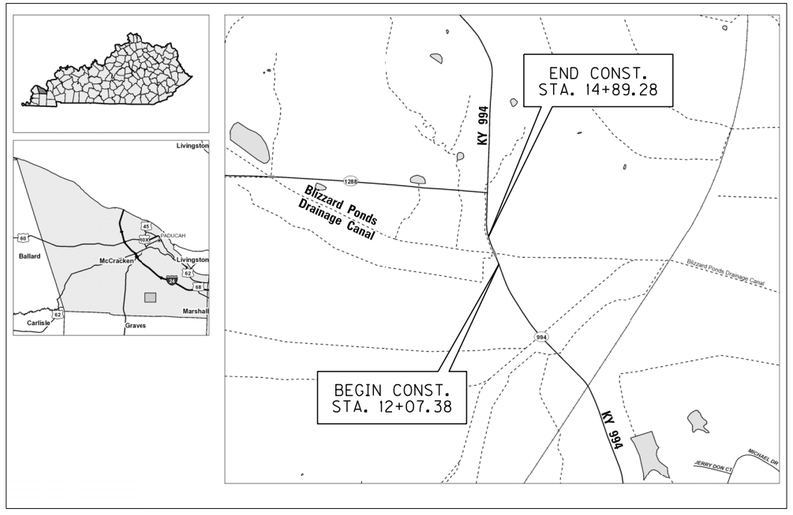
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R1

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT
McCRACKEN COUNTY
OLD MAYFIELD ROAD (KY 994)
BRIDGE OVER BLIZZARD PONDS DRAINAGE CANAL



THIS PROJECT IS OFF THE NH SYSTEM

THIS PROJECT IS A FULLY AND PARTIALLY CONTROLLED ACCESS HIGHWAY. ACCESS SHALL BE PROVIDED ONLY WHERE SPECIFICALLY INDICATED ON PLANS.

INDEX OF SHEETS	
Sheet No.	Description
R1	LAYOUT SHEET
R2	TYP. SECTIONS, GENERAL SUMMARY, COORD. CONTROL, LEGEND
R3	ROADWAY PLAN SHEET
R4	ROADWAY PROFILE SHEET
R5	EROSION CONTROL NOTES
R6	EROSION CONTROL SHEET
X1 - X2	CROSS SECTIONS
S1	TITLE SHEET
S2	GENERAL NOTES
S3	LAYOUT
S4 - S5	SUBSURFACE DATA
S6	FOUNDATION LAYOUT
S7	INTEGRAL END BENT #1
S8	INTEGRAL END BENT #2
S9	BOX BEAM GENERAL NOTES
S10	BOX BEAM CB27 DETAILS
S11	SUPERSTRUCTURE
S12	CONSTRUCTION ELEVATIONS

STANDARD DRAWINGS	
RBI-001-12	Typical Guardrail Installations
RBI-002-07	Typical Guardrail Installations
RBI-004-06	Installation of Guardrail End Treatment Type 1
RBR-001-13	Steel Beam Guardrail ("W" Beam)
RBR-005-11	Guardrail Components
RBR-015-06	Steel Guardrail Posts
RBR-016-05	Timber Guardrail Posts
RBR-020-07	Guardrail End Treatment Type 1
RBR-055-01	Delineators for Guardrail
RDI-040-01	Erosion Control Blanket Slope Installation
RDX-210-03	Temporary Silt Fence
RDX-220-05	Silt Trap Type A
RDX-230-01	Silt Trap Type C
RGX-001-06	Miscellaneous Standards
RGX-200-01	One Point Proctor Family of Curves

ACTIVE SEPIAS	
SEPIA 017	Pavement Striping Details for Two Lane Two Way Roadways

SPECIAL NOTES

Special note for concrete sealing

SPECIAL PROVISIONS

69 Embankment at Bridge End Bent Structures

SPECIFICATIONS

2019 Standard Specifications for Road and Bridge Construction

2020 AASHTO LRFD Bridge Design Specifications

DESIGN CRITERIA

CLASS OF HIGHWAY: RURAL MAJOR COLLECTOR
TYPE OF TERRAIN: ROLLING
DESIGN SPEED: 55 MPH
REQUIRED NPSD:
REQUIRED PSD:
LEVEL OF SERVICE:
ADT PRESENT (2020): 1,233
ADT FUTURE ( ):
DHV:
D %: 56
T %:

GEOGRAPHIC COORDINATES

LATITUDE 36 DEGREES 58 MINUTES 39 SECONDS NORTH
LONGITUDE 88 DEGREES 36 MINUTES 59 SECONDS WEST

DESIGNED

% RESTRICTED SD:
LEVEL OF SERVICE:
MAX. DISTANCE W/O PASSING:

KY 994

LENGTH 216.22 LIN. FT. 0.040 MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES
ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.
NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED
RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.

0' 1000' 2000' 4000'

LAYOUT MAP

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

MCCRACKEN

ITEM NO. 1-40001.00
PROJECT NUMBER:
LETTING DATE:

RECOMMENDED BY: _____ PROJECT MANAGER DATE:

PLAN APPROVED BY: _____ STATE HIGHWAY ENGINEER DATE:

STATE OF KENTUCKY
ERIC BRAD GREGORY
22033
LICENSED
PROFESSIONAL ENGINEER

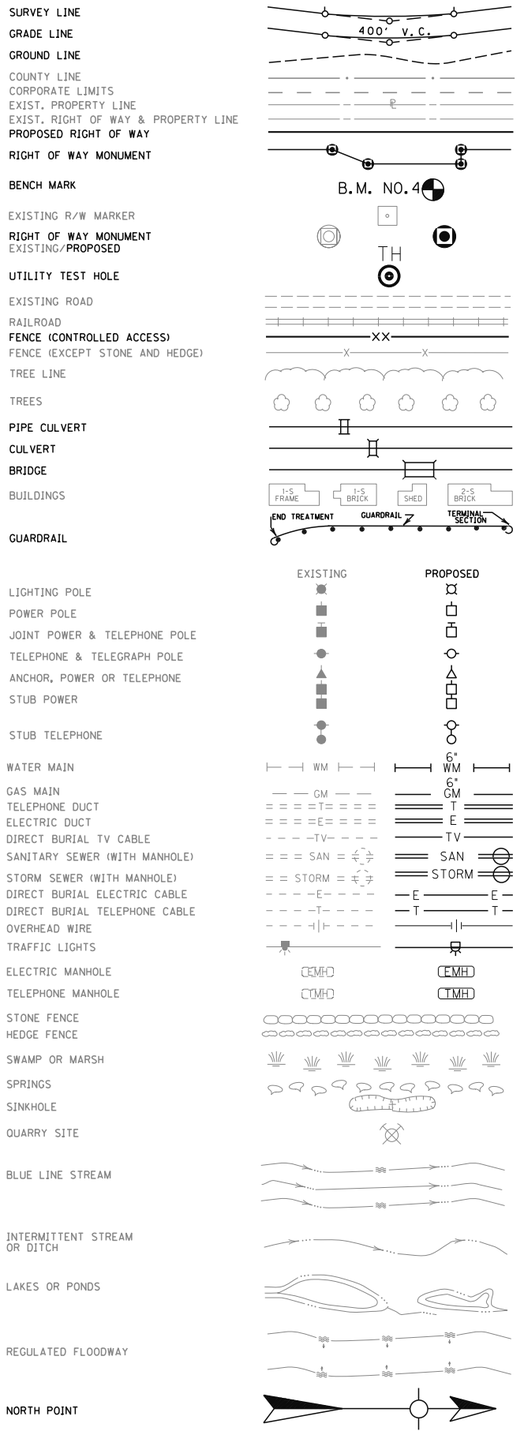
E. Brad Gregory

Digitally signed by E. Brad Gregory
DN: cn=E. Brad Gregory, o=HMB, ou, email=bgregory@hmbpe.com, c=US
Date: 2022.07.08 16:56:20 -04'00'

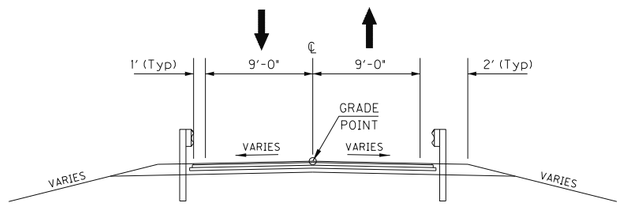
FILE NAME: G:\ENGR\HDI396.02 - KY 994 - MCCRACKEN CO\CAD\DETAILS\ROOT_LAYOUT SHEET.DGN
USER: ejordan
DATE PLOTTED: June 13, 2020
E-SHEET NAME:
MicroStation v8.11.9.459

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R2

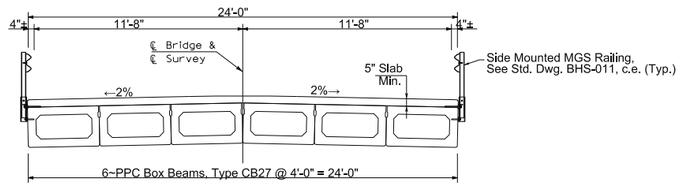
CONVENTIONAL SIGNS



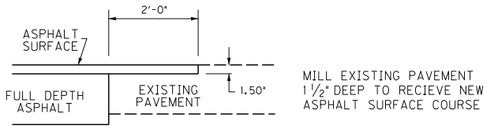
TYPICAL SECTIONS



NORMAL SECTION
KY 994



BRIDGE SECTION
KY 994



EDGE KEY DETAIL

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	PROJECT TOTAL
00001	DGA BASE (1)	TON	25
00301	CL2 ASPH SURF 0.38D PG64-22 (2)	TON	31
02230	EMBANKMENT IN PLACE	CUYD	40
21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	LF	200
02367	GUARDRAIL END TREATMENT TYPE 1	EACH	4
02545	CLEARING AND GRUBBING (Less than 1 acre)	LS	1
02585	EDGE KEY	LF	40
02568	MOBILIZATION	LS	1
02569	DEMOBILIZATION	LS	1
02726	STAKING	LS	1
02731	REMOVE STRUCTURE	LS	1
02701	TEMPORARY SILT FENCE	LF	433
02703	SILT TRAP TYPE "A"	EACH	2
02705	SILT TRAP TYPE "C"	EACH	2
02706	CLEAN SILT TRAP TYPE "A"	EACH	2
02708	CLEAN SILT TRAP TYPE "C"	EACH	2
01987	DELINEATOR FOR GUARDRAIL B/W	EACH	4
06542	PAVE STRIPING-THERMO-6 IN W	LF	433
06543	PAVE STRIPING-THERMO-6 IN Y	LF	433
10030NS	ASPHALT ADJUSTMENT	DOLL	
10020NS	FUEL ADJUSTMENT	DOLL	
05985	SEEDING AND PROTECTION	SQYD	520
05963	INITIAL FERTILIZER	TON	0.1
05964	MAINTENANCE FERTILIZER	TON	0.1

NOTES:

(1) DGA IS TO BE USED AS DIRECTED BY THE ENGINEER FOR FULL DEPTH PAVEMENT.

(2) CL2 ASP SURF 0.38D PG64-22 SHALL BE PLACED AS DIRECTED BY THE ENGINEER AND USED FOR FULL DEPTH PAVING SECTIONS WHERE COMPLETELY REPLACING THE EXISTING PAVEMENT.

Datum Reference and Final Coordinates
All new horizontal GNSS control is based on the Kentucky State Plane Coordinate System (Single Zone), referenced to North American Datum 1983, 2011 adjustment, expressed in U.S. Survey Feet. All vertical control is based on the North American Vertical Datum of 1988 (NAVD88) with GEOID12B (CONUS) applied to model the elevations, also expressed in U.S. Survey Feet.

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION	OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)		
CP 2	CAPPED IRON PIN	3528011.402	4084103.644	316.05	11+01.98	14.43
CP4	CAPPED IRON PIN	3528382.551	4083930.987	350.13	15+09.88	-12.12

CENTERLINE CONTROL POINTS

POINT	State Plane Coordinates		STATION	OFFSET
	NORTHING (Y)	EASTING (X)		
POB	3527910.386	4084124.159	10+00.00	0.00
PC	3527981.163	4084099.132	10+75.07	0.00
PI	3528047.398	4084075.711	11+45.33	
PT	3528112.771	4084049.978	12+15.57	0.00
PC	3528371.486	4083948.14	14+93.60	0.00
PI	3528493.91	4083899.95	16+25.17	
PT	3528625.438	4083903.163	17+53.23	0.00
POE	3528672.195	4083904.305	18+00.00	0.00

SCALE: N.T.S

TYPICAL SECTIONS, GENERAL SUMMARY, COORD. CONTROL, AND LEGEND

GENERAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R2a

PROPOSAL ATTACHMENTS

SPECIAL NOTE 11N FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE
SPECIAL NOTE FOR INLAID PAVEMENT MARKERS
SPECIAL NOTE FOR FOR NON-TRACKING TACK COAT

SPECIAL PROVISION 69 EMBANKMENT AT BRIDGE END BENT STRUCTURES

160 N.G.S. (U.S.G.S.) BENCH MARKS

DO NOT DISTURB N.G.S. (U.S.G.S.) BENCH MARKS IN ANY MANNER UNLESS DIRECTED BY THE ENGINEER.

165 BEFORE YOU DIG

THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTOR MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS, INCLUDING THOSE WHOM DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY COURT CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

429 WINTER CLOSEDOWN

ANY ASPHALT CONCRETE BASE AND/OR SURFACE COURSE USED AS A RIDING SURFACE EXPOSED TO TRAFFIC DURING WINTER CLOSEDOWN PERIODS SHALL CONTAIN NATURAL, CONGLOMERATE, CRUSHED SLAG, CRUSHED GRANITE OR CRUSHED SANDSTONE SAND IN THE PROPORTION OF NO LESS THAN 25% OF THE TOTAL COMBINED COARSE AND FINE AGGREGATE.

447 COMPACTION OF ASPHALT MIXTURES

WILL ACCEPT THE COMPACTION OF ASPHALT MIXTURES FURNISHED FOR DRIVING LANES AND RAMPS AT ONE INCH (25 MM) OR GREATER ON THIS PROJECT BY OPTION A ACCORDING TO SUBSECTIONS 402 AND 403 OF THE CURRENT STANDARD SPECIFICATIONS. USE JOINT CORES AS DESCRIBED IN SUBSECTION 402.03.02 FOR SURFACE MIXTURES ONLY. WILL ACCEPT THE COMPACTION OF ALL OTHER ASPHALT MIXTURES BY OPTION B.

445 EDGE KEY

THIS WORK INCLUDES CUTTING OUT THE EXISTING ASPHALT SURFACE TO A MINIMUM DEPTH AND WIDTH AS DETAILED ELSEWHERE IN THE PLANS SO THAT THE NEW SURFACE MAY HEEL INTO THE EXISTING SURFACE. THE CONTRACT UNIT PRICE BID LINEAR FOOT FOR "EDGE KEY" INCLUDES ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND DISPOSE OF THE REMOVED ASPHALT MATERIAL.

650 STANDARD DRAWINGS

STANDARD DRAWINGS ARE NOT ATTACHED TO THESE PLANS. A STANDARD DRAWING BOOK AND THE HEADWALL SUPPLEMENTAL BOOK MAY BE OBTAINED FROM THE POLICY SUPPORT BRANCH OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES IN FRANKFORT, KY. AT (502) 564-3670

MAINTENANCE OF TRAFFIC

THE EXISTING TRAFFIC CONTROL WILL BE IN PLACE FOR THE DURATION OF THE PROJECT. THE DISTRICT IS IN CHARGE OF MAINTAINING THE TRAFFIC CONTROL.

GUARDRAIL

THE CONTRACTOR SHALL DELIVER EXISTING SALVAGED GUARDRAIL SYSTEM MATERIALS TO THE CENTRAL SIGN SHOP AND RECYCLE CENTER AT 1224 WILKINSON BLVD. IN FRANKFORT, KY. CONTACT SECTION SUPERVISOR AT (502) 564-8187 TO SCHEDULE DELIVERY OF MATERIAL. DELIVER THE MATERIAL BETWEEN THE HOURS OF 8 AM AND 3 PM, MONDAY-FRIDAY.

CONSTRUCTION ENTRANCES

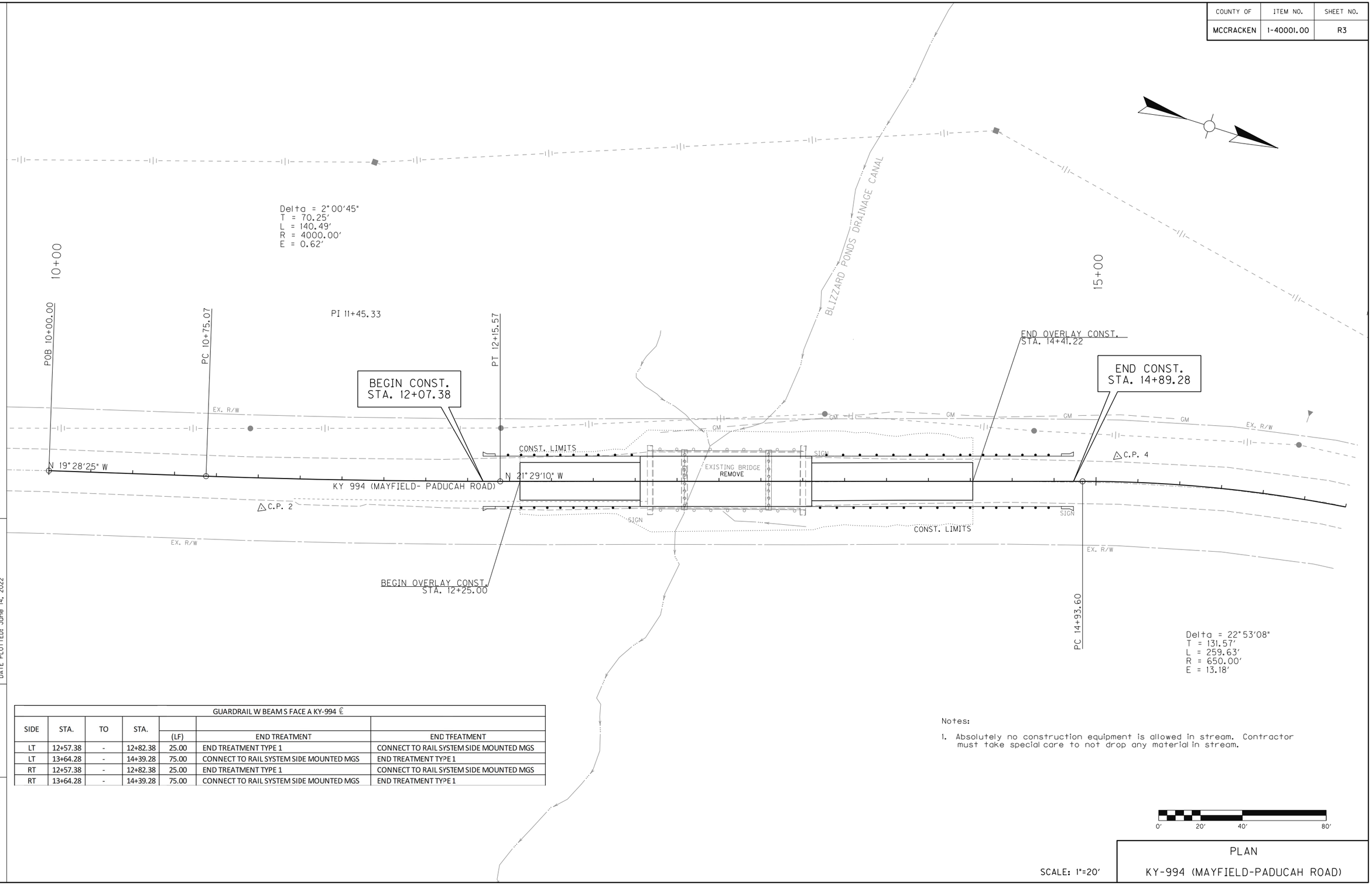
THE CONTRACTOR SHALL CONSTRUCT TEMPORARY CONSTRUCTION VEHICLE ACCESS ENTRANCES INTENDED TO REDUCE OFF- SITE TRACKING / WASHING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. THESE ENTRANCES SHALL BE CONSTRUCTED AT LOCATIONS APPROVED BY THE ENGINEER AND CONSISTING OF A MINIMUM OF 50 FEET IN LENGTH, 20 FEET IN WIDTH, AND 1 FOOT DEPTH OF CRUSHED AGGREGATE NO. 2 AND UNDERLAID WITH GEOTEXTILE FABRIC CLASS 2. QUANTITIES HAVE BEEN INCLUDED FOR SIX TEMPORARY CONSTRUCTION ENTRANCES.

TYPICAL SECTION

DIMENSIONS SHOWN ON THE TYPICAL SECTIONS FOR PAVEMENT WIDTH AND THICKNESS ARE NOMINAL OR TYPICAL DIMENSIONS. THE ACTUAL DIMENSIONS TO BE CONSTRUCTED MAY BE VARIED TO FIT EXISTING CONDITIONS AS DIRECTED OR APPROVED BY THE ENGINEER.

GENERAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R3



GUARDRAIL W BEAM S FACE A KY-994 ℄						
SIDE	STA.	TO	STA.	(LF)	END TREATMENT	END TFEATMENT
LT	12+57.38	-	12+82.38	25.00	END TREATMENT TYPE 1	CONNECT TO RAIL SYSTEM SIDE MOUNTED MGS
LT	13+64.28	-	14+39.28	75.00	CONNECT TO RAIL SYSTEM SIDE MOUNTED MGS	END TREATMENT TYPE 1
RT	12+57.38	-	12+82.38	25.00	END TREATMENT TYPE 1	CONNECT TO RAIL SYSTEM SIDE MOUNTED MGS
RT	13+64.28	-	14+39.28	75.00	CONNECT TO RAIL SYSTEM SIDE MOUNTED MGS	END TREATMENT TYPE 1

Notes:

1. Absolutely no construction equipment is allowed in stream. Contractor must take special care to not drop any material in stream.

0' 20' 40' 80'

SCALE: 1"=20'

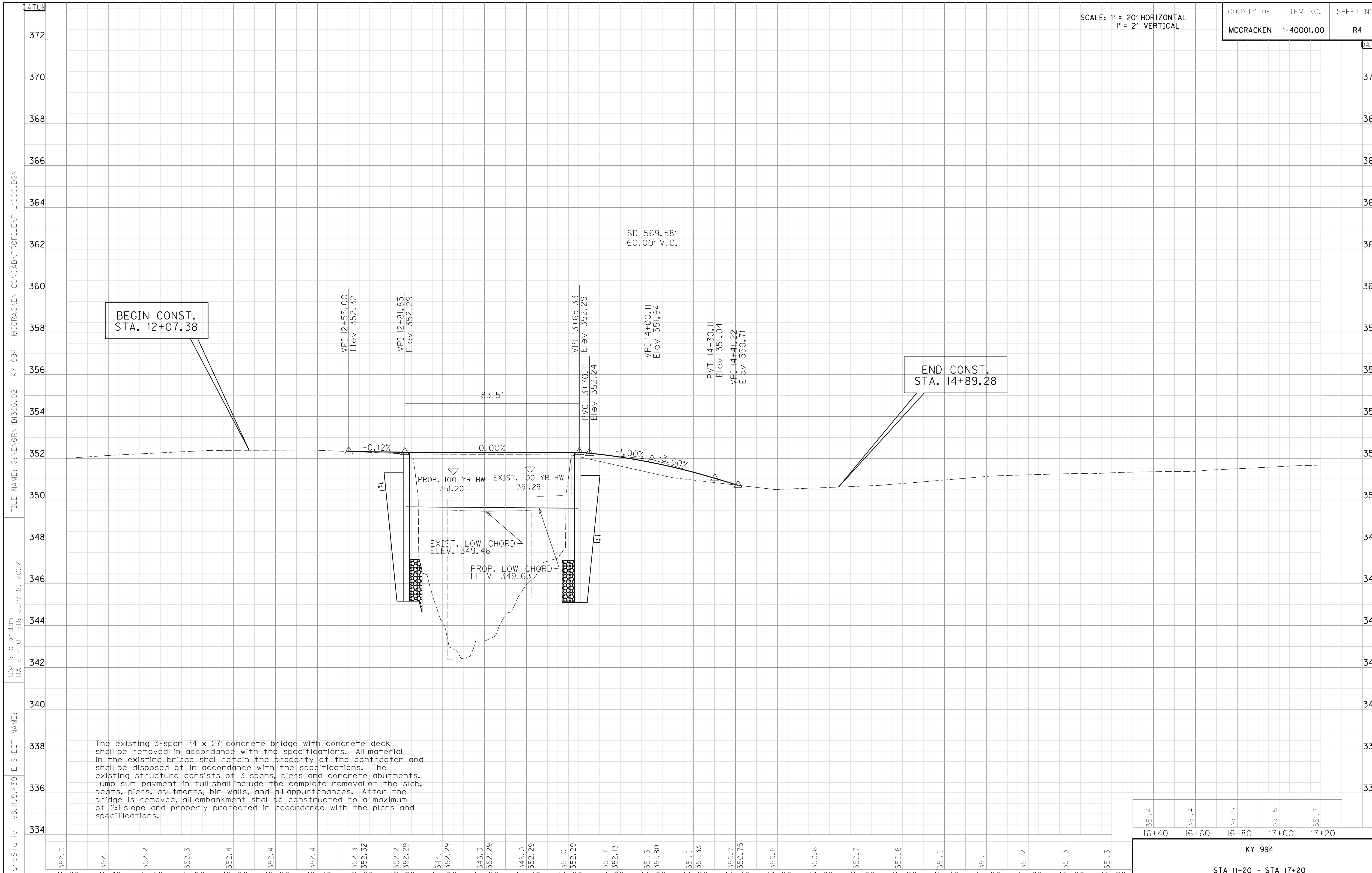
PLAN

KY-994 (MAYFIELD-PADUCAH ROAD)

FILE NAME: G:\ENGR\HD\396.02 - KY 994 - MCCRACKEN CO\CAD\PLAN\R3.DGN
USER: ejordan
DATE PLOTTED: June 14, 2022
E-SHEET NAME:
MicroStation v8.11.9.459

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R4

SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL



The existing 3-span 74' x 27' concrete bridge with concrete deck shall be removed in accordance with the specifications. All material in the existing bridge shall remain the property of the contractor and shall be disposed of in accordance with the specifications. The existing structure consists of 3 spans, piers and concrete abutments. Lump sum payment in full shall include the complete removal of the slab, beams, piers, abutments, bin walls, and all appurtenances. After the bridge is removed, all embankment shall be constructed to a maximum of 2:1 slope and properly protected in accordance with the plans and specifications.

KY 994

STA 11+20 - STA 17+20

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R5

EROSION CONTROL NOTES

EROSION CONTROL

EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE KENTUCKY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTION 212 CURRENT EDITION.

WATER POLLUTION CONTROL SHALL BE IN ACCORDANCE WITH SECTION 213 CURRENT EDITION AND THE K.P.D.E.S.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAMING A SPECIFIC INDIVIDUAL TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON THE SITE. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS FROM ENTERING WATERS OF THE STATE/U.S.

TO ENSURE EROSION CONTROL STRUCTURES WORK PROPERLY, IT IS IMPERATIVE THAT THE SEDIMENT BE REMOVED. THEREFORE, "INSPECTION" AND "MAINTENANCE" OF STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. PAYMENT FOR INSPECTION AND MAINTENANCE OF EROSION CONTROL STRUCTURES SHALL BE INCIDENTAL TO THE STRUCTURE.

CLEARING AND GRUBBING SHALL NOT BE INITIATED MORE THAN TWENTY (20) CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS TEMPORARILY SEEDED AND MULCHED.

CLEARING, GRUBBING AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED CONCURRENT WITH CLEARING OPERATIONS, AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EROSION AND SEDIMENTATION CONTROL MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. STRAW BALES AND/OR SILT FENCE MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

IN-STREAM SEDIMENTATION CONTROL DEVICES ARE NOT APPROVED AS PRIMARY TREATMENT DEVICES. THEY MAY BE USED ONLY AS BACKUP OR FAIL-SAFE PROTECTION. SEPARATE EROSION AND SEDIMENTATION CONTROLS AND SEDIMENT TREATMENT DEVICES MUST BE UTILIZED.

REMOVAL OF THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES AND INSTALLATION OF PERMANENT EROSION CONTROL MEASURES SHALL BE INITIATED WITHIN FIFTEEN (15) CALENDAR DAYS AFTER FINAL GRADING UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST ONCE PER WEEK. UPON CONCLUSION OF THE INSPECTIONS, EROSION AND SEDIMENT CONTROL MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN TWENTY-FOUR (24) HOURS AFTER THE CONDITION IS IDENTIFIED.

ALL DISTURBED AREAS SHALL BE PROMPTLY STABILIZED AGAINST EROSION. SILTATION MEASURES SHALL BE IMPLEMENTED PROMPTLY TO REDUCE SEDIMENT IN RUN-OFF FROM CONSTRUCTION INTO ANY WETLANDS, BY THE USE OF TEMPORARY SILT FENCE AND TEMPORARY STRAW BALES.

THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SPECIFIED IN THE ARAP AND/OR SECTION 404 PERMIT(S). IF ANY ADDITIONAL PERMITS ARE REQUIRED DUE TO THE CONTRACTOR'S METHOD OF OPERATION, THE CONTRACTOR SHALL FIRST RECEIVE APPROVAL FROM THE APPROPRIATE AGENCY HAVING JURISDICTION AND THEN BE RESPONSIBLE FOR OBTAINING THE PERMIT.

OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

ONLY CLEAN ROCK MAY BE PLACED DIRECTLY INTO WATERS OF THE STATE/U.S. AS INDICATED ON THE PLANS AND PERMITS. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER FILL MATERIALS TO BE DISCHARGED BELOW ORDINARY HIGHWATER MUST BE FREE OF FINES, SEDIMENT, SOIL, POLLUTANTS, CONTAMINANTS, TOXIC MATERIALS, ASPHALT, TRASH AND/OR OTHER WASTE MATERIALS.

EXCAVATION AND FILL ACTIVITIES SHALL BE SEPARATED FROM FLOWING WATERS. ALL SURFACE WATER FLOWING TOWARD THE EXCAVATION OR FILL WORK SHALL BE DIVERTED THROUGH COFFERDAMS, BERMS, OR TEMPORARY CHANNELS. TEMPORARY DIVERSION CHANNELS MUST BE PROTECTED BY NON-ERODIBLE MATERIAL AND LINED TO THE EXPECTED HIGH WATER LEVEL. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS.

NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATERBODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.

THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES; INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE UTILIZED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

BORROW AND WASTE DISPOSAL AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S.

HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EROSION AND SEDIMENT CONTROL PLANS.

WETLAND AREAS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND/OR THE PERMIT OR PERMITS ISSUED FOR THE PROJECT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE APPROPRIATE ENVIRONMENTAL PLANNING AND PERMITS DIVISION SHALL ALSO BE NOTIFIED TO DETERMINE WHETHER PERMIT OR PLAN REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.

SEDIMENT TRAPS SHALL BE LOCATED WITHIN THE RIGHT-OF-WAY AND/OR CONSTRUCTION LIMITS BUT OUTSIDE OF THE SLOPE STAKES.

REMOVE SEDIMENT FROM EROSION CONTROL DEVICES WHENEVER THEY BECOME ONE-HALF FULL. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO INSURE THAT STRUCTURAL COMPONENTS OF EROSION CONTROL STRUCTURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.

SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN RUN-OFF.

UPON COMPLETE REMOVAL OF SEDIMENT TRAPS, SPECIAL DITCHES, ETC. THE AREA WHERE THEY WERE CONSTRUCTED IS TO BE TOPSOILED, SEEDED AND MULCHED.

STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY FOLLOWING AMOUNTS:

- UP GRADIENT AREAS NOT DISTURBED (ACRES).
- UP GRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH (ACRES).
- THE USE OF TEMPORARY MULCH IS ENCOURAGED.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES). AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

IF A SILT BASIN IS NOT USED THEN ONE SILT TRAP TYPE A, ALTERNATE NUMBER 2 OR SILT TRAP TYPE B HALL BE PLACED AT THE MOST REMOTE DOWNSTREAM COLLECTION POINT PRIOR TO DISCHARGING INTO A BLUE LINE STREAM OR ONTO AN ADJACENT PROPERTY OWNER. WHERE OVERLAND FLOW EXIST, A SILT FENCE OR OTHER FILTER DEVICE MAY BE USED OR THE OVERLAND FLOW MAY BE DIVERTED TO ONE OF THE FOREMENTIONED SILT BASIN OR TRAPS.

THE EROSION CONTROL PLANS DOE NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRACTOR AND RESIDENT ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 213.03.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE OCTOBER, 2004 LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES WHENEVER THEY BECOME ONE-HALF FULL AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE RESIDENT ENGINEER.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE RESIDENT ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

EROSION CONTROL NOTES

KY-994 (MAYFIELD-PADUCAH ROAD)

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	R6

DISTURBED DRAINAGE AREAS				
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)	OUTFALL LATITUDE	OUTFALL LONGITUDE
DDA 1	0.020	71.94		
DDA 2	0.041	147.66	36.97746	-88.6166
DDA 3	0.022	79.79		
DDA 4	0.038	136.97	36.97752	-88.6164

Delta = 2°00'45"
T = 70.25'
L = 140.49'
R = 4000.00'
E = 0.62'

10+00

POB 10+00.00

PC 10+75.07

PI 11+45.33

PT 12+15.57

15+00

BLIZZARD PONDS DRAINAGE CANAL

END CONST.
STA. 15+50.00

POINT DISCHARGE

CONSI. LIMITS

DDA 1

DDA 2

DDA 3

DDA 4

CONST. LIMITS

EXISTING BRIDGE
REMOVE

N 19°28'25" W

N 21°29'10" W

KY 994 (MAYFIELD- PADUCAH ROAD)

C.P. 2

C.P. 4

BEGIN CONST.
STA. 11+60.00

PC 14+93.60

Delta = 22°53'08"
T = 131.57'
L = 259.63'
R = 650.00'
E = 13.18'

EX. R/W

GM

SIGN

350

EROSION CONTROL LEGEND	
DISTURBED DRAINAGE AREA	-·-·-·-·-

0' 20' 40' 80'

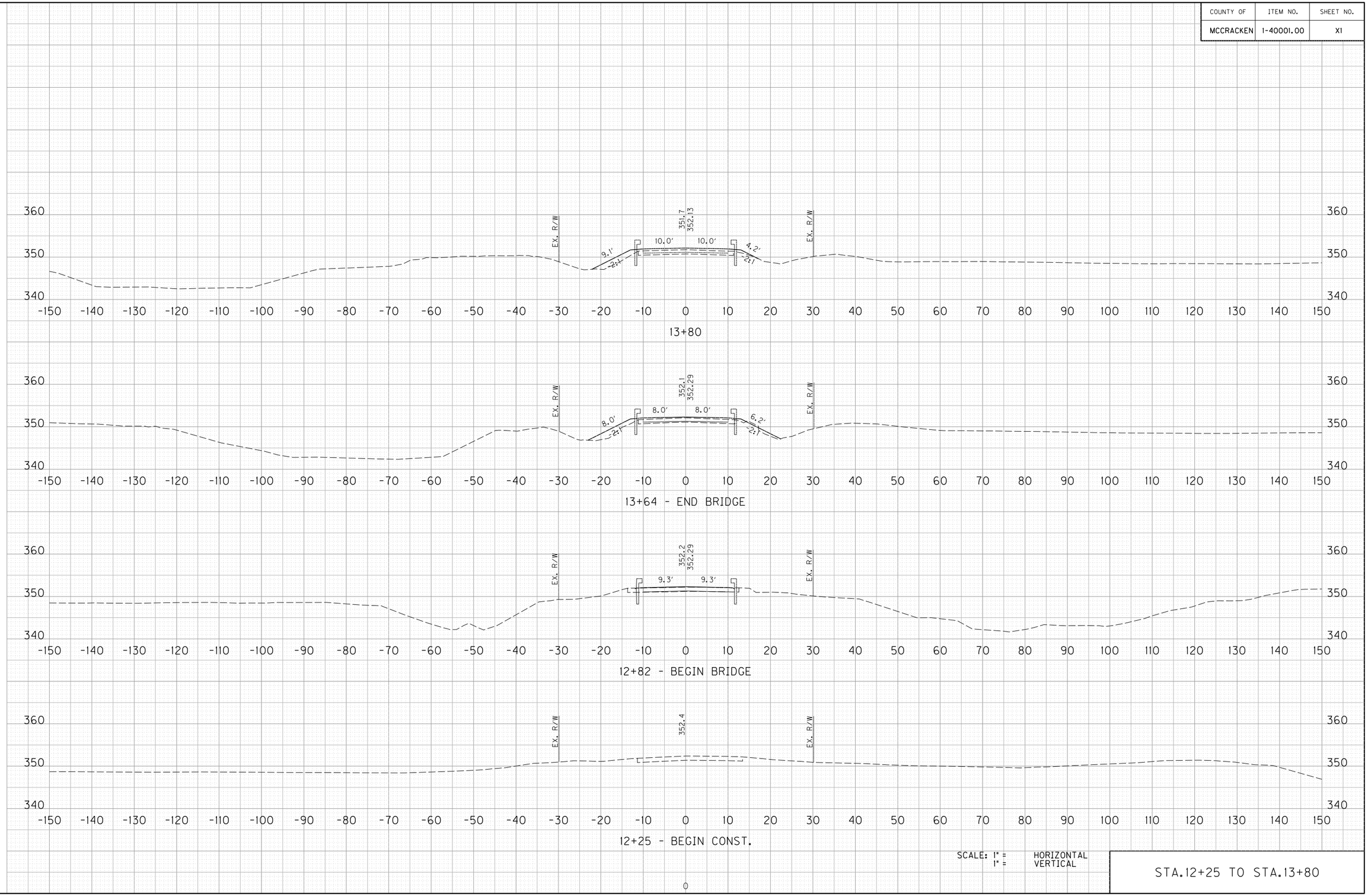
SCALE: 1"=20'

EROSION CONTROL PLAN

KY-994 (MAYFIELD-PADUCAH ROAD)

FILE NAME: G:\ENGRVHD\396.02 - KY 994 - MCCRACKEN CO\CADD\PLANS\EROSION CONTROL\EC_01.DGN
USER: ejordan
DATE PLOTTED: June 14, 2022
E-SHEET NAME:
MicroStation v8.11.9.459

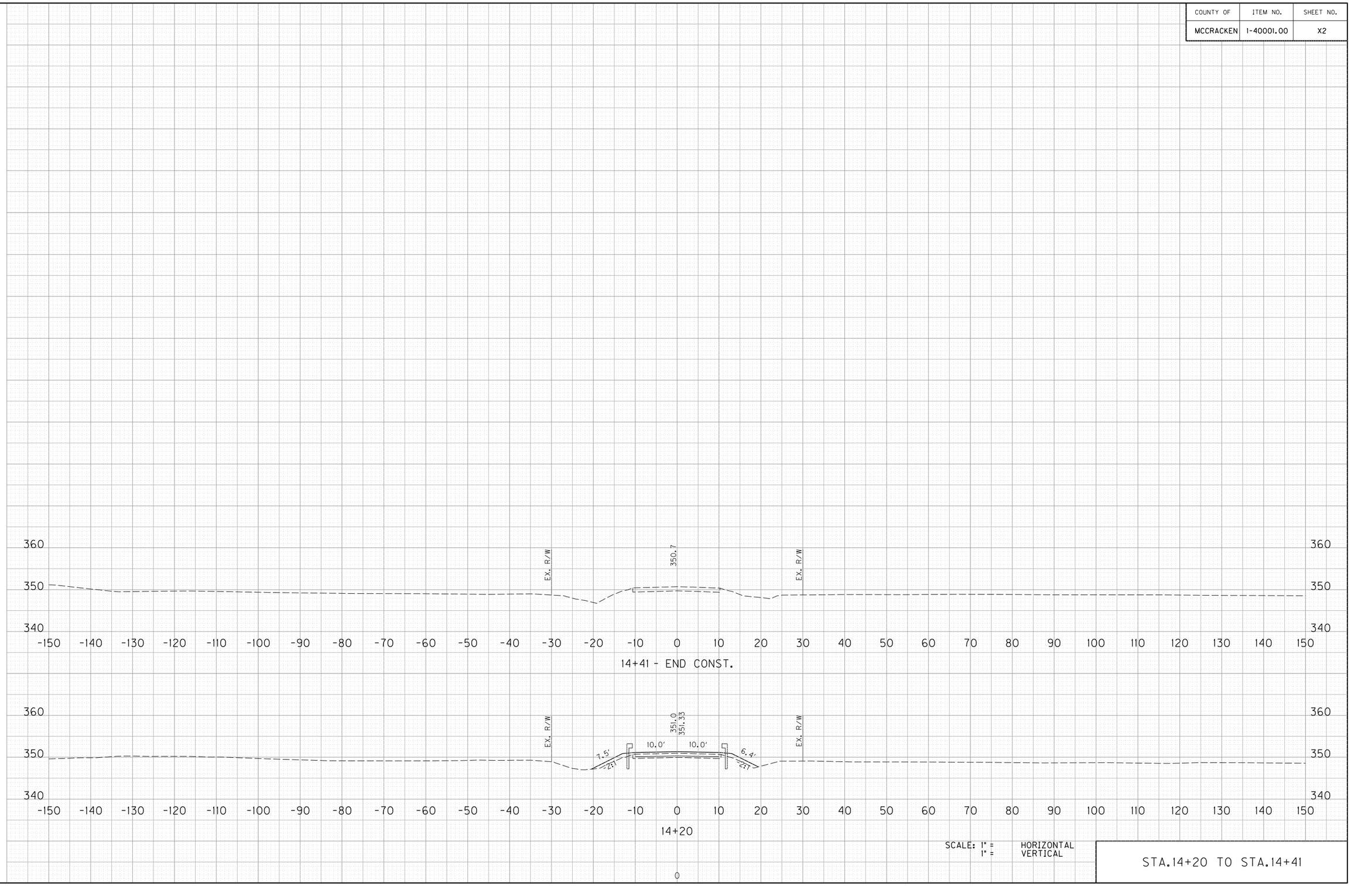
COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	X1



SCALE: 1" = HORIZONTAL
1" = VERTICAL

STA.12+25 TO STA.13+80

COUNTY OF	ITEM NO.	SHEET NO.
MCCRACKEN	1-40001.00	X2



SCALE: 1" =
1" =
HORIZONTAL
VERTICAL

STA.14+20 TO STA.14+41

MicroStation v8.11.9.919
E-SHEET NAME:
USER: tbarksdale
DATE PLOTTED: July 8, 2022
FILE NAME: G:\ENGR\HD\396.02 - KY 994 - MCCRACKEN CO\CAD\XSEC\XS.DGN

LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

McCRACKEN COUNTY
OLD MAYFIELD ROAD
KY 994 OVER BLIZZARD PONDS DRAINAGE CANAL
STA. 13+23.58

ESTIMATE OF QUANTITIES

BID ITEM CODE		08100	08104	08151	08019	02231	08046	08033	03299	08003	25017ED	23378EC	08664
BID ITEM		Concrete Class "A"	Concrete Class "AA"	Steel Reinforcement, Epoxy Coated	Cyclopean Stone Rip Rap	Structure Granular Backfill	Piles - Steel HP 12 x 53	Test Piles	Armored Edge for Concrete	Foundation Preparation	Rail System Side Mounted MGS	Concrete Sealing	PPC Box Beam CB27-48
UNIT		C.Y.	C.Y.	LBS.	Tons	C.Y.	L.F.	L.F.	L.F.	L.S.	L.F.	S.F.	L.F.
Substructure	End Bent #1	17.5	4.6	1924	70	84	384	106				205	
	End Bent #2	17.5	4.6	1924	70	84	384	106				205	
Superstructure			35.0	4224					48		155	2083	501
BRIDGE TOTALS		35.0	44.2	8072	140	168	768	212	48	1	155	2493	501

INDEX OF SHEETS

SPECIAL NOTES

Special note for concrete sealing

SPECIAL PROVISIONS

69 Embankment at Bridge End Bent Structures

STANDARD DRAWINGS

BBP-003-02 Elastomeric Bearing Pads for Box Beams
BDP-001-06 Replaced by sheet S9
BDP-002-03 Box Beam Bearing Details
BDP-003-03 Box Beam Miscellaneous Details
BDP-004-04 Box Beam Tension Rod Details
BDP-009-04 Replaced by sheet S10
BGX-006-10 Stencils for Structures
BGX-012-02 Geotechnical Legend
BGX-022 Joint Waterproofing
BJE-001-14 Neoprene Expansion Dams and Armored Edges
BHS-011 Railing System Side Mounted MGS Details
BPS-003-09 HP12x53 Steel Pile

SPECIFICATIONS

2019 Standard Specifications for Road and Bridge Construction.

2020 AASHTO LRFD Bridge Design Specifications

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of Structural Design

DATE: June 2022	CHECKED BY
DESIGNED BY: J. Van Zee	E. Kilgore
DETAILED BY: E. Downey	J. Van Zee

TITLE SHEET

CROSSING
Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO.	DRAWING NUMBER
	S1	28511

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

GENERAL NOTES

SPECIFICATIONS: All references to the Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction with current Supplemental Specifications. All references to the AASHTO Specifications are to the current edition of the AASHTO LRFD Bridge Design Specs, with interims.

DESIGN LOAD: This bridge is designed for a KYHL-93 live load. The KYHL-93 live load is arrived at by increasing the standard HL-93 truck and lane loads as specified in the AASHTO Specifications by 25%.

FUTURE WEARING SURFACE: This Structure is designed for a 15 PSF future wearing surface load.

DESIGN STRESSES:
Concrete Class "A" ~ f'c = 3500 psi
Concrete Class "AA" ~ f'c = 4000 psi
Steel Reinforcement ~ Fy = 60,000 psi
Structural Steel Yield Strength ~Fy = 50,000 psi

DESIGN METHOD: All reinforced concrete members are designed by the load and resistance factor method as specified in the current AASHTO Specifications.

REINFORCEMENT: Dimensions shown from the face of concrete to bars are to center of bars unless otherwise shown. Spacing of bars is from center to center of bars. Clear distance to face of concrete is 2", unless otherwise noted. Any reinforcing bars designated by suffix (e) in the plans shall be epoxy coated in accordance with section 811.10 of the Standard Specifications. Any reinforcing bars designated by suffix (s) in a bill of reinforcement shall be considered a stirrup for purposes of bend diameters.

BEVELED EDGES: Bevel all exposed edges ¾", unless otherwise noted.

COMPLETION OF THE STRUCTURE: The Contractor is required to complete the structure in accordance with the plans and specifications. Material, labor or construction operations, not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include cofferdams, shoring, excavations, backfilling, removal of all or parts of existing structures, phase construction, incidental materials, labor or anything else required to complete the structure.

SHOP DRAWINGS: Submit shop drawings that are required by the plans and specifications directly to the Division of Structural Design. If any changes in the design plans are proposed by a fabricator or supplier, submit those changes to the Department through the Contractor.

FOUNDATION DATA: See Foundation Layout Sheet.

DIMENSIONS: Dimensions are for a normal temperature of 60 degrees Fahrenheit. Layout dimensions are horizontal dimensions.

SUPERSTRUCTURE SLAB: Ensure the entire superstructure slab is poured continuously, out to out, before allowing any concrete to set.

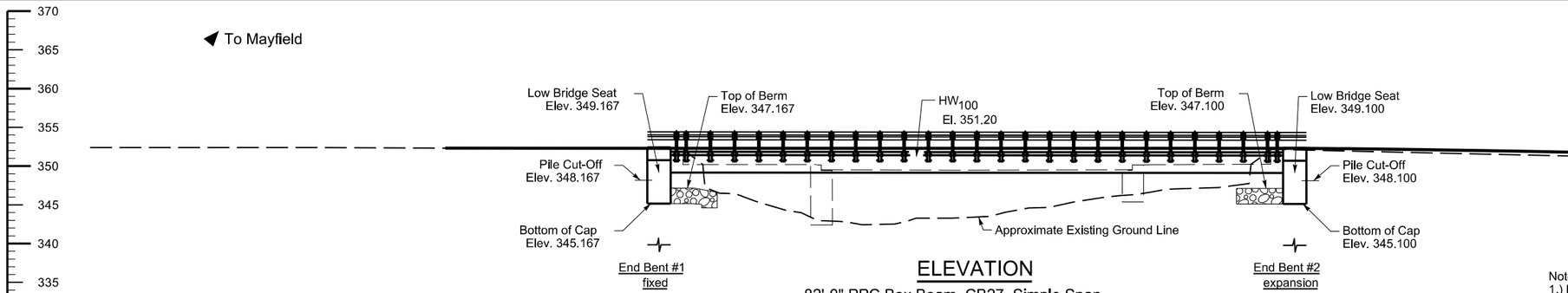
SLOPE PROTECTION: Use dry cyclopean stone slope protection in accordance with the plans and Specifications. Geotextile Fabric is to be incidental to this item.

MASONRY COATING: Contrary to the Specifications, do not apply Masonry Coating. Apply Concrete Sealing in place of Masonry Coating as noted in CONCRETE SEALER note.

CONCRETE SEALER: All areas detailed in the specifications as requiring masonry coating shall be sealed in accordance with the special note for concrete sealing. The superstructure deck, barriers, and overhangs shall also be sealed as shown herein these plans. Concrete surfaces (except the deck) shall receive the ordinary surface finish as described in section 601.03.18(A) prior to being sealed.

The following abbreviations may have been used in the preparation of these plans:

bet.	Between	Tan	Tangent
b. f.	Back Face	Thru	Through
BOF	Bottom of Footing	TOF	Top of Footing
BOS	Bottom of Slab	TOS	Top of Slab
bot.	Bottom	Tot.	Total
Brg.	Bearing	Typ.	Typical
C to C	Center to Center	Vert.	Vertical
c. e.	Current Edition	W.P.	Working Point
C.Y.	Cubic Yard	Yd.	Yard
Chd.	Chord		
CL	Center Line		
Clr.	Clear		
Conc.	Concrete		
Cu.	Cubic		
Dwg.	Drawing		
e. f.	Each Face		
El.	Elevation		
eq.	Equal		
Est.	Estimate		
Ext.	Exterior		
F to F	Face to Face		
f. f.	Front Face		
f. s.	Far Side		
fr.	Front		
ft.	Feet		
I.D.	Inside Diameter		
in.	Inch		
Int.	Interior		
L	Left		
LBS	Low Bridge Seat		
LBS.	Pounds		
M	Meter		
MPH	Miles per Hour		
n. s.	Near Side		
O.D.	Outside Diameter		
Opp.	Opposite		
PC	Point of Curve		
Perp.	Perpendicular		
PI	Point of Intersection		
PPC	Precast Prestressed Concrete		
PPCDU	Precast Prestressed Concrete Deck Unit		
PSI	Pounds per Square Inch		
PT	Point of Tangent		
R	Radius		
R	Right		
RCBC	Reinforced Concrete Box Culvert		
RCDG	Reinforced Concrete Deck Girder		
Req'd.	Required		
RR	Railroad		
Shld	Shoulder		
spa.	Spaces		
Sta.	Station		
Std.	Standard		
Str.	Straight		



ELEVATION

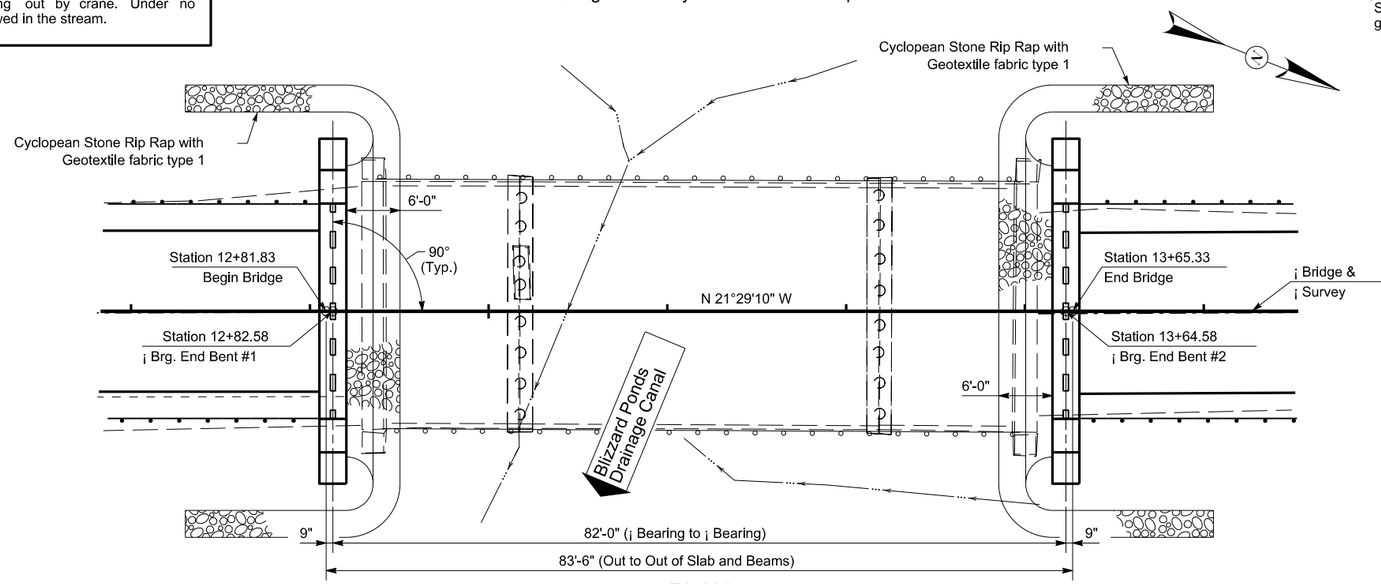
82'-0" PPC Box Beam, CB27, Simple Span
KYHL-93 Live Load ~ 27'-4" Shoulder Width @ Bridge
0° Skew ~ 23'-4" Bridge Roadway Width ~ 2:1 Fill Slopes

EXISTING SUBSTRUCTURES: Remove existing substructures by cutting piles off with chainsaw and lifting out by crane. Under no circumstances is construction equipment allowed in the stream. All costs incidental to Remove Structure.

Notes:
1.) Bridge guardrail is to be connected to approach guardrail to form a continuous unit. For details see Railing System Side Mounted MGS Details and Roadway Plans.
2.) For end bent back fill and method of construction see Special Provision 69, C.E. Include the cost of any required geotextile fabric in the bid for Structure Granular Backfill.

	500-Year
Contraction Scour	4.7 ft
Abutment Scour	1.3 ft
Total Scour	6.0 ft

NOTE: Scour is mitigated through riprap placement. Piles are not designed for any unbraced length. These numbers apply to both End Bent #1 and End Bent #2.



PLAN

~Superstructure not shown~

END OF BEAM DETAIL

(Measured along ℄ Beam)

TYPICAL SECTION

TOE OF SLOPE DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of Structural Design

DATE: June 2022	CHECKED BY
DESIGNED BY: J. Van Zee	E. Kilgore
DETAILED BY: E. Downey	J. Van Zee

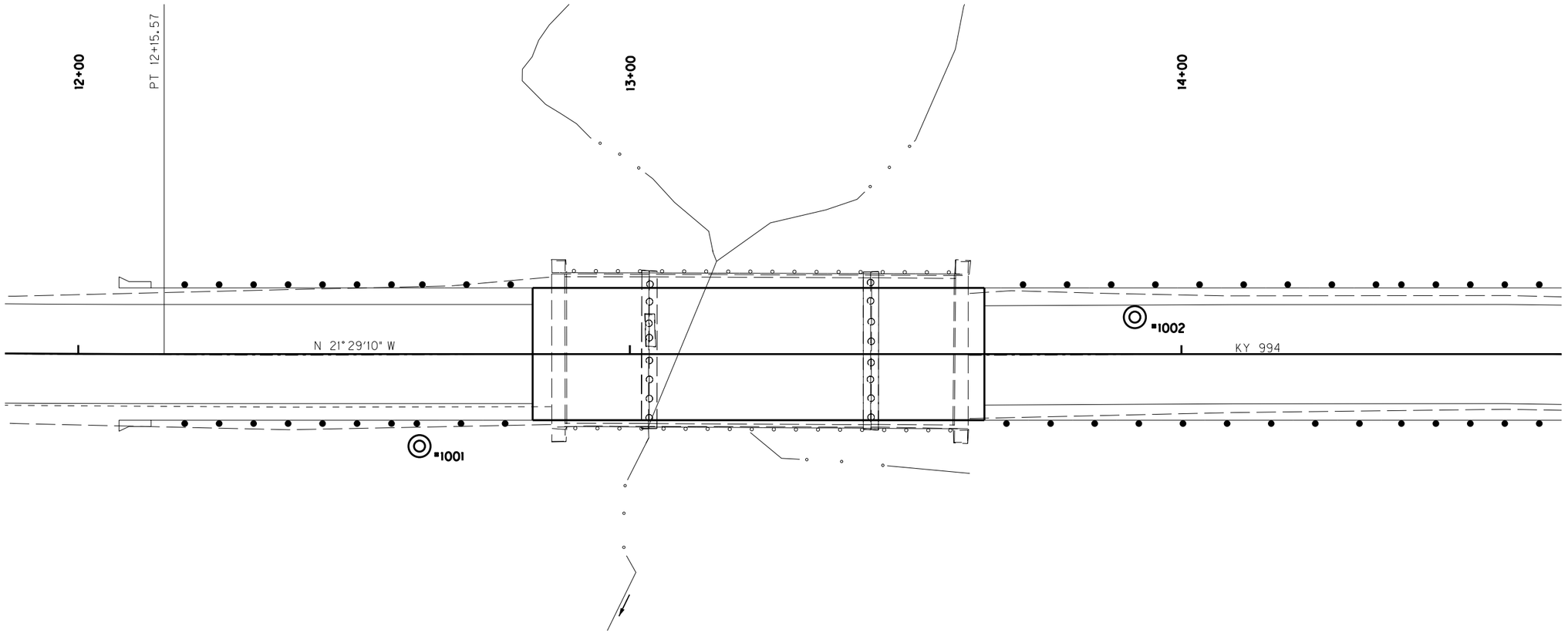
LAYOUT
CROSSING: Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO. S3	DRAWING NUMBER 28511

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

SUBSURFACE DATA

Plan Scale 1" = 10'



S–058–2022

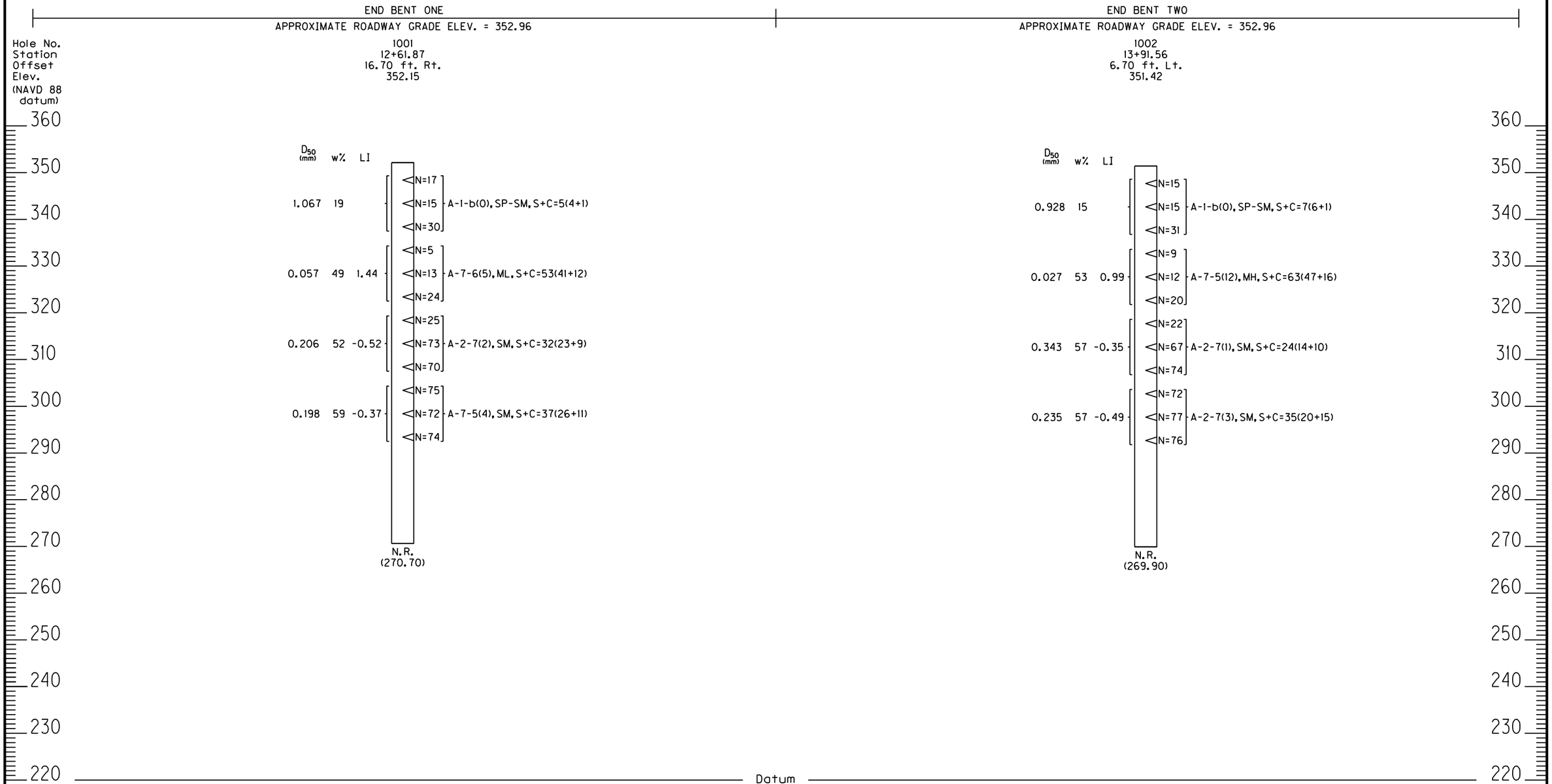
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Division of Structural Design Geotechnical Branch	DATE: 24-JUNE-2022	CHECKED BY	SUBSURFACE DATA	ROUTE KY 994	ITEM NO. 1–40001.00
				DESIGNED BY:		CROSSING Blizzard Ponds Drainage Canal		SHEET NO. S4
				DETAILED BY: E. BAILEY	T. SHEFFIELD			DRAWING NUMBER 28511

COUNTY OF
McCRACKEN

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

SUBSURFACE DATA

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale



S–058–2022

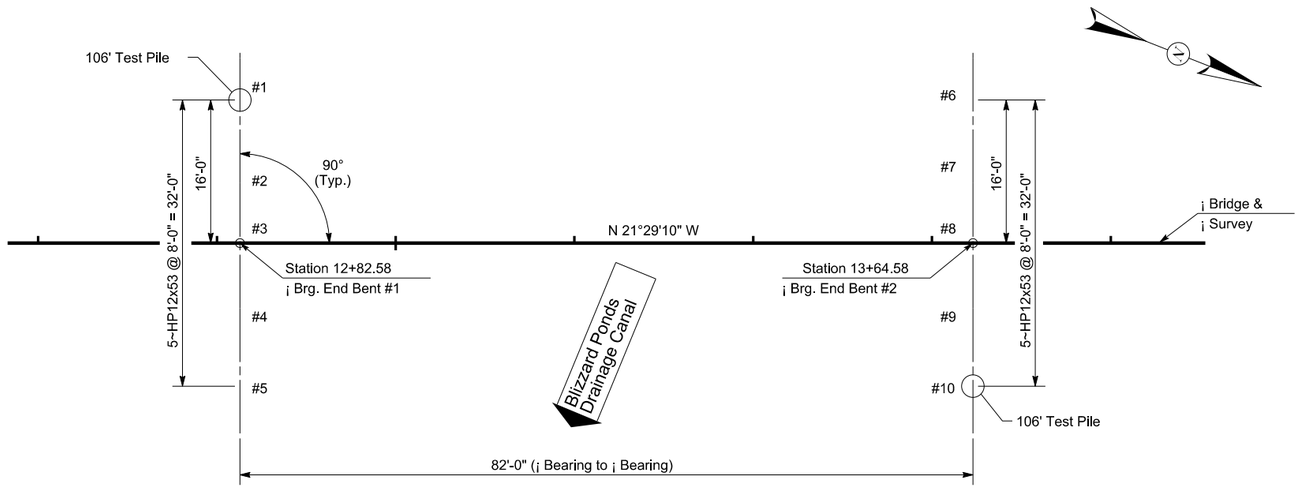
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Division of Structural Design Geotechnical Branch	DATE: 24-JUNE-2022	CHECKED BY	SUBSURFACE DATA	ROUTE KY 994	ITEM NO. 1–40001.00	COUNTY OF McCRACKEN
				DESIGNED BY:		CROSSING Blizzard Ponds Drainage Canal		SHEET NO. S5	DRAWING NUMBER 28511
				DETAILED BY: E. BAILEY	T. SHEFFIELD				

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$fileSpecification$$$$

PILE RECORD FOR FRICTION PILES USING FHWA MODIFIED GATES METHOD

Pile No.	Project Hammer Number	Pile Cut-off Elevation	Pile Length In Place	Estimated Pile Tip Elevation	Highest Allowable Pile Tip Elevation	Pile Tip Elevation As Driven	Design Factored Axial Load		Required Nominal Axial Resistance		Hammer Fuel Setting at EOD	Actual at EOD (Last 10 Blows)					
												Set	Actual No. of Blows	Blow Count (N)	Hammer Stroke(H)	Developed Hammer Energy (E)	*Calculated Nominal Axial Resistance (Rn)
		FEET	FEET	FEET	FEET	FEET	KIPS	TONS	KIPS	TONS		INCH		BLOWS PER INCH	FEET	FT-LBS	TONS
INTEGRAL END BENT #1																	
1		348.167		252.167	300.000		184	92	460	230							
2		348.167		252.167	300.000		184	92	460	230							
3		348.167		252.167	300.000		184	92	460	230							
4		348.167		252.167	300.000		184	92	460	230							
5		348.167		252.167	300.000		184	92	460	230							
INTEGRAL END BENT #2																	
6		348.100		252.100	300.000		184	92	460	230							
7		348.100		252.100	300.000		184	92	460	230							
8		348.100		252.100	300.000		184	92	460	230							
9		348.100		252.100	300.000		184	92	460	230							
10		348.100		252.100	300.000		184	92	460	230							

* The Modified Gates Formula is only applicable at the End of Drive (EOD) and may not be applied at Beginning of Restrike (BOR).



FOUNDATION LAYOUT

NOTE: Cofferdams, Sheeting, Shoring and/or dewatering methods may be required for end bent construction. Include all costs in the price bid for Foundation Preparation.

Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.

PILE LENGTH IN PLACE: Actual pile length below the Pile Cut- Off Elevation in the finished structure.

PILE TIP ELEVATION AS DRIVEN: Actual Pile Tip elevation in the finished structure.

DESIGN FACTORED AXIAL LOAD: The design factored strength loads as estimated from structural design calculations.

REQUIRED NOMINAL AXIAL RESISTANCE: The total geotechnical axial resistance required by the pile to satisfy applicable design requirements. This is arrived at by dividing the Design Factored Axial Load by the resistance factor, ϕ = 0.40, plus any other applicable considerations such as scour, embankment layers, etc. Note that dynamic formulas, including the FHWA Modified Gates Formula, should not be used when the required nominal axial resistance exceeds 600 kips.

END OF DRIVING (EOD): When the pile was driven to tip elevation.

HAMMER STROKE (H): The length of the free- fall of the ram for a gravity, diesel or single-acting steam or compressed air hammer.

DEVELOPED HAMMER ENERGY (E): This is the energy of the ram impact for a given blow. If a direct energy reading is not taken, "E" can be assumed to be the ram weight (in pounds) times the hammer stroke (in feet). (E=WH) ft-lbs.

SET: Amount of downward vertical displacement in the pile over the last 10 blows.

BLOW COUNT (N): Number of hammer blows per inch at the end of initial driving to be taken as 10 blows divided by the Set in inches.

FHWA MODIFIED GATES FORMULA: Calculated Nominal Pile Resistance Rn = 0.875 $\sqrt{E}$ log (10N) - 50 Resulting value is in tons. The Modified Gates Formula is only applicable at the End of Drive (EOD) and may not be applied at Beginning of Restrike (BOR).

Driving Criteria

Satisfy two criteria when driving friction piles:

1. Drive piles to the Highest Allowable Pile Tip Elevation.
2. Drive piles until the Calculated Nominal Pile Resistance (Rn) is equal to the Required Nominal Pile Resistance at End of Driving (EOD).

Hammer fuel setting shall be adjusted so that the blow count at the end of driving and beginning of restirke ranges from 3 to 10 blows per inch.

If the Calculated Nominal Pile Resistance (Rn) is achieved at an elevation higher than the Highest Allowable Pile Tip Elevation, continue driving until the Highest Allowable Pile Tip Elevation is reached. If the pile cannot be advanced to the Minimum Point of Pile Elevation or if the pile is being driven "significantly" past the Estimated Pile Tip Elevation, consult the Central Office Division of Construction.

Project Hammer Number	Hammer Manufacturer and Model	Weight of Ram W Lbs.	Maximum Rated Energy Ft-Lbs

Field Data

For each pile, the Project Engineer shall record all applicable data in the Pile Record for Friction Piles Sheet.

Submit this record to:

Kentucky Transportation Cabinet
Division of Structural Design
3rd. Floor East
200 Mero Street
Frankfort, KY 40622

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

HAMMER CRITERIA: Single acting diesel hammers with a rated energy between 33 klp-ft and 66 klp- ft is recommended to adequately drive the piles at End Bents without encountering excessive blow counts or overstressing the piles. The use of hammers other than single acting diesel may require different rated energies. The Contractor shall submit the proposed pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.

Use HP 12x53 in accordance with BPS-003, c.e.

Pile Points are not to be used on this structure.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

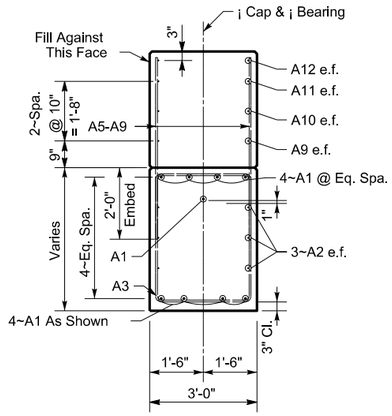
REVISION	DATE

PREPARED BY
Division of Structural Design

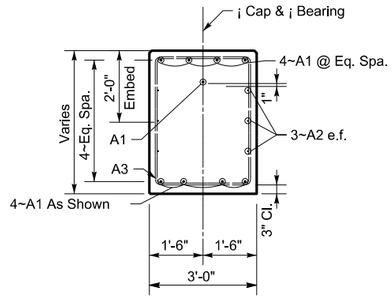
DATE: June 2022	CHECKED BY
DESIGNED BY: J. Van Zee	E. Kilgore
DETAILED BY: E. Downey	J. Van Zee

FOUNDATION LAYOUT
CROSSING
Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO.	DRAWING NUMBER
	S6	28511



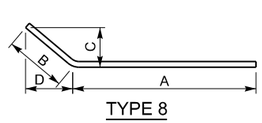
Section A-A



Section B-B

BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B	C	D
A1e	Str.	9	8	38- 3	Cap				
A2e	Str.	6	5	38- 3	Cap Sides				
A3e	14s	36	5	13- 0	Cap Stirrups	3- 7	2- 8		
A4e	Str.	4	5	3- 6	Wing Vertical				
A5e	Str.	4	5	3-11	Wing Vertical				
A6e	Str.	4	5	4- 5	Wing Vertical				
A7e	Str.	4	5	4-11	Wing Vertical				
A8e	Str.	16	5	5- 1	Wing Vertical				
A9e	Str.	4	5	6-11	Wing Horizontal				
A10e	Str.	4	5	6- 7	Wing Horizontal				
A11e	Str.	4	5	4-10	Wing Horizontal				
A12e	8	4	6	7- 3	Wing Top	3- 6 3/8	3- 9	1- 7	3- 4 3/4



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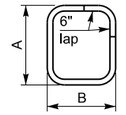

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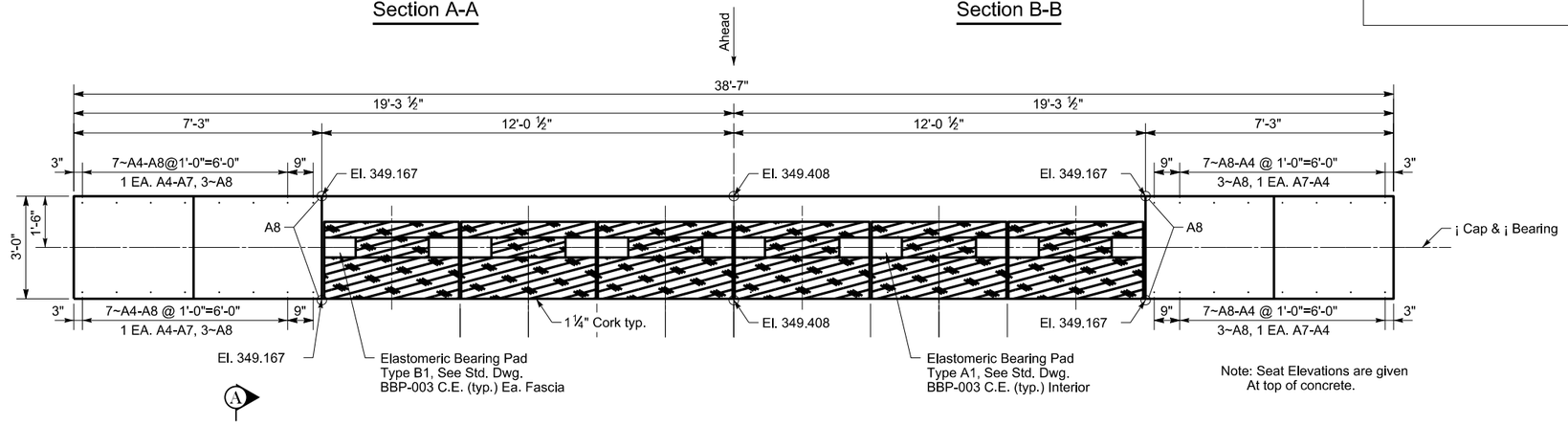
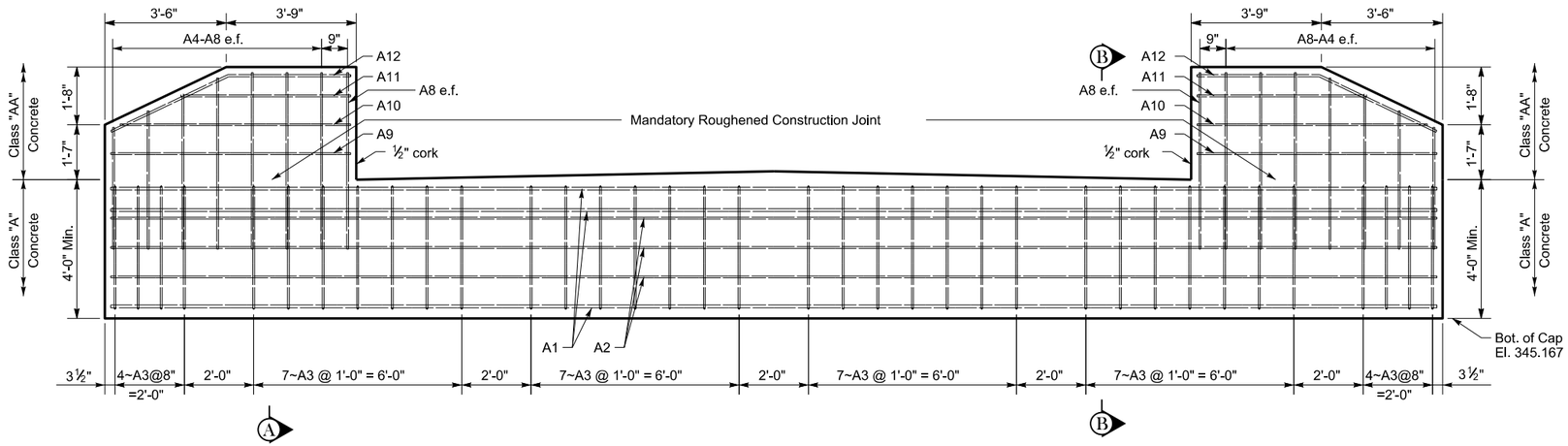


Note: Dowel box beams in accordance with Std. Dwg. BDP-002, C.E.

Note: Do not backfill wall until beams are placed, doweled, and grouted

Mandatory Construction Sequence
1) Pour Class "A" Concrete.
2) Erect Beams and Tension Lateral Rods.
3) Pour Wings With ½" Cork Between Face of the Beams and Wings.

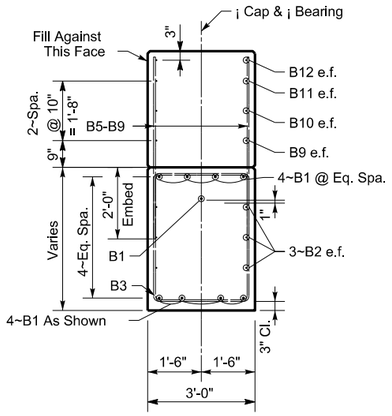
Note: For Pile location see Foundation Layout.



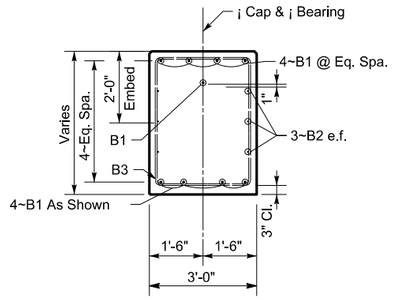
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Division of Structural Design	DATE: June 2022	CHECKED BY	END BENT 1	ROUTE KY 994	ITEM NO. 1-40001.00
				DESIGNED BY: J. Van Zee	E. Kilgore	CROSSING Blizzard Ponds Drainage Canal		SHEET NO. S7
				DETAILED BY: E. Downey	J. Van Zee			DRAWING NUMBER 28511

COUNTY OF McCRACKEN

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

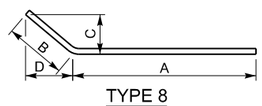


Section A-A

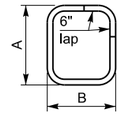


Section B-B

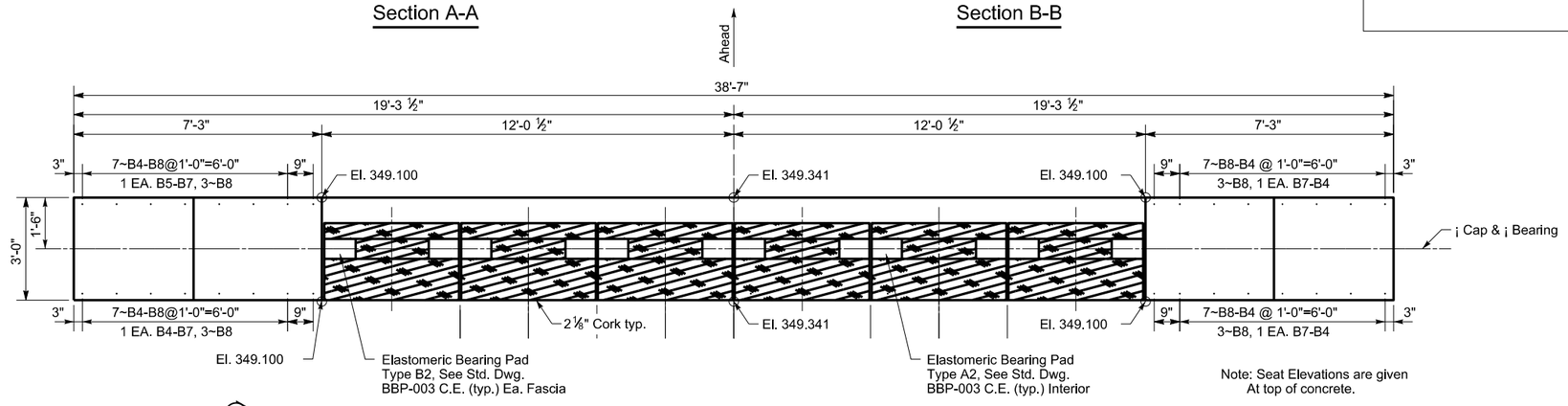
BILL OF REINFORCEMENT									
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B	C	D
B1e	Str.	9	8	38- 3	Cap				
B2e	Str.	6	5	38- 3	Cap Sides				
B3e	14s	36	5	13- 0	Cap Stirrups	3- 7	2- 8		
B4e	Str.	4	5	3- 6	Wing Vertical				
B5e	Str.	4	5	3-11	Wing Vertical				
B6e	Str.	4	5	4- 5	Wing Vertical				
B7e	Str.	4	5	4-11	Wing Vertical				
B8e	Str.	16	5	5- 1	Wing Vertical				
B9e	Str.	4	5	6-11	Wing Horizontal				
B10e	Str.	4	5	6- 7	Wing Horizontal				
B11e	Str.	4	5	4-10	Wing Horizontal				
B12e	8	4	6	7- 3	Wing Top	3- 6 3/8	3- 9	1- 7	3- 4 3/4

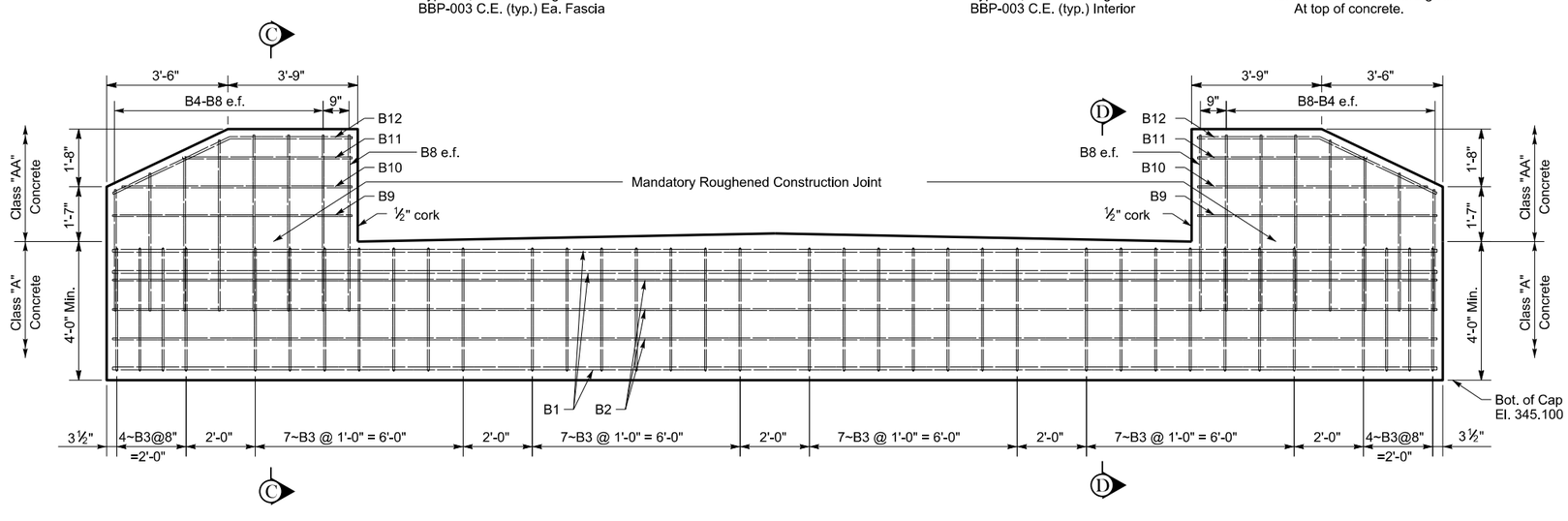


TYPE 8



TYPE 14





Note: Dowel box beams in accordance with Std. Dwg. BDP-002, C.E.

Note: Do not backfill wall until beams are placed, doweled, and grouted

Mandatory Construction Sequence
1) Pour Class "A" Concrete.
2) Erect Beams and Tension Lateral Rods.
3) Pour Wings With ½" Cork Between Face of the Beams and Wings.

Note: For Pile location see Foundation Layout.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of Structural Design

DATE: June 2022	CHECKED BY
DESIGNED BY: J. Van Zee	E. Kilgore
DETAILED BY: E. Downey	J. Van Zee

END BENT 2
CROSSING
Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO.	DRAWING NUMBER
	S8	28511

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

PRECAST PRESTRESSED BOX BEAMS

General Notes

SPECIFICATIONS: All references to the standard Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, with current supplemental specifications. All references to the AASHTO Specifications are to the current edition of the AASHTO LRFD Bridge Design Specifications, with interims.

DESIGN LOADS: Beam sections are designed for 1.25*HL93 (KYHL93) Live Load.

DESIGN LOAD DISTRIBUTION: Contrary to AASHTO LRFD Bridge Design Specifications, the design moment and shear distribution for all beams is 0.5 lanes.

FUTURE WEARING SURFACE: These beams are designed for a 15 PSF future wearing surface load.

SUBSTRUCTURE DESIGN LOADS: Unfactored design reaction forces per beam end.
DC (kips): Beam, Slab (if applicable), and Type II railing dead loads.
DW (kips): Future wearing surface.
LL (kips): Beam Live Load reaction per lane x Design load distribution.
LL+I (kips): LL with Dynamic load allowance.

DESIGN DEFLECTIONS:
¬d (in.): Sum of the downwards deflections caused by the design 5" deck, railing, and future wearing surface. (Positive Downwards)
¬c (in.): Upwards midspan camber of the beam caused by prestressing minus the downward deflection of the beam due to self weight. (Positive Upwards)

MATERIAL DESIGN SPECIFICATIONS:

for Steel Reinforcement	FY = 60000 PSI	
for Prestressed Girder Concrete (Typ. U.N.O.)	F'C = ~~7000 PSI~~	8.500 PSI
	F'CI = ~~5500 PSI~~	8.000 PSI
for Class "AA" Concrete	F'C = 4000 PSI	
for Prestressing Steel	F'S = 270000 PSI	

DESIGN LENGTH: Beam lengths shown in the Standards represent total beam length. Use the next greater designed section for non-Standard lengths.

CONSTRUCTION METHOD: Transferring bond stress to the concrete will not be allowed, nor releasing of end anchors until the concrete has attained a minimum compressive strength of F'CI as shown by standard cylinders made and cured identically with the girders; attain F'C at or prior to 28 days. Apply an initial prestress force of 33817 lbs. per low relaxation strand. Beams with honeycomb of such extent as to affect the strength of resistance to deterioration will not be accepted. The allowance of .0005L (length) is made for shortening of beams due to shrinkage and elastic change. Furnish shop plans showing a detensioning plan by numbering, in sequence, the strand pattern.

PRESTRESSING STRANDS: Ensure prestressing strands to be ⅜" oversize (0.167 sq. in.) uncoated seven- wire stress relieved, low- relaxation strands conforming to AASHTO M 203, Grade 270. If an alternate strand arrangement or strand type is preferred by the Contractor, the designer that developed the original plans will provide the design and also revise the original plans to reflect the changes. These design and plan modifications will be done at the Contractor's expense.

CORROSION INHIBITOR: Provide a corrosion inhibitor for B- type (non- composite) beams from the list of approved materials.

BEVELED EDGES: Bevel all exposed edges ¾".

BEAM SEALER: For composite box beams (CB Beams), seal the full length of the exterior face of all exterior beams with the extent from the top of the beam to 1'- 0" underneath the beam. For non- composite box beams (B beams), seal all faces of all beams, except take care to ensure the grout pockets are not sealed. Use an approved silane sealer as specified by the Division of Structural Design.

REINFORCEMENT: Dimensions shown from the face of concrete to reinforcement are clear distances. Spacing of reinforcement is from center to center of reinforcement. All steel reinforcement is to be epoxy coated in accordance with Section 811.10 of the Specifications. Consider bars marked "C" to be a stirrup for purposes of bend diameters. Non- epoxy reinforcement may be used for fabrication purposes, only, provided that the steel is not used in the top 5 ½" of the beam and the location of the steel is indicated on the shop drawings.

FABRICATION: Beams shall not be fabricated more than 120 days before the deck is to be poured.

GROUT: Provide non- shrink grout for anchor dowels, shear keys, and tensioning rod block-outs conforming with Section 601.03.03 of the Specifications. When side by side superstructure is utilized, grouting will be completed after lateral tension rods have been fully tightened and before leveling devices have been removed. Include the cost of furnishing and placing grout in the price of beam.

~~RAILING SYSTEM TYPE II:~~ Furnish this material per these specifications.

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	COATING SPECIFICATION
Post	W6x25	ASTM A36 or A572	A123
Channel	C7x9.8	ASTM A36 or A572	A123
Plate	½"x 7"	ASTM A36 or A572	A123
Tubing	8x4x0.1875	ASTM A500 or A501	A123
Bolts	⅝"	ASTM A307	A153
Nuts	for ⅝"	ASTM A563, Grade A or better	A153
Washers	for ⅝"	ASTM A563, Grade A or better	A153
Stud	1¼"	ASTM A108 (1045 C.D. Bar)	B633, Type II, Class 25
Ferrule	2½"x 5"	ASTM A108 (11L17 Steel)	B633, Type II, Class 25
Wire	⅜"	ASTM A510 (1018 Steel)	B633, Type II, Class 25
Nut	for 1 ¼" Bolt	ASTM A108 (12L14 Steel)	B633, Type II, Class 25
Nut	for 1 ¼" Stud	ASTM A325M	B633, Type II, Class 25
Washers	for 1 ¼" Stud	ASTM A325M	B633, Type II, Class 25

RAILING SYSTEM SIDE MOUNTED MGS: Is to be used on this structure, see Std. Dwg. BHS-011, c.e.

Use the current edition of the references listed below with these standards.

STANDARD DRAWINGS

BBP-003 Elastomeric Bearing Pads
~~BHS-007 Railing System Type II~~
BJE-001 Armored Edge & Neoprene Joints
RBR-001 Steel Beam Guardrail
RBR-005 Guardrail Components

SPECIAL NOTES

for Corrosion Inhibitors

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

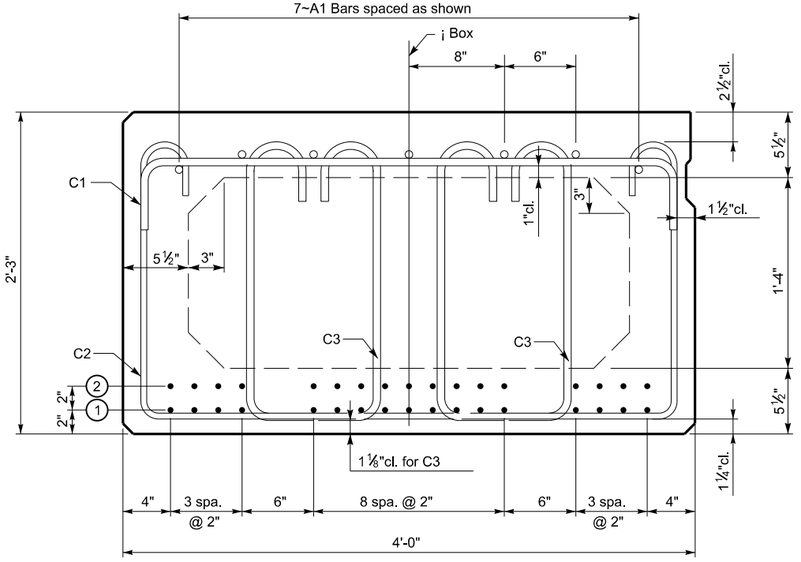
PREPARED BY
Division of Structural Design

DATE: June 2022	CHECKED BY	
DESIGNED BY: J. Van Zee	E. Kilgore	
DETAILED BY: E. Downey	J. Van Zee	

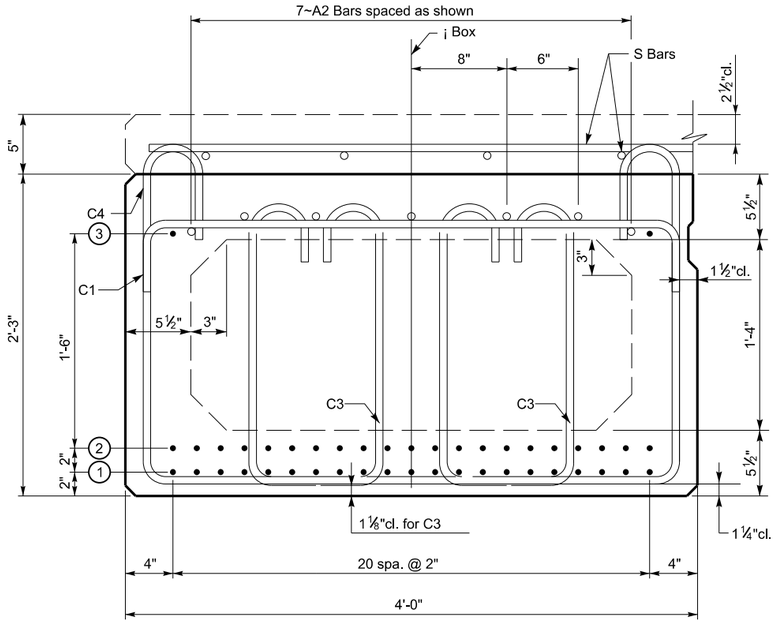
BOX BEAM GENERAL NOTES
CROSSING: Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO. S9	DRAWING NUMBER 28511

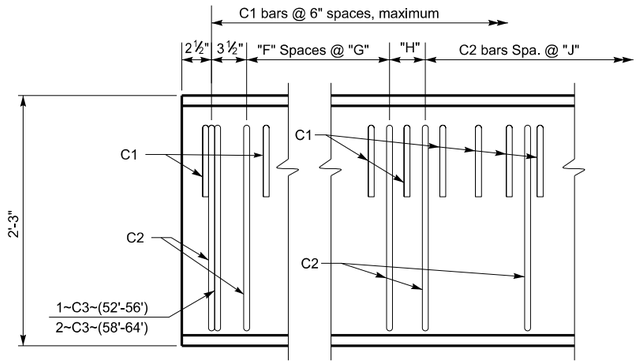
MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



B27 BEAM

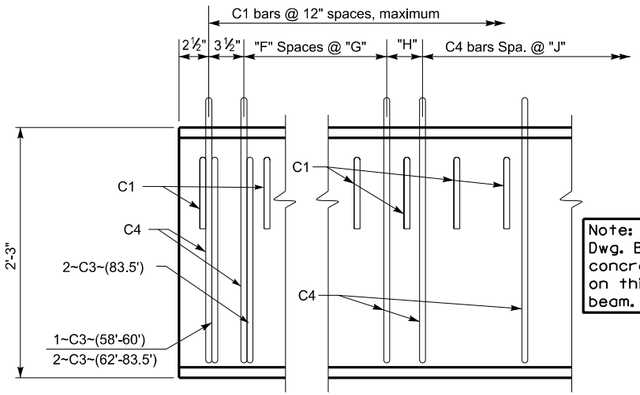


CB27 BEAM



B27 ELEVATION OF O° SKEW

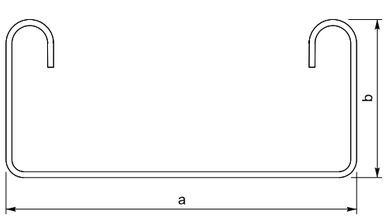
(Refer to BDP-003,c.e. for skewed details)



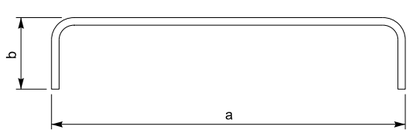
CB27 ELEVATION OF O° SKEW

(Refer to BDP-003,c.e. for skewed details)

Note: Contrary to Std. Dwg. BDP-001, c.e., use the concrete strengths shown on this sheet for the 83.5' beam.



C2(e)-C4(e) Bars



C1(e) Bar

TABLE OF STRAND DATA

Beam Type	Beam Length (feet)	Number of Strands Required Row ①	Row ②	Row ③	Conc. Strength F'CI (PSI)	F'C (PSI)
B27	52	17	1			
	54	17	2			
	56	17	3			
	58	17	5			
	60	17	6			
	62	17	8			
	64	17	9			
CB27	58	17	3			
	60	17	4			
	62	17	6			
	64	17	7			
	66	17	9			
	68	17	10			
	70	17	12			
→	83.5	21	18	2	8000	8500

TABLE OF DIMENSION DATA

Beam Type	Beam Length (feet)	"F"	"G"	"H"	"J"
B27	52	5	14"	11"	18"
	54	5	13"	10"	18"
	56	5	13"	13"	18"
	58	5	13"	16"	18"
	60	6	12"	12"	18"
	62	6	12"	13½"	17"
	64	6	12"	8½"	17"
CB27	58	6	12"	18"	21"
	60	6	12"	19½"	21"
	62	6	12"	14"	20"
	64	7	11"	11"	20"
	66	7	11"	13"	20"
	68	7	11"	15"	20"
	70	8	10"	14"	20"
→	83.5	20	3"	9"	12"

BAR QUANTITIES TABLE / DESIGN DATA

Beam Type	Beam Length (feet)	C1	C2	C3	C4	DC kips	DW kips	LL kips	LL+I kips	¬d (in.)	¬c (in.)
B27	52	105	40	2		20.6	1.5	47.0	59.1		
	54	109	42	2		21.4	1.5	47.7	60.0		
	56	113	43	2		22.2	1.6	48.4	60.7		
	58	117	44	4		23.0	1.7	49.1	61.5		
	60	121	47	4		23.7	1.7	49.7	62.2		
	62	125	50	4		24.5	1.8	50.4	62.9		
	64	129	52	4		25.3	1.8	51.0	63.6		
CB27	58	59		2	41	30.2	1.7	49.1	61.5	0.3	0.9
	60	61		2	42	31.2	1.7	49.7	62.2	0.3	0.9
	62	63		4	45	32.3	1.8	50.4	62.9	0.3	1.1
	64	65		4	48	33.3	1.8	51.0	63.6	0.4	1.2
	66	67		4	49	34.3	1.9	51.6	64.3	0.4	1.3
	68	69		4	50	35.4	1.9	52.2	65.0	0.5	1.4
	70	71		4	53	36.4	2.0	52.8	65.6	0.5	1.6
→	83.5	85		8	116	41.2	2.5	56.3	69.5	0.7	2.0

Straight Reinforcement

Mark	Size	Length
A1(E)	#5	Beam Length Minus 3"
A2(E)	#4	Beam Length Minus 3"
D(E)	#8	2'-0"

NOTE: A1 and A2 bars are to be lapped 2'-2" when necessary.

Bent Reinforcement

Mark	Size	a	b
C1(e)	#5	3'-9"	6"
C2(e)	#4	3'-9"	1'-11 ¼"
C3(e)	#5	11⅜"	1'-11 ⅜"
C4(e)	#4	3'-9"	2'-4 ¼"

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of Structural Design

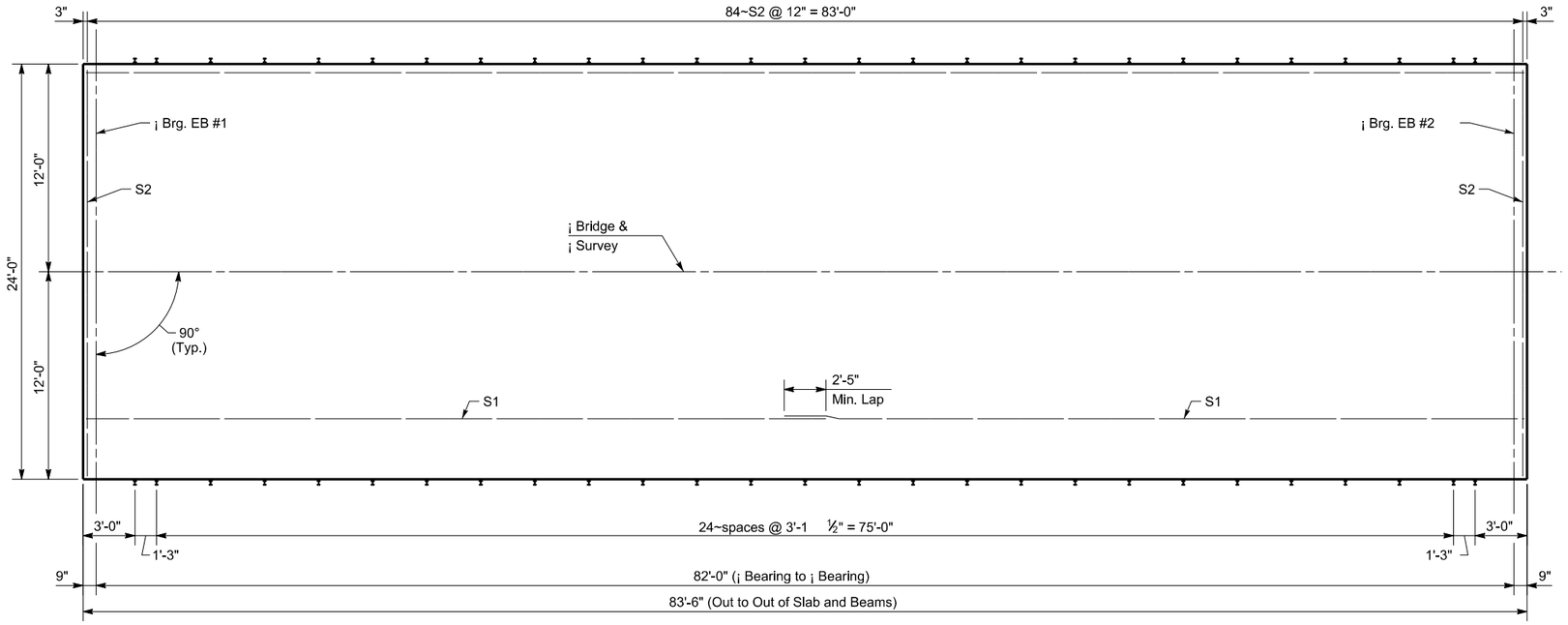
DATE: June 2022	CHECKED BY
DESIGNED BY: J. Van Zee	E. Kilgore
DETAILED BY: E. Downey	J. Van Zee

BOX BEAM CB27 DETAILS

CROSSING: Blizzard Ponds Drainage Canal

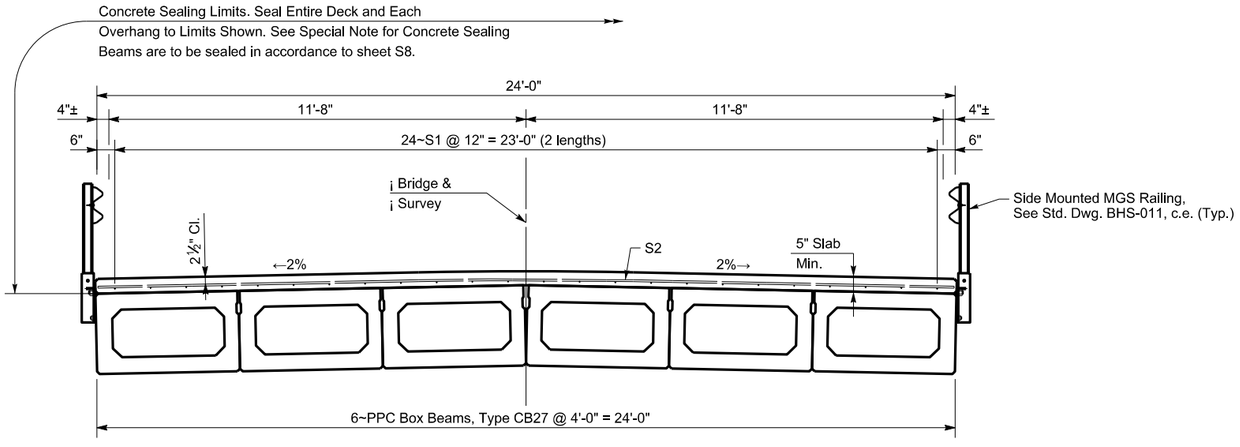
ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO. S10	DRAWING NUMBER 28511

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



PLAN OF SLAB

NOTE: Guardrail inserts in beam will need to be varied vertically to maintain proper clearance to top of slab.

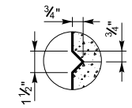


TYPICAL SECTION

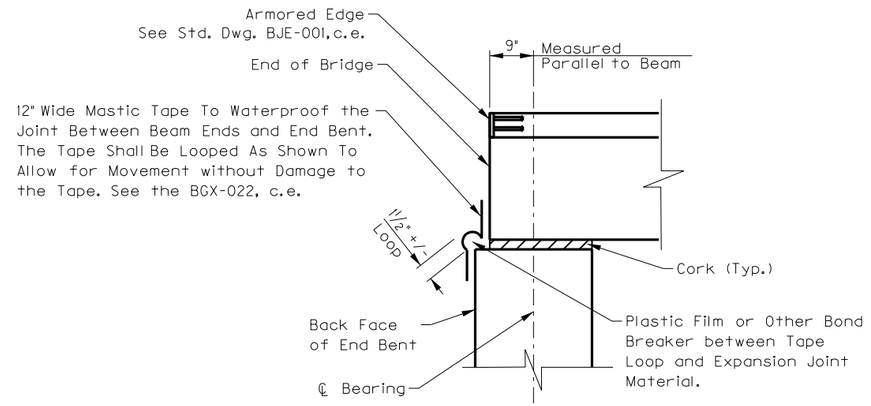
BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION
S1e	Str.	48	5	42-10	Slab Longitudinal
S2e	Str.	84	5	23- 8	Slab Transverse

NOTE: Contrary to the Standard Drawings (5" slab thickness), the construction elevations will cause the slab to be approximately 6.3" thick at each end and go to approximately 5" thick at the center of the span. No additional concrete shall be paid for to maintain the maximum and minimum allowable slab depths as shown on the construction elevations.



"V-Groove"
Rustication



JOINT WATERPROOFING DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of
Structural Design

DATE: June 2022	CHECKED BY	
DESIGNED BY: J. Van Zee	E. Kilgore	
DETAILED BY: E. Downey	J. Van Zee	

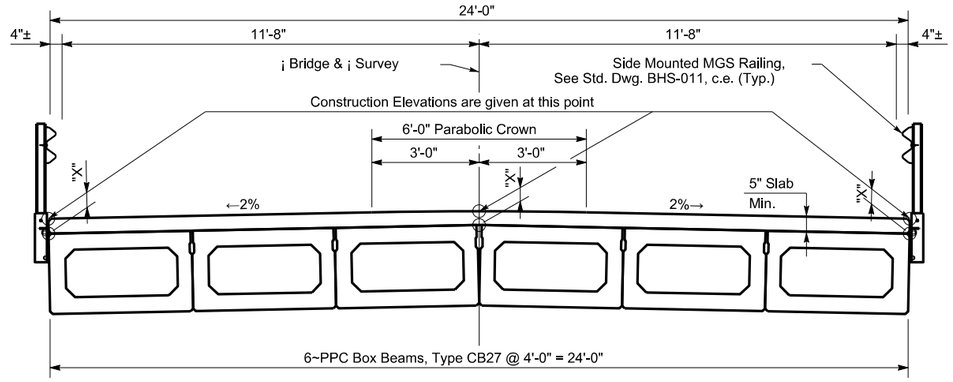
SUPERSTRUCTURE
CROSSING
Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO.	DRAWING NUMBER
	S11	28511

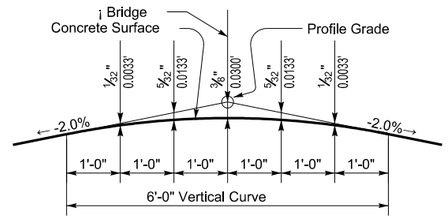
MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

CONSTRUCTION ELEVATIONS

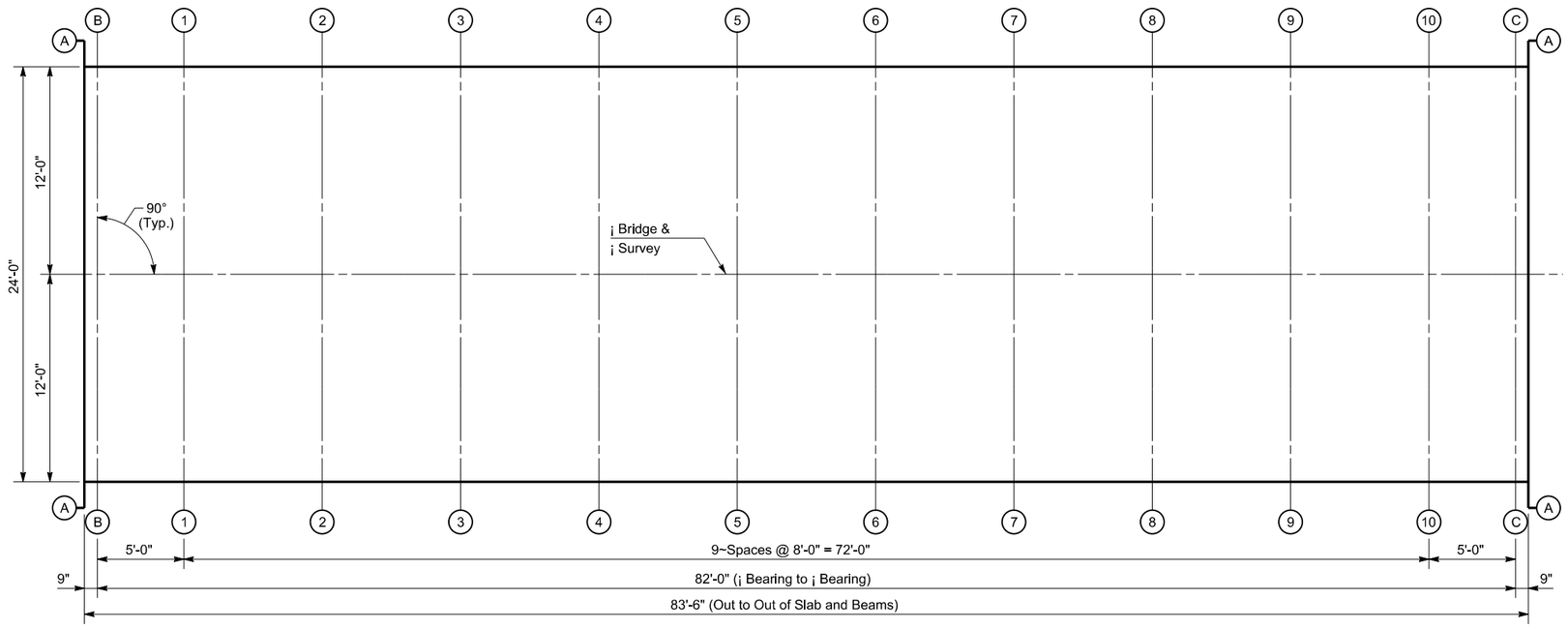
LOCATION	LEFT FASCIA			℄			RIGHT FASCIA		
	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"
SKEW LN AA	352.049			352.260			352.049		
SKEW LN BB	352.049			352.260			352.049		
SKEW LN CC	352.049			352.260			352.049		
SKEW LN DD	352.049			352.260			352.049		
GRID LN 01	352.060			352.271			352.060		
GRID LN 02	352.077			352.288			352.077		
GRID LN 03	352.092			352.302			352.092		
GRID LN 04	352.102			352.312			352.102		
GRID LN 05	352.107			352.318			352.107		
GRID LN 06	352.107			352.318			352.107		
GRID LN 07	352.102			352.312			352.102		
GRID LN 08	352.092			352.302			352.092		
GRID LN 09	352.077			352.288			352.077		
GRID LN 10	352.060			352.271			352.060		



TYPICAL SECTION



PARABOLIC CROWN



GRID LAYOUT

NOTES FOR ELEVATIONS TAKEN ON PRESTRESSED CONCRETE BOX BEAMS

Take elevations on top of beam at points indicated after the beams have been laterally tensioned and grouted. The beam elevations are to be read to three decimal places and entered in tables under "Top of Beam" elevations.

Compute dimension "X" as follows: "Construction Elevation" minus "Top of Beam" elevation equals dimension "X". Construction Elevations include camber due to weight of the concrete slab and barrier. Measuring of dimension "X" gives the final check on beam tolerances for camber, beam damage, and errors in erection that produce reverse cambers, sags, andunsightly fascia beams.

For setting templates, measure dimension "X" above top of beams for top of template. Do not set template by elevations.

Temporary supports or shoring will not be permitted under the girders when pouring the concrete floor slab or when taking "Top of Beam" elevations.

Note to Resident: The "Maximum Allowable Camber" shown on the beam sheet is the amount of camber, measured prior to casting the deck, above which the beam will begin to encroach into the slab.

The minimum allowable dimension "X" or slab thickness is 4¾" (0.395'). If any computed dimension "X" is less than that, adjustmants will need to be made to the "X" dimensions on some or all grid lines. Adjustmants must meet approval of the Engineer.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of
Structural Design

DATE: June 2022	CHECKED BY
DESIGNED BY: J. Van Zee	E. Kilgore
DETAILED BY: E. Downey	J. Van Zee

SUPERSTRUCTURE

CROSSING
Blizzard Ponds Drainage Canal

ROUTE	ITEM NO.	COUNTY OF
KY 994	1-40001.00	McCRACKEN
	SHEET NO.	DRAWING NUMBER
	S12	28511

MicroStation v10.16.3.31 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$