UPDATE DATE 2-23-96
LETTING DATE 4-23-96

INDEX OF SHEETS

STANDARD DRAWINGS

TSC-200-05	LANE CLOSURE, CASE I
TSC-210-05	LANE CLOSURE, CASE III
TSC-215-04	INTERIOR LANE CLOSURE
TSC-260-09	MISC. TRAFFIC CONTROL DEVICES
TSC-261-06	MISC. TRAFFIC CONTROL DEVICES
TSC-270-02	FLASHING ARROW

REFERENCES

DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1994 EDITION.

FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

SPECIAL NOTES

SPECIAL NOTE FOR POLYURETHANE PAINT SYSTEM USED FOR MAINTENANCE OVERCOATING APPLICATIONS

SPECIAL PROVISIONS

FOR WELDING STEEL BRIDGES (4K)

DATE DATE DATE

REVISED REVISED REVISED

FINAL CHECK DATE:

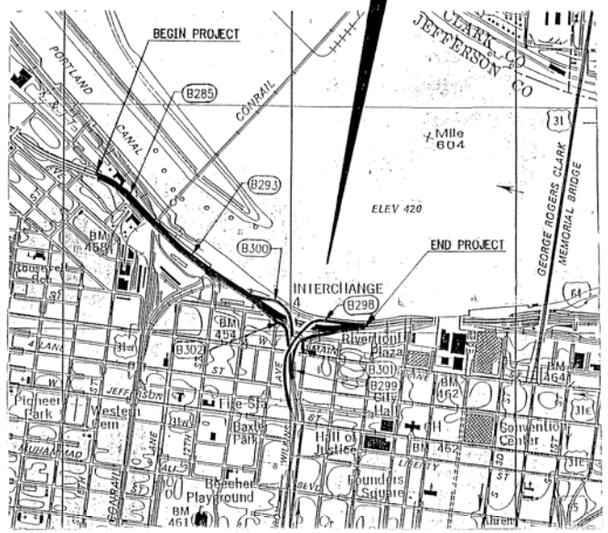
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

PLANS OF PROPOSED PROJECT

JEFFERSON COUNTY

IM 64 – 2(147) 3
FD48 056 0064 003 – 004

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP
FOR I 64 BRIDGES IN LOUISVILLE



LAYOUT MAP

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

DRAWING NO. 23481
SHEET 1 OF 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFURT
COUNTY OF
JEFFERSON
LOUISVILLE - LEXINGTON (I 64)
ROAD
PROJECT NO.

PREPARED & SUBMITTED BY:
HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
LOUISVILLE, KY
File No. 1150-06
BY S.J. Sylwestrak
DATE Aug. 30, 1993

3946 STATE OF KENTUCKY STANLEY J. SYLWESTRAK LICENSED PROFESSIONAL ENGINEER

PLAN APPROVED 12-14 1994 BY R.K. Sutherland
DIRECTOR OF BRIDGES

PLAN APPROVED 12/14 1994 BY J.M. Yeandle
STATE HIGHWAY ENGINEER

DRAWING NO. 23481

UPDATE DATE
LETTING DATE

PREPARED AND SUBMITTED BY:
HAZELET + ERDAL, INC.
CONSULTING ENGINEERS

DESIGNED BY BLS DATE 8/93
DETAILED BY TIG DATE
TRACED BY DATE
CHECKED BY DATE
CHECKED BY DATE
REVISED DATE
REVISED DATE
REVISED DATE

GENERAL NOTES

SPECIFICATIONS: The Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, 1994 edition, shall apply to this project.

DESIGN LOAD: The Pin and Hanger Back-Up Retrofit modifications to these bridges are designed for HS20-44 Live Load plus impact as specified in AASHTO Specifications using appropriately reduced safety factors for service load design.

MATERIAL DESIGN SPECIFICATIONS-NEW MATERIALS:
For Class "A" Reinforced Concrete
F'C = 3500 PSI
For Steel Reinforcement
FY = 60000 PSI
For Structural Steel
FY = 50000 PSI for AASHTO M 270, Grade 50 (ASTM A572, Grade 50) Steel

MATERIALS: AASHTO Specifications, current edition, as designated below shall govern the materials furnished.

Material	AASHTO
Structural Steel	M 270, Grade 50
High Strength Bolts, Nuts and Washers	M 164

CONCRETE: Class "A" Concrete is to be used for all columns, column ribs and footings throughout these plans.

GROUT: Grout for "Sloped Top Grout Pad" shall be EMACO S88-CA as manufactured by Master Builders Inc., Cleveland, Ohio or approved equal. Mixing, application and curing shall be strict accordance with the manufacturer's published instructions.

CLEANING AND PAINTING: All new structural steel for retrofit work shall be blast cleaned to a near-white condition and shop painted with one coat of Moisture Cure Aluminum Polyurethane Primer in accordance with Special Note For Polyurethane Paint System Used For Maintenance Overcoating Applications. Existing steel areas to be in contract with new steel, including areas under bolts heads, shall be hand cleaned with wire brushes to remove all dirt, rust, and other foreign matter before installing the new steel. No blast cleaning of existing steel will be allowed. Unless noted otherwise on these plans, all new and existing steel within 12" of the work limits of each retrofit location shall be cleaned and painted with one (1) brushed on field cost of Moisture Cure Aluminum Polyurethane Primer in accordance with Special Note For Polyurethane Paint System Used For Maintenance Overcoating Applications.

The paint for all painting work shall conform to Special Note For Polyurethane Paint System Used For Maintenance Overcoating Applications and shall consist of one (1) shop coat of Moisture Cure Aluminum Polyurethane Primer for new steel and one (1) brush on field coat of Moisture Cure Aluminum Polyurethane Primer for painting completed retrofit work areas (new and existing steel) and touch-up painting.

The cost of this work is to be included in the price bid for "Structural Steel" and "Class A Concrete" as appropriate.

TOUCH-UP PAINTING: All areas of new or existing structural steel on which the paint has been damaged by the Contractor with weld burns or by other means during construction or after final painting shall be spot painted with one (1) brushed on coat of Moisture Cure Aluminum Polyurethane Primer. The cost of this touch up painting is to be included in the price bid for appropriate items.

PAYMENT FOR STRUCTURAL STEEL: The unit price bid for "Structural Steel" shall be full compensation for access, temporary supports, drilling, reaming holes, cutting, welding, cleaning, caulking, painting and all new materials, labor, equipment, tools and incidentals necessary to complete each item of work.

WELDING SPECIFICATIONS: All welding and welding materials except for reinforcement, shall conform to Joint Specifications ANSI/AASHTO/AWS D1.5-88 Bridge Welding Code. Modifications and additions as stated on the plans and Special Provision (4K) shall supersede the ANSI/AASHTO/AWS Specifications. Nondestructive testing by the Contractor (QC) will not be required. Welding procedures shall be submitted to the Engineer and approved prior to the start of fabrication and repairs. The cost of welding, welding materials, straightening, altering and burning new or existing steel is to be included in the unit price bid for the appropriate items.

SHOP DRAWINGS: The Contractor shall submit full sets of prints of the detailed shop drawings for all structural steel to the Department for approval in accordance with Section 607.04 of the Standard Specifications.

MILL TEST REPORTS: Notarized test reports shall be furnished in triplicate to the Department showing that all the materials used for this retrofit conform to the requirements of the Specifications.

HIGH-STRENGTH BOLT CONNECTIONS: Unless otherwise provided on the plans, all new bolts shall be 7/8" diameter high-strength bolts. Open holes shall be 15/16" diameter. "Special Note for Projects with ASTM A325 High-Strength Bolts" shall apply to this project and tightening shall be by Turn-of-the-Nut Method.

ELASTOMERIC BEARING PADS: The material specifications for elastomeric bearing pads shall conform to the AASHTO Standard Specifications for Highway Bridges except that the requirement of the low temperature test is waived and a durometer hardness of 60 is required.

REINFORCEMENT: Dimensions shown from the face of concrete to bars are clear distances unless otherwise shown. Spacing of bars is from center to center of bars.

BEVELED EDGES: All exposed concrete edges shall be beveled $\frac{7}{8}$" unless otherwise shown.

DIMENSIONS: Dimensions shown on these plans are taken from original construction contract plans and do not necessarily reflect revisions made during construction. The Contractor shall verify dimensions, including thicknesses of parts, with field measurements prior to ordering materials or fabricating steelwork.

PROHIBITED FIELD WELDING: Except as shown on the plans, no welding of any nature shall be performed on the load carrying members of the bridge.

ON-SITE INSPECTION: Each Contractor submitting a bid for this work shall make a thorough inspection of the bridge and the work site prior to submitting a bid and shall be thoroughly familiar with existing conditions so that work can be expeditiously performed after a contract is awarded. A suitable method of performing the work described herein should be investigated. 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 Highways.

DAMAGE TO THE STRUCTURE: The Contractor shall bear all responsibility and expense for any and all damage to the structure during the retrofit work, even to the removal and replacement of the fallen spans, should the fallen spans result from the Contractor's actions.

PROTECTION OF VEHICLES AND PEDESTRIANS: No work will be allowed over moving traffic or pedestrian accessible areas. The Contractor shall take all necessary precautions to protect vehicles, whether moving or parked, and individuals from damage and harm caused by falling debris or other objects resulting from his operations. He shall be fully responsible for all of his actions in accordance with Section 107 of the Standard Specifications. The Contractor shall use fencing and lane closures as needed.

MAINTAINING TRAFFIC: Traffic shall be maintained at all times in accordance with the Traffic Control Notes.

BRIDGE PLANS: A copy of the bridge original construction contract plans (Drawing Nos. 17122, 18572, 18573, and 18574) and the drainage repair plans (Drawing No. 22371) will be made available to the successful bidder upon written request.

BONDING NEW CONCRETE TO OLD CONCRETE: Surfaces of existing concrete columns and floodwalls shall be roughened, cleaned to remove loose pieces and all dust, and thoroughly wetted before placing fresh concrete for new support ribs. An epoxy bonding system is not necessary.

TRAFFIC CONTROL NOTES

Lane closures will NOT be permitted between the hours of 6:00 A.M. and 9:00 A.M. nor between the hours of 3:00 P.M. and 6:00 P.M. local time, Monday through Friday. Lane closures will NOT be permitted on holidays or during special events such as the Kentucky Derby Festival, etc. Lane closures should be used only when absolutely necessary and kept to the shortest duration possible in order to minimize disruption to the traveling public. No interior lane closures will be allowed.

I64 EASTBOUND and WESTBOUND: Two 12'-0" lanes shall be maintained open to traffic in each direction at all times.

9TH STREET RAMPS: One 12'-0" lane shall be maintained open to traffic at all times.

NORTHWESTERN PKWY: One 10'-0" lane shall be maintained open to traffic in each direction at all times.

Lane closures shall be made in accordance with the Kentucky Department of Highways Standard Drawing Nos. TSC-200, TSC-210 and TSC-215. Any modifications in the standard lane closures must be approved in writing by the Kentucky Department of Highways Division of Design, FHWA, Division of Traffic, and Division of Construction.

The lane closure shall be continuous throughout the work zone. Changing lanes within the closure limit will not be allowed. Channelization devices shall be spaced at 40 feet maximum except on ramps and streets where the spacing shall be 20 feet maximum.

All signs, barricades, channelization devices and incidentals used for traffic control shall be new or like new condition; and shall be in accordance with the applicable standard drawings and the "Manual on Uniform Traffic Control Devices." The cost of all traffic control devices shall be included in the bid item "Maintain and Control Traffic."

All traffic control devices must be removed from the project site or covered adequately when not in use.

HOLIDAYS:

April 19, 1996 thru May 4, 1996	Derby
May 24, 1996 thru May 27, 1996	Memorial Weekend
July 3, 1996 thru July 6, 1996	Independence Weekend

APPROVED: Stephen P. Williams DATE: 2/1/96
for John Sacksteder, Director
Division of Design

Duane H. Thomas DATE: 2/1/96
for Simon Cornett, Director
Division of Traffic

[signature] DATE: 2/2/96
for Paul Graveley, Director
Division of Construction

ESTIMATE OF QUANTITIES

BID ITEM	UNIT	AMOUNT
Class "A" Concrete (a)	C.Y	589.9
Slope Top Grout Pad (b)	Ea.	28
Steel Reinforcement	Lbs.	84,387
Structure Excavation (c)	C.Y.	370.5
Structural Steel (d)	L.S.	1
Neoprene Bearing, Type 1	Ea.	8
Neoprene Bearing, Type 2	Ea.	32
Neoprene Bearing, Type 3	Ea.	2
Neoprene Bearing, Type 4	Ea.	8
Neoprene Bearing, Type 5	Ea.	8
Neoprene Bearing, Type 6	Ea.	2
Neoprene Bearing, Type 7	Ea.	2
Neoprene Bearing, Type 8	Ea.	4
Neoprene Bearing, Type 9	Ea.	4
Neoprene Bearing, Type 10	Ea.	24
Neoprene Bearing, Type 11	Ea.	4
Remove Concrete Crashwall End	Ea.	4
Remove and Reinstall Downspouts and Splash Blocks	L.S.	1
Maintain and Control Traffic	L.S.	1
Demobilization	L.S.	1
Flashing Arrow	Ea.	1

(a) This Bid Item includes the following concrete quantities:

Type A Supports	32 Locations,	172.9 CY Total
Type B Supports	8 Locations,	109.3 CY Total
Type C Supports	14 Locations,	294.0 CY Total
Support at Pier 41W	1 Location	7.1 CY
Support at Pier 42E	1 Location	6.6 CY
	56 Locations	589.9 CY

This Bid Item also includes anchor bolts for neoprene bearings, drilling and grouting, dowel bars, and roughening of existing concrete to improve bond.

(b) Bid Item includes removing existing concrete from tops of columns by chipping.

(c) This Bid Item includes the following approximate excavation quantities intended for planning: (See Note on details)

Type A Supports	32 Locations,	79.2 CY Total
Type B Supports	8 Locations,	196.8 CY Total
Type C Supports	14 Locations,	77.4 CY Total
Support at Pier 41W	1 Location	9.0 CY
Support at Pier 42E	1 Location	8.1 CY
	56 Locations	370.5 CY

This Bid Item also includes temporary sheet piling at the Type B Support for Pier 7, Column J.

(d) This lump sum Bid Item includes the following estimated quantities:

Structural Steel (Grade 50)	215,000 Lbs.
Silicone Caulking	500 Lin.Ft.

This Bid Item also includes welding existing girder stiffeners where noted on the details and cleaning and painting of work areas in accordance with the General Notes.

GENERAL NOTES & QUANTITIES

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

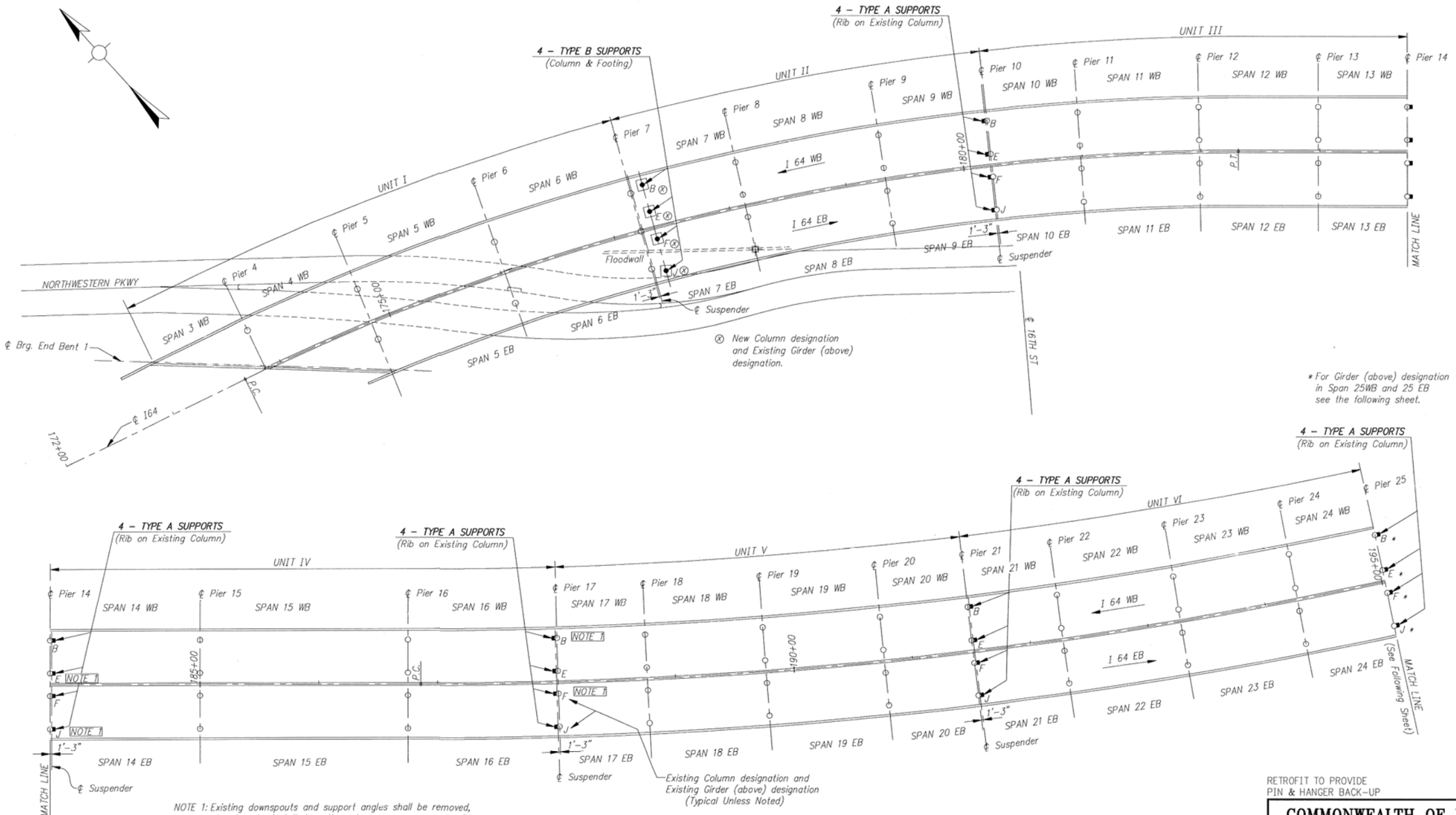
SHEET 2

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE - LEXINGTON (I 64)

STATION ROAD
P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23481

UPDATE DATE
LETTING DATE



NOTE 1: Existing downspouts and support angles shall be removed, stored and reinstalled on the column or new concrete rib. The splash block is to be removed, cut to fit new concrete and reinstalled, or at the Contractor's option replaced in kind. This work including modifications to pipes and troughs (above) necessary for the reinstallations, along with any replacement supports, expansion bolts and other parts, shall be included in the lump sum bid for "Remove and Reinstall Downspouts and Splash Blocks".

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 3

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

JEFFERSON

LOUISVILLE – LEXINGTON (I-64)

ROAD

STATION | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23481

LAYOUT

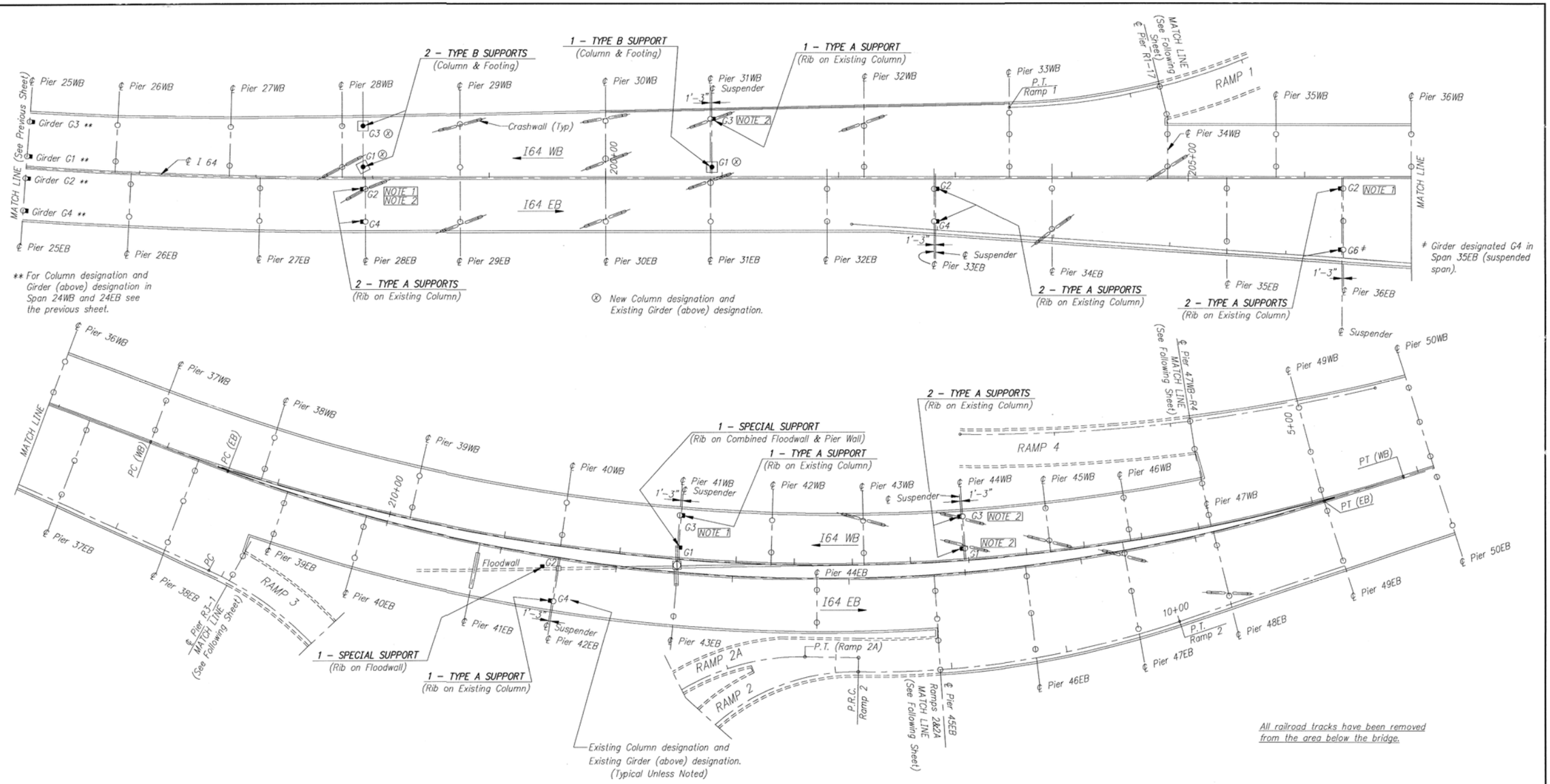
I64 – 17TH ST. to 13TH ST. (Bridge B285)

REF: DRAWING NO. 17122

DESIGNED BY: DRH & AR | CHECKED BY: TIG | DATE: 8/93
DETAILED BY: | CHECKED BY: | DATE:
TRACED BY: | CHECKED BY: | DATE:

REVISED: DATE
REVISED: DATE
REVISED: DATE

08/26/1993 kit D:\ENGFILES\I64\SHEET3



NOTE 1: Existing downspouts and support angles shall be removed, stored and reinstalled on the column or new concrete rib. The splash block is to be removed, cut to fit new concrete and reinstalled, or at the Contractor's option replaced in kind. This work including modifications to pipes and troughs (above) necessary for the reinstallations, along with any replacement supports, expansion bolts and other parts, shall be included in the lump sum bid for "Remove and Reinstall Downspouts and Splash Blocks".

NOTE 2: Existing Concrete Crashwalls that interfere with new concrete support construction are to have the end portion removed. See Miscellaneous Details Sheet. The bid item for this work is "Remove Concrete Crashwall End".

LAYOUT

I64 – 13TH ST. to 7TH ST. (Bridge B293)

Ref: Drawing Nos. 18572 & 18573

RETROFIT TO PROVIDE PIN & HANGER BACK-UP

SHEET 4

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

JEFFERSON

LOUISVILLE – LEXINGTON (I-64)

ROAD

STATION	**P.E. PROJECT NO.**	
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO. 23481

UPDATE DATE

LETTING DATE

DESIGNED BY DRH & AR DATE 8/93

DETAILED BY TTG DATE

CHECKED BY DATE

CHECKED BY DATE

TRACED BY DATE

CHECKED BY DATE

REVISED DATE

REVISED DATE

REVISED DATE

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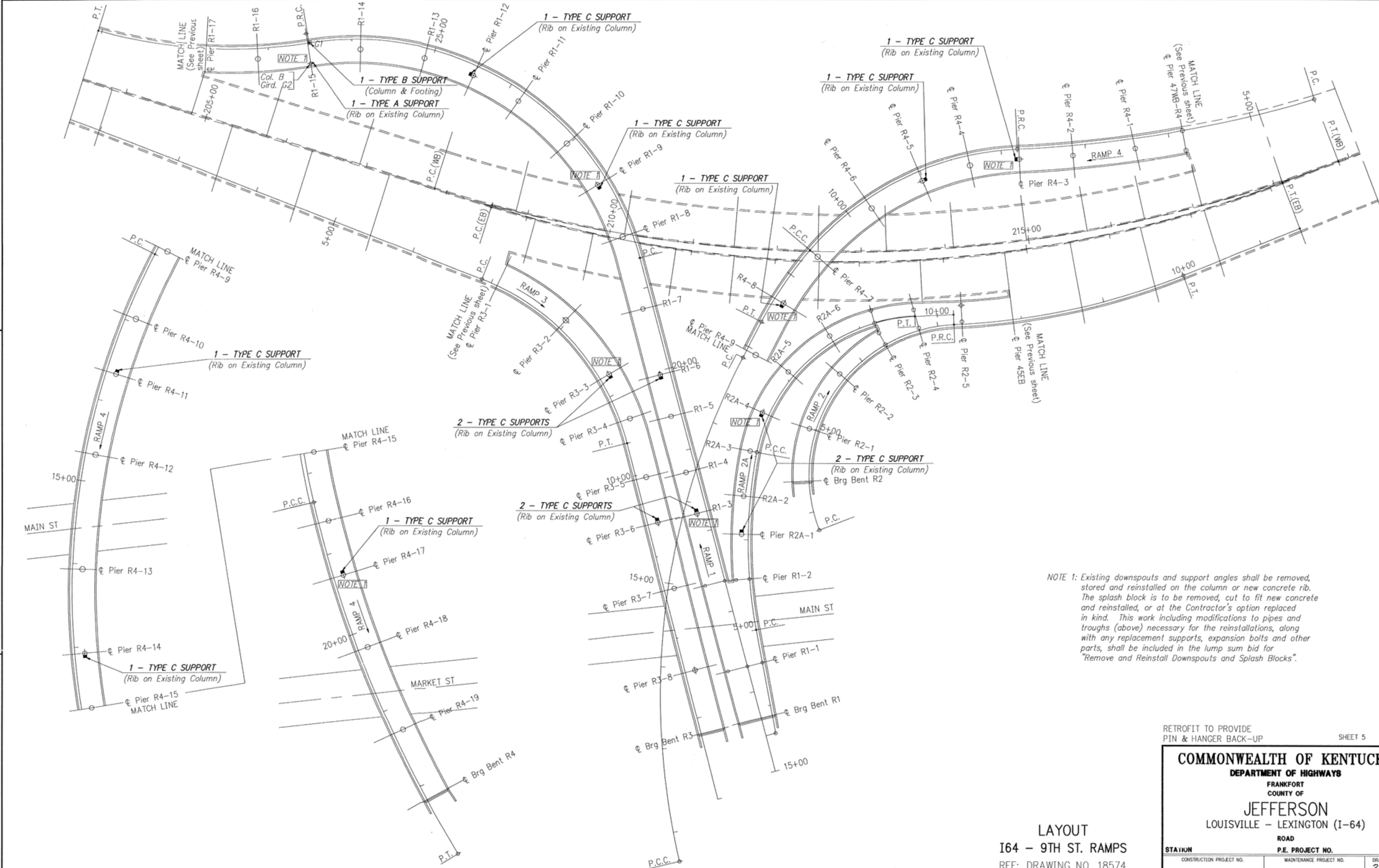

1 – TYPE C SUPPORT
(Rib on Existing Column)
1 – TYPE B SUPPORT
(Column & Footing)
1 – TYPE A SUPPORT
(Rib on Existing Column)
2 – TYPE C SUPPORTS
(Rib on Existing Column)
2 – TYPE C SUPPORT
(Rib on Existing Column)
MATCH LINE
(See Previous sheet)
NOTE 1
Col. B
Gird. G2
G1
P.T.
P.R.C.
P.C.
P.C.C.
P.C.(WB)
P.C.(EB)
P.T.(WB)
P.T.(EB)
205+00
210+00
215+00
5+00
10+00
15+00
20+00
25+00
R1-17
R1-16
R1-15
R1-14
R1-13
℄ Pier R1-12
℄ Pier R1-11
℄ Pier R1-10
℄ Pier R1-9
℄ Pier R1-8
R1-7
R1-6
R1-5
R1-4
R1-3
℄ Pier R1-2
℄ Pier R1-1
℄ Brg Bent R1
℄ Pier R2-1
℄ Pier R2-2
℄ Pier R2-3
℄ Pier R2-4
℄ Pier R2-5
℄ Brg Bent R2
℄ Pier R2A-1
R2A-2
R2A-3
R2A-4
R2A-5
R2A-6
℄ Pier R3-1
℄ Pier R3-2
℄ Pier R3-3
℄ Pier R3-4
℄ Pier R3-5
℄ Pier R3-6
℄ Pier R3-7
℄ Pier R3-8
℄ Brg Bent R3
℄ Pier R4-1
℄ Pier R4-2
℄ Pier R4-3
℄ Pier R4-4
℄ Pier R4-5
℄ Pier R4-6
℄ Pier R4-7
R4-8
℄ Pier R4-9
℄ Pier R4-10
℄ Pier R4-11
℄ Pier R4-12
℄ Pier R4-13
℄ Pier R4-14
℄ Pier R4-15
℄ Pier R4-16
℄ Pier R4-17
℄ Pier R4-18
℄ Pier R4-19
℄ Brg Bent R4
℄ Pier 47WB-R4
℄ Pier 45EB
RAMP 1
RAMP 2
RAMP 2A
RAMP 3
RAMP 4
MAIN ST
MARKET ST

NOTE 1: Existing downspouts and support angles shall be removed, stored and reinstalled on the column or new concrete rib. The splash block is to be removed, cut to fit new concrete and reinstalled, or at the Contractor's option replaced in kind. This work including modifications to pipes and troughs (above) necessary for the reinstallations, along with any replacement supports, expansion bolts and other parts, shall be included in the lump sum bid for "Remove and Reinstall Downspouts and Splash Blocks".

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 5

LAYOUT
I64 – 9TH ST. RAMPS
REF: DRAWING NO. 18574

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I-64)
ROAD
STATION
P.E. PROJECT NO.

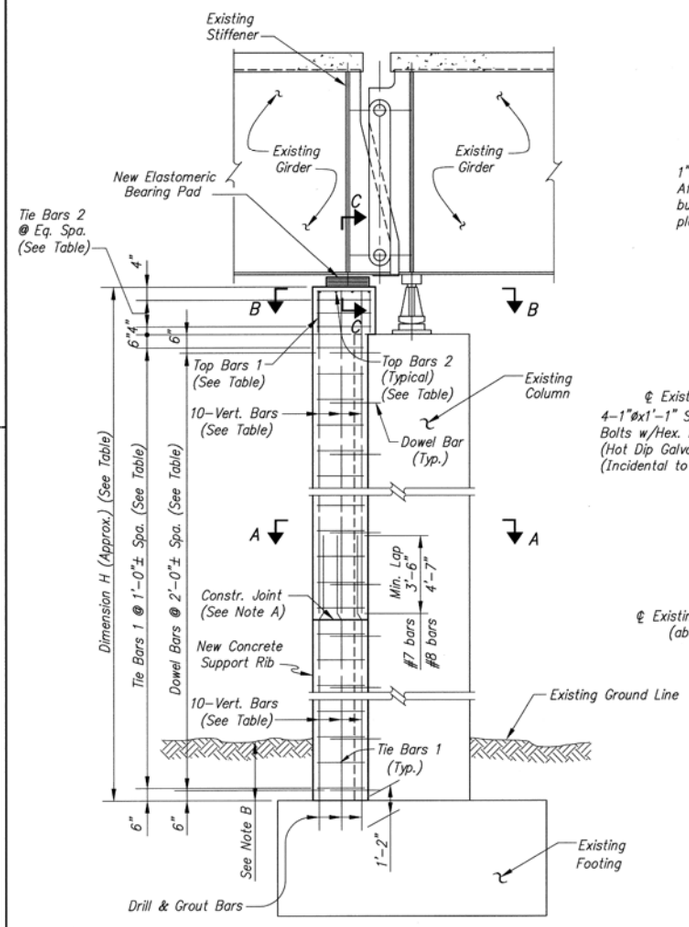
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23481

DESIGNED BY DRH & AR
CHECKED BY TJG
DATE 8/93

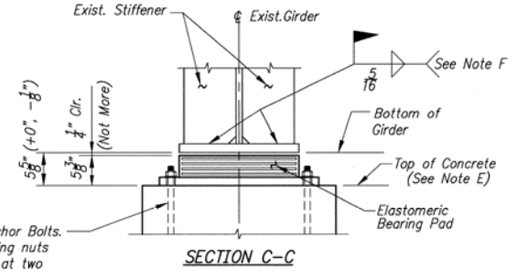
UPDATE DATE

LETTING DATE

NOTE F: Welding of existing girder stiffeners is to be included in Bid Item "Structural Steel."

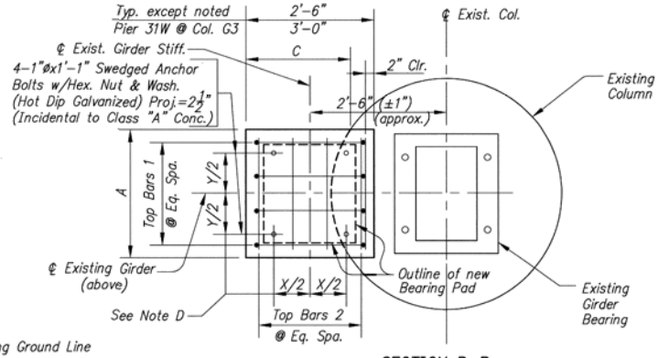


TYPE A SUPPORT
(Rib on Existing Column)



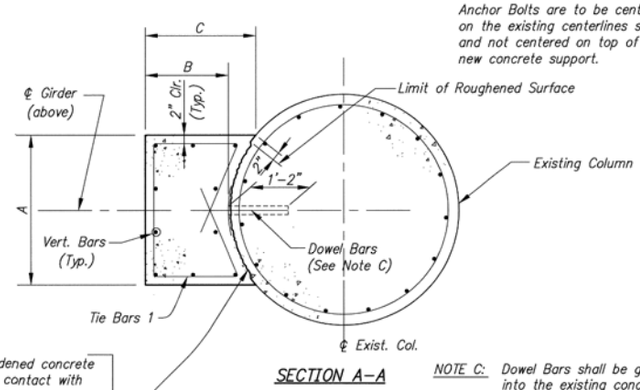
SECTION C–C

NOTE E: Top of Concrete for Type A Supports shall be finished level at an elevation which is $5\frac{5}{8}$" (+0", $-\frac{1}{8}$") below the bottom of the existing steel girder.



SECTION B–B

NOTE D: See Elastomeric Bearing Pad details for Dimensions X and Y. Anchor Bolts are to be centered on the existing centerlines shown and not centered on top of the new concrete support.



SECTION A–A

Surfaces of hardened concrete which will be in contact with fresh concrete shall be roughened within the limits shown and thoroughly wetted immediately before placing fresh concrete. This work is to be incidental to Class "A" concrete.

NOTE C: Dowel Bars shall be grouted in holes drilled into the existing concrete in accordance with Sect. 736 of the Standard Specifications. Before drilling holes mark the location of reinforcing bars in the existing concrete and adjust the dowel spacing, as necessary, to clear existing bars. Drilling and grouting is to be incidental to Class "A" Concrete.

TYPE A SUPPORT DATA

PIER	COL.	EXIST. COLUMN DIA.	(a) DIM. H (Approx.)	DIM. A	DIM. B	DIM. C	NEW BRG PAD TYPE	VERT. BARS	DOWEL BARS	TIE BARS 1	TIE BARS 2	TOP BARS 1	TOP BARS 2	STRUCTURE EXCAVATION (b) CY	REBAR WEIGHT LB	CLASS A CONCRETE QUANTITY CY
10	B	4'-6"	35'-6 3/4"	2'-6"	1'-6"	1'-10 1/2"	2	20-A1	17-D1	34-T1	3-T4	4-T6	4-T8	2.2	1114	5.5
	E	4'-6"	34'-4 3/4"	2'-6"	1'-6"	1'-10 1/2"	2	20-A2	17-D1	33-T1	3-T4	4-T6	4-T8	2.3	1081	5.3
	F	4'-6"	32'-11 3/4"	2'-6"	1'-6"	1'-10 1/2"	2	20-A3	16-D1	31-T1	3-T4	4-T6	4-T8	2.2	1040	5.1
	J	4'-6"	29'-8 3/4"	2'-6"	1'-6"	1'-10 1/2"	2	20-A4	14-D1	28-T1	3-T4	4-T6	4-T8	1.0	948	4.6
14	B	4'-6"	38'-9 5/8"	2'-10"	1'-6"	2'-0"	1	20-A5	19-D1	37-T2	3-T5	4-T6	4-T9	2.4	1531	6.9
	E	4'-6"	38'-4 5/8"	2'-10"	1'-6"	2'-0"	1	20-A6	18-D1	37-T2	3-T5	4-T6	4-T9	7.5	1519	6.8
	F	4'-6"	33'-2 5/8"	2'-10"	1'-6"	2'-0"	1	20-A7	16-D1	31-T2	3-T5	4-T6	4-T9	2.4	1333	5.9
	J	4'-6"	30'-9 5/8"	2'-10"	1'-6"	2'-0"	1	20-A8	15-D1	29-T2	3-T5	4-T6	4-T9	2.1	1255	5.5
17	B	4'-6"	37'-8 5/8"	2'-10"	1'-6"	2'-0"	1	20-A9	18-D1	36-T2	3-T5	4-T6	4-T9	2.5	1495	6.7
	E	4'-6"	37'-5 5/8"	2'-10"	1'-6"	2'-0"	1	20-A10	18-D1	36-T2	3-T5	4-T6	4-T9	2.4	1487	6.7
	F	4'-6"	37'-8 5/8"	2'-10"	1'-6"	2'-0"	1	20-A9	18-D1	36-T2	3-T5	4-T6	4-T9	2.5	1495	6.7
	J	4'-6"	36'-5 5/8"	2'-10"	1'-6"	2'-0"	1	20-A11	17-D1	35-T2	3-T5	4-T6	4-T9	2.4	1450	6.5
21	B	4'-6"	33'-3"	2'-6"	1'-6"	1'-10 1/2"	2	20-A12	16-D1	31-T1	3-T4	4-T6	4-T8	1.9	1046	5.1
	E	4'-6"	33'-11 1/8"	2'-6"	1'-6"	1'-10 1/2"	2	20-A13	16-D1	32-T1	3-T4	4-T6	4-T8	2.2	1065	5.2
	F	4'-6"	34'-2 1/8"	2'-6"	1'-6"	1'-10 1/2"	2	20-A2	16-D1	32-T1	3-T4	4-T6	4-T8	1.6	1072	5.3
	J	4'-6"	34'-11 1/8"	2'-6"	1'-6"	1'-10 1/2"	2	20-A14	17-D1	33-T1	3-T4	4-T6	4-T8	2.2	1095	5.4
25	B (c)	4'-6"	31'-6"	2'-6"	1'-6"	1'-10 1/2"	2	20-A15	16-D1	30-T1	3-T4	4-T6	4-T8	2.5	1007	4.9
	E (c)	4'-6"	32'-3"	2'-6"	1'-6"	1'-10 1/2"	2	20-A16	16-D1	30-T1	3-T4	4-T6	4-T8	2.2	1021	5.0
	F (c)	4'-6"	32'-6"	2'-6"	1'-6"	1'-10 1/2"	2	20-A17	15-D1	31-T1	3-T4	4-T6	4-T8	3.0	1030	5.0
	J (c)	4'-6"	33'-3"	2'-6"	1'-6"	1'-10 1/2"	2	20-A12	16-D1	31-T1	3-T4	4-T6	4-T8	2.2	1046	5.1
28E	G2	4'-6"	30'-2 3/8"	2'-6"	1'-6"	1'-10 1/2"	2	20-A18	14-D1	29-T1	2-T4	4-T7	4-T8	2.4	960	4.7
	G4	4'-6"	30'-2 3/8"	2'-6"	1'-6"	1'-10 1/2"	2	20-A18	14-D1	29-T1	2-T4	4-T7	4-T8	2.2	960	4.7
33E	G2	4'-0"	27'-11 3/8"	2'-6"	1'-9"	2'-2 1/4"	2	20-A19	13-D1	26-T3	2-T4	4-T7	4-T8	1.9	1133	5.0
	G4	4'-0"	29'-2 3/8"	2'-6"	1'-9"	2'-2 1/4"	2	20-A20	14-D1	28-T3	2-T4	4-T7	4-T8	2.5	1184	5.2
36E	G2	4'-0"	27'-0 1/4"	2'-6"	1'-9"	2'-2 1/4"	2	20-A21	13-D1	25-T3	2-T4	4-T7	4-T8	3.4	1109	4.8
	G6 (d)	4'-0"	29'-0 1/4"	2'-6"	1'-9"	2'-2 1/4"	2	20-A20	14-D1	28-T3	2-T4	4-T7	4-T8	2.5	1184	5.2
42E	G4	4'-0"	24'-7 5/8"	2'-6"	1'-9"	2'-2 1/4"	2	20-A22	12-D1	23-T3	2-T4	4-T7	4-T8	2.5	1023	4.4
31W	G3 (e)	4'-6"	27'-5 3/8"	2'-6"	1'-9"	2'-1 1/2"	3	20-A23	13-D1	26-T10	2-T11	4-T12	4-T8	2.1	1127	4.9
41W	G3	4'-0"	23'-9"	2'-6"	1'-9"	2'-2 1/4"	2	20-A24	11-D1	22-T3	2-T4	4-T7	4-T8	2.5	996	4.2
44W	G1	4'-0"	27'-4 7/8"	2'-6"	1'-9"	2'-2 1/4"	2	20-A23	13-D1	26-T3	2-T4	4-T7	4-T8	2.5	1124	4.9
	G3	4'-0"	26'-4 7/8"	2'-6"	1'-9"	2'-2 1/4"	2	20-A25	13-D1	25-T3	2-T4	4-T7	4-T8	1.0	1092	4.7
R1-15	B (f)	3'-6"	29'-2 3/8"	2'-6"	2'-5"	2'-11 1/4"	2	20-A20	14-D1	28-T16	2-T11	4-T17	4-T8	4.0	1215	7.0
												TOTAL		79.2	37238	172.9

(a) See NOTE E to determine the exact elevation of top of concrete support.

(b) Structure excavation quantities are based on limited information. The approximate quantities shown are intended for planning only and should be verified prior to use for bidding.

(c) Column and Unit VI Girder designations of Bridge B285 shown. For Suspended Girder designations of Unit 1, Bridge B293 see Layout Sheets.

(d) Column and Span 36E Girder designation shown. The Suspended Girder in Span 35E is designated G4.

(e) Column and Span 30W Girder designation shown. The Suspended Girder in Span 31W is designated G5.

(f) Column designation shown. The Suspended Girder in Span R1–15 is designated G2.

NOTE A: The heights of concrete placement sections shall be not less than eight (8) feet nor more than nineteen (19) feet. Construction joints are to be located by the Contractor.

NOTE B: The depth of soil cover on the existing footings varies with the location. Excavation for constructing the new support and backfilling and repaving where necessary to restore area to original conditions is to be included in the lump sum bid for "Structural Excavation."

DESIGNED BY: BLS & TJF DATE 7/93
DETAILED BY: DRH & AR CHECKED BY: TTG & BLS DATE 8/93
TRACED BY: CHECKED BY: DATE
REVISED DATE
REVISED DATE
REVISED DATE

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 6

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

JEFFERSON

LOUISVILLE – LEXINGTON (I64)

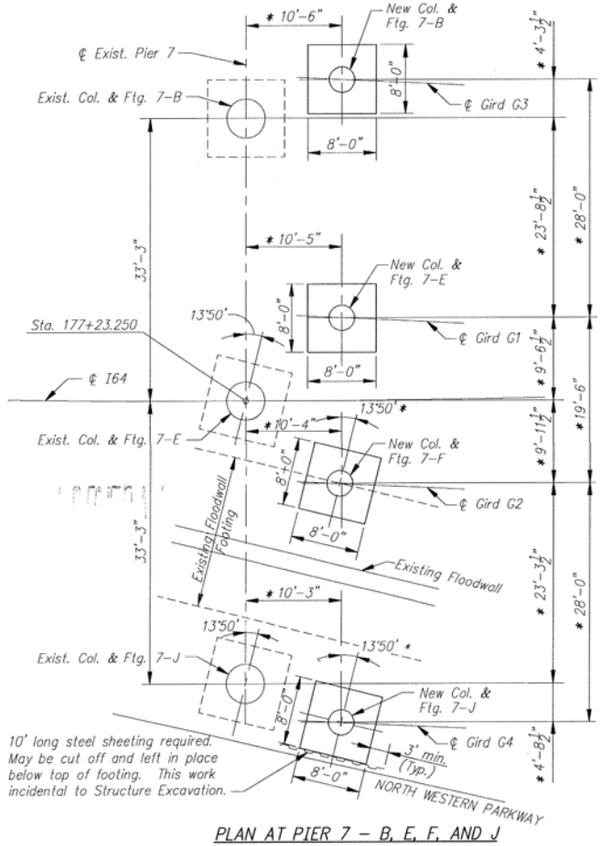
STATION **ROAD P.E. PROJECT NO.**

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

TYPE A SUPPORT DETAILS

UPDATE DATE

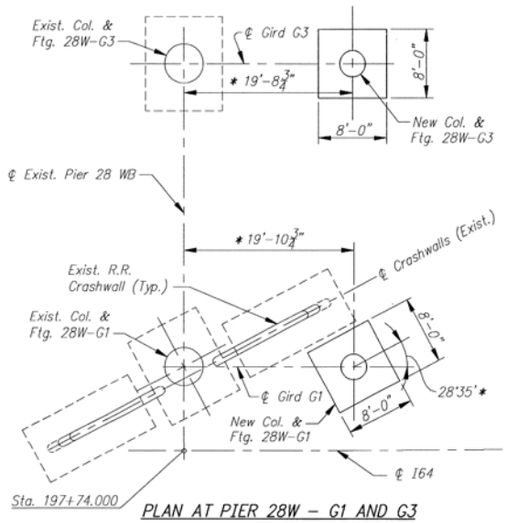
LETTING DATE



PLAN AT PIER 7 – B, E, F, AND J

TYPE B SUPPORTS

(Column and Footing)

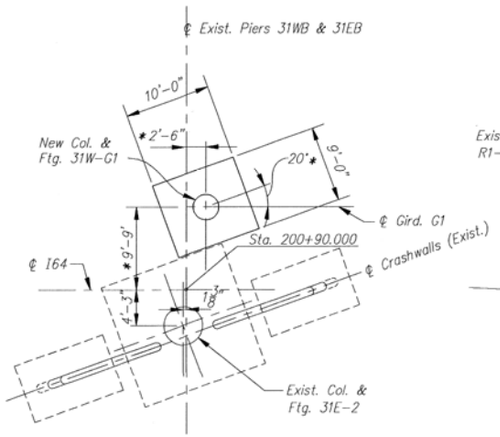


PLAN AT PIER 28W – G1 AND G3

TYPE B SUPPORTS

(Column and Footing)

* Adjust footing location dimensions, as necessary, to center each new Column under the centerline of a girder at a web stiffener. Adjust footing location angles for an edge to parallel the floodwall, North Western Parkway, or R.R. Crashwall where shown.

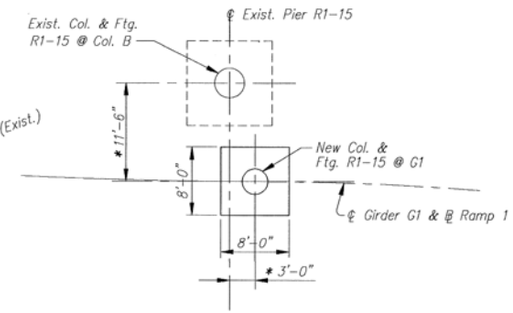


PLAN AT PIER 31W – G1

TYPE B SUPPORT

(Column and Footing)

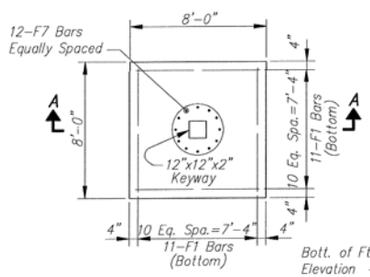
NOTE: All railroad tracks have been removed from this project area and R.R. Crashwalls are no longer needed.



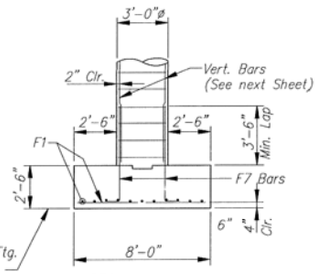
PLAN AT PIER R1-15 @ G1

TYPE B SUPPORT

(Column and Footing)



PLAN



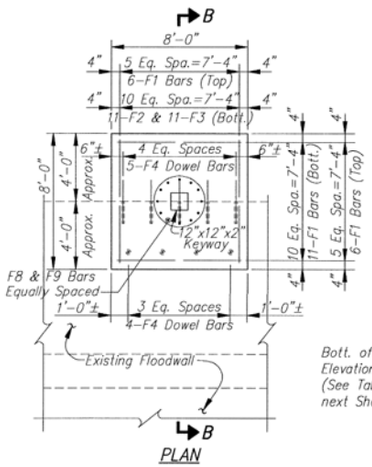
SECTION A–A

Bott. of Ftg. Elevation (See Table on next Sheet)

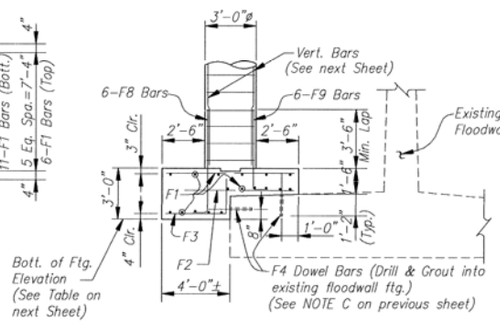
FOOTING DETAILS

New Footings 7-B, 7-E & 7-J
New Footings 28W-G3 & 28W-G1
New Footings R1-15 @ G1

FOOTING BAR SUMMARY (EACH FOOTING)	
MARK	NO. OF BARS
F1	22
F7	12



PLAN



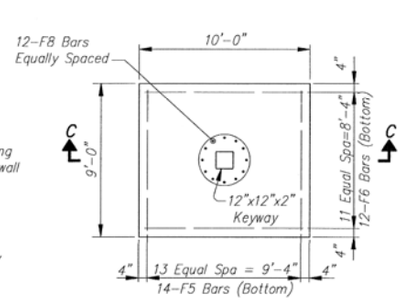
SECTION B–B

FOOTING DETAILS

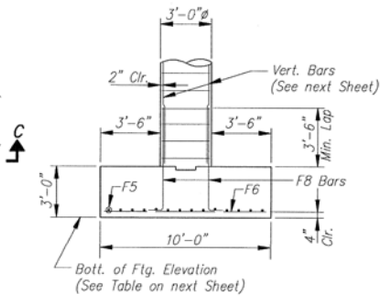
New Footing 7-F

FOOTING BAR SUMMARY	
MARK	NO. OF BARS
F1	23
F2	11
F3 #	11
F4 (Dowel)	9
F8 #	6
F9 #	6

Locate edge of Exist. Floodwall Footing before ordering these bars. Adjust length of F3 Bars and number of F8 and F9 Bars as necessary.



PLAN



SECTION C–C

FOOTING DETAILS

New Footing 31W – G1

FOOTING BAR SUMMARY	
MARK	NO. OF BARS
F5	14
F6	12
F8	12

Work this sheet with Sheet 8.

TYPE B SUPPORT FOOTING DETAILS

RETROFIT TO PROVIDE PIN & HANGER BACK-UP

SHEET 7

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

JEFFERSON

LOUISVILLE – LEXINGTON (I-64)

STATION ROAD P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

DESIGNED BY: TJF & BLS CHECKED BY: BLS & TJG DATE 7/93

DETAILED BY: DRH & AR CHECKED BY: TJG & BLS DATE 8/93

TRACED BY: DATE

REVISED DATE

REVISED DATE

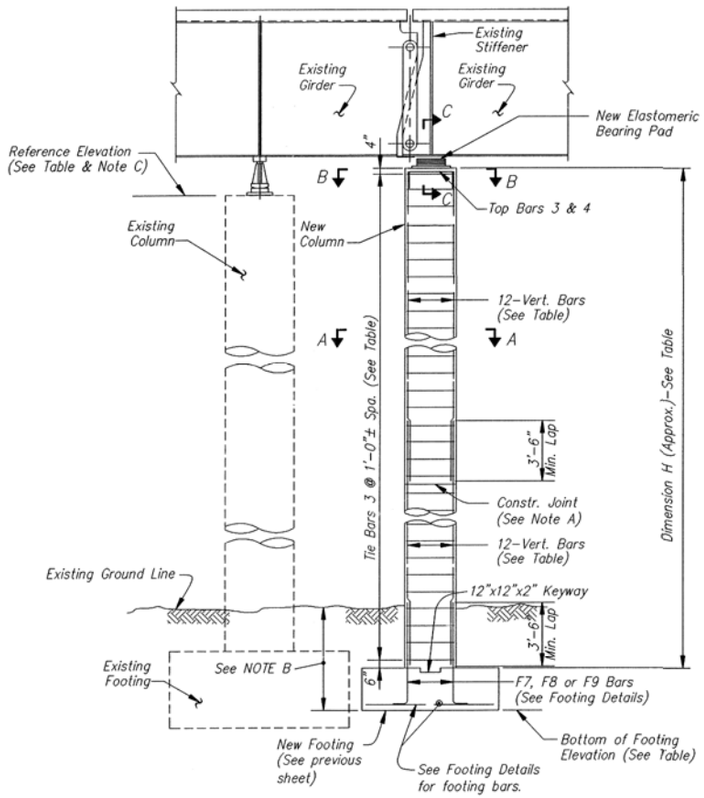
REVISED DATE

08/20/1993 AM D:\DWGFILES\I2SDWGS\SHEET7

UPDATE DATE

LETTING DATE

	DESIGNED BY	CHECKED BY	DATE	REVISED
	TIG	TIG & BLS	7/93	
	BLS	AR & DRH	8/93	
	DETAILED BY	CHECKED BY	DATE	REVISED
	DRAWN BY	CHECKED BY	DATE	REVISED



TYPE B SUPPORT
(Column and Footing)

NOTE A: The heights of concrete placement sections shall be not less than eight (8) feet nor more than nineteen (19) feet. Construction joints are to be located by the Contractor.

NOTE B: The depth of soil cover on the existing footings varies with the location. Excavation for constructing the new support and backfilling and repaving where necessary to restore area to original conditions is to be included in the lump sum bid for "Structural Excavation."

NOTE C: Reference Elevations are to be used as elevation bench marks to set Bottom of Footing Elevations.

TYPE B SUPPORT DATA

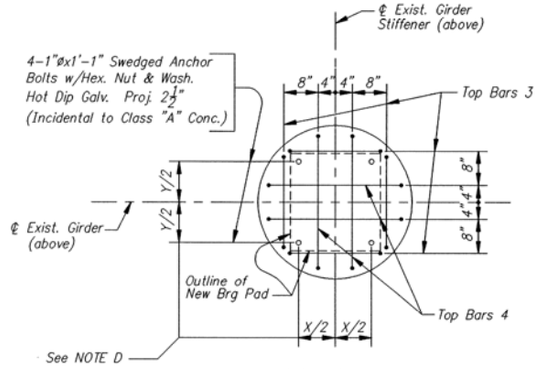
PIER	COLUMN	BOTT. OF FTG. ELEV.	(a) DIM. H (Approx.)	NEW BRG PAD TYPE	VERT BARS	TIE BARS 3	TOP BARS 3	TOP BARS 4	REFERENCE ELEV. (c) LOCATION	REFERENCE ELEV. ELEVATION	STRUCTURE ELEVATION (b) CY	REBAR WEIGHT (d) LB	CLASS A CONCRETE CY
7	B	444.00	29'–1½"	2	24–B1	29–T13	4–T14	4–T15	7B	472.64	24.6	1452	13.6
	E	444.50	27'–5⅜"	2	24–B2	28–T13	4–T14	4–T15	7E	471.24	23.9	1454	13.1
	F	450.00	20'–7½"	2	24–B3	21–T13	4–T14	4–T15	7E	471.24	22.8	1418	10.7
	J	447.50	22'–5⅜"	2	24–B4	23–T13	4–T14	4–T15	7J	469.84	13.9	1251	11.8
28W	G1	441.50	32'–2⅜"	2	24–B5	32–T13	4–T14	4–T15	28W–G1	474.93	24.6	1544	14.4
	G3	441.50	31'–3½"	2	24–B6	31–T13	4–T14	4–T15	28W–G3	474.04	23.5	1514	14.1
31W	G1	440.50	29'–4¼"	3	24–B1	30–T13	4–T14	4–T15	31E–2	471.18	34.7	1634	17.7
R1–15	G1	437.00	30'–4"	2	24–B7	31–T13	4–T14	4–T15	R1–15@B	468.02	28.8	1489	13.9
									TOTAL		196.8	11756	109.3

(a) See NOTE E to determine the exact elevation of top of concrete column.

(b) Structure excavation quantities are based on limited information. The approximate quantities shown are intended for planning only and shoud be verified prior to use for bidding.

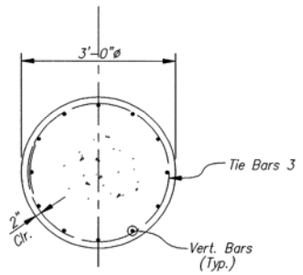
(c) Top of existing column at location shown.

(d) Reinforcing bar weights include footing bars shown on the previous sheet.

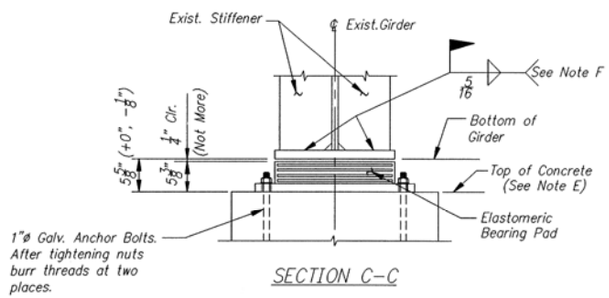


SECTION B–B

NOTE D: See Elastomeric Bearing Pad Details For Dimensions X and Y.



SECTION A–A



SECTION C–C

NOTE E: Top of Concrete Columns shall be finished level at an elevation which is 5⅝" (+0",–⅛") below the bottom of the existing steel girder.

NOTE F: Welding of existing girder stiffeners is to be included in Bid Item "Structural Steel."

Work this sheet with Sheet 7.

RETROFIT TO PROVIDE
PIN & HANGER BACK–UP

SHEET 8

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I64)

STATION ROAD
P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		23481

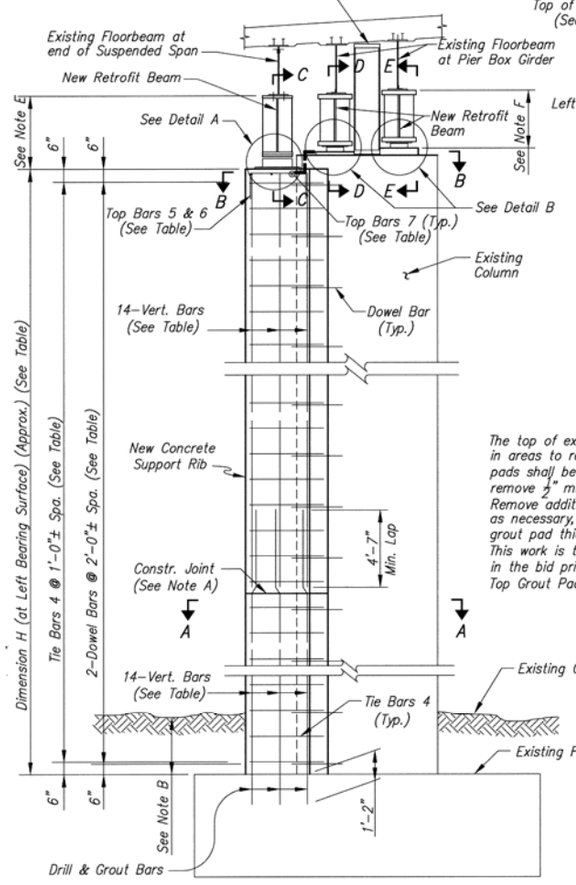
TYPE B SUPPORT DETAILS

10/1/1993 BLS D:\SHOP\FILES\DRAWINGS\SHEET8

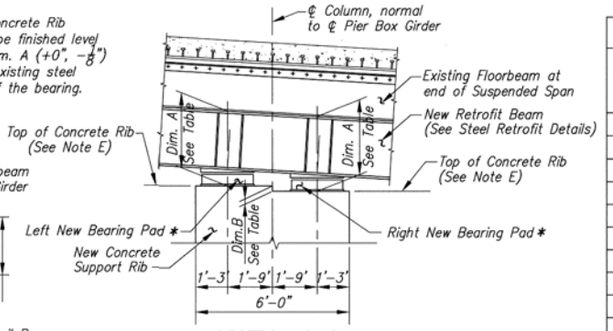
UPDATE DATE

LETTING DATE

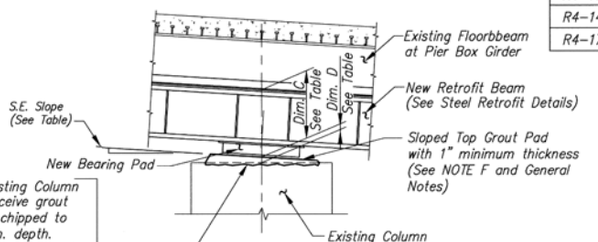
NOTE E: Each half of the top of Concrete Rib for Type C Supports shall be finished level at an elevation which is Dim. A (+0", $-\frac{1}{8}$") below the bottom of the existing steel floorbeam at the center of the bearing.



TYPE C SUPPORT
(Rib on Existing Ramp Column)



SECTION C–C
* Looking Upstation



The top of existing Column in areas to receive grout pads shall be chipped to remove $\frac{1}{2}$" min. depth. Remove additional concrete, as necessary, for a minimum grout pad thickness of 1". This work is to be included in the bid price for "Sloped Top Grout Pad"

SECTION D–D
SECTION E–E SAME AS SECTION D–D EXCEPT DIRECTION OF SUPERELEVATION

NOTE F: The top of grout pad shall be finished to a sloping surface which is Dim. C (+0", $-\frac{1}{8}$") below the bottom of existing floorbeam and parallel to the floorbeam flange.

TYPE C SUPPORT DATA

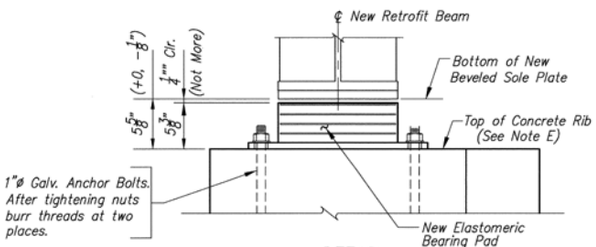
PIER	EXIST. COLUMN DIA.	(a) DIM. H (Approx.)	DIM. A	(b) DIM. B	DIM. C DOWN STA & UP STA	(c) DIM. D (Approx.) DOWN STA FLRBM.	(c) DIM. D (Approx.) UP STA FLRBM.	S.E. (Ft./Ft.)	VERT. BARS	DOWEL BARS	TIE BARS 4	TOP BARS 5	TOP BARS 6	TOP BARS 7	STRUCTURE EXCAVATION (d) CY	REBAR WEIGHT LB	CLASS A CONCRETE QUANTITY CY
R1–3	5'–6"	30'–11$\frac{3}{16}$"	2'–9$\frac{11}{16}$"	–$\frac{5}{8}$"	2'–3"	1$\frac{5}{8}$"	3$\frac{1}{8}$"	.0156	28–C1	32–D1	30–T18	4–T20	4–T21	6–T23	9.0	1858	17.0
R1–6	5'–6"	47'–7$\frac{1}{16}$"	2'–9$\frac{11}{16}$"	0"	2'–3"	1$\frac{13}{16}$"	2$\frac{11}{16}$"	.0004	28–C2	48–D1	48–T18	4–T20	4–T21	6–T23	4.6	2748	26.2
R1–9	5'–6"	47'–8$\frac{5}{8}$"	2'–10$\frac{3}{16}$"	+2$\frac{7}{16}$"	2'–3"	3$\frac{3}{16}$"	1$\frac{15}{16}$"	–.0580	28–C2	48–D1	48–T18	4–T20	4–T21	6–T23	1.5	2748	26.3
R1–12	5'–6"	40'–4$\frac{7}{16}$"	2'–10$\frac{3}{16}$"	+2$\frac{7}{16}$"	2'–3"	3$\frac{3}{8}$"	1$\frac{5}{8}$"	–.0580	28–C3	42–D1	40–T18	4–T20	4–T21	6–T23	13.1	2359	22.3
R2A–1	5'–6"	23'–8$\frac{15}{16}$"	1'–8$\frac{5}{8}$"	–2"	1'–2"	1$\frac{1}{2}$"	1$\frac{11}{16}$"	.0480	28–C4	24–D1	24–T18	4–T20	4–T21	6–T23	4.6	1486	13.1
R2A–4	5'–6"	30'–10$\frac{5}{16}$"	1'–8$\frac{5}{8}$"	–2$\frac{1}{2}$"	1'–2"	2$\frac{1}{16}$"	$\frac{3}{4}$"	.0600	28–C5	32–D1	31–T18	4–T20	4–T21	6–T23	3.2	1858	17.0
R3–3	6'–0"	23'–4$\frac{1}{2}$"	2'–10$\frac{3}{16}$"	–2$\frac{1}{2}$"	2'–3"	2$\frac{1}{2}$"	3"	.0600	28–C6	24–D1	23–T19	4–T20	4–T22	6–T23	3.9	1461	11.7
R3–6	5'–6"	21'–8$\frac{1}{16}$"	2'–9$\frac{15}{16}$"	–1$\frac{9}{16}$"	2'–3"	1$\frac{15}{16}$"	2$\frac{1}{2}$"	.0377	28–C7	22–D1	22–T18	4–T20	4–T21	6–T23	10.6	1381	11.9
R4–3	5'–6"	42'–4$\frac{7}{8}$"	2'–9$\frac{11}{16}$"	0"	2'–3"	1$\frac{5}{8}$"	3$\frac{1}{8}$"	.0003	28–C8	44–D1	42–T18	4–T20	4–T21	6–T23	0.8	2477	23.4
R4–5	6'–0"	47'–4$\frac{3}{8}$"	2'–10$\frac{1}{16}$"	+2$\frac{1}{8}$"	2'–3"	1$\frac{7}{16}$"	3$\frac{1}{4}$"	–.0504	28–C9	48–D1	47–T19	4–T20	4–T22	6–T23	0.0	2723	23.7
R4–8	6'–0"	62'–9$\frac{1}{16}$"	2'–10$\frac{3}{16}$"	+2$\frac{7}{16}$"	2'–3"	1$\frac{7}{16}$"	3$\frac{3}{16}$"	–.0580	28–C10	64–D1	63–T19	4–T20	4–T22	6–T23	5.8	3552	31.3
R4–11	6'–0"	60'–7$\frac{5}{8}$"	2'–9$\frac{15}{16}$"	+1$\frac{5}{8}$"	2'–3"	2$\frac{5}{8}$"	2$\frac{7}{16}$"	–.0390	28–A11	62–D1	61–T19	4–T20	4–T22	6–T23	4.4	3434	30.3
R4–14	5'–6"	42'–4$\frac{7}{8}$"	2'–9$\frac{15}{16}$"	+1$\frac{5}{8}$"	2'–3"	3$\frac{1}{4}$"	1$\frac{1}{2}$"	–.0390	28–C8	44–D1	42–T18	4–T20	4–T21	6–T23	9.3	2477	23.4
R4–17	5'–6"	29'–9$\frac{15}{16}$"	2'–9$\frac{15}{16}$"	+1$\frac{3}{16}$"	2'–3"	3$\frac{1}{8}$"	1$\frac{3}{8}$"	–.0290	28–C12	32–D1	30–T18	4–T20	4–T21	6–T23	6.6	1821	16.4
														TOTAL	77.4	32383	294.0

(a) Dimension H is the approximate height for the left side of the concrete rib, looking up station. See NOTE E to determine the exact top elevation for each half of the new concrete rib.

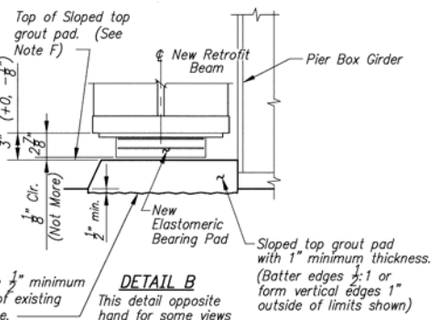
(b) Dimension B is the approximate vertical dimension that the right side bearing surface differs from the left side bearing surface, looking up station. (Plus values indicate the right side is higher and minus values indicate the right side is lower)

(c) Dimension D assumes the top of column adjacent to the pier box girder was finished to the elevation shown on the original construction plans and includes $\frac{1}{2}$" for concrete removed by chipping.

(d) Structure excavation quantities are based on limited information. The approximate quantities shown are intended for planning only and should be verified prior to use for bidding.

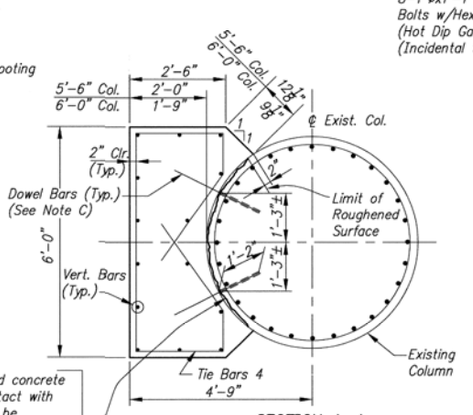


DETAIL A



DETAIL B
This detail opposite hand for some views

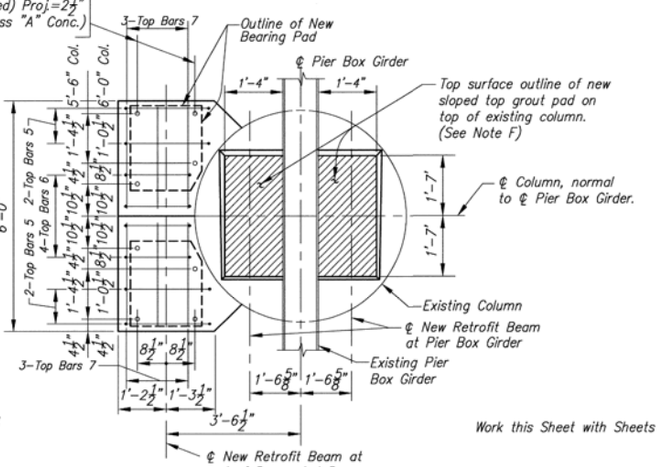
8–1"øx1'–1" Swedged Anchor Bolts w/Hex. Nut & Wash. (Hot Dip Galvanized) Proj.=2$\frac{1}{2}$" (Incidental to Class "A" Conc.)



SECTION A–A

Surfaces of hardened concrete which will be in contact with fresh concrete shall be roughened within the limits shown and thoroughly wetted immediately before placing fresh concrete. This work is to be incidental to Class "A" concrete.

NOTE C: Dowel Bars shall be grouted in holes drilled into the existing concrete in accordance with Sect. 736 of the Standard Specifications. Before drilling holes mark the location of reinforcing bars in the existing concrete and adjust the dowel spacing, as necessary, to clear existing bars. Drilling and grouting is to be incidental to Class "A" Concrete.



SECTION B–B

Work this Sheet with Sheets 10 & 11.

RETROFIT TO PROVIDE PIN & HANGER BACK–UP

SHEET 9

NOTE A: The heights of concrete placement sections shall be not less than eight (8) feet nor more than nineteen (19) feet. Construction joints are to be located by the Contractor.

NOTE B: The depth of soil cover on the existing footings varies with the location. Excavation for constructing the new support and backfilling and repaving where necessary to restore area to original conditions is to be included in the lump sum bid for "Structural Excavation."

DESIGNED BY BLS DATE 8/93
DETAILED BY BLS & AR CHECKED BY TTG DATE 8/93
TRACED BY CHECKED BY DATE
REVISED DATE
REVISED DATE
REVISED DATE

TYPE C SUPPORT DETAILS

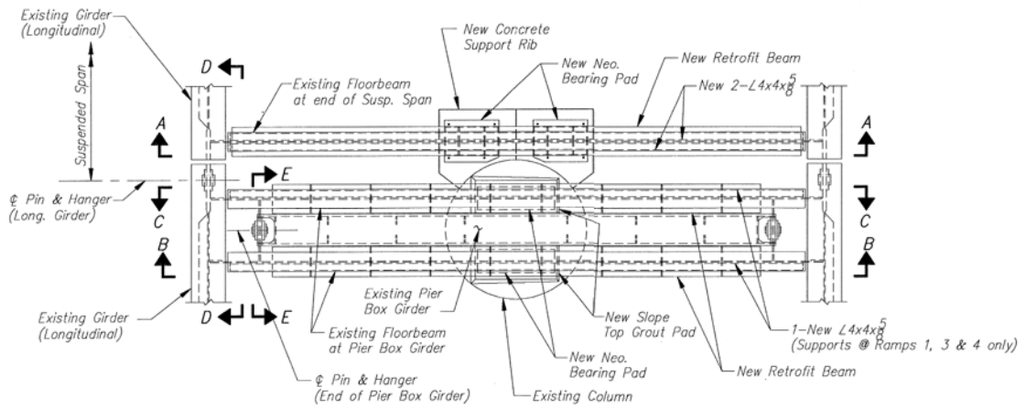
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I64)

STATION ROAD P.E. PROJECT NO.

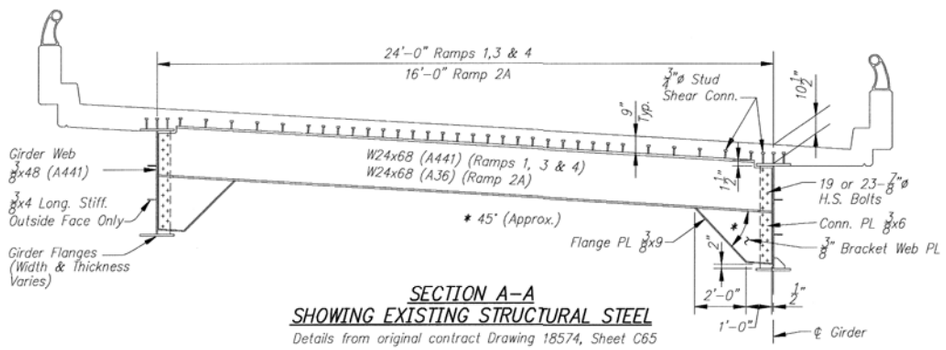
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

UPDATE DATE

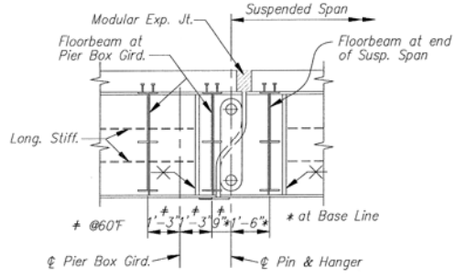
LETTING DATE



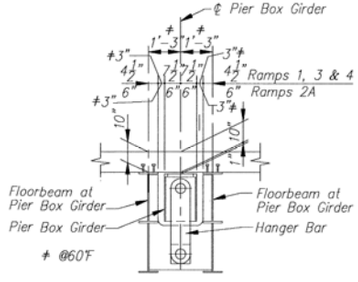
PLAN
TYPE C SUPPORT



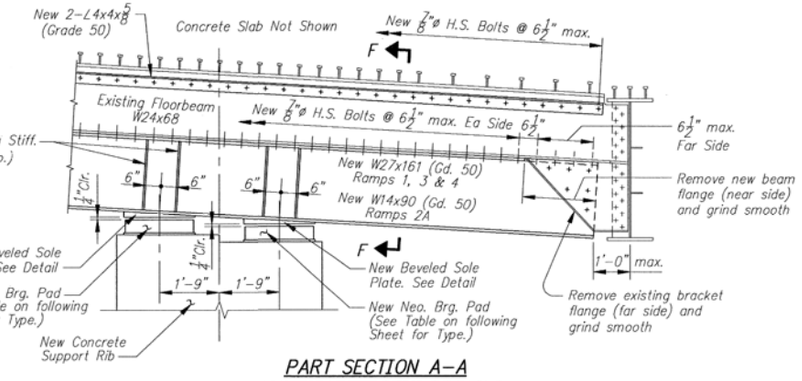
SECTION A–A
SHOWING EXISTING STRUCTURAL STEEL
Details from original contract Drawing 18574, Sheet C65



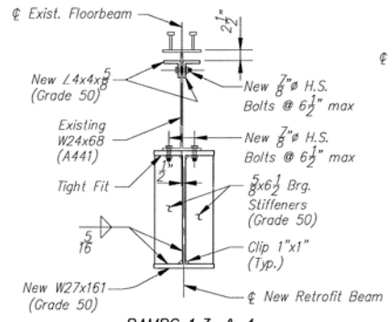
SECTION D–D
SHOWING EXISTING STRUCTURAL STEEL
Details From Origional Contract
Drawing 18574, Sheet C60



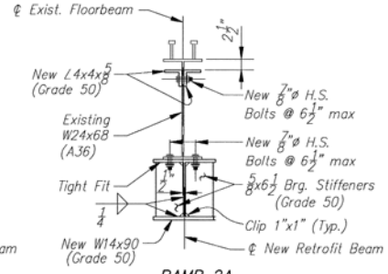
SECTION E–E
SHOWING EXISTING STRUCTURAL STEEL
Details From Origional Contract
Drawing 18574, Sheet C70



PART SECTION A–A
SHOWING RETROFIT DETAILS

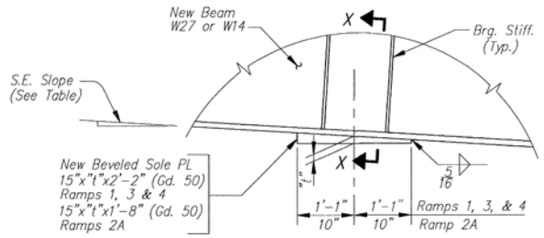


RAMPS 1,3, & 4

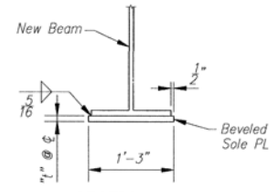


RAMP 2A

SECTION F–F



BEVELED SOLE PLATE DETAIL



SECTION X–X

BEVELED SOLE PLATE DATA		
PIER	DIM. "t"	S.E. (FT./FT.)
R1–3	1/2"	.0156
R1–6	1/2"	.0004
R1–9	1"	–.0580
R1–12	1"	–.0580
R2A–1	3/8"	.0480
R2A–4	1"	.0600
R3–3	1"	.0600
R3–6	3/8"	.0377
R4–3	1/2"	.0003
R4–5	1"	–.0504
R4–8	1"	–.0580
R4–11	3/8"	–.0390
R4–14	3/8"	–.0390
R4–17	3/8"	–.0290

Work this Sheet with Sheets 9 & 11.

RETROFIT TO PROVIDE
PIN & HANGER BACK–UP

SHEET 10

TYPE C SUPPORT
STRUCTURAL STEEL DETAILS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I64)

STATION | ROAD P.E. PROJECT NO.

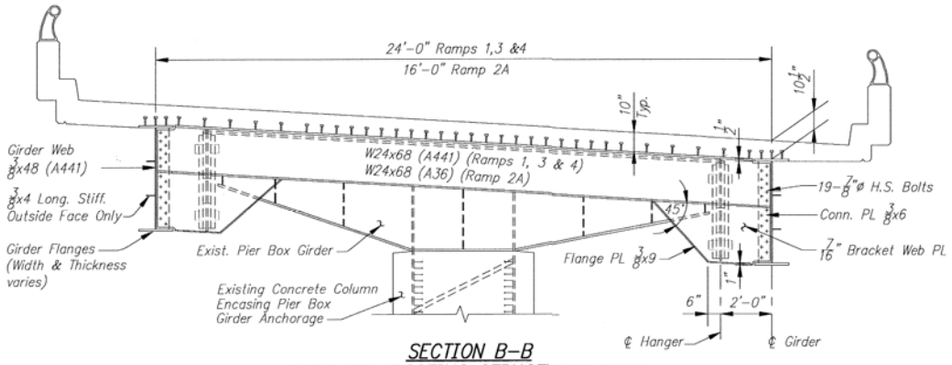
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

DESIGNED BY TIG DATE 8/93
DETAILED BY AR CHECKED BY TIG & BLS DATE 8/93
TRACED BY CHECKED BY BLS DATE
REVISED DATE
REVISED DATE
REVISED DATE

08/20/1999 AR D:\ENGFILES\I265\065\SHEET10

UPDATE DATE

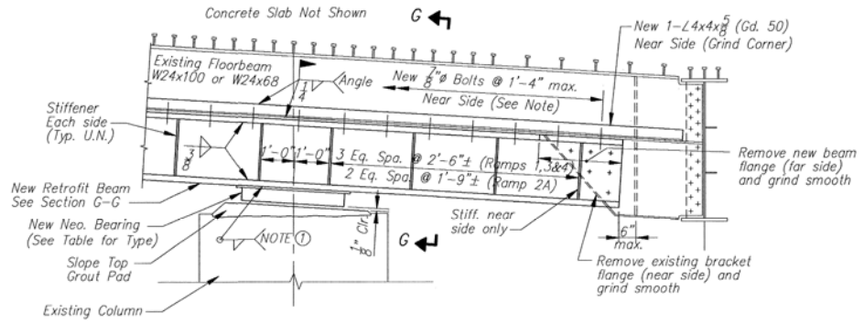
LETTING DATE



SECTION B–B
SHOWING EXISTING STRUCTURAL STEEL

Details from original contract Drawing 18574, Sheet C65 & C70

SECTION C–C
SAME AS SECTION B–B EXCEPT
DIRECTION OF SUPERELEVATION.



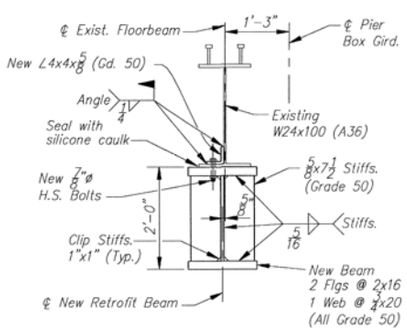
PART SECTION B–B
SHOWING RETROFIT DETAILS

NOTE ①: *The temperature of the top plate of the neoprene bearing pad must be kept below 250F when welding it to the beam flange.*

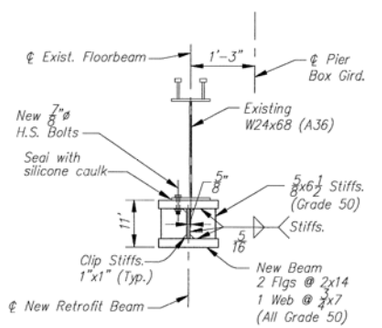
SECTION C–C
SAME AS SECTION B–B EXCEPT
DIRECTION OF SUPERELEVATION.

NOTE: *The Retrofit Beams adjacent to the Pier Box Girders are designed to act independently of the existing floorbeams (i.e. not composite with floorbeam) because of inaccessibility for attachment. Bolts connecting these beams are only to support the Retrofit Beam and maintain contact.*

NEW BEARING PAD TYPE				
PIER	FOR RETROFIT BEAM AT END OF SUSP. SPAN		FOR RETROFIT BEAM AT PIER BOX GIRDERS	
	LEFT BEARING	RIGHT BEARING	DOWN STA. FLRBM.	UP STA. FLRBM.
R1–3	5	4	10	10
R1–6	4	5	10	10
R1–9	4	5	10	10
R1–12	5	4	10	10
R2A–1	7	6	11	11
R2A–4	6	7	11	11
R3–3	9	8	10	10
R3–6	4	5	10	10
R4–3	5	4	10	10
R4–5	8	9	10	10
R4–8	9	8	10	10
R4–11	8	9	10	10
R4–14	5	4	10	10
R4–17	4	5	10	10



RAMPS 1,3, & 4



RAMP 2A

SECTION G–G

Work this Sheet with Sheets 9 & 10.

RETROFIT TO PROVIDE
PIN & HANGER BACK–UP

SHEET 11

TYPE C SUPPORT
STRUCTURAL STEEL DETAILS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I64)

STATION | ROAD P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

DESIGNED BY TIG CHECKED BY
DETAILED BY AR CHECKED BY
TRACED BY CHECKED BY

DATE 8/93 BLS
DATE 8/93 TIG & BLS
DATE
DATE
DATE
DATE

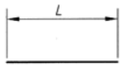
REVISED
REVISED
REVISED

08/30/1993 AR D:\MGFILES\1357\SHEETS\SHEET11

UPDATE DATE
LETTING DATE

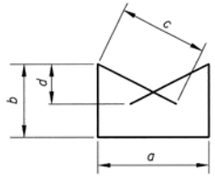
DESIGNED BY AR & BLS CHECKED BY TIG & BLS DATE 8/93
DETAILED BY CHECKED BY DATE
TRACED BY CHECKED BY DATE
REVISED DATE
REVISED DATE
REVISED DATE

BARS FOR TYPE A SUPPORTS



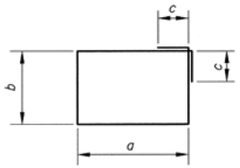
VERTICAL BARS

VERTICAL BARS		
MARK	SIZE	L
A1	7	20'-4"
A2	7	19'-8"
A3	7	19'-0"
A4	7	17'-4"
A5	8	22'-6"
A6	8	22'-4"
A7	8	19'-8"
A8	8	18'-6"
A9	8	22'-0"
A10	8	21'-10"
A11	8	21'-4"
A12	7	19'-2"
A13	7	19'-6"
A14	7	20'-0"
A15	7	18'-4"
A16	7	18'-8"
A17	7	18'-10"
A18	7	17'-8"
A19	8	17'-0"
A20	8	17'-8"
A21	8	16'-8"
A22	8	15'-4"
A23	8	16'-10"
A24	8	15'-0"
A25	8	16'-4"



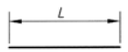
TIE BARS 1

TIE BARS 1						
MARK	SIZE	a	b	c	d	L
T1	4	2'-2"	1'-4½"	1'-9"	5"	8'-3"
T2	4	2'-6"	1'-5"	2'-0"	7"	9'-2"
T3	4	2'-2"	1'-7½"	1'-9"	6"	8'-9"
T10	4	2'-2"	1'-7½"	1'-9"	5"	8'-9"
T16	4	2'-2"	2'-4"	1'-9"	7"	10'-2"



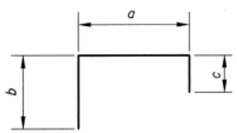
TIE BARS 2

TIE BARS 2					
MARK	SIZE	a	b	c	L
T4	4	2'-2"	2'-2"	6"	9'-5"
T5	4	2'-6"	2'-2"	6"	10'-1"
T11	4	2'-2"	2'-8"	6"	10'-5"



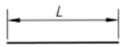
DOWEL BARS

DOWEL BARS		
MARK	SIZE	L
D1	6	2'-4"



TOP BARS 1

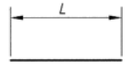
TOP BARS 1					
MARK	SIZE	a	b	c	L
T6	4	2'-1½"	2'-0"	1'-5"	5'-6"
T7	4	2'-1½"	2'-0"	1'-1"	5'-2"
T12	4	2'-7½"	2'-0"	1'-1"	5'-8"
T17	4	2'-1½"	2'-0"	0'-9"	4'-10"



TOP BARS 2

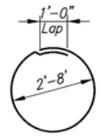
TOP BARS 2		
MARK	SIZE	L
T8	4	2'-2"
T9	4	2'-6"

BARS FOR TYPE B SUPPORTS



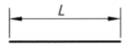
VERTICAL BARS

VERTICAL BARS		
MARK	SIZE	L
B1	7	16'-10"
B2	7	17'-0"
B3	7	12'-6"
B4	7	13'-6"
B5	7	18'-4"
B6	7	17'-10"
B7	7	17'-4"



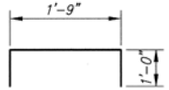
TIE BARS 3

TIE BARS 3		
MARK	SIZE	L
T13	4	9'-5"



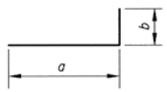
FOOTING BARS

FOOTING BARS		
MARK	SIZE	L
F1	6	7'-6"
F2	6	6'-0"
F4	6	2'-4"
F5	6	8'-6"
F6	7	9'-6"

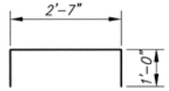


TOP BARS 3

TOP BARS 3		
MARK	SIZE	L
T14	4	3'-8"



FOOTING BARS

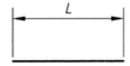


TOP BARS 4

TOP BARS 4		
MARK	SIZE	L
T15	4	4'-6"

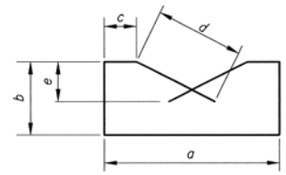
FOOTING BARS				
MARK	SIZE	a	b	L
F3	6	3'-8"	2'-0"	5'-7"
F7	7	5'-8"	1'-6"	7'-1"
F8	7	6'-2"	1'-6"	7'-7"
F9	7	4'-9"	1'-6"	6'-2"

BARS FOR TYPE C SUPPORTS



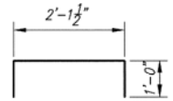
VERTICAL BARS

VERTICAL BARS		
MARK	SIZE	L
C1	8	17'-10"
C2	8	26'-2"
C3	8	22'-6"
C4	8	14'-2"
C5	8	17'-8"
C6	8	14'-0"
C7	8	13'-2"
C8	8	23'-8"
C9	8	26'-0"
C10	8	33'-10"
C11	8	32'-8"
C12	8	17'-4"



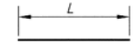
TIE BARS 4

TIE BARS 4							
MARK	SIZE	a	b	c	d	e	L
T18	4	5'-8"	2'-3"	1'-0"	2'-9"	1'-3"	17'-6"
T19	4	5'-8"	2'-3"	7"	3'-2"	1'-8"	17'-6"



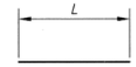
TOP BARS 5

TOP BARS 5		
MARK	SIZE	L
T20	4	4'-1"



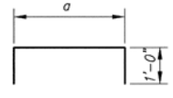
TOP BARS 7

TOP BARS 7		
MARK	SIZE	L
T23	4	2'-8"



DOWEL BARS

VERTICAL BARS		
MARK	SIZE	L
D1	6	2'-4"



TOP BARS 6

TOP BARS 6			
MARK	SIZE	a	L
T21	4	1'-8½"	3'-8"
T22	4	1'-5½"	3'-5"

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 12

REINFORCING BAR DETAILS

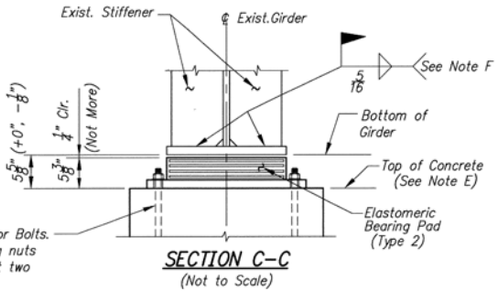
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I64)

STATION **ROAD**
P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.

UPDATE DATE

LETTING DATE



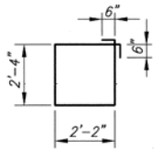
SECTION C-C

(Not to Scale)

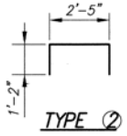
NOTE E: Top of Concrete for Support at Pier 41W, Girder G1, shall be finished level at an elevation which is 5⅞" (+0", -⅛") below the bottom of the existing steel girder.

NOTE F: Welding of existing girder stiffeners is to be included in Bid Item "Structural Steel."

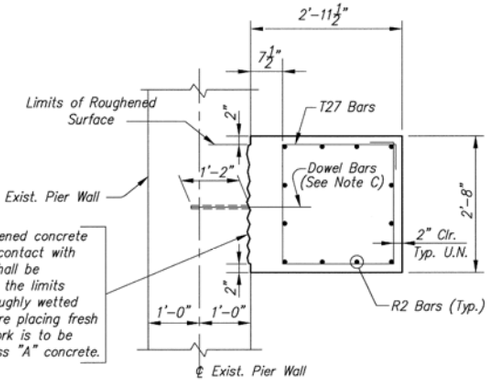
BILL OF REINFORCEMENT					
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION
R2	Str.	24	8	15'-6"	Vertical
T27	①	25	4	9'-9"	Tie Bars
T28	②	4	4	4'-8"	Top Bars
T29	Str.	4	4	2'-4"	Top Bars
D1	Str.	12	6	2'-4"	Dowels



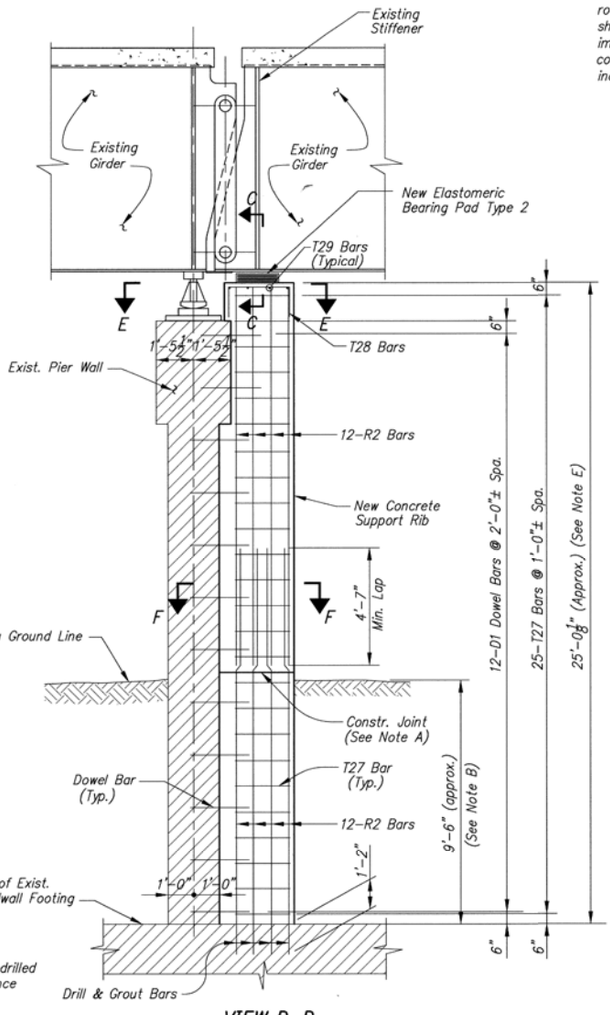
TYPE ①



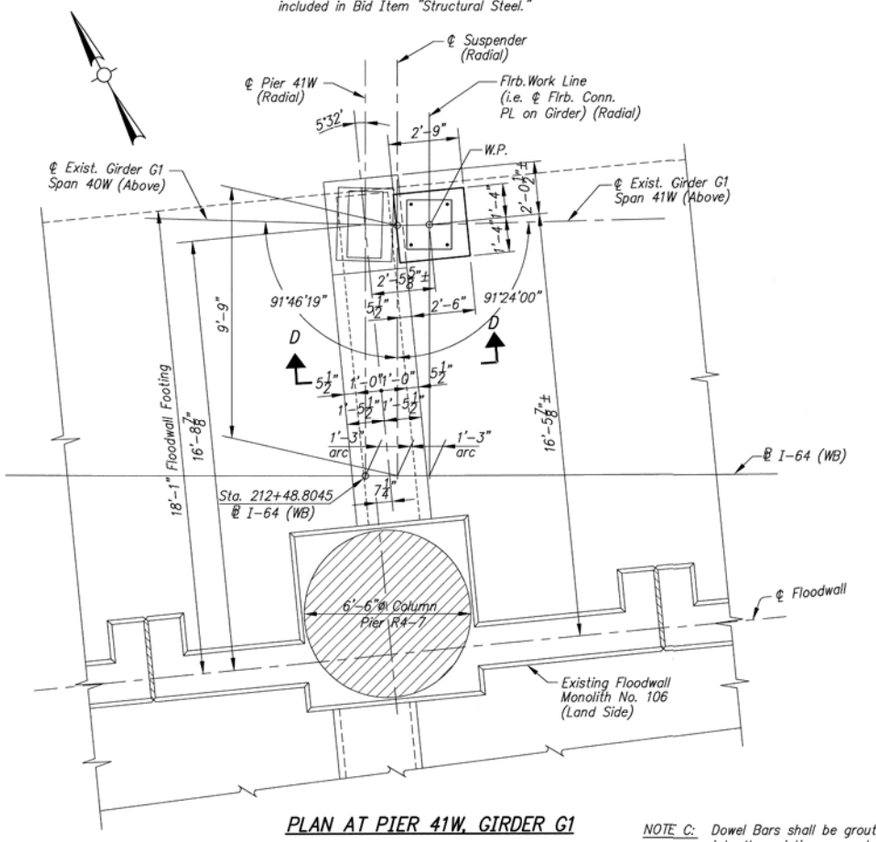
TYPE ②



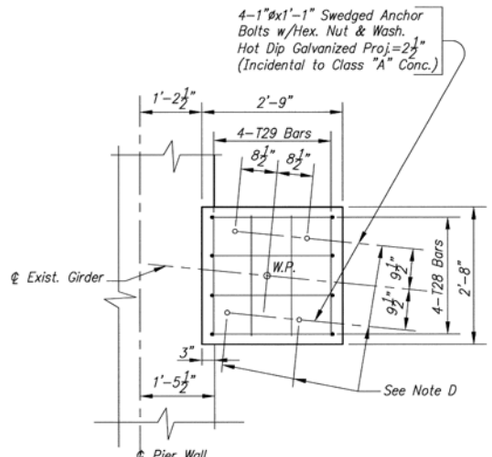
SECTION F-F



VIEW D-D



PLAN AT PIER 41W, GIRDER G1



SECTION E-E

NOTE D: Anchor Bolts are to be centered on the centerlines and Work Point as shown and not centered on top of the new concrete support.

QUANTITIES	
ITEM	AMOUNT
CLASS "A" CONCRETE	7.1 CY
STEEL REINFORCEMENT	1,546 Lbs.
STRUCTURE EXCAVATION	(a) 9.0 CY

(a) Strucure excavation quantities are based on limited information. The approximate quantity shown is intended for planning only and should be verified prior to use for bidding.

NOTE A: The heights of concrete placement sections shall be not less than eight (8) feet nor more than nineteen (19) feet. Construction joints are to be located by the Contractor.

NOTE B: Excavation for constructing the new support and backfilling and repaving where necessary to restore area to original conditions is to be included in the lump sum bid for "Structural Excavation."

NOTE C: Dowel Bars shall be grouted in holes drilled into the existing concrete in accordance with Sect. 736 of the Standard Specifications. Before drilling holes mark the location of reinforcing bars in the existing concrete and adjust the dowel spacing, as necessary, to clear existing bars. Drilling and grouting is to be incidental to Class "A" Concrete.

SPECIAL SUPPORT AT PIER 41W

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 13

DESIGNED BY BLS — CHECKED BY AR & JRH — DATE 8/93
DETAILED BY TTG — CHECKED BY BLS & TTG — DATE 8/93
TRACED BY — CHECKED BY — DATE
REVISED — DATE
REVISED — DATE
REVISED — DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I64)

STATION — ROAD P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

UPDATE DATE

LETTING DATE

DESIGNED BY	CHECKED BY	DATE
BLS	TTG	8/93
DETAILED BY	CHECKED BY	DATE
AR & DRH	BLS & TTG	8/93
TRACED BY	CHECKED BY	DATE

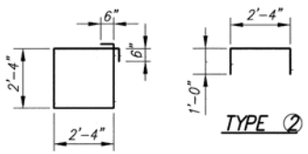
REVISED DATE

REVISED DATE

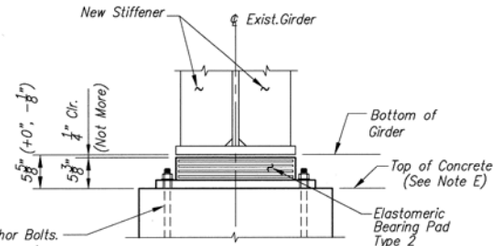
REVISED DATE

BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH	LOCATION
R1	Str.	24	8	14'-5"	Vertical
T24	①	23	4	10'-1"	Tie Bars
T25	②	4	4	4'-3"	Top Bars
T26	Str.	4	4	2'-4"	Top Bars
D1	Str.	11	6	2'-4"	Dowels

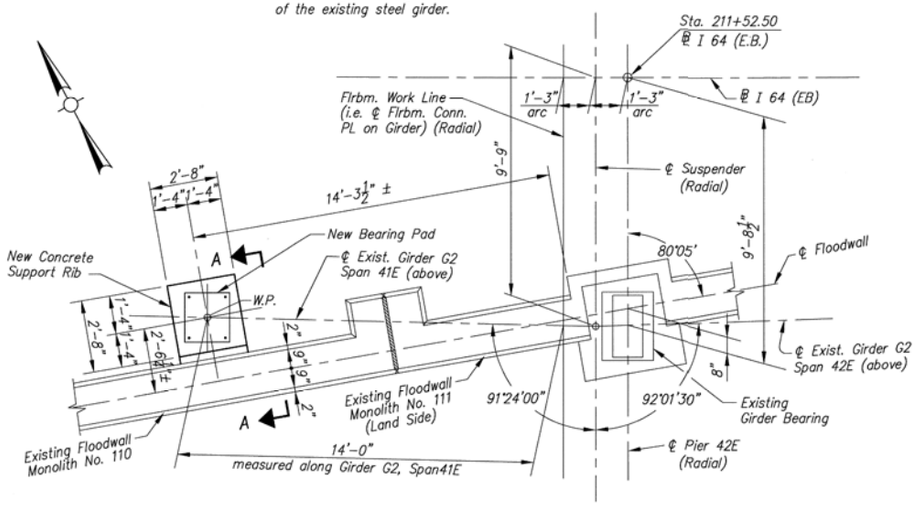


TYPE ① TYPE ②

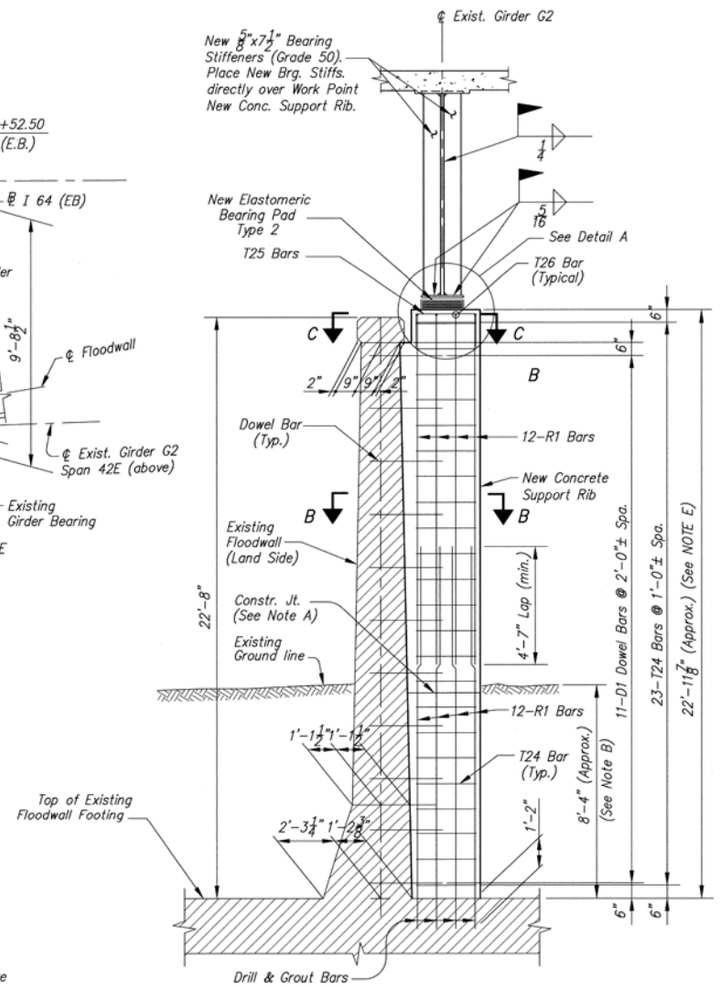


DETAIL A
(Not to Scale)

NOTE E: Top of Concrete for Support at Pier 42E, Girder G2, shall be finished level at an elevation which is 5⅝" (+0", -⅛") below the bottom of the existing steel girder.



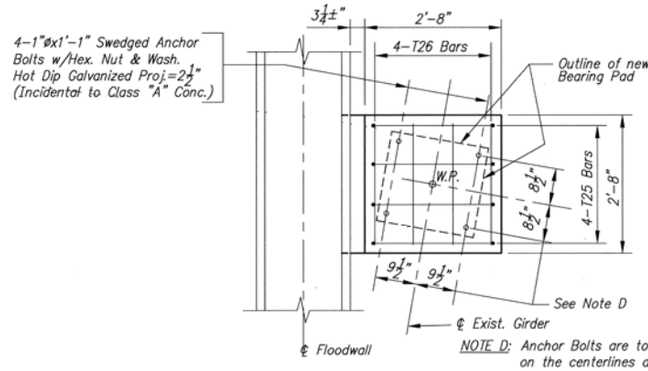
PLAN AT PIER 42E, GIRDER G2



VIEW A-A

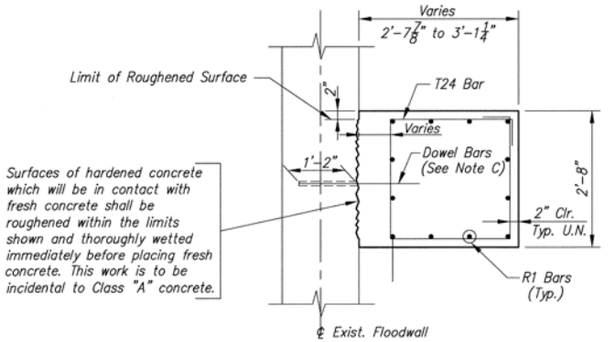
NOTE A: The heights of concrete placement sections shall be not less than eight (8) feet nor more than nineteen (19) feet. Construction joints are to be located by the Contractor.

NOTE B: Excavation for constructing the new support and backfilling and repaving where necessary to restore area to original conditions is to be included in the lump sum bid for "Structural Excavation."



NOTE D: Anchor Bolts are to be centered on the centerlines and work points, as shown.

SECTION C-C



Surfaces of hardened concrete which will be in contact with fresh concrete shall be roughened within the limits shown and thoroughly wetted immediately before placing fresh concrete. This work is to be incidental to Class "A" concrete.

SECTION B-B

NOTE C: Dowel Bars shall be grouted in holes drilled into the existing concrete in accordance with Sect. 736 of the Standard Specifications. Before drilling holes mark the location of reinforcing bars in the existing concrete and adjust the dowel spacing, as necessary, to clear existing bars. Drilling and grouting is to be incidental to Class "A" Concrete.

QUANTITIES	
ITEM	AMOUNT
CLASS "A" CONCRETE	6.6 CY
STEEL REINFORCEMENT	1,464 Lbs.
STRUCTURE EXCAVATION	(a) 8.1 CY

(a) Strucure excavation quantities are based on limited information. The approximate quantity shown is intended for planning only and should be verified prior to use for bidding.

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 14

SPECIAL SUPPORT AT PIER 42E

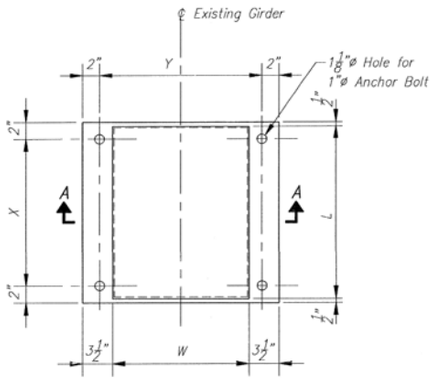
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE - LEXINGTON (I64)

STATION | ROAD P.E. PROJECT NO.

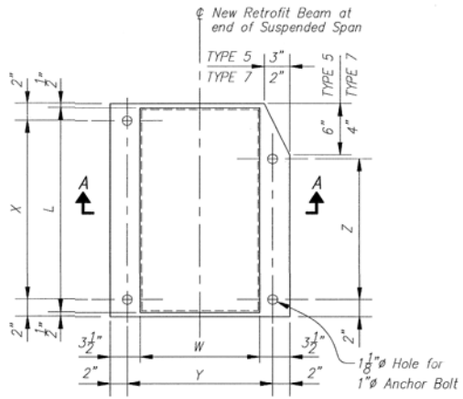
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

UPDATE DATE

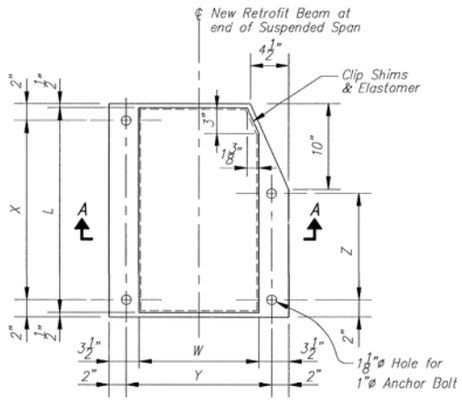
LETTING DATE



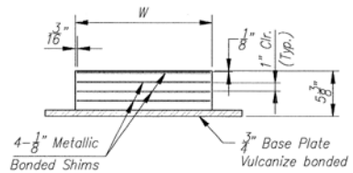
TYPES 1, 2 & 3



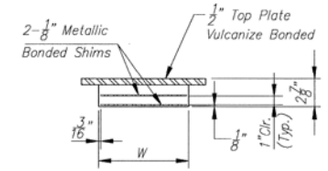
TYPES 5 & 7



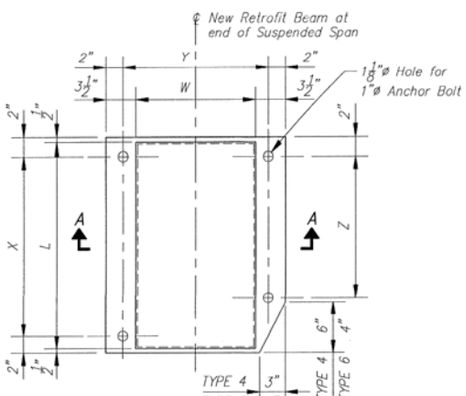
TYPE 9



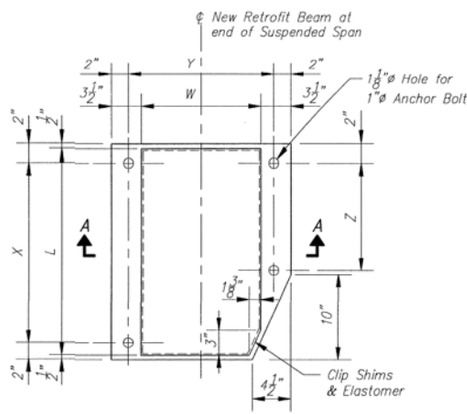
SECTION A–A



SECTION B–B

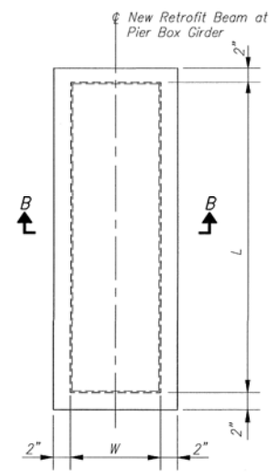


TYPES 4 & 6



TYPE 8

ELASTOMERIC BEARING PAD DETAILS



TYPES 10 & 11

Types 10 and 11 Bearing Pads are to be welded to New Retrofit Beams. See Type C Support, Structural Steel Details for Weld Note ⓘ.

DIMENSIONS FOR ELASTOMERIC BEARING PADS							
Pad	L	W	Base Plate	X	Y	Z	No. Req.'d.
TYPE 1	1'–6"	1'–8"	¾ x 19" x 2'–3"	1'–3"	1'–11"	–	8
TYPE 2	1'–8"	1'–4"	¾ x 21" x 1'–11"	1'–5"	1'–7"	–	32
TYPE 3	2'–0"	1'–4"	¾ x 25" x 1'–11"	1'–9"	1'–7"	–	2
TYPE 4	2'–0"	1'–2"	¾"x 25" x 1'–9" (clip)	1'–9"	1'–5"	1'–4½"	8
TYPE 5	2'–0"	1'–2"	¾"x 25" x 1'–9" (clip)	1'–9"	1'–5"	1'–4½"	8
TYPE 6	1'–6"	1'–2"	¾"x 19" x 1'–9" (clip)	1'–3"	1'–5"	1'–0½"	2
TYPE 7	1'–6"	1'–2"	¾"x 19" x 1'–9" (clip)	1'–3"	1'–5"	1'–0½"	2
TYPE 8	2'–0"	1'–2"	¾"x 25" x 1'–9" (clip)	1'–9"	1'–5"	1'–0½"	4
TYPE 9	2'–0"	1'–2"	¾"x 25" x 1'–9" (clip)	1'–9"	1'–5"	1'–0½"	4
TYPE 10	3'–0"	10½"	½ x 14½" x 3'–4"	–	–	–	24
TYPE 11	3'–0"	8"	½ x 12" x 3'–4"	–	–	–	4

NOTE: Elastomeric Bearing Pads shall be in accordance with Section 822 of the Standard Specifications and shall have a durometer hardness of 60. Base plates and top plates shall receive a shop coat of primer paint and a field coat of finish paint in accordance with the General Notes.

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

ELASTOMERIC BEARING PADS

SHEET 15

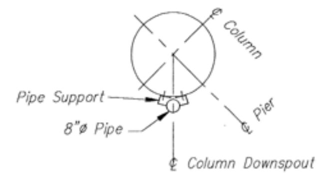
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I-64)

STATION | ROAD P.E. PROJECT NO.

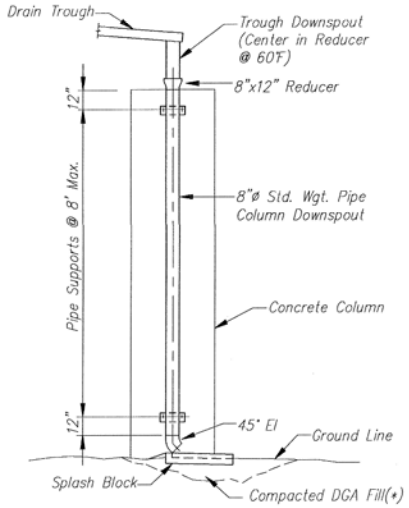
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

DESIGNED BY BLS & TIG DATE 7/93 CHECKED BY TIG & BLS DATE 7/93
DETAILED BY AR CHECKED BY BLS & TIG DATE
TRACED BY CHECKED BY DATE
REVISED DATE
REVISED DATE

08/25/1999 AM D:\SHOP\FILES\STDRAWS\SHEET15

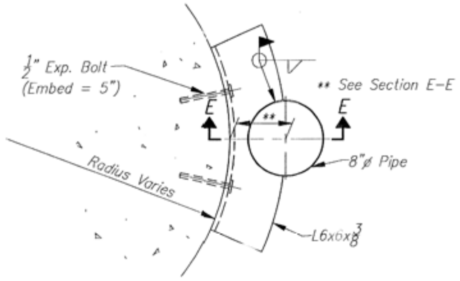


PLAN

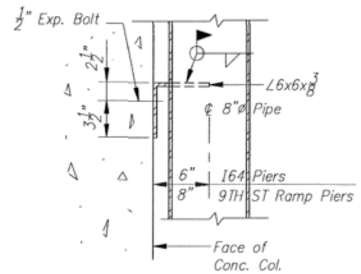


EXISTING DOWNSPOUT DETAILS

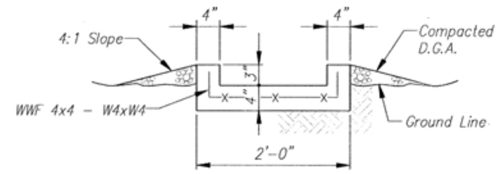
(*) 4" minimum compacted Dense Graded Aggregate under splash block (additional DGA may be required to fill depressed or eroded areas). Slope splash block to drain water away from column in a direction that best matches existing drainage contours and as directed by the Engineer.



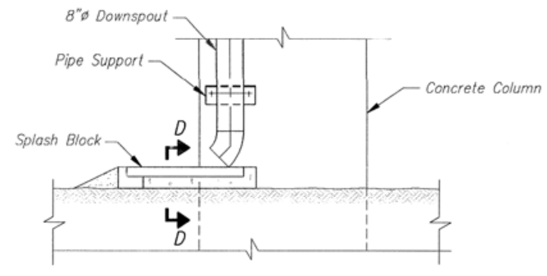
PLAN – PIPE SUPPORT @ CONCRETE COLUMNS



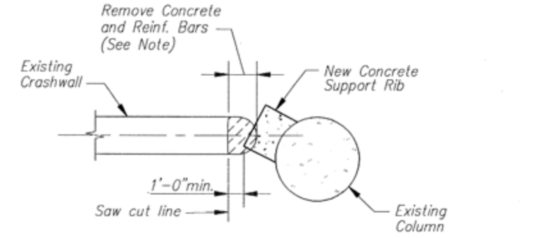
SECTION E–E



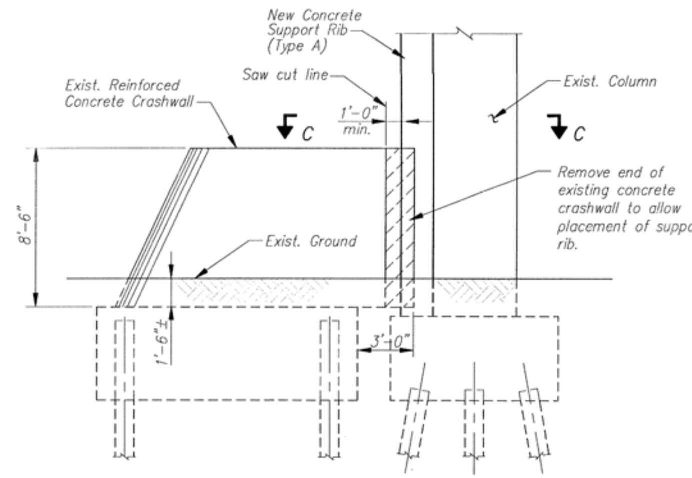
SECTION D–D



EXISTING SPLASH BLOCK DETAILS



SECTION C–C



CRASHWALL END REMOVAL DETAIL

Saw cut both sides of concrete crashwall and remove the end portion shown. Cut reinforcing bars flush. The new end face of the wall is to be neat and reasonably smooth. Payment for this work at each location will be the amount bid for "Remove Concrete Crashwall End".

LOCATIONS OF CRASHWALL END REMOVAL
Pier 28E, Column G2
Pier 31W, Column G3
Pier 44W, Column G1
Pier 44W, Column G3

REMOVAL AND REINSTALLATION OF DOWNSPOUTS AND SPLASH BLOCKS

Existing downspouts and support angles shall be removed, stored and reinstalled on the column or new concrete rib. The splash block is to be removed, cut to fit new concrete and reinstalled, or at the Contractor's option replaced in kind. This work including modifications to pipes and troughs (above) necessary for the reinstallations, along with any replacement supports, expansion bolts and other parts, shall be included in the lump sum bid for "Remove and Reinstall Downspouts and Splash Blocks"

LOCATIONS FOR REMOVE AND REINSTALL DOWNSPOUTS AND SPLASH BLOCKS *	
Pier 14E, Column J	Pier R1–3
Pier 14W, Column E	Pier R1–9
Pier 17E, Column F	Pier R1–15, Column G2
Pier 17W, Column B	Pier R2A–4
Pier 28E, Column G2	Pier R3–3
Pier 36E, Column G2	Pier R4–3
Pier 41W, Column G3	Pier R4–8
	Pier R4–17

* At locations listed, existing downspouts and/or splash blocks directly interfere with the construction of new support ribs and are to be removed, modified and reinstalled. The Contractor may elect to remove and reinstall additional downspouts and/or splash blocks for his convenience. The lump sum bid for this work is to include all locations, both those listed and those added at the Contractor's option.

MISCELLANEOUS DETAILS

RETROFIT TO PROVIDE
PIN & HANGER BACK-UP

SHEET 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
JEFFERSON
LOUISVILLE – LEXINGTON (I-64)

STATION | ROAD | P.E. PROJECT NO.

CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 23481

UPDATE DATE
LETTING DATE

DESIGNED BY AR | CHECKED BY TJG & BLS | DATE 8/93