LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

HENRY COUNTY
S. PROPERTY ROAD
KY 573 OVER TRIB TOWN CREEK
STA. 10+14.00

PROJECT LOCATION

ESTIMATE OF QUANTITIES

BID ITEM CODE		08100	08104	23378EC	02998	08151	08150	08160	08170	08301	02403	03299	23813EC	25028ED	25078ED	02351	02367	02200	00103
BID ITEM		Concrete Class "A"	Concrete Class "AA" ①	Concrete Sealing	Masonry Coating	Steel Reinforcement, Epoxy Coated	Steel Reinforcement	Structural Steel ②	Shear Connector ③	Remove Superstructure	Remove Concrete Masonry	Armored Edge for Concrete	Deck Drain	Rail System Single Slope 40 Inch	Thrie Beam Guardrail Transition TL-3	Guardrail Steel "W" Beam (Single Face)	Guardrail End Treatment Type 1	Roadway Excavation	Asphlat Seal Coat
UNIT		C.Y.	C.Y.	S.F.	S.Y.	LBS.	LBS.	L.S.	L.S.	L.S.	C.Y.	L.F.	Each	L.F.	Each	L.F.	Each	C.Y.	Ton
Substructure	Abutment #1	1.6			53		552				0.5								
	Abutment #2	2.0			38		743												
	Superstructure		24.1	1194		5554		1	1			45.9	2	59			4	25	4	84	0.3
BRIDGE TOTALS		3.6	24.1	1194	91	5554	1295	1	1	1	0.5	45.9	2	59	4	25	4	84	0.3

BID ITEM CODE		02585	08019	08003	02726	02562	02650	02014	02569	26233EC	02575	00003	00214	00339	20191ED	21289ED	00356	00008	00100
BID ITEM		Edge Key	Cyclopean Stone Rip Rap	Foundation Preparation	Staking	Temporary Signs	Maintain and Control Traffic	Barricade Type III	Demobilization	Mobilization-For Concrete Surface Treatment	Ditching And Shouldering	Crushed Stone Base ④	CL3 ASPH BASE 1.00D PG64-22 ⑤	CL3 ASPH SURF 0.38D PG64-22 ⑤	Object Marker TY 3	Longitudinal Edge Key	Ashpalt Material For Tack ⑥	Cement Stabilized Roadbed	Asphalt Seal Aggregate
UNIT		L.F.	Tons	L.S.	L.S.	S.F.	L.S.	Each	L.S.	L.S.	L.F.	Ton	Ton	Ton	Each	L.F.	Ton	S.Y.	Ton
Substructure	Abutment #1		22																
	Abutment #2		22																
	Superstructure																		
BRIDGE TOTALS		40	44	1	1	290	1	2	1	1	180	161	17	30	4	150	0.2	159	2

① Class "AA" Concrete above bridge seats is included in Superstructure Quantities

② Approximate Weight of Structural Steel = 12934 lbs.

③ Approximate Number of Shear Connectors = 660

④ Estimated at 115 lbs Per SQ. YD. per Inch of Depth

⑤ Estimated at 110 lbs Per SQ. YD. per Inch of Depth

⑥ Estimated 0.84 lbs per SQ. YD.

INDEX OF SHEETS

SPECIAL NOTES

Special Note for Concrete Sealing
Special Note for Shoulder Preparation
Special Note for Edge Key

SPECIAL PROVISIONS

STANDARD DRAWINGS

BGX-015-04	Bridge Drains
BGX-006-10	Stencils for Structures
BGX-012-02	Geotechnical Legend
BJE-001-14	Armored Edges
BHS-010	Railing System 40 Inch Single Slope
BHS-014	Thrie Beam Transition
RBR-020	Guardrail End Treatment Type 1
RBR-001	Steel Beam Guardrail (W Beam)
RBR-005	Guardrail Components
RBR-015	Steel Guardrail Posts
RBI-004	Installation of Guardrail End Treatment Type 1

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: DECEMBER 2024	CHECKED BY
DESIGNED BY: N. CORDTZ	L. LIKINS
DETAILED BY: M. BAWITHAWNG	N. CORDTZ

TITLE SHEET

CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S1	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn

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 slab 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%. The beams are designed for a HS-25 Live Load.

FUTURE WEARING SURFACE: This structure is designed for a 60 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. The steel beams and upgrades were designed with the Load Factor Method specified in the 17th edition AASHTO Standard Specifications for Highway Bridges.

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 reinforcement 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.

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 and diaphragms are poured continuously, out to out, before allowing any concrete to set.

MASONRY COATING: Apply a masonry coating finish to the substructure in accordance with section 601.03.18

CONCRETE SEALER: 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. Seal deck in accordance with the special note for concrete sealing.

CONCRETE: Class "AA" is to be used throughout the new superstructure. Class "A" is to be used on the substructures.

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

FORM WEIGHT: Design Includes 16 psf for stay in place firm weight and allows for concrete filling voids. If contractor chooses to fill flutes with concrete, cost for extra concrete is incidental.

ON-SITE INSPECTION: Each contractor submitting a bid for this work shall make a thorough inspection of the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions so that work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will be honored by the Department of Highways.

DRILLING AND GROUTING: In accordance with Section 826 of the specifications, drill holes to a depth as shown herein these plans and apply a Type IV epoxy bonding adhesive in the holes. All costs associated with this work shall be incidental to the unit price bid for Class "A" Concrete.

BONDING CONCRETE TO PREVIOUS POURED CONCRETE: Use an epoxy bond coat as described in section 511.03.02 of the Standard Specifications to bond the new concrete to the existing concrete at all construction joints noted in the plans. Include the cost of this work in unit price bid for Concrete "A".

EXISTING REINFORCING STEEL: The costs of cutting, bending and cleaning existing reinforcing steel in the abutments, if required, is to be incidental to the lump sum bid for "Remove Superstructure".

MAINTAIN AND CONTROL TRAFFIC: The contractor is fully responsible for maintaining and controlling traffic on this project. Bridge is to be fully closed to traffic for construction. Contractor shall provide signs letting public know of bridge closure for each direction and shall place type III barricades at each end of the bridge.

BRIDGE OVERLAY APPROACH PAVEMENT: Excavation into existing pavement or ground behind abutment may be required for abutment rehab. Include all costs for excavation in the lump sum price bid for Remove Superstructure. Backfill of excavated soil shall be with geotextile wrapped 57s. Pavement structure in the fully removed sections shall consist of a minimum of 8" cement stabilized road bed, 16" crushed stone base, 2~3" minimum lifts of asphalt base, and 1.5 inch minimum of asphalt surface. Surface shall be placed over existing pavement where existing pavement was not fully removed to provide a smooth transition from the bridge deck elevation to the existing pavement elevation within 75 feet off the end of the bridge. Provide plan to Engineer for approval prior to beginning work.

FIELD MEASUREMENTS: All dimensions and elevations given in these plans are based on field measurements. Prior to beginning work or ordering any materials, the contractor shall verify all dimensions and elevations. No claim will be honored by the Department of Highways regarding site conditions.

DAMAGE TO THE SUBSTRUCTURES: The contractor is responsible for any and all damages to the existing substructures during reconstruction even to the replacement of the entire substructure, should they be damaged due to their actions.

REMOVE SUPERSTRUCTURE: Include in the lump sum bid for "Remove Superstructure" all costs (materials, labor, equipment) associated with removing and disposing of the existing superstructure (including any wearing surface) and soil/backfill as necessary behind beams as detailed herein in accordance with Section 203 of the Specifications.

ELEVATIONS: The elevations given in these plans are relative elevations based on a point located on Abutment 1. The elevation at this location is assumed to be 100 feet and is not based on sea level elevations. Before starting any demolition, the contractor should make a reference benchmark off the bridge.

TYPICAL SECTIONS: 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.

COMPACTION OF ASPHALT MIXTURES: Will accept the compaction of asphalt mixtures furnished on this project by option B according to subsections 402.03.02 and 403.03.10 of the standard specifications.

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

bet.	between
b.f.	Back Face
BOF	Bottom of Footing
BOS	Bottom of Slab
bot.	Bottom
Brg.	Bearing
C to C	Center to Center
c.e.	Current Edition
C.Y.	Cubic Yards
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 Curvature
Perp.	Perpendicular
PI	Point of Intersection
PPC	Precast Prestressed Concrete
PPCDU	Precast Prestressed Deck Unit
PSI	Pounds per Square Inch
PT	Point of Tangency
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
Tan	Tangent
Thru	Through
TOF	Top of Footing
TOS	Top of Slab
Tot.	Total
Typ.	Typical
Vert.	Vertical
W.P.	Working Point
Yd.	Yard

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

REVISION	DATE

PREPARED BY
Division of Structural Design

DATE: DECEMBER 2024	CHECKED BY
DESIGNED BY: N. CORDTZ	L. LIKINS
DETAILED BY: M. BAWITHAWNG	N. CORDTZ

GENERAL NOTES
CROSSING: TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S2	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn

MATERIAL STEEL	A.S.T.M	AASHTO
High Strength Low Alloy	A709 GR 50	M270 GR 50
Shear Stud Connectors	UNS G 1018	M-169
Sheet lead and Pig Lead	B29-79	

High strength bolts, nuts, and washers F3125 Grade A325 M-164 Type 1

All steel in longitudinal rolled wide flange beams shall meet the longitudinal Charpy V-Notch toughness test for non-fracture critical components Zone 2 in accordance with the following:

M270 GR 50 (up to 2" thickness) of 15 ft-lbs at 40°F.

Sampling and testing procedures shall be in accordance with AASHTO T243 current edition, utilizing (H) frequency testing. When plate thickness exceeds 1½" frequency of testing shall be (P).

HIGH STRENGTH BOLT CONNECTIONS: Unless otherwise specified on the plans, all bolted connections shall be ASTM F3125 Grade A325 ¾" diameter high strength bolts, nuts, and washers. Open holes shall be $^{13}/_{16}$" diameter. Type 1 galvanized bolts shall be used as described in AASHTO M164. All high strength bolted field connections are to be installed with "direct tension indicators" (DTI's) in accordance with the Standard Specifications and ASTM F959. All DTI's shall be manufactured from a steel conforming to the chemical requirements of ASTM A325 for Type 1 galvanized steel. DTI's shall be installed under the bolt head with the bumps facing the underside of the bolt head. Put a hardened washer under the nut and tension from the nut.

CORROSION PROTECTION: These beams and all steel components are to be hot dip galvanized according to ASTM A123. Weathering Steel is not allowed.

SHEAR CONNECTORS: The minimum length of studs is 4". Provide the necessary length to penetrate at least 2" above bottom of slab.

The "Lump Sum Bid" for shear connectors shall be full payment for all necessary shear connectors, welding and welding material, and materials necessary to field weld or shop weld the shear connectors in place according to the plans and specifications.

If the Contractor wishes to use something other than the stud shear connectors shown on the plans, the proposed arrangement shall be submitted for approval with the shop plans.

Studs shall be welded in accordance with AWS Specifications.

MILL TEST REPORTS: Notarized mill test reports shall be furnished in triplicate to the Department, showing that all material used in the structural steel conform to the requirements of the specifications.

PROHIBITED WELDING: No welding of any nature, other than indicated on the plans, is to be performed without the written consent of the designer, and then only in the manner and at the locations designated in the authorization.

SHOP DRAWINGS: The fabricator shall submit all required shop plans, by e- mail, to the design engineer for review. These submissions shall depict the shop plans in .pdf format. As either 11"x17" or 22"x36" sheets. Designers will make review comments on these electronic submissions as needed and shall return them to the fabricator. Upon reconciliation of the designers comments, files shall be returned to the designer and plans will be forwarded to the Division of Structural Designs Shop Plan coordinator for distribution. Only plans submitted directly to the shop plan coordinator will be distributed and only plans electronically stamped "Distributed by The Division of Structural Design" are to be used for fabrication. While this process does not require the submission of paper copies, The Division of Structural Design reserves the right to require such copies on a case by case basis.

When any changes to the design plans are proposed by the Fabricator or Supplier, the shop drawings reflecting these changes shall be submitted to the Design Engineer through the contractor.

PAYMENT FOR STRUCTURAL STEEL: The lump sum bid for structural steel shall be full payment for all structural steel, bolts, washers, paint, welding and welding materials, floor drains, bearings, and all labor and materials necessary to erect the steel in accordance with the plans and specifications. The approximate weight of structure steel shown in the estimate of quantities does not include overrun.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

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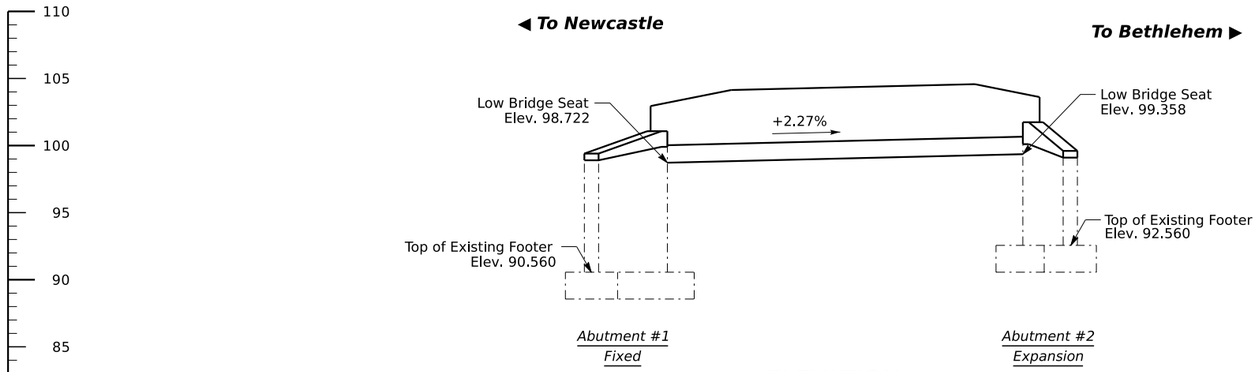
DETAILED BY: M. BAWITHAWNG	N. CORDTZ

GENERAL NOTES

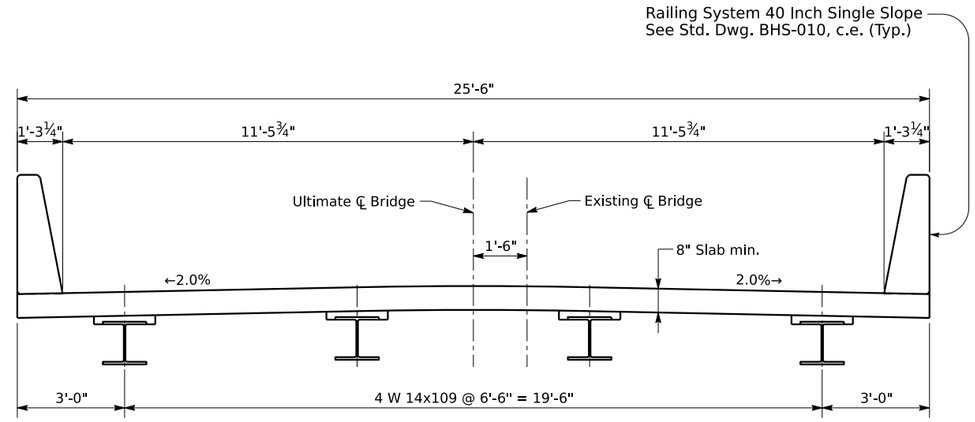
CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S3	DRAWING NUMBER 28958



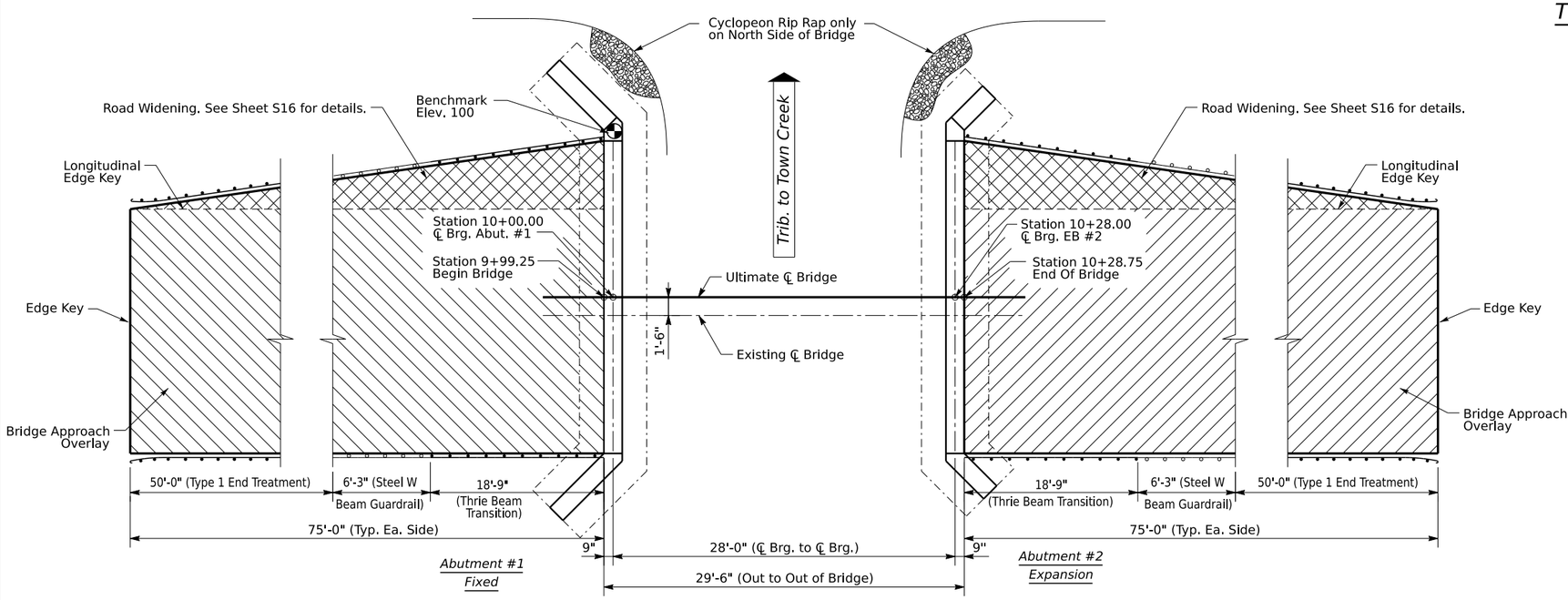
ELEVATION

28'-0" W14x109 Rolled Steel Beam, Simple Span
KY-HL93 Live Load~26'-11½" Shoulder width @ Bridge
0° skew~22'-11½" Bridge Roadway Width~2:1 Fill Slopes



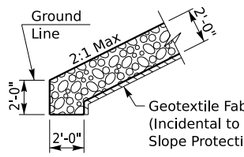
TYPICAL SECTION

Note: The centerline of the roadway to remain at the existing location over the entire project.

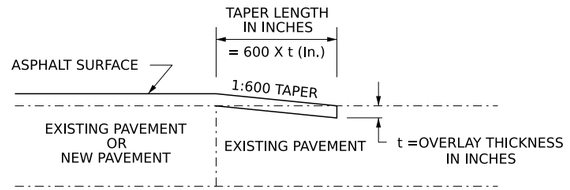


PLAN

~Superstructure not shown~



TOE OF SLOPE DETAIL



EDGE KEY DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
Division of
Structural Design

DATE: DECEMBER 2024	CHECKED BY
DESIGNED BY: N. CORDTZ	L. LIKINS
DETAILED BY: K. BISHOP	N. CORDTZ

LAYOUT
CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S4	DRAWING NUMBER 28958

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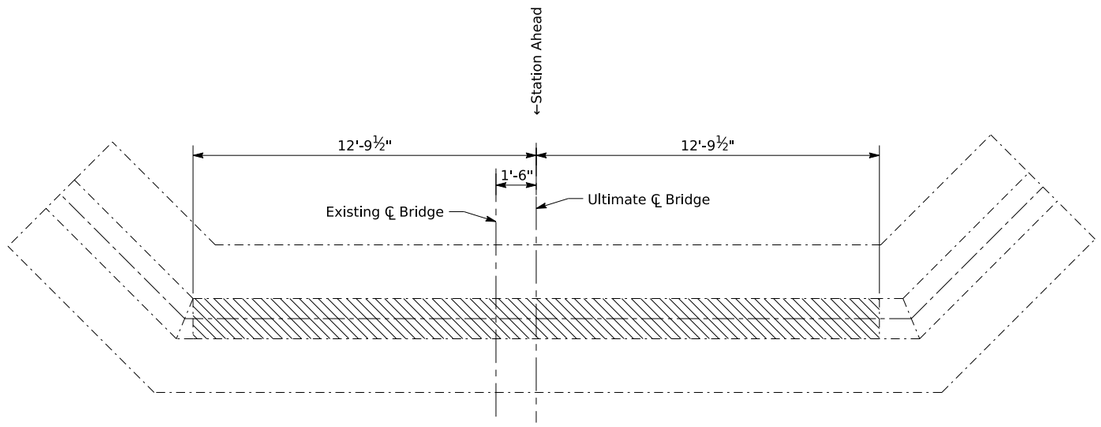
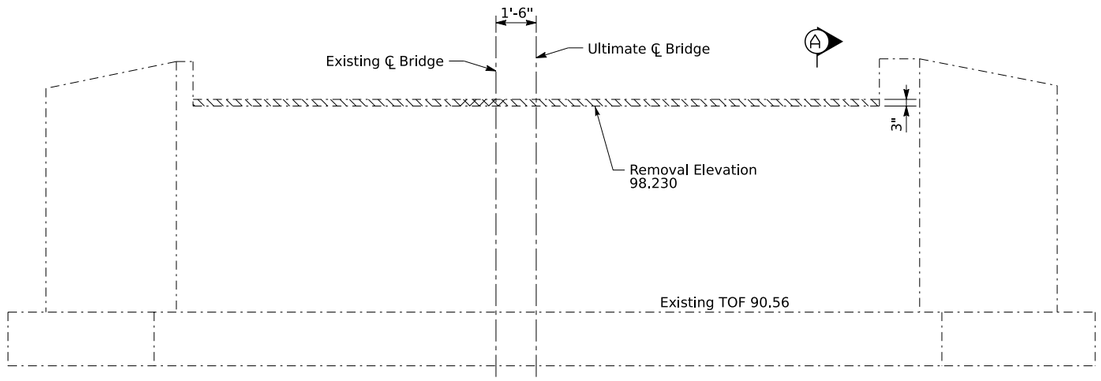


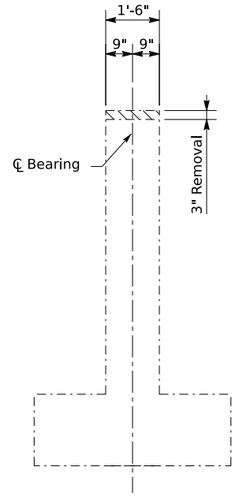
ABUTMENT #1 REMOVAL PLAN

NOTE: Clean and straighten existing reinforcement and incorporate it into the new concrete.



ABUTMENT #1 REMOVAL ELEVATION

Note: Remove cross-hatched portion of the existing concrete.



SECTION A-A

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

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Structural Design

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DETAILED BY: K. BISHOP		N. CORDTZ

CONCRETE REMOVAL DETAILS

CROSSING: TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S5	DRAWING NUMBER 28958

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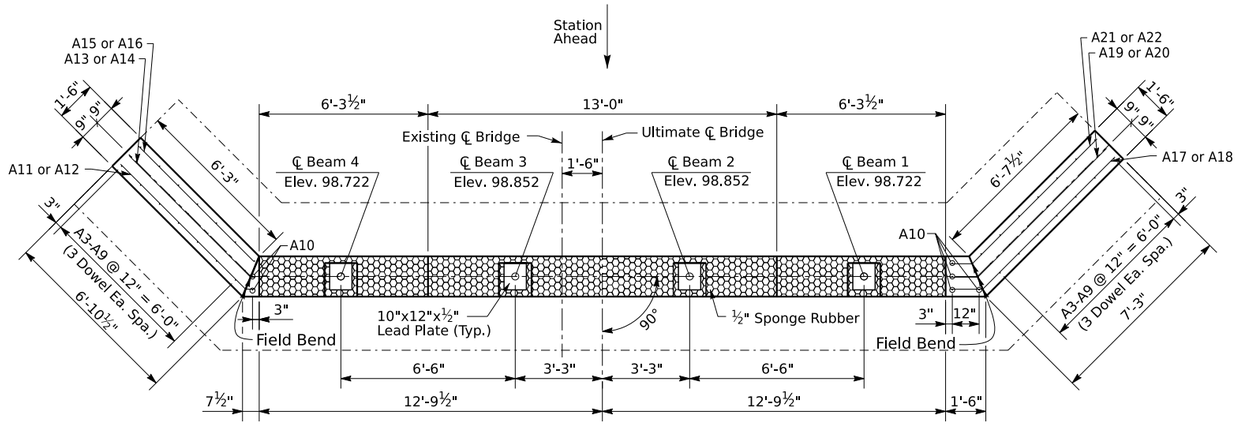
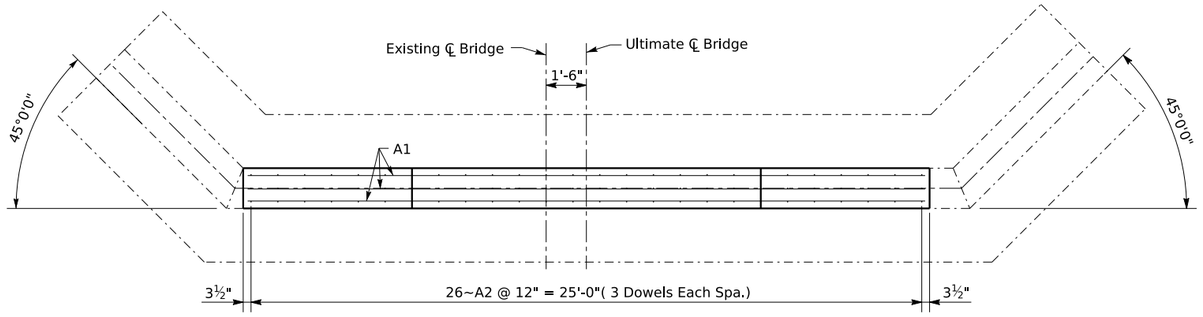


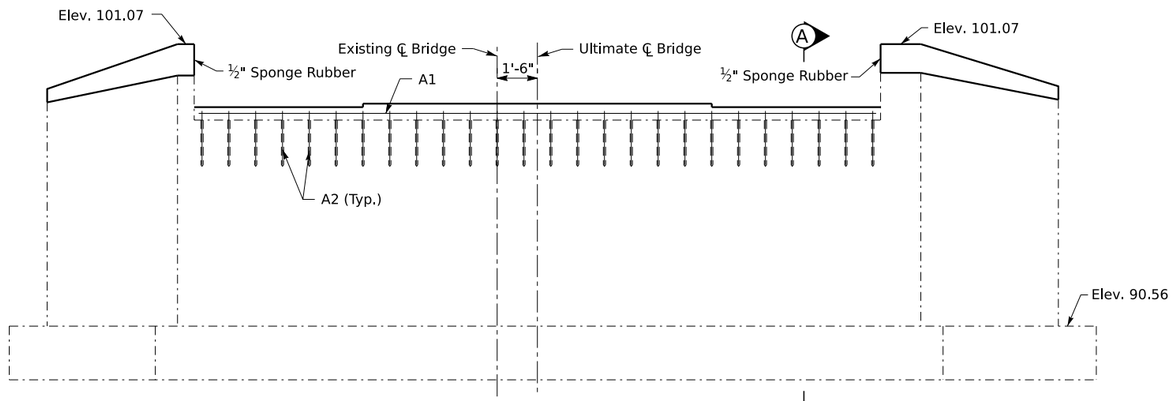
~Wing "1"~

PLAN ABOVE BRIDGE SEAT

~Wing "2"~



PLAN BELOW BRIDGE SEAT

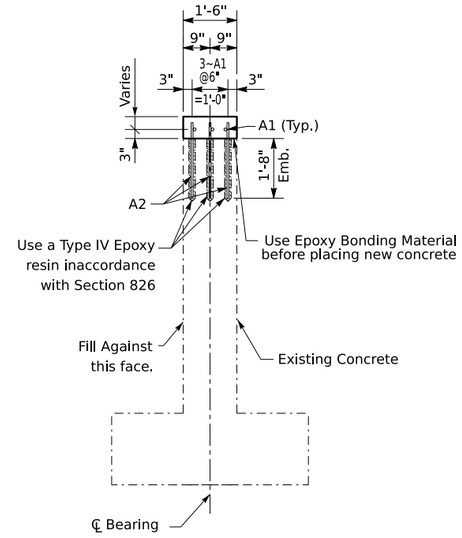


ABUTMENT #1 - ELEVATION

NOTE: Field Bend and trim if necessary

NOTE: Ensure not to drill into existing rebar, adjust location if necessary.

NOTE: Beam elevations are given at the top of concrete.



SECTION A-A

NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

COMMONWEALTH OF KENTUCKY
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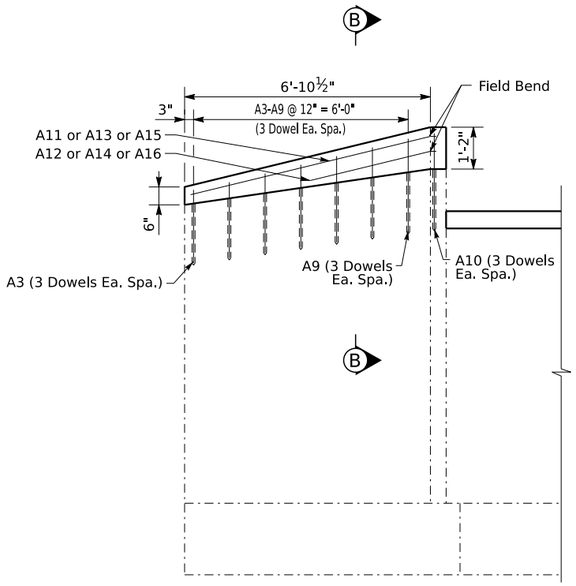
DETAILED BY: K. BISHOP	N. CORDTZ

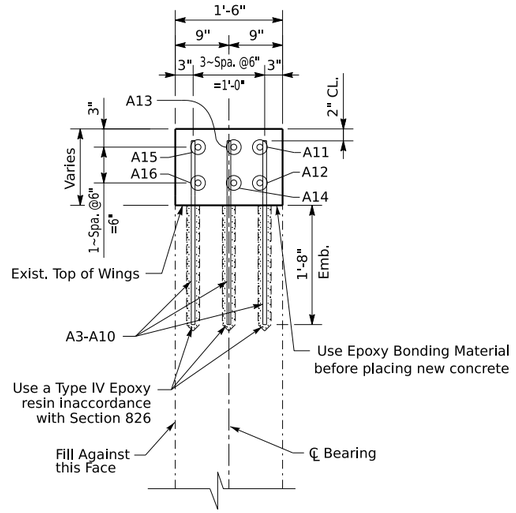
ABUTMENT #1

CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S6	DRAWING NUMBER 28958



WING #1 - ELEVATION

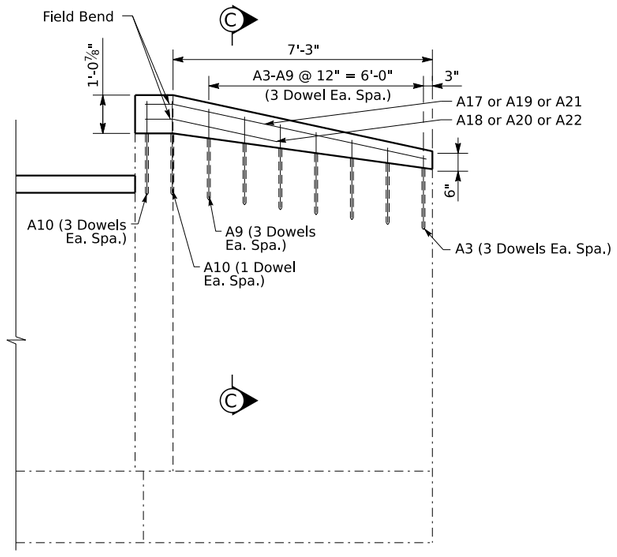


SECTION B-B

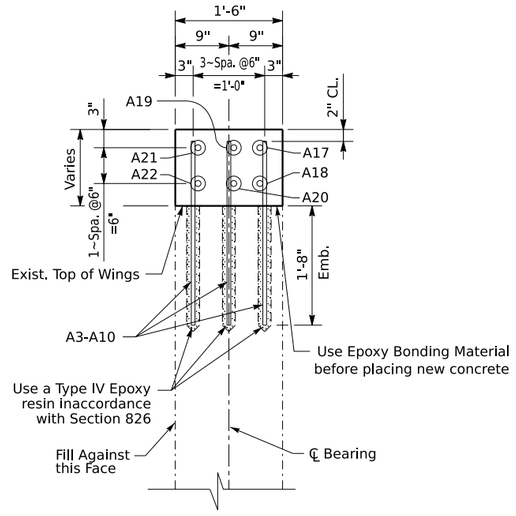
NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION
A1	Str.	3	8	25- 3	Breastwall
A2	Str.	78	5	2- 0	Breastwall Dowels
A3	Str.	6	5	2- 0	Wings Dowels
A4	Str.	6	5	2- 1	Wings Dowels
A5	Str.	6	5	2- 2	Wings Dowels
A6	Str.	6	5	2- 3	Wings Dowels
A7	Str.	6	5	2- 4	Wings Dowels
A8	Str.	6	5	2- 5	Wings Dowels
A9	Str.	6	5	2- 6	Wings Dowels
A10	Str.	6	5	2- 7	Wings Dowels
A11	Str.	1	5	7- 3	Wing 1
A12	Str.	1	5	3- 9	Wing 1
A13	Str.	1	5	7- 0	Wing 1
A14	Str.	1	5	3- 7	Wing 1
A15	Str.	1	5	6-10	Wing 1
A16	Str.	1	5	3- 5	Wing 1
A17	Str.	1	5	8- 5	Wing 2
A18	Str.	1	5	4- 2	Wing 2
A19	Str.	1	5	8- 3	Wing 2
A20	Str.	1	5	4- 0	Wing 2
A21	Str.	1	5	8- 1	Wing 2
A22	Str.	1	5	3- 9	Wing 2



WING #2 - ELEVATION



SECTION C-C

NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

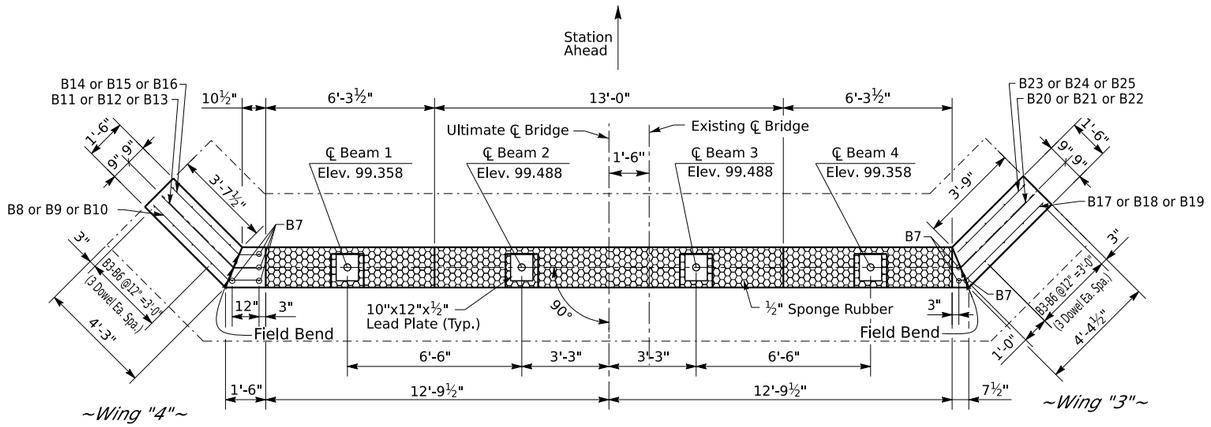
PREPARED BY
Division of Structural Design

DATE: DECEMBER 2024	CHECKED BY
DESIGNED BY: N. CORDTZ	L. LIKINS
DETAILED BY: K. BISHOP	N. CORDTZ

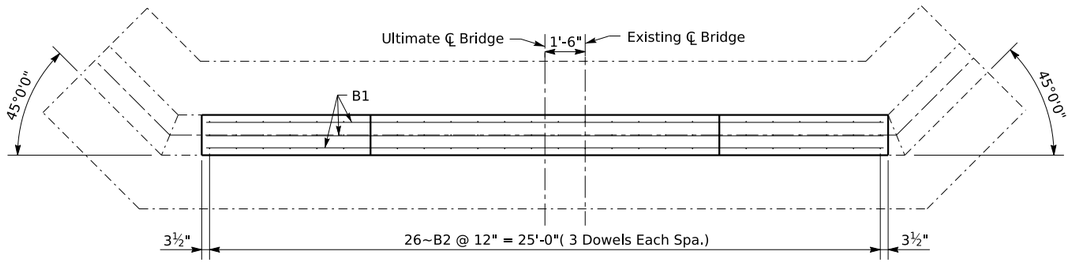
ABUTMENT #1
CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S7	DRAWING NUMBER 28958

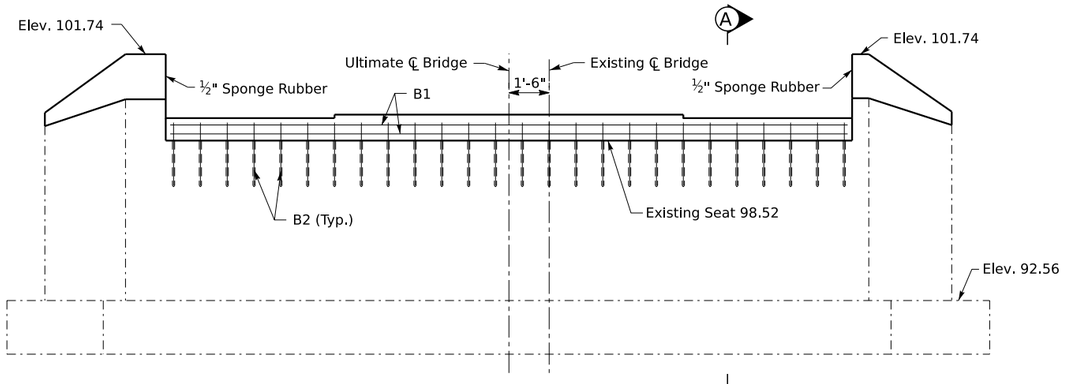
MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn



PLAN ABOVE BRIDGE SEAT



PLAN BELOW BRIDGE SEAT

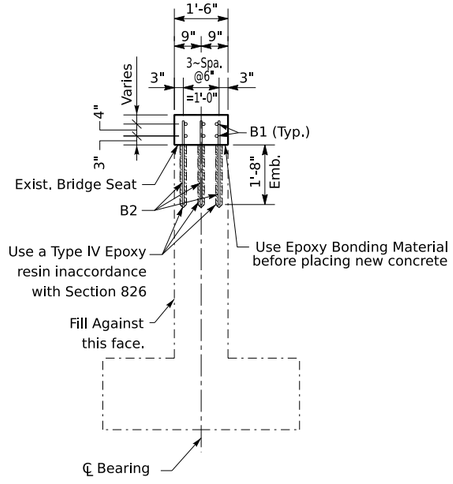


ABUTMENT #2 - ELEVATION Ⓐ

NOTE: Field Bend and trim if necessary

NOTE: Ensure not to drill into existing rebar, adjust location if necessary.

NOTE: Beam elevations are given at the top of concrete.



SECTION A-A

NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

REVISION	DATE

PREPARED BY
Division of Structural Design

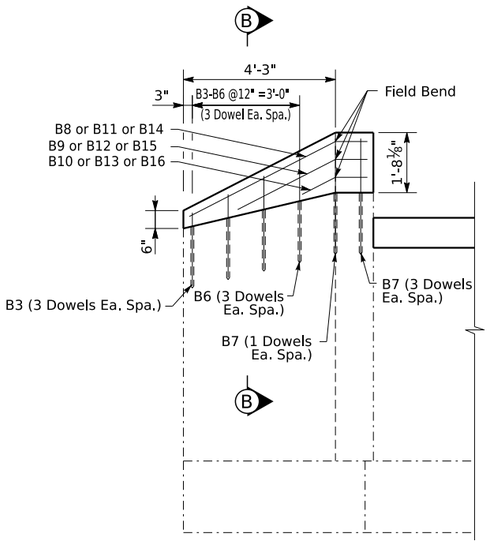
DATE: DECEMBER 2024	CHECKED BY
DESIGNED BY: N. CORDTZ	L. LIKINS
DETAILED BY: M. BAWITHAWNG	N. CORDTZ

ABUTMENT #2

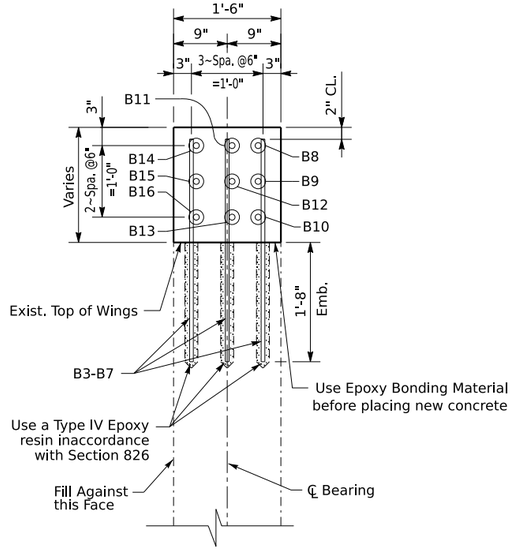
CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S8	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn



WING #4 - ELEVATION

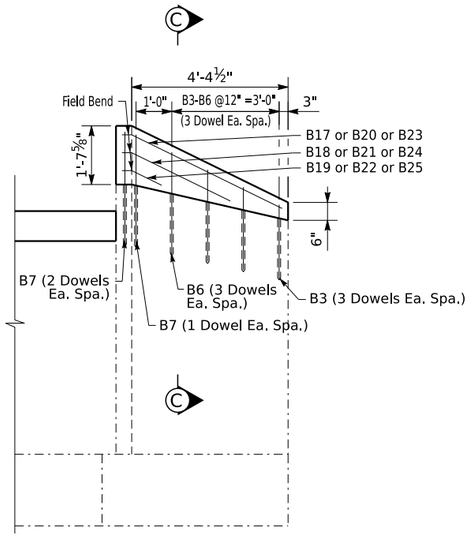


SECTION B-B

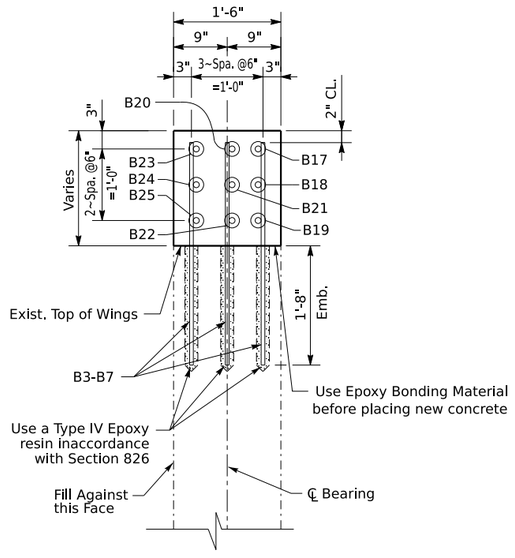
NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION
B1	Str.	6	8	25- 3	Breastwall
B2	Str.	78	5	2- 4	Breastwall Dowels
B3	Str.	6	5	2- 0	Wings Dowels
B4	Str.	6	5	2- 3	Wings Dowels
B5	Str.	6	5	2- 6	Wings Dowels
B6	Str.	6	5	2-10	Wings Dowels
B7	Str.	7	5	3- 1	Wings Dowels
B8	Str.	1	5	5- 9	Wing 4
B9	Str.	1	5	4- 3	Wing 4
B10	Str.	1	5	2- 3	Wing 4
B11	Str.	1	5	5- 7	Wing 4
B12	Str.	1	5	4- 1	Wing 4
B13	Str.	1	5	2- 1	Wing 4
B14	Str.	1	5	5- 5	Wing 4
B15	Str.	1	5	3-10	Wing 4
B16	Str.	1	5	1-10	Wing 4
B17	Str.	1	5	5- 0	Wing 3
B18	Str.	1	5	3- 5	Wing 3
B19	Str.	1	5	1- 3	Wing 3
B20	Str.	1	5	4-10	Wing 3
B21	Str.	1	5	3- 3	Wing 3
B22	Str.	1	5	1- 1	Wing 3
B23	Str.	1	5	4- 8	Wing 3
B24	Str.	1	5	3- 1	Wing 3
B25	Str.	1	5	0-11	Wing 3



WING #3 - ELEVATION



SECTION C-C

NOTE: The cost of drilling holes, grouting, and epoxy bonding material shall be incidental to the cost of Class "A" Concrete.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

REVISION	DATE

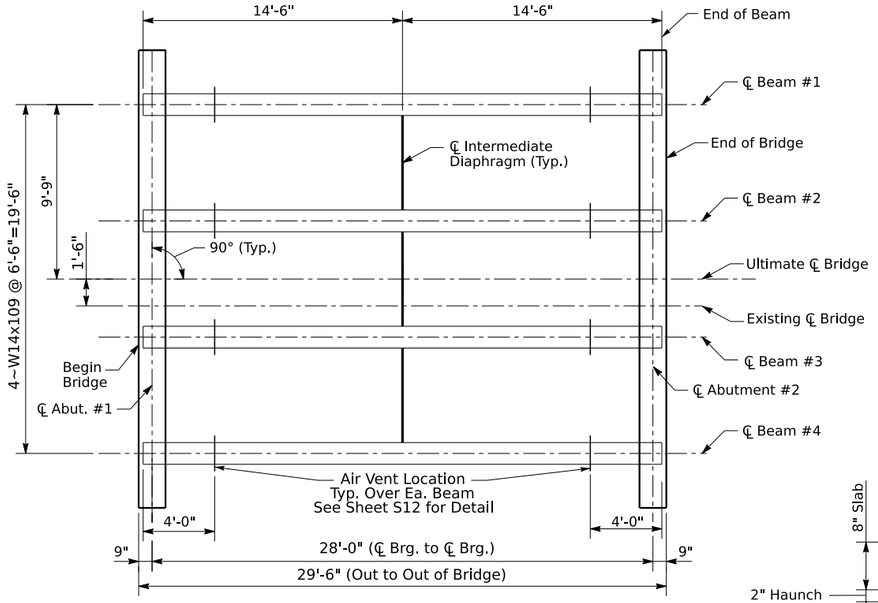
PREPARED BY
Division of
Structural Design

DATE: DECEMBER 2024	CHECKED BY
DESIGNED BY: N. CORDTZ	L. LIKINS
DETAILED BY: M. BAWITHAWNG	N. CORDTZ

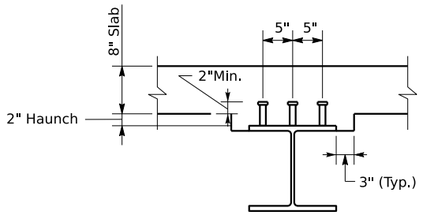
ABUTMENT #2

CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S9	DRAWING NUMBER 28958

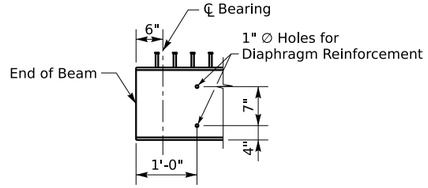


FRAMING PLAN



SHEAR CONNECTOR

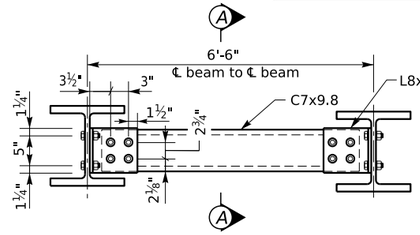
Use 1"∅x4" Long Granular
Or Solid Flux Filled Headed Studs,
Automatically End Welded.



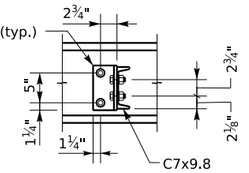
END OF BEAM DETAIL

(Typ. Each End of Beam)

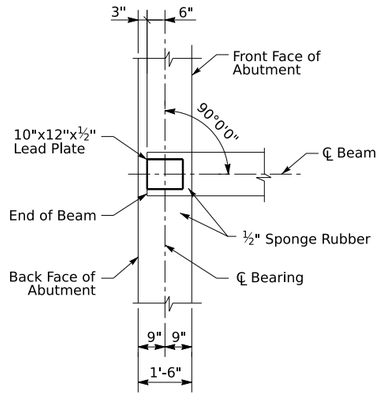
NOTE: Use ¾" ∅ Bolts with
$^{13}/_{16}$" ∅ Holes Throughout.



INTERMEDIATE DIAPHRAGM

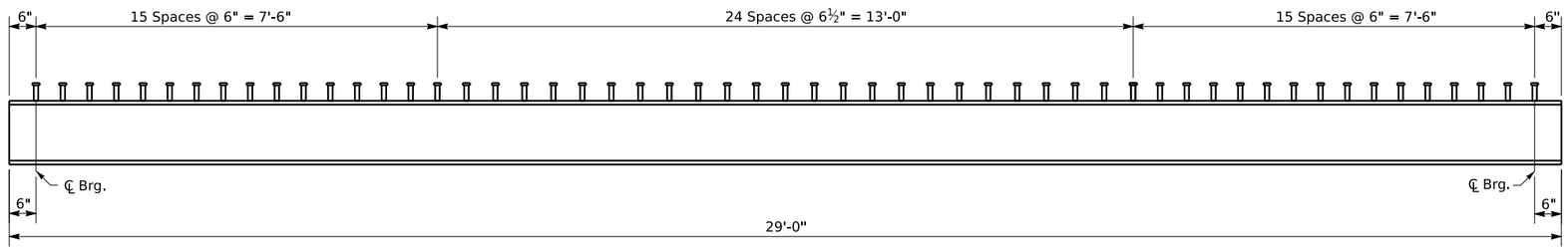


SECTION A-A



END OF BEAM DETAIL @ ABUTMENTS

Use ½" Sponge rubber between the diaphragm and the top of the support wall and between the diaphragm and the wings.



GIRDER ELEVATION

Notes:
1. Galvanize all steel according to ASTM A123
2. Install shear studs before galvanizing

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY Transportation Cabinet

REVISION	DATE

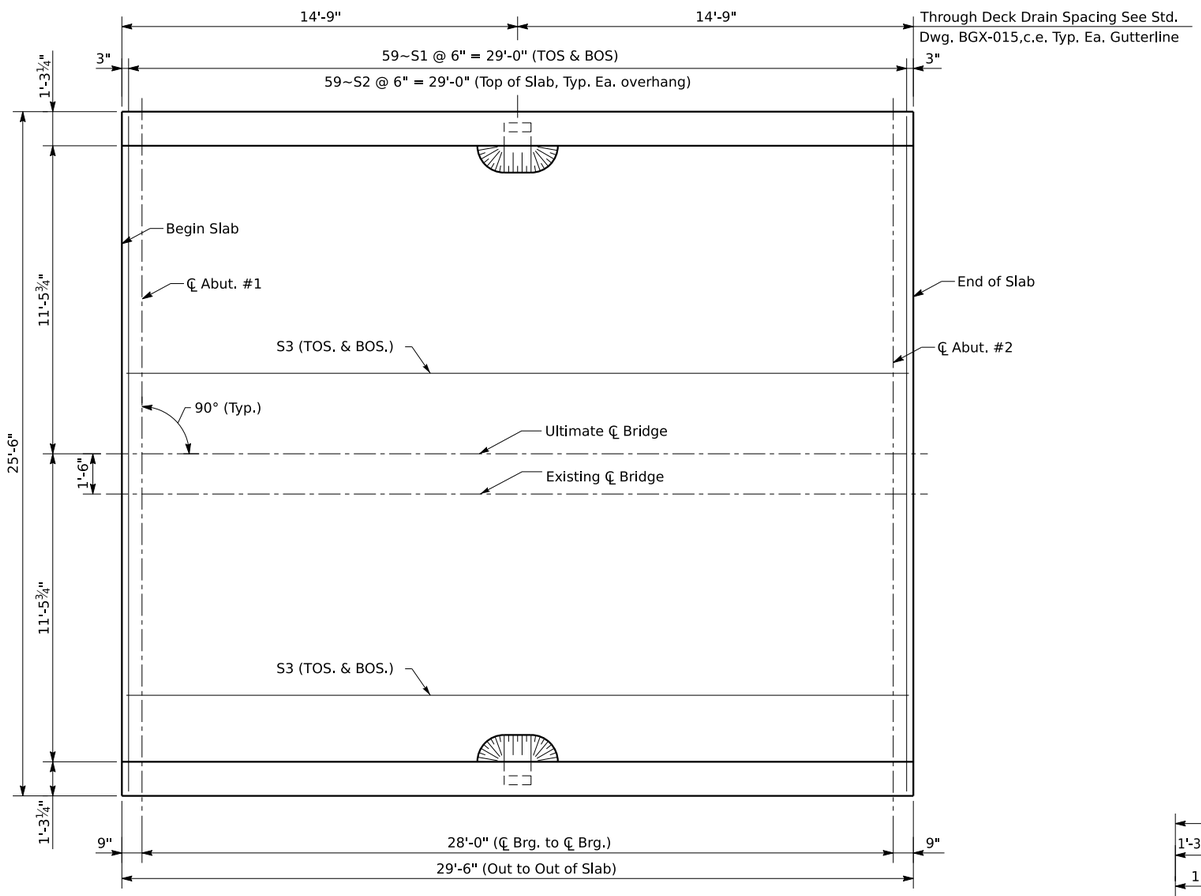
PREPARED BY
Division of Structural Design

DATE: DECEMBER 2024		CHECKED BY
DESIGNED BY: N. CORDTZ		L. LIKINS
DETAILED BY: M. BAWITHAWNG		N. CORDTZ

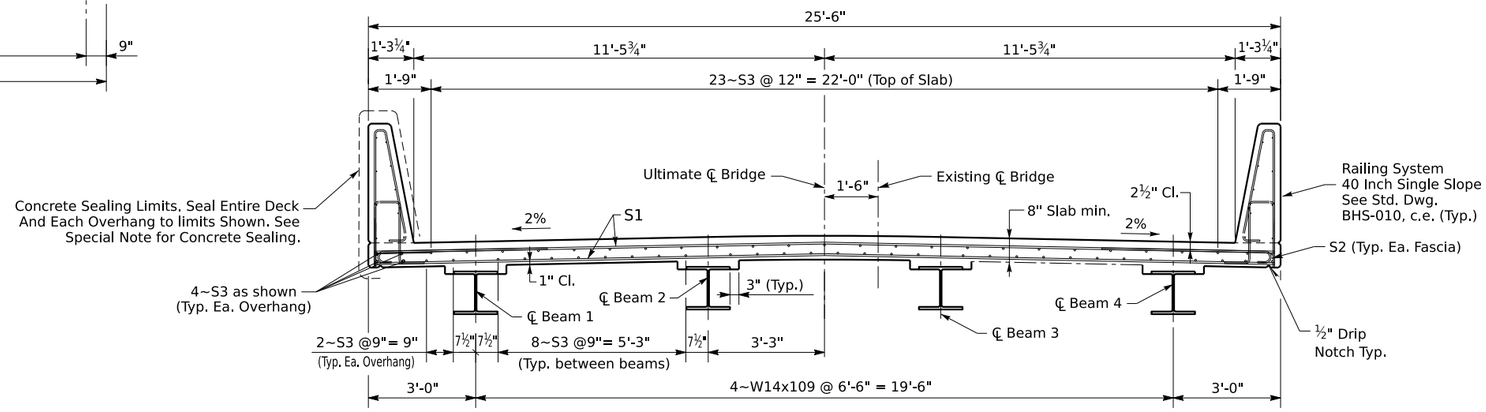
FRAMING
CROSSING: TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S10	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn



PLAN OF SLAB



TYPICAL SECTION

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY Transportation Cabinet

REVISION	DATE

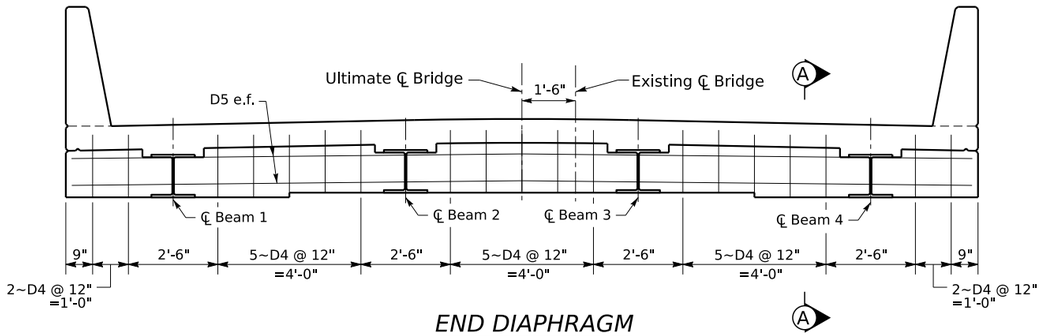
PREPARED BY
Division of Structural Design

DATE: DECEMBER 2024	CHECKED BY	
DESIGNED BY: N. CORDTZ	L. LIKINS	
DETAILED BY: M. BAWITHAWNG	N. CORDTZ	

SUPERSTRUCTURE
CROSSING: TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S11	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn

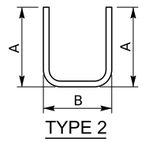


END DIAPHRAGM

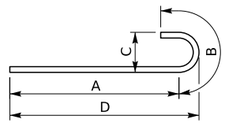
(Typ. Ea. End of Bridge)

BILL OF REINFORCEMENT

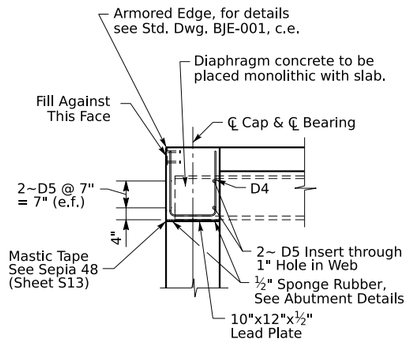
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B	C	D
S1e	Str.	118	5	25- 2	Top & Bot. Slab Transverse				
S2e	4	118	4	5- 6	Slab Overhang	4-1Ø	Ø- 8	Ø- 4	5- Ø
S3e	Str.	59	5	29- 2	Slab Longitudinal				
D4e	2	19	5	4- 6	Diaphragm	1- 8	1- 2		
D5e	Str.	4	5	25- 2	Diaphragm				
D6e	Str.	6	8	2- Ø	Abutment 1 Dowels				



TYPE 2



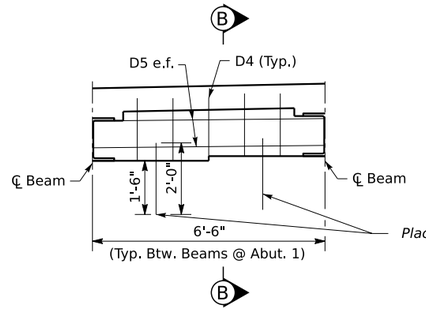
TYPE 4



SECTION A-A

Notes: 1.) Diaphragm stirrups are to project into the slab regardless of slab forming method.

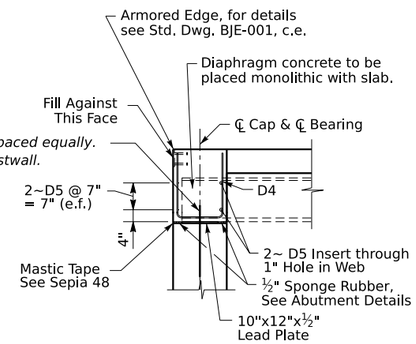
2.) Place stirrup bars parallel to face of beams.



END DIAPHRAGM

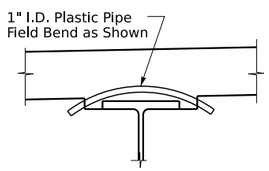
(Only @Abut #1)

Note: Only Abutment 1 is to be fixed with dowels.



Place 2~D6 between beams spaced equally.
Embed 1'-6" into Breastwall.

SECTION B-B



Note: Place 1" plastic pipe above beams 4'-0" from each end. Work and material is incidental to superstructure concrete.

AIR VENT DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY Transportation Cabinet

REVISION	DATE

PREPARED BY
Division of
Structural Design

DATE: DECEMBER 2024	CHECKED BY	
DESIGNED BY: N. CORDTZ	L. LIKINS	
DETAILED BY: M. BAWITHAWNG	N. CORDTZ	

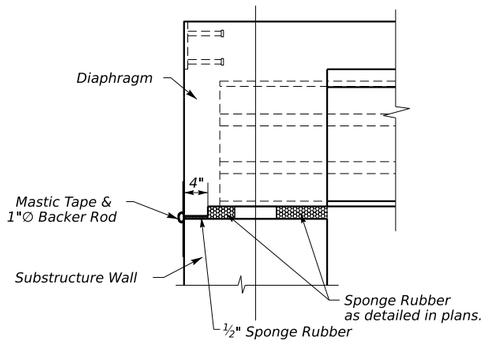
SUPERSTRUCTURE

CROSSING
TRIB TO TOWN CREEK

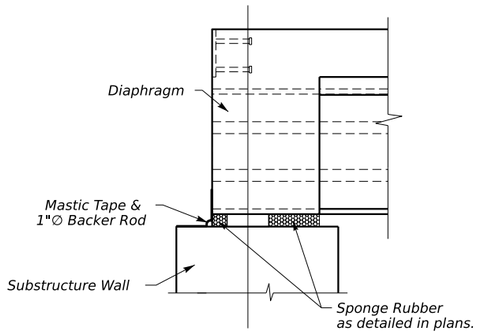
ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S12	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn

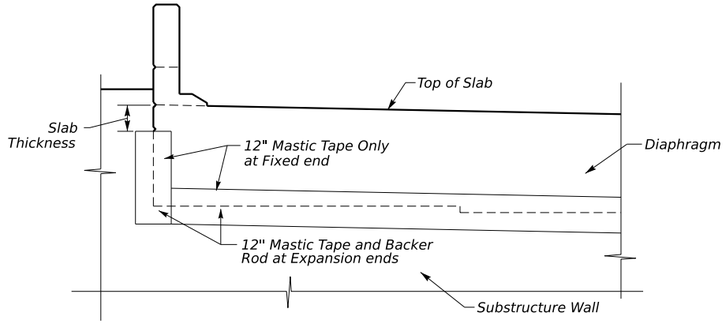
*Expansion Joint Material:
AASHTO M153
Type-I Sponge Rubber



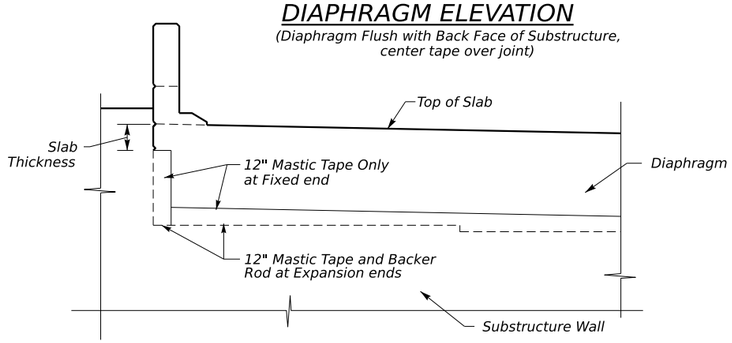
EXPANSION END
(Flush Diaphragm and Substructure)



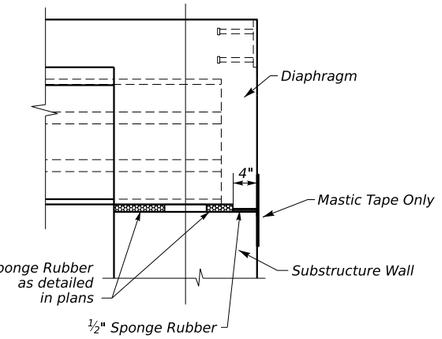
EXPANSION END
(Offset Diaphragm and Substructure)



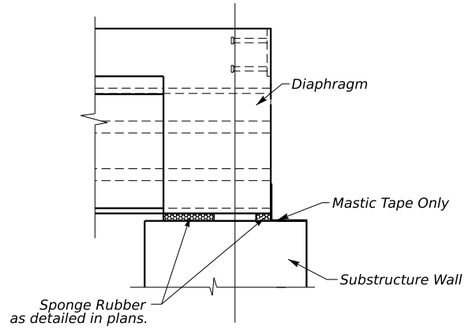
DIAPHRAGM ELEVATION
(Diaphragm Flush with Back Face of Substructure, center tape over joint)



DIAPHRAGM ELEVATION
(Offset Diaphragm and Substructure)



FIXED END
(Flush Diaphragm and Substructure)

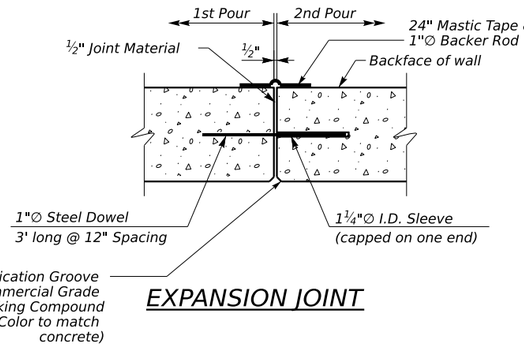


FIXED END
(Offset Diaphragm and Substructure)

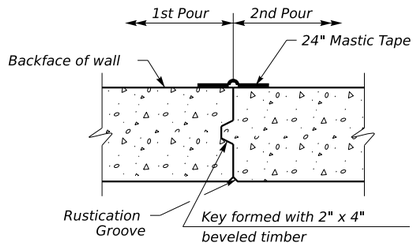
MASTIC TAPE APPLICATION AT BRIDGE ENDS

The cost of labor, materials, and incidental items for furnishing and installing Mastic Tape shall be considered incidental to the unit price bid for Concrete Class 'AA' and no separate measurement or payment shall be made.

Note: Center Mastic Tape over joint.



EXPANSION JOINT



CONTRACTION JOINT

NOTE:
Maintain 2 inch clearance from ends of Longitudinal reinforcement to edge of expansion joint.

MASTIC TAPE APPLICATION AT RETAINING WALLS

GENERAL NOTES

MASTIC TAPE: Mastic Tape used to seal joints is to meet the requirements of ASTM C-877 Type I, II, or III. The joint is to be covered with 12-inch wide mastic tape. Prior to application, the joint surface shall be clean and free of dirt, debris, or deleterious material. Primer, if required by the tape mfgr., shall be applied for a minimum width of nine inches on each side of the joint.

Mastic Tape shall be either:

*EZ-WRAP RUBBER by PRESS-SEAL GASKET CORPORATION,
SEAL WRAP by MAR MAC MANUFACTURING CO. INC. ,
CADILLOC by the UP RUBBER CO. INC.
or approved equal.*

Mastic Tape shall cover the joint continuously unless otherwise shown in the plans. Mastic Tape shall be spliced by lapping a minimum of six inches and in accordance with the mfgrs. recommendations with the overlap running downhill.

All preformed expansion joint material, caulking, mastic tape, pipe sleeve and equipment and labor necessary to complete the joints are incidental to the square foot bid for Retaining Walls.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

REVISION	DATE

PREPARED BY
Division of
Structural Design

DATE: DECEMBER 2024		CHECKED BY	
DESIGNED BY: N. CORDTZ		L. LIKINS	
DETAILED BY: M. BAWITHAWNG		N. CORDTZ	

SEPIA 048 - JOINT WATERPROOFING
CROSSING: TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S13	DRAWING NUMBER 28958

CONSTRUCTION ELEVATIONS

LOCATION	LEFT GUTTER	BEAM 1			BEAM 2			℄ BRIDGE			BEAM 3			BEAM 4			RIGHT GUTTER
		CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	
SKEW LN AA	100.737	100.771			100.901			100.936			100.901			100.771			100.737
SKEW LN BB	100.754	100.788			100.918			100.953			100.918			100.788			100.754
SKEW LN CC	101.390	101.425			101.555			101.590			101.555			101.425			101.390
SKEW LN DD	101.407	101.442			101.572			101.607			101.572			101.442			101.407
GRID LN 01	100.908	100.943			101.071			101.106			101.071			100.943			100.908
GRID LN 02	101.100	101.135			101.262			101.296			101.261			101.134			101.100
GRID LN 03	101.272	101.306			101.434			101.469			101.434			101.306			101.272

NOTES FOR ELEVATIONS TAKEN ON STEEL BEAMS

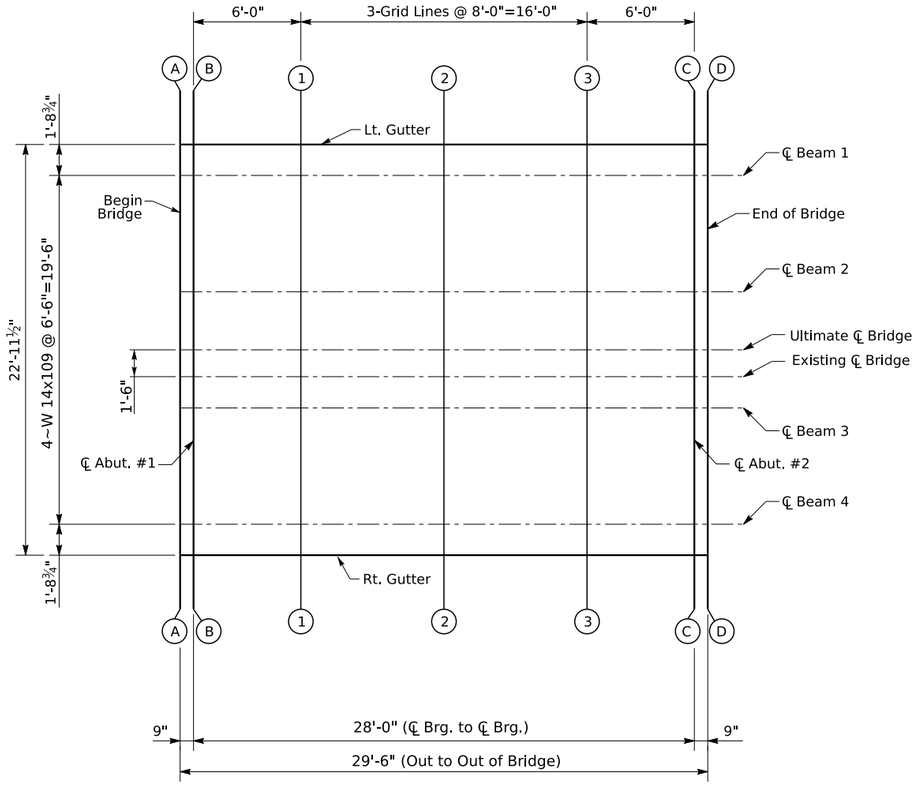
Take elevations on top of beam at points indicated by the grid layout. The beam elevations are to be read to three decimals, and entered in tables under "Top of Beam" elevations.

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, and unsightly fascia beams.

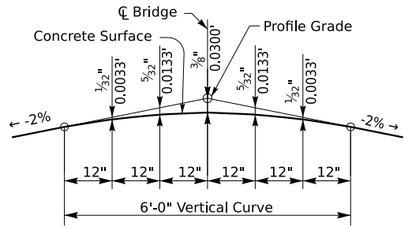
For setting templates, measure dimension "X" above top of beams for top of template. Do not set template by elevations.

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

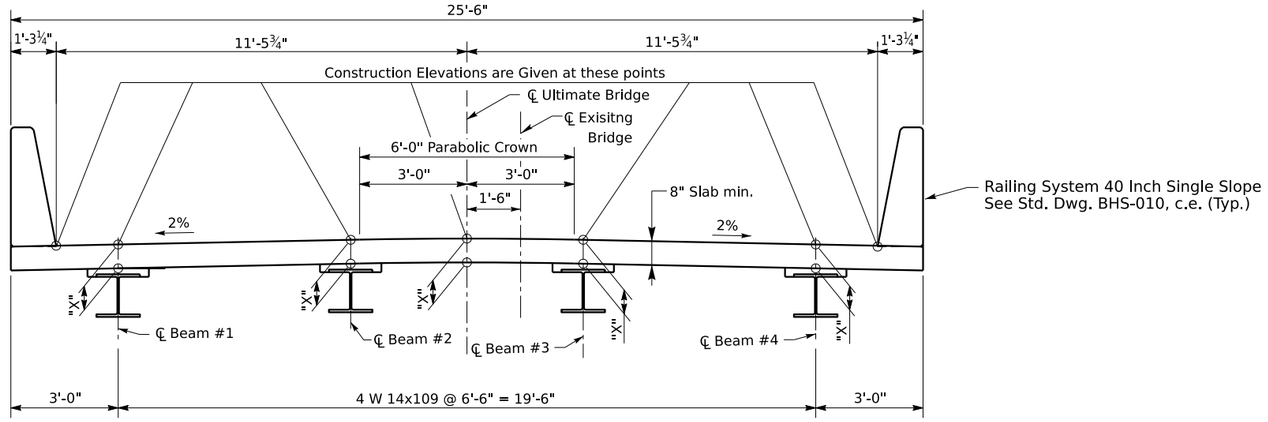
Construct barrier to roadway grade. Do not add camber to the barrier.



GRID LAYOUT



PARABOLIC CROWN



TYPICAL SECTION

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY
Division of Structural Design

DATE: DECEMBER 2024	CHECKED BY	
DESIGNED BY: N. CORDTZ	L. LIKINS	
DETAILED BY: M. BAWITHAWNG	N. CORDTZ	

CONSTRUCTION ELEVATION

CROSSING
TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S14	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn

① ROAD CLOSED R11-2 (48"x30")

② ROAD CLOSED 500 FT W20-3 (36"x36")

③ ROAD CLOSED 1000 FT W20-3 (36"x36")

④ BRIDGE CLOSED 4.5 MILES AHEAD LOCAL TRAFFIC ONLY R11-4 (60"x30")

⑤ BRIDGE CLOSED 1.9 MILES AHEAD LOCAL TRAFFIC ONLY R11-4 (60"x30")

⑨ DETOUR AHEAD W20-2 (36"X36")

⑩ 573 M1-5 (30"x24")

⑪ DETOUR M4-8P (24"X12")

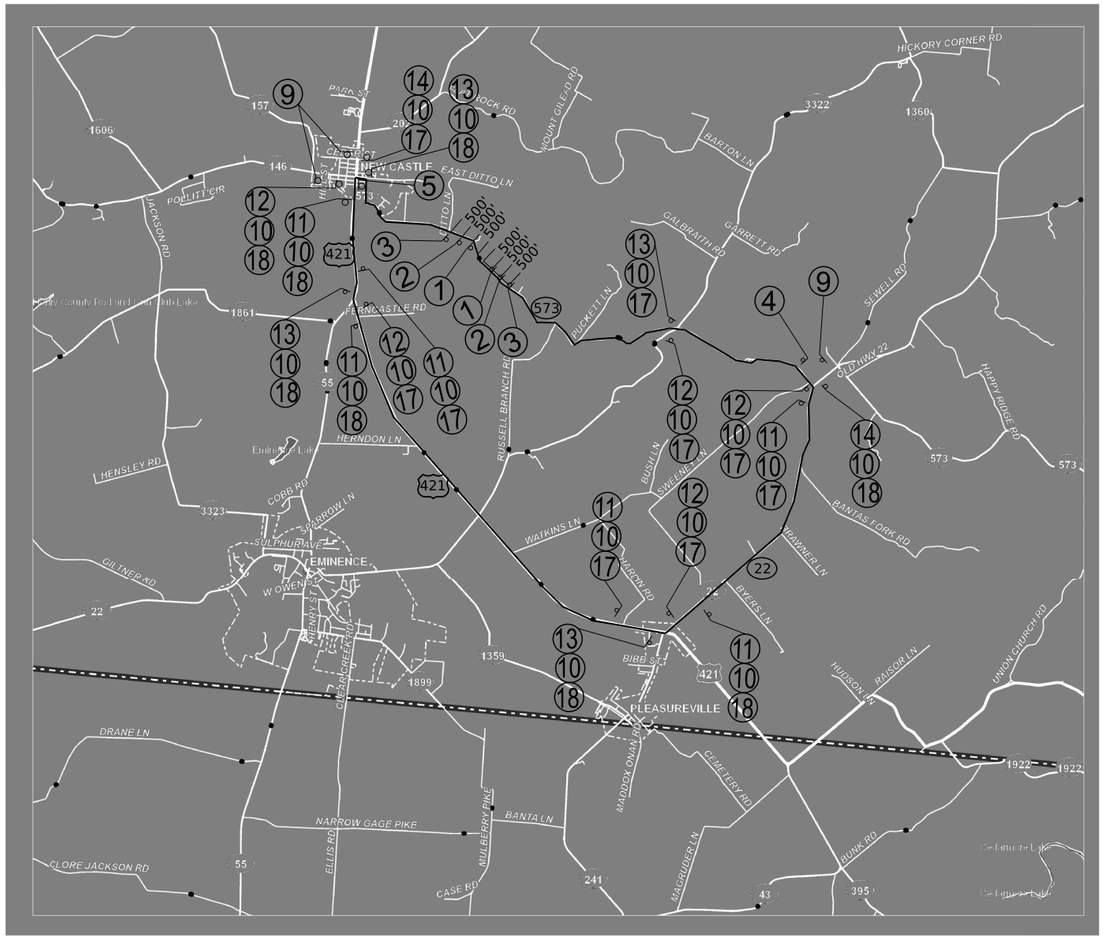
⑫ DETOUR M4-9 (30"x24")

⑬ DETOUR M4-9 (30"x24")

⑭ END DETOUR M4-8a (24"x18")

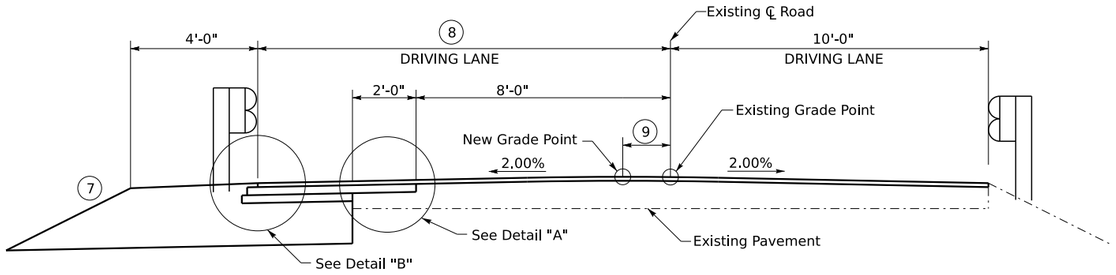
⑰ WEST M3-4 (24"X12")

⑱ EAST M3-2 (24"X12")



COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Division of Structural Design	DATE: OCTOBER 2024	CHECKED BY	*DETOUR*	ROUTE	BRIDGE ID.	COUNTY OF
				DESIGNED BY: N. CORDTZ	L. LIKINS	CROSSING	KY 573	052B00043N	HENRY
				DETAILED BY: M. BAWITHAWNG	N. CORDTZ	TRIB TO TOWN CREEK		SHEET NO. S15	DRAWING NUMBER 28958

MicroStation v10.16.3.31 USER: nicholas.cordtz DATE PLOTTED: 1-JUL-2025 FILE NAME: C:\Users\nicholas.cordtz\Desktop\28958.dgn



Note: The centerline of the roadway is to remain at the existing location over the entire project.

WIDENING
KY 573
STA. 9+24.25 to STA. 9+99.25
STA. 10+28.75 to STA. 11+03.75

KY 573
WIDEN & OVERLAY CONSTRUCTION, GRADE, & FLEXIBLE PAVEMENT

WIDEN

APPROXIMATELY 1½" SURFACE — 1½" COMPACTED DEPTH CL 3 ASPHALT SURFACE 0.38B PG 64-22

APPROXIMATELY 22' BASE —
- 3" COMPACTED DEPTH CL 3 ASPHALT BASE 1.00D PG64-22
- 3" COMPACTED DEPTH CL 3 ASPHALT BASE 1.00D PG64-22
- I6" COMPACTED DEPTH CRUSHED STONE BASE
- 8" CEMENT STABILIZED ROADBED

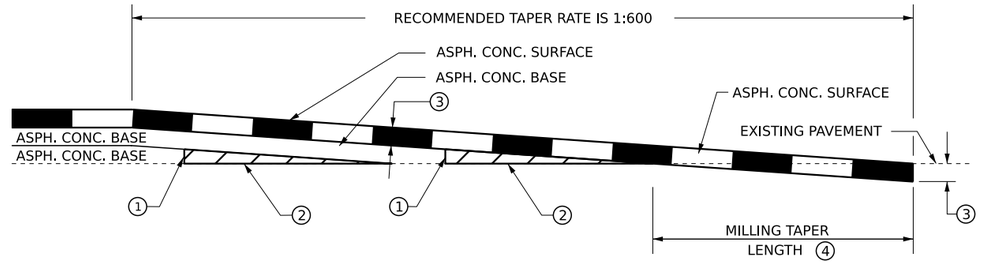
ASPHALT TACK COAT — APPLY AS DIRECTED BY THE ENGINEER BETWEEN COURSES

OVERLAY

DEPTH VARIES — DEPTH VARIES ASPHALT MIXTURE FOR LEVELING AND WEDGING

APPROXIMATELY 1¼" SURFACE — 1½" COMPACTED DEPTH CL 3 ASPHALT SURFACE 0.38B PG64-22

ASPHALT TACK COAT — APPLY AS DIRECTED BY THE ENGINEER BETWEEN COURSES



TAPERING OF OVERLAYS ON MEDIUM SPEED FACILITIES (45 MPH to 65 MPH)

① MINIMUM COMPACTED THICKNESS

② ASPHALT MIXTURE FOR LEVELING AND WEDGING OR NEXT COURSE OF ASPHALT MIXTURE.

③ ASPHALT SURFACE THICKNESS (FULL DEPTH)

④ MILL EXISTING PAVEMENT TO RECEIVE ASPHALT SURFACE FULL DEPTH (EDGE KEY).
TAPER LENGTH (ft) = $\frac{\text{t (in) x TAPER RATE}}{12}$

⑤ SAW CUT EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER TO PROVIDE A UNIFORM EDGE TO ABUT NEW PAVEMENT AGAINST. SAW CUT SHALL BE NO LESS THAN 2.0' INSIDE THE PROPOSED EDGE OF PAVEMENT AND SHALL BE INCIDENTAL TO ROADWAY EXCAVATION

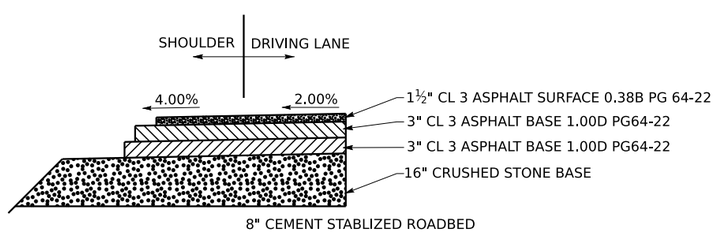
⑥ CONSTRUCT LONGITUDINAL EDGE KEY IN EXISTING PAVEMENT AS NECESSARY TO PROVIDE FOR A MINIMUM 3" LAYER OF ASPHALT BASE OVERLAY.

⑦ APPLY ASPHALT SEAL COAT FROM THE OUTSIDE EDGE OF THE PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE: TWO (2) APPLICATIONS AT THE RATE OF: 2.40 LBS/SY: ITEM 103 ASPHALT SEAL COAT: 20 LBS/SY: ITEM 100 ASPHALT SEAL AGGREGATE

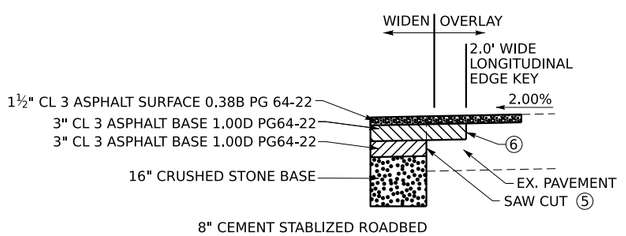
⑧ TAPER FROM 10'-0" TO 12'-11¾" STA. 9+24.25 to STA. 9+99.25
TAPER FROM 12'-11¾" TO 10'-0" STA. 10+28.75 to STA. 11+03.75

⑨ TAPER FROM 0'-0" TO 1'-6" STA. 9+24.25 to STA. 9+99.25
TAPER FROM 1'-6" TO 0'-0" STA. 10+28.75 to STA. 11+03.75

Note:
For a Taper Rate of 1 : 600
Taper Length = 75 feet when t= 1.5 inches



DETAIL "B"



DETAIL "A"

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

REVISION	DATE

PREPARED BY
Division of
Structural Design

DATE: DECEMBER 2024	CHECKED BY	
DESIGNED BY: N. CORDTZ	L. LIKINS	
DETAILED BY: M. BAWITHAWNG	N. CORDTZ	

TYPICAL ROADWAY SECTIONS
CROSSING: TRIB TO TOWN CREEK

ROUTE	BRIDGE ID.	COUNTY OF
KY 573	052B00043N	HENRY
	SHEET NO. S16	DRAWING NUMBER 28958

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