECTION

LEGEND

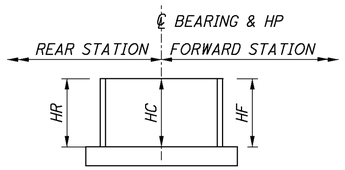
ti = THICKNESS OF INTERNAL LAYERS
te = THICKNESS OF EXTERNAL LAYERS
T = TOTAL THICKNESS OF ELASTOMERIC BEARING
N = NUMBER OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747" (14 GAGE)
N-1 = NUMBER OF INTERNAL LAYERS
INT. = INTERIOR BEAM
EXT. = EXTERIOR BEAM



B/12 SECTION



PLAN-ABUTMENTS
EXPANSION BEARINGS



BEVELED HP 10x42 DETAIL

DESIGN LOADS	
WITH FWS	WITHOUT FWS
DL = 40.77 K	DL = 30.95 K
LL = 50.72 K	LL = 50.72 K
TOTAL = 91.49 K	TOTAL = 81.67 K

NOTES

1. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

2. BEARING REPOSITIONING : IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F ± 10° F, RAISE THE GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F ± 10° F.

3. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

4. STEEL AND MASONRY PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. THE STEEL PLATES SHALL BE ASTM A709 GRADE 50 AND BE SIMILARLY COATED AS THE STRUCTURAL STEEL. SURFACE PREPARATION AND PRIMING SHALL BE DONE IN THE SHOP AND BE INCLUDED IN THE UNIT PRICE BID FOR BEARINGS, EACH. FIELD COATS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

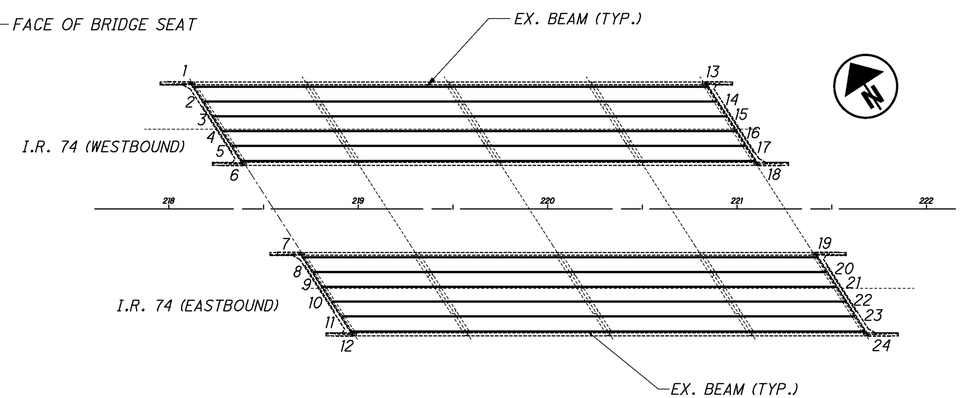
5. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO VERIFY THE HP HEIGHTS PROVIDED BY THE FOLLOWING EQUATION:

   FINAL HP HEIGHT = [(CONTRACTOR'S BOTTOM OF STEEL ELEVATION) - (CONTRACTOR'S BEAM SEAT ELEVATION)] - (SHEET LEAD THICKNESS + MASONRY PLATE THICKNESS + ELASTOMERIC BEARING THICKNESS + STEEL LOAD PLATE THICKNESS)

   HP BEVEL HEIGHTS ARE BASED ON THE ORIGINAL CONSTRUCTION PLAN'S PROFILE GRADE AND SHOULD BE VERIFIED BY THE CONTRACTOR.

   ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

6. BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO REMOVE THE EXISTING BEARINGS AND FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN. ALL COST ASSOCIATED WITH THE HP SECTIONS, MASONRY AND LOAD PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.



HP10X42 HEIGHT "H" - "INCHES (+/-)"

HEIGHT ID	BEAM END																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
HR	5 7/16"	5 3/16"	5 1/16"	5 1/16"	5 5/16"	5 3/16"	5 3/16"	5 1/16"	5 1/16"	5 1/16"	5 3/16"	5 1/16"	5 3/16"	5 7/16"	5 5/16"	5 7/16"	5 5/16"	5 9/16"	5 5/16"	5 7/16"	5 9/16"	5 7/16"	5 7/16"	5 13/16"
HC	5 3/8"	5 1/8"	5"	5"	5 1/4"	5 1/8"	5 1/8"	5"	5"	5"	5 1/8"	5"	5 1/8"	5 3/8"	5 1/4"	5 3/8"	5 1/4"	5 1/2"	5 1/4"	5 3/8"	5 1/2"	5 3/8"	5 3/8"	5 3/4"
HF	5 5/16"	5 1/16"	4 15/16"	4 15/16"	5 3/16"	5 1/16"	5 1/16"	4 15/16"	4 15/16"	4 15/16"	5 1/16"	4 15/16"	5 1/16"	5 5/16"	5 3/16"	5 5/16"	5 3/16"	5 7/16"	5 3/16"	5 5/16"	5 7/16"	5 5/16"	5 5/16"	5 11/16"

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DESIGNED JSB | DRAWN JSB | REVIEWED TAI | DATE 5-12-11
CHECKED EC | REVISED | STRUCTURE FILE NUMBER 3108015/3108074

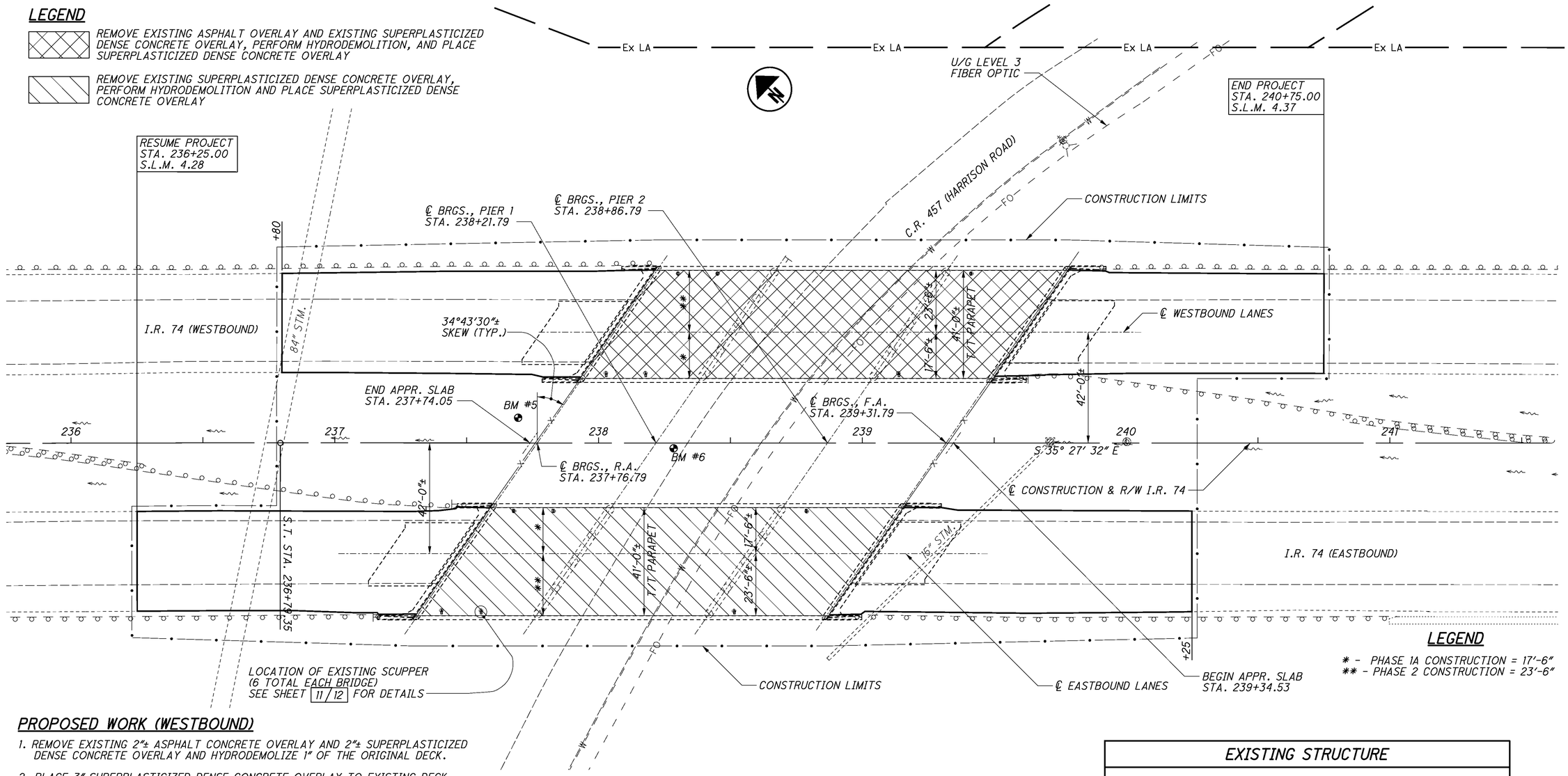
BEARING DETAILS
BRIDGE NO. HAM-74-0395 L/R
I.R. 74 OVER DRY FORK CREEK

HAM-74-3.54/VAR
PID No. 82961

LEGEND

REMOVE EXISTING ASPHALT OVERLAY AND EXISTING SUPERPLASTICIZED DENSE CONCRETE OVERLAY, PERFORM HYDRODEMOLITION, AND PLACE SUPERPLASTICIZED DENSE CONCRETE OVERLAY

REMOVE EXISTING SUPERPLASTICIZED DENSE CONCRETE OVERLAY, PERFORM HYDRODEMOLITION AND PLACE SUPERPLASTICIZED DENSE CONCRETE OVERLAY



LEGEND

* - PHASE 1A CONSTRUCTION = 17'-6"
** - PHASE 2 CONSTRUCTION = 23'-6"

PROPOSED WORK (WESTBOUND)

1. REMOVE EXISTING 2"± ASPHALT CONCRETE OVERLAY AND 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY AND HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.
2. PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO EXISTING DECK.
3. REPLACE EXISTING SLIDE PLATE ABUTMENT BEARINGS IN-KIND.
4. PAINT ALL STRUCTURAL STEEL WITH SYSTEM OZEU (FEDERAL COLOR 14277 GREEN).
5. PERFORM MISCELLANEOUS TASKS SUCH AS SEALING EXPOSED PORTIONS OF CONCRETE AND PATCHING SUBSTRUCTURE.
6. MILL AND FILL APPROACH PAVEMENT INCLUDING APPROACH SLABS AS OUTLINED IN ROADWAY PLANS.

PROPOSED WORK (EASTBOUND)

1. REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY AND HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.
2. PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO EXISTING DECK.
3. REPLACE EXISTING SLIDE PLATE ABUTMENT BEARINGS IN-KIND.
4. PAINT ALL STRUCTURAL STEEL WITH SYSTEM OZEU (FEDERAL COLOR 14277 GREEN).
5. PERFORM MISCELLANEOUS TASKS SUCH AS SEALING EXPOSED PORTIONS OF CONCRETE AND PATCHING SUBSTRUCTURE.
6. MILL AND FILL APPROACH PAVEMENT INCLUDING APPROACH SLABS AS OUTLINED IN ROADWAY PLANS.

BENCHMARK DATA

BM #5 STA. 237+69.53, EL. 570.12, OFFSET 9.54', LT

BM #6 STA. 238+28.47, EL. 551.98, OFFSET 2.03', RT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 7/115

DESIGN TRAFFIC:
2012 ADT = 59240 2012 ADTT = 13626
2024 ADT = 70880 2024 ADTT = 16303
DIRECTIONAL DISTRIBUTION = 0.58

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 45'-0"±, 65'-0"±, 45'-0"± C/C BEARINGS

ROADWAY: 41'-0"± T/T PARAPET

LOADING: CF=2000(57)

SKEW: 34°43'30"± L.F.

WEARING SURFACE: 2"± ASPHALT CONCRETE AND 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY (LEFT BRIDGE)

2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY (RIGHT BRIDGE)

APPROACH SLABS: 25'± LONG (AS-1-54)

ALIGNMENT: TANGENT

CROWN: 0.016±

STRUCTURAL FILE NUMBER: 3108104 (LEFT), 3108139 (RIGHT)

DATE BUILT: 1962

DISPOSITION: TO BE REHABILITATED

DESIGN AGENCY
DYNOTEC, INC.
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DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

GENERAL PLAN
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961

STANDARD DRAWINGS AND SPECIFICATIONS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

GSD-1-96 DATED 7-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:

848 DATED 4-16-10
927 DATED 4-15-05

DESIGN SPECIFICATIONS

THE PROPOSED WORK CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2003 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20, CASE II AND THE ALTERNATE MILITARY LOADING. CF1000(57) (STRUCTURE)

DESIGN DATA

ASTM A709, GRADE 50 YIELD STRENGTH 50,000 PSI.

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY

EXISTING BRIDGE PLANS

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

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.

ITEM 513 SEALING OF CONCRETE SURFACES, (EPOXY URETHANE)

THE COLOR OF THE URETHANE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO 17778 (LIGHT NEUTRAL).

ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL

FIELD PAINT EXISTING BEAMS AND CROSSFRAMES. THE COATING SHALL BE A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT (FORMALLY REFERRED TO AS SYSTEM OZEU) ACCORDING TO CMS 514. THE COLOR OF THE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO. 14277 (GREEN).

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, 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 519 - PATCHING CONCRETE STRUCTURE, 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 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE PARTIAL REMOVAL OF THE EXISTING END CROSSFRAMES IN ORDER TO INSTALL THE PROPOSED ABUTMENT BEARINGS. REMOVE PORTIONS OF THE END CROSSFRAME BY FIELD CUTTING THE BOTTOM DIAGONAL AND HORIZONTAL MEMBERS AS REQUIRED TO FIELD DRILL HOLES FOR THE ANCHOR RODS. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. GRIND THE EXISTING WELDS TO A SMOOTH FINISH BEFORE WELDING THE EXISTING CROSSFRAMES BACK INTO PLACE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ESTIMATED QUANTITIES

DESIGNED: ELC DATE: 9/1/11 — CHECKED: JSB DATE: 9/1/11

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE (3108104) ABUT.	LEFT BRIDGE (3108104) PIERS	LEFT BRIDGE (3108104) SUPER.	RIGHT BRIDGE (3108139) ABUT.	RIGHT BRIDGE (3108139) PIERS	RIGHT BRIDGE (3108139) SUPER.	SEE SHT.
202	11201	LUMP	-	PORTIONS OF CONCRETE STRUCTURES REMOVED, AS PER PLAN			LUMP			LUMP	2/12
202	23500	713	SQ YD	WEARING COARSE REMOVED			713				
512	10100	1320	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	132	203	325	132	203	325	
512	10300	70	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			35			35	
512	10600	8	FT	CONCRETE REPAIR BY EPOXY INJECTION	8						
514	00050	18856	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			9428			9428	
514	00056	18856	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			9428			9428	
514	00060	18856	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			9428			9428	
514	00066	18856	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			9428			9428	
514	00504	12	MANHOUR	GRINDING FINS. TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			6			6	
514	10000	14	EACH	FINAL INSPECTION REPAIR			7			7	
516	46900	24	EACH	BEARING DEVICE, MISC.: BRONZE SLIDING PLATE	12			12			12/12
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP			LUMP	2/12
519	11101	8	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN				6	2		2/12
848	10201	1426	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (T=3")			713			713	3/12
848	20000	1426	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			713			713	
848	30200	90	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			45			45	
848	50000	142	SQ YD	HAND CHIPPING			71			71	
848	50100	LUMP	-	TEST SLAB			LUMP			LUMP	
848	50200	7	CU YD	FULL-DEPTH REPAIR			5			2	
848	50320	1426	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=2")			713			713	
848	50340	570	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			285			285	

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DESIGNED ELC | DRAWN BLM | REVIEWED TAI | DATE 5-13-11
CHECKED JSB | REVISED | STRUCTURE FILE NUMBER 3108104/3108139

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961

2 / 12

84
115

ITEM 848-SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (T= 3")

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

A) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING AN UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE MUST BE DRY PRIOR TO PLACEMENT OF THE CURING MATERIAL. IF THE CURING MATERIAL CANNOT BE PLACED WITHIN THE SAME SHORT-TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL HAVE 24 HOURS FROM REMOVAL OF THE WET CURE TO APPLY THE MEMBRANE-CURING COMPOUND.

B) TRAFFIC WILL NOT BE PERMITED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI.

C) FOR EACH POUR, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS AND THE MODULUS OF RUPTURE OF EACH BEAM UNTIL THE MODULUS OF RUPTURE OF TWO TESTS IS NOT LESS THAN 650 PSI. TRAFFIC WILL BE ALLOWED ON THE OVERLAY AT 600 PSI.

D) TWO TEST SLABS WILL BE REQUIRED IN ACCORDANCE WITH SS 848 IF A PERIOD OF 30 DAYS OR MORE HAS ELAPSED SINCE THE POURING OF THE TEST SLABS OR ANY OVERLAY OPERATION AS PART OF THIS PROJECT.

E) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1 1/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

F) THE FINAL SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY. HAND CHIPPING IS FOR THE PURPOSE OF CHIPPING AREAS WHERE THE HYDRODEMOLITION MACHINE DOES NOT HAVE ACCESS. IF THE DESIRED DEPTH IS ACHIEVED BY HYDRODEMOLITION, NO FURTHER REMOVAL IS NECESSARY.

G) FULL DEPTH REPAIR WILL NOT BE REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

H) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 9:30 AM.

I) MECHANICAL MEANS MAY BE USED TO REMOVE THE EXISTING RIGID OVERLAY AND TOP 0.5 INCH OF THE ORIGINAL DECK. THE REMAINING 0.5 INCH OF ORIGINAL DECK SHALL BE REMOVED BY HYDRODEMOLITION.

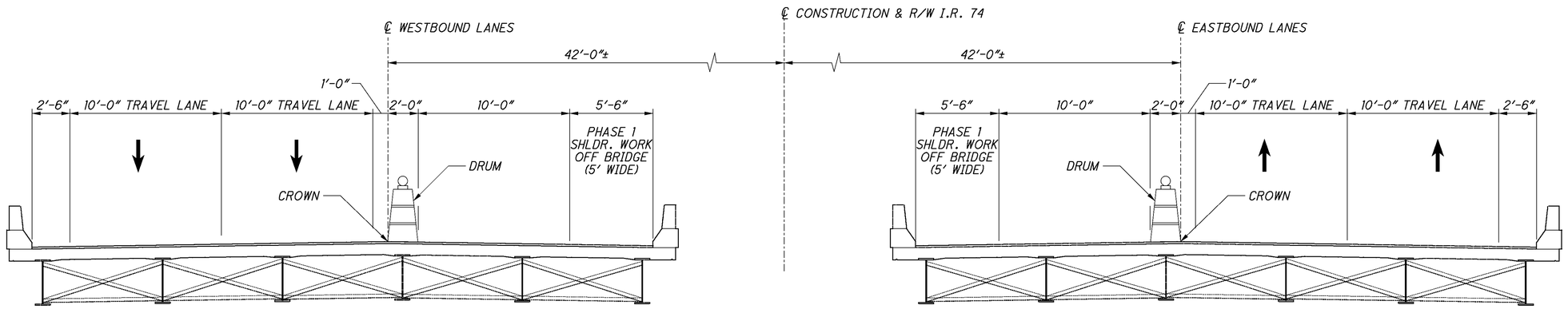
PAYMENT FOR ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN ITEM 848-SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN.

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

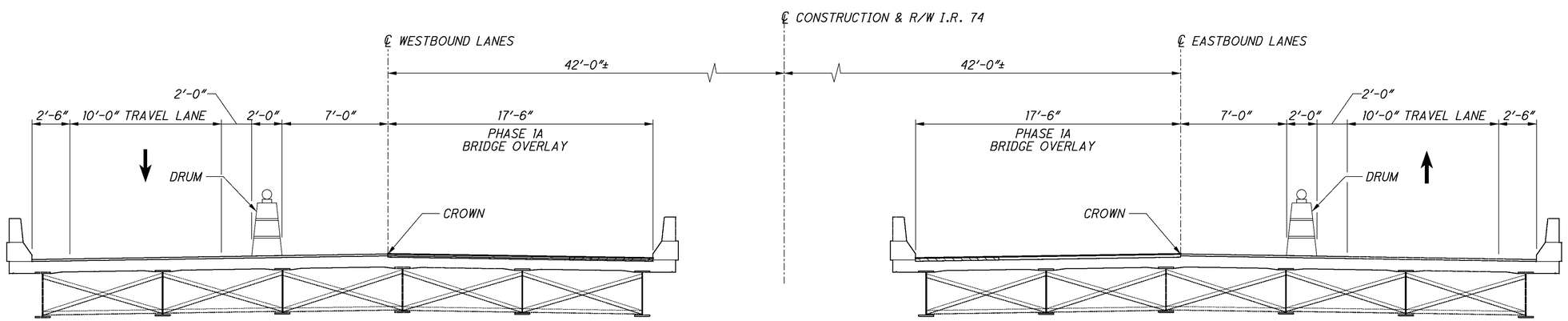
DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

GENERAL NOTES
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961



PHASE 1 MAINTENANCE OF TRAFFIC & CONSTRUCTION



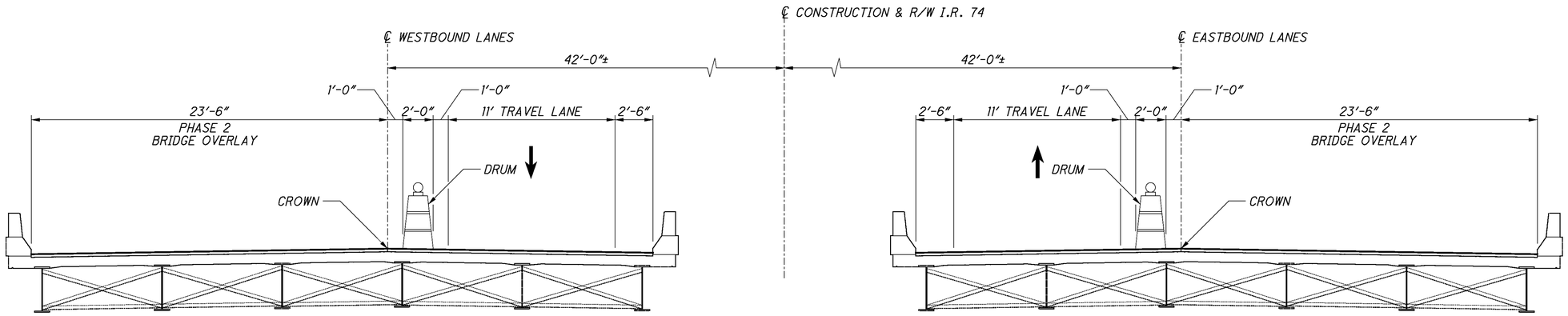
PHASE 1A MAINTENANCE OF TRAFFIC & CONSTRUCTION (PER PLCM)

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

PHASE 1 & 1A CONSTRUCTION DETAILS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961



PHASE 2 MAINTENANCE OF TRAFFIC & CONSTRUCTION (WEEKEND)

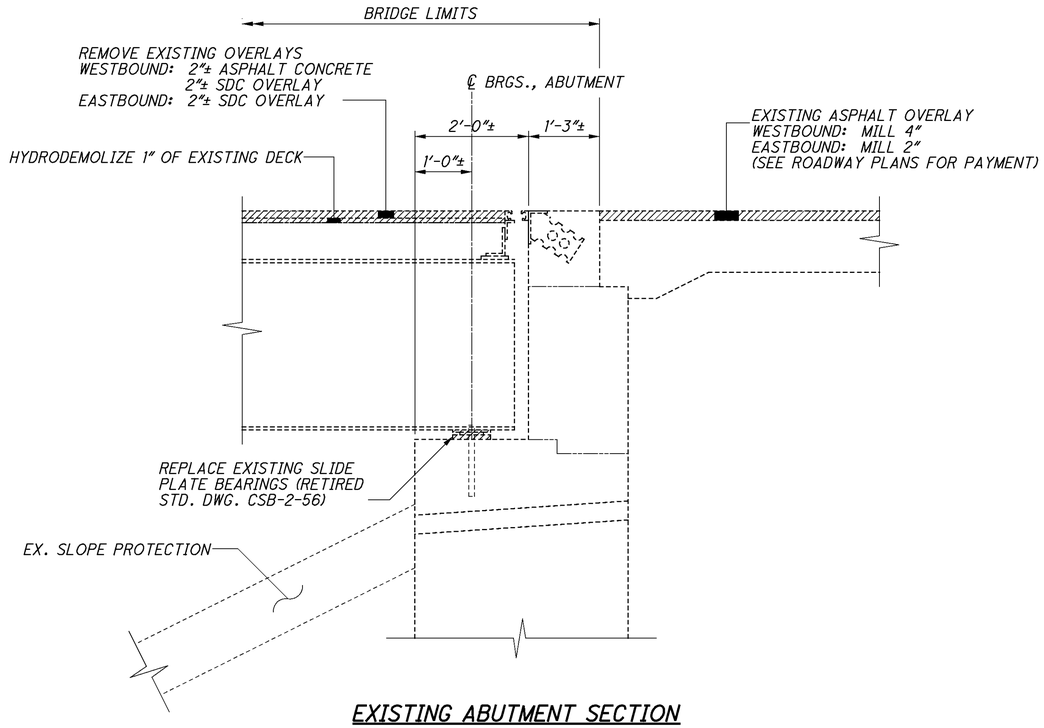
NOTE: BOTH 0395 & 0431 E.B. DECKS ARE TO BE COMPLETED IN ONE (1) WEEKEND
BOTH 0395 & 0431 W.B. DECKS ARE TO BE COMPLETED IN ONE (1) WEEKEND

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

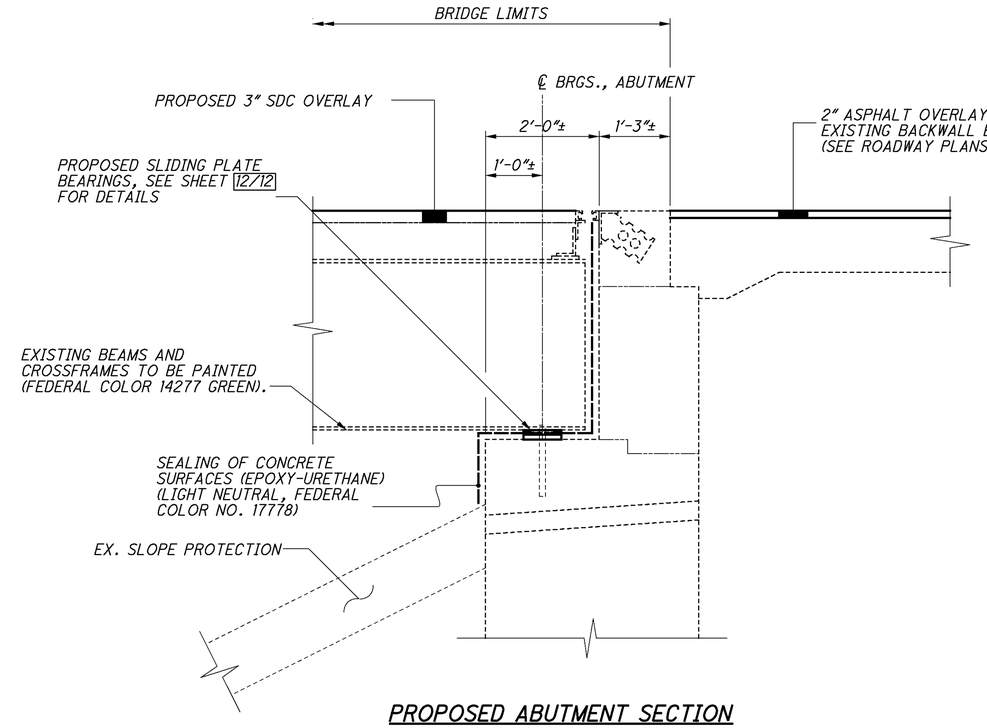
DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

PHASE 2 CONSTRUCTION DETAILS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961



EXISTING ABUTMENT SECTION



PROPOSED ABUTMENT SECTION

LEGEND

SDC - SUPERPLASTICIZED DENSE CONCRETE

NOTE

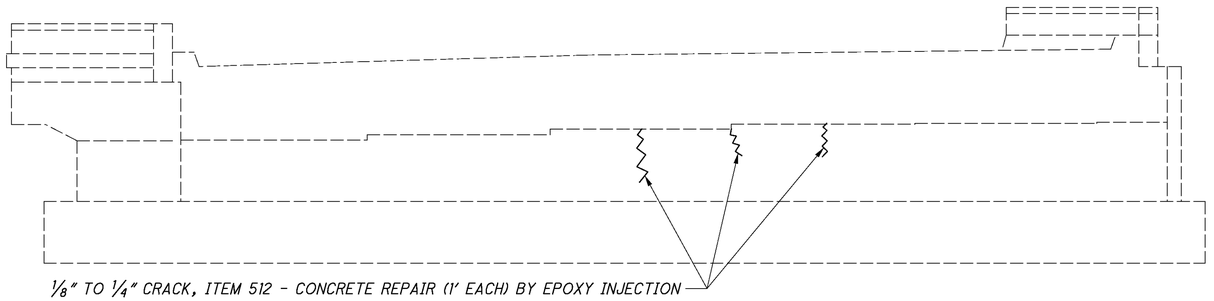
EXISTING AND PROPOSED ABUTMENT BEARINGS ARE EXPANSION.

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	05-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

ABUTMENT DETAILS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961



REAR ABUTMENT ELEVATION (WESTBOUND)

ITEM 512 CONCRETE REPAIR BY EPOXY INJECTION

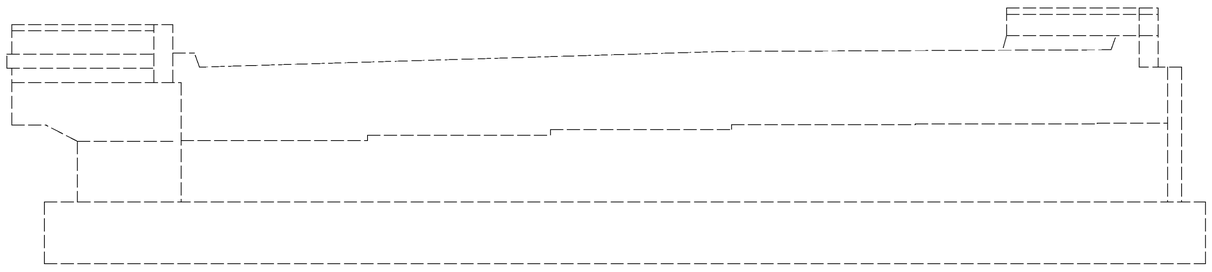
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (LIN. FT.)

REAR ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
3 - CRACKS	3.00	4.50*
TOTAL R.A.	3.00	4.50*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION



REAR ABUTMENT ELEVATION (EASTBOUND)

NOTE

SEAL ALL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE, LIGHT NEUTRAL, FEDERAL COLOR NO. 17778.

LEGEND

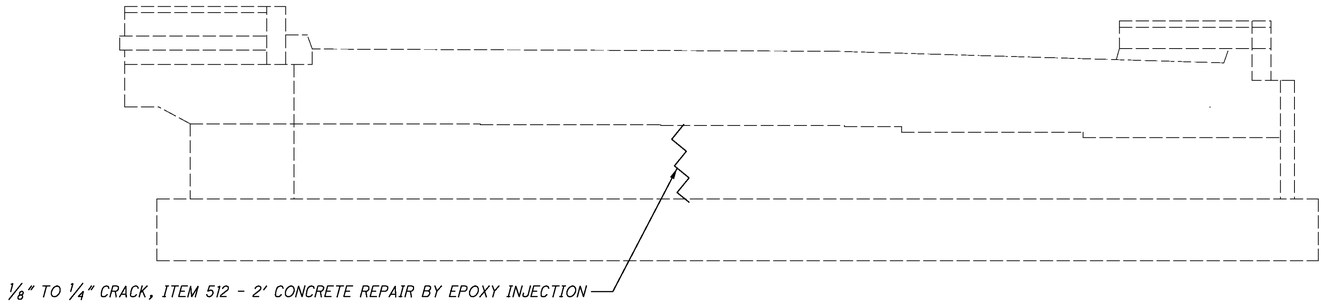
ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED ELC | DRAWN SJB | REVIEWED TAI | DATE 5-13-11
CHECKED JSB | REVISED | STRUCTURE FILE NUMBER 3108104/3108139

REAR ABUTMENT REPAIR DETIALS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961



FORWARD ABUTMENT ELEVATION (WESTBOUND)

ITEM 512 CONCRETE REPAIR BY EPOXY INJECTION

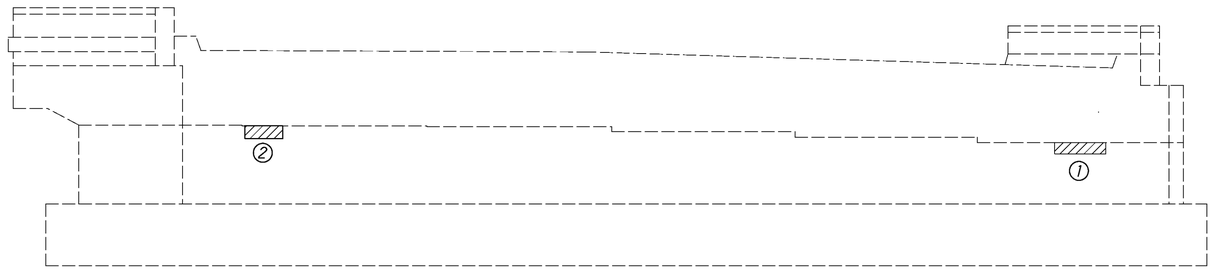
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (LIN. FT.)

FORWARD ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
1 - CRACK	2.00	3.00*
TOTAL F.A.	2.00	3.00*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION



FORWARD ABUTMENT ELEVATION (EASTBOUND)

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

FORWARD ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
①	2.00	3.50*
②	1.50	2.25*
TOTAL F.A.	3.50	5.75*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

NOTE

SEAL ALL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE, LIGHT NEUTRAL, FEDERAL COLOR NO. 17778.

LEGEND

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	SJB	TAI	5-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

FORWARD ABUTMENT REPAIR DETIALS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961

8 / 12

90
115

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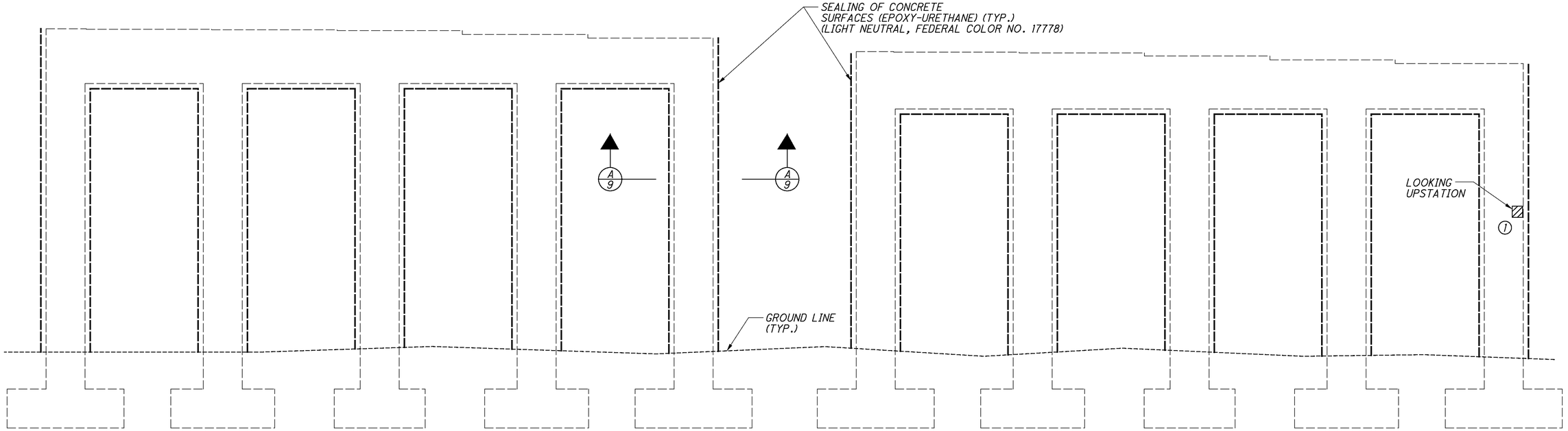
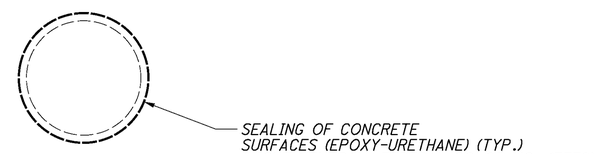


PIER SEALING DETAIL
(TYP. ALL PIERS)



A/9 SECTION

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

PIER 2	MEASURED QUANTITIES	ESTIMATED QUANTITIES
1	1.33	2.00*
TOTAL PIER 2	1.33	2.00*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

NOTE

SEAL ALL EXPOSED CONCRETE SURFACES (EXCLUDING TOP OF CAP) WITH EPOXY-URETHANE, LIGHTNEUTRAL, FEDERAL COLOR NO. 17778.

LEGEND

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB-GRANVILLE RD COLUMBUS, OH 43231
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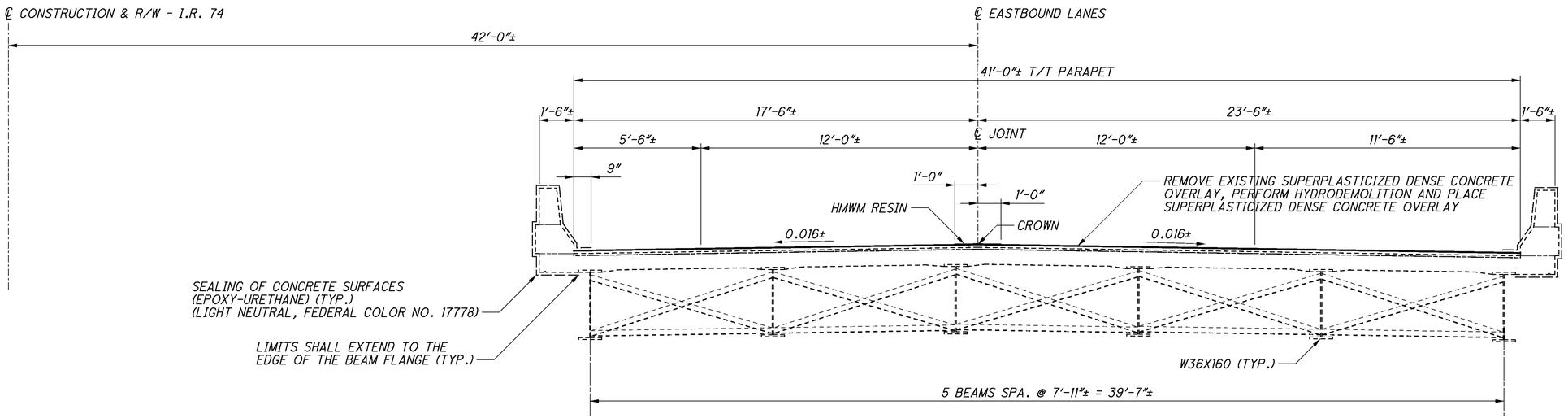
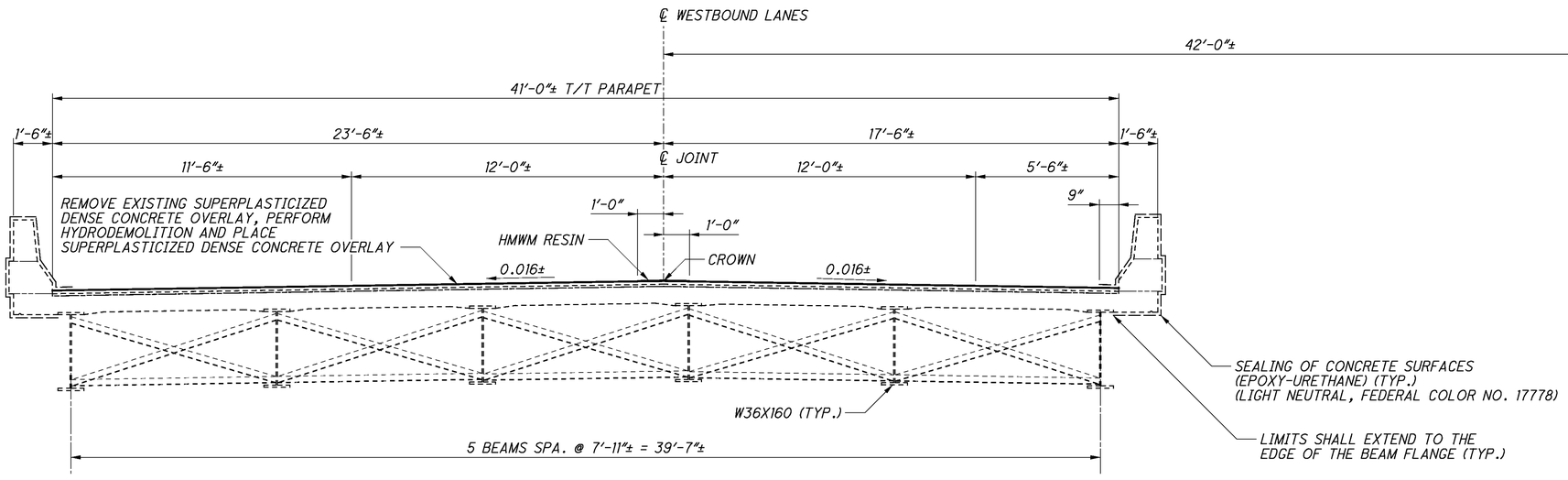
PIER REPAIR DETIALS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961



TRANSVERSE SECTION (EASTBOUND)



TRANSVERSE SECTION (WESTBOUND)

NOTE

SEE SHEET 11/12 FOR OVERLAY DETAILS

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	5-13-11
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JSB		3108104/3108139	

TRANSVERSE SECTION
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

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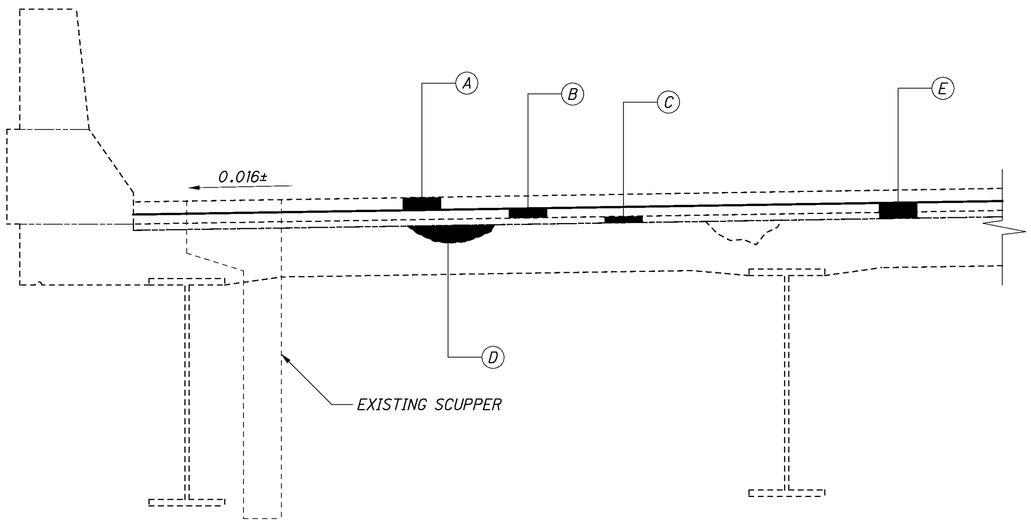


OVERLAY DETAIL (WESTBOUND)

PROPOSED WORK (WESTBOUND)

(A) - REMOVE EXISTING 2"± ASPHALT OVERLAY.

(B) - REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY.

(C) - HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.

(D) - PARTIAL AND FULL DEPTH REPAIRS TO THE DECK TO BE MADE AS DIRECTED BY THE ENGINEER.

(E) - PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO THE EXISTING DECK.

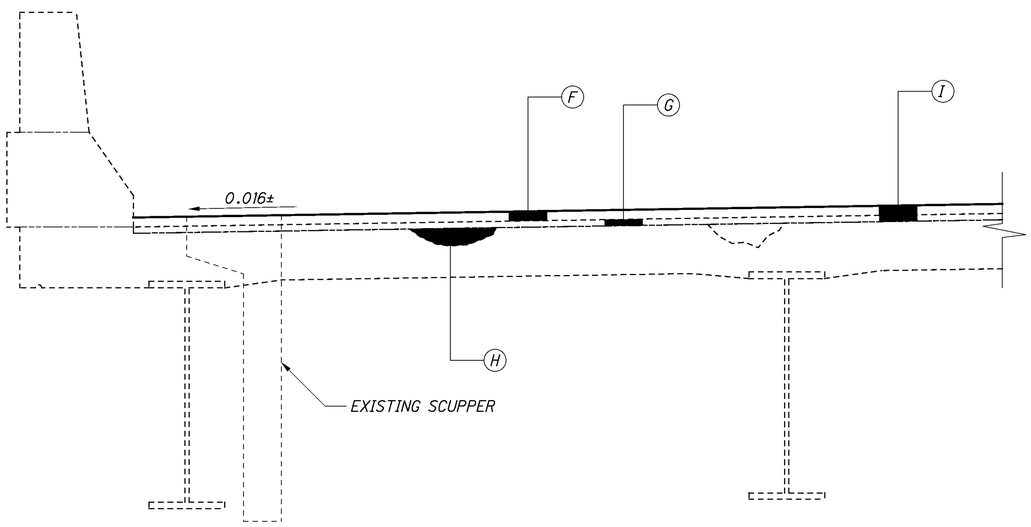
PROPOSED WORK (EASTBOUND)

(F) - REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY.

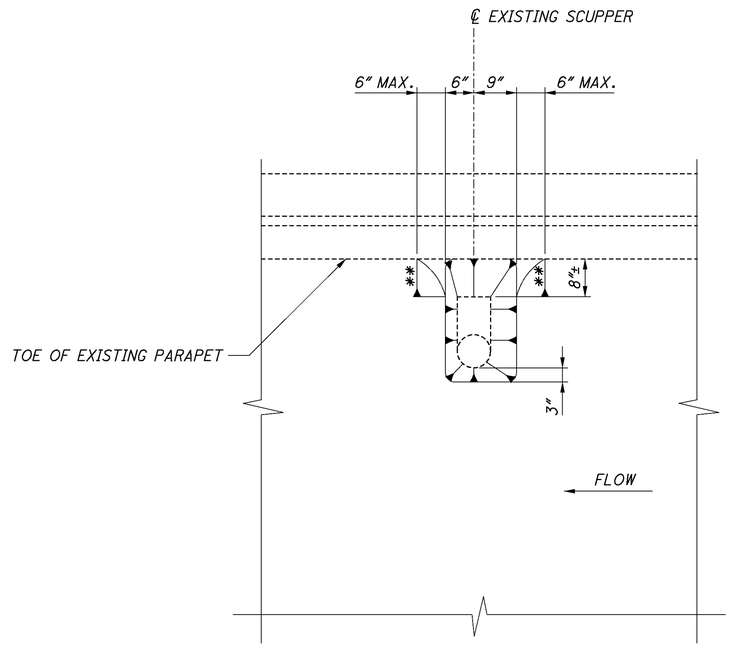
(G) - HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.

(H) - PARTIAL AND FULL DEPTH REPAIRS TO THE DECK TO BE MADE AS DIRECTED BY THE ENGINEER.

(I) - PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO THE EXISTING DECK.



OVERLAY DETAIL (EASTBOUND)



SCUPPER OVERLAY DETAIL

LEGEND

** - MATCH EXISTING SLOPE

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
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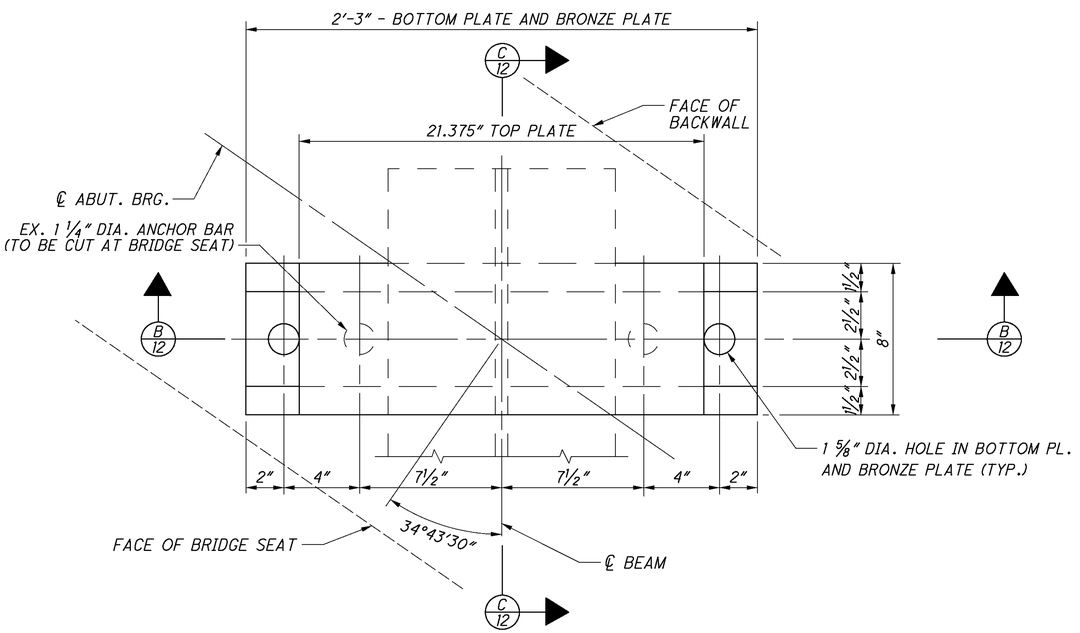
DESIGNED	DRAWN	REVIEWED	DATE
ELC	BLM	TAI	05-13-11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JSB		3108104/3108139	

OVERLAY DETAILS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/VAR
PID No. 82961

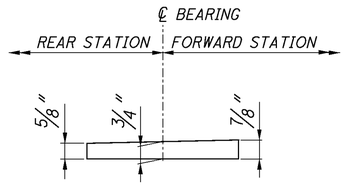
DESIGN LOADS	
WITH FWS	WITHOUT FWS
DL = 27.03 K	DL = 20.46 K
LL = 47.25 K	LL = 47.25 K
TOTAL = 74.28 K	TOTAL = 67.71 K



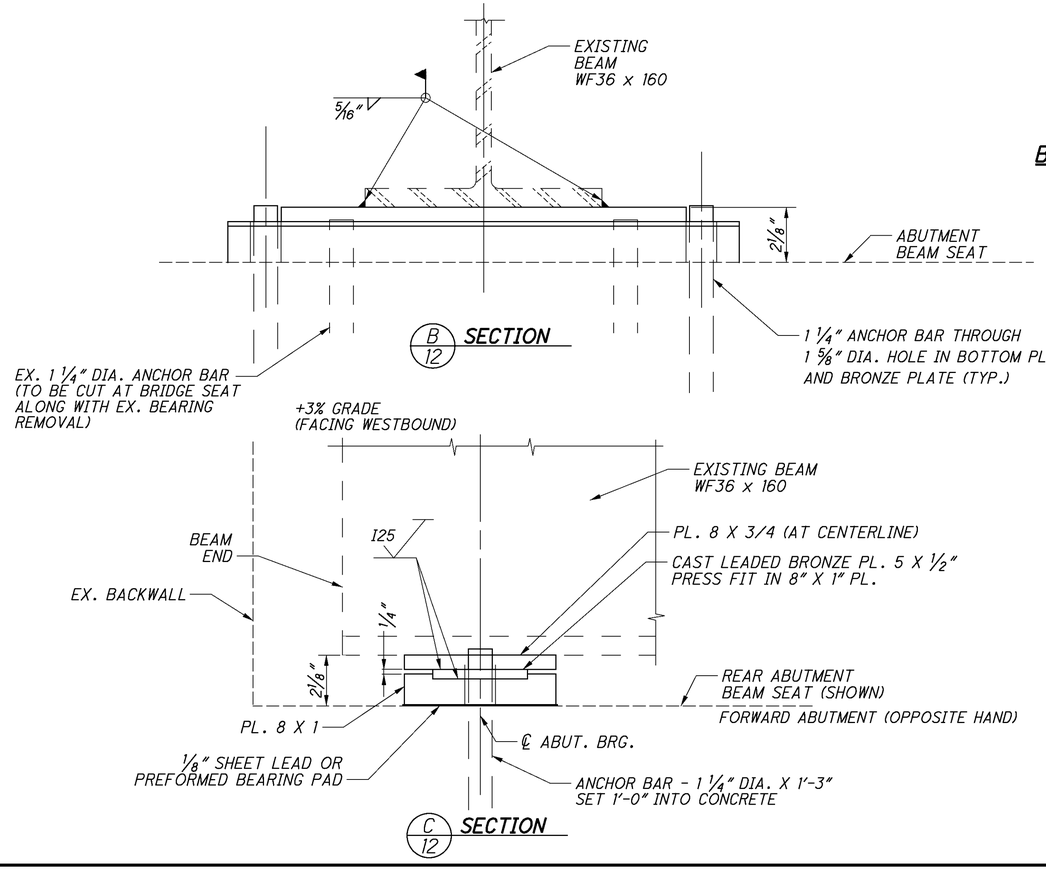
PLAN-ABUTMENTS
SLIDING PLATE BEARINGS

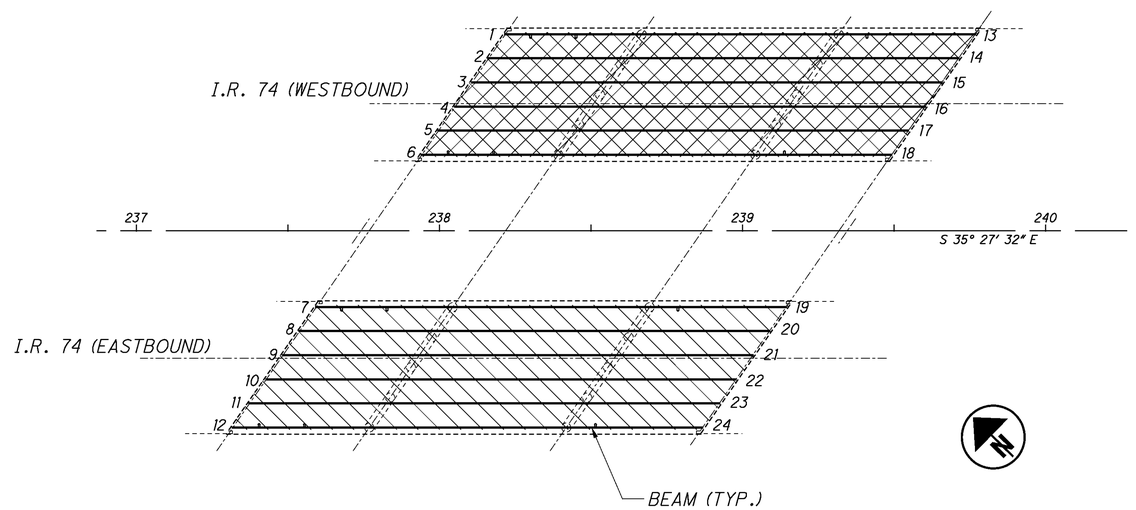
NOTES

1. CROSS FRAMES WILL REQUIRE PARTIAL REMOVAL TO INSTALL ANCHOR BARS. REFER TO STD. DWG. GSD-1-96 FOR DETAILS AND WELDING REQUIREMENTS.
2. BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO REMOVE THE EXISTING BEARINGS AND FURNISH AND INSTALL THE PROPOSED ELASTOMERIC BEARINGS FOR THE BEAMS WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516, BEARING DEVICE, MISC.: BRONZE SLIDING PLATES.
3. REFER TO SUPPLEMENTAL SPECIFICATION 927 WHICH COVERS INSTALLING SELF-LUBRICATING BRONZE BEARING PLATES FOR BRIDGE APPLICATIONS.



BEVELED TOP PLATE DETAIL





DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUB.-GRANVILLE RD COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

DESIGNED JSB | DRAWN ELC | CHECKED ELC | REVIEWED TAI | DATE 5-13-11 | REVISED | STRUCTURE FILE NUMBER 3108104/3108139

BEARING DETAILS
BRIDGE NO. HAM-74-0431 L/R
I.R. 74 OVER C.R. 457 (HARRISON ROAD)

HAM-74-3.54/ VAR
PID No. 82961

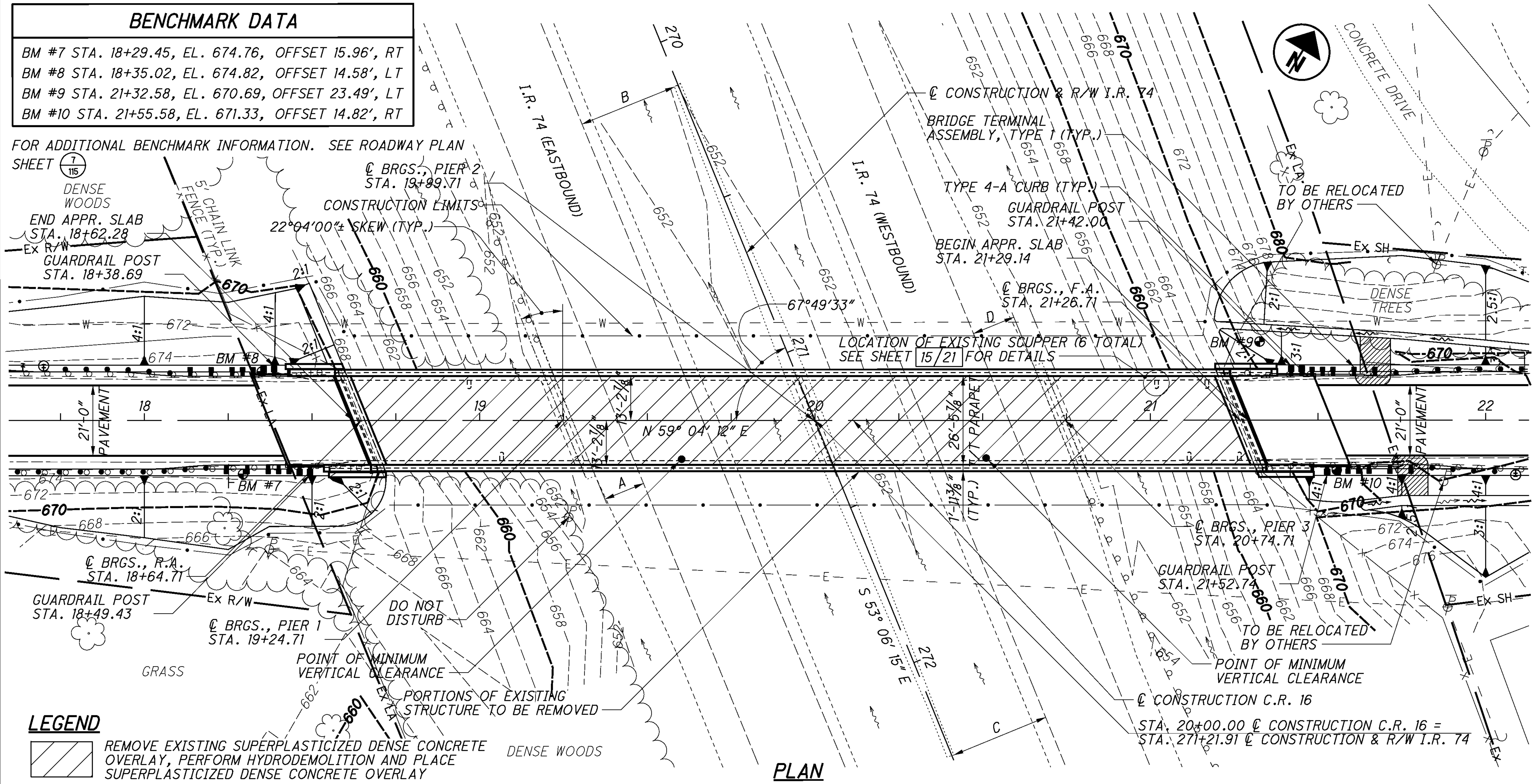
12 / 12

94 / 115

BENCHMARK DATA

BM #7 STA. 18+29.45, EL. 674.76, OFFSET 15.96', RT
BM #8 STA. 18+35.02, EL. 674.82, OFFSET 14.58', LT
BM #9 STA. 21+32.58, EL. 670.69, OFFSET 23.49', LT
BM #10 STA. 21+55.58, EL. 671.33, OFFSET 14.82', RT

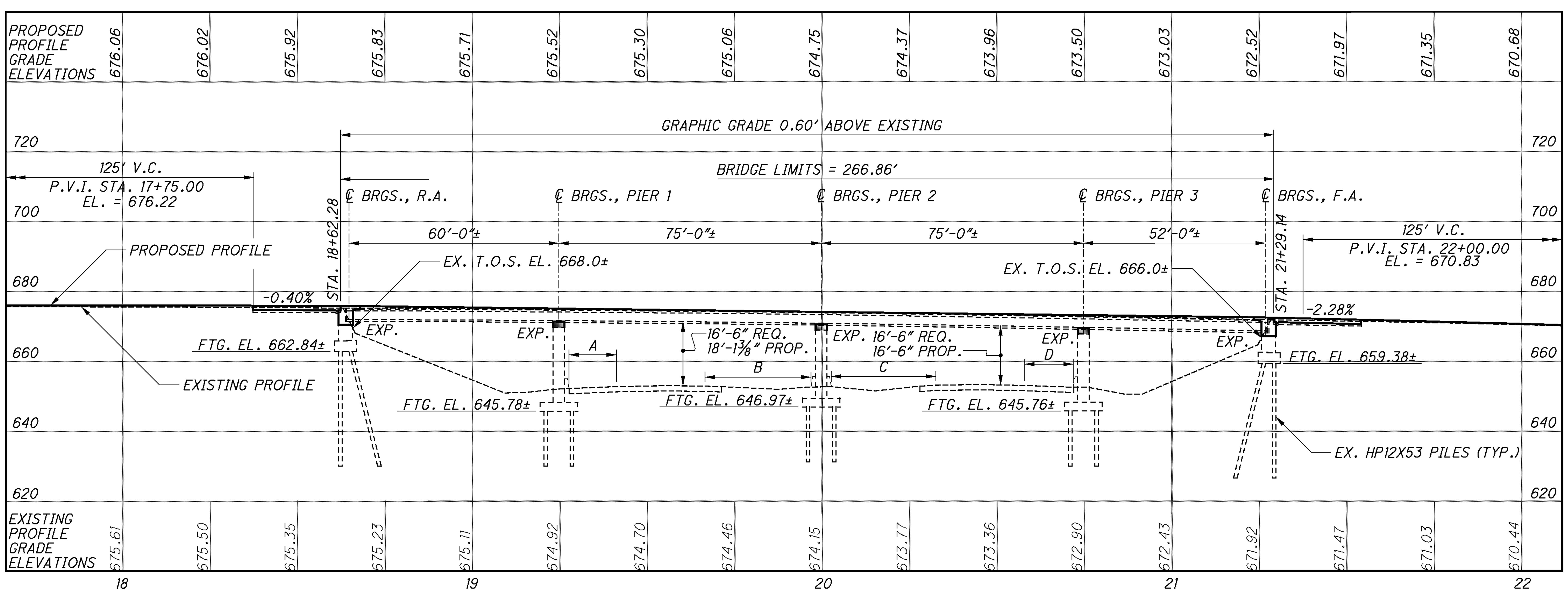
FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 7/115



LEGEND

REMOVE EXISTING SUPERPLASTICIZED DENSE CONCRETE OVERLAY, PERFORM HYDRODEMOLITION AND PLACE SUPERPLASTICIZED DENSE CONCRETE OVERLAY

PLAN



PROFILE ALONG ℄ CONSTRUCTION C.R. 16

PROPOSED WORK

THE EXISTING SUPERSTRUCTURE WILL BE RAISED TO MEET VERTICAL CLEARANCE REQUIREMENTS. THE ABUTMENTS WILL BE CONVERTED TO SEMI-INTEGRAL AND PIER SEATS WILL BE RAISED. EXISTING BEARINGS WILL BE REPLACED WITH ELASTOMERIC BEARINGS. THE EXISTING CONCRETE OVERLAY WILL BE REMOVED AND THE DECK WILL BE HYDRODEMOLIZED. A SUPERPLASTICIZED DENSE CONCRETE OVERLAY WILL BE PLACED, THE EXISTING PARAPETS WILL BE RETROFITTED AND NEW FULL-WIDTH APPROACH SLABS WILL BE CONSTRUCTED, AND ALL STRUCTURAL STEEL WILL BE PAINTED WITH SYSTEM OZEU.

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. DESIGN TRAFFIC:
   2012 ADT = 1230   2012 ADTT = 185
   2024 ADT = 1340   2024 ADTT = 201
   DIRECTIONAL DISTRIBUTION = 0.58

LEGEND

I.R. 74 (EASTBOUND)

- ● 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 18'-1⅜" PROPOSED MINIMUM VERTICAL CLEARANCE
- 17'-6⅛" EXISTING MINIMUM VERTICAL CLEARANCE

I.R. 74 (WESTBOUND)

- ● 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 16'-6" PROPOSED MINIMUM VERTICAL CLEARANCE
- 15'-10⅞" EXISTING MINIMUM VERTICAL CLEARANCE

A: REQUIRED MINIMUM HORIZONTAL CLEARANCE = 12'-0"
ACTUAL MINIMUM HORIZONTAL CLEARANCE = 12'-5¼"

B: REQUIRED MINIMUM HORIZONTAL CLEARANCE = 30'-0"
ACTUAL MINIMUM HORIZONTAL CLEARANCE = 29'-9"

C: REQUIRED MINIMUM HORIZONTAL CLEARANCE = 30'-0"
ACTUAL MINIMUM HORIZONTAL CLEARANCE = 29'-8"

D: REQUIRED MINIMUM HORIZONTAL CLEARANCE = 12'-0"
ACTUAL MINIMUM HORIZONTAL CLEARANCE = 12'-10¾"

EXISTING STRUCTURE

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 60'-0"±, 75'-0"±, 75'-0"±, 52'-0"± C/C BRGS.

ROADWAY: 24'-0"± F/F 2'-3"± SAFETY CURBS

LOADING: CF=130(57)

SKEW: 22°04'00"± R.F. W/ RESPECT TO ℄ C.R. 16

WEARING SURFACE: 2"± SUPERPLASTICIZED DENSE CONCRETE

APPROACH SLABS: 25'± LONG

ALIGNMENT: TANGENT

CROWN: 0.016±

STRUCTURAL FILE NUMBER: 3108163

DATE BUILT: 1962

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: RAISE SUPERSTRUCTURE, CONVERT EXISTING CONCRETE ABUTMENTS TO SEMI-INTEGRAL, MODIFY PIER SEATS, NEW ELASTOMERIC BEARINGS AT SUBSTRUCTURES, APPLY SDC OVERLAY TO THE EXISTING CONCRETE DECK AND PAINT STRUCTURAL STEEL

SPANS: 60'-0"±, 75'-0"±, 75'-0"±, 52'-0"± C/C BRGS.

ROADWAY: 26'-5⅞" T/T PARAPET

LOADING: HS20, CASE II AND ALTERNATE MILITARY (PROP. WORK) CF=130(57) (EXISTING STRUCTURE)

FUTURE WEARING SURFACE LOADING: NONE

SKEW: 22°04'00"± R.F. W/ RESPECT TO ℄ C.R. 16

WEARING SURFACE: 3" SUPERPLASTICIZED DENSE CONCRETE

APPROACH SLABS: 25' LONG (AS-1-81)

ALIGNMENT: TANGENT

CROWN: 0.016±

COORDINATES: LATITUDE 39°13'40" N
LONGITUDE 84°45'10" W

DESIGN AGENCY: wd transportation, a WD PARTNERS division, 7007 DISCOVERY BLVD. • DUBLIN, OH 43017, 614.634.7000 T • WDTRANSPORTATION.COM

REVIEWED	DATE
WHM	10-22-10

STRUCTURE FILE NUMBER: 3108163

DESIGNED	DRAWN	CHECKED	REVISED
STK	STK	GDJ	

HAMILTON COUNTY
STA. 18+62.28
STA. 21+29.14

SITE PLAN
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

1/21

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STANDARD DRAWINGS AND SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-81 REVISED 07-19-02

BR-1 REVISED 07-19-02

SICD-1-96 REVISED 07-19-02

VPF-1-90 REVISED 04-15-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

848 DATED 01-21-11

DESIGN SPECIFICATIONS

THE PROPOSED WORK CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

HS20, CASE II AND THE ALTERNATE MILITARY (PROPOSED WORK)
CF 130(57) EXISTING STRUCTURE

DESIGN DATA

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

ASTM A709 GRADE 50 - YIELD STRENGTH 50,000 PSI

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THIS WORK CONSISTS OF THE PARTIAL REMOVAL OF THE CONCRETE DECK NEAR THE BRIDGE LIMITS, INCLUDING PARAPETS, DECK JOINTS AND 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 TO 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.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 513 - SEALING OF CONCRETE SURFACES, (EPOXY-URETHANE)

THE COLOR OF THE URETHANE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO. 17778 (LIGHT NEUTRAL).

ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL

FIELD PAINT EXISTING BEAMS AND CROSSFRAMES. THE COATING SHALL BE A THREE-COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT (FORMALLY REFERRED TO AS SYSTEM OZEU) ACCORDING TO CMS 514. THE COLOR OF THE TOP COAT SHALL BE FEDERAL STANDARD 595A, FEDERAL COLOR NO. 14277 (GREEN).

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, 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.

A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUMENTS OR PIERS SHALL BE 1 INCH OR LESS. IF THIS 1 INCH LIMIT IS EXCEEDED, PROVIDE CALCULATIONS SHOWING THAT THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION 30 DAYS BEFORE ACTUAL WORK IS TO BEGIN. THESE CALCULATIONS SHALL BE PERFORMED, SIGNED AND SEALED BY AN OHIO PROFESSIONAL ENGINEER.

IF, DURING THE JACKING OPERATIONS, 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. THE DEPARTMENT WILL NOT PAY FOR THE 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 ENTIRE SUPERSTRUCTURE IS TO BE PERMANENTLY RAISED 0.6 FEET FROM ITS CURRENT LOCATION.

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 517 - RAILING FACED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF FACING CURB STYLE PARAPETS, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

REMOVAL: CAREFULLY REMOVE THE EXISTING ALUMINUM RAILING, POSTS, CURB PLATES, EXISTING CONCRETE CURB AND PORTIONS OF THE BULB ANGLE GUTTER. REMOVE ALL LOOSE OR UNSOUND CONCRETE. REMOVE SOUND CONCRETE, AS NECESSARY, TO OBTAIN A MINIMUM 4 INCH THICKNESS OF NEW CONCRETE.

DOWEL HOLES AND REINFORCING STEEL: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517.

SURFACE PREPARATION: THOROUGHLY CLEAN THE PARAPET SURFACE IN CONTACT WITH THE REFACING WITH DETERGENT TO REMOVE SURFACE CONTAMINANTS. AFTER DETERGENT CLEANING AND WITHIN 24 HOURS OF PLACING CONCRETE, BLAST CLEAN AND AIR BROOM OR POWER SWEEP ALL SURFACES IN CONTACT WITH THE REFACING TO REMOVE ALL SPALLS, LAITANCE, CURING COMPOUNDS, CONCRETE SEALERS AND OTHER CONTAMINANTS DETRIMENTAL TO THE ACHIEVEMENT OF AN ADEQUATE BOND. ACCEPTABLE BLAST CLEANING METHODS ARE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN WATER, ABRASIVE BLASTING WITH CONTAINMENT OR VACUUM ABRASIVE BLASTING. USE HAND TOOLS AS NECESSARY TO REMOVE SCALE FROM ANY EXPOSED REINFORCING STEEL.

MATERIALS: CONCRETE SHALL BE CLASS S WITH A COMPRESSIVE STRENGTH OF 4500 PSI. FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI.

CONTROL JOINTS: SAWCUT 1-1/4 INCH DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINT SAW CUTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THIS ITEM IN FEET BY THE ACTUAL LENGTH OF RAILING FACED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET.

BASIS OF PAYMENT: PAYMENT FOR THIS ITEM INCLUDES ALL COSTS OF REMOVAL, DOWEL HOLES, REINFORCING STEEL, CONCRETE, SHRINKAGE CONTROL JOINTS, EPOXY INJECTION AND INSPECTION PLATFORMS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 517, RAILING FACED, AS PER PLAN.

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.

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1-1/4" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1" OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6", ±, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6", CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 +/- 0.01
BREAKING STRENGTH, GRAB, LBS, MINIMUM (LONG. X TRANS.)	D751	700 X 700
ADHESIVE STRIP, 1" WIDE X 2" LONG, LBS MINIMUM	D751	9
BURST STRENGTH, PSI MINIMUM	D751	1400
HEAT AGING, 70 HR, 212 DEGREES F, 180 DEGREES BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, 40 DEGREES F, BEND AROUND 1/4" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

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.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43016
614.694.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

GENERAL NOTES
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/ VAR
PID No. 82961

2 / 21

96
115

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ESTIMATED QUANTITIES

DESIGNED: STK DATE: 03-29-11 | CHECKED: LWG DATE: 04-05-11

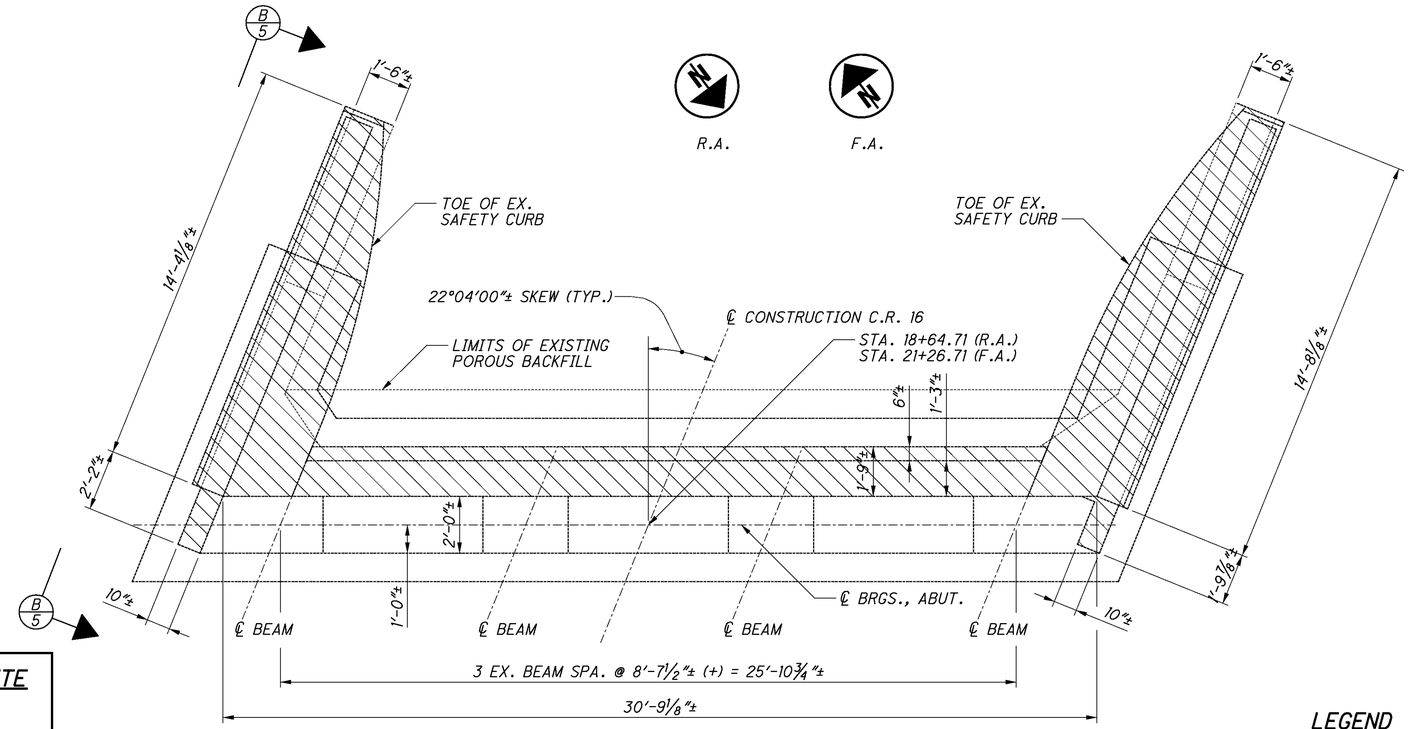
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	A.P.P.
202	11203	LUMP	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/21
202	22900	157	SQ YD	APPROACH SLAB REMOVED				157	
503	21300	LUMP	-	UNCLASSIFIED EXCAVATION	LUMP				
509	10000	12710	POUND	EPOXY COATED REINFORCING STEEL	4738	4241	3731		
510	10000	464	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	296	168			
511	31508	47	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE			47		
511	42500	15	CU YD	CLASS C CONCRETE, PIER CAP		15			
511	44100	37	CU YD	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING	37				
512	10100	1096	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	54	247	744	51	
514	00050	10290	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			10290		
514	00056	10290	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			10290		
514	00060	10290	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			10290		
514	00066	10290	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			10290		
514	00504	17	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			17		
514	10000	10	EACH	FINAL INSPECTION REPAIR			10		
516	13600	19	SQ FT	1" PREFORMED EXPANSION JOINT FILLER			19		
516	13900	138	SQ FT	2" PREFORMED EXPANSION JOINT FILLER			138		
516	14021	86	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	86				2/21
516	44100	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 3"X17"X11" WITH 1½"X18"X12" LOAD PLATE	8				
516	44100	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 2¾"X19"X12" WITH 1½" (MIN.)X20"X13" LOAD PLATE		12			
516	47001	LUMP	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		2/21
517	76201	516	FT	RAILING FACED, AS PER PLAN			516		17/21
518	21200	47	CU YD	POROUS BACKFILL WITH FILTER FABRIC	47				
518	40000	93	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	93				
518	40010	53	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	53				
519	11101	5	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	5				2/21
526	25001	163	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T = 15"), AS PER PLAN				163	19/21, 20/21
607	39900	526	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			526		
848	10200	759	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (T = 3")			759		2/21
848	20000	759	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			759		
848	30200	48	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			48		
848	50000	76	SQ YD	HAND CHIPPING			76		
848	50100	LUMP	-	TEST SLAB			LUMP		
848	50320	703	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T = 2")			703		
848	50340	304	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			304		

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.634.1000 T • WDTRANSPORTATION.COM

DESIGNED STK | DRAWN STK | CHECKED LWG | REVIEWED WHM | DATE 10-25-10 | REVISED | STRUCTURE FILE NUMBER 3108163

ESTIMATED QUANTITIES
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961



PLAN

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JULY OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

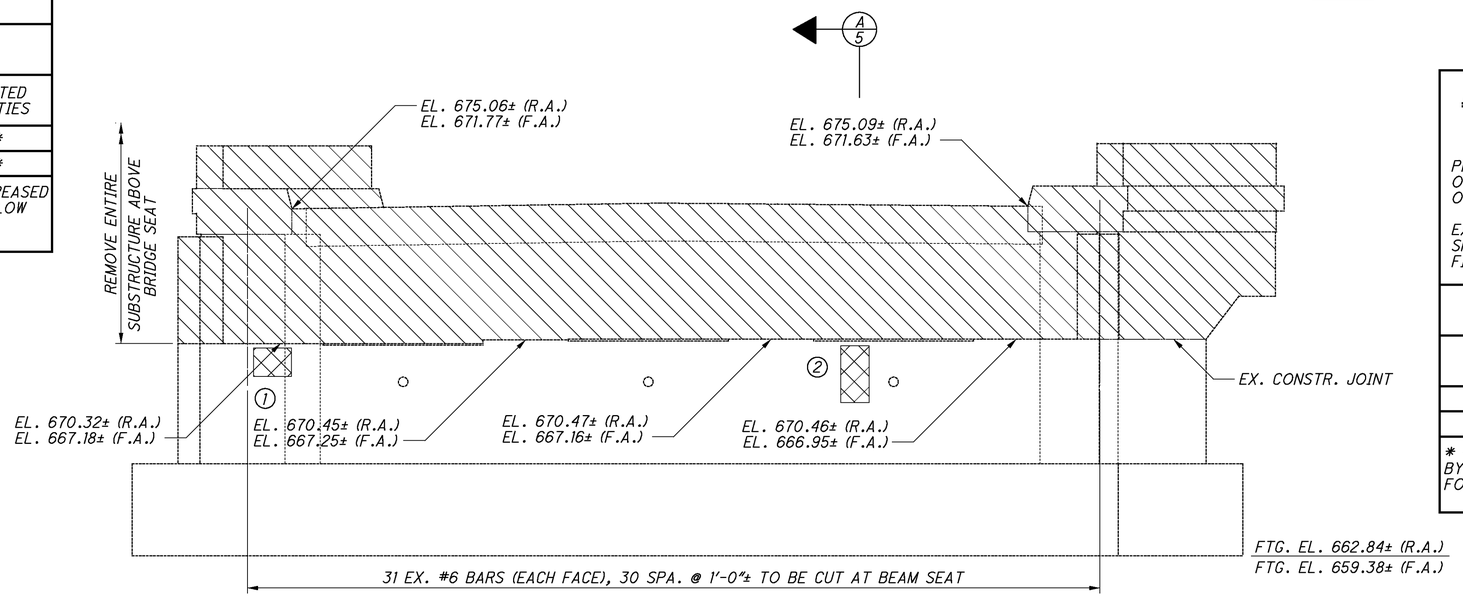
REAR ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
①	1.33	2.0*
TOTAL R.A.	1.33	2.0*

* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

LEGEND

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN



ELEVATION
PILING NOT SHOWN

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JULY OF 2010.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

ESTIMATED PATCHING QUANTITIES (SQ. FT.)

FORWARD ABUTMENT	MEASURED QUANTITIES	ESTIMATED QUANTITIES
②	2.0	3.0*
TOTAL F.A.	2.0	3.0*

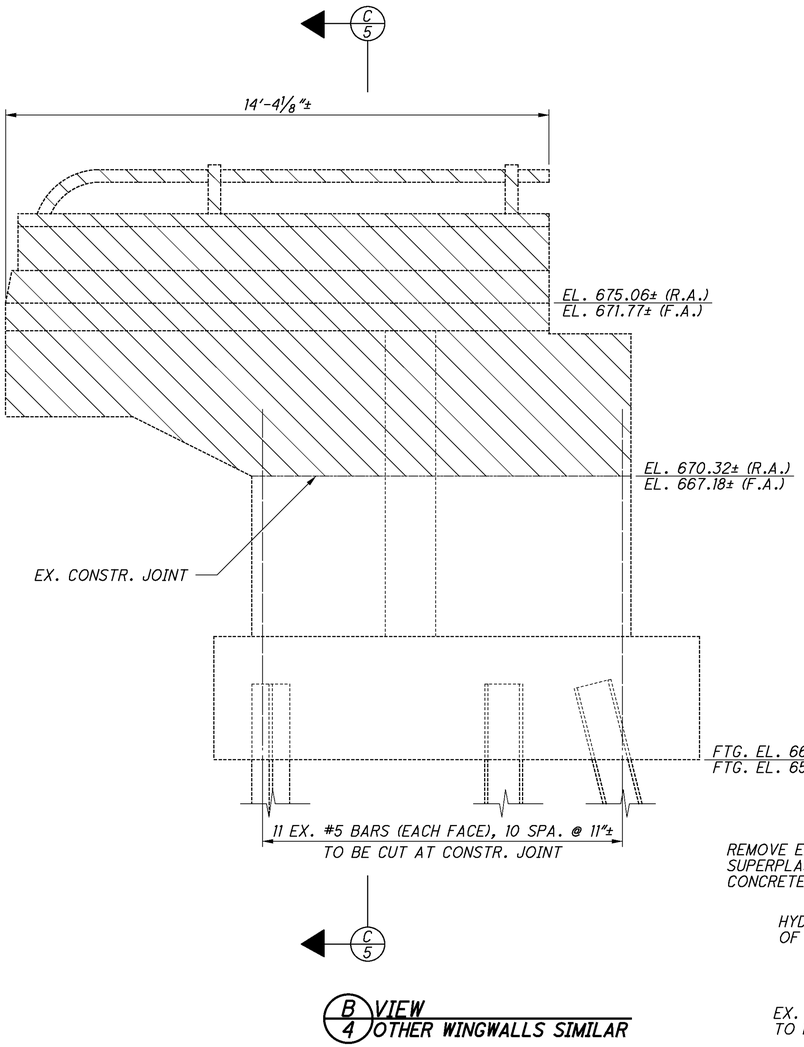
* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD DUBLIN, OH 43017
614.594.7000 FAX WDTRANSPORTATION.COM

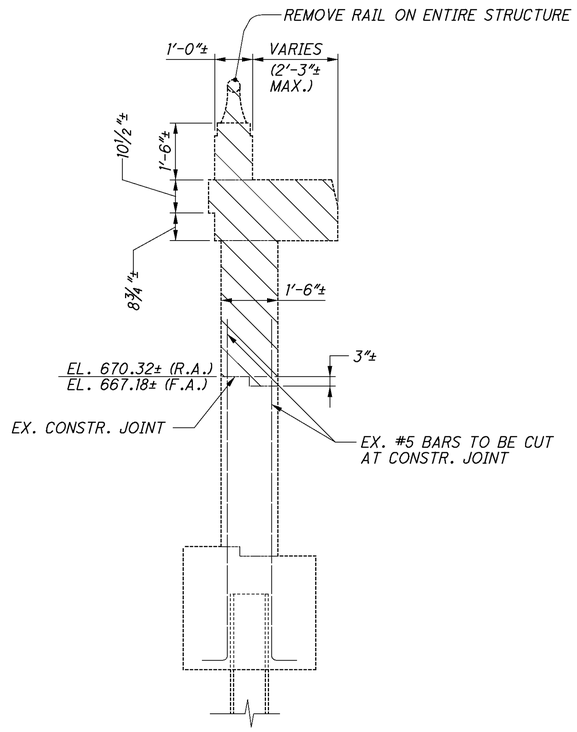
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-22-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

ABUTMENT REMOVAL DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

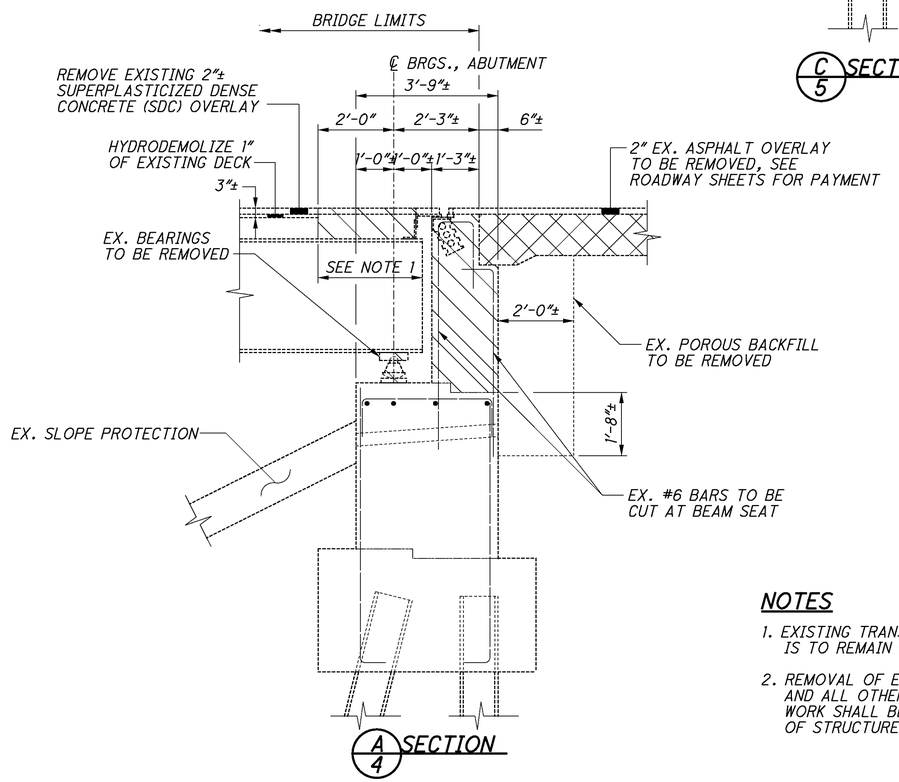
HAM-74-3.54/VAR
PID No. 82961



B/4 VIEW OTHER WINGWALLS SIMILAR



C/5 SECTION



A/4 SECTION

LEGEND

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN

ITEM 202 - APPROACH SLAB REMOVED

NOTES

1. EXISTING TRANSVERSE AND LONGITUDINAL DECK REINFORCING STEEL IS TO REMAIN (NO FIELD CUTTING ALLOWED).
2. REMOVAL OF END CROSSFRAMES, END DAMS, BEVEL FILL PLATES AND ALL OTHER ITEMS REQUIRED TO FACILITATE THE PROPOSED WORK SHALL BE INCLUDED FOR PAYMENT WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

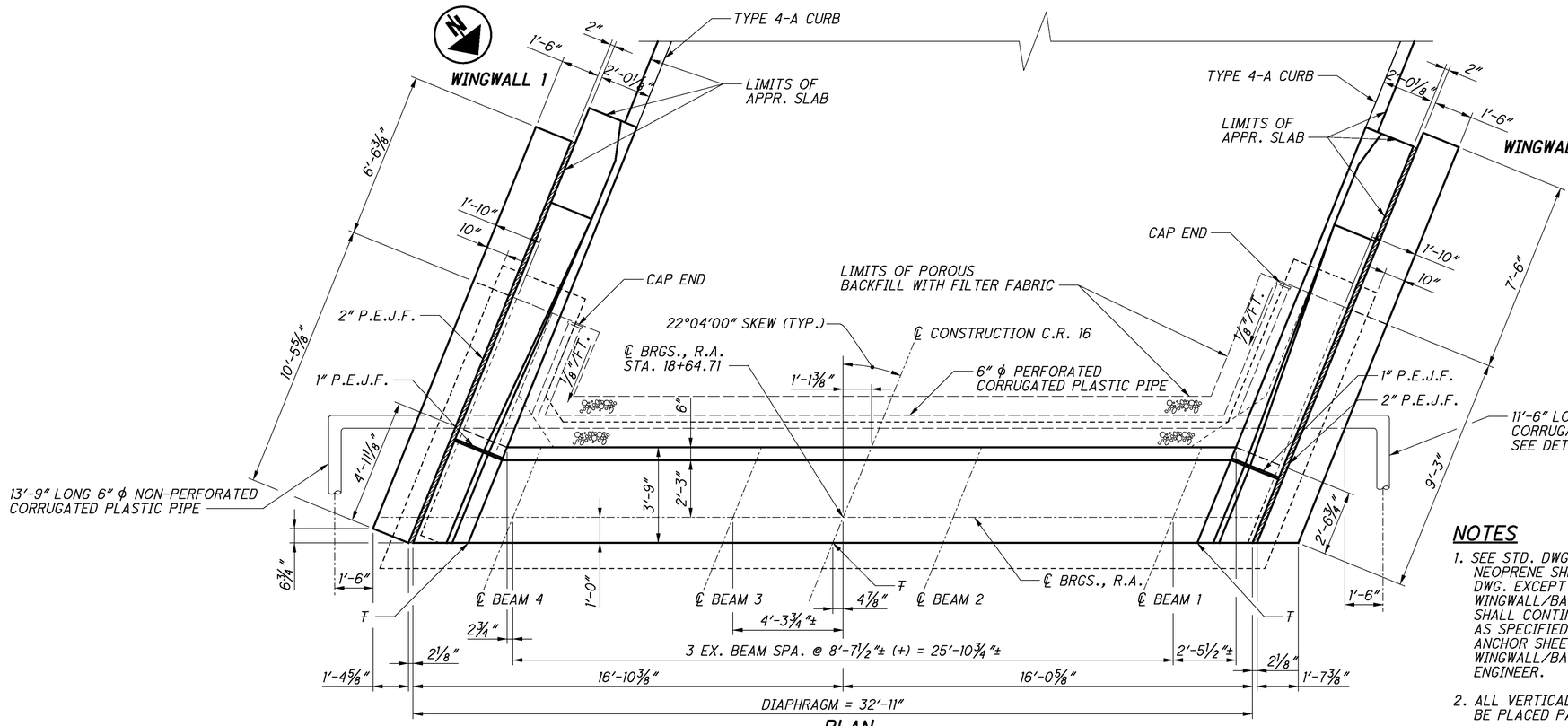
DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD. DUBLIN, OHIO 43017
614.634.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-22-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

ABUTMENT REMOVAL DETAILS

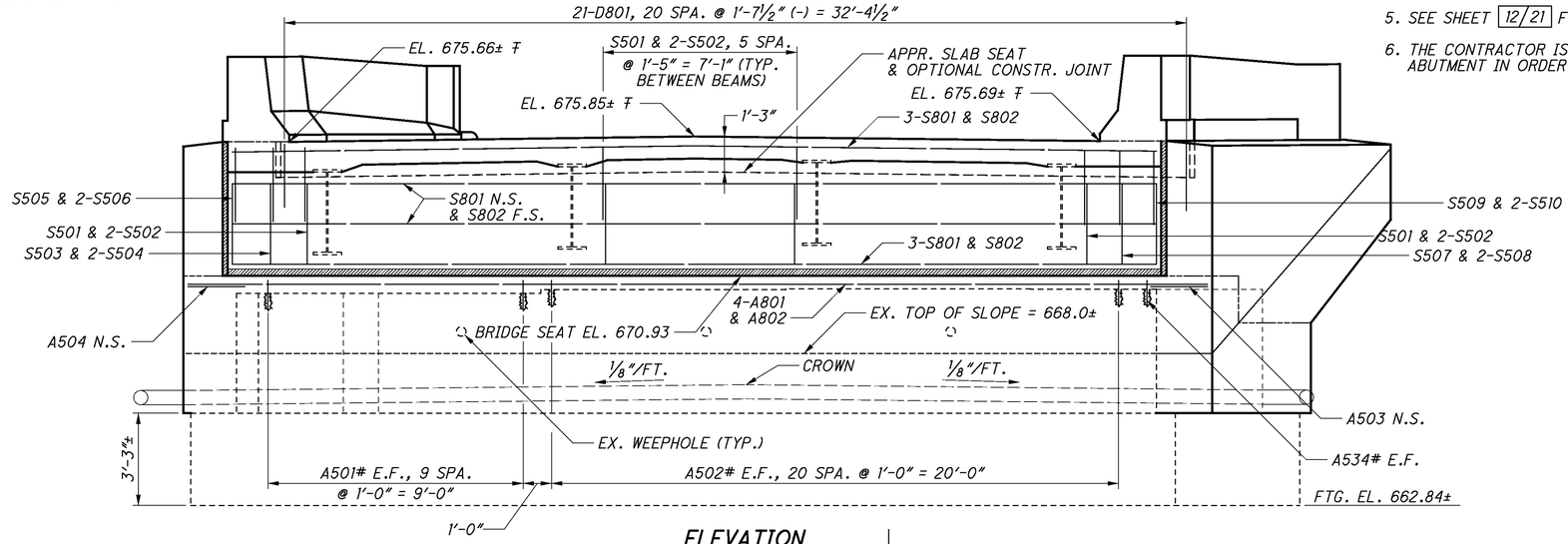
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961



PLAN

PILING NOT SHOWN



ELEVATION

PILING NOT SHOWN

LEGEND

\# - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE

℉ - ELEVATIONS TAKEN AT FRONT FACE OF DIAPHRAGM

E.F. - EACH FACE

N.S. - NEAR SIDE

NOTES

1. SEE STD. DWG. SICD-1-96 FOR ADDITIONAL DETAILS. NEOPRENE SHEETING SHALL BE PLACED PER STD. DWG. EXCEPT FOR AREAS WHERE EXISTING WINGWALL/BACKWALL LIMITS PLACEMENT. SHEETING SHALL CONTINUE TO BE 3 FT. WIDE AND ANCHORED AS SPECIFIED PER NOTE ON SHEET 2/21 . CUT AND ANCHOR SHEETING TO TOP OF EXISTING WINGWALL/BACKWALL TO MEET APPROVAL OF THE ENGINEER.
2. ALL VERTICAL BARS IN DIAPHRAGM & D801 BARS TO BE PLACED PARALLEL TO ℄ CONSTRUCTION C.R. 16.
3. SEE SHEETS 7/21 & 8/21 FOR WINGWALL DETAILS.
4. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 10 INCHES AT THE FRONT FACE OF THE ABUTMENT AND 7 INCHES AT THE BACK FACE OF THE ABUTMENT.
5. SEE SHEET 12/21 FOR ADDITIONAL NOTES.
6. THE CONTRACTOR IS TO DRILL THROUGH THE EXISTING ABUTMENT IN ORDER TO PLACE THE PROPOSED DRAINAGE PIPES.

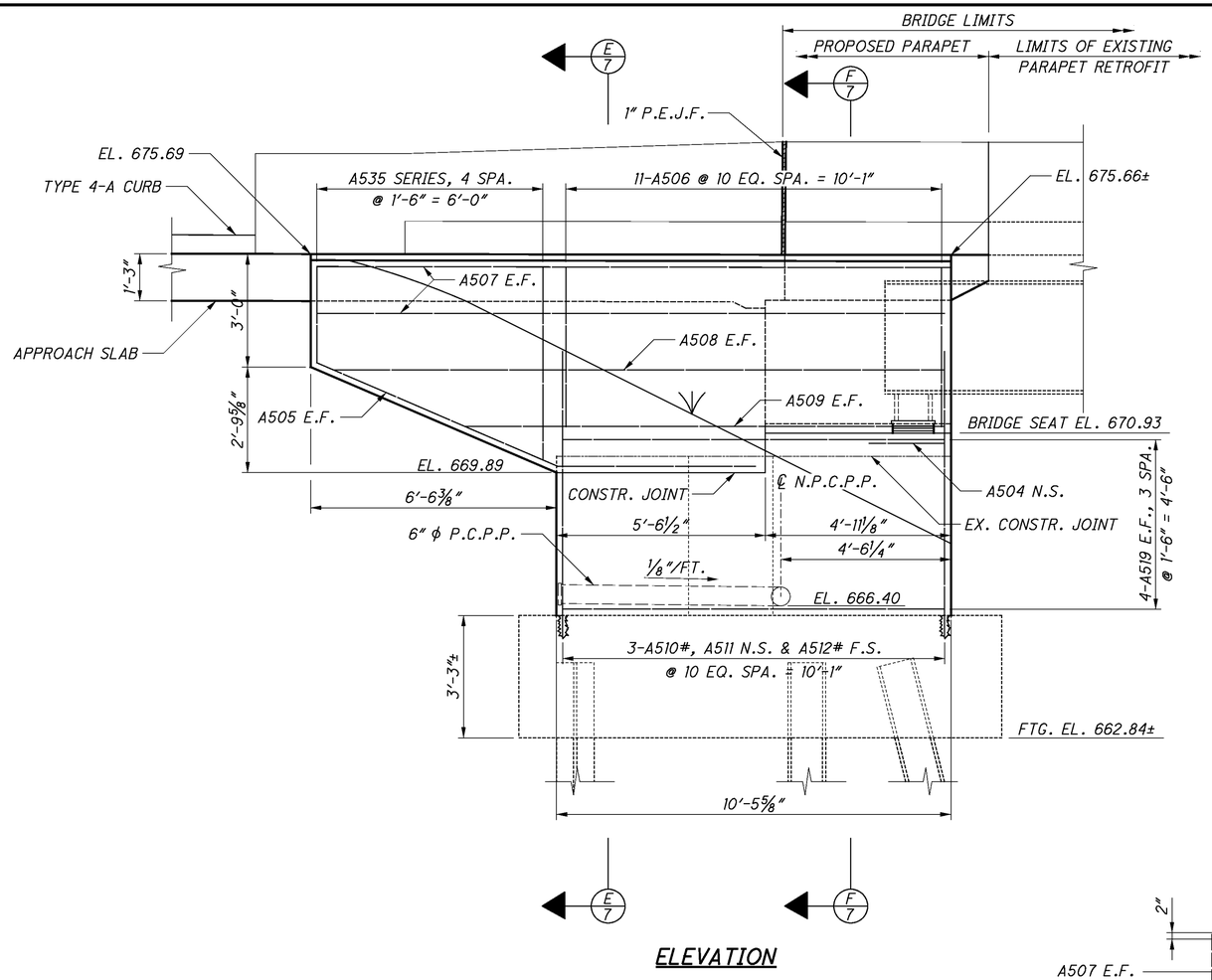
DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD, DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-22-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

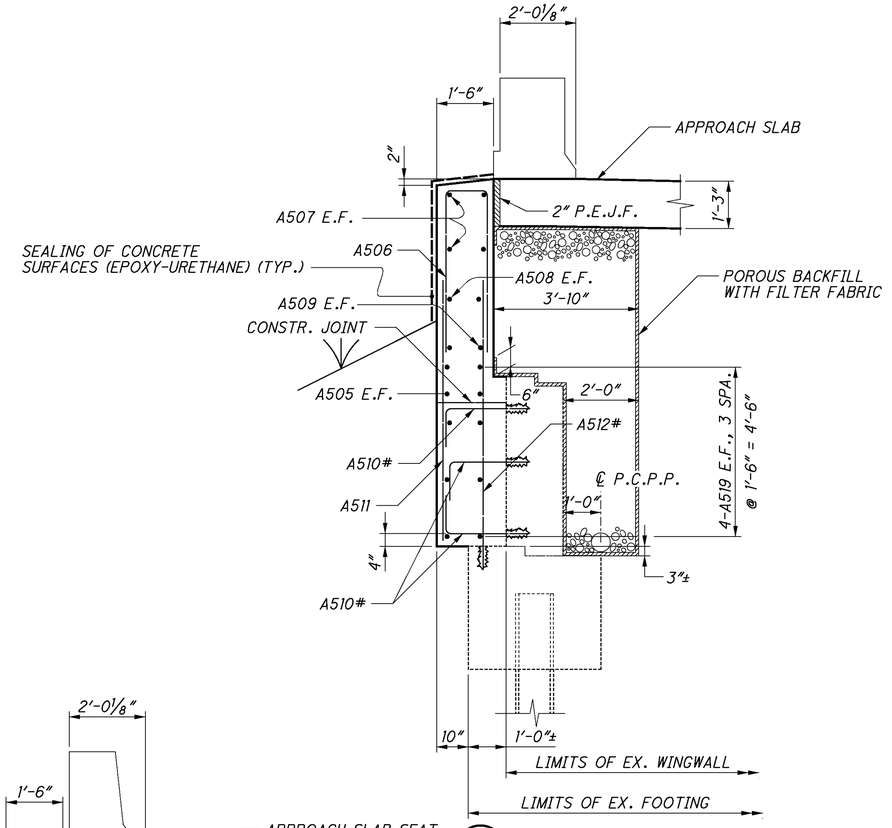
REAR ABUTMENT DETAILS

BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

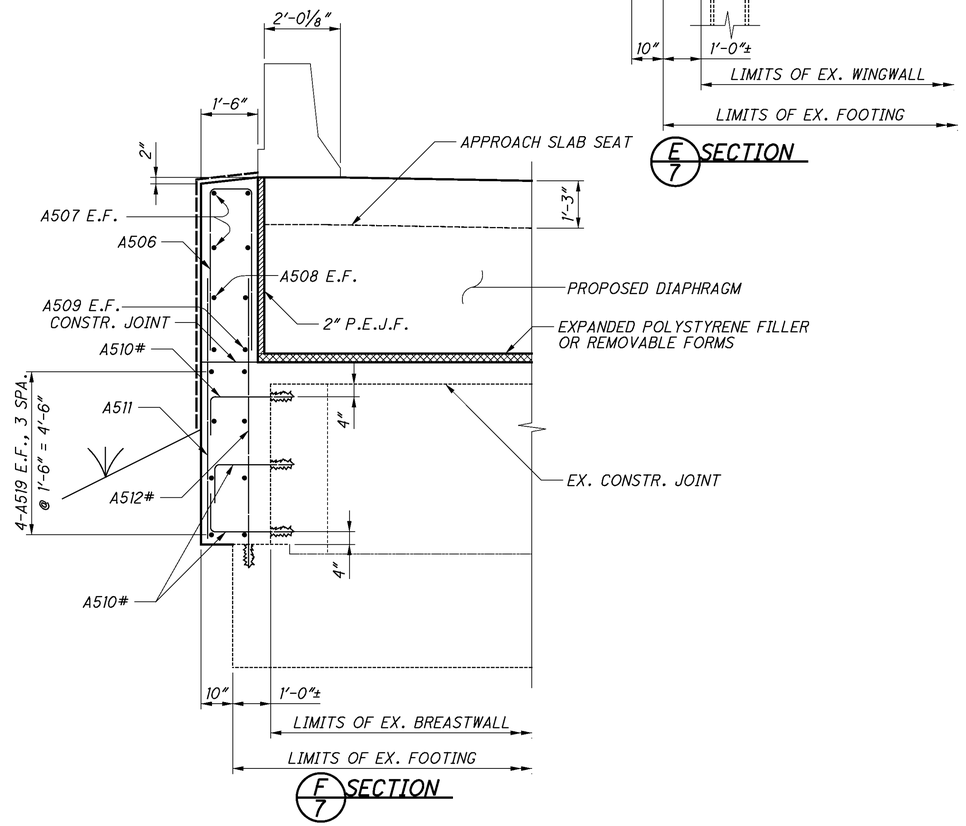
HAM-74-3.54/VAR
PID No. 82961



ELEVATION



E 7 SECTION



F 7 SECTION

NOTES

1. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 7 INCHES.

2. SEE SHEET 12/21 FOR ADDITIONAL NOTES.

LEGEND

\# - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
N.S. - NEAR SIDE
F.S. - FAR SIDE

wd transportation
DESIGN AGENCY
a WD PARTNERS division
7007 DISCOVERY BLVD, DUBLIN, OH 43017
614.634.7000 T WDTRANSPORTATION.COM

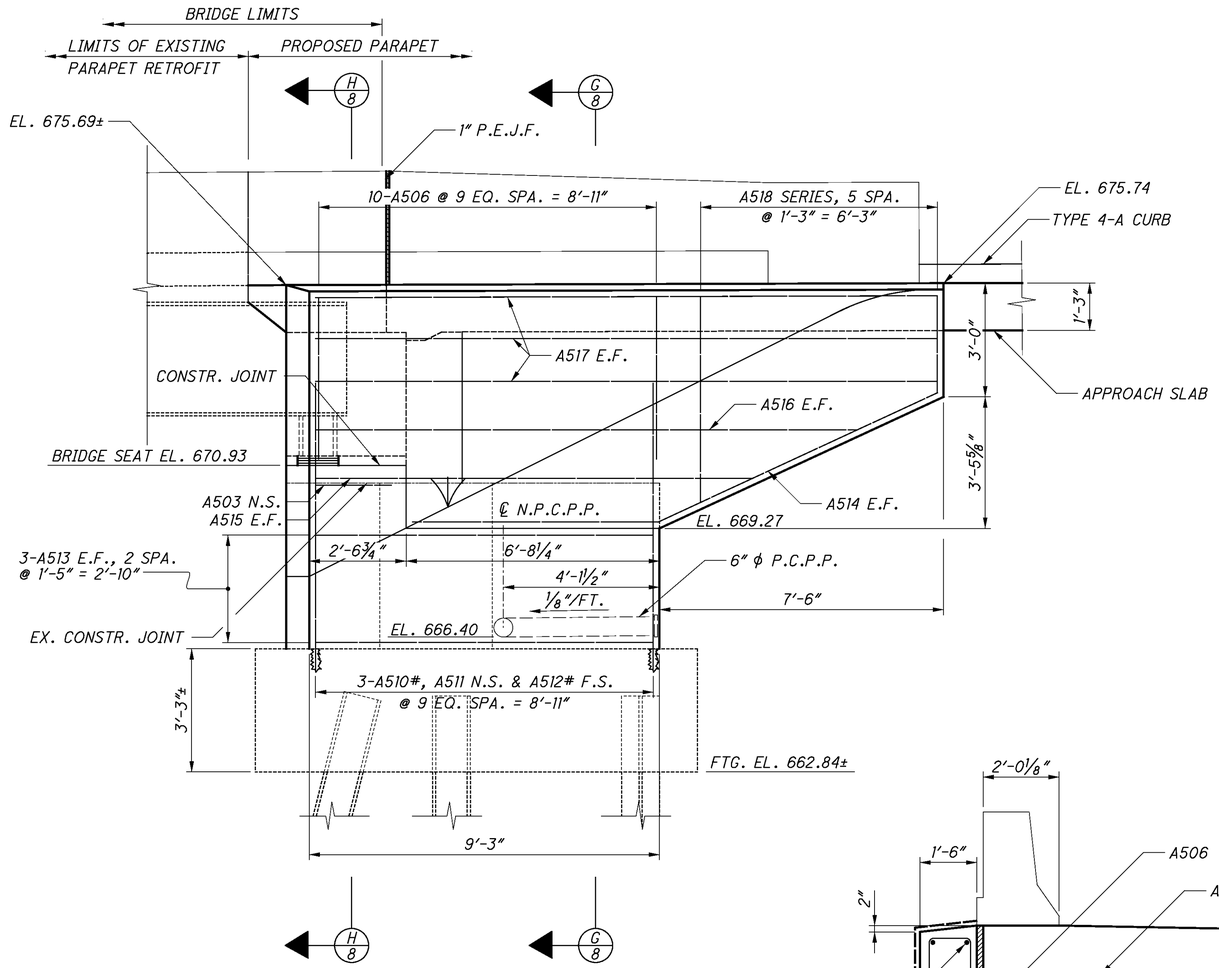
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

WINGWALL 1 DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

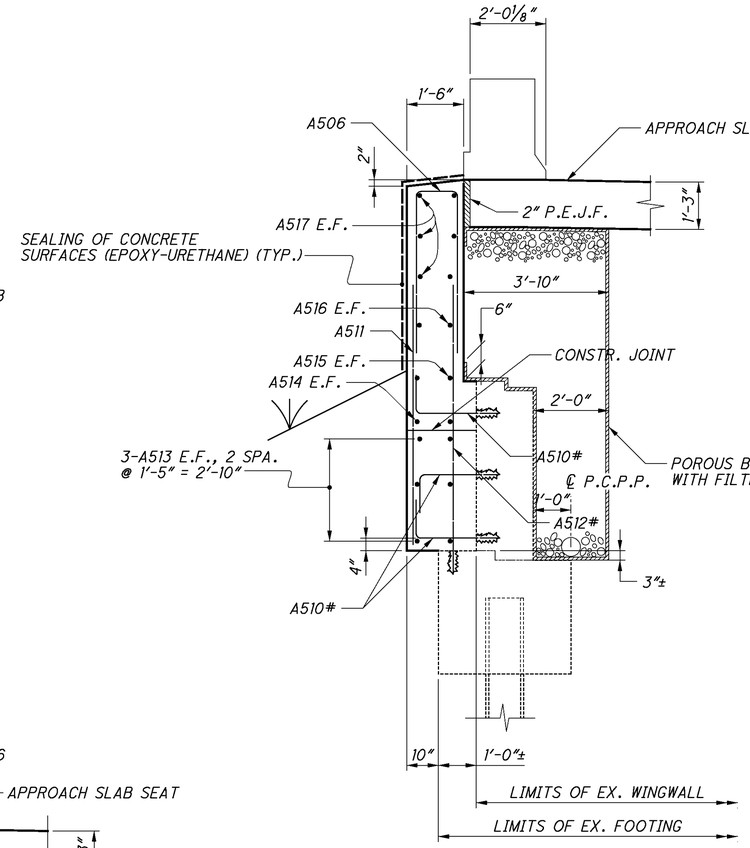
HAM-74-3.54/VAR
PID No. 82961

7 / 21

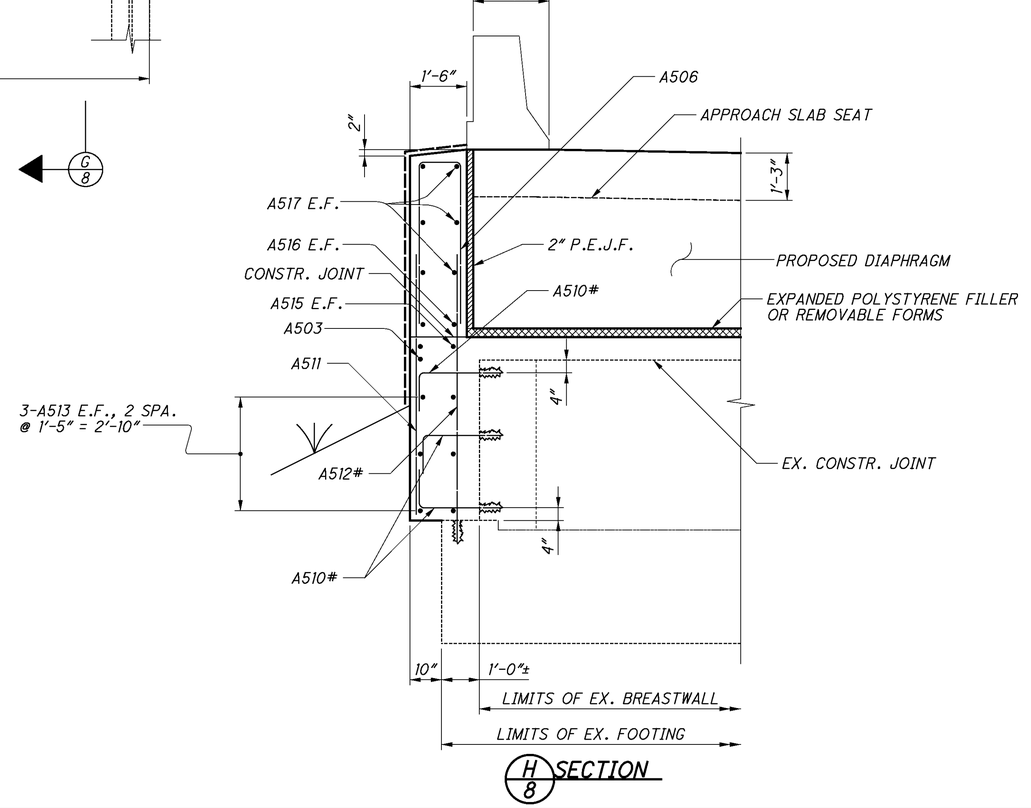
101 / 115



ELEVATION



G/8 SECTION



H/8 SECTION

NOTES

1. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 7 INCHES.

2. SEE SHEET 12/21 FOR ADDITIONAL NOTES.

LEGEND

\# - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
E.F. - EACH FACE
N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD. DUBLIN, OH 43017
614.634.7000 T. WDTRANSPORTATION.COM

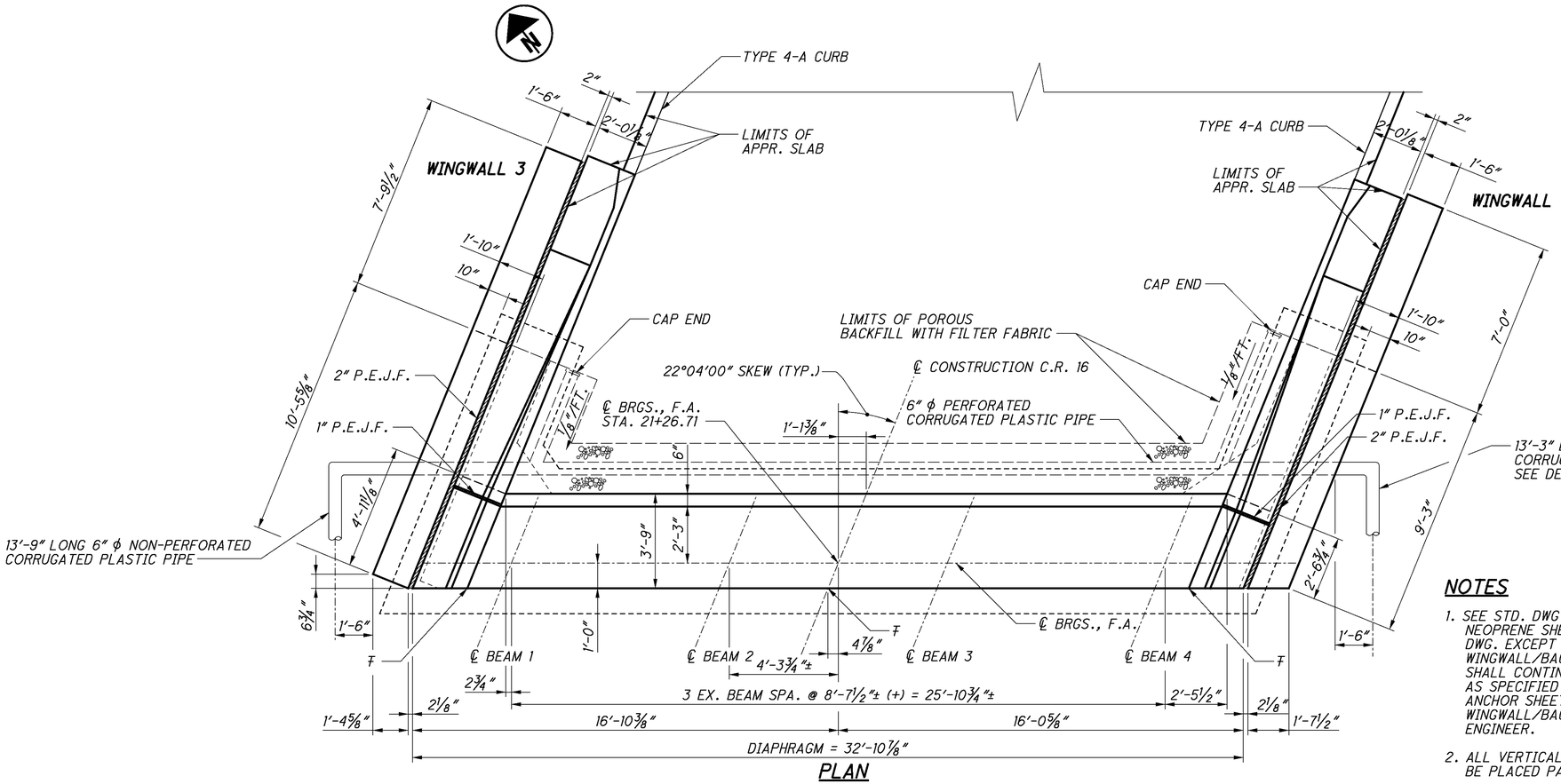
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

WINGWALL 2 DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

8 / 21

102 / 115



PLAN
PILING NOT SHOWN

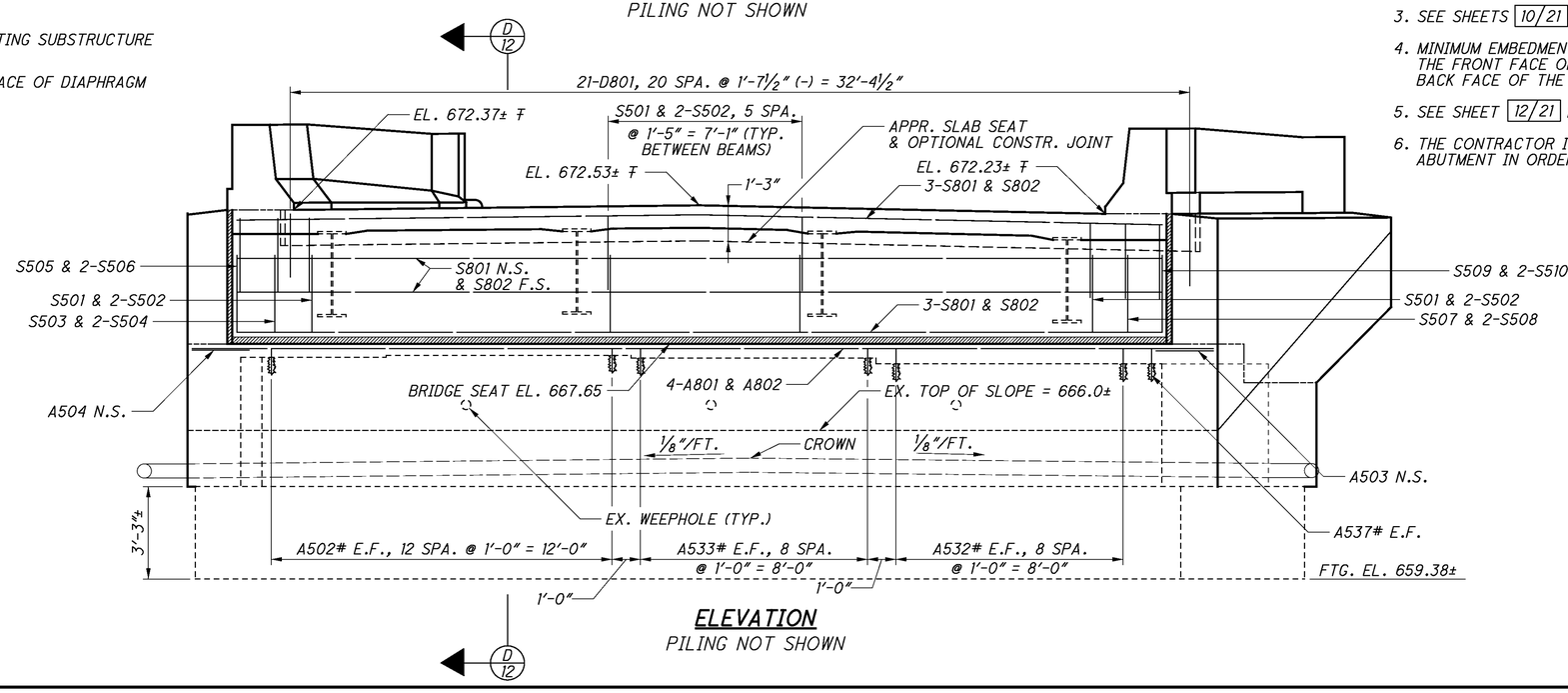
LEGEND

\# - BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE

Ŧ - ELEVATIONS TAKEN AT FRONT FACE OF DIAPHRAGM

E.F. - EACH FACE

N.S. - NEAR SIDE



ELEVATION
PILING NOT SHOWN

NOTES

1. SEE STD. DWG. SICD-1-96 FOR ADDITIONAL DETAILS. NEOPRENE SHEETING SHALL BE PLACED PER STD. DWG. EXCEPT FOR AREAS WHERE EXISTING WINGWALL/BACKWALL LIMITS PLACEMENT. SHEETING SHALL CONTINUE TO BE 3 FT. WIDE AND ANCHORED AS SPECIFIED PER NOTE ON SHEET 2/21 . CUT AND ANCHOR SHEETING TO TOP OF EXISTING WINGWALL/BACKWALL TO MEET APPROVAL OF THE ENGINEER.
2. ALL VERTICAL BARS IN DIAPHRAGM & D801 BARS TO BE PLACED PARALLEL TO ℄ CONSTRUCTION C.R. 16.
3. SEE SHEETS 10/21 & 11/21 FOR WINGWALL DETAILS.
4. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 10 INCHES AT THE FRONT FACE OF THE ABUTMENT AND 7 INCHES AT THE BACK FACE OF THE ABUTMENT.
5. SEE SHEET 12/21 FOR ADDITIONAL NOTES.
6. THE CONTRACTOR IS TO DRILL THROUGH THE EXISTING ABUTMENT IN ORDER TO PLACE THE PROPOSED DRAINAGE PIPES.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.594.2000 FT • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

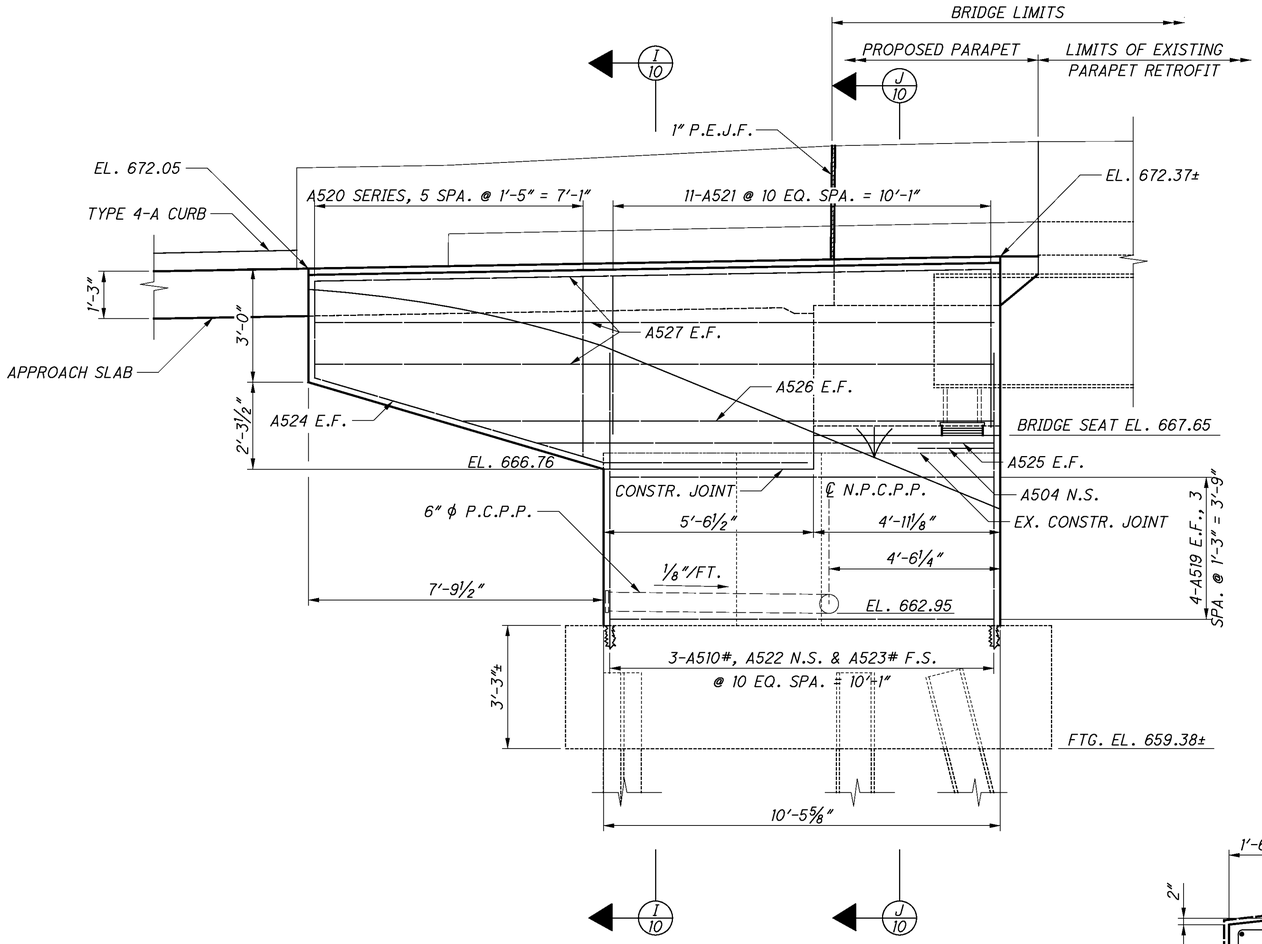
FORWARD ABUTMENT DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN RD.) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

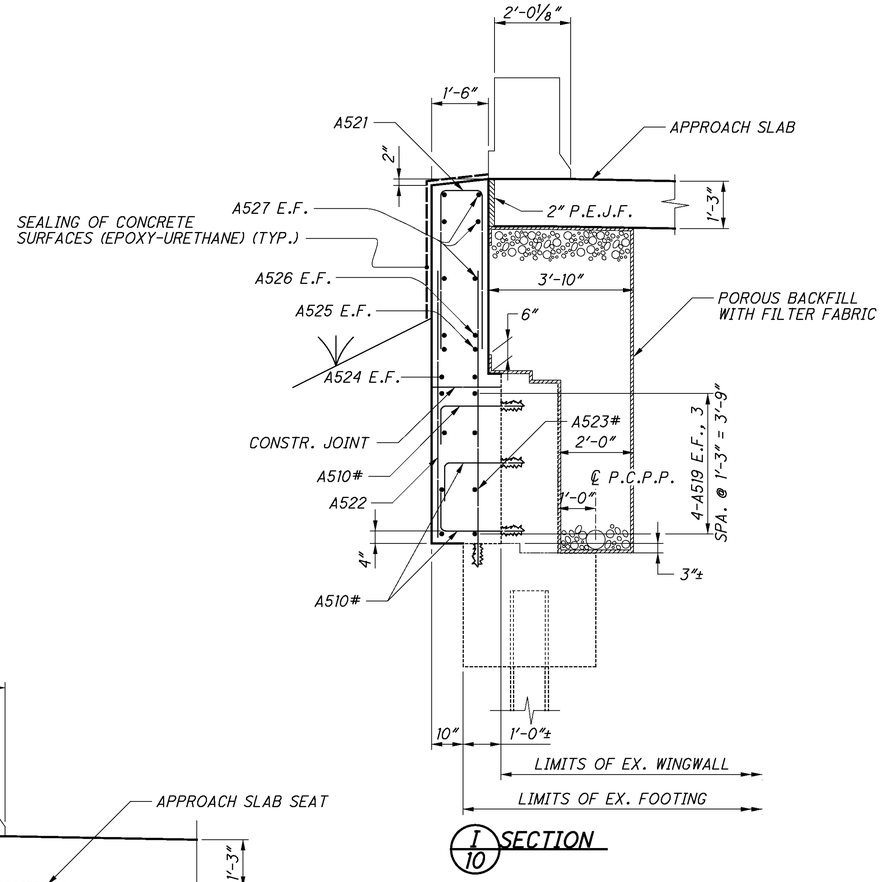
9 / 21

103 / 115

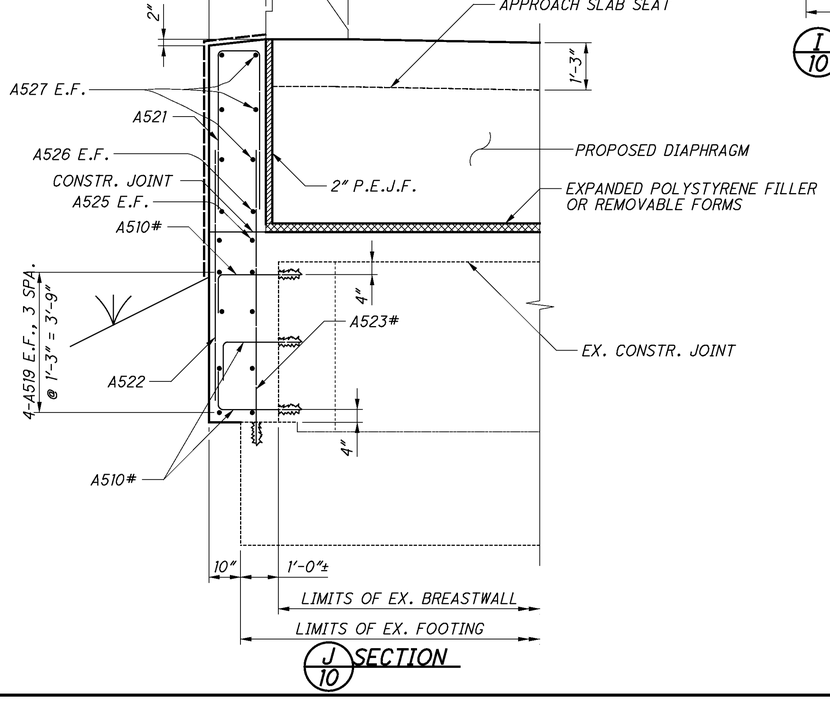
P:\CO\ODT\08\0682_HAM-74-3.54\82961\structures\HAM074_0495C\sheets\074_0495CAF001.dgn 8/31/2011 1:26:51 PM Wda377



ELEVATION



I/10 SECTION



J/10 SECTION

NOTES

1. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 7 INCHES.

2. SEE SHEET 12/21 FOR ADDITIONAL NOTES.

LEGEND

- BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
E.F. - EACH FACE
N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.654.7000 T • WDTRANSPORTATION.COM

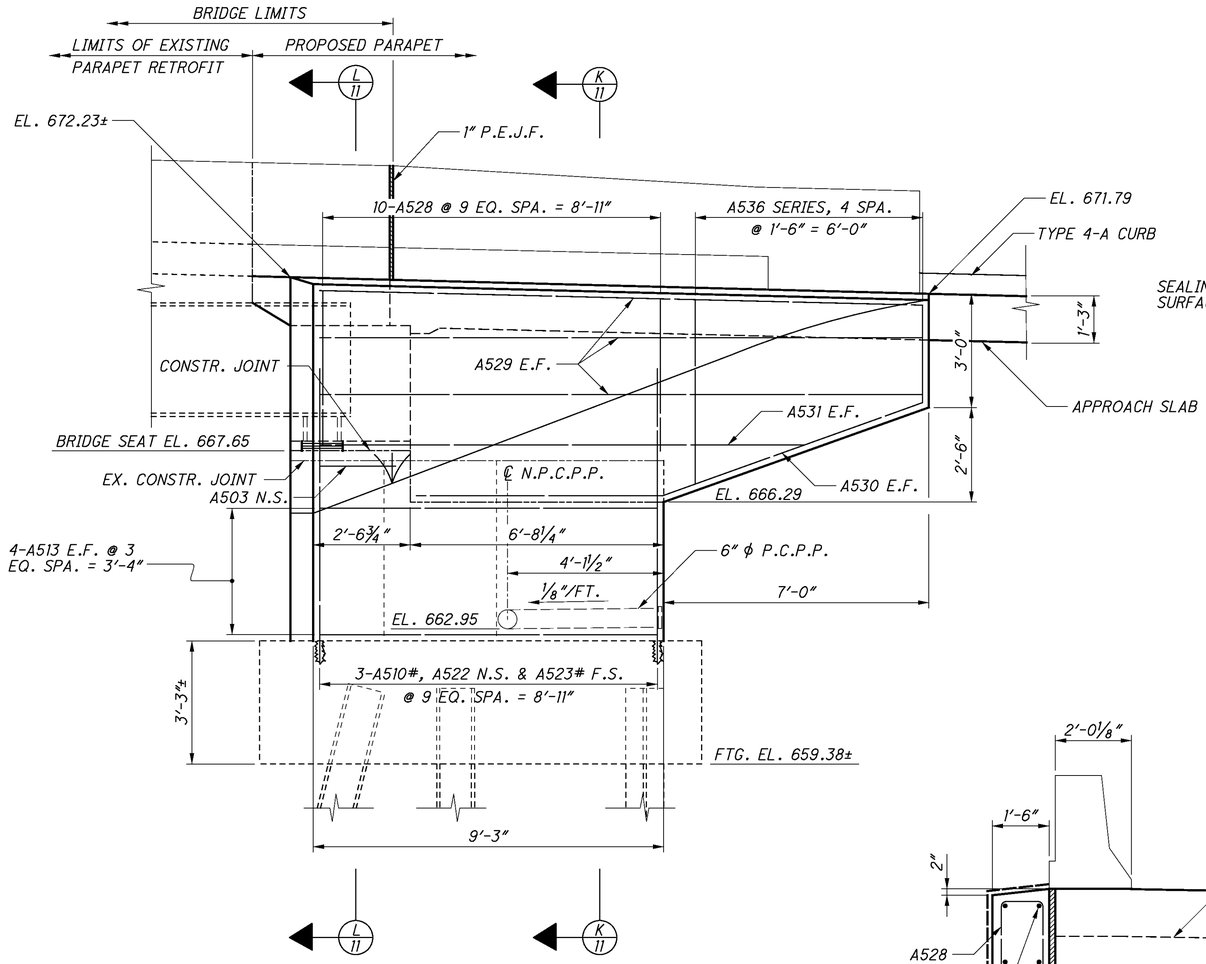
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

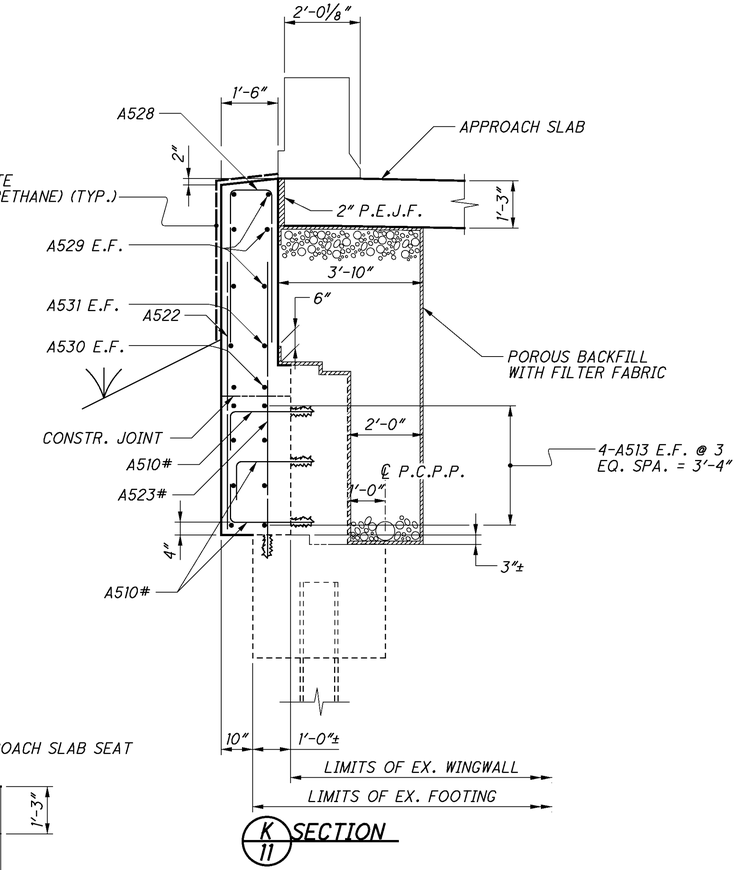
WINGWALL 3 DETAILS

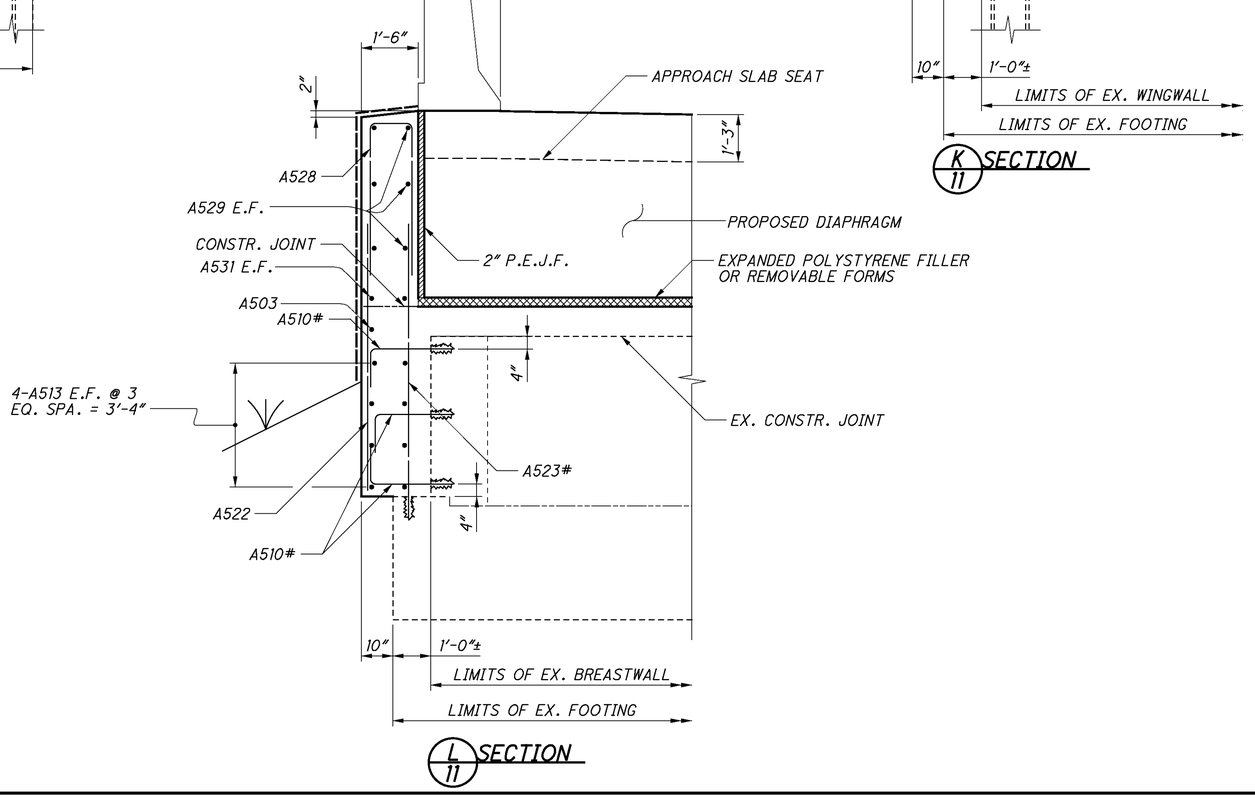
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR.
PID No. 82961

10/21
104/115







NOTES

1. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 7 INCHES.

2. SEE SHEET 12/21 FOR ADDITIONAL NOTES.

LEGEND

- BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
E.F. - EACH FACE
N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

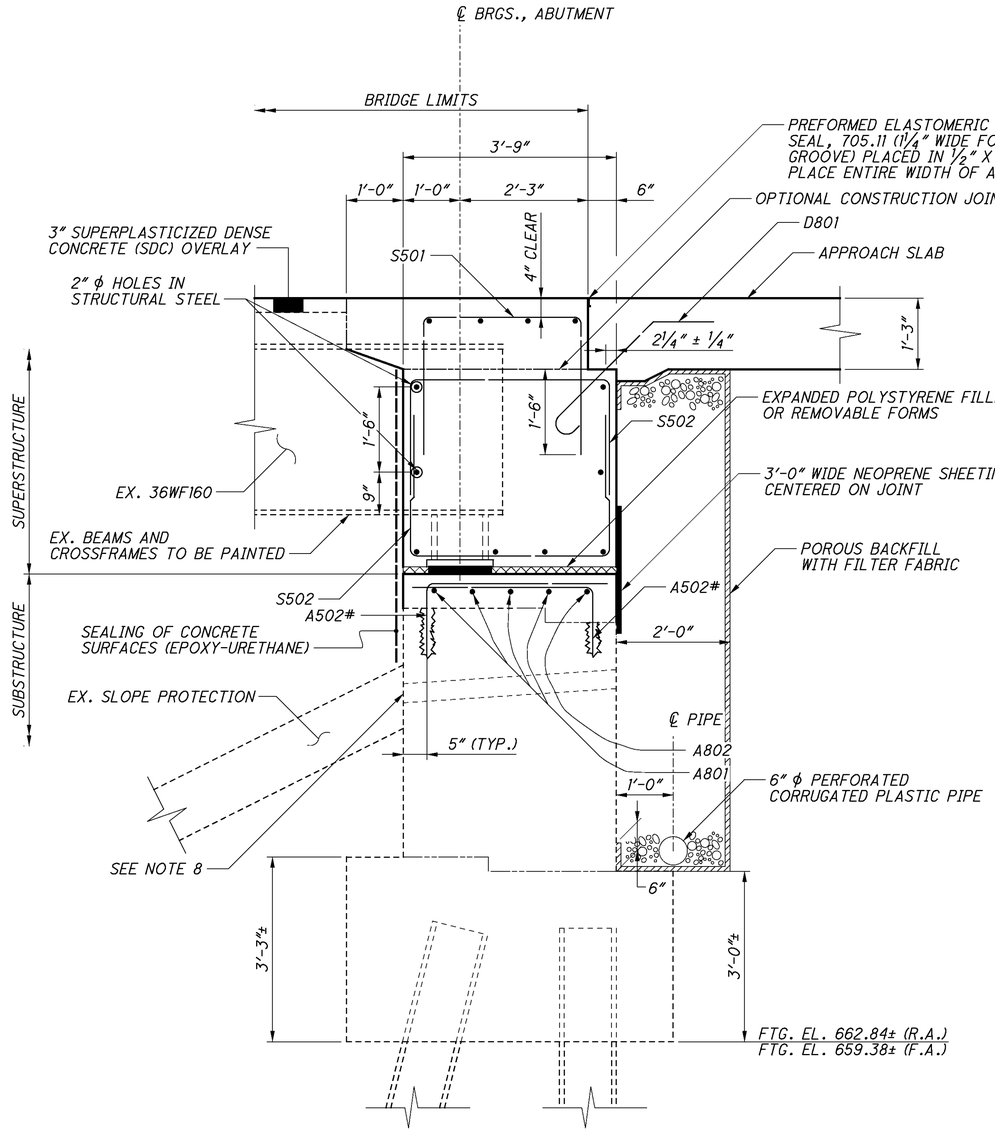
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

WINGWALL 4 DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

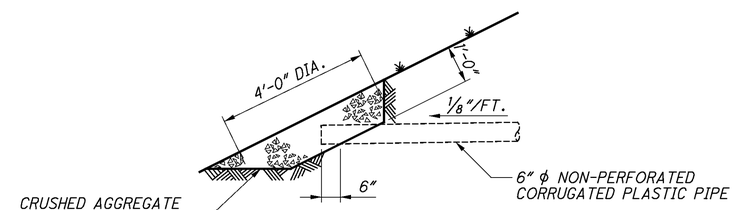
HAM-74-3.54/ VAR.
PID No. 82961

11 / 21

105 / 115



D SECTION
6,9 BARS NOT LABELED ARE S801 & S802



DETAIL A
END TREATMENT OF 6" ϕ NON-PERFORATED CORRUGATED PLASTIC PIPE

NOTES

1. REFER TO STD. DWG. SICD-1-96 FOR ADDITIONAL DETAILS.
2. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 10 INCHES AT THE FRONT FACE OF THE ABUTMENT AND 7 INCHES AT THE BACK FACE OF THE ABUTMENT.
3. POROUS BACKFILL WITH FILTER FABRIC, MINIMUM 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE.
4. ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
5. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. SEE NOTE 7 ON SHEET 16/21 FOR ADDITIONAL REQUIREMENTS.
6. PAYMENT FOR THE DRILLING OF HOLES IN THE STRUCTURAL STEEL SHALL BE INCLUDED WITH ITEM 511, CLASS S CONCRETE, SUPERSTRUCTURE.
7. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.
8. FILL AND PLUG THE EXISTING WEEP HOLES WITH CLASS C CONCRETE.

LEGEND

- BAR TO BE DOWELED INTO EXISTING SUBSTRUCTURE

wd transportation
DESIGN AGENCY
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

ABUTMENT DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/ VAR.
PID No. 82961

12 / 21

106 / 115

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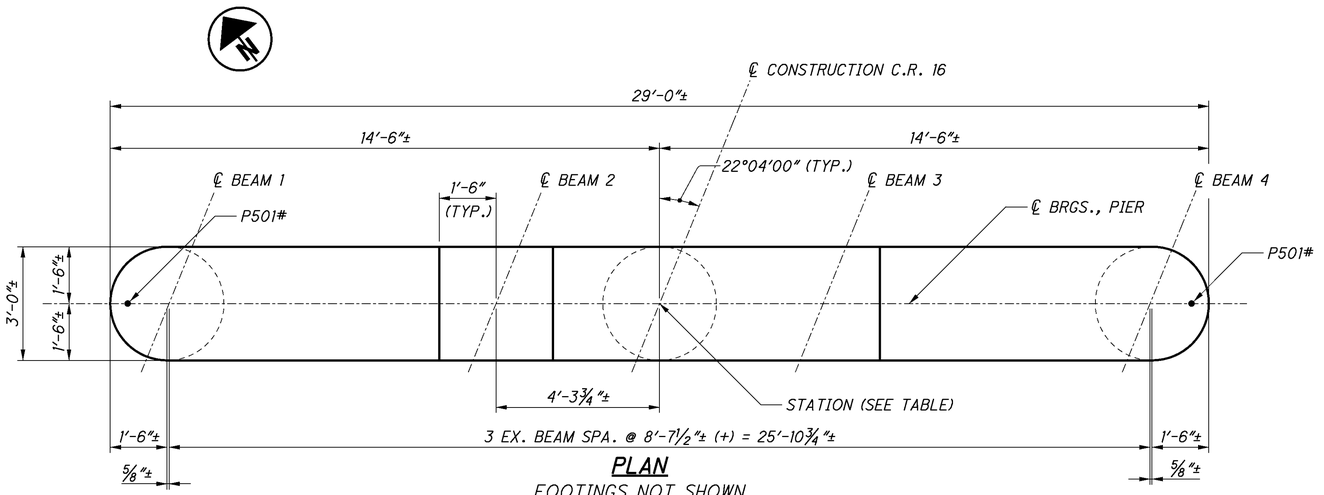
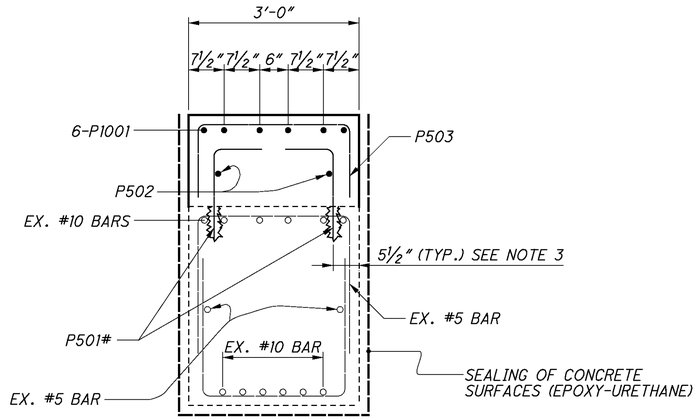
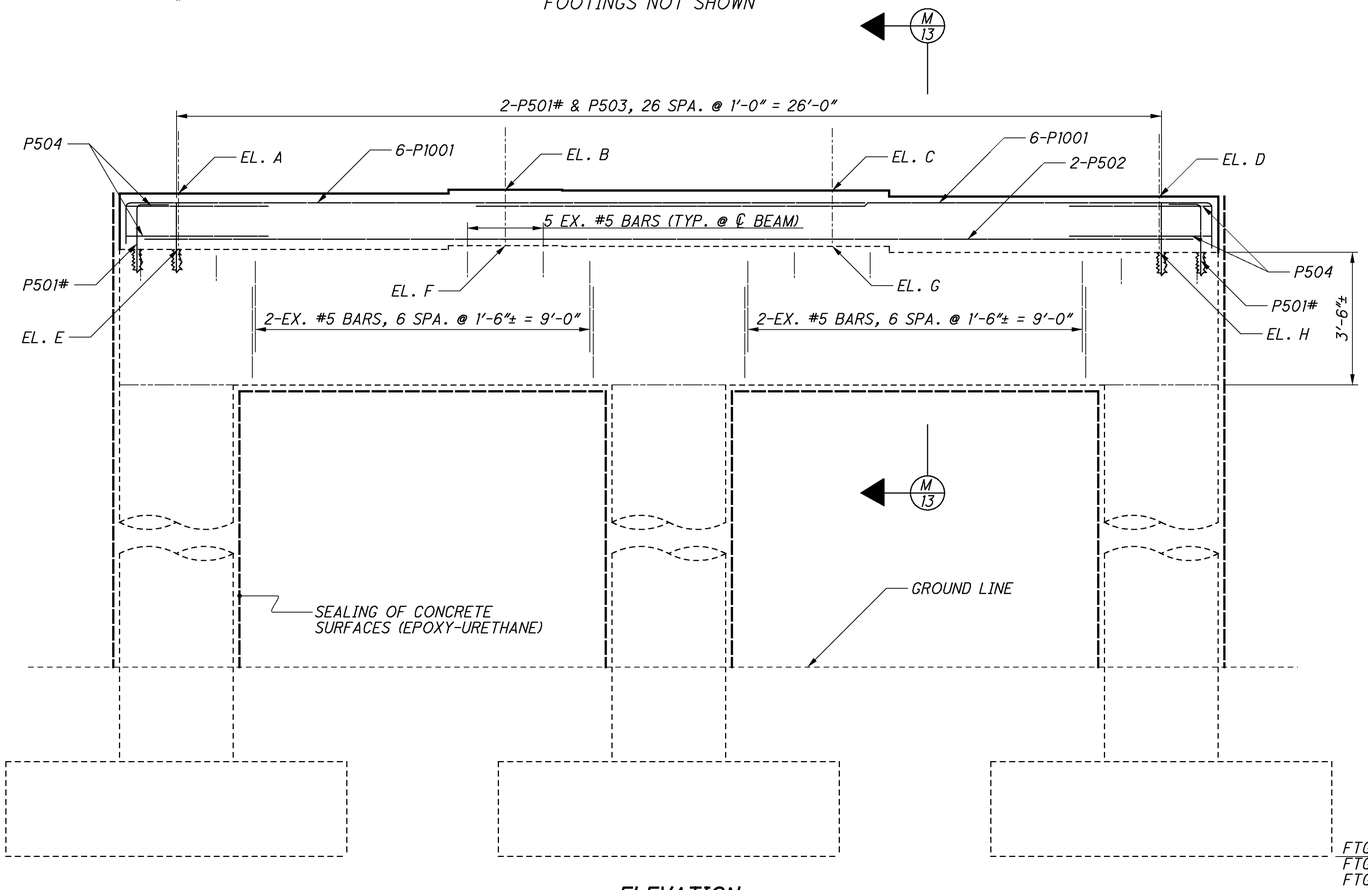


PLAN

FOOTINGS NOT SHOWN



M/13 SECTION



ELEVATION

PILING NOT SHOWN

PIER NO.	STATION	EL. A	EL. B	EL. C	EL. D
1	19+24.71	671.06±	671.25±	671.24±	671.08±
2	19+99.71	670.41±	670.50±	670.44±	670.29±
3	20+71.71	669.23±	669.28±	669.24±	669.02±
		EL. E	EL. F	EL. G	EL. H
1	19+24.71	669.58±	669.77±	669.75±	669.59±
2	19+99.71	668.95±	669.01±	668.96±	668.82±
3	20+74.71	667.73±	667.80±	667.76±	667.53±

LEGEND

- BAR TO BE DOWELED

NOTES

1. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 7 INCHES.
2. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL BEAM SEAT ELEVATIONS BY SUBTRACTING THE PROPOSED ELASTOMERIC BEARINGS WITH LOAD PLATE FROM THE CONTRACTOR MEASURED BOTTOM OF EXISTING BEAM ELEVATION AT EACH BEARING LOCATION. THIS NEW BEAM SEAT ELEVATION IS TO BE INCREASED BY THE AMOUNT THE BRIDGE IS TO BE RAISED OF 0.6 FEET. THIS FINAL BEAM SEAT ELEVATION IS A CONTRACTOR CALCULATED ELEVATION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

   FINAL BEAM SEAT ELEVATION = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION) - (PROPOSED BEARING HEIGHTS) + (AMOUNT THE BRIDGE IS TO BE RAISED).
3. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.
4. MINIMUM LAP LENGTH:
   #10 BAR = 123 INCHES

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.654.7000 T • WDTRANSPORTATION.COM

DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

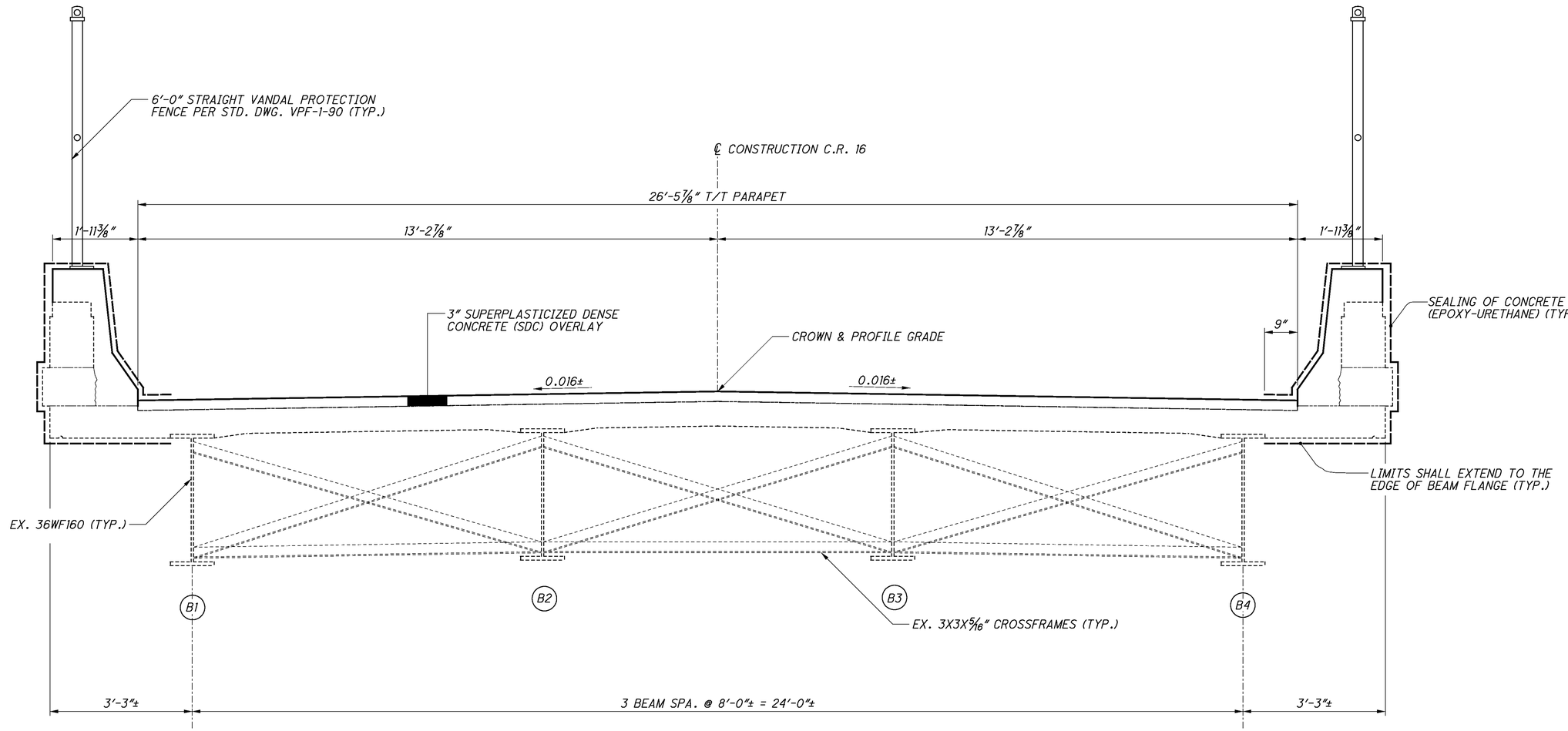
PIER DETAILS

BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

13 / 21

107
115



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DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN OH 43017
614.594.7000 T • WDTRANSPORTATION.COM

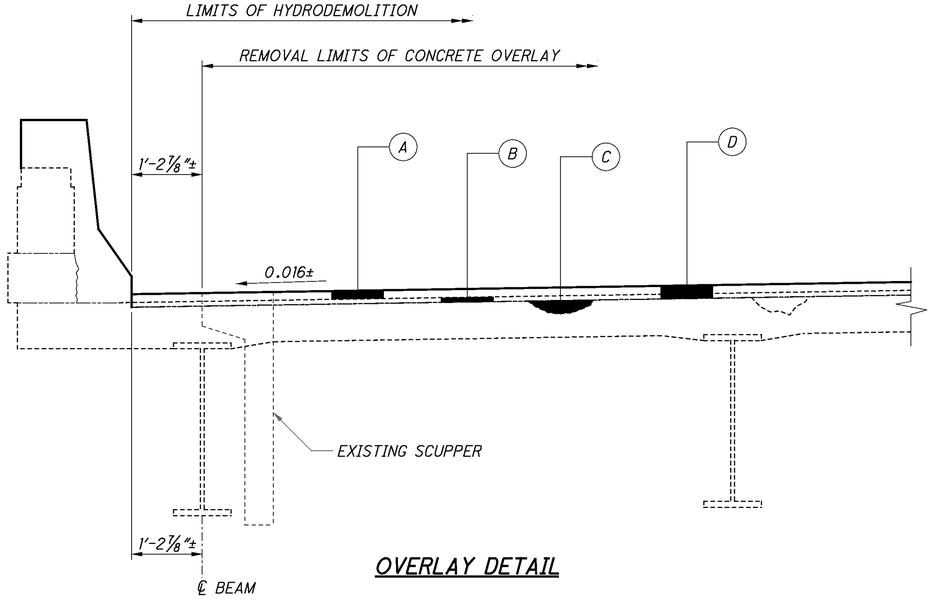
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-25-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

TRANSVERSE SECTION
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

14 / 21

108
115



OVERLAY DETAIL

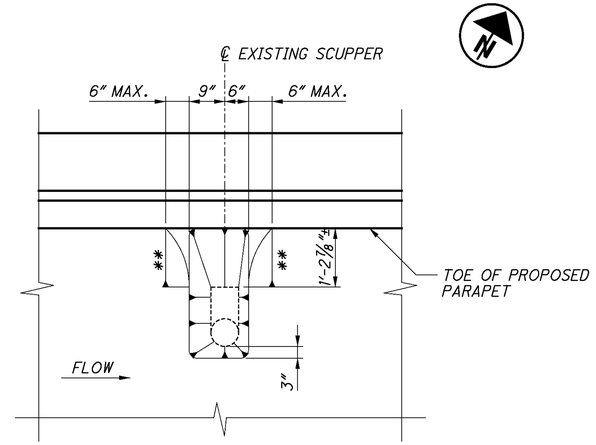
LEGEND

(A) - REMOVE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY.

(B) - HYDRODEMOLIZE 1" OF THE ORIGINAL DECK.

(C) - PARTIAL DEPTH REPAIRS TO THE DECK TO BE MADE AS DIRECTED BY THE ENGINEER.

(D) - PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO THE EXISTING DECK.



SCUPPER OVERLAY DETAIL

LEGEND

** - MATCH EXISTING SLOPE

NOTE

EXISTING BAR EXTENSIONS AT THE SCUPPERS SHALL BE REMOVED. PAYMENT FOR THIS WORK SHALL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

PROPOSED PARAPET AND OVERLAY WORK

1. REMOVE THE EXISTING SAFETY CURBS ON THE PARAPETS AS SHOWN ON SHEET 17/21 .
2. REMOVE THE EXISTING 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY.
3. HYDRODEMOLIZE 1" OF THE ORIGINAL DECK TO THE TOE OF THE PROPOSED PARAPETS.
4. REFACE AND CONSTRUCT THE PARAPETS.
5. PLACE 3" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO THE EXISTING DECK.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
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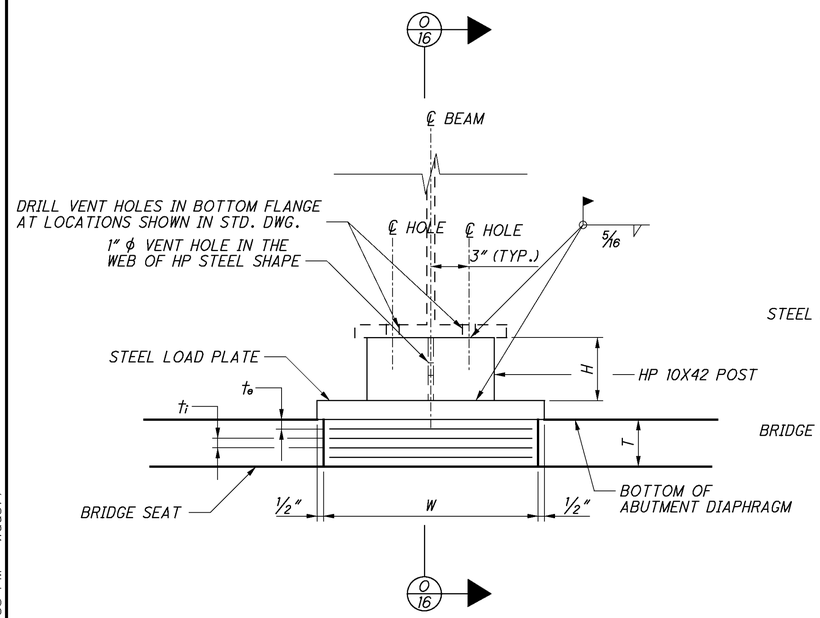
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-26-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

OVERLAY DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

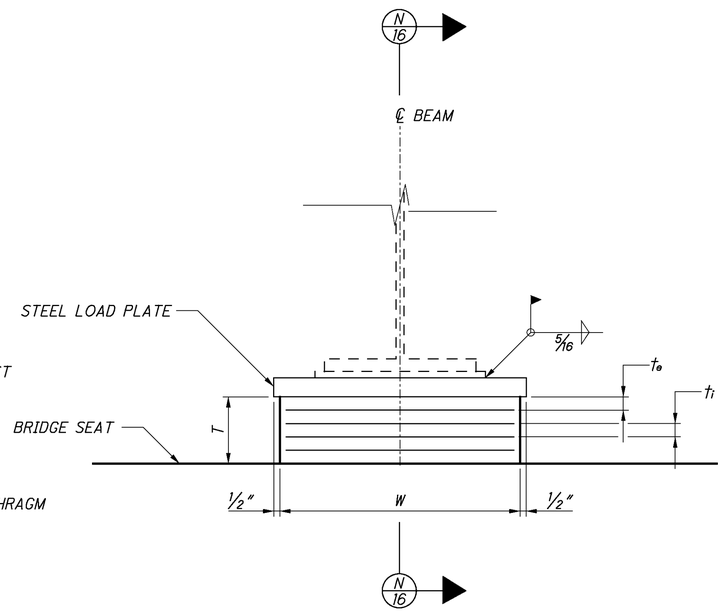
HAM-74-3.54/VAR
PID No. 82961

15 / 21

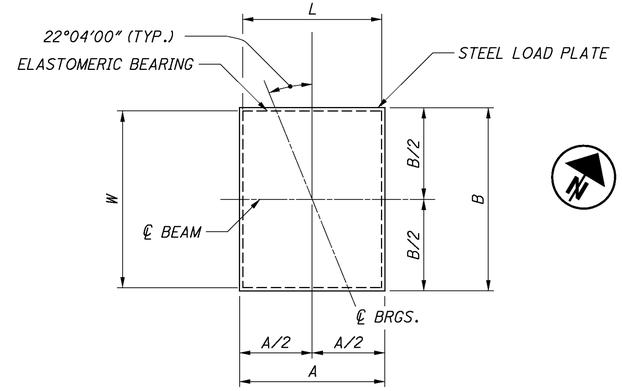
109
115



LAMINATED ELASTOMERIC EXPANSION BEARING REAR AND FORWARD ABUTMENT

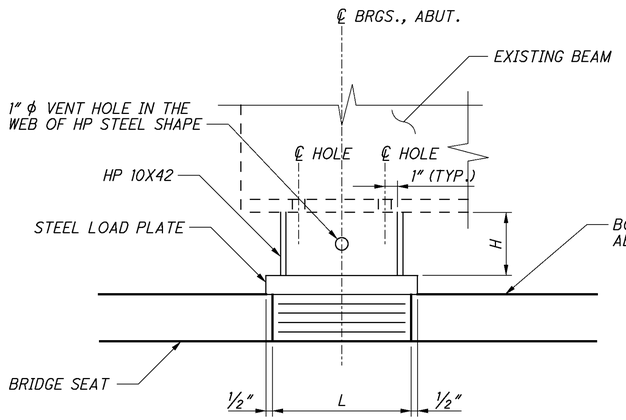


LAMINATED ELASTOMERIC EXPANSION BEARING (PIER)

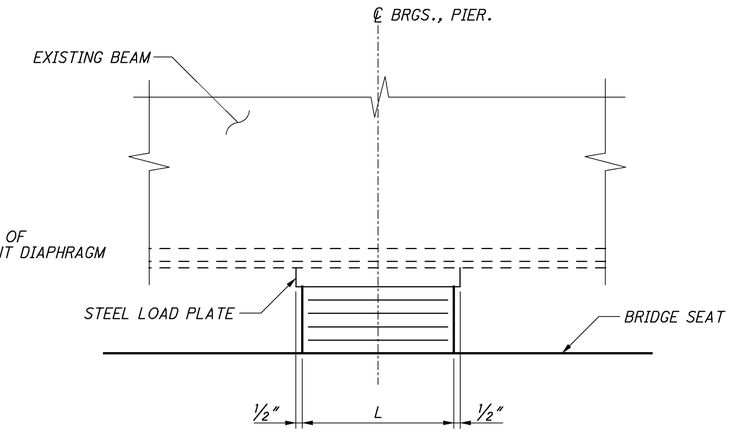


ELASTOMERIC BEARING AND STEEL LOAD PLATE PLAN

HP 10X42 HEIGHT (H)					
REAR ABUTMENT			FORWARD ABUTMENT		
BEAM	LOCATION	H (IN.)	BEAM	LOCATION	H (IN.)
B1	HR	6¾ ±	B1	HR	7⅛ ±
	HC	6¾ ±		HC	7 ±
	HF	6¾ ±		HF	6⅞ ±
B2	HR	8 7/16 ±	B2	HR	8¼ ±
	HC	8 7/16 ±		HC	8⅛ ±
	HF	8 7/16 ±		HF	8 ±
B3	HR	6¾ ±	B3	HR	7¼ ±
	HC	6¾ ±		HC	7⅛ ±
	HF	6¾ ±		HF	7 ±
B4	HR	4½ ±	B4	HR	4⅝ ±
	HC	4½ ±		HC	4½ ±
	HF	4½ ±		HF	4⅜ ±



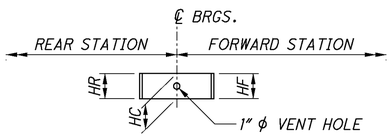
O/16 SECTION



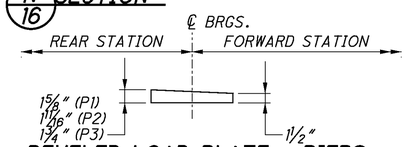
N/16 SECTION

LEGEND

ti = THICKNESS OF INTERNAL LAYERS
te = THICKNESS OF EXTERNAL LAYERS
T = TOTAL THICKNESS OF ELASTOMERIC BEARING
N = NUMBER OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.0747" (14 GAGE)
N-1 = NUMBER OF INTERNAL LAYERS



BEVELED HP 10X42 DETAIL



BEVELED LOAD PLATE - PIERS

ELASTOMERIC BEARINGS													
LOCATION	BEARING DIMENSIONS							STEEL LOAD PLATE			REACTIONS		MAXIMUM TOTAL LOAD
	L	W	ti	te	T	N	N-1	A	B	THICKNESS	DL	LL	
REAR ABUTMENT	11"	17"	0.4544"	0.14"	3"	6	5	12"	18"	1½"	69.33 k	51.10 k	120.43 k
PIER 1	12"	19"	0.453"	0.282"	2¾"	5	4	13"	20"	1½" (MIN.)	118.93 k	56.41 k	175.34 k
PIER 2	12"	19"	0.445"	0.3"	2¾"	5	4	13"	20"	1½" (MIN.)	120.69 k	58 k	178.69 k
PIER 3	12"	19"	0.47"	0.25"	2¾"	5	4	13"	20"	1½" (MIN.)	112.15 k	54.67 k	166.82 k
FORWARD ABUTMENT	11"	17"	0.4544"	0.14"	3"	6	5	12"	18"	1½"	62.53 k	49.53 k	112.06 k

NOTES

1. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
2. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F ± 10° F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F ± 10° F.
3. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
4. STEEL PLATE: PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
5. DO NOT PLACE BEARING PEDESTALS UNDER THE ELASTOMERIC BEARINGS.
6. BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), EACH. ALL COST ASSOCIATED WITH THE HP SECTIONS AND LOAD PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
7. THE CONTRACTOR IS TO VERIFY THE HP HEIGHTS AT THE ABUTMENTS PROVIDED BY THE FOLLOWING EQUATION:

   ABUTMENT FINAL HP HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION) + (0.60 FT., "HEIGHT STEEL IS TO BE RAISED") - (PROPOSED BRIDGE SEAT ELEVATION) - (ELASTOMERIC BEARING THICKNESS + STEEL LOAD PLATE THICKNESS)

   HP BEVEL DIMENSIONS ARE BASED ON THE ORIGINAL CONSTRUCTION PLAN'S PROFILE GRADE AND SHOULD BE VERIFIED BY THE CONTRACTOR.

   ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD DUBLIN, OH 43017
614.594.2000 | WDTRANSPORTATION.COM

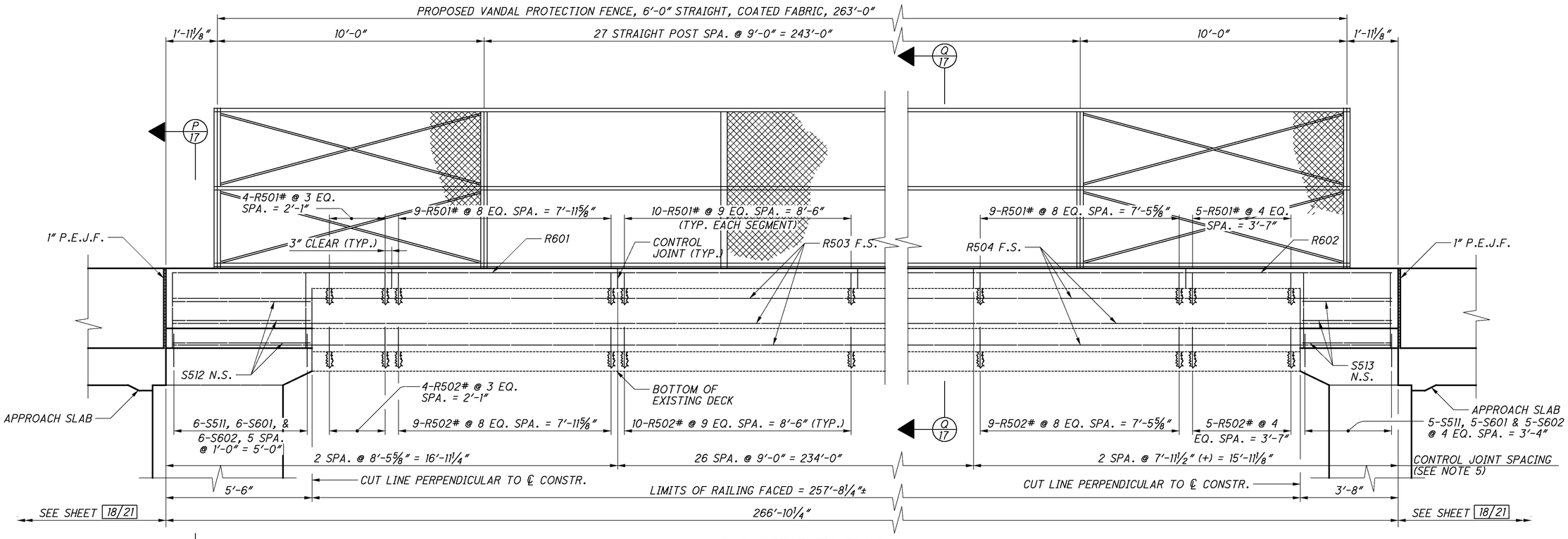
DESIGNED STK | DRAWN STK | CHECKED GDJ | REVIEWED WHM | DATE 10-26-10 | REVISED | STRUCTURE FILE NUMBER 3108163

BEARING DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

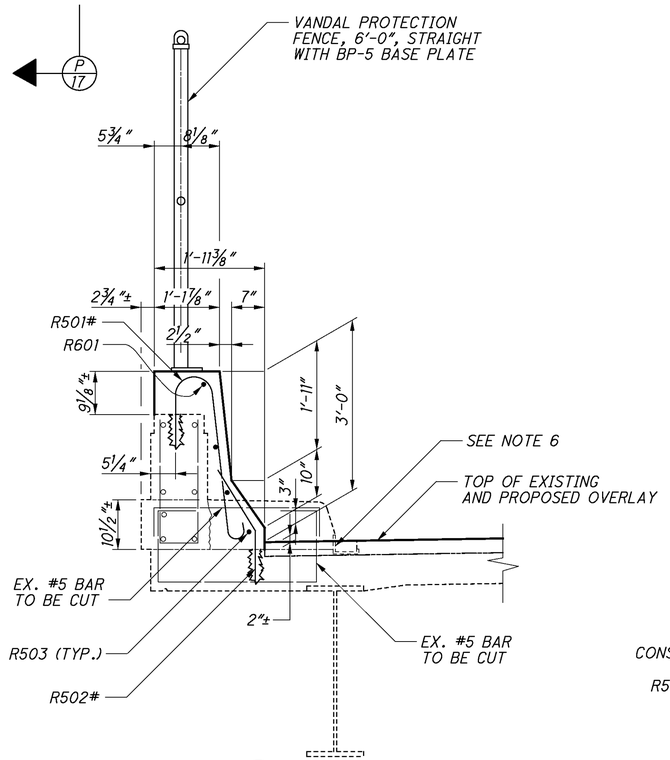
16 / 21

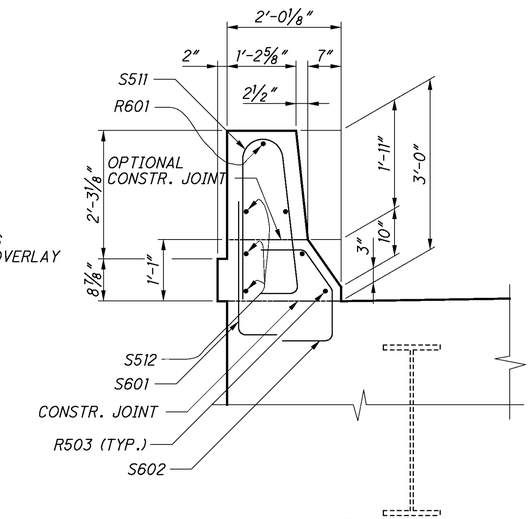
110 / 115



PARAPET ELEVATION

PARAPET VIEWED ALONG BACK FACE





LEGEND

SAFETY CURB TO BE REMOVED

- BARS TO BE DOWELED
F.S. - FAR SIDE
N.S. - NEAR SIDE

NOTES

1. SEE SHEET 14/21 FOR SEALING DETAILS.
2. MINIMUM EMBEDMENT DEPTH OF DOWELS TO BE 7 INCHES.
3. SEE STD. DWG. VPF-1-90 FOR ADDITIONAL DETAILS.
4. MINIMUM LAP SPLICE LENGTHS:

   #5 BAR = 29 INCHES
   #6 BAR = 35 INCHES

5. CONTROL JOINT SPACING WAS DESIGNED TO MATCH THE EXISTING CONSTRUCTION PLANS AT EVERY OTHER JOINT LOCATION. THE EXISTING PLANS SHOW A MAXIMUM SPACING OF 18 FEET. THE MAXIMUM SPACING FOR THE PROPOSED CONTROL JOINTS SHALL NOT EXCEED 10 FEET.
6. UPON COMPLETION OF THE HYDRODEMOLITION, FIELD CUT AND REMOVE EXISTING BULB ANGLE. THIS WORK SHALL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7097 DISCOVERY BLVD • DUBLIN, OH 43016
614.654.7000 • T • WDTRANSPORTATION.COM

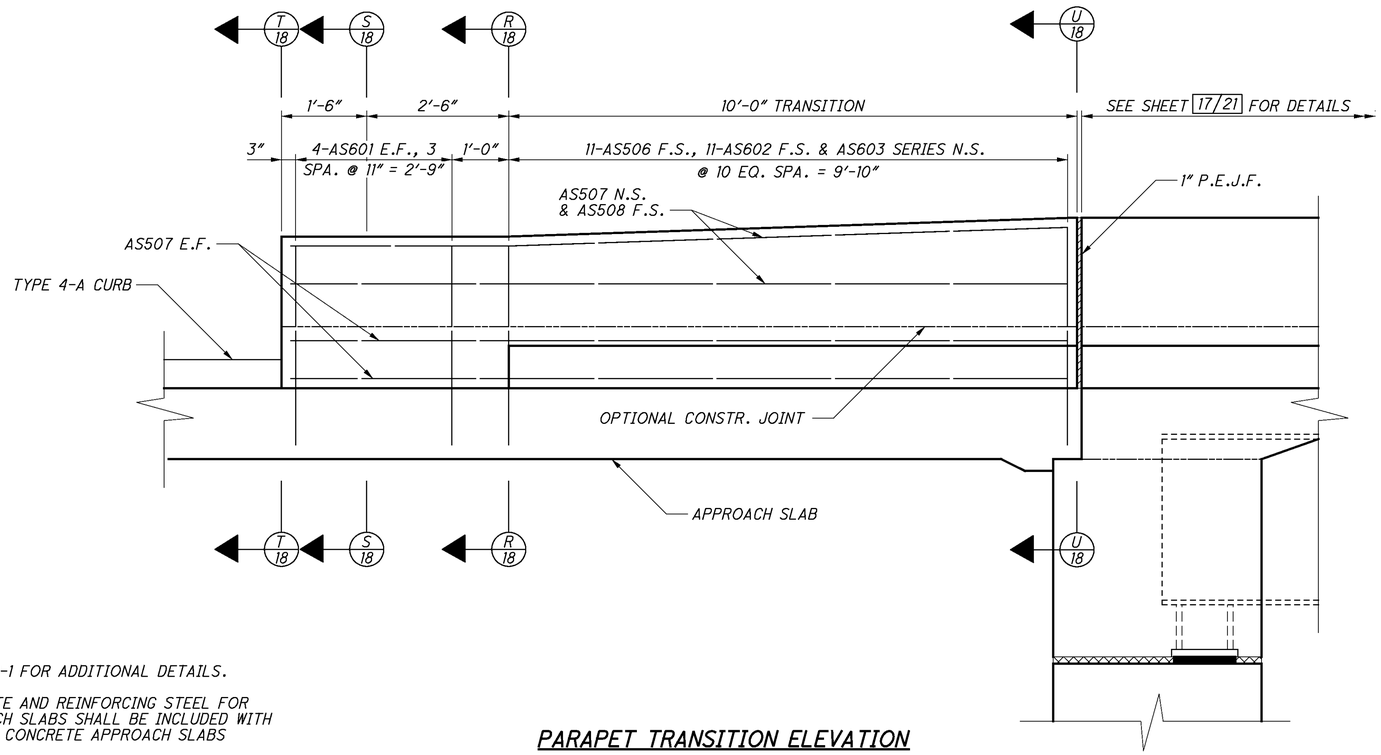
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-26-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

PARAPET DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR.
PID No. 82961

17 / 21

111 / 115



NOTES

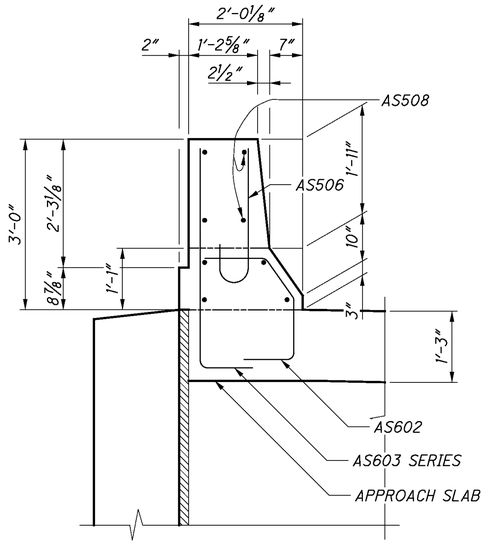
1. REFER TO STD DWG. BR-1 FOR ADDITIONAL DETAILS.
2. PAYMENT FOR CONCRETE AND REINFORCING STEEL FOR PARAPETS ON APPROACH SLABS SHALL BE INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN.

LEGEND

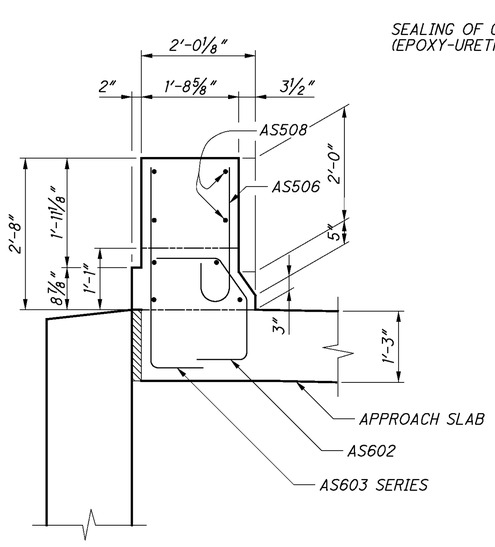
E.F. - EACH FACE
N.S. - NEAR SIDE
F.S. - FAR SIDE

PARAPET TRANSITION ELEVATION

VIEW ALONG BACK FACE OF PARAPET
TYPICAL AT EACH WINGWALL



U 18 SECTION
BARS NOT LABELED ARE AS507



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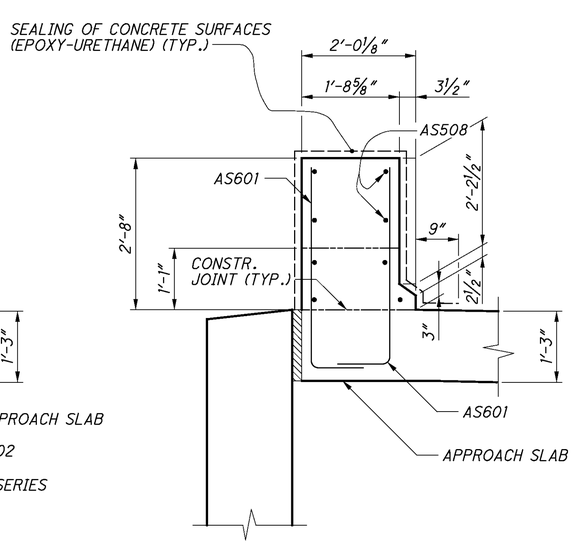

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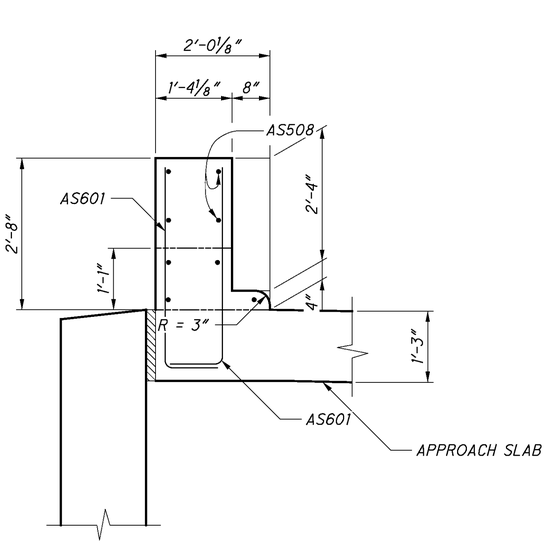


T 18 SECTION
BARS NOT LABELED ARE AS507

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD. DUBLIN, OH 43017
614.526.7000 | WDTRANSPORTATION.COM

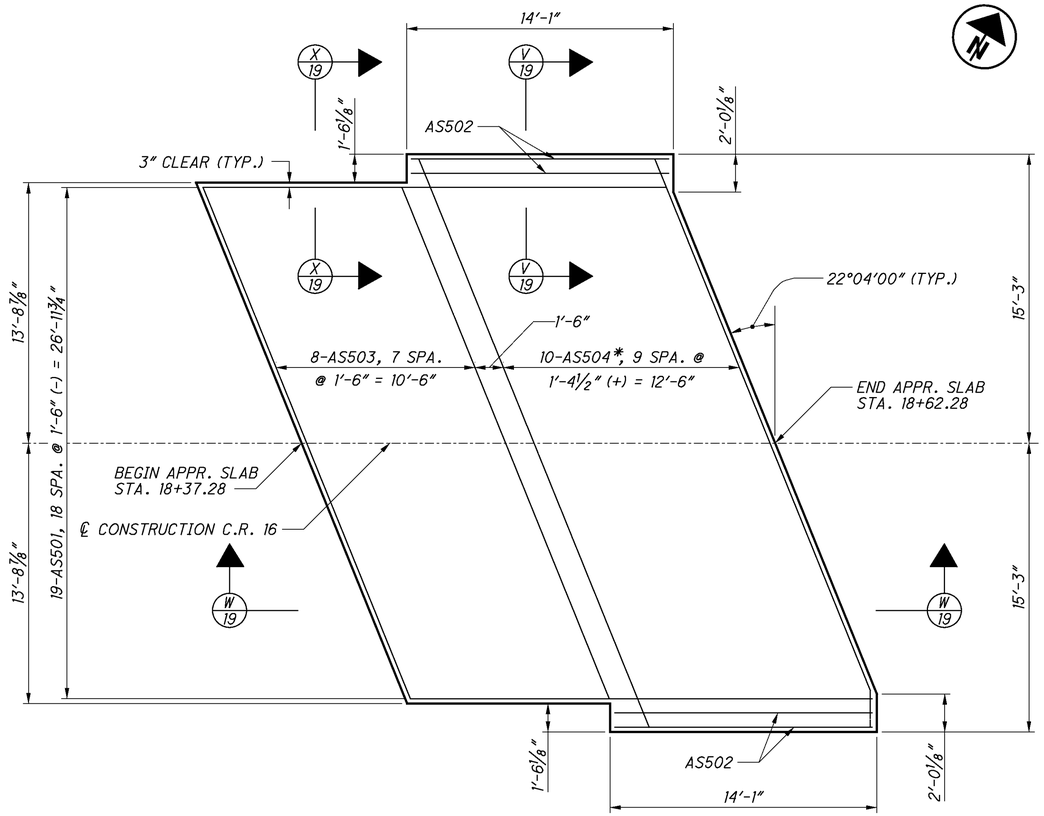
DESIGNED	DRAWN	REVIEWED	DATE
STK	STK	WHM	10-27-10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GDJ		3108163	

PARAPET DETAILS
BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

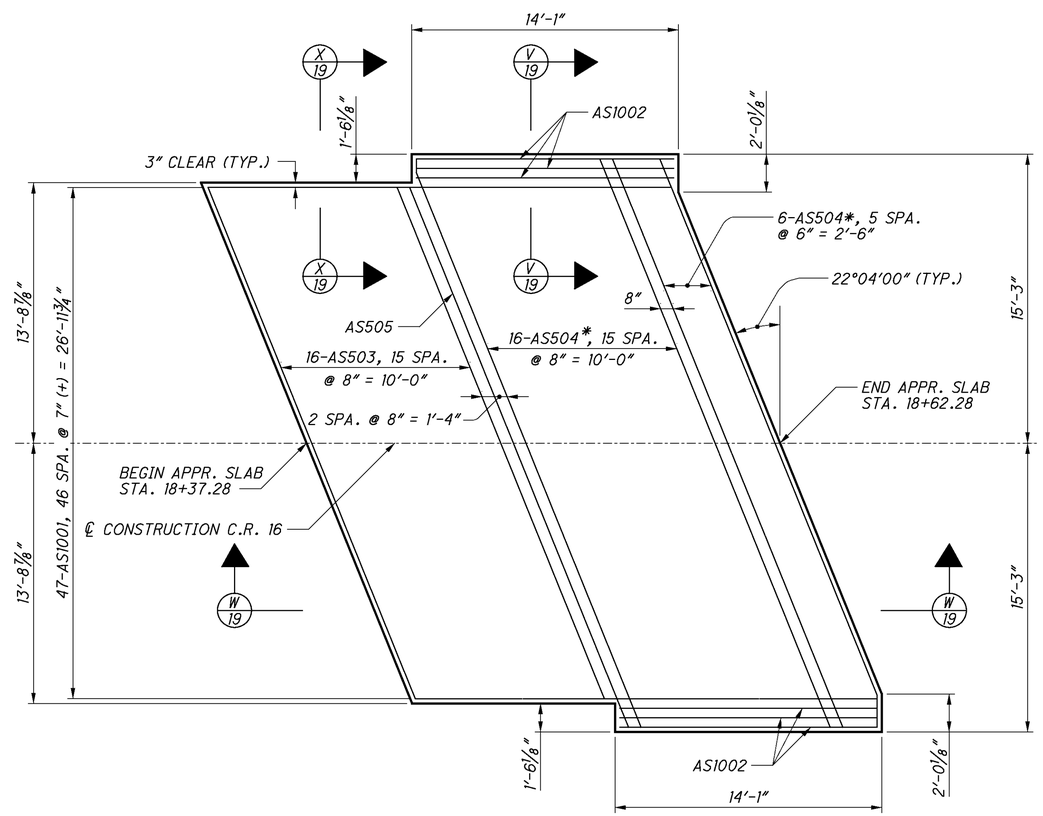
18 / 21

112 / 115



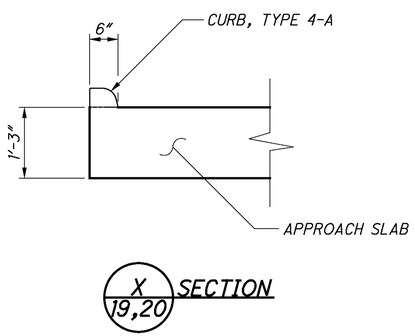
PLAN

TOP REINFORCEMENT SHOWN

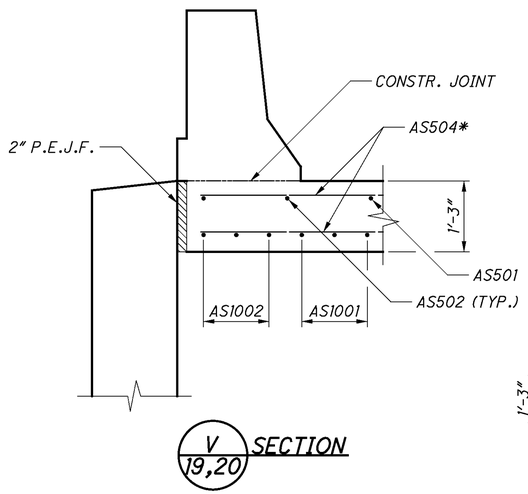


PLAN

BOTTOM REINFORCEMENT SHOWN



X 19,20 SECTION



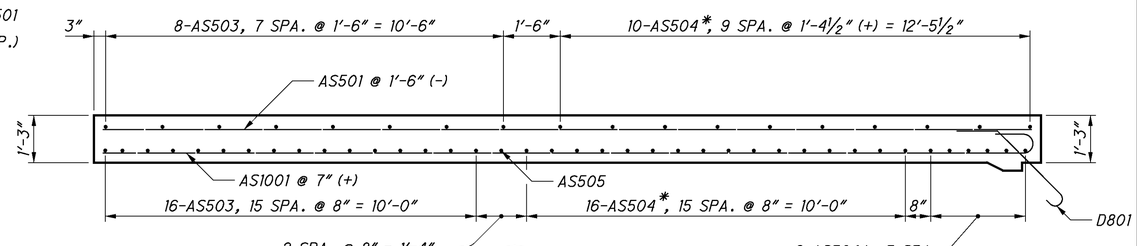
V 19,20 SECTION

NOTES

1. SEE STD. DWG. AS-1-81 FOR ADDITIONAL DETAILS.
2. SEE SHEET 20/21 FOR APPROACH SLAB REINFORCING STEEL LIST.
3. SEE SHEET 21/21 FOR D801 BARS SEE REINFORCING STEEL LIST.

LEGEND

* - FIELD BEND BARS AS NECESSARY



W 19,20 SECTION

DESIGN AGENCY
wd transportation
a WD PARTNERS division
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.634.7000 T • WDTRANSPORTATION.COM

DESIGNED STK | DRAWN STK | REVIEWED WHM | DATE 10-27-10
CHECKED GDJ | REVISED | STRUCTURE FILE NUMBER 3108163

REAR APPROACH SLAB DETAILS

BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

19 / 21

113 / 115

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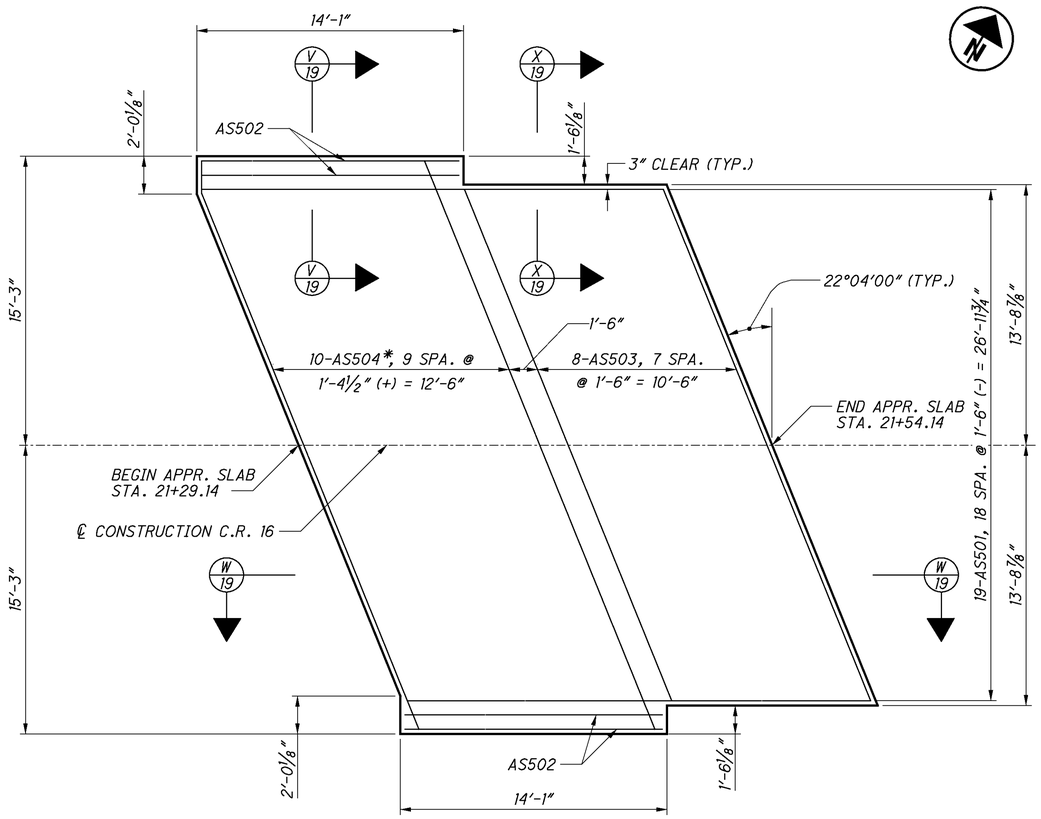
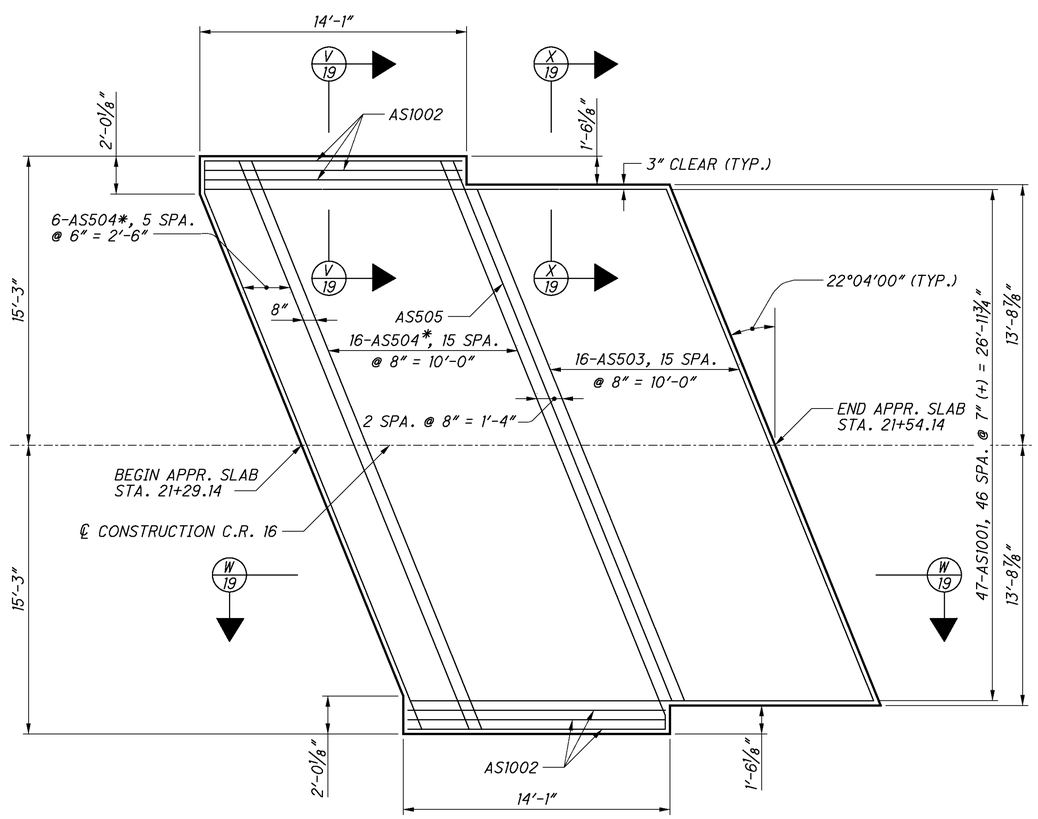


PLAN

TOP REINFORCEMENT SHOWN



PLAN

BOTTOM REINFORCEMENT SHOWN

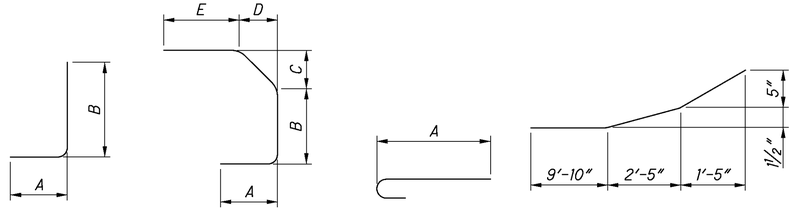
NOTES

1. SEE STD. DWG. AS-1-81 FOR ADDITIONAL DETAILS.
2. PAYMENT FOR REINFORCING STEEL TO BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN.

LEGEND

* - FIELD BEND BARS AS NECESSARY

BENDING DIAGRAM



TYPE-1 TYPE-14 TYPE-16 TYPE-25

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	E	INC
APPROACH SLAB										
AS501	38	24'-6"	972	STR						
AS502	8	13'-7"	114	STR						
AS503	48	29'-1"	1457	STR						
AS504	64	32'-4"	2159	STR						
AS505	2	30'-9"	65	STR						
AS506	44	3'-0"	138	16	2'-5"					
AS507	24	13'-8"	343	STR						
AS508	8	13'-7"	114	25	9'-10"	2'-5"	1'-5"	1 1/2"	5"	
AS601	32	4'-3"	205	1	11"	3'-6"				
AS602	44	3'-5"	226	14	10 1/2"	1'-3"	8 1/2"	6"	9"	
AS603	4 SERIES OF 11	4'-3" TO 4'-7"	292	1	11"	3'-6" TO 3'-10"				1/2" (-)
AS1001	94	25'-11"	10483	16	24'-6"					
AS1002	12	15'-0"	775	16	13'-7"					
SUB-TOTAL			17343							

DESIGN AGENCY
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DESIGNED STK | DRAWN STK | REVIEWED WHM | DATE 10-27-10
CHECKED GDJ | REVISED | STRUCTURE FILE NUMBER 3108163

FORWARD APPROACH SLAB DETAILS

BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS				
	REAR	FORWARD	TOTAL				A	B	C	D	INC
ABUTMENTS											
A501#	20		20	4'-3"	89	1	1'-3"	3'-2"			
A502#	42	26	68	4'-1"	290	1	1'-1"	3'-2"			
A503	1	1	2	3'-11"	9	19	2'-0"	9"	1'-10"		
A504	1	1	2	5'-2"	11	10	9"	1'-10"	1'-4"	2'-0"	
A505	2		2	12'-2"	26	19	5'-3"	6'-5"	2'-9"		
A506	21		21	9'-5"	207	2	4'-3"	1'-2"	4'-3"		
A507	4		4	16'-8"	70	STR					
A508	2		2	16'-3"	34	STR					
A509	2		2	12'-9"	27	STR					
A510#	63	63	126	3'-1"	406	1	1'-0"	2'-3"			
A511	21		21	6'-10"	150	STR					
A512#	21		21	7'-7"	167	STR					
A513	6	8	14	8'-11"	131	STR					
A514	2		2	14'-6"	31	19	6'-6"	7'-4"	3'-5"		
A515	2		2	11'-6"	24	STR					
A516	2		2	14'-3"	30	STR					
A517	6		6	16'-5"	103	STR					
A518	1 SERIES OF 6		1 SERIES OF 6	6'-1" TO 11'-9"	56	2	2'-7" TO 5'-5"	1'-2"	2'-7" TO 5'-5"		1'-2" (-)
A519	8	8	16	10'-1"	169	STR					
A520		1 SERIES OF 6	1 SERIES OF 6	5'-11" TO 10'-5"	52	2	2'-6" TO 4'-9"	1'-2"	2'-6" TO 4'-9"		11" (-)
A521		11	11	9'-3"	107	2	4'-2"	1'-2"	4'-2"		
A522		21	21	7'-0"	154	STR					
A523#		21	21	7'-9"	170	STR					
A524		2	2	13'-3"	28	19	5'-4"	7'-8"	2'-3"		
A525		2	2	12'-0"	26	STR					
A526		2	2	14'-0"	30	STR					
A527		6	6	17'-11"	113	STR					
A528		10	10	8'-11"	93	2	4'-0"	1'-2"	4'-0"		
A529		6	6	15'-11"	100	STR					
A530		2	2	13'-9"	29	19	6'-6"	6'-10"	2'-5"		
A531		2	2	12'-9"	27	STR					
A532#		18	18	4'-4"	82	1	1'-4"	3'-2"			
A533#		18	18	4'-2"	79	1	1'-2"	3'-2"			
A534#	2		2	4'-0"	9	1	1'-1"	3'-1"			
A535	1 SERIES OF 5		1 SERIES OF 5	5'-11" TO 11'-1"	45	2	2'-6" TO 5'-1"	1'-2"	2'-6" TO 5'-1"		1'-3½"
A536		1 SERIES OF 5	1 SERIES OF 5	5'-11" TO 10'-7"	44	2	2'-6" TO 4'-10"	1'-2"	2'-6" TO 4'-10"		1'-2"
A537#		2	2	4'-3"	9	1	1'-4"	3'-1"			
A801	4	4	8	36'-1"	771	STR					
A802	1	1	2	33'-5"	179	STR					
D801	21	21	42	5'-0"	561	18	2'-10"	1'-0"	1'-0"		
				SUB-TOTAL	4738						

LEGEND

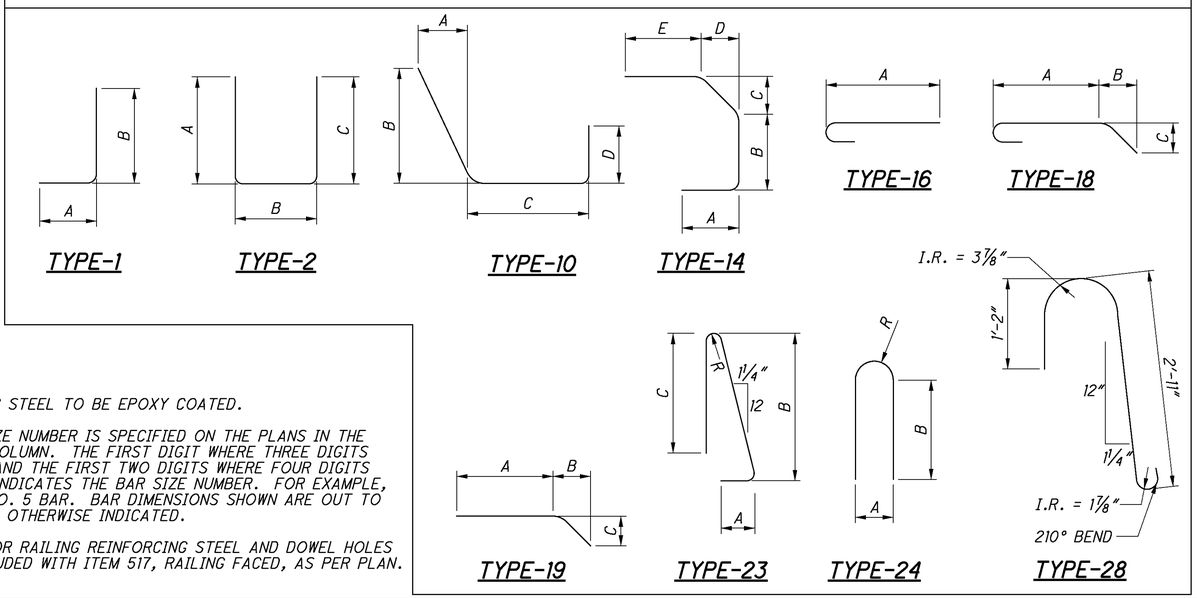
- BAR TO BE DOWELED

MARK	NUMBER				LENGTH	WEIGHT	TYPE	DIMENSIONS			
	PIER 1	PIER 2	PIER 3	TOTAL				A	B	C	R
PIERS											
P501#	56	56	56	168	2'-7"	453	1	1'-11"	10"		
P502	2	2	2	6	26'-0"	163	STR				
P503	27	27	27	81	4'-7"	388	2	1'-1"	2'-8"	1'-1"	
P504	4	4	4	12	9'-0"	113	24	2'-8"	2'-5"		1'-4"
P1001	12	12	12	36	20'-2"	3124	1	1'-1"	19'-5"		
					SUB-TOTAL	4241					

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS		
	TOTAL				A	B	C
RAILING							
R501#	574	5'-0"	2994	28			
R502#	574	2'-2"	1298	19	11"	1'-1"	8"
R503	54	30'-0"	1690	STR			
R504	6	18'-3"	115	STR			
R601	18	30'-0"	812	STR			
R602	2	22'-10"	69	STR			
		SUB-TOTAL	6978				

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
SUPERSTRUCTURE										
S501	40	7'-9"	324	2	2'-5"	3'-2"	2'-5"			
S502	80	8'-11"	745	2	2'-9"	3'-8"	2'-9"			
S503	2	8'-0"	17	2	2'-5"	3'-5"	2'-5"			
S504	4	9'-2"	39	2	2'-9"	3'-11"	2'-9"			
S505	2	8'-6"	18	2	2'-5"	3'-11"	2'-5"			
S506	4	9'-8"	41	2	2'-9"	4'-5"	2'-9"			
S507	2	7'-6"	16	2	2'-5"	2'-11"	2'-5"			
S508	4	8'-8"	37	2	2'-9"	3'-5"	2'-9"			
S509	2	7'-0"	15	2	2'-5"	2'-5"	2'-5"			
S510	4	8'-2"	35	2	2'-9"	2'-11"	2'-9"			
S511	22	6'-2"	142	23	8"	2'-9"	2'-6"			4¼"
S512	6	5'-2"	33	STR						
S513	6	3'-4"	21	STR						
S601	22	3'-1"	102	1	11"	2'-4"				
S602	22	3'-0"	100	14	10½"	10"	8½"	6"	9"	
S801	16	32'-7"	1392	STR						
S802	8	30'-7"	654	STR						
		SUB-TOTAL	3731							

BENDING DIAGRAM



NOTES

1. REINFORCING STEEL TO BE EPOXY COATED.
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
3. PAYMENT FOR RAILING REINFORCING STEEL AND DOWEL HOLES TO BE INCLUDED WITH ITEM 517, RAILING FACED, AS PER PLAN.

DESIGN AGENCY
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REINFORCING STEEL LIST

BRIDGE NO. HAM-74-0495
C.R. 16 (MORGAN ROAD) OVER I.R. 74

HAM-74-3.54/VAR
PID No. 82961

21 / 21

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