June 17, 2024

VAR-District 8 Bridge Inspections

(2024)

PROJECT NO. 105475

SUBMITTED TO:
ODOT District 8

SUBMITTED BY:
MICHAEL BAKER INTERNATIONAL, INC.

Department of Transportation

Michael Baker
INTERNATIONAL

INTRODUCTION:

LOCATION MAP:

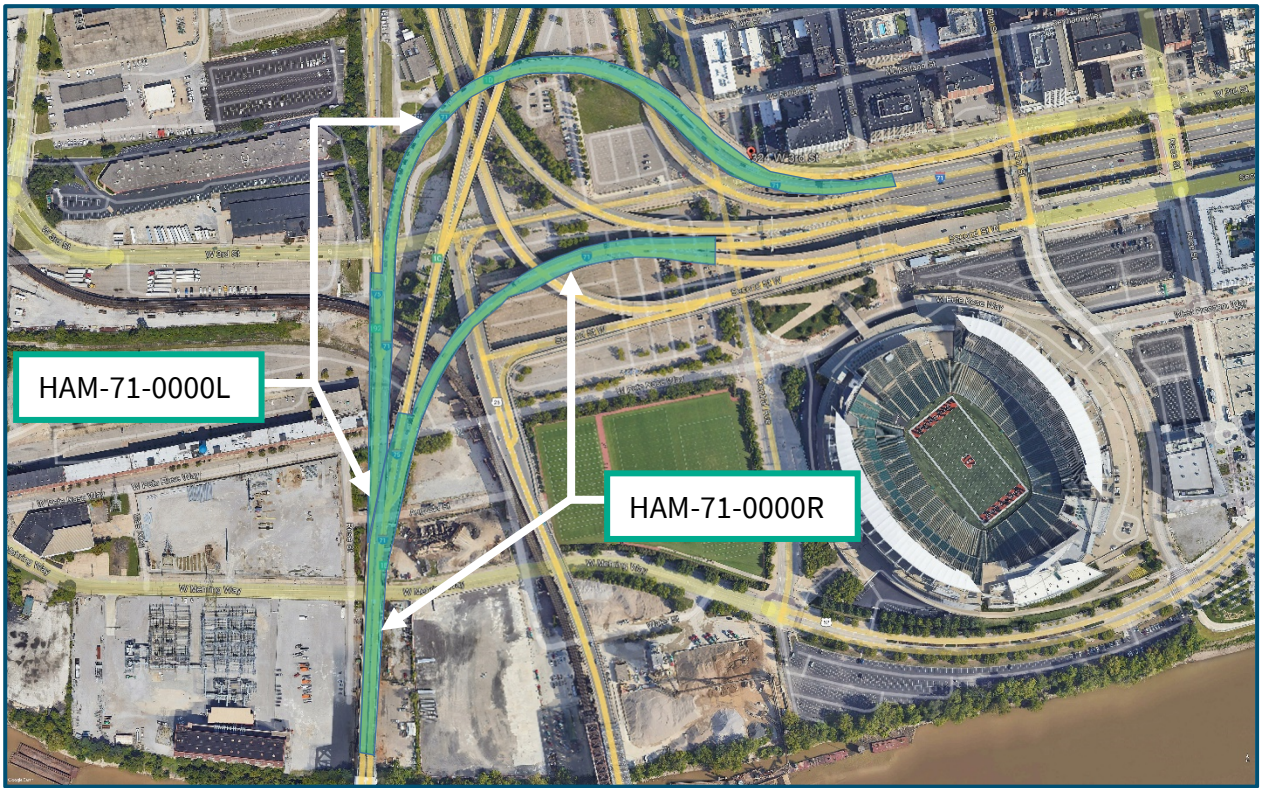


Figure 1 - I-75 SB over I-71 NB, Mehring Way, CSX Railroad, West Third Street, Pete Rose Way, & US 50/I-71 Ramps, and I-71 NB over Mehring Way, US 42, West Third Street, & US 50/I71 Ramps, Cincinnati, Ohio Location Map.

INSPECTION DETAILS:

Bridge No.:	HAM-71-0000L --- SFN 3105946 HAM-71-0000R --- SFN 3105970
Features Intersected:	I-71 Northbound, CSX Railroad, Pete Rose Way, Augusta Street, Mehring Way, and local parking lots
Locations to Inspect:	HAM-71-0000L (From River Pier to Wall Pier): Routine Element Level Inspection of 16 steel box girder pier caps (River Pier, Original Piers 1-11, 12A, 13A, 29B, and Fort Washington Way Pier 2) HAM-71-0000R (From River Pier to Pier 5): Routine Element Level Inspection
Number of Caps to Inspect:	16
Number of Inspection Days:	Estimated 7 days & 3 nights
Inspection Dates:	August 19 - September 11, 2024
Inspection Hours:	7:00 AM to 5:00 PM (Day), 11:00 PM to 5:00 AM (Night)
Inspection Equipment:	41’ Bucket Truck, 45’ Manlifts, 80’ Manlift, 120’ Manlift, Ladders

BRIDGE INFORMATION:

The HAM-71-0000L/R bridges are approach bridges to the Brent Spence Bridge. This bridge is a riveted and bolted double-deck cantilevered through truss with continuous steel stringers on the north (Ohio) and south (Kentucky) approach spans. The main span and anchor spans of the truss are 830'-6" and 453'-0" in length, respectively. The bridge carries seven lanes of vehicular traffic on Interstate Routes 71 and 75 over the Ohio River between Covington, Kentucky and Cincinnati, Ohio. The lower deck carries four northbound while the upper deck carries four southbound lanes.

HAM-71-0000L

The upper level of the north approach spans to the Brent Spence Bridge on the Ohio side of the river has fourteen fracture critical box girder pier caps with seven rolled steel stringers that frame directly into them. They carry the southbound lanes of IR 71/75 over the lower level of the Ohio approach, as well as, local roads and parking lots on the ground. The caps on the river pier and Piers 1 through 7 are riveted, built-up steel box beams simply supported on reinforced concrete columns. The caps on Piers 8 through 11, 12A, and 13A are riveted, built-up steel box beams with cantilevered ends that extend beyond the concrete pier columns.

At Pier 19A the structure diverges and HAM-75-0022L begins while HAM-71-0000L continues to the lanes of Fort Washington Way extending over other interchange ramps and local roads. From Pier 19A to For Washington Way, the number of girders varies between five and ten and the deck width varies to accommodate two uniform lanes and a converging lane. In 1999, the structure between Pier 28B and Fort Washington Way was rebuilt to coordinate with rehabilitation of the Fort Washington Interchange. Pier 29B supports a steel I-girder cap and Pier 2 supports a steel box pier cap. Both pier caps are cantilevered at each end. The forward end of HAM-71-0000L is supported on a reinforced concrete wall pier. All other substructure units are reinforced concrete cap-and-column bents or concrete columns that support steel pier caps.

HAM-71-0000R

The lower level of the north approach spans to the Brent Spence Bridge on the Ohio side of the river carries the northbound lanes of IR71/75 over US 42, an interchange ramp, local roads, a railroad, and parking lots on the ground. The bridge consists of a reinforced concrete deck on a varying number of adjacent welded steel plate girders. At Pier 15C the structure diverges and HAM-75-00022R begins while HAM-71-0000R continues to the lanes of Fort Washington Way. From Pier 15C to Fort Washington Way, the number of girders varies between five and nine and the deck width varies to accommodate two uniform lanes and a diverging lane. In 1999 the structure between Pier 20D and Fort Washington Way was rebuilt to coordinate with rehabilitation of the Fort Washington Way interchange. The superstructure girders are supported on reinforced concrete cap-and-column pier bents or hammerhead piers.

INSPECTION METHOD AND PLAN:

Michael Baker International's engineers, subcontracted by Transystems, will perform routine element level inspections on the Ohio portion of the Brent Spence Bridges HAM-71-0000L/R. The inspection teams will perform routine inspections of Bridges HAM-71-0000L and HAM-71-0000R as defined by the Scope of Services. Measurements and observations will be recorded to determine the physical and functional condition of the bridges, to identify any changes from previously recorded conditions, and to ensure that the structures continue to satisfy present service conditions.

FIELD COORDINATION:

The following personnel are anticipated to be involved with the coordination and/or field work associated with the inspection of these structures.

HAM-71-0000L & HAM-71-0000R Field Contacts

Michael Baker International:

Team Leader; Project Manager	Cory Larkin, PE, SE Cory.Larkin@mbakerintl.com	(513) 227-7486
Team Leader	Gus Cleary, EI Gustin.Cleary@mbakerintl.com	(330) 843-1113
Team Leader	Mike Baron, PE Michael.Baron@mbakerintl.com	(502) 403-6676
Team Leader	Shelby Wilson, PE Shelby.Wilson@mbakerintl.com	(740) 406-8194

PERMITTING AND COORDINATION:

The following entities will be involved in the permitting and coordination of all work associated with the inspection of these structures. Copies of permits from all entities will be kept on site at all times.

ODOT – A right of entry permit is necessary through ODOT District 8 and will be secured via the ODOT Right of Way E-Permitting System. The following ODOT personnel will be contacts:

Project Manager	Brandon Collett Brandon.Collett@dot.state.oh.us	(513) 933-6643
District Work Zone Traffic Manager	Scott Kraus Scott.Kraus@dot.state.oh.us	(513) 933-6519
Right-of-Way Use Permits	Chris Bass Chris.Bass@dot.state.oh.us	(513) 933-6577
Right-of- Permit Coordinator	Kimberly Giffin Kim.Giffin@dot.ohio.gov	(513) 933-6580

City of Cincinnati – A right of entry permit is required through the City of Cincinnati for local road lane closures. This permit will stipulate lane closure limitations and approve any proposed traffic control. Additional work performed on City owned property will be done so within ODOT easements (therefore no right-of-entry permit is required). Contacts are:

DOTE Permit and License Center row.permits@cincinnati-oh.gov	(513) 352-3463

Kentucky Transportation Cabinet – A right of entry permit is required through the Kentucky Transportation Cabinet. This permit will stipulate lane closure limitations and approve any proposed traffic control. Contacts are:

District 6 Permit Supervisor	Linzy Brefeld Linzy.Brefeld@ky.gov	(859) 341-2700

CSX RAILROAD – Visual inspection of the southern end of Span 14 and the north face of Pier 13 will be performed, thus no right of entry permit is required through CSX Transportation, Inc. to access railroad right-of-way.

Approved right of entry permits from ODOT, City of Cincinnati, and Kentucky Transportation Cabinet will be kept on the job site throughout the inspection period.

TRAFFIC CONTROL:

Michael Baker International has contracted Intech Contracting, LLC. to provide the necessary traffic control for these inspections. They will be responsible for all signs and devices which shall be placed in accordance with the latest Ohio Manual for Uniform Traffic Control Devices.

The inspection crew plans to utilize a double left lane, nighttime closure of IR-71 NB in order to gain access to the west half of the steel superstructure of HAM-71-0000L from River Pier to Pier 13A. The closure duration for the double left lane inspection will be one night. A similar, double right lane nighttime closure will be used to access the east half of the steel superstructure of HAM-71-0000L from River Pier to Pier 11. The double right lane closure will also last one night.

An additional, local route closure will be used in order to access to the fracture critical steel box girder pier cap along West Third Street. The westbound left turn lane of West Third Street will be closed from Plum Street to Central Avenue to access the hatch of Pier 2.

A maintenance of traffic scheme for closure of one (east) lane of the combined ramps from SB I-75 and EB US 50 to Second Street will be necessary to access Pier 29B of the HAM-71-0000L Bridge. This will be coordinated with inspection of the HAM-75-0022R Bridge.

The anticipated traffic control schedule is as follows:

Date	Structure	Traffic Control
Night of 8/22/24	HAM-71-0000L (coordinate with HAM-75-0022R)	Single left lane closure of I-75 SB at exit to 2nd Street Ramp
Day of 8/21/24	HAM-71-0000L	Left turn lane closure on W. 3rd Street
Night of 8/28/24	HAM-71-0000L	Double left lane closure of I-75 NB (lower level of north approach to Brent Spence Bridge)
Night of 8/29/24	HAM-71-0000L	Double right lane closure of I-75 NB (lower level of north approach to Brent Spence Bridge)

The remainder of the structures will be inspected from the ground using manlifts and bucket trucks and will not require roadway closures. Access to parking lots below the structures will be necessary for inspection operations. This access will occur at convenient times (no downtown events) and upon prior notification to parking lot management:

Lot 1: BHDP Parking (North side of West Third St. at Central Ave.)
J&F Garage
O: 513-921-5879

Lot 2: Riverfront Parking (Lot A – South Side of West Third St. at Central Ave.)

O: 513-946-8100
riverfront@parking.com

Lot 3: Premium Parking (Lot #P8670 between Pete Rose Way and West Third St.)
844-236-2011

Lot 4: ODOT (South of W. Mehring Way adjacent to river)
Lucas Braun
513.933.6598

Lot 5: John St. Parking Lots (North of West Third St. just east of I-75 SB)
Park Place
513-381-2179

FOLLOW-UP PROCEDURES:

Critical inspection findings will be reported to the District within 24 hours and details/ photographs will be provided via email. These along with other findings will be documented in the final inspection report.

APPENDIX A

RIGHT OF ENTRY PERMITS & MAINTENANCE OF TRAFFIC DRAWINGS

Permitting Note:
ODOT, City of Cincinnati, and KYTC permits will be applied for no more than 30 days from the date of inspection, using the attached MOT plan sheets.

LOCATION 1 – September of 2024

Location 1A

I-71/75 NB (lower level Brent Spence)

39.095170°, -84.522188°

Night time closure – double left lane I-71/75 northbound

Night time closure – double right lane I-71/75 northbound

Location 1B

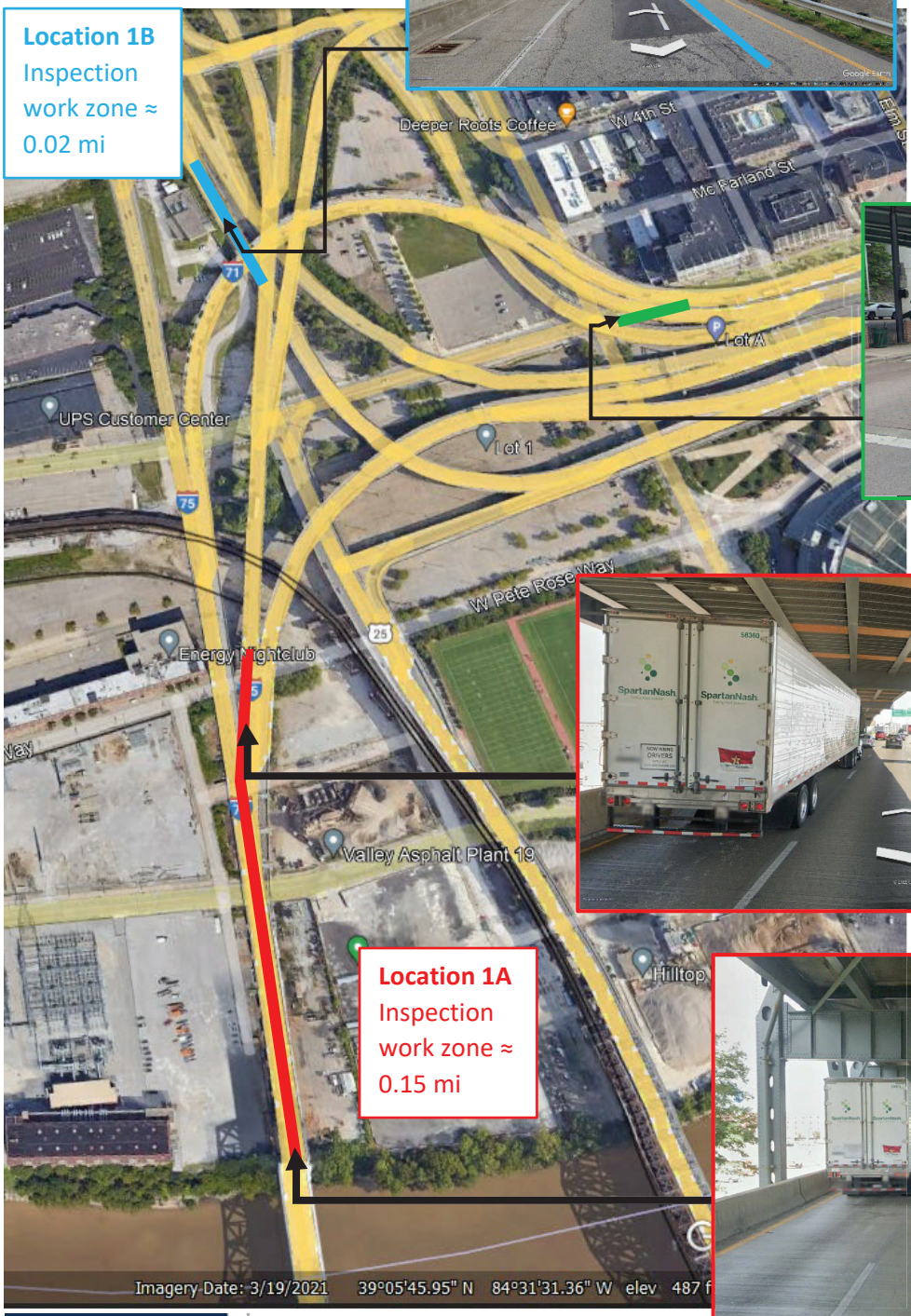
I-75 SB Second St. Ramp

Night time closure – left lane of ramp to Second St.

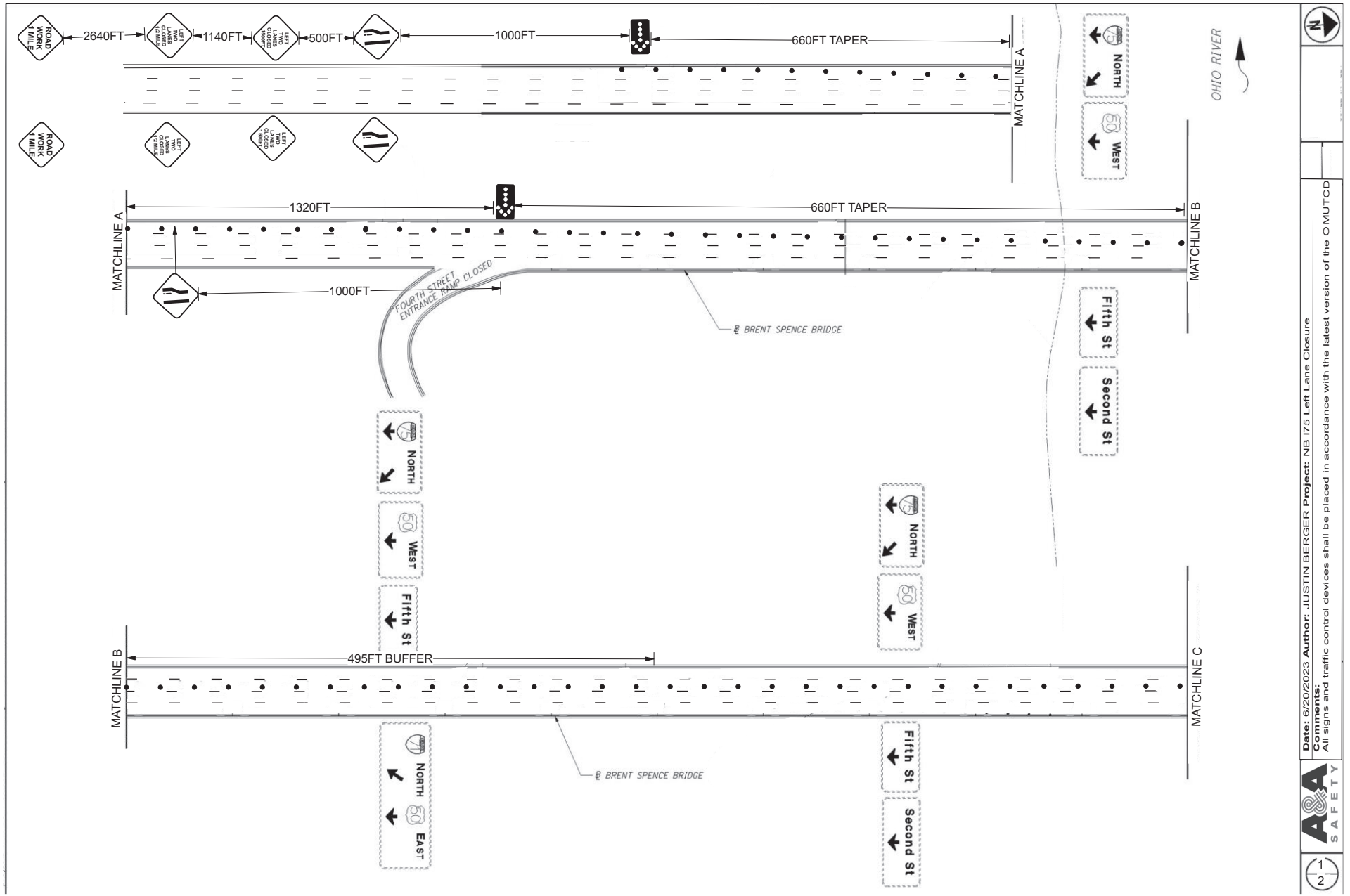
Location 1C

West 3rd St.

Day time closure – closure of left turn lane



Michael Baker INTERNATIONAL | *We Make a Difference*

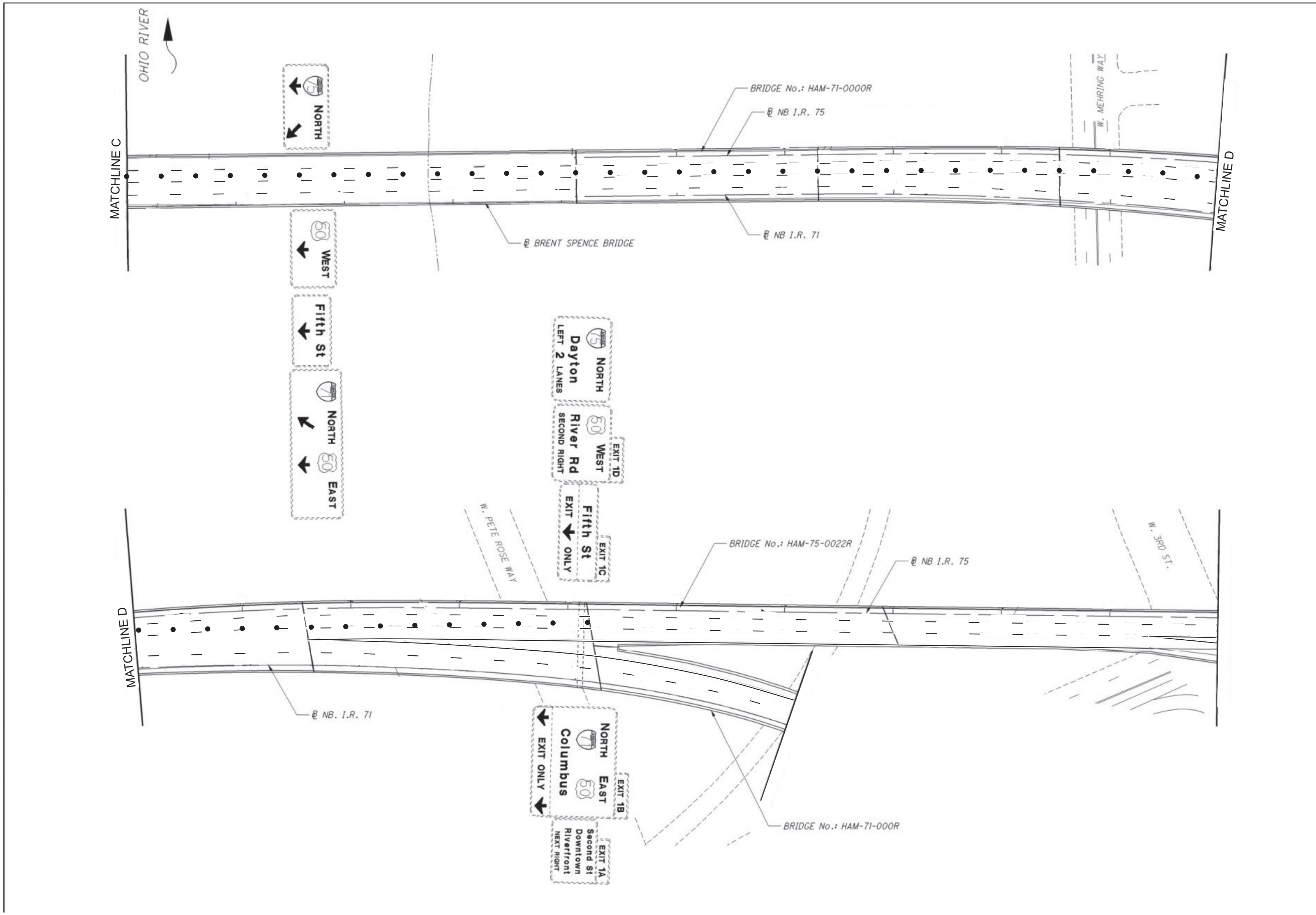


Date: 6/20/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Left Lane Closure

Comments:
All signs and traffic control devices shall be placed in accordance with the latest version of the OMUTCD

AJA SAFETY

1/2



Date: 6/20/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Left Lane Closure

Comments:
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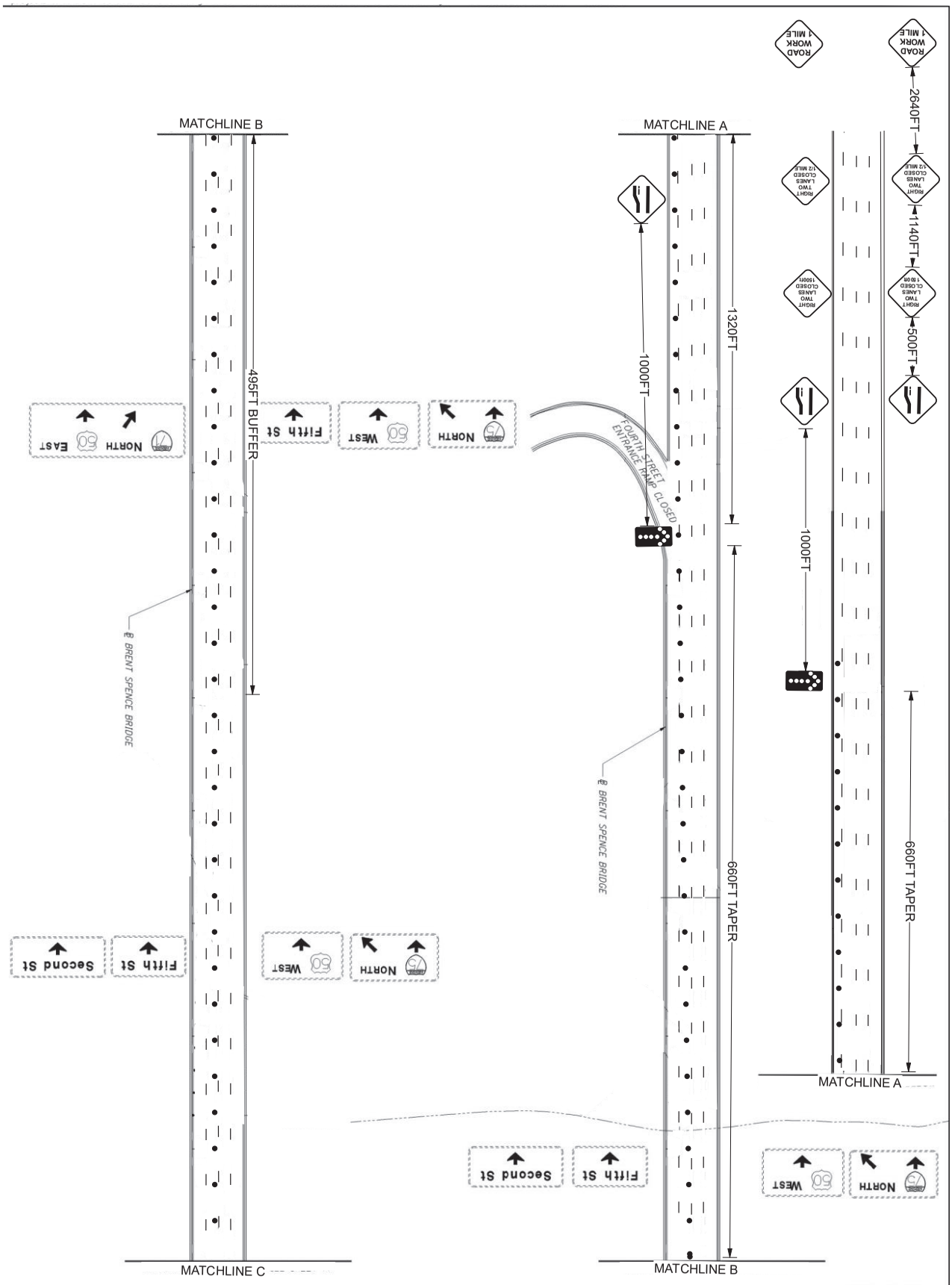
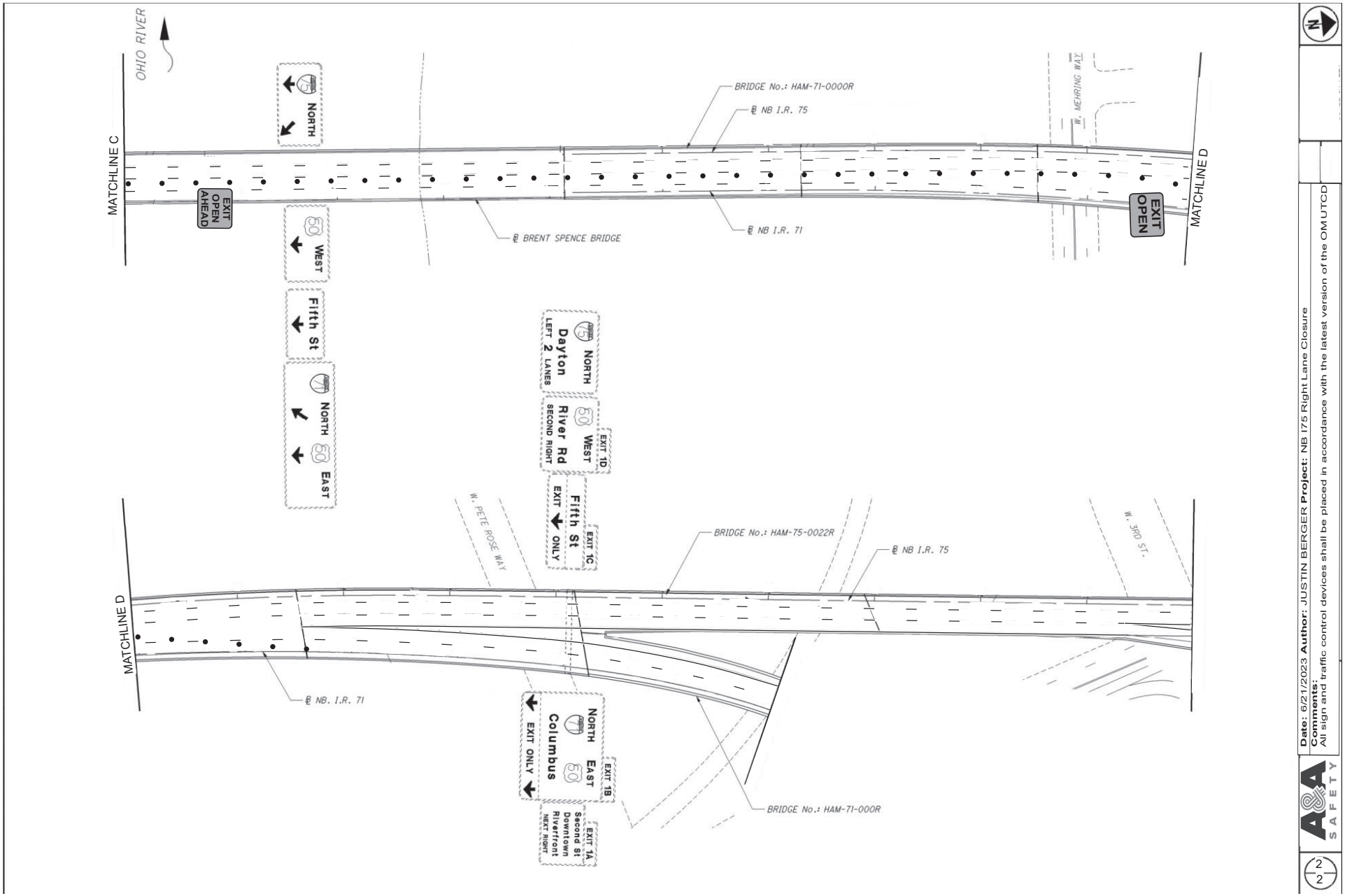
A&A SAFETY

2/2



Date: 6/21/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Right Lane Closure

Comments:
All sign and traffic control devices shall be placed in accordance with the latest version of the OMUTCD



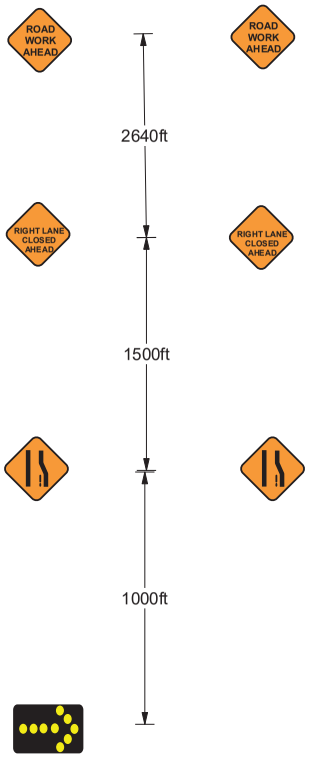
Date: 6/21/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Right Lane Closure
Comments:
All sign and traffic control devices shall be placed in accordance with the latest version of the OMUTCD

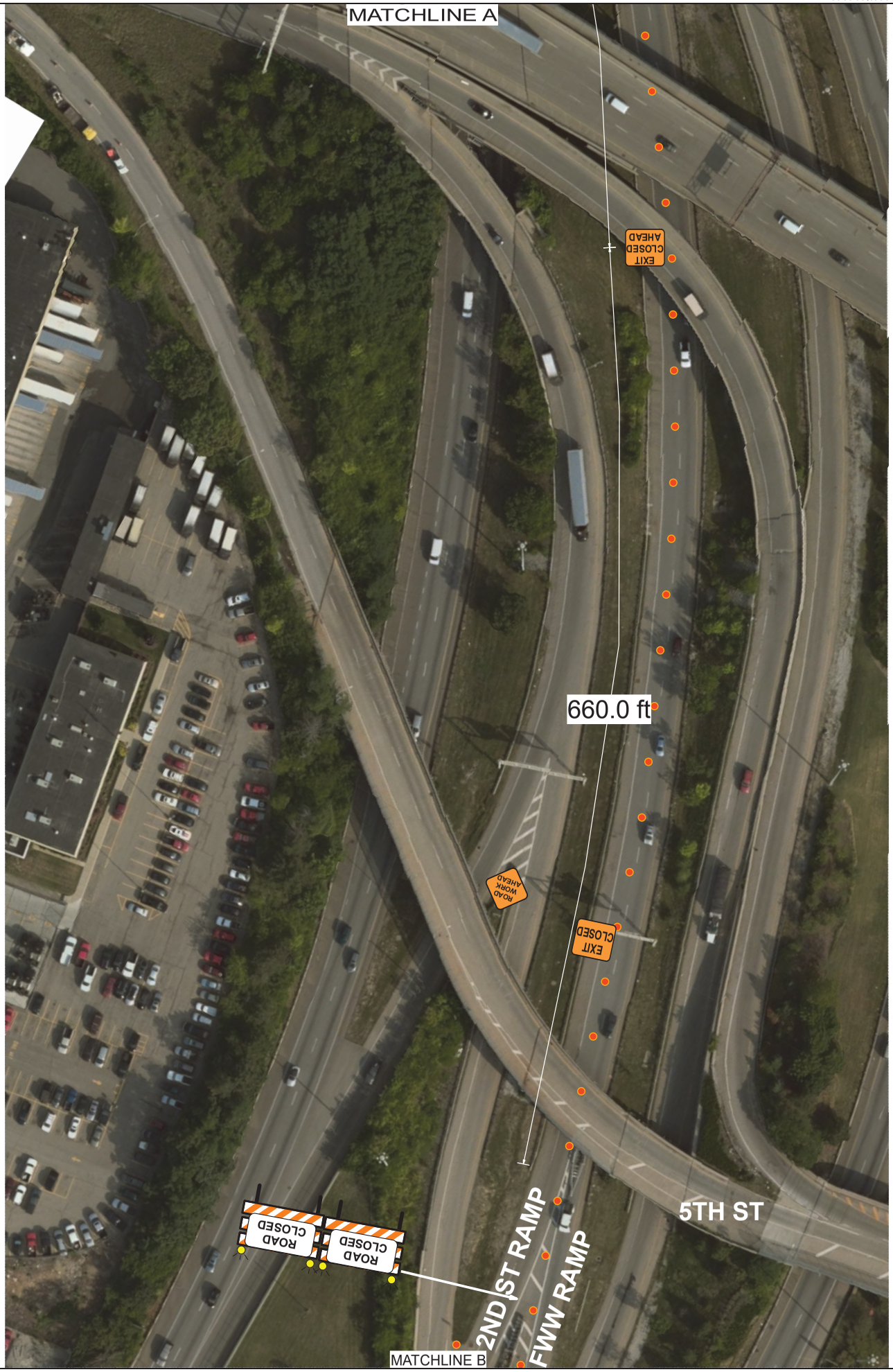
AGA SAFETY

Date: 6/26/2023 **Author:** Justin Berger **Project:** SB I71 to 2ND ST. Closure

Comments:
All sign and traffic control devices shall be placed in accordance with the latest version of the OMUTCD

ADVANCED WARNING SIGN DETAIL




MATCHLINE A
EXIT CLOSED AHEAD
660.0 ft
ROAD WORK AHEAD
EXIT CLOSED
ROAD CLOSED
ROAD CLOSED
5TH ST
2ND ST RAMP
FWW RAMP
MATCHLINE B


MATCHLINE B
75
75
75
1D
John St
John St
John St
42
127
W 3rd St
127
W 3rd St
Paul Brown Stadium
W 3rd St
John St
127
W 3rd St
42
127
W 3rd St
71
71
Paul Brown Stadium

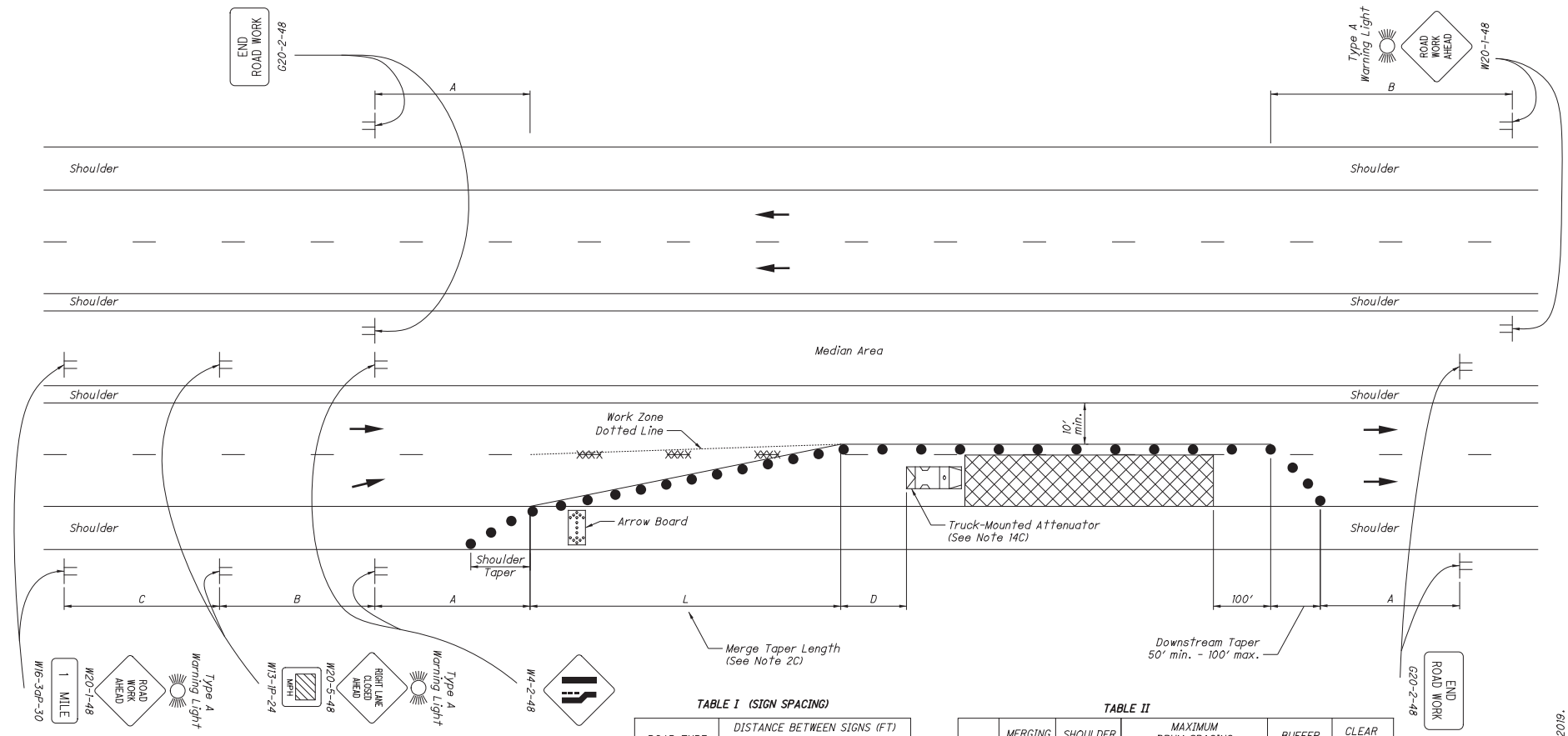


TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE BETWEEN SIGNS (FT)		
	A	B	C
MAJOR CONVENTIONAL	500	500	500
FREEWAY & EXPRESSWAY	1000	1500	2640

TABLE II

SPEED LIMIT (MPH)	MERGING TAPER RATE MINIMUM	SHOULDER TAPER RATE MINIMUM	MAXIMUM DRUM SPACING (FT)		BUFFER (D) (FT)	CLEAR ZONE WIDTH (E) (FT)
			TAPER SEC.	TANGENT SEC.		
25	11:1	4:1	25	40	155	15
30	15:1	5:1	30	40	200	15
35	21:1	7:1	35	40	250	15
40	27:1	9:1	40	80	305	15
45	45:1	15:1	45	80	360	19
50	50:1	17:1	50	80	425	19
55	55:1	19:1	55	80	495	23
60	60:1	20:1	60	120	570	30
65	65:1	22:1	65	120	645	30
70	70:1	24:1	70	120	730	30

LEGEND

- WORK AREA
- DRUMS/CONES
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- SHADOW VEHICLE WITH TMA

THIS DRAWING REPLACES MT-95.30 DATED 04-19-2019.

STANDARD ROADWAY CONSTRUCTION DRAWING

SCD NUMBER **MT-95.30**

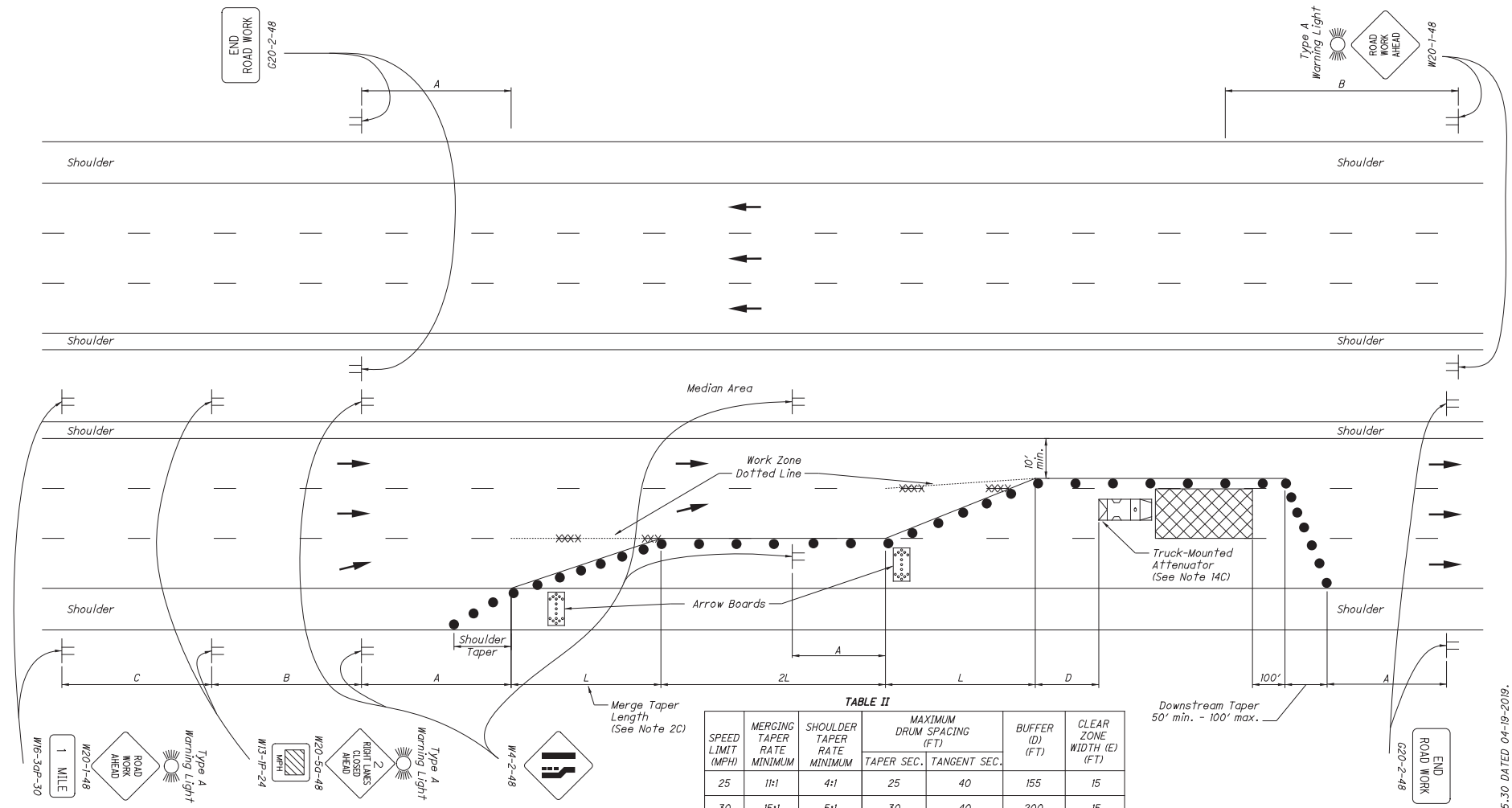
CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS

OFFICE OF ROADWAY ENGINEERING

STDS. ENGINEER Soisson

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

REVISION DATE 07-19-2019



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40	27:1	9:1	40	80	305	15
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50	50:1	17:1	50	80	425	19
55	55:1	19:1	55	80	495	23
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STANDARD ROADWAY CONSTRUCTION DRAWING

CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS

OFFICE OF ROADWAY ENGINEERING

STDS. ENGINEER: Soisson

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR: David L. Holstein

REVISION DATE: 07-19-2019

SCD NUMBER: MT-95.30

NOTES:

DESIGN SPEED

1. The design speed used for taper rates should typically be the permanent legal speed. However, on construction projects for which the speed limit is reduced, the reduced speed may be used in determining the taper rate when the taper is not the first active construction area within the project.

TAPERS

2A. The minimum acceptable length for the merge taper shall be determined by multiplying the width of offset by the merge taper rate. The merge taper rate is provided in Table II.

2B. The minimum acceptable length for the shoulder taper shall be determined by multiplying the width of the shoulder by the shoulder taper rate. The shoulder taper rate is provided in Table II.

2C. The tangent section between the two merge tapers should be two times the longer of the two merge tapers.

SIGN SPACING

3A. The work zone sign spacings shown in Table I are minimums. Maximum spacing should not be greater than 1.5 times the distances shown in Table I.

3B. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200′ for speeds of 45 mph or less and a minimum of 400′ for speeds 50 mph or greater.

ADJUSTMENTS FOR SIGHT DISTANCE

4. The location of the merging taper and the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.

BASIC SIGNING

5A. ROAD WORK AHEAD (W20-1) signs shall be provided on entrance ramps or roadways entering the work limits.

5B. END ROAD WORK (G20-2) signs are only required for lane closures of more than 1 day. It is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits.

5C. Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any W20-1 or G20-2 signs which falls within the limits of another traffic control zone shall be omitted or covered during the period when both projects are active.

SIGNING DETAILS

6A. The Advisory Speed (W13-1P) plaque shall be used when specified in the plan.

6B. When the approach speed limit is 40 mph or less, 36″ warning signs may be used.

6C. The distance plaque W16-3aP (or W16-2aP if the distance shown is in feet) shall indicate the distance to the beginning of the merging taper. Distances less than 1 mile may be expressed in feet. The plaque may be omitted if Extra Advance Sign Groups are not used.

6D. Provide signing on the inactive side of the highway, as shown, when specified in the plans.

6E. Provide the appropriate word or symbol legend necessary on Lane Reduction (W4-2, W20-5, W20-5a) signs to correctly identify which lane is to be closed.

EXTRA ADVANCE WARNING SIGNING

7. Extra Advance Warning Sign Groups consisting of ROAD WORK AHEAD (W20-1), LANE CLOSED AHEAD (W20-5), LANES CLOSED AHEAD (W20-5a), and WATCH FOR STOPPED TRAFFIC (W3-H4b) signs plus Distance plaques may be specified in the plans or may be required to be erected, as determined by the Engineer (See Standard Construction Drawing (SCD) MT-95.50).

PAVEMENT MARKINGS / RPMs

8A. If the construction operation requires a lane closure for more than 1 day, the existing conflicting reflectors shall be removed from the raised pavement markers (RPMs).

8B. Additionally, if a lane closure of greater than 3 days is required, the following shall be performed:

a) The appropriate color work zone edge lines shall be applied along the taper and tangent sections.
b) The existing conflicting pavement markings shall be removed or covered per CMS 614.11G.
c) Work zone dotted lines, 3′ in length separated by 9′ gaps, shall be provided to identify the merge.

8C. Work zone pavement markings which would conflict with final traffic lanes shall be removable tape (CMS 740.06, Type I) unless the area will be resurfaced prior to project completion.

8D. After completion of the work, pavement markings other than CMS 740.06, Type I shall be removed in accordance with CMS 614.111. The original markings and raised pavement marker reflectors shall be restored at no additional cost unless separately itemized in the plans.

(RESERVED FOR FUTURE USE)

9A. (intentionally blank)

ARROW BOARD

10. The arrow board shall be chosen from the ODOT approved list and follow the guidelines in Supplemental Specification 821.

FLASHING WARNING LIGHTS

11. Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) signs, on the LANE CLOSED AHEAD (W20-5), and on the LANES CLOSED AHEAD (W20-5a) signs are required whenever a night lane closure is necessary.

INTERSECTION / DRIVEWAY ACCESS

12. Within the length of the closure, provision shall be made to control traffic entering from intersecting streets and major drives as necessary to prevent wrong-way movements and to keep vehicles off of new pavement not ready for traffic. The Contractor shall:

a) Place across the closed lane, either 3 drums (cones) or barricades, and/or
b) Provide an additional flagger at every public street intersection and major driveway.

Drums (cones) placed across the closed lane shall be located 25′ beyond the projected pavement edges of the driveway or cross highway, as shown in SCD MT-97.11. For barricades, see SCD MT-101.60.

Existing STOP signs shall be relocated as necessary to assure proper location for the traffic conditions.

The method of control shall be subject to the approval of the Engineer.

DRUMS / CONES

13A. The maximum drum spacing along tapers and along tangent sections shall be as shown in Table II. A minimum of 3 drums shall be used to close the upstream shoulder. The downstream taper drum spacing shall be approximately 20′.

13B. Cones may be substituted for drums as follows:

a) Use of cones is permissible for either daytime operation or for nighttime operation, but shall not be used continuously, day and night. Upon completion of work within the work period, the cones shall be removed. They may again be placed on the highway in order to resume work in the following such work period.
b) Cones used for daytime traffic control shall have a minimum height of 28″.
c) Cones used for nighttime traffic control shall have a minimum height of 42″.
d) Use of cones at night shall be prohibited along tapers.
e) Cone spacing at night shall be at a maximum of 40′.
f) Where cones are substituted for drums along tangents, intermixing of channelizing devices within the same run will not be permitted. Either cones shall be used for the entire length of the tangent section, or drums shall be used for the entire length.

13C. Provisions shall be made to stabilize the cones and drums to prevent them from blowing over.

13D. All drums and cones should have a minimum offset from the edge of the traveled lanes of 1.5 feet.

SHADOW VEHICLE

14A. The shadow vehicle shall be in place and unoccupied whenever workers are in the work area. This vehicle shall be removed from the pavement whenever workers are not in the work area.

14B. The shadow vehicle shall be equipped with a high-intensity yellow rotating, flashing, oscillating, or strobe light(s).

14C. The shadow vehicle shall be equipped with a truck-mounted or trailer attenuator (TMA) in accordance with CMS 614.03.

BUFFER SPACE

15A. Where space constraints do not allow for the buffer space, a shorter length may be used.

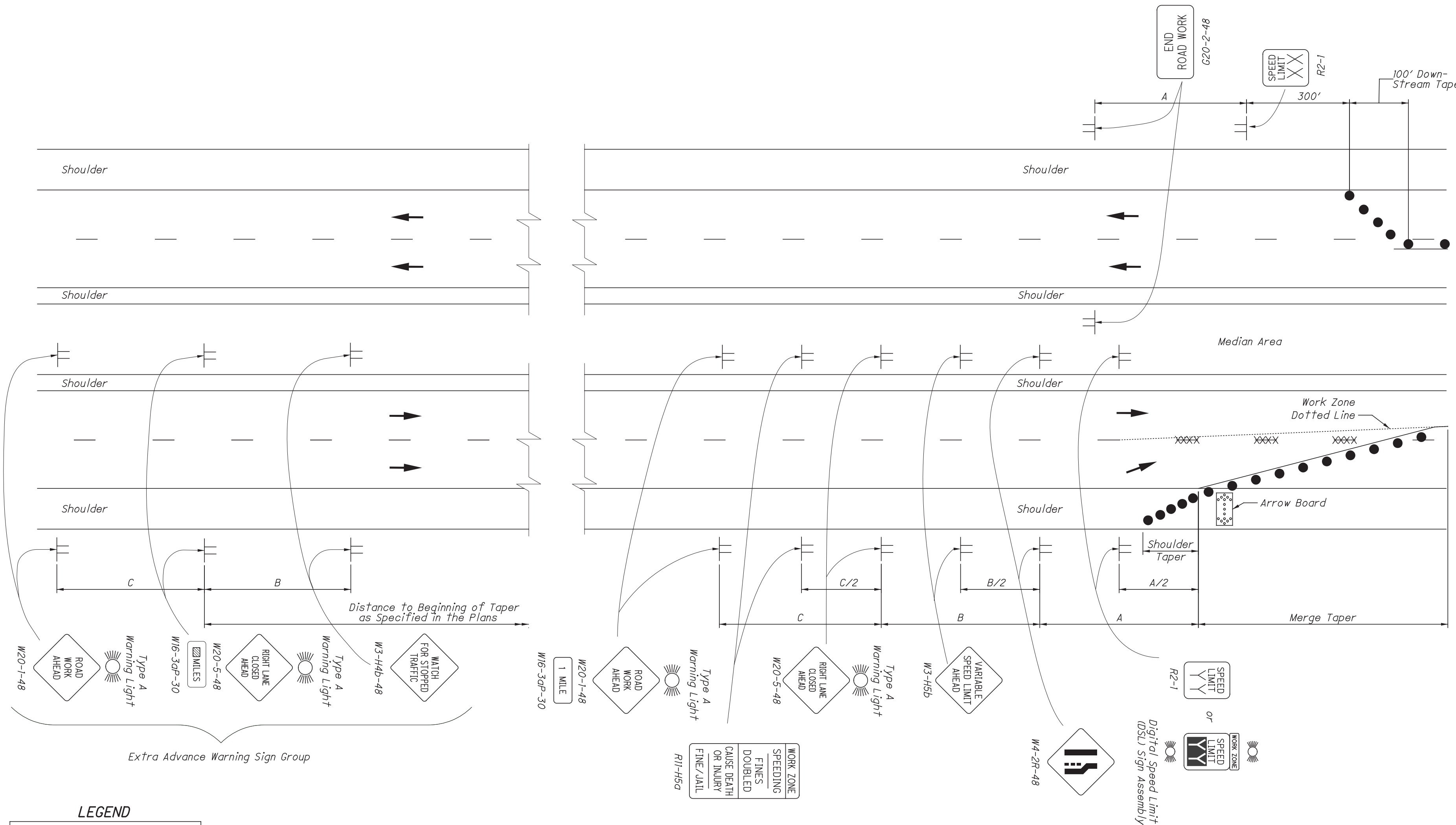
THIS DRAWING REPLACES MT-95.30 DATED 04-19-2019.

REVISION DATE	STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR	STDS. ENGINEER	OFFICE OF ROADWAY ENGINEERING
07-19-2019	David L. Holstein	Soisson	

STANDARD ROADWAY CONSTRUCTION DRAWING

SCD NUMBER **MT-95.30**

CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS



LEGEND

DRUMS	● ● ●
REMOVE EXISTING MARKINGS	~~XXXX~~
DIRECTION OF TRAVEL	→
ORIGINAL POSTED SPEED LIMIT (MPH)	XX
APPROVED WORK ZONE SPEED LIMIT (MPH)	YY

TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE BETWEEN SIGNS (FT)		
	A	B	C
MAJOR CONVENTIONAL	500	500	500
FREEWAY & EXPRESSWAY	1000	1500	2640

THIS DRAWING REPLACES MT-95.50 DATED 10-16-2015.

STANDARD ROADWAY CONSTRUCTION DRAWING

REVISION DATE 07-21-2017

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

STDS. ENGINEER Soisson

OFFICE OF ROADWAY ENGINEERING

SUPPLEMENTAL ADVANCED SIGNS USED WITH LANE CLOSURES

SCD NUMBER MT-95.50

NOTES:

INTENDED USE

1. This Standard Construction Drawing (SCD) is intended for use as a supplement to SCDs MT-95.30, MT-95.31, MT-95.32, MT-95.40, and MT-95.41. It is not intended to be used as a stand-alone drawing.

GENERAL SIGNING

2A. Maximum spacing between adjacent signs in a series should not be greater than 1.5 times the distances specified in Table I.

2B. END ROAD WORK (G20-2) signs are only required for lane closures of more than one day. It is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits.

2C. Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any W20-1 or G20-2 sign which falls within the limits of another trafffic control zone shall be omitted or covered during the period when both projects are active.

2D. Median signing shall not apply to undivided highways.

2E. Provide the appropriate word or symbol legend necessary on Lane Reduction (W4-2, W20-5) signs to correctly identify which lane is to be closed.

2F. Signing for speed reduction and/or for increased penalties shall be provided when called for in the plans.

EXTRA ADVANCE WARNING SIGNS

3A. Extra Advance Warning Sign Groups consisting of ROAD WORK AHEAD (W20-1), LANE CLOSED AHEAD (W20-5) and WATCH FOR STOPPED TRAFFIC (W3-H4b) signs plus distance plaques may be specified in the plans or may be required to be erected, as determined by the Engineer.

3B. Installation of Extra Advance Warning Sign Groups shall not serve as a substitute for the standard advance signing group, beginning with the W20-1 sign, typically located at approximately 1 mile in advance of the beginning of the work area or the merge or shift taper.

3C. If a series of several Extra Advance Warning Sign Groups is provided in advance of the same work area or roadway restriction, the ROAD WORK AHEAD (W20-1) sign may be omitted from all but the first of the Extra Advance Warning Sign Groups in the series.

THIS DRAWING REPLACES MT-95.50 DATED 10-16-2015.

STANDARD ROADWAY CONSTRUCTION DRAWING

SUPPLEMENTAL ADVANCED SIGNS USED WITH LANE CLOSURES

OFFICE OF ROADWAY ENGINEERING

STDS. ENGINEER: Soisson

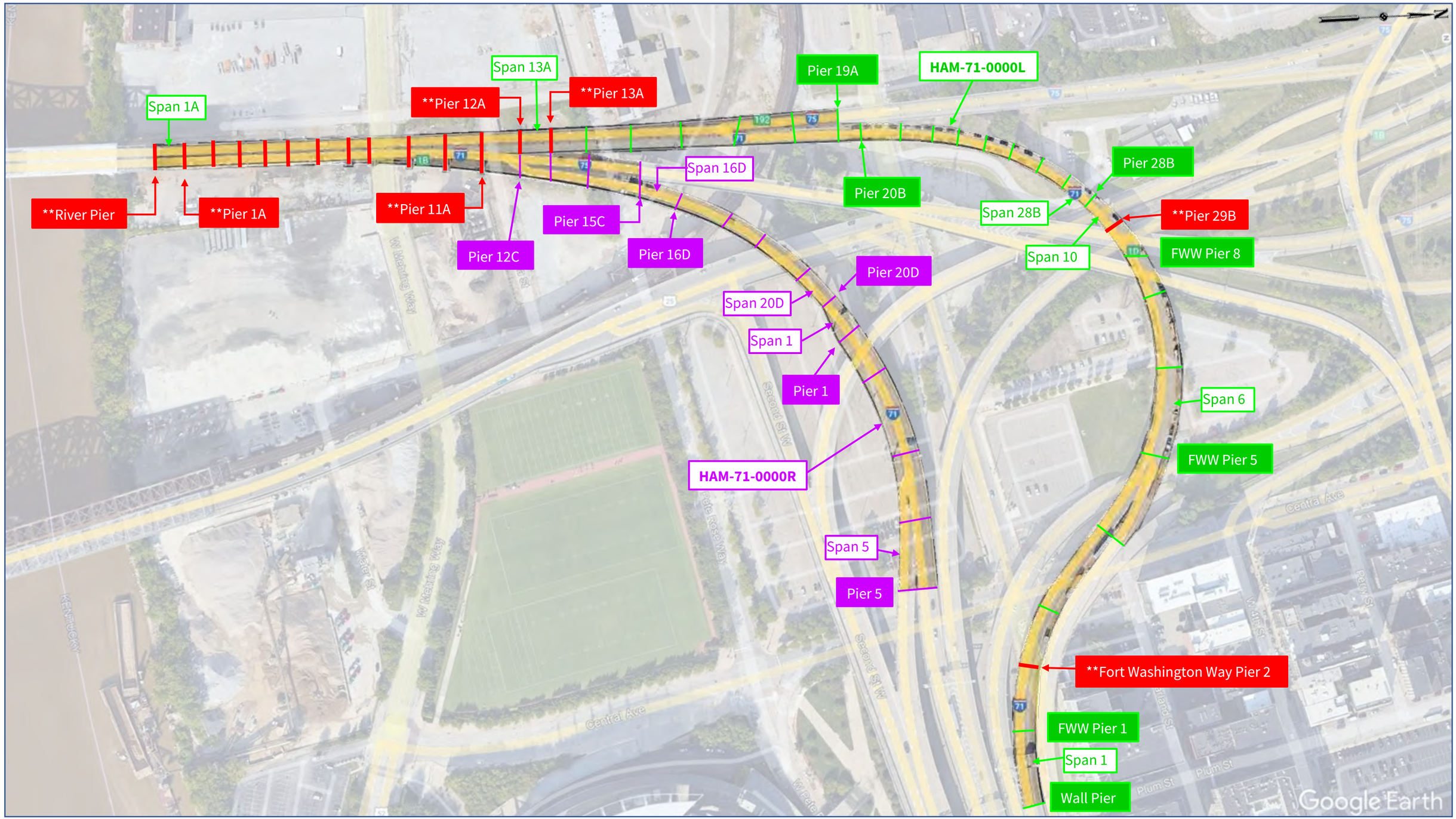
STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR: David L. Holstein

REVISION DATE: 07-21-2017

SCD NUMBER: MT-95.50

APPENDIX B

STRUCTURE LOCATION/IDENTIFICATION MAPS
FATIGUE PRONE DETAILS*
EXISTING PLANS



HAM-71-0000L/R

Overall location map and nomenclature

****Fracture critical (NSTM) members are shown in red**

Not to scale

Michael Baker INTERNATIONAL | *We Make a Difference*

River Pier Cap

*Images and descriptions taken from 2021 Pre-Inspection Report

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plate.
Category: C

Location:

- One tack weld between the north web and each side of every transverse stiffener angle (16 total)
- One cracked tack weld between the east edge of the Girder E seat angle and the north web; one tack weld between the east edge of the Girder G seat angle and the north web
- Fillet welds between ladder rungs and the north web near the east bearing.

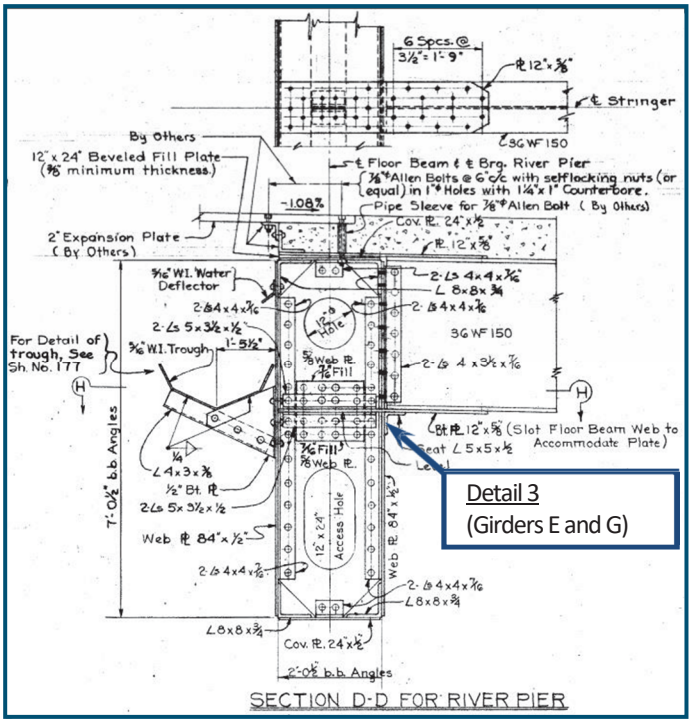


Figure 2 – Section through River Pier Cap

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web plate.
Category: D

Location: 3” fillet weld between an abandoned bracket and the exterior of the north web near the west bearing.

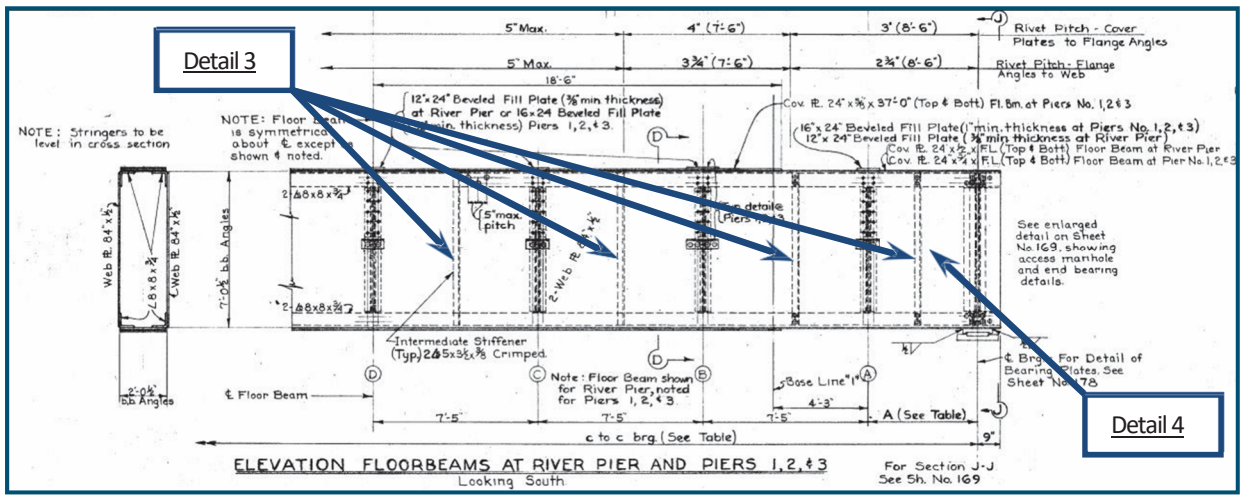


Figure 3 – Elevation of River Pier Cap

Pier Cap 1

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plate.
Category: C

Location:

- One tack weld between the north web plate and the transverse stiffener angles between Girders D and F; one tack weld between the north web plate and each side of the transverse stiffener angles between the west bearing and Girder D, and between Girder F and the east bearing; one tack weld between the south web plate and each side of every transverse stiffener angle (30 total)
- Fillet welds between ladder rungs and the north web near the east bearing

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web plate.
Category: D

Location: 3” fillet welds for 2 drain pipe support brackets on the north web near each bearing (4 total); 3” to 4” fillet welds for nine roadway sign and lighting support brackets on the south web between Girders E and G.

Fatigue-Prone Detail 5
Fillet welds greater than 4” or 12 times the connection thickness with a connection thickness less than 1.0” on the flange plate.
Category: E

Location: 6” fillet weld for a ½” steel angle on the north edge of the bottom flange plate near the east bearing.

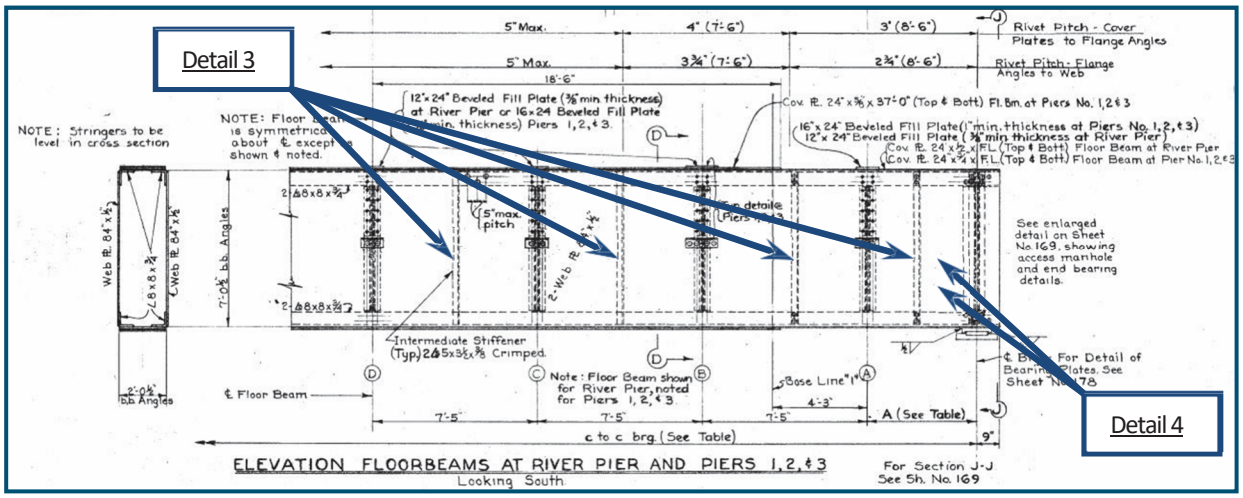


Figure 4 – Elevation of Pier Cap 1

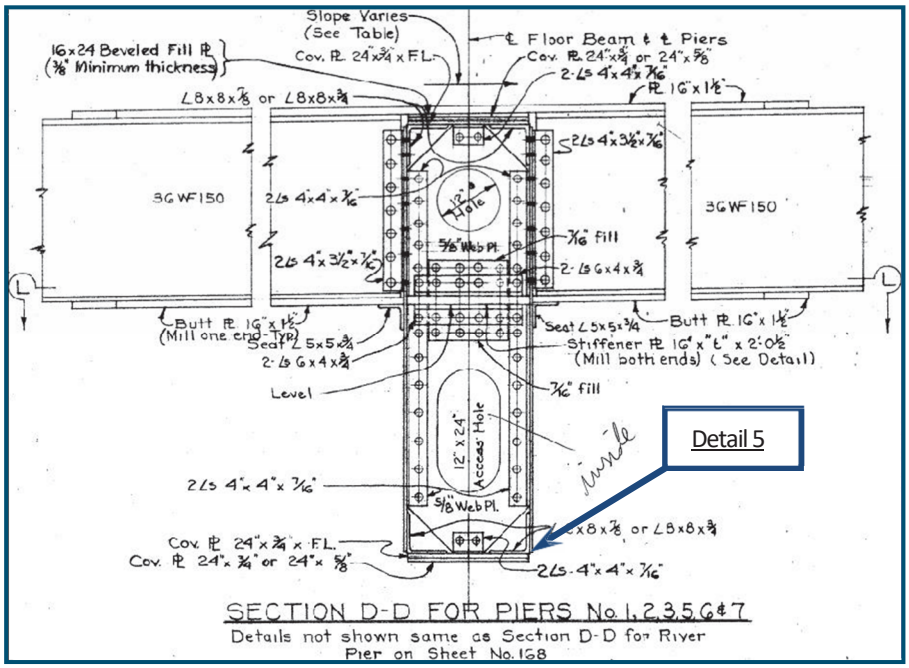


Figure 5 – Section through Pier Cap 1

Pier Cap 2

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location:

- One tack weld between both web plates and each side of the transverse stiffener angles between the west bearing and Girders A, and between Girders E and F (8 total)
- Fillet welds between ladder rungs and the north web near the east bearing.

Fatigue-Prone Detail 4
Tack weld greater than, or equal to, 2” and less than, or equal to, 4” on the web plates.
Category: D

Location:

- One tack weld between both web plates and each side of the transverse stiffener angles between Girders A and E, and between Girder F and the east bearing (24 total)
- 3” fillet welds for two abandoned drainpipe support brackets on the north web near each bearing (4 total).

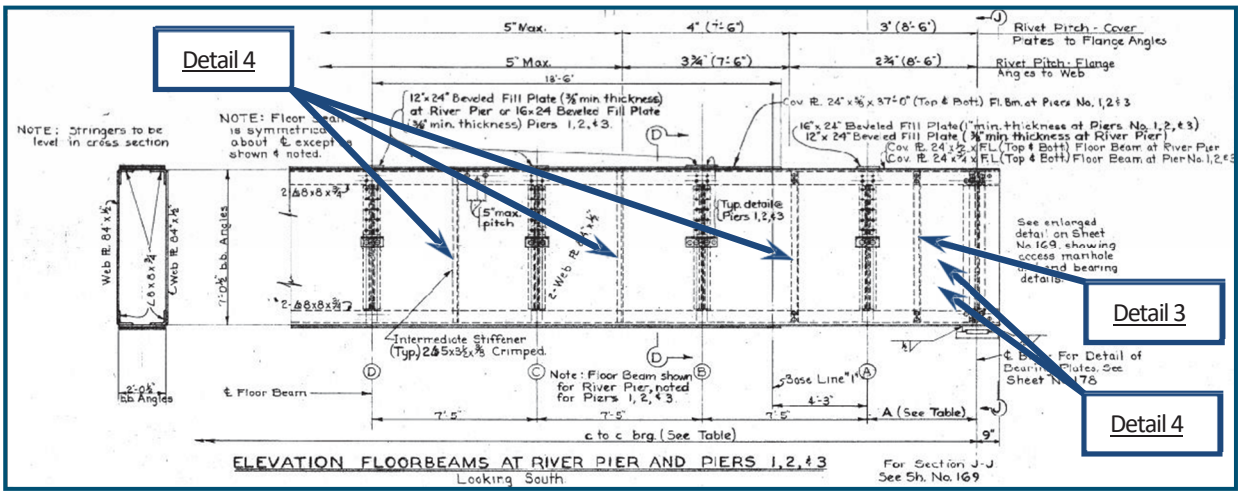


Figure 6 – Elevation of Pier Cap 2

Pier Cap 3

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location:

- One tack weld between both web plates and each side of the transverse stiffener angles between Girder B and the east bearing (24 total)
- Fillet welds between ladder rungs and the north web near the east bearing

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web plates.
Category: D

Location: One 2”-3” tack weld between both web plates and each side of the transverse stiffener angles between the west bearing and Girder B (8 total)

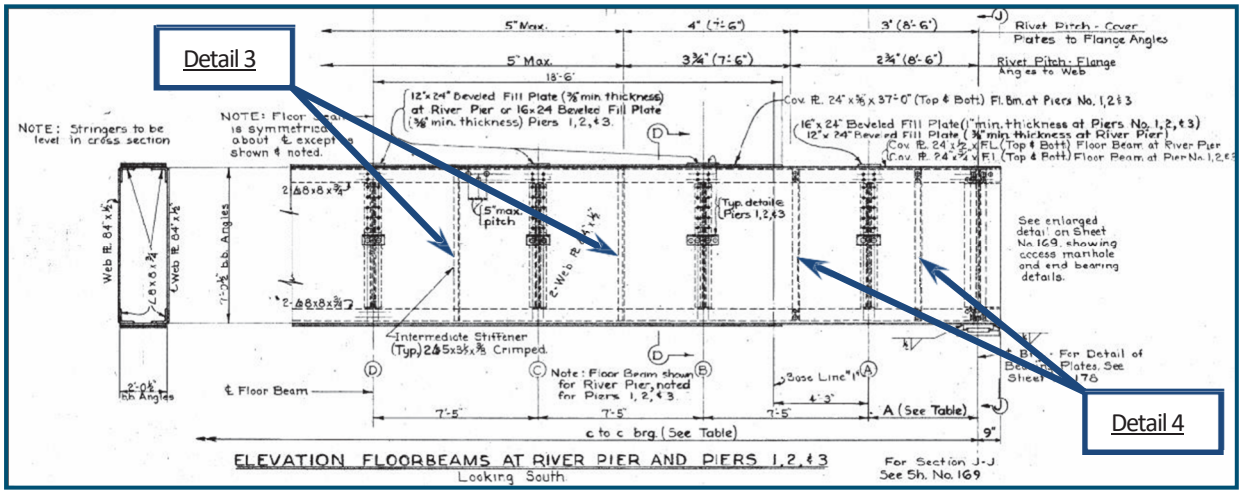


Figure 7 – Elevation of Pier Cap 3

Pier Cap 4

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location: Fillet welds between ladder rungs and the north web near the east bearing.

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web and flange plates
Category: D

Location:

- One 2”-3” tack weld between both web plates and every transverse stiffener angle (16 total)
- One 2”-3” tack weld between the bottom flange plate and the south bottom flange angle on each side of every girder diaphragm (14 total)
- One 2”-3” tack weld between the bottom flange plate and the north edge of the connection angles on each side of every girder diaphragm (14 total)
- One 2” transverse tack weld between the bottom flange plate and the connection angle on the west side of the Girder G diaphragm
- 3” fillet welds for two drainpipe support brackets on the north web near each bearing (4 total).

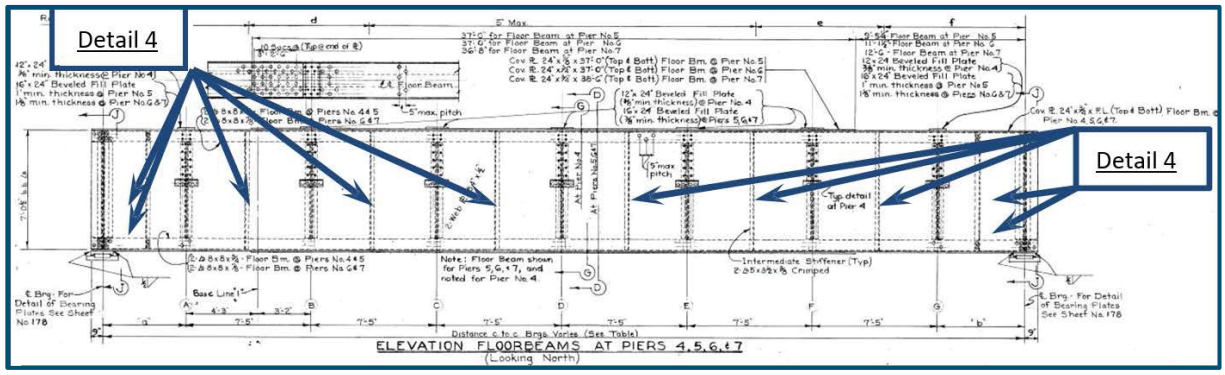


Figure 8 – Elevation of Pier Cap 4

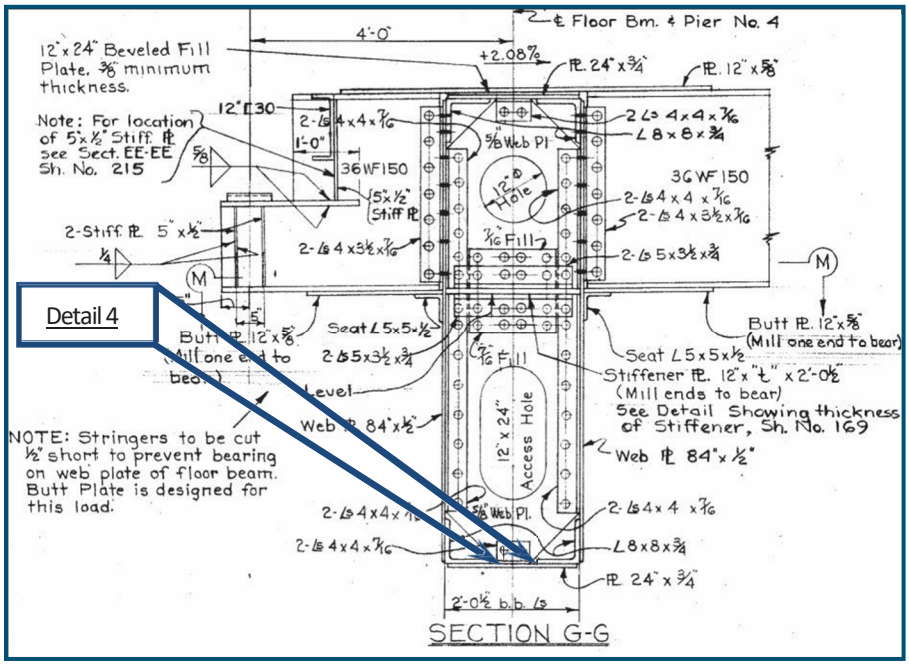


Figure 9 – Section through Pier Cap 4

Pier Cap 5

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location:

- One tack weld between both web plates and bottom flange angles at every transverse stiffener angle (16 total)
- One tack weld between the north web plate and every transverse stiffener angle (8 total)
- One tack weld between the south web plate and each side of every transverse stiffener angle (16 total)
- Fillet welds between ladder rungs and the north web near the east bearing.

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web and flange plates
Category: D

Location:

- One 2”-4” tack weld between the bottom flange plate and the north bottom flange angle at every girder diaphragm (7 total)
- One 2”-4” tack weld between the bottom flange plate and the south edges of the connection angles on each side of every girder diaphragm (14 total)
- Two 2” tack welds along the south edges of the bottom flange plates below Girder F.

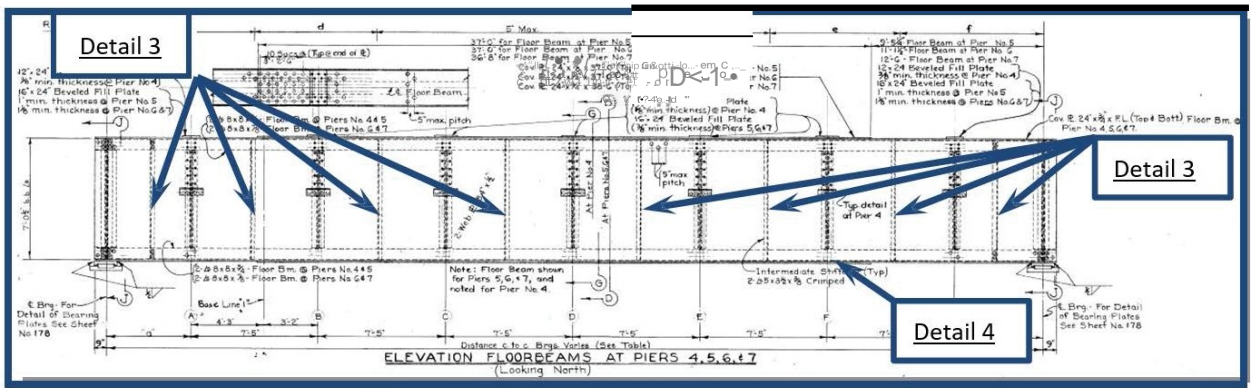


Figure 10 – Elevation of Pier Cap 5

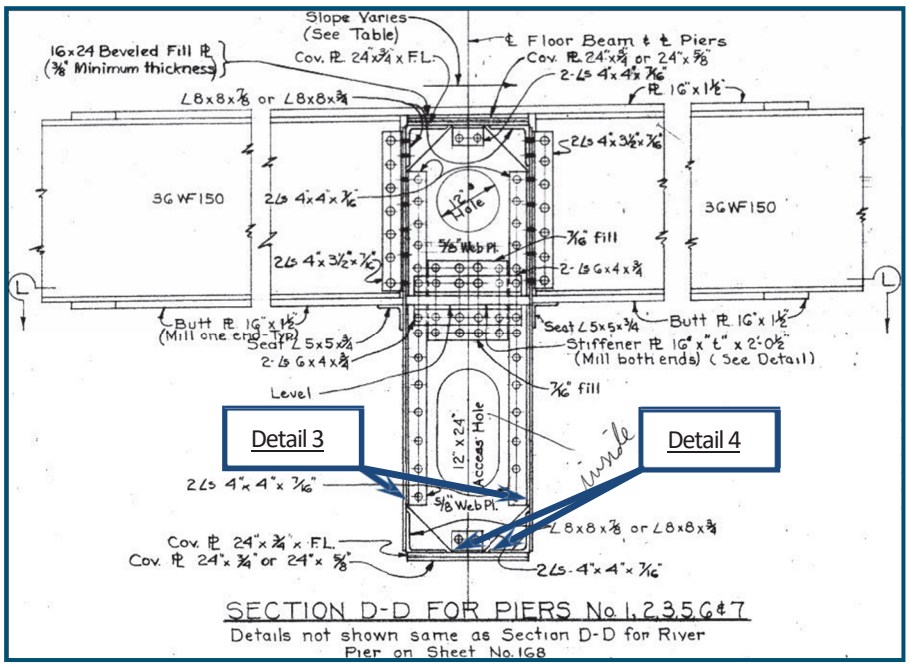


Figure 11 – Section through Pier Cap 5

Pier Cap 6

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location:

- One tack weld between the bottom flange plate and the north edges of the connection angles on each side of every girder diaphragm (14 total)
- Three tack welds between the north edge of the bottom flange and the flange angle below Girder C and below Girder E (6 total)
- One tack weld between the north web and each side of every transverse stiffener angle (16 total)
- One tack weld between the south web and each side of every transverse stiffener angle between Girder C and the east bearing (10 total)
- Fillet welds between ladder rungs and the north web near the east bearing.

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web and flange plates
Category: D

Location:

- One 2”-4” tack weld between the bottom flange plate and the south bottom flange angle at every girder diaphragm (7 total)
- One 2”-3” tack weld between both web plates and bottom flange angles at every transverse stiffener angle (16 total)
- Two 3” tack welds between the south web plate and the connection angles on each side of the Girder C and G diaphragms (8 total)
- One 2”-3” tack weld between the south web and each side of every transverse stiffener angle between the west bearing and Girder C (6 total)
- One 3” tack weld on the south web and the girder diaphragm connection angles between Girders D and E (2 total)
- 3” fillet welds for two drain pipe support brackets on the north web near each bearing (4 total).

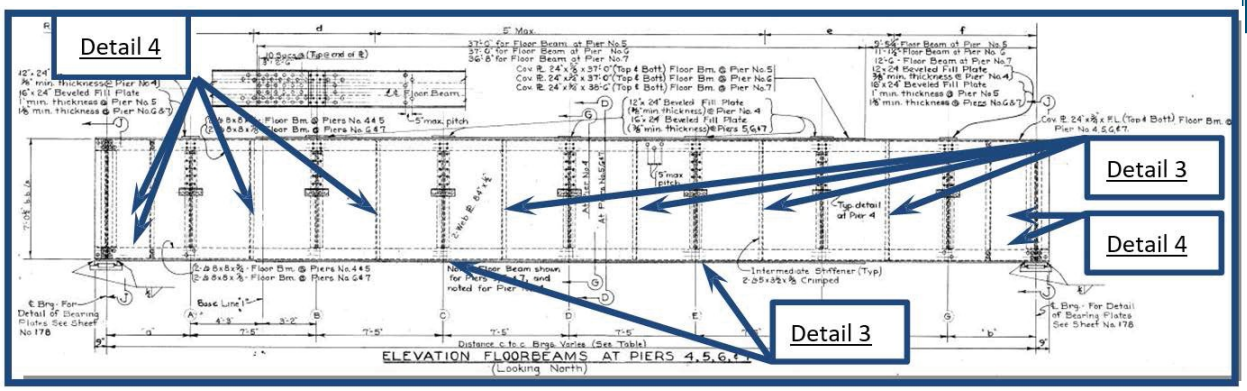


Figure 12 – Elevation of Pier Cap 6

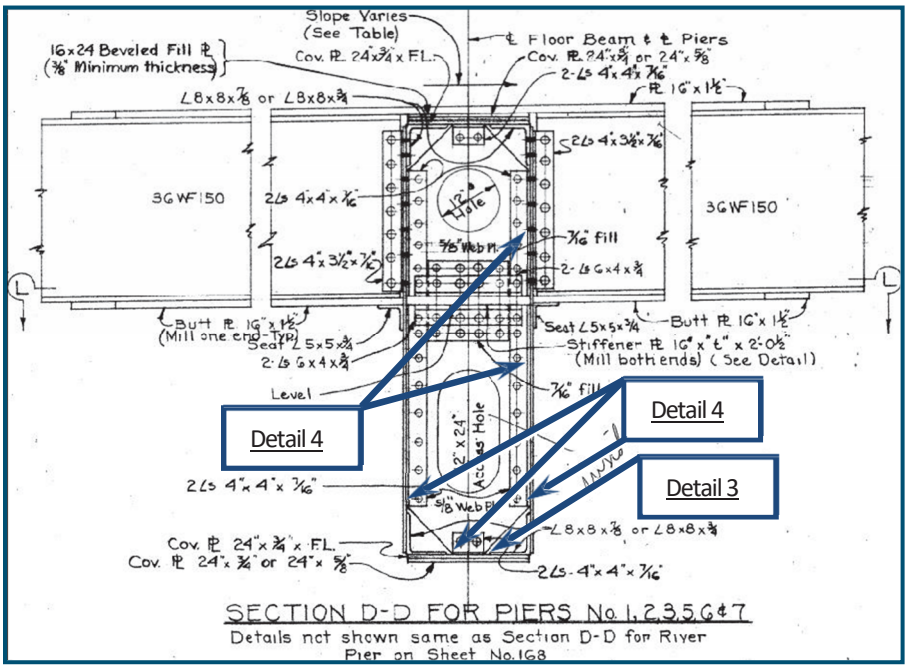


Figure 13 – Section through Pier Cap 6

Pier Cap 7

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location:

- One tack weld between the north web plate and the connection angle on the east side of Girder F
- Fillet welds between ladder rungs and the south web near the east bearing.

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web and flange plates
Category: D

Location:

- One 2”-3” tack weld between the bottom flange plate and the south bottom flange angle at every girder diaphragm (7 total)
- One 2”-3” tack weld between the bottom flange plate and the north edge of one connection angle at every girder diaphragm (7 total)
- Four 2”-3” tack welds between the south web plate and the connection angles on each side of every girder diaphragm (56 total)
- One 2”-3” tack weld between the south web plate and the bottom flange angle at every transverse stiffener angle (8 total)
- One 2”-3” tack weld between the north web plate and the bottom flange angle on the east side of both fascia girders and at every transverse stiffener angle between the west bearing and Girder F (8 total).

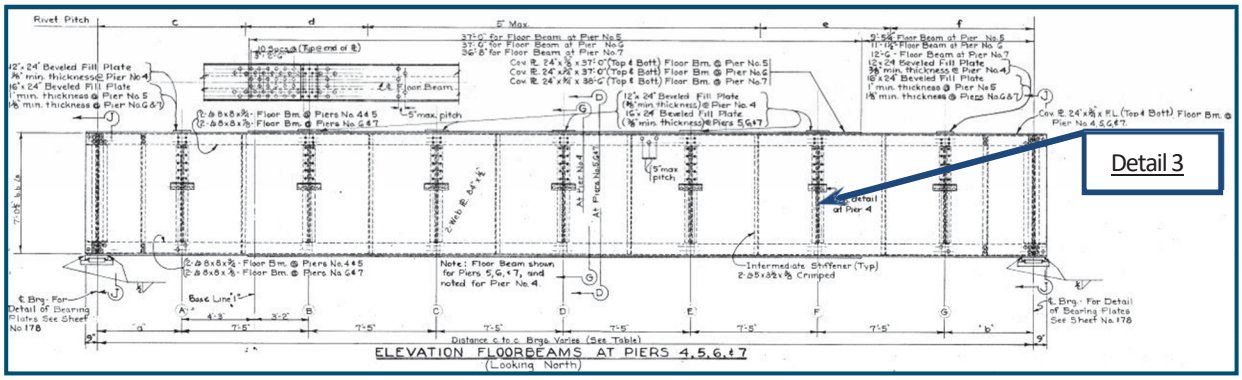


Figure 14 – Elevation of Pier Cap 7

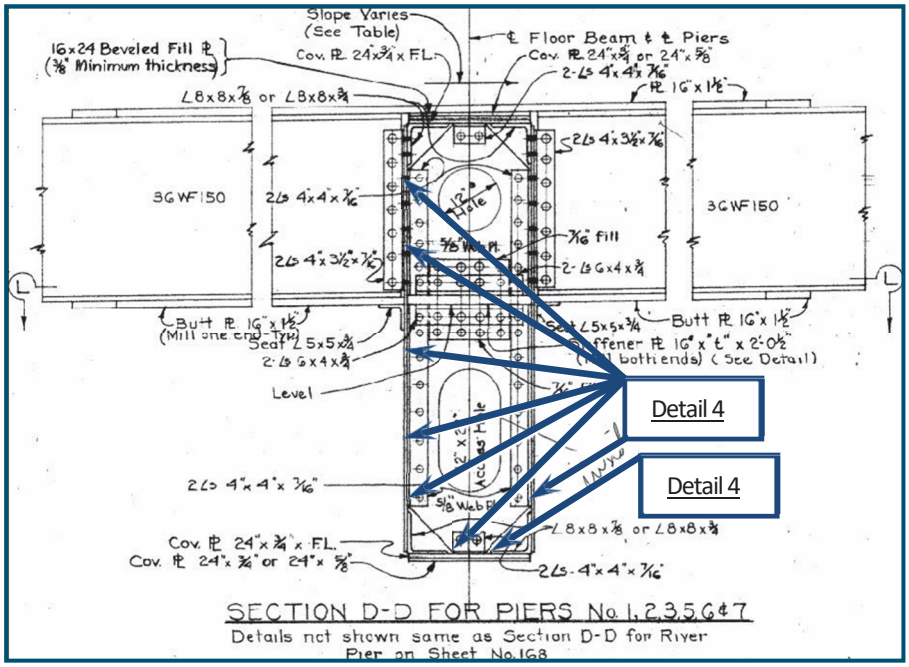


Figure 15 – Section through Pier Cap 7

Pier Cap 8

Fatigue-Prone Detail 3
Tack welds less than 2” on the web and flange plates.
Category: C

Location:

- One tack weld between the bottom flange plate and the east connection angle of the Girder B diaphragm
- One tack weld between the south web plate and each side of every transverse stiffener angle (16 total)
- One tack weld on the south web plate and the bottom flange angle at every transverse stiffener between the west bearing and Girder B, between Girders C and D, and between Girder E and the east bearing (6 total)
- Fillet welds between ladder rungs and the north web near the east bearing

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web and flange plates
Category: D

Location:

- One 3” tack weld between the bottom flange plate and the north edge of the connection angle on the east side of the Girder B diaphragm
- 3” fillet welds for six drainpipe support brackets on the north web between Girder G and the east bearing.

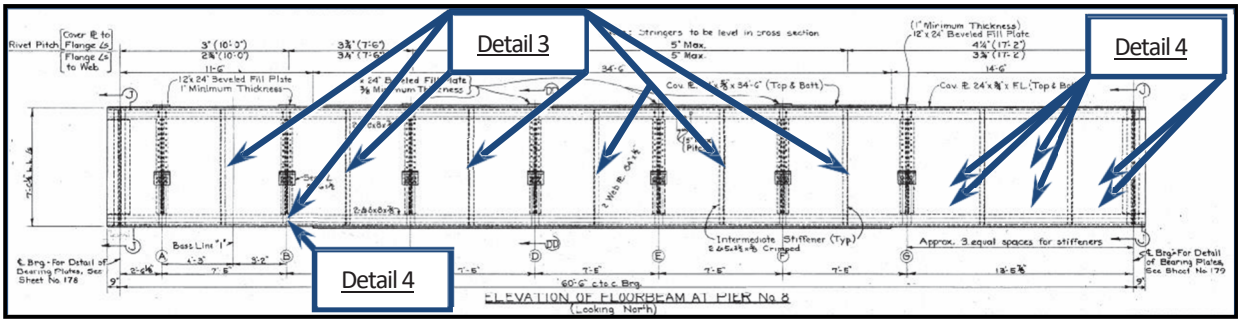


Figure 16 – Elevation of Pier Cap 8

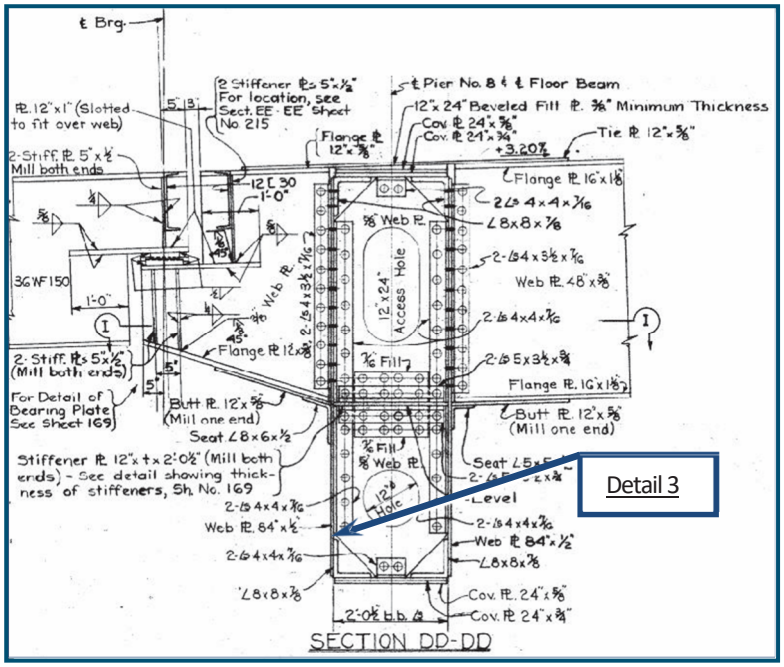


Figure 17 – Section through Pier Cap 8

Pier Cap 9

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location: Fillet welds between ladder rungs and the north web near the east bearing.

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web and flange plates
Category: D

Location:

- Five 2”-3” tack welds between the north web plate and each edge of the west bearing diaphragm fill plate (10 total)
- Two 2”-3” tack welds between the south web plate and the east edge of the west bearing diaphragm fill plate
- Three 2”-3” tack welds between the south web and the west edge of the west bearing diaphragm fill plate
- One 2”-4” tack welds between the south web plate and the bottom flange angle on each side of every transverse stiffener angle between Stringer F and the east bearing (8 total)
- One 2”-4” tack weld between the north web plate and the bottom flange angle on each side of the transverse stiffener angles adjacent to Stringer G (4 total)
- Twenty-six 3” tack welds along the north edges of the bottom flange plates at nine locations between Stringer C and the east termination of the outer flange plate

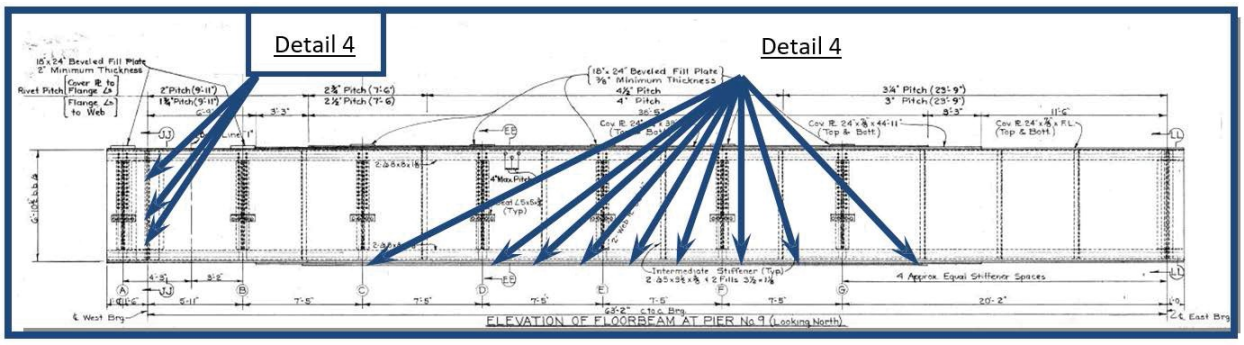


Figure 18 – Elevation of Pier Cap 9

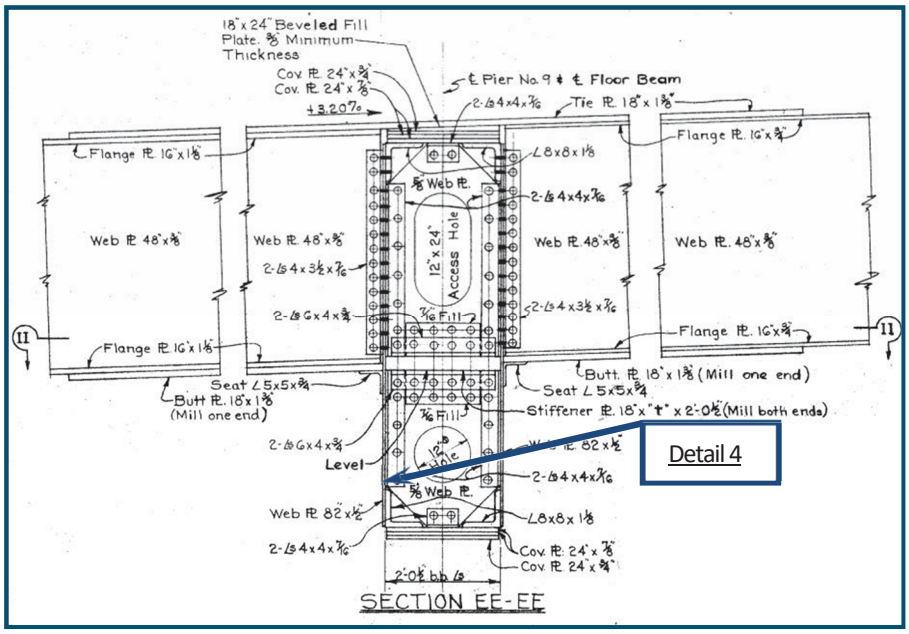


Figure 19 – Section through Pier Cap 9

Pier Cap 10

Fatigue-Prone Detail 3
Tack welds less than 2” on the web plates.
Category: C

Location:

- One tack weld between the south web and the bottom flange angle at the web splice, at the second and fourth transverse stiffeners from the east bearing, and at the transverse stiffeners between Girders B and C, Girders D and E, and Girders F and G (6 total)
- Two tack welds between the south web plate and the bottom flange angle on the east side of the first transverse stiffener from the east bearing
- Two tack welds between the south web plate and each side of every transverse stiffener fill plate (36 total)
- One tack weld between the north bottom flange angle and each end of the interior splice plate (2 total)
- Four tack welds between each web plate and both the east and west edges of the interior splice plates (16 total)
- Four tack welds between the south web plate and both the east and west edges of the exterior web splice plate (8 total)
- Three tack welds between the north web and both the east and west edges of the exterior web splice plate (6 total)
- One tack weld between both web plates and each end of the exterior bottom flange angle splice plates (4 total)
- Two tack welds between both web plates and the bottom edges of the exterior bottom flange angle splice plates (4 total)
- Fillet welds between ladder rungs and the south web near the east bearing.

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web plates.
Category: D

Location:

- Two 2”-3” tack welds between the north web plate and each side of the west bearing diaphragm fill plate (4 total)
- Four 2”-3” tack welds between the south web plate and each side of the west bearing diaphragm fill plate (8 total)
- 3” fillet welds for two drain pipe support brackets on the north web in each bay between Girders B and F (8 total)

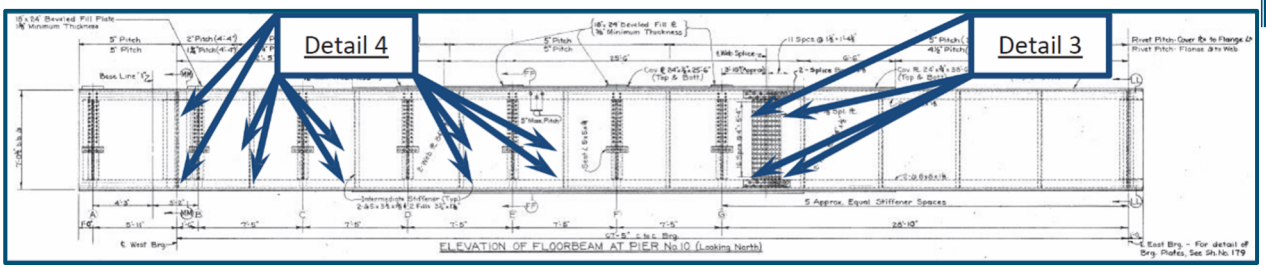


Figure 20 – Elevation of Pier Cap 10

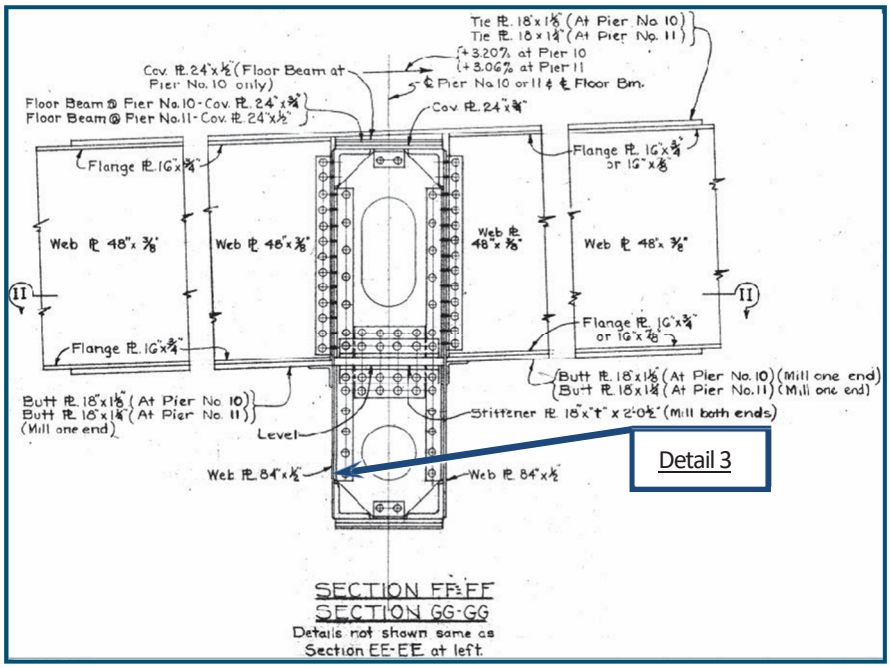


Figure 21 – Section through Pier Cap 10

Pier Cap 11

Fatigue-Prone Detail 3
Tack weld less than 2” on the web plates
Category: C

Location:

- Three miscellaneous tack welds on the interior of the north web plate on the east side of the splice plate; two miscellaneous tack welds on the interior of the north web plate on the west side of the splice plate (5 total)
- Five tack welds between the north web plate and both the east and west edges of the interior splice plate (10 total)
- Two tack welds along the edges of both bottom flange angles and their interior splice plates (4 total)
- One tack weld between the north bottom flange angle and each end of the interior splice plate (2 total)
- Two tack welds between the south bottom flange angle and each end of the interior splice plate (4 total)
- Four tack welds between each web plate and both the east and west edges of the exterior splice plate (16 total)
- Two tack welds between both web plates and the bottom edges of the exterior bottom flange angle splice plates (4 total)
- One tack weld between the north web plate and each end of the exterior bottom flange angle splice plate (2 total)
- Fillet welds between ladder rungs and the north web near the east bearing

Fatigue-Prone Detail 4
Tack weld greater than, or equal to, 2” and less than, or equal to, 4” on the web plate
Category: D

Location: Three 2”-3” tack welds between the south web plate and both the east and west edges of the interior splice plate (6 total)

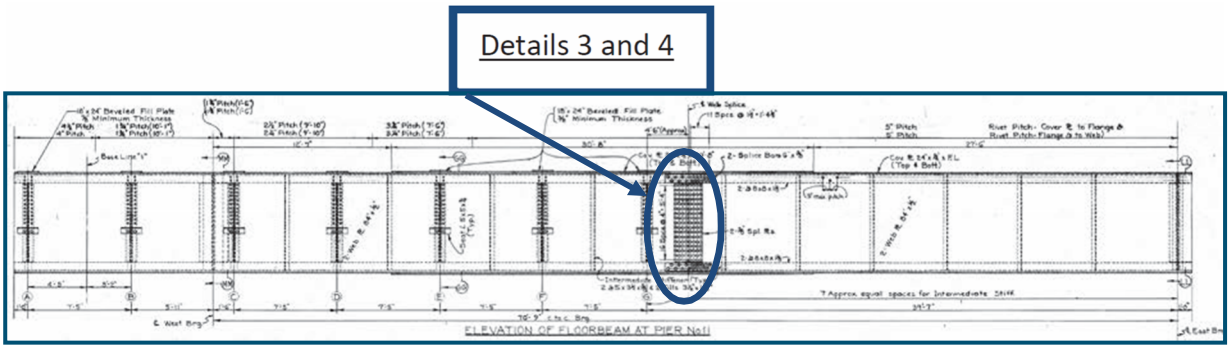


Figure 22 – Elevation of Pier Cap 11

Pier Cap 12A

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web plate
Category: D

Location: 3” fillet welds for two drainpipe support brackets on the north web in each bay between Stringer A and D and between Stringers E and G (10 total)

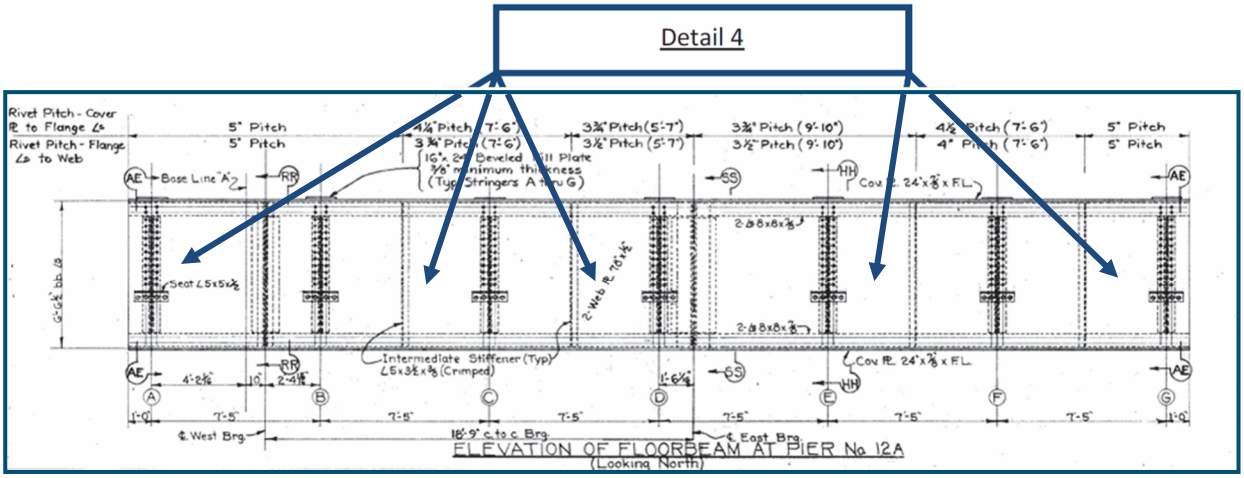


Figure 23 – Elevation of Pier Cap 12A

Pier Cap 13A

Fatigue-Prone Detail 4
Tack welds greater than, or equal to, 2” and less than, or equal to, 4” on the web plate
Category: D

Location: 3” fillet welds for two drain pipe support brackets on the north web in each bay between Stringer A and D and between Stringers E and G (10 total)

Fatigue-Prone Detail 3
Tack weld less than 2” on the web plate
Category: C

Location: One tack weld between the north web plate and each side of every stringer diaphragm fill plate (14 total)

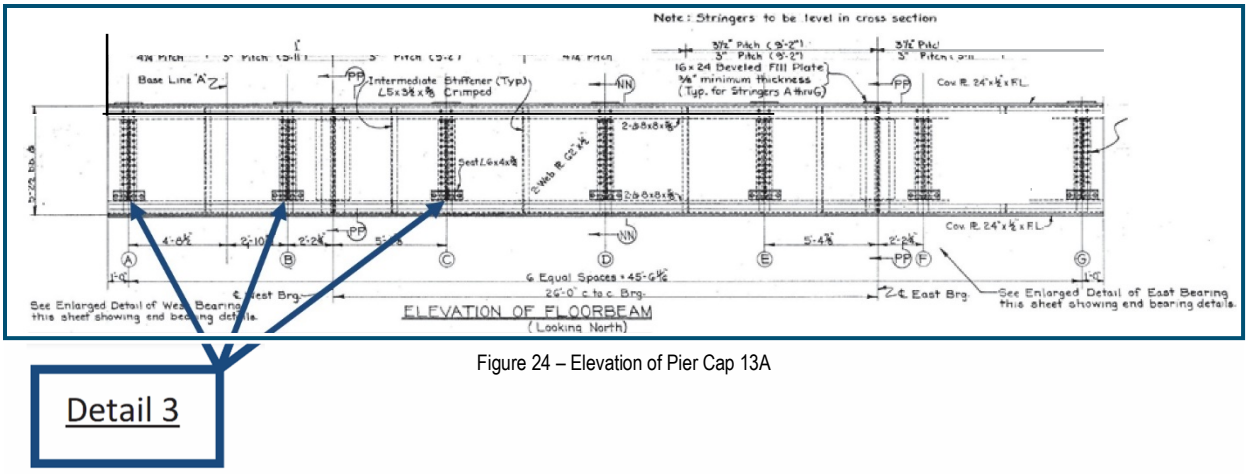
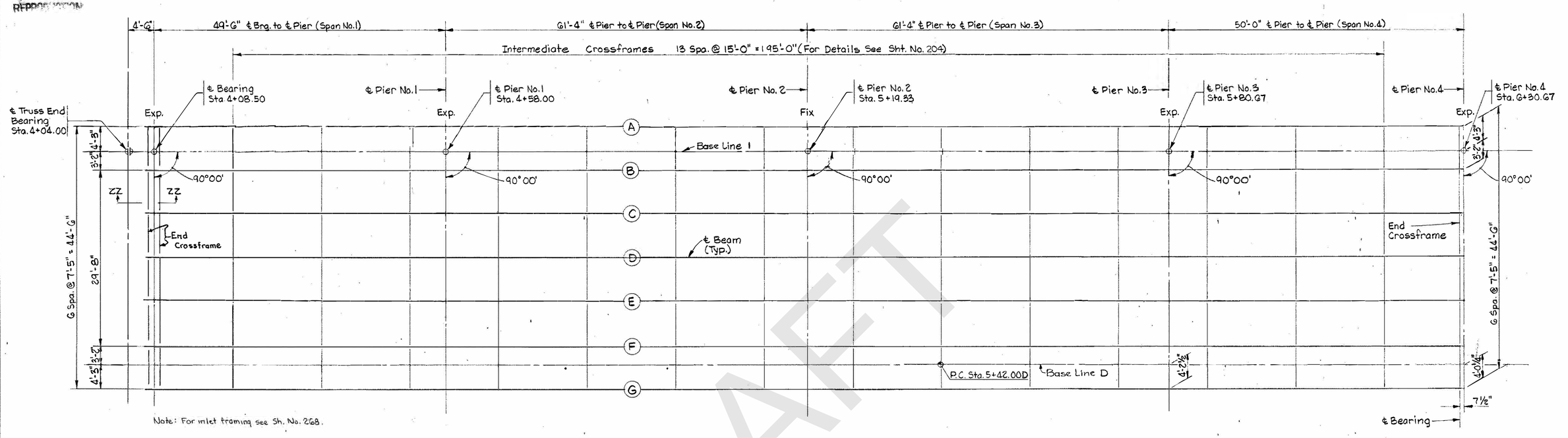


Figure 24 – Elevation of Pier Cap 13A

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

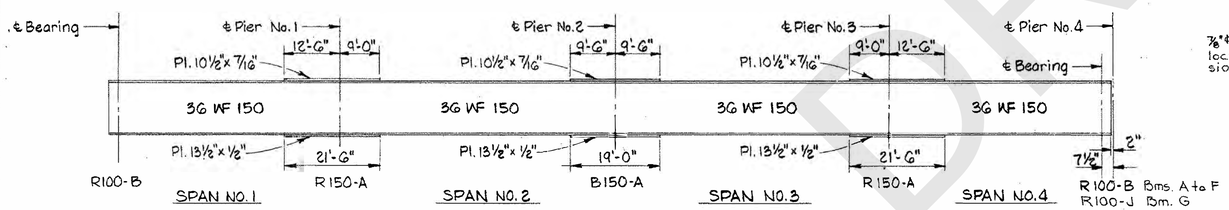
189

HAM-25-0.04



Note: For inlet framing see Sh. No. 268.

FRAMING PLAN - LOWER DECK UNIT 1



SIZE OF BEAMS AND COVER PLATES

DEAD LOAD DEFLECTIONS

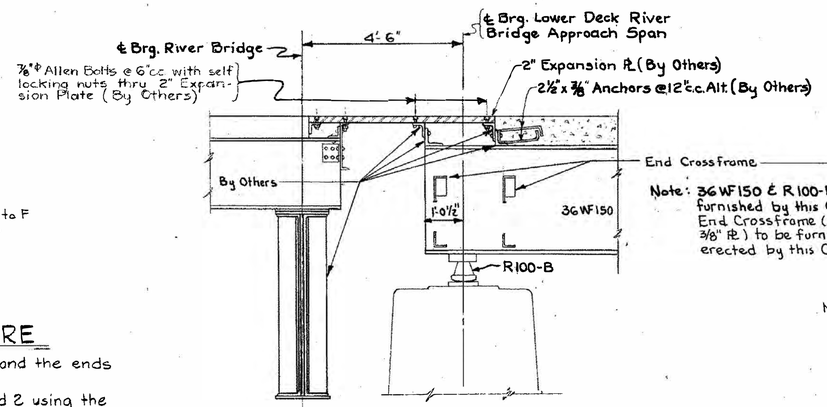
Location	Span No.1	Span No.2	Span No.3	Span No.4
Deflection Due To Weight Of Steel	0	1/16"	1/16"	0
Deflection Due To Remaining Dead Load	3/16"	3/16"	3/16"	3/16"

Note:
Where no camber is required, the beams shall be so fabricated that any curved beams will be placed with convex flange up.

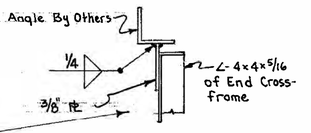
No camber required for beams in Unit 1 (Lower Deck).

BEAM SPLICE WELDING PROCEDURE

1- Raise the ends of beams in Span No.1 at River Pier ¾", and the ends of beams in Span No.3 at Pier No.3 1 3/16".
2- Butt-weld the beam flanges and web at Piers Nos. 1 and 2 using the following sequence: make two passes on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3- Weld the bottom and top moment plates at Piers Nos. 1 and 2.
4- Lower beams to their final position.
5- Raise the ends of beams in Span No.4 at Pier No.4 ½".
6- Repeat Step 2 at Pier No.3.
7- Weld the bottom and top moment plates at Pier No.3.
8- Lower beams to their final position.



SECTION ZZ-ZZ



Note: 36 WF 150 & R 100-B to be furnished by this Contractor End Crossframe (including 3/8" ℞) to be furnished & erected by this Contractor.

SHOWING LOCATION OF END CROSSFRAME

Note:
For Bearing Details, See Sht. No. 206
For Beam Splice Details, See Sht. No. 204
For End Crossframe Details, See Sht. No. 215

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 1 (LOWER DECK)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CPW	JVK 7-26-60		JHO 9/20/60	10-14-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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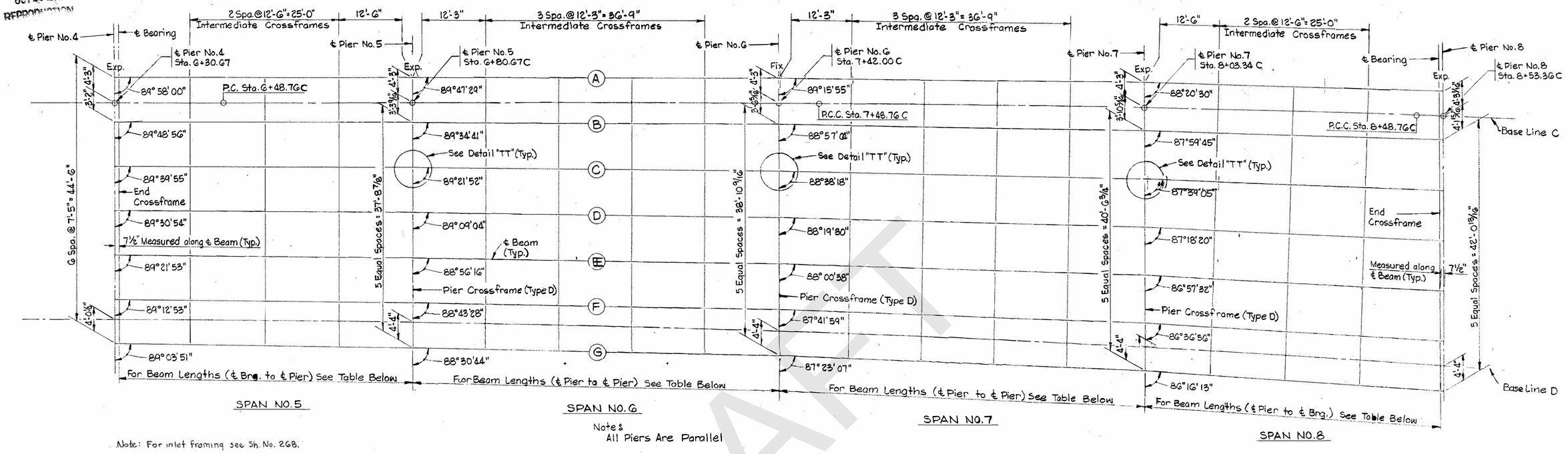
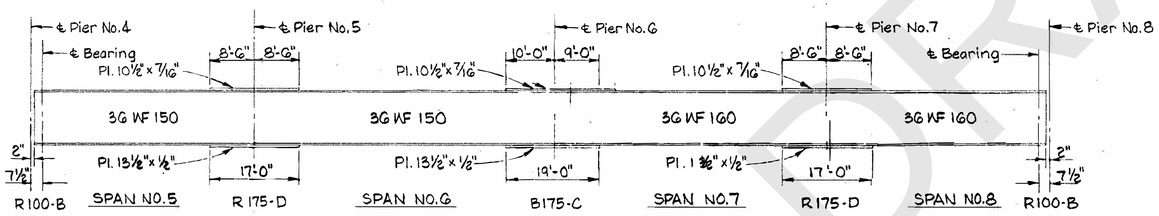


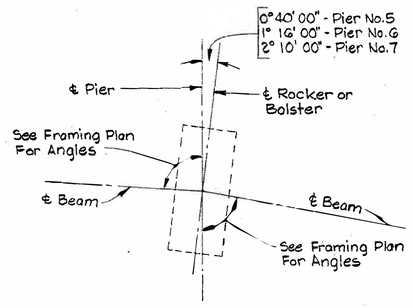
Note: For inlet framing see Sh. No. 268.

Note:
All Piers Are Parallel

FRAMING PLAN - LOWER DECK UNIT 2



SIZE OF BEAMS AND COVER PLATES



DETAIL TT

BEAM SPLICE WELDING PROCEDURE

1- Raise the ends of beams in Span No.5 at Pier No.4 1 1/16", and the ends of beams in Span No.7 at Pier No.7 1 3/16".
2- Butt-weld the beam flanges and web at Piers Nos. 5 and 6 using the following sequence: make two passes on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3- Weld the bottom and top moment plates at Piers Nos. 5 and 6.
4- Weld all pier crossframes at Piers Nos. 5 and 6.
5- Lower beams to their final positions.
6- Raise the ends of beams in Span No.8 at Pier No.8 ½".
7- Repeat Step 2 at Pier No.7.
8- Weld the bottom and top moment plates at Pier No.7.
9- Weld all pier crossframes at Pier No.7.
10- Lower beams to their final positions.

TABLE OF BEAM LENGTHS

Beam	Span No.5	Span No.6	Span No.7	Span No.8
A	49'-4 1/8"	61'-3 15/16"	61'-4 1/16"	49'-4 3/4"
B	do	61'-4"	61'-4 1/8"	49'-4 7/8"
C	do	do	61'-4 3/16"	49'-5"
D	do	61'-4 1/16"	61'-4 5/16"	49'-5 1/8"
E	49'-4 9/16"	do	61'-4 7/16"	49'-5 5/16"
F	do	61'-4 1/8"	61'-4 5/8"	49'-5 1/2"
G	do	61'-4 3/16"	61'-4 3/4"	49'-5 3/8"

DEAD LOAD DEFLECTIONS

Location	Span No.5	Span No.6	Span No.7	Span No.8
Deflection Due To Weight Of Steel	0	1/16"	1/16"	0
Deflection Due To Remaining Dead Load	1/4"	1/4"	1/4"	1/4"

Note:
Where no camber is required, the beams shall be so fabricated that any curved beams will be placed with convex flange up.

No camber required for beams in Unit 2 (Lower Deck).

Note:
For Bearing Details, See Sht. No. 206
For Beam Splice Details, See Sht. No. 204
For End Crossframe Details, See Sht. No. 215
For Intermediate Crossframe Details and Pier Crossframe (Type D) Details, See Sht. No. 204

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 2 (LOWER DECK)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CPW	JVK 7-26-60		JHO 9/20/60	W.A.E. 10-14-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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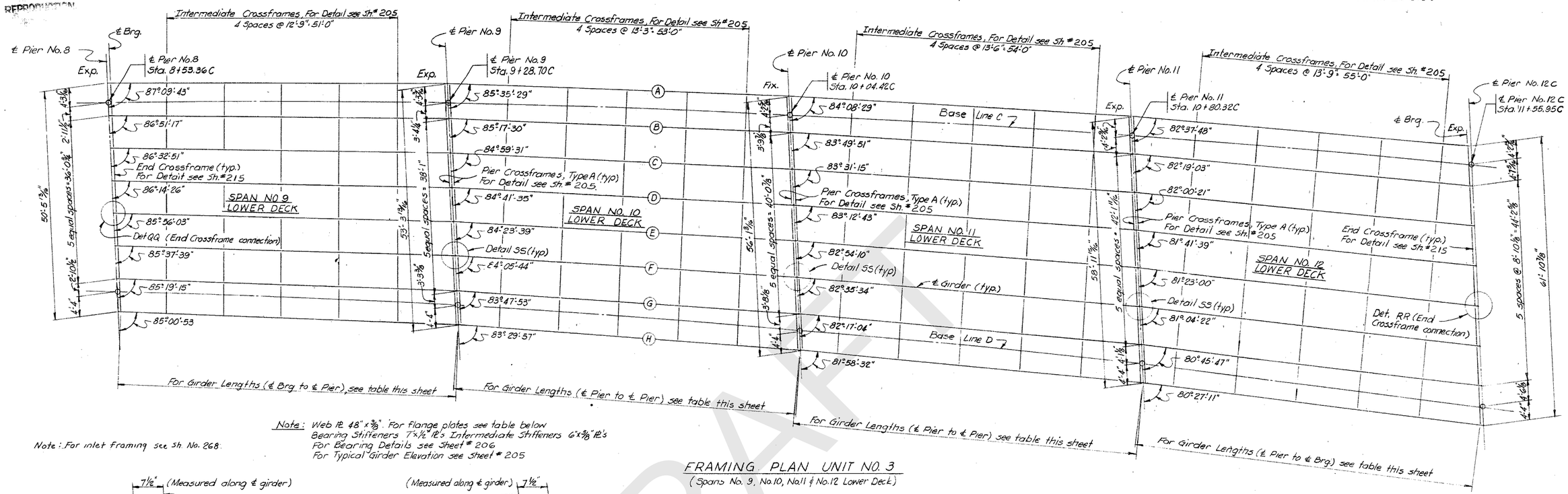
Z

Note: Piers No. 8, No. 9, No. 10, No. 11 & No. 12 are parallel to each other.

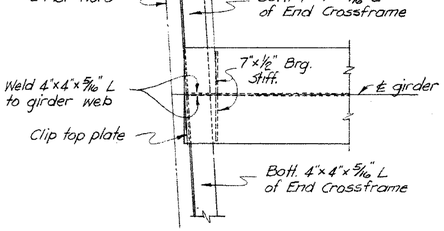


Note: Web Pl. 48"x⅜". For flange plates see table below
Bearing Stiffeners 7"x½" Pl's Intermediate Stiffeners 6"x⅜" Pl's
For Bearing Details see Sheet # 206
For Typical Girder Elevation see Sheet # 205

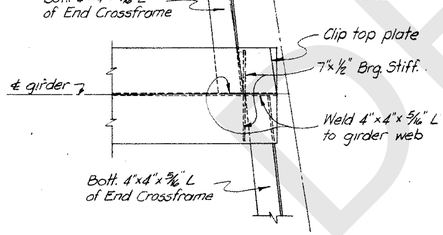
Note: For inlet framing see Sh. No. 268.

FRAMING PLAN UNIT NO. 3

(Spans No. 9, No. 10, No. 11 & No. 12 Lower Deck)



DETAIL QQ
(End Crossframe connection at)
(Pier No.8, Span No.9)
Note: Work this detail with "Part Plan of Expansion Joint" Sheet No. 215.



DETAIL RR
(End Crossframe connection at)
(Pier No. 12C, Span No. 12)
Note: Work this detail with "Part Plan of Expansion Joint" Sheet No. 215.

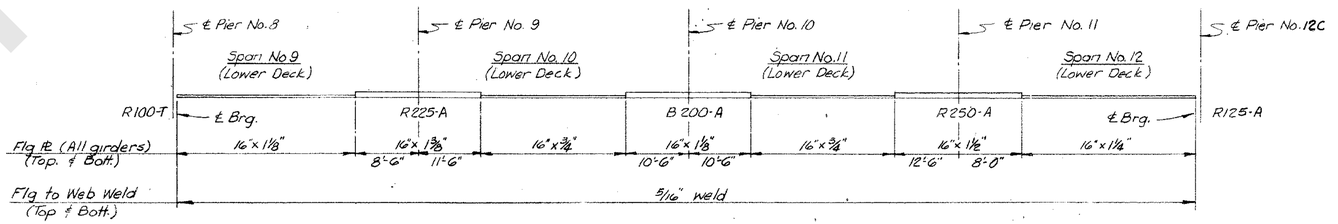


TABLE OF FLANGE PLATES AND WELD SIZE

TABLE OF GIRDER LENGTHS

Girder	A	B	C	D	E	F	G	H
Span No. 9	74'-8 3/16"	74'-8 5/16"	74'-9 1/16"	74'-9 3/8"	74'-9 11/16"	74'-10 1/16"	74'-10 7/16"	74'-10 13/16"
Span No. 10	75'-8 1/16"	75'-9 1/16"	75'-9 1/16"	75'-9 1/8"	75'-10 5/16"	75'-10 13/16"	75'-11 5/16"	75'-11 7/8"
Span No. 11	75'-10 3/4"	75'-11 1/4"	75'-11 13/16"	76'-0 3/8"	76'-1"	76'-1 5/8"	76'-2 1/4"	76'-2 15/16"
Span No. 12	75'-0"	75'-0 5/8"	75'-1 5/16"	75'-2 1/16"	75'-2 3/4"	75'-3 9/16"	75'-4 5/16"	75'-5 1/8"

Work this sheet with Sheet No. 192

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STRUCTURAL STEEL DETAILS UNIT 3 (LOWER DECK)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.P.W.	J.C. 7-21-60		JHO 7/27/60	9.1.7. 10-14-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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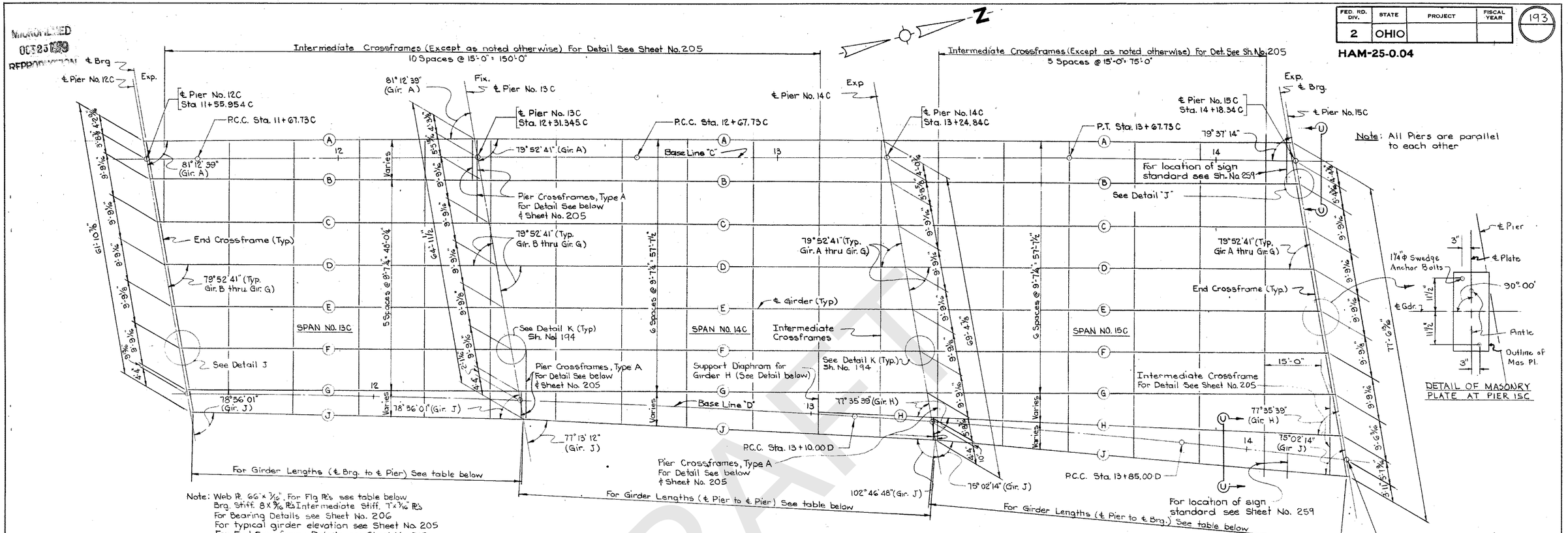
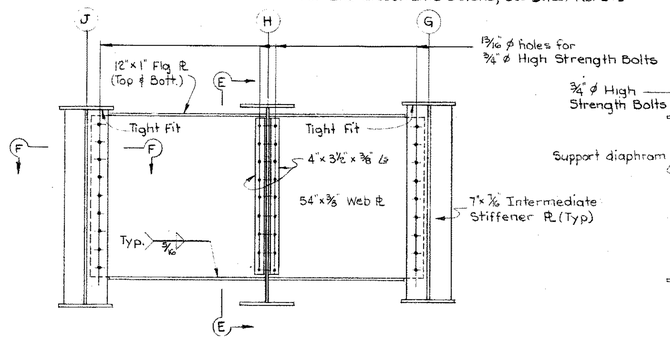


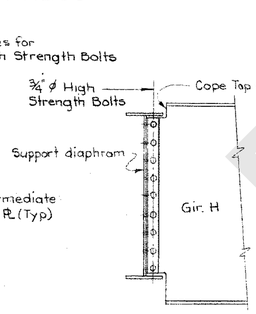
Note: Web Pl. 66" × 7/16". For Flg Pl's see table below.
Brg. Stiff. 8" × 9/16" Pl's Intermediate Stiff. 7" × 7/16" Pl's
For Bearing Details see Sheet No. 206
For typical girder elevation see Sheet No. 205
For End Crossframe Details, see Sheet No. 215

FRAMING PLAN UNIT NO. 13

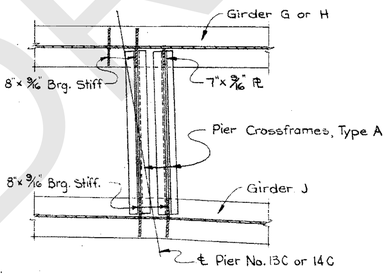
(Spans No. 13C, 14C & 15C)



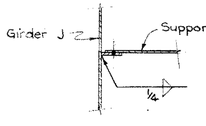
DETAIL OF SUPPORT DIAPHRAM FOR GIRDER "H"



SECTION E-E



PIER CROSSFRAME CONNECTIONS
BETWEEN GIRDERS "G" & "J" AT PIER NO. 13C
BETWEEN GIRDERS "H" & J AT PIER NO. 14C



SECTION F-F

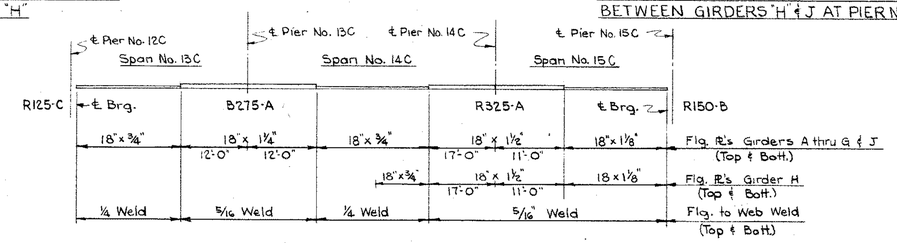
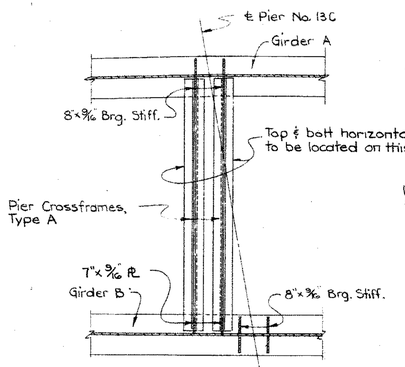
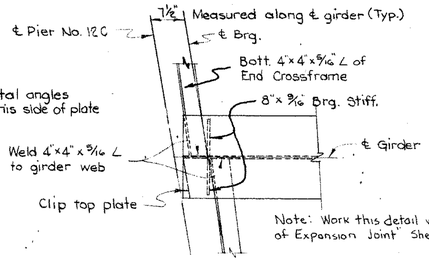


TABLE OF FLANGE PLATES AND WELD SIZES

Note: For inlet framing see Sh. No. 268



PIER CROSSFRAME CONNECTION
BETWEEN GIRDERS A & B AT PIER NO 13C



DETAIL "J"
(End Crossframe connection @ Pier 12C, Span 13C)
(Rotate thru 180° for connection @ Pier 15C, Span 15C)

TABLE OF GIRDER LENGTHS

Girders	Span No. 13C	Span No. 14C	Span No. 15C
A	74'- 9⅛"	93'- 6 7/16"	92'- 9 11/16"
B thru G	75'- 0⅝"	93'- 6 7/16	92'- 9 11/16"
H		*	93'- 6⅝"
J	75'- 3 7/16"	94'- 5/16	94'- 7"

* Girder lengths for girder shown by asterisk is from ℄ Pier to crossframe. For location, see Framing Plan.

Work this sheet with Sheet No. 194

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STRUCTURAL STEEL DETAILS UNIT NO. 13.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CAF	J.C. 4-25-60		JHO 8/1/60	10-14-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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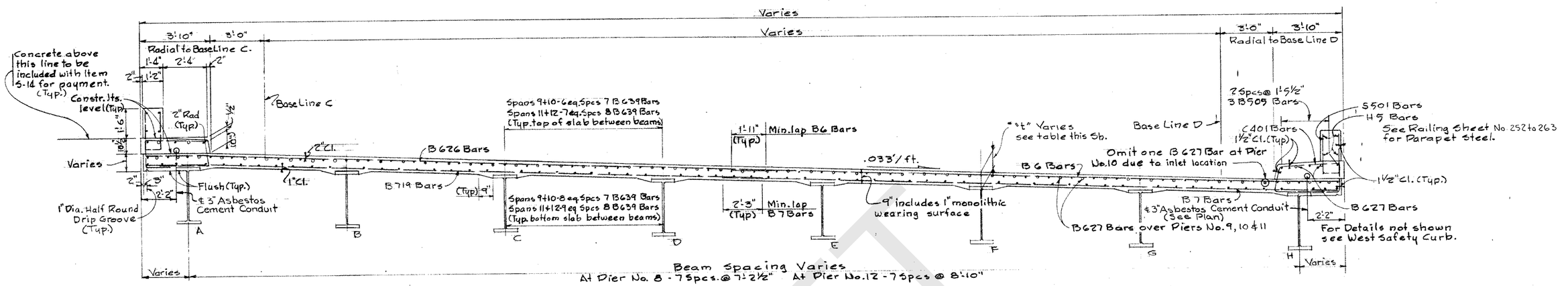
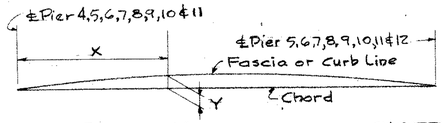


Beam Spacing Varies
At Pier No. 8 - 7 Spcs. @ 7'-2½" At Pier No. 12 - 7 Spcs @ 8'-10"

• Indicates bars in section.
○ Indicates bars over piers.
*See Sh. No. 216 for note.

TRANSVERSE SECTION UNIT 3 LOWER DECK



CHORD OFFSETS

UNIT 3. (Low. Deck) SLAB THICKNESS "t"

Location / Beam		A	B thru G	H
SPAN 9	℄ Brg. - Pier 8	9 5/8"	9 7/8"	10 1/2"
	1/4 Pt.	10 1/8"	10 1/4"	11"
	℄ Span	10 1/4"	10 1/4"	11"
	3/4 Pt.	10"	10 1/8"	10 3/4"
	℄ Pier 9	9 5/8"	9 7/8"	10 1/2"
SPAN 10	℄ Pier 9	9 5/8"	9 7/8"	10 1/2"
	1/4 Pt.	9 3/4"	10"	10 5/8"
	℄ Span	10"	10"	10 3/4"
	3/4 Pt.	9 3/4"	10"	10 5/8"
	℄ Pier 10	9 5/8"	9 7/8"	10 1/2"
SPAN 11	℄ Pier 10	9 5/8"	9 7/8"	10 1/2"
	1/4 Pt.	9 7/8	10"	10 5/8"
	℄ Span	10"	10 1/8"	10 3/4"
	3/4 Pt.	9 3/4"	10"	10 5/8"
	℄ Pier 11	9 5/8"	9 7/8"	10 1/2"
SPAN 12A	℄ Pier 11	9 5/8"	9 7/8"	10 1/2"
	1/4 Pt.	10"	10 1/4"	10 3/4"
	℄ Span	10 1/4"	10 3/8"	11"
	3/4 Pt.	10 1/8"	10 3/8"	10 7/8"
	℄ Brg. - Pier 12	9 5/8"	9 7/8"	10 1/2"

Note: "t" is measured from top of slab to bottom of flange plate ℄ ℄ Beam. See Note 1 Sheet No. 216.

UNIT 2 LOWER DECK

SPAN 5

W. Fascia Dist. X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist. X	E. Curb Offset Y	E. Fascia Dist. X	E. Fascia Offset Y
26'-0 3/4"	1/8"	26'-0 3/4"	1/8"	5'-7 7/8"	3/8"	5'-7 3/4"	3/8"
				11'-3 3/4"	5/8"	11'-3 1/2"	5/8"
				20'-11 3/4"	1"	20'-11 1/2"	1"
				30'-7 3/4"	1"	30'-7 3/4"	1"
				40'-4"	5/8"	40'-3 3/4"	5/8"

SPAN 6

W. Fascia Dist X	W. Fascia Offset Y	W. Curb Dist X	W. Curb Offset Y	E. Curb Dist X	E. Curb Offset Y	E. Fascia Dist X	E. Fascia Offset Y
10'-2 5/8"	1/8"	10'-2 5/8"	1/8"	10'-2 1/2"	1/8"	10'-2 1/8"	1/8"
20'-5 3/8"	1/4"	20'-5 3/8"	1/4"	20'-4 7/8"	1 1/2"	20'-4 3/8"	1 1/2"
30'-8"	3/8"	30'-8"	3/8"	30'-7 3/8"	1 5/8"	30'-6 1/4"	1 5/8"
40'-10 5/8"	1/4"	40'-10 5/8"	1/4"	40'-9 3/4"	1 1/2"	40'-8 3/4"	1 1/2"
51'-1 1/4"	1/8"	51'-1 1/4"	1/8"	51'-0 1/4"	7/8"	50'-10 7/8"	7/8"

SPAN 7

W. Fascia Dist. X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist. X	E. Curb Offset Y	E. Fascia Dist. X	E. Fascia Offset Y
6'-9 5/8"	3/8"	6'-9 3/8"	3/8"	7'-8 1/8"	7/8"	7'-8 1/8"	7/8"
15'-10 5/8"	1/4"	15'-10 1/2"	1/4"	15'-4 1/4"	1 1/2"	15'-4 1/4"	1 1/2"
24'-11 3/4"	1 1/2"	24'-11 7/8"	1 1/2"	23'-0 1/4"	1 7/8"	23'-0 1/4"	1 7/8"
34'-0 1/8"	1 5/8"	34'-0 3/4"	1 5/8"	30'-8 3/8"	2"	30'-8 3/8"	2"
43'-1 7/8"	1 3/8"	43'-1 7/8"	1 3/8"	38'-4 1/2"	1 7/8"	38'-4 1/2"	1 3/4"
52'-3"	7/8"	52'-3"	7/8"	46'-0 5/8"	1 1/2"	46'-0 5/8"	1 1/2"
				53'-8 3/8"	7/8"	53'-8 3/8"	7/8"

SPAN 8

W. Fascia Dist. X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist X	E. Curb Offset Y	E. Fascia Dist X	E. Fascia Offset Y
9'-1 3/8"	5/8"	9'-1 1/4"	5/8"	8'-4 1/4"	3/4"	8'-4 1/4"	3/4"
18'-3 1/8"	1"	18'-2 1/2"	1"	16'-8 1/2"	1 1/8"	16'-8 1/2"	1 1/8"
27'-4 3/4"	1 1/8"	27'-3 3/4"	1 1/8"	25'-0 7/8"	1 3/8"	25'-0 7/8"	1 3/8"
36'-6 3/8"	7/8"	36'-5"	7/8"	33'-4 1/8"	1 1/8"	33'-4 1/8"	1 1/8"
45'-7 7/8"	3/8"	45'-6 1/4"	3/8"	41'-9 1/8"	3/4"	41'-9 1/8"	3/4"

UNIT 3 LOWER DECK

SPAN 9

W. Fascia Dist. X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist. X	E. Curb Offset Y	E. Fascia Dist. X	E. Fascia Offset Y
9'-5"	1 1/4"	9'-5"	1 1/4"	9'-5 1/4"	1 1/4"	9'-5 1/4"	1 1/4"
18'-10"	2 1/4"	18'-10"	2 1/4"	18'-10 3/8"	2 1/4"	18'-10 3/8"	2 1/4"
28'-3"	2 3/4"	28'-3"	2 3/4"	28'-3 7/8"	2 3/4"	28'-3 7/8"	2 3/4"
37'-8"	3"	37'-8"	3	37'-9 1/8"	3	37'-9 1/8"	3"
47'-1"	2 3/4"	47'-1"	2 3/4"	47'-2 1/2"	2 3/4"	47'-2 1/2"	2 3/4"
56'-6"	2 1/4"	56'-6"	2 1/4"	56'-7 3/4"	2 1/4"	56'-7 3/4"	2 1/4"
65'-11"	1 1/4"	65'-11"	1 1/4"	66'-1"	1 1/4"	66'-1"	1 1/4"

SPAN 10

W. Fascia Dist X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist. X	E. Curb Offset Y	E. Fascia Dist. X	E. Fascia Offset Y
9'-5 5/8"	1 1/4"	9'-5 5/8"	1 1/4"	9'-6"	1 3/8"	9'-6"	1 3/8"
18'-11 1/8"	2 1/4"	18'-11 1/8"	2 1/4"	19'-0"	2 1/4"	19'-0"	2 1/4"
28'-4 3/4"	2 3/4"	28'-4 3/4"	2 3/4"	28'-6"	2 7/8"	28'-6"	2 7/8"
37'-10 1/4"	3"	37'-10 1/4"	3	38'-0"	3"	38'-0"	3"
47'-3 3/8"	2 3/4"	47'-3 3/8"	2 3/4"	47'-6"	2 7/8"	47'-6"	2 7/8"
56'-9 1/2"	2 1/4"	56'-9 1/2"	2 1/4"	57'-0"	2 1/4"	57'-0"	2 1/4
66'-3	1 1/4"	66'-3"	1 1/4"	66'-6"	1 3/8"	66'-6"	1 3/8"

SPAN 11

W. Fascia Dist. X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist X	E. Curb Offset Y	E. Fascia Dist X	E. Fascia Offset Y
9'-5 7/8"	1 3/8"	9'-5 7/8"	1 3/8"	9'-6 3/8"	1 3/8"	9'-6 3/8"	1 3/8"
18'-11 7/8"	2 1/4"	18'-11 3/4"	2 1/2"	19'-0 3/4"	2 1/4"	19'-0 3/4"	2 1/4"
28'-5 1/2"	2 7/8"	28'-5 1/2"	2 7/8"	28'-7 1/8"	2 7/8"	28'-7 1/8"	2 7/8"
37'-11 3/8"	3"	37'-11 3/8"	3"	38'-1 3/8"	3"	38'-1 1/2"	3"
47'-5 1/4"	2 7/8"	47'-5 1/4"	2 7/8"	47'-7 3/4"	2 7/8"	47'-7 3/4"	2 7/8"
56'-11"	2 1/4"	56'-11 1/8"	2 1/4"	57'-2 1/8"	2 1/4"	57'-2 1/8"	2 1/4"
66'-4 7/8"	1 3/8"	66'-4 7/8"	1 3/8"	66'-8 1/2"	1 3/8"	66'-8 1/2"	1 3/8"

SPAN 12

W. Fascia Dist. X	W. Fascia Offset Y	W. Curb Dist. X	W. Curb Offset Y	E. Curb Dist. X	E. Curb Offset Y	E. Fascia Dist. X	E. Fascia Offset Y
9'-5 3/8"	1 1/4"	9'-5 1/2"	1 1/4"	9'-6 1/8"	1 3/8"	9'-6 1/8"	1 3/8"
18'-10 7/8"	2 1/4"	18'-10 7/8"	2 1/4"	19'-0 1/8"	2 1/4"	19'-0 1/4"	2 1/4"
28'-4 1/4"	2 3/4"	28'-4 3/8"	2 3/4"	28'-6 1/4"	2 7/8"	28'-6 1/4"	2 7/8"
37'-9 3/4"	3"	37'-9 3/4"	3"	38'-0 3/8"	3"	38'-0 3/8"	3"
47'-3 1/8"	2 3/4"	47'-3 1/4"	2 3/4"	47'-6 1/2"	2 7/8"	47'-6 1/2"	2 7/8"
56'-8 5/8"	2 1/4"	56'-8 3/8"	2 1/4"	57'-0 1/2"	2 1/4"	57'-0 1/2"	2 1/4"
66'-2"	1 1/4"	66'-2 1/8"	1 1/4"	66'-6 5/8"	1 3/8"	66'-6 5/8"	1 3/8"

CHORD LENGTHS LOWER DECK

SPAN No.	W. Fascia	W. Curb	E. Curb	E. Fascia
5	50'-0"	50'-0"	50'-0"	50'-0"
6	61'-4"	61'-4"	61'-4 1/8"	61'-4 1/8"
7	61'-4 1/8"	61'-4 1/8"	61'-4 3/4"	61'-4 3/4"
8	50'-0 1/8"	50'-0 1/8"	50'-1 3/8"	50'-1 3/8"
9	75'-4"	75'-4"	75'-6 3/8"	75'-6 3/8"
10	75'-8 5/8"	75'-8 5/8"	76'-0"	76'-0"
11	75'-10 1/4"	75'-10 3/4"	76'-2 7/8"	76'-2 7/8"
12	75'-7 1/2"	75'-7 1/2"	76'-0 3/4"	76'-0 3/4"

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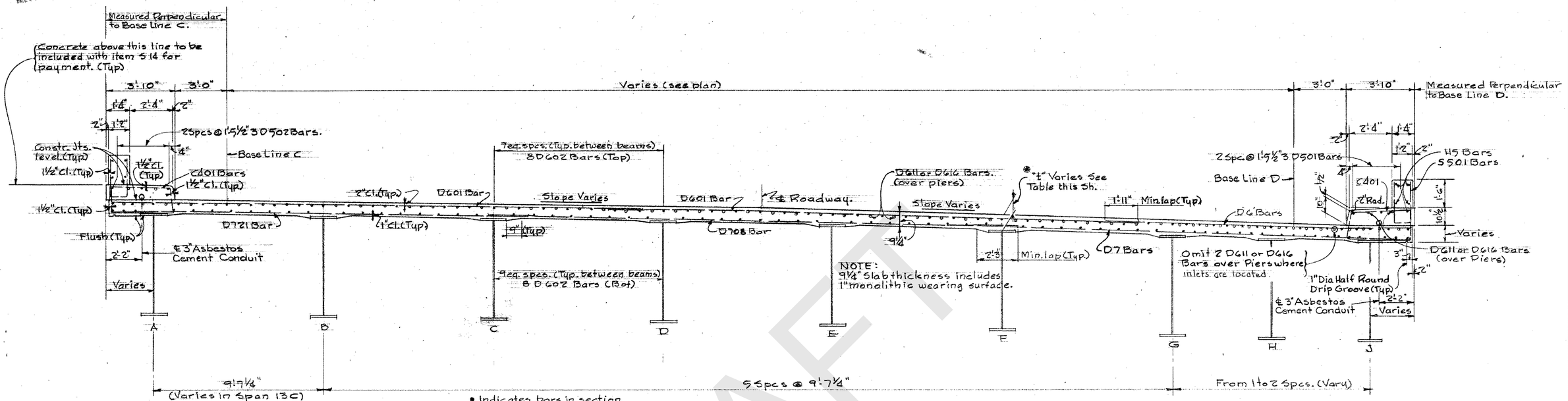
SUPERSTRUCTURE DETAILS UNIT NO. 3 (LOW. DECK).

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.C.D. 3-14-60		W.W.E. 9-15-60	W.A.S. 10-6-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

234

HAM-25-0.04



• Indicates bars in section.
○ Indicates bars over piers.

NOTE:
9¼" Slab thickness includes 1" monolithic wearing surface.

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

TRANSVERSE SECTION
(TYPICAL FOR UNIT 13)

UNIT 13
SLAB THICKNESS "t"

Location \ Beam	A	B	C	D	E	F	G	H	J
SPAN 13C									
℄ Brg - Pier 12C	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		10 7/8"
1/4 Pt.	10 1/8"	10 1/2"	10 1/2"	10 1/2"	10 5/8"	10 5/8"	10 5/8"		11 3/8"
℄ Span	10 1/4"	10 5/8"	10 5/8"	10 5/8"	10 3/4"	10 3/4"	10 3/4"		11 5/8"
3/4 Pt.	10 1/8"	10 1/2"	10 1/2"	10 1/2"	10 1/2"	10 1/2"	10 5/8"		11 1/2"
℄ Pier 13C	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		10 7/8"
SPAN 14C									
℄ Pier 13C	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		10 7/8"
1/4 Pt.	10 1/8"	10 1/4"	↓	↓	10 1/8"	10"	10"		10 7/8"
℄ Span	10 1/8"	10 3/8"			10 1/4"	10 1/4"	10 1/8"		11"
3/4 Pt.	9 7/8"	10 1/4"	↓	↓	10 1/4"	10 1/4"	10 1/4"		11"
℄ Pier 14C	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		10 7/8"
SPAN 15C									
℄ Pier 14C	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 7/8"
1/4 Pt.	9 5/8"	10"	10 1/8"	10"	10 1/4"	10 1/8"	10 1/8"	10"	10 1/2"
℄ Span	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 7/8"
3/4 Pt.	10"	10 1/2"	10 1/2"	10 3/8"	10 3/8"	10 1/4"	10 1/4"	10 1/4"	11"
℄ Brg - Pier 15C	9 7/8"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 7/8"

"t" is measured from top of slab to bottom of flange plate ℄ ℄ Beam.
See Note 1 Sh. No. 216

Note: Work this sheet with Sh. No. 233

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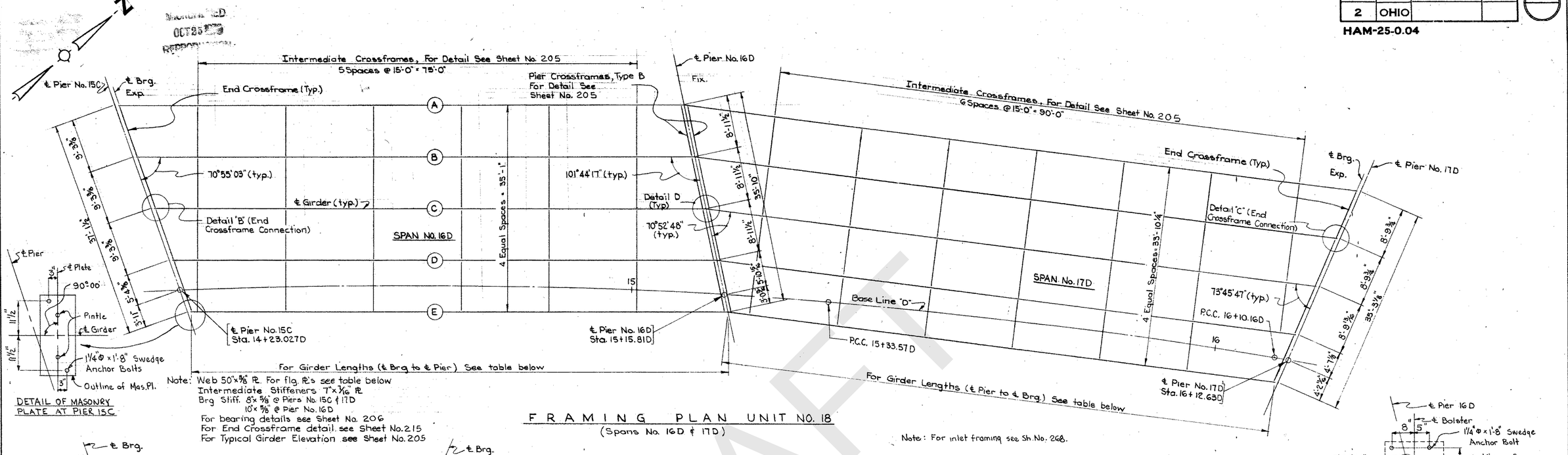
SUPERSTRUCTURE DETAILS
UNIT NO. 13.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.C.D 5-19-60		W.D.D.C. 9-16-60	W.A.I.J. 10-5-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

201

HAM-25-0.04



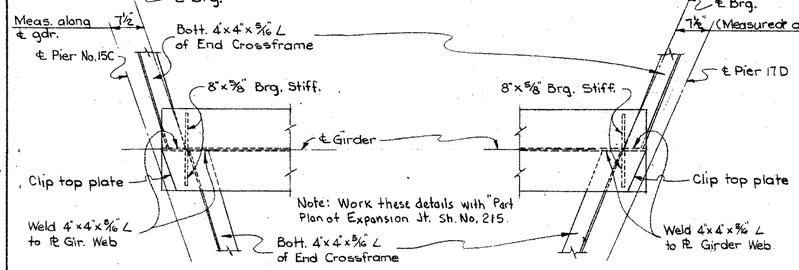
Note: Web 50"x⅜" PL. For flg. PL's see table below
Intermediate Stiffeners 7"x7/16" PL
Brg Stiff. 8"x⅝" @ Piers No. 15C & 17D
10"x⅝" @ Pier No. 16D
For bearing details see Sheet No. 206
For End Crossframe detail see Sheet No. 215
For Typical Girder Elevation see Sheet No. 205

Note: For inlet framing see Sh. No. 268.

FRAMING PLAN UNIT NO. 18

(Spans No. 16D & 17D)

DETAIL OF MASONRY PLATE AT PIER 15C



DETAIL "B"
(End Crossframe connection at Pier No. 15C Span No. 16D)

DETAIL "C"
(End Crossframe connection at Pier No. 17D, Span No. 17D)

GIRDER	LENGTHS	
Girder	Span 16D	Span 17D
A	96'-3 1/16"	115'-6 5/16"
B	95'-1 1/8"	110'-1 3/16"
C	93'-10 5/8"	104'-8 3/4"
D	92'-8 1/16"	99'-3 5/16"
E	91'-5 3/8"	93'-11 13/16"

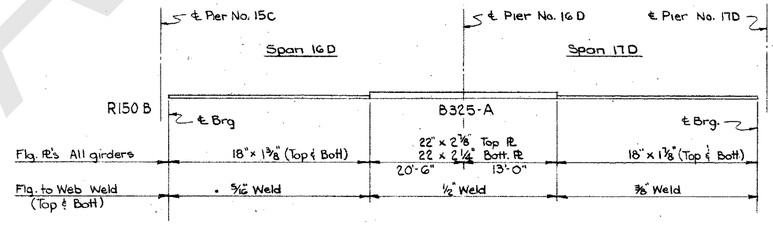
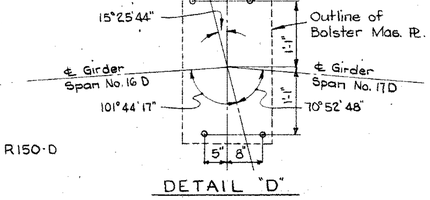


TABLE OF FLANGE PLATES AND WELD SIZES



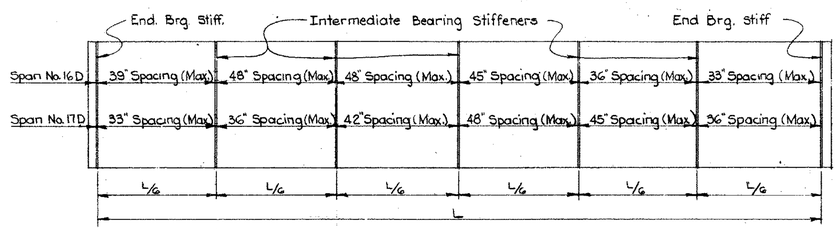
DETAIL "D"

GIRDER SPLICE WELDING PROCEDURE

With the girders of Span 16D in their final positions, raise the ends of the girders in Span 17D, at Pier 17D, the following amounts: Bm. A - 4⅛", Bm. B - 4⅛", Bm. C - 3½", Bm. D - 3", & Bm. E - 2⅝".
Butt weld the girder flanges and webs at Pier 16D using the sequence outlined in Note A Sheet No. 181
Weld all pier crossframes at Pier 16D into place
Lower the girders into their final positions.

DEFLECTION AND CAMBER																										
Span	16D												17D													
Girder	A			B			C			D			E			A			B			C			D			E		
Location	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to weight of steel	⅛"	1/16"	-	⅛"	⅛"	-	⅛"	⅛"	-	⅛"	⅛"	1/16"	⅛"	⅛"	1/16"	¼"	½"	3/8"	¼"	3/8"	5/16"	3/16"	5/16"	¼"	⅛"	¼"	3/16"	⅛"	3/16"	⅛"
Deflection due to remaining Dead Load	½"	9/16"	1/16"	7/16"	½"	3/16"	7/16"	½"	¼"	7/16"	5/16"	3/16"	9/16"	1/16"	5/16"	⅞"	13/16"	1¼"	½"	1"	13/16"	⅜"	¾"	⅝"	5/16"	⅜"	½"	5/16"	½"	7/16"
Convexity (See note below)	1⅛"	1¾"	1⅜"	1⅜"	1⅞"	1⅛"	15/16"	1⅞"	1⅛"	15/16"	1⅞"	1⅛"	1¼	1⅜"	1⅜"	2⅝"	3⅛"	2⅜"	15/16"	1⅞"	1⅛"	⅛"	1⅛"	⅝"	1⅛"	1⅜"	⅝"	1⅛"	2⅛"	1⅜"
Sum of deflection and convexity	1¾	2⅜"	1⅞"	1⅜"	2⅛"	1¼"	1½	2⅛"	1⅜"	1½"	2⅛"	1⅜"	1⅝"	2⅝"	1¾	3⅛"	5⅜"	4⅞"	1⅛"	3"	1⅜"	1⅞"	2½"	1½"	1⅛"	2⅛"	1¼"	1⅛"	2¾"	1⅝"
Required Camber	2⅝"			2⅝"			2⅝"			2⅝"			2⅝"			5¼"			3"			2¾"			2¾"			2¾"		

Notes: Convexity includes variations due to vertical curvature, superelevation and horizontal curvature.
Girder web plates shall be cut to a parabolic crown



Note: Adjust intermediate stiffener spacing to conform to intemediate crossframe spacing

INTERMEDIATE STIFFENER SPACING

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STRUCTURAL STEEL DETAILS UNIT NO. 18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.A.F.	J.C. 4-15-60		JHO 8/1160	A.A.Z. 10-14-60	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

202

HAM-25-0.04

RECEIVED OCT 25 1960 REPORT

TABLE "W" Dimensions to raise girders for welding		
Girders	At Pier 17D	At Pier 20D
A & B	1 3/4"	1 3/4"
C thru E	1 3/4"	1 1/2"

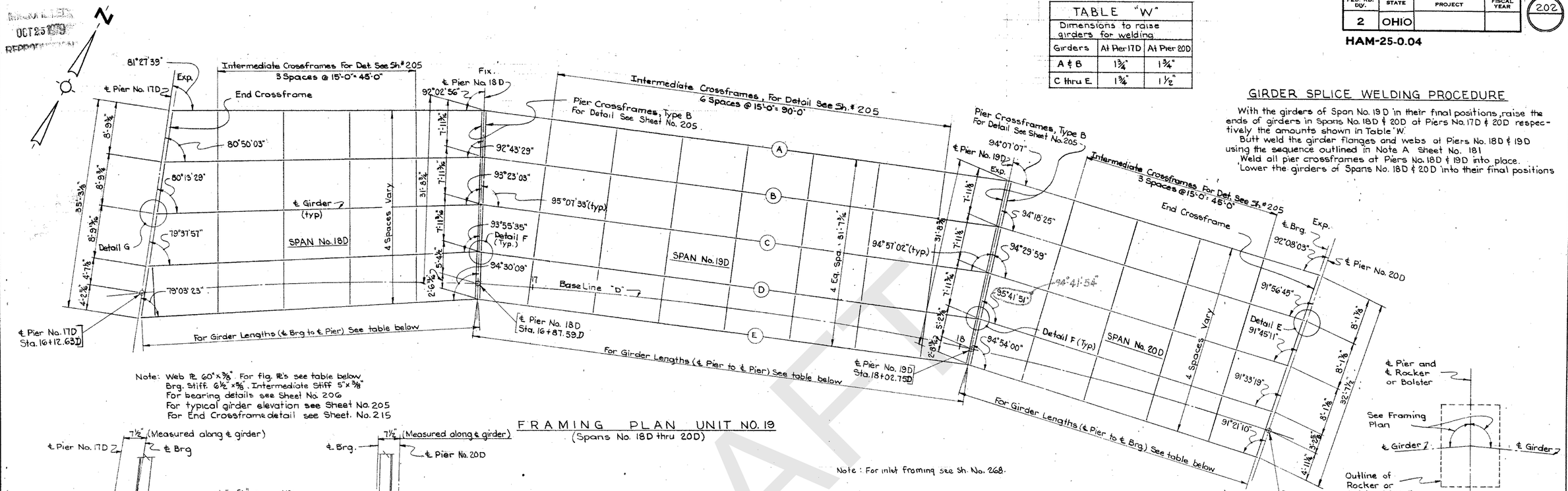
GIRDER SPLICE WELDING PROCEDURE

With the girders of Span No. 19 D in their final positions, raise the ends of girders in Spans No. 18D & 20D at Piers No. 17D & 20D respectively the amounts shown in Table 'W'.

Butt weld the girder flanges and webs at Piers No. 18D & 19D using the sequence outlined in Note A Sheet No. 181

Weld all pier crossframes at Piers No. 18D & 19D into place.

Lower the girders of Spans No. 18D & 20D into their final positions

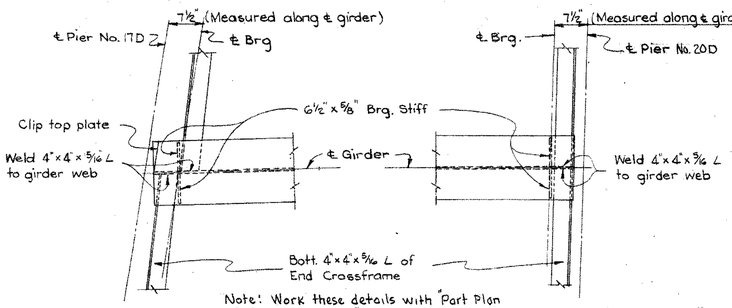


Note: Web Pl. 60"x⅜". For flg. Pl's see table below
Brg. Stiff. 6½"x⅝". Intermediate Stiff 5"x⅜"
For bearing details see Sheet No. 206
For typical girder elevation see Sheet No. 205
For End Crossframe detail see Sheet. No. 215

FRAMING PLAN UNIT NO. 19
(Spans No. 18D thru 20D)

Note: For inlet framing see Sh. No. 268.

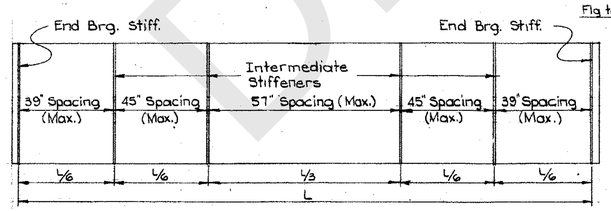
GIRDER LENGTHS			
Girder	Span 18D	Span 19D	Span 20D
A	70'-8⅜"	120'-1⅞"	73'-10⅜"
B	71'-9⅛"	118'-8⅛"	73'-0⅜"
C	72'-9½"	117'-4"	72'-1⅞"
D	73'-10"	115'-11¼"	71'-3⅛"
E	74'-10⅜"	114'-6⅜"	70'-5"



Note: Work these details with "Part Plan of Expansion Joint" Sheet No. 215

DETAIL "G"
(End Crossframe Connection)
(at Pier 17D, Span 18D)

DETAIL "E"
(End Crossframe Connection)
(at Pier 20D, Span 20D)



INTERMEDIATE STIFFENER SPACING
(Span No. 19D)

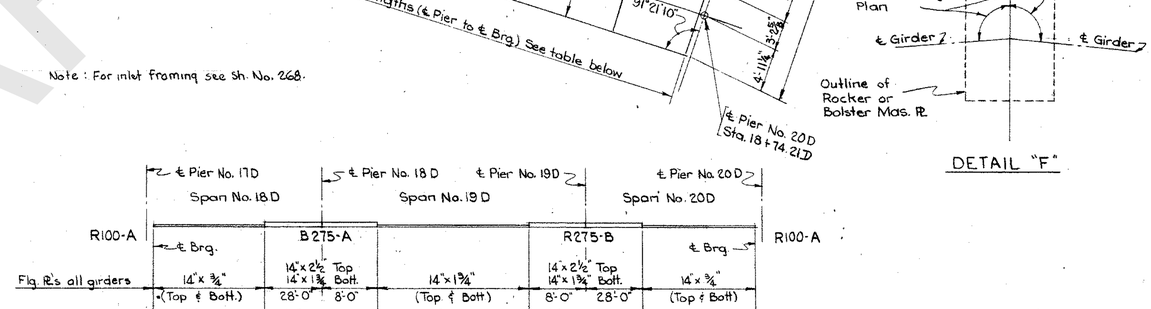
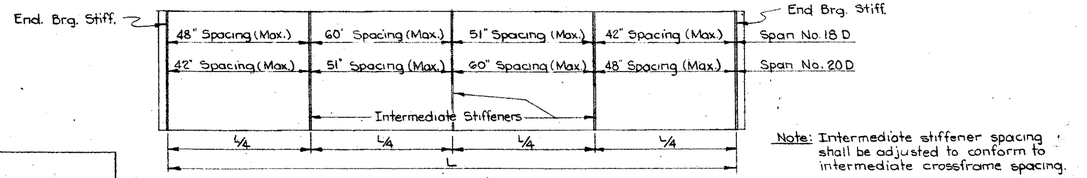


TABLE OF FLANGE PLATES AND WELD SIZES



INTERMEDIATE STIFFENER SPACING
(Spans No. 18D & 20D)

Note: Intermediate stiffener spacing shall be adjusted to conform to intermediate crossframe spacing.

DETAIL "F"

Notes: Girder web plates shall be cut to a prarobolic crown
Convexity includes variations due to vertical curvature, superelevation and horizontal curvature.

DEFLECTION AND CAMBER

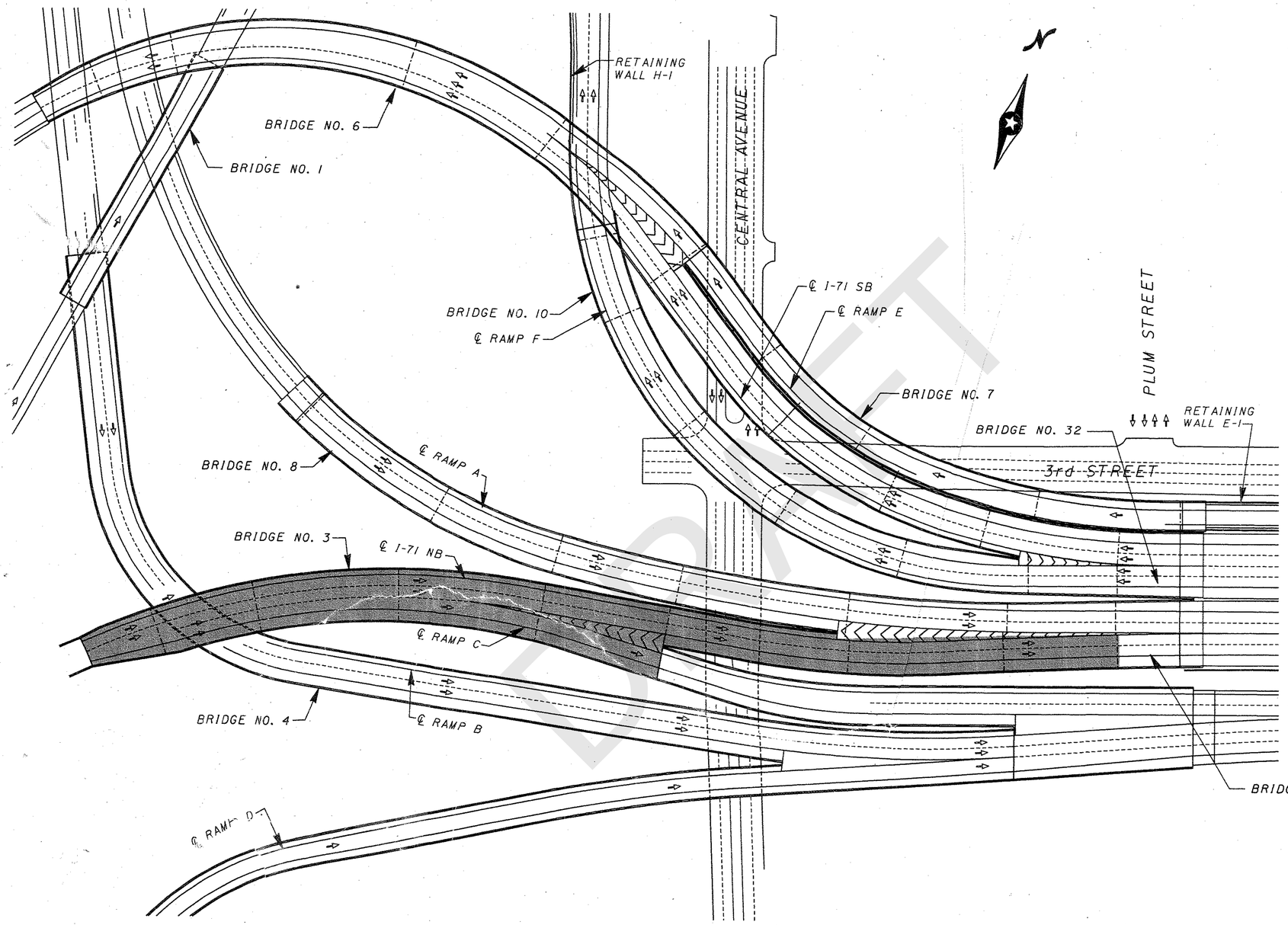
Span	18D										19D										20D									
Girder	A			B			C			D			E			A			B			C			D			E			
Location	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to weight of steel	0	-1/16"	-1/16"	0	0	-1/16"	0	0	-1/16"	0	0	-1/16"	0	0	-1/16"	3/16"	5/16"	3/16"	3/16"	5/16"	3/16"	3/16"	1/4"	3/16"	3/16"	1/4"	3/16"	3/16"	1/4"	3/16"	-1/16"	0	0	-1/16"	0	0	-1/16"	0	0	-1/16"	0	0
Deflection due to remaining Dead Load	0	3/16"	-1/8"	1/16"	1/16"	-1/16"	1/8"	1/16"	0	1/8"	1/8"	0	3/16"	1/8"	0	13/16"	1 3/16"	3/4"	5/8"	15/16"	5/8"	7/16"	13/16"	7/16"	1/2"	7/8"	1/2"	1/2"	7/8"	1/2"	-1/8"	0	1/8"	-1/16"	1/16"	1/8"	-1/16"	1/16"	1/8"
Convexity (See note above)	1½"	1½	1 1/16"	3/16"	1/4"	-1/16"	1/8"	3/16"	0	1/4"	5/16"	1/4"	1"	1 3/16"	3/16"	2 1/4"	2 5/8"	2 1/4"	1 3/16"	1 1/16"	1 3/16"	1 3/16"	1 1/16"	1 3/16"	1 3/16"	1 1/8"	1 3/16"	2 1/4"	3 1/16"	2 1/4"	0	1/16"	-1/8"	-1/2"	-3/4"	-5/8"	-7/16"	-3/4"	-5/8"	-1/2"	-1 1/16"	-1/2"	0	1/16"	-1/8"
Sum of deflection and convexity	1½"	1 1/8"	7/8"	1/4"	5/16"	-3/16"	1/4"	7/16"	-1/16"	3/8"	7/16"	0	1 3/16"	1 5/16"	3/4"	3 1/4"	4 1/8"	3 3/16"	1 5/8"	2 5/16"	1 5/8"	1 9/16"	2 1/8"	1 7/16"	1 1/2"	2 1/4"	1 1/2"	2 1/8"	4 3/16"	2 1/16"	-3/16"	1/16"	0	-5/8"	-1/16"	-1/2"	-1/16"	-1/2"	-1/2"	-1 1/16"	-1/2"	-1/8"	1/8"	0
Required Camber	1¾"			0			0			0			1¾"			4⅛"			2¼"			2¼"			2¼"			4⅛"			0			0			0			0		

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS UNIT NO. 19.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.C.	J.C. 4-1-60		JHO 8/1160	H.A.Z. 10-14-60	4/1/61

AS-BUILTS



PROPOSED STRUCTURE

TYPE: Continuous Steel Plate Girders (A572M GR345) with Reinforced Concrete Deck and Substructure

SPAN: 24.600, 34.100, 48.115, 48.119, 42.957, 56.812, 53.687 & 36.077 measured along ℄ I-71 NB, ℄ to ℄ Bearings

ROADWAY: Varies

LIVE LOADING: MS 18 Case I and Alternate Military

DEAD LOAD: Includes 2.88 KN/sq m allowance for future wearing course

WEARING COURSE: Monolithic Concrete

APPROACH SLABS: None

ALIGNMENT: Curved

SUPERELEVATION: See Superelevation Plan

LATITUDE: 39° 05′ 50″

LONGITUDE: 84° 31′ 13″

EXISTING STRUCTURE

STRUCTURE FILE NO.: HAM-25-0.04
HAM-50-20.81

TYPE: Continuous Plate Girders with a Reinforced Concrete Deck and Substructure Supported on C.I.P. Reinforced Concrete Piles.

SPAN: Varies

ROADWAY: Varies

LIVE LOADING: MS 18 Case I and Alternate Military

LOADING: CF 2000 (57) Adequate for AASHTO Alternate Loading

SKEW: Varies

WEARING COURSE: 114 SPD Concrete

APPROACH SLABS: None

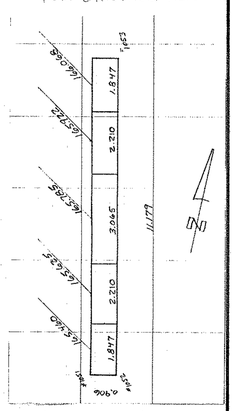
DATE OF CONSTRUCTION: 1961

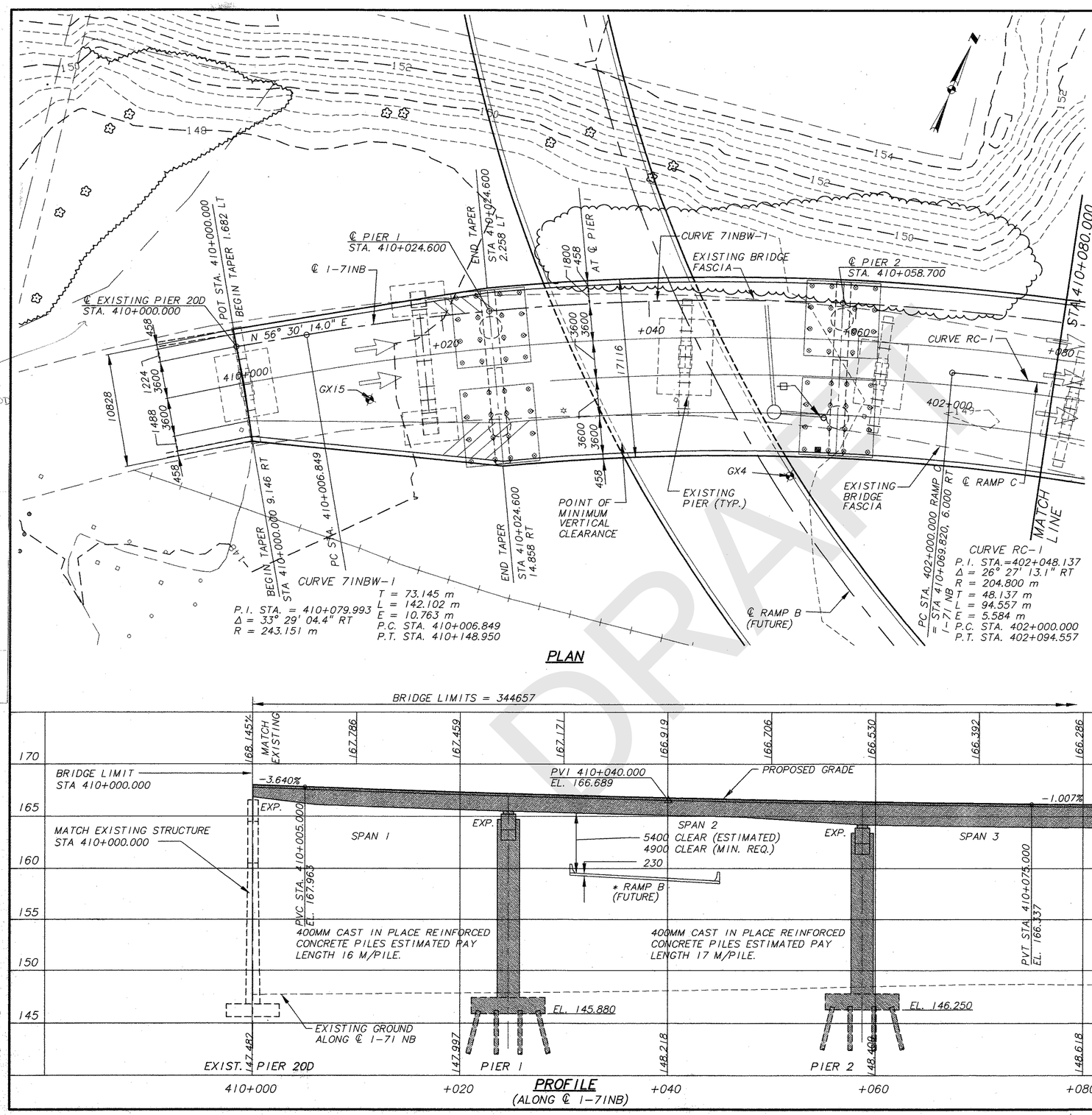
FINAL FOR CONSTRUCTION

DEM GROUP BRW HAZELET & ERDAL
A BRW COMPANY

TITLE SHEET
BRIDGE NO. 3

DRAWN	CHECKED	REVIEWED	DATED	CHECK
LHC	MKM		07-07-98	MK





PLAN

PROFILE
(ALONG ℄ I-71NB)

BENCH MARK 4300
E: 426108.061, N: 123772.053, ELEV. 161.508.
LOCATED ON THE PLAZA LEVEL AT CINERGY FIELD IN THE NORTHWEST CORNER, A BRASS DISC 0.77m EAST OF THE WEST PARAPET WALL AND 5.0m SOUTH OF THE NORTH PARAPET WALL.

BENCH MARK 4301
E: 426411.439, N: 123827.864, ELEV. 161.536.
LOCATED ON THE PLAZA LEVEL AT CINERGY FIELD IN THE NORTHEAST CORNER, A BRASS DISC 0.81m SOUTH OF THE NORTH PARAPET WALL AND 3.1m WEST OF THE EAST PARAPET WALL.

CURRENT ADT=23420
ADT (2020)=28105
CURRENT ADTT=1874
ADTT (2020)=2248

ADT (2020)
CARS: 25857
TRUCKS: 2248

LEGEND

- BORING LOCATION
- DOWNSPOUT
- SCUPPER

NOTES:

1. FOR SUPERELEVATIONS, SEE ROADWAY PLANS.
2. PILE DESIGN LOADS (SAFE BEARING CAPACITY): SEE SHEETS 23 THRU 26 OF 64.
3. FOR UTILITY INFORMATION, SEE ROADWAY PLANS.
4. SITE PLAN INFORMATION SHOWN FOR BRIDGE 3 IS BASED UPON PRELIMINARY ROADWAY ALIGNMENT & PROFILE DESIGN INFORMATION FOR FUTURE RAMPS B & C AVAILABLE AT THE TIME OF PLAN PREPARATION. THIS INFORMATION FOR RAMPS B & C SHALL BE CONFIRMED FOR CONFLICTS WITH BRIDGE 3 BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
5. TOPOGRAPHIC AND UTILITY INFORMATION SHOWN ON THE PLANS IS BASED UPON EXISTING CONDITIONS AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF WORK.
6. SEE BRIDGE 8 & 33 SHEETS FOR ADDITIONAL INFORMATION.
7. SEE SHEET 51 OF 64 FOR SCUPPER STATION LOCATIONS.
8. EXISTING PIERS ARE LOCATED APPROXIMATELY ACTUAL LOCATIONS MAY VARY ½ HORIZONTALLY AND VERTICALLY. CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF WORK.
9. FOR DRAINAGE STRUCTURE DETAILS, REFERENCE DRAINAGE PLANS.
10. ALL PIERS ON THIS SHEET ARE PERPENDICULAR OR RADIAL TO ℄ I-71 NB.
11. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS EXCEPT AS NOTED OTHERWISE. ALL ELEVATIONS, OFFSETS, AND STATIONS ARE IN METERS.
12. ESTIMATED PAY LENGTH OF PILES IS BASED ON VERTICAL PILES FROM TIP ELEVATION TO CUT OFF ELEVATION. NO PRE-BORING IS CONSIDERED.

* SUPER ELEVATION OF RAMP B (FUTURE) WAS ASSUMED TO BE 5% FOR CLEARANCE CALCULATION

FINAL FOR CONSTRUCTION

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP

DESIGNED	DRAWN	REVIEWED	DATE
JAP	BKH	REVISED	STRUCTURE FILE NUMBER
CHECKED			BR3S1TE1
SWF/RAJ			

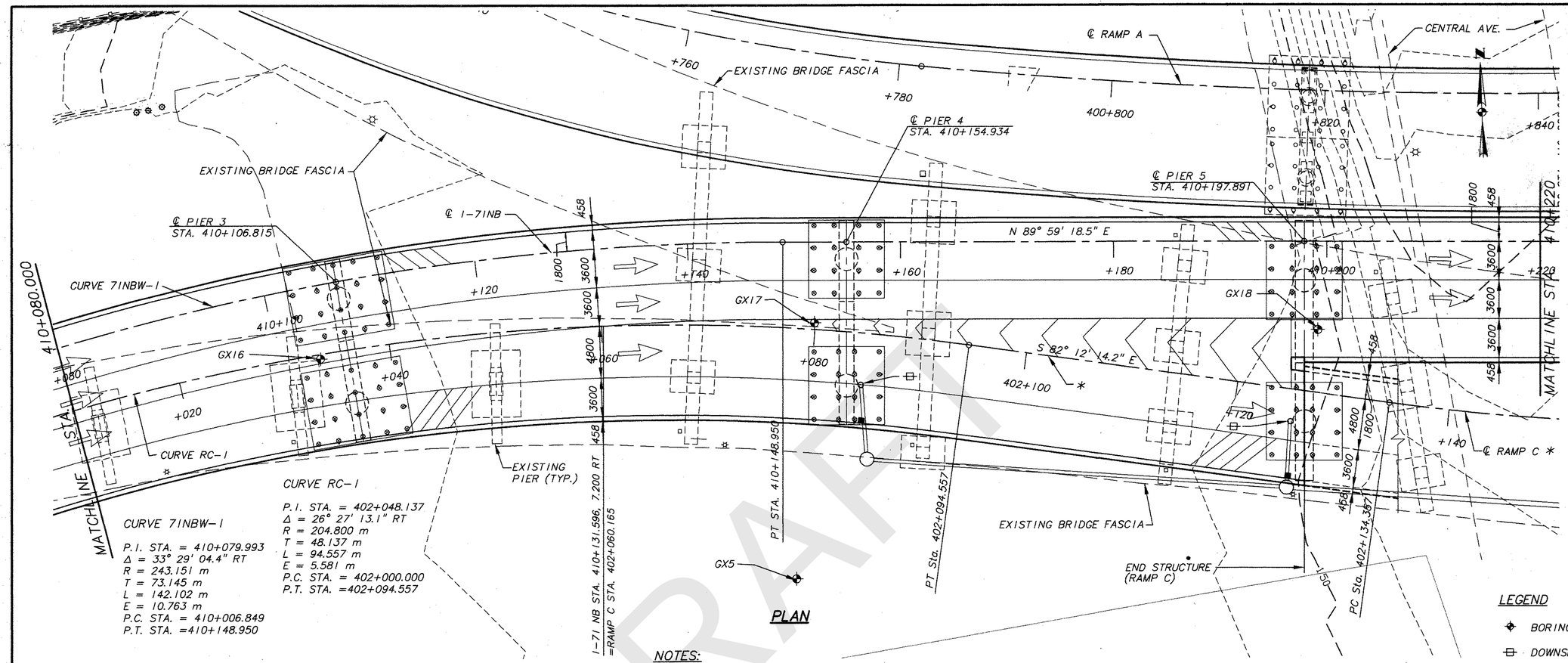
SITE PLAN
I-71 NB

BRIDGE 3

4/64

414/588

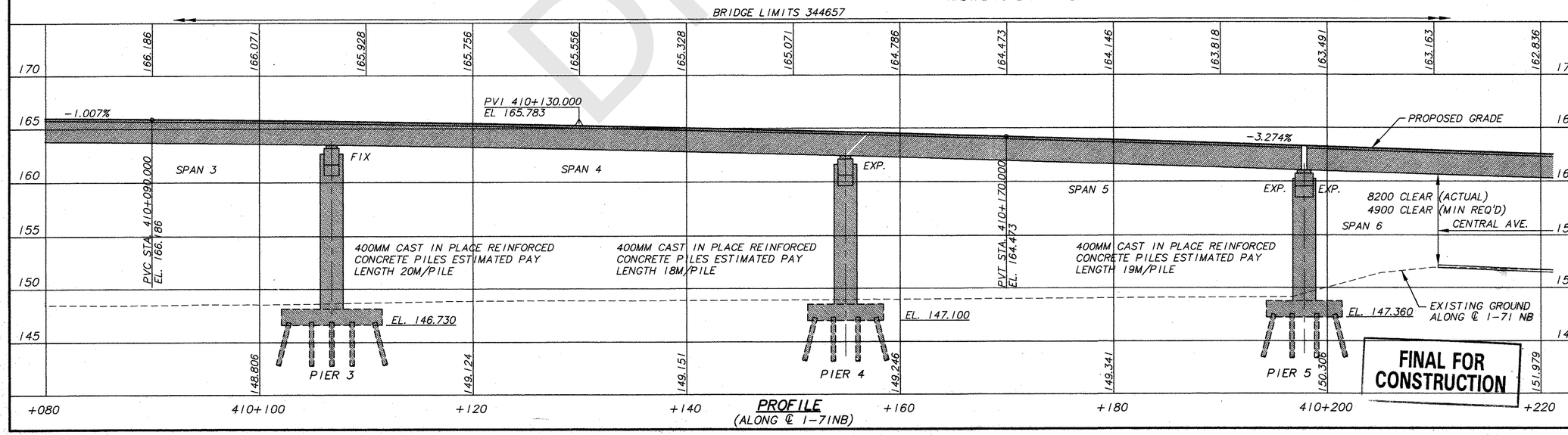
AUG 18 1998
8/18/98
BR3S1TE1



* FOR RAMP C PROFILE SEE SITE PLAN SHEET 7 OF 64

NOTES:

1. SEE NOTES 1 THRU 9 ON SHEET 4 OF 64.
2. ALL PIERS ON THIS SHEET ARE PERPENDICULAR OR RADIAL TO ℄ 1-71NB.
3. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS EXCEPT AS NOTED OTHERWISE. ALL ELEVATIONS, OFFSETS AND STATIONS ARE IN METERS.



FINAL FOR CONSTRUCTION

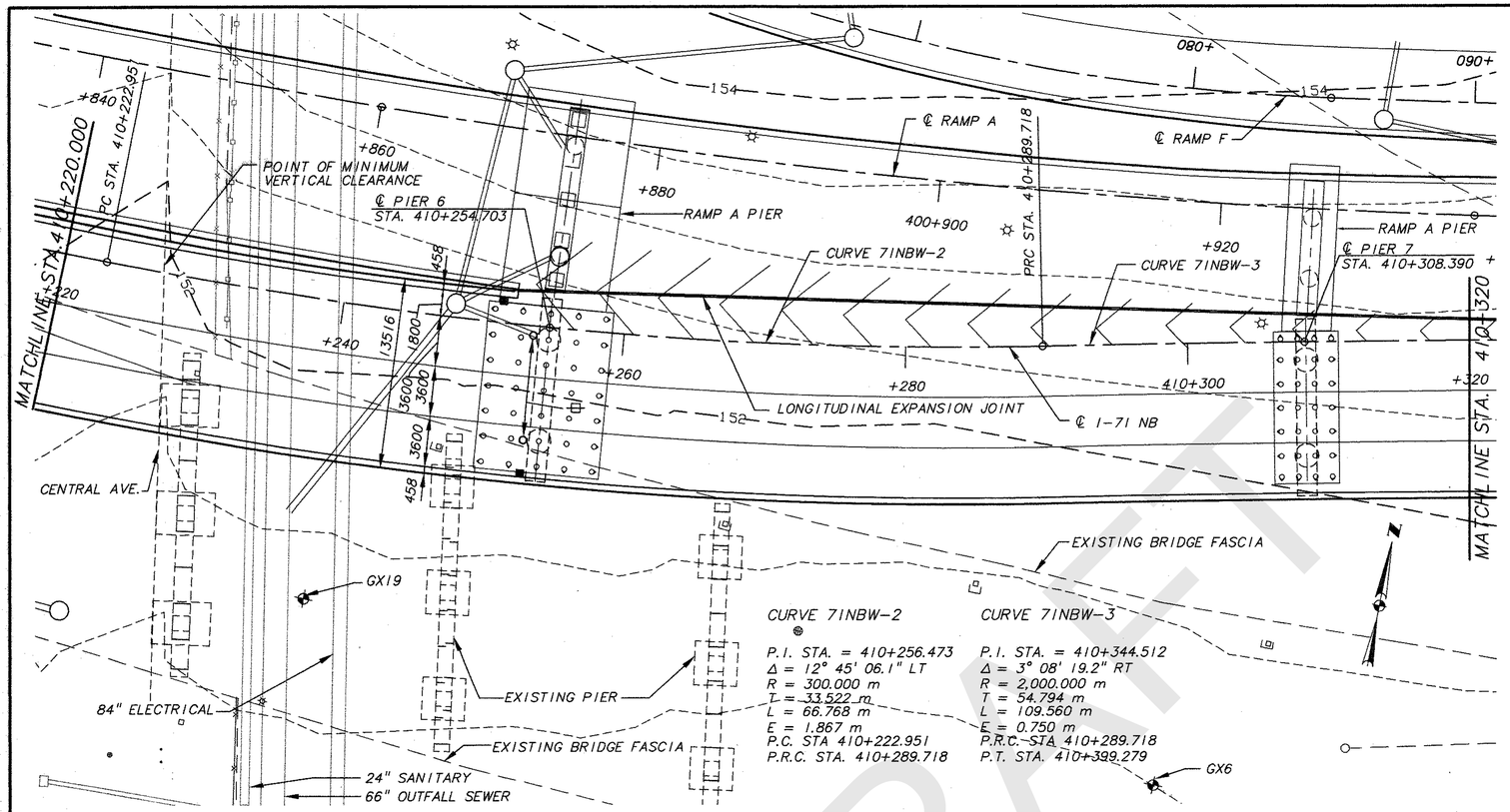
DESIGN AGENCY: BRW HAZELET & ERDAL, A BRW COMPANY
DCM GROUP
DESIGNED: JP
DRAWN: SDS
CHECKED: SF
DATE
REVIEWED
REVISED
STRUCTURE FILE NUMBER: BR3S1TE2

SITE PLAN
1-71 NB

BRIDGE 3

5/64
415/588

BR3S1TE2 7/16/98



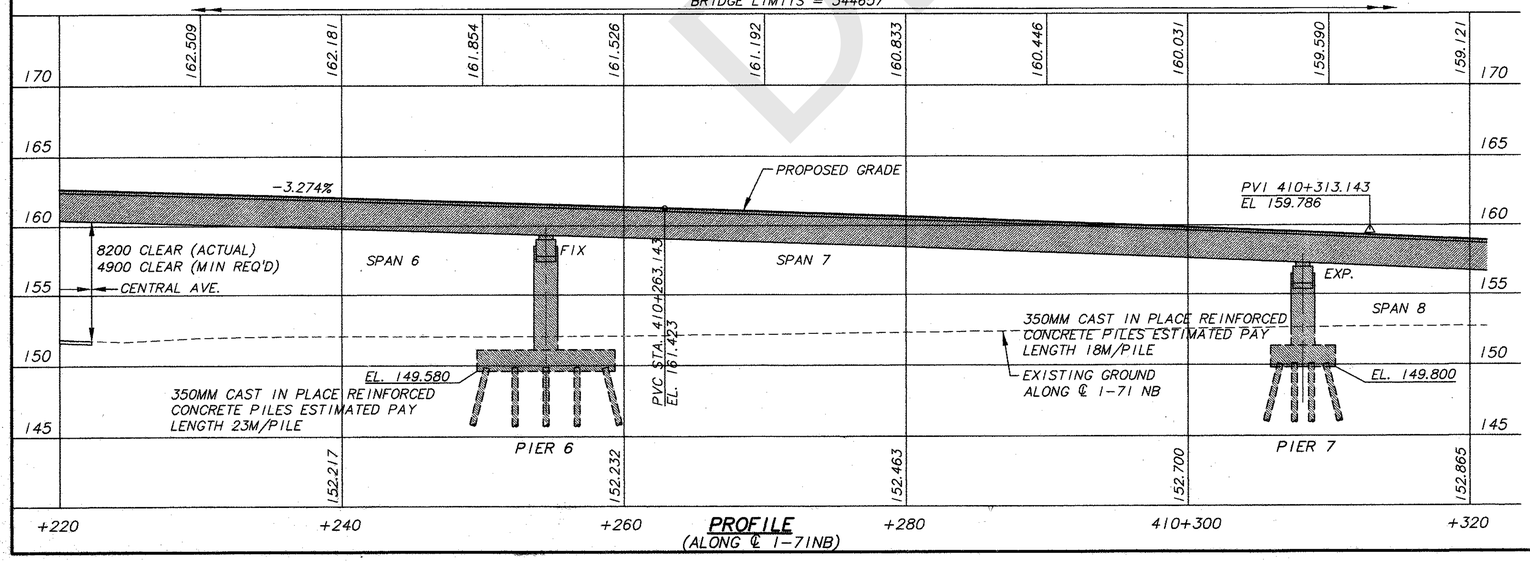
CURVE 7INBW-2

P.I. STA. = 410+256.473
Δ = 12° 45' 06.1" LT
R = 300.000 m
T = 33.522 m
L = 66.768 m
E = 1.867 m
P.C. STA 410+222.951
P.R.C. STA. 410+289.718

CURVE 7INBW-3

P.I. STA. = 410+344.512
Δ = 3° 08' 19.2" RT
R = 2,000.000 m
T = 54.794 m
L = 109.560 m
E = 0.750 m
P.R.C. STA 410+289.718
P.T. STA. 410+399.279

PLAN



PROFILE
(ALONG ℄ I-71NB)

LEGEND

- BORING LOCATION
- DOWNSPOUT
- SCUPPER

NOTES:

1. SEE NOTES 1 THRU 9 ON SHEET 4 OF 64.
2. ALL PIERS ON THIS SHEET ARE PERPENDICULAR OR RADIAL TO ℄ I-71 NB.
3. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS EXCEPT AS NOTED OTHERWISE. ALL ELEVATIONS, OFFSETS, AND STATIONS ARE IN METERS.

DESIGN AGENCY: BRW HAZELET & ERDAL, A BRW COMPANY
DCM GROUP
DATE
REVIEWED
STRUCTURE FILE NUMBER: BR3S1TE3
DRAWN: BKH
REVISED
DESIGNED: JAP
CHECKED: SWF/RAJ

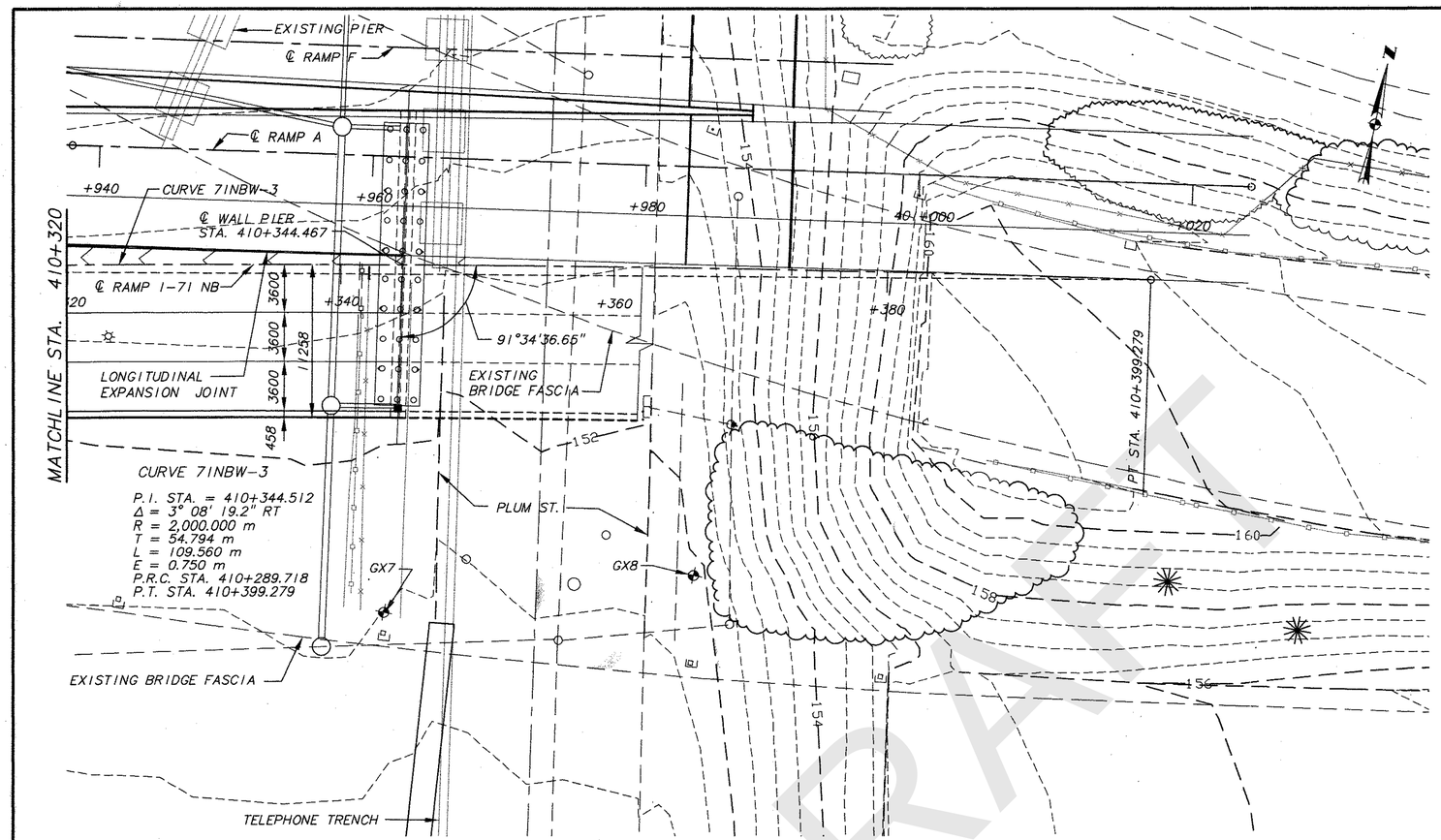
SITE PLAN
I-71 NB

BRIDGE 3

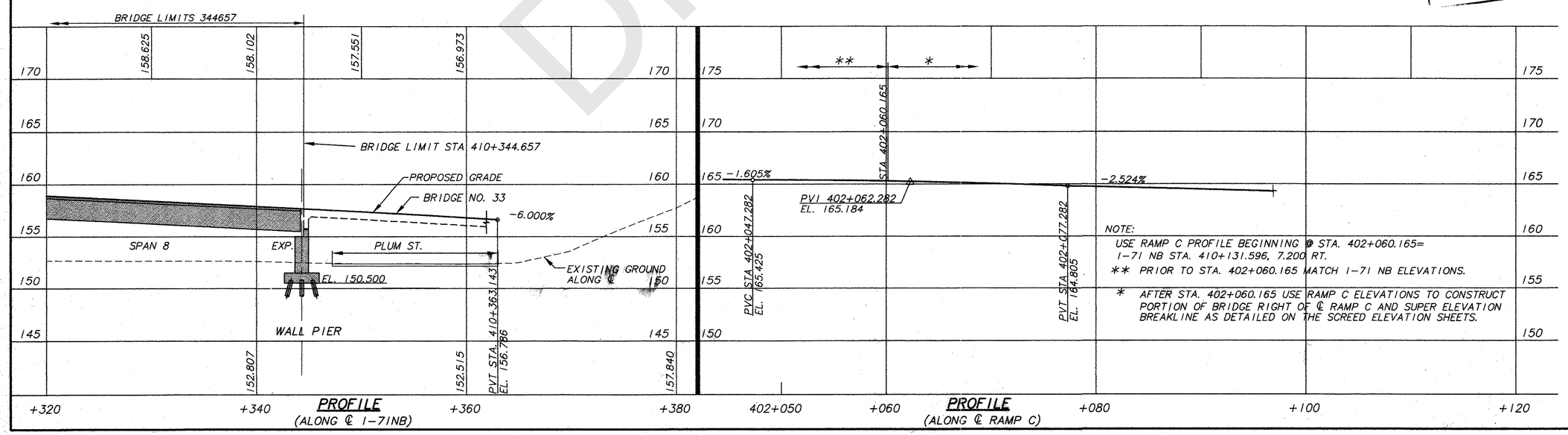
6/64
416/588

FINAL FOR CONSTRUCTION

BR3S1TE3 7/16/98



PLAN



NOTE:
USE RAMP C PROFILE BEGINNING @ STA. 402+060.165= I-71 NB STA. 410+131.596, 7.200 RT.
** PRIOR TO STA. 402+060.165 MATCH I-71 NB ELEVATIONS.
* AFTER STA. 402+060.165 USE RAMP C ELEVATIONS TO CONSTRUCT PORTION OF BRIDGE RIGHT OF ℄ RAMP C AND SUPER ELEVATION BREAKLINE AS DETAILED ON THE SCREED ELEVATION SHEETS.

LEGEND

- BORING LOCATION
- SCUPPER

NOTES:

1. SEE NOTES 1 THRU 9 ON SHEET 4 OF 64.
2. WALL PIER IS SKEWED AS SHOWN. SEE BRIDGE 8 SHEET 15 & 29 FOR WALL PIER DETAILS.
3. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS EXCEPT AS NOTED OTHERWISE. ALL ELEVATIONS, OFFSETS AND STATIONS ARE IN METERS.

FINAL FOR CONSTRUCTION

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP

DESIGNED	DRAWN	REVIEWED	DATE
JAP	BKH		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SWF/RAJ		BR3SITE4	

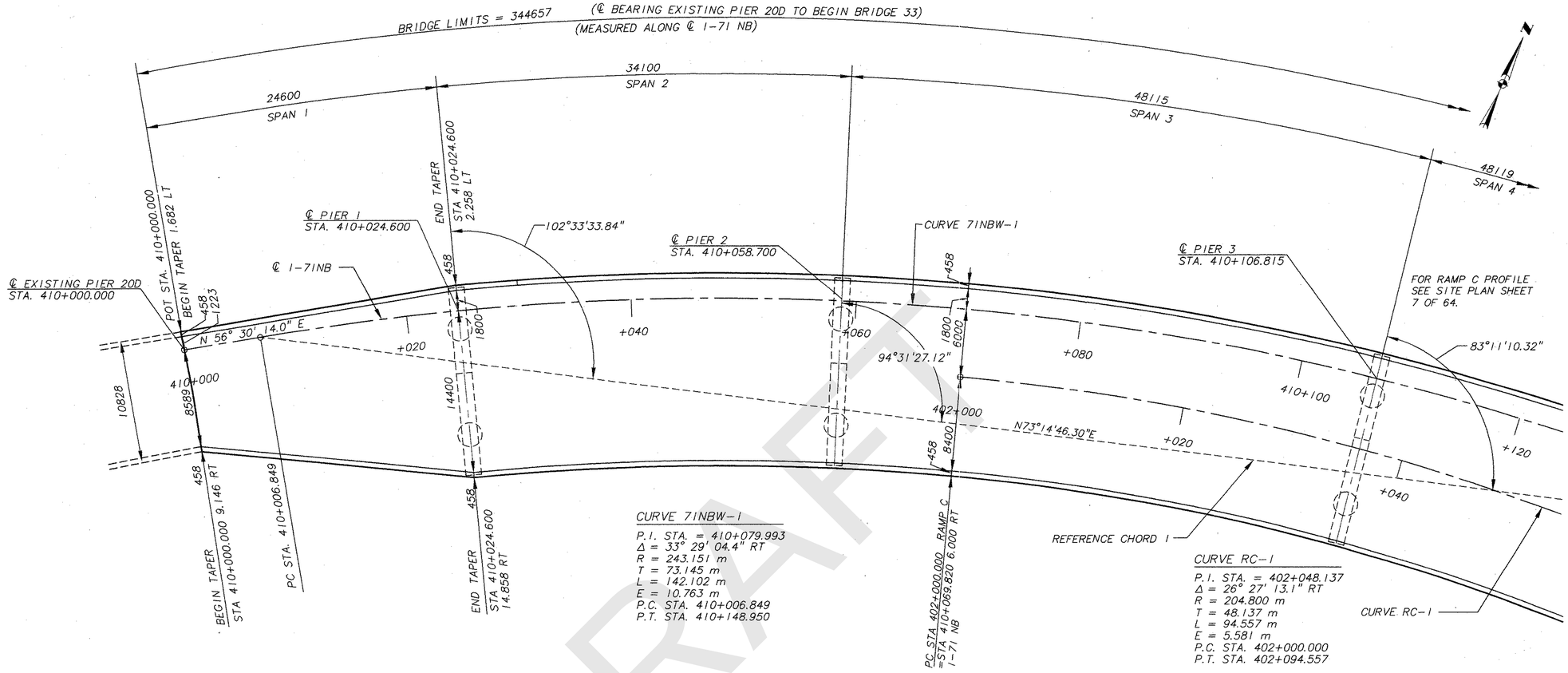
SITE PLAN
I-71 NB

BRIDGE 3

7/64

417/588

BR3SITE4 7/16/98



CURVE 71NBW-1

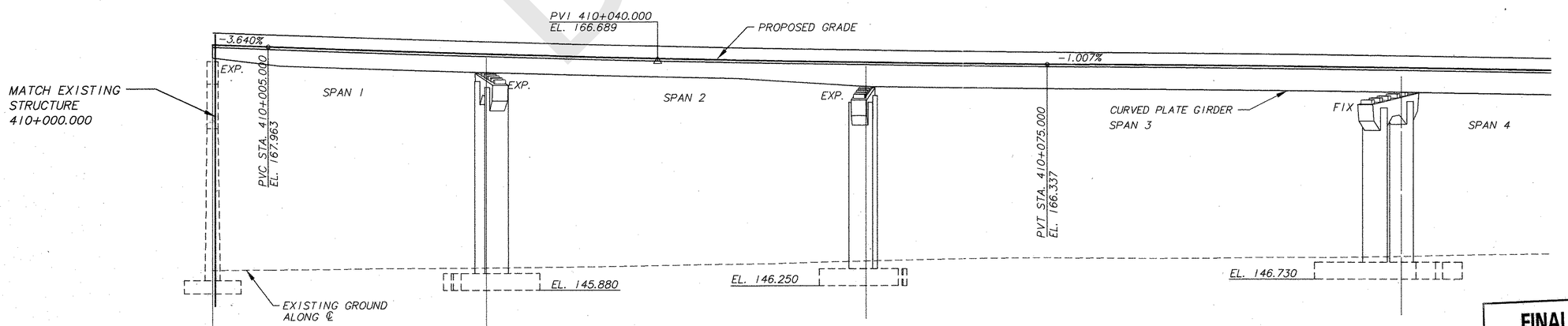
P.I. STA. = 410+079.993
Δ = 33° 29' 04.4" RT
R = 243.151 m
T = 73.145 m
L = 142.102 m
E = 10.763 m
P.C. STA. 410+006.849
P.T. STA. 410+148.950

CURVE RC-1

P.I. STA. = 402+048.137
Δ = 26° 27' 13.1" RT
R = 204.800 m
T = 48.137 m
L = 94.557 m
E = 5.581 m
P.C. STA. 402+000.000
P.T. STA. 402+094.557

GENERAL PLAN

NOTE:
WORK GENERAL PLAN SHEETS 8 THROUGH 10 WITH GEOMETRIC LAYOUT SHEETS 11 THROUGH 13.



ELEVATION

FINAL FOR CONSTRUCTION

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP
DATE
REVIEWED
DRAWN BKH
REVISED
DESIGNED SWF
CHECKED JAP/RAJ
STRUCTURE FILE NUMBER
BR3-GP1

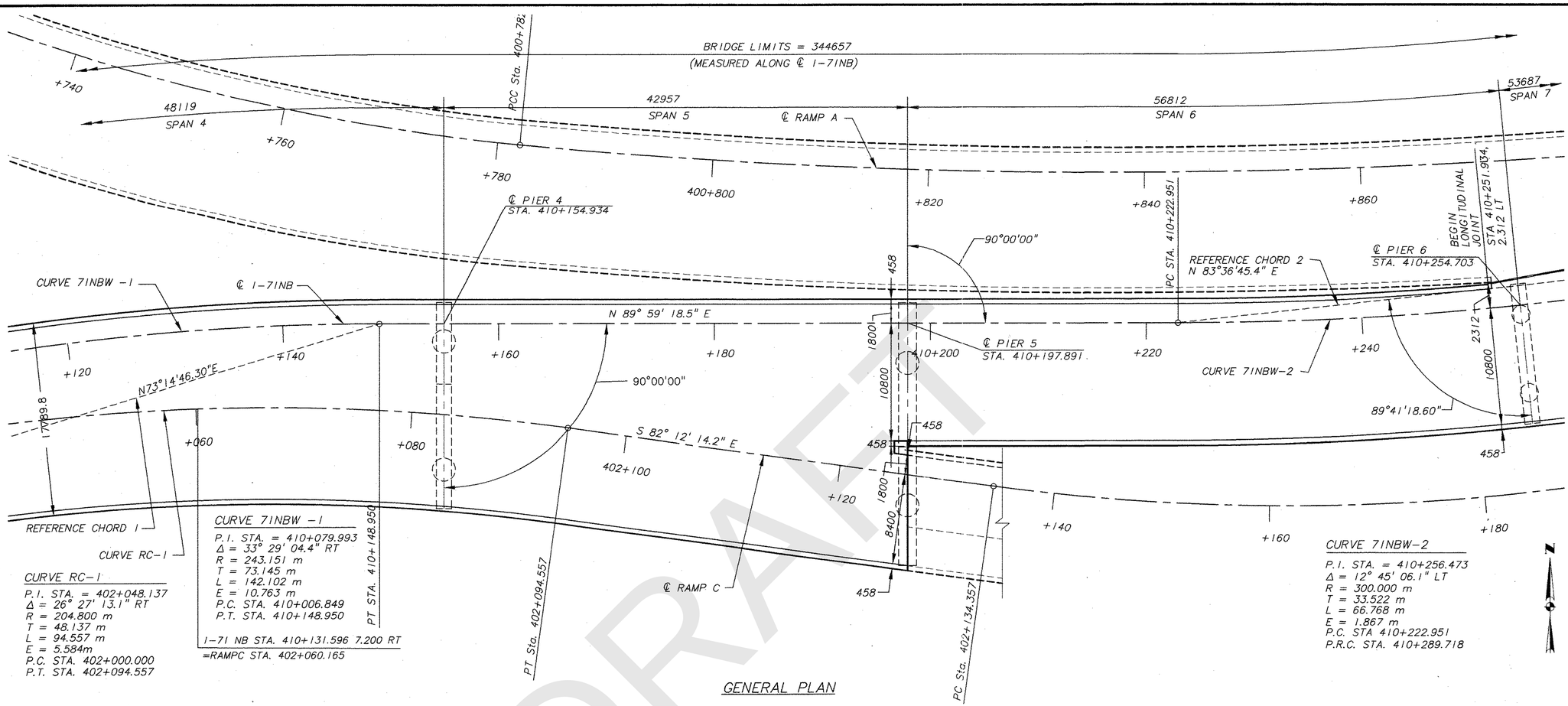
GENERAL PLAN
I-71 NB

BRIDGE 3

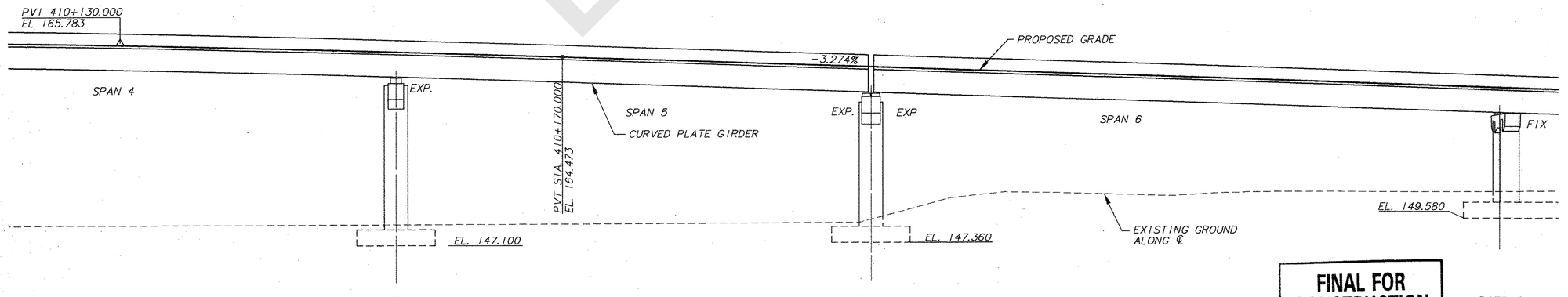
8/64

418/588

AUG 18 1998
8/18/98
BR3-GP1



GENERAL PLAN



ELEVATION

FINAL FOR CONSTRUCTION

AUG 18 1998

8/18/98

BR3-GP2

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP

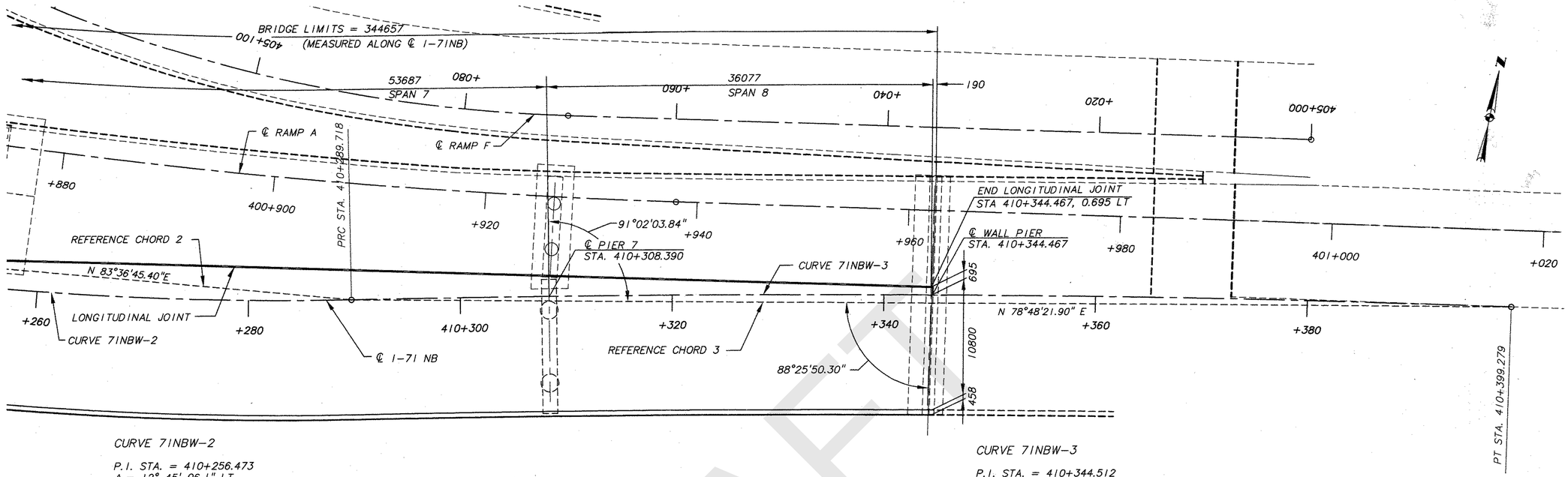
DESIGNED	DRAWN	DATE	STRUCTURE FILE NUMBER
SWF	BKH.		BR3-GP2
CHECKED	REVISED	REVISED	
JAP/RAJ			

GENERAL PLAN
I-71 NB

BRIDGE 3

9/64

419/588



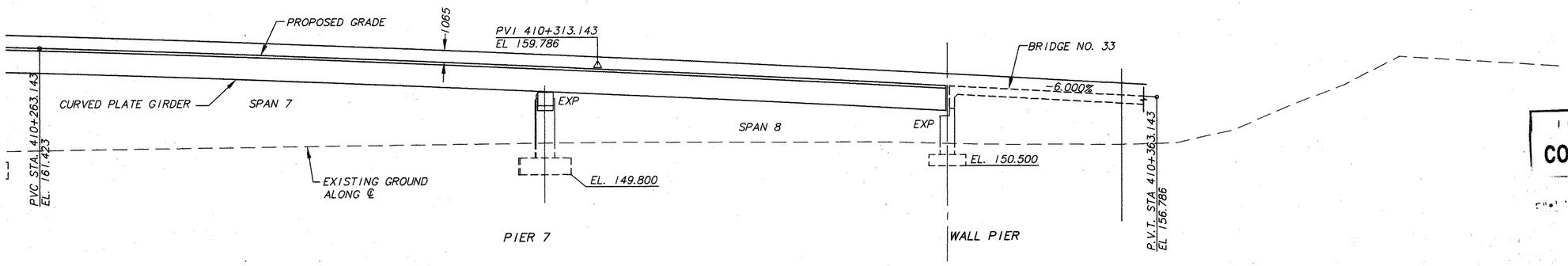
CURVE 71NBW-2

P.I. STA. = 410+256.473
Δ = 12° 45' 06.1" LT
R = 300.000 m
T = 33.522 m
L = 66.768 m
E = 1.867 m
P.C. STA 410+222.951
P.R.C. STA. 410+289.718

CURVE 71NBW-3

P.I. STA. = 410+344.512
Δ = 3° 08' 19.2" RT
R = 2,000.000 m
T = 54.794 m
L = 109.560 m
E = 0.750 m
P.R.C. STA 410+289.718
P.T. STA. 410+399.279

GENERAL PLAN



ELEVATION

FINAL FOR CONSTRUCTION

DESIGN AGENCY: BRW HAZELET & ERDAL, A BRW COMPANY
DCM GROUP
REVIEWED: ---
DATE: ---
DRAWN: BKH
REVISED: ---
DESIGNED: SWF
CHECKED: JAP/RAJ
STRUCTURE FILE NUMBER: BR3-GP3

GENERAL PLAN
I-71 NB

BRIDGE 3

10/64

420/588

BR3-GP3 7/8/98

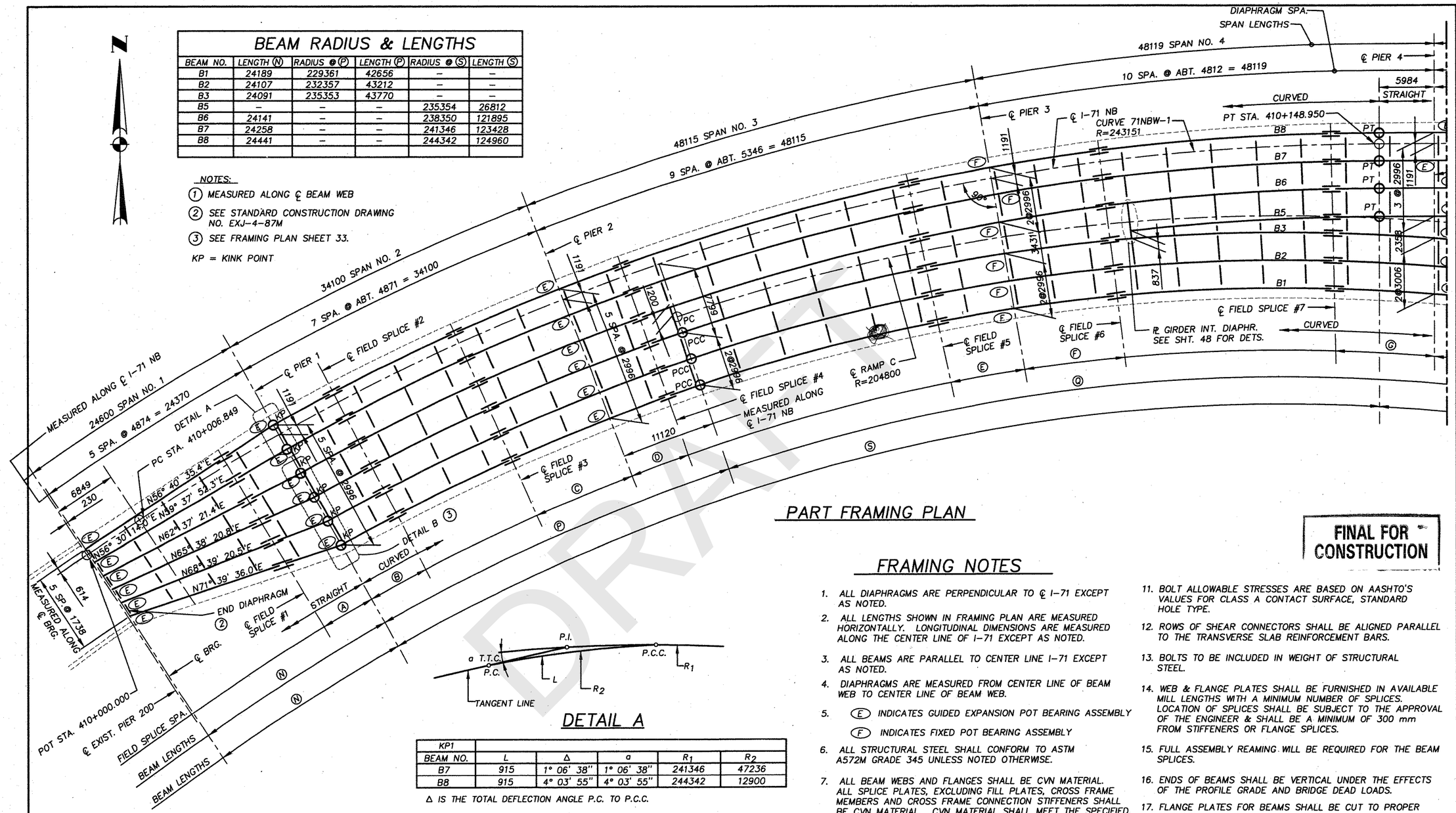
BEAM RADIUS & LENGTHS

BEAM NO.	LENGTH (N)	RADIUS @ (P)	LENGTH (P)	RADIUS @ (S)	LENGTH (S)
B1	24189	229361	42656	–	–
B2	24107	232357	43212	–	–
B3	24091	235353	43770	–	–
B5	–	–	–	235354	26812
B6	24141	–	–	238350	121895
B7	24258	–	–	241346	123428
B8	24441	–	–	244342	124960

NOTES:

1. MEASURED ALONG ℄ BEAM WEB
2. SEE STANDARD CONSTRUCTION DRAWING NO. EXJ–4–87M
3. SEE FRAMING PLAN SHEET 33.

KP = KINK POINT



PART FRAMING PLAN

DETAIL A

KP1					
BEAM NO.	L	Δ	a	R_1	R_2
B7	915	1° 06' 38"	1° 06' 38"	241346	47236
B8	915	4° 03' 55"	4° 03' 55"	244342	12900

Δ IS THE TOTAL DEFLECTION ANGLE P.C. TO P.C.C.

FIELD SPLICE DISTANCES (1)

BEAM NO.	LENGTH (A)	LENGTH (B)	LENGTH (C)	LENGTH (D)	LENGTH (E)	LENGTH (F)	LENGTH (G)
B1	6287	6892	11487	6724	8394	11323	10911
B2	6305	6982	11637	6811	8504	11471	10975
B3	6339	7072	11787	6899	8614	11620	11039
B5	–	–	–	–	–	–	11060
B6	6390	7162	11937	6987	8734	11792	11125
B7	6459	7252	12087	7075	8844	11941	11189
B8	6545	7342	12237	7163	8954	12089	11254

FRAMING NOTES

1. ALL DIAPHRAGMS ARE PERPENDICULAR TO ℄ I–71 EXCEPT AS NOTED.
2. ALL LENGTHS SHOWN IN FRAMING PLAN ARE MEASURED HORIZONTALLY. LONGITUDINAL DIMENSIONS ARE MEASURED ALONG THE CENTER LINE OF I–71 EXCEPT AS NOTED.
3. ALL BEAMS ARE PARALLEL TO CENTER LINE I–71 EXCEPT AS NOTED.
4. DIAPHRAGMS ARE MEASURED FROM CENTER LINE OF BEAM WEB TO CENTER LINE OF BEAM WEB.
5. (E) INDICATES GUIDED EXPANSION POT BEARING ASSEMBLY
   (F) INDICATES FIXED POT BEARING ASSEMBLY
6. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A572M GRADE 345 UNLESS NOTED OTHERWISE.
7. ALL BEAM WEBS AND FLANGES SHALL BE CVN MATERIAL. ALL SPLICE PLATES, EXCLUDING FILL PLATES, CROSS FRAME MEMBERS AND CROSS FRAME CONNECTION STIFFENERS SHALL BE CVN MATERIAL. CVN MATERIAL SHALL MEET THE SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
8. BEARING STIFFENERS SHALL BE VERTICAL.
9. FIELD CONNECTIONS SHALL BE MADE WITH 22 mm ASTM A–325M HIGH STRENGTH BOLTS.
10. ERECTION BOLTS: THE HOLE DIAMETER IN CROSS FRAMES AND BEAM STIFFENERS SHALL BE 4 mm LARGER THAN THE DIAMETER OF THE ERECTION BOLTS. UNLESS REPLACED BY PERMANENT HIGH STRENGTH BOLTS, ERECTION BOLTS SHALL REMAIN IN PLACE. LOCK WASHERS SHALL BE FURNISHED FOR OTHER THAN FULLY TORQUED HIGH STRENGTH ERECTION BOLTS. BOLTS SHALL BE FURNISHED AS PART OF ITEM 513.
11. BOLT ALLOWABLE STRESSES ARE BASED ON AASHTO'S VALUES FOR CLASS A CONTACT SURFACE, STANDARD HOLE TYPE.
12. ROWS OF SHEAR CONNECTORS SHALL BE ALIGNED PARALLEL TO THE TRANSVERSE SLAB REINFORCEMENT BARS.
13. BOLTS TO BE INCLUDED IN WEIGHT OF STRUCTURAL STEEL.
14. WEB & FLANGE PLATES SHALL BE FURNISHED IN AVAILABLE MILL LENGTHS WITH A MINIMUM NUMBER OF SPLICES. LOCATION OF SPLICES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER & SHALL BE A MINIMUM OF 300 mm FROM STIFFENERS OR FLANGE SPLICES.
15. FULL ASSEMBLY REAMING WILL BE REQUIRED FOR THE BEAM SPLICES.
16. ENDS OF BEAMS SHALL BE VERTICAL UNDER THE EFFECTS OF THE PROFILE GRADE AND BRIDGE DEAD LOADS.
17. FLANGE PLATES FOR BEAMS SHALL BE CUT TO PROPER CURVATURE.
18. ALL STRUCTURAL STEEL SHALL BE PAINTED USING THE IZEU PAINT SYSTEM. PRIME COAT SHALL BE APPLIED IN THE FABRICATION SHOP. SPECIAL 3 COAT SYSTEM, REFER TO SUPPLEMENTAL SPECIFICATIONS.
19. ALL BOLTS SHALL BE GALVANIZED WHEN USED IN CONJUNCTION WITH THE IZEU PAINT SYSTEM.
20. KINK POINT TRANSITION CURVES (DETAILS A THRU C) ARE AT CONTRACTOR'S OPTION AND BEAM LENGTHS GIVEN IN "BEAM RADIUS & LENGTHS" TABLES ARE GIVEN TO THE UNTRANSITIONED KINK POINTS SHOWN ON THE PLAN VIEWS.

FINAL FOR CONSTRUCTION

DRAFT

AUG 19 1998

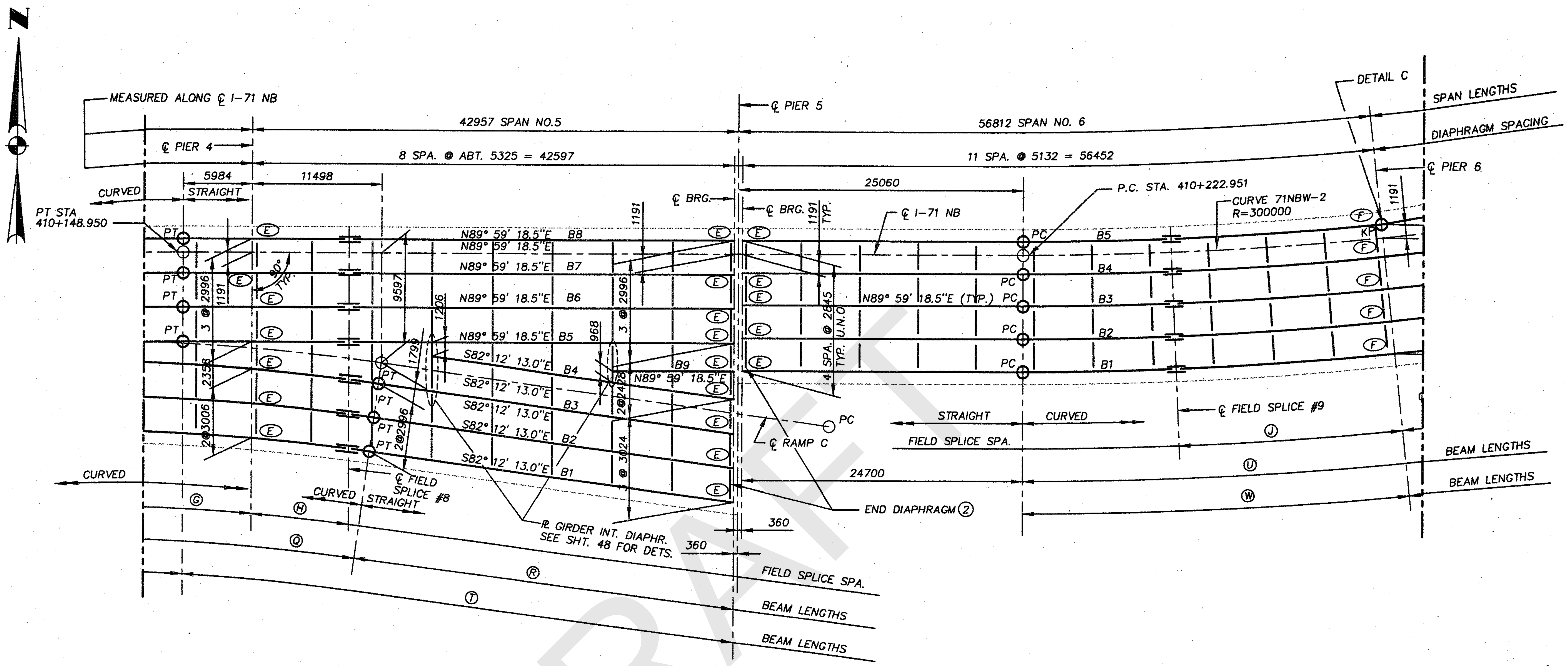
3-FRAME1.DWG 8-18-98

BRW — A DAMES & MOORE GROUP COMPANY

DESIGNED	DRAWN	REVIEWED	DATE
SA	MJF		
CHECKED	REVISED		STRUCTURE FILE NUMBER
MKM			

FRAMING PLAN
171 N.B.

BRIDGE 3



PART FRAMING PLAN

FIELD SPLICE DISTANCES ①			
BEAM NO.	LENGTH Ⓗ	LENGTH Ⓙ	
B1	8648	19287	
B2	8647	19110	
B3	8645	18933	
B4	–	18756	
B5	8600	18579	
B6	8600	–	
B7	8600	–	
B8	8600	–	

BEAM RADIUS & LENGTHS				
BEAM NO.	RADIUS @ Ⓠ	LENGTH Ⓠ	LENGTH Ⓣ	LENGTH Ⓡ
B1	197009	90960	–	32462
B2	200005	92344	–	32051
B3	203001	93727	–	31640
B4	–	–	–	26871
B5	–	–	48581	–
B6	–	–	48581	–
B7	–	–	48581	–
B8	–	–	48581	–
B9	–	–	–	10649

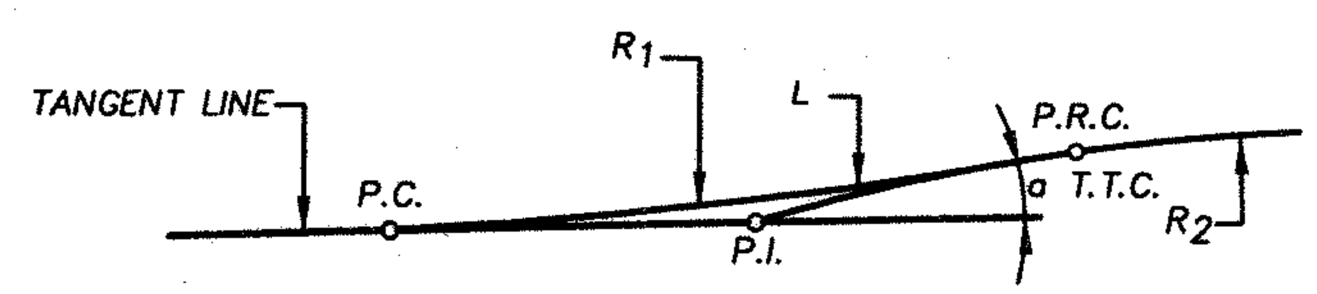
NOTES:

① MEASURED ALONG ℄ BEAM WEB

② SEE STANDARD CONSTRUCTION DRAWING NO. EXJ-4-87M

KP = KINK POINT

WELD CHART	
MAT. THICKNESS OF THICKER PART JOINED	MIN. SIZE OF FILLET WELD
TO 19 mm THICK INCLUSIVE	6 mm
OVER 19 mm THICK TO 38 mm INCL.	8 mm
OVER 38 mm THICK TO 57 mm INCL.	10 mm
OVER 57 mm THICK TO 152 mm INCL.	13 mm



DETAIL B

BEAM NO.	L	Δ	a	R_1	R_2
B1	915	10° 54' 57"	10° 54' 57"	4803	229361
B2	915	7° 54' 45"	7° 54' 45"	6626	232357
B3	915	4° 53' 46"	4° 53' 46"	10706	235353
B6	915	1° 52' 46"	1° 52' 46"	27873	238350

Δ IS THE TOTAL DEFLECTION ANGLE P.C. TO P.R.C.

FINAL FOR CONSTRUCTION

DRAFT

AUG 18 1998

BRW A DAMES & MOORE GROUP COMPANY

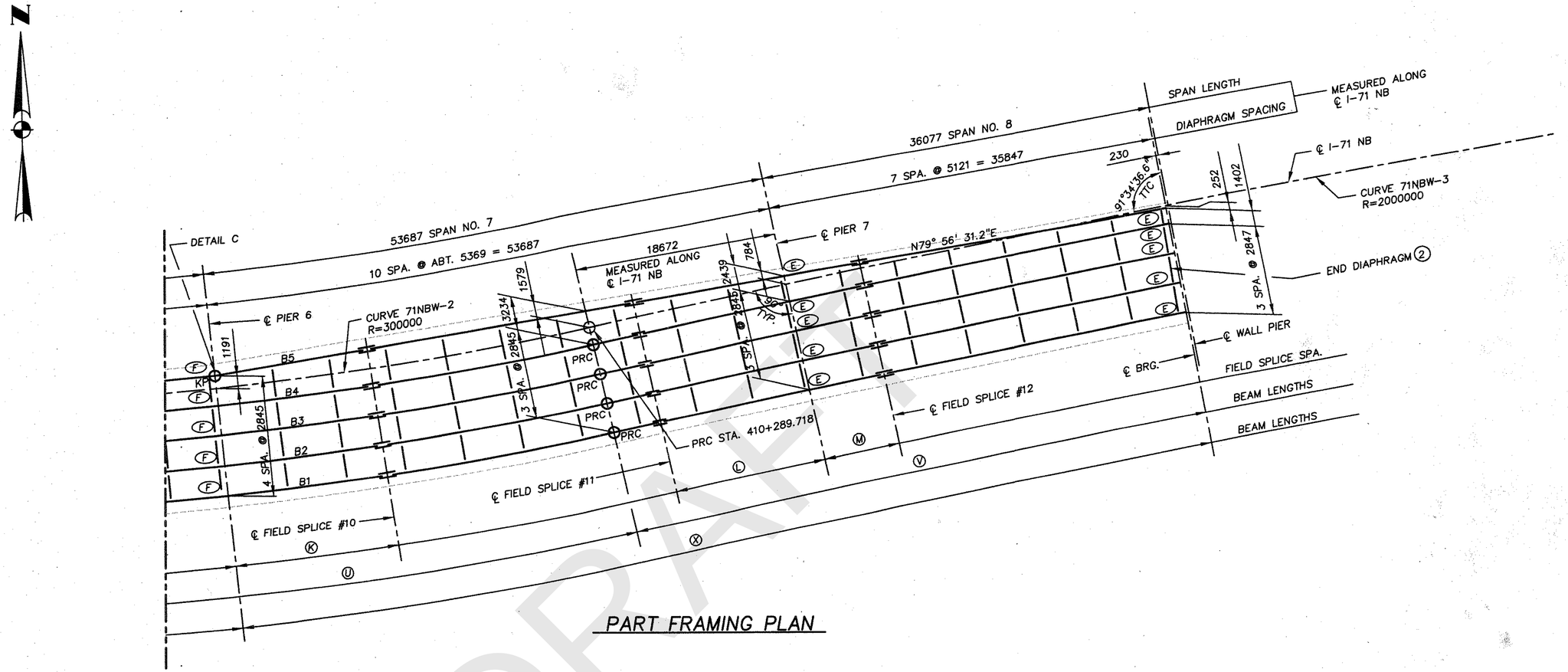
DESIGNED SA | CHECKED MKM | DRAWN MJF | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER

FRAMING PLAN
I-71 N.B.

BRIDGE 3

32/64

442/588



PART FRAMING PLAN

FINAL FOR CONSTRUCTION

FIELD SPLICE DISTANCES (1)

BEAM NO.	LENGTH (K)	LENGTH (L)	LENGTH (M)
B1	14892	14129	7024
B2	14755	14149	7034
B3	14619	14169	7044
B4	14482	14190	7054
B5	14344	14220	7067

BEAM RADIUS & LENGTHS

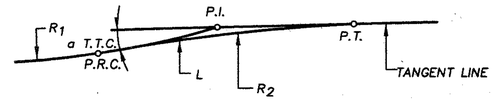
BEAM NO.	RADIUS ℄ (U)	LENGTH (U)	RADIUS ℄ (V)	LENGTH (V)	RADIUS ℄ (W)	LENGTH (W)	LENGTH (X)
B1	310191	69035	1989809	53965	–	–	–
B2	307345	68402	1992655	54120	–	–	–
B3	304500	67770	1995500	54274	–	–	–
B4	301654	67136	1998346	54428	–	–	–
B5	–	–	–	–	298809	31626	89395

NOTES:

(1) MEASURED ALONG ℄ BEAM WEB

(2) SEE STANDARD CONSTRUCTION DRAWING NO. EXJ-4-87M

KP = KINK POINT



DETAIL C

BEAM NO.	L	Δ	a	R_1	R_2
B5	915	4° 04' 12"	4° 04' 12"	298809	13021

Δ IS THE TOTAL DEFLECTION ANGLE P.R.C. TO P.T.

BRW — A DAMES & MOORE GROUP COMPANY

DESIGNED SA | DRAWN MJF | CHECKED MGM | REVIEWED | DATE | REVISED | STRUCTURE FILE NUMBER

FRAMING PLAN
171 N.B.

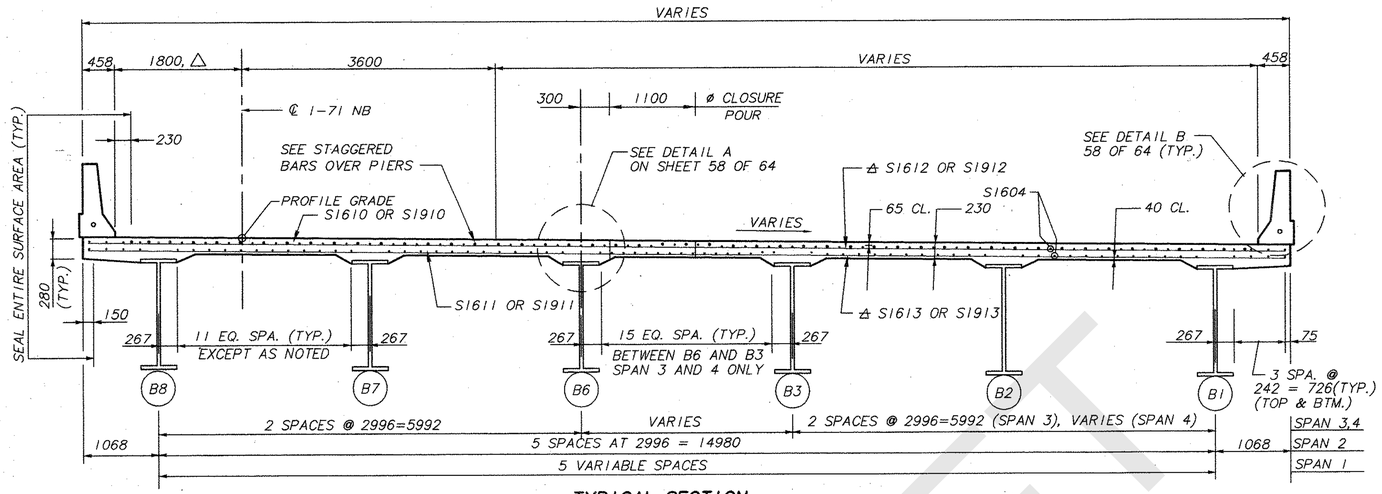
BRIDGE 3

33 / 64

443 / 588

3-FRAMEL.DWG 6-22-98

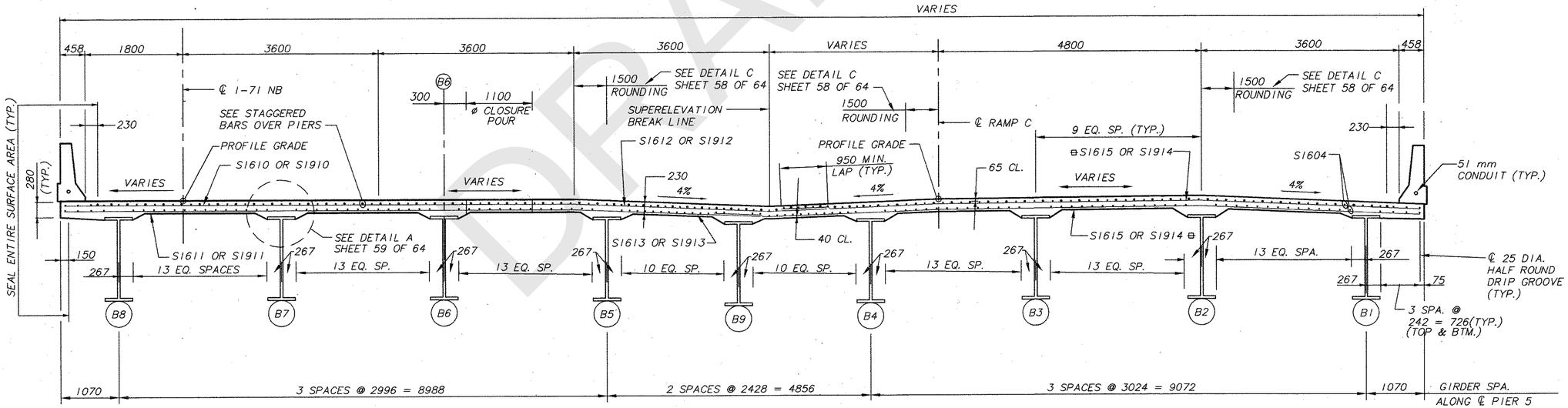
△ VARIES 1223 – 1800 IN SPAN 1



TYPICAL SECTION

(STA. 410+000.000 TO STA. 410+121.500)
(SPANS 1,2,3,PORTION OF 4)

SUPERSTRUCTURE (SPANS 1,2,3,4,5) REINFORCING STEEL LIST			
MARK	TOTAL NO.	LENGTH	TYPE
S1604	3030	12000	STR
S1606	868	2130	1
S1610	666	7310	STR
S1611	666	7310	STR
S1612	666	12000	STR
S1613	666	12000	STR
S1614	203	8200	STR
S1615	288	3800	STR
S1901	868	765	3
S1902	868	855	2
S1910	661	7310	STR
S1911	661	7310	STR
S1912	661	12000	STR
S1913	661	12000	STR
S1914	286	3800	STR



TYPICAL SECTION

(STA. 410+121.5 TO STA. 410+197.891)
(PORTION SPAN 4, 5)

△ CUT S1612, S1613, S1912, S1913 TO FIT.

ø SEE SECTION B–B SHEET 52 OF 64

⊟ CUT S1615 OR S1914 TO FIT. MULTIPLE LAPS ARE ALLOWED PER BAR LINE. LAP TOP BARS MIDWAY BETWEEN GIRDERS AND BTM. BARS OVER GIRDERS.

NOTES:

1. TRANSVERSE BARS TO BE PLACED RADIAL TO I–71 NB ALIGNMENT.
2. FOR SUPERELEVATION RATES, REFERENCE SUPERELEVATION PLANS.

FINAL FOR CONSTRUCTION

AUG 1 8 1998

BR3–TTY2 6/18/98

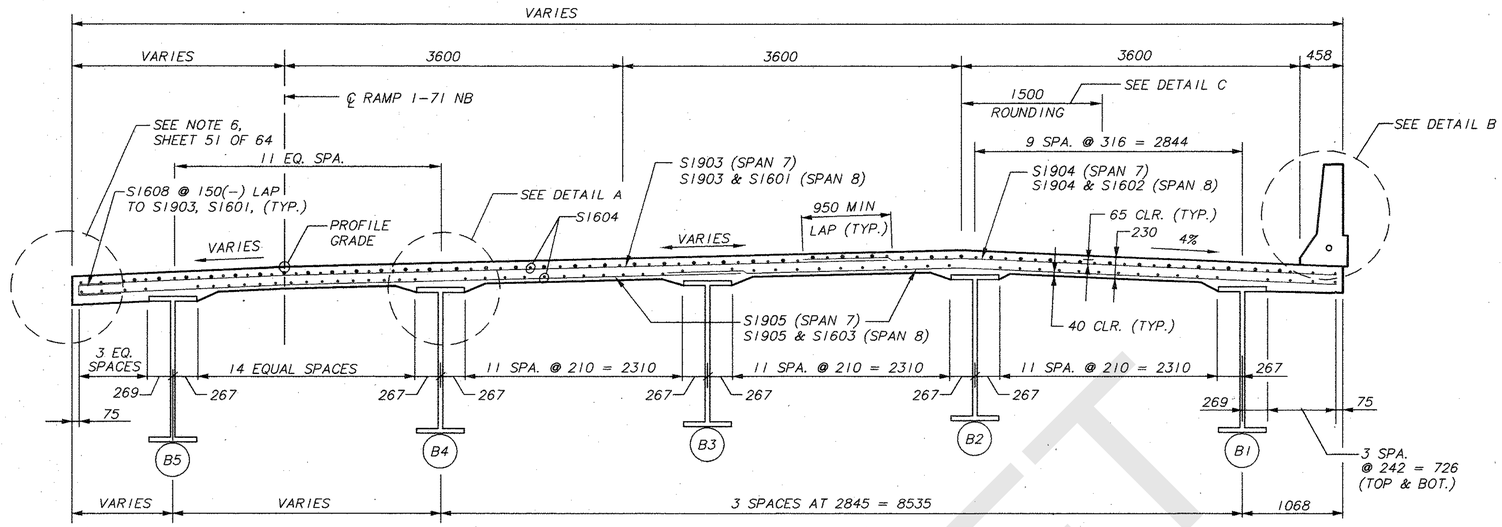
DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY GROUP
DCM
DATE
REVIEWED
STRUCTURE FILE NUMBER BR3–TTY2
DRAWN RCS
REVISED
DESIGNED JAP
CHECKED SWF

TYPICAL SECTIONS
I–71 NB

BRIDGE 3

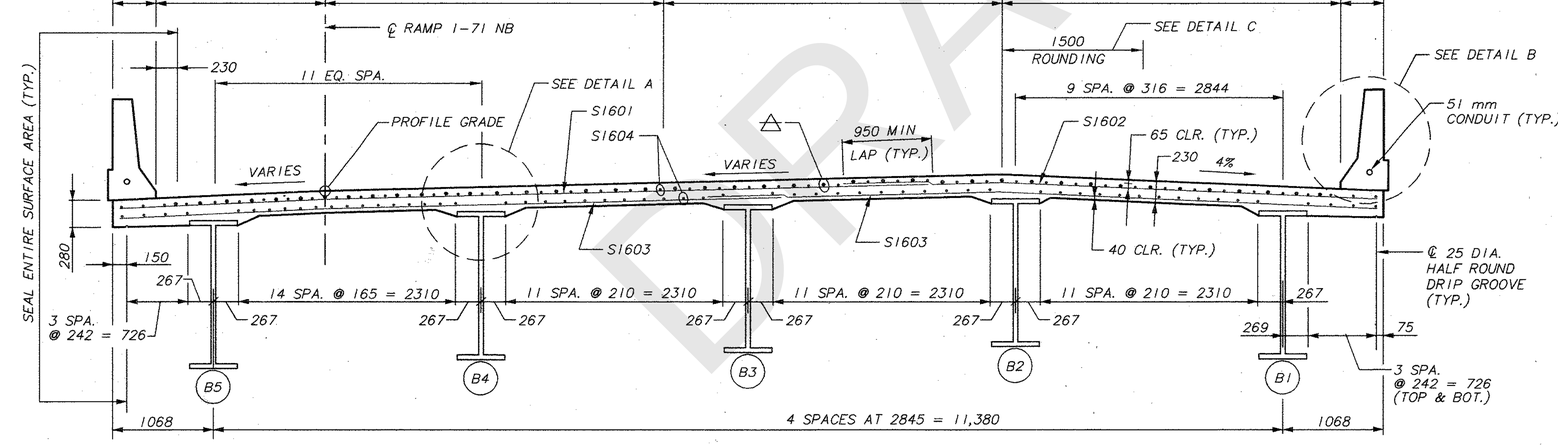
58/64

468/588



TYPICAL SECTION

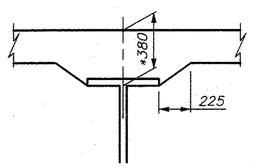
(SPAN 6 STA. 410+252.220 TO STA. 410+254.703)
(SPAN 7 AND SPAN 8)



TYPICAL SECTION

(SPAN 6 STA. 410+197.891 TO STA. 410+252.220)

△ SEE STAGGERED BARS OVER PIERS SHOWN ON SLAB PLANS



DETAIL A

* DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL GIRDER WEB IS THE DESIGN DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.

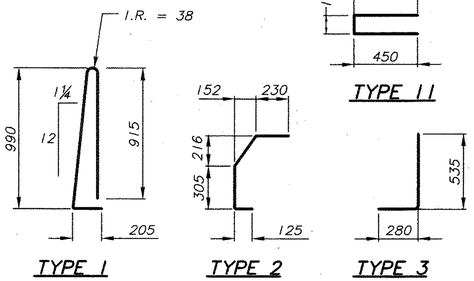
NOTES:

1. TRANSVERSE BARS TO BE PLACED RADIAL TO I-71 NB ALIGNMENT.
2. FOR SUPERELEVATION RATES, REFERENCE SUPERELEVATION PLANS.

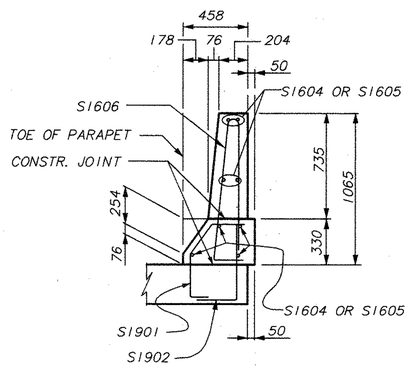
FINAL FOR CONSTRUCTION

SUPERSTRUCTURE (SPANS 6,7,8) REINFORCING STEEL LIST

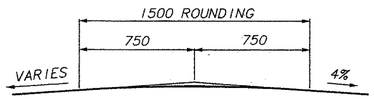
MARK	TOTAL NO.	LENGTH	TYPE
S1601	507	8700	STR.
S1602	507	5800	STR.
S1603	1014	7300	STR.
S1604	1608	12000	STR.
S1605	112	11400	STR.
S1606	444	2130	1
S1607	84	12000	STR.
S1608	615	1030	11
S1901	444	765	3
S1902	444	855	2
S1903	487	9400	STR.
S1904	487	5700	STR.
S1905	974	7600	STR.



TYPE 1 TYPE 2 TYPE 3 TYPE 11



DETAIL B



DETAIL C

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP
DATE
REVIEWED
STRUCTURE FILE NUMBER BR3-1771
DRAWN RCS
REVISED
DESIGNED JAP
CHECKED SF

TYPICAL SECTIONS
I-71 NB

BRIDGE 3

59/64

469/588

AUG 1 ♦ 1998

6/16/98

BR3-1771