PCN 124

3-228-03

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

CARTER COUNTY
I–64 EASTBOUND & WESTBOUND
OVER FLEMING FORK CREEK
& FLEMING FORK ROAD

ESTIMATE OF QUANTITIES

	BID ITEM CODE No.	2403	8510	8104	3299	8151	8469	8470	2690	2998
	BID ITEM	Remove Concrete Masonry	Remove Epoxy Bitumonus Foriegn Overlay	Concrete Class "AA"	Armored Edge for Concrete	Steel Reinforcement, Epoxy Coated	1 1/2" Expansion Dam Neoprene	2" Expansion Dam Neoprene	Safe Loading	Masonry Coating
	UNIT	C.Y.	S.Y.	C.Y.	L.F.	LBS.	L.F.	L.F.	C.Y.	S.Y.
Bridge Structure	Westbound Bridge	76	936	231.2	84.5	36633	46.5	46.5	2	820
Bridge Structure	Eastbound Bridge	76	936	231.2	84.5	36633	46.5	46.5	2	820
	BRIDGE TOTALS	152	1872	462.4	169.0	73266	93.0	93.0	4	1640

BILL OF INCIDENTAL MATERIALS

Material	Location
1" Ø I.D. Plastic Pile	Barrier Transitions
2" Ø I.D. Commercial Pipe Sleeve	
½" Cork	

INDEX OF SHEETS

ADDITIONAL NOTES

SPECIAL NOTES

SPECIAL PROVISIONS

STANDARD DRAWINGS

BGX-006-08	Stencils for Structures
BGX-010-04	Barrier Transition
BJE-001-11	Neoprene Expansion Dams and Armored Edges

SPECIFICATIONS

2000 Standard Specifications for Road and Bridge Construction

1996 AASHTO Standard Specifications for Highway Bridges including Interims through 1998.

REVISION	DATE

DATE: April 2002	CHECKED BY
DESIGNED BY: E. Cottrel	R. Finley
DETAILED BY: P. Yost	D. Carpenter

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: **CARTER**

ROUTE: **I–64** CROSSING: **Fleming Fork Cr. & Road (Ky.1704)**

TITLE

ITEM NUMBER: **9–2008.00**

PREPARED BY: **Division of Bridge Design**
D. Carpenter Section

SHEET NO. 1

DRAWING NO. **25463**

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 Standard Specifications for Highway Bridges, with Interims.

LIVE LOAD: This bridge deck is designed for HS25 live load or alternate military loading, whichever produces the greater stress. The HS25 live load is arrived at by increasing the standard HS20-44 truck and lane loads as specified in the AASHTO Specifications by 25%.

DESIGN METHOD: All reinforced concrete members are designed by the load 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 inches 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.

CONCRETE: Class "AA" is to be used throughout the new slab and barriers.

BEVELED EDGES: All exposed edges shall be beveled 7/8" unless otherwise shown.

BILL OF INCIDENTAL MATERIAL: The Contractor is responsible for furnishing enough material to complete the work in accordance with the Plans and Specifications. The cost of these items is to be included in the unit price bid for Class AA Concrete.

DIMENSIONS: Dimensions are for a normal temperature of 60° F Layout dimensions are horizontal measurements.

SUPERSTRUCTURE SLAB: The superstructure slab shall be poured continuously from out to out before the concrete is allowed to set.

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 not be honored by the Department of Highway.

EXISTING REINFORCING STEEL: The cost of cutting, bending and cleaning existing reinforcing steel is to be incidental to the unit price bid for Removing Concrete Masonry.

MASONRY SURFACE FINISH: Only areas detailed in the plans shall receive masonry coating. All coating shall be applied in accordance with the specifications.

TEXTURING: Texture the surface of the new slab in accordance with Section 609 of the specifications. Cost to texture the surface is included in the unit price bid for "Concrete Class AA"

SAFELOADING: The existing bridge end drainage on the east end of both bridges is to be pluged and safe loaded in accordance with the specifications. All cost are to be included in the unit price bid for "Safe Loading".

DAMAGE TO THE STRUCTURE: The contractor is responsible for any and all damages to the structure during reconstruction, even to the replacement of entire spans and removal of the fallen spans at his expense, should they be allowed to fall due to his actions.

PREWETTING THE DECK: The contractor shall use a high pressure washer (minimum 1200 PSI @ 2 gal./min.) to wash the deck of any loose material and dirt prior to placing the reinforcment steel. The contractor shall also continously water the deck for 2 hours before placing the new concrete and maintain visible moisture on the deck without standing water while the new slab is being poured. All cost of this work is incidental to Class "AA" Concrete.

EXISTING ALUMINUM HANDRAIL: The existing aluminum handrail, including posts, shall be carefully removed and transported to the Carter County Maintenance Garage. This material shall remain the property of the department. All costs is incidental to Removing Concrete Masonry

REMOVAL EXISTING OVERLAY: The existing overlay shall be removed in accordance with the specifications. The contractor shall also remove any delaminations and any bituminous material on the existing deck.
The deck should have a 1/4" amplitude roughness after the overlay removal.
All cost associated with removing the existing overlay and removing all bad deck material is included in the unit price bid for "Removal of Epoxy, Bituminous Foreign Overlays".

GRADE ELEVATIONS: The Engineer shall check the alignment of the finishing machine rails to verify that the new slab will have a smooth driving surface. Dead load camber is insignificant on the bridge.

ORIGINAL DRAWING NUMBER: The original drawing number for this structure is 16201.

ARMORED EDGES: Contrary to the Standard Drawing BJE-001, c.e. cost to fabricate and install the steel Armored Edge is included in the unit price bid for "Armored Edge for Concrete".

NEOPRENE EXPANSION JOINTS: The costs for armored edges used in the expasion dams shall be included in the cost of the Expansion Dam.

REMOVAL OF EXISTING REINFORCED CONCRETE: This work shall include removal of existing expansion dams and armored edges at each end of the bridge for both structures, the reinforced concrete curbs and handrails for the entire length of each bridge structure plus other concrete noted on the plans and deposing of this material away from each bridge site. Proper care shall be taken to protect the concrete beams and substructure from damage during each operation. The contractor shall be responsible for any damage caused by falling particles. The cost of this work shall be included in the unit price bid for Removing Concrete Masonry.

REVISION	DATE

DATE: April 2002	CHECKED BY
DESIGNED BY: E. Cottrel	R. Finley
DETAILED BY: P. Yost	D. Carpenter

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
CARTER

ROUTE	CROSSING
I-64	Fleming Fork Cr. & Road (Ky. 1704)

GENERAL NOTES

ITEM NUMBER	PREPARED BY	SHEET NO.
9-2008.00	Division of Bridge Design *D. Carpenter Section*	2
		DRAWING NO. 25463

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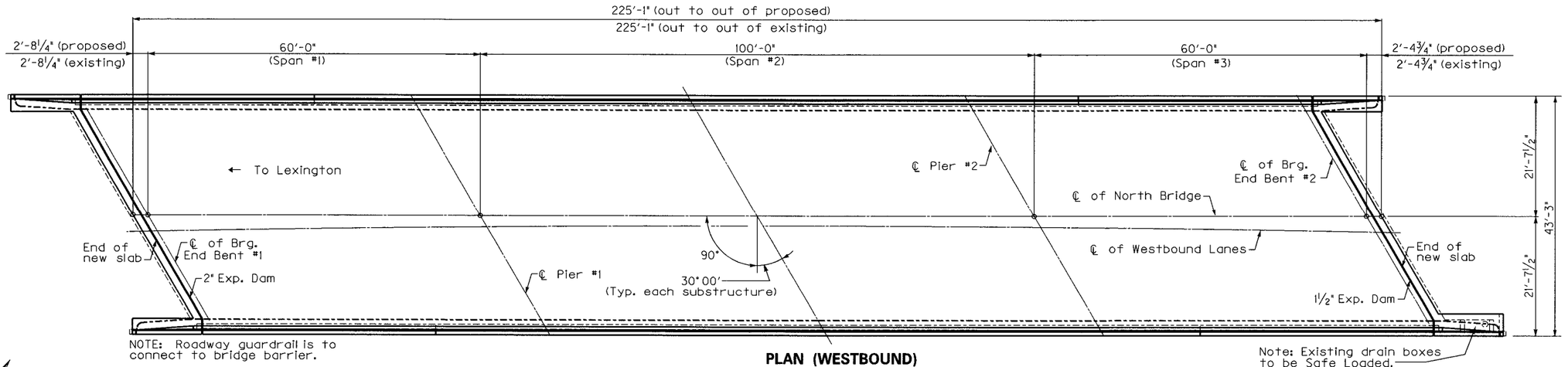
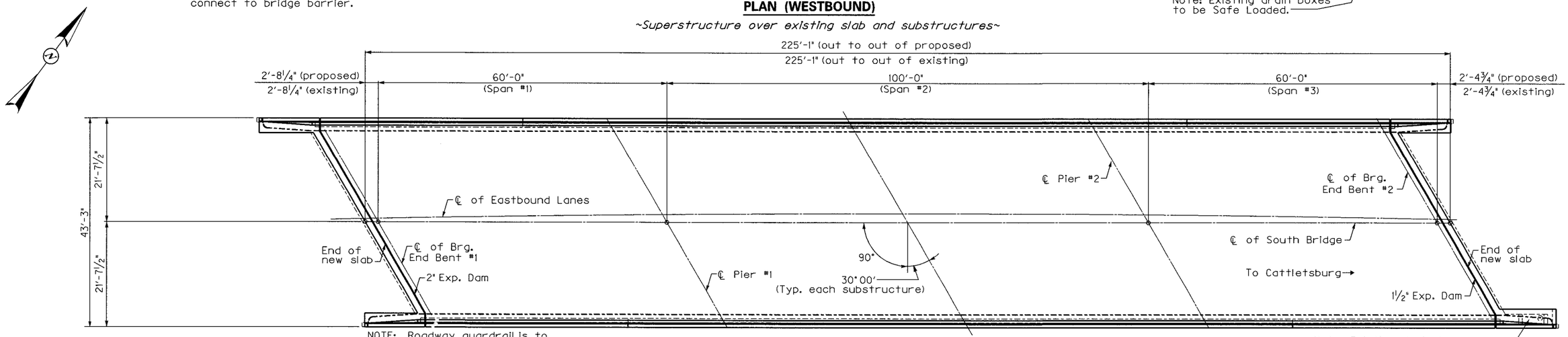
USERNAME: PYOST
DATE: 13-JAN-2003
SHEET LOCATION: GN1



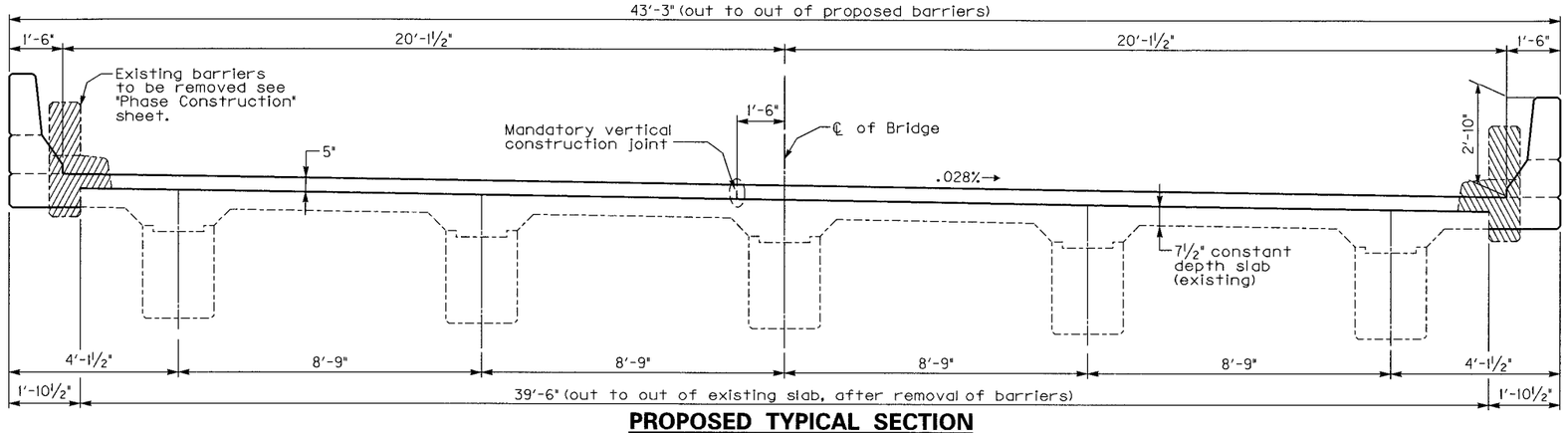
PLAN (WESTBOUND)

~Superstructure over existing slab and substructures~



PLAN (EASTBOUND)

~Superstructure over existing slab and substructures~



PROPOSED TYPICAL SECTION

REVISION	DATE

DATE: April 2002	CHECKED BY
DESIGNED BY: E. Cottrel	R. Finley
DETAILED BY: P. Yost	E. Cottrel

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

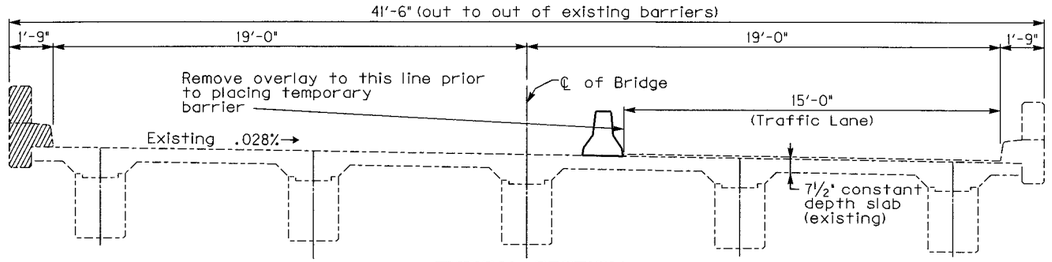
COUNTY
CARTER

ROUTE	CROSSING
I-64	Fleming Fork Cr. & Road (Ky. 1704)

LAYOUT

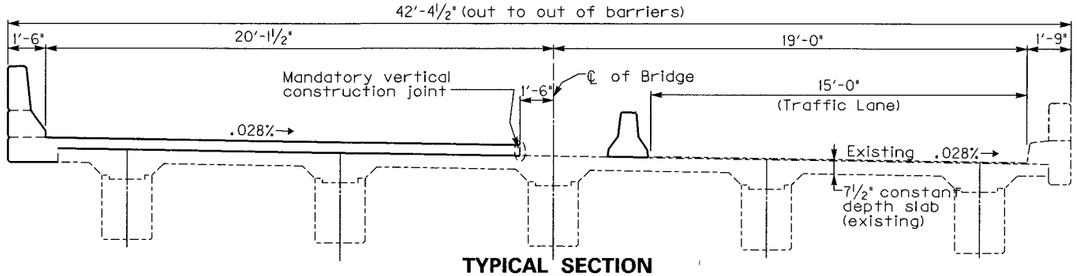
ITEM NUMBER	PREPARED BY	SHEET NO.
9-2008.00	Division of Bridge Design *D. Carpenter Section*	3 DRAWING NO. 25463

FILE NAME: D:\bridges\projects\Dale.Carpenter_Section\25463_Carter\25463.dgn
USERNAME: PYOST
DATE: 13-JAN-2003
SHEET LOCATION: LAY



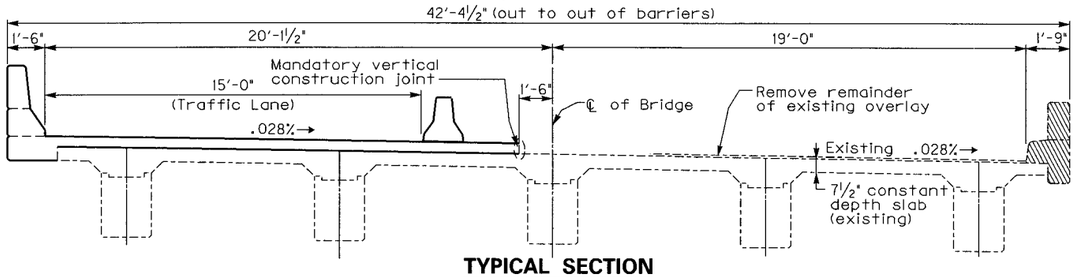
TYPICAL SECTION

~Showing Phase I Removal~



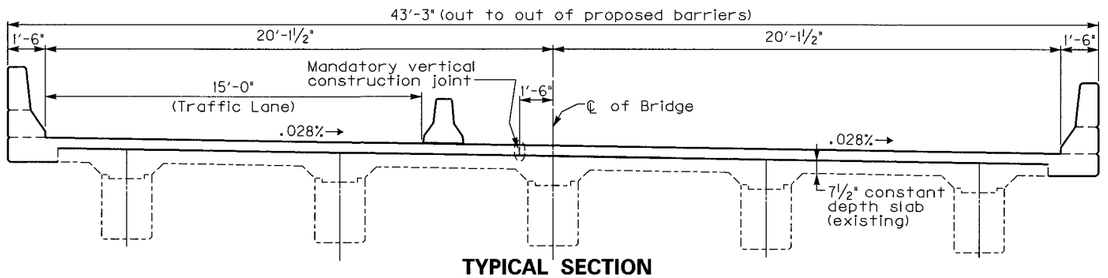
TYPICAL SECTION

~Showing Phase I Construction~



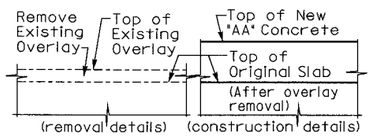
TYPICAL SECTION

~Showing Phase II Removal~

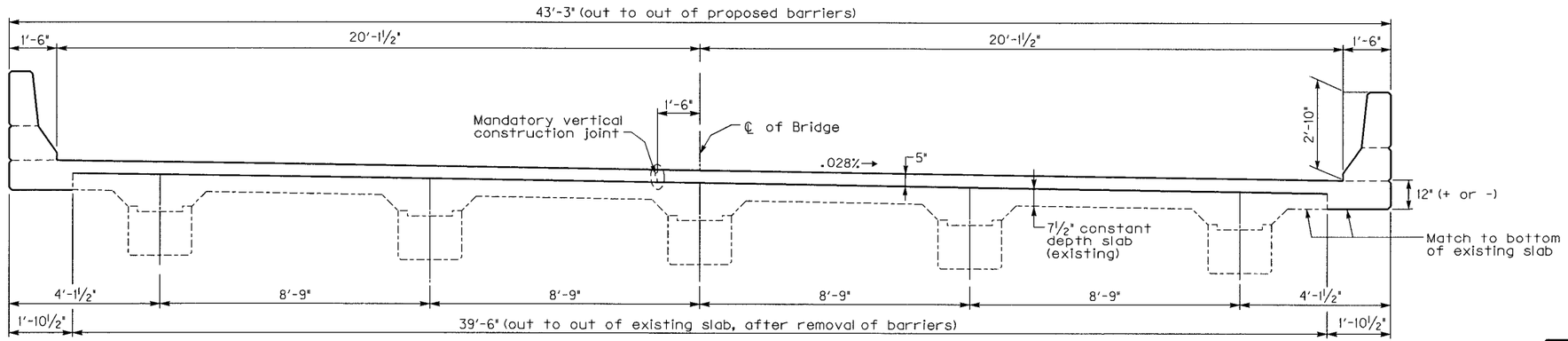


TYPICAL SECTION

~Showing Phase II Construction~



TYPICAL SLAB SECTION



TYPICAL SECTION

~Showing completed superstructure~

REVISION	DATE
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DETAILED BY: P. Yost	D. Carpenter

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: **CARTER**

ROUTE: **I-64** | CROSSING: **Fleming Fork Cr. & Road (Ky.1704)**

PHASE CONSTRUCTION

ITEM NUMBER: **9-2008.00**

PREPARED BY: **Division of Bridge Design**
D. Carpenter Section

SHEET NO. 4

DRAWING NO. **25463**

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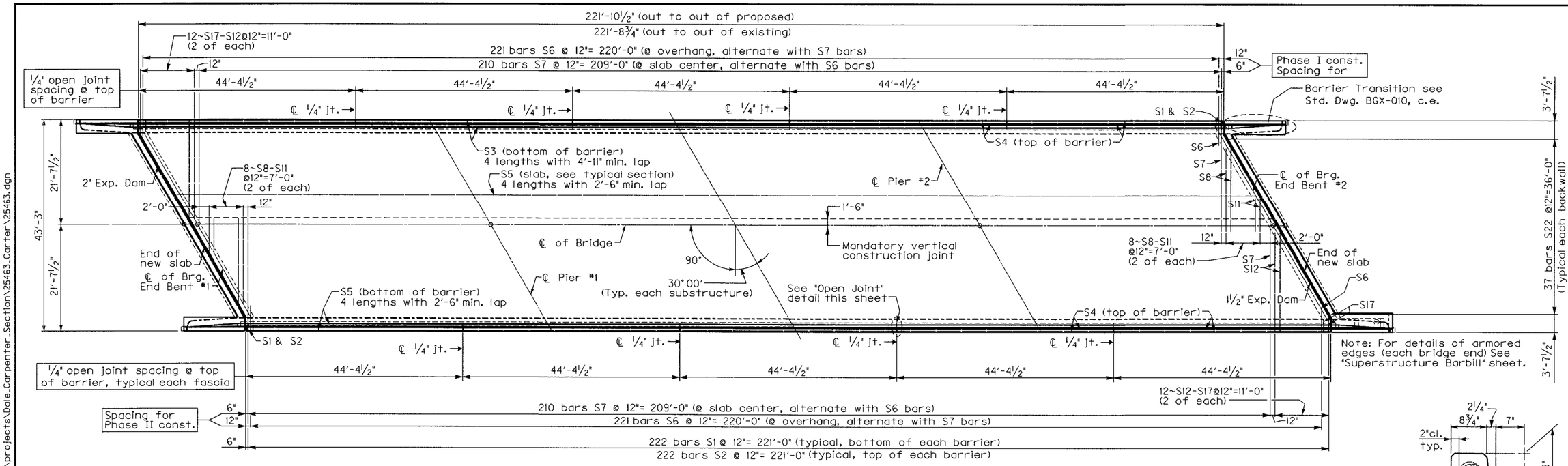
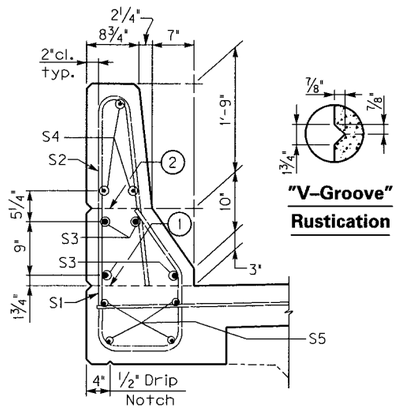
USERNAME: PYOST
DATE: 13-JAN-2003
SHEET LOCATION: PCI



*PLAN

Substructure removal and construction to be performed in synchronization with Phase work of superstructure

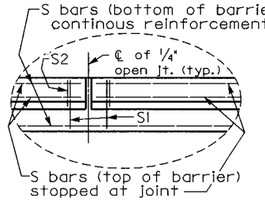


"V-Groove" Rustication

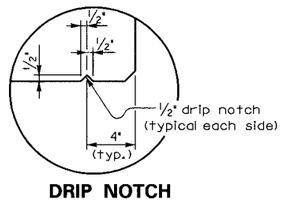
BARRIER SECTION

(1) Level mandatory roughened construction joint. Concrete above this joint to be placed after the slab has been properly cured.

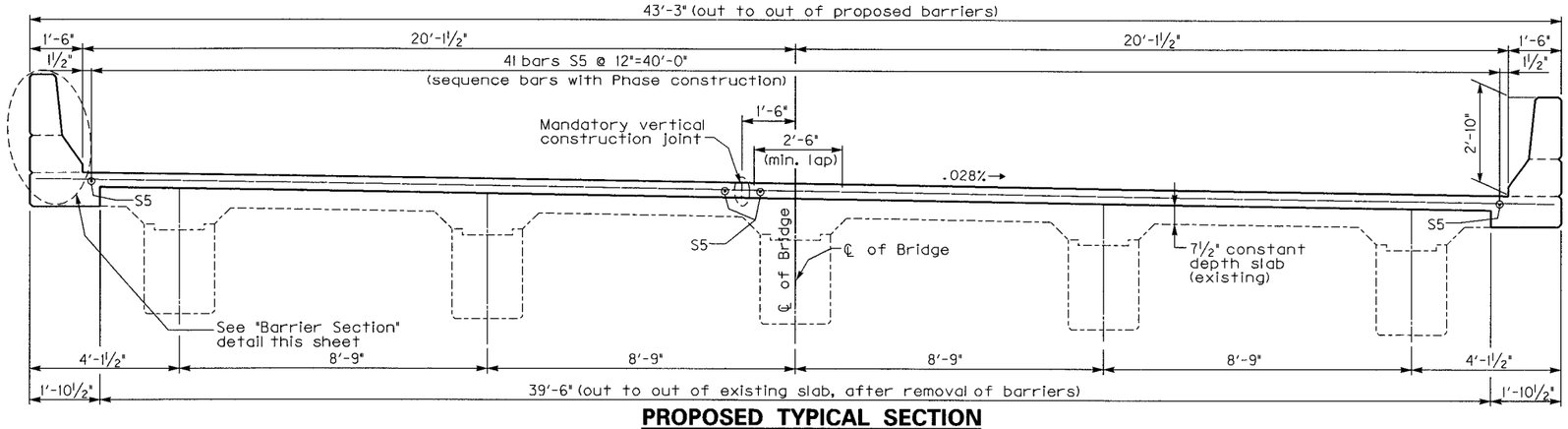
(2) Permissible construction joint. 'V-Groove' rustication joint is required if construction joint is used.



"Open Joint"



DRIP NOTCH



PROPOSED TYPICAL SECTION

REVISION	DATE

DATE: April 2002	CHECKED BY
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DETAILED BY: P. Yost	D. Carpenter

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

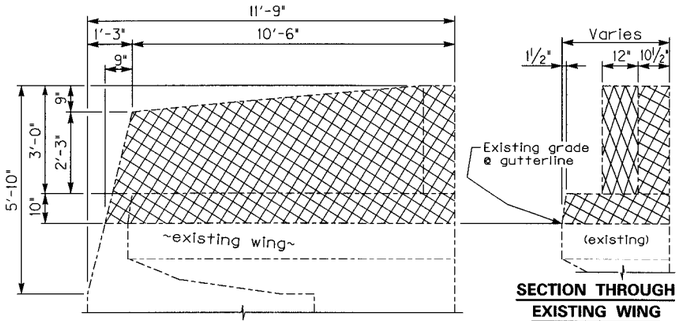
COUNTY: **CARTER**

ROUTE: **I-64** | CROSSING: **Fleming Fork Cr. & Road (Ky.1704)**

SUPERSTRUCTURE

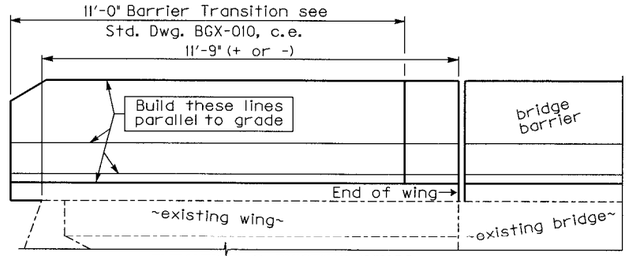
ITEM NUMBER	PREPARED BY	SHEET NO.
9-2008.00	**Division of Bridge Design** *D. Carpenter Section*	5
		DRAWING NO. **25463**

FILE NAME: D:\bridges\projects\Dale_Carpenter_Section\25463_Carter\25463.dgn
USERNAME: PYOST
DATE: 13-JAN-2003
SHEET LOCATION: 1SS

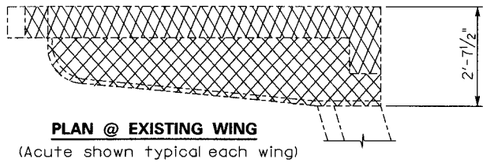


ELEVATION @ EXISTING WING
(Showing concrete remvoval)

SECTION THROUGH EXISTING WING



ELEVATION @ EXISTING WINGS
(Showing new construction)

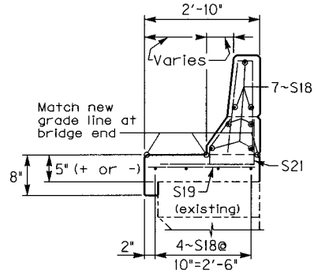


PLAN @ EXISTING WING
(Acute shown typical each wing)

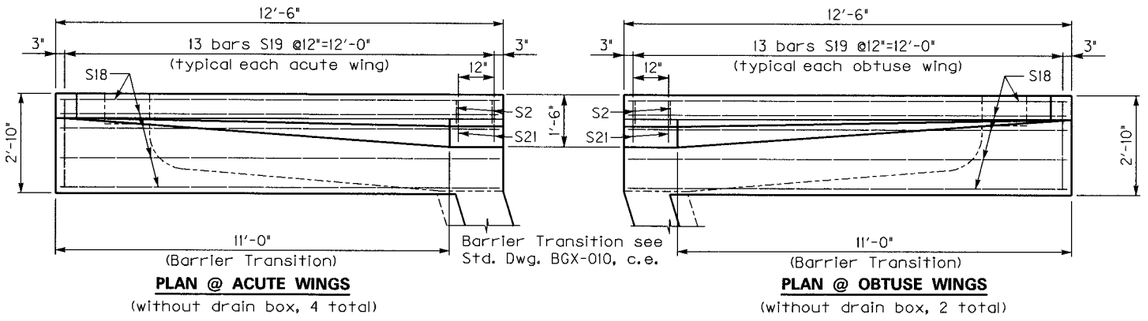
WING REMOVAL & CONSTRUCTION DETAILS

Details typical for wings both ends of existing structure.

NOTE: Remove cross-hatched area of the existing structure. Clean and straighten protruding reinforcement to allow proper bonding to new concrete. Include all cost associated with this work in the bid for Remove Concrete Masonry.

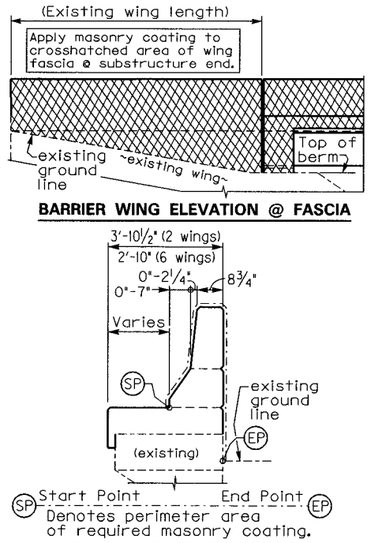


SECTION THROUGH NORMAL WING
(typical each wing without drain box, 6 total)



PLAN @ ACUTE WINGS
(without drain box, 4 total)

PLAN @ OBTUSE WINGS
(without drain box, 2 total)

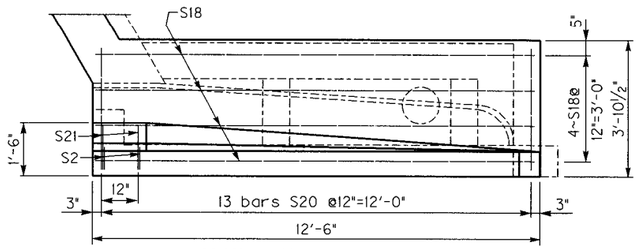


BARRIER WING ELEVATION @ FASCIA

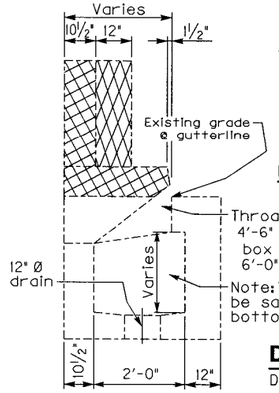
SECTION THROUGH WING

MASONRY COATING DETAILS

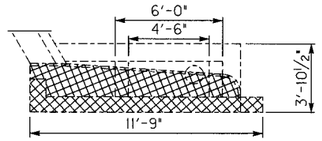
(typical each wing, 2 with drain box, 6 without, 8 total)



PLAN @ DRAIN BOX WINGS
(for wings with drain box only, 2 total)



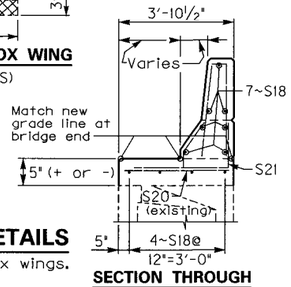
SECTION THROUGH EXISTING DRAIN BOX WING



PLAN @ EXISTING DRAIN BOX WING
(@ End Bent 2-N & 2-S)

DRAIN BOX WING DETAILS

Details typical for drain box wings.



SECTION THROUGH DRAIN BOX WING
(typical each wing with drain box, 2 total)

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Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

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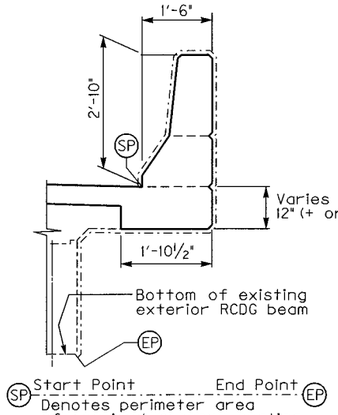
CARTER

ROUTE	CROSSING
I-64	Fleming Fork Cr. & Road (Ky. 1704)

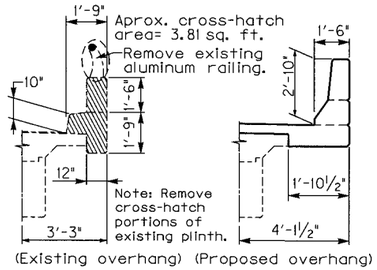
WING DETAILS

ITEM NUMBER	PREPARED BY	SHEET NO.
9-2008.00	Division of Bridge Design *D. Carpenter Section*	6
		DRAWING NO. 25463

FILE NAME: D:\bridges\projects\Dale.Carpenter_Section\25463_Carter\25463.dgn
USERNAME: PYOST
DATE: 13-JAN-2003
SHEET LOCATION: 2SS



MASONRY COATING DETAIL



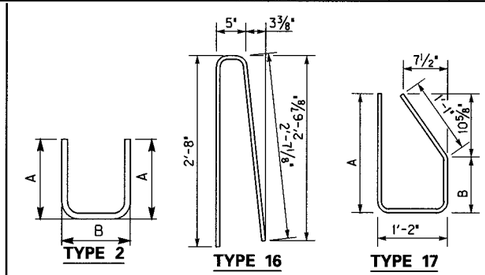
BARRIER DETAILS

SUPERSTRUCTURE OVERHANG DETAILS

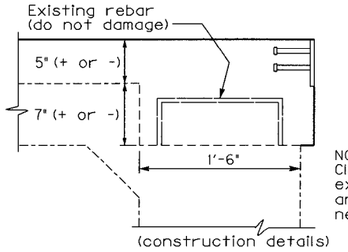
~typical details at RCDG exterior beams~

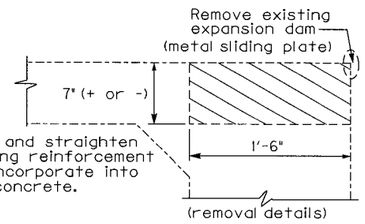
*BILL OF REINFORCEMENT FOR 2 STRUCTURES

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A/E	B/F	C/G	D/H
S1e	17	888	5	5- 1	Barriers (bottom)	1-11⅛	1- 1⅜		
S2e	16	904	5	5- 7	Barriers (top)				
S3e	Str.	64	8	59- 1	Barriers (bottom)				
S4e	Str.	60	5	44- 0	Barriers (top)				
S5e	Str.	392	5	57- 3	Slab & overhangs				
S6e	Str.	884	5	3- 0	Overhangs				
S7e	Str.	840	5	22-10	Slab @ center				
S8e	Str.	8	5	17- 3	Slab @ skew ends				
S9e	Str.	8	5	13-10	Slab @ skew ends				
S10e	Str.	8	5	10- 4	Slab @ skew ends				
S11e	Str.	8	5	6-11	Slab @ skew ends				
S12e	Str.	8	5	20- 0	Slab @ skew ends				
S13e	Str.	8	5	16- 6	Slab @ skew ends				
S14e	Str.	8	5	13- 1	Slab @ skew ends				
S15e	Str.	8	5	9- 7	Slab @ skew ends				
S16e	Str.	8	5	6- 2	Slab @ skew ends				
S17e	Str.	8	5	2- 8	Slab @ skew ends				
S18e	Str.	88	5	12- 2	Footings @ wings				
S19e	Str.	78	5	2- 6	Footings @ wings				
S20e	Str.	26	5	3- 6	Footings @ wings				
S21e	17	16	5	3-11	Barriers @ wings	1- 4⅛	0- 6⅜		
S22e	2	148	5	2-10	Backwalls	1- 1	0-11		
S23e	Str.	40	5	23- 3	Backwalls				



Note: Quantities shown in this barbill include the required reinforcement for both Eastbound & Westbound structures as detailed in these plans.

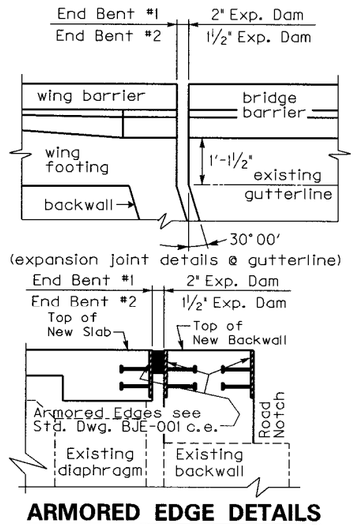




NOTE:
Clean and straighten existing reinforcement and incorporate into new concrete.

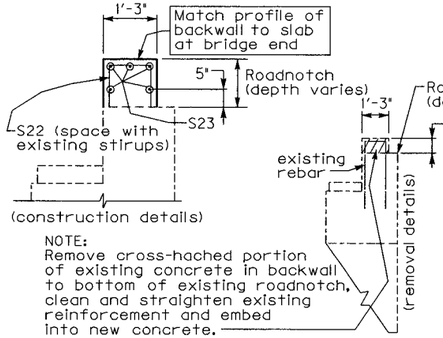
SLAB END DETAILS @ SUBSTRUCTURE

(typical each end of bridge)



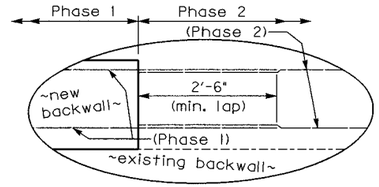
ARMORED EDGE DETAILS

(typical each end of bridge)



NOTE:
Remove cross-hached portion of existing concrete in backwall to bottom of existing roadnotch, clean and straighten existing reinforcement and embed into new concrete.

BACKWALL DETAILS @ SUBSTRUCTURE



CONSTRUCTION JOINT DETAIL

REVISION	DATE

DATE: April 2002	CHECKED BY
DESIGNED BY: E. Cottrel	R. Finley
DETAILED BY: P. Yost	D. Carpenter

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: **CARTER**

ROUTE: **I-64** | CROSSING: **Fleming Fork Cr. & Road (Ky. 1704)**

SUPERSTRUCTURE BARBILL

ITEM NUMBER	PREPARED BY	SHEET NO.
9-2008.00	**Division of Bridge Design** *D. Carpenter Section*	7
		DRAWING NO. **25463**

FILE NAME: D:\bridges\projects\Dale_Carpenter_Section\25463_Carter\25463.dgn
USERNAME: PYOST
DATE: 13-JAN-2003
SHEET LOCATION: 3SS