ODOT District 8
2023 Pre-Inspection Report

Final August 2023

Bridge No. HAM-71-0000L/R

Prepared for:

ODOT District 8
505 South SR 741
Lebanon, Ohio 45036

PID No. 105475

Prepared by:

TRANSYSTEMS

1100 Superior Avenue, Suite 1000
Cleveland, OH 44114

Project Number P402220026

INTRODUCTION:

LOCATION MAP:

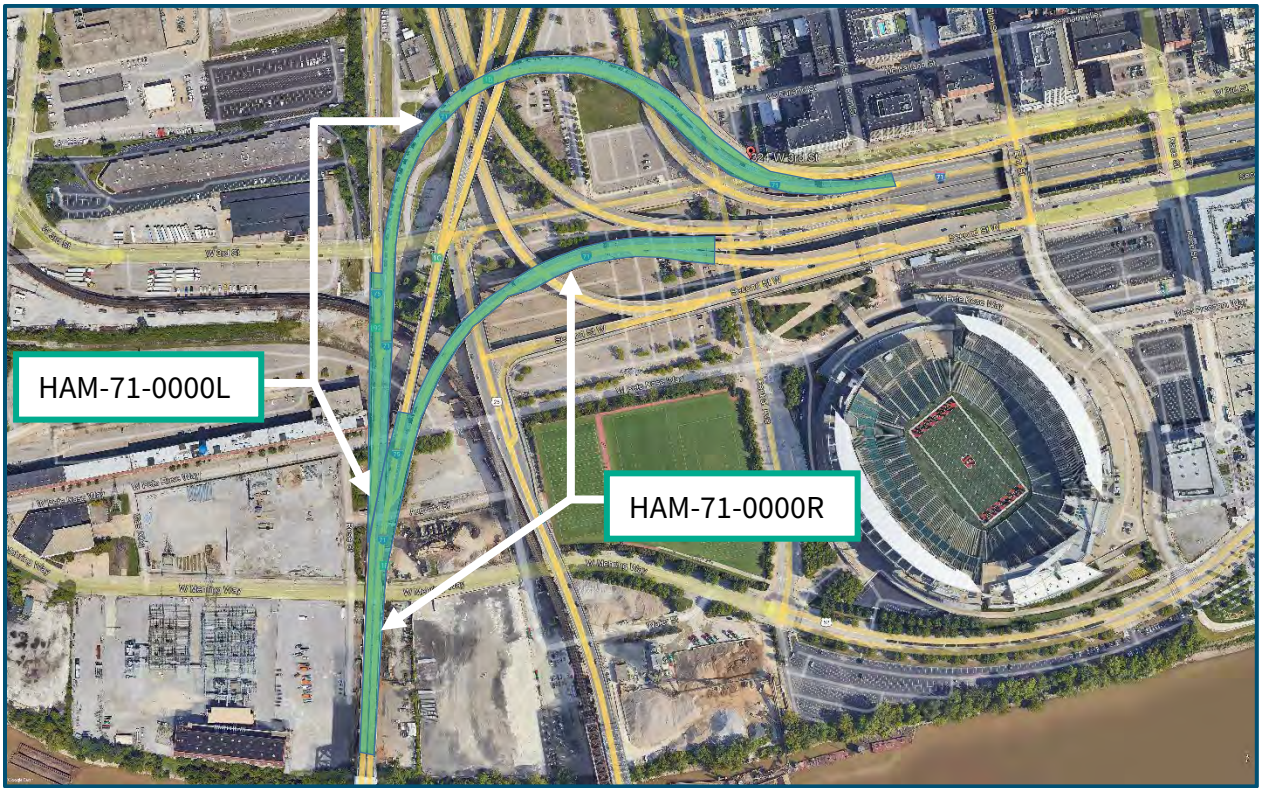

Figure 1 - I-75 SB over I-71 NB, Mehring Way, CSX Railroad, West Third Street, Pete Rose Way, & US 50/I-71 Ramps, and I-71 NB over Mehring Way, US 42, West Third Street, & US 50/I71 Ramps, Cincinnati, Ohio Location Map.

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): In-Depth Element Level Inspection & FC 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): In-Depth Element Level Inspection
Number of Caps to Inspect:	16
Number of Inspection Days:	Estimated 14 days & 5 nights
Inspection Dates:	September 11 - September 29, 2023
Inspection Hours:	7:00 AM to 5:00 PM (Day), 11:00 PM to 5:00 AM (Night)
Inspection Equipment:	46’ Bucket Truck, 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:

TranSystems Corporation, Michael Baker International, and TRC Engineers, Inc. engineers will perform fracture critical and in-depth element level inspections on the Ohio portion of the Brent Spence Bridges HAM-71-0000L/R. The fracture critical inspection will be of the steel box girder pier caps on bridge HAM-71-0000L. The inspection teams will perform in-depth inspections of Bridges HAM-71-0000L and HAM-71-0000R as defined by the Scope of Services. The inspection will adhere to the Confined Space Entry Procedure defined herein. 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 Field Contacts

TranSystems:

Team Leader; Project Manager	Carolyn Guion, PE ctguion@transystems.com	(216) 299-7724
Team Leader	Steven Hammerschmidt, PE sfhammerschmidt@transystems.com	(785) 623-6704
Team Leader	Kenny Wagner, PE kwwagner@transystems.com	(843) 303-1981
Team Leader	Chris Seman, PE cmseman@transystems.com	(617) 733-5097
Team Member	Jake Adamrovich, EI jaadamrovich@transystems.com	(724) 787-2250

TRC Engineers, Inc:

Team Leader	Christopher Hay, PE CHay@trccompanies.com	(614) 743-6493
Team Member	Lisa Brown, EI LBrown@trccompanies.com	(513) 728-0567

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 Clearly, EI Gustin.Cleary@mbakerintl.com	(330) 843-1113
Team Leader	Mike Baron, PE Michael.Baron@mbakerintl.com	(502) 403-6676
Team Member	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	(513) 352-3463
row.permits@cincinnati-oh.gov	

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:

TranSystems has contracted A&A Safety, Inc. 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 two nights. 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 two nights.

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 9/17/23	HAM-71-0000L (coordinate with HAM-75-0022R)	Single left lane closure of I-75 SB at exit to 2nd Street Ramp
Day of 9/18/23	HAM-71-0000L	Left turn lane closure on W. 3rd Street
Night of 9/18/23	HAM-71-0000L	Double left lane closure of I-75 NB (lower level of north approach to Brent Spence Bridge)
Night of 9/19/23	HAM-71-0000L	Double left lane closure of I-75 NB (lower level of north approach to Brent Spence Bridge)
Night of 9/20/23	HAM-71-0000L	Double right lane closure of I-75 NB (lower level of north approach to Brent Spence Bridge)
Night of 9/21/23	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: Intren (Duke Energy, South of W. Mehring Way adjacent to river)
Shane Rudisell
513-518-6506

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

NON-PERMIT CONFINED SPACE ENTRY PROCEDURE:

The inspection of the steel box girder pier caps falls under the Ohio Department of Transportation Confined Space Entry Program. The procedure to be used will be Class B – Non-Permit Required Entry. This procedure states "Class B inspections are arms-length inspections performed on bridges/culverts that require no special provisions for confined space issues. An air monitor is required at all times while in the confined space."

The entry procedure we will employ is described as follows:

- Open box girder caps at least 1 hour prior to entry and record air quality readings using a multi-gas air meter.
- Team shall be comprised of, at minimum, a two-person team consisting of one entrant and one attendant.
- Record readings upon entering. Do not enter if air meter alarms sound.
- Monitor air quality continuously while inside box girder cap (ensure monitor remains on and is functioning properly).
- The attendant stationed outside of the box girder cap shall maintain contact with inspector(s) at all times via phone or two-way radio.

Response procedure if the air meter alarm sounds while inside box girder cap:

- Entrant(s) shall notify the attendant and immediately exit the box girder cap.
- Allow additional ventilation and re-entry will be permitted if air quality readings are non-hazardous.
- If unsafe atmospheric conditions persist utilize a blower to provide further ventilation and re-entry will be permitted if air quality readings are non-hazardous.
- If hazardous atmospheric conditions cannot be eliminated entry into the box girder is **prohibited** and the District 8 Project Manager shall be notified within 24 hours.

Additional information:

- Oxygen deficient atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume.
- Oxygen enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.

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

MR 509
Permit No. 23-18071

Office Use Only

State of Ohio
Department of Transportation
Permit

County or Jurisdiction HAM
Rte IR71
Log Pt 0-0.131
Acc Cat

[1] Subject to all terms, conditions, and restrictions printed, written below and on the reverse side hereof, or attached,

Name: TranSystems Corporation
Address: 1100 Superior Ave Suite 1000 Cleveland OH 44114
Company Phone: 216 357-3545

is hereby granted a permit under Section 5515.01 and 5515.02 of Ohio Revised Code, and permission to perform work necessary in the manner described and at the location indicated in the following or attached to this permit.

Lane Closure - (see attached sheets)

Description of Work: ##DescOfWork##

[2] This permit shall be in the possession of employees /agents of permittee on site at all times who are in charge of the work and shall be shown, upon request, to any employee of the Department of Transportation.

Contact ODOT Representative 3 days before work begins, also contact ODOT Representative when work is completed for final inspection.
Failure to notify the ODOT Representative could result in work stoppage!

[3] No work authorized by this permit shall begin until the permittee has contacted and received instructions from

ODOT Representative DUSTIN WILLIAMS
Phone 513-615-4033
Email Address: DUSTIN.WILLIAMS@DOT.OHIO.GOV
(Authorized ODOT Employee)

NOTE: Any work performed by the permittee may be stopped if this requirement is not met.

[4] Prior to any excavation in the highway right-of-way, the Ohio811, https://www.oups.org/excavators, must be contacted in accordance with ORC Section 3781.25 to 3781.32. Ohio811 can be reached at 1-800-362-2764 or 811.

[5] If your utility is above ground in any way, you must mark your utility with a fluorescent colored marker that corresponds with the universal OUPS color code. The marker must be no shorter than six feet in height and you must maintain the marker. Guide wires must be marked a fluorescent yellow. Failure to mark as described, will result in the Department of Transportation being held harmless and no reimbursement for damage to your property.

[6] All work requiring persons or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Uniform Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[7] The permittee accepts the conditions, terms, and requirements printed, written on, or attached to this permit and understands that failure to comply fully with those conditions, terms, and requirements or any change in the use of the permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation at the permittee's expense.

[8] Performance Bond Required? _____ Yes _____ No Company_____
Effective Date _____ Expiration Date _____Amount $ _____

[9] This permit shall be void if the work described herein does not comply with the conditions, terms, and requirements applicable to this permit, and if the work is not completed by 02/15/2024

Dated 08/15/2023

Rev 5/6/2021

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General Provisions Applicable to All Permits
(Sections 5515.01 and 5515.02 of O.R.C.)

[1] This permit is not a substitute for satisfying the rights or obligations of any other party who may have an interest in the underlying fee interest.

[2] The granting of this permit does not convey to the permittee or to the property served any rights, title, or interest in state highway rights of way or in the design or operation of the state highway; or in any way abridge the right of the Director of the Department of Transportation in his jurisdiction over state highways. If, in the process of any future work or for the benefit of the traveling public, it becomes necessary, in the opinion of the Director of Transportation to order the removal, reconstruction, relocation, or repair of any of the fixtures, or work performed under this permit, said removal, reconstruction, relocation, or repair shall be wholly at the expense of the owners thereof or the permittee and be made as directed by the Director of Transportation and within the time determined by the Director. Such changes in the state highway design or operation, necessary for improved safety and operation or for the benefit of the traveling public, shall not require a permit modification since the permit confers no private rights to the permittee over the control of t he state highway.

[3] The District Deputy Director acts for and on behalf of the Director in issuing and carrying out the provisions of all permits. The District Deputy Director has full authority to ensure that all provisions of the permit are met and to reject any materials, design, and workmanship that do not meet applicable Department standards. The District Deputy Director, at his/her discretion, may require a performance bond or certified check as a prerequisite to the issuance of a permit.

[4] Failure on the part of the permittee to comply fully with the provisions and conditions of the permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Departmental action. By accepting the permit, the permittee agrees to comply with all conditions, terms, and restrictions printed or written on or attached to the permit. If the permittee or its agent performs any work contrary to the conditions of the permit or to the instructions of the District Deputy Director and, after due notice, fails to correct the problem, the Department of Transportation may, with or without notice, correct or remove such work and the permittee shall reimburse the Department for the costs and shall hold the Department harmless for all results of such work.

[5] The permittee shall indemnify and hold harmless the State of Ohio, Department of Transportation, its officers, representatives and assigns, from any and all loss, liability, damages, litigation costs, and claims for injury or death to any person, property, or business caused by or resulting from any act, omission, event, consequence, or occurrence, negligent or otherwise of the permittee, its employees, agents, or assigns as a result of the issuance of this permit.

[6] All work authorized under the permit shall be performed to the Department's satisfaction, and the entire expense shall be borne by the permittee. No work shall be performed until the permittee has contacted the Department's appointed representative named on the permit and received instructions. The Department's representative may inspect all work covered by the permit, or the Department reserves the right, during the time any or all of the work is being performed, to appoint an inspector over the work who shall represent the interest of the State on the work and any compensation arranged for shall be paid wholly by the permit holder. Work not in compliance shall be halted and the District Deputy Director shall be notified of the cause. The permittee shall be notified of the Department's determination and given an opportunity to correct the problem. If the problem is not corrected timely or to the satisfaction of the Department, this permit will be revoked.

[7] Failure to complete all work within the time specified on the permit shall void the permit, thereby making the permit illegal and subject to appropriate Departmental action. The permittee may request an extension in writing from the District Office, explaining why the extension is necessary and when the work is expected to be completed.

[8] All work infringing on the pavement or shoulders shall comply with applicable standards and requirements regarding traffic control devices. Failure to comply will be cause for revocation or suspension of the permit. Any closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Such work shall not begin until all traffic control devices are in place.

[9] If any grading, sidewalk, or other work allowed by a permit interferes with the drainage of the highway in any way, such catch basins and outlets as necessary shall be constructed to take proper care of said drainage and any materials such as pipes and tiles damaged during any installation or repair by the permittee or its employees or agents shall be repaired immediately at the sole cost of the permittee . Permittee shall timely notify the Department of any such damage and repairs thereto. Failure of the permittee to immediately repair the damage after it is discovered shall result in the Department performing the repair and the permittee shall reimburse the Department for the costs and shall hold the Department harmless for all the results of such work which may include removal of the permittee's facilities.

[10] Any damage to ODOT or another's property caused by the work shall be repaired by the permittee or permittee's agent or contractor in a timely manner and at the sole cost of permittee. If any emergency repairs to ODOT property are needed that cannot be performed by the permittee or permittee's agent or contractor, ODOT shall cause the repairs to be performed at the sole cost of permittee.

[11] Upon completion of the work, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate, Form No. MR 678 certifying that the permittee has complied with the terms of the permit.

[12] Except as herein authorized, no excavation shall be made or obstacle placed within the limits of the highway so as to interfere with the travel over the road.

[13] All pole lines are to be built in accordance with Rule 4901:3-1-08 of Ohio Administrative Code promulgated and enforced by the Public Utilities Commission of Ohio.

[14] All underground utilities shall be installed at a depth and horizontal distance from the road surface and any appurtenances in accordance with state and national safety standards and as pre-approved by the Department. After installation, the exact location of the utility shall be provided to the Department. The Department shall be held harmless for any damage to utilities due to insufficient or inaccurate installation or identification and all repairs shall be at the sole cost of the permittee.

[15] The permittee shall comply with the Air Pollution requirements of Rule 3745-17-08 of the Ohio Administrative Code promulgated and enforced by the Ohio Environmental Protection Agency.

[16] The permittee certifies that he or she is fully authorized to sign this permit. This permit shall apply to and be binding upon the permittee and any successors in interest. No change in ownership of the underlying property or of the facility owned by permittee shall in any way alter the permittee's obligations under this permit.

[17] The permittee(s) for herself/himself/themselves/itself, her/his/their/its personal representatives, and her/his/their/its successors in interest and assigns, as a part of the consideration hereof, do/does hereby covenant and agree that:

(1) No person on the grounds of race, color, or national origin, shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of the utility/facilities/ services of the permittee.

(2) In the construction of any improvements on, over, or under the above described property and the furnishing of services thereon, no person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination.

(3) The above described property shall be used in a manner that at all times is in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. DOT, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. DOT — Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(4) In the event that this instrument grants a lease, license, or permit and any of the above non-discrimination covenants is breached, then the State of Ohio, Department of Transportation, shall have the unfettered right to terminate the lease, license or permit and to re-enter and repossess the above-described property and hold the same as if said lease, license or permit had never been made or issued.

This permit is granted subject to the following attached conditions:

PERMITTED LANE CLOSURE IS PERMITTED DURING THE HOURS OF 11PM TO 5AM. ALL MAINTENANCE OF TRAFFIC WILL FOLLOW OMUTCD. NO EQUIPMENT OR MATERIAL WILL BE PERMITTED TO BE LEFT IN THE ODOT RIGHT OF WAY. CLEAR ZONE IS 30' FROM EDGE OF PAVEMENT. ALL SIGNS WILL BE REQUIRED TO BE TURNED OR REMOVED EACH DAY.

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Requires ODOT permit - applying for with this application

LOCATION 1 – September of 2023

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

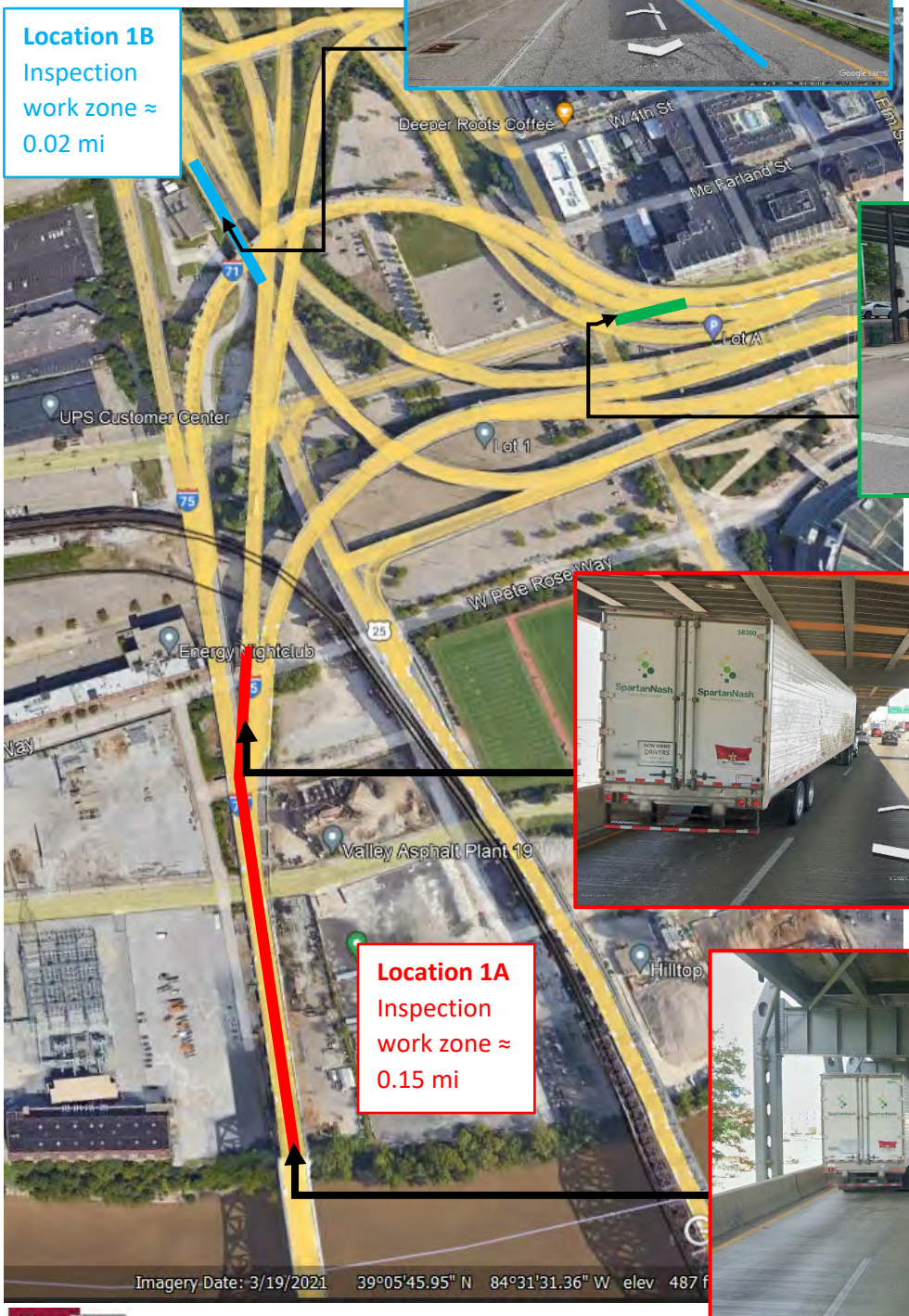
I-75 SB Second St. Ramp

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

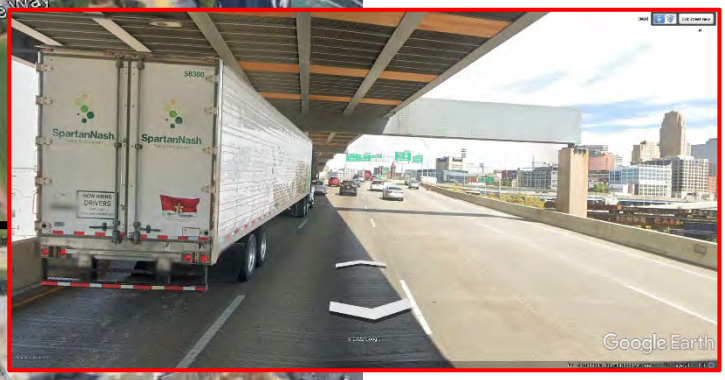
Location 1C

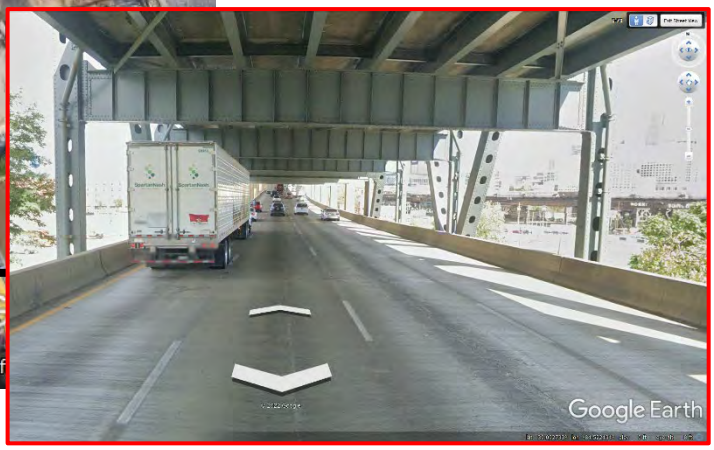
West 3rd St.

Day time closure – closure of left turn lane

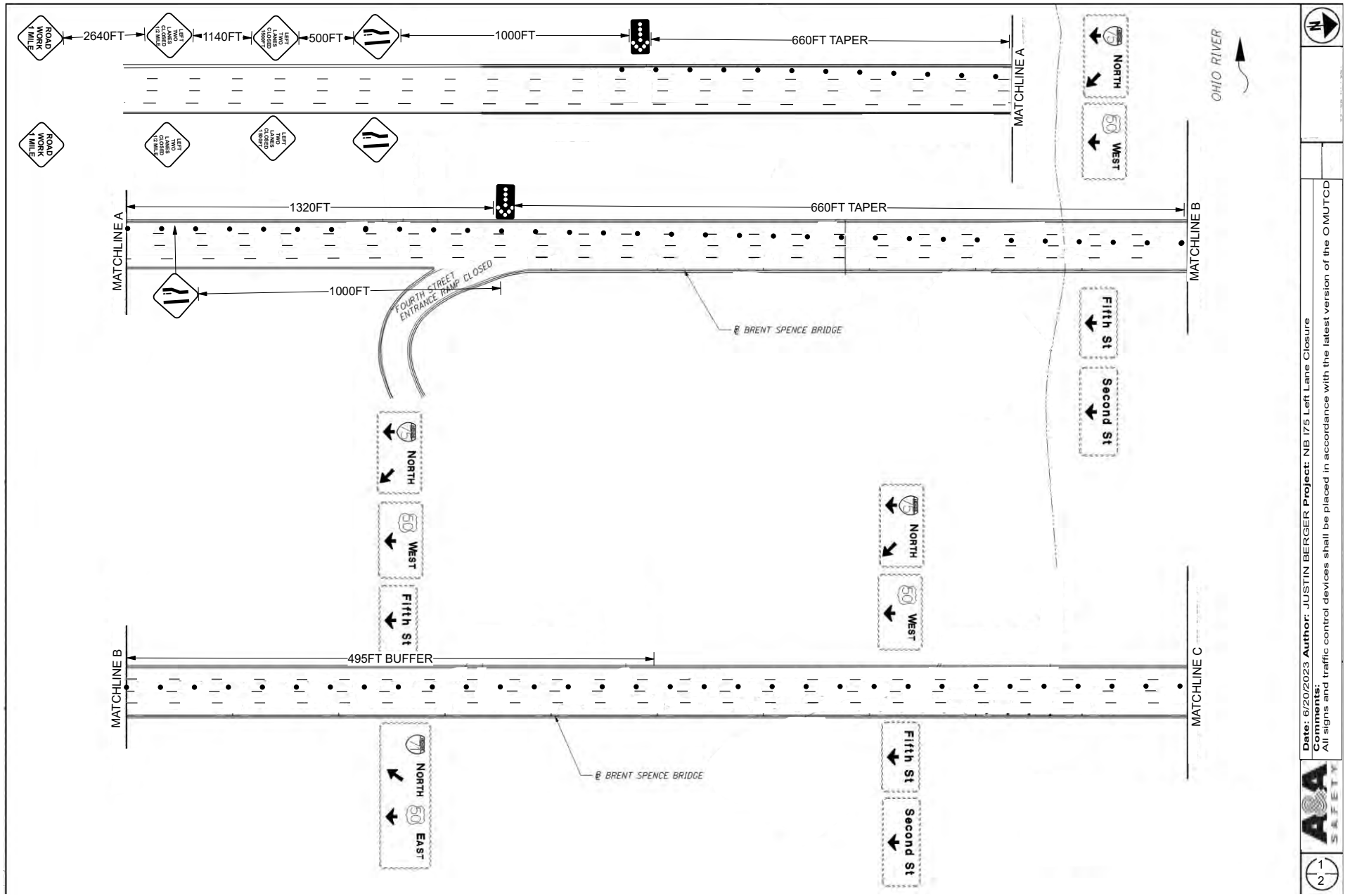


Location 1C
Inspection work zone ≈ 0.02 mi





TranSystems

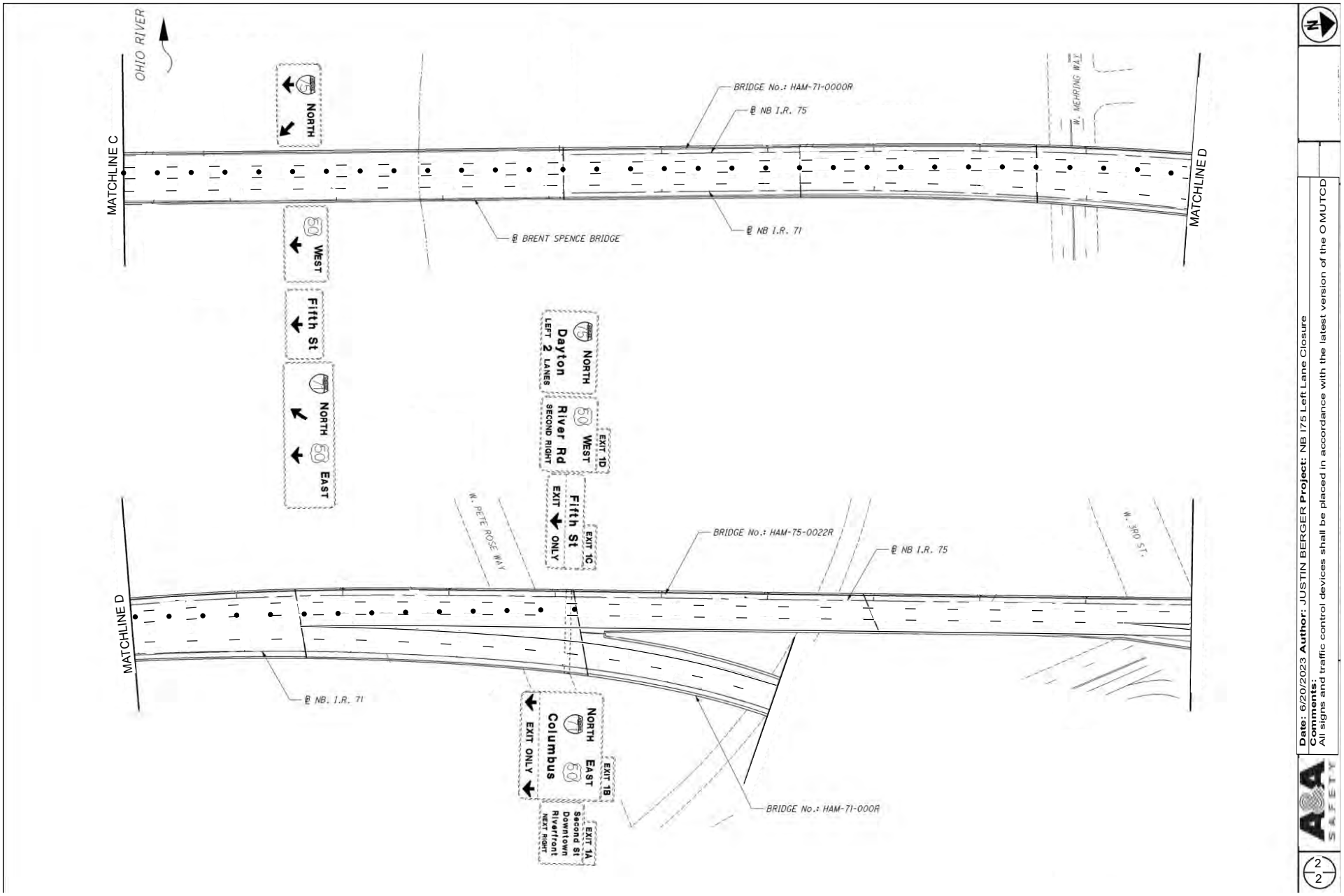


Date: 6/20/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Left Lane Closure

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

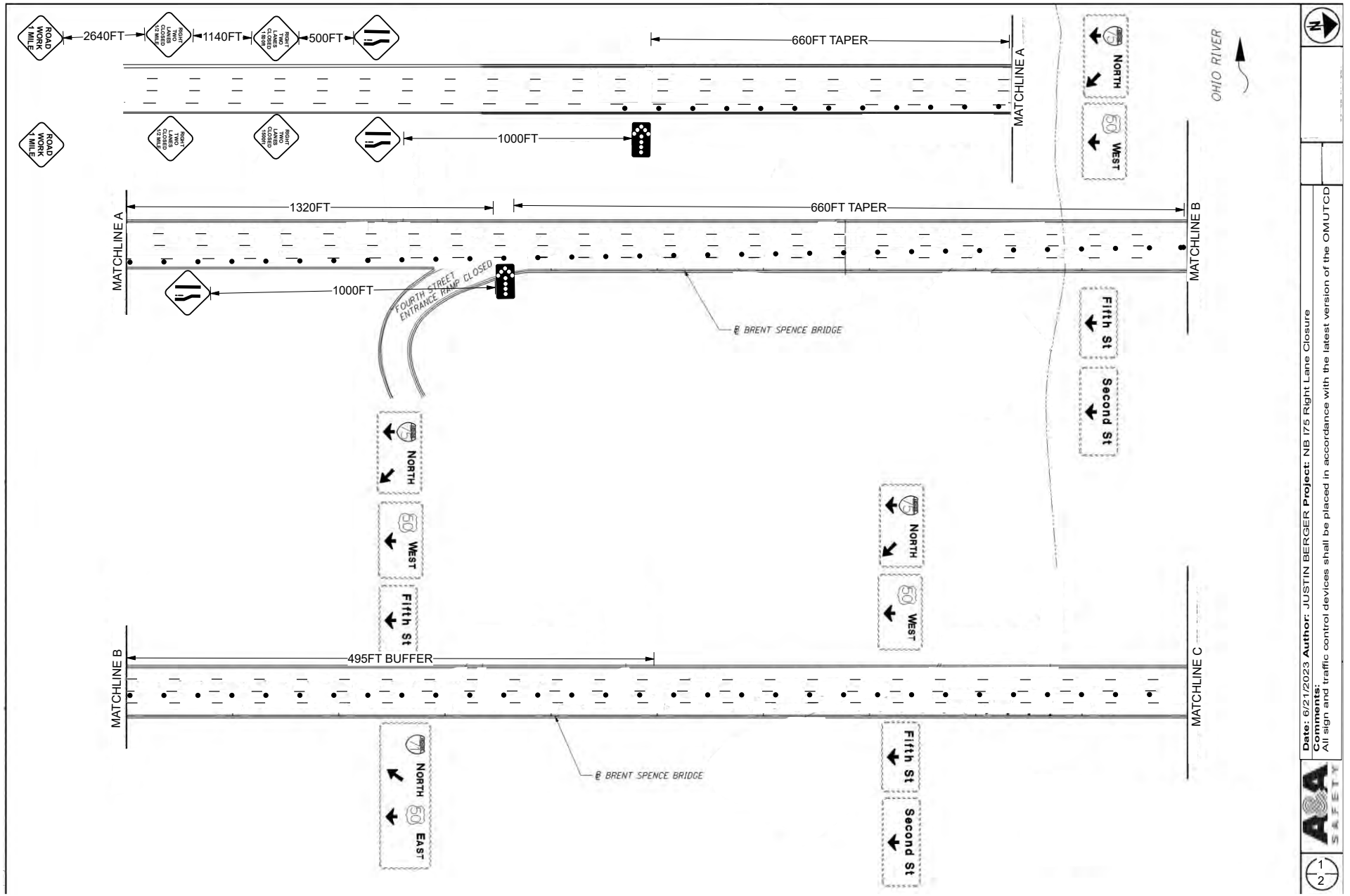
AQA SAFETY

1/2



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

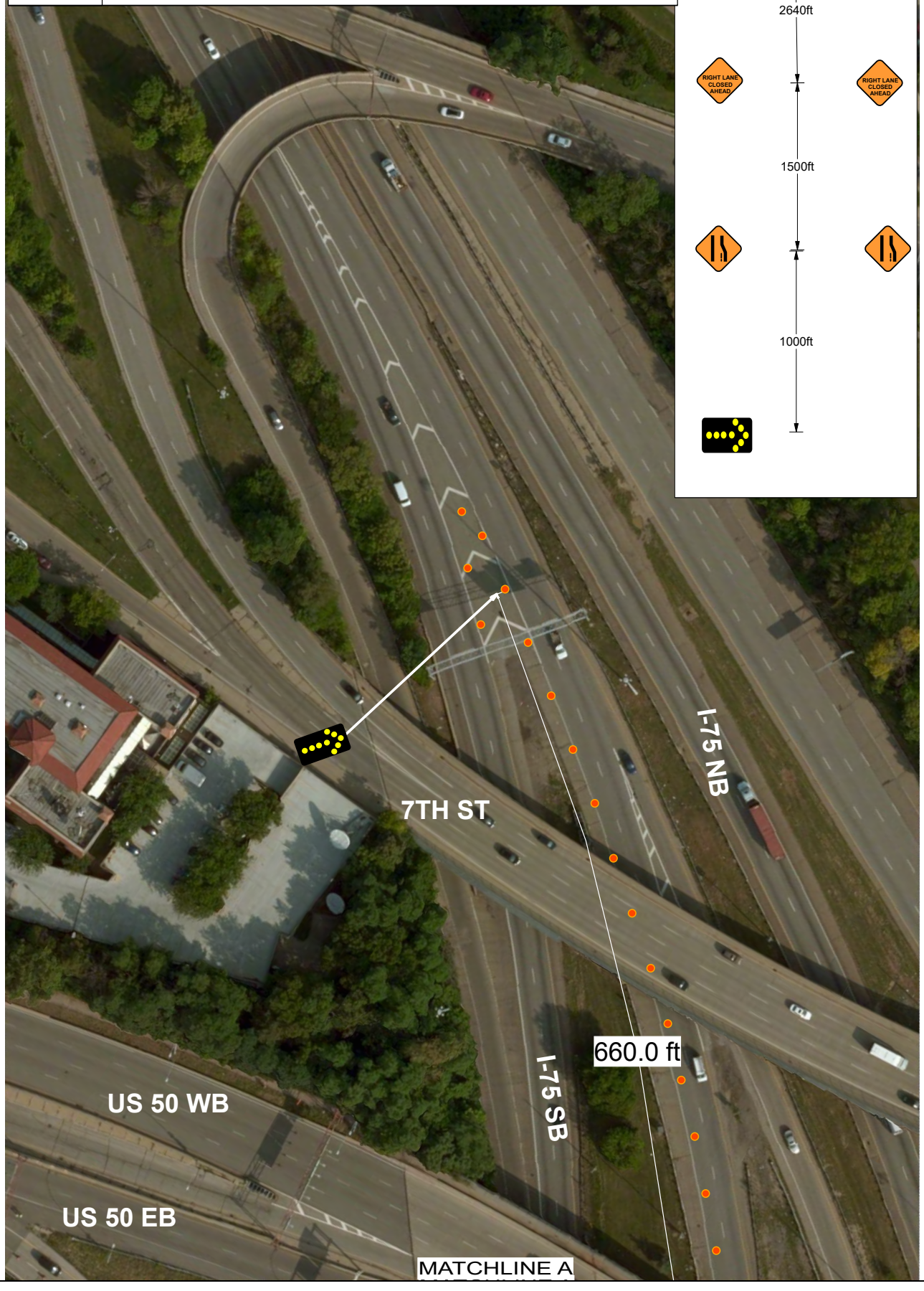
AAA SAFETY

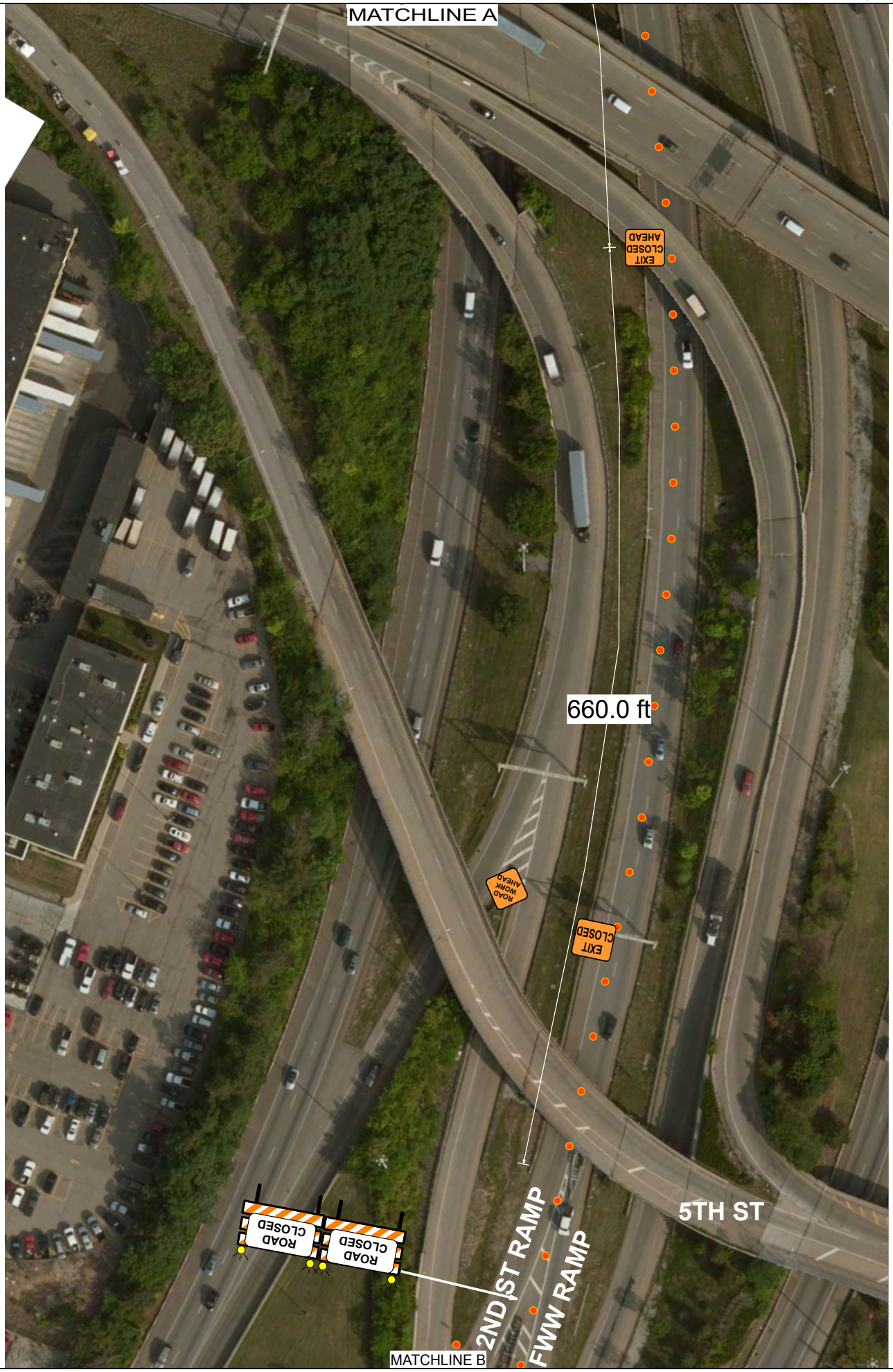

ROAD WORK 1 MILE
2640FT
RIGHT TWO LANES CLOSED 2 MILE
1140FT
RIGHT TWO LANES CLOSED 1,000'
500FT
660FT TAPER
MATCHLINE A
NORTH
50
WEST
OHIO RIVER
ROAD WORK 1 MILE
RIGHT TWO LANES CLOSED 2 MILE
RIGHT TWO LANES CLOSED 1,000'
1000FT
MATCHLINE A
1320FT
660FT TAPER
MATCHLINE B
1000FT
FOURTH STREET ENTRANCE RAMP CLOSED
@ BRENT SPENCE BRIDGE
Fifth St
Second St
NORTH
50
WEST
Fifth St
NORTH
50
WEST
MATCHLINE B
495FT BUFFER
MATCHLINE C
@ BRENT SPENCE BRIDGE
NORTH
50
EAST
Fifth St
Second St
N
A&A SAFETY
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
1
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

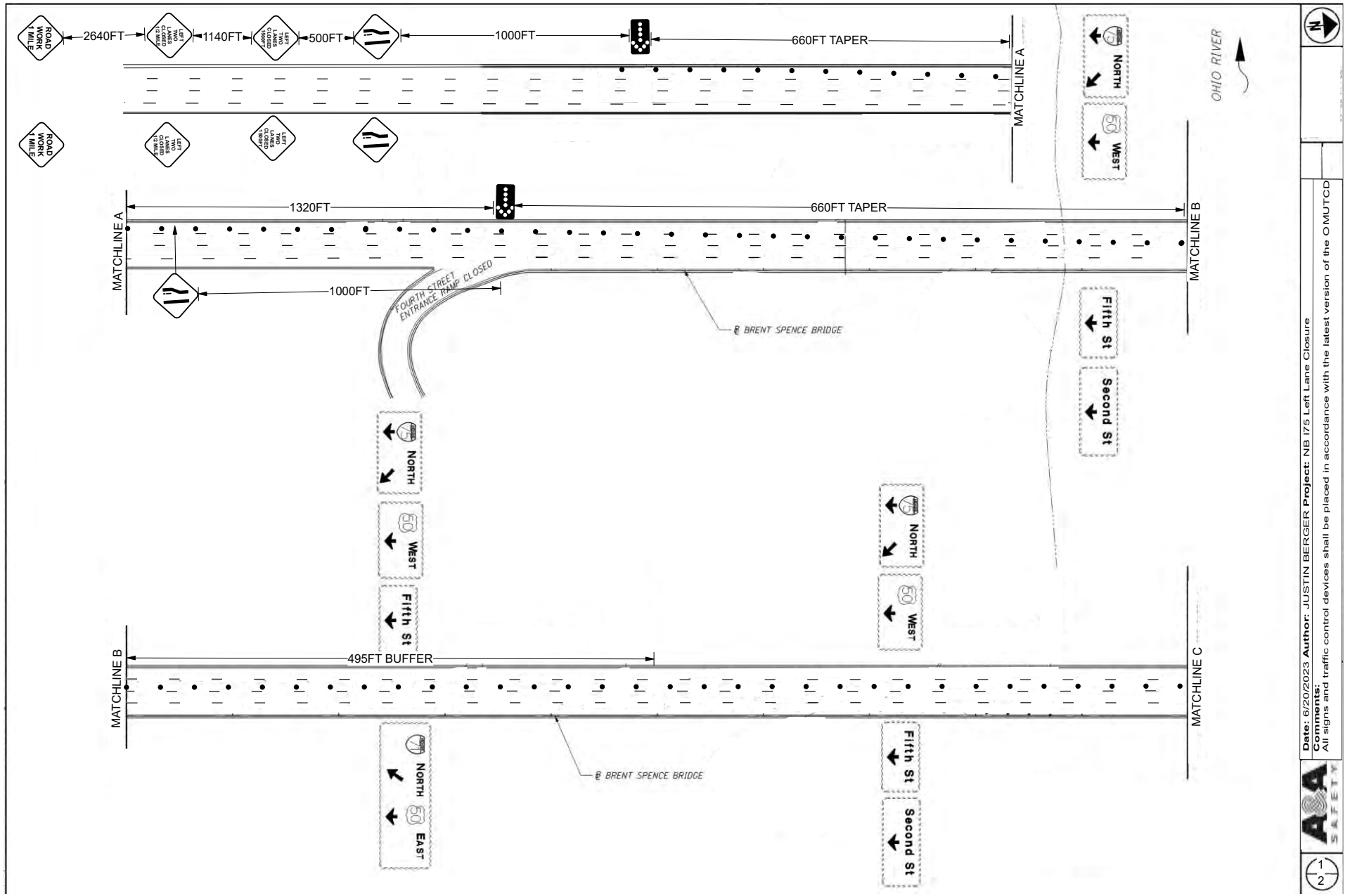
Date: 6/26/2023 **Author:** Justin Berger **Project:** SB I71 to 2ND ST. Closure

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




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
W 3rd St
John St
127
W 3rd St
42
127
W 3rd St
Paul Brown Stadium
Paul Brown Stadium
71
71

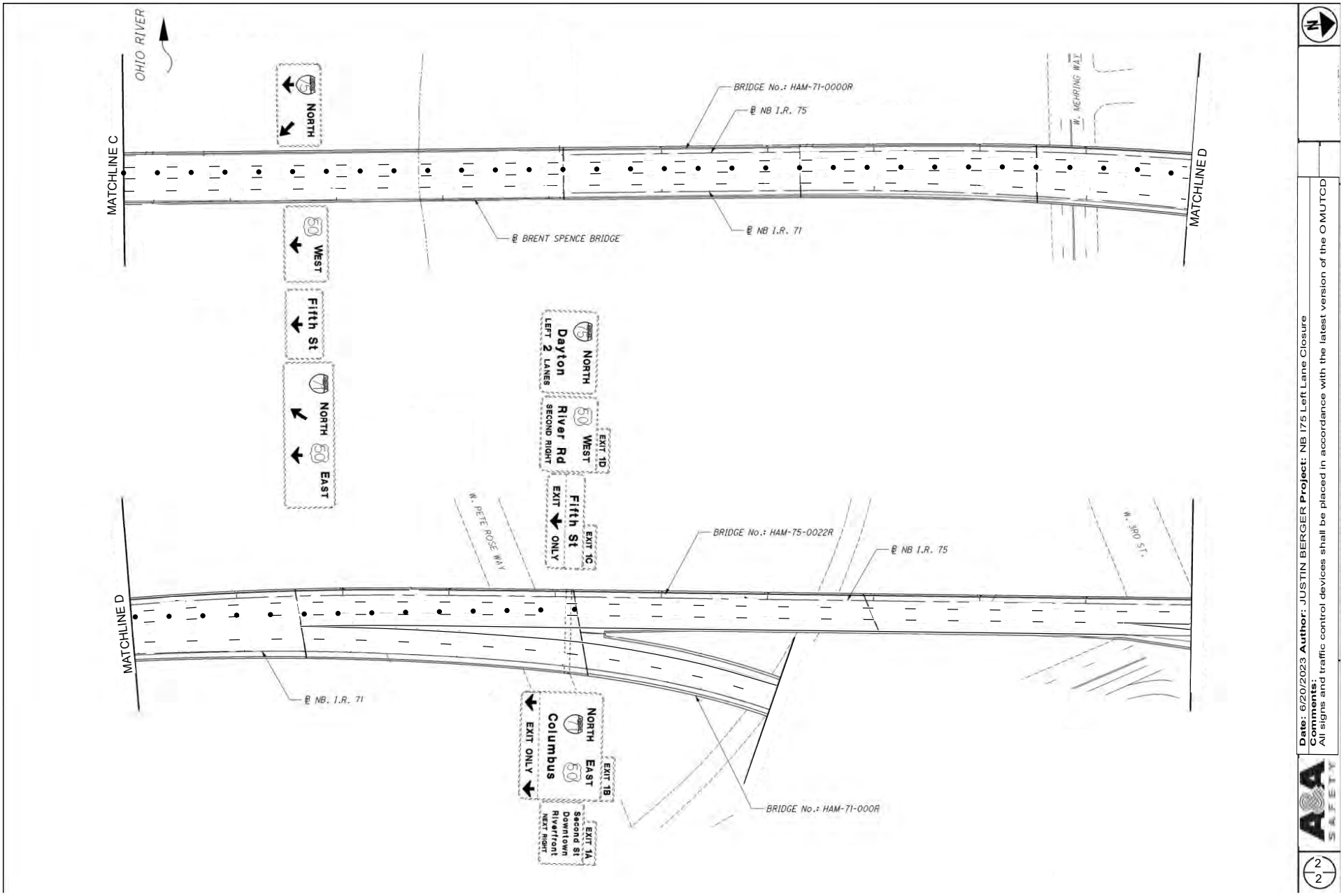


Date: 6/20/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Left Lane Closure

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

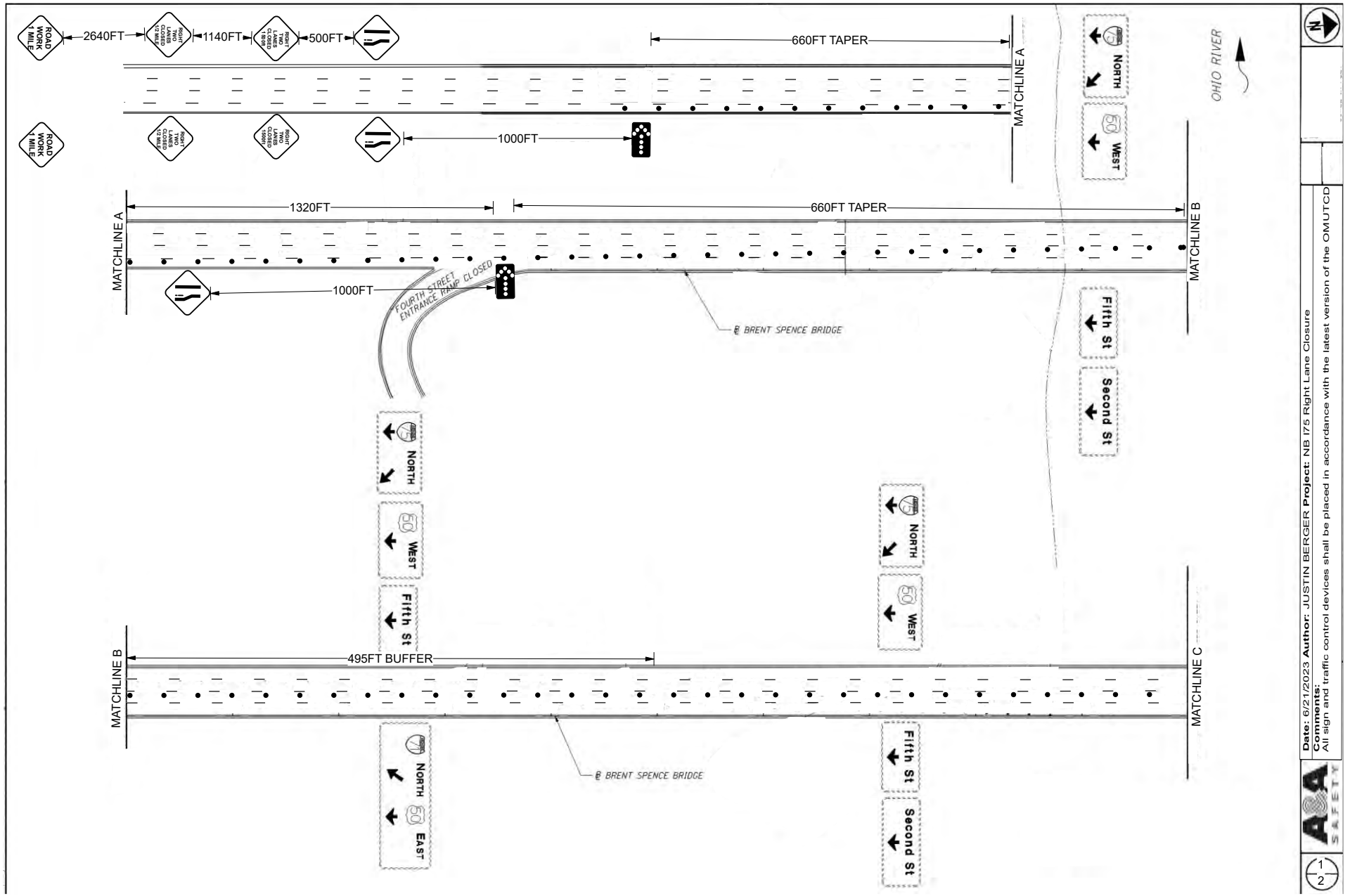
AQA SAFETY

1/2



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

AAA SAFETY


ROAD WORK 1 MILE
2640FT
RIGHT TWO LANES CLOSED 2 MILE
1140FT
RIGHT TWO LANES CLOSED 1,000'
500FT
660FT TAPER
MATCHLINE A
NORTH
50
WEST
OHIO RIVER
ROAD WORK 1 MILE
RIGHT TWO LANES CLOSED 2 MILE
RIGHT TWO LANES CLOSED 1,000'
1000FT
MATCHLINE A
1320FT
660FT TAPER
MATCHLINE B
1000FT
FOURTH STREET ENTRANCE RAMP CLOSED
@ BRENT SPENCE BRIDGE
Fifth St
Second St
NORTH
50
WEST
Fifth St
NORTH
50
WEST
MATCHLINE B
495FT BUFFER
MATCHLINE C
@ BRENT SPENCE BRIDGE
NORTH
50
EAST
Fifth St
Second St
N
A&A SAFETY
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
1
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

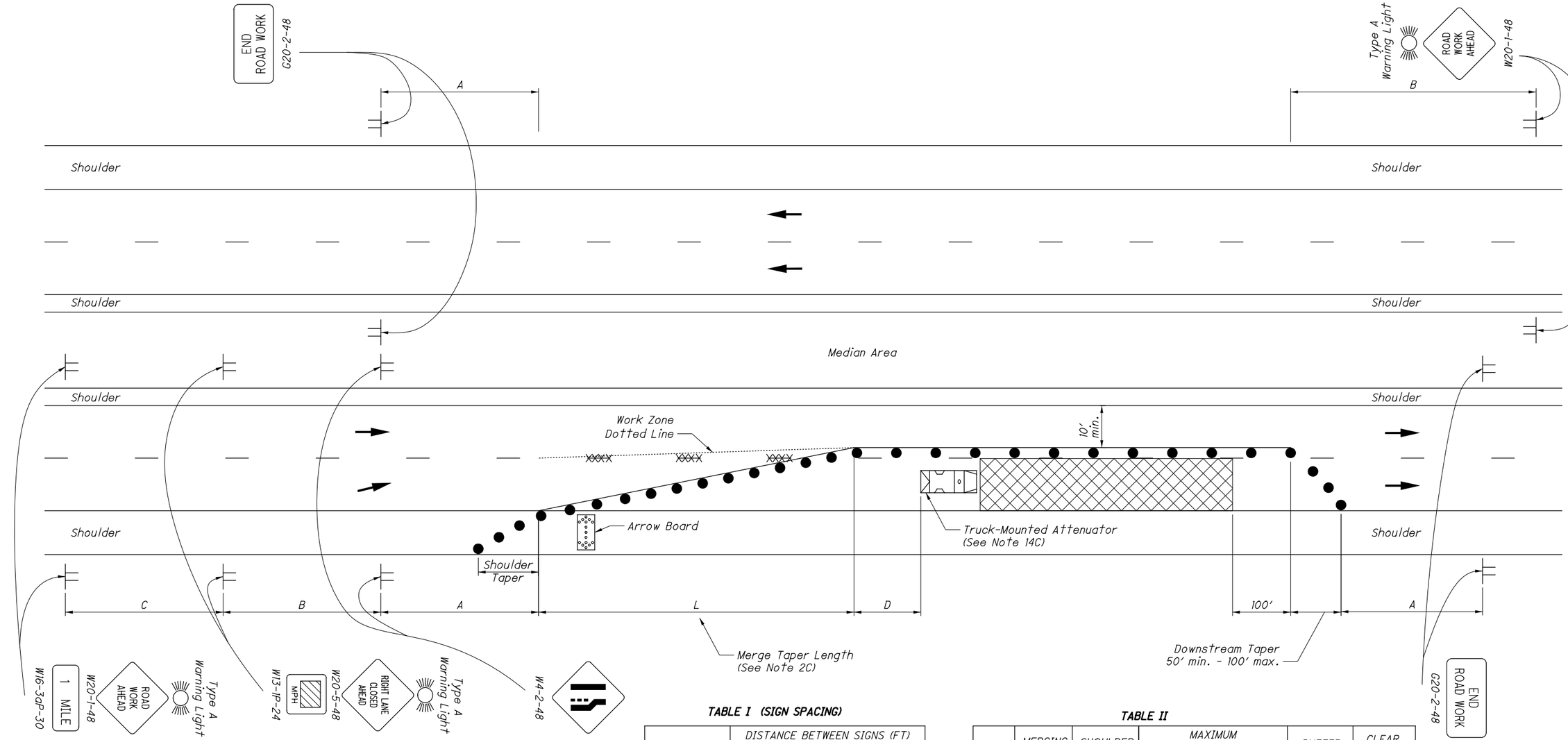


TABLE I (SIGN SPACING)

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.

REVISION DATE 07-19-2019

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR
David L. Holstein

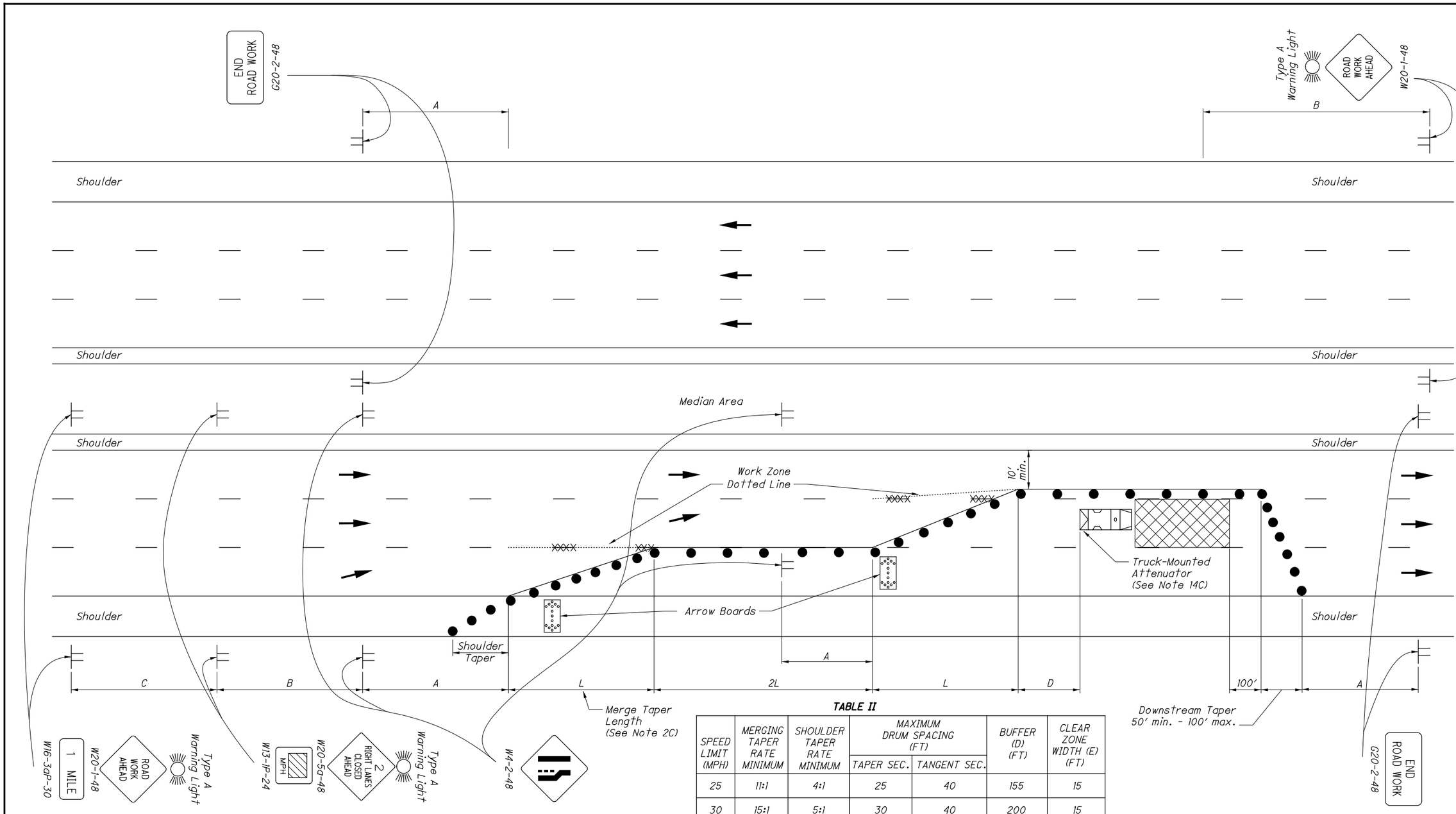
STDS. ENGINEER
Soisson

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

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

SCD NUMBER
MT-95.30



LEGEND

- WORK AREA
- DRUMS/CONES
- REMOVE EXISTING MARKINGS
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TABLE I (SIGN SPACING)

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

REVISION DATE 07-19-2019

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

STDS. ENGINEER Soisson

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

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

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 614.11I. 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 5 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 07-19-2019

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

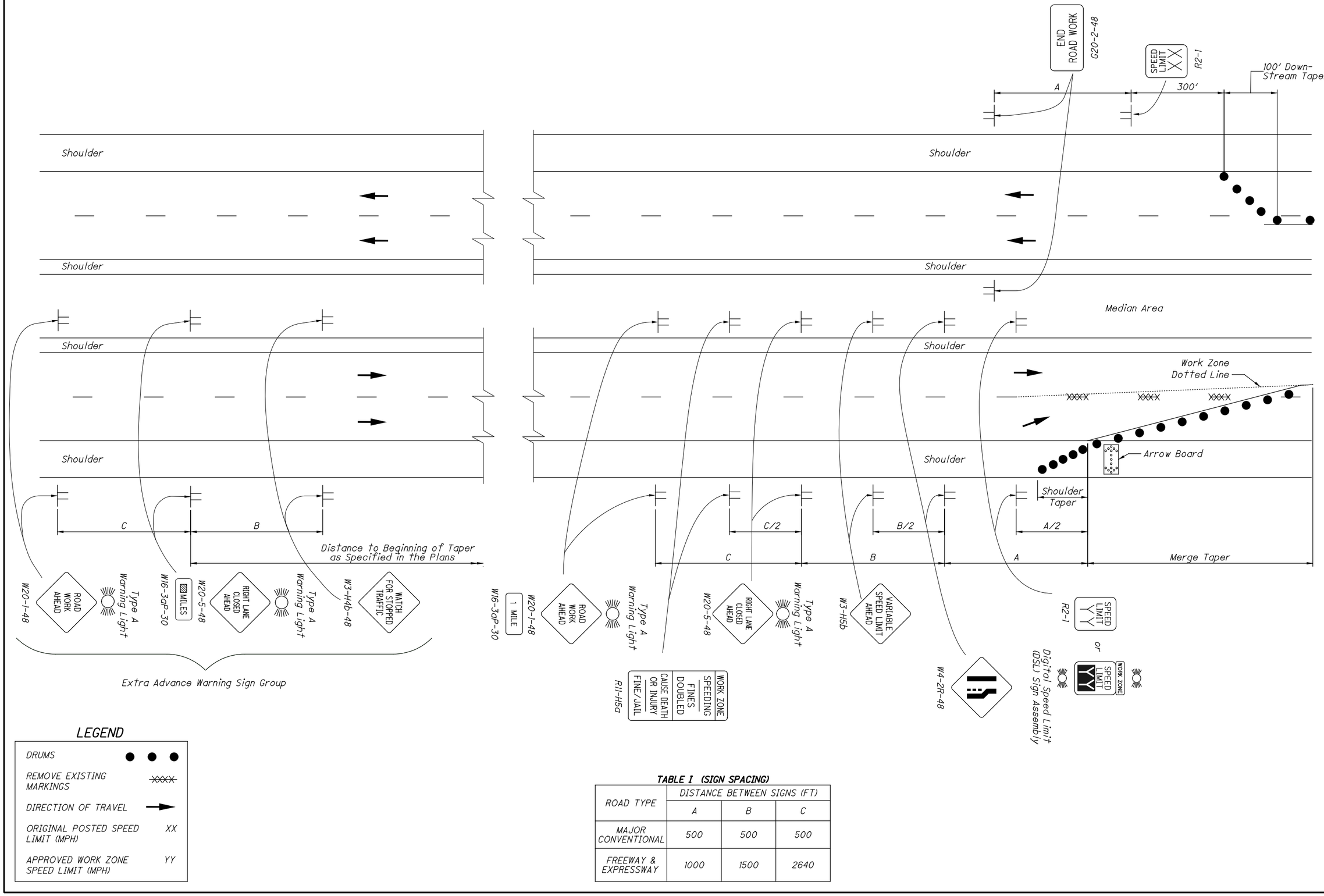
STDS. ENGINEER Soisson

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

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

SCD NUMBER MT-95.30



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.

REVISION DATE 07-21-2017

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

STDS. ENGINEER Soisson

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

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.

REVISION DATE 07-21-2017

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

STDS. ENGINEER Soisson

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

SUPPLEMENTAL ADVANCED SIGNS USED WITH LANE CLOSURES

SCD NUMBER MT-95.50

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: TranSystems Corporation
Contact Person:
Address: 1100 Superior Avenue
City: Cleveland
State: Ohio
Zip: 44114
Telephone: (216) 299-7724

PROJECT IDENTIFICATION

Permit Number: 06-2023-00635

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
Bridge Inspection	Kenton - I 75	39.092197	-84.522541

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

July 12, 2023

TranSystems Corporation
1100 Superior Avenue
Cleveland, Ohio 44114

Subject: Permit #: 06-2023-00635
Permit Type: Other - Navigable Bridges
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2023-00635

Permittee: TranSystems Corporation

Permit Type / Subtype: Other / Navigable Bridges

Work Completion Date: 9/21/2023

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	7/12/2023
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
Bridge Inspection	Kenton - I 75	39.092197	-84.522541

APPROVED
July 12, 2023
Transportation Cabinet
06-2023-00635
Kentucky

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2023-00635

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT TranSystems Corporation	**ADDRESS** 1100 Superior Avenue		
EMAIL	**CITY** Cleveland	**STATE** Ohio	**ZIP** 44114
CONTACT NAME 1 Carolyn Guion	**EMAIL** ctguion@transystems.com	**PHONE #** 216-357-3545 **CELL #** 216-299-7724	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #** **CELL #**	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS Brent Spence Approach Bridge	**CITY**		**STATE** Kentucky	**ZIP**
COUNTY	**ROUTE #** IR-71/75 NB	**MILE POINT** 191.426 - 191.638	**LONGITUDE** (*X*)	**LATITUDE** (*Y*)

ADDITIONAL LOCATION INFORMATION: see location zone map below

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☐ Utilities ☐ Vegetation Removal ☒ Other: Bridge Inspection

ACCESS: ☐ Full ☐ Partial ☐ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

Inspection of steel superstructure and steel pier caps above NB I-71/75 on the Brent Spence North Approach Bridges (Ohio side). Inspection is anticipated to begin the night of September 18, 2023 and will be completed on the night of September 21, 2023. The work to be performed includes a fracture critical inspection of 16 steel pier caps and in-depth element level inspection of the remaining structures carrying IR-71, and an in-depth element level inspection of the structures carrying NB I-71/75. Required permits will also be obtained from ODOT in order to close two left and two right northbound lanes of NB I-71/75 on separate nights in order to gain full access to the structure. MOT plans are attached.

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Received 7/10/23 TKH

Carolyn Guion — 7/5/2023

SIGNATURE **DATE**

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
July 12, 2023
KENTUCKY TRANSPORTATION CABINET
06-2023-00635

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**

- **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
- **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
- **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
- **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

TEAM KENTUCKY TRANSPORTATION CABINET

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. Before You Dig: The contractor is instructed to call 1-800-752-6007 to reach KY 811, the One-Call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that the owners of underground facilities are not required to be members of the KY 811 One-Call Before U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

UTILITY

NAME (Utility Representative)

TITLE (Utility Representative)

SIGNATURE (Utility Representative)

DATE

Kentucky 811 Know what's below. Call before you dig.

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

LOCATION MAP SHOWING BRIDGE INSPECTION ZONE

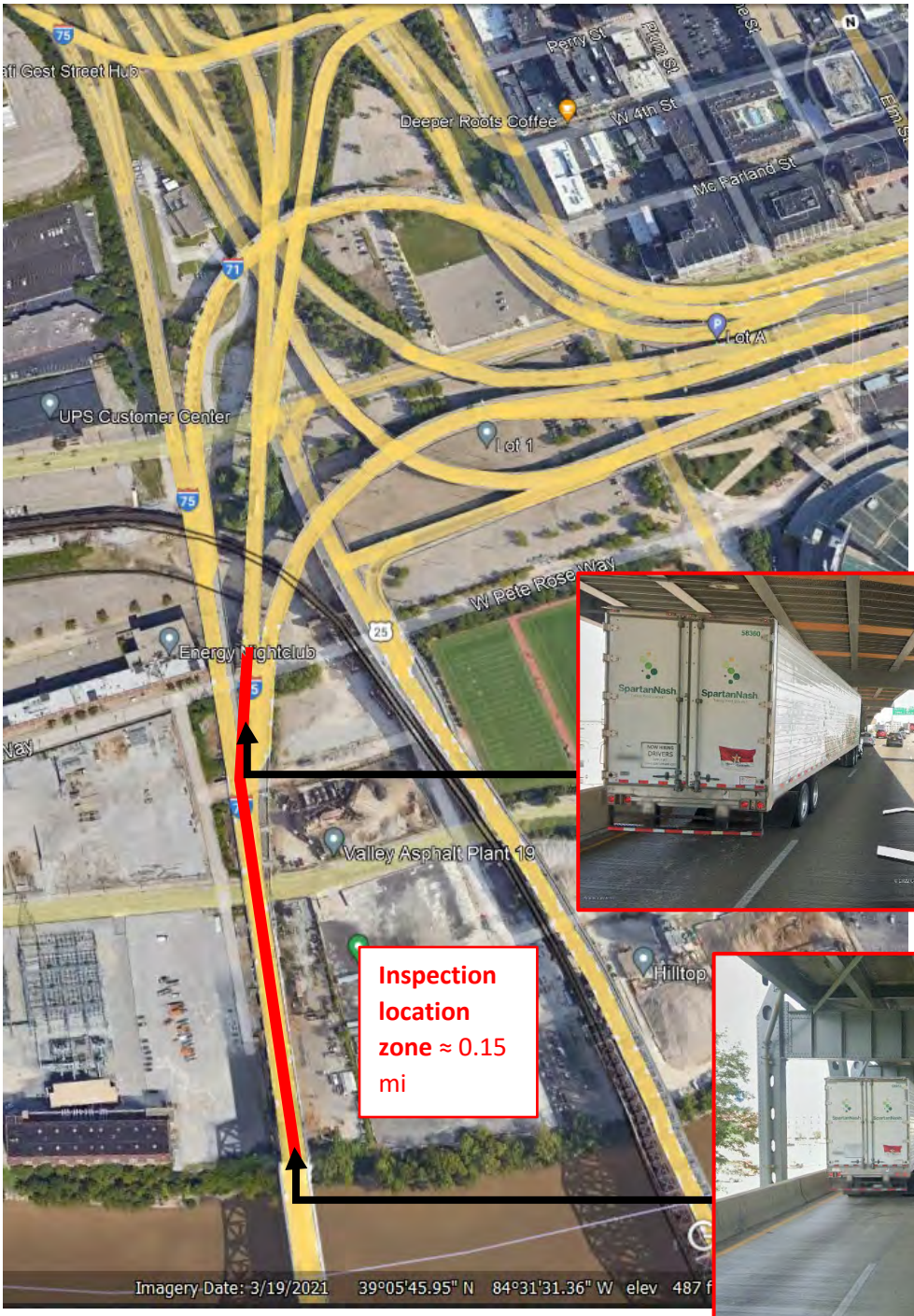
Inspection zone highlighted in red

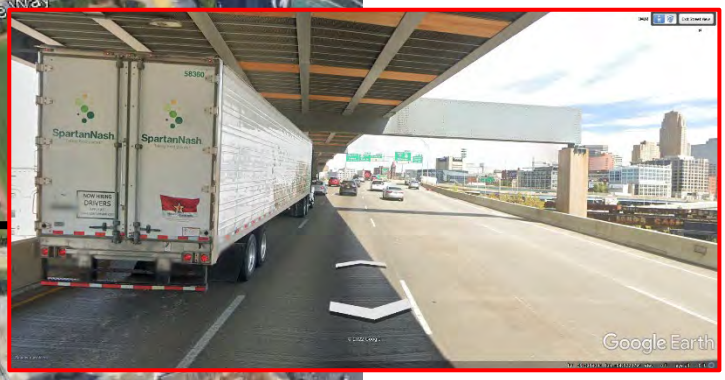
I-71/75 NB (lower level Brent Spence)

39.095170°, -84.522188°

Night time closure – double left lane I-71/75 northbound (September 18-19, 2023)

Night time closure – double right lane I-71/75 northbound (September 20-21, 2023)

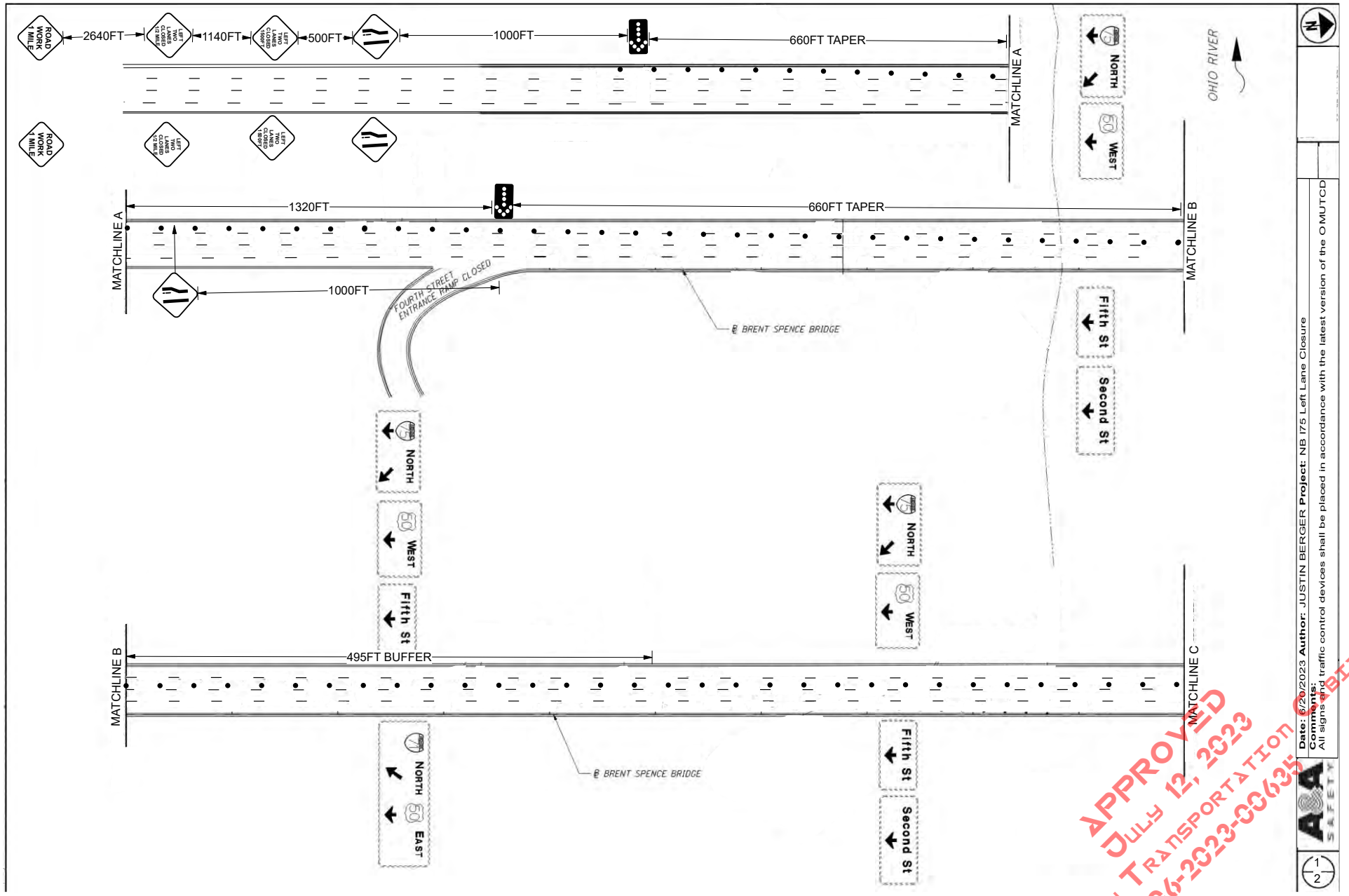




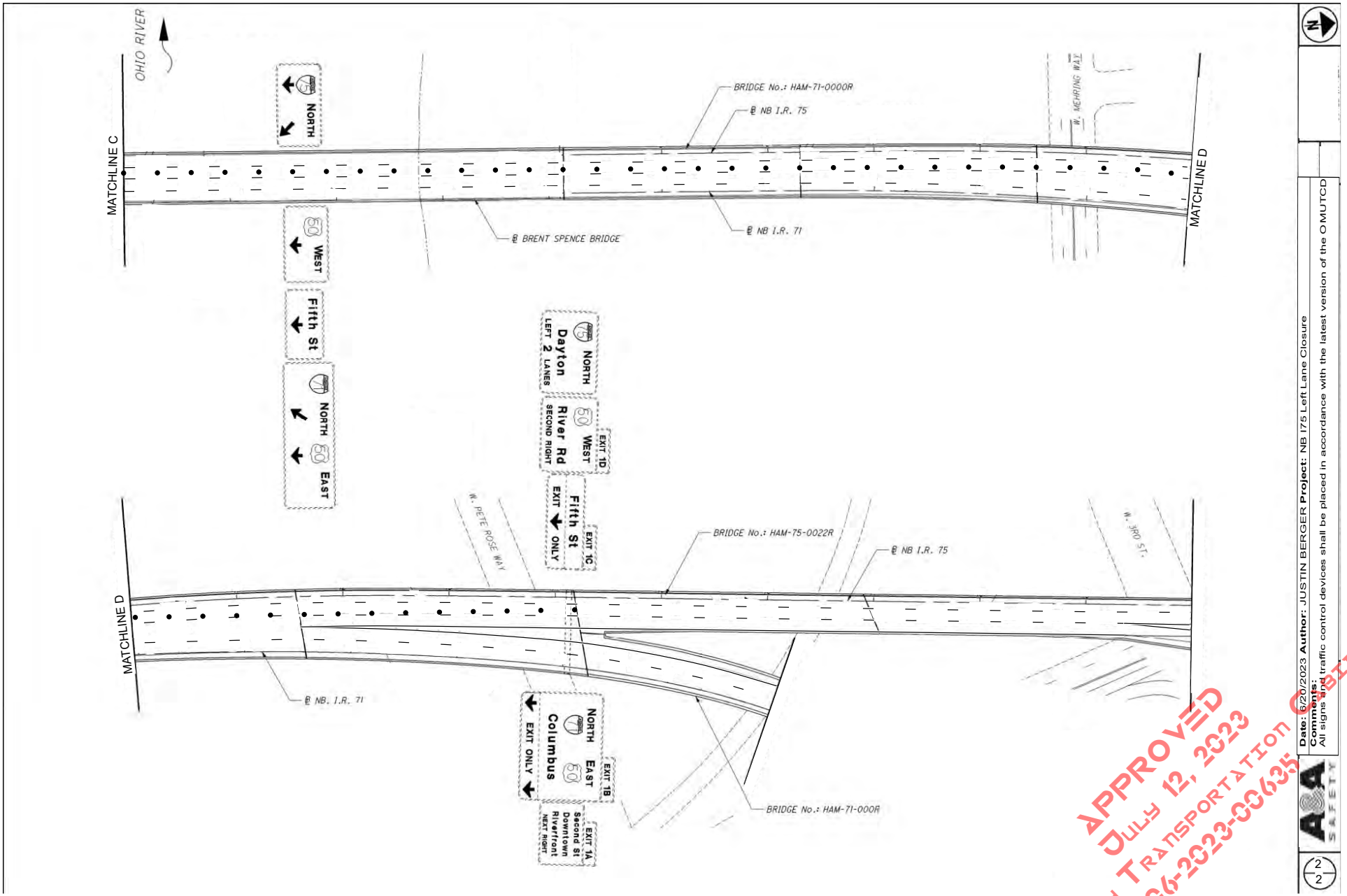
TRANSYSTEMS

APPENDIX A

MAINTENANCE OF TRAFFIC DRAWINGS



APPROVED
July 12, 2023
Kentucky Transportation Cabinet
06-2023-00635

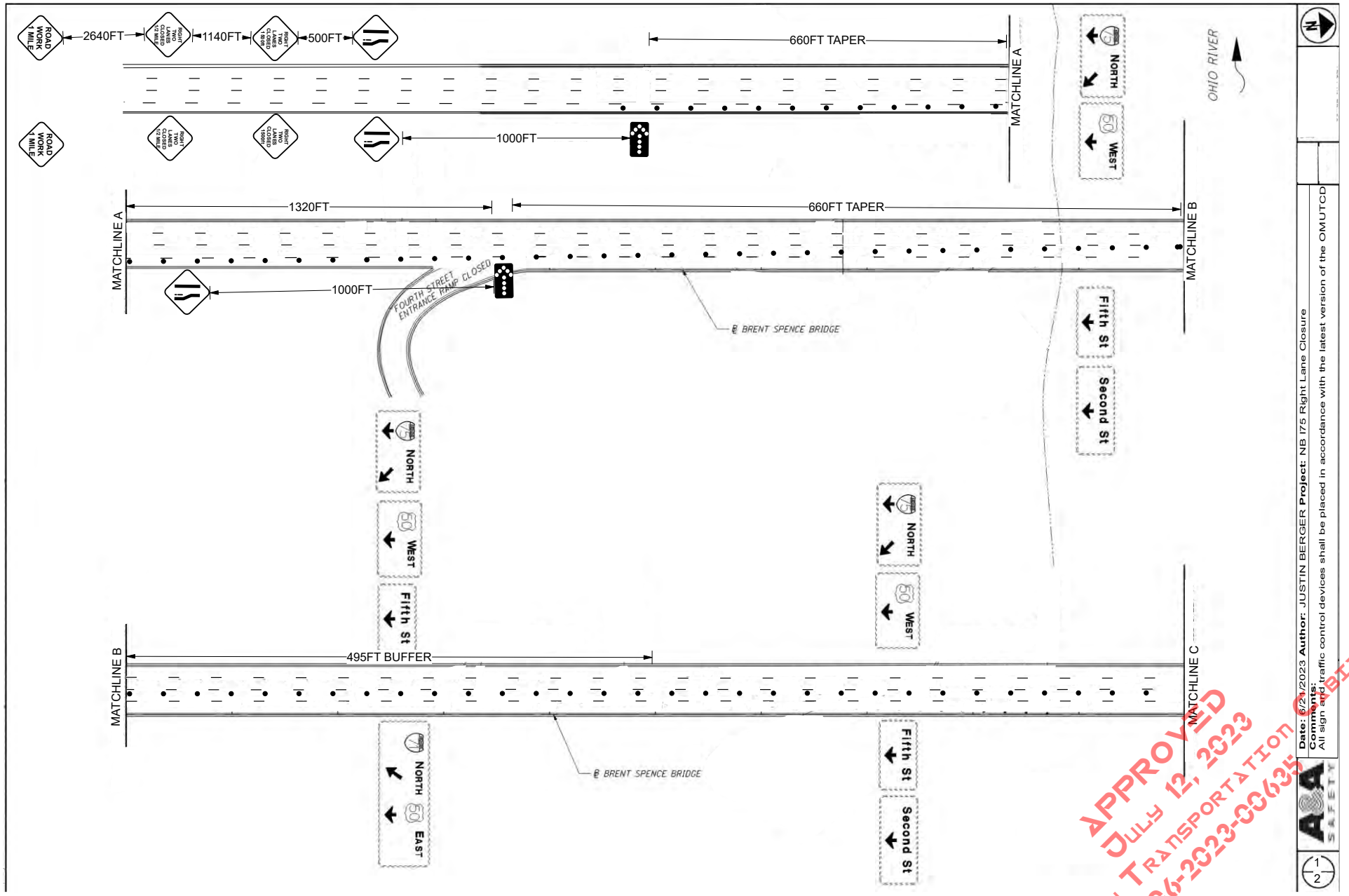


Date: 6/20/2023 **Author:** JUSTIN BERGER **Project:** NB I75 Left Lane Closure
Comments:
All signs and traffic control devices shall be placed in accordance with the latest version of the OMUTCD

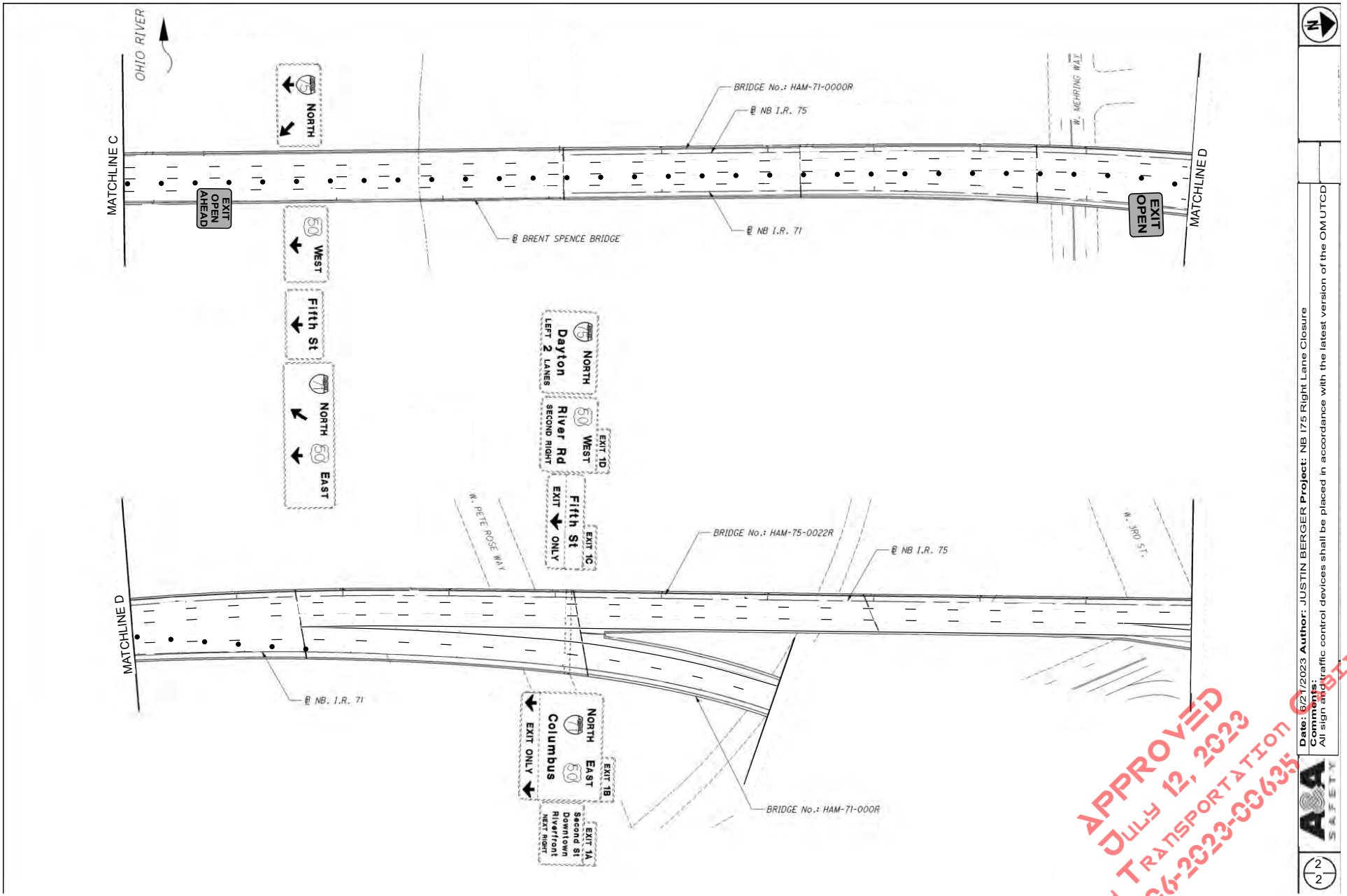
AAA SAFETY

2/2

APPROVED
July 12, 2023
Kentucky Transportation Cabinet
06-2023-00635



APPROVED
July 12, 2023
Kentucky Transportation Cabinet
06-2023-00635



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

2/2

APPROVED
July 12, 2023
Kentucky Transportation Cabinet
06-2023-00635

Transportation & Engineering Permit

Permit No.: TPZ2305251

City of Cincinnati
Department of Transportation & Engineering
Division of Engineering
Permit & License Center
Phone: 1-513-352-3463
Fax: 1-513-352-5397

Permit Type: *Street Blocking/Use Pmt*
STATE OF OHIO

This permit is valid for work starting *09/18/2023* **and void after** *09/20/2023*

Plans Attached? N

Permittee:
STATE OF OHIO

Contact: *CAROLYN GUION*
216-299-7724
24-Hours:

Insp: *DAVE ATKINSON*
District: *1 - C.B.D.*

Location: *316 W 3RD ST , 3RD ST*
Work Street: ***3RD ST*** ***From Street: CENTRAL AV*** ***To Street: PLUM ST***
Work Order No.:

This Permit has been granted to do the following: *3RD ST - STATE OF OHIO*

Street Area Impacted: *Overall Length: 0 Overall Width: 0*

Special Notes:

1: PERMIT IS FOR ODOT BRIDGE INSPECTION ON 3RD ST FROM PLUM TO CENTRAL AVE.

THIS IS FOR A CLOSURE OF THE LEFT TURN LANE ON 3RD ST.

2: All maintenance of traffic shall be performed in accordance with Item 614 "Maintenance of Traffic", as provided in the State of Ohio, Department of Transportation "Construction and Materials Specifications" (ODOTCMS) and the City of Cincinnati Supplement to the ODOTCMS and the requirements for maintaining traffic in the "Ohio Manual of Uniform Traffic Control Devices" (OMUTCD). The City of Cincinnati's "Traffic Safety Handbook" may be used as a supplement to the OMUTCD. Advanced Warning Signs, Reflective Cones and Arrow Boards where applicable, shall be the responsibility of the permittee to comply. Approval of this permit DOES NOT RELIEVE THE PERMITTEE of that responsibility.

3: Notify METRO Dispatch at 513-632-7550 for any work near a bus stop.

4: Requests for temporary parking restrictions must be made at the police district in which the requested restriction is geographically located.

If you are not certain of the police district an address is geographically located in, contact any police district for assistance in verifying the location.

It is the requestor's responsibility to submit the Parking Restriction Request in sufficient time to place the restriction sign(s)/meter bag(s) to comply with minimum lead time requirement in advance of the restriction, or the request may be unenforceable. Do not place restriction sign(s)/meter bag(s) beyond the maximum hours, in advance. When completing a Parking Restriction Request Form at a police district, be prepared to provide the DOTE, Right-of-Way Section issued permit. When a parking restriction form is received, the accepting officer will review the form for completeness and sign that it was received.

If you wish to temporarily restrict parking in an area that is not otherwise restricted, the completed request form must be submitted, AND the restriction sign(s) posted a minimum of 24 hours in advance, but not more than 36 hours in advance.

If you wish to temporarily restrict parking in metered parking spaces only, the completed request form must be submitted, AND the restriction sign(s)/meter bag(s) posted a minimum of 14 hours in advance, but not more than 24 hours in advance.

Doc Control #: TE23021240

The receiving officer will advise the requesting party that they will be notified upon approval. Although signs and bags may be given to requesting parties at time of request, signs are not to be posted until notification of approval is made.

Upon posting the signs the requesting agency must call the District. The signs will not be enforced if the agency fails to notify the District.

5: Pedestrian protection and pedestrian access must be maintained at all times.

6: The permittee is responsible for assuring that the work area is secured and pedestrians cannot walk under equipment or into the work area. Traffic control devices must be used to secure the work area. Pedestrian, advanced warning or instructional signs are required.

7: Permittee to coordinate work with on-going work in area. The DOTE Inspector has the final call on any conflict or dispute resolution.

8: Any collateral damage must be repaired as directed by the DOTE Inspector.

IMPORTANT: This permit including any approved documents must be kept on the job site at all times.

FOR INSPECTION: CALL 352-3451, BETWEEN 7:30 AND 8:30 AM, WEEKDAYS, EVERYDAY THAT YOU ARE DOING WORK UNDER THIS PERMIT. IF YOU ARE DOING WORK UNDER THIS PERMIT ON WEEKENDS, YOU MUST CALL IN THE FRIDAY BEFORE, BETWEEN 7:30 AND 8:30 AM.

In performing work under this permit, the Permittee is responsible for all related operations, that the operations conform to all applicable statutes, rules and regulations of the City of Cincinnati, State of Ohio, and that the Permittee shall defend, indemnify, and hold the City, its officers, employees, and agents harmless from and against any and all actions, suits, claims, losses, costs (including without limitation attorneys fees), demands, judgments, liability and damages arising from the work done under this permit.

THIS PERMIT MAY BE REVOKED AT ANY TIME

Call before you dig 1-800-362-2764 or 811

Estimated Permit Fee: $0.00

Final costs will be based on total measured quantities and total inspection hours.

_____

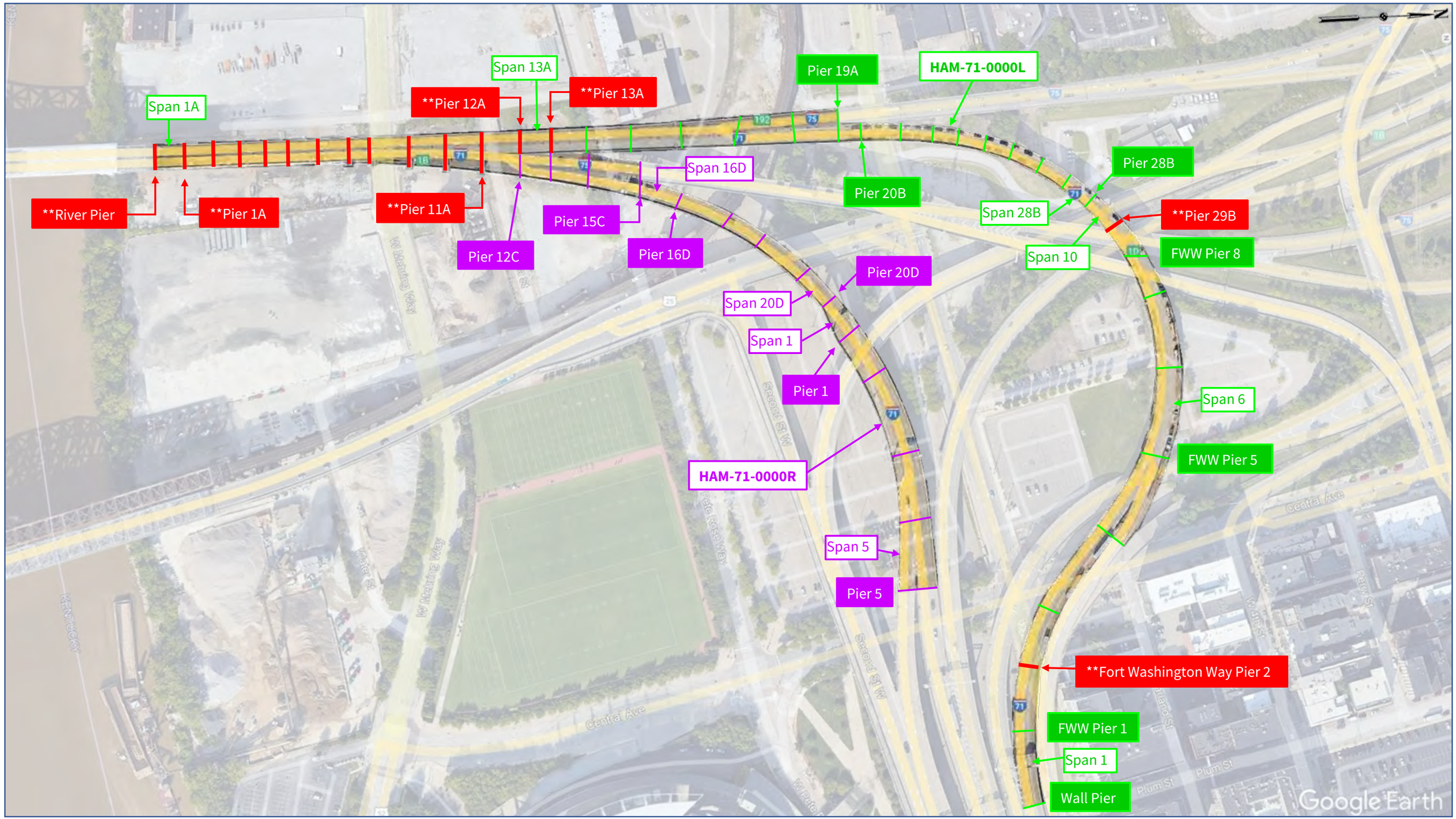
City Engineer / Designee Date

Doc Control #: TE23021240

APPENDIX B

STRUCTURE LOCATION/IDENTIFICATION MAPS
FATIGUE PRONE DETAILS*
EXISTING PLANS

*Images and descriptions taken from 2021 Pre-Inspection Report



HAM-71-0000L/R

Overall location map and nomenclature

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

Not to scale

TRANSYSTEMS

River Pier Cap

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.

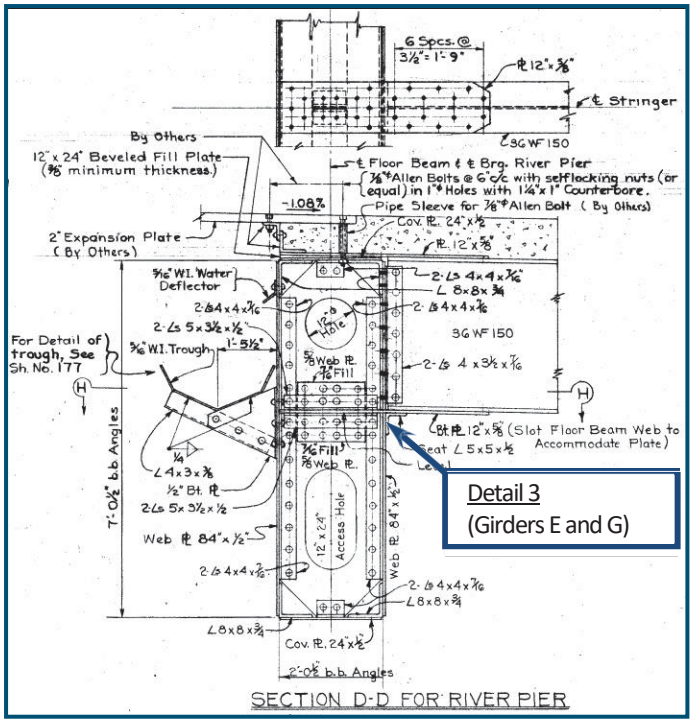


Figure 2 – Section through River Pier Cap

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.

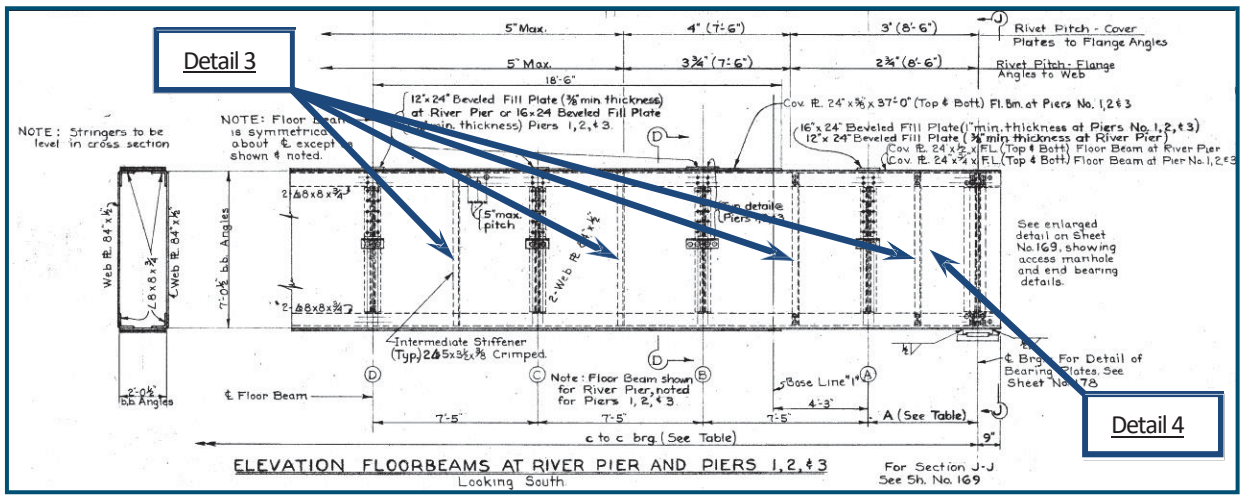


Figure 3 – Elevation of River Pier Cap

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.

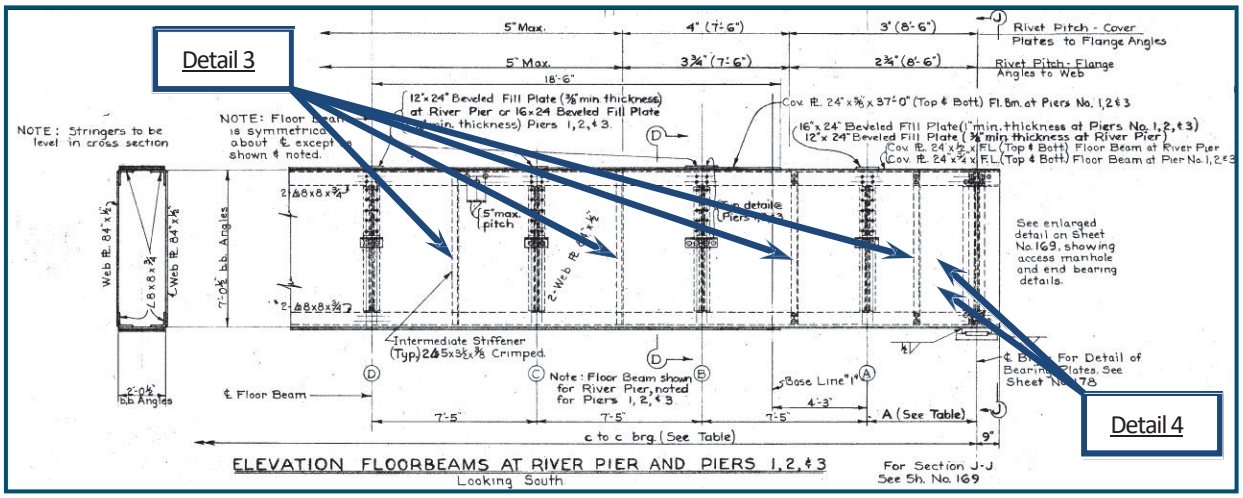


Figure 4 – Elevation of Pier Cap 1

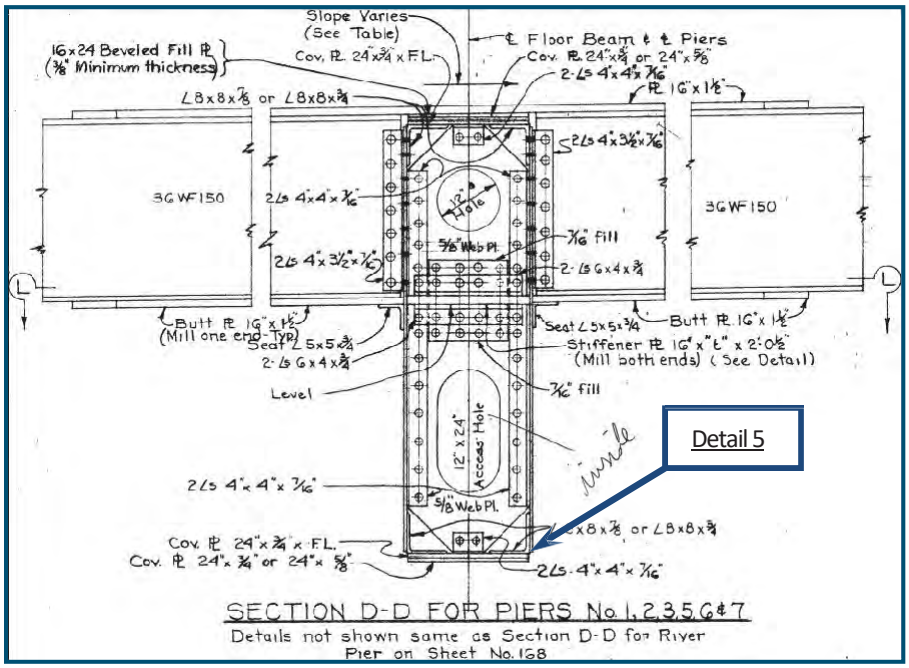


Figure 5 – Section through Pier Cap 1

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).

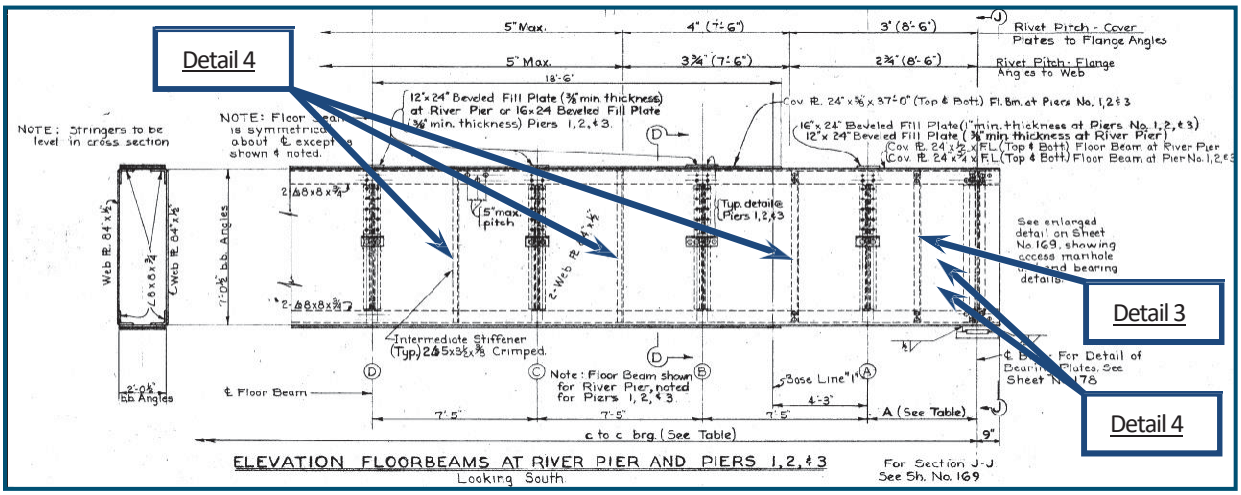


Figure 6 – Elevation of Pier Cap 2

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)

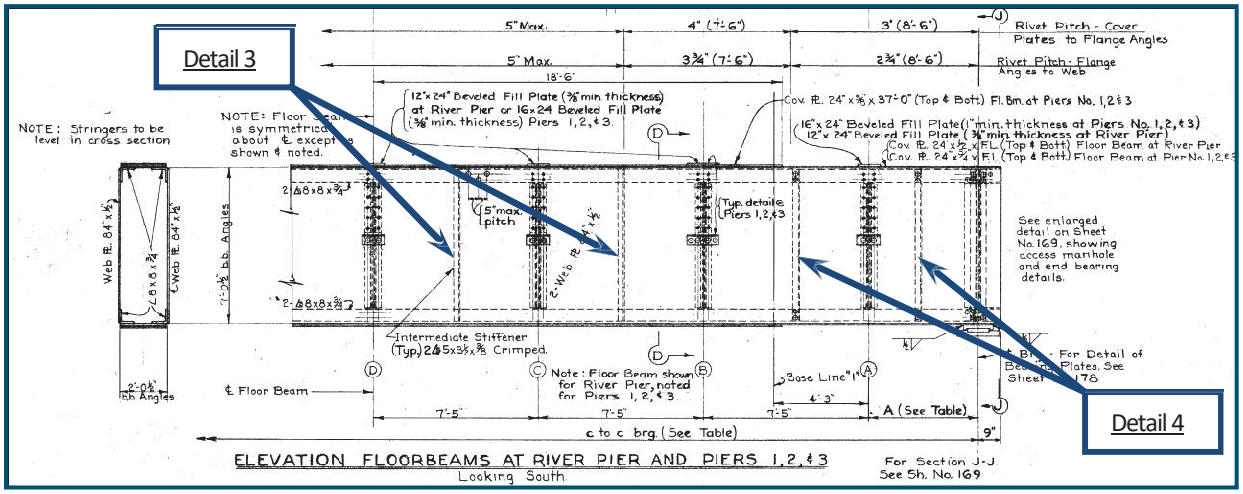


Figure 7 – Elevation of Pier Cap 3

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).

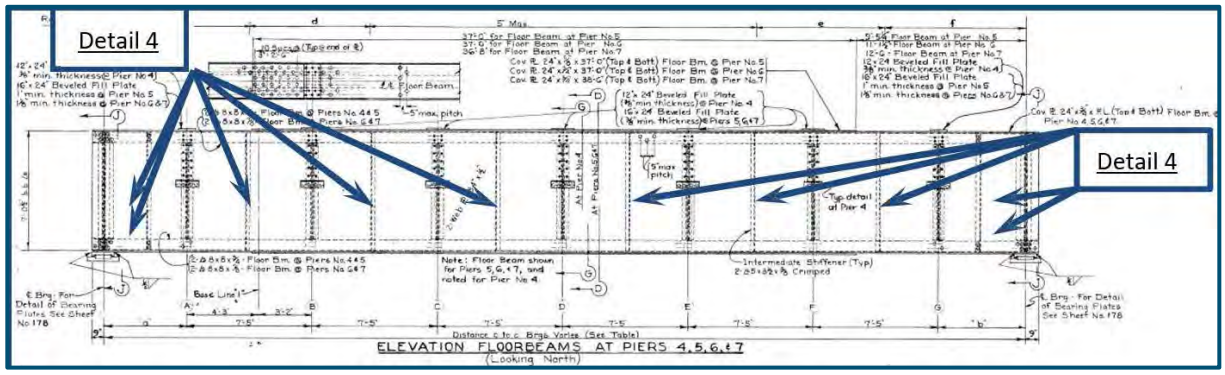


Figure 8 – Elevation of Pier Cap 4

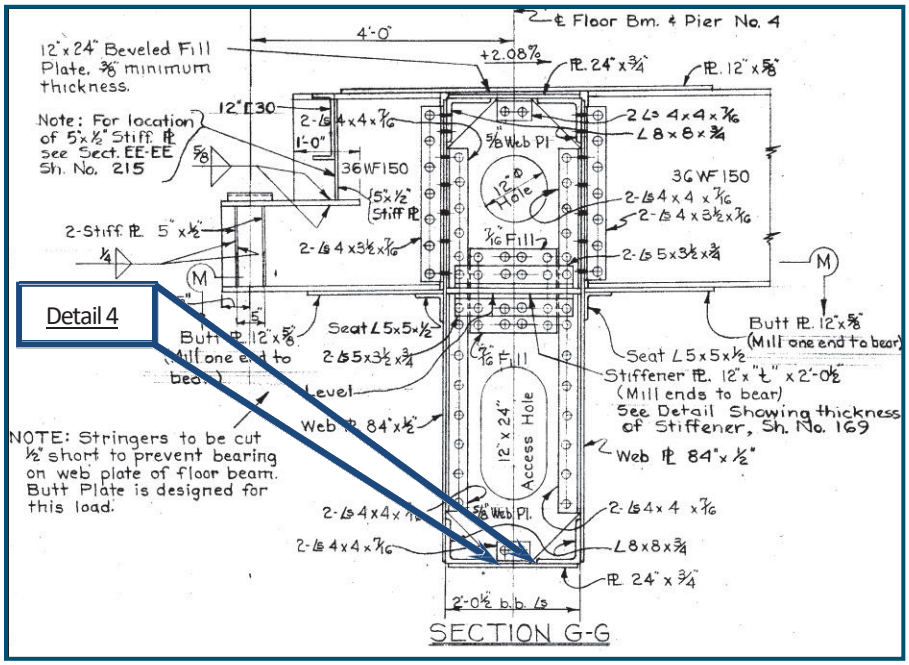


Figure 9 – Section through Pier Cap 4

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.

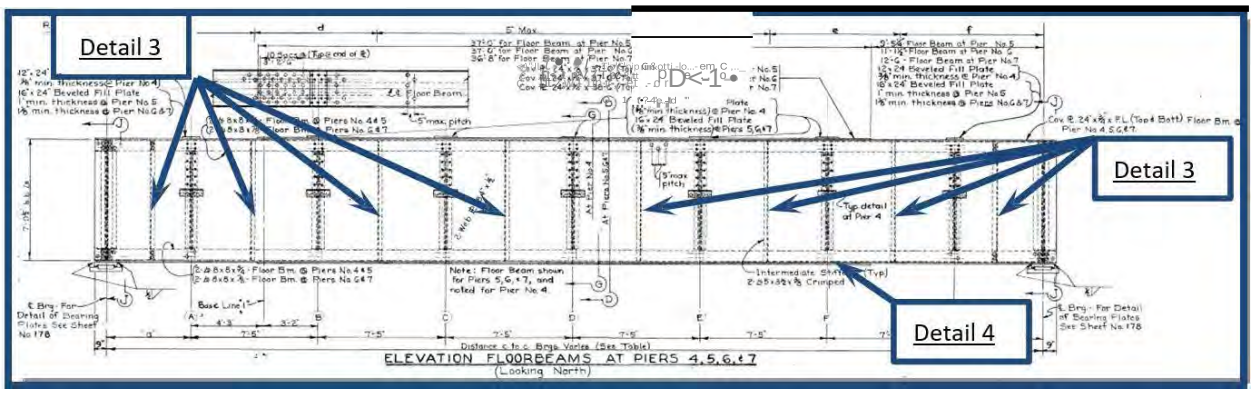


Figure 10 – Elevation of Pier Cap 5

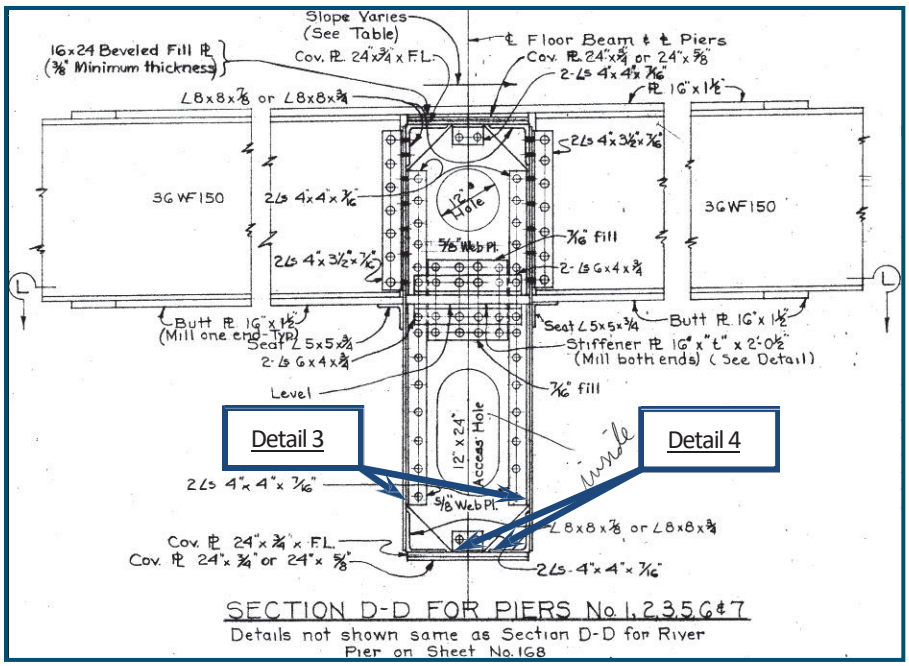


Figure 11 – Section through Pier Cap 5

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).

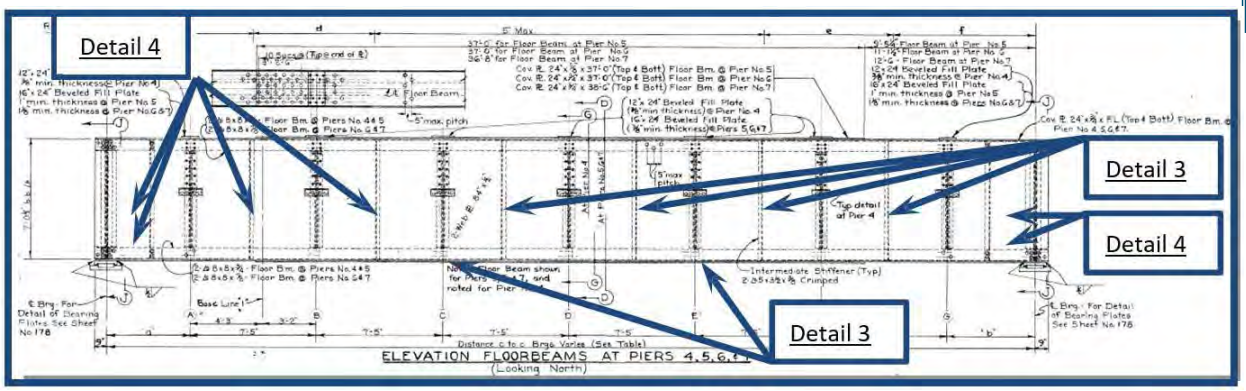


Figure 12 – Elevation of Pier Cap 6

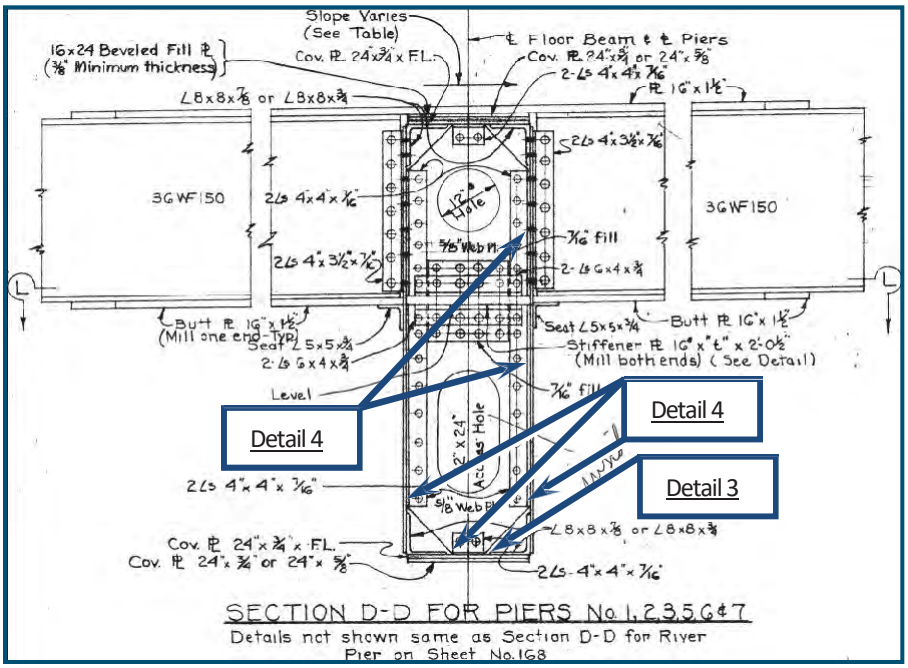


Figure 13 – Section through Pier Cap 6

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).

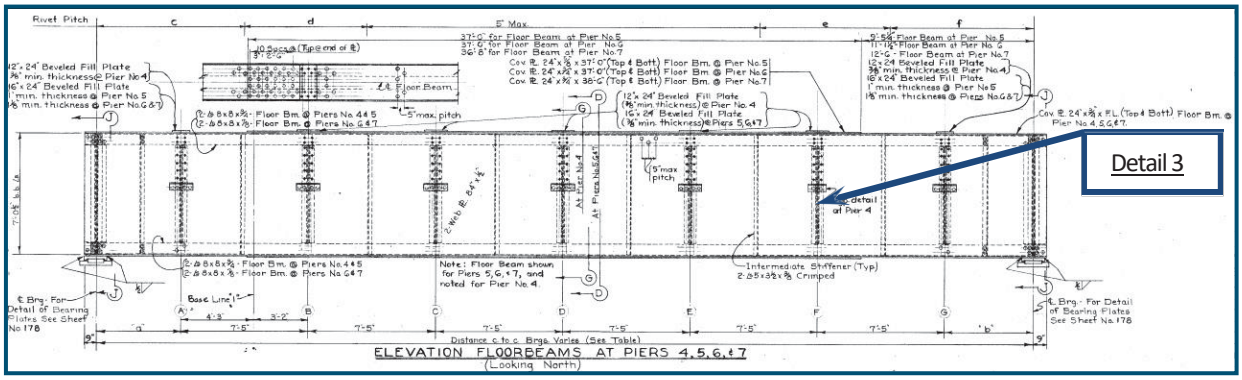


Figure 14 – Elevation of Pier Cap 7

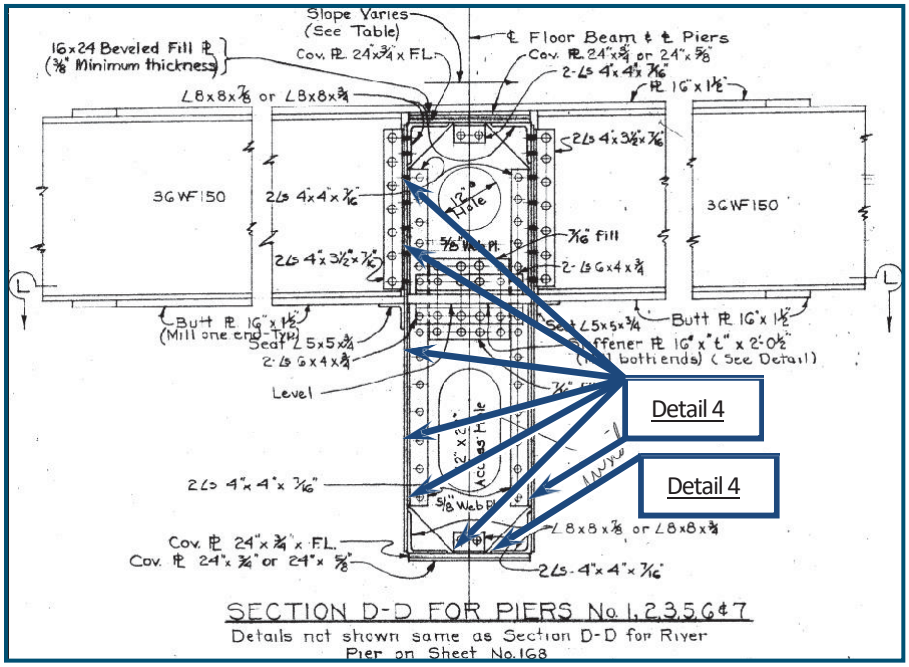


Figure 15 – Section through Pier Cap 7

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.

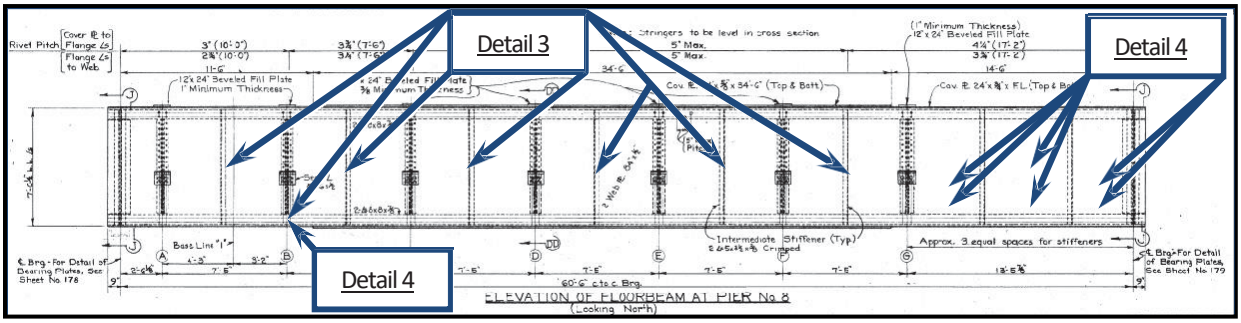


Figure 16 – Elevation of Pier Cap 8

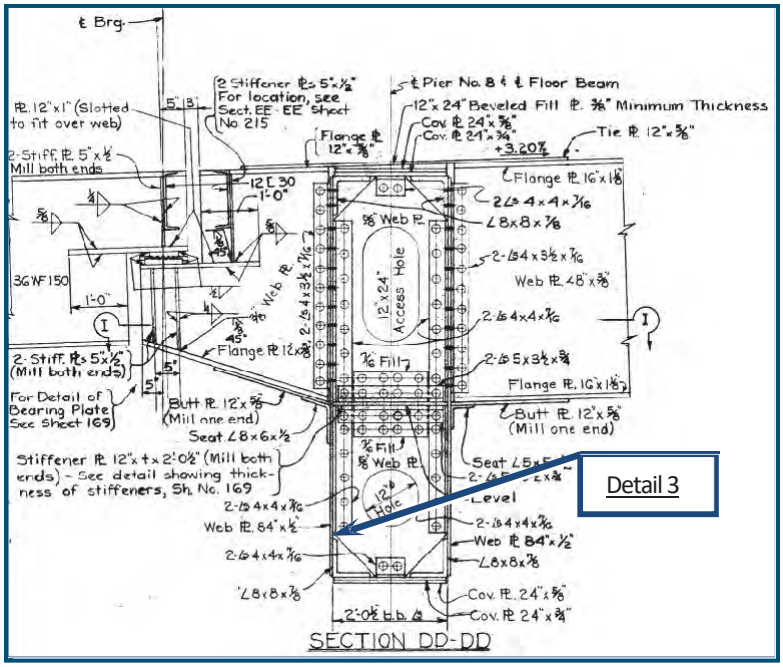


Figure 17 – Section through Pier Cap 8

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

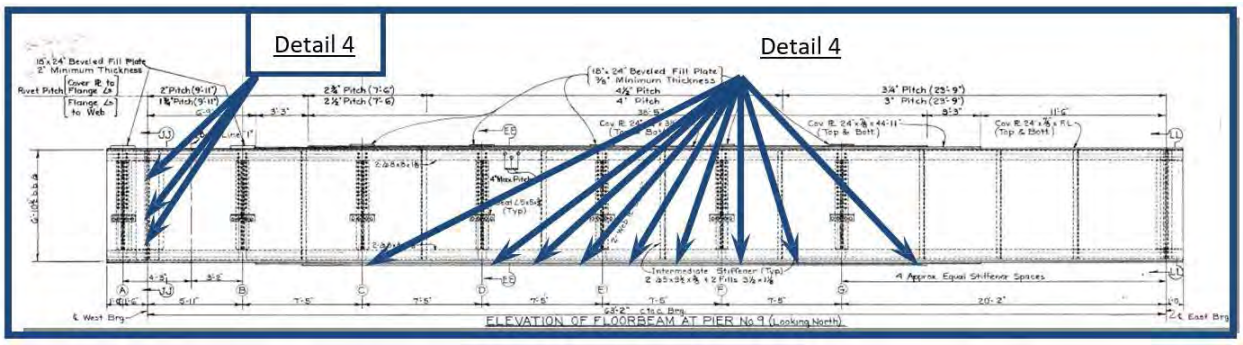


Figure 18 – Elevation of Pier Cap 9

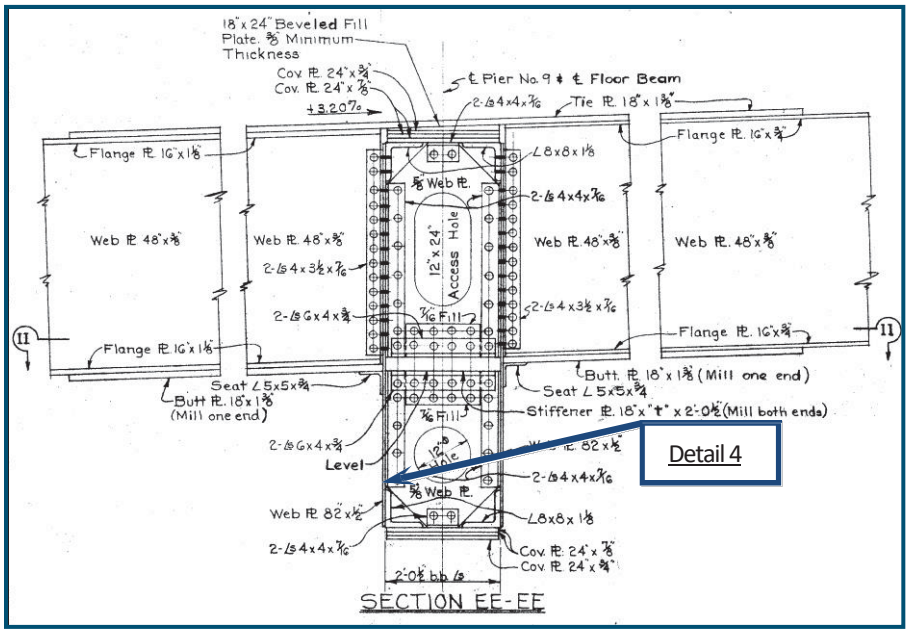


Figure 19 – Section through Pier Cap 9

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)

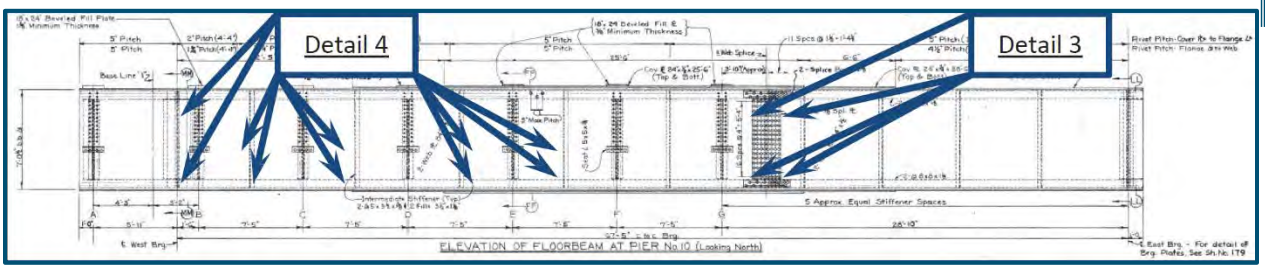


Figure 20 – Elevation of Pier Cap 10

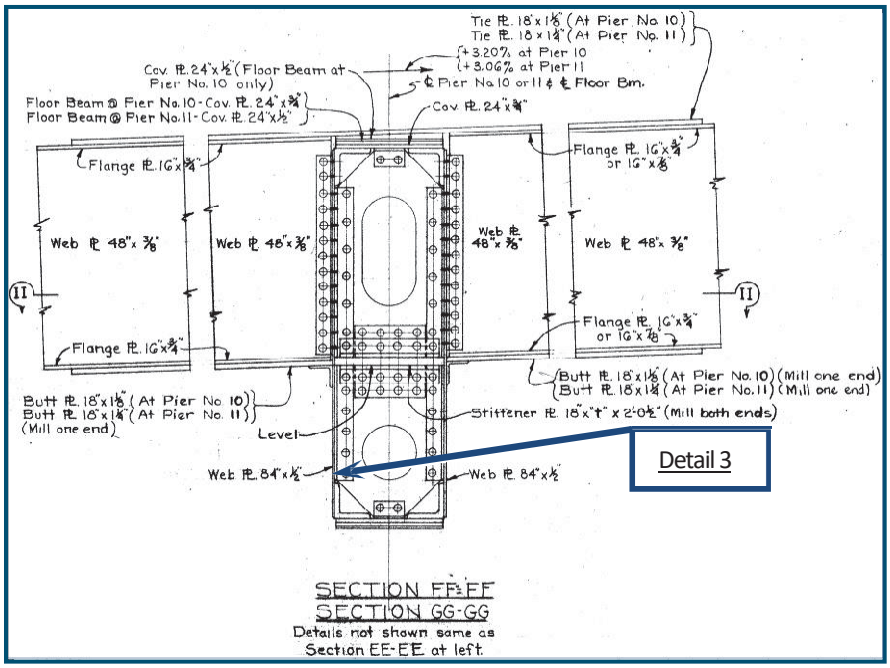


Figure 21 – Section through Pier Cap 10

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)

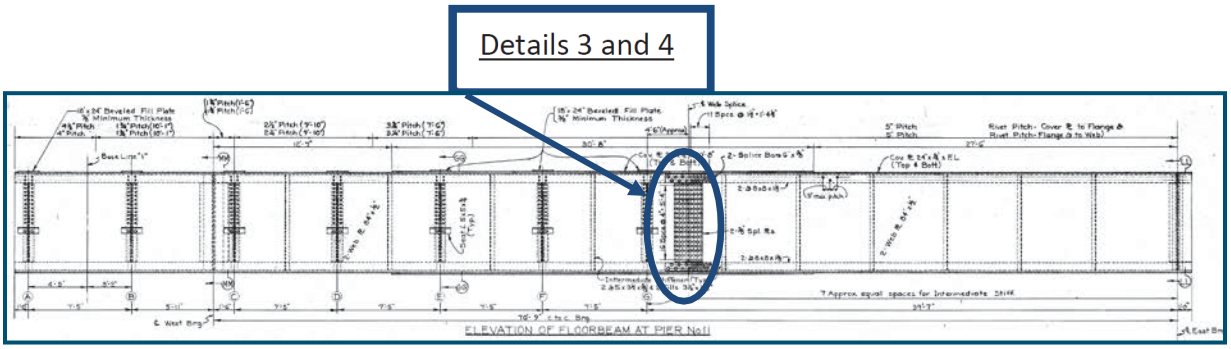


Figure 22 – Elevation of Pier Cap 11

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)

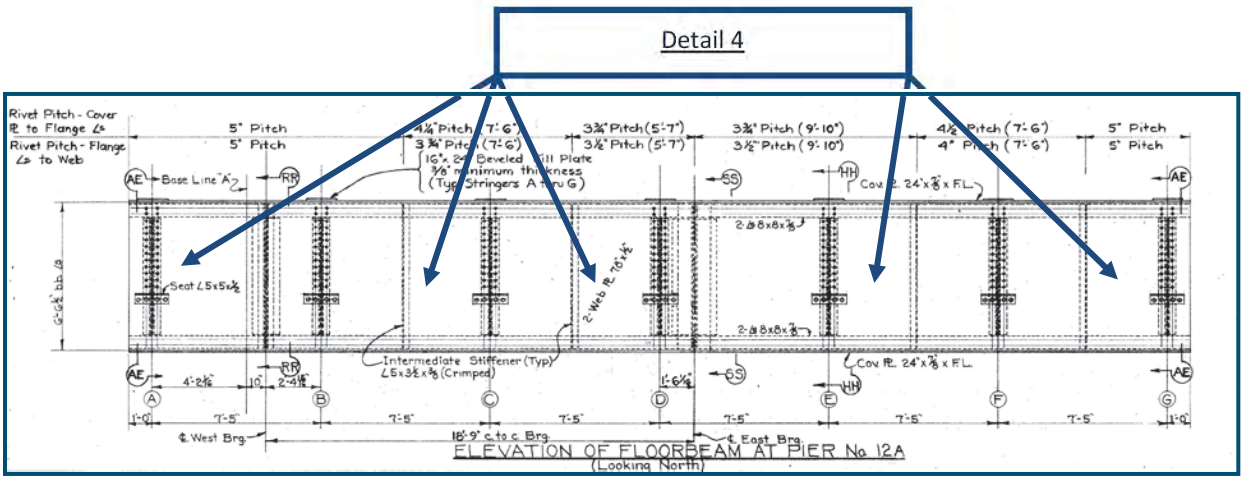


Figure 23 – Elevation of Pier Cap 12A

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)

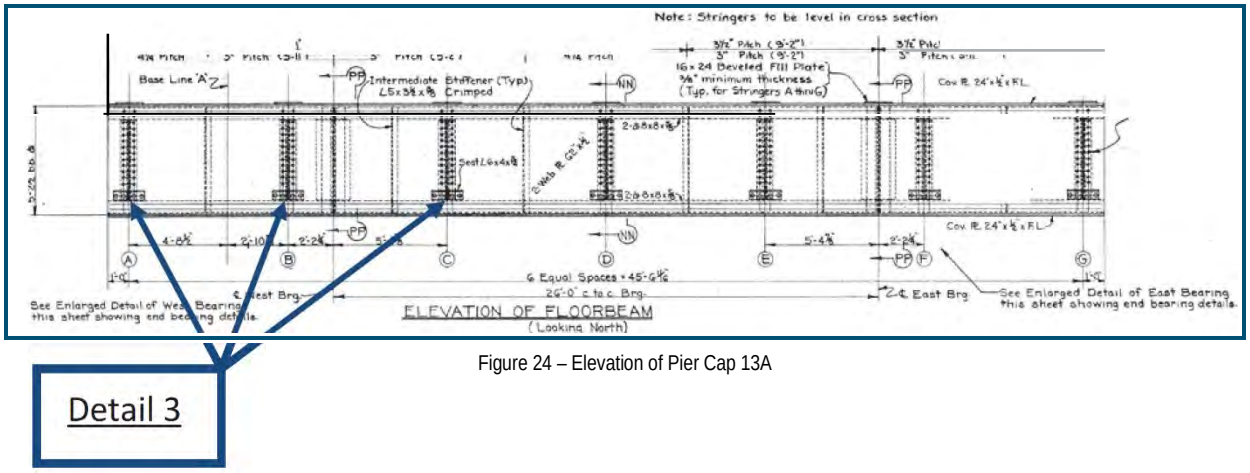


Figure 24 – Elevation of Pier Cap 13A

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

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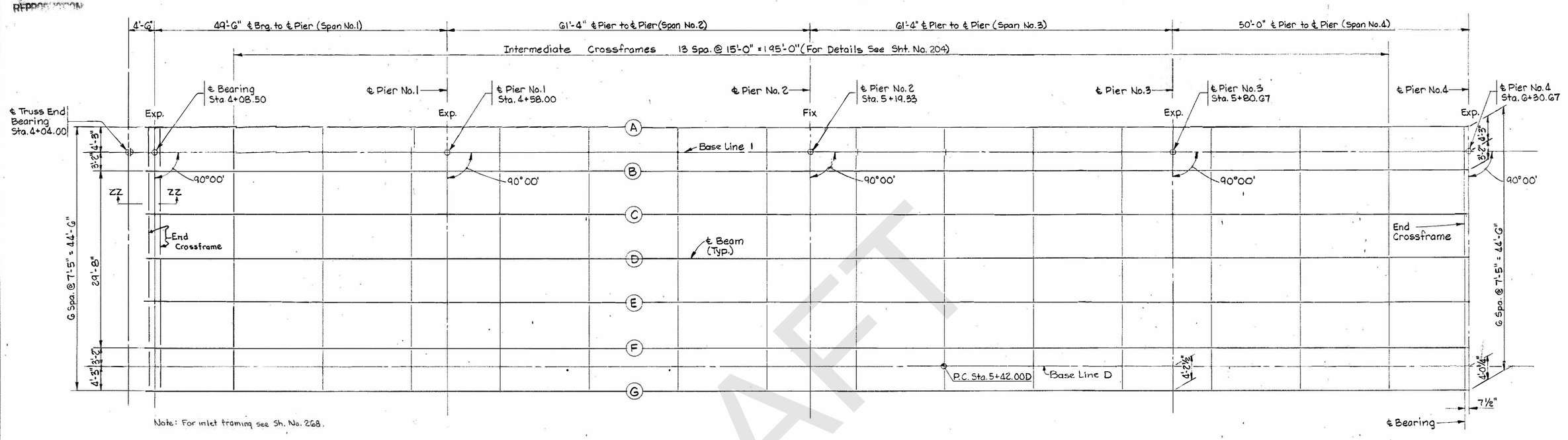
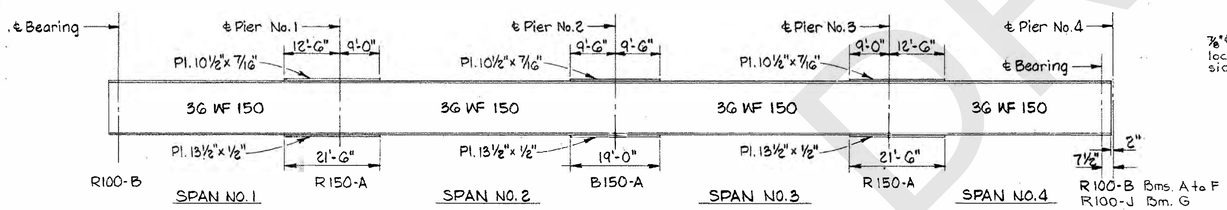


Note: For inlet framing see Sh. No. 268.

FRAMING PLAN - LOWER DECK UNIT 1



SIZE OF BEAMS AND COVER PLATES

DEAD LOAD DEFLECTIONS

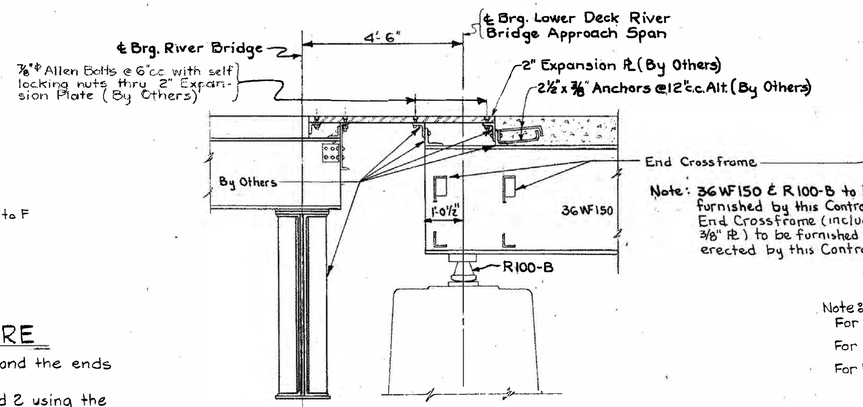
Location	Span No.1	Span No.2	Span No.3	Span No.4
Deflection Due To Weight Of Steel	0	1/16"	1/16"	0
Deflection Due To Remaining Dead Load	3/16"	3/16"	3/16"	3/16"

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

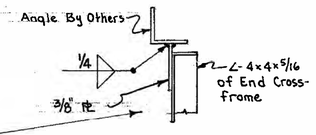
No camber required for beams in Unit 1 (Lower Deck).

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



SHOWING LOCATION OF END CROSSFRAME

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

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

HAZELET & ERDAL
CONSULTING ENGINEERS
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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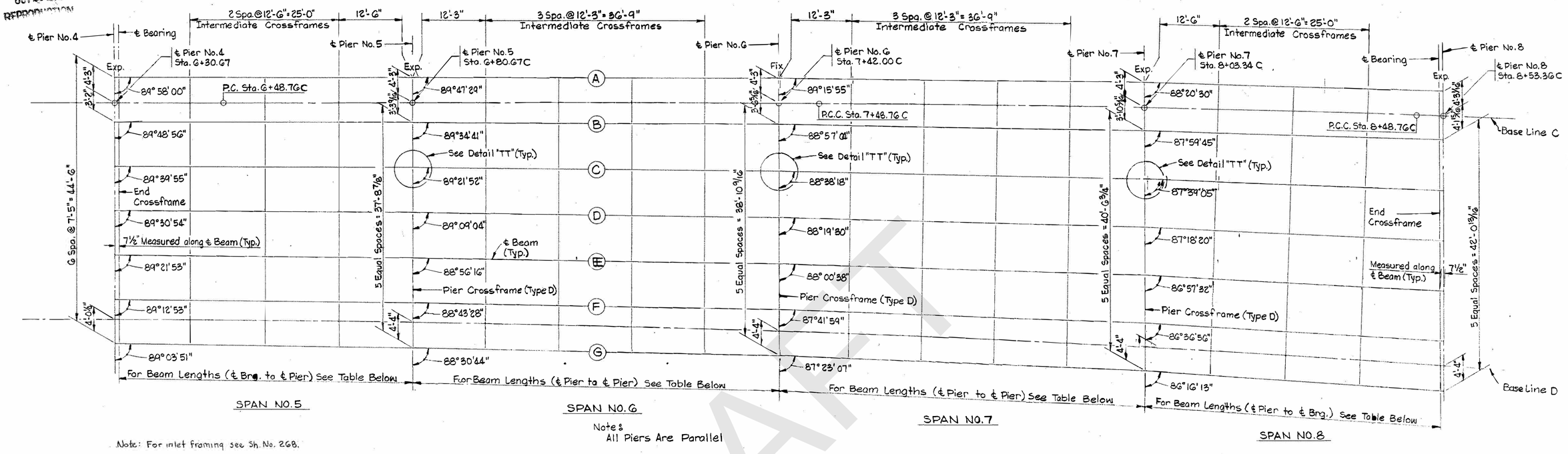
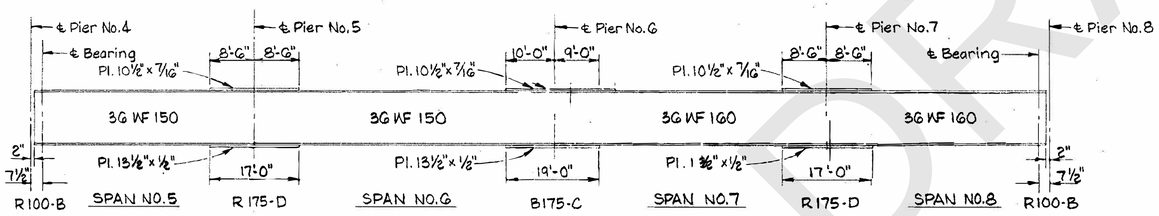


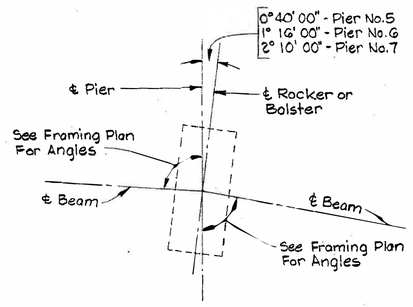
Note: For inlet framing see Sh. No. 268.

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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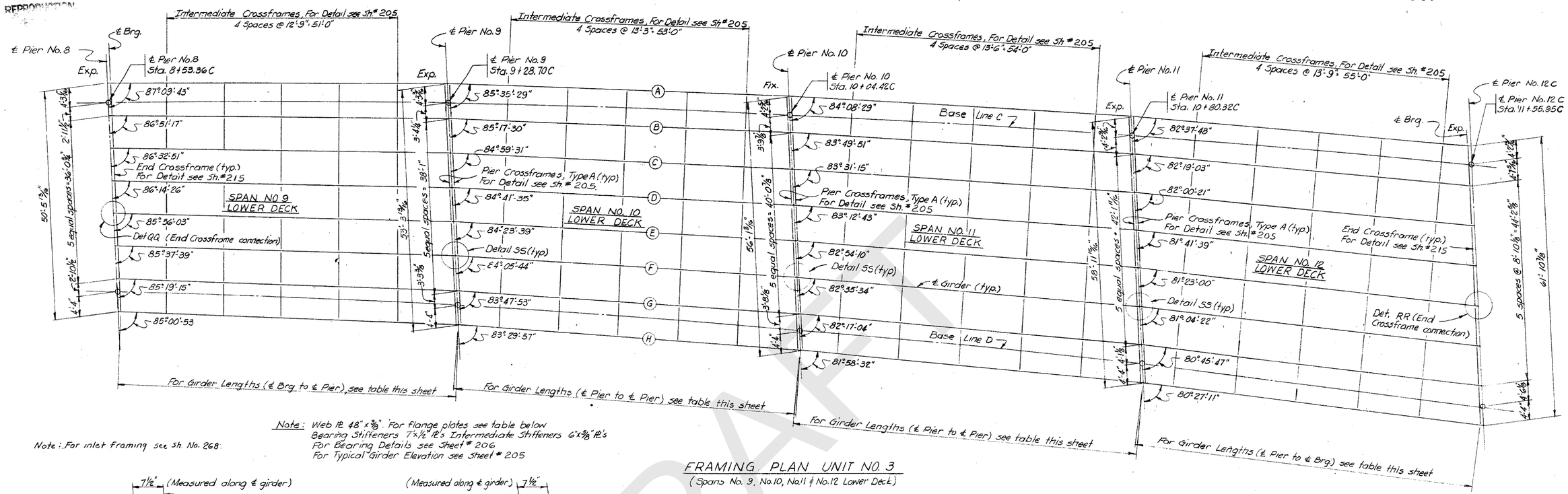
Note: Piers No 8, No.9, No.10, No11 & No. 12 are parallel to each other.

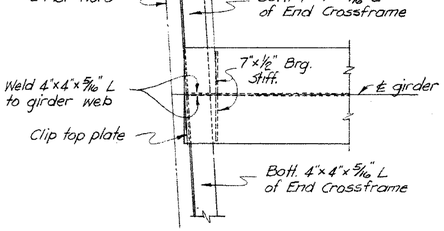


Note: Web Pl. 48"x 3/8". For flange plates see table below
Bearing Stiffeners 7"x 1/2" Pl's Intermediate Stiffeners 6"x 3/8" Pl's
For Bearing Details see Sheet # 206
For Typical Girder Elevation see Sheet # 205

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

FRAMING PLAN UNIT NO. 3

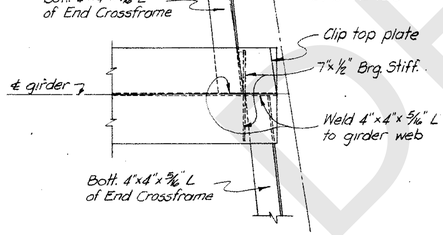
(Spans No. 9, No.10, No.11 & No.12 Lower Deck)



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.

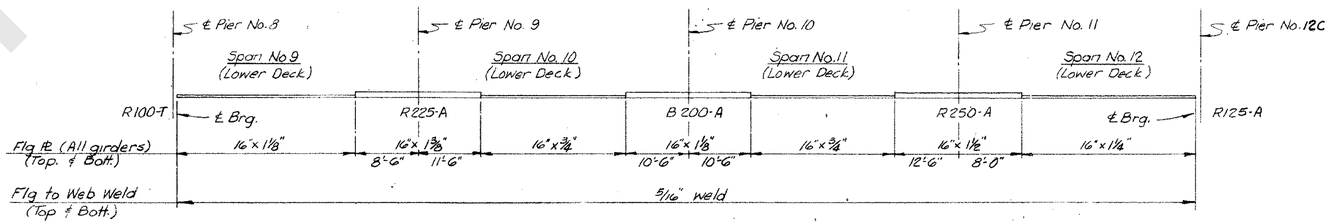


TABLE OF FLANGE PLATES AND WELD SIZE

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 3/16"	75'-2 1/16"	75'-2 3/4"	75'-3 3/16"	75'-4 5/16"	75'-5 1/8"

Work this sheet with Sheet No. 192

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CINCINNATI, OHIO

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	M.A.E. 10-14-60	

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

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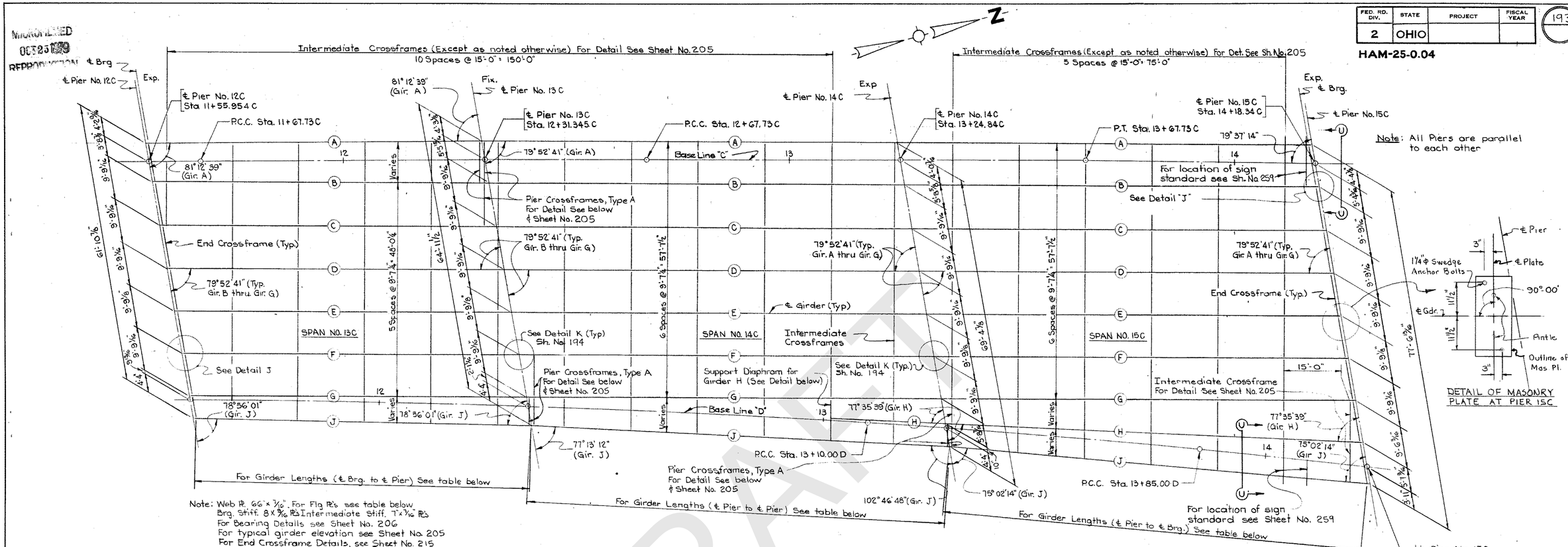
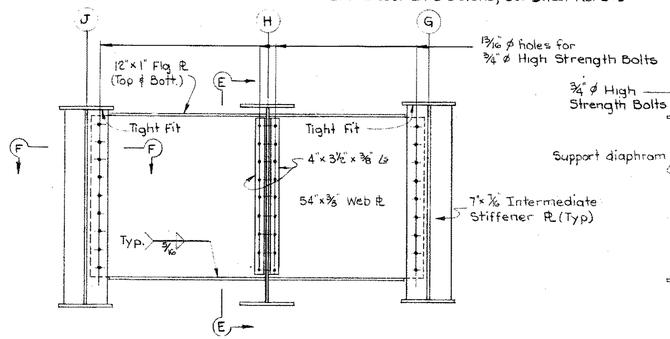
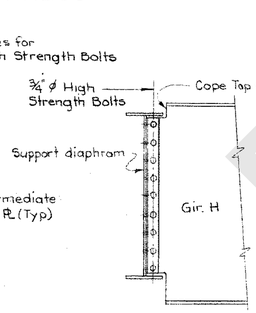


Note: Web Pl. 66"×⅞". For Flg Pl's see table below.
Brg. Stiff. 8"×⅝" Pl's Intermediate Stiff. 7"×⅜" Pl's
For Bearing Details see Sheet No. 206
For typical girder elevation see Sheet No. 205
For End Crossframe Details, see Sheet No. 215

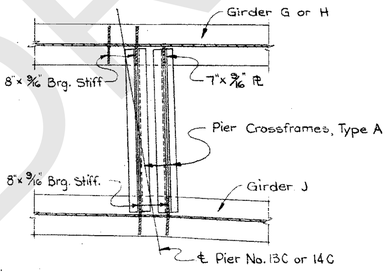
FRAMING PLAN UNIT NO. 13
(Spans No. 13C, 14C & 15C)



DETAIL OF SUPPORT DIAPHRAM FOR GIRDER "H"

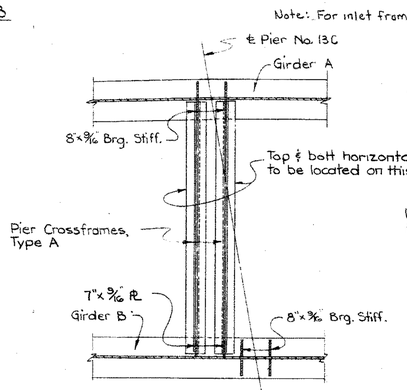


SECTION E-E

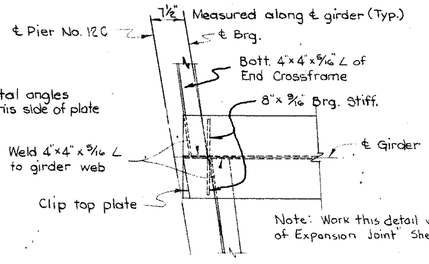


PIER CROSSFRAME CONNECTIONS BETWEEN GIRDERS "G" & "J" AT PIER NO. 13C
BETWEEN GIRDERS "H" & J AT PIER NO. 14C

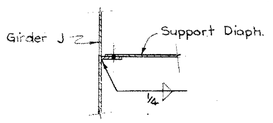
Note: For inlet framing see Sh. No. 268



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)



SECTION F-F

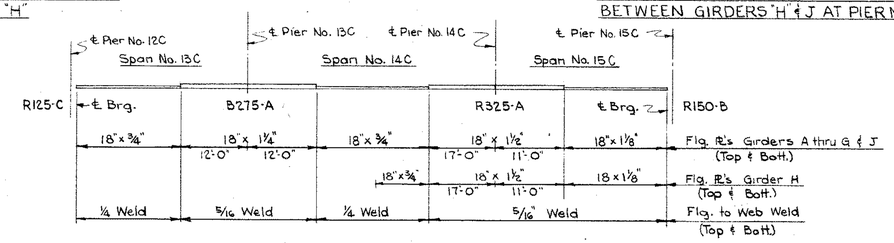


TABLE OF FLANGE PLATES AND WELD SIZES

TABLE OF GIRDER LENGTHS

Girders	Span No. 13C	Span No. 14C	Span No. 15C
A	74'-9⅛"	93'-6⅞"	92'-9⅛"
B thru G	75'-0⅝"	93'-6⅞"	92'-9⅛"
H		*	93'-6⅝"
J	75'-3⅞"	94'-5⅛"	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

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

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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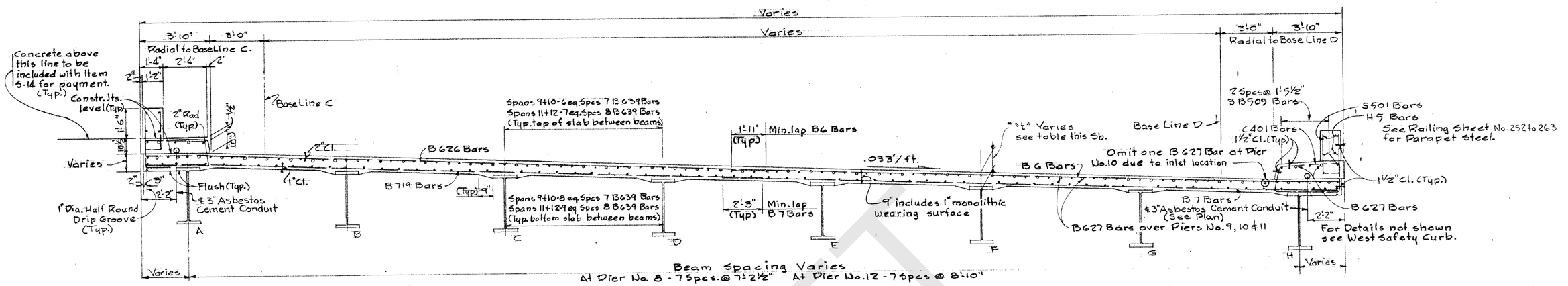
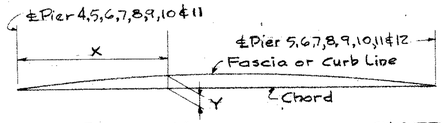


•Indicates bars in section.
○Indicates bars over piers.
*See Sh. No. 216 for note.

TRANSVERSE SECTION UNIT 3 LOWER DECK



CHORD OFFSETS

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

	Beam Location	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 1/2"	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 3/8"	2 3/4"	28'-3 3/8"	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 3/8"	1 1/4"	9'-5 3/8"	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"

HAZELET & ERDAL
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CINCINNATI, OHIO

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		

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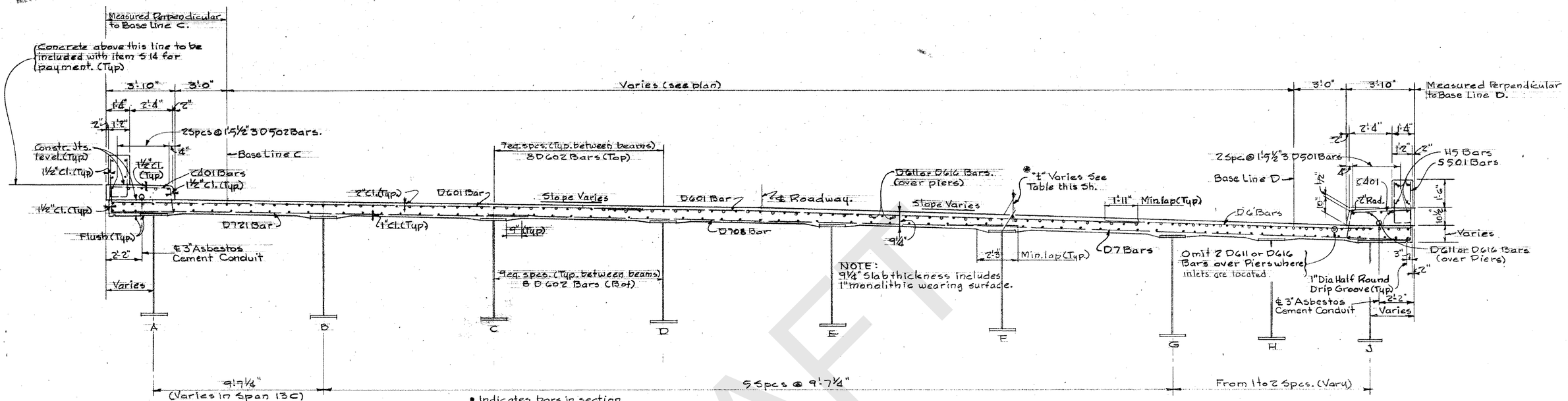

TRANSVERSE SECTION
(TYPICAL FOR UNIT 13)

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"
SPAN 13C — 1/4 Pt.	10 1/8"	10 1/2"	10 1/2"	10 1/2"	10 3/8"	10 3/8"	10 3/8"		11 3/8"
SPAN 13C — ℄ Span	10 1/4"	10 3/8"	10 3/8"	10 3/8"	10 3/4"	10 3/4"	10 3/4"		11 5/8"
SPAN 13C — 3/4 Pt.	10 1/8"	10 1/2"	10 1/2"	10 1/2"	10 1/2"	10 1/2"	10 3/8"		11 1/2"
SPAN 13C — ℄ 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"
SPAN 14C — 1/4 Pt.	10 1/8"	10 1/4"	↓	↓	10 1/8"	10"	10"		10 7/8"
SPAN 14C — ℄ Span	10 1/8"	10 3/8"			10 1/4"	10 1/4"	10 1/8"		11"
SPAN 14C — 3/4 Pt.	9 7/8"	10 1/4"	↓	↓	10 1/4"	10 1/4"	10 1/4"		11"
SPAN 14C — ℄ 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"
SPAN 15C — 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 15C — ℄ 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"
SPAN 15C — 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"
SPAN 15C — ℄ 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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CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNIT NO. 13.

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

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

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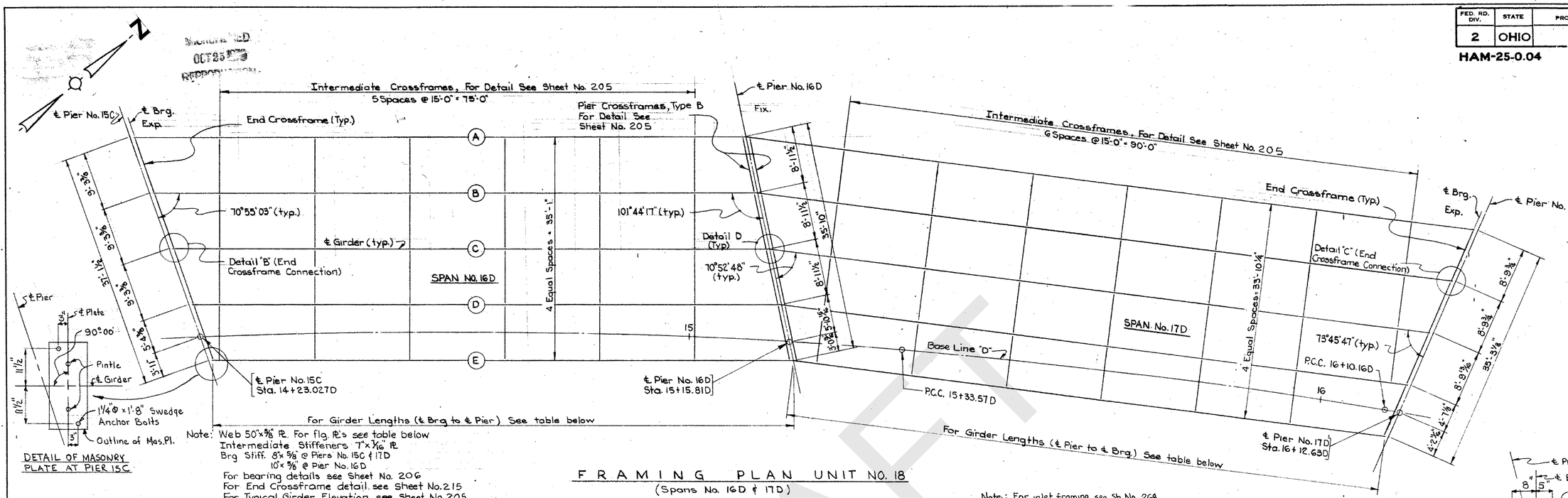


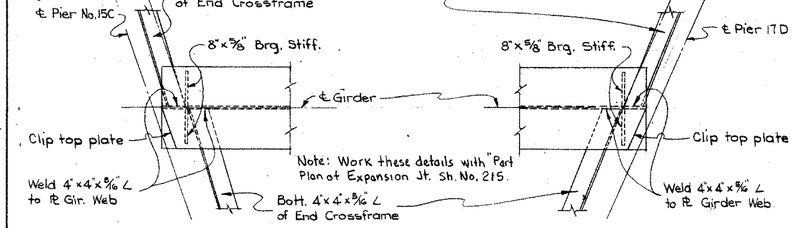
DETAIL OF MASONRY PLATE AT PIER 15C

Note: Web 50"x⅜" PL. For flg. PL's see table below
Intermediate Stiffeners 7"x⅜" 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

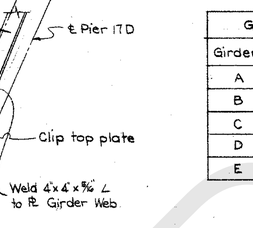
FRAMING PLAN UNIT NO. 18

(Spans No. 16D & 17D)

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



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 3/16"

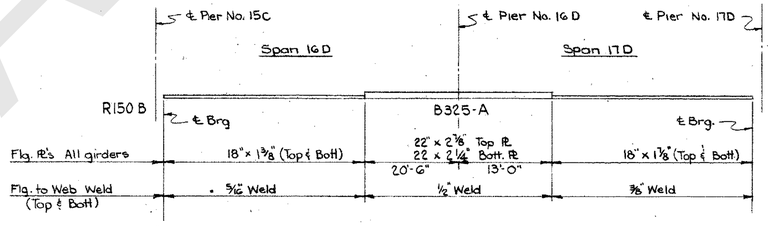
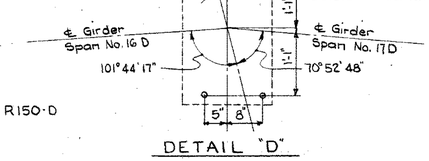


TABLE OF FLANGE PLATES AND WELD SIZES



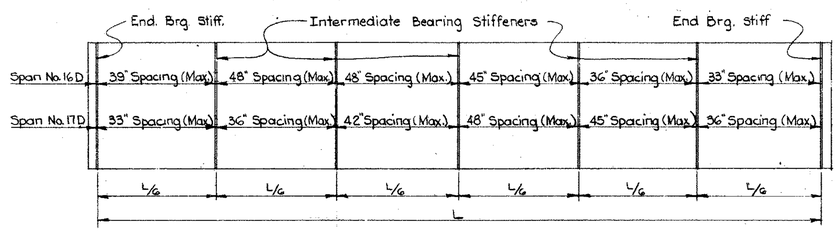
DETAIL "D"

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 - 3¾", 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.

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"	1/16" –	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"	11/16" 5/16"	⅞"	1 13/16" 1¼"	½"	1" 13/16"	⅜"	¾" ⅝"	5/16"	⅝" ½"	3/16"	½" 7/16"
Convexity (See note below)	1⅛"	1 3/4" 1⅜"	13/16"	1 7/16" 1 1/16"	15/16"	1 7/16" 1 1/16"	15/16"	1 7/16" 1⅛"	1¼"	1 13/16" 1 3/8"	2 5/16"	3 1/8" 2 13/16"	15/16"	1⅞" 1⅛"	⅞"	1 7/16" ⅝"	11/16"	1 13/16" 9/16"	13/16"	2 1/16" 1⅜"
Sum of deflection and convexity	1¾"	2⅜" 1 7/16"	1 13/16"	2 1/16" 1 4/16"	1½"	2 1/16" 1 5/16"	1 1/2"	2⅛" 1⅜"	1 15/16"	2⅝" 1¾"	3 3/16"	5 3/16" 4 7/16"	1 11/16"	3" 1 13/16"	1 7/16"	2½" 1½"	1⅛"	2 1/16" 1¼"	1 11/16"	2¾" 1 15/16"
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

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS UNIT NO. 18

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

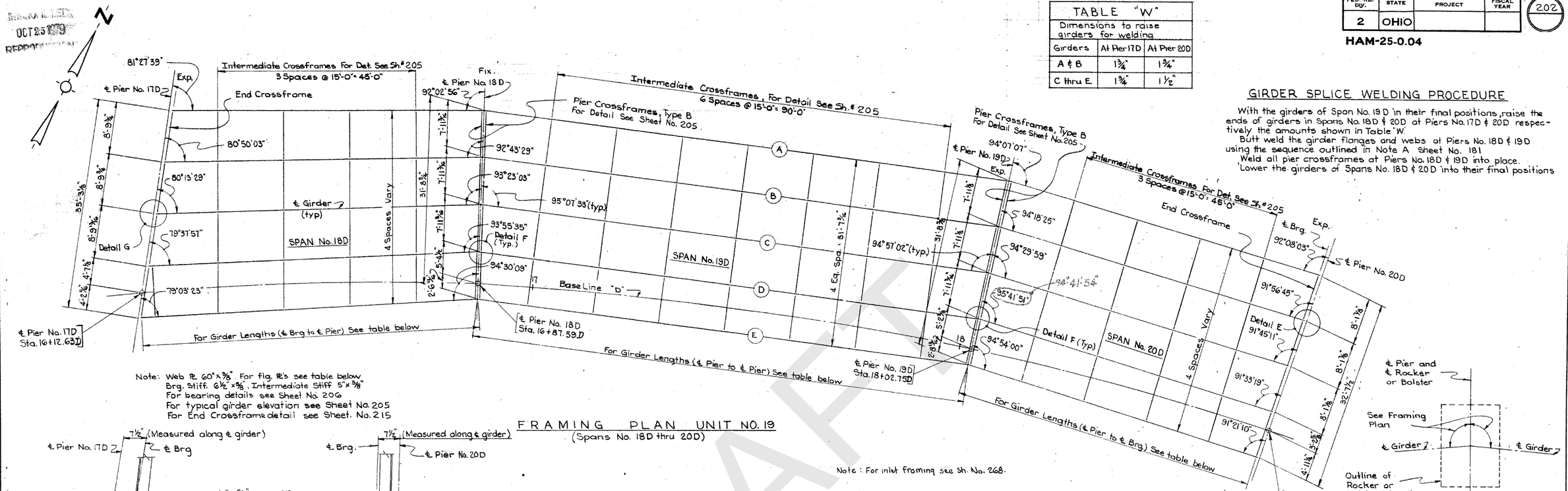
GIRDER SPLICE WELDING PROCEDURE

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.

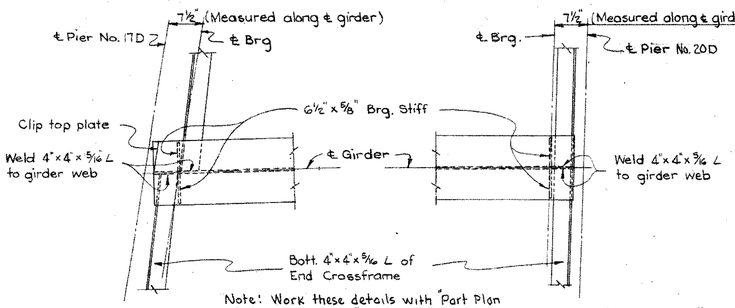
Lower the girders of Spans No. 18D & 20D into their final positions



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.

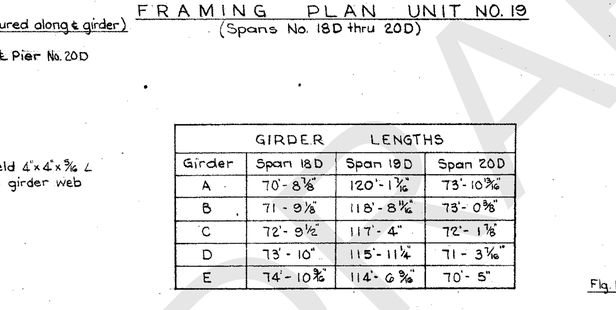


Note: Work these details with "Part Plan of Expansion Joint" Sheet No. 215

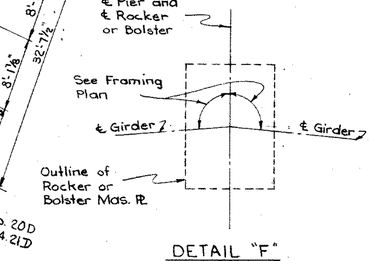
DETAIL "G"
(End Crossframe Connection)
(at Pier 17D, Span 18D)

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

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"



INTERMEDIATE STIFFENER SPACING
(Span No. 19D)



DETAIL "F"

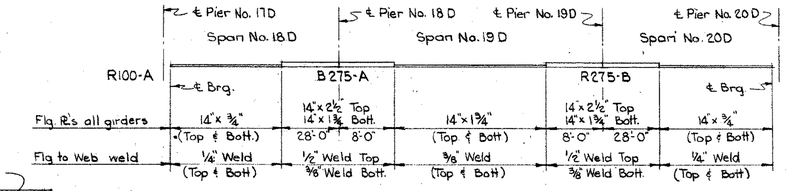
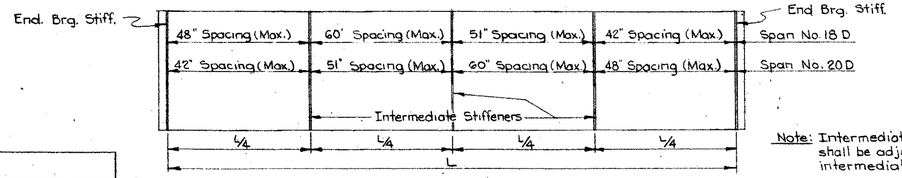


TABLE OF FLANGE PLATES AND WELD SIZES



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

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

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

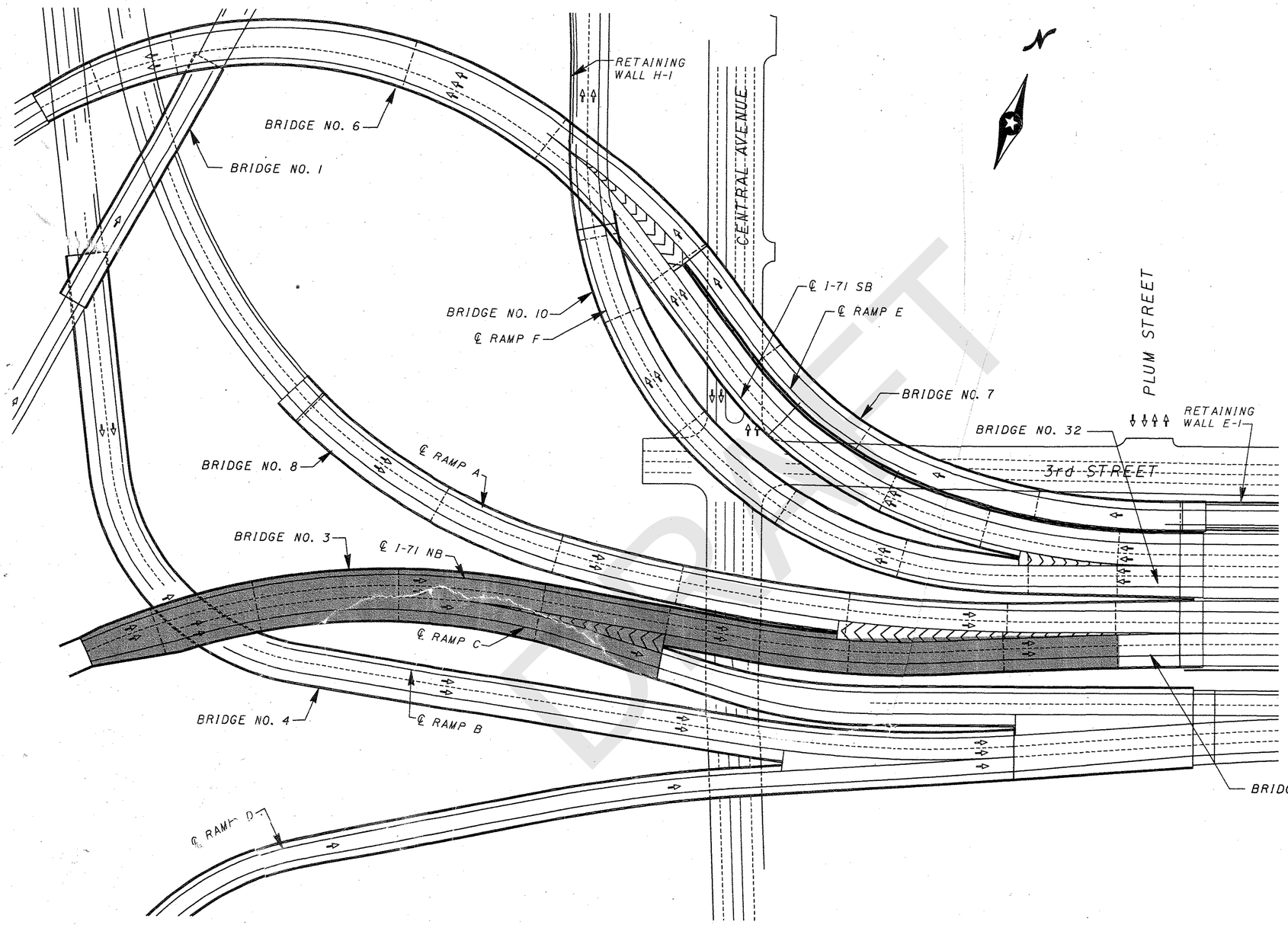
Span	18D										19D										20D									
Girder	A			B			C			D			E			A			B			C			D			E			
Location	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to weight of steel	0	-1/16"	-1/16"	0	0	-1/16"	0	0	-1/16"	0	0	-1/16"	0	0	-1/16"	3/16"	5/16"	3/16"	3/16"	5/16"	3/16"	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"	7/8"	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"	-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"	9/16"	2¼"	2 5/8"	2 1/4"	1 13/16"	1 1/16"	1 9/16"	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 15/16"	2 5/16"	1 15/16"	1 1/16"	2 1/8"	1 1/16"	1 1/2"	2 1/4"	1 1/2"	2 1/4"	3 1/16"	2 1/4"	-3/16"	1/16"	0	-5/8"	-1 1/16"	-1/2"	-5/8"	-1 1/16"	-1/2"	-5/8"	-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	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

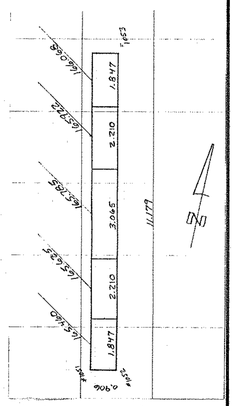
FINAL FOR CONSTRUCTION

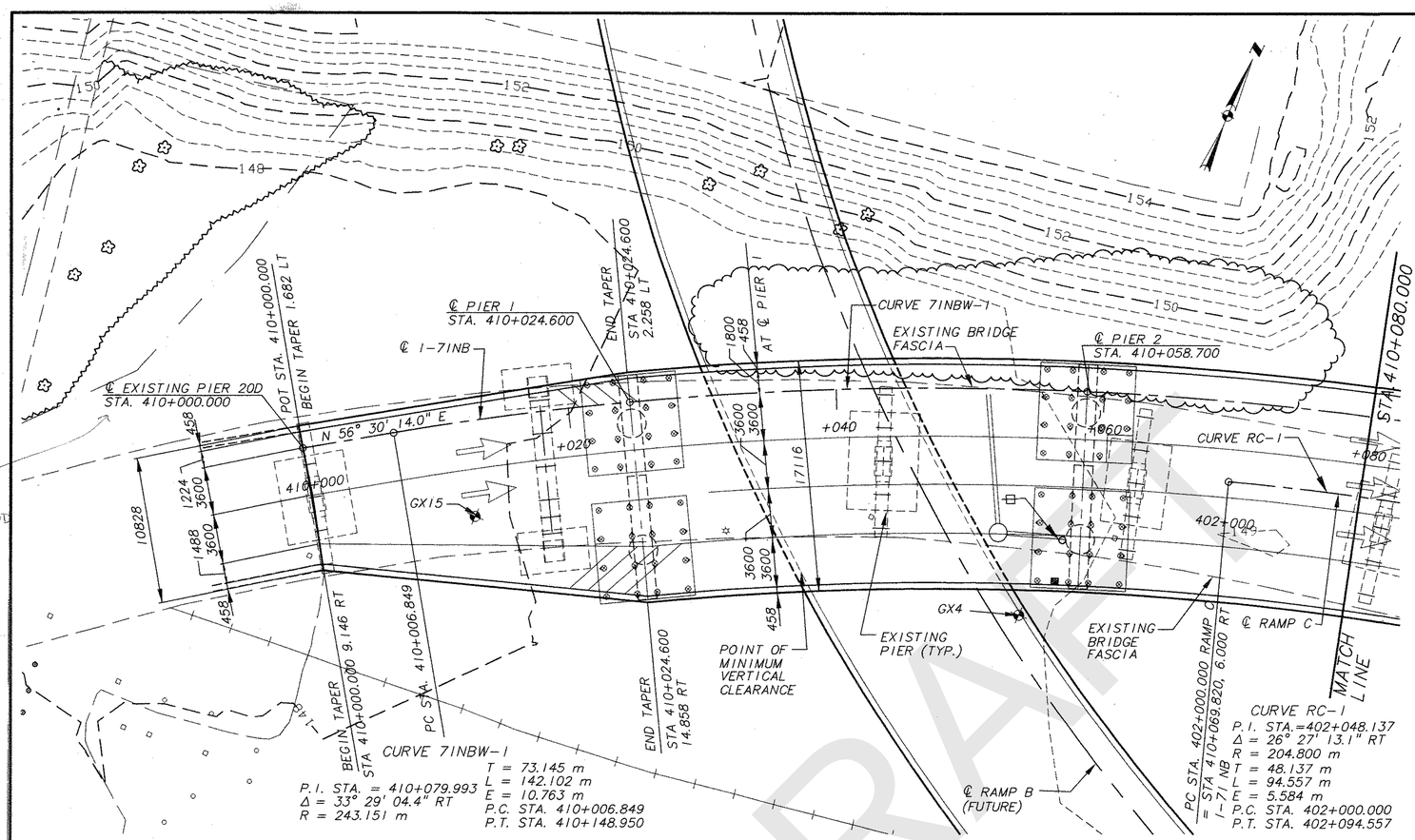
DEM GROUP BRW HAZELET & ERDAL A BRW COMPANY

TITLE SHEET

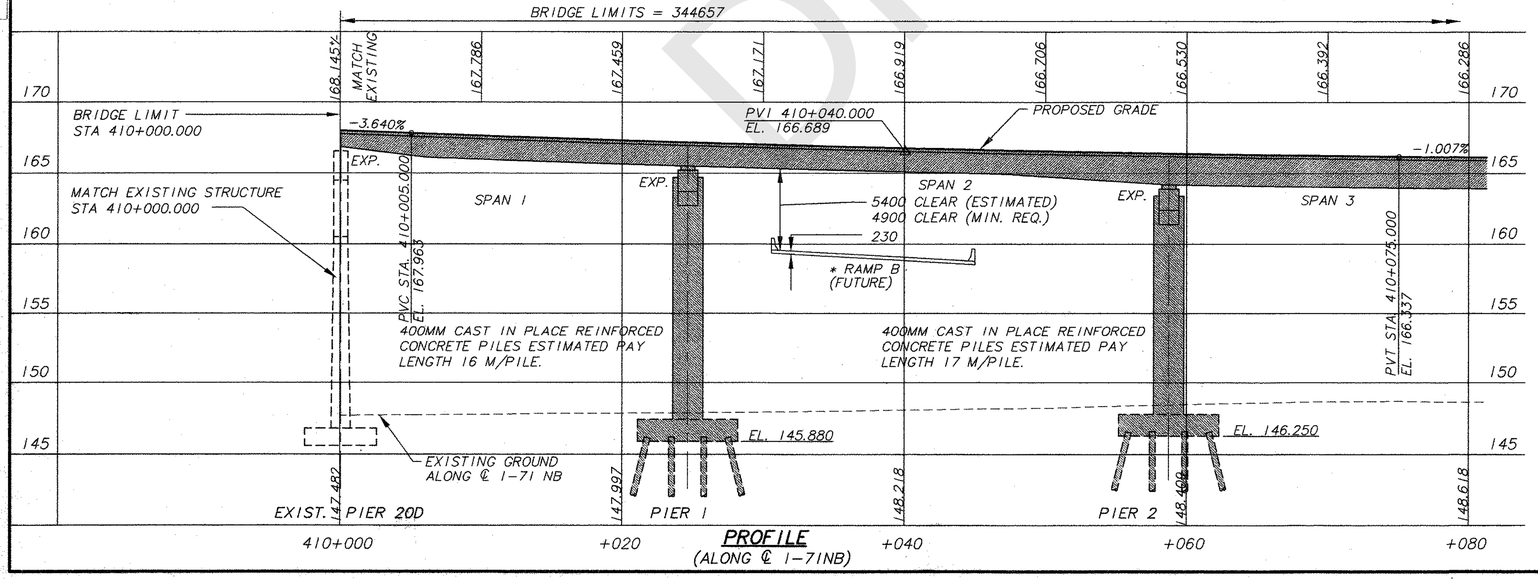
BRIDGE NO. 3

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





PLAN



PROFILE
(ALONG ℄ I-7INB)

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		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SWF/RAJ		BR3S1TE1	

SITE PLAN
I-71 NB

BRIDGE 3

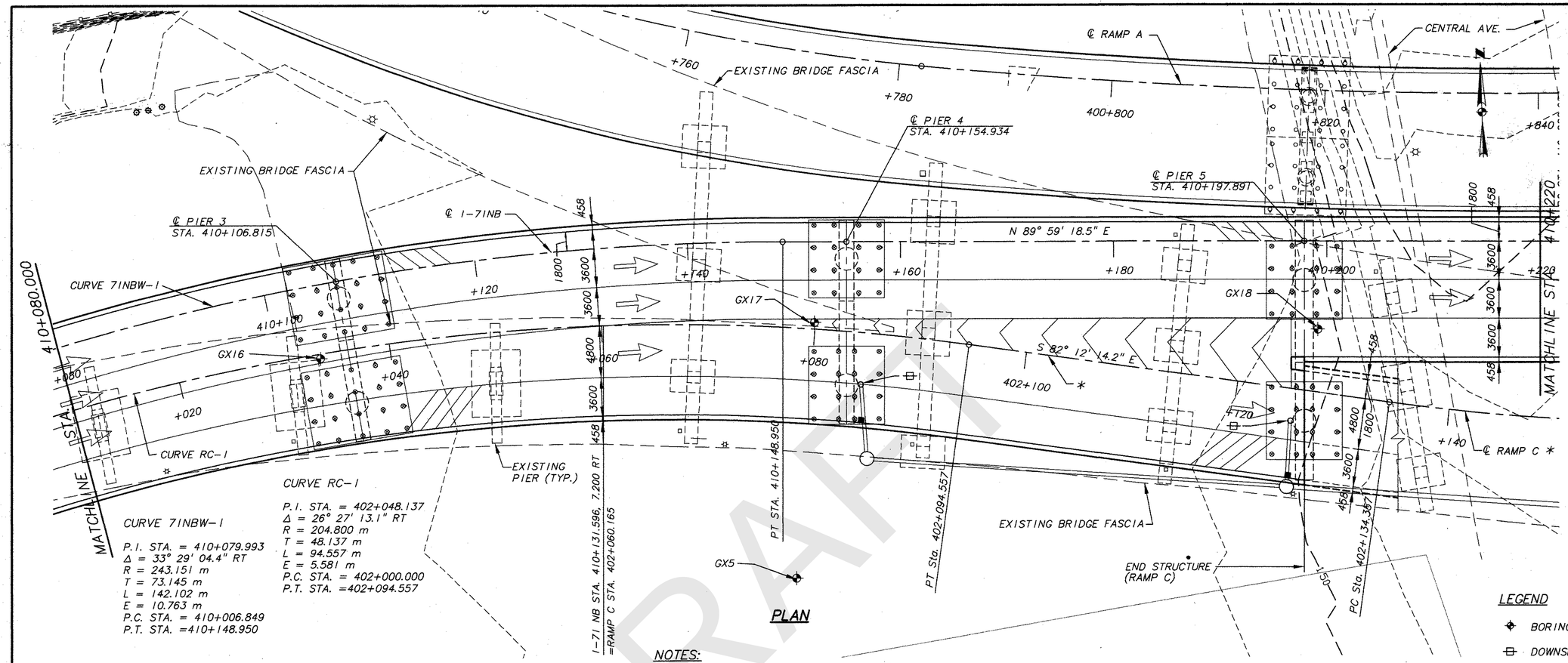
4/64

414/588

AUG 18 1998

8/18/98

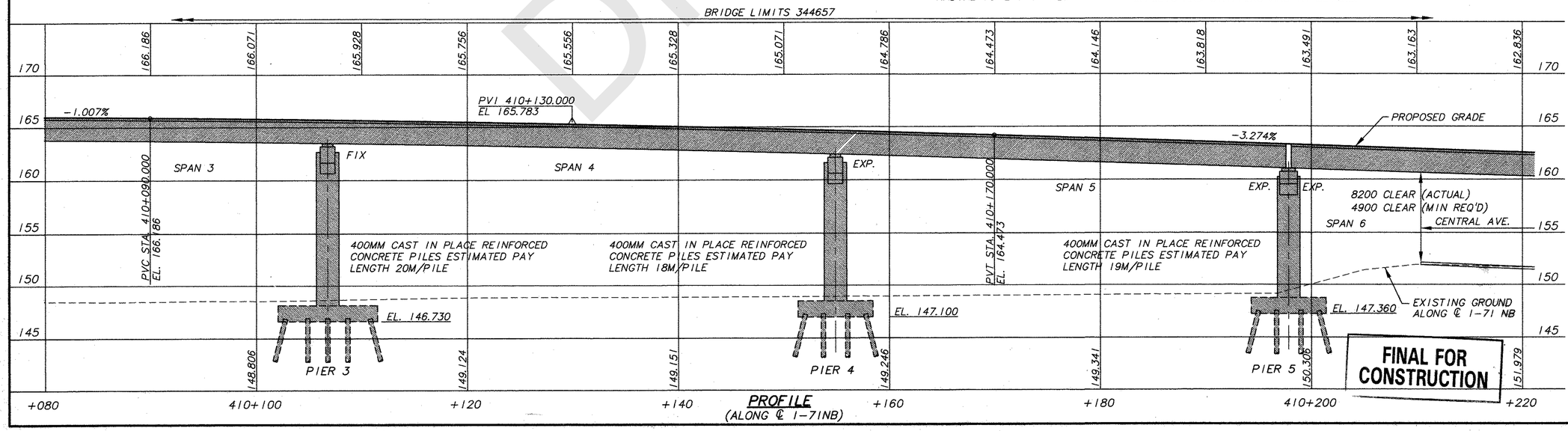
BR3S1TE1



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.

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



FINAL FOR CONSTRUCTION

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP

DESIGNED	DRAWN	REVIEWED	DATE
JP	SDS		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SF		BR3S1TE2	

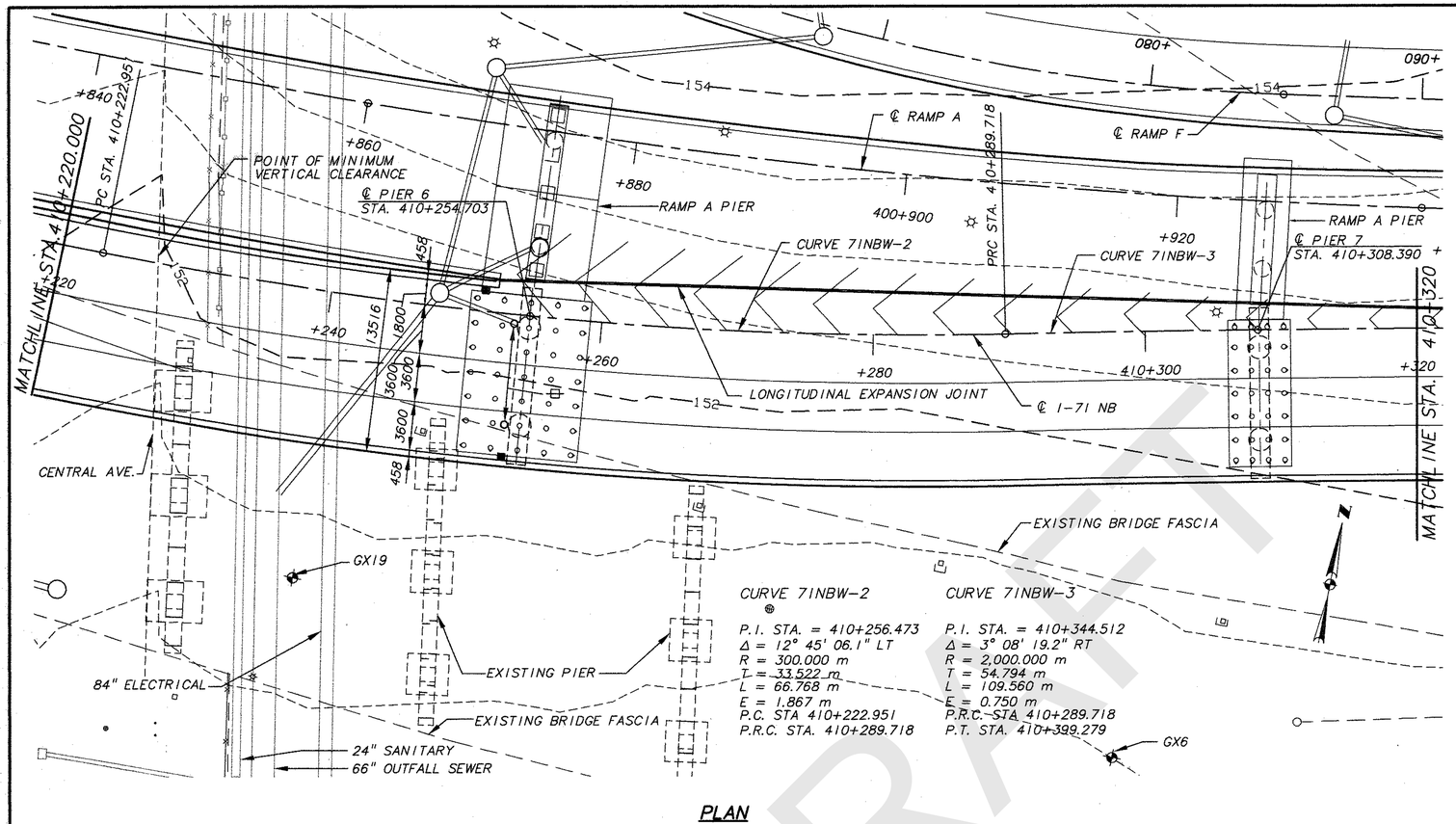
SITE PLAN
1-71 NB

BRIDGE 3

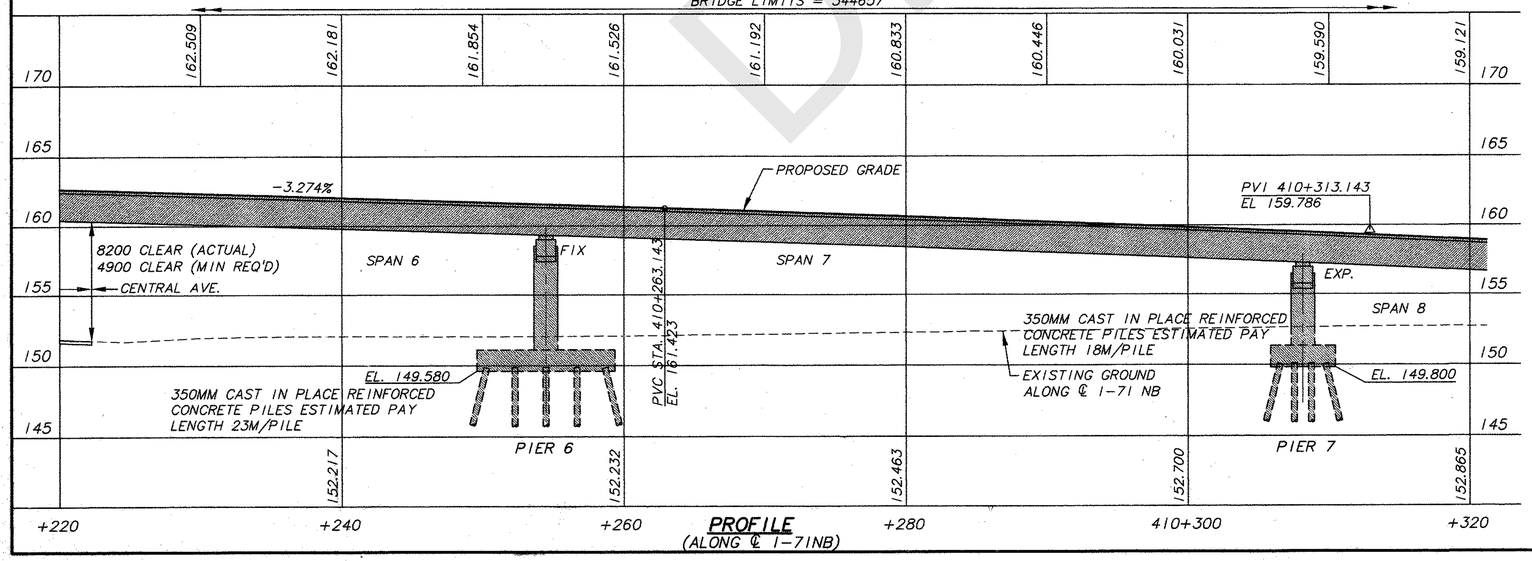
5/64

415/588

BR3S1TE2 7/16/98



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.

FINAL FOR CONSTRUCTION

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

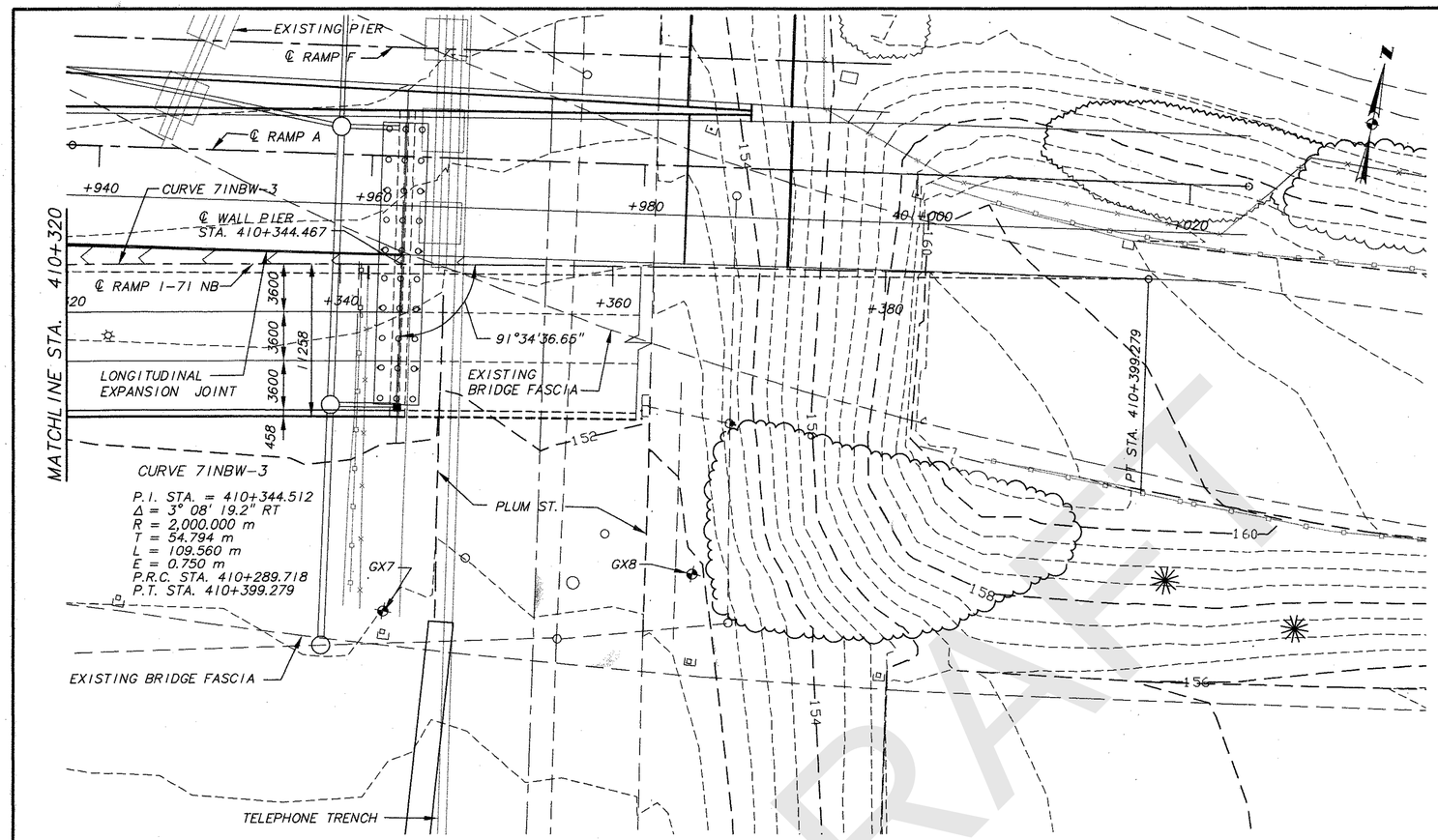
SITE PLAN
I-71 NB

BRIDGE 3

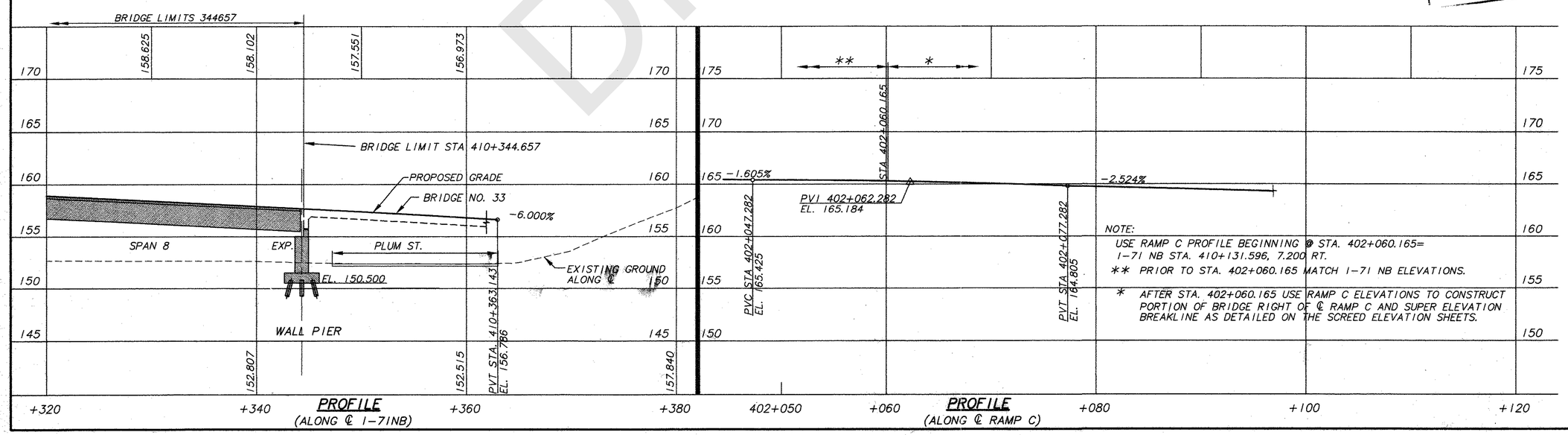
6/64

416/588

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	

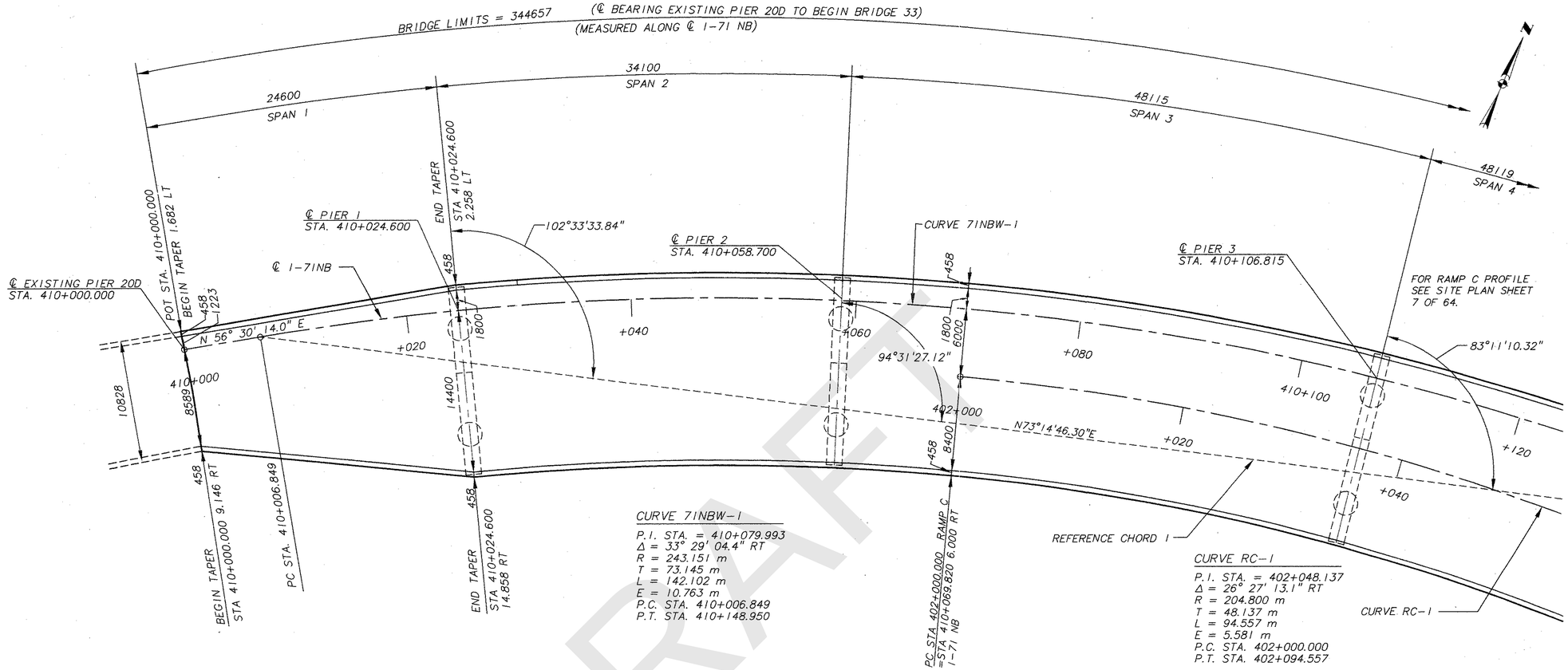
SITE PLAN
I-71 NB

BRIDGE 3

7/64

417/588

BR3SITE4 7/16/98



CURVE 71NBW-1

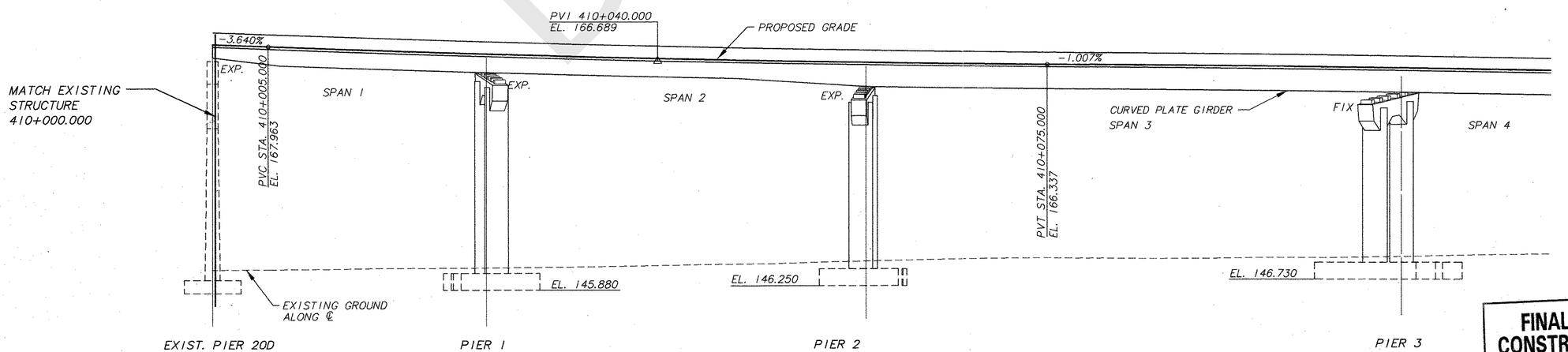
P.I. STA. = 410+079.993
Δ = 33° 29' 04.4" RT
R = 243.151 m
T = 73.145 m
L = 142.102 m
E = 10.763 m
P.C. STA. 410+006.849
P.T. STA. 410+148.950

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

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP

DESIGNED	DRAWN	REVIEWED	DATE
SWF	BKH		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAP/RAJ		BR3-GP1	

GENERAL PLAN
I-71 NB

BRIDGE 3

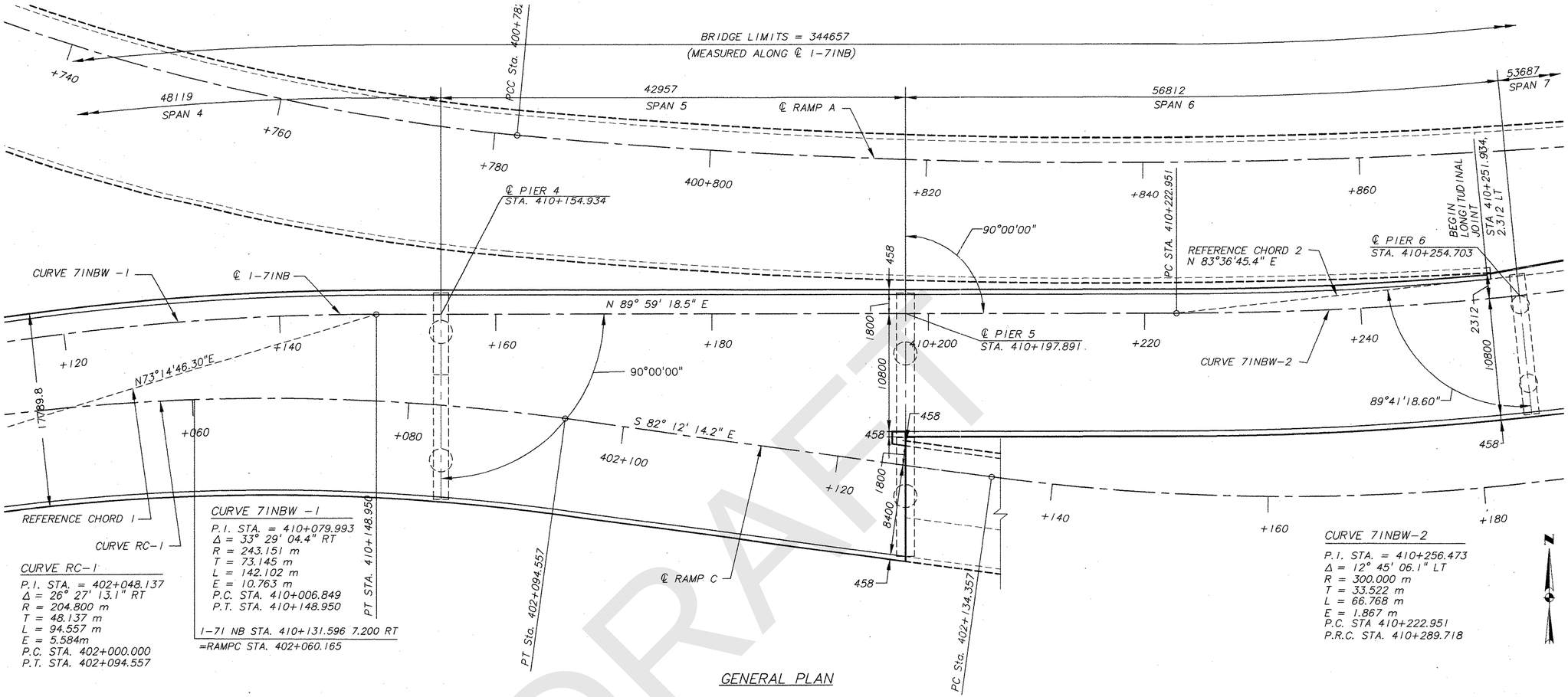
8/64

418/588

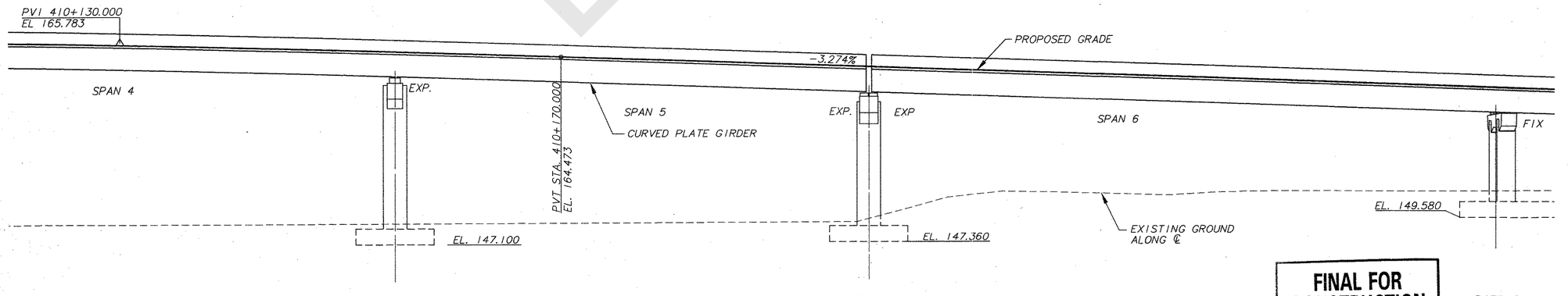
AUG 18 1998

8/18/98

BR3-GP1



GENERAL PLAN



ELEVATION

AUG 18 1998

8/18/98

BR3-GP2

DESIGN AGENCY
BRW HAZELET & ERDAL
A BRW COMPANY
DCM GROUP

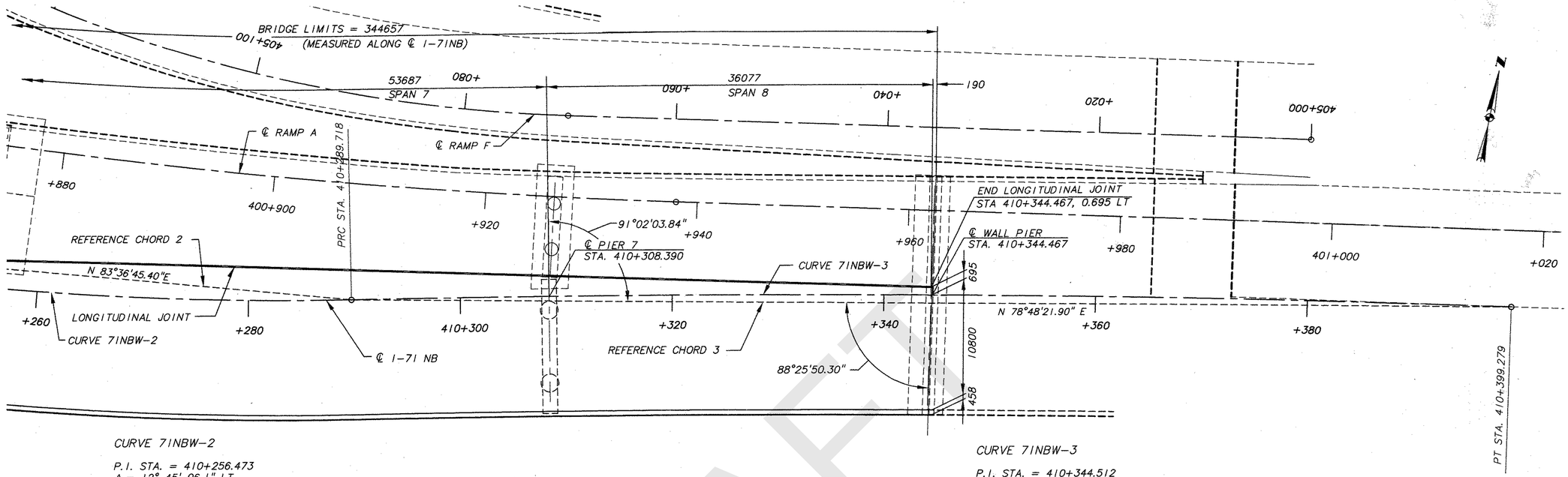
DESIGNED	DRAWN	DATE	STRUCTURE FILE NUMBER
SWF	BKH.		BR3-GP2
CHECKED	REVISED	REVISED	
JAP/RAJ			

GENERAL PLAN
I-71 NB

BRIDGE 3

9/64

419/588



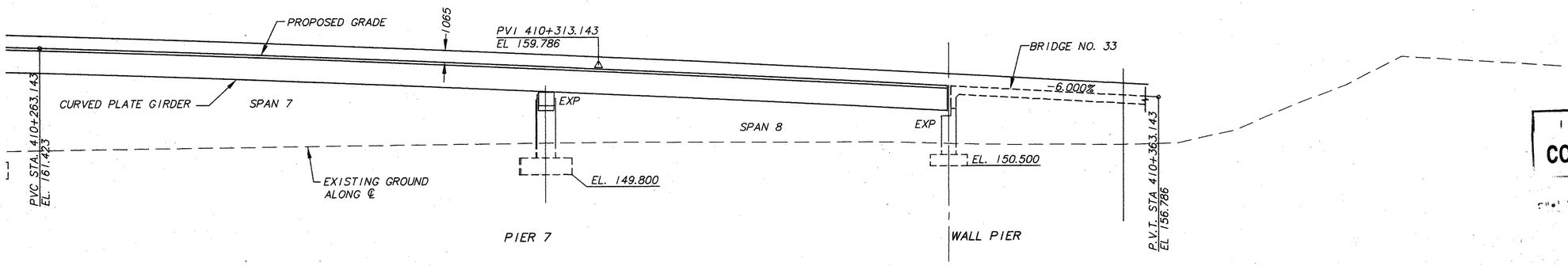
CURVE 71NBW-2

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
DESIGNED: SWF
DRAWN: BKH
CHECKED: JAP/RAJ
REVISED: ---
DATE: ---
REVIEWED: ---
STRUCTURE FILE NUMBER: BR3-GP3

GENERAL PLAN
I-71 NB

BRIDGE 3

10/64

420/588

BR3-GP3 7/8/98

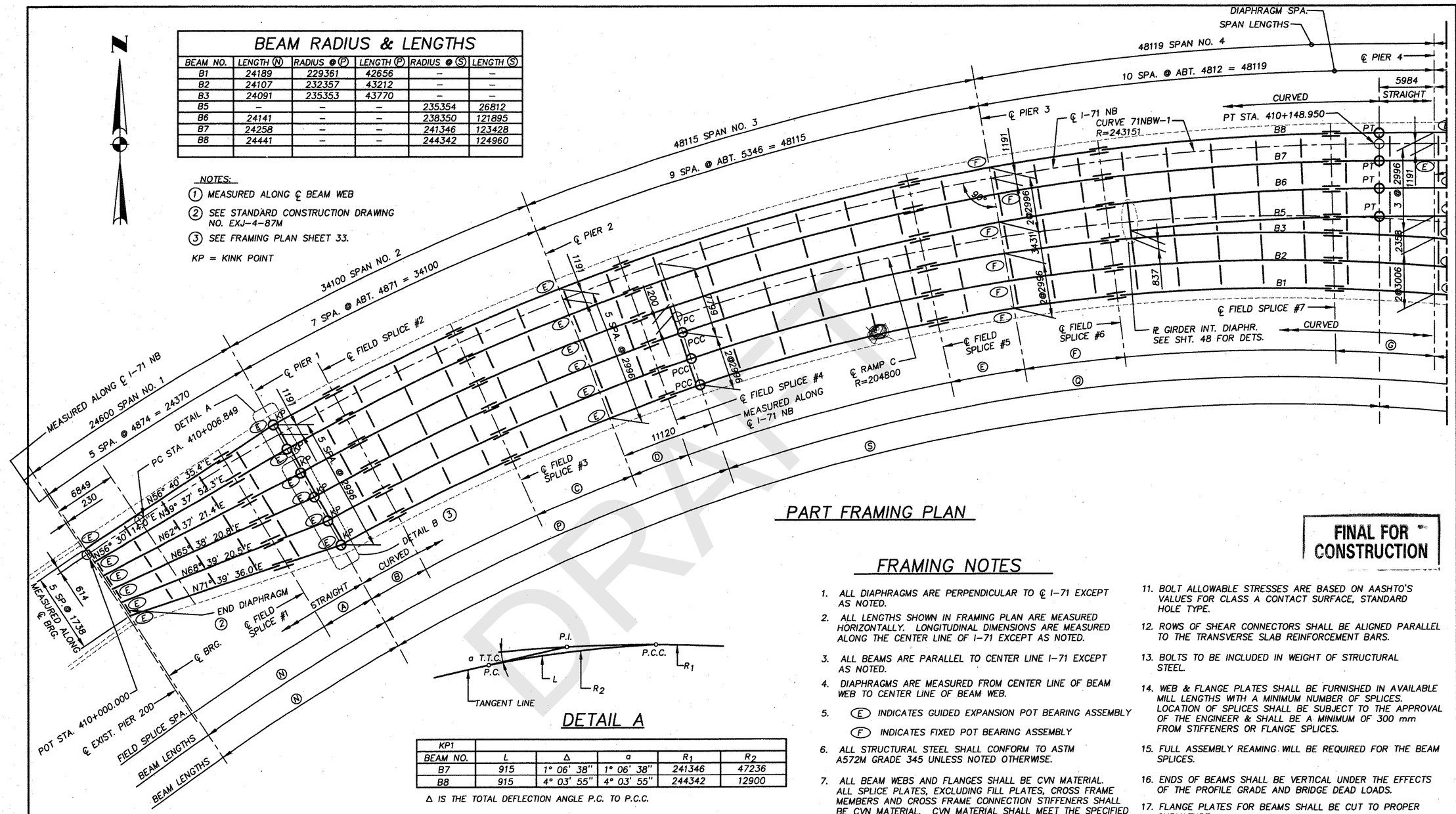
BEAM RADIUS & LENGTHS

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	α	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

AUG 19 1998

3-FRAME1.DWG 8-18-98

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.

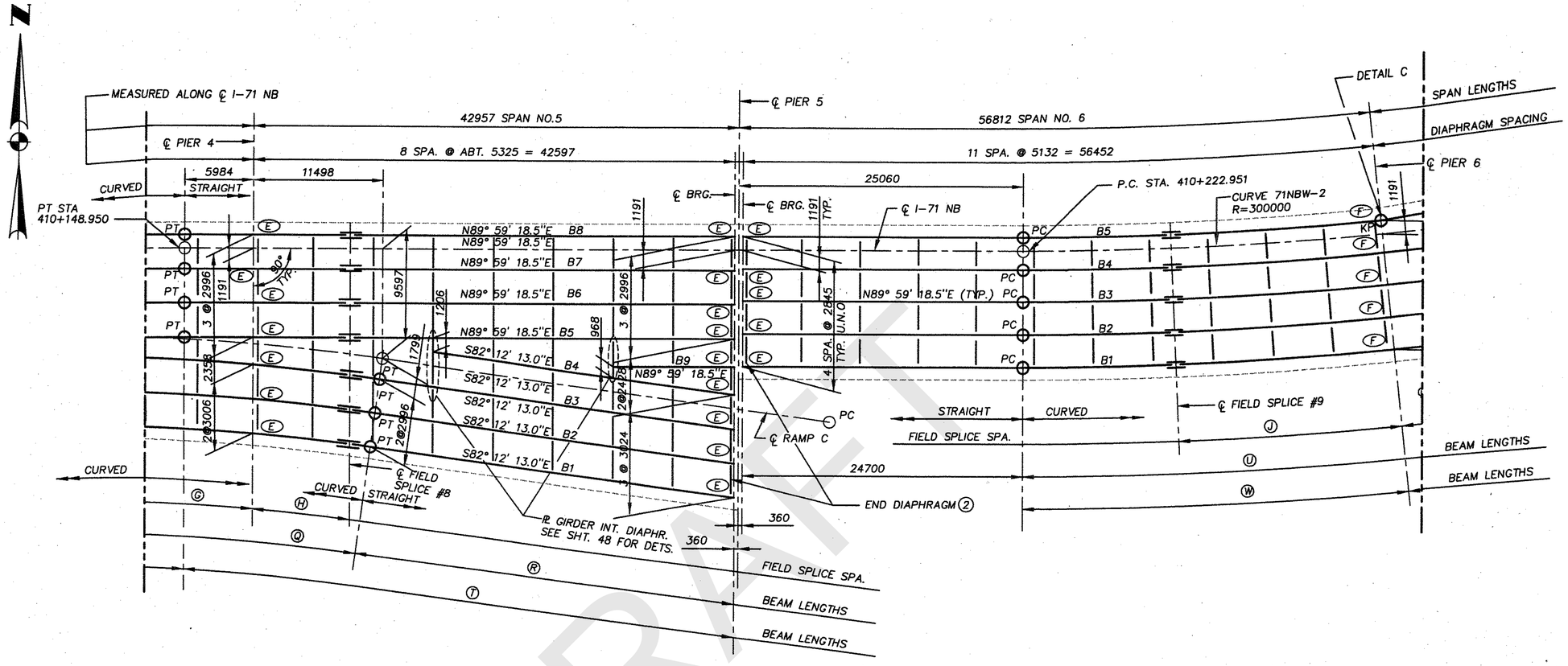
FINAL FOR CONSTRUCTION

BRW & DMM GROUP — A DAMES & MOORE GROUP COMPANY

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

FRAMING PLAN
171 N.B.

BRIDGE 3



PART FRAMING PLAN

FIELD SPLICE DISTANCES (1)			
BEAM NO.	LENGTH (H)	LENGTH (J)	
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 @ (Q)	LENGTH (Q)	LENGTH (T)	LENGTH (R)
B1	197009	90960	–	32462
B2	200005	92344	–	32051
B3	203001	93727	–	31640
B4	–	–	–	26871
B5	–	–	48581	–
B6	–	–	48581	–
B7	–	–	48581	–
B8	–	–	48581	–
B9	–	–	–	10649

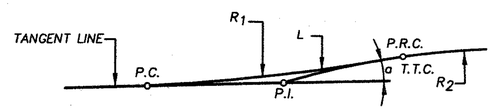
NOTES:

(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

AUG 18 1998

3-P0482.DGN 8-18-98

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

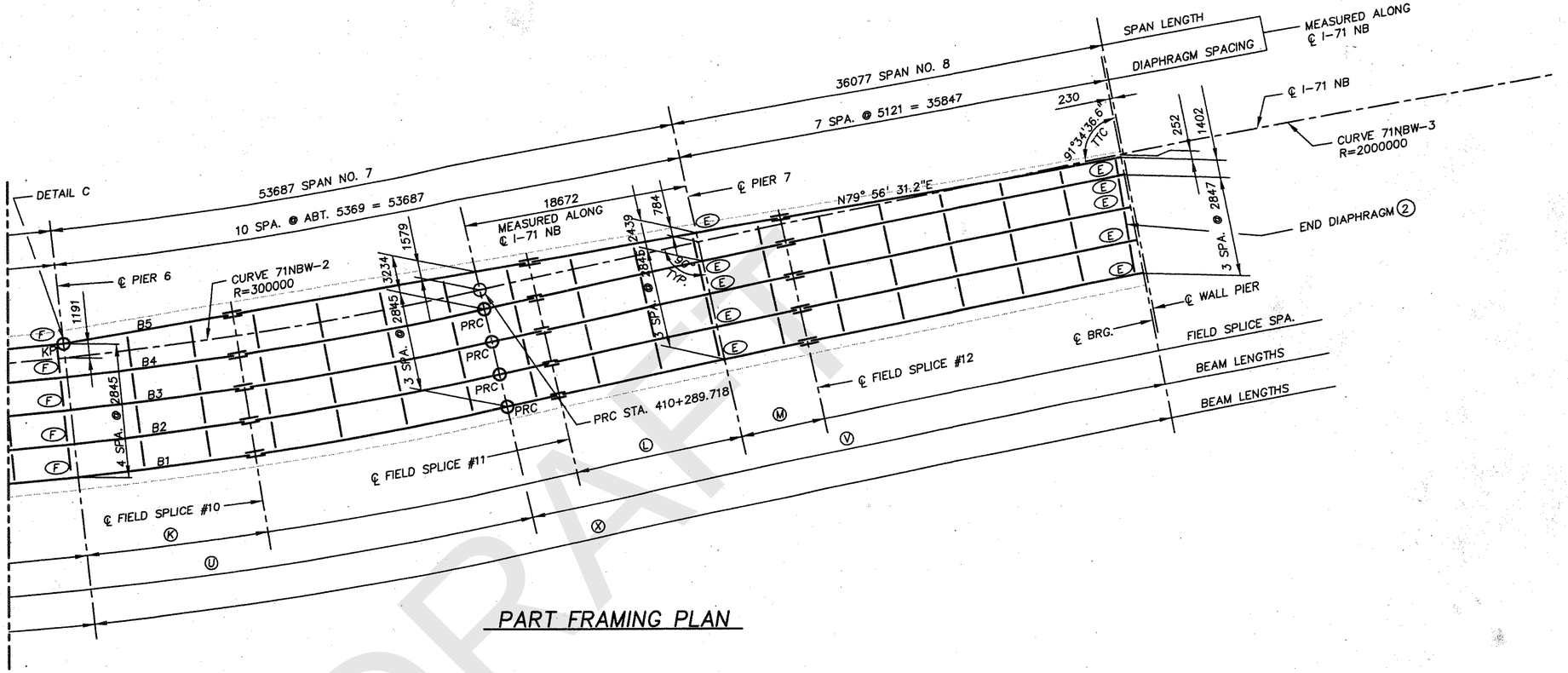
BRW A DAVIES & MOORE GROUP COMPANY

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

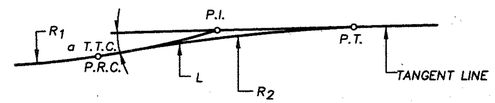
BEAM NO.	RADIUS ℄ (U)	LENGTH (U)	RADIUS ℄ (V)	LENGTH (V)	RADIUS ℄ (W)	LENGTH (W)	LENGTH (X)
B1	310191	69035	1989809	53965	–	–	–
B2	307345	68402	1992655	54120	–	–	–
B3	304500	67770	1995500	54274	–	–	–
B4	301654	67136	1998346	54428	–	–	–
B5	–	–	–	–	298809	31626	89395

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.

BCM BRW A DAMES & MOORE GROUP COMPANY

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

FRAMING PLAN
171 N.B.

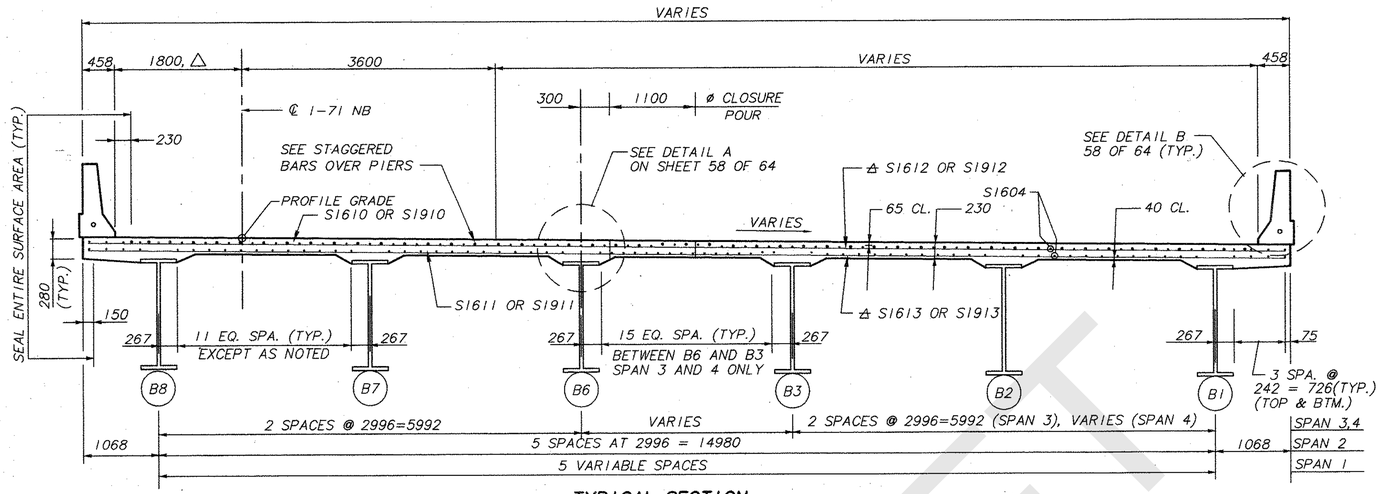
BRIDGE 3

33/64

443/588

J-FRAMEL.DWG 6-22-98

△ VARIES 1223 – 1800 IN SPAN 1

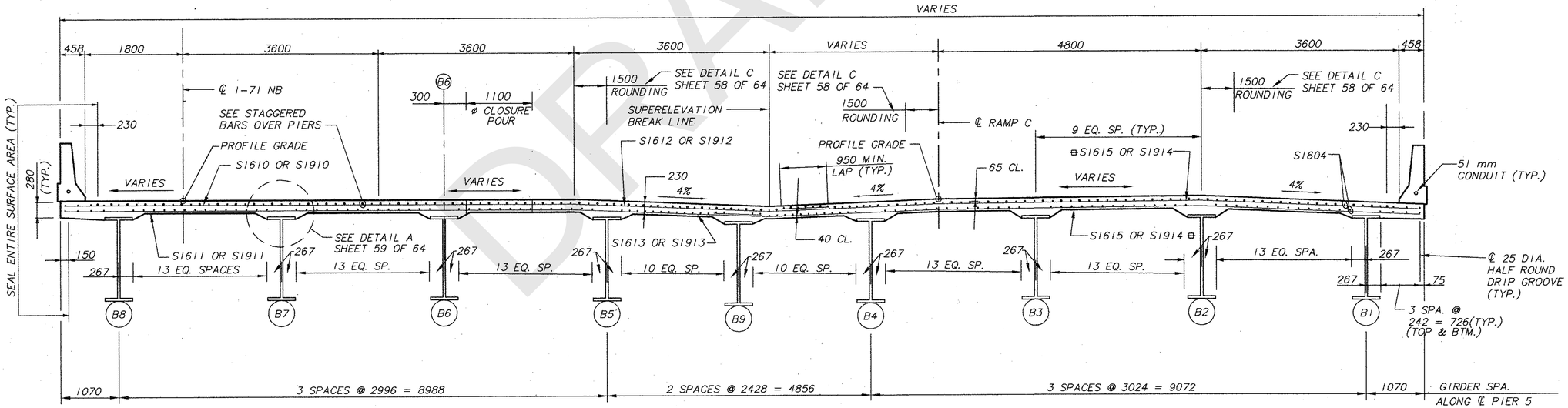


TYPICAL SECTION

(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

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

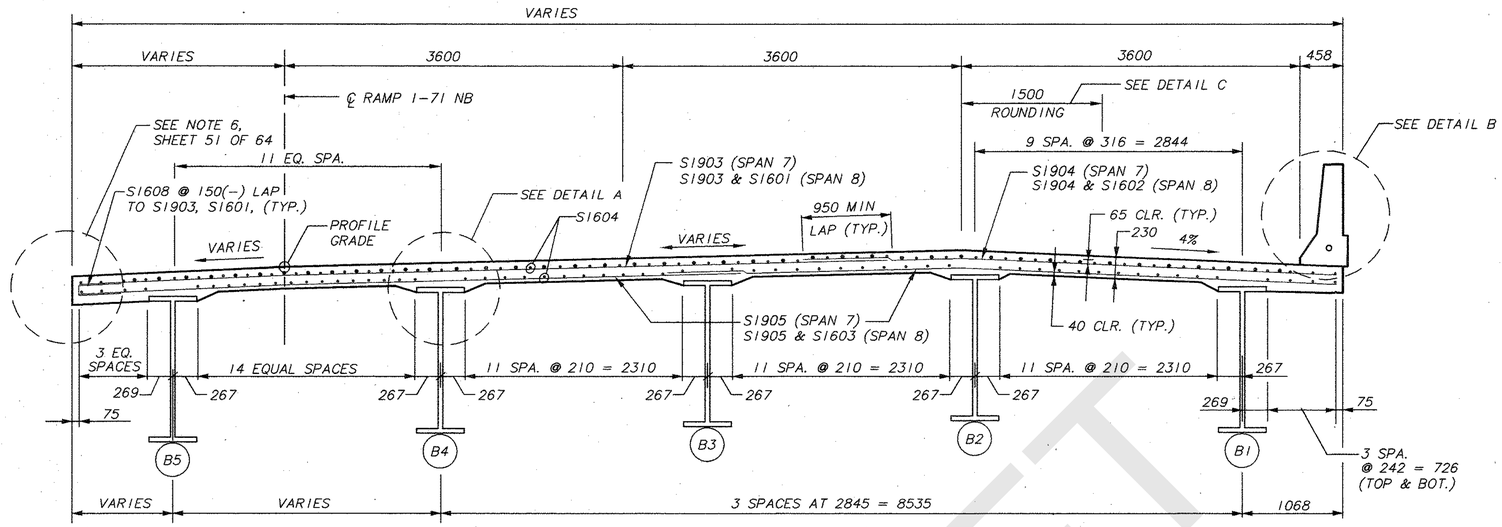
BRIDGE 3

58/64

468/588

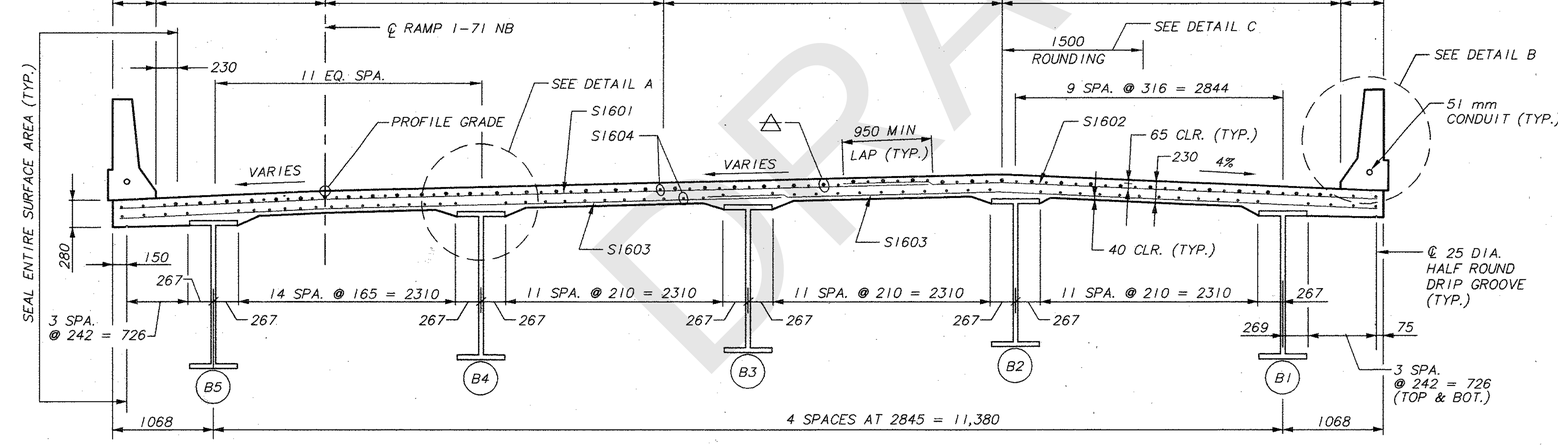
AUG 1 8 1998

BR3–TTY2 6/18/98



TYPICAL SECTION

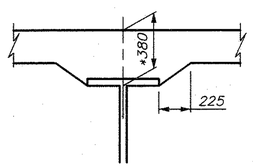
(SPAN 6 STA. 410+252.220 TO STA. 410+254.703)
(SPAN 7 AND SPAN 8)



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.

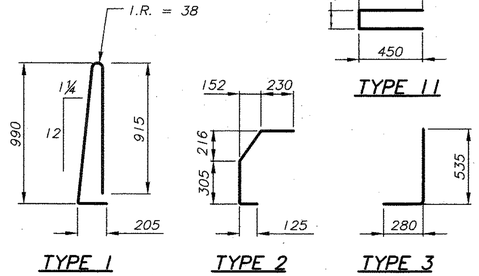
NOTES:

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

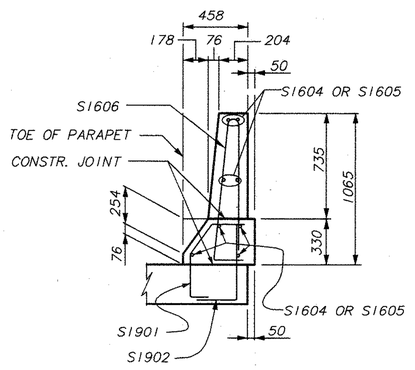
FINAL FOR CONSTRUCTION

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

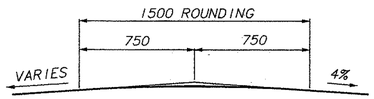
MARK	TOTAL NO.	LENGTH	TYPE
S1601	507	8700	STR.
S1602	507	5800	STR.
S1603	1014	7300	STR.
S1604	1608	12000	STR.
S1605	112	11400	STR.
S1606	444	2130	1
S1607	84	12000	STR.
S1608	615	1030	11
S1901	444	765	3
S1902	444	855	2
S1903	487	9400	STR.
S1904	487	5700	STR.
S1905	974	7600	STR.



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-TTY1
DRAWN RCS
REVISED
DESIGNED JAP
CHECKED SF

TYPICAL SECTIONS
I-71 NB

BRIDGE 3

59/64

469/588

AUG 1 ⁰ 1998

BR3-TTY1 6/16/98